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CLINICAL LECTURE
ON
THE DIAGNOSTIC SIGNIFICANCE OF LARYNGEAL ABDUCTOR PARALYSIS.

Delivered at the National Hospital for the Paralysed and Epileptic, Queen Square, on November 16th, 1897.

BY SIR FELIX SEMON, M.D., F.R.C.P.,
Physician for Diseases of the Throat to the Hospital.

GENTLEMEN,—Before entering upon the subject proper of my lecture, I think it desirable to recall to your memory a few anatomical and physiological facts which are essential for the understanding of the curious and fascinating phenomenon with which we have to deal. You all remember that the motor nerve *par excellence* of the larynx is the recurrent laryngeal nerve. With the only exception of the tensor of the vocal cords, the crico-thyroid muscle, which is supplied by the external branch of the superior laryngeal nerve, it innervates all the laryngeal muscles proper, that is, the antagonistic groups of the abductor and the adductor muscles of the vocal cords. The former is represented by the posterior crico-arytenoid muscle only, the latter by the lateral crico-arytenoid, the external and internal thyreo-arytenoids, and the inter-arytenoid muscle. The statements of Exner and of his pupils Mandelstamm and Weinzweig, according to which the superior laryngeal nerve takes part in the motor innervation of all the laryngeal muscles proper, though in varying degree, have never met with general acceptance, and have been strongly opposed by later observers. A warmly contested question, on the other hand, at the present time is that of the ultimate derivation of the recurrent laryngeal nerve. Since the beginning of this century this question has formed a bone of contention. Whilst a good many anatomists and pathologists considered the spinal accessory nerve the source of motor innervation of the larynx, others assigned the same *rôle* to the pneumogastric, and Claude Bernard was of opinion that the accessory supplied the phonatory, the vagus the respiratory, fibres of the laryngeal innervation. At last in 1873 the question seemed to be settled by the experiments of Schech according to which the spinal accessory was the only source of motor innervation of the larynx. This view held good until quite recently, when almost simultaneously various workers in different countries, notably Grabower, Grossmann, and Walter Spencer, concluded from their experiments and dissections that the spinal accessory had nothing whatever to do with the innervation of the larynx, and that the true source of the latter was the lower bundle of the vagus roots. In my own opinion the question is not definitively settled. Without in any way wishing to oppose the statements of the last named observers, there are certain clinical facts which still prevent me from giving them my unconditional adherence, and I refer to these discrepancies here only because later on we shall find that to some degree they enter into the subject of to-day's lecture. Finally I have to mention in this connection that Dr. Risien Russell has succeeded in splitting up the recurrent laryngeal nerve throughout its peripheral length into three different bundles of fibres, one of which supplies the abductor and another the adductor muscles, whilst from the third no motor effect can be produced in the larynx. We therefore now know definitely that the fibres going to the antagonistic groups of laryngeal muscles are differentiated throughout their peripheral course. Those fibres which ultimately supply the abductor of the vocal cords are situated on the inner side of the recurrent laryngeal nerve.

We now come to the consideration of some physiological points. In many textbooks of physiology, even quite modern ones, you read that the vocal cords during respiration make very marked excursions synchronous with the respiratory movements of the thorax, so that during each inspiration the glottis very perceptibly widens, and is equally narrowed during expiration. In a series of investigations which I undertook some years ago, and which I laid before the Royal Society in 1890,[1] I have shown that this view is quite incorrect so far as the great majority of healthy adults of the human species is concerned. If you examine healthy adults accustomed to the introduction of the laryngoscope and not knowing that you are going to observe their respiration, you find in fully four-fifths of all cases examined that instead of these excursions the glottis, during both inspiration and expiration, forms an isosceles triangle, the sides of which move very little or not at all during the two phases of respiration. This triangle, which represents what is called the "common respiratory position" of the vocal cords, is very perceptibly larger than the triangle formed by the vocal cords and the posterior wall of the larynx after death, when the cords occupy the so-called "cadaveric position." The differences are so considerable, that the average width of the glottis in a healthy adult man during quiet respiration is 13½ millimetres, whereas after death the maximum width ever seen so far is 6 mm. in a man and 5 mm. in a woman; the average in a man is 5, in a woman 4. The minimum cadaveric width of the glottis in both sexes I have ever seen is 2 millimetres. A graphic illustration of these conditions will show you at once that the difference referred to is anything but a *quantité négligeable*.

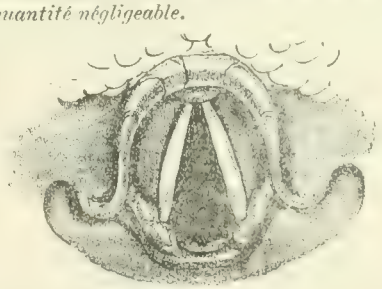


Fig. 1.—Ordinary respiratory position of vocal cords.

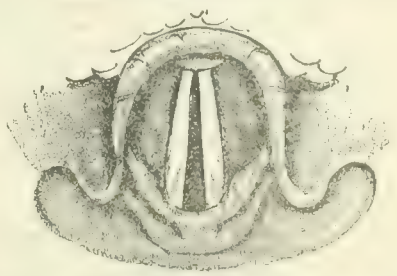


Fig. 2.—Cadaveric position of vocal cords.

The question naturally arises, What is this greater width of the glottis during life due to? The reply is this: The abductor muscles of the vocal cords are endowed with a special reflex tonus, by means of which the glottis during life is kept open during both phases of respiration to such a degree, that that type of respiration which we call the "ordinary," that is, the one in which we breathe with the diaphragm and intercostal

muscles only, is rendered possible. As soon as during life the glottis is narrowed to the same degree as we see it after death, we find that with every unusual muscular exertion dyspnœa begins, manifested either by very quick and shallow, or by very deep and laboured inspirations, accompanied by audible inspiratory stridor. At the same time, whilst the action of the diaphragm and the intercostal muscles thus becomes intensified, the accessory muscles of respiration also come into play. The reason of all this is simple. We know that of the whole respiratory apparatus the larynx itself is by far the narrowest part, and the calibre of the larynx again is still very much further narrowed by the fact that interpolated in it is the organ of phonation, namely, that reduplication of folds of mucous membrane which forms the vocal cords. By this interpolation of the phonatory in the narrowest part of the breathing apparatus, the space for the entry of air is, as I have shown by exact measurement,[2] reduced to less than one-third of its natural area. The result, if this narrowing were not counterbalanced by some compensatory arrangement of Nature, would be that no sufficient space would exist for the entrance of air into the lower air passages as soon as any extra demand were made on the breathing powers. In order to obviate this, Nature has endowed the abductor muscles of the larynx with the tonus before referred to, by means of which the glottis is kept sufficiently open for ordinary breathing. This tonus is produced by certain centripetal fibres contained mainly, but not exclusively, in the trunk of the pneumogastric nerve, which are stimulated by the interchange of gases in the lungs during the process of respiration, and act rhythmically upon certain centres in the medulla oblongata, where they are changed into tonic impulses, which travel downwards again along the fibres, which ultimately form the recurrent laryngeal nerve and keep the glottis open to a degree sufficient for ordinary respiration. These cursory anatomical and physiological observations are indispensable for an understanding of the pathological phenomenon with which we have to deal.[3]

I begin the pathological part of my lecture by reminding you of the following fact. If you cut any motor nerve which supplies various muscles horizontally across, all these muscles become completely paralysed, unless, of course, they are simultaneously innervated from other nerve sources. If, however, the lesion, instead of being a complete and sudden one, acts in a slow and progressive fashion, one of two possibilities may occur: either all the nerve fibres contained in that nerve may suffer simultaneously and in equal degree, in which event the stage of complete paralysis of the muscles will be preceded by a condition of paresis equally developed in all muscles supplied by the nerve in question; or, on the other hand, the pathological cause may act in an unequal degree upon the nerve fibres contained in the nerve trunk, when the paralytic changes may be more pronounced in one set of the muscles supplied by that nerve than in another.

These two considerations are necessary to understand the phenomenon with which we have to deal. Up to 1876 the general belief with regard to the recurrent laryngeal nerve corresponded to the two alternatives just sketched. That is to say, it was taught that if the nerve were totally disabled all the muscles supplied by it would, of course, be completely paralysed, whilst if the lesion were a slow and progressive one, there would be either general paresis of all the muscles supplied by the recurrent and equally developed in all those muscles, or, according to the particular circumstances of individual cases, this paresis might be more marked in certain of these muscles than in others, or it might even affect some muscles exclusively at first and be absent in others.

With regard to the first of these two alternatives there can be no doubt that if you cut the recurrent laryngeal nerve across there will be complete paralysis of all the muscles supplied by it, and the corresponding vocal cord which previously during quiet respiration stood in the position characteristic for this phase would, because the abductor tonus would be completely lost, recede directly into the position seen after death, and called the "cadaveric" position. Recently a great deal has been made of the fact that what I may call the "clinical" cadaveric position is not quite identical with the "genuine" cadaveric position as seen after death, because in the former case the action of the tensor of the vocal cords, the crico-thyroid muscle, which is supplied by the superior laryngeal nerve, is not abolished, whilst in the latter eventuality it is. Without denying that there may be a very slight difference between the two positions, I feel justified in saying that it is so insignificant that for all practical purposes it may be safely left out of consideration.

With regard to the second alternative, on the other hand, it was supposed until 1876 that in one case the fibres supplying the adductor, in another those innervating the abductor might be damaged first, and that according to this the one group of muscles might show a greater degree of paresis in one case, whilst in another their antagonist would be the more paretic one. The practical application of this would be that in a case in which the group of adductors was more attacked at first, on attempted phonation the vocal cord on the affected side would not quite come up to the median line but remain a little apart from it, whereby a certain degree of aphonia would be caused, whilst in another case in which the abductor was first paralysed, the vocal cord on the affected side would not be able to go quite so far out as its healthy fellow on attempted deep inspiration. Statements to this effect are found in many of the leading textbooks up to 1876. In the years 1876-78 I had an opportunity of observing at the Throat Hospital six cases of organic bilateral nervous affections of the vocal cords, in which beyond any doubt the disease-producing cause was such as to act either upon the whole of the centres or upon the whole of the trunks of the motor nerves of the larynx. Yet in all these cases the phenomena seen during life were those of paralysis of the abductors of the vocal cords only, and not once in these six cases did I see what I should have anticipatad would occur with almost equal frequency, that is, a primary paralysis of the adductors or a more marked paresis of the adductors than of the abductors. During the same time I saw an even larger number of cases in which a similar process did not act bilaterally but upon one recurrent laryngeal or one pneumogastric only. Yet in all these cases again it was always the abductor which exhibited the first or even the only signs of palsy. This fact, as you see, went flat against the, at that time, universally accepted doctrine, that it was merely an accident in every individual case which group of fibres should be the one first attacked. It struck me that my experience was a very uncommon one, and I therefore searched through all the laryngological literature at that time existing in order to find whether other observers had also met with similar experiences. The result of that search was very surprising to myself. I did not find a single really authenticated case in which in an organic progressive lesion of the motor nerves of the larynx the adductors had been the first muscles to be affected. Unless the paralysis was complete from the beginning of the observation it was always the abductor which was the first affected muscle, and hence it appeared that the doctrine found in the books had been theoretically constructed. With a view of ascertaining this beyond doubt I wrote a paper[4] in which I was very careful not to pronounce the fact which I had observed as an invariable law, but in which I merely spoke of a "proclivity" of the abductors of the vocal cords to become affected sooner or even exclusively in all cases in which an organic progressive lesion affected the centres or trunks of the motor laryngeal nerves, the spinal accessory, the pneumogastric, and the recurrent laryngeal nerve.

The publication of this paper[5] was at first followed by a number of communications corroborating my statements; then came some cases which were supposed to show that the greater vulnerability of the abductors was not unexceptional. These cases could be easily disposed of as being faulty in observation, the more so as none of them was corroborated by the evidence of a *post-mortem* examination. On the other hand, I demonstrated a number of specimens before the Pathological and other London Societies, and before the Laryngological Section of the Deutsche Naturforscherversammlung, 1886, which showed that whilst during life there had been progressive organic disease affecting the whole of the centres or the trunks of the motor laryngeal nerves, there was after death either isolated atrophy and fatty

degeneration, with increase of interstitial connective tissue of the abductor muscles, or that at any rate the degenerative and atrophic changes were considerably more advanced in the abductor than in the adductor muscles supplied by the same nerve. Indeed, this part of the question may be briefly summarised as follows: Whilst there is not a single authenticated case on record in which it has been shown by *post-mortem* examination that in a slowly progressive organic lesion of the motor nerves of the larynx the adductors had been primarily or exclusively affected, we are now in possession of quite a number of well-observed cases demonstrating the opposite order of events.

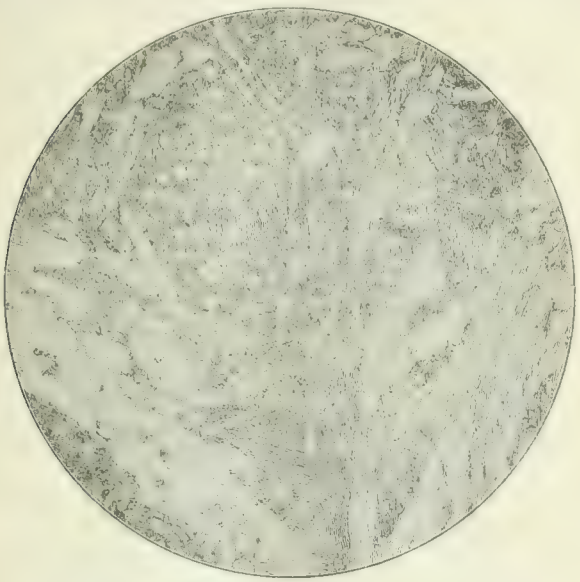


Fig. 3.—Left abductor (posterior crico-arytenoid) muscle, exhibiting very advanced atrophy and degeneration with increase of interstitial connective tissue.

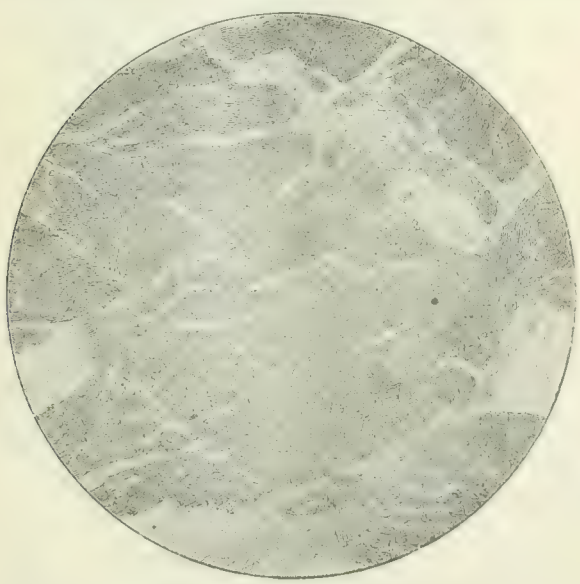


Fig. 4.—Right abductor (posterior crico-arytenoid) muscle, normal.

I only yesterday received a number of very interesting photographs, which I show you here, from Dr. Friedrich, of Leipzig, who had a case of recurrent laryngeal paralysis from the pressure of an aneurysm of the aorta under observation for three years, and who after the patient's death made a very thorough examination of all the muscles of the larynx on both sides. It was the left recurrent which was affected. What you will see here (Fig. 3)[6] is that there is a simply enormous amount of atrophy and degeneration, with a large amount of increase of interstitial connective tissue in the left posterior crico-arytenoid muscle; and it is very interesting to compare this with the right side (Fig. 4), which is absolutely normally preserved. In this connection I may mention at once that I later on was led to conclude from further clinical observations that of the adductors the first to show signs of giving way in these cases of slowly progressive organic paralysis is the internal thyreo-arytenoid muscle. You will find that here (Fig. 5),

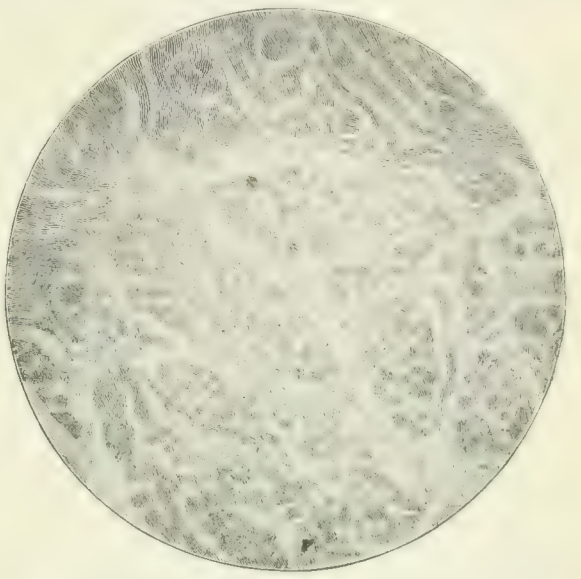


Fig. 5.—Left internal thyreo-arytenoid muscle, showing considerable atrophy and degeneration, but less developed than in the left abductor muscle.

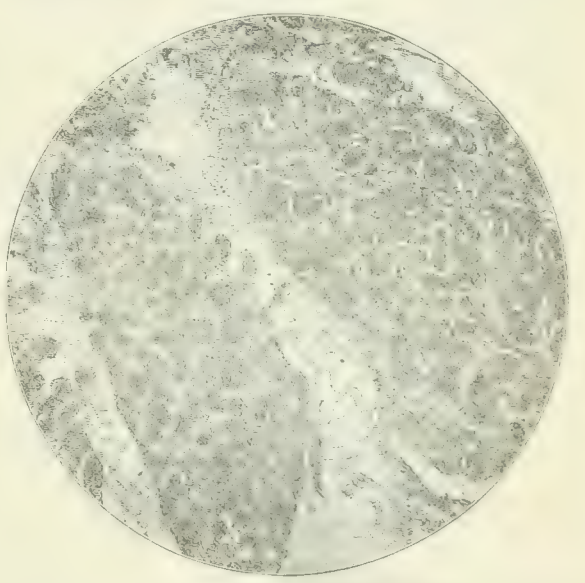


Fig. 6.—Left external thyreo-arytenoid muscle, also showing considerable atrophy and degeneration, but again less developed than in the corresponding internal thyreo-arytenoid muscle.

too, is a very considerable amount of atrophy and degeneration in the left internal thyreo-arytenoid muscle, but on comparing it with the left posterior crico-arytenoid you will see that the degeneration is infinitely more advanced in the latter muscle than in the internal thyreo-arytenoid. Finally,

you will see here in the left external thyreo-arytenoid muscle (Fig. 6) an amount of degeneration which must still be called considerable, though it is again considerably inferior to that seen in the internal thyreo-arytenoid, and much more so to that seen in the posterior crico-arytenoid muscle.

What you see here, I repeat, is by no means an isolated fact; on the contrary, in all cases of this kind in which a searching examination has been made, it has always been found that the posterior crico-arytenoid muscle was either the only one affected, or that at any rate the atrophic and degenerative changes were much more marked in it than in any of the adductor muscles supplied by the same nerve. In short, abductor paralysis in most cases merely represents the initial stages of complete paralysis of the recurrent laryngeal nerve. This, however, of course does not preclude that in some central diseases, such as tabes dorsalis, which preferentially single out certain nerve tracts, the affection should attack the laryngeal abductor apparatus only. Here is perhaps the occasion to make the plea that if ever such cases should come in future under your own observation, you should if possible obtain a *post-mortem* examination, and make such a thorough investigation of the individual muscles as has been done in Dr. Friedrich's case.

I have also to mention here one additional fact which is of considerable importance, and which in a curious way corroborates the fact of the greater vulnerability of the abductor fibres; that is that, whilst the abductor is the first to succumb, the adductors are the first to recover. That also has been shown in a number of very striking cases. For instance, I have described in 1891[7] the case of a distinguished tenor who suffered from a syphilitic tumour in his neck pressing upon the left recurrent laryngeal nerve, and completely paralysing the left vocal cord, which stood motionless in the cadaveric position. Under appropriate treatment, the tumour almost disappeared, and with its disappearance the adductor fibres of the left recurrent recovered, whilst the abductor fibres had been irretrievably damaged. The result was that the adductor fibres after their recovery got into the condition of which you will presently hear more, namely, that of paralytic contracture. The left vocal cord was in consequence of this process gradually dragged into the phonatory position, in which ever since it has remained, and the very unexpected but very pleasing outcome of this partial recovery of the nerve fibres is that the patient not merely regained his speaking voice, which had been completely lost, but also his singing powers, so that at present he again exercises his profession, being able to sing high chest as well as falsetto notes, and the voice, according to the statements of persons who have heard him sing before and after his illness, not showing any difference in character, power, and compass. Similar cases have been described by others, and a case has recently come under my own notice[8] in which, after an unintentional division of the vagus nerve in the course of a surgical operation, the adductors after suture of the nerve recovered their function, whilst those of the abductor were permanently lost.

I already mentioned incidentally that a periodical controversy has been going on over this whole question. It is raging as violently at the present moment as ever it was, and the reason of all this is that the ultimate cause of the greater vulnerability of the abductors is still unknown.

Unfortunately not a few members of our profession doubt the very existence of a new fact, unless it be accompanied by what they consider an adequate explanation. I confess I regret such an attitude. It necessarily gives rise to the construction of wild hypotheses, which are but too likely to lead us astray from calmly and dispassionately following the true, even though slow, way to the ultimate solution of the problem; however, to conclude from the multitude of hypotheses framed to explain the fact of the greater vulnerability of the abductors, I am afraid that many people think otherwise. I forbear to enter upon or even merely enumerate all these hypotheses,[9] none of which have met with general acceptance. Instead of this I prefer showing you that the pathological fact of which I am speaking does not stand isolated, and that on the contrary in the course of this controversy a number of other facts have been ascertained, all of which point in the same direction, namely, that there are biochemical differences between the two antagonistic groups of laryngeal muscles. These facts are as follows:

First, if you take the larynx of an animal which has just been killed, and lay the laryngeal muscles bare, stimulate all these muscles with a weak faradic current, and watch the time during which they respond to the stimulus, you find without exception in the most different species of animals, that is, in dogs, monkeys, cats, rabbits—and it has been shown even in human beings by Jeanselme and Lermoyez, who thus examined the bodies of people who died from cholera shortly after death—that the posterior crico-arytenoid muscle, although by far the largest of the laryngeal muscles proper, loses its electric excitability long before any of the adductors. It is not a question of a few seconds or a few minutes, but so great is the difference that sometimes it amounts to half an hour, or even an hour, when the adductor muscles still respond to the stimulus, and the abductor has long ceased to be excitable.

Secondly, parallel conditions have been shown to exist during life by Dr. Risien Russell, who, on splitting up the recurrent laryngeal nerve into its individual bundles, found that the bundle supplying the abductor lost its electric excitability long before that supplying the adductors.

Thirdly, a further experiment, also of a very interesting kind, was made by Professors B. Fraenkel and Gad, of Berlin. They gradually disabled the recurrent laryngeal nerve in a living animal by putting the nerve on a freezing mixture (the animal, of course, being under an anæsthetic). It was found that the function of the vocal cord, which was lost first, always was that of abduction.

Fourthly, within the last few weeks another most interesting fact has come to light, of which one can only hope that it will prove to be a regular phenomenon, although its discoverer, Dr. Grabower of Berlin, is most anxious for it to be known that his communication is only of a preliminary nature. He examined the nerve endings of the recurrent laryngeal nerve in the various laryngeal muscles, and found that the nerve endings in the lateral crico-arytenoid and internal thyreo-arytenoid are of a much more complicated character than those seen in the posterior crico-arytenoid muscle. In the latter one usually finds the nerve endings to be of a "simple buttonlike character of an either roundish or oval form" (Fig. 7). In the adductors, on the other hand, one



Fig. 7.—Nerve endings in the abductor (posterior crico-arytenoid muscle).

sees a "flat plate (*Plattensohle*) into which the axis cylinder opens, and round the latter additional differently formed end organs, round, or more frequently oval, bud-like structures, which extend over a larger space, and on the whole represent more voluminous and firm formations." Having had the opportunity of seeing Dr. Grabower's original preparations, I can testify to the accuracy of the above description. Through Dr. Grabower's courtesy I am privileged to republish here the illustrations which accompanied his original paper in the *Archiv für Laryngologie*, and may add that the differences are even more striking in the specimens themselves than in the illustrations.

Fifthly, the following fact which, in my opinion, is the most important one, and which actually shows that there are biochemical differences between the two antagonistic groups,

was ascertained about eleven years ago by the late Dr. Franklin Hooper of Boston. He stated in a paper read before the American Laryngological Association in 1885 that stimulation of the recurrent laryngeal nerve, uncut or cut, with an electric current, which throughout was kept equally strong, resulted in adduction of the corresponding vocal cord when the narcosis—he always employed ether—was slight, whilst, when the anæsthetic was pushed to the condition of very deep narcosis, stimulation with a current of the same intensity resulted in decided abduction of the corresponding cord. This very extraordinary fact has, I am afraid, never met with the attention it deserves, although Mr. Horsley and I[10] have specially pointed out its importance after having convinced ourselves by repetition of Dr. Hooper's experiments of the correctness of his statements. The fact that the result of electrical stimulation—currents of the same strength being used throughout—entirely differs according to the depth of the narcosis, not only when the entire re-

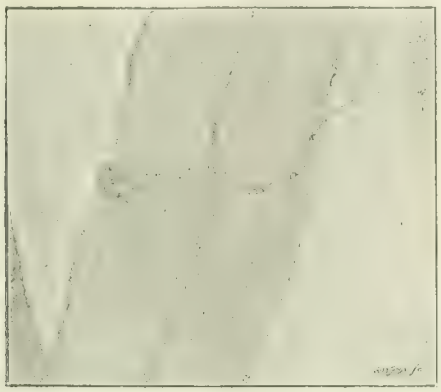


Fig. 8.—Nerve endings in the internal thyreo-arytenoid muscle.

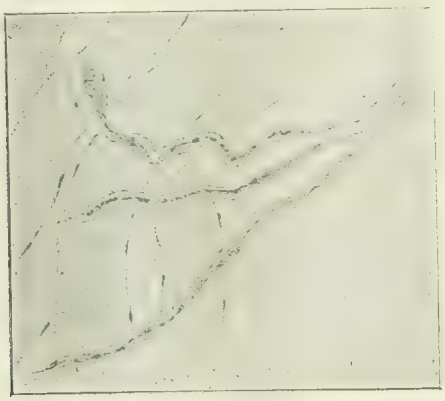


Fig. 9.—Nerve endings in the lateral crico-arytenoid muscle.

current, but also when after its section its peripheral end is stimulated, clearly points to the conclusion that the difference cannot be due to any differentiating influence of the anæsthetic agent upon the nerve centres, but that there must be a specific peripheral and differential action on its part, through the agency of the circulation, upon either the nerve fibres, the nerve endings, or the muscular substance itself. In other words, there must be biochemical differences between the two antagonistic apparatus, which in all probability some day will explain the fact of the greater vulnerability of the abductors as compared with the adductors.

Having so fully treated the various points so far enumerated, you may well ask me whether the subject proper of this lecture was really of such importance as to deserve their consideration at such a length. This you will be able to judge in one moment, because I now come to the clinical phenomenon which has given the title to my lecture, namely, the diagnostic significance of the greater vulnerability of the abductor fibres in cases of progressive organic paralysis of the motor nerves of the larynx. I shall, perhaps, best be able to illustrate its importance by going with you through the various phases of abductor paralysis in a concrete case. Take, for instance, the case of an aneurysm of the transverse part of the aorta pressing upon the left recurrent laryngeal nerve—a contingency which is the most fertile peripheral source of unilateral paralysis of the nerve. According to the law of the greater vulnerability of the abductor fibres, first of all the abductor tonus of the left posterior crico-arytenoid muscle will be gradually lost. This means that during quiet respiration the left vocal cord will no longer be in the position the cords ordinarily occupy, but will recede into the cadaveric position. No trace of this change will become objectively apparent during respiration, because the space left between the two cords is still fully sufficient to allow of free ingress and egress of air into and from the lower air passages; nor will the voice show any change, because, as the adductors of the left vocal cord are still acting, the left vocal cord as well as the right will on intended phonation go into the median line, and by the action of the crico-thyroids the necessary tension of the vocal cords will be effected. Thus neither during phonation nor during respiration will any objective symptom draw your attention to the fact that there is already something seriously amiss with the larynx.

This stage, however—that is, the one in which the affected vocal cord on attempted deep inspiration does not go further to the side of the larynx than to the cadaveric position—is only a transitory one. After a little while the same element comes into play which we see everywhere in the body when, of two antagonistic groups of muscles, one only is paralysed—namely, the paralytic contracture of the antagonists. We find such paralytic contracture, for instance, in traumatic paralysis, in spinal paralysis of children, in diseases of the joints, lead poisoning, non-use of certain parts on one side of the body only, etc. These contractures are due, according to Erb,[11] to "repeated or persistent mechanical approximation of the points of attachment of the muscles. This might be produced in different ways, and often is occasioned by the active voluntary contraction of the antagonists of the paralysed muscles, which shorten themselves with each voluntary effort, the paralysed muscles being incapable of again effecting their extension; thus the shortening becomes permanent."

This description entirely applies to the subject now under consideration. The adductors, which shorten themselves each time phonation is intended, at first are somewhat released from this shortening by the natural elasticity of the elastic membrane of the larynx, and the cord recedes into the cadaveric position. Later on, however, as no sufficient counter-extension is effected by the paralysed abductor, they remain in the condition of permanent shortening. Slow as this process is, its final result is invariably the same; the paralysed vocal cord is drawn into the median line and remains immovable in this position (Fig. 10). Now the point



Fig. 10.—Complete abductor paralysis of left vocal cord.

to which I wish to prominently draw your attention, and which is of the greatest importance so far as the diagnostic value of this form of paralysis is concerned is this: that even when this stage has been reached there is—in pure unilateral

cases—still absolutely no sign which would draw attention to the larynx. Experience has shown that the opening of the glottis on inspiration, which is still effected by the healthy abductor of the other side, is sufficient to carry on respiration without any subjective or objective dyspnœa and without stridor being heard.[12] Should dyspnœa be present in such cases, it is much more likely to be due to a simultaneous compression of the lower air passages by the same tumour which compresses the recurrent laryngeal nerve—for example, an aneurysm or other mediastinal tumour, a goître, malignant disease of the œsophagus, etc. But in pure cases—that is, in such in which the nerve disease is unaccompanied by such mechanical compression of the trachea or bronchi—under ordinary circumstances no respiratory symptoms of any kind are present. Again, with regard to phonation, the paralysed cord, as I have just explained, stands motionless in the middle line—that is, in the proper position for phonation. Its tension, which is necessary for the act of voice production, is mainly though not exclusively supplied by the crico-thyroid muscle, and this, as you know, is innervated by the external branch of the superior laryngeal nerve, which only in the rarest of cases of this kind is affected simultaneously with the recurrent laryngeal nerve. There is, therefore, in the large majority of cases no cause why the tension of the paralysed vocal cord should not be properly effected by the crico-thyroid, and thus the final factor necessary for normal voice production be supplied. As a matter of fact, indeed, the voice in a good many of these cases, though not in all, is perfectly normal for ordinary speaking purposes, and even singing, as in the case of the tenor I mentioned to you, may still be possible with a vocal cord immovably fixed in the middle line.

To summarise: The stage of complete abductor paralysis, which frequently extends over many months, not at all rarely over several years, may be present without a single symptom drawing your attention to the larynx.

Before I proceed further I wish to demonstrate to you the actuality of the statements just made.

[Here two patients were introduced, one a woman suffering from bulbar paralysis with bilateral paresis of the abductor muscles, the other a man afflicted with a new growth affecting the left side of the medulla and cerebellum, and suffering from complete left-sided laryngeal abductor paralysis. It was shown that in the case of the first patient dyspnœa only occurred on exertion, whilst the voice was quite normal, and that in the case of the second patient neither voice nor respiration showed any abnormality, the patient being still able to produce high chest notes.]

Having thus shown you the actuality of the fact, it remains for me to demonstrate its clinical importance. This importance arises from three circumstances: first, that the motor nerves of the larynx have so long and tortuous a course that from their medullary origin to their endings in the laryngeal muscles they are exposed to an enormous number of various pathological influences; secondly, that the laryngeal abductor paralysis caused by any of these influences may, and in a good many cases does, remain for a long time the only positive sign of these various pathological processes; thirdly, that it in no way proclaims its existence, but must be sought for, if one does not wish to miss the opportunity of making an early diagnosis in a good many of these cases. With regard to the first point, I need only remind you of the course of these motor fibres; whether they ultimately are derived from the spinal accessory or from the pneumogastric nerve, there is no doubt that, at any rate, after the juncture of these two nerves they run from their passage through the jugular foramen in the paths of the pneumogastric nerve. With this nerve they descend along the root of the neck into the thorax, where the recurrent laryngeal nerves are given off. The right recurrent laryngeal, which starts about the height of the right subclavian artery, winds round that vessel and ascends close to the apex of the right lung to the posterior aspect of the trachea. The left recurrent is given off by the vagus at the level of the convexity of the arch of the aorta, winds round that part of the vessel, and ascends, like the right, in the furrow between the trachea and the œsophagus up to the larynx, in the close proximity of which both nerves are split up into the twigs which end in the various laryngeal muscles.

In this long course the motor laryngeal fibres are exposed to the following bulbar and bulbo-spinal as well as peripheral diseases:

I. Bulbar and Bulbo-spinal Affections.	II. Peripheral Affections.
1. Hæmorrhage and softening.	1. Acute rheumatic influences.
2. Syphilitic processes.	2. Catarrhal neuritis.
3. Tumours.	3. Toxic influences (lead, arsenic, etc.).
4. Diphtheria.	4. Tumours in the posterior cavity of the skull or in the foramen lacerum or foramen jugulare.
5. Progressive bulbar paralysis.	5. Pachymeningitis.
6. That curious form of systemic central nervous disease first described by Hughlings Jackson and Morell Mackenzie, in which one-half of the tongue, the corresponding half of the palate, the corresponding vocal cord, and, in a number of cases, the corresponding trapezius and sterno-mastoid muscles are affected.	6. Traumatism (unintentional ligature of nerves, injection of iodine into a goître, cut throat, stabbing, injury during extirpation of goitre, etc.).
7. Amyotrophic lateral sclerosis.	7. Tumours of neck (goitre, peritracheal glands, etc.).
8. Disseminated cerebro-spinal sclerosis.	8. Aneurysms of the arch of the aorta, innominate, subclavian, carotid.
9. Syringomyelia.	9. Mediastinal tumours (malignant, tuberculous, calcification of bronchial glands, etc.).
10. Tabes dorsalis.	10. Pericarditis.
	11. Pleurisy.
	12. Tuberculosis and pleuritic thickening of apex of right lung.
	13. Chronic pulmonary affections (chronic pneumonia, anthracosis, etc.).
	14. Infectious fevers (typhoid, etc.).
	15. Œsophageal carcinoma.

This list, as you see, is a very formidable one; yet it is not theoretically constructed, and of each of the contingencies named examples have been published in which laryngeal abductor paralysis was a prominent if not the first symptom. This is particularly true of such affections as bulbo-spinal syphilis, progressive bulbar paralysis, tabes, goître, aneurysms of the aorta, and cancer of the œsophagus.

But what makes the sign so important from a diagnostic point of view is that in a considerable number of all of these cases it may be, and not rarely is, for a long time not only the first but the only symptom of the serious affection with which the patient is threatened. There is a number of well-authenticated cases on record, and I myself have seen several instances in point, in which it was the casual discovery of a laryngeal abductor paralysis, and this alone, which led to the diagnosis of such serious organic diseases as I have just enumerated. Always remember, too, that the symptom does not obtrude itself on your notice, but, like optic neuritis, must be sought for on account of the, in many cases, complete absence of all objective signs and subjective complaints pointing to the larynx. Let me give you one case in point in illustration of what I have just said:

Some years ago the head master of a large public school consulted me on account of fatigue of the voice, which he had observed during the preceding term. He was apparently a hale and hearty man of about 55, and the vocal weakness was the only symptom complained of. His voice, however, when he told me his history, was perfectly natural, and there was not the least stridor or other respiratory symptom. I was therefore not a little surprised when, on laryngoscopic examination, I found the left vocal cord motionless in the phonatory position, and, as there was no local explanation, made a careful general examination. The result of this may be summarised thus: that I found not the least evidence of any central nervous disease, and that the only suspicious signs noticeable were, first, a somewhat doubtful slight dulness over the middle part of the sternum, and, secondly, the fact that the heart sounds were audible over a larger area than they normally ought to have been. At the same time they were perfectly normal in character, there was no pulsation, no thrill, no inequality of pulses, of pupils, etc. Nevertheless, on account of the laryngeal abductor paralysis, I suspected an aneurysm of the aorta, and, as the patient did not seem willing to realise that the matter was graver than he had anticipated, proposed a consultation with Dr. William M. Ord. This was accepted, with the result that Dr. Ord

shared my suspicion, although he too found no further evidence of the existence of aneurysm. Five weeks afterwards the patient, who, instead of adopting our advice—namely, to undergo Tufnell's treatment—started for a journey to Switzerland, died from rupture of an aortic aneurysm.

I need not say that this is an exceptionally drastic illustration of the value of the symptom in question; but in many other cases it is of no less importance because the issue is not so speedily fatal. Thus, quite a number of cases are now on record in which bilateral or unilateral paralysis of the abductor muscle was for a long time the first symptom of tabes dorsalis, and the rule recommended as far back as 1881 by Dr. Buzzard—namely, that in all cases of organic laryngeal paralysis of doubtful etiology the patellar reflexes ought to be examined—deserves to be warmly supported, though, as a recent observation of my own has shown, advanced abductor paralysis may be present in tabes, even though the patellar reflexes are not quite abolished.

The very multitude of causes, however, to which laryngeal abductor paralysis may be due should caution one not to commit oneself to too rash a diagnosis of its ultimate cause on a discovery of this symptom, and I think I cannot better illustrate the necessity of this advice than by quoting to you the most extraordinary diagnostic mistake which I think I ever made.[13]

Some years ago a woman, aged about 48, came to the throat department of St. Thomas's Hospital. Her only complaint was difficulty of swallowing, and she stated that she felt an obstacle about the level of the top of the sternum. The patient looked sallow and cachectic. A bougie easily passed down the œsophagus. Though the symptoms did not point to any laryngeal affection, the left vocal cord was found to be fixed immovably in the median position; otherwise the larynx, as well as all other organs, were normal. The patient's age, the apparently normal state of all other organs, the absence of a syphilitic history, led one to think of an infiltrating carcinoma of the œsophagus, which had not yet obstructed the canal itself, but had already to some extent involved the left recurrent laryngeal nerve. Iodide of potassium was prescribed without any effect. A fortnight later there occurred ptosis of the left eyelid, then paralysis of the left rectus externus, followed shortly afterwards by complete left ophthalmoplegia. Sensory troubles in the mucous membrane of the left cheek, left-sided deafness, left-sided paralysis of the facial nerve, made successively their appearance.

By this time, of course, we knew we had to deal not with a peripheral but with a central lesion on the left side, gradually involving one cerebral nerve after another. The patient was now admitted into the hospital and subjected, under the care of Dr. Bristowe, to an energetic treatment by inunction and large doses of iodide of potassium. Her condition within the next few months improved so much that, though not cured, she could leave the hospital. The left vocal cord remained all along immobile in the median position. Syphilitic pachymeningitis was diagnosed at the time. A few months later the patient, having become much worse, came back to the hospital. The paralyses had returned with greater intensity: the left vocal cord was now fixed in the cadaveric position, and the voice, which had been formerly quite normal, had become almost aphonic. Signs of incipient paralysis were found in some of the right cranial nerves. The patient was submitted to the former treatment but without success. The paralytic phenomena on the right side progressed, and after a while included diminished outward mobility of the right vocal cord. This paresis steadily increased, but before the stage of complete right abductor paralysis had been reached the patient died comatose.

The necropsy corroborated the diagnosis of syphilitic pachymeningitis. All the affected cranial nerves were found to be imbedded near their points of emergence from the cranium in a half-gelatinous, half-fibroid mass, which had partly destroyed, partly compressed them. The vago-accessory nerves on both sides were involved.

This brings me to my concluding remarks. The multitude of possibilities which ought to occur to your minds when discovering paralysis of both and even more so of one abductor is so great that unless there be plain collateral evidence of a definite form of organic disease, you ought to look upon that symptom as a silent storm signal, hoisted for the benefit of the physician, but not justifying you in pronouncing the death warrant of the patient. Undoubtedly a number of cases of abductor paralysis occur, in which that sign is present for a long number of years without any other symptoms ever developing. In such cases it is possible that there may be some trivial local lesion, such as an enlarged gland compressing to a certain degree the motor laryngeal nerves at any point of their long course, and causing the persistent abductor paralysis owing to the greater vulnerability of the abductor fibres. Several such cases are known to myself, and I therefore consider it my duty to warn you not to frighten the patient in whom you may discover the laryngeal symptom by hinting at all sorts of contingencies, none of which may ultimately come true. But at the same time you ought to keep a patient who presents this sign under careful periodical observation. In the great majority of cases after some months, if not years, you are likely to discover further symptoms of the fundamental disease. In the case which has given rise to the whole doctrine of the greater vulnerability of the abductor apparatus, two years elapsed between the occurrence of bilateral abductor paralysis and that of the other symptoms of tabes, to which the patient seven years afterwards succumbed. And, in conclusion, you must also keep before your minds the possibility that the fixation of a vocal cord in the middle line may be due to an ankylosis of the crico-arytenoid articulation. Such ankylosis may occur in the course of a number of the same diseases in which also unilateral or bilateral abductor paralysis may be produced, and whilst signs of previous ulcerative diseases, absolute immobility of the arytenoid cartilage in question and the corresponding vocal cord, abnormal destruction of folds of mucous membrane, and especially tumefaction at the basis of the fixed arytenoid, will favour the diagnosis of a mechanical fixation, yet all these signs may be absent and nevertheless a joint disease exist.[14]

It behoves, therefore, the observer who discovers fixation of one or both the vocal cords in the phonatory position to be very guarded in the diagnosis of the disease to which such fixation owes its origin. But even with every possible limitation, there can be no doubt that the sign is one of very great diagnostic significance in a number of cases of the most serious bulbo-spinal and thoracic organic diseases.

[At the conclusion of the lecture a number of patients suffering from various central organic affections who exhibited unilateral or bilateral laryngeal abductor paralysis were demonstrated.]

NOTES AND REFERENCES.

[1] On the Position of the Vocal Cords in Quiet Respiration in Man and on the Reflex Tonus of their Abductor Fibres, *Proc. Roy. Soc.*, vol. xlviii, 1890. [2] *Loc. cit.* [3] Fuller information on the physiological aspect of the question will be found in my paper published in *Proc. Roy. Soc.*, 1890. [4] Clinical Remarks on the Proclivity, etc., *Archives of Laryngology*, vol. iii, 1881. [5] Concerning the controversy between Professor Rosenbach, of Breslau, and myself as to the priority of the discovery, I beg to refer those interested in the question to my contribution to the *Virchow Festschrift*, vol. iii, pp. 400 *et seq.*, and to my chapter on the Nervous Affections of the Larynx in Heymann's *Handbuch*, vol. i, pp. 685 *et seq.* [6] Dr. Friedrich has kindly permitted the reproduction of his photographs in this lecture. From them I have selected the photographs of the left posterior crico-arytenoid, the left internal thyreo-arytenoid, and the left external thyreo-arytenoid muscles, because the progressive degree of degeneration in these three muscles, all of which are supplied by the left recurrent, can be well seen, and I have added, for comparison sake, the photograph of the right posterior crico-arytenoid muscle, which shows the normal condition in the same individual. [7] On the Culture of the Singing Voice, *Proc. Roy. Soc.*, 1891. [8] Mr. G. H. Makins, Secondary Epithelioma of Neck, etc., *Clin. Soc. Trans.*, vol. xxix, 1896, pp. 193 *et seq.* [9] Those particularly interested in the question will find full details on these points in my papers in the *Virchow Festschrift*, vol. iii, pp. 400 *et seq.*, in Heymann's *Handbuch*, vol. i, p. 684 *et seq.*, and in the *Archiv für Laryngologie*, vol. vi, Heft 3. [10] On an apparently Peripheral and Differential Action of Ether upon the Laryngeal Muscles, BRITISH MEDICAL JOURNAL, 1888. [11] *Von Ziemssen's Cyclopædia*, vol. ii, p. 378. [12] Matters are quite different of course in the bilateral form. If the process so far sketched develops at the same time on both sides the glottis is gradually reduced not merely to the cadaveric width, but finally to a very narrow slit, so that its appearance is that of the phonatory position of the vocal cords. Long, however, before this stage has been reached increasing difficulty in breathing occurs, manifested by inspiratory stridor, which is particularly loud and sonorous whilst the patient is asleep. Expiration at the same time is perfectly free and easy, and the voice in many cases remains normal or nearly so. It is this coexistence of considerable inspiratory dyspnœa with free inspiration and normal or almost normal voice which is so characteristic that it is sometimes possible to diagnose from its presence, without the aid of the laryngoscope, bilateral paralysis of the abductors of the vocal cords. It ought to be noted that the subjective dyspnœa of the patient is the more violent the

more rapidly the laryngeal stenosis has been developed, whilst if this process has taken place slowly—as, for instance, in many cases of tabes dorsalis—it is remarkable how great an adaptability the organism shows to the altered conditions. Degrees of laryngeal stenosis are borne under such circumstances with comparative ease, which on laryngoscopic examination would seem to be almost incompatible with the continuation of life. [13] This case which is important from various points of view has been described by me previously, in the *Virchow Festschrift*, and in *Brain*, Parts 59-60, 1892. [14] Fuller information on this important question will be found in my paper on Mechanical Impairments of the Functions of the Crico-arytænoid Articulation, etc., *Medical Times and Gazette*, vol. ii, 1880.

ON A SECOND CASE OF REMOVAL OF A "PRESSURE POUCH" OF THE ŒSOPHAGUS.

By HENRY T. BUTLIN, F.R.C.S., D.C.L.,
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IN the year 1890 I saw, I believe for the first time, a patient with symptoms of a "pressure pouch" of the œsophagus, and in June, 1892, I removed the pouch. At that time there was, so far as I know, only one published case of operation for the removal of a pressure pouch of the œsophagus (von Bergmann's) but I think the operation had been performed in two, if not three, other cases, once by Billroth, and once or twice by Kocher. A full account of my case and of the operation was brought before the Royal Medical and Chirurgical Society, and was published in the *Transactions* of the Society in 1893 (vol. lxxvi, p. 269). The paper is illustrated by drawings of all the pouches, which are true or apparent "pressure pouches" in the museums of all the schools of medicine in London at that time. The small number of them, my own experience, and the statements of all writers on the subject led me to regard the condition as one of very great rarity, and I concluded my paper by saying: "I can scarcely hope to perform this operation again, for the affection is so rare that it falls to the lot of but few surgeons to meet with two of these cases in the course of a long surgical life." Since that time, my experience has been so peculiar, that I am anxious to bring the question of these œsophageal pouches prominently before the profession.

CASE I.—Captain X., aged 47. Symptoms of four years' duration. Seen first in 1890. Pouch removed in 1892. Case published in the *Transactions* of the Royal Medical and Chirurgical Society (vol. lxxvi).

CASE II.—A gentleman, aged 57, was sent to me by Mr. Critchett in September, 1894. For ten years he had suffered from slight difficulty in swallowing his food, and the difficulty had very slowly increased. He found it necessary to gulp his food down, and was then often able to swallow large pieces of solid food. But, in spite of every device and care, portions of food seemed to stick in his throat, and came up unchanged many hours after they had been swallowed. He had not lost flesh, and his general health was good. I had not the opportunity of passing an instrument for him. It is more than three years since I saw him, but I have just received a letter from him telling me that his difficulty of swallowing has very slowly grown worse, so that he is often unable to swallow liquids without some of them passing into the pouch. In the morning, after an early breakfast, he often coughs or chokes up fragments of meat, undigested, which he took on the previous evening. He is able by a movement of his neck to bring up these fragments of food. In all other respects he is perfectly well. No bulging has been noticed in his neck.

CASE III.—A gentleman, aged 73, tall, and a remarkably fine man, was sent to me by Dr. Ewart (Eastbourne) in August, 1895. He was thought to be suffering from a stricture of the œsophagus, which had been diagnosed by a medical man in large practice in London. The stricture was said to be due to varicose veins in his throat, and the veins had been burnt and the uvula shortened by a specialist in throat diseases in London, who is also in large practice. My opinion was sought on the question of the desirability of dilating his stricture. The difficulty of swallowing had commenced four years previously. It consisted, not only in a difficulty of swallowing, but in the return of fragments of undigested food long after they had been taken. On hearing this I went very thoroughly into his case, and came to the conclusion that his symptoms were those of a pouch, not of a stricture. I suggested to him the possibility of a successful removal of the pouch, but told Dr. Ewart that the operation ought not to be performed unless it could be reasonably proved, immediately before the operation, under an anæsthetic, that no stricture was present. I also begged that swelling of the neck should be sought for directly after the taking of food, particularly of liquid food.

In November, 1895, the patient decided to be examined under an anæsthetic, and to undergo the operation if I could assure myself of the existence of a pouch.

On November 29th Dr. Ewart came up from Eastbourne, and the operation was performed. But, immediately before it, I succeeded in passing a very large bulbous bougie down into the stomach, and in passing a curved sound into the pouch and feeling the end of it distinctly in the posterior inferior triangle on the left side. While Mr. Gill was administering the anæsthetic, I learned for the first time that both Dr. Ewart and the patient had noticed swelling of the neck after the taking of food. The demonstration of pouch was therefore perfect, and the operation was at once proceeded with. A long incision was made on the anterior border of the left sterno-mastoid, with its centre opposite the cricoid cartilage. The dissection was carried down between the trachea and œsophagus on the inner side and the great vessels on the outer side. The superior thyroid artery was tied, the omo-hyoid muscle divided, and the pouch was discovered lying behind the œsophagus, at its junction with the pharynx, and projecting a little towards the left side. It was cut away from above downwards, while the edges of the wound were brought together with fine silk sutures. The operation was precisely similar to that described in the *Transactions* of the Royal Medical and Chirurgical Society, and the only difference in the treatment was that no attempt was made to keep a tube in the œsophagus for the purpose of feeding, and a drainage tube was inserted in the wound of the neck instead of long strips of gauze.



Fig. 1.—From a specimen in the Museum of the Royal College of Surgeons, No. 2,291 D.

The pouch was so like that removed in my first case, that one could not be told from the other. They were practically identical in size, in shape, in structure.

On December 4th milk came for the first time through the wound in the neck; and for several days large quantities of the liquids he took passed out through the wound. But by December 12th this had almost ceased; and on December 20th he returned to Eastbourne, able to swallow perfectly well, and the wound healed.

CASE IV.—A gentleman, aged 65, was brought to me in December, 1895, by Dr. Morcom, of Dunstable. For more than a year he had experienced difficulty in swallowing, but he had not wasted, and his health was excellent, with the exception that he suffered a good deal from gout. He, like the other three patients, was able to swallow liquids with greater facility than solids; and, like them, he coughed up or choked up fragments of undigested food which he had taken long previously. He swallowed a little water in my consulting-room, and, although I was not able to discover any swelling in the neck, I was able to cause the return of some of the water into his mouth by pressing on the neck. In January of 1896 I saw him again, when his symptoms were unchanged. I passed a sound, which was arrested nine inches from the teeth, and could not be passed any further, although he was able to swallow tolerably large fragments of solid food.

I have just received a letter from Dr. Morcom, dated November 24th, 1897, saying that his patient is in much the

same condition as when I saw him. "I have not been able to detect any bulging after a meal, and the food passes into the stomach without pressure on the neck. He is just the same in regard to weight—no loss whatever."

CASE V.—A clergyman, aged 55, was brought to me by a brother clergyman in May of this year (1897), and I was told that for five years he had suffered from slight "relaxation of the throat," and some difficulty in swallowing. The dysphagia commenced really suddenly by a stoppage in his throat during a meal, and he was obliged to leave the room to vomit in order to be relieved. (*Note*—This is the only case in which the symptoms of a pouch appear to have occurred suddenly and for the first time).

Ever since there had been difficulty in swallowing, and the return of fragments of undigested food many hours after they had been taken. Every morning he was in the habit of bringing or coughing up fragments of food taken the night before, and occasionally the fragments evidently belonged to a meal taken two nights previously. He drank water in my room, but I could not distinguish any swelling of the neck. A bougie was arrested about nine inches from the teeth.

I explained to the patient that I believed he was suffering from a pouch, and that he might be cured by an operation. He had been previously led to believe that he was suffering from a stricture.

In October I saw his death in the obituary column of the *Times*, and a few days later I learnt from his friend that the operation had been performed by a London surgeon, and that he had died two days after the removal of the pouch, of suppression of urine.

I called on the surgeon who had operated, as I was exceedingly anxious to know whether the diagnosis was correct. He was so kind as to show me the pouch, which was precisely similar to those which I have removed. He also told me that it had been found in exactly the same situation, and that the operation had been practised in precisely the same manner as I have described.

CASE VI.—A gentleman, aged 57, staying in London, was brought to me by his doctor, Dr. Edward F. Cushing (Cleveland, Ohio) for my opinion on the desirability of removing a pressure pouch from his œsophagus on July 15th, 1897. In the year 1891 he began to experience annoyance from the return of fragments of food from time to time. The difficulty had slowly grown greater, but he had not become thinner, and his health was excellent. He was able to demonstrate the existence of a pouch in the usual place with ease, for he was a very intelligent man, and had studied the whole subject of œsophageal pouches with great attention. He could press water which he had just swallowed out of the pouch, or, rather, empty it out by leaning forwards; could pass an instrument into the pouch (a distance of about nine inches from the teeth) and could press solid materials out of the pouch. But there was no obvious bulging of the neck after swallowing.

I believe this gentleman has made up his mind to have the pouch removed, if he has not already undergone the operation.

It thus appears that I have seen six patients suffering from the symptoms of pressure pouch of the œsophagus. I have myself removed the pouch in two of the cases, and have seen the pouch which was removed in a third case, so that the diagnosis in three of the cases is beyond question. The symptoms in the other three cases are so decided that I cannot for a moment doubt that the patients are suffering from the same condition. Such an extraordinary experience can only be accounted for in one of two ways. Either chance must have been strangely disposed towards me, or pressure pouches of the œsophagus cannot be so rare as they have been supposed to be. While I quite admit that I may have been unusually fortunate, I cannot but believe that the rarity of the condition has been greatly exaggerated, and for this reason: The symptoms of the pouch are not generally known, and are usually mistaken for those of a yet rarer condition—pouching of the œsophagus above a stricture, whether innocent or malignant. Both in Whitehead's[1] and in Chavasse's[2] cases, gastrostomy was performed under the impression that the patient was suffering from stricture of the œsophagus, and the real nature of the condition was only discovered after the death or the patients. In four out of the six patients I have seen, many medical men had been consulted, but no one had suggested the possibility of a pouch, and one patient had been treated by a throat specialist for stricture of the œsophagus. Indeed it seems to me that these pouches have been so long regarded as the rarest of pathological curiosities, that we have not taken them seriously as possibilities of practice, and their symptoms therefore have not been studied as they deserve to be. In this belief I am publishing this paper, and will set down the typical symptoms as briefly as possible in the hope of drawing attention to the subject.

But, first, let me say that the true pressure pouch of the œsophagus is practically always situated at the back of the junction of the pharynx with the œsophagus, and that it opens into the gullet by a longitudinal opening in the middle line, about an inch in length. It has been noticed



Fig. 2.

more frequently in males than females. All my own patients were men, and the youngest of them was more than 45 years old; while in every one of them the symptoms of the pouch were first noticed after 40 years of age.

RETURN OF FRAGMENTS OF UNDIGESTED FOOD is the one constant symptom in every case; not immediately after the food has been taken, but many hours afterwards. In more than one case the fragments which came up were at once recognised by the patient as portions of food taken several meals previously. For instance, one patient told me that he had coughed up a fragment of fish which he had taken several days previously, and he was quite sure of this, for he had not taken any fish since. The fragments may be coughed, or choked up, and sometimes liquids taken at night will run out and make the patient cough, when he changes his posture, during the night.

PRESSURE ON THE SIDE OF THE NECK in the posterior triangle (usually on the left side) causes fragments and liquid to return into the mouth: and, if not, yet causes the escape of gas, which is developed and collects in the pouch, and occasions much annoyance by gurgling up at frequent intervals during movement of the head and neck. If the pouch produces bulging in the posterior triangle about the level of or below the cricoid cartilage, this is a very im-

portant symptom, but the absence of bulging does not in the least affect the diagnosis.

A bougie is arrested at a distance of about nine inches from the teeth. It may, perchance, pass into the stomach, gliding over the orifice of the pouch. But the rule is, that it passes into the pouch; and, as the affection becomes more pronounced, it may be impossible to pass an instrument down the œsophagus. If the bougie be of metal and slightly curved, its end may be made to project, so that it can be felt and seen, in the side of the neck (always almost left side) behind the sterno-mastoid muscle.

Wasting and Loss of Weight are rarely, if ever, observed until the late stages of the disease. In fact, the patient may suffer from unmistakeable symptoms of a pouch for years without any sensible loss of weight. Of course, in those cases in which the condition is gradually producing death by starvation, wasting slowly occurs during the last months or years.

The course of the disease is, in every case which I have seen or read of, very slow. The symptoms had been noticed for several years in five of the six cases before I was consulted. In the remaining case, the trouble had existed only for a year. Naturally, I am now wondering whether I could readily make the diagnosis of pouch if I were consulted within a few weeks or months of the first appearance of the symptoms.

I do not know how many cases of œsophageal pouch have been treated by removal of the pouch, but I know that von Bergmann operated on one case, Billroth on one case, Kocher (Bern) on two cases, Bayer (Prague) on one case, Mixter (United States) on one case, while I have operated on two cases, and one more case has been operated on in London. Only one of the operations proved fatal, and from an unexpected cause—suppression of urine. The relief afforded in all cases has been, so far as I am aware, complete and permanent. The patients have been relieved of distressing symptoms, and of the fear of death from slow starvation, which has occurred in a considerable proportion of the recorded cases. Before the operation is performed, while the patient is under the influence of an anæsthetic, it is desirable to pass a curved metal instrument into the pouch from the mouth, and to make its end appear in the posterior triangle of the neck, which affords the clearest proof of the existence of a true pressure pouch. And, if possible, to pass a large bougie past the orifice of the pouch into the stomach, to prove that there is no stricture of the œsophagus.

References.

[1] *Lancet* 1891, vol i January 3rd. [2] *Path. Trans.*, vol. xlii, 82, 1891

ROENTGEN RAYS AND LOCALISATION.

A: Apparatus for Exact Measurement and Localisation by Means of Roentgen Rays.

By JAMES MACKENZIE DAVIDSON, M.B., C.M.Aberd.

London.

The Roentgen rays in many of their applications are now great facts in surgical practice. However much they may find acceptance in other directions and in other fields their place there is secure, and must become more and more important. As their practical value was first realised in surgical practice, so because of their usefulness and their supplying what was long needed, it is not too much to say that it must grow. Any simple method by which their application may be rendered easier, and their scope wider and more certain is thus of the utmost practical value, and this must be my excuse in inviting attention to a simple method of localisation which will enable the surgeon to find a foreign body with precision.

It is not enough for the surgeon to have a fine photograph or skiagraph of the part of the human frame showing the presence of a foreign body. He wants more than that to enable him to operate with complete confidence. He wishes to know the size of the object and its position and depth from the skin at any point he may select. The extended use of the *x* rays has led to an increasing need for some simple method of localisation which can be at once readily carried out, and at the same time be reliable. The method I have devised I believe is of this character and I have had an apparatus constructed which fulfils these requirements. It was, of course, obvious from the first that taking a skiagraph from two or more points of view was the necessary starting point to any method of localisation. But the question was how the resulting photographs were to be dealt with to give the desired information as to the precise position of the foreign body. This remained a difficulty except to the comparatively few who were sufficiently familiar with geometrical drawing and mathematics.

Taking stereoscopic skiagraphs is a beautiful method, but it is somewhat difficult and tedious to carry out, and while giving a picture in relief, yet the relations of the parts are only relative and not precise enough for practical guidance in a surgical operation. Besides stereoscopic skiagraphs are only useful to those who possess binocular vision. My method is as follows: I take two skiagraphs from two different points of view. In order to carry out the adjustment and movement of the Crookes's tube I use a horizontal bar with a scale upon the front of it graduated in millimetres with 0° at the middle point of the bar (Fig. 1). This bar slides up

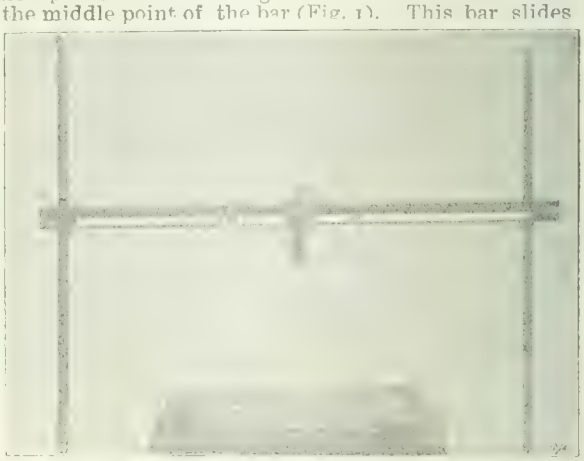


Fig. 1.—Showing the apparatus in position.

and down upon the two brass rods which rest upon the floor, each with a base similar to those in standard lamps. Further the bar can be readily detached at one end and opened like a gate so that a patient might conveniently lie under it to be photographed. There is a small holder for the Crookes's tube which slides horizontally along the bar, and there are two sliding checks, which can be fixed by means of a small screw at any desired points on the scale, thus enabling the tube to be quickly and accurately moved from position on one side of 0° to a corresponding point on the other side.

In case it is desired to adjust the Crookes's tube to any particular height, there is a small bar which slides vertically up and down and carries the tube with it and acts as a fine adjustment; a small thumb screw clamps it. There is a small spirit level fixed on the top of the carrier of the Crookes's tube. As far as this part of the apparatus is concerned, it is simply a convenient method of enabling the tube to be displaced in taking the skiagrams, and somewhat similar arrangements have been in use by other workers.

I shall now describe the method of taking the skiagraphs. In the first place, it is important to note that the kathodal rays in a Crookes's tube (with a proper vacuum) give rise to the Roentgen rays at the point where they first strike solid matter. Fig. 2 illustrates in a diagrammatic way what takes place in the tube. The kathodal rays converge to a point, and then, strange to say, go on in a perfectly straight line and strike the anode at the point *x*. It is at this point that the Roentgen rays originate. The position of this point is ascertained by observing the spot which begins to get red hot on the platinum anode. This, then, is the point we have to deal with. It is the point from which all the *x* rays diverge in straight lines into space; just as with a candle, instead of a Crookes's tube, in studying the shadows produced we would have to know that the light rays come from the flame, and it alone.

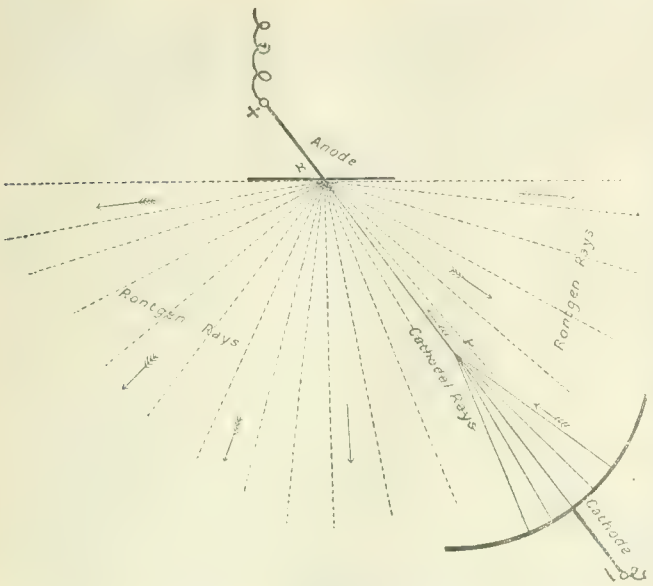


Fig 2.

First, then, the process is to measure as accurately as possible the height of the point of origin of the *x* rays above the photographic plate or film, and generally for all practical purposes the middle of the anode plate may be taken as the radiant point. The sliding holder with the tube is placed with one of its edges on o° of the scale on the horizontal bar. The check clips are adjusted on either side of the o° to the desired degree of displacement and fixed there, so as to allow of equal displacements of the tube to either side of o°. The amount of displacement of the tube does not seem to affect the accuracy of the results. I have worked with a displacement of 3, 7, and 10 cm. to each side of zero.

On the table below the tube there is a large square of vulcanite, with two fine wires stretched across it at right angles, and dividing it into four equal parts (seen in Fig. 1). It should be considerably larger than the largest photographic plate or film which is to be used, so that the plate or film covered with black paper in the usual way can be slipped beneath the cross wires. Or, instead of the vulcanite, two wires can be tied directly across the covered photographic plate. The adjustments now necessary are as follows: Put the tube holder at o°, and then with a small plumb line drop a perpendicular from the point *x* of the anode plate (say the middle of the platinum anode). The vulcanite plate is then placed so that the point where the wires upon it cross is just under the plumb-line needle; in fact, vertically below *x* (see Fig. 2). Further note that it must be so placed that one of the wires is parallel to the plane in which the tube is to be displaced—that is, it must be made to lie parallel to the horizontal bar. This can be done by mere inspection by looking along the edge of the horizontal bar, and seeing that the wire is parallel to it. Once these adjustments are made, the vulcanite sheet can be fixed to the table with drawing pins, and the instrument is ready for use at any time without further adjustments being necessary.

The distance of the *x* point on the anode vertically from the plate is carefully measured and recorded. The tube holder is now displaced to the previously fixed check clip on one side. The cross wires are lightly brushed over with some suitable dye. (The ink used for rubber stamps is good.) The plate (I prefer a film), covered as usual, is then slipped beneath the cross wires. The patient now places the part to be photographed on the plate, and a small object, opaque to *x* rays (a small coin answers well), is placed on one of the corners of the plate so as to mark a quadrant. The current is turned on and one exposure made. It is then stopped for an instant till the tube is pushed over to the other side of o°, to where the other check clip had been previously fixed, and then another similar exposure is given on that same plate and without the patient moving. When the patient raises the part from the plate he should carry the mark of the cross wires in ink on his skin, and it is important to make a small mark on the quadrant of his skin which corresponds to the quadrant of the plate upon which the opaque object (coin, etc.) was placed. This is clearly necessary to keep the parts and the negative in register.

[I may here remark parenthetically that in some cases it will be an advantage after the patient is placed ready to be photographed to drop perpendiculars by means of the plumb-line from the anode of the tube on the patient's skin. This can be done from o° and from the two points of displacement of the tube, and the points where plummet needle touch, the skin marked, the points can then be joined by a straight line. Another can be drawn at right angles from the o° point. It is clear that the cross so marked on the upper part of the patient's skin will exactly correspond to the cross left by the inked wire below: and as our method depends upon measurements taken from the cross lines, it is obviously an advantage to have an upper as well as the lower plane from which to work.]

The negative is at at once developed and fixed in the usual way, and then we find two shadows of each foreign body opaque to the Roentgen rays. If, for example, it be a bullet, we get two bullet shadows in the negative.

Of course from the above data and with this negative, one can, by means of mathematical formulæ, or geometrical drawing to scale, arrive at a correct knowledge of the position of the bullet. But the requisite knowledge is not always at hand; and I think that the method I have devised of dealing with the negative and will now describe, is simple and accurate, and within the reach of everyone who can use a foot-rule and a pair of compasses.

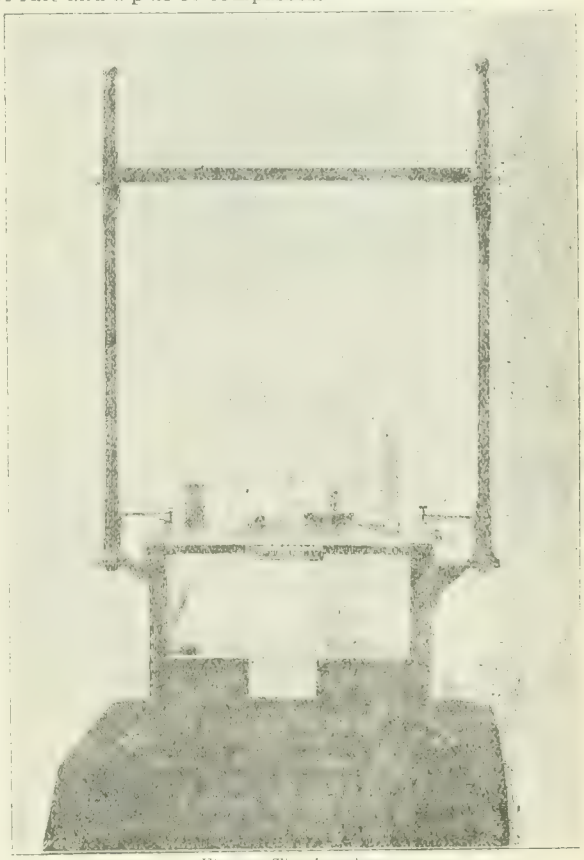


Fig. 3.—The Localiser.

Fig. 3 shows the apparatus which may be called the "localiser." It resembles a photographer's retouching desk. Upon an iron stand a piece of plate glass is placed horizontally and level—a mirror which can be adjusted so as to reflect the light from a window or lamp up from below.

There is a horizontal bar which slides up and down upon two vertical brass rods. On this bar there is a millimetre scale with a small notch at each millimetre mark. The 0° is at the middle point of this bar. On the glass plate there are two lines cut with a diamond at right angles to each other (just like the cross wires on the vulcanite plate) and this glass plate, which is movable and can be clamped, is so placed that the point where the lines cross is vertically beneath the 0° on the scale above, and the line on the glass running right and left (when facing the scale) is placed parallel to the edge of the scale. In other words they are in the same vertical plane. The scale is now raised or lowered so as to make the 0° on it precisely at the same height vertically above the negative as the anode of the Crookes's tube was from the photographic plate or film when the negative was being produced. The whole apparatus stands on three screws so that it can be levelled easily.

The negative being slightly washed after fixing can be at once placed upon the horizontal stage and easily adjusted so that the white lines produced by the cross wires are made to coincide with the cross line on the glass plate, care being taken that the marked quadrant is in the same relative position as it occupied when the photograph was being taken. As a routine practice I always mark the right upper quadrant as I stand facing the scale on the bar. (See Fig. 1). To protect the wet gelatine surface of the negative I place a sheet of mica or celluloid over it. Or, if it be a film, I place it face downwards and squeegee it. It thus remains fixed, and, the celluloid being so thin, its thickness may be ignored in the subsequent measurements.

It is important to remember that if the negative is placed on the stage with the gelatine surface downwards, the relations of the parts are reversed. And it should be so placed that the marked quadrant, which would be on the right and upper corner, if the gelatine surface was upwards, should lie on the left upper corner. However, as the patient's skin has the corresponding quadrant marked upon it, there should be no confusion.

Matters being thus arranged, it will be seen that I have really placed the negative under exactly the same conditions as it occupied when it was being taken. Under these circumstances all that is now required is to trace the path of the *x* rays which produced the negative. I do this in a very simple way. The distance on each side of the middle point (0° on the scale) to which the anode was displaced is known. Suppose it was 7 cm., I place a fine white silk thread in the notch 7 cm. to one side of 0° and I place another silk thread (red) in the notch 7 cm. to the other side of the 0°. Small weights are attached to one of the ends of each thread to keep them taut, while the other is threaded into a fine needle which is weighted by being fixed into small lead weights, in shape resembling a mouse. (See Figs. 3 and 4).

Now these threads can be used to show the path of the *x* rays which produced the negative. Suppose we are dealing with a needle in some part of the body. On looking down on the negative we find two needles, and it is not difficult to see that as the Crookes's tube was displaced horizontally in a line running right and left, that the shadow of the needle to the left was produced by the tube when displaced to the right, and *vice versâ*. Thus, if we place one of the threads on the point of the needle in one shadow correctly, it will indicate the path of the *x* ray that produced the shadow of the needle point (P, Fig. 4). Now if the other thread is placed on the corresponding point of the other needle shadow (P′, Fig. 4). Then it must follow that the position actually occupied by the point of the needle in question is precisely where the two threads cross at *c* in Fig. 4.

If we can measure the perpendicular distance of a point from three planes which are at right angles to each other—in short, if we can get the *x*, *y*, and *z*, we then know all about the position of the point in question.

This we can do at once with the point *c* in Fig. 4. First, the vertical distance from the negative to where the threads cross each other is measured. This is the distance of the point of the needle beneath the skin (of the patient), which rested on the photographic plate. We can measure this with an ordinary pair of compasses, or with a surface gauge, which is seen in Fig. 3, pointing to where the threads cross. This little instrument has its point placed against a vertical millimetre scale (which is also shown in Fig. 3), and the distance from any plane vertically to where the point of the pointer rests is read off at once. The small arrow (Fig. 4) indicates the marked quadrant, and the Figs. 1, 2, 3, 4 mark the corners of the negative.

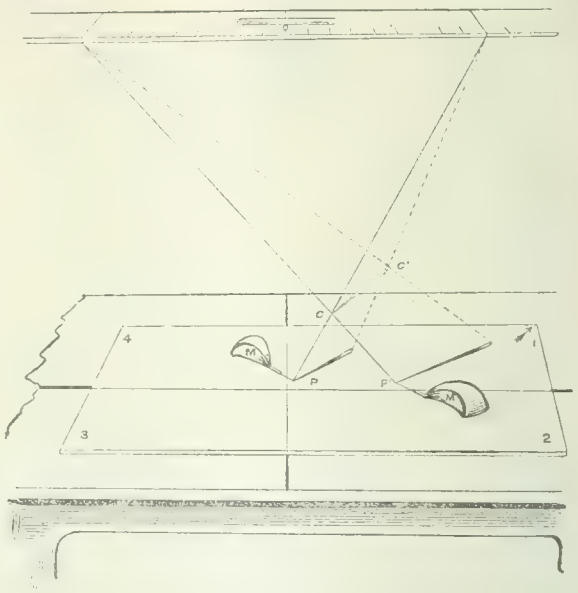


Fig. 4.

We next measure the vertical distances from the two vertical planes represented by the shadows of the cross wires to the point where the threads cross. An upright square is placed with its edge coincident with the shadow of one of the wires, and the perpendicular distance is measured with compasses from it to the point where the threads intersect. We now have obtained our *x*, *y*, and *z* of the point of the needle, and we note the result down as shown in Fig. 5. The arrows in Fig. 5 indicate the direction of the displacements of the Crookes's tube. We then proceed in a similar manner

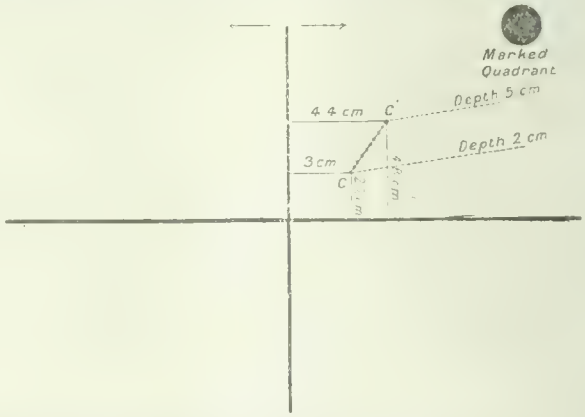


Fig. 5.

to ascertain the position of the eye of the needle c′ in Fig. 4. And the distance between c and c′ in Fig. 4 gives the direction and actual length of the needle.

From the measurements jotted down, as shown in Fig. 5, we can mark a line on the patient's skin in the same plane as the needle, and give the surgeon the exact depth at which each of its extremities can be reached by a vertical puncture.

Several pairs of threads might be used, and in this way the shape of the foreign body might be so far outlined; but it seems to me more convenient to use one pair. The point where they intersect can be fixed by the point of the surface gauge, and when the threads are moved to another position, the distance between their new point of intersection and

their former, where the point of the surface gauge stands, can be measured at once. In Fig. 4 the dark lines indicate the position of the threads—the dotted lines show the position they occupy when they are each directed to the eye of the needle, and the distance from c to c′ is the actual length of the needle; it also indicates the direction in which the needle lies.

The final result of the process is that we can draw an outline of the foreign body on the patient's skin, and give the depth below the skin of any of its parts, and this enables us to give the direction and depth at which it can be reached from any other point the surgeon may select. In applying the measurements made from the negative it is most important to remember that the quadrants are reversed if measurements are made from the negative with gelatine surface upwards. Hence it is preferable to use a film, and to place it with the gelatine surface downwards. I have described the method somewhat in detail, but it is really very simple, rapid, and reliable, and can be done very quickly after a few practical trials.

Triangulation by means of threads in the manner I have described is likely to be capable of wider application. I should hope it will prove useful in the measurement of bones, displacements, and especially in pelvic measurements. Provided fairly well defined double skiagraphs can be obtained (preferably on the same plate) then the measurements by my method cannot fail to be accurate. Mr. Paxton (of Messrs. Curry and Paxton, 195, Great Portland Street, W.) has given me valuable assistance in constructing the apparatus to carry out this method conveniently and quickly.

I shall conclude by referring to two cases in which successful localisation has been made by this method. Mr. Openshaw had a case at the London Hospital in which a needle was supposed to be embedded in a man's foot. An attempt had been made to find it without success. Dr. W. S. Hedley, who has given me most willing assistance throughout, brought the case to me for localisation. The first photograph of this case is shown in Fig. 6. (A small wire cross was put upon the sole of the foot to mark the former incision). It shows that there are two pieces of a needle in the foot. I applied my method to this case, and Fig. 7 shows the negative with the double shadows. The centre of the anode was 56 cm. above the plate, and the total displacement of the Crookes's tube was 14 cm., that is, 7 cm. to each side of the o°. The left upper quadrant is the marked one in the print.

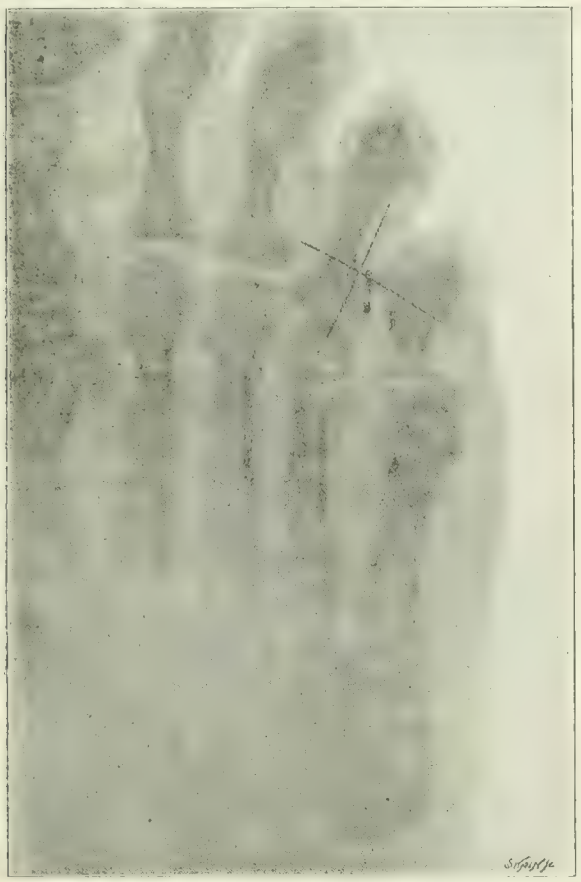


Fig. 6.—Skiagraph showing two pieces of needle and the position of the early incision is shown by the cross.



Fig. 7.—Skiagraph showing two exposures on same plate. Anode 56 cm. vertically from plate. Each exposure was equal and taken 7 cm. from the middle point.

The length of each fragment was correctly estimated, their positions outlined on the skin, and the depth of each extremity given. Mr. Openshaw, from the measurements and indications afforded, extracted the two pieces of the needle readily, and making only a very small incision.

I am informed that the first independent application of this method has been carried out by Professor Ogston, of Aberdeen, and his assistant, Dr. Irvine Fortescue. From my written description an apparatus was constructed which enabled them to locate a needle precisely in a woman's foot, and even to estimate its length correctly to a millimetre. It was successfully removed. It is of interest to note that the patient previously had had a skiagraph taken showing the presence of the needle, and had undergone two unsuccessful operations for its extraction. This case pretty clearly establishes the advantages of exact localisation preceding operative interference.

The Colonial Nursing Association.—The first annual meeting of this Association was held recently, under the presidency of Lord Loch. The object of the Association is to meet the difficulty in obtaining skilled nursing in many of the Crown Colonies and among British communities in foreign countries. It has already sent out two nurses to Mauritius and two to Cyprus, with encouraging results even from a financial point of view. Two nurses were about to be sent to Selangor, and applications had been received from Dominica, St. Vincent, St. Lucia, and Bermuda. British communities in foreign countries also have availed themselves of the scheme. Mr. Haddon-Smith, Colonial Secretary for the Gold Coast, said that the services of the nurses had been greatly appreciated on the West Coast of Africa.

PNEUMONIA: A MULTIPLE INFECTION.*

By J. W. MOORE, M.D., M.Ch., B.A.Univ.Dubl., F.R.C.P.I.,

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In a suggestive paper on Varying Infection in Pneumonia, which was published in the *New York Medical Journal*, October 9th, 1897, the author, Dr. W. H. Thompson, of the Bellevue Hospital, writes thus: "Of late years lobar pneumonia often fails to follow the definite course commonly ascribed to it. While its onset remains much the same in its suddenness, and in the rapid development of its acute symptoms, yet for some time I have declined to fix the probable date of the crisis or the duration of its subsequent stages. It may be that the advent in 1890-91 of the severest and most prolonged visitation of epidemic influenza recorded in history may have something to do with this change by contributing the influence of a mixed infection, but whatever be the cause, there is little doubt that acute lobar pneumonia now often departs more widely from its former characteristic course. In the histories of a series of 11 cases occurring consecutively in my winter service in Bellevue Hospital, in only 3 of them could it be said that they conformed to the old-fashioned type, with a definite crisis and a progressive change for the better afterwards, while in 3 a partial crisis only occurred, and in 5 none at all. In 8 out of the 11 the convalescence was very tedious, and marked by a variety of constitutional symptoms in which often the essentially toxic nature of the disease was strikingly indicated. Nothing could better illustrate than they did what a gain it was to modern pathology when lobar pneumonia was finally recognised as more an infection than an inflammation, and that its danger is due rather to systemic poisoning than to pulmonary damage. That infections by micro-organisms, however, should vary in their developments from time to time is what we should expect."

It will be observed from a close reading of the foregoing paragraph that Dr. Thompson inclines to the view that the varying phenomena presented by pneumonia in different cases probably depend upon a varying virulence of its supposed specific micro-organisms, the affection being regarded as an essential disease analogous to diphtheria, enteric fever, small-pox, or any other infective malady.

The micro-organisms in question are two: namely, (1) the micrococcus of sputum septicæmia (Fraenkel), micrococcus pneumoniæ crouposæ (Sternberg) or diplococcus pneumoniæ (Weichselbaum), and (2) the pneumococcus (Friedlaender) or bacillus pneumoniæ (Flügge). The former is now generally recognised as the usual agent in the production of acute croupous pneumonia, or, as I much prefer to call it, pneumonic fever. It was discovered by Dr. George M. Sternberg, now Surgeon-General of the United States Army, in September, 1880, in the blood of rabbits inoculated subcutaneously with his own saliva. Talamon, in 1883, demonstrated the presence of this micrococcus in pneumonic sputum, while Sternberg himself, in 1885, identified it with the micrococcus in the rusty sputum of pneumonia by comparative inoculation and culture experiments.[1] In 1886 Weichselbaum published the results of his extended researches relating to the presence of this micrococcus pretty constantly in the fibrinous exudation of croupous pneumonia. He obtained it in 94 out of 129 cases examined (54 times in cultures). To this observer we owe the name of diplococcus pneumoniæ, which serves to remind us that, as observed in the blood of inoculated animals, it is usually in pairs, consisting of oval or lance-oval elements (cocci), which are surrounded by a transparent capsule.

The second pneumonic micro-organism was obtained in 1883 by Friedlaender and Frobenius in pure cultures from the exudate into the pulmonary alveoli in cases of croupous pneumonia. Subsequent researches show that this microbe, in shape a short rod with rounded ends—hence called bacillus pneumoniæ by Flügge—is present only in a small proportion of the cases—9 times in 129 cases examined by Weichselbaum, 3 times in 70 examined by Wolf, who pursued his studies in Weichselbaum's laboratory at Vienna.

Emmerich has demonstrated the presence of Friedlaender's pneumococcus in the soil of a room in which there were many pneumonia patients. The diagnosis was rendered certain by inhalation experiments with cultivations on 18 mice, of which 8 died of pneumonia. "Hence," says Flügge, "the soil seems to be one of the places where the pneumonia bacilli can be preserved, and whence, in suitable cases, they may pass into human beings."[2]

Flügge also says: "Friedlaender's bacilli are, without doubt, not the only cause of the pneumonic process. We are already acquainted with pneumonias which are caused by aspergillus and actinomyces; it is *a priori* not improbable that also among bacteria there are several other species which can set up pneumonia." Now this is the very point I wish to enlarge upon in the present communication.

The subject may be considered from both an etiological—or, we might say, a bacteriological—and a clinical standpoint. Naturally, it is chiefly from the latter point of view that I have had opportunities of regarding the question. It is impossible, however, to ignore the bacteriological aspects of the case.

In support of Flügge's statement just quoted I propose to adduce evidence that the micro-organisms peculiar to erysipelas, to influenza, to tuberculosis, and to enteric fever may one and all give rise to a specific pneumonia or pneumonic fever. So also may Loeffler's diphtheria bacillus and the bacillus of malignant anthrax, as well as other pathogenic bacteria.

I.—Erysipelas.

In the form of this disease, which has been called "erratic" or "vagrant erysipelas" (erysipelas migrans)—the *erysipèle ambulant* of French writers—the attack may be protracted for one or two months. In such cases, not only every part of the surface of the body, but the whole tract of mucous membranes, and even the lungs and pleuræ, may in turn become affected. Dr. Peter,[3] of Paris, has drawn attention to the spread of erysipelatous inflammation from the pharynx to the respiratory passages, causing in sequence bronchitis, bronchiolitis (capillary bronchitis), and pneumonia.

In a case observed by me at Cork Street Fever Hospital many years ago, the converse of this happened. A man was admitted suffering from pneumonia migrans. After some days a blush of erysipelas showed over one shoulder, and spread thence down the back, with the interesting result that simultaneously the pneumonic symptoms subsided. So great was the impression made upon me by this case that ever since I have recognised the propriety of looking upon erysipelas pulmonum as a distinct species of the great genus pneumonia.

The teaching of Levy,[4] of Strassburg, that streptococcus pyogenes is an exciter at once of suppuration and of erysipelas is now generally accepted. This pyogenic bacterium was obtained by Fehleisen from the skin involved in cases of erysipelas in 1883, and by Rosenbach and Passet from the pus of acute abscesses within a year or two afterwards. Sternberg gives the following synonyms for streptococcus pyogenes: Micrococcus of erysipelas (Fehleisen), streptococcus erysipelatosus; streptococcus of pus, streptococcus longus (von Lingelsheim).

If, then, we admit the identity of the pus-producing streptococcus with that of erysipelas, we at once obtain a key to the occurrence of an acute pneumonia in erysipelas; for this very bacterium—the streptococcus pyogenes—plays a part that is second to none in the production of influenza pneumonia, to which I will now direct your attention.

II.—Influenza.

In the great epidemic of 1889-90 in Dublin, it was my lot to see fatal cases of influenzal bronchitis, pneumonia, pleuritis, and heart failure. In a paper on the epidemic, read before this Section on February 28th, 1890, I wrote as follows: "The pneumonia (of influenza), while producing the ordinary physical signs of acute croupous pneumonia, is often latent in its course, or accompanied by a profuse muco-purulent expectoration, with scarcely any rusty sputa. The ebbing of the strength in some of these cases in elderly people is something awful—it is often absolutely beyond control." The fact

* Read before the Medical Section of the Royal Academy of Medicine Ireland, on Friday, November 19th, 1897.

is that influenza, infrequently directly fatal, causes an indirect loss of life which is appalling, chiefly through the complications affecting the respiratory organs and the heart, which have just been mentioned.

It will be remembered that, after the great pandemic of influenza in 1889-90, German medical literature in particular was flooded with writings upon the clinical, pathological, and bacteriological aspects of the malady. In the *Dublin Journal of Medical Science* for May, 1890,[7] and August, 1890,[8] will be found reports on the bacteriology and pathological relations of influenza, which I prepared from current German medical literature. From these reports I cull the following facts:

Leyden, in a communication to the Medical Society of Berlin,[9] states that the pneumonias observed by him showed a peculiar course; severe pain in the side and dyspnœa were rarely noticed; the local process was not altogether typical; frequently it was necessary to watch for three or four days before any evidence of a localisation of the disease was forthcoming. Then a crepitating *rale* was heard over a wide area, and this perhaps the very next day would have disappeared to show itself in some other situation. Not very often a fine hepatisation occurred with clearly mapped-out dulness. Again, the typical sputum of pneumonia was often wanting. Bacteriological investigations revealed the presence of three kinds of microbes:

1. Diplococci, which represented the well-known pneumonia diplococci of Fraenkel.
2. Streptococci.
3. Staphylococci.

Leyden adopted the view that the forms of pneumonia are different: typical genuine pneumonias with deviating course; mixed forms, especially in those combined with pleural effusion; lastly, simple streptococci pneumonias.

Ribbert,[9] discussing the possibility of a causal significance of the streptococcus pyogenes in relation to the phenomena of influenza, alludes especially to the inflammations of the lungs, whose peculiar erysipelas-like spread, on which Finkler lays so much stress,[9] and whose anatomical relations admit of being referred back to the influence of the streptococcus. Ribbert points out[10] that, in contrast to ordinary croupous pneumonia, the cut surface of the hepatised lower lobe in 3 cases presented an almost smooth appearance, the exudation was soft, very rich in cells, and poor in fibrin (hypinosis). Cultivation experiments with the tracheal mucus, the lung tissue, the spleen, and the kidneys, furnished in 5 out of 8 cases the streptococcus pyogenes, or else the streptococcus erysipelatosus (which has been shown to be identical with the former), the presence of which microbe could be demonstrated in the sputum also of the influenza patients. His investigations on the whole yield the result that in all cases in which micro-organisms were at all capable of demonstration the streptococcus pyogenes was found. Only once was there in addition a coccus, which had a great resemblance to the diplococcus pneumoniæ, and probably represented a modification of the same.

Finkler[11] observed 45 cases of influenzal pneumonia, of which only 2 came under the description of typical lobar pneumonia, while the other 43 were regarded as cases of the disease which he has often described as "streptococcus pneumonia." Seven of his patients died, *post-mortem* examinations being made in 3 instances. He regarded the pathological condition as a preponderating cellular inflammation with participation of the interstitial tissue. The cellular nature of the inflammation, together with the pronounced tendency it exhibits to develop by spreading indefinitely, in Finkler's opinion justified him in describing this disease as an erysipelas of the lung. He points out that the resemblance of this form of pneumonia to erysipelas consists not alone in the anatomical characters of the inflammatory process, but also in the fact that both diseases depend on the presence of streptococci. Finkler looks upon this streptococcus pneumonia as a localisation of the exciting cause of influenza in the lungs. As to this last point, I should be more inclined to agree with Leyden[12] and Levy,[13] that the question is much more one of a secondary infection, for which the influenza merely laid the foundation. Certainly the discovery by Pfeiffer, in 1892, of the bacillus influenzæ in the purulent bronchial secretion, and by Canon in the blood of patients suffering from epidemic influenza, must be regarded as conclusive proof of the existence of a specific primary infection to which all other infections are accidental and secondary.

III.—Tuberculosis.

It is not my intention here to allude to acute tuberculous fever (in which the lungs may escape unscathed), on the one hand, or on the other to the local peripneumonic processes which accompany sporadic depositions of tubercle in the lungs in ordinary catarrhal phthisis. Nor will I refer to those cases in which in the wake of an acute primary croupous pneumonia the wounded lung falls a ready prey to a secondary infection by the bacillus tuberculosis, when this micro-organism finds a fertile soil in the caseating exudation of an unresolved pneumonia. These several conditions are all beside the present question.

My concern is with acute phthisis, or scrofulous pneumonia, and the so-called acute tuberculo-pneumonic phthisis. Dr. C. Theodore Williams thus describes acute phthisis[14]: "The patient, generally young, who may have had cough previously, is attacked with sharp pain in one side of the chest, quick pulse high temperature, the skin being quite burning to the ear of the auscultator, alternating with night chills and sweats. The general appearance betokens pneumonia, but the crepitation commences at the apices, extending to the whole lungs, and is not so fine and even as in pneumonia. The cough increases; the expectoration becomes opaque and purulent, containing quantities of lung tissue and swarms of tubercle bacilli; and the temperature assumes the intermittent type. The physical signs show at first gradual consolidation of both lungs, but later on indicate that excavation has taken place; and continues, the patient rapidly wasting and dying in a few weeks." In this disease the inflammatory nature of the lesions in the lung or lungs, and the rarity of miliary tubercle, are among its characteristics.

Acute tuberculo-pneumonic phthisis likewise presents consolidations in the lungs of a pneumonic origin, but tuberculisation, as well as pneumonia, exists.

In both these varieties of "consumption" we have examples of true pneumonia resulting from an infection by the bacillus tuberculosis of Koch.

IV.—Enteric Fever.

It is well known that pneumonia is more commonly observed as a complication in enteric fever than in typhus. Murchison noted it in 13 out of 100 cases, and Austin Flint (according to Bartlett[15]) in 12 out of 73 cases. It commonly occurs in the third or fourth week, but may usher in the disease. In this latter case its presence is probably an indication that the enteric fever poison has entered the system through the lungs. It is most commonly a lobular pneumonia, but occasionally it occurs under the form of ordinary croupous pneumonia.

It is indeed true that Eberth points out[16] that anatomical investigations had up to 1881 afforded no evidence of the admission of the bacillus typhosus through the lungs. With this Gaffky[17] does not agree, for he considers it highly probable (or, at least, the possibility cannot be contested) that the lungs may occasionally represent the seat of invasion. Eberth himself quotes a case observed by W. Meyer,[18] of Berlin, in which death ensued on the second day of illness. In this case there were found at the necropsy hyperæmia of the lungs, spleen, and kidneys; in the lower portion of the ileum marked swelling of the solitary follicles and Peyer's patches. Microscopical examination revealed a very exceptionally large deposit of Eberth's bacilli in the cells of the submucosa and in the intermediate muscular layers of the intestine. Apparently they were not found in the lungs, notwithstanding their hyperæmic condition.

That, in infective diseases in general, infection may occur through the mucous membranes of the respiratory tract has been demonstrated, according to Sternberg,[19] by several bacteriologists—especially by Buchner, who caused mice and guinea-pigs to breathe an atmosphere containing in suspension a powder consisting of dried anthrax spores mixed with lycopodium powder, or pulverised charcoal. In a series of 66 experiments, 50 animals died of anthrax, 9 of pneumonia, and 7 survived. Microscopical examination of sections and culture experiments showed that the lungs were extensively invaded. It may be objected that these results do not bear

on infection by the bacillus typhosus, which is believed not to assume the spore form. Positive results were, however, also obtained by Buchner with cultures of the anthrax bacillus not containing spores, which the animals were made to inhale in the form of spray. But in this case a considerable quantity was required, and a sero-fibrinous pneumonia was usually produced, as well as a general infection. "That man may be infected with anthrax by way of the respiratory organs," writes Sternberg,[20] "seems to be well established. In England the disease known as 'wool sorters' disease' results from infection in this way among workmen engaged in sorting wool, which is liable to contain the spores of the anthrax bacillus when obtained from the skin of an animal which has fallen a victim to this disease. That infection occurs through the lungs is shown by the fact that these organs are first involved, the disease being, in fact, a pulmonic anthrax."

Even if we take it as not yet proved that infection in enteric fever may occur by way of the lungs, there is no doubt that a close correlation exists between this disease and that variety of acute pneumonia, or pneumonic fever, to which the term "pythogenic pneumonia" has been commonly applied since 1875, when Dr. Grimshaw and I read a paper on the subject before the Medical Society of the College of Physicians of Ireland.[21] Towards the end of October, 1882, the following remarkable outbreak of disease came under my notice.

On the 12th of that month a lad, aged 13, was admitted into Cork Street Fever Hospital from 6, Malpas Street, Dublin, suffering from croupous pneumonia. Malpas Street is very unhealthy; the houses are old and dirty, ill-drained and dilapidated. The street runs down to the bottom of a valley, through which a small tributary of the Poddle river flows sluggishly. The district is a prolific hotbed of disease. On October 31st the boy's father (J. C.), a boatman, aged 36, came in with the same disease. On the 20th of the same month two girls, both aged 14, were admitted to the Meath Hospital in enteric fever—one from 11, Malpas Street, and the other from No. 13. On November 27th a girl, aged 20, was admitted to Cork Street Hospital in enteric fever from 7, Malpas Street, next door to the house from which the two cases of pneumonia had come a few weeks previously. On December 12th, J. C., aged 36, was again admitted to the Meath Hospital from 6, Malpas Street, with "renal dropsy." It was he who suffered from pythogenic (?) pneumonia in the previous October as narrated above. Another coincidence occurred in March, 1883. On the 18th of that month W. N., aged 19, came into Cork Street Hospital from 6, Malpas Street, in an attack of "febricula," and the following day A. L., aged 27, was admitted from the same house with left basic croupous pneumonia.

A very similar instance of the correlation existing between enteric fever and pneumonia came under my observation in the autumn of 1881. Four cases of illness occurred in a training college in Dublin within a few weeks. Two of the four patients suffered from true enteric fever; a third, from an attack of acute gastro-intestinal catarrh, or, as some may think, from an abortive enteric fever; and a fourth from acute pneumonia, reminding one of Laennec's "epidemic pneumonia," which in recent times has received the names of "sewer-gas pneumonia" and "pythogenic pneumonia." The drinking water was proved by Sir Charles A. Cameron to be the source of the sickness in all four cases.[22]

In November, 1891, there came under my care in the Meath Hospital a young woman with characteristic typhoid stools, and whose urine gave a striking reaction with Ehrlich's diazo-test. Her illness, however, had commenced with right apex pneumonia, with rapid breathing, cough, glutinous expectoration (not indeed deeply coloured when the patient was first seen by me), dulness on percussion, and, finally, the most typical crepitus redux.

One of the reasons which weighed with me in undertaking to make the present communication to the Royal Academy of Medicine was the remarkable tendency to a pneumonic element in enteric fever which has shown itself in Dublin during the present season. It will be remembered that the end of August and beginning of September proved both wet and cold, while the air temperature continued below the average through the greater part of September.

These atmospheric conditions were doubtless the prime reason why the epidemic enteric fever assumed the so-called thoracic form. I venture to submit brief notes of two cases in illustration of this statement.

CASE I.—R. A., aged 40, a bootmaker, was admitted to the epidemic wing of the Meath Hospital, from New Street, on September 17th, 1897, on the eighth day of of his illness. His evening temperature was 104·3°, pulse 100, respirations 32-36. When I saw him next morning I found him suffering from acute catarrhal laryngitis; the base of the left lung was quite dull, with the other signs of consolidation. He was expectorating a viscid sputum from which the rusty colour was already quickly disappearing. There was active diarrhœa, the daily number of motions varying from three to seven. Forty-eight hours after admission, profuse intestinal hæmorrhage occurred, after which the attack ran the usual course of a typhoid fever, with laryngeal and pulmonary trouble ("laryngotyphus" and "pneumotyphus"). Laryngeal examination by Dr. Richard Lane Joynt revealed a severe catarrh. The chart is a characteristic one of enteric fever, but the rapidity of the respirations sufficiently indicates the severity of the pulmonary lesion. In convalescence the patient suffered from boils as a secondary infection.

CASE II.—J. B., aged 22, a domestic servant, was admitted to the epidemic wing of the Meath Hospital, from Ranelagh, on September 15th, 1897. She was then a week ill. She was sent in as suffering from acute pneumonia, and the physical signs of left basic lobar pneumonia were present. She breathed from 40 to 44 times a minute, while her pulse at first did not exceed 100, although some days later it rose to 120. The temperature was only 101° on the evening of her admission, but gradually rose until the evening of the twelfth day of her illness, when it reached 104.3°. For several days the patient's condition was extremely unsatisfactory, and in appearance and physical signs the case strongly resembled acute phthisis, or "scrofulous pneumonia." However, she gradually emerged from the fever, the evening spiking of the temperature subsiding after the twenty-fourth day. She left hospital for the Convalescent Home at Bray, on October 22nd, the forty-fifth day from the commencement of her attack. At that time the state of her left lung remained far from satisfactory, though it was fast improving. There was still dulness on percussion over the base, the breath and voice sounds were feeble, and some effusion still existed in the pleura.

These cases are types of the form which enteric fever assumed in the unseasonably cold after-summer of the present year. That the lung attacks were the outcome—direct or indirect—of a specific poisoning by Eberth's bacillus can scarcely be doubted. This poisoning may, it is true, have been secondary to a localisation in the intestine, although the fact that in each case the lung trouble occurred at the outset of the fever points with much force to a primary localisation in the lungs. However that may be, the presence of an acute pneumonia in each case must be conceded.

Drs. Muir and Ritchie, writing in 1897,[23] say that most observers will agree with Gaffky in attributing any failure to find typhoid bacilli in the organs of a typhoid patient to the difficulties of the search.

These writers further state that in the lungs there may be patches of congestion and of acute bronchopneumonia. In these, typhoid bacilli may sometimes be observed, but evidence of a toxic action depressing the powers of resistance of the lung tissue is found in the fact that pneumococcus is frequently found in such complications of enteric fever.[24] As to this, I repeat that the very early appearanee of pulmonary trouble in a certain proportion of cases which ultimately prove to be undoubtedly enteric fever is altogether in favour of a primary infection with the bacillus typhosus by way of the lungs. A pneumonia brought about through lessened resistance to the specific micro-organisms of this disease caused by the toxic action of the typhoid bacillus on the system in general, including the organs of respiration, would be much more likely to develop in a more advanced stage of the fever.

In conclusion, I venture to submit that there is clinical evidence to show that a true pneumonitis may occur in any one of the four diseases with which this communication deals—that is to say, erysipelas, influenza, tuberculosis, and enteric fever. Further, it is reasonable to suppose that in each case the pneumonitis is directly due to a localisation of the specific poison of the disease in the lung, whether that poison be a micro-organism itself, or a toxin derived therefrom. Indeed, in respect of three out of the four diseases named, the evidence, from a bacteriological standpoint, in favour of such a view is incontrovertible.

As regards enteric fever, the influence of season and weather in determining pneumonic trouble is, no doubt, considerable: but it cannot be accepted as paramount or exclusive. And, if it is objected that the bacilli typhi abdominalis of Eberth have not as yet been often found in the lungs or sputum of enteric fever patients, I am justified in attributing this to the comparative infrequency with which, so far, search has been made for these bacteria in the pulmonary organs. Here, in any event, an almost untrodden path of investigation lies open to the adventurous footsteps and the keen perception of our Irish pathologists and students of bacteriology.

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A FATAL CASE OF THYROIDECTOMY.

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Surgeon to the Royal Infirmary, Liverpool.

A CONSIDERABLE interest attaches to a certain remarkable train of symptoms liable to supervene upon operations on the thyroid gland. With me these have occurred in cases in which the operation had been completed in the most satisfactory manner, and in which the wounds have been perfectly healthy, so there can be no doubt that the symptoms were due to a disturbance of the gland, and were not incidental to the wound. When the first case occurred, which was the one ending fatally, I had not seen anything of the kind published, and formed my own conclusions independently. Since then I have had other cases, and some have been published by Mr. Victor Horsley and Dr. Rodocanachi, from all of which it appears clear that the symptoms are due to the absorption of thyroid secretion through the wound.

The case is shortly as follows: A. M., aged 15, a slim, tall girl, had a rather large parenchymatous goitre. She was a native of Liverpool, but her father was a south-countryman, and an aunt has a goitre. The tumour was soft, but not cystic, and did not pulsate. It involved both lobes about equally. The heart was excitable, the impulse diffused, and there was a soft systolic *bruit* at the apex. The pulse was 104. There was dyspnœa on exertion. She was said to be a good useful girl at home, and, though of the thin nervous type, appeared to be quite strong enough to bear a serious operation. On December 3rd I removed the left lobe and isthmus of the gland. The operation was perfectly straightforward, and the patient left the theatre in excellent condition. All details as to dressings, drainage, etc., were carried out in the usual manner. During the night she became restless and uneasy, an irritable cough set in with a mucous rattle in the throat. The temperature was 100°, the pulse 130, and the respirations 26 and laboured. On the morning of December 4th the same condition was present; the wound was dressed and appeared perfectly healthy. In the afternoon the temperature rose to 103°, and fearing that the ether inhalation had set up bronchitis, steam and eucalyptus vapour were used, with stimulants and extra nourishment. Subsequently the restlessness, anxiety, distressed breathing, and frequency of the pulse increased, and the temperature was generally between 101° and 102° F. There was no further evidence of bronchitis. She took nourishment and stimulants well, but notwithstanding the most devoted care on the part of my house-surgeon, Dr. Badger, and the sister of the ward, the Graves's disease-like symptoms increased in severity, and the pulse became uncountable, and she died on December 6th, just two and a-half days after the operation. Small doses of morphine were given a few times, and on each occasion were followed by a little sleep. Probably, as observed by Dr. Rodocanachi, it would have been better to have used this drug more freely. A necropsy was made. In regard to the wound, there was a want of healing action, and the fluid contained in it was of a very watery character, but there was nothing suggestive of septic changes. The divided surface of the thyroid looked quite fresh, as though repair had not yet commenced. The bases of the lungs were congested, and there was a little tenacious mucus in some of the tubes, but no general bronchitis. The heart and all the other internal organs were healthy, except the liver, which was very fatty and perfectly nodular throughout from idiopathic cirrhosis. At first I thought this remarkable liver might be sufficient to account for the death of the patient, but soon dismissed the idea, for on reviewing the whole circumstances I could come to no other conclusion than that the symptoms were due to the absorption of an excessive amount of thyroid secretion, but how this came about, and what I could do to prevent it, did not at once occur to me.

A fortnight later we had another object lesson. A pale, sallow, nervous woman, aged 43, with rather chronic Graves's disease, was sent to me for operation by Dr. Abram, as she had undergone no improvement after a course of medical treatment. The thyroid was only moderately enlarged, and exophthalmos, though present, was not marked; otherwise the symptoms were usual.

On January 18th, the patient being in fairly good condition, I removed the right lobe of the gland without difficulty, and with practically no loss of blood; in fact, the operation could not apparently have been more satisfactory. For several hours the patient was very comfortable; but during the night she became restless with quickened respiration. The temperature was 101°, the pulse 128. Next morning she was a little better, and on changing the dressings the wound looked well. Later in the day the restlessness, anxiety, and irritable cough increased, and the pulse and respiration became more frequent. The ward sister was already anticipating a repetition of the last case, and it seemed to me only too probable that her fears were well grounded. I again removed the dressings. There was now no blood stain, but the wound was discharging freely a clear watery fluid, and on cutting the stitches it was seen to be filled with the same. I imagined that this fluid, or at any rate a considerable part of it, was derived from the thyroid, and wanted Dr. Abram to test it for me; but it appears that there is no chemical means of recognising thyroid secretion. However, acting on the belief that the patient was suffering from a sort of traumatic thyroidism, I left the wound open, but packed it to the bottom with dry salicylic wool. The opening up of the wound was followed by a marked improvement, but only for a time. During the night—the second night after the operation—she became worse than ever; the temperature was 104.8°, the pulse almost uncountable, the respirations 36. I removed the plug of wool, and found it saturated with watery discharge, replaced it with dry wool, and left instructions that it was to be changed as often as it became at all moist, which proved to be about every two hours. The following day, January 21st, she was better in every way. On January 22nd the temperature was only just above normal, and continued so until convalescence was established, but the pulse and respiration went down more gradually. We had no further anxiety about her.

These two cases were the twenty-fifth and twenty-sixth operated on for thyroid enlargements, and I have done about ten since. None of the others were at any time dangerously ill, but I can see now that a few of them suffered from the same condition in a minor degree, and at about the same time, I therefore set myself to try and discover what could be the reason that an operation which at first appeared so safe should all at once have become so uncertain. Upon looking back, this explanation occurred to me. In the earlier operations I handled the gland very little, tying the vessels on each side before dividing them, and ligaturing the isthmus before separating the lobe. The operations then were longer, and more blood was lost. Indeed, in Graves's disease the hæmorrhage was sometimes alarming, for in these cases the blood wells out of the gland as if it were a saturated sponge. Gradually I came to grasp the gland firmly in the left hand until the thyroid arteries were secured, and in this way found that all serious bleeding was readily avoided. About the same time I gave up ligaturing the isthmus, as it appeared unnecessary. Now in these two changes it was probable that the danger lay. From barely handling the gland it had come to be firmly squeezed during most of the operation, and from securely tying the isthmus it had come to be cut straight across—and it must be remembered that in enlarged thyroids the isthmus is frequently upwards of an inch in diameter. I take it that squeezing the gland may help to liberate secretion contained in the follicles, and that the same may escape into the wound from the lymphatics in the divided capsule round the severed isthmus, the lymphatics being the normal channel for absorption of the secretion. If the condition from which these patients suffered is to be regarded as thyroidism, and not, as Mr. Horsley has said, athyroidism, then every possible source of contamination of the wound with thyroid secretion should be avoided.

I cannot recommend that the safe grasp of the gland should be altogether given up; but I believe it may be rendered harm-

less by first ligaturing the isthmus, and exercising caution in the amount of compression. My rule now is to ligature the isthmus early in the operation, handle the gland carefully, and at once, on the barest suggestion of the train of symptoms referred to, to open up the wound, irrigate it, and fill with dry, aseptic, absorbent wool. It might be better to begin by severing the isthmus, and then remove the lobe from within outwards: but probably if one only has in mind the danger of forcing an excess of the secretion into the blood, or allowing it to escape into a fresh wound, there is no great difficulty in avoiding it. Hitherto one has not recognised the danger, and, if I have somewhat exceeded the space ordinarily alloted for the narration of a case, it is because it appears to me very important that all who undertake operations on the thyroid for exophthalmic or soft parenchymatous goitres should fully recognise this insidious and fatal complication.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ERYTHROL TETRANITRATE IN ANGINA.

PROFESSOR BRADBURY, of Cambridge, published in the BRITISH MEDICAL JOURNAL, April 10th, 1897, some notes of a case of angina pectoris, treated by trinitrine, and subsequently by erythrol tetranitrate. Having myself watched the case from its inception, a further report may prove interesting. To avert the paroxysms it became necessary to administer the remedy in steadily increasing doses. The patient takes now half a drachm in the day, that is, 6 grains at 6 A.M., to enable him to dress at 8 A.M.; six more at 10 A.M., 2, 6, and 9 P.M., together with $\frac{2}{5}$ gr. of trinitrine at 10.30 P.M. to enable him to ascend the stairs and get to bed. He is in perfect health, barring the seizures, which are always at hand, if a tabloid chance to be omitted. No physiological effects whatever have at any time been manifested. As I apprehend that these doses of erythrol are unwontedly large, possibly unprecedently, the fact may be worthy of record.

It is unfortunate that the preparation of this remedy is so costly, rendering it, as chemists admit, quite prohibitive to the poor.

Hastings. EDWARD GARRAWAY.

DISLOCATION OF THE UNGUAL PHALANX.

THE case of the above dislocation described by Dr. Bays, recalls to my mind an instance which came under my notice and treatment a few years ago. The circumstances attending it were almost identical with those in Dr. Bays's case—a blow from a cricket ball falling upon the extremity of the extended finger; and the displacement was similar. The third or fourth digit was the one affected in my case—I forget which. The injury was a fortnight old when the patient came to me, having received treatment from a chemist who failed to recognise the dislocation; it was, however, easily reduced by traction and pressure. I am inclined to think that the injury is commoner than surgical writers would lead us to infer. Compound dislocation is certainly not rare.

HAROLD DOWNES, L.R.C.P., L.R.C.S.E.

Burnham, Maidenhead.

I CAN record a similar case which occurred about 18 months ago. The only difference is that in my case the base of the ungual phalanx rested on the palmar surface of the head of the second phalanx. The dislocation was caused by a blow on the end of the middle finger of the right hand. It was easily reduced, and gave little further trouble. It is possible that the injury may be of fairly frequent occurrence, but thought so trivial that it may not have been reported.

Rochdale. D. RICHMOND, M.B., C.M.

SIX or seven weeks before I saw her, a patient had tripped in the street, and struck the points of her right fingers forcibly against a wall as she fell forwards. The proximal end of the terminal phalanx of the middle finger rested on the dorsal aspect of the head of the second phalanx; but there was no rotation or lateral displacement of the shaft of the bone. Reduction was a matter of some difficulty, but to retain it in its proper position was of greater difficulty still. The splints could not be abandoned for some weeks. After it was possible to do so the bones retained their normal position, but the movement of the joint could not be fully restored, a considerable degree of ankylosis supervening.

Ash, Dover. E. A. C. BAYLOR, M.D.

ON October 15th, 1896, some patients of the asylum were employed polishing the floors with large rubbers. One—a heavy woman—slipped and fell with her arm beneath her. In falling the left thumb was gripped by the iron joint of the rubber of the patient next her. The others, hoping to aid, pulled the rubber away. Her arm being fixed by the weight of her body, this resulted in the base of the ungual phalanx being forced on to the posterior surface of the head of the proximal phalanx. There was no external laceration, and the most careful examination failed to elicit symptoms of fracture. Having failed to reduce it, I had it fomented till the evening. In the evening I succeeded in reducing the dislocation and applied splints. The joint was swollen and tender for a time, but soon returned to its normal condition.

DAVID BLAIR, M.A., M.B., C.M.

County Asylum, Lancaster.

ASEPTIC VACCINATION.

DR. RALPH W. LEFTWICH'S note in the BRITISH MEDICAL JOURNAL of December 11th on aseptic vaccination reminds me that some years ago I began to vaccinate aseptically, but in a different way from the plan described by him. I first sterilised the child's arm for some distance around the vaccine site, and, after introducing the lymph, covered the skin over and around the abrasions with hot boric gelatine. This rapidly set into a transparent film, through which the progress of the vaccine vesicles could be observed.

On the eighth day the film was quite easily peeled off. The vesicles were then dusted over with boric acid powder, after which another, and in this case thicker, layer of the gelatine was applied, and while setting was dabbed with cotton wool in the manner practised by dermatologists. The treatment was uniformly and eminently satisfactory.

On removing the first film on the eighth day the vesicles were beautifully developed, without the least trace of the surrounding zone of redness which has hitherto, I think erroneously, been supposed to be a normal accompaniment of vaccination, while in the majority of cases the second application remained on until the scab was ready to drop off. Occasionally the contents of the vesicles oozed through the film of gelatine, necessitating a second dusting of boric powder. The plan prevented the introduction of outside septic matter, and very largely reduced the irritability and feverishness commonly associated with the course of vaccination.[1]

Latterly I have seldom had occasion to practise vaccination, but Dr. Leftwich's letter induced me to publish my experience. As he truly remarks, nearly all the evils incidental to vaccination are caused by infection of the vaccine vesicles by septic matter, and are to a very great extent preventable. In view of the very great outcry against compulsory vaccination I would respectfully suggest to the Local Government Board the expediency of recommending the adoption of the plan I have described, or of some other equally simple method of excluding sepsis in the performance of this little operation. The boric gelatine was made for me by Mr. Eardley, Glossop Road, Sheffield.

SINCLAIR WHITE, M.D.,
Honorary Surgeon, Sheffield Royal Hospital.

IT has always appeared to me not less important to attend to aseptic details in performing a vaccination than in doing any other surgical operation involving a lesion of the skin. For the last three years the following has been my regular practice:

I first cleanse the outer part of the upper arm with a weak antiseptic solution (1 in 3,000 perchloride of mercury), and

[1] The boric gelatine is made by adding a drachm of boric acid to an ounce of gelatine, liquefied by heat. It is very cheap, and can be easily made ready for use by immersing the pot containing it in boiling water for a few minutes.

this I wash away with pure (boiled) water, and dry the arm with sterilised wool. The lancet I also sterilise by holding it in boiling water or heating it in a spirit flame and allowing it to cool. The tube of calf lymph is then unsealed and a sufficient quantity of the lymph blown on to the end of the lancet. This is deposited in the form of four lymph drops at the usual sites on the arm (that is, around the insertion of the deltoid), and the skin is then incised in four or five places through each lymph drop. The arm is then allowed to dry in the air (the risk of infection from exposure of the scratches to the air for a few minutes can, I think, practically be disregarded). When dry a piece of sterilised gauze is applied well over the vaccinated area, and a pad of antiseptic (sublimate) wool placed outside this, the whole being secured by a strip of strapping obliquely circling the arm, and, finally, by a few turns of calico bandage. The mother is directed to leave the dressing undisturbed, and bring the child for inspection on the eighth day, or sooner if anything seems at all wrong. On the eighth day the dressing is changed and a fresh dressing put on for another week, with the same instructions.

In the majority of cases the formation of typical vesicles proceeds apparently with little or no disturbance to the child, there is little, if any, pyrexia, and the child eats and sleeps as usual. On the eighth day four characteristic vesicles are exposed, and there is but slight surrounding inflammatory areola, and no induration or reddening of the intervening areas of the skin, and scarcely any soreness. The dressing usually comes away without trouble. I do not prick the vesicles. During the second week the pocks dry up; healing by scabbing occurs, and by the fourteenth to sixteenth day the dressings usually can be discarded.

Exceptions must, however, be recorded: 1. In a few cases the "vaccination has not taken." I occasionally have had to repeat the operation thrice, but in one case only were the whole three attempts failures, and here, I have reason to believe, the patient was insusceptible. 2. In spite of all precautions and instructions, in a few cases the little patient is brought on the eighth day with the bandages filthy and disarranged, and the pocks in a more or less inflamed and septic state. Needless to say this would not have been bettered by the preliminary omission of the aseptic precautions herein described, but even in these cases antiseptic dressings or fomentations, frequently repeated, have quickly effected improvement, and in a week or so healing by granulation has been completed.

P. R. Cooper, B.Sc.Lond., M.B.Lond. and Vict., F.R.C.S.Eng.
Bowdon, Cheshire.

I presume that the majority of vaccinators hold it desirable to prevent the access of sources of fresh infection to the developed vesicles, though it appears that such ideas are rarely put into practice. It must be patent to even a casual observer, that the dead, or almost dead, secretions which are found in or around the developed or maturing vesicles form the best media imaginable for the cultivation of saprophytic organisms, and especially for the group of micrococci connected with cellular and cellulo-cutaneous inflammations (S. pyogenes; S. erysipelatosus, etc.), and their growth easily originates in the tissue already diseased, the various inflammatory disorders which they are able to set up, and which are so commonly observed after vaccination. Personally, I have followed a plan which has had conspicuous success, not only in removing the dread of "bad arms," but also in giving comfort to the patients throughout the whole course of maturation and defervescence, and although in principle it differs but little from Dr. Leftwich's method, I consider it more simple and equally effective.

After washing the arm with soap and water, and carbolising the area to be treated and its surroundings, vaccination is performed with an aseptic needle. After a brief "drying" period, a circular piece of cyanised gauze is placed over the marks, this being of sufficient size to cover all the spots and allow a suitable margin. Upon this a layer of absorbent antiseptic wool of the same size is placed, and above this three or four more layers of gauze. I now cut a single layer of gauze sufficiently large to overlap the above for about a-quarter of an inch all round, and fix the margin of this to the skin with flexile collodion. As will be seen, this dressing is at once readily applied, aseptic, and does not offer any edges which might catch in the garments of the patient, or become loosened by moisture, neither is a bandage necessary. The dressing may need reapplying after seven or eight days.

Since my adoption of such rational treatment, in no case can I recall that a patient has ceased his occupation owing to vaccination for even the briefest period.

A. D. Griffiths, M.D.Brux., M.R.C.S., L.R.C.P.Lond.
Cinderford.

A SOURCE OF DIPHTHERIAL AND SCARLATINAL INFECTION.

That diphtheria is largely if not mainly propagated by schools is now generally recognised by all who have come much into contact with it. The possibilities of communication of the infection from the throat of one child to another through the medium of the atmosphere of the schoolroom are sufficiently obvious to account for a good deal of diffusion of the disease in this way. But my attention has recently been drawn by the very intelligent mistress of a Board school in my district to a practice which obtains, in infant schools especially, which I suspect is accountable for a good deal of obscure communication of the disease. It is that of children licking their slates for the purpose of cleaning them. A more effective way of diffusing the infection could hardly be designed. A child with unsuspected infection in its throat licks its slate; the slate, after being dried and used, is handed next day to another child, previously unaffected, who licks it anew, and so on. The process is quite ideal in its simplicity. One way of checking it would be to allocate a special slate to each child; but there appear to be practical difficulties in the way of doing this. Another is to immerse the slates daily in boiling water; but it might also be difficult to ensure this being done. Or, perhaps more easily, they might be immersed in a dilute solution of carbolic acid. But, whichever of these courses be adopted, or if none of them be, the practice itself of licking the slate should be sternly prohibited as being filthy as well as dangerous, and above all whenever any throat mischief is prevalent.

It is obvious that the same method of communication will probably account for the diffusion of the infection of scarlatinal sore throat.

Gloucester. Francis T. Bond, M.D.

TRAUMATIC TETANUS: RECOVERY.

On November 9th, 1897, I first saw S. W., aged 27. He complained of inability to open his jaws and of painful spasms shooting round the side, starting from the mid-dorsal region of the spine. Three weeks previously while pulling mangolds in the field he scratched his right thumb and left index finger, in both cases just below the matrix of the nail; the wounds inflamed and discharged matter, but eventually healed well. He felt quite himself till November 4th (five days before my first seeing him), when he began to notice a difficulty in opening his mouth.

I found that the spine was strongly arched forwards and that there was some rigidity in all his limbs. Realising the importance of speed, I immediately procured some antitetanic serum (British Institute of Preventive Medicine). He had the first injection of 10 c.cm. under the skin of the abdomen at 4 P.M., and this was repeated at 11 P.M. the same night. The following days he had similar injections night and morning until he had nine in all.

Not noticing any decrease of spasm the serum was then stopped, and he was given chloral hydrate gr. xx. every four hours. From commencing the chloral the spasm began slowly to decrease, and sleep, which had hitherto been totally absent, soon followed.

The only drawback to the large doses of chloral was the delirium which it produced, and this necessitated its withdrawal and replacement by doses of morphine gr. $\frac{1}{4}$ hypodermically, repeated as seemed necessary. The highest temperature was 103° F. and the normal line was not reached till the twentieth day of the disease, when all spasm was practically gone.

Although I have stated that no noticeable remission of spasm occurred during the administration of the serum, I do not wish it to be inferred that the serum had nothing to do with the successful issue of the case. I consider the serum

kept the man alive, and that without it he would not have lived long enough for the chloral to do him any good. Amputation of the wounded fingers was suggested, but not approved of by the friends.

He was fed on milk and fluid beef, and constipation was treated with calomel (5 gr.).

Keynsham, near Bristol. GEO. WILLETT, M.R.C.S.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

EVESHAM COTTAGE HOSPITAL.

(Under the care of Mr. A. H. MARTIN, M.R.C.S.E., L.S.A.)

L. S., aged 84, was admitted on June 13th, 1897, for malignant disease of the hand, which had existed for three or four years, and had involved all the soft parts, and extended down to the metacarpal bones. The pain was very acute, and no sleep could be obtained previous to admission without full doses of opium.

The forearm was amputated on June 16th by anterior and posterior flaps in the middle third; all bleeding was controlled by the application of Esmarch's bandage. She was completely anæsthetised by chloroform, which she took without any bad result. After the operation the flaps were brought together by five or six silkworm thread sutures, the wound was dusted with iodoform, and then a solution of boro-



glyceride applied. The dressings were removed four days after the operation, when it was found that primary union had taken place, and on the day week from the operation everything had completely healed. The patient left the hospital in three weeks much improved in her general health, and to all appearance quite well.

NOTE.—I send a photograph of the patient taken by my friend, Mr. H. B. Pollard. I would particularly draw attention to the great age of the patient for such an operation, and the remarkable rapidity with which she recovered. I should add that there was not the slightest sign of any enlarged gland to be found in the axilla, and that the old woman's constitution did not seem broken down to any great extent. At the present time—six months after the operation—she is in excellent health, and there is no sign of any recurrence of the disease, and she suffers no pain.

THE WESTERN INFIRMARY, GLASGOW.

A SUCCESSFUL CASE OF CÆSAREAN SECTION: EIGHT CRANIOTOMIES PREVIOUSLY.

(Under the care of Professor MURDOCH CAMERON, Glasgow.)

[Reported by THOMPSON CAMPBELL, M.B., C.M., House-Surgeon.]

MRS. E. U., aged 34, was admitted on December 8th, 1897, at full term of pregnancy. Menstruation commenced in her thirteenth year and continued regular until marriage, eight years ago. She has had eight pregnancies previously, and on each occasion operative interference was called for—at full time on the first six occasions, and at the seventh month on the last two, when craniotomy had to be performed. She could not state definitely when menstruation ceased at the inception of the present pregnancy, but she was certain that she experienced fœtal movements in the month of July, 1897. She was of short stature, and had double genu valgum. The pelvis presented the winged character, and the promontory of the sacrum was felt, on vaginal examination, to project abnormally, so that the diagonal conjugate measured only 2 inches. The usual appearances and signs of pregnancy were found. There was a complete laceration of the perineum.

On December 9th, the day after admission, as the os uteri had dilated somewhat, and as the patient had experienced some slight pains, Dr. Cameron operated, performing Cæsarean section, and removing a well-developed female child from the uterus. Hæmorrhage from the uterine wound was prevented by Dr. J. M. Kerr, who grasped the edges with both hands, so that there was less bleeding than at a normal labour. The uterine incision was closed with twelve silk stitches, and the Fallopian tubes were tied in two places and cut. The abdominal wound was then united with silkworm-gut stitches and dressed.

On the day following operation the patient had a slight rise of temperature, but has made an uninterrupted recovery. She vomited on only one occasion; the pulse has remained steady, averaging 88 a minute; respirations have varied from 20 to 24 a minute.

The child was fed artificially during the first day or two after operation but is now being suckled by the mother, and is healthy and well nourished.

LINCOLN COUNTY HOSPITAL.

CASE OF CARCINOMA OF RECTUM: KRASKE'S OPERATION: RECOVERY.

(Under the care of Mr. W. J. CANT, L.R.C.P., M.R.C.S., Honorary Surgeon to the Hospital.)

S. A. C., aged 52, was admitted on May 27th, 1897. On examination a large growth was found occupying the rectum, commencing about 1½ inch above the anus, but its upper limit could not easily be ascertained. At its commencement it felt like a contracted os uteri, and bled freely on attempting to pass the finger through it. The gut was fairly movable, and the disease appeared limited to it. Trouble commenced in the rectum about two years before admission, with pain and muco-sanguineous discharge. She was at one time troubled with diarrhœa, and at another constipation. The pain increased, and she lost flesh rapidly. A few days before the operation there was almost complete obstruction, and the question of colotomy arose. The patient, however, was desirous of having the disease removed at one operation, and objected to undergo three separate operations: first the colotomy, then the excision of the rectum, and lastly the closure of the colotomy wound; and, as the disease was rapidly increasing, it seemed unwise to delay its removal by doing the colotomy first.

On June 2nd Kraske's operation was performed. Although every endeavour by purgatives and careful feeding was made

to empty the large bowel, it was found impossible to do so, owing to the obstruction. The rectum was cleaned as far as possible with solution of mercury perchloride, and every antiseptic precaution taken.

The patient was placed in the genu-pectoral position, and a sickle-shaped incision was made commencing at the post-inferior spine of the ilium, and extending to within an inch of the anus. The tissues were divided down to the bone, and reflected to the left, and the coccyx removed. As this did not give sufficient room, the sacrum was divided with a saw vertically through the right foramina and transversely through the third left foramen, and the piece of bone thus separated turned over to the left. The rectum was thoroughly exposed and the extent of the disease clearly made out. All bleeding was easily controlled. There was some difficulty in separating the rectum from the surrounding tissues, but by freely opening the peritoneum it was found, after a time, possible to bring the whole of the diseased bowel into the wound.

The peritoneal cavity was carefully closed and a temporary ligature tied round the gut above the disease, and the rectum divided first about one inch above the anus, and then just below the temporary ligature, when there was an escape of semisolid fæces, and a further free escape occurred on removing the ligature from the bowel. After carefully cleansing the parts the bowel was drawn down and the anterior part carefully sutured to the anterior part of the lower piece of the gut. The posterior part was not sutured as it was feared, owing to the free escape of fæces, that sutures all round the gut would not hold, and septic trouble might follow. The large wound was thoroughly cleansed. The reflected piece of the sacrum and superficial tissues were replaced and sutured.

The patient was put to bed and opium given to restrain the action of the bowels, but fæces continued to pass at intervals soon after the operation. The wound was kept as clean as possible and the patient fed carefully. The temperature rose for the first few days, but there was no sign of peritonitis, and the patient progressed favourably. The piece of sacrum did not unite, and came away about fourteen days after the operation. The wound granulated and filled up, leaving an artificial anus just above the anal aperture. By using a plug to prevent the escape of fæces the patient was soon able to get about with comfort, and was discharged from the hospital six weeks after the operation.

She rapidly gained health and strength, and now, five months after the operation, can follow her usual occupation without trouble. There is no sign of a return of the disease.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

J. M. PURSER, M.D., President, in the Chair.

Friday, December 3rd, 1897.

INTRAOCULAR TUMOURS.

Mr. A. H. BENSON explained that owing to the illness of Professor Scott he was not yet in a position to lay two of the three cases before the Section that evening. The third case which he showed was of interest as showing how a foreign body could become encapsuled within the globe. A man, aged 69, who was admitted to St. Mark's Hospital, November 9th, 1897, stated that fourteen years previously he had been struck by a splinter of iron in his left eye, which became blind, but that it had been no annoyance or pain to him until very recently, when it got red, inflamed, and terribly painful. When first seen by Mr. Benson, the left eye was very painful, tension + 1 or more, and vision = 0. There was considerable zonular vascularity, and no illumination of the fundus could be obtained. There was iridodonesis, probably due to dislocation of the lens, and through the transparent cornea could be seen, in the anterior chamber, apparently floating about in the aqueous, a little spongy-looking mass, about 2 mm. in diameter, and of rusty colour. This could still be seen in the hardened eye through the transparent cornea, as the specimen was preserved in a 1 per cent. formol solution. On examination Mr. Benson could find no nebula on the cornea, or mark on the sclerotic indicating that any foreign body had ever penetrated the globe. The eye was enucleated, because it was blind and very painful; and it was only on looking at the globe after its removal, that a little black hemispherical tumour was seen on the sclerotic, about the size of a grain of No. 1 shot. This Mr. Benson took to be a sarcoma protruding through the sclerotic, forgetful of or discrediting the history of the injury fourteen years ago. The globe, unopened, was hardened in 1 per cent. formol, and given to Professor Scott with the others, and it was only when he tried to make a section of the tumour that he found that it was by far the hardest tumour he had ever tried to cut, and no wonder, for it contained in its centre a mass of iron, which must have lain buried in the eye (encapsuled) for fourteen years. The symptoms were, therefore, not due to a sarcoma, but to a foreign body encapsuled in the sclero-choroidal layers, and the tumour which protruded from the surface of the sclerotic was but the thinned and pigmented wall of the capsule which contained the iron, and on the inside of the globe a corresponding protrusion of the choroid was visible. The iron had not changed to rust, and still retained, after fourteen years, its magnetic qualities.

SARCOMA OF CHOROID.

Mr. WERNER gave details of this case which occurred in a lady, aged 50. Three years ago she noticed print "muddled," and could not see people's faces with the right eye. Later, she could not see half figure, and finally not at all. The eye became blind, but gave her no trouble until July last, when it became very painful and bloodshot; the pain was so severe that she could not sleep; this lasted for a couple of days, and then passed off. She had had slight attacks since. He saw her on September 26th; the eye was glaucomatous, no p.l., widely dilated pupil, with ectropion of iris pigment, shallow anterior chamber. Ophthalmoscopic examination: Large oval-shaped smooth detachment of retina, covering disc and macular region and lower part of fundus; there were no folds except a few narrow ones at edges. The colour was yellowish, and there appeared to be vessels under the retina. Some hæmorrhages on upper surface. He diagnosed sarcoma of choroid, and advised enucleation. On opening the eye a brown oval tumour was seen at the lower part of the fundus, with shallow detachment of retina where it sloped off the tumour. Transverse section showed it to consist of two portions united by a narrow neck, the base being flattened, and upper part more or less globular and over-hanging the surrounding parts like a fungus. Microscopically it proved to be a spindle-celled sarcoma, with scattered patches of pigmentation. The iris was adherent to the cornea in a large portion of its extent. The ectropion of the uveal pigment was shown in a very remarkable way by the sections prepared by Dr. McWeeney.

GLIOMA OF RETINA.

Mr. WERNER also related this case. The patient was a boy, aged 3 years. The mother had four children older and one younger, and all had healthy eyes except the patient. One year ago she noticed a white shining appearance in the pupil of the child's right eye, and four months ago the eye began to enlarge, and increased to its present size. On October 1st, 1897, the eye was enormously enlarged and embedded in a solid growth, with the exception of the cornea and the upper portion of sclerotic, and protruded between the lids, which could not be closed; the lower part of bulbar conjunctiva was thickened, ulcerated, and bleeding. The eye was hard and glaucomatous, and in the dilated pupil a yellowish white reflection could be seen through the clear lens. The child was sickly looking and drowsy. Mr. Werner removed the eye and tumour, and scraped out the orbital contents in the hope of preventing the formation of a "fungus hæmatodes." The child improved in health remarkably, but was taken away before there was an opportunity of examining the other eye. On November 22nd Mr. Werner was informed that the child could not leave his bed, was vomiting, and refused food. The tumour was growing out from the socket again, and the left eye seemed blind. A vertical sagittal section showed that the right eye and tumour formed one solid mass. The only remains of the intraocular contents were the clear lens pressed up against the cornea, and a dark line of pigment detached

from the sclerotic behind. The sclerotic was perforated by the growth below and in front.

Dr. M'Weeney (Secretary) said that the microscopical appearances were very remarkable, all the structures being quite obliterated by the new growth of small crowded cells. The processes so characteristic of glioma cells could not be made out in the fixed preparation, and there was hardly any protoplasm round the nuclei, which were actively dividing, mitoses being visible in every field. A large area had undergone a sort of cheesy necrosis, and micro-organisms appeared to have gained access to these areas.

Myxosarcoma of Lachrymal Gland.

Mr. Werner also related the case of a man, aged 35, who had received a blow of a snowball on the left eye eighteen years ago. Four months ago the eye became prominent, and a growth appeared under the upper lid. The globe was gradually protruded and pushed downwards and inwards. There was moderate optic neuritis, and V.=F. at 2 m. The tumour was smooth, solid, and elastic. After removal of the tumour, the eye returned to its place, and vision greatly improved.

The microscopic appearances were described by the Secretary, who said that the growth was very puzzling in character, and would probably be described in Germany as sarcoma carcinomatodes. Parts were in a state of advanced mucoid change. It was separated from the lachrymal gland by a fibrous septum.

The cases were discussed by Professor Bennett (President of the Academy), Mr. Story (Secretary of the Academy), and Mr. Maxwell and Mr. Benson. Mr. Werner and Dr. McWeeney replied.

Hydatid Cysts.

Dr. McWeeney showed two hydatid cysts, one from the lower lobe of the left lung, and the other from behind the right lobe of the liver; they had occurred in a girl, aged 20, resident in Dublin, a patient of his colleagues, Dr. Boyd and Mr. Chance, at the Mater Misericordiæ Hospital. Though large, the cysts gave rise to no symptoms during life, but after death from disseminated tuberculosis, were found at the necropsy by Dr. McWeeney. Numerous "brood capsules," full of scolices, were attached to the cyst walls, and preparations of some of these were now demonstrated.

Infective Endocarditis and Villous Pericarditis.

Dr. J. B. Coleman exhibited two specimens of morbid hearts, illustrating infective endocarditis and villous pericarditis respectively. The first occurred in a girl, aged 20, who had rheumatic fever four years ago. On admission to hospital in August, 1897, she had hæmoptysis, dyspnœa; temperature 104° F.; pulse 120; a loud mitral regurgitant murmur. Acute infective endocarditis was diagnosed, and from the fact that there was considerable hypertrophy of the heart, and that the patient had suffered from rheumatic fever four years ago, it was considered probable that the present acute attack was grafted on a chronic valvular lesion. The patient rapidly became very anæmic and prostrate, with hectic temperature, profuse sweats, and she died three weeks after admission to hospital. The heart, which was exhibited, showed some dilatation and hypertrophy of the left ventricle, on the endocardial lining of which vegetations could be seen. Some of the musculi papillares were ruptured, and the cusps of the mitral valve were ulcerated, puckered, retracted, and covered with vegetations, which were also present in the endocardium of the left auricle. Microscopic sections (prepared in Dr. McWeeney's laboratory by Dr. Dargan) through a vegetation on the wall of the left auricle, showed large masses of streptococci towards the surface of the vegetation. The second specimen showed the typical appearance of villous pericarditis. It was taken from a girl, aged 19, who was admitted to hospital in September, 1897, with right basal pneumonia. On the fifth day of her illness she developed left pleurisy and pericarditis. Pneumococci were found in the villous-like projections of lymph covering the pericardium.

Dr. McWeeney, in referring to the vegetations on the heart, said he had never seen anything more remarkable than the way in which infection had taken place by streptococci. The section showed their distribution in a singularly beautiful way. A regular line or streak of cocci extended within about a millimetre of the free margin of the vegetations, and from that solid line of cocci the micro-organisms advanced towards the free surface in solid masses, shaped something like a sausage, and from the apices of these solid masses individual lines of cocci could be seen going forward to the free surface. It appeared to him to be a case of streptococcal infection of the endocardium.

Mr. Myles discussed the case; and Dr. Coleman replied.

Unruptured Aneurysm of Left Ventricle.

Mr. J. Burgess showed the heart of an old lady of 80, who died suddenly when taking her breakfast in bed. The heart showed marked fatty change; the valves were healthy; at the apex there was a projection about the size of half a hen's egg, with very thin walls, but unruptured. This communicated by a narrow opening with the ventricle through the muscular structure. The cavity of the aneurysm contained some adherent clots; its walls consisted of epicardium and pericardium only. Both coronary arteries were diseased; the posterior, which crossed the site of the aneurysm, had its lumen so narrowed that it would barely admit a pin. Sections of both coronary arteries (prepared in Dr. McWeeney's laboratory) were shown; they showed the small-cell infiltration of the intima associated with endarteritis deformans.

Dr. McWeeney thought there could be no reasonable doubt that the condition of the coronary arteries had really been one of the principal causes of the weakening of the wall of the heart. The coronary artery of that side went directly to the very place where the commencement of the aneurysm was situate, and transverse section of the coronary artery showed that the lumen was enormously encroached upon. The outside thickness of the vessel was rather greater than normal, whereas the aperture through which the blood had to go did not admit of anything larger than a pin being passed through. The great thickening in the wall appeared to consist almost entirely of a proliferation of the intima. Were it not for the history he should almost have been inclined to look upon the arterial disease as of syphilitic nature.

MIDLAND MEDICAL SOCIETY.

Wednesday, December 1st, 1897.

J. W. Taylor, F.R.C.S., President, in the Chair.

Writers' Cramp.

Dr. Short showed a case of writers' cramp affecting both hands. The patient, a clerk of 33, had the neurosis of his right hand eleven years ago, with marked wasting of the intrinsic muscles. (This condition had persisted and was still plainly seen.) He taught himself to write with the left hand. This year the left hand became affected with commencing atrophy of the thenar and hypothenar muscles. He was much depressed mentally. Electrical reaction showed diminution to both currents. Treatment with electricity, regular massage, and practice in shoulder writing had improved his condition and had obviated the necessity for leaving off work (a step which in his case meant ruin).

Idiopathic Muscular Atrophy.

Dr. Russell showed two patients, mother and daughter, suffering from idiopathic muscular atrophy. The family history extended through three generations, and the complaint showed a marked tendency to diminish in the successive generations. A slight improvement had been noted in one patient under electrical treatment.

Strangulated Ovarian Cyst Complicating Pregnancy.

Dr. Purslow showed a strangulated ovarian tumour removed during pregnancy. The patient (who had been married four years and had had one previous pregnancy which had ended in abortion at the fourth month) was, after seven weeks' amenorrhœa, seized with severe abdominal pain, vomiting, and collapse, with distended abdomen dull to percussion over its lower half. The diagnosis was doubtful, ruptured tubal pregnancy being suspected. As the symptoms were grave the abdomen was opened. An ovarian cyst was found and removed. There was twisting of the pedicle and one part of the cyst was almost black from strangulation. The uterus was enlarged and evidently gravid. The patient made a good

recovery, and the pregnancy was now—nine weeks after operation—pursuing a normal course.

Tubal Pregnancy.

Mr. J. Furneaux Jordan showed two specimens of this condition. The first was one of unruptured tubal pregnancy, the site of which was at the uterine end of the tube, the outer end being free and patent. The patient from whom it was removed had eight years previously had an Alexander's operation done, and four years ago had a hydrosalpinx removed, both operations being done by Mr. J. W. Taylor. In June last she went two weeks over her time, and then on July 10th began to "lose," and there were irregular hæmorrhages till September. With the first loss there was collapse and severe pain in the lower part of the abdomen. On examination, to the right of and rather behind and above the uterus a firm, tender swelling could be felt quite distinct from the uterus. The operation was performed on September 2nd, and her recovery, though protracted, was now complete. The second specimen was one of tubal abortion; the hæmorrhage from the outer end of the tube had taken place slowly into a cystic ovary, to which the tube was adherent. The adhesions, too, had been stretched, so that there was a mass of clot included in them between tube and the ovary. The outer part of the clot was laminated and firm. The specimen was removed by operation on September 4th. The history of her illness was almost identical with that of the previous case. On September 2nd, the day before admission to the hospital, she passed a decidua from the uterus in two triangular pieces (these were also shown). The patient made a rapid recovery from the operation, and was now quite well.

Absorbent Dressings.

Dr. Harris showed specimens of new absorbent dressings, namely, Robinson's cellular wadding and Robinson's dressing and gauze. The wadding was made of pine wood, and was recommended for very free discharges, as it was more absorbent than even Hartmann's wood wool. If it was used outside white absorbent wool it was found to be stained with the discharge over a larger area than the wool. This showed that the discharge had nearly penetrated the wool, but had been absorbed in all directions by the cellular wadding. Its disadvantages were a want of elasticity, and the fact that it did not strip off the wound quite cleanly. These objections were met by Robinson's dressings, which contained white wool evenly mixed with the cellular material. The mixture had all the absorbent qualities of white absorbent wool, and it was at the same time far more absorbent and cheaper. It could be faced with gauze (as in Robinson's tissue) after the fashion of Gamgee tissue. It was made by Messrs. Robinson and Sons, Chesterfield.

Paper.

Dr. Thomas Nelson read a paper on The Nature and Prevention of Puerperal Fever.

Epidemiological Society.—At a meeting on December 17th, Professor J. Lane Notter, M.D., President, in the chair, Mr. Cantlie read a paper on the Physical and Ethnological Conditions under which Leprosy occurred in China, Malaya, the Eastern Archipelago, and Oceania. It was shown that the statement "that leprosy was found throughout the entire empire of China," as currently reported, was untrue. North of the Yangtze river leprosy was met with only in the Province of Shantung. Southern Korea only was leprous, probably infected from Japan. Neither Manchuria nor the littoral of Eastern Siberia were leprous countries. Along the Yangtze the disease was only met with around Hankow and in the upper reaches of the river in Sze-chuen, where it bordered on Thibet. It was not until the southern part of China was reached that leprosy abounded, and in the provinces of Kwang-tung (Canton) and Fokien it was a scourge. It was from these provinces that nine-tenths of the coolies emigrated, and it was to the dispersion of the Chinese coolie from these provinces that the presence of leprosy in most of the islands and countries bordering on the Pacific was to be traced. In the leper hospitals and in the plantations throughout the Straits Settlements, Sumatra, and Java, the Chinese were in most cases the only lepers, and in all cases, except in Hawaii (Sandwich Islands) the Chinese lepers outnumbered those of all other races. In the islands of the Pacific the three great leper centres were Hawaii (practically American), New Caledonia (French), and Fiji (British). Thither the Chinese coolie, employed by the foreigner, came, and brought with him leprosy. Leprosy was a modern introduction to the Pacific Islands. No aboriginal tribe had a native word for leprosy, and most races called it, as in Hawaii, the Chinese disease. Missionaries engaged in translating the Bible into native languages had in all the islands of the Pacific, and even in Sumatra and Java, to coin a word for the disease, in many instances adopting the English term leprosy. The Chinese had visited these outlying countries for many centuries, but the status of the Chinaman, going so far afield, had quite changed recently. In former days it was the merchant that went, not the coolie. The wealthy trader was not of the class amongst which leprosy abounded; but with the coolie came leprosy and the dirt of the savage. No Negrito, Papuan, or Indonesian (mixed Caucasic and Mongolian) aboriginal tribes were leprous. When the true Malay and the Mongolian appeared, however, they brought leprosy with them. The Indonesian (aboriginal) races in Formosa, Hainan, Malaya, Sumatra, and Borneo were non-leprous, although they were being gradually ousted by the Chinese. This was ascribed to the fact that these indigens hold themselves aloof from the invaders, and shun intimate contact with the leprous-bearing people. In Borneo leprosy was unknown before 1888. During that year plantations were opened, and with the inroad of the coolie from South China came leprosy. When, on the other hand, the plantations failed, and the Chinese labourer took himself off, the disease became a thing of the past. Mr. Cantlie attached great importance to the rigorous inspection of coolie-laden ships departing from Hong Kong and the Southern Treaty ports of China, otherwise leprosy would prove a scourge throughout Oceania; and in this vast district a repetition of the disastrous state of things met with in Hawaii (Sandwich Islands) would result in every one of the thousands of Islands dotting the Pacific.—Dr. Simpson (late of Calcutta) remarked that fifty-seven lepers had been found among the Chinese and two among Europeans associated with them. There were none now among the thousands of Japanese in Hawaii, emigrants from Japan being examined at the ports of departure and arrival; and though there had hitherto been no official regulation of leprosy in that empire, the Government were seriously considering the question. In India it was for the most part confined to particular races and districts, the hill tribes being especially affected.—Dr. Pringle said that these people threw leprous women into the mountain torrents, and that to escape this fate they fled to the plains, where they lived as prostitutes. It was from one of these that the leper found some years ago in Smithfield contracted the disease as well as syphilis when a soldier.—Mr. Cantlie, in his reply, remarked that men only emigrated from China, whither they returned after a few years. These coolies were drawn for the most part from the poorest class of the population of the southern provinces, crowded out by the sturdy Manchus from the north, and that many of them were already suffering from the disease which they might communicate to the lowest class of women in the countries where they settled for the time. In China itself women were active agents in spreading the disease, from a popular belief that they could free themselves by having connection with a healthy man. In Hong Kong the police arrested all lepers found in the streets, sending them back to Canton, but in Macao they were strictly segregated in two islands, one for each sex, where they were visited periodically by a medical man and a priest.

Nottingham Medico-Chirurgical Society.—At a meeting on December 1st, Dr. Cattle (President) in the chair, Dr. Buckley showed for Dr. W. B. Ransom a case of Sporadic Cretinism in a girl aged 8.—Mr. Tresidder showed a woman, aged 46, upon whom he had operated for Malignant Growth of the Palate, removing through the mouth the alveolar process of the right maxilla and the greater part of the hard and soft palates. He also showed the growth removed and microscopic specimens of it, which showed that it had the characters of a rodent ulcer.—Mr. Smith showed for Mr.

THOMPSON a boy aged 15 who had been operated on for Intussusception, when the gut was found to be gangrenous, and a portion 10 inches long was removed, the boy making an excellent recovery. The portion of gut removed was also shown.—Mr. KINGDON showed a child, aged 13, with Congenital Bilateral Aniridia.—Mr. LAWS showed a man, aged 22, illustrating the Lymph Currents of the Lens through absorption of foreign colouring matter.—Mr. ANDERSON read notes of two cases of Intestinal Obstruction caused in each case by a band.—Dr. HANDFORD showed a Uterus in which was demonstrated thrombosis of the lower uterine veins; in the uterus itself was the remains of a clot of blood adherent; also a portion of Lung from the same case showing a pyæmic inpaction which had caused pneumothorax. The woman had recently miscarried.—Dr. BUCKLEY showed (1) Kidneys demonstrating complete obstruction of both ureters by calculi, (2) Perforated Typhoid Ulcer, (3) Hydrosalpinx.—Mr. TRESIDDER showed (1) a Uterus affected by Cancer of the Body and a Subperitoneal Fibroid which he had successfully removed by the combined abdominal and vaginal method; he also showed a microscopical section of the growth, from which it was seen to be a columnar-celled carcinoma; (2) for Mr. R. C. CHICKEN a rare variety of loose Cartilage removed from the knee-joint; it consisted of a hard lipomatous mass affecting the synovial membrane; there were also many smaller similar masses.

FORFARSHIRE MEDICAL ASSOCIATION.—At a meeting held on December 3rd Dr. J. W. WEMYSS (ex-President) in the chair, Dr. KYNOCH showed a case of Dermatitis due to Pregnancy.—Mr. GREIG showed (1) Hæmatoma removed from the Neck; (2) Congenital Dislocation of the Humerus; (3) Cast of Osteo-arthritis of the Wrist and Ankle from a boy aged 13.—Dr. WHYTE showed (1) an Aneurysm of the Aorta involving the ascending, transverse, and descending portions of the aorta; (2) a Liver from a woman, aged 53, who had had symptoms of obstructive jaundice. There was a large caseating gland surrounded by a dense mass of fibrous tissue involving the hepatic duct. There was also some perihepatitis with several small abscesses throughout the liver.—Dr. TENNANT BRUCE read notes of a case of Bradycardia. The pulse varied from 20 to 34 per minute and was associated later with convulsions of an epileptiform character. The literature was of the subject was reviewed. Dr. Bruce suggested that some confusion existed due to confounding two distinct conditions, viz. (1) slow pulse as a symptom of other diseases; (2) slow pulse as a disease itself and dependent on interference with nerve force. Though interference with the functional activity of the intrinsic cardiac ganglia was, he thought, the most probable explanation, yet the possibility of a purely medullary origin must not be lost sight of. He quoted the position of the intramedullary nuclei given by Dr. Alex. Bruce in his book on the *Hind Brain*, and asked whether lesion in the neighbourhood of the motor nucleus of the vagus, the nucleus ambiguosus, might not explain the condition. Dr. SINCLAIR agreed with Dr. Bruce that slow pulses after influenza or other diseases should be excluded, and quoted a case similar to Dr. Bruce's, where a cessation of pulse beat preceded epileptiform convulsions.—Mr. GREIG read notes of two abdominal cases: (1) Enterectomy with end-to-end Anastomosis. The patient, aged 69, was admitted to the Dundee Infirmary suffering from strangulated inguinal hernia on the right side. A small irregular laceration was found in the portion of bowel exposed; this was excised, and the cut ends of the bowel brought into apposition and sutured. The patient recovered well from the operation, and left the infirmary in four weeks, wearing a truss. Mr. Greig considered this operation preferable, though it occupied a little longer time, to the introduction of a foreign body, such as Murphy's button or bobbins. (2) A case of Intra-abdominal Strangulation successfully treated by Cœliotomy. The patient was a stout, healthy boy, aged 12, admitted with symptoms of acute obstruction. On opening the abdomen the small and part of the large intestines were distended. There were several enlarged glands, but one larger to which the omentum was adherent, and also an appendix epiploica which had caused kinking of the bowel. This was divided and the obstruction relieved. The patient was troublesome and restless, and for this reason required to be dressed daily. The stitches were removed on the tenth day, but were reintroduced under chloroform because the boy was so restless as to open up the wound and allow bowel to prolapse. The case gave no further trouble, and the patient was dismissed in due course. Mr. Greig thought this showed a tolerance in succeeding cœliotomies. Mr. Greig also showed a photograph of a case of recovery from Favus of six years' duration, the treatment being daily depilation and inunctions with various parasiticides for twelve months. Dr. WHYTE quoted other cases of recovery under similar treatment.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on November 25th, Dr. SINCLAIR WHITE, President, in the chair, Dr. COCKING showed a boy, aged 6, suffering from Cerebral Tumour. In February severe headache, accompanied by vomiting for six weeks, had occurred; in April weakness of left arm, gradual onset; in June gradual loss of sight; in August gradual weakness of left leg. The condition on November 25th was as follows: Commencing optic atrophy (post-papillitic); left hemiplegia (arm, leg, and face), tongue slight; increased deep reflexes, diminished superficial; no loss of sensation; no headache nor vomiting; occasional incontinence of urine and fæces; no convulsions; no albuminuria, tuberculosis, syphilis, rheumatic fever, ear disease, nor injury.—Dr. BURGESS showed (1) a mother and child and two sisters all suffering from Congenital Heart Disease; (2) a case of Xanthoma Multiplex, with, among other features, small multiple periosteal swellings along the edges of the ulnæ and tibia; (3) a man who had for thirteen years, with remissions and exacerbations, exhibited frequent and varied Movements of the Face, Head, and Limbs, which, though apparently voluntary, were denied to be so, and there was, as far as could be ascertained, no motive for making them.—Dr. PORTER showed a specimen of a heart with well-marked Stenosis of the Pulmonary Valve. The patient was 29 years of age, and the affection was congenital. He had, however, continued at work up to a few weeks before death which occurred from tuberculosis phthisis. He had no cyanosis nor clubbing of the fingers, and until a few months before death only complained of shortness of breath. The physical signs consisted of the single systolic *bruit* and thrill over the pulmonary artery conducted towards the left clavicle.—Mr. RICHARD FAVELL read notes of a case of Retained Placenta after abortion, and made remarks on the treatment of such cases. Mr. Favell also showed specimens of Ovarian Dermoids removed by operation.—Mr. ARCHIBALD YOUNG showed a patient who had been recently successfully operated on by Dr. Sinclair White for Abscess of the Lung, and gave particulars of the case.—Mr. ARCHIBALD CUFF read notes and showed specimens of (1) a case of Scirrhus of the Male Breast (2) a case of Rapidly Growing Soft Cancer commencing simultaneously in both breasts. Mr. Cuff also exhibited a series of Microscopical Slides illustrating the chief diseases of the breast.—The PRESIDENT, Dr. HARGREAVES, Dr. SWEETEN, Mr. LOCKWOOD, Dr. MARTIN, Dr. THOMSON (Retford), Mr. PYE-SMITH, Mr. ATKIN, Dr. BENSON, and Dr. BURGESS made remarks on the cases and specimens.

EDUCATION IN TEMPERANCE IN GERMAN SCHOOLS.—Probably incited by the action of the French Minister of Education in ordering instruction on alcohol in all schools in France under Government control, a strong effort is being made in Germany to secure similar scholastic temperance teaching. A memorial from the Berlin Anti-Alcohol League has been presented to His Excellency Dr. Bosse, Minister for Ecclesiastical, Educational, and Medical Affairs, calling attention to intoxicating beverages as a leading cause of disease and accident, especially of brain affections. The memorial points out the greater susceptibility of the young and growing undeveloped organism to the influence of alcohol in impairing physical strength, and in the setting up of an artificial want and a constantly growing alcoholic habit tending towards chronic drunkenness, and prays the Minister to order, in the interests of the German people, instruction in the alcohol question in all governmental schools. We are glad to note among the signatories the name of a well-known medical practitioner, Dr. Hirschfeld.

REVIEWS.

THE PURIFICATION OF SEWAGE AND WATER. By W. J. DIBDIN, F.I.C., F.C.S., etc. London: The Sanitary Publishing Company, Limited, 1897. (Medium 8vo, pp. 248, xvi; 28 charts, illustrations, index, etc., price 21s. net.)

THIS book is at once welcome and a trifle disappointing. It is welcome because every health officer, every sanitary engineer, every urban and rural district councillor is desirous of knowing more about the "new departure," as it is frequently called, which has been made at Sutton. Perhaps it is our own fault that it is a little disappointing. Perhaps we looked for too much that was new. Perhaps also we expected a volume of 248 pages to go a little more into practical working details of tank construction and the like and to occupy less space with the minutiæ of chemical processes which are to be found in full in the pages of Sutton or any good analytical guide. Having, however, got over the initial disappointment we found the book otherwise a very enjoyable one. The writer, while holding high rank as a chemist, and entitled, from his long experience, under the late Metropolitan Board of Works, and more recently under the London County Council, to speak with authority, is modest in claiming praise for himself, and is generally content to allow his facts to tell their own tale. Of the eighteen chapters which follow the introduction, four deal with potable water, three others are devoted to the ventilation and deodorisation of sewers and the purification of the Thames, three more are given up to such subjects as analytical methods of watching the process of purification, the interpretation of analyses, and an interesting excursus on the absorption of atmospheric oxygen by water. The remaining eight—and, with one exception, they are the eight earlier chapters—deal chiefly with the timely and interesting subject of the purification of sewage by living filters. It is this part of the book that has been most anxiously looked for and that will be read most eagerly.

In the first chapter the author shows that we have to deal with matters which speedily undergo putrefaction, when there is insufficient oxygen, by the activities of the anaërobic organisms. On the other hand, when oxygen is plentiful, the aërobic bacteria take up the running, and do their destructive work for the most part inoffensively and well. He gives tables of the chemical composition of the chief substances in sewage, showing the percentage of oxygen already there, and the several additional amounts required for their complete oxygenation. The activity of micro-organisms is illustrated by the vinegar vat, the extended surface afforded by the twigs in which is the analogue of that afforded by the coke breeze in the Sutton bacterial filtering beds. The second chapter shows how "the attempt to control Nature instead of assisting her has been the great obstacle in the way of improvements for so many years." He therefore prefers, if a deodoriser of sewage be required, that an oxidiser should be selected rather than an antiseptic, and of such a permanganate in preference to a chlorine-generator. The third chapter is largely taken up with the various experiments in purification by precipitation, and contains a most valuable table of the results (in removing oxidisable organic matter from London sewage) of various precipitating processes in which lime was a principal factor. This interesting table gives the actual cost of each process. The next chapter describes briefly the well known experiments of the Massachusetts Board of Health, the much larger experiments at Barking on ordinary London sewage, and the working of the biological filter at Sutton, where the separate system obtains. It is needless to say that this chapter is interesting in the extreme.

Chapter v., entitled "Nature's Method at Work—New Departure at Sutton, Surrey," tells how crude sewage, merely strained through a sieve, was turned on to a "bacteria tank," consisting of burnt ballast, inoculated with bacteria, and thence to a coke breeze biological filter. The average reduction of suspended matters was from 60 03 grs. per gallon in the crude sewage to 2.78 in the effluent from the bacterial tank, and to 0.73 in the final effluent from the breeze. The oxidisable matters in solution were reduced from 4 543 grs. per gallon to 1.674 in the first and 0.644 in the second filter. The total reduction of oxidisable matters was 85.83 per cent. and the reduction of albuminoid ammonia was 78.54 per cent. The final filtrates were free from all objectionable odour, and remained sweet when kept either in closed or open vessels. All this, it will be remembered, is without the use of any chemical. The slightly screened sewage goes at once on to a coarse filter, and thence to another somewhat finer. Even the inoculation of the filter may be left to time. The sewage brings with it the necessary bacteria. The Exeter septic tank of Mr. Cameron is discussed in the sixth chapter, and a table of analyses is given. The oxygen-absorbing matters are reduced in the tank some 31 per cent., the free and albuminoid ammonia respectively some 27 and 18 per cent. By further filtration through coke breeze the ultimate result is a purification of 81 per cent. as indicated by the permanganate, and a reduction of 55 and 63 per cent. in the free and albuminoid ammonia. The description of the "micro-filter," for estimating the amount of suspended matter in a water, and which lends itself to the collection of sediment for microscopic examination, deserves the attention of those not already acquainted with Mr. DIBDIN's ingenious method. The chapters on filtration of water also deserve notice, and especially his suggestion of the application of Clarke's process to the supplies from the Thames. The paper and type are excellent, but the printer has played Hamlet with the quantities of nitrogen on pp. 119 and 120, and has substituted the sign of multiplication for that of addition, near the top of p. 120. The book will well repay careful perusal. Every health officer should possess it.

STUDIES IN PSYCHICAL RESEARCH. By FRANK PODMORE, M.A. London: Kegan Paul, Trench, Trübner, and Co. 1897. (Cr. 8vo, pp. 468.)

MOST books on spiritualism are a weariness to the flesh, and the mixture of unctuous self-righteousness and unreasoning credulity which characterises the majority is particularly nauseous to many minds. We are glad to recognise in Mr. PODMORE's latest volume a striking exception. The strongest impression left by its perusal is perhaps a feeling of gratitude to the Society for Psychical Research (hereinafter called the S.P.R.) for having rendered it possible that such a book should be written, and to the author for having been at the pains to reduce to order a great mass of rather chaotic "evidence."

Mr. Podmore reminds us that though in 1882, when the S.P.R. was founded, the psychical phenomena of spiritualism were certainly less startling and less abundant than they had been some years previously, there seemed still no reason to doubt that there would be ample material for it to investigate. Professor H. Sidgwick, its first President, in an address delivered to the newly-formed Society, even went so far as to express the belief that though it would by preference turn its attention to phenomena occurring in private circles, yet it was justifiable to assume the existence of a mass of evidence, and ventured the hope that the occurrence of such phenomena would be rapidly and extensively communicated to the Society for impartial investigation. The very opposite was what actually happened. Not merely has the Society had few opportunities for continuous investigation of any sort, but "no positive results have been obtained worthy of record. All spiritualist manifestations appear, indeed, to have become less frequent not only in private circles, but with professional mediums. The spiritualist newspapers no longer teem with records of marvellous *séances*;" on the contrary they contain repeated laments over the paucity of "good mediums." This sudden diminution, dating from the institution of a society composed mainly of interested inquirers or candid friends, *donne furieusement à penser*. So Mr. Podmore seems to think, and the studied reticence of his expressions only renders stronger the effect of the stories which he tells often with no little dramatic skill. Sometimes, indeed, he permits himself to write with a degree of levity which must be deeply distressing to the feelings of a convinced spiritualist, as when, for instance, he says of Koot Hoomi, one of Madame Blavatsky's Mahatmas, that "it had already [before H. B.'s death and the revelations which preceded and followed] become evident that the Master, if a

saint and a scholar, was something less than a gentleman." Theosophy, it may be said, is abandoned by the majority even of the most inveterate spiritualists, but then we find Mr. Podmore writing that "moving tables formed a feature in some ancient Egyptian mysteries," and that "levitation was an occasional diversion of mediæval saints," and again he dismisses whole classes, and those the largest, of spiritualistic "phenomena," with the observation: "We are bound to assume abnormality somewhere, and of the two it may be easier to suppose the medium abnormally dishonest than to credit him with abnormal 'psychic' powers." But perhaps the unkindest cut of all is his habit of referring to that exalted spiritualistic creature, the medium, as "the patient." This is, indeed, a straw to show the way the S. P. R. wind is blowing.

Mr. Podmore, however, can be extremely grave and scientific, as when he speaks of the spiritualists' belief in their spirits as "little more than the instinctive utterance of primæval animism," or defines the average ghost as "a fugitive, irrelevant, and for the most part polymorphic phantasm," a form of words which we could imagine capable, if used with discretion, of causing any ordinary spectre to retire from a business in which he was assailed in phraseology so ponderous.

With regard to ordinary mediumistic performances, Mr. Podmore comes indeed to the general conclusions that "in face of exposures of fraud repeated *ad nauseam*; in face of the observed propensity in this field to disinterested fraud; in face of the demonstrated incompetence even of trained observers to deal with fraud [this is, in the language of the ring, a nasty one for the professors], we should not be justified in assuming any other cause for the physical phenomena of spiritualism than fraud, eked out possibly on rare occasions by fraudulently suggested hallucinations." What, the reader may ask, is left after this? Well, thought transference is left, and perhaps telepathy, though Mr. Podmore writes that "even with the help of a large body of experimental proof the doctrine of telepathy.....still hangs in the balance." As to how telepathy comes about, Mr. Podmore speaks with a degree of impatience which he does not attempt to conceal of the analogy of the two tuning forks, of the theory of radiant neuric force, and of the "comfortable belief in the omnipotence of ether." Mrs. Piper and Phinuit remain, or perhaps we ought to write remains, for the whole matter of perplexity is whether Mrs. Piper and Phinuit are one or twain. Mr. Podmore gets a little shaky here, but we would remind him of his excellent utterances on an earlier page, already referred to, as to the incompetence of even trained observers, and of his observations on what he calls the mythopœic tendency, or, in plain English, the natural disposition not to let a story lose in the telling. The mythopœic faculty appears to have been largely developed in the colonial judge of whom Mr. Podmore tells. The judge gave the S. P. R. an account of an apparition seen by him coincidentally with the death of an acquaintance, a story confirmed by the judge's wife; the S. P. R., after careful inquiry, came to the conclusion that the "vision, if it occurred at all, certainly did not occur at the time or in the circumstances alleged."

Mr. Podmore's book is well worth reading, and it is agreeable reading, for the style is generally vigorous, and not infrequently brilliant.

The Subconscious Self and its Relation to Education and Health. By Louis Waldstein, M.D. London: Grant Richards. 1897. (Demy 8vo, pp. 174. 3s. 6d.)

The author speaks of that which we by attention perceive clearly as "the upper consciousness," while that much greater number of impressions to which we pay no special attention he calls "subconscious." The distinction is allowed by most psychologists. He adds that the subconscious impressions are of the greater permanence, instancing the fact that sometimes when the memory of recent events is much impaired, details of early life recur clearly to the mind. The proof is not cogent. It is true, no doubt, that some of these subconscious impressions last a long time, but they are a small proportion of the vast number which we continually receive, and there is not sufficient ground to conclude that proportionately more of them survive, or that they survive longer than those far fewer impressions which are included by "attention" within what we may call the yellow-spot area of the mind.

Dr. Waldstein further asserts that the "subconscious" part of the mind is the emotional and the imaginative part. This is a confusion of two or more divisions which cross each other; they do not, as he alleges, coincide. The impressions of subconsciousness are of the same nature as those of the upper consciousness, and are derived from similar objects. Both produce pleasure and pain, and therefore arouse emotion, while to connect imagination directly with impression is, and always has been, equally impossible in either case. Dr. Waldstein's explanation of Feuerbach's figure of Socrates is an excellent example of his own bias, but since it is founded on a guess, it is no proof whatever of the connection that he seeks. His theory has often been put forward; it is the evidence for it that is still to seek.

But while we disagree with the writer's psychology, we have nothing but praise for his practical teaching. He maintains that "attention" is a faculty of late growth, and that since in childhood the subconscious impressions are so greatly in excess, it is they which have the chief influence on character. With this when it has been translated into the proverbial saying, "Example is better than precept," we should all agree, and Dr. Waldstein does good service in extending this proverb into other regions. Environment of all sorts is of far more importance than used to be thought. Sunshine, beauty, freedom, these are all of the greatest value in training.

Equally clever and practical are his suggestions for those troubled by bad dreams, or by wakefulness, or by neurasthenia, or by hysteria. These are followed by sections upon hypnotism, suggestion, hallucination, worry, superstition, mixed impressions, and visualization. All are interesting, and well repay reading. Among the many original observations, the most remarkable is undoubtedly that of the deaf mute who had learnt to appreciate the sounds of the piano by touch, and by whom a tune which she had heard before she lost her hearing in infancy, was recognised through touch in adult life. One reads all this with profit and pleasure in spite of the psychological fallacies which run throughout the book. The formation of character, for example, is indeed the "information" of desire by reason, and Dr. Waldstein's practical advice is quite as wise and helpful as if he did not base it upon the mistaken theory that reason and emotion correspond to the upper and lower consciousness.

The Yew Trees of Great Britain and Ireland. By John Lowe, M.D.Ed., F.L.S., Honorary Physician to H.R.H. the Prince of Wales. London: Macmillan and Co. 1897. (Cr. 8vo, pp. 284. 10s. net.)

It is good for every busy man to have a hobby, especially if it be one that takes him into the open air. Dr. John Lowe has chosen a most delightful study, and one which would have made Oliver Wendell Holmes hail him as a brother, in hobbies as well as in medicine. The results of many years' observation, of many rambles and excursions which must have been most pleasant in the making are given to the world in a form which enables the reader to feel some of the pleasure which the author must surely have derived from the search after great and curious yews. In the process of his investigations Dr. Lowe has seen reason to cast the gravest doubts on many traditions as to the fabulous age of not a few ancient yews. The fact appears to be that the yew grows in a somewhat erratic manner, and in its old age is apt to be a dilapidated if picturesque ruin. Dr. Lowe has worked out with great care the effect on the growth of the yew and on the girth of its trunk of the loss of its branches whether by accident or the hand of man. Separate branches or trunks may become, under certain circumstances, welded together so that the counting of rings may lead to an altogether false estimate of the age of the tree. If a tree has not been injured the counting of the rings may give a result which is approximately accurate up to the age of 200 or 250 years. At this age the tree has reached its full development as a single trunk, decay or fracture taken place sooner or later, and the bark over the decayed or injured portion sends up young

spray, which become welded together, and so a rapid increase in girth is brought about.

The active principle of yew leaves, taxin, has been made the subject of experiment by Dr. Lowe, who declares it to be a cardiac tonic of no small value. Small doses—$\frac{1}{20}$ to $\frac{1}{3}$ gr.—decrease the frequency of the heart, and cause a rise in blood pressure. He believes that taxin contrasts favourably with digitalis and convallaria, and is worthy of more extended trial. In large doses it generally depresses the heart's action. The seeds also are poisonous, though their gelatinous red-coating is innocuous.

The book is well illustrated by recent photographs of famous yews and yew hedges, and may safely be commended to all who love trees; and who with any appreciation of the beauties of Nature does not?

ISTITUZIONI DI SEMIOTICA CHIRURGICA. [Textbook of Surgical Semeiology]. By Dr. PARLAVECCHIO. Rome: Società Editrice Dante Alighiera, 1897. (Demy 8vo, pp. 456. L 7.50.)

THIS volume is something more than a textbook of surgical diagnosis; it is rather an elaborate *catalogue raisonné* of all the various means and methods which the surgeon has at his disposal for the examination of any given case. Although it is impossible to say that the book is too elaborate for its purpose, yet some sympathy may be felt with the student confronted with these 435 closely printed pages when he realises that they only deal with the preliminaries of his art. The author's method is very clear and thorough. He divides his subject into four parts: (1) Comprising all that can be learnt by physical signs, (2) by chemical, (3) by microscopic, and (4) by bacteriological examination of the various tissues, excretions, etc., of the body. In each case the common methods are carefully described, and in the fourth part, which is the fullest, there is a useful series of synoptic tables giving the chief facts as to the commoner micro-organisms.

The author lays stress on the value of photography in surgical semeiology both for recording purposes and, especially since the discovery of the *x* rays, for diagnosis. He protests against the too frequent recourse to exploratory operations, which are more likely to be abused in these days of aseptic surgery than formerly. There is an interesting chapter on microchemistry which may be useful. Probably the author would be the first to admit that no reading could ever teach a man the things which it is the object of this work to impress upon his mind so well as clinical work under a good teacher; yet as a standard work of reference on the subject the book deserves to rank highly. It is up to date and eminently sound.

NOTES ON BOOKS.

Warner's Pocket Medical Dictionary of To-day: comprising Pronunciation and Definition, 10,000 Essential Words and Terms used in Medicine and Associated Sciences. By WILLIAM R. WARNER. (Philadelphia: W. R. Warner and Co. 1897. Foolscap 8vo, pp. 304.)—This *Dictionary* is an ambitious undertaking. The explanation and definition of each word seldom exceeds one line. Hence it is not surprising that the *Dictionary* falls behind those of Gould and Dunglison. It would be unfair to expect otherwise, and we admit that Mr. Warner has furnished us with a useful guide to some explanation of out-of-the-way or specialist terms. The highest judgment has not, however, been exercised either in selection or definition. In the preface it is stated that many generally known medical words and terms have been omitted. What, then, is the use of entering "Tea (te), a stimulating beverage containing thein"? We admit that names of discoverers or saints applied to diseases often send the student to his dictionary, and hence Mr. Warner rightly includes many such names. But if "St. Clair's Disease" and "St. Job's Disease," and (very rightly) "Duchenne's Paralysis" are included, why, then, is "Raynaud's Disease" omitted? "Paget's Disease, cancerous disease of the breast," is a very bad entry indeed; the name is imperative in a dictionary, but the definition is absolutely wrong. "Rhineurynter" is admitted, but we fail to find "Colpeurynter" or "Kolpeurynter." "Paranoia" is rightly included, but the definition, "a form of chronic mental aberration," is insufficient. Mr. Warner has aimed well, but his *Dictionary* requires much revision before it can become a safe guide.

Bloc-Notes Diététique, à l'Usage des Praticiens, par un Médecin Praticien [Detachable Diet Sheets for the use of Practitioners by a Medical Practitioner.] Translated (into French) from the seventh German edition, by permission of the author, by Dr. E. VOGT. (Paris: Librairie C. Reinwald. 1897.)—This work is nearly all composed of small detachable diet sheets. The brief preface lays down the daily food required by an adult in good health, calculated in proportion to the body weight for fats, albumens, and hydrocarbons. It next gives the composition of the chief foods under their three heads; and lastly, an enumeration of the seventeen diseases for which these diet sheets are designed, followed by the diet sheets themselves. Each of these contains a list of articles of food permitted, and of those forbidden. The quantities of each kind of food to be taken at every meal, the methods of cooking it, its temperature when taken, and the times of the meals, can be stated on any sheet by the medical attendant. The book might be useful to a practitioner well versed in French, especially when treating a French patient; but as its dietaries are those in use on the Continent, the British practitioner will not probably often consult its pages, though he might do so with advantage.

The Biological Problem of To-day. By Professor OSCAR HERTWIG. Authorised translation by F. CHALMERS MITCHELL, M.A., Heinemann's Scientific Handbooks. (London: William Heinemann. Cr. 8vo, pp. 180, 3s. 6d.)—This little book will be found very useful. A translation of a well known treatise needs only advertisement; but this is more than a translation. In the first place the translation is not, as too often is the case, a rough rendering, more or less inaccurate, by a translator outside the circle of workers at the subject; but is a careful presentation of Hertwig's views with pains well taken to render the exact meaning of the author's words—no easy task in translating from the German. The translator is indeed editor also. In an excellent introduction, terse and lucid, he gives a survey of the points in discussion, and we cordially recommend this work to any readers, and there must be many, who desire to know in a general sense what Weismann's position is and on what grounds Hertwig controverts it. Thus in half an hour the reader can place himself at the centre of the most weighty biological problem of the day. Dr. Hertwig is no mere disputant; he is a scientific biologist of the very first rank; and, with the exception of Francis Balfour, no man has laboured more patiently or achieved more in embryology. In the course of these investigations he was led to doubt the validity of fundamental parts of Weismann's conception; but he writes with due respect for his antagonist and in no captious spirit. The addition of a glossary of the technical terms, compiled by the translator, puts the reader under a still greater debt to the latter for making thus accessible this important subject.

Therapeutisches Taschenbuch für Augenärzte [A Therapeutic Manual for Ophthalmologists.] Von Dr. E. LANDOLT und Dr. PYGAX: übersetzt von Dr. H. LANDOLT. (Wiesbaden: J. F. Bergmann. 1897. Fcap. 8vo, pp. 186. 2s. 3d.)—This is an A B C guide to diseases of the eye and to drugs used in their treatment. On looking up any disease we find merely the headings for treatment, not the details, and under the drugs mentioned are given one or more formulæ for their use. The information is mostly very elementary, and could not fail to be known by anyone practising as a specialist, and it is difficult to believe that it could have seriously been intended as a reference book for specialists, though this is expressly affirmed in the title and in the preface.

Elemente der Pathologisch-anatomischen Diagnose [Elements of Pathological Anatomical Diagnosis]. By Professor Dr. OSCAR ISRAEL. (Berlin: August Hirschwald. 1897. Small 8vo, pp. 140. M. 3.)—Dr. Israel divides this introduction to rational anatomical diagnosis into the following headings: (1) The properties of the body recognisable by the eye; (2) he consistency of tissues; (3) the characteristics of the body

substances, including albuminous substances, bile pigments other pigments, fat and salts; (4) the blood and its significance in regard to the changes in organs; and (5) the changes in tissues and organs. This work constitutes a guide by means of which the student may arrive, in a methodical and scientific fashion, at a conclusion in regard to the various morbid changes present in tissues and organs. It is not intended to act, nor could this be desired, as a substitute for the actual work to be done in the deadhouse.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

TABLOID CHEMICAL FOOD (PHOSPHATES COMPOUND).

MESSRS. BURROUGHS, WELLCOME, AND CO., Snow Hill Buildings E.C., prepare in the form of a compressed tabloid the ingredients of the compound syrup of the phosphate of iron—the phosphates of iron, calcium, potassium, and sodium. The tabloids are sugar-coated, and when placed in warm water the coating dissolves, and the contents quickly break up. The tabloids are made in two sizes, 2½ grains and 5 grains, representing ½ and 1 drachm of the syrup. This compressed form for the administration of the phosphates compared with the syrup, possesses the advantages of permanency, portability, and the absence of free phosphoric acid present in the syrup as a solvent.

ROUGHING HORSES.

OUR attention has been called by a medical practitioner in the country to methods of roughing horses devised by Mr. E. W. Walker, of Pailton, near Rugby, Warwickshire. One

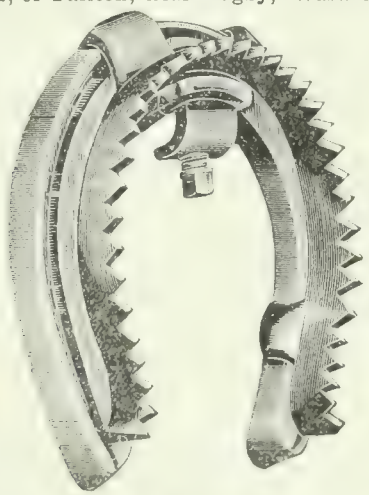


Fig 1

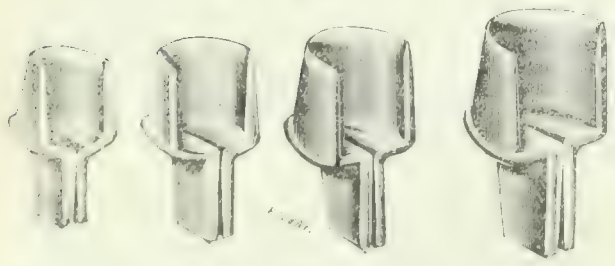


Fig 2

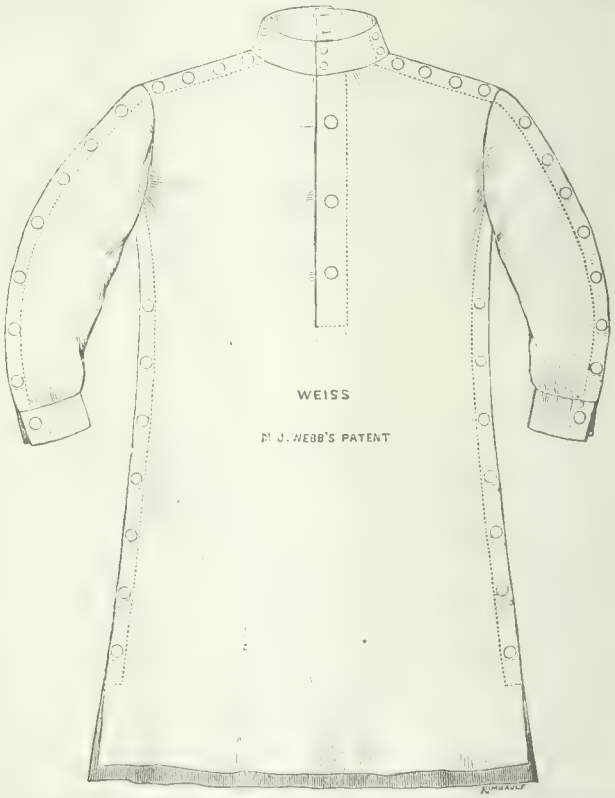
of these called the "Lightning Horse Rougher," is stated to be easily attached, no preparation of the shoe being required. The general construction and mode of adjustment will be understood from the accompanying diagram (Fig. 1). The manufacturer undertakes to send a proper size on receipt of a tracing of the fore and hind shoes, and a statement of the width of the shoe and thickness of its inner edge. The price per set is stated to be with an ordinary key 5s., serrated 1s. extra. The other invention is called the Acme Expanding Frost Cog (Fig. 2). It is made in various sizes varying in price from 7s. to 14s. a gross. The special point in the cog is said to be that it has a flexible shank which allows it to be forced into a hole in the shoe smaller in size than the shank of the cog, so that it is firmly retained. The cogs can be fixed with a blow from the hammer, and, the maker states, easily removed also.

VIMBOS.

A SAMPLE of the concentrated form of this preparation has been sent to us by Vimbos, Limited, of 130, Queen Victoria Street, E.C. It differs from the fluid form of Vimbos previously submitted to us, and reported on, in containing much less water. The analysis showed it to contain 24.06 per cent. water, 21.89 per cent. mineral constituents, and 54.5 per cent. meat extract and meat fibrine. The preparation has an agreeable meat flavour, and is free from indications of having been over-heated or burnt.

A SURGICAL SHIRT AND GOWN.

THIS is a shirt designed to facilitate access to any part of a patient's body when confined to bed. It is so made that it can be unbuttoned down the sides, arms, chest, back, and shoulders. It is claimed by the inventor that such an arrangement is of great use in nursing both medical and surgical cases. The shirt seems to us to be unnecessarily complicated, a simple cut down the back being amply sufficient for most purposes. The present design could be improved by continuing the opening in the back



for the whole length of the garment; such an addition would facilitate its removal from the patient without lifting. The buttons down the back should be replaced by tapes, as being less likely to be felt by the patient. The garment can be obtained from Messrs. John Weiss and Son, 287, Oxford Street. It is the invention of Miss Maria Webb of Clifton.

MEDICAL MAGISTRATE.—Surgeon-Colonel Locke, of Redcar, Coatham, Yorks, has on the recommendation of the Lord-Lieutenant been appointed to the Commission of the Peace of the North Riding of Yorkshire.

ARCHÆOLOGICA MEDICA.

XL.—THE HUMAN FOOT IN ART.

IT is nearly two thousand years since Horace wrote his lines:

Æmilium circa ludum faber imus, et ungues
Exprimet, et molles imitabitur ære capillos;
Infelix operis summâ, quia ponere totum
Nesciet.

and they remain as adaptable to the laws of criticism in the Victorian as in the Augustan age. Dr. R. H. Bradford, in an interesting and original paper read before the American Orthopædic Association in June, 1897, and published in the *Boston Medical and Surgical Journal*, September 23rd, 1897, dealing with the consideration of The Human Foot in Art, begins in the Horatian spirit by deprecating over-criticism of minute points of anatomy in judging works of art, but he argues that a study of defects of detail in great masterpieces of painting and sculpture may nevertheless have an interest of its own apart from an appreciation of the merits of the compositions as a whole. His modest excuse for the observations he has recorded is scarcely necessary. A criticism of anatomical details in a work of art is justified both from the artistic and from the scientific standpoint when it is kept within due limits—from the artistic side, because well-selected nature is far more beautiful than fanciful convention; and from the scientific side, because a painter or sculptor who represents a natural form otherwise than in accordance with nature is guilty of an error which he himself in all probability would be more than willing to correct. Apelles listened to and profited by the remarks of the shoemaker until that prototype of unwise critics allowed his tongue to run in advance of his experience and capacity. The lesson is perhaps as much needed and as little productive in the present day as in the spacious times of ancient Greece.

Dr. Bradford classifies the different representations of the foot in ancient and modern art into three types: The barbaric and Egyptian, the classical, and the neo-classical and modern. His analysis of these can scarcely be condensed; and hence may be quoted *in extenso:*

> The first may be considered the type of the bare-footed or sandal-wearing people: the second, sandal and cothurnus-wearing people; and the third those of the races that have worn shoes (Fig. 1).

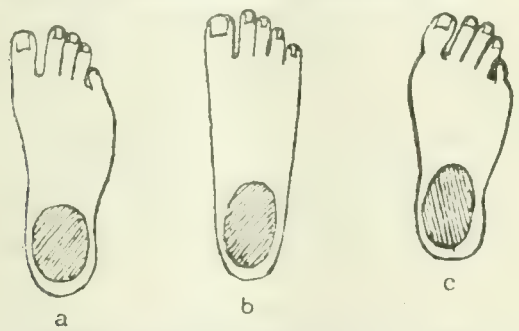


Fig. 1.—Diagram representing (*a*) the Greek, (*b*) the Egyptian, and (*c*) modern type of sculptured foot.

> The barbaric and Egyptian type is, as a rule, badly modelled, with the exception of some of the best of Egyptian sculptures, where modelling in some instances is carefully done. The various statues of the Fourth Dynasty, B.C. 3700, are all excellent types of this class. Under this head can also be placed Assyrian specimens and the works of early Indian, Burmese, Siamese, Chinese, and Japanese art, as well as the few crude figures from Africa, Mexico, and Alaska, and also the archaic Etruscan, Cyprian, and the early Greek statues. This class is characterised by the lack of divergence of the axes of the feet in standing figures, that is to say, by the parallel position of the axes of the feet, by the straight inner edge of the foot, and by the straight and uncrumpled condition of all the toes. In the Egyptian and early Greek art, where there is any attempt at careful modelling of the toes, the first toe is separated from the second, and in most instances the second toe is represented as somewhat longer than the first.
>
> The second, or classical type, is best represented by the famous foot of the Hermes, supposed to have been made by Praxiteles (Fig. 6). The characteristics are well marked. The line of the inner edge of the foot is always straight, except that there is a slight curve between the head of the metatarsal and the ankle. There is a separation between the first and second toes; the second, third, and fourth toes frequently diverge from the axis of the foot at an angle of at least thirty degrees, and are parallel to each other; the fifth toe is represented as short and crumpled, and is placed back of the base of the other toe; the outer edge of the foot curves behind the fifth toe to the middle of the foot. The angle of divergence of the standing foot is slight. This type is seen in all Greek and Roman statues with but little variation, the straight direction of the first toe being universal as well as the crumpled condition of the small toe. The curling of the small toe appears in Greek art after the sixth century B.C., and may be said to be universal since in all art influenced by Greek tradition. The foot in modern sculpture as well as in that of the Renaissance is copied largely from the classic. The peculiar distortion of the small toe is universal, and, in addition, the fifth toe is often placed even farther back on the outer edge than in the best Greek type.

Dr. Bradford, after describing the shape of the foot as unaffected by shoes (Fig. 2 *b* and 2 *c*) proceeds to investigate the



Fig. 2.—(*a*) Foot changed by modern shoe. (*b*) Infant's foot, toes extended. (*c*) Infant's foot, toes at rest. (*d*) Child's foot, showing beginning changes from shoes.

deformities of the foot attributable to foot covering. He points out that pointed shoes are not mere modern abominations, but that they were fashionable even among the Egyptians, and that in the Middle Ages they were almost as bad as at present—worse indeed if we are to judge by old pictures. Even sandals, the varieties of which he carefully describes and figures (Fig. 3), are not guiltless of harm, for they

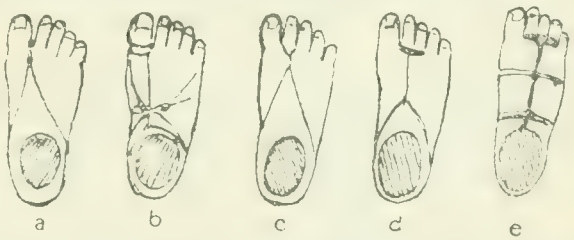


Fig. 3.—Types of sandals: (*a*) Mediterranean single-thong sandal. (*b*) Chaldean sandal secured to first toe. (*c*) Somali sandal secured to second toe. (*d*) Toltec sandal secured to second and third toes. (*e*) Early Etruscan sandal secured to second, third, and fourth toes.

have the defect of making an artificial separation between the first and second toes, and sometimes that of crowding the little toe against its neighbour. The Greek sandal (Fig. 4) had both of these disadvantages, and the



Fig. 4. Fig. 5. Fig. 6.

Fig. 4.—Greek sandal with inter-toe thong, causing divergence of toes; cross straps crowding the little toe; and an oblique strap pressing on the inner edge of the first metatarsal, and binding the foot at the mid-tarsal joint.

Fig. 5.—Drawn from the fragment of the statue of Apollo from Phigaleia (in the British Museum), showing the compression of the small toe.

Fig. 6.—Drawn from the Hermes of Praxiteles found at Olympia.

peculiarities in the representation of the foot in Greek sculpture are due to the imitation of an artificially deformed

member (Fig. 5). The remarks upon sandals are of especial interest.

Sandals furnish a protection to the sole, and are secured to the foot by some form of thong or strap. The oldest form of sandal seen in sculpture is the Assyrian, which was retained by a strap around the great toe connected with straps from the sides of the sole and behind the heel. In the Egyptian sandal a thong passing between the first and second toes, from the middle of the front of the sandal over the dorsum of the foot, was connected with thongs from the sides of the sandal. This sandal is the most common type, and resembles the modern Japanese and the modern Mexican and South American sandal. The ancient Toltec sandal was furnished with two thongs, one passing between the first and second toe, and the other between the third and fourth. The modern Somalis wear a sandal with a thong split so as to admit the second toe, leaving the other toes free. The early Etruscans wore a sandal with cross-straps, the front one passing from the sole of the sandal, between the first and second toes, over the second, third, and fourth toes, where it is secured to the sandal, leaving the first and fifth toes free, the other toes being secured under a strap.

In all these forms of sandals no pressure is exerted upon the small toe; but in a form of sandal with a front, a cross strap seen in the Orient for the insertion of the front of the whole foot, a certain amount of pressure is exerted on the side of the little toe, as in a slipper. This strap, however, is as loose as the cross strap in snow shoes. In the Greek sandal, however, a cross strap or straps were connected by lacings to be tightened in such a way as to be more firmly held to the foot. The forms varied greatly. In most a single inter-toe strap existed to be caught in the cross straps. In later sandals, however, the inter-toe strap was omitted, a reminder surviving conventionalised in the shape of the sole, which preserved a slight depression at the front of the sole between the first and second toes. The Greek and Roman sandal gave freedom to all the toes except the little toe, which was crowded by the tight cross-strap, as well as by oblique straps, which in some forms of sandals passed backwards from the sides of the front of the sandal to the instep, raising and crowding the little toe and the side of the first metatarsal. When this was snugly laced an inter-toe thong became unnecessary, as the pressure on the little toe and the top of the foot prevented the foot from slipping forward.

This form of foot wear can be easily imagined if we suppose a low bicycle shoe, with the tip removed, leaving all the toes except the small toe free. A sandal of this sort was perhaps not developed in the early period of Greek history; but, judging from sculpture, the cothurnus of the late Greek and Roman period differed but slightly from that of the classical period.

The article concludes with the judicious remark that although it is the province of the artist to furnish us with beauty as he sees it, he must find it within the lines of truth, and it is as true now as in Shakespeare's time that—

> Above the Art we add to Nature
> Is the Art which Nature gives.

The illustrations show the various types of sandal, and the changes in the shape of the foot by the modern shoe are also indicated. Perhaps it would have increased the interest of the paper had representations of the chief European types been added, but there is already enough to prove that a perfect form of foot covering has yet to be invented.

There is no doubt, however, that in our own country the distortions of the early and middle Victorian period are becoming less frequent. Even the shoemaker begins to understand that a boot constructed on the principle of median symmetry only serves to provoke bunions painful to the wearer, and objurgations no less painful to the hearer; and that the effect of a high heel is to slide the foot downwards and forwards until the toes press against the distal end of the leather cap. That he makes shoes in violation of his sense of right is due to a demand, chiefly on the part of his fairer customers, for that which he knows to be wrong- for something, in fact, that sacrifices comfort and real grace of line to a false ideal of elegance.

It is not, however, understood that another grave defect often accompanies even the more scientifically shaped sole—the tightness of the upper leather across the metatarso-phalangeal joints and phalanges, which almost entirely suppresses the free movements of the digits and is responsible for much suffering. The clumsy square toe is a bad apology for a remedy, since it gives space where space is not needed, and withholds it where it is most essential.

The design of the boot of the future, so far as plan is concerned, should be a joint production of the artist and anatomist, and let us hope that it will avoid not only the sham refinement of the pointed toe and the unnecessary ugliness of the square toe, but will give play for the lesser digits, which otherwise may follow the lead already obvious in the little toe, and degenerate into useless and not very ornamental relics.

Successful Vaccination.—Dr. James Young, public vaccinator for the sixth district of the Barton Regis Union, has been awarded the Government grant for efficient vaccination.

ANNUAL REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD, 1896-97.

[Second Notice.]

Scientific Investigations.

The scientific investigations comprise the results of some inquiries of great scientific and practical importance.

The Typhoid Bacillus in Soil.

A preliminary report by Dr. Sidney Martin on the behaviour of the typhoid bacillus in soil will be read with much interest. In reviewing the facts of an epidemic of typhoid fever which occurred in Chichester between April and August, 1896, Sir Richard Thorne draws attention to the steady diffusion of the disease which set in immediately after the appearance of a case in a notoriously insanitary area outside the city. This prevalence of the fever, he says, goes to show that enteric fever, though mainly distributed in epidemic form by means of water or of milk, is by no means always a waterborne disease, and it raises anew the question as to how far recurring prevalences of enteric fever in one town or spot can be due to the persistence in more or less active form in certain soils of the organism of the disease. Accordingly Dr. Sidney Martin has investigated the question as to what soils tend to conserve and enhance, and what soils tend to destroy and discount the life and physiological activities of the typhoid bacillus under different conditions as regards temperature, moisture, and organised constituents. Although the investigation is not yet complete, Dr. Martin has ascertained that the behaviour of the microbe is very different when in the absence of competing micro-organisms it is implanted in organically polluted soil and in soil from an altogether uninhabited and uncultivated area. In soil of the former sort, as for instance in samples of earth from Chichester, the bacillus rapidly increases and spreads abroad, whereas in the virgin soil under like conditions of temperature and moisture it languishes and quickly dies out. The importance of such work as this is very great, and we trust it will mark the beginning of a new epoch in the study of bacteriology, or rather of that as yet almost untouched branch of the science which deals with the life-history of pathogenic micro-organisms when outside the body and living under what may be to many organisms their natural conditions.

The method of experiment used in this research was to place the soil at the bottom of an Erlenmayer flask in a uniform layer. Inoculation was made into the centre of the soil, and after varying periods test cultures were taken, both from the spot of original inoculation and from localities removed from the centre. In this way it could be ascertained, not only if growth had occurred, but in addition, if any extension had taken place.

In the preparation of one of the samples of soil it was found necessary to dry it and to sift it, and when placed in the flask it was moistened so as to bring it back to its original condition. It would be interesting to ascertain if this manipulation produced any effect on the soil in the way of facilitating or otherwise the subsequent growth of the bacilli.

The Typhoid Bacillus in Milk.

Dr. Cautley has studied the conditions which affect the life of the typhoid bacillus in milk. Although he did not find that any bacterial association inhibited the growth of the typhoid organism, yet it is reassuring to read that he could not observe that the presence of any microbe facilitated its survival or multiplication. He has, however, placed the long suspected fact—that the typhoid bacillus can survive in milk under the ordinary conditions of transit and keeping even when the milk has turned sour—on a scientific basis. He also finds that when the number of associated organisms is smallest the typhoid bacillus can survive longest.

The Mutability of the Cholera Microbe.

Dr. Klein records his further observations on the mutability of the cholera microbe. The subjects of his experiments have been the several varieties of vibrio which he isolated in the course of his oyster investigations, as well as

certain other varieties. It may be remembered that Dr. Klein discovered that in the interior of the oyster Koch's vibrio became profoundly altered, and that this alteration was maintained through successive generations. He now finds that he can produce similar alterations by growing the organism under various artificial conditions. These alterations are easily produced, but in no case could Dr. Klein manage to get the altered organism to revert to its original morphological characters. In his remarks on these results, Sir Richard Thorne observes:

"For many years we have regarded the cause of cholera as particulate, as an exotic microbe, indeed, which outside the animal body and in this country has no great tendency to 'breed true,' or is at least prone to part soon with its virulence. Accordingly in practice our measures in repression of cholera have been so to deal with the invaded locality as to prevent or at least discourage, in earth or in water, acclimatisation of any foreign microbe upon which cholera may depend.'

THE BACTERIOLOGY OF DIARRHŒA.

In the last volume of these reports Dr. Klein stated that an outbreak of diarrhœa which occurred at St. Bartholomew's Hospital, London, in October, 1895, was associated with the presence in the stools of a peculiar and previously undescribed species of spore-bearing anaërobic bacillus of a highly pathogenic character, and which he named "bacillus enteritidis sporogenes." There was reason for believing that the milk supply was responsible for this outbreak; the same organism was found in milk which had been supplied to the hospital. Dr. F. W. Andrewes has made an investigation with regard to the occurrence of spore-bearing anaërobic bacilli in the contents of the human intestine, with special reference to their concern with acute diarrhœa. Many different forms of diarrhœa of every degree of severity were investigated, and the only anaërobic microbe found at all commonly was the bacillus enteritidis sporogenes. Dr. Andrewes considers that though it is not positively proved, there is a distinct probability that this bacillus is a cause of acute diarrhœa. The fact that anaërobic organisms do not normally appear to be inhabitants of the intestinal tract places us in a better position to investigate epidemics of diarrhœa.

"RETURN" CASES OF SCARLET FEVER

The administrative difficulties created by the occurrence of "return" cases of scarlet fever are well known, and Dr. Klein has commenced an investigation of certain pathological points which arise in connection with them. The first part of the inquiry has involved a bacteriological study of the desquamating skin of persons at various stages of convalescence. At no stage of the peeling process after scarlatina has he detected in the cuticle any microbe which could, to quote the words of Sir Richard Thorne "be thought of as having concern in spreading the disease." The urine afforded a similar negative result, and Dr. Klein is now engaged in the examination of secretions and discharges from the throat, nose and ear.

OTHER RESEARCHES.

The remaining researches in the report deal with the etiological factor of vaccinia and plague. Dr. Klein, although he has been unable to manufacture vaccine lymph in artificial culture, has yet found it possible to cultivate Copeman's bacillus outside the body. In a report copiously illustrated, he records certain cultural peculiarities of the plague bacillus.

THE ARMY MEDICAL SERVICE AND PUBLIC OPINION.

UNDER the heading of "Claims of the Army Medical Service," our contemporary, the *Western Daily Press* of December 10th, has an able and timely article, urging army medical reform on the ground of the suffering and loss of life in the field, from the new conditions of warfare, which must result in the present disorganised and inefficient condition of our medical service. It says:

With the introduction of new and vastly more destructive weapons of precision, the toll levied on the modern battlefield on human life will be heavy indeed. And correspondingly great will the amount of suffering inflicted—that is to say, suffering not ending in death. Those who have read some of the late Dr. Billroth's disquisitions of the wounded in future wars will fully appreciate these horrible possibilities, and they will re-echo the eminent German surgeon's opinion that "the people will demand that the help to the wounded shall be adequate, and in proportion to the development and augmentation of firearms." In the armies of the Continent no pressure of public opinion has been needed to effect the equalisation of two most important branches of the service—the men who fight and those who render aid to the wounded.....But what is the situation in the British army? The better equipment of the troops, and the revolution in tactics, have actually been accompanied by a deterioration in the Army Medical Service..... It will, therefore, come as a startling revelation that the British Army Medical Service is almost quite as badly organised now as it was in the days before the Crimea. The reason is that the War Office actually does everything in its power, whether deliberately or not, to discourage the absorption into the service of the best class of medical men....The question is one with which the British public has a right to interfere. It is not a mere professional disagreement. If war becomes a dire necessity, it is essential that all the resources of civilisation shall be utilised in order to mitigate its more clamant horrors. And how can this standard of humanity be attained with a discontented and numerically inefficient medical service? If from motives of false economy, or from a reluctance to sternly discountenance military jealousy of the medical service, the War Office fails to adopt the obvious remedies, the Government must be prepared to face, at some time or another, a heavy reckoning with the British public.

That is an impartial indictment, and fixes a heavy responsibility on those who disregard it. The reckoning which the military authorities will have to face is probably nearer than is generally supposed, if the rumours we hear regarding the deplorable insufficiency of the bearer company arrangements in the present Frontier War are substantiated. It is singular how little has been allowed to become known regarding the working of the medical service in the army of Sir William Lockhart; but the difficulties it has encountered in such warfare, and in such a country, must have been very great. It is, therefore, but fair that adverse comments should be withheld until the facts are known; a true medical history of the campaign must, however, be forthcoming.

THE HEALTH OF THE METROPOLITAN POLICE.

THE report of the Chief-Surgeon (Mr. A. O. MacKellar) on the health of the Metropolitan Police Force during the year 1896, which has recently been issued, contains many tables of statistics well deserving study by all interested in public health. To begin with, we have a table showing the quarterly totals of the monthly sick returns furnished by the Divisional Surgeons as follows:

Total Number of Sick in 1896.

Quarter ended	Fresh Cases	From Previous Quarter.	Total.	Resumed Duty.	Continued to Next Quarter.	Sick Leave.	Detached Leave.	Reported Unfit.	Died.
March 31st	2,517	449	2,966	2,354	295	175	91	42	9
June 30th	1,930	423	2,353	1,787	234	196	80	50	6
September 30th	1,868	310	2,178	1,679	233	150	83	25	8
December 31st	2,334	332	2,666	2,046	388	102	83	42	5
Totals ...	8,649	1,514	10,163	7,866	1,150	623	337	159	28

Thus it will be seen that out of a total of 10,000 cases of sickness and injury occurring in a force numbering 14,500 men, only 28 ended fatally, a result which must be considered highly satisfactory, being at the rate of not quite 2 per 1,000 of strength. Injuries and diseases of exposure naturally swell the sick list a good deal, 1,423 cases being due to the former cause. These include 141 cases of sore feet, which may be expected to diminish very much in future years, owing to the arrangement by which the constables are now permitted to purchase their own boots; 1,293 cases were attributed to the three chief diseases of exposure—rheumatism, bronchitis, and tonsillitis. The effect of exposure to all weathers are shown by the contrast presented by the sick list amongst those officers employed in the Commissioner's office, who are not so exposed, being but 26.6 per cent., while in the various police divisions (A, B, C, D, etc.), it reaches 40, 50, and even 60 per cent. of the effective strength.

The excellent use which is made of the London hospitals for the treatment of men seriously ill, may be gathered from

the fact that 183 were admitted into general hospitals on the recommendation of the chief or divisional surgeons, while the cottage hospitals of Surbiton, Norwood, Bromley, Beckenham, Thames Ditton, Barnet, etc., as well as the fever hospitals and some of the special hospitals, were also utilised for their reception. Of the 28 deaths by far the largest number (11) were due to phthisis and other lung diseases, 4 to cardiac disease and syncope, and 2 to typhoid fever.

Elaborate statistical tables are given, extending over more than three-fourths of the entire space, showing the number of cases of each disease, accident, or injury, classified according to the nomenclature of diseases, but it may be doubted whether any corresponding advantage accrues from such elaboration. It would be well, we think, if in future reports some of the space devoted to these tables could be applied to supplying an estimate of the total cost of the medical treatment of the police, including the subscriptions to hospitals. The payments to the divisional surgeons, as is well known, are on the club system at the rate of 10s. a head per annum for inspectors, and 8s. a head for constables and sergeants. Hence the total expense of actual treatment, apart from the subscriptions to hospitals, would probably be covered by a sum of £7,500 for the 14,500 metropolitan policemen, and if the exact statistics of other expenses were published, a valuable basis would be established for calculating similar expenses for other large bodies of men.

If it could be shown that 14,000 men, exposed very much to disease and injury, can be treated satisfactorily at their own homes, except when it became necessary to send them to hospital as in-patients, for a subscription of 10s. or 12s. a year, there would seem no reason why 140,000 should not be similarly dealt with, and thus a great step forward might be taken towards remedying one of the great abuses of our present hospital system.

THE NEW WATER SUPPLY OF BIRMINGHAM.

THE SOURCES OF THE SUPPLY IN WALES.

THE water supply of the city of Birmingham, which at the present time is obtained almost entirely from deep wells, and is of excellent quality, has for some years been growing inadequate to meet the wants of a rapidly-increasing population. The City Council, following the example of Liverpool, Manchester, and Glasgow, obtained parliamentary powers some four years ago to procure a fresh supply from a distance. They decided to make a series of large storage reservoirs in Wales, and bring the water thence in a long aqueduct to a distributing reservoir to be made a few miles from the city. These works, on the rivers Elan and Claerwen in Radnorshire and Breconshire, have now been begun some four years, and it may be well to give some account of them.

THE AQUEDUCT FROM WALES.

The aqueduct for conveying the water from the storage reservoirs when completed will be 73 miles long, and is partly open and partly a closed tunnel. Where it has to pass through a valley it is carried through a closed siphon, so that the water passes the whole way by gravity. At one point it has to cross the river Wye, and the pipes to convey it have already been laid along the bed of the river. The works in connection with this aqueduct have been let in sections to various contractors, and are in some portions of it well advanced.

THE DISTRIBUTING RESERVOIR.

The distributing reservoir will be at Frankley, about seven miles from Birmingham. From this reservoir the water will be distributed to various parts of the city by mains, through which the water flows by gravity. In this way the several pumping stations, which are at present used for supplying the higher parts of the city and suburbs, will be dispensed with.

THE STORAGE RESERVOIRS.

The works in connection with the storage reservoirs at Rhyader are being carried out by the Corporation. When complete there will be six large storage reservoirs formed by building dams of masonry in suitable positions across the beds of the rivers Elan and Claerwen. The lowest dam, Cavan-Coch, is being built a short distance below the confluence of the two rivers; and the reservoirs which will thus be constructed will extend for five miles up the valley of the Elan, and two miles up the valley of the Claerwen. Two more reservoirs are to be constructed up the Elan Valley, and three more up the Claerwen valley. The latter reservoirs—up the Claerwen valley—though part of the scheme, will not be constructed until the requirements of the city demand them.

The two reservoirs at present being made have the following dimensions:

	Length of Dam.	Acreage.	Capacity.
1. Cavan-Coch	600 feet	500	8,000 million gallons
2. Pen-y-Gareg... ...	525 feet	124	1,300 ,, ,,

The larger of the two reservoirs, the Cavan-Coch reservoir, when completed, will serve two purposes: It will form a storage reservoir for the supply of Birmingham, its suburbs, and the various towns within fifteen miles of the aqueduct; it has also to supply compensation water to the rivers below it, the amount being fixed by Parliament at 27 million gallons per diem.

The point of discharge at the Cavan-Coch dam is 700 feet above sea level, while the height of delivery at the reservoir at Frankley is 600 feet above. There is thus a fall of 100 feet in the 73 miles of aqueduct. From an engineering point of view, it was considered very advisable that there should be a fall of 170 feet in this length of aqueduct. This has been obtained by fixing the inlet of the aqueduct, not at the Cavan-Coch dam, but at a point some two miles higher up the reservoir, and at an elevation of 70 feet above the inlet culvert of the dam. Immediately below this inlet a second submerged dam is being built. This, when finished, will allow the bulk of the water in the reservoir being drawn off without lowering the water above it below the level of the inlet of the aqueduct, the submerged dam always holding up a body of water above the inlet.

THE HOUSING OF THE WORKMEN.

Various subsidiary works have, of course, had to be carried out. New roads have had to be made to take the place of an old road which will be submerged. Railways for the conveyance of materials and workmen have been constructed.

A village—the village of Elan—has been built, in which the Corporation undertakes all arrangements for the lodgement of their workmen. It contains an accident hospital, mission and schoolroom, public hall and recreation room, bath house, fire brigade depôt, and canteen. The last-named is a municipal public-house, based upon a modification of the Gothenburg system. The manager has a fixed salary, and no interest in the sale of liquors. The house is only used by Corporation workmen, is closed at 9 P.M., and all the profits are applied to the social well-being of the colony of workmen.

THE PROGRESS OF THE WORK.

At present, although the works have been in operation for four years, the actual building of the dams has not yet made much progress. Most of the labour and time has been spent in the necessary subsidiary works, and in excavating the foundations for the dams.

Good progress has, however, been made at the submerged dam at Sareg-ddu, and the other dams—at Cavan-Coch and at Pen-y-Gareg—have also been commenced. The stipulated time for the completion of the works is 1902.

THE FUNCTIONS OF A MEDICAL SOCIETY.—In a short presidential address to the Glasgow Southern Medical Society, Dr. James Allan summarises its functions as the cultivation of good will and the advancement of science. Neither is secured unless meetings be well attended. Both are furthered if all classes contribute—the hospital staff by accurate records, the general practitioner by striking instances less elaborated. He suggests a collective investigation of the use of some drugs, and that the visiting of public works would further the knowledge we should have of a patient's life and employment. He closes with the sensible statement that "the public will respect and have faith in the profession as much in proportion as it sees the members of the profession respecting and reposing faith in each other."

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JANUARY 1ST, 1898.

UNQUALIFIED ASSISTANTS.

THE correspondence published in our columns during the last five or six weeks on the position in which unqualified assistants now find themselves indicates by its tone and character that the profession as a whole recognises the justice and expediency of the memorandum adopted by the General Medical Council during its last session. The letters most recently received do not, as far as we can see, make any substantial addition to the arguments which were adduced in the earliest; it may, therefore, be well to consider the matter in its present aspects.

It would seem that the most which those who are affected by the new definition of the interpretation put by the General Medical Council on its duties under the Medical Acts venture to urge on behalf of the unqualified assistants is that it is hard, some would say unjust, to make the interpretation retrospective. An appeal is made for a relaxation in favour of those unqualified assistants who have been long engaged in that capacity on the ground that the new definition has been sprung upon them suddenly and without notice.

This contention, however, is advanced rather late in the day. Unqualified assistants have already had two warnings. A very distinct warning was given forty years ago in the Medical Act of 1858, which did not authorise all those then engaged in medical practice to be placed on the *Medical Register*, but, in addition of course to the holders of diplomas then recognised as qualifying for registration, only those who had been in practice before 1815, already at that date a very small class. Could any warning have been more pointed than that? Again, in 1883, when the General Medical Council issued its regulations as to covering and as to the employment of unqualified assistants another very distinct warning was given. Anyone who had been at the pains to follow attentively the decisions of the Council during the last three or four years in cases of alleged covering must have seen that the Council was disposed to take a view which became distinctly more stringent from year to year.

Unqualified assistants, therefore, have received ample warning. No statistics exist, but we apprehend that their number has decreased very considerably during the last ten years. Many who might have drifted into this unfortunate position have no doubt been warned in time. Some have not, and it is these who now appeal for relief of what they feel to be their hard case. They ask, or it is asked on their behalf, that some special examination should be held, and that on passing this they should receive some kind of licence to continue to practise as unqualified assistants.

Some of our correspondents have expressed a hope that the Apothecaries' Society of London would undertake to hold such an examination. But that body at present makes no sign, and we regard it as in the last degree improbable that it would institute an examination to prove a negative, or give a certificate that a man was not qualified to practise medicine, surgery, and midwifery, for that is what it would come to. It grants licences certifying that a man is qualified to practise these arts and will probably be content with that. Other correspondents suggest that the General Medical Council might institute such an examination. We take it to be as certain as anything can be in this sublunary sphere that the Council will not take such a course. In the first place it would stultify itself, and in the second place it is, to say the least, very doubtful whether it would have the power. The General Medical Council is often spoken of as the Medical Parliament. This connotes the idea of a body charged with the duty of making laws. As a matter of fact, its functions are much more nearly those of a judicial Court. It is charged with the duty of administering and incidentally of interpreting certain Acts of Parliament. In this direction it has large powers, and in the exercise of them it has, certainly as it seems to most people not without quite sufficient deliberation, issued a memorandum which is a notice to the medical profession of the interpretation which it has, after full consideration, put upon certain clauses of the Medical Acts. The memorandum might have been clearer on some points, especially with regard to the definition of a *bonâ fide* student, and we do not pretend here to have dealt with many questions which must arise, nor with several which have already been submitted to us by correspondents whose inquiries demand careful consideration. But the main intention of the Council's memorandum is clear; it is addressed to qualified medical practitioners, and it demands their most serious attention. It is not a new thing, but a more precise interpretation of what has been law since 1858.

OCCUPATIONAL MORTALITY.

DR. TATHAM deserves hearty congratulation upon his production of a most valuable contribution to the important series of reports that have from time to time emanated from the Registrar-General's Office on the varying rates of mortality prevailing among men engaged in different occupations.

Dr. William Farr, in his celebrated Decennial Supplements dealing with the periods 1851-60 and 1861-70, laid the foundations of these valuable inquiries, but confined his attention to the death-rates from all causes in the various occupations at different age-periods. Dr. William Ogle broke fresh ground, and carried the inquiry further, by investigating the relative incidence of various fatal diseases upon those engaged in each of many occupations or groups of occupations. Dr. Ogle, moreover, while dealing with the statistics of the last census in 1891, previous to his retirement from the public service in 1893, made provision for a very marked extension of the basis of facts for determining the relative rates of mortality from the principal diseases incidental to different occupations. Dr. Tatham frankly acknowledges

his obligations to Dr. Ogle for his forethought in providing a mass of statistical material which Dr. Tatham has turned to good account in the report which has just been issued.

The valuable tables contained in this report and Dr. Tatham's conclusions drawn from the facts and calculated rates of which they consist, are based upon more than half a million of deaths that occurred during the three years 1890-92 among the male population of England and Wales above the age of 15 years. The years of life exposed to risk during these three years were nearly 27 millions. With such an extended basis of facts the calculated rates dealt with in this report acquire a very exceptional degree of trustworthiness. The fact that the results of this new series of tables do not materially differ from those derived from Dr. Ogle's method of restricted samples does not detract from their value, while it corroborates in a remarkable manner the soundness of Dr. Ogle's conclusions published in the Decennial Supplement for 1871-80.

The main conclusions in the report before us are based upon the death-rates of males aged between 25 and 65, the period during which the effect of occupation is assumed to be most marked, and in which the proportion of occupied males is largest. Taking 1,000 to represent the mortality of all males at these ages in England and Wales in 1890-92, the comparative mortality figure for all occupied males was only 953, whereas the residue, classed as unoccupied males, gave a mortality figure of 2,215. This alarming mortality of unoccupied males is, however, susceptible of easy explanation. The deaths of occupied males at these ages in the three years numbered 250,184, while the deaths of unoccupied males were but 27,299, and included all the deaths at these ages in lunatic asylums, all the deaths in workhouses, hospitals, and prisons of inmates aged between 60 and 65 years, in addition to those of persons retired from business, living on private means, or pensioners. The death-rate among this incongruous aggregation of so-called unoccupied males has, it should be mentioned, no real statistical value, and its constitution fully accounts for the fact that the comparative mortality figures for all occupied males is so distinctly below that for all males in England and Wales. On the other hand, it should be noted that the separate treatment of this unoccupied class does not materially depreciate the value of the comparative mortality figures for the several occupational headings, as there is no good reason for believing that the proportional contribution to this unoccupied class from the males engaged in the several occupations varies to any considerable extent.

This report tells us that while the comparative mortality figure for all occupied males in England and Wales was 953, it was only 687 in agricultural districts, while it was 1,147 in London and 1,248 in industrial districts. This very wide difference undoubtedly points broadly to the greater healthfulness of agricultural than of industrial occupations. It also points, however, to the existence of sanitary and social factors which should be constantly borne in mind when drawing inferences from these occupational mortality statistics. It is obvious that the difference between the comparative mortality figure for "farm labourer, farm servant" (632) and that for "general labourer" in industrial districts (1,509) is not so much the effect of occupation as of housing, feeding, and of sanitary condition in the broadest sense of that term. While noting, for instance, that "costermongers, hawkers" have a comparative mortality figure of 1,652, we should not forget that this excessive death-rate is due far more to insanitary conditions of life than to inherent unhealthiness of their occupation, which under other conditions of living would inevitably show widely different results. These considerations should not be forgotten, as they more or less affect the comparison of the mortality statistics of all occupations.

The clerical profession maintains its position as the occupation showing the lowest death-rate, with a comparative mortality figure of 533; the comparative figure for "schoolmaster, teacher" is not much higher (604); while it is 821 in the legal profession, and 966 in the medical profession. The figure for law clerks is 1,070, and for "musician, music master" 1,214; the latter high figure is probably in part due to the inclusion of a considerable proportion of itinerant musicians. Farmers and gardeners show remarkably low mortality, their figures being respectively 563 and 553. All occupations connected with the liquor traffic show still higher mortality figures than those to which Dr. Farr and Dr. Ogle called attention in previous Decennial Supplements. The figure for brewers is 1,427, for innkeeper, publican, etc., 1642, and for inn hotel servant 1725. Among the shopkeeping class, tobacconists, milksellers, cheesemongers, and drapers, showed mortality figures exceeding 1,000, whereas the figure was 833 for booksellers, 803 for coal merchants, and 664 for grocers. The mean figure for all shopkeepers did not exceed 859. Butchers, hatters, hairdressers, and "tallow, soap, glue, etc., manufacture," all showed mortality figures ranging from 1,096 to 1,109. The excessive mortality of cutlers, file makers, scissor makers, and nail makers, noted in previous periods of observations, was still higher in 1890-92. Among other industrial occupations, slaters and tilers, wool, silk, and cotton dyers, potters and glass manufacturers, again showed marked excess of mortality, and tin miners, coalheavers, costermongers, and chimney sweepers gave figures varying from 1,311 to 1,652.

The most novel, and at the same time, perhaps, the most interesting feature in the present report is the elaborate and scientific treatment of the relative incidence of the principal causes of death upon those engaged in the different occupations. The age, occupation, and cause of death of each of the more than half a million males aged above 15 who died in the three years under observation were tabulated in combination. The tables in the report therefore show not only the comparative mortality figure for all causes, but also the relative proportions of this total mortality which was due to each of twelve of the principal causes of death. Not only is the mortality figure for all causes corrected for the varying age constitution of those engaged in the various occupations, but by an ingeniously-devised method, a comparative mortality figure for each separate disease has been calculated for each occupation, which accurately takes account of the varying age proportion prevailing in the different occupations. The effect of this correction of disease mortality for variations of age proportions is obviously most marked upon the comparative mortality figures for such diseases as phthisis and cancer, the death-rates from which vary so widely at different ages. As an example, it may be noted that the uncorrected mortality figure for inn servants from phthisis and cancer is 572 and 41 respectively; but after correction for abnormal age proportion, the phthisis rate is reduced to

476, and the cancer rate is raised to 65. In other words, the low mean age for inn servants produces without correction an unduly high rate of mortality from phthisis and an unduly low rate from cancer. Medical officers of health will undoubtedly appreciate the importance and value of this correction, and will, it may be hoped, profit by the accurate method adopted by Dr. Tatham for effecting the necessary correction, which is fully described in the report.

Thus corrected for the disturbing influence of varying age proportions in the different occupations the comparative mortality figures for liver disease, diabetes, urinary diseases, gout, as well as definitely certified alcoholism, among those engaged in occupations connected with the liquor traffic, acquire a considerably enhanced value, and accentuate the warnings conveyed in the reports previously prepared by Dr. Farr and Dr. Ogle. It is shown in the report just issued that if we take 100 to represent the mean mortality among all occupied males at these ages from each cause of death, the comparative mortality figures for publicans, innkeepers, and their servants is 723 from alcoholism, 600 from gout, 271 from diabetes, 644 from diseases of the liver, 210 from urinary diseases, and 207 from suicide.

The figures bearing upon the fatal effects of breathing dust-laden air, or air fouled in other ways, have similarly acquired greatly increased value from the careful elimination of the disturbing influence of the varying age proportions of persons engaged in different occupations. Taking 100 to represent the combined mortality from phthisis and diseases of the respiratory organs among those engaged in agricultural occupations, it is shown in a special table in this report that the comparative mortality figure from these diseases among those engaged in occupations which cause dust of various kinds, ranges upwards to 373 for file makers, 407 for cutlers and scissors makers, and 453 for potters and earthenware manufacturers. The effects of the inhalation of impure air, although not necessarily dust-laden air, is shown in another table, from which it appears that the phthisis mortality figure, which is 106 for agriculturists, rises to 301 for hatters, 322 for musicians, 326 for printers, and 325 for bookbinders; each of these occupations showing also a marked excess of mortality from diseases of the respiratory organs.

It is impossible on the present occasion to do more than to point out that this report adds much of interest in connection with the evidence, direct and indirect, of lead poisoning among lead workers, file workers, plumbers, painters, glaziers, potters, glass makers, etc. Indeed the report teems with information and facts deserving careful study at the hands of all students of the hygiene of occupations.

Rightly used the statistics in the report cannot fail to afford practical help in the direction of lessening the dangers incidental to certain occupations. In order, however, to avoid false or too arbitrary deductions from the figures, it is absolutely necessary that the many-sided aspect of the subject dealt with, and the variety of factors that contribute to the results, should be constantly borne in mind. Above all, it should be remembered that while the report bears abundant evidence of the utmost possible skill and care in the treatment of the figures, the results must, on account of the source and nature of the facts dealt with, be accepted as relatively rather than as absolutely accurate. While the arithmetical processes employed in the treatment of the collected data secure mathematical accuracy in the calculated rates and percentages, it would answer no useful purpose to shut our eyes to the inevitable defects of the data recorded in the census schedules and the death registers concerning the occupations and causes of death of the male population of England and Wales. We must be satisfied to believe, as we do, that the statistics now published are the best that have appeared on the subject, and to hope for further approach to accuracy hereafter by gradual improvement of the data on which the statistics are based.

LAXITY IN OUT-PATIENT DEPARTMENTS.

WE published, in the BRITISH MEDICAL JOURNAL for December 18th, 1897, a letter from Mr. Ensor, Ophthalmic Surgeon to the Hospital at Newport, in which he called attention to the circumstances of his dismissal from that office by "the Directors," that is, the committee of the Governors of that institution. The reason for this extreme measure on the part of the Directors was this: Mr. Ensor had previously had occasion to suspect that the hospital was being used as a sort of medical club by workmen well able to pay ordinary fees who subscribed one or two shillings a year to the hospital, and then claimed treatment there for themselves and their families. He had had several of these cases referred to the Directors for inquiry, in obedience to the rule of the Board, which runs: "That all doubtful cases are to be referred to the House Committee for investigation and inquiry, but in the meantime the patient must be treated." No notice was taken of any of these references. Mr. Ensor then met with two fresh cases in which he thought an attempt was being made to abuse the charity, and refused to attend them. The applicants complained to the Directors, who called Mr. Ensor's attention to the rule above quoted, and ordered him to attend the patients. Mr. Ensor refused until the cases had been investigated, and was dismissed from his office by the Directors, who, under the laws of the hospital, have the power of "suspending or dismissing the medical officers and *the other* resident officials for misconduct." We cannot think that this rule could be meant to apply, or can apply, to the honorary staff, who are non-resident, otherwise the words we have italicised would be unmeaning, and we are therefore disposed to regard the course pursued by the Directors as illegal; but this is a subordinate question. Mr. Ensor would be ill-advised in treating the matter as one of private wrong. It is essentially a question of justice and of the interests of the hospital. Can anyone say that Mr. Ensor's dismissal was just? Even if we grant that his conduct was a technical breach of the rule quoted, the Directors had provoked that breach by themselves neglecting to investigate and report on the cases which had been previously submitted to them, and ought certainly in common fairness to have fully investigated these last cases, and have pointed out the reasons for their insisting that the daughter of a man who earned 45s. a week, and the son of another who (with the boy himself) earned 59s. a week, should be received as hospital patients; and if Mr. Ensor then still refused, the sense of the general body of governors should have been taken on the question of the qualifications for out-patients. So much for justice.

As regards the interests of the hospital itself, Mr. Ensor's dismissal must be most disastrous. In their report for 1896 the Directors take credit for the large increase in both in-patients

and out-patients, and they state expressly that in both departments the increase "is chiefly in connection with diseases of the eye," and congratulate themselves on the addition of an honorary ophthalmic surgeon to the staff; and yet they dismiss this gentleman in the harshest (even if not absolutely illegal) manner, and thus render it most difficult to fill up the post which they regard as so important to the prosperity of the institution.

As will be seen from a correspondence sent to us by Mr. Ensor, and published in another column, the House Committee of the hospital have now called upon Mr. Ensor to sign a letter drafted by themselves, apologising and asking for an interview to make an explanation in the hope that the Board would reconsider its decision. Mr. Ensor has very naturally refused. The Directors or their House Committee hardly seem to appreciate the position. In order to right a public wrong, Mr. Ensor took a course which may have been technically incorrect; but it is obviously the duty of the Directors to remedy the evil to which their attention has been called on more than one occasion. The rules for the out-patient department ought to be revised by a committee of which the honorary medical staff shall be a constituent part. We ought to have mentioned that these out-patients are seen at their own homes when necessary, so that if the course prescribed by the Directors in this instance were followed, workpeople who would be excluded from many provident dispensaries as over the wage limit, could get attendance (and medicine also, we suppose) at their own homes for "one or two shillings a year" by subscribing to a workshop collection for the hospital, Cases like this show the great danger of making a hospital dependent to any appreciable extent on small contributions from the working class; and they also show the absolute necessity for that representation of the medical staff on Hospital Boards, of which we spoke in our issue of December 25th, 1897. Had the medical staff been members of the body of directors of Newport, this suicidal step would not have been taken.

The Queen has been graciously pleased to give the Jubilee medal of 1897 to Sir Joseph Fayrer, Bart., K.C.S.I., M.D., F.R.S., one of Her Majesty's Honorary Physicians.

Mr. Victor Horsley, the President-elect of the Neurological Society, will give his inaugural address at the annual meeting of the Society to be held at 11, Chandos Street, London, W., on Thursday, January 13th, 1898, at 8.30 P.M. The subject of the address will be, The Degree of Discharge of Different Nerve Centres.

HOSPITAL REFORM IN BRADFORD.

A committee of the Bradford Medico-Ethical Society, of which the President (Dr. Hime) is chairman, is at present engaged in inquiring into the alleged abuse and misuse of the medical charities of that town, which contains three public hospitals. The committee was appointed as the result of a paper read by Dr. Hime before the Society, and among the points into which it is inquiring are the payment of small sums weekly—as little as 3d. being taken—by patients as a contribution towards the cost of treatment, the unlimited number of cases treated for the most trivial ailments, and the absence of efficient inquiry as to the means of patients before they are admitted for treatment at some of the hospitals. It is satisfactory to find that questions of this nature are being taken up and carefully investigated in so many parts of the country. Indiscriminate charity is demoralising to the recipients, and matters are not made better when a charge of 3d. or 6d. a week is made, and the patient is thus educated to think that by this paltry payment he ceases to be a recipient of charity. Both the one and the other system depreciate the estimation in which the public, accustomed to judge everything by a money standard, hold the services of the profession.

THE WORKHOUSE NURSING ASSOCIATION.

Miss Twining, in explanation of the recent decision of the Workhouse Nursing Association to give up its work in connection with the training of nurses for workhouse infirmaries, expresses the opinion that the time has now come for the State to step in, and either directly or by subsidy, to provide nurses for the workhouses. She holds that this will be facilitated by the Nursing Association retiring from the field. We most cordially agree with Miss Twining in her first proposition; but we fear that because the only association that had any influence with the public or the Local Government Board has ceased to lift up its voice, apathy and inertia will once more be in the ascendant.

THE MIDDLEMORE LECTURE.

The annual lecture under the Middlemore Trust was delivered at the Birmingham and Midland Eye Hospital on December 16th, 1897, by Mr. Henry Eales, one of the surgeons to the hospital. The subject chosen was Exophthalmos, and, after describing the various conditions underlying this symptom and discussing diagnosis and treatment, the lecturer directed special attention to the importance of the early diagnosis of tumour. He stated that this was greatly facilitated by resection of the external rectus, which allowed complete digital examination of the orbit, since it rendered it possible to introduce the little finger into Tenon's capsule behind the globe. In this way he said the presence or absence of a tumour, not to be detected by ordinary examination, could be certainly determined, and delay in undertaking appropriate treatment thus obviated. He narrated a case in which by this means a tumour of the optic nerve was at once diagnosed (and removed), though the only symptom was proptosis; there was no interference with ocular movements; vision was normal ($V=\frac{6}{6}$); the perimeter showed the field of vision to be normal, and the optic disc appeared normal to the ophthalmoscope. He mentioned also another case in which, no tumour having been found in the orbit, the muscle was replaced. The patient died subsequently with symptoms of intracranial disease. A case of recurring exophthalmos, due to idiopathic tenonitis, was described, and several interesting cases and specimens were shown in illustration of the lecture.

EDINBURGH ROYAL INFIRMARY: KITCHEN CONCERT.

At the annual kitchen concert given by the residents of the Edinburgh Royal Infirmary the programme consisted of songs, recitations, pianoforte solos, etc., given by Drs. James, Kennedy, Porter, Wilson, Shiels, and Drinkwater; also by Messrs. Thorne, Gardiner, and Frost. At the end of the first part of the programme the resident physicians and surgeons gave a small play called *A Trip to Moscow*. The scene was laid in a Russian midwifery hospital at the time of the Medical Congress of 1897. The chief of the hospital was a certain Count Rumplesteelokin, a famous obstetrician, but in reality Mr. F. M. Caird, an Edinburgh surgeon in disguise, he having gone over to the Congress in question. Various distinguished visitors in the persons of Professors T. R. Fraser, John Chiene, A. R. Simpson, and Dr. Alexander James went to visit the hospital. There they recognise the obstetrician as Mr. Caird, who, however, refuses to have anything to do with them, and has them arrested as spies and Nihilists carrying infernal machines. Professor Simpson, for example, was arrested because he had in his possession an axis traction forceps. With difficulty they were released, and managed to find their way home. Several songs were sung during the

piece by "Professor Fraser," "Professor Simpson," "Dr. James," and by the resident of the hospital. The Infirmary Cup was next presented to the winning Rugby football team from Wards 25 and 26, under the charge of Professor Fraser. Many of the senior members of the staff of the hospital were present as guests. The pleasant evening was closed with "Auld Lang Syne" and "God Save the Queen."

DIPHTHERIA AND SCHOOLS.

WE learn that a large Board school was closed very recently in Leeds, chiefly on account of the considerable number of diphtheria cases which had occurred, mostly amongst the younger children. In a handbill which the medical officer of health has sent round in the district most affected, he warns parents of the danger, now well recognised, that a person even in good health may carry about in his throat the bacillus of diphtheria. Though this carrier of the bacillus may himself resist the attack of the germ he conveys, a susceptible child, receiving it from him, may contract a fatal illness. Dr. Spottiswoode Cameron therefore specially warns mothers not to allow their young children to be fondled and petted by children or older persons from a house where any ambiguous throat affection is known to have been present. Dr. Francis Bond, of Gloucester, has again drawn attention to the liability of infection through the slate. Evidently an apparently healthy child, but in whose mouth and throat the dormant diphtheria bacillus is harboured, using the commonest and oldest of all methods of removing what has been written, may easily leave on the slate a sufficient number of the poisonous bacilli to infect another child—especially if this latter be a small infant who knows no better than to lick the slate itself. While of course in every case this latter practice should be sternly repressed, and while some proper provision should be made for slate cleansing, it should also be clearly understood, by teachers and attendance officers, that all persons who have been in houses in which diphtheria has been present, whether teachers or children, should remain away from school. This prohibition should hold, even after they have changed their domicile and disinfected their clothing, until repeated bacteriological examinations of the throat have been made with repeatedly negative results. Children are compelled, and rightly so, to go to school, but those who run them in are therefore the more responsible for their safety there. Sir Richard Thorne's view, that compulsory school attendance has, in regard to this disease, prevented the fall in the death-rate that has occurred in most infectious diseases, is becoming more and more accepted day by day. The conveyance of infection by the apparently healthy is probably the cause of the continued prevalence of diphtheria amongst young school children.

THE DANGERS AND USES OF ERYTHROL TETRANITRATE.

WE have received from Messrs. Burroughs, Wellcome, and Co., a detailed account of the circumstances attending the fatal explosion of erythrol tetranitrate, which occurred at their works at Dartford on December 15th, 1897. It appears that the deceased—Mr. Lewis Jones, a qualified chemist—was engaged in stirring together in a mortar a mixture of erythrol tetranitrate and lactose, presumably for the purpose of making tabloids. The quantity of the active drug served out to him was 4 ounces, and there is reason to believe that the dangerous nature of the combination was fully explained to him at the time by the chief of the department. The explosion was violent, but its effects were, fortunately, local. The jury returned a verdict of "Accidental Death," and passed a resolution expressing their appreciation of the facilities placed at their disposal by the firm for investigating the circumstances of the case. For much of our knowledge of the physiological action of erythrol tetranitrate and its congener, mannitol hexanitrate, we are indebted to Professor Bradbury, of Cambridge, who in the Bradshaw Lecture, delivered before the Royal College of Physicians of London in 1895, gave some account of the pharmacology of these substances, based chiefly on a series of experiments made by Mr. Marshall, M.B., in Professor Schmiedeberg's laboratory at Strassburg. Erythrol tetranitrate is solid and crystalline, and melts at a temperature of 61° C. (142° F.). When pure it is colourless, and if kept in a dark and moderately cool place is fairly stable. If exposed to warmth, and especially sunlight, it rapidly undergoes decomposition, turning yellow and giving off nitrous fumes. Its solubility in water is slight, but it dissolves readily in alcohol and in ether. It is a vaso-dilator and belongs to the group of which glycerol trinitrate, known familiarly as nitroglycerine, may be regarded as the typical representative. Blood pressure experiments show that the nitrates of erythrol and mannitol have a less marked but more prolonged action than those of glycerol and glycol. On theoretical grounds it might be supposed that the new remedies would be useful in the treatment of cardiac pain, Bright's disease, migraine, and Raynaud's disease, but, as far as we have been able to learn, there has been very little demand for them. A well-known pharmacist stated that he had never dispensed a prescription containing erythrol tetranitrate, and the dispenser at a large general hospital admitted that the name was not familiar to him, yet Professor Bradbury, in the letter which we print in another column, states that he is able to speak very highly of its therapeutic properties in warding off attacks of angina pectoris. Dr. Garraway at p. 18 mentions the case of a gentleman who has derived immense relief from its use, and won long periods of complete immunity. Dr. Bradbury, in the lecture to which reference has been made, stated that the dose of the solid organic nitrates was a grain, but that more might be given if thought necessary. He suggested that they should be taken in the form of pills or tablets, or in alcoholic solution. There is now, unfortunately, very little doubt that these new organic nitrates cannot be handled with impunity in any form in which trituration is necessary. They, in common with many other nitrates, were known to be explosive, but that they would develop such activity by being merely gently stirred with lactose could not have been foreseen, although Professor Bradbury in his letter expresses the opinion that mixture with some readily oxidisable substance might increase the liability to explosion. Messrs. Burroughs and Wellcome appear to have taken every reasonable precaution, and are clearly not to blame for so sad an accident.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE Honorary Secretaries of the Prince of Wales's Hospital Fund for London formally announce that His Royal Highness, after consultation with the Council of his Hospital Fund for London, has decided to distribute the funds at his disposal for the year 1897 in the following way: A sum of £22,050, representing the annual subscriptions promised, *plus* the amount of interest on investments already made, will be divided among the hospitals where more than 100 beds are in constant occupation. The moneys received from the sale of stamps, probably about £38,000, will be divided among such institutions as come under the classification of hospitals. The most pressing wants of the larger hospitals will thus be relieved for this year, and the Honorary Secretaries anticipate that in future years the income of the fund will be sufficient to meet the requirements of these hospitals. It is announced that wards which for want of funds have been closed at Guy's, St. Thomas's, and other hospitals will be at once reopened, and that the needs of other hospitals will be met. The honorary secretaries add that in originating this fund the Prince of Wales was deeply impressed with the urgent wants of London hospitals; and they express the belief that the Fund for this year will remove much anxiety from hospital managers, and the hope that the public, feeling that

the Fund has grappled with a great public want, will subscribe to it annually, and will endeavour also by organised and systematic contributions to render the future of the Fund secure. The meaning to be attached to the words "hospitals where more than 100 beds are in constant occupation" is not perfectly clear. If it means that hospitals having fewer than 100 beds available are those excluded from the grants out of the annual income of the Prince of Wales's Fund this year, it would include among many others the Poplar Hospital for Accidents, the North-West London, and the Miller Memorial Hospitals, the Royal Hospital for Diseases of the Chest, the Victoria Hospital for Children, Chelsea, the Evelina Hospital for Children, the Hackney Children's Hospital, the Samaritan Free Hospital, the Royal Eye Hospital, and the Orthopædic Hospitals. If it is intended to mean hospitals in which the daily average number of beds occupied has been less than 100 we must, according to the last (1897) edition of *Burdett's Hospitals and Charities*, add to the above list the Metropolitan, the Great Northern, and the West London Hospitals, the Shadwell Children's Hospital, the Moorfields Eye Hospital, and the London Fever Hospital. It may be doubted whether it is quite fair to a hospital to exclude it because it is small if its needs be as pressing and its work in proportion as valuable as those of its larger neighbours. It must not be forgotten that very probably the collection for the Prince's Fund may have diminished the subscriptions to individual hospitals. The limitation seems rather to suggest that the Distribution Committee of the Fund were conscious that they were not qualified to undertake that thorough investigation into the merits of individual hospitals which is needful, and so had adopted the rough-and-ready test of size.

STATE CHILDREN'S AID ASSOCIATION.

VISCOUNT PEEL, the Chairman of the State Children's Aid Association, has issued in the form of a pamphlet a reply to the open letter addressed to him by Mr. Albert Pell, Chairman of the Metropolitan Association for Befriending Young Servants, Miss Catherine Scott, its Honorary Secretary, Mr. William Bousfield, President of the South-Eastern and Metropolitan Poor-Law Conference, and Mr. William Chance, Honorary Secretary of the Conference, Lord Peel supports his assertion that children leave the large aggregated schools without proper training by quotations from reports of various officials, including one by the Chief Inspector of the Local Government Board, who expressed the opinion that "the industrial training given to most pauper children is very unsatisfactory," and the opinion of Mr. Holgate, the Educational Inspector, who said that he was "opposed to the existing system of educational training." Lord Peel points out that another inspector, reporting on the training of girls, states that they are "utilised in a rather slavish way for the use of the school." Lord Peel further observes that since the formation of the State Children's Aid Association the Local Government Board has issued an order reducing the hours for which children are permitted to labour in the schools. With regard to the opinion that other Boards of Guardians will follow the good example set by the Kensington and Chelsea Boards, and establish the necessary homes for "ins and outs," Lord Peel points out that in the fourteen years which have elapsed no other Board has followed the example which these two set. Lord Peel hopes that the Bill introduced into the House of Commons last session to enable Boards of Guardians to obtain control over: (1) The children of paupers of the permanent class whose character or mental deficiency may render them unfit to have the control of their offspring; (2) the children of habitual tramps and of the "in-and-out" class; and (3) orphan children chargeable to the rates, will have the effect of diminishing the number of children taken in and out of the workhouses many times a year. With regard to the proposal to give to a central body compulsory powers to inspect the children in existing workhouse schools or infirmaries and to transfer to their own care certain classes, Lord Peel points to Mr. Stephenson's recent report, in which he recommends that the use of the ophthalmic hospital school should not be optional—a recommendation supported by the fact that he found that only 33.54 per cent. of the children who were suffering from active trachoma were isolated, two out of every three afflicted with this highly contagious disease being allowed to mix freely with healthy children. Lord Peel's letter, which is a remarkably temperate and weighty document, concludes with the restatement of the main object of the State Children's Aid Association, which is to obtain for the child more individual treatment, and to endeavour to get it placed in surroundings which as nearly as possible approximate to natural life. Copies of Lord Peel's letter can be had on application to the Honorary Secretary of the State Children's Aid Association, 61, Old Broad Street, E.C.

PROPOSED HOSPITAL BOARD FOR LONDON.

WE would call attention to a letter from Sir S. Waterlow on this subject, which appeared in the *Times* of December 28th, 1897, and which derives considerable importance from the long connection of Sir Sydney with the Hospital Sunday Fund. We have, perhaps, no right to treat this letter as an official utterance. It is written from Cannes, and therefore without consultation with the writer's colleagues on the Sunday Fund, but it may be safely taken to express the views generally prevailing in that body. The important part of the letter lies in the following clause:

> I concur in Sir William Broadbent's views that the Councils of the Hospital Sunday and Saturday Funds are not, perhaps, the best adapted for determining the needs and merits of the several hospitals, etc., in the metropolis. These Councils are much too large, and only a few of the members can be said to have had sufficient knowledge and experience of the details of hospital management to qualify them as experts to determine the relative needs and merits of the several institutions claiming to share in the funds.

Sir Sydney goes on to argue that, notwithstanding, the Council of the Sunday Fund has done its best to investigate the claims of the various hospitals and distribute its benefits equitably between them; and this we fully believe. But it is most important to note that the managers of the Sunday Fund are themselves convinced of the necessity of a more representative body for the administration of the larger funds which it is hoped will be provided, and that this body will, "whether they desire it or not, constitute in effect a Central Hospital Board." We do not suppose that our readers will fail to add (what Sir Sydney omits) that on this Board the hospitals and other institutions interested should be fairly represented. And this is, in essence, the scheme which the Joint Committee formed by the Charity Organisation Society has so long pressed on public attention.

FUNERAL DANGERS.

THE old saying that "there is never a bride but another is spied" might be adapted to funerals. Too often the conventional mode of showing respect to the dead leads in its turn to death. By a sad coincidence, a correspondent had addressed to us a letter on this subject, when the tragic death of Mr. Charles Harrison occurred to point the moral he wished to draw. There can be little doubt that the sudden attack of œdematous laryngitis which terminated Mr. Harrison's useful life was due to exposure during his attendance at the funeral of Sir Frank Lockwood. It is suggested that the use of a skull cap, such as the late Dean Stanley used habitually to wear even on ordinary occasions at the Westminster Abbey services, would prevent danger, and this might do something to diminish the risk. But the fact is that the depression produced by all the circumstances of a funeral, and the sudden change from a hot carriage or a crowded church to the damp grass and chilling air of a cemetery are very apt to produce a chill which settles on a man's weak pofnt. In the case of Mr. Harrison, who had long suffered from a chronic

laryngeal affection, it was the larynx, but in another it may be the lungs, in another the kidneys. In Scotland, we believe, and certainly in many Latin countries, it is not the custom for ladies to attend funeral ceremonies; and the modern custom of holding a special service which may be attended by friends, while only a few near relatives go to the cemetery, has much to commend it, and probably in time will afford at least a partial remedy.

THE ARMY MEDICAL SERVICE.

THE Marquis of Lansdowne, the Secretary of State for War, has appointed Thursday, January 20th, to receive a deputation of the British Medical Association to lay before him the views of the medical profession with regard to the condition of the Army Medical Service, and the necessity for reforms. The facts have already been placed before Lord Lansdowne in a report of a Special Committee of the Association, which was forwarded on December 17th last. The report explained the reasons of the unpopularity of the service amongst young medical men, and indicated the belief that the only effectual remedy would be by the consolidation of the Army Medical Staff and the Medical Staff Corps into an army medical corps in which the officers should have substantive army rank with limited command, and with that rank the military titles which are alone appreciated in the army. The report refrains from asking that the proposed corps should receive the title of the Royal Medical Corps, since this is a privilege which can only be accorded by the Crown; but it will be well known to the Queen and to her advisers that such a mark of Her Majesty's favour would be most highly appreciated both by the medical officers of her army and by the profession of which they form a part.

AMBULANCES FOR HILL WARFARE.

WE drew attention last May to the fact that litters had been withdrawn from the equipment of the Medical Staff Corps, but that no satisfactory substitute had been adopted in their place. We are therefore not surprised to learn from a recent issue of the *Pioneer* that very great difficulty has been experienced in the present frontier campaign in removing the wounded during the harassing retirements with the enemy crawling from rock to rock in rear. Our Indian contemporary refers to the deficiencies in our organisation for frontier and guerilla warfare in the means for rapidly passing to the rear during a retirement wounded men and the bodies of the slain. The field stretchers move slowly, and the dhoolie takes minutes to bring up and carry off, while it serves as a constant mark to the enemy. The fearful mutilation to which the wounded and slain are subjected in warfare with an uncivilised enemy, if left behind, brings into prominence the need of some sort of pack animal on whose back a man can be rapidly slung and removed at a trot till in comparative safety—such an expedient to be at hand only for a short space to relieve the firing line as it retired, and to convey the wounded or dead to where dhoolies are in comparative safety.

DOVER HOSPITAL: JUBILEE ENLARGEMENTS.

ON December 22nd, 1897, the new ward for women in the Dover Hospital, which has been provided out of the funds subscribed in commemoration of Her Majesty's Diamond Jubilee, was formally opened in the presence of a large assembly, the dedication ceremony being conducted by Bishop Walsh. Among those present were Sir Richard Dickeson (Chairman of the Hospital Committee), Drs. Parsons, Astley, Osborn, Ormsby, Wood, and Fosbery, and Mr. A. Elwin, the Honorary Secretary. The new ward is a bright, lofty room, 30 ft. in length by 25 ft. broad. The sanitary appliances have been selected from amongst the best shown at the Victorian Exhibition held in London last year. Immediately beneath this ward is a new children's ward similar in size. An isolation ward has also been built. After a brief religious service, the Chairman of the Hospital stated that from the Diamond Jubilee collection in aid of the hospital funds they had received £1,119 3s. 9d., and about half of that sum had been spent on these improvements, whilst the remainder would be added to the endowment fund. They had now in the hospital 10 beds for children and 1 baby cot, 11 beds for women and 15 for men, total, 37 patients. Bath rooms and lavatory accommodation of the newest description had also been provided, the old arrangements being bad and insanitary. This was a most needful improvement, and the old bath rooms had been converted into ward kitchens in which the nurses could prepare light nourishment for bad cases under their charge. The ward in which they were assembled that day was an additional women's ward, in which the Committee proposed putting 7 beds at present. It would hold considerably more than that number, but they did not think it well to crowd the ward unnecessarily. It was proposed to call it the Victoria Ward. An address was then delivered by Bishop Walsh, in the course of which he said that the physicians and surgeons, the matron and the nurses at the hospital, were carrying on an essentially Christ-like work. The true physician, surgeon, or nurse would not look upon a patient as merely a "case" or an interesting subject on which to exercise their skill, or a case which would bring them credit if they succeeded in bringing the patient through some serious illness, but they would look upon the patient as a brother or sister afflicted, and bring all forbearance and consideration to bear upon the work, and give all comfort even when the cases were very trying. Dr. Walsh next succinctly told his own singular experience in hospital work in the Mauritius on the occasion of a great cyclone, which destroyed a large part of Port Louis, the Cathedral being the only building left standing in one quarter. To this 600 people were brought, many of them fearfully injured, about 30 of whom died the same night. The Cathedral was turned into a hospital for several weeks, and during this period he believed the doctors and nurses who were taking the place of the regular ministers there were preaching Christ as faithfully and truly by their works as He could be preached. The Bishop, referring to the additions that had been made to the hospital, said that with such improvements and new sanitary appliances he felt sure the hospital was entering upon a new stage of good work, as not only was the accommodation increased, but sufferers who came there would have many more advantages. A short service of benediction followed.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A HALF-YEARLY meeting of Fellows of the College will be held on Thursday next, January 6th, at 4 P.M. Besides the reading and signing of the minutes of the half-yearly meeting of Fellows on July 1st, 1897, there is no notice of any motion on the agenda paper.

NEW ACTS OF PARLIAMENT.

WE publish elsewhere in this issue analyses of the provisions of two Acts of Parliament which come into force to-day. Neither go so far as was desired, but both are distinct improvements on previous enactments. The one, the Public Health (Scotland) Act, 1897, gives important new powers to sanitary authorities, and extends the duties while confirming the tenure of medical officers of health. One of the most important and interesting of its provisions is that which gives power to sanitary authorities to provide reception houses to which persons resident in a house in which infectious disease has broken out may be removed, if necessary compulsorily, under a magistrate's orders his warrant stating the time for which they can be detained. Another provision of much importance is that dealing with the school attendance. In future no child who has suffered from an infectious disease, or who is resident in a house in which infectious disease exists, or has existed within a period of three months, will be permitted to attend

school until a medical certificate can be produced stating that the child and the house are free from infection. Both the person in charge of the child and a teacher who would admit such a child without the certificate are made liable to penalties. A further power given by the Act which is likely to be found extremely useful by medical officers of health is that to require from public laundries lists of the owners of clothes washed during the previous six weeks. It is remarkable for the number of provisions which it contains affecting the sanitation of rural districts, and is, on the whole, a distinct advance on anything previously existing. The enhanced importance of the medical element is emphasised by the fact that the title of Medical Officer of Health is used throughout, and that his influence and independence are properly safeguarded, points which it may be remembered were seriously endangered by clauses in the Bill as it was originally introduced. The other Act to which we refer is the Infant Life Protection Act, 1897. It raises the age of protection from two to five years, and charges the local authority with the duty of administering the Act. In future inspection is to be done by women. The Act is a distinct improvement, but its good influence would have been much greater had it not continued the permission to a baby farmer to take charge of one infant without coming under the Act. A clause, however, which would require such persons to give notice to the local authority in case they accept charge of an infant for a single payment of less than £20 will, if it be found workable, do much to minimise the risk to which we have referred.

THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

THE date at which the inquiry which is to be held by the Local Government Board with regard to the epidemic of typhoid fever at Maidstone has not yet been fixed. The Board has merely informed the Maidstone Urban Council that the inquiry will take place so soon as the other engagements of their inspectors shall permit. The total number of cases notified down to the last report is stated to be 1,897, and the number of patients remaining under treatment in the hospitals is 158.

CHARITY IN 1897.

THE *Charity Record and Hospital Times* publishes its usual annual review of the chief charitable bequests and donations made during the year. The largest individual donations of the year were the gift by Mr. J. Hall of £100,000 towards the cost of the erection of the new buildings of the Newcastle Royal Infirmary, and the gift of a like amount by Sir J. Blundell Maple, M.P., to rebuild University College Hospital. By a strange irony the last-mentioned hospital has recently had to close fifty beds owing to the exhaustion of the whole of its funds available for maintenance. The effort made to raise a special maintenance fund of £100,000 for Charing Cross Hospital has, it is stated, received very fair recognition. Mr. Gorden Nicol left the residue of his estate, which is expected to amount to £30,000, to found beds at hospitals in Aberdeen and in London. The list of provincial hospitals which have received bequests or donations, in single sums, of £5,000 or over is long. The approaching distribution of about £50,000 by the Prince of Wales's Hospital Fund for London is mentioned, but our contemporary expresses the opinion that "it is very questionable whether the Fund has worked them any real good." It is added that semi-official complaints have been received that the Fund has diverted donations and subscriptions from many institutions, and the belief is expressed that when the accounts of the hospitals come to be published it will be seen that this statement is fully borne out. Our contemporary adds that 1897 has not proved so prosperous a year for the London charities as was confidently hoped and believed. It attributes this in a great measure to the multitudinous appeals made for all sorts of objects in celebration of the Diamond Jubilee. Those launched in June alone in various parts of the country included 4 schemes for almshouses, 5 for convalescent homes, 35 for building or extending hospitals, 10 for nursing, and 8 for orphan asylums. Another object which probably diverted considerable sums from hospitals and other established charities was the Mansion House Fund for the Relief of the Indian Famine, which led to the raising of nearly a million and a half.

THE NOBEL PRIZES.

IT appears that the total value of the personal estate of the late Mr. Alfred Nobel, the inventor of dynamite, is over £434,000. After the paying of certain specific legacies, none of them of very large amount, the whole of the remainder is to be capitalised, and the interest is to be divided annually into five equal parts, to be given as prizes to those who during the preceding year have done most for the benefit of humanity. One of these prizes is to be given to him who has made the most important discovery in the department of physiology or medicine. This prize will be awarded by the Carolinian Institution in Stockholm, but Mr. Nobel distinctly directs that in the distribution of the prizes "no regard is to be paid to any kind of nationality, so that the most worthy competitor may receive the prize whether he be a Scandinavian or not." The other prizes are to be given for discoveries in natural philosophy, in chemistry, for the most excellent idealistic literary work and for the best work promoting peace between nations.

DR. HALL HAINS'S DEFENCE FUND.

WE are requested by the Honorary Secretary and Treasurer, Dr. Herbert Carre-Smith, 3, Turnham Green Terrace, Chiswick, S.W., by whom subscriptions are received, to acknowledge the following further list of subscriptions to this fund. A statement of the circumstances of the case, and of the names of the members of the committee, of which Mr. Joseph Smith is chairman, will be found in the BRITISH MEDICAL JOURNAL of December 25th, 1897, page 1874. It will probably be remembered that Dr. Hall Hains, who practises at Shepherd's Bush, was tried recently at the Central Criminal Court on an unfounded charge of performing an illegal operation. The jury stopped the case by direction of the judge, and Dr. Hains left the court without a stain on his character, but in defending the charge incurred costs amounting to over £800. The fund is being raised to help to defray a part of the costs:—

	£	s.	d.
Breward Neale, Esq., M.R.C.P....	1	1	0
Sir Thomas Smith, Bart., F.R.C.S.	3	3	0
R. G. Hebb, Esq., M.D., F.R.C.P.	1	1	0
James D. Miller, Esq., M.D.	1	1	0
Bernard Brodhurst, Esq., F.R.C.S.	2	2	0
Edward Nettleship, Esq., F.R.C.S.	1	1	0
Fleet-Surgeon James D'A. Harvey, R.N.... ...	1	1	0
Surgeon D'Arcy Harvey, M.B., R.N.	1	1	0
William Domett Stone, Esq., M.D., F.R.C.S. ...	1	1	0

SIR WILLIAM GOWERS was, at a special meeting of the President and Fellows of the Royal College of Physicians of Ireland held on December 17th, 1897, elected an Honorary Fellow of the College.

ALCOHOL AND THE RUSSIAN DEATH-RATE.—An official inquiry into the comparatively larger increase among the Tartar population of the city and government of Kazan has, according to the *Kamsko Volshki Krai*, brought out some remarkable facts as to the effect of alcoholic indulgence on the death-rate. The Kazan Tartars, numbering about 640,000 souls, have a rate of mortality of only 21 in the 1,000, while the mortality among the Russians is 40 per 1,000. The general conditions among Orthodox Russians and Mohammedan Tartars are practically the same, except in so far as personal habits are concerned. The medical investigation leaves no room for doubt that the lesser mortality of the Mohammedan Tartars is directly due to their abstinence from spirituous liquors, in which the Russians indulge freely.

THE PUBLIC HEALTH (SCOTLAND) ACT, 1897.

THIRTY years have passed since the first Public Health Act for Scotland became law, and January 1st, 1898, will see the "commencement" of a new Public Health Act.

The new Act, speaking generally, places Scotland distinctly in advance of England in respect of sanitary legislation, but, regarded as a whole, it is a very unequal performance. In certain particulars, more especially in relation to infectious disease, it is distinctly in advance of anything which might have been anticipated. In other respects, as in the provisions dealing with the compulsory provision of water supplies for houses, and in those safeguarding the interests of railway companies, its tendency is distinctly reactionary.

It is interesting to note, in passing, how, as a result of the great sanitary awakening which has occurred in counties under the operation of the Local Government Act of 1889, a quite exceptional proportion of the new Act is devoted to the sanitary interests of rural districts. It is also interesting to observe that, while the local authority and the sanitary inspector constituted the executive under the Act of 1867, and the "medical officer" was a mere supernumerary, under the new Act, as the result of a process of natural evolution, the "medical officer of health" has become an integral portion of the executive.

A review of the principal provisions of the Act, in so far as they differ from those of the previous Act and from the provisions of the English Acts, may be of interest.

Taking first the clauses dealing with infectious disease, we find that on and after January 1st, 1898, the Infectious Disease (Notification) Act will extend to every district in Scotland. This has a logical but most drastic sequel in a clause which will require to be worked with the greatest caution, in which the medical officer of health, where he has reason to suspect the existence of infectious disease, is empowered, under warrant if necessary, to enter any house and examine any person found therein, with a view to ascertaining whether such person is suffering, or has recently suffered, from any infectious disease. For the first time statutory authority is given for the provision of "reception houses," to which, if necessary, the inmates of a house in which infectious disease has appeared may be removed, and such inmates may be compulsorily removed under a magistrate's warrant, and detained for a time to be specified in the warrant. For the purposes of this section the word "house" includes a ship. On the certificate of the medical officer the local authority may require from public laundries lists of the owners of clothes washed at such laundries during the previous six weeks. Various useful provisions from the London Public Health Act are incorporated, but the complicated "adoptive" system of that Act, under which "all or any" of certain sections may be applied "by order," has been dropped, and the preventive provisions are applicable to "infectious diseases," whether or not they are "dangerous," or included in the list of notifiable diseases. The compulsory removal clause has been most usefully enlarged in scope. A person may now be removed to hospital under a warrant, not only "if without proper lodging or accommodation," but if he "is so lodged that proper precautions cannot be taken for preventing the spread of the disease." The "exposure of infected persons" section has been extended as respects *locus* to "any place used in common by persons other than members of the household to which the infected person belongs," and it is provided that no articles shall be exposed or washed, without previous certified disinfection, in any washhouse or drying green used in common. Every person in charge of a child suffering from an infectious disease, or of a child who is resident in a house in which infectious disease exists or has existed within a period of three months, who permits such child to return to school without a medical certificate to the effect that the child and the house are free from infection, is liable in a penalty, as is also any teacher who knowingly admits such a child. There is a "stoppage of milk supply" clause, which will certainly not meet with universal approval. It is evidently based upon the assumption that it is inexpedient to have one local authority acting within the jurisdiction of another. The clause is a lengthy one, but its purport is, shortly, as follows:—Where a medical officer has reason to believe that any milk supplied within his district, from a dairy within his district, is likely to cause disease, he is to visit the dairy and examine the persons there, and forthwith to report to the local authority, or an executive committee (two a quorum). If the dairy is without his district he is to intimate his belief to the medical officer of the district in which the dairy is situate, and such medical officer, accompanied by the medical officer of the first district, is forthwith to visit the dairy, etc., and is to report to his local authority or executive committee, which is forthwith to meet to consider the reports, together with any other evidence submitted by the persons concerned, and the local authority must either make a closing order, or resolve that no order is necessary. Any local authority or dairyman aggrieved may appeal to the sheriff, but any order made shall remain in force pending the disposal of such appeal. Under another section the local authority may require dairymen to supply lists of their customers or of the persons by whom they are supplied with milk. Another clause extends the powers of Section LXXXIX of the London Public Health Act, and prohibits the transport of the bodies of persons who have died of any infectious disease by rail, or otherwise, without a certificate from the medical officer or a medical practitioner, that all due precautions have been taken.

The Section dealing with cellar dwellings remains, as in the Act of 1867, almost entirely unintelligible. It is still in advance of the corresponding provisions of the English Acts, in that under it no underground room may be occupied, whether along with others or separately, unless it complies with certain conditions.

The provisions of the Public Health Act (1896) with respect to "epidemic, endemic," etc., disease have been incorporated in the Act.

The law as to common lodging-houses has been strengthened to the extent that such houses will require in future to be registered anew every year. When a case of infectious disease occurs in a common lodging house, the local authority may, without further warrant than the certificate of the medical officer, remove the case to hospital; or, if the patient is unfit for removal, the medical officer may close the house in whole or part.

Power is given for the first time to take land compulsorily for hospital sites, and for sewage disposal purposes. The position of rural sanitary authorities ("district committees") is improved in various respects, particularly with regard to two matters. It is now competent for them to make regulations for new buildings, and they are empowered to form special water and drainage districts without previously having received a requisition from "ten inhabitants." Their rating powers are also considerably increased. For the first time powers are given for the establishment of port sanitary authorities in Scotland.

The law and procedure with reference to nuisances are assimilated under the new Act with the English law. Hitherto, a notice to abate a nuisance was not a statutory requirement, necessarily precedent to the institution of legal proceedings. It was customary, however, for the sanitary inspector to issue notices in respect of such matters at pleasure. The notice now becomes a statutory thing, and can only be issued with the assent of the local authority or an executive committee.

The English provisions with respect to unsound food have been considerably expanded, and for the first time in Scotland the medical officer and "a duly authorised veterinary surgeon" are endowed with powers of seizure. The seizure of live animals is authorised, and vehicles, parcels, etc., as well as "premises," may be searched. Articles "in course of transmission" may be seized, and the police are authorised to search vehicles, etc.

After January 1st, 1898, no person may be appointed medical officer to any district in Scotland unless he possesses a qualification in sanitary science. Fixity of tenure for all sanitary officers is reaffirmed. In recognition of the extended sphere of the "medical officer," under the new Act his statutory designation in future is to be "medical officer of health."

DR. ROBERT BARNES has resigned the Fellowship and the office of Trustee of the Obstetrical Society of London.

THE NEW INFANT LIFE PROTECTION ACT.

The History of the Old Act.

With the end of 1897 the Infant Life Protection Act of 1872 came to an end, and it has been superseded by an Act under the same name, which was passed in August last. This detail is one of peculiar interest to us, inasmuch as it was mainly owing to the exposures in the British Medical Journal that the evil ways of baby farmers were brought under public notice, and a protecting Act was passed a quarter of a century ago. But the opposition which was encountered at the time to any legislation of the kind was such that it was possible to meet it only by emasculating the proposed Bill, with the hope that even a modified system of restraint placed upon the business of baby farmers, as then existing, would be better than none. Upon these lines the Bill passed into law in 1872, and up to December 31st, 1897, the Act has been in operation.

As was predicted, however, it never proved to be altogether satisfactory in checking the abuses for which it was designed, and especially within recent years it has been largely felt that some amendment of the law was urgently demanded. After several unsuccessful attempts on the part of the London County Council to introduce an amended Bill, and the appointment of a Committee of the House of Lords to inquire into the question, a Bill, placed in charge of Lord Denbigh, at length passed through both Houses of Parliament in August, 1897, and the Act comes into operation on January 1st, 1898.

The New Act.

The new Act is an immense improvement upon the old one. The age of protection is raised from two years to five, and the clause in which this is set forth would be nearly perfect had it included all infants taken for hire or reward under the age of 5 years. But as we have frequently pointed out, the clause in this respect repeats the mistake committed in the superseded Act, and allows a baby farmer to take charge of one infant without rendering herself liable to the provisions of the Act.

Another clause lays down that it shall be the duty of every local authority to provide for the execution of the Act within its district, and we trust that this instruction will be rigidly carried out, especially in view of the fact that, as was shown by the reports of Our Special Commissioner on "The Baby Farming System and its Evils," published in 1896, the Act of 1872 was practically, through neglect, a dead letter out of London.

The new Act also usefully provides for the work of inspection under its jurisdiction to be done by women, and it is quite possible that this provision will materially facilitate its working.

A further extremely important clause relates to the payments down for the care of infants. Under the Act

> Any person retaining or receiving an infant under the age of 2 years on consideration of a sum of money not exceeding £20 paid down, and without any agreement for further payment.....shall within forty-eight hours from the time of receiving such infant give notice of the fact to the local authority.

This clause will, or ought to, prevent the traffic in children, the evils of which in this respect have been so repeatedly exposed.

The Duty of Local Authorities.

The above details set forth the features in the new Act which mainly call for notice. It now remains for the local authorities in whose hands the administration of the Act has been placed to make full use of it, whenever possible, within their district. We are glad to notice that in many local journals the Boards of Guardians of the respective districts have inserted lengthy notices calling attention to the new Act.

Edinburgh Obstetrical Society.—The following office-bearers were elected for the ensuing session:—*President:* Dr. J. Halliday Croom. *Vice-Presidents:* Dr. R. Milne Murray (senior), Dr. N. T. Brewis (junior). *Treasurer:* Dr. W. Craig. *Secretaries:* Dr. J. Haig Ferguson and Dr. W. Fordyce. *Librarian:* Dr. R. Milne Murray. *Editor of Transactions:* Dr. J. W. Ballantyne. *Members of Council:* Dr. Alexander Ballantyne, Dr. J. B. Buist, Dr. W. N. Elder, Dr. Hamilton (Hawick), Dr. Fraser Wright, Professor A. R. Simpson, Dr. Melville Dunlop, Dr. F. W. N. Haultain.

REPORT ON FACTORIES AND WORKSHOPS.[1]

Scope of the Chief Inspector's Report.

There has been considerable delay in the presentation of the annual report of the Chief Inspector of Factories and Workshops for the year 1896, owing to the difficulty experienced in obtaining and summarising the annual returns which, under the Factory and Workshop Act of 1895, are now required from occupiers of factories and workshops. However regrettable the delay, it is in a measure compensated by the addition to the report of these returns, the value of which will be realised in the future when comparisons require to be made between the number of people and children employed in the various industries year by year, and in the number of accidents and prosecutions. The report is issued in folio instead of the octavo form of previous years, the advantage claimed for this being that it will be in keeping with the other Home Office reports, and that it is more convenient for statistical summaries.

Dr. Whitelegge, who has been ably assisted by his staff, is to be congratulated upon the excellence and completeness of his first annual report. Since the Factory Act of 1895 came into operation a large amount of additional work has been thrown upon the Home Office; new duties have arisen in connection with the dangerous trades; metallic, animal, and other forms of industrial poisoning have to be recorded; fire escapes have to be inspected, in regard to which 144,000 occupiers are now obliged to make returns, and as there are also upwards of 10,000 laundries, docks, and warehouses to be inspected, it is clear that the resources of the Factory Department at Whitehall have of late been severely tested.

Accidents.

As regards accidents, the number reported to the certifying surgeons in 1896 was 14,433, as against 10,466 for 1895. This seems an enormous increase, but it is partly explained by the large number of accidents brought within the meaning of the term "reportable accident" of the Act of 1895. There is a rise in the number of accidents in nearly all the industries, but especially in the metal and rubber trades, the increase being greater among adults than young persons, and among females than among males, while, as regards children, there is a decided decrease. In the textile industries, on the other hand, the accident rate is greater among males than females; it is highest among young persons and lowest among adults. Taking the accidents generally, it is interesting to note that the largest number of non-fatal accidents occurred during the month of October, while January showed the largest number of fatalities. Hoists still seem to be responsible for a considerable number of fatal accidents, owing to the want of proper fencing. The starting of machinery in factories without due warning, the cleaning of it when it is motion, and the adjustment of belts when machinery is running, are frequent causes of accidents, both in textile and flour mills.

Fire Escapes.

The Act of 1895 made provision for fire escapes in any place where more than 40 people are employed. It is estimated that in the United Kingdom there are 200,000 such places. Factory occupiers are often extremely careless in the provision of such means of escape. Frequently in our visits to factories we have been struck by finding fire escapes placed in most inaccessible parts of buildings, difficult to reach when all is tranquil, and quite impossible in emergency or panic.

Poisoning and Infection.

Cases of lead, phosphorus, arsenic and anthrax poisoning are required by the Act to be reported to the Home Office. During last year 1,050 cases of industrial poisoning were reported, and of these 1,030 were due to lead. Shortly before the Factory Act of 1895 came into operation we drew attention in these pages to the obligations it imposed upon the medical profession. It is the duty of medical men to report all such cases of trade poisoning to the Home Office. During 1896 the largest number of cases of lead poisoning were reported

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[1] Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and Westminster, S.W.; or John Menzies and Co., 12, Hanover Street, Edinburgh, and 90, West Nile Street, Glasgow; or Hodges, Figgis and Co., Limited, 104, Grafton Street, Dublin. Price 5s. 1d.

during the months of June and July, the district known as the Potteries supplying by far the highest percentage.

Water Gas.

Attention is very properly directed in the Chief Inspector's report to the increasing use of water gas in private and public buildings, and since this gas contains from 30 to 43 per cent. of carbon monoxide instead of 7 per cent. present in ordinary coal gas, it is not only extremely dangerous, but as it has none of the disagreeable odour of coal gas it is difficult when it escapes to detect it by the sense of smell. Already two deaths have occurred at Garston through it, and as some municipalities are at present laying down plant for its production, stringent regulations ought to be enforced in regard to the soundness of the pipes that are to carry water gas.

Legislation.

The report also contains an extensive summary of factory and workshop legislation abroad, written by Mr. Gould, of the Home Office, who in the pages at his disposal has given a series of extracts from the Factory Acts of Belgium and France, and has thus enhanced the value of the annual report so ably penned by Dr. Whitelegge.

SERVANTS OF NATURE.

At a recent meeting the Secretary reported that the Glasgow Eastern Medical Society had been presented with a very handsome seal, the gift of Mrs. Mather in memory of her late husband, Dr. George Mather, the first president of the Society. The seal, designed by Dr. William Findlay and executed by Robert Scott, of Buchanan Street, Glasgow, shows a profile view of John and William Hunter. A sprig of oak entwines their heads, the sprig lying in the folds of a band bearing the motto of the Society, "Ὑπηρέται Φύσεως," servants of Nature. The seal is of silver, borne on a handle of ivory capped with a gold plate of dedication.

The office-bearers in the Society for the year 1897-8 are:—President, William Findlay, M.D.; Vice-President, Malcolm Black, M.D.; Secretary, R. McC. Service, M.B.; Reporting Secretary, John Patrick, M.A., M.B.; Sealkeeper, James Dunlop, M.B.; Treasurer, William Buchanan, M.B.; members of the Council, Messrs. W. L. Muir, J. F. McGrigor, J. Porter, J. McDonald, J. R. Buchanan, and Robert Wilson.

Dr. Findlay delivered the presidential address. He took as his theme the motto of the Society, and pointed out that it was a modification of the Hippocratic aphorism which embraced the entire working creed of the true physician in times past, present, and to come. William and John Hunter, and more especially the younger brother, were servants of Nature in a pre-eminent degree and it was in virtue of their service to Nature that they were able to achieve so much in revolutionising the medicine and surgery of their day.

Dr. Findlay then reviewed briefly the salient points in the life of John Hunter, commenting upon his instinctive tendency towards the studies best fitted to make a profound naturalist—studies which were really more important for his life's work than any purely literary training could have been. Even if John Hunter had never left his father's farm he would in all probability have become a remarkable and notable man as a naturalist in the district of East Kilbride. His name would have been handed down to us like that of the Banff shoemaker naturalist, Thomas Edwards, and a learned University might have honoured itself by conferring upon him a degree in recognition of his genius and researches as one of the greatest of the self-made "servants of Nature."

It is in the following of the footsteps of John Hunter, as a waiter on, an observer, a student, an interpreter, a minister, a servant, in short, of Nature, that the hope of all true progress in medicine lies. Such, indeed, has been the case from the days of Hippocrates down to those of our times. A single grain of correct observation is worth a whole bushel of hasty generalisation. The former stands crystallised for all time, whereas the latter is constantly undergoing revision, or passing into the limbo of forgetfulness and contempt; therefore minds of the cast of John Hunter's and Darwin's were never in a hurry to generalise, but with infinite labour and pains careful to observe and verify over and over again.

Though Hippocrates was the author of the motto "Ὑπηρέται Φύσεως," there was little of his spirit present in the minds of the profession until the advent of Morgagni in the latter half of the eighteenth century. The great Italian, by his pathological researches conducted in the spirit of the Greek aphorism, was able to disperse the baleful cloud of magic and superstition which had dominated the practice of medicine for centuries, and he inaugurated the dawn of a newer and more rational medicine founded on the knowledge of the natural history of disease as read in diseased structures. Into the labours of Morgagni, John Hunter, and all who were animated by his spirit, entered and became his heirs and successors, Hunter's great personality, with its far-reaching qualities, its freedom from existing prejudices, and its splendid originality—as his epoch-making investigations upon the subjects of inflammation, healing, and organisation among others triumphantly showed—overtopping all the rest. Out of their achievements, again, were developed later still, in the first half of the nineteenth century, other waves of the same spirit, notably those in which figured the honoured names of Graves, Stokes, Bennet, Allison, Forbes, and Gairdner, which showed themselves generally in a disposition to serve Nature and study the natural history of disease, when the discoveries were made that acute inflammations and fevers got well much sooner without meddlesome interference than with it; and as a consequence blood-letting and other debilitating measures, together with excessive stimulation, were gradually discarded for the saner treatment of systematic and rational feeding.

It is chiefly during the latter part of the present century that contemporaneously with the microscope and its improvements, by the gradual elucidation of the structure of the cell the way was paved for bringing to the front the question of the origin and development of bacteria. The bacteria controversy was the result and grew out of the cell controversy. The discovery of the pathogenic importance of bacteria brought us down to our own times when in 1865-7 Lister was making his first experiments on the antiseptic treatment of wounds, and was insisting upon the importance of excluding special bacterial organisms from them. The early experiments were made at the Glasgow Royal Infirmary, and it would be only fitting if some memorial of his connection with the charity were introduced into the new buildings to be erected in honour of the Queen's jubilee.

A good deal had happened even in the theory and practice of antiseptics since Lister was busy in the Royal Infirmary converting compound fractures into simple ones and dressing lumbar and psoas abscesses with carbolic putty. The labours of Pasteur, of Koch, and of Metchnikoff must be duly celebrated. The discovery of antitoxin, together with the identification of certain specific infective diseases with certain individual organisms have prepared the way to that marvellous chapter of serum therapeutics, of which only the first pages are as yet written.

Dr. Findlay concluded his most interesting address with a few remarks on the preliminary subjects of the medical curriculum, and of the value of a sound training in such subjects as physics, botany, and zoology.

PUBLIC HEALTH IN LONDON.

Annual Report of the Medical Officer of Health.

The annual report for 1896, by Mr. Shirley Murphy, medical officer of health to the London County Council, has just been issued. It is a bulky volume, and shows well how heavy is the work and how great is the responsibility which devolves on the head of the medical department of so important an administrative body.

Marriage-rate.

The population dealt with was estimated to be 4,443,311 in the middle of 1896. The marriage-rate was 18.0, which was higher than it had been for some years previously, in fact since 1883. There was a rather larger proportion of youthful marriages on the male side than there had been for several years before, 4.89 of the males married being under 21 years of age, a proportion which had not been reached since 1892. On the female side, however, more prudent counsels had prevailed, the proportion being 16.07 per cent. under 21, which, although higher than in 1895 (which was a very

prudent year), was lower than in any other year in this decade.

Birth-rate.

The birth-rate was 30.2 per 1,000 persons living. It is curious how the birth-rate varies in the various districts, the most prolific being the district of St. Luke, while the district having the lowest birth-rate was St. Martin-in-the-Fields. It is easy to say that this is owing to the differences in the proportion of women of child-bearing age in the different districts; but this does not seem to be a sufficient explanation, for, taking the births per 100 females aged from 15 to 45 years, we find the difference greater still, ranging as it does from 4.95 births per 100 in St. George Hanover Square to 19.28 per 100 in St. Luke.

Death-rate.

The relation between birth-rate and death-rate is always interesting, it having been so often maintained on the one hand, and denied on the other, that, in consequence of the high mortality among children, a high birth-rate necessarily involves a high death-rate. The general death-rate of London during 1896 was 18.1 per 1,000 living; and we do find in this case that, taking London district by district, St. Luke, where the birth-rate is so high, comes out the highest in regard to death-rate—namely, 25.1 per 1,000; while in St. George Hanover Square it was but 13.6 per 1,000, and in St. Martin-in-the-Fields but 16.2 per 1,000. The lowest crude death-rate was in Hampstead, where it was only 11.9 per 1,000.

When, however, we turn to the infant mortality to see whether this high death-rate in St. Luke, which corresponds with so high a birth-rate, both in relation to the total population and the number of child-bearing women, is caused by an excess of deaths among infants, we find that the infantile mortality in St. Luke is below the average, and much lower than in St. Martin-in-the-Fields, so that whatever the cause of the relation between birth-rate and death-rate may be, it is by no means the result of a simple dying off of a redundant infantile population.

The causes of the occurrence of high death-rate, or high death-rate from such a disease as phthisis, or high infantile death-rate in certain districts within a community are clearly not determined merely by health conditions. A cheap district may not necessarily be unhealthy, but it draws to itself a crowd of persons who, from various causes, mostly connected with ill-health, are more or less incapacitated from earning full wages, and such people die in large numbers. Thus, when we find that the corrected death-rate for St. Luke is within a decimal twice as high as that of Stoke Newington or Hampstead, we certainly must not conclude that it is twice as unhealthy a place to live in.

Zymotic Death-rate.

The death-rate from zymotic diseases in London was distinctly higher than it had been on the average during the preceding ten years. This was due to the increase in the mortality from measles, scarlet fever, and diphtheria, but especially to the increase in the deaths from measles, which continues to be by far the most fatal of the various zymotic diseases—and we may add the one about which the least interest seems to be taken by the public. In regard to scarlet fever the curious inverse ratio which Mr. Shirley Murphy has previously pointed out as existing between prevalence and fatality at different times of the year, was again observed. The smallest number of cases reported in any month was in March, in which month the case mortality was far higher than in any other—nearly three times as high, in fact, as it was in October. In September the prevalence of the disease was greatest, while the case mortality was the lowest of any month except October. The matter is very interesting, and does not seem to be capable of any complete explanation in the present state of our knowledge. There would seem to be two influences at work, one making for infectivity and the other for virulence, but not coinciding in time. Under the head of diphtheria a diagram is given which shows in a very marked manner how necessary it is to combine the death-rates from diphtheria and croup, if one is to obtain any true idea of the progress of these diseases. There evidently has been a change of fashion in nomenclature, many cases which were formerly called croup being now returned as diphtheria. Part of the apparent increase of diphtheria would appear to be so accounted for. Still, even after taking all this into consideration, the increase even of the combined diseases has been very great during the past half-dozen years.

Neither in regard to scarlet fever nor diphtheria does the evidence of school influence, as shown by the diminution of the disease during the holidays, appear so marked as it has done in other years.

There are extraordinary differences in the death-rates from diphtheria in the different districts, the rate in some being ten times as great as in others.

Housing of the Working Classes.

The report shows that a large amount of work has been done in regard to the various schemes for the housing of the working classes, and in the various forms of inspection which are undertaken under the direction of the medical officers; and in some interesting appendices reports are given in regard to various outbreaks of diphtheria, as to shelters and houses let in lodgings, and as to the sanitary condition of various metropolitan areas.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

The sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President-Elect: Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: Robert Saundby, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: Charles Parsons, M.D., Dover.

An Address in Medicine will be delivered by Thomas Richard Fraser, M.D., LL.D., F.R.S.Lond., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by Thomas Annandale, F.R.C.S.Edin,, F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by John Batty Tuke, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. Medicine.

President: George William Balfour, M.D., LL.D. *Vice-Presidents:* Sir Christopher John Nixon, M.D.; John Mitchell Bruce, M.D., Alexander James, M.D.; George Alex. Gibson, M.D. *Honorary Secretaries:* J. J. Graham Brown, M.D., 3, Chester Street, Edinburgh; Samuel Herbert Habershon, M.D., 70, Brook Street, Grosvenor Square, W.; George Lovell Gulland, M.D., 6, Alva Street, Edinburgh.

B. Surgery.

President: John Duncan, F.R.C.S., LL.D. *Vice-Presidents:* Alex. Gordon Miller, F.R.C.S.; John Chiene, F.R.C.S; James Rutherford Morison, F.R.C.S.; Joseph Montague Cotterill, F.R.C.S. *Honorary Secretaries:* Francis Mitchell Caird, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. Beeman Hodsdon, F.R.C.S., 52, Melville Street, Edinburgh. Thomas Kennedy Dalziel, F.F.P.S.G., 196, Bath Street, Glasgow.

C. Obstetrics and Diseases of Women.

President: Alex. Russell Simpson, M.D. *Vice-Presidents:* Charles E. Underhill, M.B.; George Ernest Herman, M.B.; D. Berry Hart, M.D.; A. H. Freeland Barbour, M.D. *Honorary Secretaries:* R. Milne Murray, M.B., 11, Chester Street, Edinburgh; F. W. N. Haultain, M.D., 17, Rutland Street, Edinburgh; John Campbell, M.D., 21, Great Victoria Street, Belfast.

D. STATE MEDICINE.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

E. PSYCHOLOGY.

President: THOMAS SMITH CLOUSTON, M.D. *Vice-Presidents:* WILLIAM WOTHERSPOON IRELAND, M.D.; H. F. HAYES NEWINGTON, M.R.C.S.; JOSEPH WIGLESWORTH, M.D. *Honorary Secretaries:* JOHN MACPHERSON, M.D., Stirling District Asylum, Larbert, Stirlingshire; GEORGE M. ROBERTSON, M.B., District Asylum, Murthly, Perth.

F. NEUROLOGY.

President: BYROM BRAMWELL, M.D. *Vice-Presidents:* JOSEPH ARDERNE ORMEROD, M.D.; WILLIAM RUSSELL, M.D.; ALEXANDER BRUCE, M.D. *Honorary Secretaries:* ROBERT ALEXANDER FLEMING, M.D., 10, Chester Street, Edinburgh; WILLIAM FORD ROBERTSON, M.D., Royal Asylum, Morningside, Edinburgh.

G. PATHOLOGY.

President: WILLIAM SMITH GREENFIELD, M.D. *Vice-Presidents:* FREDERICK WALKER MOTT, M.D., F.R.S.; JOHN MACFADYEAN, M.B.; ALMROTH EDWARD WRIGHT, M.D. *Honorary Secretaries:* HAROLD JALLAND STILES, M.B., 5, Castle Terrace, Edinburgh; ROBERT MUIR, M.D., 20, Hartington Place, Edinburgh.

H. PHARMACOLOGY AND THERAPEUTICS.

President: JAMES ORMISTON AFFLECK, M.D. *Vice-Presidents:* CHARLES DOUGLAS FERGUSSON PHILLIPS, M.D., LL.D.; J. THEODORE CASH, M.D., F.R.S.; NESTOR TIRARD, M.D.; RALPH STOCKMAN, M.D. *Honorary Secretaries:* R. DUNDAS HELM, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. LOCKHART GILLESPIE, M.D., 23, Walker Street, Edinburgh.

I. OPHTHALMOLOGY.

President: D. ARGYLL ROBERTSON, M.D., LL.D. *Vice-Presidents:* R. MARCUS GUNN, F.R.C.S.; GEORGE A. BERRY, M.B.; GEORGE MACKAY, M.D. *Honorary Secretaries:* WILLIAM GEORGE SYM, M.D., 50, Queen Street, Edinburgh; ANGUS MCGILLIVRAY, M.B., 23, South Tay Street, Dundee.

J. LARYNGOLOGY AND OTOLOGY.

President: PETER MACBRIDE, M.D. *Vice-Presidents:* J. J. KIRK DUNCANSON, M.D.; J. DUNDAS GRANT, M.D.; ROBERT MACKENZIE JOHNSTON, M.D.; STCLAIR THOMSON, M.D. *Honorary Secretaries:* ADAM BROWN KELLY, M.B., 10, Grosvenor Terrace, Glasgow; A. LOGAN TURNER, M.D., 20, Coates Crescent, Edinburgh.

K. DISEASES OF CHILDREN.

President: JOSEPH BELL, M.D. *Vice-Presidents:* JAMES CARMICHAEL, M.D.; JOHN PLAYFAIR, M.D.; T. M. BURN-MURDOCH, M.B.; GEORGE ARTHUR WRIGHT, M.B. *Honorary Secretaries:* GEORGE HARRY MELVILLE DUNLOP, M.D., 20, Abercromby Place, Edinburgh; JOHN THOMSON, M.D., 14, Coates Crescent, Edinburgh; WALTER STACY COLMAN, M.D., 22, Wimpole Street, W.

L. DERMATOLOGY.

President: WILLIAM ALLAN JAMIESON, M.D. *Vice-Presidents:* WALTER GEORGE SMITH, M.D.; JOHN JAMES PRINGLE, M.B.; ALEXANDER MORTON, M.D. *Honorary Secretaries:* JAMES LIMONT, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; NORMAN P. WALKER, M.D., 7, Manor Place, Edinburgh.

M. MEDICINE IN RELATION TO LIFE ASSURANCE.

President: CLAUD MUIRHEAD, M.D. *Vice-Presidents:* Sir R. DOUGLAS POWELL, Bart., M.D.; PETER ALEXANDER YOUNG, M.D.; JAMES RITCHIE, M.D. *Honorary Secretaries:* JAMES MURDOCH BROWN, M.D., 9, Walker Street, Edinburgh; FRANCIS DARBY BOYD, M.D., 6, Atholl Place, Edinburgh.

N. TROPICAL DISEASES.

President: PATRICK MANSON, M.D. *Vice-Presidents:* ANDREW DAVIDSON, M.D.; ANDREW SMART, M.D., LL.D.; WILLIAM JOHN RITCHIE SIMPSON, M.D. *Honorary Secretaries:* JAMES CANTLIE, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. LOUIS HUGHES, A.M.S., Aldershot.

O. ANATOMY.

President: JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, M.B., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

P. PHYSIOLOGY.

President: WILLIAM RUTHERFORD, M.D., F.R.S. *Vice-Presidents:* JOHN ALEXANDER MACWILLIAM, M.D.; D. NOËL PATON, M.D.; E. WAYMOUTH REID, M.B. *Honorary Secretaries:* EDMOND WILLIAM WACE CARLIER, M.D., 39, Morningside Drive, Edinburgh; ROBERT ARTHUR YOUNG, M.D., 37, Trevor Square, Knightsbridge, S.W.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.

9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

WEDNESDAY, JULY 27TH, 1898.

9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, JULY 28TH, 1898.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 29TH, 1898.

10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine.

SATURDAY, JULY 30TH, 1898.

Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P., 4, Melville Crescent, Edinburgh.
JOHN SHAW M'LAREN, M.B., F.R.C.S., 14, Walker Street, Edinburgh.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 19th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

December, 1897.

ADDITIONS AND CORRECTIONS TO LIST OF MEMBERS.

Bath and Bristol Branch, unattached, add Keir W. Ingram, Esq., Melksham.

Bombay Branch and Indian Medical Service, for Nariman, K. S., Surg.-Maj., read Nariman, K. S., Surg.-Lieut.-Col.

Border Counties Branch, for Evans, R. E., M.B. read Evans, R. E., M.D.

Glasgow and West of Scotland Branch, unattached, for Cochrane, J., Esq., read Cochrane, J., M.D.

Gloucester Branch, unattached, add Duke, Alex., Esq., Sligo House, Pittville, Cheltenham.

Metropolitan Counties Branch, for Willett, F., M.B., read Willett, E., M.B.; for Jakins, P. S., Esq., 120, Harley Street, W., read Jakins, P. S., M.D.

Midland Branch, unattached, for Porter, F. C., Esq., 10, Burford Road, Nottingham, read Porter, F. C., Esq., 12, Oxford Street, Nottingham.

North of England Branch, unattached, add Mackintosh, A., M.B., Hebburn-on-Tyne.

South-Eastern Branch, for Ewart J. Hoggan, M.B., read Ewart J. Hoggan, M.D.

Sydney and New South Wales Branch, for Young, H. C. T., M.B., read Young, H. C. Taylor, M.D.

Worcestershire and Herefordshire Branch, unattached, add Forster, E. W., Esq., Malvern Link.

Yorkshire Branch, unattached, for Moffatt, J. G., M.B., read Moffatt, J. G., M.D.; attached, for Robson, A. W. M., Esq., 7, Park Lane, Leeds read Robson, A. W. Mayo, Esq., 7, Park Square, Leeds.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: North London District.—A meeting of this District will be held at the North-West London Hospital, Kentish Town Road, on Wednesday, January 12th, at 4.30 P.M. Mr. Frederick Wallace, President of the Metropolitan Counties Branch, will preside. Dr. M. Handfield Jones will read a paper on Benign Growths taking on Malignant Degeneration in the Uteri of Elderly Women. Mr. F. Durham, Dr. H. Campbell, Mr. J. Jackson Clarke, and other members of the staff will show cases of interest in the wards of the hospital. The District Committee will meet at 4.15 P.M.—H. J. Macevoy, Honorary Secretary, Brondesbury, N.W.

Edinburgh (Lothians and Fife) Branch.—A meeting of this Branch will be held within the Royal College of Physicians, 9, Queen Street, Edinburgh, on Friday, January 14th, at 4 P.M. Agenda: Proposed revision of Constitution of Association, etc. Notice of business and applications for membership should be addressed, not later than January 6th, to Dr. R. W. Philip, Honorary Secretary, 4, Melville Crescent, Edinburgh.

WEST SOMERSET BRANCH.

Presentation.—Dr. Kelly has lately been obliged to resign the offices of Honorary Secretary and Treasurer to this Branch owing to his advanced age and failing health. He had held these offices for thirty-five years, and the present state of the Branch is largely due to the energy and zeal with which he has worked in its interests. When Dr. Kelly took office the number of members had fallen very low, and as a recognition of what he had done for the Branch the members presented him with a clock in the tenth year of his secretaryship. On his retirement it was generally felt by the members of the Branch that their appreciation of his services should assume a tangible form, and he has been presented with a handsome salver bearing an inscription showing their gratitude and esteem.

GLOUCESTERSHIRE BRANCH.

An ordinary meeting of the Branch was held at the General Hospital, Cheltenham, on December 21st, 1897, under the presidency of Mr. A. S. Cooke.

Confirmation of Minutes.—The minutes of the preceding meeting were read and confirmed.

Communications.—Mr. F. W. Storry (Stroud) read a paper on a case of Cæsarean Section, in which both mother and child recovered. Mr. G. A. Cardew, Mr. W. R. Buckell, Mr. C. E. F. Mouat-Biggs, and Dr. Pruen described cases in which they had performed the operation successfully.—Dr. Herbert Bramwell (Cheltenham) read a paper on two cases of Abdominal Section, and made many practical remarks upon them.

Venereal Disease among British Troops in India.—Dr. Rayner Batten (Gloucester) then proposed, and Mr. W. R. Buckell (Cheltenham) seconded, the following resolution, which was carried with one dissentient:

That in view of the great increase of venereal disease, and especially of syphilis, among the British troops in India, and the grave danger to the health of the community at home caused thereby, this Branch of the British Medical Association strongly urges the Government to take such measures as would, in the opinion of the Indian Government, be most likely to check the spread of the disease; and to leave the Indian Government a free hand in dealing with the question.

SPECIAL CORRESPONDENCE.

BOMBAY.

The Reorganisation of the Sanitary System.—The Prophylactic and Curative Inoculations.—Special Medical and Nursing Staff. Report of Plague Committee.

Since the active operations of the Plague Committee appointed by the Government, which commenced its work last March, the weekly number of cases has been gradually decreasing in Bombay, although the total mortality has increased during the past few months owing to the prevalence of cholera. The organisation of lay assistance, particularly of native justices, with due regard to the feelings of caste, with a minute division of labour for every district, has enabled a thorough house-to-house visitation to be carried out, and prompt removal of the sick to be effected, together with a segregation of those who have in any way been exposed to infection. Every infected house is practically emptied and thoroughly disinfected. Private hospitals under the district medical officer's supervision have been established by the generosity of the rich, which have enabled the Government to overcome the difficulties with regard to caste and creed. Rewards for notification have facilitated very considerably the discovery of fresh cases, and the collaboration of well-to-do citizens has overcome the preliminary dread of the hospital. By all these means isolation of the sick has been securely effected, but it was necessary to take the work out of the hands of the municipality, and place it in those of an enlightened and energetic committee. With the full powers bestowed upon it, the system above outlined is working well. Many fresh cases are reported at Surat, and further medical assistance will be sent to Calcutta and Madras.

With regard to treatment, Dr. Haffkine's inoculations are still under consideration. They consist of injections of a culture of the plague bacilli after the bacilli have been destroyed by heat. Fever of a few days' duration results, but unfortunately the method has not proved in every case a certain prophylactic against either disease or death. Dr. Yersin's antitoxin serum treatment has now been almost entirely given up, as it was found not to fulfil in any way the primary object of its application. Many observers speak highly of the administration in full doses of the perchloride of mercury, plague patients showing a peculiar tolerance to this drug. It has been noted that syphilitics who have been more or less saturated with mercury at some time or other have borne the disease much more successfully than others; this observation has been frequently made among the prostitutes of the city.

Twenty-two special plague medical officers have just arrived from England. Three more are to follow, as well as an increase to the trained nursing staff. Many of the medical men hold excellent qualifications, and several possess a degree in Sanitary Science.

The report of the Plague Committee up to June 30th has just been issued. It is very elaborate and markedly statistical, but increases our knowledge of the disease in many points of detail. The more recent and purely scientific investigations of Dr. Haffkine and others into the bacillary treatment are looked forward to with great interest.

BELFAST.

The Water Supply and Typhoid Fever.—Further Report by Professor Frankland.—Conference with Health Committee.—Risk of Pollution Exists, but Pollution not Proved.

At the last meeting of the Belfast Water Board Professor Frankland presented a report in which he says: "In consequence of the alleged responsibility of the Belfast water supply for the recent prevalence of typhoid, I was requested to visit Belfast with a view to making an examination of the water actually supplied in the city, more especially as on the occasion of my visit in June last I had restricted my investigation to the gathering grounds, storage, and filtration works." Accordingly various parts of Belfast were visited, and samples taken on the spot of the water supplied. After condemning in strong terms the insanitary state of many parts of the city and the insufficient care taken in the regulation of dairies, Professor Frankland proceeds:

"On the afternoon of November 5th I was present at a conference held in the Water Commissioners' offices, at which, as I understood, the members of the Health Committee were to lay before me the considerations which had led them to the conclusion that the prevalence of typhoid in Belfast was connected with defects in the present water supply. I had anticipated at this conference that the arguments on which this allegation was based would have been formally presented, and I should have had an opportunity of hearing the charges brought by the Health Committee on the one hand, and any explanations that could be given by the Water Commissioners on the other. In this, however, I was disappointed, for the indictment was of a very general and vague character; nor did there appear to be any precise data available as to the prevalence of typhoid following in any degree the different water zones of the city. It is obviously quite essential for the purpose of tracing a connection between an outburst of disease and water supply that a map should

be prepared showing where each notified case had occurred, and that on the same or a companion map the districts supplied with the several kinds of water should be indicated. Nothing, however, of this kind was forthcoming, and as far as I could ascertain nothing of the kind had been attempted."

After detailing the results of his investigation of the gathering grounds of the Belfast water supply, and pointing out that conditions exist rendering the pollution of the water by surface drainage at all events possible, he proceeds: "I see no reason for departing from the opinion expressed in my report of October 13th as to the general improbability of the present water supply of the city being responsible for an outbreak of typhoid among the consumers. On the contrary, I understand that in the gaol, which is exclusively supplied with the city water, no case of typhoid has been notified..... Whilst, therefore, there would appear to be no evidence that the recent typhoid prevalence in Belfast is traceable to the present water supply, I would nevertheless urge that such improvements in the supply as my investigations and inquiry have shown to be desirable should be carried out." As regards the recent outbreak at Ligoniel, Professor Frankland says that he has no means of directly ascertaining whether it was due to the contamination of the water by excreta from adjacent cottages, as had been asserted, but adds "there can be no doubt that both these springs (that is, the two supplying the village) are extremely dangerous sources of water supply, not by virtue of the water which they normally yield—for that appears to be of excellent quality—but because of their exposure to surface contamination, combined with the small volume of water involved, and the absence of any agencies calculated to remove any noxious matters gaining access to them. I understand that the Commissioners have already commenced works intended to bring Belfast water to Ligoniel, and I would urge that these works should be pushed forward as rapidly as possible, and that in the meantime measures should be taken to effectively protect these springs from surface influences."

CORRESPONDENCE.

THE UNIVERSITY OF LONDON BILL.

SIR,—Dr. Kingston Fowler's temperate and interesting letter in the BRITISH MEDICAL JOURNAL of December 18th, 1897, p. 1815, contains many valuable facts and at least one important correction of a current mistake. The creation of a "teaching university" in the sense most often used depends, as he says, upon future endowments. What we all desire is a local university, or, as it may be put, a real University of London. The teaching side we have already in the existing colleges and schools of art, science, and medicine. The examining and degree-giving side we have already in the present University, with its title and the well-earned reputation of its degrees and its prescription of sixty years. Together they will make a university complete in all but the necessary endowments for research; and these will certainly not be wanting if there is one, and only one, university in London which needs them.

The happy reconciliation of diverging interests already attained is the result of long and patient labour in which some of us have spent twenty years. It is no use being impatient with the Government, or with Convocation, or with King's College, or with the great medical schools. At any time since the Senate took the matter in hand it has been possible for the Senate and Convocation, for University and King's Colleges, or for the medical schools to stop progress. At the present moment this would be more difficult. In fact, so long as the Senate, University College, the Royal Colleges of Physicians and Surgeons, and the more important medical schools keep together, the reform of the University as it is, and the formation of a real University as it ought to be, is inevitable. But the task of conciliation and union—the *Ausgleich*—has been tedious, difficult, and protracted. The limits to be assigned to the local university were carefully discussed eight or nine years ago. The place for the examination of the Royal Colleges—in praise of which I fully agree with Dr. Fowler—was debated with the penultimate President of the College of Physicians. The inevitable conclusion that there must be one and not two universities in London was the result arrived at after hearing the evidence contained in two Blue Books by the Selborne and afterwards by the Cowper Commission. These questions now so inopportunely raised again speak to those who took part in their discussion

Of old, unhappy, far-off things,
And wars fought long ago.

The "Gresham" scheme for the union of University and King's Colleges with the medical schools was long ago abandoned by all but small minorities of the bodies concerned. The original "Westminster" scheme urged by Sir William Jenner, Dr. Wilson Fox, and Dr. Moxon, in which the Royal Colleges and schools were to form a degree-giving medical faculty, was long ago rejected by the Privy Council. It is only courting defeat to fall back upon positions long ago surrendered.

Judge, then, if the teachers of medicine in London have cause to be grateful to the promoters of the new Westminster scheme. We are now told that it was intended to wake up the promoters of the present Bill, and to threaten the Government with terrible consequences if they do not bring it in again and pass it at once.

Those who are seriously aiming at the success of a particular measure do not mournfully forebode its probable failure. But there was no need for this meddlesome intervention. Possibly some of those who signed the first secession-document thought that nothing was doing because they were doing nothing; but they were like a man who drops asleep in church and on waking reproaches his neighbour for not keeping awake. At the last meeting of the College of Physicians before the vacation an urgent petition to the Government to pass the Bill for a Statutory Commission was adopted with only one dissentient voice. At the last meeting of the Senate before the vacation the final agreement which we were told would disarm opposition was made, and as soon as it met in October the subject was taken up again. The stone thrown into the millpond might have seriously injured the mill; happily it did nothing more than make a splash. If the plan had succeeded the Government might have said that if we could not make up our own minds they must withdraw the Bill. Some of our colleagues seem to think that in such an event it is the easiest thing in the world to get another Bill introduced and carried. Do they suppose any Government would care to touch so thorny a question again? Do they suppose that a private Bill on such a subject has the slightest chance of passing? Do they suppose, since it has taken more than the period of the siege of Troy to bring about the present consensus of all the bodies interested in favour of the Government Bill, that they will succeed in obtaining adequate support for a totally different scheme, one, too, which is only a finished sketch for the medical faculty and barely an outline for the others?

It is absurd to call this inchoate, stillborn scheme a rival to that which is based on the reports of a very strong Royal Commission, which has been accepted by the Senate and Convocation, by University and King's Colleges, by the two Royal Colleges, and by all the medical schools except St. George's and Middlesex, while it has been rejected by no interested body, which has been twice introduced as a Government measure into Parliament, and which, now that the "rival scheme" is exploded, will, we have good reason to believe, be introduced a third time and passed.

The one thing that can ruin the Bill and all prospect of effectual legislation for many years is disunion. This danger has been happily averted by the action already taken by the great majority of the medical schools, and by the result of the meeting at the University which was reported in the JOURNAL.

The time has long passed for negotiations and criticisms and cavils. Probably every one of us would find something he would like altered in the present Bill or in the Commissioners it appoints. I, for one, should have liked to give them greater freedom of action. But all that can now be done is to get this Bill through Parliament, or to give up all hope for any legislation or charter for a generation to come. Any objections or amendments which do not touch the substance of the Bill must be made before the Commissioners, who are bound to consider them. But until the Bill is passed, the duty of all well-wishers is to keep our ranks unbroken and

strengthen the hands of the Government in making it an Act of Parliament.—I am, etc.,

Brook Street, W., Dec. 24th, 1897. P. H. PYE-SMITH.

UNQUALIFIED ASSISTANTS.

SIR,—Much has been said both for and against unqualified men in the BRITISH MEDICAL JOURNAL, but so far nothing definite has been decided upon for their benefit; however, it is already suggested and beginning to take form that co-operation of all those who are registered students of medicine (with a full curriculum, sound experience, and undeniable character) be at once promoted to bring their claim forward so as to secure their being registered as medical men.

This is surely their birthright, inasmuch as the first Medical Act before it came into force provided for everyone already in practice by placing his name on the *Register*. And even were this granted, nine out of every ten would find it uphill work to make a living, as owing to the low salaries hitherto paid to unqualified men they will be so handicapped for want of means as to be able to make but little progress, but still they will at least be free to do the best they can. It certainly could not be the intention of the Council to pauperise the above class of men with those dependent on them, but to put their foot on the multitude of untrained practitioners who are a disgrace to the profession and have never been to a hospital or school of medicine: that would of course be beneficial to the public and profession. Nothing therefore but co-operation of the whole body of men who can come under the above category (namely, registered students with full curriculum, unquestionable character, and references from employers as to their skill and ability) remains so as to lay their claim at once before the Council; and all those desiring to co-operate may address:

L. M., *Western Mail* Office, Swansea.

SIR,—My experience of the *rôle* which unqualified assistants have played during the last fifty years prompts me to say a few words in their behalf. First, we should recognise the fact that all men are not possessed of medical or surgical inclinations or, if you like, natural aptitude for the successful study and treatment of disease. Without this I care not how highly qualified the man may be as regards degrees, class honours, or book knowledge; he never will, to my mind, make a sound practitioner. I have met with many unqualified assistants who might have had only one or two years' medical schooling who were superior to their masters in "nous" at the bedside simply because they were endowed with some kind of intuition whilst dealing with the sick. I would also point to the fact that the cases the unqualified assistant was called on to attend were as a rule ordinary every-day illnesses, requiring the exercise of common sense rather than scientific knowledge. After a short probation such an assistant in a very short time, if steady and given to reading any medical weekly journal, will become as capable as the average qualified man, 50 per cent. of whom have little or no taste for the calling they have adopted.

I was amused at the suggestions put forward by "X. Y. Z." for the adoption of the Medical Defence Association. One item I shall content myself with, namely, that the Association shall insist on "uniform rates of fees." Happy thought. I would make one more suggestion, that it should also insist on uniform size of hats. Heads would not matter so much.—I am, etc.,

Harrogate, December 21st, 1897. A. S. MYRTLE.

SIR,—In the observations I am about to make, I am referring solely to that class of unqualified assistants who are employed by their principals in a most limited capacity, and under the strictest supervision and control, by far the major portion of their duties being unconnected with the medical portion of their practice. These assistants, therefore, help their principals only in a small degree in their medical work, but this assistance is a great boon when there is pressure of work, and when the principal is not in the way or otherwise engaged. These assistants do all the dispensing, book-keeping, and attend to a number of minor matters which the qualified assistant would consider beneath his notice. I should like to be informed what part is to be played by the dispenser and surgery attendant. Is either the one or the other to be allowed to attend to any injury, to give any simple medicine for a slight ailment in the surgery, or to attend an ordinary case of midwifery? If not, they are in a worse position than an ambulance man, who can go as first aid to the injured, or the prescribing chemist, or the midwife.

In this Notice the objects—which are no doubt laudable—are twofold, namely: (1) The prevention of unqualified assistants from being used fraudulently and to the danger of the public; (2) the substitution of the qualified for the unqualified assistant. As to the first point, I have never found that the restricted and supervised use of the assistant has been fraught with danger or fraud, but the very contrary; as to the second point, it will not be an easy matter to find a qualified man to take the place of an unqualified one in all his various duties. Those principals, however, who keep unqualified assistants to do a large amount of their practice, and also a dispenser, will have little difficulty in conforming to this Notice, and will not be put to much inconvenience, as the substitution can easily be effected, and their position then rendered less vulnerable; whereas the other principals, by this Notice, will be placed on the horns of a dilemma. It is all very well for the Council to pose as purists in this matter, and to cleanse what they may think is an Augean stable, regardless of the consequences to the principals, assistants, and the public; but perhaps the day will come when, in their zeal for reform, they will find they have crippled the principals, and wronged those useful, harmless, and fraudless assistants of whom I speak, many of them being gentlemen by birth and education, who will now be cast adrift, and all similar appointments closed to them.

It certainly seems a great hardship that all assistants should be stigmatised as fraudulent and dangerous to the community because other principals have used them improperly, so as to bring themselves within the pale of "infamous conduct."

Moreover, to make matters worse, the Council refused to support the humane and reasonable proposition of Mr. Teale to postpone the operation of this Notice till January 1st, 1900. I unhesitatingly assert that a greater blow has not been struck at principal and assistant for many a year, and in these days the profession requires assistance, not blows; friendly, not hostile, enactments. In conclusion, I venture to think that had the Council found a *via media*, so as to have spared this class of assistants, they would have given general satisfaction to the profession, and have earned the thanks and gratitude of those principals who keep such assistants, instead of causing great irritation.—I am, etc.,

December 20th, 1897. JUSTITIA.

SIR,—In reference to Dr. Grace's proposal to legalise unqualified assistants, it is evident that from their employers' point of view it would be a very good thing; they would get an assistant of mature years at the salary of an unqualified man, knowing the people and district, and with a legal status.

But what about their professional opponents? Is it fair that those men who have for years paid qualified men, and those who have done the whole work themselves rather than encourage unqualified practice, should not have the same advantage?

I am sincerely glad that the General Medical Council has decided the question and supported the qualified practitioner.—I am, etc.,

December 21st, 1897. M.R.C.S.

SIR,—In the Notice passed by the Council is the following limitation "not to apply so as to restrict the proper training and instruction of *bonâ fide* medical students and pupils, or the legitimate employment of dressers, dispensers, and surgery attendants under the immediate personal supervision of registered medical practitioners."

I should like to know if the last part of this means that a student, when he attends his twenty midwifery cases, must in every case be accompanied by a registered medical practitioner. I believe that up to the present time, it has been usual for a student who is attending his midwifery in connection with a hospital to go to the cases by himself, and if he is unable to manage, for him to send for the resident

obstetric officer. Would a general practitioner be guilty of infamous conduct if a *bonâ fide* student, third to fifth year, employed by him as a dispenser were to attend a midwifery case which came in during the general practitioner's unavoidable absence from home, such case forming one of the twenty cases, the general practitioner taking charge as soon as possible?

Or again, supposing an urgent case, for example flooding or a child in convulsions comes in, say between 11 and 1 in the morning, when nearly every general practitioner is out visiting, would a general practitioner be guilty of infamous conduct if his dispenser (a *bonâ fide* student, third to fifth year) were to visit the case; or must that student decline and allow the patient to die, although he may know what is the proper thing to do, until the general practitioner could attend?

Or again, would he be guilty if, during his unavoidable absence, a patient comes to his house suffering from, say, diarrhœa or a bad cough: if his dispenser or *bonâ fide* student were to prescribe for him, or must that student decline, but allow him to go to the chemist a few doors away, who doubtless will prescribe for him, or sell him some patent medicine, which will probably do more harm than good?—I am, etc.,

December 21st, 1897. L.S.A.

SIR,—I agree with Mr. Ed. Mills Grace that the General Medical Council do not see the unqualified assistants' side of the question, neither is it its business or duty to see it. Sufficient for the Council to see the side of the qualified men, over whom alone it has jurisdiction. To them it says: You shall not employ an unqualified man in your practice except under the conditions specified.

It is easy to see through the unblushing advocacy of the retention of unqualified assistants; only those do it who benefit by such help. Any time during the last fifteen years it has been generally considered bad ethics to palm off an unqualified man on one's patients, and I am glad to know that soon it will be "infamous conduct."

We are told by certain employers of unqualified men that hardship will result from the decree of the General Medical Council. I am sorry, but these alarmed philanthropists do not seem to consider the hardship to qualified men brought about by themselves. Qualified men without means are driven to shady work because the services of an unqualified man are preferred to theirs. If a practitioner has more work than he can do, or wants more leisure, does it not seem right and proper that he should employ qualified help? The man who does otherwise perpetrates a fraud on the public, and unfairly competes with his more strictly ethical brother.—I am, etc.,

December 22nd. M. A. H.

SIR,—I know a medical man who employs an unqualified man who is married and has several children, and has been over twenty years in his present situation. There is another man whom I know who is 45 years of age, unmarried, but whose aged parents are absolutely dependent upon him. He was trained by one of the best provincial surgeons—a man who occupied several honourable posts in the profession, and was senior surgeon to an infirmary. How are such men as these to gain a living? Their principals most probably cannot afford to put qualified men in their places, and engage them solely for indoor surgery work. If dismissed they are too old to turn to other employment. Many, no doubt, will begin to practise on their own account, and run the risk of an occasional fine, or they will be employed by some chemist and prescribe over the counter. The employment of unqualified assistants should be put a stop to, but at the same time the law should not be made retrospective, and such men as I have named should be allowed still to continue. I would suggest that only those who have been actually engaged as assistants for twelve years or more should be allowed to practise as hitherto, and that these should be required to pass some practical examination in symptomatology and therapeutics.—I am, etc.,

December 21st, 1897. FAIR PLAY.

SIR,—It would not be more unjust that the existing unqualified assistant should be registered as such than that, for instance, the dentists who practised before the passing of the Dentists Act should have been registered as such. What have the unqualified assistants done as a body that they should be thus dealt with? Even the midwife, who may be grossly ignorant, will have the protection of the law if the Midwives Bill is put on the statute book.

I have acted as assistant for several years to well-qualified men in good practices. I have gone through a curriculum, and have had a good general education; and since leaving college I have kept up my knowledge of medicine, surgery, and midwifery by study, and not only of those subjects but of the allied sciences. Still, I am unqualified up till now; and because I am, the law gives more protection to some ignorant quack or charlatan, who makes a splendid income by the selling of his nostrums. I for one would be quite willing to undergo an examination to enable me to act as an unqualified assistant till such time as I may obtain a full qualification.—I am, etc.,

December 20th, 1897. EQUITY.

MIDWIVES AND UNQUALIFIED ASSISTANTS.

SIR,—In the event of the Bill for the Registration of Midwives being passed, would it be considered covering to employ one of them as an assistant to dispense, attend midwifery, keep books, etc.?—I am, etc.,

St. Neots, Hunts, Dec. 16th, 1897. EDWARD J. CROSS.

P.S.—Will men be able to register as midwives also if the Bill is passed?

HOSPITAL REFORM: THE NEWPORT INFIRMARY.

SIR,—I beg to enclose copies of the correspondence which has taken place with the directors since the publication of my letter in the BRITISH MEDICAL JOURNAL of December 18th, 1897.—I am, etc.,

Cardiff, December 23th, 1897. HENRY C. ENSOR.

[*Copy.*]

Newport and Monmouthshire Hospital,
Newport, December 20th, 1897.

DEAR SIR,—At the request of the Honorary Medical Staff the House Committee met them in consultation on Saturday evening and it was then arranged that subject to your writing and publishing the accompanying letter the chairman would call a special meeting to reconsider the resolution passed by the directors at their meeting on 7th December and give you an opportunity of explaining matters.—I am, yours faithfully,

Dr. H. C. Ensor, Windsor Place, Cardiff. J. K. STONE, Secretary.

[*Copy of Suggested Apology.*]

To the Chairman of the Newport Infirmary.

DEAR SIR,—I much regret having refused to comply with the instructions of the directors as to certain cases and also that I should have published statements detrimental to the Newport Infirmary instead of asking for an interview with the directors. I now ask for such an interview in the hope that after explanation had the decision of the last Board meeting will be reconsidered. I withdraw all aspersions against the Board and agree to this letter being published.—I am, yours truly,

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[*Copy of Reply.*]

23, Windsor Place, Cardiff,
December 24th, 1897.

DEAR SIR,—I beg to acknowledge receipt of your letter of December 20th.

I have no reason to regret the action which I have taken, and therefore decline to make any apology.—I am, yours faithfully,

To the Secretary, Newport Infirmary, Newport. HENRY C. ENSOR.

THE DANGERS AND USES OF ERYTHROL TETRANITRATE.

SIR,—Erythrol tetranitrate, like all other polyatomic organic nitrates, detonates when struck with a hammer, and doubtless would explode if roughly used in a mortar. My assistant, Mr. Marshall, has, however, several times rubbed up small quantities without ill effect, but this has always been done with care. The substance can be melted (61° C.=142° F.) without undergoing decomposition, and must be heated rapidly to a much higher point before an explosion will ensue. Although more explosive than nitroglycerine, owing to its containing one more nitrate group, it is much more stable, and accidents are only likely to happen if incautiously used.

The recent accident with this material is deeply to be regretted; but it seems to me, too, that combination with sugar of milk would considerably enhance its explosive

power. I consider the drug is perfectly safe unless rapidly heated or struck or mixed with some readily-oxidisable substance. Indeed, during its investigation my assistant and I were surprised, knowing its composition, at its stability.

Increased experience of the drug enables me to speak very highly of its therapeutic properties in warding off attacks of angina pectoris and in keeping down arterial tension in chronic Bright's disease. I have also received letters from several medical men in different parts of the country confirmatory of my own experience. I have heard of no accidents from patients carrying in their pockets tabloids containing it.

I should be obliged if those who have used the drug would send either to you or to me the results of their experience with it, as I am certain the efficacy of the drug in the affections I have mentioned is not yet sufficiently known and appreciated.—I am, etc.,

Cambridge, Dec. 27th, 1897. J. B. Bradbury.

CONSULTATION WITH HOMŒOPATHS.

Sir,—I in common, I venture to think, with many others was pleased to see Mr. Jessop's timely letter concerning consultations with homœopaths in the British Medical Journal of December 18th, 1897.

As to what is the attitude of the profession as a whole on the matter, there can, I think, be little doubt. That there will always be in a large profession a few who, if allowed, will meet homœopaths and other irregular practitioners is, I think, also not doubtful.

The important point appears to me to be, What is the remedy? And I venture to think the only at once plain and sufficient remedy is for the profession as a whole to decline, not only to meet or act in common on a hospital staff with such practitioners, but also to decline to meet or act with any practitioner so meeting them.—I am, etc.,

Bradford, Dec. 28th, 1897. W. Gilchrist Burnie.

THE ASSOCIATION AND MEDICAL DEFENCE.

Sir,—I received a circular recently asking if I approved of the British Medical Association taking up medical defence, and whether I would undertake to pay an additional subscription for that purpose. I answered both questions in the affirmative; at the same time, I should like to know if in case of need Continental practitioners would share in the advantages of medical defence. In this connection I should say that in Italy and Switzerland, and probably elsewhere, the expenses of litigation would cost much less than corresponding litigation in England. One of my colleagues here propounded the question to me, and doubtless it will occur to many.—I am, etc.,

Florence, December 25th, 1897. Stuart Tidey.

THE PRIVY COUNCIL, THE GENERAL MEDICAL COUNCIL, AND THE DENTISTS.

Sir,—The General Medical Council has the administration of the Dentists' Act and the compilation of the *Dentists' Register* under its control; it also has to deal with matters relating to dental education.

The dental fund formed by the fees paid for registration amounts to £8,148 3s. 11d., and in the year 1896 the Council received for registration the sum of £530 2s. 6d. This fund contributes one-sixth of the working expenses of the office, namely, £299 13s. 6d.; the General Medical Council one-half, namely, £899 0s. 5d.; and the English Branch Council one-third, or £599 6s. 11d.

The medical profession is represented by 30 members, 20 are chosen by the medical corporations of Great Britain, 5 are nominated by the Crown with the advice of the Privy Council, 5 are elected by the medical profession as direct representatives.

Meetings of the Council, of its Executive Committee or Education Committee must necessarily be costly proceedings, for the gentlemen who give their time for these purposes must be remunerated, but it is not fair that they should discuss at great length subjects that would at once be vetoed were a dentist a member of the Council. The members of the General Medical Council cannot be expected to be familiar with matters relating to the dentists, and the presence of a skilled person would be of the greatest value to the Council. There are several methods by which this reform can be accomplished:

1. By the Privy Council increasing the number of members of the General Medical Council to 31.

2. By nominating a dentist, who is also upon the *Medical Register*, whenever the next Crown vacancy occurs.

3. By a dentist being elected by the medical profession as a direct representative.

4. By one of the medical corporations nominating a dentist as its representative.

One of the first methods appears to be the most desirable. If the first were adopted he should be elected by the dental profession as a direct representative, and should be on both registers. The second method would be the most simple, and would have the double advantage of not increasing the number of the Council, and also would save the worry, anxiety, and cost of an election.—I am, etc.,

December 28th, 1897. M., and L.D.S., R.C.S.

A DANGEROUS CUSTOM AT FUNERALS.

Sir,—I venture to draw attention to the evil consequences, of which most medical men could give instances, that often follow attendance at funerals during inclement weather, and at a time when the nervous systems of the mourners and others are depressed. Careful attention to clothing and every means of protection may ward off many of the dangers arising from cold, wet, and boisterous weather; but when all is done, there remains an ordeal dreaded by many—that of standing bareheaded at the grave, it may be in a blazing sun, or, what in this climate is more common, in a pitiless, cold, and biting wind.

We sometimes read such remarks as these: "The large assemblage, heedless of the piercing, cold blasts, stood uncovered throughout the whole ceremony." When we reflect on the numbers that are doing this daily, not in the metropolis alone, but all over the British Isles, there cannot but be a vast amount of suffering, mental and bodily, to say the very least.

As this dangerous exposure is dictated by reverence, it seems a delicate matter to challenge its necessity among a people so conservative of habits and customs relating to the dead; but surely a way might be found to obviate danger without abating reverence. Occasionally one sees an individual, made bold perhaps by some conscious weakness, or some bitter experience, donning a skull cap as he doffs the obtrusive chimney-pot, while many, no doubt, wish they could follow suit.

If only some influential persons would lead the way—and who could do this better, by example and precept, than medical men?—it would soon become the custom to go provided with a pocket head covering—if only a black handkerchief—just as one does with a pair of gloves.—I am, etc.,

London, Dec. 26th, 1897. Pilgrim.

THE WAR OFFICE AND INTENDING CANDIDATES FOR THE A.M.S.

Sir,—Will you kindly permit me to warn candidates for the A.M.S. against the present tactics of the War Office? The plan of not requiring men to declare whether they elect for the I.M.S. or A.M.S. till the marks are published is ingenious, as thus it is hoped men unsuccessful for the former will be induced to accept commissions in the latter. Fifteen vacancies for the I.M.S. and 40 for the A.M.S. have been advertised, but it is well known that fully 80 are required for the latter, and if students will only wait till the War Office introduces the long-promised reforms the boot will probably be on the other foot, and the I.M.S. will be willing to take the A.M.S. failures.

The recent action of the Royal College of Surgeons, London, and the Royal College of Physicians, London, who have sent a joint note to the War Minister, calling on him to introduce the necessary reforms as to "corps," "rank," and "titles," must have a marked effect, and if intending candidates will now support the profession, and hold back till the reforms are introduced, they will soon be able to enter the service under honourable conditions.

One word of advice to what I may call "weak men," that is, candidates who trust to be able to slip in on low marks in the present crisis. A few may be temporarily successful, but later on they will find the road of promotion barred, and they will have to retire on a gratuity or small pension, and will curse the day they were induced to compete (?) for the A.M.S.—I am, etc.,

UNITED WE STAND, DIVIDED WE FALL.

December 17th, 1897.

THE IRREPRESSIBLE NURSE.

SIR,—I should be much obliged if you or your readers would express an opinion on the following correspondence.—I am, etc.,

December 22nd. H.

[From Dr. H. to Dr. A.]

December 14th.

DEAR DR. A.,—Some months ago I was engaged to attend Mrs. ——, of ——, in her confinement, which she was expecting about the 25th of this month. To my utter astonishment I received this morning from Mr. —— (her husband) a letter, in which he says:

"I am extremely sorry to have cause to give you back word *re* your attendance on Mrs. ——. I have just been able to secure a nurse, who will only take the case in conjunction with her own doctor, so that I have no alternative. If on any future occasion I require medical advice, shall be pleased to have your services."

On interviewing Mr. ——, I find the nurse is a Mrs. S., and that you are the doctor referred to. Now, I can hardly believe that it is within your cognisance that Mrs. S. should thus tout for your services being forced on people reluctant to receive them, and I shall be glad to hear if you can explain what seems to me to be, to say the least, a most unusual course.—Yours faithfully,

H.

[From Dr. A. to Dr. H.]

December 15th.

DEAR DR. H.—In answer to your letter regarding Mrs. ——, I would say that I was asked to attend her both by the nurse and Mr. —— on separate occasions, and I consented. As regards the nurse, she is not a patient of mine, therefore it cannot be said that it is in conjunction with her own doctor, and I may say that I have only been with this nurse at one confinement before. I cannot see that the nurse is touting for me when she told me herself that if I would not come she knew Dr. —— would come, mentioning another name. The nurse evidently appears prejudiced against you, and it was a question of who should be asked instead, and I was requested to attend. I cannot see that my services are forced on people reluctant to receive them when Mr. —— called and asked me to attend his wife.

However, I am sorry you have been annoyed in the matter, and as far as I am concerned if I had refused to attend I know some one else would have been asked.—I remain, yours faithfully,

A.

[From Dr. H. to Dr. A.]

December 16th.

DEAR DOCTOR A.—Thanks for your explanation. With regard to the description, "her own doctor," it was the nurse's, not mine. I may be old-fashioned and not up to date, but it certainly seems to me that it is a new phase of medical practice, which makes the "doctor" subsidiary to the "nurse."—Yours faithfully,

H.

A PLEA FOR TOLERANCE.

SIR,—Permit me to point out that the arguments used by Mr. Flemming and "A General Practitioner" (sound ones I certainly consider them) for admitting to Branches the holders of "medical aid" appointments, would also justify us in adopting—would compel us, rather, to adopt a more generous and tolerant attitude towards the homœopathic section of the profession than has hitherto been our wont. In my opinion (shared, I trust, by a large number of your readers), our past conduct in this matter has been anything but creditable to our good sense, to say nothing of our humanity. I am utterly incredulous of the ill results predicted for our patients, and the ignominy for ourselves, from the practice of meeting homœopaths in consultation. What can be more ignominious than our present position before the public, of declining to meet men who, equally with ourselves, have passed through the legal curriculum, and so earned the right to an opinion? Why not credit these gentlemen with the possession of some tact, some desire to find a point of agreement with ourselves? It is generally admitted that Hahnemann's influence upon our own methods of practice has been and is considerable; and I could easily name a number of drugs which we have appropriated (not always with any acknowledgment) from the homœopathic armamentarium. Coleridge, a profound thinker, though not a doctor, said of Hahnemann that he was a "splendid fellow," and that his theory, though not exactly right, was by no means altogether wrong. Is not this commonly the case with theories, and a possible view of the one in question?

Our present boycotting attitude towards homœopaths amounts really to social persecution. But "the blood of its martyrs is the seed of a church." We have learnt something from homœopaths in the past; why not learn more, if more is to be learned, and so prove to the world that our sole care is that the truth alone shall prevail.—I am, etc.,

December 21st, 1897. A MEMBER.

"CANCER HOUSES."

SIR,—Your note referring to a paper by Dr. Leon Noel and Dr. Lloyd Jones's letter have decided me to forward you a short note giving some of the main conclusions of an investigation which I began more than two years ago, and the results of which in greater detail I have embodied in a paper which I hope shortly to read at a branch meeting of the British Medical Association.

Being much impressed by the great frequency of the occurrence of malignant disease in some districts compared with others in their immediate neighbourhood I have collected, tabulated, and, where possible, investigated all cases of death from malignant disease which have occurred in certain districts during the last ten years. The statistics thus obtained prove conclusively (for all the areas included in the investigation) that where there are two districts lying side by side, and differing in this one particular alone, namely, that the one district lies in a valley along the course of a sluggish stream liable to flood and to sewage contamination, or where the land is ill-drained, with little or no fall, while the other district lies on the well-drained upland, which slopes more or less steeply towards this valley, the former will have a mortality from malignant disease at least double that of the latter. Sometimes in the immediate proximity of the stream the mortality is enormously increased, so that one might almost be justified in saying that the mortality varied inversely with the square of the distance from the stream.

These facts, which are capable of proof, seem to me to point very strongly in the direction of an external agency as an important factor in the causation of malignant disease.

If, as many persons already believe, there is a micro-organism which stands in a causal relationship to malignant disease, these facts become more easy of explanation. Suppose, for instance, that malignant disease owes its origin to some micro-organism comparable in some respects with the plasmodia associated with the various forms of malaria, and which can gain access to our bodies through exhalations from the soil. Then these organisms would probably occur in abundance in the discharges from patients the victims of malignant disease. Such organisms finding their way into streams, or into the surrounding soil, might find in such conditions a suitable medium for growth and development, and in this way the circle be completed. This also would explain the existence of "cancer houses."

At any rate the facts I have mentioned are a very strong argument in favour of the micro-organismal origin of malignant disease.—I am, etc.,

Nuneaton, Dec. 13th, 1897. E. N. NASON.

THE AERIAL SPREAD OF SMALL-POX.

SIR,—As Dr. Savill, in his last letter to the BRITISH MEDICAL JOURNAL, claimed to have advanced "some of the strongest evidence of modern times" against the theory of aërial convection, it may be of passing interest to note that in course of controversy he appears to have abandoned every point but one of his attack upon this theory. The only fact upon which he continues to rely appears to be this: In a large proportion of the cases which occurred round each of the Warrington small-pox hospitals he has been able to trace some relation, direct or remote, with a previously-occurring case or cases of small-pox. This man, for instance, "contracted the disease from a neighbouring house which became infected fourteen days before;" this other was ascertained (somewhere in 1893) to have sat, thirteen days before his attack on November 3rd, 1892, in a beerhouse where there was a man who came from a house in which there was a case of small-pox; and so forth. But, granted that Dr. Savill has succeeded in referring a majority of the cases which occurred in successive zones round each of these hospitals to a possibility of direct or mediate infection, how has he helped us to understand why

in each instance the incidence of small-pox on these zones conspicuously decreased from centre to periphery?

Either this graduated incidence was in each case causally related to the small-pox hospital or it was not. If it was not, then the observed graduation was a matter of mere accident. But as similar graduated distribution has so often been observed round so many small-pox hospitals, accident can at once be set aside. If, however, the graduated incidence was in each case attributable to the hospital, how is it to be accounted for otherwise than on the theory of aërial convection? Passage of infectious persons and things to and from the hospital may, and no doubt at Warrington did, take place; but Dr. Savill has not attempted to show how such infectious traffic operated to produce the graduated incidence observed. Moreover, in the case of outbreaks round other small-pox hospitals (as in Fulham in 1884) where opportunities of early and exact inquiry were far greater than any available to Dr. Savill at Warrington, it has been clearly shown that the observed graduation could not be accounted for by any facts or hypotheses of spread by infectious traffic.

Dr. Savill's present controversial difficulties, indeed, appear to have arisen from faulty application of the theory of aërial convection to the facts of the Warrington outbreak. When he visited Warrington, small-pox had for several months been prevalent throughout the town, small-pox patients had been kept at their homes and had been imperfectly isolated; others had been going about in an infectious condition, while first one and then another small-pox hospital near to a populous area had been receiving small-pox cases. How in such circumstances would it have been possible for Dr. Savill to determine that a particular class of sufferers living round the hospitals had received infection aërially and in no other way? Obviously in such a case one circumstance alone would indicate that, among other agencies of infection, aërial convection had been operative—namely, the discovery of a graduated incidence of small-pox round the hospitals. Which, indeed, was the case.

A rough analogy will serve. Assume a town suffering from generalised prevalence of enteric fever, attributable to a polluted water service. Assume, also, an altogether exceptional and heavy incidence of fever in one quarter of the town, restricted to the customers of a single dairy. Let Dr. Savill have investigated the occurrence, and have ascertained that all the consumers of the milk from this dairy who were attacked had also either drunk water from the polluted service or had been in circumstances when it was possible that they may have done so. If Dr. Savill were to apply his Warrington logic to this discovery, we should then expect him to proclaim, first, that milk from this dairy could have had nothing to do with the fever in the exceptionally invaded part of the town: and, secondly, that in view of his investigations, milk is no longer to be regarded as a vehicle of enteric fever infection.—I am, etc.,

London, Dec. 22nd, 1897. G. S. Buchanan.

PERIPHERAL NEURITIS CONNECTED WITH PREGNANCY AND THE PUERPERAL STATE.

Sir,—Dr. H. G. Turney in his letter on December 11th, 1897, seems to be labouring under some misapprehension as to my views on the above subject. In my communication (British Medical Journal, October 16th, 1897) I distinctly state that in my opinion the most potent causes of neuritis occurring in pregnancy or the puerperium are sepsis and incessant vomiting; and indeed the object of my paper was to point out that many if not most of the cases reported were due to some well recognised cause of neuritis such as sepsis or alcoholism. I think that if Dr. Turney will refer to my paper and read it more carefully he will see that this is so.

As regards the terminology I should like to remind Dr. Turney that pregnancy and the puerperal state are in themselves perfectly normal and physiological conditions; if during the stage of pregnancy or the puerperium some disease sets in which has any connection whatever with the pregnancy or the puerperal states, it is customary and to my mind perfectly legitimate to lessen the denotation and increase the connotation of the disease by the terms "of pregnancy" or "puerperal." Thus, just as we speak of adolescent mania, climacteric melancholia, so do we speak of puerperal neuritis (whatever its immediate cause) of the chorea of pregnancy, and even of puerperal septicæmia. Certainly it cannot be said that the septicæmia is produced "by causes peculiar to" the puerperal state.

In my communication I did not wish to take up your valuable space by giving a long list of references to the 49 cases I collected, especially as these references can be found by anyone in Eulenburg's paper, and since then in the *Neurologisches Centralblatt* and the *Centralblatt für Gynäkologie*. I am interested to learn that Dr. Turney is writing a work on this subject and I shall be happy to help him, if he wishes, by sending him my full list of references.—I am, etc.,

Manchester, Dec. 18th, 1897. Ernest Septimus Reynolds.

THE TEMPERANCE QUESTION.

Sir,—In Mr. Reid's very interesting letter which appeared in the British Medical Journal of December 11th, 1897, he appears to me to draw some false conclusions, namely, "That the desire for alcohol would (under evolution) increase as the power of physical resistance decreased." The savage eliminates himself, not because he has a greater craving for drink, but because his reason and will power are not evolved, so that he does not consider consequences as civilised man does.

As civilised nations through abstinence lost their power of physical resistance, they would retain their will power, and recognising how little power of physical resistance they retained, they would abstain. The abnormal few who indulged would be quickly eliminated, and temperance secured.

Drink increases the desire for drink, and the power of resistance tends to make men drink, thinking they can do so with impunity, until too late. They find organic disease has been induced and the will power destroyed by drink.

The South European is sober partly because of his light beverage, just as the light beer of Germany does not induce drunkenness to the same extent as spirits do in Scotland and Ireland; and also in part owing to his long civilisation his will and reason are strong, which enables him to appreciate the bad effect of indulgence on a constitution with diminished power of resistance; therefore he abstains, and abstinence does not produce a craving, which indulgence does.—I am, etc.,

Cullompton, Dec. 19th, 1897. John Hope Potter.

Sir,—The letter of Mr. G. Archdall Reid in the British Medical Journal of December 11th is interesting, but his attempt "to place the matter of temperance on a scientific basis" seems fallacious.

More than one thousand years have passed away since Mohammed—in the *Koran*—forbad all true believers the drinking of wine, which includes all strong and inebriating liquors as giving rise to "more evil than good." In Turkey and India alone there are a hundred million of his followers alive to-day, and although some, in consequence of European influence, do at times indulge, it is very well known that the majority do not. Englishmen who live with Mohammedans speak in unmeasured terms of them as one of the finest types of men now in existence. If these are facts, what becomes of Mr. G. Archdall Reid's theories?—I am, etc.,

South Croydon, Dec. 12th, 1897. R. Denison Pedley.

GLYCERINATED CALF LYMPH.

Sir,—Now that the glycerine method of preserving vaccine lymph has received official sanction, it is only fair to point out that the introduction of this extremely useful innovation was due to Dr. W. C. Grigg, of Queen Charlotte's Lying-in Hospital, who called attention thereto in a short article in the British Medical Journal of April 14th, 1888, page 792, entitled "A Mode of Obtaining Vaccine Lymph without Puncturing the Vesicles." His plan consists in placing a drop of glycerine in the centre of each vesicle, whence, by a process of osmosis, the lymph is extracted through the unruptured skin of the vesicle. This plan, simple in operation and excellent in practice, avoids the risk of a admixture of blood, etc., with the lymph, and also obviates the small but still tangible risk to the infant of erysipelas and sepsis.—I am, etc.,

Alfred S. Gubb, M.D.Paris.

Gower Street, W.C., Dec. 18th, 1897.

FILARIA SANGUINIS HOMINIS.

SIR,—Will you kindly allow me to make a small but important correction in the tables given by Dr. Manson in his paper on Certain New Species of Hæmatode Hæmatozoa, in the BRITISH MEDICAL JOURNAL of December 25th, 1897? The filaria found by me to be existing in the blood of the natives of the Friendly Islands exhibits no diurnal periodicity, but is present in the peripheral blood, both by day and by night. In practically every instance in which an examination was made at both periods was this found to be the case; we may therefore presume that those cases which were examined by night only, or by day only, would have exhibited no periodicity, if opportunities had been afforded to make the double examination. The error has evidently arisen from a misconception of the meaning of the first column of Table I in my paper on Filaria Sanguinis Hominis in the South Sea Islands,[1] which represents the time of the examination, and not the period during which the embryo filariæ exist in the blood. This filaria, from its anatomical details, I provisionally considered to be identical with F. nocturna, but in size it is smaller, and the absence of periodicity I thought might be attributed to the habits of the natives. At the same time it is still open to question whether we may not be dealing with a new species, especially when we take into consideration the peculiar character of the elephantiasis in the South Sea Islands.[2]—I am, etc.,

V. GUNSON THORPE,
H.M. Dockyard, Sheerness, Dec. 27th, 1897. Surgeon, R.N.

INTUSSUSCEPTION.

SIR,—In your report of the discussion on Mr. Barker's paper at the Clinical Society on December 10th, 1897, reported in the BRITISH MEDICAL JOURNAL of December 18th, p. 1797, your reporter makes me say: "No danger is attached to laparotomy in a child." As this conveys such a wrong impression may I be allowed to repeat what I did say, namely, "That owing to the use of strychnine, brandy, and hot water baths the dangers of death from shock were much diminished (I might have added 'rapid operating'); that the danger of the surgeon infecting the peritoneum might now be left out of consideration; and that I had been surprised at the infrequency of ventral herniæ in children, even after prolonged incisions."—I am, etc.,

Upper Berkeley Street, W., Dec. 21st, 1897. C. B. LOCKWOOD.

WALCHER'S POSITION IN OBSTETRICS.

SIR,—In answer to Dr. Giles's letter in the BRITISH MEDICAL JOURNAL of December 11th, I may mention that my patient was delivered at her third confinement with axis traction forceps after a long labour; therefore, if head moulding and axis traction could have given her a living child without Walcher's position she ought to have had one on that occasion.

The difficulty of taking pelvic measurements by skiagraphs is so great that I attach no importance to evidence of this nature. Were the patients so measured near the end of pregnancy? I allow that in non-pregnant women no great movement can occur at the ilio-sacral joints.

The advantages of the axis traction forceps granted, I maintain that whenever the head is arrested at the brim we can deliver more easily in Walcher's posture than we can in any other position. Further, we can deliver safely in this posture in some cases which would otherwise end in the death of the child or in a cutting operation.

It is very gratifying to know that the use of this position was taught in England so early as 1838. However, Walcher must have the credit of introducing the method until we find some statement published before his that the conjugate can be increased by allowing the weight of the hanging legs to act on the pelvis. This is the only point which distinguishes Walcher's position from the old and familiar "dorsal" posit on.

Clearly, Dr. Giles does not seriously take exception to Walcher's work on account of its Teutonic origin, for in that case he would not have confessed that his own skiagraphs were "made in Germany!" The anti-Teutonic bias may have had more weight with Varnier, who, while singing the praises of symphysiotomy,[1] goes out of his way to attack Walcher's position. His estimate of the increase in the conjugate (0.6 cm.) is that of Klein, whose measurements were made upon non-pregnant women, and are therefore useless; for it is an obstetric platitude that the pelvic articulations are more mobile at the end of pregnancy than at other times. Judging from the measurements published in a large proportion of the cases in which symphysiotomy has been performed, delivery could have been safely accomplished by using a good pair of axis-traction forceps in Walcher's position. I may add that further measurements confirm my former statement that, in parturient women, if the legs be allowed to hang down freely the conjugate is increased on an average by 1 c.m., or ⅜ in.—I am, etc.,

Manchester, Dec. 13th, 1897. W. E. FOTHERGILL, M.D.

ANKYLOSTOMIASIS IN THE WEST INDIES.

SIR,—In his interesting opening lecture at St. George's Hospital Dr. Manson, when speaking of ankylostomiasis, states[2] that with the exception of St. Lucia, Demerara, and Jamaica this disease had not been recognised, at all events until very recently, in many of the West Indian Islands. This is scarcely correct, at least as far as Grenada is concerned, inasmuch as since 1890 the dochmius duodenalis of Leuckart has been demonstrated here, and credited as the chief cause of tropical anæmia.

In 1891 I learnt from the surgeon of a Dutch warship then visiting our port that thymol had been successfully used in Surinam and Paramaribo for the destruction of the nematode many years before, and this treatment was at once adopted here, and has remained our sheet-anchor since.

Dr. Manson's remarks tend to point to St. Lucia as the place where ankylostomiasis was first recognised in this part of the world, though, as a matter of fact, Dutch and British Guiana, Trinidad, Jamaica, and Grenada were treating the disease, and with thymol, some years before Dr. Galgey's discovery of it in St. Lucia. For a history of the disease in Demerara I would refer readers to an excellent and lengthy article in the *British Guiana Medical Handbook* for 1894 by Drs. Daniel and Conyers.—I am, etc.,

Grenada, West Indies, Nov. 26th, 1897. WALTER BOYD.

HISTORICAL NOTE ON THE MOSQUITO THEORY OF MALARIAL INFECTION.

SIR,—Our ancestors were shrewd observers, even though they frequently misinterpreted their observations. The following extract from Dr. J. Mason Good's *Study of Medicine*[3] is of interest in connection with Dr. Patrick Manson's theory of malarial infection by means of mosquitos:

> M. Rigaud de l'Isle has asserted that the miasmic particles which infect the air in these places (that is, the Campagna, etc.) are heavier than the air in its loftier and lighter strata, and may be separated from it. He has found an elevation of 300 yards at the Pontine Marshes themselves a complete security from infection; and he proposes to those who reside lower to sift the air which they breathe by wearing a fine silk gauze over the mouth and nostrils. M. Brocchi has successfully employed the same remedy, and hence recommends sleeping under a fine mosquito net in all places where intermittents are endemic.

Now although no one now supposes with MM. Rigaud de l'Isle and Brocchi that miasmic particles, or rather the malarial parasite, can be filtered out of air by fine gauze net, the mosquito, now suggested as the conveyer of infection, can be excluded by fine gauze, especially in the form of a mosquito net or curtain. And it is certainly suggestive to find observers of from eighty to seventy years ago recording prevention of malarial infection by such simple means as those in question; prevention, moreover, which is only explicable on the mosquito theory of infection. While, however, admitting the cogency of much of the evidence adduced in favour of this theory, including the above quotation, it must never be forgotten that there are serious difficulties in the way of accepting it; and that, while as Dr. Patrick Manson has pointed out, there is danger of those who have had no training in tropical medicine misinterpreting tropical clinical phenomena, there may be equal danger of tropical physicians forgetting the evidence of temperate climates in formulating their theories.

[1] BRITISH MEDICAL JOURNAL, October 3rd, 1896.
[2] *Ibid.*, June 2nd, 1894.

[1] *Ann. de Gyn et d'Obstét.*, September, 1897.
[2] BRITISH MEDICAL JOURNAL, ii, 1897, p. 985.
[3] Fourth edition, vol. i, p. 631. London: Longmans. 1824.

While mosquitos are almost confined to tropical and subtropical regions, malaria has a much wider area of incidence. A mosquito and a malaria map would be by no means correspondent in area, the former covering a much smaller tract of country than the latter. In seasonal charts too the occurrence of malaria would be, with spring and autumn rises, continuous; that of mosquitos, or their representatives in temperate regions, would be intermittent.

These are difficulties to be possibly or probably finally explained away, for they are at the present moment quite unmet, and therefore the question must be considered for the time being as not answered, in an affirmative sense at all events.—I am, etc.,

Gosport, Dec. 22nd, 1897. WILLIAM SYKES, M.D., F.S.A.

WIDAL'S REACTION.

SIR,—When Widal's reaction was first introduced as an aid to the diagnosis of typhoid, one of the requisites, if not one of the essentials, insisted on was that the bacilli used should be translatively motile. Since, however, it has been shown by Wright and Semple that the agglutinative reaction is given with dead bacilli, this would seem to be no longer a *sine quâ non*, the reaction apparently resulting rather from physical than from "paralysing" or "devitalising" effects. Simple Brownian movement seems to be sufficient to prevent true agglutination in cases where a suspension is made of living typhoid baciili even where these do not exhibit active translative movement.

If a drop preparation of such bacilli be watched, the individuals sink to the bottom of the drop in a fairly even layer, but although closely packed the bacilli still vibrate with the so-called Brownian movement. Should, however, typhoid serum in 1 in 30 dilution be added to such a specimen, the "archipelagos" formed show a striking contrast to the even "Brownian" close set field of the control specimen. I think this is of importance, as it sometimes happens that a culture wanted for diagnosis turns out either to be sluggish, or merely shows "Brownian" movement in suspension, and the observers may hesitate to use it, thus wasting time.

I believe, however, such a culture is just as reliable as a freely motile one. It would be interesting to hear the views of your readers interested in the reaction as to the validity of using such cultures.—I am, etc.,

Edinburgh, Dec. 27th, 1897. JAMES CAMERON.

MODERN BULLET WOUNDS.

SIR,—In the interesting article on gunshot wounds by Dr. Davis he regrets his lack of information of the Mauser bullet and offers his opinion as to its effects. The Mauser bullet and its effects were described in *La Medicina Militar Española* by the Medical Director of the Royal troops in Cuba, Dom Angel de Larra, and a translation of his article appeared in the *Medical Press*.

It is due to Dr. Davis to state that his hypothesis of the action of the bullet is fully borne out by the Spanish surgeons, as may be seen in the fortnightly reports of Drs. Julio del Castillo Domper and Higries Pelaez Quintata in their *Surgery of the War*.

From the report of Dr. Davis it appears that in the Turko-Greek war that fatal wounds of the skull were not succeeded by the forward projection of the body, but that the man felt sick, swerved, and shot to the earth. In the Belfast riots fatal injuries to the skull were followed by the injured falling forward and the same is reported from Cuba. Probably the posture of the soldier at the time of injury, together with his physical condition, has something to do with this final act of life.

It is of interest to note that in cutting down on a thoracic bullet injury and removing some clot and so forth, the example of John Bell was closely followed.

That the liver recovers from very serious injury is proved by the case of General Millar, of Ayacucho, where he won the independence of Peru. Twenty years after the bullet was found imbedded in the vertebra, and a broad cicatrix from the anterior border to the base of the liver marked its course. Numerous instances of injuries to soft tissues being unnoticed at the time are recorded. One on record, notably that of A. S. Johnson, of Shilolo, who died in the moment of victory. I recorded a case where a bullet passed through both buttocks, and the man's attention was first drawn to the injury by the hot blood running down his legs.

Laparotomy in military surgery, first recommended by Dr. J. Julian Chisolm (U.S.A., 1861), has not proved useful; the conditions are opposed to its successful use. Its use was discontinued by Dr. McGuire, except in cases where the wound of the intestine was of easy access, or where the viscus or wounded vessel was easily reached, without much handling of the peritoneum.

In commending the antiseptics of to-day in military surgery, we are apt to overlook the fact that Macgrigor had each soldier under his care in the Peninsula provided with a pad of oakum.

The conditions of warfare vary so much that we cannot get satisfactory conclusions from statistics. A. S. Johnson had his army decimated with measles, and the Spanish under the Cid were so smitten of the pox that they had to relinquish Naples—a memorable outbreak of the disease—for it secured notice of the medical staff from the Campeador, who recognised how much he was indebted to his Surgeon-General, Dom N. Goddin, of Arras.—I am, etc.,

December 18th, 1897. GEORGE FOY.

THE NOTIFICATION OF MEASLES.

SIR,—How long will it be before measles is made a notifiable disease, as scarlet fever, enteric fever, etc.? According to the returns for last week, there were 134 deaths in London compared with a total of 160 deaths from the remaining zymotic diseases. Every medical man knows that there are a greater number of fatal cases proportionately in measles than in scarlet fever, yet no steps are taken by the Local Government Board to effect an improvement.

The explanation of the large number of deaths almost certainly is that the former is looked upon by the general public as a trifling disease in comparison with the latter. In no case of measles I have attended in Fulham (private patients) have I been called in until one of the common complications arose—namely, bronchitis or broncho-pneumonia, sometimes tonsillitis.

If this zymotic disease were made notifiable, and the house was visited by the sanitary inspector after notification in the usual way, it is probable (1) that in time the public would not regard the disease so lightly; (2) that in time a doctor would be called in at the onset of the attack, and that consequently, where possible, (*a*) the patient or patients would be at once isolated—I believe cases of measles are not admitted into the hospitals of the Metropolitan Asylums Board—and that therefore there would be fewer children attacked; (*b*) the temperature of the room would be more evenly regulated—in how many houses at the present time do you find a thermometer? (*c*) moving the child to another room for the night would be forbidden unless it were impossible to avoid so doing.

As a result of this there would be less risk of the common complications ensuing which are largely responsible for the number of deaths at present shown; unfortunately, as measles is not usually a notifiable disease, we have no means of knowing the total number of cases, whether attended by medical men or not as the case may be, the doctor being often dispensed with in uncomplicated cases.

It might be well to add that in the case of club patients—where the parents have no doctor's bill to follow—experience shows that the medical man is usually called in more promptly.—I am, etc.,

Letterstone Road, S.W., Dec. 22nd, 1897. ALFRED WILSDEN, M.B.

THE QUEEN has been pleased to present to Professor Penberthy, President of the Royal College of Veterinary Surgeons, the medal to be worn in commemoration of the sixtieth anniversary of Her Majesty's reign.

THE Mercers' Company have subscribed £10,000 to the funds of St. Thomas's Hospital.

PRESENTATION.—The brethren of the Masonic Lodges "Clydesdale" and "St. Thomas" have presented Dr. Alexander with a Mark Master's jewel, suitably inscribed, and a purse of sovereigns, as a token of their esteem on the occasion of his leaving Larkhall.

OBITUARY.

ROBERT CHARLES KIRKPATRICK, M.D.,

Surgeon to the Montreal General Hospital.

WE learn with extreme regret of the death on December 5th of Dr. R. C. Kirkpatrick, Surgeon to the Montreal General Hospital. Dr. Kirkpatrick had been ill for about three weeks, the cause of death being tuberculous meningitis.

Robert Charles Kirkpatrick was born in 1863, the son of Mr. J. E. Kirkpatrick, of Montreal. He received his early education at the High School, and at McGill University, where he graduated B.A. He prosecuted his medical studies also at McGill University, and was for some time assistant to Dr. Wilkins, Lecturer in Histology. He obtained the degree of M.D. and C.M. in 1887, and was shortly afterwards appointed House-Surgeon to the General Hospital. After his term of office expired he travelled in Europe and took the diploma of L.R.C.S.Ed. After his return to Montreal he was in 1888 appointed Medical Superintendent, and during his term of office the Training School for Nurses was established, and owed very much of its early success to the deep interest which he took in it. He earned the good opinion of all with whom he came in contact, and when he resigned the position of Medical Superintendent he was appointed Assistant-Surgeon to the hospital, and some years ago he became full Surgeon. In 1893 he was appointed Demonstrator of Surgery at McGill University and soon afterwards became Lecturer in Surgery.

He took great interest in the recent annual meeting of the British Medical Association in Montreal, and was one of the local members of the Arrangements Committee. He was also one of the Secretaries of the Section of Surgery, and those who were brought into contact with him during that meeting will agree with the estimate of his qualities formed by one of his co-secretaries, who writes to us that "He was clear-headed, conscientious, hardworking, and enthusiastic, with a thorough knowledge of his profession and a firm faith in the potentialities of modern surgery."

As a surgeon Dr. Kirkpatrick was careful, conscientious, and possessed excellent judgment. His record as an operator on the gastro-intestinal canal was especially good. He twice performed with success the operation for repair of the stomach after perforation by ulcer, and had had many successful cases of resection of the bowel and gastro-enterostomy. He was one of the editors of the *Montreal Medical Journal*, and threw himself with characteristic energy and enthusiasm into that work.

His death will be a serious loss to the surgical department of McGill University, for men so well equipped as teachers and so well qualified to command the respect and affection of students are rare.

GEO. HENRY EVANS, M.R.C.S., L.S.A., L.R.C.P.Ed., J.P.

WE regret to have to record the death of Dr. Evans, who was the oldest and one of the most respected practitioners of Leigh, Lancs. He was born at Limeside, near Oldham, on August 28th, 1833, and was educated at Tulketh Hall, Preston, and Croft House, Brampton, Cumberland. He received his medical training at Manchester, and obtained the diplomas of M.R.C.S. and L.S.A. in 1858, and L.R.C.P.Ed. in 1864. After receiving his medical education he entered the navy as a volunteer, and took part in the Baltic Expedition in 1854-5. He was present at the bombardment of Sweaborg, and night attack on the Russian batteries, and received the medal for services on H.M.S. *Cornwallis*.

He settled in Leigh in 1858, and for many years enjoyed a very large practice. He took a deep interest in local affairs, and was the first chairman of the Local Board. He was Hon. Assistant Surgeon to the 1st Volunteer Battalion Manchester Regiment, and was appointed J.P. for the County in 1884. He was most punctual in his habits, and for over twenty-seven years he had regularly discharged, at 10 o'clock P.M. a rocket at his own expense. This was known as the Leigh time signal, and was of immense service to the whole surrounding district—so much so that a presentation, subscribed for by the public, and consisting of an illuminated address, a silver tankard, and ornaments, was made to him only a few days before his death, in recognition of his services.

He had only been ailing about three weeks, and died at his residence, Avenue House, Leigh, on Saturday, December 11th, 1897. He was interred at Royton, near Oldham, on December 15th. He was twice married—the second time so recently as April, 1897—and leaves a widow and daughter to mourn his loss.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

STAFF-SURGEON STANDISH T. O'GRADY is promoted to be Fleet-Surgeon December 6th. He was appointed Surgeon March 31st, 1877, and Staff-Surgeon twelve years thereafter.

The following appointments have been made at the Admiralty: WALTER S. H. SEQUEIRA, M.B., Surgeon to the *St. Vincent* (lent), December 17th; GEORGE D. TWIGG, Fleet-Surgeon, and EDWIN MILLER, Surgeon to the *Flora*, January 13th; RICHARD G. BROWN, Fleet-Surgeon to the *Clyde*, January 13th; EDWARD C. WARD, M.D., Staff-Surgeon to the *Mersey*, January 13th; ALEXANDER M. FRENCH, Staff-Surgeon, and JOHN E. H. PHILIPS, Surgeon to the *Cæsar*, January 13th; JOSEPH C. WOOD, Surgeon to the *Vivid*, additional, December 18th, 1897; ARTHUR A. J. MCNABB, Surgeon to the *Northampton* for the *Curaçoa*, December 18th, 1897; WILLIAM E MATHEW, Surgeon to the *Repulse*, January 13th; WILLIAM M. KEITH, Surgeon to the *Prince George*, January 13th; JOHN JENKINS, Staff-Surgeon, to the *Sirius*, December 28th, 1897; JOHN LOWNEY, Staff-Surgeon, to the *Northampton*, additional, for the *Calliope*, December 28th, 1897; THOMAS AUSTEN, Surgeon, to Malta Hospital, December 28th, 1897; JOHN GRANT, M.B., Surgeon, to the *Ramillies*, December 28th, 1897; JEROME BARRY, M.D., Surgeon, to the *Pelorus*, December 28th, 1897; SYDNEY CRONEEN, Surgeon, to the *Impregnable*, December 28th, 1897; ERIC E. KERSHAW, Surgeon, to the *Sirius*, undated.

Fleet-Surgeon GEORGE B. MURRAY has been placed on the retired list with the rank of Deputy-Inspector General, December 24th, 1897. His commissions are thus dated: Surgeon, July 11th, 1868; Staff-Surgeon, December 24th, 1879; and Fleet-Surgeon, September 16th, 1888. He was selected for service with the battalion of Royal Marines sent to South Africa for special service in the Zulu war of 1879.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN G. E. HUGHES has been selected for appointment to the 1st Life Guards as an attached Medical Officer.

Brigade-Surgeon-Lieutenant-Colonel ANTHONY L. BROWN is placed on retired pay December 15th. He entered the service as Assistant Surgeon March 31st, 1868; became Surgeon March 1st, 1873; Surgeon-Major March 31st, 1880; was granted the rank of Lieutenant-Colonel March 31st, 1888; and made Brigade-Surgeon-Lieutenant-Colonel July 18th, 1894. He served in the Ashanti war in 1873-74, and was present at the battle of Amoaful and advance on Coomassie (mentioned in despatches, medal with clasp); in the Kafir war in 1878, including the operations against the Gaikas, and in the Zulu war of 1879, including the engagements at Kambula and Ulundi (mentioned in despatches, medal with clasp); in the Nile expedition in 1884-85 (medal, with clasp, and Khedive's star); and in the operations of the Soudan Frontier Field Force in 1885-86, including the engagement at Giniss.

Surgeon-Major GEORGE WHITE died at Newbury on November 14th, 1897. He was appointed Assistant Surgeon, March 31st, 1868; Surgeon, March 1st, 1873; and Surgeon-Major, March 31st, 1877. He was granted retired pay, November 3rd, 1881.

INDIAN MEDICAL SERVICE.

THE promotion of Surgeon-Colonel G. BAINBRIDGE, M.D., Bombay Establishment, to be Surgeon-Major-General, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Her Majesty has also sanctioned the promotion of Brigade-Surgeon-Lieutenant-Colonel G. HUTCHESON, M.D., Bengal Establishment, to be Surgeon-Colonel, which has also been already announced in our columns.

The following promotions, which also have been already announced, have likewise been approved:—Surgeon-Majors to be Surgeon-Lieutenant-Colonels: *Bengal*—S. J. Thomson, R. N. Campbell, E. S. Brander, F. C. Chatterjee, and G. A. Emerson. *Madras*—C. H. Bennett, M.D., W. H. Thornhill, M.D., and E. M. Reporter. *Bombay*—H. Adey, A. W. F. Street, D.S.O., H. P. Jervis, D. C. Davidson, J. C. H. Peacocke, and K. S. Narimán.

Surgeon-Captains to be Surgeon-Majors: *Bengal* — H. R. Woolbert, G. H. Baker, T. Gringer, M.D., J. K. Adie, A. C. Younan, A. W. Alcock, and J. M. Cadell.

The Queen has likewise sanctioned the retirement from the service of Surgeon-Lieutenant-Colonel ARTHUR TOMES, M.D., Bengal Establishment, which has been already published in the JOURNAL.

Surgeon-Major FRAMJI ROTTONJI DIVECHA, Madras Establishment, has retired from the service, to which his first appointment is dated March 31st, 1880.

Surgeon Lieutenant-Colonel JOSEPH WILSON, M.D., Bengal Establishment, died at Southsea on December 13th, 1897, aged 49. A fire broke out in his residence in the Waverley Road, and he was found lying on a couch, slightly scorched, death being evidently due to suffocation. He entered the service as Assistant-Surgeon March 30th, 1872, and became Surgeon-Lieutenant-Colonel twenty years later, retiring in November, 1894. He was with the Duflla expedition in 1874-75, and in the operations against the Nagas in the same years.

Deputy Inspector-General JAMES KELLIE, late of the Madras Army, died at Ealing on December 16th, 1897, in his 92nd year.

Deputy-Surgeon-General JOHN HOUSTON, M.D., late of the Madras Establishment, died at Edinburgh on Christmas Day, at the age of 65. He entered the service as Assistant Surgeon, August 4th, 1855; became Brigade-Surgeon, June 15th, 1881; and retired with the honorary rank of Deputy-Surgeon-General, March 26th, 1886.

MILITIA MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT T. W. G. KELLY, M.D., to be Surgeon-Captain, November 7th, 1897.

Surgeon-Lieutenant JOHN EDWARD O'CONNOR, M.B., from the first Volunteer Battalion the Leicestershire Regiment, to be Surgeon-Lieutenant, December 22nd, 1897.

THE VOLUNTEERS.

SURGEON-CAPTAIN J. M. M. THOMAS, 2nd Gloucestershire (the Bristol) Engineers, and Surgeon-Lieutenant W. H. R. FORSBROOK, M.D., 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment), have resigned their commissions, December 22nd, 1897.

Mr. WILLIAM M. BOYD, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Royal Scots Fusiliers, December 22nd.

Surgeon-Lieutenant T. G. PROSSER, 4th Volunteer Battalion the South Wales Borderers, has resigned his commission, retaining his rank and uniform, December 22nd.

Surgeon-Lieutenant E. P. DICKIN, M.D., 1st Volunteer Battalion the Northamptonshire Regiment, is promoted to be Surgeon-Captain, December 22nd.

Mr. CHARLES MCBRYDE, M.B., is appointed Surgeon-Lieutenant in the 1st (Renfrewshire) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders, December 22nd.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-CAPTAIN W. H. B. CROCKWELL, the Manchester Companies, has resigned his commission, December 22nd, 1897.

SURGEON-CAPTAINS BEYTS, A.M.S., AND BAMFIELD, I.M.S.

THE gallant conduct of Surgeon-Captain W. G. Beyts at the action of the Ublan Pass on August 27th, 1897, which has been already referred to in the BRITISH MEDICAL JOURNAL, is thus spoken of by Major-General Yeatmann-Biggs, C.B., the officer in command, in the despatch reporting the operations, which appears in the *London Gazette* of Tuesday last: "I especially wish to bring to notice the admirable manner in which Surgeon-Captains W. G. Beyts, Army Medical Service, and H. Bamfield, Indian Medical Service, attended the wounded under fire during both the advance and retirement. The path down being too precipitous for any dhoolie, Surgeon-Captain Beyts carried Lieutenant North, of the Scots Fusiliers, for a considerable distance down the hill on his back ..... Such fine soldier-like conduct is, in my opinion, deserving of some special recognition."

THE MEDICAL SERVICE IN INDIA.

SURGEON-MAJOR-GENERAL GORE, P.M.O. H.M. Forces, left Simla on December 17th on a tour of inspection. He will inspect the 3rd Battalion Rifle Brigade at Umballa, and also the Station Hospital, then the Base Hospital and Royal Irish Regiment at Rawal Pindi, also the Base General Hospitals at Nowshera and Peshawur; and, finally, the camp at Bara, where the troops that have returned from Tirah have taken up winter quarters.

The Tochi Force is being demobilised, and the field hospitals will be replaced by the usual regimental ones.

In November there were employed on service in the several divisions and brigades 329 medical officers, 220 assistant surgeons (warrant officers) 395 hospital assistants, and 114 civil surgeons, making a total of 1,058 medical hands. Testimony is borne to the good work done by the medical department.

THE FRONTIER CAMPAIGN.

A CORRESPONDENT very justly expresses regret that we hear so little about the medical arrangements of the current campaign. Most of the war correspondents, he says, are officers on full pay, who dare not, if they would, point out defects. Is, he asks, the Principal Medical Officer on the "line of communications," or with the headquarter staff? These are matters we ought to know, and shall no doubt learn in time.

RETIRED MEDICAL OFFICER.

A CORRESPONDENT urges that, in any new warrant, the claims of retired medical officers, especially of those liable to recall to service, to participate in the advantages of rank and titular designation, should not be overlooked.

*** We have always advocated, as a matter of course, the extension of titular change to officers liable to recall; otherwise, in the event of recall, inevitable confusion must result. The extension of such titular change to all retired medical officers, by decree, might, however, be attended with difficulty.

THE ARMY MEDICAL RESERVE.

A COUNTRY G. P. writes: A gentleman once wrote to a horse dealer describing to him the kind of horse he required, and stating that he was willing to pay such-and-such a price. He received in reply a postcard on which was written: "Dear Sir,—You wants a horse at pony price. So do I.—Yours truly, X."

Going through this work-a-day world I have noticed that I and nearly everyone else are looking out for horses at pony prices. Unfortunately I have never found anyone anxious to sell on those terms. The medical profession—strange as it may seem—are willing thus to sell, and do so every day and hour, and even compete for the privilege. The general public are not slow to notice this unbusiness-like trait in our character, and make the most of it, as our hospitals, medical aid clubs, etc., all show. The guardians of the poor and other public bodies are not a bit behind, and get a huge cart horse out of their medical officers, to whom they pay a Shetland pony price

These examples are all too well known, but I have lately come across a new example, where the profession gets, as far as I can see, less—in fact, nothing. I refer to the Army Medical Reserve. Medical men joining the Army Medical Reserve undertake to leave their practices, throw up their work in life, leaving, perhaps, wife and children, whenever they are called upon to do so; not only in times of great national danger, but long before that when only the reserves are called out, which with our small army may be at any time. I have asked: What do they get for this? What are they paid? Nothing?

The answers I have received say: (1) They get the promise of any contract work that may be going at about 8s. per head: and (2) they get "social" position. I said "promise" just now, for from the way the contract work has been put up to a sort of Dutch auction it seems it is only the promise and nothing more they get. As to social position, I may perhaps be allowed to say that any medical man who joins the Army Medical Reserve to gain social position will be disappointed, for if his own social position is such that it needs that sort of thing to raise it, the combatant officers with whom he might mix would be quick enough to notice it, and he would not find that joining the auxiliary branch of a service that is looked down upon by so many combatant officers had raised him in their estimation at any rate. Medical men would get far more socially if they joined the Volunteers as combatant officers; they would have far more fun for their money, and would be treated with the respect that is always paid to an officer wearing Her Majesty's uniform, provided always that that officer is not in any way connected with the Army Medical Service. It would be well if the members of the Army Medical Reserve would ponder these things, and would retire from a position which does not benefit themselves, while it does harm to their brothers on the active list, in that it helps to harden Pharaoh's heart.

MEDICO-LEGAL.

RESIDENCE FOR SALE.

A MEMBER.—In reply to our correspondent's first question, we think it would be exceedingly difficult to establish a case for legal proceedings. A letter could, however, be written to the advertiser to the effect that the advertisement in question might create an erroneous impression, to our correspondent's detriment, and requesting that it should be modified; and this letter might be written reserving our correspondent's rights if the request is not complied with. In answer to the second question, to notify a removal by advertisement would be contrary to the usual custom. There would, we think, be no objection to our correspondent writing a letter to his patients referring to the advertisement and explaining the fact of his intended removal.

A QUESTION OF QUALIFICATION.

P. C. inquires whether he can register the diploma of the Society of Apothecaries, London, not having any other qualification; also if he can sign death certificates.

*** In reply to the first question, if the diploma was dated on or after July 1st, 1887, the holder will be entitled to registration on the *Medical Register* with this qualification only. If granted prior to that date the holder is not now entitled to be registered unless he passes the qualifying examination prescribed by the Medical Act, 1886. In reply to the second question, only registered medical practitioners should sign death certificates.

MIDWIFERY ENGAGEMENTS.

T. E. D. submits the following point: A doctor is engaged by a written note to attend at an approaching confinement, the husband of the lady being the writer. Some time after the doctor is written to again by the husband saying his services will not be required. The lady is confined about the time expected, another doctor being called in. The first doctor was prepared to attend, and was at no time away from his practice. Can he charge the husband a fee for having engaged him in spite of the second note?

*** If our correspondent replied to the first note of the husband agreeing to attend the confinement, this might be held to constitute a contract sufficient to render the husband liable in damages (not necessarily the amount of the fee) for breach of such contract. If the doctor in question merely entered the note in his book as an engagement, we are advised that he could not recover the fee or damages at law, as it does not appear in such a case that there could have been a contract.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the examiners:—

Part II. Human Anatomy and Physiology.—Attlee, B.A., Joh.; Badcock, B.A., Cath; B. L. T. Barnett, B.A., Joh.; Bousfield, B.A., Pemb.; Bowen, B.A., Gonv. and Cai.; J. M. Brydone, Jes.; Byles, King's; A. J. Clarke, Emm.; Claxton, King's; Crompton, B.A., Gonv. and Cai.; Davies-Colley, B.A., Trin.; Dunlop, B.A., Sid. Suss.; Emerson, B.A., Gonv. and Cai.; Foster, B.A., King's; Gabb, Down; T. B. Gilbart-Smith, B.A., Trin.; Greene, B.A., Corp. Chr.; A.W. Greig, B.A., Jes.; Holmes, B.A., Gonv. and Cai.; Home, B.A., Trin.; A. C. Ingram, Joh.; J. H. Kellgren, Trin.; Knight, B.A., Emm.; Lambert, Joh.; Laycock, Joh.; Leech, B.A., Christ's; P. G. Lock, B.A., Gonv. and Cai.; McBryde, B.A., King's; N. Maclaren, B.A., Trin.; Murray, B.A., Joh.; J. C. Newman, B.A., Trin.; G. H. Orton, B.A., Trin.; Paterson, B.A., Gonv. and Cai.; Paton, B.A., Gonv. and Cai.; Per-

kins, B.A., Joh.; Rashleigh, M.A., Trin.; Sedgwick, Sid. Suss.; Stirling-Hamilton, B.A., Jes.; Susmann, B.A., Gonv. and Cai.: T. P. Thomas, Gonv. and Cai.; Ticehurst, B.A., Cla.; R. H. Urwick, B.A., Trin.: H. H. Weir, B.A., Trin.; W. H. O. Woods, B.A., H. Selw.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—Part II: The following candidates have satisfied the Examiners:—

Allfrey, B.A., Trin.; R. H. Bell, B.A., Trin.; Boulton, B.A., Cla.; J. R. Charles, B.A., Gonv. and Cai.; W. L. H. Duckworth, M.A., Jes.; J. G. Forbes, B.A., Christ's; Godson, B.A., Joh.; A. H. Greg, B.A., Trin.; Hardy, B.A., Jes.; Harman, B.A., Joh.; G. C. Jackson, B.A., Joh.; Jeaffreson, B.A., Christ's; Jephcott, B.A., Gonv. and Cai.; Kirk, M.A., Christ's; Lindsay, B.A., Sid. Suss.; McCarthy, B.A., non-coll.; G. F. McCleary, B.A., Trin. H.; Manners-Smith, M.A., Down; Martin, B.A., Gonv. and Cai.; Mathias, M.A., Christ's; Michael, B.A., H. Selw.; Molesworth, B.A., Gonv. and Cai.; C. S. Myers, B.A., Gonv. and Cai.; H. D. O'Sullivan, B.A., Emm.; Paterson, B.A., Emm.; Petyt, M.A., Christ's; Roe, B.A., Pemb.; Shewell, B.A., Trin.; Skyrme, B.A., Christ's; Sladen, M.A., Gonv. and Cai.; B. H. Slater, B.A., Trin.; Trouncer, B.A., Jes; W. R. Wilson, B.A., Corp. Chr.; Woolley, B.A., Gonv. and Cai.; Yeld, B.A., Trin.

UNIVERSITY OF LONDON.

M.D. EXAMINATION.—The following candidates have satisfied the Examiners:

Medicine.—C. Bolton, B.S., B.Sc., University College; J. N. Brown, B.S., University College; *T. R. H. Bucknall, University College; F. M. Burnett, St. Bartholomew's Hospital; P. K. Byrne, B.S., B.A., University College; Dorothea Caine, London School of Medicine and Royal Free Hospital; F. B. Carter, University College; D. A. Chaning-Pearce, B.S., Guy's Hospital; Margaret M. Traill Christie, B.S., Royal Free Hospital; F. J. Coutts, B.S., University College; Rosina Clara Despard, Royal Free Hospital; H. B. Dickinson, University College and Royal Infirmary, Liverpool, and St. Bartholomew's Hospital; †W. d'E. Emery, B.Sc., St. Bartholomew's Hospital; G. G. Genge, B.S., St. Thomas's Hospital; S. Gillies, St. Bartholomew's Hospital; C. J. Harnett, Guy's Hospital; G. B. Hunt, B.S., University College; C. E. M. Kelly, B.S., Owens College; J. C. H. Leicester, B.Sc., University College; F. S. Locke, St. Bartholomew's Hospital; W. A. Marris, Mason College; L. Rogers, B.S., St. Mary's Hospital; R. Row, B.Sc., Grant Medical College, Bombay, and University College, London; A. E. Russell, B.S., St. Thomas's Hospital; J. L. Sawers, University College, London, and North Staffordshire Infirmary; H. B. Shaw, B.S., University College; H. Sinigar, Mason College; T. M. Thomas, M.S., Guy's Hospital; W. B. L. Trotter, University College; F. T. Waldron, B.S., London Hospital; W. C. Wood, St. Mary's Hospital.

State Medicine.—C. T. Parsons, M.D., St. Mary's Hospital and University College.

* Gold medal.

† Obtained the number of marks qualifying for the Gold Medal.

M.S EXAMINATION.—The following candidates have satisfied the Examiners:

J. H. Cook, University College; F. J. Steward, Guy's Hospital; E. C. Taylor, M.D., Guy's Hospital.

B.S. EXAMINATION.—The following candidates have satisfied the Examiners:—

First Division.—B. Dyball, St. Thomas's Hospital; A. H. Evans, Westminster Hospital; C. H. Fagge, Guy's Hospital; A. L. Home, St. Thomas's Hospital; C. H. J. Lockyer, Charing Cross Hospital; H. P. Noble, Middlesex Hospital; F. W. Robertson, St. Bartholomew's Hospital; J. D. Russell, University College and London Hospital; A. W. Sikes, B.Sc., St. Thomas's Hospital; E. J. Toye, B.Sc., St. Bartholomew's Hospital.

Second Division.—W. R. Battye, B.Sc., University College; J. E. G. Calverley, St. Bartholomew's Hospital; Mary Frances Corruford, Royal Free Hospital; S. Cornish, St. Bartholomew's Hospital; E. Fisk, Guy's Hospital; G. F. S. Genge, Westminster Hospital; Alice Mary Hawker, London School of Medicine and Royal Free Hospital; C. R. Hodgson, Guy's Hospital; J. L. Jones, University College; Beatrice Knowles, Royal Free Hospital and London School of Medicine; G. K. Levick, Guy's Hospital; G. E. Manning, M.D., Guy's Hospital; W. T. Milton, Guy's Hospital; W. G. Mortimer, London Hospital; R. H. Norman, Westminster Hospital; G. E. Richmond, B.A., B.Sc., Guy's Hospital; J. P. Scatchard, St. Thomas's Hospital; T. H. C. Stevenson, University College; E. Thomas, University College; P. N. Vellacott, Guy's Hospital; P. G. S. Williams, University College.

UNIVERSITY OF EDINBURGH.

THE following are the numbers of the students who attended the several courses of lectures in the Medical Faculty of the University of Edinburgh during the winter and summer sessions of 1896-7: Zoology, 200; Botany, 217; Physics, 241; Chemistry, 256; Anatomy, 226; Physiology, 449; Materia Medica, 199; Pathology, 162; Medical Jurisprudence, 222; Midwifery, 188; Surgery, 199; Practice of Physic, 225; Mental Diseases, 193; Ophthalmology, 84.

HOSPITAL AND DISPENSARY MANAGEMENT.

HOSPITAL LETTERS.

AT a recent meeting of the Hospitals' Association Mr. R. B. D. Acland, Chairman of the Metropolitan Hospital Saturday Fund, read a paper on its work and aims, in the course of which he observed that the system of hospital letters had little to recommend it, but that unfortunately the issue of letters was ingrained in the voluntary system of London. The principle which underlay the work of the Fund, he added, was self-help, and the strength of the movement lay in the work which was being done in the workshop. The shop collections showed signs of steady increase.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,424 births and 3,730 deaths were registered during the week ending Saturday last, December 25th. The annual rate of mortality in these towns, which had been 20.8 and 20.6 per 1,000 in the two preceding weeks, further declined to 17.7 last week. The rates in the several towns ranged from 9.0 in Croydon, 10.7 in Brighton, 11.8 in Oldham, and 13.6 in Derby, to 19.8 in Manchester, 19.9 in Nottingham, in Preston, and in Sheffield, 25.8 in Blackburn, and 26.5 in Swansea. In the thirty-two provincial towns the mean death-rate was 17.4 per 1,000 and was 0.8 above the rate recorded in London, which was 18.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.9 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.7 in Bristol, 3.1 in Leicester and in Swansea, 3.4 in Cardiff, and 7.5 in Blackburn. Measles caused a death-rate of 1.5 in Burnley, 1.6 in Halifax and in Swansea, 2.0 in Bristol, and 5.6 in Blackburn; scarlet fever of 1.0 in Gateshead and 1.1 in Plymouth; and "fever" of 1.0 in Derby. The 89 deaths from diphtheria in the thirty-three towns included 56 in London, 6 in Cardiff, 6 in Leicester, and 4 in West Ham. No fatal case of small-pox was registered, either in London or in any of the thirty-two provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals on Saturday last, December 25th. The number of scarlet fever patients in these hospitals and in the London Fever Hospitals, which had been 3,818, 3,812, and 3,806 at the end of the three preceding weeks, had further declined to 3,619 on Saturday last; 222 new cases were admitted during the week, against 328, 319, and 260 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, December 25th, 831 births and 554 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 18.5 to 20.3 per 1,000 in the five preceding weeks, declined to 18.6 last week, but was 0.0 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.8 in Leith and 15.8 in Aberdeen, to 10.6 in Paisley and 20.7 in Glasgow. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 284 deaths registered in Glasgow included 8 from measles, 6 from scarlet fever, 2 from diphtheria, 19 from whooping-cough, and 3 from "fever." Two fatal cases of diphtheria were recorded in Edinburgh, and 3 of scarlet fever in Dundee.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a slight decline last week. The deaths referred to this disease, which had been 52, 58, and 63 in the three preceding weeks, fell to 56 during the week ending Saturday last, December 25th, but exceeded by 12 the corrected average number in the corresponding weeks of the ten preceding years. Of these 56 fatal cases, 7 were of persons belonging to Poplar, 6 to Islington, 4 to St. Pancras, 4 to Fulham, and 4 to Camberwell sanitary areas; 38 of the 56 deaths were of children under 5 years of age, and 18 (nearly all of which were of children under 10 years of age) between 5 and 20 years; while no fatal case occurred among persons aged upwards of 20 years. The number of notifications of diphtheria in London, which had been 263, 300, and 288 in the three preceding weeks, further declined to 218 during the week ending Saturday last. Compared with the preceding week there was a slight increase in the prevalence of diphtheria in East London, but in North, West, Central, and South London there was a decline. Among the sanitary areas of West London only the 6 new cases notified in Chelsea exceeded those recorded in the preceding week. Among the sanitary areas of North London the new cases showed a marked decline in St. Pancras and in Hackney; while in Islington there was a further increase in the prevalence of diphtheria, the new cases numbering 16, against 8 and 11 in the two preceding weeks. In most of the sanitary areas of East London there was a decline in the prevalence of the disease, but in Poplar no fewer than 21 new cases were notified, against 7 in the preceding week. The 9 new cases in Shoreditch also exceeded those recorded in any recent week. Among the sanitary areas of South London there was a general decline last week in the prevalence of diphtheria, especially in St. George Southwark, Lambeth, Camberwell, Greenwich, Lewisham, and Woolwich. In St. Saviour Southwark, and in Bermondsey, however, the new cases exceeded those recorded in any recent week. The admissions of diphtheria patients into the Metropolitan Asylum hospitals, which had been 145, 165, and 164 in the three preceding weeks, declined to 141 last week, and 1,079 patients remained under treatment in these hospitals on Saturday last.

BIOLOGICAL SEWAGE FILTERS.

DR. REID has reported to the Staffordshire County Council on the experimental filters laid down at Tipton. Three experimental filters had been laid down by the District Council: one of coke breeze, one of sand and gravel, and a third of sand and gravel aërated on Lowcock's principle of pumping air into the filter. The two former were completed in September, 1896, the last in January, 1897. In February a coal filter was laid down by Mr. Garfield in substitution for the second. The three thus reported upon are the coke breeze, the Lowcock aërated, and the Garfield coal filters. At first the coke breeze filter (Dr. Reid gives no details as to its construction) was worked on Mr. Dibdin's charging and discharging principle, but later by a continuous flow of twelve hours followed a similar interval of rest like the other two. The Lowcock filter dealt with only half the proportion of sewage for the same area as the others. The

purification per cent. estimated by removal of organic ammonia was 33.2 for the coke, 75.7 for the aërated, and 80.6 for the coal filter. Estimated from the diminished absorption of oxygen from permanganate solution, it was 29.0, 68.5, and 70.8 respectively. Considered from the point of view of oxidised nitrogen, the amounts were 0.38, 0.74, and 0.81 parts per 100,000 in the effluent against *nil* in the effluent as it reached the filter. A preliminary precipitation with the aid of alumino-ferric cake had apparently taken place in the effluent before it went to the filters. Perhaps this, with the non-inoculation of the filter and the constant stream together account for the coke breeze filter doing apparently so much less than at Barking and Sutton. At the latter it will be remembered that, without any preliminary treatment, the purification estimated by permanganate amounted to 86.5 per cent.

VACCINATION IN SHEFFIELD.

At a meeting last week of the Ecclesall (Sheffield) Board of Guardians serious allegations were made as to the efficiency of vaccination as at present practised in Sheffield. The public vaccinators of the Union attended, at the request of the Board, to explain the large decrease in the number of public vaccinations during the last few years. One of the public vaccinators stated that his vaccinations had fallen from more than 30 a week to about 7, and the other two gave corresponding testimony to the decrease in their numbers. The important point to notice, however, is the explanations that these officers gave for this decrease. They held that objection was taken to the requirement of four insertions by the Local Government Board and certificates were therefore procured for "efficient vaccination" from other sources for a less number. They alleged that many children were being vaccinated with one insertion only, and that there were practitioners who "for sixpence would place one slight insertion on the child's arm." One of the medical officers asserted that "75 per cent. of the children in his district had not more than one or two spots, and could not be considered efficiently vaccinated." Altogether the condition of vaccination in Sheffield as revealed at this meeting is most serious. It is certainly an anomaly that the publicly vaccinated should be compelled to have four insertions of vaccine, because such a number is considered necessary to ensure immunity, while at the same time a certificate for "efficient vaccination" from a private practitioner is accepted when only one insertion has been made.

LONDON WATER SUPPLY.

The Royal Commission on the London Water Supply sat weekly down to the Christmas vacation. The examination of witnesses has so far been limited to a close questioning of Mr. Cripps, the Parliamentary Agent of the London County Council.

It has been decided by the Commission not to reopen the question of the purity of the supply, and it has been decided to accept the findings of Lord Balfour's Commission, namely, that the water supplied was of a very high standard of excellence and purity.

Mr. Cripps, on the question of the transfer of the various existing undertakings to the London County Council, contended that if this were done London would be placed on an equal footing with other large towns which had a municipal supply. Chief among the advantages from such an arrangement was the facility of administration gained by concentration. Lord Llandaff (the Chairman, however, would not see the matter in this light, and contended with equal force that any supposed advantages to be gained from concentration would be annulled by the independent action of some of the outlying districts, some of which, witness said, had already applied for individual powers. Since there would be several authorities in "Water London," this argument, the Chairman considered, had been knocked on the head.

The question of control *versus* purchase was next raised. Mr. Cripps denied that he objected to control as opposed to purchase, and if a scheme of control of a practical and definite character were suggested the Council would be quite prepared to consider it. It was not quite clear, however, what precise meaning was to be attached to the word control. Mr. Cripps complained of the constitution of the Lee Conservancy Board as being opposed to the interests of the mass of consumers. On that Board the County Council had only one representative. He was in favour of purchase because he believed that if the undertakings of the water companies were purchased on fair and reasonable terms the County Council would be able to give to every consumer a continuous supply of better water.

TYPHOID FEVER AND MIDDEN REFUSE.

Dr. Malcolmson, in reporting to the Sanitary Committee of the Middlesborough Town Council on the public health in November, remarked on the greater prevalence of enteric fever this autumn, and attributed it largely to peculiarities of the season. He added that, in his opinion, the method they adopted in the scavenging of their ashpits had something to answer for. The refuse was piled in the streets, and complete removal was impossible. As soon as the moisture had evaporated a poisonous dust was blown about the streets. He advocated the abolition of these middens entirely. Two cases of small-pox had been reported. The infection has possibly been received in each case at shows at which both patients had been present.

COTTAGE HOMES FOR PAUPER CHILDREN.

The Guardians of the Whitechapel Union have obtained the sanction of the Local Government Board to the scheme for dealing with pauper children on the separate, scattered, or cottage-home system. The children are those for whom provision is required owing to the abolition of the barrack school at Forest Gate. It is proposed at present to provide four pairs of semi-detached cottages of simple construction, each for ten children of mixed ages and both sexes, and one cottage for twenty boys, who, by reason of age, may be inadmissible into a mixed cottage. The houses will be on separate sites, and sufficiently apart to prevent the children from forming one community. Subject to this, and to each pair of cottages being within a convenient distance of a public elementary school, it is intended that all the dwellings shall be as near as may be practically possible to a headquarters home. Each mixed cottage will be under the care of a foster mother, and the boys' cottage in charge of a foster father and foster mother. Arrangements will be made for the attendance of the children at public elementary schools in the same way as ordinary children, without distinctive dress.

LONG-DELAYED ANNUAL REPORTS.

We have before us the report of Dr. Waldo, as Medical Officer of Health for the parish of St. George-the-Martyr, Southwark, in respect of the year 1896. The report is dated May last, and was issued only on December 22nd, nine days only from the end of the period to be covered by the next report of this officer. And this, too, in spite of the request of the Local Government Board that annual reports of London health officers may be in their hands "within, at most, five months from the end of the year." The latitude allowed by the Board at Whitehall is liberal.

THE POLLUTION OF THE RIVER BRENT.

We learn from the *Times* that the Middlesex County Council have deposited a Bill for next session, which sets out in the preamble that the waters of the River Brent and of other streams within the county are so polluted as to cause a nuisance and endanger the health of residents in the vicinity. Special clauses are sought to give the Council power to fix a standard of purity, to dredge, to stop up outlets of sewers, and to prohibit the passing of any matter or liquid into streams which might lead to their pollution.

FORMS FOR THE USE OF MEDICAL OFFICERS OF HEALTH.

Burgh Medical Officer of Health will be obliged if some medical officer would inform him where to procure copies of forms required under the Notification Act *re* notification to headmasters of public schools, notification by medical attendant to headmaster on the child and house being free from infection, as well as any rules dealing with the mitigation and spread of infectious disease in public schools, also the best method of informing parents or guardians of the clauses 50 and 53 of the Public Health Scotland Act, 1897.

*** Messrs. Hodge and Co., publishers, North Frederick Street, Glasgow, issue some of the forms in question. Directions for preventing the spread of infectious diseases are issued by most local authorities in respect of every case notified. These directions will probably be supplemented in future by the issue of slips reciting the terms of not only Sections L and LIII of the new Public Health Act, but also of Sections LI, LII, LVI, LVII, LVIII, LIX, LXII, and LXIV.

PAROCHIAL MEDICAL APPOINTMENT.

Member writes to ask whether a resident medical practitioner in a parish where no other one resides is entitled to the Poor-law medical appointment of such parish.

*** A resident cannot claim any such appointment, nor would it be right for him to wish to do so unless a vacancy is declared.

FEE FOR CERTIFICATION OF PAUPER LUNATIC.

Dr. G. writes to ask whether a Poor-law medical officer is bound to leave his work, however urgent, in order to accompany a lunatic patient to the house of a justice three miles off when he has already examined the patient and filled up the requisite form for admission of the patient to asylum.

*** We are not aware that it is incumbent on any Poor-law medical officer to certify to any case of lunacy, and it is certainly unreasonable to expect one to travel a distance of three miles to suit the convenience of a magistrate, except for a special fee for so doing, and this should be never less than one guinea. For the distance mentioned we consider a higher fee ought to be paid.

INDIA AND THE COLONIES.

INDIA.

Infant Mortality.—Mr. Thomas Blaney, in two letters which he has recently addressed to the *Times of India*, has drawn attention to the great mortality which occurs among infants during the first year of their life. He quotes a formidable array of figures from Indian sanitary reports. These reveal remarkable discrepancies in provincial rates, which vary from 130 to 400 per 1,000. It is very questionable whether the results of death registration according to age are entitled to much reliance in India, and provincial variations may be and probably are due to different methods and agencies of registration and to varying degrees of perfection, or rather imperfection. It may, however, be safely conceded that infant mortality is higher in India than it ought to be. Mr. Blaney attributes the excess to: (1) Early marriages; (2) poverty; (3) ignorance, and (4) malaria. He might have added insanitation in general and the special insanitation of the lying-in room. He asserts that artificial feeding is very largely resorted to in India, and that the foods given—"gruels and *conjees*"—are bad. This charge against Indian women of failing in the majority of cases to suckle their infants is not consistent with general experience. The fault to be found with Indian mothers is not that they do not suckle their young, but that they continue to suckle them too long. Mr. Blaney recommends that European infant foods should be used by Indian mothers in preference to their own "gruels and *conjees*," and states that a considerable trade has sprung up in these, and that he has in Bombay observed great benefit to arise from their use. He is probably right in his comparison of the merits of native and European foods for infants; but there is no food for the first two years of life that can replace milk, and any advocacy of artificial feeding is to be deprecated.

The Training of Nurses in India.—A circular has been issued by the Surgeon-General of Madras stating that in view to the efficient

training of women as nurses and board attendants for employment in private and up-country hospitals the Government is prepared to admit probationers of these classes, recommended by local or private private bodies, into the General Hospital Training School for Nurses on the understanding that pay, ration money, and clothing, with travelling expenses, etc., of such probationers is defrayed by local or private bodies recommending them.

VACCINATION IN THE PUNJAB.—The report for 1896-97 is written by Brigade Surgeon-Lieutenant W. A. Crawford Roe, F.R.C.S., and shows a very large decrease in the number of vaccinations performed by the district staff. This is attributed to the prevailing scarcity, emigration, and the excessive prevalence of small-pox, an explanation which the local government does not accept; 74 per cent. of the vaccinations were inspected. The successful primary vaccinations amounted to 30.2 per 1,000 of population, and children under 1 year to 23.4. As the birth-rate of the province is about 43, this, it is thought, does not present a satisfactory result. An increase took place in the number of revaccinations, which is probably due to the prevalence of small pox. The percentage of success in primary vaccination was 93 2, and in revaccination 59.7. Vaseline lymph, buffalo lymph, and human lymph were used. The two latter gave better results (99 and 98) than the former (92). Each vaccinator performed 2,978 operations, and the cost of each successful case was 2 annas, 2 pies, the whole expenditure being Rs. 102,179.

SANITARY ADMINISTRATION OF THE PUNJAB.—The Sanitary Report for 1896 is written by Brigade-Surgeon-Lieutenant-Colonel W. A. Crawford Roe, F.R.C.S., D.P.H. The year was a dry one, healthy as respects fevers and bowel complaints, but both cholera and small-pox were in excess. The registered birth-rate was 43 04, and the death-rate 31.53. Discrepancies and anomalies are notes which indicate that results are still imperfect. The death-rates of infants under 1 year for males 229 and females 223. Cholera caused 5,146 deaths, or 0.25 per 1,000. It broke out in May at the Nurpur fair in the Rawul Pindi district, and was disseminated throughout the province by persons returning from there. Owing to the drought the water supply at the fair was peculiarly liable to contamination. The disinfection of wells appeared in many instances to have put a stop to local outbreaks. Small-pox caused 45,084 deaths, or a mortality of 2.19 per 1,000—the highest since 1879. The well-vaccinated district of Kangra had the lowest rate, and other districts which presented comparative immunity belong to the same category. Water supply and drainage works are progressing, the expenditure on them amounting to nearly two lakhs of rupees. A considerable income is derived from the sale of night soil and refuse for agricultural purposes. A sewage farm has been started near Delhi. The Sanitary Board only held two meetings in the year. The proceedings appear to have been very cursory, nor does the review of this report by the local government enter very deeply into sanitary problems.

THE HEALTH OF THE TOWN OF MADRAS IN 1896.—The administration report of the Madras Municipality, the sanitary sections of which have been contributed by the health officer, Dr. J. Neild Cook, indicates that the year 1896 was characterised by "excessive temperature and deficient wind, accompanied by a deficiency of rainfall, during the first seven months, and excess of rain in the last two months of the year." The birth-rate was 41.2 and death-rate 37.8 per 1 000. The hot weather in May gave rise to an increase of fever, dysentery, and diarrhœa. There was a mild outbreak of small-pox, considerable prevalence of measles, and cholera prevailed to some extent in the third and fourth quarters of the year. Fever mortality amounted to 13 2 per 1 000. Infantile mortality is very high, amounting to 407.5 per 1,000 of population under 1 year, and 298 per 1,000 births. Overcrowding and insanitary conditions are the assigned causes. Plague did not appear in Madras in 1896, but elaborate precautions were adopted to prevent its entry, and means of segregation, disinfection, and treatment were organised. A long catalogue is given of sanitary defects in Madras. They include defective drainage, doubtful purity of water, difficulty in procuring the services of scavengers, insufficient latrine accommodation, imperfect removal of refuse, nuisance from the conveyance and trenching of night soil, intramural burial, want of slaughter-houses and markets, overcrowding of streets and houses, and the continuance of various objectionable trades in the town area. Realisation and confession of sin are a preliminary to repentance and amendment, and it is to be hoped that this salutary succession will be carried to full completion in Madras.

SANITATION IN SRINAGAR.—Dr. A. Mitra, Chief Medical Officer of Cashmere, writes an interesting report regarding sanitary progress in the capital city of that State. The condition of Srinagar in 1802 is graphically described. Impure air, polluted water, overcrowding, narrow tortuous streets and lanes, entire absence of drainage, conservancy, latrines, or arrangements for removal of sewage or refuse, rendered this populous town filthy and fœtid to a degree. Cholera came in 1892, and swept off 5 per cent. of its inhabitants. Dr. Mitra wisely employed this catastrophe as a lever for raising public interest in sanitary reform. The result has been that the State Government and more enlightened inhabitants have been induced to take the matter in hand, with the result that a good supply of pure water has been provided and distributed by pipes, a large section of the city has been rebuilt on improved principles, streets have been widened, straightened, and paved, public latrines erected, drains made, a scavenging establishment organised, night soil removed, sold, and used as manure, and sanitary regulations enacted. Cholera was imported into Srinagar in 1895, but did not spread. Vaccination has also been introduced and extensively practised with good effect, the people realising its protective influence. All this is extremely creditable to Dr. Mitra and the rulers of Cashmere.

SANITATION IN HYDERABAD.—Brigade Surgeon-Lieutenant-Colonel C. C. Little, M D., the Sanitary Commissioner of the Hyderabad assigned districts, has for many years laboured hard and not without effect to improve their sanitary condition. The report for 1896, which is long and elaborate, bears evidence of continued enthusiasm and energy in the good cause. The year was a peculiar one—marked by great heat and a deficient rainfall. There was a severe outbreak of influenza in the early months, swelling the fever total, though, owing to the drought, there was an abatement of malarious fever and bowel complaints. Cholera raged in the dry months when the waters were low and foul, and abated when the rains came and swelled and purified the supplies. Small-pox was also very prevalent. The year's birth-rate was 38.3, and death-rate 43.8 per 1,000. Registration is still faulty, but efforts are being made to improve it. Two fatal cases of plague were imported from Bombay. Precautions were adopted, and the disease did not spread. The municipalities spent 70 per cent. of their income on sanitary works, water supply and drainage bulking largely in the total. District boards also spent a large sum on sanitary works. Sanitary surveys and records are being prepared. On the whole, the sanitary concerns of these districts are evidently receiving close and vigorous attention.

BOMBAY LUNATIC ASYLUMS.—There are six asylums in the Bombay Presidency—at Colaba, Ratnaghiri, Poona, Dharwar, Ahmedabad, and Hyderabad—in which an average of 723 lunatics were treated in 1896. The Bombay Asylum at Colaba, containing 274 inmates, is under the special charge of an officer of the Indian Medical Department. The other asylums constitute additional charges of the civil surgeon. Females form 19 and criminals 14 per cent. of the population. The recovery-rate was 9.9 per cent. of daily average strength, and 24.6 of admissions. The death-rate was 10 7. Of 78 deaths 20 were due to dysentery, 9 to phthisis, 8 to epilepsy, and 5 to pneumonia and Bright's disease respectively. The year was a very unhealthy one, and from the detailed report of fatal cases it is evident that a large proportion of them entered the asylum in a moribund condition. Dr. Cook's elaborate report gives detailed information on administrative matter. Each lunatic cost Rs. 164, and Rs. 14,142 were received from paying patients. The chief occupations of the inmates are gardening and cultivation, and they are indulged in games and amusements suited to their tastes; 49 Europeans and Eurasians are confined in the Colaba Asylum. The large proportion of insanity alleged to be due to cannabis, opium, and spirits is a remarkable feature in the returns of all Indian asylums.

PUNJAB DISPENSARIES.—The report for 1896 is written by Surgeon-Colonel D. O'C. Raye, M.D., Inspector-General of Civil Hospitals. The number of institutions underwent an increase of 10 during the year; 267 were open at the close of the year, of which 254 are entirely supported by local funds. The years 1895 and 1896 were remarkable for a scanty rainfall and there was a great decrease in the number of cases of malarial fevers, dysentery, and spleen diseases. This caused a diminution in attendances. There was an increase in other diseases not dependent on climatic causes. There was also an increase in the attendance of children and in the amount of money received from paying patients; 193,370 surgical operations were performed. Of these 4,695 were for cataract, with a percentage of success of 86.69; 1,919 patients were operated on for stone, 1,495 by crushing, and the remainder by cutting. The death-rate in the former was 4 and in the latter 10.2 per cent. In four hospitals the number of operations exceeded 3,000. Several officers and subordinates are specially commended for good work in this line, including 4 lady doctors; 154 cases of natural labour were treated. Arrangements are being made in most districts for the training and employment of skilled midwives with in some cases good results. Vaccination officers are employed in medical and sanitary work during the hot season. There are 6 leper asylums in the province in which nearly 400 patients are treated; 46 deaths took place in these during the year.

LUNATIC ASYLUMS OF THE CENTRAL PROVINCES.—The asylums at Nagpur and Jubbulpore contain 332 lunatics, of which 78 per cent. were males, and 30 per cent. criminals. The recovery rate in 1896 was 7.53 on strength, and 43.10 on admission; the death-rate 8 42 on average population—a rate which compares favourably with other Indian asylums. There was no death from dysentery or phthisis, nor did any epidemic disease prevail during the year. The information regarding the causes of insanity is scanty and vague. Of one patient it was reported by his relations that "he failed in worship of his god and ran insane." Intoxicating drugs are not credited with so many cases of alienation as in some other provinces of India. Each lunatic cost about Rs. 63, and Rs. 3,426 were received from paying patients. A dairy was established at Nagpur with good results. A pleasing feature in the report is the high praise bestowed on Hospital Assistant Mohun Lall, Deputy Superintendent of the Jubbulpore Asylum for his "earnestness and devotion." This officer received the title of Rai Sahib as a recognition of his services. It is said of him that he devotes himself entirely to the interests of the asylum and its inmates. The report is drawn up by Surgeon-Colonel G. Hutchison, M.D.

MADRAS LUNATIC ASYLUMS.—There are three lunatic asylums—at Madras, Calicut, and Vizagapatam—in the Madras Presidency, in which were detained in 1896 592 lunatics. Of these 76 per cent. were males and 24 per cent. females; 75 per cent. non-criminal, and 25 per cent. criminal lunatics. Recoveries took place at the rate of 16 per cent. of strength and 61 of admissions. The death-rate of the year was 7.77. The asylum population bears a very small ratio to the population of the Presidency, and probably constitutes a small fraction of the insane population. The policy of the Government is to admit and retain persons who are dangerous or troublesome to the community, and encourage friends to take custody of harmless insanes. With the exception of 10 Europeans and Eurasians in the Madras Asylum, all the patients are natives, Hindus predominating; 61 of the patients are private or paying patients. Surgeon-Major General Sibthorpe enters minutely into administrative details. The condition and management of these lunatics is the subject of anxious care on the part of Government and all concerned in their custody and treatment. They are evidently made as comfortable as circumstances permit, and curative agencies—hygienic, industrial, recreative, and medicinal—are employed seduously to promote their recovery. Attendance and nursing present some difficulties which it is sought to remove. Probably the rise of wages proposed by the Surgeon-General will secure a more satisfactory class.

THE RANGOON LUNATIC ASYLUM.—Insanity is said to be more common in Burmah than elsewhere in India. This, which is the only asylum in the province, accommodated in 1896 332 lunatics, 87 per cent. being males and 43 per cent. criminals. The death-rate in 1896 was 9.03 per cent. of strength, and the recovery rate 18.96 and 67.82 on admissions. The death-rate among criminal lunatics was only 6.3. Many of the non-criminal lunatics are received in a very bad state of health. Of the 30 deaths in both classes, 10 were due to tubercle, 3 to dysentery, 2 to chronic diarrhœa, and 5 to mania. Efforts are being made to discharge hard less

lunatics and those of the criminal class who have recovered, and whose acts were not offences against the person. Employment is a strong point in the asylum. The inmates are engaged in various domestic duties, conservancy among them, in gardening, and manufactures of all sorts. A dairy farm supplies milk to the institution and to the public, and is worked at a profit All the clothing for the insane is made in the asylum, but it is remarked: "The men employed in this work are all sane"—criminal lunatics no doubt. The cost of each inmate was Rs. 111. The Deputy Superintendent was changed thrice during the year, an unfortunate circumstance. The Superintendent Surgeon, Lieutenant-Colonel G. T. Thomas, is highly complimented for his able and zealous management.

The Nursing Service.—The India Office has issued revised rules for the Indian Nursing Service. When the service was first instituted in 1890 no provision was made for a lady nurse remaining in India for more than ten years; but, now that Government sees the advantage of retaining experienced superintendents for a longer period, it is found necessary to offer pensions in lieu of the gratuities hitherto given. In future, nursing sisters will be entitled to a pension of £50 after completion of fifteen years' total service, and £60 after twenty years. Provision is also made for a lady nurse who may be obliged by ill-health to retire after fifteen but under twenty years' total service. The sterling pensions may be paid in India at the Government rate of exchange for the time being.

TRINIDAD.

Lessened Therapeutic Prescription of Alcohol.—In the annual report of the Surgeon-General for Trinidad for 1896, issued this year, the Hon. F. H. Lovell, C.M.G., calls attention to the remarkable decrease in the total cost of alcoholic stimulants during the past four years. Dr. Lovell points out that while the amount was £753 17s. in 1892, this had gone down to £227 10s 4d. in 1896 The hospitals embraced in the return were those at Port of Spain and San Fernando, with the Leper Asylum, the last named having been closed for two months in 1896. The reduction had been, on the whole, gradual, but had been most marked during 1896. There has thus, practically, been a decrease of two-thirds in alcoholic expenditure, a diminution which is not so very far different from the 60 per cent. which has been noted in Poor-law Medical Service during the past thirty years in the United Kingdom.

BRITISH GUIANA.

The Public Medical Service.—We have received from the Surgeon-General (Dr. D. Palmer Ross) the Annual Medical Report, together with the Financial and Statistical Returns of the Medical Department of British Guiana for the year ending March 31st, 1897. The general health of the Colony was on the whole very satisfactory, and it is interesting to note the absence of any epidemic disease, and the fact that there was not a single case of small-pox or yellow fever recorded. The most common affections were malaria, influenza, chest affections, and bowel complaints, but it is reassuring to find that, in spite of a very severe drought the number of cases suffering from the last-named cause continued to diminish as compared with previous years. As a matter of fact the amount of sickness in the Colony was less than in any year since 1885. During the year 1896 the old Quarantine Board was abolished, and its duties transferred to a Committee of the Central Board of Health. Quarantine regulations were strenuously enforced in the case of all ships arriving from suspected ports, or carrying cases of infectious disease, even including measles. The report includes some account of the year's work of the public medical institutions of British Guiana, the largest of which is the public hospital at Georgetown, with 700 beds and an attendance of over 8,000 in-patients, and thrice as many out-patients. During the period under notice the first successful ovariotomy in this hospital was performed. The death-rates in all the public hospitals are remarkably low, and the surgical results on the whole gratifying. We notice, however, that the hospital at Suddie is continually overcrowded, the number of beds being 53, the average number of patients 55, and the maximum 67; the nursing staff (3 day and 2 night) does not seem quite adequate. We understand, however, that increased accommodation has been sanctioned and will shortly be provided. A further point which seems to call for some elucidation is the saving—amounting to over £1,000 per annum—effected by the redistribution of work among some of the medical officers. The report does not quite make the matter clear, but leaves the impression that this economy has entailed an increase in the duties of certain officers without a corresponding pecuniary advancement.

VICTORIA.

Melbourne Water.—A report on Drinking Water and Disconnection, with appendices on Typhoid Fever and Unwholesome Conditions in Melbourne, by Dr. Gresswell and others, contains the statement that there is not in the entire colony of Victoria a single municipality or company that subjects the public water supply to filtration or straining of any kind. The supplies are, it is stated, derived from the surface drainage of catchment areas, laden with pollution of every kind. When a reservoir is emptied the deposits of "black, bubbling, putrid filth, it may be some feet in thickness," containing 88 per cent. of organic matter, and mainly composed of the disintegrated remains of beetles, centipedes, snakes, and rabbits. When the water mains are cleared one is "frequently unable to stand within many yards of the disgustingly offensive filth" with which they were well-nigh occluded, while eels and fish are frequently arrested and putrefy in the house pipes. The street mains are laid below, and the fire plugs fixed in the bed of the gutters, which carry slop waters and liquid sewage that enters the mains when the plugs are opened. Direct connections between the water pipes and closets, urinals, and stable drains are found everywhere, excremental matters being sucked in with any interruption of the pressure in the mains. The sanitary arrangements of the best houses are scandalous, and disconnection and ventilation almost unknown. For nearly ten years Dr. Gresswell has protested against these abuses, but as yet the authorities have turned a deaf ear, not only in Melbourne, but in Geelong and the other large and wealthy towns of the colony.

MEDICAL NEWS.

We are informed that the Princess Louise has become the patroness of the Nurses' Co-operation, 18, Cavendish Street, W. This society, founded in 1891 and incorporated in 1894, has 450 nurses as members.

At the examination for inspectors of nuisances held in Manchester by the Sanitary Institute on December 17th and 18th, 1897, 83 candidates presented themselves, of whom 33 were granted certificates of competence. At the same time 6 candidates presented themselves for the certificate in practical sanitary science, of whom 1 passed.

Medical Golf Tournament.—We are asked to state that it is proposed to start a golf tournament handicap confined to medical men. A committee, of which Dr. Rolf Creasy, Windlesham, Surrey, is Secretary, has been formed, and the plan it suggests is that matches shall be played where and when each pair of players drawn together shall mutually agree, but within twenty miles of London if one competitor so desire. Further particulars will be made known at an early date.

The Royal Institute of Public Health.—The Queen has commanded that the British Institute of Public Health shall in future be styled the Royal Institute of Public Health, has accepted the office of Patron of the Institute, and has conferred the Jubilee medal upon the President, Professor W. R. Smith, M.D. The Council of the Institute has conferred the Harben Gold Medal for 1898 upon Lord Playfair, and has appointed Professor W. R. Smith Harben Lecturer for the year 1899, and Mr. Henry C. Jones, Solicitor, Secretary to the Institute. The offices have been removed to 197, High Holborn, W.C.

Presentation.—Dr. Alexander R. Coldstream, of Florence, was recently presented with a bicycle by numerous friends and patients whose esteem he has won during his practice of fourteen years in Florence. Conspicuous among those who contributed were Dr. Coldstream's English colleagues in Florence, who took this opportunity of testifying their appreciation of Dr. Coldstream's consistent efforts to maintain the utmost harmony among the members of the profession practising in Florence, efforts which it is hoped will be continued to be crowned with success in the future as in the past.

The Prince of Wales's Hospital Fund for London.—The Honorary Secretaries of this Fund have received from Sir Edward Lawson the sum of £37,779 19s. 7d. (755,599 shillings and 7 pence), being the amount received to date in answer to the appeal made through the *Daily Telegraph*. Among the latest sums received by the Fund are the proceeds of a collection in the yard of the Thames Iron Works and Shipbuilding Company, £57 1s. 5d., and a cheque for 100 guineas from Sir Henry Irving. Arrangements have now been made for taking photographs of children, and of adults who may have reached their majority in 1897, for the purpose of inserting them into the albums for the hospital stamps.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN: UNIVERSITY OF.—Two additional Examiners: (1) Materia Medica for a period of three years; (2) Medical Jurisprudence and Public Medicine for a period of one year. Applications to Robert Walker, Secretary, by January 4th.

BOURNEMOUTH ROYAL VICTORIA HOSPITAL.—Ophthalmic Surgeon; must be F.R.C.S. Applications to the Secretary by February 1st.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician. Doubly qualified; unmarried, and when elected under 30 years of age. Salary, commencing at £50 per annum, with board and residence in the hospital. Applications to the Secretary by January 12th.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Infirmary at Havil Street and the Workhouses at Gordon Road and Constance Road. Appointment for one year. Salary, £50, with apartments, board, and washing. Applications on forms to be obtained from Mr. C. S. Stevens, Clerk to the Guardians, Guardians Offices, 29, Peckham Road, S.E.

HARTSHILL, STOKE-ON-TRENT: NORTH STAFFORDSHIRE INFIRMERY AND EYE HOSPITAL.—House-Physician. Salary, £100 per annum, increasing £10 per annum, with furnished apartments, board, and washing. Applications to the Secretary by January 20th.

JERSEY, STATES OF THE ISLAND OF.—Medical Superintendent for the Jersey Public Lunatic Asylum. Appointment for three years at a salary of £300 per annum, with house (and garden) in which the person appointed will be required to reside. Sealed applications to the President of the Committee of the Public Lunatic Asylum, Greffe Office, Jersey, by January 5th.

LEAVESDEN ASYLUM FOR IMBECILES, near Watford, Hertfordshire.—Medical Superintendent, doubly qualified, and must not exceed 40 years of age. Salary, £600 per annum, rising £50 annually to a maximum of £800, with unfurnished apartments, etc. Applications on forms to be obtained of T. Duncombe Mann, Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., before January 21st.

LEEDS, THE GENERAL INFIRMARY AT.—Resident Casualty Officer. Salary, £100 per year, with board, lodging, and washing. Applications to the Secretary of the Faculty, General Infirmary, Leeds, by January 8th.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; must be under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to W. B. Danby, Secretary, Bank Street, Lincoln, by January 24th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street, Liverpool.—House-Surgeon. Salary, £85 per annum, with board and lodging. Applications to the Secretary by January 3rd.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Two Female Clinical Assistants in the Out-patient Department, fully qualified. Applications to M. M. Bagster, Secretary, by January 5th.

NORTH-EASTERN FEVER HOSPITAL, St. Ann's Road, Tottenham, N.—Assistant Medical Officer, doubly qualified, unmarried, and must not exceed 35 years of age. Salary, £160 for the first year, £180 the second year, and £200 for the third and subsequent years, with board, lodging, attendance, and washing. Applications on forms to be obtained of T. Duncombe Mann, Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, before January 10th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road, N.W.—Assistant Physician. Must reside within three miles of the hospital and within the four-mile cab radius. Applications to Alfred Craske, Secretary, by January 7th.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Assistant to House-Surgeon, doubly qualified. Appointment for six months. Board, lodging, and washing provided. No salary. Applications to Poole Gabbett, Secretary, by January 4th.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1899. Applications to the Registrar, Royal College of Physicians, Pall Mall East, by January 10th.

ROYAL SEA-BATHING INFIRMARY, Margate.—Resident Surgeon, doubly qualified. Applications to the Secretary, 30, Charing Cross, S.W., by January 15th.

SALFORD ROYAL HOSPITAL.—Honorary Surgeon. Must reside within two miles of the hospital. The present Honorary Assistant-Surgeon is a candidate, and in the event of his being appointed there will be a vacancy for an Honorary Assistant Surgeon. Applications to the Secretary by January 2nd.

WALTHAMSTOW URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £120 per annum. Applications, endorsed "Medical Officer," to E. J. Gowen, Clerk to the Council, Town Hall, Walthamstow, by January 11th.

MEDICAL APPOINTMENTS.

ARNOTT, Grant, M.B., B.S.Durh., appointed House-Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

BAILEY, J. Harold, M.B.Vict., appointed District Medical Officer for Pendleton, Salford Royal Hospital.

BUCHANAN, G. Burnside, B.A.Camb., M.B., C.M.Glasg., appointed Dispensary Surgeon to the Western Infirmary, Glasgow.

DAVIES, Richard, M.D.Edin., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer to No. 3 District of the Cheltenham Union, *vice* Dr. Hogarth, resigned.

DIXON, Dr., appointed Medical Officer of Health to the Hay Urban District Council, *vice* R. J. Sheperd, L.R.C.P., L.R.C.S.Irel.

EDINGTON, George H., M.D.Glasg., M.R.C.S., L.R.C.P.Lond., appointed Extra Dispensary Surgeon to the Western Infirmary, Glasgow.

EVANS, H. T., M.R.C.S., L.A.H., D.P.H.Cantab., appointed Medical Officer of Health to the Bedwellty Urban District Council, *vice* Dr. J. D. James, resigned.

GARSTANG, Thos. Walter H., M.A.Oxon., M.R.C.S., reappointed Medical Officer of Health to the Northwich Rural District Council.

GETHIN-JONES, M.B., C.M., appointed Medical Officer of Health to the Porthcawl District Council.

GOODALL, John K., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Heath District of the Chesterfield Union.

HARDING, Richard, L.R.C.P.Edin., L.F.P.S.Glasg., reappointed Medical Officer of Health to the New Radnor Rural District Council.

HULKE, T. Backhouse, F.R.C.S.Eng., appointed Surgical Registrar to the Middlesex Hospital, *vice* T. H. Kellock, F.R.C.S.Eng., appointed Assistant Surgeon.

JACK, W. R., M.D.Glasg., B.Sc., appointed Dispensary Physician to the Western Infirmary, Glasgow.

JONES, Thomas, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., appointed Medical Superintendent to Bootle Corporation Fever Hospital, *vice* C. V. McCormack, resigned.

LEE, Barnard John, L.S.A., reappointed Medical Officer for the North Wingfield District of the Chesterfield Union.

MACARTNEY, Duncan, M.A.Edin., M.D.Glasg., M.B., C.M., appointed Assistant Surgeon to the Western Infirmary, Glasgow.

MCKINLAY, J. R., L.S.A., appointed House-Surgeon to the Wallasey Dispensary, *vice* A. H. Godwin, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

MATHEW, G. Porter, M.B.Cantab., etc., appointed Registrar to the Chelsea Hospital for Women.

MORCOM, Augustus, L.R.C.S.Edin., L.M., L.S.A., reappointed Medical Officer of Health to the Dunstable Town Council.

NEECH, Jas. T., L.R.C.P., L.F.P.S., D.S.Sc.Vict., appointed Certifying Factory Surgeon for the Urban Districts of Atherton and Tyldesley, *vice* G. H. Evans, deceased.

NELSON, Thomas, M.D., appointed Medical Officer for the Lydney District of the Chepstow Union, *vice* T. P. Carter, L.R.C.P.Lond., M.R.C.S., resigned.

RALPH, Richard M., M.D., M.Ch., and L.M.R.U.I., L.A.H.Dubl., appointed Senior Assistant Medical Officer to Grove Hall Asylum, Bow, E.

ROBINSON, Henry, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Hasland District of the Chesterfield Union.

ROWELL, W. H., M.B., B.S.Durh., appointed Senior House-Physician to the Royal Infirmary, Newcastle-on-Tyne.

SMITH, Lewis A., M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Tutor to the London Hospital.

STEPHENSON, Sydney, M.B., F.R.C.S.E., appointed Ophthalmic Surgeon to the Evelina Hospital for Children, Southwark Bridge Road.

WOODMAN, Thomas, M.B., B.S.Durh., appointed Junior House-Physician to the Royal Infirmary, Newcastle-on-Tyne.

DIARY FOR NEXT WEEK.

TUESDAY.

CITY ORTHOPÆDIC HOSPITAL, 5.30 P.M.—Mr. E. Noble Smith: On Wry Neck and some other Contractions.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Mr. F. C. Abbott: Congenital Abnormality of the Sternum and Diaphragm with Downward Displacement of the Heart. Mr. T. J. Bokenham: The Immunisation of Animals against (1) Typhoid and (2) Streptococcus Infection, with an account of the Properties Acquired by the Serum of Animals thus rendered Immune. Dr. Arthur Voelcker: Ulceration of a Caseous Gland into the Bronchus: Death from Asphyxia. Mr. E. W. Willett: A Case of Lipoma Nasi. Dr. Rolleston: Intrahepatic Calculi. Mr. Raymond Johnson: Congenital Cystic Kidneys associated with a Cystic Liver. Dr. Rolleston: The Pancreas from a Case of Diabetes (Card Specimen). Mr. Jackson Clarke will also show a specimen.

WEDNESDAY.

THE CLINICAL MUSEUM, 211, Great Portland Street, 4 P.M.—Demonstration by Mr. Jonathan Hutchinson.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 P.M.—Specimens will be shown by Drs. McCann, Boxall, and John Phillips. Papers:—Adjourned discussion on Dr. McKerron's paper on the Obstruction of Labour by Ovarian Tumours in the Pelvis; and a short note of a Case of Ovariotomy during Obstructed Labour, by Dr. Herbert Spencer. Dr. Addinsell: Intermenstrual Pain (Mittelschmerz).

FRIDAY.

WEST-LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, W., 8.30 P.M.—Mr. G. E. Twynam: Nephrectomy and its Relation to Pregnancy. Dr. Thudichum: Inflammation, Abscess, and New Growths in the Cavities adjoining the Nasal Cavities, and their Operative Treatment. Mr. McAdam Eccles: Operation *versus* Taxis in Strangulated Hernia.

SATURDAY.

ROENTGEN SOCIETY, 11, Chandos Street, Cavendish Square, W., 8.30 P.M. Mr. W. Webster: Practical Work with the Roentgen Rays.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTH.

WILSON-SMITH.—On December 22nd, at Kidbrook Lodge, Bath, the wife of T. Wilson-Smith, M.D., of a daughter.

MARRIAGE.

CHADWICK—CUTTING.—On December 21st, 1897, at the Parish Church, Hampstead, by the Rev. L. E. Shelford, Prebendary of St. Paul's, assisted by the Rev. John Watkins, Rector of Willingham, Cambs., Charles Montague Chadwick, M.D., F.R.C.P., Leeds, to Fanny Govette Cutting, 21, Hyde Terrace, Leeds, eldest daughter of the late Rev. W. A. Cutting, Vicar of Gayton, Norfolk.

DEATHS.

BRIGHT.—On December 29th, 1897, at Alvaston, Park Hill, Forest Hill, of pneumonia, Christopher David, fifth son of John M. Bright, M.D., aged 20.

LEWIS.—At Sutherland House, Stirling, on December 29th, 1897, May Harvey, wife of C. J. Lewis, M.D., and only daughter of Henry Stark, Falkirk. (The only intimation.)

WOODFORDE.—On December 22nd, 1897, at Oakbank, Spencer's Wood, Reading, Mary Ann, the beloved wife of W. T. G. Woodforde, M.D.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—Daily.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M. W. F., 9; Throat and Ear, F., 9.30. *Operations.*—W. Th. F., 3.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 1. *Operations.*—(Ophthalmic) M. Th., 1.30; Tu. F., 1.30.

Hospital for Women, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

King's College. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, daily, 1.30; o.p., Tu. W. F. S., 1.30; Eye, M. Th., 1.30; Ophthalmic Department W., 2; Ear, Th., 2; Skin, F., 1.30; Throat, F., 1.30; Dental, Tu. Th., 9.30. *Operations.*—M. F. S., 2.

London. *Attendances.*—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—M. Tu. W. Th. S., 2.

London Temperance. *Attendances.*—Medical, M. Tu. F., 2; Surgical, M. Th., 2. *Operations.*—M. Th., 4.30.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 9; Obstetric, W., 2. *Operations.*—F., 9.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 1.30; o.p., M. F., 3; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu., 9; Skin, Tu., 4; Th., 9.30; Dental, M. W. F., 9.30. *Operations.*—W., 1.30; S., 2; (Obstetrical), Th., 2.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

North-West London. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, S., 3; Dental, Th., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 1. *Operations*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., S., 2; o.p., W. S., 9; Eye, W. Th. S., 2.30; Ear, Tu. F., 2; Skin, F., 1.30; Larynx, F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. *Operations.*—M. Tu. W. S., 1.30; (Ophthalmic), Tu. Th. 2.

St. George's. *Attendances.*—Medical and Surgical, daily, 12; Obstetric, M. Th. 2; o.p., Eye, W. S., 2; Ear, Tu., 2; Skin, W., 2; Throat, F., 2; Orthopædic, W., 2; Dental, Tu. S., 9. *Operations.*—M. Tu. Th. F. S., 1.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males S., 3; females; W., 9.45. *Operations.*—M., 2; Tu., 2.30.

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 1.30; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.30; Eye, Tu. F. S., 9; Ear, M. Tu., 3; Orthopædic, W., 10; Throat, Tu. F., 3.0; Skin, M. Th., 9.30; Electro-therapeutics, M. Th., 2.30; Dental, W. S., 9.30; Children's Medical, Tu. F., 9.15; Children's Surgical, S., 9.15. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. W., 1.30; Children, S., 1.30. Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. Th., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Th., 2.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu., 1.30, F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th. S., 2; Ear, Tu., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, Tu., 10; F., 4; Skin, F., 2; Throat and Nose, S., 10. *Operations.*—Tu. F., 2.30.

Westminster. *Attendances.*—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1; Eye, Tu. F., 9.30; Ear, M. Th., 9.30; Skin, W., 1; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

J. A. desires to hear of an institution or home where a girl of 8 suffering from hydrocephalus could be admitted; she is helpless but not imbecile. The mother would be able to pay a little.

D. A. asks: Will some reader of the BRITISH MEDICAL JOURNAL who has had experience say whether a month's residence at Carlsbad will be beneficial to a glycosuric patient, aged 63, and add any other particulars thought necessary to attain the desired end?

DR. W. W. GROSVENOR (Gloucester) asks whether there be any home in which a man, aged 23, feeble-minded from birth and who has lost both parents, would be received. His brothers, though not well off, are willing to contribute to his support.

*** We are informed that, if certifiable, the County Asylum or the City of London Asylum near Dartford might take him for 21s. a week.

TENERIFFE AND GRAND CANARY.

R. M. D., having been informed that several cases of enteric fever have occurred at different places in Teneriffe recently, asks if the report is true; and, further, if Grand Canary is suitable for persons suffering from cardiac disease.

PHYSICAL EXAMINATION FOR THE ARMY.

W. E. A. A inquires whether atrophy of one testicle, the result of simple orchitis, would disqualify a boy otherwise perfectly sound and strong for admission into the army.

*** We are advised that such a condition would probably not be considered a disqualification.

THE DOCTOR'S STABLE.

H. W. asks as to books on veterinary medicine that would be useful to a country practitioner?

*** Williams's *Principles and Practice of Veterinary Medicine*, published by Baillière, Tindall and Cox (30s.) deals with diseases of all the domesticated animals. Fitzwygram's *Horses and Stables*, publ shed by Longmans, (2s. 6d. net.) is limited to management and diseases of the horse.

SWEATING.

M. S. asks for advice in the treatment of the case of a professional violinist, of nervous temperament, who is much bothered by perspiration of hands when playing. The strings go out of tune (flat) and his notes "whistle." He has tried various remedies locally and internally, but without much benefit. Belladonna internally and a lotion of alum and sulphate of zinc applied to the palms have been most successful.

PRACTICE IN THE GREAT COLONIES.

EMIGRANT asks for information on the following points: (1) What are the relative prospects of success in Australia, the Cape, and Canada at the present time for a well qualified general practitioner with fifteen years' experience? (2) Are there any good openings for a specialist in Western Australia or in Western Canada, or for a general practitioner? (3) Is there much opposition in Canada generally, and in the Western provinces in particular, by Canadian or American qualified practitioners? (4) Where can reliable and up-to-date information about the various Colonies be had, particularly with regard to climate, social conditions, etc.? (5) Are practices bought and sold in the Colonies generally as in England, and, if so, where are they usually advertised?

*** (1) The large towns are well supplied with good medical men, but in Australia practices can occasionally be obtained in the suburbs and inland towns. The same remarks apply to the Cape and Canada with at least equal force. (2) Numbers of general practitioners have lately settled in Western Australia and in Western Canada, and there are probably as many specialists as the population can support. (3) The ground is pretty well covered, and the Canadian medical schools, as our correspondent might have gathered from Dr. Roddick's presidential address in the BRITISH MEDICAL JOURNAL of September 4th, and from articles before and since, are well equipped, and turn out many graduates every year. (4) Mr. L. Bruck, medical bookseller, 15, Castlereagh Street, Sydney, can give information as to Australia, and has published a book on the climate, etc., of Australia. Dr. Roddick's address may be consulted as to Canada. (5) Mr. Bruck, we are informed, keeps a register of practices for sale in Australia. As to Canada we have no information on this head.

ANSWERS.

M.R.C.S.—The call is a social visit, and social custom requires calls to be returned.

H. E. D.—Our correspondent would be well advised not to seek to take any part in the medical treatment of a patient who stands in such intimate private relations to himself.

W. D.—We apprehend that the proprietary preparation in question comes under the general rule that it is undesirable for the profession to give encouragement to secret remedies, even if they are called for by their patients.

B. G. R. will find information as to the use and abuse of alcohol as a beverage in Dr. Norman Kerr's article, Alcoholism and Drug Habits, in *Twentieth Century Practice*, and *Inebriety, its Etiology, Pathology, Treat-*

ment, and Jurisprudence; Sir B. W. Richardson's *Cantor Lectures on Alcohol;* Professor Jas. Miller's *Alcohol: Its Place and Power;* and Dr. J. J. Ridge's *Alcohol and Public Health.*

THE TREATMENT OF CARBUNCLE.

R. H.—The surgical treatment of carbuncle is not so uniform as our correspondent is disposed to believe. The practice of making free crucial incisions has to a great extent been superseded by other methods, and by most surgeons of authority and experience favour is shown either to the strictly expectant method without cutting or caustic, first advocated by Sir James Paget in 1869, or to the more radical treatment of total excision or of free exposure and curetting. The non-surgical treatment of carbuncle was advocated by Dr. Duncan Bulkley at the last annual meeting of the Association, and a full report of his paper and of the discussion which followed will be found in the BRITISH MEDICAL JOURNAL of October 2nd, 1897.

PASSING BOUGIE THROUGH SENSITIVE STRICTURE.

THE following answers have been received to EX.-H. S.'s query on this subject:—

J. M. R. T. suggests filling the urethra with 5 per cent. solution of cocaine hydrochlorate and retaining this for five minutes, but advises that too great advantage should not be taken of the absence of the pain which is thus produced, as under such circumstances the "bougieism" can easily be overdone, with the result that retention of urine follows.

Dr. Edmund Thomas (Bridgend, Glamorgan) advises the use of a 10 per cent. solution of the same drug. He profers to introduce the solution by means of a syringe and soft catheter, gradually expelling the solution as the catheter is introduced. There is a French instrument Dr. Thomas remembers to have seen specially made for the introduction of cocaine into the urethra.

Dr. Geo. Steele Perkins (London) also advises the injection into the urethra of a 10 per cent. solution of cocaine.

F.R.C.S.EDIN.

F.R.C.S. EDIN., 1896, writes: "P. B. G." creates an erroneous impression with reference to the books for the above examination. Treves's *System of Surgery* is undoubtedly the best, and was recommended to me by one of the examiners. Also Treves's *Surgical Applied Anatomy.* Any of the best works on operative surgery will do, but a good knowledge of anatomy in its practical side is absolutely necessary. Sixty per cent. is necessary in all the written papers (not an average) before admission to the clinical. The candidate may be very well versed in clinical surgery, and the examination in that may last an hour and a half. There is nothing "peculiar to Edinburgh," and due allowance is made for prejudices of the schools. Spinal and head injuries are always in the wards, hence the anatomy of the nervous system must be well understood.

P. B. G. writes: In the BRITISH MEDICAL JOURNAL of December 18th, 1897, I answered a query of "Provincial" about the examination, in which I recommended certain textbooks, and mentioned a gentleman who gives demonstrations specially for the examination. I have been written to from Edinburgh and accused of unprofessionally advertising. Now I want once and for all to state that anything I did I did alone, and that the lecturer I mentioned is in no way *particeps criminis.* In answering a professional man in what I consider to be the "organ of the profession," I had no intention of advertising any lecturer or textbook author.

INDUSTRIAL INSURANCE AND MEDICAL CERTIFICATES.

REGISTERED PRACTITIONER.—With a view to provide a check to the abuse of industrial insurance, it is provided by the Friendly Societies Act, 1875, that no insurance money shall be paid by any registered friendly society "except upon the production of a certificate under the hand of the registrar of deaths, or other person having care of the register of deaths in which such death is, or ought to be, entered." A friendly society accepting or paying money on the production of any other certificate than that of a registrar renders itself liable to a penalty of "not less than one pound and not more than five pounds." The registrar is only entitled to a fee of one shilling for a certificate of a death given under the provisions of the Friendly Societies Act. It follows, therefore, that a certificate of a cause of death issued by a registered medical practitioner is useless for the purpose of obtaining the payment of insurance money from industrial insurance societies.

TREATMENT OF PAINFUL CHRONIC ULCER.

MR. T. HOPE LEWIS (Auckland, New Zealand) writes in reply to "Medicus" in the BRITISH MEDICAL JOURNAL of September 25th, 1897: A satisfactory way of treating the well-known painful chronic ulcer near the malleolus in women is as follows. Put the patient to bed. Apply for about a week boric starch poultices in buttercloth, and powder with iodoform, washing surrounding parts with soap and water and 1 in 40 carbolic. Get the ulcer as aseptic as possible. When the edges are fairly level, dress for a day or two with oiled silk protective dipped in 1 in 40, and cover with double cyanide gauze. Arrange a day for operation, and prepare the patient in the usual way. After anæsthetising, curette the ulcer thoroughly, scrub well with a gauze pad and ethereal soap, and then 1 in 40 carbolic, sop with boric lotion, and bind tightly over the ulcer oiled silk protective to stop oozing. Next tie the internal saphena vein for internal malleolar ulcer, either just below the knee or in the inner aspect of the thigh, removing four or more inches as thought fit. Then cut by Thiersch's method skin grafts from the thigh sufficient to cover the ulcer well, and dress the grafts with oiled silk protective dipped in boric lotion. Use scrupulous antisepsis, and keep the patient in bed for twenty-one days, and the result will be one of the most perfect in surgery.

NOTES, LETTERS, Etc.

SHIP SURGEONCIES.

A CORRESPONDENT who has recently had an unfortunate experience as surgeon to a steamer trading between London and South Africa, writes to warn medical men against accepting such posts without full inquiry. Our correspondent states that there was no salary attached to the appointment he held, and that he actually paid a fee to obtain it. The captain, he adds, appeared to consider the ship's surgeon as not equal in importance to a cabin boy. The cabin boy, however, was probably paid a decent wage, and it is astonishing that medical men should be willing to give their services to shipowners for nothing.

ERRATUM.

IN Dr. Renner's letter on The Vaccination Problem in the BRITISH MEDICAL JOURNAL of December 25th, 1897, p. 1879, fourth line from end of letter, for vaccinator read *vaccinifer.*

A CARD.

A CORRESPONDENT sends us a card to which his attention has been drawn. It is of the shape and size of the visiting card commonly used by ladies. It bears on the front the name and address of a medical practitioner, and certain blank spaces arranged as follows:

Fee.....

Dr. ——,
——,
——.

Name .....
Address .....

Expected.....

On the back of the card is an advertisement of a proprietary food for infants which is extensively advertised throughout the country.

*** The card which appears to be intended to be used for making midwifery engagements is obviously not one which a member of the medical profession would be well advised to use. It, in fact, makes the user a tout for the proprietors of the food in question. It has probably been taken into use without due consideration, and we anticipate that the practitioner whose name appears on it, now that his attention has been called to the objection taken to it, will discontinue its use.

CIRCULATION OF REPRINTS.

DR. F. VICARS (Ovington Gardens, S.W.) writes: It seems strange that anyone should see an objection to the circulation of reprints among members of the profession. Personally I always welcome them, read them with interest, and I hope receive benefit from their perusal. If they are a good "advertisement" for their authors I am glad of it. To put this forward as an objectionable motive seems to me altogether ungracious, and I feel sure there are not many who entertain such an idea.

A BISHOP ON SUNDAY RECREATION.

SURGEON-LIEUTENANT-COLONEL W. F. BENNETT (Bandon) writes: I notice in the BRITISH MEDICAL JOURNAL of December 25th, 1897, that Dr. O'Neill objects to the Bishop of Chester's pastoral letter on Sunday recreation, on two grounds—theological and scientific. As to the former, his quotations are no doubt applicable to the seventh day of the week under the Jewish dispensation, which, however, he seems to forget has been superseded by the Christian dispensation; but in the Christian revelation on this subject I can find no hint even of any change to the first day of the week. The only pertinent allusions to the question appear to be written by St Paul as a guide to Gentile Christians (Romans xiv, 5, 6): "One man esteemeth one day above another; another esteemeth every day alike," etc.; and (Coloss): "Let no man judge you in respect of the Sabbath." As to the scientific argument on hygienic grounds, he surely will not contend that cycling or other healthful recreations are injurious to our recuperative powers, or that rest necessarily implies idleness.

BRONCHIAL BREATHING.

DR. D. FRANKLIN WILLIAMS (Prince's Park, Liverpool) writes: The subject of bronchial and vesicular breathing which has lately been discussed in the columns of the BRITISH MEDICAL JOURNAL by Drs. West and Harris, is as interesting to past students as it is important to those who are still students. The use of the terms "bronchial" and "tubular" has always in my experience given rise to a considerable amount of confusion, due to the varied teaching imparted. The term "tubular" has been used so as to be strictly synonymous with "bronchial," meaning that the breath sounds resembled those heard over the roots of the lungs in the interscapular space behind, and the second right interspace in front. It has also been used of a variety of bronchial breathing, in which the inspiratory and expiratory acts had a markedly whistling character, likened to the sounds produced by blowing gently through the partially closed lips. Of the other varieties of bronchial breathing, cavernous breathing was likened to the sounds produced by blowing more forcibly through the partially separated lips the cheeks being more inflated; amphoric breathing to the sounds produced by blowing into an empty jar or bottle. All these terms are at once simple and suggestive, and serve above all to perpetuate the phenomena in the observer's memory. If the term "tubular" is to be used strictly in the sense of "bronchial" it should be dropped altogether, and the term "bronchial" always used. If it is to be retained, then let it be looked upon as a subvariety of bronchial breathing like cavernous and amphoric breathing.

The difference between these varieties is only one of degree, depending on the size of the resonating cavities. The best example of tubular breathing I ever heard was heard over the supraspinous fossæ in a case of tuberculous consolidation, which, if I remember rightly, also exhibited the usual sign of excavation, namely, pectoriloquy. The best example of cavernous breathing I ever listened to was heard over the interscapular region in a case of bronchiectasis, of amphoric breathing in a case of pneumothorax. The breath sounds which are heard over acute pneumonic consolidation are bronchial pure and simple, the sounds in the bronchi being easily conveyed to the surface by the solid lung tissue between the bronchi and the surface of the chest. This explains why the blowing breath sounds are best heard over the middle of the chest behind, where the larger bronchi are present. In the supraspinous fossæ the bronchi will probably be small, and hence the

sounds heard over them will possess the whistling character above described. Dr. Gee, in his able work on *Auscultation and Percussion*, 3rd edition, p. 133, appears to be of the same opinion. In regard to vesicular breath sounds much less confusion has arisen. The descriptive and suggestive terms, puerile, jerky, harsh, used of the different varieties are so well adapted to the sounds heard, and the pathological conditions in which they are present are so well recognised that nothing further need be said in relation to them. The only danger is mixing up fact with theory, that is, of indicating the various physical signs by terms based on theories as to their mode of production.

Filtration of Milk.

We have received several communications with reference to an article on the filtration of milk, published in the British Medical Journal of December 18th, 1897, page 1809.

Mr. H. Droop Richmond, F.I.C. (Analyst to the Aylesbury Dairy Company), states that he has made for his company a series of observations on sand filtration of milk as practised by Messrs. Bolle, of Berlin. His conclusions were that (1) the efficacy of a sand filter does not depend on the sand, but practically wholly on the muslin or other strainers used; (2) when the milk passes through the filters with sufficient rapidity, no greater amount of deposit is removed than by simple straining; (3) the deposit removed by the sand filters does not differ in composition from that removed by straining; (4) for a moderate turnover of milk at least 1 ton of sand must be washed free from putrescible organic matter, dried, and sterilised daily. The difficulty of doing this properly is so great that there is considerable danger of its being perfunctorily performed. The directors subsequently retained the services of a German dairy engineer to carry out experiments with the plant. His results did not differ from Mr. Richmond's, and his conclusion was that the milk was so much cleaner than the German milk that there was practically nothing to remove.

Dr. H J. W. Martin (Mill Hill, N.W.) writes to point out that care should be taken of milk at the farm, so as to eliminate the chief sources of contamination, which he enumerates as follows: Dust from the stables, particles of grain and chaff, dust from hay stored near or over the cows, or from the feeding troughs; dung, hair and mud from the cows themselves; dirt from the hands and clothing of milkers, and in the vessels into which the milk is drawn and transported. A further source of contamination which he mentions is dust from the streets, which gets into the churns and cans. He states that all these sources of contamination are avoided by the system adopted by the American Walker Gordon Laboratories, of which a branch establishment has recently been opened in Duke Street, Grosvenor Square, with a farm in Middlesex.

LETTERS, COMMUNICATIONS, Etc., have been received from:

(**A**) Mr. R. B. Anderson, London; Dr. D. Ainley, Halifax; Messrs. Armour and Co., London; F. Ashurst, M.B., Hayfield; Dr. S. Alexander, Longsight. (**B**) Mr. W. G. Burnie, Bradford; Dr. J. W. Ballantyne, Glasgow; Messrs. Burroughs, Wellcome and Co., London; Mr. W. L. Browne, London; Messrs. Bayard, Son and Bayard, London; Dr. R Boxall, London; Dr. G. S. Buchanan, London; Burgh Medical Officer of Health; Dr. H. M. Barker, Sandown; Mr. A. Boyd, Grenada; J. H. Bailey, M.B., Pendleton; Mr. A. de Bavoy, Melbourne; Mr. F. Bennett, Bandon; Byde-and; Dr. J. B. Bradbury, Cambridge; Dr. C. W. Belfield, Bristol; Dr. D. Buxton, London. (**C**) T. Campbell, M.B., Glasgow; J. Jackson Clarke, M.B., London; Mr. E. L. Collis, Stourbridge; Mr. A. E Cope, London; Dr. J. Craig, Dublin; Dr. J. Cameron, Edinburgh; Mr. H. L. Carre-Smith, London. (**D**) Dr. R. Davies, Cheltenham; Dr. D S. Davies, Bristol; J. Douglas, M.B., London; D. F. G.; Lady Florence Dixie, Annan, N.B.; Dr. F. H. Dayus, London; Mr. W. Davies, Manchester; Mr. C. D. H. Drury, Darlington. (**E**) Equity: Mr. H. T. Evans, Blackwood, Mon., Enquirer; Enquirens: Mr. H. C. Ensor, Cardiff: Mr. H. Eales, Birmingham. (**F**) Fairplay; Mr. E. St. L. Finny, M B., Kingston Hill; F.R.C.S.Edin., 1896; Mr. G. M. Foy, Dublin; Dr. S. Felce, London;' F.R.C.S. (**G**) Mr. R P. Gemmell, Glasgow; R. Gordon, M.B, Sidmouth; Messrs. R. W. Greef and Co., London; Dr. W. W. Grosvenor, Gloucester; Mr. J. Good, Devonport; Mr. A. Greenwood, London; Mr. A. S. Grunbaum, London; Mr. P. B. Giles, Brighton; Mr. H. F Gellier, London. (**H**) Dr. T. G. Horder, Cardiff; Mr. H. Heath, London; Mr. E. T. Holmes, London; Mr. M. M. C. Halton, Barnsley; Dr. N. Hardy, London; G. S. Hart, M.B., Atherstone; Mr. W. Hollins, High Wycombe; H. E. D.; Mr. E. E. Holt, Portland (Maine); Dr. W. P. Herringham, London; Mr. C. Hudson, Dr. W. M. Hutton, Edinburgh. (**I**) Dr. F. Imlach, Liverpool. (**J**) Dr. T. H. Jones, Carlisle; Mr. T. Jones, Bootle; Mr. H. H. Jennings, London; Justitia; Mr. A. B. Judson, New York. (**K**) Dr. T. G. Kelly, Leicester; Messrs. Krohne and Sesemann, London. (**L**) Dr. H. Lankester, London; L. S. A.; Mr. H. Littlewood, Leeds; Lecturer; L. M. (**M**) Dr. W. Murrell, London; Midland; Dr. Moorhead, Cootehill; Dr. J. Metcalfe, Bradford; Mr. D. McLaren, Hull; Dr. J. W. Moore, Dublin; Mr. B. F. Meadows, Hastings; Midland Medical Society, The Secretary of the, Birmingham; Dr. A. S. Myrtle, Harrogate; G. P. Mathew, M.B., London; Dr. J. Morton, London; M.R.C.S.; M.A.H.; Dr. H. Manley, London; Member; Dr. R. L. Meade-King, Taunton; Mens Sana; Dr. C. K. Millard, Birmingham; Mr. W. A. McLeorn, Hospital, Illinois; M.S.; Mr. H. J. W. Martin, London; Dr. H. J. Macevoy, London; Dr. W. F. MacCanthy, Worcester. (**N**) Mr. J. T. Neech, Tyldesley; Nemo. (**P**) Prince of Wales's Hospital Fund for London, The Hon. Sec. of the, London; Dr. L. F. Pitkin, New York; Mr. T. F. Pearse, Bombay; P.S.C.S; Dr. P. H. Pye-Smith, London; Dr. S. T. Pruen, Cheltenham; Mr. D'Arcy Power, London. (**R**) Royal Institution of Great Britain, The Secretary of the, London; Dr. H. D. Rolleston, London; Mr. G. Rendle, London; Royal College of Veterinary Surgeons, The Secretary of the, London; Mr. H. D. Richmond, London; Dr. C. Renner, London; Dr. D. A. Reid, Tenby; Dr. T. C. Railton, Manchester; Registered Practitioner; Retired Army Surgeon; R. H.; Royal Institute of Public Health, The Secretary of the, London; Dr. J. S. R. Russell, London; Mr. A. Rye, London; Professor Rutherford, Edinburgh; W. H. Rowell, M.B., Newcastle-on-Tyne. (**S**) Mr. F. S. Smythe, London; Dr. D. W. Samways, Mentone; Dr. W. J. Sinclair, Manchester; Mr. H. C. Smith, London; Messrs. Salt and Son, London; G. E. Stewart. M.B., Stirling; Messrs. Street Bros., London; Mr. L. A. Smith, London: Mr. L. Sourdillon, London; Dr. W. Sykes, Gosport; Mr. L. Salmon, Jamaica; Mr. T. P. Smerton, Jamaica; Mr. S. Snell, Sheffield; St. Mary's Hospital; The Secretary of the, London; Dr. W. J. Simpson, London; Mr. H. de Styrap, Shrewsbury. (**T**) Mr. H. Tichborne, London; Mr. J. T. Thomas, Camborne; Mr. V. G. Thorpe, Sheerness; Dr. S. Tidey, Florence. (**V**) Victim; Dr. F. Vicars, London. (**W**) Mr. F. W. Willmore, Walsall; Mr. J. H. Wathen, Clifton; Dr. R. T. Williamson, Manchester; Dr. E. F. Willoughby, London; Dr. F. Worswick, Manchester; Mr. E. W. Wallis, London; Mr. R. N. Wilkinson, Hong Kong; A. Wilsden, M.B., Brighton; C. B. Wood, London; West London Medico Chirurgical Society, The Secretary of the, London; Dr. D. Walsh, London; Mr. M. Wardle, Bishop Auckland. (**Y**) Dr. E. S. Yonge, Manchester; Dr, J. Young, Bristol; etc.

BOOKS, Etc., RECEIVED.

A Manual of Operative Surgery. By L. A. Stimson, B.A., M.D., and J. Rogers, Jr., B.A., M.D. Third edition. London: H. K. Lewis. 1897. 12s. 6d.

A Practical Textbook of the Diseases of Women. By A. H. N. Lewers, M.D. Fifth edition. London: H. K. Lewis. 1897. 10s. 6d.

Uric Acid as a Factor in the Causation of Disease. By Alexander Haig. M A., M D., F.R.C.P. Fourth edition. London: J. and A. Churchill, 1897. 12s. 6d.

Aneurysms of the Aorta. By O. A. Brown, M.A., M.D. London: H. K. Lewis. 1897. 2s. 6d.

Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. New Series, Vol. II. Edinburgh and London: Young J. Pentland. 1897

Introduction to the Study of Organic Chemistry. By J. Wade, B.Sc. London: Swan Sonnenschein and Co. 1898. 7s. 6d.

British Guiana Medical Annual. Edited by J S. Wallbridge and C. W. Daniels. Ninth year of issue. Georgetown, Demerara: Baldwin and Co. 1897. 5s.

The Speaking Voice: its Development and Preservation. By Mrs. Emil Behnke. London: J Curwen and Sons. 2s.

Cleft Palate; Treatment of Simple Fractures by Operation; Diseases of Joints; Antrectomy; Hernia, etc. By W. Arbuthnot Lane, M.S. London: Medical Publishing Co. 5s.

Clinical Lectures on Urine. By J. Rose Bradford, M.D., D.Sc., F.R.C.P., F.R.C.S. London: Medical Publishing Co. 2s.

The Rightly-Produced Voice. By E. D. Palmer. London: Joseph Williams. 2s. 6d.

La Responsabilité Médicale. Par Professor P. Brouardel. Paris: J. B. Baillière et Fils. 1898. Fr.9.

Atlas de Microbiologie. Par Professor E. Mace. Fasc. I. Paris: J. B. Baillière et Fils. 1898.

Klinische Jahrbuch. Herausgegeben von Dr. Flugge, und Dr. Mering. Sechster Band. Viertes Heft. Jena: Gustav Fischer. 1897. M.4.

Bibliographischer Semesterbericht der Erschienungen auf dem Gebiete der Neurologie und Psychiatrie. Von Dr. G. Buschan. Erste Hälfte. Jena Gustav Fischer. 1897. M.4.50.

*** In forwarding books the publishers are requested to state the selling prices.

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REMARKS
ON
THE RELATIONS OF DIFFERENT DIVISIONS OF THE CENTRAL NERVOUS SYSTEM TO ONE ANOTHER AND TO PARTS OF THE BODY.

Delivered before the Neurological Society, December 8th, 1897.

BY J. HUGHLINGS JACKSON, M.D., F.R.S.

[AFTER expressing his inability properly to thank the Society for asking him to deliver this Lecture, and after remarking on the study of nervous maladies as Dissolutions, Dr. Hughlings Jackson said:]

For the kind of work indicated some scheme of the whole nervous system is necessary. A morphological one, such as spinal cord and encephalon, or such as cord, medulla, pons, cerebellum and cerebral hemispheres, will not serve us. We must have one after degrees of directness and complexity with which nervous centres, or, as I shall say, Levels, represent impressions and movements of parts of the body; this is an anatomical not merely a morphological scheme.

I divide the central nervous system into two Sub-systems—Cerebral and Cerebellar. The two have what I call the Lowest Level in common, or in other words that level is the lowest level of the cerebral sub-system and of the cerebellar sub-system.

The Lowest Level extends, it is suggested, from the tuber cinereum to the conus medullaris; it is made up of sensory and motor centres of the cord, medulla, pons, and aqueduct—representing the body in detail; motorily from ocular muscles (ciliary muscles?) to muscles of the perineum (sphincter ani?)—with the fibres inter-connecting these centres. There are also Superior Centres of the level itself; for example, there is the respiratory, medulla, centre, which represents movements of the respiratory apparatus indirectly—represents them by intermediation of the laryngeal, phrenic and costal motor centres of the level. There are, I submit, other Superior centres with their subordinate centres, for intestinal action, defæcation, micturition, the sexual act, parturition, etc.

The Rolandic region of the cortex cerebri and the prefrontal lobe are the motor provinces of, respectively, the middle and highest levels. As to the sensory provinces I have formerly spoken of the occipital lobes as the highest sensory centres of the cerebral sub-system, but I now find it difficult to conclude with any confidence as to what are the sensory provinces of the middle and highest levels of this sub-system. In what follows it is to be understood that the unit of constitution of the whole nervous system (not excluding the highest level, the so-called "mental centres") is sensori-motor; and also that, in the middle and highest levels at least, the so-called motor provinces are only *chiefly motor* and the sensory provinces only *chiefly sensory*. I have not attempted any division of the cerebellum into levels.

I admit that the scheme of three levels is incomplete; nothing has been said of the sympathetic nervous system, nor of what may be called the olfactory and optic nervous systems; the retina is developmentally part of the brain itself, and possibly some elements, or some layer, of the retina may be the lowest centre of the optic nervous system.

With regard to the lowest level, we have to consider its Intrinsic and also what I may call its Extrinsic elements. The intrinsic elements are, as aforesaid, the centres of the cord, medulla, pons, and aqueduct with their interconnecting fibres; what I have called Superior centres are also intrinsic elements of the level. The extrinsic elements are of two kinds: (1) fibres extrinsic upwards—for instance, those of the pyramidal tract; and (2) fibres extrinsic downwards—for instance, those of the posterior columns. The best illustration of extrinsic elements of the lowest level is given by a consideration of what Sir William Gowers has called ataxic paraplegia. The disease in this malady is of fibres of the lateral columns, fibres extrinsic upwards, and also of fibres of the posterior columns, fibres extrinsic downwards; although these fibres are solidly part of the morphological mass, the cord, they are no part of the lowest level; they are fibres connecting centres of that level with centres of the middle level and with parts of the body.

The next question is as to fibres extrinsic upwards connecting centres of the lowest level with the cerebellum. Connection by sensory fibres is admitted; connection by motor fibres is not generally admitted.

[Attention was then drawn to the very important and remarkable researches by Sherrington on Reciprocal Innervation and to some recent very valuable researches by Löwenthal. Löwenthal observed that when the cerebrum (of a dog) was removed, excitation of a certain part of the cerebellum, acting when the spinal cord was in tonus, produced relaxation of the triceps and contraction of the biceps. His experiments show a motor connection, if not a direct one of the cerebellum with anterior horns.]

I have now to restate an old hypothesis on dynamical relations of the two Sub systems by intermediation of motor centres of the lowest level. Speaking very roughly, and neglecting some parts of the body, the cerebellum represents movements of the skeletal muscles in the order trunk, leg, arm, preponderatingly extensor-wise; the cerebrum represents movements of the same muscles in the order arm, leg, trunk, preponderatingly flexor-wise. It is also supposed that impulses from motor centres of the higher levels of each sub-system continuously act upon the motor centres of the lowest level; that the impulses from each set of higher levels antagonise or inhibit one another in different degrees upon different lowest motor centres; that the degree with which the cerebral and the cerebellar impulses antagonise one another is the same as the order of the degree of their different representation of movements of muscles of the body. In accordance with this hypothesis the rigidity in the common cerebral paralysis, hemiplegia, results because cerebral influence being taken off the lowest motor centres as the cerebrum represents movements in the order arm, leg, trunk, cerebellar influence upon those lowest motor centres is no longer antagonised; there is cerebellar "influx" into the parts which the cerebrum *has abandoned*.

It was asserted against this hypothesis that upon complete transverse lesion of the spinal cord above the lumbar enlargement—both cerebral and cerebellar influence being excluded from motor centres below the lesion—the legs are rigid and the knee-jerks exaggerated. But a few years ago Dr. Charlton Bastian[1] brought forward cases showing that upon *total* transverse lesion of the spinal cord above the lumbar enlargement the legs are flaccid and the knee-jerks absent. His conclusions are, I think, adopted by most neurologists in this country; they have been confirmed by Bowlby, Thorburn, and Bruns (of Hanover). I have several times stated the objections which may be brought against the theory of cerebral and cerebellar influx, some of which I admit to be serious.

There is another way of considering the hypothesis of relations of the cerebral and cerebellar sub-systems to one another by their having the lowest level in common; we may compare and contrast certain cerebral and certain cerebellar maladies with one another as being Complementary Inverses (corresponding opposites). The best marked Complementary Inverse is a case of extensive cerebellar paralysis (trunk, legs, arms) and rigidity as the corresponding opposite of the double hemiplegia (arms, legs, trunk) and rigidity of an advanced case of paralysis agitans; in the former the attitude is opisthotonic, in the latter slightly emprosthotonic. There is another very important Complementary Inverse; in some cases of tumour of the middle lobe of the cerebellum there are tetanus-like seizures. They, being paroxysmal, are obviously of different nature from the persisting cerebellar paralysis with rigidity just mentioned as certainly as an epileptiform paroxysm (I mean the epilepsy described by Bravais, 1827) is of different nature from hemiplegia with rigidity. These tetanus-like seizures depend, I suppose, on *occasional* excessive discharges beginning in some part of the cerebellum; such paroxysms are, speaking generally, the Complementary Inverse of epileptiform or epileptic seizures from sudden *occasional* excessive discharges beginning in a part of the cerebral cortex. I used to think that drawing back of the neck was especially a cerebellar symptom. Dr. Buzzard[2] has, however, published a case of retraction of the head from tumour of one temporo-

sphenoidal lobe. Tetanus-like seizures occur in cases of glioma of the pons. I have pointed out that when there is cerebellar tumour such seizures may be said to be owing to pressure on the adjacent corpora quadrigemina or subjacent medulla. Those who adopt the pressure hypothesis have, in some cases of tumour of the middle lobe of the cerebellum, three things to account for: (1) cerebellar paralysis, (2) cerebellar paralysis with rigidity, and (3) tetanus-like seizures.

One important matter as to the relations of the several levels of the cerebral sub-system to one another is as to the degree with which the organs of the digestive, circulatory, respiratory, and thermal system are represented by the lowest level and higher levels. I submit that these organs, neglecting, however, those of the thermal system, as they serve in what I call the Menial work of digesting food, circulating blood, and aërating blood, are efficiently, are almost solely, represented by the lowest level; but as the manifestations during emotions show they are largely represented in other ways in the highest level. An illustration may make my meaning clearer; it is unlikely that the heart, to take very arbitrarily but a part of the circulatory apparatus, is represented positively in the higher levels in its character as a machine for circulating the blood (as a blood pump); but it is popular doctrine that the heart is engaged in manifestations during strong emotions and this means that it is represented in the highest level, that is, in the anatomical substrata of states of consciousness. I will further illustrate by the respiratory system; I confess that I do not think I could with any definiteness illustrate by the other systems.

The respiratory apparatus is engaged in three different operations; as only one of them is respiration proper, I shall use the term thoracic cage, or, briefly, cage, instead of respiratory apparatus: 1. There is respiration proper, organic duty, or menial work. 2. The cage serves in "voluntary" operations, as in drawing in the breath when told and whilst (fixation of the chest in "effort") lifting a heavy weight with one hand. 3. It is engaged during great emotions. The services 2 and 3 are animal or personal services in which the higher levels are concerned; they are not respiratory operations, they are not organic duties or menial work. (In these remarks I ignore the sensory elements necessarily engaged with motor elements in all operations.) I will make some further remarks on the differences between the first, respiratory, and the second, "voluntary" service of the cage. I have recorded[3] a case I saw with Mr. Wilkin that of a man who had, as we thought, "latent" pneumonia (knee-jerks absent). The thing I wish to make prominent is that during the patient's respiration proper, first service of his thoracic cage, the intercostal muscles did not act at all (his breathing was solely diaphragmatic) whilst these muscles acted perfectly in the "voluntary" operation, one of higher level initiation, of drawing in his breath when told (so-called "forced inspiration") second service of the cage; Dr. Barlow subsequently saw the patient with us and confirmed this double observation. (The patient recovered, his respiratory movements became normal and his knee-jerks returned). This case seems to me to demonstrate that the two services, 1 and 2, of the cage, are of very different origination. It is the only case of the kind I have seen, nor have I heard of any other like it.

One very important thing with regard to my subject is Regulation of the digestive, circulatory and respiratory systems. There are, I have put it, three factors in Regulation. Thus with regard to the respiratory system, there is (1) Nervous regulation; the respiratory, medulla, centre is probably to some extent automatic, goes on by itself; it is also influenced by impulses ascending the vagi and by the higher levels (by "upper brain tracts"). (2) There is mechanical regulation; the elasticity of the lungs and of the costal cartilages (expiration in quiet breathing being chiefly recoil). (3) There is what, for want of a better term, I will call the factor Chemical Stimuli; in the case I am dealing with by venous blood, a natural stimulus of the respiratory centre (deficiency of oxygen). With regard to chemical stimuli, a very bad term I admit, I have suggested that effete nitrogenous products act as natural stimuli to the vaso-constrictor, medulla, centre before they are eliminated by the kidneys. I have heard more than one medical man say that he felt better when a little gouty, better for mental exertion I suppose was meant. The late Milner Fothergill[4] said that "gout poison stimulates the intellect in the earlier stages of Bright's disease." I suppose that owing to an excess of nitrogenous effetes, to an excess of a natural stimulant, the vaso-constrictor centre is highly stimulated in certain cases of Bright's malady, whereby general arterial tension is raised; and since the cerebral arteries have comparatively little muscular tissue (some physiologists consider it not demonstrated that these arteries have vaso-constrictor nerves) the result will be that the brain gets more blood and thus in the early stages of the malady it will be, at least in some ways, in better working order. This state of things is, however, more pleasant than safe and yet a salutary reduction of high arterial tension by dieting and by medicine is not always appreciated by our patients. Schäfer's researches on the suprarenal capsules, his showing that an extract of the medulla of these bodies raises arterial tension, is very important in this connection; arterial tension is raised by this extract, by its action on the muscular coats of the arteries. (It is possible that effete nitrogenous products act similarly and not on the vaso-constrictor centre as I suggested.)

It will be seen that in speaking of regulation and in particular of the factor chemical stimulus I have not been leaving the topic of the lecture; for example, stimulation of the vaso-constrictor centre will influence the higher levels of the cerebral sub-system; there is a roundabout relation between the lowest level and these higher levels; from high tension the brain will get more blood, from low tension less. Broadbent has drawn attention to the influence of states of arterial tension in cases of epilepsy. In my opinion epilepsy (the so-called idiopathic) is owing to a discharge-lesion made up of a few cells of some part of the highest level (of one half of the brain). When arterial tension is high the cells of the discharge-lesion will with the rest of the brain, get more blood and they will be in consequence more nourished and will thus become more highly unstable; when arterial tension is low these cells will get less blood. The beneficial effects of nitroglycerine in some cases of epilepsy are probably owing to its lowering arterial tension; in the same way we may perhaps interpret the cessation of epileptic fits during febrile ailments and the good effects of an old-fashioned remedy, a seton; a miniature febrile condition being probably induced by that minor surgical operation.

I have spoken of the possible "stimulation of the intellect," to use Fothergill's expression, in some cases of raised arterial tension. There is, I think, another way in which "the intellect" is affected in certain abnormal states. It has been suggested by Greg (whom Fothergill quotes, *op. cit.*) in his *Enigmas of Life*, that bodily pain and disease "may directly contribute to the loftiest efforts of the intellect. They sometimes positively enhance its powers." Here is a very important question, too large a one to be dealt with fully here.

I spoke of venous blood as a "natural stimulant" of the respiratory, medulla, centre; it stimulates other centres of the lowest level. I have thought that very great supervenosity, as in severe cases of emphysema with bronchitis, annuls the function of the lumbar centres concerned with the knee-jerk. Risien Russell finds that asphyxia first exaggerates, and then causes loss of, the knee-jerks in dogs. As to another level; in asphyxia there is loss of electrical excitability of the Rolandic area of the cortex (motor province of the middle level of the cerebral sub-system) in dogs; a very important matter with regard to the first division of what I call Lowest Level Fits. In some cases of supervenosis, there is delirium; the positive mental symptoms are not directly, but indirectly consequent, I submit, on the action of the supervenous blood; they do not, I think, signify that supervenous blood "excites the brain"; there is, I submit, greater activity in lower nervous arrangements of the highest level consequent on loss of function of the highest caused by supervenous blood—overaction of the lower from loss of control by the functionless highest. Consideration of the action of venous blood leads me to my next topic.

The Scale of Fits.—There are, I think, Lowest Level Fits, Middle Level Fits, (the epilepsy described by Bravais in 1827) and Highest Level Fits (so-called idiopathic epilepsy).[5]

I now consider only Lowest level fits and only those of these which I think are respiratory; other lowest level fits are pro-

ducible by certain poisons, by camphor and absinthe for example, and I think by some home-made poisons as in uræmic fits; there is still another group of lowest level fits analogous to those producible in guinea-pigs by Brown-Séquard's method.

It is certain that there are respiratory fits in some lower vertebrates, or rather, such fits are easily producible in them by experiment. Kussmaul-Tenner fits in rabbits are of this kind; whether these fits are produced by ligaturing the great arteries of the neck, by rapid bleeding or by sudden obstruction of the trachea, they depend on absence of oxygen; in each there is an excessive discharge beginning in the respiratory, medulla, centre. I have suggested[6] that laryngismus stridulus in man (the infant human being)[7] and convulsions in some cases of whooping-cough, are fits beginning by excessive discharge of the respiratory centre.

I must here point out that Horsley and Semon think that attacks of laryngismus stridulus are of cortical origin; they have shown that discharge of the laryngeal centre of one-half of the brain will close the glottis; they adduce the existence of carpopedal contractions in laryngismus stridulus as evidence favouring their view of its cortical origin. With great respect for the opinions of these men who have done such highly original work on laryngeal representation by the central nervous system, I think carpopedal contractions and paroxysms of convulsion are phenomena too different to have the same cause; the contractions are not owing, I submit, to cerebral discharges, but to suspension of cerebral influence on anterior horns for the hands and feet—the function of the cortical cells being, I mean in most cases of laryngismus stridulus, lost from supervenosity.

I have only spoken of respiratory fits in very young children. It is current doctrine that they are very prone to fits, and I have now to consider how it is that they are so, or rather to those I call lowest level fits. The breathing of the infant is diaphragmatic; the pyramidal tract is not fully developed in the infant; according to Soltmann inhibitory nervous arrangements are but little developed in very young animals and if so little in the human infant; it is well known that very young children tolerate large doses of belladonna (a paralyser of the endings of inhibitory vagus fibres in the heart). In the infant up to 1 year of age the respirations are 44; I suppose that this great rate is partly on account of little higher-level inhibition of the respiratory, medulla, centre; this inhibition gradually increases as the child grows older and then its breathing becomes less frequent. A healthy infant's breathing may be irregular with short pauses (Henoch), a slight resemblance to Cheyne-Stokes's respiration. Dr. Goodhart[8] remarking on Cheyne-Stokes's respiration, writes: "The respiratory centre goes back to its less educated form, and reproduces, in an exaggerated way, the rhythmical character of the respiration that is more or less natural in infancy." I suppose there is evidence here of less inhibition of the respiratory centre in infancy.

I submit then that we may conclude that, in comparison with the adult, the lowest level centres, especially the Superior Centres, are in infancy little governed (positive motor) and little controlled (negative motor) by the higher levels; that the lowest centres, and in particular the respiratory, medulla, centre, are in consequence naturally, healthily more excitable than in older people. Moreover the lowest level in the very young, the newborn infant, although the most advanced in development of all three levels of the cerebral sub-system, is incompletely developed.

I now consider in outline the Process of Evolution. Strictly we should begin with parts of the body; they make up the lowest level of evolution of the whole organism. I shall deal only with motor evolution, a very arbitrary proceeding since evolution is sensori-motor. I follow Herbert Spencer, using, however, terms more familiar to medical men than he uses; Spencer is not, of course, answerable for them, and I hope that any misinterpretations I may make of his doctrines, or misapplications of any of them, will not be put down to him.

There are four factors in evolution. In the evolutionary ascent there is (1) Increasing Differentiation (greater Complexity), (2) Increasing Specialisation (greater Definiteness), (3) Increasing Integration (greater Width of Representation), and (4) Increasing Co-operation (greater Association).[9]

(1) *Differentiation.*—There is increasing complexity; greater complexity the higher the level. The lowest motor centres represent all the muscles of the body in few different movements; the middle motor centres represent (re-represent) all the muscles in more numerous different movements; the highest motor centres represent (re-re-represent) all the muscles in most numerous different movements.

(2) *Specialisation.*—There is increasing definiteness of representation the higher the level. The movements represented by the lowest motor centres are for, comparatively, general ends, those represented by the middle motor centres are for more particular ends, and those represented by the highest motor centres are for most particular ends.

(3) *Integration.*—There is increasing width of representation by centres, the higher the level. Each of the lowest motor centres represents movements of muscles of some small region of the body (representation in detail). Each of the motor centres of the middle level represents movements of muscles of a wider region. Each of the (hypothetical) motor centres of the highest level represents movements of a widest region if not of the whole organism.

(4) *Co-operation.*—There is an increasing number of interconnections of centres, by fibres, the higher the level. The motor centres of the lowest level have few inter-connections; the motor centres of the middle level have numerous interconnections; the motor centres of the highest level have most numerous inter-connections.

I have in an earlier part of this lecture mentioned the Scale of Fits—Lowest, Middle, and Highest Level Fits. I now suggest a comparison and contrast between middle level and highest level fits as depending on discharges of levels of different evolutionary rank. The middle level fits I call epileptiform seizures; they are those described by Bravais in 1827. No one, nowadays, doubts that there is a discharge-lesion, or perhaps many would prefer to say "disease," of some part of the so-called motor region (Rolandic region) of the cortex cerebri of one-half of the brain in these cases. Highest level fits are those of epilepsy, the so-called idiopathic epilepsy, or, as I may roughly say, they are "ordinary epileptic fits"; I suppose that most of these seizures depend on a discharge-lesion of some part of the prefrontal lobe (motor province of the highest level) of one-half of the brain.

(1) (*a*) An epileptiform seizure begins very locally; (*b*) an epileptic seizure begins comparatively widely. (2) (*a*) in an epileptiform seizure the commencing spasm is particular, there is in the commonest variety a particular disposition or attitude of the thumb and index finger; (*b*) in an epileptic seizure there is not such a particularity of onset. (3) (*a*) In an epileptiform seizure the movements of *each region* are (comparatively) slowly developed; (*b*) in an epileptic seizure they are (comparatively) rapidly developed. (4) (*a*) In an epileptiform seizure the convulsion has a deliberate march, different regions of the body are involved comparatively distinctly, one after another; the convulsion becomes universal gradually; (*b*) in the epileptic seizure the convulsion has a rapid march, different regions of the body are involved nearly together; the convulsion is universal almost at once. In the following two statements it is not meant that what is given after a figure in one statement is the exact correspondent of what is given after the same figure in the other.

Do epileptiform and epileptic seizures, differing in (1) degree of localness of commencing spasms, (2) in degree of particularity of commencing spasm, (3) in degree of approach to simultaneousness of development of movements of *each* region, and (4) in degree of approach to contemporaneousness of development of movements of *several* regions, differ in these four ways because they depend on discharges beginning in (some part of) two levels which differ in that their centres or units represent (1) different numbers of different movements, (2) movements of different degrees of definiteness, (3) movements of regions of different extent, and (4) movements with different degrees of association with one another?

In accord with the hypothesis suggested is the fact that the difference between the two kinds of fits is not absolute; in the epileptic fit one side of the body is, at least often, affected a little before the other (turning of both eyes and of the head to one side is common) and a little more than the other. Indeed, I think, a very rapidly-developed epilepti-

form seizure approaches an epileptic fit in character; if so the hypothesis is further supported.

I suppose that in cases of epilepsy and of epileptiform seizures there is a very local discharge-lesion (physiological fulminate) in one half of the brain. I have thought that there are certain differences depending on different rates of liberations of energy by nerve cells (nervous discharges) in each kind of fit. With regard to liberations of energy by nervous elements, we have to consider two things or two aspects of one thing—quantity of energy liberated, and the rate of its liberation; the two varying factors both in normal and in the "excessive" nervous discharges of fits. With regard to the convulsion produced partly directly but mainly indirectly by a discharge-lesion, we have to consider the amount of convulsion, the range of convulsion, and the time in which that range is attained, and particularly whether the onset of the paroxysm is "deliberate" or "sudden." In two liberations of equal quantities of energy at different rates there is the same momentum or quantity of motion; but the *force* of the more rapid but shorter liberation of energy will be greater than that of the slower and longer liberation; using an old-fashioned term, the more rapid the discharge the more "intense" is the fit. The more rapid the liberation of energy by a discharge-lesion (primary discharge) the more numerous and greater the resistances which will be overcome, the more numerous, healthy, comparatively stable, elements will be compelled to discharge (secondary discharges); consequently the greater the amount of convulsion, and the wider its range.

I now make some general remarks on Dissolution. Dissolution from disease is rarely, if ever, the exact reverse of evolution. When we consider nervous maladies as Dissolutions we have to bear in mind not only the Dissolution, that which is effected by diseased, but the Evolution going on in the undamaged, healthy, remainder. There are some obvious exceptions to the implication that a range of evolution in cases of Dissolution remains; for example, in absolute dementia, if there be such a thing, there is no lower range of evolution remaining in the highest level, all "layers" of it being functionless. Taking the case of insanity for illustration, and ignoring that extreme degree of it which I have spoken of as absolute dementia, I submit that whilst the negative affection of consciousness in every insanity answers to the dissolution, loss of so much, the positive mental symptoms, illusions, delusions, etc.,signify Evolution going on in the healthy remainder, going on in parts which disease has spared, going on in the lower, but now highest, range of Evolution of the highest level. He who is studying the physical process during positive mental symptoms, or to take a particular example, during an illusion, in any case of insanity, is as certainly dealing with evolution as he is who is studying the physical process during a perception in a sane person; indeed, the illusion is the insane man's perception.

Dissolution is from the least towards the most organised. It is necessary here to remark that such an expression as "high organisation" is not, when used with regard to the nervous system, synonymous with most complex, etc.; indeed, the most complex, etc., nervous arrangements, centres and levels, are the least organised; the most simple are the most organised. Thus the centres of the lowest level are much more strongly organised than those of the highest level are. It is very important to bear this in mind. A man deeply comatose from sucking raw spirits out of a cask, and whose highest level or, presumably, most of it, is rendered quite functionless by much alcohol rapidly taken, recovers because the "vital" centres of his lowest level are very strongly organised and go on working, although imperfectly, when the comparatively weakly organised centres of his highest level speedily "give out." If the "vital" centres of the lowest level were not strongly organised at birth life would not be possible; if the centres of the highest level ("mental centres") were not little organised and *therefore very modifiable*, we should make few new acquirements. The highest level is supposed to be less and less organised and therefore less and less automatic the higher the "layer"; the highest layers are the least organised, least automatic and are attended by most vivid consciousness; they are most easily rendered functionless by certain general injurious agencies, as when there is delirium in such non-nervous diseases as pneumonia, whilst the function of the lower (more organised) layers persists; the positive mental symptoms of the delirium occur during activity of, during evolution going on in, the functionable, lower, more organised "layers" of those centres.

There is another relation of the several levels to one another, the consideration of which is very important, from a medical point of view. Schroeder van der Kolk[10] has stated that the spinal cord of a sturgeon weighing 120 lbs. is about equal in thickness to that of a frog; he says "that the more complicated their [animals] movements, the more numerous will be the ganglionic cells with their several groups, and thicker will be the anterior horns and the masses of grey substance in the spinal cord." Herbert Spencer has written to the same effect, but more generally.[11] The principle involved is well illustrated by Horsley and Schäfer[12] when speaking of what they call the trunk area of the motor region of the cortex cerebri; they write: "It certainly is not a little remarkable that the numerous and powerful muscles of the spine should be governed from so small a portion of the cerebral cortex, but it is to be remembered that the movements of which the spine is capable are comparatively few and simple."

This seems to show that motor centres are voluminous—contain more cells and fibres—not in proportion to the size of the *muscles* they represent, but in proportion to the number of different *movements* of muscles which they represent; the higher the level the more numerous different movements does it represent, along, of course, with corresponding impressions (sensory element) which I am neglecting. It is clear that the cerebral hemispheres are much more voluminous than all the centres of the lowest level put together are; but it cannot be said that what I call the motor province of the highest level, the prefrontal lobe, is, or is much, more voluminous than the motor province of the middle level (Rolandic region); I speak on this matter later.

I think we may say that the higher the level, limiting consideration to the motor provinces of the levels, the more tolerable is destruction of a given number of cells (destruction-lesion) and the more intolerable is high instability, instability far above normal, of an equal number of cells (discharge-lesion). For the higher the level the greater the number of different movements it represents and the greater is the intricacy of the level. (See part of the lecture on the Process of Evolution for qualifications). To take the case of destruction-lesions first; suppose a destruction of so much (1) grey matter of motor centres of the lowest level as would paralyse one arm completely; I submit that a loss of (2) the same quantity of grey matter of the "arm centre," a motor centre, of the middle level, would produce only weakness of the limb, and that (3) a loss of the same quantity of the motor province of the highest level (of any part of it I may say) would produce very little, if any, obvious effect on the arm. If what was said on the evolutionary process be true, it follows that the higher the level the greater the Compensation for a destruction-lesion, or, as I just said, the more tolerable is that kind of lesion. It is quite otherwise in the case of discharge-lesions or, synonymously, physiological fulminates; indeed, there can be no compensation for a discharge-lesion. I will illustrate by the effects of discharge-lesions of the middle and highest levels, that is by epileptiform seizures (the epilepsy described by Bravais in 1827) and seizures of so-called idiopathic epilepsy. The highly unstable cells of a discharge-lesion (or physiological fulminate) remain connected with other (no doubt, in gradually increasing degrees of indirectness, with all other) normal, healthy, comparatively stable, cells of the level of which such a lesion is a small part; most of the fit is beyond question owing to secondary discharges (induced by the primary discharge, that of the fulminate) of these normal cells (there is next, of course, discharge of cells of a lower level or of lower levels). The higher the level the more numerous are the normal cells which, upon discharge of the local fulminate can be compelled to co-operate in its excess, since the higher the level the more "intricate" it is, the greater the number of inter-connections. (Co-operation in Excess is, so to say, Compensation inverted).

The motor province of the highest level is not, I have

acknowledged, more, or not much more, voluminous than is the motor province of the middle level. I now consider this matter. Evolution is not an "even process," not one to be properly symbolised by the raising of an expression to a higher power, called Involution in algebra. If I may put it so, increasing evolution in the nervous system may, at least in some cases, be likened to the raising of some parts of an expression to a higher power than other parts of that expression are raised to. From theoretical considerations I think that in man the motor province of the highest level (a division of the "mental centres") represents very many movements of parts of the body which have small muscles (properly small movements) and that it represents comparatively very few movements of the parts having large muscles; if so it especially represents most complex movements of the ocular muscles, of the muscles of the hands, and of those of the tongue, lips, and palate; these are movements represented (of course, with corresponding sensory elements) in the physical bases of visual and tactual ideas and of words in the highest level ("mental centres").

The main elements of that part of mind which is commonly distinguished as intellect from the other part called emotion or feeling, are Visual and Tactual ideas and Words. Much the greatest part of mentation, both in the sane and the insane, is carried on in visual ideas; if all visual ideas were cleared out of a man's mind he would became practically mindless; there will be a very great representation of ocular movements in the highest level, Further, much mentation is carried on in tactual ideas. Herbert Spencer[13] has pointed out that intelligence in animals is proportionate to the development of tactual organs; to use his words: "a highly-elaborated tactual apparatus comes to be the uniform accompaniment of superior intelligence"; there will be a great representation of movements of the hands in the highest level. I suppose no one denies that words serve in all higher thought, in what has been called conceptual thought. I think that the physical bases of the psychical things we call words are audito-articulatory nervous arrangements and suggest that highly complex and special movements of the tongue, lips, and palate are represented in the highest level.

It is interesting that, according to Weir Mitchell, after amputation of limbs the parts of the lost limbs which remain spectrally, or I might say mentally, present to the patients are the terminal parts, hand and foot; the sufferers are, in most cases, unconscious of the part between the phantom hand or foot and the stump, if I may be pardoned this expression; they are "conscious of the parts" having small muscles; here is some indirect evidence that those parts are much more represented in the highest level than the parts having large muscles.

In this connexion I draw attention to a very interesting paper by Mr. F. H. Bradley.[14] In introductory remarks Mr. Bradley asks: "Why, when we strive to move in dreams do we not always move?" Perhaps this accords with the hypothesis that large movements are but little represented in the highest level ("mental centres"). Mr. Bradley makes the interesting remark that dream movements are easier in some dreams; "thus, for example, it is common to move the lips and tongue and fingers" (parts having small muscles).

I think we may conclude, taking into account not only the physical bases of visual and tactual ideas and of words, but also the vast number of connecting fibres implied by the innumerable combinations into which these ideas and words enter, that the motor province of the highest level, if not more voluminous, is yet more intricate than the motor province of the middle level; and that destruction-lesions of the former are more tolerable than equal-sized destruction-lesions of the latter; the reverse for discharge-lesions.

NOTES AND REFERENCES.

[1] *Med.-Chir. Trans.*, 1890. [2] *Brain*, vol. iv. [3] *Lancet*, December 22nd, 1894. [4] *Journal of Mental Science*, October, 1874, p. 401. [5] I do not say that all fits called epileptic (so-called idiopathic) are owing to discharge-lesions of parts of the highest level. There are seizures, called epileptic, depending on discharges beginning in parts of the temporo-sphenoidal lobe; convolutions of these lobes may not be parts of the highest level. [6] *Brain*, April, 1888. [7] For an able criticism of my opinions on this matter, see a paper by Dr. Gay, *Brain*, January, 1890. [8] *Clinical Journal*, March 1st, 1893. [9] The word "comparatively" is to be understood here and in many other places. [10] On the Spinal Cord and Medulla Oblongata and on Epilepsy, *New Syd. Soc. Trans.*, p. 64. [11] *Psychology*, vol. i, pp. 35 and 55. [12] *Phil. Trans.*, vol. cxxix, 1888, B. [13] *Principles of Psychology*, vol. i, pp. 358 *et seq.* [14] On the Failure of Movement in Dreams, *Mind*, July, 1894, p. 373.

NOTES ON AN EXPERIMENTAL INVESTIGATION INTO THE GROWTH OF BACILLUS TYPHOSUS IN SOIL.

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UNTRACED SOURCES OF INFECTION.

IN probably over 80 per cent. of the reported cases of typhoid fever the origin of the infection cannot be ascertained with any certainty. Usually some insanitary conditions in the surroundings of the patient are credited with giving rise to the disease. It is common experience that in a majority of cases when the sanitary condition are remedied, further cases of the disease are prevented. Again, it is also a common observation that so long as insanitary conditions exist cases of typhoid fever are apt to recur at longer or shorter intervals.

From observation and experience during a number of years it has become now, I think, generally accepted that the typhoid poison is generated outside the human body, and gains access by a great variety of ways.

The evidence, too, which has accumulated during the past few years must put it as almost beyond doubt that the bacillus typhosus of Eberth is the exciting cause of the disease we term typhoid fever. The theory, therefore, that the bacillus typhosus is fairly widely distributed in Nature, and that it is capable of living, and possibly of growing, for long periods outside the human body is one which, I think, is generally accepted, and is one which experience has shown to be of much value in the prevention of typhoid fever.

"TYPHOID AREAS."

It was my good fortune to have for several years exceptional opportunities of observing the special features of endemic typhoid fever in my capacity as Medical Officer of Health at St. Helens, one of the most typhoid-stricken towns in this country. Among the many interesting points in the natural history of the disease which one observed was that there were certain areas in which the disease showed a special tendency to recur at varied intervals.

One of the most marked examples of such an infected area occurred in a group of seven cottages in which 18 cases of typhoid fever were reported in eight years and a-half. Apart from the fact that these cottages had unpaved yards and privy middens, they were in a good sanitary condition. Perhaps 5 or 6 of the total number of cases were caused by direct infection, but the remaining cases occurred at intervals and under such conditions that one could arrive at no other conclusion but that there was some local source of infection which had existed in this locality during the whole of that period.

The above is an exaggerated example of what one observed in a great many other districts of the town.

EXAMINATION OF THE SOIL.

The question naturally arose as to where the actual propagation of the disease-producing organism took place. It appeared to be a matter of the first importance to determine this; because, having done so, one could the better formulate a scheme for the destruction of the infecting material.

With this object in view, I undertook a rather laborious research, during the first portion of which I was associated with Dr. Maitland Gibson, my assistant, to whose zeal, accuracy, and careful work I shall ever owe a debt of gratitude.

In the first instance, samples of soil—using the term "soil" in its widest sense—were collected from what I considered the most "probable" of the areas. These were examined by the methods which are detailed later with a view of finding the typhoid bacillus if it were present. Thirty such samples were collected and examined. In not one single instance was B. typhosus found. In many instances parallel control experiments were carried on with duplicate samples to which had been added small quantities of fresh culture of B. typhosus.

As a result of considerable experience of our best known methods of isolating the typhoid bacillus from infected material, I feel certain that it would be unwise to conclude that the organism was entirely absent from all of these soils. The number of organisms present in the "soils" examined was always great, but what made these investigations specially difficult was the number of organisms which were, either morphologically or from their cultural characteristics, very like the bacillus of typhoid fever. Dr. Klein has truly said that the search for B. typhosus under such circumstances is about as difficult as searching for the proverbial "needle in a haystack."

On many occasions similar researches have been undertaken by Continental bacteriologists, but in so far as I am aware in none of these, when positive results have been reported, has the investigation been quite satisfactory. Within the past few months Professor Delépine has been able to demonstrate the presence of B. typhosus in the soil of an infected area.

In this connection, too, how frequently have waters been examined by the most experienced bacteriological technologists, waters which one would say must have contained B. typhosus, and yet the results have been entirely negative. Several marked instances of this nature have occurred within the past few months in this country. Again, the careful and accurate investigation of Andrews and Parry Law on sewage from one of the London hospitals in which typhoid dejecta were actually thrown into the sewers without disinfection, went to show how extremely improbable were the chances of finding the bacillus typhosus in the presence of other filth organisms.

Experimental Inoculation of Soil.

Having thus entirely failed to demonstrate the presence of bacillus typhosus in the soil from presumable infected areas, I next proceeded to ascertain if it were possible for the typhoid organism to grow in the ordinary earth of the district, and if so, under what conditions. For these purposes inoculations were made on patches of soil in a field, and laboratory experiments were carried out in large sized chloride of calcium towers, which were filled with a variety of soils. In character the soil in the field, which afterwards yielded such interesting results, was as follows: On the surface about 8 inches of clayey loam, under which there was a stratum of sand and clay 10 inches thick, below which was a thick layer of stiff yellow boulder clay. The ground water level was high—it often came within 3 feet of the surface. A daily meteorological record was kept, which included 4 feet soil temperature and ground water levels. A daily estimation of the amount of carbonic acid in the ground air at 1 foot below the surface was made with a view to its giving an indication of the bacterial activity of the soil at any particular time.

The field where the outdoor experiments were carried on had not been manured for over ten years. Each experimental patch of ground had the turf removed, and nothing was allowed to grow on it:

Patch No. I was inoculated on May 20th, 1896, with about 200 c.cm. of a twenty-four-hours' old bouillon culture of bacillus typhosus, which had been recently isolated from the spleen of a man. The bouillon was added to about 1½ gallon of tap water, and the patch was slowly drenched with it on its surface.

Patch No. II had 9 inches of soil removed before it received a similar quantity of the culture. The soil was replaced as nearly as possible in its original order of stratification. Great care was taken that the sides of the excavation should not be inoculated.

Patch No. III was similarly treated, but at a depth of 18 inches from its surface.

Nothing was done to these patches until August 26th. On this date samples were taken from the surface of each patch—at about 3 inches below the surface of each—at 9 inches below the surface of Patches No. 2 and 3, and at 18 inches below the surface of No. 3. The surface samples were taken by skimming the surface with a sterile knife. The deep samples were taken by excavating at one side of the patch, and punching samples from the exposed face.

In every one of the samples bacillus typhosus was found with comparative ease. No attempt was made to compare the number of colonies of bacillus typhosus found in given [illegible] Dr. Gibson and myself were convinced [illegible] growth had taken place. Between the sowing of these patches and August 26th the weather had been on the whole dry, with abundance of bright sunshine. Total rainfall, 5.2 inches.

Another series of samples were taken on October 20th, the weather having been in the interval dull and very wet. On this occasion practically identical results were obtained.

On November 27th a third series of samples were taken and examined by identical methods and with equal care. In none of these could bacillus typhosus be found. Prior to the taking of these samples the weather had been cold, damp, and unsettled; the minimum shade temperature in the Stevenson's screen had been on several occasions below freezing point, The average of the readings of the thermometer for the week ending November 7th was 23° F.

Toward the end of August, 1896, three other patches, Nos. 4, 5, and 6 were inoculated in an identical manner to the first series. The only difference between the two series was that each of the patches in the second series was 3 feet square, while those of the first series were 18 inches square. Patches 4, 5, and 6 were examined on November 27th, and found also to contain no bacillus typhosus as far as could be ascertained.

Nothing was done until the middle of January (17th), 1897, when patches Nos. 4, 5, and 6 each received about 2 gallons of very weak beef tea (the solution containing about a teacupful of ordinary bouillon). At intervals of about a fortnight these patches (4, 5, and 6) received doses of various dilute organic solutions. This was continued until June 3rd (over 5 months). During the whole of this time patches Nos. 1, 2, and 3 received no organic matter.

On June 3rd, 1897, samples were taken from each of the six patches. In the case of the samples from patches Nos. 1, 2, and 3, no typhoid organism could be found. This was in very abrupt contrast to the fact that in patches Nos. 4, 5, and 6 the typhoid organism was easily found.

On July 11th, 1897, another series of samples were taken from each of the patches, with the same very interesting result. On this occasion samples were taken at 6 inches below the surface of Nos. 2, 3, 5, and 6. In those from Nos. 2 and 3 no bacillus typhosus could be found, while in those from Nos. 5 and 6 it was found.

At this point my investigation had to be brought to a conclusion, owing to my leaving the district, and as there is obviously some difficulty in continuing such an investigation in a new locality, I have thought it best to put in evidence what has been found, in the hope that others may repeat the experiments, and perhaps confirm them. One is convinced, however, that there are a very large number of points which require further investigation before the results can be absolutely accepted. The length of time which these experiments necessitate will make it many years before the main conditions of growth of the typhoid organism in the soil can be satisfactorily inquired into.

Methods of Isolating the Bacillus from Soils.

The amount of labour and difficulty entailed in the examination of a sample of more or less polluted soil for the typhoid bacillus can only, I think, be fully realised by those who have attempted such examinations. Such soils as have fallen to my lot to examine have contained enormous numbers of organisms which resemble in many of their morphological and cultural characteristics the bacillus of typhoid fever. It therefore becomes a matter of much importance in an inquiry such as this to make sure that reliable methods are adopted. As is well known, there is no one method which can be easily and generally applied.

Briefly, the method which was found most reliable, though by no means expeditious, and the one which was adopted for all the later experiments, was as follows:

I. The samples were collected in sterile test tubes with a sterile spatula; Each consisted of numerous small portions of soil, which were well mixed in the test tube.

II. About ½ to 1 gramme of the sample was then added to about 200 c.cm. of distilled water in a sterile flask, and this was incubated for 24 hours at 37° C. Several methods which depend for their success on the inhibition of the growth of many non-typhoid bacteria by the addition of chemical substances were investigated, but in my hands these proved not to be reliable.

III. Sterile agar plates were poured and allowed to set, with a sterile camel-hair brush from 2 to 4 such plates were inoculated by brushing the surface with the soil water This has the great advantages of producing only surface colonies.

IV. These plates were incubated and examined under a low power

(Zeiss obj. A. oc. 2). Every colony resembling in its appearance the B. typhosus was picked out with a platinum needle and examined in hanging drop with a Zeiss obj. $\frac{1}{12}$ and oc. 6.

V. Those which were found to be short motile bacilli were at once subcultured into milk.

VI. Those milk tubes which became coagulated after incubation were rejected.

VII. The milk tubes which did not become coagulated were subcultured into bouillon for indol and also into glucose gelatine for gas formation or into Theobald Smith's tubes and on to potatoes.

VIII. Pure cultures on agar were then obtained, and the organism examined by Van Ermengen's or Loeffler's method as to the disposition of their flagella, and also as to its reaction with typhoid serum of known strength.

I feel certain that it is a matter of much importance to know exactly how a culture of B. typhosus grows on the various media used. There are often slight differences in media prepared at different times by apparently identical methods which alter to some extent the character of the growth. To obviate this it was found important to prepare large batches of the different materials at one time. In the case of potatoes the slices taken from one potato ought to be kept by themselves, and each batch tested as to its reaction with a typical typhoid culture.

Conclusions from the Experiments.

The above experiments were carried out under conditions as natural as could be devised. Experiments carried on with soils in the laboratory were not found to give satisfactory results. The results obtained from the outdoor experiments are very suggestive, and, I think, throw some light on the natural history of bacillus typhosus. They prove that the typhoid organism is capable of growing very rapidly in certain soils, and that apparently under certain conditions the organism can survive from one summer to another. The rains of spring and autumn or the frosts and snows of winter did not kill them off.

What the exact conditions are which caused the organism to live for over twelve months in the one series and not in the other series of soils cannot at this step be definitely stated; but whatever these conditions may have been, there remains the one obvious fact that in the one series the organism was fed while in the other it was not. If this be the real cause of the difference it would appear that very similar conditions exist in the so-called typhoid infected areas. A leaking or defective drain is constantly feeding with organic matters the surrounding soil. If cases of typhoid fever are attributed to this drain and the leak is repaired, it is possible that a similar action will take place to that which occurred in the soils which were not manured.

So also the infected privy would appear to be admirably adapted for the preservation of the typhoid bacillus, owing to its constantly receiving fresh additions of organic matter. Whether all soils will support the healthy growth of the typhoid organism equally well is a subject for further research.

Sunlight.

Many experiments during recent years have gone to prove most conclusively that direct sunlight has a most powerful bactericidal influence on the typhoid organism. The results obtained by the above soil experiments go to indicate (as indeed one would expect) that the effect of sunlight is limited to those organisms actually on the surface. Samples of soil which had been collected by scraping a layer of soil not more than one-sixteenth of an inch in thickness from the surface of patches which had been exposed to abundant sunshine showed the organism to be present. It must be borne in mind, however, that the particles of soil are more or less opaque, and that it was impossible to roughly separate the exposed from the unexposed soil.

Spread of the Typhoid Organism in Soils.

With the object of ascertaining whether the typhoid bacillus had spread from the original infected area on to the surrounding soil (which happened to be grass land), samples were collected at distances of 1, 3, and 9 feet from two of the patches in July, 1897. No bacilli were found in any of these.

Some experiments on similar soils in the laboratory, with and without grass went to show that vegetation was detrimental to the healthy growth of the organism. These experiments could not be carried as far as was originally intended for reasons already stated. The subject is one of some importance, as it may go to explain why typhoid fever is so much more prevalent in towns than in rural districts. It also may throw some light on the fact that persons employed and living in the neighbourhood of sewage farms do not suffer from typhoid fever to the extent that might have been anticipated.

It has been already stated that cultures of the typhoid organism planted at a depth of 18 inches grew to the surface, so also patches inoculated on the surface showed that at least the organism could grow downwards to a depth of 3 inches. It is possible under the existing conditions that this downward growth may have been assisted by mechanical means, that is, rain or artificial watering.

So far as the results go no lateral spread could be ascertained.

Both in laboratory experiments and in experiments under natural (?) conditions it was abundantly proved that the typhoid organism could grow over moist surfaces of stones, etc. It was attempted in another series of experiments to detach the organism from the stones when dry by causing a current of air to impinge on them; this, however, in each case proved unsuccessful.

How far the typhoid organism can be given off from decomposing masses of semiliquid filth was also examined into. For this purpose sterile plates of agar or gelatine plated were inverted over masses of semisolid excrement, which had been largely contaminated with a culture of the typhoid bacillus. Such plates when kept at the ordinary temperature remained sterile for a period of nearly three months. Those that were kept at 37° C., and which presumably were exposed to a very actively decomposing mass, soon showed growth of various organisms. In no case did the typhoid organism appear among the growths. These plates were distant $1\frac{1}{2}$ and 4 inches from the decomposing fæcal matter, and at both distances apparently equal contamination took place.

NOTE ON THE SPECIFIC ACTION OF NORMAL HUMAN SERUM UPON THE BACILLUS COLI COMMUNIS.

By S. R. CHRISTOPHERS, M.B.Vict.

(From the Pathological Laboratory, University College, Liverpool.

The application of the serum diagnosis to the differentiation of the typhoid bacillus from the various varieties of the bacillus coli communis has not hitherto been as satisfactory in its results as might have been anticipated.

Peckham gives a table showing the action of typhoid human serum upon seventy cultures of typhoid and coli bacilli obtained from various sources, and lays stress upon the anomalous results obtained by her application of this test to the differentiation of the two forms. In her list the majority of cultures giving the biological characters of coli were undoubtedly agglutinated by human typhoid serum; one in particular she mentions as giving the reaction as fully, that is, clumping, and almost entire cessation of movement, as did any of the typhoid cultures.

Ziemke states that whilst using cultures of coli as controls in the performance of the Widal's test, he frequently found that they were agglutinated by typhoid human serum.

Bensaude also states that the agglutinins of typhoid serum act upon the B. coli, though in a less degree, than upon the typhoid bacillus, and explain this action as being due to the close biological relationship of the two organisms.

Such marked action of typhoid serum upon the B. coli would naturally invalidate the strict specific nature of the reaction between typhoid serum and the typhoid bacilli. There is, however, a source of error, which I have not seen mentioned, which may be to a large extent responsible for these puzzling results. It is that many have used as the differentiating test the blood of human typhoids. Now in the following table it will be seen that normal human serum has in the great majority of cases as specific an action upon the bacillus coli communis as has the serum of a typhoid patient upon the bacillus typhosus; that, in fact, the serum of typhoid patient probably has two distinct specific actions, one upon the typhoid bacillus due to infection by that organism, and one upon the B. coli, an action which is present alike in typhoid and non-typhoid sera.

Table I shows the action of a number of non-typhoid and typhoid sera upon the B. coli, with the amount of dilution with which the reaction could be obtained. The coli organism used was one which gave in a marked degree the characters of the B. coli, such as indol formation, coagulation of milk, gas formation, marked growth on potato, etc.

TABLE I.

		Typhoid.	Cholera.	Coli.
Non-typhoid	Normal...	Not 1 to 5	Not 1 to 5	1 to 30
	Normal...	,,	,,	1 to 120
	Normal...	,,	,,	1 to 60
	Phthisis	,,	,,	1 to 30
	Diabetes	Signs 1 to 5	,,	,,
	Lead poisoning	Not 1 to 5	,,	,,
	Empyema	,,	,,	1 to 20
	Pleural effusion	,,	,,	1 to 60
	Atheroma	Not 1 to 5	Not 1 to 5	1 to 60
	Hemiplegia	,,	,,	1 to 30
	Normal	1 to 5	Signs 1 to 5	,,
	Perityphlitis	Signs 1 to 5	Not 1 to 5	1 to 120
	Leucocythæmia	1 to 10	1 to 10	1 to 200
	Normal	Not 1 to 5	Not 1 to 5	Not 1 to 20
	Normal	1 to 10	,,	1 to 60
Typhoid	Fourth day	Not 1 to 5	Not 1 to 5	1 to 30
	Sixth day	1 to 60	,,	,,
	Sixth day	1 to 30	—	—
	Sixth day	,,	,,	1 to 20
	Seventh day	,,	,,	1 to 30
	Eighth day	1 to 120	,,	1 to 60
	Tenth day	Not 1 to 5	,,	1 to 30
	Thirteenth day	1 to 120	,,	1 to 120

At the dilutions given the action was not pronounced negative until after two hours. At such small dilutions as 1 to 20 the coli organism was agglutinated within twenty minutes with precisely similar appearances to those seen in the agglutination of the typhoid bacillus.

In order to see to what extent this action would hold good with different varieties of colon bacillus, I tried the action of normal and typhoid sera in dilution upon 16 cultures of supposed coli organisms taken from different sources. Three of these were acting pathogenically, 4 were from sewage, 4 from milk, 3 from mussels, and 1 from cheese.

It will be seen that the majority of these were agglutinated by human serum, independently of the fact whether it was from a typhoid patient or not. In fact, had any of these been suspected typhoid organisms, and the action of human typhoid serum been tried upon them, they might very easily have been returned as typhoid bacilli.

TABLE II.

	Pathogenic.				Sewage.				Milk.				Mussels.			Cheese.
	Typhoid from Spleen.	Lab. Coli.	Coli from Appendix.	Coli from Cystitis.	Coli from Diarrhœa.	C_1	C_2	C_3	C_4	C_1	C_2	C_3	C_4	C_1	C_2	C_3	C
Coagulation of milk		×	×	×	×	×	×	×	×		×	×	×				×
Gas formation		×	×	×	×	×	×	×	×	×	×	×	×	×	×		
Indol		×	×	×		×		×	×		×	×	×				
Marked growth on potato		×	×	×		×	×	×	×			×	×			×	
Human typhoid serum at dil. 1-20	×	×	×	×	×	×		×	×	×	×	×	×				
Human normal serum at dil. 1-20		×	×	×	×	×		×	×	×	×	×	×				
Normal rabbit serum at dil. of 1-40																	
Serum of typhoid injected rabbit at dil. of 1-40																	
Serum of coli injected rabbit at dil. of 1-40		^	^	^	?		^	^	×		×						

In face of these results I think that in the use of human typhoid serum for diagnosing suspected typhoid bacilli found in water, milk, etc., the equally specific action of the serum upon B. coli must also be borne in mind.

In the examination of a number of rabbits' sera, I found that in the majority of cases dilution to the extent of 1 in 20 did away with all agglutinating action upon both the typhoid and colon bacillus. Such animals injected with typhoid cultures ought (supposing a strict specific action) to give a serum agglutinating the typhoid bacillus and not the colon bacillus.

In Table II it will be seen that on none of the coli-like organisms had the serum of a typhoid rabbit (in dilution) any action, whilst it had a marked action on typhoid bacilli. So that presumably the results of those observers who have used the sera of injected animals as the differentiating agent have escaped the above-mentioned error.

However, even if injected animals be used, the serum ought to be proved to have no action upon the colon bacillus in the dilution at which it is proposed to use it as a differentiating test.

PRACTICAL SUGGESTIONS

ON THE

TREATMENT OF STRICTURE OF THE URETHRA.*

By JOHN WARD COUSINS, M.D., F.R.C.S.,

Senior Surgeon to the Royal Portsmouth Hospital, and to the Portsmouth and South Hants Eye and Ear Infirmary.

STRICTURE of the urethra may occur at any age from tuberculous disease or injury, but in a vast proportion of cases gonorrhœa is the primary cause. Living in the midst of a large seafaring population, we have abundant opportunities of treating every variety of urethral disorder. Sailors, as a class, live careless lives, and the diseases which they contract are too often treated by ignorant and unqualified persons. Injections are employed in all stages of specific urethral inflammation without any precautions at all, and their careless application, together with the neglect of local cleanliness, promotes the extension of the disease along the mucous surface of the canal.

During the last few years my views on the treatment of urethral stricture have undergone very considerable modification. I have long given up all attempts at forcible rupture, and likewise the operation of internal urethrotomy. Before the latter operation can be practised the strictured part must be dilated to admit the cutting instrument, and a sound equivalent to a No. 2 or 3 catheter must be successfully passed along the canal. Apart, therefore, from all other objections to this method, I am confident there are very few cases which cannot be cured by dilatation whenever an instrument of this size has been introduced into the bladder.

DILATATION UNDER AN ANÆSTHETIC.

It is my experience that the tightest and thickest strictures in any part of the canal can generally be cured by simple intermittent dilatation; and for the practice of this operation many kinds of instruments have been introduced from time to time, so that it would be a difficult task to develop any very startling improvement.

The special instruments which I employ are tapering catheters, with bulbous points and solid flexible beaks. The orifice of the tube is placed at the base of the beak, and the point of the straight stilette exactly fits the bore of the instrument (Fig. 1).

A tapering metallic instrument presents many advantages in the treatment by dilatation: (1) It enables the surgeon to rapidly pass several sizes of dilators at one sitting; (2) the flexible beak is serviceable in changing the direction of the point, which is a little manœuvre often of great advantage in penetrating a tortuous stricture; (3) the bulbous extremity assists the operator in determining that penetration has been successfully accomplished.

It is always a good plan to delay the operation of dilatation until the patient has been prepared by rest, regular and un-

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association held at Montreal in September, 1897.

stimulating diet, and general remedies. The preparation of the patient is an essential part of the treatment, for these precautionary measures, when carried out for a few days, render surgical interference more easy, and also tend to reduce the irritability of the canal.



Fig. 1.—A tapering metallic catheter with flexible beak and straight stilette.

It is a matter of common experience that the urinary organs present very varying degrees of irritability. Some patients are able to bear dilatation without any inconvenience, while others suffer great local irritation, attended with fever and other urgent symptoms. The passage of an instrument in a healthy man has occasionally excited dangerous constitutional disturbance. I have frequently observed that patients who have suffered from malarial poisoning in foreign climes are markedly predisposed to urinary fever. With them especially surgical interference with the urino-genital system has a tendency to produce febrile trouble, and the nervous currents which are thus excited appear to radiate widely through the body, and to rouse through old channels a latent irritability of the nervous system.

STERILISED INSTRUMENTS FOR THE DILATATION OF URETHRAL STRICTURE.

The absolute necessity for cleaning and deodorising catheters in the treatment of stricture is now universally admitted, but in my experience the process is often very imperfectly carried out. I have seen many cases of urinary abscess which could be fairly traced to the habitual use of old and dirty instruments. Now the cleaning process which I employ in my practice consists of two stages : (1) A steaming process, and (2) polishing the interior of the tubes.

The apparatus consists of a boiler having a capacity of about 3 pints, and capable of bearing a pressure of 80 lbs. to the square inch. It is heated by a spirit lamp. The steam pipe is connected with a vertical tube fitted with projecting terminals, and these are adapted to hold a complete set of catheters. Steam cocks are arranged on the steam pipe to regulate the discharge of steam, and a tray is placed beneath the instruments to collect the condensed water. I have converted a disused steam spray into a catheter deodoriser. The apparatus is represented in the woodcut. After steaming

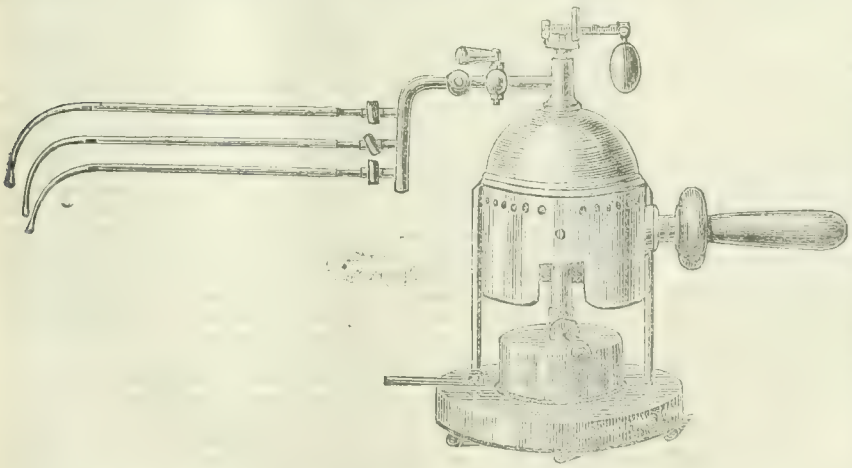


Fig. 2.—The cath deodoriser.

for three or four minutes, the instruments are wiped dry with a soft leather, and their insides polished with the steel stilettes. The point of each stilette consists of a flat metal disc which exactly fits the bore of the instrument. By the friction of the disc, the interior of the tube can be polished in one minute. The process is very simple, so that any nurse can carry it out, and completely deodorise a set of catheters in half an hour. The steaming apparatus and the tapering catheters have been made for me by Messrs. Arnold and Sons.

TREATMENT OF CHRONIC AND IMPASSABLE STRICTURE.

The operation of rapid dilatation is not suitable for many chronic cases, and their treatment has to be conducted with the greatest caution. Strictures are often followed by changes in the urethra between the meatus and the injured part of the canal, involving excoriation, ulceration, or even perforation of the mucous surface. Behind the stricture the walls are dilated and pouched, and the capacity of the bladder is reduced by slow thickening of the mucous and muscular coats. The ureters and the pelves of the kidneys, too, are often involved in the changes, which extend along the urinary tract, and these organs themselves become softened and attacked with serious interstitial disease. Hence in all cases of old stricture the treatment must be conducted in carefully regulated stages, and the urine submitted to frequent examination. It is often desirable to estimate the average amount of urea contained in the secretion, for in every case the danger of surgical treatment is in direct proportion to the extent of the renal degeneration.

In some cases, in which the introduction of any instrument has been attended with very considerable difficulty, I have used with much satisfaction a capillary catheter, and this perfectly flexible little instrument can really do injury. It is a compound contrivance consisting of a filiform bougie and a fine catheter, very carefully prepared with woven web and gum elastic, and possesses great flexibility and toughness, together with a smooth and highly polished surface. The combination is about 18 inches in length.[1]

With reference to the method of using the capillary catheter, it must always be handled with great delicacy and patience. After injecting the urethra with warm oil, the penis is drawn forward with the left hand, and the instrument gently passed down to the stricture. As soon as its progress is arrested it must be withdrawn two or three inches, rotated between the thumb and finger, and again twisted down upon the obstruction. During the repetition of these manipulations it often slips into the bladder, at the same time its free and easy movement in the urethra, together with the sensations experienced by the patient, clearly indicate to the operator that the stricture has been overcome, and the catheter coaxed to move on in the right direction. I generally retain the instrument in position for about thirty-six hours.

The operation of dilatation after prolonged rest and many patient efforts, sometimes proves unsuccessful, and the patient remains exposed to the risk of many terrible complications. Under these circumstances I always recommend the operation of external urethrotomy, followed by bladder drainage through the perineum, as the very best surgical procedure that can be practised.

Some surgeons have asserted that, if urine can be discharged through the canal, it ought to be possible by skill and perseverance for an instrument of some kind to be introduced through the stricture into the bladder. I cannot, however, admit this statement, for the urethra may be absolutely impermeable to instruments, although the urine can be discharged in a tiny and tortuous stream.

In all cases, then, of chronic and obstinate stricture, when other methods have fairly failed, and in cases of extravasation of urine, it is my practice to perform external urethrotomy in the manner suggested by Mr. Wheelhouse, and I believe this operation will supersede all the old dodges of finding a way into the bladder without a guide. After the operation the evacuation of the urine is carried on through the perineal wound for some days by means of an india-rubber tube. Perineal drain-

age secures the advantage of diverting the stream of urine, and also of permitting the anterior part of the passage to be effectually deodorised and kept at rest—a very important expedient for preventing the development of that form of febrile disturbance which is intimately associated with the contact of disordered urine with a wounded surface. Moreover, in cases of external urethrotomy for the relief of obstinate and unyielding strictures, the structures of the perineum are already infiltrated and unhealthy, the bladder is the seat of chronic cystitis, and the urine is persistently in a state of decomposition, so that under these conditions there is a special risk of septic absorption.

In all cases of extravasation of urine direct drainage through the perineum is absolutely necessary, as it is the only channel of escape for the urine well away from the swollen and sloughing tissues. Depend upon it, the most heroic incisions will prove insufficient unless the urethra is freely opened and a large drainage tube introduced just within the bladder. The operation can be very conveniently completed in the following stages: (1) Ether having been administered, and the patient placed in the lithotomy position, free incisions must be made wherever the urine appears to have penetrated, and the imprisoned fluids squeezed out with the hand—a manipulation which is much assisted by hot antiseptic irrigation. (2) Perineal section, followed by complete division of the strictured parts of the canal, should now be performed. When it is possible to pass a staff through the contracted urethra into the bladder, this part of the operation is converted into a very simple proceeding; but when this cannot be accomplished the urethra must be found and the bladder reached without a guide. When retention of urine is present the distended passage is readily opened. If, however, the bladder is empty a little patience may be necessary to ensure success. Sometimes I have found the orifice of the tube by the aid of a small probe, and then slipping by its side a blunt pointed director, the stricture has been carefully divided and a urethral gorget passed into the bladder. If any contraction exists in the penile portion of the canal, I divide this subcutaneously through the perineal wound on a straight staff with a narrow and blunt pointed knife. (3) After warm irrigation the operation is completed by introducing a large catheter through the entire length of the urethra, over the gorget into the bladder, and on withdrawing the instrument a drainage tube is inserted through the perineal wound.

The tendency to contraction of the cicatricial tissue in the walls of the canal after dilatation or external urethrotomy may be overcome by the judicious use of dilators. My patients are always taught to introduce a No. 11 or 12 tapering catheter, and they are urged to assiduously continue the treatment.

The following cases of chronic stricture were under my care at the Royal Portsmouth Hospital during May and June of 1897:

CASE I. *Stricture of the Urethra of Twenty-five Years' Duration: Extravasation of Urine.*—G. H., aged 57, a carpenter, was admitted on May 6th. He was very ill, with high fever and rapid pulse. The urine had been dribbling away for some days. The scrotum and penis were greatly distended, and the abdominal extravasation extended several inches above the umbilicus. He was at once placed under ether, and after free incisions perineal section was performed, and two strictures divided. Drainage was continued for two weeks. He made rapid progress, and soon learnt to pass a No. 11 catheter. Last seen in October; he was then in good health and able to follow his employment.

CASE II. *Stricture of the Urethra Twenty-seven Years: Perineal Fistulæ, with Fœtid Cystitis.*—B. B., aged 52, stated that he had suffered from stricture twenty-seven years, and had undergone two severe operations. On admission, May 7th, he was labouring under septic fever, with varying temperature and great prostration. He had recently made several efforts to introduce a small gum elastic catheter, as for some months the urine had escaped from the fistulæ. The urine was thick and very fœtid, and the perineum was hard and swollen. After a few days' rest and antiseptic treatment perineal section was performed. The membranous portion of the urethra was found almost obliterated, and the canal had to be opened on a fine probe. Perineal drainage was carried on for three weeks. He left the hospital on June 9th, and since then has gained 20lbs. in weight. He continues to pass a No. 12 tapering catheter three times a week. The perineum is quite sound, and the fistulæ have healed.

CASE III. *Chronic Stricture, with Acute Urinary Fever and Extravasation.*—H. J., aged 54, a shipwright, was admitted on May 25th. He stated that he had suffered from stricture many years, and had been in the habit of passing a small catheter. The penis was much swollen with brawny hardness around the base and in both spermatic regions. The urine was discharged in a tiny stream, but no kind of instrument could be coaxed through the penile stricture. After free incision and irrigation, perineal section was performed, two strictures divided, and a drainage tube passed into the bladder. The inguinal regions were also drained through the scrotal incisions. Progress was slow, and the drainage and antiseptic treatment had to be continued for three weeks. He left the hospital on July 10th, capable of passing easily a No. 12 tapering catheter. He is now in good health, and has gained many pounds in weight.

CASE IV. *Chronic Stricture and Extravasation of Urine.*—H. D., aged 50, a tall and powerful man, stated that he had evacuated his urine with great difficulty for many years. On admission—June 6th—he was suffering great pain, high fever, and prostration. The penis, scrotum, perineum, and abdominal wall were greatly distended. The immediate treatment consisted in free incisions, irrigation, perineal section, and the introduction of a drainage tube. The urethra was surrounded by sloughing tissue. Recovery was rapid, and the patient left the hospital on July 11th. A few days since his medical attendant reported that he was in good health, and regularly introducing without difficulty a No. 11 tapering catheter.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, December 19th, 1895.

AN EXPLANATION OF THE SUPPOSED INCREASE OF CANCER MORTALITY IN THIS COUNTRY.

BY ARTHUR NEWSHOLME, M.D.LOND., M.R.C.P.,
Medical Officer of Health, Brighton.

IN a recent paper read before the members of the Insurance Association of Manchester, Mr. Wm. Thorburn, F.R.C.S., enters into an interesting discussion of this subject, and the following remarks consist chiefly of a criticism of the facts and inferences contained in this paper. Mr. Thorburn first of all draws attention, as all other writers on the subject have done, to the immense increase of proportional mortality registered as having been caused by "malignant disease," the proportion of deaths from malignant disease to total deaths from all causes having risen from 1 in 74 in 1854, to 1 in 23 in 1894. This increase, if established as an actual fact, has an important bearing on the work of insurance offices; because, as Mr. Thorburn point out, (*a*) the increase is especially among males, who form the vast majority of the assured; (*b*) cancer comes on after the age at which insurance is usually effected; and (*c*) it occurs to a predominant extent in those of good social position, who are most likely to insure their lives. This statement of the case we may mention in passing is only correct in so far as the increased amount of cancer causes the mortality among the insured to occur at an earlier age than would occur in its absence. All must die; when cancer causes premature death, and only then, can it be said to have an unfavourable effect upon the practice of insurance offices.

Mr. Thorburn then summarises some of the considerations which led Mr. King, F.I.A., and the present writer to the conclusion that the registered increase of cancer is only apparent and not real.[1] These briefly summarised are as follows: There has been great improvement in diagnosis and certification, and where, as in Frankfort-on-Maine, the deaths can be classified into those of inaccessible and accessible regions, the increase of cancer is seen to be confined to the former. They support this important fact by the additional facts that the increase of cancer mortality shown in the experience of the Scottish Widows Fund is much smaller than that among the general population; while in Ireland, even when correction is made as in the last case for age distribution of population, there appears to be much less cancer than in Great Britain. The former fact points to the better medical attendance throughout the whole series of years of the class of persons whose lives are insured; the latter fact, in part at least, to the less accurate diagnosis and certification among a poor and scattered population.

Mr. Thorburn, while admitting the force of these facts and arguments, does not think that they cover the entire ground. There remains, in his opinion, a very large proportion of this increase of cancer mortality, for which he has a special explanation—one which must have occurred to many minds. Mr. Thorburn has evidently failed to appreciate the fact that Mr. King and the present writer have entirely eliminated the cause of disturbance of death-rates, on which his explanation is based, by a novel method of correction for age and sex distribution of population, which is fully described and illustrated in their paper.[2]

Mr. Thorburn's explanation is that with the lowered

general death-rate, caused by improved hygienic conditions, many more survive to older ages than formerly; but, inasmuch as we must all ultimately die, "there must be a correlative rise in the death-rate from those diseases which are neither curable nor preventable." In the paragraph just quoted it is evident that there is a failure to grasp the true meaning of the word "death-rate," which signifies the number of deaths occurring in proportion to the total population among which the deaths occurred. It follows that, if the deaths at higher ages are taken, they must be stated in terms of the number of persons living at these higher ages. That this misconception exists is shown by a table quoted by Mr. Thorburn, in which the decreasing death-rate per million living at all ages from tuberculous diseases is contrasted with the increasing death-rate from cancer. Of course, if more persons live to older ages, more will die from the diseases of degeneration, cancer among the rest. But this does not imply any addition to the cancer death-rate at these ages when stated in terms of the number living at corresponding ages.

Similarly in a further table Mr. Thorburn gives an analysis of the experience of 3,203 persons (Lancashire Insurance Company) which is most misleading, because it states the deaths from cancer in four successive decades and in one period of four years in their ratio to 100 deaths from all causes. This method of statement of the case, when we know nothing of the average age of the persons insured in each of these periods, is fundamentally unsound. It certainly does not justify the conclusion stated by Mr. Thorburn that the partial elimination of tuberculosis "is alone sufficient to account for the whole of the population now reserved to die of cancer." Still less does it justify the conclusion that "the increase of cancer is real and not fictitious, and that the cause of this increase is the fall in the death-rate from other causes."

Having shown the errors into which Mr. Thorburn has fallen by confusing between deaths and death-rates, and by basing arguments on the proportion of deaths from cancer to total deaths from all causes, it remains to consider what correct methods Mr. Thorburn might have employed, and whether the facts of the case support the conclusion reached by him by illegitimate methods. It would have been somewhat laborious and difficult for him to state the death-rate from cancer for separate groups of ages as 25-35, 35-45, and so on, though this could have been done. But, apart from this, the assumption that the increase in the death-rate from cancer is due to the greater number of survivals to mature years can easily be disproved from the Registrar-General's returns. Thus in 1881-90 the average death-rate from cancer of males aged 25 and upwards was 9.49 per 1,000; in 1871-80 it was 6.97 per 1,000 of the population over 25 years of age. But on referring to the table on page 8 of the last decennial supplement of the Registrar-General, we find that out of every million persons living at all ages, the number of males aged 25 and upwards was 214,644 in 1881-90, as compared with 214,566 in 1871-80. There is obviously nothing here to account for the great increase in the registered death-rate from cancer. The adult population out of every million at all ages was practically identical in the two decennia, and yet the death-rate among males aged 25 and upwards increased, as we have seen, from 6.97 to 9.49 per 1000!

The problem may furthermore be approached from the standpoint of the life table. In a life table, a million infants are supposed to be traced through life until all are dead. A million male infants have thus been traced, in accordance with the mortality experience of 1871-80 and 1881-90 respectively. The English life table shows that out of a million male children born, there are surviving in the former period at the age of 25 years 657,077, as compared with 693,809 in the latter period. Consequently the deaths from cancer in 1871-80 at ages over 25 among males, which were 36,410, must be increased in the proportion $\frac{693,809}{657,077}$. This means that they become 38,447, and the death-rate per 1,000 of the population aged 25 and upwards becomes 7.36 instead of 6.97. It is obvious, therefore, that even on this basis the explanation advanced by Mr. Thorburn only accounts for an increase of 0.39 per 1,000, whereas an increase of 2.50 per 1,000 in the registered death-rate from cancer among males at ages over 25 has to be explained. So much for the conclusion reached by confusing between deaths and death-rates. To sum up, there has been a remarkable increase of cancer mortality as registered in our official death-returns. The assumption that the greater number of survivals to the higher ages account for this has been shown to account for only a minute proportion of this increase. Two explanations remain. Either there has been a real increase in cancer mortality (in proportion to the number living at each group of ages), or the great increase shown by the official returns is caused by improved diagnosis and more accurate certification of death on the part of medical practitioners. The reasons given by Mr. King and the present writer in favour of the latter of these two alternatives remain as cogent as they considered them when they wrote the paper to which reference has been made. Even if this opinion is unshared by others, it is at least a wise position to assume that the problem is as yet unsolved. Theorising as to the cause of the increase of cancer, which hae been so abundant in our reviews and elsewhere, may bpostponed until it can be shown that an increase has occurred.

I may allude in conclusion to the old and oft-exploded fallacy running through Mr. Thorburn's paper, of assuming that the age at death is a criterion of mortality. Thus, in dealing with the statistics of the Lancashire Insurance Company for the years 1853 to 1896, stress is laid on the fact that the average age at death of the first half of the male cases was 56.1, whereas that of the second half was 61.0. I may point out that the company in question was established only in 1852, and as very few lives are insured after the age of 50, it necessarily follows that the age at death in the case of claims in the first half of the period from 1853 to 1896 was lower than the age at death in the second half; and the figures brought out by Mr. Thorburn have no meaning whatever, except as showing that the Insurance Company is a young one. This test is completely discredited, and it is unfortunate that an attempt should be made to rehabilitate it in a paper read before a learned society dealing with a problem of serious practical importance.

Many years ago Dr. Farr showed the danger of using the mean age at death as a test in statistical inquiries, and we may quote an example employed by him in bringing home to the mind of his readers the ofttimes laughably fallacious character of this test. Curates die at the average age (say) of 30 years, while the average age at death of bishops is (say) 65 years. Consequently bishops on an average live 35 years longer than curates; the real fact being, of course, that the former are recruited from the latter!

If one were seriously to argue that because the age at death of the boarders in a large public school averaged 15 years, while that of the occupants of a workhouse averaged 65 years, the workhouse is a more salubrious place than the public school, the argument would be submerged in ridicule. And yet the argument, of which I have given two extreme instances above, is one on which the main contention in Mr. Thorburn's paper almost completely rests.

REFERENCES.
[1] *Proc. Roy. Soc.*, vol. liv. [2] *Op. cit.*

FRENCH CONGRESS OF MEDICINE.—The opening meeting of the fourth French Congress will be held at Montpellier on April 12th. Professor Bernheim, of Nancy, will preside. The questions proposed for discussion are: 1. The Clinical Forms of Pulmonary Tuberculosis (to be opened by MM. Bard of Lyons, Révilliod of Geneva, and Vergely of Bordeaux). 2. Microbic Associations and Mixed Infections (to be opened by MM. Malvoz of Liége, Spillman of Nancy, and Widal of Paris). 3. The Therapeutic Use of Organs with Internal Secretions (to be opened by MM. de Cerenville of Lausanne, Gilbert and Carnot of Paris, and Moussé of Toulouse). The communications of all these gentlemen will be printed and distributed to all members before the opening of the Congress.

MEDICAL SIGNATORIES OF THE DECLARATION OF INDEPENDENCE.—According to an American journal there were five members of the medical profession among the men who signed the Declaration of Independence in 1776. These were Benjamin Rush, of Philadelphia; Lyman Hall, of Georgia; Oliver Wolcott, of Connecticut; Josiah Bartlett and Matthew Thornton, of New Hampshire.

FORCED REDUCTION OF LATERAL CURVATURE OF THE SPINE.

By NOBLE SMITH,

Senior Surgeon to the City Orthopædic Hospital, and Surgeon to the All Saints Children's Hospital.

Forced reduction of curvatures of the spine, a remedy which during recent months has attracted so much attention, has been chiefly directed to the correction of the deformity in caries, and (as far as this country is concerned) little notice has been taken of its application to cases of lateral curvature. Many cautious surgeons hesitate to run the risk, which apparently exists, when attempts are made to tear asunder inflamed and ulcerated vertebræ with the object of getting rid of the deformity in caries, but no such risk, I think, appertains to manual force applied to scoliotic spines.

A young man, aged 17, was sent to me on September 1st, 1897, by Dr. W. J. Foster, of Reading. He first began to fail in health at the age of 7, and the spine subsequently gave way. At the age of 13 he suffered from severe rheumatism. A year ago it was noticed that the right shoulder was projecting backwards. Recumbency was advised, and an inefficient apparatus was applied, but the spine had been getting worse ever since. There is a family history of phthisis.

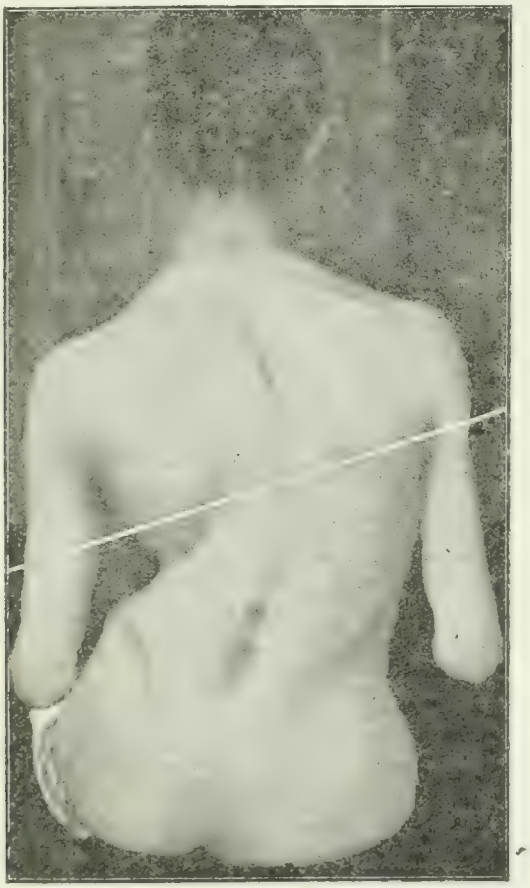


Fig. 1 (from a photograph) represents the patient when I first saw him. He was sitting in his ordinary attitude, and could only sit up a very slight degree straighter, for a moment, when he made an effort. The white line shows the positions of scapulæ.

On September 7th I applied force to the curve. The patient was placed upon a prone couch, the level part of which supported the chest, abdomen, and pelvis, the legs sloping downwards to a foot rest. I stood over the patient and applied almost as much pressure as I could exert with my right hand upon the prominent dorsal curve, while with the left hand I supported the patient's left shoulder in the contrary direction. The pressure was made downwards as well as to the patient's left, with the object of rotating the spine towards a normal position. In making this movement the ribs on the left side were seen to assume a more natural position, partly filling up the great hollow of that region. The spine was thus considerably straightened. The patient felt sharp pain at the time of pressure, but this went off in a few moments. I then applied a light apparatus to keep up the improvement produced.

On September 10th the patient reported himself as feeling much better in health, and he stated that he could sleep quite comfortably in the instrument. I again applied force in the same way as before with the same result, that is the spine was made distinctly straighter. The following week he again reported himself as feeling much better and stronger, and I again applied force and again straightened the spine considerably.

In making these forced reductions something was heard and felt to give way, like the breaking down of adhesions.

This patient was very plucky, and was able to bear the operation without an anæsthetic, but it is probable that the majority of patients would be more easily dealt with while under the influence of gas or ether.



Fig. 2 (from a photograph taken three weeks after commencement of treatment) represents the amount of improvement produced. The patient was able to maintain this position quite comfortably during the ten seconds necessary for the exposure of the photographic plate. With the help of the apparatus he was able to maintain even a better position. The white line shows the positions of scapulæ; level.

In estimating the benefits likely to be derived from this method of treatment, I may say that I have found that whatever position can be attained by apparatus can always be reckoned upon to become permanent in the course of time.

McGill University.—Mr. W. C. McDonald, already a munificent benefactor of McGill University, Montreal, has founded and endowed an additional chair of chemistry. Mr. McDonald recently erected, at a cost of nearly £50,000, a chemical institute for the university. He has now given also a sum of £40,000 to supplement the existing endowments associated with his name, in order to provide for any deficiency in income which may result from the fall in the ate of interest on investments.

SIXTY-FIFTH ANNUAL MEETING
OF THE
BRITISH MEDICAL ASSOCIATION.

Held in Montreal August 31st, September 1st, 2nd, and 3rd.

PROCEEDINGS OF SECTIONS.

SECTION OF OPHTHALMOLOGY.

Edward Nettleship, F.R.C.S., President.

A DISCUSSION ON ANTISEPSIS IN EYE SURGERY.

Dr. Noyes (New York) in introducing the discussion said: I do not think it is necessary to enter into any defence of the subject of antisepsis in eye surgery, but the matter has, as it were, reduced itself to certain practical items which in the case of different men may perhaps be somewhat different. The thing divides itself, in a certain way, naturally into two departments. In the one is considered the preparation and protection resorted to in hospital practice; in the other what is found desirable or necessary when the circumstances are more favourable, such as we have in private practice. In hospital practice, I do not think there is any very noteworthy departure in the practice of the New York Eye and Ear Infirmary from what is pretty generally practised. In the first instance, the patient receives a bath, is made perfectly clean, his face and head are thoroughly cleansed, his eyebrows especially receive attention, the eyelashes and all the parts immediately surrounding the eye are treated by a sufficient application of simple warm water and soap. Then the more particular preparation is made. The conjunctival sac is opened, and it has been my habit to inundate the sac freely with a simple solution of boric acid. It does not, as a matter of course, act as a distinctly antiseptic application, but it serves what I require: it washes out all the mucous coagula which will be found hidden away in the *cul-de-sac*. Of course it takes a little patience sometimes to insure the removal of all this material. This much so far as the preparation of the patient is concerned; I might say that in the case of some gentlemen, and I am speaking here of the institutional practice as well as my own, it is customary for twenty-four hours to put the eye under an occluding bandage in order to ascertain the presence of secretion, and if the secretions found are insufficient in quantity, the conditions are deemed sufficiently healthful to warrant proceeding with the operation at once. In some cases, however, it is sometimes true that a very notable amount of secretion is found upon the dressings, and the case is regarded as one not safe to be proceeded with; the conjunctival inflammation is treated until the secretion is overcome.

The next step is the care of instruments, and in the care of instruments there is a pretty general concurrence in one proceeding, namely, that the instruments are put into boiling water which is itself sterilised, and remain there for perhaps 5 to 10 minutes—the time is not definitely stated. Having been treated in this way for that period of time, they are then immersed in a solution containing carbolic acid solution, 4 per cent., and then they are simply kept under water and covered with a towel which has been saturated with bichloride solution of 1 to 3,000. I omitted to say that in the preparation of the skin of the face, after the treatment by soap and water, the bichloride solution of 1 to 3,000 is also added to insure greater purification of the parts.

This care of instruments by the use of boiling water and their subsequent immersion in carbolic acid is, as a general thing, all that is employed, as far as my own experience goes, and it seems adequate to secure their immunity from any pernicious influence. In the case of simple cutting instruments (needles and knives) nothing further than this, besides wiping them off with absorbent cotton, seems to be required. In instruments like forceps and scissors, the purifying process necessarily requires to be more thoroughly performed, and with greater carefulness, especially in the examination of the joints and crevices of the instruments, as sometimes under the magnifying glass it will be found that particles have adhered and they are subjected to a longer period of boiling.

In some instances, when called upon to operate outside the hospital, I have boiled the instruments before reaching the patient's house, and they are immediately before the operation immersed in alcohol and kept there for a period of 10 or 15 minutes, and this final immersion in alcohol seems to serve the purpose of securing the necessary immunity. Then, so far as the operator himself is concerned, his fingers need not necessarily come in contact with the eye, although very often in the eversion of the lids, that is unavoidable. His hands are cleansed not in the more elaborate way that is done by surgeons who may be obliged to put their hands into the cavities of the body, but by simple warm water and soap and by thoroughly scrubbing the nails and fingers with soap, to which is added powdered borax (the nailbrush thoroughly loaded with powdered borax serves, with the addition of soap, to remove all the fatty matter from under the nails, and it puts the hands in a condition which, so far as I am aware, renders them sufficiently immuned for all practical purposes. The dressings which are used have always been thoroughly treated for purposes of sterilisation. The lint and bandages have been subjected to a steam heat in a suitable apparatus, and they have been put away in a glass jar with a tight cover, and only opened as occasion requires. The bandages and the lint and all other material are carefully protected from the air after having been treated in the manner spoken of.

Furthermore, after an operation which involves the opening of the cornea and similar operations for which these proceedings are specially necessary, the dressing, which has been already sterilised, is applied and the same method of protection is employed in the solutions used: they are all prepared with distilled water, and they themselves have been put into small vials and solution of atropine, or whatever else may be employed, corked and only opened at the time of use. The solution of cocaine is treated in the same way, so that for every operation a thoroughly purified solution is used for each particular case, and it is not the mere dropping of a dropper into a bottle which has been opened many times, but a solution which has never been used before.

Finally, when dressings are to be applied, these dressings have all been sterilised, and for myself personally it is a habit to irrigate the cotton or lint which is used under the bandage with a solution of bichloride of mercury, 1 to 3,000, and thereby keep the eye under a moist dressing, this moisture lasting for 24 hours.

Lastly, in cleansing the eye after cataract extraction of any *débris* which may be present, the boric acid solution in a bulb is used, simply washing away the material from the conjunctival cavity and from the exterior of the wound, but I have long since given up irrigation of the anterior chamber; especially have I given up the use of the iodide of mercury solution, because I found in not a few instances that it gave rise to opacity upon the posterior surface of the cornea, and I no longer resort to any form of injection into the anterior chamber of any fluid whatever.

As to irrigation of the conjunctival sac, I am, for my own part, quite indifferent as to whether the solution should be 2 per cent. of boracic acid or the physiological salt solution. Consequently the whole sum and substance of the matter seems to indicate, as the result of considerable experience, that cleanliness as thorough as possible, asepsis rather than antisepsis, is the aim of the various methods mentioned.

I have, however, while making this statement to the effect that I am fully persuaded of the importance of the several steps thus summarised and that they are essential to the most satisfactory results—I have, however, another observation to make. I cannot forget two instances which have come under my notice within five years—operations involving the cornea. Suppuration took place in each of those instances, notwithstanding that the greatest pains were taken to fulfil all the requirements within my knowledge for securing antiseptic results, but in both of those instances I was fully persuaded that the ill-effect was consequent upon the pernicious influence of defective plumbing. I was compelled to operate in the neighbourhood of closets from which there proceeded a

foul odour which was quite perceptible. I was conscious of it and did what I could to ventilate the room and to counteract the pernicious effect; but the suppurative process was introduced, and in one case it did serious mischief to the eye, and in the other case necessitated measures vigorous in character to protect the eye from very serious harm. Now, there is the influence of contagion which I found myself powerless to cope with, and what could have been done under these circumstances, except to have refused to operate and go into the hospital where we knew the conditions were vastly better, I cannot at present say.

There is one other item I would like to speak of. It is well known that one of the more serious dangers with which we have to contend is protecting the eye from suppuration or the possible complications on the part of the lachrymal sac; and while every effort is made in all instances to counteract the hurtful tendency which thus arises, I likewise again call to mind instances in which there was no perceptible evidence that there had been lachrymal trouble—evidence was so entirely wanting that I was misled into failing to make any inquiry on the subject. The parts looked entirely healthful. For four days after the extraction had been performed no sign of trouble presented itself, but this was a case in which prolapse of the iris took place, and about the fifth day suppurative inflammation ensued, and simultaneously there then appeared reproduction of the lachrymal trouble which had been in abeyance for many months if not for years, showing that there was a condition of latent mischief in the lachrymal sac which at that moment came to the surface and gave rise to the injurious results of which I speak.

A word further, because I think what I now have to say bears upon the question of antisepsis. The fact that while one may have the most careful preparation, invasion of suppurative action is possible has determined me to prefer moist dressings to the eye to dry dressings, simply because secretions are thereby favoured in their outflow, or rather the outflow is favoured by those circumstances. In the second place I invariably inspect the eye after a lapse of twenty-four hours. It enables me to ascertain what is going on and I never found any harm ensue from it, I mean the prolapse of the iris or any other mischief, and you can thereby assure yourselves that a favourable healing process is going on, or if the contrary has already manifested itself you are in a position to apply appropriate remedies. For my part I know of nothing that can in any way successfully antagonise suppurative process excepting continuous uninterrupted applications of moist heat—hot water applied by compresses which are applied without interruption for the first twenty-four hours and with a temperature as hot as it is possible to bear—that is the one remedy calculated to be of any avail to counteract suppurative processes.

In reply to the President, Dr. Noyes said the dressings he used were all sterilised. They were not treated by the bichloride of mercury. They were simply subjected to the application of high heat.

Dr. Randolph (Baltimore) said: I would like to draw attention to one or two practical points that strike me now as regards the use of fluids inundating the conjunctival sac. I am entirely in accord with Dr. Noyes in thinking that the use of neutral solutions is far the best course to pursue. I think there are ideas about the use of chemical solutions which no doubt kill germs that are undergoing a gradual change. In other words, there was a time when we thought that in most cases we had to use sublimate solutions in cataract operations, but I think that now the principal thing is in cleaning our instruments. I think that boiling water is equally good, and it will be found to be associated with just as many successes. One point about the sterilisation of instruments—I have abandoned boiling my cutting instruments. It has been shown that heat—it makes no difference whether it be moist or dry—dulls the edge of the cataract knife, and there is probably no instrument in surgery that has to be sharper than the cataract knife. Consequently, I have generally immersed the cataract knife in absolute alcohol, and having been in the alcohol for fifteen minutes, it is dipped in sterilised water—water that has been boiled—and is then ready for the incision. Absolute alcohol, 99 and a fraction per cent., has been shown to be certainly germicidal to the germs found most often in the conjunctival sac. This is about all that occurs to me just now—the boiling of the instruments, except the cutting instruments—the immersion of the cutting instruments in absolute alcohol just before the incision, dipping them into sterilised water, and the inundation of the conjunctival sac with boiled water instead of any chemical solution.

Dr. Buller (Montreal) said: Mr. President, to some extent I feel responsible for bringing this discussion before the Association. I was induced to believe that it might be an interesting subject for discussion from the fact that I am aware that most of my colleagues in ophthalmology are firm believers in antisepsis, and practise antisepsis according to their light. A heresy may spring up in the presence of any belief, however sound and solid it may be. A year or two ago, I heard it announced in a scientific society of great merit and prominence, by one of the members of the society, that he did not believe at all in antiseptic surgery, and he proceeded to give a vast number of statistics, especially of cataract operations, showing that the general results of operative ophthalmology are no better now than they were before the days of antiseptic surgery. If antiseptic surgery can do nothing for us, we will not waste our time over it as a body of professional men. Therefore it was desirable, I thought, even for the sake of checking any tendency to heresy, to investigate the subject from time to time. For my own part, I am a firm believer in the efficacy of antiseptic eye surgery. I have very little to say as to the method I use in my own practice. Of course it is done under better auspices in well-appointed hospitals than can be the case where we treat, as we often have to do, our patients in boarding-houses, and even in hotels, and places where there is no possible provision for thoroughly carrying out antiseptic proceedings. The preparation, so far as the patient is concerned, which I adopt does not differ materially from that which Dr. Noyes has described. In all operations which are likely—which I expect may be followed by results from antisepsis—I certainly have the patient prepared a good many hours beforehand. I do not make it a practice to bandage up the eye for twenty-four hours beforehand with the idea of getting some knowledge of the amount of secretion which might be induced by bandaging, but I satisfy myself with preparing the patient a few hours before the operation, the face being thoroughly washed with soapy water, bichloride of mercury, and the eye flushed out thoroughly with boracic acid solution. I then bandage the eye with absorbent cotton, dusted freely with boracic acid. This is applied to the moist skin. My idea may perhaps be all wrong, but I imagine in that way I get a very strong solution of boracic acid applied to the edge of the lid, and if there is any merit in the antiseptic qualities of boracic acid, I get it in its most pronounced form in that way. This boracic dry bandage is applied then for some hours before the operation, and a short time before the operation the washing process is repeated. I do not wash out the conjunctival sac with bichloride of mercury any more. I am satisfied that it sometimes forms an element of danger in the recovery of the wound. I, like Dr. Noyes, did at one time use fluids for washing out the anterior chamber, but the results I obtained were not satisfactory, even when I used apparently non irritating solutions. I am satisfied that they caused more irritation than desirable, and I gave it up after a few attempts. I do not always apply moist dressing after my operations upon the eye, but as a general thing I prefer the moist dressing for twenty-four or forty-eight hours after my cataract operations and some other operations. I apply the dry dressing—absorbent cotton dusted freely with boracic acid, or boracic iodoform. After two or three days I abandon the moist dressing and make use of the dry dressing, changing the dressing only once a day. Now, there are one or two classes of cases which in my opinion are exceedingly convincing as to the efficacy of antiseptic eye surgery. There is one class of cases which I used to see in England quite frequently in the numerous operations of cataract extractions performed—that is, persons suffering from chronic eczema of the skin, and notably those suffering from chronic eczema of the face. I never saw in hospital practice a case of that kind operated on which did not result in suppuration. I have had some experience in operations done under similar circumstances in my own practice with the same results. Since practising antiseptic surgery, I have had the opportunity

of operating on several patients suffering from chronic eczema, and I have had good results from every case by preparing the patients beforehand, of course treating the eczema for some time before the operation. The next class of cases which to me are very striking illustrations of the benefits of antiseptic surgery are the Mules's operations, but I purpose to speak upon the subject directly, and I need not now detail what is done in the way of antisepsis in this connection just now.

Dr. JACKSON (Philadelphia) said: There are three points which I would like to speak about. One is with reference to bandaging the eye preliminary to operating. I do not do it. I believe it is bad practice. If such a test should be applied to an eye to make a decision as to whether it was fit to be operated upon or not, it should be applied some time previous to the operation. I think we should not bandage the eye twenty-four or forty-eight hours before the operation, and place our eyes to that extent in a worse condition for operation in order to detect 1 or 2 or 3 per cent. of those that were unfit for operation. Another point is with reference to lachrymal trouble. It very frequently starts in the nose, and in those cases where lachrymal disease is latent I think a careful examination of the nose will show some cause for suspicion. The third point is that while the antiseptic treatment of instruments and the proper preparation of the conjunctival sac and the exterior of the eye are important, it seems to me that a far more important part of antiseptic surgery is the thorough antiseptic management of the wound in cataract extraction, and I think that includes the thorough removal of the lens substance, and in some cases with me it includes the washing out of the anterior chamber. I also practise the washing out of the anterior chamber in quite a good many cases after operation for foreign body or injury, and in most cases opening the anterior chamber in connection with suppuration of the cornea. The antiseptic treatment of the wound itself includes the slipping away of the vitreous surrounding the foreign body after the magnetic extraction; the careful cleaning out of the adjoining tissues after penetrating one and the removal of the piece of iris for foreign body imbedded in the iris instead of picking out the foreign body as is sometimes possible.

Dr. FRYER (Kansas City) said: In speaking of antisepsis I desire to call attention to the experiment of Dr. Welch, of the Johns Hopkins University, which has a practical bearing on the subject of antisepsis. Dr. Welch found in his experiments in general work that in rendering a surface antiseptic by the usual cleansing and the secondary applications of sublimate solutions and the scraping of the epidermis he got no results, but if he precipitated the bichloride with sulphide of ammonia he got a growth very readily. In my efforts to render the conjunctival sac aseptic, I must differ with my friend Dr. Jackson in saying if the proper efforts are continued long and the eye is long enough under the weak solution of bichloride, you not only entangle enough of the chemical salt in the epithelial cells, but they pass down and into the lachrymal puncta and into the lachrymal sac, and render them aseptic. Frequently I have kept eyes ten days, two weeks to three weeks, as may be, under aseptic dressing which has been properly prepared and in 1 to 6,000 solution of bichloride of mercury; and while still some yellowish discharge may exist I have performed the operation and without evil results. I believe this is a practical point that should be borne in mind. I can see no use of a boracic acid solution. There is no indication of it other than so much hot water or the normal salt solution. It is not a germicide.

Dr. RIVERS (Denver) said: I would like to ask the gentlemen discussing this subject if it has been their habit at all to use any preliminary antiseptic treatment. I find for several years it has been my habit, and I got better results in all operations in which I intended to open the eyeball if time allowed a few days' preliminary antiseptic treatment. For this purpose I always used three or four times a day a sublimate solution; this is not used immediately preceding the operation. At that time I use hot water and soap in cleansing the eye. Under this method it seems to me that I got better results. It is not done with the idea that I am going to kill or remove all germs in the conjunctival sac, but I have always had the idea that possibly a sick germ cannot produce as much trouble as one that is not poisoned at all. Therefore if you can give them a little pain they will have something else to do perhaps than setting up suppuration.

Dr. MITTENDORF (New York) said: I should like to make a plea for the much-abused boracic acid preparation. I have made experiments years ago in making solutions of atropine in boiling water and then making specimens of them with boracic acid. I have made the boracic acid solution and I have taken the boiled water, and I have kept them in large mouthed bottles for several years, and I have found at the end of this period that the preparation did not contain boracic acid, whereas the preparations containing boracic acid, and especially the boracic acid solution preparation itself, has kept for years thoroughly aseptic. I think boracic acid has the advantage over simple boiled water, because it comes closer to the actual secretion of the eye, to the tear fluid. Its specific gravity, slight as it is over that of ordinary water, must necessarily have a great advantage on the tissues of the eye itself. I have likewise used boracic acid in solution with vaseline as a dressing for the eye after operations, and it has the advantage that the hot water or moist dressing has upon the eye: it prevents the glueing together of the eyelids, and it offers an exit for the secretion from the eye to a great extent, although care must be used in those cases not to use it too freely, because the vaseline with which it is prepared is, in itself, a little irritating to the conjunctival sac in a great many persons. I have had occasion to use Dr. Noyes's method of antiseptic treatment of the eye, and I follow it, and think it is a most perfect thing I have ever seen.

Dr. RYERSON (Toronto) said: I would like just to say that my experience is that we carry the antiseptic treatment sometimes too energetically into effect. I have observed medical men—oculists—use boracic acid with strong solutions of bichloride in antiseptic preparations. My experience has been that in such cases more harm is done than good. For my own part I think that a sterilised solution of boracic acid is all that is sufficient to wash out the conjunctival sac and put it in as aseptic conditions as possible. With regard to washing out the anterior chamber, I do not think it should be carried out in every case. It certainly should not be done as a matter of routine. I think there are cases where there are broken fragments lying in the anterior chamber which cannot be got rid of in any other way, and in such cases I think washing out the anterior chamber should be followed by good results. The remark made by Dr. Jackson was one worthy of great attention, namely, the relation of the nasal cavity to operations of the eye. In two cases I have had unfortunate results (suppurative trouble of the cornea) in operating on persons suffering from nasal catarrh. As a rule, I, at any rate, have not paid sufficient attention to the condition of the nasal cavities, and I think it is exceedingly important that in all cases for operations performed on the cornea it should be seen that they are in a fairly healthy condition.

Dr. WURDEMANN (Milwaukee) said: The solutions which might be instilled into the eye are all unfortunate under certain circumstances. It has been my habit to prepare these myself, or have them prepared by my associate in order to place the responsibility. Cocaine solutions, of course, are prepared for each operation, and not used again. I have done within six weeks some twenty-six operations with the new antiseptic, holocain. I have had the solution prepared in order to observe its alleged antiseptic qualities, and have tested it. It remained antiseptic. It is a direct germicide—a solution of 1 per cent. holocain will be germicidal in effect quite as much as 1 to 10,000 corrosive sublimate. To my mind, thus far, it is the ideal local antiseptic for cataract operations or any other operations upon the bulb. It has no effect whatever upon the cornea—the cornea remains moist. Other solutions which may be instilled—atropine, etc., are likewise prepared by myself in order to place responsibility, and not entrusted to the nurses. Another point in connection with the remarks that have been made: we seem to be able to control our practice so that I will not operate in a private house or boarding house or hotel, unless there is a specially prepared room and skilled attendance.

Dr. KIPP (Newark) said: I would like to state that some years ago I extracted fifteen cataracts within a very short period, and the only precaution was to clean the eye with boiled water and to clean my instruments, and to have the

dressings sterilised each different operation, so that I think there cannot be very great danger from atmospheric infection.

Dr. CALHOUN (Atlanta) said: It may be interesting to the members to learn the experience of practitioners from the section of the country where I have quite a practice with negroes as well as with the white population. I will have to disagree with some of the members from the account of the good effects where I have been compelled frequently not to carry out such thorough antiseptic measures. I am an enthusiastic believer in antiseptics, but in my section of the country I am compelled to operate in private houses, boarding houses, and in huts as well as in hospitals, and with the antisepsis such as I carry it out there is very little difference in the good results. I have frequently operated upon negroes and I find the negro conjunctiva is somewhat different from the white conjunctiva. Many diseases of the negro are not common with the whites, and there are many applications which you can make to the white eye that you cannot make to the eye of a negro. Treating the conjunctiva of the negro has led me into treating all other cases alike. For instance the conjunctiva of the negro will not tolerate a very strong solution of cocaine, and as a result I have fallen into the habit of using one-half of 1 per cent. cocaine, which answers every purpose most admirably. I use it with negroes as well as with whites; it requires a few minutes longer, and while preparing my instruments, I put a drop or two of cocaine into the conjunctiva, and in a moment or two I put in another drop, and in the course of five minutes the eye is ready. It acts better than 4 per cent. or even 2 per cent., as I have found stronger solutions of cocaine have a bad effect upon the negro conjunctiva. It has not upon the white. I have also found that the negro will not tolerate solutions of bichloride much stronger than 1 to 10,000, and because of that I use it upon all classes of patients, and do not see the necessity of using it stronger. Some gentleman spoke of using 1 to 5,000. In my experience I cannot use that at all upon the negro, and I have seen decided irritation, so much so as to become alarming with 1 to 5,000 solution of the sublimate. The usual method I adopt is such as Dr. Noyes has spoken of. I have given up the practice of making simple extraction. There is some obscure connection between the amount of cortical substance remaining and the disposition of the conjunctiva: in proportion to it, irritation follows: if it is a small amount there is less irritation. I formerly used a strong solution of boracic acid, but I have given it up. I believe with Dr. Noyes upon that point, and I do not think it has better effect than simple hot water. Suppuration, even amongst negroes, is a very unusual thing. I do not think I have seen a case of suppuration of the cornea in years, and I have a very large practice of cataract operations. I suppose I average yearly 100 cataract operations, and I do not think I have seen a case of suppuration in years. That is saying a good deal when we consider the habits of the negro—how uncleanly he is, and it says a good deal for antiseptic treatment of those wounds.

Dr. WILLIAMS (Boston) said: I would like to corroborate the statement of Dr. Wurdemann in regard to the good effect of the holocain antiseptic. With me it has worked exceedingly well. As to its germicidal effects, I cannot say. Another point which I did not notice having been brought out fully: it seems to me that in making our solutions, it is quite desirable to make them with a solution of boracic acid rather than with a solution of plain water. It tends to keep them better, and I think has no bad effects in any way.

Dr. ALT (St. Louis) said: It seems to me we are drifting more into the consideration of what we do in performing cataract operations rather than in discussing antisepsis, and as there is a paper on cataract operations to come, it seems to me it would be preferable to defer this discussion. With regard to my own way of handling cases for operation antiseptically, I very much agree to what Dr. Noyes stated in the remarks he made. I also use a moist dressing after the operation—cotton moistened with sublimate solution. One gentleman, I think, stated that he does not use the sublimate solution as strong as is given in the textbooks. I use the sublimate solution in the proportion of 1 to 10,000, as well in washing the eye out as in dressing. I do not use bandages. I use strong adhesive plaster after the operation, and under it a pad of absorbent cotton. I moisten this pad again; I do not look at the eye for the first twenty-four hours. I have thought it wiser to leave the wound perfectly quiet as long as there is no indication of any trouble arising. In my old method of practice, I am satisfied that I had cases of prolapses of the iris in opening the eye somewhat too soon, but I do not have any more now. With regard to boracic acid, although I make all my solutions myself, I make them with boracic acid. I must say that I have lost faith in what little antiseptic power was attributed to boracic acid some time ago, and particularly on account of the fact that some solutions which had been standing in my office showed, after half a year or more, large growths of germs and parasites, and I therefore do not rely upon it at all any more. I still adhere to sublimate and boiling water. I boil the water right where I operate, and pour it over my instruments; and where I cannot have boiling water, I rely entirely upon absolute alcohol.

Dr. BAKER (Cleveland) said: It has been my practice to follow as nearly as possible the method outlined by Dr. Noyes, with the exceptions noted by Dr. Jackson, that I do not use the moist dressings, and I do not use the bandage immediately before the operation. Sometimes a week or two weeks before, I apply it in cases in which there is some doubt in regard to the conditions of the conjunctival sac. It seems to me that if there is any practical lesson to be gained from this discussion, it is that with regard to the subject of asepsis *versus* antisepsis. It is a question of simple cleanliness, or even a question of the application of some drug to kill the germs? As I have watched these discussions from time to time in our societies and read the articles published, and particularly the experiments of my friend, Dr. Randolph, I am more and more inclined to think that it is simply a question of cleanliness. I have followed this out carefully in every case, in the careful preparation of the drugs and the instruments we use in connection with these cases, and it is my belief, too, that boiling water is one of the best things to secure this cleanliness, and I use it in all cases, excepting with cutting instruments. In this respect I have found that they are dulled, and consequently I have used absolute alcohol. I believe we neglect the simple wiping of our instruments carefully enough. I should like to have some of the gentlemen look into this matter carefully and see whether the cataract knife is carefully and repeatedly wiped with absorbent cotton, and see whether the knife is not in a fairly sterile condition afterwards. I think we should define our positions clearly, whether we believe in the use of applying drugs to the conjunctiva to kill germs, or simply whether we are going to make it as clean as possible.

After some remarks from Dr. FOUCHER (Montreal), who spoke in French,

Dr. PROUDFOOT (Montreal) said: In my preparations for patients for cataract operations especially, I am in the habit of following very much the same lines as Dr. Noyes mentioned. I have the patient's eyebrows and face thoroughly washed with bichloride. I never use anything stronger than 1 in 10,000 solution, and I find in many cases when the solution is used stronger than 1 in 10,000, you may look for a good deal of conjunctival inflammation. With regard to the preparation of instruments, I have always been in the habit of using a good deal of friction upon my knives, with absorbent cotton, and I dip them into a solution of boiling water before using and immediately after using. I think I am particular about my instruments after using them—perhaps a little more so—than I am before using them. I think if we take our knives after using them and give them a thorough dip into boiling water and have them thoroughly wiped, that the chances of any microbes remaining on the blade, which will do damage later on in a subsequent operation, will be very much diminished. After making the extraction I always apply moist cotton, moistened in the bichloride solution. I apply a rather thin pad of this directly to the eyelid itself, and over that I place either borated or hyperchloride cotton, and in case where there is any loss of vitreous I simply apply strips, and find in hot weather the patient will stand this with much more comfort than a bandage. They complain a great deal of the extra heat of the bandage during the hot weather. Of course, in cases

where there has been no loss of vitreous or any tendency to prolapse, or anything of that kind, I use the bandage.

Dr. HOWE (Buffalo) said: It was not my intention to take any part in this discussion, but I could not but be impressed with the fact, that we as ophthalmologists give our dicta, and each one his own, as to what are the best antiseptics. We must remember the fact, however—and that is the reason I rise at all—that we are not bacteriologists, and that it is simply the results of our own clinical experiences that we bring here; and, as we see from our discussion, these vary in the highest degree—one is the advocate of this plan and another of another plan, and says that his solution was so strong as theoretically to be of no value at all. It strikes me that we are not the judges of that question at all. It is for us to go to the bacteriologist and ask him what he finds in a solution. The second point is, as long as he tells us that boracic acid is of little value, it is for us to regard it in that way; and as long as he says we have excellent antiseptics in weak solutions of sublimate, it is for us to hold to that view, and that individual experience only shows what results we have, each one under different conditions. I simply rise to make that protest as to what has seemed to me to be the gist of the matter, namely, that we must accept the dicta of a bacteriologist, and that whatever our own findings are, it is a question of our dressings, or it is a question of the surroundings, or it is a question of our own dexterity.

Dr. SPALDING (Portland) said: I have not been able to follow all the discussion that has taken place, but there are two or three things I would like to say with regard to asepsis. In one or two cases where there has been suppuration in the tear sac, I have had good results in operations of this kind with a galvanic wire heated and then opening it afterwards. I think that might be of very great use in some cases where there is suppuration of the sac. The second point is with regard to the treatment of eczema around about the eyes before the operation, and I think they can be helped a good deal by the use of boracic acid. I have a recent case where the whole forehead and the eyelids were covered with eczema. Two or three weeks previous to the operation the whole surface was bathed with a solution of boracic acid, and it acted very well in cleaning the forehead and the eyelids from the eczematous eruption, so that the operation went remarkably well, and I think that it might be useful to try that as a preliminary in all cases. The third point, and it is a question with me whether it is prophylaxis or asepsis, that is where one eye has been lost, that is if one eye has been operated on unsuccessfully, whether that eye should be removed before any operation is done on the other eye. I have had experience with those cases in only three instances. In the first case I operated and I took every precaution, but the second eye was lost by suppuration. In the two following cases I removed the stump of the first eye some four weeks before extracting, and in those two cases the operation went perfectly well. I have never heard any discussion with regard to this point, and I think it might be properly introduced here, because it seems to me it is a truly aseptic question—the removal of a stump, whether painful or not, previous to operating on the second eye.

The PRESIDENT said: When I saw this subject down for discussion I made inquiry of a number of leading surgeons as to what their present practice is, and it is only right perhaps to the gentlemen who were kind enough to reply to me that I should give their names, so that we may know from whom we have the information. I think that we all wash our hands very carefully in soap and water, and usually dip them in bichloride afterwards, and have a basin of bichloride for dipping in at the time of operating. In regard to the preparation of the patients, all my correspondents who answered my circular, I think almost without exception, draw very strong attention to the point raised by Dr. Buller, viz., the importance of excluding disease of the lachrymal passages, and many draw attention also to the importance of well cleansing the eyelashes by rather forcible scrubbing. In case of lachrymal duct diseases there seems to be considerable diversity of opinion as to what would be best to do—how long to wait before operating—and I did not gather from Dr. Buller or any of the speakers what they did in chronic cases of lachrymal duct diseases. It seems to me very often the best thing is to extirpate the lachrymal sac if the suppuration is troublesome and then perform the operation for cataract. In cases where there is no visible suppuration some use iodoform styles for the duct in addition to the ordinary measures. In regard to the preparation of instruments among those who have answered me, a large proportion evidently depend upon boiling water more than anything else—dipping the knives and needles into boiling water and transferring them into a weak solution of carbolic acid. Several speakers have spoken of boiling knives or subjecting knives or needles to boiling water as injurious to the edge. I would like to ask what is meant by boiling—whether for one minute or ten minutes? I am quite sure, as I constantly do it, that dipping a knife into boiling distilled water for a minute does no harm whatever. I have done it for years, and found it does no harm. Most of our surgeons use the instruments wet; a few use them dry. A large number use mercurialised dressings. Some spoke of sterilising chemical dressings carefully, but a large number, I think, do not get them really effectively sterilised by heat just before using. With regard to the use of moist dressings, my replies show that about half use wet and half use dry dressings. Then as to the preparation of the treatment of the conjunctival sac just before operation. Most of us irrigate with bichloride, and a good many with boracic acid. I myself always irrigate with boiled distilled water that has been boiled a few hours before, and sealed up whilst boiling. Importance is attached by several to not merely irrigating out the sac, but to actually wiping the inside of the eyelid with absorbent wool as well as washing. Some of us irrigate the district of the wound with a gentle stream of distilled water after the operation before closing the eye up. It appears to me that the drift of opinion is in the direction of non-chemical asepsis, rather than in a direction of relying upon the germicidal power of such solutions as are used. Dr. Baker, I think it was, drew attention to what we really want to make up our minds to, namely, as to whether the main point is cleaning the eye or whether the main point is in killing the germs. The main point in most of my replies is to keep things clean.

Dr. NOYES said: I would like to have an opportunity to say something on just two points, one of which I did not make myself clear upon, and the other came up in the discussion. The first was in reference to the boiling of your cutting instruments. I do not subject the cutting instruments to the same boiling that scissors and forceps are subjected to. I simply dip the knife and needle into boiling water and give it a thorough and vigorous wiping, and I find that answers the purpose perfectly. That is universal. Another point which interested me a good deal was the treatment employed in cases where one eye has been lost, either through an operation or an injury or from any other cause, and we have to remove a cataract in the other eye. In the beginning of my professional career, it was almost the invariable practice to remove the lost eye, and that was upon the ground of possible sympathetic irritation being communicated from one eye to the other, and that practice continued for very many years; but of late, within the last ten or fifteen years, when cases have come to me, where failures had taken place on one side, and I was called upon to deal with the other eye, I have paid no regard to the lost eye, but have allowed it to remain, and I have not, for many years, seen any injurious consequences arise from my tolerance of the injured eye. I have preferred to let it remain, simply because in the first place I did not wish to subject the patient to two operations if it could be avoided, and in the second place I was not inclined to disfigure the patient.

A PRELIMINARY COMMUNICATION ON THE VALUE OF SALICYLIC ACID OINTMENT IN THE TREATMENT OF "SPRING CATARRH."

By ROBERT C. RANDOLPH, M.D.,
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I REGRET very much that the method which I have recently employed in treating vernal catarrh has been tried too seldom to justify me in drawing conclusions as to its true value in this disease. The affection, however, is a rare one,

and we know the futility of most of the methods employed in its treatment, and I must confess that my own experience with these methods has been just as barren of good results as the textbooks would lead one to expect. Since using an ointment of salicylic acid and lanolin, it would seem that a somewhat brighter aspect is given to the prognosis of vernal catarrh; and in order to get the members of this Section to test the worth of the treatment, I have taken the liberty of bringing it rather prematurely to your notice.

CASE I.—The first case which came under my observation was a boy 18 years old. He had been under treatment for three years at several of the hospitals in Baltimore. He came to the Johns Hopkins Hospital early in April. The disease was confined almost entirely to the corneo-scleral border, and consisted in a a gelatinous mass which elevated itself around the upper and outer border of the cornea of both eyes. Solutions of sublimate, acetic acid, ointment of the yellow oxide of mercury, copper sulphate, were all tried, but without the slightest beneficial effect. An ointment of salicylic acid was then used, in the strength of 6 grs. of the salicylic acid to 1 oz. of vaseline. Later on the strength of the ointment was increased to 10 grs., and lanolin was substituted for vaseline. A small quantity of the ointment was introduced between the lids and vigorous rubbing employed on the upper lid for several moments. This procedure was practised twice daily, and a solution of salicylate of soda (grs. x-3j) was dropped into the eyes three times daily. In a month the gelatinous masses had disappeared, and I saw him a few days ago and there has not been any reappearance of the disease. He came back not long since with an acute conjunctivitis, which he had contracted through exposure at his business, which is that of a market man, and which compels him to be at his work at late and early hours.

CASE II.—A negro child, 5 years old (boy) had been affected for a year. The disease, just as in the preceding case, was confined to the ocular conjunctiva, and was limited to the upper and outer border of the cornea. Here the ointment was used in the strength of 6 grs. of the acid to an oz. of lanolin. In two weeks the mass had disappeared. The salicylate of soda drops were used three times a day.

CASE III.—Boy 12 years of age. Here the disease was limited to the tarsal conjunctiva. The conjunctiva of the eyeball was not involved. He had been affected for several years, and had been treated for a long time. The nodules were broad, flattened, and cartilaginous in character, and tougher than the trachoma granules, and covered the entire under surface of the upper lids. Knapp's roller forceps were used, and there was at first apparently some improvement, but this was of short duration; and when I began to use the ointment in the first part of June the tarsal conjunctiva of both upper lids was literally covered with the characteristic nodules. The ointment was used for a week without the slightest beneficial effect beyond relieving the subjective symptoms. The ointment was then increased to 10, 15, 20, 40, 60, and finally 75 grs. of the acid to the ounce of lanolin. In this case it was of course necessary to evert the lids, and as this could not be satisfactorily done by his home people, I undertook myself to apply the ointment, which was applied freely once a day and rubbed well into the lids by means of a little mop made of cotton wrapped on the end of a toothpick. The rubbing was kept up for at least a minute to each lid. This has been going on nearly every day for months, and now the left lid shows only slight traces of the nodules, and the right lid has improved proportionately, it having been always the worse, and I think that within a month his lids will be free of the disease.

CONCLUSIONS.

In those forms of vernal catarrh where the changes are confined to the conjunctiva of the eyeball, it would seem that a weak ointment, say 6 or 8 grs. of salicylic acid to the ounce of lanolin, is adequate to dissipate the symptoms, but probably inadequate to cure the disease when seen as in Case III. Here it is necessary to use the ointment in the strength and in the manner described before we can hope for improvement. It must be noted, though, that the ointment even used in the strength of 6 grs. to the ounce relieved entirely the itching and burning. Patients always complain of the first few applications, and when the stronger forms of the ointment are used it is necessary to employ cocaine. I would hesitate to say that this is the first application of salicylic acid ointment, but as far as I know, it is the first time it has been used in treating spring catarrh. Salicylic acid ointment has been used very extensively by dermatologists in recent years, and I have been told that it is very valuable, particularly in chronic eczema. We have in spring catarrh an affection which is not entirely different from the chronic form of eczema. It certainly promises a great deal, and I hope that the members of the Section will perhaps give it a trial.

The PRESIDENT: Are these cases common in this country?

Dr. RANDOLPH: I have seen but six cases; I consider it very uncommon. These cases I have spoken of have been known to me for nearly four years.

The PRESIDENT: Have you in any of those cases seen the patient the next year to know whether he gets a relapse or not?

Dr. RANDOLPH: I only began the method five months ago, and I think one thing speaks very strongly in its favour, and that is the disappearance of the nodules.

The PRESIDENT: Does not the ointment cause very great irritation?

Dr. RANDOLPH: At first it does, but even in the strength of 6 grs. to the ounce, it is somewhat irritating; but they tolerate it, and in the case where the nodules on the upper lid I use cocaine every day.

The PRESIDENT: It is very desirable, especially in tarsal cases, that we should find something to get rid of it, as there is sometimes very great difficulty in distinguishing between this and trachoma. A child will often be kept away from school, and the most serious trouble made of it for years because the true nature of the disease is not recognised, and it seems to me that it is very difficult to recognise it.

Dr. RANDOLPH: I would like to say that two of these cases are very well known among the ophthalmologists in Baltimore; they have gone the rounds and made their appearance regularly every spring.

Dr. REEVE: I would like to add the remark that in the relief of a case of this sort I have met with, where ordinary remedies failed, I resorted to scraping away all this tissue, the child being under chloroform. There was a ridge about the cornea. I scraped away all the tissue and the effect was magical. The cornea seemed quite small before that, and the eye sensitive and weak. The process succeeded completely. That was a year ago, and a few weeks ago the patient presented himself again, and I found at one or two points the same condition occurred, but the improvemant was almost magical at the time of the operation, and the relief was very great indeed. There was no reaction whatever.

FOREIGN BODIES RETAINED IN THE CORNEA.

By EDWARD JACKSON, A.M., M.D.,

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THE lodgment of a foreign body on or in the cornea is usually promptly followed by increased lachrymation, pain and redness, and if these do not lead to its removal suppuration with softening of the adjoining tissue goes on until the foreign body lies loose in the bottom of an ulcer, from whence it is removed by a flow of tears or the rubbing of the lid. Only after such removal does healing occur.

Powder grains, or rather the finely divided charcoal which alone remains of the powder grain, may be retained in the corneal tissue for an indefinite period without causing irritation. Some writers mention other substances which may be similarly retained. Thus Mackenzie speaks in this connection of bits of coal. In the coal fields of Pennsylvania, however, such particles seem to exert an exceptionally unfavourable influence, provoking extensive and disastrous suppuration. Fuchs[1] says: "It is only grains of powder or of lime which are known to have the power of remaining in the cornea without exciting suppuration." But Randolph[2] found experimentally that the carbonate of lime produces inflammation in the cornea of rabbits and dogs, and he inclined to ascribe to this ingredient of the oyster shell the peculiar chronic traumatic keratitis which he calls oyster shucker's keratitis.

Although no work on ophthalmology written by a British or an American writer within the last thirty years seems to adequately mention the fact, it is probably not very rare for miscellaneous foreign bodies to be retained in or on the cornea for considerable periods of time, giving rise to a special form of chronic corneal ulcer. The lengths of time that the foreign body remained in the cornea in 197 cases met with in clinical and private practice is given in the following table:—

Time not recorded	17
Less than 12 hours	18
Within 1 day	45
Within 2 days	41
Within 3 days	26
More than 3 days and within a week	32
Within 2 weeks	11
Within 3 weeks	7

In most of the cases in which the foreign body was found after more than one week there was the history of an attempt at its extraction, which the patient supposed to have been successful, and therefore he had neglected further treatment, hoping that the inflammation would soon subside. In a few cases there was no history of the entrance of the foreign body which was found in the ulcer; the patient not having attri-

buted his trouble to such a cause; and in some such cases it may be supposed to have recently lodged in an ulcer previously formed, the depression of the corneal surface preventing its expulsion by the normal movements of the lids.

The following are cases in which the foreign bodies appear to have been retained for periods longer than three weeks:—

CASE I.—A bricklayer, aged 45, whilst hammering, more than three weeks ago, was struck in the left eye by a scale of iron, which he thought was removed at the time by a fellow workman. He presented marked hyperæmia of the pericorneal zone and deep vessels of the globe, intense pain, a low grade of iritis, with pupil dilating irregularly, but without any synechia. At the centre of the cornea was a rather deep ulcer, and at the bottom of this a minute particle of iron. Its removal gave him prompt relief.

CASE II.—A laundress, aged 38, got something in her eye more than three weeks ago, since which time the eye has been smarting and painful. She now presents pericorneal hyperæmia, lachrymation, and a small foreign body (character not noted) near the centre of the cornea. This was removed, and prompt recovery followed.

CASE III.—A labourer, aged 50, came with the history that a month ago something had got into his eye, which had been sore and had troubled him ever since. A foreign body—probably a small grain of sand—was found embedded in the lower and outer part of the cornea and removed. The eye immediately became comfortable, and promptly healed.

CASE IV.—A motorman, aged 28, states that five weeks ago he got a cinder in the right eye, and an attempt was made to remove it, and the eye gave him no further trouble for two weeks. Then it became painful, with photophobia and redness. There was now considerable hyperæmia of the conjunctiva and lower portion of the pericorneal zone. A small fragment of the cinder was discovered at the lower part of the cornea. Its removal cured the eye.

CASE V.—A labourer, aged 28, got a foreign body in the right eye five or six weeks ago, since which time there has been a "spot" upon it, and some scratching of the lid and feeling of irritation. The lower part of the cornea presented a white spot at the apex of a triangular leash of superficial vessels. The white mass contained a small speck—probably cinder—and was easily wiped away.

CASE VI.—A marine engineer, aged 36, got a foreign body in the left eye six weeks ago, since which time vision has been slightly blurred and the eye red and irritable. There was slight pericorneal redness, most marked inward, and a small foreign body opposite the nasal margin of the pupil. Its removal was followed by prompt recovery.

CASE VII.—A farmer, aged 49, while cutting Indian corn (maize) was struck in the eye by a dry leaf or blade of the corn. This was seven weeks before, and the eye had continued sore ever since, although he had been under the care of two very intelligent physicians. The lower, inner portion of the cornea presented a considerable thickening with grey exudate; and a distinct ulcer, with enlarged vessels running to it from the neighbouring conjunctiva. At the portion of the ulcer nearest the centre of the cornea there was a slight prominence of light grey tissue, and on removing this a piece of the dry blade of corn was found embedded in it. He promptly recovered.

CASE VIII.—A male nurse, aged 23, came with the history that his left eye had been sore for two months. He had been under treatment by two physicians, one of whom told him that his trouble was a need of glasses. The eye presented, at the sclero-corneal margin of the nasal side, an appearance resembling phlyctenular keratitis, with a yellowish white extension of the cornea. On wiping this away there was found on its under surface a black particle, probably what he believed it to be, a bit of dry carriage varnish. The eye promptly got well without other treatment.

CASE IX.—A labourer in the gas works, aged 31, came because his eyes itched and burned, and felt as if there was dirt in them. The right showed a spot on the lower outer portion of the cornea, which he said had been there over two months. The spot was white, and surrounded by clear cornea with no vessels running to it. There was no pericorneal zone. The spot was found to consist of epithelial masses lying in an excavation in the corneal surface, with a small dark foreign body—probably a piece of cinder—embedded in the deeper layers. Removal of these masses with the foreign body was followed by complete healing of the cornea.

CASE X.—A labourer, aged 35 (coloured), came for a spot on the lower nasal portion of the left cornea. He stated that this had been there for eighteen months; that it had followed the getting of a foreign body into his eye; that the eye had been sore for the first two or three weeks, and at times it had been a little sore since. The eye was now free from redness and apparently normal, except this whitish spot, which did not project above the general level of the cornea. This spot was readily wiped away with a roll of cotton, leaving a decided excavation in the corneal surface. The tissue removed consisted of epithelial masses, and embedded in the deepest portion a small foreign body, apparently a bit of stone.

Although cases of this kind have been so neglected by recent English writers, they have not entirely escaped observation. Mackenzie quotes the following reported by Wardrop in the *Lancet* in 1826, vol x, p. 475:

"A patient applied at Mr. Wardrop's hospital, with considerable redness of the left eye, and great intolerance of light. On the temporal edge of the cornea there was an opaque spot, to which the pupil, which was irregular, adhered. Fourteen weeks before, when twisting a piece of gold wire, a small portion of it broke off and struck the eye. Three days after the accident, intense inflammation came on, with severe pain, which continued for five weeks, and resisted active depletion. From this period the pain became less acute. A few days after applying at the hospital, a portion of the gold wire was observed projecting beyond the surface of the cornea, and a considerable portion seemed to be impacted in the opaque spot. It was easily extracted by means of a pair of forceps, and was followed by a discharge of aqueous humour. The portion of the wire was fully three lines in length, and one extremity had penetrated into the anterior chamber. The patient felt much relieved after the extraction of the foreign substance, and the inflammation and opacity soon subsided."

Panas[3] refers to previously published cases, of a scale of steel encapsulated for nine months, of a beard of wheat fixed in the cornea for two months, and of a fragment of stone remaining for ten years. The last, said to have been reported by Wardrop, I have been unable to trace.

Magnus[4] reports the case of a woman, aged 59, who carried for two years and three months a splinter of glass 2 mm. long in the lower outer quadrant of the cornea. The eye had full vision and was not reddened. It promptly recovered after removal of the splinter, which was firmly embedded.

Galezowski[5] reports a case in which half of a hull of millet had remained in the lower part of the cornea for one year. Its site was surrounded by a double circle of vessels which he figures.

Baron Wenzel[6] reports the case of a boy who got a part of the hard skin of a millet seed in his eye with the concave side toward the cornea. It remained there four months although the boy was "under the care of several oculists in Paris." On examination of the eye a round yellowish spot was perceived on the cornea, elevated above its surface, and resembling a small bladder. From this spot proceeded a number of varicose vessels. Wenzel removed it, and in a very few days no trace of the accident remained.

Guthrie[7] tells that he removed a small piece of husk of grass seed from the sclerotic at the upper corneal margin where it had been lodged sixteen months. It had merely given rise to a little occasional irritation, which was augmented on his taking cold, and three or four red vessels running from the spot were then increased in size. It had caused a small depression in which it was lodged, but whence it was easily removed, and all inconvenience immediately subsided.

Middlemore[8] speaks of the foreign body being retained in the cornea until it is surrounded by a dark coloured groove, when the slightest touch is sufficient to effect its removal.

George Lawson[9] reports the case of a woman, aged 48, with a blind painful eye, who gave the history of its having been struck by a flying beetle a year before, and that a part of the hard wing of the beetle was left sticking in the cornea, where it remained three months. It then came away of itself, but the eye was lost.

Manniske[10] reported finding a fragment of the hard wing-case of a beetle in a prominent indurated spot, which then extended partly in front of the upper margin of the pupil; but was said to have started two years before on the sclerotic above the cornea, and to have progressed steadily downward. Morgagni (letter 13) mentions a similar case of retention of this kind of foreign body.

In all of the cases I have reported above, and in most of those I have quoted, the definite history, taken in connection with the fact that the removal of the foreign body was promptly followed by recovery, where prolonged treatment had in several of them previously failed to produce any benefit, seems to prove the retention of the foreign body for the period named.

It would seem that the presence of a chronic corneal ulcer without other adequate cause, and particularly one presenting the appearances now to be described, should always awaken a suspicion of the presence of a foreign body, and lead to a careful investigation, which should include the removal of all loose material from the ulcer.

In all of the more chronic cases certain peculiar appearances were developed, being quite characteristic in the cases in which the foreign body was supposed to have been retained for six weeks or longer. These include a considerable excavation in the surface of the cornea, filled or sometimes overfilled with epithelial masses in which the foreign body lay. The bottom of the ulcer was itself covered with epithelium. The epithelial masses were always light grey or white in colour; being white in the cases of longer standing. In several cases the appear-

ance on superficial examination was strikingly like that of a phlyctenular keratitis, except that the apex of the affected area, the seat of the foreign body, was whiter. In some there was no extension of vessels on to the cornea, and no pericorneal hyperæmia.

So far as can be judged from these cases, seen only in the later stages, and from what we know of the usual changes following the lodgment of a foreign body in the cornea the history of such cases is somewhat like this: A foreign body becomes so deeply embedded in the cornea as not to produce any traumatic conjunctivitis by rubbing of the lids, and for some reason it does not set up suppuration. The resulting ulcer films over with epithelium and this epithelium rapidly proliferates, giving rise to masses in which the foreign body remains embedded, while the corneal tissue beneath the epithelium does not undergo such a regeneration as to fill up the excavation and push out the masses lying in it. In some of the cases the thickening around the excavation materially aided in retaining its contents.

What are the essential circumstances under which foreign bodies are thus retained in the cornea does not appear, except that suppuration, such as commonly occurs after such an injury of the cornea, is absent or strictly limited. It is evident from the above cases very diverse substances may be thus retained.

It is to be noted that in none of these cases did the foreign body become properly encapsulated in fibrous tissue, or included in the true corneal tissue like the carbon particles of a powder grain or of india ink used in tattooing. It has not been my fortune to see one of these miscellaneous foreign bodies become "encapsuled" in the cornea as some of the older writers say they may. Neither do any of the definitely reported cases indicate the enclosure of the foreign body in fibrous tissue, except possibly that of Magnus.

The cases above described and discussed must also be distinguished from another class of occurrences of quite different significance. Lawrence says,[11] "Sometimes foreign substances, particularly if small and smooth on their exposed surface, stick in the cornea for many days, even weeks or months, without exciting inflammation or causing much uneasiness." Probably this sentence would be more nearly correct if it read, "stick on the cornea," instead of "in the cornea." It would then apply to cases like the following:—

CASE XI.—A boy, aged 11, was noticed five months before, while spending the winter in Georgia, to have a spot upon his eye. There was no history of a foreign body getting into the eye, and there had been no redness or irritation at any time. His mother said the spot had started at the sclero-corneal junction, and had worked down toward the centre of the cornea. I found a black oval spot 1½ mm. long and 1·2 mm. wide, lying on the upper nasal side of the cornea, about 3 mm. from the corneal margin, with its long axis in the direction of a radius of the cornea. The eye was in all respects normal. Five days later, the appearance of the spot and the condition of the eye being entirely unchanged, I applied cocaine and wiped away the spot, which was simply lying upon the surface; and left the corneal epithelium entirely sound. It consisted of vegetable tissue, being probably a portion of a seed-case.

Apparently the pressure of the atmosphere was sufficient to keep this fragment in position upon the cornea for five months, for it certainly was not embedded.

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Dr. ALT (St. Louis) said: I well remember one case when practising in Toronto twenty years ago, the son of a farmer, and the statement of his father was that the foreign body had remained in that boy's eye for four years before I saw it. There was hardly any irritation, only a small grey spot on the cornea, and the boy had been subjected to all sorts of treatment. I found it to be a husk of grain. I simply lifted the husk off his cornea and sent the boy home. I recently had occasion to see a similar case of a husk of grain that had remained on the cornea for a year. I simply lifted it up and it resulted in a cure of course.

Dr. WURDEMANN (Milwaukee) said: Perhaps among many curiosities of foreign bodies in the eye these two might be of interest. A man who was hiving bees in August came to me in February of the following year, stating that he had been stung on the upper eyelid and that he had been under treatment from time to time during the entire winter. On examination I found a thin black object which looked like a mere speck or a very fine hair. I abstracted it, and placing it under a microscope I found it to be a bee's sting that had been in the eye for several months. The other case had been in the dental chair a week before. He said something had got into his eye there. I found a small piece of gold crown impacted in the cornea that had been in there one week.

The PRESIDENT said: Probably the great variations in the sensitiveness in a surface of the cornea may have something to do with the variations one meets with in the time that foreign bodies may remain there. Some people will get a foreign body in the cornea almost without knowing it. I know that personally, as I have had a good many in my cornea and did not suffer much. If it happens on a railway journey I can easily go to the end of the journey without any great inconvenience. Dr. Alt mentioned the word husk. My impression would be that most of the cases where foreign body is detained for a long time are cases of seed husks. I have seen a good many which generally turned out to be half a mustard seed.

Dr. RANDOLPH (Baltimore) said: I would like to say in connection with this subject of foreign bodies in the cornea that I have been struck by the fact that most foreign bodies which cause any trouble are those which are the husks of seeds and the wings of insects. I think that probably the chemical quality of the foreign body has much to do with determining the existence of inflammation in the cornea. For instance, the cinder and small pieces of grit may remain in the cornea for days and days without causing any trouble. We have an affection known as oyster shucker trouble. In opening the oyster the oyster shucker makes use of a hammer and a small particle of the shell falls from the shell and strikes him in the eye. The history of these cases is interesting in view of the fact that the particle of shell has produced almost immediately infiltration of the cornea. So far as my experience goes I have never been able to detect a particle of the shell in the point of injury, but within twenty-four hours after the reception of the injury we have infiltration of the cornea in marked to other foreign bodies.

A SECOND CONTRIBUTION TO THE ETIOLOGY OF DACRYOCYSTITIS.

By Dr. A. A. FOUCHER,

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IN a communication to the Medical Association of Canada in 1891, I endeavoured to demonstrate that amongst all the supposed causes of dacryocystitis there is one which prevails on all the others, and which has its origin in the unhealthy state of constitution of patients afflicted with this disease. I had come to this conclusion by observing very particularly 183 cases of dacryocystitis, in noting the relative frequency of the disease, the sex and age of the patients, the duration of the epiphora, the number of children and of miscarriages, the number of mortalities, either amongst the children of married patients or amongst the brothers and sisters of unmarried patients, recent or old cases of variola, the number of years which have elapsed between the appearance of variola and the appearance of epiphora, the cases of hereditary or adventitious syphilis, of tuberculosis, the condition of the nose and of the pharynx, of the teeth and of the sinuses of the face, finally, by noting all that could, directly or indirectly, lead to an explanation of the inflammation of the lachrymal ducts.

My conclusions have been adopted by several authors, among others by Professor Panas, of the Paris Faculty, who makes a complete record of them in his treatise on ophthalmology. There remained but to increase their value by augmenting the number of observations on which they are based. This is what I have done since 1891, and it is the result of these recent researches that I will now expound before you. The observations published in 1891 may be analysed as follows:

1891

Number of cases	183	Deaths (under 4 years of age)	
Men	46		640=46%
Women	137	Variola	75=41%
Right eye	105	Children of variolous parents	259
Left eye	129	Deaths among the latter	
Number of children	1,362	(under 4 years of age)	144=51%
Miscarriages	37		

The recent series of observations give the following results:

Number of cases	90	Deaths (under 4 years of age)	
Men	27		273=46%
Women	63	Variola	29=32%
Right eye	52	Children of variolous parents	186
Left eye	54	Deaths among these latter	
Number of children	684	(under 4 years of age)	98=52%
Miscarriages	63		

By adding these figures, we arrive at the following total results:

Number of cases	273	Miscarriages	100
Men	73	Mortalities	1,013=46%
Women	200	Variola	105=38%
Right eye	157	Children of variolous parents	445
Left eye	183	Death among these latter	242=54%
Number of children	2,046		

As may be observed, the recent series of observations differ slightly from the first, and the total results are in keeping with my first conclusions, and I reiterate them in the following manner:

There exist numerous causes of dacryocystitis, but its principal element lies in the unhealthy constitutional state of individuals. This is the reason why the number of infantile deaths reaches 46 per cent. It is the reason why variola is so common among these patients (38 per cent.) as variola itself carries infantile deaths to 54 per cent. I therefore repeat what I stated in 1891: The adjuvant causes —inflammation of the adjoining parts, for example—must have a prolonged action, a certain degree of intensity. There must also be a change in the pathological character of the secretion which passes in the lachrymal ducts. This requires a virulent action, and to this action the state of the constitution must lend itself; in other words, it requires an appropriate disposition. This disposition is generally brought on by debilitating diseases, such as variola, tuberculosis, syphilis, etc., which act upon the inflammatory affections, lengthening their second period, and finally giving them a chronic character. It is difficult to exactly define a patient's constitutional state, but we must not expect to find a large number of sound and viable children when the parents are themselves tainted with constitutional defects.

Consequently the best means of ascertaining the parents' state of health is to establish the figure of mortality of their children.

Everybody knows that typical table of mortalities in the family of the syphilitic who married while in a fully developed state of syphilis; it has been asserted with truth that this was the most deadly diathesis, but I have often met with similar reports of infantine mortality in cases of variolous non-syphilitic parents, which leads me to think that variola, either recent or of long date, is as fatal to the product of conception as syphilis.

Infantine mortality in my cases of variola has reached 54 per cent.; now out of a total number of 1,294 children, taken indiscriminately at the clinic from families of patients treated at the dispensary for affections other than dacryocystitis, I have noted 389 mortalities under four years of age, that is to say, an average of 30 per cent. There is, as may be seen, a great difference between this mortality and that of children of variolous parents or of persons affected with dacryocystitis: however, these observations, made to establish a point of comparison, have been taken from hospital patients; I believe that the mortality would be inferior to 30 per cent. if it were taken from cases in private families.

The fact that 73 men and 200 women have been affected with dacryocystitis also corroborates my deductions. The constitution of women is naturally weaker than that of man. Women are oftener ill and more easily affected by ailments and feel their fatal influences more readily. They pass through critical periods to which men are not exposed; the confinements, the suckling, and the fatigue which attend them, the sleepless nights, the uterine troubles to which they are subject, and lastly the commencement and cessation of the menses, are for women so many causes of constitutional disorders liable to affect the mucous parts in general and the lachrymal ducts in particular.

Shall we also mention the impressionable nature of women and the very frequent causes which act by reflexion on their lachrymal ducts? Not to speak of it would seem to infer that we consider women as being as poorly endowed as men in this particular, and that both partake alike of the joys and tears of life. It is not so, however; women evidently have the worst lot, and the result is that their lachrymal ducts are more active than ours. All these reasons put together account for the frequent cases of dacryocystitis met with in women.

Apart from this, however, all things being equal and the system being prepared thereto by some constitutional unhealthiness or another, a lasting nutritive torpor sets in; interior and exterior infections are favoured, circumstances being now propitious to the production and cultivation of organic microbes, and the organism being powerless to remedy the evil certain diathesisical manifestations appear, and among them we classify dacryocystitis.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF DIPHTHERIA WITH EXTREME BRADYCARDIA.

THE rarity of bradycardia in the course of diphtheria leads me to publish an account of this extreme case which was unfortunately fatal.

On the evening of September 20th, 1897, I was called to A. L., aged 20, who had spent the day in the city as usual, and had just been brought home with difficulty owing to his being in a delirious condition. He did not recognise his friends nor myself, and talked nonsense wildly. He spoke of headache. He was said to have shivered in the train. His pupils were dilated; pulse 100; temperature 99.2°. The throat was bright red by artificial light. He vomited frequently.

Next day he was rational, but very depressed. There was an offensive discharge from the nostrils; a small patch of membrane on the left tonsil; the glands at the angles of the jaw were swollen and tender. The temperature was 102°, pulse 100. At 7.30 P.M. the back of the pharynx was covered with membrane. At 11.45 P.M. I injected 1,000 units of antitoxin (Burroughs and Wellcome). Pulse 100, temperature 103°.

On September 22nd the pharynx, tonsils, uvula, and soft palate were greatly swollen and covered with membrane. At 8 P.M. I injected 1,500 units of antitoxin. The pulse was 90, temperature 103.6°. I directed the throat to be swabbed with solution of mercury perchloride (1 in 1,000), and employed a carbolic spray to nostrils and throat.

On September 23rd the temperature in the morning was 102.2°, pulse 82; the nasal discharge was bloody; 500 units of antitoxin were injected. At 9 P.M. the temperature was 100° and the pulse 84. The Klebs Loeffler-bacillus was present "in pure culture" in three specimens of membrane examined (Clinical Research Association).

On September 24th the temperature was 99.2°, the pulse 100, and the membrane was separating freely. He felt much better and slept well.

On the following morning the pulse was 87, the temperature 100°, and the membrane was coming away in large masses. At 3 P.M. the pulse was 75, and the patient was much depressed. Stimulants were ordered more freely than before. At 7 P.M. the pulse 40 and at 11 P.M. 52; temperature 100°. The urine now for the first time showed a small amount of albumen, but hyaline, granular, and epithelial casts and degenerated tubal epithelial cells in large quantity.

On the morning of September 26th the pulse was 40, regular and remarkably powerful, corresponded with the heart beat. The temperature was 98.8°. The throat was clear of membrane except a small patch on the right side, the abdomen

distended, and he took nourishment badly. Stimulants and liquor strychninæ were given by hypodermic injection.

The patient was seen by Dr. H. P. Hawkins in the afternoon, who advised that nourishment should be given only by enemata, that the iron mixture and stimulants by the mouth should be discontinued, and the hypodermic injections regularly continued. During the day the pulse fell gradually to 35. The beats were powerful as before, and were equal with the heart beats and regular. Hot fomentations were applied to the cardiac area.

On September 27th at 3 A.M. the pulse was 24, occasionally intermittent. The temperature was 99·2°. The patient vomited several times. At 5.30 A.M. the pulse was 30; he "felt better" and was clear-headed. I left the patient for an hour; at 7 A.M. I found the pulse at 14 and most astonishingly powerful; the nurses reported that it had fallen for about a quarter of an hour to 10 beats a minute. The first heart sound at the apex was weak. Cardiac dulness normal. After another hypodermic injection of brandy the pulse rose to 20, but the patient had a slight convulsive seizure and the respirations (12 per minute) became very deep and sighing, but regular. The face was pale, the lips blue. The surface heat was maintained. At 11.30 A.M. I employed an oxygen inhalation, which however instantly caused an alarming convulsion. The patient passed urine naturally all along at regular intervals. At noon the pulse began to lose its power, its rate was 25. At 1 P.M. it was very weak. At 4 P.M. it was imperceptible at the wrist, but the heart-rate was 50. The respirations were deep and sighing as before. About 5.30 P.M. the pulse returned for a brief period, 44, very weak and irregular. From that time until 7 P.M., when the patient died, only occasional respirations—an average of five per minute—indicated to the onlooker that the patient was alive.

The patient was healthy and vigorous until seized by this illness. The antitoxin appeared to do the work expected of it successfully, but unfortunately did not avert the condition which gave rise to the sad termination.

Forest Hill, S.E. H. Laing Gordon, M.D.Edin.

TRAUMATIC ANEURYSM OF THE RADIAL ARTERY CURED BY TYING THE BRACHIAL ARTERY IN THE MIDDLE OF THE ARM.

Dr. Robertson's interesting case of aneurysm of the ulnar artery reported in the British Medical Journal of December 4th, 1897, reminds me of a case of aneurysm of the radial artery for the cure of which I was obliged to ligature the brachial artery in the middle of the arm. The following is the history of the case:

W. Q., aged 22, a house painter and decorator, sustained a lacerated wound of his right wrist, caused by the sash of a window suddenly falling and crushing his wrist against the framework of the window. The wound was carefully dressed and hæmorrhage arrested. As the wound was healing, however, recurrent hæmorrhage took place from the radial artery, which had evidently been wounded just as it turned back towards the outer side of the carpus. Pressure with graduated compresses over the bleeding point had controlled the hæmorrhage temporarily, and attempts had been made to ligature the artery above and below the wound in it.

These attempts were unsuccessful, owing probably to the position of the artery and the lacerated condition of the tissues, and a traumatic aneurysm formed as the wound healed. It was when matters had arrived at this stage that I was asked to see the patient in consultation with a view to further operative procedure, and it was then decided to tie the brachial artery, which operation I accordingly performed in the middle of the arm. The operation was successful, the aneurysm disappeared, and the patient, who was a healthy, well-developed young man, suffered little inconvenience after the wound had healed.

The patient has lately informed me that within a year of the operation being performed, he competed, and gained first prize for painting in a fine arts examination, and that now, eighteen months after the operation, he has perfect use of his hand and arm.

C. R. Woods, M.D.,
Surgeon-Major A.M.S.

Dublin.

GUNSHOT WOUND OF HEART.

At the Musketry Camp at Aboukir at 11 A.M. on September 22nd, 1897, a corporal on duty as a marker in the mantlets at the rifle range was struck by a splinter of a bullet (Lee-Metford), which is supposed to have splashed back from the target. The man was sitting in a stooping position at the time, with his arms crossed and resting on his knees. On feeling himself wounded (he afterwards said it seemed as if someone had hit him with a whip on the chest), he got up, and, quite unaided, walked a distance of some 600 yards to the camp, which he just managed to reach when he fainted, and was carried to the hospital tent in a state of collapse. The medical officer in charge of the camp saw him immediately, and found that there was a wound of the chest situated between the fourth and fifth costal cartilages, 2 inches to the inner side of the left nipple.

On examination the external wound was found to be semilunar, $\frac{3}{4}$ inch long and $\frac{1}{4}$ inch wide, with clean-cut edges. On carefully probing the wound was found to lead into the thoracic cavity; no trace of a bullet could be detected; hæmorrhage was free.

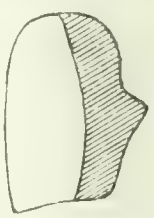


Diagram of the casing which caused the wound. Exact size. Weight, 24 grains; thickness, that of ordinary cartridge paper. The dark portion embedded in heart.

The man recovered consciousness after about an hour, but was extremely weak, and suffered from hiccough, nausea, and frequent vomiting. He was kept absolutely quiet, and everything possible was done to keep his strength up, but he gradually sank, and died at 1 A.M. on September 28th.

At the necropsy the chest was carefully opened. The pericardium, which was adherent to the chest wall, was perforated, and the pleural cavities were partly filled with blood. The portion of the bullet which caused the wound was immediately found embedded to the depth of about a quarter of an inch in the wall of the apex of the right ventricle of the heart, its exact position being about three-quarters of an inch above the apex. It had not perforated the cavity. The part of the bullet which had caused the wound was the cupro-nickel casing, which had evidently stripped off on striking the target.

A. T. Sloggett,
Surgeon-Lieutenant-Colonel, A.M.S.
Senior Medical Officer, Alexandria.

PUERPERAL PERITONITIS SUCCESSFULLY TREATED WITH ANTISTREPTOCOCCUS SERUM.

On November 3rd I was called to see L. O., aged 26, primipara. She had been confined (natural labour) three days earlier. In the middle of the night she had been taken with shivering, accompanied by severe pains in the abdomen. She sent for the midwife who had attended her, and who applied hot poultices, and gave her a dose of castor oil, which she vomited.

I found great tenderness over the abdomen, the pulse 140, the temperature 103°, the lochia diminished. I ordered her opium and injections of mercury perchloride.

I reported the case to Dr. Langdon, M.O.H. He kindly suggested my trying subcutaneous injections of antistreptococcus serum, which I was fortunate enough to procure immediately at the Hants County Hospital through the kindness of Mr. J. C. Hitchens, one of the house-surgeons. I immediately injected 10 c.cm. of the serum, and in ten hours the pulse had come down to 100, and the temperature to 100° F. I repeated the injection (10 c.cm.), and twenty-four hours afterwards the pulse was 80, temperature 99.6°. This slight increase of temperature continued till the ninth day, when it became normal, and the patient made an excellent recovery.

Winchester. F. C. MacNalty, M.A., M.D., M.Ch.T.C.D.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE CORBETT HOSPITAL, STOURBRIDGE.

A DEATH FOLLOWING ETHER ANÆSTHESIA.

[Reported by H. HAMMOND SMITH, M.R.C.S., L.R.C.P., Honorary Surgeon to Corbett Hospital, and EDGAR L. COLLIS, B.A., M.B., B.Ch. Oxon, M.R.C.S., L.R.C.P.]

T. C., a man, aged 39, was admitted on September 21st, 1897, with fracture of the right femur. The fracture at the junction of upper and middle third was slightly oblique. Splints and extension were applied as usual. Six weeks later when the splints were taken down no good union had occurred; consequently they were replaced for another three weeks; at the expiration of this period very fair union had occurred. During this time the patient was placed on a generous diet, which included Bass's ale Oj a day, and he was also taking ℥ij cod-liver oil three times a day. Consequent on the prolonged use of the splints the knee was found to be stiff and almost quite useless, owing to adhesions about the joint. All efforts to break these down were accompanied with such pain that it was thought best to place the patient under an anæsthetic for this purpose.

On the afternoon of December 8th, 1897, the patient, who had previously been prepared by a good purge and by abstinence from food, was brought into the operating theatre. The heart was examined, and the sounds though not loud were determined to be regular and those of health. Ether was then administered by a Clover's inhaler. The patient was slightly longer going under than usual and tolerated the indicator turned to ¾ for some time; then followed a short spell of incoherence and struggling and complete anæsthesia was obtained. No difficulty with the breathing occurred. The slight operation of breaking down the adhesion was now completed, and the administration of ether was stopped. The patient was now breathing stertorously and well, like one recovering from ether. Ten minutes later one of us helped the porter to carry him back to bed on the stretcher. Before leaving him in the ward the corneal reflex was tried and found to be present, indeed the patient moved his head as resenting such treatment.

Later on it is reported that he opened his eyes, and seemed to recognise an onlooker; consequently no special supervision was maintained, beyond that a nurse and the porter were constantly moving about the ward. About twenty minutes later (half an hour in all since the administration of any ether), the porter noticed the breathing to be in gasps, and that the patient was blue in the face. He fetched one of us from the theatre where another operation had by now been just completed. Before we could get to the ward the patient was dead, and beyond all chances of resuscitation. He was lying with the head thrown back, so that no possible difficulty of breathing could have arisen due to his position. The eyes were open and the lips slightly parted, and there was no sign of any struggle for breath. There had been no sickness.

The ether used has been submitted to two independent analyses, and found to be pure anæsthetic ether of the *B.P.* Rather less than ℥j was used (it was impossible to measure exactly afterwards, and no observation was made at the time).

At the *post-mortem* examination the body was found to be fairly well nourished. The heart and pericardium were healthy. There was a slight excess of fat over the right side of the heart, specially filling up the auriculo-ventricular groove. The coronary veins were much distended. The right side was distended with fluid venous blood; the walls of the right side seemed rather thin, though the muscular tissue was healthy and not invaded by the overlying fat. The left side was healthy, all the valves seemed competent and the flaps healthy. No obstruction to the circulation could be found in the pulmonary arteries.

The air passages were carefully examined; no sign of an obstruction was found. The lungs were healthy, but loaded with blood. There were slight adhesions of the left side from an attack of pleurisy some years ago. In the brain all the veins were distended; otherwise nothing abnormal was detected. The stomach was practically empty. The liver, spleen, and kidneys were all found to be healthy organs, though dripping with blood when cut into. Indeed, beyond the intense venous congestion no abnormal sign could be found.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

J. F. PAYNE, M.D., President, in the Chair.

Tuesday, January 4th, 1898.

THE SERUMTHERAPY OF TYPHOID FEVER.

MR. T. J. BOKENHAM, in introducing this question, pointed out that all recent researches on typhoid—and they were numerous—indicated the need for drawing a clear distinction between the principles governing the serumtherapy of this disease and those applicable to the case of diphtheria and tetanus. While the serumtherapy of diphtheria depended on the existence of a true antitoxic function possessed by the remedial serum, no such principle had yet been demonstrated with any known "antityphoid" or "antistreptococcus" serum. Indeed, there was no definite proof as yet available that true toxins were actually produced by the life processes of either Eberth's bacillus or of the streptococcus. Until such toxins had been prepared and investigated in the laboratory, nothing could justify their talking of either a "typhoid" or a "streptococcus" antitoxic serum. In the face of clinical evidence they could but admit that serum obtained from animals immunised by suitable treatment against typhoid cultures or against streptococci had decided and valuable therapeutic properties. Mr. Bokenham was inclined to attribute the good effects of such serums to their bactericidal and not to their antitoxic powers. *Specificity of the Typhoid Bacillus.*—A doubt was still occasionally expressed as to the truly specific nature of Eberth's bacillus, and much was made of the close resemblance which undoubtedly existed between it and the omnipresent bacillus coli. Before any advance whatever could be made in the study of the serumtherapy of typhoid, that question of specificity had to be finally settled. The various means lately devised for making out the differences between them were too well known to require anything more than passing mention. Cultural differences long ago settled the point to the satisfaction of most bacteriologists, while Widal's researches gave the additional evidence that a mixture of serum from a typhoid patient with culture of (*a*) B. typhosus, and (*b*) B. coli, produced in the one case perfect agglutination, and in the other case *nil*. The distinction between these two microbes was demonstrated in an equally striking manner by a simple experiment such as had been performed both by Dr. Funck of Brussels and also by Mr. Bokenham. A tabular record was shown on the screen, which showed, first, the protective effect upon young guinea-pigs of serum from a horse immunised against typhoid when mixed with a ten times lethal dose of typhoid culture; secondly, the failure of the serum to protect against a similar dose of B. coli; thirdly, the apparent power of even normal serum to afford similar protection when given in large doses. The evidence in favour of the specific nature of Eberth's bacillus must therefore be taken as conclusive. *Immunisation against the Typhoid Bacillus.*—In their early work Brieger, Kitasato, and Wassermann suggested an analogy between the immunity produced against tetanus and diphtheria on the one hand, and that against cholera and typhoid on the other. In all these diseases they considered the chief symptoms as due to intoxication, and that protective sera owed their powers to antitoxic constituents. In 1892 Chantemesse and Widal conclusively showed, however, that it was not possible to protect animals against typhoid infection. They demonstrated, nevertheless, that the serum of patients convalescent from typhoid fever had real preventive and therapeutic powers. In the same year Bruschettini and Stern maintained that antitoxic substances existed in the sera both of immunised animals and of convalescents; their conclusions

were, however, called in question by Sanarelli in 1894, who holds with Pfeiffer and Kolle, Funck, and others, that there is as yet no sufficient evidence in favour of such a view. Mr. Bokenham's own experiments led him to endorse Pfeiffer's statements, and to consider antityphoid serum as being chiefly bactericidal in action. *Methods of Immunisation.*—Two methods had been described. Method 1 consisted in using virulent cultures. The objection to this was that it was dangerous to both animals and investigator, and that results were but slowly produced. Method 2 consisted in administering cultures of bacilli which had been killed by heat, chloroform, or some other antiseptic. Mr. Bokenham thought that a combination of the two methods was likely to possess some advantages, although he now preferred a plan differing in some respects from either of them. While engaged in the immunisation of horses for the production of diphtheria antitoxin he was much struck by the results obtained by the method of immunisation first described by Cartwright Wood. He found that by using heated and filtered cultures of B. diphtheria grown in albumen broth, not only could a condition of high resistance be rapidly set up, but that such injection actually gave rise to the formation of antitoxin in the blood, without the use of any ordinary diphtheria toxin. Mr. Bokenham showed two charts of the temperatures of two animals treated by him with this serum toxin. Now these good results were obtained by using a filtrate of which the toxic properties had been destroyed by heat; as it was found later on that a course of injections of true toxin had in both these animals quite the reverse of a beneficial effect. It must be admitted that a curative serum for diphtheria was producible without the intervention of toxins at all. Mr. Bokenham wished to see whether a similar method of treatment might not also be applicable to typhoid. For this he prepared a bouillon to which was added a 10 per cent. of blood serum (converted into alkali-albumen). The medium was then inoculated with virulent typhoid bacilli and incubated for at least three weeks, after which it was filtered through a Berkefeld filter to remove bacilli. Tested on guinea-pigs such a filtrate was altogether devoid of harmful action, and gave rise to no symptoms save some rise of temperature. Chemical tests showed the presence of an albumose similar to that isolated some years ago by Dr. Fenwick and the author from the spleens of patients dead of typhoid fever. This filtrate was then used in an attempt to immunise a horse, or, at least, to try and produce some modification of its natural susceptibility to either living or dead typhoid bacilli. Mr. Bokenham then showed a chart of a horse treated first with the above filtrate, then with killed culture, and finally with alternating doses of filtrate and of killed culture. He also showed the chart of another animal treated with killed cultures only. While the first animal remained in excellent health, and was but little affected by the injections, the second horse reacted most violently to each injection. There were also corresponding differences in the case of the two sera obtained from them—the first producing the agglutination reaction with extreme readiness, the second being far less active. The susceptibility to living cultures of B. typhoid was also much less marked in horse 1 than in horse 2. So far, then, there was some evidence that the filtrate from living cultures, although not toxic, had other properties of at least equal importance; an animal treated with it showed a decidedly increased tolerance to both killed and living typhoid cultures, and yielded a serum which possessed marked agglutinative powers. *Had the Serum of this Animal any Neutralising Power for Typhoid Bacilli?*—This was tested as follows: (1) The dose of young typhoid culture lethal to a guinea-pig was ascertained. The test culture was actually of such strength that one dose of a twenty-four hours' culture killed a 500 g. guinea-pig with certainty in twenty-four hours or thereabouts. Inoculations were intraperitoneal, and after death bacilli were found swarming in the peritoneal cavity. (Attention was here drawn to the great need for care when making the inoculations so as to avoid wounding the intestines). (2) Ten times this ascertained lethal dose was then mixed with various proportions of serum, and the mixture injected into a guinea-pig. *Had the Serum any Preventive Action?*—A dose of serum that was found to protect when given by the method of mixtures was injected twenty-four, forty-eight, and seventy-two hours before inoculation of a series of guinea-pigs with ten lethal doses of culture. The result showed a distinct protective action. *Could a Curative Action be Demonstrated?*—Experiment showed that injections of serum made within three hours of injecting ten lethal doses of culture were in a large number of cases efficacious. *Summary.*—(1) Non-toxic filtrates of fresh cultures have distinct immunising powers. (2) Immunising action is displayed towards both living and dead cultures. (3) The serum of an animal treated with filtrates of fresh cultures acquires agglutinative and bactericidal properties. (4) Mixed with living cultures in sufficient proportion, the serum renders them harmless. (5) To a certain extent the serum has also protective and curative powers. *Had the Serum any Action against the Toxic Filtrates of Old and Dead Cultures?*—Mr. Bokenham had been unable to demonstrate any such action, and agreed with other observers in considering the serum as devoid of antitoxic properties. He believed, however, that such a serum would ultimately be obtained, and, although unfortunately his own experiments had been interrupted, these afforded some indication of the lines on which progress might be hoped for.

Dr. Bertram Abrahams was not inclined to attach much meaning to the experiments made upon animals, because what was produced could not be called typhoid fever; and the results could hardly be put in line with clinical observation. If an animal was killed in twenty-four hours by an intraperitoneal injection of a typhoid culture, the course of events was not such as was witnessed in typhoid fever. He did not, again, understand why Mr. Bokenham was anxious to obtain an antitoxic serum if, as he alleged, no toxin was formed by the typhoid bacillus.

Mr. Bokenham, in reply, thought that the view held by clinicians—namely, that the symptoms of typhoid were due to an intoxication—was probably correct; but by laboratory methods no toxin had as yet been isolated from cultures of the typhoid bacillus.

Lipoma Nasi.

Mr. Edgar Willett remarked upon the misleading nature of the term in that the enlargement was due to overgrowth of sebaceous glands and fibrous hyperplasia. Sections of the specimen which he exhibited showed the presence of bacilli, which Dr. Andrewes thought to be of the kind causing seborrhœa. Although the condition was usually attributed to alcoholic excess, it was against this view that it was very rare, if it occurred at all, in women.

Intrahepatic Calculi.

Dr. H. D. Rolleston exhibited the above specimen, which was obtained from a man, aged 38, who died with diabetes and pulmonary tuberculosis, and had been jaundiced. It appeared possible that the extension of duodenal catarrh to the pancreatic duct had set up chronic pancreatitis, and that this in its turn had set up diabetes. The fibrotic pancreas, with its dilated duct containing calculi, was also shown. Possibly the extension of catarrh to the intrahepatic ducts accounted for the calculi. The calculi were large, filled up the hepatic ducts, crumbled, and were composed of bile pigment and cholesterin. There were no calculi in the gall bladder, and the cystic duct was not dilated, so that the intrahepatic calculi had been formed *in situ*, and had not been conveyed there from the gall bladder. Intrahepatic calculi of any size were rare, and the occurrence of cholelithiasis in diabetes was quite exceptional; in 220 cases of diabetes quoted by Brockbank from Windle there was one calculus, or 0.45 per cent.

Cystic Disease of the Kidneys and Liver.

Mr. Raymond Johnson reported a case of the above, the patient being a woman, aged 63. The kidneys were recognisable on palpation, and were much enlarged; the urine was acid, and slightly purulent. After death, besides the above lesions, there was found a softened gumma in the spleen. The author did not think, however, that a syphilitic fibrosis lay at the bottom of the cystic changes; he rather thought they depended upon a congenital defect.

Liver of a Rachitic Child.

Mr. Jackson Clarke, in showing this from a patient dying with tetany, pointed out that the portal canals contained an increased amount of lymphoid tissue. Microscopic sections

of the small intestine, spleen, and lymphatic glands also exhibited similar hyperplasia. The author viewed the adenoid vegetations so common in rickety children as part of a widespread tendency to hyperplasia of lymphoid tissue in rickets.

Dr. H. D. Rolleston questioned whether the tissue in the liver could be called lymphoid; it was rather hyperplastic connective tissue, and possibly arose from toxic absorption occurring from the intestinal canal.

The President, after noticing that in the cases he had seen there was fibrosis of the enlarged liver, suggested that the changes shown in Mr. Clarke's specimens were possibly in an early stage of progress. If the theory of a circulating irritant were adopted to account for the lesions of rickets, it still remained a question when the irritant was produced.

Dr. Parkes Weber thought that there were no changes in the rachitic liver that could not be explained by intestinal toxæmia. Fatty infiltration of the hepatic cells was sometimes met with, possibly an accumulation of fat occurring in well-fed subjects owing to the cells failing to make use of the substance in question.

Dr. Lazarus-Barlow pointed out that in guinea-pigs connective tissue hyperplasia of the liver was not uncommon in animals apparently healthy, though possibly due to the passage of toxins from the intestine. Similar appearances were producible in guinea-pigs by the administration of digitoxin.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Surgery.

Sir William Thomson, P.R.C.S.I., President, in the Chair.

Friday, December 10th, 1897.

Tetanus Treated by Antitoxin.

Mr. Glasgow Patteson read notes of two cases of tetanus treated with injections of antitoxic serum, both of which recovered. In the first case, a boy, aged 14, who trod on a thorn, the symptoms developed eleven days after the injury. Spasms were frequent and severe. Ten c.cm. of serum were injected thrice daily at first, and, in all, 23 injections were given. The spasms gradually diminished in frequency, and rapid convalescence followed. In the second case, a gardener who fell off a cart and cut his knee, the symptoms came on about 12 days after the injury. Rigidity and opisthotonos were well marked, but the spasms were neither so frequent nor so severe as in the previous case. In all, 18 injections of 10 c.cm. each were administered, and the patient was quite well at the end of a fortnight. Mr. Patteson pointed out that these cases were open to the criticism that they might have got well under ordinary methods of treatment; but that considering our limited knowledge of serum injections all the cases that threw any light on the subject were deserving of record.

Mr. J. Knox Denham read notes of a case.

Mr. Henry Croly read notes on a case of "cephalic" or "hydrophobic" tetanus. The patient, a man aged 35, was thrown to the ground while driving, and sustained severe head injuries, shortly after which he got an attack of tetanus, accompanied by unilateral facial paralysis. Tetanus antitoxin in the form of dried serum was injected hypodermically (1 g. dissolved in 2 drachms of sterilised distilled water), but did not appear to do any good, so was discontinued after some days. The next treatment was chloral hydrate in drachm doses, night and morning, which lessened the spasms and produced sleep. From this on, the spasms grew less daily, the facial paralysis disappeared, and the patient made an excellent recovery.

The President said they were accustomed to look at tetanus as essentially consisting of two groups—one acute and one rather regarded as chronic. The acute cases came on very rapidly, and ran fatal courses usually within a few days; but the chronic cases were hopeful, no matter what treatment was adopted.

Mr. Henry Grey Croly related a fatal case of tetanus which occurred last November. Antitoxin was injected. He had tried the antitoxin treatment in more than one case without any benefit whatever. He stated that he had often noticed yawning to be a forerunning symptom of tetanus.

Sir Thornley Stoker said that he had seen Mr. Denham's case of tetanus, and he had no doubt whatever that the antitoxin did diminish, or at times even abolish, the spasms. At the same time the patient died. In the application of antitoxin for tetanus it was impossible to say in a given case whether it was the treatment that cured the patient or not. He related an acute case of tetanus which occurred in a boy aged 13, with the most frequent and violent spasms he had ever seen, with one exception. He saw the boy on the sixth day after the injury, and after being treated with the rapid exhibition of mercury, and by what completely allayed the spasms—the inhalation of the vapour of nitrite of amyl—recovery took place. Antitoxin treatment was only on its trial, and it was, therefore, very important that a great bulk of cases should be recorded.

Mr. Myles had met two cases of tetanus. Both recovered. In one case he had used antitoxin. Recovery was complete. He thought that the gradually-increasing weight of evidence was in favour of antitoxin.

Mr. M'Causland related a case of tetanus. The patient was struck by the step of a passing car on the legs, and slight wounds were inflicted. Tetanus having supervened, the skin around the wounds was freely excised, and at the same time an injection of 10 cg. French antitoxin was given. A drachm of bromidia every two hours, nourishment, and a large enema was ordered. Only two slight spasms occurred after recovery from the anæsthetic. Recovery was complete in ten days. Mr. M'Causland could not say whether it was the antitoxin or the excision of the skin which had the effect of curing the man.

Sir William Stokes had been deeply impressed by the result of the antitoxin treatment in one of Mr. Patteson's cases.

Mr. G. Jameson Johnston asked Mr. Knox Denham if there was any facial paralysis in his case, because Sir William Gowers thought that the facial paralysis was always accompanied by some lesion of the fifth nerve. Mr. Johnston thought it was more of a passing neuritis which passed up the facial nerve, which became paralysed by pressure in the canal at the time.

Mr. Lentaigne said he had treated three cases of tetanus with mercury and chloral, and all had recovered, whether as a result of the treatment or not he would not venture to say. He had used the mercury before antitoxin had been discovered, but just after the microbic nature of tetanus had been discovered. He had used it on general principles, and because of its action on the whole system in syphilis and some other affections, all of which were then believed to be probably of microbic origin. The chloral was given in 15 or 20-grain doses every third hour to relieve spasms, and both drugs were continued so long as any symptoms appeared. The patient was rapidly mercurialised, and then kept under the influence of the drug by small doses; he also kept hot carbolic and sublimate lotions constantly on, and in the neighbourhood of the wound he used a mixture containing 1 in 40 carbolic acid, and 1 in 1,000 or 2,000 corrosive sublimate. He was himself very doubtful as to the value of the antitoxin as at present manufactured, and so also seemed to be the manufacturers in the Pasteur Institute, as he had lately seen a bottle of serum on the label of which it was written that it was of no use for acute tetanus, and could be of use only in chronic tetanus. He considered that the immediate and efficient application of antiseptics to the wound was most important from a prophylactic point of view.

Professor Bennett drew attention to the fact that Mr. Colles had recommended turpentine as the proper local antiseptic for a tetanus wound.

Dr. Finny remarked on the tendency at the present day to overrate treatment by serum and antitoxin.

Mr. Patteson, replying, said he had employed fluid serum prepared at the Pasteur Institute. Dried serum was also made, and had the advantage of retaining its properties better. In his cases the wounds had been carefully scraped and strongly cauterised, but he did not think that much could be gained by excising the wound where the symptoms had already developed. He said that he would not like to trust to mercury as a treatment for tetanus.

Mr. M'Causland said that in his case the wounds had not

been excised till six hours after the symptoms had manifested themselves.

Mr. KNOX DENHAM and Mr. HENRY CROLY replied.

SECTION OF MEDICINE.

Friday, December 17th, 1897.

Sir GEORGE F. DUFFEY, M.D., P.R.C.P.I., President, in the Chair.

SYPHILITIC ENCEPHALOPATHY.

DR. W. R. DAWSON read notes on a case of this disease. Of all the diseases which simulated general paralysis, that which presented the greatest difficulties in diagnosis was cerebral syphilis. The following was a case in point: A gentleman, aged 45 years, with a bad nervous heredity and a history of syphilis and chronic alcoholism, and of an attack of delirium tremens, and who had suffered from ocular paralysis some years before, recovering with abstinence and iodide of potassium, became affected with a form of mental alienation characterised by grandiose delusions and some mental weakness. There was extensive paralysis of intraocular muscles, ptosis, general tremor, flattening of the face, increased knee-jerks, muscular and cutaneous sensory abnormalities, and, perhaps, girdle pains, cardiac weakness, and a rupial skin eruption. Speech was not affected. Abstinence and iodide once more proved effective, and the patient, after passing through a melancholic stage, recovered in about seven months. The disease, therefore, proved to be syphilitic, and, as there had been no headaches or congestion of the papilla, could not have been extensive. As there was evidence of a lesion of the nuclei of the third and other cranial nerves, the locality was at the base, and for this and other reasons it was probable that the disease affected the cortex—perhaps, from the mental symptoms, that of Flechsig's frontal association centres—by way of the vessels, the mental symptoms being due to partial anæmia of nervous structures weak by heredity and impaired by alcohol and other agencies.

Dr. DAWSON, in reply to the PRESIDENT, said he had not seen any nervous cases which were due to the early stages of syphilis. Such cases were very rare, and two forms of mental states occurred, at all events, in secondary syphilis. One was an acute mental form, and seemed to be due to simple syphilitic meningitis. Recovery generally ensued. The second form was a weak melancholic state of mind, probably due to an anæmic condition. In answer to Dr. DRURY, he said he had not the slightest doubt of the importance of syphilis as an etiological factor of general paralysis. In reply to Dr. POLLOCK, who had asked a question regarding the separation of alcoholic and syphilitic symptoms, he said there were certain symptoms which it would be impossible to say were alcoholic or syphilitic.

PERNICIOUS ANÆMIA.

Dr. J. B. COLEMAN read a note on a case of pernicious anæmia, confining himself chiefly to the clinical aspect of the disease as presented by a man, aged 67, who was admitted to hospital, complaining of weakness and shortness of breath. He had been getting pale and weak for two or three months, during which time he had occasional attacks of diarrhœa and vomiting. On admission he was extremely anæmic, his skin being of a pale yellow or cream colour; temperature 99° to 101°; pulse frequent, soft and compressible; he had systolic murmurs over his aortic and pulmonary area, and a venous hum in the jugular region; he suffered from dyspnœa on exertion. Urine normal in quantity; sp. gr. 1015, dark in colour, acid in reaction, contained neither sugar nor albumen; it gave urobilin spectrum and marked indican reaction; urea 2 per cent.; no trace of iron; ptomaines were not examined for. He had subconjunctival ecchymoses, but no retinal hæmorrhages. His blood was pale pink, very watery, did not clot readily; sp. gr. 1034; the fresh specimens showed great variation in the size and shape of the red cells, which had no tendency to rouleaux formation. Hæmoglobin was reduced to 30 per cent. of normal; the red cells numbered 1,000,000, and subsequently 800,000 per cubic mm. (20 to 17 per cent. of normal number); there were only 1,100 white cells per cubic mm., but on the day of his death they mounted to 21,000. Stained blood preparations, which were exhibited, showed poikilocytes, megalocytes (diameter 14 μ). microcytes (diameter 2·4 μ) and nucleated red cells; the latter comprised both gigantoblasts (diameter, 14-21 μ) and normoblasts; some red cells had lost their hæmoglobin (shadow corpuscles), and others showed polychromatophilic changes. The patient had some hæmorrhage from his gums, and severe attacks of vomiting and diarrhœa, and he died three weeks after admission to hospital. Regarding treatment, arsenic was tried, but had to be discontinued. Gastric sedatives, intestinal antiseptics, rectal injections of water, oxygen inhalations, and nutrient enemata were given. The *post-mortem* examination disclosed no lesion to account for the anæmia; his body was fairly well nourished, subcutaneous fat in considerable quantity; lungs very anæmic; heart fatty with atheroma above aortic valves; absence of blood throughout entire vascular system; spleen small, firm, red; kidneys pale, firm, capsule not adherent; liver fatty; stomach and intestines very pale, with atrophy of their walls.

Dr. COLEMAN, in reply to Dr. CRAIG, said that from a rapid examination he had concluded the aromatic sulphates to be rather in excess.

Professor MCWEENEY, Dr. FALKINER, and Surgeon-General POTTER joined in the discussion.

BRITISH ORTHOPÆDIC SOCIETY.—The third annual meeting of this Society was held at the City Orthopædic Hospital on December 15th, 1897, Mr. NOBLE SMITH in the chair.—The minutes of the last annual meeting were read and confirmed. The Treasurer's report was also read and adopted.—Mr. A. H. TUBBY (Honorary Secretary for London), having served his term of office, announced that he would not seek re-election. A cordial vote of thanks to Mr. Tubby for his valuable services was proposed by the CHAIRMAN, and seconded by Mr. LUKE FREER (Birmingham), and carried unanimously.—Mr. Keetley was re-elected Treasurer; and Mr. Tubby, Mr. Thelwall Thomas, Mr. Vincent Jackson, and Mr. D'Arcy Power were elected to fill the vacancies on the Council. Mr. E. Muirhead Little was elected Honorary Secretary, to succeed Mr. Tubby.—An ordinary meeting of the Society followed, Mr. NOBLE SMITH presiding.—A discussion on Fibrous Ankylosis and its Treatment was opened by Mr. KEETLEY, who said he believed true fibrous ankylosis of joints was rare, and that when it did exist it was only as a temporary state of a joint on its way to osseous ankylosis. Many cases regarded as of fibrous ankylosis were really examples of movement limited by some cause outside the joint—for example, malunited fracture, inflammatory deformity, inflammatory periarticular adhesions, and nutritive shortening, combined with contractions of capsule and ligaments. When joints which had been supposed to be the seats of fibrous ankylosis had been opened years afterwards they were often found free from internal adhesions and with the cartilage intact. Cases were quoted in support of the speaker's views and in favour of open operation in cases of ankylosis. The bonesetters were sometimes said to have taught surgeons something of value. He believed that they had done nothing of the kind, and that forcible movement of a joint of which the exact condition was unknown was like working in the dark. Listerism had robbed operations on joints of their terrors, and they ought to be far more often performed. The Roentgen rays also were valuable aids to diagnosis in cases of suspected fracture near joints.—Mr. NOBLE SMITH thought early movement was most valuable after sprains and dislocations in preventing stiffness.—Mr. MUIRHEAD LITTLE was surprised to hear Mr. Keetley say that fibrous ankylosis of the knee seldom occurred. He could confirm what Mr. Keetley had said of the value of Roentgen's rays in diagnosis.—Mr. TUBBY thought that Mr. Keetley had laid down principles and mentioned facts that were of considerable value, especially the distinction between extra-articular and intra-articular ankylosis. He thought that loss of movement was often less objectionable to the patient than ankylosis in a vicious position. He referred to the experiments of Dr. Halsted Myers, of New York, on the causes of flexion of the knee and other joints as showing how when once flexion had begun the extensors were at a rapidly increasing disadvantage.—Mr. LUKE FREER referred to the tendency to relapse in case of extra-articular ankylosis of a

rheumatic character, especially in cases of flat foot. In these division of the contracted structures around the joint was to be advised, together with treatment of the rheumatoid condition.—Mr. KEETLEY, in reply, said that he attached very little importance to early movement after injuries in and about the joints. The important thing was correct reduction. Fractures near joints were most difficult to reduce and to keep reduced. In Colles's fracture, if reduction were once complete the after-treatment was of little moment. He did not deny the occasional occurrence of true fibrous ankylosis, for he had seen such cases. The younger the patient the greater the likelihood of fibrous ankylosis in such a joint as the knee. Mr. Little's case was doubtless one of osteomyelitis.

SOCIETY OF ANÆSTHETISTS.—At a meeting on December 16th, 1897, the PRESIDENT (Dr. Dudley Buxton) in the chair, Mr. TYRRELL read a paper on a New Method of Combining the Vapours of Chloroform and Ether. He pointed out that occasionally difficulties arose in giving ether to certain patients. He thought that the administrator should be able to control the proportion of the anæsthetic employed. He used two Junker's bottles, giving either chloroform or ether singly or combined. To meet the condition of oxygen starvation in prolonged operations and in fat persons with feeble circulation he allowed a small stream of oxygen to enter the facepiece, so providing for the need of aëration. The apparatus consisted of two Junker's bottles fitted with tubing controlled by taps so as to supply either chloroform or ether or both to the facepiece. The chloroform was given in the ordinary way, and ether given if occasion arose, either simultaneously with or instead of chloroform. The method was advocated for operations on the young, for thyroid tumours with dyspnœa from pressure; for removal of glands in the neck in young children; in operations for empyema; and in some eye operations. Dr. GRANT MORRIS said that by this method the after-effects of the anæsthetic were obviated. The PRESIDENT said that he had adopted the method of giving oxygen with ether for two years, and found it very satisfactory. He hoped to bring his results before the profession shortly. Mr. E. WHITE, Mr. J. WHITE, Dr. LOW, Dr. SILK, Dr. COOK, and Mr. CARTER BRAINE took part in the discussion; and Mr. TYRRELL replied.—Dr. FLUX read the notes of a case of Protracted Anæsthesia following the Administration of Nitrous Oxide Gas. The patient was a girl, aged 19 years, apparently in normal health. The gas was given with a view to the extraction of teeth, and the usual phenomena of nitrous oxide gas narcosis were present, except that consciousness did not return for an hour and twenty minutes, in spite of vigorous efforts to arouse her. Consciousness when it returned was complete, and occurred abruptly. The patient had fainted in the waiting room before the administration of the anæsthetic. Mr. TYRRELL considered that the case might be one of hysteria. Mr. CARTER BRAINE and Mr. STARLING regarded these as cases of hystero-epilepsy, and Mr. HILLIARD and Mr. E. WHITE thought the case might be of the nature of a hypnotic trance. Dr. FLUX having replied, the meeting closed with the usual votes of thanks.

ROENTGEN SOCIETY.—At the meeting of this Society held on December 7th, 1897, Mr. A. A. CAMPBELL SWINTON read a paper on Adjustable X-ray Tubes. As was well known, the penetrative character of the *x* rays produced by any given tube was found in practice to vary greatly according to the precise degree of vacuum, the temperature, and other factors, which were very difficult to control. For practical working, and in order to obtain the best results under all conditions, some simple means of compensation and regulation were desirable, so that rays of any desired penetrative value could be obtained at will. Mr. Swinton described several simple methods, discovered by himself, by which this could be effected without any necessity for applying heat to the tube. Either the antikathode or the kathode might be made movable, in which case, in a suitable form of bulb, the nearer the two electrodes were together the more penetrative, and the further they were apart the less penetrative would be the rays produced. According to another method, several kathodes of different sizes were fitted in the tube, and when these were used independently it was found that the smaller the kathode the more penetrative were the rays, and *vice versâ*. The most simple and practical method of procuring the desired adjustment could be, however, effected by placing the kathode in a slightly conical annex blown on the glass bulb. The kathode could be arranged so that its position along the axis of the conical annex could be varied to the extent of about half an inch, when it was found that the smaller the annular space between the kathode and the glass the more penetrative were the rays. With a tube of this description rays of any desired degree of penetrative value could readily be obtained with great facility. Mr. Swinton also discussed the best construction and materials for the antikathode, the most efficient dimensions of kathode, together with some theoretical considerations. He recommended for ordinary work kathodes of about 1½ inch diameter, and about ¾ inch radius of curvature, and insisted upon the importance of good polish, and even accurate curvature. Platinum was the best available substance for the antikathode surface; though uranium, if commercially obtainable, would probably be superior, as other metals of high atomic weight were either too fusible, or not commercially obtainable. The platinum, unless itself very thick and heavy, was best best mounted upon a solid block of aluminium, which absorbed the heat and prevented the platinum becoming melted, volatilised, or deformed, even when very great electrical power was employed.

BRADFORD MEDICO CHIRURGICAL SOCIETY.—At a meeting on December 7th, 1897, Dr. ARNOLD EVANS (President) in the chair, Dr. MAJOR gave a microscopical demonstration, including sections of the spinal cord from a case of Tabes Dorsalis, Blood from Pernicious Anæmia, and sections of Cerebral Cortex.—Dr. BRONNER showed a case of Orbital Cellulitis. In the upper part of the orbit was a hard mass which simulated a new growth. Dr. Bronner considered that the hardness was caused by compression of the inflamed cellular tissue by the muscles of the upper eyelid. An incision had been made deeply into the swelling, but no pus was obtained. The mass was subsiding under simple treatment. Drs. RABAGLIATI, MORTON, CARTER, and HORROCKS discussed the case.—Mr. ALTHORPE showed a case of Congenital Club Hand which had been operated on elsewhere by removal of portions of the metacarpal bones. Mr. Althorpe had again operated twice with a view of liberating some of the tendons which were adherent and had in addition excised part of the first metacarpal bone. He made some observations on club hand in general, and the case was discussed by several members.—Mr. HORROCKS showed the Ovum from a case of Ectopic Gestation which was operated on by abdominal section. The ovum and clots were removed, and the edges of the sac stitched to the abdominal wound, and the cavity drained with iodoformised gauze. The patient made a rapid recovery.—Dr. GODFREY CARTER read notes of a limited outbreak of Typhoid Fever in Leeds during August and September, 1897; 33 cases occurred in three small streets of cottages situated in a shallow valley. The likelihood of the disease being imported was not very great, as few of the patients had been from home during the previous month. The houses had partly outside waterclosets and partly privy middens, one to four households using one midden. In 25 per cent. of the houses the drains were found to be defective, as shown by the calcium phosphide test. The families of 41.6 per cent. of the cases were supplied with milk by one of two brothers, who obtained their milk from separate sources, but often supplied one another in case of deficiency. At the farm from which one of these brothers obtained milk, the water came from a shallow spring in cultivated fields, and showed very marked animal defilement, but bacteriological examination did not reveal the presence of Eberth's bacillus. Four samples of milk, two from the other farm and two from the one under consideration, were examined, and one of the two latter only showed the presence of Eberth's bacillus. This specimen of milk had been stored in the milkman's cellar, while the other had never entered the house. The cellar had a sink communicating by an imperfect trap with the city sewers; the drain under the cellar was leaking at every joint. The milk before being sent out was occasionally stored in this cellar, being placed in open pans on a stone bench 3 or 4 feet high. There had been several

cases of fever in the vicinity of the dairy, and consequently contamination of the drains. Dr. Carter considered that this was a case in which the poison had been aërially conveyed in the shape of spores or otherwise, from the sewer, through the leaking drain, to the pans of milk. The empty milk cans were kept in the cellar, but Dr. Carter did not think that they could be contaminated sufficiently to affect the milk to any extent. Drs. Evans, Farrow, Goyder, Bell, Kitchin, and Campbell discussed the paper, and Dr. Carter replied.

Nottingham Medico-Chirurgical Society.—At a meeting on December 15th, 1897, Dr. Cattle, President, in the chair, Dr. W. B. Ransom, read a paper on Pernicious Anæmia, illustrated by lantern slides. The conclusions arrived at were that blood destruction always played a part in the pathogenesis of the disease, but evidence was brought to show that disease of the normal hæmogenetic tissues, in spite of compensatory activity of the medulla of the long bones, without increase of the normal hæmolytic processes, could also produce the same group of symptoms. Pernicious anæmia might be due to increased hæmolysis caused by toxins absorbed from the digestive tract or elsewhere, or to excessive fragility of new-made red corpuscles with normal hæmolysis. There was no sufficient evidence that the hæmolytic process was confined to the portal area. Iron containing pigment might be found variously in liver, spleen, kidneys, and intestinal mucosa, but was probably in all these places merely stored up or being excreted.

REVIEWS.

Inspector-General Sir James Ranald Martin, C.B., F.R.S. By Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., LL.D., M.D., F.R.S., Q.H.P., etc. London: A. D. Innes and Co. 1897. (Cr. 8vo, pp. 203, frontispiece portrait. 6s.)

James Ranald Martin was a great man, and devoted a long life with conspicuous ability, diligence and tenacity of purpose to the saving of human life by means of the amelioration of those conditions which give rise to fatal illness. He has taken a chief place as a pioneer of preventive medicine in India, and has also asserted a right to a prominent position among the promoters of sanitary reform in this country. The story of his busy and fruitful career could not have been related more fitly than by his successor at the India Office, whose service abroad and at home, in its motives, its value, and its results presents so many points of resemblance to that of the subject of this memoir.

The task undertaken by Sir Joseph Fayrer has evidently been a congenial one, and has been executed with great skill and excellent taste and judgment. Martin came of a good Highland stock which in times past supplied not a few eminent soldiers to the British Army. His own early leanings were towards a military career, but at his father's persuasion he studied medicine. He was a pupil of St. George's Hospital and became a member of the College of Surgeons of England at the age of 18 years and 5 months. He obtained through family interest an Assistant-Surgeoncy in the Bengal Presidency and at the age of 21 proceeded to India. During the early part of his service he encountered severe outbreaks of cholera, fever and dysentery, and distinguished himself by the energy and assiduity with which he threw himself into the task of combating them. In so doing he was himself prostrated. On his recovery he obtained the coveted charge of the Governor General's bodyguard, in which capacity he served during the greater part of the first Burmese war, until in fact he was compelled by severe illness to fly that trying province. The experiences which he encountered of deadly disease and frightful mortality must have stimulated that ardent striving for sanitary reform which during the rest of his life constituted its mainspring.

Having again regained his health he obtained a Calcutta appointment, which gave him charge of a large hospital and enabled him to acquire a lucrative practice. During the ten years of his Calcutta life he was constantly engaged in schemes and projects having for their object the improvement of the health of troops, prisoners, and the population at large. He devised new forms of statistical record, designed to display more clearly the influences affecting health and longevity. He initiated an important scheme of medico-topographical surveys and reports intended to shed light on the causation of disease. He promoted and aided in conducting a searching inquiry regarding the health and sanitation of Calcutta, and started that sanitary movement of which the capital city stood in such urgent need, and which is still in progress, and still far from being as real and effective as it ought to be. He was one of the main founders of the Calcutta Hospital and Medical School. He aided in reorganising medical education. He assisted in developing the medicinal resources of India. He recommended the location of British soldiers in the hills during the hot weather, and made many other valuable suggestions affecting military hygiene. In all these, and many other directions, he was able, by the force of his character, and by his urbanity and singlemindedness, to impress and influence those in authority.

During this period also he strove to raise and benefit his own service, and he succeeded in obtaining for them improved pensions and a share of the honours and rewards distributed for good service. He continued to urge the claims of the Medical Services to equal rank and reward with their combatant brother officers as long as he lived. In this matter he was at one with the ablest and greatest of Indian administrators, the Marquis of Dalhousie, who in a long minute contended that "the medical officer in respect of real rank, dress, honours, and promotion should be placed on a footing with his brother officers." This must come, and the wonder is that it has been delayed so long.

After leaving India Martin spent a busy professional life in London. He was largely consulted in tropical cases, and took a prominent part in the great sanitary inquiries and reforms of the day. He was an active member of the Health of Towns Commission and of the Commission which investigated the sanitary state of the army at home and abroad. He wrote valuable papers and books on sanitation and tropical medicine—valuable especially from the standpoint of causation, prevention, and treatment. He was appointed successively Physician to the Secretary of State for India and President of the India Medical Board, and served also as permanent member of the Army Sanitary Commission and of the Senate of the Army Medical School, Netley, in the organisation and management of which he took a keen interest. He may be said to have died in harness. He contracted his fatal illness only a few days after he retired from the Board in November, 1874, having attained the age of 79. In the year 1860 he was knighted and created a C.B. in recognition of his eminent public services, which were also acknowledged by several scientific associations. A subscription was raised after his death, in the medical profession, for the purpose of establishthe Ranald Martin Memorial Prize, which has been the means of eliciting some valuable essays on public medicine.

Such is a brief sketch of the man and the book. It is an interesting record of a noble character, of high and worthy purposes, of efforts well conceived and pertinaciously pushed to success in most cases. Even where they have not fully attained their aim, none of them have been futile; and they have all, complete or incomplete, contributed to the attainment of that increasing purpose which in sanitation, as in everything else, gathers bulk and force in its progress through the ages.

A Handbook of Diseases of the Nose and Pharynx. By J. B. Ball, M.D. Third edition. London: Baillière, Tindall, and Cox. 1897. (Crown 8vo, pp. 404. 7s. 6d.)

This *Handbook of Diseases of the Nose and Pharynx* has passed into its third edition within a remarkably short period of time. The reason of this is not difficult to find. The author gives in clear, simple language such an exposition of the subject as the practitioner desires to refer to.

Dr. Ball does not profess to have rewritten the book, but it is only just to say that there are very few pages which do not show evidence of the most careful revision in the light of such advances as have been made since the last issue. Thus in relation to ozæna we find (p. 130) the statement that a certain number of cases have their origin in diseases of the

sinuses, especially of the sphenoidal sinus, and that in such cases the treatment thus indicated is followed by a cure of the ozæna. Under the head of the Treatment of Chronic Hypertrophic Rhinitis the use of the turbinotome, or "spoke-shave," of Mr. Carmalt Jones meets with considerable approbation.

The chapters on deviations of the septum, diseases of the accessory sinuses and diphtheria are among those in which the writer has thought it necessary to make the greatest changes. He describes the forms of septal deviation (pp. 201 and 202) and the methods of treatment with greater completeness. Though the more recently devised methods of diagnosis and treatment of disease of the sinuses receive full attention, some reference might, however, have been made to the dangerous intracranial infections which have been recorded as resulting from suppurative disease of the sphenoidal sinus. In regard to diphtheria, Dr. Ball is an ardent believer in the serum treatment, both on theoretical and empirical grounds (p. 365).

It will be a benefit to British rhinology if Dr. Ball is encouraged to issue new editions as they are called for, with the same discreet amplification and revision.

A TEXTBOOK OF HUMAN ANATOMY. Translated and adapted for English use by OWEN LANKESTER, M.R.C.S. London: Allman and Son, Limited. (Royal 8vo, pp. 79. Fifty-one Illustrations. 2s.)

THE title of this book is somewhat misleading, as it only contains a very meagre account of "Human Anatomy." It is apparently intended for the use of those who desire to have some general idea of the structure of the human body and the functions of its various organs, and for this purpose it is likely to prove useful. Nurses will find in it a great deal of valuable information which they would otherwise have to pick out for themselves from one of the larger works on the subject. It is also likely to be of service to those who desire to qualify themselves thoroughly for rendering first aid to the injured, though there are more details given than are really required to obtain a certificate of competence for that purpose. The descriptions are clear, and, as far as they go, accurate; and every opportunity is taken of introducing remarks about diseases and injuries which will make the book more interesting to non-professional readers.

The difficult subject of the nervous system is treated in such a way that anyone who will thoughtfully read the paragraphs devoted to it cannot fail to have a fair idea of its various parts and their uses—a knowledge which many nurses do not possess, but which would add materially to their general efficiency; and the same remarks apply to the pages devoted to the organs of sense. A satisfactory knowledge of anatomy can only be gained by dissection, and even such superficial knowledge as this work is intended to assist in imparting would be more accurate and better fixed in the mind by the dissection, if not of the human body, of one of the lower animals, such as a rabbit; but there are probably many readers to whom this would be distasteful, and they will find the four coloured plates and the numerous diagrams very good substitutes. These are well chosen, and calculated to assist materially in the proper understanding of the descriptions in the text.

UEBER DIE TABES [Locomotor Ataxia]. Eine Abhandlung für praktische Aerzte. VON Dr. P. J. MOEBIUS. Berlin: S. Karger, and Glasgow: F. Bauermeister. 1897. (Royal 8vo, pp. 132. 3s. 6d.)

DR. MOEBIUS'S well-known reputation in the domain of nervous disease will make this monograph sure of a welcome. After a historical sketch the author discusses the subject under the signs and course of the disease, the morbid anatomy, etiology, diagnosis, prognosis, and treatment. The symptoms of locomotor ataxia are chiefly described under (1) the loss of the light reflex, (2) the pains, (3) the disappearance of the knee jerks, (4) the bladder symptoms, and (5) certain troubles of sensation. In the course of the description the importance of vesical disturbance in the early disease is very properly much more emphasised than is usual in many textbooks. The fact that locomotor ataxia may exist without loss of the knee-jerk is also mentioned. The author supports the now very generally accepted view that sufferers from this disease show a very large percentage of past syphilis.

The most interesting parts of the work, however, are those concerned with the prognosis and treatment. Moebius contends that a properly conducted antisyphilitic treatment cannot harm the patient. Treatment by tissue extracts, by suspension, and by nerve stretching is subjected to some pungent criticism. The good effect undoubtedly sometimes seen under electrical treatment is ascribed to suggestion. Although the author starts from the premiss that tabes is an incurable disease, yet he does not deny that much may be done for the patient, especially in the treatment of the pains of the ataxia by Fraenkel's method, etc. He very properly remarks that these patients are entitled to some hope. Nothing does such a patient more harm than an utterly hopeless outlook, and nothing can be more inconsiderate than to unfold to him, however unintentionally, all the possible symptoms which may eventually appear. This book is characterised not only by its wide knowledge of the subject, but also by its robust common sense.

L'ALCOOLISME. [Alcoholism.] By A. JAQUET. Suite de Monographies Cliniques sur les Questions Nouvelles en Médecine, en Chirurgie, en Biologie. [Series of Clinical Monographs on New Questions in Medicine, Surgery, and Biology.] No. V. Paris: Masson et Cie. 1897. (Roy. 8vo, pp. 40. Fr. 1.25.)

IN disagreeing with the prevalent Continental theory that many grave evils arising from indulgence in spirituous liquors are attributable to imperfect rectification, M. JAQUET unequivocally lays down that the essential poison of alcoholic liquors is alcohol. He further insists that the purest alcohol can produce intoxication, and that, though the symptoms may be less accentuated and a longer time may elapse before their appearance, the same result will be attained as from indulgence in impure alcoholic drinks. He quotes Forel as stating that in the Swiss Ellikon asylum for inebriates 30 per cent. of the patients had not taken spirits or liqueurs, but had drunk beer, wine, or cider. At the same time certain modifications of alcoholic influence are recognised as due to the variety of the alcoholic beverages.

Comparing the symptoms produced by freely-diluted pure ethylic alcohol with those following the drinking of brandy of a bad quality, the author acknowledges that the greater gastric irritation, nausea, headaches, etc., are the issue of amylic and propylic alcohols and aldehyde. M. Jaquet also points out the cumulative effect of repeated small doses of the purest alcohol.

Alcoholism is treated as a disease, and the work of asylums for inebriates is commended. The monograph is replete with useful information.

NOTES ON BOOKS.

TRANSACTIONS AND REPORTS.

THE *Transactions* of the Periodical International Congress of Gynæcology and Obstetrics in Geneva, 1896 are contained in three volumes of *Comptes Rendus*, edited by Dr. CORDES, Secrétaire-Général (Gynécologie, volumes I and II, pp. 518 and 284; Obstétrique, 1 volume, pp. 335. Geneva: Georg and Co., Libraires de l'Université. 1897.)—These three bulky volumes should at least be acquired by every public medical library devoted to general medical or to obstetric and allied literature. Their contents are already known to most of our readers, but they include monographs of special value with the discussions upon them. The reports of the discussions on pelvic suppuration, operative treatment of backward displacements, and the management of eclampsia, in which case, as in many others, the "remarks" are really separate papers, and are particularly valuable. The discussion on the best method for closure of the abdominal wound, with guarantee against hernia, shows that there is no sure guarantee of the kind, whilst there is also no agreement as to best

methods. The obstetrical volume includes a series of instructive communications, well suited for a book of reference, on the relative frequency and prevailing types of pelvic contractions according to different nations, groups of countries and districts.

The Report on the Treatment of Imbeciles and Epileptics, by Dr. J. M. RHODES, C.C., and Alderman A. MCDOUGALL, J.P., to the Chorlton and Manchester Joint Asylum Committee on the Best Methods for the Care and Treatment of Imbeciles and Epileptics. Published by the *Poor-law Officers Journal* Office. (Manchester: Roy. 8vo, pp. 36. 14 Illustrations. 1s. 6d.)—This report is the outcome of a commission given to the authors by the Joint Asylum Committee to visit such institutions for the treatment of imbeciles and epileptics in Germany, France, and Belgium, as they might deem desirable for the purpose of collecting information as to the care and treatment of such cases. It appears that in addition to imbeciles in county asylums the Chorlton and Manchester Boards have close upon 600 epileptics and imbeciles in their workhouses, and that about 960 patients of both classes would have to be provided for. The report recommends that 20 per per cent. of the epileptics and imbeciles (those suffering from bodily as well as mental disorder) should be treated in "pavilions," as at Alt-Scherbitz, and that those not physically incapable should be provided for in homes on the colony plan, not more than thirty to each home. A detailed description of the Alt-Scherbitz Asylum, near Leipzig, is given, and copiously illustrated with plans and views, and a shorter account follows of other German asylums, of the Bielefeld Colony, and of St. Ann's Asylum at Paris. We congratulate the Asylum Committee of Chorlton and Manchester upon the practical information now in their hands, and trust it may lead to their providing, especially for the young cases, family homes as distinguished from institutions. The report, which is handsomely got up, reflects much credit upon its compilers.

A Surgical Handbook, for the Use of Students, Practitioners, House-Surgeons, and Dressers. By FRANCIS M. CAIRD, M.B., F.R.C.S., and CHARLES W. CATHCART, M.B., F.R.C.S. Eighth edition, revised throughout. (London: Charles Griffin and Co. 1897. Fcap. 8vo, pp. 338, 208 illustrations. 8s. 6d.)—"Caird and Cathcart" needs no praise. There could not be a better book: there are not many as good. In this new edition, by the sacrifice of some diagrams and paragraphs, room has been made for twenty-eight new diagrams and forty-three fresh pages; yet the little volume slips easily into one's pocket, and weighs under 10 ounces. We look for many further editions of it—year after year—till its authors are too old to care for it; and it is hard to see how any other man could better their work.

Handbuch der Anatomie des Menschen. Sinnesorgane. Erste Abteilung Haut. 5 Lieferung: (Integumentum commune) [Handbook of Human Anatomy. Organs of Sense. Section I: The Skin]. Von weil. Professor Dr. A. VON BRUNN. (Jena: Gustav Fischer. 1897. Roy. 8vo, pp. 114. M.5.)—Professor Von Brunn has here given a very complete account of the anatomy and histology of the skin, illustrated by no fewer than 117 figures in the text, and has appended to it a bibliography occupying 9 pages of small type. The work is an example of German thoroughness and of conscientious labour. Anatomists, authors of treatises on diseases of the skin, and everyone who has any special reason for putting himself abreast of the present state of our knowledge of the histology of the cutis, hair, nails, glands, nerves, and vessels of the skin, and of the female and male mamma, will find the means of doing so by a study of this well-illustrated section of Von Brunn's *Handbook of Human Anatomy* in eight volumes.

Die Bedeutung der Augenstörungen für die Diagnose der Hirn und Rückenmarks-Krankheiten. [The Significance of Ocular Derangements for the Diagnosis of Diseases of the Brain and Spinal Cord.] Von Dr. OTTO SCHWARZ, Privatdocent an der Universität Leipzig. (Berlin: S. Karger. London: Williams and Norgate. 1898. Demy 8vo, pp. 100. 2s. 6d.)—On the ground that eye symptoms in nervous diseases scarcely receive adequate consideration in textbooks, Dr. Schwarz enters into the matter in a very systematic and thorough manner. Taking diseases of the central nervous system *seriatim*, he describes the visual and ocular anomalies that may be present, and then discusses the differential diagnosis of the disease, particularly with reference to the diagnostic meaning of the concomitant eye troubles. The advantage of having the subject treated in this mode is, of course, obvious, and when so ably done as in this instance the value of the work is great. The book is one that deserves to be widely read, and we do not doubt that it will be much appreciated by those who study its contents.

Eye Strain in Health and Disease. By AMBROSE L. RANNEY, A.M., M.D. (Philadelphia: The F. A. Davis Company. 1897. Roy. 8vo, pp. 330, 38 illustrations. 2 dols.)—This book is entirely devoted to the subject of the refractive and muscular anomalies of the eye. It consists of ten chapters, of which the first two deal with the general consideration of eye strain on the whole system and with the tests of vision and ocular movement. The other chapters are devoted to the consideration of eye strain in the production of special diseases. The whole book consists of an attempt to explain the development of various diseases, such as consumption, gout, chorea, insomnia, chronic gastritis, epilepsy, insanity, and neuralgia as being indirectly due to heterophoria, and case after case is published in which persons suffering from these and other diseases are believed to have been entirely cured by the performance of graduated tenotomies on one or more of their ocular muscles; these in many cases are followed by a reproduction of letters written by the grateful patients and their friends, of which the following is a specimen:—"Your name will occupy a prominent place in our shrine, and heaven will be continually besieged to bless both you and yours." We are told that "obstinate constipation is often due to a condition of the eyes that entails a leakage of nerve force." The whole book is an illustration of the grossly exaggerated way in which a worker may sometimes be led to contemplate his own speciality.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

PALATINOIDS OF SYRUPS.

MESSRS. OPPENHEIMER, SON AND CO., Limited, 14, Worship Street, E.C., make in palatinoid form the dry ingredients representing Parrish's food and Easton's syrup. These palatinoids possess the advantages of portability, accuracy of dosage, and easy administration. The syrups are very acid preparations, and affect the teeth; the palatinoid can be taken without causing injury in this respect. For young children a palatinoid can be cut open, and the contents given in any suitable vehicle.

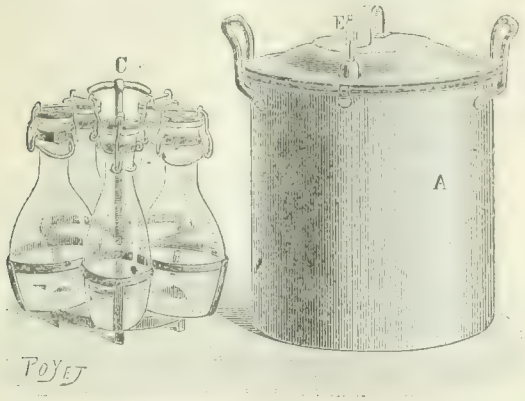
THE ELECTRO-NEUROTONE.

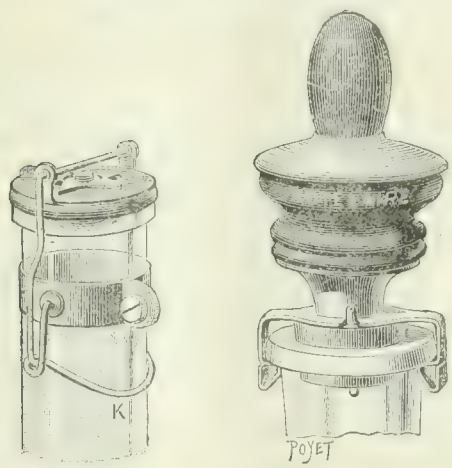
THIS is a patent appliance for producing cutaneous stimulation by means of an induction coil. In shape it resembles a flat iron. It is made of ebonite, and on its under surface there are two plates of polished metal arranged side by side, longitudinally. These are connected to an induction coil which is included in the instrument, in some patterns. When the coil is working, the instrument is to be rubbed over the patient with a movement like that of ironing. Its effects resemble those of "faradisation" with a wire-brush electrode.

THE PASTEURISATION OF MILK.

WE have received from Mr. C. J. Hicks, 8, 9, and 10, Hatton Garden, a form of milk pasteuriser, and a feeding bottle for infants, designed by M. Louis Contant. As the use of pasteurised milk for infants presents many advantages, we have thought it well to submit this apparatus to a careful test with the following result:

The apparatus comprises (1) A metal reservoir (A) with a lid perforated for the introduction of a thermometer; (2) a metal stand (C) fitted with compartments for holding the bottles; (3) six bottles, provided in two sizes, to hold respectively 6 ounces or half a pint; these are furnished with patent air-tight stoppers (K) fixed to the neck of the bottles in such a way, that by raising or lowering a spring, complete or partial closure can be easily effected; (4) certain accessories, including a measuring glass, stand lifter, and a can for warming the feeding bottle in water before use. The directions given are sufficiently clear, and we have found in practice that the method is simple and effective for the purpose claimed.





The bottles, after they have been charged with the requisite amount of milk, and the stoppers tightly closed by lowering the spring, are placed in cold water. A pint or more of water is introduced into the reservoir, and into this the stand of bottles is also lowered when the milk has been sufficiently cooled. Care must be taken before the heating process to readjust the stoppers tightly on the mouths of the bottles in order to provide for the necessary expansion of air. The apparatus is now heated over a fire or gas burner until the mercury reaches the indicating mark on the thermometer, namely, 90° C.; this will take about ten minutes, and the temperature of the milk in the bottles is then found to stand at 72° C. at the bottom, 74° C. at the centre, and 77° C. at the surface; it should then be removed and allowed to stand with the lid on for another ten minutes; (it would be advisable to add this latter detail to the directions for use that are given). The milk temperature at the end of this time is found to have fallen about 5° C. The stand of bottles is now removed with the lifter, and after the stoppers have again been tightly closed, the bottles are placed in cold water, where they should remain until required.

It is thus effected that milk at a temperature of about 20°C. is raised in about ten minutes to at least 70° C., and this, or a slightly lower degree of heat is maintained for another ten minutes, when the milk is again rapidly cooled, the air-tight stoppers preventing any contamination during the process.

A very thin scum is produced from coagulation of albumen; this easily breaks up on shaking; part of the gaseous constituents are doubtless driven off, but in all probability no essential change is produced whereby any diminution in the nutritive value is effected; the taste is but slightly altered, and is quite agreeable.

The effect of pasteurisation, conducted as above, on the micro-organisms contained in a sample of fresh milk, was tested as follows: Plate cultivations on gelatine were made from the milk before and after the process, 5 cm. and 50 cm. of milk being employed respectively. After twenty-four hours the 5 cm. plates showed (*a*) from the original milk, colonies too numerous to count, but discrete, liquefying, and non-liquefying; (*b*) from the pasteurised milk, only three colonies (later, numerous colonies were observed). The 50 cm. plates showed (*a*) from the original milk, confluent universal growth of colonies all over the gelatine with much liquefaction; (*b*) from the pasteurised milk, about two hundred colonies, a few liquefying.

The effect on certain special pathogenic organisms which may occur in milk was also tested. Sterile milk tubes were inoculated with the specific organisms of enteric fever, diphtheria, the streptococcus scarlatinæ, bacillus coli, and the spores of the bacillus enteritidis sporogenes, the last an anaërobic organism isolated by Klein and Andrewes from the stools of patients during a limited, but severe outbreak of diarrhœa, which was traced to the ingestion of contaminated milk containing the same organism.[1] Control tubes were made at the same time.

One set of milk tubes was pasteurised as above, and afterwards both these and the control tubes were incubated in the warm chamber. After 24 hours subcultures were made from all the tubes. In the result the subcultures from the pasteurised tubes all remained sterile, except in the case of the bacillus enteritidis sporogenes, in which abundant growth with clotting of the milk occurred in both the pasteurised and control tubes when incubated under anaërobic conditions. The control subcultures all showed abundant growth of their respective micro-organisms.

For domestic use, and when employed as above, this apparatus may be recommended as a simple and effective pasteuriser. The process eliminates any risk from the specific organisms of enteric fever, diphtheria, and probably scarlet fever, and greatly diminishes the risk of infection by the tubercle bacillus, though it does not ensure immunity from this or any other spore-bearing organism, and in the uncertain state of our knowledge at the present time of the identity of the microbes, probably of various kinds, which may give rise to diarrhœa, epidemic or otherwise, it is certainly safer at seasons of the year when such may be expected to occur, to absolutely sterilise milk by prolonged boiling, or temporarily to altogether abandon its use.

The feeding bottle is fitted with a stopper, through which passes a silver tube of small calibre to admit air as the milk is withdrawn in the act of sucking, and a removable reservoir teat (la Tutélaire). After the bottle has been filled and warmed in the watercan, and the stopper and teat adjusted, the latter is compressed to expel the air; the bottle is then inverted, and the reservoir and teat gradually fill with the milk, at the same time as air entering through the little tube in the stopper passes up through the column of milk to the upper end of the bottle. By this arrangement the infant can obtain its meal if the bottle is kept tilted with very little effort, as no atmospheric pressure has to be overcome, and without any admixture of air. As the teat and stopper are removable it is quite easy, with due precaution, to keep the whole apparatus clean.

[1] Report of Medical Officer to Local Government Board, 1895-6.

YELLOW FEVER IN NEW ORLEANS.—During the recent epidemic of yellow fever in New Orleans twelve medical practitioners contracted the disease, and two—both young men not acclimatised—died. Twelve trained nurses were also attacked, but none died.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THIRTY-FIFTH LIST.

Presented by the Authors.

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CORLETTE (C. E.). A General Account of Beri-Beri as seen in Sydney—based on original observations. 1897.
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VACHER (F.). Dangerous Infectious Diseases. 1897.
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Presented by VAUGHAN HARLEY, Esq., M.D., London.

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Presented by ERNEST HART, Esq., D.C.L. (Hon. Lib.).

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ALTHAUS (J.). The Value of Electrical Treatment. 2nd edition. 1897.
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FENWICK (E. H.). Tumours of the Bladder. 1897.
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Presented by H. MANDERS, Esq., F.R.C.S., Farnborough.

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REPORT OF THE STATISTICAL COMMITTEE, WITH APPENDICES. 1896.

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Presented by ARTHUR NEWSHOLME, Esq., M.D., Brighton.

STATISTICS OF THE ELEVENTH CENSUS OF THE UNITED STATES. Vols. 2, 3, 4. 1890.

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LEXICON OF MEDICINE AND THE ALLIED SCIENCES. Part 23. Puke Scap.

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TRANSACTIONS have been received from the following Societies:
British Laryngological, Rhinological and Otological Association.
Laryngological Society of London.

CALENDARS have also been received from nearly every Medical School for the Session 1897-98.

BOOKS NEEDED TO COMPLETE SERIES.

The Honorary Librarian will be glad to receive any of the following volumes, which are needed to complete series in the Library:

AMERICAN CLIMATOLOGICAL TRANSACTIONS. Vols. 1 to 7.
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AMERICAN JOURNAL OF THE MEDICAL SCIENCES. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vols. 59; vols. 89, 90, 1892-93; or any parts of these vols.
AMERICAN JOURNAL OF OPHTHALMOLOGY. Vols. 1-9.
AMERICAN LARYNGOLOGICAL ASSOCIATION. Vols. 1-6, 8, 9.
AMERICAN OTOLOGICAL SOCIETY. Vol. 3, part 2, 1883.
ANNALS OF SURGERY. Vols. 1 to 11; 13 to 16.
ARCHIVES GÉNÉRALES DE MÉDECINE. 1831-1839 inclusive; 1846-1855 inclusive; 1857-1864 inclusive; 1871.
ARCHIVES OF OPHTHALMOLOGY. Vols. 1-7 and since vol. 13.
ARCHIVES OF OTOLOGY. Vols. 1-7, and 20, 21, 22.
ARMY MEDICAL DEPARTMENT REPORT 1870.
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INTERNATIONAL CLINICS. 5th Series. 1895.
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Applications for duplicates from medical societies forming libraries may be addressed to the Sub-librarian, 429, Strand.

THE following appointments have recently been made at the Western Infirmary, Glasgow: Dr. Duncan Macartney has been appointed an Assistant Surgeon, Dr. W. R. Jack a Dispensary Physician, Dr. George B. Buchanan a Dispensary Surgeon, and Dr. George H. Edington an Extra Dispensary Surgeon. As has been already announced, Mr. George Burnside Buchanan, B.A.Cantab, M.B., M.Ch., has been appointed Assistant to the Professor of Clinical Surgery in the Glasgow University, *vice* Dr. J. C. Renton, resigned.

THE late Mr. Samuel Bentlif, of Maidstone, has by his will bequeathed £100 each to the West Kent Hospital, Maidstone, and the Kent County Ophthalmic Hospital, Maidstone; and £3,000 as an endowment for providing two free nurses, to be called the "Bentlif" nurses for nursing the poor in cases of sickness at their homes without charge.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JANUARY 8th, 1898.

UNQUALIFIED PRACTICE.

I.—The Evil.

The recent action of the General Medical Council in framing resolutions for the suppression of medical practice conducted by means of unqualified assistants and "covering" is of the first importance to the profession. It may, indeed, not unreasonably be assumed to foreshadow efforts in the same direction of a more comprehensive nature; we mean that steps may and probably will be taken to obtain statutory powers enabling the Council to deal with advertising quacks and other unqualified practitioners, so that they may be punished more severely than the law at present gives it any means of doing.

That effective and stringent remedies are urgently needed does not require discussion; a cursory perusal of newspaper reports frequently reveals the fact of riders being appended to the verdict of a coroner's jury urging in strongly-expressed terms that the case under their immediate investigation should be brought before and dealt with by the General Medical Council. The fact that the powers of the General Medical Council in cases of this kind are limited does not occur to the public mind. The General Medical Council is regarded as being the power which must be invoked where unqualified practice has resulted in serious consequences, and with the General Medical Council, therefore, rests a great responsibility, for if such expressions of opinion are allowed to go unregarded the public may naturally conclude that there is nothing which calls for a remedy.

The vast amount of harm caused by the advertising quack cannot, in our opinion, be overestimated, but only when some case more flagrant than usual has resulted in a prosecution which has failed (as in the case of the Indian oculists) is public opinion thoroughly aroused to the serious condition of our existing laws.

How much injury of the worst kind may be caused in cases that never see the light it is impossible to say; we allude especially to the open and disgraceful advertisements for the cure of "secret diseases" and "female disorders," and the quack pamphlets on those subjects. We have before us at this moment the evidence obtained with the view of legal proceedings in a case of unqualified practice on the part of one of these pamphleteers. Anything more odious than the conduct of the quack in question it is impossible to conceive. The prosecution was commenced against him on behalf of the Society of Apothecaries but never came on for trial, the penalty of £20 having been paid by the defendant into court. Having regard to the sums of money which this abominable quack must have received from his miserable victims, the penalty was no doubt easily and cheerfully paid by him so as to avoid exposure, and enable him still to carry on his infamous business.

In a less injurious degree from the moral point of view, but still distinctly productive of detriment to the public interest, is the practice of the prescribing chemist. Notwithstanding the honourable and consistent course adopted on the subject by the *Pharmaceutical Journal*, there is all over the country an enormous amount of practice by chemists. In some cases the practice is confined to "counter" practising, in others there is a consulting room, and in some instances the chemist actually visits in the same way as a qualified practitioner.

It was some time since urged in a lay contemporary that there "never can be any danger in the humble work of the chemist judging for himself the right remedy for slight symptoms or common complaints." But even assuming for the sake of argument, what we would be by no means disposed to admit, that this is so, the practice is not confined to slight ailments and simple complaints. The chemist freely prescribes where the complaint may prove to be of a dangerous character, and will do this even through the medium of a more or less irresponsible messenger. The business of chemists should be confined to their legitimate functions; they are not taught or required to known anything of the "structure of the human body or its anatomy, the functions of the body or physiology, or the injuries or diseases to which that human body is liable and their proper treatment, medicine, and surgery." Some members of the public do not seem to understand this, and frequently look to the chemist as possessing an equal knowledge with the qualified medical practitioner.

The mischief being so great, what is the remedy for it? This must to a great extent rest with the General Medical Council. If this powerful body would take the matter in hand, and not rest until it had obtained additional Parliamentary powers to restrict in some measure the unsatisfactory state of things now prevailing, the profession would be reassured, and would doubtless consider that it owed a debt of gratitude to the Council.

In the efforts to secure the highest possible standard of knowledge the Council is every day increasing the cost of entering the medical profession. When a man enters it he finds that his expensive education provides him peradventure with a bare subsistence, and that he has to compete with the irregular and unqualified practitioner, who waxes rich while he is scarcely able to earn a living.

In a future article we propose to discuss the details of a Bill drafted under the superintendence of the Parliamentary Bills Committee of the British Medical Association dealing with the evils to which we have referred.

FAMINE AND PLAGUE IN INDIA.

A Contrast.

India has had to encounter no ordinary trials during the past eighteen months. Troubles have not come singly. Famine, earthquakes, war, and pestilence have followed in quick succession, each being of such dimensions as to con-

stitute in itself alone an enormous task for the Government of India. The famine threatened twelve months ago to be the greatest calamity, but it has been tided over with a marvellous success. There can be no question as to the brilliancy and effectiveness of the measures taken to combat the danger and to distribute food to the famished millions. Guided by officers experienced in this special work, the Government of India has been able to carry out schemes of relief which have never been equalled in magnitude by any other Government in the world, or by any previous effort on the part of the Indian Government. The number saved from starvation is enormous.

This success has been mainly secured by acting on the principle that officers trained in the methods of dealing with famine were the best to organise and conduct famine operations. It is a principle which is also and rightly followed in the case of war. In the war against the rebellious tribes on the North-West Frontier the best officers in the Indian army were sent to conduct the campaign. The principle is here recognised that those who are trained to the work know best how to direct and conduct it. This is common sense.

It is, therefore, a matter of surprise that a similar policy was not accepted and adopted in the fight against plague. The prevention and checking of the spread of plague are essentially medical questions, and it was to have been expected that the medical profession would have in this instance been given positions of prominence and trust. But this has not been so. Trained medical men, as the controlling agency, have been conspicuous by their absence. Their part has been a secondary one, while military and civil officers have played the prominent part in direction and control, and have been appointed to positions for which they are not specially fitted either by knowledge or training. This is not in accordance with common sense.

It is a curious spectacle, this reversal of the ordinary conditions of life—the untrained trying to command and lead the trained. If a similar policy had been adopted against plague as was wisely observed in the famine and the frontier war, there can be little doubt that a similar success would have attended the efforts of Government, and there would have been no occasion to deplore the enormous loss of life which is now taking place in the Bombay Presidency. The disease in its progress from village to village, and from district to district is gradually raising a bill of mortality which, if it occurred elsewhere, would be viewed with something more than alarm.

Possibly one of the reasons for the adoption of this fatal policy by the Indian Government was that a large number of its medical officers were employed in famine duty, and later a still larger number with the troops on the North-West frontier. Still it does not explain the failure to utilise them in the earlier periods. The fact is that there is no special sanitary service in India. It is impossible to call the Sanitary Commissioner with a few deputies for each of the provinces, some of them the size of European States, a sanitary service. The Sanitary Commissioners are officers without men, and their power is limited. To make their task yet more hopeless they must submit to have their reports criticised by another department and then shelved. The power of a department in India depends very much on the rank and pay of its officers, and the tendency for many years past has been the reduction of both in the so-called Sanitary Department.

The fatal effects of this mistaken policy and want of an established sanitary service has been but too well demonstrated within the past eighteen months, when efforts have been made to combat the plague by combatant officers, by civilians, by any officials, in fact, save by medical men, and the highly organised and trained sanitary service which they ought to have under their orders. Is it too much to hope that the medical men recently sent out to India by the authorities at the India Office will be allowed to stay in India, or that special steps will be taken to find substitutes for them who shall form the nucleus of that imperial and provincial sanitary service in India which has yet to be organised?

THE ATTACK ON THE SUPERANNUATION ACT.

The Poor-law Officers' Superannuation Act, which came into operation on September 29th, 1896, and which had previously received the support of the majority of the various Boards of Guardians of England and Wales, provides pensions for Poor-law officials on terms almost precisely similar to those by which other Civil servants have for many years past been able to secure pensions after a prolonged period of public service. There cannot be a doubt that it was the intention of the Legislature that all Poor-law officials should in the no very distant future be in a position to secure superannuation allowances after having themselves subscribed towards them. Exception to this was permitted only in reference to those in office previous to the passing of the Act, who voluntarily contracted themselves out of its provisions, within three months of its becoming law.

The Guardians of the Pershore Union have just taken a most extraordinary course, to which we called attention in the British Medical Journal of December 25th, 1897. We do not understand that any of the medical officers of the Pershore Union did decide voluntarily to contract out of the Act within three months after its becoming law, and their salaries will therefore be subject to deductions for the Superannuation Fund. It might naturally be assumed that the Guardians of that union would in such case have been ready to meet the requirements of the Act in question, by receiving the periodical contributions of their officers on the scale enacted therein, and providing them with pensions when these became due. Such, however, is not the case. The majority of the Pershore Guardians have by resolution decided not only to refuse to elect fresh medical officers to fill any vacancies which may occur, but they have also declined to re-elect any of their former officials (who may be subject to annual re-election) unless by a distinct understanding with them, or contract entered into by them, they will not in the future put in a claim for superannuation allowance in any form.

Two of the medical officers of the Pershore Union, who have held office for a long time—one of them for no less than thirty-seven years—have just had to face this opposition to their apparent rights. They were threatened with non-re-election to their former appointments (on the occasion of the annual vacancies), and have secured re-election to office only on condition that they waive all claim to pensions when in the ordinary course these will become due.

It is very much to be regretted that these gentlemen

should have given way upon this point, since their action must tend to prejudice the position of Poor-law medical officers throughout the country. At the same time it must be admitted that their failure to resist the unreasonable and inequitable demands of the guardians, though a matter for regret, is hardly one for surprise, in view of the fact that the advertisement of the Pershore Guardians, stating that they would appoint medical officers who would be required to contract themselves out of the Act, brought a large number of applications from members of the profession in various parts of the country. The applicants have practically cut the ground from under the feet of the old medical officers, and their conduct must be strongly reprobated. It is difficult to speak patiently of the action taken by the Pershore Guardians, though it is true they came to the decision by a small majority; for the requirements of the Act had been explained to them by their chairman and their clerk, and, moreover, after it had been pointed out to them that all officers elected in the future would under any circumstances be compelled to submit to periodical deductions from their stipends to the same extent as if they were ultimately to become entitled to pensions. It was suggested that this palpable injustice could be met by the Guardians refunding to such officers these deducted amounts. Even if this is done we fail to see how by so doing there will be any compliance with Section 12 of the Act under which these deductions from salaries are levied.[1]

We venture to think that when the legality of this procedure of the Pershore Guardians comes to be tested they will then find they have no power to escape from providing pensions to their medical officers, and that the plan they propose, of returning to them the deductions made from their pay, instead of carrying the same to the common fund of the Union, will not be held, either by the Local Government Board or by any court of law, to be a compliance with the Act, but will be regarded as a direct evasion of its requirements.

The important principle involved has been brought under the notice of Mr. T. W. Russell, the Parliamentary Secretary of the Local Government Board, by the President of the Council of the British Medical Association, and the Poor-Law Medical Officers' Association has also taken steps in the matter. It is to be hoped that the Local Government Board will take a strong line upon this question, and prevent Boards of Guardians from driving a coach-and-six through Acts of Parliament. The value of the Board's decision will, however, be much diminished if it be unduly delayed, and we trust that Mr. Russell will see his way to return an early answer to the representations which have been made to him.

A LARGE number of sick and wounded from the Frontier are expected at the Royal Victoria Hospital, Netley, within the next two months.

AT the meeting of the Epidemiological Society of London on Friday, January 21st, Dr. Christopher Childs will read a paper on the History of Typhoid Fever in Munich.

[1] This section is as follows:—CONTRIBUTIONS. 12. *Obligation to Officers and Servants to Contribute.*—Subject to the provisions of this Act, every officer and servant in the service or employment of the guardians of a union *shall contribute annually for the purposes of this Act a percentage* amount of his salary or wages and emoluments according to the scale laid down by this Act, such amount to be from time to time deducted from the salary or wages payable to him *and to be carried* to and form part of *the common fund of the union.*

WE understand that Dr. Charlton Bastian, F.R.S., has been requested by the Solicitors of the Treasury to investigate and report upon the mental condition of R. A. Prince, who has been committed for trial on the charge of murdering Mr. William Terriss.

SIR WILLIAM BROADBENT will open a discussion on Adherent Pericardium at the meeting of the Medical Society of London on Monday next. Among those who intend to take part in the discussion are Sir R. Douglas Powell, Dr. W. Ewart, Dr. S. West, and Dr. John Broadbent.

THE NEUROLOGICAL SOCIETY.

THE Presidential Address to the Neurological Society of London, which is to be delivered by Mr. Victor Horsley on January 13th, at 8.30 P.M., at 11, Chandos Street, will, as already announced, deal with the subject of the Degree of Discharge of Different Nerve Centres. The lecture will comprise a discussion of methods of estimating the degree of discharge of "nerve energy" from the cortical and spinal nerve centres respectively, together with observations of the work done by a muscle when contraction of the same is initiated from the cortex cerebri and spinal cord respectively. The address will be illustrated by lantern slides of the graphic recorded tracings on which the statements are founded.

PROPOSED VACCINATION LEGISLATION.

WE understand that a memorial to the President of the Local Government Board with regard to the amendments which it is proposed to introduce into the Vaccination Acts, is in course of signature by leading officers of county councils and county boroughs throughout the country. The memorial points out that the present state of matters imperils the public health, and brings the law into discredit; and urges that any concession made to parents who object to the vaccination of their infant children should be in the form of a suspension only, but that vaccination should be made obligatory when the child reaches school age at latest.

SAFETY EYEGLASSES FOR GAMES.

ACCIDENTS to the eyes occur from time to time owing to the breaking of spectacles or eyeglasses during the course of various games or while shooting. In a recent case which has been brought to our notice, the accident had most serious consequences. In a hockey match played between Oxford University and Westgate at Surbiton, one of the players, wearing glasses for short sight, was hit by a hockey stick on his glasses. The glass was smashed, cut through the upper lid, and literally cut the eye to pieces, so that it had to be removed by a surgeon a few hours afterwards. This case emphasises the danger which has so often been pointed out of playing games, such as cricket or hockey, in ordinary glasses. All who play such games run a risk which the eyes share in common with the rest of the body; this risk can, of course, not be removed, except by wearing some form of more or less transparent shield, such as the wire gauze goggles worn by stone breakers. It is quite out of the question to expect ordinary players to adopt such a precaution, but much can be done to reduce the risk of the wearer of glasses to a level with that of the ordinary player. The splintering of the glass is the special danger from spectacles. If they be made of some substance which will not break, or at least give a clean fracture, the danger, while not abolished, is very much diminished. Such a substance is found in Brazilian quartz or pebble. With this substance some experiments were carried out a few years ago by Major Verner, of the Rifle Brigade, with the object of using it for the manufacture of glasses to protect the eyes from stray shot while shooting. The experiments were successful so far that they showed that the quartz does not splinter on fracture. Glasses made of this material present, then, one of the desiderata. They have still to be made strong enough

to resist the force of the impacts they are likely to be subjected to. This can be done in two ways—either by making the whole lens thicker than usual while retaining its required curvature, or by making it dome-shaped, and so regulating the curvatures of its anterior and posterior surfaces as to give the curvature required. Thus for a concave lens of 2 D the two curvatures would be + 10 and − 12, and for a convex lens of the same power − 10 and + 12 respectively. The object of giving the dome shape to the lens is of course to increase its strength. In the series of tests above referred to, a lens of 100 D. radius on both surfaces $\frac{5}{32}$ in. thick, stood the impact of No. 5 shot at 100 yards range. In making the lenses of this form $\frac{5}{32}$ in. is therefore the minimum thickness allowed for spectacles to be used in shooting. This thickness would of course have to be varied to suit the exigencies of particular games, as would the radius of curvature of the dome. At present there are no experimental data that we can find. Facts are much wanted, and the subject presents a useful field for investigation.

FOOTBALL ACCIDENTS.

The growth of professionalism in football has no doubt done much to raise the general standard of play and to popularise the game. It may be doubted, however, whether, in spite of the interest taken in it, the actual number of persons playing the game has undergone any large increase. It is probable, indeed, that the number has diminished, many who might as players be getting health and enjoyment being now passive spectators. Whether such is the case or not, there can be no doubt that accidents on the football field have of late years been both more frequent and more severe than formerly. This is especially noticeable in matches where a "gate" is taken and in which professionals are engaged, for the men being insured, and, in many cases guaranteed support by the terms of their engagement for months or perhaps years to come, are careless as to the chance of accident. In important games, too, the players are paid a premium if they win, and in order to secure this often resort to very rough tactics. In this country no steps have as yet been taken to diminish the risks of the game, but in America an attempt has been made. Both branches of the Legislature of Georgia recently passed a Bill forbidding the game to be played if money was charged for admission to the ground. This, whilst effectually abolishing professionalism and the rougher element, would leave the amateur sport untouched. The Governor of the State has, however, vetoed the anti-football Bill, stating as his reason that such legislation is "Governmental paternalism of the most vicious and pronounced type."

THE GREAT SANITARY IMPROVEMENT SCHEME FOR BOMBAY.

The terrible lesson of the plague has drawn attention to the urgent necessity for extensive sanitary improvements to the city of Bombay, more especially in respect to the removal of insanitary dwellings and the prevention of overcrowding. The new scheme is a thoroughly comprehensive one, and provides not only for opening up crowded localities, the construction of new streets with frontages for the erection of improved dwellings, and the levelling up of low-lying areas, but for improving existing dwellings and housing large numbers of the poorer classes in new buildings to be let at an extremely low rent. It will provide for the accommodation of population displaced and allow also for the future expansion of the city. Vacant lands to the north of the city will be laid out, and, where necessary, filled in. Certain areas west of Colaba are to be reclaimed, and will provide for residences of a superior class. As the cost of such a scheme will be enormous and the borrowing powers of the Corporation only sufficient to meet the cost of certain necessary essential sewerage and storm-water drainage improvements, it is proposed to create a special agency, with a separate staff, to devote their entire energies to the particular task before them. Large proprietary interests of Government will be involved, but in the Board to be constituted the Corporation will be strongly represented. The City of Glasgow Improvement Trust was constituted for similar purposes, and has been most successful in its results. The vacant lands will be vested in the trust for building and other purposes. The entire cost will not be less than 5 crores of rupees (over $3\frac{1}{2}$ million pounds sterling), and may possibly amount to double that sum. None of the duties of the Corporation will be taken away from it. It will still have to complete the drainage scheme, to control civic finance, the water supply, the care of roads and streets, the public lighting, and many other duties. The prompt and efficient execution of this scheme is of vital importance to the health and the sanitary good name of Bombay. Such a scheme, involving systematic, prompt, and sustained reconstruction of insanitary streets and neighbourhoods upon a scale large enough to make a permanent impression upon the now chronic unhealthfulness of the city, is beyond the power of the municipality. The water supply of Bombay is derived from three sources at some considerable distance, is of good quality, and allows about 23 gallons a head to the population daily. It is controlled by the municipality, and is now a source of large revenue. The main drainage is based on a natural fall, giving a rate of flow of about two to three miles an hour towards the place of outfall, whence it is pumped continually into the sea at some distance from the foreshore. The probable improvements to the city by this new scheme will be enormous, not only as to its sanitary condition but its general plan. It is estimated that the value of property will be considerably enhanced, and that what at first sight may appear a wasteful expenditure will prove to be a great source of riches to the community. The scheme has been accepted by the municipality, and now only awaits the final sanction of the Government. The details, however, have not yet been completed.

THE STUDENT DAYS OF KEATS.

The history of Keats's medical education still needs elucidation. The main facts are sufficiently clear, but it has not yet been marked out in detail. He left Clarke's school at Enfield in 1810, when he had just completed his 15th year, and he was apprenticed at once to Thomas Hammond, a surgeon of Edmonton, where his mother was living after her separation from her second husband, William Rawlings. Keats was bound apprentice for the usual term of five years, and often revisited his old school, to which his master was the doctor. It is said that his fellow apprentices looked upon him as an idle, loafing fellow who was always writing poetry, and that after a time master and pupil quarrelled and the indentures were cancelled. This happened in the summer or autumn of 1814, and Keats entered as a student at the United Hospitals of Guy and St. Thomas, then located in the Borough. For the first winter and spring after leaving Edmonton he lodged alone at 8, Dean Street, Borough, and then for about a year, in company with some fellow students, over a tallow-chandler's shop in St. Thomas's Street. Thence he went, in the summer of 1816, to join his brothers in lodgings in the Poultry, over a passage leading to the Queen's Head Tavern. He was appointed dresser to Mr. Lucas, Surgeon to Guy's Hospital, March 3rd, 1816, and on July 25th, 1816, he was admitted a Licentiate of the Society of Apothecaries. The books of the Royal College of Surgeons make no mention of his name, so that he probably never attempted to obtain the diploma of that body. The statement that he quarrelled with his master Thomas Hammond is probably correct, for Keats was headstrong and pugnacious; but it is probably incorrect to assign the cancelling of his indentures to any such cause. Keats was merely following out the ordinary curriculum of a medical student of the time. The regulations of the Apothecaries' Society required attendance upon lectures as well as mere apprenticeship, and it was customary for a master to forgive his apprentice the latter part of his time to enable

him to attend a general hospital. Thus Mr. Watson, Secretary to the Court of Examiners at the Apothecaries' Hall, states expressly in his evidence given before the Select Committee on Medical Education in 1834, that "Although an apprentice is usually bound for five years, very few serve their masters for the full time;" and this is exactly the course taken by Keats. He was not a genuine practitioner of medicine, nor could he become one, for by nature he was otherwise inclined. He says: "The other day, during the lecture, there came a sunbeam into the room, and with it a whole troop of creatures floating in the ray; and I was off with them to Oberon and fairyland." "My last operation," he once told Charles A. Brown, "was the opening of a man's temporal artery. I did it with the utmost nicety, but, reflecting on what passed through my mind at the time, my dexterity seemed a miracle, and I never took up the lancet again."

THE NEW INFIRMARY AT NEWCASTLE-ON-TYNE.

LORD RAVENSWORTH presided at a special meeting of the governors of the infirmary, held on Tuesday, January 4th, to consider the question of giving up to the corporation of Newcastle the piece of land, held on lease from the corporation, on which a part of the infirmary now stands. The property in question consists of two portions, one containing 11,276 square yards, held on lease until October, 1951, at a rental of 28. 6d. per annum, and the other, containing 1,859 square yards, held on lease until October, 1927, at a rental of £21. The surrender of this large area of valuable land in the heart of the town will probably be more than an equivalent for the value of the proposed site on the Leazes. About one-quarter of the present site is freehold, belongs to the infirmary, and the sale of this will realise a handsome sum for the institution. The discussion was altogether favourable to the proposition, and it was unanimously resolved that the land should be offered to the corporation, and given up as soon as possible after the completion of the new building. This action of the governors will, it is believed, disarm to a great extent any serious opposition. It is estimated that the cost of a new hospital of 400 beds will be about £160,000, at the rate of £400 a bed. Mr. Hall's gift of £100,000 provides the greater part of the money, and as soon as the question of the site is settled an energetic appeal will be made for the remaining £60,000. The £100,000 already subscribed to the Jubilee Fund will then be available for a permanent endowment, as it is thought that this special fund should be kept apart, and not broken into to raise a portion of the building. The Newcastle City Council, at its meeting on January 5th, decided to hold a special meeting on January 12th to consider the proposition above referred to from the governors of the infirmary.

COUNTY COUNCILS AND LUNATIC ASYLUMS.

THE County Council of the West Riding of Yorkshire has under consideration a scheme which includes the erection of a new asylum at Scalebor Park in the Wharfe Valley, which will accommodate about 170. The Scalebor Park Asylum is intended for private or paying patients only, and will be a new departure in the policy of county asylums, which has been made possible by the recent Lunacy Law Amendment Acts. Already there are 100 of these patients in the three general asylums, so there need be no hesitation on the part of the authorities in providing for them in a separate building, where they will be self-supporting. The accommodation which they now occupy in the asylums will thus be set free for pauper cases. Several of the borough and county asylums that are fortunate enough to have more accommodation than they require have received patients on payment of rather more than their actual cost, thus removing them from the pauper class, and to a certain extent relieving the rates. To start a separate institution, not in the immediate neighbourhood of the county asylum, is an improvement, for there can be no doubt that persons hesitated to send their friends to pauper asylums, though they paid for them, for their neighbours did not know of this fact, and classed them all together. The general feeling in favour of public institutions has to be dealt with. It may be right or wrong, but in any case the present experiment in no way interferes with the use of the better class private asylums, and reduces the risks involved in some of the large poor asylums where patients are farmed by the authorities who have not themselves accommodation for them. The double tide which is to be noticed in all hospitals and asylums is evident. On the one hand, a desire that those who can pay a little should be made to pay, and that all institutions should be under official control. There is good in both, but there is danger as well. The West Riding Committee further propose to erect villa residences on this estate containing 20 patients each, so as to bring the total number up to something like 350. The Committee have also in hand a hospital for acute cases at Wakefield, which will afford accommodation for 200 patients. The Council has, in fact, to deal with a very serious increase of insanity which has taken place within the last ten or twelve years, and, from what can be gathered from the actual number of certified lunatics under their care and control, there can be little doubt that the erection of an additional asylum has become necessary. In 1887 there were only 2,951 patients in the two asylums, and 1,060 in the union workhouses, of the Riding, whereas there are now three asylums, namely, Wakefield, Wadsley, and Menston, containing 4,152, and in the workhouses 928, making a total of 5,080. During the year 1896 there was an increase of 242, and there has been an aggregate annual increase in the asylums of 130, and the Asylums Committee have to face the fact that in the course of three or four years the asylums will be crowded. As it takes something like five years to erect an asylum and make it available for the reception of patients, it follows that by the time a new asylum can be at their disposal a considerable number of its intended inmates will be waiting admission.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

WE are informed that Mr. Brudenell Carter, the representative on the General Medical Council of the Apothecaries Society of London, will give an address on Legislation as a Remedy for Medical Grievances at a meeting of the South-West London Medical Society, to be held at Stanley's Restaurant, 235, Lavender Hill (close to Clapham Junction), on Wednesday, January 12th, at 8 P.M. We are asked to state that it is understood that Mr. Carter will discuss some of the views expressed by Mr. Victor Horsley in his recent address on the Medical Acts, and that it is expected that Mr. Horsley will be present. All medical men interested in the subject are cordially invited by the Society to attend, and to take part in the discussion. A brief report of Mr. Horsley's address to the South-West London Medical Society, entitled the Medical Acts of Parliament, as they are and as they ought to be, which was delivered on December 8th, 1897, before the South-West London Medical Society, will be found in the BRITISH MEDICAL JOURNAL of December 11th, 1897, p. 1748.

YELLOW FEVER AT JAMAICA.

A CORRESPONDENT writes that there has been an increase of yellow fever, chiefly amongst the new troops that have come to the island. There were 7 cases and 4 deaths at Up Park Camp, 2 cases and 1 death at Newcastle. Dr. Cooke's report to the Mandeville Board of Health was reassuring, inasmuch as it afforded evidence of renewed sanitary activity. It disclosed abundance of nuisances, but it is the ignoring, not the discovery, of nuisances that is the weak point with so many authorities even in Jamaica. Dr. Cooke's account of the isolation he was able to carry out with their own consent of the infected family at Shooter's Hill, reads very differently from the sensational paragraph in the *Daily Gleaner*. We

hope great things from such work as Dr. Cooke's. There is evidently a wide field for his sanitary energies. The death-rate in the island for the last completed year was 24.2. It varied from 19.4 in the parish of Manchester to 29.2 in that of Kingston. Seventy-five per cent. of the deaths were uncertified, although there are 119 medical men, or one to every 6,000 of the population.

THE RICHMOND ASYLUM, DUBLIN.

At the last fortnightly meeting of the Governors of this asylum, some well-deserved compliments were paid to the Superintendent, Dr. Conolly Norman. For many years Dr. Norman has had a very hard battle to fight. When he took over the management, the asylum was in a state which would be accurately described by that often misapplied term "a hotbed of disease." Phthisis, dysentery, and chronic diarrhœa were prevalent in it, and the overcrowding which at the beginning of his term of office existed to a degree of which we in this country have no experience, has, it is to be feared, not tended to decrease since. During the last two years, the institution has been further afflicted with a severe epidemic of beri-beri. Dr. Norman's reports for the last ten years have been despairing cries for reforms. To the credit of the Board of Governors be it said they have for the most part supported him in his efforts, but the body in which all the real power is vested—the Government department known as the Board of Control—has been apathetic in the extreme. Nevertheless, Dr. Norman has borne in mind the maxim that "it's dogged as does it," and, by doggedly hammering away, he has had the drainage of the asylum entirely remodelled and renewed, additional buildings erected, a new asylum projected and begun in the country, and finally the Grangegorman Prison absorbed into the asylum system. It was with reference to the work of Dr. Norman with respect to this building that the Chairman of his Board rendered to Dr. Norman the praise which is so justly his due. As a visiting justice, the Chairman had been familiar with the old prison for the last eleven years. "He was astonished to see what he might term a transformation of the old gloomy prison into a charming scene. The lower floor gave one the idea of the deck of a transatlantic steamer rather than of a department of a lunatic asylum." When we remember how poor a country Ireland is, and how closely the expenditure of public funds is scrutinised, we shall realise the difficulties under which this result has been attained.

THE INTERNATIONAL CONGRESS OF ZOOLOGY.

The fourth International Congress of Zoology will commence in Cambridge on Tuesday, August 23rd, 1898. Previous congresses have been held in 1889 at Paris, in 1892 at Moscow, and in 1895 at Leyden, when Sir William Flower was elected President of the ensuing Congress, and was entrusted with the task of selecting the actual place of meeting in Great Britain after consultation with his colleagues in these islands. An invitation was sent at the beginning of 1896 to the President of the Permanent Committee of the Congress by scientific bodies in Cambridge, and this town was selected for the Congress of 1898 with the full approval of that Committee and of the President-elect. Last autumn invitations to join a General Committee were issued by Sir William Flower; but he was, unfortunately, obliged to resign the Presidency on account of ill-health. At a meeting on November 4th, when the General Committee was definitely constituted, Sir John Lubbock was invited to accept the Presidency, and the invitation was endorsed by the Permanent Committee of the Congress. At the same meeting an Executive Committee was appointed, and is now engaged in the necessary work of organisation. The local arrangements are in the hands of a Reception Committee, of which Professor Newton is Chairman and Mr. Adam Sedgwick Vice-Chairman. Circulars inviting those who may wish to attend the Congress to send in their names to the Reception Committee, whose offices are at the Museum, Cambridge, will shortly be issued, and the same Committee will make arrangements for the accommodation of members, and will undertake all the purely local preparations. The member's subscription will be £1.

THE DIAGNOSIS OF RABIES.

The Board of Agriculture have issued a circular letter to local authorities stating that arrangements have now been made which will enable the Board's veterinary officers to carry out investigations in instances where dogs or cats are suspected of rabies. The method which will be employed is the method of inoculation for the diagnosis of rabies which we owe to the genius of Pasteur. The Board of Agriculture request all local authorities to issue "such instructions as will insure the prompt despatch to the Board's Laboratory of the head of any dog or cat which has died or been slaughtered on account of suspected rabies, where the veterinary inspector finds, after *post-mortem* examination and inquiry into the history of the case, that he is not in a position to express a definite opinion as to whether the animal was or was not rabid."

RECRUDESCENCE OF INFLUENZA.

No fewer than twenty-nine deaths were registered last week in London as directly due to influenza. After making allowance for the fact that doubtless a few of these deaths would have been recorded in the preceding week had Christmas Day not fallen upon the Saturday, it is evident that there was a marked increase in the fatality of the disease. In the three preceding weeks the deaths in the metropolis from influenza had been 10, 17, and 15 respectively, so that recently there has been a continued increase in its fatal prevalence; and the number last week exceeded that recorded in any week since May last. The disease appears to be most fatal in North London, especially in Hampstead and Islington. Of the 29 deaths from influenza in the metropolis last week 15, or rather more than half, were of persons aged upwards of 60 years. Epidemic influenza appears to be present also in Norfolk, Suffolk, Cambridgeshire, and other parts of the East of England.

COUNTRY MILK AND CITY TYPHOID.

A pretty little piece of verbal fencing has recently taken place between Dr. Weatherly, the Chairman of the Long Ashton Rural District Council—the district which lately supplied Clifton with a considerable amount of typhoid-infected milk—and Dr. Davies, of Bristol. In the warmth of controversy the latter had roundly accused the rural council of conniving at the persistent pollution of the Ashton brook. Dr. Davies has, it will be recollected, established that 94 per cent. of his cases were receiving milk from a certain farm, that the water supply of this farm was from a pump, and that the water of this pump, both chemically and bacteriologically, resembled that of the Ashton brook, which received, directly or indirectly, the sewage of nearly the whole village of Long Ashton. Considering the long delay before the first cases were recognised, it is not surprising that Eberth's bacillus was not actually found in the water; but as its friend and ally, the bacillus coli communis, was abundantly evident, there could be no doubt about the efficient pollution of the water both of pump and stream with excremental matters. Dr. Davies accordingly withdraws the word "connived," metaphorically raises his hat in apology for the unparliamentary expression, and substitutes "knowingly permitted" or in the legal phraseology of the Acts "caused." Dr. Weatherly has no objection to legal phraseology, and so again metaphorically they shake hands. Dr. Davies's position—that a sanitary authority which carries its drain pipes into a stream causes the pollution—is unassailable legally. We do not care to assess the moral obliquity of the proceeding, but if the passage at arms has no other effect it will have drawn attention—shall we say for the n^{th} time?—to the need there is

that sanitary authorities should realise their responsibilities. If, as we gather, the farm K was within the jurisdiction of the Long Ashton Rural District Council, they cannot altogether get rid of a certain amount of responsibility in regard to the outbreak. Dr. Weatherly harps much upon the absence of the typhoid bacillus a month or six weeks after the cause of the disaster had arisen, but he suggests, as far as we have seen, no other efficient origin for the fever, and that the outbreak was due to the milk from the farm K. Dr. Davies has made, as we said before, as plain as a pikestaff. What amount of inspection had the Long Ashton Rural Council given to this farm in their district? Why did they know nothing of the patient with ambulatory typhoid, to use a familiar, though somewhat loose, expression? How many recent analyses had they made of the pump water at the K. farm? In short had they done any of the many things it was their bounden duty to do as a sanitary authority to secure the purity of the milk sent from their district into Clifton?

THE INTERNATIONAL CONGRESS OF HYGIENE.

THE ninth International Congress of Hygiene and Demography will be held at Madrid from April 10th to April 17th, 1898. The Congress is under the patronage of His Majesty Alfonso XIII and Her Majesty the Queen Regent, and the Spanish Minister of the Interior, Señor Sagasta, is President of the Organising Committee. The Secretary-General of the Congress is Dr. Amalio Gimeno y Cabañas, Professor of Hygiene in the University of Madrid. The President of the Executive Committee is Professor Julian Calleja, the Vice-President the Marquis del Busto, Professor in the Madrid Faculty of Medicine. As far as relates to hygiene, the work of the Congress will be divided among ten Sections as follows: Microbiology in Relation to Hygiene; Prophylaxis and Transmissible Disease; Medical Climatology and Topography; Urban Hygiene; Hygiene of Alimentation; Hygiene of Infancy and of Schools; Hygiene of Exercise and Labour; Military and Naval Hygiene; Veterinary Hygiene, Civil and Military; Sanitary Architecture and Engineering. The part of the work relating to Demography will be divided among three Sections as follows: Technics of Demographic Statistics; Statistical Results in Relation to Demography; Dynamical Demography (movements of population, etc.). A British Committee, of which Sir Douglas Galton, K.C.B., is Chairman, has been formed to secure the co-operation of sanitarians in this country, and generally to promote the success of the Congress. Programmes of the subjects to be dealt with and all other particulars may be obtained from the Honorary Secretary to the British Committee, Dr. Paul F. Moline, 42, Walton Street, Chelsea.

OYSTERS AND SEWAGE CONTAMINATION.

IN a report presented some time ago by Dr. Brown to the Colchester Town Council, it was stated that several cases of typhoid fever had recently occurred in the borough, and that "the chain of evidence, moral and medical, was conclusive that the sewage-soaked oysters of the little seaport (Brightlingsea) were the factors at work on the production of the infection." Four cases occurred in different parts of the borough, and all at the same time. Every probable cause was investigated, and the only factor found common to the group was the consumption of oysters brought from Brightlingsea. In consequence of the wide publicity given to this report the subject came up for discussion at a meeting of the Brightlingsea Council, held immediately afterwards. The medical officer, in introducing the subject, complained that, although he had written to Dr. Brown asking for further information, none had been forthcoming. Assuming that the allegations were correct—and this he did not doubt for a moment—he was unable to trace the implicated beds with the object of closing them if necessary. The clerk advised the Council that it was their duty to close the oyster beds if there was evidence that the oysters caused disease. The general impression seemed to be that there was no proof that Brightlingsea oysters had ever caused typhoid fever, otherwise the town would long since have been decimated, and the typhoid bacillus would have been discovered in the oysters. The allegations were deemed to be unfair and likely to injure the reputation of the town. The weakness of the above arguments has frequently been exposed, and we can only recommend the District Council to lose no time in so protecting their oyster beds that the bivalves fattened thereon may be placed above suspicion. As an inspector of the Local Government Board has been investigating other causes of typhoid fever alleged to have been caused by the consumption of oysters from the Brightlingsea beds, doubtless the cases referred to by Dr. Brown will also receive his attention.

DEATH OF PROFESSOR ZAKHARIN, OF MOSCOW.

WE regret to announce the death of Professor Zakharin, of Moscow, whose name, long famous in Russia, became known throughout the world during the last illness of the late Czar. He was Professor of Clinical Medicine in the University of Moscow for nearly forty years, and for a long time he was one of the most prominent physicians in Russia. He wrote little, but was a sound clinical teacher; and, in spite of certain eccentricities, some of which could hardly be described as amiable, he was an able and honest practitioner. He was successful far beyond the average of successful physicians, for two or three years ago his fortune was computed at about half a million sterling, and the bulk of it had been earned by the practice of his profession. Professor Zakharin was about 70 years of age.

CENTENARIANS IN 1897.

A PECULIAR glamour surrounds those fortunate individuals who live through, or believe themselves to have lived through, a hundred years. Considerable interest, therefore, attaches to the list of British centenarians for 1897, for which we are again indebted to the *St. James's Gazette*. Our contemporary's method has the advantage of not duplicating names in different years, but is deprived of some of its statistical value by the fact that people, so to speak, profess centenarianism at differing periods, some proclaiming the fact as soon as it is accomplished, or even earlier—for one lady is recorded as dying in her 100th year—while others modestly hide it from the world till what time they leave it. The list contains 34 names, the proportion of females to males being 23 to 11; the normal ratio is about 3 to 2. The total number is less than in any of the last ten years, except 1893; it may perhaps be inferred that, to speak in agricultural parlance, the 1893 and 1796 crops were rather less hardy than, for instance, the 1791—1891 finding 48 names in the *St. James's Gazette* list. It is a noteworthy fact that, out of the 34 centenarians of 1897, no fewer than 12 were certainly Irish, while 2 of the others had unmistakably Hibernian names. It would seem that poverty is a factor predisposing to longevity, as well as to number and size of offspring, for both of which Ireland is famous. A large number of the centenarians are naturally referred to as living or dying in the workhouse, although those who, as is recorded of one Phœbe Goode, have given hostages to fortune to the number of 50 grandchildren and 100 great-grandchildren, to say nothing of the next generation, probably find no difficulty in resting in the bosom of their families. In a considerable proportion of the cases it is explicitly stated that the mental faculties were unimpaired to the last. It is pleasant and encouraging to reflect that to live to 100 does not necessarily entail becoming a Struldbrug, even if one fails to emulate the famous old lady who

> Lived to the age of a hundred and ten,
> And died of a fall from a cherry tree then.

Very few details are given as to the habits and avocations of the centenarians. True, it is said of one old lady, still hale at the age of 102, that she is a lifelong abstainer and an in-

veterate churchgoer, and smoker of black twist tobacco. No indication is, however, given to which of these habits her longevity is to be attributed. Of one man, who died at the age of 108, it is recorded that he was a cripple, and for many years a vagrant; the famous John O'Brien attained the same age, and was for 75 years champion fowler and angler of Ireland, in addition to which both he and his father fought at Waterloo. Another Waterloo veteran, who was severely wounded in the battle, did not succumb till last year, having attained the age of 115. The absolute record in point of age s held by Mrs. Anne Armstrong, who, it is said, was born at Fermanagh in 1781, and has lived in Milton Malbay, co. Clare, for over 90 years.

BACTERIOLOGICAL DIAGNOSIS.

THE resolution of the Londonderry and North-West of Ireland Branch, which was reported in the BRITISH MEDICAL JOURNAL of November 13th, 1897, p. 1456, shows strongly the trend of modern preventive medicine. The discovery by Koch of the tubercle bacillus, the identification by Klebs, Loeffler, and Eberth of those of diphtheria and of typhoid, have given an immense impetus to the bacteriological diagnosis of infective disease. The New York method of utilising the bacteriologist to assist the general practitioner in clearing up doubts as to the diphtherial nature of certain throat affections, so well described to the Association at Bristol by Dr. Bigg, has been followed up, in regard to that disease, and somewhat in the same manner, not only in the city last mentioned, but we believe also in Newcastle-on-Tyne and St. Helens, in Liverpool, in Manchester, in Leeds, and many other places. The advantage of extending the method to diseases other than diphtheria was conspicuously shown by the way in which, as we lately had occasion to record, Dr. Davies was able so promptly to deal with what might otherwise have become a troublesome milk outbreak at Bristol. We learn that a bacteriological laboratory has just been established at Dundee, and we see that quite recently the Runcorn District Council have petitioned the Cheshire County Council to establish one for Cheshire. There are, of course, already many such laboratories attached to the departments of the officers of health in many counties and large towns, the Worcester and West Riding counties for instance, but it is not every medical officer who can give the time that would be required were he to undertake the task of examining bacteriologically every doubtful case of the diseases named. During the cholera scare, the Local Government, under certain restrictions, placed the services of Dr. Klein at the disposal of authorities whose medical officers suspected the possible existence of that disease in their districts. More recently they offered to do the same in regard to new outbreaks (but in regard to new outbreaks only) of diphtheria. It would require many Dr. Kleins to do the necessary work were the practice of referring all doubtful cases to the central health office to become universal. Hence the importance of the suggestion that comes to us from Londonderry. Perhaps something in the nature of a retaining fee, paid by the county council, or by the Local Government Board, to the bacteriological expert at each of our medical schools, with such pecuniary aid in equipment as would enable him to combine accuracy with speed, might to some extent meet the case. Authorities, and through them private practitioners, would then have the vested right to call for the services of the expert, on payment of an honorarium in each case. We should be inclined to insist on the latter to prevent the time of the expert from being wasted over trifles. The authority would of course pay this fee, acting on the advice of its own medical officer. Where there is no medical school within reasonable distance, the county council or the council of a large urban authority might provide such a laboratory. But it should be remembered that to be of service it must be available continually. This means that if it is attached to the department of an officer of health he shall receive sufficient assistance to enable him to carry on the new work rapidly and well, without having to neglect the administrative duties which rightly make so large a demand upon his time. In most cases an experienced assistant, or a deputy medical officer, would be required. The utilisation of the pathological departments of our medical schools seems, where it is practicable, the better method. It would help also to keep the health department in touch with the school. Of course every medical officer of a large district ought to have a laboratory—most of them already have, but it is one thing for him to undertake an investigation, to do which he has arranged his work perhaps a week beforehand, and it is quite another thing to ask him to stop his other work and attend to specimens sent in at all sorts of hours. If he is to do this he must have adequate assistance, and, unless he can do this, much of the usefulness of the work would be lost. Laboratories for larger areas, at least in the provinces, are therefore desirable. A State subsidy would imply a State guarantee as to efficiency, and the head of the laboratory ought to have more than a superficial acquaintance with bacteriology. While it is quite time that something more was done in this direction, it should be done cautiously. It must be *festina lente* if it is also to be *vestigia nulla retrorsum*.

ST. PETERSBURG INSTITUTE FOR EXPERIMENTAL MEDICINE.

ON December 20th, 1897, the St. Petersburg Institute for Experimental Medicine held its annual meeting under the presidency of His Highness Prince Alexander von Oldenburg. After the delivery of an address by Dr. A. Wladimiroff, on the Prophylaxis and Treatment of Bubonic Plague, Professor Lukjanoff, Director of the Institute, read a report of its work during the year. From this it appeared that 120 persons had been engaged in research work of one kind or another in the Institute; the number of investigations published was 65. Some 25,000 tubes of antidiphtheria serum, and about 1,000 tubes of various other kinds of serum, were sent out. The number of persons treated for hydrophobia by antirabic inoculations was 363, with a mortality of 0.7 per cent. The funds of the institute amount to £28,000.

TUBERCULOSIS AND EXPECTORATION.

OUR Paris Correspondent writes: The Public Assistance Administration of Paris has opened at the Lariboisière Hospital two pavilions for the treatment of tuberculous patients only. The two contain 160 beds. At the Tenon and Laennec Hospitals the same system will be adopted. The Administration will thus create a series of sanatoria where the special sanitary measures requisite to prevent contamination will be scrupulously observed. Directions concerning the means to be taken to avoid propagation of the disease have been drawn up and distributed. This last measure, though wise, will, it is to be feared, be useless, owing to the general habit of spitting which renders the every-day walk in Paris both dangerous and disagreeable, only equalled by omnibus and railway travelling. In some omnibus and railway carriages a notice is posted up forbidding this repulsive and extraordinary habit. Unfortunately the presence of the notice seems to bring the habit to an acute point. Whether a spirit of contradiction is at work or the subtle influence of suggestion is a difficult question to settle. But the painful fact is evident, that the streets of Paris, its railway stations, and public carriages were never in a more dangerously disgusting condition than they are now, owing to this uncleanly habit. Not long ago the editor of the *Journal de Médecine* wrote an article on this subject urging that the prohibition, since it is unfortunately necessary, should be enforced. At present if not an incentive it is a dead letter, and neither omnibus conductors nor railway guards attempt to have the prohibition respected.

UNIVERSITY OF WARSAW.—The total number of students at present on the books of the University of Warsaw is 1,097, of whom 423 belong to the medical faculty.

NEW YEAR HONOURS.

Sir William Tennant Gairdner, K.C.B.

The Queen has conferred the dignity of a Knight Commander of the Bath upon Dr. W. T. Gairdner, Professor of Medicine in the University of Glasgow, and Physician in Ordinary to Her Majesty the Queen in Scotland.

Sir William Tennant Gairdner was born in Edinburgh on November 8th, 1824, the son of Dr. John Gairdner, of that city. He received his medical education at Edinburgh University, where he obtained the degree of M.D. in 1845. In 1846 he was appointed Resident Medical Officer at the Edinburgh Royal Infirmary—a post which he vacated in 1848, when he succeeded Dr. Hughes Bennett as Pathologist to the infirmary. In 1853 he became Physician to the infirmary, and began to lecture on the practice of medicine in the Extra-mural School. In 1862 he was appointed Professor of Medicine in the University of Glasgow, and in the following year Medical Officer in the City of Glasgow. This last appointment was accepted with some hesitation, but Sir William Gairdner has since on many occasions borne witness to the great influence for good which the experience gained in that office has had upon his career as a clinical physician and as a teacher of medicine. The sanitary condition of Glasgow at that time was most deplorable. In some parts there was such great overcrowding that nearly 1,000 persons lived upon an acre of ground. The habits of the people were often extremely filthy, and the possibility of cleanliness was too often denied to them by the faulty construction of the enormous tenement houses in which they dwelt, and by the insufficient supply of water, which in any case was of doubtful purity. The prevalence of typhus fever was only an index of the numerous other preventable diseases produced or fostered by insanitary surroundings. Supported by enlightened Lord Provosts such as Mr. John Blackie and Mr. John Ure, and aided by the skill and enthusiasm of Mr. John Carrick, the city architect, an immense transformation was worked under the Glasgow City Improvement Act, and when the great epidemic of cholera reached Glasgow so many improvements had been effected, and public opinion had been so completely won over, that the city was able to face it without panic, and the citizens showed no disposition either to conceal or to exaggerate individual cases of diarrhœal disease. As a matter of fact, Glasgow was able to show a death-rate from cholera very much less than that of any other large town in Scotland except Paisley, which had been the first to adopt similar precautions. Not the least of the services which Sir William Gairdner rendered to the city of his adoption was that he was able, when he resigned the office of medical officer, to point out as his successor Dr. J. B. Russell, who has shown himself to be so eminently fitted for the duties of that office.

Sir William Gairdner, as Professor of Medicine in the University, and as Physician to the Western Infirmary, Glasgow, has commanded the respect and affection of many generations of students. As a clinical teacher, as he would himself be the first to confess, the whole bent of his teaching has been influenced by the profound impression made by his ten years' experience as the medical officer of health for Glasgow. Only on this New Year's Day, when speaking at a meeting of the Victoria Infirmary, Glasgow, in response to a reference made to the honour which he had received that day, he dwelt forcibly upon the great change which had come over the mode in which the science and art of medicine was regarded by its professors and by thinking men in all professions. The old idea, he said, was to fight disease by drugs; the modern idea was that disease was a departure from sound functions, and that it was to be met, not by giving mixtures containing many ingredients, but by trying to promote the healthy discharge of all functions of the body by doing all that was possible to secure that the normal power of the individual had a fair chance to struggle with and to overcome abnormal influences.

In 1888, when the British Medical Association held its annual meeting in Glasgow, Professor Gairdner, as President, delivered an address on the Physician as Naturalist, marked by his customary philosophical insight. In it he urged that the physician ought to be regarded as being "admirable and trustworthy as a healer, chiefly in proportion to the confidence reposed in him as a naturalist—that is, as a humble, reverent, and exact follower and student of Nature." How far Sir William Gairdner has succeeded in attaining his own ideal is sufficiently evidenced by his life-work, and by the universal pleasure which this well-merited honour has given to his old pupils, and to very many beyond that wide circle.

Sir John Batty Tuke.

The honour of knighthood has been conferred upon Dr. John Batty Tuke, the President of the Royal College of Physicians of Edinburgh. Sir John Batty Tuke took the degree of M.D. in the University of Edinburgh in 1856, and from 1857 to 1863 served as medical practitioner in medical charge and as surgeon to the Colonial Forces in New Zealand. On his return to Edinburgh in 1863 he was appointed Assistant Physician to the Royal Edinburgh Asylum. In 1865 he was appointed Medical Superintendent of the Fife and Kinross District Asylum, an office which he held until 1873, when he settled in Edinburgh, and became associated with the late Dr. John Smith and Dr. Lowe in the management of the Saughton Hall Private Asylum. Sir John Batty Tuke is a Manager of the Royal Infirmary and of the Royal Maternity Hospital, Edinburgh, and in addition to being President of the Royal College of Physicians of Edinburgh he is its representative on the General Medical Council. He is also President of the Medico-Chirurgical Society of Edinburgh, a member of the Council of the Royal Society of Edinburgh, and in 1876 received the honorary degree of D.Sc.Dub.

Sir John Batty Tuke has always shown an active interest in the advancement of the scientific study of medicine. He was one of the first in Great Britain to give attention to the systematic study of the morbid anatomy of the insanities, and was largely instrumental in the establishment of the research laboratory of the Royal College of Physicians of Edinburgh, which has served so important a function in raising and maintaining the scientific spirit in Edinburgh. His contributions to the literature of the subject to which he has specially devoted himself have been numerous and important. He is the author of the Morison Lectures for 1874 and 1894, the subject of the last course being The Insanity of Over-Exertion of the Brain. He contributed to Bucknill and Tuke's *Manual of Psychological Medicine* the section dealing with the morbid histology of the brain, and he is the author also of various articles on mental disorders in the *Encyclopædia Britannica*, including those on Insanity and Hysteria.

Sir John Struthers.

Emeritus Professor John Struthers, upon whom the Queen has conferred the honour of knighthood, is the President of the Royal College of Surgeons of Edinburgh. He is a native of Fifeshire, born in 1823, of an old Edinburgh family. He was educated privately before going to study medicine at Edinburgh University, where he graduated M.D. in 1845, after an active student career, during which he was first prizeman in anatomy, physiology, surgery, and pathology. He took the Licence and Fellowship of the Edinburgh College of Surgeons, and, after two years of the demonstratorship, became Lecturer on Anatomy, a position which he occupied till 1863, when he was appointed by the Crown to the Professorship of Anatomy at Aberdeen University. While occupied mainly in anatomy in the Edinburgh School, teaching large classes, he held office in the Royal Infirmary successively as House Surgeon, Assistant Surgeon, and Acting Surgeon.

At Aberdeen he gave himself entirely to anatomy, and had to create a modern anatomical school. New buildings—museum, theatre, dissecting-rooms, and histological laboratory—arose under his plan and direction. His teaching embraced histology, comparative anatomy, and embryology, as well as the more ordinary work of the schools of human anatomy, but the application of anatomy to surgery, and his insisting on careful dissection, were the prominent aims of his teaching and care. The weekly evening lectures he gave on the Relation of Man to the Higher Animals, in illustration of the Darwinian hypothesis, were largely attended by the Arts and Divinity students of the University and by the general public, and excited no small interest by their novelty in the University. The Anatomical Museum which he formed for the University there, and with which he constantly illustrated his lectures, comprises compara-

tive as well as human anatomy. He took an active part in promoting the general interests of the medical school, in having laboratories fitted up in the several departments, and in bringing about the establishment of a Chair of Pathology, for the foundation of which the late Sir Erasmus Wilson gave the handsome sum of £10,000. During the twenty-six years of Dr. Struthers's tenure of office the number of students of medicine in the University increased from 150 to 450. Latterly he was concerned also in the rebuilding of the Royal Infirmary of Aberdeen, of the committee for which purpose he was chairman.

During his time at Aberdeen the duty of attending to the numerous parliamentary projects of medical reform was entrusted to Dr. Struthers by the University, and he sat in the General Medical Council from 1884 to 1891, first as sent by Edinburgh and Aberdeen Universities jointly, and after the Medical Act of 1886, which gave a member to each university, as member for Aberdeen University. He was Chairman of the Education Committee, prepared reports on the systems of medical education and examination in France and Germany, and the final report, following which the Council enacted the new five-year course of professional study, and issued recommendations in regard to study and examinations, on completing which work he retired from the Council. Since returning to Edinburgh, on retiring from professorial work in Aberdeen, he has been an active member of the College of Surgeons, as Examiner in Anatomy, as worker in the anatomical department of the museum, and in the planning and equipping of the research laboratory of the College. He was President of the College 1895-97, occupying that position during the year of Her Majesty's jubilee.

The publications of Dr. Struthers in anatomy have been numerous. In 1854 appeared Part I, in 1864 Part II of *Anatomical and Physiological Observations*, containing papers representing his research work in the Edinburgh School; in 1866, *Historical Sketch of the Edinburgh Anatomical School*; and in 1889, on his retiring from professorial duties at Aberdeen, *References to Papers in Anatomy, Human and Comparative*, containing an abstract of all his published papers to that date, some seventy in number. Since his retirement he has published various papers in human and comparative anatomy, in which rudimentary structures come in for a large share of attention. His valedictory address as President of the Royal Physical Society of Edinburgh in November last was devoted to the consideration of rudimentary structures in man and their meaning. In regard to medical education and examination, Dr. Struthers embodied his experience of half a century in the introductory address, entitled The Medical School of the Future, on the opening of session 1895-96 in his old school at Surgeons' Hall. He speaks earnestly against the present over-lecturing system and the cramming fostered by the present system of over-examination, and urges taking the student to Nature, and training him to observe and to think for himself.

Sir GEORGE KING, K.C.I.E.

Brigade-Surgeon-Lieutenant-Colonel Sir George King, who has been promoted to be a Knight Commander of the most eminent Order of the Indian Empire, is the Superintendent of the Royal Botanical Gardens, Calcutta. He passed into the Indian Medical Service first of his year in 1865, and was shortly afterwards appointed to succeed the late Dr. T. Anderson in charge of the Calcutta Gardens, an appointment which has been held by a succession of distinguished men. He has an eminent reputation as a botanist and horticulturist, but his most valuable services to the Government of India have been in connection with the introduction and extension of the cultivation of the cinchona into India. Dr. Anderson, before his untimely death, had introduced the plant into Ceylon, and Sir George King has had the task of systematising its cultivation, and of organising the manufacture of quinine and of cinchona febrifuge on a commercial basis. There are now in the four divisions of the permanent plantations of Bengal upwards of four millions of trees or plants, chiefly of the calisaya, hybrid, and succirubra varieties. The quinine and febrifuge is sold to the natives in small packets at the price of a pice or farthing—the smallest current coin—yet the Government of Bengal unwillingly receives a small annual profit from the manufacture of the drug. Every rural post-office throughout Bengal sells the 5-grain packets for a pice, and in addition all the dispensaries and hospitals throughout India are supplied with quinine sulphate and the cinchona febrifuge. It is understood that Sir George King is about to retire.

Surgeon-Lieutenant-Colonel S. J. THOMSON, C.I.E.

Surgeon-Lieutenant-Colonel Samuel John Thomson, who is appointed Companion of the Order of the Indian Empire, entered the Indian Medical Service as Surgeon in October, 1877. He served in the Afghan war of 1880, receiving the medal. He was promoted Surgeon-Major in October, 1889, and has served with distinction for many years in the sanitary department of the North-West Provinces and Oudh, of which he is now Sanitary Commissioner.

Surgeon-Major F. F. MACCARTIE, C.I.E.

Surgeon-Major Frederick Fitzgerald MacCartie, M.B., who is appointed Companion of the Order of the Indian Empire, entered the Indian Medical Service in 1878. He served in the Afghan war of 1880, for which he holds the medal. He was promoted Surgeon-Major in 1890, and is at present Health Officer for the port of Bombay, and in this capacity has done excellent work in organising the inspection of ingoing and outgoing ships during the prevalence of plague.

OTHER HONOURS.

Among the names of the recipients of New Year Honours are those of three gentlemen who, though not members of the medical profession, have yet at one time or another been associated with medical work. Sir George Morris, who has been advanced to the honour of K.C.B., is Vice-President of the Local Government Board for Ireland, while Sir Ernest Clarke was, at the commencement of his career, a clerk to the Local Government Board, and was attached to the Medical Department. He served under three successive medical officers, Sir John Simon, Dr. Seaton, and Sir George Buchanan, and acted as Private Secretary to the last two. After relinquishing that appointment, and down to the time when he became Secretary of the Royal Agricultural Society, he continued to take a keen interest in Public Health questions. He acted as Secretary of one of the most valuable of the sections at the International Congress of Hygiene in 1891—namely, that on the Diseases of Animals in their Relation to Man, and there is not wanting evidence that his early studies have been of great value to him in the important office which he now holds. To Sir John Holder, one of the new baronets, Birmingham owes the new General Hospital. He was chairman of the Building Committee, and a most liberal contributor.

THE PLAGUE IN INDIA.

[FROM OUR SPECIAL CORRESPONDENT.]

Statistics of Mortality in Bombay.—The Plague at Poona.—The Treatment of the Sick.—Age and Sex Incidence.—Sanitary Cordons.—The Observation Hospital.—The Statistics of Mortality.—Sanitary Matters in Poona.

THE official figures of mortality show that the deaths from plague in Bombay increased from an average of 9 a week in July—when the epidemic of 1896-97 had become reduced to its minimum—to nearly 20 in August, to nearly 40 in September, to about 45 in October, and to 60 in November. For the week ending December 4th, 83 deaths from plague have been recorded. The general rate of mortality was 45 per 1,000, while the usual rate at this period of the year is only about 31. The mortality from all diseases—706, average only 511—is in excess, but, while that from plague is increasing, the excess lately shown in other diseases is declining. The official figures are almost certainly much below the right number. The inference is that Bombay will see a recrudescence of the epidemic such as has occurred in other places, and as the mortality from other diseases declines that of plague will increase. While the plague was at its height the mortality from other diseases was below the average. Notwithstanding the elaborate organisation now at work for removing the sick to hospitals, segregating those coming from infected places in camps, disinfecting many and shutting up a few infected houses, the plague is evidently not under complete control.

The plague is raging fiercely in Poona, Surat, Sholapur,

and other places in the Bombay Presidency, and at present it can hardly be said that the active sanitary measures adopted have had much influence on the course of the epidemic. In Poona the disease is almost as rife as it was in the primary outbreak last spring. Probably half the population has deserted the city, and the deaths from plague amount to nearly 400 each week. At the General Plague Hospital the mortality is about 66 per cent.

Admirable arrangements are made for the care and comfort of the sick. With practically open-air ventilation for the wards, warm coverings, and abundant nourishment the patients are placed under the most favourable conditions for recovery, but the power of resistance possessed by the natives appears to be low. The general plan of treatment is a stimulant one—ammonia, ether, and rum being given freely. Hypodermic injections of strychnine are largely used. Quinine and arsenic is almost the regular medication. More women seem to be attacked than men, and the mortality amongst them is also greater. Latterly children seem to have been more largely affected. There is one lady doctor at the Poona General Plague Hospital, but as she has duties very similar to those of an English house-surgeon, her qualification as a health officer does not seem to be utilised.

The city has been divided into sections. Each of these is surrounded every morning with a cordon of troops. Everyone leaving this district is examined by a medical officer, and the houses are searched for sick and dead. Where necessary disinfection is also adopted. About 20 dead bodies are discovered daily.

Doubtful cases of illness are sent to the observation hospital, plague cases to one of the plague hospitals. Just as in Bombay, however, cases after cases are found at the same houses, and the limited number of houses declared unfit for human habitation is not likely to make much impression in stamping out the disease.

As all doubtful cases are recorded as due to plague, and as it is estimated that half the population has deserted the city, the municipal statistics are of little value. The total recorded mortality of plague in Poona is about 80 per cent. of the cases, while that registered at the General Hospital is estimated at about 66 per cent. At Nasik 264 cases have occurred with 197 deaths; at Poona 5,769 cases with 4,328 deaths.

The sanitary arrangements of the city are very bad. The water supply is hardly sufficient, and it is of doubtful quality. The drainage is very imperfect, the surface drains being almost open sewers. The two streams running through the city are fearfully polluted by the liquid refuse from the houses, which differs in no essential feature from what we should call sewage, yet the natives can be seen bathing and cleaning their teeth in these foul streams. Although public latrines are provided to a certain extent, excrement seems to be deposited anywhere and everywhere, the habits of the lower classes of natives being utterly indifferent. The night soil is collected by carts and ultimately converted into powdrette, which has proved a considerable source of revenue to the municipality. The administration of sanitary matters has been taken out of the hands of the municipality, and there have recently been effected several minor alterations and improvements; but as no money is at present forthcoming for any general scheme, it is to be feared that the efforts of those now responsible are not likely to be attended with any great results.

The special plague medical officers were in December allocated as follows:—To Bombay: F. A. Foy, M.B., C.M.Aberd.; L. T. R. Hutchinson, M.A., M.B., B.C.Cantab.; W. Watkins-Pitchford, F.R.C.S.Eng., M.B.Lond. To Bengal: W. C. Hesack, M.B., C.M.Aberd.; T. C. Litler-Jones, M.R.C.S., L.R.C.P.L.; Sorab Nariman, M.D., B.Sc. Bombay, M.R.C.S., L.R.C.P.L., D.P.H.Camb.; T. F. Pearse, M.D.Brux., F.R.C.S.Eng., M.R.C.P.L., D.P.H.Cantab.; H. C. Selby, B.A., M.B., B.C.Cantab.; H. Venis, L.R.C.P.E., L.R.C.S.E., L.S.A.; W. Venis, M.R.C.S., L.S.A., D.P.H. Cantab. To Madras: R. D. Dalal, M.R.C.S., L.R.C.P.L., L.M.&S.Bombay; R. W. Jameson, M.R.C.S., L.R.C.P.L.; H. H. G. Knapp, M.A., M.B., B.Ch.Oxon.; A. E. Stevens, M.B. Durh., L.R.C.P.L., M.R.C.S.; E. S. Winter, M.R.C.S., L.R.C.P.L. To Malegaon: H. W. Bruce, M.B.Lond. To Nasik: W. N. Barron, M.R.C.S., L.R.C.P.L.; W. W. L. McLean, M.R.C.S., L.R.C.P.L. To Belgaum: D. C. Kemp, M.R.C.S., L.R.C.P.L., L.S.A. To Sholapur: W. M. Muat, M.B., C.M.Glasg.; H. D. Packer, M.R.C.S., L.R.C.P.L. To Dhoolia: C. Balfour Stewart, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P.L.

PREVENTIVE INOCULATION AGAINST PLAGUE.

M. W. M. HAFFKINE AND SURGEON-MAJOR LYONS, I.M.S., have drawn up a joint report of the epidemic of plague in Lower Damaun, and on the effect of preventive inoculation there, which is interesting and important.

The disease was imported in the early part of February, 1897, into Lower Damaun, which is in Portuguese territory, by arrivals from Bulsar in the Bombay Presidency—a neighbouring town affected with plague—and by sailors from Karachi. The first local cases occurred at the end of February among the Damaun fishermen. As the disease began to gain ground in March the people fled to the extent of 2,000. Then Upper Damaun, which is separated from Lower Damaun by a river, was cut off from communication with the infected area by the Portuguese governor placing a sanitary cordon along the river. A week later the Bombay Government followed suit, and closed British territory to the inhabitants of Damaun. The worst period of the epidemic was in April, when the Damaun frontiers were closed, and in the middle of April the deaths reached 80 a day, which is severe for a population of less than 8,000. During the epidemic 2,189 deaths were registered from plague, but it is estimated that at least 200 or 300 more were unaccounted for. It is estimated that close on a third of the inhabitants succumbed to the disease.

It is in an epidemic such as this, which is stated to be one of the most virulent observed in India, that the inoculations were tried on a large scale. The results are estimated on the 2,189 authenticated deaths, thus avoiding any possibility of exaggerating the power of the prophylactic. Altogether, 2,297 persons were at different times inoculated. Between March 26th and the end of May 6,033 uninoculated had 1,482 deaths, that is, 24 6 per cent., while 2,297 inoculated had 36 deaths, or 1.6 per cent. With the same death-rate as the uninoculated the inoculated should have had 332 deaths instead of 36, which represents a difference in mortality of 89.2 per cent. To meet objectors Drs. Haffkine and Lyons point out that with such results and so high a proportion of the inoculated to the rest of the inhabitants (2,297 to 6,033) it is impossible that the inoculated represented the upper or any particular class of the population, and to which their reduced death-rate could be ascribed. A notable example is given in the Parsee community, which consisted of 306 persons, of whom 277 were inoculated, leaving only 29 uninoculated. In the 29 uninoculated there were 4 deaths from plague, or a mortality of 13 8 per cent., while among the 277 inoculated there were 8 attacks with only 1 death, which was that of a woman ill of plague before inoculation. Counting this death the mortality in the inoculated was 0.36 per cent., or 38.3 times lower than in the uninoculated. In a careful analysis of the results of the inoculation it is shown that the efficacy of the prophylactic depends on the virulency of the microbe from which the lymph is prepared, and on the dose and its powers of producing a well-marked febrile reaction, and that it is more effective in preventing deaths than attacks.

EDUCATION IN MALTA.

WE have received a pamphlet by Dr. Manché which contains proposals for an improved system of education in Malta, and, so far as it touches upon the medical course of the Malta University, we are glad to welcome it as a thoughtful attempt at reform. The preliminary examination for the university consists of Latin, English, Italian, mathematics, elements of physical science and religious instruction. It appears to be a disputed point whether both the English and the Italian should in the future be required. Malta is a polyglot community, and everyone has to know a little of both these languages; there cannot, therefore, be great difficulty in acquiring them, and they are both of great importance. Maltese who wish to perfect their studies would naturally gravitate to England as their mother country and to Italy as their nearest neighbour.

The solution of this question, however, requires more local knowledge than we can claim.

The university course suggested for an undergraduate who intends to become a medical man is one year of English, Italian, mathematics, and intellectual philosophy, followed by two devoted entirely to pure science, chemistry, physics, botany, and zoology. We presume that the student would at the end of this time take a degree in science. This is a sound course of study, and follows pretty closely the lines now adopted by Oxford and Cambridge.

Dr. Manché has done well to urge that the study of preliminary sciences should be completed before the medical course is begun. This is the method adopted by our universities, and where, as in the course for the Conjoint Board in England, the sciences are studied during the first year of medical work along with anatomy and physiology, the results are to be deplored. All our teachers are clamouring against this system, for it interferes with the learning of the two medical sciences.

The first four years of medical study Dr. Manché allots as we here are accustomed to think best. The first two years are to be given to anatomy, physiology, and general questions of pathology, with materia medica, the last two to practical work. He has followed closely the lines which we, after prolonged experiment, have laid down for our students. The fifth year is, it appears, a debated point. The rules of the University are interpreted as meaning that the fifth year is to be given up to hospital practice of medicine and surgery only. Dr. Manché pleads for more latitude, and urges that the special branches of throat, eye. ear diseases, and such like, should be allowed during this year. This we should certainly support, and we cannot but think that the original rules must have been interpreted in a way not intended by the University.

Lastly, for the examinations Dr. Manché suggests first that the written part should not be a thesis, but a paper of questions distributed over the subject. There can be no question that he is right. An examination in medicine or surgery ought to be general, and ought to guarantee that the student has sufficiently wide knowledge to be a safe practitioner. A thesis ought always to be a later stage for such graduates as wish to obtain special distinction.

The oral examination is always a difficult matter. On the whole, we think that the system by which a definite time is allotted to each subject separately, during which the candidate is examined by one examiner, while a second looks on to see fair play, is the best.

The question of allowing students to pass in one subject at a time has been settled in different ways at different times. At present in London, for the pass examination, medicine, surgery, and midwifery, may be passed separately, but anatomy and physiology must be passed together, and, owing to the greater complexity of the final subjects, this is perhaps the most reasonable compromise.

In conclusion, we hope that the sensible scheme put forward by Dr. Manché will be adopted by the Select Committee who are appointed to examine the question, for it practically follows the lines which the long and wide experience of the various universities and corporations of these islands has found to be the best.

THE RECENT TYPHOID EPIDEMICS.

MAIDSTONE.

Cessation of the Epidemic.

On Sunday last services were held in all the churches in Maidstone in thanksgiving for the fact that the epidemic, which has lasted since the middle of September, is at last over. Occasional cases still continue to occur, as might be expected from the large amount of secondary infection that must exist in an epidemic of such magnitude. In the fortnight ending December 29th ten cases were notified, on eight of these days no cases were reported. The total number of cases is 1,897 for the whole period of the epidemic.

The Local Government Board inquiry, which has been granted at the request of the townspeople, will, it is expected, be held at an early date. The Town Council wish the inquiry to be limited to the cause of the outbreak, but it is understood that the Water Company will seek to insist on the bad sanitary condition of many of the houses as being a large factor in the etiology of the outbreak. A test case is very much wanted in this branch of sanitary law, and its issue one way or another cannot fail to materially advance the legal understanding of the subject, if it does not lead to fresh legislation.

The medical practitioners who have attended necessitous cases during the outbreak have been invited to send in to the Committee statements of their fees. It is to be hoped that they will be as generously dealt with as have other applicants on the funds of the committee; too often the exacting, and often heroic, services of the medical attendant are forgotten with the cessation of the trouble.

Bacteriological Report on the Farleigh Water.

The report of Mr. Adams and Dr. Washbourn upon the condition of the Farleigh supply has been presented to the council. In their joint introductory remarks they point out that it is probable that more abundant evidence of pollution would have been forthcoming had the water been collected earlier. The samples they examined were collected on September 19th, and can only account for the cases notified between October 10th and October 18th. This deduction is made by allowing three weeks for incubation period and distribution of the water. The height of the epidemic, it will be remembered, occurred between September 19th to 27th. On this ground the authors account for their failure to find the specific bacillus of typhoid fever in the samples of water examined.

But this failure, they add, is no evidence against the view that the disease was conveyed by the water: "The chemical analysis on the other hand, when viewed in the light of a knowledge of the natural characteristics of the water of the district obtained by twenty-five years' experience shows such a departure from the normal as to give most conclusive evidence of pollution. As far as the bacteriological evidence is concerned, the only samples which showed distinct evidence of contamination with animal excreta were those derived from the spring at Tutsham-in-Field."

It is much to be regretted that the samples were not collected at an earlier date; for, as matters now stand, this most typical waterborne epidemic is robbed of the only link of evidence wanted to make it a textbook case.

LYNN.

The total number of cases notified up to the end of the year was 461. For the seven days ending January 1st, 1898, the notifications were 5. The total deaths remain at 43, none having been reported in December.

It is unfortunate that the mildness of the winter so far has not been helpful to Lynn. For with their present condition of water supply, as described in our previous reports, no guarantee of safety can be given. It is to be hoped that the new waterworks scheme is being pushed on with all possible rapidity.

CAMBORNE.

The first case of typhoid fever in connection with the present outbreak was notified on December 5th, 1897. Some 80 cases have since been reported. For the following particulars we are indebted to Dr. Telfer Thomas, M.O.H. for the district: "I understand from the Medical Officer of Health of the Redruth Rural Sanitary Authority that 17 cases have been notified to him during the same period in the adjoining parish of Illogan. The only factor in common in these cases, which are distributed over a wide area, is that they all consume the water supplied by the Camborne Water Company. This points strongly to the water as being the cause of the outbreak, particularly as no case has been notified in any other part of the district where the water supply is from a different source. The Camborne Water Company reservoirs are situated on the hills about three miles from the town, and the supply is drawn from two sources, at Boswyn and Cargenwyn. As far as one can judge, there is hardly a possibility of the former supply being polluted in any way; but at the latter place the possibility of pollution is not so remote. I have made careful inquiries, but can hear of no recent case of enteric fever in or near this hamlet that could have polluted the water supply. The whole of the water now being used comes from the Boswyn source, the other supply having been completely cut off some two weeks ago."

DR. HALL HAINS'S DEFENCE FUND.

WE are requested by the Honorary Secretary and Treasurer, Dr. Herbert Carre Smith, 3, Turnham Green Terrace, Chiswick, S.W., by whom subscriptions are received, to acknowledge the following further list of subscriptions to this fund. A statement of the circumstances of the case, and of the names of the members of the Committee, of which Mr. Joseph Smith is Chairman, will be found in the BRITISH MEDICAL JOURNAL of December 25th, 1897, page 1874. It will probably be remembered that Dr. Hall Hains, who practises at Shepherd's Bush, was tried recently at the Central Criminal Court on an unfounded charge of performing an illegal operation. The jury stopped the case by direction of the judge, and Dr. Hains left the court without a stain on his character, but in defending the charge incurred costs amounting to over £800. The fund is being raised to help to defray a part of the costs:

	£	s.	d.
Amount previously acknowledged	76	2	6
Additional subscriptions received:			
Charles W. Chapman, M.D., M.R.C.P.	1	1	0
John S. Spence, M.D.	1	0	0
T. Colcott Fox, F.R.C.P.	2	2	0
J. Batteson, L.R.C.P., M.R.C.S.	1	1	0
E. M. Swanwick, L.R.C.P., M.R.C.S.	1	1	0
George Brown, M.R.C.S.	1	1	0
Per BRITISH MEDICAL JOURNAL:			
Ernest Hart, D.C.L.	2	2	0

DEATHS UNDER ANÆSTHETICS.

CHLOROFORM.

MR. TIBBITTS, Deputy Coroner, held an inquest at the Sessions Court Buildings, Birkenhead, on November 26th, touching the death of Mrs. Eva Hughes, who expired on November 21st, while undergoing an operation under chloroform. The case was one of retained placenta after miscarriage at four months. We are indebted to Dr. Edward H. Brun, of Rock Ferry, for the following details: As I could not succeed in removing the placenta after repeated attempts, I asked Dr. Newington to give chloroform for me. This he did on November 21st, and I then succeeded in getting my fingers into the uterus, and easily removed the placenta. The administration of chloroform had ceased for about three or four minutes, when the patient suddenly collapsed. We succeeded in bringing her round, and she went on well for about five minutes when she collapsed again, the pulse became imperceptible, and all further efforts at revival were useless. The method of resuscitation adopted on both occasions was inversion, together with the hypodermic injection of strychnine and artificial respiration. There was no *post-mortem* examination. The chloroform was administered through a Junker's inhaler. The quantity of chloroform did not reach 2 drachms.

The verdict of the jury was to the effect that the patient died from failure of the heart's action while under chloroform properly administered.

THE CHLOROFORM DILEMMA.

SIR,—Dr. Waller in the BRITISH MEDICAL JOURNAL of November 20th, 1897, p. 1469, gives us much that is suggestive, but rides off triumphant on a false issue at last. He says, "If chloroform is dangerous under all circumstances, it may not be administered in minor surgery." Why not? Surely all depends on the degree of danger, which he acknowledges to be small. Then he continues, "Death in this class of cases is therefore unjustifiable, and should be considered a criminal offence." Forcible, if badly expressed!

The other horn of the dilemma he puts thus: "If chloroform is dangerous only when unskilfully administered, then again death by chloroform is unjustifiable, and ought to be considered a criminal offence." A careless reader would think this sentence a severe reflection on some unskilful chloroformist, but strictly speaking it reflects more on death than on chloroform, and does not mention the administrator at all! This "horn" is not the only alternative, though Dr. Waller speaks as if it were. It is, in fact, only a particular case of the alternative that chloroform is dangerous under some circumstances, and those circumstances must be exhaustively considered before a conclusion can be arrived at by this method. It would surely be better to forbear the use of such words as "unskilfully," "unjustifiable," "criminal offence," or even "careless." For my part I prefer ether, but I see no reason why a man who prefers chloroform should be pilloried in this way. Strong language is not always a sign of moral superiority.—I am etc.,

PHILIP MIALL,
Consulting Surgeon to the Bradford Infirmary.

RESPIRATORY EMBARRASSMENT DURING ANÆSTHESIA.

DR. E. FURNISS POTTER (London) writes: Some time ago I read a communication in the BRITISH MEDICAL JOURNAL relating a case of embarrassed respiration during the administration of chloroform caused by elongated uvula; and it is suggested to me that it would be of interest to mention another and very frequent cause of respiratory trouble. I have often observed while giving an anæsthetic—usually ether—to patients with nasal obstruction (more especially that form of it due to post-nasal growths), that the breathing has become embarrassed, and on removing the mask have found the lower lip was so much indrawn as to interfere considerably with inspiration; on drawing the lip down, the trouble has instantly disappeared, and by preventing the lip from being again indrawn—by simply gently holding it—the mask could be reapplied, and the administration continued without any further trouble. I have noticed this in very many cases (doubtless others have also), but I am not aware that it is mentioned in any of the textbooks on the subject.

THE CHAIR OF SURGERY AND THE WESTERN INFIRMARY AT GLASGOW.

THE managers of the Western Infirmary in Glasgow have issued a statement containing the following announcement, which is in accord with that contained in the BRITISH MEDICAL JOURNAL of December 18th, 1897: "The managers of the Western Infirmary desire formally to put their subscribers and the public in possession of the result of the recent negotiations between the Senate of the University and themselves regarding the question of 'facilities for clinical teaching' afforded to the Professor of Surgery. This may be best done by the publication of the following extract from the joint minute unanimously adopted by the Board and by the Senate—namely: 'That Ward 18 be allowed to remain under the charge of Professor Macewen, a result of this arrangement being that the provision proposed by the managers in the interest of the Professors of Midwifery and Materia Medica cannot be made in the manner originally contemplated.'"

BATTLE OF THE CLUBS.

BLACKFRIARS PROVIDENT DISPENSARY FOR WOMEN AND CHILDREN.

A PROSPECTUS of the Blackfriars Provident Dispensary for Women and Children has been received from Miss L. P. Fowler. The medical officer is a fully qualified lady practitioner, and the charges to members about the same as in most provident dispensaries, while the institution is said to be for those only who are unable to pay the ordinary medical fees. There are, however, two objectionable features which have often been condemned in our columns:

1. Absence of medical examination of members previous to admission.
2. Admission of members at a time when they are suffering from actual sickness.

There is nothing of a provident nature in attending cases of actual sickness for a fee of 2s. 6d. for the first, 1s. for subsequent, week during that illness; and it is the reverse of provident to accept healthy and diseased members at the same rate, as it takes away all the inducement from the former to become members before they feel the pressure of disease.

We understand from Miss Fowler, though the facts do not appear in the printed documents, that a wage limit of 30s. per week for a single woman, and 50s. per week for a family, has been fixed for the guidance of the medical officer, and that any person who having been a member ceases to be a member is not again admitted except by a special vote of the Committee after investigation. Miss Fowler added that the Committee which is appointed by the Women's University Settlement, are very desirous that the institution should be conducted on true provident principles. We hope, therefore, the Committee will consider the point objected to, and will endeavour to merit the support of the medical profession.

LITERARY NOTES.

THE demise of the *Guyoscope* (which writes its own epitaph in the number of December 31st), if it does not exactly eclipse the gaiety of nations, at least withdraws an element of harmless fun from London medical life. Many Guy's men in particular might say with truth that they could have better spared a better—or, at any rate, a more serious—periodical.

The *International Medical Magazine* of Philadelphia will hereafter be edited by Dr. Walter L. Pyle, who is already favourably known in medical literature as the author of various papers on the therapeusis of the saints, the medical virtues attributed to precious stones, etc., and the colla-

borator with Dr. George M. Gould in a large work entitled *Curiosities of Medicine*, which was published last year.

The library of the distinguished American gynæcologist, Dr. Thomas Addis Emmett, valued at 240,000dols. (£48,000) has been sold to the New York Union Library for 150,000dols. (£30,000).

The following extract from the "Pages from a Private Diary," which form so attractive a feature of the *Cornhill Magazine*, will be interesting to many of our readers. The passage occurs in the January number:

I came on a curious passage in a letter of Mrs. Waller's to her banished son about the marriage of his daughter. She wishes to know what dowry he is prepared to give. "I am not in hast to mary her, she is yong enough to stay, but the danger is if she should catch the small-poxe or hir beauty should change, it would be a great lose to hir." Everybody is familiar with the frequent references to small-pox in the letters and memoirs of the seventeenth century. Pepys is full of it; but I have never met a passage that brings so keenly home to one the nearness of the risk.

The McEwan Hall Guide Book, issued by the Committee of *The Student*, the Edinburgh University magazine (the editor of which is, we understand, a medical student), may fairly be called perfect in its way, inasmuch as it combines beauty with usefulness. It gives a full and readable account, with artistic illustrations, of the McEwan Hall. The career of Mr. William McEwan, M.P., the "pious founder" to whose bounty the University of Edinburgh owes this magnificent addition to its pile of buildings and the "Modern Athens" this latest addition to her many things of beauty is appreciatively set forth. Excellent portraits are given of the academic and municipal magnates of Edinburgh, and of the architect, artist, organ builder, and clerk of works, who had a share in the great work. We congratulate the editor of the *Student* on a very handsome and workmanlike production.

The Laryngoscope, a monthly journal devoted to diseases of the nose, throat, and ear, which has earned for itself a high reputation among special journals in America, will henceforth appear in a European edition, published by Messrs. John Wright and Co., of Bristol. Dr. StClair Thomson will have charge of the European edition. It is intended to give the journal a thoroughly comprehensive and cosmopolitan character. In the selection of the matter the needs of the general practitioner (in whose practice the affections with which the *Laryngoscope* concerns itself occupy a considerable place) will be kept in view as well as those of the specialist. To none of the special departments of the healing art more than to that which the periodical in question takes as its province are the following words of Mr. Jonathan Hutchinson applicable:

In the early stage of any department of knowledge, it is almost a matter of necessity that it should be in the hands of a few. But it is the highest privilege of those who thus devote themselves to the reclaiming of new spots of territory, to be able after a while to hand them over to the commonwealth, to prove that they are now cultivated and well worthy of annexation.

According to the *Publishers' Circular* the total number of medical books published in 1897 in this country was 211. Of these 152 were new works, and 59 new editions. The literary output in the province of medicine during the past year has been almost exactly the same as in 1895, but is by more than one hundred in excess of that in 1896. Taking the months of 1897 individually, we find that the number of new works published in January was 9, in February 9, in March 0, in April 12, in May 18, in June 16, in July 17, in August 5, in September 14, in October 19, in November 15, in December 14. If it be allowable to educe a general law from these figures it appears that, apart from the two dead seasons, the output of medical literature is pretty uniform throughout the year, with a slight rise at the opening of each session of the *annus medicus*. It would be interesting to know precisely what books are classified by the *Publishers' Circular* under "Medicine, Surgery, etc." If we may judge from the strange groupings one sometimes sees in the literary papers, this heading would seem to be as comprehensive as the great sheet seen in a vision by the Apostle, which contained "four-footed beasts of the earth, and wild beasts, and creeping things and fowls of the air."

The question of reviving the use of Latin as the international language of medicine has several times been mooted in recent years, and it may be remembered that a memorial urging the adoption of this measure was drawn up and signed by a number of doctors in India for submission to the International Medical Congress held in Rome. Whether the document was ever actually submitted we are unable to say; at any rate, nothing came of it. There is, we think, nothing impracticable in the proposal, but if it should ever be carried into effect the discussions at some of the earlier congresses at least would probably be conducted in a *lingua franca* that would make Cicero turn in his grave. An amusing passage in the lately published work by Prince Henri d'Orleans, *From Tonkin to India*, gives an idea of the kind of thing that might be expected till a return to the older discipline in the teaching Latin had had time to leaven the rising medical generation. At Talifoo in Yunnan the Prince engaged an interpreter, who could speak no French but who had been educated by the French missionaries as "a Latinist." His Latin was distinctly "doggy" and the Prince's was little, if at all, better, so that at first intercourse was not easy. The Prince says:

Our oratorical attempts were hardly brilliant; there were even times when we were not in touch. By degrees, however, we gained fluency, and in a month had completely mastered each other's idiosyncrasies of expression. But what Latin! "Horresco referens!" Solecisms, barbarisms, neologisms, all the "isms" invented might be applied to our jargon. Luckily, we had only ourselves for audience.

The following is a sample:—The Latinised Chinaman on crossing into Assam exclaimed to the Prince, *Inquijen prehendunt bonas terras*. "Inquijen," being interpreted, means "English"; the rest needs no explanation. It is not the Latin of the Augustan age, but it is intelligible and 'twill serve.

The January number of the *Century Magazine* contains an article on Huxley's home life, by his son, Mr. Leonard Huxley, one of the masters of Charterhouse School. Huxley as a controversialist on matters of science or theology was more remarkable for light than for sweetness, but the picture of him as he was in the bosom of his family is charming. He was the most delightful of companions to his children, and his skill in drawing made him most successful in providing amusement for them. Dr. Anton Döhrn, the founder of the Marine Biological Station at Naples, who once spent a day or two with the Huxleys at Swanage, wrote afterwards that if he was asked to define happiness he would say, "Go and see the Huxley family at Swanage, and if you would enjoy the scene I enjoyed, you would feel what is 'happiness,' and never more ask for a definition of the sentiment." In his later years Huxley was fond of playing with his grandchildren, and was specially attached to one of them, who was the prototype of "Sandy," in Mrs. Humphry Ward's novel *David Grieve*. Of this boy Huxley wrote:

He is a most delightful imp, and the way in which he used to defy me on occasion was quite refreshing. The strength of his conviction that people who interfere with his freedom are certainly foolish, and probably wicked, is quite Gladstonian.

"The Russian Office for the Medical Press of Foreign Countries," which was opened in St. Petersburg on January 1st, undertakes to supply to subscribers extracts or translations of "all that is worth knowing" in Russian and Polish medical literature; it will also, if desired, furnish reports of Russian societies, congresses, etc. The reason assigned for the establishment of the "Office" is that "the march of medicine in Russia is very little known to British and American physicians." This is probably true as a general statement, but readers of the BRITISH MEDICAL JOURNAL have the advantage of having presented to them abstracts of the most valuable work in the practical departments of medicine that is published in the leading periodicals of Russia.

An Italian lady, Dr. M. Montessori, has been appointed a medical officer of the Red Cross Society.

A MEDICAL PLENIPOTENTIARY.—According to the New York *Medical News*, Dr. G. H. Bridgman, of Elizabeth, New Jersey, has been appointed Ambassador and Minister Plenipotentiary to Bolivia.

ARCHDUKE KARL THEODORE OF BAVARIA, who is well known as an ophthalmic surgeon of distinction, performed his 3,000th operation for cataract on December 1st, 1897, in his eye hospital by the Alpine lake Tegernsee, in Upper Bavaria.

GERMAN ASSOCIATION OF SCIENTISTS AND MEDICAL MEN.—The German Association of Scientists and Medical Men will hold its annual meeting this year at Leipzig, under the presidency of Professor Waldeyer, of Berlin.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

THE sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President-Elect: Sir THOMAS GRAINGER STEWART, K.C.B., M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by THOMAS RICHARD FRASER, M.D., LL.D., F.R.S.Lond., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by THOMAS ANNANDALE, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir JOHN BATTY TUKE, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. MEDICINE.

President: GEORGE WILLIAM BALFOUR, M.D., LL.D. *Vice-Presidents:* Sir CHRISTOPHER JOHN NIXON, M.D.; JOHN MITCHELL BRUCE, M.D., ALEXANDER JAMES, M.D.; GEORGE ALEX. GIBSON, M.D. *Honorary Secretaries:* J. J. GRAHAM BROWN, M.D., 3, Chester Street, Edinburgh; SAMUEL HERBERT HABERSHON, M.D., 70, Brook Street, Grosvenor Square, W.; GEORGE LOVELL GULLAND, M.D., 6, Alva Street, Edinburgh.

B. SURGERY.

President: JOHN DUNCAN, F.R.C.S., LL.D. *Vice-Presidents:* ALEX. GORDON MILLER, F.R.C.S.; JOHN CHIENE, F.R.C.S.; JAMES RUTHERFORD MORISON, F.R.C.S.; JOSEPH MONTAGUE COTTERILL, F.R.C.S. *Honorary Secretaries:* FRANCIS MITCHELL CAIRD, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. BEEMAN HODSDON, F.R.C.S., 52, Melville Street, Edinburgh. THOMAS KENNEDY DALZIEL, F.F.P.S.G., 196, Bath Street, Glasgow.

C. OBSTETRICS AND DISEASES OF WOMEN.

President: ALEX. RUSSELL SIMPSON, M.D. *Vice-Presidents:* CHARLES E. UNDERHILL, M.B.; GEORGE ERNEST HERMAN, M.B.; D. BERRY HART, M.D.; A. H. FREELAND BARBOUR, M.D. *Honorary Secretaries:* R. MILNE MURRAY, M.B., 11, Chester Street, Edinburgh; F. W. N. HAULTAIN, M.D., 17, Rutland Street, Edinburgh; JOHN CAMPBELL, M.D., 21, Great Victoria Street, Belfast.

D. STATE MEDICINE.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

E. PSYCHOLOGY.

President: THOMAS SMITH CLOUSTON, M.D. *Vice-Presidents:* WILLIAM WOTHERSPOON IRELAND, M.D.; H. F. HAYES NEWINGTON, M.R.C.S.; JOSEPH WIGLESWORTH, M.D. *Honorary Secretaries:* JOHN MACPHERSON, M.D., Stirling District Asylum, Larbert, Stirlingshire; GEORGE M. ROBERTSON, M.B., District Asylum, Murthly, Perth.

F. NEUROLOGY.

President: BYROM BRAMWELL, M.D. *Vice-Presidents:* JOSEPH ARDERNE ORMEROD, M.D.; WILLIAM RUSSELL, M.D.; ALEXANDER BRUCE, M.D. *Honorary Secretaries:* ROBERT ALEXANDER FLEMING, M.D., 10, Chester Street, Edinburgh; WILLIAM FORD ROBERTSON, M.D., Royal Asylum, Morningside, Edinburgh.

G. PATHOLOGY.

President: WILLIAM SMITH GREENFIELD, M.D. *Vice-Presidents:* FREDERICK WALKER MOTT, M.D., F.R.S.; JOHN MACFADYEAN, M.B.; ALMROTH EDWARD WRIGHT, M.D. *Honorary Secretaries:* HAROLD JALLAND STILES, M.B., 5, Castle Terrace, Edinburgh; ROBERT MUIR, M.D., 20, Hartington Place, Edinburgh.

H. PHARMACOLOGY AND THERAPEUTICS.

President: JAMES ORMISTON AFFLECK, M.D. *Vice-Presidents:* CHARLES DOUGLAS FERGUSSON PHILLIPS, M.D., LL.D.; J. THEODORE CASH, M.D., F.R.S.; NESTOR TIRARD, M.D.; RALPH STOCKMAN, M.D. *Honorary Secretaries:* R. DUNDAS HELM, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. LOCKHART GILLESPIE, M.D., 23, Walker Street, Edinburgh.

I. OPHTHALMOLOGY.

President: D. ARGYLL ROBERTSON, M.D., LL.D. *Vice-Presidents:* R. MARCUS GUNN, F.R.C.S.; GEORGE A. BERRY, M.B.; GEORGE MACKAY, M.D. *Honorary Secretaries:* WILLIAM GEORGE SYM, M.D., 50, Queen Street, Edinburgh; ANGUS MCGILLIVRAY, M.B., 23, South Tay Street, Dundee.

J. LARYNGOLOGY AND OTOLOGY.

President: PETER MACBRIDE, M.D. *Vice-Presidents:* J. J. KIRK DUNCANSON, M.D.; J. DUNDAS GRANT, M.D.; ROBERT MACKENZIE JOHNSTON, M.D.; STCLAIR THOMSON, M.D. *Honorary Secretaries:* ADAM BROWN KELLY, M.B., 26, Blythswood Square, Glasgow; A. LOGAN TURNER, M.D., 20, Coates Crescent, Edinburgh.

K. DISEASES OF CHILDREN.

President: JOSEPH BELL, M.D. *Vice-Presidents:* JAMES CARMICHAEL, M.D.; JOHN PLAYFAIR, M.D.; T. M. BURN-MURDOCH, M.B.; GEORGE ARTHUR WRIGHT, M.B. *Honorary Secretaries:* GEORGE HARRY MELVILLE DUNLOP, M.D., 20, Abercromby Place, Edinburgh; JOHN THOMSON, M.D., 14, Coates Crescent, Edinburgh; WALTER STACY COLMAN, M.D., 22, Wimpole Street, W.

L. DERMATOLOGY.

President: WILLIAM ALLAN JAMIESON, M.D. *Vice-Presidents:* WALTER GEORGE SMITH, M.D.; JOHN JAMES PRINGLE, M.B.; ALEXANDER MORTON, M.D. *Honorary Secretaries:* JAMES LIMONT, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; NORMAN WALKER, M.D., 7, Manor Place, Edinburgh.

M. MEDICINE IN RELATION TO LIFE ASSURANCE.

President: CLAUD MUIRHEAD, M.D. *Vice-Presidents:* Sir R. DOUGLAS POWELL, Bart., M.D.; PETER ALEXANDER YOUNG, M.D.; JAMES RITCHIE, M.D. *Honorary Secretaries:* JAMES MURDOCH BROWN, M.D., 9, Walker Street, Edinburgh; FRANCIS DARBY BOYD, M.D., 6, Atholl Place, Edinburgh.

N. TROPICAL DISEASES.

President: PATRICK MANSON, M.D. *Vice-Presidents:* ANDREW DAVIDSON, M.D.; ANDREW SMART, M.D., LL.D.; WILLIAM JOHN RITCHIE SIMPSON, M.D. *Honorary Secretaries:* JAMES CANTLIE, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. LOUIS HUGHES, A.M.S., Aldershot.

O. ANATOMY.

President: Sir JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, M.B., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

P. PHYSIOLOGY.

President: WILLIAM RUTHERFORD, M.D., F.R.S. *Vice-Presidents:* JOHN ALEXANDER MACWILLIAM, M.D.; D. NOËL PATON, M.D.; E. WAYMOUTH REID, M.B. *Honorary Secretaries:* EDMOND WILLIAM WACE CARLIER, M.D., 39, Morningside Drive, Edinburgh; ROBERT ARTHUR YOUNG, M.D., 37, Trevor Square, Knightsbridge, S.W.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.

9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

WEDNESDAY, JULY 27TH, 1898.
9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, JULY 28TH, 1898.
9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 29TH, 1898.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine.

SATURDAY, JULY 30TH, 1898.
Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.

JOHN SHAW M'LAREN, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

THE ANNUAL MUSEUM.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 26th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

ADVERTISEMENTS IN THE MUSEUM CATALOGUE.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 19th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

December, 1897.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on January 19th, April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th, 1898.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

ADDITION TO LIST OF MEMBERS.

The following is the list of officers of the Glasgow and West of Scotland Branch:

President: W. A. McLachlan, M.D.
President-elect: Freeland Fergus, M.D.
Vice-Presidents:
J. C. Renton, M.D. Mr. H. E. Clark.
Honorary Secretaries:
J. H. Nicoll, M.B., 14, Somerset Place, Glasgow.
T. W. Jenkins, M.D., 1, Newark Drive, Pollokshields.
Council:

Frew, W., M.D., Kilmarnock	Muir, W. L., Glasgow
Finlayson, Jas., M.D., Glasgow	Patrick, W., M.D., Glasgow
Herbertson, J. C., M.D., Johnston	Shearer, F., M.B., Paisley
Kelly, J. K., M.D., Glasgow	Sloan, S., M.D., Glasgow
McVail, D. C., M.B., Glasgow	

Representative on Council of Association:
Goff, B., M.D., Bothwell.
Representative on Parliamentary Bills Committee:
Goff, B., M.D., Bothwell.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at Newtown St. Boswells, N.B., on Friday, January 28th, at 3.15 P.M.—Particulars by circular.—R. DUNDAS HELM, Carlisle, W. HALL CALVERT, Melrose, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the North-West London Hospital, Kentish Town Road, on Wednesday, January 12th, at 4.30 P.M. Mr. Frederick Wallace, President of the Metropolitan Counties Branch, will preside. Dr. M. Handfield Jones will read a paper on Benign Growths taking on Malignant Degeneration in the Uteri of Elderly Women. Mr. F. Durham, Dr. H. Campbell, Mr. J. Jackson Clarke, and other members of the staff will show cases of interest in the wards of the hospital. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Honorary Secretary, Brondesbury, N.W.

EDINBURGH (LOTHIANS AND FIFE) BRANCH.—A meeting of this Branch will be held within the Royal College of Physicians, 9, Queen Street, Edinburgh, on Friday, January 14th, at 4 P.M. Agenda: Proposed revision of Constitution of Association, etc.—R. W. PHILIP, Honorary Secretary, 4, Melville Crescent, Edinburgh.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE usual monthly meeting of the Branch was held at the Royal Society's Room, Sydney, on October 29th, 1897, Dr. CLUBBE, President, in the chair. There were forty-five members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Member.—The PRESIDENT announced the election of Dr. W. H. O'Neil, of Narrandera, as a member of the Association.

Cases.—Dr. SCOT SKIRVING exhibited a patient upon whom he had performed Gastrostomy, and explained the case. Drs. MACCORMICK, SYDNEY JONES, and BOWMAN made some remarks upon the case. Dr. SCOT SKIRVING replied.—Dr. CLUBBE exhibited five cases of Talipes upon whom he had operated.—Dr. MACCORMICK exhibited a patient upon whom he had operated for Cancer of the Tongue, and demonstrated the operation. Drs. SCOT SKIRVING and HINDER discussed the operation. Dr. MACCORMICK replied.—Dr. GORDON MACLEOD showed an Ulcer of the Ocular Conjunctiva, in a patient 74 years old, which had some unusual characteristics.

Communications.—Dr. HANKINS read notes on a case of Pylorectomy.—Dr. POPE read notes on two further cases of Removal of the Transparent Lens for High Myopia.—Dr. FIASCHI read notes on a case of Fracture and Dislocation of the Pubic Portion of the Pelvic Ring, with penetration of the bladder of a bone fragment. The patient was exhibited.

Proposed Alterations in Articles of Association.—The PRESIDENT called upon Dr. RENNIE to move the following alterations in the Articles of Association:

1. In the preface the words "The parent Association means the British Medical Association" shall be inserted immediately before the words "The Association means the New South Wales Branch of the British Medical Association."

2. The words following shall be added to Clause 3, namely, "and is to act in alliance with the parent Association, and the common seal is to be affixed by way of ratification to a provincial agreement dated the day of , and made between the parent Association of the one part and the Association of the other part, whereby the parent Association assents to the user by the Association of its present name, subject as in such agreement mentioned. The Branch is not to be regarded as an agent of or as having an authority to act for the parent Association.

3. By adding to Clause 5 the words following: "But every person who is now or at any time hereafter becomes a member of the Association

must forthwith become a member of the parent Association, and in each of the cases following, namely:

(*a*) If any person who at the time when this regulation comes into operation is a member of the Association and not a member of the parent Association fails to become a member of the parent Association within three calendar months from that time, or

(*b*) If any person who subsequently becomes a member of the Association, and is not then a member of the parent Association, fails to become a member of the parent Association within three calendar months from the time when he becomes a member of the Association, or

(*c*) If any person who is for the time being a member of the Association and of the parent Association ceases to be a member of the parent Association, such person shall *ipso facto* cease to be a member of the Association."

4. By adding to Clause 6 the words "out of such annual subscriptions the Association shall as regards each member pay to the parent Association the annual subscription of such member as a member of that Association."

The motion was seconded by Dr. QUAIFE, and carried.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING of this Branch was held at Aberdeen on December 15th, 1897, Professor FINLAY, the President, in the chair.

New Members.—After routine business, Messrs. R. Bruce, M.B.; T. W. Lumsden, M.B.; and T. Snowball, M.B., Aberdeen Royal Infirmary, were ballotted for and unanimously admitted members of the Branch.

Pneumothorax.—The PRESIDENT read a paper upon some points in pneumothorax, illustrated by several cases which had recently come under his observation. The matters discussed were mainly such as related to etiology and treatment. With reference to the latter, the result of the *post-mortem* examination in one of the cases had impressed upon him the necessity of reconsidering the question of operative interference, and suggested the propriety of treating purulent effusions occurring in pneumothorax in the same way as empyemata, even where the pus was not fœtid, as tending to the prolongation of life and the greater comfort of the patient. In fœtid effusions there was no choice; such should certainly be evacuated and drained. As for the serous effusions, there was more room for reasonable difference of opinion, but if there were good grounds for thinking that the perforation in the pleura had become sealed up, the removal of a portion of the fluid need not be looked upon as inadmissible.

Osteoplastic Resection of Foot.—Dr. SCOTT RIDDELL exhibited a patient on whom he had performed osteoplastic resection of the foot by the Wladimiroff Mikulicz method for caries of astragalus and os calcis and tuberculous disease of the calcaneal flap. The result was a satisfactory one, the patient being able to walk without any special boot or support. Skiagraphs of the foot by Mr. MCKENZIE DAVIDSON and Dr. RUDOLF GALLOWAY, showing the condition of the bones before and after operation, were also exhibited.

SPECIAL CORRESPONDENCE.

PARIS.

Paris Competitive Examinations.—Typhoid Fever contracted in Hospitals.—A Hospital for Epileptics.

AT the last "Concours d'Agrégation" and the "Concours de la Médaille d'Or," both competitive examinations at the Paris Medical Faculty, the candidates, who were considered to be men of considerable attainments, retired from the examination after the first sitting, leaving alone in the field one believed by them—with or without reason—to be the "favourite." The Paris medical press comments on the fact, which is certainly startling, that this "strike" among the candidates has happened simultaneously before two different examining juries of the Paris Medical Faculty. A writer in the *Gazette des Hôpitaux* declares that this strike among the candidates in these competitive examinations is a sign of the times, which he foresaw six years ago on the occasion of a "Concours d'Agrégation," which has never been forgotten.

Dr. Louis Guinon publishes three cases of typhoid fever contracted in a hospital, an occurrence which invalidates the belief that hospital contagion does not exist. The three patients were children at the "Enfants Malades." One was treated for bronchitis, another for poliomyelitis, the third for purpura. A few weeks after their admission to the hospital wards, where there were typhoid patients under treatment, they were attacked; recovery followed. The serum diagnosis removed all doubts as to the nature of the fever; water could not be incriminated, as they drank only *tisanes*. Infection before admission could not be advanced, as the symptoms appeared after they had been in the hospital several weeks.

M. Philibert Dessaignes, Mayor of Champigny-en-Beaugé, and formerly deputy of the Loir and Cher Department, has recently died and bequeathed to the department £40,000 to found a hospital for epileptic patients, idiots, the blind, and deaf and dumb. The *Progrès Médical* recommends that in connection with this hospital about to be organised and the Blois Asylum special institutes should be created for masters and mistresses destined to treat and develop mentally abnormal children.

BERLIN.

Banquet to Professor Virchow.—The Prevention of Tuberculosis.—The Antipyrin Patent.—General News.

AN imposing Virchow banquet, to celebrate his fiftieth anniversary, both as a university teacher and as the editor of the world-famed *Archiv für pathologische Anatomie*, was held in the large hall of the Kaiserhof on December 28th, 1897. As a rule, numbers bear no relation to intrinsic quality, but in this case the assemblage of more than 400 who met to do honour to Rudolf Virchow was almost completely representative of medical science in Germany. Delegates had been sent from the medical faculties of the different German universities, Berlin, Munich, Leipzig, Halle, Würzburg, etc., from the Royal Academy of Science, and from no fewer than thirty-nine scientific societies. Virchow had on his right Herr von Bartsch, the representative of the Prussian Government, and on his left Professor von Bergmann, to whom had been allotted the first toast of the evening, "The German Emperor." The speeches in honour of Virchow were two, one by Professor Waldeyer, and one by Professor O. Liebreich. Waldeyer held him up to admiration as a teacher; not a teacher of the Berlin University students merely, but of the whole scientific world. No one, he said, who regards medicine scientifically but is a pupil of Virchow. The entire medical world speaks his language; his words are grains of gold, which keep their value, and his *Archiv* has been the beacon, guiding medical science in its new path. Liebreich, in his speech, did honour to Virchow, the scientific investigator and naturalist. In eloquent words he set forth how Virchow had "grafted the twig of chemistry on the stem of pathological anatomy;" and had created a new basis for medical thought by his doctrine of the cell. Virchow's reply was full of interesting autobiographical reminiscences. He referred to his work in Silesia at the time of the epidemic of relapsing fever (*Hunger-typhus*) epidemic in 1848. It was then that by his investigations and publications he gave an impulse that helped to call into existence that common property of our day—public hygiene. In the course of his speech he alluded gratefully to the confidence with which he had been met by each succeeding Ministry in Prussia during his long career, until finally he came to his latest, his favourite, creation, the Pathological Museum now in course of construction, which he said would be made available, not only to doctors of all nations, but to the general public. He drank to the Berlin University, its further growth and prosperity. Professor Schmoller, the rector of this year, replied on behalf of the German universities; Professor Orth, of Würzburg, addressed Virchow, and the list of official speeches was closed by Professor Hermann Munk, who proposed the health of Virchow's wife and family.

The Prussian Cultus-Minister, Dr. Bosse, has addressed a circular to the provincial government authorities (*Oberpraesidenten*) on the subject of the results attained by the measures taken to prevent the spread of tuberculosis in hospitals, lunatic asylums, penitentiaries, prisons, almshouses, etc., during the years 1894-1896. He says there can be no doubt that the numerous newly established free sanatoria have a beneficial influence on the masses in this way, that the discharged patients are able to spread rational views on the prevention of tuberculosis. He appealed to the authorities to take every opportunity of enlightening the population

as to the dangers of infection and the precautions to be taken for avoiding it. He advises the introduction of compulsory notification in fatal cases, and compulsory disinfection of the rooms occupied and objects used by tuberculous patients immediately after removal or death. He gives special and detailed instructions for periodical disinfection wherever a case of tuberculosis occurs in prisons, asylums, etc., and expresses the hope that the time may not be distant when special sanatoria shall be provided for the tuberculous insane. He thinks that wherever feasible the attention of the public should be drawn to the fact that the sale of articles of food by phthisical patients with cough and expectoration is not without danger to the buyers.

The antipyrin patent, held by the Höchst colour works, will expire next July. It will by then have run its course of fifteen years, which is the span of life allowed to a German patent. During these fifteen years the holders of the monopoly have sold the drug at 105 marks per kilo (about £2 12s. 6d. per pound), but of course the price will fall considerably from the moment the manufacture and sale are thrown open to competitors; in fact, experts calculate that it will go down quickly to £1 10s. or even £1 5s. per pound, and in a few years will fall still lower. Then probably the usual convention will be made by the chief competitors in the market, and the price will once more rise a little. Five or six large chemical works, it is said, are busy preparing the manufacture of antipyrin, so as to be ready with it immediately on the extinction of the patent.

A department for hydrophobia—similar to the Pasteur Institute in Paris—is to be added to the Institute for Infectious Diseases in Berlin, of which Robert Koch is director.

The committee for the revision of the German *Pharmacopœia* has met, and is holding its sittings periodically in the new building of the Imperial Board of Health.

Professor Robert Koch has been invited by the Indian Government to make another stay in India for the purpose of studying the epidemic and endemic diseases of man and beast so prevalent there. But Koch is engaged on work that will keep him in German East Africa for some time, probably about a year, and does not think of leaving until he has concluded it.

ST. PETERSBURG.

Epidemic of Diphtheria in St. Petersburg: the Serum Treatment of Diphtheria in Russia.—Ten Years of Typhus Fever in St. Petersburg.—An Epidemic of Relapsing Fever.

THE autumn and early winter of the year just closing (for, according to the old style of reckoning, 1897 is still with us) has been characterised in St. Petersburg by the occurrence of one of the worst epidemics of diphtheria that have occurred in that city during recent years. This is clearly shown by the following figures: In the year 1893 there were 230 cases of the disease; in 1894, 775; in 1895, 530; in 1896, 267; and in 1897 as many as 1,690. These figures were recently quoted by Dr. Rauchfus, the first of living Russian authorities on the diseases of childhood, at a meeting held in the newly-opened "Pirogof Museum." The occasion was an interesting one, as the meeting, composed of the medical practitioners of the Russian capital, was dedicated to the memory of the late Professor Botkin, one of the greatest of modern Russian physicians and hygienists. The evening was mainly devoted to a discussion of diphtheria and recent methods of treating it. Dr. Rauchfus, in his opening address, was able to quote some very conclusive figures as to the value of the serum-therapy of this disease—figures sufficiently large to exclude accidental fallacies. Thus from one group of "Governments" (those in which the system of "zemstvos" has been introduced) details of 36,099 cases treated in this way were forthcoming, and in these the death-rate was 14.6 per cent. In 6,297 cases in the remaining Governments the death-rate was 13.2 per cent. From all other parts of Russia, including Poland and the Baltic Provinces, the Don Cossack Territory and the Caucasus, Central Asia and Siberia, similar evidence was quoted; the highest percentage of deaths occurring in Siberia, where, out of 113 cases, 20 per cent. proved fatal. When, on the other hand, the antidiphtheritic serum was not employed the mortality was much higher. Thus, among 5,202 such cases in the "zemstvo" Governments, the death-rate was 31.6 per cent.; elsewhere it was still higher, amounting among the Cossacks of the Don to 56.8 per cent. The serum method of treating diphtheria is yearly becoming more widely employed in Russia. In 1895 the output of serum was 75,000 flasks, while in 1896 this figure had grown to 400,000.

The prevalence of typhus fever in St. Petersburg during the ten-year period 1887-96 is the subject chosen by Dr. Orlof for his doctor's thesis. The author is of opinion that typhus is endemic in the Russian capital, and that it occasionally becomes epidemic. In the ten years under review it was not very prevalent; the cases recorded numbered 2,228, and the deaths 264. The larger number of patients were of the male sex, children did not appear to be very susceptible; the maximum of cases occurred in the age-period 21 to 25 for both sexes; the maximum of deaths among males fell in the age-period 46-50, and among females in the age-period 51-55. The disease was most prevalent and fatal in the early months of the year, the maxima occurring in May and the minima in August. It may be noted that there were no cases of typhus among the Jews of St. Petersburg; also, that under the head of "occupations" the highest incidence of the diseases occurred among persons following "medical" callings, particularly ward attendants and nurses. The death-rate in St. Petersburg (11.8 per cent. of the cases) was higher than for the rest of Russia (8.9 per cent.)

Another thesis for the Doctor's degree of the St. Petersburg Army Medical Academy deals with the prevalence of relapsing fever in the capital in the years 1895-6. This disease, known as "recurrent *typh*" in Russia, was more prevalent in those years than it had been for fifteen years previously. In 1895 there were 2,259 cases, and in 1896 there were 4,986. As usual, the epidemic was worst among the poor, and particularly among the overcrowded. Males suffered considerably more than females. Occupation seemed to have little influence in its prevalence; but its infectivity was shown by its comparatively frequent occurrence among nurses and ward attendants, among the attendants at low-class lodging houses or "night refuges," and among the barmen at the lowest *traktirs*, or drinking bars. The author of this thesis is Dr. D. A. Likhatchef.

CORRESPONDENCE.

THE LONDON UNIVERSITY COMMISSION BILL.

SIR,—I have to thank Dr. Pye-Smith for his courteous reference to my letter of December 18th, 1897; to the promoters of the Westminster scheme he is not quite so kind, but this we could hardly expect, as he is one of the very few members of the medical profession who have been consistently in favour of the reconstruction of the present University.

I am glad to find that Dr. Pye-Smith agrees with me that what London requires is a great "local" university. Such a university, in order to obtain the endowment necessary for its full development must, I believe, secure the sympathy and support of the people amongst whom it is placed, and to this end it is essential that the teaching institutions shall be so included in it as to become integral parts of a living corporate body, and that the status of its undergraduates or students shall be such that it may receive recognition from the students of other universities. Those who have attentively considered the London University Commission Bill will be able to judge to what extent the proposed University will meet these requirements.

I confess that two references in Dr. Pye-Smith's letter somewhat puzzle me. One is contained in the sentence, "The place for the examination of the Royal Colleges was debated with the penultimate President of the College of Physicians." If this implies that the Final Examination of the Conjoint Board will have any place at all in the examinations for the M.B. degree of the reconstructed University, it is, I fear, likely to prove misleading. I can find nothing in the Bill to justify such a view. It cannot possibly imply that the "internal" students of the University will be admitted to the medical degrees on terms different from the "external"

students, as a mere whisper of such an intention would be certain to secure the immediate rejection of the Bill; and rightly so, for it would be a manifest injustice to the students of the provincial schools.

The other reference is to "the original Westminster scheme." If Dr. Pye-Smith is alluding to the scheme promoted in 1887 by the two Royal Colleges for a charter of incorporation as "The Senate of Physicians and Surgeons," I do not know on what grounds he applies the term "Westminster" to it, and what analogy he finds between a scheme for founding a degree-giving body consisting of a medical faculty only, and the proposed University of Westminster, is not very easy to see.

As one of the minority who opposed the attempt of the Royal Colleges to obtain power to give degrees in medicine, I hope I shall not be thought to be in favour of such a method of settling the university question in London.

The papers issued with the Westminster scheme contain a clear statement that the University shall include "at least the faculties of arts, science, and medicine, and possibly as many more." He is surely in error in stating that the medical schools were to have any place in the "Senate of Physicians and Surgeons."

It may perhaps be worth while to mention that the Westminster scheme was originally suggested by an address on Legal Education delivered by the Lord Chief Justice of England, Lord Russell of Killowen, at the invitation of the Council of Legal Education on October 28th, 1895. That address contained a proposal to establish, either separately or in connection with a University in London, an "Inns of Court School of Law," with power to grant degrees in law.

The governing body of the proposed school was to consist of "say thirty members, ten to be nominated by the Inns of Court, ten by the Crown, one each by the Lord Chancellor, the Lord Chief Justice, and Master of the Rolls, one each by the four universities of Oxford, Cambridge, London, and Victoria, and three by the Incorporated Law Society. These figures are merely suggestions." In the Westminster scheme it is proposed to organise each Faculty on lines similar to those suggested by the Lord Chief Justice for the Faculty or School of Law, and to form the Faculties into a university by means of a Senate with general powers of control, equal representation on which is given to each Faculty. The proposal of the Lord Chief Justice, standing by itself, is open to the same objections which was urged against the scheme of the Royal Colleges, in that it would found a university of one Faculty.

It may, I suppose, be taken for granted that the Inns of Court and the Incorporated Law Society will adopt the same attitude towards the scheme of 1897 as they did towards the Cowper scheme.

I trust that Dr. Pye-Smith does not include me amongst those who think that in the event of the failure of the present Bill it will be "the easiest thing in the world to get another Bill introduced and carried." Fortunately, nothing of the kind will be necessary. The procedure aimed at, as is plainly stated in the Westminster scheme, is by charter, and no Bill will be required. After approval by the Privy Council, a charter, if opposed in Parliament, entails only a single debate and division, and, as it is a matter excluded from the operation of "the 12 o'clock rule" in the House of Commons, it makes no demand upon Government time. A Bill, on the other hand, must go through all three stages, and in Committee amendments may be moved upon every line.

There is one question to which, although often asked, I have not yet seen any satisfactory answer—namely, What precise benefit will accrue to medical education or to the London medical schools from the passing into law of the Bill of 1897?

Our chief needs are, first, a degree in medicine accessible to the average student; secondly, some general bond of union between the teaching bodies of the different schools, and thirdly, endowment for professorships, especially in the scientific subjects of the curriculum, and for founding laboratories to be utilised for the purposes of research.

How far are our wants likely to be met if the scheme of 1897 is carried into effect?

Without specifying too closely, I am free to say that in no quarter have I discovered any enthusiasm for the Bill; which is not the Bill introduced into Parliament in 1896, and is not even a Bill to carry out the scheme of the Cowper Commission, being provided, as it is, with three pages and a-half of essential particulars, in respect of which the Statutory Commissioners are bound to depart from the recommendations of the Royal Commission.

I am glad to see, from a paper which has just reached me, that the Committee of Delegates of the Metropolitan Medical Schools has again resumed its meetings, and has drafted amendments which will, it may be hoped, be vigorously pressed for and obtained before the schools promise their support to the Bill.—I am, etc.,

Clarges Street, W., Jan. 5th. J. K. FOWLER.

BIOLOGY AND THE FIVE YEARS' CURRICULUM.

SIR,—My attention has been drawn to some recent articles in the BRITISH MEDICAL JOURNAL,[1] from which I learn that the question is now being debated whether the biology taught to candidates for the Conjoint Board diploma is worth the time and labour which it costs. As a teacher of biology, who has sent in many candidates for this examination, I have my doubts as to the value of the instruction which we are called upon to give. The candidates are judged by their knowledge of the details of specified animals and plants. It is not a matter of surprise to me that many of the men should fail to satisfy the examiners, nor that the time assigned to the biological work should be grudged by those who are responsible for the chief subjects of professional study. The junior medical student is at present required to store his memory with much technical information, which is learnt with difficulty and quickly forgotten. The university student does, I believe, get lasting benefit from his preliminary scientific year, but he is not so hurried and distracted as the Conjoint Board man. It is pretty clear to me that the biology of the Conjoint Board must be humanised, or else swept away altogether.

Those who direct the course of medical education, and especially those who examine junior candidates, should recollect that it is not the minutiæ of biology which signify to the future physician or surgeon, but the practical methods and the scientific ideas which he may be helped to acquire. We ought to train him to some extent in the difficult art of observation, show him how to draw, how to work with the microscope, how to set up simple experiments, and faithfully record the results. We should give him a little practical knowledge of the development of some vertebrate animal, such as the chick, and a general, but distinct, notion of a few organisms very unlike the human subject. The examination should not turn upon the names of the parts, trivial details, or the learning of the schools. We do not wish to turn out zoologists or botanists, but observant and inquiring students of medicine. It would greatly encourage the better teachers if certified drawing books and notes of experiments were admitted as part of the proof of competence in elementary biology and other sciences.

I believe that the existing syllabus, and especially the present mode of examination, could be greatly improved, but other changes are required in addition to these. The Conjoint Board candidate in his first year is too hurried; he has not time to deal properly with the many new facts, notions, and terms which are poured upon him so liberally. Moreover, he works (in biology at least) almost altogether with students preparing for that particular examination; the course for university students soon diverges from his, and he loses the great advantage of companionship with more ambitious and better-prepared men.

If biology for Conjoint Board men is to be retained at all, the course should, in my opinion, be assimilated in respect of duration and choice of subjects to that of university students, while the examination should encourage the best and most interesting teaching.—I am, etc.,

Leeds, Dec. 31st, 1897. L. C. MIALL.

THE BACTERIOLOGY OF VARIOLA AND VACCINIA.

SIR,—In the BRITISH MEDICAL JOURNAL of January 1st, on p. 31, reviewing my paper on the Etiology of Vaccinia and Variola in the Report of the Medical Officer of the Local

[1] BRITISH MEDICAL JOURNAL, November 13th, 1897, p. 1432; November 20th, 1897, p. 1514.

Government Board for 1896-97, you say that "Dr. Klein ..... has yet found it possible to cultivate Copeman's bacillus outside the body." The bacillus to which you evidently refer is the small bacillus which I described and figured in the Report of the Medical Officer of the Local Government Board for 1892-93 as occurring in the lymph of human variola and in great numbers in the early stages (72 to 96 hours) in calf vaccine lymph. Dr. Copeman afterwards confirmed this result, and has himself referred to it in this sense on various occasions. It is therefore unjustified and inaccurate to refer to this microbe as "Copeman's bacillus."—I am, etc.,

St. Bartholomew's Hospital and College, Jan 1st. E. Klein.

ERYTHROL NITRATE IN MEDICINE AND PHARMACY.

Sir,—The conditions under which erythrol nitrate is explosive are apparently not well known. After the publication of Professor Bradbury's researches on its physiological action I tried several experiments with it. I was unable to explode it on concussion in its pure state by hammering a little on an iron plate at the ordinary temperature, but if heated to about 130° F. it readily exploded on being struck, and even on rubbing the hammer on a stone to polish and clean it, thus slightly warming it before striking the erythrol nitrate, the latter exploded after two or three strokes. I found, however, that, like nitroglycerine, it was soluble in fats and oils; it readily dissolved in the fat of chocolate, which solution was stable and could be safely cut into tablets for medicinal use. Of these I have prepared a number of small quantities.

Since the fatal accident we have further experimented in my laboratory with the object of ascertaining what admixture of other substances used in pharmacy will render it more explosive. (1) We find that if a little be heated on platinum foil it deflagrates with a flicker. (2) A trace triturated violently in a porcelain mortar does cause slight explosions. (3) Mixed with a little milk sugar we could not explode it by striking it with a hammer at ordinary temperatures, or even after moistening the mixture with spirit; but only a little was tried. (4) A trace of an oxydising agent, such as silver oxide, mercuric oxide, potassium permanganate, potassium chlorate, or potassium nitrate, as well as reducing agents, such as reduced iron, charcoal, hypophosphites, pyrogallol, morphine, and creosote, all seemed to render the erythrol nitrate more readily explosive by concussion. Erythrol nitrate melts at 142° F., and neutral fats and oils dissolve it to the extent of one-fourth their weight when gently warmed, but on cooling much of the nitrate crystallises out. Nevertheless, this fatty coating of the crystals is a protective, as I find that chocolate tablets can be prepared to contain a large dose of the nitrate by adding an excess of fat. I have failed to make these explode by violent hammering, although they contain a quantity of the crystals. It is desirable, however, to use such a quantity of chocolate that the erythrol nitrate may be in complete fatty solution in the tablets.—I am, etc.,

New Cavendish Street, W., Jan 3rd. W. Martindale.

Sir,—I can fully endorse all that is written in the British Medical Journal of January 1st with regard to the value of "erythrol nitrate" in angina. I have under my care four sufferers from angina, and all are taking with benefit the half-grain tablets. Dr. Lauder Brunton kindly gave me in consultation the suggestion for one case, and the result was so good I prescribed it for the others with equal advantage. Nibbling a tablet during the day will keep off an attack.—I am, etc.,

Windsor, Jan. 1st. W. B. Holderness.

DENTAL REPRESENTATION ON THE MEDICAL COUNCIL.

Sir,—The timely opening of the columns of the British Medical Journal has "ere now helped the dentists in their efforts to give effect to the Act of Parliament under which they desire to practise." I therefore beg to follow up the concise letter which appeared in the British Medical Journal of January 1st, p. 50, on representation of dentists on the General Medical Council. During the last session of that body the Executive Committee passed a measure which, had it been allowed to run, would have undone the advantages which dental progress has been securing to the public during the last thirty years. Happily means were found to lay the case before the Council, and the result was that the edict of the Executive Committee was recalled, and the Registrar was ordered not to act on it until further orders. It is gratifying to know that the members of the Executive Committee were the readiest to see the sequential mischief of their resolution becoming operative, but had they been influenced by a dental representative instead of being guided by a lawyer, whose professional training forbids him to see beyond the legal bearings of the case, this late advent of wisdom with its accompanying humiliation and trouble and expense, and the bitter disappointment to the misguided applicants for registration, would all have been avoided.

Again, the reports of the different examining bodies on the dental curriculum were discussed—not for the first time—at great length with but little result, and further reports have to be made to the Council at its next meeting on dental education; yet the voice of a dentist was unheard. True, some of the members who have to report may in their helplessness be led to consult a dental practitioner, but then these gentlemen may in nowise represent the wishes, or understand the needs, of the dental profession.

In recent debates views have been expressed which I had thought belonged to the dark ages, when the medical profession was unenlightened and when the Barber Surgeons were fighting for recognition. It would have been well both for speakers and listeners if these mistakes had been pointed out at once instead of having to be corrected from the outside. On these and other grounds I appeal for the appointment of a dentist representative on the General Medical Council. Your correspondent, a Member and L.D.S. of the College of Surgeons, claims this privilege on the ground of equity, seeing that we dentists bear so large a share of the expenses of the Council; I would ask your help on the more urgent ground that I apprehend danger to the cause of dental education if it be not immediately defended when it is attacked by influential members of the Council, and I fear that it is likely to suffer from misrepresentation even among those who are most favourably disposed towards it. Your space forbids me prolonging this letter, but I hope that others better able than I may take advantage of your kindness and express their views of the subject.

There are, I know, many members of the profession all over the kingdom, and not a few of the members of the General Medical Council, who fully sympathise with us in this matter, and in no way could they help us better than by expressing their views in your columns.—I am, etc.,

James Smith Turner.

George Street, Hanover Square, W., Jan. 4th.

ANKYLOSTOMIASIS IN THE WEST INDIES.

Sir,—I was pleased to see in the British Medical Journal of January 1st that Dr. Boyd, of Grenada, had called attention to the fact that ankylostomiasis was recognised and treated with thymol at the military and colonial hospital at Paramaribo many years ago, as I am able to corroborate this statement. In 1885 my colleague, Dr. Noordyk, a Dutch army surgeon and myself, were in charge of many hundreds of cases of ankylostomiasis, which were sent up to Paramaribo in shoals from the cocoa and sugar estates of the neighbouring rivers, and Dr. Noordyk was successful in finding the ankylostomum duodenale and the oval eggs of the parasite in the fæces and also in the intestines of cases which had succumbed to the weakness caused by the anæmia. Although Noordyk was pressed by myself to publish his finds he was too modest to do so, and I am therefore proud to have an opportunity of drawing attention to some work done by my painstaking colleague.—I am, etc.,

John H. Spitzly,
Late Surgeon-in-Chief, Colonial Hospital, Paramaribo.

Canonbury, N., Jan. 4th.

THE AERIAL SPREAD OF SMALL-POX.

Sir,—Dr. G. S. Buchanan's letter in the British Medical Journal of January 1st compels me again to trouble you. Surely, however, Dr. Buchanan cannot have read the correspondence in its entirety, or he would not state that I have "abandoned every point but one of my attack upon the theory." I have abandoned no point, and I

have, hitherto, made no attack. My objects in writing, in the first instance, were: First, to correct a misinterpretation of my conclusions as set forth in the Warrington report; and, secondly, to answer a query addressed to me by one of your correspondents. In doing so, I drew attention to two remarkable facts, which are directly at variance with the theory of aërial convection; and asked for similar facts which would support that theory with equal strength.

Dr. Buchanan now asks me to help him to understand why, "in each instance, the incidence of small-pox on these zones" ("successive zones around each of the hospitals") "conspicuously decreased from centre to periphery;" and he adds, "how is it to be accounted for otherwise than on the theory of aërial convection?" If Dr. Buchanan will kindly refer to my report (p. 65), he will see that, as regards the old hospital, there is *not* an incidence graduated *from the hospital* as a centre, but there *is* a graduated incidence from a point situated in a street 200 yards away, where two cases arose, which were diagnosed by an unqualified assistant, left on duty by his principal, as measles, and *remained unisolated in their homes for twelve and ten days respectively*, from whom at least twenty-three cases could be traced by direct or mediate infection. Similar statements and reasoning apply to the new or temporary hospital (p. 71).

This question of the graduated incidence of small-pox in the successive zones around a small-pox hospital is one of considerable interest, for I take it that data of this kind form the very basis upon which the theory of aërial convection rests. I entered upon the Warrington inquiry with a perfectly open mind, and at the outset I determined to take those cases in which no source of direct or mediate infection was apparent, and make a spotted map of *these cases*, to see if *they* would show a graduated incidence around the hospitals. I and my two medical assistants and clerks devoted the best part of twelve months to the inquiry on the spot, and there were very few cases which could not readily be traced to direct or mediate infection; and even in these we had reason to believe that more time and pains would have revealed some direct source (p. 70), for it is wholly incredible the amount of time required to trace infection in some cases. These few cases formed no such graduated incidence as that which the aërial theorists love. Rather the contrary, if anything, they increased in number with the distance from the hospital. But the number of cases was too few, in my opinion, to draw any conclusion from either way, and I did not add these data to my report, which already filled 100 Blue Book pages with double columns. Moreover, after careful consideration of the whole matter, it seemed to me *impossible to exclude all possible sources of direct or mediate infection in any case of small-pox*. Here, verily, is the crux of the whole matter. The aërial theory is based upon inferences drawn from cases in which every possible source of direct or mediate infection is excluded. But how is it possible to exclude every possible source of direct or mediate infection? The man (Case 296) whom I mentioned as having sat, all one evening, next the husband of a small-pox case which had been at home with the eruption out for two days, is only one instance of a very large number. Another gentleman reporting upon this case attributed it to aërial infection, but I, devoting perhaps a little more time to the matter, *happened* upon the chance circumstance which threw light upon his source of infection. But supposing, Sir, you or I caught small-pox, how is it possible for us to remember *all* the circumstances and *all* the people with whom we have come in contact on any given day or days, for the period of incubation of small-pox is not absolutely fixed? How is it possible for us even to know, much less to remember, all the vehicles we rode in, or the seats we sat on? How can we know who might have been there just before us, after coming straight from a person who, perhaps, did not even know himself that the pimples on his forehead were the eruption of small-pox? Many such slight cases occur nowadays, so great is the modification introduced by vaccination. The same difficulties—and greater because of the less intelligence—arise in the case of workmen at work, or children at play or at school. Out of a family of five, three caught small-pox and two died, by *unwittingly* taking in some infected linen to wash. It was the merest chance in the world that this linen was afterwards known to have been infected. And, bearing in mind the high infectivity of small-pox, one must recall, in order to exclude *all* possible sources, every person with whom, and every thing with which we have come into contact, not on one day only, but on *at least three days*. There was no more difficulty in investigating these matters in the Warrington inquiry than in any other; in fact, in many ways, owing to the compactness of the town, the early date at which I started the investigation, and the inexhaustible resources of a Royal Commission, it was easier. But I was absolutely driven to the conclusion, in the end, that the aërial theory is an inferential theory drawn from purely problematical data; and that small-pox follows very precisely the lines of human intercourse, and shows a graduated incidence around unisolated or insufficiently isolated cases; provided the vaccination factor remains fairly constant as it was at Warrington, which is a uniformly well primarily vaccinated town, but a uniformly badly revaccinated one.

Personally, I think it is hardly worth while knocking down such a "man of straw" as a theory which rests upon such a slender basis, but for the harm which it is doing; but on this account I would again draw attention to two facts, first, that fresh air is the best known natural germicide; why should Nature suspend her operations on this particular occasion and the air become a vehicle for germs to an indefinite distance? Secondly, the *undoubted facts* to which I have referred, that two communities were exempt from any cases not explained in the usual way within the sphere of influence of what the aërial theorists say is a germ-laden atmosphere; namely, over 700 people exposed (according to the aërial theory) in the workhouse *next door* to the old hospital, and the brewery with 364 persons near the new hospital. These are *facts*, not "possible," or, as I would say, "impossible" data, and are certainly *against* the hypothesis of aërial spread. And now, I am again brought back to my starting point, namely, to ask for *facts* on the other side.

If any further explanation to Dr. Buchanan's query be required it is to be found in the circumstance, as stated in my Report (pp. 11, 66, 68, and 76) that the hospital, owing to unavoidable circumstances, was not sufficiently isolated, and was itself a source of direct and mediate infection, and that it was naturally a greater source of infection to the people living near (whose children played in the open space behind the hospital, and communicated with the patients above and below the palings, as they were doing at the time I took the photograph, which was reproduced in my Report) than to those living further away whose families played in another open space. Insufficient isolation was in operation at both hospitals.

During the past few weeks I have had a large amount of private correspondence addressed to me, and the reason I trouble you at such length is because, as Dr. Wilson of Cheltenham and others write me, "this theory is causing great inconvenience as to the selection of sites for hospitals." Now, if vaccination is to be rendered less efficient, and the provision for isolation more difficult, we shall have small-pox endemic again as in the middle ages.

It seems to me that the profession is swallowing an untenable theory without sufficiently looking into it in the light of common sense; a theory, that is, which is based upon hypothetical *impossible data*, inasmuch as it is impossible to exclude all the possible sources of direct or mediate infection from a highly contagious malady like small-pox.—I am, etc.,

Upper Berkeley Street, W., Jan. 4th. THOS. D. SAVILL.

*** This topic is very interesting and important, but we would appeal to our correspondents to have more consideration for the exigencies of space.

CONTRACTING OUT OF THE POOR-LAW SUPERANNUATION ACT, 1896.

SIR,—In the BRITISH MEDICAL JOURNAL of December 25th, 1897, you publish a letter from Dr. J. J. Tisdall, in which he says: "It is to be devoutly hoped that no member of our profession will be found so totally forgetful of his duty..... as to contract out," etc. Now, as one (amongst the many, I suppose) who applied for one or other of the appointments

advertised by the Pershore Guardians, I offered to contract out, and for the following reason. I am over 40 years of age, and find the Boards of Guardians now, as a rule, when advertising, stipulate that the candidate shall be under that age, "therefore I am debarred from applying." I have been deputy medical officer to workhouse and union for over ten years, doing a great deal of the work that, of course, does not count "for superannuation." I have also been district medical officer for two years, yet, should I wish to return to Poor-law work, the question of age stops me just at the time when a man is supposed to be at his best both mentally and physically. I am informed that the Pershore appointments have been filled up by re-election of late medical officers. Of course I was unaware that there was any question of re-election in the matter; I supposed it was a matter of arrangement of districts.—I am, etc.,

January 5th. PAST MEDICAL OFFICER, P.L.U.

UNQUALIFIED ASSISTANTS.

SIR,—I hope you will afford me space, on my own behalf as well as on that of unqualified assistants generally, to thank those gentlemen who are drawing attention to the hardships created by the new regulations which are to prevent legally unqualified men from working in the future. It is highly satisfactory to know that so large a percentage of the medical men are in our favour, many of them testifying to the competency of experienced unqualified men they have had, while they admit they find inexperienced qualified men less useful. The question has been asked, why are there unqualified men? Of course, in many cases it has been their own fault, but unforeseen circumstances have prevented many others from qualifying; and when men get to 40 years of age and upwards, they are not well fitted for exam. work. Surely some allowance ought to be made for those who have worked steadily and skilfully for twenty years and upwards. A large number would not have to be considered, and yearly that number would be likely to diminish.—I am, etc.,

TEMPUS FUGIT.

SIR,—As it would be extremely difficult to obtain a complete list of the names of unqualified assistants (with or without curriculum) in any other way, and as some advantage might possibly accrue to them by organisation, may I be kindly allowed, through the medium of the BRITISH MEDICAL JOURNAL, to ask all my fellows in misfortune to send me their names and addresses (care of H. Fawssett, Esq., solicitor, 20, Cullum Street, Fenchurch Street, London, E.C.); also full particulars of their own peculiar circumstances? It will be necessary for all who avail themselves of such an opportunity to enclose (for reply) a stamped directed envelope. It would be advisable for each one to state whether he would be willing to subscribe towards the inevitable expense of such co-operation. There are many registered practitioners who probably sympathise with us in our doleful calamity, and would like to render us practical aid. If my surmise is correct, their help is cordially invited, and will be thoroughly appreciated by all the sufferers.—I am, etc.,

January 4th. GRAHAM WINMORE.

THE IRREPRESSIBLE NURSE.

SIR,—I can relate a parallel experience to that of "H.," with this happy exception, that I did not lose my patient. I was duly engaged to attend a lady. Calling at the house a week or two later I was informed that the nurse they were going to engage had strongly advised the lady not to have me to attend her, but "her doctor." She indulged in such fulsome adulation of this gentleman that my patient was simply disgusted, and the result was that the nurse lost her engagement, while mine was duly carried out. It is not an uncommon thing for nurses, especially the younger school, to criticise the medical attendant's treatment and advance their own opinions. In some cases this may create distrust in the mind of patient and relatives; but with those of sound judgment and common sense, as in the case I have related, the nurse merely damages her own interests, and possibly in the long run would cause "her doctor" to say, "Save me from my friends."—I am, etc.,

January 3rd. Q. E. D.

SIR,—Almost identically the same thing has happened in my practice within the past month.

Mr. Y. called on me and asked me to attend his wife, mentioning at the time that he had engaged the nurse. A few days later the nurse came down here so as to be handy. After a week, I am told from various sources that the nurse is trying to persuade Mr. Y. to call in Dr. B. On making inquiries, I find that Dr. B. has promised the nurse a commission on each case. Fortunately, Mr. Y. is a man of justice, and will not go back on his engagement.

Personally, I most decidedly think that in your case Dr. A. should decline to attend Mrs. ——, for his own sake any way.—I am, etc.,

January 3rd. M.B.

WIDAL'S REACTION.

SIR,—The point raised by Dr. Cameron in his letter, although not novel, possesses both practical and theoretical interest. When, in the first half of 1896, Bordet announced that agglutination could be obtained with dead cholera vibrios, I repeated his observation and also applied it to serum diagnosis, but found the reaction to be less complete, namely, it took a longer time and required a more concentrated serum solution. For that reason I ignored it altogether in describing serum diagnosis, and adhered to Durham and Gruber's instructions for observing agglutination.

When "typhoid" serum is added to an emulsion of typhoid bacilli two things generally occur: (1) Agglutination; (2) inhibition of movement. The latter is not so constantly present as the former, but when occurring is the more important, because, so far as I have seen, it never occurs with other than "typhoid" serum, although agglutination does if the serum be insufficiently diluted. I have ventured on a former occasion to put forward the hypothesis that this is due to the presence of two bodies which take part in the reaction, namely, Gruber's "agglutinin" and Pfeiffer's "paralysin." On a non-motile culture the paralysin could hardly act.

Of course the Brownian movement in an inactive emulsion is also often altered on the addition of "typhoid" serum, but this easily escapes observation. I think it therefore highly desirable to employ active cultures (and even a sluggish one is far preferable to a motionless one), because the use of an inactive culture not only deprives us of one of the characteristics of the reaction, but also makes it less sensitive. So that a negative result under such circumstances makes the doubt yet more doubtful, while a positive result is nearly as valuable and reliable as if obtained with an active culture.—I am, etc.,

Ladbroke Grove, W., Jan. 1st. ALBERT S. GRÜNBAUM.

SIR,—Dr. Cameron's letter on the subject of Widal's reaction touches upon a matter of much interest; for, while there can be no doubt that the reaction can be obtained with sluggish or motionless cultures, few, I think, will agree with his statement that such specimens are just as reliable as freely motile preparations.

The bacillus typhosus in broth culture may lose its accustomed activity if the medium be too alkaline, if the broth be too crowded, or if the stay in the incubator be prolonged beyond twenty-four hours. Whichever of these causes may be operating, it will generally be found that not only are the bacilli sluggish, but that they have a tendency to form small clumps, which may lead to error in diagnosis. Again, with some typhoid serums the cessation of movement is the most marked phenomenon, agglutination only occurring after a long interval. With an inactive culture the positive reaction might thus be overlooked. Feebly active cultures, too, even if previous to the addition of serum they contain small groups, are yet extremely slow in giving a typical reaction with typhoid blood.

The case is very different where dead bacilli are used. During the past three months I have tested with motile cultures the blood of some fifty typhoid patients, and in many cases have checked the results with emulsions of dead bacilli kindly sent to me by Professor Wright. When one has once got accustomed to the granular and crowded appearance of

the field the test as performed with the dead bacilli is in every way satisfactory. The bacilli in such an emulsion are never found in clumps such as commonly occur in sluggish broth cultures, and the clumping, although somewhat slow, is marked and characteristic.

My own experience is that an actively motile culture is undoubtedly the best to work with, for this will exhibit, on the addition of a typhoid serum, both loss of movement and clumping. Wright's dead bacilli are a great convenience when a fresh culture cannot be obtained. Least satisfactory of all is a sluggish culture in which small clumps of bacilli can already be detected.—I am, etc.,

J. O. SYMES, M.D.,
Clifton, Jan. 3rd. Bacteriologist, Bristol Royal Infirmary.

HOSPITALS AND WORKMEN.

SIR,—The latest development of the engineers' strike shows that the working classes can contribute according to their earnings from 3d. to 1s. a week to any case which they have at heart. Herein lies, as it seems to me, a ready solution of the whole of two great questions, the financial embarrassment of many of our great hospitals, and the abuse of the out-patient departments.

Let hospitals be open free to the poor and needy, and to them only—they are quite numerous enough—and their poverty leads to the development in them of the severer and more typical forms of disease, just those most amenable to treatment by rest and diet, and most valuable for instruction. To their relief let the funds collected from the charitable (such as the Hospital Sunday Fund) be devoted.

For the great and worthy class which has organised itself into powerful unions, with large sums of money invested, charity is an insult, and they know it. They wish to be independent, and for them the Hospital Saturday Fund has, as they think, opened an honourable means of obtaining medical attendance. Unfortunately they have not realised that their contributions are not anything like adequate for this purpose. Did they once discover that while demanding relief in return for their hospital contributions they are getting a shilling back for every penny they spend, they would, I believe, have the honesty to terminate the arrangement. As it is, they are obtaining medical relief from institutions to which they have recently contributed very little, and to which their masters, whom they are fighting, have given a very great deal for several generations. They are thus, no doubt, without being aware of it, biting the hand that has fed them, and such an ungrateful thing the average artisan would not do.

Let the whole of the trades unions have a sickness fund, with its own hospitals. Let their members be taken in to any institution at a rate sufficient to pay all expenses, including the medical fees. Something similar is done in the case of parish poor transferred from the workhouse to the wards of a general hospital. In one case the charge is 10s. a day. For 15s. a day any hospital in London could take in trade unionists, and make it worth while. The men would then have the immense satisfaction of paying their own way and getting as good treatment as anyone in the world can have. The funds of the charitable would then be adequate for the destitute and homeless, the men out of work and too weak to work. All would be satisfied: the unions have it is clear ample funds for the purpose, and no better investment for their money could be found.—I am, etc.,

January 1st. D.P.H.

BERI-BERI IN SOUTH AMERICA.

SIR,—I have just read with interest the correspondence on the subject of beri-beri. For over ten years back the Brazilian navy has sent ashore the sick in the vessels on station here for treatment in this hospital. On looking up the entry books I find that such vessels as came directly from ports north of Rio de Janeiro, or from the upper waters of the River Paraguay, might have on board a number of sick from one or two up to over a dozen. Their medical men never had any formal consultations with medical officers of the hospital, but I am told that they had an opinion that these sick men showed various symptoms of the same general disease. On shore, however, the diagnosis seemed to vary with the severity or stage of the disorder. Sudden deaths would occur, and after necropsies, of which there are no records, the cause returned invariably was heart disease, in other cases cured or relieved. The diagnoses were many and varied.

About seven years ago the health authorities of Buenos Ayres took alarm over the importation of beri-beri from Brazil in the belief that it is highly dangerous and infectious. In this country (Uruguay) it is classed as one of the "infectio-contagious" diseases requiring notification by medical men. In none of the annuals of statistics of this republic, nor in the daily or weekly returns of reported cases in the newspapers have I seen mentioned a single case. Sanitary inspection, isolation, and disinfection might follow; but, as a matter of fact, cases that I have heard of have come down here for change of air, not urgently requiring medical assistance, and can have set the law at nought. In such cases taken comparatively early, good food, moderate exercise, and Easton's syrup work wonders.

A case of my own was a seaman of the Brazilian navy, sent down from Matto Grosso for treatment here. He died a few minutes after being carried in on a stretcher. I did not see him alive. There had been dyspnœa and cyanosis, and general dropsy. The medical certificate is required within twenty four hours after death, so "valvular disease of the heart" was considered equal to the case.

I had the opportunity afterwards of making a *post-mortem* examination: Considerable anasarca; lungs, liver, kidneys, and spleen as in advanced heart disease; lungs congested and œdematous with much bronchitis; the heart was hypertrophied, 17 ounces in weight, firm and well nourished, but the aortic and mitral valves looked perfectly healthy, as did the endocardium and aortic endothelium.—I am, etc.,

W. THOMSON, M.B.,
Resident Medical Officer.
British Hospital, Monte Video, Dec. 6th, 1897.

SCRUTIN DE LISTE AT THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

SIR,—Enclosed please find a copy of a letter addressed to the President of the Royal College of Surgeons with enclosures.—I am, etc.,

Melbourne, Nov. 29th, 1897. JAMES W. BARRETT.

[*Copy.*]

127, Collins Street, Melbourne, 25th November, 1897.

To the President of the Royal College of Surgeons,
Lincoln's Inn Fields, London, England.

Sir,—Through the courtesy of Mr. Trimmer, Secretary to the Royal College of Surgeons, a ballot paper commonly in use at elections to vacancies on the Council of the College, has been forwarded to me.

The system of election adopted is that known as the *scrutin de liste*. Will you permit me very respectfully to point out the grave objection to an election conducted on such a system? There are only two principles on which elections can be properly conducted (1) either a majority of the electors returns the candidate (or candidates), or (2) else the various parties in the electorate return candidates in proportion to their strength; in other words, either a majority elects all the successful candidates or they are properly apportioned amongst parties. The former result, namely, the return of all the successful candidates by a majority and the withdrawal of representation from a minority is attained best by Nanson's system, described in papers forwarded herewith. The return of candidates representing the views of various parties in proportion to their strength in the electorate is best obtained by the Hare system, which aims at reproducing in the elected body in miniature the various opinions held in the electorate at large. Thus the object of the Hare system is to make the elected body an exact reflex of the electorate. But it is a matter of common knowledge that the method of *scrutin de liste* (at present adopted by the College of Surgeons) is hopelessly inaccurate, that by it a minority may return many of the candidates, and a majority may be defeated. It is obsolete and absurd. The reasons for these statements are set out in the accompanying document and references.

It is surely desirable that one of the first medical institutions in the empire should conduct its elections by methods which are above criticism, and which are worthy of its scientific reputation.

Owing to the distance at which I write I have anticipated your permission, and sent copies of this letter to the *Lancet* and BRITISH MEDICAL JOURNAL.

I have the honour to be, Sir,
Your obedient servant,
JAMES W. BARRETT, F.R.C.S. Eng.

Melbourne, Australia.

THE HUMAN FOOT IN ART.

SIR,—Anatomists who have no pretensions to be artists may yet support a claim to discuss the human foot from an art point of view by reference to words which I have quoted

elsewhere[1] from Murray's *Greek Sculpture*, where the object of the artist is declared to be: To express, so far as the material in which he works will permit, "the essential character" of the object he portrays.

We have, however, to face the lamentable circumstance that there is not among anatomists any generally-accepted conception of the "essential character" of this interesting part of the body. I could give a long list of contradictory views held by those who speak with authority on "essential" particulars, even on questions of fact. Let me give one instance, suggested by an article in the BRITISH MEDICAL JOURNAL of January 1st. Mayer of Zurich[2] insisted that the inner line of the foot is straight, and that the boot should correspond. Professor Cleland of Glasgow[3] dissents from this view; so does Professor Arthur Thompson of Oxford.[4] I think, if I may say so, that Mayer was right, and I know that a straight line from the inside of the heel in my own foot touches the mid-phalangeal joint of the great toe.—I am, etc.,

Gloucester, Jan. 1st. T. S. ELLIS.

OBITUARY.

JOHN AUGUSTUS WALLIS, M.D.,

Commissioner in Lunacy.

WITH much regret we have to record the death, at the age of 52, of Dr. John Augustus Wallis, one of the Medical Commissioners in Lunacy. He was a native of Cornwall, and received his early education at Falmouth and afterwards in Belgium, where he acquired a familiar knowledge of the French language. He studied medicine in Dublin, and obtained the diplomas of L.R.C.S.I. and L.R.C.P.E. in 1866, and after engaging in general practice for a short time he was, in the following year, appointed Assistant Medical Officer at the Durham County Asylum, where he remained for nearly seven years. During his residence there he continued his medical and literary studies with the purpose of taking a university degree, and with that object he went into residence at the University of Aberdeen, where he graduated as M.B. and C.M. in 1875, afterwards proceeding to the degree of M.D. in 1883.

After taking his degree he travelled in the United States and on the Continent with the object of seeing asylums and studying the condition of the insane and their treatment in other countries, and on his return to England he took up the duties of Assistant Medical Officer at the West Riding Asylum at Wakefield under Dr. (now Sir James) Crichton-Browne. A few months after he was appointed Superintendent of the Hull Asylum, which was at that time a building of very antiquated type situated within the boundaries of the city, and quite unsuitable for its purpose. Dr. Wallis at once set to work to remedy this state of matters, and soon had the satisfaction of seeing a site for a new asylum purchased and plans put in hand. The present commodious building was subsequently erected from plans prepared by a local architect under his directions.

In 1878 he was appointed Superintendent of the Lancashire Asylum at Whittingham, where his practical knowledge of asylum construction and of the needs of the insane was still further called into requisition. For fourteen years he remained at the head of this large establishment, and under his management many important additions and improvements were effected. It was at his instigation that the Lancashire Asylums Board determined to erect a special hospital at Whittingham for the treatment of recent acute cases, and plans for this building had been prepared under his direction and in accordance with his instructions, when he was appointed a Commissioner in Lunacy on the resignation of Mr. Cleaton four years ago.

In his work as an asylum superintendent Dr. Wallis was eminently successful. His kindly disposition and cheerful temperament endeared him to his patients, and his relations with those under his authority were always of a friendly character. His old colleagues will recall many acts of kindness and self-denial towards those with whom he was associated. He made a special study of the housing of the insane, was deeply impressed with the importance of early treatment, and desired to see more thorough provision made for the treatment of recent cases, while he advocated the erection of more simple and economical buildings for chronic and incurable cases.

As a Commissioner he took a broad and generous view of his duties. His work was done carefully and conscientiously, and his many good qualities were thoroughly appreciated by his colleagues, to whom his early death will be a source of grief and sincere regret.

For some time past his health had been failing, and to several of his friends he had expressed the opinion that he was suffering from serious disease of the heart, and a conviction that he should not live long. Within the last few weeks he experienced one or two severe attacks of angina pectoris, and he died suddenly on the morning of December 30th, 1897.

Dr. Wallis married in 1878 the youngest daughter of Mr. F. W. Pearson of Hull. His wife died about five years ago, but he leaves a family of four sons to mourn his loss.

[1] *The Human Foot.*
[2] *Why the Shoe Pinches*, translated by J. S. Craig.
[3] *Transactions of Glasgow Philosophical Society* 1888.
[4] *Anatomy for Art Students*

WILLIAM WADHAM, M.D. ST. ANDREWS, F.R.C.P.LOND.,

Consulting Physician to St. George's Hospital.

WE regret to have to record the death of Dr. William Wadham, who was for many years Dean of the Medical School of St. George's Hospital. He was born in Gloucestershire in 1823 and received his medical education at St. George's Hospital. After completing his student career he travelled for some time on the Continent: in 1847 took the degree of M.D. at the University of St. Andrews; in 1850 he became a Member and in 1870 a Fellow of the Royal College of Physicians. He held the appointment of Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, and was Medical Registrar to St. George's Hospital. In 1862 he became Assistant Physician and in 1868 full Physician to St. George's Hospital, and on his retirement in 1887 he was elected Consulting Physician. He was a sound practical physician, and his clinical lectures were found useful and instructive by many generations of students. As a systematic lecturer he succeeded in making his course on forensic medicine interesting and attractive, while as Dean of the school he showed a keen interest not only in the studies of the students but also in their recreations. In return he won their esteem and regard, and his death will be a source of deep regret to old St. George's men. Dr. Wadham, who had suffered for some time from cardiac and renal disease, died at his house in Park Lane on December 28th.

The funeral took place at Frenchay, Gloucestershire, the deceased physician's birthplace, on December 31st, 1897.

MONTGOMERY ALBERT WARD, M.D., F.R.C.S.I.,

Dublin.

WE record with regret the death of Dr. Montgomery A. Ward, of Dublin. He had been in poor health for some time, but there was nothing to suggest the very sudden ending of his life. On Thursday morning, December 30th, 1897, he was found dead in his bed.

Dr. Ward was a graduate of the University of Dublin. He took his A.B. in 1864, M.B. in 1865, M.D. in 1883, M.Ch. in 1866. In the same year he became a Licentiate of the Royal College of Surgeons in Ireland, and in 1874 a Fellow of the same College. He was a lecturer on Anatomy and Physiology in the old Ledwich School of Medicine, and was Assistant Surgeon to the Adelaide Hospital. He left that institution on being selected as one of the Surgeons of Mercer's Hospital. He resigned his appointment at the invitation of the governors during the late disputes, but he was re-elected to his old office, and at the time of his death he was Senior Surgeon.

Dr. Ward did not write much, but he enjoyed a considerable practice, and he was regarded with much esteem by a large body of the public and the profession.

A painful circumstance is that this makes the third sudden death in the surgical staff of Mercer's Hospital within seven months, and removes the last of the surgeons who held office during the recent disputes in that institution.

A Friend of Thirty Years' Standing (Dr. R. Fair Frazer) writes: "Montgomery Ward was more than a successful surgeon and painstaking physician; he was a large-minded man with a warm heart, ever ready to encourage and help a friend, or anyone worth helping. In society he was the life of the circle in which he moved, and his death is deeply lamented by rich and poor. Such a man can badly be spared."

THE REV. T. E. CLARK, M.D.ABERD.

On Christmas Eve, 1897, the Rev. T. E. Clark, M.D.Aberd., died at his house in Clifton, being 63 years of age. After a distinguished career as a student at the British School of Medicine, Dr. Clark took the M.R.C.S. in 1858, and began practice in Clifton. In a short time his success was so marked that there were few busier medical men in the district, but in 1885 he took holy orders. During the time he was in practice he was Surgeon to the Royal Infirmary (1864-73), and Physician to the General Hospital; Lecturer at the Medical School from 1857 to 1864 on botany; on anatomy and physiology from 1864 to 1868, and on surgery from 1868 to 1869.

After ordination he took first a curacy in the Isle of Man, and subsequently became vicar of Polt Shrigley, but in 1890 he returned to Clifton. Dr. Clark had not been in good health for some time, and had an alarming attack of heart failure only a few days before his death, which occurred quite suddenly. He had a kind, genial manner, and was much respected by his patients and friends, both as a medical man and as a clergyman. Since his return to Clifton he had taken no part in local medical matters, but did occasional duty in the parish church of Clifton and elsewhere.

JOSEPH JOHN FOX, M.R.C.S., L.S.A.

Although it is nearly twenty years since Mr. Fox retired from practice, there must be many who can still recall his striking and attractive personality at Stoke Newington, where he lived for about 37 years. Mr. Fox was born at Falmouth in 1821, and came of a long line of Quaker medical ancestors. He had very little school education, and furnished a striking example of the truth of Gibbon's maxim that the most important education is that which a man gives himself. Few men have had a greater passion for knowledge. He was throughout his life not only an omnivorous reader but a diligent student and note-taker. The problems of the higher mathematics exercised a peculiar fascination for him; and in studying them he found constant relaxation from the cares of practice and sleepless nights.

In the classics and philology, in history, botany, and meteorology, he was almost equally at home; and half a century ago he did much in his own neighbourhood to stimulate mental culture by founding the Stoke Newington Mutual Improvement Society.

Mr. Fox entered at University College in 1839. He never enjoyed robust health, and was eventually compelled to retire from practice by deafness connected with Ménière's disease. He was one of the old school of practitioners—not merely the medical attendant, but the warm and faithful friend of his patients, and was instinctively beloved by children.

Mr. Fox was the writer of a series of papers in the *Medical Times and Gazette*, showing the influence of age and sex and season on the mortality of the metropolis, especially from zymotic diseases. He was an active Fellow of the Statistical Society, and among his papers on connected subjects may be mentioned the Province of the Statistician, read at the meeting of the British Association at Oxford; and an essay on the Vital Statistics of the Society of Friends, in which he constructed a valuable life table for the members of that body, to which the late Dr. Farr subsequently referred as an authority. To clear discrimination and sound judgment Mr. Fox added a faculty of lucid exposition. In the lecture room no one could better animate the dry bones of study. Mr. Fox's later years were spent in quiet retirement and continual reading. He found an especial delight in studying Dr. Murray's new Oxford Dictionary as the several parts appeared, and the last number was at his bedside at the time of his death. By his inexhaustible mental energy (maintained to the last), by his uniform geniality and kindness, and by his strong conscientiousness and deep religious principle, his lifelong character is best expressed.

DEPUTY-SURGEON-GENERAL JOHN HOUSTON, I.M.S.

We regret to have to record the death of Deputy-Surgeon-General John Houston, which occurred at his house in Edinburgh on Christmas day. He was the third son of the late Mr. James Houston, of Tullochgriban, Strathspey, and was educated at Elgin and Glasgow. He obtained the degree of M.D., and became a Member of the Royal College of Surgeons of Edinburgh in 1854. He entered the Indian Medical Service in 1855, and was posted to the Madras Presidency. After a few years' service in the military department he was appointed Acting Durbar Physician to the Maharajah of Mysore, and in this position he was in close relation with the two last Maharajahs. For ten years before his retirement he was in Bangalore in the capacity of Principal Medical Officer to the Mysore State. His high character and his abilities in the discharge of his duties obtained for him the respect and friendship of both the Maharajahs and of the officers of the Mysore Commission. He retired in 1886, and since that time has resided in Edinburgh. He is survived by his wife (a sister of Sir Arthur Mitchell, K.C.B.), two sons and two daughters—both married. One of his sons is Dr. Alexander C. Houston, of Edinburgh, who has taken a distinguished position as a bacteriologist and a student of Public Health questions.

The sudden death of Dr. Hugh Calderwood, B.Sc., will be regretted by many, especially by recent graduates and present students of medicine in Glasgow University. His university career in the faculties of science and medicine was a brilliant one, and in its course he gained, in addition to many medals, prizes, and certificates, the degree of B.Sc., with first-class honours. On graduation in the summer of 1896 he was appointed by the University Court to a demonstratorship in anatomy, which post he occupied until his death. His keen intellectual powers were united to a nature singularly open, frank, and manly, and during his all too brief career, both as a student and subsequently as a Demonstrator of Anatomy under Professor Cleland, he won for himself an assured place in the esteem and affection of everyone who came to know him, whether as pupil, colleague, or friend.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Dr. Stanislaus Danillo, Lecturer on Mental Diseases in the St. Petersburg Medico-Military Academy, aged 49; Dr. Carl Ritter von Rzehaczek, Emeritus Professor of Surgery in the University of Graz; Dr. Tiburcio Padilla, founder and till his death editor of the *Semana Medica* of Buenos Aires, Professor in the Colegio Nacional, and Physician to the Hospital de las Mercedes of that city, author of *Guia Medical*, and of a work on medical jurisprudence, co-editor of the *Farmacopea Argentina*, etc.; Dr. Joseph F. Edwards, editor of the *American Journal of Health and Hygiene*; and Dr. T. H. Belval, of Brussels, editor of the *Mouvement Hygiénique*, and founder of the Belgium Antialcohol League, aged 65.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Inspector-General Thomas Russel Pickthorn died at Rockbeare, Emsworth, on December 31st, 1897, in his 81st year. He was the son of the late Commander John Pickthorn, R.N. He entered the navy as a Surgeon in 1842, and was promoted to be Staff-Surgeon in 1851. He served in the *Spartan* in China from 1852 to 1855, and was present at several actions with Chinese pirates, etc., for which he received the China medal. He was successively promoted to be Fleet-Surgeon in 1866, Deputy-Inspector-General of Hospitals in 1870, and Inspector-General of Hospitals in July, 1878. He retired in September, 1878.

ARMY MEDICAL STAFF.

Surgeon-Major-General A. A. Gore, M.D., Principal Medical Officer in India, has been granted a Distinguished Service Reward of £100 per annum. Surgeon-Major-General Gore commenced his career as Assistant-Surgeon in the army on October 1st, 1860, was appointed Surgeon, September 2nd, 1868; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, August 18th, 1886; Surgeon-Colonel, January 13th, 1892; and Surgeon-Major-General on March 10th, 1895. He has been twice on active service on the West Coast of Africa; first in 1861, when he was present at the bombardment and destruction of the town of Massougha, on the Sierra Leone river on December 10th, the attack on Madoukia, December 27th, and the storming and capture of the stockaded fetish town of Rohea on

December 28th. For these services, and for conspicuous bravery, he was mentioned in general orders, and specially recommended for promotion in 1868. He also took part in the Ashantee war of 1873 as sanitary officer, and was severely wounded in the action of November 3rd, near Dunquah, and was again wounded at Quarman on November 17th of the same year.

Surgeon-Colonel J. H. HUGHES, M.D., appointed to be a Principal Medical Officer in the Bombay Command, in succession to Surgeon-Colonel F. B. Scott, M.D., C.M.G., whose tenure of appointment expired on December 25th, is posted to Quetta District.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR W. T. WHITMORE, F.R.C.S.Edin., and Surgeon-Lieutenant A. H. MARSH, having resigned their Volunteer appointments, cease to belong to the Army Medical Reserve, January 1st.

Surgeon-Lieutenant A. H. VERNON, 4th Volunteer Battalion the Hampshire Regiment, is appointed Surgeon-Lieutenant, January 1st.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL G. PRICE, M.D., Bengal Establishment, Civil Surgeon of Moorshedabad, is permitted to retire from the service from January 16th. He was appointed Assistant-Surgeon, October 1st, 1872, and Surgeon-Lieutenant-Colonel twenty years thereafter.

Surgeon-Lieutenant-Colonel H. ADEY, 10th Bombay Light Infantry, is also permitted to retire from the service, December 18th, 1897. His first commission dates from October 1st, 1877. He was in the Afghan war in 1879-80 (medal); in the Egyptian war of 1882, including the battle at Tel-el-Kebir (medal, with clasp, and Khedive's star); and with the Zhob Field Force in 1890.

Brigade-Surgeon-Lieutenant-Colonel F. A. SMYTH, Bengal Establishment, is granted the temporary rank of Surgeon-Colonel from November 8th, while officiating as Principal Medical Officer Frontier Field Force.

Brigade-Surgeon-Lieutenant-Colonel A. S. REID, M.B., Bengal Establishment, is granted the temporary rank of Surgeon-Colonel from November 1st, while officiating as Principal Medical Officer Lahore District.

Surgeon-Colonel G. W. R HAY, M.D., Bombay Establishment, acted as Surgeon-General with the Government of Bombay from August 18th to October 29th.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT-COLONEL-COMMANDANT A. T. NORTON, C.B., the London Companies, resigns his commission, retaining his rank and uniform, January 5th.

Quartermaster W. PILLING, the London Companies, also resigns his commission, January 5th.

THE VOLUNTEERS.

THE undermentioned Surgeon-Captains are promoted to be Surgeon-Majors, January 1st: A. LINGARD, 3rd Middlesex Artillery; J. A. GRAY, 5th Volunteer Battalion the Royal Scots (Lothian Regiment); J. SUTCLIFFE, 2nd Volunteer Battalion the Duke of Wellington's West Riding Regiment.

Surgeon-Captain A. J. BOYD, M.D., 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, resigns his commission and is appointed Captain, January 1st.

Mr. THOMAS HAMILTON, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Royal Scots Fusiliers, January 1st.

Mr. JOHN BROWN YEOMAN, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Cheshire Regiment, January 1st.

Surgeon-Lieutenant A. WHYTE, M.D., 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, is superseded for absence without leave, January 1st.

Surgeon-Major W. M. VORES, 2nd Volunteer Battalion the Royal Sussex Regiment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel, on being appointed Senior Medical Officer to the Sussex Volunteer Infantry Brigade, January 1st.

Surgeon-Lieutenant J. J. O'HAGAN, 5th (Irish) Volunteer Battalion the King's Liverpool Regiment, is promoted to be Surgeon-Captain, January 5th.

Surgeon Captain A H SMITH, 5th (Ardwick) Volunteer Battalion the Manchester Regiment, resigns his commission and is appointed Captain, January 5th.

PARLIAMENT AND THE ARMY MEDICAL SERVICE.

IT is significant of the interest aroused among public men in the question of the grievances of the Army Medical Department that we find the following in the election address of Mr. Campbell, Q.C., candidate for the St. Stephen's Green division of Dublin: "I shall heartily co-operate with the Irish members in any effort to procure equal treatment for our Irish schools of medicine and surgery in relation to the medical departments of the army and navy, and in removing the grievances of the officers of these departments, as well as in protecting the interests of Irish civil servants."

THE FRONTIER RISING IN INDIA.

THE despatches from Major-General Sir Bindon Blood and Major-General E. R. Elles dealing with the operations of the Malakand and Mohmand Field Forces on the North-West Frontier of India in September and October last are published.

Writing of the severe action fought on September 16th, Sir Bindon Blood, among other officers, singles out for special mention Surgeon-Captain J. Fisher, of the Bengal Establishment, "who made a most determined, though unsuccessful, attempt to take medical aid to the wounded of Captain Ryder's detachment through a hot fire." Surgeon-Lieutenant E. L. Perry, Bengal Establishment, is also spoken of with special approval. The medical arrangements generally, Sir Bindon adds, were excellent.

Major General Elles's despatch on the Mohmand Expedition is preceded by a letter from the Adjutant-General, in which it is said that the physical difficulties of the country traversed were very great, and severely tested the endurance of the troops. Among the officers mentioned are: Surgeon-Colonel E Townsend, Army Medical Staff; Surgeon-Captain J. B. Jameson, Bombay Establishment, for the operations in Jarobi Glen; and Surgeon-Lieutenant-Colonel J. F. Williamson, Army Medical Staff.

A despatch has also been published from Brigadier-General E. R. Elles, C.B., reporting the operations carried out against a rising of Mohmands and other tribes led by the Adda Mullah in August last. After describing the determined stand made by the enemy and the success with which it had been overcome, General Elles brings to favourable notice the conduct of the officers with his force, and speaks thus of Surgeon-Captain T. H. J. C. Goodwyn, Army Medical Staff: "I would bring to very special notice the gallantry of this officer, the only medical officer with the force He was attending to the wounded wherever the fire was hottest, and showed great devotion to his duty. He was himself knocked out of time by a stone or spent bullet, but refused to leave his work."

MEDICAL ARRANGEMENTS WITH THE KURRAM MOVABLE COLUMN.

THE two medical units with this column are 62 Native Field Hospital, with D section British Field Hospital. Surgeon-Major Willis, I.M.S., is in medical charge of 62 N.F.H. with Surgeon-Captains Hudson, Bennett, and Surgeon-Lieutenant Price in charge of sections. Surgeon-Major Willis has two sections at Sadda, the headquarters of the force. He has one section at Thull and Alizi on the lines of communication. The British section D 3 is in charge of Surgeon-Lieutenant-Colonel Wolseley, A.M.S. This hospital was doing duty on the lines of communication in the Malakan expedition and marched across Kohat Pass to Kohat and on up to Sadda with No. 3 Field Battery and escort. From Sadda it was ordered to Parachina, 21 miles further up the Kurram Valley, 12 miles from the Pewar Kotel.

The only European troops with the column are the Field Battery and a Maxim Detachment of the Royal Scotch Fusiliers. The battery has suffered a good deal from ague and severe diarrhœa. The cold and high altitude at Parachina seemed to bring out the malaria, which they must have contracted while at Kohat in the autumn.

General Hill marched up the Karamana Pass with all his force on November 20th to meet General Lockhart. Both the native field hospital and British furnished flying sections on a very light scale. No tents were allowed for the troops.

On the 30th two columns went from Laura Malla foraging. No casualties. On December 1st General Hill moved into the Chamkani country. The enemy fired at long ranges from the mountain sides. At one time the firing was rather severe. Lieutenant Battys of the 6th B.C. was killed, shot through the head, and Lieutenant Stewart 5th Gurkas was shot through the lower third of the thigh, implicating the bone. This officer is making most satisfactory progress, and it is hoped that the leg will be saved. Most of the wounds were caused by Martini or Snider bullets: None of the Europeans in the Maxim detachment were wounded, but twenty of the natives were, some very severely. Four were killed. Several of the hospital transport ponies were shot and the ten belonging to D 3 British field hospital under Surgeon-Lieutenant-Colonel W. O. Wolseley were rushed and the Sepoy escort killed and the ponies' throats cut. Some officers' chargers and syces shared the same fate. The force got back to camp at 7.30.

Surgeon-Colonel Murphy, D.S.O., who is P.M.O. of the column, was out. Surgeon-Major Willis was busy most of the night with 1 is wounded. The force went up to Thubie again on December 2nd; four Sepoys were killed and one officer wounded. In the evening the flying sections took over all the sick and wounded from General Gasaler's Brigade, leaving free of all sick to march down to Barr. Captain Nicholson and Lieutenant Williams of the 2nd Yorks and twenty-seven non-commissioned officers and men (European) were taken over by D 3 B.F H. 62 N.F.H. took over about the same number of native sick and wounded. Next day all the wounded were safely transported to Sadda down the Karamana Pass. They bore the journey very well. From Sadda they go down to Kohat by sick convoy. All the wounded were improving before they left. It is lucky they got off before the snow commenced, which has been falling the last two days. The cold is bitter—hard frost. We do not know when we go to the base.

SURGEON-CAPTAIN SELBY, I.M.S.

IT is highly probable, says the *Bombay Gazette*, that Surgeon-Captain Selby, of the 1st Battalion 2nd Ghoorkas (with Captain Macintyre of the same corps) will receive the V.C. Surgeon-Captain Selby displayed great gallantry, standing over a wounded Goorkha and saving him when the enemy were almost upon him. Captain Macintyre saved Lieutenant Wylie's body from mutilation by carrying it away under a heavy fire when in command of the rearguard retiring from Waran.

MEDICAL OFFICERS IN THE FRONTIER WAR.

A CORRESPONDENT states that considerable speculation has arisen over the following order issued by the Principal Medical Officer in India: "I am directed by the Commander-in-Chief in India to request that every medical officer who may be sent back to India from field service on account of ill-health be brought before a Medical Board, and the proceeding A. F. H. 2 forwarded to this office."

*** If the same were done with all other officers, suspicions would not be aroused. Does it imply anything against medical officers? Or is it a form of official pressure to get medical officers to work on in fear of a Medical Board till they drop? It certainly requires explanation.

THE TITLE FOR A MEDICAL CORPS.

A RETIRED ARMY SURGEON suggests the title "Royal Surgeons" rather than "Royal Medical Corps," because shorter and better English. Captain ——, R.S., would be on all fours with Captain ——, R.E. He also suggests a distinctive uniform; the present one is scarcely distinguishable from that of the Royal Artillery. He mentions a tint of green or French grey as appropriate.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

A MEETING of Convocation will be held at the University on Monday, January 17th, at 5 P.M.

THE RECONSTRUCTION BILL.

Mr. J. B. Benson, LL.D., B.A., will present the report of the Special Committee appointed on May 12th, 1896, and will move its reception. The Special Committee, consisting of thirteen members, was appointed to prepare a memorandum of points in the scheme of the Cowper Commission in which modification is desirable, with power to confer with any Statutory Commission which may be appointed, and with the Senate or any of its Committees; and with powers to prepare amendments to the London University Commission Bill, and to have them proposed on behalf of Convocation in either House of Parliament. The report gives an account of the proceedings at the conference of the various bodies named in the report of the Cowper Commission with the Senate held on December 14th, 1897 (BRITISH MEDICAL JOURNAL, December 18th, 1897, page 1816). The Special Committee recommends that, "having regard to the great length of time that the question of the reconstruction of the University has been under consideration, to the many schemes that have been proposed, to the support which the Bill introduced last session has already received, and to the probability indicated by the Chancellor that it will be reintroduced in the approaching session," Convocation should adopt the following resolution:

(A) "That this House accepts the scheme embodied in the London University Commission Bill, 1897."

The Committee further recommends (as its own function ends with this report, and it is desirable that the progress and development of the new Bill shortly to be introduced shortly be carefully watched in the interests of Convocation) the adoption of the following resolution:

(B) "That a Special Committee, consisting of thirteen members, be appointed, with the functions and powers of the Special Committee appointed by Convocation on May 12th, 1896."—(That is virtually the reappointment of the expiring Special Committee.)

THE INTERMEDIATE M.B. EXAMINATION.

In the report by the Standing Committee, which is also to be presented to Convocation, it is recommended, in reference to the Intermediate M.B. Examination, (*a*) that the subjects of anatomy and physiology should not be separated; (*b*) that the subject of organic chemistry should be removed from the syllabus of the Intermediate M.B. Examination, and be included in the Chemistry of the Preliminary Scientific Examination; (*c*) that in order to carry out the foregoing resolutions and syllabus in chemistry at the Preliminary Scientific should be revised so as to include inorganic and organic chemistry, and to limit and define the amount of knowledge of these subject expected from candidates so as not to exceed the requirements of the Intermediate Science Examination; (*d*) that the subject of materia medica should be held to include a knowledge of the physiological action of drugs; (*e*) that the examination on apparatus used in physiological investigation should be reserved for the Examination in Honours; (*f*) that the whole examination thus arranged, consisting of anatomy, physiology, and materia medica, should be passed at one time. To give effect to these recommendations, a deputation was received by the Committee of the Senate, when their opinions were heard, considered, and discussed at considerable length.

The above report will be presented and its adoption moved.

OTHER BUSINESS.

Several resolutions respecting graduation in the Faculty of Laws will also be moved.

MEDICO-LEGAL.

MEDICAL WITNESSES IN CRIMINAL CASES.

T. J. F.—We are advised that a professional witness is not entitled to refuse to give evidence as to criminal charges, even though his fee is not paid beforehand. He has a right to have a proper fee allowed afterwards. The conduct money must be paid beforehand, but need not be more than the necessary out-of-pocket expenses of travelling to the court and back. We are advised that a witness who is subpœnaed and is in court is certainly liable if he refuses to give evidence to be punished for contempt of court by imprisonment (*see* Regina *v.* Cooke, 1 C. and P., 322). The "subpœna" is, as its name implies, an order from the Crown to attend and give what information the person summoned may possess, "under pain" of punishment. Further, we are advised that any witness present in court, if he even had not been subpœnaed at all, is on a criminal charge liable to be sworn and to answer all lawful questions on pain of committal (*see* Regina *v.* Sadler, 4 C. and P., 218). The question of his remuneration for loss of time is a matter which ought to be determined by the magistrate at the close of the hearing of the case, having due regard to the witness's situation in life and the value of his time. There does not appear to be any rule which binds the magistrate's discretion or any settled minimum which applies to the case of a witness in medical practice, although there certainly ought to be.

LIABILITY OF MEDICAL MEN IN LUNACY CASES.

INQUIRENS writes: In certifying that a person is insane and sending him to an asylum, is it not now rather the custom for a medical man to obtain from the petitioners or friends of the patient a letter of indemnity against any future action being brought against him for his act, and is not this in your opinion a very wise and necessary step to adopt?

*** The suggested precaution would be wise, but we are not aware that any such custom obtains. The Act of Parliament relating to the subject purports to protect the medical practitioner signing such a certificate in good faith and with reasonable care, and also provides for any action against him being stayed if the court is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care.

"MEDICAL AID" TICKETS.

A CORRESPONDENT writes that he has been invited by gentlemen in his neighbourhood to issue tickets at a cheap rate for the treatment of the poorer classes, and he desires to know whether such a ticket as the following would be in accordance with the etiquette of the profession:

Medical Aid. No.
Hours of Attendance: 2 to 4 at the Surgery,
L—— House, B——,
Mondays, Wednesdays, Fridays

This ticket entitles the holder to advice and medicine for three successive visits.

Date..... Price, 5s.

*** The issuing of such tickets would, in our opinion, be inadvisable. Such action might be considered to constitute a form of advertisement.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,954 births and 5,256 deaths were registered during the week ending Saturday last, January 1st. The annual rate of mortality in these towns, which had been 20.6 and 17.7 per 1,000 in the two preceding weeks, rose again to 24.9 last week. The rates in the several towns ranged from 14.1 in Birkenhead, 14.7 in West Ham, 15.5 in Gateshead, and 16.4 in Croydon, to 27.6 in London and in Leeds, 30.6 in Blackburn, 32.7 in Halifax, and 37.4 in Norwich. In the thirty-two provincial towns the mean death-rate was 23.1 per 1,000 and was 4.7 below the rate recorded in London, which was 27.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 3.1 per 1,000; in London the rate was equal to 3.8 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.7 in Birmingham, 3.8 in London and in Halifax, 4.7 in Swansea, and 6.0 in Blackburn. Measles caused a death-rate of 1.9 in London, 2.0 in Burnley, 2.1 in Brighton, 2.2 in Halifax, 2.5 in Bristol, 3.6 in Swansea, and 4.4 in Blackburn; whooping-cough of 1.2 in Wolverhampton and in Salford, 1.7 in Leeds, and 2.4 in Norwich; and "fever" of 1.3 in Bolton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 88 deaths from diphtheria included 53 in London, 6 in Cardiff, 4 in Birmingham, 4 in Liverpool, 4 in Leeds, 3 in Manchester, and 3 in Sheffield. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 3,619 at the end of the five preceding weeks, had further fallen to 3,572 on Saturday last, the 1st inst.; 273 new cases were admitted during the week, against 319, 260, and 222 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 1st, 915 births and 717 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.3 and 18.6 per 1,000 in the two preceding weeks, rose again to 24.1 last week, but was 0.8 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.2 in Leith and 18.4 in Aberdeen to 26.7 in Edinburgh and 31.3 in Greenock. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 334 deaths registered in Glasgow included 13 from measles, 3 from scarlet fever, 16 from whooping-cough, 2 from "fever," and 7 from diarrhœa. Three fatal cases of scarlet fever were recorded in Edinburgh, and 2 of diphtheria in Dundee.

DIPHTHERIA IN LONDON.

THERE was a slight decline in the mortality from diphtheria in London last week. The fatal cases of this disease, which had been 58, 63, and 56 in the three preceding weeks, further fell to 53 during the week ending Saturday last, January 1st, but this number exceeded by 8 the corrected average in the corresponding periods of the ten previous years. Of these 53 deaths, 5 were of persons belonging to Fulham, 5 to Islington, 5 to Hackney, 4 to Chelsea, and 4 to Camberwell sanitary areas. The notifications of diphtheria in London, which had been 300, 288, and 218 in the three preceding weeks, rose again to 292 during the week ending Saturday last, January 1st. Compared with the preceding week there was a decline in the number of new cases notified in West and Central London, but a marked increase in North, East, and South London. Among the sanitary areas of West London there was a decline in the prevalence of diphtheria in Paddington and in Chelsea, while in Fulham there was a slight increase. In North London there was a general increase in the prevalence of the disease; in Islington the notified cases, which had been 8, 11, and 16 in the three preceding weeks, further rose to 22 last week; and in Hackney 23 new cases were reported, against 14 in the preceding week. Among the sanitary areas of East London the prevalence of diphtheria showed a marked increase in Bethnal Green, where 15 new cases were notified, against 11, 7, and 6 in the three preceding weeks: there was also a considerable increase in Whitechapel and in Mile End Old Town. On the other hand, the 18 new cases reported in Poplar showed a slight decline from the number in the preceding week. In most of the sanitary areas of South London the disease showed in-

creased prevalence, especially in St. George Southwark, Lambeth, Camberwell, Greenwich, Lewisham, and Lee. In Wandsworth, on the other hand, the 9 new cases showed a further decline from those recorded in recent weeks. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 142, against 165, 164, and 141 in the three preceding weeks; and 1,066 cases remained under treatment in these hospitals on Saturday last, January 1st.

THE REGISTRATION OF PLUMBERS.

AT the quarterly meeting of the Worshipful Company of Plumbers, held on January 1st, the Registration Committee were received by the Master and Wardens at the Guildhall, and were afterwards entertained at dinner under the presidency of Alderman Richard Hind. In the speeches which followed, most of the now well-known points in favour of registration were made by the various speakers. Mr. Bishop, Past Master of the Company, dwelt on the fact that plumbing was—or at least ought to be—a highly skilled calling—the hall mark of registration should therefore be given to it. The Master of the Company laid stress on the good results of an apprenticeship system in training plumbers to execute sanitary work of a sufficiently high order to ensure the health of the public as far as it could be protected by mechanical contrivances. The importance of practical instruction to the younger members of the craft cannot be overrated. This was urged by Mr. George Taylor, who also expressed the opinion that the workmen of to-day were equal in manual skill to their predecessors, a fact which was, however, not allowed by Mr. W. Titmas. Professor Garnett said the plumbers were foremost among those connected with the building trades in recognising the value of technical instruction, and he pointed out that the Technical Education Board had encouraged the establishment of classes for plumbers in London. Dr. Vacher instanced the Liverpool Corporation as one among the larger municipal bodies which were alive to the importance of the Plumbers' Registration system as a branch of Public Health work.

SCHOOLS AND INFECTIOUS DISEASE.

DR. HARRIS, the health officer of Islington, reports that 48 per cent. of known cases of scarlet fever and 39.3 per cent. of known cases of diphtheria in the parish during the third quarter of 1897 were of children attending public elementary schools; whilst in houses where children attended these schools, there were in all, and including the above, no less than 66.3 and 61.8 per cent. of these cases known to exist. These data give force to Dr. Harris's statement that the London School Board appear to ignore the requirement of their own Code of Regulations in so far as that code lays down the rule that no child from an infected house shall be permitted to return to school until the house has been certified by the local medical officer of health to be free from infection, and that thereafter in all cases, at least seven days shall elapse before the return is allowed to take place. So far as Dr. Harris can learn, and certainly in his own and a neighbouring district, the rule is a dead letter. But if so, why was it made?

DUTIES OF MEDICAL OFFICER OF HEALTH.

BETA asks for (1) the best book on the duties of M.O.H.; and (2) a reliable book for the guidance of a nuisance inspector.

*** The first part of the question we answered on November 20th, 1897, p. 1543. The inspector might consult F. R. Wilson's *Guide for Inspectors of Nuisances*, London, Knight and Co., 90, Fleet Street, price 4s. 6d.; Alber Taylor's *Sanitary Inspector's Handbook*, 2nd edition, 1897, London, H. K. Lewis; Vacher's *Food Inspector's Handbook*, London, the Sanitary Publishing Company, Limited, 5, Fetter Lane, price 6s.; and Dr. Reid's *Practical Sanitation*, price 6s., same publishers.

SUCCESSIVE DISEASES AND NOTIFICATIONS IN THE SAME PATIENT.

ENQUIRER notified two cases of scarlet fever on October 28th, 1897. On November 2nd the same children developed diphtheria, and this was notified. The district council decline to pay second fee in each case for second disease notified in same patient. Can he make them?

*** Possibly, if he is prepared for the sake of 5s. to lose a morning in the court, to fight a paid lawyer, stand a cross-examination on the differential diagnosis of diphtherial and scarlatinal throat; if he is prepared to rebut such forensic suggestions as that the rash he mistook for that of scarlatina was really that of diphtheria, or that the case was never one of the latter disease at all. For his own comfort we think "Enquirer" should let the matter drop. If he should succeed he might possibly be regarded as somewhat keen in small money matters. On the other hand, the judge might consider that having complied with the section by his first notification he had no need to take further action in the cases. Our own opinion is that he did right to notify the presence of the second serious illness. It is of the greatest importance that the existence of every case of diphtheria should be known to the health officer, and we think the information well worth the couple of half-crowns the authority is asked to pay for it. It may yet save many lives.

EXTRAS ORDERED BY DISTRICT MEDICAL OFFICER AND NOT SUPPLIED.

B., whose previous letter was replied to at p. 1883 of the BRITISH MEDICAL JOURNAL, December 25th, 1897, writes again to say that he did not fully explain his case in his first letter, and that his entry was to the effect that he had been informed by the child's mother that the extras ordered by him had been refused by the resident officer. As this report of his is strictly correct, he asks again whether he can refuse to expunge it.

*** If the report is strictly correct, as B. states it to be, we fail to see on what grounds he can be called on to expunge it.

MEDICAL NEWS.

IT is reported that a serious epidemic of measles has broken out in the Welsh colony in Patagonia. Similar outbreaks occurred in this isolated community in 1879 and in 1886.

IN the paragraph regarding the Nurses' Co-operation in the BRITISH MEDICAL JOURNAL of January 1st the address was incorrectly given. It should have been 8, New Cavendish Street.

BIRMINGHAM HOSPITAL SUNDAY.—The collection of the Birmingham Hospital Sunday Fund amounted last year to £5,177, an increase of £639 over the corresponding collection for the amalgamated charities three years ago.

PRESENTATION.—Dr. Edward P. Phillips, of Haverfordwest, a surgeon-lieutenant-colonel of the Pembrokeshire Volunteers, was entertained at dinner on December 29th, 1897, to celebrate the completion of his fifty years of medical practice in that town. The Mayor, Sir Charles E. G. Philipps, Bart., presided. During the evening Dr. Phillips was presented with an illuminated address and a life-size oil painting of himself, and also a barograph.

THE UNDERMANNING OF THE ENGLISH LOCAL GOVERNMENT BOARD.—At a recent meeting of the Norfolk County Council the Earl of Kimberley is reported to have made some very severe strictures with regard to the undermanning of the Local Government Board. He said that the staff was wholly insufficient to attend to the business submitted to the Board for its consideration. Whether the representations which were being made on the subject would end in the office being supplied with a proper staff he could not venture to say, but he expressed the opinion that the existing state of affairs was disgraceful.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.—It is announced that the Council of the Prince of Wales's Hospital Fund for London has already made to certain hospitals awards of sums of money, in most cases augmented by a special donation in honour of Her Majesty's Diamond Jubilee as follows: The London Hospital £5,000, special donation £3,937 10s., total £8,937 10s.; the Middlesex Hospital £1,000, special donation £1,925, total £2,925; University College Hospital £1,400, special donation £1,181 5s., total £2,581 5s.; Seamen's Hospital (Dreadnought) £500, special donation £918 15s., total £1,418 15s.; Hospital for Sick Children, Great Ormond Street £500, special donation £700, total £1,200; Royal Sea Bathing Infirmary, Margate, £297 10s.; North London Consumption Hospital, Fitzroy Square and Mount Vernon, Hampstead, £131 5s., special donation £131 5s., total £262 10s.

MEDICAL VACANCIES.

The following vacancies are announced:

BOURNEMOUTH ROYAL VICTORIA HOSPITAL.—Ophthalmic Surgeon; must be F.R.C.S. Applications to the Secretary by February 1st.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Physician. Doubly qualified; unmarried, and when elected under 30 years of age. Salary, commencing at £50 per annum, with board and residence in the hospital. Applications to the Secretary by January 12th.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Infirmary at Havil Street, Camberwell, and the Workhouse at Gordon Road, Peckham, and also for relief duty at the Constance Road Workhouse. Appointment for one year. Salary, £50, with apartments, board, and washing. Applications, on forms to be obtained at the Guardians' Office, to be sent to Charles S. Stevens, Clerk to the Guardians, Guardians' Offices, 29, Peckham Road, S.E.

CARLISLE: COUNTIES ASYLUM.—Junior Medical Officer. Salary, £80 and board. Applications to Dr. Campbell, Garlands, Carlisle.

CHELSEA HOSPITAL FOR WOMEN.—Clinical Assistant. Post tenable for three months. Applications to the Secretary.

HARTSHILL, STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—House-Physician. Salary, £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Applications to the Secretary by January 20th.

HULL ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60, with board and furnished apartments. Applications to the Chairman, House Committee, by January 10th.

LEAVESDEN ASYLUM FOR IMBECILES, near Watford, Hertfordshire.—Medical Superintendent, doubly qualified, and must not exceed 40

years of age. Salary, £60 per annum, rising £50 annually to a maximum of £800, with unfurnished apartments, etc. Applications on forms to be obtained of T. Duncombe Mann, Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., before January 21st.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; must be under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to W. B. Danby, Secretary, Bank Street, Lincoln, by January 24th.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House-Surgeon. Appointment for six months. Salary, £25, with board and lodging. Applications to the Secretary by January 10th.

LIVERPOOL STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with board, residence, and washing. Applications, endorsed "House-Surgeon," to the Honorary Secretary by January 14th.

MANCHESTER: ANCOATS HOSPITAL.—Resident Junior House-Surgeon. Salary, £50 per annum, with board and washing. Applications to Alex. Forrest, Honorary Secretary.

MARGATE: ROYAL SEA-BATHING INFIRMARY.—Resident Surgeon, doubly qualified. Applications to the Secretary, 30, Charing Cross, S.W., by January 15th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer to the North-Eastern Fever Hospital, St. Ann's Road, Tottenham, N.; unmarried and doubly qualified. Salary, £160 during the first year, £180 during the second year, and £200 during the third and subsequent years with board, lodging, attendance, and washing. Applications on forms to be obtained at the Chief Office of the Board, Norfolk House, Norfolk Street, Strand, W.C., where they must be delivered by 10 A.M. on January 10th.

NORTH-EASTERN FEVER HOSPITAL, St. Ann's Road, Tottenham, N.—Assistant Medical Officer, doubly qualified, unmarried, and must not exceed 35 years of age. Salary, £160 for the first year, £180 the second year, and £200 for the third and subsequent years, with board, lodging, attendance, and washing. Applications on forms to be obtained of T. Duncombe Mann, Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, before January 10th.

ROYAL COLLEGE OF PHYSICIANS.—Milroy Lecturer for 1899. Applications to the Registrar, Royal College of Physicians, Pall Mall East, by January 10th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Anæsthetist and Registrar. Applications to the Secretary.

ROYSTON URBAN DISTRICT.—Medical Officer of Health and Inspector Nuisances. Salaries after the rate of £20 per annum respectively. Applications to H. F. J. Banham, Clerk to the Urban District Council, Council Offices, Royston, by January 8th.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House-Surgeon. Salary, £100 per annum, outdoor. Applications to James F. Potts, Secretary, Eden Vale, Sunderland.

WALTHAMSTOW URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £120 per annum. Applications, endorsed "Medical Officer," to E. J. Gowen, Clerk to the Council, Town Hall, Walthamstow, by January 11th.

MEDICAL APPOINTMENTS.

BUSH, J. Paul, M.R.C.S.Eng., L.S.A., appointed Senior Surgeon to the Bristol Police Force.

CARBERY, E., M.B., B.Ch., B.A.O.Dub., appointed House-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

CHALLINOR, Cedric, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Vict., appointed Certifying Factory Surgeon for Leigh (Lancashire) District, *vice* G. H. Evans, deceased.

DICKSON, Graeme, L.R.C.P.E., L.R.C.S.E., L.F.P.S.Glasg., appointed Medical Officer of Health by the Rural District Councils of Hay, Breconshire; Painscastle, Radnorshire; and Bredwardine, Herefordshire.

DOHERTY, J. D., M.B., M.S., appointed Assistant House-Surgeon to the Northern Hospital, Liverpool.

GARDNER, A., M.B., C.M.Edin., appointed Medical Officer of Health to the Kirby Moorside Rural District Council.

GEMMEL, W. A., reappointed Ambulance Surgeon to the Northern Hospital, Liverpool.

GRAVELEY, Richard, M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Chailey Rural District Council.

GREEN, T. A., M.D., C.M.Edin., appointed Medical Officer of Health by the Meltham Urban District Council.

HAMILTON, Samuel, B.A., M.B., B.Ch., appointed Medical Officer and Public Vaccinator to the Saint Mellons District of the Newport, Monmouthshire Union, *vice* W. H. Richards, resigned.

HERBERT, William, M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Wirral Children's Hospital, Birkenhead.

HOMER, T., L.R.C.S., L.R.C.P.Edin., appointed Medical Officer of Health for the Small Isles District of Inverness-shire, *vice* J. Dewar, M.B., C.M.Glasg., resigned; and Parochial Medical Officer and Public Vaccinator for Small Isles, Inverness-shire, *vice* J. Maxwell, M.D.Glasg., resigned.

HOUFTON, E. H., M.B.Lond., M.R.C.S.Eng., appointed Medical Officer of Health to the Mansfield Woodhouse Urban District Council.

JOHNSON, C. H., M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the No. 4 District of the Basingstoke Union.

LECHE, Arthur, L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer to the Workhouse and to the No. 7 District of the Axbridge Union, *vice* H. S. Smith, M.R.C.S.Eng., resigned.

LLOYD, L. J., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer of the St. Mary Abbotts (Kensington) Workhouse Infirmary.

MANDALL-COATES, J., M.B., M.S.Edin., appointed House-Physician to Northern House, Liverpool.

MOORE, S., M.D., M.Ch., M.A.O., Roy. Univ. Irel., appointed Medical Officer to the West District of the Holbeck Union, *vice* J. W. H. Brown, M.R.C.S., L.R.C.P.Ed., resigned.

PATERSON, C. E., M.D., appointed Medical Officer for the Frimley District of the Farnham Union, *vice* H. Manders, F.R.C.S.Eng., resigned.

PEARCE, F. H., B.A.Camb., M.R.C.S.Eng., L.R.C.P., appointed House-Surgeon to Northern Hospital, Liverpool.

WALKER, J. F., L.R.C.P., L.R.C.S.Irel., L.M., reappointed Medical Officer for the No. 6 District of the Basingstoke Union.

WALLIS, Charles Edward, M.R.C.S., L.R.C.P., L.D.S., appointed Dental Surgeon to the Victoria Hospital, Chelsea.

DIARY FOR NEXT WEEK.

MONDAY.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C., 8 P.M.—Dr. J. E. Grevers, of Amsterdam, will show a series of lantern slides illustrating some Diseases of the Antrum and Cysts. Casual communications by Mr. Charles A. Clark and Mr. H. Lloyd Williams.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—A discussion on Adherent Pericardium will be opened by Sir William Broadbent, Bart., M.D., followed by Sir R. Douglas Powell, Bart., M.D., Dr. John Broadbent, Dr. W. Ewart, and Dr. S. West.

TUESDAY.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Adjourned discussion on the Prevention of Enteric Fever. The discussion will be opened by Dr. Corfield.

ROENTGEN SOCIETY, 11, Chandos Street, Cavendish Square, W., 8 P.M. Mr. W. Webster: Practical Work with the Roentgen Rays.

HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. T. D. Savill: Tabes Dorsalis and other Disorders of the Gait in Diseases of the Nervous System.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Dr. Beevor: On Cerebral Localisation.

WEDNESDAY.

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 P.M.—Annual general meeting. Report of Council, etc. After which an ordinary meeting will be held, and Cases and Specimens will be shown by Professor Kanthack (for Dr. Paul Bergengrün), Mr. H. T. Butlin, Mr. Cresswell Baber, Mr. E. Waggett, Mr. W. G. Spencer, Dr. H. E. Lack, Mr. Wyatt Wingrave, Dr. Tilley, Dr. Watson Williams, Dr. Adolph Bronner, Mr. Charters Symonds, and others.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, 5.15 P.M.—Demonstration of Clinical Cases.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—The President's (Mr. Mayo Robson) Valedictory Address on Extrauterine Gestation. Dr. Elder, of Nottingham, will show (1) Solid Ovarian Tumour, (2) large Vesical Calculus, (3) a Six Weeks' Extrauterine Gestation.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Dr. Bruce: Cases in the Medical Wards.

NEUROLOGICAL SOCIETY OF LONDON, 11, Chandos Street, W., 8.30 P.M.—Annual general meeting. Inaugural Presidential Address by Mr. Victor Horsley: On the Degree of Discharge of Different Nerve Centres.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Clinical evening. Patients in attendance at 8 P.M. The following cases will be shown: Mr. W. G. Spencer: A case of Obliterative Arteritis affecting Three Limbs. Dr. C. W. Chapman: A case of Bradycardia with Obstruction of the Inferior Vena Cava. Dr. C. E. Beevor: A case of Locomotor Ataxia with almost universal Analgesia. And other cases.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

MARRIAGE.

HAYNES—TARLETON.—On 4th instant, at the Parish Church, Castle Bromwich (by the Rev. E. G. Harker), Sydney Walter Haynes, M.D., of Birmingham, to Rosetta Clara, daughter of the late John Haigh Tarleton, M.R.C.S., of Stockton-on-Tees.

DEATH.

WATKINS.—On the 30th December, at 30, Warrior Square, St. Leonard's-on-Sea, Charles Stuart Watkins, M.R.C.S., late of King William Street, Strand, aged 68.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances*—Daily, 2. *Operations*.—Tu. F. S., 2.

Central London Ophthalmic. *Attendances*.—Daily, 1. *Operations*.—Daily.

Central London Throat, Nose, and Ear.—*Attendances*.—M. W. Th. S., 2; Tu. F., 5. *Operations*.—1.-p., Tu., 2.30; o.-p., F., 2.

Charing Cross. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations*.—Th. F. S., 3.

Chelsea Hospital for Women. *Attendances*.—Daily, 1.30. *Operations*.—M. Th. F., 2.

City Orthopædic. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—M., 4.

East London Hospital for Children. *Operations*.—M. W. Th. F., 2.

Great Northern Central. *Attendances*.—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations*.—M. W. Th. F.

Guy's. *Attendances*.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations*.—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances*.—Daily, 10. *Operations*.—M. Th., 2.

King's College. *Attendances*.—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations*.—W. Th. F., 2.

London. *Attendances*.—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations*.—Daily, 2.

London Temperance. *Attendances*.—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations*.—M. Th., 4.30.

Metropolitan. *Attendances*.—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Tu., 2; Dental, Tu. Th. S., 9. *Operations*.—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations*.—Daily, 1.30.

National Orthopædic. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—W., 10.

New Hospital for Women. *Attendances*.—Daily, 2; Ophthalmic, W. S., 9.30 *Operations*.—Tu. F., 9.

North-West London. *Attendances*.—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations*.—Th., 2.30.

Royal Eye, Southwark. *Attendances*.—Daily, 2. *Operations*.—Daily.

Royal Free. *Attendances*.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations*.—W. S., 2; (Ophthalmic) M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances*.—Daily, 9. *Operations*.—Daily, 10.

Royal Orthopædic. *Attendances*.—Daily, 12.30 and 1. *Operations*.—M., 2.

Royal Westminster Ophthalmic. *Attendances*.—Daily, 1. *Operations*.—Daily, 2.

St. Bartholomew's. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations*.—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances*.—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 1.2; Dental, M. Tu. F., S., 12. *Operations*.—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

St. Mark's. *Attendances*.—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations*.—M., 9; Tu., 2.30.

St. Mary's. *Attendances*.—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations*.—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances*.—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations*.—W. F., 2.

St. Thomas's. *Attendances*.—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations*.—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances*.—Daily, 1.30. *Operations*.—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances*.—Daily, 1.30; Tu. F., 6.30. *Operations*.—Daily, exc. M., 10.

University College. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations*.—Tu. W. Th., 2.

West London. *Attendances*.—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electrical, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations*.—Daily, about 2.30; F., 10.

Westminster. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations*.—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the Journal etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to him personally.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will kindly forwarding their Annual and other Reports, favour us with *duplicate copies*.

Telegraphic Address.—The telegraphic address of the Editor of the British Medical Journal is *Aitiology, London*. The telegraphic address of the Manager of the British Medical Journal is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are directed will be found under their respective headings.*

QUERIES.

Surgeon desires to hear of a home where a fairly healthy female could be received, suffering from a perforating ulcer on each foot. Her chief need is rest. The friends are willing to contribute about 10s. weekly. She has neither diabetes nor locomotor ataxy.

M. W. J. would be glad to know which are the best works on anæsthetics in the English, French, and German languages, besides those of Drs. Hewitt and Buxton; and, if possible, the names of publishers, the prices and date of last edition.

Roentgen Ray Apparatus.

Dr. C. Harold Harcourt (Stonebroom) writes for information as to the best practical work upon the construction of a 6" spark coil for Roentgen ray photography.

*** The best practical book on the subject with which we are acquainted is the *Induction Coil in Practical Work*, by Lewis Wright London: Macmillan and Co. 1897. 4s. 6d.). The back numbers of the *English Mechanic* also contain much useful information on the same subject. The requisite parts can be obtained from various dealers.

Electric Light for a Country House.

Country Practitioner writes to inquire the probable cost and the best arrangement for an electric light in a country house where only one or two lights would be required.

*** Where such a small amount of light only is wanted it will probably be found most convenient to use accumulators, and have them periodically recharged at the nearest electric power station; this is done for quite a small sum. If no station is available within a convenient distance there must be a special installation. In the country the source of power to drive the dynamo will present some room for choice depending on the situation. If water power can be employed this will probably be the cheapest: if not, a gas engine is the most convenient: but if a gas engine is not available, one of the many excellent oil engines that are now on the market may be employed, such as the Hornsby Akroyd. As to cost, this will entirely depend on which method our correspondent adopts.

Examinations for the D.P.H.

P. S. C. S. (India) asks: (1) Is it possible to go through the laboratory work, the fever hospital attendance, and the work under the medical officer of health in six months if one wants to qualify for the D.P.H. of Cambridge? (2) Is the attendance at any fresh course of lectures on public health necessary? (3) Is there any physical impossibility of combining attendance at the laboratory and attendance under the medical officer of health during the same period? (4) Besides water analysis and bacteriology what other practical work is required from the candidate for the D.P.H.? (5) Which is the best place for the training? Is it possible to have the training at Edinburgh? (6) What is likely to be (*a*) the fee for the attendance in infectious diseases hospitals? (*b*) The fee for getting the certificate from the medical officer of health? and (*c*) the laboratory fee both in Cambridge and London? (7) What will be the cost of living in London and Cambridge respectively?

*** (1) Yes. (2) Very desirable, but not absolutely necessary. (3) No. (4) The candidate's knowledge of how to detect the nature of certain gases is practically tested, and also his knowledge of the microscopic appearance of various parasites, starch grains, water deposits, food stuffs, textile fabrics, etc. A candidate would not pass the examination if he did not possess a fair practical knowledge of air, soil, and food analysis, although this knowledge has not often been put to a practical test in these examinations. The practical acquaintanceship with sanitary apparatus and appliances is tested, and the candidate may be asked to inspect and report upon a house, slaughter-house, hospital ward, offensive trade, common lodging-house, etc. "P.S.C.S." should write to Dr. Anningson, Cambridge University, for a copy of the regulations affecting candidates for that D.P.H., and also for some of the more recent questions which have been set in the examination, and which are now published and sold for 6d. a set. These will give him the best idea of the scope of the examination. (5) Most of the medical schools have now made arrangements to take students through the necessary work for any D.P.H. The work may be done at Edinburgh, even if "P.S.C.S." is not a graduate of that University. (6) The fees generally asked amount to 23 guineas—that is, 20 guineas for (*a*) six months' laboratory work, including lectures on public health and weekly excursions to places of public health interest; (*b*) six months with a medical officer of health; (*c*) a course of bacteriological instruction, and 3 guineas for attendance and instruction at a fever hospital (7) It need not exceed from 30s. to 40s. a week at either place.

ANSWERS.

Dr. C. A. Locke.—A description of Laloo, a case of parasitic fœtus, was published in the British Medical Journal of February 25th, 1893, page 436.

ALPHA.—So far as we are aware, there is no other society of the kind in existence.

F.R.C.S.—The secret nostrums of quacks can only be treated as abominations to be avoided. The particular one referred to—judging from its designation—is probably one of the class containing large doses of potassium iodide, which would in some instances be dangerous.

INQUIRENS.—If our correspondent will refer to the BRITISH MEDICAL JOURNAL of December 25th, 1897, p. 1888, he will find a statement to the effect that the "Omega" stove is a portable one, and that the arrangement described is such that the products of combustion enter the room. He will further find that "we do not feel justified in recommending any stove for use in a living room which does not remove the products of combustion, however applicable such stoves may be for shops, halls, lobbies, and wine cellars."

HOME FOR INEBRIATES.

GRADUATE.—We know of no retreat for males at the terms stated, but inquiry might be made of the licensee of a licensed retreat. The patient's written consent is necessary.

THE BICYCLE AND NASAL DISEASE.

WE have received the following replies to Mr. R. W. H. Stewart's query in the BRITISH MEDICAL JOURNAL of November 20th, 1897, as to any observed facts relating to nasal disease arising in connection with bicycling:

Dr. B. L. WHITEHEAD (Leeds) writes that he has frequently noticed such an association. He is, however, inclined to think that in addition to the irritation caused by dust, etc., the hyperæmia of the erectile tissue over the turbinate bones induced by continuous exertion may lead to chronic hypertrophy of these parts. He mentions that he has lately seen two cases of recurrent unilateral conjunctival congestion following a prolonged bicycle ride. In both these cases there was nasal obstruction on the same side as the conjunctivitis, and complete cure of the eye condition followed relief of the nasal obstruction.

Dr. ATWOOD THORNE (London) has also frequently noticed the connection, but has always considered that the bicycle was the discoverer and not the cause of the trouble, any slight obstruction which would usually remain unnoticed being at once made evident by the greater demands on respiration which the pastime entails.

NOTES, LETTERS, Etc.

ERRATUM.—In the report of the meeting of the Midland Medical Society, held in Birmingham on December 1st, and published in the BRITISH MEDICAL JOURNAL of January 1st, "Dr. Thomas 'Nelson' read a paper on..... Puerperal Fever," should read, "Dr. Thomas 'Wilson' read a paper," etc.

ERYTHROL TETRANITRATE IN ANGINA.

DR. EDWARD GARRAWAY (Hastings) writes: In my notes upon tetranitrate of erythrol in the BRITISH MEDICAL JOURNAL of January 1st, I erroneously spoke of the preparation as in "tabloids." They were in effect "tablets" manufactured by Martindale, of New Cavendish Street.

MR. J. C. MCWALTER, L.R.C.S.I. (Dublin) writes: Concerning the trinitrine, I think the only safe combination for administration in tablet form is that with cocoa butter and chocolate, which was first suggested, I believe, by that very capable pharmacist, Mr. Martindale; but even with that unctuous excipient they should not be hammered into pellets, but cut into discs of the required size and weight.

MESSRS. OPPENHEIMER, SON, AND CO., LIMITED (London) write: We prepared some six months ago, in accordance with the suggestion of Dr. Bradbury, palatinoids of erythrol tetranitrate. We carefully prepared this drug by first rubbing down to an impalpable powder the sugar of milk in a glass mortar, and then adding the erythrol tetranitrate dissolved in alcohol, so obviating any possible chances of an explosion. Moreover, we understand by this means the drug can be more generally disseminated throughout the powder than when it is rubbed up together with the sugar of milk alone.

MR. JOHN BAIRSTOW (Manager and Secretary of the Joseph Turner and Co.'s Chemical Works, Queen's Ferry, Flintshire) writes: In the BRITISH MEDICAL JOURNAL of January 1st Dr. Garraway says: "It is unfortunate that the preparation of this remedy is so costly, rendering it, as chemists admit, quite prohibitive to the poor." We beg to point out that the price has been recently reduced very much on account of improvements in manufacture, and it is not now a very expensive drug. No doubt Dr. Garraway refers to the price we were compelled to charge when we first put the drug on the market.

IN connection with this subject, Professor Bradbury, of Cambridge, draws our attention to a letter published in the *British and Colonial Druggist* with regard to the risk of explosion of erythrol tetranitrate. The letter, which is dated from St. Bartholomew's Hospital, and signed by Messrs. William Parsons and J. Langford Moore, appears to show that erythrol tetranitrate has been somewhat extensively used at St. Bartholomew's Hospital, and that it has been prepared by pulverisation on many occasions without any accident. In all cases a perfectly clean and dry glass mortar was used.

MR. PHILIP SCHIDROWITZ (Chancery Lane, W.C.) writes: In your editorial notes on the above subject in your issue of January 1st you say that the drug in question "is fairly stable if kept in a dark and moderately cool place. If exposed to warmth, and especially sunlight, it rapidly undergoes decomposition, turning yellow and giving off nitrous fumes." Professor Bradbury, in his original paper on the subject, ascribed these properties to the higher nitrates generally, but did not apply them to erythrol tetranitrate in particular; and, in fact, an experience of the preparation and general characteristics of this drug extending over a period of nearly two years has led my colleague, Dr. Rosenheim, and myself to a distinctly different conclusion. In support of this statement I will mention (1) that we have had an ounce of erythrol tetranitrate on a shelf of the laboratory for the past eighteen months in an ordinary glass bottle. The temperature of the laboratory during this time varied from 32° to 90° F. From the relative position of the shelf and the windows in the laboratory it is certain that this bottle has been exposed on sunny days to more or less direct sunlight. The compound has remained absolutely unaltered both in appearance and chemical properties. (2) Eight yards of magnesium ribbon (30 grains) were burned at a distance of 6 inches from a little heap of the powdered substance, the only precaution being the interposition of a glass plate between the burning ribbon and the powder. The exposure to the magnesium light lasted seven minutes. The erythrol tetranitrate remained unaltered. (3) A small quantity of the same sample was recently heated for 68 hours to 30° C., but remained unaffected.

We can fully endorse Professor Bradbury's statement as to the remarkable stability of this substance (considering its chemical composition) under ordinary conditions. It detonates if violently struck in a Wedgewood mortar with a pestle of the same material or with a hammer, but we have very frequently powdered small quantities, and in our opinion there is absolutely no risk associated with such a proceeding. It may be heated (slowly) to 200° C., at which temperature it gradually decomposes. If rapidly heated it explodes violently at approximately the same temperature. Moreover, our experiments have shown that part of a little heap of erythrol tetranitrate may be exploded, and the remainder (in actual contact) be left untouched.

I am therefore of opinion that the drug may be used with perfect safety, but to avoid all risk the following conditions should be observed: (1) It should not be exposed to direct sunlight (in a shop window, for instance). (2) It should be gently powdered by rubbing up (not striking) in small quantities (15 to 30 grains at a time) in a smooth agate or glazed porcelain mortar. (3) If it be necessary to mix it with other substances this should be done on a smooth glass slab with the hand or a wooden spatula (preferably after moistening with water; but this is not actually necessary). (4) It should not be mixed with any of the incompatibles of nitro-glycerine.

SHIP SURGEONCIES.

M.R.C.S.E., L.S.A. writes: Noticing the remarks as to the South African steamers in the BRITISH MEDICAL JOURNAL of January 1st. I may inform you that, having been obliged to give up a country practice from increasing age and indifferent health, I have during the last four years made four trips on one of the lines, and in every one have found the captains most kind and the voyage very pleasant, and an easy way of escaping the worst three months of an English year. The work is practically nothing, so that I do not think the doctor has much cause of complaint. In my own case I have derived a great amount of good from the trips. The vessels are short ships, and not compelled to carry doctors.

VIATOR writes to say that he had an unpleasant experience on a North Atlantic steamboat last summer, and advises any man who may think of taking such a berth to make careful inquiry and a definite arrangement as to the conditions and privacy of his cabin, and to decline to accept any appointment without remuneration.

"SCINTILLÆ MEDICINÆ."

MR. FREDERICK ASHURST, M.B. (Hayfield), writes: It is pleasing to know that there are many medical men who have a keen sense of the humorous, like "Philologus" in the BRITISH MEDICAL JOURNAL of December 25th, 1897, who alludes to "the occasional distortion of medical terms which make it hard to repress a smile." One need not dwell upon the fact that the smile, the quip, and the joke are not always debarred by the etiquette of the sick room; and, indeed, are often stimulant and tonic to the patient.

The practice of medicine is of necessity gloomy and overshadowed, but we need not see quite so much of the sad and depressed looking medical visage; and it is not our business to either provide work for the undertaker, nor to try and look like one as much as possible. I will give a few of the harmless jokelets I possess at the expense of my patients, and also a personal guarantee as to their absolute genuineness.

It sounded as though a wholesale enterectomy had been performed on a patient of mine who, in answer to my query as to the state of the bowels, replied, "Oh! they was *re*moved once last night."

Then I am familiar with all the ordinary diseases of the chest, but I never knew there was such a pulmonary affection as was mentioned by a man in the village who, in answer to a question as to what was the matter with his wife, replied with unction, "Well, the doctor caws it conjunction uv lungs."

And whilst a goodly section of people complain of being "costive," I have several times been assured by a patient that he was "terribly caustic in my bowels," in which case he must indeed be in the condition so sympathetically described by another inhabitant of this place, who, alluding to a sick friend, said, "Aye, poor chap, he's welly done; but then for 'ears he's *enjoyed* very bad health."

Well, we do know that there are very occasionally patients belonging to the too-leisured classes who seem to actually revel in "bad health," and even amongst the working classes one may see a man drawing over £1 a week, owing to his being in more than one sick club—and if his normal wage is, 16 shillings a week in work, it may be that sometimes he really does *enjoy* a spell of bad health. My predecessor, however, used to remark that it was difficult to find a drug which could cure a man in two or three sick clubs.

We must, sometimes, in the course of our duties, receive as well as give a rebuke—and the other day I bowed meekly when an indignant farmer said to me, "It's time you were come—Loo (alluding to his wife upstairs)—Loo's up there welly *extracted* wi' pain!"

I have no objection to handling a cue with the idea of knocking the ivories about, but I am not so mad upon the game as to have what a patient of mine suffered from (according to a relation)—namely, "a billiard attack"—yet this was given as my diagnosis by the patient's mother to an inquiring friend, when I had really mentioned "a bilious attack." Moreover, whilst I have, of course, dealt with many cases of pneumonia, I can truthfully inform the vicar and churchwardens of

this parish that I have never had anything whatever to do with "Pew-money"—yet it has been said of me, by an anxious mother, that I have so had to do with it, in the case of her daughter. And whilst "ulcer of the stomach" is familiar to all of us, I should certainly have reported it to the BRITISH MEDICAL JOURNAL if I had ever detected "an ulster in the stomach" of any patient of mine, who, however, has repeatedly given that as my diagnosis of her case.

Lastly, I am certain that neither Dr. George Harley nor any other writer on hepatic diseases, ever saw a case of "Condigentian of the liver"—yet I was gravely assured that such was what a certain patient here said was what her medical attendant had "called" it; but I believe it was only a case of "congestion of the liver" after all.

THE PRAGUE WEATHER PROPHET.

THE editor of the *Revue de Polytechnique Medicale* is still full of enthusiasm regarding Professor Zenger's weather prognostications. In France, he says in his last issue, the tendency to acknowledge the marvellous exactitude of these predictions is daily spreading more and more, while in many Austrian provinces their fulfilment is now looked upon as a matter of course. In the Tyrol the decadal theory has received a most striking exemplification, snow having begun to fall on precisely the same day in 1877, 1887, and 1897. Even in his own country the Professor's fame as a prophet is firmly established. Some time ago, basing his vaticination on a similar calamity in 1887 he foretold a failure in the wheat and beetroot crops for the present year, and, in point of fact the late harvest was the worst that has been garnered since 1865. In order to edify his readers Dr. Levy appends a long statement showing, in parallel columns, the principal meteorological events of the first half of September, 1887, as contrasted with those during the same portion of last September. There is unquestionably a certain likeness between the two records, but they are far indeed from being identical, and possibly a similar table for any two years would be just as conclusive. Professor Zenger is evidently quite sincere, and a firm believer in the accuracy of his system, but so far his predictions scarcely entitle him to pose as a weather prophet.

THE EMPIRE MUTUAL SICKNESS, ACCIDENT, AND GENERAL ASSURANCE ASSOCIATION, LIMITED.

THIS Association is, we are informed, circularising the medical profession in certain districts, inviting applications for its debenture shares. It offers special advantages to medical men who are willing to take up £50 of these shares by appointing them local directors and "sole medical examiners for districts convenient to them;" and in addition it promises that the Company will issue before long "a printed booklet of Boards of Reference, mentioning each local director therein, and causing them to be widely known." Unwary members of the profession should be careful of circulars relating to commercial enterprises which offer to become a medium of advertisement for professional men as an inducement to subscribe for shares.

BERI-BERI IN URUGUAY.

DR. THOMAS W. N. GREENE (Southsea) writes: In the BRITISH MEDICAL JOURNAL of November 13th I notice some correspondence about the origin, contagiousness, etc., of beri-beri. The following facts may be of interest to those engaged in the study of this still somewhat obscure disease. I was for many years connected with the British Hospital in Monte Video, South America, part of the time as sole medical and surgical officer, but chiefly as visiting and consulting physician. When first I took charge I found that amongst the pay patients in the general pay ward were a number of Brazilian sailors, from the Brazilian navy, suffering from beri-beri, and that for years it had been the custom of the Brazilian naval authorities to send this class of patients to our hospital in Monte Video for treatment. Those of them who did not die within the first three or four days almost invariably recovered, the only treatment being as a rule a generous diet and tincture of perchloride of iron. No attempt at isolation was ever made. They were placed in the same ward with surgical and medical (non-infectious) cases. Most of them remained in the hospital for two or three months, and in no instance was there any propagation of the disease, which, I think, disposes completely of the idea that it is infectious. During twenty-five years of general practice, both in the interior of the Uruguayan Republic and its capital city Monte Video, I never saw a case of beri-beri outside of the British hospital, whereas in the hospital we were rarely without one or more, generally half a-dozen. However, about the year 1891, the sanitary authorities of Monte Video accepted the doctrine of the infectious nature of this disease, and, classing it along with yellow fever and cholera, issued an order prohibiting the disembarkation in that port of patients suffering from it. Shortly after this order was issued, six patients were landed at 8 P.M. one day from a Brazilian man-of-war, and brought to the hospital, when I saw them at 9 A.M., and diagnosed beri-beri in all six. One was in a dying condition, and expired the same night. We notified the authorities next day, and the remaining five were removed from the hospital and sent back on board their ship, and these were the last cases I ever saw.

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REMARKS
ON THE TREATMENT OF BACKWARD DISLOCATION OF THE THUMB (FIRST PHALANX).

BY J. HUTCHINSON, JUN., F.R.C.S.,
Surgeon to the London Hospital.

THE literature on this subject is already so abundant that it may be doubted whether there is room for anything further to be written which shall be of practical value. Besides innumerable papers in the Medical Journals and Transactions, there are over twenty monographs in French and German on Dislocation of the Thumb to reward the search of the industrious reader, and nearly all of them are concerned with the most common form, namely, the backward dislocation of the first phalanx, and the cause of the trouble such displacement sometimes gives to the surgeon. Two of the papers may be singled out as being of special value: one, an extremely full account (well illustrated) by M. Farabeuf, of Paris; the other, some valuable lectures by Mr. Battle, reported in the *Lancet*, December, 1888. M. Farabeuf, with his unrivalled anatomical material and experience, has probably said the last word on the pathology of dorsal dislocation of the phalanx; and that last word we may fairly quote (with slight modification) as follows:—"In the backward dislocation of the thumb the phalanx counts for nothing, the sesamoid bones and the glenoid ligament for everything." His elaborate classification of the varieties of this dislocation we need not trouble about, although it is based on no fewer than a hundred *post-mortem* experiments. The only cases that prove really difficult to reduce are the "complete" ones, those illustrated by Fig. 1, copied from Professor Helferich's *Hand Atlas of Fractures and Dislocations* (1897 Edition). It needs no explanation; but attention may be drawn to the position of the long flexor tendon of the thumb, which lies

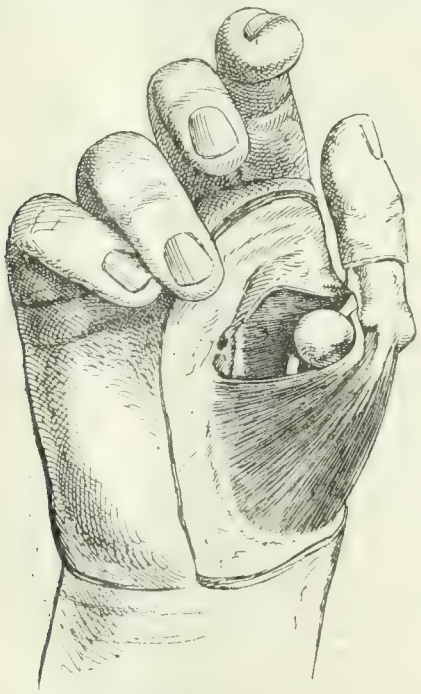


Fig. 1.

to the ulnar side of the metacarpal head. This is its usual position, and the question arises whether the displaced tendon ever accounts for difficulty in reduction of the phalanx. Since several writers have asserted this in a positive manner, we must accept it as of occasional occurrence, but for practical purposes we may concentrate our attention on the sesamoid bones and the glenoid ligament.

It is well known that the two surfaces of the metacarpal head and the phalangeal base correspond very imperfectly in dimension, and that the latter can only be in contact at any one moment with a small portion (estimated at two-fifths) of the former. This is illustrated by the accompanying figure (Fig. 2), the thumb being slightly bent, and A being placed over one part of the metacarpal head which is not touching the phalanx. The cavity is, however, enlarged by the glenoid fibro-cartilage

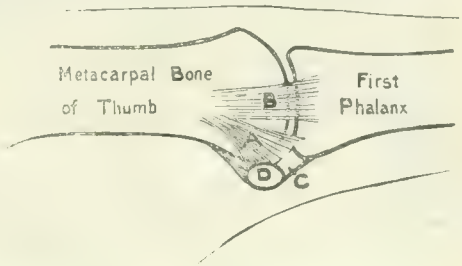


Fig. 2.

(indicated by C) in which the sesamoid bones are developed. One of these is indicated by D. The transverse fibres of the fibro-cartilage are extremely strong, and it is highly improbable that in a backward dislocation the connection between the two sesamoid bones is ever torn. It may also be noted that the lateral ligaments consist of two bands, one (B) passing to the side of the phalanx, the other (A) to the sesamoid bone and the glenoid fibro-cartilage.[1] In fact, the only weak point of the antero-lateral part of the joint capsule is at the proximal end of the fibro-cartilage—a so-called anterior ligament, which is but loosely connected with the neck of the metacarpal bone. This portion is torn through with ease when the phalanx is violently pressed backwards (hyper-extended). We may consider the glenoid fibro-cartilage and its two sesamoid bones as forming an integral appendage to the base of the phalanx, and as invariably accompanying it in the case of dislocation; and further, that in the great majority of cases this appendage forms the sole obstacle to reduction. That the two heads of the flexor brevis tend to "button-hole" the broad metacarpal head is not denied, but this action is not probably of much importance, or else the difficulty of reduction would not persist when the muscle is fully relaxed by deep anæsthesia and flexion of the carpo-metacarpal joint. It is further proved by the cases in which the surgeon has divided one head of the flexor brevis, and been mortified to find that reduction has not been facilitated thereby. Such cases are rarely published, but I have personally known of one or two, and would venture to assert that the proceeding is not good surgery.

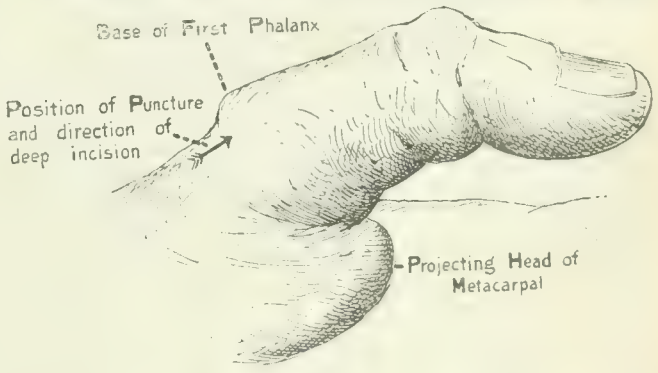


Fig. 3.

All incisions on the palmar aspect of the joint are to be avoided. Fig. 1 shows that the division of the muscles on one side of the metacarpal head implies a very considerable section which can hardly fail somewhat to weaken the thumb. And after the outer head of the flexor brevis and the abductor are completely divided, the sesamoids and glenoid ligament still remain to hinder reduction. Presumably they

can be forced to the other side of the metacarpal head, but by the method of reduction now advocated each sesamoid slips to its respective side and allows the metacarpal to pass between them. Another objection to the method just referred to is that the collateral artery of the thumb will probably be divided at the same time as the flexor brevis, whereas the section of the glenoid ligament from the dorsum can involve no hæmorrhage, and the knife cannot possibly be introduced too deeply, since the neck of the metacarpal prevents this. Fig. 3 will explain the position of the puncture, for which a tenotome or narrow-bladed scalpel is required. It must be understood that the knife is introduced just behind the base of the phalanx, opposite to its centre and right on the dorsum of the thumb, the extensor tendon being easily avoided.

The displaced glenoid ligament is divided as it lies on the back of the metacarpal bone, the knife being made to cut downwards until its point is stopped by the base of the phalanx. I am led strongly to recommend this method of division of the glenoid ligament from the dorsal surface from a personal experience of three cases, in each of which it succeeded admirably. It may be asked whether the section was actually required in all three. In the first two cases the patient had been anæsthetised, and prolonged efforts at reduction made by others without success, and I resorted to the tenotome only after renewed failure of the manipulation method. The latter is so well known that it is hardly necessary to describe it here. As Farabeuf pointed out, the metacarpal bone should be flexed and adducted, whilst the dislocated phalanx is hyper-extended to a right angle with the former. Then traction is made on the phalanx in a line parallel to the long axis of the metacarpal, so as to slide the sesamoid bones, etc., over its head. There are several well-known methods of obtaining a firm grip of the first phalanx during this manipulation. In my third case (where attempts at reduction in other hands had also failed) I resorted almost at once to the division of the glenoid ligament. At the same time one would freely grant that most cases can be reduced without section by the method briefly given above, But, in my opinion, the section of the glenoid ligament is such a trifling matter, so easy to do, and so certain in its result, that it is preferable to prolonged traction and manipulation. It is true that Farabeuf speaks of "the relatively short and slight manœuvres which suffice to reduce metacarpo-phalangeal dislocations." This optimistic view is hardly borne out by some of the cases he refers to, or, for instance, by the following example:

Faucon[2] narrates that in 1862 he saw at Strassburg a case in which prolonged and fruitless efforts at reduction were followed by gangrene of the thumb, and "if his memory did not fail him, by the death of the patient from purulent infection." Many surgeons have admitted they have occasionally failed in effecting reduction. Vidal quotes Dupuytren as giving up the attempt 24 hours after the accident, Boyer after 10 days, Paillou after 24 hours. Malgaigne declared that there was no dislocation so often found to be irreducible. Ballingall[3] reported no fewer than six cases in which efforts at reduction failed. This, however, was before the *rôle* of the sesamoid bones and the modern manipulation method were known.

I should be sorry if it were thought that there is anything original in the advocacy of subcutaneous division of the glenoid plate between the sesamoid bones. It would indeed be difficult to decide to whom the merit of the suggestion belongs; it certainly dates back as far as the time of the great French surgeon, Desault. But it is certain that this simple and effective measure is not widely known, or we should cease to find extensive tenotomies and troublesome efforts at hooking aside the thumb muscles advocated. Professor Helferich, in his admirable work already referred to, makes no mention of the division of the glenoid ligament, although in Duplay and Reclus's *System of Surgery* (published some few years previously) it is described and figured. German authors, it may be noted, are sometimes rather oblivious of French ones, and *vice versâ*.

In one of the best and most recent English works on surgery,[4] Mr. Marmaduke Sheild writes: "Should reduction prove impossible, open arthrotomy should be at once performed by a free incision on the palmar aspect. Resisting structures, as portions of ligaments, or the short flexor tendons, may be divided or pulled aside with a fine hook, and thus reduction be effected. In old cases the base of the phalanx may be excised. I would advise this treatment in preference to subcutaneous tenotomy; for I have seen failure to reduce this dislocation on more than one occasion, even when the operator had divided the structures round the joint with the tenotome so freely and repeatedly that there appeared little left." The reasons for differing entirely from this teaching have already been given. One or two examples may be quoted of operation other than section of the glenoid ligament.

Surgeon-Captain F. J. Greig[5] was obliged to operate on a recent case of backward dislocation in a soldier, reduction by other means being impossible. A two-inch incision made over the palmar aspect of the joint exposed the metacarpal head lying fixed between the heads of the flexor brevis muscle. These latter being hooked aside the dislocation was reduced after some manipulation. The wound did well, but stiffness of the joint continued for some time.

In a case occurring at St. Thomas's Hospital[6] it was found necessary to divide both heads of the flexor brevis pollicis before reduction could be effected. The patient was a boy, aged 12, and the ultimate result could not be stated. To justify the contention that the methods (other than dorsal section of the glenoid plate) are defective, one more instance may be quoted.

Professor Polaillon[7] in a recent case of complete backward dislocation of the first thumb phalanx, after the failure of manipulation under anæsthesia, determined to operate. On the fourth day after the accident an anæsthetic was given, and the external lateral ligament was divided (probably also the flexor brevis, head, etc.). Reduction was then effected, but the phalanx remained in an abducted position, and within a month the patient was readmitted with recurrence of the backward displacement. Resection of the metacarpal head was then performed, and a fair result obtained.

I think it is unnecessary to adduce other examples, and would submit the following propositions:

1. In backward dislocation of the first thumb phalanx, a careful trial should be first given to the manipulation method described so well by M. Farabeuf and others.

2. If this fails a tenotome should be introduced from the dorsum behind the projecting base of the phalanx, so as to divide the glenoid ligament and allow the sesamoid bones to slip on either side of the metacarpal head.

3. This method of section divides no important structures, is perfectly safe if aseptic precautions be observed, and will not interfere with the subsequent utility of the joint. It is therefore preferable to all methods involving a palmar incision.

The fact that many cases have been recorded of old unreduced backward dislocation of the phalanx bears eloquent testimony to the difficulties sometimes encountered by the surgeon at first. As a rule, excision of the metacarpal head has been resorted to in these cases, for the disability is usually so marked as to justify an operation. A good result has been obtained in this manner in one case six months after the bone first slipped out of place.[8] I have known one case in which it remained unreduced at the end of a year from the accident.

The subject of dislocations of the thumb, other than the backward variety, may be briefly referred to. The late Professor J. Wood showed at the Pathological Society[9] a dissection of an old unreduced forward dislocation of the first phalanx of the thumb. It had been complicated with a fracture of the metacarpal neck, which may have rendered reduction difficult. "The new joint had apparently been a tolerably useful one." My colleague, Mr. F. S. Eve, exhibited a similar specimen (now preserved in the Museum of St. Bartholomew's Hospital) taken from a recent case. Reduction was found to be easy by extension when the specimen was dissected. It is a significant commentary on the fact that rarities only tend to be shown at societies and recorded, that these two are the only cases of dislocation of the thumb mentioned in the *Pathological Transactions*, both illustrating a form extremely uncommon compared with the backward dislocation.

It may be asked whether the method of section of the glenoid ligament from the dorsal surface is ever required in the case of dislocation of other digits than the thumb. Un-

doubtedly some examples occur (particularly of dorsal dislocation of the index first phalanx) in which great difficulty is met with in reduction. M. Polaillon[10] showed three cases, two concerning the index and one the ring finger, of dorsal dislocation which resisted all attempts at reduction under anæsthesia and remained out of place. In all such cases it can hardly be doubted that the real difficulty is in the glenoid ligament, and its division may be recommended with confidence should the ordinary manipulation fail.

Finally, it may be said that with the correct understanding of the part the sesamoid bones and the glenoid ligament play in backward dislocation of the thumb, and with a resort to the simple method of operation already described in cases otherwise irreducible, all the difficulties of this much discussed subject practically disappear.

NOTES AND REFERENCES.

[1] A mistaken attempt has been made in one of the most recent works on anatomy to do away with the glenoid ligament of this articulation, and to describe merely "sesamoid bones in place of a glenoid ligament." It is hardly necessary here to combat this view. [2] *Bull. de la Soc. de Chir.*, Tome iv, 1878, p. 743. [3] *Edinburgh Medical Journal*, 1815, p. 188. [4] Treves's *System*, vol. i, p. 992. [5] BRIT. MED. JOUR., August 24th, 1895. [6] Mr. W. H. Battle, *Lancet*, December 22nd, 1888. [7] *Affections Chirurgicales des Membres*, 1895, p. 451. [8] Mr. T. Bryant, *Manual of Surgery*, vol. ii, p. 372. [9] *Transactions*, vol. iv, p. 250. [10] *Loc. cit.*, p. 452.

CLINICAL REMARKS
ON
CATHETERISATION OF THE MALE URETERS UNDER ELECTRIC LIGHT.

By E. HURRY FENWICK, F.R.C.S.,
Surgeon to the London Hospital, Surgeon to St. Peter's Hospital for Urinary Disease.

THE MODE OF EXAMINATION.

SINCE the introduction of the electric cystoscope it has been foreseen that the next important step in the progress of precise urinary surgery would consist in an easy method of catheterising the male ureters. It was felt that once this manœuvre was rendered practical, much of the obscurity in surgical renal disease would disappear, many of the false impressions we still retain about the symptomology would be effaced, and the mortality of nephrectomy would be assuredly lessened. It is generally allowed that the female ureter is easily entered and traversed by a suitable catheter guided either by the finger (Simon, Pawlik), or by the eye (Newman, Hirst, Hamill, Kelly, Goldschmidt); but the disappointment caused by the failure of Brenner's instrument in 1889 has rendered us sceptical as to the possibility of guiding an instrument into the male ureter under electric light.

This manœuvre is, however, possible, and has been now in active use for two years. Not only is it practical in most cases, but to the dexterous it is easy. It will probably be easiest to those who have studied the varying positions and aspects of the ureteral mouths under electric light, and to those who have become adepts in guiding fine bougies under electric light over the mouths of false passages in the strictured male urethra.

Fingers and eyes thus skilled can engage most ureters in a couple of minutes, provided a suitable cystoscopic instrument is employed. I wish, however, before drawing attention to the instrument, to dissent somewhat strongly from the opinion of one surgeon, who asserts it can always be performed in the consulting room under cocaine. Of course it may be done, but not, I submit, with safety. No harm can follow when there is little chance of inflammatory reaction (cystitis, pyelitis, suppression) resulting. Thus it will probably do no harm to catheterise ureters in one's room, provided the patient has not reached 45, the urine is quite clear, the kidneys are healthy, and that no tuberculosis of the urinary tract is present. But under such healthy conditions the procedure is not called for.

It will probably be found that those patients who really need ureteral exploration for obscure disease possess kidneys too sensitive to ureteral or urethral shock to permit any risk of a subsequent chill being run. The immediate and remote death-rate due to washing out the bladder in cases in which pyelitis or irritable explosive kidneys coexist is sufficiently high to discourage anyone from washing out that viscus in one's consulting room for the first time—a requisite in catheterising ureters; in fact, to do so at all, except under the most favourable circumstances of rest and warmth.

If the ureter has to be explored, let it be done with care and caution, let the patient be in bed, and remain there quietly for a few hours after the examination.

THE INSTRUMENTS.

Several forms of catheterising male cystoscopes are on the market, but as yet they fall mainly under two patterns—the Nitze and the Casper. As will be seen from the accompanying Figs. 1 and 2, both consist in a cystoscope



Fig. 1.—The Nitze Male Catheterising Cystoscope.

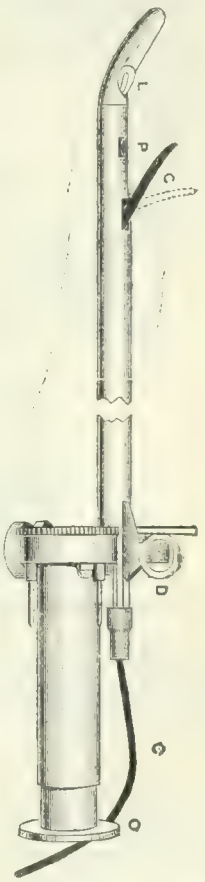


Fig. 2.—The Casper Male Catheterising Cystoscope.

with its usual electric lamp L, its prism P, and its telescope. Attached to one side is a channel for the catheter C to run in. This is so placed as to allow the point of the catheter to emerge into the bladder under the eye of the operator. He is thus able to guide it into the mouth of the ureter.

It is difficult to say which instrument will find the greatest favour. Both are valuable, both need, in my opinion, improvement. For my own part, I work the Casper without difficulty, and prefer it because the point of the catheter can be so easily manipulated through a large angle by pressing on the ring D.

This instrument is introduced into the bladder, the catheter lying hidden in its channel. The mouth of the ureter selected is brought into view, and the catheter is pushed along its groove until its point is seen to emerge. A little movement of the cystoscope itself, or manipulation of the ring D, to alter the angle, or a slight rotation of the catheter, is sufficient to guide the latter into the mouth of the ureter (Figs. 3 and 4) and it can now be watched swelling up the wall of the bladder as it passes up the ureter. In a few seconds urine will drop from the end of the catheter, and may be collected in a test

tube. It is best to give the patient plenty of fluid some time before the examination in order to excite the renal function. I have for long relied upon half a bottle of Contrexéville water



Fig. 3.—The Nitze Catheter entering left Ureter.

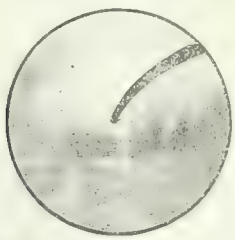


Fig. 4.—Cystoscopic picture of a Casper catheter entering mouth of right ureter.

taken an hour before exploration. Cocaine is ample in most instances when the urethra is tolerant and capacious. If an anæsthetic is needed chloroform is perhaps more suitable, as it interferes less with the rapid secretion of the kidney than ether (?).

RAPID DETECTION OF THE SITE OF THE URETER MOUTH AFFORDED BY STAINING THE EFFLUX WITH ANILINE DRUGS.

When the bladder base is much swollen or the ureteral orifices are displaced, or the kidney is sluggish, or herniæ coexist, difficulties may arise. In detecting the mouths of the ureters and distinguishing a thin-edged patulous orifice from a minute hernia the value of a stain for the urine will be obvious. I have for some years made use of fuchsin ($1\frac{1}{2}$ gr. in pill). This, if taken an hour or so before the examination, will colour the urine a delicate pink, so that after the bladder has been washed out streams of pink urine will be seen to issue from the ureters. I may be permitted to remark that fuchsin does not affect some kidneys at all, and others which are undoubtedly weak pass a good deal of the colour through. Some years ago I hoped to be able to test the efficiency of the secreting cells by means of fuchsin, but extended experience showed me the test was unreliable.

SOUNDING THE KIDNEY PELVIS AND URETER FOR STONE UNDER ELECTRIC LIGHT.

Before the male ureter could be catheterised under the light, I used to have the female ureteral catheter tipped with metal for sounding the female ureter, for the fingers can detect by these means the presence of any small calculus in the channel of the ureter. Sounding the ureter is difficult in the male because of the many bends the catheter has to make and the many corners it has to pass; the gripping and friction of these tend to obscure the sense of touch. But there is no doubt in my mind that this is a step in the future. The microphone perhaps may render it of more value. I believe that ureteral obstructions from kinks and stones are more frequently the cause of renal pain and colic than is at present allowed.

ON THE CAUSE OF DEATH BY ELECTRIC SHOCK.

BY

THOMAS OLIVER, M.A., M.D., F.R.C.P., Professor of Physiology, and ROBERT A. BOLAM, M.D., Joint Lecturer in Physiological Chemistry and Physics,

University of Durham, College of Medicine, Newcastle-on-Tyne.

THE increasing employment of electricity within the last few years has demonstrated, from the accidents to workmen engaged in its generation and distribution, not only what a dangerous force it is, but the necessity for using all the precautions suggested by experts. In this country alone within the last few years, sixteen deaths have been caused by electricity. It has seemed to us, therefore, that the present time is opportune for reopening the subject with the view of ascertaining the cause of death in such cases.

A powerful electric current kills immediately. Two opinions are before the profession (1) that death is due to failure of the respiratory centre (d'Arsonval) (2) that it is due to sudden arrest of the heart's action. From the appearance presented by the internal organs after death some physiologists have maintained that death is due to asphyxia. We have it on the testimony of workmen employed in electric generating stations that when one of their mates has been fatally injured by coming into contact with highly charged metal, he has generally breathed a few times although to all appearance dead. This fact, therefore, would suggest that death was not due to failure of the respiratory centre. To what other cause may it be attributed? It is desirable that a definite opinion, if possible, should be arrived at as to the cause of death in electric shock, so that we may have at our command means for the resuscitation of those who have been apparently killed by such discharge. As this subject formed part of an inquiry by a Home Office Committee upon which one of us served, and for which we instituted a series of experiments upon animals, most of them under anæsthesia, with the view of determining these points, we feel that the data thus obtained have a scientific not less than a practical value, and as such we offer them for consideration.

The animals employed in this research have been dogs and rabbits. In almost every case ether was used as the sole anæsthetic. The blood pressure was recorded in the ordinary way, the left femoral artery being usually opened in the dog, the left carotid in the rabbit. Respiratory movements were registered by means of a Verdin's double tambour applied to the chest of the animal, and communicating with a recording tambour. When artificial respiration was used in the attempts at resuscitation after shock it was generally performed by the Sylvester method; occasionally by inflation through the usual tracheal cannula inserted at the outset of the experiment. An alternating current supply in the laboratory running at 100 volts and 100 cycles per second was transformed as required. Wet sponge electrodes mounted on 6 inch vulcanite handles for efficient insulation were applied to the fore and hind limbs on portions of the skin previously shaved and thoroughly moistened. The period of stimulation was shown by an ordinary time marker on a shunt circuit in which were placed two incandescent lamps in series. We would take this opportunity of cordially acknowledging our indebtedness to Mr. R. J. Patterson, Lecturer in Physics, Durham College of Science, for much help in the physical portion of the work as well as for personal aid in many of the experiments.

RESULTS.

When an animal is exposed to electric currents of sufficiently high potential death, practically speaking, is instantaneous. The animal is thrown into a condition of opisthotonos, during which breathing is suspended; the heart's beat momentarily quickened and then arrested, while with currents of somewhat higher potential still it is immediately arrested without any preliminary quickening. On shutting

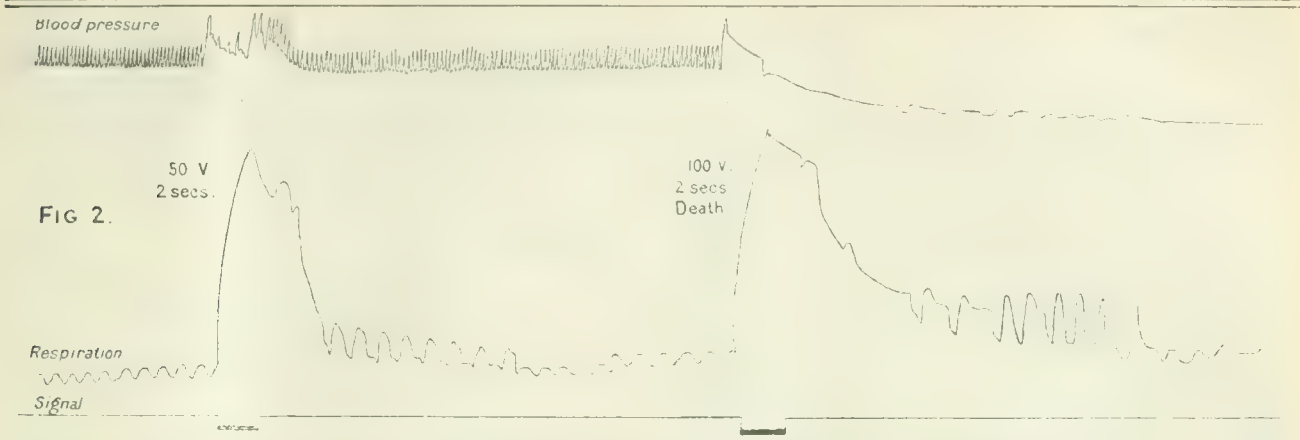
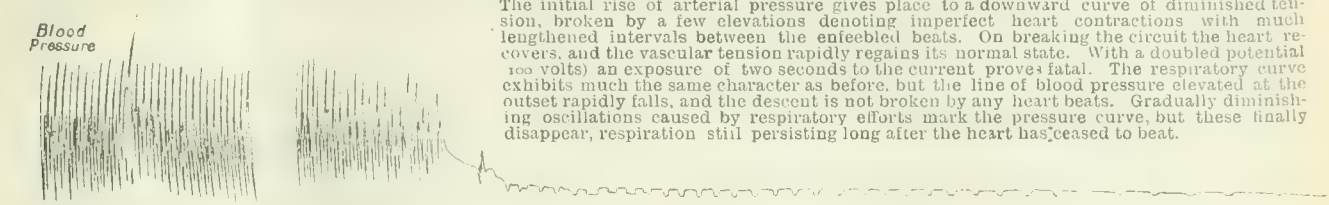


FIG 2.

Fig. 2.—A current of 50 volts induces similar but more pronounced respiratory disturbance, and there is now evidence that the heart is affected. The initial rise of arterial pressure gives place to a downward curve of diminished tension, broken by a few elevations denoting imperfect heart contractions with much lengthened intervals between the enfeebled beats. On breaking the circuit the heart recovers, and the vascular tension rapidly regains its normal state. With a doubled potential (100 volts) an exposure of two seconds to the current proves fatal. The respiratory curve exhibits much the same character as before, but the line of blood pressure elevated at the outset rapidly falls, and the descent is not broken by any heart beats. Gradually diminishing oscillations caused by respiratory efforts mark the pressure curve, but these finally disappear, respiration still persisting long after the heart has ceased to beat.



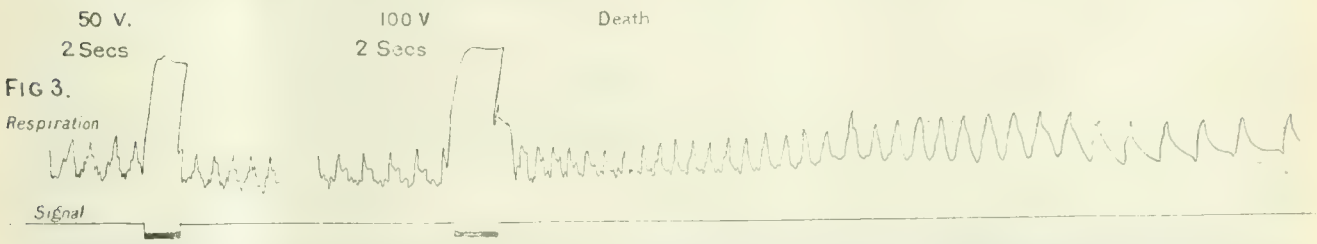


FIG 3.

Fig. 3.—Dog, terrier. Fick's kymograph. Cannula in left femoral. Currents of 25 and 50 volts show vascular and respiratory effects, similar to, but less marked than in the rabbit. In this instance 100 volts proved fatal. The blood pressure curve presents the same features as in the smaller animal, and respiration is seen to continue for some 45 seconds after the cardiac arrest.



FIG 7.

Fig. 7.—Dog, mongrel. Mercurial kymograph. Cannula in left femoral. This tracing shows the rapid fall of blood pressure when a lethal current passes. No heart impulses can be seen on the downward curve, and the influence of the irregular respiratory efforts grows less and less as the pressure sinks to zero. Breathing is continued for thirty seconds after the circuit is broken.

off the current there occurs a deep inspiration, usually followed by an expiratory cry. When a serious accident from electricity has happened, it is this "cry" which is heard by workmen, and which attracts them to the spot where the apparently lifeless body of one of their comrades is lying. Dogs, through which a powerful electric current has been passed, may, on breaking the circuit, not only breathe spontaneously and rhythmically for several seconds (even a minute or two) but bark loudly, and yet all the time the heart has ceased beating. Whilst in some of our experiments death seemed to be due to contemporaneous cessation of the respiration and heart's action, yet in most there was ample demonstration that the organ first to be arrested was the heart, for breathing was observed to continue rhythmically for a brief period, and then irregularly and feebly before stopping. We have reason to believe that only in the case of very high voltages with currents considerably above the potential usually required to kill the animal is there simultaneous stoppage of heart and respiration. Primary cessation of the heart's beat is without doubt the general rule, while under no circumstances have we succeeded in causing primary arrest of respiration followed by failure of the heart.

The accompanying tracings are selected to elucidate some of the chief phenomena observed during and after the passage of the alternating current in animals. The uppermost curve in all the tracings is that of blood pressure, the middle that of respiration, whilst the lowest indicates the point and duration of each electrical discharge.

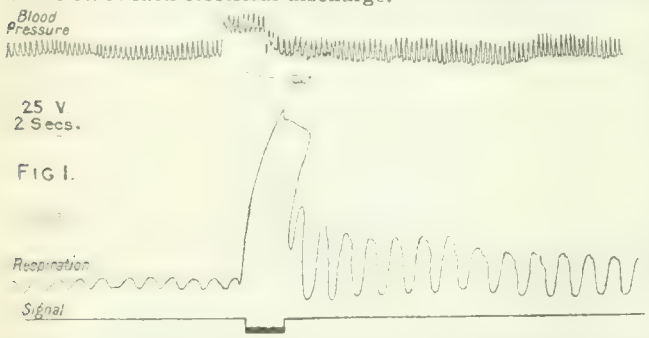


Fig. 1.—Rabbit, male. Blood pressure by Fick's kymograph. Cannula in left carotid. The passage of a current of 25 volts for two seconds causes marked inspiratory spasm with concomitant rise of blood pressure. The heart's action is not disturbed. A series of deepened respirations ensues upon shutting off the current.

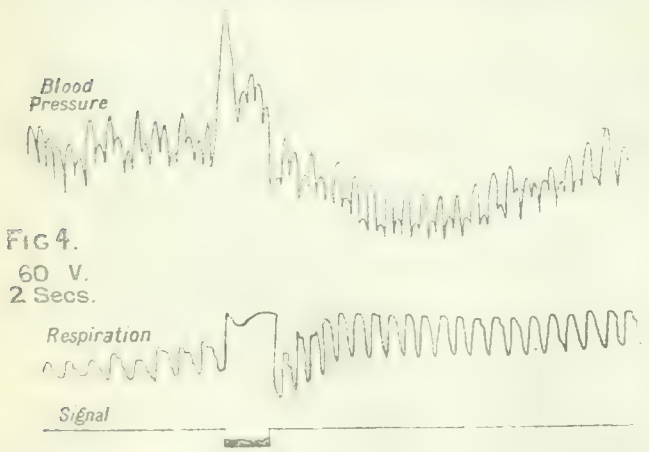


Fig. 4.—Dog, terrier. Mercurial kymograph (Verdin). Cannula in left femoral. A 60 volt current causes only slight rise of blood pressure with a subsequent fall, also slight.

The changes in arterial tension are more strikingly exhibited when the mercurial manometer is employed to register the blood pressure.

The resemblance of the blood pressure curves in these cases to those obtained on vagus stimulation is striking and suggestive. So far, however, the results furnished, both after section of the vagi and after injection of atropine, give no support to the supposition that pneumogastric impulses account for the inhibition of the heart observed. We are led on the other hand to believe that the effect of the current is directly upon the heart itself. Our opinion as to the cardiac cause of death received confirmation from the evidence gained by auscultation of the chest of the animal during and after the passage

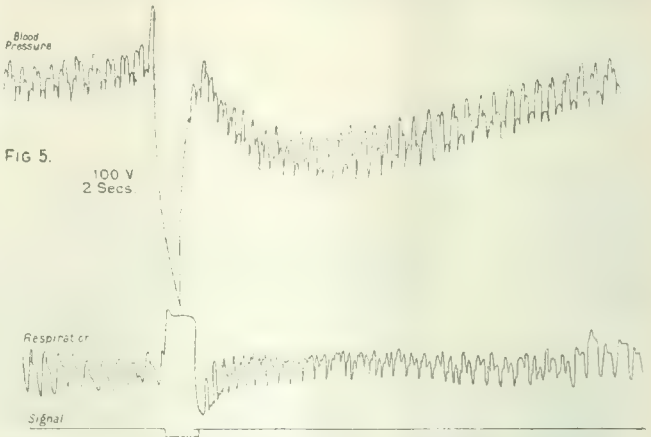


Fig. 5.—With 100 volts we see the initial rise followed almost immediately (and while the current continues to pass) by a rapid fall practically to zero. At the break of circuit, pressure rises by rapid leaps, attaining almost to the previous normal level. A gradual diminution of tension then takes place, followed by a somewhat slower rise up to or beyond the usual limit.

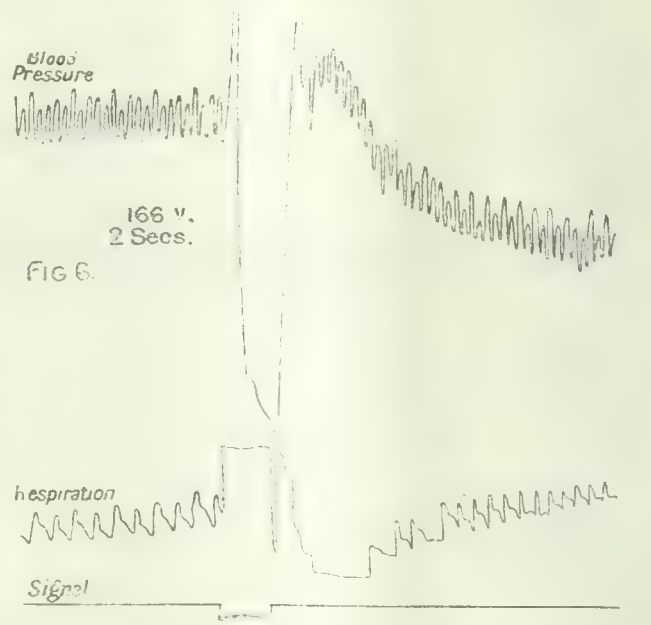


Fig. 6.—In the case of 150 and 166 volts the same features present themselves in exaggerated form. It may be noted in the latter instance that the respiratory lever falls with forced expiration when the current is cut off, only to at once rise again with the inspiratory gasp previously commented upon. Thereafter the tracing denotes further pronounced expiration, a period of rest in the position of extreme expiration, and finally gradual return to the usual characters.

of the current. The heart's sounds indicated momentary quickening and even irregularity in the case of currents of low voltage, but with higher voltages instant cardiac arrest was the striking feature. On breaking the circuit the chest walls would rise and fall in respiration, and the respiratory murmur be pronounced, without any return of the heart's sounds being observed. We considered it advisable to control this result by direct inspection. To this end the heart of the

animal was exposed by removal of a portion of the chest wall, respiration and anæsthesia being maintained through the tracheal cannula. In such the heart would be observed to be suddenly arrested on completing the electrical circuit, to undergo distension when the current ceased to pass, and then to enter into a state of fibrillary tremor maintained for a variable period, while the animal would make deep respiratory efforts as evidenced by forcible movements of the diaphragm. It has not seemed to us necessary in this paper to go into details regarding the voltage and ampèrage of currents used, nor to insist upon a measured relation between the current employed and the weight of the animal, experiments through lower to higher voltages having demonstrated to us that there was no absolute relation—we of course speak within limits—between the voltage employed and death of the animal. By this we mean that whilst naturally a discharge of high voltage would kill an animal and that immediately compared with a lower we did not find that a smaller animal was necessarily killed by a lower voltage than an animal twice its size. Frequently it was just the reverse of this. Circumstances rather suggested to us that he younger and the less highly organised the animal the higher the potential of the discharge required to kill it, compared with that needed for an older animal and one occupying a higher plane. To this circumstance and others still under investigation we hope to allude in a subsequent communication.

Into the appearances presented by the various organs *post mortem* we need hardly enter, beyond stating that after death from electric shock the left ventricle of the heart may contain a very small quantity of blood, while the right ventricle, auricle, and the large veins near the heart are distended and filled with dark fluid blood. Granted that the fatal result in alternating current discharge is brought about by heart and not by respiratory failure, it will be at once seen that the problem of treatment of resuscitation in apparent death from electric shock is much increased in difficulty. We have made preliminary experiments with many cardiac tonics and have endeavoured to excite contraction of the arrested heart in various ways—by stimulation, by relief of the overloaded cavities—but hitherto with indifferent success. Thus far artificial respiration appears to hold out the only possibility of restoration, but if recovery is not accomplished in 20 or 30 minutes the prognosis would seem to be very unfavourable. We have succeeded in resuscitating two animals apparently dead from electric shock by means of artificial respiration, once after an interval of 20 minutes. As has been shown by other observers, the administration of amyl nitrite before the shock diminishes its effects, but the practical value of this observation is not apparent.

The experiments just narrated deal only with alternating currents, which are generally thought to be the most dangerous to life. We propose to extend the investigation to the effects of direct or continuous current discharges, with the view of inquiring how far the opinion of electricians in this direction is justified. This, with a fuller consideration of some of the points only briefly raised in this preliminary communication, we hope to make the subject of a future paper.

THE USE OF POSTURE IN PERCUSSION OF THE HEART.

By DONALD ROSE PATERSON, M.D., M.R.C.P.,
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WITH the introduction of new methods of treating the heart, the importance of mapping out the boundaries of the organ has acquired fresh interest. Questions arise daily which emphasise anew the desirability of attaining greater precision in the art of percussion; but it cannot be said that the advance in our knowledge has brought us any nearer this much-wished-for goal. On the contrary, there is ample evidence, in the many papers dealing with the subject, of the unsatisfactory position of the question, and it is quite clear that so long as certain anatomical and physiological factors are frequently lost sight of, there will be little advance towards a clearer conception of the condition of the heart. Our methods of percussion are doubtless simple enough in themselves, and produce precise results in the cadaver where the relations the internal organs are fixed; but in the living body, they are admittedly difficult to interpret, and perhaps it is too much to hope, in the present state of opinion, for the adoption of a common plan which will afford some basis of comparison. My attention was more particularly directed to this question three years ago, while engaged with Professor Haycraft in investigating the movements of the heart within the chest cavity. (The results of this investigation were brought before the annual meeting of the British Medical Association in London in 1895).[1] We observed very striking effects on the position of the heart when the posture of the body was changed, and this gave rise to the suggestion that it might be of value in clinical observations. Since that time I have adopted a method of percussion which, I have learned from experience, possesses certain advantages, and adds materially to the accuracy of the examination. This posture percussion, as it may be called, was investigated by Salzer and Drescher some years ago, and later by Gumprecht,[2] in a paper recently published; and my experience closely coincides with theirs.

It is well known that in changes of posture of the body the heart follows the laws of gravitation, and the influence of posture on percussion and the heart's impulse has been investigated by von Dusch, Gerhardt, and others. Their observations were, however, limited in scope, and did not deal with the changes in the prone position. The diagrams published by the former show the effect produced by change of posture from one side to the other to be considerable. But no attempt was made to ascertain the area of dulness with the body in the face position, and the result obtained was not of great practical value. The alterations in the percussion area with the body on the left side, were of service in showing that the heart was not fixed; but it gave a misleading estimate of the boundaries of the organ, and the suggestion to make clinical use of it has not been realised. In Walshe's work on the heart, it is stated that "in the prone position, and in decumbency on the left side, the heart comes more fully towards the chest wall than in the supine posture or in decumbency on the right side." There is no suggestion that this fact may be used as an aid in percussion, and it merely describes the mobility of the organ. The alteration in the site of the cardiac impulse by posture, which has long been familiar to clinicians, illustrates very well the range of movement possessed by the organ. Dr. Arthur Ransome[3] investigated many years ago the position of the impulse in different postures of the body—recumbency, erect attitude, right and left side. He ascertained the side-to-side movement in fifty-one individuals to have a mean extent of about $3\frac{3}{4}$ inches—a maximum of $5\frac{3}{4}$ inches and a minimum of 2 inches. More recently Guleke[4] has dealt with this point in an exhaustive manner, and his conclusions, taken from the examinations of some hundreds of patients, go to show that out of every five males between the ages of 41 and 50, in one only is the impulse palpable in right-sided recumbency; in two in the supine position; in three in the erect attitude, and in four with the individual on the left side. So that in this last position, in one only out of the five will the impulse remain unfelt. These figures serve to demonstrate the influence of gravitation in causing movement of the heart. They do not deal with the prone position—which has been overlooked, although it modifies the impulse as well as the percussion area—but they indicate clearly that there may be considerable movement of the organ within the chest cavity.

It is not generally recognised that the operation of the law of gravitation modifies to some extent our conception of the relation of the heart to the other viscera and the walls of the chest. Our knowledge has been obtained from an examination of the opened chest cavity, where disturbing factors are introduced. Within the chest the heart is attached at its base to the great blood vessels, being slung, so to speak, in the bag of the pericardium, and closely clasped by the lungs. It possesses no absolute fixed point, even the base partaking of a considerable degree of movement. The greater part of the organ is entirely free within the pericardial sac, and may undergo marked alteration in position when subjected to certain influences. It has been pointed out by Haycraft and myself[5] how important the action of gravity becomes in the open chest, and how it has influenced the description of the movements of the heart since

the time of Harvey. If an animal with an opened chest be held face downwards in the prone position, the heart falls forwards in diastole, and springs back during systole. When the animal is placed upon the back and the chest opened, the heart sinks towards the back and the left side, and springs forward at each contraction. This action operates likewise in the unopened chest, but, as we shall see later, its range is more restricted when the walls are intact. In the human cadaver we have the same influence. However great the care taken to preserve the normal relations by fixing the parts by means of needles, I have found generally that as soon as the chest is opened some shrinking of the lung borders takes place, and the heart by its weight falls backwards and presents a more flattened anterior surface than it has during life. Normally, the lungs are in close contact with the heart, as a whole; they accommodate very readily to any change in its shape and position, and we have the borders displaying an ever-varying relation to the walls of the heart. They respond readily to all changes in the heart, and fulfil the functions of a delicate oncometer whose movements may be graphically registered by the cardiopneumatic tracing. It is this intimate connection which is not so apparent in the opened chest, for there the heart may have fallen away and the lungs have retracted even to a slight extent, which suffices to destroy the accurate representation of parts in life. It is doubtful whether the lungs actively influence the position of the heart, except perhaps in forced respiration, as Kronecker appeared to assume, when he speaks of the "massage of the heart." Gerhardt, indeed, doubts the active displacement of the heart by the lungs, and a study of the cardiac movements in the opened chest will show the readiness with which the pulmonary borders adapt themselves to the diastole and systole, and follow closely any deviation of the organ when the posture is altered. If an animal be placed on the left side, the heart falls to that side and compresses the left lung, whilst the right lung moves across the middle line and preserves its intimate relation to the cardiac wall. Again, if a glass plate be applied to the front of the opening in the chest and the animal held belly downwards, the heart tilts forwards, flattens out its anterior surface on the glass support, and pushes aside the pulmonary margins. This adaptation of the lungs is very intimate, and in view of the great variation of which the right side of the heart is capable within physiological limits, it seems to me that the existence of three lobes in the right lung is of service, as it enables that organ to accommodate itself more closely to the changes taking place in the ventricle.

If we turn now to the unopened chest, we have evidence also that the heart is influenced by the force of gravity. This was derived by a method which was adopted by Haycraft and myself in our investigations. Dogs were placed in various positions (prone, supine, left side, and right side) and killed. Precautions were taken to avoid external pressure likely to disturb the chest wall, and the bodies frozen. Sections were then cut by a saw, and photographs taken at once, and afterwards both section and photograph compared. This enabled an examination of the thoracic wall to be made *in situ* before any disturbing influence could be introduced, and we got a representation of parts as they are in life. On comparing photographs taken from corresponding parts of the heart in dogs placed on the back, face, and left side, the effect of gravity is apparent at a glance. In the first position the heart is closely embraced by the lungs, and to a considerable extent, anteriorly, only a small portion of the anterior surface coming into contact with the chest wall. Fig. 1 is a tracing from a photograph of a section of a dog in the prone position, and shows the heart closely applied to the chest wall over a large area, its anterior surface notably flattened whilst the lungs are thrust backwards, and do not come into extended relation with the chest wall in the cardiac region. The organ has, in fact, by its weight, spread itself out, so to speak, on the thoracic wall, presenting thereby a greater surface, and preventing that overlapping of the lungs which is seen in the back position. In Fig. 2, from an animal on the left side, there is a considerable change to be noted. The organ has moved to the left side, and though it touches the wall there is no extension of the area of apposition and the surface uncovered by lung is not larger. The right lung extends as far forward as the middle line, closely enveloping the right side of the heart. If we calculate roughly the area of apposition to the chest wall, we find in Fig. 1 nearly one-third of the circumference of the whole heart uncovered by lung; in Fig. 2, not more than one-sixth. In the paper already referred to, we have inserted two tracings (marked Figs. 3 and 4) from a prone and a left side position, taken from sections nearer

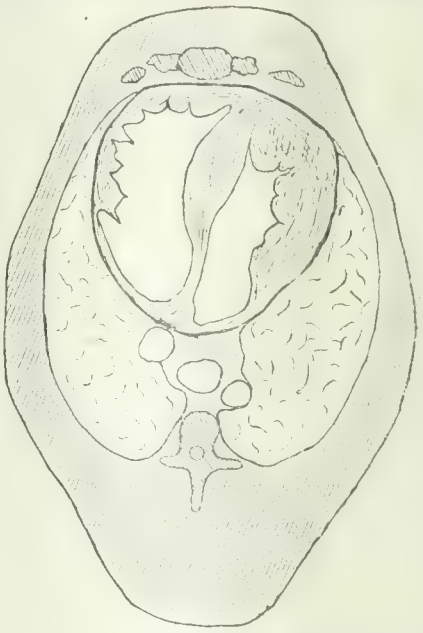


Fig. 1.—Tracing of a photograph of a frozen section (taken from below); prone position.

the apex of the heart, where there is a greater mobility, at least in the horizontal plane. The prone position shows a large surface of the right and left ventricles in close contact with the chest wall and the lungs widely apart; in the other position, the heart is almost entirely to the left of the mid-

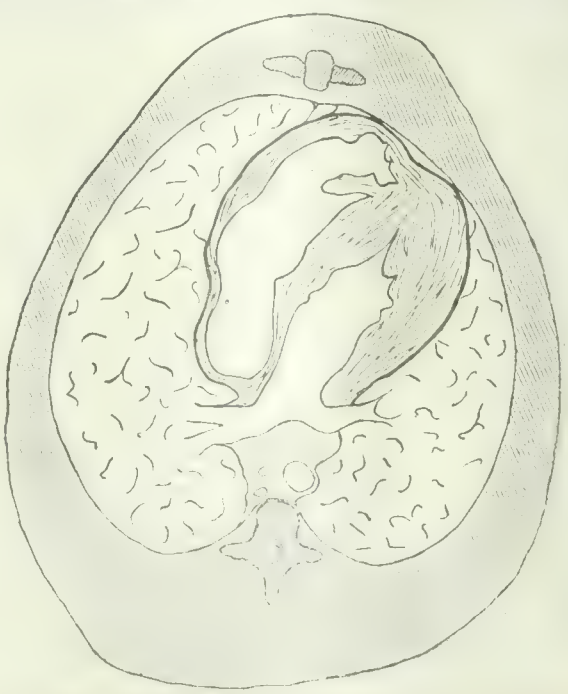


Fig. 2.—Tracing from a photograph of a frozen section; left side position.

dle line, whilst the right lung extends across to the left side, and envelops the organ closely.

An examination of a large series of sections points to the same conclusions, and illustrates the service of the prone position in bringing a larger area of the heart's surface into close proximity to the chest wall, and therefore more available for accurate percussion. It shows, moreover, the advantages of the prone position over left side recumbency, and it is quite clear that the latter possesses little value for the purpose of percussion.

METHOD OF CARRYING OUT PERCUSSION.

The observer is met at the outset with the difficulty of making an examination of a patient in the prone position with ease and comfort. Theoretically one would expect the action of gravity would best be obtained by having the individual perfectly flat on the face. This may be arranged by having two tables with a gap between to allow a view of the precordia. Here the body is at complete rest, the muscles are relaxed, and the full influence of gravity called into play. But percussion must necessarily be conducted in a cramped attitude from below, and it is obvious that this position, however great its advantages, cannot be regarded as practical. A more convenient method is to have the patient on the hands and knees on a table. The observer is then at a higher level, the cardiac area is fully exposed, and percussion more easily carried out. For ordinary work, a compromise may be adopted by having the patient standing and stooping forwards with the hands resting on some support. I have used this position in the out-patient room for three years, and have found it of considerable service. In a patient confined to bed, the sitting posture, with the trunk bent forwards, will generally be sufficient. A useful way to obtain the effects of gravity is to place the individual on a ward locker in the form of a high back chair so that he may stoop forward and support himself with his hand (Fig. 3). He is then at a higher level,



Fig. 3.

and percussion may be performed with more comfort to the observer. The left arm of the patient may be placed loosely behind the back, as this relaxes the pectoral muscles which seem to me during contraction to increase the sense of resistance and affect the note. In the stooping posture it should not be forgotten that the act of flexing the body forces up the diaphragm so that it stands at a higher level than usual. This is no disadvantage, as it will throw the heart more forward, and will, if anything, tend to enlarge the area of dulness presented to percussion. In fact, we may recognise several causes which co-operate in increasing the precordial dulness in this posture. There is the influence of gravity—the heart by its own weight falling forwards. Then the forcing up of the diaphragm occurs to some extent, and finally the excursion of the anterior wall of the chest is restricted, and it does not move so much forward during respiration.

THE PERCUSSION AREA IN THE PRONE POSITION.

The influence of gravity, we have seen, results in the exposure of a larger area of the heart directly to the chest wall, and we find clinically that the area over which a dull note is obtained is definitely increased. I do not propose to enter into the distinction between relative and absolute dulness as modified by the effect of posture. Theoretically the relative dulness in the prone position should undergo but little variation, as that area is supposed to represent the anatomical limits of the heart. We know, however, as a matter of practice that the boundaries are exceedingly difficult to define absolutely, and if we cast aside preconceived ideas and enter on the examination with an open mind (which is admittedly difficult to do) we shall find our results by no means constant. Anyone can test this by the simple expedient of percussing the cardiac area blindfolded, and in a short time making a second observation under similar conditions for comparison. These remarks apply with perhaps greater force to the boundaries on the upper and right sides. The base of the heart lies deeper than the body and apex, and is covered by a greater thickness of lung. The right boundary cannot be determined with any great degree of accuracy on account of the note given by the sternum which masks that of the heart underlying it. We have not infrequently over the lower part of the bone a clear resonant note where it is obvious a considerable part of the right ventricle lies beneath. This effect of the sternum may be demonstrated in cases where that bone is abnormally short. In those we may have a clear resonance over the lower sternum, while immediately beyond the lower margin of the bone the right border of the heart may be noted to go as far over as the right sternal line. It will be granted that the assumption of the prone position does to some extent lend aid in ascertaining the deep boundaries of the heart. As the superficial dulness is definitely increased the shading off in the relative note is not so gradual, and we shall see later that there is reason to suppose that the difference between the two areas is not great. Repeated observations were made over an extended period of time on the deep boundaries with the patient in the stooping posture; in some instances material help was given, and this was so in a marked manner in individuals with emphysematous lungs, where no outline would be made out with the patient in the ordinary position. On the whole, however, the sources of fallacy in percussing the relative dulness were not removed, and it was found better to adopt the absolute dulness in which observation is less likely to err.

An examination of a large number of healthy individuals of different ages and sexes was carried out, and in not a few repeated at intervals. The method adopted was to percuss the absolute dulness in the erect posture and record it in an outline form. The individual was then placed in the stooping posture and any alteration in the area noted and recorded. The results over a series of cases agreed in the main, and the general outline of the increased area may be represented by the diagram (Fig. 4 on p. 138), which was taken from a young adult.

Taking first the alteration in the cardiac impulse, it was found in the majority of cases that it moved outwards in the prone position and at the same time became more diffuse. It was frequently palpable outside the nipple line where in the erect position it was quite within that limit. The average extent of its excursion ranged about half an inch, in some individuals being much greater, while in others little or no displacement was shown. In character it became less pronounced and not so forcible. This may be due to narrowing of the intercostal spaces from approximation of the ribs, which prevented the cardiac thrust being palpable over so large an area of intercostal space as in the upright position. The limits of absolute dulness underwent considerable change. The upper and left border, which may be considered as one, curved from just above the junction of the fourth left costal cartilage with the sternum, outwards close above the upper margin of that rib, then downwards and slightly outwards to the position of the impulse in the line of the nipple. In young subjects this border may sometimes reach almost to the lower border of the third rib, and on the other hand in elderly people it may

scarcely attain the fourth rib. This border is by far the most important one to map out with accuracy, as it gives a clearer estimate of the condition of the heart. The right border coincides as a rule with the left lateral sternal line; sometimes it extends out to the sternum, but it is usually impossible to obtain a trustworthy result over that bone from the presence of its own resonant note. The lower limit cannot be distinguished from the upper margin of the liver dulness.

Such is an outline of the area of dulness which may be observed in healthy individuals in the prone or stooping posture, and it is of interest to compare the limits of the heart as ascertained in the ordinary position. For this purpose I have introduced an outline diagram (Fig. 5) from Vierordt's *Medical Diagnosis*, a standard work on the subject. It will be seen that the absolute dulness in the stooping posture approxi-

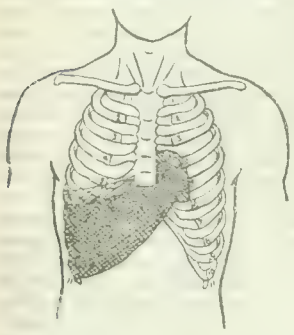


Fig. 5.

Fig. 5. Normal percussion figure of the heart from Vierordt's *Medical Diagnosis*. Light shading represents relative dulness.

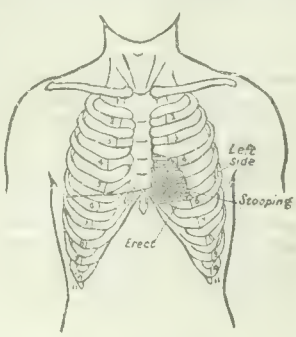


Fig. 4.

Fig. 4.—Outline of percussion area from a man 26 years of age. Light shading represents increased dulness in stooping posture; × × the cardiac impulse in different postures.

mates very closely to the area of relative dulness as percussed by the ordinary method, the only difference of moment being a somewhat wider limit for the upper and left boundary in the latter. The shoulder, so to speak, of the margin does not move out so clearly in the stooping posture, a modification which is readily explained by the base of the heart having a more limited range of movement and not coming into such close contact with the chest wall as the body and apex. On the whole, however, I think it will be conceded that the resemblance is sufficiently close to enable one to draw an accurate estimate of the anatomical limits of the heart from information afforded by the absolute dulness of the prone or stooping position.

With regard to the advantages of this method of examination, I believe it will be found to be much more precise than the estimation of the relative dulness in the supine position, inasmuch as it can be carried out by a lighter stroke and the percussion note is more definite. We avoid those transitions of sound which easily lead to error and which are scarcely to be recognised even by long training and the most practised ear. The constant variation in the pulmonary borders is largely eliminated, and having to deal with an increased area giving an absolutely dull note, the accuracy of our percussion is greater and observation is less likely to err. Lastly, there is a further advantage which has been pointed out by Gumprecht in that it brings out an area of dulness which may be quite impossible to ascertain in the supine position. In tympanites of the stomach and colon I have on more than one occasion experienced difficulty in determining the cardiac area until the patient was placed in the stooping posture.

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[1] *Jour. of Phys.*, vol. 19, Nos. 5 and 6. [2] *Deut. Arch. f. klin. Med.*, Bd. 56. [3] *Journ. of Anat. and Physiol.*, vol. 9, p. 137. [4] Ueber die Häufigkeit eines sicht-und fühlbaren Herzpitzenstosses beim Menschen. By Heinrich Guleke, *Inaug. Diss.*, Dorpat, 1892. [5] *Loc. cit.*

MEDICAL MAGISTRATE.—Dr. John Griffith Lock, J.P. for the Borough of Tenby, has been appointed by the Lord Chancellor, upon the recommendation of the Lord-Lieutenant, to the Commission of the Peace for the county of Pembroke.

PERICARDITIS IN RHEUMATOID ARTHRITIS.

BY GILBERT A. BANNATYNE, M.D.GLASG., M.R.C.P.Edin.

Honorary Physician to the Royal Mineral Water and Royal United Hospitals, Bath.

THE question of heart affections in rheumatoid arthritis is one which has given rise to much discussion. While endocardial lesions are found with a comparatively greater frequency than those of the pericardium some doubt has always existed as to their origin and nature. The same may be said with greater truth about pericardial lesions, and for this reason I think the two following cases may be of interest. In both we have the occurrence of an acute pericarditis during the course of rheumatoid disease, and presumably, therefore, intimately connected in origin with it.

CASE I.—R. D., aged 24, tailor's assistant, married, was admitted to the Bath Mineral Water Hospital on January 25th, 1896, suffering from rheumatoid arthritis. Her family history was unimportant, whilst her previous history had been distinctly good. She had been married two years and had one child twelve months old. Her confinement was natural and uneventful, but a month after she caught cold, and pain came suddenly in both knees, then in her ankles and feet, and spread rapidly to her hands, wrists, and shoulders, and quite recently to her elbows, jaws, and neck. Her condition had steadily been getting worse. On admission she was found to be a rather badly nourished woman, who was losing flesh fast, and whose temperature was never quite normal. Otherwise her general health was fair and her appetite good. Menstruation was scanty and irregular. On examination the heart's apex was found in the fourth interspace in the nipple line. It was heaving and diffuse. The cardiac area of dulness was increased slightly in all directions. A loud systolic and a post-diastolic murmur was heard at the apex, with accentuation of the second sound at the base. The joints most affected were those of the fingers, the wrists, the jaws, and the neck; the shoulders, elbows, knees, and ankles to a less extent. There was marked muscular wasting of the interossei and extensor muscles of the forearm and hand. There was sweating of the hands and pigmentation of the skin of the forehead, hands, and forearms. The hands and feet felt cold, and looked blue, and the axillary glands were enlarged, but there was none of the spleen. The pulse was 86 and the temperature 99.2°. The urine contained neither sugar nor albumen. Under treatment she progressed slowly, if at all. On February 16th, three weeks after admission, she complained of pain in the chest, and the temperature was found to have risen to 101.4°. Loud pericardial friction was detected over the second left cartilage, her pulse was quick, and there was some difficulty in breathing. From the 16th to the 25th the friction extended, and finally could be heard all over the cardiac area, her temperature meanwhile ranging from 99° to 103°, and her pulse from 100 to 140. During the evening of the 25th she complained of a short hacking cough, and she became slightly cyanosed. Over both apices there was slight loss of resonance, with some bronchial breathing and fine inspiratory crepitations were detached. On the 26th the expectoration, which was difficult to bring up, was rusty in character, and her temperature remained about 103°. On the 27th the heart's action was very irregular and feeble, and there was œdema of feet and legs. A trace of albumen was found in the urine. On the 28th, although the breathing was still rapid, it was not so laboured, the expectoration had become frothy, her pulse was more regular and the temperature was slightly less, as was also the œdema. On the 29th she felt better, and about midnight she became much easier, her breathing became quiet and less hurried, her pulse more regular, and her temperature fell to normal within a few hours. During March 1st she continued better, but on the 2nd she complained of some pain between the shoulders, and had diarrhœa, whilst a rash appeared on her hands. This latter was bright red in appearance, slightly raised, and serpiginous in outline. Her temperature, too, rose to 101.4° On the 3rd she was better, her breathing easier, and in no pain. The rash began to fade. On the 4th she continued better, and on examining the chest it was found that the symptoms were rapidly clearing up, and that the pericarditis was practically gone. From that date until her discharge, on the 28th, she progressed rapidly, getting stronger and better every day. The lung and heart mischief especially cleared up in a wonderful way. The murmurs, however, persisted, but they, too, were less intense in character. The joint symptoms from the onset of the pericarditis improved rapidly until all swelling and pain had nearly gone, and this continued until her discharge, when the hands were no longer asphyxiated in appearance, nor were they cold or wet. A certain amount of deformity still remained, but for all practical purposes the condition appeared to be cured.

CASE II.—G. H., aged 37, labourer, was admitted on January 3rd, 1896, suffering from rheumatoid arthritis. His family history showed phthisis on the maternal side, but his previous history was good. His present illness began thirteen months ago, after an attack of influenza and tonsillitis, with stiffness and pain in the right thumb, which soon spread to all the joints of both hands, to the knees, and later on to shoulders, elbows, wrists, jaws, and back of neck. On admission he was found to be a badly nourished man with fair appetite, bowels costive, but fast losing flesh. Within the last few weeks he had got rapidly worse. On examination, the heart's apex was found in the third interspace ½ inch internal to the nipple line. The first sound at the apex was impure, but no distinct murmur. He had considerable swelling of the joints of the fingers, of the wrists, and knees, the other joints being affected to a less extent. Both hands and feet were wet with perspiration, and there was marked pigmentation, with wasting of the extensors of the arms. On January 7th he developed a herpetic eruption along the course of the right ilio-inguinal nerve, his general condition meanwhile remaining much the same, except that the temperature, which on admission was 99°, rose to 100°. For several days this persisted, and he suffered much from pain

and sleeplessness. On the 24th his temperature rose to 101°, and he had some pain in the chest on deep inspiration. On examination, pericardial friction was heard along sternum, and this on the 25th had become general over the cardiac area. Temperature now rose to 102.6°. On the 27th there were signs of fluid in the pericardium and pleuritic friction at the left base was also detected. On the 29th his temperature began to fall, and he felt better in himself, and from now onwards his pericarditis and pleurisy rapidly cleared up, and he was discharged nearly well on February 20th. At this time not only had the chest symptoms disappeared, but the joint conditions had much improved, and his general health was better than it had been since the onset of his illness.

With what were we dealing in those two cases, which are typical of a class of cases by no means extremely rare? Were we dealing with a mixed infection, or were those cases due to the same infection as had given rise to the arthritis? That they must have been due to an infective organism is, I think, clear, as how else can we explain the sequence of events? In one we had pericarditis followed by pneumonia, diarrhœa, and a skin eruption; in the other herpes followed by pericarditis and pleurisy; while both occurred in the course of acute rheumatoidal changes. They thus strongly point to some blood infection. Another point is the rapidity with which the symptoms cleared up in the joints—a rare occurrence in uncomplicated rheumatoid arthritis. Did the organism, if such were the cause of the pericarditis, during its life cycle elaborate in the blood a substance curative to the joint changes? If so, the cause of both conditions must surely have been identical. If rheumatoid arthritis were due to a reflex nerve change, or to one having a central nerve origin, one would expect the arthritis to be made worse by the occurrence of such conditions as the above cases illustrate. In fact, one is driven to the conclusion that they must have been due to an infective organism, and that in all probability the cause of the rheumatoid disease was the cause of the pericarditis, and that these organisms gave rise to some metabolic change inimical to their further existence both in the joints and other special sites. In pure uncomplicated rheumatoid arthritis such production must occur more slowly. If this theory is not correct, the solution of the mystery must rest in the supposition that the infection was a mixed one, and that the products of one were inimical to the life of the other. Unfortunately, in neither case did I feel justified in aspirating the pericardial fluid, but in both from the joints I obtained specimens of the organism I believe to be specific to the disease.[1] I much regret not having been able to obtain proof as to the cause of the pericarditis. In both cases endocardial lesions had arisen before coming under observation, but in neither could reliable histories of their onset be obtained. In neither, however, was there any history of antecedent illness likely to cause such lesions, and I think, therefore, we may justifiably presume that they arose during the course of the illness, and that they were caused by the same agent as gave rise to the pericarditis. I am much indebted to Mr. L. H. Walsh for the careful notes of these cases.

REFERENCE.

1 *Lancet*, April 25th, 1896.

THE PARASITE OF MALARIA IN THE FEVERS OF WEST AFRICA.

BY SURGEON-CAPTAIN C. W. DUGGAN, M.B.,
Army Medical Staff.

DR. MARCHOUX in a paper entitled Le Paludisme au Senegal, published in the *Annales de l'Institut Pasteur*, describes the symptoms and treatment of malaria in Senegal, West Africa, and gives a detailed account of the appearances presented by the parasite in the peripheral blood and internal organs. His observations extend over a considerable period of time and include the examination of a large number of cases.

I propose to refer to Dr. Marchoux's paper with a view to indicate some points wherein his description differs from what I observed in cases of malaria at Sierra Leone. According to Dr. Marchoux the symptoms of malarial fever in Senegal are as follows. There is a feeling of *malaise* for two or three days, followed by fever of a continued or remittent type, with vomiting. Icterus is frequently present. The patient is extremely weak, often delirious, and threatened with a pernicious attack. After three or four days' treatment the patient is well, but from the twelfth to the fourteenth day there is a return of the fever. Another relapse occurs twelve to fourteen days later. In some patients the attacks continue till the malaria has become chronic. Pulmonary congestion is the most frequent complication.

Dr. Marchoux made a microscopic examination of the blood in 347 cases, and found parasites on every occasion. They varied in number according to the gravity of the attack and the time at which the observation was made. Five to six and even more parasites were seen in the same field, and one to four parasites in each affected red cell. The author makes special reference to a process of the parasite by means of which it penetrates the red cell. He gives a drawing of two stained specimens in which this process is visible. He has seen a parasite partly within and partly without a red cell. As a rule the parasite develops without pigment. Crescents were seen on the twelfth day after a first infection, and were the first signs of a relapse. At this period large pigmented parasites in their external appearance resembling tertian parasites were found, but instead of forming rosettes they became spheres, and the pigment collected itself in the form of a central halo, and then the spheres became oval and finally crescentic; these two last stages may be wanting as in tertian and quartan types. Dr. Marchoux considers that the constant appearance of the crescents at the time when there is a recurrence of the fever points to an encysted stage capable of further development. He has never seen a free crescent. He believes that the form of the malarial parasite seen by him in Senegal is identical with the summer-autumn parasite of Marchiafava and Bignami. He states that it has already been described by Ziemann in the Cameroons and by myself at Sierra Leone.

In the Roman parasite the formation of pigment is the rule and on the West Coast it is the exception. With reference to the size of the parasite Dr. Marchoux affirms that it is smaller than the Roman parasite (during the winter not more than 1 μ) and towards the month of November, when the fever is milder, it is of the same size as the Roman parasite, and later on even exceeds it. He is of opinion that the resistance offered by the individual attacked is the most important factor in influencing the size of the parasite; the greater the resistance the parasite encounters the larger it becomes. When convalescents return to Europe with chronic malaria, it is the large form of parasite that is found in their blood, and in support of this statement Dr. Marchoux affirms that M. Laveran, who has examined many such cases, has always found this form of parasite.

From Dr. Marchoux's conclusions I quote the following: "In Senegal malaria is only contracted during the rainy season. A daily dose of 25 cg. of quinine sulphate is strongly recommended as a prophylactic. The parasite of malaria is polymorphic." From a comparison of the symptoms of malarial fever in Senegal (Dr. Marchoux's observations were made in the part which lies to the north of the Gambia) with what I found at Sierra Leone, it appears that there is no essential difference between the fevers of the two districts.

My observations on the fevers and parasite of malaria of Sierra Leone are recorded in a paper read before the Royal Medical and Chirurgical Society and published in the *Transactions*, vol. lxxx, p. 213. As will be seen by a reference to this paper the onset was sudden in a number of my cases. In some, relapses occurred every few days, in others less frequently. Pulmonary congestion was a rare complication. I was unable to detect a process connected with the parasite in any of my stained specimens. Before the death of the parasite the pseudopodia were always retracted, and the parasite assumed a ring shape. So far as I was able to observe no parasite was seen to possess a pseudopodium specially designed to enable it to penetrate a red cell. The parasite adhered firmly to a red cell, and while developing appeared gradually to sink into it. I did not observe any appearance which might be interpreted as that of a parasite only partly within a red cell. In all my cases the development of the parasite was accompanied by the formation of pigment. Crescents generally appeared a few days after the commencement of fever. I have seen them as early as the end of the second day in a patient who had never previously suffered from malarial fever. In a number of hospital patients

the appearance of crescents in the blood was not followed by fever. They persisted for several weeks, and the patients were discharged from hospital apparently in good health.

In some of my cases deeply pigmented spherical bodies accompanied the crescent form; in them the pigment was generally arranged in a dense mass occupying the interior of the parasite. These pigmented parasites were never larger than a normal red cell, and could readily be distinguished from the large pigmented parasites of tertian fever. In one instance I saw a pigmented sphere slowly change into a crescentic form. Among several hundreds of crescents that I examined with care, I did not observe any appearance suggestive of an encysted stage of the parasite, and in this connection I may mention that I saw in one oval form of the crescent series three large, well-marked spores, each possessing a distinct nucleolus, while a fourth spore, which had evidently just escaped, lay close to this oval-shaped parasite.

In many cases crescents were free in the blood, no fine line connecting the ends of the crescent being visible, and the periphery of these crescents did not stain with eosin.

At Sierra Leone the season of the year did not influence the size of the parasite. Frequent observations were made during both the dry and rainy seasons, and the parasite was always found to present the same appearances.

Some patients were frequently admitted to hospital with attacks of malarial fever, while others suffered to a very small extent; but in all cases the same size of parasite was evident.

Since my return to this country I have had an opportunity of examining several sailors invalided after the Benin expedition. They were sent to the Royal Naval Hospital, Plymouth, where I made a careful examination of their blood, some months after they had left the African coast. In these cases the appearances presented by the parasite were in every respect identical, both as regards its form and size, with what I observed at Sierra Leone—the minute unpigmented forms, the slightly pigmented, and crescents. The activity of the parasite did not appear to be at all diminished by the change of climate, and I detected no difference in its size. In one of the cases the temperature had been normal for two days. All the men had been treated with daily doses of 10 to 15 grs. of quinine sulphate.

From this brief account it will be evident that the conditions referred to by Dr. Marchoux as affecting the size of the parasite of malaria caused no alteration in the appearance of the parasite seen by me at Sierra Leone and in this country. I am of opinion that the parasite of malaria observed by me at Sierra Leone is identical with the parasite of the summer-autumn fevers of Southern Italy, described by Marchiafava and Bignami, and that there is no evidence of polymorphism in its development. The only case suggestive of polymorphism was admitted to hospital shortly after the beginning of the rainy season. The appearance of the parasite agreed in every detail with the description of the tertian parasite given by Golgi, and with specimens of this parasite kindly sent me by Dr. Thin.

Malarial fever may be contracted during the dry season. I have employed quinine as a prophylactic in daily doses of 5 grs., but only succeeded in inducing a few persons to continue this treatment. The results were sufficiently encouraging to warrant the advisability of all who have to live in a malarious district adopting this precautionary measure. The hydrochlorate is preferable, being stronger, more soluble and palatable than the sulphate.

TRANSIENT AND RECURRING PARESIS IN ACUTE CEREBRAL SOFTENING.

By S. A. ORD-MACKENZIE, M.R.C.S.Eng., L.R.C.P.Lond.
Woolhampton.

THE somewhat indefinite symptoms of acute softening due to thrombosis of the cerebral arteries may make those observed in this case of special interest.

At the commencement it was one of the usual type. Severe and persistent neuralgic headache above the left orbit had existed in a woman aged 66 for ten days or so before I saw her. Except that her power of memory seemed to fail from day to day, the symptoms remained practically unchanged for a fortnight, till one afternoon she became suddenly drowsy, cerebration was slow, and the speech blurred. Two hours after this there was slight paresis of the right side of the face, shown only by a faint droop of the angle of the mouth, and by the ala of the right nostril being flattened. The pupils were equal, sluggish, and somewhat contracted. The conjunctivæ had a yellowish tint. The following morning the paralysis had disappeared, the conjunctivæ were normal in appearance, but the patient remained semi-comatose.

She passed a restless night, and the next day the nose and mouth were drawn far over to the left side, the conjunctivæ were again yellow, and the skin of the face had a distinctly jaundiced look. The extremities were cold as far as the knees and elbows, and also the left side of the neck. The knee-jerks were gone. She was sensible to pin-pricks on the soles, but sensation seemed dulled, and the feet were drawn slowly away, and only after a distinct interval. The right hand was hyper-extended, the fingers and elbow flexed. The hand and forearm would respond slightly to stimulation, but power in the shoulder seemed to be lost.

Six hours later no traces of paralysis or pigmentation were to be found, the patient spoke quite rationally, but the same evening it all returned, and she was as drowsy as ever.

Two days later she began to pass her water under her, and the pulse, which still continued full, dropped from 54 to 42. (No drugs had been given since the coma first set in.) Next morning there was marked external strabismus of the right eye, which had gone by the following day. The pupils of both eyes were generally strongly contracted when the lids were suddenly raised, and then slowly dilated. No optic neuritis was present in either eye, but the choroid of the left had a blotched and mottled appearance as though from old capillary hæmorrhages. The surface of the cornea of the right eye was hazy and as though studded with minute boiled sago grains, which had not been noticed when the eyes were examined the previous day. The media had become cloudy, and only one or two of the retinal vessels could with difficulty be indistinctly seen.

There had been no history of any impairment of vision. When the examination of the eyes was commenced there was no paralysis of the face, but it was very marked before the examination was concluded, and then it appeared that local irritation, such as raising the lids or touching the tongue, would bring it on. At those times when these focal symptoms were most marked the conjunctivæ would become deeply stained and the face also, though not when the palsy was induced by irritation. The urine shortly after would have a dark "portery" appearance, though this grew less marked as the case went on. It was faintly acid, contained no albumen or sugar, but immense quantities of oxalate of lime and minute traces of bile pigments.

There had been great frequency of micturition for some days, almost half-hourly calls, and a considerable quantity at a time. Two days later the pulse rose to 76 and the respirations to 34, though examination of the chest revealed nothing. Rhythmical movements of an athetotic character were present in the right arm.

The forearm would be flexed to a right angle, then rotated in; the thumb was then strongly flexed, and lastly the limb would be slowly extended again. This would occur about six times a minute, and lasted several hours. Four days later the patient spoke quite sensibly, smiled at and knew everyone around her, remarked that she felt better and would like something to eat, objected to milk, but made signs for something solid. Half an hour later the coma was as deep as ever.

Towards evening she showed signs of Cheyne-Stokes breathing, pulse 88, strong, and incompressible. Next day the temperature, which had throughout the illness been normal, rose to 100° F., pulse 80, respirations 48; pupils unequally contracted, the right the smaller of the two; all reflexes gone, both superficial and deep. No urine had been passed for twenty-six hours, the bladder appeared empty, and on passing a catheter only a few drachms were drawn off. The bowels had been constipated all through. Slight hypostatic pneumonia at both bases.

The next and last day of her illness the temperature rose to 103.8° in the morning, respirations 72, pulse 140, and very weak. The face was flushed, the skin moist, and there was conjugate deviation of the eyes to the right. At 6 P.M. the respirations were 52, the pulse uncountable, the temperature in both axillæ 107.2°, and in the rectum 108.6°; the face was pale and the skin dry. At 6.30 she died, and there was no rise of temperature after death.

The *post-mortem* examination of the brain revealed extensive mischief. The surface showed nothing abnormal on the convexity, the vessels appearing patent and healthy, but at the bifurcation of the basilar artery was a patch of atheroma, and one or two small patches in the right posterior cerebral, while the left posterior cerebral was blocked a short distance from its origin for about three-quarters of an inch. On section, the brain substance was normal to a level with the roof of the lateral ventricles, but at that point it was distinctly softer on the left side and of a yellowish tint. The vessels of the choroid plexus on this side were congested and matted together with yellow lymph. The floor of the ventricle was one mass of softening involving the optic thalamus and corpus striatum, and rendering any distinction of detail impossible.

The area of softening was approximately 2 inches by 2½ and 1 inch in depth, and a small patch of it occupied the inner surface of the superior temporo-sphenoidal lobe. The other organs of the body showed nothing unusual, except that there were numerous bands of recent peritonitic adhesions binding down the intestines without any inflammatory condition of the gut itself, and accounting for the pain which was elicited on deep pressure over the gall bladder, though there was nothing else to point to existing mischief there.

The most noticeable points of interest in the case were the brief yet recurring attacks of paresis, more especially in the close connection they apparently had to the paroxysmal hæmoglobinuria to which the jaundiced appearance of the patient seemed evidently due. It could hardly have been caused by an excess of bile pigment, which would have shown itself in greater quantities in the urine, whereas traces of it were but once found, and then only to a slight degree. The effect would also have been more lasting had it been due to more than some altered condition of the blood, for a few hours sufficed to remove all discoloration both of conjunctivæ and skin, to reappear and disappear again and again a few hours later.

AN EXPERIENCE OF NINETY-SIX CASES OF DIPHTHERIA IN PRIVATE PRACTICE.*

By WALTER CHARLES AYLWARD, M.R.C.S., L.R.C.P.

MOST of the information we possess in reference to diphtheria, particularly in reference to the treatment of that disease by the hypodermic injection of antidiphtheritic serum, has been obtained from the isolation hospitals. The conditions which obtain under these circumstances of necessity differ somewhat from those which obtain in private practice, and I venture to hope that a record of results observed under the latter conditions may not be wholly devoid of interest. Moreover, as one-fourth of the cases were treated by non-serum methods and the remaining three-fourths with serum, an opportunity will be afforded of comparing the results of the two methods in the same outbreak and under similar conditions, and the fallacy of comparing one line of treatment in an outbreak of malignant type with another line of treatment in an outbreak of benign type will be avoided.

The outbreak as a whole must be regarded as a mild one, although there were some very severe cases in addition to those which proved fatal. The spread of disease was almost entirely due to personal contact with the sufferers. The first case of the whole series occurred in June, 1896, and was followed in five days by No. 2, who had been sitting next to No. 1 at school. No. 3 was the brother of No. 2, and slept with him. No. 4 attended the same school as Nos. 1 and 2, and No. 5 was the father of No. 4.

* Read at a meeting of the East Sussex District of the South-Eastern Branch of the British Medical Association.

In all these cases there had been obvious personal contact affording ample opportunity for the conveyance of infection from one to another, and this mode of infection was so marked a feature of the whole outbreak that upwards of two-thirds of the total cases were clearly traceable to it. A few examples of indirect personal infection occurred; by this I mean the conveyance of infection by an intermediate person without the intermediary contracting the disease. For example, Mrs. J. nursed Case 4, and washed him after his death, and did not contract diphtheria, but four days later her son had developed it. Again, Case 42 died, and was "laid out" by Mrs. F., who remained well, but a nurse child who lived with her developed the disease within a few days. In neither instance could any other source of infection be traced. On inquiry I elicited the information that after performing her offices for the dead child Mrs. F. had taken absolutely no precautions in disinfecting herself beyond the formality of washing her hands in a little ordinary water and using a little carbolic soap.

In reference to the position occupied by the false membrane, it is worthy of remark that in nearly 97 per cent. of the cases it was observed at some time or another on one or both tonsils, and these were the parts almost invariably first attacked. In 51 per cent. of the cases it did not spread beyond them, but in the remainder it spread so as to attack the various adjacent parts as follows:

The posterior part of pharynx	in 26	per cent.
The uvula	in 23	,,
The soft palate	in 15.6	,,
The nares	in 14.6	,,
The larynx	in 9.4	,,

In two cases the posterior pharynx was attacked, and the false membrane disappeared without spreading to the tonsils.

The submaxillary glands were observed to be enlarged in 72 per cent. of cases, and sometimes the enlargement of these and the cervical glands with the surrounding œdema was so great as to suggest at first sight a combination of lower alveolar abscess and mumps.

The age incidence of those attacked was approximately as follows:

Under 1 year	1	per cent.	...	1 fatal case.
Between 1 year and 2 years ...	5.2	,,	...	0 ,,
Between 2 years and 5 years ...	10.4	,,	...	1 ,,
Between 5 years and 10 years ...	38.5	,,	...	3 ,,
Between 10 years and 15 years	23.0	,,	...	1 ,,
Above 15 years	21.9	,,	...	0 ,,

In 11.1 per cent. only of total injected cases has a rash been observed. This appears to be considerably below what is usually experienced, and it would be interesting to know to what cause or causes this difference may be reasonably attributed. On looking through my notes with this object specially in view, I found that while a rash followed in 25 per cent. of 12 cases in which fluid serum was used, it only followed in 8.33 per cent. of 60 cases in which the dried serum had been used. Although the numbers are too small to carry much weight, this marked difference seems to point to some causal relationship, and rather suggests that in the process of drying the serum loses some of its irritating properties upon the skin. So far as I have been able to judge, there is no difference in its effects upon the disease.

The rash usually appeared some eight to fourteen days after the injection. It was usually of a measly appearance, and attacked the lower extremities first, then the upper extremities, and afterwards the trunk, if at all. One marked exception to the measly type of rash occurred in Case 18, in which fluid serum was used. In this case the rash was markedly urticarial, with raised flat-topped wheals as large as a five shilling piece. There was much general subcutaneous œdema, and the face was so swollen that the eyes were nearly closed. The heart's action was very feeble, and much accelerated—pulse 170 per minute, while the temperature rose to 103°. There was no albuminuria.

In Case 26, although the rash was of the usual measly type, the distribution was peculiar. From the middle of the thigh downwards both lower extremities were well peppered with the rash, both on the flexor and extensor aspects, while the only other part of the body attacked was a circular patch 10 inches in diameter, having for its centre the point of injection between the scapulæ.

Albuminuria was observed in 18.7 per cent. of 16 cases exa-

mined. These were all serum cases, and as this is below the average percentage in ordinary cases, the evidence afforded is, so far as it goes, dead against the idea that serum injection causes or increases albuminuria as some have supposed.

Paralysis followed in 8.3 per cent. of 24 non-serum cases, and in 18.0 per cent. of 72 serum cases. In all of them the soft palate was attacked; in some other parts were also affected. In most the primary diphtheritic attack had been severe, and 2 proved fatal, but to this general rule Case 2 was a marked exception. In him the primary attack seemed most trivial; he could scarcely be persuaded that he was ill at all; his eating and sleeping were unimpaired. The only false membrane ever observed were two patches, each as big as a pea, one on either tonsil. Yet, in a month's time, all the usual symptoms of palatal paralysis appeared; walking or standing became impossible, while the movements of arms and hands were much impaired. The knee-jerks were absent, although curiously enough the abdominal and cremasteric reflexes were unusually well marked.

The instrument used for injecting has in all cases been an ordinary aspirating syringe of ℥ij capacity. In no case has the whole of the elaborate ritual sometimes prescribed for disinfecting the skin been carried out, but the following precautions were always taken:

First, the injecting needle was boiled, and the syringe filled with phenol (1 in 20) half an hour before use. If dried serum were used the dissolving water was boiled at the same time. (In the earlier cases the syringe was boiled too, but this practice was discarded because of damage to the washers.)

Secondly, the patient's skin was prepared by rubbing with phenol (1 in 40), and immediately after applying a very small amount of pure phenol to the spot selected for injection.

In addition to the destruction of any germ that might be lurking about this had the advantage of slightly anæsthetising the part. A thin scab was commonly formed, which seemed to give rise to little, if any, inconvenience. In no case have I seen abscess or other untoward result from injection unless the previously mentioned rashes be deemed such.

There was generally some complaint of pain during the first twelve hours after injection, and it was more commonly referred to the point of shoulder of same side than to the point of injection.

The effects of the serum not only upon the false membrane but upon the patients generally, were as a rule astonishing. When I began its use some seventeen months ago I had a most healthy scepticism as to its value, and was quite prepared to find it little better than many other much belauded modes of treatment. Experience in its use has made me a grateful enthusiast.

Its effect upon the false membrane seems to depend mainly upon the length of time that membrane has been formed. If recent, it seems to be disintegrated and almost dissolved away. If it has been in existence some days the absence of spread will be the main indication of the effects of the serum. There may be some slight tumefaction at the edges of the false membrane, which may look as if it were curling, but the thick layers take from two to seven days to become completely detached, even then leaving a raw bleeding surface exposed. In recent cases some observable effects upon the false membrane can usually be noticed within six hours, and in only 3 per cent. of the 72 serum cases was any spread observed after the lapse of twelve hours from time of injection. In these, which were among the earlier cases, only a very small initial dose had been given, namely, 200 Behring units. In the majority of cases, including a baby of 13 months, 1,000 Behring units were injected.

As a general rule the temperature rose for a few hours, but was soon followed by profuse perspiration and a considerable drop in the temperature. This was well exemplified in Case 33, where the temperature recorded twelve hours after injection was 105° F., and twenty-four hours later was 99.2° F.

One common result or, at any rate, sequence of injection, especially in children, was a long comfortable sleep.

The mortality in 24 non-serum cases was equal to 12.5 per cent., and in 72 serum cases was equal to 4.16 per cent. Of the fatal non-serum cases No. 14 died of asphyxia just four and a-half hours after first being seen. His parents declined tracheotomy. This case, apart from the history, might very well have been diagnosed as primarily laryngeal, as no false membrane was visible about any part of the pharynx. There was, however, a history of sore throat during all the previous week, when he had been with diphtheritic children. Case 19 died suddenly of cardiac paralysis. Several days after all false membrane had disappeared. Of the fatal serum cases it is worthy of note that all three had been suffering for from four to six days before medical aid was sought. No. 4 died during tracheotomy from the combined effects of the diphtheritic poison, asphyxia, and chloroform. No. 22 died of asphyxia and exhaustion nine hours after injection. No. 79 died of cardiac paralysis several days after all false membrane had disappeared.

Most of what has gone before has had reference more or less directly to the use of serum in the treatment of diphtheria, and this has been so intentionally, because I have become fully convinced that this is the treatment *par excellence* of the disease. In addition to this the usual hygienic measures were adopted, the details of which it is not necessary to burden you with. All get-atable false membrane was painted with perchloride of mercury and glycerine (1 in 1,300).

It is most important that injection be performed at the earliest possible moment after a definite diagnosis has been made, and it is specially in connection with this point that I believe better results will be obtained in private than in hospital practice. Even in the best organised ambulance service some hours must usually elapse after the diagnosis has been made at home before treatment can be commenced at hospital, and under unfavourable circumstances the time might be longer. This delay in a disease like diphtheria may in some cases prove to be the death warrant. This view is strongly supported by the fact that all but one of the fatal cases had been neglected for several days, and this solitary exception was one of the earlier cases, in which, to my lasting regret, I failed to use the serum treatment. The same truth is further exemplified by the fact that only one death occurred in the last 58 cases—mainly, I think, because the people began to realise the importance of seeking advice early. Moreover, in by far the great majority of cases the disease begins in the tonsils and spreads from these glands to more dangerous regions. Early injection will in most cases prevent this spread. A very considerable proportion of the 51 per cent. in whom the false membrane did not spread beyond the tonsils were those who were living in the same rooms or houses with the fatal or more severe cases, and were consequently seen early—often before the false membrane appeared at all.

The small percentage of laryngeal cases may be similarly accounted for.

One word in reference to immunising injections. It is strongly recommended by some to use them for all members of a household where diphtheria appears. I have never done so, nor have I as yet injected a suspected case of diphtheria before false membrane has appeared. My reasons for not doing so are: (1) That in every case of this series in which the serum was used in a full dose on the first appearance of false membrane, the arrest of disease has been prompt and efficient. (2) Considerable pain is often caused by injection. (3) Although the risk is probably very small, it cannot be said to be absolutely *nil*. (4) It is open to question whether it is prophylactic at all.

The serum used in every case was that prepared by Messrs. Burroughs, Wellcome, and Co., and generally the dried form. The latter variety eighteen months ago had a considerable practical advantage in point of bulk, as a full dose could readily be dissolved in ℥ij of water or less, whereas the fluid serum was about 10 c.cm. (℥iij). Since, however, the serums have been more highly concentrated this advantage has disappeared.

The late Mrs. Alicia Ellen Renton has by her will bequeathed £500 to the Hospital for Diseases of the Chest, City Road; £200 to the Consumption Hospital, Brompton; and £100 each to the Hospital for Convalescent Children, Highgate; the Alexandra Hospital for Sick Children, Dyke Road, Brighton; St. John's Hospital, Leicester Square; and the Hospital for Diseases of the Skin, Stamford Street.

TREPHINING OF THE MASTOID FOR MASTOID DISEASE: NO RELIEF: SUBSEQUENT TREATMENT WITH ANTISTREPTOCOCCIC SERUM: RECOVERY.

BY G. L. KERR PRINGLE, M.D.EDIN.,
Surgeon to the Bridgwater Infirmary.

I SUBMIT the following case, as it is of considerable interest.

On March 20th, 1897, I saw S. B., aged 22, a bricklayer, who complained of shivering pains in the back, with general *malaise*. His previous history and family history were good, with the exception that he was rather given to alcoholic excess. The temperature was 102.5° F.

On March 22nd the temperature was 103° F. He complained of great pain in the occiput, and there was retraction of the head, and pain and stiffness in the erector spinæ muscles. I advised his removal to the infirmary. On admission the temperature was 103.8° F.; the bowels were constipated. The head was shaved, and an icebag applied. Potassium bromide gr.x was ordered every four hours.

On March 23rd the temperature was 100° F., and rose in the evening to 103.2° F. He still complained of great pain, and objected to the icebag. The pupils were regular; the abdomen was not retracted, and there was no paralysis, but he did not speak distinctly. There was some cutaneous hyperæsthesia and general irritability, but no marked photophobia. The pulse was 86, not markedly irregular. No history of discharge from ear could be obtained. He was given 15 gr. antipyrin every four hours, which kept him quiet. The next ten days temperature varied from 101° F. to 103° F.

On April 6th the temperature fell to 101° F., and the same evening he had a copious discharge of pus from the right ear. He was still very irritable, semi-delirious, and very noisy. The head was still retracted.

On the following day I trephined the mastoid antrum and cells, establishing free drainage. No marked collection of pus was found, but a considerable surface of bared bone. The following day the temperature fell to 99° F. He was still in the same condition.

On April 9th the temperature was 98° F., and there was slight facial paralysis, due, no doubt, to the operation. The wound was dressed.

On April 13th the temperature rose again to 102.6° F., and on April 16th it was 103.6° F. His condition was practically the same; he was very noisy indeed, and could hardly be kept in bed. The head was very much retracted, and there was great tenderness over the erector and sterno-mastoid muscles.

On April 17th Mr. Cross, of Bristol, happening to be in the infirmary, kindly examined the discs, and corroborated the opinion that he had optic neuritis and engorgement of retinal vessels.

On April 18th the temperature was 103.8° F., and his condition was the same.

On April 20th the temperature had fallen to 99.6° F., but the symptoms were otherwise the same with the exception that the pulse had become very feeble, and his appetite, which had been good, now fell off.

The temperature indicated so clearly the presence of pus, that I determined to try antistreptococcic serum. The following day, the temperature being 99.8°, I injected between the shoulders 10 c.cm. of serum (obtained from Burroughs and Wellcome). The temperature rose that evening to 100.6°.

On April 22nd temperature was 100.8°, and 5 c.cm. of the serum were injected. The same evening the temperature fell to 98.4°.

On April 23rd the temperature was 97°, the pulse very feeble, and he was in a state of semi-collapse.

On April 24th the pulse had improved, he was brighter, and the temperature was normal.

On April 25th I again injected 5 c.cm.

For the next week the temperature remained fairly normal; the wound was very foul; he seemed to be more conscious though still very troublesome.

For the next four or five days the temperature was fairly normal, and on May 9th the temperature was still normal, and he was decidedly better and quite conscious, but appeared to be a little dazed. He had no pain in head, and he was able to look at illustrated papers, but the neck was still very stiff.

On May 11th the temperature was normal; he could move his head about, had no pain whatever, and was able to play draughts.

On May 14th he was allowed up; he was quite convalescent, and the discs were normal.

On May 22nd he was discharged. He had slight thickness of speech and slight paralysis of the right upper eyelid. During convalescence it was ascertained that he had previously had a discharge from the right ear.

The interesting points of the case are (1) the optic neuritis and its subsequent total disappearance; (2) the treatment by the antistreptococcic serum. As far as the operation went, I question whether very much was gained by it, as there was no improvement in the symptoms. Thirteen days elapsed between the operation and the first inoculation. Whether the subsequent improvement was due to the inoculation it is difficult to say, but the fact remains that all the symptoms disappeared subsequent to the injections. Curiously, the patient was again admitted to hospital on August 20th for an attack of chorea, with no rheumatic or cardiac complications, which gave way to treatment by arsenic and belladonna.

A CASE OF FACTITIOUS URTICARIA, OR SO-CALLED DERMOGRAPHISM.

BY LOUIS E. STEVENSON, M.B., B.C.CANTAB.,
Temple Sowerby, Penrith.

A CASE of this interesting skin phenomenon came under my notice recently. The patient is a young man aged 22, of florid complexion, and has ever enjoyed the best of health. He is liable to blush profusely at very slight cause, and is somewhat "short in the temper." From his earliest childhood it has been noticed that scratching of his skin has been followed by white raised patches.

Using a moderate amount of pressure with the blunt end of a pencil, I wrote on the flexor surface of his left forearm in big letters his name "Joseph," when the following phenomena were observed: For a minute or so nothing could be seen but the red flush produced by the pressure. Presently, beginning centrally and spreading towards the periphery, the flush was slowly replaced by a white, raised, cord-like swelling, bordered with perhaps a suspicion of red, the result being that the name stood out in bold relief. The writing remained quite legible (at a considerable distance) for upwards of half an hour, and then disappeared, the skin returning to its normal condition. There was no pain or tingling complained of. I asked the patient to experiment with different areas of skin, and he thinks the skin between his shoulders is the most sensitive, and the skin of his face the least so.



This peculiar skin condition is, I suppose, allied to urticaria, and the subjects of the latter disease are supposed to manifest the symptoms of dermographism on occasion.

Conversely, one would expect that the subjects of dermographism would be liable to skin disorders, especially those of the urticaria type. My patient has never had any skin trouble of any kind. As to the cause of the phenomenon, I take it it must be due to hyperexcitability or abnormal irritability of the nerves controlling the blood supply to the skin, a moderate stimulus resulting in the pouring out of a quantity of serum, thus producing the phenomena in question. I cannot find much reference to this condition in the medical literature at my disposal, but it is said to be fairly common amongst the French, as one might expect in a race with such highly-strung nervous systems. We know, for example, that the Protean manifestations of hysteria are to be observed across the Channel in their fullest perfection.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A SALIVARY FISTULA OF THIRTY YEARS' STANDING: OPERATION: CURE.

MR. G., aged 61, native of St. Helena, consulted me in June, 1896, for what he termed "a leak in his neck." Examination revealed an opening about the size of a small pinhead situated in the inferior portion of the superior carotid triangle of the left side of the neck, and from which there was oozing a thin watery fluid. On giving him a small crystal of citric acid to suck, the flow of this fluid would markedly increase. It was evidently salivary secretion. I passed a small probe into the fistula in the direction of the parotid gland about two inches.

Over thirty years ago the patient underwent an operation for an enlargement in the neck, which he says the doctor called "a tumour"—what variety of tumour I could not elicit from the patient. After the healing of the wound, which was several months after the operation, he noticed that his neck was always wet, and that from the lower portion of the cicatrix there seemed to be an oozing of water. He had undergone treatment on several occasions without success.

I injected, hypodermically, cocaine, placing the patient in the recumbent posture (which I believe to be the only safe manner for the administration of that anæsthetic), and passed a probe well into the fistula. I then passed a curved needle, threaded with heavy silkworm gut, well under the probe and fistula, bringing it out on the other side. Removing the probe I ligated the fistula. This would be at a point about 4 c.cm. from the opening of the sinus. Reinserting the probe to the point of ligation, I cut down upon the probe, laying the fistula open, and curetting thoroughly, sutured the incision with three or four sutures.

I asked the patient to return in four days. Examination then showed no signs of suppuration, and the wound seemed well healed. On the fifth day I removed the ligature. On the eleventh day the sutures were taken out. It is now fully three months since the operation, and there are no signs of the recurrence of the fluid, and the surface is thoroughly healed.

The only points to be noted in this operation are these: The ligating of the fistula at the proximal end of the fistula, thus shutting off the flow of saliva, to allow the curetted portion of the canal to heal; and the early removal of the ligature before its cutting its way to the fistula, or causing the parts to slough. I might here add that I found the opening of Stenson's duct, and I had no difficulty in passing a probe its full length.

Claremont, near Cape Town. R. S. ANTHONY, M.D.

THE TOLERANCE OF CREASOTE.

IT may be of interest to record briefly the particulars of a case under my care in which creasote was exhibited with apparently unique tolerance. A gentleman, aged 35, with a distinct phthisical family history, was attacked twelve months ago with pulmonary tuberculosis. Positive evidence from bacteriological examination of the sputum was from time to time forthcoming during a period of six weeks, when he was acutely ill. In addition to the general principles of treatment, so soon as the diagnosis was established, I prescribed beechwood creasote by the stomach, commencing with mj thrice daily, as well as inhalations of guaiacol. The patient who was possessed of scientific attainments, fully realised the nature of his illness, and was most anxious from the first to saturate his system with the drug, being imbued with a strong faith in it. The dose was very rapidly increased, till at the end of a month, when I sent him to Arôsa, he was taking exactly 340 minims in every twenty-four hours. He never had any toxic symptoms. During the two and a half months the patient was at Arôsa he continued to take between 3 and 4 fluid drachms each day. He returned completely restored to health in every detail. Shortly after his return home the patient's belief in creasote as a prophylactic inspired him to go on taking the drug, and this he has done ever since without any ill-effects, the dose varing from 100 to 140 minims a day. He continues in perfectly good health.

In searching records relating to the tolerance of creasote, I have failed to discover any parallel to this case. Advocates of creasote in the treatment of phthisis maintain that the value of it as a specific remedy must be in its exceptional tolerance. It should be noted that the patient inhaled large quantities of guaiacol all the time he was taking creasote by the stomach.

Carlisle. C. W. GRAHAM, L.R.C.P.

AIROL POWDER IN CORNEAL ULCER WITH HYPOPYON.

THE dark green impalpable odourless powder of airol[1] will be found a very useful application in these serious ulcers of the cornea. The cases are common in agricultural districts, often as the result of slight injury, such as is received in "cutting the quick," that is, trimming the hedge, or when the eye is "stubbed," that is stabbed with stubble. Such lesions of the cornea seem very liable to infection; sometimes doubtless are fouled from the first, as when the scratch is received where the butcher bird has been at work, and covered the thorns of the hedge with putridity, but often the corneal wound is illtreated before it can heal, and the tainted wound is bathed in microbic exudation, the irritating products of the microbes then rapidly affects the vascular tissues in the eyes, and causes the formation of pus in the anterior chamber. The pus can be watched through the clear and imperforate cornea. The ulcer may be a comparatively small one, but the patient will usually need admission to the wards, and sometimes incisions or the cautery. Some of the most threatening cases have been successfully treated with airol powder in the following manner:

The eyelids are held open and the airol powder flicked on to the eye with a dredger, the powder turns gradually to an orange colour, and in three to six hours the conjunctival sacs are washed out gently with boric water, which brings out superfluous cakes of yellow powder. The airol is again used as before, and this proceeds every few hours, the eye being treated by the open method—no bandage or pad is used—but the patient is kept in bed.

The ulcer heals, and the pus is absorbed in a proportion of cases greater, as far as I can judge, than by other methods. The eye is singularly tolerant of the airol; in no case have I seen signs of irritation from its use, and when incision and cautery have been used the after-treatment by airol has seemed to be satisfactory.

At present I have not tried it in purulent ophthalmia. In herpes and ulcers of the glans penis, carbuncles, boils, and sloughing sores it has been useful in acting like iodoform, but without the objectionable odour.

GEORGE WHERRY,
Cambridge. Surgeon to Addenbrooke's Hospital.

POISONING BY SWALLOWING THREE OUNCES OF CHLOROFORM:

RECOVERY AFTER UNCONSCIOUSNESS LASTING TWELVE HOURS.

A ROBUST housemaid, aged 19, finding herself three months pregnant, took with her to her bedroom on a Friday night in November last a bottle of chloroform, and swallowed 3 fluid ounces of the liquid, most probably between 3 and 4 A.M. on the Saturday morning. At 6.30 A.M. her mistress found her

[1] Airol is a gallate of the subiodide of bismuth.

lying with her head over the side of the bed, her cheek resting on the floor. She was snoring loudly, and was quite unconscious. Dr. Waterston saw her shortly afterwards, and called in Dr. Robinson at 8.30 A.M. She was in bed, perfectly unconscious, with complete muscular relaxation, flushed face, and widely dilated pupils; the corneæ were insensitive. The pulse was regular and full. Her mouth and breath smelt strongly of chloroform.

The stomach pump was applied with little result; the fluid which returned did not smell much of chloroform. Strychnine gr. $\frac{1}{30}$ was injected hypodermically, and the dose repeated two or three times during the day. Enemata were given to unload the bowels, so as if possible to get rid of some of the poison; they were not relieved, however, till about 3 P.M. Enemata of strong coffee and of brandy were also given. The mouth gag was used, and the tongue kept well forward all the day. The breathing kept good and the pulse natural. At 4 P.M. consciousness returned after an absence of twelve hours. In the evening she was removed to her home in a cab, and her sister states that she made an excellent recovery from the chloroform.

JAMES WATERSTON, L.R.C.S.Ed.
Sunderland. WILLIAM ROBINSON, M.D., F.R.C.S.Eng.

ETIOLOGY OF LARYNGISMUS STRIDULUS.

ATTACKS of laryngismus stridulus are known to be dependent on a reflex, the effective stimulus of which may pass along various afferent tracts.

In the following case, which may be of interest, the afferent impulse was demonstrably started from the irritation of cutting teeth; in most cases the exact irritating cause is very much a matter of conjecture.

The patient is a strong, healthy, well-nourished female child, with good hygienic surroundings, and presenting no evidence of rickets. When 5 months old she had mild attacks of laryngismus stridulus, which passed off when she cut her first tooth. She had attacks of a similar nature six weeks later, and these again passed off on the appearance of another tooth. She now remained free from the disease till she was 12 months old, when the attacks returned with increased severity. On visiting the child I rubbed my finger along her gums, which immediately brought on a typical attack of laryngismus stridulus with carpopedal contractions. After the attack subsided I lanced her gums, which were very tense and swollen. In a few days three more teeth appeared, with complete cessation of the attacks.

Goole. ALEX. M. ERSKINE, M.B., D.P.H.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND MUSEUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

CITY HOSPITAL, BIRMINGHAM.

SCARLATINA MALIGNA.

(By C. KILLICK MILLARD, M.D., B.Sc., Medical Superintendent).

MRS. A. M. H., aged 27, was admitted on July 27th, suffering from scarlet fever.

History.—She had never had any serious illness, but had not been strong since her last confinement. Prior to her present illness she had been staying in the country with her two children on a visit to her married sister. The latter developed scarlet fever, and Mrs. A. M. H. and her children at once returned home in the hopes of escaping the infection. Before reaching Birmingham, however, she had already commenced to sicken, the rash appeared the next day, and on the day following she was admitted to hospital, together with the two children, a girl, E. H., aged two years, and a boy, T. H. H., aged 4 months.

On admission she was very prostrate; temperature 103.6°; tongue dry and brown; throat congested and filled with sticky mucus, and faint but typical scarlatiniform eruption was present on trunk and limbs.

July 28th. Has been very restless all night, had no proper sleep, and vomited several times. She is now quite delirious. Pulse rapid and weak. A mixture containing nux vomica, strophanthus, and spirit of camphor was ordered every two hours. At 5.40 P.M. she was still very delirious, and had not slept all day. A draught containing potassium bromide and chloral hydrate was given, but without effect. At 10.30 P.M. liquor morphinæ hypodermica ♏iv was injected, but also without effect. Two hours later the morphine was repeated; the pupils contracted, but still she had no sleep. She was now wildly delirious, and refused all food and medicine by the mouth. Enemata were not retained. Temperature 105°. The patient continued in much the same condition through the night, and sank at 4 A.M., just three days and a-half after commencing to be ill.

The husband came to see me the following morning, bringing a telegram he had just received informing him that his sister-in-law was also dead. She had died a few hours before our patient, having been ill almost precisely the same length of time; the symptoms and course of illness were also almost identical. Strange to say, the two sisters had been married on the same day!

Of A. M. H.'s two children, the elder had a comparatively mild attack of simple scarlet fever, complicated, however, during convalescence by obstinate otorrhœa, which persisted for three months. The other, the baby, was found not to have scarlet fever, and was discharged after eight days' quarantine.

REMARKS.—True scarlatina maligna is now fortunately comparatively rare, and in consequence scarlet fever is no longer the dreaded and fatal disease it once used to be. What this change in type is due to we do not know, but it is to it rather than to any improvement in our methods of treatment that we must chiefly attribute the remarkably low case mortality which now attends our scarlet fever cases. When the true malignant form does occur, as in the above cases, we are forced to realise how helpless we still are. The cases, occurring in two sisters, appear to indicate that "malignancy" depends rather upon "soil" than upon "seed"—that is, it is due to excessive constitutional reaction of the individual to the scarlet fever poison rather than to exceptional virulence of the infecting germs, for, although the child E. H. was doubtless infected from the same source—what this was was not discovered—she nevertheless showed no sign whatever of malignancy. The case of the baby, T. H., illustrates the immunity usually enjoyed by very young children to scarlet fever. Out of an experience of over 5,000 cases of the disease I can only remember seeing 3 undoubted cases in children under 4 months of age.

BIRKENHEAD UNION INFIRMARY.

EFFECTS OF AN OVERDOSE OF NITRITE OF AMYL.

(By GEO. S. STANSFIELD, M.R.C.S., Medical Officer.)

A WOMAN, aged 58, is under treatment for angina pectoris. She has from six to twelve attacks in the twenty-four hours. Nitrite of amyl inhaled (from capsules) quickly relieves the distressing symptoms; owing to the costliness of capsules a small quantity of amyl nitrite was obtained, and this was given both internally and by inhalation, but had not the same effect as the capsules, so its use in this form was discontinued.

On November 24th paraldehyde ℥ij in water ℥ij had been ordered. The nurse went to her locked cupboard and inadvertently measured amyl nitrite, the two bottles (though not the labels) being exactly alike. It was only after she had given it to the patient that she realised from the odour and a remark of the patient what she had done. She at once gave the whites of two eggs in one pint of hot water; the patient vomited within five minutes. Meanwhile I had been telephoned to, and had ordered apomorphine gr. $\frac{1}{10}$, to be followed by cocaine gr. $\frac{1}{3}$, and at once visited the patient. I found that after the apomorphine she had again vomited freely; hot water was given and the vomiting encouraged. At this time—half an hour after the unfortunate dose—the pulse was exceedingly weak, about 130 per minute; respiration very shallow, with long intervals; and temperature as low as 95°—the index had not been shaken lower, so it may have been less than this. The patient was semi-comatose,

vomiting liquid smelling strongly of amyl nitrite and having a brown colour. The pupils were contracted and she was bathed in perspiration. Strychnine gr. $\frac{1}{30}$, followed by ergotinin cit. $\frac{1}{50}$, was given hypodermically, and whisky (2 ounces) was given *per rectum*. The patient's breathing gradually became deeper and more regular, and in about two hours she was in her usual condition after an anginal attack. She said: "This must have been a very bad one. At the time I was losing consciousness everything seemed green." Dr. Gibson, assistant medical officer, examined the urine on the following day; there was no sugar present and no blood corpuscles, but some hæmoglobin was present for twelve hours, as shown by guaiacum test.

Poisoning by amyl nitrite is so rare that I venture to send these particulars for publication.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

W. H. DICKINSON, M.D., President, in the Chair.

Tuesday, January 11th, 1898.

BENEFACTION TO THE SOCIETY.

THE PRESIDENT announced that Dr. R. Barnes had generously returned to the Society two of its debentures for £100, thereby making a donation of that amount to its funds.

ADJOURNED DISCUSSION ON THE PREVENTION OF ENTERIC FEVER.

Professor CORFIELD, who resumed the discussion, did not agree with Dr. Poore that the great cause of the increase of enteric fever in recent years had been the watercloset. On the contrary, nothing had been more marked than the decrease of the mortality from this disease in this country since the passing of the Public Health Act in 1875, since which date many towns in this country had been sewered and the watercloset system had been more universally spread. As a matter of fact, those parts of the country where the water-carriage system was not carried out in its entirety, and where numbers of houses were provided with so-called dry closets of one kind or other, were precisely those parts of the country where enteric fever prevailed. London was probably the most complete example among the large towns, not only in this country, but in the world, of a water-closeted town, and the death-rate of London from enteric fever during the years 1881 to 1890 was less than that of the country generally. The high enteric fever death-rates were all in those counties where the water-carriage system was least adopted. The watercloset was not invented by Bramah, as had been stated; it was too beneficent an invention to have been the work of one man. Waterclosets were not unknown to the ancient Romans, and were described by Vitruvius, and the remains of them were found in the Palace of the Cæsars. In our own country, Sir John Harrington had published a specification with drawings for such a purpose in the year 1596 in a remarkable book called the *Metamorphosis of Ajax*. The modern form of apparatus, which was afterwards improved by Bramah, was really invented by one Alexander Cummings in the year 1776. Twenty-five years ago enteric fever was generally regarded as a disease which originated *de novo* from decomposing excrement. This view had, however, been gradually superseded, and Professor Corfield related some remarkable instances which had come under his observation, and which he had described in a paper read before the Epidemiological Society in 1874, showing that a place might be for years in a condition which favoured the spread of enteric fever, but that none appeared there until a case was introduced. It was generally admitted that it was spread by drinking water and by uncooked foods, such as milk, shellfish and watercress, but its communication by means of the air around the patient was very generally doubted. Dr. Budd strongly maintained that such communication was not only possible but frequent, and he, Professor Corfield, believed that he was right. Dr. (now Sir William) Gairdner had mentioned the case of H.R.H. the Prince of Wales, a case which was generally believed to have resulted from aërial communication. The speaker had gone through his notes taken on the spot twenty-seven years ago. It was found that water and milk could be excluded, and because of certain supposed defects in the sanitary arrangements of the house it had been always considered that the disease was contracted from sewer air. As a matter of fact there were no cesspools under the house (as was stated to be the cause), there was nothing the matter with the watercloset of the Prince's apartment, which he, the speaker, had tested several times, and its soilpipe was fully ventilated. Those who were most in the house were not attacked, and on consideration of the whole facts of the case, he believed that it resulted from a contamination of food which was partaken of by the gentlemen and male servants of the party, and not by the ladies and female servants, among whom there was no case of the disease. Nevertheless, he fully believed in the conveyance of poison by means of foul air, and especially by means of water polluted by sewer air. One of the most frequent causes of enteric fever in London a few years ago was the connection of the waste pipes of the drinking water cisterns with the drains and sewers, and the pollution of the water by sewer air on account of that connection, and the remarkable decrease of enteric fever in London during recent years was, he believed, chiefly due to the fact that these waste pipes had been disconnected from the drains. It had been hinted that cisterns might be dispensed with where a constant system of water supply was adopted, but this was not the case, as the water was liable to be turned off occasionally for various reasons, and it was necessary to have storage cisterns in the house. There was a remarkable difference between the method of spread of enteric fever and of cholera, which had not yet been thoroughly explained. He would illustrate it by the case of the city of Lyons; that city had always been free from outbreaks of cholera, for although the disease had been introduced there several times it had never spread. On the other hand, enteric fever was very prevalent in the same city. He had himself seen hundreds of cases there, and he believed that it was caused by the contamination of the soil, the ground air, and the atmosphere of the house, with fæcal emanations from the many cesspools with which that city abounded.

Dr. EDWARD SEATON spoke from the point of view of a medical officer of health. Medical sanitary organisation was a most fundamental consideration, as he had recently insisted in his address at the Sanitary Congress at Leeds. The compulsory notification of infectious diseases was inaugurated at Huddersfield, Bolton, and Nottingham almost simultaneously twenty years ago. Methods of disinfection had greatly improved, and at present Dr. Armstrong, of Newcastle, anticipated great advantage from the use of sterilisers in enteric fever pavilions. Proper means for treating enteric fever and for preventing the spread of infections were urgently required. Since the Local Government Act of 1888 was passed several counties had inaugurated a system of circulating information with regard to the prevalence of typhoid in their component sanitary districts. In some the information was collated by experts, and when any small excess of the disease arose the medical officer instituted an inquiry. The Society of Medical Officers of Health were considering the advisability of notifying at once to county authorities the occurrence of any preventable diseases. He was much in sympathy with Dr. Poore's views on rural sanitation. Sir E. Chadwick and Sir B. W. Richardson had placed the ideal system before them, and there was some tendency to consider that town systems were most applicable to the country. In France circumstances—namely, land around dwelling houses—often allowed of the method advocated by Dr. Poore. The drainage of villages and sparsely populated districts by a network of sewers and drains was unnecessary, and the ideas which had originated with the venerated pioneer of sanitation, Sir E. Chadwick, were sometimes distorted, or rather the wrong ideal had come to be set. The carriage of sewage to great distances and its treatment on large tracts of land was frequently expensive, but good results might be obtained from new bacterial systems of treatment.

Dr. J. E. SQUIRE, in a paper read before the Society, had shown, as a result of observations in the 1885 campaign in the Soudan, that the infection of enteric fever might travel through the air by means of dried fæcal matter. In this

campaign patients' excreta rapidly became dried, and then were carried hither and thither by the wind. Since then it had been shown that although dried typhoid bacilli retained their virulence, this means of typhoid infection required careful study, as it was of importance, more especially in the tropics.

Dr. FLETCHER LITTLE made suggestions which if carried out would, he thought, result in the complete suppression of typhoid fever: (1) Notification must be made universal; in districts adopting it the mortality was half that existing elsewhere. Means must also be taken to compensate the bread winner of a family, if prevented from working by the occurrence of enteric fever in his house. (2) The wide use of Widal's reaction, which should be supplied gratis to practitioners. (3) All public buildings such as railways, hospitals, barracks, etc., should be under the care of the medical officer of health. (4) The water test should be applied to all drains laid down before they were passed; the smoke test was insufficient. (5) All sources of milk should be carefully examined. The milk for London often came from a great distance, and the health of London thus depended on that of remote districts. The railways ought to allow the milk cans they carried to be sealed. (6) All raw shellfish should be regarded as "suspect." (7) All cases of enteric fever should be in hospital and when there should be treated by their own doctors. (8) Typhoid stools should not be put on the soil, since birds and animals conveyed the infection elsewhere.

Dr. C. T. WILLIAMS was impressed with the importance of the vulnerability and immunity to typhoid fever possessed by different individuals, and gave illustrations. He believed that the Anglo-Saxon race was more prone to it than Italians, and instanced hotels and rooms which constantly infected English, though the native Italians were unaffected. In support of Dr. Poore's views, he mentioned a village in Sicily, supplied by an old Roman aqueduct and situated on the side of a rocky range; there were no waterclosets or drains, the inhabitants defæcated in the surrounding fields, and typhoid fever never occurred.

Dr. P. HORTON SMITH referred to the long period after defervescence that typhoid bacilli could be detected in the urine and fæces, and pointed out that if not properly disinfected they might spread the disease. The bacilli had been found in the fæces twelve days after defervescence by Brieger and forty-one days by Lazarus, and he himself had found them in the urine twenty-two days after. Even after the bacilli had disappeared from the excreta they might remain in the bone marrow and set up chronic osteomyelitis; and in two cases they had been found at the time of operation in a cavity containing a sequestrum six years after enteric fever. He thought it inadvisable to put typhoid excreta on the soil, because the bacilli had been found by Lösener in soil from a ploughed field, and S. Martin and Robertson had shown that they could grow in soil. The dejecta should, if possible, be burnt, or if this was impracticable be treated with strong antiseptics.

Dr. H. E. DURHAM insisted on the importance of accurately recognising the typhoid bacillus, and pointed out the imperfections in technique and the resulting unreliability of many published observations. What was ordinarily known as Widal's serum reaction was, as ordinarily employed—namely, with blood diluted to 1 in 10—quite valueless for the recognition of enteric fever. Gruber had at the outset pointed out that a high dilution of the blood was necessary. The serum of typhoid patients was comparatively feeble as compared with the potency of the serum of immunised animals. He arranged the potency of serum in three classes: weak, 1 in 1,000; medium, 1 in 10,000; strong, 1 in 100,000. It was only with serum of medium or strong potency that reliable results could be obtained.

Dr. C. CHILDS spoke on the importance of preventing pollution of water supplies. The pollution of water might be detected at the present time in two ways (1) *experimentum in vitro*, or bacteriological or chemical examination; (2) *experimentum in vivo*, or the effects not on guinea-pigs, but on the human consumers of water supplies. By both of these methods (the analysis of samples and the epidemic outburst of typhoid) the pollution was only discovered after the mischief was done. With the present methods nothing could have been more prompt than the detection and removal of the source of pollution at Clifton and at Maidstone. It was, therefore, most important that all water supplies should be thoroughly and systematically inspected and registered. The waterworks company should be held responsible for the consequences of any pollution. Wilful pollution of the water supply should be regarded and punished as a criminal offence. The typhoid mortality in England and Wales had fallen from 32 per 100,000 in the eighth decade to about 19 in the ninth decade (that is, about half). Since 1890 the mortality had remained over 17. Formerly in Munich the typhoid mortality was more than three times as great as in England and Wales; at present it was more than three times as little. In this city of 400,000 inhabitants there were 10 to 14 deaths from enteric yearly. It was to be hoped that in the future equally good results would be obtained.

Dr. SEYMOUR TAYLOR, while admiring the bacteriological researches in connection with typhoid fever, pointed out that the bacillus typhosus was not the same as typhoid fever; the seed was not the harvest. Typhoid was endemic, but also epidemic. What were the factors that led to an epidemic outbreak? These he discussed under three heads: (*a*) The influence of pre-existing diarrhœa and prevalence of hot weather. Persons might drink polluted water with impunity; when in good health they were, so to say, bad culture media. If there was diarrhœa or gastro-enteritis they might become good culture media. In Germany the different clinical aspect of typhoid fever might have something to do with the beer-drinking habits of the nation. (*b*) Prevalence of typhoid fever in new comers to the district, while the residents, who were possibly immunised by homœopathic doses, remained immune. (*c*) The supposed antagonism of malaria to enteric fever. It appeared that the natives of malarial countries were not prone to enteric. In conclusion, the bacillus or seed of the disease had recently been investigated rather to the exclusion of the study of the soil or the characters and conditions of the communities and individuals attacked by it.

Dr. G. V. POORE, in his reply, chiefly confined himself to the question of treating the excreta, including that of typhoid fever, by depositing it close to the surface of a well-tilled humus. The excreta were not to be put on the surface, but, as Moses long ago directed, they should be covered by a superficial layer of soil, which prevented the flies getting at it. This, he thought, could not do any harm in country districts; it had been said that the earth was a great source of danger, but the market gardeners and farm labourers, who necessarily "eat their peck of earth" several times over, were among the healthiest members of the community. He had not advocated the disuse of waterclosets. Burying excreta 4 feet under ground, as was sometimes done, was like laying down port; the bacilli were not destroyed, and only required digging up to spread infection. In China the excreta were religiously collected and placed on the fields, and the mortality from enteric among our troops there was extremely low, 0.48 per 1,000. The high rate of mortality in some tropical parts, where the dry closet system was in use, was due to infected water, not to the dry earth system. When the soil was saturated and thoroughly polluted the best way to purify it was to till it and crop it. He referred to typhoid fever having been traced to sewage farms at Beverley and High Wycombe. There was great need for instruction in the methods of dealing with excreta, and some of the funds spent on technical education by county councils might with advantage be devoted to this object.

MEDICAL SOCIETY OF LONDON.

A. E. SANSOM, M.D., President, in the Chair.

Monday, January 10th, 1898.

ADHERENT PERICARDITIS.

SIR WILLIAM BROADBENT, after some preliminary remarks, observed that adherent pericardium often escaped recognition, a definite diagnosis being rarely made or even attempted. The diagnosis indeed was often extremely difficult, and even impossible. Partial adhesions might give rise to neither symptoms nor physical signs, and even adhesions involving the entire surface of the heart might be attended with little or no interference with its functional efficiency, and therefore with no appreciable hypertrophy or dilatation or disturbance of the circulation calling attention to the heart, provided

that there were no outside adherence of the pericardium to the chest wall. It would be a mistake, however, to suppose that the absence of symptoms or signs deprived this lesion of any importance, because though under normal circumstances the action of the heart might not be impeded, it might hamper the right auricle or ventricle in the case of bronchitis or interfere with the compensatory hypertrophy of the left ventricle in renal disease or other condition attended with high arterial tension. Still more might it aggravate the effects of valvular disease or the degenerative changes of old age. The symptoms to which adherent pericardium gave rise were not at all characteristic, and it was only when other causes of these symptoms could be excluded that one could look on them as possibly indicating adherent pericardium. Sometimes, however, the absence of stasis in the pulmonary circulation when general dropsy was present from systemic venous obstruction might suggest that the dropsy was due to the right heart being hampered by pericardial adhesions. He related a case in illustration of this point. Discussing the problem of how to discover whether a given valvular lesion was or was not complicated by adherent pericardium, he pointed that each valvular lesion produced its peculiar effects on the circulatory apparatus; and, for example, in disease of the aortic valves, the absence of the usual compensatory hypertrophy might be due to the effect of adherent pericardium. Similar effects were even more marked in mitral disease. The diagnosis, in fact, could only be arrived at by means of physical signs, and there was no better field for minute observation and careful discrimination. In the normal state the heart glided over the central tendon of the diaphragm, upon which it rested, both with its own systole and diastole, and with the respiratory ascent and descent of the diaphragm. When adhesion took place all shifting and gliding ceased; a given area of the surface of the heart which would correspond very nearly on the posterior and inferior aspect with Sibson's fixed point in the interventricular septum in front, was bound to a definite part of the tendinous expansion. While the heart was thus fixed the respiratory excursion of the central tendon must also be restricted, since the heart was adherent to the pericardium as well as to the diaphragm, and the fibrous connections of the former did not allow of its free movements downwards. Now the triangular space between the divergent costal cartilages was loosely associated with the central tendon of the diaphragm, and it was there that one looked for evidences of the adherence of the heart thereto. Visible or palpable pulsation did not help, for there might be neither epigastric protrusion or tug in the normal conditions. Much more significant was the complete arrest of the slight respiratory movements of this part of the abdominal wall. It was his practice for more than twenty years to note carefully the indications of adhesion left by general pericarditis in every case which had come under his notice, and that arrest had never been wanting. It could not be said, however, that immobility of the epigastric triangle necessarily implied adherent pericardium. Other evidences were imperfect descent of the apex beat during inspiration and inadequate shifting of the cardiac impulse when the patient was turned on to the other side. Indications might also be furnished by dilatation and hypertrophy when present in the absence of valvular disease. A systolic tug of the left false ribs posteriorly, communicated by the diaphragm, might be conspicuous. He had not derived any assistance either from the pulsus paradoxus or from the effect on the veins of the neck. Auscultation did not afford much assistance in the diagnosis of adherent pericardium, and reduplication of the second sound was so readily induced by other causes that its value was small.

Sir R. Douglas Powell pointed out that a further division must be made of cases in which there was much thickening or calcareous deposit. Apart from this latter group, there was no sign or group of signs which would enable them to arrive at a diagnosis. Competent observers had designated this or that sign as pathognomonic of adherent pericardium, but others of equal merit had denied their significance. Very often when they had diagnosed the condition during life, the *post-mortem* examination would reveal their error, while, on the other hand, the condition was found to exist without there having been during life any symptom or sign to direct their attention to the heart. He suggested that one function of the pericardium was to guard the heart against sudden congestions and the effects of overstrain. This function would cease with an adherent pericardium. This condition, moreover, would prevent the pericardial sac rendering assistance in promoting the flow of lymph through the heart structure. He pointed out that comparatively few of the cases of adherent pericardium were the result of pericarditis, it being often the result of chronic disease of that organ; in other words, it was due to parenchymatous and not to interserous inflammation. The cases diagnosed during life were probably cases in which in addition to the adhesions of the pericardial layers there were adhesions to the mediastinal structures. As to causation it might result from extension of a severe pericarditis through the outer surface or the inflammatory process might spread from the pleura. He himself had never observed the tugging of the apex beat noticed by certain authors, and he did not attach much importance to the paradoxus pulse, which might be produced by so many other conditions.

Dr. John Broadbent said the *post-mortem* records at St. George's Hospital between the years 1890-93 showed that of 87 cases of heart disease 31 showed evidences of adherent pericardium. He quoted Sturges's figures from the Great Ormond Street Hospital, where of 100 cases of heart disease only 6 were free from pericardial adhesions. He pointed out that the size of the heart in this condition varied greatly. Sometimes normal or less than normal in size it was usually enlarged, being hypertrophied and dilated. In 6 cases which he had collected the diagnosis was made during life, and confirmed *post mortem*, they proving rapidly fatal. The myocardium was also frequently affected. He called attention to the early onset of cardiac dulness due to cardiac dilatation. This diminished as convalescence set in, but if adhesions formed the dilatation might be rendered permanent. If therefore the heart remained enlarged he inferred that adhesions had formed before the heart had had time to regain its proper size. The indications which might suggest the existence of adherent pericardium were the persistence of the pericardial rub for a long time, the persistence of cardiac dilatation and a prolonged convalescence, especially if marked by a temporary improvement followed by unaccountable recurrence.

Dr. Ewart pointed out that serious symptoms only occurred when the outer surface of the pericardium had contracted adhesions to surrounding structures, especially if there were much thickening. He described as erroneous the view that the apex was raised when there was effusion within the pericardium. He dissented from the view that the strain fell principally upon the right side of the heart, and adduced reasons for believing on the contrary that when adherent pericardium interfered with the movements of the heart, it was the left ventricle that was most affected and hampered.

Dr. S. West inclined to the view that the damage inflicted by a severe attack of pericarditis was never altogether recovered from, though all symptoms might have disappeared. He discussed the value of recession of the apex beat as a symptom of adherent pericardium, and described the special concatenation of circumstances under which alone it could be produced. Mere obliteration of the pericardial sac did not necessarily involve much interference with the heart, which, however, was likely to follow adhesions to or thickening of the mediastinal tissues. He pointed out that dilatation rather than hypertrophy was the rule in adherent pericardium, and even when hypertrophy was apparently present it was usually, or, at any rate often, mere hyperplasia of the connective tissue, and not real hypertrophy.

Dr. Lees insisted that it was not fair to assume that cardiac disease when it coexisted with adherent pericardium was necessarily the result thereof. His view was that the influence of the adherent pericardium on the heart was indirect, namely, by tending to fix and maintain the condition of dilatation. He called attention to the very marked dilatation of the heart which took place in rheumatic young subjects, even apart from any rub or murmur. He attributed this dilatation to a weakening of the cardiac wall, probably due to some toxin elaborated by the microbe of rheumatism. He pointed out that inflammation of the visceral pericardium was really superficial carditis.

Sir W. Broadbent in reply challenged Dr. Ewart's reason-

ing in respect of the share of the left ventricle in the production of the symptoms ascribed to adherent pericardium, symptoms which he observed were essentially right heart symptoms.

OBSTETRICAL SOCIETY OF LONDON.

C. J. CULLINGWORTH, M.D., F.R.C.P., President, in the Chair.

Wednesday, January 5th, 1898.

SPECIMENS.

DR. MCCANN: (1) Malignant Adenoma of Cervix, with microscopical slides; (2) Uterine Fibroids.—Dr. JOHN PHILLIPS: The Placenta from a Full Term Extrauterine Fœtation, child being dead and removed by abdominal section five months later, the patient doing well on the seventh day.—Dr. REMFRY: Hydrocele of the Canal of Nuck.—Dr. CULLINGWORTH: Malignant Growth of (?) Fallopian Tube.

THE OBSTRUCTION OF LABOUR BY OVARIAN TUMOURS IN THE PELVIS.

In opening the adjourned discussion on Dr. McKerron's paper on this subject, Dr. HERBERT SPENCER referred to a case of ovariotomy during labour which was obstructed by an ovarian dermoid incarcerated in the pelvis. In the case recorded the patient, aged 20, had had one dead child previously without difficulty; with the second child the labour was obstructed by an ovarian dermoid weighing 16 oz. incarcerated in the pelvis. As the tumour could not be pushed up laparotomy was performed, the uterus withdrawn from the abdomen, the tumour removed, and the child delivered by forceps applied in the dorsal position. Mother and child recovered. In the treatment of ovarian tumour obstructing labour, the author thought that the tumour should be pushed out of the pelvis if possible, but discarded version, forceps, craniotomy, and simple incision or tapping of the tumour, on account of their danger. Cæsarean section would be very rarely necessary if the uterus were withdrawn from the abdomen. The author discussed the merits of vaginal and abdominal ovariotomy, and considered that, on the whole, the latter was the preferable operation. Dr. Herbert Spencer also showed an ovarian dermoid tumour, which becoming incarcerated in the pelvis obstructed labour. The tumour was pushed up out of the pelvis under chloroform, the child delivered by forceps, and ovariotomy performed seven months later. Mother and child recovered. A skiagraph of the tumour was also exhibited.

Dr. ROBERT BOXALL exhibited a tumour (dermoid) of the ovary in which Cæsarean section was performed at the end of the first stage of labour and the tumour removed. Both mother and child recovered.

Dr. HERMAN said that Dr. McKerron's paper was the fullest account of the complication of labour with ovarian tumour that had yet been given. He agreed in the main with Dr. McKerron's advice. But there was one method of treatment, the credit of which he believed had been given to Fritsch, which he thought deserved fuller consideration and commendation than Dr. McKerron had given to it, namely, the making an incision into the cyst through the vagina and stitching the opening in the cyst to the margins of the vaginal incision. In this way the emptying of the cyst contents outside the peritoneum was secured. If the cyst were a dermoid, as many of the cysts which obstructed labour were, simple tapping was attended with much danger of the cyst contents escaping into the peritoneal cavity. Of 43 cases in Dr. McKerron's paper treated by tapping or incision 24 died. This danger was avoided by Fritsch's procedure. He (Dr. Herman) did not advise this for tumours that could be pushed up, nor for those which came under the care of experienced operators in circumstances suitable for the performance of ovariotomy. Many of these cases occurred in the practice of accoucheurs having little or no experience in ovariotomy.

Dr. PLAYFAIR said that twenty years had elapsed since he had communicated to the Society the paper he had himself written on this subject. In that he had collected 35 cases, which Dr. McKerron had incorporated with his own. He had tabulated the details of 126 more, making 183 in all. This conclusively showed that this serious complication of labour was by no means so rare as might be anticipated. It was a curious and important fact that the existence of ovarian tumours was only suspected in 18 per cent. of the cases before labour. Of course, if it was diagnosed during pregnancy, it was now an admitted rule of practice that ovariotomy should be performed without delay, but unhappily the figures showed that this was only exceptionally possible. The explanation of this was probably that it was only very small and freely mobile tumours that could engage in the pelvis and become impacted in front of the presenting part. He did not doubt that, when it was feasible, the best and safest practice was to remove the tumour either by abdominal or vaginal ovariotomy. The reason why he had not recommended this in his former paper was obviously because ovariotomy twenty years ago was on an entirely different footing from the operation in the present day. Then antiseptic precautions were unknown or in their infancy, and laparotomy was a much more serious business than it was now. To do it during the actual progress of labour was a procedure that had never been considered a possibility. He related a case in which induction of labour was performed in preference to laparotomy, with unhappily a fatal issue. While admitting that ovariotomy was the best course, he felt that there must always be cases where it could not be judiciously practised. It was obvious that this plan required experience in operating and suitable surroundings in nursing. He did not envy the practitioner who had no experience in abdominal surgery if suddenly called on to perform such an operation. It behoved them, therefore, when ovariotomy was not feasible, to decide what was the next best course to pursue. Obviously the one thing which should not be done was to leave the case alone in the hope that the fœtus might be pushed or drawn past the obstructing tumour. Dr. McKerron showed that in all such cases the mortality was 50 per cent. In his (Dr. Playfair's) paper he had recommended vaginal puncture of the tumour, so that its size should be lessened as much as possible; when this had been done the results had been much more satisfactory, the mortality having been only 18 per cent.

Dr. HEYWOOD SMITH remarked that in 1884 he saw a single woman, aged 24, who had a small ovarian tumour behind and to the right of the uterus. She married and became pregnant. During the pregnancy he several times pushed the tumour above the uterus. During labour the tumour came down in front of the head, obstructing delivery. He aspirated the cyst, and the child was born alive. She again became pregnant, and he performed ovariotomy during the third month, and the patient was delivered of a full-sized child.

Dr. HORROCKS thought the paper valuable, but the statistics of cases quoted were interesting historically rather than as having any bearing upon modern treatment; because the fact that in these days of aseptic operations one could open the abdomen without ill-effects rendered the question of what to do in cases of tumour obstructing labour capable of being answered quite differently. Twenty years ago, and less, it would have been wrong to do laparotomy in such cases, because the operation itself would have been fatal in the majority of cases of sepsis. He failed to see why Cæsarean section was performed fn Dr. Boxall's case; the method adopted by Dr. Spencer was more scientific and better in every way for the patient. With regard to the question of vaginal *versus* abdominal operations he certainly thought the latter was preferable, because even in the non-pregnant state vaginal ovariotomy was often most difficult and perplexing, and when pregnancy complicated it all the vessels became enlarged, and hence the hæmorrhage might easily become alarming, when it would be difficult and perhaps impossible to catch the bleeding points from the vagina.

Dr. SPENCER was glad to find a general agreement that the best treatment of incarcerated ovarian tumours which could not be pushed up was ovariotomy. Cæsarean section inflicted an injury on the patient which in ordinary cases was quite unnecessary, though it had been recommended in that Society as recently as 1892. He thought the opinion of the Society should go forth that ovariotomy was the proper treatment when practicable.

The PRESIDENT said that it was greatly to be regretted that the author of the paper had not been able to be present at the adjourned discussion. He agreed with Dr. Horrocks that in drawing conclusions from past experience it was necessary to have continually in mind the very different conditions under

which operations were performed before and since the introduction of antiseptics. As a large proportion of the ovarian tumours that had been met with as obstructions to delivery had proved to be dermoids, it seemed doubtful whether tapping would always succeed in effecting such a diminution in size as would suffice to overcome the obstruction. Undoubtedly the ideal treatment was the removal of the tumour there and then by abdominal section. Where this was impracticable, the proper course, if the tumour could not be pushed out of the way, was to endeavour to deal with it temporarily by tapping or incision *per vaginam*, and to perform ovariotomy as soon as possible after the labour was over. He did not think the alternative of Cæsarean section was to be commended. He concluded by referring to the case he had published in the *St. Thomas's Hospital Reports for 1887*, p. 143, in which abdominal section had been performed on a patient nineteen weeks after delivery for the removal of a dermoid tumour of the ovary that had caused serious obstruction to delivery, and that had subsequently undergone suppuration and discharge *per vaginam* through a rent in the posterior wall of the cervical canal.

HARVEIAN SOCIETY OF LONDON.

R. H. MILSON, M.D., President, in the Chair.

Thursday, January 6th, 1898.

THE PATHOLOGY AND TREATMENT OF GOUT.

DR. A. P. LUFF read a paper on this subject. After considering the various views as to the causation of gout, he stated the reasons for believing that the presence of uric acid in the blood in gout was due to absorption of that body from the kidneys owing to deficient excretion of it by those organs. He strongly maintained that if uric acid was normally produced in the liver, spleen, or tissues generally, then it must be conveyed in the blood to the kidney to be excreted, and therefore ought to be capable of detection in the blood of healthy persons. He referred to the results of a number of experiments to show that careful examinations of the blood of healthy human beings, of other mammals, and also of birds, failed to show the presence of the least trace of uric acid. Dr. Luff therefore considered that the first step in the pathogenesis of gout was a failure on the part of the kidneys, from functional or organic mischief, perfectly to excrete the uric acid formed in them, and that consequently, absorption of the non-excreted portion took place from them into the general circulation, where it at first existed in the form of sodium quadriurate, and formed the source from which the gouty deposit was derived. Dr. Luff was of opinion that uric acid was formed in the kidneys by the combination of urea with glycocine, or with one of the derivatives of the latter body. He brought forward evidence to show the erroneous nature of the views held as to a diminution of the alkalinity of the blood promoting uratic deposition, whilst increased alkalinity of the blood was supposed to cause solution of the deposit, and claimed that in the light of recent experimental evidence such views were untenable. The gout-inducing properties of certain wines and beers he considered to be due to the effect they exercised on the liver by increasing the amount of glycocine passed to the kidneys and so causing an increased production of uric acid in those organs. In the treatment of gout Dr. Luff advocated the necessity of attention to the personal factors of each patient, and the desirability of determining from time to time the daily output of uric acid. The immediate treatment of the gouty paroxysm and the after-treatment of the gouty state were discussed. To promote the absorption and elimination of the gouty deposit, Dr. Luff advised the use of citrate of potash, copious draughts of water, hot baths, and massage, and the use of a table salt prepared from vegetables in place of common salt. A rational mixed diet with sufficient vegetable food was advised. When a mineral water was employed with the object of removing gouty deposits, Dr. Luff strongly advocated the selection of a water as free as possible from sodium salts, although waters containing those salts might be usefully employed in the treatment of certain gouty affections.

DR. EWART dwelt upon the value of the suggestions contained in the paper, and upon the clearness with which the author had stated his views as to the chemistry of gout. Apart from the question as to any detrimental action of common salt, the suggestion of the use of an artificial table salt was a happy one. Dr. Luff's important observations on the properties of the ash of vegetables had a practical bearing upon the general question of diet. They lent support to a largely vegetarian rather than to an extensively meat-treatment. The soundness of this view was not necessarily disproved by the well-known fact that an acute attack had occasionally been induced by an abrupt change to a strictly vegetarian diet. The chemical theory which had been propounded was plausible and complete so far as it went. But whilst it professed to explain how uric acid might be accumulated, it failed to show why the kidney should take on abnormal action. The antecedents of gout remained mysterious, and needed elucidation.

MR. WILLIAM ARMSTRONG (Buxton) had been much impressed in a considerable number of cases by the great increase in the persistency and gravity of gouty symptoms when even slightly defective kidney action was present. He felt sure that the state of the nervous system had much to do with the genesis of gout. Nerve strain and disturbance without doubt greatly affected the deeper and more subtle digestive processes, and favoured the occurrence of fermentation and consequent auto-poisoning, and many of those cases of irregular gout now so common came on in persons whose general nerve tone had become distinctly lowered. This had a very distinct bearing upon the questions both of dietary and treatment, and was a strong argument in favour of Dr. Luff's view that it was impossible to indicate one general treatment for all gouty cases; but that each should be treated as a unit and dealt with according to the special indications present. With regard to the taking of common salt, he had been noting its effects by means of careful quantitative determination of uric acid for some time past, but had not been able to satisfy himself that it was harmful; still, Dr. Luff's suggestion that a table salt should be prepared from the salts of vegetables ought not to be lost sight of. One of the most valuable means of keeping the gouty tendency in check was no doubt the drinking of hot water in the morning fasting and at bedtime; as also was the taking of a single grain of calomel, followed by a saline aperient once a week. With regard to dietary, while favourable to the use of vegetable foods, he could not shut his eyes to the fact that vegetables were ill-digested by many of the gouty, and he therefore prescribed them very largely in the form of purées with excellent results. In old standing cases, or where the patient was much debilitated, butcher's meat might be freely given; but then it was absolutely necessary that the hot water drinking should be strictly carried out, and that carbohydrates should be cut down as much as possible. Bread should be taken either twice-baked, or at least cut very thin and thoroughly torrified. In some of the most refractory cases of chronic gout surprising results had been achieved by the "Salisbury" treatment, which consisted in giving only beef or mutton, the whites of eggs, and considerable quantities of hot water. This method was one which should only be carried out under careful medical supervision, but was well worthy of attention in obstinate cases. With regard to alcohol, he had found many gouty people could never get rid of their ailments so long as they drank whisky, while their symptoms at once abated when that spirit was abandoned. Probably Dr. Luff's theory, that in many of these cases the kidneys were in a more or less abnormal condition, would account for this fact. In some cases of atonic and so-called neurotic gout patients were greatly benefited by taking a little sugar-free champagne, or a glass of port wine (thoroughly matured in the wood) with meals; but still moselle, diluted with sufficient alkaline water to neutralise its acidity, was probably the least harmful form of alcohol for the gouty.

DR. HUBBARD asked Dr. Luff if he had any experience as to the value of lysidine, a German preparation of somewhat recent introduction, which was vaunted as a powerful solvent of uric acid. He (the speaker) had used it in three or four severe conditions of gout, and was under the impression that it was useful.

THE PRESIDENT asked whether such large doses as 30 to 40 minims of vinum colchici were given in cases where cardiac

lesions existed. He thought that saline aperients, with a pill containing blue pill and colchicum each night, would be safer.

Dr. CALEY spoke of high arterial tension in cases of chronic gout where there was no evidence of renal disease. He thought that this pointed to some toxæmic agency, though there was evidently a close connection between gout and granular kidney.

In reply, Dr. LUFF said he had never known full doses of vinum colchici disagree even with the subjects of cardiac disease; but where there was reason to suspect advanced fatty degeneration of the heart, smaller doses would be indicated. He had tried lysidine, but had been unable to ascribe to it any good effect.

ULSTER MEDICAL SOCIETY.

J. A. LINDSAY, M.D., President, in the Chair.

Thursday, January 6th, 1898.

NOTIFICATION OF INFECTIOUS DISEASES.

A DISCUSSION took place relative to the working of the Compulsory Notification of Infectious Diseases Act in Belfast, and it was decided to issue a circular to the medical practitioners of the city, setting forth the recommendations of the Council on the subject.

THE ACTION OF PEPTONE ON THE KIDNEY.

Professor W. H. THOMPSON, read a paper on the action of peptone and its precursors on the function of the kidney. The paper gave some of the preliminary results obtained by Professor Thompson in the inquiries in which he is at present engaged. He hopes to report his conclusions at a later stage. Dr. Lorrain Smith and Professor Redfern congratulated Professor Thompson on having opened up new ground in physiological investigation.

CIVIL SURGEONS IN INDIA.

Surgeon-Lieutenant-Colonel MOORHEAD, read a paper on the life and work of civil surgeons in India. After explaining who the civil surgeons were, he described their multifarious duties in the plains under two heads—those in the station and those in the district. He dwelt upon their work in connection with gaols, hospitals, dispensaries, vaccination, sanitation, etc., and touched upon the difficulties attending the treatment of native ladies of high caste. In this connection he paid a tribute to the excellent scheme inaugurated by the Marchioness of Dufferin and Ava for providing female medical aid for the women of India. He also spoke of the work of civil surgeons in hill stations, and gave a brief description of Simla, and the duties there. He referred to an address by the late Mr. Ernest Hart, in which he described the labours of Indian medical officers in civil employ as "overwhelming," and quoted his high encomium on the admirable work done by the service. The life of a civil surgeon was, on the whole, not an unpleasant one, in spite of his numerous and sometimes trying duties, and in spite of the heat. He had a good position, was to a large extent his own master, and could generally find time for amusements of various kinds. He concluded by a reference to the important part played by medical officers in the founding and building up our Indian Empire, and brought specially to notice the noble services rendered by Surgeons Boughton and Hamilton.

LIVERPOOL MEDICAL INSTITUTION.

RICHARD CATON, M.D., F.R.C.P., President, in the Chair.

Thursday, January 6th, 1898.

MULES'S OPERATION OF EVISCERATION.

MR. BICKERTON showed two men on whom Mules's operation had been performed six weeks previously. A silver ball was inserted in one case, a glass ball in the other. The chief point was that in both the sclerotic and conjunctivæ were sutured together, the resulting cicatrix being firm, with the formation of conjunctival granulations, which were subsequently snipped off. Movement of the resulting stump in each case was very good.

ACUTE BRIGHT'S DISEASE.

Dr. CARTER read notes of two cases in which severe symptoms had developed after exposure to wet and cold. The first, a girl, had convulsions, and became comatose, with congested face and stertorous breathing. The urine contained one-third albumen. Under the inhalation of oxygen the amount of urine increased, the albumen diminished, and the percentage of urea increased. The convulsive attacks diminished in number rapidly, and then ceased. The patient recovered, In the second case there was general œdema, headache, half albumen in the urine, but no convulsions. This patient recovered under treatment with jaborandi.

Dr. MACALISTER regarded oxygen as a most valuable agent in the treatment of uræmic coma and convulsions. He could not agree that any reasonable doubt existed that the recoveries were attributable to its use. In the cases in which he had employed it the effect in some had been immediate so far as the convulsions and coma were concerned. He referred to several such cases, including one of puerperal eclampsia, in which the immediate danger had been averted by oxygen inhalation.

Dr. BARR and the PRESIDENT also made some remarks.

INOCULATIONS WITH T. R. TUBERCULIN IN LUPUS.

Dr. G. STOPFORD TAYLOR showed three patients suffering from lupus vulgaris, all of whom had benefited considerably by inoculation with the new tuberculin. He thought the cost of the remedy would prevent its being extensively used.

Dr. LESLIE ROBERTS had treated four cases by this method. There could be no doubt that the new tuberculin exercised a favourable influence on the disease. It was most marked when the lymph and blood vessels most actively participated in the tuberculous process. In the dry non-irritative form of the disease, when the tuberculous nodules seemed to be more or less isolated by inert disease, the improvement was far less obvious. The local changes consisted in shrinking of the tissues in the immediate vicinity of the tubercles, and in an arrest and healing of ulceration. The reduction of œdematous swelling of the lips and gums was very remarkable. He would not express any opinion as to the ultimate value of the new tuberculin at present.

Dr. BUCHANAN noticed that in one of Dr. Taylor's cases during treatment the patient developed a cough and had an attack of hæmoptysis. He suggested that there might have been latent pulmonary tubercle, which had been affected by the inoculations, local reaction resulting. The short immunity produced by the tuberculin was important. He thought that if tuberculin was to do any good it must be given for a very long period.

Dr. ABRAM pointed out that in Koch's original paper it was stated that complete immunity was only obtained after the administration of large doses of T. R. tuberculin. Koch himself, as a rule, increased the dosage until 20 mg. solid substance were injected, and then ceased, or only repeated the dose at long intervals. He suggested that Dr. Taylor should continue until this maximum dose was reached.

BLADDER GROWTH DIAGNOSED BY MEANS OF THE CYSTOSCOPE.

Mr. THELWALL THOMAS related two cases: 1. Simple papilloma in the bladder of a man aged 38, who for six months had suffered from hæmaturia. The growth, which was pedunculated, was situated to the right of the orifice of the right ureter. Suprapubic cystotomy was performed, and the growth removed. 2. Ulcer surrounded by papillomatous fringe. A woman, aged 42, had had hæmaturia and pain for six months. The cystoscope revealed an ulcer to the left of the orifice of the left ureter, surrounded by a fringe of papillomata. The urethra was dilated, and the growths cut away with scissors. The bladder was washed out with hot water. Next day retention of urine occurred; subsequently micturition became normal. In the after-history of both cases there was no pain or hæmaturia. The author emphasised the importance of the early use of the cystoscope in cases of hæmaturia.

Mr. LARKIN said he had long considered the cystoscope an essential instrument in examining the bladder, and frequently of great service in clearing up the diagnosis in cases of renal or pelvic suppuration.

Dr. KENNAN related a case he had seen in Vienna at the

Pathological Institute, in which the mucous membrane of the trigone had been superficially charred by the cystoscope.

Mr. Damer Harrisson also made some remarks.

Traumatic Insanity.

Mr. Damer Harrisson read a note on traumatic insanity, and related some cases where insanity had been entirely relieved by the operation of trephining.

Dr. Nathan Raw thought very few cases of real insanity were due to traumatic causes—in fact, only about one-third per cent. of the total admissions to asylums, excluding depressed fractures and adherent cicatrices causing local motor symptoms. Operative interference could not be of much benefit. The temporary insanity due to concussion of the brain, causing molecular disturbance, as a rule passed off without any interference.

Mr. C. G. Lee referred to a case of Rawdon's, which had been shown to the Society about three years ago. A young lady had fallen from a bedroom window on to some spiked railings. One spike penetrated the skull, lacerated the superior longitudinal sinus, and damaged the left occipital lobe near the cuneus. The patient recovered without mental disturbance. There was right-sided hemianopsia which persisted up to the present. Contrasting this case with the last mentioned by Mr. Harrisson, he was inclined to think the symptoms described might be functional in character.

Mr. Rushton Parker remarked that the effects of injury to the head were evidently various. He had a strong steady working man who after concussion became negligent, passionate, and permanently untrustworthy. Also an old gentleman of 70, who became degenerate and died. Both without scar or local symptoms susceptible to relief by operation. There were also cases where symptoms of insanity due to head injury passed away completely without operative treatment. But the cases related by Mr. Harrisson were urgent and the relief after operation had been conspicuous. What appeared to be most striking in these cases was the remarkably slight anatomical changes found at the operation in some of them.

Dr. Glynn and Dr. Barr also took part in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

James Braithwaite, M.D., President, in the Chair.

Friday, November 19th, 1897.

Pathological Meeting.

Specimens.

Dr. E. W. Selby (Doncaster) showed: 1. A Cyst removed from the Neck of a girl aged 23, lined with squamous epithelium, and developed from a persistent portion of a branchial cleft. 2. A Section of a Small Encapsuled Tumour removed from the chin of a man aged 52—a dermal adenoma possibly originating in a sweat gland.—Dr. Baxter Tyrie showed: 1. A Phocomelic Fœtus. There was no history of maternal impressions, of plural or monstrous births on either maternal or paternal side. The mother was a primipara. 2. Drawings illustrating a Hereditary Malformation of the Hand which he had traced back for five generations. It took the form of a welding together of two or more fingers. The right hand was implicated three times as often as the left, and with one exception the deformity was confined to the males. The transmission was through the females to the males. He commented on the similar method in which hæmophilia and pseudo-hypertrophic paralysis were transmitted. 3. Sections and Dissections showing the Physiological Dermoids (Sutton) normally present in some of the Artiodactyles.—Mr. W. W. Linington showed: 1. Microscopic Section of Prostate showing laminated calculi forming in crypts of gland, and demonstrating the origin of prostatic stones (100 diameters). 2. Alveolar Sarcoma of Great Trochanter (400 diameters). Man received injury in September, and in following February amputation at hip-joint was performed for a growth strictly localised to the trochanter. The specimen was a typical one, and the history illustrated the rapid growth of these tumours in bone in distinction from their slow increase when affecting cutaneous structures. 3. Rhabdomyoma of Kidney (400 diameters). Myoma of kidney in which a few cells had developed into striped muscle. History unknown.—Dr. Wardrop Griffith showed an example of Duodenal Diverticulum arising, as such cases usually do, just above the orifice of the common bile duct. It passed into the substance of the pancreas, and was unaccompanied by symptoms.

Friday, December 3rd, 1897.

James Braithwaite, M.D., President, in the Chair.

The Use of Decalcified Bone in the Treatment of Wounds.

Dr. Robinson alluded to the treatment of sponge grafting formerly adopted by some surgeons, agreeing that it was successful in stimulating and directing the granulations of a wound, but failed in not being absorbable. Decalcified cancellous tissue contained all three qualities. It is prepared by boiling segments of bone for some days, decalcifying with acid, neutralising with soda, and lastly bleaching with hydrogen peroxide. Dr. Robinson quoted some successful cases illustrating the action of the bone grafts.

The President, Dr. Rabagliati, Mr. Littlewood, and Mr. Walker joined in the discussion.

Imprisoned Tooth: an Obscure Cause of Cervical Abscess.

Mr. T. R. Jessop read a paper on the above subject, giving particulars of two cases. In the first, a female of 25 had suffered from pain in the lower jaw for some years. After extraction of a molar tooth an abscess formed, which discharged through the cheek, closing, refilling, and bursting from time to time. Later all the teeth on this side were removed, but without any benefit. When Mr. Jessop saw the case bare bone could be felt at the bottom of the sinus, and on exposing the jaw under ether a minute hole was observed leading to a large cavity containing a carious bicuspid tooth. This was removed, and in a short time healing was complete. In the second case, a man of 45, similar symptoms were present, but there were in addition several sinuses in the neck leading towards the ascending ramus of the jaw. Examination with a probe revealed no bare bone. All the molar teeth had been removed in the upper and lower jaw on that side some six years previously. The upper jaw was wider and thicker and more substantial than natural, whilst the lower was sharp, firm, and compact. This observation led Mr. Jessop at the operation to attack the upper jaw first, but he was unable to find any disease. On gouging the lower jaw the marble-like surface of a tooth was struck, and a full-sized wisdom tooth undergoing caries was extracted. The sinuses ceased discharging, and in a few days had entirely healed.

A discussion followed in which the President, Dr. Rabagliati, Mr. Ward, Dr. Robinson, and Dr. Selby joined.

In reply Mr. Jessop laid stress on the fact that in both his cases the jaws were apparently quite healthy, and were not tender on pressure.

The Aachen Treatment of Syphilis.

Dr. Mouillot read a short paper on the Aachen treatment for syphilis as carried out in Harrogate. He pointed out that the treatment of syphilis by inunction of mercury was a very successful one, and that as a rule such treatment could be best carried out at mineral spring stations, as the waters appeared to favour the rapid elimination of the drug. He supported this statement by reading notes of 5 cases in which the treatment had been successful in curing active symptoms after ordinary treatment by the mouth had failed to do so.

The President thought there was probably a good deal of truth in the writer's claim to considerable success in the treatment of syphilis in the way discussed in his paper. He was assisted both by having at command the resources of the most complete baths in the country, and probably in the world, and also the bracing, life-giving climate of Harrogate.

Mr. Jessop, Mr. Ward, and Dr. Trevelyan also took part in the discussion.

Dr. Cundell, ex-Mayor of Richmond, has forwarded to the Treasurers of the Royal Hospital, Richmond, a cheque for £3,090, being the amount collected during his year of office in aid of the Jubilee Endowment Fund.

NORTH OF ENGLAND GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

Friday, December 10th, 1897.

HENRY BRIGGS, M.B., F.R.C.S., President, in the Chair.

FIBROID OF UTERUS.

DR. ARTHUR WALLACE (Liverpool) showed a fibroid of the uterus removed from a woman aged 38. At the operation the tumour was not found attached in any way to the uterus, but was slung across the pelvic brim by adhesions passing laterally and posteriorly. Below it lay the two months' pregnant uterus, retroverted and held down in the pelvis by the tumour. Four subperitoneal fibroids were observed projecting from the uterus; two of these attached by a thick pedicle common to both were removed. The tumour presented the typical characters of fibro-myomata of the uterus, and its peripheral portion contained plates and nodules of calcareous material. The patient recovered, and pregnancy continued.

CALCAREOUS DEPOSITS IN MESOSALPINX.

Dr. WALTER (Manchester) showed some calcareous deposits in the mesosalpinx removed from a patient, aged 53, who had undergone ovariotomy for a large cystoma.

STRANGULATED PAROVARIAN CYST.

Dr. ARNOLD LEA (Manchester) read notes of a case of strangulated parovarian cyst, causing intestinal obstruction, and showed the specimen, with microscopic sections. The patient, a multipara, aged 42, was taken ill, whilst stooping, with intense pain in the left side of the abdomen and sickness. This continued for several days, and in spite of treatment the bowels did not act. When first seen, five days after the onset of the symptoms, a firm, round, elastic tumour was felt reaching above the umbilicus on the left side of the abdomen. The uterus lay retroflexed and behind the tumour, which filled the left side of the pelvis. The abdomen showed some general distension, and for thirty-six hours the vomiting had been bilious and dark-coloured, but not fæcal. The temperature was 101°, and the pulse 118. Abdominal section was performed as soon as possible. The tumour was found to be a parovarian cyst of the right broad ligament. This had rotated forwards on the uterine attachment of the broad ligament as an axis, and lay in front of the sigmoid flexure and rectum, to which it was attached by numerous recent adhesions. The cyst was dark-coloured, but not gangrenous. It was rapidly removed, the pelvis flushed out with saline solution, and a drainage tube inserted. The coils of bowel were considerably distended. The temperature was 99.6° and the pulse 106 after the operation. The patient progressed very favourably for twenty-four hours, passing flatus within twelve hours. She then suddenly had profuse evacuations of the bowels, a large quantity of solid and liquid fæces coming away almost continuously. She rapidly became collapsed, and died within an hour. The necropsy revealed no hæmorrhage or signs of general peritonitis. The coils of bowel were almost empty. The cyst had partly mechanically, and partly also by setting up local peritonitis, caused obstruction, which had been complete five days before operation. The cause of death was collapse on shock, following the rapid emptying of the intestines. This was known to occur at times after operation for strangulated hernia and other forms of intestinal obstruction. It was sometimes the result of acute enteritis, or might be due to excessive peristalsis following the relief of obstruction. In such cases it was no doubt advisable at the time of operation to puncture the intestines if they were much distended, allowing the fluid fæces to drain away, and stitching the bowel by Lembert's suture. Dr. Lea suggested that in similar cases copious subcutaneous or intravenous injections of saline fluid should be resorted to, along with stimulants and small doses of morphine to check the peristalsis.

UTERINE FLEXIONS AND VERSIONS.

Dr. FOTHERGILL (Manchester) read a paper on the pathology of certain uterine flexions and versions, which he considered should not be treated by any direct attempt to strengthen or replace the organ. After pointing out the necessity for distinguishing between "flexion and version," he called attention to the fact that in many women both conditions existed without interfering in any way with comfort or reproduction. Anteflexions and anteversions in cases where symptoms dated from puberty were said to be as a rule either congenital or caused by inflammatory processes during childhood in organs other than those of reproduction. Flexions and versions of such origins, that is, personal peculiarities, congenital conditions, and those acquired during childhood, were often discovered only after the appearance of symptoms due to one or other of the accidents of reproductive life. In these cases flexions and versions would certainly call for no direct treatment. In most cases, however, in which the symptoms dated from one of the accidents of reproduction, the flexions or versions discovered on examination were secondary results of a primary cause, which should be discovered and removed. Thus the common condition of anteflexion and retroversion due to old utero-sacral cellulitis should not be diagnosed as "displaced uterus," but as "old cellulitis," and treated accordingly. Retroversion and retroflexion occurring as signs of "subinvolution" should be diagnosed and treated as such, and should not be called "displacement," and treated by pessary or operative methods of fixation. Again, retroversion was the earliest physical sign of prolapsus uteri, whatever the cause of the "prolapse," a fact which deserved wider recognition than it at present obtained. Indeed, in every case presenting a distortion or displacement of the uterus, the pathology should be carefully thought out before—as was sometimes done—proceeding to rectify the condition by the introduction of a pessary or by any of the fashionable operative measures. Notes of 23 illustrative cases were laid on the table.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 7th, 1898, Dr. THUDICHUM, Vice-President, in the chair, Mr. G. E. TWYNAM read a paper on Nephrectomy and its Relation to Pregnancy, which will be published. Dr. AMAND ROUTH congratulated Mr. Twynam on his valuable paper. He referred to two cases bearing on the subject, and gave it as his opinion that in all the cases quoted there had been chronic disease of the kidney which had been removed, and so the other kidney had assumed compensatory work. He would like to know what would be the effect of the removal of a healthy working kidney in a pregnant woman. Mr. SWINFORD EDWARDS had had a case in a male subject where for laceration he had removed one kidney, thus throwing all the work suddenly on the opposite organ. The result was that in four days' time both the amount of urine and urea were normal. Mr. TWYNAM replied.—Dr. THUDICHUM read an abstract of a paper on Inflammatory Abscess and New Growths in the Cavities adjoining the Nasal Cavities and their Operative Treatment. Ethmoidal abscess, he averred, might be due to tubercle, syphilis, septic inflammation, and injury. It was often confounded with and mistaken for abscess in the maxillary sinus. When the ethmoidal abscess was found in the anterior part of the ethmoid it usually presented as a swelling at the inner canthus of the eye. The proper treatment of such cases was to make a free opening from the nose, and not to open them externally if it could be possibly avoided, on account of the great liability there was of a permanent sinus remaining as a result. In abscess of the maxillary sinus he advised that the opening should always be made through the nose, and not through the alveolar process of the maxilla. In discussing the treatment of polypi, he considered free removal of a great part of the ethmoid bone essential. Tuberculosis of the nasal cavity was often a starting point of lupus of the face. He believed that tuberculin was of no permanent good in such cases. Dr. ALDERSON thanked Dr. Thudichum for his most valuable paper. He had had but few cases in many years of suppuration in the sinus. He believed that the swelling caused by an ethmoidal abscess was always smaller than that produced by an abscess of the maxillary sinus. Dr. J. B. BALL considered Dr. Thudichum's plans of treatment were original, vigorous, and effective. He doubted, however, the advisability of active treatment in latent inflammatory affections of the sinuses, since if symptoms were not distressing operative procedures might cause more harm than good. He did not agree that the maxillary sinus should not be opened

through the alveolar border, but in every case the opening should be such as to allow free access for syringing out the cavity by the patient himself.

REVIEWS.

CLINICAL METHODS: A GUIDE TO THE PRACTICAL STUDY OF MEDICINE. By ROBERT HUTCHISON, M.D., F.R.C.P., and HARRY RAINY, M.A. F.R.C.P.,Edin., F.R.S.E. London, Paris, and Melbourne: Cassell and Co. 1897. (Cr. 8vo., pp. 564, 137 illustrations and 8 coloured plates. 9s.)

THE object of this book is primarily to enable the student beginning his work in the medical wards to examine a case satisfactorily, so that the methods more strictly belonging to surgical, gynæcological, or obstetric practice are not considered here. The first chapter is given to casetaking, the importance of which in the training of the beginner can hardly be exaggerated. The interrogation of the patient is first described, and under the various systems or organs, the student is directed as to what questions should be put to the patient. A complete scheme of note taking is appended. Much useful information is given in Chapter II upon the general condition and appearance of the patient. Chapters III to XI inclusive help the student to fill in the portion of the notetaking concerned with the physical examination. A chapter has been wisely added upon the clinical examination of children, as it often requires more skill and patience than in the case of the adult, and interrogation can hardly ever be quite satisfactory in their case. Chapter XII contains an account of the examination of pathological fluids, the technique and site of puncture being briefly referred to. The information here is sufficiently complete, but the value of a good hand centrifugal machine for obtaining deposits is hardly emphasised enough. The very necessary chapter on clinical bacteriology contains a description of the apparatus needed in the preparation and examination of the cover-glass preparation as well as special methods. The most important microbes are also briefly described; under the diphtheria bacillus the method of making cultures with the suspected exudation is given, and under the typhoid bacillus the technique of Widal's serum test after Delépine. Needless to say that if the student wished to carry out either of these procedures, he would require to be acquainted with much more laboratory detail than is given here. In an appendix the equivalents of the English and metric systems are stated as well as the preparation of important stains and reagents.

The main body of the work, however, deals with the physical examination of the various systems beginning with the alimentary. A very careful description of the examination of the mouth, œsophagus, and abdominal organs is given, preceded by a short account of the anatomy of the part concerned. The importance of determining the lower border of the stomach is properly emphasised, but perhaps there is a tendency to over-estimate the value of percussion as applied to the stomach. A good account of the examination of the stomach contents, vomit, fæces (including intestinal parasites), occupies one section of this chapter. The chapter on the physical examination of the heart includes sections on the pulse, use of the sphygmograph, and on the various symptoms met with in the principal cardiac diseases; but the last-named is too short to be of much value. The examination of the lungs follows in Chapter VI, and includes a section on the sputum. The use of symbols in recording lung diseases is given on pp. 264 5, but these hieroglyphic methods do not commend themselves to everyone. Chapter VII on the urine is full. A short chapter is given to the diagnosis of skin diseases.

The chapter on the nervous system is very complete and excellent. Considerable space is here given to cerebral and spinal localisation; a few lines of description of cranial topography might well have been added, as the relation of scars, etc., to the underlying nervous structures is of importance to the physician. The examination of the cranial nerves, and the investigation of the motor and sensory functions, reflexes, etc., are clearly described. Chapter X includes such examination of the eye, ear, throat, and nose as is likely to be required in an ordinary medical case.

This handy little manual is certainly characterised by a most commendable thoroughness, and its value is considerably increased by its numerous and well-executed illustrations. We can heartily commend it to the student—not, of course, to be learnt by rote, but to be carefully studied in connection with his practical work. The excellence of the book quite justifies the hope expressed in the preface by the authors that it may also be of service to the practitioner who wishes to keep himself acquainted with the latest methods of clinical investigation.

THE GUIDE TO SOUTH AFRICA. 1897-98 Edition. Edited annually by A. SAMLER BROWN and G. GORDON BROWN. London: Sampson Low, Marston and Co. 1897. (Demy 8vo, p. 446. 2s. 6d.)

THE eyes of so many are turned towards South Africa in the hope of gaining there either health or wealth, that Messrs. BROWN'S comprehensive guide possesses special interest.

The chapters on South Africa as a health resort are admirably done, and it would be well for anyone who contemplates living and working in South Africa in consequence of incipient phthisis or threatening ill health, to consult the excellent maps and tables, and to master the information given in these pages before selecting the centre of his future activities. "Activities" is said advisedly, for a person obliged for health's sake to live in a dry atmosphere at a high altitude is not condemned in South Africa, as at Davos and St. Moritz, to a life of idleness, for here at an elevation of 4,000 feet, 5,000 feet, or even 6,000 feet, there are busy towns and industrial centres.

Africa may be compared geographically to an inverted soup plate. From vast, central plateaus covering thousands of square miles, the land slopes to the sea shore. On the high tablelands the rainfall is extremely small, and the air is dry and stimulating.

The climatic conditions of mountain resorts, which are stated by Sir R. Douglas Powell to be conducive to recovery in those suffering from lung disease, are taken as the criteria of the South African climates on the high plateaus; and it is claimed that in some respects these offer greater advantages than are to be found in Alpine mountain resorts. Thus Sir R. Douglas Powell states that the climatic properties which are so beneficial to the invalid during the winter at Davoz and St. Moritz are: (1) Low atmospheric pressure, (2) dryness of atmosphere, (3) purity of air, (4) freedom of air from organic germs, (5) low temperature of the air, (6) diaphaneity to the sun's rays, (7) stillness of the air.

As the land rises from the shores of Cape Colony three successive plateaus are formed, and are called the Southern Karoo, the Great or Central Karoo, and the Northern Karoo. The first lies at an elevation of from 1,000 to 1,500 feet. At Ceres, which is a popular sanitarium in the Southern Karoo, the mean barometric pressure is 28.49, the mean maximum temperature 72°, and the mean minimum 45°, while the annual rainfall is 41 inches.

It is, however, in the Great Central Karoo, at an elevation of about 3,000 feet, that the most satisfactory winter climatic conditions are found, of which Dr. Symes Thompson says: "In the district of the Karoo we find a region characterised by excessive dryness of air and soil, where, at a level of less than 3,000 feet above the sea, remarkable purity and coolness of air are secured, with an almost complete absence of floating matter; together with great intensity of light and solar influence; great stillness in winter; a large amount of ozone, and a degree of rarefaction of proved value in cases of phthisis."

The hottest month is January, with a mean maximum temperature of 87°, and the coldest is July, with a mean minimum of 36°; the mean daily range is about 27°. The winters are bright and clear with the nights cold, and medical opinion appears to be in favour of the winter climate as being the most suitable for pulmonary invalids. In the summer the heat is often excessive, and dust and thunder storms are frequent; but in the winter the fine-weather area is large. It is possible for invalids, by changing their residence once in six months, to live in the region of dry calms all the year round. In the Great Karoo an attempt is made to provide suitable accommodation for invalids at Beaufort West, 2,850 feet above sea level.

The Northern Karoo stretches northwards to the borders of the Orange river. It is situated at an elevation of from 2,800 feet to 6,000 feet above sea level. It is here so dry that the annual rainfall averages only 10 inches, and in some places is as low as 2 inches. The extremes of temperature are greater than in the Central Karoo, the cold in the winter being more severe and the summer heat greater; but the winter days are said to be very enjoyable, the air being keen and bright with a maximum of sunshine, which allows of almost uninterrupted outdoor exercise. Tarkastad, at an elevation of 4,300 feet, has an annual rainfall of only 18 inches. It is very highly praised as a health resort by Dr. Symes Thompson. There are numerous towns, situated in the Northern Karoo, at an elevation of between 3,000 feet and 5,000 feet, where the air is keen and dry, all of which can produce many instances of patients, with pulmonary complaints, doing well.

It is contended that all the conditions of Sir R. Douglas Powell are fulfilled in the tablelands of the Karoo, but that the warmer air of South Africa gives an advantage over Alpine mountain resorts, and that the dust storms, which are the curse of South Africa, can be avoided by seeking in winter an anticyclonic area.

In spite, however, of all that is urged in favour of the climate of the South African uplands for phthisical patients, it is most emphatically stated in Messrs. Brown's *Guide* that, owing to the lack of proper accommodation, those who are extremely ill should not be sent to South Africa. There are, on the other hand, numerous cases of young men, who had at home shown signs of incipient phthisis, growing strong and leading active, vigorous lives on their emigrating to the tablelands of Natal or Griqualand. Sanitaria are being erected, and before long invalids may safely seek in South Africa health, which is more to be prized than the wealth of the goldfields and diamond mines.

The Bacteriological Institute of Grahamstown, is said to be one of the largest and probably the most complete in the world. It is subsidised by all the South African States, including the Transvaal and the Orange Free State and is under the direction of Dr. Alexander Edington. Vaccine, antitoxin, and other serums are prepared in the institute and supplied to the colonies.

The *Guide* is well supplied with an admirable series of geographical, ethnographical, geological, physical, and meteorological maps of South Africa.

ZUR THÄTIGHEIT DER CELLULAREN KÖRPERELEMENTE BEI INFECTIONSKRANKHEITEN. [The Action of the Cellular Elements of the Body in Infective Diseases]. By Dr. BRUNO SCHÜRMAYER. Berlin: Oscar Coblentz. 1897. (Demy 8vo., pp. 32. M. 1.)

THIS pamphlet has been written with the object of emphasising the part played by cellular activity in the contest of the individual with the infective diseases as against the view now often too exclusively adopted that immunisation is brought about solely through the action of a serum free from cellular elements. Dr. SCHÜRMAYER arranges the subject under the the following questions: (1) In what way does leucocytosis assist the individual in the contest? Is it possible to call forth this assistance, and is there any chance of using it in the treatment of infections? and (2) Are any cellular elements other than leucocytes available for the same purpose?

The author discusses at some length the leucocytosis which has been proved to exist in the infective diseases as well as the experimental production of this leucocytosis. He concludes that leucocytosis is of striking service to the individual that it can be artificially induced and made use of in treatment. From a study of the staphylococcus, streptococcus, and influenza infections and experimental anthrax, Dr. Schürmayer concludes that the part played by other cellular elements is to render bacteria harmless probably by the secretion of alexins, but that microbes are also taken up and literally digested by cells. In reality phagocytosis and the production of protective bodies are nothing else than a part manifestation of the same chemical process. The author does well to call attention to a part of the defensive mechanism of the body which is in some danger of being overlooked.

L'INFANTICIDE. Par P. BROUARDEL, Professeur de Médecine Légale, et Doyen de la Faculté de Médecine de l'Université de Paris. Paris: J. B. Baillière et Fils. 1897. (Royal 8vo, pp. 402. Two coloured plates and 14 illustrations. Fr. 9.)

THE marked increase of late years in cases of infanticide which has been noted in England as well as on the Continent, has led to increased attention being paid to the various medico-legal questions which arise, both as regards the examination of the bodies of newborn infants and the symptoms of recent delivery in those suspected of the crime. The first half of this volume consists of lectures delivered in the course of forensic medicine by Professor BROUARDEL during 1896, in which all such questions are treated exhaustively; the second half of nearly 100 medico-legal reports on actual cases, made for the most part by the author himself, at the request of various judicial authorities. These reports, it need hardly be said, are models of what such reports should be for clearness and conciseness.

The trials for infanticide in France alone, have increased, we are told, from an average of 94 per annum in 1831-35, to an average of 200 per annum in 1870-80. It must be remembered that the Code Napoleon distinguishes between infanticide and murder, and hence some of the points discussed in this volume—for example, the question, What is a newborn child—have not the same interest for us on this side of the Channel. It may be noted, however, that in view of the above legal distinction, one French authority proposes that every child whose umbilical cord has not separated should be considered as newborn, another, that the cicatrisation of the umbilical wound should be fixed on as the date, while a third would extend the period so long as traces of the fœtal circulation can be discovered.

Having pointed out the accidents to which a child is liable during and after birth, the author considers the proofs of respiration having taken place. He does not attach much importance to measurements of the chest or the position of the diaphragm, pointing out that in the condition of the lungs themselves we have sufficient evidence to enable an expert to say whether or not the child has breathed. The signs showing how long respiration has continued—whether for some hours, a day, or several days, are fully discussed, with reference, of course, to the distinction in the Code already mentioned.

Desiccation of the umbilical cord has been considered by both French and English writers as evidence that the child has lived, but Dr. Brouardel regards this as an error due to Billard, and refers to a case of mummification of the cord recorded by Mr. Lowndes, of Liverpool (who by a slip is styled Sir Frederick Lowndes), only to declare his disagreement with the conclusions arrived at. The author, like Caspar, regards this condition of the cord as due merely to physical causes, and not to vital action. As regards the examination of suspected persons, the Professor warns his students not to examine any woman who objects to their doing so, telling them that the Criminal Code contains nothing which forces individuals to submit to be medically examined. In England we carry this principle a little further, and, without the express consent of the party concerned, no prudent medical man will make such examination.

It will be seen that this volume contains much of interest to all engaged in the study or practice of forensic medicine.

SÄUGLINGSERNÄHRUNG UND SÄUGLINGSSPITÄLER. [Infant Feeding and Infant Hospitals.] Von Professor OTTO HEUBNER. Berlin: August Hirschwald. 1897. (Royal 8vo, pp. 74. M. 1.60.)

PROFESSOR HEUBNER in this pamphlet gives a history of the artificial feeding of infants. He mentions the discussion that took place at Salzburg in 1881, when a resolution was passed to the effect that the only way of obtaining pure milk was by keeping the cows and cowsheds absolutely clean; system of ventilation of the cowsheds was advocated. No scientific reason was given for this procedure until 1886, when Soxhlet read a paper at Munich in which he proved that the impurity of the milk was due to the presence of bacteria, and that these organisms gained access to the milk during the process of milking, and also during the transport of the milk.

Soxhlet's researches were based on Lister's discovery that the milk in the cow's udder is germ free.

Professor Heubner points out that it is since the recognition of this fact that artificial feeding has become more scientific, and that the results on the whole are more satisfactory. Elaborate tables are given showing the quantity of milk consumed by normal breast-fed infants, together with their body weight. The table shows the variations of the normal; further on lists are given showing the amount of nourishment required in proportion to the body weight at different ages. Lists of various foods are given, but Professor Heubner lays more stress on the sterilisation of the cow's milk than on the particular form in which the milk is given. His experience in the Charité Hospital in Berlin is fully described, and forms the most valuable part of the pamphlet. In 1896 an entirely new arrangement of wards and nursing was instituted on strict antiseptic principles by Professor Koch. Before this date the infant mortality was 80 to 90 per cent.; since 1896 it has fallen to 65 per cent. Every four patients have two nurses; one attends solely to the feeding, the other washes the body and attends to the excreta. Before feeding the nurse washes her hands in antiseptics, and wipes the child's mouth with an antiseptic cloth. The milk is sterilised, the bottle is kept in a sterilised chamber till wanted, the bottle being perfectly dry. After feeding the bottle is washed out with boracic lotion and put back into the steriliser. Each child has its own bottle marked. Curves are given showing the increase of body weight since cleanliness was introduced.

Professor Heubner suggests that infant asylums should be built for wasting infants, and points out that the mortality in hospitals is far greater than in private practice, the reason for this being that the patients must be isolated. He gives many cases which had been removed from the hospital and continued to have the same diet, but immediately put on weight. Professor Heubner ends with a detailed plan of an infant asylum both as regards its structure and nursing organisation.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

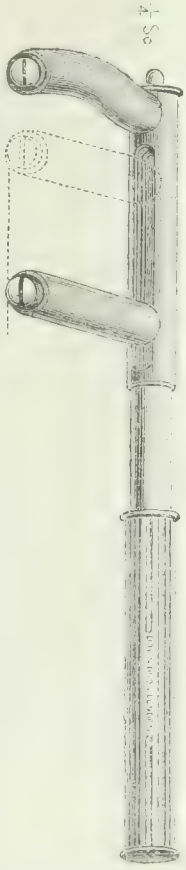
HYPODERMULES.

A new form of hypodermic medication has been introduced by Mr. Frank A. Rogers, 327, Oxford Street, W., under the name of hypodermules. They consist of small glass flasks, which are stated to contain exactly measured doses of sterilised solutions ready for hypodermic injection. When required for use the point of one of the flasks (A) is broken off by means of a small copper tube (B), and the needle of



the syringe is then inserted (C) and the contents withdrawn. It is claimed for hypodermules that there is absolute sterility. The solutions after sterilisation are introduced into the hypodermules direct, thereby reducing to a minimum the risks attending the use of hypodermic solutions. It may safely be assumed that the solutions will not alter in chemical constitution or become concentrated, as there is no exposure to air. The hypodermules can be made of any size, and the contents prepared according to any formula. This form of hypodermic medication certainly possesses obvious advantages.

AN IMPROVED WRENCH.



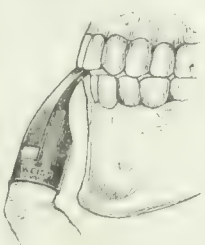
Mr. A. H. Tubby, M.B., M.S., F.R.C.S. (25, Weymouth Street, Portland Place, W.) writes: The accompanying drawing illustrates a modification of Mr. H. O. Thomas's wrench, which has been made for me by Messrs. Down Bros. The upper arm is curved so as to fit more completely the convexity of the dorsum of the foot than the straight arm of the ordinary wrench can do, and so avoid slipping and abrasions of the skin. The arms on section are elliptical and not round, thus distributing the pressure more equally at the spot where such is made. The wrench is made to open by means of a screw, to the extent of 5 inches, and closes up almost completely, so that it can be used for both infantile and adult feet.

SALOL.

Salol splits up into salicylic acid and carbolic acid on being warmed with an alkali. It passes through the stomach unchanged, and is decomposed in the duodenum by the alkali of the pancreatic juice. It follows that salol, being perfectly insoluble in water, should be administered in fine powder, so that the solvent action of the fluid of the alimentary canal can more readily take effect. Messrs. Burroughs, Wellcome, and Co., Snow Hill Buildings, E.C., prepare a compressed tabloid of salol which disintegrates readily into a powder when placed in water. Messrs. Oppenheimer, Son and Co., Limited, 14, Worship Street, E.C., enclose salol powder in a soluble jujube cachet or palatinoid. The disintegrating tabloid and the palatinoid of salol can be recommended as convenient forms for the administration of this insoluble drug.

AN ANÆSTHETIST'S MOUTH OPENER AND GAG.

Messrs. Weiss and Son, of 287, Oxford Street, have a little appliance designed by Dr. Frederick Hewitt with the object of affording a ready and rapid means of opening the mouth of the semi-anæsthetised or anæsthetised patient. Owing to the frequency with which the upper teeth overlap the lower, it is often impossible to relieve obstructed breathing by the customary plan of pushing the lower jaw forwards, and it therefore becomes necessary to open the mouth. If the teeth are tightly clenched, and more especially if there are no vacant spaces between them, Dr. Hewitt points out that it is by no means an easy matter to do this. The difficulty reaches its acme in the case of powerfully built men whose upper teeth considerable overlap the lower. The little appliance here figured is made of brass and is, in reality, a curved finger shield more or less wedge shaped, which can be introduced, as shown, beneath the overlapping upper teeth. When the thin end of the wedge has gained admission the mouth opener is pushed onwards till the teeth are separated by the large end, at which two slots are cut, one through the upper and the other through the lower wall. When once the teeth have fixed themselves in these slots the finger may be taken out of the instrument and the mouth will remain open without further assistance.



THE PLAGUE IN INDIA.

PRESENT POSITION.

As 1897 drew towards its close a feeling of greater confidence in regard to the limitation of the spread of plague prevailed in India. Up to the present moment the disease has practically been limited to the Bombay Presidency and the valley of the Indus. The local journals in India are devoting less and less space to the subject, and this is not to be explained merely on the ground that the people are becoming less subject to scare, but as the official returns show the area affected by plague is limited. In Poona, where plague is most rife, the daily average number of new cases was, during the second week of December, 1897, as many as 57.

Unfortunately the most recent news appears to show that a true recrudescence of plague has occurred in the city of Bombay. The experience is but a repetition of what occurred in Canton and in Hong Kong during the three years 1894-95-96. In the course of the first-mentioned year plague appeared in an epidemic form. After wellnigh completely disappearing, cases occurred in 1895 in what might be termed a sporadic form. In 1896, however, the disease again began to return, and a true recrudescence prevailed. So far as is known the sequence here recorded appears to be the natural history of the disease, and the city of Bombay would seem about to bear out the truth of the statement, inasmuch as it has reached the third stage of recrudescence after having experienced plague in its epidemic and sporadic form.

Ever since the first week of December, 1897, plague has shown an increased rate of mortality. During the weeks ending December 8th, 15th, 22nd, and 29th, 1897, the deaths from plague were respectively as follows: 71, 137, 172, 225. The latest report, dated January 6th, 1898, is: "The plague returns for the city of Bombay show 142 cases and 105 deaths during the last twenty-four hours." If it be really a recrudescence that exists in Bombay we cannot hope for an abatement in the mortality for some months at least. Throughout the Bombay Presidency, to which practically the plague is confined, the total number of deaths from plague is sensibly diminished in spite of the high returns from the cities of Bombay and Poona.

The report from Poona reads as follows:

	December, 1897.				
Week ending	3rd.	10th.	17th.	24th.	Total 4 Weeks.
New cases ...	496	520	420	285	1,721
Deaths	394	383	350	250	1,377

In Poona, if the mortality has not greatly diminished, the new organisation under Colonel Creagh and Surgeon-Major Reade has in another direction achieved striking success. The violent opposition to all necessary measures, which was so lamentable a characteristic of the first visitation, has almost entirely disappeared, and many of the leading citizens are co-operating cordially with the responsible authorities, and rendering every possible assistance.

The recently appointed Plague Commission holds its meetings in Calcutta. Strict vigilance is maintained on the railways approaching Calcutta, and there are four inspection stations with quarantine camps to protect the frontiers of Bengal. At all the principal stations in the Bengal district passengers are inspected before leaving the railway carriage; the name and address of any person holding a ticket from a plague-infected area are noted and sent to the local police in order that the health of the new arrival may be watched, and action taken if he or she falls ill of the disease within ten days. Detectives travel with every train, and are on the watch in every principal station. This has proved to be necessary, as all sorts of devices are resorted to whereby the stringent precautions considered necessary may be thwarted.

FUTURE PROSPECTS.

Plague, as far as can be now ascertained, first appeared in Bombay in August, 1896. The disease, with numerous fluctuations, gradually increased, until it developed into the great epidemic which caused so high a mortality in January and February, after which it declined till the months of May and June, when the epidemic reached its lowest point. The fluctuations which characterised its increase were observable also in its decline. In May and June the disease was of distinctly a milder type, and hopes were entertained that not only the worst period had passed, but that shortly the city of Bombay would be free of the disease. That freedom has not yet been secured, but as stated above a recrudescence appears to be in progress.

How long this state of affairs will continue it is impossible to say. We have only previous epidemics to guide us and these occurred under very different conditions from those now obtaining in Bombay. Plague was epidemic in Bombay for two years in 1689 and 1690 and again in 1702. It is possible that though there was no great epidemic between these years the city was not altogether free. Bombay at that time was not the most important town in Western India and its mortality unless very exceptional would not attract attention. Surat was then to India what Bombay is to-day, and the history of plague there is that the epidemic which broke out in 1684 continued for seven years. It is recorded that during this time the city was never entirely free from the disease. After a lull during the rainy season the disease broke out with fresh fierceness in October, and again abating during the greater part of the cold and hot seasons raged with renewed fury towards the end of May. The deaths at times on a very modest calculation amounted to 300 a day. It is remarkable that in this epidemic up to 1689 no Englishmen had been attacked. Plague seems to cling to a place once it gains a foothold, and it is not easily ousted.

The centre of interest in regard to plague does not, however, now lie in Bombay. It has shifted from that great city to the country around Bombay, and now includes the whole of the Bombay Presidency. Surgeon-Captain Grayfoot, Secretary to the Surgeon-General with the Government of Bombay, has prepared a plague map for the Bombay Presidency, marking in red ink against each town and village the date of the first imported case; in black ink the date of the first case among local residents as distinguished from strangers; and in blue the localities where plague has become epidemic. A glance at the map shows the whole of the Presidency to be infected. It is in this large area that the danger of the epidemic lies; no such extent of country in Western India has been infected with plague for 200 years, and the epidemic that began in 1684 did not wholly disappear for 18 years.

In 1891 plague attacked Bussora and destroyed 80,000 people, and then it passed into Persia. It is this region that has now to be watched with care; for should plague gain epidemic proportions there, we may hear later of an advance westwards.

VACCINATION AND SMALL-POX IN GERMANY.

THE returns for the year 1895 as arranged and analysed in a recent publication of the Statistical Department of the Imperial Board of Health exhibit the remarkable spectacle of a vast population, the land frontiers of whose country are conterminous on three sides with those of peoples among whom vaccination is neglected and small-pox prevalent, enjoying an unexampled exemption from that disease. The cases met with are invariably of foreign origin, and confined to the frontier districts, save when imported direct from abroad to the interior, as was the case at Berlin in 1895. In the preceding year there was none in any town with a population of 50,000, though the total mortality was above the average owing to a serious outbreak in a frontier district, where for several years the lymph supply had been so inferior that the rising generation was practically unvaccinated.

The returns show that the immunity of the German people is attributable not so much to the efficiency of the primary vaccination, which is in fact not so universally carried out as some persons imagine, as to the practice of compulsory revaccination of all children in their 14th year, that is, at the end of the period of obligatory school attendance. This, which was enjoined by the Act of 1874, has been performed on nearly all persons born since the year 1860; those who have been vaccinated in infancy only being consequently for

the most part by this time over 40 years of age, and either women, or men who, from physical inferiority, have escaped military service, which in all cases involves a revaccination at the age of 20.

In 1895 there were but 27 deaths throughout the empire, distributed among 18 localities, mostly singly, though 5 occurred in Berlin and 4 in the Rybnik district; 14 of the 27 were in places within a few miles of the frontier. Unvaccinated infants under 2 years of age contributed 11 = 40.74 per cent. of the whole—all or nearly all of whom might have been saved had the age for vaccination been, as here, the 3rd or 6th month of life. Seven were children between the ages of 3 and 10 years; of these, 3 were certainly unvaccinated, and no evidence was forthcoming as to the others. Two were young adults, one having returned a few days previously from Russia, where he had contracted the disease; and 7 were persons above 45 years of age, 1 had been vaccinated in infancy only, another revaccinated more than forty years previously, and nothing could be ascertained as to the remaining 5, who were probably unvaccinated, or, if vaccinated, half a century had elapsed since the operation.

The outbreak at Berlin began with a man who had arrived a week previously from Russia; 15 other individuals were subsequently attacked; 10, including the original case, were vaccinated adults, in whom the disease was of the mildest type, and 6 were infants under 2 years, 5 of whom died, all being unvaccinated or vaccinated unsuccessfully.

Of 1,164 deaths that have been recorded during the last ten years 919, or 79 per cent., have been on the frontiers—namely, 764 on the east and south-east, 55 on the south and west, and 100 in the seaport towns of the Baltic and North Sea, while the 21 per cent. in the interior were, as we have seen in the case of Berlin, no less directly introduced from abroad. Naturally the heaviest incidence is felt by Prussia from its contiguity with Russia, France, and Holland, and the constant presence in the great ports of a mixed seafaring population from all nations, and of emigrants from Eastern Europe on their way to America. Indeed in 1895 only 15 *cases* were notified among the 20 million inhabitants of the other States.

Turning next to vaccination we find that of the 1,677,321 children born in the previous year (a birth-rate of 33.5 per mille), 1,186,674 were presented for vaccination, and 201,975 = 12 per cent., escaped, 39,369 on medical certificates of unfitness, while of the 1,391,019 liable to revaccination, 1,143,021 were presented, and only 36,054 = 3.15 per cent., were not, of whom all but 7,234 were medically exempted. The number unaccounted for in these figures appears to represent those who had died or emigrated in the respective periods. Revaccinations of recruits, about 200,000 annually, are not included in these statistics, nor are those carried out in places where cases of small-pox appeared.

The percentage of successes in primary vaccination ranged from 99.68 in the Province of Schwabe to 92.03 in Lübeck, and in revaccinations from 99.63 in the Black Forest to 57.32 in Hamburg. The extraordinary proportion of failures in this city does not reflect on the skill of the vaccinators, but is the result of the superior efficacy and greater permanency of the immunity conferred by the variolo-vaccine obtained by L. Voigt in 1881, which, whether passed from arm to arm, or reinoculated into the calf, has since been employed almost exclusively by practitioners and public vaccinators in Hamburg. Eleven deaths, or about 1 to 100,000 infants, were alleged to have been caused by vaccination, but of 3 nothing could be learnt; in 7 the first inflammatory symptoms appearing three or four weeks after the operation were evidently due to subsequent infection from insanitary surroundings or causes unconnected with the vaccination, save so far as it provided a breach of surface for infection, and in one that followed closer on the vaccination the arm had been bandaged by ignorant parents with a dirty rag. Dr. Ballard long ago pointed out the distinction between vaccinal erysipelas and erysipelas occurring after but not from vaccination, based on the incubation of erysipelas, which does not exceed two or three days, that the former appears soon after the operation, and frequently prevents the development of the vesicles, while the latter, for which the vaccinator is in no way responsible, shows itself in the second or third week. The vast majority of alleged vaccinal poisonings belong to the latter class, but even in those clearly traceable to the actual operation, the source of infection may, as Dr. Kubler, the compiler of these statistics, suggests, be found, not in the use of impure lymph, or of unsterilised instruments, but in the dirty skin of the infant itself, the previous cleansing of the area of vaccination, as now carried out in all surgical operations, and enjoined on vaccinators in Germany, though rarely practised here, having been neglected. This is a precaution that should never be omitted, since it would otherwise be very difficult, if not impossible, to disprove the not unnatural conclusion that the lymph or the lancet was in fault.

VACCINATION IN CHICAGO: AN INTERESTING EXPERIMENT.

THE occurrence of the great epidemic of small-pox in the city of Chicago in the years 1893-4-5, during which 3,754 persons were attacked, with a mortality of 1,213 (32.3 per cent.), awakened the municipal administration of the city to the need for strengthening its defences against that disease. An interesting account of what has been done for this purpose is contained in the report which has just been published of the Department of Health of Chicago for the years 1895 and 1896, submitted by Dr. E. Garrott, M.D., Chief Medical Inspector to the Commissioner of Health, W. R. Kerr. The information which Dr. Garrott's report contains on this subject is the more instructive in view of the discussion which must shortly arise as to the reconstruction by Parliament of our own system of protection against small-pox.

It appears from the report that prior to 1895 the promotion of vaccination in Chicago was limited to indirectly enforcing it on public school children only, by requiring that no child should be admitted to a school without being previously vaccinated. As children are not received into the Chicago public schools until they are six years of age, it follows that a large proportion of the child population was unprotected, infant vaccination not having been enforced as it has been in this country. So far as the remainder of the population above the school age were concerned, no effort of any kind was made to ensure their protection. It is not surprising, therefore, that the state of things when small-pox found its way into the city should have been very much what it has been of late years in some of our own urban populations. As Dr. Garrott remarks, "Suddenly an epidemic of small-pox would appear, and at once general attempts at vaccination would be made; perhaps only to be met with determined opposition by those who disregarded the danger or denied the efficacy of the proceeding. A large number of unprotected persons would thus exist, constituting excellent ground for the growth and propagation of the scourge, and the loss of life and property would be fearful."

Nor was the mode of conducting vaccination amongst the school children, even when there was no panic, free from serious objection. The vaccinees had to be brought to the City Hall, the basement corridors and many of the rooms of which were daily crowded with children of all ages and social conditions, together with their friends, waiting their turn to be operated on. In such a motley multitude there would, as Dr. Garrott observes, be many from districts infected with scarlet fever, measles, diphtheria, chicken-pox, or various infectious disorders of the skin, and some perhaps actually suffering from these morbid conditions. No wonder, therefore, if the City Hall came to be looked on as an active centre for the propagation of mischief as great as that which its vaccinating machinery was intended to remedy. To complete the picture of this ill-regulated *régime*, the lymph used was largely supplied on "points," of the character of which there was no satisfactory guarantee; nor does there appear to have been any that the vaccinations performed were reasonably efficient. We cannot, perhaps, exhibit in our own country anything which can fully parallel this state of things in the second city of the United States, but it would not be difficult to show that, taking our vaccination as a whole, we have not in some respects much to boast of in the way of superiority.

For the important reconstruction of the whole sanitary machinery of Chicago in 1895, which affected the mode of dealing not only with small-pox but with diphtheria and other dangerous infectious diseases, the city is indebted to

the energy, persistence, and administrative capacity of the Assistant Commissioner of Health, F. W. Reilly, M.D. The first reform which Dr. Reilly effected was the substitution for vaccine "points" of liquid calf vaccine, treated with glycerine, supplied in hermetically-sealed glass tubes. The farm in which this vaccine is produced is periodically inspected, and each consignment of lymph is carefully tested by the Health Department before being sent out. It is stated to have "proved continuously to be bacteriologically pure and clinically successful, excellent results following in from 90 to 97 per cent. during its use." Dr. Garrott further remarks: "During the many years that I have been connected with the Health Department of this city I have never found any vaccine that was so promptly and uniformly successful in producing typical results. I have noted in using this fluid vaccine a diminution of the usual inflammatory areola surrounding the vaccine vesicle, less constitutional disturbance, freedom from suppurating sores, inflamed glands and lymph vessels, etc., and it produces a more active and typical vesicle than occurs with virus dried upon an ivory or quill point, and the element of secondary or adventitious infection can, with simple precaution, be entirely eliminated." Some striking photographic illustrations of the difference between the scars produced by this lymph and those obtained under the old system of vaccination accompany Dr. Garrott's report, which those who are familiar with the true Jennerian imprints will have no difficulty in recognising as the genuine "trademarks" of a good vaccination. With the aptness for coining telling epithets for which his fellow-countrymen are conspicuous, Dr. Garrott has christened this lymph as "sure-shot vaccine," and relies upon it, in the hands of an efficient marksman, to do as certain execution as our own generals expect from a Lee-Metford rifle.

The next step was to abolish altogether the vaccination assemblages at the City Hall and to substitute for them a system of distributive vaccination by a staff of trained vaccinators. The work of these vaccinators is to visit systematically the 230 public schools of the city, the parochial schools, lodging houses, police stations, county agent's office —the equivalent of our Poor-law relief stations—and other places where the public are regularly or casually collected, for the purpose of offering vaccination. For it must be remembered that there is no legal ordinance enforcing vaccination in Chicago.

But the system of visitation does not end here. Domiciliary visits are made where necessary to the homes of the people, and those whom it is desired to influence are dealt with as considerately but at the same time as persistently as the experience of the well-trained staff of the Health Department dictates. The need for tact and discretion in such work as this is nowhere greater than in Chicago, which, as Dr. Garrott remarks, "with its Polish settlements, Italian and Greek colonies, Russian villages, Bohemian towns, Armenian hamlets, and Chinese quarters, in many of which English is an unknown tongue," contains a population, apart from the independent American citizen, that requires to be handled with great caution.

"Many of these persons," Dr. Garrott observes, "have lately left countries wherein they have been subjected to oppression, and any attempt at insisting on their adopting measures, no matter how salutary, which they cannot fully understand, is at once met by violent and determined opposition. A review of these various elements will indicate the delicate manner in which the people have to be approached in order to exact compliance and co-operation on their part; but the questions and issues that have arisen have all been met satisfactorily by those engaged in the work." No better illustration could be desired of the efficacy of the hand of steel in the velvet glove than is offered by the work which Dr. Garrott's vaccinating staff has thus done amongst the polyglot population of Chicago. For more than a year, from the latter part of 1895 to the close of 1896, not one case of small-pox occurred in the city, although in the various districts and towns around it variola was sporadic, and some infected patients had actually passed through Chicago. This immunity is not, of course, to be attributed to the fact that the population as a whole was immune, but to the influence which the general extension of vaccination had had in reducing the risk of those accidental outbursts of the disease which might have so easily occurred from occasional importation of its infection. So strong is Dr. Garrott's confidence in the general protection which Chicago enjoys that he does not hesitate to say, "Equipped as the Health Department is to-day with educated medical men of undoubted ability, and armed with the 'sure-shot vaccine,' it is absolutely impossible for small-pox to spread. Our city is now better protected than it has ever been before, and I believe in this regard is one of the best protected cities in the world." It will be observed that Dr. Garrott, unlike the antivaccinators both of his country and ours, does not rely for protection against small-pox upon the great works which have been and are still being carried out for the drainage and water supply of Chicago, by which its death-rate was reduced in 1893 to the effective minimum of only 16.9 per mille of its population; nor even on the well-devised arrangement for isolation of the sick and quarantining of the suspected which is employed in Chicago to meet ordinary emergencies, but on the special organisation for promoting vaccination and revaccination which has been thus called into existence. This is an instructive comment on the wisdom of those who would have us throw vaccination to the winds, and trust to what, with a wholly unjustifiable limitation of the term, they are pleased to call "sanitation." As if vaccination were not as much a form of true sanitation or preventive medicine as drainage or the supply of pure water! Some idea of the work performed by the Chicago vaccinating staff may be gathered from the fact that in 1896 there were 270,410 persons examined by it, of whom 159,670 were found to be satisfactorily vaccinated, and 109,189 were operated on.

There is, in conclusion, one feature of the Chicago system of protection against small-pox which has special interest for us in this country at the present moment, and that is its relations to the system of public instruction. In this matter the public health and education authorities appear to work hand-in-hand with a harmony that might be imitated with great advantage in Great Britain. Not only are the staff of the health department empowered to visit the public schools for the purpose of examining the vaccinal condition of the children, but the public vaccinators are required to attend at the schools every Saturday from 10 to 12 A.M. to vaccinate gratis all who may voluntarily present themselves for the purpose. The limits of the duties of the public vaccinators in this respect are precisely prescribed, and cordial co-operation between them and the teachers is inculcated.

It is very suggestive of the difference of procedure on the two sides of the Atlantic in regard to the promotion of vaccination that whilst in Great Britain we have been relying on the compulsory vaccination of infants alone as our safeguard against small-pox, in Chicago it seems to be thought more effective to prohibit by law the admission of any unvaccinated child into a public school. On this provision, and on the efforts of their well-trained staff to make vaccination and revaccination acceptable to the citizens, and to convince them that it is offered them for their own good, the authorities of Chicago rely with apparent confidence that they have now brought the demon of small-pox under complete control. May we not learn a lesson in this matter from the great democracy of the West—that we have much to hope from the adoption of an effective system of vaccination, on the lines laid down in the report of the Royal Commission, combined with an effort, such as we have never yet made, to enlist the intelligent co-operation of the public in it?

NOTES ON HEALTH RESORTS AND SANATORIA.

Spezia, on the Eastern Riviera.—Dr. A. E. Leeson informs us that great improvements have taken place there. It was at one time a favourite winter residence of the English; but this position it lost, partly on account of its bad drinking water and partly because its sea promenade, the Marina, which runs in front of the town, was appropriated by the Italian Government as a coalwharf for the fleet. The coal dust entered the windows of the hotels—almost all on the Marina—and was a positive nuisance. Some years ago, however, an excellent water supply was obtained; the water

is plentiful and of the purest quality, brought from springs in the Appennines at great expense. The coal nuisance exists no longer, as a commercial harbour has just been inaugurated to the east of the town; the Marina is now free from the coal heaps which disfigured it, and is being rapidly laid out in a tasteful manner. The life is quiet and exclusively Italian, but there are two theatres and often good performances. The hotel charges are at least one-third less than at Cannes and at Nice, and at least in one of the hospitals there is English management and sanitation by Jennings. The place is sheltered from the north-east and west, but not shut in. The storms and floods which have just desolated Northern and Eastern Italy have not been felt in Spezia, where the rain lasted only half a day, and was less than one-third of an inch.

Kimberley Sanatorium, South Africa.—Kimberley lies on the high inland plateau of South Africa, 4,100 feet above sea level. The mean temperature for summer (October-March) is estimated at 72° F., that for winter (April-September) at 56° F. The mean relative humidity is 55 per cent., and the annual rainfall 18 inches. The amount of sunshine is very great. The sanatorium, founded by the Right Hon. C. J. Rhodes, was opened recently, and undoubtedly supplies a want. It is half a mile from the town of Kimberley on the tram line between Kimberley and Beaconsfield, and stands in grounds of its own, overlooking Beaconsfield and the hills of the neighbouring Free State. The arrangements are somewhat those of a good hotel, and are not intended for cases of very advanced disease. Kimberley is connected by good trains with Cape Town, from which it is 650 miles distant. It possesses golf links and arrangements for tennis, cricket, and football, as well as club and social comforts, and in addition has the special interest of being the site of the South African Diamond Mines. In respect to the sanatorium we would point out that cases of incipient pulmonary tuberculosis, which may certainly be expected to take advantage of the institution, need careful medical supervision as to diet, exercise, etc., and facilities for lying and resting in the open air perfectly protected from winds.

The Claremont Sanatorium, South Africa.—This is a branch of the Battle Creek Sanatorium, Michigan, U.S.A., which was instituted in 1866, other branches being those at Chicago, Illinois; St. Helena, California; Boulder, Colorado; Lincoln, Nebraska; and Portland, Oregon. Another branch is to be established at Calcutta. The Claremont Sanatorium is under the direct management of a local Board, but under the general supervision of the Board of Trustees of the Medical Missionary and Benevolent Association in America (Battle Creek), whose sanatoria devote their earnings to the relief of the sick poor. The Claremont establishment is built on an elevation in the beautiful Claremont Valley, on the suburban side of Table Mountain, about six miles from Cape Town, with which it is in communication by railway and electric tram. It is away from the noise of the city, and lies amidst beautiful scenery in grounds of its own, part of which is covered by a forest of young fir trees. All kinds of dietetic treatment can be carried out here under the direct superintendence of medical men. There are arrangements for massage and Swedish gymnastics, as well as for hot air and vapour baths, and various kinds of hydrotherapeutic treatment.

Seaside Hospitals for Children in France.—Dr. Charles Leroux[1] speaks of the assistance offered to scrofulous, tuberculous, and rachitic children of the poor classes by the establishment of seaside sanatoria. England apparently took the lead in this direction by the institution of the Royal Sea-Bathing Infirmary at Margate in 1791. The sanatoria at Berck-sur-Mer are the best known in France. Several of its hospitals belong to the Assistance Publique of Paris, and there are likewise other foundations, so that Berck is the chief site of the seaside treatment of poor children in France. There are likewise sanatoria at Saint-Pol-sur-Mer, Pen-Bron (near Le Croisic), Saint-Trojan (in the island of Oléron), Arcachon, Fouras, and Sainte-Eugénie (Cap Breton). On the Mediterranean coast there are sanatoria at Banyuls-sur-Mer, Hyères-Giens, Cette and Cannes. Although the climates of the north coast, the west coast, and the south coast of France differ considerably from each other, and although the various groups of marine spas should receive a different class of cases. Dr. Rochard has pointed out that all kinds of scrofulous children are a hundred times better off in a seaside sanatorium, whatever its position may be, than in the unwholesome air of large towns and ordinary hospitals. The sanatorium of Banyuls-sur-Mer belongs to the Œuvre des Hôpitaux Marins. It consists of a series of buildings united by galleries, and can boast of excellent hygienic arrangements and a beautiful situation on the Mediterranean coast in the department of Pyrénées-Orientales. Since its foundation in 1888 up to the end of 1896 the total number of children treated there has been 870. Of these, 141 remained still under treatment; of the rest, 71.74 per cent. were cured, 14.28 per cent. were improved, and only 4.38 per cent. died. The sanatorium of Saint-Trojan belongs to the same philanthropic association, and is situated between the sea and a forest of pines on an excellent part of the shore of the island of Oléron. It is a more recent establishment than that of Banyuls, and Dr. Leroux does not furnish statistics in his interesting paper.

[1] *La Revue Philanthropique*, 1897, p. 395.

ARCHÆOLOGICA MEDICA.

XLI.—WILLIAM COWPER, THE ANATOMIST.

Cowper's glands are known by name to more persons than their discoverer ever expected, or perhaps deserved, for he was not entirely honest in his dealings, though he was a good anatomist, and the teacher of Cheselden.

Cowper was the youngest son of Richard Cowper, of Petersfield, actually in Sussex, but so near the borders of Hampshire that he is often spoken of as a Hampshire man. Here he was born in 1666. He was apprenticed to William Bignall, a surgeon in London in 1682, was "turned over" to John Fletcher, another surgeon, and became free of the Barber Surgeons' Company, March 9th, 1691. He then began to practise in London, and immediately devoted his attention to anatomy. In 1694 he published an account of the muscular system of the human body, under the title *Myotomia Reformata*. The work is based on the mechanical principles then in vogue as a result of the teaching of the Oxford School of Anatomy, which had Sir Charles Scarborough (1616-1693) as its most distinguished exponent—a man whose monument records that he was "Anglorum inter medicos Hippocrates, inter Mathematicos Euclides," a Hippocrates among Engiish physicians, a Euclid among mathematicians.

Two years later—in 1696—Cowper was elected a Fellow of the Royal Society, and in 1698 he published at Oxford *The Anatomy of Human Bodies*, "with figures drawn after the life by some of the best masters in Europe, and curiously engraven in 114 copperplates. Illustrated with large explications containing many new anatomical discoveries and chirurgical observations. To which is added an introduction explaining the animal economy." The publication of this work promptly brought Cowper into conflict with Godfrey Bidloo, the great Dutch anatomist (1649-1713), who asserted roundly that it was a pirated edition of his *Anatomia Corporis Humani, Centum et Quinque Tabulis ad Vivum Delineatis*,[1] first published at Amsterdam in 1685.

Bidloo expressed his opinions pretty freely, and did not hesitate to call Cowper a "highwayman" in a quarto pamphlet of 54 pages, printed at Leyden in 1700, and entitled *Gulielmus Cowper criminis literarii citatus coram Nob. Ampliss. Soc. Brit. Reg.* Cowper replied in the following year in the satirical pamphlet *Eucharistia*, in which he says that the figures were drawn originally for Swammerdam, that the English publishers had purchased the impression, and that he had written entirely fresh descriptions for the English edition.

An impartial examination of the first edition shows that Cowper spoke the truth in this matter, but not the whole truth, and that Dr. Norman Moore's account of the transaction in the *Dictionary of National Biography* is probably correct. Dr. Moore says "Bidloo unjustly depreciates Cowper's work, and has no grounds for charging him with plagiarism so far as the descriptive anatomy is concerned. The origin of the work seems to have been a request to Cowper from the English publishers to write letterpress to the Dutch plates, and though the plates may have been prepared for Swammerdam, it remains clear that there was some

[1] For an estimate of the artistic value of these plates see an interesting address by Mr. William Anderson, F.R.C.S., in the British Medical Journal, vol. ii, 1895, p. 353.

invasion of the rights of Bidloo and his Dutch publishers in the plates, and that Cowper connived at this invasion."

This supposition has lately received unexpected support from a discovery made by Mr. Hewitt, the assistant-librarian at the Royal College of Surgeons of England. Mr. Hewitt has found, by a careful examination of the first edition of Cowper's *Anatomy*, that the circle containing the letterpress in the frontispiece has been accurately reproduced, with the words *The Anatomy of Humane Bodies*, by William Cowper, Surgeon, 1698. This circle has been pasted over the original printing on the plate, but if the front page be held up to the light it is easy to see that the original words were "Godefridi Bidloo Ontleding des Menschelyken Lichaams Gedaan door Govard Bidloo Anat. et Chirurg. Professr." Cowper or his publishers therefore pirated the Dutch edition of Bidloo's plates published in 1690, five years later than the original which was in Latin. It is true Cowper added largely to the anatomical descriptions, but he effaced Bidloo's name, and only mentions his connection with the work in a short sentence buried in a long preface.

Cowper maintained his credit in spite of this controversy, and he became the early teacher of anatomy to Cheselden before that great surgeon and anatomist was apprenticed in 1703 to James Ferne, surgeon to St. Thomas's Hospital. In 1702 Cowper published his description of a pair of glands whose ducts open into the membranous urethra in man, glands which are now known universally as Cowper's glands, though Méry (1645-1722) really discovered them in 1684.

Cowper also described the junction of the arterial and venous capillaries in a cat and dog, and in May, 1705, he contributed an interesting paper to the *Philosophical Transactions* describing "Ossifications or Petrifactions in the Coats of the Arteries, particularly in the Valves of the Great Artery," in which he describes the degenerative disease of the aortic valves. He speaks in this paper of a man, aged 67, who "some months before his death... ...would frequently offer to show me his wrist, to feel his unequal pulse, which was wont to amuse him, the artery then missing sometimes one, sometimes two strokes in six or seven. At first he told me it missed but one in ten, but at length these stops became more frequent, especially on any agitation of body or mind." Cowper died March 8th, 1709, and is buried at Petersfield.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, W.C., on December 31st, 1897.

There were present the Chairman, Dr. de Havilland Hall, Dr. J. B. Ball, Dr. W. Knowsley Sibley, Dr. J. W. Hunt, Dr. M. Greenwood, Dr. F. J. Allan, Dr. Walter Smith, and Mr. F. S. Edwards.

The accounts showed a marked diminution in the rate of sickness claims, which had been exceptionally high through the summer. So far, the "expectation" of sickness, upon which the premium tables were based, has not been exceeded in any year of the Society's working, but as the number of members steadily grows, and the average age is still increasing, the total amount of sickness claims must of necessity get larger.

The causes of illness are very various, and accidents produce a considerable number of the claims. Influenza is still well in evidence, but the cases are of shorter duration than in former years. A very marked feature in the experience of the Medical Sickness and Accident Society is the growth both in number and duration of claims arising from nervous disorders. Evidence of the heavy strain which medical practitioners have too often to bear is plainly seen in the claim records of this Society.

The death was announced of one of the chronic sickness members. He joined the Society in 1890, and shortly afterwards met with a carriage accident, in which he sustained a fracture of the skull. For more than six years he has been totally incapacitated, and during that period his wife and three children have received from the Society the sum of 100 guineas a year. There are few cases in the records which show more clearly the value of the aid which this Society renders to its members. Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

DR. HALL HAINS'S DEFENCE FUND.

WE are requested by the Honorary Secretary and Treasurer, Dr. Herbert Carre-Smith, 3, Turnham Green Terrace, Chiswick, S.W., by whom subscriptions are received, to acknowledge the following further list of subscriptions to this fund. A statement of the circumstances of the case, and of the names of the members of the Committee, of which Mr. Joseph Smith is Chairman, will be found in the BRITISH MEDICAL JOURNAL of December 25th, 1897, page 1874. It will probably be remembered that Dr. Hall Hains, who practises at Shepherd's Bush, was tried recently at the Central Criminal Court on an unfounded charge of performing an illegal operation. The jury stopped the case by direction of the judge, and Dr. Hains left the court without a stain on his character, but in defending the charge incurred costs amounting to over £800. The fund is being raised to help to defray a part of the costs:

	£	s.	d.
Amount previously acknowledged	83	8	6
Additional subscriptions received:			
J. B. Lawford, F.R.C.S.	1	1	0
H. F. G. Harrison, L.R.C.P.Lond., M.R.C.S. ...	1	1	0
John C. Uhthoff, M.D., F.R.C.S.	2	2	0
J. Batterham, F.R.C.S.	1	1	0
William Steer, M.R.C.S.	0	10	0
J. V. Denne, L.R.C.P.Lond., M.R.C.S.	0	10	6
William Travers, M.D., F.R.C.S.	2	2	0
Thomas E. Bobbs, L.R.C.P.I.	0	10	0

We are asked to state that the Committee will gladly receive additional subscriptions, however small the amount.

BATTLE OF THE CLUBS.

THORNE.

IT would appear from the *Doncaster Gazette* on December 25th, 1897, that the controversy between the clubs and the local profession at Thorne has not been so satisfactorily settled as had been hoped. Sundry of the friendly societies of that town have introduced a new practitioner from outside, who is willing to take all members at 4s. 4d. per head, tradesmen to be included and mileage not to be considered.

It is much to be regretted that medical men should thus put themselves in opposition to their professional brethren. Such want of loyalty is seldom found in other professions, and working men often give us a better example in this respect.

PENAL POWERS OF THE GENERAL MEDICAL COUNCIL AND FOREIGN PRACTITIONERS.

MR. VICTOR HORSLEY has published a report to the registered practitioners of England and Wales as a supplement to the *Clinical Journal* of January 5th.

The first point to which attention is drawn relates to the legal affairs of the Council and the action of the President thereon, and Mr. Horsley complains of the refusal to call a meeting of the Penal Cases Committee to deal with the proceedings against a special class of offenders against the Medical Act, resolved upon at the last session of the Council in November, 1897.

On the other point, as to foreign medical practitioners, Mr. Victor Horsley calls attention to the letter of the President of the General Medical Council to the Lord President of the Council in which he states that "foreign medical men are under no restrictions in Great Britain as far as practice is concerned," and that their only disabilities are that they cannot recover fees by legal process, or sign certain certificates, or give medical evidence or hold certain public offices. With reference to attempts which were being made to modify the present laws in Italy relating to foreign medical practice in a manner unfavourable to foreign practitioners there, an article appeared in the BRITISH MEDICAL JOURNAL of June 12th, 1897, pointing out the desirability of establishing reciprocity of medical practice among the nations, which certain sections of the Medical Act, 1886, were specially designed to facilitate, and which the Medical Council were making endeavours to bring about. To the general principles of reciprocity we adhere, but we concur with Mr. Victor Horsley that the statement of the President of the Medical Council in his letter to the Lord President might

have been in some measure qualified, as there can be little doubt that the powers of the Apothecaries' Society could be enforced against an unregistered foreign practitioner practising here, however doubtful it may be that such a course would be taken by the Society, where such foreign practitioner held a diploma in his own country legally qualifying him to practise, and where the duties of his profession were exercised in a manner not otherwise objectionable.

INDIA AND THE COLONIES.

INDIA.

VACCINATION IN THE BOMBAY PRESIDENCY.—The report for the year 1896-97, submitted by Surgeon-Lieutenant-Colonel J. W. Clarkson, Sanitary Commissioner, indicates that, notwithstanding the disturbance of all sorts of work caused by the plague, the outturn of work was good. Results were, as might be expected, worse in the city of Bombay, where successful vaccination amounted only to 14 per 1,000 of population. In other districts the rate varied from 22 to 34. It is estimated that 79 per cent. of children available for vaccination were protected. The percentage of success in primary vaccination was 92 and in revaccination 78. Diagrams are given to illustrate the relation between vaccine protection and the prevalence of small-pox. The fluctuations of the latter show that there are influences at work other than vaccination. Still, the better-vaccinated districts manifest on the whole lower small-pox rates than the worse. Animal vaccination is making progress, and it is satisfactory to find that no evidence was forthcoming during the year that vaccination was instrumental in communicating plague.

HOSPITALS AND DISPENSARIES IN THE CENTRAL PROVINCES.—The year 1896 was in these provinces a famine year, and the mortality increased from 349,137 in 1895, to 468,469 in 1896, in a population of some 13 millions. The 95 dispensaries included in the report afforded relief to 1,374,129 patients, 112,539 more than in the previous year. In addition, some 189,345 patients were treated in 24 private dispensaries, and medical relief was also given in a large number of poorhouses and relief camps connected with the famine operations. There was a large increase in the number of cases of cholera treated, the disease having prevailed during the year epidemic. Small-pox was, however, dormant. A substantial augmentation took place in malarial fevers, dyspepsia, bowel complaints, worms, venereal diseases, and ulcers. The surgical practice in these institutions appears from the returns to be active and successful. Government contributes 30 per cent. of their cost, the remainder being derived from local sources. A return is given of *post-mortem* examinations performed by civil surgeons and subordinate officers, amounting to a total of 563. Eleven hundred and one packets of quinine were sold to the public through the post-office, realising Rs.1,541. The report is written by Surgeon-Colonel G. Hutcheson, M.D.

VACCINATION IN THE CENTRAL PROVINCES.—Dr. Hutcheson reports that operations were in 1896-7 greatly impeded by famine, the consequent reduction of the birth-rate, the migrations of the people caused by scarcity of food, and the employment of vaccinators on famine, cholera, and plague duty. In spite of these serious hindrances the successful vaccinations amounted to 30.56 per 1,000 of population. The operations under 1 year of age amounted to two-thirds of the whole. The use of animal instead of human lymph is increasing. There seems to be no prejudice against vaccinating calves, which are procured in many places gratis. The percentage of success in primary vaccination was 96, and in revaccinations 77, and some 50 per cent. of operations were inspected by the superintendent, who reported a success of 93. The small-pox diagrams exhibit somewhat unequal results, and without explanation are not of much value as indicating the result of protection. Smaller areas and more detailed data would be better. The subject requires special inquiry and study.

VACCINATION IN ASSAM.—The results for 1896-97, as represented in the report submitted by Surgeon-Colonel A. Stephen, M.B., are satisfactory. During the last ten years the number of vaccinations in Assam has doubled. The proportion of successful vaccinations per 1,000 of population was in 1896-97 45.7, but it is estimated that not more than 24 per cent. of infants available for vaccination were protected. Calf lymph is prepared at a depôt in Shillong, and mixed for distribution with glycerine and lanolin. The percentage of success obtained with this material was high. It is said that there is a prejudice against using calves for this purpose in the province, and that they are difficult to get in the districts. The Chief Commissioner thinks, however, that fresh calf lymph should be prepared at the head quarters as an alternative and supplementary supply. Small-pox inoculation is practised in many parts of Assam. The province is still insufficiently protected by vaccination, and the diagram indicating protection as compared with small-pox is held on this account to be of little value. Besides, it is stated that owing to the nature of the country and difficulties in communication, accumulations of susceptible subjects are apt to occur, and give rise in particular places to excessive death-rates after the lapse of a few years.

THE TREATMENT OF THE INSANE IN INDIA.—Dr. T. W. McDowall selected this as the subject of his Presidential Address delivered at the fifty-sixth annual meeting of the Medico-Psychological Association held at Newcastle-on-Tyne on July 29th, 1897. He admits frankly that he has no personal knowledge of India or its peoples, and appears to be unaware that a statistical comparison of the relative amount of insanity in India and England is available. The latest Indian census reveals a proportion of about 5 insanes and imbeciles per 10,000 of population in India, against some 32 per 10,000 in England. He quotes from official returns the number of insanes confined in Indian asylums, but omits to mention that the death-rate among these is, class and climate considered, very moderate, and that the recovery rate is higher than that of British asylums. He deplores that so few Indian insanes are under asylum treatment, and advances some surmises regarding the treatment and fate of those who remain under the custody of their friends and relations, hinting "that they are got rid of in a variety of objectionable ways." Those who know the disposition and social habits of Indian natives testify that they are wonderfully kind and patient, according to their lights and means, towards the weaklings and infirm of their families and communities. The Indian Governments, as in duty bound, segregate and care for the mad folk who are dangerous or offensive or helpless or uncared for, and offer an asylum to those, also, whom their relatives may desire to submit to special care and treatment; but to whip all the deranged and imbecile among the Indian population into asylums is a project the advisability of which is very open to question. The charges advanced against the management of Indian asylums are mainly that they are entrusted to military medical officers who are not specialists; that these are too frequently changed; that most of the real work is delegated to incompetent subordinates, medical and otherwise; and that sanitarily, economically, and medically the asylums of India are in a very backward and bad plight. The truth is, however, that the Indian civil surgeon, despite his military status and liability to be summoned on emergency to military work, spends most of his service in the performance of civil medical work, which, as all the world knows, he performs very diligently and skilfully, and when an asylum constitutes part of his charge he takes interest and trouble in the work, and does it well. It is true that administrative details and returns make much—perhaps too much—demand on his time and attention, and that the class of attendants employed in Indian asylums is not by any means satisfactory. But are the trouble of pestering administrative details and inefficient servants unknown in British asylums? Dr. McDowall recommends that Indian insane women should be collected into asylums, and placed under the charge of medical women trained in this country. Such a project might land the Government in very hot water indeed.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

B.S. EXAMINATION FOR HONOURS.—The following candidates have satisfied the Examiners:

Surgery.—First Class: B. Dyball (gold medal and moiety of scholarship), St. Thomas's Hospital; C. H. Fagge (gold medal and moiety of scholarship), Guy's Hospital; †E. J. Toye, B.Sc., St. Bartholomew's Hospital. Second Class: A. H. Evans, Westminster Hospital; A. L. Home, St. Thomas's Hospital; J. D. Russell, University College and London Hospital. Third Class: C. H. J. Lockyer, Charing Cross Hospital; H. P. Noble, Middlesex Hospital; A. W. Sikes, B.Sc., St. Thomas's Hospital.

† Obtained the number of marks qualifying for a gold medal.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

Biology.—G. M. Crockett, Royal Free Hospital; K. A. Dawson, Royal Free Hospital; A. Kellgren, Royal Free Hospital; M. E. Martin, Royal Free Hospital; F. Murray, Royal Free Hospital; L. G. Simpson, Royal Free Hospital: H. O. Sutcliffe, Cambridge.

Chemistry.—J. B. Bradley, Birmingham; A. M. Dodd, Royal Free Hospital; F. D. D. Ledgard, Royal Free Hospital.

Materia Medica and Pharmacy.—M. A. Alabone, Guy's Hospital; A. H. Bell, Cork and Guy's Hospital; W. M. McLoughlin, University College Hospital; J. Notley, Birmingham; G. E. Saltau, Royal Free Hospital.

PRIMARY EXAMINATION, PART II.—The following candidates passed in:

Anatomy.—A. J. Beardmore, Sheffield and Middlesex Hospital; J. H. Beasley, Birmingham; A. A. F. Clarke, St. Thomas's Hospital; W. A. C. Cox, St. Mary's Hospital; M. Foley, Royal Free Hospital; A. W. H. Grant, Charing Cross Hospital; G. H. L. Hammerton, Sheffield; H. L. Hands, Madras; D. T. C. Jones, University College Hospital; E. McD. Judge, Guy's Hospital; A. J. Kennedy, Edinburgh; W. L. Norwood, Royal College of Surgeons of Ireland; C. V. Smith, University College Hospital.

Physiology.—W. P. Allen, Birmingham; A. J. Beardmore, Sheffield and Middlesex Hospital; J. H. Beasley, Birmingham; A. A. F. Clarke, St. Thomas's Hospital; W. A. C. Cox, St. Mary's Hospital; M. Foley, Royal Free Hospital; H. L. Hands, Madras; D. T. C. Jones, University College Hospital; E. McD. Judge, Guy's Hospital; A. J. Kennedy, Edinburgh; C. J. Marsh, University College Hospital; W. L. Norwood, Royal College of Surgeons, Ireland; L. Sells, St. Thomas's Hospital.

NORFOLK AND NORWICH HOSPITAL.—At the quarterly meeting of the Board of Management of the Norfolk and Norwich Hospital on January 8th, Dr. Michael Beverley was appointed consulting surgeon to the hospital, and a special resolution of thanks for his twenty-five years' service as surgeon to the hospital was adopted unanimously. Mr. S. H. Burton was at the same time appointed surgeon, and Mr. H. A. Ballance assistant-surgeon, to the hospital. Dr. Beverley, in thus making room for the promotion of younger men, has set an example of self-abnegation which will be generally recognised.

DONATIONS TO HOSPITALS.—The London Hospital has received through its bankers, Messrs. Glyn, Mills, Currie, and Co., an anonymous donation of £2,000 for the maintenance fund. The Treasurer of Guy's Hospital has received a Bank of England note for £500 from "A. B." in aid of the funds of the hospital.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JANUARY 15TH, 1898.

TWO OBJECT LESSONS IN THE ADMINISTRATION OF VACCINATION.

LEGISLATION is in all matters so largely a question of experiment, that it is of the first importance to be able to throw on any new legislative project the light of experience from others of a similar kind, This applies in an eminent degree to such contentious subjects as vaccination, in regard to which public opinion is in a great degree unformed, and requires to be instructed by concrete facts of an unquestionable kind which it can readily apprehend. It is for this reason that we desire to direct the attention of our readers to two recent experiences, the details of which appear in our present issue. They are derived from the empire of Germany on the one hand and the city of Chicago on the other. These experiences so corroborate and complement one another that they help to simplify greatly the problem with which our legislators will shortly be confronted. Representing, as they respectively do, the ideals of administration under a highly centralised national bureaucracy and a civic democracy of the most modern type, they offer us an opportunity of applying the lessons they teach to social conditions which are intermediate between the two.

The remarkable freedom from small-pox which has now for some years prevailed throughout the German Empire, with its population of more than 50,000,000, is strikingly illustrated by the fact that since 1885 only 1,164 deaths from small-pox have been recorded. We may leave out of consideration the steady decrease which has year by year during this period been exhibited, and confine our attention to the suggestive fact that 919, or 79 per cent. of these deaths took place on the frontier, whilst in the bulk of those that occurred in the interior the infection was introduced from abroad. When we regard the extent of the German frontier, and remember that it is in contact by land and in relations by sea with countries in which the administration of vaccination is far less efficient than it is in the Fatherland, the wonder is that the record of mortality should have been so small as it is. It may be asked to what is this high degree of immunity to be attributed? The reply is that it is due not so much to the efficiency with which infant vaccination is enforced, for the operation appears to be less forcibly insisted on in Germany than is often represented, but to the much more complete system of revaccination of children in their 14th year, when they are, as a rule, about to leave school. This statement lends great weight to the contention of those in this country who maintain that if our own adolescent and adult population were fortified in a similar manner we might make a large concession to determined objectors to infant vaccination, and might even extend the limits of the vaccination age to what it is in Germany, without incurring any serious risk, especially if, as has been suggested, and as is the case in Germany, we guard the portals of the school at entrance as well as at exit by the requirement of vaccination in those who pass them. It is in the imperfectly protected elder population of this country that the main danger to unvaccinated infants lies. The experience of Germany appears to show that if those above 2 be protected those under that age will run but little risk. Only 11 unvaccinated infants died in 1895 in the whole German Empire.

This view of the matter finds strong support in the practice in Chicago, where also no child is permitted to attend school who does not exhibit evidence of having been efficiently vaccinated. It has been contended that it would be incompatible with the ideas of the liberty of the subject to enforce such a condition in this country, and that, if we did, it would be used as an excuse by some parents to avoid sending their children to school. But, irrespective of the fact that vaccination in childhood is already the law of the land, it can scarcely be maintained that our ideas of liberty should more nearly approach to licence than do those of such a democracy as that of Chicago. As to the effect which such a requirement might have in excluding children from school, methods of dealing with this difficulty will occur to most persons by which it would be reduced so as to be inconsiderable.

The argument from the experience of Germany is so crushing that it would be difficult to understand how it should fail to carry conviction were we less familiar than we are with the capabilities of evasion which characterise the antivaccination expert. Ousted from all possibility of denying that the rapid decline in small-pox mortality which has manifested itself in Germany during the last twenty years is the chronological sequel of the greatly improved administration of vaccination which was instituted in 1874, he has taken refuge in the assertion that it is really attributable not to the improvement of vaccination, but of "sanitation." He has never ventured to offer any substantial proof of this assertion, but has contentented himself with a vague reference to the improvements which have of late years been effected in the water supply and drainage of Berlin and some of the larger German cities. It would be an affront to the intelligence of our readers, especially in view of the recently published declaration of more than 1,100 medical officers of health on this subject, to discuss this pretext any further.

No less important than the evidence which the experience of Germany offers as to the value of systematic general revaccination on leaving school is that afforded as to the freedom of danger from vaccination in infancy. As has been stated above, 11 deaths were alleged to have been caused by vaccination, or about 1 to 100,000 infants. Of these we are told that nothing could be learned about 3, and that in 7 of the others the history of the cases when investigated showed that the results were due, not to the operation itself, but to insanitary conditions connected with the surroundings of the children, which might have equally affected any other trivial abrasion of the skin.

The lesson of the experience of Chicago is in one respect different from that of Germany. It must be admitted that satisfactory as has been the immunity from small-pox which that city has enjoyed since the reform of its vaccination system, it is too soon yet to claim for it the triumph which that of Germany has conquered. We have no doubt that the confidence of Dr. Garrott in the defences which he has provided, including his "shot-sure vaccine," will prove well founded, but time alone can entirely justify it. What, however, is particularly instructive in the Chicago system, is the evidence which it affords of what can be done, under conditions which are much more unfavourable than those generally existing in this country, to promote a general vaccination of the population without any direct legal compulsion.

In this we have only another illustration of an experience which is by no means uncommon in sanitary administration, that whilst the best devised measures will fail in incompetent hands, personal capacity and persuasiveness will often largely compensate for defective legal authority. It is on this rock that so much of our own legislation has got stranded. We often put weapons of precision into the hands either of untrained novices or of those who, from their position, are afraid or unwilling to use them, and then wonder that they fail to do execution. The recommendations of the Royal Commission as to improvements in the machinery of vaccination, as well as others which have been suggested, will be of little avail to enable us to achieve such results as have been obtained in Germany and Chicago, unless efficiency in the individuals by whom they are to be administered is also ensured. We must have "shot-sure" gunners as well as guns.

THE PREVENTION OF ENTERIC FEVER.

The interest that the recent discussion at the Royal Medical and Chirurgical Society, on the Prevention of Enteric Fever, excited was shown by the fact that the meeting had to be twice adjourned, and that on the third and last night the debate had to be prolonged beyond its ordinary limits. Such discussions on subjects of great practical importance serve a useful end by generalising and—if we may use the term without any prejudice—popularising scientific results among the rank and file of busy practitioners. In addition, hints or thoughts struck out in the course of debate may break new ground. In the present case several new points were brought out, and Dr. Poore may be congratulated on having, in his opening address, given a thoroughly practical turn to the discussion that followed.

As many as twenty speakers took part in the three days' discussion, and approached the subject from many, though not from all, points of view. Wide though the range of the debate was, no mention was made of the artificial immunisation against typhoid infection started by Professor Wright, and recently investigated by Mr. Bokenham from an experimental point of view, though the ingenious suggestion that new comers to a district were more especially liable to suffer from enteric fever, because the native inhabitants had become protected by homœopathic doses of the poison, was supported by Dr. Seymour Taylor. Curiously enough, another and quite a different aspect of the subject, which has a peculiar interest at the present time, escaped in silence; this was the question whether cases of enteric fever should be treated as heretofore in the wards of a general hospital, or whether they should be sent like scarlet fever and variola to special institutions or to the hospitals of the Asylums Board. Much was of course said about the necessity for strict and scrupulous personal disinfection of the patient and all his dejecta, and from the difficulties that may arise in satisfactorily carrying this out in a private house, the deduction might be drawn, as one speaker did, that all cases should be sent into hospitals.

The prevention of typhoid fever was approached along three avenues—that of the bacteriologist, that of the medical officer of health, and that of the general physician, and the speakers might be divided into three groups according to the lines along which they chiefly travelled. Prevention necessitates an accurate knowledge of the causes of enteric fever, and in this connection many interesting points were referred to. The milkborne origin was well illustrated by Dr. Davies, who spoke fresh from the successful suppression of what promised to be a severe epidemic at Bristol. Professor Corfield and Dr. Payne both briefly referred to sewer gas as a cause, and generally signified their belief in its powers of spreading typhoid, but Dr. J. E. Squire was the only speaker who exemplified the aërial communication of the poison; in this instance it appeared plain that dried excreta, in the form of dust, had been the *materies morbi*. The *rôle* of flies as carriers of typhoid infection was graphically described by the Director-General of the Army Medical Staff, Surgeon-General Jameson, C.B.; and, lastly, a fresh point was made when it became clear that hospital *post-mortem* rooms may serve not only for the investigation of the morbid lesions of the disease, but as centres from which infection may spread broadcast. The dangers of washing out the intestines of patients dead from enteric fever by attaching them to the tap were, as indicated by Dr. Poore, by no means imaginary, and should be in future strictly guarded against.

The long periods during which the bacillus typhosus could remain more or less latent in the body after the occurrence of enteric fever, and thus prove a fresh and often unsuspected source of infection, were referred to, and may serve to explain any case of the disease that apparently arises *de novo*. While sanitary science has accomplished wonders during the last few decades in reducing the mortality from enteric fever, much remains to be done in the way of prevention before we can hope that the disease will become as rare as typhus is now. The water supply should be systematically examined and placed entirely under the control of medical officers of health, and to ensure its purity the companies should by law be rendered responsible for the consequences of any pollution.

Further improvements in the valuable system of notification, which has done such valuable work in its twenty years of existence, between sanitary authorities, especially in the direction of internotification, were hinted at by Dr. E. Seaton, and if carried out would strengthen our lines of defence against the disease.

The systematic bacteriological examination of water, milk, and sewage, was sketched by Professor Boyce, and the importance of an acquaintance with the normal flora of water, sewage, etc., was insisted upon, so that any variations might be traced to their source, and precautionary measures at once taken. As demonstrated by the Clifton epidemic, Widal's serum reaction may sound the first note of alarm, and show that apparently obscure cases of "influenza" are in reality

the first drops of the storm which is about to break. The systematic extension of this test to epidemic cases of diarrhœa, might, as pointed out by Dr. Sims Woodhead, enable medical officers of health to nip impending outbreaks of typhoid fever in the bud. Dr. Durham, who may be said to have assisted in the birth of Widal's serum diagnosis, insisted on the importance of sufficient dilution of the blood in the performance of this test, and at the same time drew attention to the not infrequently faulty and insufficient methods employed in the differentiation of the bacillus typhosus from the ubiquitous colon bacillus.

From the point of view of the general physician and practitioner, Dr. Payne urged the grave responsibility attaching to the medical attendant of a case of enteric fever. His duty is to prevent any possibility of the spread of infection; and, though more limited, his function is of equal, if not greater, importance than that of sanitary boards and officers.

A GERMAN VIEW OF ENGLISH MEDICAL EDUCATION.

The system of medical education in this country is so complicated that it is difficult for an Englishman of ordinary intelligence to grasp the relative value of different diplomas and the reason why so many examining bodies exist. To a foreigner the confusion must appear even greater, and in any account of the system written by a German we should consequently expect to find numerous errors. We were therefore agreeably surprised in reading an article on this subject, written by Dr. zum Busch in a recent number of *Die Heilkunde*, to find how successfully he has overcome these difficulties. Dr. zum Busch has, however, been through the mill; he is the possessor of an English diploma, and thus writes from personal experience. He describes the two main classes of students—those who aim at a University degree or higher diploma, and those who are content with a licence to practise. He estimates the cost of a medical education here with sufficient accuracy, and the total comes out higher than in Germany. He has appreciated the high value which we place upon athletics in this country, especially in our student days; and in conclusion he gives several reasons why he would not recommend his countrymen to follow his example and settle here.

In the long account which he gives of our examinational and educational methods we have detected but few slips; one, however, of these is somewhat ludicrous, though in a foreigner pardonable. He describes our medical students as hailing from the Board Schools. We presume he means boarding schools.

The author finds something to admire in our methods, such as our system of clinical clerkships and other similar offices filled by quite junior students. But the article is, on the whole, adversely critical, and we feel bound to admit that many of his criticisms are just and to the point. We do not altogether agree with him when he states that there is an insufficiency of theoretical teaching in our schools, nor do we regard our examination system as quite so bad as the Chinese, to which he likens it; nevertheless, thinking men in this country have long seen that our examination system is, to put the matter mildly, far from perfect.

What most strikes the intelligent foreigner in this connection is the absence of State control, both in teaching and examining. First, he receives a shock when he sees eleven medical schools in London, to say nothing of the provinces, struggling and competing for students. He sees the advertisements of these schools each proclaiming the cheapness and goodness of the article it supplies; he sees the waste of clinical material produced by tying down each student to one particular hospital, and the entire disuse of our large infirmaries for teaching purposes. If, however, he manages to understand the way in which this part of our system works, he has then to grapple with the far greater difficulty of trying to find a system in the chaos of competing examining bodies. The absence of any State examination, the absence even of any uniformity in the standards of the Examining Boards, must be almost bewildering. In spite of the recognition of this anomaly by the best of our teachers and examiners, we seem as far from the desired goal—the one-portal system, or at least a uniform examination—as ever.

The severance of teaching from examining as exemplified in the present London University, the absence of any bond between the medical schools, and above all the absence of a real university in the metropolis, are other points that attract the unfavourable notice of our Continental neighbours. Dr. zum Busch, however, devotes the bulk of his article to a description of the examinations of the Conjoint Board in England. He gives specimen papers, describes the curriculum enjoined by the Royal Colleges, and the series of examinations which it entails. Examination by wholesale is the weak point he puts his finger on. It is hardly possible to see, when we consider the large number of examinees, how the general system can be different. We, however, know that they do manage it differently in Germany. In England, however, six hundred or more candidates have to be examined in a few days; the examiners are overworked; a candidate has but little chance to show how much practical knowledge he possesses, for the bell rings at the end of ten minutes, and another candidate is put through the process. "Five years to learn," he exclaims, "and his diploma rests on the chances of a ten minutes' examination—no wonder 72 per cent. fail." Allowing for a little exaggeration in the numbers, who can, on calm deliberation, say that this is an ideal condition of affairs?

Among other points needing reform Dr. zum Busch calls attention to the short tenure of office in such posts as House Physician and House Surgeon, and to the free hand that quacks of all descriptions have in this land.

We have, however, said enough to show that the article we have been considering is an able and thoughtful one, and the criticisms it contains well worthy of careful consideration.

On Wednesday next, January 19th, Mr. Hutchinson will deliver a New Year's address at the Clinical Museum, being a summary of the year's work. Patients will be demonstrated as usual at 4 o'clock, and the lecture will be given afterwards. All members of the profession who incline to attend are invited—1, Park Crescent, Regent's Park.

THE INCREASE OF INFLUENZA.

There was a considerable further increase in the fatal prevalence of influenza in London last week. The deaths attributed directly to this disease, which had been 17, 15, and 29 in the three preceding weeks, further rose to 43 during the week ending Saturday last, and exceeded the number recorded in any week since April, 1895. Of these 43 fatal cases,

5 were of children under 5 years of age, 14 of persons aged between 20 and 60 years, and 24, or more than half of the total number, were of persons aged upwards of 60 years. The disease appears to be especially fatal in Paddington, St. Pancras, Wandsworth, and Camberwell.

THE MONTREAL MEETING.

The Treasurer of the British Medical Association has received a cheque for £28 6s. 3d., being the amount of the collection at Christchurch Cathedral, Montreal, on the occasion of the annual service of the Association when the sermon was preached by the Bishop of Niagara. The amount has been divided between the Royal Medical Benevolent College and the British Medical Benevolent Fund.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The half-yearly meeting of Fellows of the College should have been held on Thursday, January 6th, but the quorum of 30 Fellows was not present. Only 15 Fellows, of whom 8 were members of the Council, attended. Mr. Alfred Willett, Senior Vice-President, would have presided; but after waiting fifteen minutes the Secretary reported that only 15 Fellows were present, whereupon they also dispersed.

DEATH OF MR. AUGUSTIN PRICHARD.

We regret to have to record the death of Mr. Augustin Prichard, F.R.C.S., Consulting Surgeon to the Bristol Royal Infirmary. Mr. Prichard, who was in his 80th year, was well known to many members of the British Medical Association as a regular attendant at the annual meetings, and at the Worcester meeting he was President of the Surgical Section. We hope to publish a memoir in an early issue.

THE SANITARY CONDITION OF POLICE COURTS.

An incident which occurred recently at Liverpool may serve to direct attention to the great importance of having our police and other courts of justice properly ventilated and in good sanitary condition. The stipendiary magistrate, after a fortnight's absence from ill health due, as was believed, to the insanitary condition of the court in which he was obliged to sit while administering justice, was congratulated by the senior member of the legal profession present on his recovery, and addressed on the necessity for having better sanitary arrangements made in his police police court, in which it was stated that the foul air and bad ventilation exercised a most prejudicial effect upon the health of those whose business required their attendance there. We hope that it is not necessary, as the much-suffering stipendary at Liverpool seemed to fear, that the death of a city councillor or J.P. should occur as a result of the insanitary conditions of the court, before the attention of the civic authorities would be directed to the matter. We have good reason to believe, from inquiries we have made, that no such occurrence as that at Liverpool would be possible in London, our Metropolitan police courts being as a rule in good sanitary condition, and as well ventilated as is possible where numbers of the great unwashed, very dirty and very evil smelling, congregate for hours together in a limited space. The Old Bailey, however, has long been a standing disgrace to those who are responsible for the administration of justice in the City of London, and the only excuse put forward for its many shortcomings as regards light and ventilation is that it is just going to be rebuilt, an excuse which has now served for about twenty years, and may possibly serve for another period of like duration. In the meanwhile, that the wealthiest city in the world should be content to lag far behind smaller Continental cities, Brussels for example, in this matter is not very creditable to the public spirit of its ruling powers. Liverpool has, in a general way, a good reputation for activity in municipal affairs in matters affecting public health. The insanitary state of its police court comes, therefore, as a disagreeable surprise.

DIET TABLES AT HEALTH RESORTS.

For the ordinary tourist a *table d'hôte* at foreign hotels has many attractions. He can really be satisfied with the present system, for it saves him the trouble of ordering a special meal; and if not over-tired from a long day's excursion, he will often be able to do justice to several of the courses, and will not chafe at the length of time the whole dinner takes. It is quite otherwise with invalids. Many of them should take a much smaller meal, and ought to be spared the annoyance of sitting at table simply looking on whilst their neighbours are eating. Too often indeed a variety of succulent dishes, and the example of healthy visitors around them, tempt the real patients at health resorts to neglect the doctor's advice, and to partake of dishes which, in their ordinary life at home, would never even appear on the table. The real question is whether special diet tables should be instituted at health resorts, as advocated by many, especially by some doctors in France, or whether restaurants *à la carte* should be established, and arrangements made by which visitors are not to be charged on a higher scale for their rooms if they prefer not to take their meals in their own hotel. With special diet tables there are sure to be difficulties in regard to the many kinds of diet ordered, and many patients would object to the formality and constraint of this system. On the other hand, the satisfactory working of the *à la carte* system has been proved to be possible by its good results at Carlsbad and other health resorts, where it is an established custom. This system has likewise the advantage of suiting a number of ordinary visitors, who infinitely prefer a small meal taken at a time which they can choose for themselves, to sitting through a long *table d'hôte* meal with neighbours who are usually strangers to them, and often unsympathetic.

THE MANCHESTER ROYAL INFIRMARY.

It may be remembered that during the course of last year the question of the improvement of the Manchester Royal Infirmary reached an acute phase. Ultimately, the Committee representing the Corporation on the one hand, and the Infirmary on the other, took the matter in hand. The Special Committee of the Corporation have drawn up a report, which, however, has still to be approved by the City Council, and, if approved, may have very far-reaching effect. The scheme provides for the Corporation acquiring a large slice of vacant land within the Infirmary ground, whereby the street known as Parker Street would be widened to the extent of the land acquired. The entrance lodges would be removed, and the boundary line set back. The infirmary authorities ask a sum of £286,000 for the land in question—about 12,000 square yards, or, roughly, about £25 per yard. On the other hand, there is to be no extension of the Infirmary buildings on the present site, and any rebuilding or alterations must be in the nature of provision for emergency cases only. The additional accommodation required by the Infirmary authorities will, it is thought, be best supplied by the erection of a new building elsewhere, the present buildings being utilised for emergency cases and as a receiving house. The scheme is, it will be seen, a large one, but it has still to be submitted to the City Council.

THE WATER SUPPLY OF LINCOLN.

At a recent meeting of the Lincoln City Council further consideration was given to a letter from the medical men of Lincoln, urging that, while the water supply of the city was so liable to pollution as at present, it was important that fortnightly bacteriological examinations should be added to the fortnightly chemical analyses of the town supply; and further, that the supply from the Witham, being admittedly polluted by the sewage effluent of an asylum in which typhoid fever was known to have occurred, steps should be taken to stop such pollution. The Council replied by inquiring whether any new method of analysis had been discovered since 1892, and quoting Sir George Bu-

chanan's statement that the processes then in use were "of no earthly value for the demonstration of morbid elements in water." The Council denied ever having admitted that there was pollution of the water supply from the Witham, and added that "if medical examinations of the water are of any use, those which have been made of the effluent from the asylum farm give no reason to think that it contains any injurious properties." Relying upon the evidence given before the Metropolitan Commission, they considered that there was no danger of any such pollution of this water. They deprecated the use of the term "pollution" in reference to the water supplied by the Corporation; they had spared no efforts to "supply safe drinking water to the inhabitants of Lincoln, and, so far as the death-rate and health of the City are concerned, their exertions have been attended with success." It seems rather strange that an answer of this sort should have been drawn up so evidently without consulting the medical officer of health, who could have at once informed them how greatly bacteriological examination of water has been improved since 1892. However, the Lincoln Medical Society were able to do this, and in his reply Dr. Carline stated that a "bacteriological, together with a chemical, analysis will if made at regular and frequent intervals show if a water supply is polluted and consequently a source of danger." He adds, "a polluted water is not necessarily a water containing disease germs (morbific elements), but, where innocuous organisms can penetrate, disease germs can also find a way; and if such germs obtain access to a polluted water, they will multiply in it and result in an epidemic." Dr. Carline also points out that instead of using 7 to 15 drops of water for bacteriological examination "large quantities are now employed, the microbes being separated by centrifugal action, or by filtration through a Pasteur or other reliable filter." After defending the use of the term "polluted" and showing the dangers from unrecognised cases of typhoid, the medical manifesto goes on to discuss the bearing of the death-rate of the city on the safety of the water supply, and draws attention to the fact that in Maidstone the death-rate for a long time had compared favourably with that of Lincoln. In regard to Sir George Buchanan's opinion, which naturally weighed so much with the Waterworks Committee, they referred to his further answers before the Commission in which he insisted on the necessity of searching for and putting a stop to all sources of pollution such as the effluent from the Bracebridge sewage farm.

PAYMENTS BY OUT-PATIENTS.

THE *Daily Chronicle* announced recently the gift from an anonymous donor of £25,000 to the London Hospital, to be spent, if we understand aright, on the out-patient department on condition (1) that the out-patients shall pay some small sum (2d. seems to be suggested) towards the cost of medicine and bandages, and (2) that hospital letters shall be abolished. The second condition (which, if we understand the vague language of the paragraph, is intended only to apply to out-patients) will not provoke much comment. Nothing is more useless than these out-patient letters, and the sooner they are abolished the better. But the small payment system will be very differently looked at. For our own part, we are utterly opposed to it. We believe that it will only tend still further to deteriorate the out-patient departments—which certainly need no such deterioration—and to produce renewed discontent. What is the motive for this twopenny plan? If it be economy, a much greater economy could be effected by the far sounder plan of only treating a reasonable number of patients, and selecting their cases with reasonable care beforehand. If it be to foster the sense of independence in the patient, this can only be effected by charging him the fair price of the article supplied. Meanwhile, the twopenny charge puts the hospital in direct competition with the provident dispensaries and the poorer medical men of the district, and will tend still further to aggravate their complaints of the hospital system. The mixing up of the pay and the gratuitous systems in our hospitals is one of the most far-reaching changes which can be effected in the medical treatment of the poor. But in the present unorganised condition of the hospitals this great change can be effected without any public discussion whatever! And yet people are found to deny the necessity of a Central Hospital Board.

AN HISTORIC INSTRUMENT.

BY the kindness of Mr. Willett the museum of the Royal College of Surgeons of England has been enriched by a case of instruments which has a distinct historic value. The case contains two saws, one of which bears the inscription, "The first subcutaneous osteotomy saw made by Mr. Blaise, and used by Mr. William Adams on December 1st, 1869, in his first case of division of the neck of the femur." The case was given to Mr. Willett by Mr. Adams apparently as a mark of appreciation for his recent most interesting Bradshawe Lecture on the correction of certain deformities by operative measures upon bones.[1] Mr. Adams's first operation of subcutaneous osteotomy was performed upon Luke Bristowe, aged 24, a gardener, who had bony ankylosis of the right hip-joint, the thigh being flexed and abducted after rheumatic fever. Four months after the operation he could stand upon both legs, the pelvis being tilted and the spine somewhat curved. He could also bear the weight of his body upon the leg whose femur had been divided, no slight achievement in the days which preceded the introduction of antiseptic surgery. The operation was devised upon the lines of subcutaneous osteotomy, special care being taken during its performance to exclude the air and to close the wound at once. Subcutaneous osteotomy was at first limited to the neck of the femur, but the results were so good that Mr. Adams is now able to write, "I have also sent you my favourite set of osteotomy saws—saws which have seen a great deal of service and cut through every long bone in the body." There are two sets of these saws: the one Mr. Willett has offered to the Museum of St. Thomas's Hospital where Mr. Adams long since won his laurels as curator; the other set has been presented to the Museum of St. Bartholomew's Hospital.

ASEPTIC VACCINATION.

IN recent issues of the BRITISH MEDICAL JOURNAL the question of aseptic vaccination has been raised by several correspondents, who describe their procedures in carrying out this practice. These, briefly summarised, amount to antiseptic cleansing of the arm to be operated on, and of all instruments, and then to the application of some preparation such as a gelatine film or gauze dressing which shall protect the vaccinated person from the introduction, by means of the punctures or scarifications made, of septic or other noxious organisms. We fear that it must be admitted at the onset that whilst this country took the lead in antiseptic surgery, there has been far too much carelessness in the matter when the comparatively minor surgical operation of vaccination has been in question, and this notwithstanding the fact that the extreme infancy of the subjects operated on has added to the risk. The performance of vaccination without a preliminary cleansing of the operator's hands or cleansing of the infant's arm is by no means uncommon; the instruments used are, we fear, but rarely sterilised, and we at times hear complaints that they are not even carefully washed between different operations when more than one is performed at the same time. The official instructions to public vaccinators must be regarded as out of date in this respect, although it must be remembered that so far as the Government are concerned the whole question of vaccination is under consideration, and that piecemeal modifications and amendments are not to be desired. But whilst we are fully convinced of the great importance of the performance of vaccination under aseptic conditions, we can hardly admit that much mischief has resulted from the actual operation. The

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1897, p. 1689.

erysipelas and other allied inflammations which are apt to supervene on vaccination, and which are especially fatal by reason of the very tender age of the subjects, rarely, if ever, come on until the second week; and making all allowance for the postponement in infection that may be due to the concurrent action of two different poisons, it seems clear that erysipelas, if it were received into the system at or about the time of the actual operation of vaccination, could not be so invariably postponed in its first manifestations as it is. On the contrary, the obvious results of the infection would make themselves apparent within a very few days. Post-vaccinal erysipelas is nearly always contracted during the second week. It may be partly due to infection in dirty and unhealthy houses after vesicles have been intentionally opened, but it far more frequently follows ruptures and abrasions of the vesicles as the result of careless handling in poorhouses where infants are necessarily to a great extent uncared for. But this fact in no way relieves the operator from the duty of using all reasonable antiseptic methods; it rather adds to his duty that of advising and, if he can, of carrying out similar precautions during the time when the vesicles are liable to be broken. We regret to admit that in this country we are not so far advanced as many of our Continental brethren, for it is no uncommon thing in foreign countries to see every precaution by way of cleansings, antiseptics, and even the use of a sterilised dress, which are everywhere deemed necessary for the performance of ordinary surgical operations. Clearly there is room for improvement and progress in this direction, and we are sure that public and other vaccinators will be glad to know the precise methods which are best adapted to effect the end in view, but which are not prohibitory in ordinary general practice.

THE OUT-PATIENT QUESTION AT THE NEWPORT INFIRMARY.

AT a meeting of the Newport Medical Society, held at Newport Infirmary on January 5th, the President, Mr. O. E. B. Marsh, in the chair, a discussion took place on the question of hospital reform, with special reference to the recent difficulty at the Newport Infirmary. The following resolution was unanimously carried:

That this meeting of the Newport Medical Society, having heard particulars of the disagreement between the directors of the Newport Infirmary and Mr. Ensor, considers that his original action was taken in the interest of the institution as well as of the general medical profession, and that he has been harshly dealt with by the directors, in their not having invited him to explain his action before summarily dismissing him from his appointment.

It will be seen from the letter signed by the members of the staff of the Newport and Monmouthshire Hospital that the matter is to be brought before the annual meeting of the subscribers to the hospital, which is to take place at the end of this month. We trust that some adjustment of the difficulty may then be found possible; but an adjustment brought about by an abject apology such as was demanded from Mr. Ensor would not be equitable. At a recent meeting of local subscribers to the Workmen's Newport Infirmary Fund it was contended that Mr. Ensor was bound to treat all the cases sent to him, and had no right to ask any questions. This is merely to assert, in the crudest possible way, the doctrine that the medical officer is the servant of the lay governors, with the still more intolerable addition that he, of all other servants, is bound to unquestioning obedience, however unreasonable his masters' commands may be. What would any class of workmen say to such a doctrine applied to themselves? We fully concede that the medical officer is bound, so long as he holds his office, to obey the rules; and are willing to admit that Mr. Ensor was guilty of a technical violation of them. But this was provoked by the previous violation by the directors of their duty to investigate the cases which had previously, in strict conformity to the rules, been submitted to them; and therefore, if any apology is to be made, the directors should be the first to apologise. But what is wanted is not apologies, but proper investigation of the cases. It is absurd to say that Mr. Ensor had no right to make inquiries. He was a party interested, and had every right to make them. We yet hope that he will obtain justice from the governors of the infirmary, and that proper rules for the out patient practice will be at once promulgated.

PROGRESS OF YELLOW FEVER IN JAMAICA.

REPORTS differ as to whether Kingston is still suffering as much from this malady, but a trustworthy correspondent informs us that at Spanish Town, Hope Gardens, and Up Park Camp, as well as in neighbouring places, the disease was not decreasing at the time he wrote. Amongst the garrison at the Camp named, three Europeans and three natives had been attacked during the fortnight ending December 25th, and in the same fortnight there were four deaths from this disease—two of natives, two of Europeans. There was also a case on the guardship *Urgent*, off Port Royal. The *Jamaica Post* of December 20th devotes a leader to praising the energetic action of the medical officer of the Manchester parish. We have on two previous occasions spoken of Dr. Cook's good work. As we pointed out a week ago, the isolation of the family at the post-office at Shooter's Hill, looked at soberly, has few of the sensational elements depicted at the time in the *Gleaner*. The upper and the lower part of the house were capable of being separated, and separately entered, so that no one was confined in the portion of the house in which the postmistress had died. In fact, there was, strictly speaking, no confinement at all. During the disinfection of the house the isolated persons were in the grounds, not in the dwelling, and, as we stated when the matter was first mentioned, every kindness and consideration was shown them by Dr. Cook. The article in the *Post* referred to gives many particulars justifying our statement. It is well that one who, from his official position, could not well reply to attacks by anonymous paragraphists, should have been so ably defended by the editor.

INCREASE OF LUNACY IN THE METROPOLIS.

THE report of the Asylums Committee of the London County Council gives food for reflection, and opens out a subject on which the medical profession may exert its influence for the public benefit. In proportion, London shows more lunacy than the rest of England and Wales, the figures being 19.17 against 14.59, there being no fewer than 19,954 imbeciles and lunatics under care in the County Council asylums in the metropolis. During 1896 about 700 were added to the total, a similar increase having taken place during the previous twelve months. These unfortunate persons, with their numerous attendants, are housed in seven asylums at the average cost of 9s. 6½d. per week per head, and the accommodation being insufficient, new institutions are to be erected at Norton Manor and Bexley. The reports of the medical officers do not mince matters, and from that of Dr. Claye Shaw, of Banstead, we learn that in his opinion, "as regards the future of lunacy we are doing all in our power not to stamp it out but to increase it, if, that is, there is anything in the principle of hereditary transmission," while Dr. Jones, writing of the causes of insanity among the inmates of Claybury Asylum, says: "A hereditary history of insanity was ascertained in 253 of the admissions (106 males, 147 females), a proportion of only 26 per cent." He adds that about 20 per cent. did not reply to the question, and that "a faulty heredity is not always owned to," but that previous attacks and hereditary influences combined are the antecedents in 49 per cent. The meaning, as we understand it, of Dr. Claye Shaw's heavy indictment is that opportunities for further transmission are given by the early discharges of patients who

are "legally cured," but who would be all the better for a prolonged process of annealing. We have done so much to show the evils of massing any one class of persons, and to show that experience as well as science have proved that people, both sick and well, are best dealt with in small numbers, that it is surprising to learn that a new Metropolitan Asylum is to accommodate 2,000 patients. When it is remembered that the large majority of these persons must be permanently retained, the recoveries being but 8.11 per cent. on the total number under treatment, the plan seems to be without sufficient recommendation. To build large buildings as the permanent abode of some 1,800 persons, whose malady is one which especially needs individual treatment, is, we venture to affirm, a serious civic error. It is certainly, as Dr. Jones's medical report admirably points out, the duty of the State to promote the people's sobriety, morality, and other virtues, the ignoring of which lead to insanity, but it is none the less the duty of the Board, which is entrusted with the care of the insane, to see that the conditions of cure are the best attainable. It may be doubted whether the massing of large numbers under a necessarily inelastic system does supply the best condition for cure, which in some cases is found in surroundings which compel self-assistance and awaken interest and hope. In the event of further accommodation being needed we trust that it will be met by erecting smaller blocks for acute cases, or hospitals in connection with the present institutions. It has also to be considered whether all the persons now under care need be kept in big institutions. Many of them are harmless and could be safely trusted with their relations and in their own homes, where they would teach, unconsciously perhaps, lessons of patience and kindness. In Gheel, as everyone knows, not only harmless imbeciles but even those patients in whom outbursts have to be expected and guarded against, are lodged in families under close supervision, a plan followed in some cases by marked improvement and certainly increased happiness to patients.

THE MAIDSTONE EPIDEMIC, AND AFTER.

It is stated that a number of leading householders in Maidstone, who have had cases of typhoid fever in their houses, contemplate combined action for the purpose of proceeding against the water company for the recovery of damages. It appears that the company has as yet sent in no bill in the districts which were supplied from the Farleigh sources, although they have collected water rents elsewhere in the usual way. The *Times* states that the legal view is that unless payment is tendered the householders will be out of court, and it is understood that as the first step, payment will be tendered for the water supplied during the last two quarters of 1897, and that the next step will be to deliver claims for expenses attendant upon the illness attributed to the polluted water. The Relief Committee recently decided to invite the medical profession to send in their claims for fees for attendance in necessitous cases, but it is urged that this course would in reality operate only to the benefit of the water company. The Local Government Board have fixed January 31st as the date for the commencement of the inquiry into the cause of the outbreak. The inquiry will be conducted by Mr. J. S. Davy, General Inspector, Dr. Theodore Thomson, Medical Inspector, and Mr. Wilcox.

THE MEDICAL STUDY OF "SECOND SIGHT."

Mr. Andrew Lang among the doctors is like Saul among the prophets. Yet it appears that he is an "honorary member of the Caledonian Medical Society," and to the organ of that meritorious Society he has lately contributed an article. In the issue for January, the author of *Cock Lane and Common Sense* and other works on the manners and customs of bogeys, discusses the subject of "Second Sight," which he is inclined to treat seriously. He says that in his private opinion "an amount of evidence enough to warrant suspension of judgment has been collected by the Society for Psychical Research." He also suggests that "medical men in the Highlands, and indeed everywhere, have the best opportunities for unprejudiced study of—what is essentially within the range of their subject — hallucinations." Mr. Lang, indeed, admits that "the majority of these arise from physical conditions—alcohol, fever, incipient brain disease"; but he thinks that "the casual hallucinations of the sane and healthy are a singular and important topic, not any longer to be dismissed by two stock cases among invalids, the eternal Nicholai and 'Mr. A.'" If our recollection serves it was *Mrs.* A. whose subjective disturbances of vision would, as Huxley puts it, have made her a mine of the most authentic ghost stories had she not been a woman of exceptional strength of mind. Medical men will, of course, readily admit that the "unprejudiced study" of hallucinations is "essentially within the range of their subject." As regards the particular forms of hallucination connoted by the term "second sight," however, comparatively few doctors are fortunate enough to find clinical material for study. It may therefore be interesting to some of our readers to learn that within Mr. Lang's own knowledge a percentage of people can provoke hallucination by merely gazing into a glass ball. He has had experience, convincing to himself, that a small percentage of such hallucinations are "veridical," or, in popular language, are real cases of "second sight." "Any one" (continues Mr. Lang) "who knows a Highland seer might make an interesting and harmless experiment by trying him with a glass ball; they can be procured from Mr. E. A. Bennett, Secretary of the Society for Psychical Research, 19, Buckingham Street, Adelphi, London, W.C., and cost 3s. or 4s. The experiment is psychological." This, we venture to think, is practically tantamount to saying that the "seer" either deludes himself or the experimenter.

HOSPITAL REFORM ASSOCIATION.

The first annual meeting of the Hospital Reform Association will be held at the offices of the Medical Defence Union, 20, King William Street, Strand, London, on Wednesday, January 19th, at 4.30 P.M. The annual report of the Council will be presented, and a President, Vice-President, Treasurer, and an Honorary Secretary will be elected or re-elected. Further, a discussion of a Scheme for the Better Administration of Medical Relief in Out-patient and Casualty Departments will be opened by Dr. Garrett Horder, the Honorary Secretary of this Association. Much good work has been done by the Hospital Reform Association, nevertheless it is, we understand, in want of money, and would welcome an accession of members. The address of the Secretary of the Association (Dr. Garrett Horder) is 10, Windsor Place, Cardiff.

A SHORT WAY WITH HYPOSPADIAS.

Mr. Green, of Ripon, in the current issue of the *Quarterly Medical Journal*, narrates a case of extreme hypospadias in a patient, aged 24, who had always passed as a woman. He had been living in domestic service as a housemaid when he suffered from symptoms attributed to the absence of menstruation. Careful examination showed a condition of extreme hypospadias. The scrotum was split into two halves, each containing a testis. No prostate could be felt *per rectum*, and the development of the genital apparatus appeared to have been arrested *in utero* about the third month. "The question," says Mr. Green, "now arose as to what should be done, and as the patient in mind and habit is more a woman than a man, and it is illegal for him to remain as he is in female attire, he expressed a desire to have the testicles removed and continue a woman; and it seems to me that this is the best solution of the difficulty." Mr. Green therefore admitted the patient, at his own urgent request, into the Ripon Cottage Hospital, and removed both the testicles. He made a good recovery, and, being now un-

sexed, has returned to domestic service as a housemaid. Subsequent microscopic examination of the testes showed them to be in every respect normal and active organs.

ALCOHOLISM AND SUICIDE.

In a letter addressed to the *Liverpool Daily Post*, Dr. Francis Imlach draws a moral from the greater prevalence of alcoholism and suicide in certain groups of lives. The moral is that such groups must reform themselves and become more sober, or submit to extinction. He points to the greater self-restraint of certain classes as compared with others, specially of fishermen and of enginedrivers and guards, who only show a fifth of the average proportion of both alcoholism and suicide. Much of this improvement has undoubtedly been due to the abstinence propaganda, special efforts in this direction having been made by various temperance bodies, such as the United Kingdom Railway Temperance Union, with its rapidly-increasing branches, under the favouring auspices of railway directors and managers. It ought not, however, to be forgotten that fishermen, enginedrivers, and guards are mostly employed in the fresh air, an environment favourable to the development of a robust frame and morals. Miners have been distinguished for their growing sobriety, as they too have been systematically appealed to by temperance enterprise. Their character is described in the supplement to the Registrar-General's report for the three years 1890 to 1892, as a temperate body of men, their alcoholic mortality having been less than one-third of the standard, their suicide less than two-thirds, and their mortality from liver diseases not exceeding two-thirds. Among liquor vendors the death-rate has been high. Among innkeepers alone the mortality from all diseases has increased enormously; from alcoholism by three-fifths, and from suicide by one-fourth. On the whole, there has been a comparative decrease of drunkenness, while a few groups have exhibited an increase. These conclusions are based on the returns, but, as everyone knows, not all death certificates record the part played by alcoholism, The lesson of self-restraint must be taken to heart, if sobriety is to increase in the groups which have exhibited a tendency in the opposite direction.

THE EVOLUTION OF THE THERMOTAXIC MECHANISM.

Nature does nothing by jumps. The more we know the less we can classify, and it has been truly said that the comparative morphologist is the despair of the systematist. The latest of our long established hard-and-fast distinctions to go is the old classification of animals into hot and cold blooded, or into homothermic and poikilothermic, to speak more accurately. In a recent issue of *Nature* are the records of work by Mr. Alexander Sutherland on the temperature of reptiles, monotremes and marsupials. In this memoir, originally presented to the Royal Society of Victoria, he shows conclusively the gradual change that has come over the heat regulating mechanism of these animals, taken in ascending order. In the case of a lizard kept under observation for ten hours, during which time the temperature of the animal's environment was raised 14° C., the temperature of the animal varied to a corresponding extent. In the case of echidna similarly observed, the temperature of the animal always kept above that of the air. It varied, however, from 22° C. to 36° C., an immense range for a mammal. The variation did not, however, keep pace with that of the air, but preserved a kind of average rate above it. Here, then, we have the elements of a mammalian thermotaxic mechanism, together with the remains of the homothermic conditions of the lizard. In the case of the koala (Phascolarctos cinereus) the same condition has advanced a step higher—that is, a steady maintenance of body temperature above that of the environment, which underwent a small variation corresponding to a much greater variation in the latter. It is clear, then, that there are grades in the power of regulating body temperature, and that the mammals which are classed lowest on anatomical grounds are not only of the lowest temperature, but also of the greatest range, and are likewise most susceptible to temperature changes in the environment.

MEDICAL AID FOR WOMEN IN INDIA.

The opening of the Rasulkhanji Hospital for women at Junagadh by Lord Sandhurst adds one more institution to the many which have been established in India, and which have for their object the bringing of medical science and skill within the reach of the women of the East. The disabilities under which Indian women, when ill, labour owing to the custom which prevents them from being attended by medical men, can be met by the employment of medical women. In 1896 a movement was set on foot by the political agent of Kathiawar to bring effectual medical relief to the women of the Kathiawar States. It was warmly supported by the chiefs, and through their co-operation 10,000 rupees per annum were voted for the maintenance of a lady doctor and dispensary. A still further development has now taken place. It was felt that a hospital and quarters for the medical women were still wanting to make the scheme complete. The Nawab Sahib of Junagadh has generously provided both at a cost of 80,000 rupees. It is this hospital—thoroughly well equipped, airy, cool, and accommodating 40 patients—which Lord Sandhurst recently opened.

THE DEPOPULATION OF FRANCE.

The late Professor Tarnier, according to Dr. Dureau, was the first private person who offered a reward to increasers of the population. He instituted a prize of 100 francs for each child that might be born in the year after its institution, namely, 1892, in his native village, Arc-sur-Tille, Burgundy. Dr. Cabanès, however, has found that a similar prize had already been offered for the same year by the Comte de Chardonnet, Mayor of Charette. It appears that not a single child was born in the village of Charette in 1891. The noble Mayor announced by beat of the drum in the market place that "We, Mayor of Charette, promise to award a prize of one hundred francs to every woman who brings a viable child into the world in the course of the year 1892. The said reward will be delivered at the end of the week following the declaration of the birth of the child at the Town Clerk's office. The parents must be inhabitants of the commune of at least one year's standing and the child must be born in wedlock." Nobody can deny the advisability of these qualifications, but it seems strange that the necessity for increase of population is so keenly felt in France that a mayor should think it right to deliver such a proclamation.

THE PROPOSED MIDLAND UNIVERSITY.

The first meeting of the Court of Governors of Mason University College, Birmingham, since its incorporation under the Act passed last year, was held on Thursday, January 13th, at 3 P.M. Prior to the meeting, the Right Hon. the Lord Mayor of Birmingham entertained the governors at luncheon in the Council House. After luncheon, Mr. Chamberlain, the President of the College, made an important speech, in which he said that a Midland University was a pressing necessity. Birmingham was the centre of the only industrial district in England which was without such a means of co-ordinating higher education. He thought that a sum of £250,000 would be required as an endowment fund for such a scheme, and he was in a position to say that the project had already been very favourably received, and that substantial financial support had been promised.

A conversazione was given at Charing Cross Hospital Medical School on January 10th. There was a large attendance, including most of the staff of the school. The amusements provided for the guests were most varied in character, ranging from dramatic performances to exhibitions of bacteriological specimens.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

A MEETING of the South-West London Medical Society was held on Wednesday, January 12th, at Stanley Restaurant, Clapham Junction, Dr. DICKINSON in the chair.

Mr. BRUDENELL CARTER read a paper on Legislation as a Remedy for Medical Grievances. He said his offer of the paper was called forth by one which was read to the Society on December 8th last by Mr. Victor Horsley, of which latter he speedily heard that it had been made the vehicle of a direct attack upon him, and which, when he came to read such parts of it as had been published, appeared to him to call for refutation in relation to public questions, however it might be treated in relation to private ones. He thought they were entitled to ask for his (Mr. Carter's) credentials. Mr. Carter proceeded to give a sketch of his own career, in the course of which he stated that he had at one time been a general practitioner. Continuing, he said it would doubtless be conceded that the wearer of the shoe knew best where it pinched, and that the medical profession knew better than other people what their grievances were. He was inclined to look upon the consciousness of grievances as a sign of health and vitality. Medical grievances were intensified by the fact that members of the profession had of late years been increasing in number with a rapidity previously unexampled, while at the same time the demand for their services had in many directions been diminishing. At the election of direct representatives to the General Medical Council in 1886 there were 18,074 voting papers sent out for England and Wales, while in 1891 there were 19,585, and in 1896 22,577. From 1871 to 1881 the rate of increase had been 3 per cent., but since 1881 it had been 25 per cent. Moreover the result of increased knowledge was a diminution of the number of cases of illness, and a curtailment of the length of illnesses generally. Formerly, in a case of ovarian tumour, the patient would sink into the grave in four or five years, during which time she would require the periodic attention of the general practitioner to relieve her suffering. At the present time she was operated upon, got well in a month, and the measure of her tardy appreciation was meted out to the surgeon who performed the operation, not to the general practitioner for his diagnosis. The general practitioner, in view of competition, was driven to work for fees which not long ago would have been regarded as inadequate. It was melancholy to add, on the authority of the Registrar-General that the tendency to suicide had greatly increased among medical men. It would be seen that he had not the slightest inclination to minimise or explain away the evils under which the members of the medical profession were suffering; but the real questions which pressed for solution were, first, how were those evils brought about; and, secondly, how could they be remedied? A great many of the causes lay upon the surface and were obvious, such as abuse of medical aid societies and hospitals, and were the not unnatural results of competition, while others depended upon the competition of persons outside the ranks—quackery in all its forms. The illegal medical practice of unqualified persons other than druggists was not the most important factor. He had seen it stated that the population of England and Wales spent about three millions sterling every year on patent medicines. In trying to remedy the abuse of societies and hospitals and the practice by unqualified persons, the first point seemed to him to be should they trust to an invocation of Hercules as represented by the law, or should they put their own shoulders to the wheel? Among the complaints made against the General Medical Council was one that it had not hitherto set the law in motion with sufficient frequency or promptitude; but to that he would revert later. The supposed existence of grievances against the General Medical Council was unknown to him (Mr. Carter) until he saw the results of the British Medical Association meetings at Carlisle two years ago. The reports of the meeting were abbreviated, but he was told privately that three speakers—Dr. Lovell Drage, Mr. Victor Horsley, and Dr. Welsford—all signalised themselves by the energy of their attacks upon the Council, and that Mr. Horsley assailed the action of the President, Sir Richard Quain. The Council had been described as the medical parliament, in forgetfulness of the fact that while Parliament was legislative, the Council was administrative. Even lately he had seen it called the ruling or governing body of the profession, although it had scarcely more to do with governing or ruling the profession than the ruling of the courses of the stars. The Medical Act of 1858 was not primarily medical reform at all; it was primarily political, to place the three kingdoms on a footing of equality, and to see that examinations were of a sufficiently searching character for the reasonable security and safety of the public. The General Medical Council was composed, as far as its majority was concerned, of representatives of licensing corporations, and these were expected to arrive at an agreement with regard to standards of examination, and to carry their decisions into effect. Mr. Carter went fully into the provisions of the several Medical Acts, and showed that the preamble of the Act of 1858 declared it to be expedient that persons should be able to discriminate qualified from unqualified practitioners, and establish registration as a satisfaction of this expediency. In the year in which the Act came into operation, a registered practitioner, on the strength of Clause 40, wrote to the Home Office complaining that the Council was not taking action in this respect. The letter was transmitted to the Council by the Government. The Council referred it to a Committee, who, with the assistance of their legal adviser—a solicitor of the highest eminence—reported that no duty of prosecution was cast upon the Council by the Act. The reply was received by the law officers of the Crown with perfect acquiescence, and it left the question where it stood to-day. Certain prosecutions had been undertaken by the Medical Defence Union, and when they had failed it had been due to an insufficient appreciation of the legal difficulties in the way. He believed he was right in saying that convictions had been obtained in all the prosecutions undertaken by the Council; but he did not think the Council would prosecute except in special cases. The Council ought not to be a prosecuting body; it only met twice a year, and, irrespective of hotel and travelling expenses of the members not resident in London, the proceedings cost £37 10s. an hour. Prosecutions ought to be undertaken by the police authorities, who were the proper people to do moral scavenging of this kind. He understood Mr. Horsley that anything which could be called medical practice, if done by an unregistered person, was an offence, and that every such unregistered person could be made amenable to law. He would mention an incident at a meeting of the General Medical Council, which, as they were sitting *in camerâ*, did not fall on the ears of the reporters. Mr. Horsley delivered a judgment nearly an hour long as to his view as to the state of the law on a particular point, and ended by appealing to the counsel retained by the Council whether he (Mr. Horsley) was not right. Counsel contented himself with four words—"Not in my opinion"; on which Mr. Horsley flourished the Act of Parliament, saying, "It must be so; look at the position of this comma." Mr. Horsley was aware that there were no stops to an Act of Parliament, but he thought the law could be altered by the caprice of the printer's man. The object of the Act of 1858 was to prevent the public being deceived by unregistered persons. Very strenuous efforts were made by energetic medical reformers to obtain the insertion of a clause for the punishment of unqualified practitioners, but they were not successful—the Government would not accept any of the proposals. If Mr. Horsley would suspend his labours in the cause of medical reform until he had overcome the difficulties, he did not think he (Mr. Carter) would be again called upon to consider his proposals. Mr. Horsley had said that the business of the Council was too much in the hands of the legal advisers, which was like saying the unfortunate result in hospital treatment was due to the patients being too much under the control of the physicians and surgeons. He thought it impossible to exaggerate the depth of gratitude which the Council owed to its legal advisers. With regard to the point about Mr. Upton, that gentleman would shortly deal with the matter in a public manner. Mr. Horsley stated that all the representatives of the Corporations voted against Sir Christopher Nixon's motion whether the Council could of itself insti-

tute a preliminary examination, but that was incorrect. It must not be supposed that he (Mr. Carter) wanted to render examinations unduly severe; that would be a trades union device, and an unworthy one. Medical students were, in a large number of cases, the sons of medical practitioners; and while the standard should be raised commensurate with the advance of technical knowledge and of general education, it should not be made prohibitive. Mr. Horsley advocated alterations in the law to lessen their difficulties, but how were these alterations to be obtained? As a political force the profession was powerless. Parliament would not take one step in suppressing quackery or protecting the medical profession, unless such step benefited the public. Therefore the question in its present phase was not so much legislative as educational. The Duke of Richmond, in the early Seventies, did his best to carry a Bill which would be satisfactory to the profession, but the representations made to the Duke on the subject were so diverse and conflicting that he abandoned the project in dispair. He believed Parliament at present would be more likely to curtail than increase medical powers. His opinion was that the corporations might do a great deal. Moreover, systematic efforts should be made to enlighten the public on medical matters. The only men he knew who did that were Trousseau of Paris, and Priestley Smith of Birmingham. Why should not the British Medical Journal do it? It derived a large amount of money from quack advertisements in its columns. Hitherto they as a profession had suffered the public to remain in ignorance; it was now their duty as well as their interest to enlighten them. Mr. Carter, referring to his contribution to Mr. Humphry Ward's *Reign of Victoria*, said that if his assailants would show him that they had done as much he would hail them as fellow workers. The public had come to look upon eminent physicians who had received honours at the hands of their Sovereign as men who represented all that was best in the profession which they adorned, but Mr. Horsley looked upon them as subjects for vituperation. Before his hearers endorsed his views or accepted his championship, it might be wise to consider how his controversial methods were likely to affect the government of countries, whose understandings must be convinced, and whose goodwill must be secured before they could improve the laws of the medical profession. He thought those controversial methods were dangerous.

The Chairman, after assuring Mr. Carter that at the meeting of December 8th Mr. Horsley's reference to him was not discourteous, and indeed was only made in a good-humoured way, called upon Mr. Horsley to reply.

Mr. Brudenell Carter said he received the explanation with very great pleasure. He had been informed that a personal attack had been made on him at the meeting referred to. He hoped Mr. Horsley would accept the withdrawal of any assertions which had been based on that conception.

Mr. Victor Horsley said he hoped to have heard from Mr. Carter a systematic attack on his (Mr. Horsley's) position of December 8th. His position on that date was practically that by the Acts of Parliament under which they worked it could be discovered by anyone who could read, that qualification was not registration. They worked because they were registered, and that was their statutory guarantee. He quoted Section VI of the Medical Act, 1886, which was headed "Effect of registration," which was described in the margin as detailing the privileges of registered persons, and recounted as the first privilege that a registered medical practitioner should be entitled to practise medicine, surgery, and midwifery in the United Kingdom. He then, at the meeting referred to, went on to review the position, and stated that if those words meant anything at all, they meant that the man in the street who was not registered was not entitled to practise. That position had not really been touched by Mr. Carter. But he had gone into many points, some of which he was very much surprised to hear. He agreed with Mr. Carter that the worst form of competition they had to deal with in a practical way was the prescribing chemist and the sale of patent medicines, and he had never said anything to the contrary. As to who was to carry out the prosecution, he also agreed that it should be done by the police. But if Mr. Carter went to the police authorities and asked them to carry it out, he would be met by a direct negative. Meantime, why should they stand idle if they could not obtain some means of stimulating the Public Prosecutor to do his work, which stimulation was notoriously very difficult? They must do the work themselves. The mass of the profession ought not to be taxed to carry it out, but they would be foolish if they sat still and did nothing. Mr. Carter made a personal attack upon him (Mr. Horsley), with regard to the comments which he had thought fit, at one time or another, to make upon the action of the President of the General Medical Council. It was true he (Mr. Horsley) read a paper at Carlisle, and he had sent a full copy of the paper to Mr. Carter, so that he (Mr. Carter) knew, as far as he knew, the contents of the paper as it was published in the British Medical Journal. He must now state that since his election to the Council he had found that precisely the same evils which he complained of at Carlisle, and which were based and owed their origin entirely to the action of the President, had been carried on; and he had felt it his duty to publish the fact in a protest to the profession, because he had done all he could constitutionally to stop these evils. He had asked the President to call the Penal Cases Committee together to deal with the cases to which he drew his attention, but he had refused to do so. The President had, moreover, he submitted, acted improperly towards him by not only refusing to carry out this constitutional measure, but had actually written to him (Mr. Horsley) asking him to forego his right to address him personally. That was a personal matter between him and the President, but it was now a public matter, which he had published in the *Clinical Journal* too late for it to appear the same week in the other journals. That was his position with regard to the President, and if the President did things of that kind was he (Mr. Horsley) to sit perfectly still and say nothing while knowing what was going on? Mr. Carter had dealt with the constitution and functions of the General Medical Council, and told them that the Council did not rule the profession. He did not know what the word "rule" conveyed to Mr. Carter, but if he (Mr. Horsley) knew that the Council had the power to strike him off the *Register*, and if he knew that by virtue of being on the *Register* he was entitled to practise medicine, and surgery, and midwifery, then he felt he was ruled by the General Medical Council. Mr. Carter also stated that the Medical Act was passed not for the benefit of the profession at all, or, at any rate, it was passed primarily for the protection of the public. He admitted the latter, but contended it was passed for the benefit of both parties. The General Medical Council was placed in the position to fairly and squarely look at the interests of both these parties, and he would like to refer to an address he gave to the students at Sheffield three years ago, in which he pointed out that the genuine interests of the profession were the material interests of the public. Mr. Carter said the object of the Act of 1858 was to secure uniformity of the operation of medical diplomas; of that there could be little doubt, nor of the fact that the Act of 1886 aimed at the same thing; but it was known to all in that room that no such uniformity had been attained, and that it could not be attained until they got the one-portal system. He did make a mistake about the motion of Sir Christopher Nixon—it was not repulsed by all, but by an overwhelming majority. The clause dealing with the disciplinary control of the profession was certainly drawn too strictly, as it gave the power only of expulsion—it gave no power to publicly reprimand. Offenders had been reprimanded by the President, though possibly Mr. Carter might deny it, and he was told by the legal advisers that such a thing was impossible, but he pointed out to Sir William Turner a statement in the minutes showing that a certain practitioner had been severely reprimanded by the President. He (Mr. Horsley) admitted it was not statutory, but probably no one would care to go to the High Court and complain of having been reprimanded, and if he did the judge would probably say the President had acted in the best interests of the profession. Mr. Carter referred to the advantage of having certain gentlemen as legal advisers to the Council. Unfortunately every single

criticism of those legal advisers that he could make in the past session had been made *in camera*, and under ordinary circumstances one's lips on such subjects would be sealed; but as Mr. Carter had seen fit to break such secrecy, and to make an attack upon himself as to his ability to interpret Acts of Parliament, he (Mr. Horsley) must also lift the veil sufficient to defend himself. The point was one of vital importance; it was as to whether certain wholly unqualified persons, and one especially—a man who had successfully evaded the law for fifteen years—were to be placed on the *Dentists' Register*. The resolution on the subject was come to against the legal advisers, and it turned out that the legal advisers had suggested that the Dentists' Act could be tortured by a certain reading of Section XXXVII, so as to enable those unqualified persons to be pushed into the *Register*. He re-echoed the remark that it was a most disgraceful shame. But what was Mr. Carter's point? He said he (Mr. Horsley) made a speech of an hour (it was not more than ten minutes), and he asked Mr. Mackenzie whether he agreed. Mr. Mackenzie replied, "That is not my opinion." Of course he did; he replied that to everything he (Mr. Horsley) brought forward, and he (Mr. Mackenzie) was defeated on every single point by the Council itself. They now came to the point about the comma, which was really a colon; the point at issue was in this. Section XXXVII of the Dentists' Act was divided into two parts by that colon, and he (Mr. Horsley) was maintaining that it was to be read as one section from top to bottom; Mr. Carter had given them to understand that he (Mr. Horsley) represented to the Council that the section was separated into two parts by intent. On the contrary, he (Mr. Horsley) got Mr. Mackenzie into a trap, because he had put the Council up to this point that they were to recognise Section XXXVII of the Dentists' Act as an entity. He said on that occasion of course he knew the legal tradition that there were no stops in an Act of Parliament, but here he saw one colon, and he asked whether they were to understand that this divided the section into two parts. Mr. Mackenzie replied, "Oh, of course it is well known that there are no stops in an Act of Parliament, the whole thing must be read as one." Mr. Horsley replied that that was exactly what he wanted. The burden of his contention was this: Mr. Mackenzie had employed this section as the basis of his advice to the Executive Committee. The Act spoke of matters which expired in 1880, seventeen years ago. Mr. Horsley read extracts from the Act to explain his meaning. They found that the man who made this application stated the following facts: That he was a foreigner; that he had had no dental education; that he had been apprenticed to a dentist who was another foreigner who was not entitled to register under the Act at all. That was the ground on which the General Medical Council decided that the Registrar should do nothing. He would not have said a word of that if Mr. Carter had not broken the seal. The legal advisers would have to defend themselves in another place. He had showed that under Section XL the Council could successfully prosecute, and last year an unqualified practitioner was prosecuted and the full penalty obtained. The point was not only that the man professed a title, he did not call himself LL.D. but M.D. It was assumed by those who suggested that the only provision of the Medical Acts was to protect a title, that provided they could successfully show that he did wilfully pretend that he had a title they could convict him. But the experience of the Defence Union was that the magistrates came forward and asked where was their proof of practice? Now, to give Mr. Carter an object lesson as to the value of some statements of the legal advisers. It was true that one of the legal advisers on one occasion did refer to the want of success of the Medical Defence Union. But the same legal adviser forgot that the Medical Defence Union employed him as counsel in the case, and not only that, but they employed him in the case when it went into the High Court, and also to review the summons in the magistrate's court. That same magistrate, when the case was brought before him, when it was proved by a certificate that the person had quoted a title though he had been struck off the *Register*, said to the prosecutors that this was not enough proof; and that that did not prove practice. That prosecution failed because the legal adviser to the General Medical Council did not indicate to them in what way it would be successful. Prosecution by the Medical Defence Union had failed undoubtedly; that body had spent its money freely to test what could be done by the medical profession, and now and then they were defeated; but as a general rule they were very successful. The legal advisers to the General Medical Council were the last persons to be quoted as critics of the legal policy of the Medical Defence Union. It was true the General Medical Council was now going to take steps to test some most important question in the Act, and he would not divulge any *in camera* secrets as to why they were going to do so. As regarded the matter in which Mr. Upton was concerned, he (Mr. Horsley) referred in his address on December 8th, 1897, to the use of the word "qualification," and pointed out that Mr. Upton used the word "qualification" in a popular sense. Mr. Horsley read from the Act of 1886 the words bearing upon the definition of this term. He still maintained that the sense in which Mr. Upton used the term was misleading. The legal advisers were going to bring forward their opinion at the next session in May; and until then they must wait for any pronouncement of importance. Mr. Carter had suggested—but he knew he did not mean it—that he (Mr. Horsley) wished the examinations to be unduly severe in order to prevent overcrowding in the profession. To that statement he would simply return a direct negative, and say such a comment was unjustifiable and should not have been made. The giving up of the Duke of Richmond's Medical Bill was a very great loss to the profession; it provided for the one-portal system—the very thing which was wanted. Of course it was opposed, but who by? The same opposition that they would meet again, but which they would overcome; it was only a question of time. Mr. Carter had told them that the Apothecaries' Society could not take part in altering the conditions under which they lived, but he (Mr. Horsley) did not see why not. They obtained a Bill not very long ago called the Apothecaries' Amendment Act, giving them power to strike persons off their list of licentiates, and if that Act had been passed they would have been placed on the same footing as any other body. He was quite at one with Mr. Carter that if the Corporation had the money to spare they should spend some of it in prosecutions; but he would like to mention that the Medical Defence Union was the body which employed the Apothecaries' Act most. Finally, he must once more refer to the sentences with which Mr. Carter concluded his address, because he (Mr. Horsley) had been so frequently misrepresented in the journals and in public places. Mr. Carter had said he (Mr. Horsley) had made a practice of vituperating the members of the profession who had been honoured by the Sovereign. It was perfectly plain that he was referring to the criticisms which he (Mr. Horsley) had published from time to time, and intended to publish if necessary, on the President of the General Medical Council. The *Lancet*, at the time of the last election, made a statement in its leading article inferring that he (Mr. Horsley) had made statements which he could not substantiate. He thereupon substantiated every one of them in the next issue of that journal. If he was placed in a public position, and it came to his personal knowledge that a public official was, in his opinion, not fulfilling the moral or written laws of the body with which he was connected, he would certainly publish the fact in order to acquit himself of any personal responsibility in the matter.

Dr. BOUSFIELD, in thanking Mr. Carter and Mr. Horsley for their attendance, said Mr. Carter was labouring under a mistake. Corporationism practically crystallised the position Mr. Carter took. They knew from Mr. Carter's published statements that direct representatives were regarded by him as an unmitigated nuisance, and that there were already five too many. He thought the question of direct representatives lay at the root of the whole question. General practitioners took the position that the General Medical Council was not a representative body of the medical profession. He concluded by eulogising Mr. Horsley's courageous and straightforward attitude.

Dr. ANDERSON spoke of the comparatively poor prospect of new entrants into the profession, and alluded to the suppression of the practice of the Indian oculists.

Dr. Barkwell spoke of the abuse of medical practice in the neighbourhood, and offered suggestions for remedying it, and also on the question of the registration of midwives.

Dr. Aart said while they were grateful to their two distinguished visitors, Mr. Carter's paper sounded like the dying groans of the corporation. But Mr. Horsley had answered in a dignified manner, and matters now looked healthy when a representative of a corporation came and delivered such a weak paper.

Dr. Hillstead did not agree in educating the public so much in all their little designs. A man did not hold ambulance classes for the good of the public but to lessen his own obscurity.

Dr. T. S. Howell spoke in defence of the Apothecaries' Society.

Dr. Anderson congratulated Mr. Horsley on his success, and thought there could be no doubt of the issue of the engagement. Mr. Carter had forgotten that the General Medical Council was the channel of the rights of the medical profession. They did not need reminding of the power wielded by the great corporations. They were bent on getting the single portal system, and they promptly required an amended Medical Act.

Dr. Herbert Tanner urged getting a definite pronouncement from Parliamentary candidates on a draft Bill for the medical profession, and gave an instance which led him to think it would succeed. He wished to differ from Mr. Carter's statement that they, as a political power, were insignificant.

Mr. Carter briefly replied, stating that in all institutions and corporate bodies communications were addressed to the Secretary, not to the President; and no one had a right to assail the leisure of the President by sending letters direct to him. He also thought Mr. Horsley was mistaken in the appeal he made to the President to call the Penal Cases Committee together; the Committee had no power to do anything except advise the President, and it could be safely left to the President to know on what matters he required advice from the Committee. The General Medical Council had done all it could for the one-portal system, but when everything was ready for signature in 1869 the College of Surgeons stood out, and the scheme fell to the ground. He did not appear as an apologist for the General Medical Council, which had done its duty in the past and would continue to do it in the future.

A vote of thanks to Mr. Carter and Mr. Horsley concluded the meeting.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 19th day of January next, at 2 o'clock in the afternoon.

The following Committees also will meet:

Tuesday, January 18th, 1898.—2.0 p.m. Premises and Library Committee.—3.0 p.m. Subcommittee of Parliamentary Bills Committee to consider Memorial from Scottish Midland and Western Medical Association.—3.30 p.m. Subcommittee on Army Medical Reform.—4.0 p.m. Subcommittee on Incipient Insanity.—4.30 p.m. General Practitioners and Ethical Committee. 5.0 p.m. Parliamentary Bills Committee. *Wednesday, January 19th, 1898.*—10 a.m. Journal and Finance Committee.

Francis Fowke, *General Secretary*.

January, 1898.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accomodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 a.m. to 5 p.m. Members can have their letters addressed to them at the Office.

THAMES VALLEY BRANCH.

At a meeting of the Council of the Thames Valley Branch on November 10th, 1897, the following resolution (which we think it right to publish though it has not been sent for publication in the usual way) was passed by the Council of the Branch:

That the Council of the Thames Valley Branch considers it inadvisable that the Journal and officers of the Association should take a partisan action in the election of members of the General Medical Council.

BRANCH MEETINGS TO BE HELD.

North of Ireland Branch.—The winter meeting will be held in the Museum, College Square North, Belfast, on Thursday, January 27th, at 4 p.m. Members who wish to read papers, show patients, or bring any other business before the meeting will kindly communicate on or before Wednesday, January 19th, with John Campbell, Honorary Secretary, Belfast.

Border Counties Branch.—The next meeting of this Branch will be held at Newtown St. Boswells, N.B., on Friday, January 28th, at 3.15 p.m.—Particulars by circular.—R. Dundas Helm, Carlisle, W. Hall Calvert, Melrose, Honorary Secretaries.

Christmas Entertainment at St. Bartholomew's Hospital.—The members of the Hospital Amateur Dramatic Company, with the assistance of the Hospital Orchestral Society, gave their usual Christmas entertainment in the Great Hall of St. Bartholomew's Hospital on Thursday and Friday evenings, January 6th and 7th, with a dress rehearsal, to which some of the patients were invited on January 5th. The hall was crowded on each occasion. The dramatic portion of the programme consisted of a comedietta, *The Duchess of Bayswater and Co.*, followed by H. J. Byron's comedy, *Weak Woman*. The acting throughout was of a high order, Messrs. H. D. Everington and H. L. Brownlow especially distinguishing themselves, whilst Mr. J. Valérie as "Captain Ginger" kept the audience in roars of laughter through the last two acts of the comedy. The musical portion of the entertainment was equally good. Two glees were well rendered by the nurses, and songs were sung by Mr. S. F. Smith, Nurse Ball, Mr. P. Wood, and Mademoiselle Giulia Ravogli. The overture and the music between the acts showed how well the society had profited by the directorship of Mr. S. Pollard.

Harveian Society of London.—The annual meeting will take place on Thursday next, January 20th, at the Stafford Rooms, Titchborne Street, Edgeware Road, W. After the ballot and election of officers for the coming year and the delivery of his address by the out-going President, a *conversazione* will be held, to which every member may bring a friend. The following is a list of names of gentlemen proposed by the Council as officers of the Society for the year 1898:—*President:* *James F. Goodhart, M.D., F.R.C.P. *Vice-Presidents:* Mr. Argles, Dr. Boxall, Mr. Juler, *Dr. Gee. *Treasurer:* Mr. Edmund Roughton. *Honorary Secretaries:* Mr. Jackson Clarke, *Dr. Leonard Guthrie. *Council:* Mr. Bartlett, *Dr. Cock, *Mr. Alban Doran, Dr. Gow, Mr. J. Griffith, Mr. Raymond Johnson, *Mr. Keetley, Dr. Maclure, Mr. L. Mark, Dr. Milson, *Dr. Nix. Those names with an asterisk are those of members who have not served the office before.

The University of London Bill.—The following resolution was unanimously passed at a meeting of the medical and surgical staff of the London Hospital Medical College on January 7th: "That the medical and surgical staff of the London Hospital is in favour of the scheme embodied in the Bill of 1897 for a new University of London; to be amended, if possible, according to the representations of the delegates of the metropolitan medical schools."

The "British Pharmacopœia."—With reference to an article in the *Chemist and Druggist* of January 8th, purporting to publish the first part of a critical review of the forthcoming *British Pharmacopœia*, we are officially informed that such publication is entirely unauthorised by the General Medical Council, and that criticism at present is not possible because the work is still incomplete. We are also officially informed that the article already published contains numerous inaccuracies, and that it bears internal evidence of having been based upon an early unrevised proof.

Obituary.

ERNEST HART, M.R.C.S., D.C.L.,

Editor of

The British Medical Journal

FORMERLY CHAIRMAN OF THE PARLIAMENTARY BILLS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION.

MR. ERNEST HART for so many years Editor of this JOURNAL and for a quarter of a century Chairman of the Parliamentary Bills Committee died in Brighton on Friday, January 7th, after a long illness. Some details of this illness and of the courage with which he bore it are given on another page by a hand which ministered to him at the last.

THE BRITISH MEDICAL ASSOCIATION.

DR. HENRY BARNES of Carlisle, President of the British Medical Association in 1896-97, has sent the following sentences epitomising the services which Mr. Ernest Hart rendered to the Association. The Carlisle meeting over which Dr. Barnes presided was the last annual meeting which Mr. Hart was able to attend:—

"In order to appreciate correctly the value of the services rendered to the Association and the JOURNAL by the late Mr. Ernest Hart, it would be necessary to write a history of the Association for the last thirty years, but some idea may be formed by comparing the state of matters before his appointment and that which exists at the present time. When he first entered upon his duties as Editor the Association had only about 2,000 members, although it had existed about thirty-four years; it has now upwards of 17,000 members. The JOURNAL then consisted of twenty pages; now it has sixty-four pages and of larger size.

"My first acquaintance with him dates from 1868. We were about to form a medical society here, and I entered into a correspondence with Mr. Hart. At that time we only had about half-a-dozen members of the Association resident in this district, but at a large meeting which was held for the purpose of considering the matter, a letter which I had received from Mr. Hart was read, in which he so clearly showed the advantages of membership of the Association, that a resolution to form a Branch was almost unanimously adopted. In my capacity as secretary to the newly formed Branch I was for seven years a member of the Committee of Council, and subsequently for several years I had the honour of representing the Branch on the Council. In this way I had many opportunities of meeting Mr. Hart, and seeing him at his work. He always impressed me as being sincerely anxious to promote the prosperity of the Association and the success of the JOURNAL, and he would willingly take any amount of trouble with these objects in view. He had also the capacity of attracting to his aid those best qualified to do good service, and from small beginnings the staff has gone on increasing, and now includes, in addition to the permanent editorial assistants, a large number of experts—many of them men of high standing and eminent authority.

"With this help he has initiated and carried out many important inquiries and investigations which have resulted in great public benefit, and have advanced the prestige and standing of the medical profession. The inquiry into the evils arising from baby farms was one of the first, and the disclosures of the Commissioner in the JOURNAL so aroused public attention that the Government were compelled to take up the question and pass the Infant Life Protection Act. It so happens that I knew the Commissioner who had charge of this inquiry very well, and the results of his inquiry made a great impression upon me. Since then there have been many reports and inquiries calling for more efficient administration of workhouse infirmaries, and the necessity of taking more effective measures of dealing with imbecile, feeble-minded, and backward children. The question of the amelioration of the position of the medical officers of the public services, questions of sanitary reform, and the necessity of safeguarding water supplies against contamination with the germs of infective disease, have occupied a good deal of his attention, and in his treatment of them he has deserved well of the public as well as the profession. It would be easy to multiply illustrations of such work. A perusal of the records of the Parliamentary Bills Committee show much he has done, and form an enduring monument of useful public work.

"In taking his holidays in recent years Mr. Hart has done much to extend the influence of the Association by assisting in the formation of new Branches. Many new Branches have been formed in the Colonies, mainly through his advocacy, and the recent successful meeting in Montreal conclusively showed that his suggestion to our members in Canada to organise themselves into Branches had been adopted. It was the first annual meeting held outside the British Isles, and its success fully justifies his policy in extending the influence of the Association so as to make us truly British, and not British in name only.

"During my year of office as President I have to acknowledge that Mr. Hart rendered me useful service. In any inquiry I wished to make the resources of his staff were placed at my disposal. In spite of the obvious failure of his health, there was no lack of intellectual vigour, and the last time I spoke with him I found that he was as keenly interested in the welfare and prosperity of the Association as ever and as proud of the success of the JOURNAL.

"Others may speak of him as a philanthropist, a sanitary reformer, or as a *littérateur*. As a politician he influenced politicians, and did much useful work in the lobby of the House of Commons. I desire to close this brief tribute of admiration for his genius by expressing my warm appreciation of the very valuable services he rendered to the Association and the JOURNAL as an official."

The following telegram, conveying an expression of the regret and sympathy of Dr. Roddick, the President of the Association, and of the members of the Montreal Branch and of the profession in Canada, was received by cable from Montreal on January 9th, 1898:

"Mr. Hart's death causes much regret here. Convey sympathy from Roddick, Branch, whole profession to widow.

"SPRINGLE."

At a council meeting of the Dublin Branch of the British Medical Association held on January 10th in the Royal College of Physicians, the following resolution was proposed by Dr. J. W. MOORE, seconded by Dr. CRAIG, Honorary Secretary, and carried unanimously:

That the Council of the Dublin Branch of the British Medical Association have learned with deep regret the melancholy tidings of the death, on January 7th, at Brighton, of Mr. Ernest Hart, D.C.L., the able and accomplished Editor of the BRITISH MEDICAL JOURNAL; that the Council are fully conscious of the grave loss to the Association which is involved in Mr. Hart's death, and that they desire to convey to Mrs. Hart an expression of their sympathy with her in her bereavement.

Mr. Ernest Hart, in addition to holding for twenty-five years the office of Chairman of the Parliamentary Bills Committee, a capacity in which he rendered services more fully referred to below, acted for many years as Honorary Secretary of the Scientific Grants Committee. He was a staunch advocate of the policy of devoting annually a sum out of the income of the Association to the encouragement of research in pathology and other departments of science nearly related to medicine. For many years he took an active part in promoting the work of the Committee, and was a strong supporter of the proposal to appoint Research Scholars. His connection with the Committee terminated some years ago, but its formation was in no small measure due to his initiative.

Another evidence of Mr. Hart's unceasing desire to increase the usefulness of the British Medical Association and add to the advantages which attach to membership was afforded by the action which he took in 1887 to procure the foundation of a library. The scheme had been for some time in his mind when, in July, 1887, he addressed a letter to the then President of Council, Sir Walter Foster, suggesting the formation

of a library and reading room for the use of members, and offering his own services and resources in carrying out the proposal. The Council accepted the suggestion, and nominated a Library Committee. Mr. Hart from the first acted as Honorary Librarian, and took a great interest in the selection and collection of books. His own contributions to the collection were numerous and valuable, and included a fine copy of the Basel edition of Vesalius's great work, as well as copies of Bidloo and Albinus, and of William Hunter's *Anatomy of the Human Gravid Uterus*. He introduced a system of exchange of duplicate copies with other medical libraries, and arranged to obtain the Paris *thèses* as they are published. The library has grown under his fostering care, until it now comprises over 10,000 volumes, including many valuable sets of periodicals. That it is appreciated by members is shown by the fact that the number of persons who visit the reading room exceeds 5,000 a year, and that the number during the last quarter shows that a steady growth continues.

Of Mr. Hart's work as Editor of this Journal this is, perhaps, not the time or the place to speak at any length, but those who have been intimately associated with him, and have worked for him and under him in the conduct of the Journal, may take this opportunity of briefly testifying to the intense interest which he took in everything that concerned it. To it he gave unstintingly of the best that was in him. No trouble was too great, and a question affecting the Journal was always allowed to take precedence of any other. Proud as he was of its success he was yet ever seeking improvement, and no suggestion to this end could come before him which he did not weigh and carefully consider.

IN MEMORY OF ERNEST HART.

By T. Holmes.

I have been asked to contribute some particulars of Hart's career to the Journal, which he edited for so long a time, and which owes so much to his enterprise and to his sagacity. All the members of the British Medical Association are proud of the strength and the position to which the Association has risen; but not all of them, perhaps, reflect how intimately bound is the Association to the Journal, and how much the prosperity of the Journal was the creation of the man whose loss we now deplore. Indeed, the majority of our members are not old enough to compare the Journal as it is with that which it was before Hart took it in hand. Anyone who can make that comparison is in a position to estimate the debt which the whole Association owes to the late Editor of its Journal. This is far from being the only service which Hart rendered to the profession; but it deserves the first mention in the pages of this Journal.

My only qualification for writing this memoir is that I am now amongst the oldest of Hart's professional contemporaries, having been house-surgeon at St. George's when he was dresser; but there are several departments of his many-sided activity of which I am not qualified to judge, and which will, I am glad to think, be treated by more able writers.

Ernest Hart was born in London, of Jewish parents, in June, 1835. His father was in good practice as a dentist in the West of London, and his younger brother, who died at the age of 49, followed the same profession. Hart himself was educated at the City of London School, then rapidly rising in reputation and efficiency under the vigorous headmastership of the Rev. Dr. Mortimer, who regarded him as one of his most promising pupils, and, I believe, had a warm regard for him. He would have gone to one of the universities (Cambridge probably) with a scholarship, had it been possible then for a Jew to take his degree.

After the termination of a career of unusual distinction, he left the City school, as Captain, and soon afterwards entered at Mr. Lane's school attached to St. George's Hospital, and it was here that I made his acquaintance. He was then a most promising student, full of energy and intelligence, and it was during his student career that Hart's first public service was rendered. The degraded condi- of the juniors in the Naval Medical Service was attracting public attention, and was the cause of an unpopularity of that service which was very detrimental to the efficiency of the navy itself. A society of medical students was formed, chiefly through Hart's exertions, at St. George's and the other hospitals, and of this society he was Secretary and I was Chairman. It proved most successful. We were warmly backed up by Colonel Boldero and other members of Parliament. We collected funds, held public meetings—at which, amongst many others, our then Senior Physician, Dr. J. A. Wilson, one of the most effective of platform orators, spoke; we organised and presented petitions; and ultimately were able to give notice of Parliamentary action with so strong a backing that the Government of the day recognised the justice of our claims and conceded all that was asked. The Students' Society ended in complete success and with a handsome sum in hand, which was distributed to medical charities. Hart did not serve as House-Surgeon at St. George's, but at St. Mary's in 1856. He became afterwards Surgical Registrar at St. George's—probably with some idea of connecting himself with the School; but the duties were not congenial to him, and he attached himself thenceforth to St. Mary's, where he became Ophthalmic Surgeon (1861-1868), and afterwards Aural Surgeon 1865-1868), and Dean of the Medical School from 1863-1869, when his connection with the St. Mary's School ceased.

He entered at first into consulting and operative surgical practice, both in ophthalmic and in general surgery, with much zeal and with very fair promise of success. He had very good connections among the Jewish community, and married a lady of good Jewish family. He was also assisted with introductions to practice by Mr. Coulson, who was then doing a very large practice in the City, but used at that time only to attend personally in the daytime, and leave all the rest of his business to Hart and another gentleman, who acted as his assistants.

As a proof of his activity and ingenuity in practical surgery I may mention his proposal for the cure of popliteal aneurysm by flexion of the knee-joint, which was illustrated by two successful cases recorded in the 42nd volume of the *Medico-Chirurgical Transactions*—his own (original) case and one by Mr. Shaw. I was in consultation with him over the original case, and can testify that the plan was at that time quite new to himself and to us all, though it seems to have been tried on the Continent successfully in the previous year. It was at the time a real advance in the treatment of popliteal aneurysm, and I have employed it with great success; but the far greater impunity which now attends surgical operations has thrown the bloodless methods into relative obscurity. But, however fair might be his prospects of success in private practice, his strength lay elsewhere, and it was in more public employments that his chief distinctions were to be gained.

He was at this time working for the *Lancet*, and was a member, along with Dr. Anstie and Dr. Carr, of a Commission appointed by it to investigate the condition of nursing in the Poor-law infirmaries of London. He had the valued assistance of Dr. Joseph Rogers. The revelations made by this Commission produced such a public sensation that the Home Secretary of that day (Mr. Gathorne Hardy, now Lord Cranbrook) nominated a Committee of physicians and surgeons, presided over by Sir T. Watson, to visit the various workhouse infirmaries of the city and report to him. It was on this report that "Gathorne Hardy's Act" was founded—an Act which has actually produced an enormous improvement in the medical treatment of paupers in London, and, through the creation of the Metropolitan Asylums Board, has exercised a most beneficial influence on the health of the whole town. That improvement has spread and is spreading by the force of example to the infirmaries throughout the country. And, if it were not for the ingrained unpopularity of everything connected with the Poor Law, the out-patient dispensaries established under the Act would be a most important factor in lessening the abuse of the hospital out-patient system. Hart's share in this great work is one of his earliest and best titles to the gratitude of the public. And I believe that the present provisions for the compulsory notification of infectious disease -provisions the importance of which can hardly be exaggerated, especially in our crowded cities, are largely due to Mr. Hart's advocacy and to the principles which he laid down in his Reports on the Hospitals of the Sate, and on the Workhouse Infirmaries prior to Gathorne Hardy's Act.



[British Medical Journal, Jan. 15, 1898.]

Mr. Hart's influence as a sanitary reformer was immensely increased when in 1866 he succeeded Dr. Markham, on his appointment to the office of Medical Inspector under the Local Government Board, as Editor of this JOURNAL. And the benefit was mutual. If Hart gained power by his command of an independent organ of public and professional opinion, and by the support of a great organisation, which he knew so well how to strengthen, the JOURNAL and the Association derived even greater benefit from his vigorous writing, his intimate knowledge of journalism, and his almost instinctive sagacity in selecting useful subjects for public discussion, and in directing such discussion to a good result.

I can only illustrate his career as an editor by a few of the most prominent instances selected out of the records of his busy and useful life.

I pass over, therefore, with a mere verbal mention such matters as the agitation of the question of the admission of Members to a share in the government of the College of Surgeons, of the Medical Acts Amendment Act of 1887, and of the One Portal System. All of these reforms he vigorously advocated, and such advocacy would form a claim to high praise in the record of any other medical reformer. In Hart's case it sinks into comparative insignificance.

One of his most useful works was the inquiry into the practice of baby farming, to which I am glad to find that justice will be done by one better qualified than I am to speak of it. Another, and one perhaps even more important, was his setting forth of *The Truth about Vaccination* in a vigorous work directed to the refutation of the follies and fallacies by which the antivaccinists were endeavouring to deprive the world of the benefits of Jenner's inestimable discovery. That this attempt is now so clearly shown to the public in its true colours, and the disastrous effects which would follow even partial success in it are so well appreciated, is due in no small degree to his labours. Another great public service must not be forgotten even in so fragmentary an account as this is. I mean the admirable series of articles on Hypnotism, Mesmerism, and the New Witchcraft, which appeared a few years ago in these columns, and were republished, with additions, in a book which has since passed into a second edition. Quacks are irrepressible, and those who flourish chiefly on female weaknesses most irrepressible of all; but all that could be done towards putting down one of the most mischievous of quackeries was effected by these admirable articles. Nor must I omit to mention the persistent efforts which he made to abate the smoke nuisance, which is so great a curse to our London atmosphere, and hardly less so in the great centres of manufacturing industry. "The remarkable success of the movement for smoke abatement," said Sir F. Pollock at Grosvenor House, April 10th, 1883, "was due above all things to the energy, the enterprise, the ability, and the unceasing exertions of Mr. Hart."

He was equally energetic in his endeavours to check the great epidemics which devastate the world, and whose ravages are appalling in countries where the first principles of sanitation are unknown or disregarded. Thus he wrote on the Influence of Milk in spreading Zymotic Disease (and worked personally on behalf of the Aylesbury Dairy Company in aid of their endeavour to secure an uncontaminated milk supply), he called attention to waterborne typhoid, to the sanitary needs of India, and to the nurseries of cholera, and was indefatigable in urging the necessity for regulating the great pilgrimages, which are such powerful agents in spreading epidemic diseases.

In all these efforts he was sympathetically assisted by his wife, a daughter of Mr. A. W. Rowland of Lower Sydenham, who survives him. Mrs. Hart has herself received a medical education, and could take an intelligent share in all his pursuits and tastes. One of these tastes was foreign travel, and this was not only a delight to him while in health, but unfortunately became a necessity as the slow disease which ultimately consumed him became more and more pronounced. He visited in succession Japan, India, Burmah, and the West Indies, and of each of these countries he has left interesting notices, and in some—notably Japan and India—he made extensive and excellent collections of works of art—for he was an acute and excellent judge of such things. But this topic also will be treated by a more accomplished writer.

In the year 1883 a meeting took place at Grosvenor House, under the presidency of the Duke of Westminster, at which a portrait of her husband, by Frank Holl, from 500 subscribers, was presented to Mrs. Ernest Hart. In the address which accompanied the presentation, Mr. Hart's services to the medical officers of the navy were especially dwelt upon; and it is also shown that he had been hardly less serviceable to those of the army and the Poor Law, and to the medical officers of health. The account of that meeting given in this JOURNAL for April 14th, 1883, is well worthy of the perusal of anyone who wishes to form an idea of the extent and of the success of Mr. Hart's labours on behalf, not of his own profession only, but of all the human race. One who knew him well (Canon Barnett) said on that occasion that he well remembered Mr. Hart saying to him, ten years previously, that "he hoped to leave the world a little better than he found it." It was a noble hope, and the members of this Association know how indefatigably and how successfully he strove to realise it.

The following sketches of Mr. Ernest Hart's manifold labours in various fields of public work have been contributed by some of those who were associated with him in the study of the several questions as they arose.

HIS PUBLIC HEALTH WORK.

IN the sphere of public health and preventive medicine Mr. Ernest Hart has been one of the foremost leaders of the reforms which have been secured during the past quarter of a century. At the commencement of his career the public mind had not yet fully grasped the great principles of sanitation, although the persistent efforts of the earlier reformers—Southwood Smith, Chadwick, Simon, and others—were beginning to take effect. Mr. Hart brought his keen intellect to bear on the glaring evils of the time, and by a persistent attack on one blot after another he let light into many of the dark corners of our social life. He had the not too common gift of seizing the most favourable opportunity for securing attention to glaring evils, and he had the tact and courage to persevere until the reforms he had in view were attained.

HOSPITALS OF THE STATE.

His first great effort was on behalf of the sick poor in our metropolitan workhouses, and it is curious to note that one of his latest crusades was to expose the shortcomings of a large proportion of our provincial workhouses and infirmaries, and to seek to secure for the sick poor in those institutions the more rational and humane treatment which thirty years ago he successfully assisted in securing for the sick poor of London. It was in 1865, that Mr. Hart, then one of the editorial staff of the *Lancet*, co-operated with Dr. Anstie, Dr. Carr, and Dr. Joseph Rogers in an investigation for that journal into the condition of the sick poor in the metropolitan workhouse infirmaries. In an article in the *Fortnightly Review* on the "Hospitals of the State" he forcibly drew attention to the barbarities of the system then prevailing. Soon afterwards he took part in forming the Metropolitan Workhouse Infirmaries Reform Association, and he led the crusade which, eighteen months later, culminated in the passing of Mr. Gathorne Hardy's Metropolitan Poor Act of 1867, an Act which led to the creation of the Metropolitan Asylums system, the erection throughout the metropolis of separate infirmary buildings administered as, what they are now admitted to be, "Hospitals of the State," and the classification of the sick in wards apart from the lunatics, imbeciles, able-bodied, and infectious patients.

Many of the larger provincial cities profited by the metropolitan lessons, and gradually reformed their Poor-law methods, but a few years ago Mr. Hart realised that the better and humaner results which had been secured in the larger centres of population were still unknown in many of the remoter country workhouses, where there was still frequently to be found no proper system of trained nursing, where the sick poor were still too often left to the tender mercies of a few ignorant paupers, and where the accommodation was still deplorable. It was his opinion that more would be accomplished in the direction of reform by publishing a series of articles describing the inside of the union infirmaries and their

inmates than by any indictment based on generalised statements. By this means he endeavoured, in the first instance, to arouse local sympathy or even local hostility, and at the same time to draw the attention of the Local Government Board, through the agency of an educated public opinion, to well-authenticated instances of maladministration or positive neglect. The success that attended this method is too recent to need much comment. The very fearlessness which challenged opponents, by placing unpalatable facts before them, attracted public attention, and when he emphasised the perfunctory manner in which the official inspections were often carried out, it had the effect of infusing more life and energy into a most essential part of the functions of the Local Government Board.

The great reform which Mr. Hart had set himself to accomplish was the introduction of greater humanity into the treatment of the sick, the aged, and the infants. So long as these helpless creatures were at the mercy of the ignorant pauper helps, so long would their life be liable to be one long-drawn period of misery. Mr. Hart took up the position that it was the duty of the guardians to provide all the care and skilled attention which would surround them in a voluntary hospital had they had the good fortune to be on the other side of the invisible line that divides the poor from the pauper, and he consistently worked towards that end.

In 1896 his attention was directed to the workhouses in Ireland; he pursued the same method, with the result that he placed before the readers of the British Medical Journal a series of pictures representing such conditions of misery and neglect existing under the Poor Law, that public opinion was at once aroused to demand a reform.

It is not often given to a reformer to see the immediate fruits of his labours, but Mr. Hart had the gratification of being able to chronicle individual instances of improvement in the administration of workhouses around which he had thrown the lash of his criticism: but, far beyond that, he saw the great reform of the abolition of pauper nursing by an order of the Local Government Board. The time was ripe for this; several agencies had been at work, with most of which Mr. Hart was in cordial co-operation, and by these various means public opinion was made fully aware of the evils which surrounded the system of pauper nursing. Still, to Mr. Hart is due the credit of focussing the eye on individual instances of cruelty, neglect, hardship, and indifference, which gave a substance to the vague charges made against the system.

Barrack Schools.

A correspondent writes: In Mr. Hart the children have indeed lost a powerful and devoted friend. It must be nearly thirty years ago since we used to look to him for help in advocating boarding out. But, although Mr. Hart's interest in pauper children extended over so long a period, it was not until the early eighties that he began to turn his attention to the barrack schools, being called to observe the products of the system in some of the girls reared in one of the schools whom his sister-in-law, Mrs. S. A. Barnett, endeavoured to train in a small cottage where Mr. Hart was a frequent guest. The results being unsatisfactory, his keen mind probed to find the flaw in the education, and with the many channels for information to which he had access, he had soon gathered a mass of information. His interest increased with his knowledge, while his clear judgment discriminated between the remediable mistakes in administration and the radical errors of a system which "only destruction could remove." That reform was needed he was convinced, and that it should go in the direction of individualising the children he also unswervingly held, but he took no public action, except by constantly keeping the matter before the press, until the scandals of the cruelty practised on the children at the Brentwood schools, and the occurrence of a large number of cases of food-poisoning at Forest Gate in the summer of 1894 gave him an opportunity.

A deputation, which the British Medical Association took a large part in organising, was introduced to Mr. Shaw Lefevre (then President of the Local Government Board) by Sir John Gorst. Ably supported by others who spoke on various aspects of the matter, Mr. Ernest Hart made a masterly statement, showing the need of a public inquiry, and demanding the appointment of a Departmental Committee. The children's champion—never so persuasive as when pleading for the helpless; never so eloquent as when stirred by injustice—won his demand, and on the appointment of the Committee in October, 1894, Mr. Hart was summoned as the first witness. He brought, as he explained, no "eyewitness experience," but a mass of carefully sifted knowledge, a collection of information from authorised persons, and a vital sympathy with children and their needs. He marshalled his facts, arranged his arguments, and pressed his reforms on the Committee with a lucidity, comprehensiveness, and force which evidently carried great weight, for after hearing 75 witnesses the now famous Report embodied many of his suggestions, and in the main supported his conclusions.

The series of articles directly drawn from the evidence which have appeared in the British Medical Journal are being carried out in accordance with Mr. Hart's axiom, that a subject needing reform has to be kept before the public until the public demands reform. That the public have begun to require wider views and more far-sighted objects in the treatment of these children is already seen in the formation of the State Children's Aid Association, an influential body bent on obtaining for the children that form of education which will eventually raise them above pauperism. On the Council of this Association Mr. Hart took a seat, and although prevented by frequent illnesses from making attendances, his advice and suggestions have been often sought. Moved by a lever of common feeling the Local Government Board, hitherto culpably apathetic to the welfare of its childish charges, has taken some important steps, and Mr. Hart lived to see some of the changes made which he so passionately advocated. The ophthalmic condition of the London pauper children is no longer a matter of questions. Mr. Sydney Stephenson has exposed facts, and the Government has removed the diseased children from the guardians' charge. The feeble-minded, the under-nourished, the "remanded" children, and those suffering from ringworm, and diseases of malnutrition, are in future to be specially cared for by the Metropolitan Asylums Board. A new ophthalmic hospital is to be built, the cubic space for each child is to be raised, while in all the schools greater consideration is shown to the dietary, exercise, and play appliances of the unfortunate class for whose welfare Mr. Hart so persistently laboured. The work of demolition has also begun, for the Local Government Board have decided that the largest barrack schools, Sutton, containing 1,500 children, shall be broken up and the children scattered. Mr. Hart's action has been bitterly opposed in some quarters, but he treated these attacks with indifference, strong in the purity of his motives and confident that the public, when it knew the facts, would endorse his views. In the opinion of a country guardian, "His wise action mainly changed the public opinion with regard to workhouse nursing;" doubtless the memory of this victory won years ago for the sick poor gave him both courage and patience in his efforts for the children of the poor.

Baby Farming and the Protection of Infant Life.

Within two years of his appointment as Editor of this Journal Mr. Hart turned his attention to the evils then existing in regard to baby farming, and we are indebted to the Commissioner appointed by him to write the reports of the Baby Farming System and its Evils which appeared in the Journal of 1896 for the following short historical note: Nothing could more clearly show his indomitable energy and journalistic enterprise than the work which he did in this connection. Having satisfied himself that a gross and wicked traffic in infant life was being carried on he set himself the task of exposing the evil. As the result of his preliminary inquiries he was soon in the possession of much valuable information with respect thereto. He inserted an advertisement in a local newspaper which "enjoys a great and lucrative reputation in this traffic," offering a reward to persons who were willing to adopt a child for a fixed sum. It may be of interest to recall that within a week of the announcement appearing no fewer than 333 letters were received, while several personal applications were made during the same period. The inquiry amply manifested that the greatest facilities existed for the disposal of children; that for £10 per head—the market price of an infant's life under these circumstances

—any number would be taken, so that they would give no further trouble, and never be heard of again. But the replies to the advertisement also furnished Mr. Hart with the addresses of most of the women who resorted to baby farming in the metropolis. This information was turned to excellent account, for he secured the services of the late Dr. Alfd. Wiltshire, who adopting the *rôle* of a distressed father burdened with the incubus of an inconvenient illegitimate child, paid visits to the various baby farms with a view to ascertaining all that he could of their owners and their practices. These inquiries also included visits to places of "temporary retirement for ladies," of which at that time there were many, in which the procuring of abortion was carried on to a large extent.

Thus it was that Mr. Hart became possessed of a large amount of valuable information bearing upon the subject, and armed with this he lost no time in endeavouring to put public opinion in motion in order to secure some legal restrictions in the practice of baby farming. In 1868 several articles were published in the British Medical Journal embodying the main facts of the inquiries. As the result of this questions were asked in the House of Commons respecting the statements which had appeared in the British Medical Journal; and Mr. Gathorne Hardy, the then Home Secretary, was further asked whether he intended to put the law in motion to suppress the evils to which attention had been drawn. The official reply was that the statements had been read, and that it was quite evident, if they were true, they reflected great disgrace on any nation in respect to which they were made. But here the matter ended as far as the Government was concerned, and here also began the most difficult part of Mr. Hart's enterprise.

Despite the hideous practices which had been exposed, and the unassailable evidence in support thereof which had been produced, it was not until four years later that an Act for the Protection of Infant Life was passed. This Act, which came into force on January 1st, 1872, has been superseded, as was pointed out in the Journal of January 1st, 1898, by the new Act of last year.

Mr. Hart never lost his interest in the subject of infant life protection. It was this fact which led him to appoint a Special Commissioner to write some articles upon The Baby Farming System and its Evils, which appeared in the British Medical Journal in the early part of 1896. The appearance of these articles was especially opportune, for shortly afterwards the House of Lords Committee appointed to inquire into the subject of baby farming began to hold its sittings, and the articles in question were freely referred to by the Committee.

Waterborne Disease.

In the sphere of Preventive Medicine Mr. Hart never lost an opportunity of emphasising the great principles of purity of water, of air, of soil, and of food. From the time when, in 1865, he took part in the investigation of a mysterious outbreak of cholera at Theydon Bois, in Essex; and when, in 1866 the disastrous cholera epidemic of that year in East London was traced to the distribution of unfiltered and specifically polluted water from the Lee during several days by the East London Water Company, he watched the course of each epidemic of Asiatic cholera. From year to year his conviction strengthened that the drinking or the "eating" of specifically infected water was the cause of practically every one of the epidemics. These views he strongly brought out in his address on "Waterborne Cholera," delivered before the annual meeting of the American Medical Association at Milwaukee in June, 1893, and reiterated in his address on "The Nurseries of Cholera: Its Diffusion and its Extinction," which he delivered before the Section of Public Medicine of the British Medical Association at Newcastle in August, 1893. In the second of these addresses he laid bare, in his peculiarly graphic and forcible style, the dangers of the great Indian fairs and of the Meccan pilgrimages, and when, in 1894, he personally visited India he attacked very vigorously the sanitary shortcomings of that great Empire, and sought to impress on the Government, as well as on the people at large, the urgent need for radical sanitary reforms, which would, as a first instalment, secure the water supply of the people against pollution. The absurdities of the old quarantine systems as a means of keeping out epidemic diseases he ridiculed, and he helped in no small degree to bring about their final abolition in this country.

Milkborne Disease.

Milkborne disease also engaged Mr. Hart's attention. At the International Medical Congress of 1881 he read a paper on "The Influence of Milk in Spreading Zymotic Disease," giving the history of seventy-three outbreaks of typhoid fever, scarlatina, diphtheria, and allied throat illness which had been traced to the agency of milk. He dealt with the same subject before the Social Science Association at Huddersfield in 1883, and in a further report in 1897 he has set out the history of ninety-five additional outbreaks of disease traceable to the same agency.

As Chairman of the Parliamentary Bills Committee of the British Medical Association, a position which he occupied from 1872 to 1897, he systematically studied and fearlessly criticised all proposals for legislation affecting the medical professional and the public health of the community, and many are the amendments of dangerous or inadequate proposals which have been secured in Bills before Parliament, whilst many also are the measures which he and the Parliamentary Bills Committee have been instrumental in bringing before Parliament and successfully adding to the statute book. The interests of medical officers of health, and through them of the public health of the community, have always found in Mr. Hart a staunch champion. His address on "Local Government as it is, and as it ought to be," read at the Sanitary Congress at Leicester in 1885, showed clearly the pressing need for local government reform and the lines on which it should be carried out; and when, in 1888, the Bill for reform of local government in England and the establishment of a system of county councils throughout the country was before Parliament, he was instrumental in securing several important additions and amendments. He sought to secure the general appointment of county medical officers of health, but the clause actually embodied in the Act was only a limping concession to his advocacy. In the following year, supported by the Scotch Association of Medical Officers of Health, he and the Parliamentary Bills Committee were more successful, and secured in the Local Government (Scotland) Act of 1889 the recognition of the principle of stability of tenure for the medical officer of health, a principle which has been since recognised in the Public Health (London) Act of 1891 and in the Public Health (Scotland) Act of 1897. His efforts had also much to do with the passing of the Infectious Disease Notification Act of 1889.

Smoke Abatement.

Smoke abatement was another of the many movements with which Mr. Hart's name has long been associated, and by means of the Smoke Abatement Exhibition of 1882—which was mainly due to his initiation—he did much to solve the difficult problems involved in that troublesome question. It is no fault of his that the practical remedies which he then indicated and himself adopted against the evils have to a large extent been ignored by the public whom he sought to benefit. Mr. Hart took the warmest interest in the organisation of the International Health Exhibition of 1884, and as a member of the Executive Committee he gave much time and labour to promote its success.

Vaccination.

Mr. Hart's advocacy of vaccination as a prophylactic against small-pox is well-known. His pamphlet, entitled, *The Truth about Vaccination*, published in 1880, set out in a concise form the facts and arguments in support of vaccination, and answered all the serious objections advanced against the practice. It did much towards spreading accurate information on the subject amongst the general public, and its value was shown in the virulent and personal attacks of which he was the constant recipient at the hands of the anti-vaccinators. He was strongly in favour of vaccination with calf lymph, and as long ago as 1879 he drew up a Preliminary Report on an "Investigation of the Results of Vaccination from the Calf in various Countries," and submitted it to a conference held in London on his suggestion on December 4th, 1879, at which a number of the leading members of the medical profession attended, and met M. Warlomont, of Brussels.

The fact that to-day, eighteen years after that Conference was held, we are apparently on the eve of the inauguration of a national system of vaccination with calf lymph, is an eloquent testimony to the soundness and acumen of Mr. Hart's judgment. A new edition of *The Truth About Vaccination* was called for and issued in 1895.

INDIAN SANITATION.

DR. W. J. SIMPSON, late M.O.H. Calcutta, and one of the Secretaries of the Indian Medical Congress, writes:—

One of the most important results of Mr. Hart's visit to India in 1894-95 was the improvement afterwards effected in the Mecca pilgrimage. His mission aroused more than a passing interest in the subject among some of the more influential officials; and it awakened among the Mohammedan leaders a desire to save their community from the dangers which the pilgrims to Mecca incurred owing to the insanitary condition of Kamaran, Jeddah, and the Holy City. Mr. Hart carried the Mohammedans along with him in his views, and his representations on the subject came therefore with peculiar force and effect, and it is in no small measure due to his efforts that so much has been recently done to improve the conditions under which the pilgrimage is made. Sir Charles Elliott, the Lieutenant-Governor of Bengal at the time of Mr. Hart's visit, was the first to appreciate and give a hearty welcome to his mission; and when proposing a vote of thanks to Dr. Harvey for his presidential address to the Indian Medical Congress, spoke in the following terms on the pilgrim question:

Another subject which has been a good deal in the mind of the Government is that regarding cholera among Mecca pilgrims. Our distinguished visitor, Mr. Hart, delivered a lecture on the subject on Saturday, and showed the value of what Dr. Harvey said about the importance of carrying the mind of the public with us. Any attempt that we may make to put down the evils which attend the pilgrimage to Mecca, in the course which so many of our fellow subjects in this country suffer seriously and perish on the way, is to be welcomed. They start from this place in a state of disease and in a state of poverty, by reason of which they are unable to carry out the journey properly and safely. To relieve this there are excellent philanthropic people, who would desire to do much, but it is absolutely impossible to do anything unless we can carry the people with us, and unless we can carry the feelings and wishes of the people along us. No doubt that Mohammedans are the persons from whom the pilgrims are drawn, and I thank Mr. Hart for my own part and on behalf of the Government for the trouble he has taken in drawing together the members of the Mohammedan community, whose leading representatives met him a few days ago, to share his views and to see with his eyes.

The strong support given by Mr. Hart to the resolutions passed by the Indian Medical Congress was invaluable. His experience in these matters proved to be of great assistance, and it is to Mr. Hart mainly that the medical officers in India owe the speedy abandonment by the Secretary of State for India of the objectionable third clause of the Cantonment Bill. That clause rendered a medical officer who examined a prostitute compulsorily or periodically for the purpose of ascertaining whether she was or was not suffering from any venereal disease, liable on conviction in a summary manner to a fine of R.100, or to imprisonment. The third clause was an insult to the whole body of medical men in the service of the Government, and Mr. Hart's assistance in their hour of need is not likely to be forgotten.

Mr. Hart's desire to help the medical profession in India, and advance the cause of sanitation in that country, was much appreciated by the profession in India, as shown by the unanimity with which, after the delivery of this address pointing out the need of scientific and sanitary places of research, a resolution was framed, stating that the

Congress in general meeting assembled heartily concurs in the views which have been expressed as to the primary importance to the health and welfare of the army and of the people of India, of the liberal encouragement and support by the Government of India, by the municipal authorities, and by individuals of scientific and sanitary places of research and clinical study, for the better knowledge, prevention, and treatment of the prevalent diseases of India (such as cholera, malarious fevers, diphtheria, etc.), and the endowment of qualified persons for these purposes.

Mr. Hart's ardour sometimes carried him into regions in which it appeared to some that he did not sufficiently appreciate the labours of the many eminent medical men who had spent their lives in India, and that he criticised somewhat severely the attainments of his medical brethren. It was this misunderstanding which estranged some of the members of the Indian Medical Service; but it could at the most have been only a temporary disagreement, for those who knew Mr. Hart best were aware that there was no one more loyal to the profession, and that he was attacking a system and not individuals. The defects of the system of medical and sanitary administration in India lay not with the able medical officers in the public service, but with the Indian authorities, who were satisfied with its present undermanned condition.

THE TEMPERANCE MOVEMENT AND THE COFFEE TAVERN.

One of the matters in which Mr. Hart took an active interest was the means to be taken to check the evils of inebriety, and he early recognised that the true remedy was to be found not in repressive legislation, but by providing greater facilities for rational recreation, and means for treating inebriety as a disease. Dr. NORMAN KERR writes:—

Mr. Ernest Hart took a warm interest in the various departments of that striking feature of the Victorian Age which is best known as the "Temperance Movement," using the word "temperance" in its broadest sense. In the institution of these most practical and useful establishments—coffee taverns—he bore a conspicuous part. Well does the writer remember attending, with a few other ladies and gentlemen, at Mr. and Mrs. Hart's hospitable residence, repeated gatherings, in which both Mr. and Mrs. Hart displayed deep interest in the establishment of this now popular and successful enterprise. Indeed the name of "coffee tavern," which rapidly caught on, was, as by an inspiration, suggested and adopted at one of these conferences. For many years Mr. Hart acted as a director of the London Coffee Tavern Company, never wearying in publicly advocating the claims of this new departure in practical temperance, on public health as well as on social and philanthropic grounds.

Nor should his valuable services, alike in his capacity as Editor of the JOURNAL and as efficient worker, to the modern movement in the British Medical Association, in the true interests of habitual drunkards, be forgotten. From its foundation he was an active Vice-President of the Society for the Study of Inebriety, and one of his papers to that Society on Ether Drinking attracted the attention of the civilised world. Mr. Hart's persistent and ungrudging sympathy with, and advocacy of, all genuine efforts at sobriety are fresh in the grateful recollection of all real friends of true temperance. The writer, in the course of a protracted friendship, never appealed to Mr. Hart in vain for repeated succour and encouragement to professional colleagues bravely battling with the direful disease of inebriety, unselfish good deeds unknown to the world at large.

NATIONAL HEALTH SOCIETY.

Miss FAY LANKESTER, Secretary of the National Health Society, sends the following note:

Mr. Ernest Hart joined the Committee of the National Health Society in 1876, and in 1877 became Chairman of the Executive Committee. He continued to take a deep interest in the promotion of the Society to the day of his death, and was always anxious to hear of its usefulness and well-being. He retired from the chairmanship two years ago on account of failing health, which prevented his regular attendance at the meetings of the Society. During the time he was in active work on the Committee of the Society some of its most useful public work was accomplished—namely, the strong advocacy for vaccination, the organisation of lectures on all subjects relating to public health, the training of teachers for county council work, and free lectures amongst the poor on all subjects relating to personal and domestic hygiene. Mr. Hart was, whilst travelling in India, the means of starting a Branch Health Society in that country.

REGISTRATION OF PLUMBERS.

His mind was essentially practical. Nothing had value for him in practical matters until it was expressed in terms intelligible to everyone. A minor consequence of this dominant characteristic, but one which was essential to his personal charm, was the fact that, with all the public objects

which he set himself to achieve, and the often hot conflicts which arose in the course of his efforts, he never had or nourished a grievance. His endeavours to bring about that most desirable of reforms—the better training and registration of plumbers—were characteristic of this attitude, and his plan of opening the campaign was proposed in the same direct and incisive manner as characterised all his public work. It was at a dinner of the Plumbers' Company when Ernest Hart, having listened to the long list of post-prandial orations which custom has imposed as necessary, rose to contribute his quota to the talk. In those days the great City companies had only just begun to recognise the trust of their position. From what a different aspect he viewed the *raison d'être* of his host and their hospitality? To him the Plumbers' Company existed for the plumber, and in a short and pithy speech he told the Company that singularly apparent fact. From that time till he died he never ceased advocating the reforms which he thought necessary. In this work he was ably joined by Mr. W. R. E. Coles, the Secretary of the Company, and together they, in the pages of this JOURNAL and in other ways too numerous to mention, never ceased to enforce the results of their combined deliberation.

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

DR. DE HAVILLAND HALL, Chairman of the Executive Committee of this Society, sends the following sketch of Mr. Hart's part in the foundation and subsequent conduct of this Society:

Any mention of Mr. Hart's life-work would be incomplete if it did not include an account of the Medical, Sickness, Annuity, and Life Assurance Society. Attempts had been made to start a provident society for the medical profession previous to 1883, but they had all proved failures. In the beginning of that year Messrs. Bain Sincock and Ravenhill addressed letters to the BRITISH MEDICAL JOURNAL strongly advocating the formation of a medical sick and benefit society. These letters provoked a lengthy correspondence, but, as on previous occasions, in all probability nothing would have resulted from the discussion, had not Mr. Hart taken up the question in his usual energetic manner. In order to lay before the profession a workable scheme he obtained the advice of a professional actuary at his own cost, and defrayed the preliminary expenses incurred before the Executive Committee was constituted. Not the least of the benefits Mr. Hart conferred on the Society was the appointment of Mr. C. J. Radley the first secretary.

Mr. Hart recognised that, in launching a new society with little or no experience to guide the Committee, it was all important that the Secretary should be a man of great ability and judgment, and here Mr. Hart's consummate knowledge of character enabled him to select a man exactly fitted for the post. It is not too much to say that the shrewdness and the intimate knowledge possessed by Mr. Radley of the working of friendly societies were invaluable at the starting of the new Society. Equally successful was the appointment of the present Secretary, who was also selected by Mr. Hart. From the foundation of the Society in 1883 until 1894 Mr. Hart was the Chairman of the Executive Committee, and, except when he was travelling abroad, he hardly missed a monthly meeting, and, in order to save expense, these meetings were held at his private residence. On resigning the office of Chairman, the post of President was created, in order to retain Mr. Hart's name at the head of the Society, and the Executive Committee voted a sum of 200 guineas from the management fund for the purchase of a work of art to be presented to him as a small recognition of his services to the Society. This action of the committee was cordially endorsed at the annual meeting of the Society in 1894, and a resolution thanking Mr. Hart for "the energy, ability, and public spirit with which he initiated the foundation of this Society, and for the continuous skill and care with which he has so successfully conducted its affairs," was carried with acclamation. If the medical profession had no other cause for gratitude to Mr. Hart, a retrospect of the valuable work done by the Society during the fifteen years that have elapsed since its foundation should be sufficient to ensure the most grateful thanks, not only of the members of the Society, but also of the remainder of the profession, who have thus been spared many distressing appeals for assistance. It may be asserted that the Society would hardly have existed, and certainly not in its present flourishing condition, had not Mr. Hart taken it up. His financial genius, great administrative skill, and ability in selecting suitable men for carrying on the routine work of the Society, have resulted in a great success, and the foundations have been so firmly laid that, even though the hand which guided the Society so skilfully through its early difficulties has been removed, there is every reason to believe in the prospect of an increasing success in the future.

IRISH DISPENSARY DOCTORS.

THE following lines are written by one who has taken a prominent part in the movement for obtaining better conditions for the medical officers of the Irish Poor-law Service:—

For many years Ernest Hart has given much attention to the case of the Irish dispensory doctors, and they must bear in their memory the work which he did in their interest. In 1892 he brought the subject before the Parliamentary Bills Committee, and on his recommendation it was determined to make a special effort to win relief for their grievances. In consultation with Mr. (now Sir William) Thomson, of Dublin, a number of questions were addressed to each dispensary medical officer under the Poor Law, and in this way a Commission was set to work. The replies were copious, and a great deal of the space of the JOURNAL was given up to their publication during a couple of months. Later on he went over to Dublin to attend a conference, and he also then appeared before the Local Government Board as one of a large deputation, to press the claims of the doctors for redress of their wrongs. The whole of the evidence with the comments upon it was printed in a pamphlet and sent to all Members of Parliament and to the officers immediately concerned. The Irish newspapers reproduced much of what was written, and the result was an informing of the public to an extent which had never before been attained. It is true that thus far no substantial change has been effected, but Mr. Hart's action has laid the ground for future success.

To the Irish dispensary doctor his death is a special loss, because it will be difficult to find another advocate so sympathetic or so wise, or gifted with the quiet, persistent energy which he brought to every work he undertook.

THE ARMY MEDICAL SERVICE.

A GENTLEMAN whose advice and assistance Mr. Hart had often sought during the prolonged army medical controversy, writes:

Mr. Hart's able advocacy and persistent efforts for justice and the redress of grievances towards medical officers of the public services will long be remembered with gratitude. So closely was he identified with their fight for just rights, that many who had never spoken to, or even seen him, nevertheless regarded him as a personal friend. He was indeed their friend, striving generously and disinterestedly for those of his own profession whom he felt had to wage a very unequal warfare against a powerful and unreasoning oligarchy, strong in pride, prejudice, and prerogative.

The abolition of relative rank, which left the medical officers derelict in the army, roused him to espouse their cause. He knew that according to the rules of the service they could not combine either in defence, or in expressing with collective voice their needs and desires. Therefore, in 1888, determined to get at the heart of the matter, he, as chairman of the Parliamentary Bill Committee, hit upon the expedient of a *plébiscite*, through the British Medical Association; by which each medical officer's opinions would be got at without a charge of collective combination. It succeeded, and the vote was almost unanimous for simple army equality. Fortified by this knowledge he set about that powerful advocacy of their claims, which has not ceased for ten years. During that time commissions, committees, and deputations, have issued in warrants, army orders, and revised regulations all conceding something, even if in a halting and imperfect way, to the claims of the medical officers. Step by step, chiefly through Mr. Hart's persistent efforts, the War Office, or perhaps rather the military hierarchy thereof, have been driven from untenable positions that could no longer be defended; and although

the citadel has not yet been won victory is in sight, but he has not been spared to share in it.

In this, as in all other controversies and matters involving special and technical knowledge, Mr. Hart, as was his wont, always availed himself of expert advice. Indeed, his faculty of picking other men's brains, added to his own immense ability, have been the main means of making the British Medical Journal the power in the State it now is. But although his self-confidence was great, and he sometimes asserted himself dogmatically, if not imperiously, he always presented an open mind and "sweet reasonableness," that took the edge off differences. And then, when he saw he had to relinquish a position, his retreat was conducted with an adroitness which showed him to be a splendid tactician, knowing, with the wisest, when to do and when to forbear. The quickness with which he grasped new or unfamiliar facts was extraordinary, and only equalled by a mental flexibility and literary nimbleness which enabled him, almost without apparent effort, to immediately set forth new thoughts in that elegant diction which characterised his writings.

No man's death will be more regretted by medical officers of the public services than his; and the only thought which will console them is that their cause is so good, that even he will not be found essential to its maintenance; and army medical reform will work itself fully out even although the brain of the old master no longer directs.

THE MEDICAL EDUCATION OF WOMEN.

Mrs. Elizabeth Garrett Anderson, M.D., sends the following account of the part which Mr. Ernest Hart took in the movement for the admission of women to the medical profession:—

For the past thirty years Mr. Hart had given his hearty support to the movement for introducing women into the medical profession. At an earlier date, when on the staff of the *Lancet*, his comments on my initial struggles had not been friendly, and I well remember being introduced to him as an opponent at the house of a mutual friend, and talking the subject over with him. How he came later on to a better mind I know not. Possibly Mrs. Hart, who studied medicine in Paris, helped him to a wider and more sympathetic view of women's lives than he had had as a younger man. Certainly, from the time of the foundation of the London School of Medicine for Women in 1874 Mr. Hart did all he could, consistently with his position as Editor of the Journal, to befriend the movement. For several years he and Mrs. Hart gave a handsome scholarship to the school; he was one of its governors, and in that capacity he was always ready with shrewd and kindly advice and with encouragement. On the other hand, he felt that as Editor of the Journal he could not properly go against the expressed wish of the majority of the members of the Association, and at the time when, by the fallacious method of post-cards, a vote was recorded against the further admission of women into the Association, he thought it necessary to try to persuade me to resign the position as member which I had then had for some years. I understood his attitude, and, though the advice was not taken, our friendly relations were maintained. Mr. Hart was endowed with the gifts of a diplomatist, and he probably respected my refusal to surrender a point of vantage as much as I did his self-suppression in urging the surrender. Later on, when the Association had frankly opened its doors to women, he was able to follow his own inclination with less reserve, and whenever he could give a word of friendliness and appreciation to the School or to the New Hospital and its staff, or, indeed, to medical women anywhere, that word was forthcoming. He had a very real love of freedom and a desire to see people reach their intellectual best, whether men or women. He had also the rarer power of seeing the ethical and economic value to women of freedom. He was able to understand, as few can, how much misery comes to women through the poverty that is based upon dependence and upon the absence of adequate training for work by which they can maintain themselves in the social position to which they belong. Professional women in all departments have lost a good friend by his death.

SOME PERSONAL TRIBUTES AND REMINISCENCES.

Sir Henry Thompson writes: I send a few lines respecting my old friend, Ernest Hart, whom I knew more or less intimately throughout his life, dating from the close of his career as a student at St. George's Hospital. Among those personal qualities which strike me as the most salient were a fund of enormous energy, for many practical purposes inexhaustible; having this as a basis, he was endowed with a natural taste for logically arranging or organising, whether a subject for literary treatment or human agents for the execution of a purpose. He was remarkably fertile in resource when difficulties or perplexities lay in his path, and he had courage to overcome them when its exercise was required. Moreover, he was prompt to avail himself of new suggestions in the way of improvement from whatever quarter they proceeded, having the gift of ability to discern the value of new ideas and how to profit in some way thereby. However numerous or pressing the affairs with which he was occupied, each received due attention, and he could exercise a clear judgment respecting them and—often so difficult an accomplishment—preserved a due sense of their relative importance. Fully occupied with a crowd of engagements as he mostly was, and of late years much oppressed by weakness and ill-health, he would nevertheless greet the intrusion of an old friend with a welcome response, and, detaching himself from the pressure of his surroundings, would be ready at once to discuss, if required, a fresh subject thus brought before him. I deeply regret the loss of a sincere, loyal, and valued friend.

Dr. Lauder Brunton writes: Many a young physician has had reason to thank Mr. Ernest Hart for a helping hand held out to him at the time of his hardest struggle, and for literary work given to him when expenses were heavy and patients were few. To all such Mr. Hart ever showed himself most sympathetic, helpful, and kind. He not only provided them with work, but encouraged them in their efforts, and cheered them by his generous appreciation of their endeavours, and by his cheery outlook for them of good fortune in the future. By many such his loss will be felt as a personal bereavement, and they will remember him always as a friend in need, and as a helper when help was sorely wanted.

A number of other letters have been received from members of the profession expressing their regret at learning of Mr. Hart's death, among others from Sir James Paget, who observes, "I know that he always worked hard and usefully and well for the general good." Lady Russell Reynolds desires it to be said that she attended the memorial service in order to show her "grateful remembrance of the kindness and courtesy" which Sir Russell Reynolds received "during the memorable year of his presidency, from Mr. Ernest Hart and all members of the British Medical Association."

The following reminiscences have been received from various friends well acquainted with his life and endeavours:—

Mr. Frederick Greenwood, who, when editor of the *Pall Mall Gazette*, enlisted Mr. Hart's services as an occasional contributor, writes: Only two days before your editor died, I received from him a bright little letter, with complaint in it, to be sure, of "a sharp and sudden attack of dyspepsia," a grumble at being robbed thereby of the bolder charms of breakfast, luncheon, dinner, a hint at sleeplessness of nights, and a gird at his own "ridiculous despondency," but not a word that breathed a thought of dying. The despondency itself was dyspeptic, to his belief, or it would not have been called ridiculous. Till then, apparently (but we don't know what apprehensions a kindly nature may conceal) he was in hope of coming out into the world again, to take up the work which he always seemed to me to do with as much pleasure as vigour. The whole amount of it, the full value of it, is known to others much better than to me; but looking back upon an acquaintance of thirty years or more, I recall enough for any man to go to his grave satisfied with, both in quantity and quality. Considering the constant advance of medical knowledge, the mutation of opinion (do I come upon dangerous ground?), the frequency with which the best minds contend against new theories which are not unsound or yield to others that are, I make bold to

assume that Hart must have been in his own profession a man in a thousand to retain the confidence of such a body as the British Medical Association, for a lifetime almost, as editor of such a Journal as theirs. That, however, is but a guess, though pretty obviously a good one. But he was not all professional. In the long time that we were friends he was engaged laboriously, strenuously, and in general successfully, in many good works of which I could judge, and watched him in with admiration. These good works were always for somebody's benefit or for the benefit of an aggregate of somebodies. They would have been good if done under the coldest sense of duty; they were better—at least to eyes that saw them in the doing—because done with all the warmth of a sensitive and eagerly humane mind. In the whole they must make a long catalogue, and a most honourable one, and to the list of his successes in putting things right or righting things that were wrong, several failures might be added that were as honourable as any of the triumphs. Quite a young man when he was in the full activity of his career, he was still alert and good for work to the last—and good, too, for the enjoyment of life, which a wide range of tastes ministered to and a gentle temper enhanced. This is but a brief and hasty word, and I am loth to end it abruptly, but am still less in a mind to flourish off in a parting phrase.

Japanese Art.

The following lines have been written by an authority on the subject of Japanese art work: Mr. Hart was not a man of many recreations, for his pleasure lay chiefly in his public work—but he indulged generously in one hobby for the last fifteen years of his life, the study and collection of Japanese works of art. Beginning as early as 1882, he rapidly amassed a remarkable series of objects appertaining to almost every branch of the art and art industry of the farthest East—paintings, engravings, keramics, lacquer, metal work, carvings in wood and ivory, stencil plates—well selected specimens of each and all—came into his hands. In the earlier years he bought for the most part under expert advice, but in the later times he became himself an expert, and required little outside assistance. In 1886 he exhibited a remarkable collection at the rooms of the Society for the Encouragement of Arts, Sciences, and Commerce, and gave a series of lectures dealing with each group of works, and entering into questions of history, technique, and criticism with a facility that few could have attained in a lifetime spent in their study.

Some years after, drawn to the Mecca of his art cult, the Land of the Rising Sun, he added largely both to his knowledge and possessions, and on his return to England gave in 1891 and 1895 a second and a third series of lectures setting forth his ripened experience. His interest in the subject never slackened even down to the last months of his active life. He was ever classifying, rearranging, completing, and occasionally thinning his collection. His was a well-known figure at every gathering of Japanophiles, whether at the *soirées* of the Japan Society, or at exhibitions, or sales of things Japanese; and all friends or strangers who were genuinely interested were sure of a welcome to view his treasures and to profit by his learning. He has left abundant evidence of his knowledge in his published lectures, in various contributions to journals, and in his volume on stencil printing, issued in 1895.

Sanitary Reform in India.

Before Mr. Hart started for India to attend the Medical Congress at Calcutta he had prepared a laborious and lengthy speech on the sanitary needs of India, which had been put into type before he left England. Finding it was much too long to give as a spoken address, he on arrival at Calcutta engaged the services of a shorthand writer, dictated to him a summary of this address, which was accordingly furnished to the press as his intended speech. When, however, Mr. Hart stood up to address his audience all notes were discarded, and brimful of his mission he delivered one of the most brilliant philippics ever heard on such a subject, sparkling with satire, trenchant with indisputable facts, and dealing straight blows at those in authority for supineness and neglect. He held his audience spell-bound, short bursts of laughter which greeted his sallies of satirical humour breaking only the silence with which he was listened to and his close arguments followed. Deriding the printed recommendations for the prevention and staying of cholera among troops, he held up in his hand the Blue Book in which the medical officers were recommended to march the troops out of the barracks at right angles to the wind, and exclaimed, "You might as well tell them to waltz."

This speech and his subsequent open letter to the Viceroy had a profound influence in inaugurating sanitary reform, although the hard hits of his attack aroused a good deal of sore feeling and useless recrimination at the time.

Pilgrim Path of Cholera.

[The following notes have been received from one well acquainted with all the circumstances of his efforts on behalf of the Mecca Pilgrims, and of the journey to India with this end in view.]

Keeping his mind always open to find the cause of great epidemics and to discover their prevention, he with others perceived clearly that many of the great epidemics of cholera sprang from the massing of unwashed pilgrims at Mecca, spreading thence to Europe along the homeward path of these pilgrims. In order to bring the subject home to the public mind he published an illustrated series of papers in the *Daily Graphic*, called The Pilgrim Path of Cholera. Attention was aroused by these articles in influential quarters, and the attention of the Queen was drawn to the great risks her Indian subjects ran in the pilgrimage to Mecca. It was proposed that Mr. Hart should go, in the summer of 1894, to Constantinople, charged with the high mission of laying the whole subject before the Sultan, and trying to get him to move as the head of the Mohammedan Church, and enforce such sanitary measures as would prevent the dissemination of cholera at Mecca. Mr. Hart was on the point of starting, and had even taken his railway ticket, and was boldly going alone on this mission in a wretched state of health, when at the last moment, yielding to the entreaties of his wife, he gave it up, it being arranged that they should go to India later on for him to raise there the whole question of the sanitation of Mecca among the Indian Mohammedans, and to induce them to petition the Sultan for the reforms necessary. The result of which was that Mr. Hart received an influential invitation from Hyderabad asking him to hold a meeting there on the subject. He sailed for India with Mrs. Hart in December, 1894. He first addressed a meeting of the leading Mohammedans under the presidency of the Prince of Oude in Calcutta, and then proceeded to Hyderabad in the Deccan. He was received at the station with a public torchlight procession, and was presented with an address and a silver casket from the native and English doctors. During the fortnight that he was in Hyderabad, making his plans and forming public opinion, he was entertained by the leading native noblemen, the Prime Minister, and the Shah Kadri, the head of the Mohammedan Church in Hyderabad. On the afternoon of the meeting a public half-holiday was given, and it was calculated that no fewer than 5,000 Mohammedans assembled in the public gardens, under the most unusual circumstance of hearing an European and "Infidel" address Mohammedans on the sanitation of their holy places. The meeting was honoured by the presence on the platform of the Prime Minister, the Resident, and the Shah Kadri. The speeches were given in Urdu, Mr. Hart's speech being translated sentence by sentence by Ali Mahomet Belgrami. A full account appeared in the Journal at the time.

Hyderabad is, as is well known, the hotbed of fanatic Mohammedanism, and the wildest rumours were set about in the bazaars as to Mr. Hart's supposed intention of obtaining the closure of the Zem Zem well; and there is no doubt that he ran considerable personal risks in thus addressing such a vast meeting of fanatical Mohammedans. But quite undaunted Mr. Hart proceeded steadily on his self-imposed mission, and having obtained at the meeting a vote in favour of his proposals of sanitation, he trusted that the first step had been made in the reform he so ardently desired to see carried out.

Though suffering from severe intestinal trouble and chill, he started from Hyderabad to fulfil an engagement to address a Mohammedan meeting at Aligahr; but on reaching Agra he was struck down by dysentery. He was conveyed to a dak

bungalow overlooking the Jumna, lent by the Collector, and here he lay almost at the point of death for a fortnight. Desperately ill as he was, he could with difficulty be persuaded to give up his engagement to address the meeting of Mohammedans which had been arranged in the North-West Provinces. As soon as he could be moved he was carried down to Bombay, and came home without delay by the long sea journey. Nursed all the way home by his wife he slowly recovered strength, but had not been home a month when he was laid up by an attack of influenza and pneumonia. His health never really recovered from these two attacks of severe illness.

[From a Correspondent.]

HIS ENERGY IN SPITE OF INCREASING ILL-HEALTH.

Till the year 1883 Ernest Hart enjoyed vigorous health, and had the untiring energy of a keen, wiry, nervous organisation. He drew enjoyment from many sources—from his active participation in public affairs, as well as from his happy appreciation of natural beauty. Directly publishing day was passed, and the JOURNAL, which was the pride of his life, was out, he and his wife quitted London, according to an invariable custom, and spent the week-end quietly together in the country, passing the time either riding on horseback or on the river. In the late autumn of 1883, when apparently in good health, rapid and progressive emaciation and nervous restlessness led to an examination, and the painful discovery that he was the victim of that most intractable disease, diabetes. Symptoms soon became more marked, and his condition at his then age, 48, was rather serious. He did not, however, abate one iota of his work; indeed, the reverse, as he took on himself the arduous labours involved in being an active member of the executive of the Health Exhibition, which was, in fact, largely due to his initiative. With the double object of interviewing the King of Italy on a mission from this Committee, and for the benefit of his health, he went to Italy in the early spring of 1884. Though he knew he was hit by a disease which never forgave, he returned home determined to defy it to its utmost, and to bear himself bravely. "I will go on to the end; I should hate to be pitied," he would say. But from the time that it was discovered that he had diabetes till his death, fourteen years later, he always suffered more or less from the dyspeptic and nervous troubles with which that disease torments its victims. A careful and special study of diabetic dietaries was made by his wife, and his diet was carefully arranged in view of these. In 1885 he went to Carlsbad, after the Brighton meeting, and derived so much benefit from the treatment that for four successive summers he made a practice of going there for two or three weeks directly the annual Association meeting was over. It was found that ocean journeys did more to restore him when fatigued, and to banish dyspepsia and depression, than anything else. He consequently arranged to take his holiday in the early spring, when he and his wife used to get away from the ubiquitous post on long and heartily-enjoyed sails to Egypt, to Corfu, to Madeira, to the Canary Islands, to the West Indies, and on two occasions, when long leaves of absence were granted, to Japan and to India and Burmah. But even on these pleasurable journeys, taken for health's sake, he never forgot the main objects of his life, that is, the improvement of public health and the furtherance of the JOURNAL and Association. Thus in Cairo, in 1885, his voluntary investigations into, and forcible representations as to, the insanitary condition of the city since the English occupation, led to his being requested by those in authority to frame a scheme of reform; in Teneriffe in 1887 the information laboriously gathered (even when he himself was suffering from an acute attack of illness) as to the climatic conditions of the island, and put forward in a series of striking letters in the JOURNAL, induced the public and profession to accept that island as another health resort for invalids; in Canada, in 1891, on his way home from Japan, he initiated in each city as he passed through the foundation of a Branch of the British Medical Association; and in India, in 1895, though then in extreme ill-health, he made the whole country ring with his demands for sanitary reform; and even in his last journey to the West Indies, when he was so ill that he could walk and move only with great difficulty, he made efforts to attend the complimentary dinners and lunches given him by Branches of the British Medical Association, and formulated a scheme of interinsular organisation of the West Indian Branches, which he thought would make the British Medical Association of larger public usefulness in the islands.

It was a source of genuine gratification to him to find in these far-away dependencies how highly the JOURNAL was appreciated, and what a strong link it proved to be between isolated members and the great body of the profession in the mother country.

In 1890 he had a severe attack of pneumonia, from which he made a good recovery. As the years went by his health and strength steadily and slowly declined, but not his energy and his intense intellectual activity. He never missed seeing his secretaries and shorthand writers in the morning, though the great budget of JOURNAL letters was not infrequently dealt with as he reclined on his bed, and under conditions of suffering which only a strong purpose and an abiding sense of public duty made him disregard. His London house at Wimpole Street was arranged and used for the convenience of his editorial work, and here his numerous visitors, who sought interviews with him on professional subjects, would find him in his study, surrounded by the interesting objects of his collection of Japanese works of art, and keeping two or three shorthand clerks and typists hard at work. In this house he delighted to entertain his numerous friends, and his charm as a host will not be soon forgotten. From time to time societies of working people were entertained in the big drawing-rooms, or very poor friends from Whitechapel, on which occasions he would hold their interest for hours describing the workmanship, and telling stories, of his Japanese treasures.

The whole of his Japanese collection, the reputation of which was world-wide, was made by him personally since 1884. In 1886 he gave a series of lectures on the arts and artists of Japan at the Society of Arts, which showed so profound a knowledge of his subject that the honour was done him of their being translated into Japanese. When some years later he visited Japan, he found himself the recipient of unusual honours offered by the Japanese Government as a testimony of their appreciation of his efforts and learning. Temple treasures, exposed only to royal persons, were uncovered to him, and at Nikko he was requested to enter the temple by the central door as a great mark of respect, all others entering by the side door.

Despite the internal misery and the nervous depression the diabetes frequently caused, he went bravely on, dealing with public questions with a *verve* and grasp which were amazing. His voice was heard in no uncertain tones in America on the burning question of medical etiquette; in Paris on the exposure of the delusions of mesmerists; in India on the scientific investigation of the prevention of disease; and at home in the demand for trained nurses for the sick poor, for natural homes for pauper children, for pure air untainted by smoke, and for clean water undefiled by disease germs.

He never missed attending the annual meetings of the British Medical Association—with the exception of the last one at Montreal—though the fatigue of these often tried him. All will remember his bearing on these occasions, his ceaseless activity, his never-failing courtesy to strangers, his easy imparting of information, his grasp of endless details, his quick apprehension of the main point at issue in an involved discussion, and the rapidity with which he directed secretaries and various operations and organisations at once. All will recall the small slight figure, the quick nervous movements of the body, the noble head and brow, the pale clear-cut face the large grey eyes which seemed to blaze out the thoughts before they were spoken by the mobile lips and bell-like voice. And all those who remembered him in his vigorous days and spoke of him with pride as "our Editor," saw with sorrow at the Carlisle meeting how the fell disease against which he had made so brave a fight was getting him under. He rose from his chair and walked with difficulty from an increasing ataxy, his emaciation was marked, and his physical weakness very patent. Though even here the old fire of eloquent speaking burst out under stimulus on the platform.

For several years he had been accustomed to live much at

his little country place at Totteridge, ten miles from London, but on his return from Carlisle he arranged to sell his London house, dispose of a part of his noted Japanese collection, and to live altogether and do his editorial work at Totteridge. The change was made to his satisfaction, but health did not improve. He was troubled with recurrent attacks of herpes, and serious and almost constant dyspepsia. On the advice of Dr. Pavy, Mrs. Hart took him last January on a cruise in the *Lusitania* to the West Indies. Life on an ocean steamer again revived him, and he frequently expressed his sense of enjoyment of the sunshine and the views of sea and sky.

On his return home last March he was able to walk better, with the assistance of a friend's arm. Feeling nervously stronger, and not one whit weakened in intellectual vigour, he was most anxious to continue his work and to edit the JOURNAL to the end, which he knew could not be far off. All through last summer he carried on his editorial work lying on a long chair on the lawn of his garden. Every day his secretary came from the office with the JOURNAL letters, and every Thursday he drove up to London to attend the meeting of the Reference Committee. In evidence of his marked interest in public welfare, it may be noted that it was from his chair in the garden at Fairlawn that he tried to raise the funds to purchase the late Sir Spencer Wells's property as a public park for Hampstead.

HIS LAST ILLNESS AND THE AMPUTATION.

In June a crop of herpetic spots on the right leg and foot ulcerated. Slowly ulceration took on a necrotic character. Under careful and patient treatment all the ulcers healed, excepting one above the first metatarsal bone, which slowly spread till a patch of dry gangrene was produced. Suffering acutely at times but still undaunted Mr. Hart pursued the usual course of his life. Indeed, in July he and his wife gave three large garden parties to London friends, though at the time he could not stand, and had to be carried everywhere. Those who were at these receptions will remember his vivacious conversation, his keen interest in all that was going on, and his pleasure at presenting his guests with bouquets of roses.

Slowly the gangrene gained ground, and the pain became so severe that on Thursday, September 2nd, Mr. Hart was obliged for the first time most reluctantly, and only after earnest persuasion, to give up driving to town to attend the meeting of the Reference Committee.

His condition became rapidly serious, and on Saturday, September 4th, Mr. Lockwood was called in, and gave his decision that amputation of the leg was necessary to save life. Mr. Hart took this fell news with the utmost composure. "When can it be done—to-morrow?" was his question.

He was conveyed in an ambulance to London on the 6th; and after a consultation with Mr. Bryant, Dr. Mitchell Bruce, and Mr. Lockwood, amputation of the leg at the upper third was decided upon.

Apprehension did not disturb Mr. Hart's sleep that night; and the next morning he preserved his perfect composure, the last thing he did before being carried to the operating room was to dictate to his wife some notes for a leader in the JOURNAL.

The operation was successful. Recovery was not, however, quite uninterrupted, for the formation and breaking down of a hæmatoma and a subsequent slough led to the wound being open over a small area, and was not quite closed at the time of his death. Sugar almost disappeared, and diabetic symptoms abated, after the operation, a very strict diet being maintained.

Early in October Mr. Hart was removed to Brighton. Up to Christmas he continued to make slow but steady progress; he gained strength and weight, though he suffered almost constantly from neuritic pain in the stump referred to the lost foot. Twice a day he might have been seen driving with his wife along the sea front, and at tea time he liked nothing better than that friends should come in and chat with him. On Christmas Day he was well enough to join a small party of intimate friends and relatives at dinner, and to see a number of friends on the following day.

After Christmas a gradually-increasing weakness was noted; he lost weight; the old dyspeptic troubles returned, with occasional accesses of pain in the chest and epigastrium. Mr. Willoughby Furner, his medical attendant, was unremitting in his care. The indisposition was thought to be temporary, and no immediate danger was apprehended. On Tuesday he was out driving twice in the day. On Wednesday he saw friends in the afternoon, and was much interested in some unpublished literary work which was read aloud. He expressed again his wish to do something for the sick poor in their homes, so that they might enjoy as he had done the comforts of skilled nursing, and he saw a medical man as to the needs of a one-legged poor man whom he wished to help. The next day there was a change for the worse. He had a rapid, intermittent pulse, and was restless and depressed. He gave up hoping on that day, for the first time, to get better.

HIS DEATH.

He faced death with the same calm courage with which he faced the operation of amputation. Through all his last illness he was supported by the one hope that he would recover sufficiently to resume his editorial work and conduct again the JOURNAL, which had reached such a vigorous growth under his direction; yet even this abiding hope seemed to fail him the last day of his life. Towards evening he grew better, the pulse became steady though rapid, and he sat up to read the evening papers with the old keen interest in the public affairs of the world, discussing them with his wife. The early part of the night he slept well in snatches. At 3.30 A.M. he awoke from an hour's sleep almost pulseless, and in a cold, deathly sweat. His doctor was summoned, and everything possible was done to stimulate the flagging heart. He knew he was dying, and was perfectly calm and clear-headed, solicitous of those about him, and most grateful for their attentions and efforts to give him relief. He asked questions as to the significance of his symptoms, and realised his position, though he thought that the end might not be just yet. About 6 o'clock he asked to be turned on the right side, and calling his wife to his side he spoke with her, gave a few sighs, and fell calmly asleep like a weary child in her arms. The indomitable spirit had fled.

A memorial service was held at Marylebone parish church on January 11th, and among those present were, in addition to Mrs. Hart and other members of his family, and Mr. Albert Kiesh, representing Miss Hart, Sir William Mac Cormac, President of the Royal College of Surgeons; Dr. Holman, Vice-President, representing the President of the Council (Dr. Saundby), who was unavoidably detained; Dr. Parsons, Treasurer; and Dr. Cleveland, Mr. George Eastes, and Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman, I.M.S., members of the Council of the British Medical Association; Dr. de Havilland Hall, representing the Medical Sickness and Accident Assurance Society; Mr. Basil Holmes, representing the Metropolitan Public Gardens and Playgrounds Association, of which Mr. Hart was Vice-President; Sir Henry Burdett, K.C.B.; Sir Felix Semon; Dr. Bateman, Secretary of the Medical Defence Union; Surgeon-Lieutenant-Colonel Ince, I.M.S., Brigade-Surgeon-Lieutenant-Colonel F. Howard, A.M.S.; Dr. Frederick Roberts, Dr. Dudfield, M.O.H. Kensington; Dr. Sims Woodhead, Mr. William Adams, Mr. Croft, Dr. Dudley Buxton, Dr. Norman Kerr, Dr. William Murrell, Dr. Symes Thompson, Dr. W. S. Playfair, Dr. Mapother, Mr. C. B. Lockwood, Dr. W. J. Mickle, Dr. Pickett, Mr. Hume Williams, Dr. Simpson (of Calcutta), Mr. C. L. Taylor (Sub-editor of the BRITISH MEDICAL JOURNAL) and many members of the printing and publishing staff, Miss Emma Cons, Lady Russell Reynolds, and Mrs. Garrett Anderson. The pall-bearers were Sir Henry Thompson, Sir Ernest Clarke, Dr. Stephen Mackenzie, Mr. Francis Fowke (General Secretary of the British Medical Association), Dr. Dawson Williams (Assistant Editor of the BRITISH MEDICAL JOURNAL), Mr. George Smith, Mr. Stephen Hyam and Mr. Sydney Rowland. The service was conducted by the Rev. Canon Barnett and the Rev. Brooke Lambert. Canon Barnett in the course of his address said: "We have been moved to meet by respect for Ernest Hart. Each of us is thinking now of some aspect of his character which drew our admiration or affection. One remembers the ardent intellect which burnt up difficulties; another the masterly ordering of facts which made hard

things easy to be understood. For some of us he is the keen fighter who fought for his side with sharpest weapons; for others he is the host, who, by charm of manner, added to our happy days. One will think of the strong critical power which dissected and tossed to ridicule worn-out traditions; another will think of the love of beauty which so enriched his home, his garden, and his talk, and made him so anxious to increase the open spaces of London. He is the man of science, but he is also the lover and the loved of animals, the head of one of the greatest literary staffs, and also the favourite of children, who seemed by instinct to recognise his friendship. He is known to the world as a leader, but he is known to many unknown as a sympathiser with misfortune, as a generous helper of the fallen, as a friend who put his best at a friend's service. Each of us—as to-day we cherish his memory—will consider his character from his own point of view. No words of mine will express what each one feels. But there is one side of Ernest Hart's character which belongs to all alike. He was a man of public spirit. From the beginning of his career he took up causes, and he used his great influence to make his profession a public service. His ambition was to leave the world cleaner, happier, and better than he found it, and in the pursuit of that ambition he never hesitated to face the prejudices of his peers. He made some enemies and some mistakes, but they were made because he conceived that his first duty was not to his class, but to the public. The sick poor are better cared for, children are safer from harm, national health is more considered, the medical profession is now honoured because Ernest Hart lived. Men of public spirit are the salvation of our country—there are many in England, but there are far too few."

At the conclusion of the service the body was removed to Woking, where it was cremated.

Mr. Hart was twice married. His first wife died, two years after marriage, in 1858. In 1872 he married the daughter of Mr. Alexander Rowland, of Lewisham, who survives to mourn his loss.

SPECIAL CORRESPONDENCE.

PARIS.

The Effects of the Laporte Case in Medical Practice.—Scientific Methods and the Dreyfus Case.—An Epidemic of Typhoid Fever at Castres.—Decorations for Doctors.

DR. LE BEC, surgeon to the St. Joseph Hospital, publishes in the *France Médicale* the following case, showing the intimidating effect which the Laporte trial exercises on the medical profession. A few weeks ago a similar case occurred. Dr. Bec was telegraphed for to attend a patient in a small village three hours from Paris. After an unavoidable delay he was at the patient's bedside and learned that she had been attended by a midwife who was unable to effect delivery and had called in a local medical man when the patient was in convulsions. It was impossible to extricate the head of the fœtus without using forceps. The patient was insensible and in great danger. The local doctor, a young man established in the village only three months, would not take the responsibility of using forceps or performing symphysiotomy, fearing that if—as was probable—death ensued, he might be prosecuted. He told the husband that he could not do anything more, and that another doctor must be called in. When Dr. le Bec reached the patient she was in a comatose condition; the child was dead. The treatment, which was quite proper, had failed to restore the mother to consciousness, and Dr. le Bec was as powerless as the local doctor. He returned to Paris, leaving the patient in the same condition. The midwife, on being questioned by Dr. le Bec, admitted that she had never examined the patient to ascertain if there was contraction of the pelvis. She also knew that there was œdema of the lower limbs, and that the patient suffered from shortness of breath, but never analysed the urine. The position of the local doctor was a most difficult one; operating might have saved the child's life, but he was positively terrified by Dr. Laporte's condemnation.

An interesting proof of the belief in the precision and honesty of scientific judgment and method of reasoning is furnished by what is termed *l'affaire Dreyfus*. M. Scheurer-Kestner, who is convinced of the innocence of Captain Dreyfus, now undergoing punishment for having betrayed his country as a spy, has demanded a revision of the trial. The *Temps* publishes a letter of Professor Duclaux, Membre de l'Institut and Director of the Pasteur Institute, addressed to M. Scheurer-Kestner, in which he says: "You ask me to express in my quality of *savant* what I think of the charges against Captain Dreyfus as they have been stated in the daily press. My simple belief is this: If in the scientific questions we work at to solve we directed our investigations as the 'instruction' has been directed in the *affaire Dreyfus* it would be a mere matter of chance if we arrived at a true solution. We have quite different rules which descend to us from Bacon and Descartes—we keep our *sangfroid*: not to go into a cellar to see clear; we believe that probabilities are not to be taken into account; that one hundred uncertainties are not worth one certainty. Then when we have worked and sought, and believe that we have discovered the truth, and find it even believed in, we are already resigned to find this truth invalidated by a process of revision at which we ourselves often preside."

After M. Dujardin-Beaumetz had investigated at Castres the origin of the typhoid fever epidemic, the Minister of War forbidden the troops in garrison there to frequent any of the dining rooms, restaurants, coffee or wine shops, etc. The army medical authorities attribute the epidemic to the public fountains being contaminated. The entire population protest against this verdict. Among the working classes who drink a great deal of water there is not one case of typhoid fever. Forty-five soldiers among 800 have died, whereas there have been only 20 deaths among the lay population, amounting to 20,000. The severe measures taken by the War Minister have greatly affected the Castres population. The tradespeople are holding meetings, and a special meeting of the Municipal Council has been called. It is rumoured that the Council will demand that a special scientific commission, entirely independent of the army administration, shall be appointed.

Dr. Vaillard, Professor at the Val-de-Grâce Hospital, Dr. Hayem, Professor of the Paris Medical Faculty, Dr. Jules Simon, Consulting Physician to the House of Education of the Legion of Honour, and Professor Raymond, Physician at the Salpêtrière, have been promoted to the rank of Officier de la Légion d'Honneur. Fifty-one medical men have been created Chevaliers de la Légion d'Honneur.

CORRESPONDENCE.

THE LONDON UNIVERSITY COMMISSION BILL.

SIR,—I hope Dr. Fowler will not think that I undervalue the facts and arguments in his second letter[1] if I do not answer them minutely. I am very glad when I agree with him, and if he will allow me to refer him to an article which appeared in the *Medical Magazine* for March and May, 1897, he will find, I hope, more points of agreement than one.

That the only practical prospect of obtaining a great local University in London is the reconstruction of the present University of London is, however, far from being an individual opinion. It was reached after long and patient deliberation by the majority of Lord Selborne's Commission, by the still larger majority of Lord Cowper's Commission, by Lord Justice Fry and the majority of the Senate, by the late Professor Huxley and the majority of the Teaching University Association, by the late and by the present Government, by University College, by the delegates from all the medical schools, as well as the other Colleges interested, and by the two Royal Colleges, the last resolution of the College of Physicians being carried, as Dr. Fowler may remember, with but one dissentient vote.

Among those consistently in favour of this reconstruction have been Sir James Paget, Sir William Savory, the present and late Presidents of both Colleges, and the majority of the members of the medical schools, including the Senior Physicians of St. George's and of the Middlesex Hospitals.

[1] BRITISH MEDICAL JOURNAL, January 8th, p. 114.

That there has been a sad want of enthusiasm we must all confess, and if the new Westminster scheme had lived a little longer, Dr. Fowler would have found the Thames as incombustible as ever. As to enlisting civic interest in the scheme, a University in London is far more likely to evoke local patriotism than local patriotism to found a University.

The comparative advantages of proceeding by Charter or by Bill have been, I assure Dr. Fowler, long and carefully discussed, and we have been warned on high authority that we should gain nothing whatever by the former plan. No Charter can be granted by the Crown which has not lain on the table of both Houses of Parliament; and if opposed, neither Bill nor Charter can be got through unless the Government uses its power. But whatever difference of opinion there may be on this point, which is one of which I do not profess to judge, the present Government has decided the question by their intention of again introducing the Bill of last session, and this time they are bound to see it through. Any proposed Charter would be, we may be sure, opposed by our common enemies and defeated. Our only course, unless we prefer the present condition to last indefinitely, is to give the Government no excuse for receding. The one object of all of us who wish to move forward is to get the Commission appointed. Once appointed, any unanimous representation from the medical schools would, if not contrary to the general drift of the Cowper report, come with a weight which would be irresistible. If, however, any one of our London schools deliberately decide that the present condition is better than what the Bill offers, it will suffer no injustice; it will maintain its present position outside the reformed University, and we may hope will be satisfied with that, without seeking to hinder the others.—I am, etc.,

Brook Street, Jan. 7th. P. H. PYE-SMITH.

P.S.—In courtesy to Dr. Fowler, I should add that the reason I applied the term "Westminster" to the scheme of the two Royal Colleges conferring degrees in medicine alone, was that this was the name proposed for the intended university in 1886 when Sir William Jenner was President.

THE OUT-PATIENT QUESTION AT THE NEWPORT INFIRMARY.

SIR,—Considering the prominence attained by the unfortunate dismissal of Mr. Ensor from his post of Honorary Ophthalmic Surgeon to the Newport and Monmouthshire Hospital by the directors, we think it due to ourselves to state the position we have taken since the beginning of this controversy. At the meeting of directors on December 7th, 1897, when Mr. Ensor was dismissed from his appointment, those of the staff who were present protested, and voted against the mode of his dismissal. As soon afterwards as possible a meeting of the honorary medical staff was called to hear Mr. Ensor's explanation of the charges preferred against him at the directors' meeting. This explanation appeared to throw a fresh light upon the case, and the staff drew up a unanimous memorial, asking that the notice of dismissal should not take effect until Mr. Ensor had been allowed to state his side of the case before a full meeting of the Board. Upon the memorial being sent to the directors, the House Committee asked the staff to meet them in order to discuss the memorial. The staff consented, and urged the House Committee to call a meeting of directors to hear Mr. Ensor. After a long discussion, the House Committee refused to call a special meeting unless Mr. Ensor first apologised—the apology to be one that would be satisfactory to the chairman of the directors and to a member of the medical staff. This was agreed to by the staff, who saw no other method of getting Mr. Ensor's case considered before his dismissal came into force.

Mr. Ensor on receiving the form of apology, drawn up as before said, refused to sign it, saying he had nothing to regret.

The House Committee then declined to call a special meeting of directors. The original memorial of the staff, however, came before the directors on January 4th, four days after Mr. Ensor's connection with the hospital had ceased. The whole staff had an interview with the directors, when it was carried by a large majority that, inasmuch as Mr. Ensor had written saying that he had no reason to regret his action, the Board refused to reopen the case.

The staff then entered their strong protest against this action of the directors, and expressed their intention of publishing their protest in the medical papers.

The annual meeting of the subscribers will take place at the end of this month, when the matter will come up for further and probably final consideration. We do not now, therefore, propose to enter further into the merits of the case, except to say that no doubt Mr. Ensor acted under a sense of great provocation, but we do not uphold all his actions which led up to the present crisis.—We are, etc.,

(Signed)

MELVILLE BREWER, A. GARROD THOMAS,
REGD. E. WORMALD BREWER, T. G. MACORMACK,
O. E. BULWER MARSH, H. B. SEDDON,
ROBERT J. PATON, CHARLES STUART VINES.

Newport and Mon. Hospital, Jan. 7th.

DENTAL REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Allow me also to thank you for opening the columns of the BRITISH MEDICAL JOURNAL to a correspondence on the subject of the direct representation on the General Medical Council of the dental branch of the medical profession. I feel sure that the free ventilation of this subject in the JOURNAL will be of the greatest service to us, and your support will now (as in the past) be of material help to the progress of dental surgery and its proper recognition.

I should like to point out that the arguments used and the plans proposed by your correspondent, "M. and L.D.S., R.C.S.," in the JOURNAL of January 1st have been fully recognised by the officials of the British Dental Association, and acted upon, as far as possible, some two or three years ago on the very lines suggested by your correspondent, and his letter states very clearly the various alternatives possible. For my own part, I think the next step should be an "act of grace" on the part of the General Medical Council itself, by which that body might unanimously make a requisition to the Privy Council, admitting the justice of our claim, and asking that, on a fitting opportunity, our branch of the medical profession should be directly represented on the General Medical Council by a dentist holding surgical and dental qualifications, competent to legislate, not only on dental, but on medical questions as well, and of such there are not a few in our ranks.

In conclusion, I would further note that there are 34,478 practitioners on the *Medical Register* of 1897, having 30 representatives on the General Medical Council, thus providing one representative to each 1,149 medical practitioners; whilst there are 4,860 dentists on the *Dentists' Register*, of whom 1,573 possess registrable qualifications, and they have as yet no representative at all on the General Medical Council! These figures speak for themselves.—I am, etc.,

S. J. HUTCHINSON, M.R.C.S. and L.D.S.Eng.

Brook Street, W., Jan. 10th.

SIR,—Mr. J. Smith Turner's letter in the BRITISH MEDICAL JOURNAL of January 8th, page 116, clearly demonstrates the urgent need of the dental profession being represented on the General Medical Council.

It is obvious that no corporate body can be represented by anyone so well as by one of its own members, who knows and understands the requirements of such a body.

It is not so many years since dentistry was in the hands to a great extent of charlatans and persons who were absolutely ignorant of the science and art of their calling, and it was only by the exertions and enterprise of some of the heads of the dental profession, foremost among whom, if I mistake not, was Mr. Turner himself, that a charter was obtained whereby persons wishing to practise dentistry were forced to attend a regular course of instruction and pass an examination before they could obtain a diploma entitling them to practise their profession, after which they were registered as duly qualified dental practitioners in the *Medical Register*.

It must not be lost sight of that this desirable end was obtained only after a hard struggle on the part of the dentists themselves. The result has been that now there are over 1,000 duly registered dentists on the *Medical Register*, the General Medical Council benefiting to the extent of from £500 to £600 a year paid for registration fees, over which the dental profession have no control.

Surely the time has arrived when such a state of things should cease and that the corporate body of dentists should be represented on the Council.—I am, etc.,

FREDERICK BOWREMAN JESSETT, F.R.C.S.

Buckingham Palace Mansions, Jan. 10th.

MEDICAL REFORM: OBJECTS AND MEANS.

SIR,—By your courtesy, about eighteen months ago, I drew the attention of the profession to the inferior general powers it possessed, as compared with the legal profession, for the suppression of quacks and unqualified practitioners. May I again refer shortly to this subject?

In the last session of Parliament a Bill was passed, which comes into force to-day, as an Act entitled "The Land Transfer Act," and it is interesting to note that, besides the general powers which the legal profession already possess for the punishment of unqualified practitioners, this Act contains a clause providing that any person not being a member of the legal profession drawing for pay instruments of transfer shall incur a penalty of £50. Again, the third part of the Bill originally provided for compulsory registration of title, and yet the members of the legal profession induced the Government to modify their original proposals, and now it is enacted that the adoption of these clauses shall be optional.

How is it that it never occurs to the members of local medical societies and branch associations to follow the example of their neighbours in appointing deputations to interview and "heckle" the individual members of, and candidates for, Parliament on proposed legislation which materially affects their status and interests? The medical profession should be able to enforce its views upon Parliamentary candidates with more show of power than the legal profession; for surely medical men have more opportunities for influencing the votes of their patients on a public question like the suppression of quacks than the lawyers have in the voting of their clients; but by the persistency of their intervention the lawyers always appear to gain all that is worth fighting for. In almost every constituency at the last election the legal profession obtained the views of the candidates on the above-named enactment, and worked and voted accordingly. Why cannot the medical profession arise and do likewise on its own behalf?

Lastly, I would again point out that Section 40 of the present Medical Act provides—not as it ought to do, that any person not being a registered medical man who for pay treats patients, etc., but that—"any person who shall wilfully and falsely take or use the name of physician, doctor, etc., implying that he is registered under the Act," so that one is compelled to admit that the Act protects a mere title, and not the person who practises the profession; in other words, as it is a legal maxim that penal Acts are construed strictly, in any action against an unqualified practitioner it must be proved that the defendant exercised fraud in obtaining his patients, and a court of law will always hesitate to convict for fraud unless such is proved to the hilt.—I am, etc.,

Leeds, Jan. 1st. J. H. WIGHAM.

COUNTY COUNCILS AND LUNATIC ASYLUMS.

SIR,—In your annotations of the week in the BRITISH MEDICAL JOURNAL of January 8th, 1898, p. 101, you state that the building of a new asylum for private or paying patients only (referring to the action of the County Council of the West Riding of Yorkshire) will be a "new departure in the policy of county asylums which has been made possible by the recent Lunacy Law Amendment Acts." You proceed to comment upon the improvement it would be "to start a separate institution not in the immediate neighbourhood of the county asylum, for there can be no doubt that persons hesitated to send their friends to pauper asylums, though they paid for them." Your editorial comment is doubly incorrect, for the power to build such accommodation is set out in Section CCXLI of the original Lunacy Act, 1890, and not in any of its amendments. After defining the local authority thus, Section CCXL, "The council of every administrative county and county borough respectively constituted under the Local Government Act, 1888, and the council of each of the boroughs specified in the Fourth Schedule, or in the case of the City of London the Common Council, shall be a local authority for the purposes of this Act." The power set forth is as follows, Section CCXLI: "A local authority may provide asylum accommodation for pauper and private patients, together or in separate asylums, and may provide separate asylums for idiots or patients suffering from any particular class of mental disorder." This power has already been acted upon, and the first public body to give effect to it was the London County Council. Mr. P. M. Martineau, Chairman of the Asylums Committee of this body, states in the second annual report of the Claybury Subcommittee, dated March, 1891, that the then Chairman of the Council, Lord Rosebery, laid in June, 1890, the foundation stone of Claybury Asylum, and that the Committee, having consulted with the architect and Commissioners in Lunacy, resolved to spend £10,000 upon the fine mansion on the estate, and convert it into an asylum for fifty private paying patients. Mr. Martineau gives the Council's reason for this separate private establishment "that it may become 'an annexe' for the accommodation of paying patients—a small private asylum under public control; and it is hoped that the success of this experiment may encourage the Council to provide for a class of patients above the pauper class, but who can ill afford to bear the cost of a private asylum, and who may find comparative quiet and comfort, perhaps even a touch of 'home,' in such an institution as the Claybury mansion-house." The decision of the Asylums Committee of the London County Council to bring all their private patients to Claybury, and the fact that there are at present fifty-two private patients under care and treatment is a fulfilment of this desire, and a justification of the action taken by this "local authority."—I am, etc.,

Claybury, Jan. 11th. ROBERT JONES, M.D.Lond.

FAMINE AND PLAGUE IN INDIA.

SIR,—With reference to the leading article on Famine and Plague in India in the BRITISH MEDICAL JOURNAL of January 8th, your readers will hardly be surprised to learn that a civilian with the rank and title of "Plague Commissioner" has been appointed by the Bombay Government. This officer has recently been acting as Commissioner in Sind, and having to vacate this appointment on the return of the permanent incumbent, this post was specially created for him, in which he draws a handsome salary and allowances for controlling and directing the specially selected medical officers lately sent out from home by the India Office, and he will no doubt in due course be credited with, and decorated for, the results of their arduous labours.

This proceeding is as incongruous as the policy hitherto observed of entrusting all power in regard to plague operations in the districts to assistant collectors. I have known a collector to be so jealous of his authority as to insist on inspecting vaccinators' registers and office records for fear he should not be considered paramount in his district. It seems that the severe lesson it is now experiencing does not convince the Government of the preposterous absurdity of placing trained experts under the orders of amateurs, however high in the grade of Civil servants. It clearly proves, if proof were needed, the official estimate of sanitation, and indicates how essentially necessary it is for the welfare of India that the sanitary department should be more than a mere name, which has hitherto been its fate. A long and bitter experience has convinced me that no real progress or reform in sanitation can be effected until the Government of India takes the matter directly into its own hands.—I am, etc.,

C. W. MACRURY,

Earl's Court, Jan. 11th. Brigade-Surgeon-Lieutenant-Colonel, I.M.S.

A SHORT WAY WITH ANTIVACCINATORS.

SIR,—I shall be glad if you will allow me at this early period in the new year to invite the attention of your readers to the need for their co-operation in meeting the very active agitation which is being carried on by the Antivaccination League at the present time. In view of the probability of legislation during the ensuing session of Parliament, in furtherance of the recommendations of the late Royal Commission, an effort is being made to influence the members of the Legislature both directly, by personal communications, and indirectly, through their local constituents. To effect this latter object letters are addressed to such local publications as will admit them, not only attacking compulsory vac-

cination, but seeking to discredit vaccination itself. It is of the greatest importance that these letters, wherever they appear, should be answered.

It has been too much the practice hitherto to disregard them as in most cases unworthy of notice. To this mistaken policy is in a large degree attributable the hold the antivaccination agitation has obtained in many localities. To reply to them is useful in two ways: it serves at the same time to neutralise misrepresentations, and to educate the public to appreciate the facts on which vaccination rests. This is work which must be done mainly by the medical profession, for few others are in a position to do it. But there is another reason why it is incumbent on the profession to undertake it. Antivaccinators constantly make it a subject of complaint that vaccination is the only medical prescription which is enforced by law. This is true; and it is, therefore, only right that as the maintenance of vaccination so largely rests upon medical opinion every effort should be made to instruct the public as to the justification for this position. I trust, therefore, that whenever any of your readers see a statement in any local paper, whether in the form of a paragraph or letter, misrepresenting the case for vaccination, if they do not themselves reply to it, they will send the paper to the Jenner Society, that it may be dealt with if practicable and desirable. I have, on behalf of the Society, during the past year, replied to a large number of such letters, but it is only possible for me to do a limited amount of work of this kind, and it is much better that local attacks should, if possible, be met by local defence. I shall at all times be glad to give any assistance towards this work. It is a form of warfare which needs some little training to ensure success, for the enemy is crafty, is familiar with the use of his weapons, and too often does not mind striking a foul blow when a fair one fails.—I am, etc.,

FRANCIS T. BOND, M.D.Lond.,
Gloucester, Jan. 10th. Honorary Secretary, Jenner Society.

LIVING TUBERCLE BACILLI IN THE NEW TUBERCULIN.

SIR,—Dr. Shingleton Smith, in the December number of the *Bristol Medico-Chirurgical Journal*, 1897, p. 333, makes a very decided and serious charge against Koch's new tuberculin, alleging that living tubercle bacilli may be obtained from it. This may not be as startling to some of your readers as it is to me, but as I use the method very largely I venture to ask whether this is an accepted fact.—I am, etc,

January 8th. F.R.C.S.

THE DIAGNOSIS OF STRICTURE OF THE LOWER PART OF THE ŒSOPHAGUS.

SIR,—In Mr. Butlin's paper on Pouch of the Œsophagus,[1] he speaks of proving the absence of stricture by passing a very large bulbous bougie into the stomach.

It may appear presumptuous in me to differ from Mr. Butlin on this matter, but I do not speak without warrant when I say that the passage of even the largest possible bougie is not incompatible with the presence of a stricture at the cardiac end of the œsophagus, capable of causing obstruction symptoms even more severe than those in Mr. Butlin's case. The reason of this is not far to seek. In the distended œsophagus the part behind the cricoid has a maximum diameter of 2 centimetres, while the lower part has a diameter of about 4 centimetres. It is, therefore, obvious that the largest bougie which can pass the upper part will not be arrested below until the lower part has contracted to half its normal size. When that or something approaching it has taken place, it would appear that the additional elastic or spasmodic contraction, though ineffectual to arrest a bougie, is sufficient altogether to prevent the passage of solid food and largely the passage of liquid. In a case which I saw about a year ago the patient, who was a medical man, had been seen by a well-known London surgeon, who had passed a 2 centimetre bulb into the stomach, yet he continued as before to be unable to swallow any solid food, and he estimated that about two-thirds of the liquid was rejected. He was seen by other surgeons in Edinburgh and the provinces. Pouch was suspected but not demonstrated. Atony of the muscle was suggested; neurosis was mentioned. But the fact that the real cause was stricture, was demonstrated by the lower part of the œsophagus being stretched by an expanding bag to something like its normal dimensions, and by the swallowing powers being perfectly restored in consequence. I have seen other cases of the same kind, and believe them to be more common than might be supposed.—I am, etc.,

Southport, Jan. 3rd. J. C. RUSSEL, M.D.

[1] BRITISH MEDICAL JOURNAL, January 1st, 1898.

UNQUALIFIED ASSISTANTS.

SIR,—Would you kindly allow me, as a general practitioner in a colliery district of Durham county, to protest against the high-handed action of the General Medical Council in regard to the employment of unqualified assistants. We had no idea that such a motion would be instantly made law, and we find ourselves in the unpleasant position of having to immediately discharge our unqualified assistants, or be charged with "infamous conduct," etc. Now, Sir, anyone who has had reason to seek for a *locum tenens* in the holiday season knows that it is next to impossible to obtain the services of one, even at the usual 3 guineas a week indoor. How, then, can a struggling practitioner in a poor district be expected to engage a qualified assistant at famine prices?

In my own case, I receive 6d. a fortnight for attending a miner, his wife, and family, and providing them with medicines, etc., that they may require. The midwifery fee is 15s., and we never get paid for fully 40 per cent. of our cases, the mining population being of a very migratory nature. Most of the tradespeople in the district are struggling people, the tradesmen themselves being in Free-gardeners, Oddfellows, or Foresters' lodges—we get little for attending them. The bills for attendance on their wives and families often run unpaid for three or even four years.

I may perhaps give some example of a week's work in winter when I say that we have sometimes half the households on our club to visit, paying one hundred visits or even more a day and walking (one cannot afford to keep a horse), my assistant and self together, some ten or twelve miles. I have before me now a visiting list with over two hundred names on it, most of these to be seen on alternate days, gives one a very fair amount of work to do.

I can give my total, or net income, from the work. The proceeds were £338. So that after deducting my drug bills, rent and taxes, assistant's wages (£45 indoor), and my general servant's wages, I had the magnificent income of £189 per annum to provide food, clothes, holidays, and give what I could to church and chapel bazaars, leek shows, and the other innumerable things, charitable and otherwise, that a "colliery doctor" is expected (I might almost say compelled) to contribute to.

The members of the Medical Council cannot understand the condition of the colliery practitioner. The conditions of practice vary in almost every county according to the class of the population residing therein, and I think, with all due deference to the powers that be, that if the Council were made a purely representative body, allowing one representative to each county or two counties, and making it a *sine quâ non* that the representative should practise in the district he represents, we would derive much more benefit from the Council than we do as at present constituted.

Representatives would be in touch with local affairs as they are, and would not judge everything from a hospital consultant's point of view.

Is it even common sense that a woman may attend midwifery, and parade a brass plate bearing the words "Certificated Midwife," and that a registered medical student, with full curriculum and only his final examination to pass, cannot attend a case unless his principal runs risk of appearing before the General Medical Council?

Perhaps some reader will inform me who will be responsible in the case of the student attending the regulation twenty cases before being allowed to present himself for his final examination? These are usually done at outdoor pauper cases. Will the Professor of Midwifery or the Principal of the College be accused of "infamous conduct?" Surely, sir, this law will apply to corporate bodies as well as individuals, the offences being equal in all respects.

I apologise for the length of my letter, and only excuse

myself by the fact that nearly all colliery practitioners in this county are in a similar position.—I am, etc.,

January 8th. M.D., AND EIGHT YEARS IN PRACTICE.

SIR,—The recent action of the General Medical Council on the subject of unqualified assistants again proves the absolute necessity for the adequate representation on the General Medical Council of the general practitioners by a *bonâ fide* general practitioner. As a result of the recent enactments, a conscientious practitioner of many years' standing may be placed in the following awkward predicament: While continuing to pursue his practice in the same manner as he has always hitherto done, using the services of an unqualified assistant, as has been customary and lawful, he may imperil his diploma and be adjudged guilty of infamous conduct; on the other hand, if he comply with the terms as indicated by the General Medical Council, he is saddled with an assistant who is practically no use to him. As a third alternative, he may get rid of his unqualified assistant and replace him by a qualified assistant; but in that case, what is to become of the old unqualified assistant?

This may be a sentimental question, but it has to be solved all the same. In many cases not only friendship but actual affection may exist between an employer and his old assistant, and it would be an unmanly piece of heartless egotism to see him turned into the street; moreover, by custom, by training, and by experience, the unqualified assistant is exactly the man he wants, and could not be satisfactorily replaced at a moment's notice by a qualified assistant. The present unqualified assistant is often a relic of the old-fashioned apprenticeship system, under which a boy was placed in a surgery as an apprentice to learn the art and craft of a surgeon and accoucheur. This system was recognised by law, and the term of apprenticeship actually counted for a certain proportional period in his medical and surgical curriculum. Want of means, want of determination or energy, want of brains—or a combination of all three—prevented him from qualifying, and he gradually drifted into the position of an unqualified assistant—a modest, unambitious, yet tolerably useful *rôle* in life, and one compatible with—in some cases—a fair standard of comfort. Some of these unfortunate men had the temerity to marry, and even to beget children. Are these men, now at the arbitrary dictum of a body of men not thoroughly cognisant of their exact position, duties, and usefulness, to be summarily turned into the street? I trust not. It seems to me that all unqualified assistants of three years' service might be registered, no renewals made, and thus by lapse of time the unqualified assistant will ultimately become extinct. The register might be open for, say three months, all applications to be registered, to be endorsed by one or two registered practitioners, and accompanied by a testimonial of character. Certainly I should strenuously object to their undergoing any examination whatever, as in that case a new order of practitioners would be instituted.

Unless some such scheme be adopted, the present unqualified assistants will be let loose on the world to live as best they can, and the result will be that some will commence unqualified practice, and we shall thus reinforce the order of medical botanists, medical electricians, masseurs, ophthalmic opticians, man-midwives, rupture specialists, itinerant physicians who frequent sea-side and holiday resorts and give a prescription for any complaint under the sun for threepence, and quacks of all sorts and conditions; while others will most probably get lower and lower in the scale of humanity, till ultimately they become low lodging-house tramps and loafers, if not even worse than that.

Just a word to those qualified men who contend that the competition by unqualified assistants is unfair and unjust to them. They seem to forget that when they became qualified the unqualified assistant was a recognised fact and therefore no new condition is being imposed on them, but an opponent is being gradually extinguished for their benefit. What we contend for is that this extinction of the unqualified assistant shall be as gradual, merciful, and painless a process as possible.—I am, etc.,

Preston, January 10th. JAMES A. RIGBY.

SIR,—A perusal of the correspondence on this question reveals the fact that a section of the profession is opposed to reform. Some of the writers while resenting the recent decision of the General Medical Council, would have that body attack other evils, reminding one of the couplet:

> Compound for sins they are inclined to
> By damning those they have no mind to.

To the Medical Defence Union our gratitude is due for exposure of the evil, and also to Coroner Braxton Hicks, who again and again during recent years has, at inquests, shown the injustice accruing to the poor by the prevalence of the custom. To those who ask what is the use of agitation for improvement, we can mention three recent facts of good omen: First, the election of Mr. Victor Horsley to the General Medical Council; secondly, the decision of the General Medical Council as regards unqualified assistants; and thirdly, the pronouncement by the Irish Royal College of Surgeons (BRITISH MEDICAL JOURNAL, November 27th, 1897).—I am, etc.,

Elgin Avenue, W., January 11th. H. HAVELOCK STURGE.

THE BRITISH MEDICAL ASSOCIATION AND LEGAL MEDICINE: EDINBURGH MEETING.

SIR,—In BRITISH MEDICAL JOURNAL of January 8th a list of the sixteen Sections in which papers are to be read at the Edinburgh meeting in July are given, but I fail to observe that Legal Medicine has any place among the list as it might have, and as it, I think, rightly has, at most medical congresses held in other countries. In former years it used to be tacked on to Public Health, with which it has absolutely no connection; why it was difficult to understand. It has now disappeared. In times like the present, when University authorities and Royal Commissions recommend, and are giving effect, to the separation of Medical Jurisprudence from Public Health, and when specialising is freely indulged in, one would have thought that the Council of the Association would not have overlooked this matter, in my humble judgment one of the first importance. Legal medicine, apart from the significance attached to it by Continental and American Associations and jurists, is surely as worthy of a distinct place in the annual programme as at least four other subjects in recent years selected for special treatment. Legal Medicine is all but ignored and cold-shouldered in this country, and thus it comes about that there is little or no interchange of opinion between medical men except on rare occasions at meetings of the Medico-Psychological Association, and none between the legal and medical professions, on matters of the very first importance, except that which unfortunately takes place in the arena of civil and criminal courts, where medical men are distinctly on most occasions placed at a disadvantage by the attitude of bench and bar. In Edinburgh, the seat of the Supreme Courts of Justice and of legal learning, it surely might have been possible to have set up a Section of Legal Medicine to the discussion, at all events, on the crucial points which divide the two professions largely through misunderstanding of one another. Members of the legal profession and of legal societies might be invited by the President (Sir Thomas Grainger Stewart) and the Council. If not too late, I beg to throw out this suggestion for the consideration of those with whom the arrangements for the meeting rest.—I am, etc.,

Edinburgh, July 10th. J. F. SUTHERLAND.

"THE HUMAN FOOT IN ART."

SIR,—I observe that under this title attention has been drawn in the BRITISH MEDICAL JOURNAL of January 1st and 8th to the proper direction of the great toe, and that neither the one contributor nor the other appears to be aware of the readily ascertainable but much neglected fact that though the great toes certainly lie in contact one with the other in their whole length when the feet and placed together, provided that the feet are undeformed and are laid down on a perfectly flat surface, yet nevertheless a properly fitting shoe of the ordinary and historic pattern conforms exactly to the shapes and requirements of the foot, not deforming it in the least.

Shoes are not made with the sole flat, but with an instep

and with the toe turned up, and in these respects they copy the form which moccasins and thin slippers fall into after they have been worn for some time. The heel and the balls of the toes are the parts of the foot which press downwards with most force, and in every step in walking the joints at the balls of the toes are forced into a position of great over-extension before the foot leaves the ground. The shape thus impressed by the foot on a thin leather covering has very naturally and justly been copied in making thicker soles, which necessarily resist and restrain the changes of form undergone by the naked foot in walking, and compel the selection of a comfortable mean.

Now, it happens that the path of movement of the toes in over-extension is not directly upwards, but upwards and outwards, as anyone can see for himself by placing his bare feet together and raising the tips of his toes from the ground, when he will find that an angular interval is rapidly opened up between his two great toes. When Hermann Meyer, who was a very great authority on the actions of the joints, wrote his celebrated pamphlet, the path of movement in over-extension of the toes had not been noted; and, indeed, it was this pamphlet which called my attention to the subject, and led to my discovering the path of movement at the later date. Meyer's statements on the anatomy of the foot were correct as far as they went, but when, like Mr. Ellis, of Gloucester, he gave advice to shoemakers, the majority of both shoemakers and the public refused to have their shoes turned in at the toe.—I am, etc.,

The University of Glasgow, Jan. 8th. JOHN CLELAND.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON-MAJOR, likely to be ordered abroad this trooping season, is desirous of obtaining an exchange which will give him another year at home.—Address "Red Cross," care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

THE following appointments have been made at the Admiralty:—RICHARD W. COPPINGER, M.D., Deputy-Inspector-General, to Jamaica Hospital, January 6th; RICHARD S. P. GRIFFITHS, Deputy-Inspector-General, to Haslar Hospital, January 6th; RICHARD C. MUNDAY, Surgeon, to Jamaica Hospital, January 6th; JOHN C. ROWAN, M.B., Surgeon, to the *Talbot*, January 6th; SAMUEL CONNER, Surgeon, to the *Albacore*, January 6th; BENJAMIN G. HEATHER, Surgeon, to the *Alecto*, January 6th; LOUIS E. DARTNELL, Surgeon, to the Royal Victoria Yard, Deptford, January 10th; GEORGE R. MACMAHON, B.A., M.B., Surgeon, to the *Excellent*, January 12th; CHARLES R. SHEWARD, M.B., Surgeon, to the *Excellent*, January 8th; THOMAS THORNE, Staff-Surgeon, to the *Sultan*, undated.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL BENJAMIN FRANKLIN, C.I.E., Bengal Establishment, Surgeon to the Governor-General, is promoted to be Surgeon-Colonel, October 24th, 1897. He was appointed Assistant-Surgeon, April 1st, 1869; and Brigade-Surgeon Lieutenant Colonel, January 1st, 1894.

Brigade Surgeon-Lieutenant-Colonel G. MCB. DAVIS, M.D., D.S.O., Bengal Establishment, is also promoted to be Surgeon-Colonel from October 24th. His commission as Assistant-Surgeon dates from April 1st, 1869; that of Brigade-Surgeon-Lieutenant-Colonel from January 17th, 1894. He was with the Mahsood Wuzeeree expedition in 1881; with the first Miranzai expedition in 1891 (medal with clasp); with the Hazara expedition in 1892 (clasp); with the Waziristan Delimination Escort under Brigadier-General Turner in 1894 (mentioned in despatches); and with the Waziristan Field Force under Sir William Lockhart in 1894-95 as Principal Medical Officer to the 1st Brigade (D.S.O. and clasp).

The promotion of Brigade-Surgeon-Lieutenant-Colonel G. W. R. HAY, M.D., and R. CALDECOTT, of the Bombay Establishment, already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

The date of the promotion of Surgeon-Lieutenant-Colonel A. S. REID, Bengal Establishment, to be Brigade-Surgeon-Lieutenant-Colonel is June 9th, 1897, and not as stated in the *London Gazette* of October 22nd last.

The promotion of Surgeon-Lieutenant-Colonels J. S. WILKINS, D.S.O., and W. A. BARREN, of the Bombay Establishment, which has been already announced in the BRITISH MEDICAL JOURNAL, has been approved by the Queen.

THE VOLUNTEERS.

SURGEON-LIEUTENANT J. L. THOMAS, 2nd Glamorganshire Artillery, is promoted to be Surgeon-Captain, January 12th.

Surgeon-Lieutenant Colonel T. R. PEARSON, M.D., 1st North Riding of Yorkshire Artillery (Western Division Royal Artillery), has resigned his commission, January 12th.

Surgeon-Major J. L. LECKIE, 3rd Volunteer Battalion the Welsh Regiment, is promoted to be Surgeon-Lieutenant-Colonel; and Surgeon-Lieutenant W. W. JONES, M.B., of the same corps, is promoted to be Surgeon-Captain, January 12th.

Surgeon-Major J. ADAMS, 21st Middlesex (the Finsbury) Rifles, is promoted to be Surgeon-Lieutenant-Colonel, January 12th.

Mr. CHARLES S. EDWARDS is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Prince of Wales's North Staffordshire Regiment, January 12th.

VOLUNTEER MEDICAL STAFF CORPS

FIRST CLASS STAFF-SERGEANT WILLIAM LEE is appointed Quartermaster in the Glasgow Companies, January 12th.

LEAVE IN THE INDIAN MEDICAL SERVICE.

A CORRESPONDENT writes: Leave, both furlough and privileged, has practically been stopped for three years; and now that plague is spreading, there is little prospect of its being resumed. A large number of Indian medical officers are certain to be invalided from the frontier war; truly a lively prospect for those left and for intending candidates! The service is entirely undermanned.

VOLUNTEER MEDICAL OFFICERS AND THE REGULARS.

SURGEON CAPTAIN, VOLUNTEER CORPS, writes: Is it customary for volunteer surgeons to grant certificates of fitness for foreign service to private soldiers on furlough and at a distance from an army surgeon? I granted such a certificate lately and rendered my account (10s. 6d.) to the adjutant of the private's regiment, but he returned it, saying "that although he did not disclaim liability, he wished to acquaint me before recovering the account from the soldier that it was customary for volunteer surgeons to grant these certificates *gratis*. It was to save the men being recalled from furlough, a privilege they cannot afford to pay for twice, that the services of volunteer medical officers have been asked for." In other words, to save the pockets of the regiment—surely not the men!—our services are to be requisitioned *gratis*. What think you?

THE FRONTIER RISING IN INDIA.

THE *London Gazette* of Tuesday last contains the despatches of Major-Generals Sir B. Blood and E. R. Elles regarding the operations of the Malakand and Mohmand Field Forces on the North-West Frontier of India. These despatches were briefly noticed in the BRITISH MEDICAL JOURNAL of January 8th. The following further items may prove of interest. Writing on October 22nd, 1897, Sir Bindon Blood says: "I regret to find that in my report of August 20th last I omitted to include the name of Surgeon-Captain E. V. Hugo, Indian Medical Service, amongst those of the officers recommended to the favourable consideration of His Excellency the Commander-in-Chief for their services during the recent defence of Chakdara Fort. I now have great pleasure in stating that Surgeon-Captain Hugo served with distinction throughout the defence in question, and in recommending him for favourable consideration accordingly." Later on Sir Bindon writes, "The medical service was carried out in a very satisfactory manner. Some difficulties arose on the transfer of officers and material to the Tirah Expeditionary Force on its formation, especially as large convoys of sick and wounded were on the line of this force at the time.....Matters were ultimately restored to smooth working on the arrival of Surgeon-Colonel J. C. G. Carmichael, Indian Medical Service, who is now Principal Medical Officer of the force." Surgeon-Colonel Carmichael is subsequently singled out, among other officers, as worthy of special mention.

Major-General Elles's despatch contains no special item of interest to medical readers other than those mentioned in the BRITISH MEDICAL JOURNAL of January 8th.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

BRIGADE-SURGEON-LIEUTENANT-COLONEL G. P. GILES, V.D., F.R.C.S., Welsh Border Brigade, has been appointed Senior Medical Officer Instructor of the Volunteer Ambulance School of Instruction in succession to Surgeon-Major H. F. Stokes, London Rifle Brigade. A course of training for stretcher bearers will be held at the headquarters of the 13th Middlesex (Queen's Westminster) Rifle Volunteers, James Street, S.W., commencing at 8 P.M. on Wednesday, February 9th. Further particulars can be obtained on application to the Secretary, 10, St. Benet Place, Gracechurch Street, E.C.

THE CARRYING OF THE WOUNDED.

THE special correspondent of the *Times of India* with the Tirah Expeditionary Force gives some interesting particulars from the headquarters of the 2nd Division at Bagh. He says that the great difficulty which has to be overcome in the carrying of the wounded has been brought rather prominently to the notice of a great many. Owing to the nature of the country and the character of the enemy on the frontier, the system of transporting wounded is difficult; it is practically impossible to carry even an empty dooly, much less a heavy one with a wounded man in it. The correspondent suggests a large increase in the number of stretchers with each unit, with kahars to carry them, instead of, as at present, each regiment having four stretchers carried by four fighting men each. Doolies might practically be abolished, only keeping a few with each hospital.

Another suggestion of importance, worth consideration, is offered—namely, the raising of a small corps of Bhutia coolies, and attaching a certain number to each corps. These men are extraordinarily strong, and accustomed since childhood to carrying heavy weights up and down hills and each man would carry, it is believed, with ease, a wounded man on his back (in a sort of chair arrangement strapped on to their backs, in which they are accustomed to carry people up the hill of Darjiling) up or

down the steepest place, and with as little discomfort as possible to the wounded man. These remarks are specially made in reference to the engagements on the 9th and 16th November, 1897, when the heavy losses were primarily due to difficulties in carrying the wounded. The total losses of the 2nd Division, for the month ending November 18th, were 462 in killed and wounded alone, not counting sick, for with sick included the numbers amount to 908.

THE HEALTH OF THE RIFLE BRIGADE.

CONFIRMATION is at hand of the sickness and loss of life from dysentery in the 3rd Battalion, which have been reported in the *Westminster Gazette* and the *Daily Mail*, in an extract of a letter from a sergeant of the corps. The deaths had amounted early in December to 101. The special correspondent, at the front, of the *Times of India* (Bombay) gave some weeks ago a harrowing account of the sufferings of this regiment in the Tochi Valley, Sherrain, and Datta Khel, where the disease steadily stuck to the men, although camps were moved, and of its intractable nature.

The 3rd Battalion Rifle Brigade is one of the corps sent back from the the front, owing to sickness, to cantonments in India. This regiment will have been specially inspected by the Principal Medical Officer in India, Surgeon-Major-General Gore, who was on tour last month. There is reason to fear that loss of life from disease will considerably augment the already large list of casualties in killed and wounded. In one division alone, the 2nd (*Times of India*), the losses in one month by sickness were 446, to which have to be added 462 killed and wounded.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1897.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending December last 82 426 births were registered in these thirty-three towns, equal to an annual rate of 30.1 per 1,000 of their aggregate population, estimated at 10,992,524 persons. In the corresponding periods of the three preceding years the birth rates in these towns were 30.7, 29 3, and 31.3 per 1,000 respectively. In London the birth-rate last quarter was 29.5 per 1,000, while it averaged 30.5 in the thirty-two provincial towns, among which it ranged from 23.0 in Halifax, 23.3 in Bradford, 24 8 in Huddersfield, and 25.3 in Brighton to 34.1 in Sunderland, 34.2 in Sheffield, 34.6 in Liverpool, 35.0 in Wolverhampton, and 35.8 in Gateshead.

During the quarter under notice 52,187 deaths were registered in the thirty-three towns, corresponding to an annual rate of 19.0 per 1,000, against 17.7, 19.4, and 18 8 in the fourth quarters of the three preceding years, 1894-5-6. In London the rate of mortality was 19.4 per 1,000, while it averaged 18.8 in the thirty-two large provincial towns, among which it ranged from 12.6 in Croydon, 13.3 in Cardiff, 14.3 in Brighton, 14 5 in Portsmouth, and 15.4 in West Ham and in Derby to 20.6 in Blackburn, 20.7 in Wolverhampton, 20.8 in Birmingham, in Bolton, and in Sheffield, 20.9 in Norwich and in Leeds, 21.7 in Preston, and 22.9 in Liverpool. The 52,187 deaths registered in the thirty-three towns last quarter included 6 413 which were referred to the principal zymotic diseases, equal to an annual rate of 2.34 per 1,000, against 1 97, 3,05, and 1.74 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 2.72 per 1,000, while it averaged 2.08 in the thirty-two provincial towns, among which it ranged from 0.77 in Portsmouth, 0.90 in Plymouth, 0.96 in Nottingham, and 0.99 in Croydon, to 2.81 in Halifax, 2 82 in Sheffield, 3.32 in Burnley, 3.55 in Wolverhampton, and 4.58 in Blackburn. The 6,419 deaths referred to the principal zymotic diseases in the thirty-three large towns during the quarter under notice included 2,196 which resulted from measles, 1,097 from diphtheria, 929 from whooping-cough, 825 from diarrhœa, 772 from "fever" (principally enteric), 599 from scarlet fever, and 1 from small-pox. The fatal cases of measles, which had been 893, 1,507, and 1,452 in the three preceding quarters, rose again to 2,196 during the three months ending December last, and were equal to an annual rate of 0.80 per 1,000; in London the measles death-rate was 1.05 per 1,000, while it averaged 0.63 in the thirty-two provincial towns, among which this disease showed the highest proportional f tality in Swansea, Birmingham, Oldham, Burnley, Blackburn, Halifax, and Gateshead. The deaths referred to diphtheria, which had been 956, 646, and 720 in the three preceding quarters, further rose to 1,097 during the three months under notice, and were equal to an annual rate of 0.40 per 1,000; in London the death-rate from this disease was as high as 0.63 per 1.000, while it averaged 0 24 in the thirty-two provincial towns, among which diphtheria was proportionally most fatal in West Ham, Plymouth, Cardiff, Wolverhampton, Leicester, Birkenhead, and Burnley. The fatal cases of whooping-cough, which had been 1,380, 1,247, and 896 in the first three quarters of last year, rose again to 929 during the three months ending December last and were equal to an annual rate of 0 34 per 1,000; in London the whooping-cough death-rate was equal to 0 41 per 1,000, while it averaged 0 29 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Norwich, Liverpool, Bolton, Oldham, Leeds, and Sheffield. The 825 deaths from diarrhœa registered during last quarter exceeded the average number in the corresponding quarters of recent years, and were equal to an annual rate of 0.30 per 1,000; in London the death rate from this disease was equal to 0 20 per 1,000, while it averaged 0.37 in the thirty-two provincial towns, among which diarrhœa was proportionally most fatal in Wolverhampton, Bolton, Salford, Burnley, Blackburn, and Preston. The deaths referred to different forms of "fever" (including

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Fourth Quarter of 1897.

Towns.	Estimated Population middle of 1897.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	10.992,524	82,426	52,187	30.1	19.0	2.34	6,419	1	2,196	599	1,097	929	772	825	160	1.3
32 Provincial Towns	6,529,355	49,585	30,568	30.5	18.8	2.08	3,388	1	1,030	351	391	475	535	605	166	1.8
London	4,463,169	32,841	21,619	29.5	19.4	2.72	3,031	—	1,166	248	706	454	237	220	152	0.7
West Ham	273,682	2,197	1,048	32.2	15.4	1.88	128	—	35	2	33	21	27	10	150	2.9
Croydon	121,171	766	380	25.4	12.6	0.99	30	—	14	1	5	7	—	3	119	—
Brighton	121,401	766	432	25.3	14.3	1.07	32	—	15	1	2	2	7	5	95	0.2
Portsmouth	182,585	1,242	661	27.3	14.5	0.77	35	—	2	3	11	5	9	5	132	0.6
Plymouth	97,658	657	408	27.0	16.8	0.90	22	—	—	2	9	4	2	5	123	0.5
Bristol	232,242	1,575	1,011	27.2	17.5	2.06	119	1	52	3	8	3	34	18	160	0.8
Cardiff	170,063	1,323	566	31.2	13.3	1.70	72	—	8	2	39	3	9	11	122	1.2
Swansea	100,309	741	469	29.6	18.8	2.48	62	—	41	5	5	8	1	2	181	1.5
Wolverhampton	87,287	762	451	35.0	20.7	3.55	77	—	18	—	25	6	11	15	167	0.2
Birmingham	505,772	4,065	2,620	32.2	20.8	2.69	339	—	129	38	34	45	26	67	183	2.9
Norwich	110,154	826	573	30.1	20.9	1.65	45	—	2	3	4	18	12	6	192	0.9
Leicester	203,599	1,475	809	29.1	15.9	1.59	80	—	6	12	28	9	14	11	145	3.2
Nottingham	232,934	1,594	1,000	27.5	17.2	0.96	56	—	4	8	7	13	14	10	172	1.1
Derby	103,291	683	397	26.5	15.4	1.39	36	—	8	5	3	5	9	6	167	—
Birkenhead	111,249	819	498	29.5	18.0	1.47	41	—	8	9	9	2	10	3	137	1.4
Liverpool	633,078	5,461	3,617	34.6	22.9	2.36	374	—	56	62	43	75	76	62	170	3.8
Bolton	121,433	991	630	32.7	20.8	2.12	64	—	—	7	—	19	12	26	189	—
Manchester	534,299	4,258	2,695	32.0	20.2	2.16	287	—	97	48	17	27	40	58	159	1.5
Salford	213,190	1,784	1,006	33.6	18.9	2.07	110	—	16	17	9	14	20	34	175	2.0
Oldham	145,845	923	691	25.4	19.0	2.48	90	—	40	3	1	16	8	22	209	—
Burnley	106,122	729	520	27.6	19.7	3.32	88	—	36	3	24	3	5	17	233	1.9
Blackburn	131,330	850	674	26.0	20.6	4.58	150	—	103	1	5	2	12	27	259	1.9
Preston	115,103	844	624	29.4	21.7	2.09	60	—	10	2	1	2	15	30	269	4.8
Huddersfield	101,454	627	457	24.8	18.1	1.91	48	—	18	0	3	1	10	7	159	3.5
Halifax	95,747	543	438	23.0	18.3	2.81	67	—	43	11	3	2	4	4	175	2.5
Bradford	231,260	1,341	926	23.3	16.1	1.10	64	—	17	2	3	13	12	17	134	1.7
Leeds	409,172	3,129	2,132	30.7	20.9	2.65	272	—	82	34	30	49	40	37	187	0.3
Sheffield	351,848	3,000	1,821	34.2	20.8	2.82	247	—	80	26	11	55	46	29	181	2.4
Hull	225,745	1,842	921	32.8	16.4	1.38	77	—	15	15	5	9	20	13	123	1.3
Sunderland	142,107	1,208	650	34.1	18.3	1.09	70	—	31	2	1	11	12	13	140	0.8
Gateshead	101,070	003	439	35.8	18.2	2.63	66	—	30	8	4	4	7	13	159	0.2
Newcastle-on-Tyne	217,555	1,655	924	30.5	18.1	1.48	80	—	14	5	9	22	11	19	159	0.3

typhus, enteric, and simple and ill-defined forms of fever), which had been 406, 280, and 499 in the first three quarters of 1897, further rose to 772 during the three months ending December last, and were equal to an annual rate of 0.28 per 1,000; in London the "fever" death-rate was 0.21 per 1,000, while it averaged 0.33 per 1,000 in the thirty-two provincial towns, among which the highest rates were recorded in Bristol, Wolverhampton, Norwich, Liverpool, Preston, and Sheffield. The fatal cases of scarlet fever, which had been 469, 410, and 492 in the three preceding quarters, further rose to 599 during the quarter ending December last, and were equal to an annual rate of 0.22 per 1,000; in London the death-rate from this disease was 0.22 per 1,000, and corresponded with the mean rate in the thirty-two provincial towns, among which scarlet fever showed the highest proportional fatality in Liverpool, Manchester, Huddersfield, Halifax, and Leeds. One death from small-pox was registered last quarter in Bristol, but no death occurred in any other of the thirty-tlhree large English towns.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under 1 year of age to registered births, was equal to 160 per 1,000 during the quarter under notice, against 155, 178, and 150 in the corresponding periods of the three preceding years. In London the rate of infant mortality was equal to 152 per 1,000, while it averaged 166 in the thirty-two provincial towns, among which it ranged from 95 in Brighton, 119 in Croydon, 122 in Cardiff, and 123 in Plymouth and in Hull, to 193 in Norwich, 209 in Oldham, 233 in Burnley, 259 in Blackburn, and 269 in Preston.

The causes of 695, or 1·3 per cent., of the deaths in the thirty-three towns during the three months ending December last were not certified either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.7 per cent., while it averaged 1.8 in the thirty-two provincial towns. The causes of all the deaths during the quarter in Croydon, Derby, Bolton, and Oldham were duly certified; and only 1 death was uncertified in Brighton, in Wolverhampton, and in Gateshead: while the highest proportions of uncertified deaths were registered in West Ham, Birmingham, Leicester, Liverpool, Preston, and Huddersfield.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,628 births and 4,612 deaths were registered during the week ending Saturday last, January 8th. The annual rate of mortality in these towns, which had been 17.7 and 24.9 per 1,000 in the two preceding weeks, declined to 21.4 last week. The rates in the several towns ranged from 12.6 in Cardiff, 15.8 in Oldham, 16.5 in Portmouth, and 16.6 in Brighton, to 24.4 in Salford, 25.0 in Blackburn, 26.8 in Plymouth, and 27.5 in Norwich. In the thirty-two provincial towns the mean death-rate was 20.4 per 1,000, and was 2.6 below the rate recorded in London, which was 23.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the rate was equal to 3.3 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.1 in Preston, 3.6 in Swansea, 4.0 in Derby, and 6.7 in Blackburn. Measles caused a death-rate of 1.6 in Halifax, 2.1 in Croydon, 2.5 in Derby, 3.6 in Swansea, and 4.3 in Blackburn; scarlet fever of 1.2 in Wolverhampton; whooping-cough of 1.0 in Leeds, 1.5 in Birmingham, and 2.3 in Norwich; and "fever" of 1.6 in Blackburn and 1.8 in Preston. The 73 deaths from diphtheria included 50 in London, 3 in West Ham, and 3 in Leicester. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 3,572 at the end of the six preceding weeks, had further fallen to 3,450 on Saturday last, January 8th; 239 new cases were admitted during the week, against 260, 222, and 273 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 8th, 1,026 births and 733 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.6 and 24.1 per 1,000 in the two preceding weeks, further rose to 24.3 last week, and exceeded by 2.9 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 18.7 in Perth and 21.1 in Aberdeen to 25.0 in Edinburgh and 34.9 in Greenock. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Aberdeen and Greenock. The 338 deaths registered in Glasgow included 11 from measles, 4 from scarlet fever, 2 from diphtheria, 12 from whooping-cough, 2 from "fever," and 7 from diarrhœa. Three fatal cases of scarlet fever and 2 of diphtheria were recorded in Edinburgh, 4 of diphtheria in Aberdeen, and 3 of scarlet fever in Greenock.

DIPHTHERIA IN LONDON.

THERE was a slight further decline last week in the mortality from diphtheria in London. The deaths referred to this disease, which had been 63, 56, and 53 in the three preceding weeks, further declined to 50 during the week ending Saturday last, January 8th, but exceeded the corrected average number in the corresponding periods of the ten preceding years. Of these 50 fatal cases, 6 were of persons belonging to Islington, 4 to Paddington, 4 to Hackney, 3 to Bethnal Green, 3 to St. George Southwark, and 3 to Newington sanitary areas. The notifications of diphtheria in London, which had been 288, 218, and 202 in the three preceding weeks, declined again to 238 during the week ending Saturday last, January 8th. Compared with the preceding week there was a slight increase in the number of new cases notified in Central London, but a decline in West, North, East, and South London. Among the sanitary areas of West London there was an increase in the prevalence of diphtheria in Hammersmith and in Chelsea, the new cases exceeding those recorded in any recent week. In all the sanitary areas of North London, except Hampstead, there was a decline in the prevalence of the disease; in Islington the new cases, which had increased from 8 to 22 in the four preceding weeks, fell to 14 last week; and the 19 new cases notified in Hackney showed a decline of 4 from the number in the preceding week. There was also a marked decline last week in the prevalence of diphtheria in East London; in Poplar the new cases, which had been 21 and 18 in the two preceding weeks, further declined to 9 last week; and Bethnal Green 7 new cases were notified, against 15 in the preceding week. In most of the sanitary areas of South London the disease showed decreased prevalence, especially in Lambeth, Camberwell, and Lewisham; but in St. Saviour Southwark, Battersea, Greenwich, and Lee there was a somewhat marked increase, the number of new cases exceeding those recorded in any recent week. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 134, against 164, 141, and 142 in the three preceding weeks; and 1,060 cases remained under treatment in these hospitals on Saturday last, January 8th.

FEE FOR ATTENDANCE ON CASE OF COMPOUND FRACTURE REMOVED TO WORKHOUSE.

E. P. K., who is a district medical officer, writes, saying that he received a medical order to attend a case of compound fracture of the leg; that he set the fracture, and attended the case for two days, when, at his recommendation, the patient was removed to the workhouse, as the cottage in which the patient lived was not suitable for the treatment of the case. "E. P. K." asks whether he is not entitled to the usual extra fee for this case, as the guardians refuse to pay more than half the same.

*** We are advised that our correspondent would do well to accept the offer made by the guardians, as there is some doubt as to whether he can claim the whole fee; this being allowed for the treatment of the case, and not simply for the first attendance and the setting (so-called) of the fracture.

MEDICO-LEGAL.

MEDICAL PRACTICE AND COVERING.

MIDLAND writes: A medical society has started, or proposes to start, with an unqualified man; our correspondent, therefore, makes the following inquiries: (1) Can a registrar accept the unqualified man's death certificate? (2) If he does, how should our correspondent proceed? (3) The same society has a qualified man at a distance. Can he, under orders from the society, or on application by a patient, without recognising unqualified person, attend where the latter has been without being chargable with covering? (4) Can he allow patients who have been attended by the unqualified man to come and receive medicine at his house; or can he allow the man himself to come and dispense medicines for patients he has attended, without being deemed guilty of unprofessional, or rather, infamous conduct?

*** In reply to the above questions:

1. An unregistered medical practitioner cannot sign death certificates.

2. If he does, if the registrar accepts such certificates, reference should be made to the Registrar-General, Somerset House.

3 and 4. These questions are a little difficult to reply to by a direct negative; but if it can be shown that the qualified man does that which enables the unqualified man to practise, then we think he would come within the liability referred to in the recent Notice of the General Medical Council. The case on being brought before the Council would, of course, be dealt with on its merits, and in accordance with the evidence adduced.

RECOVERY OF FEES.

W. A. S. R. states that he was sent by a well-to-do farmer to attend his groom, who had met with an accident in his service, and was in attendance for about a fortnight. On sending in his account the master repudiates liability. Our correspondent inquires if the fact of the master having sent to request his attendance does not render him liable; he also inquires if the Employer's Liability Act affects the case.

*** In reply to the first question, assuming the fact can be established that the master requested the attendance, we think there is no doubt that he is liable, and would probably pay on threat of legal proceedings. As to the second question, we do not think the Employers' Liability Act affects the case.

MEDICAL NEWS.

THE NEW OPERATING THEATRE AT THE BOLTON INFIRMARY.—A new operating theatre has just been added to the Bolton Infirmary, which will greatly increase the capacity of that institution from a surgical point of view. The new buildings comprise the operating room itself, which is 30 feet long by 23 feet wide, a vestibule, an anæsthetising room, a consulting room, and a lavatory. The operating room has a circular end to the west which is largely occupied by windows, and there are also windows both on the north and south side. The circular roof also has glass 8 feet deep all round. There can be no doubt therefore that the room is well lighted. The floor is finished with encaustic tiles, while the walls are lined with white and cream-coloured tiles, rounded at all angles. Varnished pitch pine is used wherever woodwork is required, and all modern appliances in the way of sterilisers, glass tables, and electric light are liberally supplied.

AT a meeting of medical men practising at Darlington, held recently, 17 out of the 19 practitioners, who are ratepayers, resolved to send a protest against the use of "water gas," and to transmit it to the Town Council. The protest was brought before the Town Council by the Mayor, and referred to the Gas Committee.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House-Physicians. Appointments for six months. No salary, but residence, board, and washing provided.—Also Assistant Dispenser. Salary, £80, with meals. Applications to Howard J. Collins, House-Governor, by January 29th.

BOURNEMOUTH ROYAL VICTORIA HOSPITAL.—Ophthalmic Surgeon; must be F.R.C.S. Applications to the Secretary by February 1st.

BRAMLEY UNION.—Medical Officer and Public Vaccinator for the Upper and Lower Wortley District. Salary, £20 per annum and usual fees. Applications to Arthur Bottomley, Acting Clerk, Union Offices, Tong Road, Armley, by January 15th.

BRIXTON DISPENSARY, Water Lane, Brixton, S.W.—Resident Medical Officer; unmarried and doubly qualified. Salary, £150 per annum, with furnished apartments, attendance, coal, and gas. Applications to the Secretary by January 28th.

DUBLIN: MERCER'S HOSPITAL.—Vacancy on the Surgical Staff. Applications to the Registrar by January 29th.

FINSBURY DISPENSARY. Brewer Street, Goswell Road, E.C.—Resident Medical Officer. Appointment an annual one subject to re-election. Salary, £100 per annum, with furnished residence, attendance, coals, and gas. Applications to the Secretary by January 25th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 per annum, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or, in lieu thereof, the sum of £20 per annum. Knowledge of Welsh desirable. Applications to Thomas Thomas, Secretary, Board Room, Bagillt Street, Holywell, S. Wales, by January 24th.

HARTSHILL, STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—House-Physician. Salary, £100 per annum, increasing £10 per annum at the discretion of the Committee, with furnished apartments, board, and washing. Applications to the Secretary by January 20th.

LEAVESDEN ASYLUM FOR IMBECILES, near Watford, Hertfordshire.—Medical Superintendent, doubly qualified, and must not exceed 40 years of age. Salary, £600 per annum, rising £50 annually to a maximum of £800, with unfurnished apartments, etc. Applications on forms to be obtained of T. Duncombe Mann, Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., before January 21st.

LAGOS RAILWAY.—Principal Medical Officer for service on railway in course of construction in Lagos, West Africa; age between 30 and 40, unmarried man preferred. Salary, £40 per month, first-class passage out and home, quarters or allowance in lieu thereof. Applications to the Office of the Crown Agents for the Colonies, Downing Street, London, S.W., by January 15th.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; must be under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to W. B. Danby, Secretary, Bank Street, Lincoln, by January 24th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Anæsthetist and Registrar (non-resident). Salary, £45 per annum. Application to T. S. Conisbee, Secretary.

SHEFFIELD ROYAL HOSPITAL.—Senior Assistant House-Surgeon; unmarried. Salary, 70 guineas per annum, with board (exclusive of wine and beer) and lodging. Applications to Dr. Sinclair White, Secretary to the Honorary Medical Staff by January 28th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, and a small honorarium will be given at the expiration of the term of office. Applications to the Chairman of the Medical Committee by January 24th.

MEDICAL APPOINTMENTS.

BALLANCE, H. A., M.S.Lond., F.R.C.S.Eng., appointed Assistant Surgeon to the Norfolk and Norwich Hospital.

BENNETT, H. P., M.B., C.M.Edin., appointed Assistant Surgeon to the Northumberland, Durham, and Newcastle Infirmary for Diseases of the Eye.

BEVERLEY, Michael, M.D.Edin., M.R.C.S.Eng., appointed Consulting Surgeon to the Norfolk and Norwich Hospital.

BURTON, S. H., M.B.Lond., B.S., F.R.C.S.Eng., appointed Surgeon to the Norfolk and Norwich Hospital.

CADDICK, C. J., M.B., C.M.Edin., appointed Assistant Medical Officer to the City Hospital, Edinburgh.

CREWDSON, Thomas G., M.B., C.M.Edin., appointed Assistant Medical Officer to the City Hospital, Edinburgh.

EDWARDS, Charles S., L.R.C.P.& S.Edin., L.F.P.S.Glasg., appointed Certifying Surgeon under the Factory Act for the Tunstall District, *vice* G. C. Holt, deceased.

EDWARDS, H. N., M.R.C.S., L.R.C.P., appointed Medical Officer for the Flamsted District of the Hemel Hempstead Union.

HAMILTON, Roger K., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Hasland District of the Chesterfield Union, *vice* Dr. Robinson.

HILL, Hedley, M.D., appointed Surgeon to the B. Division of the Bristol Police.

MATHESON, J. Colin, M.B., C.M.Glasg., appointed Resident Medical Officer to the Westminster General Dispensary, Gerrard Street, Soho, W., *vice* Lionel Smith, resigned.

MORRIS, C. G., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Third District of the Bath Union, *vice* F. W. Hanham, L.R.C.P. Edin., L.F.P.S.Glasg., resigned.

RICHMOND, J. R. M., appointed Medical Officer of Health to the Overton Rural District Council, *vice* W. N. Thursfield, M.D.Edin., D.P.H.Camb., resigned.

THORMAN, W. H., B.A.Cantab., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Royal United Hospital, Bath, *vice* W. H. Cooke, M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., resigned.

WARD Walter Fisher, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the Blyth District of the Worksop Union.

WAY, Montague, M.R.C.S.Eng., L.R.C.P.L., appointed Assistant House-Surgeon to Guy's Hospital.

WHITAKER, E. J., M.B., C.M.Edin., D.P.H.Camb., appointed Medical Officer of Health to the Blymhill Rural District Council.

DIARY FOR NEXT WEEK.

TUESDAY.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. Dundas Grant: Cases of Ménière's Disease and other forms of Vertigo.

CITY ORTHOPÆDIC HOSPITAL, 5.30 P.M.—Mr. John Poland: Deformities of Bones after Injury.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Voelcker: Ulceration of a Caseous Gland into the Bronchus: death from asphyxia. Dr. H. Betham Robinson: A Papilliferous Cyst of a Sudoriparous Gland from the Axilla. Dr. Drysdale: The Blood from a case of Pemphigus. Mr. C. B. Lockwood: Stricture of the Small Intestines leading to Intestinal Obstruction and Perforation. Mr. F. C. Wallis: (1) A piece of Intestine removed by Enterectomy; (2) A case of Appendicitis. Mr. A. W. Addinsell: A case of Appendicitis with Suppuration of the Right Suprarenal Capsule. Dr. Freyberger: An Anomalous Truncus Brachicephalicus associated with Aortic Disease and symptoms simulating Aneurysm. Mr. Furnivall: An Unusual Cyst of the Tongue. Mr. A. G. R. Foulerton: Cystic Dilatation of the Vermiform Appendix.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Dr. Risien Russell: A Pathological Demonstration of Cerebral Tumours.

WEDNESDAY.

WEST LONDON POST-GRADUATE COURSE, West London Hospital, W., 5 P.M. Dr. J. B. Ball: Cases in Throat Department.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W., 8 P.M.—Annual Meeting. Address by the President.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, S.W., 7.45 P.M.—Annual General Meeting.

NORTH-WEST LONDON CLINICAL SOCIETY, North-West London Hospital, Kentish Town Road, 8.30 P.M.—Monthly Demonstration of Cases.

HOSPITAL REFORM ASSOCIATION, 20, King William Street, Strand, W.C., 4.30 P.M.—Annual Meeting.

THURSDAY.

SOCIETY OF ANÆSTHETISTS, 20, Hanover Square, W., 8.30 P.M.—Discussion on Resuscitation in Emergencies under Anæsthetics, to be opened by Dr. Wilson.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Mr. Stanley Boyd: Surgical Cases in the Wards.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 P.M.—Annual Meeting. 9.30 P.M.—*Conversazione.*

FRIDAY.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M. — Dr. Christopher Childs: On the History of Typhoid Fever in Munich.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

DEATHS.

BRADBURN.—On January 4th, at Fair Home, Leamington, James Denham Bradburn, M.R.C.S., F.R.C.P.Edin., eldest son of the late James Bradburn, of Monk's Hall, Eccles, aged 46.

BROWN.—On December 31st, 1897, at Weston-super-Mare, George James Brown, M.R.C.S.Eng., late of Birmingham, aged 71 years.

FREELAND.—On December 8th, 1897, at Long Lane, Antigua, West Indies, Phyllis Elvie, second daughter of F. J. Freeland, M.D., aged 3 years and 4 months.

HUNT.—On January 8th, at 16, Francis Road, Birmingham, Joseph Hunt, M.R.C.S., aged 49, late of 29, Temple Row, Birmingham.

PRICHARD.—On January 6th, at his residence, 4, Chesterfield Place, Clifton, Bristol, Augustin Prichard, F.R.C.S., aged 79.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 12.30 and 1. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Tu., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

MEDICAL RESPONSIBILITIES.

G. P. has been consulted by a young woman A., aged 18, who is four months pregnant; her father is dead, and her mother C. has neglected her. A. has lived with Mrs. B., a patient of our correspondent; neither C. nor B. knows the condition of things, though B. suspects. G. P. asks whether he should acquaint B. and C., or B. only, or C. only, or neither.

*** We think that "G P." would be well advised not to acquaint either. His proper course is to urge A. to communicate the facts to B., or some other near friend or relative if it be impossible to confide in her mother.

THE IRREPRESSIBLE NURSE.

F. H. T. asks: 1. Is a parish nurse justified when a medical man is in attendance on a patient in going to that patient and saying, "Oh, this is a hospital case, and I will get you a ticket," without consulting the medical man? 2. Is the medical man under the circumstances justified in calling on the nurse, and demanding an explanation of her conduct?

*** However annoying such expressions of opinion on the part of nurses and others may be, it is, as a rule, wise to avoid being drawn into a discussion with those who have uttered them, and it is best as far as possible to ignore them altogether. Such conduct on the part of a nurse is less excusable than in others, but unfortunately a medical man is likely rather to lose than gain by calling it in question.

MUSCULAR EXERTION IN CYCLING.

DR. C. M. JESSOP (Redhill) writes: Will any of your readers be so good as to inform me of the muscular exertion put forth by a person of 150 pounds' weight in riding a cycle one mile on a level road? And again on an incline of 1 in 25 and 1 in 50? The following formula is for walking on the level:

$$\frac{W \times D}{20 \times 2240}$$

This equals 17 67 foot tons per mile. But in cycling the whole weight of the body (150 pounds) is not lifted, only the thighs, legs, and feet. I assume this to be equal to one third of the weight of the whole body (150 pounds). Consequently the work done in foot tons per mile would be 5.4 foot tons. But is this a correct estimate for the first part of the question? If so, then, 65 miles cycling will equal 20 miles walking.

ANSWERS.

ETHICS.—We regret that such use should have been made of our reply.

MR. GEORGE STOKER (Hertford Street, W.) writes: In answer to "Surgeon," who asks for a home for a woman with perforating ulcers on each foot, I beg to inform him that such case can be admitted into the Oxygen Home, 2, Fitzroy Square, and there submitted to the oxygen treatment.

FEES FOR ATTENDING CONSULTATION.

NEMO.—We believe that it is the universal custom in the medical profession that when a medical attendant is required to attend a consultation he should receive a special fee. The rule given in the *Medico-Chirurgical Tariffs* is as follows: "When the ordinary medical attendant has to meet another practitioner in consultation, he is fully entitled, from loss and disarrangement of time, to not less than double his usual fee, exclusive of that for inordinate or needless detention."

RURAL DISTRICT NURSES.

R. D. P.—The sum of £100 should suffice to establish a district nurse. Where the population is scattered, one of the greatest difficulties—that of locomotion—has been to a great extent solved by the introduction of the cycle, and the expenses considerably reduced in consequence. Detailed information as to the best means of carrying out a scheme of district nursing may be obtained from Dr. Hurry's book (recently published), entitled *District Nursing on a Provident Basis.*

F.R.C.S.EDIN.

M.D., F.R.C.S.ED. would like to point out that "P. B. G.'s" remarks about the F.R.C.S Edin. were much more correct than those of "F.R.C.S.Edin. 1896." An average of 60 per cent. is necessary all round to pass the examination, but he understands that now everyone is to be allowed up for the clinical whatever he may make in the written examination. The question of books is a matter of opinion to a large extent. Erichsen will still continue to be a favourite textbook. Treves's *Surgical Anatomy* is not sufficient, though a nice book to read. McLachlan's book is to be preferred.

DUTIES OF SHIP SURGEONS.

W.D.—We have referred our correspondent's letter to an experienced physician, who writes: I do not know of any book that would be specially useful to a medical man who "meditates ship-surgeoncy," nor is there likely to be such a book. The diseases which a man has to treat on board ship, with the single exception of sea-sickness, are exactly like those which he has to treat on shore.

SWEATING.

DR. W. RICHARDSON RICE (Coventry) writes: Increase in the amount of sweat is usually accompanied by dilatation of the cutaneous vessels, but it often also occurs when the opposite condition prevails. From this we may infer that the secretion of sweat is under the direct control of a nervous apparatus going to the gland, rather than influenced by the

condition of the vaso-dilator or vaso-constrictor nerves. Hence astringents generally fail. I have found belladonna the most effectual remedy in these cases. It appears to give nerve tone to the glands, and in order that it may penetrate through the sebaceous matter on the skin, it should be combined with chloroform or ether. In my experience the formula most useful is ℥j of chloroform in ℥j of lin. belladonnæ well rubbed in night and morning.

TENERIFFE AND GRAND CANARY.

DR. GEORGE FLUX (Old Burlington Street, W.) writes: "In reply to "R. M. D." in the BRITISH MEDICAL JOURNAL of January 1st respecting Teneriffe and Grand Canary, I beg to state that I have two friends now suffering from typhoid fever at Orotava, Teneriffe; these victims have also two friends suffering in the same way at the same place. I am informed on very reliable local authority that there is a good deal of enteric (?) at all times among the native population on the island. I am informed on the same authority (as regards Teneriffe) that the lot of an invalid is a miserable one; there is a deficiency of bodily comfort, and locomotion is very bad.

DEATH CERTIFICATES AND NECROPSIES.

W. H.—It is obviously desirable that in cases which are to be the subject of a *post-mortem* examination the cause of death should not be certified until the result of the necropsy is known. If, however, as will occasionally happen, the necropsy is not decided upon until after the medical certificate has been issued, the Registrar-General can have no authority to object to the subsequent holding of the *post-mortem* examination, and has, moreover, a direct interest in the cause of death being ascertained and certified with the greatest possible accuracy. In case the result of the necropsy should prove the inaccuracy of the previously-issued certificate, it is desirable that the certifying practitioner should so inform the Registrar-General, in order that the correct cause of death might be noted and classified for statistical purposes.

NOTES, LETTERS, Etc.

INJUDICIOUS FRIENDS.

MRS. MARY SCHARLIEB, M.D. (Harley Street), writes: My attention has just been drawn to a paragraph in the *Daily Mail* of Monday, January 10th, in which my name appears. I need not say that I know nothing about the paragraph in question, and that I see it now for the first time.

GOLF TOURNAMENT.

THE handicap, open to qualified medical men, has been arranged. The play is to be under the following conditions: Match play (local rules of green to hold good). Competitors to be notified of result of each draw. Entries must be made by January 22nd; first draw on Monday, January 24th. Each couple to arrange time and place of their match (providing green be within thirty miles of London if one party so wish). About a fortnight to be allowed for the completion of each round. Intending competitors to send name, address, and lowest handicap, with entrance fee (5s.), to the Honorary Secretary at Windlesham, Surrey. Committee: Mr. Ernest Clarke, Dr. W. R. Dakin, Mr. C. T. Dent, Mr. Howard Marsh, Dr. Laidlaw Purves, Sir Thomas Smith, Bart., Mr. F. C. Wallis, and Mr. Rolf Creasy (Honorary Secretary).

SUUM CUIQUE.

DR. A. CORDES, M.R.C.P.Lond. (Geneva) writes: I read in the BRITISH MEDICAL JOURNAL of January 8th, p. 93, an article on the "Comptes Rendus" of the Congress held in Geneva in August, 1896. This article is written so as to let the reader believe that I supervised the three volumes. I feel bound to say that Dr. Bétrig has edited the gynæcological part, I being the editor of the obstetrical part only. *Suum cuique.*

MECHANICAL IMPEDIMENT TO RESPIRATION DURING ANÆSTHESIA.

DR. C. HAMILTON WHITEFORD (Plymouth) writes: Like Dr. Potter, I have frequently observed the mechanical obstruction offered by the lips in anæsthesia. In people with deep flabby lips, especially in those who have lost their front teeth, the lips—the upper as well as the lower—frequently act as valves, allowing expiration but preventing inspiration by their edges being drawn in and completely closing the oral orifice. This valve action is quite independent of any obstruction caused by the base of the tongue falling over the larynx, occurring equally with the chin elevated or depressed. Pulling forward the tongue with forceps, the chin being already elevated, relieves the dyspnœa and cyanosis by separating the lips and allowing free entry of air.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, ETC., RECEIVED.

Cairo of To-day: a Practical Guide to Cairo and its Environs. By E. A. Reynolds-Ball, B.A., F.R.G.S. London: A. and C. Black. 1898. 2s. 6d.

Lectures on the Theory and Practice of Vaccination. By R. Cory, M.A., M.D., F.R.C.P. London: Baillière, Tindall and Cox. 1898. 12s. 6d.

The Origin of Zymotic Diseases. By F. A. Cooper, B.Sc. Birmingham: G. Jones and Son. 3d.

Practical Toxicology for Physicians and Students. By Dr. R. Kobert. Translated and Edited by L. H. Friedburg, Ph.D. New York: Wm. R. Jenkins. 1897.

*** In forwarding books the publishers are requested to state the selling prices.

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PRESIDENTIAL ADDRESS
ON
THE RESPONSIBILITIES OF THE MEDICAL ATTENDANT
IN OBSTETRICAL AND GYNÆCOLOGICAL CASES.

Delivered before the Edinburgh Obstetrical Society,

BY ALEXANDER BALLANTYNE, M.D.,
Eskbank, Midlothian, N.B.

IN commencing his valedictory Presidential address Dr. Ballantyne said that during his term of office two honorary Fellows, two corresponding Fellows, and twelve ordinary Fellows had been removed by death. Just two years ago the Society was made poorer by the death of Dr. George Battey, of Rome, Georgia, whose name will remain notable as long as gynæcology exists. The President glanced briefly at Battey's connection with ovariotomy, reminded the Society that he had emphatically stated that the operation should only be done as a *dernier ressort*. "This much," he said, "is due to the dignity of our calling; this much is due to humanity, to decency, and to public morality." Battey was a guest at the Society's meeting in July, 1881, when he detailed a case of extrauterine pregnancy on which he had operated. The work of Marion Sims and Lawson Tait had placed the safety and utility of ovariotomy beyond a doubt. The name of another honorary Fellow and of a still greater gynæcologist than Battey also appeared in the death list, namely, Sir Thomas Spencer Wells. Before 1858, when Wells did his first completed ovariotomy, Clay in England beginning in 1842, and the two Atlees in America (John in 1843, and his more famous brother Washington in 1844) had continued in the face of all opposition to carry on an unchecked career of operating as suitable cases presented themselves. The all-important part which Clay had played in the advancement of ovariotomy was referred to, and subsequently the work and career of Spencer Wells. It was during the Crimean War that the latter learned "that a man's abdominal walls might be lacerated by fragments of shell, his intestines protruding and covered with mud, so remaining for several hours, and yet, after careful cleansing of the cavity and accurate closure of the wounds, complete recovery was possible, which," he added, "made him much less afraid of abdominal wounds." It might be doubted whether the revival of ovariotomy under the influence of Clay and Wells would have been so complete but for the third strong-siding champion, Thomas Keith, who began operating in 1862, and whose altogether marvellous results were, according to Sims, "the wonder and admiration of surgeons all over the world."

Obstetrics had suffered more than gynæcology by the deaths of Dr. Kidd (Dublin), Dr. Lusk (New York), Dr. Pajot (Paris), Dr. Stadtfeldt (Copenhagen), and Dr. Braxton Hicks (London) all exceptionally able teachers and writers. During Dr. Ballantyne's presidency, while there was an abiding sense of loss, the places of those who had gone were being filled by others well fitted to carry on the work of the Society. Thirty-five ordinary Fellows had been elected during the period in question, making the number 402 at present, which, with 35 honorary Fellows and 86 corresponding Fellows, brought the membership up to 523, precisely the number two years ago. The work done at the ordinary meetings of the Society during its 57th and 58th sessions was then referred to. From this the President passed to a consideration of certain ethical questions which had been under consideration at the last meeting of the 57th session. He said:

It is not my intention to give a summary of the various opinions expressed, nor even to state what direction discussion took (for this you can recall as easily as I can), but to endeavour to ascertain what relation obstetricians and gynæcologists stand to the law chiefly on the question of professional secrecy. It is granted on all hands that there is much that is uncertain and much that is unsatisfactory regarding this matter, and that not only medical men but lawyers differ as to when and under what circumstances it becomes the duty of the medical adviser to break faith with his patient.

Theoretically, of course, the doctor is constantly under the Hippocratic oath—that facts, medical or otherwise, which a practitioner learns from his patient during professional attendance should not be divulged. And the law of this country seems clearly to hold that a secret acquired by a medical man during his attendance upon a patient is the secret of the patient, and therefore that he or she has a *primâ facie* right in law to require that his or her secret should be kept, unless it can be shown that there is some paramount reason setting aside that right. The law, then, so far upholds our old professional rule.

Individual judges have from time to time gone even further, and have indicated that medical men should legally be under this ancient rule, with certain exceptions. Thus Mr. Justice Buller expressed his regret that the information got from medical men was not privileged. Lord Brougham expressed himself in much the same way, and Chief Justice Best said that the law was hard in itself, of questionable policy, and contrary to that of America and France.[1] While Mr. Justice Hawkins, in the comparatively recent case of Kitson *v.* Playfair and wife, said that there were criminal cases—and he instanced one, that of self-inflicted criminal abortion—where it would be "monstrous cruelty" for the doctor to inform the police "and with regard to those when it was said the doctor should inform, the judge might himself in some cases refuse to commit a medical man for contempt in refusing to reveal confidences." From this it is evident that there are many cases occurring in medical practice in which a practitioner may be in serious doubt whether he should inform the Public Prosecutor, and about which any judge, in the event of the information being given, may express his own individual opinion, adverse or otherwise, as circumstances presented themselves to his mind during a trial.

In America and France the law differs from that of this country in so far that it binds the doctor to keep his patient's secret. In America the law binds the professions of the Church, Law, and Medicine equally. According to this legal code, "the clergyman is prevented from disclosing confessions made to him in his professional character in the course of discipline enjoined by the rules of practice of the religious body to which he belongs. The attorney or counsellor at law is not allowed to disclose a communication made by his client to him, or his advice given thereon in the course of his professional employment. And a person qualified to practise physic or surgery is not allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity." From this it is plain that in America the three professions stand in precisely the same relationship to those seeking their counsel and advice. The law recognises that a certain portion of the community has from circumstances been placed at disadvantage and is suffering in some way in relation to religion, law, or medicine, that it needs help from some one of these professions, and that it would be wrong to place any obstacle in the way of obtaining it, whether guilty or innocent. The penitent is safe with the priest, the suspected criminal is safe with his attorney and counsel, and the patient is, or should be, safe with his medical adviser. The members of each profession get necessary information for a special and humane purpose—information they would certainly not have acquired had the simple benefit to the person not been the sole end in view, and which probably would have been withheld but for the seal of professional confidence. And the revisers of the American code even go further by stating that the necessity of the law relating to medical men is even stronger than in the case of a legal adviser when life itself may be in danger. And yet the law which binds a physician to secrecy is very frequently broken by the ruling of its administrators. Thus Judge Bartlett, speaking on the subject of criminal abortion at a meeting of a medical society presided over by Dr. Joseph H. Raymond, said: "The rule may be regarded as pretty well settled in this State that the physician is compellable by law to disclose (in the witness box, not voluntarily) what he knows indicating the commission of criminal abortion where the victim of that abortion is dead. Where the patient, how-

ever, survives and does not waive her privilege, the medical practitioner must keep silence."

And District Attorney Backus speaking at the same meeting on the same subject gave it as his opinion that a self-attempted abortion should not be disclosed whether the person lived or died; but where it is done by another, the doctor should endeavour to procure the consent of the patient to inform even though she survives. It is quite evident from these opinions and from cases constantly occurring in American law courts that while the three professions are almost exactly word for word bound under the same law, the medical profession alone is compelled by law to break the law that binds them. Whether this be right is open to question. It is difficult to see in what way the doctor differs from the lawyer and the clergyman. Under this law the silence of the medical man cannot be looked upon as concealing a crime; and surely his reticence defeats the ends of justice less than that of the lawyer, who often knowing the guilt of his client and all the circumstances of the crime, uses this knowledge entirely for the benefit of the prisoner, and, by reason of the information, probably gets an effectual means of defence. Yet his conduct is not looked upon as reprehensible, but would certainly be regarded as such if he announced in court that the man had confessed to him that he was guilty of the imputed crime.

In this country the doctor is not privileged as we have previously said, and this opinion has again been recently confirmed by the answer of counsel to the question of the Royal College of Physicians, London, which ran as follows: Has a medical practitioner any privilege with regard to secrets confided to him in the course of his practice analogous to the privilege as between a solicitor and client or otherwise? Answer: We are of opinion that there is no privilege attaching to statements made to a medical practitioner by his patient. Our profession, then, is not in any degree protected or supported by law, as from time immemorial the legal profession has been; nor has it that tacit protection which is extended to the priest. Yet it is no less true, as we know, that should a doctor disclose any fact to a third party which may affect the character or cause injury to the patient he would be liable to an action for defamation of character. There are pitfalls innumerable the moment we swerve from the golden rule of absolute reticence. And alas! it is also true that the most rigid adherence to this rule does not always bring safety to the practitioner, and indeed may sometimes land him in an awkward predicament. For example, let us take the hypothetical case instanced by Mr. Justice Hawkins at the trial already referred to in which he remarked it would be "monstrous cruelty" if the doctor did not keep silence in the criminal case which might come under his observation. Presuming such a case to occur, which it may do at any moment, and the doctor is faithful to his patient and does exactly as Mr. Justice Hawkins would have him do, says nothing about it and does the best he can for his patient. Notwithstanding this she dies from her self-inflicted injuries. No one knows of them but the doctor and his patient, and she is dead. He may properly certify the death as one from septicæmia. Possibly she may have consulted him about her condition before she was driven to commit the crime which ended her life; and rumour is busy, and suspicion is aroused, and the Public Prosecutor gets hold of the case. A necropsy reveals the injuries which presumably have caused death. Then the question arises, Who would be the more likely person to commit the crime, the patient or the doctor. The Public Prosecutor and the public may think the doctor the more likely, and he may possibly come to be tried for murder, and should such a case come before Mr. Justice Hawkins, would he say you have done a "monstrous cruelty" if you had informed upon this poor woman? In such a case, the doctor, according to the judge, deserves to be hanged if he does inform, and may certainly be hanged if he does not.

But to return to the protection of the patient, not only in this vexed question of criminal abortion, about the reporting of which lawyers and doctors both here and in America take such different views, arising doubtless from the laudable desire to stop the crime, and at the same time shield the patient, but many others in which the obstetrician has difficulty in deciding how to act. In cases of "concealment of pregnancy" I presume the medical man would be expected to inform, but to what extent does it differ from that of self-inflicted abortion, and why should the law or we be less careful to protect the poor woman who, in the agonies of labour and great distress of mind, destroys or allows her child to die while coming or having just passed through the maternal passages, than she who has destroyed her child *in utero*? This is surely a legal and altogether arbitrary distinction.

Then there are the cases of pregnancy sometimes with abortion, in women out of wedlock, or where the wife has been separated from her husband for a considerable time. In no class of cases perhaps is it more necessary for the medical adviser to remain silent in the interest of the patient and for the protection of himself.

Perhaps the most common experience, and one in which it is most difficult to preserve the secret of the patient, is that in which the practitioner is sent for to see a servant in the employment of a client. Her mistress may or may not be suspicious regarding the nature of the illness, and has employed the practitioner not only to treat the servant but to tell her what is wrong. How should such cases be dealt with? It has been said in justification of breaking the confidence existing between doctor and patient in such cases, that the doctor is acting solely as the professional agent of the employer, and that he was sent for the special purpose of knowing in what condition she is and pays him his fee. In such cases there is no justification. Such a supposition is quite fallacious, wrong in principle, unjust, not in accordance with law, and would in many cases be actionable. In such circumstances it is always necessary not only to have the full permission of the patient to see and prescribe for her, but also permission to tell her employer what she suffers from.

No part of the practice of obstetrics and gynæcology requires more tact and prudence than the management of syphilis and gonorrhœa in married people. It must not be always taken for granted because a married woman has one or other of these diseases that the husband is the source of infection, and if not so, it would plainly be wrong to allow him to be exposed to the risk just as much as when the husband is suffering from such complaints, we must safeguard the wife; and this we endeavour to do effectively without breaking faith with the patient. The delicate question whether a woman should be told what she suffers from must be determined by the particular circumstances of the case, and whether it be in her interest and for her good that she should know. It sometimes is not. The aim in all such cases is to prevent disease, while at the same time the secret of the patient is kept. Should the practitioner think it his duty to break faith with his patient, he should feel perfectly certain that there is strong reason for doing so sufficient to have weight with both judge and jury. Scarcely less difficult is it to know how to act when such diseases occur in servants and employees, and in these cases the medical practitioner runs greater risk of an action-at-law should professional confidence be broken. I trust the time is not far distant when the practitioner will be freed from this responsibility by the compulsory notification of all contagious diseases.

But not only is the question of professional secrecy in relation to the law upon an unsatisfactory footing: the law itself as it at present stands is directly opposed to the very frequent practice of the obstetrician, notwithstanding the assurance of counsel given about two years ago to the Royal College of Physicians, London, "that the law does not forbid the procurement of abortion during pregnancy, or the destruction of the child during labour where such destruction of life is necessary to save the mother." But this is only the opinion of counsel, the law remains: and though the illegality of these operations may not be entertained in the law courts, still—"In the event of the death of the mother, the medical man exposes himself to a prosecution for a criminal offence." Why, then, should the law not be amended to run as it does in the Penal Code of the State of New York? "A person who with intent thereby to procure the miscarriage of a woman, unless the same is necessary to preserve the life of the woman or of the child with which she is pregnant, is guilty of abortion, etc."

After what has been said, it must, I think, be admitted that with the law on one side and the patient on the other, the

position of the obstetrician is in a very uncertain state of equilibrium, and that this condition of affairs calls for early readjustment. Whether the adoption of a law such as exists in America and France (and it has much to recommend it) should be made is a matter for serious consideration. But whatever may be done, the law should emphasise in some very decided way a patient's legal right of privilege which she can only waive, except—and the law should make the exceptions—in certain well-defined cases. It does so now in the notification of infectious diseases, it may in the future do so in the case of contagious diseases, and it ought to specify in other cases what the doctor must reveal.

As things now are, the public generally think that professional reticence is merely the fastidious rule of a fastidious profession, contrary, as they often signify, to common sense. But, and until there is a clearer understanding between the law and the medical profession, and something definite achieved in this direction, the obstetrician and medical practitioner should bear in mind that it is the duty of the law to detect crime, that the Public Prosecutor is alone responsible for its proper investigation, and that the duty of the physician is simply to his patient. For his own protection, about which the law thinks nothing, the general practitioner at least should never induce premature labour without consultation with another medical man, that in all cases of suspected criminal abortion he should safeguard himself by calling in as early as possible another independent medical witness, and that never under any circumstances whatever should he be induced to examine a woman without her full consent, and preferably in the presence of witnesses.

And now the last few moments which end my presidency are gone, and it only remains for me to reiterate my gratitude for your kindness, and for the great honour you have done me. In my successor you will find not only a much more worthy President, but a familiar friend; one already accustomed to the duties of this chair, and one whom we all delight to honour, not only for the work he has done for this Society, but for his high standing as a gynæcologist, obstetrician, and teacher.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, 1896, i, p. 871.

SOME OBSERVATIONS ON THE COMPOSITION OF HUMAN MILK.

BY ALFRED H. CARTER, M.D., F.R.C.P.,
Professor of Medicine in Mason College, Birmingham;
AND
H. DROOP RICHMOND, F.I.C.

A TRUSTWORTHY estimate of the average composition of healthy human milk is most desirable for two reasons. In the first place it affords a standard by which we may judge of the quality of a mother's milk in cases where such milk disagrees with her infant; and in the second place it provides us with a standard by which we may adjust the composition of an artificial food for an infant during the suckling period. The table on page 200 represents the results of analysis of 94 samples of human milk. They were derived almost entirely from women admitted into the lying-in department of the Birmingham Workhouse Infirmary. With 7 exceptions all the samples were taken at some time within the puerperal month. There is every reason to believe that by this time human milk attains a composition which does not vary to any important extent during the later period of normal lactation.

The methods of analysis adopted were as follows:

TOTAL SOLIDS (WATER) AND ASH.

Five grammes were weighed into a tared platinum basin and evaporated to dryness on the water bath; the drying was continued in a water oven till the weight was practically constant. The residue was weighed as total solid matter, and the loss considered as water. The residue was then carefully ignited over a small flame till a white ash was left; it was found that the organic matter burnt easily if the basin was not covered during the ignition and the ash was not fused.

FAT, PROTEIDS, AND SUGAR.

Five grammes were weighed into a beaker and diluted with 50 c.cm. of distilled water; 2 c.cm. of a solution of copper sulphate (65 g. per litre), and a tenth normal solution of caustic soda dropped in, till the precipitate settled rapidly in curdy flakes; after some hours' repose, the clear liquid was decanted into a Gooch crucible, and the precipitate was then washed, first by decantation and then on the crucible with distilled water by means of reduced pressure. The crucible and its contents were then dried in the water oven till the precipitate dried in flakes; the crucible was placed in a small beaker, filled with ether, and left to macerate for twenty-four hours, at the expiration of which time it was submitted to a thorough washing with ether, the beakers and stirring rods being also rinsed with ether. This treatment was again repeated after a further drying. The crucible was then dried in the water oven till constant in weight; it was next ignited, at first gently, and finally strongly, and the difference between the weight after drying and that after ignition was taken as the proteids. This is the well-known Ritthausen method slightly modified in detail.

The combined ethereal solutions were evaporated in a small flask, and the residue, after heating in the water oven till the weight was constant, was considered as fat. This was examined in Zeiss's butyro-refractometer at a temperature of 35° C. to obtain the refractive index. In several cases the fat was also estimated by the Adams, Werner-Schmidt, or Gerber methods, and no appreciable difference was observed.

The filtrate from the precipitate produced by copper sulphate was used in several cases for the determination of the sugar by weighing the copper oxide produced on boiling with Fehling's solution. Estimations were also made by polarising the filtrate obtained by adding acid mercuric nitrate, or an acetic acid solution of picric acid to the milk. In all the analyses reported, however, the results for sugar were taken by difference; the reason for this will be discussed later.

Our methods differ only in detail from those adopted by Leeds; they give excellent results with cow's milk, and here the sugar deduced by difference agrees well with that estimated by Fehling's solution or by polarisation. In one particular we are totally at variance with him, as he finds that his analyses add up to 100 per cent. when all the constituents are directly determined; we find that ours are seriously below that total, when we attempt to take our estimated figures for lactose to represent the sugar. We will refer again to this.

We have noticed the fact recorded by Leeds that the fats are often, though not always, tinted green: this we find to be due to the presence of copper, and appears to be caused by the presence of free fatty acids in the fat. We find that the copper is easily removed from the green fats by shaking with dilute hydrochloric acid, and the fat then contains free fatty acid; the fat obtained in other processes also contains free fatty acid, and a similar colour may be obtained when a neutral fat (as that of cow's milk) receives an addition of a fatty acid.

The following table shows the amount of copper found in some of the fats, together with our notes of the colour:—

Serial Number.	Percentage of CuO in Fat.	Remarks.
19	2.80	Very deep green.
7	1.27	Very green.
12	0.87	Green.
15	0.62	Green.
16	0.30	Slight green.

The colour is directly proportionate to the percentage of copper in the fat; all figures are corrected by subtracting the percentage of copper oxide.

From the table the following arithmetical mean may be calculated:

Specific gravity	1031.3	Sugar	6.59
Water	88.04	Proteids	1.97
Fat	3.14	Ash	0.26

Table Representing the Results of Analysis of 94 Samples of Human Milk.

Mother.				Child.		Milk.							Remarks.
Name.	Age.	Pregnancy.	Health.	Age.	Health.	Specific Gravity.	Water.	Fat.	Sugar.	Proteids.	Ash.	R.I.F.	
												Deg.	
1. R. L.	19	1st	Robust	3 days	Not thriving	—	86.75	3.23	—	—	0.38	52.8	Death on 5th day; milk upset the child from the first.
5. ,,	—	—	—	4 ,,	—	—	86.95	2.94	5.78	4.05	0.28	55.4	
2. K. N.	19	1st	Indifferent	5 ,,	Good	1035.0	87.65	2.97	7.69	2.04	0 27	55.4	Mother had acute rheumatism a
6. ,,	—	—	—	6 ,,	—	1033.5	86.69	3.63	7.40	2.02	0.26	54.0	few months ago; child thriving
14. ,,	—	—	—	15 ,,	—	1028.0	90.06	2.25	6.17	1.32	0.20	48.9	remarkably, especially during 3rd
19. ,,	—	—	—	30 ,,	Very good	1031.7	87.10	3.95	7.11	1.64	0.20	48.2	week.
4. S. A.	30	4th	Good	16 ,,	Good	1035.2	87.79	2.59	7.80	1.58	0.24	51.0	
3. L. F.	19	1st	,,	10 ,,	Bad	1027.6	87.48	4.13	4.80	3.11	0.48	54.2	Child died on 8th day; sample taken 2 days later.
7. F. S.	24	2nd	,,	23 ,,	Good	1028.1	84.58	6.91	6.71	1.60	0.20	52.0	
8. E. T.	36	3rd	,,	9 ,,	,,	1030 4	88.60	2.60	6.93	1.63	0.24	—	
15. ,,	—	—	—	11 ,,	—	1033.4	88.49	2.51	7.30	1.46	0.24	51.1	
20. ,,	—	—	—	11 ,,	—	1033 1	89.72	1.50	7.03	1.52	0.23	50.0	
9. M. M.	33	3rd	,,	9½ months	Good	1032.3	91 40	0.47	6.90	1.02	0.21	—	Before suckling.
10. ,,	—	—	—	9½ ,,	—	1030.6	89.48	2.51	6.79	1.14	0.18	—	After suckling.
11. I. M.	20	2nd	,,	6 ,,	Good.	1031.6	89.13	2.50	6.83	1.36	0.18	—	Before suckling.
12. ,,	—	—	—	6 ,,	—	1029.5	86.53	5.15	6.84	1.28	0.20	—	After suckling.
13. H.	28	1st	,,	9 days	Good.	1033.7	86.66	3.86	7.39	1.81	0.28	52.0	
16. A. B.	19	1st	Syph. ?	5 ,,	,,	1034 7	86.95	3.45	7.05	2.26	0.29	51.8	
21. ,,	—	—	—	19 days	—	1031.1	85.94	5.08	7.08	1.69	0 21	50.8	
31. ,,	—	—	—	37 ,,	—	1031.6	87 69	3.51	6.75	1.82	0.23	52.4	Before suckling.
32. ,,	—	—	—	37 ,,	—	1031.2	87.59	3.68	6.74	1.78	0.21	52.9	After suckling.
75. ,,	—	—	—	3 months	—	1031.4	88.25	3.39	6.61	1.52	0.23	53.8	Before suckling.
76. ,,	—	—	—	3 ,,	—	1030.2	86.95	4.41	6.88	1.54	0 92	54 0	After suckling.
17. E. M.	35	2nd	Good	9 weeks	Good	1032.8	89.66	1.88	6.90	1.33	0.23	50.3	Before suckling.
18. ,,	—	—	—	10 ,,	—	1030.2	88.78	3.06	6.67	1.25	0.24	51.9	
22. C. W.	19	1st	Good	13 days	Good	1038.6	85.63	4.68	7.33	2.11	0.25	51.8	
23. Incog	20	,,	,,	24 ,,	,,	1034.7	89.21	1.62	7.04	1.88	0.25	51.1	Before suckling.
24. ,,	28	,,	,,	5 weeks	Failing	1042.6	88.01	1.22	8.89	1.55	0.33	51.9	
25. L. S.	29	3rd	,,	5 days	Good	1027.5	90.34	2,03	4.38	2.75	0.50	55.6	Before suckling.
26. ,,	—	—	—	—	—	1032.1	88.40	2.66	6.36	2.30	0.28	53.5	After suckling.
27. N. K.	21	1st	Good	4 days	Good	1032.1	86.72	3.92	6.61	2.87	0.28	54.4	Before suckling.
28. ,,	—	—	—	4 ,,	—	1036.4	87.00	3.74	6.73	2.26	0 27	54.0	After suckling.
29. J. P.	31	4th	Good	4 ,,	Good	1031.9	87.90	3.09	6.33	2.34	0.34	54.0	Before suckling.
30. ,,	—	—	—	4 ,,	—	1026.8	87.94	4.20	5.20	2.32	0.34	53.8	After suckling.
33. R. J.	21	1st	Good	10 ,,	Good	1027.2	88.43	3.47	5.08	2.66	0.36	51.1	Before suckling.
34. ,,	—	—	—	10 ,,	—	1027.9	88 70	3.15	5.36	2.52	0.27	52.8	After suckling.
35. C. T.	22	2nd	Good	5 ,,	Good	1027.3	89.23	2.53	6.03	1.96	0.25	53.1	Before suckling.
36. ,,	—	—	—	—	—	1031.8	88.91	2.85	6.37	2.20	0.27	53.3	After suckling.
37. E. M.	28	1st	Good	9 days	Good	1030.8	86.87	3.94	6.65	2.26	0.28	50.6	Before suckling.
38. ,,	—	—	—	9 ,,	—	1034 2	87.70	2.78	6.96	2.28	0.28	51.4	After suckling.
39. E. S.	23	2nd	Unhealthy	8 ,,	Good	1031.5	87.70	3.32	6.63	2.10	0.25	50.7	Before suckling.
40. ,,	—	—	—	8 days	—	1035.0	88.87	1.75	7.38	1.90	0.21	50.1	After suckling.
41. P. S.	20	1st	Good	5 ,,	Good	1033.3	87.40	3.12	6.68	2.49	0.31	50.1	Before suckling. (Excessive secre-
42. ,,	—	—	—	5 ,,	—	1033 5	87.36	3.12	6.70	2.51	0.31	50.1	After suckling. (tion.
43. ,,	—	—	—	14 ,,	—	1028 0	87.58	4.09	5 64	2.32	0.37	49.1	Before suckling.
44. ,,	—	—	—	14 ,,	—	1030.2	86.31	4.75	6.42	2.21	0.31	49.1	After suckling.
45. N. G.	27	1st	Good	11 ,,	Good	1028.5	87.32	4.35	5.75	2.33	0.35	48.9	Before suckling.
46. ,,	—	—	—	11 ,,	—	1027.6	88.41	3.48	5 04	2.73	0.34	49.4	After suckling.
48. ,,	—	—	—	17 ,,	—	1033.7	87.71	2.91	7.07	2.04	0.27	48.9	Before suckling.
49. ,,	—	—	—	17 ,,	—	1031.9	88.47	2.79	6.89	1.61	0 24	50.9	After suckling.
47. R. R.	21	2nd	Very anæmic	14 ,,	Fair	1029.0	88.09	3.28	5.60	1.76	0.27	52.8	Before suckling.
50. ,,	—	—	—	20 ,,	Good	1029.5	86.23	4.99	7.25	1 44	0.19	51.4	Before suckling.
51. ,,	—	—	—	20 ,,	—	1032.0	88.38	3 03	6 95	1.45	0.19	51.0	After suckling.
52. E. P.	20	2nd	Good	7 ,,	Strophulus	1031.6	87.72	3.33	6.63	2 06	0.26	53.3	Before suckling vomited fre-
53. ,,	—	—	—	7 ,,	—	1031.2	87.71	3.37	6.72	1.93	0.25	53.3	quently; restless.
54. ,,	—	—	—	16 ,,	Good	1030.2	89.96	1.91	6.62	1.26	0.25	50.4	After suckling.
55. ,,	—	—	—	16 ,,	—	1032.1	89.10	2.49	6 81	1.38	0.22	52.5	Before suckling vomiting ceased; doing well.
56. S. D.	21	2nd	Phthisis	9 ,,	Delicate	1032.6	89.57	1.95	6.75	1.49	0.24	52.0	After suckling.
57. ,,	—	—	—	9 ,,	—	1031.4	89.96	1.62	6.71	1.47	0.24	51.8	Before suckling.
59. ,,	—	—	—	15 ,,	Failing	1033.0	88.82	2.39	7.03	1.50	0.26	51.8	After suckling.
60. ,,	—	—	—	15 days	—	1029.0	89.40	2.66	6 03	1.64	0.27	51.9	Before suckling.
58. L. M.	2	2nd	Tuberculous disease of wrist	5 ,,	Bad	1030.0	87.11	3.96	5.40	3.19	0.34	55.8	After suckling.
61. L. K.	26	,,	Good	11 ,,	Good	1031.3	87.62	3.32	7.16	1.65	0.25	53.3	After suckling, vomiting, diarrhœa.
62. ,,	—	—	—	11 ,,	—	1032.3	88.10	3.04	7.11	1.50	0.25	52 6	Before suckling, colostrum 4 days.
65. ,,	—	—	—	21 ,,	—	1031.1	88.46	2.89	7.18	1.30	0.17	52 9	After suckling.
66. ,,	—	—	—	21 ,,	—	1031 1	88.74	2.67	7.15	1.26	0 18	52.8	Before suckling.
63. K. W.	34	2nd	Good	6 ,,	Good	1032.2	87.64	3.27	7.09	1.73	0.27	53.0	After suckling.
64. ,,	—	—	—	6 ,,	—	1036.3	89.23	1.23	7.50	1.77	0.27	52.5	Before suckling.
67. K. C.	18	1st	Good	7 ,,	Upset	1031.3	89.54	0.87	5.19	4.02	0.38	58.4	After suckling.
68. ,,	—	—	—	—	Bad	1032.4	89 39	1.87	5.74	2.65	0.35	56.6	Before suckling (child always crying, and died in convulsions 8 days old.
69. E. S.	22	1st	Good	7 days	—	1030.5	90.13	0.99	5.35	3.16	0.37	58.2 ?	After suckling.
70. ,,	—	—	—	7 ,,	—	1031.0	88.45	2.10	6.55	2.54	0.36	58.0	Before suckling (Child died on
73. ,,	—	—	—	11 ,,	—	1028.6	88.36	3.70	5.53	2 05	0.36	52.3	After suckling (thirteenth day.
74. ,,	—	—	—	11 ,,	—	1026.7	87.57	4.71	4.87	2.47	0.38	52.6	Before suckling.
71. F. S.	26	2nd	Good	10 ,,	Good	1031.9	87.05	3.71	7.11	1.91	0.22	52.0	After suckling.
72. ,,	—	—	—	10 ,,	—	1032.0	87 00	3.74	7.12	1.03	0.21	52.1	Before suckling.
77. E. T.	19	1st	Good	16 days	Good	1030.6	87.12	3.80	7.20	1.65	0.23	53.4	After suckling.
78. ,,	—	—	—	16 days	—	1030.8	87.25	3.72	7.18	1.63	0.22	53.3	Before suckling.
79. F. N.	24	2nd	Epileptic	7 ,,	Good	1031.6	88.75	1.88	7.27	1.87	0.23	54.8	After suckling.
80. ,,	—	—	—	7 ,,	—	1033.4	89.00	1.64	7.29	1.84	0.23	55.0	Before suckling. (Glycosuria.
													After suckling.

Table Representing the Results of Analysis of 94 Samples of Human Milk—(continued).

Mother.				Child.		Milk.							Remarks.
Name.	Age.	Pregnancy.	Health.	Age.	Health.	Specific Gravity.	Water.	Fat.	Sugar.	Proteids.	Ash.	R.I.F.	
												Deg.	
81. R. E.	20	1st	Good	5 ,,	Dyspeptic	1030.9	87.35	3.43	6.42	2.48	0.32	55.8	Before suckling; griping; flatulence; diarrhœa.
82. ,,	—	—	—	5 ,,	—	1033 9	88.29	2.16	6.70	2.52	0.33	—	After suckling.
83. E. H.	19	1st	Good	15 ,,	Strophulus	1034 3	89.29	1.59	6.86	1.97	0.29	—	Before suckling.
84. ,,	—	—	—	15 ,,	—	1034.5	89.31	1.62	6.81	1.98	0.28	—	After suckling.
91. ,,	—	—	—	22 ,,	—	1027.1	84.72	6.65	6.64	1.77	0.23	—	Before suckling.
92. ,,	—	—	—	22 ,,	—	1024.0	82.93	8.82	6.29	1.74	0.22	—	After suckling.
85. E. B.	31	1st	Very anæmic	9 ,,	Delicate	1036 3	89.35	0.81	6.50	2.83	0.33	—	Before suckling; child always in pain and crying; diarrhœa; vomiting on 7th day.
86. ,,	—	—	—	9 ,,	—	1034.5	88.95	1.48	6.45	2.79	0.33	—	After suckling.
89. ,,	—	—	—	16 ,,	Better	1028.6	88.65	2.84	6.81	1.67	0 23	—	Before suckling; child rapidly improving.
99. ,,	—	—	—	16 ,,	—	1026.3	86.08	5.71	6 30	1.69	0.22	—	After suckling.
87. A. M.	27	1st	Good	12 ,,	Good	1034.0	89.41	1.62	6.81	1.90	0.26	—	Before suckling.
88. ,,	—	—	—	12 ,,	—	1032.5	89.40	1.67	6.76	1.90	0 27	—	After suckling.
93. M. M.	36	6th	Good	11 ,,	Small and weak	1031.2	90.59	0.98	6.52	1.71	0 20	—	Before suckling.
94. ,,	—	—	—	11 ,,	—	1027.6	87.65	4.07	6.31	1.77	0.20	—	After suckling; child did badly, vomiting, diarrhœa on 14th day; very deficient supply.
Mean	—	—	—	—	—	1031.3	88.04	3.07	6.59	1.97	0.26	—	

Perhaps a more exact method of obtaining the average composition is that of "percentile grades," devised by Galton. By this method the 50-percentile grade is:

Specific gravity ...	1031.6	Sugar	6.75
Water	88.10	Proteids	1.87
Fat	3.08	Ash...	0.25

For the purpose of comparison we subjoin a few of the analyses of human milk most frequently referred to by writers on the subject:

—	Vernois and Becquerel.	Clemm.	Payen.	Tidy.	Frey.	Lohmann.	Leeds.
Water ...	88.91	90.58	89.54	86 27	90.01	88 5	86.7
Proteids ..	3.92	2.01	3.35	2 97	1.05	1.7	1.9
Fat	2.67	3.34	3.34	5.37	4.34	3.8	4 1
Sugar* ...	4.36	3.15	3.77	5.13	7.61	6.0	6.9
Ash	0.13	0.19	—	0.22	0.21	0.2	0 2

* Vernois and Becquerel estimated sugar by the polariscope as lactose; this we find to be about 2 per cent. lower than taking it by difference; adding 2 per cent. to the sugar, and subtracting 2 per cent. from the proteids (which Vernois and Becquerel took by difference) it is seen that their results agree fairly well with ours.

It will be seen that some of these results differ widely from those obtained by us—notably that of Vernois and Becquerel—which has hitherto been more generally quoted by authors than any other. While making full allowance for actual differences in the composition of human milk, we cannot but think that some of the variations referred to are due to faulty methods of analysis. On the other hand, our results very closely correspond to those obtained by Lehmann and by Leeds.

It is a matter of some interest and importance to note the proportions of the different ingredients of milk to each other. Thus, the ratio of fat to carbohydrates is as 1 to 2.2 nearly; that of fat to proteids is as 1 to 0.6; while that of proteids to carbohydrates is as 1 to 3 6. These ratios correspond almost exactly to those observed in the results of investigations conducted at Munich as to the smallest amounts of food compatible with health, under 1½ year of age.[1] These conclusions were arrived at by actual trial of food stuffs in different proportions, evidence quite distinct from that deduced from the composition of milk.

VARIATIONS.

Our analyses show that pretty wide variations in every ingredient of milk are met with. The widest variations are met in the fatty constituents, the largest amount being 8.82 per cent., while the lowest is only 0.47 per cent.; proteids vary from 4.05 per cent. to 1.02 per cent.; while the proportion of sugar varies the least, namely, from 8.89 per cent. to 4.38 per cent. From the fact that the arithmetical mean of each ingredient differs so slightly from the 50-percentile grade—as previously shown—it may be concluded that the variations from the normal are disposed with approximate equality above and below it.

SPECIFIC GRAVITY.

The specific gravity of any given sample of milk represents the resultant as between the amount of fat and solid constituents other than fat which are present. The former tends to reduce and the latter to increase the specific gravity. This fact, together with the varying amounts of each of the solid constituents other than fat, render untrustworthy all conclusions calculated from the specific gravity as to the percentage proportion of any individual solid constituent. The highest specific gravity we obtained was 1042.6 (No. 24); this is probably due to the low percentage of fat (1.22) and the high percentage of sugar (8.89) and ash (0.33). The percentage of proteids in this sample is rather below the average (1.55). The lowest specific gravity we obtained was 1024 (No. 92), due to the very high percentage of fat (8.82). More than a third (32) of the samples examined yielded a specific gravity between 1031 and 1032.5.

WATER.

The highest percentage of water recorded is 91.4 (No. 9). This was a very poor milk of 9½ months' lactation, containing the smallest percentage of fat in the whole list, and poor also in proteids. It was taken, however, before suckling. The sample from the same woman after suckling was much better. The percentage of water fell to 89.48, that of fat rose to 2.55, and of proteids to 1.14. The lowest percentage of water recorded is 82.9, occurring in Sample 92, associated with the lowest specific gravity (1024), and the highest percentage of fat in the whole list.

FATS.

The highest percentage of fat recorded is 8.82 (No. 92), while the lowest is 0.47 (No. 9). More frequently than not the proportion of fat is larger in the samples taken after suckling than before.[2] The average composition of the milk before and after suckling was

	Before Suckling.	After Suckling.
Water	82.53	88.04
Fat	3.83	3.18
Sugar	5.1	6 53
Proteids	1 99	1.99
Ash	0 28	0 26

It is seen that the only important difference is in the percentage of fat. In 8 cases the analyses were sensibly identical—that is, difference in fat less than ¼ per cent., and in the other constituents less than $\frac{1}{10}$ per cent.

This is more obviously the case with milk taken after lactation has become fully established. During the colostrum period, and for a variable time afterwards, the rule that fat is higher after suckling is often reversed. The difference between the milks before and after suckling may be largely mechanical, and due to the separation of cream in the breast. If the secretion is constant in composition, the first portion drawn will be above or below the normal in fat according to the position of the mother; if she is in a prone position the cream will be drawn off first, and this may account for the fact that we very frequently observed that the milk before suckling was high in fat in the earlier stages of lactation.

It is worthy of remark that in one case (Nos. 41 and 42) the analyses were almost absolutely identical, and here the secretion was excessive; it may be reasonably supposed that the cream had no time to rise. The reverse is the case where secretion was very deficient (Nos. 93 to 94), where the largest difference in fat is observed.

The difference in the refractive index suggests that the fat of milk differs from that of cow's milk.

SUGAR.

The proportion of this ingredient of maternal milk is subject to much less fluctuation than that of fat or proteids. The highest percentage observed was 8.89 (No. 24), the same sample which exhibited the highest specific gravity, namely, 1042.6. The lowest percentage observed was 4.38 (No. 25), representing as nearly as possible a half of the maximum percentage. The results obtained by estimation of the sugar by means of the polariscope as lactose were found to be entirely different from the quantity of sugar ascertained by analysis, thus suggesting a special difference in composition. A sample of the sugar was prepared according to the method used by one of us in conjunction with Pappel[3] to separate the sugar from the milk of the gamoose. The milk was mixed with acid mercuric nitrate (2 per cent.), and the clear filtrate neutralised (to phenolphthalein) with dilute caustic soda (not potash). After filtering from the precipitate, the mercury in solution was removed by sulphuretted hydrogen, and the solution evaporated and left to crystallise; the first crop of crystals was seen under the microscope to consist of rhomboid plates (not the usual wedge-shape crystals of lactose, which were absent), mixed with amorphous matter. A little of this dissolved in water was fractionally precipitated by the gradual addition of alcohol, a flocculent precipitate was first produced, and on further addition of alcohol a crystalline precipitate was obtained. The specific rotatory power $[\alpha]_D$ of the first mother liquor (corrected for mineral matter) was about 26.8°. After several recrystallisations a sugar was prepared nearly free from mineral matter, which crystallised wholly in rhomboid plates, and gave no flocculent precipitate with alcohol. This had a specific rotatory power of 48.7 degrees, while the specific rotatory power of lactose (anhydrous) is 55.3 degrees.

By oxidation with nitric acid a large quantity of mucic acid was formed, larger than that given by the same amount of lactose. Treatment with phenylhydrazine acetate produced an osazone soluble in hot water and crystallising on cooling and resembling phenyllactosazone in appearance; a product somewhat like the anhydride of phenyllactosazone was observed, but in very minute quantity.

It is also worth noting that human milk does not taste sweet, while a 7 per cent. solution of lactose, artificial human milk made from cow's milk with 7 per cent. of lactose and asses milk (with about 7 per cent. lactose) all have a distinctly sweet taste.

Determinations of sugar were made in several milks by polarisation and by Fehling's solution gravimetrically and compared with the results deduced by difference: in every case a serious deficiency was noted.

From the following table we feel justified in concluding that the sugar of human milk is not lactose; there is some evidence that two sugars are present, a crystalline aldobiose, and an amorphous substance (animal gum?).

Sugar by Difference.	Sugar Polarised. $[\alpha]_D$ 48.7°	Sugar by Fehling calculated as Lactose.
5.78	4.66	5.22
6.93	—	6.35
8.89	—	7.91
7.69	6.02	—
4.80	2.58	—
7.80	6.63	—
7.40	6.27	—
6.71	5.44	—
6.81	5.83	—
6.30	5.45	—

By the method used for preparing the sugar, there is no difficulty in preparing lactose in a state of purity from the milk of the cow, gamoose, and ass.

The quantity of sugar obtained was very small, and did not admit of further research, but we hope to prepare further quantities for study.

PROTEIDS.

The variation between the maximum and minimum percentages occupies a place midway between that of sugar and fat. The highest percentage observed was 4.05 (No. 5), while the lowest was 1.02 (No. 9). As a general rule, the percentage of proteids diminished after the first week of lactation. From the extreme importance of being able if possible, to estimate the approximate percentage by some ready and easy method we endeavoured to devise a simple formula for this.

If we assume that the degrees of gravity added to the percentage of fat give the degrees of gravity of the milk from which all the fat has been removed (a rule which holds with remarkable accuracy with cow's milk), and further assume that the sugar and ash are constant, and deduce the gravity of a solution containing 6.75 per cent. sugar and 0.25 per cent. ash in 97 parts of water, as 29.6, we take the difference of G+F−29.6 to be equal to the gravity due to proteids; this figure divided by 2.8 will give the percentage of proteids.

The formula is: Proteids $= \frac{G + F - 29.6}{2.8}$, and is deduced from the known specific gravity of the sugar proteids and ash of cow's milk. Applied to our average figures (G = 32.6, F = 3.08), the proteids work out at 1.82, which is in close agreement with the average found, 1.87. This formula is nothing more than a quantitative expression of Holt's method of ascertaining the amount of proteids, and may be applied to show the validity or otherwise of Holt's method.

Applied to our analyses in many cases the results are good, but the exceptions are so numerous and so marked (negative results even occurring) that we are obliged to abandon it. Especially is the failure marked when we attempt to apply the method to the milks which did not agree. Other formulæ have been calculated by purely mathematical methods from our results without any greater success. We can only conclude that Holt's method is based on a fallacy.

It is hardly necessary to point out that the proteids of human milk differ from those of cow's milk by not yielding a curd with rennet, and by giving a much finer precipitate with acetic acid. We have observed that a solution of cow's milk neutral to phenolphthalein gives a precipitate at once with copper sulphate, and if this ignited a green residue (copper phosphate?) is left. Human milk under these conditions yields no precipitate, but requires a further addition of alkali, and the precipitate then obtained yields a black residue on ignition (due to copper oxide).

ASH.

The percentage of ash varies from a maximum of 0.5 to a minimum of 0.17, but in the large majority of samples it varied between 0.23 and 0.28. As a general rule, when the percentage of ash was high that of proteids was also high, but this is by no means always so. Thus in Sample 3, A.=0.48, P.=3.11; in No. 25, A.=0.50, P.=2.75; in No. 30, A.=0.34, P.=2.32; while in No. 65, A.=0.17, P.=1.30; in No. 10, A.=0.18, P.=1.14.

REFRACTIVE INDEX OF FAT.

This was determined as the only practicable indication of variation in composition of fat; it is, however, affected by

two distinct chemical facts. Broadly speaking, the lower the molecular weight the lower is the refractive index; also the larger the percentage of unsaturated glycerides (for example, olein, linolein) the higher the refractive index. A low percentage of volatile fatty acids (such as butyric) which have a low molecular weight would cause a high refractive index; a high percentage of olein would also cause a high refractive index.

The highest refractive index we have noticed is 58.4°, while the lowest is 48.2°; as a comparison we may give the figures for some other fats, determined by one of us:

Butter fat, average 46.1, maximum 48.4, minimum 44.6
Palm-nut oil ,, 41.6 (low molecular weight)
Cotton-seed oil ,, 61.6 (high olein and linolein).

This determination affords a ready means of demonstrating that the fat of human milk has by no means the same composition as that of cow's milk.

CLINICAL REMARKS.

There were 5 deaths among the 42 children suckled on the various samples of milk submitted to analysis. It is a remarkable fact that in each of the fatal cases, with one exception, the percentage of proteids was high, ranging from 2.05 to 4.02. In one fatal case the percentage was 1.71 before and 1.77 after suckling; but here the labour was very prolonged, the child was in a miserable condition at birth, and the supply of milk was very scanty. In every case but 3 of the whole number in which the proteids exceeded 2.5 per cent. the milk disagreed. Variations in the percentage of the other ingredients seem to be much more readily borne. It is a matter of regret that the details of nutrition were not closely followed in those children which appeared to be doing fairly well at the time the samples of milk were taken.

In the following table we give the analyses of the milk in all cases in which the health of the child was not good:

No.	Case.	Water.	Fat.	Sugar.	Proteids	Ash.	R.I.F.	Remarks.
1	A	86.75	3.23	—	—	0.38	52.8	Infant died.
5	A	86.95	2.94	5.78	4.05	0.28	55.4	
4	B	87.48	4.13	4.80	3.11	0.48	54.2	Infant died.
24	C	88.01	1.22	8.89	1.55	0.33	51.9	Failing.
47	D	88.09	3.28	5.60	1.76	0.27	52.8	Fair.
52	E	87.72	3.33	6.63	2.06	0.26	53.3	Strophulus, vomiting.
53	E	87.71	3.37	6.72	1.95	0.25	53.3	
58	F	87.11	3.96	5.40	3.19	0.34	55.8	Vomiting, diarrhœa.
59	G	88.82	2.39	7.03	1.50	0.26	51.8	Failing.
60	G	89.40	2.66	6.03	1.64	0.27	51.9	
67	H	89.54	0.87	5.19	4.02	0.38	58.4	Died.
68	H	89.39	1.87	5.74	2.65	0.35	56.6	
69	I	90.13	0.99	5.35	3.16	0.37	58.2	
70	I	88.45	2.10	6.55	2.54	0.36	58.0	Died.
73	I	88.36	3.70	5.53	2.05	0.36	52.3	
74	I	87.57	4.71	4.87	2.47	0.38	52.6	
81	J	87.35	3.43	6.42	2.48	0.32	55.8	Griping, flatulence,
82	J	88.29	2.16	6.70	2.52	0.33	—	diarrhœa.
83	K	89.29	1.59	6.86	1.97	0.29	—	
84	K	89.31	1.62	6.81	1.98	0.28	—	Strophulus.
91	K	84.72	6.65	6.64	1.77	0.22	—	
92	K	82.93	8.82	6.29	1.74	0.22	—	
85	L	89.53	0.81	6.50	2.83	0.33	—	Pain, diarrhœa, vomiting.
86	L	88.95	1.48	6.45	2.79	0.33	—	
93	M	90.59	0.98	6.52	1.71	0.20	—	Supply deficient, child
94	M	87.65	4.07	6.31	1.77	0.20	—	died.

In cases A, B, F, H, I, J, and L, an excessive amount of proteids was found, accompanied in H, I, and L with a serious deficiency in the fat. In Case C (for which we are indebted to the kindness of Dr. Marston Low), the very abnormal amount of sugar and the deficiency of fat are the probable causes of disagreement. In case M the milk is not abnormal, but the supply was deficient. Cases D, E, and G, show no marked difference from the mean, but in these cases the infant was not seriously ill. Case K is peculiar; the first samples were deficient in fat, while the later ones contained the largest amount recorded; possibly the irregular secretion may be the cause of disagreement.

If we eliminate these analyses, we find as the composition of milk which agrees with the infants as follows:

Water.	Fat.	Sugar.	Proteids.	Ash.	Refractive Index of Fat.
[88.12	3.11	6.70	1.83	0.24	51.9°

while the average of milk which disagreed with the infants was:

Water.	Fat.	Sugar.	Proteids.	Ash.	Refractive Index of Fat.
88.11	2.95	6.28	2.36	0.31	54.3°

The milk which agreed with the infants may be further subdivided according to the time that has elapsed since parturition:

Time Since Parturition.	Water.	Fat.	Sugar.	Proteids.	Ash.	Refractive Index of Fat.
4 to 6 days ..	88.01	2.97	6.47	2.25	0.30	53.2°
7 to 14 ,, ...	88.21	3.06	6.62	1.85	0.26	51.5°
15 to 29 ,, ..	87.74	3.42	6.95	1.67	0.22	51.4°
Over 30 ,, ...	88.53	3.00	6.83	1.43	0.21	51.7°

From the above table we feel justified in concluding:

1. That the proteids and ash decrease as lactation advances.[1]
2. That the sugar has a tendency to increase.

There is a certain amount of evidence, also, that the composition of the fat (indicated by the refractive index) differs in the earlier stages of lactation from that present later. In this particular an analogy to the fat of cow's milk is well marked; it is known that butter fat is considerably poorer in volatile acids (butyric, etc.) in the early stages of lactation than the normal fat, and its refractive index is higher.

The milks which disagreed with the infants show in most cases the characteristics of milk in the early stages of lactation (high proteids, ash, and refractive index, and low sugar) to an exaggerated degree, suggesting that in these cases the normal functions of the breast are delayed, and that the colostrum period is prolonged. This is especially the case if only those cases are taken where either the child died (except M, in which the supply was deficient) or where vomiting and diarrhœa were observed.

REFERENCES

[1] Quoted by Landois and Stirling, *Human Physiology*, vol. i, p. 481. [2] Reiseb (*Ann. Chem. Phys.*, 1849-89) in 4 cases found the fat considerably higher after suckling than before; in 1 case the fat was nearly identical. Bouchardat and Quevenne (*Du Lait* ii, 77) and Forster (*Berichte*, 1881, 591) give analyses of three successive portions of milk; in every case (6 in all) the fat was lowest in the first portion, higher in the middle portion, and highest in the last. [3] *Jour. Chem. Soc.*, lvii, 754. [4] *Cf.* Tolmatscheff (*Zeitsch. f. Chem.*, 1868, 254), Clemm (*Wagner's Handwörterbuch f. Physiol.*, ii, 450), Griffith (*Chem. Gaz.*, 1848, 192), and Leeds (*Chem. News*, 1884, l, 301).

SOME OF THE WAYS IN WHICH MILK BECOMES PATHOGENIC.*

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THIS communication contains the results of an examination of over 110 samples of milk sent to me by Professor Hope, of Liverpool, and Dr. Niven, of Manchester, for the purpose of determining the prevalence of tuberculous infection. While doing this work I was able to find evidence of the existence of contaminations which I considered went far towards explaining the occurrence of summer diarrhœa in artificially-fed infants and to a lesser extent in adults.

That diarrhœa is frequently caused by the consumption of milk is a view accepted by many authorities. What I have found is that milk very often becomes capable of producing considerable irritation through changes which take place after it has left the udder and has been under certain conditions. Part of the samples examined were obtained from diseased cows, the milk being carefully drawn into sterilised vessels and

* For a full account of this subject see *Journal of Comparative Pathology*, ... M'Fadyean, vol. x 1897, pp. 150 to 189.

sent immediately to the laboratory. These I will call unmixed milks. The other samples were collected at railway stations in sterilised bottles from milk cans just arriving from the farm. These I will call mixed milks. These specimens were collected in summer and in winter. Some were necessarily kept longer than others.

The results obtained are summarised in the following tables:

Pathogenic Properties of Milk from Diseased and Healthy Udders.

Milk from Udders.		Producing Tuberculosis.			Producing Marked Irritation.			Producing no Marked Irritation.		
		Actual No.	Percentages.		Actual No.	Percentages.		Actual No.	Percentages.	
A. Certainly diseased	10	5	50.0	31.5	3	30.0	25.30	2	20.0	42.08
		1	11.1		2	22.2		6	66.6	
B. Probably diseased	9	6			5			8		
C. Healthy	5	0	0	0	2	40.0	40.00	3	60.0	60.00
Total ...	24	6			7			11		

Pathogenic Properties of Non-tuberculous Milk from Diseased and Healthy Udders.

Milk from Udders.		Producing Marked Irritation.			Producing no Marked Irritation.		
		Actual No.	Percentages.		Actual No.	Percentages.	
A. Certainly diseased ...	5	3	60.0	38.5	2	46.0	61 6
B. Probably diseased ...	8	2	25.0		6	75.0	
	13	5			8		
C. Healthy ...	5	2	40 0	40.0	3	60.0	60.0
Total ...	18	7			11		

Pathogenic Properties of Milk, Rich and Poor in Cells from the Udder.

	Producing Tuberculosis.		Producing Marked Irritation.		Producing no Marked Irritation.	
	Actual No.	Per Cent.	Actual No.	Per Cent.	Actual No.	Per Cent.
Cells abundant or very abundant...	6	46.2	3	23.1	4	30 8
Cells scanty or in moderate numbers	0	0	2	25.0	6	75 0

Pathogenic Properties of Non-tuberculous Milk.

—	Producing Marked Irritation.		Producing no Marked Irritation.	
	Actual No.	Per cent.	Actual No.	Per cent.
Cells abundant	3	42.9	4	56.2
Cells scanty or moderate...	2	25.0	6	75 0

Mixed Milks from the Town Market, and Unmixed Milks from Diseased Cows Compared.

Milk Producing.	Mixed Milks.		Unmixed Milks.	
	Actual No.	Percentage.	Actual No.	Percentage.
No marked irritation...	17	37.74	11	45.76
Marked local irritation but no general infection	17	37.74	7	29.12
Intense local irritation general infection	8	17.76	0	0
Tuberculosis ...	3	6.66	6	24.96
Total ...	45	99 90	24	99 84

The most striking outcome of this comparison is that even the milk of markedly diseased cows is much less often capable of producing irritation than the ordinary mixed milk supplied for consumption, and whilst 17 per cent. of the latter are capable of producing severe infection, rapidly fatal, none of the milks obtained direct from the udder, in sterilised vessels, produced any affection of comparable intensity.

Even with regard to the minor forms of irritation, such as local abscesses, inflammatory enlargement of lymphatic ganglia, mixed milk proved inferior in quality to unmixed milk from diseased cows.

The same difference is also shown by the comparatively small number of mixed milks which were free from all noxious properties, for whilst only 37.74 per cent. of the mixed milks proved perfectly innocuous, 45.76 (that is 8 per cent. more) of the unmixed milks showed the same quality. If it be remembered that 23 out of the 24 of the latter had been taken from tuberculous cows, and that more than one-half of these cows had diseased udders, it will be evident that to get a proper idea of the relative noxiousness of mixed and unmixed milks on the basis of the results quoted above, the tuberculous milks should be excluded.

If this be done there remain 42 specimens of non-tuberculous mixed milks, and 18 of non-tuberculous unmixed milks. The pathogenic properties of which were as follows:

	Not Irritating.	Irritating Locally.	Highly Virulent.
	Per cent.	Per cent.	Per cent.
Mixed milks ...	40.8	40.8	19.2
Unmixed milks ...	60.5	38.5	—

The following tables show the influence of keeping and of temperature:

I.—*Mixed Milks coming from a Distance of generally over Forty Miles, and generally kept for from Twenty-four to Sixty Hours, and even more in a few Cases. (Tuberculous Samples excluded.)*

Mean Temperature in the Shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
30° to 35°	7	5	12	58.0
35° to 40°	7	11	18	38.5
40° to 45°	2	3	5	40.0
45° to 50°	1	4	5	20.0
50° to 55°	—	—	—	—
55° to 60°	0	2	2	0.0
	17	25	42	39 0

II.—*Mixed Milks coming from a short Distance (generally under Twenty Miles), most of them kept for less than Ten Hours (with the exception of Five out of the Seven bad Specimens, and Four out of the Twenty-Two good Specimens, Tuberculous Samples excluded.)*

Mean Temperature in the Shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
50° to 55°	1	0	1	100.0
55° to 60°	8	1	9	88.8
60° to 65°	11	4	15	73.2
65° to 70°	—	—	—	—
70° to 75°	2	2	4	50 0
	22	7	29	75.68

III.—*Unmixed Milks kept for various Lengths of Time, but Collected from the Udder in Sterilised Vessels. (Tuberculous Samples excluded.)*

Mean Temperature in the Shade (Manchester) during Time the Specimens were kept.	Specimens producing no Noxious Effects.	Noxious Specimens.	Totals.	Percentage of Good Specimens.
35° to 40°	6	0	6	100.0
40° to 45°	3	2	5	60 0
45° to 50°	5	2	7	71.5
50° to 55°	—	—	—	—
55° to 60°	—	—	—	—
60° to 65°	0	3	3	0.0
	14	7	21	67.2

The influence of time is well shown by the number of specimens remaining good even at high temperature when the milk had been kept only half a day.

On the other hand, the influence of temperature is still more evident, for in every category the number of good specimens is almost inversely proportional to the height of the temperature.

When the clear relation existing between time of keeping *plus* temperature and the noxious properties of a certain number of samples of milk is contrasted with the ambiguous results obtained when an attempt is made to connect these noxious properties with disease of the udder (tuberculosis being excluded), it is difficult not to feel convinced that infection of the milk outside the udder, and the conditions under which it is kept, are the most important factors causing it to acquire irritating properties.

I have been able to collect some facts during the last few years in connection with outbreaks of epidemic diarrhœa due to the consumption of milk. I have found a close resemblance between the infection produced in guinea-pigs by the inoculation of milk which had given rise to one of these outbreaks, and that produced in guinea-pigs by the injection of several samples of mixed milks obtained on the market. This has led me to suspect that milk must be one of the most potent causes of the summer diarrhœa of children, an opinion which is also held by several well-known authorities. My belief has been strengthened by the fact that from all the cases of fatal septicæmia due to milk injections I have been able to isolate a bacillus identical with that obtained twice from milk causing intense diarrhœa in children and adults. Other organisms have been present in a few specimens, but the only organism constantly present has been this bacillus. This microbe retains its virulent properties even after being cultivated for several generations outside the body. It resembles closely the bacillus coli communis in its pathogenic action, its mode of growth on gelatine, agar, potato, milk, lactose agar, glucose gelatine, its size and shape, its motility. The differences are so much within the limits of variations observable in that organism that I am still doubtful whether the differences observed are enough to allow of this milk bacillus being considered a different species. It does not either correspond exactly to any of the other known bacilli resembling the bacillus coli. It is possibly only a pathogenic variety, but for the present it will be enough to say that it is a bacillus found in pathogenic milk.

A SIMPLE METHOD OF CHECKING CHOLERA IN INDIAN VILLAGES.

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MORE than three years have now elapsed since I commenced experiments on the treatment of wells with potassium permanganate as a means of checking waterborne cholera outbreaks. The method has now come into extended use, and I have gradually accumulated evidence that in my opinion is sufficient to justify a positive conclusion as to the utility of the method. As the success that has been obtained does not appear to be either known in England or sufficiently recognised in India, I propose to give a short summary of the evidence in my possession.

Preliminary experiments showed me that it was impossible to disinfect a well by the addition of small quantities of potassium permanganate. At the same time it was easy to produce a reduction in the number of microbes present by means of this substance, and this reduction was found to last for several days. It appeared to me to be likely that this reduction, which persisted after all traces of permanganate had vanished from the water, was chiefly due to the permanganate having destroyed some pabulum necessary for the reproduction of microbes. If cholera microbes are present in a well from which water is constantly being drawn, it is clear that they will vanish from the well, unless they reproduce at a greater rate than that at which they are being removed. It appeared to me that it might be possible to lower the rate of reproduction of cholera microbes below this necessary minimum by the employment of potassium permanganate, and that in this way it might be useful in checking cholera outbreaks. I attempted to test this possibility in the village of Shahgunj, near Agra, while a limited outbreak of cholera was present. A number of wells in this village were subjected to a daily bacteriological examination as to the presence of the cholera microbe and its allies. Of these wells half were treated with potassium permanganate, a sufficient quantity being added in each case to give a pink colour to the water that lasted for several hours. The remaining wells were left untreated. It was found that cholera microbes or "vibrios" vanished within two or three days from the treated wells, while they remained for at least a week in the wells that had not been treated.

The method I have recommended is that every well in a cholera-infected village should be treated with a sufficient quantity of potassium permanganate to produce a pink colour that lasts till the following day. Generally 2 or 3 oz. of permanganate will be found sufficient for each well, but the quantity will vary greatly with the amount of organic matter present in the water. If the well is very foul it may be necessary to dissolve 8 oz. or more of permanganate in its water. I have also suggested that one well should be treated with an extra large quantity of permanganate and its water immediately pumped out until the red colour has nearly vanished. The inhabitants should be instructed to use only the water of this well until the following day, when the water of the remaining treated wells will be fit to drink. Surgeon-Major Thomson, Sanitary Commissioner to the North-West Provinces and Oudh, who has had great practical experience of the method, tells me that it is necessary to repeat the treatment every three or four days as long as the danger of cholera appears to exist. In the case of wells in cantonments, I have lately recommended that after the addition of

permanganate an equal quantity of hydrochloric acid should be poured into the well. The addition of acid greatly increases the activity of permanganate.

Before discussing the results that have been obtained by this method, it will be well to consider the kind of proof that one may fairly expect to obtain. In the first place, it is obvious that the cessation of cholera after the treatment of wells does not of itself afford any proof that there was a causal relation between the two phenomena. For instance, I visited the town of Cawnpore during a severe cholera outbreak, which reached its maximum in August, 1894, and carried off 6 per cent. of the population. I spent three days in one of the worst affected quarters of the town and disinfected most of the wells with lime. No further cases of cholera occurred in this locality. But it was afterwards found that the cholera came to an end at about the same time in other parts of the town, and that in the quarter that I visited the disease had greatly diminished in intensity before I carried out my treatment of the wells. An indefinite number of similar instances might give no proof at all of the validity of the method.

A study of the history of cholera in India shows that no conclusion as to the validity of treatment of wells or any other method of checking cholera can be drawn from a consideration of the suddenness or otherwise with which any given outbreak has come to an end. So far as the evidence in my possession goes, the so-called typical outbreak, with its sharp rise and gradual fall, is for villages in many districts, if not in all, an exception rather than the rule, although the data for the district as a whole would furnish such a curve.

If the treatment of wells with potassium permanganate is of any use, treated outbreaks should have a shorter duration than not-treated outbreaks. It might be thought that some conclusion as to whether or not this had happened might be obtained by finding out the average duration of a cholera outbreak in villages in any district, and observing whether the durations of treated outbreaks were more or less than this average.

For instance, in the Gonda district in the summer of 1895 permanganate was put into the wells of seven cholera-stricken villages, either by Surgeon-Major Pratt, the Civil Surgeon, or by myself. Besides the data for the above instances, I am indebted to Surgeon-Major Pratt for the data of the course of contemporary outbreaks in seven other villages in the same district in which no disinfectants were employed. The total population of these two groups of villages was about the same —namely, 4,714 for the not-treated villages, and 4,601 for the treated villages. The treated villages reported 56 cases of cholera, the not-treated villages reported 123 cases. The average duration of an outbreak in the not-treated villages was about 22¾ days, and the average duration in the treated villages 14½ days, although, on the one hand, the treated villages include one in which permanganate was not used until the twenty-fifth day after the commencement of the cholera; and, on the other hand, the not-treated villages include one instance (which I believe for this district to be exceptional) in which the outbreak only lasted two days. Here the not-treated villages form a control, and enable us to conclude with some degree of probability that the employment of permanganate in the other group of affected villages was of use.

A comparison of the duration of any single treated outbreak with the average length of an outbreak in the same district, must, I believe, be useless, because so far as the evidence in my possession goes in any series of outbreaks, there are always such wide variations from the average length. To illustrate this statement I may quote from a report by Bryden, entitled Cholera Epidemics of Recent Years Viewed in Relation to Former Epidemics: a Record of Cholera in the Bengal Presidency from 1817 to 1872, published at the Government Press, Calcutta, in 1874. Bryden appears to hold an opinion (which, perhaps, is not yet extinct) that in investigating cholera the study of statistics is more important than the study of the thing itself. Accordingly he arrives at the conclusion that cholera is due to a miasm; a zone of cholera-laden air may pass through a cantonment without becoming localised, when a short outbreak results. If it becomes localised a longer outbreak may be expected. It is not clear what his opinion was of the nature of or reasons for "localisation," but he quotes with approval the statement of a medical officer who describes the disease in Peshawar "going round and round as in a basin." Leaving these speculations, let us consider some of Bryden's facts. He gives statistics of the duration of 56 outbreaks of cholera in different gaols in the Bengal Presidency. The average length of these 56 outbreaks is 15¾ days. Of the total number of outbreaks, 25 lasted longer than the average, and 31 were shorter than the average. Only about half of the total number are within five days of the average duration. At the time that these outbreaks were happening it was believed that cholera was due to an airborne miasm, and very frequently an attempt was made in these gaols to drive away the miasm by lighting green wood fires in different portions of the building. Supposing this method was used in each of these 56 outbreaks, and supposing each gaol superintendent had been asked to report on the efficiency of the process, in the majority of the cases (namely, 31) he would have been able to report that the outbreak had had less than the average duration. A believer in the method might have suggested that in the smaller number of cases in which the cholera exceeded the average duration, a sufficient number of green wood fires had not been lighted, or that the evidence was bad because the process had been left to irresponsible subordinates, and the above data would give no means of upsetting his contention.

Such a line of argument would, however, be quickly disposed of if reference was made to cases of outbreaks in districts where no attempt had been made to combat the miasm by green wood fires. As an example of such a case, I may quote the cholera outbreaks that were reported in the Mainpuri District in the year 1894. The number of villages in this district in which cholera was reported was 100; of this total in 30 instances the outbreak consisted of only a single case; in 12 instances the outbreak consisted of 2 cases reported on the same day; in 15 cases the outbreaks are stated to have lasted one day only, but to have resulted in from 3 to 12 deaths; in 6 instances the outbreaks lasted for two days, resulting in from 2 to 16 deaths. No outbreaks were reported lasting for three days, but from four days onwards there is a gradual increase to the outbreak of longest duration with only one conspicuous break in the series—namely, that between the longest (fifty-one days) and the longest but one (thirty days). If the cases are included in which the outbreaks lasted for only one or two days, then the average length of an outbreak in this district is six days and a quarter. If these cases are not included on the ground that they are "sporadic," then the average duration of the remaining outbreaks is a little over fifteen days. Of the 37 outbreaks included with this limitation, it will be noted that 17 are below the average, while if the whole 100 outbreaks are considered, no less than 72 per cent. lasted for a less time than the average of six days and a quarter.

The above cases clearly show the futility of attempting to deduce the useful effect of green wood fires or any other method of checking cholera, by reference to the length of a single-treated outbreak to the average length of not-treated outbreaks even in the same district. These considerations appear to lead to the conclusion that what is required to prove the utility of a method is a comparison of the average length of a series of treated outbreaks with the average length of a series of not treated outbreaks in the same area. But even this conclusion appears to me scarcely justifiable for a district in which a large proportion of outbreaks last for only one or two days, or at any rate such a comparison would only be of value if based on thousands of outbreaks occurring during a series of years. Such consideration applies to the greater part of the Punjab, where, as I am informed by Surgeon-Captain Roberts, in certain districts as much as 70 per cent. of village outbreaks extend to merely 1 to 5 deaths. But, fortunately for the purpose of testing the permanganate method, in other parts of India cholera outbreaks commonly have a longer duration. Bryden gives particulars of outbreaks recorded among British troops in cantonments in the years 1856-1867; that is to say, before the practice of cholera camping was introduced. The total number was 135. Of these only 14 lasted for a week or less; all the others had a longer duration, the average being about 18 days. The durations of no fewer than 63 of these outbreaks were within five days of the average length. In such a case, owing to the control out-

breaks being so generally of long duration, there was no difficulty at arriving at a just conclusion as to the value of cholera camping when this method was introduced as soon as a sufficient number of instances (comparatively small in this case) could be brought forward. So far as the evidence in my possession goes, in most districts in the North-West Provinces the duration of village outbreaks resembles more that quoted for British troops in cantonments than the instance of the Mainpuri district. The following table gives a summary of the data I have collected:

Locality.	Date.	Number of Outbreaks Reported.	Average Duration in Days.
Agra district... ...	1891	4	10¾
,, ...	1892	27	53½
,, ...	1894	7	41½
Allahabad district ...	1893	11	36½
,, ,, ...	1894	34	151½
,, ,, ...	1895	17	63
Narsingpur district	1891	5	50½
,, ,,	1892	18	57⅝
,, ,,	1893	22 (not treated)	81¼
,, ,,	1895	53 (treated)	24
Nimar district ...	1895	27 (treated)	17
Bijnor district ...	1895	19 (treated)	15½

In the last three groups of outbreaks in the above table the wells had been treated with permanganate, but this was carried out by native subordinates; there are grounds for suspecting that it was not done properly, and I therefore do not propose to quote these cases as evidence either for or against the value of the method. I have no doubt that native subordinates can carry out the process carefully, and that they have done so in many instances during the recent famine, but when the process was being introduced, and before its object was understood, it is probable that in many instances the prejudices of the villagers prevented its having a fair trial. Consequently for the purposes of scientific discussion, I propose to quote in the first instance only cases in which the treatment of the wells was carried out by European officials. Down to the end of 1895 I was able to collect 50 such instances. Out of these 50 instances in 11 cases no success was recorded. An analysis of these 11 failures shows that in every case only a portion of the water supply was treated. In 3 out of these 11 cases, evidence was obtained that nearly all of those attacked after treatment of the wells were persons who had only drunk not-treated water. In one case the treated well was closed, thus driving the inhabitants to use water from other sources, which were shown by later research to contain the cholera microbe.

Of the remaining 39 outbreaks, in 3 cases the treatment of the wells was only commenced more than thirty days after the appearance of the cholera, at a time, that is to say, when it is possible that the disease had already run its natural course.

This leaves us with 36 outbreaks, out of which in 16 cases no further attacks were reported after treatment of the wells. Of the remaining 20 outbreaks, in 10 some "later cases" occurred. By this I mean that attacks were reported as having occurred later than three days after the date of treatment of the wells. In the remaining 10 cases, attacks only occurred during the first three days after the use of permanganate, that is to say during the time covered by the probable incubation period of the disease. The above-mentioned "later cases" were few in number, generally occurring on the fourth or fifth day after treatment of the wells. In one village it was noted that of the two later cases, one was that of a man who had refused to allow his well to be treated.

Since collecting the details of the above 50 outbreaks, I have received but few detailed accounts of the results of employing the method, though its use has widely extended. But during my recent visits to Bombay, I met many sanitary and medical authorities from different parts of India, every one of whom who had used the method was convinced of its utility. But the most authoritative statement that I can quote is the following extract from a report by Mr. Palmer, Superintending Engineer, Allahabad Circle, published in the official report on the recent famine in the North-West Provinces:[1]

The experience of the present famine and latter part of the preceding one affords the highest presumptive evidence of the value of permanganate of potassium as a disinfectant in cholera. During April, 1896, we were attacked by cholera, and could not in any way get rid of it except by marching the people from place to place till it died out. We felt all the time that we were not combating it, but simply running away till it was tired out. Under this difficulty I consulted Professor Hankin, of Agra, on the subject, and he immediately furnished me with instructions on the use of permanganate of potassium, which were issued to all on April 18th, 1896; but the permanganate did not come to hand till May. In the succeeding epidemic of May, 1896, the permanganate was used somewhat perfunctorily and without any understanding of its importance, or much belief in its efficacy, on the part of the officers in charge and the visiting inspectors; its use, however, extended. The disinfection of wells is strongly insisted on in the Public Works Department rules issued in December, 1896, and enforced general attention to the point. The first March epidemic in Allahabad was earlier than expected, and caught us in the midst of a struggle with other difficulties, and without a large enough supply of the drug at hand. A supply of 1,700 lbs. of permanganate was at once ordered (ready made up in 5-lb. boxes of 2-ounce packets) and obtained with difficulty: meanwhile the epidemic raged in just the same ungovernable way as last year. In April we got the drug well distributed at all points, and the disinfection of wells going on everywhere, apparently contaminated or not. After this there was no more mere blind running away from cholera, but we were able to fight it, and we did so with early success in every case excepting the attack in Hamirpur. All officers on the relief works got to thoroughly believe in the efficacy of the drug, and much attention was given to its use. Many zamindars asked for packets of it for use in wells which were not near our works, and many others asked us to disinfect their wells for them. Under the name of "lal dawai" this drug is now familiar in every hamlet of the Bundelkhand districts and is largely believed in. It has been often shown by Professor Hankin how impossible it is to ensure disinfection in many cases; but there is no reasonable doubt that in permanganate of potassium we have a most valuable ally in combating these baneful choleraic epidemics. Altogether we have used up about 1,950 lbs. of the drug; and the small practical point of having it ready made up in 2-ounce packets, 40 packets in a tin box, was found to be of the greatest assistance in facilitating its use. The simple directions now are to go on putting in half a packet at a time till the water retains a faint pink colour for four hours, and to repeat the dose every week, preferably on a Sunday.

Further on in the report on the famine it is stated that permanganate "undoubtedly proved a most useful agent in checking disease." Considering that this evidence is drawn from observations carried out on a population whose power of resisting cholera was probably greatly lessened by the existence of famine, it will be admitted that it is of great value in leading to a conclusion as to the value of permanganate. But it must be borne in mind that its use was only one of the many important administrative measures employed with conspicuous success during the famine to protect the people from disease.

I may conclude this paper with the following extract from the preface of a pamphlet that I published in 1895 with the aim of popularising the method:

It may be well to mention here, as I have done elsewhere, that the method of purifying water by means of permanganate, to which I have been standing as godfather, is by no means new. Permanganate was used in drinking water during the London cholera epidemic of 1866. Its use has been advocated by many sanitary authorities before and since, such as Parkes and Surgeon-Colonel King, the present Sanitary Commissioner of Madras. I am under the impression that it was used more especially with the object of freeing water from organic matter, and that when it was proved that cholera was not due to organic matter as such, but to a specific microbe, the use of permanganate to a great extent went out of fashion, until attention was again drawn to the subject by a paper that I published in November, 1894, in the *Indian Medical Gazette*, and in a paper read in the following month before the Indian Medical Congress.

The method is of interest from the scientific standpoint, as its success appears to give the last proof of the truth of the view, for long so ably advocated by the late Mr. Ernest Hart, that cholera is in most cases a waterborne disease.

REFERENCES.

[1] Narratives and Results of the Measures adopted for the Relief of Famine during the years 1896 and 1897, published in the *North-West Provinces and Oudh Government Gazette* of November 27th, 1897, page 454.

NOTE ON THE DRAINAGE OF LARGE CAVITIES AFTER SURGICAL OPERATIONS.*

BY GEORGE HEATON, M.B.OXON., F.R.C.S.,
Surgeon to the General Hospital, Birmingham.

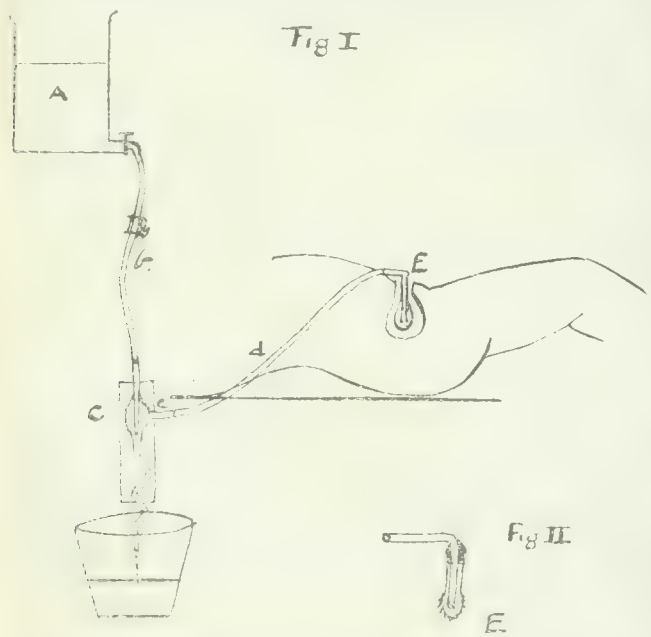
WHEN a hollow organ such as the urinary or gall bladder has been opened, or when a large suppurating cavity has to be drained, the surgeon after his operation often has much difficulty in keeping the patient and his dressings dry and clean.

* Read at a meeting of the Pathological and Clinical Section of the Midland Counties Branch of the British Medical Association.

If it be some intraperitoneal structure, such as a suppurating gall bladder, liver abscess, or suppurating pelvic cyst which has been opened and then stitched to the parietal peritoneum, some efficient method of drainage during the first few days becomes of even vital importance. The leakage of pus or other irritating fluid in the first few hours after the operation, before the cavity of the peritoneum has been shut off by plastic inflammation, has frequently been the cause of a spreading fatal peritonitis. But even when—as in the case of a suprapubic opening into the urinary bladder—a hollow organ has been opened without involving the peritoneum, if the discharge be at all profuse, there will be considerable difficulty in keeping the dressings dry. It is only by an almost constant changing of dressings and the use of large quantities of absorbent materials for collecting the escaping urine that the patient can be kept at all dry and clean; and, despite every care in nursing, the bed is apt to get wet and the patient chilled.

During the past twelve months I have tried several modes of drainage with a view of obviating this, and have at length found one which I believe to be both simple, efficient, and inexpensive. I lay no claim to originality in the principle of the apparatus. The idea, indeed, was suggested by seeing the siphon arrangement used by dentists for the mouth during their operations. Several such siphon drains have also been described by surgeons.

The principle of the apparatus is the keeping up of a continuous slight siphon action from the cavity to be drained by means of a modified Sprengel's pump. Only sufficient suction is required to keep up a siphon action; indeed, any powerful suction is apt to be injurious to the tissues of the patient.



The apparatus (Fig. I) consists of a reservoir (A) capable of holding about two gallons, which is connected by means of the tube (*b*) with the upper limb of a glass Sprengel pump (C), which is usually fixed to one of the legs of the patient's bedstead.

The side tube (*c*) of the pump is connected by means of a second piece of drainage tubing (*d*) with a perforated glass bulb (E) (Figs. I and II), which is placed in the cavity to be drained.

When water is allowed to trickle very slowly from the reservoir (A) through the pump (C) into a pan placed below to receive it, sufficient siphon action is maintained in the side tube (*d*) to remove even the smallest quantity of fluid as it collects in the cavity to be drained, and this passes down with the water from the reservoir into the vessel beneath the bedstead, leaving the patient and his bed quite dry.

The chief difficulty experienced was in securing a satisfactory glass ending to be placed in the cavity. When an ordinary piece of glass tubing was used, or one perforated at the sides (like a Keith's drainage tube) the wall of the cavity to be drained was soon sucked into the open end and lateral openings, giving the patient pain and putting an end to all siphon action.

This difficulty is overcome by having two tubes, an outer one perforated at the sides, which encloses an inner one which is connected with the pump. Fluid as fast as it collects in the cavity trickles through the perforations of the outer tube, and is then sucked up by the open end of the inner tube. Several such glass endings have been tried, varying in size and shape with the wound and cavity to be dressed.

During the past six months I have used this apparatus on six patients after operation.

Two cases of suprapubic drainage of the bladder after removal of villous papillomata.
One case of cholecystotomy.
Two cases of suprapubic cystotomy for intractable cystitis.
One case of suprapubic lithotomy.

The apparatus has answered its purpose well in all. The only case which calls for any comment is one in which I am using it at present in the General Hospital, and which gives a good idea of its efficiency and usefulness.

It is the case of an old Crimean soldier, who was admitted into hospital in July last. He has a fracture of the dorsal spine high up, with typical symptoms of complete severance of the spinal cord at the seat of fracture.

Regular passage of a catheter for the relief of his retention of urine soon set up a cystitis, and at the same time acute bedsores made their appearance on the buttocks and sacrum. Unless a catheter was passed at almost hourly intervals urine dribbles away, wetting his bed and irritating his bedsores.

On July 26th, 1897, with the assistance of Mr. Chavasse, I performed a suprapubic cystotomy. No anæsthetic was needed, as the patient's tissues were completely insensitive. A glass tube was put in the suprapubic wound and connected with the apparatus, and he has worn it ever since—a period of 5 months. The apparatus has during all this time kept him and his bed dry and clean. The bedsores relieved of the irritating urine rapidly healed, and the patient's condition at the present time is almost as good as when he was admitted, though unfortunately a fresh bedsore has recently formed.

The reservoir requires filling twice in twenty four hours, and once each day the glass ending is removed from the patient's bladder in order to cleanse it from the phosphatic deposit which collects in it. Beyond this his bladder requires no attention whatever.

The apparatus, which without the reservoir (for which an ordinary washhand-jug will suffice) costs some five or six shillings, has been made for me by Messrs. Philip Harris and Co., to whom my thanks are due for the care they have shown in carrying out my instructions.

A CASE OF ANTRO-TYMPANIC DISEASE AND BEZOLD'S MASTOID ABSCESS COMPLICATED WITH EXTRADURAL ABSCESS:

PARALYSES ON THE SAME SIDE AS THE LESION SUPERVENING AFTER OPERATION: RECOVERY.

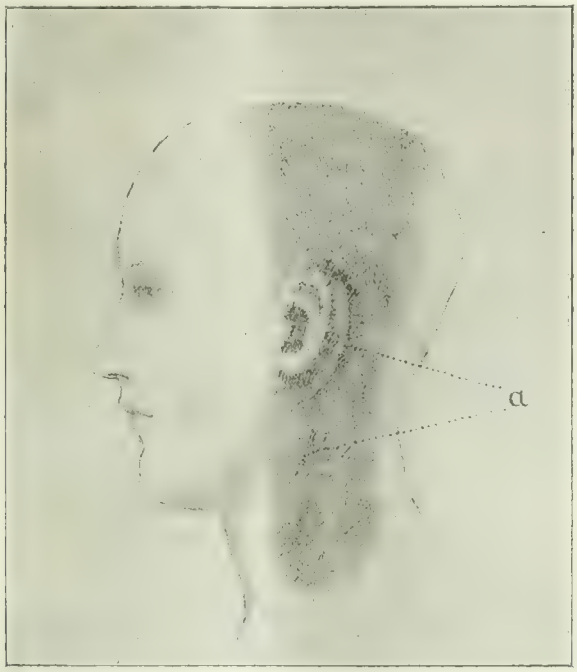
BY T. G. OUSTON, F.R.C.S.ENG.,
Assistant Surgeon, Hospital for Children, Newcastle-on-Tyne.

THE patient, a largely-developed girl, aged 15 years, was first seen by me on October 22nd, 1895. Her mother gave the history of a discharge of "matter" from the left ear for twelve years, of pain in the head, intense at times, for six months, and of a gradually increasing swelling in the left upper part of the neck for two months. There was no history of vomiting, dizziness, or paralysis. The girl was acutely ill, and staggered a little in her walk. The temperature was 103° F., and the pulse 110. A fluctuating, and in places red and œdematous, swelling extended from the vertex in the parietal region, and occupied the anterior and posterior triangles of the left side of the neck to the level of the thyroid cartilages. The head was held stiffly inclined to the left shoulder.

OPERATION.

On October 23rd, 1895, under chloroform, a semilunar incision was made behind the attachments of the pinna, giving exit to fully 12 ounces of offensive pus mixed with dark blood-stained *débris*. The squamo-temporal and parietal bones were found denuded, the external surface of the mastoid process rough, and its tip carious and eroded. The abscess cavity extended deeply into the neck under the sterno-mastoid muscle. After removal of some superficial

mastoid necrosis the mastoid antrum was reached through fairly firm bone at a depth of ⅛ of an inch, and a collection of creamy pus tapped. Several drachms of this pus issued, its white appearance and apparent freedom from odour contrasting strongly with the contents of the more superficial



The shading indicates the extent of the extracranial abscess cavity.

abscess. In enlarging the opening into the antrum downwards, the non-thrombosed lateral sinus was opened, blood welling up suddenly and flooding the wound; the hæmorrhage was very easily stopped by plugging with gauze.

A small loose sequestrum removed from a position above and behind the antral opening disclosed a larger opening, into which a probe passed by its own weight to a vertical depth of 1½ inch. On bending the probe and sweeping it round in a posterior direction, a cavity could be made out between the dura mater and the bone. It was not thought advisable to proceed further by enlarging the opening into the cranial cavity owing to the very septic state of the parts generally, and the condition of the patient. A rubber drainage tube was inserted just within the opening into the cranium.

COURSE SUBSEQUENT TO OPERATION.

The temperature and pulse rapidly came down to and remained at normal, the wound remained sweet, and the condition of the patient appeared for a time satisfactory. The gauze packing was removed from the lateral sinus on the fourth day without hæmorrhage. Marked pulsation was observed in the blood clot occupying the opening into the cranial cavity on removal of the drainage tube.

On November 3rd, 1895, the patient complained that she "saw double." Examination showed complete paralysis of the left external rectus muscle, the pupils were semi-dilated, equal, and reacted sluggishly to light. Intense neuro-retinitis with the usual signs of choked disk were present in both eyes, but rather more intense in the left. Vision tested in a superficial manner appeared normal. Slight left facial paresis was present. The power of grip in the left hand was almost gone, that of the right hand being strong. No paresis of the left leg or *tache cérébrale* could be made out. The patellar reflexes were obtainable with difficulty.

On November 4th, 1895, Professor Oliver kindly discussed with me the advisability of exploring the cerebellum and temporo-sphenoidal lobe. It was decided to wait, as a basal inflammation might account for all the symptoms. The general health of the patient continued to improve, and during the following six weeks the paralyses and neuro-retinitis gradually became less marked. At this time the vision in the right eye was normal, with the left eye $\frac{6}{9}$ distant vision and Jaeger 4 near type were read. On March 25th, 1896, the wounds were entirely healed and the paralyses gone.

On November 3rd, 1897, the patient presented herself in robust health. The left eye showed deterioration of distant vision to $\frac{6}{12}$, the fundus oculi showing partial atrophy of the nerve with a few white patches in the neighbourhood of the papilla. These with a slight otorrhœa being the only adverse signs to be detected.

REMARKS.

The difference in character and complete separation of the two collections of pus is worthy of notice. The extradural abscess in all probability was continuous with one in the cerebellum, with which it communicated through an erosion in the dura mater. The abscess burrowing down in the sheath of the sterno-mastoid followed the course sometimes taken in disease of the tip and inner surface of the mastoid process as described by Bezold. Erosion into the mastoid vein would afford an explanation of the presence of the altered blood clot found in this abscess. The explanation of the paralyses on the same side of the body as the lesion is explained as an involvement of the motor fibres in the inflammatory process after their decussation. The possibility of this is a fact worth remembering in cases presenting one-sided symptoms in which cerebral abscess of the opposite side is suspected, especially should middle-ear mischief be present on both sides. The absence of diminution of vision during severe neuro-retinitis in this class of case, with greater intensity on the same side as the lesion, is in accordance with the signs noticed by other observers.

A CASE OF CHRONIC SUPPURATIVE MIDDLE EAR DISEASE WITH INTRACRANIAL COMPLICATIONS.

BY ROBERT H. WOODS, M.B., F.R.C.S.I.,
Throat and Ear Surgeon to the Richmond Hospital, Dublin.

THE time is within the recollection of the youngest of us when intracranial abscess meant certain death. To-day it is not too much to say that with proper treatment the chances of recovery are distinctly in the patient's favour. This change is partly the result of the spirit of investigation which in the recent past has dominated the work of our profession and partly to the genius of one man whose achievements have been something for the rest of us to wonder at.

Professor Macewen was the first to co-ordinate and elevate the treatment of brain abscess, and to him must be ascribed the credit of having shown the laws to which the condition is subject and the evidences by which its presence, from being a matter of conjecture, becomes one of high probability. For my own part I must express my indebtedness to him for any knowledge I may possess on the subject or any success that may have attended my efforts in this direction.

I hope the following case will have sufficient interest to warrant my bringing it under notice:—

M. C., aged 28, railway guard, was admitted to the Hardwicke Hospital under the care of Dr. O'Carroll on September 21st, 1895, having been sent in by Dr. O'Connell Redmond, who suspected intracranial mischief as the cause of his malady.

Previous History.—Fifteen years previously he had scarlatina. For the past seven years his left ear has been intermittently discharging fœtid pus. He suffered from chronic constipation.

History of the Attack.—The discharge from the ear stopped on September 15th (that is, seven days before admission) and he was attacked by violent throbbing headache, principally affecting the left side and occipital region. He lost appetite, became thirsty, shivered repeatedly, and was inclined to be sick but did not actually vomit.

Condition on Admission.—The patient looked dazed. His pupils, especially the right, were dilated, but reacted slowly to accommodation and to light. The eyes were prominent, the lids not touching the corneæ. The tongue was covered with fur, brown in the middle and white towards the tip and edges. He was perspiring freely and the body was covered with a sudaminous rash. He complained of great pain in the abdomen, especially in the right iliac region. A loud systolic murmer was to be heard in the mitral area and could be followed into the axilla. The upper angle of the left posterior triangle of the neck just at the base of the skull was very tender, especially on firm pressure. His stools were yellowish and fluid. He had no paralysis motor or sensory.

The case was one of some obscurity, and although the likelihood of the brain being affected was not lost sight of, the first idea was that it was a case of severe typhoid fever;

and this presumption was favoured by the evidence afforded by the character of the stools, the tenderness and gurgling in the right iliac fossa, and the absence of symptoms that could reasonably be taken as pointing to any other cause for the malady. No typhoid rash, however, could be seen. At Dr. O'Carroll's request I examined him on September 30th.

The body was almost constantly bathed in sweat. His breath had a very disagreeable odour, and the teeth were covered with sordes. He frequently lost consciousness, was unable to recognise his relatives, and became very restless, getting out of bed and tossing the clothes about. Cerebration was slow; even in his more lucid moments it was difficult to get him to answer questions coherently. When asked his address he gave a former one, and he was unable to name familiar objects, though he understood and could tell their function. Thus, when shown a bunch of keys he could not by any effort think of their name, though when asked what they were for he had no hesitation in replying that they were for opening locks and doors. Similarly, when shown a pocket knife, without being able to say what it was, he could tell that it was useful for cutting tobacco, and if in the same moment he was shown a plug of tobacco he had the same difficulty in naming it as if he had not used the term at all. Or if one persisted in the question he might call it an overcoat or a walking stick, or something equally absurd, though he was quite aware it was used for smoking or chewing. His pulse was feeble, but not frequent. He was emaciating rapidly in spite of the fact that he took fluid nourishment fairly well. He complained of thirst, a bad taste in the mouth, and of frontal and occipital headache. He was on one occasion observed to have a slight degree of opisthotonos during a rigor. Ophthalmoscopic examination showed that he had double optic neuritis. The urine (sp. gr. 1037) was acid, and there was a precipitate of urates and a trace of albumen, but no sugar.

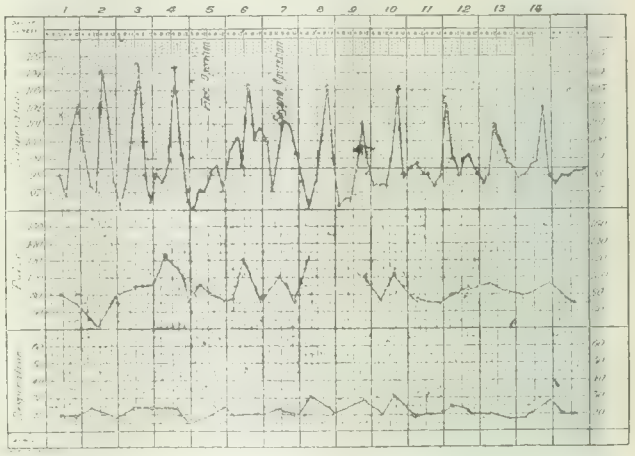
His temperature was now taken every four hours, and the difference between the curve on the ordinary clinical chart and that of the four-hourly chart was most marked and most instructive. The ordinary chart, which for curiosity's sake was marked at the same time, showed a curve varying two or three degrees from day to day without any regularity, and so devoid of character that absolutely nothing could be learnt from its inspection, or, worse still, whatever was learnt was wrong. Some idea of its deception may be formed from the fact that on October 3rd, when the patient was at his worst, when, as shown by the four-hourly chart, his maximum and minimum temperatures for the day differed by 8.5° F., the ordinary chart told nothing more than that at a certain hour in the morning his temperature had been 98° F., and in the evening 99° F., a not very serious condition if the chart was the only guide to one's opinion. This is as good an illustration as one can have of the danger of using ordinary temperature charts where intracranial pyogenic trouble is suspected.

On examining the four-hourly chart it will be seen that on the days immediately preceding the first operation there is the most marked similarity between the sequence of events. On each day the morning temperature was subnormal by a degree or even two, in the middle of the day a rise coincident with rigor occurred, the temperature passing 104° F., followed by a fall to subnormal again as night approached.

After we had thus observed him a few days there seemed to be no doubt that whether he had typhoid fever or not he was suffering from intracranial mischief, the result of the suppurative ear disease, and from the character of the temperature chart the tenderness in the posterior triangle of the neck, and other symptoms, a diagnosis was made of sigmoid sinus thrombosis.

First Operation, October 5th, 1895.—The patient being too ill for removal to the Surgical Hospital was chloroformed in bed. A vertical incision was made immediately behind the left ear, and the bone removed from Birmingham's triangle with mallet and gouge until the mastoid antrum was exposed. From this cavity a quantity of very fœtid cholesteatomatous *débris* and granulation tissue were removed, and exit given to a few drops of greenish pus. The antral walls were inspected, but no matter could be seen escaping. The bony opening was then enlarged backwards until the groove for the sigmoid sinus was opened up. The sinus was of a dark greenish colour, the walls softened, and the lumen plugged with a septic thrombus. The sinus was slit open and the clot scraped away with a Volckmann's spoon. The dura mater was then lifted gently away from the bone in various directions. An abscess was found on the cerebellar aspect of the petrous bone, and about two drachms of fœtid pus evacuated. This was probably extradural. The cavity was syringed out with carbolic lotion, a drainage tube inserted, and the outer portion dressed with iodoform gauze.

The patient was much benefited by the operation, but not so much as we expected. The temperature was lower, the pain and perspiration less, but his mental condition remained blurred and he had the same form of amnesia and to quite the same degree as before operation. Professor Macewen points out that the symptoms of extradural abscess or sigmoid sinus thrombosis always dominate and mask those of brain abscess when they occur together, and that it is not until the dural condition is relieved that reliable evidence of the brain abscess can be obtained. This was clearly a case in point, and it was concluded that there was yet another lesion, probably brain abscess, unrelieved. The symptoms pointed rather towards the cerebrum than the cerebellum as the seat of the trouble; but the fact that I had already found pus in the cerebellar fossa warped my judgment to the extent of making me believe the cerebellum to be the more likely place. I, however, decided to place the exploratory wound so as to have access to both cerebrum and cerebellum.



Second Operation, October 7th.—The patient being still too ill for removal, this was also performed as he lay in bed. A trephine hole was made behind and above the mastoid process, opening directly over the lateral sinus so that access could be had both above and below the tentorium. Great care was taken to prevent contamination from the mastoid wound, which was now discharging fœtid pus. A hollow needle was passed into the cerebellum three times with negative result, so it was decided to try above the tentorium. The punctures in the dura mater were therefore sealed by being liberally sponged with compound tincture of benzoin to ensure against contamination from the neighbouring pus. In order to get quite clear of the lateral sinus, it was found necessary to enlarge the trephine hole slightly upwards by taking a half moon out of its upper edge; this having been done the temporo-sphenoidal lobe was tried, and at the third insertion of the needle we were rewarded by the appearance of pus. A crucial incision was made in the dura mater, and a pair of catch forceps entered along the track of the needle and withdrawn with the blades open. Exit was thus given to over 4 drachms of horribly fœtid pus together with numerous brain sloughs. The cavity was washed out with weak carbolic lotion and a drainage tube inserted. Notwithstanding the fact that he had a mitral murmur, we felt bound at both operations to give him chloroform rather than ether on account of the unsuitability of the latter in such cases, and it is worth noting that he took the anæsthetic perfectly.

After-History.—The pulse-rate, which before operation was 72, rose after evacuation of the abscess to 96. The patient made steady, if somewhat slow, progress to complete recovery. He complained a few times of pain in various point of the chest; he had slight cough, but there were no physical signs. Ten days after the first operation there was no albumen in the urine; the temperature was normal, and so remained during his stay in hospital, except for three temporary rises, due on two occasions to blocking of the cerebellar drainage tube by sloughs, and on the third to a bud of granulation tissue, which grew into the lumen of the tube through a hole in its side. From the beginning of the attack until about October 15th—that is, for about a calendar month—his mind was a complete blank. He remembered nothing of the operations, nor the fact that he had consented to their performance. He slowly recovered from his amnesia by first being able to name more familiar objects and afterwards others. Though when in health one of the most placid of men, during convalescence he was emotional and excitable; more than once the idea possessed him that individual nurses had treated him unkindly, whereupon he denounced them with a degree of fervour and sincerity born only of the deepest conviction, but for which he was truly penitent when the enormity of his offence was later on brought home to him. The temporo-sphenoidal drainage tube was removed before many days, the tube to the cerebellar fossa was kept in for several weeks, and withdrawn very gradually. The wounds were quite dry, and there was no appearance of discharge from the ear. On November 14th he was allowed up. The rapidity with which he lost flesh during his illness was only exceeded by the rate at which he fattened during convalescence.

Vision.—On December 2nd his field of vision was examined by Mr. Swanzy, who found that he suffered from incomplete right homonymous hemianopsia, due probably to implication of some of the optic radiations in the temporo-sphenoidal lobe. Six weeks later this had so far improved as not to interfere with the performance of his duty as a railway man.

Epileptiform Seizures.—On December 14th, 1896, he was discharged from hospital, and a couple of weeks afterwards returned to his work, where he is still employed, though not as guard. On two occasions subsequent to

his leaving hospital he was attacked by epileptiform convulsions. On February 11th, 1896, while at work his head swam and ached; on getting home he became faint, and the head and eyes were involuntarily turned towards the right as if trying to look over the shoulder, the arms and legs got stiff, his skin greatly congested, and he lost consciousness for fifteen minutes, after which interval he recovered. The second attack happened about six weeks later, and was of a similar type. It would seem as if these two seizures were in some way dependent on the state of his bowels. On both occasions he was badly constipated, and was completely relieved by purging. Since he has paid more attention to his habits he has not for over twelve months been similarly troubled.

Mental Condition.—He is at the present time in full possession of all his faculties. The ear is perfectly dry, and he is able to discharge with efficiency his duty as keeper of a railway crossing.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ON THE USE OF NITROUS OXIDE GAS FOR PROLONGED OPERATIONS.

IN his interesting communication to the British Medical Association, recently reported,[1] Dr. Kemp remarks that "As the result of his experiments (on animals) it is strongly suggested that nitrous oxide gas combined with oxygen would be an appropriate anæsthetic for prolonged operations. A deep and smooth anæsthesia can be maintained for a sufficient length of time to warrant a wider trial in major surgery for long and severe operations. The gas is many times safer than either chloroform or ether, and after-vomiting is practically never present if the ordinary precautions of feeding be observed."

I have anticipated this suggestion, and as the result of clinical experience have arrived at very similar conclusions. During the past two years I have frequently given both nitrous oxide gas and air, and also gas mixed with oxygen, in preference to ether for long operations, with in most cases satisfactory results. The long prevalent idea that it is dangerous or injurious to prolong nitrous oxide anæsthesia is not, I think, supported by facts. I have given pure gas, with occasional breaths of air, for periods of over ten minutes in nearly 200 cases, the longest administration in the series lasting fifty minutes, without the occurrence of any disquieting symptoms, nor have I seen anything to suggest that an undue strain is thrown upon the right side of the heart. The patients, too, recover quickly, and no bad after-effects ensue either on the same or on the following day. But the anæsthesia thus produced is far inferior to that obtainable by nitrous oxide mixed with oxygen.

Mr. Gardner[2] has recently called attention to the value of this mixture for some of the operations of *minor* surgery, the longest administration he records lasting fourteen minutes. There are, however, many operations in *major* surgery for which this mixture is suitable, sometimes even preferable to chloroform or ether. I have given the mixture for periods varying from fifteen to sixty-five minutes in nearly 150 cases for such operations as radical cure of hernia and hydrocele, Syme's amputation, amputation of leg, removal of polypi and exostoses from the external ear, trephining long bones, removal of lipomata, adenomata of the breast, etc. In one case, a girl aged 14, anæsthesia was maintained for fifty-five minutes while the mastoid antrum was trephined. The longest case is that of a man aged 20, in whom varicose veins of the thigh and leg were excised, the operation lasting one hour and five minutes. Except for three or four slight movements of the leg, absolutely quiet and smooth anæsthesia was obtained, and no reflex movements occurred while the skin was being sutured. The patient vomited once, but was quite ready for his tea on his return to the ward.

All persons are not equally good subjects for gas. Heavy smokers occasionally, but more especially heavy drinkers, often struggle violently under gas, but even when this is so at first, these patients often settle down after four or five minutes, and take the anæsthetic fairly well.

Gas and oxygen is, I think, a highly valuable anæsthetic in cases of extensive cellulitic inflammation occuring in broken-down alcoholic subjects, for in these patients the risks of either chloroform or ether are often so much increased that although, as pointed out above, such persons are especially prone to struggle, it is, I venture to think, worth while to put up with this inconvenience for the sake of the greater safety of the patient's life. Children as a rule take the mixture well; the youngest patient I have notes of was aged 1¾ year, in whom smooth anæsthesia was maintained for fifteen minutes while a tuberculous abscess was scraped, injected with iodoform emulsion and sewn up; the oldest a man aged 74. As far as my experience goes, patients with pyæmia, bronchitis, and even acute pneumonia take the mixture well. As regards after-effects, my experience is that the patients often vomit slightly at the close of a long operation, but this is seldom repeated, and the patient is quite himself at the end of five or ten minutes. The only disadvantage is the difficulty of invariably maintaining absolutely quiet anæsthesia during the whole period of a long operation, but this, I believe, is a difficulty due rather to want of experience than to any defect in the method itself. In conclusion, gas and oxygen may with advantage be substituted for ether in a large number of the cases in which that anæsthetic is usually given; sometimes it may be preferable even to chloroform, and, being undoubtedly the safest anæsthetic we possess, it merits a wider trial in major surgery.

HERBERT J. PATERSON,
Senior Assistant Anæsthetist, St. Bartholomew's Hospital.

[1] BRITISH MEDICAL JOURNAL, November 20th, 1897.
[2] *Lancet*, June 12th, 1897.

TWO CASES OF POISONING WITH CARLINE THISTLE.

I THINK these cases are worth recording. They occurred at Bahria, Citta Vecchia, in the third week of November. The carline thistle (local name, Xeukit-il-Miskta) is the carlina gummifera (Dec.), atractylis gummifera (Lin.), a plant common in Malta and in other countries on the shores of the Mediterranean. It is notable for its root, which can grow to enormous proportions, and for its purple composite flower surrounded by radical spinous leaves.

Three children ate the root of one of these plants, which they cut with a knife; two of them, a girl aged 8 years and a boy aged 9 eating it rather freely. They ate it on a Wednesday afternoon, and did not complain at all before the catastrophe came on. On Thursday evening the girl was taken ill, and the parents were soon alarmed at the stertorous breathing and at the drowsiness of the child. There was some retching, but no actual vomiting. Early in the morning the child became collapsed and died before any medical aid could be got. In the evening of Friday the boy returned home and refused to eat. He was told that the girl had died, and he confessed that they had been eating some roots the day before. He went to bed, and soon after the family were startled at his difficult breathing. The father of the girl (the children were cousins) was sent for, and he declared that his daughter had suffered in the same way. The district medical officer was hastily called, but it was too late, as the boy died a few hours after comatose and with marked signs of asphyxia.

At the *post mortem* examination the two bodies had the same appearance. The tongue protruded slightly between the lips, the pupils were greatly dilated. The appearance consisted in a general congestion in the venous system. In the girl all the organs were highly congested, the lungs and the brains especially so. The stomach showed capillary injection in limited areas. It contained a brown liquid in which fibres of the ingested root were identified. The intestines were congested and contained abundant solid fæces. The heart in both cases was flaccid, and contained a little dark fluid blood.

In the boy the congestion was not so well marked in the organs, with the exception of the brain, of which the veins were injected to the extreme. No trace of the root could be found in the stomach, but the fibres were found abundantly in the intestines, which contained a very great quantity of solid fæces. No attempt was made to examine chemically the organs, as the poisonous principle of the plant is not known to me. I have searched all the books of botany and medical jurisprudence which I could find here, but no cases of poisoning by this plant are fully described, nor is the active principle of the plant mentioned anywhere. The only literature on the subject I am aware of is an article in the *Barth*, September, 1875, an extinct local medical paper,

which, among others, refers to a communication by Lefranc in 1866 to the Botanic Society of France. No definite notions on the active principle of the plant can be gathered from that article, and I could not obtain the *Bulletin* of the Botanic Society of France.

The third child, a boy of about 12 years of age, ate a small quantity of the root. Up to Saturday morning he did not complain of the least ailment, but he was given a good dose of castor oil, which he very much needed, and is well.

THEM. ZAMMIT, M.D.
The Laboratory, Public Health Department, Malta.

A CASE OF FIBRINOUS RHINITIS.

THE following are the chief points observed in a case of this uncommon disease. A boy, aged 10, was brought on account of bloody discharge of the nose for the last three days. There was a history of nasal obstruction on the left side for a fortnight following a bad cold, and of slight ozæna for two days. He was otherwise well, and in his usual good health. There was no history of sore throat, or other illness, nor of the introduction of a foreign body. The pharynx and naso-pharynx were normal, and the nose was healthy on the right side; on the left it was completely obstructed owing to a purulent-looking mass filling the narrow space between the deflected septum and turbinates. This mass came away like a pledget of wool, in the form of a rolled-up membrane, its consistence being between that of coagulated muco-pus and a diphtherial cast. Under the microscope it was found to be partly muco-pus, but chiefly fibrinous, but without definite cellular structure. Further examination of the nasal chamber showed the mucous membrane sodden, and in one spot red and raw, the passage itself being little more than a chink. No foreign body or polypus was found, though careful search was made.

Under the influence of syringing with an antiseptic and alkaline lotion, the mucous membrane became healthier. As this occurred the new epithelium could be seen forming a whitish surface, which after a time came away in flakes, leaving a red surface beneath. This process recurred in a decreasing degree until at the end of six weeks the mucous membrane was quite normal. During this time no foreign body or other cause could be discovered, and there were no constitutional symptoms whatever.

The condition at first suggested "membranous" rhinitis as appropriate, but to call it membranous in the sense that a diphtherial cast is so would be as misleading clinically as to consider it mere secretion; it was something between the two. The total absence of constitutional symptoms also made it highly improbable that the disease bore any relation to diphtheria.

With the few descriptions of cases of fibrinous rhinitis, however, it corresponded very closely, clinically and pathologically. No doubt other forms of rhinitis may be "fibrinous" to some extent, and though the line drawn may be somewhat arbitrary, yet this disease seems a fairly well-defined one.

Clinically, somewhat similar appearances are seen after the application of the cautery or caustics, and also in the new epithelium growing over a cut surface, as, for instance, after removal of a spur, but in this case these causes could be excluded; there was, however, slight superficial ulceration.

Noteworthy points in the case were: 1. The marked nasal stenosis. 2. The fibrinous nature of the exudation with the recurring exfoliation of the epithelium. 3. The complete absence of constitutional symptoms.

Clinically, the features of the case suggested that the stenosis, causing pent-up discharge and secretion, was one of the chief causes.

On the question whether such an affection of the mucous membrane is associated with a particular micro-organism as has been suggested, this case, I regret to say, throws no light. Bacteriological examination was not satisfactory, being limited to stained cover-glass preparations; no bacilli were found, but no cultivations were taken.

I have once seen a somewhat similar condition, and that was in a child where both sides were affected; in that case cultures were taken by Mr. St. George Reid, who found micrococcus albus liquefaciens and bacillus termo of Vignal, but no others.

Dulwich. F. J. DIXON, M.A., M.B., B.C.

TWO CASES OF NIGHT BLINDNESS.

THE following cases of night blindness are interesting specially as the subject has been recently brought forward at the annual meeting in Montreal:

A. and B., brothers, aged 12 and 5 years respectively, are said by their parents to have always been quite blind at night, so much so that they are quite unable to find their way home if left alone away from the house after dark. This was noticed from the time that they first moved about alone. These are the only two boys in a family of five, the three girls not having the least difficulty in seeing at night. The sight of the boys by day has always been excellent. They are both quite up to the average in intellect.

I was only able to test the acuteness of vision and fields of the elder boy, the other being too young to give reliable answers. In the elder boy the sight was excellent by day (V.=$\frac{6}{6}$ easily). The fields were much contracted, their diameter not being more than a quarter of the normal. He distinguished colours perfectly.

Both boys were examined with the ophthalmoscope, and in both very little abnormality was to be discovered. There was slight pallor of the discs, and the retinal arteries were perhaps a little small. Tracing the arteries towards the periphery, their sheaths were found in places to be thickened, as shown by white lines running along each side of them, but this was not uniformly the case. At the extreme periphery of the fundus there seemed to be some thinning of the retina, making the choroidal vessels stand out more clearly than elsewhere; but nowhere could I discover any disturbance of pigment or any pigment arranged in the reticulated manner characteristic of retinitis pigmentosa.

Though the characteristic signs were wanting, one must consider these to be cases of retinitis pigmentosa. It is remarkable that the boys only were affected in the family. This agrees with the known fact that retinitis pigmentosa is more common in males than females. I examined one of the girls, and her fields were normal. The parents knew of none of their relatives who were affected in the same way. It is to be noted, however, that the parents were second cousins, and this supports the theory that consanguinity is in many cases a cause of the disease.

Kimberley, Cape Colony. H. SYMONDS, M.D.

NECROPSY ON A CASE OF INFECTIOUS JAUNDICE (WEIL'S DISEASE).

THIS was the only fatal case out of forty-five patients who suffered from the disease. The cases, which came under my notice some years ago, were all children from 5 to 15 years of age, except one man of 25 years. They all ran a fairly typical course, and there was not anything in the early symptoms to suggest that this was an especially severe case. Death took place on the tenth day of illness from asthenia caused by uncontrollable vomiting and diarrhœa.

The body, that of a girl of 10 years, was wasted, and stained a deep yellow colour. There were numerous petechiæ about the ankles, the inner side of the thighs, and the lower part of the abdomen. The two upper central incisors were short and notched; many of the other teeth were carious. The nose was well formed, and there were no signs of interstitial keratitis. The abdomen contained about a quart of reddish-brown fluid. The peritoneum, both parietal and especially intestinal, presented numerous ecchymoses, varying in size from a millet seed to a threepenny piece. The mesenteric veins were gorged with blood. The intestines, large and small, were absolutely empty. They presented no lesion on the internal surface. The gall bladder was empty. The liver appeared larger than normal (no scales were available for weighing), and so soft that a finger could be pushed into it. It seemed in a state of disintegration, and, in spots, was almost fluid, but there was no sign of pus. It was yellow on section, and emitted a faint but unusual and unpleasant smell, similar to a smell which had been noticed in life in this and some other cases. The spleen was congested and friable, and about three times the usual size. The kidneys

were congested and soft, the calices, pelvis, and ureters bile-stained. The pleural cavities contained a little yellow fluid. The lungs were pale and collapsed, and showed numerous small ecchymoses. The heart and large vessels were empty, the valves normal, the endocardium spotted with petechiæ, and the pericardium contained a little yellow fluid.

Newquay. N. E. NORWAY, M.R.C.S., L.R.C.P.

SPURIOUS ABORTION.

IN connection with the cases published by Dr. Eden in the BRITISH MEDICAL JOURNAL of November 20th, 1897, the following case may be of interest.

E. J., aged 18, unmarried, and living with her parents, was brought to me on June 28th, 1897, with the history of being four weeks late in her menstrual period. She began to menstruate at 15, and had previously been perfectly regular. Amenorrhœa continued a further fortnight (ten weeks altogether). The flow then commenced, and continued irregularly, but not more profusely than usual, for a few days over a fortnight, ceasing on July 29th. On August 11th, while spending the night in an excursion train, slight hæmorrhage began, with pain, trifling at first, but rapidly increasing in severity. On arrival at home the pain became more acute, and continued throughout the next day, while the hæmorrhage remained slight. When seen she was in great pain, which was continuous, with exacerbations at irregular intervals. There was slight bleeding from the vagina, but under the circumstances no vaginal examination was made The uterus could just be felt suprapubically on deep pressure. There was no enlargement nor tenderness of the breasts; the nipples and areolæ were normal, and careful pressure failed to cause any discharge to appear at the nipple. Early the next morning she passed a fleshy mass, which, on superficial examination, appeared to be an ordinary abortion. A more careful inspection, however, showed it to be a cast of the interior of the uterus, 3 inches by 2 inches, of pyriform shape, and containing fluid in the interior. The outer surface was rough, fleshy, and irregular, with fissures traversing it in various directions. On opening it up, about half an ounce of clear fluid escaped, but no embryo with it. In thickness the wall averaged a quarter of an inch. The interior was lined by smooth, glistening membrane, homogeneous throughout, and the most careful examination failed to detect any trace of an embryo, or any sign of placental tissue, nor could any spot or depression be found suggestive of where an ovum had been implanted. Unfortunately, the specimen was thrown away, and no microscopical examination could be made.

The patient made an uneventful recovery, and has been in perfect health since; she has menstruated regularly three times. During the period of amenorrhœa she was in her usual health, with the exception of occasional slight headaches; she had no sickness. She has always been under immediate supervision, and her behaviour throughout has been in no way different from usual.

The question arises, What was the nature of the cast? The presumption is strongly against pregnancy. Apart from the absence of physical signs, notably in the breast, which would probably have been recognisable at that period (fifteenth week), supposing her to have been pregnant, the circumstances of the case render the possibility of her having been exposed to the risk of conception extremely slight. Too much reliance must not, however, be placed on the latter, as we know how pregnancy may occur under the most exceptional circumstances. If she was pregnant, and the case an example of "missed" abortion, the ovum must have perished very early and its absorption been complete, as no trace of it was found in the fluid that escaped, or of its site in the wall of the cast. Extrauterine gestation is negatived by the fact of its having reached the fifteenth week, supposing her to have been pregnant, without giving rise to symptoms, and by her complete recovery. There remains the third possibility of spurious abortion. The evidence for this, though incomplete, is highly suggestive. It is to be regretted that the circumstances prevented a vaginal examination being made, and that the cast was not examined microscopically.

Harrogate. W. EDGECOMBE, M.D.Lond., F.R.C.S.Eng.

SOME time ago I was sent for to a lady with a history of chronic dysmenorrhœa and menorrhagia. Menstruation had been suspended for a short time, and when I arrived, to all appearances abortion had occurred. I was shown a pear-shaped mass which exactly coincided with the idea of abortion, but on closer examination I found that there was at the narrower end an opening into a widening cavity in the mass. On examination I found the os a good deal dilated, and a large cavity inside a hypertrophied cervix, the opening from the cervix to the uterus being quite closed. The expelled body was undoubtedly a very thick cast of the cavity existing between the two openings of the cervix uteri. I do not think it was a case of pregnancy occurring within the cervix, but simply a casting off of an extremely hypertrophied lining of the cervix uteri. I did not examine the body microscopically.

Highgate. HUGH WOODS.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

MILITARY HOSPITAL, GLENCORSE, N.B.

CASE OF ADDISON'S DISEASE RAPIDLY FATAL.

(By WILLIAM ALEXANDER, M.D., Brigade-Surgeon-Lieutenant-Colonel, Portobello, N.B.)

IN former years Addison's disease was supposed by some to cause death by starvation, and no doubt the occlusion of the thoracic duct in the inflammatory process occurring in the course of its progress gives grounds for such beliefs. In recent years, however, it has been demonstrated that men can live for many weeks without food, and the fact that a strongly developed man should die within a fortnight of the time he was actively engaged in his duties shows that there is another factor engaged which appears to have a specific toxic effect on the heart, and thus produces death.

The following case may be of interest: Sergeant T. H., aged 29, was admitted to hospital on October 10th, 1891, having been up till that date engaged as drill instructor. Previous history: He appears to have had jaundice in Egypt in 1882, but recovered, and was always healthy. He was very fond of cycling, and had had one or two heavy falls, of which one was particularly severe. It gave him a severe shock, from which, however, he speedily recovered. His comrades observed that he had been failing in health for a considerable time, but he continued at his duty and amusements till his admission. The physical signs were bronzing of face, neck, hands, knees, and genitals. The symptoms were general weakness, with a pulse very slow (40), weak, and compressible. There was no pain in epigastrium, but a feeling of vertigo was complained of. The tongue coated and dry, and the temperature 98.7° in the morning and 99.8° in the evening.

On October 14th he complained of irritability of stomach, general restlessness, a feeling of sinking and nausea, and indefinite pain about the epigastrium. The temperature was normal, the pulse very slow and weak.

The treatment consisted chiefly in easily-assimilated food and stimulants, which, however, had no apparent effect, as debility increased and the heart's action became slower and weaker till October 19th, when the pulse was not perceptible at the wrist. He died at 3.35 P.M. on that date, being the tenth day after admission.

Post-mortem Appearances Nineteen Hours after Death.—The body was well nourished. Muscular development was great. The face, neck, hands and knees on exposed parts of a dark sunburnt colour. The genitals very dark. The sclerotic was clear. The liver was very dark and stained in the vicinity of gall bladder, which was distended with bile. The gall bladder was adherent to the duodenum, which was also stained with bile. This part of the intestine was inflamed for about 12 inches, and dilated into a pouch below the pylorus. The mesenteric glands were enlarged, and, on section, showed a yellow cheesy matter. The parts in the vicinity of the pancreas were agglomerated by recent inflammatory products, and were with difficulty distinguished. The suprarenal cap-

sules were seen prominent on each side, though involved in the surrounding inflammatory products; the right was the larger—it weighed 1 ounce; the left weighed ½ ounce. On section they were found to be studded with solid yellow cheesy matter. The thoracic duct could not be traced. The kidneys were somewhat congested; the right weighed 7 ounces, the left 5 ounces. The spleen was healthy. The small intestine was empty, and the colon and rectum much contracted, showing that the process of starvation was in progress. The lungs were healthy, and presented no adhesions. The heart was fatty; it weighed 11 ounces; the valves were healthy. A large fibrous clot occupied the right side; the left was empty.

An account of the case and specimens of the diseased portions were at the time, by kind permission, forwarded to the Professor of Medicine, Edinburgh University.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

J. F. Payne, M.D., President, in the Chair.

Tuesday, January 18th, 1898.

Papilliferous Cyst of a Sudoriparous Gland from the Axilla.

Mr. H. B. Robinson exhibited microscopic sections of the above, which was removed from the axilla of a girl aged 13. The cyst was about the size of a Barcelona nut, and had been noticed only a short time; its contents were not sebaceous in character but a clear fluid, and it lay embedded in the corium. The papillary processes projecting into the cavity were invested with columnar epithelium. The author had been unable to find the record of any similar case. Unna had described small cysts of the ducts of the sweat glands but none of the coils.

The Blood from a Case of Pemphigus.

Dr. C. R. Drysdale showed preparations of the blood from a case of pemphigus in a woman aged 61 years. The chief feature was the great increase in the number of the eosinophile cells. There were many other diseases, however, in which a similar increase was met with, and no diagnostic importance, therefore, could be attached to it.

Dr. Galloway, after noticing facts to the same effect, stated that in the fluid of ordinary blisters the same cells were to be found in considerable numbers.

Dr. Whitfield had observed in a case of dermatitis herpetiformis under Mr. Malcolm Morris as many as 20 per cent. of eosinophile cells. Although the fluid from ordinary blisters in healthy individuals contained considerable numbers of eosinophile cells, they were not in such excess as in the fluid from the vesicles of pemphigus. The granules in the cells were not so large and spherical as in the eosinophile cells of normal blood.

Dr. Lazarus-Barlow also noticed the smaller size of the granules in the cells exhibited; judging from the fact, however, that the nuclei were horseshoe shaped, he thought the cells probably true eosinophiles somewhat altered in character. The number of such cells was greater in the fluid of pemphigus blisters than in that of others, a difference possibly dependent upon the lowered general condition. It was important, also, to remember that the number varied in the blood taken at different depths from the surface.

The President referred to the earlier observation of Sir James Paget, to the effect that the blister fluid of a person out of health contained more corpuscles than that of another, though at that time the different classes of leucocyte had not been so clearly differentiated.

Intestine Removed by Enterectomy.

Mr. F. C. Wallis recounted the case of a woman in whom acute intestinal obstruction followed a gynæcological operation; the abdomen was opened and a fæcal fistula formed; the piece of intestine concerned was afterwards excised. The author remarked upon the slenderness of the adhesions that were found, and upon what he considered a fatty degeneration of the muscular wall of the gut.

Acute Appendicitis.

Mr. F. C. Wallis also recorded a case of this condition which presented the clinical signs of acute obstruction arising after a heavy meal. The appendix was excised; an abscess was found at its base. During the operation the appendix lay for a short time in contact with the incised abdominal parietes, and in these a putrid abscess subsequently formed, a result evidently due to septic inoculation.

Appendicitis with Suppuration of the Right Suprarenal Capsule.

Mr. A. W. Addinsell remarked upon the rarity of abscess of the suprarenal body, and especially was the case unusual in that examination showed no evidence of tuberculous disease. The patient was a man who had contracted Malta fever, and this was thought to complicate the appendicitis. Death took place after seven weeks, the appendix being found after death dilated and filled with fæces; there was no pus in the peritoneal cavity. The left kidney and spleen were enlarged; the left suprarenal capsule was the size of a tangerine orange, and was filled with ordinary pus. It was noteworthy that the pulse remained throughout full and tense, a result possibly to be associated with irritation of the suprarenal; the temperature was high. There was a history of a strain, and this possibly was connected with the lesion of the body in question.

Mr. F. C. Wallis could corroborate the observation on the pulse; it was also noteworthy from a surgical aspect that when the abdomen was opened no trace of any enlargement of the appendix was discernible, though fulness had been detected some short time before the operation, as examination after death showed that this arose from the close adhesions around the appendix.

Dr. Bertram Abrahams observed that as only one adrenal was affected, Addison's disease was out of the question, though the author of the paper had discussed its possibility; the abscess did not appear to be tuberculous. He did not follow the author's suggestion in regard to suprarenal irritation; all that was known was that the injection of suprarenal extract led to a transitory increase in blood pressure. The use of the extract in diabetes insipidus caused no permanent rise in the blood pressure. It would be worth inquiring into the bacteriological causes of early suppuration in appendicitis. In a case of three days' duration he had found besides the colon bacillus a capsulated form of organism, and the same had been encountered in some cases of abscess formation after contusion. Sometimes, on the contrary, an acute appendicitis terminated without the formation of pus.

Anomalous Truncus Brachicephalicus Associated with Aortic Disease.

Dr. Freyberger exhibited the above, which was from an adult in whom the diagnosis of aneurysm had been made in consequence of the pulsation of the abnormal artery at the root of the neck, associated as it was with dilatation of the ascending part of the aortic arch. The malformation consisted in the origin of the left carotid from the trunk of the innominate; the condition was not rare and was normal in some animals.

The President pointed out that the disposition present was that described by Galen and the older anatomists as normal in the human subject, the description being probably taken from the lower animals.

Unusual Form of Meckel's Diverticulum.

Mr. Tregelles Fox recorded the case of a boy who died of peritonitis due to rupture of the distended end of a diverticulum. The diverticulum was much dilated at the free extremity, and had led, in consequence of the pressure occasioned, to great congestion of a part of the small intestine. The rupture of the process itself appeared to have been due to its rotation, which had been followed by sloughing.

Cystic Dilatation of Vermiform Appendix.

A specimen of cystic dilatation of the appendix was exhibited by Mr. A. G. R. Foulerton; the condition was productive of no symptoms, and was discovered at an abdominal operation performed for another purpose.

CLINICAL SOCIETY OF LONDON.

CLINICAL EVENING.

JOHN LANGTON, F.R.C.S., President, in the Chair.

Friday, January 14th, 1898.

OBLITERATIVE ARTERITIS.

MR. W. G. SPENCER showed a patient, an omnibus driver, aged 27, in whom the first symptoms appeared in the left leg in August, 1897, and they increased until October. Gangrene of the toes then supervened, and spread up the leg, so the limb was amputated through the middle of the thigh. By the middle of November the stump had healed, and the general health had greatly improved. The femoral artery was obliterated in the stump, but the femoral vein was patent; only one little vessel was tied, and there was little oozing. The right lower extremity, which was colder, had since desquamated, and was now almost normal. The case was similar to one reported by Mr. Gould in 1884. His patient was young (aged 19), and after progressing for about three years the disease came to a standstill. Dr. Hadden had also recorded a case which he had watched for two years, and the disease in this case had also progressed for a time, and then stopped. The condition of the abdominal aorta and iliacs, in his own case, was doubtful. The arteries in the right arm were thickened. In the stump the intima was thickened in the tibials; above that the arteries were firmly thrombosed, but no obvious change was present in the arterial coats. Since the amputation there had been increased pulse tension in the left radial and both temporal arteries. The patient had not had syphilis, nor was he alcoholic. He had no cardiac trouble; his urine was healthy, and urethra normal.

Mr. GOULD had seen a man that afternoon at the Middlesex Hospital, who had had his left leg amputated for obliterative arteritis some three years ago. The right leg was then healthy, but 18 months ago it began to be diseased, and was now as the left one was just before the amputation, namely, cold and pulseless.

OBSTRUCTION OF INFERIOR VENA CAVA.

Dr. CHAPMAN showed a man, a hairdresser, who had developed symptoms of obstruction of the inferior vena cava, with bradycardia (40 per minute). The distribution of the varicose veins was very characteristic; they were on the abdominal wall and both legs. The only feature of interest in the history was that six years ago, after influenza, he had sudden pain in the head, and the veins became apparent. There was no enlargement of the heart, and no sign of any abnormal growth in the chest, but the liver was markedly enlarged. There was no albumen in the urine, and there were no other symptoms worth speaking of. He had been treated with large doses of iodide of sodium.

Dr. PRINGLE said he had recently had under his care a somewhat similar case, the patient being a lad, aged 13. He presented curious ulcers on both legs of doubtful nature, but on stripping him he found evidence of obstruction of the inferior vena cava. This was an immediate sequel of an attack of scarlet fever five or six years previously. He recovered under quite ordinary treatment after one relapse. He had no bradycardia, no enlargement of liver. He was disposed to regard the bradycardia in the author's case as a mere coincidence.

Dr. MORRISON remembered such a case in a man, aged 65, commencing in the veins of the extremities, extending to the groin, and ultimately involving the external iliacs. The temperature was generally subnormal. He had no bradycardia. He tried to commit suicide by starvation, and during that time his temperature went as low as 91° F. He died in two years.

LOCOMOTOR ATAXIA WITH ALMOST COMPLETE ANALGESIA.

Dr. BEEVOR showed a patient, aged 55, suffering from locomotor ataxia of gradual onset and of six years' duration, associated with almost complete analgesia. There was no history of specific disease. At present there was slight incoordination with the eyes shut, and slight ataxic walk. Knee-jerk was absent. The pupils did not react to light, and were small. There was some inco-ordination of the upper limbs with the eyes shut. There was complete analgesia everywhere except on the nose and around the mouth, analgesia of inside of mouth and of tongue; and loss of sensation of heat and cold over the same wide area.

TREPHINING FOR SYMPTOMS OF CEREBRAL TUMOUR.

Mr. PEARCE GOULD showed a patient, aged 41, seen in February, 1897. Previously a robust, healthy man, a blacksmith, he, without any history of injury, was attacked by severe headache, followed by aphasia, twitchings, facial palsy, and paralysis of right side of tongue. He had slow pulse and normal temperature. There was no pathological change in either eye. His condition rapidly grew worse, so he was trephined for a supposed tumour in the frontal lobe. On removing a round of bone the dura mater bulged but did not pulsate. On incising this, normal brain substance protruded. Mr. Gould explored in different directions, but failed to find any evidence of tumour or excess of cerebro-spinal fluid. Nevertheless, the patient soon began to improve and the protrusion of brain subsided. After a time he resumed work, and with the exception of an occasional epileptic fit he had been free from symptoms. Mr. Gould believed he had penetrated the ventricle, but there was no excess of fluid and the escape of fluid was not followed by retraction of the protruding brain substance.

Dr. SIDNEY PHILLIPS related the case of a man who, fourteen years before, had received an injury to the head. About six months before admission he suffered from severe headache and vomiting. On admission he had a pulse which fell to 18 a minute. There was no optic neuritis. There was a tender spot on the head, so he trephined, but found nothing whatever except that the cranium appeared somewhat thicker than usual. This patient recovered perfectly. He added that immediately on the removal of the bone the pulse jumped up to 60, and when he left the hospital it was 70 per minute. He had local twitchings just before the operation, which afterwards ceased immediately.

PERIPHERAL NEURITIS FROM ARSENIC.

Dr. COLMAN showed a girl, aged 12, who was admitted to the Queen Square Hospital in December 1897, with the following history: From September 27th to October 28th, at another hospital (with the exception of six days, when the treatment was discontinued on account of gastric disturbance) she was given 15 minims of liquor arsenicalis three times a day for the cure of chorea. She left that hospital cured of the chorea and apparently quite well. On November 10th she complained that her legs were weak and tingled; in another week there was distinct ankle drop. When admitted to Queen Square there was almost complete paralysis of all muscles of the extensors below the knees, with well-marked reaction of degeneration. There was also some weakness of the extensor muscles in the forearm, with diminished faradic reaction but no reaction of degeneration. There was no alteration of cutaneous sensibility, but there was great tenderness of the leg muscles. There was well-marked arsenical pigmentation in the neck and groins. She had been kept in bed and treated by massage and electricity, and she was rapidly recovering. The case was of interest by reason of the delay that occurred between the cessation of the arsenical treatment and the onset of the symptoms. It also showed that these somewhat heroic doses of arsenic which were so highly vaunted in the treatment of chorea were not unattended by serious risk. Several instances of similar paralyses had come under his notice, and in one, at any rate, recovery did not take place.

Dr. SUTHERLAND asked whether there had been any sickness, adding that it often happened that the supervention of symptoms of gastric intolerance put a stop to the treatment.

Dr. BEEVOR observed that one ought to be very careful in the use of this drug. He had had a case in an adult who took 15 minims thrice daily for six weeks, and then presented double wrist drop with severe pain in the legs, but after two years recovered.

Dr. COLMAN, in reply, pointed out that the treatment had had to be suspended on account of gastric intolerance for several days, but whether there was vomiting or only nausea he did not know.

NERVOUS DISTURBANCES FOLLOWING INJURY TO SHOULDER.

Mr. WALLIS described this case. The patient was a woman

who in June, 1896, fell downstairs and injured her shoulder. This was left unattended to for three weeks, and an attempt was then made to reduce a dislocation. She came complaining of a constant gnawing pain in the joint, and there was almost complete paralysis of the right arm with complete loss of sensation. He could feel that the head of the humerus was enlarged, and he cut down upon it and found that the cords of the brachial plexus were implicated in tissue which was itself adherent to the periosteum. This was carefully stripped off, and under a course of massage a great improvement had taken place. There was now a fair amount of movement, and sensation had returned though the skin was still glossy; there was no longer any pain.

SEQUEL OF A CASE IN WHICH A NEW OPERATION FOR PROMOTING THE HEALING OF AN INDOLENT ULCER WAS EMPLOYED.

Mr. WALLIS also showed a man in whom he had provoked healing of an intractable ulcer of the leg by making parallel incisions outside the margins of the ulcer, separating the skin adjacent to the ulcer from the subjacent periosteum, and bringing the edges together. The result had proved eminently successful.[1] He mentioned, however, that of two other cases treated in the same way, one had proved anything but satisfactory, but the third had been successful.

LIGATURE OF FEMORAL ARTERY FOR ANEURYSM IN A CHILD.

Mr. RAYMOND JOHNSON showed a girl, aged 12, who came complaining of pain in the right hip and a swelling in Scarpa's triangle, which was thought to be an abscess in connection with hip disease. The swelling, however, turned out to be an aneurysm. It was urgent to do something, as the tissues over it were much inflamed, so having made a small opening in the abdominal wall through which the house-surgeon with his finger controlled the small external iliac artery, he cut down and ligatured the artery after turning out the sac, whether above or below the bifurcation of the profunda he could not say. He had come to the conclusion that there was nothing the matter with the hip, and that the aneurysm was probably of embolic origin. The patient had had two attacks of rheumatic fever, and there was valvular disease of the heart, and lately a small swelling had appeared on the left side of the abdomen near the spleen, which was possibly aneurysmal.

CASE OF INTRACRANIAL DISEASE.

Dr. PURVES STEWART showed a man, aged 38, who exhibited symptoms pointing to lesion of the left side of the medulla oblongata, with implication of the hypoglossal and spinal accessory nerves of the left side, and probably also of the restiform body of the left side. There was no history of venereal disease. A mallet fell on his head eighteen months ago, but this was not followed by any symptoms at the time. A year ago he began to drag his right foot, and then the right hand began to feel heavy. Five months ago he experienced difficulty in swallowing and articulation, and his voice became hoarse. Three months ago, on admission, he complained of giddiness and unsteadiness in walking. He had paralysis of the left palate and left vocal cord, wasting and paralysis of the left tongue, and weakness and ataxy of the right arm and leg. His gait was hemiplegic and ataxic. With his eyes shut he fell backwards and to the left. The knee-jerks were exaggerated, on the right especially. Treatment by iodides and mercury was without effect. The symptoms seemed to point to a lesion of the medulla extending back to the left inferior peduncle of the cerebellum, but they might possibly be due to an aneurysm of the vertebral artery, or, as suggested, to an exostosis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

F. W. KIDD, M.D., President, in the Chair.

Friday, January 7th, 1898.

SPECIMENS.

DR. ALFRED J. SMITH showed a large Fibromyoma, with Uterus and Appendages removed by Cœliotomy on December 14th, 1897, from an unmarried woman, aged 36. The patient noticed for the past seven or eight years a lump in her abdomen, which increased in size during menstruation; it caused little or no inconvenience up to two years ago, when it suddenly got much larger and became painful to the touch. Menstruation ceased eighteen months ago. On examination it was found that a large, solid mass, the size of a seven months' pregnant uterus, filled the central portion of the abdominal cavity; it was movable upwards, and could touch the ribs on the right side; it did not sink in the pelvis, as there was a clear margin about two fingers' width above the pelvis, which was quite clear on percussion. On bimanual examination under ether the cervix pointed downwards and forwards. Fundus, small posterior. Left ovary enlarged in front; right low down. Sound passed 5 cm. Traction on cervix with volsella demonstrated no connection with tumour. From the facts stated the tumour did not appear to be uterine. Abdominal section was determined on. An extensive incision was made; the tumour was easily drawn out of the abdomen, and on making tension on it to determine the pedicle Dr. Smith was astonished to find ovaries and tubes coming out along with it. The pedicle was twisted loosely; it was quite translucent when untwisted, and contained no solid portion. A chain suture was introduced and the tumour removed. On examining the pelvis, a solid mass occupying the position of the uterus was felt. The specimen shown consisted of a large fibromyoma growing from the fundus of the uterus. The uterus consisted of the fundus and supravaginal portion of the cervix, with hypertrophied and elongated tubes and ovaries attached. An amputation had taken place some time previously through the junction of the supravaginal portion of the cervix and the portio media. There was no accumulation of fluid in the uterine cavity or any peritoneal adhesions. The case demonstrated the difficulties of diagnosing abdominal tumours and of explaining how the amputation took place. The twisting of the pedicle was certainly not sufficient. Recovery was uneventful. Dr. Smith also exhibited a large Fibromyoma of the Uterus removed by Cœliotomy; recovery.—Dr. R. D. PUREFOY showed (1) Myomatous Uterus removed by Cœliotomy; (2) Subperitoneal Myoma removed by Cœliotomy.

THE ACTION OF THE VAGINAL PLUG IN ACCIDENTAL HÆMORRHAGE.

Dr. HASTINGS TWEEDY read a paper on the action of the vaginal tampon in accidental hæmorrhage, which will be published.

Dr. WINIFRED DICKSON said that accidental hæmorrhage had always seemed to her to be the very worst complication in midwifery. Why did Dr. Tweedy think it better not to use the speculum? She thought the plug ought to be sterilised. Did he plug with balls of cotton wool, and did he attach strings to them in order to facilitate their removal?

Dr. MACAN could recall several cases where Dr. Tweedy's treatment might have been of service, if it was as serviceable as he (Dr. Tweedy) hoped it to be, but he (Dr. Macan) wanted proof of the statement that the uterine arteries were stopped by the process of plugging. As far as internal accidental hæmorrhage went, before total detachment of the placenta, his method stopped the uterine arteries, and his treatment in these cases was most favourable. Plugging might be carried out as long as the membranes were perfect, but, after their rupture, there was no means of increasing the intrauterine tension. So far he (Dr. Macan) preferred to introduce a Barnes's bag in preference to plugging the vagina; also, in placenta prævia, where the bleeding surfaces were quite close, he preferred to use a Barnes's bag. He did not understand how Dr. Tweedy's method could twist the arteries very much, nor how the accumulation of CO_2 could take place.

Dr. ALFRED J. SMITH said that he did not understand how a vaginal plug would so act as to compress the uterine arteries. To his mind the great difficulty in dealing with such cases was not in cases where labour had started at all, but in cases of concealed hæmorrhage, where the patient was collapsed and almost pulseless, with no labour pains, cervix quite hard, and where there was a pathological condition of the uterine muscular fibres. He thought that the best treatment in grave cases would be to ligature the uterine arteries direct, and the uterus could then be removed. Death from

[1] BRITISH MEDICAL JOURNAL, 1897, vol. i, p. 590.

accidental hæmorrhage generally occurred after delivery, up to two hours after parturition.

Dr. DOYLE considered that unless an artery was atheromatous very little pressure would stop it.

Dr. R. D. PUREFOY said that the practice in the Rotunda Hospital in such cases was to plug, and accumulating evidence was distinctly in favour of continuing the practice. He thought that such subsidiary means as the use of a firm binder should not be forgotten, and also the stimulation of the uterine contractions by the careful manipulations of both hands.

Dr. KNOTT also spoke.

Dr. TWEEDY said, in answer to Dr. Dickson, that he always used sterilised cotton wool. A much greater quantity of wool could be pressed into the vagina without a speculum. He did not employ strings, as by so doing he did not see how so tight a plug could be made with strings as without, and there was no difficulty in removing the pieces of cotton wool. In reply to Dr. Macan, who had said that no evidence had been adduced to show that the circulation was impeded, Dr. Tweedy said that in one of the cases which he had been able to study, he was easily able to bend the whole broad ligament by pressing in the lateral fornices and pulling down the cervix, and was able to tighten the lower portion of the broad ligament against the upper portion. A branch of the uterine artery ran to the cervix before that artery entered the uterus, and if the cervix were pulled upon, and a plug placed outside the branch, the uterine artery must receive a sharp bend at the plug.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

R. M. SIMON, M.D., in the Chair.

Friday, November 26th, 1897.

EPITHELIOMA OF TONGUE.

MR. GAMGEE showed a man, aged 49, whose tongue he had excised for epithelioma on May 13th, 1896. The growth was on the right side of the tongue, involving the floor of the mouth and extending back to half an inch from the anterior pillar of the fauces. The submaxillary lymphatic glands were slightly enlarged, but freely moveable. The whole tongue was removed by Kocher's method, after preliminary tracheotomy and the insertion of a Hahn's tube. At the present time, eighteen months after the operation, the patient was free from recurrence.

ENLARGEMENT OF VEINS OF TRUNK.

Mr. LOXTON showed a case of marked enlargement of the superficial veins of the trunk.

PERIOSTEAL ABSCESS CAUSED BY TYPHOID BACILLI.

Mr. SARLING read a note on a case in which typhoid bacilli had set up a periosteal abscess, after remaining latent for three and a-half years. The patient, a girl aged 16, was admitted to the General Hospital, June 24th, 1897, with a painful swelling of the left forearm. Up till about three weeks before this date, she was regularly at work in a factory, but, after getting very wet and cold on Whit Monday, the affected limb began to pain her and to swell, and both these conditions steadily got worse. She had typhoid fever three and a-half years ago, following which she had pain in the left forearm; but there was no formation of abscess at that time. On admission, there was a rounded swelling in the middle of the left forearm, which was very painful and tender on pressure; the skin over it was rather red and slightly œdematous; the swelling was very elastic, and there appeared to be deep fluctuation. The bridge of the nose was extremely depressed, suggesting congenital specific mischief, but there was no confirmatory evidence in the eyes, teeth, or other parts. The temperature was 101°. The condition of the nose suggested that possibly there might be a specific inflammation of bone, and the patient was treated for six days with iodide of potassium. During this time the temperature varied from 98° to 100.5°, generally being below 100°, but the inflammatory signs became worse, and it was therefore determined to incise the swelling. On June 30th some drachms of pus were evacuated after the division of the skin and the extensor muscles, a sequestrum about the size of a bean was removed from the middle of the posterior surface of the radius, a drain was inserted and the wound sutured. The tube was taken out nine days after the operation, and the wound was healed in a month. The pus was odourless and presented no unusual appearance. As the clinical features of the case were not those of an acute infective periostitis, and as there had been some trouble in the left forearm immediately after the typhoid fever, it was thought advisable to make a cultivation, which was taken by Dr. White on agar-agar with the usual precautions. This proved to be a pure culture of the bacillus typhi abdominalis. The tests relied upon for distinguishing the growth from the bacillus coli communis were the following: (1) There was no production of gas in gelatine or in glucose, or in lactose agar-agar; (2) it did not clot milk; (3) it grew on potato, but the growth was invisible; (4) the flagella were 12 to 18 in number; (5) a cultivation of this bacillus, used for the serum test of typhoid fever of patients in the hospital, gave a positive reaction in all cases in which a typical culture of the typhoid bacillus gave it, and in no others. On testing the serum of the patient with a pure culture of the typhoid bacillus an incomplete reaction took place in about four hours. A culture of this bacillus was sent to Dr. Durham, at Cambridge, who examined it, and came to the conclusion that it was the bacillus typhi abdominalis.

DRAINAGE OF MUCOUS CAVITIES AFTER OPERATIONS.

Mr. HEATON read a note on a system of drainage of mucous and other cavities after surgical operations, which is published at p. 207.

ULCERATION OF MITRAL VALVE.

Dr. FOXWELL showed a heart with ulceration on the auricular surface of the aortic cusp of the mitral valve. The ulceration did not reach the free edge of the valve. There was no definite mitral murmur, but only an occasional whiff with the first sound. There was, however, a constant well-marked murmur having all the characteristics of tricuspid regurgitation—that is, it had a harsh but superficial character; it was heard loudest down the left edge of the sternum, opposite the fifth and sixth cartilages; its power of conduction was short, it being almost lost at the apex and left base; at the same time it could be heard to the right of the sternum. There was also true pulsation in the external jugulars, with definite evidence of great dilatation of the right ventricle. *Post mortem* both ventricles were enlarged, but the right more than the left. Dr. Foxwell's opinion was that the patch of ulceration had not produced the constant murmur, but this was due to functional tricuspid insufficiency, as had been diagnosed during life. During life the case was a most obscure one, and no definite diagnosis had been formulated. The history dated back a year, when the patient was said to have suffered from typhoid; previous to which her uterus had been curetted. She was only in the hospital a few days, during which she suffered from pneumonia, which was the immediate cause of death. The most striking physical signs were a much enlarged spleen reaching to the iliac crest, and of board-like hardness, associated with marked simple anæmia. Was the "typhoid" really the onset of the ulcerative endocarditis, and was this due to the curetting? Against this view was the patient's statement, and the fact that the ulceration looked as if its age should be counted by weeks rather than by months.

TWINS WITH COMMON PLACENTA.

Dr. THOMAS WILSON showed male twins of about five and a half months' development, with a common placenta, from a case of hydramnion. The patient from whom the specimens were obtained was a multipara aged 39, who had had six children previously. The patient was seen at the eleventh week, at which time the physical signs agreed with the patient's opinion as to the period of pregnancy. At the twenty-second week she was again seen with the abdomen enormously distended, and causing severe pressure symptoms; the abdomen had been rapidly growing for the previous six weeks. Three days later the membranes were punctured, upwards of nineteen pints of fluid running away.

Labour then rapidly progressed, and was completed in about seven hours and a-half. One twin was eight ounces heavier and an inch and half longer than the other; the former in a distended amniotic sac, the latter in another sac containing apparently about a normal quantity of fluid. The placenta was single. The cord of the larger twin was very thick, and contained three vessels of large calibre; the cord of the smaller twin was normal in thickness and had a velamentous insertion.

DERMOID CYST OF OVARY.

Dr. PURSLOW showed a dermoid cyst of ovary removed by abdominal section. The cyst was the size of a large orange, and contained hair and a tooth. The point of interest about the case was that though the tumour grew from the left ovary it lay in front and to the right of the uterus, and was adherent to the vermiform appendix. Recovery was uneventful.

SUPPURATING CYST OF OVARY.

Dr. PURSLOW showed this case. The patient when admitted to hospital stated that she had been confined three months previously; after the confinement she had a severe attack of puerperal fever, and this subsided, leaving her very weak and ill, and with a swelling in her abdomen. On examination, a swelling the size of a large cocoanut could be felt behind the uterus pressing the latter forwards and upwards against the abdominal wall. Pelvic abscess was diagnosed, and the patient was placed under an anæsthetic in the lithotomy position, with the intention of incising the swelling *per vaginam*. After making a bimanual examination, however, Dr. Purslow felt convinced that the tumour was an ovarian cyst, and did not make an opening from the vagina, but had the patient drawn up the table and opened the abdomen in the middle line, removing a cyst of the left ovary containing pus. The patient made an uneventful recovery.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting of this Association on January 11th, Miss COCK, M.D., President, in the chair, Mrs. FLEMMING, M.D., read notes of some cases of Infective Endocarditis, which had occurred in the Royal Free Hospital, under Dr. Sainsbury's care.—Dr. JANE WALKER read a paper on a case of Cystic Degeneration of the Kidneys and Liver. She described the clinical aspect of the case, the *post-mortem* appearances, and gave an account of the history and bibliography of the disease.—Dr. MABEL JONES (Brighton) read an account of a case of Cardiac Failure treated by Massage. The patient was a girl, aged 14, and had had acute rheumatism at 8 years old. When first seen she had been ill one month with orthopnœa, great œdema of the legs, enlarged heart (especially the right side), mitral and tricuspid regurgitation, ascites, large liver, scanty bile-stained albuminous urine. She was treated for six weeks with rest, diet, cardiac tonics, and removal of the fluid, with no good result. Massage was then tried, at first irregularly, then every day for a week. At the end of this time all œdema and ascites had disappeared, the urine was free from bile and albumen and averaged 41 ozs. daily against 27 ozs., there was no dyspnœa, and none of these symptoms returned when the patient got up and began to go about.

BRITISH GYNÆCOLOGICAL SOCIETY.—At the annual meeting on January 13th, Professor MAYO ROBSON, F.R.C.S., President, in the Chair, the Treasurer and the Editor of the Journal presented their annual reports. The officers for the ensuing year were then elected as follows: (The asterisk indicates the new names proposed by the Council for the respective offices.) *President:* *H. Macnaughton-Jones, M.D. (London). *Vice-Presidents:* G. G. Bantock, M.D. (London), Professor J. W. Byers, M.D. (Belfast), A. E. Cordes, M.D. (Geneva), G. Elder, M.D. (Nottingham), *R. A. Hodgson, M.D. (London), *F. Bowreman Jessett, F.R.C.S. (London), *J. J. Macan, M.D. (London), Professor W. L. Reid, M.D. (Glasgow), C. H. F. Routh, M.D. (London), F. F. Schacht, M.D. (London), W. Travers, M.D., F.R.C.S. (London), Professor Hector Treub, M.D. (Amsterdam). *Treasurer:* J. A. Mansell Mouillin, M.D. (London). *Council:* W. Armstrong, M.R.C.S. (Buxton), E. Tenison Collins, F.R.C.S. (Cardiff), A. Donald, M.D. (Manchester), F. Edge, M.D. (Wolverhampton), *C. H. Gage-Brown, M.D. (London), C. Godson, M.D. (London), F. N. Haultain, M.D. (Edinburgh), W. Balls Headley, M.D. (Melbourne), P. L. Hebert, M.D. (London), *H. S. Howell, M.D. (London), Skene Keith, M.B., F.R.C.S.Edin. (London), R. Marsden Low, M.B. (London), Christopher Martin, F.R.C.S. (Birmingham), *A. W. Mayo Robson, F.R.C.S. (Leeds), *W. H. Newnham, M.R.C.S. (Clifton), James Oliver, M.D. (London), H. F. Powell, M.D. (London), Professor A. J. Smith, M.D. (Dublin), *Heywood Smith, M.D. (London), *R. T. Smith, M.D. (London), *E. T. Smith, L.S.A. (London), D. Thomson, M.D. (London), *John Wallace, M.D. (Liverpool), W. S. Wyman, M.D., F.R.C.S. (London). *Editor of Journal:* F. F. Schacht, M.D. (London). *Honorary Secretaries:* George E. Keith, M.B. (London), *Arthur E. Giles, M.D. (London).—After a vote of thanks had been passed to the retiring officers the PRESIDENT read his valedictory address on Extrauterine Gestation, which will be published.

MANCHESTER MEDICAL SOCIETY.—The following is the list of office-bearers, members of Committee, Library Committee, and auditors for the year 1898:—*President:* Mr. G. A. Wright. *Vice-Presidents:* Mr. Collier, Dr. Godson, Dr. Harris, Dr. Reynolds. *Treasurer:* Dr. Glascott. *Secretary:* Mr. Coates. *Committee:* Dr. P. Ashworth, Dr. A. Brown, Dr. J. G. Clegg, Dr. Edge, Dr. T. A. Helme, Dr. Milligan, Mr. Milner, Mr. J. E. Platt, Dr. Torrop, Dr. Wild, Dr. A. T. Wilkinson, Mr. A. Wilson. *Library Committee:* Dr. Kelynack, Mr. J. W. Smith, Dr. R. T. Williamson. *Auditors:* Dr. Goodfellow, Dr. Ledward.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting held on January 13th, the following list of office-bearers, Council, and list of Committees was adopted: *President:* *W. Macfie Campbell, M.D. *Vice-Presidents:* K. A. Grossman, M.D.; A. C. E. Harris, M.B.; *R. S. Archer, M.D.; and *Henry Harvey, M.B. *Honorary Treasurer:* James Armstrong, M.B. *Honorary General Secretary:* *J. M. Hunt, M.B. *Honorary Secretary to Ordinary Meetings:* *W. Thelwall Thomas, F.R.C.S. *Honorary Librarian:* T. R. Bradshaw, M.D. *Council:* A. Bernard, M.B.; C. T. Holland, L.R.C.P.; T. D. Leigh, M.R.C.S.; G. P. Newbolt, F.R.C.S.; W. Permewan, M.D.; R. J. Richardson, M.D.; *R. Caton, M.D.; *E. A. Browne, F.R.C.S.Edin.; *Arthur Wallace, M.D.; *Leslie Roberts, M.D.; *F. H. Barendt, M.D.; *Francis Johnston, M.B. *Pathological and Microscopical Committee:* J. H. Abram, M.D.; F. H. Barendt, M.D.; R. A. Bickersteth, F.R.C.S.; Rubert Boyce, M.B.; A. W. Campbell, M.D.; F. C. Larkin, F.R.C.S.; *C. Macalister, M.D.; *G. P. Newbolt, F.R.C.S.; F. T. Paul, F.R.C.S., and C. S. Sherrington, F.R.S. *Journal Committee:* *The President, *the Editor, *the Honorary Secretary to Ordinary Meetings, *the Honorary Secretary to Pathological Section, *the Honorary Librarian, *Rubert Boyce, M.B.; F. H. Barendt, M.D.; *T. B. Grimsdale, M.B.; *Charles Lee, M.R.C.S.; *C. Macalister, M.D.; *G. P. Newbolt, F.R.C.S., and W. Permewan, M.D. Those marked (*) did not hold the same office last year.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting held on January 14th, Dr. R. SYDNEY MARSDEN (President) in the chair, Dr. H. LAIRD PEARSON read a clinical note on the Treatment of Chorea by Large Doses of Arsenic, beginning with 15 to 20 minims. Dr. Pearson laid stress on the necessity of keeping the patient in bed, and if vomiting occurred, as it occasionally did in about a week's time, leaving off the treatment for forty-eight hours. The PRESIDENT, and Drs. STANSFIELD, BLOOD, F. JOHNSON, and DIXON took part in the discussion, and Dr. PEARSON replied.—Dr. BLOOD read a note on Ulceration of the Cornea in Females, showing the sympathy between the genital system and the eye. Drs. STANSFIELD, SHEARS, and LAIRD PEARSON made remarks, and Dr. BLOOD replied.—Mr. SHEARS read notes and exhibited: (1) A specimen of Intraocular Sarcoma; (2) two patients on whom he had performed Mules's operation. The PRESIDENT and Dr. STANSFIELD made remarks, and Mr. SHEARS replied.

GRESHAM LECTURES.—Four lectures on Tropical Diseases were given by the Gresham Professor of Medicine (Dr. Symes Thompson) at Gresham College during the course of this week.

REVIEWS.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F.R.S.; the drawings by H. V. CARTER, M.D. Fourteenth edition, edited by T. PICKERING PICK, Senior Surgeon to St. George's Hospital, etc. London: Longmans, Green, and Co. 1897. (Super roy. 8vo, pp. 1,224. 705 illustrations, many coloured. 36s.)

THE fourteenth edition of a student's textbook rarely requires detailed criticism. There are, however, a few points in this volume to which we must allude.

According to the preface the whole work has undergone a careful revision, and in some parts sections have been almost entirely rewritten. Many new illustrations have been added, while in some places old illustrations have been eliminated, and have been replaced by others.

The sections on the Bones and Articulations still remain in many respects the best in the book. In connection with the attachments of the posterior ligament of the elbow-joint it is stated that this structure is attached on a level with the upper part of the olecranon fossa; it would have been better to have said that it crosses and is attached to the fossa at the junction of the upper and middle thirds. In dealing with the forearm the connections between the shafts of the radius and ulna by means of the interosseous membrane and the oblique ligament are called the "middle radio-ulnar articulation." This, we think, would with advantage have been omitted from the articulations. When the articulation between the metacarpal bone of the thumb and the trapezium is being described it is stated that "its ligaments are a capsular ligament and a synovial membrane." Such loose expressions as this ought to be avoided, especially in a textbook intended for the use of students. In the description of the hip-joint the attachments of the ligamentum teres are correctly given, but in the figure which is intended to show them the ligament is depicted as attached to the upper margin of the depression at the bottom of the acetabular cavity.

The value of the book would be enhanced from a surgical point of view if under the Development of the Bones the portions of each bone derived from the primary and secondary centres respectively were clearly depicted in illustrations of several colours.

The nervous supply of the palatal group of muscles, with the exception of the tensor palati, is stated to be "in all probability the internal branch of the spinal accessory, whose fibres are distributed along with certain branches of the pneumogastric through the pharyngeal plexus." The possibility and probability of the facial nerve supplying such muscles as the levator palati ought to have been mentioned.

An attempt has been made to render more intelligible the description of the peritoneum and its complex folds by describing its development in the embryo. This section has been contributed by Dr. Fred. T. Brockway, Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, New York, and was published in the last issue of the American edition of the work. This account is concise and in many cases clear, but it errs on the side of shortness; if a student has not a previous knowledge of the development of the human embryo, he will scarcely be able to follow the descriptions which are given.

In the description of the liver three surfaces are described—upper, under or visceral, and posterior. Several of the diagrams which illustrate this section are taken from the models of Professor His, on which account it would have been better to have given the more modern views of the shape of this organ, and to have described five surfaces. The text would then have been in conformity with the illustrations.

The various sections which are devoted to Surgical Anatomy remain in many respects the least up to date in the book. Thus in the paragraphs on the surgical anatomy of the large intestine it is stated that the descending colon is the portion of the bowel usually opened, and that this is done by the operation of lumbar colotomy. Surely this is not in accordance with the modern practice of surgery.

In the section on the surgical anatomy of the liver, etc., it is asserted that "when the gall bladder is ruptured, or one of its main ducts, the injury is necessarily fatal from peritonitis caused by extravasation of bile into the peritoneal cavity." With this statement we cannot agree.

In conclusion we think that the volume is one of the best student's textbooks of anatomy in the English language, but we hope that in a future edition the sections on surgical anatomy will be carefully brought up to date.

LA DIPHTÉRIE ET LA SÉRUMTHÉRAPIE [Diphtheria and its Treatment by Serum.] By Dr. G. VARIOT. Paris: A. Maloine. 1898. (Roy. 8vo, pp. 586; 28 illustrations and 1 coloured plate. Fr. 12.)

THIS book embodies the results of observations on upwards of 3,000 cases admitted into the Trousseau Hospital, Paris, during the years 1895 and 1896. After giving a lucid and practical account of the bacteriology of diphtheria, the author discusses the diagnostic value of bacteriological examinations, especially with reference to the serum treatment. There has been a tendency of recent years to subordinate clinical experience to bacteriological ideas, and to regard the presence of the bacillus as the most important diagnostic factor. But Dr. VARIOT has no difficulty in showing that however valuable laboratory evidence may be, bedside facts still remain, as regards treatment, the best guides in the large majority of cases. In his description of the disease he provisionally adds to the varieties ordinarily recognised another which he terms "bacteriological diphtheria," by which he means such forms of sore throat as would not be called diphtherial were it not for the presence of the bacillus. These obviously cannot be diagnosed offhand; it is necessary to await the result of one, sometimes several, bacteriological examinations. The question arises, Are we to employ the serum in cases of this nature? While admitting the importance of injecting antitoxin as early as possible, the author reminds us that these kinds of angina are usually of a mild character, and he does not think it right that the patients should be submitted to the chance of getting the rashes, febrile attacks, and articular troubles, which have been observed to follow the injection of serum in a variable proportion of instances. These doubtful cases should, however, be carefully watched, and, if definite clinical signs appear, resort should at once be had to antitoxin. In all cases of undoubted clinical diphtheria, and in all cases, even if doubtful, in which the larynx is involved, antitoxin should be immediately employed. Of its value the author speaks highly, and fully confirms the favourable opinions expressed by the majority of those who have used it on a large scale.

The greater portion of the remainder of the book deals with laryngeal diphtheria. The merits of tracheotomy and intubation are ably discussed, the chapters dealing with the latter operation being especially good. The writer advocates the trial, in certain circumstances, of a method of intubation in which the tube is left in the larynx for a few minutes only. This "short-period intubation" may have to be repeated more than once in the same case. In his hands this practice has been attended with success. Under the term "*énucléation*" is described a new and seemingly easy method of quickly removing the tube by external manipulation of the larynx. The intubation instruments figured are an improvement upon any with which we are acquainted.

But though on the subjects above mentioned, as well as on others less important, the author writes clearly, fully, impartially, and very practically, we think there are points, equally important, to which he might have devoted more attention. Very little is said about the dosage of antitoxin, which is apparently still administered in France by the cubic centimetre and not by the unit. Though the effects peculiar to serum are discussed at length, there is no account given of its influence on the ordinary complications of diphtheria. The statistical tables in the appendix deal with the antitoxin cases alone. They show that the percentage mortality was only 14.5 in 1895 and 15.2 in 1896; but it would have been more satisfactory had similar pre-antitoxin statistics been furnished for comparative purposes, instead of the bald statement that the mortality previously ranged from 40 to 50 per cent. Sufficient stress is not laid upon the importance of in-

jecting the serum early; and though we gather that this time-influence has been observed by the author, the statistical tables are not arranged to show it.

We notice much unnecessary repetition and a not very orderly arrangement of the chapters—facts which, coupled with the absence of an index, distinctly weaken the value of the book.

In spite, however, of these faults, the work is one that may be read with much profit, even by those who have an intimate acquaintance with diphtheria.

A System of Practical Medicine by American Authors. Edited by the late A. L. Loomis, M.D., LL.D., and W. Gilman Thompson, M.D. Vol. I. London: Henry Kimpton. 1897. (Roy. 8vo, pp. 986. 25s.)

At the present time the competition between larger text-books and systems of medicine threatens to rival that existing between individual members of the profession. There are at this moment three voluminous books of this kind in course of publication in the English language competing for readers—the present work, Allbutt's *System of Medicine*, and the *XXth Century Practice of Medicine*. The very rapid advances of medicine render treatises very short-lived, and so lead to their more frequent reproduction; but even in this volume, published this year, it is seen how impossible it is to keep absolutely up to date, for there is no mention of Widal's typhoid reaction or of Sanarelli's bacillus of yellow fever. It should in justice be stated that the editors' preface is dated January, 1897, so that considerable delay may have occurred between the writing and the publishing of the volume.

This volume is the first of four which will deal with all the subjects of general medicine, but will not encroach on the domains of specialities such as dermatology, gynæcology, or ophthalmology.

The length of this *System* has been shortened also by the omission of all general articles on such subjects as pathology, treatment, or hygiene, but in spite of this the present instalment is too bulky and heavy to hold in the hand and read with comfort, a fact which, it is to be feared, will militate in some degree against the popularity it deserves.

The outlines of the whole *System* were arranged by the late Professor Loomis, and on his death have been undertaken by Dr. Gilman Thompson, who had previously been associated with him as as co-editor.

The first article is on malaria, and is divided into two parts. Professor W. H. Welch gives an exhaustive and beautifully illustrated description of the specific protozoon, while Dr. Thayer has wisely been selected to write on the pathological anatomy and clinical features of the disease.

Dr. J. C. Wilson writes on enteric fever and on influenza; he has gone very fully into the history of the latter disease, but says nothing about the differentiation of enteric from typhus fever in his otherwise admirable article on the former disease. In his account of typhus fever Dr. Doty mentions that from a study of an epidemic of that disease in Philadelphia in 1836 Drs. Gerald and Pennock recognised a difference between enteric and typhus fevers.

Dr. Hamilton West divides cases of dysentery into four classes: the acute catarrhal, the diphtheritic, the amœbic, and secondary forms. There are some beautiful illustrations of dysenteric amœba taken from Councilman's and Lafleur's original article in the *Johns Hopkins Hospital Reports*. Though inclining to believe that the amœbæ are pathogenic, the author does not consider that this point has been definitively settled.

Dr. Crozier Griffith writes on measles, rubella, pertussis, and mumps. The article on diphtheria from the pen of Dr. W. H. Park is most complete in every respect, and is accompanied by some excellent illustrations.

Professor Osler has written a complete account of the whole subject of tuberculosis, dealing with the tuberculous disease of practically all the organs in the body. In the section on pulmonary tuberculosis he gives some details of the success attending the treatment of phthisis in sanatoria, and proposes that in time the Health Boards of cities will provide sanatoria for the two classes of tuberculous patients, so as to arrange for systematic treatment of the early cases on the one hand, and for the proper care of chronic incurable cases on the other. It is impossible to speak in detail of the twenty-eight articles contained in this volume, but there can be no question as to their value, and we warmly recommend the first instalment of a work which as a whole bids fair to do honour to the fair name of America in the world of medicine.

Selected Essays and Monographs. Translations and Reprints from Various Sources. London: The New Sydenham Society.[1] 1897. (Demy 8vo, pp. 436.)

This volume contains papers on syringomyelia, various skin affections, syphilis especially in relation to the nervous system, etc. Dr. Bruhl's contribution to syringomyelia, translated with notes and additions by Drs. Galloway and Lindley Scott, contains a very full account of the subject. The description of symptoms is arranged under: (1) Specific symptoms, including those referable to (*a*) the anterior horns, (*b*) the posterior horns, (*c*) the median grey matter; and (2) associated symptoms, such as those due to the implication of the lateral tracts and posterior columns. Morvan's disease is, in Dr. Bruhl's opinion, an affection distinct from syringomyelia. The author contends that the variety of syringomyelia presenting well-known clinical symptoms is due to gliomatosis of the cord. The morbid anatomy, including the subject of medullary gliomatosis, and the diagnosis receive very full consideration. The disease has to be distinguished among others from progressive muscular atrophy, an affection which is now looked upon as of much less frequent occurrence than formerly; indeed, some authors would exclude it altogether as a substantive disease. The etiology of syringomyelia due to gliomatosis is as obscure as ever, the author stating that in all likelihood it is a disease of evolution.

Syphilis in its relation to the nervous system is represented by papers on a case of cerebro-spinal syphilis by Dr. Henry Thomas, syphilis and general paralysis and parasyphilitic epilepsy by M. Fournier, both the latter being translated by Dr. Guthrie Rankin. Dr. Thomas's case of multiple cerebral gummata, etc., is an exceptionally interesting one, and is carefully recorded with illustrations from the morbid anatomy. M. Fournier distinguishes syphilitic epilepsy, or epilepsy due to a gross syphilitic lesion, from so-called parasyphilitic epilepsy. Some may find it difficult to appreciate the distinctions between this parasyphilitic epilepsy and ordinary genuine epilepsy with syphilitic antecedents.

Two interesting papers on pemphigus vegetans by Professors Köbner and Neumann respectively (translated by Dr. Barendt) bring out the details of that uncommon and serious affection. Dr. Osler's paper on the visceral complications of erythema exudativum multiforme has attracted considerable attention, and is very properly reproduced here. Dr. Shepherd records a strange case of a purpuric eruption ending in gangrene, of which the cause was apparently the administration of sodium salicylate. Professor Neisser's paper on the relation between treatment in the early stage and tertiary syphilis will be read with considerable interest; the author is a warm advocate of Fournier's method of intermittent treatment. The remaining articles include papers on Yaws, by Dr. James Maxwell and Drs. Wallbridge and Daniels respectively, and papers on Frambæsia, by Dr. Breda and M. Charlouis respectively, both the latter being translated by Dr. A. E. Garrod. The papers in this 161st volume brought out by the New Sydenham Society are well selected, and deal almost without exception with subjects of much practical importance. The work of translation has in all cases been very efficiently performed.

The Origin of Disease: Especially of Disease Resulting from Intrinsic Causes. By Arthur V. Meigs, M.D. London: J. B. Lippincott and Co. 1897. (Demy 8vo, pp. 229. 137 illustrations. 21s.)

The regular examination of several organs in each fatal case leads Dr. Meigs to the conclusion that chronic diseases are

[1] The annual subscripton to the New Sydenham Society is £1 1s. Agent Mr. H. K. Lewis, 136, Gower Street, London, W.C.

general in their nature. The commonest of them is fibrosis, and this, which marks the progress from youth to age, is the underlying lesion in many cases which, by the name of Bright's disease, are referred to the kidney. He writes principally to combat such partial views, but except among writers of textbooks, whose unhappy lot it is always to be putting asunder those things which Nature has joined together, we imagine that Dr. Meigs's opinion is the rule, and not, as he seems to think, the exception. There are chapters on the various organs, each being a series of disquisitions upon drawings of microscopical sections, written with continual reference to the clinical features of the cases. They are robbed of much of their value by frequent misinterpretation of the appearances, so that the text is continually refuted by the delicate drawings. The strongest chapter is that on the blood vessels, in which Dr. Meigs maintains that all arteriole disease is endoarteritis, that the so-called muscular hypertrophy of middle-sized arteries is nothing but fibrosis, and that the thickening of the external coat is not to be separated from general increase of interstitial fibrous tissue.

The book ends with some sagacious chapters on diagnosis, prognosis, and treatment in chronic disease. It is not a safe guide in pathology, and some of the arguments—as, for instance, that phthisis is not due to Koch's bacillus (p. 26, *et seq.*), and that cardiac hypertrophy is not compensatory (p. 86), are very weak; but it is written in excellent English, its method is delightful, and its clinical wisdom great. The illustrations are profuse, and very beautifully executed.

BACTERIOLOGIE DES WEIBLICHEN GENITALKANALES [The Bacteriology of the Female Genital Canal]. Von Dr. C. MENGE und Dr. B. KRÖNIG. Leipzig: Arthur George. 1897. Vols. I and II. (Roy. 8vo, pp. 719. M. 20.)

THE first part of this work, treating of the non-pregnant and non-puerperal woman, is by Dr. MENGE; the second part, treating of woman in pregnancy, labour, and the puerperal state, is by Dr. KRÖNIG. Dr. Menge's part is very thoroughly done. Full references are given to previous workers in the same field, and their observations and conclusions are summarised and criticised. Dr. Menge has himself made bacteriological observations on a large scale. Among the more important and novel practical conclusions which he sets forth are these: The cervix uteri, which some abdominal operators think so septic that they take pains to cut it out or to sterilise it, Menge finds is in health not only free from germs, but the producer of secretions which destroy germs: it is a bactericidal organ, apparently designed for the protection of the parts above. This view finds support in the higher mortality which has followed so-called "panhysterectomy," as compared with the removal of the body of the uterus, leaving the cervix behind. Menge finds that as causes of chronic disease of the female genitalia, the gonococcus and the tubercle bacillus are far more important than any other organisms. The mischievous effects of streptococci are seldom seen except in recently-delivered women. Either they kill the patient or the leucocytes kill them, and the patient gets well; they seldom keep up chronic disease. "Mixed infection," that is, of gonococci and streptococci, or other organisms combined, rarely if ever occurs, for the gonococcus is a jealous being, and brooks no rival near it. If the gonococcus and other cocci are introduced together, the gonococcus soon in some way "wipes out" the rest. The only one with which it sometimes coexists is the tubercle bacillus, because these two organisms can both penetrate uninjured epithelium, and both live in the tissues. Tuberculous disease of the female genitals is far more frequent than is generally believed.

The second part of the work, by Krönig, is also worthy of high praise. Bacteriology is in it made to throw light on many important clinical questions; such, for instance, as the use of vaginal antiseptic injections before delivery and during lying-in, a practice which the author's bacteriological studies lead him to think harmful. Fever has been said to be the result of over-exertion of the uterine muscle. Krönig holds that fever during labour results from the absorption of toxins produced by bacteria in the liquor amnii. The author traces different forms of puerperal fever to the special organism that produces them with an amount of detail that makes it impossible to summarise his views within the limits of space that we can give to it.

In short, the whole work is written in the purest scientific spirit, not tainted by any directly utilitarian aim. Books like this are the stones out of which the temple of scientific medicine is constructed. The book is based on personal observation, guided by a search for truth, and uninfluenced by any thought of the effects of their work in bringing practice to the authors. It appeals not to the public nor to the profession at large, but solely to the judgment of scientific experts.

EXPERIMENTELLE UND KRITISCHE STUDIEN ÜBER SÄUGLINGSFÄCES BEI NATÜRLICHER UND KÜNSTLICHER ERNÄHRUNG [Experimental and Critical Investigation of the Fæces of Suckled and Hand-reared Infants]. Von Dr. M. BLAUBERG. Berlin: August Hirschwald. 1897. (Roy. 8vo, pp. 126. M. 3.)

As the author truly observes in the introduction to this book, the physiology of digestion in infants has hitherto received far less attention than the pathology, and it is therefore from its physiological aspect that he has undertaken this laborious research into the composition of fæces.

In the first section Dr. BLAUBERG gives a very complete summary of previous investigations on this subject, and this portion, with its full and careful references, forms one of the best parts of the book. Dr. Blauberg attaches special importance to the researches of Uffelmann and of Wegsebeider, which he reviews at considerable length. Previous observers have hitherto paid comparatively little attention to the mineral constituents of the fæces, and there are wide variations in the analyses which have been published, and practically none deal with newborn infants. With a view chiefly to the determination of the inorganic salts the author has examined quantitatively the fæces of infants during the first year of life.

Two series were taken, the first being from breast-fed infants, the second from infants fed on cow's milk. None of the children were more than 8 days old. All methods of analysis are very fully described. The author shows, as a result of his analyses, that the fæces of infants fed on cow's milk contain more fat and inorganic salts than is the case with breast-fed infants. He points out an interesting fact, that in new-born babies a so-called "fat diarrhœa" may occur which is physiological rather than pathological, as during the first week of life the absorption of fat appears to be normally absent.

There can be little doubt, however, as the author himself points out, that whether fed on human or on cow's milk, the newborn infant is adapting itself to new conditions, and that therefore the value of any observations on the relative composition of the fæces must lose considerably in importance. A comparison of the fæces associated with the two diets, but taken at a later age, would naturally be of greater value and interest. At the same time, there can be no doubt that Dr. Blauberg has given us a valuable contribution to the physiology of digestion in infants on lines which, so far as we know, have not hitherto been attempted.

RECHERCHES CLINIQUES ET THÉRAPEUTIQUES SUR L'EPILEPSIE, L'HYSTÉRIE ET L'IDIOTIE. [Clinical and Therapeutic Researches on Epilepsy, Hysteria, and Idiocy.] Par BOURNEVILLE avec la collaboration de MM. METTETAL, J. NOIR, REGNAULT, RELLAY, VAQUEZ, et J. BOYER. Vol. XVII, avec 41 figures dans le texte et 9 planches. Paris: Aux Bureaux du *Progrès Médical* and Félix Alcan. 1897. (Demy 8vo, pp. 272. Fr. 6.)

THIS volume contains the seventeenth report of that part of the Bicêtre which is under the direction of Dr. BOURNEVILLE, and consists as usual of two sections. The first gives statistics of the children accommodated in the Bicêtre and the Fondation Vallée; the second relates in detail the histories of 17 cases. On January 1st, 1896, there were 519 children in the institution; during the year 97 were admitted, 27 died, 64 were discharged, and 37 transferred to other asylums, and there remained on December 31st, 1896, 483, a reduction of 36

during the twelve months. The singing class has much improved, and now numbers 385; every six months an examination is made of the compass and tone of voice, and M. Bourneville has discovered that in epileptics during the time the attacks are frequent, the tone becomes less clear and less sonorous, and the volume is notably diminished. Fencing, dancing, and gymnastics are still taught, and the band played at various functions. At the Fondation Vallée there were 139 girls at the beginning of the year; 54 were admitted, 8 died, and 23 were discharged or transferred, and on December 31st there were 162 inmates. This institution is much overcrowded, but a new building, capable of accommodating 100 children, has been built and will soon be opened. Dr. Bourneville is very anxious that the special classes for backward children which have been started in connection with the School Board in London, Birmingham, Leicester, and elsewhere in England, should be put into operation at Paris; and he has drawn up the points on which the Commission which has been appointed should make inquiry.

Among the clinical papers are five on the treatment by the thyroid gland of myxœdematous idiocy, the name Dr. Bourneville gives to what in England is known as sporadic cretinism. One case he has studied very carefully, and he gives in full detail the appearances noted before the case was treated, and those observed two and a-half years after the treatment had been in operation. One result was very marked—namely, the inefficiency of subcutaneous injections of thyroid juice and the complete success of the thyroid gland given by the mouth. A paper on the examination of the blood of two myxœdematous patients before and after treatment shows that the number of red globules varies; sometimes it is increased, sometimes normal, and sometimes diminished; in the last case the thyroid treatment increased the number, but it must be continued for a long time. The amount of hæmoglobin is also increased. A paper on the urine of three patients undergoing the same treatment demonstrates the absence of albumen. There are some very good illustrations at the end of the book of brains showing sclerosis, pseudo-porencephaly, and the changes due to meningo-encephalitis.

L'HÉRÉDITÉ, NORMALE ET PATHOLOGIQUE [Heredity, Normal and Pathological]. Par CH. DEBIERRE, Professeur d'Anatomie à l'Université de Lille. Paris: Masson et Cie. 1897. (Roy 8vo, pp. 40. Fr. 1.25.)

THIS interesting essay is the fourth of a series published under the direction of Dr. Critzman, dealing with *Les Questions Nouvelles en Médecine, en Chirurgie, et en Biologie*. The size of this little book is out of proportion to its value, for it deals in an able manner with one of the most difficult problems of natural science—that of heredity. It is, moreover, of great value in that it treats not only of physiological, but also of pathological, heredity.

The subject is dealt with in five sections. The first is very short, and is concerned with attempts to answer the question, What is Heredity? The second section is likewise very short, and deals with the forms of heredity. Section three absorbs a third of the monograph, and treats of physiological heredity, and among other things discusses the subject of the inheritance of mutilations and acquired characters. Professor DEBIERRE is of opinion that characters acquired artificially during adult life and those acquired artificially during embryonic life may be transmitted; he still relies on Brown-Séquard's epileptic guinea-pigs. It has long been held by naturalists, at any rate in Great Britain, that mutilations are not transmitted, and that Brown-Séquard's experiment of inducing epilepsy in guinea-pigs is inconclusive. The question of the predominance of the male or female in transmitting characters is discussed carefully and broadly, as well as the effects of marriage among blood relations. Atavism among families as well as racial atavism is dealt with under the term "ancestral heredity" on the usual plan, and with the customary instances. It is remarkable in writings on heredity that authors illustrate very well the necessity of observing a shrewd caution made by Darwin, that we are more apt to remember facts in favour of, than those opposed to, a particular view. This comes out in a striking way in this essay. Every published statement is not a fact. For instange, on page 9 we read the following extract from De Quatrefages, reported by Dr. Parsons: Two black slaves in the same settlement in Virginia married. The woman gave birth to a girl entirely white; on seeing the colour of the child she was terrified, but was reassured when her husband stated that his own brother was white. This is given as an example of atavism, probably assuming this to be a case of albinism. We may ask, would this be accepted as evidence in an English divorce court? If not, then it cannot be accepted as evidence in science.

The fourth section deals with the inheritance of pathological conditions, for example, malformation, neuroses, diatheses, neoplasms, and infections, intoxications, and immunity. But unfortunately the author's scope is out of all proportion to the space at his disposal; for example, the inheritance of neoplasms is disposed of in a single page.

Thirteen of the forty pages are devoted to the consideration of the "Theories of Heredity, beginning with Wolff, and including those of Darwin, Weismann, His, Haeckel, Naegeli, and O. Hertwig. It is a significant fact that whereas selective breeding is successfully carried out by farmers to produce stock which may be serviceable for food, for wool, or for draught purposes; by breeders for the purposes of sport, as in breeding race horses, fancy pigeons, dogs, and the like; and by horticulturists for ornamentation and utility in producing new varieties of flowers, grasses, and the like, simple principles being followed which give fairly constant results and commercial success, yet in the scientific aspect of heredity no attempt has been made to investigate the matter by experiments on an extensive scale. Zoological gardens might do good work in this direction by experiments in the production of hybrids. It is, however, a remarkable fact that at the present time it seems easier to invent a theory of heredity than to record an original reliable and incontestable observation.

However, Professor Debierre furnishes in this essay of forty pages a satisfactory summary of the present state of knowledge in regard to heredity.

THE MEANS BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED IN HEALTH AND DISEASE. By W. HALE WHITE, M.D., F.R.C.P. London: J. and A. Churchill. 1897. (Demy 8vo, pp. 78. 2s. 6d.)

IN the first of his Croonian Lectures Dr. HALE WHITE begins by discussing some general facts in relation to the temperature of animals, which if not borne in mind in experimentation might lead to error. Under the subject of specific heat in animals it is concluded that a rise of temperature in man is not due to any variation in the specific heat. The author then names the various methods of determining whether a rise of temperature is due to the increased production or diminished loss of heat; he concludes the lecture by describing in detail the method of comparing the variation in the loss of heat with the variation in the internal temperature. If, as the author contends, both the internal and surface temperatures can be shown to have risen, and the amount of sweat to have increased, then the production of heat must have itself increased.

In the second lecture, Dr. White investigates the production and loss of heat in various diseases, in baths, exercise, etc. He concludes that in some fevers the pyrexia is due to a diminished loss of heat, while in others this is of but slight importance, but the production of heat is very great. Thus the processes which lead to a rise of temperature may be different in the different fevers.

Lecture III on calorimeters includes the description of one by the author, but this method does not appear to be, at any rate as yet, very reliable.

Lecture IV deals with the chemical method. For obvious reasons it is not possible to calculate the heat production from the diet, but supposing the heat equivalents to be known and the amounts of nitrogen and carbon discharged be calculated, then the amount of proteid and fat which has to be broken down to produce that quantity of nitrogen and carbon, can be determined. In this way it has been proved in starving rabbits suffering from swine erysipelas that there is an increased heat production nearly entirely due to the increased destruction of proteid. Some experiments by May

show that grape sugar saves the destruction of albumen and fat. This opens up the important question, not a little discussed of recent times, of the value of milk and farinaceous foods in fever. It would have been interesting to hear at greater length Dr. White's views on the defensive mechanism of pyrexia in the infective processes. These lectures contain much important information, based on actual experiment and observation, in a subject of the first interest to those who have to deal with disease, and they come from one who has made himself an authority on the subject.

ANATOMICAL ATLAS OF OBSTETRIC DIAGNOSIS AND TREATMENT. By OSCAR SCHAEFFER, M.D. London: Baillière, Tindall and Cox. 1897. (Demy 8vo, pp. 234. 12s. 6d.)

THIS work consists of two parts. First, there is an Atlas of 142 plates printed in colours. They are mainly diagrammatic, as they should be, for they are intended to make things clear and plain to the student, not to represent new observations. After the Atlas come 176 pages of letterpress in elucidation of the plates. This part of the work is practically a very concise textbook of midwifery.

The plates, looked at as they should be from the point of view of their purpose, are very good. Opposite each plate is given a description of it. We think students will find them helpful. The treatise on midwifery, which forms the second part of the work, is extraordinarily condensed. There are no superfluous phrases, unless it be the names of German obstetricians by which, heaped together, the patriotic author labels very simple methods. Thus, we are told that the after-coming head may be expressed by the "Wigand-A. Martin-Winckel manipulation." The features of contracted pelves and of labour with them, are given more fully than in English books of corresponding size, although occasionally clearness seems to be sacrificed to brevity.

In most points the author is an accurate and trustworthy guide, but it is not usual for the fundus uteri at the end of the sixth month of pregnancy to be 3 or 4 cm. below the umbilicus; it is not expressly stated that the author refers to lunar months. We agree with the anonymous editor in thinking that in early tubal gestation laparotomy should be the rule, if the surgeon is competent and the environment favourable, instead of the injection of morphine as recommended by Dr. SCHAEFFER during the first three months, and "possibly also the fourth and fifth."

On the whole the book is highly to be commended, and we think students will find it helpful.

NOTES ON BOOKS.

INDEX AND APPOINTMENT BOOKS.

WE referred, in the BRITISH MEDICAL JOURNAL of December 4th, 1897, to an Appointment Book published by Messrs. Eason and Sons Limited, of 80, Middle Abbey Street, Dublin. This firm has since sent to us a number of other books published by them, intended to facilitate the task of reference and classification. The most elaborate of these is the *Biliteral Extension Index*, a foolscap volume with the alphabet on projecting tabs, the lettering appearing on both sides, so that the book can be run through from front to back, or back to front, with equal ease. Each letter is again subdivided alphabetically, so that entries can from the first be made approximately in alphabetical order. The description is perhaps a little complicated, but the system itself is perfectly simple. The *Professional Notebook*, which is printed in various sizes, is indexed upon a different principle. The bulk of the book consists of numbered pages with thumbnail indications for each ten. The earlier pages of the volume are occupied by an alphabetical index for the entry of the titles of the subjects noted in the body of the book. On the left hand side of each page of this alphabetical index columns are ruled for the vowels *a e i o u*, and *y*. If, for instance, the entry to be made is "chloral," the word is entered under C, and a tick is made in the column under the vowel *o*; in this way the eye is quickly brought to the desired entry. In quarto size a book of this kind costs 10s. in strong binding, a smaller size, bound as a pocketbook, costs 5s. The cabinet notebooks, in octavo or quarto size, on the same principle, but without the vowel index, and plainly but strongly bound, can be obtained at prices varying from 1s. to 5s., according to the size and binding. The *Cabinet Index* is a quarto manuscript book with an alphabetical recessed index for direct entries. This firm also publish blank indices, which are manuscript books with recessed edges, also an indexed calendar which can be adapted to any year, and is provided with a key to find the arrangements of the days of the months in any year. The Appointment Book, to which we have already referred, can be obtained enclosed in a red leather case with indexed sheets for addresses and a writing pad.

Appendicite. Par le Dr. CH. MONOD, Professeur-Agrégé à la Faculté de Médecine, Chirurgien de l'Hôpital St. Antoine, et J. VAUVERTS, Interne des Hôpitaux de Paris. (Encyclopédie Scientifique des Aide-Mémoire.) Paris: Masson et Cie; Gauthier-Villars et Fils. 1897. (Cr. 8vo, pp. 196. 2 fr. 50 c.)—This book, though small and unpretentious, contains all that a practical surgeon can desire to help him in obtaining full information relating to the pathology, symptoms, and treatment of typhlitis. The authors have really omitted very little that would meet the requirements of both advanced student and practitioner. Doubtful points are discussed fully and fairly, and both personal experience and a wide study of the work of others have been brought to bear on the preparation of this work. Strict criticism might perhaps suggest that many of the difficulties still connected with the subject of appendicitis are likely to be forgotten in the reading of the lucid and authoritative statements of the authors, and also that but little mention has been made of the work done by other than French surgeons. We know of no other work in which the indications and contra-indications of surgical treatment under different circumstances are so clearly laid down. In France, as in this country, it is very evident that in a large proportion of cases of appendicitis reliance is placed on strictly medical treatment.

Sick-room Cookery and Hospital Diet. By MAUDE EARLE. London: Spottiswoode and Co. 1897. (Demy 8vo, pp. 256. 3s. 6d.)—This book on sick-room cookery will be useful alike to the medical man prescribing the dietary of a patient suffering from diabetes or convalescing from fever, and to the nurse who is trying to coax back the shy appetite of a patient by tasty dishes which are strictly within the dietetic limitations allowed. Miss Earle's recipes are excellent, and the book has the unusual advantage in invalid cookery manuals of systematic arrangement. Thus diabetic foods are placed altogether under the headings of diabetic soups, diabetic meat dishes, diabetic vegetable dishes, diabetic savouries, diabetic sauces, diabetic puddings, and diabetic cakes; and the reader discovers that the poor diabetic is not so much to be pitied after all in the matter of restriction of diet if so many good things are allowed him. Peptonised foods are treated in the same practical manner. We recommend this little book very heartily.

Die Strikturen der Harnröhre und ihre Behandlung. [Stricture of the Urethra and its Treatment.] Von Dr. H. WOSSIDLO in Berlin. Mit 36 Abbildungen. (Leipzig: C. G. Naumann. Crown 8vo, pp. 185. M.2.)—This book includes three numbers of a series of small works published under the title of *Med. Bibliothek für praktische Aerzte*, and it contains an account of the pathology, symptoms, diagnosis, and complications of stricture of the urethra, as well as of the various methods of treatment in vogue at the present time. Special attention is given to the views of Oberländer with regard to the use of the urethroscope both in diagnosis and in the determination of the extent to which dilatation of the stricture should be carried in order to avoid the risk of relapse. Though the author has nothing new to say about stricture, the book may be commended as a useful and clearly written summary of the present state of knowledge on the subject.

ON the occasion of his retiring from the post of Medical Officer for the parish of Tongue, Sutherland, Dr. William Stewart Macdougall was entertained at a dinner on January 11th. The healths of the parting guest and his wife were heartily pledged.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CONDENSED MILK: PICNIC BRAND.

THIS condensed milk is said to contain the whole of the original cream, and to be free from micro-organisms. It is of good flavour. It appears to be sweetened with cane sugar. A sample tin was kept at a temperature of 37° C. for seven days, and when opened at the end of this time there was no sign of decomposition. The amount of fat which the milk is stated in the analysis submitted by the manufacturers to contain, is 10.18 per cent. This is slightly in excess of the amount found on our examination, but the discrepancy affords no reason for questioning the statement that the product is prepared from whole milk. The directions on the tin prescribe for newborn infants a dilution with fourteen parts of water to one of milk. Such a dilution would produce a liquor far too poor in fat if compared with human milk. The milk can be obtained at 21, Mincing Lane, E.C.

LUPUS SCRAPERS.





DR. G. G. STOPFORD TAYLOR, Honorary Physician to the Liverpool Hospital for Cancer and Skin Diseases, writes:

One of the principal reasons why curetting operations for the relief of lupus are so frequently attended by unsatisfactory results is owing to the shape of the instruments with which they are performed. While Volkmann's scoops are all that can be desired for the removal of nodules and small circumscribed areas, whether superficial or deep, they are quite unsuited for the removal of extensive patches of diseased tissue, therefore Messrs. Mayer and Meltzer have made, at my suggestion, a set of steel scrapers, three in number, the blades of which are slightly concave, and measure ¼ inch, ½ inch, and 1 inch in length.

They are beautifully finished out of one piece of steel, are fitted into a neat metal case, and in my hands have proved most useful, and I trust will prove a welcome addition to the armamentarium of the dermatologist.

A SYRUP OF HYPOPHOSPHITES.

THE Syrupus Hypophosphitis Compositus is an unofficial preparation, which contains in solution the hypophosphites of iron, calcium, manganese, and potassium, with the alkaloids quinine and strychnine. It is well known that this syrup is apt to become cloudy, and form a precipitate mainly composed of ferric hypophosphite, and frequently to develop a disagreeable odour of sulphuretted hydrogen. It has been determined that the cause of the odour may be either impurities in the sugar or the hypophosphites employed. We have received a specimen of this syrup, prepared by Messrs. Lorimer and Company, Britannia Row, Islington, N. It is perfectly bright and neutral. There is not the slightest deposit, and no trace of disagreeable odour. It is, in fact, a most excellent preparation. The composition and strength of the syrup are shown upon the label.

MEDICAL MISSIONARIES.—According to the *Maryland Medical Journal* the total number of medical missionaries in the world is 460, an increase of 122 in five years. Of these 168 are in China, 165 in India, 44 in Africa, 34 in Syria and Turkey, and a smaller number in each of nearly a score of other countries. More than 340 are men, and about one-third of that number are women. The United States has 246 in the field, Great Britain 174, Canada 21. The American Presbyterians lead with a total of 71, the American Methodists follow with 55.

ARCHÆOLOGICA MEDICA.

XLII.—CLOPTON HAVERS, M.D., AN EARLY ENGLISH HISTOLOGIST.

THE Haversian canals, like Cowper's glands, are known to every student of medicine at home and abroad. Yet to most people the names denote structures and connote but little. Details of Cowper's life and work have already been given in the BRITISH MEDICAL JOURNAL of January 15th, p. 160; it may be interesting to give a short account of Clopton Havers.

Havers was born at some time between 1550 and 1560, the son of a clergyman, perhaps of the less compliant sort, for the son was much indebted to Dr. Richard Morton, a Fellow of the Royal College of Physicians, formerly Fellow and Chaplain of New College, Oxford. Dr. Morton was a well-known Nonconformist who was ejected from his living of Kinver in Staffordshire, on the passing of the Act of Uniformity in 1662. He then studied medicine, and was created a Doctor of Physic at Oxford at the great Convocation held on December 20th to confer an honorary D.C.L. on William, Prince of Orange, afterwards William III, then on a visit to England. The grace for Morton's degree was not well received by the resident Doctors and Masters, for he would seem to have been selected for the honour because his religious tenets were known to be in accord with those professed by the Prince. He was, too, one of the four Fellows whose names were omitted from the Charter granted to the College of Physicians by James II in 1686, but he was restored to his place as Fellow three years later by a Committee of the old and new Fellows who had been nominated to compose the differences engendered by the charter. Addressing Dr. Morton, Havers writes:

I must own it as one of the kindest Providences of Heaven that I had the happiness, Sir, not only to be directed in my studies by you, but by your particular favour to enjoy many other great and extraordinary advantages, to all which under Almighty God I owe what I pretend to in Physic.

Nothing is now known of the early education of Dr. Havers until he became a member of Catherine Hall, Cambridge, which he left without taking any degree in the University. He was admitted an Extra-Licentiate of the Royal College of Physicians, July 28th, 1684—an Extra-Licentiate being one who had authority to practise medicine anywhere in England except in the City of London, or within seven miles of it, though he could only settle in Oxford or Cambridge if he held a special licence or had obtained a degree. Havers graduated M.D. at Utrecht, July 3rd, 1685, settled in London, was admitted F.R.S. December 15th, 1686, and L.R.C.P. December 22nd, 1687.

His investigations on the structure of bone were communicated to the Royal Society during the years 1689, 1690, and 1691; they were republished under the title *Osteologia Nova, or New Observations of the Bones*, to which was added a "Discourse of the Cartilages." This work soon rendered him famous, and on June 30th, 1698, the minute books of the Barber-Surgeons Company record that

there bee an Anatomy lectures called Gale's Anatomy. Dr. Havers and Dr. Hands being put in nominacion for reading of the same, Dr. Havers was chosen for three years and to read on the second Tuesday, Wednesday, and Thursday in July next by three of the clock in the afternoon and to have thirty shillings for his paines and the remainder to be disposed of by the Committee.

In the following year the minutes again record, under the date December 14th, 1699, Dr. (*sic*) Hands and Dr. (*sic*) Havers were put in nomination for reader of the Ventera (visceral) lecture in the room of Dr. Tyson. Dr. Hands was chosen for "fower years." Gale's Anatomy, founded in 1655, was an osteological lectureship. His bequest, which brought in originally £16 a year, still survives at the Royal College of Surgeons, where it has become amalgamated with the Arris lectureship on the muscles to form the Arris-Gale professorship.

Nothing more is known of the career of Havers except that he died apparently of a malignant fever, and was buried on April 29th, 1702, at Willingale Doe in Essex. His funeral sermon was printed with a dedication to his widow, Mrs. Dorcas Havers.

The observations on the structure of the bones were quite worthy of being reprinted. They deal with the periosteum, with the growth of the bones, with the marrow, and with the synovial membrane of the joints. In speaking of the peri-

osteum, Dr. Havers gives a clear account of the prolongations, afterwards known as Sharpey's fibres. He says:

The Periosteum is united to the bone by little fibrillæ, or threads continued from the one and penetrating into the substance of the other, which may be observed in a perfect bone, especially in some places. But I discovered it more plainly in the bones of a calf, which were tender and imperfect, where, I found, the threads penetrating that gelatinous Matter, which lay under the Periosteum, and beyond it were inserted into that part which was indurated, out of which I could draw some of them.

He assumed, however, that these fibres were nervous in function, and not, as Sharpey showed them to be, merely connective, for Havers continues:

By these fibres and the mediation of the Periosteum, it is probable that the bones have some internal sense, so that they may be said to be sensible, not only in their membrane, but even in their substance.

Havers's description of the chemistry of bone is correct, though it is necessarily expressed in the chemical nomenclature of the time. He writes:

These parts (of a bone) are of two sorts, to wit, Terrestrial and Saline. It is true if we come to torture a bone with the fire, it seems to confess that it consists of all the five chemical principles; it affords us a spirit and Phlegm, a volatile salt and an oily or sulphureous substance.

The Haversian canals are described as follows:

In the bones through and between the plates are formed Pores besides those, which are made for the passage of the blood vessels, which are of two sorts. Some penetrate the Laminæ and are transverse, looking from the cavity to the external superficies of the bone. The second sort are formed between the plates, which are longitudinal and straight..... And that I may not be thought to pretend to the discovery of what no other men's Eyes can discern—because they are generally very difficult to be observed, unless it be the transverse pores in the internal lamell—I have the two pieces of bone which I have brought along with me, in one of which the transverse, in the other the longitudinal, pores are very visible with the help of an ordinary magnifying glass.

Havers fell into error about the uses of the canals, for he says:

About these passages I was particularly strict in my inquiry, whether they were not formed for blood vessels tending either to or from the Marrow.....yet I made myself certain that these pores, or the generality of them which I examined, had no vessels which passed into them.

He was reduced, therefore, to the supposition that the larger canals contained medulla, which is true; and that the smaller ones contained medullary oil, which is untrue; whilst he says of the pores in the cranial bones:

I do conceive that they are perspiracula by which the offensive Vapours which arise and gather within the Cranium do perspire. And it may seem more probable if we consider how Sweats do easily and frequently arise in the forehead, even when they are not discernible in other parts. .....I must confess that I have not met with them in all the Skulls that I have examined, and perhaps the difference may make some variation in the state of the brain: the want of them may be a natural dulness and cloudiness; it may render us obnoxious to a frequent headache, not only upon the accident of a cold or any other evident occasion, but even where the crasis of the blood is good and no accountable cause has fallen under observation.

MR. VICTOR HORSLEY AND THE GENERAL MEDICAL COUNCIL.

THE following is the full text of the report referred to briefly last week, which Mr. Victor Horsley has recently issued:

A REPORT TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—I sincerely regret being obliged to make the following report to you, but the urgent nature of the matters composing it, and my inability to secure the safety of those of your interests which are endangered, gives me no option but to discharge my personal responsibility as a direct representative member of the General Medical Council.

A.—*Re the Legal Affairs of the Council, and Action of the President thereon.*

In a paper which I read at the annual meeting of the British Medical Association at Carlisle in 1896, I drew attention to the dangerously arbitrary powers possessed by the President of the General Medical Council, and I showed how the business of the Council, especially the prosecution of certain offenders against the Medical Act, was adversely affected by the exercise of such powers.

Four months after the publication of my paper, the General Council commenced a revision of the penal procedures of the Council, and ultimately removed from the President the personal exercise of most of his power, and vested it in the Penal Cases Committee.

The fact that these precautionary measures have unfortunately not been sufficiently observed, or were not made sufficiently stringent, has led to a repetition in a very aggravated form of the evils to which I drew your attention at Carlisle in 1896.

The circumstances of the present case are as follows: At the last session of the Council, namely, November, 1897, the Council decided that a flagrant example of the special class of offenders against the Medical Act referred to above should be legally prosecuted on certain lines and on certain definite evidence which was before them.

At the end of December, 1897, from facts which came to my immediate personal knowledge, the conviction was forced upon me that unless a very radical change were at once effected in the conduct of this legal business, an unsuccessful issue would result.

Under these circumstances I felt it an imperative duty to write to the President informing him of the facts, and asking him to call the Penal Cases Committee as soon as possible, in order that the existing confusion might be rectified, he alone being invested with the power of calling such Committee together out of session.

He replied that (1) such a proposal was impracticable; (2) that he did not intend to call the Committee; (3) that he had referred the solicitor's statements (upon which my opinion as expressed above was formed) back to the same source for his opinion thereon; and (4) had instructed the same solicitor to take the opinion of eminent counsel upon facts already laid before the Penal Cases Committee, and upon the report of which the Council had decided to act. Thus the President, after making a statement (No. 1) that was not correct, and refusing to take the only constitutional course open, namely, that of summoning the responsible committee, assumed the direction of affairs, and reopened the matter which had already been decided upon by the Council, and in addition assumed the responsibility of ordering the great and useless expense of taking legal means to re-discover facts already known to and settled by the Council itself, with the concurrence of the legal assessor in the session of last November.

On receiving the President's letter I immediately communicated the facts to two leading members of the Penal Cases Committee, one of whom I am aware endeavoured to persuade the President to summon the Committee, but was also unsuccessful.

I therefore wrote again to the President (who had not answered my former letter) asking him once more to call the Committee and to withdraw his instructions to the solicitor as being a waste of public money. By way of reply to that letter I have only received a note from the President improperly suggesting that I should in future address my communications not to him (the only responsible person), but to the Registrar or the Solicitor, neither of whom, of course, have any authority or powers.

The present situation, therefore, is that the President, with what in my opinion amounts to a reckless disregard of fact and of constitutional right, is allowing the most important and serious work of the Council affecting the interests of the whole profession to remain in the hands of those who would appear to be unable to satisfactorily prosecute it. And further, that he has, without any authorisation whatsoever from the Council, ordered a large and useless expenditure of the public funds of the Council.

My object in obtaining a meeting of the Penal Cases Committee was to have the whole circumstances properly investigated by the body competent to deal with them, and thus to secure matters of such difficult and delicate nature being properly dealt with.

That object has been frustrated by the action of the President.

As the Council does not meet until May, I am unable to call in question the President's conduct in the proper place before that date, and am therefore powerless to do anything to remedy either the present state of this special penal business of the Council or the expenditure in which the President has involved the Council. I am therefore constrained to make this public statement in order that the members of the profession may be made aware of the manner in which their interests are being menaced, and of the steps I have taken to protect their interests. That I have not succeeded is, I venture to point out, not my fault, but is to be attri-

buted to the power still left by the Council in the hands of the President alone, and arbitrarily exercised by him.

B.—*Re Practice in Italy.*

I desire at the same time to report to the electorate the following matter, which is the outcome of an official letter sent by the President of the General Medical Council to the Privy Council, on July 1st, 1897, since I can obtain no answer from the President of the General Medical Council, to whom I have addressed the communication reprinted below. A grave legal error contained in his letter impugns the whole position of all medical practitioners in the kingdom, and being now published will, if possible, be made use of by every enemy to the profession, and every unqualified person who trades on the ignorance and fears of the public. It is necessary, therefore, to immediately correct the error referred to, and to warn the profession of the injury which the President's official pronouncement may, if left unchallenged, inflict upon its members.

The circumstances of the case are as follows:

The Italian medical profession are seeking to obtain from their Government a statutory protection of qualified medical practice in Italy, and desire to make it compulsory upon any British subject practising medicine in Italy to pass the Italian State examination. Our countrymen who are so practising in Italy applied last summer to the General Medical Council to interest itself in their behalf. As no reciprocity is possible, since we do not admit foreign degrees to our *Register* except as *additional* titles, the General Medical Council ordered a small committee to draft a letter to the Privy Council upon the subject.

This letter is the one to which I take exception. It is signed by Sir R. Quain as President of the General Medical Council, and after recounting in a way which in my opinion is erroneous and misconceived, the respective positions of a British practitioner resident at home and abroad, dilates at length on the injustice of the proposed Italian legislation, and suggests amendment of the Medical Acts in order that reprisals may be efficiently made when necessary by our Government. This letter is to found on page 185 of vol. 34 of the Minutes of the Council, which has just been published. Immediately after this letter came to my notice I wrote to the President in the following terms, but have received no answer thereto beyond a formal acknowledgment.

[COPY.]

25, Cavendish Square, W.,
December 30th, 1897.

SIR,—I beg to draw your attention to the following matter, which is of urgent public importance, and I submit requires prompt correction.

On page 185 of the minutes of the Executive Committee (meeting November 22nd, 1897, vol. xxxiv, "Minutes of the General Medical Council") is given a copy of a letter signed by yourself dated July 1st, 1897, and forwarded to the Privy Council in consequence of a resolution of the Council of May 27th, 1897 (see "Minutes of the General Medical Council, vol. xxxiv, p. 68).

In this letter occurs the following passage (page 186, line 17): "the reason assigned for the proposed change is that Italian doctors are not permitted to practise in other countries of Europe, including the United Kingdom, unless they possess the diplomas of the countries in question.

"In contravention of this statement the General Medical Council desire to remind the Lord President that foreign medical men are under *no restrictions in Great Britain* as far practice is concerned, and that the only disabilities under which they labour, if they do not possess a diploma registrable under the Medical Acts, are (*a*) that they cannot recover fees by legal process or sign certificates; (*b*) that they are unable to give *medical* evidence in courts of law, and (*c*) that they may not hold certain public offices. *They are absolutely free to practise their profession*, not only upon other foreigners, as British medical men may at present practise in Italy, but also *upon the Queen's subjects*, and upon foreigners resident within the Queen's dominions."

Since the name of no foreigner can be placed on the *Register*, except he possesses a British qualification, this statement assumes that any unregistered person may unrestrictedly carry on medical practice in the United Kingdom. In other words, that registration under the Medical Acts, 1858 and 1886, is of no value as regards practice, and that the Apothecaries Act of 1815 does not apply to foreigners practising in the United Kingdom, though unregistered and unqualified.

I beg to call your attention to the following considerations, which show that the statement in your letter to the Privy Council is incorrect, and that foreign practitioners who are unregistered and unqualified persons cannot practise unrestrictedly medicine, surgery, and midwifery in the United Kingdom.

1. The Medical Act of 1886 (49 and 50 Vict., cap. 48) contains a section, No. 6, which is headed "Effect of Registration," and in the marginal index is stated to describe the "*privileges*" of registered persons. This section in its commencement states as the first privilege that "on and after the appointed day a registered medical practitioner shall, save as in this Act mentioned, be entitled to practise medicine, surgery, and midwifery in the United Kingdom." Thus the privilege of practising medicine in the United Kingdom is conferred by the Act on registered persons alone in precisely the same way as the second privilege conveyed in the section, namely, that of recovering professional charges by process of law, is alone bestowed upon registered persons. The punishment of persons who commit breaches of this section, and who practise without being registered, is provided for in Section XL of the Medical Act, 1858. An unregistered foreign doctor, therefore, practising in the United Kingdom would come under the restrictive penalties of these sections of the Medical Acts.

2. The Apothecaries Act, 1815, provides that persons who do not hold the registrable qualification, namely, licentiateship of the Society of Apothecaries, and who nevertheless practise medicine, shall be punished under the penal section No. 20. This statute has been successfully employed for the punishment of unregistered and unqualified foreigners (including Italians) and others attempting to practise medicine in this country.

An unregistered foreign doctor, therefore, practising in England and Wales, would come under the restrictive penalty of the Apothecaries Act, 1815.

The incorrectness of your statement cannot fail to have a gravely prejudicial effect on the manner in which the Government, that is the Privy Council, will regard the existing Medical Acts, and also directly compromises the value of any official letters which may be sent in the future by the General Medical Council to the Privy Council. Under these circumstances I shall be much obliged if you will kindly inform me as soon as possible what steps you propose to take to correct the erroneous impression conveyed by your letter, which has unfortunately now become public property by being published in the current volume of the Minutes of the Council.

I take this opportunity also of giving notice that at the next session of the Council I shall move that a letter of rescission, withdrawing your letter of July 1st, 1897, be forwarded to the Privy Council.—Yours faithfully,

Sir Richard Quain Bart., M.D., VICTOR HORSLEY.
President, General Medical Council.

In my opinion it is clear that a certain injury to the authority and reputation of the Council cannot fail to have been inflicted by the President's letter, and it is equally certain that we cannot obtain a *tabula rasa* until the Council meets and formally repairs damages by admitting that the letter sent to the Privy Council by the President was inaccurate.

However, by giving publicity to the matter and early contradiction to the President's statement, I think the profession will be able to prevent any injurious use being made of it during the five months that must elapse before the May session.

VICTOR HORSLEY,
Direct Representative for England and Wales.

THE King's College Hospital annual students' dinner will be held on Thursday, February 10th, at the Holborn Restaurant, when the chair will be taken by Proofessor Hughes, F.R.C.S. All past students wishing to be present should apply for tickets to the Honorary Secretary, Dinner Committee, at the hospital.

THE NEW MIDLAND UNIVERSITY SCHEME.

[FROM OUR BIRMINGHAM CORRESPONDENT.]

MASON UNIVERSITY COLLEGE.

ON Thursday, January 13th, was held the first meeting of the Governors of the new Mason University College, under the Presidency of the Right Hon. JOSEPH CHAMBERLAIN, M.P. The Governors number 180, and comprise, among others, representatives of the Council of the City, the county councils of Warwickshire, Worcestershire, Staffordshire, Shropshire, Leicestershire, Derbyshire, and Rutlandshire; representatives of the councils of the various county boroughs in those counties; the Lord President of the Council, the Chancellors of the Universities of Oxford, Cambridge, London, Wales, Victoria University; Dr. W. H. Dickinson, representing the Royal College of Physicians: and Sir William MacCormac, representing the College of Surgeons; the Senate of the Mason College, and the various members of Parliament of the Midlands.

NEED FOR A UNIVERSITY IN BIRMINGHAM.

There was an extremely large gathering, and, after the formal business of electing the Council had been disposed of, Lord WINDSOR moved the following resolution, which was seconded by Professor W. H. TILDEN, F.R.S., and carried:

That having regard to the development of higher education in the Midlands, and to the immediate requirements and prospective interests of such education, the Governors of Mason University College are of opinion that the time has arrived for the establishment of a university in Birmingham, and that the Governors will give their hearty support to the measures requisite to obtain a Royal Charter for that purpose, and generally for the promotion of the object.

Earlier in the day a reception of the Governors was held by Mr. Chamberlain at Mason College, and an opportunity was afforded them of inspecting the various departments, over which they were conducted by the professorial staff. This reception was followed by a luncheon given by the Lord Mayor of the city (Councillor C. H. Beale) at the Council House, to which the whole of the Governors of the College, and all the professorial and teaching staff were invited. There were also present the Earl of Dartmouth, Viscount Cobham, Lord Norton, Lord Windsor, Sir H. Wiggins, Sir B. Hingley, Sir J. C. Holder, Sir Willoughby Wade, Sir Walter Foster, M.P., Principal Heath, Dr. Windle, and a large number of the best-known men of Birmingham and the surrounding counties.

After the usual loyal toasts had been drunk, the LORD MAYOR, in a few words, proposed the toast of "Mason University College."

MR. CHAMBERLAIN'S SPEECH.

In his reply as its first President, Mr. JOSEPH CHAMBERLAIN delivered a most eloquent address, in which he made the first public announcement of a proposed scheme for the establishment of a Midland university. He commenced his speech by tracing the history of Mason College from its foundation by Sir Josiah Mason eighteen years ago till the present time, and then went on to say that now was a ripe and fitting time to consider whether it be not possible to realise a long-cherished ambition, and convert Birmingham into a university town. The objections formerly urged by members of older universities against the establishment of newer ones were little heard now, and at the present moment Birmingham and the district surrounding it was the only great centre in England not already provided with university facilities. In Germany, with a population of 56 millions, there already existed 21 universities. Scotland, with 4 millions, had 4; while in England and Wales, with a population of nearly 30 millions, there at the moment only existed 6 universities.

By the term "university" he meant first of all a great school of universal instruction, taking all knowledge as its province; and, secondly, a place in which professors and teachers should be associated with their students, and where all would be students together, and, lastly, a body which should have power to control the course of education it gives and confer degrees to test the value of its instruction.

To attain such an ideal it was above all things necessary that the scheme should have a strong financial support; it would be far better to wait another fifty years even than have a "starved" university. To establish and properly endow a university a sum of at least £250,000 would be necessary.

In conclusion, Mr. Chamberlain said he should appeal to the local patriotism of Birmingham and the districts around it—patriotism which had in the past done so much and which might yet in the future raise them to as high an eminence as a city of learning as they already enjoyed as a school for local government and municipal administrations.

OPINION IN BIRMINGHAM.

Such a scheme—for the establishment of a university on lines somewhat similar to those of the Victoria University—has naturally aroused a large amount of local enthusiasm, and articles of strong approval have happened not only in the press of the city, but in nearly all the local journals of the neighbouring counties. With the medical profession of the Midlands generally and in the Medical Department of Mason University College it is deservedly a very popular scheme.

It has long been patent to the authorities at the Birmingham medical school that they are under great disadvantages as compared with most of the other large provincial medical schools owing to their want of powers of conferring degrees on their students. Not only are many for this reason induced to carry out the whole of their studies elsewhere, but many of the most promising students leave towards the close of their curriculum to seek degrees elsewhere.

The clinical material at the disposal of the various medical and surgical teachers is almost unrivalled, and the medical department at the College is well equipped in every way, but until a university is established locally with degree-giving powers, it can never hope to compete with its more fortunate rivals.

As regards funds, it is hoped that in addition to donations from wealthy and generous well wishers of the scheme, members of some of the chief industries of the City and Midlands will organise and jointly contribute to the support of the various professional chairs.

The Lord Mayor (Councillor Beale) is giving the scheme his hearty support, and is calling together a representative meeting at the close of the present month, at which Mr. Chamberlain will again speak. The details of the scheme will then be thoroughly discussed, and resolutions adopted for carrying it to a successful issue.

ST. GEORGE'S HOSPITAL.

NEW MORTUARY AND POST-MORTEM ROOM.

A NEW mortuary and *post-mortem* room presenting several features of interest have recently been added to St. George' Hospital. The *post-mortem* room is placed above the mortuary, the bodies being removed from one to the other by means of a lift. The whole building is lined with white-glazed tiles, and being lit from the top is very light and clean in appearance. All the corners and angles are rounded, an arrangement which does not permit of the lodging of dust, and readily allows of flushing with water from a hose. Ventilation has been made a special feature, for in addition to gas-draught flues in each corner of the room, a rotary fan is in course of construction.

The tables are of slate, supported on a central iron standard, round which they revolve, and through which water and washings pass off to a grid-covered drain, which also drains the floor of the room. There is a plentiful supply of hot and cold water. The whole building wears the air of scrupulous cleanliness, and is quite free from the objectionable atmosphere so common in other and similar buildings.

In addition to this excellent equipment a small chapel has been provided in which the bodies can be viewed singly; the friends entering at one door find the body has already been brought in through another, through which it is, after their departure, returned to the mortuary.

A lift connects the mortuary with the *post-mortem* room. In this chapel service can be held, if wished, prior to the necropsy. In fact, everything seems to have been done to consider both the comfort and feelings of the friends, and the facility and cleanliness of the necroscopic examination.

THE GENERAL MEDICAL COUNCIL AND UNQUALIFIED ASSISTANTS.

The following is the text of the notice with regard to the employment of unqualified assistants, as it appears in the Minutes of the General Medical Council:

NOTICE.
EMPLOYMENT OF UNQUALIFIED PERSONS AS ASSISTANTS OR OTHERWISE.

Whereas it has from time to time been made to appear to the General Medical Council that some registered medical practitioners have been in the habit of employing as assistants in connection with their professional practice persons who are not duly qualified or registered under the Medical Acts, and have knowingly allowed such unqualified persons to attend or treat patients in respect of matters requiring professional discretion or skill: and whereas in the opinion of the Council such a substitution of the services of an unqualified person for those of a registered medical practitioner is in its nature fraudulent and dangerous to the public health: The Council hereby gives notice that any registered medical practitioner, who is proved to have so employed an unqualified assistant, is liable to be judged as guilty of "infamous conduct in a professional respect," and to have his name erased from the *Medical Register* under Section xxix of the Medical Act, 1858.

Further, in regard to the practice commonly known as "covering," the Council gives notice that any registered medical practitioner who, by his presence, countenance, advice, assistance, or co-operation, knowingly enables an unqualified or unregistered person (whether described as an assistant or otherwise) to attend or treat any patient, to procure or issue any medical certificate or certificate of death, or otherwise to engage in medical practice as if the said person were duly qualified and registered, is liable to be judged as guilty of "infamous conduct in a professional respect," and to have his name erased from the *Medical Register* under the said enactments.

But the foregoing notices do not apply so as to restrict the proper training and instruction of *bonâ fide* medical students as pupils, or the legitimate employment of dressers, midwives, dispensers, and surgery attendants, under the immediate personal supervision of registered medical practitioners.

DEATHS UNDER ANÆSTHETICS.

Chloroform and Ether.

We are indebted to Mr. F. S. Pitt-Taylor, M.B.Vict., Resident Surgeon at the Royal Infirmary, Liverpool, for the following account of a death under anæsthetics at that infirmary: The patient, T. E., aged 35, was admitted to the Royal Infirmary on January 7th, suffering from internal and external hæmorrhoids. He had been losing blood from them for the last three years, and had lately become so weak as to be unfit for work. He was intemperate in his habits. An operation was advised, and the usual complete examination of his condition was made in the wards, nothing being found to contra-indicate it. On January 8th chloroform was administered under my superintendence by Mr. Prentice, one of our senior students. About 1 drachm had been dropped on the inhaler when struggling commenced, and the anæsthetic was changed to ether. After a few inhalations of the latter the struggling ceased, but after a few more he suddenly became cyanosed. The administration of the ether was immediately discontinued, and the tongue and jaw pulled forward. The respirations at the same moment became weaker and shallower, and soon afterwards stopped altogether, the pulse failing almost simultaneously. Inversion was at once performed, and was followed by artificial respiration for about half an hour. Tracheotomy was unnecessary, as the air entered the lungs freely during the whole period of artificial respiration. At the *post-mortem* examination the lungs were found greatly congested. The heart was somewhat dilated and hypertrophied, and there was considerable fatty infiltration of its walls. On opening the right auricle an extremely large and patent foramen ovale was seen measuring an inch and a quarter in diameter. The mitral and tricuspid valves were slightly thickened, and early atheroma of the root of the aorta was present. All the other organs were congested, but were otherwise healthy.

DR. HALL HAINS'S DEFENCE FUND.

We are requested by the Honorary Secretary and Treasurer, Dr. Herbert Carre-Smith, 3, Turnham Green Terrace, Chiswick, S.W., by whom subscriptions are received, to acknowledge the following further list of subscriptions to this fund. A statement of the circumstances of the case, and of the names of the members of the Committee, of which Mr. Joseph Smith is Chairman, will be found in the British Medical Journal of December 25th, 1897, page 1874. It will probably be remembered that Dr. Hall Hains, who practises at Shepherd's Bush, was tried recently at the Central Criminal Court on an unfounded charge of performing an illegal operation. The jury stopped the case by direction of the judge, and Dr. Hains left the court without a stain on his character, but in defending the charge incurred costs amounting to over £800. The fund is being raised to help to defray a part of the costs. The Committee will be glad to receive additional subscriptions however small the amount:

	£	s.	d.
Amount previously acknowledged	94	8	0
Additional subscriptions received:			
Brigade-Surgeon-Lieutenant-Colonel Purves...	1	1	0
Arthur Roberts, Esq., M.D.	0	10	6
Henry T. Butlin, Esq., F.R.C.S.	2	2	0
T. M. Allison, Esq., M.D.	1	1	0

BRITISH MEDICAL BENEVOLENT FUND.

The annual general meeting of the above fund was held on Thursday, January 13th, at the residence of the Treasurer, Sir W. H. Broadbent, Bart., and was attended by a considerable number of members of the medical profession, including the members of the Committee, and the Honorary Secretaries, Dr. Samuel West and Mr. Joseph White.

In the unavoidable absence of the President, Sir James Paget, Bart., the chair was taken by Sir W. H. Broadbent.

The financial statement for the year, and the report of the Committee were presented to the meeting, and from these it appeared that annual subscriptions amounting to £962 6s. 6d., and donations amounting to £405 4s. 10d., had been received during the year, and distributed in grants to 167 out of 216 applicants. The grants varied from £5 to £18 each. The amount received from interest on invested capital had been £2,255, and this had been, as usual, devoted to the payment of annuities of £20 each to 107 recipients who had attained the age of 60 years and upwards. Ten annuitants of £20 each had been elected during the year, and one annuity of £15 had been granted to the widow of a medical man in accordance with the provisions of the Dunlop Gift. Owing to investment of recent legacies, one new annuity had been added to the permanent list, and the number on the list now amounted to 108.

The grant department had still caused the Committee very great difficulty and anxiety. This part of the fund is entirely dependent on the income derived from annual subscriptions and donations, and this always falls very far short of its requirements. What the fund most urgently requires is a large increase in its regular annual subscribers. The books and accounts of the fund had been exhaustively audited by the Honorary Chartered Accountant, and the working expenses had been remarkably small.

The meeting expressed very great regret at the resignation of Mr. J. T. Mould, F.R.C.S., who had been chairman of the Committee for many years, and who had been compelled to retire through ill-health.

Votes of thanks were carried by acclamation to the Committee, to the Treasurer, and to the Honorary Secretaries, and to the Auditor, the Honorary Chartered Accountant, and the medical press; and a special vote of thanks to Sir William Broadbent for his courtesy in the chair, and for his great interest in the welfare of the charity, concluded the meeting.

A Chair of Tropical Diseases has been established in the New York University Medical College. Dr. A. E. Stubbert has been appointed the first incumbent.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JANUARY 22ND, 1898.

THE TYPHOID BACILLUS AND POLLUTED SOIL.

IT has been accepted by many that the Royal Commission on the Metropolitan Water Supply was perfectly justified in basing on the evidence brought out before them the conclusion that the typhoid bacillus could not, when exposed on the surface of soil in fæces or in other organic matter, remain alive for a longer period than fourteen days or thereabouts. Some laboratory experiments carried out appeared to afford corroborative evidence on this point. It has always been maintained, however, by those who have from time to time been deputed to inquire into the causes of the various outbreaks of typhoid fever, especially those that were supposed to be due to the transmission of typhoid infective material through the agency of the soil or by water, that the evidence was not certainly in favour of such a time limitation of the vitality of the typhoid bacillus. Indeed, there had been accumulated a considerable amount of indirect evidence to the contrary, though there was certainly no direct evidence on this point, and the Commissioners, until they obtained that evidence, were perhaps justified in their conclusions.

Within the past few weeks, however, there have been published two series of experiments which undoubtedly place this question on a much firmer basis than heretofore. It had already been pointed out by Klein, Cartwright Wood, and Uffelmann, amongst others, that the typhoid bacillus will, under certain conditions, live for a much longer period —one or two months—than was at one time supposed. It has been insisted that, although there may be no multiplication in water, the bacillus will remain alive and capable of setting up its specific infection.

Quite recently Dr. John Robertson, Medical Officer of Health for Sheffield, has published in the BRITISH MEDICAL JOURNAL a series of experiments carried out by Dr. Maitland Gibson and himself, which may perhaps be described as experiments under natural or normal conditions. He has found that a number of factors, which at one time appeared to be of comparatively slight importance, undoubtedly play a very prominent part in determining the life-history of the typhoid bacillus in the soil.

Most workers were prepared to find that the vitality of the typhoid bacillus under conditions of saprophytism had been underrated, but that under suitable conditions it would be possible to demonstrate the presence of typhoid bacilli in soil 315 days after they had been placed there, and at the same time to prove that they had undergone considerable multiplication, was scarcely anticipated. Dr. Robertson has been able to prove all this. In the first instance he entirely failed to demonstrate the presence of bacillus typhosus from the soil of presumably infected areas, so that when he found them in his later experiments they must have been present in fairly large numbers. In one series of experiments he found that during the warmer months typhoid bacilli, placed in the soil, continued to multiply, this multiplication going on apparently for a period of at least 143 days. When, however, the cold weather came on, and the "natural" soil was left untreated, he lost trace of the bacilli, and at the end of 181 days—towards the end of November—none of the bacilli could be found. In another series of experiments, instead of placing the typhoid bacilli in ordinary soil, he placed them in a soil which was afterwards "watered" first with a very dilute broth, and then at regular intervals with solutions of organic matter of various kinds, so that the soil might be brought into a condition approximating fairly closely to that found in a sewage contaminated area. Here, at the end of 88 days—before the organic matter had been added, he was unable to find any typhoid bacilli in the cold winter months. In January organic matter was first added. As soon as the warm weather came round the soils were again examined, and it was found that in those to which no broth or organic matter had been added no typical bacilli could be found; whilst in those soils to which these organic matters had been added, typhoid bacilli could be demonstrated in the soil at the end of 315 days. Here we have an outdoor experiment carried out on a large scale under conditions ordinarily met with. It afforded abundant evidence that although the typhoid organism under certain conditions may be killed off when the conditions are favourable, it may even survive the frosts and rains of winter and spring. Under ordinary circumstances the unfavourable conditions of a low temperature are sufficient to prevent the development and spread of the typhoid organism; but when favourable conditions of nutrition are introduced, the bacillus is able to withstand the action of the low temperature, and to survive until the warm weather comes round, when it again becomes active. It is to this balancing of conditions that the medical officer of health will have to look if he is to cope successfully with the spread of typhoid.

Another point raised by Dr. Robertson is that vegetatio appears to interfere with the spread of the typhoid organism How far this may be due to the abstraction of soluble organic matter from the soil by the roots of the grasses and plants, must at present remain doubtful, but the experiments carried on point to this as being a possible explanation of the localisation of typhoid in regions in which vegetation is active. Further details, given in the paper in the BRITISH MEDICAL JOURNAL of January 8th, p. 69, will well repay careful study.

Confirming Dr. Robertson's experiments are those recently published by Dr. Sidney Martin.[1] These experiments accentuate the differences pointed out by Dr. Robertson in an exceedingly interesting and direct manner. Dr. Martin carried on a series of experiments, using organically contaminated soil, first of all sterilising this substance by means of heat. Of these soils eight samples were used,

[1] Supplement containing the Report of the Medical Officer in the Twenty-sixth Annual Report of the Local Government Board for 1896-97.

four of them taken from near houses repeatedly invaded by enteric fever, the other four being ordinary black garden mould, which, to all appearance, were very similar to the first series. In soils of this nature it was found that at the end of 16 days typhoid bacilli had not only remained alive, but, at the temperature of the incubator, had multiplied to such an extent that they had made their way from the centre of a layer of moistened sterilised earth (contained in an Erlenmeyer's flask plugged with cotton wool) to the periphery. In the whole of a considerable number of specimens the bacilli were found to remain alive, but in one or two, in which the proportion of moisture was somewhat greater, but where it never formed a layer on the surface of the soil, the spread towards the periphery was not quite so rapid, and it would appear — although it is not safe to hazard any very definite statement on this point— that too much moisture in a soil is not favourable to the extension of the typhoid bacillus from an affected area. At the end of 105 days bacilli, kept at a temperature of 37° C., still remained alive. Dr. Martin also found that the bacillus coli communis behaved in very much the same fashion. When exposed to diffuse light at the aboratorary temperature the growth of the typhoid bacillus was much slower; there had been a certain spread in 53 days, but in 63 days the bacilli had not extended to the periphery of the flask, that is, they had not extended so far in 63 days at the room temperature as they had extended in 16 days at the incubator temperature. When these experiments were repeated on virgin soil, that is, soil taken from Hampshire which had never come under cultivation or been manured, there was not only no multiplication of either the typhoid bacillus or the bacillus coli, but they actually appeared to be killed off, not only in the top soil, which was practically peat, but also in the subsoil, which was made up of a mixture of peat and sand—being very resistant, hard, and impermeable—and in the red sand taken from 2½ feet from the surface.

Both these observers, then, arrive at the same conclusion that the bacillus typhosus will remain alive in soil containing a certain quantity of organic matter. They both go further, and are able to demonstrate that there is a marked multiplication of the bacillus, especially when the conditions as regards temperature and moisture are sufficiently favourable.

These sets of experiments are of very great interest at the present moment, an interest which promises to become still greater as years go on and the population on non-agricultural areas becomes denser. They are important in themselves, but still more so as the forerunners of a long series which must be undertaken to elucidate and corroborate certain of the points raised by them.

"WHY FIGURES ARE SOMETIMES SAID TO PROVE ANYTHING.'

THE article by Dr. Fletcher Ingals, of Chicago, which was published in the BRITISH MEDICAL JOURNAL of October 13th, 1897, p. 1394, deserves attention, not solely because of the intrinsic interest of its subject matter, but also because it is an excellent illustration of the accurate use of the statistical method. It is not too much to assert that more blunders are made by medical men in drawing inferences from statistics of results of cases than in any other matter with which they are concerned. Thus we read an account of an extremely low fatality in a series of cases of enteric fever without any reference to the ages of the patients. Or again: the assertion is made that cancer and phthisis are hereditary diseases, because in a high percentage of cases there is a history of the same disease in parents or collateral relatives. In the particular instance taken up by Dr. Ingals, he sets himself the task of discovering whether there is really any such causative relationship as is commonly supposed between chronic inflammation of the nasal mucous membrane and pulmonary tuberculosis.

Having complete records of 830 cases of pulmonary tuberculosis, Dr. Ingals found that nasal disease was present in 237, or 28 per cent. This would suffice to many minds to establish a causative relationship between the two. Not so with Dr. Ingals. He has grasped the fundamental fact that in comparing two groups of persons you must state the mortality or morbidity from a given disease in proportion to an equal number of persons in the two groups. Dr. Ingals, as the result of an examination based on this principle, is able to show that "nasal catarrh is much more prevalent than pulmonary tuberculosis, and that it is much less frequent in a given number of tuberculous patients than in the same number of healthy people." One might be attempted to infer from this that nasal catarrh has an inhibitory influence on the development of phthisis, but the more likely supposition is that it has no influence whatever in either direction. We draw attention to the above example of the use of a right method, because a wrong method is so commonly adopted in similar inquiries.

Reference has been made above to the supposed heredity of phthisis and cancer as cases in point. The case of cancer may be mentioned in somewhat fuller detail. Inasmuch as 1 out of 21 men and 1 out of 12 women who reach the age of 35 are registered as dying from cancerous disease, it follows that there must have been a history of cancerous disease in parents or grand-parents in 1 out of 3 cases if these relatives died at higher ages than 35. Consequently a history of heredity in 33 per cent. of the cases under investigation would simply imply that these cases conformed to the average experience of the entire population of the country. What is really required, in order to test the point at issue, is on the one hand a careful and accurate statement of the number of cases in which there was a history of hereditary cancer among the general population; and, on the other hand, a similar statement of the number of cases of hereditary history in cancer among the patients investigated, both groups being stated in proportion to the number living in each instance at corresponding ages. Such a statement of the case it is frequently impossible to secure; but it must not be ignored that anything short of this method of expression of the facts is apt to be delusive and fallacious.

THE SPHERE OF SCIENCE.

THE address given by the Archbishop of Canterbury the other day to the students of the London Hospital Medical College, will cause many to think of the past. He said that there were two great entrances by which all kinds of truth entered into the soul and mind of man. The one was through the spiritual and moral faculty by which it was possible for

the mind to lay hold upon truths of the very highest importance, but which could not be reduced to the testimony of experience. The other was by the use of the bodily senses—the mind employing those senses under its own direction for the purpose of pursuing whatever investigation was chosen to be the subject of study. The manner in which the Archbishop developed his subject must have made some of his hearers reflect how short a time it seems since Darwin set men by the ears! How short a time since the theory that formative power had been, was, and would be continuously exerted, was thought by many to be opposed to religious truth! How fierce the excitement, and how rough the language used by either side! How little understood then what seems now so plain! Yet let us not deceive ourselves. The power to think clearly in abstract matters is given to very few, and though their judgment slowly imposes itself upon the mass it is not assimilated. The particular statement may be condoned on their authority, but the principle involved is not understood, and the next terms in which it is put forward will produce as fierce disputes as before.

For in truth there are two sides. The world of science is the world of sense, that of religion is the world beyond sense, and though science takes cognisance of the effects, yet the premisses of religion are not in her world. She is apt to say these are incapable of proof—and so they are; but she forgets that her own are like them in this: Science is a mass of inductions founded upon sense impressions, which can be proved true only by the senses whose truth is in question. The dull do not understand this, and the clever have agreed, since madness lies the other way, to beg the question. Yet it should be remembered now and then that necessity, which is more and more put forward in defence of religion, is needed to support science too. The premisses of each are believed because we cannot help believing them, not because we can prove either.

Science cannot affirm the truth of religion, since she deals with the world of sense alone; nor has she the right to say that this is the only actual. It is inept to declare that what she sees is all that can be. But when the evidence of sense is offered by religion, it is the duty and the right of science to criticise, for sense impressions are her own ground, and must be judged by her rules. Struggles will still arise on these subjects in the future as bitter as those that have been fought in the past, and the issue will assuredly be the same. Scientific men make many mistakes, but there is a gradual growth of truth, or of what stands for truth to us, and this is not to be gainsaid.

Another way in which science and religion meet is in the sphere of morals. Even if it be admitted that right conduct has its root in religion, and is mainly vitalised by its influence, either directly exercised or the result of inheritance, science supplies knowledge which is a useful, if not a necessary, complement to religious feeling.

It is well, then, as the Archbishop says, to survey carefully the subject, which is the mind and spirit of man. It is well to recognise two kingdoms in his world, and two faculties which must each be given due training and due honour. It is especially needful, in order to avoid misunderstanding and offence, that we should try to see clearly what belongs to each, and how in action they should be combined. But few succeed in this, for, besides the fact, which is of little real moment, that we have no standard of proof but ourselves, truth is relative, since men develop their faculties irregularly and unequally. One man feels little the spiritual influence which in another is supreme, and each recognises imperfectly the foundation on which the other stands.

Reality and truth are a world into which, perhaps, we never enter, and even those shadows of them that we see upon the wall are not all alike visible to each of us. Two sorts of men are common in the world, and common in both camps. The one is logical but narrow in vision, arguing rightly from his own, but incapable of seeing the premisses of his opponent. The second, blustering and inconsequent, prides himself upon his common sense in holding opinions on both sides, yet examines none.

THE BRITISH MEDICAL JOURNAL.

AT the meeting of the Council of the British Medical Association on January 19th, Dr. Dawson Williams, Assistant Editor, who has been connected with the editorial department of the JOURNAL for seventeen years, and has on many occasions discharged the duties of acting Editor, was unanimously appointed Editor of the BRITISH MEDICAL JOURNAL. At the same time Mr. C. Louis Taylor, who has been Sub-Editor for the last eleven years, was appointed Assistant Editor.

DR. DONALD HOOD has been selected by Lord Salisbury to succeed the late Dr. Wadham as Examining Physician to the Queen's Foreign and Home Service Messengers.

THE Queen has been pleased to award to Inspector-General of Hospitals and Fleets Henry Macdonnell, C.B., R.N., the Jubilee medal of 1897.

A DISCUSSION on Intracranial Complications of Otitis Media will be introduced at the next meeting of the British Laryngological, Rhinological, and Otological Association by Mr. C. A. Ballance, who will read a paper founded upon observations made in fatal cases.

MR. HAROLD JALLAND STILES, M.B., F.R.C.S.E., has been appointed Surgeon to the Royal Edinburgh Hospital for Sick Children, Edinburgh, in place of Mr. Joseph Bell, M.D., F.R.C.S.E., whose term of office has come to an end. Mr. Bell has been appointed a Consulting Surgeon to the Hospital.

AT a meeting of the Medical Officers of Schools Association, which will be held at the house of the Medical Society of London, Chandos Street, Cavendish Square, W., on Wednesday next, at 3.30 P.M., Dr. Greville Macdonald, will read a paper on Some Points in the Physics of Adenoids. The Society invites the attendance of medical men interested in the subject.

WE understand that Dr. Charlton Bastian has resigned the post of Physician to University College Hospital, and Professor of Clinical Medicine in University College. Having just completed thirty years of service to these institutions, and finding it difficult to command the necessary time and energy for the discharge of his duties, he is willing to give place to others. He still retains his physiciancy at the National Hospital for the Paralysed and Epileptic.

THE Lord Chancellor has appointed Edward Marriott Cooke, M.B.Lond., Medical Officer and Superintendent of the Worcester County and City Lunatic Asylum, to be Commissioner in Lunacy in place of J. A. Wallis, M.D.,

deceased. Dr. Cooke has held the office of President of the Worcestershire and Herefordshire Branch of the British Medical Association.

AT the meeting of the British Balneological and Climatological Society which will be held on Wednesday next at 20, Hanover Square, a discussion on the Treatment of Cardiac and Circulatory Affections by Baths, Climate, and Exercises, will be introduced by Dr. Samuel Hyde (Buxton). Among those who are expected to take part in the discussion of this subject, which has recently attracted so much attention, are Dr. George Oliver (Harrogate), Dr. Douglas Kerr (Bath), Dr. Sansom, Dr. Wm. Ewart, Dr. Bezly Thorne, Dr. Leonard Williams, Dr. Alexander Morison, Dr. Herringham, Dr. Wethered, Dr. Ward Humphreys (Cheltenham), Dr. Eardley Wilmot (Leamington), Dr. Bowen Davies (Llandrindod Wells), Dr. Havell (Felixstowe), Dr. Shirley Jones (Droitwich), and the President, Dr. Vicary Snow (Bournemouth).

SIR FREDERIC BATEMAN.

WE regret to learn that Sir Frederic Bateman, of Norwich, was seized a few weeks ago with right hemiplegia. There was no loss of consciousness, no loss of speech, and no impairment of intellect. Under these favourable circumstances it is confidently hoped that Sir Frederic will shortly be able to resume professional and literary work. It is a curious coincidence that the author of *Aphasia* and the *Localisation of the Faculty of Language* should have right hemiplegia, and it is fortunate that he should have such an attack without any affection of speech.

THE CHAIR OF FORENSIC MEDICINE AT GLASGOW.

WE understand, though it has not yet been officially announced, that the Chair of Forensic Medicine in Glasgow University is vacant by the retirement of Professor P. A. Simpson. For some time Professor Simpson's health has prevented him from fulfilling the duties of his chair, which have been carried on by a substitute, and his retirement has now been decided upon. Among the names of probable candidates are mentioned those of Dr. Eben Duncan, Dr. R. M. Buchanan, and the present acting Professor, Dr. Galt.

TYPHOID FEVER IN THE ARMY.

IT is announced that the Government of India propose to obtain the services of three special officers to carry out bacteriological investigations in connection with the prevalence of enteric fever in the British army in India. We understand that so far the only appointment which has definitely been made is that of Surgeon-Major A. M. Davis, formerly Assistant Professor of Hygiene in the Army Medical School, Netley, whose services have been placed at the disposal of the Principal Medical Officer, Bengal, for bacteriological work. The number of young soldiers who are attacked with enteric fever within a short time after their arrival in India is very large. Many theories have been advanced to account for the special incidence, but none are altogether satisfactory. The very serious nature of the problem which has to be attacked will not be disputed. The rate of admission for enteric fever in the army in the United Kingdom is 1.3 per 1,000 of strength, while the deaths represent a rate of 0.27 per 1,000 of strength. In the British army in India the admissions are 18.8 per 1,000, and the deaths 5.11 per 1,000, and a very large proportion of the men attacked are under three years' service. There are, however, two other stations of the British army where the rates are still higher. In Bermuda the rate of admission was 33.0, and of deaths 5.73. In Egypt the figures were 33 9 and 8.94 respectively. The ratios we have quoted refer to the period 1886-94 in each case. Of course, the absolute loss is very much larger in India, as the garrison is much bigger; but the conditions in India are very complex, and Bermuda offers in its insularity, the simplicity of conditions, and limited numbers, a much better field of investigation and prophylaxis than India. As special bacteriological observations and special prophylactic inoculations are undoubtedly needed, the Bermudas would appear to be better fitted for study or experiment than any other locality in which a section of the British army is stationed.

HEROIC DOSES OF ARSENIC.

THERE can be no doubt that there is a tendency at the present day to administer arsenic in many diseases, especially those of a neurotic character, in which formerly it was never employed; and to exhibit that drug in large doses not previously used. Practitioners who prescribe that drug in these heroic doses will do well to study the report of a case narrated at the last meeting of the Clinical Society by Dr. Colman, and described at page 215 of the present issue of the JOURNAL. A girl suffering from chorea took arsenic in doses of 15 minims, given three times a day for thirty-one days, except on six of those days, when it was discontinued as she had gastric disturbance. The chorea was speedily cured, and the drug stopped; but thirteen days after its cessation she began to suffer from symptoms which ushered in peripheral neuritis, and almost complete paralysis of all extensor muscles below the knees, with well-marked reaction of degeneration, and some weakness of the extensor muscles of the forearms. She had arsenical pigmentation of the neck and the groins; but under treatment by rest, massage, and electricity, she rapidly recovered. The case well illustrated the serious risk attending this method of treatment; and that the untoward symptoms were not due to any special idiosyncrasy of the patient was shown by the fact that Dr. Colman had seen at least two other serious cases of the kind, whilst Dr. Beevor had also met with a case in an adult, and there are others on record.

THE NEW INFIRMARY, NEWCASTLE-ON-TYNE.

THE many difficulties in obtaining the site upon the Leazes are being gradually overcome. The Bill to be brought before Parliament has been deposited, and it is hoped that the opposition to it will be disarmed by the offer of the infirmary governors to give up a large part of their present site to the City Council. The Christmas Guild of the Freemen was held on January 17th, when the action of their stewards in agreeing to give up the rights of eatage on the new site was discussed. The gathering was an unusually large one, and the general feeling was that the Freemen could not take upon themselves the responsibility of losing to the city the splendid offer of Mr. Hall. Indeed, it seemed that the Freemen had not the power to vote on the question, but were bound by the action of their stewards, who agreed to give the land when they were asked for it some months ago. The City Council has not yet dealt with the offer of the governors of the infirmary, but there is no doubt that the offer will be accepted. The next step will be the holding of a towns meeting, when all citizens can attend and vote. A meeting of this kind is usually a mere matter of form, but when the question is of great public interest an active opposition may succeed in gaining a majority, and in compelling a poll of the citizens generally to be taken.

THE PUBLIC HEALTH OF JAMAICA.

THE Jamaica papers of December 23rd, 1897, were much occupied by the startling announcement in a letter from the Governor of the island to the City Council of Kingston, to the effect that if they did not speedily set their house in order they would be sent about their business. Of course, the courteous Colonial Secretary, who conveyed in polite phrases his Excellency's ultimatum, wrapped the matter up in much more elegant language; but the opposition journals had no difficulty in unwrapping the message, whose sting, like a scorpion's, was contained in the tail. The meeting of the Council, at which the message was received, was not a large one, but Dr. Robinson seems to have been pretty outspoken. According to the *Jamaica Post* he expressed his

belief that as long as sanitary matters were left to the City Council, and conducted as at present, they would always be bad. He would like to see them put into more competent hands. Notwithstanding the immense amount of money spent he could see no material improvement in the state of the city. Money had been spent—and lavishly—but never in the right way. They must not content themselves with sitting in their chairs and giving orders, but must go round and see that their orders were carried out, that such and such streets, for instance, had really been cleansed. One of the papers hints that the absence of the Mayor from the meeting had much to do with the frank manner in which certain members discussed their own and their neighbours' shortcomings, and the remarks about his worship in his absence were not all complimentary. The *Post* has a leader on the City Muddle; the *News Letter* one on Insanitary Kingston. The latter regrets that "the sanitary condition of Kingston is showing signs of deterioration instead of improvement." It adds that "Dr. Mosse, the Superintending Medical Officer, has been for years urging upon the municipal authorities the necessity of paying greater attention to the improved sanitation of the city." After referring to the improvements he describes in the country districts, the *News Letter* quotes the following from his last report: "That Kingston, so admirably situated, and so largely endowed with institutions adapted for the relief of disease and suffering . . . should exhibit such a distressing picture is, to say the least of it, vastly disappointing. If we compare its annual [death] rate, 29.4, with that recorded in 1891-92, namely, 25.2, we find that, instead of improving our position, and lowering the mortality during the last quinquennial period, we are forced to confess that in spite of the great advance in sanitary science we have retrograded to the above extent." Let us hope the Council will arouse themselves, and if they do, we need not fear for the result. There are evidently men in it who know better than they have yet done.

THE RECRUDESCENCE OF INFLUENZA IN LONDON.

DURING the last few weeks London practitioners have realised that influenza is once more adding to their work and their anxieties. It can hardly be said that there has been a new outbreak, for the affection has never been absent from the metropolis since its reappearance just eight years ago. The course of events may be briefly summarised as follows: In the ten years 1880-89 the total number of deaths ascribed to influenza in London was 63. In January, 1890, there was a severe though short epidemic, and the mortality for the year rose to 652; the Registrar-General points out, however, that calculated on the basis of the increase in deaths from diseases of the respiratory organs, influenza could reasonably be credited with 2,258 deaths during the first four weeks of the year alone. It is noteworthy that at the time of the outbreak the mean temperature was 7.1° above the average, with which may be aptly compared the mild temperature of the present season. In 1891 a severe epidemic appeared about the beginning of May, rose to its maximum in three weeks, and then gradually fell to its termination at the end of July. The direct mortality for the year was no fewer than 2,336. In the following year it was almost the same, 2,264, but the outbreak reached its maximum intensity in January and February. The influenza mortality rose almost suddenly in the first week of the year, reached its maximum in the third week, and then gradually subsided. Thus in three years over 5,000 deaths in London alone were certified as influenza, and the cases in which death resulted indirectly would probably swell the number to about 14,000. In 1893 the direct mortality fell to 1,526, and was more evenly distributed, except for two exacerbations in the spring and winter; of these the latter was fairly acute, more than a third of the total deaths occurring during the last four weeks of the year. In 1894 there was a further fall to 750 directly fatal cases, most of which occurred in the early part of the year. In 1895, however, there was a severe outbreak in February and March; altogether, 2,156 direct deaths were recorded, of which 1,570 took place between the middle of February and the end of March. In 1896 the mortality was the smallest since the reappearance of the disease; the 496 deaths were fairly uniformly distributed. Last year the direct mortality was 656; there was a slight exacerbation, lasting from the middle of March till the middle of May, 237 deaths occurring in eight weeks. In the week ending January 15th there was a slight decline in the mortality. The deaths directly referred to this disease, which had been 15, 29, and 43 in the three preceding weeks, declined to 40 during the week ending Saturday last, January 15th. Of these 40 fatal cases, 7 were of persons under 40 years of age, and 12 of persons aged between 40 and 60 years; while 21, or rather more than one-half of the total deaths, were of persons aged upwards of 60 years. East and Central London have been hitherto practically free from fatal influenza, nearly all the deaths from this cause recently recorded in the metropolis having occurred in West, North, and South London. The disease appears to be most fatally prevalent in Kensington, Marylebone, St. Pancras, Newington, and Lambeth. Speaking generally, the recrudescences are of short duration, attaining their maximum intensity in about three weeks, and dying out in about eight. There is reason, therefore, to hope that the present epidemic will not be of great severity. As regards the seasonal incidence it should be noted that exacerbations occurred in the winters of 1889-90, 1891-92, 1893-94, as well as the present one of 1897-98. In 1891 there was an outbreak in the spring and summer, in 1893 and 1895 in the spring. The autumn is invariably the period of minimum incidence. It can hardly be doubted that temperature must exert an important influence on this incidence. When the outbreak occurs in winter the season is characterised by spring-like mildness; the severe winter of 1890 seems to have, so to speak, kept the epidemic off till May. On the other hand, the hottest months of the year are, in general, those most free from the disease. One is tempted to conclude that the most favourable climatic conditions for influenza in England are normally found in the spring, but this is a question which can only be definitively settled after many more years of experience.

THE INSANE CRIMINAL.

IT has now become an established doctrine that a crime, however deliberate it may have been and however full of knowledge and cunning, if it depend on an insane delusion, cannot be judged as if it were the act of a responsible person. Such cases as that of the man convicted at the Central Criminal Court last week of the murder of Mr. William Terriss doubtless cause many to think that the partially insane, who know what they are doing, should suffer; and this is the foundation of much of the criticism which so often arises when a criminal is recognised to be insane. The summing up of Mr. Justice Channell was on the well-known lines laid down in the Macnaghten case: that a person is responsible for any act if he knows the nature and quality of the act and if he knows that act to be a wrong act. He pointed out that distinct evidence of a diseased state of the mind must be produced, and that this disease so interfered with the mental action of the accused as to prevent him from recognising that his act was criminal. He said there was a unanimous opinion of the doctors that the prisoner was of unsound mind at the time he committed the act, but the jury must decide if the insanity was the cause of the crime. The jury, after half an hour's deliberation, returned a verdict of guilty. They added that in their opinion the prisoner knew what he was doing, and to whom he was doing it, but that from the medical evidence he was not responsible for his actions. Their verdict made it evident that their feeling was rather in favour of punish-

ing Prince as a criminal. As was to be expected, the case has given rise to much criticism, and the lay press and the public generally are not satisfied. Still we think the verdict of irresponsibility was right. It requires a good deal of moral courage sometimes to give an opinion which is known to be in opposition to general feeling; but there can be no doubt that a medical man's duty when called in to give an expert opinion in such a case is to speak without any regard to the feelings of the public. That a man driven to an act by an insane delusion is to be considered responsible for that act is altogether unreasonable. Much has been made of the fact that since this crime was committed several other persons have threatened similar acts; but this would have been just as likely to have occurred if Prince had been condemned to be hanged; crimes lead to crimes, and this is well recognised. The medical evidence was clear, and no one can doubt that it was absolutely correct and impartial.

THE HEALTH OF MR. GLADSTONE.

WE learn from Cannes that the rumours as to an unfavourable change in Mr. Gladstone's health are quite unfounded, and that he was able to take a long drive on January 19th, the day on which these rumours became current in London. We are authorised to state that the only foundation for these reports is that the neuralgic pain persists in spite of treatment, and this must be attributed in large measure to the exceedingly cold and wet season at Cannes this year with the prevalence of *mistral*. No fresh access of inflammatory trouble has appeared, and the pain continues to be one day better and another worse. The general health continues as before to be excellent. Mr. Gladstone keeps very much to his ordinary habits of life, with the exception that he takes rather more rest than usual. He is not confined to his bed, and is in the habit of driving out when the weather is fine. Mr. and Mrs. Henry Gladstone join him in accordance with a previously arranged plan.

FURTHER MEDICAL ASSISTANCE FOR INDIA.

THE Secretary of State for India has selected from the list of volunteers previously received eight more medical men and two more medical women, who will proceed to India on January 26th, for work in the plague districts. If plague should spread to other parts of India (outside the Bombay Presidency) still further reinforcements will be necessary, and in order to meet such demands the India Office invites volunteers to send in their names to be put upon the list. The terms of appointment and other information will be sent to any qualified practitioner who may apply to the Revenue Secretary, India Office, Whitehall. The India Office intend also to send twenty-five more nurses, if the complement can be made up in time.

THE NEW AUTOMATIC REVOLVER.

PROFESSOR VON BRUNS, of Tübingen, a well-known authority on questions of military surgery, has published some interesting experiments with the new automatic revolver, which it appears is being adopted by nearly all the European governments. The experiments were made on pine wood, on plates of iron, on a living horse, and on portions of human corpses, at distances varying from 10 to 300 metres. The results were as follows: There was little difference between the effects on living and on dead material. The hole made is from 5 to 7 millimetres in size, and decreases with the increase of distance; the aperture of exit is usually slightly larger than that of entrance. The effect of the projectile on the long hollow bones was exactly similar to that of the German infantry rifle at 1,000 to 2,000 metres. The bone was splintered in every case; in no case did the projectile remain in the bone. The track of the bullet invariably formed a smooth channel without shattering of the bone, and without bony *débris*. In the case of bullets striking the skull there was explosive action, that is, comminution of the vault, at a distance of 10 metres—corresponding to the effect of the infantry rifle at 1,000 metres—which decreased gradually up to 50 metres' distance. As regards the penetrative power, at 10 to 20 metres the projectile passed through two trunks, and only stuck in the third; it pierced pieces of pinewood 32 centimetres thick, and three iron plates each 2 millimetres thick. In all respects the new automatic pistol proved itself superior to the ordinary army revolver.

HEALTH OF MADEIRA.

WE learn by cable from Madeira that the rumours as to the prevalence of typhoid fever there are incorrect, and that the island is absolutely free from the disease.

SIR WILLOUGHBY WADE.

THE many friends of Sir Willoughby Wade will learn with regret that he has decided to retire from practice, and to sever his long and honourable connection with Birmingham. This decision is to a great extent due to the state of Lady Wade's health, which makes it desirable that she should reside in a milder and less fickle climate than that of England. Sir Willoughby has, we understand, purchased the Villa Montfort, situated about a mile and a-half from Florence. The villa dates from the fifteenth century, and it is an interesting circumstance that it has an association with a famous physician of a bygone day. Antonio Benivieni, who is believed to have built the villa, and who certainly lived in it, was a leader of medical reform in his day. He did much to release medicine from the thraldom of scholastic philosophy, and endeavoured to base the art of healing on observed facts rather than on fantastic theories and *a priori* reasoning. His chief work, *De abditis morborum causis* contains records of twenty *post-mortem* examinations, and shows the author to have been three centuries in advance of his day in his conception of pathology as the foundation of rational medicine. The date of his birth is uncertain, but he died in 1502. He was a friend of Savonarola, who, according to tradition, was a frequent visitor at the villa now about to be tenanted by Sir Willoughby Wade.

BUILDINGS FOR OPHTHALMIA PATIENTS.

THE Metropolitan Asylums Board have lost no time in making provision for those Poor-law children who, being afflicted with ophthalmia, are consigned to their charge. At their meeting last Saturday the scheme of the new ophthalmic hospital at Brentwood was discussed and passed. It was but a fortnight ago that the Board agreed to purchase another site of 49 acres at Swanley for the erection of a similar institution at the cost of £5,050. Under the scheme for the Brentwood Hospital School the services of an ophthalmic specialist are to be engaged, and the general management will be under the care of a resident trained nurse. Each cottage is to hold ten children, and not more than two cottages are to be in juxtaposition. The air space for each child is to be 600 cubic feet, though it is recognised that more room and special accommodation must be provided for a limited number of cases. For purposes of "skilled nursing" the cottages are to be arranged in groups of three pairs, and to each group is to be attached another building with a central kitchen, etc. It has, however, been shown by innumerable examples that homely food cooked before children, by their aid, arranged to suit their tastes, and to awaken what we may call gastronomic interest, is more likely to be eaten and utilised by weakly children than even better cooked food served and arranged in an institutional manner. The scheme also provides for an infirmary, waiting, operating, and school rooms, a lodge, mortuary, a destructor and disinfector, and other administrative buildings. The rather elaborate character of these arrangements would appear to indicate that the Metropolitan Asylums Board believe that ophthalmia must continue to be as rife and as persistent

as it is now. That this need not be we have experience as well as Mr. Stephenson's official figures to show. Among the barrack school children isolation and treatment are needed for 800 out of 13,000 children. If this proportion were maintained among those who live normal lives in the homes of the industrial poor and attend the elementary schools, London would need some 50 of such hospitals for its children. This comparison shows what we have often contended, that ophthalmia assumes its serious aspect in barrack schools where the children are aggregated, and dwindles to an insignificant malady when they are isolated. It therefore seems a questionable policy to build establishments both expensive and elaborate to meet an evil which it may reasonably be expected will gradually diminish. Further, as the Hanwell Ophthalmic School exists and should be surrendered to the Central Board, that the guardians should have the power to refuse this transference, and thereby compel further expenditure of public money, is a fresh example of the confusion in metropolitan Poor-law administration.

"MEDICAL UNITS" AND COMMANDING OFFICERS.

GENERAL H.R.H. THE DUKE OF CONNAUGHT, in issuing his important memorandum on the training of the troops under his command during 1897, reports as follows of the medical units. He says: "Commanders of Forces did not in every instance fully appreciate their responsibilities in connection with the tactical arrangements necessary when accompanied by bearer companies and a field hospital, and medical officers in charge were not informed of Commanders' intentions." This affords a fresh example of how matters connected with the medical service are considered to be of quite secondary importance. The report of Lord Morley's Committee after the Egyptian war furnishes some evidence of the results which followed on keeping the Principal Medical Officer of a force in the field ignorant of movements contemplated by the Commander of the Force. General H.R.H. the Duke of Connaught has done well to draw attention to the "responsibilities" that devolve on "Commanders of Forces."

PLAGUE AND THE INDIAN MEDICAL SERVICE.

Two peculiar features of the organisations against plague in the Bombay Presidency call for attention. One, referred to in a former issue of the BRITISH MEDICAL JOURNAL, is the absence of experienced medical men as controlling agents or leaders of the Plague Committees. There is no medical president. The other is the delay that occurs in deferring what are likely to be adequate preventive precautions to a time when the outbreak has reached its height, and is more or less on the decline, instead of introducing them at the earliest period when the epidemic is but gradually gaining ground. The measures when they are adopted show that the Government spares no money to render them efficient, but they are, as a rule, unfortunately too late. Plague has hitherto been ahead of the authorities, whereas the authorities, in their operations, should be ahead of plague. This was manifestly the case when General Gatacre's Committee was appointed in the early part of 1897 to deal with the plague of Bombay. The disease had reached its height, and was actually on the decline. It might have been thought that the lesson learnt on that occasion would have prevented a similar mistake with regard to Poona. Yet Poona had to learn its own lesson, and here, again, it was only at the height of the epidemic in November that any organisation at all adequate to what is required for plague was adopted. The Plague Committee was reconstituted and strengthened, and a more vigorous policy was introduced. The advice of the medical element has no doubt in the end prevailed. We are not surprised to hear that the Bombay Medical Service feels acutely the position that has been assigned to them in the present epidemic. They get plenty of hard work, but not the position to which their knowledge and their profession entitle them. The military and civil elements in a plague committee are very valuable, and their services much needed, but these are far from giving them a position of supremacy on medical and sanitary questions. The chairman of a plague committee should be a medical man, experienced in dealing with epidemics, and the majority of the committee should be medical men similarly qualified, and able to devote their whole time to the work. A better system than that existing in the Bombay Presidency we are glad to observe prevails in the North West Provinces, where the medical element is allowed greater scope, and where their proper position is recognised. And it is to be noted that the results have been uniformly successful. The plague, though introduced into several districts, has been stamped out with a promptitude which is deserving of the highest praise. The most formidable of these outbreaks was at Hardwár and its neighbourhood, where, besides human beings, rats and monkeys were affected.

WORKHOUSE NURSING.

DR. RHODES, in a vigorous letter to the *Times*, reiterates the old story of the difficulty of obtaining satisfactory nurses for Poor-law service, especially in some of the smaller unions. The reasons for this difficulty he states to be the low rate of wages offered, the meddling of incompetent matrons, and the bad food; reasons which we, in common with all who have worked at this subject, have stated over and over again, and with little effect. Dr. Rhodes speaks with the experience of a guardian, and from the knowledge gained as Chairman of the Northern Workhouse Association. He is conversant with the circumstances which surround the nurses in the union infirmaries, but we do not think that he has quite sounded the depths of the ignorance of the Boards in the southern agricultural unions; in the north they move faster. It is encouraging to find that the Workhouse Association in the north is in a vigorous and sound condition, and it only emphasises the difference between the north and south of the Trent, differences which we fear will hinder Dr. Rhodes from carrying out his excellent project of providing nurses for England and Wales.

CREMATORIA FOR LONDON.

THE proposal of the London County Council to apply to Parliament for powers to local authorities to erect crematoria as an alternative means of disposing of the dead, touches a matter of much importance. The matter can be viewed from two standpoints. From what may be called the public health aspect, the present usual method of burial is productive of overcrowding by the appropriation to a needless extent of the badly wanted open spaces that exist in the metropolis. From its other aspect—the sanitary—earth burial under the conditions which must exist in and near great centres of population is open to many objections which need not now be repeated. A study of the return (metropolitan cemeteries) recently issued by the Home Office shows that the total acreage of the existing cemeteries is 631 acres, and of this 300 acres are already used. Thus 351 acres remain available for future interments. In the 300 acres now used up, 1,511,000 interments have taken place, which gives an average of 5,036 interments per acre. Multiplying this by 351, the number of acres remaining as available for future interments, we get the result that as at present arranged, there is accommodation but for 1,767,636 interments to take place. Now the estimated population of the County of London on April 6th, 1897, was 4,471,759. If from this we subtract 1,767,636, the remaining burying capacity of the existing cemeteries, we arrive at the striking conclusion that there is at the present time a deficiency of nearly three millions (2,704,123). How many years at the present rate of interment will the remaining burying capacity last? Obviously some alteration in the present state of things must be made. Either the existing burial accommodation must be enlarged or some other method of disposal

must be adopted. What methods are available other than the obvious one of cremation it is difficult to see. At a recent meeting of the Camberwell Vestry the proposal that in the event of the powers above mentioned being granted, a crematorium should be erected, was, on the motion of Mr. St. Cedd, Chairman of the Burials Committee, carried unanimously. At present the unexhausted capacity of the parish cemetery reaches only to some 100,000 interments, whilst the population of the parish already exceeds 254,000. The City of London and the Islington Vestry have adopted similar resolutions.

MEDICAL POPES.

Several of the Roman Pontiffs were students of medicine in their youth, and others seem to have prescribed even during their pontificate, as Pius IV, who, with poetic justice, was Cardinal de' Medici, and Nicholas V, the learned Pope of the fifteenth century. One pontiff, however, was a qualified doctor according to modern ideas, and wrote medical works. This was John XXII, who reigned (1316 to 1334) at Avignon. He was born at Cahors, and seems to have studied at Montpellier under Bernard de Gordon, author of the once famous *Lilium Medicinæ*. It is at least certain that the Pope, then Jacques Duèse, was at Montpellier. He wrote afterwards treatises on gout, eye diseases, the preservation of health, and the development of the fœtus, for embryology was studied as early as the thirteenth century. To the last Duèse wrote on medicine. Early in the fourteenth century he received the tiara, and died at the age of 90. No doubt he knew how to preserve his health as well as how to write on the subject, though other authorities on sanitation have not always been consistent. Unfortunately, the *Chronique Médicale* shows that he had failings to which the most worldly might well take exception in a priest and a doctor conjoined. Cardinal de Via died rather suddenly, and John XXII suspected one Géraldi of poisoning His Eminence. Géraldi was found guilty "by order of the Pontiff," dragged through the streets of Avignon at a horse's tail, and finally flayed alive. This affair, our contemporary notes, with some reason, was a blot on the name of John XXII, whose life was in other respects so brilliant; indeed, it has been said that as the founder of the University of Cahors in 1332, if for no other reason, he should be blessed. To this panegyric Géraldi and our profession might demur. Let us trust that Pope John was gentler to his patients than to his flock.

"SUICIDE BY TYPHOID FEVER."

The last issue of the *National Review* contains under the above title a forcible and timely philippic by Mr. A. Shadwell against the apathy of ratepayers in regard to the purity of public water supplies. The outbreaks of typhoid fever at Maidstone and Lynn furnish a text, and Mr. Shadwell insists strongly upon the folly of the ill-timed parsimony which led the Maidstone Town Council to discontinue the fortnightly examination of their four sources of supply in 1890, and does not fail to enforce the expensiveness of this piece of economy. Briefly but clearly he summarises the salient points which convicted one of these four sources of the *causa causans*, and shows how obvious were the polluting conditions had any proper inspections been made. But ignorance and apathy, along with penny-wise economy, prevailed. At Lynn there had been an outbreak of typhoid fever in 1892, and the pollution on its way to the town of the pure chalk water was well known. At first the Town Council had objected to the cost of bringing the clear pure water in pipes direct from its source. Then as knowledge grew the majority were won over to the scheme. Still wisdom lingered, and a section obstructed. A poll of the ratepayers was taken in 1893, and the scheme lost. Dear economy again. But while Maidstone and Lynn have thus suffered for their sins, other attempts at suicide have been by chance averted. The investigation undertaken, at the suggestion of the War Office, into the supply at Portsmouth, as we lately pointed out, showed that it was perhaps more by good luck than good management that disaster has hitherto been avoided. It is not, says Mr. Shadwell, the officials who are at fault: they are anxious enough if they were only allowed to make everything safe; it is not the Local Government Board—they can but advise; it is the local sanitary authority and those who choose them, whose ignorance, indifference, or penuriousness develop these suicidal tendencies. The local press, except in large towns, has little force; the London papers can only be roused by startling results; they have scanty space to spare, but their advertisement columns are open to all. Why, he asks, should not "those who suffer from a dangerous water supply, and can get nothing done" publish in the front page of the daily papers a notice headed "Borough of Stinckhampton," and set forth the signed report of the analysis? This, he contends, "would set the whole place agog in two hours." We commend the suggestion to the consideration of the thinking, but outvoted, ratepayers of some of our many towns with impure water supplies.

THE DEPUTATION TO THE SECRETARY OF STATE FOR WAR.

A deputation from the British Medical Association comprising representatives from most of the chief centres of medical education in the United Kingdom waited on Lord Lansdowne, the Secretary of State for War, at Lansdowne House on January 20th. The deputation was introduced by Dr. Farquharson, M.P. Sir Thomas Grainger Stewart, Sir James Mouat, K.C.B., V.C., Dr. Saundby, Mr. Macnamara, Professor C. B. Ball, and Sir William Thomson stated the views of the deputation.

Lord Lansdowne, in reply, assured the deputation that he was entirely with them in regarding with very serious concern the present condition of the Army Medical Staff. The fact that comparatively little competition existed for vacancies, and that, as stated by the President-elect and the President of Council, only inferior men presented themselves, certainly pointed to a very grave condition of things, and the subject was having the most serious consideration given to it. In proof of this his lordship enumerated several matters which had come before him during his present term of office—the position of medical officers on courts-martial, medical messing, grant of leave for study, pay of the junior medical officers in India, length of the Indian tour, etc.—all of which had been dealt with, he thought, to the satisfaction of the profession. With regard to the question of the formation of a medical corps and the question of rank, his lordship said he saw no objection to the formation of a medical corps, but it was intimately connected with the second question, which presented very serious difficulties. He regarded some of the present medical titles as cumbrous, and thought it ought not to be beyond the power of the authorities to discover more suitable designations. The matter was one which had been lately examined with great care, and he hoped shortly to be able to announce the decision of the War Office. In conclusion, his lordship asked whether if the questions of corps and rank were disposed of satisfactorily, the War Office might rely upon receiving from the profession assistance in obtaining the best class of candidates in adequate numbers.

Dr. Farquharson, in thanking his lordship for his kindness and courtesy in receiving the deputation, said that if the concession of the medical corps and army titles were made, it would result, in his opinion, in the Medical Department being placed in a most satisfactory position both as regarded the number of young medical men entering the service and the qualification of those entering.

University of Kasan.—On November 5th, 1897, the University of Kasan celebrated the 93rd anniversary of its foundation. The total number of students at present is 864, of whom 488 belong to the faculty of medicine.

THE LATE MR. ERNEST HART.

THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

AT the meeting of the Council of the British Medical Association on January 19th, Dr. SAUNDBY, the President of Council, referred to the death of Mr. Ernest Hart in the following terms:

"Since we last met the Association has sustained a great loss in the death of Mr. Ernest Hart. For more than thirty years he has not only been the able and accomplished Editor of the BRITISH MEDICAL JOURNAL, but he has been the originator of nearly every development by which our Association has expanded itself and become more useful to the medical profession in its broader and more scientific as well as in its corporate relations. To illustrate what I mean I have only to name the Scientific Grants Committee, the Parliamentary Bills Committee, and this library which we see around us, and to remind you that they all owed their initiation and their guidance through many years to his untiring personal supervision, his ability, and energy. He has died no longer young, having lived a life full of purpose, having accomplished many things. He has lived to see this Association reach a pitch of prosperity which he probably never anticipated. How greatly this success has been directly due to the popularity attained by the JOURNAL under his editorship none of us will be disposed to question. A man's life is soon spent, but institutions last long enough to use up many generations. We shall all pass away, yet when the last of us has gone we hope this Association will still be evergreen and flourishing. In it Mr. Hart possesses a monument of the noblest kind, and in this Council room he will be always remembered as one of those who did most to make the Association what it is to-day. I beg to move the following resolution:

> "The Council desires to convey to Mrs. Ernest Hart its expression of deep sympathy with her in the loss she has sustained, and to place on record its recognition of the memorable services rendered by Mr. Ernest Hart to this Association during his tenure of the office of Editor of the BRITISH MEDICAL JOURNAL for more than thirty years."

This resolution was passed unanimously.

THE following resolution was passed by the Committee of the National Health Society at its meeting on January 12th:

That the Committee, recognising the great loss sustained by the National Health Society in the death of Mr. Ernest Hart, places on record the warm appreciation of the important work done by him as Chairman of the Council for many years, and requests the Chairman of Committee to forward this resolution to Mrs. Hart, with an expression of condolence and sincere sympathy with her in her bereavement.

WE have received the following tribute to the memory of Ernest Hart from Mr. William Adams, F.R.C.S.:

SIR,—I should be glad to be allowed to add a few words to the memory of my oldest professional friend Ernest Hart, with whom I have been on terms of intimacy for over forty years.

My acquaintance with Ernest Hart commenced in the year 1854 at the "Grosvenor Place School of Medicine," or "Lane's School," attached to St. George's Hospital, when at the request of Mr. (afterwards Sir) Spencer Wells I delivered a course of lectures on orthopædic surgery, and afterwards assisted Spencer Wells's colleague, Mr. George Pilcher, in the surgical lectures. At this time Spencer Wells went off to Smyrna, where the British Civil Hospital was established for the wounded soldiers from the Crimea.

In 1854 Ernest Hart was one of the most distinguished pupils at Lane's School. He was always a favourite with his fellow students—bright, genial, and witty—and he was also a favourite with the surgical staff, who appreciated his great abilities.

Mr. Timothy Holmes, who has done full justice to Ernest Hart's great abilities and to his many-sided activity of mind, seems to have made his acquaintance, like myself, at Lane's School, and I can only endorse every word Mr. Holmes has said.

Ernest Hart remained a true friend of mine ever since 1854, and only in July or August last, at one of his elegant garden parties at Totteridge, he remarked, "Don't forget, Adams, that I was one of your pupils." He was then happy and cheerful amongst his friends who have now to mourn his loss.—I am, etc.,

Loudoun Road, N.W. WM. ADAMS.

A CORRECTION.—We are requested to state that in the report of the memorial service held on January 11th the name of Mr. Albert Kisch was incorrectly spelt and that he attended as representative of the Jewish members of the medical profession.

LONDON WATER COMMISSION.

AFTER an adjournment for a month over the Christmas vacation, the Royal Commission appointed to inquire into the best means of dealing with the London water supply met again on January 17th in the "Moses" room of the House of Lords. The examination of Sir Alexander Binnie, Engineer-in-Chief to the London County Council, occupied the whole sitting. He said that the Administrative County of London was interested in the total water supply of the eight companies to the extent of 79½ per cent., and the total of the districts outside to the extent of about 20½ per cent. He quoted figures to show how nearly there might be an approach to the absorption of the whole flow of the River Thames during comparatively long periods of the year. Experience had shown that the average daily flow of the river in its natural state might fall as low as 298.3 million gallons, as it did during the month of September, 1893. Although the average flow of the river for the whole year might be at the rate of 1,350 million gallons a day, the actual volume of water flowing over Teddington Weir might, in consequence of the withdrawal of water by the companies, be as little as 188.1 million gallons. Although the companies had exceeded their authorised limits during certain months, on the whole year they had not drawn as much as they were entitled to draw.

In reply to question by Mr. Pember as to the companies being bound to send down compensation water, Sir Alexander Binnie said that the matter was beyond dispute, because it had been proved that the two companies took the whole flow of the river, and, in lieu of the water which they ought to send down, they pumped up water from Bow Creek.

Witness did not altogether accept the finding of Lord Balfour's Committee that the Thames and Lee were satisfactory sources of supply. He believed that the Thames and Lee must remain for many years, if not always, portions of the sources of London water supply, but he thought it expedient that a portion of that supply should come from some other source. Water derived from sources into which a large amount of sewage was poured, while it did not necessarily poison people, rendered them liable to epidemics. In his official capacity as engineer to the London County Council, he would not abandon the present source of supply—the Thames and the Lee—at the present time. He would rather begin to supplement the water from these sources, not substitute for them entirely fresh sources.

On Tuesday the Commission again sat and Sir Alexander Binnie continued his evidence. On his calculations the present sources of supply would have to be supplemented in from ten to fifteen years' time. He would look for his supplemental source to a district in Wales. The cost of such an undertaking would be from £90,000 to £96,000 per million gallons. He estimated that in the year 1931 it would be necessary to supplement the existing sources of supply by 147 million gallons, and if this water was brought from Wales it would cost £14,112,800, and in order to provide for the requirements of 1948 there would have to be a further expenditure of £12,000,000, making a total of £26,000,000. The County Council and its predecessor had expended about 6½ millions

in draining the metropolis and in removing the sewage outfalls, and in recent years the Council had spent nearly a million on works for the treatment of sewage. The beneficial effect produced on the river by this treatment would be rapidly rendered nugatory if the present abstraction of upland water was allowed to be continued.

In answer to the Chairman Witness expressed the opinion that it would be possible to supply water at high pressure to the tops of the highest houses at the present time. He would say that the mains would certainly stand the additional pressure. Constant supply was nearly an accomplished fact, and in order to prevent failure from frost the companies should be compelled by statute to place their pipes at a depth below the surface of at least 2 feet 6 inches. Further, in cases where a supply was not afforded consumers should be allowed to recover the rates.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The usual quarterly Council was held on Wednesday, January 12th, Sir William Mac Cormac, Bart. (President) in the chair.

The minutes of the preceding meeting were read and confirmed.

A report was read from the Discipline Committee requesting the Council to reconsider a resolution adopted by the Council on December 9th, 1897. This resolution was:

That the mover and seconder of the third resolution be informed that the Council are not prepared to make a general pronouncement respecting the connection of Fellows and Members of the College with medical aid associations, but are willing to consider evidence which may be submitted to them respecting the connection of any individual Fellow or Member with an association which canvasses for patients to the injury of private practitioners and allows the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor.

After reconsideration the Council referred the subject back to a committee for further report.

The Senior Vice-President reported that on January 6th, the day appointed for the half-yearly meeting of Fellows, the required quorum of 30 was not obtained, 15 Fellows only, including 8 members of Council, having attended, and that accordingly no meeting had been held.

A letter of December 14th, 1897, was read from the Secretary of State for War, acknowledging the receipt of the letter from the Presidents of the Royal Colleges of Physicians and Surgeons respecting the Army Medical Service.

A letter was also read from Dr. William Gordon, Chairman of the Subcommittee on Army Medical Reform of the Parliamentary Bills Committee of the British Medical Association, thanking the Council for the consideration given to the report of his Committee, and for the assistance rendered to the cause of reform by the letter to the Secretary of State for War.

THE SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

The following correspondence which has passed between Dr. Saundby, the President of the Council of the British Medical Association, and the Local Government Board will be read with pleasure. The prompt action of Mr. T. W. Russell in this matter will give eminent satisfaction, and we trust it will have the effect of preventing other Boards of Guardians from attempting to upset the intentions of the Act of Parliament on this matter.

Letter to Mr. T. W. Russell, *re* Superannuation of Poor-law Medical Officers:

British Medical Association,
429, Strand, London, W.C.,
December 30th, 1897.

To T. W. Russell, Esq., M.P., Under-Secretary, Local Government Board.

Sir,—Twenty-seven years ago, as the result of a prolonged agitation, the Poor-law medical officers, aided by this Association and other medical corporations, succeeded in obtaining from Parliament an Act for their superannuation (33 and 34 Vic., cap. 94). This was intended to prevent the recurrence of the scandal arising by the continuance in office of men past work, whose circumstances did not permit them to give up an important part of their income.

By the enclosed document you will see that this settlement is threatened by an attempt on the part of the Pershore Board of Guardians to require their medical officers to contract themselves out of the Act.

May I beg leave to ask whether it is legal for the guardians to do this without the consent of the Local Government Board, and further to express the hope that if it is not, your Board will not sanction such a breach of a national engagement?—I am, Sir, yours obediently,

Robert Saundby, M.D., LL.D.,
President of Council.

Reply of Local Government Board:

Local Government Board, Whitehall, S.W.
January 17th, 1898.

Sir,—I am directed by the Local Government Board to advert to your letter of December 30th relative to the application of the Poor-law Officers' Superannuation Act, 1896, to Poor-law medical officers, and to transmit to you, for the information of the British Medical Association, the accompanying copy of a letter, which the Board have addressed to the Guardians of the Pershore Union on the subject.—I am, Sir, your obedient servant,

Robert Saundby, Esq., M.D.,
President of the Council
of the British Medical Association.

H. C. Monro,
Assistant Secretary.

Local Government Board, Whitehall, S.W.,
January 15th, 1898.

Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letters on December 29th, 1897, and to request that the particulars of the reappointment of Mr. Martin Woodward as Medical Officer for the Eckington and Fladbury Districts, and of Mr. J. G. Rusher as Medical Officer for the Upper Snodsbury District of the Pershore Union may be communicated to them in three of the enclosed forms.

With reference to the stipulation of the Guardians requiring officers, as a condition of appointment, to contract out of the provisions of the Poor Law Officers' Superannuation Act, 1896, I am directed to draw attention to the fact that the guardians are required to make a deduction from the officer's salary under Section 12 of the Act, and no agreement between them and the officer, or undertaking on the part of the officer not to claim any superannuation allowance, can relieve them from this statutory duty, or relieve the officer from the duty of making the contribution.

The officer has also a statutory right to pension, and the Board are of opinion that that right was created, not only in his interest, but also in that of the public, in order that officers who are too old or infirm to perform their duties satisfactorily may not be retained in office.

The Board therefore direct me to state that the arrangement is not one to which they can consent.—I am, Sir, your obedient servant,

(Signed) S. B. Provis,
Assistant Secretary.

J. Martin, Esq.,
Clerk of the Guardians
of the Pershore Union.

THE PLAGUE IN INDIA.

The Management of an Epidemic of Plague.

In Poona the epidemic has now been got well in hand. What is known as the ward system has come into vogue in the city of Poona and the Cantonment, and the results have been highly encouraging. The method pursued in the city of Poona is wholly military in its composition, and is under the direction of Colonel Creagh and Surgeon-Major Reade. The city is divided into ten wards, and in charge of each ward is a military officer. The duties of these ward superintendents are comprehensive. They have to search for plague cases, re-

move the sick to the hospitals, and the "contacts" to the segregation camps, superintend the disinfection and whitewashing of infected houses, keep a census of all the persons living in their division, and a special register of all sick, whatever is the complaint from which they are suffering. Each ward officer has at his disposal a body of thirty British soldiers, one of whom is appointed supervisor of one-sixth of the division. The principal points towards which attention is directed are disinfection and house-to-house visitation, and for these special measures have been adopted to make both work smoothly and efficiently. The British soldiers do the disinfecting, no native being entrusted with that work. Infected houses are first saturated with perchloride of mercury, and afterwards the premises are whitewashed by coolies under the immediate supervision of Europeans.

It has been argued that house-to-house visitation often leads to a spread of the disease, as the people, when they know a search is to be made, remove their sick to a neighbour's house until the inspectors have come and gone. This difficulty is being met in Poona in two ways: every house in an infected district is inspected every day; and cordons are drawn round the prescribed area to prevent all subterfuge. The plan adopted is as follows: Every day as the returns come in a note is made of the district in which the disease is most prevalent. Early in the morning, about 6 o'clock, a detachment of troops descends on this locality, entirely surrounds it, and remains on guard there whilst a special search is being made. During this process, which usually lasts an hour and a half, no one is allowed to pass either in or out of the enclosed area except by allotted alley-ways, at each of which is placed a European doctor. The thoroughness of this system must tell soon, and already good results are in evidence. Moreover, the Committee in charge have overcome the prejudices of the natives, and many of the leading native citizens are cordially co-operating with the authorities. It is also worthy of remark that when the recrudescence of plague in Poona demanded help from the soldiers, the leading natives asked that British and not native soldiers should be employed in the search parties.

(FROM OUR SPECIAL CORRESPONDENT)

THE OUTLOOK IN INDIA.

While slowly declining in a few places the plague is increasing in others, and in many still continues with great severity. The following places in the Bombay Presidency have been notified as infected—Thana and Kolaba districts, the Jaugira State, the Ratnagiri, Poona, Ahmednagar, Nasik, Khandesh, Satara, Sholapur, Belgaum and Dharwar districts, the Southern Mahratta country, the Surat district, the Palanpur, Baroda and Cutch States, and the Karachi district.

At Poona, where about 500 patients are under treatment in the various plague hospitals, the mortality during the past fortnight has been over 72 per cent, and whereas for the whole period since the outbreak the mortality in the hospitals has averaged 66 per cent., it rises to over 75 per cent. for the whole city. The mortality amongst Europeans and high-class Eurasians in the Sassoon Hospital has been only 55 per cent. Poona is suffering from a recrudescence of the epidemic and the weekly mortality in Bombay still continues to rise, showing a revival of the plague also in that city. In both places, however, the organisation for coping with the epidemic has been minutely elaborated; there being abundant hospital accommodation for the sick, observation camps for those who have been exposed to the disease, and segregation camps for those who have come from infected districts. In addition there are house-to-house visitations to search for any infected. The natives have now greatly got over their former dread of the hospitals, but still continue to secrete the sick and dead as far as they are able. Free disinfection with either perchloride of mercury or carbolic acid, followed by lime washing, is the chief method adopted to destroy the contagium. From a sanitary point of view more than half the houses would be condemned as unfit for human habitation, and the number of houses in both cities which have been closed is so entirely insufficient that this is obviously the one weak point in the present administration. At Poona every house in one of the sections into which the city is divided has been thoroughly disinfected, whether any cases of plague have occurred or not, but of course the complete disinfection of a whole town of this size is a work of time. It is a point for the consideration of almost every municipality in India whether it would not be the cheapest method in the long run to pull down all the insanitary dwellings and build up blocks of houses specially suited for the working classes. Adaptation to the climate, and the special wants of the various classes of natives, is merely a matter of detail. Probably in the end such a measure would become a source of revenue to the municipality. Such an idea is talked about in the general improvement scheme for Bombay, but it might be equally well carried out in other cities. The habits of the natives, and the conditions under which they live, are so favourable to the spread of contagious diseases that disinfection and segregation will not entirely stamp out the disease. In both the cities which have been chiefly under consideration cases after cases are being reported as occurring time after time in the same infected houses. The Plague Commission for Bengal have completed elaborate arrangements for intercepting railway passengers from infected districts. At Sholapur also the clothes of all third-class passengers are disinfected by steam under pressure, and the native has to bathe himself thoroughly with a disinfectant solution. Similar measures are about to be adopted at the Poona railway station.

Without being pessimistic it is to be hoped that in a scientific point of view all these measures will not be hastily credited with bringing about a decline in the various outbreaks. It must be constantly borne in mind that epidemics of the plague, like those of other contagious diseases, have their almost regular course of rise maturity and decline, and even now it is more than probable that all the efforts which have been made have not succeeded in altering the communal life-history of this disease. Recrudescences have occurred where the disease was thought to be stamped out, and we may yet see further developments after another hot season.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

THE sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President: T. G. RODDICK, M.D., Professor of Surgery in McGill University, Montreal.

President-Elect: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by THOMAS RICHARD FRASER, M.D., LL.D., F.R.S.Lond., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by THOMAS ANNANDALE, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir JOHN BATTY TUKE, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. MEDICINE.

President: GEORGE WILLIAM BALFOUR, M.D., LL.D. *Vice-Presidents:* Sir CHRISTOPHER JOHN NIXON, M.D.; JOHN MITCHELL BRUCE, M.D., ALEXANDER JAMES, M.D.; GEORGE ALEX. GIBSON, M.D. *Honorary Secretaries:* J. J. GRAHAM BROWN, M.D., 3, Chester Street, Edinburgh; SAMUEL HERBERT HABERSHON, M.D., 70, Brook Street, Grosvenor Square, W.; GEORGE LOVELL GULLAND, M.D., 6, Alva Street, Edinburgh.

B. SURGERY.

President: JOHN DUNCAN, F.R.C.S., LL.D. *Vice-Presidents:* ALEX. GORDON MILLER, F.R.C.S.; JOHN CHIENE, F.R.C.S; JAMES RUTHERFORD MORISON, F.R.C.S.; JOSEPH

MONTAGUE COTTERILL, F.R.C.S. *Honorary Secretaries:* FRANCIS MITCHELL CAIRD, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. BEEMAN HODSDON, F.R.C.S., 52, Melville Street, Edinburgh. THOMAS KENNEDY DALZIEL, F.F.P.S.G., 196, Bath Street, Glasgow.

C. OBSTETRICS AND DISEASES OF WOMEN.

President: ALEX. RUSSELL SIMPSON, M.D. *Vice-Presidents:* CHARLES E. UNDERHILL, M.B.; GEORGE ERNEST HERMAN, M.B.; D. BERRY HART, M.D.; A. H. FREELAND BARBOUR, M.D. *Honorary Secretaries:* R. MILNE MURRAY, M.B., 11, Chester Street, Edinburgh; F. W. N. HAULTAIN, M.D., 17, Rutland Street, Edinburgh; JOHN CAMPBELL, M.D., 21, Great Victoria Street, Belfast.

D. STATE MEDICINE.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

E. PSYCHOLOGY.

President: THOMAS SMITH CLOUSTON, M.D. *Vice-Presidents:* WILLIAM WOTHERSPOON IRELAND, M.D.; H. F. HAYES NEWINGTON, M.R.C.S.; JOSEPH WIGLESWORTH, M.D. *Honorary Secretaries:* JOHN MACPHERSON, M.D., Stirling District Asylum, Larbert, Stirlingshire; GEORGE M. ROBERTSON, M.B., District Asylum, Murthly, Perth.

F. NEUROLOGY.

President: BYROM BRAMWELL, M.D. *Vice-Presidents:* JOSEPH ARDERNE ORMEROD, M.D.; WILLIAM RUSSELL, M.D.; ALEXANDER BRUCE, M.D. *Honorary Secretaries:* ROBERT ALEXANDER FLEMING, M.D., 10, Chester Street, Edinburgh; WILLIAM FORD ROBERTSON, M.D., 12, Bristo Place, Edinburgh.

G. PATHOLOGY.

President: WILLIAM SMITH GREENFIELD, M.D. *Vice-Presidents:* FREDERICK WALKER MOTT, M.D., F.R.S.; JOHN MACFADYEAN, M.B.; ALMROTH EDWARD WRIGHT, M.D. *Honorary Secretaries:* HAROLD JALLAND STILES, M.B., 5, Castle Terrace, Edinburgh; ROBERT MUIR, M.D., 20, Hartington Place, Edinburgh.

H. PHARMACOLOGY AND THERAPEUTICS.

President: JAMES ORMISTON AFFLECK, M.D. *Vice-Presidents:* CHARLES DOUGLAS FERGUSSON PHILLIPS, M.D., LL.D.; J. THEODORE CASH, M.D., F.R.S.; NESTOR TIRARD, M.D.; RALPH STOCKMAN, M.D. *Honorary Secretaries:* R. DUNDAS HELM, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. LOCKHART GILLESPIE, M.D., 23, Walker Street, Edinburgh.

I. OPHTHALMOLOGY.

President: D. ARGYLL ROBERTSON, M.D., LL.D. *Vice-Presidents:* R. MARCUS GUNN, F.R.C.S.; GEORGE A. BERRY, M.B.; GEORGE MACKAY, M.D. *Honorary Secretaries:* WILLIAM GEORGE SYM, M.D., 50, Queen Street, Edinburgh; ANGUS MCGILLIVRAY, M.B., 23, South Tay Street, Dundee.

J. LARYNGOLOGY AND OTOLOGY.

President: PETER MACBRIDE, M.D. *Vice-Presidents:* J. J. KIRK DUNCANSON, M.D.; J. DUNDAS GRANT, M.D.; ROBERT MACKENZIE JOHNSTON, M.D.; STCLAIR THOMSON, M.D. *Honorary Secretaries:* ADAM BROWN KELLY, M.B., 26, Blythswood Square, Glasgow; A. LOGAN TURNER, M.D., 20, Coates Crescent, Edinburgh.

K. DISEASES OF CHILDREN.

President: JOSEPH BELL, M.D. *Vice-Presidents:* JAMES CARMICHAEL, M.D.; JOHN PLAYFAIR, M.D.; T. M. BURN-MURDOCH, M.B.; GEORGE ARTHUR WRIGHT, M.B. *Honorary Secretaries:* GEORGE HARRY MELVILLE DUNLOP, M.D., 20, Abercromby Place, Edinburgh; JOHN THOMSON, M.D., 14, Coates Crescent, Edinburgh; WALTER STACY COLMAN, M.D., 22, Wimpole Street, W.

L. DERMATOLOGY.

President: WILLIAM ALLAN JAMIESON, M.D. *Vice-Presidents:* WALTER GEORGE SMITH, M.D.; JOHN JAMES PRINGLE, M.B.; ALEXANDER MORTON, M.D. *Honorary Secretaries:* JAMES LIMONT, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; NORMAN WALKER, M.D., 7, Manor Place, Edinburgh.

M. MEDICINE IN RELATION TO LIFE ASSURANCE.

President: CLAUD MUIRHEAD, M.D. *Vice-Presidents:* Sir R. DOUGLAS POWELL, Bart., M.D.; PETER ALEXANDER YOUNG, M.D.; JAMES RITCHIE, M.D. *Honorary Secretaries:* JAMES MURDOCH BROWN, M.D., 9, Walker Street, Edinburgh; FRANCIS DARBY BOYD, M.D., 6, Atholl Place, Edinburgh.

N. TROPICAL DISEASES.

President: PATRICK MANSON, M.D. *Vice-Presidents:* ANDREW DAVIDSON, M.D.; ANDREW SMART, M.D., LL.D.; WILLIAM JOHN RITCHIE SIMPSON, M.D. *Honorary Secretaries:* JAMES CANTLIE, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. LOUIS HUGHES, A.M.S., Aldershot.

O. ANATOMY.

President: Sir JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, M.B., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

P. PHYSIOLOGY.

President: WILLIAM RUTHERFORD, M.D., F.R.S. *Vice-Presidents:* JOHN ALEXANDER MACWILLIAM, M.D.; D. NOËL PATON, M.D.; E. WAYMOUTH REID, M.B. *Honorary Secretaries:* EDMOND WILLIAM WACE CARLIER, M.D., 39, Morningside Drive, Edinburgh; ROBERT ARTHUR YOUNG, M.D., 37, Trevor Square, Knightsbridge, S.W.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.
9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

WEDNESDAY, JULY 27TH, 1898.
9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, JULY 28TH, 1898.
9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 29TH, 1898.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine.

SATURDAY, JULY 30TH, 1898.
Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.
JOHN SHAW M'LAREN, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

THE ANNUAL MUSEUM.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 25th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The third ordinary meeting of the session will be held at the Medical Library, University College, Bristol, on Wednesday, January 26th, at 7.30 P.M., F. Richardson Cross, M.B., President, in the chair. The Report of Local Council on Constitution Committee's Recommendations will be presented. The following communications are expected:—The President: Cases of Congenital Eye Disease. Mr. G. Munro Smith: Case of Disappearance of a Sarcomatous Tumour of Neck. Mr. W. M. Barclay: Two cases of Intestinal Obstruction; Laparotomy: Recovery. Dr. T. Carwardine: Specimens indicating some Surgical Points in Mastoid Disease. Dr. F. H. Edgeworth: A case of Diphtheria in which Death was due to a Clot in the Basilar Artery. Dr. P. Watson Williams: The Clinical and Pathological Aspects of Enteric Fever. Dr. G. Parker: A case of Cancer of the Œsophagus.—J. MICHELL CLARKE, Bristol; W. M. BEAUMONT, Bath, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting of the District will be held at the Western General Dispensary, Marylebone Road, W., on Friday, January 28th, at 4.30 P.M., G. Crawford Thomson, M.D., Vice-President, in the chair. Agenda: Dr. Sims Woodhead, F.R.S.Ed.: Serum Therapeutics. Dr. H. F. Winslow: Clinical Demonstration on some Interesting Cases.—THOMAS DUTTON, M.D., 13, Holland Park Avenue, W.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held at the Lambeth Infirmary (by kind permission of the Board of Guardians) on Thursday, January 27th, at 8.30 P.M. Cases of clinical interest from the wards of the infirmary will be shown. Dr. Hector Mackenzie will read a paper on the Symptoms, Diagnosis, and Treatment of Movable Kidney.—THEO. B. HYSLOP, District Secretary (*pro tem.*), Bethlem Royal Hospital, S.E.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary on Friday, January 28th, at 3 P.M. Members wishing to read papers, etc., are requested to write to the Secretary at once.—WM. COLLIER, Honorary Secretary, St. Mary's Entry, Oxford.

DUBLIN BRANCH.—The twenty-first annual general meeting of the Dublin Branch of the British Medical Association will, by the kind permission of the President and Fellows, be held on Monday, January 31st, at 4.30 P.M., in the hall of the Royal College of Physicians, Kildare Street. The officers and council for the ensuing year will be elected by ballot, and any other necessary business transacted. Sir C. J. Nixon, M.D., President-elect, will deliver the annual address. Any member wishing to bring any subject of professional interest before the meeting, or to propose any gentleman as a member of the Association or of the Branch, should give notice on or before January 24th. The annual dinner of the Branch will be in the College Hall at 7.30 P.M. on the day of the meeting.—JAMES CRAIG, Honorary Secretary and Treasurer, 35, York Street, Dublin.

NORTH OF IRELAND BRANCH.—The winter meeting will be held in the Museum, College Square North, Belfast, on Thursday, January 27th, at 4 P.M.—JOHN CAMPBELL, Honorary Secretary, Belfast.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at Newtown St. Boswells, N.B., on Friday, January 28th, at 3.15 P.M.—R. DUNDAS HELM, Carlisle, W. HALL CALVERT, Melrose, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE second meeting of the District was held at the North-West London Hospital on January 12th; Mr. FREDERICK WALLACE, President of the Branch, in the chair.

Communications.—Dr. M. HANDFIELD-JONES read a paper on Benign Growths taking on Malignant Degeneration in the Uteri of Elderly Women. After referring to senile endometritis and to the normally occurring atrophy of the uterus in old age, Dr. Handfield-Jones gave notes of several cases illustrating the subject of his paper—cases which at the onset showed signs and symptoms of villous endometritis, who were curetted and pronounced to be suffering from benign disease (uterine adenoma), but later on ran a malignant course with enlarging uterus, necessitating extirpation or ending fatally without operation. On the other hand, one case was mentioned in which a cancerous polypus was removed from the body of the uterus in 1893, the patient being still living and comfortable at the end of 1897 (extirpation of the uterus had been refused). The general conclusions drawn from Dr. Handfield-Jones's experience in this connection might be summarised as follows: (1) There is generally an early stage of benign adenoma in corporeal cancer—a disease which occurs most frequently in women between 56 and 60 years of age. (2) Microscopical examination of uterine scrapings after curetting in this stage is not quite reliable; no doubt because it is no index to the condition of the deeper structures. (3) Clinical signs and the clinical course are more valuable than microscopical evidence: for example, an enlarging uterus, metrorrhagia, and constitutional signs are very suggestive of malignancy. (4) The degree of malignancy varies a good deal in these cases; the course may be prolonged in undoubted malignant cases, even for years. (5) Rapid increase in the body of the uterus is the most important sign in guiding one to recommend extirpation.—The PRESIDENT, Dr. H. CAMPBELL, and others spoke on the paper.—Dr. HANDFIELD-JONES, in reply, quite agreed with Dr. Campell that pain might be absent or insignificant in cases of cancer of the body of the uterus.

Cases.—Mr. FRED. DURHAM, Dr. H. CAMPBELL, Dr. KNOWSLEY SIBLEY, and other members of the staff showed cases of interest in the wards of the hospital.

Votes of Thanks.—Votes of thanks to Dr. Handfield-Jones, to the hospital authorities, and to Mr. F. Wallace were cordially passed.

EAST YORK AND NORTH LINCOLN BRANCH.

A SPECIAL meeting of this Branch was held on January 14th, at the Hull Royal Infirmary, Dr. PIGEON (President), in the chair.

Report of Constitution Committee.—The report of this Committee was adopted, subject to the two following modifications: (1) The draft report of the Council should be published in the BRITISH MEDICAL JOURNAL for consideration by members, as well as presented to the Branches, before the Branch annual meetings; (2) as regards the election of members, that the present procedure be continued.

Army Medical Service Reform.—Dr. MILBURN moved, and Mr. R. H. B. NICHOLSON seconded, the following resolutions, which were carried unanimously:

1. That this Branch views with grave concern the present condition of the Army Medical Service, inasmuch as such a state of things must entail serious injury to the health of our troops, if not actual disaster in war. That this Branch considers the unsatisfactory state of the Service to be the natural result of the refusal of the military authorities to carry out reforms which are absolutely necessary; and would urge the medical

profession, in the national interest, to make clear to the public the nature of these reforms and the need for them; to point out the serious consequences which may attend their postponement, and to make every effort to secure their speedy adoption.

2. That this Branch approves of the action taken, and endorses the reforms suggested by the Subcommittee of the Parliamentary Bills Committee of the British Medical Association.

SPECIAL CORRESPONDENCE.

PARIS.

Reading through Opaque Bodies.—The Serum Treatment of Leprosy.—The Hydrotherapeutic Service in Paris Hospitals.—M. Zola and the Paris Medical Students.—General News.

DR. GRASSET'S communication to the Montpellier Academy of Science and Literature concerning a letter enclosed in several coverings which was read at a distance, was referred to a few weeks ago in the BRITISH MEDICAL JOURNAL. The Montpellier Academy has since appointed a committee to verify the fact and repeat the experiment with rigorous and scientific precision. The result was that the medium failed to read a letter enclosed in a box between two undeveloped photographic plates. A sealed folded letter held before the subject for a length of time, but not allowed to leave the hands of a second person, was likewise left undeciphered.

M. Hallopeau has placed before the Academy of Medicine a report on M. Laverde's serum treatment of leprosy. The investigator obtained a fluid by crushing leprous tubercles, and this, after mixing it with sterilised water, he injected. According to M. Laverde the patients treated in this manner improved in condition. The committee appointed by the Academy to report on the work done by M. Laverde not having the necessary materials in their hands, are not in a position to make control experiments, but recommend M. Laverde to continue his researches and observations, and to report thereon.

Dr. Bourneville, editor of the *Progrès Médical*, states very clearly that medical officers frequently neglect the actual working of the hydrotherapeutical services in municipal and departmental hospitals. They order douches and baths, specifying the kind and limiting the time, but seldom take the trouble to ascertain whether the bath room is properly arranged, whether the person who gives the douche understands what is to be done and not done, whether the heat of the undressing rooms and douche rooms is properly regulated, and the drying towels satisfactory. M. Bourneville draws the attention of M. Peyron, Chief of the Assistance Publique, to the above details. "Formerly the drying towels were thick, now they are replaced not by Turkish towelling but by thin cotton towels." M. Bourneville has endeavoured in the nurses' schools to train the pupils in hydrotherapeutics, but owing to a variety of causes there were too many difficulties in the way, and he declares that the solution to the question rests with the *chefs de service*, who should reform the working of the hydrotherapeutic service. The hospital directors' functions are simply administrative, and it is useless to look to them for co-operation.

The Paris medical students have been greatly angered by M. Zola's letter to the President of the Republic, published in *L'Aurore*, wherein he accuses General Billot of suppressing proof of Captain Dreyfus's innocence, and other generals of being accomplices. The Medical Students' General Association addressed a letter to M. Zola, protesting against his views. Medical students have amused themselves by attempting to parade about Paris in organised bands, shouting "Conspuez Zola!" A few policemen quickly sent them home to their lodgings. M. Zola, in reply to their letter, requests M. Tissier, the President of the Committee of the General Students' Association, to assure his comrades that he (Zola) does not attack the army, but only the conduct of some of its chief officers; that his heart aches to see the youth of France mixed up with those interested people who manœuvre to make these two questions appear one. M. Duclaux (Member of the French Institute, and director of the Pasteur Institute), Professor Charles Friedel, Professor Grimaux, Dr. Pottevin, Dr. A. Zuber, M. Delbet (hospital surgeon, and Professeur Agrégé at the Medical Faculty), Professor Bonnier, and many other men well known in the academic and scientific worlds, have signed a petition asking that the Dreyfus case may be reopened.

It is rumoured that Dr. La Jarrige and Dr. Boisleux, who were sentenced to imprisonment for procuring abortion, will soon be liberated.

Dr. Samuel Pozzi has been elected Senator for Dordogne.

The *Journal de Médecine* of January 16th publishes a sympathetic and appreciative obituary notice of Mr. Ernest Hart, late Editor of the BRITISH MEDICAL JOURNAL.

BERLIN.

Medical Courts of Honour.

THE proposed Bill for the establishment of medical courts of honour has already passed through many phases, and, if it ever become law in Prussia, should be perfect—if frequent remodelling can make it so. Thrice the draft has been submitted to the medical representative bodies (*Aerztekammern*) for approval, and twice it has been returned as unsatisfactory. In fact, at the present moment, the Prussian Cultus-Minister, Dr. Bosse, almost despairs of bringing about an agreement, and in a rescript addressed to the Central Committee of the *Aerztekammern* he expresses his fear "that legislation on the subject will have to be postponed for the present." One of the chief points of disagreement lies in the question whether the jurisdiction of the courts of honour should extend to the non-professional or private life of members of the profession, a proposal which to the majority of the Prussian *Aerztekammern*, and also its Central Committee, is most distasteful. In his latest rescript Dr. Bosse says that he agrees with the Committee's resolutions in so far as there can be no question of making the political, religious, or scientific opinions of a doctor the subject of inquiry on the part of the court of honour. But, seeing that the court would have to decide on all "offences against the honour of the profession," cases might arise in which it would be impossible to give judgment without taking into account non-professional or private actions. On points of procedure, such as the majority of two-thirds for passing judgment demanded by the Central Committee, the Minister declares himself quite ready to give way.

CORRESPONDENCE.

THE SOCIETY OF APOTHECARIES.

SIR,—In an address delivered by Mr. Victor Horsley, and published in the *Lancet* of January 1st, two questions are raised affecting the Society of Apothecaries. The first question is whether the erasure of the name of a licentiate from the list of the Society is equivalent to the cancellation and deletion of the licence or diploma granted to him.

I am unable to say that it is so, and I gather that my opinion is shared by the legal assessor of the General Medical Council. If it is equivalent, it must be inferentially; I mean that this result is certainly not obtained by statutory enactment. The power of the Society to erase is conferred by the Apothecaries Act Amendment Act, 1874.

In a further speech delivered by Mr. Victor Horsley, and reported in last week's BRITISH MEDICAL JOURNAL, p. 173, Mr. Victor Horsley, if correctly reported, makes the following statement, which is not intelligible: "They (the Society) obtained a Bill not very long ago called the Apothecaries Amendment Act, giving them power to strike persons off their list of licentiates, and *if that Act had been passed* they would have been placed on the same footing as any other body." But the Act *was passed*, and if it had not been the Society of Apothecaries would not possess the powers which they do.

The 4th section of the Act is as follows:

It shall be lawful for the Master Wardens and assistants for the time being of the said Society of Apothecaries to strike off from the list of Licentiates of the said Society the name of any person who shall be con-

victed in England or Ireland of any felony or misdemeanour or in Scotland of any crime or offence, or who shall after due inquiry be judged by the General Council to have been guilty of infamous conduct in any professional respect and the said Society shall forthwith signify to the General Council the name of the Licentiate so struck off.

The duties of the Society of Apothecaries under this section are, as will be seen, ministerial and not judicial, and under it the Society, in cases of infamous conduct in a professional respect, can only erase from their own list a name already struck off the *Medical Register*. So far, then, as language goes there is no power given to the Society by this section to destroy the diploma of the person whose name has been erased from the list of licentiates or to compel him to give it up for cancellation. No doubt this creates a difficulty, for (1) the person so erased retains his title though unable to recover his fees by legal process, and consequently, (2) if capable of restoration, he must be restored on the footing that his diploma has never been destroyed, and (3) he cannot be successfully proceeded against for unqualified practice.

I have said, *if capable of restoration*, though having regard to the silence of the Medical Act, 1858, on the point, I have always myself doubted the power of the General Medical Council to restore. If, however, the Council can and do restore a name, what is the Society of Apothecaries to do? They erase, as I have pointed out, to make their own list correspond with the *Medical Register*: if they refuse to restore (and they would absolutely refuse to do so unless the Council had previously restored the name to the *Register*) there would be the same confusion as if they were to refuse to erase. As a matter of fact, two names of licentiates qualified prior to 1886, erased from and restored to the *Medical Register*, have been restored to the Society's list of licentiates on the footing of their old diplomas.

Fresh legislation, in my opinion, can only meet the difficulty by assimilating the practice of the medical to that of the legal profession, and providing for suspension of practice in cases with extenuating circumstances, and absolute cancellation of the diploma in those where there are none.

In dealing with the second question, I do not know to what particular statement or opinion ever made or given by me Mr. Victor Horsley is referring. I think he must be alluding to a statement which from time to time appears in the newspapers of the persons who have received the Society's diploma. This statement is not inserted by me, and I am not "the Secretary of the Society." I have, in fact, nothing to do with the examining functions of the Society, except as their legal adviser.

I venture, however, to think that the point raised by Mr. Victor Horsley is of a somewhat academic character. The Society have certainly never meant or intended to assert that their diploma *without registration* enables the holder to practise medicine, surgery, and midwifery, but they certainly do assert that it does so *when registered*. Registration is such a necessary complement of obtaining a diploma or diplomas that the distinction drawn by Mr. Victor Horsley would, I think, be difficult of recognition by most persons, who would assume that the statement under discussion conveyed by implication the meaning which I have attached to it.

If it is this statement to which Mr. Victor Horsley is referring, I may add that I have for entirely different reasons long felt an objection to it, and if the Society take my advice they will discontinue its insertion in its present form.

I have occupied so much of your space that I will not deal with the relations of the Society of Apothecaries and the Medical Defence Union, to which Mr. Victor Horsley refers in the BRITISH MEDICAL JOURNAL of January 15th, p. 173; but were I to do so, it would be found that they reflect no discredit on the Society.

I should not have troubled you at all had I not been referred to by name, and I am still somewhat at a loss to know on what grounds my name has been mentioned. Any letters I have addressed to the General Medical Council or otherwise have been official ones on behalf of the Society, and not written by me as an individual.

In conclusion, sufficient allowance is not made for the exceptional position of the Society. Whatever they have done has been done without assistance, and often in spite of opposition. They do not and cannot possess the power and the influence of the Royal Colleges.

Notwithstanding, their record, past and present, is excellent, and those who know most about their work will not disparage or depreciate what they have done for the medical profession. —I am, etc.,

Austin Friars, E.C., Jan. 17th. JAMES RICHARD UPTON.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

SIR,—I shall be much obliged if you will insert the following corrections of a few errors in the otherwise remarkably accurate report of my speech on pages 172 and 173 of the BRITISH MEDICAL JOURNAL of January 15th:

Page 172, column 1, lines 59 and 60, after "read" read "that the only qualification *was* registration."
Page 173, column 1, line 32, for "put" read "brought."
Page 173, column 1, line 60, after "M.D." read "but that he also practised by it."
Page 173, column 1, line 77, for "he" read "she."
Page 173 column 2, line 11, for "question" read "questions."
Page 173, column 2, line 32, after "who by?" read "The corporations."
Page 173, column 2, line 37, for "Bill" read "Act."
Page 173, column 2, line 39, for "that" read "another"
Page 173, column 2, line 43, for "corporation" read "corporations."

—I am, etc.,

Cavendish Square, Jan. 15th. VICTOR HORSLEY.

SIR,—In reference to your otherwise accurate report of the meeting of the South West London Medical Society held last week, I beg to state that the chair was occupied by our President, Mr. T. A. J. Howell, and not by me.—I am, etc.,

W. G. DICKINSON,
Putney Heath, Jan. 17th. Honorary Secretary.

SIR,—It has been pointed out to me that the remarks I am reported to have made as chairman of the meeting of the South-West London Medical Society, when Mr. Brudenell Carter read a paper on Legislation as a Remedy for Medical Grievances, hardly do justice to Mr. Victor Horsley.

I assured Mr. Carter, as I thought, in the most emphatic way, that there was absolutely nothing in the address which Mr. Horsley gave on December 8th that could in any way be construed as a personal attack. Mr. Carter at once accepted my assurance.

I should be much obliged, therefore, if you would give me the opportunity of repeating that statement.—I am, etc.,

Wandsworth, S.W., Jan. 18th. T. A. I. HOWELL.

SIR,—Whilst congratulating you upon the journalistic enterprise which has enabled you to supply to the profession so full an account of the important meeting on Wednesday night, may I be permitted to supplement that account in one or two not unimportant particulars?

The report gives no evidence of the fact that Mr. Brudenell Carter's position was not so much that of an opponent of medical reform (though he frankly intimated his disagreement with the methods by which that reform is being sought) as a personal attack upon Mr. Horsley of a kind seldom heard under such circumstances. "So long as Mr. Horsley refrains from addressing me, my equanimity is not likely to be disturbed by anything that he can do. My object will be to project his personality into space, and to leave it in that cold and unexplored region undisturbed." And further on, "The characteristic of Mr. Horsley's statements is their want of accuracy;" "his law is that of a thieves' attorney." I for one venture to think that from one guest to another (for that was the position of both the chief speakers) such expressions are utterly inexcusable.

There is, moreover, one remark of Mr. Brudenell Carter's which is in the highest degree insulting, not only to Mr. Horsley and to the direct representatives, but to the profession which they represent, which should not fail to be put on record. It was the closing one of his reply, and was to the effect that "as for what the direct representatives might do, the Council cared very little about it." It is hardly to be supposed that Mr. Brudenell Carter would have ventured to speak thus in the name of the Council without consultation, and, indeed, there were several points in his address which bore clear evidence of influence little short of inspiration, as, for example, his acquaintance with Sir Richard Quain's reasons for requesting Mr. Horsley to refrain from addressing him personally.

The main point for the profession to note is that any reform which is to be effected must be effected not only without the assistance of the General Medical Council, but in the teeth of it, and it is to be hoped that this will be realised, and the matter taken up in earnest without further delay.—I am, etc.,

Old Kent Road, S.E., Jan. 15th. EDWARD C. BOUSFIELD.

UNQUALIFIED ASSISTANTS.

SIR,—The action of the General Medical Council in regard to unqualified assistants brings prominently before the profession matters that have clamoured for reform for many years—reform that should no longer be neglected now that the Council is showing such vigour—reform that even an elementary feeling of fairness should oblige the Council to introduce without delay.

Judging, so far as one can, by the Council's actions in the past, it would appear that the condition and needs of the general practitioner in such districts as this are very imperfectly, if at all, understood by that body. Allow me to give, as briefly as possible, a few facts bearing upon the question of assistants and the conditions of our work.

The following opinions have been expressed in different forms many times recently in the BRITISH MEDICAL JOURNAL and other medical journals, and seem to embody the most important of many ideas:

1. That the employment of unqualified assistants is unfair to newly qualified men.
2. That it is unfair to the public.
3. That the general practitioner should take only such work as he can do himself, thus leaving room for the newly qualified.
4. That in order to do this he should charge more.

Let us glance at these points in detail.

1. It must be admitted that every man should obtain practical experience not only in professional knowledge, but in the method of working a practice. He must either obtain it before or after he is qualified, and the obtaining before instead of after cannot constitute unfairness to anyone any more than any other part of his curriculum. This is looking at the matter solely from the assistant's point of view. But surely the principal may also in fairness be considered, seeing that he is himself only a step further advanced than the assistant, who will in his turn become a principal. And every practitioner who has employed both unqualified and qualified assistants will admit that the newly qualified man is generally much more incompetent, and infinitely more unwilling to be taught, and therefore of much less use. The usual routine is that he goes as assistant into a general practice to learn; that he learns at the expense, to a greater or lesser extent, of that practice; and that at the end of a year or less, when he is beginning to be really useful, he goes off to practise for himself, the upshot being that the practice is kept in a constant state of unrest, and the principal's interests suffer. If, on the other hand, he were to get his experience before qualifying, and took at least two years to do it, he would not only benefit himself, but his principal as well.

2. If an unqualified assistant is used as any honourable man would use him, there could be no unfairness to the public. He lives in the house of the principal; he is sent to see patients who are under the principal's treatment; he does not treat cases on his own responsibility; the patients understand his position perfectly well, and are never backward in asking for the principal.

3. That the practitioner should take only such work as he can himself perform has been frequently said, and is no doubt the ideal condition—a condition one would think that is possible to such men as are on the Council, but how far possible to the general practitioner, especially in a colliery district? For instance, a man pays 6d. per fortnight at a pit to have himself, his wife, and his children attended and supplied with medicine. Taking the average family at five—a very moderate calculation—this means that he must attend 400 individuals, when they need him, to bring in £1 per week, or £52 per year, and to get £520 per year gross he must have 4,000 subscribers. Anyone with a personal knowledge of the ways of club subscribers knows that the work is anything but a sinecure, and that it is beyond any man's power to do it without help.

4. That he should charge more. No opinion could be sounder than this. But who is it that prevents his doing so? The newly-qualified man. I have no doubt that this district is like all others of its kind, and I speak from personal experience when I say that every effort of the men in practice to improve their position and raise their charges is immediately met by the competition of newly-qualified men, who simply rush in to supplant them at a lower price, and so frustrate any effort to bring about the very condition they are supposed to need.

To revert to the latest action of the Council in the matter of employing unqualified men, even under supervision, let us take a typical case under the new regulation. The principal is out; a woman in labour requires assistance. The assistant may not go, although he has completed his college course, and is absolutely capable of managing the case. The alternative is a so-called midwife, a woman without the slightest knowledge, and whose sole pretension to the title consists in having had children herself. Or the message concerns a person who has been taken ill. The assistant is quite able to treat the case until his principal shall take it over, seeing that he has a reasonable knowledge of medicine and therapeutics; but he must not. The patient may (and in this district constantly does) go to a quack doctor, who is perhaps a retired workman, with no education, and without the ghost of a shadow of knowledge of either diseases or drugs.

One wonders how many members of the Council are aware that in districts such as this there are numberless men making good livings as medical practitioners who are simply ex-labourers and quacks of the most pernicious type. They visit and treat sick people, they attend labours, they dispense medicines, and when their patients die they give a death certificate. And what does the law or the Council do? Nothing. These men are allowed to practise with impunity, and the working classes employ them with the full belief that they are as qualified to practise as any qualified man. Not only is this so, but they are actually appointed as surgeons to benefit societies.

Truly reform is needed. But the Council should not stop at the present point. Under the conditions now obtaining, the struggling club doctor is driven to pay nearly double as much for assistance as he was doing, with no increase of income to provide for it. Surely, then, he has a right to demand that if he must be crushed by competition it shall only be at the hands of men who are qualified to practise. And does it not seem absurd to talk of the public suffering injury by being attended by unqualified assistants, who do know something of their work, and yet allowing them to be gulled and deceived by ignorant impostors?

We general practitioners are well aware that it is an easy matter to point out grievances, and not so easy to remedy them, but we want to see this newborn vigour of the Council take measures with the beam outside the profession, as well as the mote that is in it. And who is going to believe that the General Medical Council cannot do as much for the medical as the Incorporated Law Society does for the legal profession? There is no doubt that what is possible for the one is possible for the other. If the five guineas we pay on registration is not sufficient for the work let us pay a reasonable yearly sum, but let us have some real benefit and protection in return.

Allow me to assure you that I write from no personal or selfish motive. I have myself employed only qualified assistants for many years, but in the older days I employed unqualified ones, and I was one myself during the time that I did my curriculum. I therefore write with a personal knowledge of the subject, and I am absolutely certain that every general practitioner who looks upon his calling as a profession and not as a trade, will accept with hearty good will any effort to keep our house in order, so long as it is accompanied by a determination to protect that house from outside assaults.—I am, etc.,

Bishop Auckland, Jan. 17th. MARK WARDLE.

SIR,—A most instructive letter is that of "M.D. and Eight Years in Practice" which appears in the BRITISH MEDICAL JOURNAL of January 15th. Should not the first paragraph end

with on "famine prices"? As it reads it is difficult to know what is meant. Here is an example of a medical traffic to which I alluded in a former letter, and which it would be impossible to work without an unqualified assistant. Is it desirable to retain the unqualified assistant to perpetuate such a state of affairs as is described?

The writer says he walks twelve miles and visits fifty patients a day; the walking will take four hours (one cannot maintain a dignified carriage at a quicker pace); shall we say five minutes for each visit?—and he is an expert practitioner who can take the temperature, gauge the pulse, view the tongue, ask questions and hear replies in the time—this then will take up other four hours. Then the putting up medicines for this long list will take, say, two hours. Then what about casuals who call at the surgery? They will take, say, another hour, to say nothing of the very necessary urine testing. Altogether "M.D. and Eight Years in Practice" must spend twelve hours a day at work for £189 (to be exact) a year net.

Now, Sir, I call this a glaring example gratuitously exhibited of a sordid traffic, dangerous to the patients, degrading to the individual practitioner, and damaging to the repute of an honourable profession. I know enough of pitmen to aver that 99 out of every 100 of them spend more than 6d. a fortnight on their dogs.

Could the General Medical Council have a better reply for all those who advocate the retention of the unqualified assistant than this letter which is flung at them by "M.D. and Eight Years in Practice"?—I am, etc.,

January 16th. M.O.H.

SIR,—Unlike law and divinity, the medical is eminently a practical profession, and it looks beyond common-sense reasoning to keep students studying at a school until they get their degree or qualification, and then be launched upon the public as genuine qualified practitioners of medicine. How would it answer if the same regulations were applied to the captain of a ship? How could he possibly learn the details and make minute observations without having acted in the various posts of subordinate officer, and be able to decide in a moment or two what steps should be taken for the safety of the lives which may be in his hands? The medical practitioner is never so critically placed. Now, why should medical students not be granted certificates for each professional examination they pass, and each certificate to carry with it a limited amount of legal power, so that they could act as assistants to practitioners? For instance, a student with full curriculum, and preparing for his final, could be styled First Class Assistant, and so on.

I suppose, according to the Council, should a medical student, even the day before he passes his final, witness a serious accident and lend his services, he is acting illegally, and if a qualified man were to turn up to the case he would be guilty of covering. What about humanity?—I am, etc.,

January 15th. REPEAL.

SIR,—The correspondence on unqualified assistants shows great divergences of opinion amongst general practitioners. The old men resent a needless meddling with their private affairs; the middle-aged men think their social status will be improved by getting rid of a link with the druggists; the younger men look forward to filling the places of the disestablished and disendowed assistants—*chacun pour soi*. The long and hazy debate of the General Medical Council looks as if the authorities felt they must do something to attack "covering" but what that offence was, not being either coroners or general practitioners, they hardly knew. In the end they have destroyed the last remains of the old ladder by which all the older members of the profession climbed to qualification—I mean apprenticeship.

Many a sound old practitioner will agree with me that the old men knew what many of us will never know—the art and craft of the surgeon and apothecary learnt as Aristotle would have things learnt, by beginning with the things first and learning the reasons after—for example, *Eth. Nic.*, I-IV, 6, ἴσως οὖν ἡμῖν ἀρκτέον ἀπὸ τῶν γνωρίμων. Now we teach raw students the mathematical proofs of laws founded on phenomena which they have not observed, but about which they have read in Ganot. The result is brilliant as far as examinations go, but woeful in practice, for we hear of men who cannot even wrap up bottles decently, let alone make a mixture in less than a quarter of an hour, while they put on forceps, or try to, in simple cases and then send for help, etc.

May I as an apothecary, proud of my trading company—one of the few in the City of London—suggest that the dormant method of apprenticeship should be revived? Let every master bind his unqualified assistant to him by proper indentures for seven or five years as his apprentice. At the end of that time let him do exactly as his fathers did before him, and become an apothecary qualified now to practise surgery. This may have far-reaching consequences, and lead to a revival of a good old system which neither technical schools, nor crammers, nor colleges, nor anything else can replace, as we see only too clearly in the great industrial world of craftsmen, wherein we chirurgeons should be proud to take our place—the first place.

There is another thing. One perpetual complaint is that the newly qualified man treats his master's paying patients, whose servant he is for the time being, as if they were loafers in the casualty room, forgetting that servitude is no mean thing; our fathers have done it, and it is part of the title of the most ancient and noble potentate in the world, the Pope himself, whose every letter begins with *Servus servorum Dei*. The apprentice will learn not to do this, and that, too, very soon.—I am, etc.,

January 16th. M.B., M.R.C.S., L.S.A.

SIR,—As a practitioner of more than thirty years' standing, I would state that I thoroughly approve of the action of the General Medical Council as to unqualified assistants so far as it would prevent them imposing upon the public as to their want of status, taking charge of branch practices, signing certificates, etc., but think there could be no objection to an unqualified man working under a qualified employer, provided that the employer himself saw every case at least twice.

The assistant's principal duties should be dispensing, book-keeping, and ordinary midwifery, and he should be a duly-registered student who has passed the first examinations, and might reasonably be expected to become fully qualified in due course, and, under any circumstances, the exact status of every assistant should be easily ascertainable.

In case a practice were so extensive that the principal could not see all the patients, the assistant should be qualified. Here comes in the question of expense; and there is not the slightest doubt that when the receipts are insufficient, it is often due to the parish appointments being grossly underpaid; and if the matter were investigated (say, by a Select Committee of the House of Commons) it would be found that no Board of Guardians has any idea as to how much of the medical officer's salary goes into his pocket, when his expenses have been deducted. It would also be found that it is no one's business to call the attention of Boards of Guardians to the fact that many new and expensive drugs and appliances have been introduced, which their medical officers really cannot afford to supply; in fact, the question as to whether duties can be efficiently performed with insufficient remuneration is one which Boards of Guardians, like ostriches putting their heads in the sand, are in the habit of blinking altogether.

One way of calling attention to this matter would be by starting a society to provide drugs, etc., for the sick poor, to the funds of which the public should be invited to subscribe.—I am, etc.,

January 17th. MIDLANDS.

THE CANCER MORTALITY OF ENGLAND.

SIR,—My attention has only to-day been drawn to a communication from Dr. Arthur Newsholme, of Brighton, appearing in the BRITISH MEDICAL JOURNAL of January 8th, and taking the form of a somewhat militant criticism of certain recent remarks made by me to the Insurance Association of Manchester. Your readers will perhaps not regret that I am at present unable to deal fully with the subject of Dr. Newsholme's paper, for a double reason. In the first place, my original paper, which was taken down as spoken by a shorthand writer, appeared in an insurance periodical, and is not readily accessible, so that, in order to make myself in-

telligible, I should be obliged to reproduce almost the whole of it, and should thereby transcend the limits of your correspondence column. Secondly, I have promised a communication upon the subject to the *Edinburgh Medical Journal*, and am thereby debarred from prior publication elsewhere.

In the body of his paper Dr. Newsholme discusses with his usual clearness certain statistical questions with which he is far more highly qualified to deal than I am. Unfortunately he lends piquancy to his remarks by certain so-called criticisms of some of my remarks. A few of these criticisms are somewhat captious. I need only refer to the closing sentences of his first paragraph; others are entirely irrelevant. His last three paragraphs are devoted to a somewhat ponderous, but withal a humorous, exposure of an obvious fallacy underlying certain data which I obtained from the records of the Lancashire Insurance Company. As the figures referred to were in my original paper explicitly set aside as "being too small to establish a general proposition," and as they are clearly there introduced only to indicate my reasons for a certain line of investigation, the matter ceases to have any interest for myself or probably for your readers.

On two points however Dr. Newsholme makes a more serious error. He states that the figures just referred to constitute the basis "on which the main contention in Mr. Thorburn's paper almost completely rests." This is not so. He also accuses me of confusing deaths with death-rates, his reason being that the "death-rates" mentioned by me are not "death-rates as corrected by the method of King and Newsholme." The distinction is an important one into which for the reasons given I cannot now enter. Where death-rates were not available I have certainly illustrated my remarks by referring to the proportion of deaths from cancer to total deaths, but the audience to whom my remarks were adoressed was not in the slightest degree confused by such illustration.—I am, etc.,

Manchester, Jan. 18th. WILLIAM THORBURN.

THE TREATMENT OF BACKWARD DISLOCATION OF THE THUMB.

SIR,—I am pleased to find that the conclusions to which I came in my paper[1] on the Backward Dislocation of the Fingers upon the Metacarpus, as to the importance of the glenoid ligament, are confirmed by Mr. J. Hutchinson, jun., in his contribution to the subject published in the BRITISH MEDICAL JOURNAL of January 15th. The treatment recommended in many textbooks is still inadequate, and perhaps his advocacy may assist in a correct solution of these cases being put before our students in subsequent editions. Perhaps I may be permitted to recapitulate the methods of treatment which I recommended in the order in which they should be tried: (1) Manipulation by the "dorsi-flexion" method, without violence, and without (or on failure with) anæsthetic. (2) Subcutaneous section of the glenoid ligament from the back of the joint. (3) In the case of the thumb, subcutaneous division of one or both heads of the flexor brevis muscle. (4) Incision into the joint under antiseptic precautions, with replacement of ligament in long flexor tendon. (5) Excision of the head of the metacarpal bone after severe compound fracture or ankylosis of joint (especially of the thumb). In old-standing dislocations, when the glenoid ligament has become adherent to the head of the metacarpal bone, it is not possible to reduce the dislocation after simple section of the ligament; therefore, it is necessary to make open section or gain additional help by division of the flexor tendons.—I am, etc.,

Mansfield Street, W., Jan. 18th. WILLIAM HY. BATTLE.

SIR,—The late Mr. Oliver Pemberton was in the habit of teaching his class that reduction was always perfectly easy if the patient was made to hold the arm behind his back. No reason was given for the success of this empirical "dodge." I have no personal experience thereof, but in view of the difficulties set forth in Mr. Hutchinson's paper think it well to mention the fact.—I am, etc.,

Gloucester Place, W., Jan. 18th. HERBERT SNOW.

[1] *Lancet* vol. ii. 1888, p. 1223, *et seq.*

DENTAL REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

SIR,—It has often been found that those reforms are the most difficult to effect upon the advisability of which there is the greatest unanimity. It would appear as though the hammer and anvil of conflicting interests, the furnace of discussion and the bellows—well, we all know the bellows—were necessary for the beating out of any alteration of form in the cold iron of existing facts.

The weakness of the case for dental representation on the General Medical Council, as advanced in the letter of Mr. Smith Turner, appearing in the BRITISH MEDICAL JOURNAL of January 8th, lies in its great strength. There is not a valid argument that can be advanced against it. Hence it suffers from the difficulty of starting and maintaining a vigorous discussion of this obvious grievance.

It is plainly repugnant to all constitutional principles that any intelligent body of people should be taxed and governed, their affairs regulated, and their revenue raised and expended, by a corporation in which they are denied representation. To the Council itself, there appears to be no room for doubt, a dental colleague would be of inestimable value; not to dominate and overrule the common sense of his medical *confrères* upon dental matters, but to help them with his intimate knowledge of such matters, and to enable them to avoid such pitfalls as Mr. Smith Turner shows us they were in such danger of falling into on a recent occasion.

If we admit, as we all must, that sound professional regulations are also for the public benefit, then the public, too, must reap advantage from whatever tends to smooth the way for the wise framing of such regulations. But by what means, short of an amending Act of Parliament, could a dental representative find a seat upon the General Medical Council? Perhaps it would be too much to expect any of the electing bodies to commit their interests into the hands of one who is not, like them, engaged in the practice of medicine or surgery, although I may remark in passing that the Fellows of my own College have repeatedly given evidence of their liberality in electing dentists on the College Council, which action has in past years been found of undoubted benefit. Setting aside, then, the elected members of the General Medical Council there remain the Crown nominees, five in number; and in the dental profession are many men fully qualified for appointment who would worthily fill one of these posts with advantage alike to the dental and medical professions. It behoves, therefore, those who are interested in the carrying out of this reform to "agitate, agitate, agitate," and to demand that when one of these Crown nominations shall become vacant, Her Majesty shall be advised to fill it by the appointment of a dentist pending the more certain basis of a permanent settlement by which the right of the dentists to fixed representation shall be definitely established.—I am, etc.,

Dublin, Jan. 14th. GEO. M. P. MURRAY.

SIR,—To those who are interested in the future of the dental profession it seems to be of the utmost importance that that profession should be represented on the General Medical Council.

Although the general question of education and the more particular one of the preliminary examination of the student previous to registration are common to every member of the Council, yet there are some points in dental education and some points also in the administration of the Dentists' Act that require the presence of one who has an intimate acquaintance with these matters.

Without this safeguard mistakes are very apt to occur, and mistakes that cost 22s. 6d. per minute are rather expensive, especially as it costs another 22s. 6d. per minute to remedy them.

Whatever may be the views held by a few of the members with regard to dental education, I hold that it is to the great advantage of all branches of the profession and of the public generally that the dentist should be possessed of such an education as should fit him to become an observant and fully-equipped practitioner.

The statistics given in Mr. Hutchinson's letter on this subject show that we have a distinct claim to representation,

and the incident referred to by your correspondent in the BRITISH MEDICAL JOURNAL of January 8th I venture to think could not have occurred had we had a representative on the Council.—I am, etc.,

J. HOWARD MUMMERY, M.R.C.S. and L.D.S.

Cavendish Place, W., Jan. 18th.

NOT THE MILLENNIUM, BUT AN IMPROVEMENT.

SIR,—The various evils under which the profession groans have elicited many more or less useful suggestions for their cure. Perhaps an account of what we have tried here may interest some of your readers, and may seem worthy of imitation.

During the election of representatives on the General Medical Council in 1896 the practitioners in Gateshead were called together to discuss the advisability of some united action. We met twice at the house of one of our senior practitioners, Dr. Ridley. At the close of the second meeting, at which we had a very representative gathering, it was suggested that a permanent Association should be formed for medico-ethical purposes. The proposal was taken up with considerable enthusiasm, and did not end in mere enthusiasm. In less than a month every practitioner in the place gave in his adhesion to the Association. When we consider that we are not a mere debating society for the delivery of academic views on things in general, and the performance of nothing in particular, but a real working body, it will be admitted that this result was creditable to the practitioners of a place of over 100,000 inhabitants. I have not heard of any other town of the same size where all the practitioners are banded together for ethical and defensive purposes.

Our rules are few but strict, imposing exclusion from the Association and professional ostracism on any member deliberately breaking any engagement made by the Association as a body.

Our officials are also few, consisting of President (who is only eligible for one year), an Hon. Secretary (who is also Treasurer), and another elected member who, with the above, form the executive. We meet once in two months, but may have, and have had, a special meeting at any time when such a meeting is required.

The Association, though young, has already proved valueable. We met the delegates of the friendly societies and showed them that their present rate of payment—3s. per member per annum—is neither fair to us nor honourable to them. We resolved, and every member signed a document to this effect, that we will make no future engagement with any friendly society at less than 4s. Already several lodges are paying that figure, and gradually we hope to make it the general thing.

We have resolved to attend no juvenile lodges at less than adult rate, and that we will have no dealings with female lodges. So far our members have stood loyally together, and, judging from the temper of the Association generally, the first defaulter will have an exceedingly unpleasant time.

Not the least of our Association's advantages is that we are getting to know one another better, and a distinctly friendly feeling is growing up between men who a year or two ago contented themselves with the merest acknowledgment on meeting, and not always that.

On January 12th, 1898, under the chairmanship of our President, Dr. Newcombe, we had our first annual dinner, and every member (with a very few unavoidable exceptions) was present. The attendance was so large that the cynic might ascribe it to the fact of the dinner, and not to *esprit de corps*. At any rate, the attendance was what was wanted, and we did not quarrel with the cause of it. We had few toasts but plenty of music, and a most enjoyable evening was spent—so enjoyable, indeed, that it was generally felt that we should publish the facts in the hope that the idea may be followed in other towns.

At the establishment of the Association we received valuable information from the Manchester Medical Guild, the Portsmouth Medical Union, and the Newbury and District Medical Society as a result of an appeal through the medical journals. As an established and so far successful body we wish to tender our thanks to our friendly advisers.

We do not wish to give the impression that we in Gateshead have attained the millenium. Far from that. Being practically a part of the neighbouring city of Newcastle-on-Tyne, where there is no ethical organisation, we are constantly threatened with opposition from that quarter, and could venture much further on the path of reform were we ten miles away instead of being on the opposite bank of the river.

We have many other difficulties common to all towns. Our Association, however, has had such a good influence in promoting friendliness and *esprit de corps* that we fully believe that in the formation of such localised societies for defensive purposes lies the secret of effective resistance to unfair demands on the profession.

Any information regarding formation and organisation I will gladly give.—I am, etc.,

ALFRED COX, M.B.,

Honorary Secretary, Gateshead Medical Association.

Cotfield House, Gateshead, Jan. 17th.

COUNTY COUNCILS AND LUNATIC ASYLUMS.

SIR,—In the BRITISH MEDICAL JOURNAL of January 15th, Dr. Jones, Superintendent of the Claybury Asylum, takes exception to your comments on the scheme of the West Riding Asylum authorities for the erection of a new asylum for private patients at Scalebor Park; but, unfortunately for Dr. Jones, his facts are much more incorrect than your comments. After quoting the Secretary, Dr. Jones continues: "This power has already been acted upon, and the first public body to give effect to it was the London County Council." I must correct this statement, which is wholly at variance with facts. I refer Dr. Jones to p. 71 of the forty-seventh report of the Commissioners in Lunacy, where he will read: "In our remarks we were, however, in error in our statement that the County of London alone had hitherto moved in this matter, availing itself of the powers conferred by Section CCLV of the Lunacy Act, 1890. As a matter of fact, the Committee of the Dorset Asylum had already planned arrangements for the accommodation of private patients in separate wards distinct from pauper cases."

I think this clearly proves that to the Committee of the Dorset Asylum, and not to the London County Council, belongs the credit of having first availed itself of the powers to make special provision for private patients.

I do not think there is any reason to complain of your comments on the scheme of the West Riding authorities; for, after all, the provision for private patients at Dorchester and Claybury cannot be considered the same as what is now proposed to be done in Yorkshire—namely, the erection of a new asylum for this class of patient.—I am, etc.,

Dorchester, Jan. 18th. P. W. MACDONALD.

THE EPIDEMIC OF TYPHOID AT CLIFTON.

SIR,—The Widal's test, by which so many cases here were diagnosed to be enteric fever by the medical officer of health, was of strengths of dilution varying from 1 in 10 to 1 in 50—at least I am so informed.

I still continue to see cases of influenza, and in one house at present have four patients, all of whom have had fever, severe frontal headache, and some diarrhœa lasting three or four days, but all have convalesced within a week or ten days.—I am, etc.,

Clifton, Jan. 18th. W. J. TIVY, F.R.C.P.E., F.R.C.S.E.

FORCED REDUCTION OF LATERAL CURVATURE OF THE SPINE.

SIR,—I hope you will allow me to enter my emphatic protest against the views given in Mr. Noble Smith's article with this title in the BRITISH MEDICAL JOURNAL of January 8th. The two illustrations given in his paper exhibit a young man with well-marked osseous rotation of the dorsal vertebræ with convexity to the right, and of the lumbar vertebræ with convexity to the left. The second figure purports to show the improvement effected after three weeks of Mr. Smith's treatment. My opinion is that there is exactly the same amount of osseous, that is, incurable, deformity exhibited in Figure 2 as in Figure 1, and that if Mr. Smith had carried out my method of examination he would have obtained an equally improved photograph of the patient the same day that the first one was taken. I have for years demonstrated that it is unfair to exhibit a photograph of a patient in the

habitual or worst position before coming under treatment unless a second one is also shown, exhibiting the best position in which the same patient can be placed. I beg, therefor', to point out that Mr. Smith's Figure 1 represents the patient's habitual or worst posture, and his Figure 2 the patient's best posture. I challenge Mr. Smith to exhibit before the Clinical Society of London, of which both he and I are members, a patient with as much deformity as shown in his two illustrations before he has commenced treatment, and again after three weeks or three months, or twelve months if he prefers, with a diminution of the rotation of the vertebræ (osseous deformation). All surgical pathologists who have written on lateral curvature of the spine are agreed that the rotation of the spine which occurs in that deformity is impressed on the individual vertebræ, the cancellous tissue of the bodies of the vertebræ being arranged on the twist, as well as the whole shape of the individual vertebræ distorted; and it is absurd to believe that the "almost as much pressure as I could exert with my right hand" of Mr. Smith, repeated even three or four times at intervals, would effect a change which the most expensive and most ingeniously constructed extension beds have failed to effect after years of torture of the imprisoned patients, and which have fortunately been discarded on that account by most surgeons of the present day.—I am, etc.,

Queen Anne Street, W., Jan. 8th. BERNARD ROTH.

SIR,—From Mr. Noble Smith's communication in the BRITISH MEDICAL JOURNAL of January 8th it appears that he is not aware of the fact that the method he describes is an example of a less-efficient detail forming part of the long-recognised Swedish methods; though these are, of course, far more active and efficient in their higher stages. Mr. Noble Smith would be interested in the section of Dr. Lagrange's work on *Médication par l'Exercice* and the photographs there reproduced.

The very valuable method first advocated years ago by Mr. Barwell, called by him "rachilysis," is, I imagine, a well known and frequently-employed method of treatment in scoliosis. I have always supposed so during the years in which I have myself used both the less efficient plan of Mr. Noble Smith and the more powerful and scientific method of Mr. Barwell.—I am, etc.,

Nottingham Place, W., Jan. 13th. GERARD SMITH, M.R.C.S.

SIR,—A short paper by Mr. Noble Smith, with photographic illustration, invites some comment. The author relates the case of a lad, aged 17, with lateral curvature, whom he placed on a prone couch, and whose right and left shoulders he then pressed in opposite directions on two separate occasions with eight days' interval; on each occasion "something was heard and felt to give way." After this the patient was, says Mr. Smith, much better, and photographs are given in support of this averment.

Time out of mind manual pressure has been applied to the scoliotic protuberance of the right shoulder and left pectoral region. Indeed, some ten or twelve years ago Dr. Lorenz, of Vienna, described[1] his method of applying such force. He is, I am told, a tall, powerful man, and he provides himself with a padded beam and other means of utilising his strength to the full, causing the spine or parts about it to crack and give way. Yet he does not pretend to attain, even after many *séances*, the advanced result which Mr. Smith claims to procure by simple pressure with his hands in a single sitting, and still greater in a second.

For an explanation of this discrepancy one naturally turns to the photographs. The first represents the patient as "he was sitting in his ordinary attitude, and could only sit up in a very slight degree straighter for a moment when he made an effort." The second is taken three weeks later; it represents the patient making this effort. "He was able to maintain this position quite comfortably during the ten seconds necessary for the exposure of the photographic plate." One cannot but feel it to be a pity that the two were taken under such very different conditions, for photographs of a person stretching his trunk to the full, and of one letting it go quite lax, must of necessity differ a good deal. Also it is to be regretted that in taking Fig. 1 the supposed line of the spine was marked out with some coloured matter, whereas it is a fundamental principle of photography for scientific purposes that marking is inadmissible.

But accepting this line as correct, I have on both plates bisected the spine from the top of the sacrum to the vertebra prominens, and joined the dots marking those two vertebræ with the bisecting points. Through the centre of these lines and at right angles to them, lines are drawn which continued on to the spine and to the points where they meet are the radii of the curves. They are, of course, shorter if these curves be sharp, longer if such be less well marked. But the plates are of unequal size. From the point of the olecranon to the tip of the acromion (in neither plate is the left upper arm foreshortened) measures in Fig. 1 1.9, in Fig. 2 2.1 inches. The radii in Fig. 1 measure 2 2, therefore carrying on the proportions as for the two humeri (note 1.9 : 2.1 :: 2.2 : 2 44) the radii in Fig. 2 ought to be 2.44, and this is exactly what the compasses give as the length of those radii. The result is that in spite of jerking himself up and correcting to some extent the previous careless position of the scapulæ, the spine in the one figure is curved to the same degree as it is in the other.—I am, etc.,

Wimpole Street, W., Jan. 15th. RICHARD BARWELL.

[1] *Pathologie und Therapie der sittlichen Rückgratsverkrümmungen.*

THE CASE FOR VACCINATION.

SIR,—I have given my reasons against the main recommendation of the Jenner Society in the BRITISH MEDICAL JOURNAL of December 11th and 25th, 1897, and need not, therefore, further refer to them; but in regard to Dr. Bond's request to medical men to discuss with antivaccinators in the public press I would like to warn the unwary not to attempt such a thing. I had the misfortune to be drawn into a discussion on vaccination some years ago, and found myself in a contest with antivaccinators from all parts of the country for quite two years, and have always regretted it. Antivaccinators should be left severely alone, and if Parliament choose to abolish compulsory vaccination so much the worse for the antivaccinators and the better for the profession.—I am, etc.,

East Sheen, Jan. 15th. ALEX. MCCOOK WEIR.

ERYTHROL TETRANITRATE IN ANGINA.

SIR,—In reply to Professor Bradbury's request, I send you a short account of my personal experience with this drug. I began suffering from constant attacks of angina pectoris on walking or exertion in December, 1896, having had during the previous nine months but two attacks.

My heart was examined by Sir R. Douglas Powell in July, 1896, and by Sir W. Broadbent in January, 1897, and they both pronounced me free from organic disease. The angina increased during January, so that even the exertion of dressing and undressing brought it on, and I could not walk 100 yards.

In the beginning of February I was confined to my bed by an attack of laryngeal influenza, and as I was recovering from that acute rheumatism developed, the fever of which continued for three weeks. The wrists and hands, right knee and ankle were the joints most affected. I was confined to bed for a month, and while so resting I had no angina. On getting about again I found that exertion and walking brought it on as before, so I kept very quiet both indoors and out.

I had taken salicylate of soda in an effervescing mixture three times a-day during the attack of acute rheumatism, and continued a morning dose for some time afterwards; in fact I have taken it with short intermissions to this time, as I had a recurrence of acute rheumatism in July and occasional pains in my joints since.

I believe that the paralysing effects of the influenza toxin on the sympathetic has disabled the heart, and has also produced an atonic condition of the stomach, which becomes distended by flatulence, and adds to the cardiac embarrassment, for I have more tendency to angina after meals.

My natural pulse was 64, but for some months it has been but 54, and soft, with no signs of arterial ossification, although 67 years of age might indicate it.

During the early months of the year I took tabloids of trinitrine, which always stopped the pain; but in April, on reading Professor Bradbury's account of the use of erythrol in the BRITISH MEDICAL JOURNAL, I obtained some $\frac{1}{2}$-grain

tabloids, and took for some time two a day. I was soon able to do more, and walk further; but continued very weak, and did not improve in health until July, after being a month in the Isle of Wight. The erythrol always warded off the attacks of angina, and I was able after July to walk for an hour or two, its influence lasting about five hours. At times I took only one in the morning if I did not go out in the afternoon, and omitted that if I did not go out at all; but I cannot now walk or exert myself, increasing the action of my heart, without inducing angina, unless I take the ½-grain tabloid of erythrol. It produces in me a slight giddiness, not the fulness of head one gets with trinitrine.

In two ladies suffering from a similar angina, to whom my son gave erythrol, it produced such severe headache that it had to be stopped. They were both subject to migraine, but they said that the headache was different and more severe than their migraine. They also suffered from rheumatism. In another case of angina that I met with in the summer rheumatism was a feature. He had been taking trinitrine, so I suggested to his doctor a trial of erythrol.

Erythrol is very pungent, stinging the tongue, and when I had taken it twice a day for some time it produced a gastrodynia apparently at the œsophageal orifice of the stomach. The first tabloids I received were hard and insoluble, and I pulverised them in a folded paper by two or three sharp blows—very much, as I now find, at the risk of an explosion. At my suggestion, Messrs. Burroughs, Wellcome and Co. now make them with a more soluble medium; they quickly disintegrate, and can be washed down with a draught of water. Thus diluted they do not sting the tongue nor the stomach.

It seems remarkable that after my experience of the sustained effect of half-grain doses of erythrol that Dr. Garraway's patient should require such large doses; but then, angina arises from various causes, and thus it may act with more or less effect in different cases.—I am, etc.,

Hildenboro', Jan. 4th. J. BRENDON CURGENVEN.

CONSULTATION WITH HOMŒOPATHS.

SIR,—With reference to Mr. Jessop's inquiry as to the prevailing opinion in our profession on the above subject,[1] I I hope that, as he desires, there will be many and outspoken replies. So far as my experience goes, the opinion of the profession is now what it has been so long as I can remember, namely, that we should not meet homœopaths in consultation. I do not advocate this from any discourtesy to those who practise homœopathy, or from any wish to belittle them needlessly. But it has always seemed to me irrational for an allopath, who cannot possibly believe in homœopathy, to go through the ceremony of consulting with a homœopath, knowing well that his treatment would not be carried out, and that his therapeutical advice would be laughed at and ignored, so far as the administration of drugs is concerned.

I can hardly think that any other view than the preceding is possible where medical cases are concerned, and the consultation is one involving the medicines to be administered. I take it for granted that a physician would not be content merely to give a diagnosis and prognosis without entering on the therapeutics of a case. It may be suggested that the insuperable difficulties which exist as to an allopathic physician consulting with a homœopathic practitioner do not apply in surgical practice; that in surgical practice the principles of *similia similibus* and of infinitesimal doses are not always involved, and that the principles and practice of surgery are the same for homœopath and allopath.

This may be so. But it seems to me that it would be most undesirable and dangerous that we should countenance a method of practice which we regard as nothing better than quackery when it is applied to medical cases, and that we should meet its professors in consultation in surgical cases. The public would quickly assume that we approved of homœopathy when it became known that the homœopathic practitioner was met in consultation at all. The public could not possibly distinguish whether consultations were limited to surgical cases or not. I might add that the distinction is not always easy nor possible. Besides, it is not clear why we should not agree to call homœopaths into consultations with us if we were ready to be called in to consult with them.

[1] BRITISH MEDICAL JOURNAL, December 18th, 1897.

It would be interesting to know who is the "eminent practitioner" of this town to whom Mr. Jessop refers as being one who meets homœopaths in consultation. I believe all the leading practitioners in the town belong to the Medico-Ethical Society and are bound by its rules not to meet any irregular practitioners. The rules bearing on the point are as follows, and were distinctly held to include homœopaths when they were framed:

EXTRACT FROM THE RULES OF THE BRADFORD AND DISTRICT MEDICO-ETHICAL SOCIETY.

31. No member shall meet in consultation other than a registered regular practitioner.

32. No member of this Society shall meet in professional consultation any medical practitioner who conducts his practice otherwise than in an honourable and legitimate manner.

33. No member of this Society shall knowingly meet in professional consultation any consultant resident within a radius of 15 miles who shall meet in consultation any such irregular practitioner.

An honourable man could hardly belong to a society which has adopted the above rules, as understood by us, and at the same time meet homœopaths in consultation. If it were supposed that there was any loophole for such a thing, I have not the least doubt the rules would be altered to specially prevent it.—I am, etc.,

THOS. WHITESIDE HIME, B.A., M.D.,
President Bradford and District Medico-Ethical Society.

Bradford, Jan. 16th.

THE SECTION OF STATE MEDICINE AT EDINBURGH MEETING.

SIR,—While sympathising very much with the desire expressed in Dr. J. F. Sutherland's letter, that legal medicine should receive its proper recognition at the Edinburgh meeting, may I draw your correspondent's attention to the fact that the change in title from "Public Medicine" Section as heretofore, to "State Medicine," seems to indicate that this year legal medicine is to be entitled to its full share of attention in the Section, and not merely to be tolerated as a sort of hanger-on to public health? In Guy and Ferrier's *Forensic Medicine* (fifth edition) I find that State medicine is defined as embracing all the duties a medical man may be required to perform on behalf of the State, and as consisting of two parts, the one known as hygiene or public health, the other as forensic medicine, legal medicine, or medical jurisprudence. At Edinburgh, where, according to the same authorities, lectures on forensic medicine were first delivered in any school in the United Kingdom, and under the presidency of the distinguished professor of the subject in Edinburgh University, we are surely warranted in expecting that legal medicine will have its full share of attention in the Section of State Medicine.—I am, etc.,

Dulwich, Jan. 17th. H. NELSON HARDY.

THE RECRUDESCENCE OF INFLUENZA.

SIR,—I observe in the columns of the BRITISH MEDICAL JOURNAL that there is a recrudescence of influenza in the London districts, that this new outbreak shows a steady increase week by week, and is of a virulent type. Now I should like to ask how is this recrudescence to be explained? Is it to be explained by atmospheric conditions and suitability of soil, or by some affinity or close alliance between the organisms of the specific fevers? What evidence, bacteriological and clinical, is there in favour of this latter view? Such a view would explain the tendency of an epidemic of one acute specific disease to be followed by that of another: of a patient recovering from a fever to be seized by another. The older clinicians realised the sequence of the acute specific fevers.

Again, in these cases of influenza I should like to ask what reason is assigned for their origin? Can their prevalence be accounted for by aërial transmission, or is there any evidence to show that all the cases had a common origin, that is, arose by personal or mediate infection?

An expression of opinion from bacteriological investigators and others would be of considerable value in throwing light upon the origin of such outbreaks.—I am, etc.,

Liverpool, Jan. 17th. D. FRANKLIN-WILLIAMS.

ANKYLOSTOMIASIS IN THE WEST INDIES.

SIR,—Please allow me to add the colony of the Leeward Islands to the list of the places in which ankylostomiasis

was recognised and treated with thymol years before Dr. Galgey began his investigations.—I am, etc.,

G. H. Mapleton, M.B.,
Late of St. Kitts, W.I.

Goudhurst, Kent, Jan. 13th.

Obituary.

AUGUSTIN PRICHARD, F.R.C.S., M.D. Berlin,

Formerly Surgeon to the Royal Infirmary, Bristol.

Not only in Bristol where he lived so long, but to the medical profession throughout the kingdom, the news of the death of Augustin Prichard will occasion a feeling of profound regret. Mr. Prichard was a highly respected member of our Association, and a well known figure until the last few years at the annual meetings. The last at which he was present was that held at Bristol in 1894, when, though unable, owing to increasing deafness, to take any large part in the scientific work, he was present at many of the pleasant social gatherings, and welcomed at his own house many of his old friends and former pupils.



Augustin Prichard was born in Bristol on July 16th, 1818. His father was James Cowles Prichard, F.R.S., an eminent physician, but better known by his great work on the *Natural History of Man*. His mother was the daughter of Dr. Estlin, an accomplished scholar, and several of his brothers took high honours at Oxford, and became Fellows of their Colleges.

He received his early education at a private school kept by a Mr. Norton, who must have been a man of considerable ability, and went thence to the old Bristol College, a school which flourished for a short time only, and boasted among its assistant masters the late Francis Newman. In 1834, at the age of 16, Mr. Prichard was apprenticed to his uncle, John Bishop Estlin, the founder of the Dispensary for the Cure of Complaints in the Eyes, a surgeon of no mean repute. He also entered as a student at the Infirmary and Medical School, and was dresser to Mr. Harrison. When the term of apprenticeship expired in 1839, Mr. Prichard went to London, where he acted as dresser to Sir William Lawrence at St. Bartholomew's, and also studied medicine and pathology under Drs. Latham and Burrows, and midwifery under Dr. Rigby. He attended the fever hospital, then under the charge of Dr. Tweedie, and caught scarlet fever, a bad attack which nearly proved fatal. A devoted friend and fellow-student, the late Dr. Goodeve, nursed him through the sickness. Early in 1840 Mr. Prichard became M.R.C.S. and L.S.A., and went to Berlin. He there pursued his studies under Müller, the famous physiologist, Schönlein, and Dieffenbach, who was performing the recently introduced operation for strabismus, and took the degree of M.D., the subject of his thesis being iritis. Subsequently in Vienna he attended the demonstrations of Rokitansky and Jaeger, "the best operator for cataract," as he tells us in his reminiscences, "that I have ever seen." Jaeger might have had as high an opinion of Mr. Prichard had he been at hand to watch him operate in after-years. Mr. Prichard always used a Beer's triangular knife, and never employed a speculum or caught hold of the conjunctiva with a forceps, and he operated without any anæsthetic. In this operation, as in all others which he undertook, he exhibited great dexterity. Mr. Prichard returned home in the autumn of 1841, but visited Paris in the spring of 1842, where he attended the lectures of Cruveilhier, Claude Bernard, and Civiale. He settled in Bristol in October, 1842, commencing practice at the Red Lodge in Park Row, the late residence of his father, who about this time had become one of the Commissioners in Lunacy.

Mr Prichard took up photography, and was one of the earliest pioneers of the art. He joined his uncle as surgeon to the Eye Dispensary and made ophthalmic surgery his special study, and gained a very wide reputation as an operator. In 1845 he married Mary Sibellah, a daughter of the Rev. Thomas Ley, Vicar of Rame in Devonshire, by whom he has four sons and three daughters. Mrs. Prichard died five years ago in her seventy-fourth year.

In 1849 Mr. Prichard became a Fellow of the Royal College of Surgeons by examination. In 1850, after a sharp contest, he was elected Surgeon to the Royal Infirmary, Bristol. He had been since 1843 Lecturer on Anatomy at the Medical School. At this time, too, he made many preparations of fœtal structures, and in 1857 read a clear and well written paper before the Bath and Bristol Branch on the Anatomy, Physiology, and Diseases of the Membrana Pupillaris. He described the membrane as a "substratum on which the iris may be developed," and the persistence of a small portion of it in the centre as the cause of anterior central capsular cataract.

He continued his lectures in anatomy until 1854, and from 1849 to 1864 was also Lecturer on the Principles and Practice of Surgery—at first in conjunction with Mr. Henry Clark, and afterwards alone. At the Infirmary his talent for lecturing, his skill in operating, and his practical and well directed clinical instruction attracted large numbers of pupils, very many of whom became his attached friends. Among them were the late Berkeley Hill, Edwin Coathupe (late Chief Constable of Bristol) Edmund Comer Board, now Consulting Surgeon to the Infirmary), Alexander Waugh, of Radstock, Dr. Lionel Weatherly, Mr. Essex, of Pontypool, and many others.

In addition to his work at the Infirmary and Medical School he was acquiring a large private practice in Clifton and Bristol. In 1853 he left the Red Lodge, which was sold, and became a reformatory school for girls, and moved to Chesterfield Place, Clifton, where he resided for the remainder of his life. With all this increasing labour he found time to publish a small work *Ten Years' Operative Surgery*, of which the first part appeared in 1862 and the second in 1863. The two little volumes give a clear and terse account of a large number of operations performed between 1850 and 1860, at the Infirmary and in private. The following, from a review of this book which appeared in the *Edinburgh Medical Journal*, gives a good description of Mr. Prichard's general style of writing: "We might very naturally have expected that a record of 639 cases, contained in 174 pages, would have proved dry and uninteresting, but our author has condensed when it was possible, and expanded when necessary, with so much skill, and has infused through the whole so much personal interest, in reference both to the case and to the surgeon, that it is really an interesting record of difficulties surmounted and benefits conferred on a scale of no ordinary magnitude." In this connection we may quote from a letter just received from an old friend of Mr. Prichard's. He says, "The same remembrances of special cases remains through

life, narrated in the simplest and most condensed language, and keeping out of sight circumstances not specially bearing on the point at issue. All this was done with a simplicity and modesty of bearing that was his character."

On two occasions—in 1853 and 1863—Mr. Prichard was selected to deliver the Address in Surgery at the annual meeting of the British Medical Association. The first of these addresses he never published. It dealt with the subject, among others, of extirpation of a blind and diseased eye in order to save the sight of the sound one—an operation with which his name should be ever associated, and to the establishment of which as a recognised practice he has a high claim. His second address, in 1863, at the meeting at Bristol in that year, was upon the Treatment of Carbuncle by the formation of a slough with potassa fusa, and subsequent pressure. At the jubilee meeting at Worcester he occupied the Presidential Chair of the Surgical Section.

In 1870 he ceased to be Surgeon to the Infirmary owing to the operation of a rule that no surgeon should serve more than twenty years. Mr. Prichard was at the time full of vigour and self-reliance. His release from public duties gave him more time to devote to his private practice, which, owing to the high reputation he had gained as an ophthalmic and general surgeon, was now large, his advice being sought by the practitioners in neighbouring districts, in many cases presenting serious difficulties or requiring major operation.

On quitting the Infirmary he read a paper before the Branch, giving a Summary of Surgical Operations performed by himself and his colleagues, in which he took up the cudgels in defence of large hospitals. This was shortly before the dawn of antiseptic surgery, which has effectually gained the victory for the hospitals.

Two other brief contributions to the literature of surgery must be referred to: one on Lithotomy by Allarton's Median Operation, and the other on Intraocular Myotomy. Cutting for stone is a much less frequent operation than it was formerly, but in this Mr. Prichard was eminently successful, and he is believed to have been the original contriver of the wrist and ankle straps for keeping the patient in the "lithotomy position." To the subject of intraocular myotomy he returns in a paper, the last of his surgical contributions, published in the *Annals of Ophthalmology* in April, 1897. His first paper on the subject in 1871 gives a lucid account of the operation, of the diseases in which it is appropriate, notably glaucoma, and of the physiological reason why it should be used. His last paper was a plea for the adoption of an operation which he thought had possibly not been given a fair trial.

In addition to his professional pursuits, Mr. Prichard was an excellent draughtsman, and passionately fond of sketching. He has left a large collection of water-colour drawings of bits of the old city, subjects in which he took a great interest. He published a little volume of reminiscences, of which a notice appeared in the BRITISH MEDICAL JOURNAL. In person he was a tall and handsome man, with a firm expression; a man who inspired confidence in those who sought his advice. He was a man of great natural gifts, which he improved by an untiring industry in exercising them, zealous in all that he undertook, but particularly so in the congenial pursuit which he chose to make the chief work of his life. No man ever followed out the precept "Whatsoever thy hand findeth to do do it with thy might" with greater faithfulness than Augustin Prichard.

Just two weeks before Christmas Mr. Prichard was taken with symptoms of intestinal obstruction, and so distressing did his condition become in twenty-four hours that an operation was decided on. Mr. W. H Harsant was the operator. An incision was made in the middle line below the umbilicus, and no obvious cause being discoverable by the fingers, an inflamed-looking portion of bowel which might have been the seat of the obstruction was sutured to the edges of the parietal wound. This was opened by a small incision on the following day, and though attended with temporary relief, and by evacuation of the intestines *per anum*, yet it ultimately failed to effect a cure. An attempt was made two days before death to unite the wound, but this was followed by a recurrence of the original symptoms, and Mr. Prichard sank, dying peaceably at midnight on January 5th.

ROBERT HIBBERT TAYLOR, M.D., L.R.C.S.EDIN., Liverpool.

WE regret to record the death of this veteran member of our profession, which took place at his residence in Percy Street, Liverpool, on January 5th, in the 86th year of his age. He was born in Dumfries in June, 1818, and became a student in the Edinburgh School of Medicine. He graduated M.D. of the University of Edinburgh in 1834, and subsequently studied at Guy's Hospital and in Paris and Berlin, at a time when few Englishmen found their way to the great German school.

In 1839, although only in his 22nd year, he settled in Liverpool, and commenced to practise as an ophthalmic surgeon. Shortly afterwards he started a small eye dispensary in Marylebone, which was subsequently removed to Great George Street, where it was opened on a considerably larger scale. This was at that time still a residential street, and was practically the southern limit of the town. He soon acquired a considerable reputation in his speciality, and was in 1853 invited by the authorities of the Eye and Ear Infirmary to become one of the Honorary Surgeons to that institution. He retained this position for the period of sixteen years, when he retired in accordance with the laws of the institution, and was appointed Consulting Surgeon.

At this distance of time, when the chief actors have passed away, it can cause no distress to recall the fact that the year after he was appointed to the Infirmary Dr. Taylor's enthusiasm and devotion to the duties of his profession were so far misunderstood as to lead to a cruel and groundless charge being preferred against him by certain of the authorities of the Infirmary, who compelled him to tender his resignation. His professional brethren in the town, with the loyalty which they always show when great issues are at stake, warmly espoused his cause, with the result that the authorities of the Infirmary were compelled to hold an investigation, which resulted in the complete vindication of Dr. Taylor, and led to the subscribers requesting him to withdraw his resignation. The whole transaction, which was fully recorded in the BRITISH MEDICAL JOURNAL at the time, is almost forgotten by the present generation of medical men, and we should not have recalled it now but for the fact that it illustrates the difficulties Dr. Taylor, in common with many other pioneers, have had to encounter from prejudice and ignorance; and also the spirit of loyalty and justice which the members of our profession have always shown on behalf of a brother practitioner who is unjustly assailed.

Dr. Taylor was the first Lecturer on Ophthalmic Surgery in the Liverpool School of Medicine, and occupied the position for several years. He took a great interest in the Workshop for the Blind in Cornwallis Street, and was an early promoter of the Medical Mission, and until recently its Secretary. He was Surgeon to the School for the Deaf and Dumb, and was actively associated with other philanthropic undertakings in the city. He was the author of various contributions to medical literature, and wrote the chapters on Diseases of the Eye in Tweedie's *System of Medicine*. About twelve years ago he retired from active practice, though he did not cease to manifest a kindly interest in the charitable organisations with which he had been associated, and he continued to give his professional services gratuitously to some poor people almost up to the last. He leaves a widow, five sons, and four daughters.

JOHN RAMSAY HILL, M.B. C.M.EDIN., British Guiana Medical Service.

WE regret to announce the death of Dr. John Ramsay Hill at Barbados, on December 6th, 1897, at the early age of 33. After graduating in 1885, he proceeded to Vienna, and worked at the organs of special sense until 1886, when he joined the British Guiana Medical Service. He contracted phthisis while on leave in England in 1893, and the disease, though early seeming to yield to treatment, steadily progressed by successive acute attacks to a fatal termination, notwithstanding the careful, prolonged, and systematic treatment by creasote and guaiacol to which he characteristically submitted himself.

Dr. Hill was an enthusiast at his profession, and from his earliest connection with the service he was an active member

of the British Guiana Branch of the British Medical Association, and a contributor to the pages of the *British Guiana Medical Annual*. As a physician his skill, care, and courtesy endeared him to many in the different districts of the colony in which he acted, and his treatment of the diseases of the organs of special sense gained him a wide reputation throughout the colony. In his latter years, though weighed down by weakness and the knowledge of the progress of his malady, he bravely bore up, and continued to practise his profession with zeal, and to collect materials for the investigation and elucidation of our local diseases.

In private life he was as much beloved as he was in public esteemed, as the large attendance at his funeral in Georgetown testified. He leaves a widow and son, as well as a large circle of friends and relatives to lament his loss.

Mr. William Keays, of Cappamore, County Limerick, died on January 4th at the age of 54 years. He had been suffering for a long time from a tumour in the neck, the nature of which was obscure. Latterly, owing to increasing discomfort, he was compelled to give up work and seek surgical advice. For this purpose he proceeded to Leeds early in November, and there underwent two operations. Although nothing was left undone which care and attention could accomplish the result was unsuccessful, and he quickly sank from exhaustion. Mr. Keays received his medical education in Dublin, where he was a pupil of the late Mr Morgan. After qualifying he was appointed to the medical charge of the Munroe Dispensary District, where he won the goodwill and esteem of everyone with whom he came in contact. The deceased qualified as L.R.C.P. and L.R.C.S.Irel. in 1868.

The death of Mr. Frederick Dowker, M.R.C.S., L.S.A., and L.M., of Helmsley, in the 63rd year of his age, removes from Yorkshire a medical practitioner of the old school, who was held in great respect by all with whom he came in contact. He was educated at Christ's Hospital, and afterwards at St. Bartholomew's Hospital. After gaining his diploma he lived for a short time at Crewe, and afterwards acted as assistant to a medical practitioner at Helmsley, where he continued to practise until failing health compelled him to relinquish active duties. Mr. Dowker, until recently, was Medical Officer for the Oswaldkirk District of the Helmsley Union, and also Medical Officer of Health of the Helmsley Sanitary Authority. He is survived by a widow and three children.

The death of Mr. Henry Weech Randolph occurred at his residence, Milverton, Somerset, on January 5th. Mr. Randolph was born in 1807, qualified as L.S.A. in 1829, and M.R.C.S.Eng. in 1830. He commenced professional studies at the Wiveliscombe Dispensary, where he was apprenticed to Mr. Sully, a surgeon, who at that time had a large practice in the West of England. He afterwards entered at St. Bartholomew's Hospital, where he was a pupil of Abernethy. Starting practice in Milverton in 1831, he continued engaged in his professional work until within a few years of his death. He held for many years the post of Surgeon to the Wiveliscombe Dispensary, and was twice President of the West Somerset Branch of the British Medical Association.

We regret to have to record the death of Dr. Owen Daly, which took place at his residence in Hull on December 28th, 1897. The deceased was the second son of Mr. Owen Daly, J.P., of Mornington Hall, County Westmeath, Ireland, where he was born on March 6th, 1821. In 1839 he went to the Dublin University, where he took the degrees of B.A. and M.D. in 1843 and 1857. He was also a Fellow of the Royal College of Physicians of London, and a Fellow of the Royal College of Surgeons in Ireland. On June 26th, 1857, he was elected Physician to the Hull Royal Infirmary, which post he resigned in 1886, when he was appointed Consulting Physician to the institution. Among the appointments held by Dr. Daly were those of Physician to the Hull and Sculcoates Dispensary and Consulting Physician to the Grimsby District Hospital. He was formerly lecturer on the Principles of Materia Medica and Therapeutics at the Hull and East Riding School of Medicine. On April 5th, 1870, he was appointed a Justice of the Peace for the East Riding of Yorkshire. Dr. Daly married, in June, 1847, the daughter of Mr. Thomas Oldham, of Salt-Fleetby, Louth, Lincoln, by whom he had two daughters and two sons, one of whom is Dr. E. O. Daly, one of the physicians to the Hull Royal Infirmary.

Mr. J. Dale, of Stockton, died at his residence on January 12th after a protracted illness. The deceased gentleman, who was a native of Yarm, qualified as M.R.C.S. and L.S.A. in 1851. He had been in practice at Stockton for about forty years. He was senior borough magistrate, and was medical officer under the Factory Acts for the Stockton district. He leaves a widow, two sons, and four daughters. Dr. Dale was 67 years of age.

The death is recorded of Dr. Thomas Torney, who for more than fifty years practised his profession in the city of Dublin. He was 78 years of age, and qualified as L.R.C.S.Edin. in 1850; he took the degree of M.D. of the University of St. Andrews in 1851, and became M.R.C.P.I. in 1891. He was also a Fellow of the Royal Academy of Medicine of Ireland. The funeral, which took place on December 27th, 1897, was attended by a large number of members of the profession.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are: Dr. Filippo Lussana, Emeritus Professor of Physiology in the Universities of Parma and Padua; Dr. G. Alexianu, Professor of Medical Pathology at Bucharest; Count Motta Maia, Professor of Anatomy and Operative Surgery in the Medical Faculty of Rio de Janeiro; Dr. C. H. Jones, founder and first President of the Baltimore Medical Association, aged 70; Dr. J. W. Hamilton, Professor of Surgery in the Columbus Medical College, Ohio, aged 72; and Dr. Francesco Bini, for many years Professor of Psychological Medicine at Florence, aged 84.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medica Department is 8s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A Surgeon-Captain of six years' service in the Indian Medical Service is willing to exchange with an officer of the same length of service in the Army Medical Staff. Apply, stating terms offered, to "Easedale," care of Messrs. Grindlay and Co., 55, Parliament Street, London, W.

A Surgeon-Major high up on the Roster wishes for an exchange with an officer recently returned home. Apply, S. H. C., care of Messrs. Holt and Co., 17, Whitehall Place, London, S.W.

THE NAVY.

The following appointments have been made at the Admiralty: Evan St. M. Nepean, Staff-Surgeon, to the *Racoon*, February 1st; Edward B. Townsend, Staff-Surgeon, to the *Black Prince*, February 1st; Alfred H. Jeremy, M.B., Surgeon, to the *Victory*, additional, January 20th.

ARMY MEDICAL STAFF.

Brigade-Surgeon James Greig Leask, M.B., died at 44, Clarges Street, Piccadilly, on January 16th, in his 66th year. He was appointed Assistant-Surgeon, August 28th, 1855; Surgeon, February 15th, 1871; and Surgeon-Major, March 1st, 1873. He was granted retired pay, with the honorary rank of Brigade-Surgeon, August 9th, 1881. He was in the Zulu war in 1879.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel H. D. Masani, Bombay Establishment, is permitted to retire from the service, from January 16th. He was appointed Assistant Surgeon, March 31st, 1877, attaining the rank of Surgeon-Lieutenant-Colonel twenty years therefrom. He served in the Afghan war in 1879 as Sanitary Officer in the Bolan Pass (medal), and in the operations of the Zhob Field Force in 1890.

MILITIA MEDICAL STAFF CORPS.

Mr. Arthur Ernest Madge is appointed Surgeon-Lieutenant, January 19th.

THE VOLUNTEERS.

Mr. Mordaunt George Dundas is appointed Surgeon-Lieutenant, in the 1st Norfolk Artillery (Eastern Division Royal Artillery), January 19th.

Lieutenant John C. Wright, M.B., 2nd West Riding of Yorkshire Artillery (Western Division Royal Artillery), resigns his commission, and

is appointed Surgeon-Lieutenant, January 19th. Surgeon-Lieutenant-Colonel H. MEADE, of the same regiment, also resigns his commission, retaining his rank and uniform, January 19th.

Mr. JOHN M. M. THOMAS, late Surgeon-Captain, is appointed Lieutenant in the 2nd Gloucestershire (the Bristol) Engineers, January 19th.

Mr. ROBERT S. RODGER, M.B., is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Manchester Regiment, January 10th.

Surgeon-Captain J. STEPHEN, M.D., 3rd (the Buchan) Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Major, and Surgeon-Lieutenant J. MIDDLETON, M.B., of the same regiment, is promoted to be Surgeon-Captain, both dated January 19th.

THE FRONTIER RISING IN INDIA.

DESPATCHES are published from Major-General A. G. Yeatman-Biggs, C.B., Commanding the Kurram-Kohat force, describing the operations which took place on the Samana Range and in the Kurran Valley in August and September last. These operations, it will be remembered, included the defence of Fort Gulistan by the 36th Sikhs, and of the post of Saragarhi by a party of twenty men of the same regiment against overwhelming numbers of the enemy. General Yeatman-Biggs specially mentions Brigade Surgeon-Lieutenant Colonel W. R. Murphy, D.S.O., and Surgeon-Captain C. D. Prall, "whose care of the wounded men was unremitting, and who was often under heavy fire." "Miss Theresa McGrath (he adds), who had been previously attached to the hospital by my order, rendered most valuable assistance to the medical officer. Her conduct is spoken of most enthusiastically by all ranks."

THE 24TH BRITISH FIELD HOSPITAL TIRAH EXPEDITIONARY FORCE.

THE special correspondent of the *Pioneer* with the 2nd Division Tirah Expeditionary Force, writing from Barkai on December 23rd, 1897, alludes to the 24th British Field Hospital under Surgeon-Lieutenant-Colonel Bourke which, he says, is a model field hospital from every point of view. The medical officer in charge has taken every pains to make his unit efficient, and not only did the wounded under all circumstances receive every attention and constant food and care, but the disciplinary and transport arrangements were equally excellent, owing to the fact that Surgeon-Lieutenant-Colonel Bourke personally superintends everything, even if it involves his being up and about long before daylight. Surgeon-Major Beevor, attached to this hospital, is a Guards' medical officer who has come out to India for a year in order to experiment with the *x* or Roentgen rays. The apparatus is his own property, for the Indian Government have not as yet provided it for troops on service, and the benefits Surgeon-Major Beevor has conferred on his brother medical officers and on wounded men have been enormous, for not only have bullets been discovered and extracted in a few moments, thus avoiding all unnecessary probing, but the negative results have been equally successful in showing that no bullets or fragments are in the body. All day nearly on the 12th Surgeon-Major Beevor and Surgeon-Captain Marder were dressing cases for no sooner had one case been dealt with than another was brought in

THE DHOOLIE IN HILL WARFARE IN INDIA.

THE special correspondent of the *Times*, writing on December 15th from the headquarters' camp (Swaikot) of the Tirah expeditionary force says: "The rear guards were terribly delayed and embarrassed by the transport and particularly by the hospitals. The wretched Kahars, hardly able to carry the dhoolies when empty, seemed quite unable to bear them when loaded with the weight of a wounded man. Yet they had to be brought along, and the troops had often to fight desperately to hold the savage pursuers at bay while the dhoolie bearers got safely away with their precious burdens."

"THE OLIVER" ACCOUTREMENTS.

THE Canadian Government has finally adopted for the local military force the above accoutrements, the invention of Deputy-Surgeon-General W. S. Oliver, who holds a retired pay appointment at Halifax, Nova Scotia. The Oliver accoutrements have competed locally with no less than four sets of other equipment, namely, the Slade Wallace, the Burrett, the Miriam, and latest of all the Lewis. Deputy-Surgeon General Oliver has achieved success after long waiting and many disappointments which would have disheartened a man of less spirit. An officer of the Canadian Militia, writing to the *Canadian Military Gazette*, says that "Lord Wolseley had pronounced 'the Oliver' the best equipment in the market." This is notable testimony to its worth.

MIXED BOARDS.

THE following, we are informed from a trustworthy source, lately occurred in Burmah. A committee, on a distinctly sanitary and medical question, was detailed, in which the Principal Medical Officer was requested "to attend." On its being pointed out that this detail was not in accordance with Army Order 56 of 1897, it was cancelled, and the P.M.O., in an amended order, was made President. But, before much was done, this in time was cancelled, with a reconstituted Committee in which once more the P.M.O. was requested "to attend." This ridiculous and paltry see-sawing was done not only in defiance and contempt of the Queen's Regulations, but in direct contravention of Letter 4,843 D Medical Department Regulations, dated October 15th, 1897, which directed that paragraphs 1,360 and 1,362 Army Regulations, India, volume vi, were to be expunged and the Queen's Regulations left as the sole authority on all matters connected with the constitution of boards, etc. This letter was issued with the sanction of the Government of India. Nevertheless, as appears, there are officers in high command who not merely ignore, but directly contravene such orders.

It is high time such disobedience of orders on the part of those who would sternly resent non-compliance with their own orders should be officially dealt with. The question must be put in Parliament: Why, in the face of Army Order 56 of 1897, does the other Army Order directing the attendance of medical officers before Boards remain uncancelled?

INTENDING CANDIDATES FOR THE MEDICAL STAFF.

A CORRESPONDENT writes: Those who contemplate entering the medical department of the army must not be deluded into supposing that, if tired of the service before being entitled to a pension, they can retire with a gratuity, and be quit of it. Not at all; the War Office retains a lien over their lives up to 55, during which they can be recalled to service. He retired on a gratuity of £1,800 after fifteen years' service, but his name is still in the *Army List* as liable to recall. This effectually handicaps his success in civil life; he is not a free agent, and all for £1,800! Be wary, and not sell your liberty at such a price.

ARMY COMMISSIONS: COMBATANT AND MEDICAL.

A CORRESPONDENT, who has a faculty for unearthing things curious and not generally known, sends us copy forms of original commissions in Her Majesty's army, which we give in parallel columns:

COMBATANT COMMISSION.

Victoria by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, etc.,—To our trusty and well beloved ———, Greeting: We, reposing especial Trust and Confidence in your Loyalty, COURAGE, and good conduct do, by these Presents, Constitute and Appoint you to be an Officer in Our Land Forces, from the ———. You are therefore carefully and diligently to discharge your duty as such in the Rank of Lieutenant or in such higher rank as We may from time to time hereafter be pleased to promote or appoint you, and of which a notification will be made in the *London Gazette*, and you are at all times to exercise and well discipline in Arms both the inferior officers and men serving under you, and use your best endeavours to keep them in good Order and Discipline. And We do hereby command them to obey you as their Superior Officer, and you to observe and follow such Orders and Directions as from time to time you shall receive from Us or any of your superior Officers according to the Rules and Discipline of War in pursuance of the trust hereby reposed in you. Given at Our Court, etc.

MEDICAL COMMISSION.

Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, Empress of India, etc.,—To our Trusty and well beloved ——— Greeting: We, reposing especial Trust and Confidence in your Loyalty, ABILITY, and good Conduct, do by these Presents Constitute and Appoint you to be an Officer in the Medical Staff of Our Army from the ———. You are therefore carefully and diligently to discharge your Duty as such in the Rank of Surgeon-Lieutenant in our Land Forces or in such higher Rank as We may from time to time hereafter be pleased to appoint you to, of which a notification will be made in the *London Gazette*, by doing and performing all and all manner of things thereto belonging as required by the established Regulations of Our Service, exercising authority according to the Rules and Discipline of War over junior Officers of Our Medical Staff and Subordinates employed in Our Army Medical Department, and over the Soldiers of the Medical Staff Corps, and over all Officers and Soldiers attached thereto, and over all Patients in Military Hospitals, and observing and following yourself under the same Rule and Discipline such orders and directions from time to time as you shall receive from Us or any your Superior Officer in pursuance of the Trust we hereby repose in you. Given at Our Court, etc.

In comparing the above we would first observe that the "Combatant" is evidently an older copy than the "Medical," from the words "Empress of India" being omitted. But we presume even the latest would show no difference in the stereotyped phraseology employed. As our correspondent points out, the first curious difference in the two documents is the substitution of the word "ability" in the Medical for "courage" in the Combatant. Can it be, as he facetiously suggests, that the antiquated draftsman considered that any blockhead, provided he had courage, was fit for a combatant; and any poltroon, provided he had ability, suitable for a medical officer? But the old idea clearly was that the very quality, nerve, or courage which is superlatively necessary in medical men, whether civil or military, was not needed in the army surgeon. In these days, when such a high proportion of medical officers have earned the Victoria Cross by splendid acts of devotion and bravery, it is surely invidious to omit the word "courage" from their commissions. It should be inserted. And well might the word "ability" be added to that of the combatant, seeing the high intellectual qualifications he is now supposed to possess.

We notice another peculiarity in contrasting these commissions: while both officers are enjoined and empowered to exercise authority and discipline in specific directions, inferiors are ordered by "command" to "obey" combatants, but there is no injunction that they shall obey medical officers. We consider this an important omission, which should be rectified. Further, it is very clearly laid down that both classes of officers are to obey such orders and directions as they shall from time to time receive from the fountain of authority. Such being the case, we ask, How do general officers and others who take upon themselves to ignore the Queen's regulations when medical officers are concerned, as in the matter of mixed boards, etc., reconcile their disobedience with the plain wording of the commissions under which they act? We think it is time the phraseology of commissions was revised, and anything invidious in qualifying nouns or adjectives disused.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

A GENERAL meeting of Convocation was held on January 17th in Burlington Gardens, Mr. E. H. BUSK, Chairman of Convocation, presiding.

THE COMMISSION BILL.

Dr. J. B. BENSON presented the report of the Special Committee appointed on May 12th, 1896, and moved its reception (see BRITISH MEDICAL JOURNAL, January 8th, p 123), which was carried by a large majority. Dr. Benson moved the following resolution recommended by the Special Committee:

"That this House accepts the scheme embodied in the London University Commission Bill, 1897."

Dr. BLAKE ODGERS, Q.C., seconded the motion. The subject had been discussed for about twelve years, and opinion had been ascertained. The cause of one university as against two had prevailed, and the Bill, which was the result of months of negotiation, embodied what might be made a working system which carried the consent of the bulk of persons who were best acquainted with the history of the question and the needs which had to be satisfied.

Mr. LITTLER, Q.C., moved the following amendment:

"In view of the fact that Convocation consists of about 4,000 members, most of whom are precluded by the nature of their avocations or by the distance of their abode from attending a meeting in London, this House postpones the expression of opinion on any scheme of legislation for the reconstitution of this University until such scheme shall have been submitted to members of Convocation for individual consideration, their approval or otherwise to be signified in the same manner as at a Senatorial election."

Mr. MOULTON, Q.C., seconded the amendment.

Mr. HANBURY failed to see why there should be two sets of examinations, one for members of the teaching body and another for external students.

The CHAIRMAN said that no official expression of opinion could be given except by members actually present at Convocation.

Mr. LITTLER said he was quite aware of that, and his amendment was framed to include an unofficial ascertainment of the views of members of Convocation.

Mr. T. B. NAPIER said a fair and resonable compromise had been effected, and the interests for which he had been anxious were better protected than in the original Cowper scheme. He was unable to accept Mr. Littler's amendment; as a working agreement had been arrived at and public opinion had been distinctly expressed against two Universities, the wisest course was to at once accept the scheme, as delay was injurious to the University and to the cause of education.

Dr. SILVANUS THOMPSON opposed the amendment, and though he thought the Bill was by no means perfect, he was prepared to support it as a satisfactory settlement of conflicting opinions and interests.

Dr. HEBER HART supported the amendment.

Sir JOSHUA FITCH pointed out that the amendment necessitated indefinite postponement of a settlement. At Oxford and Cambridge members of Convocation had to go to the University to give their votes, and if people felt strongly on a subject they would make a journey to enforce their convictions.

Mr. JOSEPH said at a Senatorial election voting papers were used, and no such indefinite delay arose as Sir J. Fitch feared, and this was a far more important question than any Senatorial election.

A division was then taken, and there voted for the amendment 42, against 76.

The resolution was then carried.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

THE Morison Prizes, consisting of £3, a certificate, and a silver medal, bequeathed to the College by Sir Alexander Morison, a former President of the College, have, on the recommendation of the present Morison Lecturer, Dr. Alexander Morison, been awarded to George Grant, Montrose Asylum, and to Mary Petrie, Elgin District Asylum.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentleman, having previously passed the necessary examinations, and having now attained the legal age of twenty-five years, has been admitted a Fellow of the College:

F. J. Steward, M.B., B.S.Lond., L.R.C.P.Lond., Guy's Hospital.

The following gentleman, having previously passed the necessary examinations, and having now conformed to the by-laws and regulations, has been admitted a Member of the College:

A. Kinsey-Morgan, exams. for L.R.C.P.Lond., Guy's Hospital.

CONJOINT BOARD IN ENGLAND.

SECOND EXAMINATION.—The following candidates have satisfied the Examiners in the subjects indicated:

Anatomy and Physiology.—W. Lister, H. L. Atkinson, and H. C. Alderman, Yorkshire College, Leeds; J. C. Wadmore and J. C. Norton, University College, Bristol; R. A. L. Graham and W. J. Hogg, Queen's College, Belfast; J. L. Prichard, E. G. Narramore, and R. H. Crompton, University College, Liverpool; C. C. W. Mays, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology; A. W. S. de Vine, Mason College, Birmingham; A. H. Style, Cambridge University and St. George's Hospital; E. H. Hunt, Oxford University; L. H. Guest, Owens College, Manchester; P. Savill, University College, London; H. S. Harris and W. C. Mence, St. Thomas's Hospital; P. S. Blaker, Medical College, Calcutta; J. H. McAllum, of Cambridge University and the London Hospital; R. A. Jones, Charing Cross Hospital, and Mr. Cooke's School of Anatomy and Physiology; S. J. O. Esser and A. S. David, London Hospital; T. H. J. E. Hughes, G. J. S. Atkinson, A. de Morgan, W. S. Page, and W. G. Speers, St. Mary's Hospital; E. Shelton-Jones and B. Rodil, Guy's Hospital; J. B. C. Francis, Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; S. C. Jellicoe and S. M. W. Meadows, Middlesex Hospital; R. M. McQueen, St. George's Hospital; M. B. Hay, F. K. Etlinger, J. S. New, University College, London; G. E. Cathcart, St. Bartholomew's Hospital; R. S. Cocke, King's College, London; A. H. Tovey, St. George's Hospital; E. C. Hepper and J. F. Robertson, St. Bartholomew's Hospital; W. P. Ker, B. S. Maudy, and J. L. Whatley, Guy's Hospital; M. W. Haydon, St. Thomas's Hospital; C. A. Marsh and B. M. S. Sodi, London Hospital; K. H. Bennett, University College, London; H. C. Baker, E. F. Sall, and W. R. Harrison, St. Mary's Hospital; and T. Domela-Nieuwenhuis, Lausanne and Zurich Universities; A. C. Newport, Charing Cross Hospital; P. F. Alderson, Middlesex Hospital; E. D. Smith, F. E. Tayler, and E. B. D. Adams, St. Bartholomew's Hospital; D. C. O. C. Finigan, Berlin and Kiel Universities and St. Bartholomew's Hospital; M. D. Wood, T. T. Kelly, T. R. Beale-Browne, R. D. Attwood, E. J. F. Hardenberge and R. Tilbury, Guy's Hospital; V. R. F. Kroenig and C. E. Builteel, King's College, London; A. S. Downton, W. H. Davidson, and A. H. Williams, London Hospital; C. A. Wiggins, St. Mary's Hospital; and A. de V. Blathway, University College, London.

Anatomy.—A. A. Vernon, Long Island College Hospital, New York, and J. P. E. Henery, St. George's Hospital and Mr. Cooke's School of Anatomy and Physiology; F. A. Simpson, Cambridge University and St. Mary's Hospital, and C. T. Magee, Melbourne University and the London Hospital.

Physiology.—Mr. C. T. Fox, University College, London.

Sixty-nine gentlemen were referred in both subjects, 2 in Anatomy and 4 in Physiology.

MEDICO-LEGAL.

THE PROCURING OF MISCARRIAGE.

JAMES CHARLES ADY, aged 42, described as a surgeon, was indicted for using an instrument with intent to procure miscarriage, and for using means unknown with the same intent was tried at the Central Criminal Court before Mr. Justice Channell on January 18th, and was found guilty. Leon Tomasso, who was found guilty of administering a drug with intent to procure miscarriage, was brought up for judgment. Mr. Justice Channell, according to the report in the *Times*, said that there was abundant evidence to show that the prisoners had been habitually doing this as a matter of business, and they had carried it on, each of them as far as he knew, with the greatest skill. He thought they were very dangerous persons on the ground of the extreme skill with which the operations were performed. He sentenced Tomasso to seven years' penal servitude, and Ady to seven years' penal servitude. The prisoner Ady was struck off the *Medical Register* on June 4th, 1896.

CORONERS AND MEDICAL CERTIFICATES.

DR. A. writes that he has attended for many years Miss B., a lady, aged 75 years, who has been for some time a chronic invalid with "fatty heart," cardiac asthma, and other complications. He usually saw his patient three times weekly. On the Saturday morning, before the usual visit was paid, his attendance was requested at an early hour, and on his arrival the patient was found to be dead. He was informed that the deceased had vomited, and shortly after had suddenly jumped out of bed; that she soon after swooned, and almost immediately expired. Our correspondent having seen his patient on the previous Wednesday, and taking into consideration the circumstances attending the death, and knowing the diseases from which she was suffering, did not hesitate to give a certificate of the cause of death as arising from syncope. It appears that the coroner for the district regards this as discourteous to his office, and asserts that it was "Dr. A.'s" duty to have communicated with him before doing so.

*** Under all the circumstances of the case as related by our correspondent, no exception can be taken to the certificate of death being given by him in the usual way. It is true that on the arrival of "Dr. A." on the Saturday morning in question, he found the deceased dead in her bed, but finding that the conditions under which she died were quite consistent with the diseases for which he had so recently attended her, he was legally justified in certifying to the best of his knowledge and belief the cause of death. We presume no inquest was held in this case, but that the coroner having received notice of the sudden death made the usual preliminary inquiries; and it is, perhaps, the wiser course, if the medical practitioner knows that such inquiries are pending, to withhold any certificate he may feel disposed to give until the decision of the coroner is known, for if an inquest is held a *post-mortem* examination might possibly reveal some other cause than that mentioned in the certificate already given. In the present case no discourtesy could possibly be attributable to "Dr. A.," and it is probable that the certificate given materially assisted the coroner in his decision. Again, it is possible that in the inquiries made by the coroner certain facts in connection with the death may be revealed which might have been unknown to, or concealed from, the medical practitioner.

UNQUALIFIED ASSISTANTS AND COVERING.

AN INQUIRING M.D. submits the following point: He and his partner employ a medical student as dispenser. In cases of emergency the latter attends to a confinement, but never uses instruments and never continues attending the case afterwards, one of the partners always going on with the case himself. Our correspondent inquires if such conduct would be considered infamous conduct in a professional respect, and

adds that this is a question which must affect hundreds of practitioners similarly situated.

*** We can only say that the circumstances of any case brought before the General Medical Council would be considered on its merits. We may refer our correspondent to the terms of the notice from the General Medical Council on p. 228.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE FOURTH QUARTER OF 1897.

[SPECIALLY PREPARED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the fourth or autumn quarter of last year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided.

The 32,841 births registered in London during the three months ending December last were equal to an annual rate of 29.5 per 1,000 of the population, estimated at 4,463,169 persons; this rate was slightly below the mean rate in the corresponding quarters of the five preceding years 1892-96. The birth-rates during the period under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In Kensington, St. George Hanover Square, Westminster, Hampstead, St. Martin in the Fields, and London City the birth-rates were considerably below the average; while they showed the largest excess in St. Luke, Shoreditch, Bethnal Green, St. George-in-the East, Mile End Old Town, St. Olave Southwark, and Bermondsey.

The 21,142 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 19.0 per 1,000, against 16.2, 17.7, and 17.7 in the corresponding periods of the three preceding years, 1894-95-96; in the third quarters of the ten years 1887-96 the death-rate in the metropolis averaged 19.3 per 1,000. The lowest death-rates in the various sanitary areas were 11.0 in St. Martin-in-the-Fields, 11.8 in Lee, 12.0 in Lewisham (excluding Penge), 13.0 in Wandsworth, 13.2 in Hampstead, 14.2 in St. George Hanover Square and in Plumstead, and 14.6 in Paddington; the highest rates were 25.3 in Bethnal Green and in Bermondsey, 25.8 in Shoreditch, 26.0 in St. George Southwark, 27.0 in St. George-in-the-East, 27.7 in St. Luke, 28.0 in St. Olave Southwark, and 28.3 in St. Saviour Southwark. During the quarter under notice 3,009 deaths resulted from the principal zymotic diseases in London; of these, 1,165 were referred to measles, 699 to diphtheria, 454 to whooping-cough, 248 to scarlet fever, 225 to enteric fever, 216 to diarrhœa, 1 to typhus, and 1 to an ill-defined form of continued fever. These 3,009 deaths were equal to an annual rate of 2.70 per 1,000, against an average rate of 2.34 in the corresponding periods of the ten preceding years, 1887-96. In the third quarters of the three preceding years the zymotic death-rate was 1.69, 2.83, and 1.59 per 1,000 respectively. The lowest zymotic death-rates last quarterin the various sanitary areas were 0.83 in Hammersmith, 0.91 in Lee, 0.94 in Paddington, 0.99 in Hampstead, 1.27 in St. Martin-in-the-Fields, and 1.31 in Lewisham; while the rates ranged upwards in the other sanitary areas to 4.74 in Shoreditch, 4.85 in St

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Fourth Quarter of 1897.

SANITARY AREAS.	Estimated Population middle of 1897.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,463,169	32,841	21,142	29.5	19.0	2.70	3,009	—	1,165	248	699	454	1	225	1	216	2,033	151
West Districts.																		
Paddington	126,161	735	459	23.4	14.6	0.94	29	—	1	4	14	3	—	3	—	4	33	148
Kensington	171,427	847	756	19.8	17.7	2.45	105	—	29	18	32	6	—	7	—	13	68	185
Hammersmith ...	105,959	744	445	28.2	16.8	0.83	22	—	3	3	4	1	—	5	1	5	39	156
Fulham	120,040	1,013	588	33.8	19.6	3.50	105	—	50	10	25	10	—	4	—	6	58	145
Chelsea	96,692	639	444	26.5	18.4	2.24	54	—	15	5	15	6	—	6	—	7	50	133
St. George Hanover Sq.	80,330	303	285	15.1	14.2	1.65	33	—	13	1	7	6	—	4	—	2	23	165
Westminster	53,027	277	283	21.0	21.4	3.63	48	—	20	2	12	8	—	5	—	2	32	206
St. James Westminster	22,576	127	118	22.6	21.0	3.74	21	—	13	5	—	1	—	1	—	1	13	142
North Districts.																		
Marylebone	140,808	1,025	640	29.2	18.2	1.37	48	—	6	3	14	13	—	4	—	8	47	129
Hampstead	77,275	366	255	19.0	13.2	0.93	19	—	4	—	4	8	—	1	—	2	14	123
St. Pancras	242,255	1,730	1,202	28.6	19.9	2.40	145	—	53	5	45	15	—	16	—	11	127	159
Islington	341,134	2,440	1,560	28.7	18.3	2.32	197	—	73	19	39	37	—	18	—	11	130	157
Stoke Newington ...	34,136	186	137	21.9	16.1	1.75	15	—	2	1	6	3	—	3	—	—	12	129
Hackney	216,698	1,576	1,033	29.2	19.1	3.93	212	—	80	12	50	49	—	15	—	6	79	143
Central Districts.																		
St. Giles	37,840	235	172	24.9	18.2	1.70	16	—	8	1	2	1	—	2	—	2	31	111
St. Martin-in-the-Fields	12,711	53	35	16.7	11.0	1.27	4	—	1	1	2	—	—	—	—	—	3	94
Strand	23,552	136	143	23.2	24.4	1.70	10	—	8	1	—	—	—	1	—	—	27	132
Holborn	30,493	202	181	26.6	23.8	1.57	12	—	4	1	2	2	—	2	—	1	20	149
Clerkenwell	66,162	500	396	30.3	24.0	4.11	68	—	16	6	20	14	—	4	—	8	41	180
St. Luke	41,279	503	285	48.9	27.7	3.59	37	—	9	5	6	11	—	2	—	4	35	133
London City	30,228	132	154	17.5	20.4	2.12	16	—	1	2	6	1	—	5	—	1	13	106
East Districts.																		
Shoreditch	121,883	1,109	785	36.5	25.8	4.74	144	—	76	8	20	26	—	6	—	8	66	195
Bethnal Green	129,098	1,157	813	35.9	25.3	3.58	115	—	36	8	26	33	1	4	—	7	93	194
Whitechapel	79,724	710	442	35.7	22.2	1.85	37	—	14	2	4	8	—	4	—	5	58	152
St. George-in-the-East	47,917	461	323	38.6	27.0	5.69	68	—	39	5	6	8	—	8	—	2	39	167
Limehouse	58,508	522	353	35.8	24.2	3.09	45	—	14	6	7	15	—	1	—	2	33	170
Mile End Old Town ...	111,883	1,071	571	38.4	20.5	3.58	100	—	43	3	13	26	—	11	—	4	51	157
Poplar	169,811	1,462	882	34.5	20.8	4.08	173	—	52	12	44	33	—	15	—	17	87	164
South Districts.																		
St. Saviour Southwark	24,919	212	176	34.1	28.3	5.79	36	—	26	3	6	1	—	—	—	—	19	156
St. George Southwark	60,388	526	391	34.9	26.0	4.85	73	—	49	6	8	2	—	3	—	5	38	203
Newington	122,191	1,072	677	35.2	22.2	3.49	106	—	66	10	22	2	—	2	—	4	71	165
St. Olave Southwark	11,480	112	80	39.1	28.0	5.25	15	—	6	2	1	4	—	—	—	2	11	179
Bermondsey	85,629	795	540	37.2	25.3	4.87	104	—	58	13	9	10	—	6	—	8	36	204
Rotherhithe	40,643	289	174	28.5	17.2	1.58	16	—	—	7	4	2	—	2	—	1	13	145
Lambeth	300,048	2,333	1,259	31.2	16.8	2.48	186	—	89	7	48	10	—	6	—	17	135	168
Battersea	168,877	1,313	755	31.2	17.9	3.66	154	—	66	15	39	16	—	9	—	9	77	152
Wandsworth	195,612	1,229	636	25.2	13.0	1.37	67	—	6	4	33	10	—	6	—	8	54	111
Camberwell	257,575	1,822	1,185	28.4	18.5	2.99	192	—	94	12	43	18	—	16	—	9	114	151
Greenwich	178,367	1,372	754	30.9	17.0	1.66	74	—	11	13	17	17	—	9	—	7	70	143
Lee	39,215	204	115	20.9	11.8	0.91	9	—	—	1	4	—	—	2	—	2	9	93
Lewisham	86,152	531	257	24.7	12.0	1.31	28	—	6	2	15	3	—	1	—	1	20	94
Woolwich	41,409	307	187	29.7	18.1	2.13	22	—	2	2	11	1	—	4	—	2	16	156
Plumstead	61,057	463	216	30.4	14.2	1.91	29	—	3	2	15	5	—	2	—	2	28	102

George Southwark, 4·87 in Bermondsey, 5·25 in St. Olave Southwark, 5·69 in St. George-in-the-East, and 5·79 in St. Saviour Southwark.

No fatal case of small-pox was registered in London during the three months ending December last. Measles showed the highest proportional fatality in St. James Westminster, Shoreditch, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, Newington, St Olave Southwark, and Bermondsey; scarlet fever in St. James Westminster, St. Luke, St. Saviour Southwark, St. Olave Southwark, Bermondsey, and Rotherhithe; diphtheria in Hackney, Clerkenwell, Poplar, St. Saviour Southwark, Battersea, Woolwich, and Plumstead; whooping-cough in Hackney, St. Luke, Bethnal Green, Limehouse, Mile End Old Town, and St. Olave Southwark; and "fever" in Westminster, City of London, St. George-in-the-East, Mile End Old Town, and Woolwich sanitary areas.

During the quarter ending December last 2,033 deaths from phthisis were registered in London, equal to an annual rate of 1·82 per 1,000. Among the various sanitary areas the lowest phthisis death-rates were recorded in Paddington, Hampstead, St. Martin-in-the Fields, Wandsworth, Lee, and Lewisham; and the highest rates in St. Giles, Strand, St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, St. Saviour Southwark, and St. Olave Southwark.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 151 per 1,000, and slightly exceeded the mean-rate in the corresponding periods of the ten preceding years, 1887-96, which was 150 per 1,000. Among the various sanitary areas the rates of infant mortality were lowest in St. Giles, London City, Lambeth, Wandsworth, Lee, Lewisham, and Plumstead; while they showed the largest excess in Kensington, Westminster, Clerkenwell, Shoreditch, Bethnal Green, St. George Southwark, and Bermondsey.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,944 births and 4,432 deaths were registered during the week ending Saturday last, January 15th. The annual rate of mortality in these towns, which had been 24·9 and 21·4 per 1,000 in the two preceding weeks, further declined to 20·6 last week. The rates in the several towns ranged from 12·2 in Huddersfield, 12·6 in Cardiff, 12·9 in Birkenhead, and 13·3 in Swansea, to 23·7 in Plymouth, 25·7 in Liverpool, 28·9 in Norwich, and 29·6 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 19·0 per 1,000, and was 3·9 below the rate recorded in London, which was 22·9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2·4 per 1,000; in London the rate was equal to 3·3 per 1,000, while it averaged 1·8 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3·0 in Gateshead, 3·2 in Oldham, 3·5 in Derby, and 3·7 in Sheffield. Measles caused a death-rate of 1·6 in London and in Sheffield, 1·7 in Croydon, 2·0 in Derby, 2·1 in Brighton and in Oldham, and 2·2 in Halifax; scarlet fever of 1·0 in Huddersfield; and whooping-cough of 1·0 in Derby and 1·1 in Portsmouth. The mortality from "fever" showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 44 in London, 6 in Birmingham, 4 in Cardiff, and 4 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 3,450 at the end of the seven preceding weeks, had further fallen to 3,253 on Saturday last, January 15th; 215 new cases were admitted during the week, against 222, 273, and 239 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 15th, 1,000 births and 615 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had risen from 18·6 to 24·3 per 1,000 in the three preceding weeks, declined again to 20·4 last week, and almost corresponded with the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15·7 in Leith and 15·8 in Paisley to 23·8 in Perth and 31·5 in Greenock. The zymotic death-rate in these towns averaged 1·9 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 295 deaths registered in Glasgow included 14 from measles, 4 from scarlet fever, 5 from whooping-cough, and 9 from diarrhœa.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a slight further decline last week. The fatal cases of this disease, which had been 56, 53, and 50 in the three preceding weeks, further fell to 44 during the week ending Saturday last, January 15th, but exceeded the corrected average number in the corresponding periods of the ten preceding years. Of these 44 fatal cases, 10 were of persons belonging to Islington, 4 to Hackney, and 3 to Bethnal Green sanitary areas. The notifications of diphtheria in London, which had been 218, 292, and 238 in the three preceding weeks, further declined to 194 during the week ending Saturday last, January 15th. Compared with the preceding week there was a slight further increase in the number of new cases notified in Central London, but a decline in each of the other groups of sanitary areas. Among the sanitary areas of West London there was a general decline in the prevalence of the disease, although in Westminster the 4 new cases exceeded the number recorded in any recent week. In most of the sanitary areas of North London there was a further decline in the prevalence of diphtheria; in Islington the new cases, which had been 22 and 14 in the two preceding weeks, further fell to 10 last week; and in Hackney 16 new cases were notified, against 23 and 19 in the two preceding weeks. Among the sanitary areas of East London there was a further decline in the number of new cases in Shoreditch, Bethnal Green, and Poplar, but in Mile End Old Town there was an increase. In most of the sanitary areas of South London the prevalence of diphtheria showed a marked decline, especially in Newington, Lambeth, Battersea, and Lee; in Camberwell, however, there was a slight increase, 16 new cases being notified, against 28 and 14 in the two preceding weeks. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 111, against 141, 142, and 134 in the three preceding weeks; and 1,020 cases remained under treatment in these hospitals on Saturday last, January 15th.

BACTERIOLOGICAL DIAGNOSIS.

THE Public Health Committee of the Aberdeen Town Council have under consideration a scheme for making bacteriological examinations in connection with the diagnosis of certain infectious diseases. A plan suggested by Dr. Matthew Hay, Medical Officer of Health, has been strongly recommended for adoption.

ALCOHOL IN WORKHOUSES.

AT a recent meeting of the Malton Board of Guardians a resolution was carried to the effect that the guardians ask the medical officers not to recommend spirits for paupers through relieving officers, but when such spirits were absolutely necessary that the medical officers supply the whisky, brandy, etc., in the ordinary way as medicine. Another Board not long ago advertised for a medical officer, who was to contract to supply alcoholic beverages in this way; but the Local Government Board speedily declared the illegality of this procedure, not for the first time.

MEDICAL OFFICERS OF HEALTH IN SCOTLAND.

PRACTITIONER writes: In the BRITISH MEDICAL JOURNAL of January 1st, in the article on the Public Health (Scotland) Act, 1867, you state: "After January 1st, 1898, no person may be appointed medical officer to any district in Scotland unless he possesses a qualification in Sanitary Science." I would like to ask you if this applies to small local medical officers of health acting under the county medical officer, and if it is necessary that they should have a B.Sc. or D.P.H. as well as their qualifications in Medicine and Surgery?

*** There is no exemption under the Act; the statutory requirement will apply to all local medical officers appointed hereafter. In practice such officers will probably continue to be appointed, but they cannot discharge any duties specifically reserved for medical officers of health.

DUTIES OF SCOTTISH MEDICAL OFFICERS.

DISTRICT MEDICAL OFFICER.—It is difficult to delimit the duties and responsibilities of a medical officer of health. We are of opinion that in respect of Case I, where our correspondent was called upon by the School Board to visit (at a distance) and advise, he was acting in the service of the School Board, and is entitled to be paid by them, and £2 2s. would probably be a reasonable fee. Case II is a narrower one, and it is questionable whether D. M. O. would be well advised in demanding a fee.

MEDICAL NEWS.

MEDICAL MAGISTRATE.—Dr. A. A. G. Dickey, of Colne, has been appointed by the Lord Chancellor of the Duchy of Lancaster (Lord James) a magistrate for the borough of Colne.

THE Right Hon. the Lord Mayor has consented to take the chair at the festival dinner of the Metropolitan Hospital, of which he is the President, to be held at the Whitehall Rooms on April 18th.

THE CHALMERS HOSPITAL, EDINBURGH.—Miss Mary D. Stephenson, formerly of Charing Cross Hospital, and latterly of Tiverton Infirmary, has been appointed matron of the Chalmers Hospital, Edinburgh, in the room of Miss Agnes E. Bourne, resigned.

THE UNIVERSITY OF LONDON BILL.—The following resolution was passed at a meeting of the Medical Board of King's College, held on Wednesday, January 12th: "The Board of the Medical Faculty of King's College report to their Council that they are in favour of the scheme for a new University of London embodied in the Bill of 1897, and would desire that the delegates should obtain those amendments that are recommended in the report."

THE ASCENT OF THE NURSE.—According to the *Nursing Record* the University of Texas has formed a nursing department, and has recognised the head of the Nurse Training School as one of the professors of the University with a chair of Clinical Nursing. The lady in question is in future to teach not only the pupil nurses but all the medical students at the University Hospitals in the details of nursing. There appears to be no limit to the "professional" ambition of the modern nurses, and doubtless the fair incumbent of the "Chair of Clinical Nursing" will fully maintain the dignity of her academic position. But what of the unhappy medical student, who, already burdened almost beyond his strength, is to have a course of lectures on the making of poultices and the adjustment of bedpans inflicted upon him? Sydney Smith's vision of being "preached to death by wild curates" seems not altogether unlikely to be fulfilled, with the appropriate change of circumstances in the case of the latter-day medical student.

THE STAFF OF THE ENGLISH LOCAL GOVERNMENT BOARD.—Mr. Chaplin, President of the Local Government Board, recently replied to the criticisms of the Earl of Kimberley with regard to the undermanning of the English Local Government Board; in the course of his remarks, while insisting upon the complexity and multiplicity of the duties which have been piled upon the shoulders of the Board, stated that he had recently been able to make arrangements with the Treasury by which the staff would be raised from 467 members of all ranks to 572. He added that this would involve an increased expenditure of £18,000 a year.

LARYNGOLOGICAL SOCIETY OF LONDON.—The following is the list of Officers and Council for 1898:—*President:* H. Trentham Butlin, F.R.C.S. *Vice-Presidents:* J. W. Bond, M.D.; A. Bronner, M.D.; H. de Havilland Hall, M.D.; Scanes Spicer, M.D.; T. J. Walker, M.D. *Treasurer:* W. J. Walsham, F.R.C.S. *Librarian:* J. Dundas Grant, M.D. *Secretaries:* Herbert Tilley, M.D.; William Hill, M.D. *Council:* A. A. Kanthack, M.D.; Sir F. Semon, M.D.; W. R. H. Stewart, F.R.C.S.; StClair Thomson, M.D.; P. Watson Williams, M.D.

HEALTH OF BELFAST.—In his report presented to the City Council at their usual monthly meeting on January 1st, Dr. Whitaker, medical officer of health, gave the death-rate for the previous four weeks as 24.4 per 1,000, and the zymotic rate at 2.8 per 1,000. The number of cases of typhoid fever notified during this period was 273, but the mortality had been low. The deaths from zymotic diseases numbered 61, as compared with 71 in the corresponding period of last year. The epidemic of typhoid fever was steadily declining, and, as the above figures show, the deaths from zymotic diseases were actually less at the present time than at the corresponding period of last year, when there was no typhoid epidemic.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS.—A Quarterly Court of the Directors of the Society was held on Wednesday, January 12th, Dr. Pollock, Vice-President, in the chair. It was resolved to distribute, on January 19th, £1,222 10s. among 50 widows, 3 orphans, and the 5 recipients on the Copeland Fund. Application for assistance was read from a widow for herself and son, aged 13, and a grant at the rate of £50 per annum was made to the widow, and one of £12 per annum to the son. One member was elected, the death of one reported. The Christmas present, amounting to £934 had been made on December 20th to the widows and orphans on the Funds. A committee was appointed to draw up the report for 1897. The expenses of the quarter were £75 19s. 6d. The Secretary was desired to convey to the President (Sir J. Paget, Bart.), the best wishes of the Directors for his health and happiness during the present year. The offices of the Society are at 11, Chandos Street, Cavendish Square, W.

SOCIETY FOR THE STUDY OF INEBRIETY.—At a quarterly meeting on January 13th, the Chairman (Dr. Norman Kerr) in proposing a vote of condolence to Mrs. Ernest Hart, referred to the serious loss to the Society in the lamented death of Mr. Ernest Hart, who had been a Vice-President for fourteen years. Mr. Hart had repeatedly rendered most valuable service editorially and in person. He had taken part in the proceedings at the British Medical breakfasts at Cork and Belfast, and at various other medical breakfasts. His remarkable paper on Ether Drinking was specially valuable. Dr. Pitcairn seconded the resolution, which was carried. Surgeon-General the Hon. J. L. Lovell, C.M.G., reported the remarkable decrease in the therapeutic prescription of intoxicants in the three Trinidad hospitals, amounting to 60 per cent. during the past few years. Mr. W. L. Brown, L.R.C.P.Edin, gave an elaborate account of ancient so-called remedies for intoxication, illustrated by slides. These remedial measures included mixing drinks, wreaths and unguents, drink dress, vegetable acids and bitters, essential oils, oils and emulsions, the mineral cure (pumice stone, sandy soils, the ancient external "gold cure") the water cure, the animal cure, etc. The true cure was represented to be the treatment of the inebriate as a diseased individual, with involuntary curative restraint.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House-Physicians. Appointments for six months. No salary, but residence, board, and washing provided.—Also Assistant Dispenser. Salary, £80, with meals. Applications to Howard J. Collins, House-Governor, by January 29th.

BOURNEMOUTH ROYAL VICTORIA HOSPITAL.—Ophthalmic Surgeon; must be F.R.C.S. Applications to the Secretary by February 1st.

BRIXTON DISPENSARY, Water Lane, Brixton, S.W.—Resident Medical Officer; unmarried and doubly qualified. Salary, £150 per annum, with furnished apartments, attendance, coal, and gas. Applications to the Secretary by January 28th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Post tenable for three years. Applications to the Secretary.

DEVONPORT ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon for six months. Board, lodging, and washing; no salary. Applications to "Chairman of Medical Committee" by January 28th.

DUBLIN: MERCER'S HOSPITAL.—Vacancy on the Surgical Staff. Applications to the Registrar by January 29th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Senior Resident Medical Officer. Salary, £70, with board and washing. Applications to the Committee of Management at the Hospital by February 1st.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Resident Medical Officer. Appointment an annual one subject to re-election. Salary, £100 per annum, with furnished residence, attendance, coals, and gas. Applications to the Secretary by January 25th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 per annum, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or, in lieu thereof, the sum of £70 per annum. Knowledge of Welsh desirable. Applications to Thomas Thomas, Secretary, Board Room, Bagillt Street, Holywell, S. Wales, by January 24th.

HERTFORD UNION.—District Medical Officer and Public Vaccinator for the Second and Third Districts; doubly qualified. Salary for No. 2 District, £29 16s., and for No. 3 District, £50 per annum, exclusive of fees. Applications, on forms to be obtained at the Clerk's Office, to be sent to T. J. Sworder, Clerk, by January 27th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—House-Surgeon; unmarried. Appointment for six months. Salary, £20, with board and residence in the hospital. Applications, on forms provided, to be sent to the Secretary by February 2nd.

HULL ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £40, with board and lodging. Applications to "Chairman, House Committee," by January 24th.

LINCOLN COUNTY HOSPITAL.—House-Surgeon; must be under 30 years of age and unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to W. B. Danby, Secretary, Bank Street, Lincoln, by January 24th.

LONDON COUNTY ASYLUM, Hanwell, W.—Junior Assistant Medical Officer; doubly qualified, and between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms to be obtained at the Asylums Committee Office, 21, Whitehall Place, S.W., where they must be delivered by 12 noon on January 22nd.

MANCHESTER ANCOATS HOSPITAL.—Resident Junior House-Surgeon. Salary, £50, with board and washing. Applications to Alex. Forrest, Honorary Secretary.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Bowden, Cheshire.—Resident Medical Officer for the In-patient Department. Salary, £60 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by January 31st.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £30 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as Senior. Applications to the Secretary by February 4th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen Square, Bloomsbury.—Anæsthetist. Applications to H. Burford Rawlings, Secretary and Director, by January 31st.

NORTHAMPTON: BERRY WOOD ASYLUM.—Assistant Medical Officer; under 30 years of age; unmarried and doubly qualified. Salary, £150, increasing to £200, with board, lodging, washing, and attendance. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent by February 9th.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon: non-resident. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum. Applications to Mr. A. F. Kirby, St Peter's Church Walk, Nottingham, by February 1st.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Surgeon: must be F.R.C.S.Eng. Applications to the Secretary by February 1st.

SHEFFIELD ROYAL HOSPITAL.—Senior Assistant House-Surgeon: unmarried. Salary, 70 guineas per annum, with board (exclusive of wine and beer) and lodging. Applications to Dr. Sinclair White, Secretary to the Honorary Medical Staff by January 28th.

SUNDERLAND EYE INFIRMARY.—House-Surgeon. Salary, £150 per annum, living out. Applications to J. F. Potts, 13, Eden Vale, Sunderland, by February 3rd.

UNIVERSITY COLLEGE, London.—Assistant Physician to the Hospital. —Applications to the Secretary by February 8th.

WARWICK COUNTY LUNATIC ASYLUM.—Second Assistant Medical Officer. Salary, £130, rising to £150 per annum. Applications to the Medical Superintendent before January 22nd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, and a small honorarium will be given at the expiration of the term of office. Applications to the Chairman of the Medical Committee by January 24th.

MEDICAL APPOINTMENTS.

BENSON, Jas. Walsh, L.R.C.P.I., L.R.C.S.I., L.M., appointed Resident Surgeon of the North Riding Infirmary, Middlesbrough-on-Tees, *vice* Dr. Geo. F. Longbotham, resigned.

CLOUGH, Joseph, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the First District of the Hunslet Union.

COLMAN, W. S., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

CRAWFORD, Dr., appointed Medical Officer for the Fifth District of the Tonbridge Union.

CURTIS, H. J., B.S.Lond., F.R.C.S.Eng., appointed Surgical Registrar to University College Hospital, London.

DE VILLIERS, J. H., M.R.C.S., L.R.C.P.Lond., appointed House-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

DOBSON, Arthur, M.R.C.S.Eng., etc., Surgeon to the Ilkeston Hospital; and Honorary Lecturer and Surgeon to the Ilkeston Ambulance Association.

EDWARDS, C. W., M.R.C.S., L.R.C.P., appointed Surgeon to the East Grinstead College Hospital.

ELLIOTT, Chas. N., B.A., T.C.D., M.B., M.Ch., reappointed Medical Officer of Health to the Thrapston Rural District Council.

HOLMES, Jas. D., M.B.Glasg., appointed House-Surgeon to the General Infirmary and Fever Hospital, Paisley, *vice* E. McKay, M.B.Glasg., resigned.

JEPP, Dr., appointed Medical Officer of Health to the Whitchurch Rural Council.

LUCY, Reginald H., M.B.Edin., F.R.C.S.Eng., appointed Surgeon to the South Devon and East Cornwall Hospital, Plymouth, *vice* W. Paul Swain, F.R.C.S., appointed Consulting Surgeon.

MAPLES, R., L.R.C.P.Edin., L.M., M.R.C.S.Eng., appointed Medical Officer of Health to the Kingsclere District Council.

MOFFAT, Dr., appointed Medical Officer to the Alness Parish Council, *vice* Dr. Rutherford, resigned.

PALMER, P. Allan, M.R.C.S.Eng., L.R.C.P.Lond., Junior Assistant House-Surgeon, appointed Assistant House-Surgeon of the Hull Royal Infirmary, *vice* Dr. Grieve, resigned.

PICKERING, Harold J., L.D.S.R.C.S.Eng., appointed Assistant Dental Surgeon to York Dispensary.

PORRITT, E. E., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

PRESTON, J. M. S., M.B., C.M.Edin., appointed Assistant Medical Officer of the New Bridge Street Workhouse of the Township of Manchester.

SCOTT, H. Ainslee, M.B., Ch.B.Vict., M.R.C.S., L.R.C.P., appointed Third Assistant Medical Officer to the Monsall Fever Hospital, Manchester.

THOMSON, H. Campbell, M.D., M.R.C.P.Lond., appointed Physician to Out-patients at the Hospital for Epilepsy and Paralysis, Regent's Park.

TINKER, Dr., appointed Medical Officer for the No. 7 (Newton) District of the Ashton Union.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Mr. Thomas Bryant: Remarks on Rectal Surgery, illustrated by the drawings of the late Mr. Gowland.

TUESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Lecture by Dr. Ferrier, F.R.S.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. Harry Campbell: On Disorders of the Nervous System characterised by Widespread Muscular Wasting.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Mr. A. Marmaduke Sheild: Immunity and Latency after Operations for Reputed Carcinoma of the Breast, illustrated by 108 tabulated cases.

WEDNESDAY.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION, 11, Chandos Street, Cavendish Square, W., 3.30 P.M.—Dr. Greville Macdonald: Some Points in the Physics of Adenoids.

WEST LONDON POST-GRADUATE COURSE, West London Hospital, W., 5 P.M. —Dr. Beddard: Heart Disease due to Alcohol.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 P.M. —Dr. Hingston Fox: The Treatment of Constipation. Dr. Bertrand Dawson: Physical Signs of Stomach Disease and their Relation to Diagnosis and Treatment.

DERMATOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 P.M. — Mr. J. Hancocke Wathen (Clifton): Local Effects of Iodoform. Cases will be shown by Dr. Savill, Mr. W. T. Freeman, Dr. Walsh, Dr. Abraham, and others.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Dr. Samuel Hyde (Buxton) will introduce a discussion on the Treatment of Cardiac and Circulatory Affections by Baths, Climate, and Exercises. The following gentlemen have signified their intention of taking part in the discussion: Dr. George Oliver (Harrogate), Dr. Douglas Kerr (Bath), Dr. Sansom, Dr. William Ewart, Dr. Bezly Thorne, Dr. Leonard Williams, Dr. Alexander Morison, Dr. Herringham, Dr. Wethered, Dr. Ward Humphreys (Cheltenham), Dr. Eardley Wilmot (Leamington), Dr. Bowen Davies (Llandrindod Wells), Dr. Havell (Felixstowe), Dr. Shirley Jones (Droitwich), the President, and others.

THURSDAY.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Dr. Galloway: Demonstration of Dermatological Cases.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos Street, Cavendish Square, W.—Card specimens, 8 P.M.—Mr. Hartridge: (1) Foreign Body lodged in the Eyeball. (2) Rupture of Choroid and Extensive Pigmentation of Retina after Severe Concussion of the Globe. Mr. Lawford: Case showing New Development of Vessels on the Retina. Papers at 8.30.—Mr. Sydney Stephenson: Epithelial Xerosis of the Conjunctiva. Dr. A. Breuer: The Function of the Rods and Cones of the Retina. Messrs. MacKenzie Davidson and Treacher Collins: The Localisation of Foreign Bodies in the Eye and Orbit by means of Roentgen Rays, with illustrative cases.

FRIDAY.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. W. P. Herringham: Sudden Death in Rheumatic Fever due to Myocarditis. Mr. F. C. Abbott: Two cases of General Peritonitis due to Unusual Causes—(1) Gangrenous Intussusception of Small Intestine; (2) Strangulation of a Meckel's Diverticulum by Itself. Dr. Samuel West: Case of Serous Effusion of Fifteen Months' Standing treated by incision. Mr. J. Hutchinson, jun.: Internal Strangulation of Loop of Small Intestine by a Fibrous Ring detached from an Old Hernial Sac: Operation: Recovery.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION, 11, Chandos Street, W., 3 P.M.—Mr. F. Marsh: Notes of Five Cases of Cerebral Abscess due to Ear Disease. Dr. Dundas Grant: Case of Otitic Extradural Abscess, with patient. Mr. C. A. Ballance: Some Lessons in the Diagnosis and Treatment of Intracranial Complication and of Otitis Media gleaned from Fatal Cases. Mr. St. George Reid: Notes of Traumatic Rupture of Tympanic Membrane. Dr. Fayette C. Ewing: Recurring Parotitis in a Healthy Child. Exhibition of cases by the President, Mr. Wyatt Wingrave and Dr. F. Spicer.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

GALLETLY.—At Sycamore House, Northwold, Norfolk, on January 14th, the wife of Wm. Gloag Galletly, M.B., C.M., of a daughter.

WATSON.—On January 11th, at Hendro, Overton Park, Cheltenham, the wife of Deputy-Surgeon-General George Alder Watson, Bengal Army (retired), of a son.

MARRIAGES.

DICKSON—FARRAR.—On January 12th, at St. Mary's Church, Crumpsall, Manchester, by the Rev. R. Catterall, Rector, Thomas Graeme Dickson, L.R.C.P., and L.R.C.S.Edin., of Hay, Breconshire, eldest son of F. K. Dickson, J.P., F.R.C.P.Edin., of Buxton, to Elizabeth Lister Farrar (Bessie), eldest daughter of T. Lister Farrar, of Manchester, solicitor.

HUGHES—MELLOR.—On Wednesday, January 12th, at Christ Church, Ashton-under-Lyne, by the Rev. Thomas Foster Clarke, Rector of Thurstaston, Cheshire (late Vicar of Rostherne), cousin of the bridegroom, assisted by the Rev. F. H. Burrows, Vicar, William Hugh Hughes, of Latchford House, Ashton-under-Lyne, to Mary Alice (Minna), second daughter of Thomas Walton Mellor, of The Reynors, Ashton-under-Lyne, and Tan-y-Bryn, Abergele.

TURNER—DAWSON.—On January 5th, at St. Jude's Church, South Kensington, by the Rev. Eardley Wilmot, Vicar, Surgeon-Major W. Turner, A.M.S., to Jeannie Kemp, second daughter of Major R. E. Dawson, J.P. (late Suffolk Regiment), of Nohaville, co. Westmeath, Ireland.

DEATHS.

PARE.—On December 28th, at 25, Buckland Crescent, N.W., of influenza and pneumonia, Margaret Edmondson, the dearly-loved wife of John William Pare, M.D., C.M., L.D.S.

RENTZSCH.—On January 16th, John Sigismund, son of Sigismund H. Rentzsch, of the Firs, Waltham Cross, Herts, aged 6 months.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations*.—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances*.—M. W. Th. S., 2; Tu. F., 5. *Operations*.—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations*.—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances*.—Daily, 1.30. *Operations*.—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations*.—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances*.—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations*.—M. W. Th. F.

GUY'S. *Attendances*.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations*.—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances*.—Daily, 10. *Operations*.—M. Th., 2.

KING'S COLLEGE. *Attendances*.—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations*.—W. Th. F., 2.

LONDON. *Attendances*.—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations*.—Daily, 2.

LONDON TEMPERANCE. *Attendances*.—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations*.—M. Th., 4.30.

METROPOLITAN. *Attendances*.—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations*.—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations*.—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances*.—Daily, 2; Ophthalmic, W. S., 9.30 *Operations*.—Tu. F., 9.

NORTH-WEST LONDON. *Attendances*.—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations*.—Th., 2.30.

ROYAL EYE, Southwark. *Attendances*.—Daily, 2. *Operations*.—Daily.

ROYAL FREE. *Attendances*.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations*.—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances*.—Daily, 9. *Operations*.—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*.—Daily, 12.30 and 1. *Operations*.—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 3; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations*.—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances*.—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations*.—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances*.—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations*.—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances*.—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations*.—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances*.—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations*.—W. F., 2.

ST. THOMAS'S. *Attendances*.—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations*.—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 3; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances*.—Daily, 1.30. *Operations*.—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances*.—Daily, 1.30; Tu. F., 6.30. *Operations*.—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations*.—Tu. W. Th., 2.

WEST LONDON. *Attendances*.—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations*.—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations*.—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Corrospondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

ENQUIRER (L.R.C.S., L.R.C.P. Edin., 1885) asks what books are best to read for the D.P.H. Conjoint of Edinburgh.

A. W. S. asks whether anyone has ever weighed hen's eggs at the time of setting, and compared the weight with that of the chicken and the egg shell at the time of hatching?

RETIRED asks: Is the whole of the Isle of Wight considered relaxing? I have lately retired from practice, and want to find a home quite close to the sea, where there is something to be seen, as I cannot take exercise? Would Bembridge answer the purpose?

FREQUENT MICTURITION.

H. S. B. asks for suggestions as to the treatment of a case of frequent micturition, both by day and night, in a boy aged 3½ years, the intervals between the acts varying from a quarter of an hour to two hours. Circumcision was performed in infancy. There were no evidences of calculus or worms. The urine is normal. Prolonged treatment by belladonna and atropine has been tried.

SCHOOL FOR BOY PARTIALLY BLIND.

DR. J. DAVOREN (Mitcham Lane, Streatham, S.W.) writes: I should feel much obliged if you could acquaint me with the name and address of a home or school which would receive an intelligent lad, aged 16 years, nearly blind, where he would be taught some useful occupation. He can pay £25 a year. Not being totally blind he is ineligible for the School for the Indigent Blind.

CHEMISTS' SHOPS AND DOCTORS' MESSAGES.

APEX and A. H. S. C. both have under consideration a proposal for an arrangement by which a chemist who resides at some distance should receive messages from patients who may desire their attendance. One correspondent proposes to have a consulting-room in the chemist's private house, next door to the shop; the other proposes to have a brass plate on the chemist's private door. We are asked for an opinion as to the desirability of such arrangements.

*** We entertain no doubt that the arrangements proposed would be regarded by professional opinion as undesirable.

PRACTITIONERS OF MEDICINE AND DENTISTRY.

A. asks what is the general custom between medical and dental practitioners regarding charges for attendance and professional services? Is it usual for medical men who attend the wife and family of a dentist to charge the same fees as for an ordinary patient?

*** The general custom appears to be that when the dentist and the doctor are friends and neighbours, and reciprocity reigns between them, for the question of fees to be in abeyance. On the other hand, it is the custom for half fees to be paid on either side in a large number of cases, while in some cases each side insists upon paying full fees, but this is the most unusual.

TREATMENT OF TERTIARY SYPHILIS.

CYCLOPS would be thankful for a hint respecting treatment (local and constitutional) of a case of tertiary syphilis, the chief symptoms of which are obstinate rash in the head, with ulceration of the inner surface of nostrils and gradual enlargement of the end of the nose. The patient has taken for the last three years iodide of potassium with perchloride of mercury, the former to the extent of half-drachm doses three times a day. The only application to the head has been to rub in an ointment composed of oleate of mercury, ol. tereb., and lanolin. Would the long-continued and large doses of the iodide tend to cause the irritation of nostrils and thickening of the cellular tissue of the nose? Information on these points will be gladly received.

THE HISTORY OF THE MEDICAL STUDENT.

G. F. B. writes: What books are there I could consult in order to obtain some information about medical students, as regards their history, habits, customs, etc., from the earliest times up to modern dates? A book in which I could get references to others would suit my purpose best.

*** Our correspondent will obtain some of the information he requires in Mr. Young's *Annals of the Barber Surgeons*, and Mr. South's *Memorials of the Craft of Surgery*, if he looks for it under the heading of "Apprentices." The medical student of his day, amusingly but not untruthfully portrayed by Albert Smith in the *Physiology of the London Medical Student*, whilst the statistics of his fate are given by Sir James Paget in the fifth volume of the *St. Bartholomew's Hospital Reports* (1869).

TREATMENT OF PEMPHIGUS.

G. H. V. writes: For four months past I have had under my care a case of pemphigus vulgaris in a lady, who is also pregnant now seven months. Bullæ (mostly small now) keep recurring over the same parts, despite four months' treatment by liq. arsenicalis mx, with ferri et ammon. cit. gr. x, and tinct. nuc. vom. mv, combined with liberal and regular feeding. Lotions of carbolic acid or liq. carb. detergens are the only means of alleviating, and that temporarily, the most distressing itching and pain. I can exclude syphilis as a cause, and ascribe it to worry and neglect of food; she has six troublesome children. The whole of the skin is more or less affected, except the head above the collar line and the hands beyond the cuff line. This suggests to me that either light or air are in some way concerned with keeping the unaffected parts free from the disease, and also suggests that an effective treatment might be found in keeping the patient in a state of

complete nudity—in a warm room, of course—until such time as the eruption ceased to appear, or showed signs of cure if the treatment proved successful. Is the disposition of the bullæ constant in this disease, as instanced by my case? [G. H. V. asks for suggestions as to treatment, and also whether the nude method has ever been tried in this most obstinate skin disease.]

ANSWERS.

F.B.—We apprehend that there could be no legal objection to a practitioner who holds the diplomas of M.R.C.S.Eng., and L.R.C.P.Lond. describing himself as physician and surgeon.

NEMO.—So far as we are aware, it is not the custom of the medical profession to charge fees to medical students, still less to a qualified man even though he has not yet started in practice.

BACHELOR.—1. Such visits are social visits, and are governed by ordinary social customs. 2. A person practising as a dentist, but not on the *Dentists' Register*, cannot be regarded as a regular practitioner in dentistry.

VERITAS.—Our correspondent might refer to the following books: *The Special Temptation of Early Life*, by C. G. Wheelhouse, F.R.C.S. (Henry Walker. 137, Briggate, Leeds) and *Morality*, by Mr. Maurice C. Hime, formerly head master of Foyle College, Londonderry (London: J. and A. Churchill. 1s. 6d.).

DUTIES OF SHIP SURGEONS.

F. H. M. writes: As an ex-ship's surgeon, I would suggest to "W. D." that he might find some useful information in that portion of Notter and Firth's *Hygiene* which deals with the navy and mercantile marine. Of course this forms only a small part of the whole book.

MUSCULAR EXERTION IN CYCLING.

DR. HARRY CAMPBELL (Wimpole Street, W.) writes: I doubt whether it is possible to express by means of a mathematical formula the muscular exertion put forth by an individual in riding a cycle along a level road. This necessarily varies with the friction of the machine, the condition of the road, and the skill of the rider. I presume the only way of arriving at a correct conclusion would be by experiment; it would be necessary to ascertain the amount of traction needful to pull a cycle and rider along a given distance of level road. I feel sure that it is impossible to calculate the difference between the energy spent in walking and cycling by the method suggested by Dr. C. M. Jessop, namely, by reference to the difference between the weight of the entire body and that of the legs. I think it is more nearly represented by the difference in the energy expended in standing and sitting. In walking we have not only to carry the body forward, but we have to use up a lot of force (much more than most people think for) in keeping the body erect. In cycling the energy spent in this way—especially by those who hunch the back—is practically *nil*, so that practically the whole stock of muscular energy is available for forward propulsion.

NOTES, LETTERS, Etc.

ERRATUM.—In the notice of Spezia as a health resort in the BRITISH MEDICAL JOURNAL of January 15th, page 160, line 10, the first word should be "hotels," not "hospitals."

A DISCLAIMER.—Mr. Thos. Alph. Buck, M.B.Lond., of Ryde, desires to disclaim all knowledge of a paragraph mentioning his name which appeared in a recent issue of the *Isle of Wight Observer* of January 15th, 1898.

PHOTOGRAPHY IN MEDICINE AND SURGERY.

THE Assistant-Secretary of the Royal Photographic Society requests us to state that the Committee which is organising the International Photographic Exhibition, to be held at the Crystal Palace from April 27th to May 14th next, are anxious that it should thoroughly illustrate the large part which photography plays as a recording agent and otherwise in so many scientific processes. To this end the Committee asks the loan of examples of the application of photography to medicine or surgery. Communications should be addressed to Mr. R. Child-Bailey, 12, Hanover Square, London, W., Assistant Secretary of the Society, who will forward full particulars.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(**A**) Mr. R. B. Anderson, London; Mr. F. Addiscott, London; A. W. S.; Mr. A. Atkinson, London; H. Aldersmith, M.B., London; Mr. W. Adams, London. (**B**) Dr. C. E. Beevor, London; H. Blake, M.B., Great Yarmouth; *British and Colonial Druggist*, The Editor of the, London; Dr. C. Beale, London; Mr. R. C. Bayley, London; Dr. J. W. Ballantyne, Edinburgh; Mr. E. C. Bousfield, London; Dr. S. J. Barton, Norwich; Birkenhead Medical Society, The Secretary of the, Birkenhead; Dr. H. S. Ballance, Weston-super-Mare; Mr. R. Barwell, London; Dr. T. Bridgwater, Harrow-on-the-Hill; Dr. J. P. Zum Busch, London; Mr. W. H. Battle, London; B.A.Cantab.; Mr. Blackett, London; Dr. A. Blair, Helmsley. (**C**) W. Collier, M.B., Oxford; Mr. H. N. Constance, London; Miss J. Crossfield, London; Dr. S. Coupland, London; Dr. H. Campbell, London; Dr. J. M. Clarke, Bristol; Dr. H. J. Curtis, London; A. Cox, M.B., Gateshead; Cyclops; Mr. H. Carre-Smith, London; Mr. J. H. Cummery, London. (**D**) Mr. F. J. Day, Manchester; Mr. F. Dobbs, Folkestone; Mr. J. Davoren, London; Mr. W. H. Daly, Pittsburgh, U.S.A.; Dr. V. Dickinson, London; T. Drapes, M.B., Enniscorthy; Mr. W. G. Dickinson, London; Dr. T. Dutton, London; Dermatological Society of Great Britain, The Secretary of the, London; Mr. A. Dobson, Ilkeston. (**E**) Mr. C. W. Edwards, East Grinstead; Mr. T. H. S. Escott, Brighton; Mr. T. S. Ellis, Gloucester; Dr. M. G. Evans, Caerphilly; Enquirer. (**F**) Dr. J. Foulis, Edinburgh; F. H. M.; Dr. M. Fletcher, London; A. G. Francis, M.B., Hull. (**G**) Mr. H. F. Giffard, London; Dr. W. H. Gregory, Beverley; Mr. H. E. Garnett, Brighton; G. J. B. (**H**) Mr. J. Hutchinson, London; Mr. G. C. Harvey, Eltham; Dr. M. Holmes, Gourock; Mr. F. Hobday, London; Mr. V. Horsley, London; Dr. T. W. Hime, Bradford; Dr. F. de H. Hall, London; J. M. Hunt, M.B., Liverpool; Dr. W. P. Herringham, London; Mr. H. N. Hardy, London; Mr. T. A. I. Howell, London; Mr. A. Hosie, Aberdeen; Dr. W. S. Hedley, London; Mr. J. Harpes, Belfast; Howard Association, The Secretary of the, London. (**J**) Mr. W. A. Jones, Edinburgh; J. V. R. C.; J. S. L.; Dr. R. Jones, Woodford Bridge; Dr. H. L. Jones, London; Mr. H. H. Jennings, London. (**L**) Labour; Mr. G. Lunan, Edinburgh; Dr. A. E. Leeson, Spezia. (**M**) A. E. Maylard, M.B., Glasgow; Member; J. McGowan, M.B., Oban; Member B.M.A.; Mr. H. E. Maberly, London; M.B., C.M.; G. H. Mapleton, M.B., Goudhurst; Dr. W. Milligan, Manchester; Mr. H. Macdonnell, Portsmouth; Mr. A. Mackay, Tongue; Mr. G. M. P. Murray, Dublin; Midlands; M.B., M.R.C.S., L.S.A.; Dr. H. Meigs, Paris; N. G. Munro, M.B., Yokohama; Dr. H. J. Macevoy, London; Mr. T. S. Mansford, London; Mr. J. F. MacGregor, Malvern; Dr. P. W. MacDonald, Dorchester; Mr. G. Morgan, Brighton. (**N**) Nibestos Filter Company, London. (**P**) J. E. Prichard, M.B., Bristol; F. S. Pitt-Taylor, M.B., Liverpool; Mr. P. A. Palmer, Hull; Dr. A. Packman, Rochester; Mr. H. J. Pickering, York; Mr. J. F. Potts, Sunderland. (**R**) Rebman Publishing Company, London; Dr. T. H. Redwood, Rhymney; Dr. J. Robertson, Sheffield; Repeal; Dr. A. J. Rodocanachi, Ashton-under-Lyne. (**S**) Dr. Mary Scharlieb, London; Mr. H. M. B. St. Ruth, London; Mr. W. B. Saunders, Philadelphia; *Student*, The Editor of the, Edinburgh; G. Smith, M.B., London; Mr. J. A. Singer, London; Dr. G. Sharp, Leeds; *South Africa*, The Editor of, London; Dr. T. D. Savill, London; *Science Siftings*, The Editor of, London; E. W. K. Scott, M.B., Burnley; Dr. J. G. Symes, Clifton; Dr. S. Sunderland, London; Dr. H. Snow, London; Mr. A. H. Safford, London; B. H. Shaw, M.B., Cradley Heath. (**T**) Mr. J. H. Tuohy, London; Dr. H. C. Thomson, London; A. H. Tubby, M.B., London; Dr. J. Tunstall, Sutton Coldfield; J. T. Thompson, M.B., Cardiff; Dr. C. B. Taylor, Nottingham; T. P. Thomson, M.B., Carlisle; Dr. StC. Thomson, London; Mr. W. Tyrrell, London; Mr. W. J. Tivy, Clifton; Dr. W. Thorburn, Manchester. (**V**) Mr. C. S. Vines, Newport, Mon.; Mr. V. C. J. Vanderstraaten, Colombo; G. H. Vos, M.B., London; Mr. J. H. de Villiers, Ipswich; Vidian. (**W**) Mr. A. Walker, Aberdeen; Mr. C. H. Whiteford, Plymouth; J. R. Whitwell, M.B., Melton; Dr. W. Hale White, London; Dr. F. Willcocks, London; Dr. A. McC. Weir, East Sheen; W. H. Wigham, M.B., South Molton; Dr. D. Walsh, London; Mr. J. White, London; Mr. M. Wardle, Bishop Auckland; Mr. D. F. Williams, Liverpool; Mr. G. E. Williamson, Newcastle-on-Tyne; etc.

BOOKS, ETC., RECEIVED.

Sewer Gas and its Influence upon Health. By H. A. Roechling, C.E. London: Biggs and Co. 5s.

A Doctor of the Old School. By Ian Maclaren. London: Hodder and Stoughton. 1897. 2s. 6d.

Premature Burial: Fact or Fiction. By D. Walsh, M.D. London: Baillière, Tindall, and Cox. 1898. 1s. 6d.

The Diagnosis of Disease. By J. P. Parkinson, M.D., M.R.C.P., F.R.C.S. London: Baillière, Tindall, and Cox. 1898. 4s.

Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie. II Jahrgang. Bericht über das Jahr 1896. Redigirt und herausgegeben von Dr. Hildebrand. Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1898. 25s.

*** In forwarding books the publishers are requested to state the selling prices.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

AN INQUIRY

INTO

THE RELATIVE EFFICIENCY OF WATER FILTERS

IN

THE PREVENTION OF INFECTIVE DISEASE.

A Special Report to the "BRITISH MEDICAL JOURNAL."

BY

G. SIMS WOODHEAD, M.D., F.R.S.E., AND G. E. CARTWRIGHT WOOD, M.D., B.Sc.,
Director of the Research Laboratories of the Conjoint Board of Physicians (London) and Surgeons (England) Late Research Scholar of the British Medical Association.
[From the Laboratories of the Royal Colleges of Physicians (London) and Surgeons (England).]

PART II.

PRESSURE FILTERS.

UNDER the heading of non-pressure filters we have already considered the principles upon which the method of testing filters is based, but it is obvious that the method of applying these principles must be modified in the case of tap or pressure filters. Before going further we are anxious to take this opportunity of again insisting upon the vital distinction which must be drawn between the direct passage, mechanically, of micro-organisms through a filter and the indirect passage of microbes, due to their growth into the filtrate through the walls of the filter, since in almost all the references made in the public prints to the first portion of the report on table filters, this distinction appears to have been completely misunderstood and misinterpreted. In the present part of the investigation we have again divided the filters into two classes: (*a*) the obviously imperfect filters which permit of the direct (mechanical) passage of micro-organisms; (*b*) the more perfect filters which do not allow of this direct passage of micro-organisms. We have already stated in Part I that, in our opinion, all filters which do not allow of such direct passage, will not allow the ultimate passage of *disease germs*, as this could then occur only by a process of growth through the walls of the filter. The experimental data on which this view was based (which entirely corroborates the work of Gruber and his pupils), were not given in our previous article,[1] inasmuch as none of the table filters which prevented the direct passage of the micro-organisms appeared to us to be capable of being used practically as non-pressure filters, owing to the fact that the exceedingly close texture of the filtering media which is necessary to keep back the direct passage of the microbes, in all cases requires considerable pressure in order to give a reasonable amount of filtrate. The experiments which we have carried out in connection with this subject will now be given in more detail, but, as can be readily understood, we can refer only to some of the more characteristic results which have been obtained, since naturally a much larger number of experiments than are here detailed were carried out before we could arrive at a final decision on this most important point.

METHODS OF TESTING PRESSURE FILTERS.

It is evident that our experiments on pressure filters could not always be carried out when they were affixed to taps and under normal conditions, in the same way as had been done in the case of the table filters. In the first place we could not introduce disease germs into the water supplying the filter without the obvious danger of most disastrous results ensuing. In the second place we could not supply the tap filters with definite emulsions of test organisms and water in which the number of germs present could be accurately determined, as we had been able to do in the table filter experiments. All we could do was to introduce a certain quantity of a rich emulsion of the organism to be tested into the reservoir of the pressure filter before it was affixed to the tap; the quantitative element is therefore entirely wanting in such an experiment, inasmuch as in the case of an imperfect filter the number of test organisms present in the unfiltered water would become less and less the longer the filter was allowed to run. Indeed, in order to make certain of demonstrating the presence of the introduced organisms in the filtrate, it was necessary to take a number of samples at different stages, since it was impossible to predicate how long it would take in the case of any particular filter for the organisms to be washed through, or how quickly they might have disappeared through having been all washed away. As a matter of fact in most cases little difficulty was experienced in this respect, large quantities of the test organisms were always taken, and no inconvenience resulted, since the experiment was in every case purely qualitative and not quantitative in character.

We have found the following method of testing a filter very convenient in those cases where we were able to sterilise

[1] The first part of this report, dealing with non-pressure filters, was published in the second volume of the BRITISH MEDICAL JOURNAL for 1894, pages 1053 1118, 1182, 1375, 1486.

with certainty the whole mechanism. It consisted in collecting in flasks a large quantity of the water filtrate (500 c.cm. to 1 litre), and incubating these for three or four days at the temperature of the room. If the flask originally had contained only one or two water organisms which had passed the filter, these would have multiplied after incubation to such an extent that 1 c.cm. of it made into a gelatine plate would contain several hundred colonies. The risk of the atmospheric impurities entering the flask during the process of collecting the sample may be practically neglected, as these organisms (chiefly fungi and yeasts) usually do not multiply in water.

Testing with Disease Germs.

Wherever disease germs were being worked with, the filtering medium to be tested was made use of as a table filter, and a pressure of 26 to 28 inches of mercury applied by means of a water pump. In these cases, of course, the filtration was necessarily intermittent, and the filters always attained the temperature of the room; these conditions, however, after all approximate to what would occur in actual practice where the same rise of temperature would take place in an intermittently-used filter. The table filter arrangement was also taken advantage of in many experiments in which non-pathogenic germs, such as pigment-forming organisms (where it was necessary to exclude the presence of other bacteria than those which were being experimented with), were used.

One of the difficulties encountered in carrying out such experiments was the ease with which the filter may become contaminated with germs from the atmosphere or its surroundings. These foreign germs probably obtain entrance at those periods when the cotton-wool plug has to be removed from the reservoir, whilst a fresh charge of fluid is being supplied to the filter. This operation having to be performed more or less frequently, the chance of contamination in course of time became a not very improbable one; indeed, we not infrequently found, after the lapse of twelve or fourteen days that foreign organisms had obtained an entrance and grown through the filter into the filtrate; in consequence, the experiment had, as a rule, to be repeated, since the presence of these air organisms might possibly prevent our recognition of the test organism, especially if these latter should occur in small numbers. In the experiments with cholera we were able practically to eliminate this risk by the following method, by which we were enabled to assert, almost with certainty, that 300 or 400 c.cm. of the filtrate did or did not contain Koch's cholera bacilli. A concentrated sterile solution of peptone and salt was added in such quantity to the filtrate under examination that a broth of 1 per cent. of each of these constituents was formed; this was then incubated at 37° C., and examined for cholera. As Koch and many other observers have found that this method allows us to demonstrate the presence of comma bacilli when the usual methods fail absolutely, and since as has already been stated in the previous report, we were able in this way to demonstrate the presence of the cholera organism during a period of six weeks, in filters which had once been infected with cholera germs, it is highly improbable that we should fail to find them in our filtrates, which were open to much less serious contaminations.

Another difficulty encountered in the use of the Chamberland and Berkefeld candles as table filters was that, inasmuch as the filters could only be charged with fresh water from time to time, the candles were apt to become dry in the interval, and this might naturally interfere with the growth of the organisms through into the filtrate. This was obviated by closing the side tube of the exhaust bottle by means of a piece of india-rubber tubing and a spring clip. It was found that as the amount of filtered water accumulated in the bottle sufficient internal pressure was obtained to prevent further filtration, so that the filter might be left in this condition for several days without risk of the candle becoming dry. This method was taken advantage of in some of those experiments with pathogenic germs, where it was intended to extend the results over several weeks, the chances of contamination being thus minimised, as the reservoir required to be opened less frequently. Only a portion of the experiments, however, were carried out in this way, as they were open to the possible objection that the gases collecting in the receiver might exert a negative *chemotactic* influence.

In considering the question of whether a filter can be a perfect safeguard against the passage of disease germs by means of their growth through the filter and into the filtrate we shall, before discussing the case of disease germs proper, commence by observing the manner in which these filters affect other organisms, as this casts great light upon the question.

Testing with Water Organisms.

The water supply (New River Company) with which the laboratories are provided always contained at least four varieties of micro-organisms, and the different way in which these conducted themselves towards different filters is very interesting and suggestive. In water filtered by means of a Pasteur-Chamberland candle attached to the tap, only one species of micro-organism could, as a rule, be recognised. This organism was a rod-shaped microbe, which normally liquefied the gelatine somewhat slowly, forming a funnel in which flakes of a distinct yellow colour collected. Although these were the characteristics of the organism when separated directly from the tap water, it presented an entirely different appearance when developed from the filtered water. The colonies, instead of appearing on the second or third day as a liquefying species, now frequently did not make their growth evident to the naked eye till the fifth or sixth day, and then only as non-liquefying colonies, the characteristic ferment action and colour being manifested usually only after the lapse of three or four weeks' cultivation. It is thus evident that only one out of the four species of organisms present was usually able to grow through the wall of the filtering candle, and that it had become so modified and attenuated that it required several weeks to recover, completely, its usual vital characteristics.

In water filtered through a Berkefeld candle at least two species of organisms appear in the filtrate after the second or third day; the first is the same yellow liquefying form just mentioned. This, however, at once exhibited its usual characters. The other is a rod-shaped organism which rapidly liquefied the gelatine and produced a green colour. It is thus apparent that the filtering medium used in this case offers much less resistance to the growth of micro-organisms through its pores, and also that these channels appear to exert no devitalising or attenuating influence on the organisms during their passage through the wall of the candle. These results at once indicate that all filters which do not permit of the direct passage of germs cannot at once be placed in one class, but that they exhibit varying degrees of perfection of action as regards the growth of organisms through their walls, which, as we shall see, may possibly in some cases be of considerable importance. They also suggest that any method which relies upon the use of a single germ in the testing of a new filter, may possibly lead to incorrect results when the conclusion is applied from the special case to the general question.

Testing with Chromogenic Organisms.

To determine more precisely the reaction of these two filters to well-known colour organisms which are generally used as test organisms, the following experiments were carried out:

Rich emulsions of staphylococcus pyogenes aureus, micrococcus prodigiosus, and bacillus violaceus were added to the reservoir of the filters before these were attached to the tap; the filtrate was then examined for these organisms immediately and from day to day. We were never able, in the case of either the Chamberland or Berkefeld filter to detect these organisms, although the filtrate was regularly examined for several weeks. Against such experiments it has been urged by Kubler,[2] and, more recently, by Johnston,[3] that the test organisms may be killed off by the water organisms which collect on the outer surface of the candle. This, however, is highly improbable and a much more pertinent objection which might be urged against the conclusiveness of these experiments would be that the large number of water

[2] *Zeitsch. für Hyg.*, Bd. viii, p. 49.

[3] *Thesis for the Degree of D.Sc. of Edinburgh University*, August, 1894 = Banks and Co., Edinburgh.

organisms, which permit of only small quantities of the filtrate being brought under examination, might prevent the detection of the test organisms if they happened to be present in only small numbers. To eliminate this objection the experiment was carried out with the candles fitted up as table filters, every precaution being taken to prevent the ingress of foreign organisms. The filters were charged from time to time with fresh sterilised water and the filtrate was carefully examined, but, even after the lapse of three weeks, none of the test organisms could be separated from the filtrate. In this experiment the water and the filter both attained the temperature of the room—a condition which would be much more favourable to the growth of these organisms than the temperature of the water from the tap. This negative result must be therefore regarded as still more conclusive. Inoculations from the reservoir of the filter on the termination of the experiment in every case showed the test organism to be still living and vigorous. A final experiment was carried out with a Chamberland and with a Berkefeld filter, in which each filter was fed with a mixed emulsion, containing the following organisms: Micrococcus roseus, micrococcus carneus, bacillus minaceus, bacillus mycoides roseus, bacillus violaceus, and staphylococcus pyogenes aureus. In this experiment the water was retained in the reservoir of the filter by means of a piece of india-rubber tubing and a spring clip, as already described, so that the filter could be left undisturbed until an examination of the filtrate was to be made. Samples of the filtrate were taken only on the second, third, and fourth weeks of the experiment. These all proved to be completely germ-free, as large quantities of the water were added to concentrated broth solution and incubated, with absolutely negative result. This experiment appears to us to prove in a very striking fashion the apparently impassable barrier which both these filters present against the passage of such organisms.

Experiments with Cholera and Typhoid Fever Bacilli.

The experiments with pathogenic germs, which were among the earlier carried out on this subject, at first gave aberrant results from those already described, inasmuch as it sometimes appeared as though typhoid or cholera germs, after the lapse of two or three weeks, passed into the filtrate. Subsequent investigations, however, disclosed that this was due to the india-rubber fittings of the filter giving way, owing to the intermittent strain imposed upon them when the filter was removed from or inserted into the neck of the exhaust flask, an operation which was being repeated at least once a day. The method of fitting up the candles was then modified, and after such modification had been made no results of this character ever again occurred.

Chamberland and Berkefeld candles, fed from day to day with cholera and typhoid emulsions in sterilised tap water, in no case allowed of the passage of the disease germs, as we have never been able to demonstrate their presence in the filtrate. We would lay special stress upon the experiments with cholera, inasmuch as in each experiment 300 or 400 c.cm. of the filtrate were mixed with the concentrated broth solution, and thus brought under examination. By this means the possibility of the disease germs passing through in very small numbers, and thus escaping observation, was tested most thoroughly. In addition to these results several experiments were carried out, extending over a much longer period, in which the danger of extraneous organisms gaining entrance during the frequent changing of the fluid to keep the filter moist was obviated by the use of the india-rubber tubing and spring clip already described. In this way sterile filtrates were obtained after the lapse of six and eight weeks from both Chamberland and Berkefeld filters, although inoculations from the outer surface of the candles proved that numerous living pathogenic germs still remained.

Influence of Addition of Broth to Tap Water.

We have repeated an experiment which was carried out by Schöfer,[4] under the direction of Gruber, in which Berkefeld filters which had been fed with emulsions of cholera and typhoid organisms in sterilised water, received on the fourth or fifth day the same fluid, enriched with the addition of a small quantity of broth, after which they were again fed with the usual fluid. They found that two days after the application of the broth-enriched fluid to the filter the disease germs began to make their appearance in the filtrate, and increased in number till they reached a maximum; they then gradually decreased, probably as the highly diluted broth was gradually washed away. The filter could now be again fed with the fluid enriched with broth, and the same series of phenomena were again observed, except that the number of colonies in the filtrate was enormously increased on the next day, this being due, no doubt, to the multiplication of the organisms which were already present in the pores on the other side of the filter. We have found that the addition to the water of even such a small quantity as one-fiftieth of its bulk of broth sufficed to permit the growth of both cholera and typhoid organisms through either Berkefeld or Chamberland candles into the filtrate. The Berkefeld candle allowed the disease germs to pass on the second or third day, while in the case of the Chamberland filter the growth through was always further delayed, the organisms exhibiting their presence on the third or fourth day after the enriched fluid had been added. We have never been able to observe that the filter cleared itself of the disease germs, and we would lay special stress on the experiments with cholera in this relation. By means of the broth method, the presence of cholera could be demonstrated for between three and four weeks after the filter had been once fed with the enriched fluid. These experiments therefore show clearly that under favourable conditions of temperature and medium (broth) disease organisms can go through the walls of these filters in a precisely similar manner and in almost the same period of time as in the case of those water organisms which can appear in the filtrate of the same filters.

We have always found that when a filter is fed with a culture of either typhoid fever bacillus or Koch's cholera bacillus in normal broth, the germ has grown through the walls of the filter and appeared in the filtrate in the course of two or three days, so long as the temperature at which they are held is sufficiently high to admit of the growth of these organisms, the filters in these experiments being retained at the ordinary temperature of the room. We should here mention that in neither the case of typhoid nor cholera germs did the organisms which appeared in the filtrate exhibit in cultivation any signs of weakness or attenuation. It must be concluded from this fact that the devitalising influence exerted by the action of the pores in the case of the Chamberland candle on water organisms requires for its exercise the assistance of other factors, probably being aided in producing this effect by the lower temperature of the water and the less favourable pabulum which it afforded. These experiments also show that, under certain favourable conditions—a suitable pabulum (for example, broth) and a sufficiently high temperature—disease organisms can traverse the walls of any filters that have yet been put upon the market. We have now to consider whether this could ever occur in actual practice. As regards temperature, it must at once be admitted that the necessary conditions might frequently come into operation. The question as to whether the conditions as regards medium (food) would ever be sufficient to allow of their passage through such a filter, must be considered under two headings—namely, (1) as to whether the water contained sufficient organic matter to raise it to the standard of a mixture of broth and water; (2) as to whether the slimy mass which collects on the walls of a filter, even in the case of a pure water supply, might not afford a sufficient pabulum for the growth of a disease germ through its walls into the filter. In the experiments to which we are about to refer, we shall have to consider the influence exerted by each of these factors alone and also when the two are operating in conjunction, as it was, of course, quite possible that, although neither of these alone might cause the passage of disease germs, when combined they might bring about this result.

Experiments with Cholera and Typhoid Fever Bacilli in New River Company's Water.

In our experiments we have taken as a type of a good water the water as supplied to the laboratories by

[4] Ueber das Verhalten von pathogenen Keimen in Kleinfiltern, *Centralbl. f. Bakt. und Parasitenk.*, Bd. xiv, No. 21, 1893.

the New River Company, and as a type of the worst possible water which would probably ever be used for drinking purposes—Thames water taken near Waterloo bridge at low tide. In the experiments carried out with the candles covered with a coating of slime, which had been left as the result of use on the tap for three or four weeks, those of one set were sterilised by being subjected to steam for several hours, while those of the other set were used in their "raw" condition, as it was just possible that the application of heat might have affected the value of the slime as a nutrient medium. In the experiments carried out with the sterilised candles the water employed to form the emulsion with cholera bacilli was previously sterilised at 100° C., but where the candles were used in their "raw" condition the normal unsterilised fluid was employed. In the following table may be seen the results of such experiments carried out on a Chamberland filter, with cholera bacilli after laboratory tap water had been passed through the candles for three or four weeks, from which we must conclude that the slimy covering does not enable pathogenic germs to traverse this filter. Similar experiments carried out with a Berkefeld filter gave precisely similar results. We may explain here that in this table and in the others which follow the + *(plus)* or − *(minus)* signs indicate that the organisms in question were or were not found in the filtrates under examination.

Table I.—*Tap Water + Cholera.*

Condition of Candle.	1st Day.	2nd Day.	3rd Day.	4th Day.	6th Day.	10th Day.	18th Day.
Chamberland candle, without slimy coating (sterilised) ...	—	—	—	—	—	—	—
Chamberland candle, slimy coating (sterilised)	—	—	—	—	—	—	—
Chamberland candle, slimy coating (unsterilised) ...	—	—	—	—	—	—	—

The same experiment was carried out with the typhoid bacillus, except that the unsterilised candle was not used, as a negative result in that case could not be relied upon, as we have at present no sufficiently reliable method for separating the typhoid bacillus from many of the water organisms. As the results were again negative it is unnecessary to give them in detail.

Experiments with Cholera and Typhoid Fever Bacilli in Contaminated Thames Water.

The experiments with Waterloo water *plus* cholera bacilli were carried out on the same plan with the exception that the slime on the candles was obtained by the filtration of a considerable quantity of tap water. The results, which were again negative, are given in the following table. The experiments with Berkefeld candles yielded exactly the same results, and need not be given here in detail.

Table II.—*Waterloo Water + Cholera.*

Condition of Candle.	1st Day.	2nd Day.	3rd Day.	4th Day.	6th Day.	10th Day.	18th Day.
Chamberland candle without slimy coating (sterilised) ...	—	—	—	—	—	—	—
Chamberland candle, slimy coating (sterilised)	—	—	—	—	—	—	—
Chamberland candle, slimy coating (unsterilised) ...	—	—	—	—	—	—	—

Similar experiments were carried out with typhoid bacilli, with sterilised candles and Waterloo water, and the results obtained again gave no support to the view that the disease germ could, even in the presence of this highly polluted water, pass through into the filtrate.

Experimemts with Cholera and Typhoid Fever Bacilli in London Sewage.

As a final and conclusive test as to the possibility of disease germs traversing the walls of these filters, when fed with a water highly contaminated with organic matter, an experiment was carried out with undiluted sewage. The results, when the cholera bacillus was used, are to be found in the following table:

Table III.—*London Sewage + Cholera.*

Condition of Candle.	1st Day.	2nd Day.	3rd Day.	4th Day.	6th Day.	10th Day.	18th Day.
Chamberland candle without slimy coating (sterilised) ...	—	—	—	—	—	—	—
Chamberland candle, slimy coating (sterilised)	—	—	—	—	—	—	—
Chamberland candle, slimy coating (unsterilised) ...	—	—	—	—	—	—	—

Similar experiments with Chamberland and Berkefeld candles (except with the unsterilised candles) were carried out, with sterilised sewage and typhoid bacilli, but as these again gave an absolutely negative result, they need not be detailed.

From a consideration of the experiments to which we have briefly referred, and bearing in mind that many other similar experiments were carried out at the same time under slightly varying conditions, the evidence against the possibility of either typhoid fever bacillus or Koch's cholera bacillus appearing in the filtrate from either of these filters becomes very strong indeed.

We have seen that the addition of even a comparatively small quantity of broth to tap water, enables disease germs to grow through the walls of these filters, but, on the other hand, waters naturally highly contaminated, and even sewage itself, do not appear to supply the disease germs with a sufficiently favourable pabulum to enable them to traverse their walls. We have accordingly every reason to believe, so far as experimental evidence would warrant us to dogmatise on such a question, that these filters provide a complete safeguard against the transmission of waterborne infective disease.

Influence of Filtration on Non-Specific Infection.

We have up to the present discussed only the influence which filters can exert as regards the transmission of specific infective disease; we must now consider the action which they may exert upon the spread of those more general gastro-intestinal disorders which are so frequently associated with a contaminated or suspicious water supply. These non-specific disorders resulting from the ingestion of water have perhaps never yet received that attention from the hygienist and general public which, from their importance, they undoubtedly merit. The influence upon the death-rate of cholera nostras and other allied conditions, due to this cause would probably, if it could be traced over the country at large, far transcend in importance even that due to typhoid fever.

If we consider the influence on morbidity exerted by this factor, its importance not merely from a hygienic but from a pecuniary point of view becomes still more striking, although unfortunately the statistics on this point are still very incomplete, and probably do not reveal more than a very small percentage of the cases affected.

Water as a Medium of Infection.

In the first part of this report[5] we have already suggested why water was so frequently the means of transmitting infective disease. Experimental evidence would seem to show that disease germs (for example, cholera) in water, taken on an empty stomach, might pass into the intestines unharmed by the gastric juice, while if taken in milk or with food none appear in the intestines, probably because

[5] British Medical Journal, Vol. ii, 1894, p. 1058.

the stomach "reacts" to the food with its acid gastric secretion, which latter exerts a distinct germicidal or antiseptic action on the microbes. It is evident from this that injurious germs when present in water have a much better chance of arriving unharmed in the alkaline contents of the intestines, where, undisturbed, they can manufacture their poisonous products, and so give rise to gastro-intestinal disturbances. Our information upon the species of organisms which can, or usually give rise to such disorders, is at present exceedingly limited and unsatisfactory; indeed, it is very probable that such disorder may be due to many different species of organisms, acting under special conditions; thus only certain portions of the community, apparently all subjected to the influence of the same etiological cause, are attacked, and these, except in the case of epidemics, at different periods. In addition, it may very frequently be observed that a population exposed to such influences often seems to acquire a relative immunity to their action. Thus we frequently observe strangers to a locality affected by a water almost at once on their arrival, whilst those who have been constantly partaking of it experience no evil result, and refuse to acknowledge that the water can be the source of the mischief. Again, there is good reason to suppose that even those organisms normally present in the intestines can, under favourable conditions, give rise to serious disturbances of the intestinal tract. We are concerned here, however, only with those organisms which can be carried by means of water, and the influence which filters can exert on their transmission. Our means of testing this are, as has already been stated, not so definite as in the case of specific disease germs, since we are unable to demonstrate the germs which may give rise to these disorders, and test them directly as regards their power of passing through the walls of a filter.

Animal Experiments as a Test.

Our only means of approaching the question at present appears to be by estimating the degree of toxicity of the products which can be manufactured by such bacteria present in the water by the injection of these products into, and thus testing their action on, the lower animals. It has been pointed out by Blachstein[6] that if a tube of broth be inoculated with one cubic centimetre of a good drinking water, and incubated at 30° C. for 48 hours or longer, 2 cubic centimetres of this mixture of organisms and their products can be injected intravenously into a rabbit, or intraperitoneally into a guinea-pig, apparently without inconveniencing either of these animals. On the other hand, should the water used originate from a contaminated source, such as from the Seine, both animals usually rapidly succumb. This method has been modified by one of the present writers[7] in substituting subcutaneous for intraperitoneal injection in the case of guinea-pigs and taking the presence or absence of local reaction as the test of contamination instead of the lethal action. This was found necessary as it is quite exceptional in this country for the water supplies to be contaminated to such an extent as to exert a lethal action. We have found in the case of laboratory tap water that the effect on rabbits was *nil*, while in the case of guinea-pigs, at most only a slight swelling (œdema) was visible at the end of twenty-four hours, after which it rapidly disappeared.[8] Even when the organisms in the tap water are allowed to grow for weeks in the broth, and so heap up their products, their effect on animals is still practically *nil*. From this it would appear that these germs, which are all what may be termed water organisms—that is to say, microbes which are capable of multiplying and living in the purest potable waters—are not capable of producing any large amount of injurious toxic products. This is, indeed, what might naturally be expected, since it is not at all probable that the faculty of building up complex protoplasms from the most simple compounds which must be possessed by a water organism would go along with the power of disintegrating the more complex organic compounds which is usually associated with the production of toxins. In our application of this method to the testing of filtered and unfiltered water we have incubated the broth at 37° C., as this is the temperature at which the organisms would have to produce their toxins in the human body, such temperature in great part excluding the action of many of the ordinary indifferent water organisms. We have also taken advantage of the local reaction in guinea-pigs as affording evidence of less marked virulence and toxicity of the mixture in the very common case of the water being non-lethal for either guinea-pigs or rabbits.

Influence of Filters on Toxicity of Broth Cultures grown from Filtered Water.

In the case of the filtered water, in order to determine exactly the means through which the filter exerted its influence, it was necessary to investigate the following three factors, first, whether the filter by allowing only a diminished number of germs, although of the same nature as in the unfiltered water, to pass through, might tend to affect the animal in a lesser degree; secondly, whether the same germs passing through into the filtrate might not have been attenuated in their passage and thus weakened in their effects on the animals; or thirdly, whether the diminished effect of the filtered water might not be due to the filter allowing only those species which belong to the more innocuous water organism type, and thus relatively inoffensive (non-toxic) to traverse its walls. We have been able to answer the first question by incubating the broths for a day or two longer, which would amply compensate for the lessened numbers at the commencement of the operation, but invariably found that this was quite insufficient to account for the difference in the results. The influence of the second factor was tested by incubating the broth for a considerable period, and then from this inoculating fresh broths with which the animal experiments were then carried out. The result, however, proved that this was not the real or only explanation, although it is exceedingly probable that it may exert some influence. This leaves us with the third factor as alone capable of explaining the difference in the virulence of the filtered and unfiltered water. This conclusion is in perfect accord with what we have already stated as regards the power of the filter of allowing only certain of the species present to appear in the filtrate. This is, moreover, corroborated by the fact that the relative permeability of the Berkefeld and Chamberland filters for water organisms corresponds with a relative virulence in the action of their filtered fluids. In the following experiments the filters were fed with the water for two or three weeks in order that the filtrate might contain all those germs which would probably in course of time traverse their walls.

Animal Experiments with Tap Water.

In carrying out experiments with the laboratory tap water we were obliged to modify the method of procedure, since the unfiltered water, when mixed with broth and incubated for forty-eight hours, was practically innocuous, so that in order to obtain a positive result in this which was our control, we were obliged to incubate it for a period varying from a fortnight to three weeks. The filtrates from Chamberland and Berkefeld filters were then incubated for the same or a longer period, and the local results produced in guinea-pigs carefully compared with each other and with the control (Table IV).

These experiments show that ordinary tap water, which, when incubated in broth for three weeks, may be injurious and distinctly irritating for guinea-pigs, when it has been filtered through either of these candles becomes practically inoffensive. This action of these filters in render-

[6] *Annales de l'Inst. Past.*, 1893, p. 689.

[7] Circumstances under which Infectious Diseases may be conveyed by Shellfish with Special Reference to Oysters: Special Report to the BRITISH MEDICAL JOURNAL by G. E. Cartwright Wood: BRITISH MEDICAL JOURNAL, vol. ii, 1896, p. 853.

[8] Since these experiments were carried out we have observed that the action of the tap water supplied to us by the New River Water Company varies greatly at certain periods, the effect on guinea-pigs being much more marked at these times than at others, and this we found was due to the presence of the "potato bacillus" (Bacillus mesentericus vulgatus) on these occasions. Thus, for example, during the past summer the water contained this organism regularly and gave rise to a local reaction in guinea-pigs, whilst during the autumn months, after it had disappeared, the water again became innocuous. It is quite possible that during the summer months, when there is the greatest strain upon the supply, some other sources may be laid under contribution; this would account for the deterioration (from the bacteriological point of view) in the quality of the water.

TABLE IV.—*Tap Water.*

Nature of Material.	Age of Culture.	Species of Animal and Method of Inoculation.	Result.
Chamberland filtrate, taken after 6 weeks	Broth culture incubated at 37° C. for 3 weeks	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Slight œdematous swelling which had disappeared at the end of the second day; no loss of weight. Apparently unaffected; animal still living after one month; no loss in weight.
Berkefeld filtrate, taken after 6 weeks	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Slight œdematous swelling which had quite disappeared on the second day; very slight temporary loss in weight. Apparently unaffected; animal still living after one month; no loss in weight.
Unfiltered Tap water (Control)	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Soft swelling with indurated margins; animal lost 30 grammes in weight during a week; still living after one month. Apparently unaffected.

TABLE V.—*Thames Water taken at Waterloo Bridge.*

Nature of Material.	Age of Culture.	Species of Animal and Method of Inoculation.	Result.
Chamberland filtrate taken after 2 weeks	Broth culture incubated at 37° C. for 48 hours	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Slight swelling, which had quite disappeared in 24 hours. Apparently unaffected, still living after the lapse of a month.
Ditto	Broth culture incubated at 37° C. for 14 days	Guinea-pig: 2 c.cm. subcutaneously	In 48 hours swelling completely disappeared.
Berkefeld filtrate, taken after 2 weeks	Broth culture incubated at 37° C. for 48 hours	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Swelling still visible after 24 hours; had disappeared on fourth day, leaving slight but distinct induration. Apparently unaffected; still living after lapse of a month.
Ditto	Broth culture incubated at 37° C. for 14 days	Guinea-pig: 2 c.cm. subcutaneously	Distinct swelling still visible on fourth day, which was followed by distinct induration, which was still visible on tenth day, and accompanied by enlarged and hardened condition of inguinal gland.
Chamberland filtrate, taken after 3 months	Broth culture incubated at 37° C. for 48 hours	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Swelling disappeared in 24 hours, and in 48 hours local lesion just discernible. Apparently unaffected.
Berkefeld filtrate, taken after 3 months	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Swelling just visible after 24 hours, and local lesion just discernible on fourth day. Apparently unaffected.
Unfiltered Waterloo water (Control)	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Diffused soft swelling in 24 hours, and found dead on second day. Died within 18 hours.

TABLE VI.—*London Sewage.*

Nature of Material.	Age of Culture.	Species of Animal and Method of Inoculation.	Result.
Chamberland filtrate taken after 2 weeks	Broth culture incubated at 37° C. for 48 hours	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Slight swelling which persisted for several days, but had completely disappeared on tenth day. Animal still living after a month.
Berkefeld filtrate taken after 2 weeks	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Marked swelling, which persisted till the tenth day, when it burst, forming small abscess with suppuration. Animal still living after a month.
Unfiltered London sewage (control)	Ditto	Guinea-pig: 2 c.cm. subcutaneously Rabbit: 2 c.cm. intravenously	Soft swelling extending over surface of abdomen followed by death of guinea-pig on third day. Died within 18 hours.

ing the water inoffensive is shown much more markedly in the case of dangerous waters, as will be seen in the above tables.

ANIMAL EXPERIMENTS WITH CONTAMINATED THAMES WATER.

The filtration experiments with Thames water taken near Waterloo Bridge are exceedingly striking, and must be regarded as very important as indicating the remarkable influence which the above-mentioned filters can exert on the toxicity of a highly contaminated water. The results of two sets of experiments are given in Table V.

Here the unfiltered water, which is so very virulent for both guinea-pigs and rabbits, becomes almost innocuous after filtration, and even when incubated for fourteen days exhibits only slight toxicity. The relative difference in the filtering efficiency of the Chamberland and Berkefeld filters in this respect is exhibited very clearly in the action on guinea-pigs of the broths which had been incubated fourteen days. In the former case the local action is evanescent, while in the latter

it is quite marked, persists till the tenth day, and is accompanied by enlargement of the inguinal glands.

ANIMAL EXPERIMENTS WITH LONDON SEWAGE.

We have also carried out some experiments with London sewage for the purpose of estimating the influence which these filters exert on the virulence of this fluid. In this experiment, as fresh samples of sewage could not conveniently be obtained from day to day, the filters were fed with the same stock solution during the whole period. The results obtained are found in Table VI.

In these experiments a marked difference in the virulence of the Chamberland and Berkefeld filtrates is again evident, as seen by the results obtained on guinea-pigs.

We may now summarise the conclusions which we think we are justified in drawing from these experiments. There can be no doubt that these filters, and probably all those which prevent the direct passage of test organisms, exert a most remarkable influence on the toxin-producing capacity and virulence of the fluids which they filter. We have accordingly as good reason as experimental evidence can afford to insist that these noxious waters would be practically bereft of their harmful properties by this filtration. The varying degree of efficiency in the two filters experimented with is of great scientific and technical interest; but whether this influence would manifest itself under normal conditions in actual practice in the filtration of water as of any importance must at present be regarded as somewhat doubtful.

We now give the results in detail of our examination of the various pressure filters which we have considered it necessary to bring under the scope of our investigation. As in the case of the table filters, we divide these into two groups:

A. Those filters which allow of the direct passage of test organisms into the filtrate; and

B. Those filters which do not allow test organisms to pass directly into the filtrate.

A.—FILTERS WHICH PERMIT OF THE DIRECT PASSAGE OF DISEASE GERMS.

REASONS WHICH GUIDED US IN THE SELECTION OF PRESSURE FILTERS TO BE TESTED.

We have considered it unnecessary in this section to consider, further, pressure filters in which the filtering material consists of charcoal in its various forms, spongy or magnetic iron, or natural porous stone, where these have already been examined as table filters and found ineffective. We have included these in our investigations where the material or the method of its use differs from that adopted in the table filter, or where from their extensive use it was considered advisable to subject them to the direct test of experiment. It must, however, be distinctly borne in mind that by far the larger number of the pressure filters which are at present in use are composed of the inefficient filtering media which we have already reported on under the heading of non-pressure filters, and that their deficiencies are rendered still more manifest when they are used as pressure filters. We have stated in our previous reports on non-pressure filters that an ineffective filter might materially increase the risk incurred by those making use of an infected water; probably almost all the disease germs would in course of time be washed through into the filtrate, and thus continue to infect the water for a considerable period. This no doubt holds good for the very porous material which has to be made use of in the case of table filters, but as much denser filtering media *can* be employed in the case of pressure filters, there is no question but that many such filters, although imperfect, may permanently arrest even a large proportion of the disease germs, and in all probability in this way really lessen the risk of infection incurred by those making use of them. This fact is brought home to us by a cursory examination of the tables relating to imperfect filters, the filtrate from the table filters usually containing very large numbers of the test organism, whereas in the case of some of the imperfect tap filters, the proportion passing through is frequently comparatively small, and in some cases comparatively large quantities of the filtrate had to be examined before the presence of micro-organisms could be demonstrated. A number of these pressure filters in which these denser media have been made use of have recently been placed upon the market, we believe in consequence of our first report on filters; and in the case of one filter at least, the results which we have obtained are of such a character as to indicate that a new substance, natural stone, must be added to those which are capable of affording a germ free filtrate.

THE SILICATED CARBON FILTER COMPANY, *Battersea, London.*—The tap filter supplied by this firm is fitted with the same medium as those which we have already tested, in the case of table filters, yet, inasmuch as the material is arranged in a different manner, and consists of a combination of solid and granular charcoal, we considered it advisable to bring this within the scope of our examination. Its structure and arrangement will be understood at once on reference to the diagram which is appended.



The vendors claim for this filter that it "yields absolutely sterilised water under any pressure." They also state that it "is invaluable in the tropics and in all climates as a safeguard against cholera, typhoid, and other zymotic diseases."

The rate of outflow in the case of this filter is very rapid, about one pint per minute being passed during the first day, and even after water has been running through it continuously for a fortnight, the filtration of a pint required little more than two minutes.

This filter was tested as a table filter with cholera and typhoid organisms, which at once passed through into the filtrate. These experiments need not be considered further here, as the experiment with staphylococcus pyogenes aureus carried out on the tap under the conditions of actual practice proved that these pathogenic microbes pass directly into the filtrate. The results obtained with the test organism and with tap water are given in the appended tables:

TABLE VII.—*Tap Water.*

(Pressure 23 to 25 lbs. Temperature 19° C. to 25° C.)

Date of Sample.	Average Number per c.cm. originally Present in the Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day...	50 to 60	0 ?
Second day		26
Third day		60
Fourth day		200
Fifth day		1,000
Sixth day		Innumerable
Seventh day		"

TABLE VIII.—*Staphylococcus Pyogenes Aureus.*
(Pressure 23 to 25 lbs. Temperature 19° C.)

Date of Sample.	Average Number per c.cm. originally Present in the Suspension.	Average Number Present. per c.cm. in the Filtrate.
First day, sample No. 1 ...	200,000	15 to 20
,, ,, ,, No. 2 ...		20
Second day		3

The direct passage of the test organism, as seen in these experiments, proves, in our opinion, that this filter confers no protection against the acquisition of waterborne disease (Table VIII); while the filtered water when the filter has been in use for a few days, instead of being sterile, showed a very much larger number of microbes than the unfiltered tap water (Table VII).

Since this first series of experiments was carried out we have received from the Silicated Carbon Company an improved form of their filter, with which we have carried out the following experiments. The essential character in which this filter differs from the former one consists in the fact that the carbon needle possesses much thicker walls and that its structure is very much denser and its texture finer. The fittings of the needle are also improved and are made much more secure. The rate of filtration with 25 lbs. pressure is very much slower than in the case of the earlier form—so slow, indeed, that this consideration alone would always militate against its coming into any very general use. The results of our experiments are given in the following tables:

TABLE IX.—*On Tap. Pressure 25 lbs.*

Date of Sample.	Average Number per c.cm. originally Present in the Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day	50	Nil
Second day		5
Third day		300 to 400

TABLE X.—*Staphylococcus Pyogenes Aureus.*

Date of Sample.	Average Number per c.cm. originally Present in the Suspension.	Average Number present per c.cm. in the Filtrate.
First day	400,000 to 600,000	2
Second day, Sample No. 1		3
,, ,, No. 2		12
Third day ,, ...		Nil

We have also tested this candle fitted up as a table filter, feeding it with a rich emulsion of cholera. On incubating 200 c.cm. of the filtrate with concentrated broth, we had no difficulty in demonstrating the presence of the cholera bacillus in the filtrate.

From these tables it may at once be seen that these filters do not afford protection against the direct passage of disease germs.

MAIGNEN'S "FILTRE RAPIDE" AND "ANTI-CALCAIRE" CO. LIMITED, *255, Regent Street, London, W.*—This filter consists (*a*) of a cylinder of stout coarse asbestos cloth, the use of which is to keep back all coarse particles of straw, dirt, etc.; (*b*) the filter proper, an accordion-shaped bag of fine asbestos cloth tied on to a rigid tube at each end, and firmly packed with carbo-calcis, each plait in the accordion-shaped bag being firmly bound with asbestos cord; through this bag filtration takes place from without inwards. Both these parts are contained within a large metal cylinder. The space within the iron cylinder not occupied by the two asbestos bags may be filled with carbo-calcis, but as it had already been found that carbo-calcis is by itself insufficient to keep back micro-organisms, it was thought better to test the essential parts of the filter alone. In order that the filter might get properly set, water was allowed to pass through it for fourteen days, after which the different parts were sterilised by passing through them a 10 per cent. solution of caustic soda.

In experimenting with this filter we had some difficulty in deciding as to the best means of sterilising it, as owing to its size, the application of superheated steam was out of the question. The best way out of the difficulty, although not free from objection, appeared to be to apply some antiseptic fluid which would not injure the filtering material, and then get rid of the antiseptic by washing it away by allowing water to run through the medium for a certain time. A strong solution of caustic soda was used as the antiseptic, the fluid being allowed to act upon the filtering medium for several hours before the tap water was allowed to enter so as to clear the filter of the disinfectant. The water issuing from the filter was tested with phenolphthalein for the alkali before it was considered ready for the experiment. The results obtained with tap water are to be found in the appended table.

TABLE XI.—*Tap Water: Temperature 17° C.*

Date of Sample.	Average Number per c.cm. originally present in the Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day	40 to 60	0
Second day		30 to 40
Fourth day		130 to 150
Eighth day		7,000 to 9,000

It will be seen from this table that the filtrate the first day after sterilising was sterile when tested in quantities of 1 c.cm. in plate cultures, but it is quite possible that this may not have been altogether due to the filtering capacity of the material, but may be ascribed partly, at any rate, to the charcoal still retaining some of the antiseptic in its pores. As will be seen from the table, on the second day the number of organisms in the filtrate is practically the same as in the unfiltered water; while on the third and fourth days the filtered water contains many more organisms than are present in the tap water.

The filter was tested as regards the passage of test organisms by being treated with an emulsion of staphylococcus pyogenes aureus. A number of samples were taken at different periods as, naturally, we could not foretell at what date the test organisms would appear in the filtrate. The results obtained on this occasion are rather surprising, as the test organism was detected only in the first sample examined, as will be seen from the appended table. This may have been due to the fact that the filter allowed the test organisms to be washed through almost *en masse*.

TABLE XII.—*Staphylococcus Pyogenes Aureus.*

Date of Sample.	Average Number per c.cm. originally Present in the Suspension.	Average Number Present per c.cm. in the Filtrate.
First day, sample No. 1 ...	500,000 to 800,000	6
,, ,, ,, No. 2 ...		0
Second day, sample No. 1 ...		0
,, ,, ,, No. 2 ...		

We have repeated this experiment with another test organism (bacillus prodigiosus), and were able easily to demonstrate its presence in the filtrate. This filter accord-

ingly permits of the direct passage of the test organisms, and cannot, in our opinion, be relied upon to afford any protection against the communication of waterborne disease.

WILLIAM DALTON, *9, Dickson Road, Blackpool.*—We are not aware whether or not this tap filter has yet been placed upon the market, the specimen upon which we now report having been sent by the maker to the BRITISH MEDICAL JOURNAL for examination. The claims made for it are that it ensures perfect filtration of water or any fluids, while at the same time it makes provision for carrying away the deposit, left by the water or liquid filtered, by a special pipe by which its filtering capacity was supposed to be again restored; the water in the process of filtration passes first through asbestos gauze, then through charcoal, limestone, or other similar material, and thence through a perforated or gauze cover, whence it issues from the filter. The rate of filtration was at first a very rapid one, and, although the filter was allowed to run continuously, it still gave a pint in three minutes on the third day; but in the course of a week it required a quarter of an hour to filter this quantity.

We have tested this filter affixed to the tap as regards the passage of water organisms, staphylococcus pyogenes aureus and yeasts, and fitted up as a table filter under pressure as regards the passage of cholera bacilli.

The results obtained in these experiments are set forth in the appended tables.

TABLE XIII.—*Test Organisms.*

Test Organism used.	Average Number per c.cm. originally Present in the Suspension.	Average Number Present per c.cm. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	20,000 to 30,000	300 to 400
Cholera bacilli...	3,000 to 4,000	80 to 100

TABLE XIV.—*Tap Water.*

(Pressure 14 to 16 lbs. Temperature 21° C. to 25° C.)

Date of Sample.	Average Number per c.cm. originally Present in the Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day...	40 to 50	20
Second day		30
Third day		80 to 100
Fourth day		100 to 150
Fifth day		150
Seventh day		200 to 300
Tenth day		300 to 400

As will be seen from these tables this filter offers no impediment to the direct passage of micro-organisms, and can in our opinion afford no protection against the communication of waterborne infective disease.

JACOB BARSTOW AND SONS' Patent Combination Natural Stone and Carbon Filters, *Filter Works, Pontrefract, England, supplied to Her Serene Highness Princess Mary Victoria of Teck, the Empress Eugenie, the Prince of Monaco, the Belgian and other Governments, have never yet received a second or an inferior award at any time, but have won thirty-one gold and other first prize medals.*—The filtering medium used in the manufacture of these filters consists, as already stated in Part I of this report, of a combination of natural porous stone and carbon. The vendors state that their filter removes all "bacilli" from water, and "is excellently adapted for rendering even very impure water drinkable." The rate of filtration is very rapid; in fact, the filtering medium seemed to offer so little resistance to the passage of the water that on the first day its rate of flow was very similar to that with which it had issued from the tap previous to the fixation of the filter. On the third day, when the water pressure was 16 lbs. to the square inch, it required only ten seconds to filter a pint, and on the sixth day the filtration was still very rapid. We must state, however, that in the case of this filter it was not convenient to allow the water to pass continuously at full pressure, and that only a moderate flow was permitted; accordingly it must be borne in mind that under other conditions the filter might have become choked up much more quickly. We have carried out two sets of experiments; one, using the filter as a regular simple tap filter attached to the main; the other, in which an emulsion of yeasts and staphylococcus pyogenes aureus was poured into the reservoir of the filter before it was affixed to the tap. The results obtained in our experiments are found in the following tables.

TABLE XV.—*Test Organisms.*

Test Organism used.	Average Number per c.cm. originally Present in the Suspension.	Average Number Present per c.cm. in the Filtrate.
Staphylococcus pyogenes aureus + yeasts	30,000 to 40,000	30 to 50.

TABLE XVI.—*Tap Water.*

(Pressure 14 to 16 lbs. Temperature 16° C. to 17° C.)

Date of Sample.	Average Number per c.cm. originally Present in the Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day	30 to 40	5
Second day		25
Third day		250
Fourth day		300 to 400
Fifth day		400
Sixth day		400

It will be seen on reference to Table XVI. that the water organisms passed through the filter at once into the filtrate, and by the third day appeared in the filtrate in much larger numbers than in the control water. The water organisms which appeared in the filtrate were not all of one species, but comprised all the types present in the control water, and at any rate during the first days almost in a similar proportion. It will be observed also that the yeasts and staphylococci passed directly into the filtrate. It is impossible, of course, to give any idea of what proportions of these were allowed to pass into the filtrate, since we are unable to say how long it would take for the micro-organisms to be washed through the medium, and to appear in largest proportion in the filtrate. It is, however, quite sufficient for our purpose to be able to show that after the tap water had been running for two minutes these organisms appeared in considerable numbers in the filtrate. As our previous experiments had plainly shown that all filters which allow the direct passage of test organisms permit also disease organisms to be transmitted, we did not consider it necessary to make any experiments with cholera and typhoid bacilli. This appeared all the more unnecessary in this case, inasmuch as we had already tested the same material as a table filter, and found that it readily allowed the passage of these disease organisms.

We have accordingly no hesitation in stating that in our opinion this filter affords no protection agains the communition of waterborne infective disease.

PIEFKE FILTER, ARNOLD UND SCHIRMER, *Gr. Frankfürter Str. 123, Berlin, N.O.*—This filter is supplied for the rapid filtration of large quantities of water for household or manufacturing purposes. It is supplied in different forms adapted for the special use to which it is to be applied. The forms we have seen consist (1) of a filter to be used in a cistern or well, the water being pumped through the filter. The other form (2) a pressure filter, with which we have experimented, is fitted to the supply pipe from a cistern, or from th main. The principle

is the same in both cases. The filter is formed by a series of discs consisting of (1) stout cellulose paper, or (2) asbestos films, (3) either of these covered with a layer of deposited fine asbestos pulp. These discs are supported in series on perforated zinc plates, clamped together on fenestrated cups by a thumb nut on a central delivery pipe. This filter must, from the experimental point of view, be considered under three separate headings, inasmuch as two quite distinct kinds of filtration may be made use of, and a third form of filter can be constituted by combining two of the substances employed. We shall briefly describe these forms under three headings: (1) as fitted up with discs of compressed cellulose, of which two thicknesses are supplied; (2) the filter fitted up as in number one, but receiving a deposit of asbestos pulp before being used, by charging the first portion of the water with this material; (3) in which the filter is fitted up with thin discs of compressed asbestos of a bluish colour.

Piefke Filter No. 1.—As the filtering medium in this form consists practically of thick filtering paper, we naturally cannot expect anything more than a mere mechanical filtration, and, indeed, the manufacturers expressly state that deposition of asbestos on the filter is necessary for all finer filtration. As a mechanical filter the compressed cellulose functions admirably, retaining all the ordinary forms of finely suspended material on the surface of the discs, so that it might be relied upon to render almost any water clear and sparkling. The finest gunpowder charcoal, and ultramarine are both completely retained on the surface of the disc, while, on the other hand, milk passes through into the filtrate. The rate of filtration with 16 lbs. pressure is also ample, so that for many purposes, where water is required to be merely cleared of suspended material, this filter may be very conveniently used. From a hygienic point of view, the fact that the filtering medium (cellulose discs) may be so easily and cheaply renewed, is a point of considerable importance. This filter was, in the first instance, sterilised by allowing 5 per cent. carbolic acid to act on it for several hours; it was then attached to the tap, the disinfectant being removed by the water being passed through the filter for a short time before a sample was taken. The results obtained from these experiments are given in the following table:

TABLE XVII.—*Tap Water.*

(Pressure 16 lbs. Temperature 12.5° to 14° C.)

Date of Sample.	Average Number per c.cm. originally Present in Tap Water.	Average Number Present per c.cm. in the Filtrate.
First day...	30 to 50	20
Second day		50
Third day		70
Fourth day		400
Fifth day...		500

As will be seen, these cellulose discs offer no barrier to the direct passage of water organisms, and accordingly would confer no protection against the transmission of waterborne disease. It will be seen that the number of organisms present in the filtrate did not increase so rapidly from day to day as has been observed to be the case in many of the other filters. It must be pointed out, however, that these experiments were carried out during the colder part of the year, when the temperature in the laboratory ranged from 12 5° C. to 14° C.

Piefke Filter No. 2.—In examining this filter considerable difficulty was experienced in carrying out our experiments, as we could not submit the apparatus to the ordinary process of sterilisation without running the risk of destroying the filtering mechanism. Thus the exposure to moist heat in the steam steriliser would very probably have weakened or destroyed the filtering capacity of the paper discs, and at the same time have disturbed the deposit of asbestos pulp. In the experiments with water carried out with the filter attached to the tap, recourse was had to the use of carbolic acid (as in the case of Piefke Filter No. 1). When tested in this way we were unable to obtain an absolutely sterile filtrate on the first day of the experiment, but as the number of organisms present in the filtrate came practically within the margin of error (taking into consideration the condition of the experiments), the results obtained could not be regarded as being absolutely decisive. We accordingly submitted this form of filter to a test in which a disease organism was used under the following conditions: The mechanism was fitted up, and, after attachment to the tap, was allowed to work for several hours. It was then detached from the tap, and fed with a rich emulsion of cholera organisms, the fluid being drawn through by means of the exhaust exerted by a water pump. At three different periods of the filtration a quantity of the filtrate, about 200 c cm., was added to broth, incubated at 37° C., and examined for the presence of cholera bacilli. The result of these experiments will be found in the following table:

TABLE XVIII.—*Tap Water + Cholera.*

Number of Sample.	Presence or Absence of Cholera.
Sample No. 1	+
„ No. 2	+
„ No. 3	+

The positive result obtained in this experiment warrants us in concluding that this form of filter does not afford protection against the communication of waterborne disease. We may also point out that, even if this experiment had given a negative result, this filter could not be recommended for use with a dangerous water, inasmuch as its character would vary from time to time, owing to the manner in which the asbestos pulp was deposited when the filter was freshly charged.

Piefke Filter No. 3.—In this type films of compressed asbestos are made use of as the filtering medium. In the experiments with water the filter was sterilised by allowing it to stand in contact with carbolic acid for several hours; the acid was then washed away by passing a considerable quantity of tap water through the filter. The gelatine plates made from this filtrate either remained sterile or developed so few colonies as to come within the range of experimental error. The result of the experiment must accordingly be regarded as inconclusive, and we do not accordingly append any table of results with tap water. Fresh discs were then inserted in the filter, and experiments with cholera bacilli similar to those in connection with Piefke Filter No. 2 were carried out. The results obtained will be found in the following table:—

TABLE XIX.—*Tap Water + Cholera.*

Number of Sample.	Presence or Absence of Cholera.
Sample No. 1	+
„ No. 2	+
„ No. 3	+

We may here state that these discs were apparently able to retain a very large proportion of the microbes present in the water. To such an extent, indeed, was this the case that gelatine plates frequently failed to reveal their presence, although the incubation of larger quantities of the filtered water in broth gave a positive result. There is no doubt that asbestos supplies a very fine filtering medium which may, under certain circumstances, provide a germ-free filtrate, although, as we have shown in our experiments, neither of these filters when submitted to a stringent test could be relied upon to protect against the passage of disease organisms. In addition, even if these filters had in the first place been able to prevent the passage of test organisms, we should have been obliged to submit them to further and more prolonged investigation. Gruber states that asbestos filters gave in the first place a sterile filtrate, but in course of time, when used under pressure, the filtering medium became broken down

and disorganised, so that organisms were passed directly into the filtrate. In his opinion, accordingly, such a filter is at first perfect, but in course of time and use becomes imperfect. In our experiments, by bringing larger quantities of the filtrate under examination, we have come to the conclusion that these filters, Nos. 2 and 3, were from the first imperfect, and accordingly found it unnecessary to carry the investigation further. The use of asbestos filters for the prevention of disease at present also labours under the disadvantage that the medium cannot be tested before being sent out, and warranted to provide a germ-free filtrate, as can be done in the case of porcelain candles.

We must accordingly conclude from our experiments that the Piefke filter does not afford protection against the communication of waterborne disease.

FILTRE UNIVERSEL. CHABRIER JEUNE ET CIE., *63, Rue de Maubeuge, Paris.*—The manufacturers of these filters make use of both charcoal and porcelain as a filtering medium, but we shall concern ourselves only with the latter, as we had already satisfied ourselves that the former could in no case give satisfactory results. The porcelain is constructed in many various forms, to supply pressure, non-pressure, and pocket filters. It is stated that the porcelain is of great hardness, and that it is baked at a very high temperature. After drawing attention to the fact that water contains many organisms, and often transmits typhoid fever, cholera, dysentery, etc., it is stated that "these filters are the only ones of their kind able to remove from water and other liquids injurious germs." The model on which we carried out our experiments was catalogued "No. 1." The wall of the porcelain bougie, while much shorter than that of the Pasteur-Chamberland candle, is much thicker. The bougie, which has a metal fitting instead of a porcelain nipple through which the water is delivered, is fitted into a metal case similar to those of the other pressure filters. The fittings as a whole are neither so simple nor so satisfactory as are those of several of the other filters examined. Indeed, the danger which is here incurred of the whole object of filtration being nullified by the "union" of the porcelain with the metal is, we believe, very great. Moreover, this arrangement renders impossible the cleaning of the bougies by baking or burning, which in almost all cases is undoubtedly the only practicable method of completely restoring the efficiency of a porcelain filter. The vendors state that this filter affords a supply of 5 to 25 litres per hour, according to the water pressure. In our experiments, with a pressure of 24 lbs. to the square inch, the initial output was between 4 and 5 litres in the hour. In the accompanying table will be found the results obtained with tap water:

TABLE XX.—*On Tap.*

(Pressure 25 lbs. Temperature 19° C.)

Filtre Universel on Tap.	1st Day.	2nd Day.	3rd Day.	4th Day.	5th Day.	6th Day.	7th Day.
Presence or absence of Organisms	–	–	–	–	+	+	+

This porcelain candle thus prevented the direct passage of water organisms when 1 c.cm. of the filtrate was brought under examination, their appearance in the filtrate on the fifth day being due no doubt to their growth through the walls of the filter. In an experiment carried out with this filter during winter, when the temperature of the water is very much lower, the filter yielded a sterile filtrate for a much longer period.

TABLE XXI.—*Sterile Tap Water + Cholera and Typhoid.*

Test Organism used.	1st Day.	2nd Day.	3rd Day.	4th Day.	6th Day.	10th Day.
Cholera bacillus	–	–	–	–	–	–
Typhoid bacillus	+	+	+	+	+	+

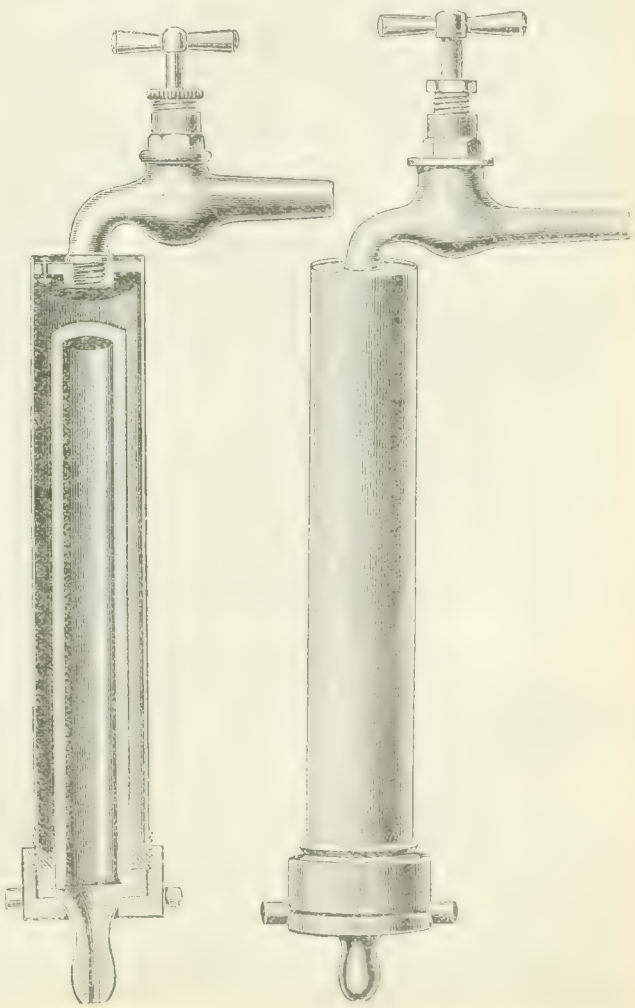
Two of the candles were fitted up as table filters, which could be used under the exhaust of a water pump. One of these was fed with sterilised water *plus* an emulsion of typhoid bacilli, the other with sterilised water *plus* cholera bacilli. The results are given in Table XXI.

The candle treated with typhoid bacilli allowed of their immediate passage from the first, while the one with cholera prevented their passage up to the end of the experiment. It is probable that the former result was not due to an imperfection in the candle, but rather to a breakdown in the fittings, but were such the case the objections which we have urged against the method in which the candle is fitted into the case are simply emphasised.

Even could this filter be absolutely relied upon to prevent the passage of disease germs, the smallness of its output (due no doubt to the thickness of the walls of the candle), and the difficulty of restoring the initial output by means of cleansing, would prevent it from ever coming into serious competition with several other similar forms already in use.

B.—FILTERS WHICH DO NOT ALLOW DISEASE ORGANISMS TO PASS INTO THE FILTRATE.

FILTRE CHAMBERLAND, SYSTÈME PASTEUR. SOLE LICENSEES AND MAKERS IN THIS COUNTRY, J. DEFRIES AND SONS, LTD., *147, Houndsditch, London, E.C.*—From the accompanying illustrations of the filtering candle and case of this well-



known filter, the method of fitting and use will be readily understood. In the first part of our report, which deals with non-pressure filters, we have already considered in some detail the claims put forward on behalf of these filters, and some of the evidence which has been adduced in support of these statements. It is sufficient to repeat here that the vendors of the Pasteur-Chamberland filters claim that this filter is the only one which has been proved in practice to protect against the transmission of typhoid and other waterborne diseases. This filter has for long been regarded as the standard filter for scientific purposes in the laboratory. In considering the Pasteur-Chamberland filter under the heading of non-pressure filters we did not enter into detail, nor did we give those special experiments on which we based our conclusion that this filter, along with others, might be regarded as furnishing an effective safeguard against the acquisition of waterborne disease, inasmuch as these filters give such a small output of filtered water when used without pressure (unless combined to form a battery, against which there are serious objections) that they could, as a rule, find their practical application only as tap or pressure filters. In the introduction to this part of the report we have already given in a general manner the data which, it has appeared to us, warrant us in supporting the view that those filters which do not permit of the direct passage of test organisms afford a permanent protection against the passage of disease germs. We shall here give some of these experiments in greater detail, and shall then bring under consideration some of those mechanical and physical details which are of so much importance in the practical application of any system of water filtration.

We have already stated in our previous report that when this filter was used as a table filter the filtrate was still germ-free on the fourth day, but at the same time we pointed out that, inasmuch as the candles were not kept constantly moist by being continuously fed with fresh water, the conditions were not the most favourable for the passage (by growth) of the microbes through its walls. It may now be asked whether the pressure to which the filter is subjected when attached to the tap exerts any influence on the rate at which the microbes pass through into the filtrate. Our experiments lend no support to this view; the only factor which appears to exert any influence seems to be that of temperature. The higher the temperature (within reasonable limits) naturally the more quickly organisms grow through the walls of the candle, while a lower temperature may not only prolong the period of sterility, but when the temperature is lowered while a filter is in use, and the water organisms have grown through the wall of the candle, the effect is so marked that the filter seems to clear itself in the course of two or three days; those organisms on the inner side of the walls, being washed away, are apparently not replaced by fresh or continued growth owing to this lowering of the temperature.[2] It is, perhaps, as well to explain here that in the above and the following tables, as elsewhere, the "first day" of the experiment signifies that the sample was taken within an hour or two of the filter being set in action; the "second day" of our table, therefore, means that the filter had been running for twenty-four hours, and had not really been in action for two days as might be supposed.

Arrest of Disease Organisms.

The following experiment carried out with twelve Chamberland candles, fitted up as a battery and fed with an emulsion of cholera in sterilised tap water, will indicate not merely the possibilities of disease germs passing through such candles, but it also gives data concerning the equal quality of the twelve fresh candles employed, and an indication as to the reliability of the connections when fitted up in such a battery. In the first two experiments carried out with this apparatus the disease germ appeared to pass directly into the filtrate, and, as this had not occurred previously with Chamberland candles when the fittings were intact, our attention was at once directed to this point. Tests were made in two ways: first, by the addition of ultramarine to the water, which is always retained on the surface of the porcelain; secondly, when air is forced through the outlet of the submerged battery it at once bubbles out through any leak which may be present in the fittings, thus indicating precisely the part at fault. In the first experiment the leak was found to have originated in a small aperture in the iron framework, which was easily remedied by soldering; in the second it was due, apparently, to the fact that we had failed to make two of the india-rubber connections sufficiently tight; this latter defect was made good by firmly wiring all the connections. These accidents clearly indicate the dangers resulting from a multiplicity of fittings attendant upon the use of a battery, a point to which we have already drawn attention.

During the course of the experiment the battery was placed in a room kept at a temperature of from 25° C. to 30° C., and after being once filled with the sterilised water, to which cholera emulsion had been added, was refilled three times daily with its own filtrate. The experiment was continued for ten days. It was, of course, impossible to prevent the rapid multiplication of impurities in the water, and it was not considered necessary to extend the experiment longer, as the number of extraneous organisms had then increased to such an extent as practically to leave little probability of detecting the cholera organism even if present. In addition, the favourable conditions as regards temperature would probably by this time have permitted of the passage of the disease germ had such been possible under these conditions.

Table XXII.—*Sterile Tap Water + Cholera Emulsion. Temperature 30° C.*

Date of Sample.	Average Number of Colonies Present in 1 c.cm. of Filtrate.	Presence or Absence of Cholera Bacilli in Filtrate *plus* Peptone Solution.
First day	*Nil*	*Ni*
Second day	*20 to 30 impurities	,,
Third day	400 to 500 impurities	,,
Fourth day	Thousands of impurities	,,
Fifth day	,,	,,
Sixth day	,,	,,
Seventh day	,,	,,
Eighth day	,,	,,
Ninth day...	,,	,,
Tenth day...	,,	,,

* The appearance of impurities on the second day, a period too short to permit of the growth of the organisms through the walls of the Pasteur-Chamberland filter, was probably due to the battery not having been completely sterilised when the experiment was started, an operation attended with obvious difficulties in the case of so large a piece of apparatus.

This experiment appears to us to establish very decisively that these candles afford complete protection against the passage of disease germs.

In the introduction to this part of the report the experiments with typhoid fever bacillus and other test organisms have already been mentioned; and it now suffices to repeat that on every occasion where the fittings were intact these pathogenic organisms appeared unable to pass into the filtrate. We may conclude accordingly that so far as experiments can guide us in such a matter, the Pasteur-Chamberland candles provide a perfect safeguard against the passage of disease organisms. We may state also that the testing to which the candles are subjected before sending out appears to exclude the possibility of any imperfect candles being put on the market, since we have had occasion to test over 150 candles in these and other experiments, without being able to satisfy ourselves that any single one of them was imperfect when supplied to us.

Chamberland Candles as Tap Filters.

From the large number of experiments which were carried out with the Chamberland candle as a tap filter we are enabled here to make a few observations as to the time required for water organisms to penetrate into the filtrate. In most cases such organisms appeared in the filtrate on the fourth day, but sometimes not till the ninth or tenth day, or even longer, this depending, apparently, directly on the

[2] It is very doubtful if the candle ever really clears itself, as we have found that when a larger amount of the filtrate (200 to 300 c.cm.) was taken and incubated for three or four days, we could always demonstrate the presence of numerous water organisms.

temperature of the water. In some cases, however, where several filters were started under apparently similar conditions, one of them would give a sterile filtrate for a considerably longer period than the others. This we at first attributed to differences in the quality of the candle, but resterilisation of the candles and repetition of the experiment convinced us that, in addition, some factor which we had not taken into consideration must also come into operation. We have already referred to the remarkable influence exerted by the temperature, as shown by the fact that a sudden fall in the temperature of the water will permit of filters which were discharging organisms into the filtrate to apparently clear themselves and remain sterile until the temperature again rose. We may mention that the makers of these filters have recently placed on the market an arrangement of the candles with the object of permanently obtaining a sterile filtrate. They seek to attain this end by obliging the water to pass through two candles, but in our experiments this arrangement simply slightly prolonged the time required for the organisms to grow through into the filtrate. These questions as to the passage of water organisms are, however, of more technical interest than of any practical value, since they only serve to reinforce our argument regarding the distinction between the direct passage of germs and their growth through the filter into the filtrate. They need not, accordingly, receive further consideration in this report. We give, however, in the following table a typical example of this process.

TABLE XXIII.—*Pasteur-Chamberland Candles on Tap (Pressure 24 lbs.; Temperature 18° C.).*

Quantity of Filtrate Examined.	1st Day.	2nd Day.	3rd Day.	4th Day.	5th Day.	6th Day.	7th Day.
1 c.cm. in gelatine plate... ...	—	—	—	+	+	+	+
10 c.cm. in broth	—	—	—	+	+	+	+

RATE OF FILTRATION.

We have now to consider the output of the Chamberland candles when used as tap filters, and the means of renovating them when they have been in operation for some time. In our experiments the candles were worked at a tap pressure of 16 lbs. and 24 lbs. to the square inch, according to the floor or storey of the laboratories on which they were being used. The difference in the amount of output under these pressures with the same candle was such that on an average, with the higher pressure, about one-third more initial output was obtained than at the lower pressure.

It should be noted, however, that exposure to high pressures appears to reduce the output more rapidly than when less water pressure is brought to bear. This is due, in the first place, to the larger quantity of water filtered, and, accordingly, the larger amount of suspended matter which is deposited on the candle; and, secondly, to this suspended matter being driven by the high pressure into the pores of the candle, and thus greatly reducing its output of filtered water. When the water has been allowed to flow continuously for a certain number of days, the output of a filter appears to reach a minimum, where it remains almost constant for a practically indefinite period of time. While in this state a curious phenomenon may occasionally be noted. We observed that on certain days the output of all the filters rose slightly, and, on investigating the conditions, we found that this corresponded with a sudden fall in the barometric pressure, which would, of course, increase to that extent the effective pressure of water in the taps. It is possible that this influence of the barometric pressure may, in certain localities, where the condition is a constant one, exert an effect on the filtering capacity of the candle which may have to be taken into practical consideration.

We have also investigated the question as to the extent to which individual candles varied in their output when tested under precisely similar conditions. These candles have apparently varied considerably in their structure at different periods, so that for this purpose twelve new candles which had been recently purchased were tested in succession under precisely similar conditions on the same tap at 24 lbs. pressure. The results are to be found in the appended table:

TABLE XXIV.—*Filtering Capacity of Chamberland Candles at 24 lbs. Pressure.*

Number of Candle.	Average Filtrate in 5 minutes.	Average Time Required to Filter 1 pint.
1	400 c.cm.	7 minutes 6 seconds
2	520 ,,	5 ,, 28 ,,
3	600 ,,	4 ,, 44 ,,
4	680 ,,	4 ,, 10 ,,
5	715 ,,	3 ,, 58 ,,
6	780 ,,	3 ,, 38 ,,
7	780 ,,	3 ,, 38 ,,
8	780 ,,	3 ,, 38 ,,
9	830 ,,	3 ,, 25 ,,
10	1,080 ,,	2 ,, 37 ,,
11	1,150 ,,	2 ,, 23 ,,
12	1,440 ,,	1 ,, 58 ,,

As will be seen from this table, the candle which filtered most rapidly gave an output more than three times as great as that which filtered most slowly, and that such a variation with these candles was not unusual is confirmed by a very extensive experience of their use for laboratory purposes. We have frequently observed in the case of broken candles that their thickness varied within very wide limits, some being nearly three times as thick as others. In addition, it is not unusual, on examining a section of the wall of a cylinder, to find an imperfection in the form of a large air bell, which reduced the thickness of the filtering medium in that position to at least one-half of that elsewhere. As such candles protected absolutely against the passage of disease germs, we have every reason to believe that a layer of porcelain only half as thick as that used would serve our purpose efficiently, while probably permitting of a correspondingly larger output of filtered water. We cannot, of course, express an opinion as to the difficulties which might be encountered in the manufacture of such candles, or as regards their strength and durability in practice. These questions could, naturally, only be determined by direct experiment.

AVERAGE QUANTITY FILTERED.

We give in the following table the average quantities of filtered water which can be obtained when storage tanks are made use of, although, as we have already observed, the use of such, when placed under the tap, is not, we think, to be recommended:

TABLE XXV.—*Average Quantity Filtered by Chamberland Candle F.*

Chamberland Candles.	1st Day.	2nd Day.	3rd Day.
No. 1. Time taken to filter 1 litre	10 minutes	13⅓ minutes	20 minutes
Calculated quantity filtered in twenty-four hours	122.5 litres, or 27 gallons	86 litres, or 19 gallons	64 litres, or 14 gallons
No. 2. Time taken to filter 1 litre	4⅜ minutes	5⅞ minutes	14½ minutes
Calculated quantity filtered in twenty-four hours	281 litres, or 62 gallons	144 litres, or 32 gallons	93 litres, or 20 gallons
No. 3. Time taken to filter 1 litre	4½ minutes	8½ minutes	16⅔ minutes
Calculated quantity filtered in twenty-four hours	230 litres, or 51 gallons	115 litres, or 26 gallons	69 litres, or 15 gallons

METHOD FOR RESTORING OUTPUT.

The methods of renovating the output of these filters recommended by the vendors consist of, first, removing the film from the surface by means of a brush; secondly, by the use of a cleansing solution which they supply. We have not succeeded by the use of the cleansing fluid in obtaining satisfactory results. By the use of the brush, however, in the case of a new candle, the output was usually almost completely restored, but in course of time this method becomes less and less efficacious. This is due no doubt to the passage of the vegetable matter into the pores of the filter.

which is not then, of course, removed by the process of brushing the surface. The only efficient means at our disposal of restoring the filtering capacity of these candles is, we find, to subject them to a process of baking at a red heat. This is carried out most efficiently in the laboratory by means of a small muffle furnace, but even where every care is taken to dry the candles previously, a certain amount of breakage takes place: moreover, the process is not one which could conveniently be carried out in practice.

In addition it is necessary to retest each candle after it has been subjected to this process, as the heat may have destroyed its filtering efficiency by causing cracks or other defects in the porcelain. This is done by subjecting the candle when submerged in water to an air pressure of 7 lbs., when the efficiency of the candle is manifested by the pressure being maintained, and by absence of air bells in the fluid.

These results bearing on the output of the Chamberland candle and on the process of renovation by means of cleaning, were obtained chiefly with water supplied by the New River Company; in addition a few experiments were carried out with the Lambeth Water Company's water, which gave very similar results. As the London water is supposed to undergo a rather better process of sand filtration than elsewhere, it is probable that rather better results may be obtained with it than with most other waters. It must be remembered, however, that the slimy coating which in time envelops the candle and restricts the output is usually derived in great part from the growth in the mains and pipes of vegetable organisms which are carried to the filter, and not so much from the particles which have escaped the sand filter. We have also observed that sediment in the pipes derived apparently from reparation of the mains or even from the cleaning of cisterns, may lead to a sudden diminution of the output. We are convinced, therefore, that what we have described may be taken as a fair sample of what might be expected of these candles under the most favourable conditions. On the other hand, where the filters are used in the army for camp purposes, where turbid water must frequently be supplied to the filters, some experiments carried out with the Thames water taken at Waterloo Bridge (see pp. 266, 267), indicate that the candles would require to be burned at frequent intervals if anything like their initial output is to be maintained.

We must accordingly conclude from our extensive experiments with the Pasteur-Chamberland filter, and from the experience of the French War Office of their use in the army that these candles afford complete protection against the communication of waterborne infective disease.

The Berkefeld Filter Company, Limited, *Engineers and Contractors for Pure Water Supplies, Contractors to Her Majesty's Government, 121, Oxford Street, London, W.*—In our first report on non-pressure filters we gave in detail the claims put forward on behalf of the Berkefeld filter in preventing waterborne disease, and we stated that our experiments confirmed the claim that these filters did indeed appear to confer protection against the transmission of disease germs, but we also expressed our opinion that owing to their comparatively small output as table filters, they must find their chief use as pressure filters. We have already considered the experiments on which we base our conclusion that these filters, although permitting of the rapid growth through their walls of water organisms, still supply an effective barrier to the passage of disease germs into the filtrate. We shall here simply make the addition of a few details to these results, and then consider more fully those physical and mechanical details which are of so much importance in the practical application of any system of water filtration.

When the Berkefeld filter was used either as a table filter or as a tap filter, it was found that water organisms might pass into the filtrate as early as the second day, and appeared at latest on the fourth or fifth day of filtration. The organisms made their appearance in the filtrate, independently of the temperature (which varied from 11° C. to 18° C.). In the case of the Chamberland candles used at the lower temperature, the filtrate sometimes remained sterile for apparently indefinite periods of time, when 1 c.cm. of this filtrate was brought under examination. This must be ascribed to the combination of two unfavourable conditions: the low temperature and the devitalising influence exerted by the pores of the porcelain; these together preventing the growth of the organisms through the Pasteur-Chamberland filter into the filtrate. Where the latter condition is wanting, as in the Berkefeld candle, in which the channels are apparently not nearly so fine, the low temperature is insufficient to prevent the passage by growth of water organisms through the filtering medium of the wall. In the following table we give an example of the action of this filter (candle "No. 14" of the old list) when attached to the tap.

Table XXVI.—*Berkefeld Candle No. 14 on Tap (Pressure 24 lbs.: Temperature 18° C.).*

Quantity of Filtrate Examined.	1st Day.	2nd Day.	3rd Day.	4th Day.	5th Day.	6th Day.	7th Day.
1 c.cm. in gelatine plate... ...	—	—	—	+	+	+	+
10 c.cm. in broth		—	+	+	+	+	+

Arrest of Disease Organisms.

In addition to the experiments already given, on which we base our opinion that these filters do not permit of the passage of disease organisms, we may here give an experiment carried out with a composite battery of twelve Berkefeld candles fed with cholera emulsion and sterile tap water. As these candles are supplied in many different forms and sizes, we tested a battery made up of three each of forms Nos. 1, 2, 8, and 14.

This battery was kept in a room maintained at a temperature of 30° C., and after being once fed with the emulsion of cholera mixed with sterilised water was refilled three times daily with its own filtrate. The impurities which, of course, could not be excluded from the water multiplied very rapidly at this temperature, so that it was considered unnecessary to continue the experiment beyond the sixth day. The results obtained are shown in the appended table.

Table XXVII.—*Sterile Tap Water + Cholera Emulsion. Temperature 30° C.*

Date of Sample.	Average Number of Colonies Present in 1 c.cm. of Filtrate.	Presence or Absence of Cholera in the Filtrate added to Peptone Solution.
First day	*Nil*	*Nil.*
Second day	40 to 50 impurities	,,
Third day...	Thousands of impurities	,,
Fourth day	,, ,,	,,
Fifth day	,, ,,	,,
Sixth day	,, ,,	,,

The negative result recorded in this experiment appears to indicate that this filtering material, which is made up in so many different forms and sizes, is remarkably uniform in its quality, as a defect in any one of the candles would have been detected at once on the first day of the experiment. We may here state that we have at various times examined over fifty of the Berkefeld candles, and have in no case been able to satisfy ourselves that any one of them was imperfect as regards the prevention of the direct passage of test organisms.

Rate of Filtration.

We must now briefly consider the rate of filtration of the Berkefeld filters, and the means of renovating their output when they have been in operation for some time. The tap filters specially experimented with were, first, that described as Fig. F in the maker's list fitted with candle No. 14; and secondly, that described as Fig. H, fitted with candle No. 1 of their list. The candles were exposed to a tap pressure of 16 lbs. or 24 lbs. to the square inch, according to the floor or storey of the laboratories on which they were being

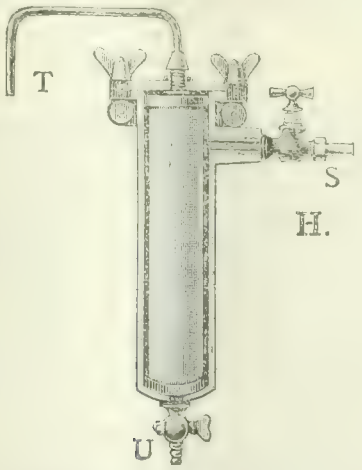
used. The difference in the amount of output under these pressures with candle No. 14 was such that on an average with the higher pressure about one-third more initial output was obtained than at the lower pressure. It is necessary to to point out here that it is not advisable to use a greater pressure than 35 lbs. to the square inch since the suspended materials present in the water are driven into the pores by excessive pressures, and thus rapidly block the filter and necessitate cleansing.

We have also tested the various candles as regards variations in the output of individual cylinders by trying six new candles under precisely similar conditions. The results are to be found in the appended table:

TABLE XXVIII.—*Filtering Capacity of Six Berkefeld Candles No. 14 at 24 lbs. Pressure.*

Number of Candle.	Average Filtrate in 5 Minutes.	Average Time required to Filter 1 Pint.
1	3,350 c.cm.	51 seconds
2	3,400 ,,	50 ,,
3	3,500 ,,	49 ,,
4	3,625 ,,	47 ,,
5	3,850 ,,	44 ,,
6	4,440 ,,	38 ,,

Similar experiments were carried out with candle No. 1 fitted up in Fig. II. of maker's list, an exceedingly good



Section of Berkefeld Filter. S, inlet; T, outlet; U, cleansing tap.

model, which seems to us to subserve the functions of a filter more perfectly than any we have yet seen described,

TABLE XXIX.—*Filtering Capacity of Berkefeld Candles (No. 1) at 24 lbs. Pressure.*

Number of Candle.	Average Filtrate in 5 Minutes.	Average Time required to Filter 1 Pint.	Pints per hour.
1	5,317 c.cm.	31 seconds	116
2	5,119 ,,	29 ,,	124
3	6,000 ,,	28 ,,	130
4	6,000 ,,	28 ,,	130
5	6,250 ,,	27 ,,	133
6	6,666 ,,	25 ,,	141

inasmuch as the filtered water finds its exit from the upper part of the case, thus obviating any chance of contamination with unfiltered water due to leakage. The candle in this filter is much larger than the one already described, being 10 inches in length and 2 inches in diameter, and is stronger in a corresponding degree. An experiment was made with six of these candles to test their average rate of output. The results obtained are set forth in Table XXIX.

As will be seen from this table, the rate of filtration is very rapid—in fact, the output is so large that there is no reason why such filters should not supply sufficient water to meet all household requirements. We have already stated that any filter to be really satisfactory must supply all the water which is necessary for domestic requirements.

AVERAGE QUANTITY FILTERED.

The next point to be considered is how far the output is maintained under continuous operation, and the total amount of water filtered before the output is seriously diminished. This can be seen in the following table, where the experiment was carried out with three candles of form No. 14:

TABLE XXX.—*Average Quantity Filtered by Berkefeld Candle No. 14.*

No. of Candle.	1st Day.	2nd Day.	3rd Day.
No. 1. Time taken to filter 1 litre	128 seconds	428 seconds	750 seconds
Calculated quantity filtered in 24 hours	68 gals.	32 gals.	24 gals.
No. 2. Time taken to filter 1 litre	100 seconds	143 seconds	294 seconds
Calculated quantity filtered in 24 hours	157 gals.	87 gals.	41 gals.
No. 3. Time taken to filter 1 litre	77 seconds	130 seconds	461 seconds
Calculated quantity filtered in 24 hours	184 gals.	64 gals.	29 gals.

These candles give a large output, but unfortunately are very fragile, and accordingly are frequently broken during the process of cleaning. In consequence of this the manufacturers have replaced this type by another in which the candle is made much shorter and stouter, and which gives a very similar output of filtered water. There is no doubt, however, that the larger candles (No. 1), which are considered in our next table, offer greater advantages over the smaller forms both as regards output of filtered water and as regards risk of breakage.

TABLE XXXI.—*Average Quantity Filtered by Berkefeld Candles No. 1.*

Number of Candle.	1st Day.	2nd Day.	3rd Day.
No. 1. Time taken to filter 1 litre ...	56 seconds	160 seconds	285 seconds
Calculated quantity filtered in 24 hours	176 gals.	85 gals.	59 gals.
No. 2. Time taken to filter 1 litre ...	52 seconds	68 seconds	147 seconds
Calculated quantity filtered in 24 hours	316 gals.	178 gals.	90 gals.
No. 3. Time taken to filter 1 litre ...	43 seconds	55 seconds	94 seconds
Calculated quantity filtered in 24 hours	387 gals.	253 gals.	138 gals.

From this table it will be seen that very large quantities of water can be rapidly filtered by means of these candles. It need scarcely be pointed out that where, as in actual practice, the filter is used only intermittently, it will continue in operation for a much longer period before the output becomes so diminished that the candle requires cleansing. The water employed in these experiments was chiefly the New River Company's water, and this no doubt represents a very favourable water for these candles, other supplies which contain much matter in suspension, such as peaty waters will naturally rapidly block these filters.

Methods for Restoring Output.

The cleansing of the candles when the output becomes diminished is easily and quickly effected by rubbing the surface with a sponge, piece of loofah, or a brush, under a running tap. In this process a very thin surface layer of the filtering material is removed along with the sediment which has blocked up the pores of the filter and diminished its output. When cleaned in this way the original output is usually at once completely restored. Thus a filter containing candle No. 1 which had been in intermittent use for nine months, after cleansing, furnished a litre of filtered water in sixty seconds. In the case of a candle No. 14, which has been in domestic use for the last four years, the output after cleaning was still equal to that of a new candle. The surface of the candle was somewhat worn and irregular, but on testing its efficiency against test organisms it was found that it still completely prevented their passage.

Mechanical Cleansing.

The vendors of these filters employ a mechanical cleansing arrangement in the case of their large supply filters. This consists essentially in mixing a small quantity of prepared kieselguhr with the first water which is passed through the filter. A thin coating of kieselguhr is thus deposited over the cylinders upon which the suspended material in the water accumulates and as soon as the filter begins to get clogged the kieselguhr and the sediment which has collected can be completely thrown off and washed away without the filter being opened, by reversing the current of water and passing it backwards through the filter for a short time. We have experimented with this method on the filter shown in the block on p. 275, and although the output was not completely restored in the same way as was done by brushing the candle it would no doubt be very serviceable when used as they describe in their special filter. We observed when using the kieselguhr that when only a small quantity was mixed with the water, a distinct advantage might be obtained in the total quantity of water filtered during the course of three or four days. This will be seen by comparing the results obtained with the same candle with and without kieselguhr, as recorded in the following table:

Table XXXII.—*Filtration of a Berkefeld Candle (No. 1) with and without Kieselguhr.*

Filter with and without Kieselguhr.	1st Day.	2nd Day.	3rd Day.
Without kieselguhr:			
Time taken to filter 1 litre	52 seconds	68 seconds	147 seconds
Calculated quantity filtered in 24 hrs.	316 gals.	178 gals.	90 gals.
With kieselguhr:			
Time taken to filter 1 litre	56 seconds	65 seconds	88 seconds
Calculated quantity filtered in 24 hrs.	314 gals.	248 gals.	192 gals.

In the course of the seventy-two hours the candle which had been treated with kieselguhr filtered 170 gallons more water than the other. This method would be especially serviceable in the case of turbid waters where the pores of the filters would otherwise become rapidly blocked, since, as our table shows, the chief advantage is gained on the second and third days, when the suspended matter present in the water has begun to collect on the cylinder.

We must accordingly conclude from the extensive series of experiments carried out with these Berkefeld filters that they afford complete protection against the communication of waterborne disease.

Aëri-Filtre-Mallié, Théories Pasteur, Porcelaine d'Amiante, Maison Mallié, *155, Faubourg Poissonniere, Paris.*—The Filtre Porcelaine d'Amiante is the only one of those sent out by this firm which we shall now consider. We have already given a brief description of it under the heading of table filters. It has been highly praised by many authorities, and has received an award from the French Academy. It is claimed for it by the vendors that it is the most perfect filter ever produced, and is "impenetrable." They state that only the porcelaine d'Amiante provides a continuous and perfect filtration of water. Miquel, in his experiments, found that this filter sterilised highly polluted stagnant water during twelve days' filtration, a result which he affirms could not have been obtained by any other filter. An examination of this filtering medium tends to confirm the assertion of the makers that it is the finest porcelain which has ever yet been put upon the market for this purpose; it is composed, we believe, of an extremely fine porcelain, containing very finely powdered asbestos, and is of a reddish terra-cotta colour, which is probably due to the presence of iron. We have carried out experiments with candles of this material (figure A of catalogue), and also with the balloon-shaped filters (figure B of catalogue). This latter has a diameter of 2½ inches, and the walls are $\frac{5}{32}$ of an inch thick. Only the latter was used as a tap filter, the other candles being used for the purpose of testing the uniformity of the candles sent out by this firm.

In the course of our experiments with water we have repeated Miquel's experiment with stagnant water, in which he found that organisms were kept back for a period of twelve days. One of the large candles was allowed to rest in a vessel of Thames water taken at Waterloo Bridge from which the filtered water was drawn into an exhaust bottle by means of siphonage and the pressure of a water pump. The filter was retained at the temperature of the room, and samples of the filtrate were examined from day to day. The results are given in the appended table:

Table XXXIII.—*Thames Water taken at Waterloo Bridge.*

1st Day.	2nd Day.	3rd Day.	4th Day.	5th Day.	6th Day.	7th Day.	8th Day.	9th Day.	10th Day.	11th Day.	12th Day.
−	−	−	−	−	−	−	−	+	+	+	+

In this experiment it will be seen that the filtrate remained sterile up to the eighth day, which is a period of time at least double that during which the Pasteur-Chamberland gives a sterile filtrate under similar conditions.

The experiments with this material as a tap filter were carried out during the colder season of the year, when undoubtedly the temperature conditions are much less favourable for the growth of water organisms through the filter, and where, accordingly, the filtrate would tend to remain sterile during a longer period. The temperature of the water during the first experiment varied from 16° C. down to 12° C., but we may mention that during this period Chamberland and Berkefeld filters under precisely similar conditions failed to discharge continuously sterilised water. The results are set out in Table XXXIV.

These results with water are certainly very striking, and indicate that at any rate when exposed to a moderately low temperature this filter can apparently supply a sterile filtrate for at least a month. We have already pointed out that the growth of water organisms through the walls of the candle into the filtrate does not in any way indicate the incapacity of a filter to prevent the transmission of waterborne disease, so that the power possessed by this filter of offering greater resistance to the passage of water organisms does not necessarily indicate more perfect protection against cholera and typhoid, although it undoubtedly does show that in this material we have an extremely effective filtering medium. The very fine nature of the porcelain would no doubt manifest its influence most markedly in the case of the filtration of fluids containing toxic bacteria, but, as has already been discussed elsewhere, it is very doubtful whether such refinements in the action of a filter such as those which exist between the d'Amiante, Chamberland and Berkefeld filters would exert any perceptible influence in actual use.

We have carried out experiments with tap water and emulsions of cholera (Table XXXV) and typhoid bacilli (Table XXXVI) over prolonged periods, using the two forms as table filters. In no instance have we been able to demonstrate the presence of either of these organisms in the filtrate.

TABLE XXXIV.—*Porcelaine d'Amiante on Tap.*

(Pressure 16 lbs. Temperature 16° to 12° C.)

Presence or Absence of Water Organisms in Filtered Water.

Days ...	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
First experiment ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Second experiment ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Third experiment ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE XXXV.—*Tap Water + Cholera.*

Description of Filter.	Days.								
	1	2	3	4	5	6	12	20	26
Balloon-shaped Form	—	—	—	—	—	—	—	—	—
Candle Form	—	—	—	—	—	—	—	—	—

TABLE XXXVI.—*Tap Water + Typhoid.*

Description of Filter.	Days.								
	1	2	3	4	5	6	12	20	26
Balloon-shaped Form	—	—	—	—	—	—	—	—	—
Candle Form	—	—	—	—	—	—	—	—	—

These experiments prove that this filter provides as perfect a protection against the transmission of waterborne disease as is afforded by any of the methods of filtration at present known to scientific workers.

We must now briefly consider the mechanical details which would affect its application in practice. The most important from the practical point of view is the rate of filtration, and the ease with which the filter can be cleaned. The rate of filtration in this filter (Fig. "B." of catalogue) is exceedingly slow, since with a pressure of 16 lbs., when the filter is still new, two hours are required for the filtration of a single litre. Under continuous filtration the rate of output slowly declines. On cleaning the filter by brushing it with a nailbrush the original rate of filtration is at once completely restored. A filter in continuous use for five months, being brushed from time to time, at the end of that period, when cleaned still gave almost the original output. This is a result which we have never been able to obtain with any other of the porcelain filters, and is to be ascribed no doubt to the fineness of the porcelain retaining all the suspended material on the surface of the candle, whence it can be easily removed by the process of cleansing. In this respect the porcelain d'Amiante possesses advantages over many other forms of porcelain. The mechanical fittings of the filter are also all that can be desired. In conclusion, however, although we must regard this filter as affording a perfect protection against disease, the slow rate of filtration will prevent its ever coming into general use for the filtration of water.

PUKALL FILTER, *Royal Porcelain Factory, Potsdam, Berlin.*—This is a filter of apparently only recent introduction and at present is not in extensive use; indeed, from the fact that we were unable to obtain a case or fittings with the filter, it may perhaps even be said not to be upon the general market. As we were unable to obtain either catalogues or pamphlets relating to this filter we are unable to compare the claims put forward on its behalf with the results obtained in our experiments. The filtering medium consists of a very fine form of unglazed porcelain which is moulded into a very peculiar-shaped filter, a lower tubular part, which expands above into a spheroidal portion, the dome of which is somewhat flattened. In our experiments the tubular portion was fitted with an indiarubber cork, through which passed a piece of glass tubing in order to facilitate the collection of filtered samples.

We obtained this filter in three sizes—small, medium, and large. As already stated, the texture of the porcelain seems to be very fine and the walls accordingly are correspondingly thin, about $\frac{3}{32}$ in. in thickness. The length of the smallest filter is $3\frac{3}{4}$ in., while the diameter of the globe is $2\frac{1}{4}$ in. The medium-sized filter is 6 in. in length, the globe-shaped portion being $3\frac{1}{2}$ in. in diameter. The large form is 10 in. in length and the globe-shaped portion $6\frac{1}{2}$ in. in diameter. The filters had to be fitted up in tin cases constructed in the laboratory and fastened down with solder; as these were unfortunately unfitted to withstand very high pressure owing to the flexibility of the metal, we were unable to estimate exactly the pressure to which the filter was exposed, as this had to be regulated only by the tap. The pressure under these conditions was usually considerably under 16 lbs., so that the rapidity of filtration is really somewhat understated in the figures which are given below. The rate of filtration of the three filters under pressure is as follows: The small-sized filter delivered a litre of water in fourteen minutes; the medium size a litre in nine minutes; and the large form the same quantity in four minutes. These results as regards output are certainly very favourable for a porcelain filter, but it must be pointed out that the quantity declines very rapidly under continued use as foreign matter collects on the surface of the filter. Brushing the surface almost completely restores the original output, but no doubt in course of time the pores in the interior of the porcelain would also become more or less blocked, and probably the only effectual method of renovating the filter would be by baking it at a red heat. The filters are no doubt quite well suited to undergo this process, as they consist entirely of unglazed porcelain, although their unusual shape placed certain difficulties in the way, in our hands, as we had, at the time when these experiments were carried out, only the ordinary laboratory combustion furnace at our disposal.

It is unnecessary to give the series of tests to which each of the three forms of this filter was subjected. It will be sufficient to record the experiments carried out with one or other forms as the results obtained with the other forms were precisely comparable. We give in the appended table the experiments carried on with the largest form:

TABLE XXXVII.—*Tap Water. Temperature 16° C.*

Description of Filter.	1st Day.	2nd Day.	3rd Day.	4th Day.
Large Pukall on tap	—	—	—	+

Here the filtrate remains sterile for three days, but in several other experiments in which the other forms were used, the organisms appeared in the filtrate considerably earlier, usually on the third day, and on one occasion even on

the second. We were also able to observe that the organisms present in the filtrate did not appear to have been weakened in their passage through the porcelain; this was evidenced by their exhibiting their power of liquefying the gelatine at first to a much greater extent than is usually observed in the case of organisms that have run the gauntlet of the Pasteur-Chamberland filter. One of the medium-sized filters was tested on a tap with staphylococcus pyogenes aureus; the results obtained are given in the accompanying table:

TABLE XXXVIII.—*Table Water + Staphylococcus Pyogenes Aureus.*

Description of Filter.	1st Day.	2nd Day.	3rd Day.	4th Day.
Medium Pukall	—	—	—	—

The negative result recorded on this occasion indicates that this filter is apparently impenetrable to the passage of the test organisms, but this point is much more definitely proved by the experiments with cholera and typhoid bacilli which were carried out with the filters fitted up as table filters. The results obtained are to be found in the appended tables.

TABLE XXXIX.—*Tap Water + Cholera Bacilli.*

Description of Filter.	1st Day.	2nd Day.	3rd Day.	4th Day.	7th Day.	12th Day.	18th Day.
Medium Pukall	—	—	—	—	—	—	—
Small Pukall...	—	—	—	—	—	—	—

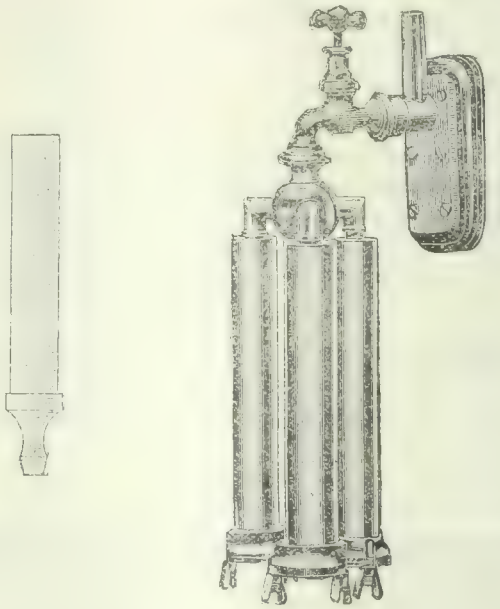
TABLE XL.—*Tap Water + Typhoid Bacilli.*

Description of Filter.	1st Day.	2nd Day.	3rd Day.	4th Day.	7th Day.	12th Day.	18th Day.
Medium Pukall	—	—	—	—	—	—	—
Small Pukall...	—	—	—	—	—	—	—

These experiments indicate very definitely that this form of porcelain can be relied upon to arrest the passage of disease organisms. It must be concluded, accordingly, that this filter affords a perfect protection against the transmission of waterborne disease.

SLACK AND BROWNLOW, *Abbey Hey Works, Gorton, Manchester.*—We have already reported on the compressed charcoal filters supplied by this firm under the heading of non-pressure filters, so that we considered it unnecessary to test further this material when used as a tap filter. This firm has, however, recently placed upon the market a filter which, they claim, is germ-proof. Here the filtering medium consists of unglazed porcelain; we therefore considered it desirable to bring this form under examination. It is stated by the vendors, in their catalogue, that "the filtering tube or candle consists of a hollow cylinder of porous porcelain, which in specially prepared forms is recommended by Dr. Koch, Professor Pasteur, and other eminent scientists as being the only one which effectually sterilises water, and thus arresting all disease germs communicated by water, and preventing cholera, typhoid fever, dysentery, etc. Scientists and the highest medical experts acknowledge the system of filtration through porous porcelain tubes to be the best, and the marvellous power of our germ-proof tubes in sterilising water is the result of exhaustive experiments extending over several years: water literally teeming with germs and impurities is rendered bright, sparkling and absolutely sterile." They also quote a report on their filter by Mr. W. A. H. Naylor, F.I.C., F.C.S., which is as follows: "I have tested several candles of unglazed porcelain manufactured by you, the experiments made having special reference to their capability of removing micro-organisms from drinking waters. On passing one of the London company's waters through the respective candles, the filtered water so obtained was in every case found to be free from bacteria and germs, that is, it was in a sterile condition. The same water before filtration through your candles gave evidence of the development of bacteria to a considerable degree."

The porcelain in this type of filter is used as a candle formed on a model similar to that of the Pasteur-Chamberland system, but differs slightly in dimensions, being about 6⅝ in. in length and 1⅛ to 1¼ in. in diameter, with a glazed porcelain nipple. In the accompanying illustrations can be seen this form of candle, along with a tap filter consisting of a group of



three of these. We carried out our experiments on a tap filter containing one candle, which is described in the maker's catalogue as No. 115. The fittings of this filter are all that can be desired. The results of our experiments with this filter when fitted on the tap at 24 lbs. pressure appear in the appended table:

TABLE XLI.—*Slack and Brownlow Candle on Tap (Pressure 24 lbs., Temperatur 18° C.)*

Quantity of Filtrate Examined.	1st Day.	2nd Day.	3rd Day.	4th Day.	5th Day.	6th Day.	7th Day.
1 c.cm. in gelatine plate ...	—	—	—	+	+	+	+
10 c.cm. in broth	—	—	—	+	+	+	+

These results would appear to indicate that this filter has the power to prevent the direct passage of water organisms, since of course their appearance on the third and following days would be probably due to their growth through the walls of the candles—a process to which even thoroughly reliable filters are subject. This view was confirmed by subjecting the filter to the more stringent test which we have described in the introduction, consisting in collecting 200 or 300 c.cm. of the filtrate on the first day in a sterile flask and incubating at 20° C. for three or four days before testing for the presence of organisms. If only 2 or 3 water organisms happened to be present in this filtrate, they would in this time have multiplied to such an extent as to have been easily recognised when introduced into gelatine plates or broth. We have

subjected three candles of this make to this stringent test, and on every occasion the filtrate remained absolutely sterile.

This filter was then subjected to a series of experiments with our test organisms. Six of the porcelain candles were fitted up in a battery, and fed with a rich emulsion of staphylococcus pyogenes aureus for three days, but as will be seen in the following table none appeared in the filtrate.

TABLE XLII.—*Sterile Tap Water plus Staphylococcus Pyogenes Aureus. Temperature 22° C.*

Date of Sample.	Presence or Absence of Staphylococcus Pyogenes Aureus in the Filtrate.
First day...	–
Second day	–
Third day	–

Two candles were then fitted up as table filters, and fed with a rich emulsion of the cholera bacillus in sterilised tap water, the examination of the filtrate being carried out for a week. On each occasion 300 c.cm. of the filtrate was added to concentrated broth, and incubated for the detection of cholera, but, as will be seen from the following table, the result on each occasion was negative.

TABLE XLIII.—*Sterile Tap Water+Cholera Bacilli.*

Number of Candle.	1st Day.	2nd Day.	3rd Day.	4th Day	5th Day.	6th Day.	7th Day.
Candle No. 1	–	–	–	–	–	–	–
Candle No. 2	–	–	–	–	–	–	–

RATE OF FILTRATION.

Our experiments were carried out with twelve porcelain candles which we had obtained through our agents, and each of these was tested on at least two occasions, sometimes after having been cleaned by being subjected to a red heat, which did not appear to affect their efficacy, although no reference to this method of renewing their output is made by the vendors. We must accordingly conclude that these filters (at any rate those candles which we have subjected to examination) are able to prevent the transmission of disease germs into the filtrate. The manufacturers make no reference to their candles being submitted to any test before being sent out, and it is probable that unless some process of selection is exercised imperfect candles might from time to time be placed upon the market; but, as we have already stated, the few that we have been able to bring under examination all passed our tests.

TABLE XLIV.—*Filtering Capacity of Slack and Brownlow Candles at 24 lbs. Pressure.*

Number of Candle.	Average Filtrate in Five Minutes.	Average Time Required to Filter One Pint.
1	1,250 c.cm.	2 minutes 16 seconds.
2	1 425 ,,	2 minutes.
3	1,850 ,,	1 minute 33 seconds.
4	1,950 ,,	1 minute 32 seconds.
5	2,000 ,,	1 minute 25 seconds.
6	2,000 ,,	1 minute 25 seconds.

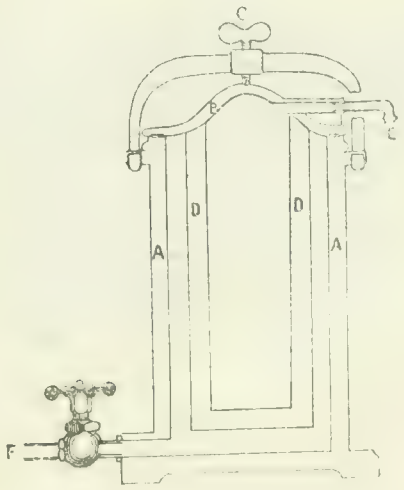
We shall now consider very briefly the rate of filtration of these filters and the other conditions which would affect their use in actual practice. We give in Table XLIV the initial output obtained with six fresh candles, from which it will be seen that their rate of filtration is rather above that usually obtained with porcelain candles:

Under continuous filtration the output of these candles falls very rapidly—the output after twenty-four hours being only about one-third and after forty-eight hours one-sixth of the initial filtering capacity. This is probably to be ascribed to the porous nature of the porcelain used, which permits of an initial high rate of filtration, but is at the same time, owing to the comparatively large size of its pores, liable to have these blocked very rapidly. The vendors do not describe any method of cleansing the candles, but we have found that the process of brushing, at first at any rate, renews their output. In practice, however, no doubt the candles would have to be subjected to a red heat from time to time to remove the organic matter retained in the pores of the candle. We have found, however, that these candles when raised to a red heat in our Muffle furnace became so profoundly modified in their filtering capacity that their output of filtered water was reduced from one-half to one-third of that which they originally provided. It would appear accordingly that these candles are not suited to undergo this process of baking, and this fact must seriously interfere with their use for many purposes.

This filter is a recent addition to those on the market, and accordingly has not been been tested to the same extent in laboratories and in actual practice as in the case of some of the older forms, but so far as our experiments go they warrant us in concluding that this filter protects against the transmission of waterborne disease.

DUFF'S PATENT GERM-PROOF FILTER. AGENTS: WITTY AND WYATT, LIMITED, *88, Leadenhall Street, London.*—The vendors state that the filtering medium consists of a natural stone, which it is estimated contains 41 billions of granular particles to the cubic inch. They state that "water readily passes through this, leaving all the microbes, germs, and other impurities on the outer surface of the stone, from which they can be easily brushed off with a scrubbing brush. This filter will filter the muddiest and foulest water. All dirt, germs, etc., are left on the surface of the stone. . . . . It is impossible to have impure water under any circumstances."

This filter, which is shown in the accompanying illustration, has a cast-iron case (A) covered by a lid (B), which is



held in position by a hoop and thumb screw (C). To the lid is attached a hollow cylinder of stone (D), which is the filtering medium. The water to be filtered passes in at the cock (F), surrounds the stone, and issues through it as filtered water at the cock (E). The mechanical arrangements of this filter are good. We may also state here that the rate of filtration is extremely rapid, and that so far as regards

removal of suspended material from a water it functions admirably.



The filtering medium appears to consist of a natural sandstone, so soft in its consistence that it is easily rubbed down or scraped to a powder by means of a knife or other metal instrument. The particles are very fine when broken down in water, varying from 1 to 3 μ in diameter, and appear to consist of silicious material, as they were apparently unaffected by the action of strong acids. The stone is supported by a series of bands of brass wire, which it appears to us it would be advisable, if possible, to discard, as these must not only reduce the filtering capacity, but also interfere with the process of cleaning. The bottom of the candle is plugged with clay or cement, and this also is a weak point which it would be well to avoid. The candle is 11 inches in length, 4 inches in diameter, and the thickness of the wall of the filter through which the water must pass is 1 inch.

In carrying out our experiments with this filter we experienced considerable difficulty in sterilising the stone filtering medium owing to its liability to crack when exposed to the higher temperatures necessary to produce this effect. This was due to the fact that the stone is first of all cemented to a metal top and to a series of metal bands encircling its circumference, and that these metal fittings would probably expand much more rapidly when heated than the stone cylinder, which would naturally tend to a rupture at the junction of the metal with the filtering medium. As will be seen, this prevented our carrying out as complete a series of experiments as would otherwise have been the case. The candle was sterilised either by being placed in a vessel containing water in the steam steriliser for four or five hours, or by being heated up to 120° C. for an hour in the autoclave. We give in the following table the results of our experiments with this filter when affixed to the tap.

TABLE XLV.—*Duff's Patent Germ-Proof Filter on Tap. (Pressure 24 lbs., Temperature 18° C.)*

Quantity of Filtrate Examined.	1st Day.	2nd Day.	3rd Day.	4th Day.
1 c.cm. in gelatine plate	—	—	+	+
10 c.cm. in broth	—	—	+	+

As will be seen from the above table, this candle appears to conduct itself as a perfect filter, permitting of the passage of organisms only after the lapse of an interval of time which would permit of their growth through its walls into the filtrate.

The filter was then again sterilised, and after being fed with a rich emulsion of staphylococcus pyogenes aureus, was again affixed to the tap and allowed to run continuously. Four samples were taken during the first day, the first immediately after starting, the second after the lapse of an hour, the third after two hours, and the fourth after six hours. On the second day two other samples were taken. We carried out these experiments with the filter attached to the tap, as we considered it possible that the germs might be washed through the filter only after the lapse of a certain time, owing to the thickness of its walls, but as will be seen from the table which follows we were unable to demonstrate the presence of the test organism in any of the samples examined.

TABLE XLVI.—*Tap Water + Staphylococcus Pyogenes Aureus.*

Number of Sample and Time of Taking.	Presence or Absence of Staphylococcus Pyogenes Aureus in the Filtrate.
First day, Sample 1 (immediately)	—
,, ,, 2 (1 hour)... ...	—
,, ,, 3 (2 hours) ...	—
,, ,, 4 (6 hours) ...	—
Second day, Sample 1 (24 hours) ...	—
,, ,, 2 (30 hours) ...	—

We intended then to test this filter with cholera bacilli, but during the process of sterilisation the candle cracked and was rendered useless for our purpose. Another candle was, however, obtained from the agents, and after sterilisation the experiment was proceeded with. The filter was fed with a rich emulsion of cholera bacilli in sterilised tap water, the filter being fed again and again with the filtrate which had passed through its walls. Large quantities of the filtrate were then taken and added to concentrated broth, to be incubated, so that we might detect cholera bacilli even if only a very small number should happen to be present in the filtrate. In this way more than two litres were brought under examination on the first day, and one litre on the second. The filtrates with one exception, however, remained absolutely sterile, and the growth on that one occasion was traced to the entrance of an accidental impurity acquired during the process of manipulation. The results obtained appear in the following table:

TABLE XLVII.—*Sterile Tap Water + Cholera Bacilli.*

Number of Sample.	Presence or Absence of Cholera Bacilli in the Filtrate.
First day, Sample 1	—
,, Sample 2	—
,, Sample 3	—
,, Sample 4	—
Second day, Sample 1	—
,, Sample 2	—
,, Sample 3	—

This experiment demonstrates very clearly that this material furnishes a germ-free filtrate when tested under the most strict conditions that we could devise. We were proceeding to test this candle further with staphylococcus pyogenes aureus when our candle again met with an accident during the process of preparation. On applying to the agents we were unable to procure another candle, as it appears that only a few have yet been manufactured, the inventor apparently waiting to ascertain how far this filter subserved its functions before going further in the matter. We have accordingly been unable to proceed further in this direction.

As we have already stated, the rate of filtration of this filter is very rapid. This will be seen from the following table:

TABLE XLVIII.—*Filtering Capacity of Duff's Patent Germ-Proof Filter.*

No. of Candle.	Day.	Average Filtrate in 5 minutes.	Average Time required to Filter 1 pint.
Candle 1	First day	9 litres	19 seconds.
,,	Second day	3 ,,	57 ,,
Candle 2	First day	14 ,,	13 ,,
,,	Second day	5 ,,	34 ,,

As will be seen from this table, this filter, like all others, would in course of time rapidly diminish in its output from the deposition of suspended materials on its surface. We have found that when cleaned, as recommended by the makers, by a brush, the output was renewed, but we have been unable to carry out a sufficiently extensive series of experiments to warrant us in concluding how far this output would be permanently maintained. If the metal bands were removed no doubt the candle might be subjected to a much more effective process of cleansing.

As has been already mentioned, we have unfortunately been unable to continue our investigations on this very interesting filter, but so far as our experiments go they warrant us in concluding that this filter affords protection against the communication of waterborne disease.

CONCLUDING REMARKS ON TAP FILTERS.

In this part of the report we have given the results of the examination of the filters of twelve manufacturers, and have had to report unfavourably on six of these; the six other types of filters appear to afford protection against the communication of waterborne disease.

It will be observed that in this pressure filter report we have not thought it necessary to test so many types of filter or of varieties of filtering material as was the case in the report on table filters. We have been guided in our selection of filters for examination by (1) the possibility of their conferring protection against the communication of waterborne disease and (2) by the fact of their having been in extensive general use. Thus, a filtering material such as silicated carbon, which was not found efficient in its action when used as a table filter, might possibly, when used as a pressure filter in a more compressed form or with a greater thickness of filtering material, exert a more perfect filtering action. The results obtained with these different materials, however, were found to be absolutely comparable with those described in the previous report when used for table filters.

The following list contains the names of those firms whose filters, so far as appeared from our experiments, did not appear to be calculated to confer protection against the communication of waterborne disease:

THE SILICATED CARBON FILTER COMPANY, *Battersea, London.*

MAIGNEN'S "FILTRE RAPIDE" AND "ANTI-CALCAIRE" CO., LIMITED, *255, Regent Street, London, W.*

WILLIAM DALTON, *9, Dickson Road, Blackpool.*

JACOB BARSTOW AND SON'S PATENT COMBINATION NATURAL STONE AND CARBON FILTERS, *Filter Works, Pontefract, England.*

PIEFKE FILTER: ARNOLD UND SCHIRMER, *Gr. Frankfürter Str. 123, Berlin, N.O.*

FILTRE UNIVERSEL: CHABRIER JEUNE ET CIE., *63, Rue de Maubeuge, Paris.*

The following list contains the names of those firms whose filters in our experiments appeared to afford protection against the communication of waterborne disease:

FILTRE CHAMBERLAND, SYSTÈME PASTEUR. SOLE LICENSEES AND MAKERS IN THIS COUNTRY, J. DEFRIES AND SONS, *147, Houndsditch, London, E.C.*

THE BERKEFELD FILTER COMPANY, LIMITED, *121, Oxford Street, London, W.*

AËRI-FILTRE-MALLIÉ THÉORIES PASTEUR, PORCELAINE D'AMIANTE, MAISON MALLIÉ, *155, Faubourg Poissonnière, Paris.*

PUKALL FILTER, ROYAL PORCELAIN FACTORY, *Potsdam, Berlin.*

SLACK AND BROWNLOW, *Abbey Hey Works, Gorton, Manchester.*

DUFF'S PATENT GERM-PROOF FILTER. AGENTS: WITTY AND WYATT, LIMITED, *88, Leadenhall Street, London.*

GENERAL CONCLUSIONS ON FILTER REPORT.

In the course of our examination of the different filters above detailed, we have, we believe, tested all the materials and combinations of materials which have been used to any extent in the construction of filters, which, to recapitulate, are as follows:

1. Carbon in its various forms, either pure or compounded with some other chemical substance—for example, the silicated or manganous varieties:
   - (*a*) As blocks, or in the powdered or granular form, used either separately or in combination—for example, *Doulton's Manganous Carbons; Morris's Patent "Circulating" Filter.*
   - (*b*) Charcoal as fine powder deposited on asbestos cloth, or placed in the interior of a stone block—for example, *Maignen's Filtre Rapide: Barstow's Filter.*
2. Iron in the form known as *spongy iron* or as *magnetic oxide*, either:
   - (*a*) Alone—for example, *Spencer's Magnetic Filter;*

   Or:
   - (*b*) Along with asbestos cloth—for example, *Spongy Iron Company's Filter.*
3. Asbestos in various forms, either:
   - (*a*) As a film of compressed asbestos pulp—for example, *Nibestos Filter;*
   - (*b*) As asbestos cloth on which fine charcoal or magnetic oxide is deposited—for example, *Lipscombe's New Patent Cylinder Filter: Spongy Iron Company's Filter.*

(*c*) As a fine deposit on cellulose discs—for example, *Piefke Filter*;

Or:

(*d*) As porcelain manufactured from finely-powdered asbestos—for example, *Porcelaine d'Amiante Filter.*

4. Cellulose, either:

(*a*) As discs of compressed cellulose—for example, *Piefke Filters*;

Or:

(*b*) As compressed cellulose, with a fine deposit of asbestos pulp—for example, *Piefke Filter.*

5. Porous stone (artificial or natural), either:

(*a*) Alone—for example, *Doulton's Stone Bottle Filter; Duff's Patent Germ-proof Filter*;

Or:

(*b*) With other substances, such as powdered carbon—for example, *Barstow's Tap Filter.*

6. Forms of prepared porcelains from clays or pastes—for example, *Pasteur-Chamberland Filter; Pukall Filter.*

7. Compressed silicious or diatomaceous earths—for example, *Berkefeld Filter.*

As will be seen from the report, the only filtering media which were found on examination to be efficient were forms of porcelain, compressed silicious earth and natural stone, and we may now consider briefly the probability of the other media being rendered efficient. It has been already stated that we examined as tap filters a number of filtering media which had previously been found not to be efficient as table filters, since these media might be used in a denser form, or in larger quantity when used under pressure. We were unable to demonstrate in any case that either of these factors exerted any influence other than merely to diminish the number of organisms appearing in the filtrate, and in some cases to spread their distribution in the filtrate over a longer period.

Molar and Molecular Action in Filtration.

The pores in a perfect filter are never smaller than the diameter of a bacillus, as is demonstrated by the fact that all the filters at present known to scientific workers permit, under favourable conditions, of the growth of water organisms through their walls into the filtrate. It is assumed that the microbes are arrested in the fine pores of the material by a species of molecular or surface attraction, and remain there unless the conditions are such that the organism is able to grow in the fluid as a long filament in contact with the surface of the pore till it arrives on the inner wall of the filter. It is assumed, accordingly, that the pores of such a filter are so fine, that when an organism enters its lumen it comes into such close relation with the walls, that molecular attraction comes into play and its further progress is arrested.[10] The difference in the action of different species of the efficient filters is probably to be attributed to the varying fineness of the pores occurring in their walls. Where the organism is brought into very close relations with the walls of the pores the porcelain appears to exert a distinct devitalising influence on the water organisms, which either prevents their further growth, or weakens them to such an extent that they appear in the filtrate only in an attenuated form. The Berkefeld filter appears to have the largest pores among the efficient filters, as is evidenced by the fact that the water organisms were not apparently weakened, that more species of organisms appeared in its filtrate, and that lowering the temperature to 11° C. did not prevent their appearance. The Pasteur-Chamberland filter, on the other hand, at 11° C., was able to give an apparently sterile filtrate for a prolonged period.[11] The Porcelain d'Amiante filter appeared to possess still finer pores, and to offer an even greater resistance to the growth of water organisms through its walls. These facts indicate clearly that the efficiency of the filtration depends on the character of the pores in the filtering medium, which naturally depend on the nature of the substance employed for this purpose. It is of course evident that no material can be expected to supply a series of pores of similar calibre within a narrow range, but that a certain proportion of larger pores, the effect of which will be probably annulled by increasing the thickness of the walls beyond that which would have been otherwise necessary, must be reckoned on. We have, for example, frequently observed air bells in the walls of Pasteur-Chamberland candles, which reduced the effective filtering capacity of the porcelain layer to one-third of that existing elsewhere, and yet these candles furnished a sterile filtrate. This indicates clearly that a very much thinner layer of this material might be used to furnish a sterile filtrate, if we could depend upon a wall of this thickness being homogeneous throughout and free from flaws. We cannot, however, as we have already stated, expect the channels in any medium to be quite uniform, and in all probability many of these at some part of their course would be so large as to allow of the direct passage of organisms, if this were not prevented by the channels opening into or leading from such larger pores being of a smaller diameter, corresponding to the channels preponderating in the filtering medium. The thickness of the layer of filtering material employed will be not merely that which is theoretically required to furnish a sterile filtrate, but that which gives the candle sufficient rigidity to withstand the process of cleansing, and, if necessary, sterilising, without being subject to the risk of breaking. The point, however, to which we wish particularly to draw attention is that the efficiency of the filtration depends entirely on the nature of the filtering material employed, that is to say, on the average size of the pores traversing its substance, and not on the mere thickness of the filtering material.

As we already stated in Part I of this report, the amount of filtering medium, when this is inefficient, present in a filter in all probability affects merely the period over which the disease germs would continue to be distributed in the filtrate,

[10] In confirmation of this view that molecular action comes into play we may refer to the interesting results obtained by C. J. Martin (*Journal of Physiology*, vol. xx, p. 364, 1896) with a Chamberland candle when used for the filtration of blood serum under a pressure of fifty atmospheres. He found that after a time the pores appeared to become obstructed and probably filled with concentrated serum, so that the porcelain wall became apparently converted into a dialysing membrane, and in consequence the filtrate consisted of merely the salts and diffusible extracts, while the non-diffusible proteids were all retained on the surface of the filter.

[11] *Vide* Footnote 8.

as the greater proportion of these will ultimately be washed through more or less rapidly, according to the depth of the medium which they have to traverse. An inefficient filter which received on one occasion water charged with disease germs would probably merely distribute these disease germs in the filtrate for a greater or less period of time, instead of the consumer receiving the disease germs all at one time where filtration was dispensed with. We have already suggested that in our opinion the effect of such a filter would be to materially increase the risk of infection without decreasing the severity of the disease, since the chances of the micro-organism passing unharmed into the small intestine and finding there suitable conditions would be greatly increased by its distribution over a more prolonged period.

WATER AN UNSUITABLE MEDIUM FOR DISEASE GERMS.

We are, however, unable to support the view that either cholera or typhoid fever germs can find a suitable breeding ground in any of the ordinary filtering media, and that from this cause the filter may continue to infect the water supplied. We have been unable to find any evidence that either of these organisms can multiply in water, even when highly polluted with sewage, and are accordingly strongly of opinion that the presence of disease germs in the filtrate from an infected filter is not to be ascribed to their multiplication, but to the germs originally introduced being gradually washed through into the receiver. We regard the experiments with perfect filters fed with raw sewage, where disease germs were unable to grow through into the filtrate, as strongly supporting this view. The history of epidemics spread by means of drinking water are also against the assumption that the germs multiply in this medium, since it has been observed that where a supply has been accidentally contaminated, but where the contamination has afterwards been cut off, the epidemic which originates through the drinking water does not continue to spread as one might legitimately expect if the germs were undergoing multiplication. It may be suggested, however, that the organic matter which has been retained in the pores of the filter may afford them sufficient nutritive pabulum; but the experiments which we have described with filters which had been in prolonged use, sterilised and unsterilised, give no support to this hypothesis. We do not indeed deny that these germs can multiply outside the living body; indeed, we believe that both are capable, under favourable conditions, of undergoing a saprophytic stage, but we believe that the necessary conditions are wanting under the circumstances we are at present considering.

COMPARISON OF FILTERING MEDIA.

The efficiency of a filtering medium, as we have already stated, depends on the size of the channels by which it is traversed, and, of course, on their regularity. In our examination of the different filters at present in use we found only three substances which have supplied an efficient filtering medium—porcelain or paste, compressed diatomaceous earth and natural stone. It must be noted, however, that all porcelains do not arrest the direct passage of organisms, and that those which are capable of furnishing a sterile filtrate vary greatly as regards their output and the obstruction which they offer to the growth through their walls of water organisms. The most perfect filter, from the scientific point of view, which we have seen is undoubtedly the Porcelaine d'Amiante, in which the clay is mixed with finely-powdered asbestos; but, unfortunately, the rate of filtration is so slow that the use of this filter for domestic purposes appears to be out of the question. Inasmuch as the more pervious porcelains can be relied on to arrest the passage of infective disease germs, they are naturally much more suitable for all practical purposes. The compressed diatomaceous earths as used by the Berkefeld Filter Company furnish a much less perfect filter from the strictly bacteriological point of view than the porcelain; they are nevertheless capable of arresting the passage of disease organisms, and have the great advantage of affording a larger output. We regard this rapidity of filtration as an all-important point in discussing the applicability of any filter for domestic purposes. For this reason we are of opinion that experiments carried out with the more porous materials such as diatomaceous earths or natural stone, rather than with denser media such as porcelain, are more likely to lead to the production of the filter of the future. The same amount of output as from the Berkefeld filter may no doubt be obtained by combining a number of porcelain candles of slower filtering capacity, but we have already insisted upon the risk of a leak, and the whole object of filtration being frustrated from the multiplicity of fittings thus involved, and we are accordingly unable to recommend any such arrangement. In addition, the time and labour involved in cleaning a number of candles constituting such a battery to restore their output, would, we believe, prevent this arrangement ever coming into general use. Natural stone, as found in Duff's patent filter, affords an abundant supply of filtered water, but, as we have already stated, we have not had an opportunity of submitting this substance to as searching and prolonged an investigation as we could have desired. We do not know for example whether under more prolonged use the output would not become so seriously diminished by the collection of organic matter in the pores that its filtering efficiency could not be restored by the process of brushing. We must now, however, regard natural porous stone as one of those substances which can be used for the construction of an efficient filter. The only other substance which has been said to yield a sterile filtrate in scientific experiments is asbestos. The experiments which we have carried out with various forms of this material have not yet yielded satisfactory results, but they have indicated the possibility of sterile filtrates being occasionally obtained under special conditions in a laboratory experiment. In our opinion, however, this material must at present be regarded as absolutely unreliable, inasmuch as its want of rigidity must always render it liable to the organisms being washed through in course of time into the filtrate. It has in addition

the great disadvantage that in most cases it has to be replaced from time to time with fresh asbestos wool, when the efficiency of the filter will vary, so that the filtering mechanism cannot be sent out by the makers as tested and warranted to be efficient in its filtering capacity. It is quite possible, however, that this material may come into use when combined with some rigid supporting material, when it might present certain advantages over the other materials at present in use.

We have described in detail, as regards each filter, the relative ease and rapidity with which it can be cleansed, and have pointed out that porcelain is not so easily nor so perfectly cleansed as the Berkefeld material; the latter filter, however, is much more fragile, and unless carefully handled a large amount of breakage may result.

Filtered Water to be Sufficient to Supply All Domestic Requirements.

We should like again to insist upon the necessity of all the water required for domestic purposes being filtered where it is considered necessary that the water to be used for drinking purposes should be subjected to this process, and that this should be effected with as little trouble as possible, otherwise the person or persons to whom this duty is relegated may be tempted to neglect the filtration of the water to be used for household purposes. If the water supply is considered open to pollution, and accordingly recognised as a source of danger, all the water consumed must be subjected to the process if any reliance is to be placed on it. We ourselves have had occasion to observe that where a filter has been attached to a pipe the servants soon learn how to disconnect the filtering mechanism so as to obtain quickly the water which they require, and thus obviate the necessity for waiting during the time occupied by its passage through the filter. If the process of filtration is to be relied upon, as in the case of waters which are known to be subject to contamination, the filter should be fixed either in the cistern, or, if attached to the tap, should be arranged in such a manner as not to allow of its being tampered with by those making use of it.

Use of Filters in Epidemics.

We have in this report kept specially in view the suitability of any filter to be used continuously for the filtration of water for domestic use, but we may here refer to the special use of filters in cases of emergency, such as an outbreak of epidemic typhoid. We have seen recently in the cases of Maidstone and Lynn that householders, although warned to boil their water, are either unable or unwilling to take the trouble to carry out this process in the thorough and complete fashion which is necessary to prevent infection. We believe that in such cases perfect filters, such as some of those we have described, have for this purpose an important sphere of usefulness.

Army Field Service Filters.

Through the kindness of the late Director-General of the Army Medical Department, Sir William Mackinnon, K.C.B., we were able to examine, for the first part of this report, the portable service filters which at that time were in use. It will be seen on reference to Part I that none of these portable service filters afforded any protection against waterborne disease; indeed, in our opinion, they would tend to increase rather than to diminish the risk incurred by those making use of them, since when such filters had once been charged with contaminated water they would continue for some time afterwards to discharge the disease germs into the "filtered" water. That this view, founded upon laboratory experiments, was not without justification has since, we believe, been indicated by the history of an epidemic of cholera which occurred in one of the regiments of our army in India.

To come down to more recent events, it is probable that the use of an efficient filter would have greatly reduced the number of cases of dysentery in the troops at present engaged on the Indian frontier. In this connection is it too much to suggest, considering how great are our interests in tropical climates, and the risk of acquiring waterborne disease run by so many of our race in these regions, that it is desirable that some effort should be made by those in authority to investigate and, if possible, recommend some practical method of meeting this ever-present danger?

Application of Results Obtained.

In this report we have given in detail the results of experiments with different filters as regards their power of preventing the passage of disease organisms, and have also, so far as possible, indicated the rapidity of filtration and the ease or difficulty with which they can be cleansed and their output renewed in the case of the respective filters. The reliability of the latter points may no doubt vary under different conditions, and we have no doubt that one filter may be better adapted for some conditions than for others. We have not, however, attempted to do more than to supply the data upon which water engineers and those interested in this question of water filtration may determine the form of filter best suited for their purpose. The conditions which obtain in actual practice are no doubt in many respects different from those which have come into operation in our experiments. Only experience can determine which of the filters reported upon are best adapted for domestic purposes; and should none of those at present on the market meet these requirements we have no doubt that the demand for such an article will in due course lead to the want being supplied.

[*This Report, together with that on non-pressure filters published in the* British Medical Journal, *November-December, 1894, will be reprinted as a pamphlet, and will be obtainable at the Office of the* British Medical Journal.

VALEDICTORY PRESIDENTIAL ADDRESS
ON
EXTRAUTERINE GESTATION.

Delivered before the British Gynæcological Society on January 13th, 1898.

BY A. W. MAYO ROBSON, F.R.C.S.,
Professor of Surgery in the Yorkshire College of the Victoria University; Senior Surgeon to the General Infirmary at Leeds.

GENTLEMEN,—I trust that you will condone my departure from the usual valedictory address in taking as my subject one which I believe cannot help but interest all who are engaged in gynæcological practice. I have ventured to do this for several reasons: first, because I happen to have had considerable experience in the subject of ectopic gestation, having either myself operated on, or seen with others, close on 40 cases; secondly, because I have certain original observations on diagnosis to mention; and thirdly, because I have recently heard or read of a number of deaths from ectopic pregnancy which would not have occurred had the subject been as well understood by the profession at large as it is by the Fellows of this and kindred societies. I feel, therefore, that as President of the British Gynæcological Society, I shall be taking a broader view of the responsibilities of my office by taking up a subject of wider interest than if my remarks were simply confined to the session's work, important as it has been.

The subject of ectopic pregnancy is of no less scientific than practical importance, for not only does it offer several problems difficult of explanation, but from its frequent occurrence and its alarming and dangerous symptoms, its study becomes of the first importance both to the general practitioner and to the operating surgeon.

It is a curious fact that in every female mammal above the monotremes there is a portion of the genital canal between the abdominal ostium and the uterus, in which under normal conditions the impregnated ovum is not retained, and that its lodgment and growth in this situation rarely occur except in woman.

Its frequency in woman may be the result of desquamative salpingitis, which Mr. Lawson Tait—to whom we owe so much in this special line of work—says is always present in such cases. The fact of there nearly always being a history of previous menstrual troubles, and often of serious pelvic disease before the ectopic pregnancy occurs, tends to support this view, and it is well shown in the record of my cases handed round; though in one, Case 2, there was not only an entire absence of any such history, but the organs themselves when handled and the tube when examined after removal showed no evidence of disease other than the one for which operation was undertaken.

Tubal gestation is of interest also, from the many forms it may assume and the many accidents that may occur in its course, these varieties being mainly dependent on the position of the ovum in the tube as well as on the site of the placenta. I have endeavoured to show in the chart the probable varieties of the disease that may be met with, and have marked by an asterisk those varieties that I believe I have had experience of.

Had I the wish, it would be manifestly impossible in a short address to traverse the whole field in so extensive a subject. I propose, therefore, to make some remarks on my cases, to refer to certain points in diagnosis, and to consider one or two details in treatment.

Taking the list as a guide, it will be noticed that the greater number of cases, Nos. 1 to 9, come under the regular form, in which the rupture takes place into the peritoneal cavity before the twelfth week, and death occurs from hæmorrhage unless the case be treated surgically, and it will be seen that of these all recovered except one, who was operated on when pulseless, and where death resulted from pulmonary embolism within twenty-four hours.

The next most frequent class in the list, Nos. 16, 18, 20, 21, 22, and 23, where the primary hæmorrhage is recovered from, may be termed subacute, and is interesting in that the after-course is so very variable. The bleeding becomes arrested by plastic peritonitis throwing out a barrier of lymph which causes adhesions of the contiguous viscera, thus forming a more or less considerable pelvic tumour.

These cases may be difficult to diagnose unless the history be carefully taken, but as a rule that is sufficiently characteristic to give the key to the situation. Cases 16, 20, 21, 22, and 23 are good examples of the limitation of bleeding by matting of intestines and omentum, and in Cases 3, 5, and 8 the occurrence of second and third attacks of syncope, probably marks the recurrence of fresh hæmorrhages. Case 22 is a forcible example of one of these cases being left to Nature for six weeks, the operation having at last to be undertaken with a pulse of 145, and a temperature of 102°; fortunately, however, it was not too late.

Nos. 14 and 17 are instances of so-called hæmatosalpinx in which the blood had been poured out through the open end of the tube, either from death of the ovum, or from abortion into the peritoneum through the abdominal ostium.

I have seen and operated on several cases of suppuration in the pelvis, in which the history and the character of the abscess have led me to believe that the cause has been an extrauterine gestation, in which the bleeding has become limited by adhesions and the intraperitoneal hæmatocele has afterwards broken down into pus, but the difficulty of proving the origin has led me to leave them out of the list. In Case 10, however, the history of an ectopic pregnancy rupturing into the broad ligament and of the hæmatocele breaking down seems so clear that I have introduced it as an example. This case also shows how a false stricture of the rectum may be produced by effusion into the left broad ligament, and yet completely clear up when the collection is evacuated.

Case 4 may possibly be an example of ovarian pregnancy, but if so it was at an extremely early stage and the ovum was not found, though searched for in the blood clot; moreover, the tube and ovary were adherent, so that even had the ovum been discovered, the proof of ovarian gestation would not have been certainly established. It is of interest in that it occurred in a patient on whom I had operated on account of a ruptured ectopic gestation on the opposite side four months previously.

Case 3 exemplifies apparent recovery after the first rupture, then secondary rupture of the false gestation sac and fatal hæmorrhage saved by operation. No. 11, which came under my care for cystitis, presents several interesting points. The patient, then single, was in the hospital in York twenty-five years before, and excited considerable interest, as although pregnancy was diagnosed, she denied it, and apparently proved herself in the right at the time, as labour never supervened. She passed through a tardy abdominal illness, but was well enough to marry four years after, and remained well until cystitis developed. On sounding the bladder I felt a solid body, and after dilating the urethra I removed a number of bones belonging to a lithopædion, the sac of which I could feel bimanually in the pelvis. By means of a scoop and a syringe I was able, under ether, to empty the sac, and the patient recovered, and was well ten years later.

DIAGNOSIS.

In all the acute cases that I have seen there has been no difficulty in making a diagnosis, the symptoms having been pathognomonic. These were a sudden pelvic pain followed by faintness of varying degrees, even to extreme collapse; the history of one or, perhaps, two missed periods, and usually the appearance of a slight metrorrhagia, with at times the passing of decidual membrane. On pelvic examination the uterus was usually found tilted over to the normal side, and a soft doughy swelling could be felt at the site of disease. The special symptoms to which I would draw attention are:

1. Superficial dulness on percussion over the pubes and in either flank, which on deeper percussion gives a resonant note.

2. A thrill in the same regions on gently flicking with the finger nail, though no ordinary signs of fluctuation can be felt.

3. A symptom which I believe has not been hitherto described. On turning the patient over, the dulness in the flank then uppermost persists for some little time, but gradually disappears in a way which I have never found in the case of any other fluid than blood in the peritoneal cavity.

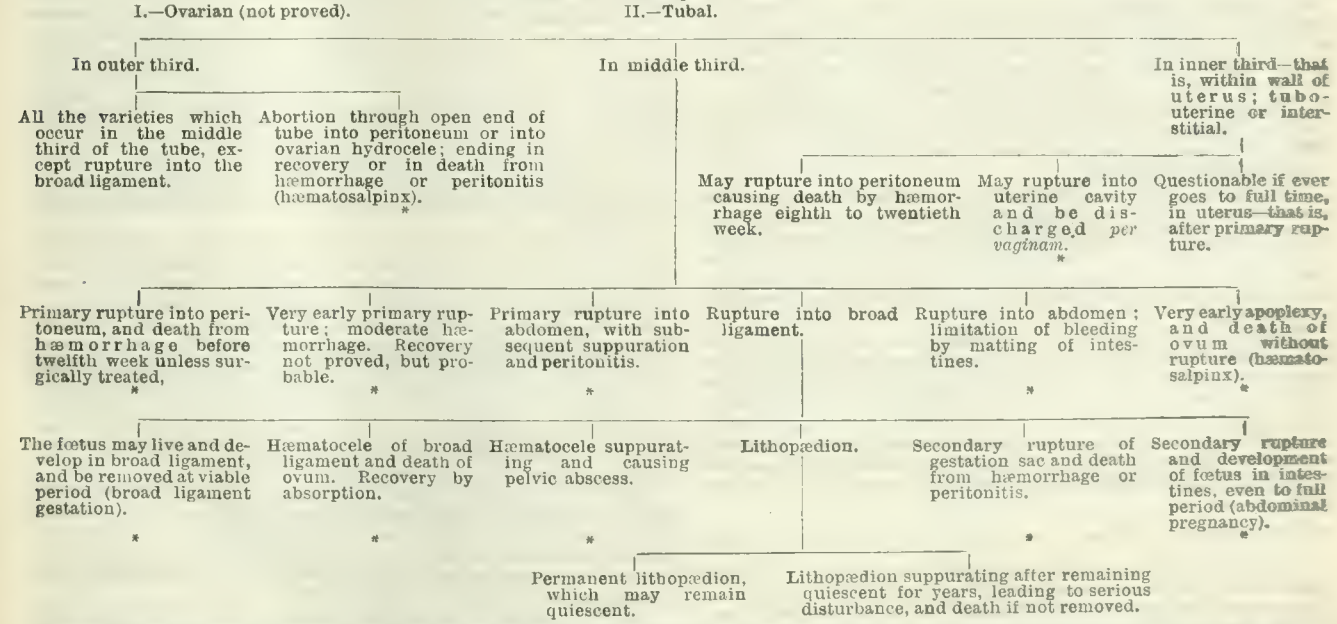
Table of 23 Operations for Extrauterine Gestation.

No.	Date.	Initials.	Age.	Private or Hospital.	History.	Condition when seen by Operator.	Operation.	Result.	After-History.
1	27/4/91	Mrs. F.	29	P	Previous good health; 2 children, last 2 years before; one missed period, 2 weeks; sudden pain and collapse in railway station; carried home to bed; slight metrorrhagia	Seen in collapse some hours after; uterus slightly pushed to the right	Abdomen full of blood and clots; left ruptured tube removed; lavage; drainage	R	Now well.
2	23/12/91	Mrs. H.	23	P	Regular in menses, and well up to 3 weeks before seizure, when began to have pain on right side of pelvis; missed period; sudden pain and collapse while at breakfast; slight metrorrhagia and membrane passed	Seen within 2 hours; pulseless; fulness on right, and uterus tilted to left	Abdomen full of blood and clots, right ruptured tube removed; lavage; drainage	R	Now well.
3	22/2/92	Mrs. C.	32	P	Rupture sixth week from last period; sudden seizure while going to church; collapse; partial recovery on removal to bed, and then second attack 24 hours after first; slight metrorrhagia	Pulse 140; no tumour felt; fluctuation in abdomen; sanguineous vaginal discharge	Operation 32 hours after first rupture; 6 hours after second attack; left tube ruptured close to uterus; removal; lavage; drainage	R	Now well.
4	3/4/92	Mrs. H.	24	P	Sudden seizure with faintness after period missed few days	Large blood cyst in neighbourhood of ovary, which was joined up to open end of Fallopian tube; tumour felt on bimanual examination	Appendage removed; questionable ovarian form of ectopic gestation	R	Well
5	18/8/92	Mrs. S.	30	P	Six weeks since last period, slight show soon after period missed; first attack 2 days before I saw her; partial recovery; second attack 12 hours before my visit; metrorrhagia	Collapsed and pulseless; left tube size of small orange, ruptured in middle; fluctuation in abdomen	Operation 48 hours after first rupture; abdomen full of blood; removal of left tube; lavage; drainage	D	Sudden from pulmonary embolism 16 hours after operation.
6	19/3/96	Mrs. E. M.	32	H	Menses normal up to January, when last period; end of February menses appeared, and membrane passed with pain, and later some faintness	Swelling to right of and behind uterus; faintness just before operation	The tube had just ruptured on the peritoneal aspect, and was bleeding freely; the ovum was found in the tube intact; much blood free in pelvis	R	Cure.
7	6/10/96	Mrs. G.	34	P	One missed period; sudden attack of syncope, with pelvic pain thought to be peritonitis	Rapid pulse; distended abdomen; fluctuation in abdomen; uterus tilted to right; os soft and patulous; slight vaginal discharge	Abdomen containing free blood; clots in large quantity; ruptured left tube removed; lavage; drainage	R	Well.
8	2/3/97	Mrs. C.	28	P	Salpingitis and ovaritis years before; never pregnant; one period missed six weeks; sudden faintness and pain three days before my seeing her; second attack day before	Free fluid in abdomen; pulse rapid; no temperature; tumour felt on left, and uterus pushed over to right	Abdomen full of blood; left tube size of Tangerine orange, ruptured and bleeding; ovum still in tube; removal; lavage; drainage	R	Well.
9	23/11/97	Mrs. B.	30	P	One child 4 years old; metrorrhagia or leucorrhœa ever since last period, six weeks previously	Operation 36 hours after rupture; recovery from initial collapse and recurrence of fainting; pulse 130	Operated on for me by Mr. W. H. Thompson 36 hours after rupture; about 3 pints of blood free in peritoneum; ruptured tube removed; abdomen washed out and drained	R	Cure.
10	4/6/80	Mrs. B.	26	P	Missed period soon after marriage; sudden pain in pelvis and collapse followed by discharge of blood and membrane; formation of hæmatocele in left broad ligament	Tumour on left of pelvis reaching into abdomen; tender on pressure; fever; Douglas's pouch filled up; rectum surrounded; illness extending over several months	Abscess of left broad ligament opened up and drained; blood clots with pus in abscess sac	R	Well now.
11	4/5/87	Mrs. M.	42	P	Abdominal tumour with amenorrhœa 25 hours before; pregnancy diagnosed, but no labour followed; abdomen gradually got less; 7 years bladder symptoms	Hard pelvic tumour felt at lower part of abdomen, and bimanually felt close to and fixed to uterus	Urethra dilated and bones extracted from fœtal sac through bladder; bladder and fœtal sac washed out; drainage	R	Quite well some years later.
12	15/9/89	Mrs. R. S.	29	—	Dysmenorrhœa since marriage 5 years before; probably gonorrhœa; amenorrhœa 3 months; sharp pelvic pain followed by painful menstruation	Seriously ill with great pelvic distress; tumour on left of uterus; uterus anteflexed and pushed to right	Fœtal blood cyst in left broad ligament, size of hen's egg, with ovary and tube adherent; removal	R	Quite well since.
13	21/9/90	Mrs. W.	31	P	Dysmenorrhœa and dyspareunia for five years, since birth of child; pelvic pain and two missed periods	Tumour on right of uterus diagnosed as extrauterine gestation; operation declined; sudden pain followed by syncope; pelvic hæmatocele developed	Hæmatocele absorbed very gradually, and convalescence prolonged	R	Well now.
14	10/11/90	Mrs. K.C.	20	H	History of gonorrhœa followed by dysmenorrhœa and continued pelvic distress; one period missed	Tumour felt on left of uterus; great pelvic distress and marked tenderness on bimanual examination	Left tube filled with blood clot, and ovary and tube adherent; probably abortion in tube; membranes, but no fœtus; removal	R	Quite well since.
15	12/12/90	Mrs. A.F.	26	H	Severe pain; dysmenorrhœa, then period of amenorrhœa	Great pelvic distress; invalidism; fixed tumour on left of uterus	Left hæmatosalpinx removed; blood clot and membrane, but no fœtus found	R	Quite well since
16	19/12/90	Mrs. S. H.	30	H	Menses ceased end of October; six weeks later while at work faintness and pelvic pains; 2 days after, second attack; 2 weeks after, third severe attack, and then blood and membrane passed	Pelvic tumour; uterus pushed to left; tender abdomen; profound anæmia	Large blood clot filling pelvis; right tube ruptured ½ inch in longitudinal axis; right appendage removed	R	Well some time after.
17	11/5/93	Mrs. T. Jewess.	26	H	Confined 15 months before and suckled child; menses had never reappeared; 12 weeks before admission sudden pain and collapse, together with appearance of menses, which continued	Tumour size of orange felt through abdominal wall, on right of uterus; *per vaginam* this felt to be separated from uterus, though close to it; os patulous	Right tube removed with mass of blood clot surrounding it; tube unruptured, the blood having evidently escaped from the open ostium; probably an abortion from the end of the tube; much lymph with the blood clot; decidua in tube	R	Cure

Table of 23 Operations for Extrauterine Gestation.—(Continued).

No.	Date.	Initials	Age.	Private or Hospital.	History.	Condition when seen by Operator.	Operation.	Result.	After History.
18	—	Mrs L. V.	26	H	One child 3 years before; gonorrhœa; dysmenorrhœa; one period missed; severe abdominal pains, followed by collapse and recovery, and later some repetition of attacks extending over 6 weeks	Douglas's pouch and pelvis filled by soft swelling, which surrounded the uterus; os soft and exuding purulent sanguineous discharge	Ruptured Fallopian tube, with hæmorrhage into broad ligament, and into abdomen; limited by intestines and omentum	R	Good recovery from operation, but 3 months later had gonorrhœal pyelitis following cystitis and other troubles
19	23/7/96	Mrs. P.R.	33	H	Four children; menstruation regular up to 7 weeks before, then missed 1 week, when menses commenced and membrane passed, since which time pelvic pain and metrorrhagia	Os patulous; distended left tube felt; uterus enlarged, but freely movable	Left Fallopian tube occupied by ovum removed; ostium of tube patulous and bleeding into abdomen: tube unruptured; clots in peritoneal cavity	R	Cure.
20	18/2/97	Mrs. H.L.	37	H	Ten children; last four years ago; missed period at end of November; pelvic pain with collapse middle of December; menses then commenced; between that time and operation she had several fainting seizures with pain	Os patulous and Douglas's pouch full; soft tumour in pelvis around uterus	Sac containing blood clot in pelvis limited by intestines and omentum: ruptured tube in centre of mass, and ovum found in centre of clot	R	Cure.
21	20/5/97	Mrs. E.C.	39	H	One miscarriage at age of 19; 3 years before, severe abdominal and pelvic pain; March 29th, sudden pelvic pain and collapse April 10th, 22nd, 27th, and May 1st similar attacks with increased pain in left side of pelvis: metrorrhagia continuous	Uterus surrounded by soft tumour, and Douglas's pouch filled up; great tenderness	Pelvis filled with blood clot, and on left of uterus ruptured tube with placenta in it; on clearing the tube it was still bleeding	R	Cure.
22	22/7/97	Mrs. M. H., Armley	29	P	One child 2 years before; dysmenorrhœa; two missed periods, then great pain and faintness; abdomen became distended, and a pelvic abdominal tumour developed; exacerbations of pain and several fainting attacks; rapid pulse and increase of temperature: metrorrhagia and offensive discharge	Abdomen distended and tender: pelvic tumour extending nearly up to umbilicus; uterus fixed; pulse 140 to 150; temperature 102° to 103°; os patulous: offensive purulent sanguineous discharge	Pelvis filled with blood clot breaking down, and offensive; left tube ruptured, and containing placenta; much matting of intestines and omentum; tube ligatured off and removed; abdomen cleared and drained	R	Now quite well.
23	22/10/97	Mrs. S.	26	P	Six years before had pelvic symptoms, 9 weeks before had sudden abdominal and pelvic pains, followed by hæmorrhage from uterus; pelvic distress and uterine hæmorrhage	Pelvic and abdominal tumour surrounding uterus; marked tenderness and Douglas's pouch filled up; os patulous; sanguineous discharge; pulse rapid, and some fever	Blood clot in pelvis with placental remains: both tubes and ovaries diseased, but left ruptured; removal; drainage	R	Well.

Schema of Ectopic Gestation.



The accompanying schema shows at a glance the varieties of the disease that may be met with, giving a rational explanation of the conditions. seems convenient to divide the tube into thirds, as the outer third is completely invested by the peritoneum; the middle third is only partly invested, and has the mesosalpinx below: while the inner third is placed in the uterine wall. In the outer two-thirds rupture of the tube usually occurs in the third to the tenth week, rarely beyond the twelfth; but in the inner third it may not occur until the fifth month. The anatomical arrangement forms the basis for the classification which is shown in the chart. I have marked with an asterisk all the varieties that I believe I have seen, either under my own personal care or in the hands of colleagues.

4. In one case, related to me by my colleague Mr. Jessop, the liver dulness had entirely disappeared, apparently owing (*a*) to the liver having become diminished in size from the loss of blood, and (*b*) to the bowels having been pushed up by the effusion of blood in the pelvis.

In nearly all the cases there was dysmenorrhœa for some time before the catastrophe, and in several the pain of the pregnant tube led the patients to seek advice before rupture occurred.

In three cases I made the diagnosis of tubal pregnancy before rupture; in one, Case 13, the rupture occurred into the broad ligament, and after a long, tedious illness the patient recovered without operation. In another, Case 19, I removed the unruptured tube containing the ovum; and in a third, Case 6, I made the diagnosis and arranged to operate, and the rupture actually occurred on the way to the operating theatre, where I removed the tube still bleeding.

In the class of cases not seen until some time after the first rupture, the presence of a painful tumour fixing the uterus, often more marked at one side, usually filling up the pouch of Douglas, and sometimes reaching above the pelvic brim, when taken with the presence of metrorrhagia, the passage of decidual membrane, and the characteristic onset following on previous dysmenorrhœa with one or two missed periods will usually lead to a right conclusion.

TREATMENT.

Had it not been that quite recently I saw the report of a fatal case of ectopic pregnancy in which a surgeon was called in but declined to operate because of the collapsed condition of the patient, I should not have thought it worth while to remark on the treatment of these cases, as I think we are nearly all agreed that the arrest of hæmorrhage by the ligature and removal of the bleeding tube should always be adopted when the rupture has taken place into the peritoneal cavity.

A reference to my table of cases will show that three of the patients were pulseless at the time of operation, and in all three a pulse had returned at the wrist before the operation was finished, doubtless due to transfusion through the peritoneum by the absorption of the saline solution used in washing out the abdominal cavity to clear it of blood and clot.

My former remarks will show that I believe there will seldom be any doubt in diagnosis, but even if there should be, it is infinitely better to make a small exploratory incision in the middle line than to stand idly by and allow the patient to die of hæmorrhage when the simple application of a ligature could save her life. Such an exploratory operation need not necessarily open the abdomen, as in case of intraperitoneal hæmorrhage, the blood shows through on exposing the parietal peritoneum.

Even where the patient has partly recovered from the first hæmorrhage I would urge operation, since a second hæmorrhage may at any moment occur and prove fatal before operation can be arranged. Where rupture has occurred into the broad ligament, operation is not called for, unless the hæmorrhage be very excessive, or unless at a later stage it ends in suppuration.

When it is borne in mind how fatal this accident is, and what a terrible condition the patient usually is in when the surgeon arrives, it is as astonishing as it is gratifying to know that the operation is so safe and satisfactory. For instance had it not been for the accidental death from pulmonary embolism in a patient pulseless when operated on, I should have been able to record an uninterrupted series of recoveries; as it is, the one death in 23 only gives a mortality of 4.3 per cent.

A CHEQUE for £10,000 has been publicly handed over to the Leicester Infirmary by Mr. Councillor Herbert Marshall as a Jubilee endowment to the institution. The amount was wholly raised by Jubilee subscriptions at the instance of Mr. Marshall, ex-Mayor of the borough. This sum has been augmented by over £2,500 raised by a bazaar promoted by the Duchess of Rutland, the Countess of Warwick, and others, as well as by largely increased annual subscriptions.

CONSERVATION OF THE OVARY IN HYSTERECTOMY AND HYSTERO-MYOMECTOMY.

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"WHAT'S in a name?" is a question often asked, with the implied answer that the name is really of no importance at all, and yet nothing has done more to perpetuate bad surgery than ill-chosen names. For example, the names "cystocele" and "rectocele" given to the prolapsing soft tissues of the anterior and posterior vaginal walls have been the causes of innumerable operations upon these inoffensive parts of the anterior and posterior vaginal walls, while the real injury which let them protrude lay at the vaginal outlet; in like manner, the name "prolapse of the womb" given to the hernia ("sacropubic") at the inferior strait has been responsible for many useless operations for the removal of the prolapsing uterus, curing the ailment only in name, and losing sight of the fact that a patient with a vaginal pouch hanging out between her limbs was no better off even if the uterus were out of it.

On the other hand, I feel that much has been lost to the surgical world, and the progress of the conservative treatment of the pelvic disorders of women retarded by the changing of a name given by the older anatomists, with remarkable insight, to the essential female organs of sex, from "testes muliebres" to that of "ovaria" or "ovaries," and so losing sight of the homology between these glandular organs in the male and in the female. Had the older proper name of the ovaries been kept, and were they to-day called "testes" instead, radical executive surgery would have advanced far more slowly, and would never have gone so far, as the well-known conservatism with which the male is treated would then inevitably have been reflected upon the gynæcological field.

Sir Spencer Wells struck the first telling blow in favour o conservatism in his *Ovarian and Uterine Tumours* (London: 1882, p. 342) when he reported 1,000 cases of ovariotomy in tabular form, in which the ovariotomy was unilateral—that is, one ovary was left, in 228 women who survived the operation and were under 40 years of age; 120 of the 228 women bore 230 children, very nearly an average of 2 children to each woman. Of the women over 40 years of age there were four who bore children. C. Schröder[1] by the resection of the ovaries; A. Martin,[2] in the resection of ovaries and opening closed tubes; and Dr. W. M. Polk[3] by his repeated demonstrations and earnest insistence upon the possibility of restoration of function in diseased adherent tubes and ovaries, and of the functional value of opened and amputated tubes, have in later days laid the foundation stones for the important conservative gynæcological work in the immediate future.

C. Schröder, in a spirit of ultra-conservatism, stated that one of his reasons for the preservation of part of an ovary was to retain the function of ovulation, even if it were accompanied by but a theoretical possibility of conception.

We are now beginning to realise that so long as the cyclical changes of menstruation persist they hold most important fundamental relations to the well-being of the body at large; and while we are as yet unable to state what is definitely accomplished by the act in the way of excretion, or its influence on metabolism, we do know only too well that the sudden artificial induction of the menopause is often a source of extreme and lasting discomforts.

There is a growing conviction that the ovary belongs to the same group of organs as the thyroid, thymus, and pineal glands, and that in addition to its function of ovulation, it secretes a substance which is absorbed and consumed in the animal economy, and which is necessary to it in retaining its physiological balance.[4] Martin[5] says:

"It is probable that the ovaries, like the liver and thyroid gland, modify the blood circulating through them, and add to the blood some peculiar product of their metabolism. It may be that some of the climacteric symptoms are due to the loss of this substance from the system."

An active principle called "spermin," found in sperm by Schreiner in 1878, has been found in the thyroid and thymus glands, and in the spleen, ovaries, testes, and blood, from all of which it has been extracted in the form of an insoluble spermin phosphate.

A. Poehl[6] has elaborately studied this product, and found it in both the male and the female reproductive organs, and as a normal physiological constituent of the prostate, testicles, ovaries, thyroid, thymus, pancreas, and spleen, as well as in the blood. The crystals of spermin were separated from the semen in a form similar to the Charcot-Leyden crystals of Boettcher, with which they were for a long time confused. Spermin is, as A. Gautier has declared, a leucomaine, believed up to now to be a product of the retrogressive metamorphosis of an albumen, either injurious or indifferent to the organism; evidences now in hand, however, go to show that spermin possesses most valuable functions in connection with the activities of living beings, and the spermin secreting and elaborating organs may be called the "apothecaries" of the body, secreting many important medicaments, much more active and more accurately representing its true wants under varying conditions than artificially administered drugs.

Spermin is an active oxidising agent, assisting by its catalytic action in restoring the oxidising power of the blood without having recourse to the oxygen derived from the air. Spermin has also shown a favourable action when given to patients suffering from diabetes, scurvy, etc., in which such auto-intoxications are manifestly the result of an accumulation of retrograde products. Injected subcutaneously it acts as a physiological tonic in all kinds of depressed conditions such as neurasthenia, anæmia, etc. Poehl declares that it increases the nitrogenous excreta of the kidneys. Its action is enhanced by the alkaline condition of the blood.

More positive evidence for an internal secretion of the ovary are the experiments on bitches made by G. E. Curatulo and L. Tarulli[7] These authors, after regulating the diet of the animals until a certain average quantity of nitrogenous materials and phosphates were excreted daily, removed the ovaries. In each experiment they found the phosphates in the urine greatly and permanently reduced in quantity; in one case where the nitrogenous materials averaged 9.93 g. and the phosphates 1.50 g., a series of daily observations was continued over three months, and demonstrated the fact that, while the nitrogen remained about the same in quantity, the phosphates decreased down to 0.60 g.

The experiments of Curatulo and Tarulli would go to explain the utility of castration for the relief of osteomalacia, by permanently diminishing the excretion of the lime salts which form the solid elements of the bones. Associating Curatulo's results with the evidence given by Poehl of the high oxidising power of "spermin," we may ascribe the effects of castration in decreasing the phosphates in the urine, not to the lessened quantity taken in the food but to a diminished oxidation of the organic phosphates contained in the tissues, which, combined with earthy bases, are finally deposited in the bones in the form of calcium and magnesium phosphates.

Routh[8] gives further important evidence of the existence of an internal ovarian secretion in citing Dr. Airstoff's investigations, which show that when one ovary is removed in a rabbit the other one undergoes a compensatory hypertrophy, increasing both in size and weight, the follicles mature and wither more quickly, and the medullary increases. These changes begin within two months after the operation, and in three or four months the remaining ovary has become nearly double its original size.

Since the ill-effects of castration, whether the structures are diseased or not, are often so disastrous, it becomes a question of paramount importance to determine whether we can in any way substitute the lost ovarian tissue, and to this end two natural lines of experiment have been tried. E. Knauer[9] in a communication entitled Einige Versuche ueber Ovarientransplantation bei Kaninchen, has shown that the ovaries may be completely severed from their normal surroundings and successfully transplanted, either to a part of the broad ligament or between the muscles of the abdominal wall. In one of the rabbits examined six months after the transplantation, one ovary excised and implanted in the broad ligament was found as big as a lentil, and abundantly nourished, with a normal stroma and numerous follicles of all sizes containing ovules; a number of degenerated follicles were also found, perhaps more than usual. The ovary implanted in the fascia of the abdominal wall was only about a third its original size, but was in other respects normal.

The second line of experimental substitution of the lost ovarian tissue is that of feeding to the women deprived of ovaries one of the organic juices. This has been tried by R. Chrobak[10] in a few cases with distinctly encouraging results. The ovaries of cows, washed in ether and alcohol, and dried at a temperature of 45 to 50° C., with an air pump, and then pulverised and made into tablets containing 0.2 gr. of ovarian substance each were used. Two, three, or even four of these tablets were given daily to women suffering from the severe symptoms of an induced climacteric; in one case, after taking two or three tablets daily, the attacks of giddiness, flushes, and sweatings, which the patient had been having on an average ten times daily, were reduced to three, and disappeared entirely at night; another patient was entirely relieved of attacks which had been distressing her five or six times a day.

A valuable contribution to this line of observation has been made by Dr. H. B. Stehman, of Chicago,[11] who gave thyroid tablets to a series of patients suffering from various forms of mental and other disturbances, such as excessive flow, amenorrhœa, extreme nervousness, and ovarian pains, all of which might on the present hypothesis be attributed to deficient ovarian secretion. Each tablet given three times daily represented about one-sixth of a sheep's thyroid. In each of the six cases reported in detail, such a remarkable improvement was observed within several weeks, that the conclusion seems well founded that "in these cases of neurasthenia, with poor nutrition, and in consequence disordered pelvic function, ovarian tissue is indicated. The extract not only modifies the nutrition of the ovary but also general nutrition, and this return to the normal makes physiological processes possible."

While the verdict of "not yet scientifically proven" must still be written under some of these citations, the evidence is still strong enough to present cogent reasons to the gynæcologist for the utmost conservatism in treating the essential organs of sex. With these important observations in mind the efforts, and, if I may use the term, the experiments, of the conscientious gynæcologist at the operating table must henceforth lie in the direction of conservatism.

Strongly imbued as I am with these convictions, I make no apology for the presentation of the following chart carrying out a line of conservatism which may at first sight be deemed extreme, but which must, however, be judged by its results. Since the spring of 1895 I have invariably made an effort to retain the ovaries even in those cases under my care in which it has been necessary to remove the uterine tubes and the uterus; the result of this has been a remarkable diminution, and in some cases complete absence, of the distressing nervous symptoms of the menopause.

The table which I present here shows only those cases in which this plan of operating was tried where the uterus was removed for myomatous or fibroid tumours. There were twenty of these cases, three of them in black women and the remainder in white. The first operation is recorded as performed May 11th, 1895.

No general hospital cases have been included in the list of later date than December, 1896, although 18 cases have been operated upon since that time; the two cases dated February 17th and March 18th, 1897, were operated upon in my private hospital.

It will be seen by consulting the list, which has been prepared with great pains by Dr. Jay H. Durkee, that a brief but satisfactory analysis is given of each case. I would call particular attention to the column showing what organs were removed. It will be noted that this includes in every case the uterus, in 11 instances one ovary, in 6 instances one, and in 10 both uterine tubes. The column to the right of this shows what organs were left behind, not removed. In the larger column in the middle of the table the symptoms of the patient before the operation are given. The four columns

Conservative Treatment of the

Gynæcological Number.	Date of Operation.	Initials of Patient.	Age.	Race.	Marital Condition.	Menstruation.	Anatomical Diagnosis.	Organs Removed.	Generative Organs Left.
3501	May 11, 1895	A. B.	47	White	Married: 1-para; labour normal. 2 mis. ,, ,,	Irregular. Dysmenorrhœa increasing	Cyst R. ovary. Small, Solid L. ,,	Uterus, R. and L. tube, L. ovary	R. ovary
3590	July 21, 1895	C. T.	59	Black	Single	Menopause, 5 years	Myoma uteri. Extensive adhesions	Uterus, R. tube, and ovary	L. tube and ovary
3628	July 8, 1895	S. E. H.	40	White	,,	Irregular and profuse	Myoma uteri. Omental adhesions	Uterus, R. tube, and ovary	L. tube and ovary
3867	Oct. 22, 1895	M. S.	45	Black	Married: 1-para; labour normal	Profuse 4 years. Dysmenorrhœa increasing.	Myoma uteri	Uterus, R. and L. tube, R. ovary	L. ovary
3806	Sept. 23, 1895	R. R. McL.	18	White	Single	Irregular and profuse hæmorrhages	Myoma uteri	Uterus and R. and L. tube	R. and L. ovaries
4369	May 11, 1896	M. E. R.	36	,,	Married: 4-para; labours all hard	Irregular 6 years. Increasing menorrhagia	Myoma uteri	Uterus, L. tube, and ovary	R. tube and ovary
4252	Mar. 30, 1896	A. C.	40	,,	Married: 1-para; labour normal 1 mis. ,, ,,	Normal	Myoma uteri. Strong adhesions	Uterus, tubes, and L. ovary	R. ovary
4423	June 6, 1896	B. R.	38	,,	Single	Menorrhagia 7 years. Hæmorrhages	Myoma uteri	Uterus, tubes, and L. ovary	R. ovary
4526	July 25, 1896	R. R.	46	Black	Married: 6-para; labours normal 1 mis. ,, ,,	Irregular for 3 years	Myoma uteri. L. salpingitis and oöphoritis	Uterus, L. tube, and ovary	R. tube and ovary
4635	Sept. 12, 1896	E. H. McG.	37	White	Married: 0-para 0 mis.	Constant flow for 4 months	Myoma uteri (submucous)	Uterus and tubes	Ovaries
4894	Dec. 28, 1896	C. B.	45	,,	Married: ?-para	Menorrhagia	Cystic myoma	Uterus and tubes	Ovaries
4845	Dec. 1896	E. B.	32	Black	Married: 0-para 0 mis.	Increasing menorrhagia	Myoma uteri	Uterus, tubes, and R. ovary	L. ovary
4849	Dec. 5, 1896	I. M. J.	27	White	Married: 1 mis.; no bad results	Irregular, scant. Severe dysmenorrhœa	Pelvic peritonitis. Hydrosalpinx duplex. Retroflexed uterus	Uterus and tubes	Ovaries
4771	Nov. 2, 1896	N. W. D.	42	,,	Single	Increasing Menorrhagia. Hæmorrhages	Myoma uteri	Uterus, L. tube, and ovary	R. tube and ovary
4832	Nov. 25, 1896	F. G.	28	,,	Married 4 years: 0-para	Regular	Myoma uteri. Multinodular	Uterus	Tubes and ovaries
4733	Nov. 2, 1896	M. R. B.	40	,,	Single	Profuse	Myoma uteri	Uterus and tubes	Ovaries
4902	Dec. 30, 1896	C. E. E.	36	,,	Married: 1-para; labour normal	Regular	Myoma uteri	Uterus, R. tube, and ovary	L. tube and ovary
4903	Dec. 30, 1896	C. W. T.	35	,,	Married: 0-para	Increasing menorrhagia for 3 months	Myoma uteri	Uterus	Tubes and ovaries
San	Feb. 17, 1897	G. W. C.	51	,,	Married: ?-para	Regular. Free	Myoma uteri	Uterus	Tubes and ovaries
,,	Mar. 18, 1897	K. D.	46	,,	Single	Excessive menstruation. Regular	Myoma uteri	Uterus	Tubes and ovaries

This Chart contains no hospital cases later than December, 1896. Since then 18 cases

which follow this furnish an analysis of the condition of the patient since the operation; in 3 cases, Nos. 5, 6, and 7 on the list, I have not been able to hear from the patients at all. The remarkable columns are the last, and the next to the last; it will be seen by consulting these that in no single instance has the operation given rise to any of the aggravating symptoms so commonly, I might almost say invariably, associated with the artificially induced menopause.

The utmost discomforts experienced were slight flushes, and in 9 cases absolutely no symptoms of a menopause are noted. Some of the letters received from the patients were quite remarkable for their enthusiastic expressions as to the relief experienced. One of my patients in the thirties, after experiencing no symptoms of the menopause beyond that one which is, of course common to all cases of uterine extirpation, namely, the cessation of menstruation, began two years after the operation, and fully from four to six years earlier than natural to pass through the various nervous phenomena of a menopause of an ordinary character.

The technique of the operation is simple; the ovaries are the important organs to conserve, and the uterine tubes may be removed or left in as the operator may decide best. I think the operation is easier if the tubes are left, and the enucleation is begun by tying off the broad ligament at the uterine cornu, including the isthmus of the tube and the utero-ovarian ligament in the first tie, tying the round ligament next, and then exposing the base of the broad ligament, ligating the uterine vessels, amputating the uterus at the vaginal junction, clamping the uterine vessels of the opposite side, and then pulling the uterus up and out, and ligating the round ligament, the tube, and the ovary at the opposite cornu.

I have not carried my conservatism so far as to add considerably to the length of the operation by attempting to retain

Ovaries in Hysterectomy.

Condition of Patient in Hospital.	Symptoms before Operation.	General Health since Operation.	Symptoms now Suffering from.	Symptoms of Artificial Menopause.
Relieved of symptoms Recovery uninterrupted	Tumour. Duration, 12 years. Increasing. Dysmenorrhœa. Sharp pain in the lower abdomen	Better	Constipation	Slight flushes for 6 months, no other symptoms.
Bladder torn in operation. Recovery good	Tumour. Dull pain in the abdomen	Greatly improved. Has gained a great deal	None	None.
Recovery good Relieved of symptoms	Tumour 7 years. Began with sharp pain lasting 3 weeks, followed by gradual swelling without pain. Discharge during exertion	Much better. Now takes a great deal of exercise	Headaches and pain in bladder, which are better since operation	Palpitation and flushes. Suffered before operation more than now.
Recovery good	Tumour 4 years. Pain in the abdomen. Drawing sensation at umbilicus	Better	Weakness. Frequent micturition	No symptoms for 20 months, now gradually increasing.
Recovery uninterrupted	Uterine hæmorrhages 9 months. Irritating watery discharge	—	--	Not heard from since.
Recovery slow, but uninterrupted	Tumour. Profuse leucorrhœa. Sharp pain in lower abdomen for 6 years, periodical and changeable. Profuse menstruation, and irregular for 6 years. Ten years increased frequency and burning micturition.	—	—	,,
Recovery slightly delayed by nervous manifestations	Tumour. Throbbing in the head (worse on exertion, increasing in severity). Constant backache, tenderness of right side, palpitation, increased frequency of micturition	—	—	,,
Recovery uninterrupted	Tumour 3 years. Hæmorrhages, constant headache, profuse menstruation for 7 years. Great weakness, leucorrhœa, feeling of heaviness slowly increasing during 3 years	Suffered slightly after leaving hospital Much better last two months. Has gained in flesh	Dull pain in back. Worse when reclining	Slight sweating and dizziness, not until two months ago; thinks they are increasing.
Recovery uninterrupted	Dull aching in lower abdomen. Leucorrhœa for 3 years. Bearing-down pain, pressure on bladder, frequency of micturition, irregular menstruation	Good	None	None.
Recovery slow, some temperature (reaching one time 103°)	Tumour. Dysmenorrhœa gradually increasing. Profuse menstruation, irritating leucorrhœa, frequency of micturition	Decidedly better	None	None.
Recovery uninterrupted	No history. Impossible to get interpreter	—	—	No symptoms, 2 months after operation.
,,	Abdominal tumour. Increased menorrhagia, profuse leucorrhœa. Constant dull pain in abdomen	Decidedly better. Relieved of all symptoms. Has gained flesh	None	None.
,,	Pain in back and right side. Inability to have movement without enema. Menstruation irregular, scant. Severe dysmenorrhœa. Profuse leucorrhœa, constant pain and soreness in abdomen, increasing in severity	Much improved	Periodical attacks every 3 weeks, growing less each time	None.
,,	Great weakness, hæmorrhage. Tumour noticed for 6 months. Menorrhagia increasing for 1 year	—		No symptom 1 month after operation.
,,	Abdominal tumour, noticed for 1½ year. Steady growth, tenderness	Much improved. Has gained in weight, and is better able to exercise	"Sick headaches" and pain in back, less than before operation	Slight flushes and palpitation the first month; none since.
,,	Increased frequency of menstruation	Greatly improved	None	None.
,,	Tumour 5 years. Pressure on bladder	,,	Frequent desire to urinate. Headaches	None.
,,	Tumour 2 years. Dull pain in lower abdomen. Increasing menstruation	Greatly improved. Has gained in weight	Slight pain in abdomen, much less than before operation	Very slight flushes.
Recovery uninterrupted. Slight pain upon micturition	Tumour. Inability to exercise, weakness, pain	Good	None	Absolutely no symptoms.
Recovery uninterrupted	Profuse menstruation. Tumour, weakness, pressure on bladder	,,	—	None.

have been operated upon. They have been omitted on account of the short time elapsed.

inflamed or diseased tubes and ovaries, which can be much more quickly and safely removed in conjunction with the uterus.

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GUY'S HOSPITAL.—The Council of the Prince of Wales's Hospital Fund for London has forwarded to the Treasurer of Guy's Hospital a cheque for £7,912 10s., part of which, £1,312 10s., is a "special donation given in honour of Her Majesty's Diamond Jubilee." The remainder, amounting to £6,600, has been allocated to Guy's Hospital out of the income of the Fund in order to "encourage the Committee to take in hand the work of opening both the wards now closed, containing 114 beds." A meeting of the General Court of Governors was held on January 12th, at which, in acknowledging the munificent gift of the President of the hospital, it was decided to proceed at once with the reopening of the closed wards, in accordance with the wishes of the Council of the Fund. Before, however, the full equipment of beds can be placed at the disposal of patients, it will be necessary to provide temporary accommodation for a portion of the nursing staff. Meanwhile the paying beds in the general wards at one guinea a week have been once more made free to the sick poor. The governors hope by means of increased subscriptions to be able to meet the annual expenditure necessary to maintain the reopened wards. The increased number of patients renders it necessary to undertake extensive structural alterations in the laundry and other departments.

INTERVAL OPERATIONS IN APPENDICITIS, CHIEFLY FOR RELAPSE, WITH A TABLE OF CASES.*

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IN the year 1892 I read before this Branch a paper on appendicitis, since which time until quite recently I believe no formal communication has been made on this subject to the Branch, though from its extreme importance it has greatly occupied current medical literature and medical societies. I do not propose to-day to consider appendicitis in all its phases: the ground to be occupied is too extensive for the time at my disposal, and general discussion becomes too diffuse. My purpose is rather to focus attention upon relapsing cases and operation in the period of quiescence, or, to use a phrase which seems to have found favour in America, upon "interval operations."

Whilst everyone is familiar with the fact that patients do have repeated attacks of appendicitis, variously spoken of as relapses or recurrences, no reliable data are forthcoming as to the proportion of patients who suffer in this way. This lack of information arises probably from various causes. Consulting physicians and surgeons are often unable to follow out their cases either in hospital or in private practice as persistently as is necessary to arrive at a definite conclusion; those who are occupied in family practice see only a limited number of cases, too few to furnish the number requisite to settle the question. Another difficulty arises from what I believe to be a fact—namely, that the less severe cases come to the care of the physician and the more intense to the care of the surgeon; and the experiences of the two show considerable divergence.

Without pretending to give the actual proportion of patients who suffer from relapse, I may say that certainly more than a third of the patients I have operated upon for appendicitis have had more than one attack, and in a few cases the relapses have spread over a number of years, a condition eventually arising which imperatively demanded surgical interference. I may also add that it would have been greatly to the advantage of these patients if they could have been operated upon during a period of quiescence, for their risk would have been less and their future comfort would have been promoted by a wound healing by first intention, and a firm scar, instead of that which they have had to be content with, namely, a wound which, owing to suppuration, could not be securely closed at the time, with the formation of a scar which eventually became the seat of a hernia.

The results of relapse are, besides the mortality which occurs, repeated invalidism, and in a few cases severe interference with nutrition. I have seen it suggested that the mortality from relapses is inconsiderable, but this by no means accords with my experience. Fatalities occur quite frequently in these cases, and it is important to bear in mind that a mild attack in the first instance, or in the second or later attacks, is often followed by a severe one, which may bring about the patient's death.

Repeated invalidism, too, is a matter of no small importance to those who have to earn their living, as each attack will prevent the patient working for days or weeks at a time. Interference with nutrition to a marked degree is not often noticed, but Cases 1 and 3 were severe examples of this kind.

The conditions found as explaining the tendency to relapse are various. Perhaps the commonest is malposition of the appendix with distortion and adhesions; the next most common is the presence of concretion; complete stenosis occurs not infrequently; and a fourth condition, and one that carries with is perhaps unusual risk, is the presence of abscess, of which there is no indication. Which of these is present in any given case is generally only a matter of conjecture. If it were possible to diagnose between the conditions I have spoken of, we should be able to separate the more dangerous cases with abscess or concretion from the less dangerous, and operate upon the former without any delay whatever, whereas in the latter delay would be more excusable. It is not difficult to explain how the pathological changes above mentioned should give rise to recurrent attacks of appendicitis. Malposition, distortion, and adhesion of the appendix prevent the emptying of its narrow cavity into the cæcum, putrefactive changes being thus favoured by stagnation of its contents. The part played by concretion is probably this: by pressure on the walls of the appendix in which an infective inflammation has been set up, necrosis of the part pressed upon is produced, and from this perforation. It is quite certain that concretions may remain innocuous for years in the appendix until some accidental change makes them potent for harm, and this accident may occur at any time. Stenosis of the appendix is the result of previous inflammatory attacks, and the distal portion may undergo dilatation at any time with thin mucus or pus, and when thus distended is an ever present danger to the patient. A remarkable instance of this kind is to be found in the Mason College Museum: a stenosed appendix is dilated to the size of the thumb, and after many attacks of appendicitis the patient eventually succumbed to leaking from the dilated portion.

Unrecognised abscesses may give rise to fresh attacks as the subjects of them begin to move about, either because the adhesions become torn or stretched by muscular movements, or, by the action of underlying or of overlying muscles, the infective pus may be driven into the adjacent lymphatics. Of the possibility of these abscesses rupturing and giving rise to an immediate diffuse, septic peritonitis, numerous examples could be quoted.

Whilst the local conditions in and around the appendix of which I have just spoken are the predisposing causes which bring about the attack, they are lighted up into activity very generally by catarrh of the colon extending to the vermiform appendix. The catarrh is excited either by cold or by imperfectly-digested food, and when it has spread into the appendix the mucous membrane here becomes swollen and softened, so as to block its orifice more or less completely. The appendix is prevented by adhesion from expelling its contents, and we thus have a stagnant fluid containing the colon bacillus which kept at rest grows luxuriantly, invades the walls of the appendix, and may pass through them to the parts around, giving rise to peritonitis, or to suppuration local or diffused.

The important question which we may all have to answer decisively is, When should operation be resorted to, how many relapses are to be waited for? The answer to this varies somewhat with the age and social position of the patient. In young children the risk of perforation or gangrene of the appendix, or of some other fatal accident, is greater than in adults, and for this reason I incline to advise operation after one really severe attack.

In the adult unless there is some special reason against it, I am willing to wait till the second definite attack has occurred, and then I advise operation, always assuming that the patient has been treated properly, not only by diet and medicine, but by prolonged rest after the first attack. In hospital cases, even in adults, I occasionally advise operation after the first attack if it has been a severe one, and the patient's occupation involves him in hard work or exposure, or if the patient, though free from fever and with a satisfactory improvement locally, yet has an appearance of not doing well—if I may put it so, is not thriving.

To reiterate what I have said above, if one could tell the exact condition in and around the appendix, one would be willing to wait for repeated attacks when there is merely adhesion and distortion of the appendix, but as we cannot tell whether pus is present or not, or whether a concretion exists, to remove patients from danger I feel compelled to advocate interference with the moderate amount of delay I have outlined above. As enforcing this lesson I should like especially to lay stress on Cases 7, 12, and 17.

To justify these interval operations it is necessary that they shall be attended with a very small mortality, and they must be free from any secondary trouble such as hernia at the site of the incision. As to rate of mortality, Treves has published a list of more than a hundred cases in which the mortality

* Read at a meeting of the Birmingham and Midland Counties Branch of the British Medical Association.

Table of Interval Operations for Appendicitis.

No.	Hospital or Private.	Sex.	Age	Number of Attacks.	Date of Operation.	Conditions Found.	Result.	Remarks.
1	H.	M.	22	Several	Sept 14, 1897	Very dense widespread adhesions, no concretion or stricture in appendix	Recovery	Drained. Threatened hernia in 1897, due possibly to straining, patient having stricture of the urethra.
2	P.	M.	7	4	Apl. 20, 1894	Small abscess, much distortion of appendix	,,	
3	P.	F.	64	Several	Jan. 7, 1896	Very dense matting of omentum and intestine appendix not found	,,	Whole of omentum divided, releasing transverse colon. Complete relief of symptoms.
4	H.	M.	18	2	Feb. 10, 1896	Moderate adhesion. Double stricture of appendix	,,	Fluid in appendix and free fluid in abdomen sterile on cultivation.
5	H.	F.	32	4	Feb. 17, 1396	Appendix found on brim of pelvis, in mass of adhesion close to right ovary	,,	No pus, concretion, or stricture of the appendix. Fluid in it sterile on cultivation.
6	P.	M.	35	3	Feb. 20, 1896	Appendix to front and outer side of cæcum moderately adherent	,,	No pus, concretion, or stricture. Recovery interrupted by slight femoral phlebitis (left).
7	P.	M.	26	3	Apl. 14, 1896	Considerable matting. Appendix stenosed and containing three concretions	,,	
8	H.	F.	23	5	Apl. 27, 1896	Appendix densely adherent under cæcum. It was perforated, and a small abscess lay around it	,,	Drained.
9	P.	M.	43	3	May 15, 1896	Appendix herniated into ileo-cæcal pouch and densely adherent	,,	No pus, concretion, or stricture, but attacks were of extreme severity.
10	P.	M.	31	4	June 2, 1836	Appendix densely adherent to outer side and back of cæcum	,,	No pus, concretion, or stricture.
11	H.	M.	26	3	Nov. 16, 1896	Appendix adherent in pelvis, with a concretion near cæcal end	,,	
12	H.	F.	22	1	Jan. 25, 1897	Appendix lay in an abscess behind cæcum, no concretion or stricture	,,	Operation a month after commencement of attack, pulse and temperature being normal.
13	P.	F.	–	2	Feb. 5, 1897	Appendix at inner side cæcum, densely adherent except at tip, which was free and dilated beyond a stricture. A few drops of pus around appendix	,,	Wound closed without drainage.
14	H.	M.	—	2	Feb. 22, 1897	Abscess around base of appendix which contained a concretion	,,	Drained.
15	H.	M.	20	3	Mar. 15, 1897	Appendix to outer side of cæcum and behind it, stenosed at free end	,,	No abscess or concretion.
16	P.	M.	52	2	Mar. 18, 1897	Appendix densely adherent, and running over iliac vessels into pelvis	,,	No abscess or concretion. Stitch abscess delayed recovery.
17	H.	M.	15	1	Apl. 12, 1897	Appendix running from cæcum into an abscess in pelvis. It was perforated and a concretion was found in the pus	,,	Drained. At the time of operation, pulse and temperature had been normal for several days.
18	H.	F.	30	3	May 31, 1897	Appendix perforated at its base, and small abscess surrounding it	,,	Wound closed without drainage. Incision suppurated, probably infected by abscess.
19	H.	M.	23	2	July 29, 1897	Appendix spirally coiled on itself and small abscess around it	,,	Wound closed without drainage. Appendix free from concretion and stenosis.
20	H.	M.	30	Several	Oct. 1, 1897	Appendix behind and to outer side of cæcum. Moderate adhesions	,,	No concretion or stenosis of appendix. No pus.
21	H.	M.	14	1	Oct. 4, 1897	Appendix only slightly adherent. Strong adhesions of omentum to parietal peritoneum	,,	Patient admitted under physician in very severe attack. Operation in quiescent period three weeks after.
22	H.	M.	44	3	Nov. 15, 1897	Appendix very short, adherent to cæcum, and containing a concretion, numerous adhesions of omentum to parietal peritoneum	,,	Small stitch abscess.
23	H.	M.	36	2	Nov. 26, 1897	Appendix to inner side of cæcum, and densely adherent to small intestine which lay over it	,,	No concretion, abscess, or stricture of appendix, but a small hernia of mucous membrane near its free extremity.

was less than 1 per cent., and other surgeons have shown similar happy results from smaller series of cases. My own experience goes to confirm this, for all my 23 cases, of which you have a list before you, fortunately recovered, and they include many cases in which the operation was severe, the age of the patients varying from childhood to over 60.

The question of hernia is by no means an unimportant one, for it brings with it in some cases inconvenience and occasionally danger. Whether hernia is to occur or not depends greatly upon the question whether the wound can be closed entirely or whether it must be drained. Drainage is required only where pus exists, and not always then; but when it is employed undoubtedly the scar is more likely to yield. If, however, the wound is properly planned, muscular tissue is divided as little as possible, the tissues are carefully sutured, the patient is kept at rest in the horizontal position for at least four weeks, and the abdomen is supported for a few months with a properly-fitting belt, then my experience leads me to believe that hernia is very exceptional indeed.

The most suitable time for operation is about three weeks after the commencement of the attack; when all acute symptoms have disappeared and the temperature and pulse have become normal. If operation be performed earlier than this, the vascularity of the parts produces troublesome oozing in the process of separating of adhesions, whilst if the time be considerably prolonged there is the disadvantage that the adhesions have become much tougher and harder to separate.

The method of operation has received a great deal of attention, and the way in which the abdominal wall should be incised has been discussed almost *ad nauseam*. Where circumstances permit, a very good incision is the vertical division of the skin outside the semilunar line, division of the aponeurosis of the external oblique in the same line, then a transverse separation of the muscular fibre, and a vertical division of the fascia and peritoneum. This in operations which require only a moderate amount of manipulation is excellent, but it appears to have been followed occasionally by atrophy of the rectus from division of its nerve supplies derived from the ilio-hypogastric nerve. Another incision is one to the inner side of the semilunar line, opening the anterior layer of the sheath of the rectus, pulling the muscle inwards without division, then incision of the posterior layer of the sheath. When the wound is closed the fascial layers are carefully united by sutures, and the muscle falls back into its place and remains unweakened; my attention was called to this incision by my friend Mr. Bowlby, though I do not know whether he originated it. Whilst holding that as far as possible incision such as I have described should be adopted, I think any operator does well not to be unduly bound by these if the appendix lies somewhat out of the ordinary position, or if the parts indicate by their condition that more than a usual amount of manipulation is to be expected.

The abdomen once open, care should be taken at once to pack sponges inside, so that if in the process of manipulation pus is liberated it will be prevented from soiling the rest of the cavity. In seeking the appendix there is no guide so reliable as the longitudinal muscular bands of the cæcum;

these should be followed persistently. Some adhesions are quite soft and easily separated, others are extremely tough and difficult to get through; the operator must work firmly yet circumspectly or he will get into trouble, especially with tissues like the walls of intestine infiltrated with inflammatory material. In one case I tore a small hole in the cæcum, but it was easily repaired, and no harm ensued. In two other cases—Nos. 1 and 9—the adhesion was so dense that the inner coats of the appendix stripped from the outer in great part, but there was no drawback in this, as the essential portion (the mucous coat) was removed. It seemed likely that the symptoms in Case 3, in which the appendix was not removed, were due to the drag on the transverse colon, and acting on this view I ligatured and divided all the omentum, thus releasing the colon, and the patient obtained complete relief from her symptoms. If pus is found, the sponges placed in the abdomen prevent infection of more distant parts, but it must be mopped up as speedily as possible, and the walls of the cavity in which it lies thoroughly cleansed.

In dealing with the stump of the appendix, if its tissues are not much infiltrated it is easy to make a flap of the peritoneum, which can be stitched so as to cover the stump, but when the parts are a good deal infiltrated this cannot be done, nor is it necessary to insure a satisfactory result. In the majority of my cases I have been content to ligature the appendix close to the cæcum, and after dividing it have applied pure carbolic acid to the little patch of mucous membrane exposed, and finally, at the end of the operation, have tucked the end underneath the cæcum.

If there is much pus present it will be well to drain, the safety of the patient being the first consideration, but as this undoubtedly leaves a great tendency to hernia, it should be resorted to only after careful consideration. I find my own tendency now is to drain less frequently than I formerly did.

However well a patient does, I think he should spend four weeks in bed, in the horizontal position, so as to allow the recently-united tissues to become firm before any strain is put upon them, and in all cases I advise for a time the wearing of a well-fitting belt.

As before mentioned, all my cases have recovered; they have all been completely relieved of their symptoms, and as to hernia, I have satisfied myself, either by personal examination or by inquiries from the medical attendants, that only one patient suffered from hernia where the wound was completely united by sutures. In this case there was an abscess round the appendix, but I closed the wound without drainage. Unfortunately the incision became infected, probably from the abscess, and suppurated, leaving a weak scar, which has since yielded (see Case 18).

Even with an operation which has very little risk and which cures constantly, patients will require an alternative, at all events for a time, until experience of repeated attacks tells them that they had better get rid of the offending organ. The alternative is prolonged rest in the horizontal position, with careful dieting, and such medical treatment as may be required. With prolonged rest undoubtedly a few cases get well, but there is no certainty about this alternative, and rest, even if prolonged for two or three months, may not produce a cure. The patient must have this fairly put before him, or he is apt to resent the care that has been bestowed upon him if, after resting a good many weeks, a period of activity is followed by a further relapse.

As bearing upon this, I may point out that in Cases 6 and 9, in both of whom only a fixed adherent appendix was found, pus and concretion being absent, relapse occurred whilst the patients were still resting in bed.

Mr. Walter A. S. Bridgeford, M.R.C.S., L.R.C.P., of Boulder City, West Australia, has been appointed a magistrate for the East Coolgardie District.

The medical profession in this country will learn with great regret that Dr. Joseph J. O'Dwyer, of New York, whose name is associated with intubation in laryngeal diphtheria, is dead. He was suffering from tuberculous meningitis, the diagnosis having in the first instance been made by Dr. O'Dwyer himself. He was 55 years of age.

ON THE ULTIMATE FATE OF PLACENTAL TISSUE RETAINED *IN UTERO*.

By W. E. FOTHERGILL, M.A., B.Sc., M.D.,
Manchester.

In the British Medical Journal of May 9th, 1896, I figured and described five microscopic sections of placental tissue which showed that, after the fœtal circulation has ceased, no constructive process continues in the fœtal elements of the placenta; that the epithelium of the chorionic villi degenerates and disappears, the connective tissue of the villi more slowly losing its identity; that the maternal blood occupying the intervillous spaces first clots and then becomes organised, rendering firm and tough the originally spongy placenta. At that time I was not able to explain fully the processes which occur in placental tissue retained *in utero* after the death or expulsion of the fœtus. Since then, however, I have been fortunate in obtaining some good specimens from cases of missed abortion and incomplete abortion, that is to say, some fleshy moles and placental polypi, which have enabled me to clear up the question.

Though uterine moles have often been described from the times of Hippocrates, Aristotle, and Galen onwards, the literature of this subject continued for several centuries to be more amusing than instructive. Morgagni,[1] however, perfectly understood the gross pathology of retained ova, as have most subsequent writers. Scanzoni[2] says that the thickness of the chorion in a retained ovum is due to the effused blood, more or less organised, which is found between the villi. This, he continues, becomes transformed into connective tissue, which becomes vascular and adheres to the uterine wall. Upon this statement little advance has been made. Though an enormous number of cases of retention of the products of conception has been recorded from a clinical standpoint, more especially during the last few months, the authors seem content with the statement that, upon microscopic examination of their specimens, chorionic villi were found. Budin[3] and Breus[4] both wrote papers on the subject in 1892, which I have already reviewed somewhat critically in the *Manchester Medical Chronicle*, n. s. 6, 1897. Berry Hart,[5] at the Carlisle meeting in 1896, described two cases, giving microscopic appearances similar to those figured by myself in the British Medical Journal of May 9th, 1896. Papers by Neumann[6] and others published during the last year give no further information.

The results of my recent work are as follows: After the fœtal circulation ceases, the small fœtal blood vessels of the placenta quickly disappear entirely, the larger ones being more slowly obliterated, and leaving for some time a few blood crystals and amorphous granules to mark their position. The fœtal connective tissue between the epithelial layers of the amnion and chorion, as also that forming the cores of the villi, is compressed, but is not otherwise altered for a long time.

The fœtal epithelium covering the amniotic surface of the placenta remains recognisable for a long time; the cell outlines, however, are lost, and the nuclei become clouded. The fœtal epithelium of the chorion covering that membrane itself and the villi which spring from it also loses its cell outlines, and its nuclei soon cease to stain clearly. Meanwhile a great change occurs in the maternal circulation. The space between the uterine wall and the chorion coextensive with the placenta is crossed by numerous villi, while innumerable smaller villi hang freely from the chorion without reaching the surface of the decidua. Into this great intervillous space maternal blood flows from the uterine wall during the life of the fœtus, and returns into the maternal vessels after circulating amongst the villi. When the epithelial covering of the villi degenerates after the stoppage of the fœtal circulation, the maternal blood in the intervillous space does not long continue to move, but soon forms a firm blood clot embedding the villi. This intervillous blood clot consists so largely of fibrin that it is probable that the degenerated epithelium of the villi acts as a foreign body, layer after layer of fibrin being deposited upon it from maternal blood until the whole intervillous space is thrombosed. Eden[7] has shown that this occurs in parts of

placenta which lose their fœtal blood supply toward the end of normal pregnancy.

Thus a placenta retained *in utero* for a few days after the death of the fœtus consists of a mass of villi embedded in maternal blood clot. While this mass is bounded on the fœtal aspect by the amnion and chorion, it is bounded on the uterine aspect by the decidua serotina. In the serotina are maternal blood vessels and dilated uterine glands embedded in a delicate connective tissue, many of whose corpuscles are enlarged to form the characteristic and well-known decidual cells. Fig. 1 illustrates the condition of things at this stage.

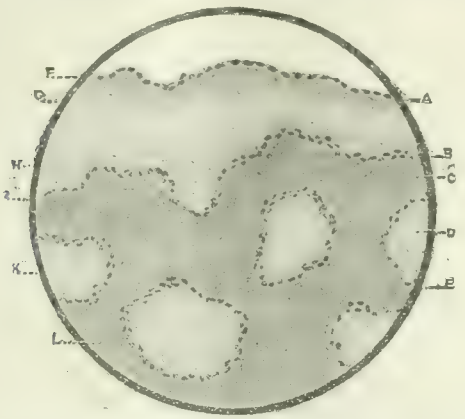


Fig. 1.—Section showing fœtal surface of a placenta retained a few days *in utero*; the intervillous space filled with fibrin; fœtal epithelium as yet intact. A, amnion; B, chorion; C, fibrin; D, core of villus; E, epithelium of villus; F, I, epithelium; G, H, connective tissue; K, villus; L, fibrin in intervillous space.

Turning now to the examination of sections of a placenta which has been retained about five months *in utero:* The upper margin of the section shows the amnion and the chorion, their connective tissue layers blended with one another. The epithelium of the amnion is still intact, that of the chorion has largely disappeared. The lower margin of each section shows patches of decidua serotina containing numerous large decidual cells. The intermediate portion of each section contains numerous villi, their stroma compressed, their epithelium either absent or reduced to rows or clusters of nuclei without any cell protoplasm. A large amount of fibrinous material derived from the maternal blood remains visible; but the striking feature of these sections is the presence in the intervillous spaces of layers, rings, and bands of very large cells which surround some villi completely, touch others upon one side, and invade the fibrinous masses.

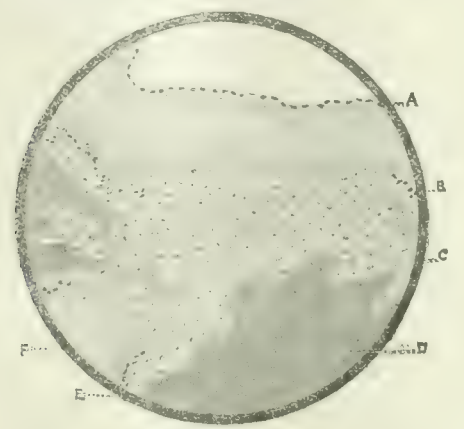


Fig. 2.—Section showing fœtal surface of a placenta retained five months; decidual cells are seen removing the degenerated fœtal epithelium from chorion and villus, also organising the fibrin. A, Amnion; B, chorion; C, decidual cells; D, fibrin; E, remains of epithelium; F, villus.

Now the patches of decidua serotina on the maternal margin of these sections are directly continuous with some of the groups of large cells in the intervillous space. It is clear, indeed, that the large cells forming the rings round some villi and touching others are neither more nor less than decidual cells which have spread from the patches of decidua and invaded the blood clot in the intervillous space. The masses of large cells are, in fact, extensions of the decidua from the maternal towards the fœtal aspect of the dead placenta.

Next we notice that in those parts of the sections where much degenerated fœtal epithelium remains, very few decidual cells are as yet visible, and, *vice versâ*, where the intervillous spaces are filled with decidual cells, no fœtal epithelium is to be seen. A closer examination shows that the decidual cells destroy both the fibrin and the fœtal epithelium, and replace them by a delicate cellular tissue. The connective tissue cores of the villi seem to oppose more resistance to the advancing decidual cells than does the chorionic epithelium, for only in a few parts of the section do the cores of the villi appear eroded and disintegrated by the active cells which surround them.

Two new facts are shown by these sections. It was previously known that in retained placenta (1) the fœtal epithelium gradually disappears; and (2) that the blood clot in the intervillous spaces becomes organised after a time. Now, however, we learn (1) that the decidual cells destroy both the degenerated fœtal epithelium and the fibrinous masses in the intervillous space; and (2) that these same cells replace the material removed by a delicate connective tissue. In other words, the decidual cells destroy the fœtal epithelium, and organise the blood clot; they have a phagocytic action as well as a constructive action.

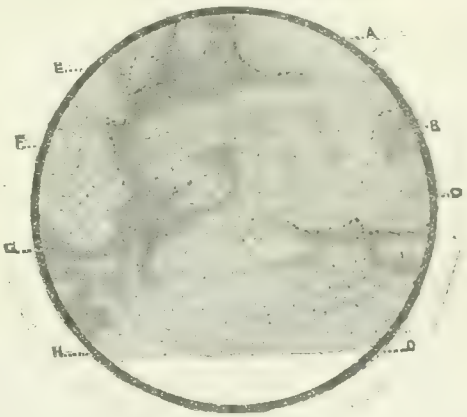


Fig. 3.—Section showing the uterine surface of a placenta retained five months: decidual cells are seen spreading from the patch of original decidua, removing fœtal epithelium from the villi and organising fibrin. A, C, E, villus; B, D, G, fibrin; F, decidual cells; H, patch of decidua serotina.

Thus, while these sections confirm my former statement that the fœtal elements of the placenta do not grow after the death of the fœtus, they also show that maternal elements remain active under certain circumstances, and tend to convert the retained placenta into a mass of tissue of the nature of decidua. Hartman and Toupet[7] have applied the term "deciduoma benignum" to a placental polypus thus converted into a mass of connective tissue. In this connection it is interesting to recall that Cazeaux,[8] Naegele, Osiander, and others believe that complete absorption of a placenta by the uterine mucosa has occasionally occurred. The ectopic placenta after the death of the fœtus is invaded by decidual cells from the tubal mucosa, which destroy fœtal epithelium and organise intervillous blood clot just as described above.

While the above brief description of the fate of retained placental tissue completes the object of the present article, I may note that the decidual cells behave in exactly the same manner in cases of so-called placental infarction as in cases of retained placenta. This applies both to the pathological placental infarct often described as occurring early in preg-

nancy, and also to the physiological infarction which has been shown by Eden[7] to occur normally towards the end of pregnancy.

I also hope to show in another communication that the phagocytic action of decidual cells is not exercised under abnormal conditions alone, but that it plays a part in the development of the normal placenta and membranes. For in every placenta those portions of the chorionic villi which become embedded in the decidua undergo the same changes as do the villi of a retained dead ovum. First they lose their fœtal blood supply, next large decidual cells of the serotina crowd round them, destroy and remove their epithelium, and form round the remains of the stroma a delicate connective tissue.

Again, those chorionic villi which do not enter into the formation of the placenta leave but few traces on the outer surface of the developed membranes of the ovum. For when the placenta begins to take its shape, changes in the fœtal circulation destroy the blood supply of those villi which are not in the placental area. Soon after, the decidua vera unites with the decidua reflexa, and the decidual cells of these structures attack the now non-vascular villi, and help to reduce them to the remnants which represent them upon the developed membranes of the ovum.

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A CASE OF OLD PELVIC ABSCESS AND ACCIDENTAL HÆMORRHAGE IN A PREGNANT WOMAN.

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CASES of pregnancy complicated by an old pelvic abscess are so rare that I feel justified in publishing the following one, more especially as it was further complicated by accidental hæmorrhage.

Mrs. C., aged 34, 6-para, was admitted to the Glasgow Maternity Hospital on April 29th, 1897. She stated that she had never been a very strong woman, but had never had any serious illness. There had been nothing remarkable about her confinements except that after her third she had had an attack of "inflammation of the womb." After that for six months she had suffered from weakness, pain in the back, and "whites." She gave no history of ever having had any discharge of pus from the vagina, but gave a confused account of having noticed a swelling in the abdomen midway between the umbilicus and pubes about three years ago after her fourth confinement. She stated that for the last month or so she had noticed that this swelling was rapidly increasing in size. Her last menstrual period had been towards the end of March, and it had been scantier than usual. Before that she had been quite regular. Eleven days before admission, after retiring to bed, she was seized with a sudden discharge of blood from the vagina, which lasted about nine hours. It came in a gush without any warning, and was accompanied by a little pain, dull in character, over the lower part of the abdomen, if anything more severe on the right side. She felt feverish and shivered at times, but there was no severe rigor. The blood was dark in colour, with some clots but nothing else. She got up in the morning and did her usual housework. There was no discharge during the day, but on retiring to bed the next night the discharge recurred in smaller amount. Up to the date of admission she had more or less discharge each night, but none during the day.

Condition of Patient on Admission.—She is weak, and very anæmic. There is evident pulsation in the veins of the neck, but no cardiac murmur. There is an abdominal tumour, central in position, measuring about 7½ inches vertically from the pubes, and 9 inches transversely in its widest part. The swelling is freely movable from side to side. It feels soft and elastic. There are no contractions evident; no fœtal heart sounds, but a distinct uterine *souffle* is heard. No fœtal parts can be felt *per vaginam*; the cervix is thick and soft, and the external os admits the tip of the finger. The internal os is completely closed. The uterus is enlarged, and lying well forward, and feels doughy and soft. In the anterior fornix, at the junction of the body and cervix a distinct groove is felt. This distinct groove was also noticed by Dr. Edgar, the assistant physician, who kindly examined her for me. We thought it was caused by the body of the uterus lying so far forward that it formed an angle with the cervix. At the *post-mortem* examination this was shown to have been the track of the sinus which we had felt. After the examination there was a little dark watery discharge. A douche was given.

The diagnosis presented considerable difficulty. She was evidently pregnant, but from her menstrual history she had only missed one period and the one before that had been very scanty, so that, going by the history, she could not be more than two months gone. The uterus by its size would indicate at least between six and seven months. I was inclined to think we had to deal with a hydatid mole, but could get no indication of any vesicles having been passed. She was put upon small doses of ergot, strychnine, and iron, and a liberal diet.

Next day there was a slight oozing of serum. The catheter had to be passed. She said she was feeling stronger. Her temperature was practically normal. She did very well until May 3rd, when some dark-coloured blood began to come away. In consultation with my colleague, Dr. Black, I decided to dilate the cervix with Hegar's dilators, and explore the cavity of the uterus. Under chloroform I pulled the cervix down and steadied it with forceps, and dilated until the finger could be introduced. The lower part of the uterine cavity was full of black clot, but no fœtus could be reached. As the cervix was still full length I could not reach any distance into the cavity. Some of the clot was washed out, and a small Barnes's bag introduced. A firm binder was put on. The forceps had torn the mucous membrane of the anterior lip of the cervix transversely. The walls of the cervix were intact. The dilatation was done about 1 P.M. At 11.30 P.M. I removed the bag, and found the cervix was shortened considerably. On dilating further with my fingers, I found there was a fœtus in its bag of membranes attached to the fundus of the uterus. More than half of the cavity was occupied by blood clot. I ruptured the membranes and drew the fœtus down. The amount of liquor amnii was small. Dr. Black then dilated further, and delivered the body of the fœtus, breech first. The head came off, but was caught in the fingers and removed. The placenta was detached from the fundus, and removed. It and the membranes seemed healthy, and showed no evidence of hæmorrhage. The uterus was thoroughly washed out, and it contracted firmly. The anterior wall of the cervix was found to have been lacerated. This had evidently happened during the dilatation with the fingers and delivery of the fœtus, but we could not understand why it had given way.

A hypodermic of ergotin was given. The patient did not show any signs of collapse. Her temperature was 100° at the time of delivery. It had been 99° and 99.8° the two days previous.

The fœtus had been dead a short time, but was not macerated to any great extent. It was fully four months developed.

May 4th. Temperature in the morning was 102°, and in the evening 102.6°. She complained of nothing except feeling feverish. The vagina was washed out, and a good deal of *débris* came away, but the discharge was perfectly sweet. There was no distension. She was frequently fed with milk and beef juice. Her pulse was about 100, and soft. She was given 10 gr. quinine.

May 5th. Patient has not been so well to-day. She has suffered from sickness and retching, which causes pain all over the abdomen. Temperature 101.2° in the morning and 101.4° in the evening. Pulse varying from 100 to 120, and very soft. Large doses of bismuth relieved the stomach symptoms for a few hours, but in the evening she rejected everything. Rectal alimentation was commenced, and a mustard leaf applied over the stomach. Small pieces of ice dipped in brandy were given. A half-grain morphine suppository was inserted. There was no distension of the abdomen. The vomiting ceased during the night, and she was fairly comfortable.

May 6th. She was much weaker to-day, and although she has been freely stimulated the pulse was not improved in strength. The temperature in the morning was 99°, and in the evening 101.4°. The nutrient enemata were continued all day, and she had brandy and egg flip by the mouth. At midnight she had improved a little.

May 7th. She was much weaker, and could not be roused. Temperature 100°. She gradually sank and died at 3.20 P.M.

Post-mortem examination report by Dr. R. M. Buchanan.—The lungs were hyperæmic, and left one slightly adherent. They both showed healed tuberculous lesions at the apex. In the heart there was slight thickening of the aortic cusps, and also along the base of the mitral curtains. Abdomen: The lower fringe of the omentum lies between the uterus and the bladder. It is hyperæmic and slightly glued to the part, but there is no naked-eye appearance of exudation. In this situation there is a small amount of shreddy fibrin associated with a very small amount of an opaque yellow fluid. The liver is very pale, and presents the appearance of fatty degeneration. The spleen is slightly enlarged and dark coloured. The kidneys show the character of cloudy swelling. The stomach and small intestine appear normal. The caput cæcum is firmly bound down in the right iliac fossa, and the vermiform appendix lies along its inner aspect in a direction upwards and inwards. When the caput cæcum is pulled forward and freed by section of its lateral adherents, a large abscess cavity, comparatively empty, is exposed. The cavity extends upwards as far as the crest of the ilium, where it is not limited by a very definite wall, downwards and inwards over the right side of the bladder by means of a series of sinuses. Purulent infiltration of the cellular tissue extends downwards as far as Poupart's ligament and round the right side of the pelvis. The contents of the pelvis are now removed *en masse*; the rectum appears normal; the posterior aspect of cervix and uterus is opened by a median incision. This displays a longitudinal tear in the cervix anteriorly continuous through the whole length and thickness of the wall into an abscess cavity. This cavity appears large enough to admit a hen's egg, and is found to be continuous with the sinuses and cavities above described. The suppurative process has invaded the cervical tissue to some extent, and has passed through it by a short sinus about ½ inch in diameter and ½ inch in length just within the external os anteriorly. It also appears to have perforated the cervix at the upper end of the tear. The internal surface of the uterus is covered with a greyish purulent exudation. No bacteria were found in the blood of the jugular vein on microscopic examination.

The cause of death seems to have been exhaustion, as there was no evidence of septicæmia. The discovery of the abscess was a complete surprise to me, as nothing in the patient's history pointed to its presence. The indefinite history of the swelling in the abdomen did not indicate anything pointing to an abscess in the right iliac fossa, as she distinctly stated that

it was central. The increasing swelling she had observed for the last few weeks had undoubtedly been the uterus. One can hardly suppose the abscess had formed there when she had the so-called attack of inflammation after her third confinement, as her fourth and fifth pregnancies and deliveries had been normal. It is a curious circumstance that so large an abscess could have discharged itself without her having been aware of the pus coming away. The opening was very small, and its being within the external os would tend to make it ooze away slowly. The position of this opening accounts for our not seeing it when the cervix was exposed during the dilatation. The reason why the anterior wall of the cervix tore was made plain at the *post-mortem* examination. The thin partition between the cervical cavity and the sinus had given way.

A careful exploration of this tear would have led to the detection of the sinus, bnt nothing would have been gained as regards the result of the treatment. No operation would have been of any avail.

The reason why no hæmorrhage occurred during the day was, I think, due to the fact that the sinus so weakened the cervical wall at its upper part that the weight of the uterus while she was up caused an acute bend at the junction of the body and cervix, and thus closed the cervical canal.

Last year I saw a *post-mortem* examination on a somewhat similar case in the hospital. The patient was admitted under Dr. Oliphant's care in a very exhausted condition. She was a primipara, with a slightly contracted pelvis. She had been in labour for a considerable time, and several attempts had been made to deliver her by means of forceps by two medical men before sending her into the hospital. Craniotomy was done, and the child easily extracted, but she died in a couple of days.

At the *post-mortem* examination an abscess cavity was found in the left broad ligament. A tear in the left side of the cervix opened into a channel communicating with the abscess cavity. This sinus opened into the vagina by a small orifice in the posterior lip of the cervix. Her mother could give no history of her ever having had any illness pointing to such a condition of affairs.

Both of these cases illustrate how important it is to have a *post-mortem* examination in all fatal puerperal cases.

I am indebted to my late resident, Dr. Forbes, for the careful notes of the case.

SOME ILLUSTRATIVE CASES IN GYNÆCOLOGICAL SURGERY.

By ROBERT O'CALLAGHAN, F.R.C.S.I., ETC.,
Late Surgeon to the Carlow Infirmary, and to the Chelsea Hospital for Women.

CASE I. *Abdominal Hysterectomy for Large Myoma.*—Mrs. H., aged 49, was sent to me in May, 1897, by Dr. Clement Godson. She gave the following history: Owing to considerable loss she consulted Dr. Godson in 1893, for which he treated her successfully. For the past three years she had noticed a lump in her abdomen, which gradually increased until the last six months, when she began to have great irritability of the bladder, and frequent desire to micturate. Her periods became very profuse, lasting ten days to two weeks, and between these she had a watery discharge which required the constant use of a diaper. She presented a very bloodless appearance, and was very weak. On examination I found a large œdematous myoma rising as high up as the umbilicus, but uniform in growth, and about the size of a six months' pregnancy. I advised operation, and at once, as it was quite evident that if she were left much longer in her existing condition operative interference would become impossible. I performed hysterectomy on June 11th (kindly assisted by Dr. Clement Godson), Drs. Fagge and Scholtz, Mr. Hurry Fenwick, and others being present. The patient made an uninterrupted recovery, and left the Home in five weeks, already much improved in health. This is, I consider, one of the typical cases which justify mutilation so irreparable as hysterectomy, and the risk which such a serious operation must always involve; it is in striking contrast to the many excuses which are now made for so-called total hysterectomy.

CASE II. *Vaginal Hysterectomy for Epithelioma of Cervix.*—Mrs. M., aged 36, was brought to me by Dr. James Donelan in February, 1897, with a history of interperiodic losses since February, 1896, but during the previous three months bleeding had become profuse, was seldom absent, and necessitated the constant wearing of a diaper. She had also great irritability of the bladder. I found the uterus fixed on the left side, and a small growth protruding from the cervix, which bled freely; no fœtor. Before giving a definite opinion, I curetted the uterus and removed the growth, under ether, next day. Dr. Donelan had it microscopically examined, and it was pronounced to be epithelioma. Dr. Granville Bantock saw her in consultation with Dr. Donelan and myself on March 10th, to decide upon the advisability of further operation. I pointed out the marked infiltration of the left broad ligament with the disease and slight cachexia. Dr. Bantock held, however, that the patient would be much more comfortable after operation, though holding out no hope of prolonged life. She decided upon operation, and I removed the uterus with great difficulty, owing to advanced disease. The left broad ligament gave much trouble, being very friable, and the ligatures cutting through time after time. In addition to this, the bladder wall was fixed and required very careful handling. I had the invaluable assistance of Dr. Bantock in the most difficult case of the kind I have experienced. The bladder gave some trouble for ten days, but otherwise convalescence was uninterrupted, and the patient left for the seaside in a month.

CASE III. *Removal of Appendages for Double Pyosalpinx.*—Miss M., aged 22, was a patient of Dr. Morgan Richards, who attended her a year previously for an attack of acute peritonitis. She sent for me in September, 1897. I found her suffering from localised peritonitis of left side: the temperature was 102°, and she was in considerable pain. On vaginal examination, which was very painful, I found acute tubal mischief, with cystic disease of left side, and marked tubal disease on the right side; the uterus was completely fixed. Dr. Granville Bantock saw her with me ten days afterwards, when by suitable treatment the temperature was going down, and agreed with me that the only treatment advisable was complete removal of the appendages, which were utterly useless, and a source of great danger to life. The patient drifted away, and after consulting many specialists in London, returned to say that the general consensus was against operation. After examination again, I reiterated my previous views and advice, and said that when she came and told me that she wanted the operation I would do it, as I knew that time would force it upon her. She then consulted Sir John Williams, who agreed with the necessity of operation. This advice, combined with another acute attack of pain, sent her back to me, and I removed the appendages with the greatest difficulty; the cyst in the left ovary was ruptured in trying to extract it. Both tubes and ovaries were embedded in a mass of old adhesions, and were very hard to bring up and tie off. Dr. Bantock gave me his kind and invaluable help in this case also, Drs. Richards and Wood being present. I washed out the abdomen with water at a temperature of 110°, and drained with Bantock's glass tube, which was removed on the third day. The patient made an uninterrupted convalescence, and left the Home in three weeks.

REMARKS.—I have much pleasure in selecting these 3 cases from my year's work to report, because I think they are all interesting to both surgeon and practitioner, and are undoubtedly cases which demand operation. In Case I the myoma was simply a large sponge of blood, which medicinal treatment had failed to squeeze, and the patient was slowly bleeding to death. In Case II the point is that the patient was saved a great deal of distress from profuse discharges, menstrual and fœtid, as she was only 36. Case III illustrates a form of tubal disease which had got far beyond the stage of palliative treatment, and the condition would have ended sooner or later with an acute attack of general peritonitis.

PRESENTATION.—Dr. Thomas Easton has, on the occasion of his leaving Stranraer, been presented with a silver salver bearing a suitable inscription, accompanied by a cheque representing nearly £100. The presentation was made at a cake and wine banquet presided over by Provost MacRobert.

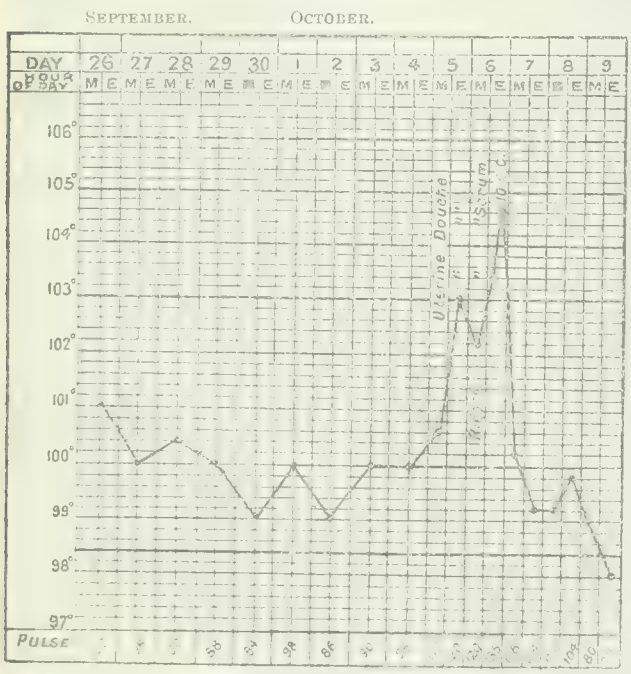
ABORTION WITH SEPTICÆMIA: TREATMENT BY ANTISTREPTOCOCCUS SERUM: RECOVERY.

BY J. MUNRO CAMPBELL, M.B., C.M.,
Shawlands, Glasgow.

MRS. W., aged 24, pregnant two months with her third child, was first seen on September 20th, complaining of severe vomiting, which had existed throughout the pregnancy, but had latterly become much worse. The tongue was clean, the abdomen not at all tender, the temperature normal, and no evidence was found of any internal abnormality. Treatment by bismuth and morphine, and careful dieting with the constant recumbent position, seemed to lessen the severity of the symptoms somewhat, but she still continued to vomit at intervals, and was almost constantly nauseated.

On September 26th the temperature was elevated for the first time, reaching 101°, while the pulse, which had previously been normal, became rapid (90-100). On this date there was slight diarrhœa, and some tenderness over the right iliac fossa, but no sign of uterine action and no discharge from the vagina. From September 26th to October 5th the temperature varied from 99° to 101°. There was still no sign of any inflammatory condition of the uterus, the os was undilated, and the closest investigation could not elicit that the patient had any feeling of uneasiness in the pelvis, or any sign that the fœtus was dead. The vomiting still continued, but had become more "bilious" in character, while the bowels were rather confined. The urine was free from albumen.

On October 5th some watery fluid was noticed issuing from the vagina, and on examination the os was found patent, and



portions of a macerated fœtus were removed. The temperature was now 103° F. and the pulse 120. Under chloroform the uterine cavity was carefully explored and scraped, so as to empty it completely of its contents, and a douche of 1-5000 perchloride was used. After this the patient had two rigors, and the temperature rose gradually, till at 6 P.M. on October 6th it was 104.6° F., while the pulse was 135, and the patient was evidently very ill. The uterine cavity was being regularly douched with perchloride solution. At 9.30 P.M. on October 6th 10 c.cm. antistreptococcus serum were injected with the strictest antiseptic precautions.

The patient passed a good night, and next morning the temperature was 100.2° and the pulse 118. By 4 P.M. the temperature was 99.2° and the pulse 104.

On October 8th the temperature was 99.2° and the pulse 100. In the evening the temperature was 99.8°, pulse 104.

On October 9th the temperature was 99°, the pulse 80. In the evening the temperature was 97.8° and the pulse 78.

The further progress of the case was uneventful, the temperature and pulse continuing normal. It is worthy of note that in this case no improvement whatever was observed from scraping the uterus, or from the douching with perchloride; but a very evident and unmistakable improvement in all the symptoms followed the injection of the serum.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

MAGNESIUM SULPHATE IN TROPICAL DYSENTERY.

IN the British hospitals at Buenos Ayres and Monte Video I had charge of a large number of cases of acute tropical dysentery in the persons of sailors from ships in those ports, and from Rosario, Santos, and Rio de Janeiro. I treated the first few cases with powdered ipecacuanha in classical fashion, but, in spite of all precautions in administration, including a morphine-dressed blister on the epigastrium, I could get nothing greater than a homœopathically-useless dose retained, and in most cases the first dose was the last that the patients would submit to taking at all, so nauseous did they find it. The type of disease as I saw it was doubtless severe, for all my patients died long before the arrival of the eighth day brought any hope of natural recovery. Presently, three men of fine physique having rapidly followed each other from the same ship through the hospital to the cemetery, I was forced to the conclusion that ipecacuanha did not deserve its name of *radix dysenterica*, reluctantly took the advice of some local medical friends, who in their private practice saw nothing of the disease in the acute form in which it came before me, and relied on large doses of opium. The result was, if possible, even worse than under the ipecacuanha treatment.

In despair I turned to the simple white mixture of my hospital pharmacopœia, and found that large doses of magnesium sulphate with sulphuric acid, at frequent intervals, acted like magic. In fact, thereafter I only lost one case, and that is the most instructive of all. It occurred in the person of an able-bodied seaman from one of Her Majesty's ships, who was brought in collapsed, delirious, and passing blood and slime in large quantities almost constantly. He was a young man of slight build, light complexion, and evidently miserable physique, and his "medical sheet" showed that he had been almost constantly on the sick list for one thing or another ever since he had been in the service. He was being treated with opium, and "getting rapidly worse"; in fact, he was sent ashore to die. Magnesium sulphate in large and frequent doses was substituted for the opium, and the patient at once began to improve rapidly, when, twenty-four hours later he was seen in consultation, and exception was taken to the treatment, and return to the opium urged, in spite of the fact that the discharges were much less frequent, and contained less blood, and that the patient was rational and able to sleep quietly. However, at my urgent entreaty, no change was made in the treatment until next morning, when two of my superiors met in consultation, and decided to stop the magnesium sulphate and give opium. The patient had now been thirty-six hours in hospital. He was comfortable, bright, and cheerful, with a quiet and fairly full pulse. Fæces had begun to appear in the discharges, which were quite free from blood. In fact, the man was practically convalescent. I asked to be allowed to give him nothing, but a "small dose" of opium was insisted on, and, if I remember rightly, ½ gr. was given at once, and repeated every three hours. Blood reappeared in the motions almost immediately, and that evening, forty-eight hours after admission, the man died. This case confirmed the conclusions to which the uniform experience of a large number of cases of acute tropical dysentery had brought me, namely: that (1) ipecacuanha is

useless, if not worse; (2) that opium is positively poisonous in these cases; (3) that the treatment of dysentery is essentially purgative; (4) that magnesium sulphate is practically a specific.

F. WYATT-SMITH, M.A., M.B., B.C.Cantab.

Guildford.

STRANGULATED UMBILICAL HERNIA IN A MAN AGED 89: OPERATION WITHOUT GENERAL ANÆSTHESIA: RECOVERY.

J. D., aged 89, who had eaten heartily on June 27th, 1897, was seized with violent pains in the abdomen about 9.30 A.M. on June 28th. He gave himself a soap-and-water enema, and as he obtained no relief he sought medical advice. He was seen about 1 P.M., and again at 8.30 P.M., when it was evident that he was vomiting the contents of the small intestine, as the vomit was distinctly fæcal.

A small lump about the size of a tangerine orange in the region of the umbilicus was, he said, an old rupture, for which he wore a truss. This swelling was tender, tense, and dull to percussion, and gave no impulse on coughing. The hernia could not be reduced by taxis. A large abdominal aneurysm the size of a cocoanut was situated in the left epigastric region. The patient consented to an operation for the relief of the strangulation without an anæsthetic; ether was contraindicated as he suffered from chronic bronchitis, and as his heart was weak and pulse intermittent we considered that chloroform would be too depressing.

The operation, in which I was assisted by my father (Mr. John Bowes) and my brother (Dr. T. A. Bowes), was undertaken without further delay. A quarter of a grain of cocaine hydrochlorate was injected under the skin in the line of incision, and the sac cut down upon. This was opened and found to contain some adherent omentum and a small knuckle of intestine; the gut was very dark in colour, but had not lost its lustre. The lower part of the stricture was divided and the gut returned to the abdominal cavity, and the sac with its adherent omentum, after being securely ligatured, was cut off, and the pedicle remained at the umbilical opening. There was little or no hæmorrhage during the operation, and not a single vessel had to be picked up with pressure forceps. The wound was closed with a continuous suture, and no drain was used.

The operation, which lasted altogether about forty minutes and was performed mainly by the light of a candle, was extremely well borne by the patient, and after it was over his pulse was stronger than when we began. Immediately after the operation he was given ¼ gr. of morphine hypodermically and a nutrient enema, consisting of 2 ounces of milk, an egg, and ½ oz. brandy. The patient passed a comfortable night, being allowed ice only by the mouth, and the nutrient injection was repeated at 3.30 A.M. and 7.30 A.M.

On June 29th, at noon, the patient was fairly comfortable, had passed flatus freely but no motion. His temperature was normal, pulse 80, cough rather troublesome, and he complained of great thirst. He was ordered 2½ ounces of milk, ½ ounce of lime water, and 1 teaspoonful of brandy every two hours by the mouth, and by the rectum a meat suppository, alternating with a nutrient injection consisting of 4 ounces of milk and 1 egg every four hours.

It is unnecessary to detail the daily notes, as the patient's recovery was uninterrupted. The temperature only once rose above 99°, and was generally normal. The bowels were several times relieved in the early hours of June 30th, and, as the rectum seemed to be irritated by the nutrient injections, they were discontinued and a meat suppository given every four hours and the quantity of nourishment by the mouth doubled.

The rectal feeding was discontinued on July 2nd. On July 6th the stitches were removed, a small quantity of seropus escaping through the stitch holes. On July 7th he ate a sweetbread for his dinner, and from this date the quantity of solid food was increased daily.

On July 11th he sat out of bed for three quarters of an hour. The wound was a little troublesome, as there was some discharge from the deeper parts whereas the surface had healed by first intention, and this discharge did not finally cease till about six weeks after the operation.

On July 17th he went out in a bath chair for an hour, and at the end of August, when I met him out walking, he said he felt better than he had done for years. I saw him towards the end of December, and he was then in excellent health and reminded me that he would complete his 90th year in March next.

Herne Bay. C. KESSICK BOWES, M.D.

ERYTHROL TETRANITRATE IN ANGINA.

WITHIN the last year I have used erythrol tetranitrate in two cases of angina pectoris:

1. A man, aged 52, with aortic disease, who suffered severely at times from angina, tried all the known remedies with more or less success until shortly before coming under my care, when he found they had all lost their usefulness. His attacks having become more severe and numerous, I tried him with Burroughs, Wellcome and Co.'s tabloids of erythrol, 1 every four hours. From the first he got relief, and they acted especially well in warding off on attack. They gave rise to no discomfort or headache. Unfortunately the cardiac condition did not improve and he died from complications. He always stated that without the tabloids life was not worth living.

2. Also a man, aged 60, with aortic trouble and angina, for which no drug did any good. Erythrol relieved him, causing no discomfort nor bad symptoms, but had no effect on the course of the disease.

In neither case did any accident occur, no special care being taken with the drug. The tabloids were usually carried about in a small glass tube in the waistcoat pocket.

Bath. GILBERT A. BANNATYNE, M.D.

THE TOLERANCE OF CREASOTE.

MR. C. W. GRAHAM, in the BRITISH MEDICAL JOURNAL of January 15th, p. 144, refers to a case of his "in which creasote was exhibited with apparently unique tolerance." I would point out that by beginning with small doses and gradually increasing I have found little difficulty in getting patients to tolerate drachm doses three or four times a day. The best medium for such large doses, as Dr. Clifford Beale has pointed out, is cod-liver oil. If we wish to get the full therapeutic effect of this drug in phthisis we should not give less than one drachm thrice daily. When this quantity is given the patient becomes so impregnated with the drug that all his secretions acquire a strong odour of it. This is especially noticeable in the case of the expectoration, showing that the drug is eliminated in large quantities by the very organs we desire to influence by it.

Wimpole Street, W. HARRY CAMPBELL.

POISONING BY CRUDE CAMPHOR OIL: RECOVERY.

MY chief inducement to publish this case is the fact that, as far as I can discover, the textbooks on toxicology scarcely notice, if indeed they refer to, camphor oil poisoning, while both from the quantity swallowed, and the rather rapid recovery, I am led to hope that the following details may prove of interest.

A Chinese coolie's wife brought a little girl, aged 5 years, to my surgery, and gave the following history: "By mistake the child had been given half a (Chinese) teacupful of crude camphor oil instead of tea." This oil is used by the natives as a preventive for mosquito bites, and contains from 40 per cent. to 50 per cent. of crystallisable drug which precipitates after standing for several days.

The mother informed me that the accident had occurred about one hour and a-half before coming to me, and that, directly after swallowing the oil, the child had fallen on the floor in convulsions, which lasted twenty minutes; the eyes were wide open, the face livid, hands clenched, feet cold, and legs outstretched. Towards the end of the fit the patient frothed at the mouth and vomited, but the ejecta were not blood stained. After vomiting the child drank half a cupful of water, and was then brought to me. When I saw it it had just vomited slightly for a second time; it looked pale and languid, and was apparently nauseated. The pulse was 100, the temperature not taken.

I immediately tried to promote emesis by ipecacuanha, and after pushing the drug succeeded in obtaining very free and repeated results. The vomit, beyond smelling strongly of

camphor, presented no other peculiarities, and was quite free from blood.

The little patient soon fell asleep, and after a time was taken home. I was informed next day that she was running about and playing, and apparently quite well.

To say nothing of the camphor still held by the oil in solution after the precipitate had formed, and only reckoning the quantity by weight of the latter, this child must have swallowed at least from 100 gr. to 200 gr. of pure drug!

A. NORRIS WILKINSON, M.R.C.S., L.R.C.P.

Twatutia, North Formosa.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

DISTRICT INFIRMARY, ASHTON-UNDER-LYNE.

OVARIOTOMY DURING SCARLET FEVER: ACUTE NEPHRITIS: RECOVERY.

(Under the care of Dr. ALEX. HAMILTON.)

[Notes by A. J. RODOCANACHI, M.D.Lond., House Surgeon.]

THE acute stage of scarlet fever would not be chosen for the performance of an operation such as ovariotomy. Consequently interest will attach to this case, especially owing to the entirely favourable results.

C.A., aged 32, a weaver, was admitted on November 11th, 1897, for the performance of ovariotomy. The skin of the abdomen was very thoroughly cleansed with turpentine, carbolic acid, and other irritants, and a compress of the latter was put on and covered with gutta-percha tissue.

On November 15th a rash was observed on the abdomen, limited to the area of the compress. The patient felt well, complained of no sore throat or other trouble, and the temperature was normal.

On November 16th the rash was again observed in the morning. The operation was performed at noon, and the rash had then faded. The ovariotomy was quite uncomplicated, a single large cyst containing 13 pints of fluid being removed; there were no adhesions.

After the operation she was kept in an isolation ward for a week. The temperature on the second day reached 100°, and on the third day 101°, the pulse then being 104 per minute. Scarlatiniform rashes affecting the abdomen and legs were noted for two or three days. The wound never gave any trouble. The skin stitches were removed on the eighth day, and she was taken back to the general ward. Her temperature then began to fluctuate between 98.4° and 100.8°, though all the time she felt and seemed well.

On the evening of December 3rd, eighteen days after the operation, the patient, though not complaining, appeared ill. The temperature rose to 101.8°, and the pulse to 116. On examination it was found that the urine contained much blood and albumen, and the skin showed a fine branny desquamation. It was now seen that the rashes which had been attributed to the carbolic acid, iodoform, or turpentine had been those of scarlet fever, and that it was now complicated by acute Bright's disease. The subsequent history was uneventful. She was isolated, and went through a typical stage of desquamation. The urine gradually became clear, and before Christmas was free from albumen. She left the hospital quite well on January 7th, 1898.

If confirmation were needed of the diagnosis it was afforded by J. B., aged 28, who was admitted to the same ward on November 24th with advanced caries of the foot. On December 1st, Dr. Bisset Smith performed Syme's amputation. On December 2nd, in the evening, her temperature reached 104°; the stump looked well, there was no pus. There was a rash on the buttocks. On the next day the whole body was covered with a typical rash of scarlet fever, and the tongue and throat were characteristic. She went through a regular desquamation, and ultimately did quite well.

THE muzzling order, so far as it applies to Devonshire and to the Isle of Wight, has been revoked.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

W. H. DICKINSON, M.D., President, in the Chair.

Tuesday, January 25th, 1898.

IMMUNITY AND LATENCY AFTER OPERATIONS FOR REPUTED CANCER OF THE BREAST.

MR. MARMADUKE SHEILD read a paper on this subject, which commenced with a short sketch of the general results of the old or incomplete operation for cancer of the breast in this country during the present century. Attention was drawn to the fact that the more extensive operation as now advised was promulgated by Moore as long ago as 1867. Almost every surgeon of experience was able to quote notable exceptions to the generally received rule that rapid recurrence was invariable. An investigation into the subject led to the belief that the results of the old or incomplete operation were not so universally bad as generally stated. A number of cases had been collected from various sources to show this. A much larger number could have been quoted, but the cases were collected rather with the view of illustrating the subject, and of evoking comment and discussion, than for the sake of compiling a very large number. The source of information was quoted in the tables, and the reasons for believing the cases to be genuine were carefully stated, especial stress being laid upon the opinions of well-known surgeons. In the first group, 44 cases were recorded where long immunity resulted after operation, with no recurrence. In the same group were 64 cases, where recurrences local and metastatic took place. Here it was notable that some of the cases, where life had been longest preserved, had been those marked by local recurrences, which had been removed one or more times. In some of the cases return of the disease took place at remarkably long periods after operation. The paper concluded by discussing some of the various groups which these cases formed, and it was argued that some of the best results obtained must be rather due to some peculiarity in the growth or the individual than the actual nature of the operation. The late recurrences observed made no doubt that the adoption of the rule of Volkmann of a three years' limit was too absolute, and the period of time too short for the pronouncement of "cure." A collective investigation of the true results of the modern extensive operation was much to be desired.

Mr. T. PRIDGIN TEALE, in a record of his private cases for thirty-five years, had obtained a fairly complete account of their subsequent history. In 18 selected cases of carcinoma of the breast, although only 1 died from recurrence within eight years from the time of operation, all but 2 or 3 eventually succumbed to this cause. He was emphatic that cases which remained free from recurrence for three years ought not to be called "cured;" in fact this term should not be employed for cases operated upon for cancer. He was accustomed to remove the whole breast and any doubtful skin; in his earlier years he had not systematically opened the axilla, but later he had done so, and removed any glands that could be felt. He had not removed the pectoral fascia, and he had not found that recurrence had seemed specially to follow on this omission. The results of this old operation had been fairly satisfactory. In his cases recurrence in internal organs had been comparatively rare. If the extensive or complete operation of modern times had been practised thirty years ago, before the introduction of antiseptics, the mortality from operation would have been higher. He inquired whether removal of the pectoralis major limited the movement of the arm of the affected side.

Mr. T. BRYANT spoke of the value of the author's collection of exceptional cases, which enabled them to place a more favourable prognosis before their patients, and to show that a proportion, though they could not say what percentage, of cases operated upon for mammary cancer survived for periods of from five to twenty years. Of 72 cases in his own private practice, 55 per cent. died within three years from the date of operation, 44 per cent. lived for more than three years and half of these for five years and upwards. He did not quite like the use of the terms "complete" and "incomplete." For "incomplete" implied

some omission on the surgeon's part if he performed the so-called "incomplete" operation. He did not systematically clear out the axilla and remove the pectoral fascia, but only when necessary. He always opened the axilla to see if there were any enlarged lymphatics. As a matter of fact recurrence, when it occurred, was often not in the axilla or in the line of the lymphatics. The results of the so-called "incomplete" operation were better than those of the more extensive or "complete" procedure. Extensive operations on old women would tend to raise the operation mortality. Cancer was not always a progressive disease; it might remain for long periods a local affection, as was shown by cases of carcinoma fibrosum of twenty years' standing. In cases where for some reason such local disease had been removed rapid metastases resulted, in such cases it was wise to refrain from operating. In a lady aged 65 the right breast contained a sarcoma the size of a cocoanut and the left breast a carcinoma fibrosum. The sarcoma was removed and in the next five years recurrent sarcomatous growths were removed eighteen times. Finally the carcinoma on the left breast involved the veins of the arm and death from lung disease resulted, no necropsy being obtained. Nodules of carcinoma fibrosum in the skin might come and disappear, leaving white scars behind. He had noticed this in ten cases.

Mr. C. HEATH was entirely in accord with Mr. Teale in disapproving of calling cases that remained free from recurrence for three years "cured." He quoted cases free from recurrence in which operations were performed eleven and seven years ago, and two cases—mother and daughter—in whom the disease was removed, without any recurrence, five years ago. But in two other cases patients died five years after operation from intrathoracic recurrence. From 1870 to 1874 he had, as Surgeon to the Women's Hospital, Soho, operated freely for mammary cancer, and in a clinical lecture (*Lancet*) in 1871 had insisted on adequate removal of the implicated and surrounding tissues, his practice had been on these lines since, and his results were as good as those obtained by Halsted's more extensive operation. He referred to the failure of Chian turpentine and electricity to remove or arrest recurrent carcinoma. The cancer wards at the Middlesex Hospital were a great boon to unfortunate victims of this disease. Medical men often complained of not being able to find out whether their patients were alive or dead. It was in reality quite easy by paying a shilling at Somerset House to find this out and to see the death certificate.

Mr. R. BARWELL also protested against the use of the term "cured." He had had one case which survived operation for twenty years, another fifteen years, and 6 that died from other diseases ten years after operation without recurrence, and other instances of long immunity, but he was loth to regard them as cured, for he had seen recurrence after fifteen years. In cancer of another organ, the tongue, he had seen immunity for sixteen years, and in many cases for periods of seven to twelve years. It was important to remove the pectoral fascia, and he always put his finger into the axilla to feel carefully for enlarged glands and swollen lymphatic cords, but he did not practise the "complete" operation. As to opening the axilla in cases where it appeared healthy, some help might be obtained by a consideration of the anatomical seat of the original growth; if this was near the sternum enlargement of the glands was less likely. The skin should be removed adequately, but not too widely, for he thought there was less chance of recurrence if the wound healed by first intention. If much skin was removed, tension was exerted on bringing the flaps together, and union was less easy.

Mr. BUTLIN had originally intended to discuss the pathological features, but as the general drift of the debate had been clinical, he would limit himself to this aspect. The aim of the author's paper might be mistaken, and be thought to be in favour of "incomplete" operations, but this was evidently not so, for the author, like the speaker, practised Halsted's operation. In a case under his care in which the great pectoral muscle had been divided the movement of the arm was remarkably free. Difficulty of movement when it occurred depended on the conditions of the integument and not on division of the muscle. As to the theory of curability of the disease, he had long accepted Volkmann's three-year limit, not, indeed, as being absolutely correct, but as being as good as could be fixed. A patient was practically cured if in three years no recurrence took place. If the period was somewhat lengthened for cancer of the breast, it should be shortened for cancer of some other organs such as the tongue, and, as experience ripened, a time limit for every organ would be established. He protested strongly against the pessimistic view that there was no cure for cancer. It was fatalism and the high Calvinism of surgery to say, Cancer once, cancer always. Volkmann's three-year limit was advantageous both for patient and surgeon. If the pessimistic view became widely known and accepted, patients would be so discouraged that they might fail to avail themselves of the benefits of operative procedures, and a surgeon thoroughly imbued with this belief might be less careful and thorough in his operations. He advocated a wisely optimistic view.

On the motion of Sir THOMAS SMITH, Bart., seconded by Mr. A. E. BARKER, the discussion was adjourned.

MEDICAL SOCIETY OF LONDON.

A. PEARCE GOULD, F.R.C.S., Vice-President, in the Chair.

Monday, January 24th, 1898.

RECTAL SURGERY.

MR. THOMAS BRYANT read a paper giving his experience in rectal surgery, and took advantage of the opportunity to show upwards of a hundred drawings by the late Mr. Gowlland illustrating the subject. He strongly urged the importance of making a careful examination in all cases of rectal and anal trouble before ordering any treatment. He described the technique of the examination, and cautioned practitioners against introducing the finger into the rectum in suspected cases of anal ulcer, except under an anæsthetic. Pruritus ani, he said, was usually a symptom of some local affection, and was not a disease *per se*. It should therefore induce the practitioner to look for the real cause. He regretted that cases of anal and rectal abscess were often allowed to drift and run their natural course instead of being dealt with on general principles. Such neglect had the effect of converting simple into complicated cases. Passing on to consider rectal and perineal fistulæ, the author emphasised the necessity of carefully marking out the lines of induration about the anus, these lines marking the direction of sinuses. In regard to treatment he insisted on the necessity for following out each sinus to its termination, failing which the operation would probably prove unsuccessful. He referred to the existence of cases of perforating ulcers of the rectum, and mentioned instances of fæcal, scrotal, and abdominal extravasation, of fæcal extravasation in the buttock and female genitals, and perforation of the bladder by perforating ulcers of the rectum. He recalled two cases brought by him before the Clinical Society in which he had performed lumbar colotomy for the cure of recto-vesical fistulæ with success, and he confirmed his opinion that ulcerated openings sometimes took place between the bladder and either the large and small intestine, many of which had no connection with stricture of the bowel, still less with cancer. He expressed surprise that fissure or painful ulcer of the rectum was so frequently overlooked owing to no examination being made. He pointed out the diagnostic value of a papilla at the dorsal or perineal end of the anus as a guide to the site of the ulcer, and explained how this might readily be exposed. It was this lesion which usually prompted patients with piles to seek advice. The consideration of piles followed, and the value of a full enema was demonstrated. This enema was indispensable to complete diagnosis. Inflamed piles, suppurating and sloughing piles, strangulated piles, came in for consideration and hints were given as to treatment. He dwelt upon the preventive treatment of piles and discussed the various operations, he himself preferring the clamp and cautery to any other procedure.

Mr. ALFRED COOPER referred to the risk of fæcal incontinence attending the old practice of pushing the director into the bowel and slitting up all the sinuses. He pointed out that there was as a rule only one internal opening which must be sought for. He had used the ligature in the treatment of piles for thirty years, and preferred it to all others. When piles invariably came down and could only be kept up

by plugs an operation was certainly necessary, but he insisted on the importance of ascertaining beforehand whether the flux relieved the patient of headache, etc. He had seen death follow neglect of this precaution. When fistulæ were associated with phthisis, there was a danger of causing rapid progress of the disease. He pointed out that there was not only an external but also an internal tag, and unless the latter were removed the patient's sufferings would not be relieved. He mentioned, as illustrating the necessity for a careful examination, the case of an actor who had previously consulted no fewer than eight medical men, six of whom had not examined him at all while the two others said he was suffering from fissure. As a matter of fact there was a bone impacted in the rectum, which he removed.

Mr. Goodsall preferred the patient to lie on the right side for the purpose of an examination, the left forefinger being used, leaving the right hand free for operative manipulations if required. He insisted on the fact that 90 per cent. of diseases of the rectum were situated within 2 inches of the anus, and many men made the mistake of introducing the finger too far to begin with. He advocated the use of a T-shaped incision for the relief of ischio-rectal abscesses, the patient in the severer cases sitting for twenty minutes night and morning in hot water for some time after the operation. He laid it down as a rule that if the external opening of a fistula was behind a line drawn transversely from one ischial tuberosity to the other, the internal opening would generally be found in the middle line posteriorly and *vice versâ*. Constipation in youth was often followed by fissure and after a time by piles. By-and-by the piles prolapsed, and by dilating the sphincter relieved the fissure, but as the fissure got better the piles became worse.

Mr. Swinford Edwards observed that 50 per cent. of cases of pruritus ani were amenable to forcible dilatation of the sphincter with scraping of any eczematous surface, and the condition was not necessarily indicative of rectal disease. He thought it was unnecessary to pass a probe right through in cases of fistula until the patient was anæsthetised. With regard to sinuses which ran up beyond the internal sphincter, he advocated laying them open if they were beneath the mucous membrane, but not otherwise. He discountenanced plugging the wound after operation for fistula as unnecessary. He had never seen a case of perforating rectal ulcer, but he mentioned a case in which the administration of an enema in a patient with rectal disease had been followed by stripping of the peritoneal tissues followed by gangrene. He had operated for recto-vesical fistulæ in three ways—by iliac colotomy, which had the advantage of permitting the exploration of the abdomen, by posterior proctectomy and by suprapubic cystotomy. He had treated over 100 cases of piles by the injection of 1 in 5 of carbolic acid in glycerine with the happiest results, and in suitable cases he thought there was no better method.

Mr. Battle asked the author whether in his cases of rectal ulcer there were signs of the existence of ulcerative colitis. To illustrate the importance of routine examination he mentioned the case of a woman whom he had previously seen with a syphilitic stricture of the rectum, who returned later with partial obstruction. He expected to find that the stricture had closed, but as a matter of fact he found three sovereigns impacted there, which he withdrew.

The President asked whether the author had any experience of immediate suture of the divided structures after operation for fistula. One advantage of scraping the track of the fistula was that the granulation tissue lining of collateral ramifications bulged, and so made themselves visible. He referred to Whitehead's operation, remarking that surgical opinion seemed to be unfavourable to it. He observed that he had taught that acute pain in a patient with piles was an indication of some complication.

Mr. Bryant, in reply, said he had not had sufficient experience of Whitehead's operation to form a reliable opinion, but he did not like it. He dissented from the view that operations for fistula in phthisical patients were likely to be followed by disastrous results, his experience being all the other way. He declined to admit that fistulæ had only one internal opening and instanced cases in which there were several distinct internal apertures.

HARVEIAN SOCIETY OF LONDON.

Annual Meeting.

The annual meeting and *conversazione* took place on Thursday, January 20th.

Reports of Council and Treasurer.

The reports of the Council and the Hon. Treasurer showed the Society to be in a flourishing condition. Hearty votes of thanks to the retiring officers were passed and acknowledged.

Election of Officers.

The ballot for officers and Council for the ensuing year was taken, with the result that the members nominated by the Council, and whose names were published in the British Medical Journal of January 15th, p. 174, were all elected, Dr. Goodhart heading the list as President.

President's Address.

The retiring President (Dr. R. H. Milson) delivered the annual address, in which he reviewed the work done by the Society during the past year. Continuing, he said: "Thus it is that medical science, which is always changing and advancing, is aided by societies like ours, where new theories are propounded and discussed, new methods of treatment brought forward, and facts established. As specialists also bring their cases, we have the advantage of their researches, though we look at disease through the broad view of medicine and surgery as a whole. The members comprising men from various schools, as well as various schools of thought, cannot but be benefited by mutual association; the older bringing their experience and the younger new theories and new modes of treatment." He then reviewed some of the advances in medicine and surgery which had occurred since 1864, when there was no clinical thermometer, the laryngoscope was only just coming into use, ovariotomy was struggling into recognition, with a mortality of one in every two cases operated upon: Listerism was unknown, bromide of potassium was beginning to be used, hydrate of chloral was unknown, hypodermic injections were being first employed, and the salicylic treatment of rheumatism was unknown. "How advantageously are the members of the whole profession now placed in comparison with their predecessors of thirty-three years ago. Further, the great progress attained in this short time is an excellent augury of the advance that may be looked for in the future." The President then referred to the social aspects of the Society, and the success of the annual dinner, and thanked the officers and members for their uniform kindness and support during the year. He trusted that all would live up to the traditions of the past, by following humbly and patiently in the footsteps of those distinguished members who in its earlier life did so much for the reputation of the Society, such as Hodgkin, Marshall Hall, C. J. B. Williams, Erichsen, Hare, and Sibson. "So that, in our earnest search after truth, it may be able to be said of each of us that he was:

> One who never turned his back, but marched breast forward,
> Never doubted clouds would break;
> Never dreamed, though right were worsted, wrong would triumph,
> Held, we fall to rise, are baffled to fight better,
> Sleep to wake."

Induction of New President.

Dr. Milson finally inducted his successor, Dr. Goodhart, to the chair, and thought the Society could not fail to be greatly benefited by his presidency.

Conversazione.

A *conversazione* was afterwards held, with instrumental music by the string band of the Royal Horse Guards (Blue), and vocal music under the direction of Mr. Mervyn Dene and the Crichton Part Singers. A small collection of books and engravings relating to William Harvey and his two Royal patrons, James I and Charles I, was exhibited by Dr. F. W. Cock, the retiring Honorary Secretary, and Mr. D'Arcy Power. A print of Harvey from an original plate by Faithorne was also presented to every member and guest at the meeting by Dr. Cock.

The first list of annual subscriptions to the second year of the Prince of Wales's Hospital Fund includes one of 1,000 guineas from the Hon. Wm. Waldorf Astor.

EPIDEMIOLOGICAL SOCIETY.

Professor J. LANE NOTTER, M.D., President, in the Chair.

Friday, January 21st, 1898.

TYPHOID FEVER AND SUBSOIL WATER.

DR. CHRISTOPHER CHILDS read a paper on the history of typhoid fever in Munich, illustrated by a number of tables, from which it appeared that the mortality from this disease alone had fallen in successive decades since 1850 from 202.4 to 147.8, 116.7, and 16.0 per 100,000 inhabitants; in 1891-6 to 5.5, and during the last three years to 3.0; while epidemics had been unknown since 1880. In England and Wales the death-rate had been 32.55 in the eighth decade, 19.76 in the ninth, and 17.38 in the period 1891-6. The trustworthiness of the returns of deaths certified by medical practitioners was confirmed by their close correspondence in seasonal incidence with those in the garrison and in the hospitals, where all fatal cases were verified *post mortem*. Since the water supply of the city had within recent years undergone a complete change, it was natural that the unparalleled reduction in the prevalence and mortality of typhoid fever should be ascribed thereto, but no such relation could be shown. Munich stood on a plateau inclining downwards from south to north, the higher area south of the city being open and almost uninhabited; while the Isar flowed with a rapid current northwards through the city, which was traversed by numerous tributary streams (*Stadtbäche*), in great part covered over by paving or buildings. The soil of the entire plateau was a bed of gravel 10 to 50 feet thick, resting on impermeable marl, which supported a sheet of ground water fluctuating with considerable regularity, and generally at a higher level in summer and autumn, and lowest in the winter months. This subsoil water, comparatively pure in the open country, became greatly polluted under the town and suburbs, except in close proximity to the river, where it was diluted by percolation from the gravelly bed of the stream; it was, too, as a rule, purer when low than when it rose nearer to the surface of the ground, mingling with the contents of the pervious cesspits, which from time immemorial had received all the excreta of the population. In 1858 the cesspits were ordered to be emptied, cleaned, and lined with cement. After 1858 sewers were constructed in the suburbs immediately surrounding the old city. From 1881 up to the present time the sewerage and house drainage of the rapidly growing city have been gradually improved and carried out by Gordon. A very large number of the watertight cesspits still remain. Until 1865 the city of Munich was entirely dependent for its water supply on springs or wells sunk in the gravel by the seven royal and six municipal waterworks or belonging to private individuals, all of which were or became in course of time seriously polluted. But in that year the south and west districts received a new and pure supply from the Pettenkofer Waterworks, which indeed drew from the ground water, but in the open country to the south before it had become polluted; and in 1883 the Hochquelle Zeitung or Highland Waterworks were opened, the source being from springs and streams impounded in the Mangfall Valley in the Bavarian Alps twenty miles distant, which now furnished all parts of the city with water of exceptional purity. In 1854, during the epidemic of cholera, Pettenkofer, then a firm believer in the propagation of this disease as well as of typhoid fever almost exclusively by means of water, set himself to ascertain the source of the water supply of every house in the city, but neither in that epidemic of cholera nor in subsequent outbreaks of typhoid could he find any connection of place or time between the source of the water and the incidence or prevalence of the disease. On the other hand, he did observe a remarkable correspondence, seasonal and in successive years, between the rise and fall of the ground water and the prevalence of typhoid, which was always greatest when the water was low. He then formulated his theory of the conditions necessary for the spread of the disease, namely: (1) The presence of the specific microbe in the soil, (2) a population susceptible of or predisposed to infection, and (3) pollution of the soil, with certain conditions of porosity affected by temperature and moisture, or the oscillations of the ground water. In 1865 the population supplied with pure water from the Pettenkofer works suffered as heavily in the severe epidemic of that year as those who drank from the old wells, and in 1884 23,000 who still used the latter did not suffer more than those who enjoyed the still purer highland water. The great decline in typhoid came too late to be ascribed to the introduction of the former, and too early to be explained by that of the latter supply; but it began after the time when the cesspits were made watertight, and culminated at the end of 1880, soon after the closure of the 800 slaughterhouses in the city. Each of these events marked the cessation of a great and hitherto continuous source of pollution of the soil, though ten to twenty years being required for the removal by natural agencies of the organic matter, the "healing of the soil," as he called it, the improvement continued, though more slowly, to the present time.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Sir J. BATTY TUKE, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, January 19th, 1898.

SPECIMENS.

PROFESSOR T. ANNANDALE showed: (1) Some Special Urinary Calculi, one a large one from a case where he had made the bladder for the condition of extroversion. (2) Cancer of the Rectum from a patient aged 16. (3) Ankylosis of the Elbow, with a buried ulnar nerve. (4) Some cases of Fracture, showing curiosities of the reparation of Nature.—DR. JOHN THOMSON (for DR. JOHN PLAYFAIR) showed a specimen of Tumour of the Brain, taken from the child he brought before the Society at its meeting on December 21st, 1897, then suffering from tremor of the left arm and hemiparesis. The child had been trephined over the right motor area by Mr. Joseph Bell, but nothing beyond greatly increased intracranial tension was discovered. No relief followed the operation, and the child died within two days. At the necropsy, a sharply circumscribed rounded caseous tumour was found in the substance of the brain, immediately to the right of the mesial line. It measured from 1½ to 2 inches in diameter, and had destroyed the anterior limb and genu of the internal capsule, the caudate nucleus, and most of the lenticular nucleus. It reached on its outer side only to about 1·5 cm. from the surface of the brain, and had not therefore implicated the cortex. There was a certain amount of tuberculous meningitis, but no other lesion of the central nervous system.—DR. ALEXANDER BRUCE showed an Aneurysm which had ruptured into the left bronchus, and which during life had given few signs or symptoms to guide to a correct diagnosis.—DR. SHENNAN showed (1) Specimens from a case of Diphtheria where the membranes had extended far down the trachea. (2) Gall stones impacted in the common bile duct.—DR. RAINY showed an Infant illustrative of Achondroplasia, which had lived two hours. The legs, arms, and abdomen were characteristic.

DRAINAGE OF FOURTH VENTRICLE FOR ACQUIRED HYDROCEPHALUS

DR. BRUCE and MR. HAROLD J. STILES read a conjoint paper on opening and draining the closed fourth ventricle in acquired hydrocephalus due to basal meningitis. The patient was a girl, aged 13, with well-marked signs of congenital syphilis, and presenting symptoms indicative of chronic basal meningitis, namely, irregular pyrexia, persistent head retraction, nystagmus, paresis of one external rectus muscle, weakness of the limbs, gradually increasing blindness, great weakness and emaciation. The condition becoming critical in spite of all medicinal treatment, owing to great cyanosis and to the supervention of rigors, it was decided, on consultation with Mr. Stiles, to open up the fourth ventricle and thus drain the ventricular system. Mr. Stiles accordingly trephined in the middle line over the lower part of the occipital bone, including the margin of the foramen magnum, and enlarged the opening in the bone by means of the bone forceps. A double ligature was passed round the occipital sinus in the dura mater, which was then incised. Separation of the two tonsils of the cerebellum allowed a large quantity of cerebro-spinal fluid to escape. The operation was followed

by immediate improvement, normal temperature, restored appetite and mental power. This condition lasted for a week, when there was again a rise of temperature. Death occurred nineteen days after the operation with hyperpyrexia. During this period cerebro-spinal fluid drained away in large amount. Drs. Bruce and Stiles referred to the ease with which the fourth ventricle could be exposed, and the cause of the occlusion of the foramen of Magendie determined and removed by this operation, and they considered that death was due more probably to the previous exhausted condition of the patient, and to the complications of pus and albumen in the urine. A *post-mortem* examination confirmed the diagnosis which had been made.

Remarks were made by Dr. James Carmichael, Mr. Joseph Bell, and Mr. Cotterill, and Mr. Bruce replied.

Diagnosis and Prognosis of Imbecility in Infancy.

Dr. John Thomson read a paper and gave a lantern demonstration of photographs illustrating the diagnosis and prognosis of imbecility in infancy. After referring to the cases of mentally defective infants presenting no marked physical defects, in whom the diagnosis had to be founded mainly on the delay in development of the various bodily and mental functions, he spoke of microcephalus, chronic hydrocephalus, infantile cerebral paralysis, the so-called "Mongolian" imbecility and cretinism, and on the effect of repeated eclamptic attacks in damaging the mental power. In microcephalus the shape as well as the size of the head, and the abnormally early closure of the fontanelle, helped to distinguish the condition from that of ordinary paralytic cases where the head was small. In chronic hydrocephalus and infantile cerebral paralysis, the degree of the mental defect varied with the extent of the disease present. It was generally less, however, than might have been expected from the amount of the structural lesion. The so-called "Mongolian" imbeciles had very distinct physical as well as mental characteristics, so that they could be recognised readily even at birth, and a confident prognosis given as to the degree of intelligence they were likely to attain in later life. The presence of even a severe degree of cretinism was not usually accompanied by great bodily deformity during early infancy. It was only as years passed that the characteristic features became very well marked. The conditions which were most liable to be mistaken for cretinism were achondroplasia and "Mongolian" imbecility. The achondroplasic baby had at birth many curious resemblances to the adult cretin, but was much more deformed than the cretin infant. When he grew up, however, he became an ordinarily intelligent dwarf, and had few cretinous characteristics. The "Mongolian" imbeciles, on the other hand, were not very like cretins in early infancy, but in later childhood and adolescence might resemble them in many points. Dr. Thomson dwelt specially on the importance of studying the form of the hands in doubtful cases, as they were sometimes even more characteristic than the face. Eclamptic attacks were much more often a symptom than a cause of a damaged brain. Sometimes, however, a normal infant became imbecile after the occurrence of fits. It was important, however, to remember that in some cases where a long series of convulsive attacks occurred there was a temporary condition of dementia produced which lasted for weeks, but was entirely recovered from if the fits were arrested.

Hunterian Society.—At a pathological meeting held on January 12th, Dr. F. C. Turner in the chair, Mr. Targett showed a specimen of unusual Rupture of the Uterus.—Dr. Keith exhibited (for Dr. F. J. Smith) the Heart of boy, which showed incomplete closure of the ventricular septum in its upper portion associated with pulmonary stenosis.—Dr. F. J. Smith exhibited: (1) A Stonemason's Lung, in which there were multiple papillomata, with great rigidity of the bronchial tubes; (2) A Suprarenal Capsule into which hæmorrhage had taken place; the patient had died of septicæmia; (3) a Colon, the surface of which was slaty black and granular, with curious nodular swellings; the symptoms were those of chronic dysentery.—Dr. Dawson showed a specimen of Dilated Bronchial Tubes of a few months' standing in a case of aneurysm of the first part of the aorta.—Dr. Arthur Davies exhibited the Heart taken from a case of phthisis, in which the free edge of the mitral valve was thickened from old mischief, and attached to it were two large deposits of firm lymph, each about the size of half a shelled walnut, and partly blocking the orifice. There was no sign of ulceration of endocardium. The weight was 6 ounces. There was ulceration of large intestine throughout the entire length. The kidneys were large, with almost white cortices. —Dr. Fortescue Fox showed a microscopic specimen of Carcinoma of the Pylorus, in which the points of interest had been the difficulty of diagnosis, and the formation of an abscess in connection with the malignant disease.—Mr. A. H. Tubby exhibited a specimen of Inveterate Congenital Talipes Equino-varus, which he had successfully removed by amputation 6 inches below the knee-joint. Remarks on the case were made by the Vice-President, Dr. Best, and Dr. J. H. Sequeira.

Glasgow Southern Medical Society.—At a meeting on January 20th, Mr. Stuart Nairne, a former President, in the chair, the proceedings took the form of a "hat night." This proved interesting, as many practical questions were discussed in a somewhat informal way: 1. Best methods of controlling the abuse in the sale of patent medicines. The plan in vogue in Germany, where the exact formula was printed on the label, was approved. 2. Differential diagnosis of rash of scarlet fever and other eruptions resembling this. 3. Treatment of tuberculous meningitis. 4. Antipyrin in the treatment of pneumonia. Mr. Stuart Nairne's experience of the treatment of pneumonia was confined to surgical cases. He had found a combination of antipyrin with tr. digitalis in small doses of gr. iij or iv of great use. It seemed to make the respiration easier. Caution was advised in the use of large doses. 5. Treatment of exophthalmic goître. The usual measures were mentioned. Hydrofluoric acid, iodide of calcium, electrical treatment and its radical cure by surgical means were discussed. 6. Appendicitis: When to operate? Mr. Parry thought the American rule a good one: After the third day if there is not a drop in the pulse-rate and temperature, operate. As long as there was any tenderness, the patient must be kept very strictly to bed; the alternative was operation. Other subjects were mentioned, but want of time prevented their discussion, though interesting and important—for example, gonorrhœa in women, treatment of chronic Bright's disease, etc.—On February 3rd Mr. Parry will give a demonstration on Surgical Cases in his wards in the Victoria Infirmary.—On February 17th a discussion will be opened on the Use of Forceps in Obstetrical Practice.

Nottingham Medico-Chirurgical Society.—At a meeting on January 19th, Dr. C. H. Cattle, President, in the chair, Mr. Waring read a paper on the subject of Uterine Toilette. Intrauterine treatment in cases of septic endometritis was generally discussed, special attention being drawn to the advantages of packing the uterus with iodoform gauze soaked in iodoform emulsion as a means not only of encouraging drainage, but also on account of its promoting a healthy restoration or cicatrisation of the endometrium. The influence of intrauterine treatment with gauze packing upon periuterine inflammatory conditions was emphasised, and cases of acute septic endometritis associated with parametritis and perimetritis were quoted, in which treatment by curetting and subsequent application of antiseptics and gauze packing had been followed by a rapid subsidence of the inflammatory conditions. Messrs. Cattle, Wood, Hunter, Willis, Mutch, Anderson, and Tressider spoke; and Mr. Waring replied.

Bradford and District Medico-Ethical Society.—At the annual meeting, held on January 19th, the annual report and the treasurer's report were read and adopted. The treasurer's report showed that there was still a balance in hand. The larger part of the Society's last annual income had been spent in actively promoting the interests of the profession, more particularly in taking the steps which induced the School Board to withdraw the objectionable regulation refusing to recognise certificates of unfitness to attend school, supplied by medical practitioners. Dr. Hime was re-elected President for the third time. Mr. Miall was re-elected Vice-President, also for the third time. Drs. Dunlop and Mackenzie

were elected Hon. Secs. Dr. March was re-elected Treasurer. The following Committeemen were appointed: Drs. and Messrs. Goyder, Mossop, Bronner, Horrocks, Althorp, and Manknell.—The President delivered a brief address, in which he referred to the progress made by the Committee appointed to inquire into hospital abuse. He also mentioned with satisfaction that prompt and effective steps had been taken by the Medical Defence Union to inflict punishment on a Bradford daily paper for offensive references to a member of this Society.

REVIEWS.

The Winter Meteorology of Egypt, and its Influence on Disease. By H. E. L. Leigh Canney, M.D.Lond. London: Baillière, Tindall, and Cox. 1897. (Roy. 8vo, pp. 72, meteorological charts and tables. 3s. 6d.).

The book consists of two papers, one read before the Royal Meteorological Society, and the other at the recent Moscow Congress. It is the second, that on the winter climate of the Egyptian health resorts and its influence on disease, which will especially interest English physicians. The mere advice, "Go to Egypt," is certainly not enough. "In a country where the patient may be exposed to heavy dew throughout night after night at one spot, and at another spot may never be within 20° or 30° of the dew point; where at one spot there may be the dust and impurity of the countless myriads of germs of a crowded city, and at another spot air so pure that scientists have questioned whether it contains any single living organism; where the night temperature of two spots, a mile or two apart, may vary night after night as much as 15° or 20°; where the prevailing wind may bring air over scores of miles of cultivated land, or on the other hand, over hundreds of miles of desert; it is essential that, where such wide differences exist, we should be far more precise." The observations recorded show how important the author's statement may be for the various classes of cases sent to Egypt, and with what a useful contribution he has furnished us.

The daily range of temperature is 5° or 6° greater in Upper Egypt owing to the hardly noticeable rainfall and greater dryness of the air than in Lower Egypt. The mean temperatures for the four winter months (December to March) are 59.5° at Mena House, 60.5° at Helouan, 63.8° at Luxor, and 68.3° at Assouan. A cultivated area in Upper Egypt reaches the freezing point seventeen times in January and February, when a spot half a mile distant on the roof of a hotel only reached 38° on one occasion. During the day the relative humidity was found 13.7 per cent. greater in the cultivated fields than on Luxor roof or in the neighbouring desert; and during the night the relative humidity in the cultivated fields was 21.4 per cent. higher than on Luxor roof, and about 40 per cent. higher than in the neighbouring western desert.

Of the affections mentioned as deriving great benefit from Egypt, Dr. Canney recommends Assouan in phthisis, or possibly Helouan, though Lower Egypt is too cold in December and January. Under suitable cases of phthisis he includes: non-erethic cases, hæmorrhagic cases, non-acute cases of first or second stage, chronic quiescent phthisis, and cases associated with bronchitis. With regard to asthma he recommends Assouan in cases associated with bronchitis, Mena House when there is dyspepsia, and perhaps Luxor, or either of the two former health resorts when the affection is of distinctly nervous origin. For chronic bronchitis and emphysema Assouan is preferred, or else Helouan or Mena House in April; for convalescence from pulmonary affections Assouan, or possibly Helouan. Assouan is given the first place in all forms of Bright's disease and in albuminuria. The new baths at Helouan will be useful in cases of rheumatoid arthritis and gout, and dyspepsia, etc., dependent on gout, and the climate of Upper Egypt may be sought after the course of baths.

The author very properly draws attention to the importance of establishing sanatoria at suitable spots in Upper Egypt, in the construction of which the position, aspect, altitude, construction, ventilation, warming, and cooling of the air, and a constant supply of desert air to sleeping rooms must all be made questions of special study.

The Masters of Medicine. Sir James Simpson and Chloroform, 1811-1870. By H. Laing Gordon. Edited by Ernest Hart, D.C.L. London: T. Fisher Unwin. 1897. (Crown 8vo, pp. 246. 3s. 6d.)

The Masters of Medicine series of volumes do not decrease in interest as they are issued in rapid succession from the press; indeed, the last, dealing with such a charming personality as that of Sir James Simpson, and such an attractive subject as the discovery and introduction of chloroform anæsthesia, arouses human sympathy perhaps more than any.

Dr. Gordon pourtrays in a vivid manner the tortures and horrors of the operating theatre half a century ago, before agony was lost in anæsthesia. It is only by thus picturing the surgery of the past that we can estimate, in some degree, what Simpson accomplished in abolishing pain, and what Lister has done in banishing danger. The story of the discovery of the anæsthetic properties of chloroform, which was told in the British Medical Journal of October 17th, 1896, is related in this book in greater detail; and the great battle waged by Simpson against stupidity, ignorance, and bigotry is described in an interesting manner.

Simpson's reputation and practice were so great that patients flocked to his consulting room from all parts, but he refused to leave Edinburgh, where he was beloved for his unbounded kindness and revered for his knowledge. Dr. Gordon gives some delightful sketches of the genial Master; he says:

> The striking form with which Nature had endowed him became more remarkable when affected by years, work, and domestic afflictions. Though of medium height his presence, even beside typically large-built and large-boned fellow countrymen, was never insignificant. His features, overhung by his massive forehead, surrounded by the long and thick hair, spoke his character. Firm, concentrated mouth and piercing eyes, when his mind was fixed on a scientific or practical object; a soft, womanly tenderness about the lips, and a genial, sympathetic emotion in his deep-set eyes when aroused by an object of pity or pleasure. His hand was broad and powerful, but the fingers were pointed and especially sensitive of touch. To see him was to see one of the sights of "Modern Athens."

And again as to his mind and methods of work:

> Professor Simpson's versatility was remarkable. He turned from one subject to another and displayed a mastery over each; it was not merely the knowledge of principles which astonished but the intimate familiarity with details. He was able to discuss almost any subject in literature, science, politics, or theology with its leading exponent on equal terms. He had the power of patient listening as well as the gift of speech; more than that, he had the ability to charm speech from others, of making each man reveal his inmost thoughts, betray his most cherished theories, or narrate his most stirring experiences; the most reticent man would not realise until he had left Simpson's presence that in a brief interview, perhaps the first, he had told his greatest adventures or laid bare his wildest aspirations before this student of mankind who was summarising his life and character as he spoke.

As the year went on Simpson felt plainly that the battle against death and suffering was only half gained by banishing the pain of operation, and that to obtain rapid and healthy healing of wounds was the next great desideratum. That the trouble lay in the air surrounding the wound was surmised; and so convinced was Simpson of this that he declared that a man laid on a hospital operating table was exposed to more chances of death than the English soldiers on the field of Waterloo. As cleansing the air surrounding a patient in town hospitals seemed impossible, Simpson urged that surgical patients should be moved into the pure air of the country and lodged in cottage hospitals. Till death overtook him he passionately pleaded the cause of hospital patients and deprecated the then enormous death-rate.

The dark riddle he vainly tried to read was afterwards solved by the genius of Lister. At the present day every surgical patient owes gratitude to these two Masters who have made him insensible to pain and healed him—Simpson and Lister.

When the end came at last Edinburgh showed her reverence for Simpson by the whole city ceasing to work and gathering in thousands around his open grave, to mourn one who had served them and humanity so well.

We are grateful to Dr. Laing Gordon for a delightful sketch of a great master and a lovable man.

The Psychology of the Emotions. By Th. Ribot. (Contemporary Science Series.) London: Walter Scott. 1897. (Demy 8vo, pp. 475. 6s.)

This is a valuable addition to this most useful series of books, and one which both medical men and laymen will read with pleasure and profit. The psychology of Scotland and

Germany are profound and thorough, but are not easy of digestion and assimilation, while that of M. Ribot is charmingly written and is full of lucid explanation and brilliant comparison. He has already made special studies of other factors of mind, and this monograph on the psychology of the emotions is a masterly exposition of the present views of French thinkers on the subject. As M. Ribot points out, one of the chief hindrances to the development of a science of the emotions has been the belief that they were analogous to or dependent upon intellectual states. This is very true, and, as the author points out, this independence is manifest in the normal development of the emotions and feelings, and is still more evident in their disorder. Ribot says: "The doctrine which I have called physiological (in contradistinction to Herbart's, which is the intellectualist) connects all states of feeling with biological conditions, and considers them as the direct and immediate expressions of the vegetative life. It is the thesis which has been adopted without any restriction in this work. From this standpoint feelings are no longer a superficial manifestation or simple efflorescence; they plunge into the individuals' depths, they have their roots in the needs and instincts; that is to say, in movement. Consciousness only delivers up a part of their secrets; it can never reveal their whole, we must descend beneath it."

The book consists of two parts. The first is a more or less complete study of emotion, its forms and developments, while the second deals with special emotions.

In the first part following the introductory chapter, which treats of the evolution of the affective life, physical pain is considered in its various forms, and the different explanations of its vital connections are given, and it is maintained that pain results from the quality or intensity of sensation, and depends on a form of movement or chemical modification. Moral pain is considered, and a typical case of hypochondriasis is given. Pleasure and its causes and relations are studied as a whole; then follows the consideration of morbid pleasures and pains, and one of the chief points in the book is the clever and methodical way in which the normal and abnormal are compared and contrasted. M. Ribot is a believer in neutral states, free from both pleasure and pain, and gives the grounds for this belief. The emotions, their forms, qualities, and modes of expression occupy a chief part of this book, and the difficult and rather unsatisfactory classification of the emotions is handled in a masterly way, the general conclusion being that it is impossible to have a really satisfactory classification. He thinks the only line to follow is that of genetic filiation, namely, to state afresh the simple primary emotions, then to find out by what mental processes, conscious or unconscious, the composite and derived emotions have arisen from them.

The memory and association of feeling each occupy a chapter, and then comes the second part of the book, which is devoted to special psychology. Space will only allow us to mention some of the subjects treated, such as the instinct of conservation, fear, anger, the ego and its emotional manifestation, the sexual instinct, social and moral feeling, religious sentiment, normal and abnormal and morbid characteristics. One of the later chapters on decay of the affective life is specially important to medical men, pointing out as it does the parallel between intellectual and emotional decay. The conclusion of the whole matter is given in a brilliant final chapter in which the place of the feelings in the psychic life is made clear.

The book is one of very great charm and interest, and well worthy of careful perusal.

A Manual of Obstetric Practice, for Students and Practitioners. By Professor A. Dührssen, M.D. Translated from the sixth edition by John W. Taylor, F.R.C.S., Surgeon to the Women's Hospital, Birmingham, and Frederick Edge, M.D., F.R.C.S., Surgeon to the Women's Hospital, Wolverhampton. London: H. K. Lewis. 1897. (Cr. 8vo, pp. 322. 6s.)

The translators give among their reasons for translating this work that "it is a practical book. Nothing essential is neglected or slurred over, and every direction for diagnosis or treatment has been carefully chosen and personally tested. The book is remarkable for its absolute freedom from all irrelevant matter." We concur with the translators in their encomiums. The book is remarkable for its conciseness. It is not an echo of a chorus of conflicting opinions, but embodies the practical directions of a man who has his own opinion on every subject and knows exactly what he means. Such a book, written by a man so competent as Professor Dührssen, will always be instructive and attractive reading.

We may however be permitted to doubt whether the novelties in practice with which Professor Dührssen's name is associated will ever commend themselves to English practitioners. They are two: plugging the uterus with iodoform gauze, and hastening delivery by free incisions into the cervix uteri and vulva. As to the gauze, which is Dührssen's great remedy for uterine hæmorrhage of all kinds, we would remark that any remedy against uterine hæmorrhage which is used in the routine way in which Dührssen advises the use of gauze ought, unless it be in itself dangerous, to be followed by a large percentage of recoveries. We admit that gauze plugging of the uterus is not fatal; but will it stop hæmorrhage which would not have stopped without it? We think not, and for evidence in support of our view we need go no further than this book. At page 200 we read: "If no contraction comes on after the tamponnade of the uterovaginal canal in a case of absolute atony of the uterus, and the uterus is becoming distended with internal hæmorrhage, one should compress the uterus from without against the tampon." Lower down we read about "hæmorrhage coming on from half to two hours after the tamponnade." When there is not atony of the uterus English practitioners know how to stop hæmorrhage without iodoform gauze, and when there is atony gauze plugging cannot be depended on.

The other novelty, which in an extreme form Dührssen calls "vaginal Cæsarean section," also seems to us to be no improvement upon Nature. It means that when the os uteri is not dilated delivery is to be effected by cutting it open and extracting the child with forceps, the expansion of the vaginal orifice being also hastened by free lateral incisions. With regard to this we will quote the author. He says (page 241): "The author is convinced that the beginner or the practitioner who does not act up to all the modern demands as regards asepsis can cause grave disease with these incisions, and he therefore holds it to be the duty of the general practitioner to call in the help of a specialist in such difficult cases." For our part we think dilatation by the bag of membranes, and failing that its imitation by a water bag is better than these large incisions.

Traité de Chirurgie Clinique et Opératoire. [Treatise on Clinical and Operative Surgery.] Par A. Le Dentu, Professeur à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital Necker; et Pierre Delbet, Professeur agrégé à la Faculté de Médecine de Paris, Chirurgien des Hôpitaux. Paris: J. B. Baillière et Fils. 1897. Vols. IV and V. (Imp. 8vo, pp. 992 and 902. Fr. 12 each.)

The production of this encyclopædic work continues with great regularity. Vol. IV treats of the surgical diseases of the nervous system, and of the surgery of the vascular system.

Professor Schwartz has contributed the section dealing with the surgery of the nerves and veins. He divides his subject into three chapters, dealing successively with traumatic lesions, neuritis, and tumours. Under each of these headings he considers his subject not only from a surgical but from an etiological and pathological standpoint. The introduction of surgical pathology into this treatise is one of its leading characteristics. It is a wise measure, facilitating as it does a rational understanding of the subsequent surgical treatment. Professor Schwartz, as might have been anticipated, treats his subject in a thorough manner, and his contribution, which occupies some 140 closely printed pages, is a complete treatise on the subject.

Professor Delbet contributes the section surgical diseases of arteries. His discussion of aneurysm, which occupies some 200 pages, is a very complete account of a most important subject, aneurysms of every region of the body in which

they have been known to occur being considered in detail. Affections of the lymphatic system are carefully treated by M. Brodier.

To M. Chipault, of the Salpêtrière, is due the credit of having contributed perhaps the best section of the volume. The 600 pages to which his article extends comprise a complete treatise on the surgery of the brain and spinal cord.

The fifth volume fully maintains the high standard of the fourth and preceding volumes. Diseases of the eye, contributed by M. Terson, *Chef* of the ophthalmological clinic of the Hotel Dieu, occupy the first 350 pages. His contribution is a complete treatise in itself, and one worthy the careful study of every ophthalmologist. Equally exhaustive is the account given by M. Castex of the diseases of the ears and nose. In fact the careful compilation of practically all the existing material of importance by the several authors of this work does not leave room for criticism.

Perhaps the most marked feature of the work is the the great attention paid to symptoms and treatment on the one hand and to pathology on the other. The work is thus essentially practical in nature, and it is this feature which will save it from the usual fate of universal treatises. We can only congratulate the editors, Professor LE DENTU and DELBET in the success that has so far attended their labours.

NOTES ON BOOKS.

Scenes in English Life. Lessons in English on the Series Method, with Instructions to Teachers and Directions for Pronunciation. Book I. Children's Life. By HOWARD SWAN and VICTOR BÉTIS. With a Preface on the Use of the Method for Teachers of the Deaf by SUSANNA E. HULL. (London: George Philip and Son. 1897. Cr. 8vo, pp. 180. 2s. 6d.—This is the first of a series of books containing scenes of English life, adapted for the use of teaching the deaf by the oral method of lip-reading, but useful also for teaching English children their own language in primary schools. The book is an example of what is called the Gouin method of teaching language, by means of which vivid mental pictures of various scenes are called up and outlined in language by giving the verbs only. The other words of the sentence group themselves round the verb, and the child thinks and speaks not in words but in sentences. The mind, according to this method, contemplates not the words uttered or written, but the subject itself, so that there is always thought behind the words. Language is the association of thought with expression, and does not consist of sounds or signs alone. Taking advantage of this the authors have developed what they call a psychological method of teaching languages, a method of "mental evocation by which all possible means are used to call up mental representations." A full table of English vowels, of which the authors say there are twenty-one—fifteen simple and six diphthongs—is given. The letters and combinations employed to indicate sounds are those already in use, and when used systematically, in accordance with a few simple rules and accent marks, enable the exact English pronunciation to be indicated with accuracy in nearly all cases without change of the spelling. The instructions to teachers in this book give directions for the use of the Series method, and as this is in principle the same for all languages, the book will be useful to teachers of French, German, Italian, etc., who are interested in this method.

REPORTS AND ANALYSES

CALF VACCINE LYMPH.

SAMPLES of vaccine lymph from the Birmingham Calf Vaccine Establishment (204, Victoria Road, Aston) have been submitted to us for examination. The lymph is stated to be aseptic, but this claim cannot be upheld, as incubation at body temperature of agar plates inoculated with a droplet of the lymph gave rise to the appearance of numerous bacterial colonies. Employed by a skilful operator for the vaccination of children, eight vesicles were obtained as the result of ten insertions of the lymph.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF THE COUNCIL.

AT a meeting of the Council held in the Council Room at the Office of the Association, 429, Strand, London, W.C., on Wednesday, January 19th.

Present:

Dr. ROBERT SAUNDBY, President of Council, in the chair.
Sir THOMAS GRAINGER STEWART, M.D., F.R.S.E., President-elect.
Dr. CHARLES PARSONS, Treasurer.

Dr. JAMES BARR, Liverpool.
Dr. RAYNER W. BATTEN, Gloucester.
Dr. M. BEVERLEY, Norwich.
Dr. T. BRIDGWATER, LL.D., Harrow-on-the-Hill.
Mr. H. LANGLEY BROWNE, West Bromwich.
Mr. HENRY T. BUTLIN, London.
Dr. JOHN CAMPBELL, Belfast.
Dr. JOHN A. CAMPBELL, Carlisle.
Dr. JAMES CANTLIE, London.
Dr. ALFRED H. CARTER, Birmingham.
Mr. ANDREW CLARK, London.
Dr. W. F. CLEVELAND, London.
Dr. J. WARD COUSINS, Portsmouth.
Dr. H. RADCLIFFE CROCKER, London.
Dr. E. H. DICKINSON, Liverpool.
Dr. T. M. DOLAN, Halifax.
Brig.-Surg.-Lieut.-Col. E. F. DRAKE-BROCKMAN, London.
Dr. W. DYSON, Sheffield.
Mr. GEORGE EASTES, London.
Dr. WILLIAM A. ELLISTON, Ipswich.
Dr. DAVID W. FINLAY, Aberdeen.
Sir B. WALTER FOSTER, M.D., M.P., Birmingham.
Dr. J. H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. JOSEPH GROVES, Carisbrooke, Isle of Wight.
Dr. C. HOLMAN, London.
Mr. T. VINCENT JACKSON, Wolverhampton.
Mr. T. R. JESSOP, Leeds.
Mr. EVAN JONES, Aberdare.
Mr. JORDAN LLOYD, Birmingham.
Mr. N. C. MACNAMARA, London.
Dr. J. C. MCVAIL, Glasgow.
Mr. H. J. MANNING, Salisbury.
Dr. J. W. MILLER, Dundee.
Dr. JOHN WILLIAM MOORE, Dublin.
Mr. W. LEWIS MORGAN, Oxford.
Mr. R. H. B. NICHOLSON, Hull.
Surgeon-Major-General T. F. O'DWYER, Aldershot.
Dr. J. W. J. OSWALD, London.
Dr. ISAMBARD OWEN, London.
Mr. C. H. WATTS PARKINSON, Wimborne Minster.
Dr. ROBERT W. PHILIP, Edinburgh.
Dr. H. H. PHILLIPS-CONN, Reading.
Dr. FRANK M. POPE, Leicester.
Dr. EDWIN RAYNER, Stockport.
Dr. JOHN ROLSTON, Devonport.
Dr. WILLIAM RUSSELL, Edinburgh.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond Hill.
Dr. E. MARKHAM SKERRITT, Clifton.
Dr. R. SOMERVILLE, Galashiels.
Mr. HENRY STEAR, Saffron Walden.
Dr. J. ROBERTS THOMSON, Bournemouth.
Dr. A. R. URQUHART, Perth.
Mr. T. JENNER VERRALL, Brighton.
Mr. JOSEPH WHITE, London.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last meeting, having been printed and circulated and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from Dr. Henry Barnes, Mr. R. S. Fowler, Sir W. T. Gairdner, Dr. Glascott, Dr. Handford, Mr. J. D. Harries, Mr. Hemming, Dr. J. A. Lindsay, Mr. Jones Morris, Dr. G. H. Philipson, Dr. A. R. Saunders, Dr. Leonard Sedgwick, Dr. Tyson, and Mr. G. E. Williamson.

The President of Council introduced to the Council Mr. W. L. Morgan, the new representative of the Oxford Branch, who attended for the first time.

The President of Council reported the death of Mr. Ernest Hart, Editor of the BRITISH MEDICAL JOURNAL (see page 237).

Resolved: That this Council desires to convey to Mrs. Ernest Hart its expression of deep sympathy with her in the loss she has sustained, and to place on record its recognition

of the memorable services rendered by Mr. Ernest Hart to this Association during his tenure of the office of Editor of the BRITISH MEDICAL JOURNAL for more than thirty years.

The President of Council reported that he had sent in the name of the Council the following telegram of condolence to Her Majesty the Queen:

HER MAJESTY THE QUEEN.

Balmoral Castle, Ballater, N.B.

May it please your Majesty to accept, on behalf of the Council of the British Medical Association, this expression of our sincere grief at the death of Her Royal Highness the Duchess of Teck, who has taken so noble a part in those works of practical philanthropy with which our profession is especially concerned. It is our earnest prayer that God in his mercy will comfort and sustain your Majesty in this as at all times.

ROBERT SAUNDBY, M.D., LL.D., President of Council.
FRANCIS FOWKE, Secretary.

429, Strand, London.

and that he had received the following reply:

O.H.M.S., Balmoral.

To Robert Saundby, 429, Strand.

Am commanded by the Queen to thank you and the Council of the British Medical Association for your kind message of condolence.

PONSONBY.

The President of Council reported having written a letter to Mr. T. W. Russell, of the Local Government Board, respecting the superannuation of Poor-law medical officers (see p. 238).

The PRESIDENT OF COUNCIL: The next business is two resolutions of which Dr. Woodcock has given notice, and I propose to proceed in this way. I shall ask Dr. Woodcock to move his first resolution, and then probably somebody will second it for him; and then I will ask if anybody wishes to speak upon the resolution of the East Anglian Branch, which is in very much the same terms. I should like the gentleman who wishes to speak upon that to speak next. After the various indictments have been read, I shall take the liberty of explaining the circumstances which I think have led to this very regrettable occurrence, and then the debate must proceed.

Dr. WOODCOCK: Mr. President and gentlemen, I do not lightly undertake the responsible duty which has been imposed upon me in submitting the resolution which appears in my name on the agenda, because I am perfectly well aware that that resolution involves censure of the President of this Council—a position of very great honour and dignity. I have personally experienced so much consideration and courtesy at the hands of the President, and have so frequently admired the ability, the tact, and the patience with which he has discharged the duties of his high office, that my personal knowledge of him rather adds to the painful difficulty of formulating a charge against him. However, necessity is laid upon me. I am here in the discharge of the duty which has been imposed upon me by the Branch which I represent, and I feel it right to say that I entirely acquiesce in the sentiments which have been expressed by that Branch. I will only add further, by way of preliminary observation, that I will impute no base or unworthy motive, I will refrain from personalities as far as possible, and I will be as brief as possible. It must be remembered that at the annual business meeting of the Association in London on July 28th complaint was made by a member of the Association of the inaction of the Association with regard to the election to the General Medical Council in 1896; and in reply to the observations which were then made, the President of the Council said, while he was indicating the unusual circumstances which led to the apparent indifference, that "the Association was a great organisation, and that it ought to have been able to come forward with candidates, to nominate them and to carry them." That deliverance on the part of the President of the Council inspired a hope that, when opportunity occurred, some action would be taken by the Association, that something would be done to exercise the influence which rightly belongs to us. It was in the early part of September that we were all very much surprised by the unexpected resignation of Dr. Rentoul, and the necessity for a by-election. At once those of us who took much interest in medical politics began to think about the advisability of putting into operation this great machinery which we possess, and with that view we at once put ourselves into communication with those whom we thought were in authority. I was approached with regard to the candidature, and my reply was that Mr. Wheelhouse had the first claim upon the representation of the North, and I did not think any man could, with very great grace, accept the position until Mr. Wheelhouse had been approached. I thought it belonged to us in the North. However, I sent a telegram to Mr. Wheelhouse in these terms: "Will you consent to stand for the General Medical Council if nominated by the Council of the Association?" because I had in my mind that that was the purpose, the intention and the desire. The reply I had to that telegram was from Mrs. Wheelhouse, to say that Mr. Wheelhouse was away in Canada. Then telegrams were sent to this office, and all the reply we got was: "Waiting for instructions of the President of Council." Whatever appeals were made here, this office seemed to be bereft of power and judgment and of courage, and could do nothing. That was the conclusion we came to, that at all events there was nobody to rely upon in London. Then we approached Dr. Saundby at his residence in Birmingham, and the reply we got from Birmingham was: "Dr. Saundby is not expected home until"—a certain day—I forget the date just now. Under these circumstances we were in a difficulty, because we found that on September 18th Mr. Jackson's address appeared in the JOURNAL. You all know, gentlemen, that Mr. Jackson was the nominee of an association which, contrasted with this is utterly insignificant, both in numbers and influence, and importance; and yet, by the effective organisation of that small association, and by the right employment of their very small paper, they succeeded in placing two of the three of their candidates at the head of poll in 1896. We did not feel—and I am not speaking now because I was a candidate at the time—that the profession generally were satisfied with the result. We did not want the same sort of thing to occur again, and we did not want this small Incorporated Medical Practitioners' Association to be able to effect a second time the sort of business which they had done the first time. It was under those circumstances—I think at Mr. Whitehead's suggestion—that Mr. Horsley was approached, because I had a strong feeling that Mr. Wheelhouse being away, it was absolutely necessary, if we were to succeed, we should not have some man with simply a local reputation, but somebody who was pretty generally known, and it struck me that Mr. Horsley's work in connection with the Medical Defence Union admirably fitted him for doing the sort of work we wanted doing on the General Medical Council. In the same number of the JOURNAL, September 18th, there appeared an intimation that Mr. Horsley was to be a candidate. Now, after all this, what happened? We never had any intimation from this office that the President of Council had returned; we never had any communication from Dr. Saundby that he had come and found it was too late to call the Council; there was no expression of regret, and no acknowledgment of our communications. The first intimation we had of the President of Council's return was to see his name signed at the foot of the circular letter commending the candidature of Sir Walter Foster. This was very astounding after what had occurred, and we said, "This is not fair, this is not just; this is not the sort of thing we have a right to expect"—because although Dr. Saundby did not sign his name as President of the Council of the Association, it was indicated at the foot of that circular that Dr. Saundby was the President of the Council of the Association; besides which everybody knew he was the President. And so it appeared to us as if, without consulting the Council, without consulting us, who had taken action in this matter, and who were supremely anxious that we should act constitutionally and loyally to the Association—that we were altogether ignored, as if our judgment was of no value, and that we had no right to select the candidate, but that the President of the Council and Sir Walter Foster had a right to determine what should be done in the interest of the profession. That was the sort of thing which made us indignant. I do not deny we thought this was a very unfair course to take. Then I am told that Dr. Saundby used his influence in other ways. This letter came from the Secretary of one of the Branches to his co-Secretary, and was sent to me: "During the late election to the General Medical Council I received a letter from Dr. Saundby, as President of Council,

inviting me as Secretary of the East Anglian Branch to appeal to the members in favour of Sir Walter Foster. It appeared to me decidedly wrong to take the action he suggested in favour of either candidate, and I replied that I did not consider myself at liberty to take such action unless I was directed to do so by the vote of the meeting called in reference to the matter. I added that I was for that election a supporter of Mr. Horsley, that the same argument which prompted my reply to Dr. Saundby equally prohibited my taking official action in favour of Mr. Horsley. I am still of opinion that this is the proper attitude for officials to preserve, and I think Dr. Saundby's action was ill-advised, and calculated to injure the prestige of the British Medical Association."

The PRESIDENT OF COUNCIL: May I just ask if Dr. Woodcock is prepared to hand to the Council my letter to the Secretary, because I deny I wrote to the Secretary in my official capacity as President of Council.

Dr. WOODCOCK: I am not in possession of that letter. Dr. Beverley, to whom the letter was addressed, will second my resolution, and he may be able to throw some light upon it. I know this letter was sent to him. I take this further position: there was the fact that in a large Branch like the Lancashire and Cheshire Branch—in the first place I may say that I did not take the initiative, but a largely-attended Council meeting of the Branch held in Liverpool passed a resolution in much stronger terms than I have submitted to-day, with only one dissentient, and I believe that gentleman simply dissented because of his personal affection for Dr. Saundby and because he objected to the terms that he "abused his position." I prefer to use other terms. This went on from the Council to a general meeting which our Branch had at Warrington, and strange to say that resolution was carried unanimously. Is there such a sense of unfairness, such a want of judgment on the part of a large number of men, that they would perversely interpret an action of this kind if it had not been calculated to deceive and had not been calculated to produce an impression which was an unfair one? That is what I have to say. I merely say that if the President of Council found that it was impossible for the Association to do anything, his duty was to remain neutral in the matter if nothing was to be done. ("No, no.") He should have remained neutral in the matter. Unless he had the authority of this Council I say he had no right to act as he did. Of course I think it would have saved him from the difficulty of the position in which we find ourselves to-day, and it would have saved me from the painful necessity of arraigning him in the presence of this Council. You will notice that the terms of my resolution are mild. I framed that resolution myself and I simply say that we disapprove of his action. I think it was ill-advised action; I think it was indiscreet; I think it was prompted very likely by some very honourable feeling towards a friend and a colleague; at the same time I think it was a great mistake. I cannot help thinking that this action is one which Dr. Saundby must regret as much as anybody else, because I am quite sure he has compromised, unintentionally, I believe, a position of great dignity and of great honour. I beg to move the resolution which appears in my name:

That this Council disapproves of the action of the President in giving his official support to a particular candidate for a seat on the General Medical Council without taking the advice of the Council of the Association.

Mr. PARKINSON: Dr. Woodcock has used throughout his speech the word "we." "We think this, and we think that." I should like to know what he means by "we?"

Dr. WOODCOCK: I am speaking on behalf of a Branch which consists of more than a thousand members.

Dr. CAMPBELL: And with what authority?

The PRESIDENT OF COUNCIL: The authority of a general meeting which passed this resolution unanimously.

Dr. WOODCOCK: Quite so, and with the request that I should submit it here.

Dr. BEVERLEY: Mr. President and gentlemen, I may as well make my position plain at first by saying in answer to a question just asked that I am the representative of the East Anglian Branch, and that I speak as the mouthpiece of that Branch as the result of a special meeting which has recently been held. It affords me, not pleasure, Sir, but pain really, to second Dr. Woodcock's resolution, and I do so, not simply that I agree with what he has said, but because of the resolutions which you will see further on in the agenda list as having been passed by the East Anglian Branch. During the course of the recent election I was personally communicated with by many members of our Branch as to what they considered to be the very unfair action taken by the President of our Council in advocating the claims of one distinguished member of the Association to the prejudice of the claims of another distinguished member of this Association, and that is the reason why I take exception to-day to the Association supporting an individual candidate without any authority from the Council or a general meeting of the Association, which might have been called to determine the matter. We look upon the President as the mouthpiece of the Association—of the Council at any rate—and if he gives his *imprimatur* to one particular candidate, those who are not in touch with the general management of the Association would very naturally imagine that that particular candidate had been selected by the Association as a body. It is mainly for this reason that we desire to protest against the action which you, Sir, thought you were right to pursue. That you have that right as a member of the Association, even although you are President of this Council, I am not prepared to dispute; but as President of this Council you wrote to myself and you wrote to my colleague, Dr. Barnes, asking us to use our influence to procure the election of Sir Walter Foster. You asked for the production of the letter which Dr. Woodcock has referred to. It was written by Dr. Edgar Barnes. I sent it to Dr. Woodcock to-day because I was very much afraid I should not be able to be present. I shall hand it in to you, Sir. I think you will take our words to the effect that you wrote to us, if we are the only two Secretaries of Branches that you wrote to.

The PRESIDENT OF COUNCIL: This is not my letter.

Dr. BEVERLEY: That is the letter from Dr. Barnes.

The PRESIDENT OF COUNCIL: I want my letter produced here, and the Council can judge whether my letter answers the description given of it.

Dr. SHUTTLEWORTH: If you will allow me to follow, Sir, I shall be happy to read it.

Mr. BUTLIN: You should produce the letter; it is not fair to refer to it without producing it.

The PRESIDENT OF COUNCIL: I think it is not fair to describe a letter without producing it.

Dr. BEVERLEY: If people are not ready to accept my word——

The PRESIDENT OF COUNCIL: I absolutely deny it.

Mr. BUTLIN: If you have a letter why do you not bring it forward?

Dr. BEVERLEY: If the President disputes that he wrote to me——

The PRESIDENT OF COUNCIL: I do not dispute it; I admit I wrote a letter; but why should your word be taken and not mine?

Dr. BEVERLEY: I am not asking it.

The PRESIDENT OF COUNCIL: Yes, you are. You ask that your word should be taken in this Council instead of mine on a matter of fact. I say, produce your evidence.

Dr. BEVERLEY: I am not asking anything of the kind. I produce Dr. Barnes's letter, and I say I had a letter from you as President of the Council.

The PRESIDENT OF COUNCIL: And I say, produce your evidence.

Dr. BEVERLEY: It may be noticed, gentlemen, that we have had, at our East Anglian Branch, a meeting. Our President was not in the chair; and some may ask, Why not? It ought to have been explained that she would have been in the chair but for absence abroad, and her place was taken by Sir Peter Eade. I wish you to know that the President of our Branch thoroughly agrees with the terms of our resolution. This is the letter I received: "I returned to London to-day, and I find in the JOURNAL the terms of the resolution passed by our Branch at the meeting in December. I am entirely in accord with that resolution, and I think it will be well that the subject should be dealt with promptly, as that will prevent any repetition of the offence.—I am, yours truly, E. GARRETT ANDERSON." I will not occupy

further the time of the Council. Dr. Woodcock has put the matter very fairly before you, and all I can say is that, so far as our Branch is concerned, we do not approve of the action that the President and the JOURNAL have taken in reference to this by-election. I beg to second Dr. Woodcock's resolution.

Dr. SHUTTLEWORTH: As a representative of a very small Branch (the Thames Valley Branch), I have to bring under the notice of the Council a resolution of the Council of that Branch on the same subject as has been referred to in the resolution now before the meeting. The resolution from the Thames Valley Branch respecting the General Medical Council election is to this effect:

That the Council of the Thames Valley Branch considers it inadvisable that the JOURNAL and officers of the Association should take a partisan action in the election of members of the General Medical Council.

The PRESIDENT OF COUNCIL: Of course, Dr. Shuttleworth, I thought that would come on in the next resolution, but, anything you have to say about me personally you had better say now.

Dr. SHUTTLEWORTH: I thought it would give me an opportunity to read the letter about which there has been some discussion.

The PRESIDENT OF COUNCIL: Anything personal you had better deal with now, but the Reference Committee is not concerned here.

Dr. SHUTTLEWORTH: Dr. Langdon Down, the Secretary, has furnished me with the letter he received on which the resolution was passed. This letter is as follows: "83A, Edmund Street, Birmingham, September 27th, 1897. Dear Sir, I shall be greatly obliged if you will do all in your power to promote the success of Sir Walter Foster's candidature on the seat of the General Medical Council vacant by the resignation of Dr. Rentoul. Owing to my absence in Canada, it was not possible for me to get the Association to take any organised action in the matter, but I feel sure the great majority of members will agree with me that he is the best representative that we can have at this juncture. It will, however, need some energetic action to secure his election, and I trust you will do your best.—I am, Dear Sir, yours very truly, Robert Saundby. To R. Langdon Down, Esq., M.D., Secretary, Thames Valley Branch."

The PRESIDENT OF COUNCIL: That is the letter.

A MEMBER: It is a private letter.

Dr. SHUTTLEWORTH: It is not a private letter. It was sent to the Secretary of the Branch, not as a private friend, because the Secretary informed us he did not know Dr. Saundby. It was sent to him as the Secretary of the Branch, and it is not entitled to be called a private letter at all.

The PRESIDENT OF COUNCIL: I admit that is the letter.

Dr. SHUTTLEWORTH: And I suppose an identical letter was sent to the other Branches.

The PRESIDENT OF COUNCIL: That is the letter I wanted produced. I admit that letter.

Dr. SHUTTLEWORTH: It is not signed Robert Saundby, "President of the Council," but it is addressed to R. Langdon Down, Esq., M.D., Secretary of the Thames Valley Branch; and I think the fair presumption is that the Secretaries of other Branches received letters of this kind addressed to them officially, although not signed by the President officially.

The PRESIDENT OF COUNCIL: That is admitted.

Dr. SHUTTLEWORTH: The result of this was that at the next meeting of the Council this letter was laid before it, and the Council were unanimous that the President had taken rather more than was desirable upon himself in personally advocating what seemed to be a personal matter as far as the signature is concerned, that the Branch should as a Branch adopt the candidature of one candidate in preference to another, when there were two most excellent men in the field; and the result it had upon the members' minds was that they generally voted in the opposite direction to that which they were desired. I think it was a mistaken policy, and a mistake in view of the President's duties towards the Association. It was no doubt a very well intended one, and one that we can readily understand in his connection with the very excellent candidate, Sir Walter Foster, who was before the constituency. I may say personally that Sir Walter Foster is an old friend of mine, and had there not been another candidate who appeared to be of equal standing entirely in the field, I should have supported Sir Walter Foster in preference to the other candidate.

The PRESIDENT OF COUNCIL: Before anybody else speaks I think I ought now to give my explanation. I fully admit that letter; I asked Dr. Woodcock if he would produce that letter, and I was of course disappointed that he did not. I deny that it is correctly described in the letter Dr. Beverley read, and it was on that account I wished the letter to be produced. Dr. Woodcock's resolution calls upon this Council to express disapproval of my conduct on the ground that I gave "official" support to a particular candidate during the recent election to the General Medical Council, and the resolutions reported from the Lancashire and Cheshire and the East Anglian Branches express the same complaint in slightly stronger language. The burden of the charge is not that I took an active part in the contest, but that I intervened in my "official capacity" as President of the Council.

In reply, I beg to assure you that I did not at any time entertain the thought of interfering officially in that election, and I deny most distinctly that there is any just foundation for this charge, either in my intentions, or in my actions.

It is well known to you that I did take part in the contest, and as Chairman of Sir Walter Foster's Election Committee I did certain things which have been misrepresented to you as "official" acts; it is therefore right that I should explain how it was I allowed myself to occupy that position.

From the speeches at the two last annual meetings, from the correspondence in the JOURNAL, and from numerous private communications I had become convinced of two things: the first was that it was the general wish that the Association should no longer remain passive during these elections; and the second was that Sir Walter Foster was the favoured candidate. When I reached home from Canada on Sunday, September 19th, I found the position of affairs to be that Dr. Rentoul had resigned, that a Committee sitting in Manchester had nominated Mr. Victor Horsley, two or three other candidates were also in the field, and the situation was further complicated by the uncertainty arising from Dr. Rentoul's resignation having been withdrawn by him. I felt that officially there was nothing to be done but to wait. I had no reason to believe that the Manchester Committee to any extent represented the Association, and I could not know that opinion had veered round respecting the candidates.

On Thursday, September 23rd, I came to London to attend the Reference Committee, and then learned that that morning a reply to our special inquiry had been received to the effect that Dr. Rentoul would not be allowed to withdraw his resignation. That was on Thursday at about 1 o'clock, and the nominations of candidates had to be sent in by the next Saturday at latest.

It seemed to me plainly out of the question to summon the Council, and I should have let things take their course if Sir Walter Foster had not arrived from Canada. Thinking that in so doing I was carrying out the wishes of the Association, I asked him to stand, and obtained his consent. When he in turn asked me to act as Chairman of his Election Committee, in pursuance of the same line of conduct I agreed to do so, and I gave him what support I could. But throughout I intended to act unofficially, having received no formal mandate from you in the matter; and, in spite of all that Dr. Woodcock and his supporters say, I maintain that I have done nothing which deserves any other name. I did not make use of the machinery of this office, of your clerks, of your paper, or of my official title, and the sole action which calls for any notice is the letter addressed to the Secretaries of Branches. I addressed the Branch Secretaries in many instances as personal friends, but in every case as men well known in their districts and suitable to be election agents. I did not ask, and did not think of asking, that they should give me official assistance as Branch Secretaries, and I am sorry if anybody misunderstood me. But when this particular charge was made, I sent a copy of my circular letter with a statement of the point at issue to Mr. Fowke with a request that he would ask Mr. Upton, the Solicitor to the Association, to give us the benefit of his impartial opinion, and I should like to read you what he says:

"I adopt all that Dr. Saundby says in his letter to you of

December 31st, 1897, on the question of 'official capacity.' I consider that to sustain such a charge it would be necessary to show that he either added the words 'President of the Council' after his signature, or used paper with the Association's heading, or stated in his letter that he wrote on behalf of the Council. It is easy to be wise after the event, but perhaps it would have been still better if he had expressly stated that he did not write in his official capacity or that he wrote as Chairman of Sir W. Foster's Committee."

I will say nothing now about my conduct as a member of the Reference Committee because that forms the subject of another resolution. The question at present is whether certain actions of mine were official or not, and if they were official whether you approve or disapprove them.

I ask the Council to declare by its vote that those actions were not official, but performed in the capacity of Chairman of Sir Walter Foster's Election Committee, and that therefore they do not call for any expression from you of approval or disapproval. I can assure this Council that in all I have done I have been animated by the single desire to carry out what I believed to be your wishes, and the wishes of the majority of the Association; nothing has been further from my intention than to give occasion for such censure as that now sought to be passed upon me, and which I venture to submit I have done nothing to deserve. (Cries of "Vote, vote.")

Mr. VINCENT JACKSON: I should like, Sir, before the vote is taken, to ask Dr. Woodcock whether, having heard the statement which has been given us by the President, having heard his distinct denial that he had in the letters which he wrote the slightest idea to convey that he wrote them as President of the Council, or that he wrote those letters in his official capacity, he would under these circumstances withdraw his resolution? (No, no.)

The PRESIDENT OF COUNCIL: I hope it will not be withdrawn.

Dr. WOODCOCK: I do not think I have the authority or the power to withdraw that resolution, and, if I may speak frankly, I am not satisfied with the explanation. There is some aggravation of the ill-advised action in the fact that it was Dr. Saundby's suggestion that Sir Walter Foster became a candidate. Seeing there was a strong candidate in the field, I do not know how that can be justified. I do not feel that that, at all events, minimises the offence which I think has been committed. I have been very careful indeed to excuse Dr. Saundby from any intentional abuse of his position. I simply say we do not approve, that his action was ill-advised, and that it was ill-judged; and I am bound to say the explanation is not satisfactory to me, and I think in some points it rather aggravates the charge. ("Vote, vote.")

Mr. PARKINSON: I think Dr. Woodcock's remarks are rather of a serious nature. Our President has made a straightforward statement of his intentions throughout, and if we do not accept them we impute that he made them with the intent to deceive.

The PRESIDENT OF COUNCIL: No, I do not understand that.

Dr. WOODCOCK: Do not let gentlemen impute to me things I have never said. My admiration for Dr. Saundby's personal character is as high as ever. I have said nothing whatever but "ill-advised" action. I do not wish it to be thought that I am importing any spirit of bitterness into this question at all. I am here in a representative capacity, and I do not like the idea of going back to Lancashire and, to use a common expression, say that I showed the white feather. Whatever the vote is, I have discharged my duty as well as I could.

Mr. PARKINSON: You stated, sir, that your action was taken in a personal capacity. If that is so, what right have we to criticise it?

The PRESIDENT OF COUNCIL: That is my point, of course.

Dr. BEVERLEY: I quite accept it, sir, that you wrote as Dr. Saundby, but certainly Dr. Barnes and myself were under the impression that you wrote officially.

Mr. JORDAN LLOYD: I may say that I was one of the secretaries for Sir Walter Foster's candidature. I received absolutely no intimation from Dr. Saundby. Dr. Saundby does not know that I am going to say this. I received no indication from him, although I was official secretary for Sir Walter Foster's election campaign. Dr. Saundby wrote to me as a friend, but he did not sign himself as President of the Council. He wrote exactly the same kind of letter I received from him scores of times in connection with other things before he held the honourable position he holds to-day. I think it right I should say this as an official, and knowing something of the way in which this campaign was conducted, that none of us received any official communication from Dr. Saundby as President of the Council. ("Vote, vote!")

Dr. BARR: I claim the right to speak. I do not wish to give a silent vote on this matter. Dr. Woodcock has accused Dr. Saundby of an ill-judged action, and that is all. We do not accuse him of any intentional misrepresentation as President of the Council. He should act as the Speaker of the House of Commons acts. He should not be a party man, but should conduct the business of this Council as the Speaker of the House of Commons. (No, no.) There was plenty of time to summon this Council together so as to express an opinion as to which of those two candidates was the most suitable one for the position, and which would receive the greatest support, not merely from this Council but from the Association. Dr. Saundby tells you he did not write as President of the Council, and of course he did not. I received a letter from Dr. Saundby, and he did not in that letter sign himself as President of the Council. But still it was addressed to me as the Secretary of the Branch, and his action in requesting me to use my influence among members and friends, among the members of our own Branch, would be in his official capacity. I took no action until a week before the election came on. I had actually recorded my own vote before I took any part in the election, and then I was careful not to act as Secretary of the Branch. The only thing that made me act at all was what appeared to me the disgraceful conduct of the Journal and Reference Committee. It was that which compelled me, at the last moment, to act, and I then set about it, but took good care not to act in my official capacity. I even signed my name as convener of the meeting, so that there should be no misapprehension whatever that I was acting as Secretary of the Branch. Within three days I gathered together the largest meeting that any candidate had at that election, and the universal opinion of that meeting in support of Mr. Victor Horsley's candidature was that he was the better man, and that the conduct of the JOURNAL was reprehensible.

The PRESIDENT OF COUNCIL: That will come on presently.

Dr. BARR: I am speaking of Dr. Saundby in connection with the JOURNAL also as a member of the Reference Committee.

The PRESIDENT OF COUNCIL: That will come on presently; you are discussing now my interfering in an official capacity.

Dr. BARR: The general impression was that you acted in your official capacity, and the inference was of course, from the letters directed to the Secretaries of Branches, that they were required to act in their official capacity. I have, therefore, very much pleasure in supporting the resolution of Dr. Woodcock. I may mention that I have received two letters to day from members of our Branch who are unfortunately not able to be present to support Dr. Woodcock.

Dr. SHEEN: I should like to say one or two words, Sir. It is admitted by this Council that you did not act in your official capacity, and whatever we may think of your conduct—whether we approve or disapprove of it as individuals—I think it is not for this Council to discuss the matter.

The PRESIDENT OF COUNCIL: Of course I ask you to say that my action was not official, and that you neither express approval or disapproval, but I suppose the only thing before us is really Dr. Woodcock's resolution, and I should be glad if you would allow me to take a vote upon it, because we have a lot of business before us.

Dr. WARD COUSINS: I should like to say one word. I do really think, Mr. President, that after the [illegible] I must appeal to the Council to request Dr. Woodcock to withdraw his resolution.

The PRESIDENT OF COUNCIL: I beg that you will not ask him to do so.

Dr. WARD COUSINS: I should say that after the statement

of the President of the Council, the right course to take is to pass on to the next business, and I shall propose it.

The President of Council: No, I think not; I shall object to that. I would rather take a vote upon it.

Dr. Cleveland: Should not the vote be taken by ballot? (No, no).

The President of Council: No; I shall put Dr. Woodcock's resolution to the vote now.

The resolution was then put and lost, 9 voting for, and 41 against.

The President of Council: I have now to call upon Dr. Woodcock to move his second resolution.

Dr. Woodcock: Mr. President and gentlemen; in moving my second resolution. of course I am at liberty to use language a good deal more emphatic than that I used with regard to the President of the Council. This is no longer a personal matter; it has reference to a small Committee which I hope will soon be one of those "little systems that have had their day and ceased to be." What I have to say with regard to the action of the Reference Committee has not much reference to any action that was taken previous to the issue of the Journal on October 2nd. The fact of the matter is, no action was taken. As I said a little while ago, all that seemed to be possible here was a policy of masterly inactivity, an irresolute impotence, or impotent irresolution might better perhaps express what was going on. This office seemed to be bereft of all sort of power and of all sort of courage. But when the Journal appeared on October 2nd it was very evident that somebody had arrived; that there was somebody at the wheel, and somebody with purpose and determination. I could base a very grave and serious charge against the Reference Committee simply on the issue of the Journal of October 2nd. In the first place let it be remembered that we had four candidates in the field who were members of the British Medical Association, and that in the issue of October 2nd there was a leading article in connection with the forthcoming election to the General Medical Council. After some preliminary observations, which were not personal, three of the candidates were dispensed with in 11 lines, and then 112 lines were devoted to eulogy, some people might be disposed to say almost if possible, exaggerated eulogy, of another candidate. That appears to me to be a very improper, a very unfair, and a very partisan sort of action. Not only was that so, but there is a report of a meeting which was held in support of Sir Walter Foster's candidature. To that meeting there is nearly five pages of the Journal devoted; besides which there are ever so many letters published in support of Sir Walter Foster's candidature. I happen to know that ever so many letters in support of Mr. Victor Horsley's candidature were suppressed and not published. At any rate, there was a letter from Mr. Whitehead, of Manchester, and I know that Dr. Armour, Dr. Maude, and Dr. Hall wrote letters which were suppressed. Of course, there is another matter; not only have we four, or nearly five, pages devoted to the report of Sir Walter Foster's meeting, but directly you came to notice in the Journal any reference to Mr. Horsley's meeting, you descend from large type to small. It seems to me to be a very improper sort of thing to do. We had had a meeting in support of Mr. Victor Horsley's candidature in Manchester—a largely attended meeting—I am told a better meeting than you had in support of Sir Walter Foster, but you did not devote in the Journal half the space to the report of that meeting which you did to that of Sir Walter Foster; and you have no excuse because at the request of this office, I personally paid 2 guineas to a local reporter, who sent you a verbatim report of every speech made. Of course an hour's speech by Mr. Horsley, and other speeches of greater or less length in his support, could be condensed in a way that was not possible to a meeting called in support of another candidate. This does not seem to me to be exactly the kind of conduct that should distinguish an impartial Reference Committee. You could not have clearer evidence of partisanship; there could be nothing more indicative that it was the set purpose of somebody in authority and with power here to use the Journal strictly in support of one candidate and not in support of the others. That is not impartial; that is not fair; that is partisanship. It is not likely to contribute either to the harmony, to the efficiency, or to the success of the Association if work is to be done in that way. Of course I do derive some sort of satisfaction from the reflection that this action will very soon make that Reference Committee a memory and a regret.

Mr. Vincent Jackson: Not a regret.

Dr. Woodcock: Yes. I think a regret that it ever existed. Of course you know that the Reference Committee was appointed in the first place under these conditions. Mr. Hart, not being a member of the Council, felt that it was desirable that he should have someone who would be able to advise him with regard to certain matters if he consulted him, but I do not think it was ever intended that that Reference Committee should ever determine what should not be published in the Journal. I cannot conceive of any worse arrangement possible being made. It is as expensive, as cumbersome, and as bungling an arrangement as ever existed anywhere. The satisfaction one has is that it has so clearly demonstrated its unfitness to have imposed upon it the responsible duties which it holds, and which it exercises in its own way, that I do not think the Association will ever again consent to its reappointment. This is another very serious consideration—that the Journal, conducted in this way, notwithstanding the assistance of Dr. Rentoul; the obliging retirement of Mr. Jackson; the aid of the Incorporated Medical Practitioners' Association and the support of its journal—all conditions calculated to excite grave searchings of heart—failed, and failed ignominiously. I do not think there can be any very satisfactory arrangement of this kind. Of course a defeat is sometimes inevitable, and it is not always dishonourable, but when defeat and disaster are the result of opportunities which are abused and misused—as I think these opportunities were—then of course one has another satisfaction in the thought that even a Reference Committee cannot dodge results. "The way of trangressors is hard." There is nothing for them but the sort of remorse which gives but uncertain relief, and it is some sort of grim satisfaction to me, that, whatever the result of this resolution is, remorse, at any rate, is the portion of this Reference Committee to-day. I beg to move the following resolution:

That this Council condemns the action of the Reference Committee in allowing the Journal of the Association to be used officially in furthering the interests of a particular candidate for a seat on the General Medical Council without consulting the Council of the Association, and considers such action prejudicial to the interests of the Association.

Dr. Beverley: I beg to second Dr. Woodcock's second resolution, and very briefly. The Journal is the mouthpiece of the Association. The Association, we are told again to-day, had no official candidate, but it adopted one; there were two distinguished members of the Association as candidates, and the Journal adopted one of them without the recognition of the Association. I certainly think it is worthy of the condemnation which Dr. Woodcock's resolution desires to put upon them.

Dr. Holman: The resolution moved by Dr. Woodcock is practically a combination of resolutions relative to the same matter which had previously been passed independently by two Branches of the Association and I propose in my reply to deal with all these resolutions together. It may be well, however, before discussing the resolutions themselves, to point out that in passing them the Branches in question have adopted a course which is not only irregular and unconstitutional, but likely to be seriously prejudicial to the interests of the Association. The Reference Committee is directly responsible to the Council, and the constitutional course for a Branch dissatisfied with anything in the conduct of the affairs of the Association is to instruct its representatives on the Council to bring the matter before that body after due notice has been given. The Council being elected annually by the free choice of the Branches is always genuinely representative of the feelings and wishes of the Association. The Association could not be carried on at all if individual Branches are to take it upon themselves to pass votes of censure on those entrusted with the management of its affairs whenever anything displeases them. If this were to become the practice, Branches possessing only partial information on any matter at issue might very easily be passing resolutions which must sooner or later bring them into collision with the Council of the Association who would have full and accurate information before them, and if the divergence of opinion became acute, disintegration of an Association, now united

and powerful beyond all precedent, would be within measureable distance, a condition so grave as to be avoided by all means possible.

The Reference Committee, however, does not care to rest its case on grounds either of sentiment or of technicality; and it has no wish to repudiate or evade any share of responsibility for the line taken by the JOURNAL in the recent contest for the seat on the General Medical Council left vacant by the resignation of Dr. Rentoul.

The points on which the conduct of the Reference Committee is impugned may be summed up under three heads:

1. That the Reference Committee allowed the JOURNAL to take a certain line with regard to the election of a direct representative on the General Medical Council without any reference to the Council of the Association.
2. That it allowed the JOURNAL to give its support to a particular candidate.
3. That it allowed this to be done by unfair means. This I take to be implied in the charge that the JOURNAL was "used officially and by correspondence in furthering the interests of a particular candidate."

1. With regard to the charge that action was taken without reference to the Council of the Association, a plain statement of the facts of the case will best explain the conduct of the Committee. An emergency of the acutest possible character had suddenly arisen. The first intimation of Dr. Rentoul's resignation reached the office on Thursday, September 9th, when the JOURNAL was going to press. At that time the Editor was lying in a surgical home in peril of his life, and all the chief officials of the Association were in Canada, or on the high seas on their return journey. Dr. Bridgwater was in the country. The only member of the Reference Committee on the scene was the Chairman. The entire editorial charge of the JOURNAL had only three days before been given by Mr. Hart into the hands of Mr. Taylor. In these circumstances it was impossible to summon a special meeting of the Council. Every possible effort was, however, made to communicate with the President of the Council. Telegrams were sent to Montreal, to the place where the vessel he was expected to return by was likely to touch, and to his private address in Birmingham.

On September 14th the following telegram, addressed to Mr. Hart, was received:

"Kindly inform us what action you are taking in the General Medical Council election. Shall you adopt and support a candidate?

(Signed) "WALTER WHITEHEAD,
"BRASSEY BRIERLEY."

To this the Acting Editor (Mr. Taylor), with the approval of the Chairman of the Reference Committee, replied:

"Await instructions of President of Council."

No other reply was possible at the time. Neither Mr. Wheelhouse nor Sir Walter Foster could be communicated with; and no one else likely to command extensive support had come forward, or had been mentioned as a possible candidate. An additional element of perplexity was supplied by the fact that at the time in question Dr. Rentoul had withdrawn his resignation, and no positive reply as to the validity of the withdrawal could be obtained from the officials of the General Medical Council. There was, in fact, practically no candidate in the field, Mr. Horsley on being communicated with by the Acting Editor (Mr. Taylor) on September 14th, had announced that he would not stand. (His decision to come forward was made known at the office only on the afternoon of Thursday, September 16th, when the Reference Committee was actually passing the pages for the JOURNAL of the 18th.) Dr. Woodcock (as appeared from telegrams shown to the Acting Editor by Mr. Horsley) was uncertain whether he would stand or not.

In the meantime those responsible for the conduct of the JOURNAL were being severely taken to task by members of the Lancashire and Cheshire Branch for not taking action. In the *Medical Press and Circular* of September 22nd there appeared a letter in which the following words occur:

SIR,—It seems to me that the BRITISH MEDICAL JOURNAL, as the organ of the Association, has entirely neglected its duty. It treated the last general election of direct representatives as a matter of perfect indifference. It has not had a single official comment upon the work of the last annual business meeting held in London, and now the medical public have been placed in a most awkward position by the untimely retirement of one of the direct representatives on the "General Council." This great Association, representing about two-thirds of the whole profession, is in a state of utter helplessness, because it has neither head nor leader, and must stand aside, waiting developments, and trust to chance or any voluntary committee to conduct the contest. An official communication from a committee, constructed for the purpose of selecting a suitable candidate, was made to the Association, asking what action the Council intended to take, and if it would adopt a candidate. The reply was, "Awaiting instructions from the President of Council."

* * * * *

All the other medical journals are doing what they can to advise what is best, and how best to accomplish it, in the matter of filling up the vacancy in the General Council, while the BRITISH MEDICAL JOURNAL is silent. What a responsibility!

Again, in a letter dated September 28th, addressed to the Editor of the BRITISH MEDICAL JOURNAL by the Chairman and Honorary Secretaries of the "Manchester Committee," the following passage occurs:

At the annual meeting, when the question of the JOURNAL was under discussion, there was evidently a strong feeling that the Association should have taken an active part in the selection of suitable candidates as direct representatives of the profession on the General Medical Council and that those gentlemen elected should be supported by the Association.

These extracts are sufficient to show that some of those who have taken the lead in condemning us for having taken action in the recent election were equally loud in upbraiding us as long as we remained passive.

What would be the effect of Dr. Woodcock's resolution if passed? It would be nothing less than the establishment of a rule that the JOURNAL is not to take a side whenever there are differences of opinion in the profession, or if there is a possibility of members of the Association being found in opposite camps, until the Council has been summoned to decide the policy to be pursued.

The Council must remember that this resolution is not merely an attempt to make a new rule, but a censure upon the Reference Committee for acting in accordance with past precedents. Whether or not the Council adopts the new rule it cannot consistently pass this resolution. The position of the Reference Committee in respect of the JOURNAL is at least as free as that of the Editor. The Editor has had full authority to take what line he thinks fit upon all public questions: and while no doubt trying, as every good editor should, to be the mouthpiece of the best public opinion, he has been virtually independent. The Council appointed the Reference Committee to control that independence, but the authority formerly enjoyed by the Editor was necessarily conveyed to the Reference Committee, so that whether its actions have been pleasing or displeasing to the Council, they cannot have been in excess of authority. But the point of Dr. Woodcock's resolution is that the Committee has exceeded its authority; he condemns the Committee for taking a certain course in the JOURNAL without previously consulting the Council. Where can Dr. Woodcock find in the instructions to the Committee any such obligation? The terms of the resolution passed by the Journal and Finance Committee on October 21st, 1896, and ratified by the Council are:

That the Reference Committee shall guide the policy and control the contents of the JOURNAL.

The obligation implied in Dr. Woodcock's proposed condemnation therefore, does not exist, and this Council will not join with him in condemning the Committee upon an *ex post facto* rule, even were that rule much wiser and more practicable than this proposal has been shown to be.

2. With regard to the charge of supporting a particular candidate, here again a brief recital of facts will be sufficient.

Sir Walter Foster did not return from Canada till the afternoon of September 23rd. As the last day on which nominations could be received was September 27th, it is plain that if action was to be taken at all it must be taken at once. It appeared practically impossible to summon a meeting of the Council at such short notice; certainly it would not have been possible in the circumstances to secure the attendance of such a number of members as would have been likely to be accepted as adequately representing the Council.

Sir Walter Foster expressed his willingness to come forward, and in supporting his candidature the Reference Committee had every reason to believe that it was "guiding the policy" of the JOURNAL in the manner likely to be in harmony with the feeling of the majority of the members

of the Association. Great and repeated efforts had been made on behalf of the Association at the annual meeting at Carlisle and in the Journal to induce Sir Walter Foster and Mr. Wheelhouse to stand at the election last year, and regret at their refusal to be put in nomination appeared to be widespread. The gold medal of the Association was conferred on Sir Walter Foster with the full approval of the members present at the general meeting in London only a few weeks before Dr. Rentoul's resignation, and the governing body of the Association were taken to task for not having used more strenuous efforts to induce him to reconsider his decision. The Reference Committee had, therefore, good reason to think that Sir Walter Foster would be the most acceptable candidate to the Association at large.

It may be added that the Committee had good reason to believe that Sir Walter Foster would command the suffrages of many of the members of the Lancashire and Cheshire Branch itself. We are in possession of indisputable evidence that steps were actually taken by the Manchester Committee to induce Sir Walter Foster to stand. The Reference Committee may surely be excused if from these facts it concluded that Sir Walter Foster was the candidate who would be most acceptable to the members of that Committee, and those whom they represented.

3. I pass now to the charge against the Reference Committee that it allowed the Journal to be used in furthering the interests of a particular candidate "*by correspondence*." The natural meaning of the charge is that documents and letters supporting the other candidates were not published. This charge is absolutely without foundation. Letters advocating the claims of the various candidates were published with perfect impartiality, as may be seen by reference to the Journal. It was not possible, nor was it considered necessary, to publish all the letters received on the subject of the election, but in each instance the decision was based on reasons that had nothing to do with partisanship. Of these letters not published some were considered offensive in tone, others might have exposed the Journal to an action for libel (for example, one writer charged Sir Walter Foster by implication with "professional crime"), others might be described as "swearing at large," and their publication did not appear to be calculated to serve any useful purpose. It may be added that, of the four letters specified by Dr. Woodcock, but one contained any direct reference to Mr. Horsley.

A considerable proportion of the unpublished letters—only twelve in all—came too late. It must be remembered that the contest, as far as the Journal could take any active part in it, was compressed into the issues of two weeks (September 25th and October 2nd), and letters which it was impossible to publish in the issue of October 2nd (the pages of which had to be passed for press on September 30th), could not with any advantage have been published later. The letters in question are filed in the office, and the Reference Committee are prepared to submit them to the judgment of the Council. In short, to this charge of dealing unfairly with correspondence the Reference Committee simply oppose an unqualified denial. No "document" whatever, except the letters just referred to, was withheld from publication.

The meetings in support of Mr. Horsley's candidature when sent were reported exactly as received; in the later period of the contest reports were taken from the newspapers, as none were supplied in the usual way by the promoters of those meetings. The Reference Committee point to this as a proof of their desire to deal fairly by all the candidates, for in accordance with journalistic usage the Journal would have been perfectly justified in making no reference to meetings of which no official reports were supplied.

There remains a further charge which is not contained in the resolutions of the East Anglian and Lancashire and Cheshire Branches, but which was strongly put forward at the last meeting of the Council by Dr. Woodcock. This is, that the Lancashire and Cheshire Branch was treated with discourtesy.

The Reference Committee regret that anything they should have said, written, or done should have been interpreted to mean intentional discourtesy. They can state in all sincerity that no discourtesy was intended, and it has not yet been made clear how any want of courtesy was shown. With regard to the inquiry addressed to Mr. Hart by Mr. Walter Whitehead and Dr. Brassey Brierley on September 14th, 1897, it is not easy to see how a charge of discourtesy can lie against the Reference Committee for not having replied to a private telegram by a declaration of policy at a time when no policy other than that of animated expectancy was possible. But the Reference Committee cannot admit that discourtesy was shown by it at any time either to the Branch or to individual members thereof. When Dr. Brassey Brierley asked that a reporter should be sent down to Manchester to a meeting in support of Mr. Horsley's candidature, he was requested to engage a local reporter on behalf of the Journal, and a full report of the meeting as received from that reporter was published in the Journal of September 25th, 1897, p. 835. Dr. Woodcock's charge of unfair condensation is entirely baseless as far as those responsible for the conduct of the Journal are concerned. No limit of space was assigned in the telegram asking Dr. Brassey Brierley to engage a reporter, and the transcript of the reported notes was published as it stood with the omission of a very few words not material to the argument.

On all these grounds the Reference Committee submit their conduct throughout this troublesome business with confidence to the judgment of the Council. They were placed by circumstances which could not have been foreseen in a position of unexampled difficulty, and they did with honesty of purpose and fairness of spirit what they conceived to be their duty to the Association, and what they judged to be best in the interests of the Association and of the profession. That they carried out their task to the satisfaction of those who had the best opportunity of knowing all the difficulties with which they had to contend is shown by the resolution passed by the Journal and Finance Committee, and confirmed at the Council meeting in October, thanking the Acting Editor, Mr. Taylor, and the Chairman of the Reference Committee for their able conduct of the Journal under circumstances of exceptional difficulty in September (Minutes of Journal and Finance Committee, October 20th; Minutes of Council meeting of the same date). Except from the Lancashire and Cheshire and the East Anglian Branches, the Committee has heard no word of complaint of the conduct of the Reference Committee, and the complaints of these Branches have been shown to be entirely unfounded.

Dr. Woodcock's resolution, if passed, would render the Journal absolutely impotent in all questions affecting the profession in which a rapid decision was required. If the Journal, speaking for the Association, is to have any influence on the course of medical policy, it must be so guided from week to week by a committee appointed constitutionally, that on all great questions it can express an authoritative and weighty opinion.

In conclusion, I may venture to remind the Council that the question now submitted to it is not whether the existence of the Reference Committee is desirable in itself; that can be raised at any time. The sole issue in regard to that Committee now before the Council is whether it is prepared to pass the resolution proposed by Dr. Woodcock. If the Council passes that resolution the Reference Committee will, of course, accept it, but it must be as a vote of want of confidence

Mr. Parkinson: I should like to ask Dr. Woodcock why he chooses this particular occasion to object to the Journal approving of some candidatures instead of others. It must be remembered that this is not the first time the Journal has pointed out certain candidates as being more desirable than others. We all know that at the last general election the same thing happened. Dr. Rentoul, who was elected at the head of the poll, objected that his candidature had not been taken up by the Journal, but that the candidature of other candidates had been taken up. At that time there is no doubt the three prominent candidates whom the Journal supported were Dr. Glover, Dr. Woodcock, and Dr. Drage; and I think it seems a little extraordinary that these gentlemen should come forward now and complain of the action of the Reference Committee when they did not complain of it at the time they were the candidates who were supported.

Dr. Woodcock: It is not true; it was the *Lancet* and not the Journal.

Mr. PARKINSON: Those were the three candidates.

Dr. WOODCOCK: Dr. Holman has misrepresented what was our action, and he has charged us with inconsistency which never existed. He has spoken about our change of mind. I admit that there is great difficulty in answering by a speech which was written before the one was made to which Dr. Holman had to reply; there is a little difficulty in that, certainly. This was the position of things. We approached Mr. Wheelhouse. He was not available then, and we thought of Sir Walter Foster. It was when we found those gentlemen were out of the country that we appealed to another man whom we thought was a strong man, because we were anxious that the Incorporated Medical Practitioners' Association should not defeat us again and carry their man. There was no inconsistency at all about it. We should have supported Sir Walter Foster if he had been at home and had consented to stand, but he could not be nominated without his consent. There is no inconsistency and no personal opposition. The whole thing needs to be explained in that way. In regard to what Mr. Parkinson says, the whole explanation is that the complaint at the annual meeting was that the JOURNAL had taken no action with regard to the last election. I suppose Mr. Parkinson reads so many medical papers that he confuses their titles.

The PRESIDENT OF COUNCIL: I will now put Dr. Woodcock's motion.

The motion was then put and rejected, 9 voting for and 33 against.

The PRESIDENT OF COUNCIL: I think it is much better that this subject should have been discussed thoroughly. I quite agree with Dr. Woodcock that it would have been my duty to have summoned a meeting of the Council had I been able and had it been possible. It was quite my feeling that I ought to have done it, and I always intended to do it. Dr. Barr says there was plenty of time to call a meeting between Thursday at half-past 1, when I knew there was to be a vacancy, and Saturday, when the nominations were to be sent in. I, however, was of opinion that there was certainly not time to call a meeting.

Read letter from Mr. Garrett Horder, respecting the formation of an Ethical Section at the Annual Meeting at Edinburgh.

Read letters from the Sydney and New South Wales Branch (respecting the incorporation of that Branch) together with the Solicitor's opinion.

Extract of letter from the Honorary Treasurer of the Sydney and New South Wales Branch, dated September 20th, 1897:

Dr. Rennie (Hon. Sec.) has asked me to mention to you that he received your communication enclosing copy of proposed agreement and amended Articles of Association, which he has already submitted to the Council, and the Council unanimously decided to give effect to the wishes of the parent Association in the matter.

Without wishing further to anticipate the Secretary's reply, I should like to express my personal regret that the parent Association should have been treated with such apparent discourtesy, as is evident from the copy of the correspondence forwarded by you. As President of the Branch during the time of the Incorporation, I feel it all the more. Before the expiration of my term of office (the end of March, 1895), I submitted to the Council a draft letter giving full particulars of our action and reasons for the same, which it was agreed should form a basis for a communication from the Branch to the parent Association, and I now regret to find that that letter was never sent; had it been sent, as agreed upon at the time, the parent Association would not have been left to find out from outside sources what we had done. In incorporating the Branch we protected our own members from any unlimited liability in connection with the purchase of the *Australasian Medical Gazette*, and at the same time we absolutely protected the parent Association from any liability or responsibility our action might have involved it in. A local medical paper, owned and managed by the profession, was felt to be an absolute necessity, as the BRITISH MEDICAL JOURNAL could not report the proceedings of our local Branches full enough and in time to be of any interest to Australian members. The result, I am sure, has been mutually beneficial, as evidenced by the great increase in the membership of all the Australian Branches during the past two or three years. I trust, as soon as the present difficulty is adjusted, that matters between the Branch and the parent Association will run more smoothly than ever before.

Apologising for troubling you at this length,

I remain yours very truly,

W. H. CRAGO,

Hon. Treasurer New South Wales Branch,
British Medical Association.

New South Wales Branch, Sydney,
October 25th, 1897.

Francis Fowke, Esq.,
General Secretary, British Medical Association.

Dear Sir,—I have the honour to acknowledge the receipt of yours of August 8th, with enclosures. The matter of your communication has been carefully considered by the Council of this Branch, and the additions to our Articles of Association suggested by your Council will be added as soon as possible, in accordance with the requirements of the Companies Act of this Colony.

I enclose the two agreements signed as requested. With regard to the suggested addition to the Article of Association *re* the compulsion of members joining the Branch to also become members of the parent Association, I beg to inform you that in our form of application for membership (see enclosure), we elect persons members of the Home Association and also members of the Branch simultaneously. The Branch has decided that certain gentlemen are ineligible for membership of the Branch, and they have been compelled to resign. The Council are anxious to know if members elected under these conditions, who are ultimately expelled from the Branch, can still remain members of the home Association, or in the event of their expulsion from the Branch do they *ipso facto* cease to be members of the home Association.

I have the honour to be,

Your obedient servant,

GEORGE E. RENNIE,
Honorary Secretary.

P.S.—With regard to the cost of the stamp on the agreement (£1) will you credit the Branch with this amount, and the Honorary Treasurer will deduct it from the next remittance.

14, Austin Friars, London, E.C.
December 16th, 1897.

MY DEAR SIR,

New South Wales Branch.

I return herewith the agreement in duplicate duly stamped. I also return the letter of the Honorary Secretary of the Branch to yourself of October 25th last.

In reference to his question of whether members of the Branch who are expelled can still remain members of the parent Association, or whether in the event of their expulsion from the Branch they *ipso facto* cease to be members of the parent Association, I am of opinion that such members of the Branch would not cease to be members of the parent Association, but would remain members of the parent Association until expelled under the provisions of the by-laws of the Association or until they had resigned.

Yours faithfully,

F. Fowke, Esq. JAMES R. UPTON.

Resolved: That the President of Council, the Treasurer, and the General Secretary be empowered to seal the agreements with the seal of the Association.

The agreements were then sealed, and the seal relocked in the presence of the Council.

Resolved: That a committee of six, consisting of the President of the Council, the Treasurer, Dr. Barr, Dr. Ward Cousins, Mr. Nicholson, and Dr. Philip, be appointed to consider the conduct of the business of the Annual General Meetings, and to report to the next meeting of the Council.

Resolved: That the Constitution Committee be reappointed as follows:—The President of Council, the Treasurer, Dr. Ward Cousins, Dr. Stamford Felce, Sir Walter Foster, Dr. Leonard Sedgwick, Dr. Markham Skerritt, Mr. Lawson Tait, and Mr. Walter Whitehead, together with the following members of Council: Dr. Barr, Dr. Bridgwater, Dr. Crocker, Dr. Dolan, Dr. Bruce Goff, Dr. Holman, and Mr. Vincent Jackson.

The President of Council reported having received a Memorial from the Corporate and Medical Reform Committee, which had been considered by the Journal and Finance Committee and by them referred to a subcommittee for consideration and report.

Read communication from the Lancashire and Cheshire Branch respecting (1) the General Medical Council election, (2) Constitution of Association, and (3) the case of Mr. R. B. Anderson.

It was moved and seconded: That a committee be appointed to consider the case of Mr. R. B. Anderson, with special reference to the desirability of the Association taking action in the matter, with the view of having the legality of the decision of the Court of Appeal tested in the House of Lords.

The motion having been put from the chair the same was declared to be lost, only six voting for it.

Mr. Butlin read letter—as a representative of the Council on the Civil Rights Defence Committee—from Lord Stamford, suggesting that the Council should assist in paying off the debt incurred by the Civil Rights Defence Committee, upon which the Council of the Association had appointed representatives. It was felt, however, that the Council had no power to vote money for this purpose.

Revised by-laws of the Edinburgh Branch were then considered.

Resolved: That the proposed alterations in the by-laws of the Edinburgh Branch be approved.

Read resolution from Border Counties Branch respecting fees to medical witnesses.

Resolved: That the resolution from the Border Counties Branch be referred to the Parliamentary Bills Committee.

Read resolutions from the East Anglian Branch on the report of the Constitution Committee.

Resolved: That the resolutions from the East Anglian Branch be referred to the newly appointed Constitution Committee.

Read resolution from the Dublin Branch on the report of the Constitution Committee.

Resolved: That the resolution from the Dublin Branch be referred to the Constitution Committee.

Read resolution from the East York and North Lincoln Branch on the subject of the great increase of venereal disease among the British troops in India.

Resolved: That the resolution from the East York and North Lincoln Branch be referred to the Parliamentary Bills Committee.

Read resolution from the Oxford Branch respecting medical aid associations, of which the following is a copy:—

St. Mary's Entry, Oxford,
November 16th, 1897.

Dear Sir,—The following resolution was unanimously passed at a general meeting of the Oxford Branch, held at the Radcliffe Infirmary on October 29th, 1897:

"That the Council of the British Medical Association be asked to pass a resolution to the effect that in future no medical men belonging to medical aid associations be elected members of the Association."

Kindly bring this resolution to the notice of your Council at its next meeting.

Yours very truly,
WM. COLLIER.
Hon. Sec. Oxford Branch.

Read communications from the Registry of Friendly Societies, of which the following are copies:

REGISTRY OF FRIENDLY SOCIETIES, CENTRAL OFFICE.
28, Abingdon Street, S.W.,
January 5th, 1898.

DEAR SIR,—When I had the pleasure of meeting Sir Wm. Turner and yourself on the *Parisian*, we had some conversation on the subject of medical aid associations. On my return to England, I put myself in communication with the Friendly Societies Conference, which consists of societies having more than 3,000,000 of members, and they have appointed the following committee to confer with the medical authorities on the subject:

Mr. Boyd (National Sick Burial Association),
Mr. Stockall (Manchester Unity of Oddfellows),
Mr. Stead (Ancient Order of Foresters),
Mr. Chapman (Parliamentary Agent of same Society),
Mr. Cleveland (National Independent Order of Oddfellows).

These gentlemen had an interview at my office recently with Dr. Glover, Mr. Bryant, Dr. Church, Mr. Teale, and Dr. Bruce, representing the General Medical Council, and an interesting conversation took place, but it was thought advisable that, before stating any definite conclusion on either side, an interview should be sought with gentlemen representing your Associa'ion.

I have ascertained that Wednesday, January 19th, at 12 o'clock, would be a convenient time for the Friendly Society representatives, and, if that should also be convenient for you, it would give me great pleasure to receive the deputation here at that time.

I am, dear Sir,
Yours faithfully,
E. W. BRABROOK.

F. Fowke, Esq.,
Secretary British Medical Association,
429, Strand, W.C

Resolved: That a Subcommittee, consisting of the President of Council, the Treasurer, Sir Walter Foster, Dr. Ward Cousins, Mr. George Eastes, and Dr. Oswald, be appointed to act as a delegation of this Council to hear what the Friendly Societies have to say on the question of medical aid, and to see how far they are prepared to remedy the abuses which are most complained of, and to report back to this Council.

The election of candidates was then considered. Two of the candidates were referred to the Branches in whose district they resided for further inquiry and report.

Resolved: That 154 of the 156 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

A motion by Dr. Groves on the desirability of an index to the last Report of the Royal Commission on Vaccination was considered.

The President of Council promised to write to Lord Herschell to find out whether there was any intention of printing such an index, and, failing him, to the Duke of Devonshire.

Resolved: That the grant of £100 to the Jenner Society be renewed.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a communication from the Corporate and Medical Reform Committee, a resolution authorising the printing of a number of copies of a pamphlet on Small-pox and Vaccination, the accounts for the quarter amounting to £9,269 13s. 3d., the report of the auditors, and a resolution unanimously carried approving the proposal of the Premises Committee on the purchase of the freehold of the premises now held on lease by the Association.

Resolved: That Dr. Dawson Williams be appointed Editor of the JOURNAL, in accordance with Article 28 and By-laws 12 and 15, in succession to the late Mr. Ernest Hart, subject to future arrangements as to salary and terms of service.

Resolved: That Mr. C. Louis Taylor be appointed Assistant Editor of the JOURNAL, subject to future arrangements as to salary and terms of service.

Read communication from the Registrar of the University of London asking for the support of the Association to the University of London Commission Bill of the last session of Parliament, and to join deputation of the Senate to the Lord President of the Privy Council.

Resolved: That the Council take no action in consequence of the great divergence of opinion on the matter.

Resolved: That the report of the Edinburgh Branch on the Constitution of the Association be referred to the Constitution Committee.

Resolved: That the minutes of the Premises and Library Committee of the 18th inst. be received and approved, and the recommendations contained therein carried into effect, excluding the resolution respecting the purchase of the lease of 429, Strand, and 2, 3, 4, and 5, Agar Street.

The minutes of the Premises and Library Committee contain a report relative to the purchase by the Association of the lease of 429, Strand, 2, 3, 4, and 5, Agar Street, and a resolution appointing a Subcommittee to consider the negotiation for the purchase of the freehold; and the report of the Librarian.

Resolved unanimously: That the following gentlemen—the President of Council, the Treasurer, Mr. Macnamara, Dr. Ward Cousins, Dr. Holman, Dr. Rayner, Dr. Bridgwater, and Mr. Andrew Clark—be appointed a Committee with full power to negotiate for the purchase of the freehold of the premises, 429, Strand, and 2, 3, 4, 5, Agar Street, Strand, at a sum not exceeding £81,250.

Resolved: That the minutes of the Inebriates Legislation Committee of October 26th, 1897, be received and approved, and the recommendations contained therein carried into effect, and that a grant of £50 be made to the Committee towards the expenses of communicating with the Justices of the Peace, Boards of Guardians, Prison Authorities, etc.

Resolved: That the minutes of the General Practitioners and Ethical Committee of January 18th (with the exception of the two resolutions respecting the Coventry Provident Dispensary ordering the matter to be referred back to the Birmingham and Midland Branch) be received and approved, and the recommendations contained therein carried into effect.

The minutes of the General Practitioners and Ethical Committee contain various communications and resolutions of a medico-ethical nature; a letter from the Coventry Public Medical Service; resolutions from the East Anglian Branch respecting medical aid associations; the Ethical Rules of the Worcester and Hereford Branch.

Resolved: That the minutes of the Parliamentary Bills Committee of the 18th instant be received and approved, and the recommendations contained therein carried into effect.

The proceedings of the Parliamentary Bills Committee will be found at p. 317.

Resolved: That the Draft Obstetric Nurses Bill be received and printed, and copies sent to each member of this Council and to each Branch Secretary, and that the Bill be placed upon the agenda of the next meeting of Council for consideration.

Resolved: That the Parliamentary Bills Committee be empowered to take such action as may be required, pending the next meeting of this Council, in view of possible attempts at legislation upon this subject.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

CORK AND SOUTH OF IRELAND BRANCH.—A general meeting of the Branch will be held on Monday, January 31st, in the Medical Society Rooms, 118, Patrick Street, Cork, at 4 P.M. Business, general.—PHILIP G. LEE, Honorary Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next meeting will take place at the "Medical Library," 5, Pembroke Road, Portsmouth, on Tuesday, February 8th, at 9 P.M. Gentlemen desiring to make communications or to show patients or specimens are requested to communicate with the Honorary Secretary, C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.

MIDLAND BRANCH.—A meeting will be held at Leicester Infirmary on Wednesday, February 9th, at 3.30 P.M. Business: To discuss the report of the Constitution Committee of the Association. The President, Mr. C. J. Bond, will be glad to see members at afternoon tea after the meeting. Members of the Association may be elected members of the Branch at the meeting, and are requested to apply to the Secretary, FRANK M. POPE, M.B., 4, Prebend Street, Leicester.

DUBLIN BRANCH.—The twenty-first annual general meeting of the Dublin Branch of the British Medical Association will, by the kind permission of the President and Fellows, be held on Monday, January 31st, at 4.30 P.M., in the hall of the Royal College of Physicians, Kildare Street. The officers and council for the ensuing year will be elected by ballot, and any other necessary business transacted. Sir C. J. Nixon, M.D., President-elect, will deliver the annual address. The annual dinner of the Branch will be in the College Hall at 7.30 P.M. on the day of the meeting.—JAMES CRAIG, Honorary Secretary and Treasurer, 35, York Street, Dublin.

HONG KONG AND CHINA BRANCH.

A MEETING of the Hong Kong and China Branch was held in Hong Kong on December 17th, 1897. Surgeon-Colonel EVATT, P.M.O., occupied the chair. Ten members and four visitors were present.

New Members.—R. M. Gibson, M.B., C.M., was elected a member of the Association and of the Branch; and W. E. Home, B.Sc., M.D., Staff-Surgeon, R.N., already a member of the Association, was elected a member of the Branch.

Representative of Branch on Council of Association—James Cantlie, M.B., F.R.C.S., was elected representative of the Branch on the Council and on the Parliamentary Bills Committee.

Election of Officers and Council.—The following were elected officers for the ensuing year: *President:* G. P. Jordan, M.B. *Vice-President:* G. J. H. Evatt, M.D., Surgeon-Colonel, P.M.O. *Honorary Secretary and Treasurer:* J. C. Thomson, M.D. *Council:* J. M. Atkinson, M.B., P.C.M.O.; F. W. Clark, M.B.; W. E. Home, M.D., Staff-Surgeon, R.N.; Alex. Rennie, M.B., and F. O. Stedman, M.D.

Paper.—Surgeon-Colonel EVATT read a paper on Cholera Experiences, based on experience of nine epidemics of cholera in India, including a personal attack.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, January 18th, 1898.

Present:

Dr. R. SAUNDBY (President of Council) in the Chair.
Dr. C. PARSONS, Treasurer.

Mr. S. H. AGAR (Henley-in-Arden).
Dr. R. W. BATTEN (Gloucester).
Dr. T. BRIDGWATER (Harrow-on-the-Hill).
Mr. G. BROWN (London).
Dr. W. A. CARLINE (Lincoln).
Dr. W. F. CLEVELAND (London).
Brig.-Surg.-Lieut.-Col. E. F. DRAKE-BROCKMAN (London).
Mr. GEORGE EASTES (London).
Dr. R. ESLER (London).
Mr. E. H. GALTON (London).
Dr. BRUCE GOFF (Bothwell).
Dr. WM. GORDON (Exeter).
Dr. A. J. HARRISON (Clifton).
Dr. C. HOLMAN (London).
Mr. VICTOR HORSLEY (London).
Mr. EVAN JONES (Aberdare).
Dr. C. W. MARRIOTT (Reading).
Dr. J. C. MCVAIL (Glasgow).
Dr. W. J. MICKLE (London).
Dr. JOHN WILLIAM MOORE (Dublin).
Mr. C. H. W. PARKINSON (Wimborne Minster).
Mr. A. BROWN RITCHIE (Hulme).
Dr. J. ROLSTON (Stoke).
Dr. G. E. SHUTTLEWORTH (Richmond).
Dr. R. SOMERVILLE (Galashiels).
Mr. C. R. STRATON (Wilton).
Dr. J. C. THRESH (Chelmsford).
Dr. A. R. URQUHART (Perth).
Dr. M. WARD (Twickenham).
Dr. S. WOODCOCK (Old Trafford).

On the motion of Dr. CLEVELAND, Dr. Saundby, President of Council, was requested to take the chair.

The minutes of the last meeting were taken as read and were confirmed.

Read letters of apology for non-attendance from Sir Thomas Grainger Stewart, Dr. R. Farquharson, M.P., Mr. Spanton, Dr. J. W. Miller, Dr. James Ritchie, Dr. Isambard Owen, Mr. Balding, and Mr. Jones Morris.

THE ARMY MEDICAL SERVICE.

Dr. GORDON, in reporting on the work of the Army Medical Reform Subcommittee, said that the deputation which the Committee had authorised the Subcommittee to arrange had been fixed for January 20th. The Subcommittee had arranged for a preliminary meeting in order to decide the speakers on the occasion. Representatives had been asked to come from the different licensing bodies in the United Kingdom in order that they might express their interest in the matter. He hoped that success would attend the efforts which were being made (see p. 327).

REFORM OF THE MEDICAL ACTS.

The CHAIRMAN said the next business was to consider the memorial from the Corporate and Medical Reform Committee which had been referred to the Committee by the Council.

Dr. WOODCOCK said his view of the matter was that the memorial could only be taken into consideration with any effectiveness if it was taken also in connection with the following resolution, which had come up from the annual meeting last July, and which had been referred from the Council to the Parliamentary Bills Committee:

That it be a recommendation to the Council to appoint a Committee for the purpose of drafting a Bill for the amendment of the Medical Acts.

The Parliamentary Bills Committee had had a Subcommittee to deal with the question of the amendment of the Medical Acts, and had drafted a Bill for the purpose. Just when the suggestions which were embodied in that Bill were about to

be considered there came a matter of urgency—the midwives question—which was referred by suggestion of Mr. Ernest Hart, the then Chairman, to the Subcommittee, which then undertook to consider the midwives question. In the draft Bill which the Subcommittee submitted all the points embodied in the memorial were covered. It was obviously impossible for any effective work to be done in connection with a matter of such magnitude unless some arrangement was brought into operation which did not already exist. It was perfectly impossible for a Subcommittee meeting for a short time once in three months to make much progress with a question of such magnitude. His own view was that the Subcommittee should be reappointed. There should be some arrangement for continuous sittings, and unless it was possible for a few gentlemen interested in the question to come together and meet for two or three consecutive days, he did not see that they were going to make much progress in the matter. There was not a single point in the memorial to which allusion was made which was not covered by the rough draft of the Bill which the Subcommittee submitted.

Mr. GEORGE BROWN said the object of the memorialists was to move the Association to do something. It was felt that the time had arrived when a reform of the Medical Acts was called for. He personally thought there was no better organisation than the British Medical Association to take up the question. It was a great work to draft a Bill which would satisfy the whole of the profession or even the majority. If a Subcommittee could be formed to take up the work in the way Dr. Woodcock suggested, he thought it would be doing a work for which the profession would be grateful to the Association. No doubt any Bill would meet with a great amount of opposition; but he was not without hope that it would be possible to give the medical profession much more security and improve their position generally, by a Bill which would not be opposed by the public.

Mr. HORSLEY said he quite agreed with Dr. Woodcock that a Committee ought to be appointed to consider the subject, and that it ought to sit from day to day. Eastertime he thought would be a good opportunity for the Committee to meet.

After some further discussion, it was proposed by Mr. GEORGE BROWN, seconded by Dr. SHUTTLEWORTH, and resolved:

That a Subcommittee, consisting of Mr. Victor Horsley, Dr. Woodcock, Mr. Brown Ritchie, Dr. Bateman, and Mr. George Brown, be appointed to prepare a Medical Acts Amendment Bill to be submitted to the Council.

It was further proposed by Mr. VICTOR HORSLEY, seconded by Mr. PARKINSON, and resolved:

That it be a recommendation to the Council to make a grant of £50 to cover the expenses of the Subcommittee under the following heads: travelling, hotel, and printing expenses, and legal assistance.

OBSTETRIC NURSES BILL.

After some discussion upon the Obstetric Nurses Bill prepared by the Subcommittee, the following resolution was proposed by Dr. WOODCOCK, seconded by Dr. SHUTTLEWORTH:

That the Draft Obstetric Nurses Bill be submitted to the Council of the Association.

Dr. URQUHART moved the following amendment, which was seconded by Dr. J. W. MOORE:

That the Bill should be put upon the agenda of the next meeting and thoroughly discussed.

The amendment having been put to the meeting it was lost, 7 voting for and 10 against it. The original motion was then put and carried.

DISCIPLINARY POWERS OF QUALIFYING BODIES.

A memorandum adopted by the Glasgow University Court on July 8th, 1897, with regard to the disciplinary or penal powers of the qualifying medical authorities, which had been submitted to the Council, and by them forwarded to the Parliamentary Bills Committee, was considered. It was proposed by Dr. SAUNDBY, the Chairman, seconded by Mr. BROWN RITCHIE, and resolved:

That the memorandum of the Glasgow University Court be referred to the Committee already appointed to draw up a Medical Acts Amendment Bill

INCIPIENT INSANITY.

Dr. CLEVELAND said that the Subcommittee appointed to consider the question of the treatment of incipient insanity had met that day, and had passed two resolutions, the first being:

That the Medico-Psychological Association be requested to reappoint their Subcommittee to continue the consideration of the question of the treatment of the incipiently insane.

In reference to the attempt which had been made by certain Boards of Guardians to include the fees of their certifying medical officers in their ordinary salaries, it had resolved:

That in the opinion of this Subcommittee any clause introduced into the Lunacy Bill now pending in regard to the examination of alleged lunatics by the medical officers of Boards of Guardians will be unjus unless it grants an increase of salary in proportion to the average annual number of cases examined during the preceding three years.

He proposed the adoption of the report of the Subcommittee which was seconded by Dr. URQUHART, and carried.

VACCINATION LEGISLATION.

Dr. MCVAIL said he wished to move that a Subcommittee be appointed to watch any legislation which might be introduced in the ensuing session of Parliament with regard to vaccination, and to report thereon. He proposed:

That Dr. Farquharson, M.P., Dr. Batten, Dr. Groves, Dr. Thresh, Dr. McVail, and Mr. George Brown be appointed a Subcommittee to watch any legislation on the subject of vaccination which may be introduced during the ensuing session of Parliament, and to report thereon.

This resolution was seconded by Dr. BATTEN, and carried.

PROSECUTIONS UNDER THE PHARMACY ACTS.

Dr. BRUCE GOFF reported that the Subcommittee had considered the memorial of the Scottish Midland and Western Medical Association as to prosecutions under the Pharmacy Acts, and presented the following report:

The Subcommittee sympathises with the memorialists in the difficulties of their position, and feels that it is the duty of the Association to support the policy of the Pharmacy Acts. The Association is recommended to support a proposal to give the power of prosecution to the Public Prosecutor as well as to the Pharmaceutical Society.

It was proposed by Dr. BRUCE GOFF, seconded by Dr. MCVAIL, and resolved:

That the report of the Subcommittee be received and approved.

AMENDMENT OF THE LOCAL GOVERNMENT (SCOTLAND) ACT.

Dr. GOFF said a memorandum had been sent round to the members of the Committee with reference to an amendment of the Local Government (Scotland) Act with regard to the tenure of office of Poor Law medical officers in Scotland.

After some discussion it was proposed by Dr. BRUCE GOFF, seconded by Dr. SOMERVILLE, and resolved:

That the Parliamentary Bills Committee request the Council of the Association to support, by all means in its power, the Bill to be introduced this session into Parliament to amend the Local Government (Scotland) Act, 1894

THE next general meeting of the Medico-Psychological Association of Great Britain and Ireland will, by the courtesy of Dr. W. S. Kay, be held at the Asylum, Wadsley, near Sheffield, on February 16th, at 4 P.M., under the presidency of Dr. T. W. McDowall. The following papers and notes will be read: On the Comparative Intellectual Value of the Anterior and Posterior Cerebral Lobe, by Dr. Clapham Crochley; on Alcoholism and Suicide, by Dr. W. C. Sullivan; notes of a case of Hæmatoporphyrinuria, by Dr. A. Keith Campbell; and notes of an unusual case of Poisoning, by Dr. Bedford Pierce.

THE members of the Royal Irish Constabulary have presented to Nurse Murtagh, one of the staff of Madame Steevens's Hospital, who has been for years in charge of the fever ward to which members of the constabulary are sent for treatment, a gold watch and chain and an illuminated address for the unwearying attention and unselfish devotion which has characterised her attention on Royal Irish Constabulary patients.

THE SANITARY INSTITUTE.—The Council have accepted an invitation from the Lord Mayor and City Council of Birmingham to hold its seventeenth congress and exhibition in that city in September next.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JANUARY 29TH, 1898.

THE DEPUTATION TO THE SECRETARY OF STATE FOR WAR.

THE influential and thoroughly representative deputation on the army medical question which waited on Lord Lansdowne last week had every reason to be satisfied with its reception. The Secretary of State for War not only listened to the statements made with the utmost courtesy and attention, but showed a thorough grasp of the subject in all its aspects and details.

It could not, of course, be expected that he would reveal his intentions, because, according to official precedent, that must be reserved for Parliament. But he said enough to show that his sympathies are warmly with the medical officers in their struggle for a fair, reasonable, and honourable equality with the officers of other branches of the service with whom they have to perform most important military duties, and socially spend the best part of their lives.

It is therefore most necessary that Lord Lansdowne, in his evident desire to do justice to medical officers, should be given every support. This he has, indeed, already secured, not only in a united medical profession, but in most influential sections of the public press throughout the three kingdoms, as we have recently shown by numerous extracts.

His hands have been strengthened by such expressions of public opinion against the selfish opposition of a powerful section of his military advisers, who, it cannot be forgotten, wrecked the good intentions of previous War Ministers.

The situation is peculiar. The claim of medical officers to equality in army status and title is met with the pretext that should such equality be conceded it would encroach upon the distinctive prerogatives of combatant officers. But has it done so in the case of the American, Italian, or Egyptian armies? Does the position of our paymasters and ordnance store officers clash with the rights and duties of regimental officers?

It is, indeed, remarkable that true army status is readily conceded to paymasters, bandmasters, schoolmasters, volunteer officers, and titles even conceded to veterinary surgeons, while denied to medical officers; and yet these last are those with whom the "combatants" come into the closest contact, whether in camp, quarters, or the battle-field.

The old pretext that army status would involve general command, is no doubt being again worked for all it is worth. Lord Lansdowne might ask the American Ambassador how that matter, if it was ever raised, was got over when medical officers of the American army got true army status? Doubtless Colonel Hay could tell him.

Medical officers entirely repudiate all claim to general command, which, of course, obviously lies altogether outside their sphere; so it cannot be the fear of their setting up such a claim that bars their obtaining army rank.

We have not touched upon the minor reforms which Lord Lansdowne, with a statesmanlike grasp of facts and vigorous administrative will, has already effected in the Army Medical Department; but the medical profession are deeply grateful for them.

They look upon the rectification of these minor grievances as affording a good augury for the completion of the great reform by the formation of a medical corps, with consequent granting of due army status; the same strong will which carried the minor will yet effect the major reforms.

When this is done, we do not think it is too much to promise that those who, like ourselves, now contend most stoutly for the rights of medical officers, will become the warmest advocates of the service as a career worthy of the best students in our medical schools.

Lord Lansdowne is a very distinguished statesman, and an administrator who has left his mark upon the greatest dependencies of the Empire, and in the present connection it is interesting to recall that the founder of the fortunes of his family was the celebrated Sir William Petty, Physician-General to the Army in Ireland under Henry Cromwell, the son of the Protector. Such an ancestry at least affords a sentimental basis for sympathy between his lordship and the medical profession, but we believe that his desire to improve the medical service, his sense of justice, and his force of mind will supply all the needed motive power to bring about this greatly-needed reform.

THE SUBSOIL OF LONDON.

THE divine who illustrated his discourse on the beneficence of the Deity by pointing out how the largest rivers had generally been made to flow through the largest towns, would have had some difficulty in convincing an audience of sanitarians that the subsoils of our great cities had always been wisely chosen by Providence for the dwellings which they underlie. Scattered villages in the lower and broader valley of the Thames, covering little knolls of elevated gravelly ground, well drained by neighbouring slopes, were situated happily enough. Even the more elevated sites on the thick clay, which underlies most of the metropolis, had much to commend them; still better as sites were the lower greensands and the chalk. But when the march of civilisation connected these oases, and covered the lower valley gravels and marsh lands and the deep valley clay with an unnatural growth of dwelling houses, the teleological argument of the preacher somewhat failed.

Curious are the "sections" met with by the geologist in excavations in the old parts of London. Mr. Woodward, in one of the Geological Survey's memoirs recently issued,[1] has reproduced, after Chaffers, a woodcut of a most interesting section in Cannon Street of great interest. Above, immediately

[1] *Soils and Subsoils from a Sanitary Point of View, with special reference to London and its Neighbourhood.* By Horace B. Woodward, F.R.S. Eyre and Spottiswoode. 1897. Price 2s. 6d.

below the street level, is a mass of *débris*, containing loose stones, brickbats, and the like. Then comes the old pavement of the roadway of a date anterior to the Great Fire of 1666. Below that is a layer in which fragments of Norman and Early English pottery have been found. Then a somewhat thick layer containing tesselated pavement of the Roman period, beneath which is a black soil containing Roman ware. All this is, in one sense, "man-made ground," and beneath this are the loam and gravel of the valley drift. Much, however, of the man-made ground is less innocent. Gravel pits and excavations for brick earth have been made good with various kinds of insanitary rubbish.

Of the actual surface geology of much of older London comparatively little is known; and it is quite possible that, even if provided with such information as the Survey have in MS., the intending purchaser of a new house might find that what he took for a favourable gravelly subsoil was the site of a gravel pit, going down to the clay and afterwards filled up with refuse of an unspeakable character. In the less crowded parts of the metropolis, however, it is still possible to recognise, with the help of the department, the real nature of the subsoil, and to obtain some idea whether the foundations of an intended dwelling are likely to be wet or dry. Mr. Woodward points out that, while to build on sand may, from the sanitary point of view at least, be good - if the sand be deep and of considerable area—the foundations are likely to be wet if the site be merely a hollow in the clay, filled up with sand or gravel, or if the sand be the alluvium in which the ground water rises and falls with the water of the neighbouring river. To build on rock, such as the chalk, may also in some cases be bad, if the limestone for instance be riddled with "pipes" filled with gravel and sand, and therefore subject to sudden sinkings of the surface. A light building may sometimes with impunity be placed on such a clay as that which underlies the made ground and peat at Hackney Wick, but which itself lies on a gravel wet with tidal water. But heavy buildings must, according to Mr. Meeson, have their foundations carried right down into the gravel itself. The running water of the gravel otherwise would probably wash away the clay pressed down into it by the heavier structure.

Settlements, Mr. Woodward also points out, may result from the drainage of sand and gravel caused by railway cuttings and tunnels. He is even inclined to think that much abused person, the jerry builder, may sometimes be blamed for dislocations of drain-pipes which may have been due to settlements of this kind, or even by the shrinkage of clay in dry weather. "Legally," perhaps, though we do not think that this is really so, this sort of "accident" might be classed under that singular heading, an "act of God." We fear a coroner's jury of medical officers of health would unanimously bring it in manslaughter. The danger of building over "faults" is pointed out, and the advisability of not purchasing a house about the actual construction of which nothing is known until a year has elapsed, and it has been subjected to varying seasons of wet and drought.

We recently remarked upon the happiness of the thought which associated Mr. Whitaker with Dr. Thomson in the Local Government Board investigation of the Portsmouth water supply, and, coming as it does after the Board's recent praiseworthy attempt to get exact data as to the viability of the typhoid bacillus in different soils, Mr. Woodward's memoir, freely illustrated as it is with drawings, and containing as it does a beautiful small scale geological map of the district around London, must be regarded as a valuable contribution to the health literature of the closing century.

Apart from its bearing upon local water supplies, which is not overlooked in the pamphlet, the amount of water in the subsoil has an importance of its own beyond the mere question of dampness, important as that of course is. In his paper last week before the Epidemiological Society, a report of which we give in another column, Dr. Childs recapitulated the observations of von Pettenkofer on the relationship of typhoid fever to the rise and fall of the ground water in Munich. The Bavarian capital stands on a bed of alluvium covering a nearly watertight marl. The water in this gravel varies in amount remotely with the rainfall, and flows with the river. Pure on the upper side of the town, it becomes grossly contaminated in its course. This subsoil water stands highest in summer and autumn, lowest in winter, and it is when it is lowest that enteric fever is most fatal. Curiously enough, it is not when the wells sunk into this stratum are most polluted that typhoid is most prevalent, and the most conspicuous diminutions in the mortality from this disease followed the removal of the cesspits and other soil-polluting agencies—notoriously the 800 slaughterhouses—and preceded by three years the introduction of the purer mountain water supply. The better drainage of the city, the removal of soil pollutions and similar sanitary improvements have been attended by a steady reduction in the typhoid death-rate from 2.02 in the Fifties to 1.48 and 1.16 in the Sixties and Seventies, followed by a sudden drop to 0.16 in the Eighties, and to 0.06 in the seven years of the present decade. "The epidemics," says Dr. Childs, "may be said to have ceased in the autumn of 1880." Certainly, as we showed last week, the final word has not yet been said upon the relation of enteric fever to a polluted subsoil.

PLAGUE AND THE PILGRIMAGE TO MECCA.

The importance of Mecca as a focus and disseminator of cholera, by means of Mohammedan pilgrims, by whom it is visited annually, is thoroughly understood, and it is not surprising that all European Governments, including Turkey, should hold strong views regarding the possible danger of plague being spread to Europe by pilgrims proceeding to Mecca from infected areas in India. The efforts made last year were successful, but it must be remembered that there is a very serious difference in the conditions which exist this year. It is that Jeddah, the port of Mecca, was last year an infected port. This is a subject of importance for those concerned, not only with the pilgrimage from India, but from every other part of the Mohammedan world. It is reported that Russia has decided to maintain the prohibition of Mohammedan pilgrimages from Russian territory for the current year; and it would seem that this is an example which other Governments—European, African, and Asiatic—would do well to follow.

In January and February, 1897, plague in Bombay was increasing by leaps and bounds, and the question as to what was to be done regarding the pilgrims became one of extreme urgency. The Government of India were at first naturally reluctant to stop the pilgrimage, since such a measure was

certain to be regarded as very severe by a people whose religious susceptibilities are easily aroused. It needed no little moral courage to depart from the traditions of non-interference with religious customs by which the Indian Government has been guided so long. The step was, however taken, and by an order published in India the Governor-General in Council prohibited Indian Mohammedans from joining the pilgrimage to Mecca. Such was the alarming condition of Bombay at the time that the Mohammedan leaders saw the reasonableness and necessity of the precaution, and helped the Government in no small degree by giving it their loyal support.

There can be no doubt that the stoppage of the pilgrimage from India was a wise measure, for, with the thousands that would have embarked from Bombay and other Indian ports, a great infection of the Hedjaz could hardly have been avoided. The infection of Jeddah, Mecca, and Medina at an early period of the year would have been serious, because the season was favourable to the spread of the disease, while the introduction of infection at an early stage of the immense gathering of pilgrims from all parts of the Mohammedan world would have supplied the requisite conditions for the production of a serious catastrophe far-reaching in its effects. Jeddah, however, became affected with plague by means beyond the direct control of the Indian Government. It is believed that the plague was introduced by Hadramaut and Yemen merchants who trade with the pilgrims assembled at Mecca, and who deal in contraband goods brought directly or indirectly from Bombay. It was among these merchants the plague first broke out in Jeddah. Fortunately this outbreak did not occur until June, when most of the pilgrims had departed, and when the intense heat proved, as it has done elsewhere, unfavourable to the spread of the disease. There were only 58 deaths in all, and the disease appears to have been of a mild attenuated type, for it is estimated that the number of attacks was about three times the number of deaths.

This year the Government of India have done what they were urged to do last year, not only for the sake of preventing the spread of plague to Mecca, but to prevent its extension to other parts of India by means of pilgrims. They have treated the Bombay Presidency as an infected country, isolating it from other parts of India. No person resident permanently or temporarily in the Bombay Presidency is to be permitted to embark from any port in India with the object of making a pilgrimage to Mecca, and residents in other parts of India, who wish to perform the pilgrimage, are to be subjected to certain stringent conditions between the time of their leaving their homes and their embarkation. The ports which are open to pilgrims are limited to Karachi in Scinde and Chittagong in the lower provinces of Bengal. Opinions are likely to differ as to the advisability of using Karachi, so recently the scene of an epidemic, as a port of embarkation. We should have thought it wiser to have given it a wide berth.

THE LONDON POST-GRADUATE COURSE.—The next course will commence on February 14th. A full prospectus can be obtained from Dr. Fletcher Little, Secretary, 32, Harley Street, W. The fees are from 1 to 3 guineas for single courses, but the lectures are so arranged that all may be attended by those entering for the term. The lectures and demonstrations are specially designed to meet the needs of practitioners.

LORD WOLSELEY'S ARMY CORPS.

IN addressing the North London Rifle Club, Lord Wolseley is reported to have spoken as follows: "He would stake his honour that if the Government decided to go to war, and to send an army *abroad*, we could put on board ship at the quays on the sea coast of England, and at out ports, *two full army corps*, complete down to the very last possible stores that would be required, *complete in every way*, and that could be done before the Navy could have the necessary ships to carry them from these shores." That is indeed a plain enough statement, which, coming from the Commander-in-Chief, could not have been lightly made, and therefore must be seriously taken. It is, nevertheless, so startling as to make men pause and examine the data upon which it must be founded. We have neither the desire nor the competency to deal with the purely military details involved; but on the medical services, which the mobilisation of the two army corps would involve, we can join issue. We have put the kernel of the statement in italics, namely, "two full army corps," "complete in every way," suddenly and successfully mobilised for service "abroad." The statement, of course, is a general one, but we take leave to say that, resourceful and self-reliant as Lord Wolseley is, he has not the means suddenly to make the medical services of two full army corps "complete," much more efficient "in every way." Perhaps he does not consider an efficient medical service necessary to "complete" an army corps. If he does not, the British public will, if we mistake not, think otherwise, and will hold him as responsible for medical efficiency as for any other military branch. We must take it for granted that the two army corps could be mustered only by calling out the Reserves. Now, what medical services, active and in reserve, has Lord Wolseley at his disposal? Through grievous mismanagement the active Medical Staff of the army is at present about 100 short of its normal establishment, so that there are barely 200, all told, and available, serving at home; next, there are about 125 retired officers liable to recall to service up to 55 years of age; that gives a total of about 325 medical officers available to go "abroad" with "two full army corps." But to get these men together every station hospital in the three kingdoms would have to be stripped of its military medical staff, and left in a state of confusion and paralysis; while it is notorious that of the officers liable to recall probably half are physically unfit for active service abroad, owing to the effects of long and hard tropical service. Thus the medical officers available would dwindle down to nearer 200 than 300. What are the complete medical establishments in officers of "two full army corps?" Each corps requires in the front, including a sprinkling of quartermasters, 118 officers, or 236 for the two; the number required on the line of communications would vary with the length of the line, the physical peculiarities of the country, and the climate, but could hardly be less than 100; then for base hospitals at least 50 more would be required, and 10 per cent. must be allowed for constant casualties. This gives a total of not less than 400 medical officers to "complete in every way" the "two full army corps" for active service "abroad," while the visible supply is not much over half that number. We have said nothing about non-commissioned officers and men of the Medical Staff Corps, because the 2,000 or so required for the two corps could probably be got together from the reserve. The net result is, Lord Wolseley could only muster a medical establishment for one army corps, and that by absolutely paralysing the home establishment, and imperilling our Colonial and Indian garrisons by stopping all reliefs and leaving casualties unfilled. But the calling out of the Reserve would proclaim "national emergency," and necessitate the embodiment of the Militia if not of the Volunteers. From what source are medical establishments for over 100,000 Militia to be provided? for they are dependent on the attenuated Army Medical Staff. The War Office may retort, "Draw upon the Army Medical Reserve of officers." But

this body is composed of men belonging to volunteer corps, to which their services are already hypothecated. True, they are counted twice over, but only to make a brave show on paper. There are just over 200 of them; they are not liable for service abroad. They are professors, lecturers, civil practitioners, holding all sorts of public and private appointments which they cannot relinquish for military service. It has been promised that they shall not be asked to serve away from their homes. They are a screen to hide the nakedness of our real military medical services—perhaps a useful function in some official eyes. We suspect that Lord Wolseley would find it somewhat difficult to explain how he proposes to make his two army corps "complete" in their medical arrangements.

THE INFANT LIFE PROTECTION ACT.

WE are glad to see that public notice has been drawn in the *Westminster Gazette* to the emasculated clause in the Infant Life Protection Act, by which baby farmers are permitted to take one child without being subject to the Act. The objections already expressed by the BRITISH MEDICAL JOURNAL to the loophole thus provided for astute baby farmers need not here be repeated. But while it is clear that the value of the Act has upon this account been greatly discounted, it is worthy of note that exception is now being taken to the fifth clause relating to the payment down for a child. The section in question only requires notice to be given to the authorities when the sum paid down does not exceed £20. It is pointed out that under this clause "£20 and one penny will take it out of the Act and leave the child without protection. The same thing will occur if the consideration be a less sum, and an agreement for further payment," and the conclusion is arrived at that the Act, as it now stands, will make the lines of these unfortunate children less safe than before, if that were possible. We cannot agree, however, that things are quite so bad as this writer assumes. No doubt the sum of £20 was decided upon as being beyond the limit usually paid by persons whose position compelled them to resort to this mode of disposing of children. Still it is difficult to comprehend why, apart from this, the fixed sum was not made higher than it is. There would certainly have been less opportunity of evading the excellent intention of the clause had the sum, for example, been made £100. But even with the restriction as to payment down, now in force, good is bound to result. Servants and members of the lower classes who desire to dispose of their illegitimate offspring by the tempting offer of the payment of a lump sum, would find difficulty in providing a sum beyond that fixed by the Act; and thus it may be taken that the 5th clause, as far as it goes, is an improvement upon the old Act of 1872. The deficiencies and defects of the Act are not unknown to those who promoted it. Probably the public has little knowledge of the opposition which it encountered from certain philanthropic bodies and others when it was being framed and discussed outside the Legislature. Indeed, had the promoters held out upon the vital question of not excluding a single child from the operation of the Act, the opposition would probably have been powerful enough to have prevented the measure from passing. This was the sole reason by which the emasculated clause (No. 1) came to be inserted. Upon the whole, however, we believe that the Act will prove of use, and especially so since there are signs that the local authorities are becoming alive to the necessity of making due provision for its enforcement.

SEQUELÆ OF THE GREAT FIRE IN LONDON.

THE havoc wrought by the great fire has very properly set the inhabitants of Cripplegate thinking how such a disaster may be prevented in the future. A Fire Committee was appointed just before Christmas, whose report has been presented lately at a full meeting of the ratepayers of the wards of Cripplegate Within and Without. Amongst other important recommendations, the Committee suggest that Jewin Street should be carried westward across Aldersgate Street, through the slums and alleys of St. Bartholomew's, to open into West Smithfield. Such a street would be an undoubted gain to the neighbourhood and to the great hospital situated on its confines. But it would sweep away a triangle bounded by Long Lane, Aldersgate Street, and Little Britain, which has few equals in London in historic interest. It is an area haunted by memories of all that is strangest in the life of mediæval London. Here was the King's market for horses and cattle held every Friday throughout the year; here, too, was the Friars' market, held at statutable times within the confines of the Priory, a market which became the great cloth fair of London, and was so important that, like every fair of the first magnitude, it had a court of pie powder for the due regulation of its concerns. In process of time it degenerated into mere revelry, and the humours of "Barthelmy Fair" became a byword throughout the kingdom. But it did not become extinct until 1855. Long Lane marked the end of the Priory grounds, and the present Cloth Fair, running parallel with it, shows the care taken by the monks to keep so valuable a source of revenue under their own control. Many of the seventeenth century houses still stand, and they must have witnessed strange sights. They can ill be spared, in spite of their squalor, but a new street would in some measure recompense us for their loss, by giving a better approach to the fine old church of St. Bartholomew the Great, now so buried in their midst as to be well-nigh invisible.

KING ARTHUR'S MEDICINE.

DR. GEORGE M. GOULD and Dr. Walter L. Pyle, of Philadelphia, contribute a most interesting article to the October number of the *Quarterly Medical Journal*, which has since been reprinted in the December number of the *Bulletin of the Johns Hopkins Hospital*. The subject is the medicine of the Arthurian cycle. They point out that in the frequent jousts cerebral concussion was a common event and that the common sign of basal fracture (hæmorrhage from the nose, mouth, and ears) occurs several times. Thus, when Sir Launcelot smote Sir Galahantyne on the helmet, "his nose braste oute on blood and eeyrs and mouthe bothe and therwith his hede hange lowe." Arthur himself gave Sir Accolon such a buffet, that "blood came out at his eres, his nose, and his mouthe." Accolon lived four days after the injury, and his death is attributed to loss of blood rather than to the fracture. The face was rarely injured in these combats for it was protected by the visor, and the armour was usually sufficient to prevent any penetration in the case of thoracic wounds. Broken ribs were not uncommon when the combatants had been locked in a deadly embrace. It was a common belief that if a weapon entered the trunk either very deeply or in a vital part, it should not be immediately withdrawn for fear of instant death. Thus, when Lauayne pulls out the truncheon from the side of a wounded knight, "He gaf a grete shryche (shriek) and a mervuillous grysely grone, and the blood braste oute nyghe a pint at ones that at the last he sanke down upon his buttoks, an so swouned pale and dedely." The knights themselves were often skilled in surgery, and the sick and wounded were frequently sent to the monasteries and nunneries. Sir Percyval was evidently an adept in the first aid treatment of wounds, for we read of him that he "stopped his bledyng wounde with a pyce of sherte." Malpractice, too, was not unknown, for Sir Marhaus "dyed through fals leches." Broken, dislocated, and amputated limbs were left to Nature, but all wounds were treated by salves and ointments. Some of the styptic ointments were very severe, for Morgan le Fay searched Alexander's wounds, and "gaf suche an oynement unto hym that he shold have dyed, and on the morne whanne she came to hym he complayned hym sore, and thenne she put other oynements upon hym and thenne he was out of his payne." Potions and alcohol were often administered, but there was an abiding faith in healing by enchantment, and a sturdy belief in virtue and virginity to heal wounds.

Drs. Gould and Pyle conclude their paper by pointing out that the Arthurian legends contain matters of interest to the obstetrician, to the alienist, and to the student of forensic medicine.

"OMNE IGNOTUM PRO MAGNIFICO."

A CONTEMPORARY—*Science Siftings*—which has frequently taken a courageous course in exposing quacks and their devices, has recently published some suggestions for a "Bill for the Suppression of Quacks." It proposes that every proprietary article of a medicinal character shall bear in addition to the Government stamp a clear plain imprint of the composition or formula of such proprietary article. This suggestion has frequently been made in the past, and its adoption was urged in some articles on the subject, published in the BRITISH MEDICAL JOURNAL a good many years ago. It seems to be so entirely in accordance with common sense that opposition to it is only likely to come from interested parties. Another suggestion advanced is that it should be made a misdemeanour punishable by fine or imprisonment to write for publication a testimonial knowing it to be false, or with fraudulent intent to publish, or cause to be published, a false testimonial. There is another trick of the trade which might be mentioned. This is the publishing of a letter or testimonial in a garbled form, or without the writer's knowledge or permission, but this is, we believe, an offence which can already be dealt with at common law. The policy of certain other proposals made appears more open to question. One is that a special licence should be required for the sale of proprietary articles, another that some public office—the Local Government Board or the Home Office is suggested—should have the right to consider before publication any printed matter to be issued with a proprietary preparation, and should have the power to compel the insertion in the printed matter of a caution or description. We are disposed to think that the less the Government has to do with the sale of these proprietary medicines the better. It is already somewhat of a disgrace that revenue should be raised from the stamps affixed to quack remedies, for there is no doubt that the Government stamp is looked upon by the more ignorant classes of the community as a kind of guarantee by the Government. The Prussian system, under which the police publish in the newspapers notices as to the character of secret remedies for the information of the public, appears to be more dignified and at least equally effective.

KENSINGTON PALACE.

KENSINGTON PALACE, which is about to be thrown open to the public, has many interesting associations for members of the medical profession. The original house was inhabited by Lord Chancellor Finch, afterwards first Earl of Nottingham. My Lord, whilst he was only plain Master Heneage Finch, fell in love with and married Elizabeth, William Harvey's niece, the daughter of Daniel, once churchwarden of St. Laurence Pountney at the foot of London Bridge, and afterwards a great Turkey merchant, with a house at Combe in Surrey, where Harvey spent much time during the declining years of his life. In the six acres of ground surrounding the house, and now forming part of Kensington Gardens, Harvey must often have wandered, combing his hair, as his use was in the open air, and thinking upon the problems of development. King William III bought the house from the second Earl of Nottingham, called Daniel after his maternal grandfather, for Evelyn says in his diary, "Feb. 25th, 1689-90. I went to Kensington, which King William had bought of Lord Nottingham and altered, but was yet a patched house, but with the garden, however, it is a very sweete villa." It cost the King no less than £20,000, and, though the old house was soon burnt to the ground, it is said that the lower portion of the present north wing is a part of the original "Nottingham House." William III and Queen Anne added largely to the house, George I built the eastern front from the designs of Kent, George II added the north-west angle as a nursery for his children, and the house was finally brought to its present appearance by the Duke of Sussex, patron and friend of T. J. Pettigrew, the celebrated surgeon and archæologist. Births and deaths of illustrious persons took place in rapid succession within its walls. Radcliffe's services were in constant requisition at Kensington Palace. In December, 1694, he was summoned in hot haste to the death bed of Queen Mary then ill of the small-pox. In 1699 he attended the Duke of Gloucester, son of the Princess of Denmark and heir-presumptive to the English Crown. The case was hopeless, and Radcliffe vented his spleen in virulent abuse of the two physicians who had charge of the patient. Here, too, at the close of the year he said to the dropsical King with a brutal frankness, "I would not have your Majesty's two legs for your three kingdoms"—a statement which lost him his patient, for William would never see him again, though he made use of his diet-drinks. William III was brought to the Palace to die in March, 1701, his death being determined by the fracture of the clavicle caused a few days earlier by his horse stumbling over a molehill at Hampton Court. In October, 1708, Prince George of Denmark, husband of Queen Anne, died in the Palace after Dr. Radcliffe had gone to Bath to relieve his dropsical symptoms. Once more the great but eccentric physician was called to attend a Royal deathbed at Kensington. This time it was the Queen herself who needed his skill. But Radcliffe lay ill of the gout at Carshalton, and Queen Anne died before he saw her, his place being taken by Richard Mead, "the princely" doctor. Radcliffe's absence on this occasion was so misconstrued by the mob that they threatened to pull him in pieces if he ever came to London. George II, too, died at Kensington, and lastly of royal persons the Duke of Sussex, the Queen's favourite uncle. But the associations of the Palace are not all so mournful. The Queen herself was born in the room on the far side of the present drawing-room. She was sleeping in the Palace when she received the announcement of her accession, and by a curious coincidence the present Duchess of York was born in the room known as "the Queen's Nursery," for the Duchess of Teck inhabited this part of the Palace for some years.

CANCER OF THE BREAST.

THE Royal Medical and Chirurgical Society lives up to its name. The interesting and prolonged discussion on the prevention of enteric fever, essentially a medical subject, has but just come to a close, and now there is every prospect of an animated debate on Mr. Marmaduke Sheild's paper on Immunity and Latency after Operations for reputed Carcinoma of the Breast. Carcinoma of the mammary gland is so grave and so common a disease that a discussion upon the results which may be hoped for from operation is sure to be read with interest by all practical members of the profession. The questions which have to be answered are, Is amputation of the breast in this condition of much avail, and if so, how much tissue should be removed? The general conclusion which Mr. Marmaduke Sheild drew from the facts and statistics which he brought before the Society was that they ought to afford encouragement to surgeons, and serve as a useful reference in persuading patients and their friends to have the operation performed. There can be no doubt that the extremely discouraging nature of the results of the operation led many eminent surgeons in the earlier part of this century to be opposed to the older plan of removing the whole mamma. With partial operations, however, there was great risk that the skin flaps left contained cancerous tissue. Moore, in a paper read before the same Society thirty years ago, pointed out the inadequacy of the operation then in vogue, and insisted that the entire breast should be removed. To Mr. Mitchell Banks in this country, and to Gross in America, belongs the credit of being amongst the first to revive the more radical operations now commonly practised.

Unfortunately, the most complete operations, including the free clearing of healthy tissues adjacent to the breast, does not, even when performed at a reasonably early period, always ensure immunity from recurrence. The interesting facts brought forward by Mr. Sheild appear to show that operations which would now be considered incomplete are not always followed by results so bad as might have been anticipated, and that the surgeon must take into account the pathological truth that cancer is occasionally a capricious disease, and may apparently remain latent in certain subjects for long periods. One other point which appears to be established by Mr. Sheild's statistics is that in those cases in which life has been prolonged for many years a careful watch has been kept for recurrences, which have been removed at an early date. Every surgeon must be careful, as Mr. Bryant warns us, against speaking of "the incomplete operation" and "the complete operation" after the fashion of the present day. If the former has a lower mortality and is as good a guarantee against recurrence as the practice of resecting the pectoralis major and clearing away glands under the clavicle, it cannot justly be called "incomplete." Even the complete dissecting out of the contents of the axilla seems by no means essential to good results. Those who put trust either in the most reliable statistics or in their own experience should further remember Mr. Pridgin Teale's objection to the too free use of the expression "cured." Three years' immunity from cancer after operation does not necessarily mean cure, and any case free for that length of time may be lost sight of by the operator, become stricken once more, and seek relief from others. It has been said, "Call no man cured of tuberculosis until you have seen his necropsy," and most of the speakers adopted much this point of view with regard to the curability of cancer. Mr. Butlin, however, spoke eloquently in favour of regarding cases that remained free from recurrence for Volkmann's three-year limit as cured. The debate was adjourned, and it is to be hoped that other operating surgeons will express their views at the next meeting.

THE RESPONSIBILITY OF THE MEDICAL PROFESSION FOR PUERPERAL FEVER.

IN a shilling cyclopædia, published by a well-known and much-advertising firm of soap makers, we notice a short article on puerperal fever which contains the following sweeping statement: "Puerperal fever is in every instance due to some negligence on the part of the medical attendant." If this were true it would imply an ideal relationship between doctor and patient, such as would exist in the late Sir Benjamin Richardson's City of Hygeia. If medical men had the power they could prevent puerperal fever. In some institutions they have the power and they do prevent puerperal fever. But the great majority of women in childbirth do not give the doctor the power or the opportunity of stopping every road through which infection might come to them. The average woman about to be confined lives as she pleases, she chooses her own nurse (and unless the statements of some of our recent correspondents are incorrect) sometimes the nurse chooses the doctor. The average nurse dresses as she likes and pleases herself as to the precautions against infection that she chooses to observe, and to advise the patient to follow. Puerperal fever will not be stamped out until either the principles of antisepsis are thoroughly understood by every nurse in the kingdom, or the public come to understand that the safety of the lying-in woman depends upon the faithful observance by her nurse of all the doctor's instructions, and that a nurse who decides for herself as to whether this or that is necessary is a dangerous person. It may seem as if in the above remarks we are unduly hard on the nurses, and are trying to exculpate the doctors. But a little consideration will convince anyone that the nurse is brought more often and more closely into contact with the patient than the doctor, and that her opportunities of infecting are therefore greater. Further, her knowledge is less, and therefore it behoves her to take instructions from the doctor. An expectant mother who values her life will ask her doctor to recommend a nurse, and will insist that the nurse carries out the doctor's directions. Doctors cannot control nurses without the co-operation of patients.

SCIENCE AND ADMINISTRATION IN INDIA.

THE present attitude of the Government of India with regard to scientific investigation may not unfairly be described as one of benevolent neutrality, at any rate in most directions. The greatest courtesy is shown to independent scientific investigators who present credentials of competence, and every facility is afforded to them to carry out their inquiries. But this is not the whole duty of rulers, and we are therefore glad to find that our contemporary *Nature* in its last issue refers to the urgent need that exists for further facilities for scientific investigation in India. Matters, it continues, "are continually arising which ought to be made the subjects of systematic inquiry, but at present the means for carrying out such investigations are altogether inadequate to the wants of our great Indian Empire." These observations were drawn forth by a letter from Surgeon-Captain A. E. Grant, who writes from the Hygiene Laboratory of the Medical College, Madras, stating that several well-ascertained examples of poisoning from diseased or improperly-prepared koda millet (*Paspalum scrobiculatum*) occurred during the past year in India. He believes it to be probable that, owing to the prevailing scarcity of the usual food grains, koda millet has been extensively sold and eaten in localities where its use is ordinarily unknown. While recognising the great importance, both from the hygienic and the economic point of view, of making an investigation into the matter, Surgeon-Captain Grant has despairingly to admit that he sees no prospect of being able to find time to carry through such an investigation. He therefore writes to offer to supply adequate samples of the grain to any investigator in Britain or elsewhere who has the necessary leisure and facilities for work of this sort. It is, obvious, however, that such work ought to be carried on under the auspices and at the cost of the Government of India in a properly-appointed hygienic institute. The incident forms another argument in favour of the early organisation of such an institute. The Government of India makes efforts which excite the astonishment and admiration of the world to remedy evils already afoot, but it does not appear fully to have recognised that the finer achievement would be to find out the causes of the evils, so that may be prevented.

INDIAN REPORTS.

SIR MOUNTSTUART E. GRANT DUFF, in an address which he gave last week on the recreations of an Indian official, rather went out of his way to slip in a criticism "of the terrible lengthiness of Indian documents." He quoted from Lord Cromer a story of General Blumenthal, who, during the Franco-German war assembled the newspaper correspondents with the army, and said, "Gentlemen, there is too much writing; if this goes on somebody will be shooted; will you come to breakfast, gentlemen?" Lord George Hamilton, who presided at the lecture, seems to have sympathised with General Blumenthal, and discussed at some length the defects of "the peculiar zoological species known as 'the long-tailed official'—the man who wrote long despatches." When an ex-Governor of an Indian province and a Secretary of State for India thus combine to rally Indian officials, it may perhaps be permitted to others to say, without offence, that the length of most Indian reports is portentous. It is a common accusation that the people of Great Britain know very little about India, and take little interest in its affairs. The accusation is not wholly true, but so far as it is well founded its cause is to be found to no small extent in the enormous length of the official reports issued by the Indian Governments. We publish from time to time analyses of

reports touching upon public health questions, but the labour of condensation is very great, and the feeling arises that it would be very much to the advantage of all parties if the reports were drawn up in a more condensed form. We should like to have something like the admirable letters which Sir Richard Thorne and his predecessors have prefixed to succeeding volumes of the reports of the medical officers to the Local Government Board. These introductions serve the purpose of the general reader, and act at the same time as a guide to the experts, while they afford an opportunity for an expression of the opinion of the chief officer upon the facts with which he has become intimately acquainted in the course of his official duties.

THE LEGAL RESPONSIBILITIES OF WATER COMPANIES.

IT is reported that the Maidstone Town Council have taken the advice of their solicitors as to their standing in any proposed action against the Maidstone Water Company for damages arising out of the recent typhoid epidemic. Strange as it may appear, they have been informed that they have no ground for action. The reason given is that they have as a corporate body suffered no loss. It appears that the water company are only under a contract to supply the authority with water for street watering and flushing purposes, the supply to the town being regulated by individual contracts. The opinion of the solicitors is, however, stated to be that the position of the consumer is on a different footing, and they advise that there is ground for a test action on their part against the company for the recovery of damages. It would be useful if the matter can be taken into court. A leading case on the responsibilities of water companies in the matter of the purity of the water they supply is very much needed. The Local Government Board inquiry into the causes and circumstances of the epidemic has been fixed for January 31st at the Maidstone Town Hall.

UNIVERSITATES NON SUNT PRÆTER NECESSITATEM MULTIPLICANDÆ.

THIS sentence, quoted by the President of Magdalen upon the authority of a distinguished member of the sister University of Cambridge, expresses the opinion which was apparently dominant in the mind of those who composed the very influential deputation which waited upon the Lord President of the Council last Monday. Sir Henry Roscoe, speaking on behalf of the Senate of the University of London, said that that body was anxious to come into closer relation with the teachers. Professor Michael Foster said that the majority of Fellows of the Royal Society were individually in favour of the scheme of the Cowper Commission, Sir Samuel Wilks and Sir William Mac Cormac assured the Duke of the support of the two Royal Colleges, and Dr. Frederick Taylor gave a similar assurance as chairman of the delegates of the medical schools, while Dr. Crosby, on behalf of the Corporation, Mr. Sidney Webb, on the part of the County Council, Mr. Ralph Palmer, representing the City Guilds, and Sir Wolfe Barry the Institute of Civil Engineers, all spoke in the same strain. The Duke of Devonshire's reply was a little ambiguous. He said that he was convinced, and that the Government was convinced. But in the same breath he said that the deputation was of particular value to him, because of the support which it would give him in urging upon his colleagues, and the support which it would give to his colleagues in urging upon Parliament, the importance attached to the question by almost the whole of those connected with the teaching institutions of London, and the expediency and necessity of making such moderate provision of parliamentary time as might be necessary to remove or overcome the small amount of opposition which still existed. The Duke of Devonshire asked for an assurance that notwithstanding the progress made towards unanimity in this matter it would not be desirable to attempt to proceed by charter, and that the appointment of a Statutory Commission to frame the future statutes and to reconstitute the University was the only means to ensure the scheme from further delay and perhaps from ultimate failure. The assurance was given by Sir Henry Roscoe, Mr. Anstey, and Sir Joshua Fitch, so that at present the matter seems to stand thus: The Duke of Devonshire, as Lord President of the Council, is pledged to introduce the Bill and to urge upon his colleagues (by which paraphrase we may suppose that he meant the Leader of the House of Commons) so to arrange the course of public business in the House of Commons as to find time for discussing the Bill at an early date. Here the subject must be left for the moment with the expression of the opinion that those who are actively engaged in promoting the passage of the Bill would be well advised at once to seek the support and enlist the interest of the metropolitan members of Parliament. As the Duke of Devonshire said, this is not a party question, and it is indeed understood that Mr. Balfour has even relied upon this fact to excuse him from the necessity of making a House and carrying the Bill on a division. It is pretty certain that if the metropolitan members of Parliament could be brought to see that the passage of the Bill into law would redound to the credit and honour of London, time would be found for its discussion and a majority in its favour.

ALPHONSE DAUDET'S MEMORY.

THE author of *Tartarin de Tarascon* and *Le Nabab* once wrote out for Professor Lacassagne some psychological notes on himself. He was myopic from infancy but had a very keen visual memory, so that he could remember, when he visited a picture gallery many years after his last visit, every change in the number, position, and individuality of the paintings and statues. The illustrious novelist seemed less at his ease with figures, as when he noted the number of a house and it happened to be over 9, he had a mental habit of adding up the two figures; thus, for 31 he calculated 3 and 1 make 4; the first figure was probably retained in his mind's eye, and, remembering 4, he would then calculate that 3 being the first number therefore 1 must be the second. Others have remembered figures by similar clumsy mental processes. Daudet himself relates how a friend, ignorant of German, once travelled with him in Germany, and tried to learn from his distinguished companion a few elementary sentences necessary for a tourist. The pupil had an extremely bad memory for words but a first-rate ear for music. In vain did M. Daudet try to make his friend remember "Ich will Fleisch essen." Directly he really wanted to order meat of a waiter the words disappeared from his mind M. Daudet therefore set the sentence, with two others, to the music of a popular air. The friend at once and for good remembered the sentences, "Ich will Fleisch essen; Ich will Bier trinken; Ich will zwei Zimmer, Ich will!" and could when necessary employ the right one. Medical students who make use of *memoria technica* show similar peculiarities. Some of the most brilliant and the most plodding workers alike reject artificial aids as absolute folly, whilst others belonging to those same opposite types seem never to learn anything new, not even matters so simple as the order of structures in an anatomical space, without such aids. Assistance through music is found useful by some, though useless by most. We knew of some students many years since who prepared a rhyming or rhythmical version of the *Pharmacopœia*. Thus "Conium" was offered to Helicon in the following form:

> "Oh! there's a cataplasm, extract, and a pill,
> A vapour, a succus, and a tincture."

These lines were set to a particular tune, but nearly all the students who learned them remembered the names of the preparations by the rhythm. One young gentleman, however, could never call to his mind either the name of Conium or the lines which set its compounds astride on Pegasus, unless the air came into his head, and so he found it with the remain-

ing pharmacopœial lyrics. To remember the music through the words of a song, the opposite accomplishment, is rare, nor is it even frequent among musicians.

THE PROSPECTS OF ENGLISH SPAS.

AFTER the extensive improvements recently carried out at Bath and Harrogate, it is only natural that there should be considerable discussion at these spas as to what steps are to be taken to secure success for the future. It is quite clear that much must depend on the management of the bath establishments, and the means taken to provide for the comfort and amusement of visitors, and it is to the due consideration of these points that some of the best known foreign health resorts owe much of their popularity. Outlays must certainly be made by the ratepayers, and the amount of return will depend on the efficiency of the management. Whatever schemes be adopted therefore, it will be essential that the medical men practising at the spas be properly represented, for they alone can be thoroughly acquainted with the needs of those who, by visiting the spa for their health, contribute to the income of the ratepayers. At Bath the Mayor has had a conference with representatives of the medical profession, and the Baths Committee have adopted a resolution inviting the members of the profession in Bath to form an advisory body to whom such medical questions connected with the management of the baths as may be deemed advisable may be referred by the Baths Committee. A slight difficulty has arisen owing to the fact that there are certain homœopathic practitioners in Bath, and that some hesitation has been felt by other members of the profession in sitting on the same committee with them. It is probable that a meeting of the profession will be held at an early date to decide what course should be taken.

THE DISPOSAL OF THE DEAD.

THERE is considerable evidence that this important subject is beginning to force itself upon the attention of the public, and the question of how to dispose of the "majority" without injury to the "minority" which remains, will have to be answered by the help of modern science. Cremation is becoming more and more general, and recently Sir Seymour Haden, the veteran champion of rational earth burial, has pleaded his cause afresh in the *Times* with his accustomed eloquence. Burial is necessarily and naturally a matter in which we are swayed by sentiment, and it often happens that when a great sorrow overshadows us we find it easiest to do what is customary. Of late years a good deal has been done to mitigate the troubles which death brings to the living. Mortuaries have been established, the time which intervenes between death and burial has been lessened, and a great deal of the "pomp" of the interested tradesman has vanished. For this last reform the public is indebted to no one more than to Sir Seymour Haden. Now it must be admitted that there are few customs which have not their drawbacks as well as their advantages, and this question of the disposal of the dead needs to be calmly reviewed from every side. On the theory that a dead body is liable to be dangerously infective, and to become a breeding place for pathogenic microbes which may ultimately spread disease among the living, the most rational method of disposal seems to be fire. On the theory that a corpse is infective, it is advisable to subject it to a minimum of manipulation, and to dispose of it on the nearest available spot. When one reads, as we did lately, that a body was "embalmed," and then sent a long journey over land and seas to be cremated, one cannot but think that enthusiasm had got the better of common sense. Again, it must in all candour be admitted that there is not much evidence of any frequent spread of disease being due to dead bodies whether above ground or below; the living sick are more dangerous. The question of disposal of the dead must be looked upon, also, from the economic point of view; and it is clearly one of those questions upon which the ratepayer has a right to be heard. A body has to be decently conveyed to the crematorium, just as it has to be conveyed to the grave. The champions of cremation say, and say rightly, that when a body is burnt it is no longer a danger to the living. The champions of "rational" burial hold that the danger of burial to the living has been exaggerated; that cremation pours the products of combustion into the air; that the expense of simple inhumation is not greater than cremation; and that a cemetery, well managed, is a valuable open space which ultimately freshens the air by its growth of herbage. The question is one of much importance, and it is clearly one upon which there is room for individual opinion. The time has certainly arrived when the *pros* and *cons* should be definitely laid before a Royal Commission or Parliamentary Committee.

TRACTION OF THE TONGUE IN APPARENT DROWNING.

A REPORT was recently published in *La Tribune Médicale*, which appears to illustrate the value of traction of the tongue in the restoration of the apparently drowned. A boy fell into one of the docks at Havre, and was not recovered till he had been immersed fully five minutes. He was quite unconscious when brought to land, but a custom-house officer at once proceeded to perform artificial respiration by Laborde's method (rhythmical traction on the tongue), while other attendants rubbed him vigorously and blew air into his mouth. In half an hour signs of life reappeared in the form of respiration and a few moans. He was quite two hours longer before completely recovered. Our contemporary considers that the fortunate result was mainly due to the tractions on the tongue, and with Dr. Gilchrist, of Nice, who has called our attention to the report, suggests that it should be made widely known through the lay press that traction on the tongue, repeated regularly fifteen times a minute, is a highly efficacious treatment in many cases of apparent death from asphyxia.

CANADIAN TINNED LOBSTERS.

THE exports of tinned lobsters from Canada have increased in value from 1,930,175 dols. in 1891 to 2,489,995 dols. in 1896. No little discontent has, however, been manifested on account of the uncertainty as to quality. The contents of many tins have been found blackened or otherwise discoloured, the flesh remaining firm, while in others the meat was not only black but liquid and the can distended with foul gas. The loss from this cause has been even estimated at from 600,000 dols. to 900,000 dols. a year. Under these circumstances the Dominion Government requested Professor Andrew Macphail of Bishop's College, Montreal, to examine, report, and advise. His report, which is of a most interesting character, has been presented to the Canadian Parliament.[1] After having as the result of observation and experiment excluded from any great share in the mischief such suspected causes as acid used in making the tins, season, period as to moulting, size and sex of the lobster, Dr. Macphail was driven to the conclusion that the "smut" was essentially of bacterial origin. From the contents of "preserved" lobster tins he has isolated four distinct bacteria, pure cultures of which he obtained by inoculating untainted tins. These, cultivated in the usual manner, grew all four in hydrogen, all four coagulated milk. Amongst the pleasant products of their bacterial life were indol, butyric and lactic acids, methylamine and dimethylamine, carbon dioxide and sulphuretted hydrogen. By altogether discarding the old practice of puncturing the tins after the first "bath"; by limiting this bath to a simple immersion of the sealed tins for an hour in boiling water (too great or two prolonged heat deteriorating the taste of the

[1] Discoloration in Canned Lobsters. Report of an Inquiry into the Causes Leading to a Deterioration in the Quality of Canned Lobster. (Printed by order of Parliament. 1897. Ottawa. E. Dawson, Queen's Printer. Pp. 33, 8vo. Price 5 cents.)

"fish"); by repeating the bath for 50 minutes 12 or 15 hours later and again for 40 minutes after a further like interval, and even in warm weather giving a fourth bath of 30 minutes; by keeping the cans well cooled in the intervals; by great attention to protecting the meat from contamination during the shelling and packing; by protecting the tins from dirt, and by suchlike aseptic measures science triumphed, and Professor Macphail presented to the London merchants cans of lobster prepared under his direction six months earlier which satisfied their requirements not only as to soundness but as to taste. Now, fifteen months from their preparation the tins contain undeteriorated lobster flesh. One other point is important. Dr. Macphail's methods are a sort of combination of the extreme cleanliness of the operating theatre with the repeated low temperature sterilisation of the cultivation media used in the laboratory. The non-puncturing after the first bath leaves the tins less concave than we are accustomed to look for in "healthy" canned food. To some slight extent this is obviated by mechanical means, but still probably in actual practice the unpunctured tins might resemble in appearance the old slightly bulged tins and be condemned unopened. For the rest, the methods are clearly set forth, are not too complicated, and ought, if carried out, to restore the character of the Canadian lobster trade.

MEDICAL EDUCATION IN THE UNITED STATES.

ACCORDING to Dr. William T. Slayton, whose annual volume, *Medical Education and Registration in the United States and Canada*, has lately appeared, the total number of medical schools in the United States is now 154. Of this number 117 require attendance on four annual courses of lectures and 27 require attendance on sessions of eight months, and 10 on sessions of nine months each year. Twenty-nine States and the District of Columbia require an examination for the licence to practise medicine; eighteen of these require a diploma from a recognised College and an examination. Fifteen States require a diploma from a College recognised by them or an examination. Five States, namely, Vermont, Michigan, Kansas, Wyoming, and Nevada have no laws regulating the practice of medicine; and virtually the same thing may be said of Alaska. According to the New York *Medical Record*, many of the schools included in Dr. Slayton's list are mushroom institutions not worthy of notice, containing, perhaps, a dozen students, and brought into existence only for the purpose of profit or from other motives of self-interest. In 1883-84 the number of students in regular schools was 10,600; in 1893-94 they had increased to 17,601. The number of students in homœopathic schools in 1883-84 was 1,267; in 1893-94 it was 1,666. The number of students in the "eclectic" schools remained stationary during the decade in question. The increase in the period from 1893-94 to the present time has been at about the same ratio. Both the number of schools and their yearly output of graduates are declared by our contemporary to be far beyond the demand.

THE OLD ADAM AND THE NEW EVE.

THE advocates in Germany of the policy of admitting women to the medical profession appear to have won a considerable victory, for it is announced that the Chancellor is about to make use of his legal right to control the conditions of examination and of admission to practise medicine and pharmacy by authorising the admission of women to the examination. The universities are not yet open for instruction, but as the State examination, which is the one portal to the legal practice of medicine in Germany, is now open to them, they will be able to pursue their studies in some university which admits women, as, for instance, one of those of German-speaking Switzerland. The new woman is the subject of much admiration and of much fear, both equally foolish. To begin with, she is not at all new; and, in the second place, she remains woman. A great and increasing number of women have to earn their own living, and in the process are exposed to the same influences as men. Some few lead such a life from choice, but we may be sure that they will never be a large number. The former should be pitied and helped; the others should not be thwarted, lest their small martyrdom bring more proselytes than their success. The great majority are in business and lead a hard life of it. Some have sufficient means to enable them to enter a profession, of whom most are teachers of languages, history, music, or other arts. The army, though there have been women soldiers, the bar, in spite of Portia's success, and the Church, are as yet closed to them, but it has been allowed by common consent that medicine ought to be open to them, and there are a certain number in our ranks. The whole movement is, indeed, a useful relief for struggling women, and one which for that reason we would gladly help; but to talk of it as a change in the relation of the sexes, or as a movement of great social importance is an error of judgment. Men will always cultivate the qualities which women admire, and women those which men wish to see in them, with the happiest results, for each sex is a good critic of the other, while those who prefer a life of single independence will not perpetuate their peculiarity.

INCREASE OF INFLUENZA IN LONDON.

ALTHOUGH for some time past influenza has been somewhat prevalent in several parts of London, the number of deaths directly attributed to this disease had, until the last few weeks, shown but little tendency to increase. During the three weeks ending January 15th the fatal cases of influenza registered in London were 29, 43, and 40 respectively; but during the week ending Saturday last, January 22nd, the deaths referred to this disease rose to 73, a higher number than in any week since March, 1895. Of these 73 deaths 5 only were of persons under 20 years of age, 7 of persons aged between 20 and 40 years, and 17 of persons between 40 and 60; while 44, or more than half of the total deaths, were of persons aged upwards of 60 years. The disease appears to be much more fatally prevalent in South London than in any other part of the metropolis, especially in Wandsworth, Battersea, and Camberwell. Influenza is reported also to be epidemic in Paris.

THE "FATIGUE VALUE" OF SCHOOL CLASSES.

AN interesting attempt to introduce scientific precision into ideas as to the nature and causes of overpressure in schools has been made by Dr. Kemsies, the headmaster of a large German school.[1] He states his personal experience of the conditions which influence the working capacity of his pupils. The best work of the week is done on Monday and Tuesday (after the Sunday holiday). On Tuesday afternoon the work has already begun to deteriorate. He strongly advises a holiday on Wednesday, in order to check the mental exhaustion, and so raise the standard of work for the second half of the week. The first two hours of the day produce the best work; after the mid-day meal there is a marked falling off. If the individual lessons last longer than two hours the greater part of the class suffer from fatigue; a recreation interval after each two hours' lesson is recommended before the next lesson begins. After the holidays (which never last longer than four weeks) the quality and quantity of work are markedly increased. The fatigue value of different subjects is given. Gymnastics produce the greatest fatigue; the work done after this is almost useless. Dr. Kemsies considers that sleep, bathing, and walking are quite sufficient bodily exercise. Mathematics come next in the list. This is followed by foreign languages and religion. History, German, and natural history are bracketed as producing the least fatigue. Singing and drawing are very fatiguing to some, but not to others. The connection

[1] *Deut. med. Woch.*, January 20th, 1898.

between the age limit and the fatigue value of the different subjects is not given, which rather detracts from the value of the conclusions, but if English schoolmasters would make similar observations on the fatigue value of the different subjects they are in the habit of teaching, the results might prove of great value to those interested in educational matters. The term "fatigue value" is vague. A child often appears fatigued because he is bored by the teacher. He has lost interest in the subject before him, owing to the incapacity of the teacher to interest him. In this case the same physical and psychological picture might be produced as would be caused by real mental overwork. The German teacher does not encourage bodily exercise to the extent that is usual in this country. Cricket and football have possibly a lower fatigue value than gymnastics.

THE DISCIPLINARY POWERS OF UNIVERSITIES.

AT a Convocation of the University of Durham, to be held on February 1st, it will be proposed to revoke the degrees of a graduate in medicine and surgery, in accordance with the penal powers of the new charter of the University. At the last meeting of the Edinburgh University Court it was agreed to appoint Lord Stormonth-Darling, Sir William Turner, and Dr. Heron Watson as the Court's representatives on the Joint Committee of the Scottish Universities, to consider the question of acquiring penal and disciplinary powers over graduates guilty of a criminal or other offence.

THE WESTERN INFIRMARY, GLASGOW.

THE three new theatres in the Western Infirmary are practically complete, but are not yet opened for work. It is stated that one of them will be specially assigned to Professor Macewen. This will be regarded as gratifying evidence of the re-established harmony between the managers and the staff of the infirmary.

AMONG the gentlemen upon whom the honour of knighthood was conferred by the Queen at Osborne on January 25th were Dr. Batty Tuke and Dr. John Struthers.

MR. JOHN H. MORGAN will give the first of his Lettsomian Lectures before the Medical Society of London on Monday, February 7th, at 8.30 P.M. The subject of the course is the Affections of the Urinary Apparatus in Children.

AT the meeting of the Edinburgh University Court, on January 17th, intimation was made of a donation of £1,000 by Sir William Overend Priestley, M.P. for the Universities of St. Andrews and Edinburgh, towards the cost of redecorating the library. The gift was gratefully received.

THE Cameron Prize of the University of Edinburgh, open each year to anyone who in the preceding five years has made any "highly important and valuable additions to practical therapeutics," has been awarded to Professor T. R. Fraser, F.R.S., in recognition of his researches and practical therapeutic observations in connection with strophanthus.

THE Treasurer of Guy's Hospital has received from Mr. Henry Lewis Raphael the sum of £20,000, to be devoted to the building of the "Henriette Raphael Nurses' Home," in memory of the late Mrs. Raphael. By this munificent gift one of the special and pressing needs of the institution has been provided for.

PRINCESS HENRY OF BATTENBERG paid a visit on January 26th to the Royal Victoria Hospital, Netley, for the purpose of conveying a message of sympathy from the Queen to the soldiers in the hospital, many of them just returned from the Indian frontier, who have suffered in the service of their country. Her Royal Highness was received by the Principal Medical Officer and other officers of the Army Medical Staff, and was conducted over the wards by Surgeon-General Nash. The hospital contains 540 patients, of whom 30, including 8 wounded, are invalids from the Indian frontier. The Princess expressed to the men Her Majesty's admiration of the gallantry of her soldiers, and the pain it had caused her to learn that so many had fallen while following the colours.

DEATHS UNDER ANÆSTHETICS.

CHLOROFORM.

WE have been favoured by Dr. J. Lewis Jones, of Llansamlet, Swansea, with the following particulars of a case of death while under the influence of chloroform which occurred recently in his practice:

The patient, O. R., aged 21, suffered from varicocele. Having taken the necessary precaution of examining the heart before administering the anæsthetic, and finding no physical objection, chloroform was given in the ordinary way. The urine had also been examined and found normal. There was some trouble in getting the patient under. Before the second ligature was applied chloroform was withdrawn, and in about three minutes after withdrawing it the patient became pale and the pulse small and irregular. This was followed in a few seconds by a long sigh, which was in reality the last certain sign of life, although all the artificial means ordinarily resorted to were applied, including injections of ether and strychnine. The after-treatment was continued for at least half an hour. The patient was exceedingly nervous, and surrounded also by friends of the same temperament.

WE have received from Dr. Albert Paling, house-surgeon to the General Hospital, Bristol, the following account of a case of a death under chloroform which occurred recently in that institution:

The patient was admitted into the General Hospital, Bristol, under the care of Dr. J. Michell Clarke, for exopthalmic goître, on October 31st, 1897. She was under medical treatment, without marked improvement, till the beginning of January, 1898, when a consultation was held, and it was decided to endeavour to arrest the disease by division of the isthmus of the thyroid body. On the morning of January 4th her pulse was 140 per minute, and about 3 o'clock on that day chloroform was administered. She took the anæsthetic well, and was soon under. The administration lasted an hour and a few minutes; her average pulse rate was 120 per minute. An ounce and a-quarter of chloroform was given. All went well till the operation was completed and the bandage was being applied; her pulse was then observed to be 160 per minute, and small. She was raised into a position about 45 degrees with the table, to apply the bandage. Immediately after this the anæsthetist noticed her breathing was very shallow, her pupils suddenly dilated and became fixed at extreme dilatation, her face assumed a grey shade; then her respirations ceased, and the pulse became imperceptible. At the first sign of failure in breathing artificial respiration was commenced, the tongue drawn well out, the head was lowered, the bandages cut, cold was applied to the face, and hot towels to the precordia. Inversion was tried, and artificial respiration persisted in, but all were unavailing. No chloroform had been given for 8 minutes prior to the first signs of failing respiration, and about 10 minutes before the cessation of the heart.

MR. HERBERT MILLS BIRDWOOD, C.S.I., late Governor's Council, Bombay, will give a lecture on the Plague in Bombay with lantern slides on February 17th, at 4.30 P.M., before the Indian Section of the Society of Arts.

THE CEYLON MEDICAL SERVICE.—Surgeon-Major Allan Perry, who retired recently from the Army Medical Staff, has been appointed Principal Civil Medical Officer and Inspector-General of Hospitals, Ceylon, in succession to Sir William Raymond Kynsey, C.M.G. Surgeon-Major Perry served for four years in Colombo and Kandy, and his return will be welcomed alike by the public in Ceylon, and by the members of the Medical Service. It is believed that his appointment will give an impetus to the study and practice of ophthalmology in the island, as he is known to have given special attention to this subject.

BRITISH MEDICAL ASSOCIATION.

DEPUTATION TO THE SECRETARY OF STATE FOR WAR

WITH REFERENCE TO THE POSITION OF OFFICERS OF THE ARMY MEDICAL STAFF.

As briefly mentioned in the BRITISH MEDICAL JOURNAL of January 22nd, a deputation from the British Medical Association, comprising representatives from most of the chief centres of medical education in the United Kingdom, waited on Lord Lansdowne, the Secretary of State for War, at Lansdowne House, on January 20th. The deputation was introduced by Dr. Farquharson, M.P., and consisted of the following gentlemen: Sir Thomas Grainger Stewart, representing the University of Edinburgh, and President-Elect of the British Medical Association; Dr. Robert Saundby, President of Council of the British Medical Association; Surgeon-General Sir James Mouat, V.C., K.C.B. (retired); Dr. D. MacAlister, representing the Medical School of the University of Cambridge; Professor Ball, representing the University of Dublin, and Regius Professor of Surgery; Professor A. Ogston, representing the Medical School of University of Aberdeen, and Regius Professor of Surgery; Sir George Duffey, representing the Royal College of Physicians of Ireland; Sir William Thomson, representing the Royal College of Surgeons of Ireland; Mr. N. C. Macnamara, F.R.C.S., Vice-President of the British Medical Association; Dr. S. C. Griffith, Master of the Society of Apothecaries; Surgeon-Major-General G. L. Hinde, C.B., (retired); Surgeon-Major-General Campbell Fraser (retired); Dr. T. Bridgwater, LL.D., Vice-President of the British Medical Association; Dr. J. W. Moore, Professor of Practice of Medicine in the Royal College of Surgeons of Ireland; Mr. George Brown, one of the Direct Representatives for England on the General Medical Council, British Medical Association; Dr. J. W. Miller, British Medical Association; Dr. C. H. Milburn, British Medical Association; Dr. W. Gordon, British Medical Association; Mr. Francis Fowke, General Secretary of the British Medical Association.

Dr. FARQUHARSON, in introducing the deputation, said that although gentlemen were present from all parts of the kingdom it was primarily a deputation of the British Medical Association represented by its principal officers, the President-elect, the President of Council, Vice-Presidents, and other important officers. The deputation wished to lay before his lordship the condition of the Army Medical Department, which he thought would be admitted was in a very unsatisfactory condition. The deputation had what they considered a complete remedy to lay before his lordship, and one which they were quite sure would have his serious and sympathetic consideration.

Sir THOMAS GRAINGER STEWART said he had the honour of appearing before his lordship in a double capacity, on the one hand as President-elect of the British Medical Association and on the other as representative of the University of Edinburgh which had deputed him to represent to his lordship and to the War Office the very important views that were entertained by the University with regard to the question of the Army Medical Department. The University felt that it had some right to speak, not from the fact that it had supplied so large a proportion of army senior officers as some other schools had, but because since the time of Waterloo, with one single exception, every head of the Army Department had been a student of the Scotch Universities. He was not there to represent mere grumblings on the part of the profession or to champion simply the rights of its members, but very strenuously to represent to his lordship the anxiety the medical profession felt with regard to the state of the Army Medical Department. They had the very strongest feeling that they would not be doing their duty to the army or to the nation if they as a profession did not come forward and frankly let his lordship understand that they believed the condition to be thoroughly and profoundly unsatisfactory at ths present time. That had been felt so strongly in the British Medical Association that a Committee engaged in investigating the whole question had existed for a considerable time. They had gone with extreme care into the matter, and had brought out a number of points which had been embodied in the reports which had been placed before his lordship. What was required from an army doctor now was very different from that which was required from him fifty or sixty years ago, when it was a matter of setting a dislocation or mending a fracture, and so forth. In these days it had to be recognised that wounds had become very much more formidable than they were when inflicted with the old weapons. Wounds in the field were now far more dreadful, and the work of the surgeon had therefore become greater. Again, it had been discovered that a great deal more could be done for the cure of men seriously injured than was thought to be possible in former times. He recollected, when he was a student, the astonishment that was felt when it was found that men in the Crimea were found to do better sometimes in the mere hospital tents than in the so-called well-organised hospitals. At that time it could not be understood why that should come about, but it was known now that those hospitals were full of the germs of disease. One of the greatest things an army surgeon had to do was to understand aseptic surgery. The great improvements in surgery which had come in with Lord Lister required such minuteness and care that surgery required men of great soundness of judgment and scientific attainments before the best results could be obtained. A great deal had also changed with regard to the knowledge of epidemic diseases. Those epidemic diseases, which were a great cause of death in all campaigns, could to a large extent be prevented if discovered early, and if the proper means for their prevention were taken, if thoroughly scientific methods of management and investigation were carried out. It had become necessary for army medical men to be scientific men, well trained, and not rough and tumble surgeons, if they were really to do the best for the soldiers engaged in campaigns. There had also been developments with regard to field hospitals, and removing men to the rear to hospitals, and so on, and all those things required to be organised, and therefore a great deal fell on army medical officers that did not fall upon them in the earlier days. With such tremendous and important duties the medical profession felt that it was absolutely impossible, as things were, for the work to be properly carried out. The present state of the Army Medical Department had been found on investigation to be in the judgment of the profession really scarcely fit to meet the requirements of peace, and the members of the Committee who had looked most into it were satisfied that if there were to come a time of war it was to be dreaded that all the horrors which occurred during the Crimea might be repeated. Then again it was felt by the Committee, and they represented it very strongly to his lordship, that the numbers employed were very inadequate, that there were far fewer army doctors now than there when the army was very much smaller. It was also known that, most unfortunately, the numbers applying were not equal to the requirements of the service. The service had become so unpopular with young men that the best men, who used to look to the army as a fine field in the old days, no longer thought of it. They turned away from it. They might go into the Indian Service or the navy, but, as far as coming into the army, a good man in the University of Edinburgh scarcely ever dreamed of it. The army did not get the best men; it scarcely got any Edinburgh men as candidates. Of course he did not like to say such a thing, but the impression prevailed in the profession that the qualifications of those who did come forward from other schools were far less satisfactory than was desirable, that men had to be admitted who did not reach a standard that would be welcomed by the Indian Service, for example, or by other departments. The causes of that unpopularity had been very fully discussed in the memorandum which had been presented to his lordship, and he would not go into that in detail, but it was perfectly clear that the medical officers were to a large extent treated as outsiders, and were not recognised as being an integral part of the army. Moreover, the medical officers had to complain of certain social disabilities and discomforts. Their position was not recognised as it deserved to be. The deputation also regretted that in consequence of changes made a few years ago there had been such a complete separation of medical officers from regiments. In the old times, when a man was connected with the regiment many

advantages followed which were now impossible. Then there was under-officering, the result of which was that opportunities of study leave had been practically impossible. He wished particularly to dwell for the moment upon the importance of study leave. Everyone who was in active exercise of the profession knew how apt he was to get rusty and fall behind. Army officers had been promised opportunities of getting away for visiting the hospitals in London or any other good medical centres, but those promises had been scarcely able to be fulfilled in consequence of the extreme pressure that had existed. It was very desirable that there should be, if possible, such a manning of the service that men would be able to get away and improve their knowledge in the way that he had indicated. With regard to the remedies, the Committee believed in the first place that it was of the utmost importance that there should be a reconstitution of the Army Medical Department on new lines, that the Army Medical Department should become an army medical corps, and that the Army Medical Corps should include what was at present the Medical Staff and the Army Hospital Corps. Those two being associated together should have their strength increased so as to make them thoroughly efficient, and the Committee hoped that Her Majesty might be graciously pleased to convert such a corps by Her authority into a Royal Corps, and to give it thereby a position and prestige to which it was fully entitled. Those who were most familiar with the subject believed that not titles of the kind at present in use should be employed, but ordinary military titles. He did not know how it could be devised, but it was very possible that something might be done whereby medical men should become more associated with regiments and with groups than had been the case of late years. They ventured to think as a profession that they had precedents of some importance in regard to the constitution of such a Royal Corps as he had ventured to name; but, on the one hand there were the Royal Engineers and on the other the Royal Artillery, and there was also the Army Service Corps. All those were in their day not recognised as integral parts of the army. It had been found, on looking into the matter, that there was a time when an artilleryman was regarded as something quite outside the lines of the army, but in the course of time it came to be made an honoured branch of the profession. There were very great difficulties indeed in carrying such improvements through, and, when the great place was given to the Royal Artillery which it now had in the service, many people grumbled and complained. It was well known with what respect and reverence the Royal Engineers were regarded at the present time, but they had an exceedingly hard fight to be recognised as anything more than sappers and miners. His lordship knew how splendid had been the results of the commissariat department and the Army Service Corps. They believed that if they could get such a thing carried out in regard to the Army Medical Corps they would be able to anticipate far brighter times, and that the medical profession, instead of looking on with the profoundest anxiety, as they were now obliged to do, at the prospect of any war, would be able to face it, and say that, just as the country could absolutely trust the men to do their best in the battle as the generals could be trusted to do it, so could they trust the Army Medical Department to save lives and to do the very best that the profession were able to do.

Surgeon-General Sir JAMES MOUAT, V.C., K.C.B., said he was there to support the views put forward by the deputation; and seeing that he was in his sixtieth year of service, he thought he might claim to be a representative of the old school. He considered that the formation of medical officers and men into a corps, Royal if possible, with definite army rank and military titles, was absolutely indispensable to enable them to perform their onerous duties efficiently. The time had arrived to promote those reforms which in his opinion would remove the chronic discontent which was ruining the prestige of the Army Medical Department, and very seriously affecting the efficiency of the service. What medical officers required was simply to be treated on a perfect equality with the other scientific branches of the army, Engineers and Artillery, and not to be treated as they were at present as a class apart, and almost an inferior class. He could not see there was anything in the education of the medical officers of the army, which embraced all the collateral sciences, that should in any way disqualify them from holding military rank and title equal to the other departmental officers of the service. If all those points were conceded, he was quite sure that content would very possibly be restored. As it was at present, there was no doubt the condition of the service was most unsatisfactory. Medical officers could not be got to enter it. When he entered the service sixty years ago, there were 200 candidates waiting to get in, and he had the greatest difficulty in getting in. He did not see that he could add anything to what had been said by the President-elect of the Association, but he hoped that the time had arrived, and that his lordship would have it in his power to concede the very simple matters which were asked for, and which he thought would tend to place the department in a condition which at present it did not hold.

Dr. ROBERT SAUNDBY said his duty was simply to represent the views of the British Medical Association in supporting the objects of the deputation, and to say that the Association sincerely trusted that the particular remedy—namely, the consolidation of the Army Medical Staff and the Army Hospital Corps into a Royal Medical Corps or an Army Medical Corps, as had been indicated by the memorandum—would receive his lordship's earnest consideration. As a medical teacher in a medical school, he was fully aware, and all those who were medical teachers knew, of the unpopularity of the present existing medical service. Students were quite unwilling to come forward, and although it was a disagreeable thing to say, it was necessary to support what Sir Thomas Grainger Stewart had said, that the army did not get anything like the leading men, but only the inferior men of the schools.

Mr. N. C. MACNAMARA said he had been requested to speak as one of the Vice-Presidents of the British Medical Association. As far back as 1854 he was appointed Assistant-Surgeon to the 1st Bengal European Fusiliers. Soon after joining the regiment cholera broke out, and a number of the men were attacked by the disease in a short time. He lived in the hospital day and night, and had come to know something about soldiers, and from that time onwards had taken much interest in all that concerned them. In those days many army surgeons had been educated at the public schools, and had learned how to give and take in a proper spirit from their companions; most of them were known personally to the gentlemen who obtained commissions for them in the army. Their regiment was often their home for life, and they were in many instances the cherished friends and advisers of their brother officers and of the men. But after the Crimea all that was changed; the medical organisation of the army then collapsed, and Lord Herbert's Commission reported at the time that no small part of its defects was due to the fact that its officers were not armed with sufficient authority to enable them to work their department effectively. Nothing could have been stronger than Lord Dalhousie's minute on the subject. Then followed the days of open competition for appointments in the Army Medical Service, and a system which had led to medical officers being constantly moved from one station to anothers. Regiments constantly moved in the natural order of things, and so officers and privates might come under the care of several different medical men in the course of a few months. Community of action or of purpose was thus impossible. Beyond that, the competitive system had, he thought, admitted a certain proportion of officers in all departments of the army who were disposed to assert their position with a high hand in right of their rank, rather than to cultivate those amicable relations which formerly prevailed between the medical and other officers. In not a few instances a state of tension, if not of severe friction, had been engendered, and the life of the army surgeon was far from being a happy one. No fewer than three Commissions had tried to devise steps to improve their position, and the work they had done, clearly drawn up by Dr. Gordon, was in his lordship's hands. As a member of Lord Camperdown's Commission in 1889 he had heard the evidence tendered. It was stated that 75 per cent. of the medical officers considered it necessary that they should be granted substantive rank and military titles to enable them efficiently to perform their duties as army surgeons,

and that on entering the service they necessarily became military officers and were subject to the risks of other officers on active service. Their death-rate, due to their life and calling, was higher than that of any other class of officers in the army. The military officers examined, with the exception of Sir Donald Stewart, did not appear to him to appreciate to its full extent the life and the difficulties which medical officers laboured under in existing conditions. They had long since left their regiments, and perhaps hardly realised the great changes which had taken place since the introduction of competitive examinations and the abolition of the purchase system. They asserted that medical officers were not officers of the army, but belonged to the Medical Department, and so on. Lord Dalhousie, on the other hand, thought that "the absurdity of regarding a medical officer as a non-combatant" had been abandoned. Mr. Stanhope did not think himself in a position at the time to overrule the opinion of his military advisers. Among other changes existing titles were introduced, such as that of brigade-surgeon-lieutenant-colonel. One could not understand such titles, unless they were intended to throw ridicule on the medical service. In February and August last year 71 vacancies were advertised in the Army Medical Service, but only 50 candidates came up for the competitive examinations, and of those 31 passed into the service. Whatever the feeling of some members of the profession might be as to army medical officers having substantive rank and titles, so far as he knew their opinion was unanimous that there was nothing left but to give such to them. As a means to that end they begged his lordship to carry into effect the recommendations contained on p. 7 of the report forwarded to the War Office in December, 1896, and reiterated in the memorial lately presented. Identical recommendations had been made to his lordship by the Royal College of Physicians and the Royal College of Surgeons of England, and, if they might judge of public opinion by the utterances of the *Times* and other organs of the press, there seemed to be an almost unanimous desire, not only on the part of the profession, but also of the community at large, to see those reforms carried into effect. The medical officers of the army should be brought up to their full strength, otherwise no scheme of reform could yield satisfactory results.

Professor BALL said that as a large number of the graduates of Dublin University held commissions in the Army Medical Staff, many of them of the highest rank, the authorities were naturally anxious to join in the deputation which had been originated by the British Medical Association. It had for its object the improvement of the position of those members of the staff who had already entered the service. They were also naturally anxious that the Service should again be made attractive to the recently qualified students. That it was not attractive now was a notorious fact, and that was all the more remarkable when on all sides they heard complaints of overcrowding of the profession in all branches of civil practice. In trying to investigate the cause one could not help being struck by the fact that the Indian army still retained its popularity, and that the competition for commissions in that service was very keen. One of the chief causes, if not the chief cause, was undoubtedly the fact that the Indian army opened up to a young man entering that service a professional career. The home service could not in the nature of things hold out such opportunities. Except in the very largest military stations the opportunities for purely professional work in the Army Medical Staff were of a very meagre description, and young men entering the Service soon got to find out that they were not encouraged in scientific and professional work. The relations of the Medical Staff to the other branches of the Service undoubtedly constituted the real grievance of which those officers who at present held commissions complained. These officers were emphatically of the opinion that what was wanted was a medical corps, and they believed that, once they had that, the other things were of a minor consideration. It was hard for a civilian to understand exactly the meaning of the terms "substantive rank," "relative rank," and "departmental rank," but the rank that the Army Medical Staff had at present did not enable them to carry on their duty in the way in which they thought they ought. The duties that devolved upon the surgeon now by the requirements of modern surgery—and more especially, perhaps, by the requirements of modern military hygiene—had made his occupation one of vast importance to the army. The medical staff at present seemed to occupy a somewhat undefined position. They either belonged to the army or they did not. If they belonged to the army, their request to be made a corps and an integral part of it seemed to be a reasonable one. If that was not the case, the logical conclusion to be drawn would be that they were a department of the Civil Service attached to the army; but he thought that was a contention nobody would put forward. If the forming of a medical corps tended to draw the best class of students to the army as a profession, he was sure that many of the other difficulties that had been mentioned would soon disappear.

Sir WILLIAM THOMSON said he was present as representing the Royal College of Surgeons of Ireland, which naturally took a considerable interest in the question, because it had already sent into the ranks of the Army Medical Department a large number of officers; indeed, at one period, at all events, something like one-half of the officers serving belonged to Ireland. On the evidence which had been brought before him, he thought the grievances which the medical officers of the army complained of were very substantial, and the fact was obvious that for the last three or four years the declaration of these grievances had had the effect of practically starving the Army Medical Department; the number of candidates had greatly diminished, and in some cases had not perhaps equalled the actual number of vacancies. He took it that the grievances must be extremely serious when in a country like Ireland, which, as his lordship knew, was rather a poor one, young surgeons hesitated to enter the department which gave them the security of a very good income and the prospect of an excellent pension, and were prepared to enter the struggle of civil life such as it was. The present state of affairs had not been brought about so far as he was aware by any preconcerted action on the part of the schools. He himself had always declined to tell any young man who asked for his advice that he was not to enter that service. On the contrary, he had said that the service presented very many advantages. But nevertheless the volume of evidence which had been brought forward by those who had experience was such that it had the deterrent effect to which he alluded. So far as he had been able to judge, medical officers in the first place felt that their position in the army would be exceedingly improved by the granting of military titles instead of the titles which they now enjoyed. The medical department in the army was the only department which prefixed to its military title a signification of the actual profession or calling of the individual, with the exception, of course, of certain minor departments in cavalry regiments, such as farrier-sergeant or farrier-major. The other claim laid down was that of the Army Corps; and he had no doubt whatever, speaking as a civilian and as a hospital surgeon, that in these days it was absolutely necessary that some distinct organisation, such as would be provided by an Army Medical Corps, should be established if they were to have the effective treatment of the wounded in time of war. Anything that would serve to cut up the medical department into two bodies, such as the Army Hospital Corps and the Medical Staff Corps, would, in his opinion, utterly fail when the moment came to organise the medical department for the great crises of war. He believed that an Army Medical Corps would give great cohesion to the whole body of medical men, and that they would be able themselves to devise and carry out the improvements which they would feel to be necessary, and that the benefit to the army would be unspeakable. He need not say, perhaps, to his lordship, that the army medical body was a most important one in the service of the country; with them lay the important matter that the soldiers who were to fight should be kept in good health and protected from the influences of bad climate, and when it was traced down it would be seen that it was only through the medical officers that the physical efficiency of the army could be maintained. In conclusion he submitted that the medical officers deserved all the sympathetic consideration that he was sure his lordship would give to their claims.

Dr. FARQUHARSON said that Dr. MacAlister and Professor Ogston were also prepared to speak if his lordship desired to hear them.

Lord LANSDOWNE assumed they concurred in what had been said by the other speakers.

Dr. FARQUHARSON said they absolutely concurred in everything that had been said.

Lord LANSDOWNE, in reply to the deputation, said: I have in the first place to make you my apology for having given you the trouble of coming to me at this house. It would have been more convenient to you, and indeed it would have been more convenient to me, to receive you in the usual way at the War Office. If I was unable to do so, it was owing to the distinct *fiat* of a member of your profession, who absolutely enjoined upon me that I should not leave the house to-day. Perhaps you will permit me to say I am entirely with you in regarding with very serious concern the present condition of the Army Medical Staff. When we find, in a body of that kind, for admission into which there ought, under a proper condition of things, to be keen competition amongst the most promising of your students, that that competition does not exist we may well be uneasy, particularly when we are told, as we have been told this afternoon by the President of the Council, that it is only the comparatively inferior men who present themselves; and by the President-elect that, according to his experience, the best men turn away from the Army Medical Staff. That certainly points to a very grave condition of things that we have to some extent been acquainted with during the time I have had the honour of being connected with the War Department. I can assure you that the matter is not one which we fail to consider, and to consider very seriously. In the first place, I hope you will forgive me for reminding you that, although some one or two of the principal aspirations of your profession have not yet been dealt with, yet in regard to a number of other points which have been laid before me on its behalf we have been able, as we conceive, to redress the alleged grievance. I will merely, without in the least going into details, enumerate one or two of the matters with which we have been able to deal since I took office. I will take them in their order. There was the position of medical officers on courts of inquiry and courts martial. A good deal of dissatisfaction was expressed upon that point, and we have dealt with it, and, I believe, dealt with it in a manner satisfactory to the profession. Then there was the question of medical nursing. We have dealt with that. One or two of the speakers referred to the question of grant of leave for study; and there again, as far as I have been able to deal with the matter, I have dealt with it; but the privilege which we desire to concede has, I am afraid, been of little avail owing to the staff being undermanned, so that we really have not been able to give the leave which we did very strongly desire to give in deserving cases. Then my attention was called to the question of the pay of the junior ranks of the Army Medical Staff in India. That we have dealt with. Also to the length of the Indian tour, and that, with the concurrence of the Secretary of State for India, has been shortened, I believe, in the manner which was desired. There was a minor question of mess allowance to medical officers on duty with the military, and that we took up and dealt with in accordance with the request made to us. I merely mention those—I know they are comparatively small points—to show you that we really have endeavoured to do what we can to remove difficulties. Then, one or two of the speakers have referred to the disadvantage under which medical officers find themselves, socially and professionally, because they are no longer, as they used to be, attached to regiments. I quite feel the force of that argument. On the other hand, remember that the system of attaching medical officers to regiments was abandoned, and abandoned deliberately, and I must say for professional reasons which seem to me to be very strong. It was felt that a man whose career began and ended with his regiment was not likely to enlarge his professional horizon as much as we should all desire. Whether it would be possible now to revert in a limited degree to the old system and to attach an officer for a short period of years to a regiment it is hardly useful to discuss at this moment, because we have not got the officers to do it. There again we come to the same difficulty, the difficulty in which we are placed of being so seriously short-handed. I come now to what is really the serious matter to which you have directed my attention this afternoon, the question of the formation of a medical corps and the question of rank. As to the formation of a medical corps, I for one would see no serious objection to the proposal, but it is intimately connected with the other proposal, which does present very serious difficulty. It occurred to me while I was listening to your observations that there was, at any rate, one hopeful feature in what was said. I think it was clearly indicated by the speeches, and it was certainly indicated in the very admirably drawn memorandum, which was supplied to me by the Association, that you gentlemen desire to claim nothing for the Medical Staff, which should carry with it command, outside the limits of the corps itself. That at once, I think, removes one of the most serious difficulties in our way. I on my side am inclined to make you an admission, which is, that I regard the present titles of the medical staff—certainly some of them—as extremely cumbrous and inconvenient, I have the keenest sympathy with anybody who has the misfortune to designate himself brigade-surgeon-lieutenant-colonel. I do not think it ought to be beyond our power to discover some designations which might, at all events, be less open to objection than the present compound titles. But these questions of rank are extremely difficult and complicated questions. Dr. Ball, I think it was, said, and I sympathised very much with what fell from him, that to the civilian these questions of honorary rank, substantive rank, and relative rank, were extremely perplexing. We know they abound in pitfalls. I do not feel able this afternoon to tell you positively that I see my way at this moment to the solution of the rank question which will remove all the difficulties suggested, not on your side alone, but on the other side as well. The matter is, however, one which we have been lately considering with great care, and I hope shortly—and when I say shortly, I mean shortly—that I may be able to make you aware of the decision which the War Office has arrived at. There is just one question which I should like to put to you. Of course it would strengthen my hands very much if I had from you some distinct, I will not say promise, or anything of the nature of a contract, but a distinct assurance that if these questions of corps and rank were to be satisfactorily disposed of we might really depend upon your sending us the most promising young men of your profession? We want to attract to the Medical Staff not the mediocrities but the very cream and flower of the profession, and nothing would delight me more than to be able, during my tenure of office, so to arrange matters that we might once again see young men of the greatest promise and eminence in their profession taking their place in a profession which I cannot help thinking is one of the most honourable which British gentlemen could possibly undertake for a career in life.

Dr. FARQUHARSON said he was only expressing the feeling of all present when he returned to his lordship their very cordial thanks for his kindness and courtesy in receiving the deputation, and for the helpful words he had used. He thought it was very good of his lordship at a time when he was overwhelmed with work, and in the doctor's hands, to receive the deputation at all. He had no right to pledge any one present, but he could pledge himself personally, and he thought he might pledge others, that if the concession was made of the army titles, it would at once place the Army Medical Department in a condition of perfect peace and happiness, and bring back to it the best students from all the medical schools. He should like to emphasise the point that the profession did not want the titles for any purposes of command beyond the command which they were now called upon to undertake in the Medical Staff Corps. It was found impossible to carry out their duties without some kind of strictly defined medical rank, which they only wished to use with the strictly military duties which they were called upon to perform. He was certain that if his lordship only carried out the plan which had been proposed, he would cover his administration of the army with glory as far as the medical profession was concerned, and completely satisfy not only those already serving, but those studying medicine and preparing to go into the army, but who were now prevented by the condition of the service.

The deputation then withdrew.

HOSPITAL REFORM ASSOCIATION.

THE first annual meeting of this Association was held at the offices of the Medical Defence Union, 20, King William Street, Strand, on the afternoon of Wednesday, January 19th. Dr. J. WARD COUSINS (Chairman of the Council) presided.

REPORT OF COUNCIL.

The report of the Council was read by Mr. T. GARRETT HORDER (Honorary Secretary). It stated that the whole question of hospital reform was being much discussed by the press, both medical and lay, and the public were much interested in the subject. They were beginning to realise the necessity of bringing about some tangible reforms. The real work of the Association was just commencing. The Council begged both the professional and the non-professional members of the Association to influence their friends in favour of it, so that the membership might increase. An Investigation Committee had been appointed to report on the Manchester medical charities. Investigation had been attempted at Brighton, but, so far, it had not met with much encouragement from hospital managers there. The managers of the large general hospitals in London had appointed a committee to draw up a scheme for the better administration of medical relief in the out-patient and casualty departments.

The financial report showed that, roughly speaking, the Association had received £67, and had spent about the same sum. The chief items of expenditure had been the travelling expenses of the Honorary Secretary, the hiring of halls, and printing. The liabilities amounted to about £50, and there was a sum of £5 in hand.

Mr. T. R. ATKINSON said that he was sorry to hear of the Association being £50 in debt. He feared that the existence of a debt would tell against the interests of the Association.

Colonel MONTEFIORE also regretted the debt, but he thought that an accession of members would meet the difficulty.

Dr. SNAPE did not regard the deficit as a serious matter. The money had, he thought, been exceedingly well spent.

On the motion of the CHAIRMAN, seconded by Dr. SIBLEY, the report was received and adopted.

Colonel MONTEFIORE and Dr. SIBLEY were appointed auditors. The election of a president was deferred to a future occasion. The Chairman of the Council and all the other officers were unanimously re-elected.

PROPOSALS FOR THE REFORM OF OUT-PATIENT AND IN-PATIENT DEPARTMENTS.

Mr. T. GARRETT HORDER said that in drawing up any scheme for the better administration of medical relief in our hospitals, infirmaries, and dispensaries, we must bear in mind the necessity of carefully avoiding any measures that would in any way lessen the usefulness of these institutions in relieving cases of urgent illness.

The points which we should aim at are briefly the following:

1. To lessen the large number of people who now resort to the hospitals when suffering from minor or trivial ailments.
2. To restrict treatment, both in the in-patient and in the out-patient departments, to people who are not in a position to pay private practitioners.
3. To abolish subscribers' recommendations.
4. To limit the number of new cases to be dealt with by each medical officer in the out-patient department.
5. To bring about a more intimate and cordial relationship between the hospital staff and the practitioners resident in the district surrounding each hospital.

It seems manifestly impossible to draw up any scheme which shall prove suitable to all hospitals. It will be our endeavour, therefore, to sketch out schemes which will suit

A. The large general hospitals.
B. The smaller general hospitals.
C. The special hospitals.

A.—THE LARGE GENERAL HOSPITALS.

I.

It cannot be denied that at the present time most hospitals treat a very large number of people in their casualty department whose illnesses are of a very trivial description. Formerly that department was used for the treatment, as its name implies, of casualties, that is, cases of accidents and of sudden and acute illness. It has been argued by some prominent hospital managers that it is difficult to define exactly what are trivial and what are not trivial cases. In the great majority of instances, however, no such difficulty exists. A skilled resident medical officer should be appointed at all the large general hospitals to deal with such cases. This idea has been successfully carried out in St. George's and at St. Thomas's Hospitals for some years past, and quite recently St. Mary's Hospital has adopted a similar plan.

II.

The Hospital Reform Association has urged the necessity of restricting all out-patients to those bringing a recommendation from a medical man, and although that particular recommendation has not met with much support from members of the medical staffs, yet it would seem on the whole that it is the best, easiest, and simplest way of limiting hospital treatment to those who are in need of it. To meet the objections which have been made to that plan it will be as well to propose some modification of it.

In dealing with this question we have to consider the eligibility of patients from two points of view: first, do the patients stand in need of hospital treatment? and, secondly, are they unable to pay for proper treatment outside the hospitals? And, again, these patients must be subdivided into two classes: (1) those suffering from such ailments as are ordinarily treated by general practitioners; and (2) those suffering from special disorders (for example, ophthalmic, aural, gynæcological cases) which are not generally treated by general practitioners. To make this more clear it may be said that whereas a patient suffering from chronic bronchitis would be ineligible for hospital treatment, a patient suffering from cataract would be perfectly eligible.

Now the question arises, What should be the *modus operandi?* Should the medical fitness of a patient be decided first, or should the hospital authorities first make inquiries into the financial fitness? This is of great importance, because it is perfectly manifest that no inquiry that is conducted at the hospital will prove of any real use. To make certain that the patients are fit and proper persons for gratuitous treatment it is absolutely necessary in the majority of instances for the inquiry officer to visit the homes of the patients. As it might happen in some cases that this delay would prove hurtful, the best plan would be that the resident physician should first decide the medical fitness of patients, and after they have received first aid to refer them to the inquiry officer for particulars as to their circumstances.

The suggestions made by Dr. Turney in the December number of the *St. Thomas's Hospital Gazette* should be adopted—namely (1) that a notice should be placed in the out-patient rooms to the effect that patients bringing notes from medical men should receive first consideration; and (2) that the medical men residing in the district of the hospital should be furnished with notes by the hospital authorities.

In the case of patients coming from a distance it should be made an absolute rule that they should bring a note from a medical man. That hospitals are much abused by this particular class is well known; and it is obvious that the services of an inquiry officer could not be utilised in such cases. Many instances have come under the notice of the Hospital Reform Association in which people suffering from some trivial ailment have spent as much money in travelling to a hospital as would furnish a specialist with his ordinary consulting fee.

With respect to in-patients, except in cases of real urgency, hospital managers should make inquiries before they are admitted. Such a regulation would not apply to patients recommended by medical men.

The suggestion of the Charity Organisation Society with regard to cases obviously destitute—namely, that they should be referred to the Poor Law, is a good one, and one that would benefit the patients. At the same time the existence must be admitted of a class of people who, while they are too poor to obtain proper nourishment, are yet of a class whom

it would be cruel to pauperise. For this particular class the resources of the Samaritan Society should be available.

III.

We are given to understand that at many of the large general hospitals in the metropolis patients without subscribers' letters have the same facilities for treatment as those supplied with such letters. It will be found, I venture to say, that the hospital funds will not suffer to any appreciable extent if this system of recommendations by subscribers is done away with. There can be no doubt whatever that the system leads to a good deal of abuse, and that as long as it remains in operation it will be almost impossible to check that abuse. However stringent the regulations made by hospital authorities for the admission of patients, it will be found that subscribers will certainly fail to co-operate with those authorities in seeing them carried out.

IV.

It may be said that a regulation as to the limitation of the number of new cases has answered so well at St. George's and at St. Thomas's Hospitals that it would answer equally well at other large hospitals. The resident physician would have the selection of cases, and naturally would select those which in his opinion stood most in need of immediate treatment. It must not be forgotten that, as a rule, the majority of out-patients suffer from chronic illnesses, and therefore do not suffer any ill effect from having their treatment delayed for a few days.

V.

If the plan recommended were loyally carried out by hospital managers, they (the managers) would find a disposition on the part of medical men to take a greater interest, not only in the medical work but in the financial work in the hospitals. Nothing but good can result from the establishment of a more cordial relationship between the hospital physicians and surgeons and the outside practitioners. The subject of a wage limit for hospital patients has not been mentioned, because it is believed that such a limit is liable to act harshly. At the same time, the hospital authorities should come to some agreement amongst themselves on the subject—an agreement which would allow their inquiry officers some discretion in exceptional instances.

B.—The Smaller General Hospitals.

It is obvious that the plan recommended could not be carried out in its entirety by small provincial hospitals, and it is therefore necessary to propose some alternative plan. I have been much impressed with the system adopted at Oldham, Sunderland, and Dorchester, and they deserve the consideration of managers of other country hospitals.

In Oldham Infirmary patients have to appear before what is called an Admission Committee, and have to prove to the satisfaction of that Committee that they are not in a position to pay for treatment. The work of the Committee is made easier by the fact that the benefits of the institution are restricted to inhabitants of the borough. The fact that out of a population of about 130,000, only 4,400 availed themselves of the benefits of treatment in the out-patient department in the year 1892 proves to my mind that the system adopted there is one to be commended. And belief in it is strengthened when we find that the working classes of that town subscribe something like £5,000 a year to the funds.

In the case of Sunderland Infirmary it appears that the out-patient department is limited to the treatment of in-patients who have been discharged, but who still require further attention, and to cases of accidents and sudden illness. In Sunderland, as in Oldham, the working classes subscribe large sums towards the support of the institution. In Dorchester I am informed that the system of examination by an Admission Committee before treatment works well, and that little abuse exists.

Supposing that small provincial hospitals adopted the plan pursued at Oldham and Dorchester, I would suggest that the medical officers should have instructions to reject any cases which, in their opinion, were not in need of hospital treatment. In Sunderland, cases that appear unsuitable from a medical point of view are referred to the Provident Dispensary.

C.—Special Hospitals.

It is plain that another system must be adopted for these. We have our opinions respecting the need of such a large number of hospitals for special diseases, but we are bound to recognise the fact that they exist, and that they are, as is proved by the report on them of the Hospital Reform Association, much abused. The subject teems with difficulties, and we feel that it is only by the co-operation of the medical officers attached to them that we can possibly hope to overcome these difficulties. I would venture to suggest that all patients should be requested before being treated to bring a note from a medical man stating that the patient required special treatment, and was not in a position to pay the specialist's fee for that treatment. The effect of such a regulation would be to diminish the number of people who now resort to such hospitals, and to bring the specialists into closer relation with the general practitioner. It must, I think, be admitted that a large number of persons resort to special hospitals who could be treated quite as efficiently by general practitioners. At the same time, the fact must be recognised that in some instances patients who require the aid of specialists are not recommended by their medical attendants to consult them.

Looking at the question from an all-round point of view, I feel that it is very desirable to bring the specialists into a closer relationship with the family doctors; I feel also that there is a large and deserving class of persons who, although well able to pay a moderate fee, are not well enough off to pay the ordinary consulting fees of specialists. We therefore think that to avoid the abuse of special hospitals on the one hand, and on the other hand to make provision for the class indicated, the medical officers attached to special hospitals in the metropolis and in the large provincial towns should take this matter into their consideration, and see whether they could not adopt some means whereby people could have the benefit of their advice and treatment on payment of a moderate fee. It should be made a *sine quâ non* that people who wished to take advantage of such a scheme should bring a letter from their own medical man, stating that they were not in a position to pay the ordinary consulting fee. I submit that this would be far preferable to the present system adopted at most of the special hospitals where fees varying in amount are extracted from patients, no portion of which enriches the pockets of the medical staff.

All hospital treatment should be free and should be restricted to those who are not able to pay for such treatment. It is altogether wrong to mix up business with charity; and if hospitals find they are not in a position to treat all the patients who resort to them the managers should take steps to reduce the number of patients. The idea of charging small sums for medicines or appliances is altogether repugnant to the name of charity; it is moreover unfair to the main body of the profession and leads many members of it to adopt plans for procuring patients which scarcely tend to enhance the dignity of their calling.

Recommendations.

(1) That in the casualty department of our large general hospitals only cases of urgent importance should be attended to.

(2) That in the out-patient department patients bringing notes from medical men should have a prior claim to treatment. That a resident physician should be appointed whose duty it shall be to see all out-patients in the first instance, and select those that require immediate treatment and decide which do not require hospital treatment. That after patients have received "first aid" their circumstances shall be inquired into by a competent officer. That the honorary medical officer shall not be required to treat more than twenty new cases at one sitting.

(3) That all in-patients, with the exception of cases of accidents or of great emergency, should be recommended for treatment by medical men, and that before being admitted their circumstances should be inquired into by an officer specially retained for that purpose.

(4) That hospitals should have the power of receiving adequate fees for the treatment of people who have met with accidents and whose position in life warrants such an action being taken by the hospital authorities.

(5) In the case of smaller general hospitals, that the plan adopted at Oldham and Dorchester be recommended for trial.

(6) That both in the large general hospitals and in the smaller ones patients coming from districts outside should be requested to bring notes from medical men before being treated.

(7) In the case of special hospitals: (*a*) That payments by patients should cease. (*b*) That the eligibility for free treatment should depend on the recommendation of private practitioners. (*c*) That some provision should be made for people who are in a position to pay a moderate fee but are not in a position to pay the ordinary fee of specialists.

Colonel MONTEFIORE thought that the general scheme put forward in the paper was good. In explanation of the suggestion of the Charity Organisation Society, which was referred to in the paper he said that the cases which that Society thought ought not to be dealt with by the hospitals were those in which there was no chance of the poor people obtaining for themselves the necessaries of life or obtaining them at all except through Poor-law relief. They contended that such people would receive no good from the bottle of medicine or the valuable advice which they received at the hospitals. As to the visiting officer proposed in the paper, he would have to be a very ubiquitous person if he was to be required to visit the homes of all the applicants at the hospital in such a district, for instance, as that of St. Bartholomew's. He admitted that the views of the Charity Organisation Society on the subject of hospital reform were not quite up to date, and that body intended to hold a meeting for the purpose of dealing with it. He begged the Hospital Reform Association to turn their attention in the direction of provident dispensaries. Medical men talked about the abuse of the hospitals, and they meant that many people went there suffering from trivial complaints, for the treatment of which they could pay a medical man. But it must be remembered that there was a large number of persons who abused hospitals in this way, but who would be nevertheless unable to pay a general practitioner for a long illness. They could, however, both in health and in sickness, pay small sums to secure treatment in sickness by the general practitioners of their districts through the medium of properly conducted provident dispensaries or provident medical clubs. For some reason there was a strong feeling in the medical profession against institutions of this sort, but some medical men believed that they would be the only clue to the solution of this particular question. It would be a good thing for that Association to deal with the question of the proper conduct of such agencies.

Dr. SIBLEY said that Colonel Montefiore's remarks pointed to the introduction into England of a compulsory medical insurance fund system, such as had been in use in Germany for many years. The payments were deducted by employers from the wages of their workpeople.

Colonel MONTEFIORE said that he was entirely opposed to compulsion of any sort or form. He was advocating only a voluntary system.

The CHAIRMAN said that a compulsory system of that kind would never be adopted by the House of Commons in these days.

Mr. T. R. ATKINSON said that many of the persons who gave money to the hospitals did so for the sake of making the lot of the patients a little lighter, and not entirely with the idea that the patients would not be enabled by screwing and pinching to pay a trifling sum themselves. That was a point which Mr. Horder had not referred to. In such cases the gifts were made for the express purpose of relieving the persons attending the hospitals from the necessity of screwing and pinching themselves to pay for medical help. As to Poor-law infirmaries, the people who went to them went as paupers. A patient was not made a pauper by any amount of Poor-law relief, but there was a feeling of pauperism connected with it. In addition to this, the people who administered Poor-law relief were not so polite as the people who administered the out-patient department of a hospital. He hoped that the hospitals in that respect would always be more attractive than the Poor-law dispensaries. Poor-law managers had for a long time been doing their utmost to diminish Poor-law relief, and Poor law doctors got the patients into the house as quickly as possible, because the remuneration which they received was not sufficient to induce them to run after them. As to provident dispensaries, medical practitioners were against such as did not contribute a sufficient amount for their services. They did not consider twopence a week enough; but he did not think that an experienced general practitioner who really understood the work of a large district would object to take patients from a provident dispensary if they paid a shilling a month.

A Committee, consisting of Drs. Isambard Owen, Sibley, Snape, and Dauber, was appointed to consider the recommendations of the paper.

The thanks of the meeting were accorded to the Chairman, on the motion of Mr. ATKINSON.

THE PLAGUE IN INDIA.

[FROM OUR SPECIAL CORRESPONDENT.]

A Victim to Duty.—Precautions in Bengal.—The Regulation of Travel.—The Galton System of Identification.—General Sanitation.—Bombay and Sholapur.—Mortality in Poona.

DR. HERBERT KNAPP, now at Poona, one of the medical officers recently sent out from England for plague duty has unfortunately contracted the disease. The attack, however, is mild, the highest recorded temperature being 103·6°. The glands are rapidly subsiding, and he is now almost convalescent.

In Bengal elaborate preparations are being made to keep out the plague. Inspecting stations are being established at Chausa, near Buxur, on the East Indian Railway; at Mairwa, near Chabra, on the Bengal North-Western Railway; and at Chakradharpore. There is already one at Khurda Road, near Puri, at the terminus of the East Coast line. When these stations are ready, the large one at Khana will be given up.

The regulations issued relating to travellers by rail, road, or river, require medical officers to be guided by the principles of the Venice Convention as regards detaining travellers on suspicion of infection, but also introduce two entirely new systems: (1) Allows respectable people to pass on executing an agreement to submit to medical examination for ten days after arrival at their destination, and provides for their identification by the system of thumb marks. (2) Is a system of passes enabling persons from non-infected places to furnish evidence of this fact, and so avoid trouble and detention. It has an additional object in reducing the number of cases to be examined by the medical officers. There will be further a travelling staff to go on the various railways, hold casual inspections, and generally to look out for all possible sources of plague contamination. A very large force of police, with minute instructions, is also available for assistance, arrangements being made for tracking persons who come from infected areas. All those going east of Khana will be scheduled, examined, and only allowed to proceed on the permit of the medical officers.

With regard to general sanitation the following statement is extracted from the proceedings of the Plague Commission at Calcutta: "It is now entirely at the discretion of the magistrates having jurisdiction in municipalities where conservancy is neglected to appoint health officers to do in the way of cleaning up pretty well everything that can be done, and to make those people pay for it whom they may judge to be equitably responsible" (Hon. H. H. Risley).

In Bombay city the plague is now (December 31st, 1897) rapidly on the increase, but in Poona and Sholapur it shows some signs of abating. The virulence of the cases has, however, in no way lessened. In Poona, at the General Hospital, the mortality in February was 53 per cent., in March 59, in April 71, in May 79, in June 66, in July 32 (when the minimum weekly number of cases was recorded), in August 57, in September 58, in October 63, in November 68, and for the first three weeks in December it was over 73 per cent. While March and April gave the greatest number of cases in the first outbreak, October and November record the most in the recrudescence. The mortality in the hospital throughout the epidemic is for males about 67 per cent., for females 64 per cent., and for children 61 per cent. For the whole munici-

pality the mortality is considerably higher—over 75 per cent. To realise fully the gravity of the mortality it must be borne in mind that there has been an enormous exodus from the city and the cantonment. The mortality returns, while showing about five times the average number of deaths, are for a population which is probably reduced to less than half. The extraordinary decline in the birth-rate during the past eight months—it has fallen to only one-fifth of its average—shows the extent to which the city has been deserted. From 10 to 20 dead bodies are being discovered daily, the people being under the dread of segregation, disinfection, and the hospital. The death-rate seems higher when more effective machinery is in operation, the inferences being, of course, that plague cases are discovered earlier, when before they were secreted. This probably explains the increase in the hospital mortality. In the earlier periods of the epidemic the rapidly fatal cases, which ought to have gone to the hospital, were not recorded.

The following is the official list of the latest batch of doctors and nurses appointed by the India Office for plague duty in India:

Doctors.—Henry Deeds N. Mackenzie, M.D.Edin., C.M.; George John Blackmore, M.B., C.M Edin.; Ernest E. R. Laing, L R C.S., L.R.C.P.Edin., P. and S Glasg.; Graham W. Smith, M.B., L R.C.P.Lond., M.R C.S.Eng.; Christopher T. Parsons, L S.A., M.D.Lond.; William Adolphus Justice, M B., C.M.Aberd., D.P.H.Camb.; Rupert W. Hornabrook, M R.C.S. Eng., L.R C.P.Lond., M B. and B.S.Adelaide; Frank Gerard Clemow, M D.Edin., D.P.H.Camb.

Ladies.—Dr. Margaret Marion Traill Christie, M.D., B.S.Lond., and Dr. Alice M. Corthorn, M.B.Lond.

Special Nurses.—Mrs. M. E. Pearse, Misses J. A. Evans, J. Snowdon, E. Smith, A. Richardson, J. Grieveson, B. S. Wood, L. Foxbe, M. M. Murphy, E. E. Bradshaw, M. E. Harvey, E. D. Bleancy, M. L. Barrow, A. M. Cracknell, D. B. Hyland, F. M. Fry, A. Buckley, and M. E. Chick.

PROVISION FOR PAUPER LUNACY.

The question of provision for pauper lunacy is greatly vexing the souls of many of our local authorities. Only the other day, at the Council House, Birmingham, an inquiry was held by an Inspector of the Local Government Board into an application by the City Council for sanction to borrow a sum of money to provide the land for erection of a new lunatic asylum. Up to the present time the City Council has spent £259,000 on the existing asylums at Winsor Green and Rubery Hill. But, year by year, the pressure on these institutions has augmented; and although the increasing number of pauper lunatics was temporarily accommodated by the lease of Sandwell Hall—which provides for the reception of 150 cases—yet the ever-growing numbers compelled the authorities to determine upon the erection of another new asylum.

In the large and important neighbouring County Palatine the subject is even more pressing. In Lancashire the care of lunatics has been a county matter, the boroughs joining with the county authorities in making provision for pauper lunatics. When the Local Government Act of 1888 came into force the four county asylums became vested in the County Council, which soon found the work of managing these asylums too heavy for it. Consequently an Act was obtained which created a special Asylums Board for Lancashire, elected by the County Council and by the Councils of the fifteen county boroughs. Since this Act was passed in 1891 the asylums have been under the control and management of that Asylums Board. Against the Board a strong indictment has just been brought by the *Liverpool Daily Courier* in a series of articles. We do not propose to follow the controversy in wearisome detail, but briefly to mention the salient and practical points.

The Lancashire Asylums Board, indeed, inherited a defective state of asylum provision for the pauper insane within the county. For years previously the Lunacy Commissioners had suggested and urged further accommodation to meet the rapidly-growing necessities of the county for increased accommodation for the pauper insane. And in fact the county was unfairly weighted; it suffered vicarious punishment for evils which had arisen in other places at home and in parts abroad. From all the world over mental wreckage drifts to and settles down in the port city of Liverpool. Derelict cases of lunacy from all quarters of the globe are dumped down there, and constitute a severe tax on Lancastrian resources. But irrespective of this, the conditions of life in Lancashire foster a full measure of that constant rise in the number of certified cases of mental disease which is everywhere in this country so striking a social feature in the present generation.

Much has been done to meet the need of Lancashire. From time to time the accommodation of its four large county asylums has been augmented; additions have been made, annexes have been built, and the making of this sort of provision is still in progress. Provision for 90 chronic cases has been made at Rochdale Workhouse; Winwick Hall has been obtained and fitted for the accommodation of 50 idiot boys; Winwick Hall Estate has been purchased, and the erection of a new large county asylum thereon has been begun. This when completed will be capable of receiving 2,000 patients.

Necessarily all this is work slowly accomplished. The fault found with the Lancashire Asylums Board is that it has been too slow; that its apparently laggard action is deserving of severe censure. This conclusion does not necessarily follow. The Asylums Board must await the pleasure of various authorities, at whose door, perhaps, part of the delay may justly lie. A thousand subjects have to be duly weighed; and it is a great undertaking to duly consider the details, to prepare for, build, equip, and start a huge new county asylum. On the other hand, the Board has been tardy in action; and a too great and slow deliberation may easily degenerate into dawdling.

The increase of pauper lunacy in the county during the past twenty years is very striking. The total of 6,624 in 1877 we find has risen to 11,050 in 1897, or not very far from double, and represents an average annual increase of about 220 pauper lunatics on the rates. There is not space, nor is this the occasion, to enter upon the true explanation of this increase and similar increments of the registered lunacy elsewhere.

Of the suggestions made to the Board in relation to the accommodation of pauper lunatics in the county, some are useful. A rearrangement of the method of distributing the cases is desirable, so that lunatics shall be drafted into each asylum from the parts of the county nearest to or in most convenient communication with it. The erection of separate asylums for pauper idiots is a desirable measure. Finally, a classification of cases is desirable in order to permit them to be housed in institutions differing considerably in their mode of supervision, medical care, and general administration. For example, there might with advantage be separate provision for acute cases, for quiet chronic or infirm ones, for idiots, and for those suitable for improved workhouse accommodation. Some, possibly, might be boarded out; but the conditions of social life in Lancashire and like counties are but little adapted to this last method of provision.

LEGISLATION FOR INEBRIATES.

The resolution adopted at the last annual meeting of the Association, urging the necessity for prompt amended legislation for habitual drunkards, which has been sent to the Branches, has already borne good fruit. Among other magisterial deliverances, a resolution agreed to at a recent meeting of the Manchester City Justices merits special attention. The proposer, Mr. Herbert Philips, who has taken a deep interest in the Fallowfield Licensed Retreat for Women, narrated an interview which he had had at the Home Office with the official secretary of Sir M. W. Ridley, from whom he gathered that the new Bill was in preparation, that it would deal only with police-court inebriates, and that public pressure on the department would tend to hasten the introduction of the promised measure. It is noteworthy that the seconder was the stipendiary magistrate (Mr. Headlam), who had to deal with a large amount of female inebriety. We trust that the members of the Association will bring this important matter, before their representatives in Parliament, and also secure the passage of a similar resolution to that adopted by the Manchester justices, which was as follows:

That, in the opinion of the justices here assembled, it is of urgent importance that further provision be made by law for the restraint of

habitual drunkards, with a view to their reformation. That the justices therefore trust that Government will, in the forthcoming session of Parliament, produce and pass the long-delayed Bill for this purpose, to which those concerned in the administration of justice look as the only hope of dealing properly with those criminal inebriates on whom the ordinary sentences have no effect.

The Committee of the Howard Association has carried a similar motion. The resolution expresses the hope that there will be no further delay in legislating for habitual drunkards, and adds that by the general assent of all competent authorities a law to secure the more effectual treatment of this class of offenders is one of the measures most imperatively needed in the public interest, and also as a mercy to the poor victims of cruel habits.

We are glad to learn from the *Australasian Medical Gazette* that a well-known member of the Association in New South Wales, the Hon. J. M Creed, has obtained permission to bring into the Legislative Council a Bill relative to the care, control, and treatment of inebriates. The Bill provides for the treatment of inebriates in gaols, receiving houses, and retreats. It further enacts that upon the hearing of oral evidence, or the certificate of a duly qualified medical practitioner, a Supreme or District Court Judge, or under certain conditions a police or stipendiary magistrate, may direct the treatment of the inebriate under sufficient restraint in his own home, or the home of a friend, under the care of an attendant, who, during the currency of the order, is to be under the control of the judge or magistrate by whom it is issued. The necessary charges are to be fixed by the judge or magistrate and paid out of the inebriate's property. The attendant thus appointed is to have power to prevent any person from supplying the inebriate with intoxicating liquor or any drug for the purpose of producing a state of inebriation. Penalties are provided against the attendant who neglects to comply with the directions given to him, and against any person who may supply the inebriate with drugs or alcoholic liquor. The Government will have power to license institutions for the care, control, and maintenance of inebriates, and to make regulations for the issue and revocation of such licences, and generally for the proper management of asylums established under the Act. The habitual inebriate is to be placed under control by any of the methods pointed out in the Bill, either upon his own application while sober, or upon the application of the husband, wife, parent, brother, sister, or partner in the business of the inebriate, or of a member of the police force of or above the rank of subinspector acting on the request of a duly qualified medical practitioner in professional attendance on the inebriate, or on the request of a relative of the latter, or at the instance of a justice of the peace.

LONDON WATER COMMISSION.

THE Royal Commission appointed to inquire as to the best means of dealing with the water supply of the metropolis met again on January 24th.

Mr. Balfour Browne, Q.C., on behalf of the London County Council, disclaimed any desire to "make a case" before the Commission.

Sir Alexander Binnie, in further examination, gave details of the regulations which had been enforced by the Corporation of Bradford for preventing waste of water. Some instructive figures were handed in, showing the estimated, average, and maximum supplies of the New River Company, from which it appeared that in 1895 the average daily supply throughout the year was 38,115,885 gallons, and that the supply was 45,274,642 gallons a day during the week of maximum consumption. It was estimated that the quantities in 1915 would be 77,921,000 and 92,554,000 gallons respectively. It was pointed out, however, that these estimated increases were based not only upon an increase of population, but upon an increased supply per head. It was calculated by Mr. Francis, the Engineer of the New River Company, that, as one result of the introduction of constant supply, the consumption during the summer months would amount in 1931 to as much as 60 gallons per head per day.

From further figures handed in it appeared that the percentage of the maximum monthly or daily supply over the average daily supply for the year 1896 was in the case of the Chelsea Company 21 per cent., East London 16.7 per cent., Grand Junction 20.3 per cent., Kent 20.5 per cent., Lambeth 26.9 per cent., New River 21.2 per cent., Southwark and Vauxhall 12.4 per cent., West Middlesex 15.4 per cent. In the case of all the companies combined it was 16.98 per cent. As shewing the amount of water which English-speaking people could and did use, and what an excessive demand a freer use of water might produce, he laid before the Commission figures which showed that the consumption per head per day was 109.3 gallons in Baltimore, 111.9 in Boston, 85.6 in Brooklyn, 325.8 in Buffalo, 190.7 in Chigaco, 128.5 in Cincinnati, 161.8 in Detroit, 70.5 in Montreal, 103.9 in New York, 171.1 in Philadelphia, 101.4 in St. Louis, and 100.3 gallons in Toronto. In Paris the consumption was 47 gallons per head per day.

The advantages to the consumer of placing the water supply of London in the hands of a public representative body might be summarised as follows: 1. It would put an end once and for all to the continued inquiries on the London water question which had been going on since 1811. 2. It would place London in a similar position to that which it had been found most expedient to adopt in almost all other large towns in Great Britain, the United States, and India. 3. That as, according to all authorities on the subject, the present supply must be more than doubled within the next thirty or forty years, it was expedient that the new works should be carried out by some public body. The inquiry was adjourned until Monday next, when Sir Alexander Binnie will be cross-examined by counsel for the water companies.

A CORRECTION.—Dr. Sisley calls our attention to the fact that in the brief report of the proceedings of this Royal Commission, published in the BRITISH MEDICAL JOURNAL of January 22nd, page 237, it is not made plain that the river referred to as that from which the two companies took the whole flow is the river Lee, and that the two companies are the New River and the East London Water Company.

THE LATE MR. ERNEST HART.

WE are requested by the Secretary of the Irish Medical Association to state that at a meeting of the Council of that Association on January 11th, the following resolution was passed unanimously:

That the Council of the Irish Medical Association at this their first meeting since the lamented demise of Mr. Ernest Hart, the consistent friend of all Poor-law reforms, hereby desire to convey to Mrs. Hart and family an expression of their sincere regret at their sad bereavement.

DR. AUGUSTUS BROWN (Shanklin, I. W.), writes: May I ask for a few lines simply to state that, as Demonstrator of Anatomy to Mr. Lane's school (the Grosvenor School of Anatomy, adjoining St. George's Hospital), I gave the late Mr. Ernest Hart considerable assistance in his early anatomical studies, for during the years 1853 and 1854 I constantly visited him at his father's house, and night after night gave him instruction in the bones, muscles, and ligaments, and in the year 1854 I did the same with the viscera, brain, nerves, and arteries. I knew his father, mother, sisters, and brother, intimately, and after the professional work was over, I frequently had chats with his father, and with Hart himself upon matters not only connected with the school, but on general social questions. I may here state that I thoroughly endorse all that has been written relative to his great and many-sided attainments, for I knew more about Hart than all those who were connected with the Grosvenor school, and I think my early services to him deserve mention as well as the names of the Professors who knew his after-career. I had the earliest opportunity of knowing the talent which the late editor of our JOURNAL possessed.

BATTLE OF THE CLUBS.

PENGE AND BECKENHAM.

THE club question in this district still remains unsettled. All the clubs except one appear to have accepted the services of Dr. Wallace, an officer of one of the medical aid societies, and to have discarded their old doctors. Reports of the annual meetings of some of these friendly societies have recently appeared in the local press. Several speakers there criticised severely the present attitude of the doctors and were strongly in favour of the formation of a medical institute.

We are informed that a large minority of the members of the clubs dissent altogether from such a proposal, and would willingly accept the terms of the doctors. It is quite possible

that before long this minority will be a majority, and it is almost certain that the profession will win in the long run if it remain united. Medical institutes are not always successful, and medical men generally throughout the country are beginning to see where their true interest lies and are ceasing to fight only for their own individual hands. It is not probable that in the future any but a very small percentage will allow themselves to be used as tools in the hands of those who would not hesitate to crush the dignity and self-respect of the profession.

BUCKLEBURY DIAMOND JUBILEE NURSING ASSOCIATION.

THE Honorary Secretary of this Association takes exception to some paragraphs in the BRITISH MEDICAL JOURNAL of December 11th, 1897. She urges that the institution is of the greatest assistance to the poor, who cannot afford to call in a doctor, and that the nurse, for her own credit's sake, would send for one on the least indication of urgency; that the local doctor thoroughly approves of the enterprise, because it prevents him from being troubled by trivial cases where bills are incurred by those utterly unable to settle them. She concludes by stating that "with very few exceptions the rules of the Bucklebury Diamond Jubilee Nursing Association are the same as those of the Queen Victoria Diamond Jubilee Nursing Association."

While fully admitting the charitable intentions of the promoters of this Association, and not denying that it may be the means of giving useful help to the poor, we regret to find that Mrs. Sutton endeavours to defend the employment of nurses to take the place of a doctor in trivial cases. Such a position is, in our opinion, quite untenable. It requires medical experience to tell whether a case is trivial or not, and the safety of the public ought never to rest on the chance of the nurse, for her own reputation's sake, calling in the doctor in time. As to the rules of this Association being, with very few exceptions, the same as those of the Queen Victoria Diamond Jubilee Nursing Association it may be well to draw our correspondent's attention to the fact that the latter never allows any of its nurses to attend to patients not under the charge of a qualified medical practitioner.

TESTIMONIAL TO DR. J. T. ARLIDGE.

THE following additional subscriptions have been received to the fund which is being raised to present a testimonial to Dr. John T. Arlidge. Dr. Arlidge for many years before the subject attracted as much attention as is now given to it, devoted himself to the study of the conditions of industrial life unfavourable to the health of the workers. In particular he has made most valuable contributions to a better knowledge of the means of obviating the effects of injurious processes in pottery works, and by his volume on *The Hygiene, Diseases, and Mortality of Occupations*, in which he summed up the results of his large experience and wide reading, he laid not only the medical profession, but all who take a statesmanlike interest in social problems, under a deep obligation. The Honorary Secretary of the fund is Dr. Charles F. Moore, 10, Upper Merrion Street, Dublin:

	£	s.	d.
Wm. J. Mickle, Esq., F.R.C.P.Lond.	1	1	0
L. R. Ashwell, Esq.	1	1	0
Mrs. P. C. S. James	1	1	0
The Duke of Sutherland	5	0	0

The following sums have been received by the Manchester and Liverpool District Bank at Hanley or by W. H. Folker, F.R.C.S., Hanley:

	£	s.	d.
Matt. F. Blakiston, Esq., Stafford	5	5	0
Mrs. John Gailey, Leek	1	1	0
Thos. Hughes, Esq., Wychdon Lodge	2	2	0
Robert Heath, Esq., Greenway Bank	5	0	0
J. W. Phillips, Esq., Tean	5	0	0
Thos. W. Twyford, Esq., Biddulph	5	0	0

THE DR. HALL HAINS DEFENCE FUND.

DR. HERBERT CARRE-SMITH, 3, Turnham Green Terrace, Chiswick, S.W., Honorary Secretary and Treasurer of this fund, in writing to acknowledge the following additional subscription, observes: "I have now either received or been promised just over £100 for the above fund, and, in accordance with Dr. Hall Hains's wishes, it is proposed to close the subscription list after this week. If, therefore, any others of your readers care to subscribe I shall be pleased to receive any additional subscriptions as soon as possible. Many decline to subscribe on the ground that they consider Dr. Hall Hains should have belonged to the Medical Defence Union. The importance of every medical man taking this precaution is quite appreciated. At the same time, however, it is easy to be wise after the event; and a final appeal is made to those who have neglected to insure themselves in this manner."

	£	s.	d.
Amounts already acknowledged	99	2	6
Edmund Owen, Esq., F.R.C.S.	1	1	0

SPECIAL CORRESPONDENCE.

PARIS.

French Medical Students and "Manifestation Mania."—Insanitary Dwellings in Paris.—Proposed Memorial of the late Professor Tarnier.

DR. LÉON MARCHAUD, Honorary Professor at the Paris School of Pharmacy, has notified to M. Tissier, President of the Students' General Association, that he resigns his honorary membership of their Association. In his letter he says: "I was as glad to encourage the study of the laborious as I am now grieved to see lectures and schools where scientific truths are taught deserted by your students in order to indulge in perambulations which are not included in the curriculum, and which may be the origin of fatal disturbances." The manifestation epidemic rife among the Paris medical students has reached the provinces. The last news from Montpellier states that "student manifestations follow one on another." There are a number of foreign students at Montpellier. These have decided that they are sensible of the duties which French hospitality imposes on them, and therefore abstain from all manifestation. They likewise express their disapproval of those among their fellow-students who take part in the manifestations and who do not observe a strict neutrality. The Socialist students declare "that they ally themselves with the revolutionary party and protest against the legal innovations of the Dreyfus-Esterhazy trial and the mystery which surrounds it." The remaining students do not make any confession of faith, but indulge in crying "Conspuez Zola!" on leaving the lecture rooms. A few evenings ago a meeting of 400 students took place at Montpellier. There were two parties, one which endorsed the judgment delivered in the Dreyfus-Esterhazy matter and considered that in the quality of students they had no voice in the matter, but left to every individual the responsibility of his actions. Another party blamed the conduct of the Dreyfus syndicate. After the meeting 200 students paraded the streets crying "Conspuez Zola!" At Nancy, the president and treasurer of the Students' General Society have resigned; the manifestations made by the students have provoked these resignations. The medical and scientific world continue to sign the petition to be sent the Chamber of Deputies, asking that "security for citizens against arbitrary measures be maintained;" also another, asking for a revision of the Dreyfus trial. It seems probable that pathology may be enriched by a new disease—"manifestation mania." One case has already been recorded. A butcher boy during a fortnight had shown great excitement concerning the Dreyfus affair; he talked of nothing else. When Zola's letter to the President of the Republic appeared he declared himself hostile to the celebrated writer, and ever since has been a conspicuous figure in all the manifestations, or rather street riots. He became violently angry, and his neighbours declared he was going mad, without knowing how true their words were. A few days subsequently he rushed from his room, clothed only in a shirt, brandishing a chair, crying, "Conspuez Zola!" "Vive l'Armée!" An intelligent policeman persuaded him to dress himself and go with him to "manifest in the street." The suggestion was tempting, and the maniac is now under treatment in the prison infirmary.

The Dean of the Paris Medical Faculty has read at the Institute a paper on insanitary dwellings. Formerly hospitals were hotbeds of infection breeding pestilence and spreading death; now, says Professor Brouardel in his memoir, it is insanitary overcrowded dwellings that spread tuberculosis, cholera, typhus, and plague. In 1850 a law was passed concerning insanitary dwellings, but it was not well framed. M. Théophile Roussel prophesied in the Chamber of Deputies that this law would prove perfectly useless; his words have unfortunately been proved true. Private societies have

been formed to provide sanitary dwellings, but the success of these societies has not been equal to their good will. Nevertheless, some good results have been obtained, but insufficient to cope with the widespread evil. Parliament is again considering the question, but mistrusts its competence to frame a law requiring to be based on scientific knowledge of sanitary science. Professor Brouardel calls upon the Academy of Sciences to study the question and furnish a solution.

The former pupils of Professor Tarnier have formed a committee to find means for erecting a monument to his memory. The committee is formed of members of the University, members of Parliament representing the Department of the Côte d'Or, members of the General Council of the Seine, members of the Paris Municipal Council; also members of the learned societies of which M. Tarnier was a member.

BERLIN.

Foot and Mouth Disease.—Ambulance Practice.—The Roentgen Rays in Military Surgery.—Admission of Women to German Universities.—General News.

A SPECIAL committee, composed of bacteriologists, veterinary surgeons, and cattle breeders has been sitting in the new Board of Health building to hear the report of the official scientific research in connection with foot and mouth disease, and also to discuss the best measures for stamping out the disease in future. Last year special money grants for a research into the foot and mouth disease were voted both by the German Reichstag and the Prussian Diet—35,000 marks (£1,750) to the Imperial Board of Health and 20,000 marks (£1,000) to the Prussian Institute for Infectious Diseases—showing that the German Federal Governments are fully alive to their responsibilities in the matter. Since then the work has been steadily carried on in both institutes, and, the report says, has decisively proved that the micro-organisms considered by many investigators to be the generators of the disease—for instance, Siegel's bacillus and Kurth's streptococcus — are not its cause. The micro-organism of foot and mouth disease has not yet been discovered, in spite of the manifold experiments made in the course of the research in both institutes; in fact, the bacteriological methods at present in use are quite ineffective in this case. As regards immunity, the research seems to have proved that an attack of the disease immunises for the future. In the debate that followed it was decided that the researches should be continued, and an agreement was arrived at as to the practical co-operation of the cattle breeders in the experiments on immunity and treatment.

A curious and interesting ambulance rehearsal was made the other day under one of the chief Prussian military surgeons, Dr. Thal. An ambulance train, complete in every detail, and consisting of eighteen carriages (six ambulance, six kitchen, one provision, one luggage, one for the doctors, and one for the nurses) started from Berlin for Wittenberg manned by forty-two soldiers representing "sick and wounded," eight hospital assistants, eight students, and eight nurses. The two head army surgeons, Dr. v. Coler and Dr. v. Leuthold, as well as the Prussian Minister of War, Dr. v. Gossler, accompanied the expedition as inspecting visitors. The first halt was made at Güterbof (about one hour from Berlin), where the lifting in and out of the sick and wounded, undressing, putting to bed, etc., were rehearsed. Then as the train went on the "feeding" of the patients began, the provisions for which had been cooked *en route*. At Wittenberg the train was left and the transport of the patients to an open space, with nursing, feeding, etc., rehearsed. This accomplished, the train returned to Berlin. The three visitors and Dr. Thal expressed themselves as highly satisfied with the efficiency of all the arrangements, and it is only to be hoped that the forty-two "sick and wounded" will not be laid up in good earnest from overeating themselves.

Dr. H. Küttner, the Tübingen surgeon, who formed one of the German Red Cross Society's expedition to Turkey during the late campaign, has published an account of diagnostic results obtained by aid of the Roentgen rays. He says that skiagraphy helped him not only in localising the seat of projectiles, but also in the estimate and treatment of injuries to the nervous system. For instance the photograph showed him whether a case of severe paralysis was caused by a contusion of the spinal cord by a splintering of bone or by a rifle ball, and whether an operation of the central nervous system might be undertaken with the hope of success. Dr. Küttner thinks the Roentgen rays so indispensable in military surgery, that he strongly recommended their use in the German reserve field hospitals.

In the course of a debate on the Budget in last Thursday's sitting of the Reichstag the admission of women to the German universities and university degrees was ventilated. Prince Schönaich-Carolath quoted figures to show how far England, the United States, Russia, and smaller States are ahead of Germany as regards the admission of women to the medical curriculum, and asked for more liberality in Germany. Count Posadowsky—the head of the "Reichsamt des Innern"—replied by the usual stock arguments against the mental capacity of women, and after one or two weak speeches the matter dropped.

Professor Hitzig of Halle has been elected an honorary member of the London Neurological Society, in the room of the late Professor du Bois-Reymond.

LIVERPOOL.

Liverpool Northern Hospital Dinner: Speech by Dr. Frederick Roberts: Liverpool as a School of Surgery: The New David Lewis Northern Hospital: The Horse Ambulance: Past and Present Students.

THE dinner of the past and present members of the honorary and resident staffs of the Liverpool Northern Hospital, intended to commemorate the old building which is soon to be pulled down to make way for the new hospital, to be called the David Lewis Northern Hospital, took place at the Exchange Station Hotel on Jan. 22nd. The chair was occupied by Dr. Frederick T. Roberts, of University College Hospital, London, who was at one time junior house-surgeon to the hospital, and afterwards honorary physician. About fifty past and present members of the honorary and resident staffs sat down, besides several members of the Committee and chaplains of the institution. Amongst those present were Drs. and Messrs. James Barr, T. H. Bickerton, T. R. Bradshaw, A. Bernard, W. Macfie Campbell, R. Caton, T. R. Glynn, G. G. Hamilton, Reginald Harrison, C. B. Shears, Brigade-Surgeon N. Norris, Brigade-Surgeon C. F. Oldham, Fleet-Surgeon Lyon Vasey, etc., and the present medical staff. Letters expressing regret at their inability to attend were received from Lord Stanley, Dr. A. T. H. Waters, Mr. Hakes, Mr. B. Levy, Dr. A. Davidson, and others.

After the toast of "The Queen" had been drunk with musical honours, the Chairman proposed "The Northern Hospital" in an extremely happy speech, containing many pleasant, often humorous, reminiscences of the time when he was officially connected with the institution. He said that he first came to Liverpool in 1863 as junior house-surgeon to the hospital, where he had charge of the medical cases. He quickly found himself called on to deal with serious emergencies on his own responsibility, the first result of which was to show him how little he really knew, and how much he had yet to learn from experience. The lesson learnt in this way he had never forgotten, and he declared that the first thing which a newly qualified practitioner had to be taught was to realise the extent of his own ignorance. He found that the hospital was almost unique as a field for practice, presenting a variety of diseases and injuries such as he had never met with anywhere else before or since. He had found his practice in the Northern Hospital a grand foundation to build experience upon, and he had by its means acquired no small amount of medico-legal training. He looked back with feelings of great pleasure on his relations with the Committee and others with whom he was associated in his work, and he felt towards some of them a debt of gratitude which no words could adequately express. He desired especially to record his gratitude to Dr. A. T. H. Waters, who had first started him on his career as a teacher by inviting him to join the Liverpool School of Medicine, where he was first demonstrator of anatomy, and afterwards a lecturer. To Dr. Waters he owed his introduction to the opportunities for work which he had

enjoyed. Among those who were associated with him in his work at the Northern Hospital was a resident pupil, Mr. Thomas Jones, now Professor of Surgery at Owens College, Manchester. Alluding to the great changes which had taken place in nursing since he had left the hospital, he wished to pay a tribute to the nurses of the old school, who were devoted women who did their duty according to their lights. He had that day visited the new David Lewis Northern Hospital, which was in course of construction, and he was greatly impressed by the general excellence of its plan and arrangements. Attention had been paid to general comfort, sanitation, and provision for scientific and practical investigation. Perfect as the arrangements of the new hospital promised to be, he reminded his hearers that it could only attain real success by solid, honest work carried out on the lines pursued in the old one. He coupled the toast with the name of Mr. J. E. Sheppard, Chairman of the Committee.

Mr. Sheppard, in acknowledging the toast, alluded to the success which had attended the horse ambulance which had been introduced by his predecessor, Major Joynson, to whom the idea was suggested by what he had seen in the United States, and which was the first ambulance of its kind in Europe.

The toast of "The Past and Present Members of the Honorary Staff" was proposed by Dr. Permewan, and responded to by Dr. Glynn for the past, and by Dr. Dickinson and Mr. C. Puzey for the present members.

The health of "The Past and Present Residents" was proposed by the Rev. W. Sheal, and replied to by Mr. Reginald Harrison, Brigade-Surgeon Oldham and Mr. Pierce.

Colonel McFie proposed "The Nursing and Permanent Staff," which was replied to by Mr. Joseph Unsworth.

A vote of thanks to Dr. Roberts for presiding was moved by Dr. T. R. Bradshaw, and seconded by Dr. J. H. Lightbody, and carried with musical honours.

During dinner a selection of music was played by Higgins's band, and afterwards Messrs. Coats and Gemmel, of the Resident Staff, played a fantasia of popular airs called "The Northern Hospital Medley." Dr. Roberts, by special request, sang "The Death of Nelson," which he gave with all the force and charm for which he is so justly celebrated. The delightful reunion of old friends and colleagues was brought to a close by the singing of "Auld Lang Syne" and the "National Anthem."

In the afternoon a number of old residents visited their old hospital for the last time before it is pulled down, and were courteously shown over the new building in course of construction by the architect, Mr. W. Harvey, of Liverpool.

ABERDEEN.

Paraffin in the Water Supply.—Perilous Condition of the Aqueduct.—Bacteriological Examination of the Water.

CONSIDERABLE anxiety has recently existed in the town of Aberdeen as regards the purity of its water supply. The fact of the presence of paraffin being determined in the town water a few weeks ago led to the discovery that the pollution was due to the accidental escape of paraffin from a cask placed in an outhouse about ten yards from the aqueduct which leads the water from the higher reaches of the river Dee to the city reservoirs. Investigation showed that the contamination occurred in the neighbourhood of Milltimber, some six miles above the city. The oil flowing from the cask had found its way into a drain which crosses the aqueduct, and had thence percolated its wall. It may be mentioned that adjoining the outhouse is an ashpit used as a receptacle for common refuse and the contents of a closet. The dimensions of the aqueduct are 3 feet 9 inches by 3 feet 4 inches. Its wall is built of brick and cement of the thickness of a single brick. The aqueduct is carried entirely underground, and has clay puddling below and for a certain distance up the sides. The top of the aqueduct has no other protection from pollution than the earth above it, and the brickwork is in some parts in an unsatisfactory state of repair.

Investigations made by the Water Committee of the Aberdeen Town Council have led to somewhat disquieting disclosures. In the first place, an experimental repetition of the original accident in which two gallons of paraffin were emptied at the site of the leaking cask resulted in the collection of about a quart of the liquid after a short time from the interior of the aqueduct. In the nearer Deeside suburbs, where rapid and extensive building operations have been for some years in progress, and where houses and groups of villas are already situated in the neighbourhood of the aqueduct, cesspools have been formed and drains laid within a few feet of the pipe; nor does there appear to be any legal objection to such procedures. Foul ditches have been noted crossing above the aqueduct, and one containing putrid liquid material from an adjacent midden crossed 2 ft. 8 in. above the crown of the arch. To open a manhole for the inspection of the aqueduct it was necessary to remove a large heap of decaying vegetable rubbish which overlaid it.

The inspector of the aqueduct has stated that the wall is deficient in many places, and ventured the remark that a visit to the interior of the aqueduct after a rain storm was like "going into a shower-bath." Root tendrils have been collected which, having penetrated the brickwork, have continued to grow to the length of some yards in the interior of the tube. Dr. Matthew Hay, in his monthly report to the Town Council, has drawn attention to this very serious state of affairs, and though, as he says, it may be assumed that the amount of the polluting material is, relatively to the total bulk of the water, small, it appears to be a most urgent necessity that immediate steps be taken by the Town Council to remedy the matter.

We have yet to learn the results of the bacteriological and chemical analyses of the water at present being carried on in the laboratories at the University. Aberdeen has been a singularly healthy town for some years; in 1895 its death-rate was the lowest among the principal towns in Scotland, and that of 1896 was very close to it; but it would appear to be a matter of extraordinarily good fortune that a terrible example of the effects of a polluted water supply, such as Maidstone has recently given, has not been furnished by the town.

CORRESPONDENCE.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

SIR,—Mr. Upton has now spoken, as Mr. Carter promised he would. It would have been better if, before assuming that I had talked "unintelligible" nonsense, Mr. Upton had done me the honour to inquire of me whether my speech of last week, in which the Society of Apothecaries was mentioned, was correctly reported, because it would have saved him from writing on my views and knowledge of the Apothecaries Act Amendment Act of 1874 much that has no meaning. The corrections I would have gladly supplied him, and which render part of Mr. Upton's letter wholly inoperative, are contained in my letter published immediately after his in the BRITISH MEDICAL JOURNAL of January 22nd.

Leaving out, therefore, the third, fourth, and part of the fifth paragraph of Mr. Upton's letter, as being not germane to the subject, I must, before entering upon the important matter which gave rise to Mr. Upton's letter answer two points made by Mr. Upton, first that he is at a loss to know why his name should have been mentioned at all, and secondly that he is not "the secretary" of the Society, and "has in fact nothing to do with the examining functions of the Society except as their legal adviser." I mentioned Mr. Upton's name because, when the matter came up at the General Medical Council, the question originated in a letter signed by him, and when I contested the validity of its contents, the Council were given to understand that he would personally explain, as Mr. Carter said he would. This fact in view of Mr. Upton being the legal adviser of both the Apothecaries' Society and the British Medical Association obviously assumed a very special importance. As regards the second point it must not be understood from Mr. Upton's "correction" that he is only the legal adviser and not "the secretary;" or that my original statement, namely, that he is the solicitor and secretary is wholly incorrect; for as a matter of fact Mr. Upton is "the solicitor and clerk," and as "the clerk" he does the secretarial work of the Apothecaries' Society as shown by

the official letters to the General Medical Council, which are signed "J. R. Upton, Clerk to the Society."

Now for the main issue.

On the strength of a letter written by Mr. Upton to the General Medical Council, in which he stated that a practitioner whose name had been erased from the *Register* and from the list of licentiates of the Apothecaries' Society "still held the qualification of L.S.A.," the legal advisers of the General Medical Council advised the members of the Executive Committee that they should recommend the Council to restore the name of the practitioner to the *Medical Register*. When the matter came before the Council I drew attention to the claim that this involved on the part of Mr. Upton writing on behalf of the Apothecaries' Society (*vide* my full paper published in the *Lancet*, January 1st, 1898), and I am most agreeably surprised to find from Mr. Upton's letter that my objection is actually in his view correct. My whole contention was that a diploma, such as that of the Society of Apothecaries, was only of value when the person holding it was registered, and when his name was on the list of diplomates, and that it has no value in the absence of registration. Mr. Upton now says distinctly that the Society "never meant or intended to assert that their diploma, without registration, enables the holder to practise medicine, surgery, and midwifery." If that is so, then that is exactly what I stated, and I am gratified to find that I have Mr. Upton, the solicitor of the Apothecaries' Society, on my side, so strongly against Mr. Brudenell Carter, the representative of the Apothecaries' Society.

We now come back to Mr. Upton's use of the word "qualification." As regards this very essential matter, it is distressing to find that although, as we have just seen, in one paragraph he states satisfactorily enough that a diploma without registration is no use, and does not "enable the holder to practise," he nevertheless says in an earlier paragraph that if a person who has once been granted a diploma has been struck off both the *Medical Register* and the list of licentiates of the Apothecaries' Society, he yet "cannot be successfully proceeded against for unqualified practice." In other words, he asserts that such a person's practice is qualified—that is, legal—that is, registered—which thing is an absurdity, because the case considered is that of a person whose name has been erased from the *Register*.

Thus, Mr. Upton's fifth paragraph is diametrically opposed to his ninth. It is plain that both the profession and the subject are worthy of a somewhat fuller and less contradictory explanation from Mr. Upton.—I am, etc.,

Cavendish Square, W., Jan. 22nd. VICTOR HORSLEY.

SIR,—On reading your report of Mr. Carter's answer to Mr. Horsley's strictures at the meeting of the South-West London Medical Society, I was disappointed to find that his final sentence was omitted. He said: "As for what the direct representatives might do, the Council cares very little about it."

Although this was undoubtedly said in a moment of irritation at finding his views were not acceptable to the meeting, the statement is very significant. Nothing could more clearly show what is the real position taken up by the representatives of the corporations, and Mr. Carter in particular, in their attitude to the whole body of general practitioners. Mr. Carter's position may be summed up in his own words: "Parliament will not take one step in suppressing quackery or protecting the medical profession unless such step benefits the public." "As a political force the profession is powerless."

Does the profession re-echo this statement? Do we believe that Parliament will necessarily take a hostile attitude to all medical reform, that members of the House of Commons will take quacks under their special care, and that the General Medical Council is incapable of being made to work harder, or of being made more representative? If so, we must make it our business to influence Parliament through its individual members. It is not tenable that we are impotent as a political force. If, as Mr. Carter naïvely put it, we are only one in so many hundreds, it is true we can have little expectation of influencing elections directly, but Carter must know that we can do much (in my opinion all) by organising deputations of medical men to wait upon members of and candidates for Parliament.

Mr Carter's one remedy for our political powerlessness is to educate the public, and he suggested that that should be done by the distribution of tracts upon medical reform to our patients. This is, of course, as Mr. Horsley said at the meeting, a matter of taste.

An organised, determined effort to interview and obtain pledges from all parliamentary candidates is more likely to prove the fallacy of Mr. Carter's pronouncement that the General Medical Council "cares very little what the direct representatives may do."—I am, etc.,

Catford, S.E., Jan. 24th. ROBERT J. COLLIE.

SIR,—Mr. Brudenell Carter is reported to have said at the meeting of the South-West London Medical Society on January 12th: "And that Mr. Horsley assailed the action of the President (Sir Richard Quain) in a manner which induced decent people to leave the room rather than remain to listen to him."

May I say that I was present (in my official capacity as the Honorary Secretary of the Ethical Section) during the whole of the sitting, and that to my own knowledge the audience became much larger when Mr. Horsley commenced to read his paper? I am not prepared to assert that no one left the room whilst the paper was being read, but I can assert without fear of contradiction that no section of the audience did so. If Mr. Carter's secondhand statement is correct, then I fear there must be a considerable number of—I will not say indecent but non-decent—persons in the profession. I would ask Mr. Carter whether he would include Dr. Glover (another direct representative) among the non-decent community?—I am, etc.,

Cardiff, Jan. 24th. T. GARRETT HORDER.

THE WANTS OF THE GENERAL MEDICAL PRACTITIONER.

SIR,—Contrary to prognostication, the interest taken by the general practitioner in the present work of the General Medical Council shows a healthy tendency and one that would recognise the potentiality of that body. Not long ago such subjects as preliminary medical education, increase of the curriculum to five years, coverings, etc., were spoken of or passed over as if they were outside the domain of the profession altogether; the only topic being discussed with any enthusiasm was the medical aid and club question. The outcome of the "battle of the clubs" has on the whole been effective though not ideal, and there has arisen more than one modified hero who explains to the patients that the labourer is worthy of his hire, and that the treatment and management of certain cases cannot reasonably be expected by club patients whose doctor is to live by club fees alone.

The friction between the public and the profession has of late been serious, whereby offences have been given and taken and the spirit of loyalty injured. But the total extinction of the unqualified assistant has been the cause of much wonder and comment, especially as many are of opinion that the Council's decision is conspicuous by its absence of mercy and compensation which are proverbial and time-honoured characteristics of the medical profession.

Some practitioners allege that the decision will prove more of a disadvantage than an advantage to them personally, since they will be obliged to accept, at the present position of fees, a poor qualified instead of a good unqualified assistant who has, they say, hitherto satisfactorily answered their purpose. Others maintain that it will be more of a cross than a loss; while others—the majority, no doubt—view, though not without some regret, the issue as highly beneficial, hoping that step will be a necessary preliminary to the dislodging of the unqualified quack.

The introduction of the pupil after the exit of the unqualified assistant would appear to show that some kind of unqualified practice was almost necessary in the profession, and indeed it is difficult to see how such could be totally avoided if practice is to make perfect. But it is nevertheless difficult to imagine in what way the pupil-assistant could in these days be of much value, unless perhaps he were a final

year's medical student. The face of the public would be set against the pupil-assistant in the majority of localities, thus compelling the youth to spend his pupilship in the slums of large towns—a proceeding not calculated at a tender age to develop those higher and noblest qualities which are sought in us.

The system that I advocated a month or two ago in the British Medical Journal, and which, I am told, has been suggested before—namely, that after passing all legal examinations the young medico be required to spend at least twelve months in some general practice before receiving his diploma, and therefore before registration, would confer a boon on the general practitioner, and indirectly on the public It is a system that could hardly meet with disapproval in the medical schools. Its advantages are many and obvious. In these days the post of assistant is looked down upon by the public, but if it were known that assistantships were necessary to complete qualification, the assistant would have a proper place assigned to him. The principal would be required to sign documents in regard to character, time of service, etc., prior to the assistant's final registration, thus ensuring the training and development of all desirable qualities of the assistant. Overworked practitioners would be able to secure help without the worry of being dictated to by new diplomates, whose knowledge of the world and the working of a general practice is at the present day very rudimentary. The unregistered assistant would be able to take temporary charge of the practice, and practitioners would be in a position to hear of newly registered men who could be guaranteed to act as good *locum tenens* when required. Assistants would be more common, and mutual help, which is much needed in the profession, less rare. It is well admitted that at the present day a newly-qualified man is totally incapable of taking charge of a general practice, and is regarded by some as a source of danger in such a capacity. If the General Medical Council would but "cast a moment's fair regard" on the present very unenviable position of the general practitioner, they would give these suggestions some attention, and allow the doctor of the future to take advantage of such enjoyable and beneficial trips as that to Edinburgh in the coming July, instead of permitting them to "drink the dreams" only, and meet with disappointment at the last moment through the inability to procure that volatile medical commodity—the *locum*.—I am, etc.,

Wolverhampton, Jan. 20th. T. Dobson Poole.

UNQUALIFIED ASSISTANTS.

Sir,—I have read with interest several letters *re* unqualified assistants, and note that many doctors complain of newly-qualified men being unable to dispense a bottle of medicine and wrap it up decently.

Surely this is not what doctors get qualified for? Are there not chemists who are specially trained for this work? and methinks if the medical profession would only recognise more that these men are educated, trained, and examined specially for this work, and employ them instead of unqualified men and youths, it would be better not only for them but also for the patient, and tend to establish that *entente cordiale* which ought to exist between medicine and pharmacy.—I am, etc.,

Stamford, Jan. 24th. James S. Prior, Ph.C., M.P.S.

Sir,—It is not too much to say that a large proportion (probably by far the largest proportion) of the newly-qualified medical men of to-day who act as assistants, have also acted in that capacity at some former period of their career, that is when unqualified. To advocate the continued existence of the latter class of practitioner therefore on the ground of his superior attainments is, in the majority of cases, equivalent to comparing his efficiency in the unqualified and qualified phases of his existence, to the great disadvantage of the latter state of grace—which is demonstrably absurd.

Not only, however, are we told that the unqualified is more competent than the qualified helper, but also that he is often superior to his principal in tact, bedside manner, and even practical experience.

It is no doubt an excellent rule, as another correspondent has remarked, to follow Aristotle in learning things first and reasons afterwards, provided that this advice be carried out in its entirety; but certainly if nowadays there is somewhat of a tendency to invert this precept, many an old practitioner, sound or unsound, knows and regrets in his heart of hearts that in his day the equally mischievous practice of fulfilling the first part and ignoring the second prevailed largely.—I am, etc.,

January 24th. E. W. A.

THE AERIAL SPREAD OF SMALL-POX.

Sir,—I confess to finding myself in dilemma between Dr. Savill's moving appeal to me for facts in support of the theory of aërial convection, and the appeal for brevity of correspondence which you appended to his last long letter. Let me, then, say in brief, that I will gladly place at Dr. Savill's disposal—as I have already placed at the disposal of Dr. Wilson, of Cheltenham—a mass of facts which have been ascertained and published with regard to the graduated intensity of small-pox manifestation which occurred round Fulham Hospital in 1880-81 and 1884-85; in respect of metropolitan districts which, between 1875 and 1886 contained small-pox hospitals; round the Oldham Hospital in 1893; round the Sheffield Hospital in 1887, and in other cases.

Dr. Savill might advantageously reconsider, in the light of knowledge obtained from these more comprehensive data, his own account of the manifestation of small-pox in very limited areas round each of the Warrington hospitals. Dr. Savill cannot get away from his own figures, which, as your reviewer perceived, show that in respect of each of these limited areas there was a conspicuous graduation of small-pox incidence. But can either of his present explanations of these occurrences be accepted as adequate, in view of the very definite fact that similar graduation of small-pox incidence has been manifest on many occasions round a plurality of hospitals receiving acute small-pox cases under local conditions that were altogether dissimilar? For when we are told that at Warrington in each instance it was merely a question of children in an open space near the hospital boundary communicating with patients through the palings, we not only ask how it happened that within the small circle of 500 yards round each hospital the distribution of the houses to which these children conveyed small-pox was graduated from centre to periphery; but we reply that similar graduated incidence has been observed round other hospitals where there was no open space, and no palings, and no communication of this sort at all.

And, similarly, when Dr. Savill offers his alternative explanation that in Warrington the houses in which small-pox patients remained unisolated happened to be in greater number near to the hospital than at a distance, reply must be made that the phenomenon of graduated incidence, which we have to explain, is one which has been repeatedly manifest round other hospitals near which there were no such unisolated cases. Obviously we have no justification, scientifically, in accepting an explanation that graduated incidence was due to a particular set of local circumstances in the case of one hospital, to another totally different set of local circumstances in the case of a second hospital, and are quite unexplained by any local circumstances in the case of a third hospital, while at the same time we have in aërial convection a theory which adequately accounts for the phenomenon in one and the same way for all the hospitals.

The rest of Dr. Savill's letter appears to me to require little by way of answer. "Epidemiologist," in his letter of December 11th, has shown, and Dr. Savill has not denied, that upon a proper basis of calculation, the incidence of small pox upon the workhouse near one of the Warrington hospitals, and upon the brewery near to the other, was in each case conspicuously in excess of the attack rate of the whole town of Warrington. Dr. Savill has himself abandoned his contention about incidence opposite to prevalent winds. To his observations about the "inconvenience" of the policy of a central responsible authority which refuses to sanction small-pox hospitals near populous areas, I may reply that there are certain advantages in preventing the waste of human health and life, even though some people find the process inconvenient. Finally, I would note how successful Dr. Savill has been in reducing his position to an absurdity. In his last letter he declined to consider whether among other

sources of infection at Warrington aërial convection was operative because—the italics are his—*it is impossible to exclude all possible sources of direct or mediate infection in any case of small-pox.* Thus, to give his own illustration, he refuses to admit "the possibility" that a given person, although dwelling near a hospital receiving acute small-pox cases, could have contracted small pox by aërial convection, unless he can first eliminate the chance that the person in question, on the day he was infected, may have sat upon a seat in a vehicle where there had been "someone just before who had come from a person who perhaps did not know himself that the pimples on his forehead were the eruption of small-pox."

Manifestly, there never has been and never will be a single case of small-pox in which a remote chance of infection of this kind can be excluded, and by making such a demand Dr. Savill has adopted a position which renders it hopeless for me to enter into further argument with him. If he refuses to consider the question of atmospheric convection until it is conceded that atmospheric convection is impossible, he and I have no common ground for discussion.

But may I, in parting with Dr. Savill, present him with one more analogy? Let Dr. Savill be in a room, fireless, but with open window. Let there be a smoky chimney a few hundred yards away. Let Dr. Savill observe on his table a particle of soot. If, following the argument I have just quoted, he were to consider how that particle of soot came there, he must needs refuse to admit the possibility that it came from the smoky chimney unless he can first eliminate the chance that there may have been in his room a visitor who had just before been talking to a man who, although his appearance did not show it, was nevertheless a chimney sweep.—I am, etc.,

London, Jan. 11th. G. S. BUCHANAN.

THE DIFFICULTIES OF THE LONDON STUDENT.

SIR,—As an old student of a London hospital, a holder of four London qualifications, and the father of intending medical students, I venture to point out some great hardships of study in London which the Westminster University scheme might have remedied. To the uninitiated their remedy seems possible without it.

That the average student cannot obtain a degree is a grievance that has been worn threadbare, but is more or less real, as the public have some extra confidence in M.D.'s of any kind; and occasionally advertisements of valuable appointments abroad appear concluding with words to the effect that candidates must hold an M.D. This is good for Scotch and Irish students, bad for Londoners.

But the multiplicity of final examinations is not so often pointed out as being injurious to the student, and, I may add, to the public, which wants efficient medical attendants with a reliable official stamp. The injurious action can be seen clearly in the case of the higher degrees generally taken by qualified men. Candidates for these have little or no chance if they are engaged in really responsible work, such as private practice or public appointments, when preparing to face the examiners, more but still not very much if they have heavy hospital duties to perform, and most if they do no private practice, but fill up their time reading advanced text-books, with just enough hospital work and very little real responsibility. It can hardly be disputed that a patient behind the scenes might be wise in reversing the general decision of the examiners.

If anyone doubts my contention let him analyse the results of the higher examinations—for example, the recent M.D. Lond. list:

Of the 32 successful, representing, I am told, only 45 per cent. of the candidates:

8 passed the M.B. in 1896.
11 ,, ,, 1895.
8 ,, ,, 1894.
1 ,, ,, 1893.
1 ,, ,, 1892.
1 previously an M.D.Lond. passed in State Medicine.
2 I cannot trace.

Those qualifying for medals were M.B.s of 1896.

It looks as if the 55 per cent. of failures included the older and more experienced body of candidates, who could hardly be stupid or idle considering their previous training.

Now as to the apparently unnecessary hardships of the student. If he wants the M.D.Lond. and M.R.C.P.Lond. he must pass two examinations in pure medicine, with a considerable lapse of time between them, unless he be fortunate. Woe to him if he engages in responsible work in the interim! Why should not these two examining bodies agree on the standard of a higher examination in medicine, and recognise each other's passes in that subject at least? The same question can be applied to the F.R.C.S.Eng. and M.S.Lond. in surgery.

The trials of the student who struggles for "The Conjoint" and the M.D.Lond. are generally very severe on account of the lapses of time between examinations in the same subject; but to the uninitiated it would appear that his lot might be eased without much difficulty and with much increase in real medical efficiency by the introduction of a system of mutual recognition of even portions of the examinations by the colleges and London University.

Lest there should be any doubt about the hardship and unpractical tendency of examinations, let me give a student's history, which can be proved absolutely if necessary. A. B. passed L.S.A. and M.R.C.S. in the end of his fourth year, being appointed assistant house-physician in his hospital (a six months' appointment) at almost the same time. He was house physician (twelve months) in his fifth year, and passed M.B.Lond. second class during office. If he passed at all during his hard year of office he would probably have got his first class on just enough ward work, without responsibility, and plenty of special reading. But would he have been a better practitioner? However, he lost his chance of entering for the M.D. in his sixth year, which he occupied by studying lunacy as assistant in a large asylum. In his seventh he was obstetric assistant (twelve months' appointment) at his hospital. At the end he passed the M.R.C.P.L., but owing to his work in the asylum he was not eligible for the M.D.Lond. examination held about the same time. Being impecunious, and not feeling equal physically to the London struggle, he then went into practice in the country without the remotest chance of his M.D.Lond., as it is impossible for him to leave his home for months to work in hospitals and read text-books.

Again I ask, why in the interests of student and public should not the M.R.C.P., which carries the higher medical prestige, pass for medicine at the London M.D., and *vice versâ*? and why should not the system of reciprocity be extended? London has advantages, and great ones, but unless steps are taken to smooth unnecessary blocks from the student's path, I think fathers and guardians would be wise to turn their eyes towards other seats of medical education.—I am, etc.,

January 8th. AN OLD STUDENT.

THE SECTION OF STATE MEDICINE AT EDINBURGH MEETING.

SIR,—I am not sure that I attach the same meaning to the term "State Medicine" as Mr. H. Nelson Hardy, and with all due respect to the Editors I have difficulty in accepting the new definition of it in Guy and Ferrier's *Forensic Medicine* (5th Edition). In former years there was a section entitled "Medical Jurisprudence and Public Health;" in later years the title took the form of "Public or State Medicine;" and now it appears dressed in another garb, that of "State Medicine." One has only to look back over the communications for a series of years to be satisfied that the section is to all intents and purposes one of Public Health. In the regulations of the Faculty of Physicians and Surgeons, Glasgow, "State Medicine" and "Forensic Medicine" are referred to as two entirely different subjects. The Senate of Glasgow University, appreciating the importance of each, has asked for a separation of the two subjects. Edinburgh University has already not only come to this decision, but is on the eve of acting upon it.

It is difficult to understand why "Legal Medicine" should not have a distinct place allotted to itself as is the case at medical conferences in other countries. By so arranging the legal profession is more likely to co-operate with us. Of course so far as the Edinburgh meeting is concerned the matter has been settled, but it will be practically impossible to have at another gathering a President of the Section of State Medicine like Sir Henry Littlejohn, who is in this

country the embodiment of all that is best both in Medical Jurisprudence and in Public Health. I must now take leave of the matter and leave to others who take a more active interest in the affairs of the Association than I do the action necessary in order to secure for "Legal Medicine" a place for itself in future annual programmes. If it has got to be tacked on to any other subject there is as much if not more justification in sandwiching it along with Psychology.—I am, etc.,

Edinburgh, Jan. 25th. J. F. SUTHERLAND.

CONSULTATION WITH HOMŒOPATHS.

SIR,—I am rather surprised that anyone at this time should again raise the question "Should homœopaths be met in consultation?" Are the homœopaths bigoted or narrow-minded? If any should think so let them read the introduction to Dr. R. Hughes's *Manual of Therapeutics*. I did so accidentally when a student, and was so pleased with it that I resolved to study it after I qualified.

I wonder if the extremest fancies that ever entered into the mind of a homœopath are more chimerical than the grave and laboured speculations of the lights of our profession, which are received with acclaim to-day and discarded to-morrow. Do we not use the remedies which they have introduced or rescued from oblivion, and shown us how to employ with advantage, and that without acknowledging their source? Do we not read of a new remedy introduced by Dr. So-and-So, when it has been employed by the homœopaths since the time of Hahnemann, and oftener with more success by them, as they discriminate when it should be used, whereas those of the orthodox school employ it in all and every case, and being disappointed soon relegate it to the region of forgotten remedies, for example, potassium bichromate cactus grandiflora.

Are our textbooks free from the teaching of homœopathy? I would ask those gentlemen who have written to the BRITISH MEDICAL JOURNAL on this subject to study carefully the *Medical Annual* for 1887, Dr. Sidney Ringer's *Handbook of Therapeutics*, and compare them with Dr. Hughes's works, and tell us what opinion they come to. A number of medical men have told me they have been indebted to the homœopaths for some of the best hints they ever got, and I have learned more of the treatment of disease from some of these men than from those from whom much more was expected.

I think the time has now arrived when doctors should be bent more on relieving human suffering, and advancing their profession, than standing on their dignity, and should not be above learning from all or any source.

What about the new serum treatment? Does it not savour of *similia similibus curantur?* I think a great number of us, consciously or unconsciously, practise a little homœopathy, and I think it is not becoming in members of a liberal profession "to denounce Hahnemann as a charlatan, while presenting their patients with a plateful of crumbs furtively swept from Hahnemann's floor."

I have never met a purely homœopathic doctor in consultation, but will be very pleased to do so.—I am, etc.,

January 24th. AN OPEN MINDED GENERAL PRACTITIONER.

ST. JOHN AMBULANCE LECTURES.

SIR,—I have just seen a circular of the St. John Ambulance Association *re* home hygiene. Among other matter it contains regulations for the examination of "secretaries and executive officers of centres and class secretaries, the clergy, school teachers, county council lecturers, and all who are willing to occupy a portion of their time in spreading useful knowledge" for the lecturer's certificate. As this is a very serious departure from the rule of the Association to employ only registered medical practitioners as their lecturers, I think that the executive should give some authoritative statement of their reason for this proposal to constitute a body of lay lecturers. It means either that the Association is dissatisfied with the work done by their present staff of lecturers, or that the medical profession is getting tired of helping the Association. Seeing that without the aid of the profession the whole of the work of the St. John Ambulance Association would cease, I think that some statement should be made at once, or the Association may find that medical men will refuse to give any course of lectures that the executive thinks may be given by lecturers who have merely passed an examination which does not require any special course of training; for the circular says, "The attendance at a course of lectures before examination for a lecturer's certificate is not compulsory."

I shall be glad if some of the other lecturers of the Association will give their opinion on this circular.—I am, etc.,

January 21st. HYGIENE.

THE MIDWIVES QUESTION.

SIR,—Those of your readers who are interested in this question will be glad to hear that early next session an effort will be made, by consent of both parties, to appoint a Parliamentary Committee on this subject. I have this on the authority of Mr. Skewes-Cox, our local member, and it is particularly gratifying to me as I made this suggestion by letter to several M.P.'s, including the Home Secretary and the Leader of the House on February 16th, 1897, when we were threatened with a crude and premature Midwives Bill.

It is perfectly clear to me that any legislation dealing with "midwives" apart from "sick nurses" would be imperfect and faulty, and our efforts should now be directed to secure a satisfactory and workable "Sick and Obstetric Nurses Bill." When the time comes I shall be prepared to submit a scheme which was recently referred to in the BRITISH MEDICAL JOURNAL.—I am, etc.,

East Sheen, Jan. 22nd. ALEXANDER MCCOOK WEIR.

CRIMINAL LUNATICS.

SIR,—The conflict of medical and legal opinions about criminal lunatics is somewhat scandalous, and could be settled in this way: The justification of capital punishment is that it is beneficial to society—that it acts as a deterrent on criminals. Lunatics are not hanged because they are irresponsible, because such a punishment would be no deterrent to them. But many, if not most, lunatics are influenced by a system of rewards and punishments, so that a criminal's sentence should be commuted upon satisfactory evidence not merely that he was insane, but that he was so insane that the fear of such a punishment would have no influence on his actions.—I am, etc.,

Croydon, Jan. 24th. T. ARCHD. DUKES.

THE QUESTION OF TABLE SALT IN CHRONIC GOUT.

SIR,—I note in the interesting paper read by Dr. Luff before the Harveian Society of London, on January 6th, and reported in the BRITISH MEDICAL JOURNAL of January 15th, that he recommends the habitual use of an artificial table salt instead of common salt (or chloride of sodium) in cases of chronic gout. He recommends one made from the ash of vegetables. A similar idea occurred to me about a year ago, but I have simply substituted chloride of lithium for chloride of sodium. My practice being almost exclusively gynæcological, I have only had the opportunity of testing this in one case and upon myself, as I am personally interested in the disease. In both cases the result appeared satisfactory, but of course no conclusion can be come to except by more extended observation. I therefore commend the matter to the general physicians. The use of chloride of lithium can certainly do no harm, and it is extremely agreeable in taste, and should be used exactly as common salt is used. I procured mine from Reynolds and Branson, Leeds.—I am, etc.,

Leeds, Jan. 21st. JAMES BRAITHWAITE, M.D.

ANTISEPSIS IN OCULAR SURGERY.

SIR,—*Apropos* to the interesting discussion on antisepsis in ocular surgery, recorded in the BRITISH MEDICAL JOURNAL of January 8th, will you allow me to remark that on January 5th I introduced to the notice of the President and members of the Medico-Chirurgical Society of this city, a female patient, upwards of 70 years of age, on whom I had recently performed the operation of double extraction for cataract. The patient in question, a former inmate of the union hospital, was quite blind when I first saw her, very frail, under 7st. in weight, in bad health, and suffering from profuse discharge from the lachrymal sacs; in fact, after the lens had been removed the wound was constantly bathed in

pus, and the dressings saturated with matter. She nevertheless recovered perfectly, without any drawback, and has now central and movable pupils (the operation was performed without iridectomy), shows no trace of operative interference, and has excellent sight. I have on former occasions been compelled to operate under similar circumstances, and the patients have done well. I attribute these results to the placement of the incision precisely in the corneo sclerotic junction, in which case the flap fits like a watch glass, and is at once agglutinated to the stump, so that the wound is closed before the discharge has a chance of infecting it. The antiseptic precautions which I usually adopt are very simple. I cleanse the face and eyebrows with a solution of biniodide of mercury in alcohol, wash out the conjunctival sac with weak nitrate of silver lotion, sterilise forceps, speculum, and other non-cutting instruments with dry heat, and dip the knives and needles for a few seconds in absolute alcohol.—I am, etc.,

CHARLES BELL TAYLOR, M.D.,
Surgeon to the Nottingham and Midland Eye Infirmary.

January 17th.

FORCED REDUCTION OF LATERAL CURVATURE OF THE SPINE.

SIR,—With regard to the letters upon this subject published in the BRITISH MEDICAL JOURNAL for January 22nd, I beg to state that Fig. 1 in my paper referred to by your correspondents (JOURNAL, January 8th) represents the patient in the best position he could maintain for 10 seconds while he was being photographed. His better position was only momentary, and was to such a slight extent that it was hardly appreciable.

Fig. 2 shows so obvious an improvement in every respect that I can quite understand the doubts which your correspondents seem to have as to its being the effect of the treatment. I do not expect to convince Mr. Roth, who practises the "movement cure" treatment, a method which, I agree with him, cannot overcome osseous deformity, but I certainly believe that I have succeeded in lessening or overcoming rotation by mechanical means in a large number of cases. No one, however, could imagine that I inferred in my paper that any appreciable change in the shape of the bones or cartilages had occurred in three weeks, and I contend that it is hardly fair criticism to assume that I suggested such a view. My points are that whatever improvement in position of the spine can be attained by any means, such improvement will become permanent if kept up for a reasonable time by an efficient mechanical appliance, and that by applying manual force in the prone position I have been able to correct the curves to a greater extent by means of one such operation than I could by half a dozen or more adjustments of the apparatus alone. As to the method of applying force, I believe the manual plan is far more safe than the use of levers, and I have little doubt that I could exert enough force by such means to break the ribs if I wished to do so. If your correspondents doubt this assertion I shall be happy to give them a personal demonstration.

It would, of course, be useless to correct the spine in such a way unless a mechanical apparatus were applied at the same time, and those who discard the use of apparatus have no object in forcing the spine into a better position.

The patient represented in my paper was exhibited at the Harveian Society on November 4th, 1897, and the process of reduction demonstrated, and if your readers will refer to your report of that meeting (JOURNAL, November 20th) they will see that the opinions of those present, including Dr. Hare, Dr. Bowles, Dr. Dodsworth, Dr. Roe Carter, and others, who spoke from personal experience of my method of treatment, were unanimous in their recognition of its success. Dr. Bowles remarked, "that having at one time been opposed to treatment by apparatus he had become converted to this plan of dealing with lateral curvature from having seen the benefits derived by patients under Mr. Noble Smith."

Those who wish to see for themselves what can be done by such treatment should attend the practice of the City Orthopædic Hospital, or I will gladly show a representative committee the process at my own house where they can follow out the whole course; but to exhibit a patient at a society one day and expect members of that society three months later to remember the exact position the spine had assumed at first is hardly a fair experiment.

With regard to the marked line on the patient's back, referred to by Mr. Barwell, I would remark that photography does not indicate all that one can see and feel, and therefore I outlined the curves with ink. The line however is so distinct that no attempt to disguise can be fairly suggested.—I am, etc.,

Queen Anne Street, W., Jan. 24th. NOBLE SMITH.

THE TEMPERANCE QUESTION.

SIR,—I cannot imagine where Mr. Potter found the following, which he gives as a quotation from me: "That the desire for alcohol would, under evolution, increase as the power of physical resistance decreased." It certainly does not occur in my letter. Indeed, I am very strongly of the opinion that the racial use of alcohol has tended little or not at all to evolve physical resisting power, and have been at pains to prove this point.[1] Mr. Potter further says, "The savage eliminates himself, not because he has a greater craving for drink, but because his reason and will power are not evolved, so that he does not consider the consequences as civilised man does." I have lived among savages, and I have not observed that their will power is weaker than that of civilised man, but I have observed that their craving for alcohol is immensely stronger.

Let me ask Mr. Potter—nay, let me ask the vast majority of your readers who are moderate drinkers, and are therefore exposed to temptation—why do they not get drunk? Is it because they strenuously resist the desire, or because they lack the craving? I think the great majority will reply that the craving does not exist in them. But do they not all know individuals—medical men, perhaps, fully cognisant of the physical evils induced by alcoholism—who indulge to excess, notwithstanding that they are made exceedingly miserable thereby, and though all their interests call them to abstain? Men differ as regards the depth of their cravings in other respects—for instance, as regards tobacco, sexual indulgence, various articles of diet, etc. In like manner do they differ as regards the depth of their craving for alcohol, and nations like the South Europeans, which have had a prolonged and disastrous experience of alcohol, are now mainly composed of individuals who crave little for it; whereas nations like the American Indians, which have had little or no experience of it, are mainly composed of individuals who crave greatly for it. Surely, since alcohol is a poison, and since it so stringently eliminates those who crave for deep indulgence, it must be a cause of evolution like every other eliminating agency throughout Nature, which is not also a cause of absolute extermination? Does not the fact that every nation acquainted with alcohol is drunken strictly in inverse proportion to the duration of its familiarity prove that thus evolution has taken place, just as evolution has taken place wherever any disease has been prevalent and deadly? Mr. Potter further says: "The South European is sober partly because of his light beverage, just as the light beer of Germany does not induce drunkenness to the same extent as spirits do in Scotland and Ireland." He confuses cause with effect, and ignores my statement that Wellington's troops were much more drunken on the wines of the Peninsula than their Iberian *confrères*. Moreover, certain savages (for example, the Africans with their *pombè* beer, and the natives of Guiana with their cassava intoxicant) have been able to manufacture alcohol in extremely dilute solutions only, yet, when opportunity offers, they eagerly indulge in spirits. Again, certain other savages (for example, the native Australians and the inhabitants of the Arctic Circle) have never been able to manufacture alcohol at all, and they are the most drunken peoples on earth. If this topsy-turvy theory were correct, they should be the most sober. Surely, then, it is abundantly evident that North Europeans use strong solutions because they desire deep indulgence, not that they indulge deeply because their solutions are strong.

I have dealt at length in my book (pp. 341-3) with Mr. Pedley's objection, and have not space to consider it here. Suffice it to say that the same cause—fanaticism—which has

[1] *The Present Evolution of Man*, pp. 325-6.

kept Mohammedans sober, has kept them barbarous also, by checking their intercourse with more civilised but more drunken peoples. I do not know why Mr. Pedley informs us that Mohammedans are "one of the finest types of men now in existence," for I have never maintained that the use of alcohol benefits a race physically or mentally, but merely that, being a poison, it has been the cause of an evolution against itself—an evolution which would be reversed were alcoholic selection withdrawn; and further that, since we cannot permanently abolish alcohol, for the reason that we cannot exterminate the organism which produces it, it would be criminal to cause a retrogression, which would assuredly result in ultimate disaster.—I am, etc.,

Southsea, Jan. 7th. G. Archdall Reid.

Obituary.

CHARLES HAYES HIGGINS, M.D., M.R.C.P., F.R.C.S., etc.,

Birkenhead.

Another veteran member of the profession in the North of England has passed away in the person of Charles Hayes Higgins, who has been a familiar and respected figure in Birkenhead for nearly half a century. His birth took place on board the flagship of Admiral Hayes (hence his second name), off the Island of Java, in 1811, at a time when his father, Colonel Charles Thomas Higgins, of the Hon. East India Company's service, was on shore leading his regiment in the storming of Batavia, which was captured from the French. His medical studies, as was not infrequent in the case of students in earlier days, were carried on in several schools in succession, Bristol, Edinburgh, Paris, and Guy's being visited by him. He qualified as L.S.A. and M.R.C.S. in 1834, and subsequently became an honorary Fellow of the College in 1844; M.D. of St. Andrews in 1849, and M.R.C.P. London in 1859. He settled in Birkenhead in 1850, and soon became popular with the public and the profession. At the time of his death he was Physician to the Birkenhead Eye and Ear Hospital and Dispensary. He was formerly Surgeon to the Birkenhead Hospital, and Consulting Physician to the Wirral Children's Hospital. He was Surgeon-Major (V.D.), 1st C.E.V.

In the earlier years of his professional life he made several contributions to the literature of his profession, and his Case of Inversion of the Uterus from Polypus: Extirpation successfully performed with Knife, published in the *Edinburgh Med. Surg. Journal* for 1849, excited great interest at the time. Largely through the interest felt in him by the late Sir James Y. Simpson he was made an F.R.S. of Edinburgh.

He was twice elected President of the Birkenhead Medical Association, and twice filled the chair of the Birkenhead Literary and Scientific Society, of which he was for long a very active member. His tastes were largely literary, and he was for many years a member of the Library Committee of the town. He was a devoted student of Shakespeare, and the author of several lectures on the subject, two of which, designed to refute the Baconian heresy, were favourably noticed by Mr. Gladstone. His personality was extremely charming, and his conversation was marked by delicate humour and wide information.

His health had been failing for some time, and he lived to see nearly all his old friends carried to their rest before him.

His funeral was largely attended by the public, and by leading representatives of the profession in Birkenhead, Liverpool, and the neighbourhood.

We regret to announce the death of Dr. Reid, of Templeton, Kildrummy, on January 18th. In him Aberdeenshire has lost one of its oldest and most respected medical men. He began his studies at Marischal College, and his professional career extends over a period of fully fifty-two years. He established himself first at Ballater, where for many years he was the only medical practitioner in a very large district. On the death of his father in 1870 he returned to his native place of Kildrummy, where up to the date of his death he carried on a large and successful medical practice combined with the business of farming. He was Medical Officer to the Parish Council, and also a J.P., and his great consideration and unselfishness, more especially to his poorer patients, cause his death to leave a blank in that district which will not easily be filled.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Staff-Surgeon H. J. McC. Todd has been promoted to be Fleet-Surgeon, January 6th. He was appointed Surgeon March 31st, 1877, and Staff-Surgeon twelve years thereafter. From the *Royal Navy List* we learn that he served in medical charge of the Niger expedition in 1879, and landed with the Naval Brigade during engagements with the natives at Onilsha (mentioned in despatches). He received the expression of their lordships' great satisfaction at the display of zeal and devotion to duty manifested during the epidemic of yellow fever at Jamaica in 1885-86, and was recommended for promotion.

The following appointments have been made at the Admiralty: John Acheson, M.D., Staff-Surgeon, and Moyle Breton, Surgeon, to the *Arrogant*, January 27th; John C. Ferguson, B.A., M.B., Surgeon to the *Vivid*, January 21st; Edward Cuffey, M.B., Surgeon to the *Vivid* additional, undated; Joseph C. Wood, Surgeon, to the *Racer*, lent, February 7th.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel William A. May is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* A. L. Brown, retired, December 15th, 1897. Brigade Surgeon Lieutenant-Colonel May's previous commissions are thus dated: Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1886; and Surgeon-Lieutenant-Colonel, September 30th, 1894.

Surgeon-Major Henry E. W. Barrington, M.B., F.R.C.S.I., retires on retired pay January 22nd. He entered the service as Surgeon February 3rd, 1878; and became Surgeon-Major twelve years thereafter.

Surgeon-Colonel R. C. Eaton, having been appointed Principal Medical Officer in the Bombay Command, has been posted to the Poona District.

ARMY MEDICAL RESERVE.

Surgeon-Captain A. J. Boyd, having resigned his medical appointment in the Volunteers, ceases to belong to the Army Medical Reserve January 22nd.

THE VOLUNTEERS.

Surgeon-Lieutenants W. Langran, 3rd Volunteer Battalion the Devonshire Regiment, and R. Odell, 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment, are promoted to be Surgeon-Captains, January 22nd.

Surgeon-Lieutenant-Colonel R. Girvan, 2nd Volunteer Battalion the Royal Scots Fusiliers, has resigned his commission, January 22nd; he retains his rank and uniform.

Surgeon-Captain R. L. Sparrow, 6th Volunteer Battalion the Manchester Regiment, is promoted to be Surgeon-Major, January 22nd.

Surgeon-Major R. S. Turner, M.D., 6th Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Lieutenant-Colonel, January 22nd.

THE RISING ON THE NORTH-WEST FRONTIER OF INDIA.

A despatch has been published from Major-General G. C. Bird, commanding the Tochi Field Force, describing its operations from June to November last. The Governor-General in Council, in issuing the despatch, says that the force has fully carried out the objects of the expedition, and he desires to express his high appreciation of the discipline, resolution, and patient endurance displayed by all ranks under the severe trials to which they have been exposed. General Bird submits the names of the following officers, among others, for favourable consideration:—Surgeon-Colonel R. H. Carew, D.S.O., Army Medical Staff, Principal Medical Officer of the Force; Surgeon-Lieutenant-Colonel W. A. Simmonds, 12th Bengal Cavalry; Surgeon-Major H. C. Hudson, 16th Bengal Cavalry; and Surgeon-Captain L. P. Mumby, M.B., Army Medical Staff.

THE MEDICAL SERVICES IN THE FRONTIER WAR.

Our contemporary, the *Irish Times*, in common with many others, expresses surprise at the extraordinary silence maintained regarding the part played by the medical services during the late trying campaigns. That the duties of the medical officers, by night and by day, in darkness and in light, must have been of the most harassing nature is quite evident; that they shared fully the open and hidden dangers and alarms of their combatant brethren is equally plain; that they had often to succour the wounded under fire is certain; yet we know little or nothing of details. Our contemporary trusts this silence does not indicate that the medical services are to go unrecognised and unrewarded, because, if any such official spirit is manifested, the country will see to it. The official history of the campaign has yet to be published, and we trust that when it appears it will plainly set forth not alone the merits but the shortcomings of the medical services—whether, indeed, they were sufficient in strength and organisation for their arduous duties.

THE OPERATIONS IN THE SOUDAN.

The *London Gazette* of Tuesday last contains a despatch from Sir Herbert Kitchener, the Sirdar of the Egyptian army, describing the operations which resulted in the capture of Abu Hamed and the occupation of Berber in July and August last. The Sirdar records his appreciation of the excellent services of the whole of the force, whether officers or men,

engaged in the most arduous duties throughout the trying summer heat. Sir Herbert Kitchener's staff included Surgeon-Captains H. E. H. Smith and C. S. Spong, of the Army Medical Staff.

THE MEDICAL STAFF CORPS IN INDIA.

I. V. R. C. writes: The Border War has clearly indicated the need of a European Medical Staff Corps in India. What is needed is an Indian battalion of the corps, say of four companies of 150 men each. This should have been formed when station hospitals were introduced. Once the companies were in India the cadres should remain, while the men returned home as their tour or time expired. Cut off from contact with the British soldier in India, the Medical Staff Corps is kept much apart from a large section of the army. Such a body would soon repay its cost by good service in the hospitals of India, while it would stiffen the Indian Medical Staff Corps—a very desirable thing as the campaign has shown.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.—Mr. R. H. Biffen, of Caius, has been appointed Demonstrator of Botany; the Rev. F. C. Kempson, M.B., of Caius, has been appointed Demonstrator of Anatomy; and Mr. H. W. Pearson, of Christ's, has been appointed Assistant Curator of the Herbarium. Mr. O. Salvin, F.R.S., has been elected an Honorary Fellow of Trinity Hall.

HONORARY DEGREE.—The complete degree of M.A. *honoris causâ* has been conferred on W. H. R. Rivers, M.D.Lond., of St. John's, University Lecturer in Physiological and Experimental Psychology.

BACTERIOLOGY.—The State Medicine Syndicate have made a grant of £50 to the Department of Pathology, in aid of the course in Bacteriology for the D.P.H. examinations.

SURGICAL DEGREES. On January 13th the degree of Bachelor of Surgery was conferred on Mr. H. R. Langmore, M.B., B.A., St. John's. The examiners report that at the recent examination for the M.C. degree no candidate was approved.

UNIVERSITY OF EDINBURGH.

At a meeting of the University Court on January 17th, Dr. Alexander Gordon Miller, Edinburgh, was appointed an additional examiner in Clinical Surgery for a period of two years, from January 1st, 1898.

UNIVERSITY OF ABERDEEN.

THE University Court of the University of Aberdeen has appointed to be additional Examiner in Medical Jurisprudence and Public Health, for a period of one year (in room of the late Dr. Fred. W. Barry), James Peter Watt, M.A., M.B., Medical Officer of Health for the County of Aberdeen; and to be additional examiner in Materia Medica, for a period of three years (in room of Dr., now Professor, Stockman, University of Glasgow), Francis Warner, M.D., London Hospital Medical College, London.

CONJOINT BOARD IN ENGLAND.

FIRST EXAMINATION.—The following candidates have passed in the the subjects indicated:

Chemistry and Physics.—J. W. W. Adamson, St. George's Hospital; H. R. P. Baker, St. George's Hospital; A. E. Bird, Owens College, Manchester; C. J. Blasson, University College, London; F. A. Brodribb, St. Paul's School, West Kensington; R. Burges, London Hospital; H. B. Connell, Mason College, Birmingham; S. N. Crowther, Westminster Hospital; W. B. Davy, Middlesex Hospital; E. M. De Wilton, St. Mary's Hospital; F. R. Edmunds, University College, London; L. W. Forsyth, Cambridge University; T. H. Fowler, St. Bartholomew's Hospital; P. A. Heudley, King's College, London; C. T. Holford, St. Thomas's Hospital; W. E. Houlbrook, St. George's Hospital; T. Howell, University College of South Wales, Cardiff; G. Hughes, St. Bartholomew's Hospital; E. H. Kenderdine, Masons College, Birmingham; R. P. Kennedy, St. Mungo's College, Glasgow; J. M. King, Royal College of Surgeons, Edinburgh, and University College, London; G. H. Latham, St. Thomas's Hospital; W. T. McCowen, St. Mary's Hospital; J. K. N. Marsh, St. Thomas's and St. Bartholomew's Hospitals, and the Birkbeck Institute; H. M. H. Melhuish, St. Bartholomew's Hospital; G. W. Miller, St. Bartholomew's Hospital; L. Morgan, University College of South Wales, Cardiff; A. E. Oakeley, Middlesex Hospital; F. M. M. Ommanney, Guy's Hospital; F. Paine, University College, London; J. D. Pearson, Guy's Hospital; G. Raymond, St. Thomas's Hospital; S. Riley, Owens College, Manchester; S. A. Robertson, University College, London; T. Scatchard, Yorkshire College, Leeds; E. A. Smith, University College, Liverpool; A. C. Storey, University College of South Wales, Cardiff; J. H. Timothy, University College of South Wales, Cardiff; A. H. Turner, Guy's Hospital; J. Wells, Mason College, Birmingham; H. L. Willcox, King's College, London; C. M. Woods, Charing Cross Hospital; A. C. Young, St. Bartholomew's Hospital.

Materia Medica.—M. A. Alabone, Guy's Hospital; E. G. Battiscombe, London Hospital; P. R. Browning, St. Thomas's Hospital; M. Clover, University College, London; H. E. Darlington, Mason College, Birmingham; J. C. Furness, Charing Cross Hospital; E. Hyde, Cambridge University and St. George's Hospital; E. A. Le Maistre, London Hospital; C. T. McClure, London Hospital; J. A. Mellish, St. George's Hospital; A. F. Palmer, Cambridge University and Middlesex Hospital; P. B. Spurgin, St. Mary's Hospital.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THE following candidates have passed the examination for Membership of the College:

J. B. Coleman, M.D.; F. C. Martley, M.B.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, January, 1898.—The following candidates passed in:

Surgery.—J. Buckley (Section I), Manchester; W. J. H. Dawson, St. Thomas's Hospital; J. H. C. Fegan, Charing Cross Hospital; H. F. Forty, Middlesex Hospital; E. J. Gruchy, London Hospital; S. E. H. Martin, Royal Free Hospital; G. C. Walker, Liverpool.

Medicine.—J. Buckley (Section I), Manchester; J. B. Cautley (Section I), St. Bartholomew's Hospital; W. F. Crispin, Leeds; H. C. Cooper, St. George's Hospital; G. J. D. Davies, Leeds; G. M. F. Pereira, Calcutta and Royal Free Hospital; T. B. Sellors, Middlesex Hospital; C. H. St. M. W. Toke, St. George's Hospital; J. H. Wilson, Middlesex Hospital.

Forensic Medicine.—J. Buckley, Manchester; J. B. Cautley, St. Bartholomew's Hospital; J. H. Chambers, Manchester; H. C. Cooper, St. George's Hospital; G. J. D. Davies, Leeds; W. J. Henson, Guy's Hospital; G. M. F. Pereira, Calcutta and Royal Free Hospital; T. B. Sellors, Middlesex Hospital; C. H. St. M. W. Toke, St. George's Hospital.

Midwifery.—W. F. Chrispin, Leeds; R. A. Lewty, Leeds and St. Mary's Hospital; H. T. L. Roberts, St. Mary's Hospital; J. Spencer, Leeds; J. H. Wilson, Middlesex Hospital.

The diploma of the Society was granted to the following candidates: Messrs. J. H. Chambers, W. F. Chrispin, W. J. H. Dawson, J. H. C. Fegan, J. Spencer, G. C. Walker, J. H. Wilson, and Miss S. E. H. Martin.

MEDICO-LEGAL.

THE SOUTH KENSINGTON LADIES' DENTAL ASSOCIATION.

THE *Globe*, of January 14th, reports a case of some interest to the profession. The South Kensington Ladies' Dental Association sued a Miss Pegden for dental work. For the defence it was argued that this Association could not recover fees for dental work, not being on the *Dentists' Register*. It was stated in evidence that Mr. W. Ash, F.R.C.S., L.R.C.P., was the manager of the association on behalf of Mrs. Partridge and her children, and that he was a registered dentist. Deputy Judge Fitzroy Cowper, however, dismissed the summons with costs, on the ground that as the association could not be registered, it could not sue for dental work.

MEDICAL ETHICS.

A MEMBER.—A patient, X., sends for Dr. A., who is ill. Dr. A. desires X. to accept Dr. B. or Dr. C. in his place. X. declines, and sends for Dr. D. Is Dr. D. entitled to consider X. as his own patient?

*** If X., when calling in Dr. D., informed him that his own doctor was ill, and that he only wanted the other to act as Dr. A.'s substitute, Dr. D. ought not to accept any fee from X. without Dr. A.'s consent, and should hand X. over to Dr. A. on his recovery. On the other hand, if X., on account of Dr. A.'s illness, is determined to change his doctor—and the fact that he declined to accept the deputies proposed is some presumption of this—Dr. D. would not be debarred from accepting X. as his patient. If, however, aware of the circumstances of the case, it would be a graceful act on his part to offer to attend for Dr. A. if X. is willing for him to do so.

NOTIFICATION OF INFECTIOUS DISEASES.

DEVONIAN writes: A medical man applies to the sanitary authority of his district for fees for notification of infectious diseases due to him for cases notified during the last three years. Applications for these fees have already been made by the medical officer of health periodically without effect. The sanitary authority now refuses to pay for any notification made prior to the last six months, saying they have no power to pay accounts beyond six months. What redress has the medical man?

*** We do not think that the sanitary authority can claim to be relieved of its statutory obligations as between the authority and the medical officer of health simply on the ground stated, and we would recommend our correspondent to consult a solicitor as to the desirability of taking legal proceedings if payment is not made.

QUESTIONS OF CONTRACT.

ENQUIRER.—The points involved in the questions submitted to us by our correspondent on the agreement, of which he enclosed a copy, are of too complicated a character to be dealt with in the columns of the BRITISH MEDICAL JOURNAL, and we would recommend our correspondent to consult a solicitor. *Primâ facie*, however, assuming the agreement was in force at the time of the transfer of the practice, and that C. refuses to perform B.'s obligations to A. thereunder, he (C.) can hardly, we think, claim to be entitled to the benefit of the agreement; in other words, he cannot claim the privileges while repudiating the liabilities. But there are many difficult questions which must be dealt with by the legal adviser of our correspondent having all the facts before him.

FORESTERS' MEDICAL OFFICER.

A MEMBER B.M.A. inquires if a friendly society such as the Foresters can dispense with their medical officer at three days' notice; or can the medical officer claim a half-year's notice or salary in lieu of a half-year's notice? The friendly society justifies its action by the following rule, which occurs in the book of rules: "A qualified medical practitioner

shall be appointed and remain in office during the pleasure of the court."

*** We are of opinion that except under very special circumstances the medical officer could not be dismissed at three days' notice. In the absence of any special agreement as to notice, we think that he would probably be entitled to three months' notice or salary in lieu thereof. The appointment may, however, have been for a term certain. We would recommend our correspondent to consult a solicitor before taking legal proceedings.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,679 births and 4,440 deaths were registered during the week ending Saturday last, January 22nd. The annual rate of mortality in these towns, which had declined from 24.9 to 20.6 per 1,000 in the three preceding weeks, was again 20.6 last week. The rates in the several towns ranged from 10.6 in Birkenhead, 13.5 in Cardiff, 14.8 in Swansea, and 15.1 in Croydon to 21.1 in Birmingham, 21.9 in Wolverhampton, 22.0 in Preston, and 22.8 in Liverpool. In the thirty-two provincial towns the mean death-rate was 18.8 per 1,000, and was 4.6 below the rate recorded in London, which was 23.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London the rate was equal to 3.1 per 1,000, while it averaged 2.0 per 1,000 in the thirty-two provincial towns, and was equal to 3.4 in Salford, 3.8 in Halifax, 4.0 in Gateshead, and 4.7 in Blackburn. Measles caused a death-rate of 1.7 in Brighton, 1.8 in Oldham and in Sheffield, 1.0 in Swansea, 2.2 in Halifax, and 3.5 in Blackburn; scarlet fever of 1.1 in Sunderland and 1.2 in Wolverhampton; whooping-cough of 1.0 in Liverpool and in Leeds, and 1.5 in Gateshead; and "fever" of 1.0 in Salford and 1.1 in Halifax. The 55 deaths from diphtheria in the thirty-three towns included 33 in London, 7 in Leeds, and 3 in Cardiff. No fatal case of small-pox was recorded last week either in London or in any of the thirty-two large provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 3,253 at the end of the eight preceding weeks, had further declined to 3,149 on Saturday last, January 22nd; 248 new cases were admitted during the week, against 273, 239, and 215 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, January 22nd, 938 births and 573 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 24.3 and 20.4 per 1,000 in the two preceding weeks, further declined to 19.0 last week, and was 1.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.6 in Leith and 16.0 in Edinburgh to 23.8 in Perth and 27.0 in Aberdeen. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Paisley and Greenock. The 256 deaths registered in Glasgow included 10 deaths from measles, 12 from whooping-cough, 3 from "fever," and 8 from diarrhœa. Three fatal cases of scarlet fever were recorded in Edinburgh; 2 of diphtheria, 2 of scarlet fever, and 4 of whooping-cough in Greenock.

DIPHTHERIA IN LONDON.

The fatal cases from diphtheria in London which had been 53, 50, and 44 in the three preceding weeks, further declined to 33 during the week ending Saturday last, January 22nd. Of these 33 deaths, 3 were of persons belonging to Fulham and 3 to Shoreditch sanitary areas. Judged, however, by the number of new cases of diphtheria notified last week in the metropolis the prevalence of the disease showed an increase. The notifications of diphtheria in London, which had declined from 292 to 194 in the three preceding weeks rose again to 205 during the week ending Saturday last. Compared with the preceding week, the prevalence of the disease remained stationary in West and North London, and in South London there was a slight decline, but in East London there was a marked increase. Among the sanitary areas of West London there was a further decline in the number of new cases notified in Paddington and in Chelsea; but in Fulham there was a considerable increase in the prevalence of diphtheria, 10 new cases being notified, against 5 in the preceding week. Among the various sanitary areas of North London the new cases notified differed but slightly from those recorded in the preceding week. In East London there was a very marked general increase last week in the prevalence of diphtheria; in Bethnal Green the new cases numbered 13, against 4 in the preceding week; in Whitechapel they were 6, against 0; and in Poplar, they were 13, against 7 in the preceding week. In the sanitary areas of South London, however, there was generally a slight decline in the prevalence of the disease, which was most marked in Camberwell Newington, and Lewisham. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 123, against 142, 134, and 111 in the three preceding weeks; and 1,040 cases remained under treatment in these hospitals on Saturday last.

A VILLAGE WATER SUPPLY.

The recent circular of the Local Government Board will doubtless afford opportunity to many health officers to remind their authorities of the parlous state in which many of them stand as regards water. We see, from the *Nottingham Guardian*, that Dr. E. H. Houfton, in his first report to the Mansfield Woodhouse Urban District Council, drew their attention to the dangerous condition of the wells in the village. Previous medical officers had done the same, and in order to have independent evidence Dr. Houfton submitted twelve samples of water for analysis. These samples were taken from different parts of the village and from the wells that were most used. The report of Messrs. Southall Brothers and Barclay of Birmingham showed that five of the samples were largely contaminated by sewage, and four others were of a suspicious character. The remaining three were stated to be fairly free from organic matter. Dr. Houfton points out that three-fourths of the population of the village are drinking water of a dangerous character, and he adds that the circumstance that this up to the present has had no noticeable effect upon the death-rate is a matter for congratulation, but that if a case of typhoid fever were introduced into the village, the probabilities are that the disease would run rampant, and could only be stamped out by closing all the wells and providing a different supply.

We fear that the people of Mansfield Woodhouse are not the only village community thus situated. Fortunately polluted water does not always cause typhoid. It is not till the ambulant typhoid patient, as at Long Ashton near Clifton, pollutes the water and thence the milk supply, and at the hop pickers' camp takes the typhoid bacillus to the source, as at Maidstone, that disaster occurs, but the inhabitants of many of these villages would dwell more safely on the top of a well-cared-for powder magazine.

REMUNERATION FOR ATTENDANCE ON A PRIVATE PATIENT SENT TO AN ASYLUM.

Lunatic writes to ask how he can obtain payment for professional services rendered to a patient who is now in a lunatic asylum, and who still has a fair sum of money in the Post Office Savings Bank.

*** If our correspondent can establish his claim to the satisfaction of a county court judge, we believe he can obtain an order for the amount to be paid out of the money in the bank. Steps should be taken at once to do this, as the guardians will probably draw upon the deposit for repayment of any expense incurred by them for maintenance in the asylum. It would probably be best to engage a solicitor to act in this case.

MEDICAL NEWS.

A course of clinical lectures will be given at the East London Hospital for Children, Shadwell, during February and March by members of the staff. The first lecture will be given by Dr. Donkin on Thursday, February 3rd. Practitioners and senior students are invited to attend. Further information can be obtained from Mr. H. B. Robinson, M.S., 1, Upper Wimpole Street, or from Mr. Thomas Hayes, the Secretary to the Hospital.

The Registration of Midwives.—Meetings in support of a Bill for the Registration of Midwives have been held in various parts of the country. At one held at the house of Miss Shaw Lefevre in London, Mr. Schwann, M.P., took the chair, and the meeting gave expression to the belief that it was desirable to pass such a Bill. A resolution to the same effect was passed at a meeting held at Arundel after listening to an address by Mr. J. H. Johnstone, M.P.

Royal Commission on Tuberculosis.—Meetings of this Commission were held at 7, Whitehall Place on January 19th, 20th, 21st, and 22nd, the following members being present: The Right Honourable Sir Herbert Maxwell, Bart., M.P. (Chairman), Sir Richard Thorne, K.C.B., F.R.S., Sir George Brown, Mr. Shirley F. Murphy, Mr. Harcourt E. Clare, Mr. Cooke-French, and Mr. John Speir.

The Queen has been pleased to confer upon Dr. Richard Domenichetti, of Horncastle (Deputy-Inspector-General (h.p.), Medical Officer of Health to the Louth Rural District, and Honorary Physician to Her Majesty) the Jubilee Medal in commemoration of Her Majesty's reign. A similar distinction has been conferred upon Dr. W. R. Rice, C.S.I., Honorary Physician to the Queen, and late Surgeon-General with the Government of India.

By the help of Mr. Passmore Edwards arrangements have been made for the extension of the Willesden Cottage Hospital at a cost of £25,000. The hospital was originally erected by Mr. Edwards in 1893, but owing to the rapid growth of the district the accommodation provided has, it is stated, for some time been found inadequate. It is proposed by the council that the institution should in future be known as the Passmore Edwards Hospital for Willesden.

PRESENTATION.—The officers and staff of the Dorchester Asylum have presented to Mr. W. R. Hanbury, Assistant Medical Officer, on the occasion of his leaving to engage in general practice, with a silver claret jug, as a mark of their esteem.

THE ABUSE OF MEDICAL CHARITIES.—A meeting largely attended by medical practitioners was held in East Ham on January 25th to consider what steps should be taken to prevent the abuse of medical charities in suburban Essex. The chair was taken by Dr. F. J. Smith, and among the other speakers were Drs. A. W. Beaumont (M.O.H. East Ham), Harry Campbell, and Butler Hogan. The work of the provisional Committee was endorsed, and it was unanimously resolved to form the Suburban Essex Mutual Medical Protection Society, and to call a meeting of all registered medical men practising in Suburban Essex at Stratford on Tuesday, February 8th, to draw up rules and combine for the suppression of abuse of medical charities in the district and the promotion of professional amity.

THE NEW OPERATION ROOMS AT THE NORTH STAFFORDSHIRE INFIRMARY.—The operating rooms at this infirmary have been completely remodelled, and were recently formally opened by Mr. Mitchell Banks. The main operating room has now a fine north window; the floor is of terrazza, the walls are of tiles with rounded angles for floor and ceiling, and the doors are of teak. Adjoining this operation room is a smaller one with the same arrangements as to floor and walls as in the larger theatre. Beyond the two operation rooms is a nurses' store and sterilising room, the floor of which is of vitreous tiles, the walls also being lined with tiles, and the fixtures of Twyford ware being all made solid and smooth without any ornamentation liable to collect dirt. Mr. Mitchell Banks, in the course of his address, said that the care and skill bestowed upon the operating room and its appurtenances, and upon the hospital itself, were worthy of the profoundest admiration. To those who had assisted in the work—and he knew no one would be jealous of the name of Mr. Spanton—the greatest possible credit was due. He had written on what he had spoken called "Fetish worship" in regard to antiseptics, and he thought it most important that surgeons should be careful to remember the general principles of antisepsis, and not be led into the worship of certain minor details. It was of the greatest importance that amid the beautiful appliances with which they were surrounded they should not forget the general principles of surgical cleanliness.

MEDICAL VACANCIES.

The following vacancies are announced:

BOURNEMOUTH ROYAL VICTORIA HOSPITAL.—Ophthalmic Surgeon; must be F.R.C.S. Applications to the Secretary by February 1st.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon (to dispense), doubly qualified. Salary, £60 per annum, with board, residence, and washing. Applications to C. V. Woodcock, Secretary, by February 1st.

CHARING CROSS HOSPITAL.—Resident Medical Officer. Salary, £100 a-year, with board and residence. Applications to Arthur E. Reade, Secretary, by February 14th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloan Square, S.W.—Honorary Visiting Surgeon to the Western District of the Institution. Applications to Austin E. Cooper, B.A., M.D., Secretary, by February 1st.

CITY OF LONDON UNION INFIRMARY, Bow Road, E.—Dispenser, between 25 and 40 years of age. Salary, £100 per annum and dinner daily. Applications on forms to be obtained of F. W. Crane, Clerk to the Guardians, 61, Bartholomew Close, E.C., by whom they must be received by February 5th.

DEVONPORT ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months, ending August 15th, 1898. No salary; board, lodging, and washing provided. Applications to be addressed "Chairman of Medical Committee" by February 9th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Senior Resident Medical Officer. Salary, £70, with board and washing. Applications to the Committee of Management at the Hospital by February 1st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury, W.C.—House-Surgeon; unmarried. Appointment for six months. Salary, £20, with board and residence in the hospital. Applications, on forms provided, to be sent to the Secretary by February 2nd.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury. Medical Officer, doubly qualified. Salary, £180 per annum; also Junior Resident Medical Officer, doubly qualified. Salary, £80 per annum, with board and lodging. Appointment for one year. Both officers must devote their whole time to the service of the charity. Applications to the Chairman of the Medical Board by February 9th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Bowdon, Cheshire.—Resident Medical Officer for the In-patient Department. Salary, £60 per annum, with board, apartments, and washing. Applications to C. W. Hunt, Secretary, by January 31st.

METROPOLITA ASYLUMS BOARD.—Aesistant Medical Officer for the North-Western Fever Hospital, Haverstock Hill, N.W.; doubly qualified, unmarried, and must not exceed 35 years of age. Salary, £160 during the first year, £180 the second, and £200 during the third and subsequent years of service, with board, lodging, attendance, and washing. Applications on forms to be obtained of T. Duncombe Mann, Clerk to the Board, Chief Office of the Board, 1, Norfolk House, Norfolk Street, Strand, W.C., to be sent in by February 17th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £30 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as Senior. Applications to the Secretary by February 4th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen Square, Bloomsbury.—Anæsthetist. Applications to H. Burford Rawlings, Secretary and Director, by January 31st.

NORTHAMPTON: BERRY WOOD ASYLUM.—Assistant Medical Officer; under 30 years of age; unmarried and doubly qualified. Salary, £150, increasing to £200, with board, lodging, washing, and attendance. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent by February 9th.

NOTTINGHAM CHILDREN'S HOSPITAL.—House-Surgeon: non-resident. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum. Applications to Mr. A. F. Kirby, St. Peter's Church Walk, Nottingham, by February 1st.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £30 per annum, with board, lodging, and washing. Applications to the Secretary by January 31st.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 1st.

SEAMEN'S HOSPITAL SOCIETY (*DREADNOUGHT*), Greenwich.—House-Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E., doubly qualified. Salary, £75 per annum, with board and residence, and an additional £25 per annum if certain clinical work is performed satisfactorily. Applications to P. Michelli, Secretary, by February 7th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon, doubly qualified. Salary, £2 per mensem, with residence, board, and washing. Appointment tenable for six months. Applications to Major C. Tyler, Secretary, by February 10th.

SUNDERLAND EYE INFIRMARY.—House-Surgeon. Salary, £150 per annum, living out. Applications to J. F. Potts, 13, Eden Vale, Sunderland, by February 3rd.

UNIVERSITY COLLEGE, London.—Assistant Physician to the Hospital. —Applications to the Secretary by February 8th.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM, Powick.—Head Medical Superintendent, doubly qualified. Salary commencing at £800 per annum, with partly-furnished house, coals, gas, and garden produce. Applications to W. Price Hughes, Clerk to the Committee, 40, Foregate Street, Worcester, by February 12th.

MEDICAL APPOINTMENTS.

ARMSTRONG, Hubert, M.B., Ch.B.Vict., appointed House-Surgeon to the Infirmary for Children, Liverpool, *vice* B. Curtis Kelly, M.B., C.M. Edin., M.R.C.S., L.R.C.P., resigned.

BADGERY, William, L.D.S., R.C.S.Edin., reappointed Dental Surgeon to the West Cornwall Dispensary and Infirmary, Penzance.

BROWNE, Robert, M.D.Dub., F.R.C.S.I., appointed Superintendent Medical Officer of Health for Rathmines (Dublin), *vice* Montgomery Ward, M.D.

DYBALL, Brennan, M.B., B.S.Lond. (bracketed Gold Medal and Scholarship), F.R.C.S., L.R.C.P.Lond., appointed Resident Casualty Officer at the Leeds General Infirmary.

HARLEY, Mr. M. M., appointed Medical Officer of Health to the Newport Pagnell Urban District Council.

HOPE, G., L.R.C.P.Lond., M.R.C.S.Eng., D.P.H.Eng., appointed Medical Officer for the Seventh District of the Brentford Union.

HORROCKS, Oswald, L.M.&S.Madras, L.R.C.P.&S., F.R.C.S.Eng., L.M.Rotunda, appointed District Surgeon, Sierra Leone.

JELLETT, J. W. H., M.D.Dub., M.B., B.Ch., appointed Medical Officer of Health to the Heavitree Urban District Council.

MIDDLEMIST, Geo. E., M.B., etc., appointed Second Assistant Medical Officer to the County Asylum, Dorchester, *vice* W. R. Hanbury, M.R.C.S.Eng., L.R.C.P.Lond., resigned.

MILLER, Alexander Gordon, M.D., F.R.C.S.Edin., appointed an additional Examiner in Clinical Surgery at the University of Edinburgh.

MONTGOMERIE, Hugh M., M.D.Edin., M.B., C.M., reappointed Physician to the West Cornwall Dispensary and Infirmary, Penzance.

NORMINGTON, A. E., M.B., Ch.B.Vict., appointed Medical Officer of the Workhouse of the Stoke-upon-Trent Union.

PALMER, C. J., L.S.A., appointed Medical Officer for the No. 2 District of the Mansfield Union.

STANLEY, Arthur, M.D., B.S.Lond., D.P.H., Assistant Medical Officer North-Western Hospital of the Metropolitan Asylums Board, appointed Medical Officer of Health for Shanghai.

STRICKLAND, J. F., M.B., C.M.Edin., appointed Assistant House-Surgeon to the Infirmary for Children, Liverpool.

SYMONS, John, M.R.C.S.Eng., L.S.A., reappointed Surgeon to the West Cornwall Dispensary and Infirmary, Penzance.

WARNER, Francis, M.D.Lond., appointed an additional Examiner in Materia Medica at the University of Aberdeen, *vice* Professor Ralph Stockman, resigned.

WATT, James Peter, M.A., M.B., appointed an additional Examiner in Medical Jurisprudence and Public Health at the University of Aberdeen, *vice* Dr. Fred. W. Barry, deceased.

WEBBER, H. W., M.D., M.S Lond., appointed Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth, *vice* R. H. Lucy, F R.C.S., appointed Surgeon.

WHITAKER, E. J., M.B , C.M.Edin., appointed Medical Officer of Health to the Blymhill Rural District Council.

WOODHEAD, T. F., M R.C.S Eng., L R.C.P Lond., appointed Medical Officer for the Meltham District of the Huddersfield Union.

DIARY FOR NEXT WEEK.

TUESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Lecture by Dr. Ormerod.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. Harry Campbell: Cases of Localised Muscular Wasting.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Eden will give a lantern demonstration of the Age Changes which occur in the Placenta and Fœtal Membranes. Dr. T. J. Bokenham: The Immunisation of Animals against Streptococcus Infection, with an account of the Properties acquired by the Serum of Animals thus rendered Immune; with Lantern Illustrations.

CITY ORTHOPÆDIC HOSPITAL, 5.30 P.M.—Mr. Chisholm Williams: On Rachitic Deformities.

WEDNESDAY.

WEST LONDON POST-GRADUATE COURSE, West London Hospital, W., 5 P.M. Mr. McAdam Eccles: Emergency Operations.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 P.M.—Specimens will be shown by Dr Dakin and others. Annual Meeting. Dr. Cullingworth (President) will deliver the Annual Address.

THURSDAY.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Mr. Wallis: Demonstration of Selected Surgical Cases.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 P.M.—Mr. Mansell Moullin: The Treatment of Malignant Growths by Toxins.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, 4 P.M.—Dr. H. B. Donkin: Cases in the wards.

FRIDAY.

WEST-LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith, 8 P.M.—Discussion on the Transmission and Dissemination of Cancer; to be opened by Mr. C. A. Ballance.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Royal Kent Dispensary, Greenwich, 8.15 P.M.—Dr. G. Sims Woodhead will introduce a discussion on the Serum Treatment of Disease. The following members have promised to take part in the discussion—Drs. Toogood, Hartt, Dockrell, Herschell, and Ezard.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

BÖDEKER.—At Harvey Hill, Kikuyu, British East Africa, on November 24th, 1897, the wife of Henry Albert Bödeker, M.B., C.M., of a son. Indian papers please copy.

HENSTOCK.—On December 24th, 1897, at Viña del Mar, Chile, the wife of J. L. Henstock, M.R.C.S., L.R.C.P., of a son.

YELF.—On January 22nd, at Moreton-in-Marsh, Glos., the wife of Robert E. B. Yelf, M.B., of a son.

MARRIAGES.

DEMPSTER—HOWARTH.—On January 13th, at St. Margaret's, Westminster, by the Rev. G. Williams, M.A., William S. Dempster, M.R.C.S., L.R.C.P.Lond., of Winsley, South Croydon, to Nellie, third daughter of the late James Howarth, of Balham.

HAVELOCK—LOW.—At Seaview, Monifieth, on January 18th, by the Rev. Jas. Gerard Young, D.D., John G. Havelock, M.D., Medical Superintendent, Royal Asylum, Sunnyside, Montrose, to Edith Margaret, third daughter of James F. Low, Esq., of Seaview, Monifieth, Forfarshire, and Balmakewan, Kincardineshire.

KENNEDY—HUTCHINS.—On January 26th, at St. Mary's, Cadogan Street, S.W., by the Rev. M. A. Kelly, John Kennedy, M.R.C.S.Eng., L.R.C.P. Lond., of Camberwell, to Susie Ascott, only daughter of Walter Hutchins, of Knightsbridge, S.W.

SUTTON—RICHARDS.—On December 10th, 1897, at Quetta, Baluchistan, by the Rev. A. E. Ball, Samuel Walter Sutton, M.D., B.S.Lond., to Margaret, eldest daughter of the late Dr. Richards, of Ross, Herefordshire.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 12.30 and 1. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Opthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

SUBSCRIBER wishes advice as to what might be done for the education of a young lady, aged 20, recently deprived of mother, who is backward mentally and physically, has harelip and cleft palate; speech rather indistinct, memory good. Father able and willing to pay fair fees.

DEFECTIVE ARTICULATION.

INQUIRENS desires to hear of an institution or home where for a moderate sum a lad aged 14 who is dull but *compos mentis*, who has difficulty with the consonants, and cannot pronounce g's or c's, saying "det" for "get" and "tut" for "cut," could be taught and improved in these respects.

HOME FOR IMBECILE GIRL.

J. S. L. asks if there is any charitable or other institution that would undertake the care of an imbecile girl of 12 years of age. Her father is a working man who can ill afford anything towards her maintenance. He would be glad if a Bristol member would inform him if there is any institution of the kind in that city.

*** We are indebted to Mr. Douglas Dent, one of the Honorary Secretaries of the Associated Bristol Charities, for the following detailed answer to our correspondent's inquiry: "J. S. L." should apply to the Poor-law guardians for such a case as is described by him. There is no Bristol institution for reception of imbeciles or idiots, and, as a rule, we should look to send such cases to the Western Counties Idiot Asylum, Stourcross, Exeter, which is for the reception and training of private and pauper cases, at 9s. a week if from the four western counties of Dorset, Somerset, Devon, or Cornwall, and at 12s. from other counties. If it should be only a "feeble-minded" child—a point determinable only by proper medical opinion—there is a recently-established home—the "Mary Carpenter"—for 15 girl inmates, but probably not for distant cases. The Honorary Secretary is Mrs. Gilmore Barnett, 7, Great George Street, Bristol. Rate of payment, 5s. to 7s. a week.

BACTERIOLOGICAL DIAGNOSIS.

MEDICAL OFFICER OF HEALTH would be glad to know of any sanitary authority who allows any practitioner residing in their district to have his cases of diphtheria or typhoid verified by culture at their expense.

RUBBER TYRES TO VEHICLES.

DR EDGAR G. BARNES, Eye, Suffolk, writes: Can any of your readers who are experienced in the use of solid rubber tyres on broughams, etc., tell me whether, on account of their noiselessness, it is necessary or advisable to have bells attached to the horses.

THE ESTIMATION OF ALBUMEN.

F. R. HIST. SOC. asks whether the estimation of albumen in urine by means of Esbach's albuminimeter is vitiated (so far, at least, as to be practically unreliable for clinical purposes) when applied in the case of a patient to whom methyl blue is being administered? If so, what other convenient method of estimation is suggested in these circumstances?

ASEPTIC SURGERY.

SIGMA asks to be referred to books or pamphlets dealing with the advance of aseptic treatment in surgery during the last twenty-five years.

*** Among the most recent books on the subject are: (1) *Antiseptic Surgery: its History, Principles, Practice, and Results*, by W. Watson Cheyne (Smith, Elder and Co., 1882); (2) *Aseptic Surgery*, by C. B. Lockwood (Young J. Pentland, 1896).

PRACTICE IN THE COLONIES.

G (Ontario, Canada) writes: If "Emigrant," who sought information on this subject in the BRITISH MEDICAL JOURNAL of January 1st, will write to the following agencies he will doubtless secure the desired information regarding Canada; (1) The Medical Agency of Canada, 17, Ross Street, Toronto, Ontario, Canada. (2) Dr. W. E. Hammill, Janes Building, Toronto, Canada: (3) Dr. W. H. Merry, Lynn, Mass., U.S.A. This last deals with United States mainly; to a slight extent with Canada.

PENDULOUS UVULA.

MR. A. V. CROSSING, M.R.C.S. (Plymouth) writes: I was called one midnight to see a man "who was taken suddenly ill with something in his throat, and was very pale;" such was the statement of his sister who came for me. Upon my arrival at the house about five minutes after, he walked into the room I was in, mumbling something most inarticulately, which I could not understand, coughing violently, and pointing to his throat. Whilst his sister was getting me a spoon he bent his head downwards, coughed a few times, drew a deep breath, then said "he was all right." He informed me he felt as if something had been drawn into his throat, and that with the effort of coughing it had burst. I examined his throat, and found it intensely congested, with a relaxed and extremely pendulous uvula, which was slightly excoriated at the tip. He said he was afraid to go to bed for fear the same thing might happen again. A similar occurrence, he stated, took place about fifteen years ago. The patient was otherwise healthy. Am I right in concluding that the uvula had been drawn into the rima glottidis?

ANSWERS.

THE HISTORY OF THE MEDICAL STUDENT.

DR. J. HAROLD BAILEY (Pendleton) writes: G. F. B. will find numerous references which may prove of use to him in my articles on "The Medical Student as a Character in Fiction," published in the *Medical Magazine* for 1894.

TREATMENT OF TERTIARY SYPHILIS.

DR. C. M. JESSOP (Redhill) writes: May not the condition "Cyclops" describes be partially the result of the drugs and oleate ointment keeping up irritation? I should be inclined to give cod-liver oil, some simple syrup of iron, and opium internally; also a watery solution of opium externally if required.

ADENOID VEGETATIONS.

A PARENT.—Our correspondent will find an interesting discussion upon the subject of Post-Nasal Growths in Children, which took place at the Harveian Society of London, reported in the BRITISH MEDICAL JOURNAL of February 18th, 1893, p. 355. The subject is also fully discussed in most works on laryngology and rhinology.

FREQUENT MICTURITION.

DR. C. M. JESSOP (Redhill) writes: Has "H. S. B." examined for stricture? If none found, he might obtain relief by epispastic fluid above the pubes, or over spine in region of centre of micturition.

DR. PERCY NEWELL (Crowborough) writes: If your correspondent, "H. S. B." will try the following mixture with his little patient he will probably benefit his case: R. Tinct. lycopodii clar., ℥iiss; tinct. cardam. co, ℥iiss; syrup. simp., ℥ss; aq. q.s. in ℥vj; ft. mist., Sig. ℥ss, 4tis horis sum. This prescription I saw recommended by Dr. Macfie Campbell in the BRITISH MEDICAL JOURNAL, May 4th, 1895. In the JOURNAL of May 2nd, 1896, p. 1089, are some hints on treatment of this condition by Dr. O'Connell Redmond. I consider the lycopodium mixture much superior to either belladonna or atropine.

NOTES, LETTERS, Etc.

A DISCLAIMER.

DR. ETHEL M. N. WILLIAMS (Newcastle on-Tyne) writes: My attention has been drawn to a paragraph in the *Newcastle Daily Journal* for Monday, January 17th, under the head of some physiology lectures which I was announced to give. I need not say that I was extremely annoyed at the appearance of the paragraph, and that I knew nothing of it till I saw it in print.

NOTE ON THE DRAINAGE OF LARGE CAVITIES AFTER SURGICAL OPERATIONS.

DR. ERNEST A. T. STEELE (Southend-on Sea) writes: In the *Annals of Surgery* for April, 1896, is a description by Dr. Dawbarn of a siphon apparatus for bladder drainage, etc., which is similar in principle to that described by Mr. Heaton, and even more simple and less expensive.

MUSCULAR EXERTION IN CYCLING.

DR. C. M. JESSOP (Redhill) writes: If my method of solving this question in animal mechanics on p. 195 is not correct, it is clear that Dr. Harry Campbell has not the right method when he would estimate the traction by pulling a cycle and rider along a given distance of level road. How does he propose to ascertain the traction or energy of the cycle rider by introducing an outside power? Walking on a level surface is equivalent to raising $\frac{1}{10}$ part of the weight of the body through the distance walked. In the formula I gave 20 is the coefficient of traction; what will it be for cycling? That is the point. Friction, condition of road, position of body or skill in cycling, gearing of the machine—all important in considering gradients—may be left out in the general question of energy on the level for simple propulsion. It is a physiologist's question, and reference to the writings of the late Dr. Haughton might settle it.

Perhaps the following consideration may help to solve the problem proposed: In walking, friction proceeds in two lines, is at a maximum, and reduces the coefficient of traction. In cycling, friction proceeds only in one line, is at a minimum, and this coefficient of traction is doubled. Again, the time in covering a given distance is halved and fatigue lessened. The outcome will be that 40 miles on a cycle will equal 20 miles walking, or work equal to 353·4 foot-tons—a fair day's work.

COLONIAL REGISTERS AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A CORRESPONDENT recently sent us an advertisement page from a paper published, we believe, in New South Wales. The page contained an advertisement of a person who, we are informed upon inquiry, was removed from the list of Members of the Royal College of Surgeons of England some few years ago. We are further informed that, owing to the fact that the Australasian colonies have or had no provision in their Medical Acts for the removal from the Colonial Registers on the ground of misconduct of the names or qualification of any practitioner when registered, the Council of the College of Surgeons have been unable to prevent a person removed from the list of Members of the College from continuing to call himself a Member of the College.

GENUINE AND SPURIOUS CACTUS GRANDIFLORUS.

DR. GORDON SHARP (Leeds) writes: Within the last few years liquid extract and tincture of night-blooming cereus has been brought before the members of the medical profession of Great Britain as a remedy in various heart affections, functional and organic. The plant belongs to the natural order Cactaceæ, and is cultivated in the tropics and in hothouses in our own country; and the parts employed are the fleshy stems and flowers. The correct botanical name is "cereus grandiflorus," but it is more commonly known as "cactus grandiflorus." The fresh plant is employed, and from the fact of its containing much chlorophyll preparations of cereus have a beautiful green hue. Un-

fortunately a spurious cereus has been largely put in the market and sold as the genuine drug. Mr. E. M. Holmes, curator of the Pharmaceutical Society's Museum in London, has pointed out that this spurious plant is opuntia decumana. The mistake has probably arisen on account of opuntia being sometimes known as cactus opuntia. Preparations of opuntia—that is, of the spurious cactus—are either brownish or yellowish in colour, owing to the presence of a large proportion of xanthophyll in the plant.

Cereus contains a very small amount of alkaloid with some glucosidal resinous bodies. Opuntia contains several resins, but almost no (if any) alkaloid or true glucoside. But neither plant appears to possess any important active ingredient, and I incline to the belief that neither cereus nor opuntia has any therapeutic value; still there are those who ascribe virtues to cereus. Medical men should therefore see that the drug they prescribe for their patients is genuine. I may add that practitioners who have employed preparations of opuntia in the firm belief that they were using cereus have got results usually ascribed to the genuine drug. Those interested in the plant and its therapeutics will find the following useful: Holmes, *Pharm. Journ.*, August 21st, 1897; Jones, BRITISH MEDICAL JOURNAL, January, 1890, page 70; Williams, *Practitioner*, volume xlvii, page 223 (1891); Sharp, *Practitioner*, September, 1894, and *Pharm. Journ.*, November 24th, 1894.

A NEW LINE OF RESEARCH.

THE new hydraulic laboratory which is in course of erection for Cornell University ought to prove of great value to those investigating the conditions of life of bacteria in water on a large scale. To waterworks engineers and what may be called engineer biologists the plant to be provided will afford the means of attacking many hitherto unsolved problems. Amongst the work in contemplation is a series of experiments designed to determine the possibility of populating potable water with forms of life capable of destroying dangerous organisms, and yet strong enough in their struggle for life to survive in sufficient numbers under the artificial conditions of large reservoirs and supply pipes, the conditions of organic life in which are as yet hardly known.

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PRESIDENTIAL ADDRESS
ON
SOME POINTS IN CONNECTION WITH MEDICAL REFORM.

Delivered before the Dublin Branch of the British Medical Association on January 31st.

By Sir CHRISTOPHER JOHN NIXON, F.R.C.P.I., M.D., LL.D.,
Physician in Ordinary to the Lord-Lieutenant, Senior Physician to the Mater Misericordiæ Hospital, and Representative of the Royal University of Ireland on the General Medical Council.

The President, having thanked the members of the Association for the honour which they had conferred upon him, said:

Present Conditions of General Practice.

The subject which I have chosen to bring under your consideration is one which of late may be said to have had an increasing amount of interest centred in it—namely, the subject of medical reform. The profession, naturally, is anxiously concerned in any measures or changes which will promote its well-being and lead to an advancement of its tone and status. It can scarcely continue to be oblivious of the condition of general practice in the large towns and generally throughout the kingdom, especially in England, and it is bound, in the interests of our brethren, and still more in the interests of the public, to organise and support a movement which will alter for the better the conditions of such practice. The public mind is not apparently sufficiently educated to appreciate the fact that in most instances the type of practice which, under the guise of a spurious philanthropy, supplies advice and medicine for the modest fee of 6d., is a degrading sham. I am far from suggesting that all cheap medical practice is an object of suspicion. The great majority of general practitioners in every large city and town who are brought into intimate contact with the people, and become familiar with the ordinary diseases which are prevalent, and which they treat with skill and sympathetic care for moderate fees, are in their way as important, in a utilitarian aspect, as the consultant or hospital physician and surgeon. They represent a large body of earnest and conscientious workers who for moderate gain render good and honest services to those who need their aid. This class has nothing in common with the Medical Aid or such like practitioner which the existing state of the profession, the defects in our system of examination, tending as it does to overcrowd its ranks, and the unfair and unsympathetic action of the State in ignoring the privileges and rights of those who serve under it, are responsible for creating.

The Evil Influence of Competition amongst the Various Examining Boards.

To remedy these defects and get rid of the evil influence of competition amongst the various examining Boards is the problem which has to be solved. The end desired may be attained in two ways—by professional unionism and by legislation. I do not purpose entering here on the debatable ground of professional unionism, or to advance any arguments against those dangers of anything like trade unionism, which the *Times* more than a quarter of a century ago warned the profession against. I will merely content myself by disclaiming any analogy between professional unionism and those trade unions which involve the most grinding form of tyranny and the most complete abolition of individual freedom of action. Professional unionism, as I understand it, is a combination to enforce the principles and duties of medical ethics, and secure that degree of legitimate independence which an honourable profession should claim and maintain. I am afraid, however, professional unionism is not a potent machine in a political struggle. It is only by legislation that the reforms that are needed will be effected, and, happily, as the interests of the public and the profession are equally involved in the change, the end is likely to be attained. That which will raise the status of the profession, and lighten the bitter struggle for existence amongst its members, will secure for the public a more competent type of practitioners, and one more keenly alive to the onerous and responsible nature of his calling.

The Direction in which Reforms Should be Made.

If I were permitted to outline the direction in which reforms should be made, I would indicate them as follows: (1) A uniform standard of preliminary examination; (2) a uniform standard of professional examination; (3) a more efficient and more extended exercise of the disciplinary powers of the General Medical Council—these changes to be effected by amendments of the Medical Acts.

With regard to the preliminary examination, it is scarcely necessary at this time of day that I should labour the point that its standard should be raised, and that it should be made uniform throughout the kingdom. It is mainly to defective preliminary training and culture that we can connect as cause and effect at least one result—the introduction of a class of student who is utterly unfitted to appreciate or profit by the training which the present curriculum of study entails. Such students are either deficient in mental capacity, or so poorly furnished with the instruments of thought that they find it almost impossible to follow or comprehend the problems which are presented to them in the various branches of scientific study. It is, unfortunately, true that in the competition which exists between the various rival corporations many such individuals ultimately get their names upon the *Register*, and are thus entitled, without let or hindrance, watch or ward, to prey upon their fellow man. They succeed in degrading their calling; they largely contribute to the misery and hardships of their deserving brethren. They help to swell the seemingly ever-increasing multitude which the university and corporation mills grind with neither slowness nor fineness, being in this way to a large extent responsible for that disturbance of the economic balance of demand and supply which so disastrously affects the profession. The matter of preliminary education has, as you know, occupied the serious attention of the General Medical Council, and no one could doubt its desire to raise considerably the standard. Its action has, with one exception, eliminated from the list of recognised examinations those held by the licensing corporations, and by a recent order the Council requires a higher grade of examination from some of the bodies recognised by it. This is, however, but a step in the right direction.

The Objectionable Feature in the Present Regulations.

What is objectionable in the present regulations is that a number of examinations in general education held in different divisions of the kingdom are recognised without any security as to uniformity of standard, and without any supervision or inspection by the Council. Moreover, the Council is satisfied with the matriculation examinations of the Universities without any regard to the standard of pass. This is obviously open to objection, as in many cases the test of a university entrance examination is applied merely to ascertain if the candidate have sufficient ability to profit by a university course, and it does not necessarily imply the possession of any high degree of mental culture. At the last session of the General Medical Council I proposed, and Mr. Horsley seconded, a motion asking that the Education Committee should inquire as to what steps it was necessary to take in order that a preliminary examination wholly conducted by the Council should be established.

An Examination in General Education,

The motion was moved mainly with the object of ascertaining what course would have to be taken to accomplish the end suggested, but the majority of the members either thought it was not the business of the Council to hold an examination in general education, or that it was objectionable to have a one-portal preliminary examination. Perhaps, too, the members felt that the Council has not statutory powers to deal with the question, a view borne out by the contention of the *Medical Press*, which in a recent article stoutly maintains that the Council has no power to insist upon an examination in general education at all, and that under the 15th clause of the Medical Act of 1858, any person possessed of one or more of the qualifications

described in the schedule of the Act shall be entitled upon payment of a fee to be registered upon producing to the registrar the document conferring such a qualification. I shall merely content myself with saying that under Clause 20 the Council has, in my opinion, power without limitation to lay down the course of study and examinations to be gone through to obtain the various qualifications, and in virtue of this power it is enabled to require evidence of general culture.

The "One portal" Examination.

The second reform to which I desire to allude is the securing of a uniform standard in the professional examination; in other words, what is known as the "one-portal" examination. Prior to 1858 the various examining boards, 19 in number, conferred privileges to practise over limited areas. Thus a person holding a degree from an Irish or Scotch body could only practise in Ireland or Scotland, and even those persons who obtained qualifications in England could only practise within certain defined areas. Out of the existing chaos the Act of 1858 secured two things, registration and reciprocity of practice amongst holders of the various diplomas. It made no attempt to secure uniformity of examination, and left untouched the competition between the licensing bodies, a competition certainly not tending to elevate the standard, but in many instances, after the manner of a Dutch auction, merely attracting candidates to the examinations and fees to the College exchequers. The succeeding Act of 1886 is signalised by the establishment of a registrable qualification embracing the three branches of the profession, and for the incentive which it gave to the combination of medical corporations in the holding of conjoint examinations.

The Institution of Conjoint Examinations.

This has no doubt led to some good results, both as regards education and examination, but the results have not been all that were anticipated. Those who are disinterestedly anxious for the well-being of the profession, and that it should minister in the most effective way to the public need, felt that a system of examination which involved a keen competition between a number of rival corporations, without there being any adequate means available to secure a moderately high minimum standard, or a standard uniform in character, was open to grave objections. Examining Boards should be, like Cæsar's wife, above suspicion. It is idle to mince words. If one Conjoint Board maintains a high standard, its doing so serves to promote the pecuniary interests of its rival, the increase being in proportion to the number of candidates who are passed. This state of things tends not towards elevation, but towards depreciation, of the standard; hence the development of an agitation within the profession, which resulted in the Duke of Richmond's Bill establishing a one-portal examination for each division of the kingdom being passed by the House of Lords in 1878. The only bodies which opposed its passing through the Upper House were the Scotch universities, whilst the English and Irish universities and colleges were supporters of the measure. Although the Bill was subsequently withdrawn amidst the slaughter of the innocents, a result for which the imprudent action of the Marquis of Ripon was mainly responsible, still a great step was gained in pledging the State to the principle of the one-portal examination—a principle which I have not the least doubt will be, sooner or later, put into practice. The single Conjoint Board of the Duke of Richmond's Bill is not, however, the ideal settlement.

What is Wanted.

An examination is wanted for each division of the kingdom, conducted independently of the universities and corporate bodies, having no connection with any existing institution, ensuring a uniform standard of professional knowledge, and qualifying for a registrable licence to practise medicine, surgery, and midwifery. It might be supposed that the colleges and universities would lose financially by the establishment of such an examination. I do not believe that they would sustain any such loss. The expense of conducting a single examination would be very much less than that attendant upon the multiple number of examinations now held, whilst the balance accruing from fees after the payment of examiners would be paid in a proportionate rate to the universities and the colleges. Both institutions would still derive an income from the granting of degrees, or in connection with membership, fellowship, or such like distinctions. If it could be shown that any financial loss would result from the change, the State should be responsible for such loss, as it would be the gainer in having secured for the public a more highly-trained and competent type of practitioner. On the other hand, it may be argued that, whilst levelling up as regards the corporation, the State examination would mean levelling down as regards the universities. A little consideration will dispose of this assumed danger. The State examination would provide in the best way for the type of practitioner who would be most efficient in the work of general practice, and many students, no doubt, would be satisfied with merely passing through the portal. Those who had a higher ambition, and whose attainments were above the ordinary level, would affiliate themselves to the various colleges or universities in which they receive their training. The latter will always maintain or even raise its standard, as its degrees, instead of being mere registrable qualifications, become distinctions of greatly increased value and importance, and in proportion to their worth will be their attractiveness to the class who aspire to possess them.

The Disciplinary Powers of the General Medical Council,

With regard to the disciplinary powers of the General Medical Council or, to give it its correct title, "the General Council of Medical Education and Registration," even at the present time strangely divergent views are held and maintained. No one denies that in passing the Act of 1858 the intention of the Legislature was to serve the interests of the public, not those of the profession. In the preamble of the Act it is stated that its purpose was to enable persons requiring medical aid to distinguish between qualified and unqualified practitioners. But if anyone will take the trouble of following the history of legislation in connection with the medical profession, and will read the Parliamentary debates in connection with the various Bills introduced, he will have to admit that registration was only a part of the reform which the Legislature desired to effect. When Dr. Lyon Playfair (now Lord Playfair) introduced, in 1886, the Bill to amend the Act of 1858 he stated that within a few years no fewer than twenty medical Bills had been introduced, all wrecked through various conflicting interests, jealousies, and distrust, influencing the public on the one hand; the profession on the other. In some of the Bills the question of increased powers being given to the General Medical Council was provided for—a point which gave rise to animated debates. The intention of both Medical Acts was undoubtedly to give more extensive powers to the General Medical Council than the obscure wording of the Acts implies. Probably they belong to the class of measures which pass through Parliament in a spirit of compromise. In those early morning hours, when our weary legislators have exhausted the forms of debate,

> When the deep of night is crept upon our talk
> And Nature must obey necessity,

clause after clause is rapidly passed, and it is intended, doubtless, that the whole draft of a Bill should have a clear and specific meaning. But, unfortunately, in proportion as any measure is debatable and contentious, so often is the obscurity of the phraseology of the Act that deals with it, affording to the sister profession an opportunity of discussing before various tribunals what were the specific intentions of the weary legislators in respect of the various clauses of a Bill at the time they passed them. The 40th section of the Land Act of 1896 is a case in point. This uncertainty and obscurity as to the meaning of certain clauses in the Medical Acts of 1858 and 1886 affords grounds for the opinion held by men who are entitled to our respect, that the sole duty of the General Medical Council is to put fit and proper persons upon the *Register*, and remove improper persons therefrom, and that it has no power over the internal discipline of the profession. But I may point out that even their own contention refutes the position which they take. Upon what grounds are improper persons removed from the *Register?* Who is it that investigates and decides the course of action to be taken?

The Powers of the Council.

The powers of the Council are, I consider, specifically laid down in Clause 20 of the Act of 1858, which gives to it control over professional study and examination, whilst Clauses 28, 29, and 40 lay the foundation for the exercise of those penal powers which the Council has so frequently put in force for the protection of the public and for the maintenance of professional ethics. So that not alone does the Act confer the power of interference with the internal discipline of the profession, but the procedure of the Council shows how freely that power has been exercised.

In connection with the ambiguous wording of some of the clauses of the Act of 1856, I may briefly allude to a point raised by Mr. Horsley in one of those addresses which he has delivered on the construction of the Medical Acts, addresses so creditable to him not alone for the cogency of their reasoning, but for the disinterested zeal which they display. Mr. Horsley points out that the Act specifically refers to members of the profession who are registered as "qualified practitioners," and declares that they should be distinguished from unqualified practitioners. He maintains, therefore, that the Act protects the individual, not the title he possesses. It confers upon the individual the right to practise, as well as certain other rights and privileges laid down in Clauses 31, 32, 35, 36, and 37 relating to recovery of fees, etc., immunity from serving on juries or in the militia, holding public medical appointments, and signing certificates, etc. That Mr. Horsley is correct in his reading of the meaning of the Act is made manifest by the fact that removal of the name from the *Register* does not remove the title, which the person still continues to hold until the body from which he obtained it strikes the name off its list of licentiates or graduates as case may be. Lord Justice Lopes, in his judgment given in the appeal case of Allbutt against the General Medical Council, lays down that by Section xxxiv of the Act of 1858 a "legally qualified practitioner" is to be construed to mean a person registered under the Act, which to any ordinary mind endowed with normal, not forensic, intelligence would indicate a person alone privileged by law to practise.

But whilst fully recognising that those only who are registered are entitled to practise, it must, I think, be admitted that the wording of the Act is too vague to permit of prosecution in all cases where persons practise without being registered. The Act states that "any person who shall wilfully or falsely pretend to be or take or use the title of Physician, Doctor of Medicine, Licentiate of Medicine or Surgery, Bachelor of Medicine, Surgeon, General Practitioner, or Apothecary, or any name, title, addition, or description implying that he is registered under the Act.....shall, upon a summary conviction for any such offence, pay a sum not exceeding twenty pounds." Take, however, the case of a person who was a *bonâ-fide* "Doctor" or "Surgeon," and who practised as such without being registered, could it be held that such a person "wilfully and falsely" assumed the title which he had legitimately obtained? Furthermore, it would be contended, in the absence of any direction making registration obligatory, that he was sufficiently penalised by deprivation of the rights and privileges laid down in the clauses already referred to. The extraordinary contention of Lord Justice Lopes in the case cited, that the General Medical Council should publish the grounds upon which a name was erased from the *Register* to enable former patients to decide whether or not they might employ the practitioner who had ceased to be legally qualified, seems not alone to be at variance with the spirit and meaning of the Act, but contradictions of the construction put upon Section xxxiv by the learned judge himself.

Amendments Desirable in the Medical Acts.

If I might venture to enumerate the amendments which it might be desirable to make in the Medical Acts, I would tabulate them as follows: 1. No person should be allowed to practise medicine, surgery, or midwifery unless he was registered. Any breach of this regulation to be punishable by fine or imprisonment. 2. One licensing Board to be established in each division of the kingdom for the purpose of holding an examination of a uniform standard, and granting a registrable qualification in medicine, surgery, and midwifery. The Board should have no connection with the existing universities or licensing bodies. Its members to be appointed by the General Medical Council, which should have full powers given to it to regulate the scope and character of the examination. 3. Power to be given to the General Medical Council, in dealing with penal cases, to examine witnesses upon oath, and to inflict in certain cases a less grave form of punishment than that of erasure of the name from the *Register*. 4. That all criminal prosecutions under the Medical Acts should be undertaken by the police, and the fines obtained by convictions remitted to the Council.

The Suggested One-portal Examination.

It may, doubtless, be considered by some that the suggested change is too sweeping and radical in its nature, and that due regard has not been paid to the position and interests of those bodies which at the present time grant the registrable qualification. To such persons a one-portal system, which would represent a combination of the universities and licensing bodies in the formation of a conjoint board of examination for each division of the kingdom, would be the best solution of the difficulty. Such a scheme would, it is admitted, be preferable to the existing state of things, under which, for example, we have here in Dublin four different bodies in competition for the purpose of granting a registrable qualification. But we must bear in mind that our claim for reform gains strength not in relation to professional interests, but in direct proportion to its public utility. I regret to have to admit that neither the public nor the State is very much concerned with the privileges or status of our profession, and as yet we are too weak, politically, to secure those rights to which we are justly entitled. It is only when a reform appeals to the selfish instincts of the community at large that it is likely to be carried; hence I hold that the principle of a State examination, securing as it would a minimum uniform standard free from the taint of anything that would suggest corporate competition, is the one which in the end would command most sympathy and support. I personally entertain no doubt as to its effects upon the profession and upon the future of the various colleges. To the profession it would bring higher status in proportion to the standard which was created, and less storm and stress in the battle of life. To the colleges it would mean the removal of the lowering if not degrading influence of a monetary competition, leaving them the source of those grades of professional honour which they could make attractive in proportion as they gave them in recognition of high attainments and distinguished merit. In most earnest loyalty to the College of which I am a humble member, and in whose hall we meet here to-night, I venture to express a hope that I will live to see the principle for which I have just contended realised.

A FURTHER NOTE ON THE TECHNIQUE OF SERUM DIAGNOSIS.

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The method of employing capillary sedimentation tubes for the purposes of serum diagnosis may be claimed to possess certain advantages over all other methods. In the first place, it enables us to dispense with prolonged microscopic observations. In the second place, it is a method which may, where necessity arises, be employed even in the absence[1] of a microscope. In the third place, it is a method which lends itself better than any other method to the quantitative determination of the intensity of the serum reaction. The following note deals with certain improvements that have been introduced into this method. These improvements relate first, to the method of collecting blood from the finger, and, secondly, to the method of diluting the serum.

The Method of Collecting Blood from the Finger.

The form of blood capsule which on the whole appears to present the greatest advantages is the form which is illustrated in Figs. 6 and 7.[2]

These capsules are readily made by heating a piece of glass tuting in two places in succession and drawing it out there into capillary tubes,

The lower of these capillary tubes is then bent up so as to form a somewhat acute angle with the long axis of the capsule. The only point that requires to be attended to here is that the capillary tube must not be allowed to kink at the point where it is bent over. This, however, may be effectually prevented either by blowing down the upper end of the capsule while the lower end is being bent up, or, more simply, perhaps, by giving the capillary tube time to cool down and then bending it over very slowly.

The blood capsule is filled in by capillarity and gravity in the manner which is indicated in Fig. 6. It is advisable only to half-fill the capsule. When a sufficient quantity of blood has flowed in, the flame of a spirit lamp or of a match is rapidly passed over the empty half of the capsule. Before the air, which has thus been rarefied, can contract again the tip of the capsule is to be sealed up as indicated in the figure. When the air now contracts it necessarily draws the blood up into the capsule in such a way as to leave the orifice of the bent tube quite free. The flame may now be applied to this end without any fear of overheating the blood.

METHOD OF DILUTING THE SERUM AND OF MIXING IT WITH THE BACTERIAL CULTURE.

When the serum has exuded from the clot, it is to be aspirated either into such sealed sedimentation tubes as are represented in Figs. 1 to 5, or into an unsealed sedimentation tube which has been fitted with a small rubber teat.[3] The aspirating force which is required is obtained in the former pattern of tube by heating the air-chamber at the upper end of the sedimentation tube. In the latter pattern of tube it is obtained by compressing the rubber teat. In both cases this is to be done before introducing the tip of the tube into the blood capsule. Also before introducing the tip of the tube into the capsule a mark is to be placed upon the stem of the capillary pipette at any convenient point. One of the red wax pencils, which are employed for writing on glass, may be conveniently employed for this purpose.

As soon as the serum has run up as far as the point indicated by the mark the sedimentation tube is to be withdrawn from the blood capsule. The point of the tube is now to be introduced into a watchglass of normal saline solution. During the interval which necessarily elapses between the withdrawal of the sedimentation tube from the capsule and its introduction into the salt solution a bubble of air is to be allowed to pass up into the orifice of the capillary stem. This bubble of air is destined to serve as an index. Salt solution is now allowed to run up from the watchglass into the pipette until the distal end of the air-bubble index reaches the mark which has been placed upon the stem of the pipette. A volume of salt solution, which is exactly equal to the volume of the serum employed, will now have been introduced into the tube. A second air-bubble index is now required. This is readily obtained by merely raising the point of the tube out of the salt solution. As soon as it has been obtained the point of the tube is once more lowered into the fluid. In this manner the sedimentation tube can rapidly be filled in with any desired number of equal volumes of salt solution.[4]

For ordinary serum diagnosis, where a tenfold dilution is to be employed, the most convenient procedure is to introduce into the sedimentation tubes, first, one volume of serum, and then four equal volumes of salt solution. As soon as these have been taken in, the tip of the pipette is to be transferred to a watchglass containing the bacterial emulsion with which the serum is to be tested. Five equal volumes of this emulsion may now be allowed to pass into the pipette. The sedimentation tube will thus have been filled in, first, with one volume of serum, secondly, with four volumes of normal salt solution, and thirdly, with five volumes of bacterial emulsion. This will represent a tenfold dilution of the serum, for the serum will obviously stand in the relation of one to ten to the total volume of fluid which has been introduced into the tube. Mixture of the contents of the sedimentation tube is now readily effected by allowing the air in the air chamber to draw up the whole fluid into the mixing chamber. If sufficient aspiratory force has been obtained at the outset, this will effect itself in an automatic manner. If, on the other hand, sufficient aspiratory force was not then obtained (and this case can only occur where sealed tubes are employed), it will be necessary now to break off the upper capillary end of the air chamber. The air in the air chamber may then be reheated without in any way displacing the contents of the tube. In either case, as each successive volume of fluid is drawn up into the air chamber, its air-bubble index will rise to the surface of the fluid, and will thus be got rid of. The escape of these air bubbles will be facilitated if (*a*) the mixing chamber has been made reasonably large, (*b*) if the tube is held vertically, and (*c*) if the tube is gently rotated between finger and thumb while the air bubbles are passing up through the fluid.

When the contents have been effectually mixed, the rubber teat is again compressed, or gentle heat is again applied to the air chamber, and the mixture of diluted serum and bacterial culture is driven down into the stem of the capillary pipette.[5] The orifice of the capillary tube may then be immediately sealed up in the flame. The sedimentation tube is now placed upright in a test tube which has been labelled with the date and with the patient's name. The amount of the serum dilution may be conveniently inscribed upon the sedimentation tube. In all cases it is advisable to put up a control tube. This control tube is to be filled in with a mixture of equal volumes of bacterial culture and normal saline solution.

The procedure which has just been described is, as has been already said, the procedure which is most applicable to ordinary diagnostic purposes. Where, however, it is desired to make a quantitative estimation of the intensity of the serum reaction, it is preferable, first, to take into the tube one volume of serum, as is represented in Fig. 1; secondly, to take in four or more equal volumes of normal salt solution (as is represented in Fig. 2); thirdly, to expel the diluted serum into a clean watchglass; and, fourthly, to mix one volume of this diluted serum, or of any further dilution that may have been made from it, with one volume of the bacterial culture.

The most convenient form of culture to employ in these sero-sedimentation tubes is a dead bacterial culture. These dead bacterial cultures are easily prepared for use in serum diagnosis by the following method:—

First, young agar cultures of the desired micro-organism are emulsified with a measured quantity of sterile normal salt solution. Four to five c.cm. of salt solution is an appropriate amount to add to each agar tube. The bacterial emulsions are then heated to a temperature of 60° C. for 10 minutes. Lastly, an addition of 0.5 per cent. carbolic acid is made to the dead cultures in order to prevent the possibility of accidental contamination. The dead and carbolised cultures are now filled in from a syringe into capsules, such as those which are illustrated in Fig. 9 and Fig. 10. Or, where larger quantities of bacterial cultures are required—as, for instance, for class purposes, or for the daily routine of blood examinations—the dead cultures are simply introduced into such drop bottles as are represented in Fig. 8.

METHOD OF APPRAISING THE RESULTS OBTAINED BY THIS METHOD.

The positive or negative result of a blood examination can in an ordinary case be judged of in the course of twelve hours by a mere naked eye inspection of the sedimentation tubes. Figs. 4 and 5 represent respectively such a positive and negative result. In Fig. 5, which represents a negative result, the fluid has remained turbid throughout. In Fig 4, which represents a positive result, the supernatant fluid has become completely clarified, and a floccular precipitate, which consists of masses of agglomerated bacteria, has settled down to the bottom of the tube. A less complete positive reaction would have manifested itself in the formation of a precisely similar floccular precipitate in an incompletely clarified fluid. Such a floccular and unevenly disposed precipitate can generally be distinguished at a glance from the evenly stratified and non-floccular precipitate which gradually accumulates at the bottom of the control tubes. A difficulty in discriminating these two varieties of deposit can only occur in cases where the characters of the bacterial deposit are masked by either a sediment of red blood corpuscles or by a sediment of flocks of serum globulin. The former source of confusion can be completely avoided by employing for serum diagnosis only serums that are free from blood corpuscles. The latter source of confusion can be avoided by employing normal salt solution, and not distilled water, as a diluting agent for the serum.

Where these fallacies have been admitted into an experiment, it will, however, still be possible to discriminate between a sediment that contains agglomerated bacteria and a sediment that contains only non-agglomerated bacteria. For this purpose recourse must be had to the microscope. A sample of the sediment may be obtained for examination by

breaking off—first, in the case of a sealed tube, the tip of the air chamber, and then afterwards the tip of the capillary stem. The sediment may also be examined in this way for agglutinated bacteria in cases where it is desirable to learn the result of a blood examination at the earliest possible moment. In such cases it will generally be found that, if the serum possesses the characteristic agglutinating

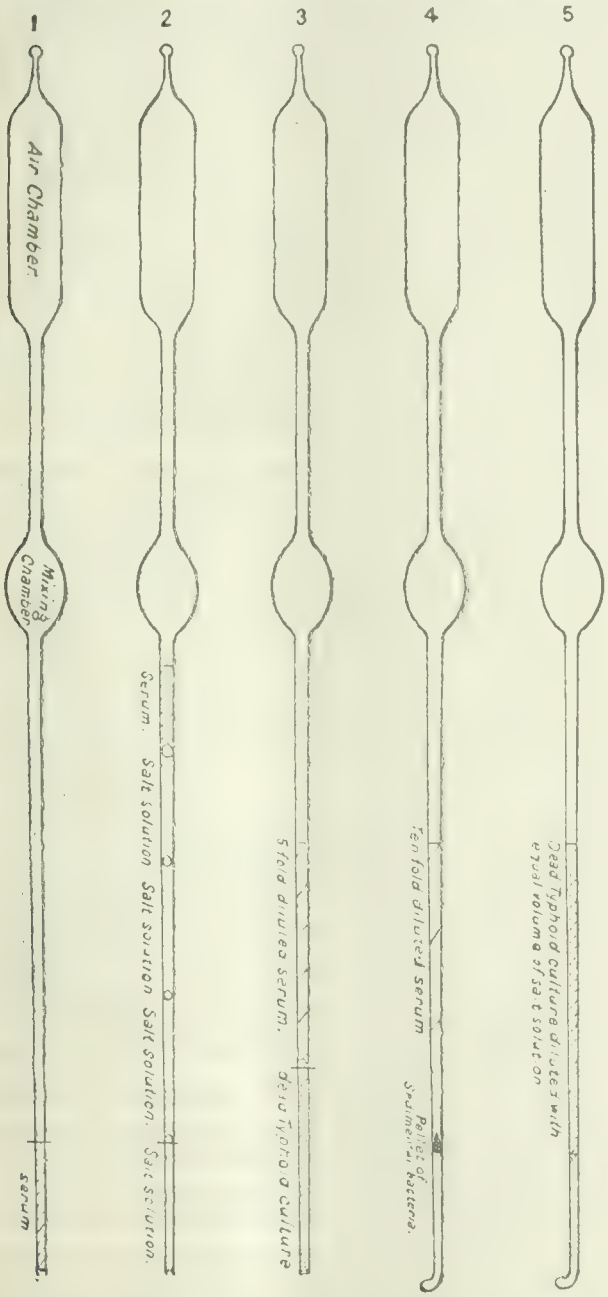


Fig. 1.—Sero-sedimentation tube which has been filled in with one volume of serum. Fig. 2.—Sero-sedimentation tube which has been filled in with one volume of serum and four volumes of normal salt solution. Fig. 3.—Sero-sedimentation tube which has been filled in with equal volumes of a fivefold diluted serum and of bacterial emulsion. Fig 4.—Sero-sedimentation tube showing positive result of a serum diagnosis, that is, clarification of supernatant fluid and formation of a pellet of agglomerated bacteria at the bottom of tube. Fig. 5.—Sero-sedimentation tube showing a negative result; no clarification of supernatant fluid and no pellet of agglomerated bacteria.

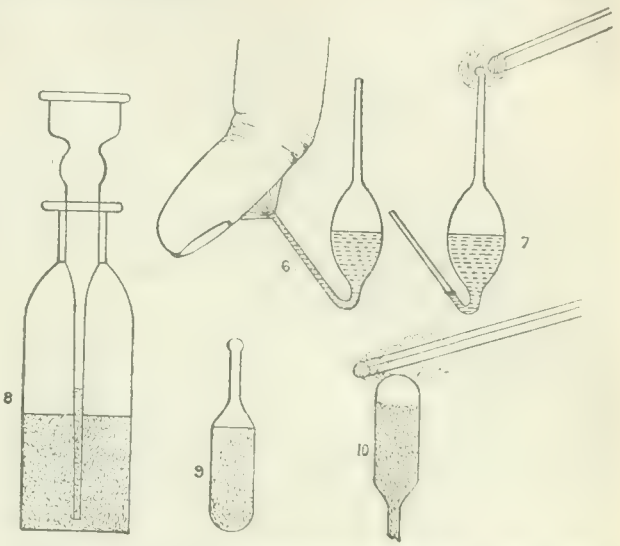


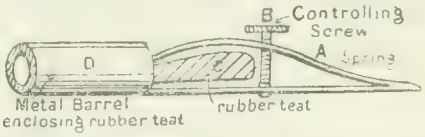
Fig. 6.—Method of filling in blood capsule from finger. Fig. 7.—Showing method of sealing upper end of blood capsule. Fig. 8.—Drop bottle filled in with dead bacterial culture. Fig. 9.—Glass capsule filled in with dead bacterial culture. Fig. 10.—Method of emptying dead bacterial cultivation out of capsule.

power, evidence of agglomeration can be obtained in a very few minutes by examining a drop of fluid from the bottom of a sedimentation tube.

In conclusion, it is perhaps worth noting that the capillary sedimentation tubes may be used over and over again. They may be blown out after breaking off the ends. This done, they may be cleaned in distilled water. They may then be dried by passing them through a flame.

Notes.

[1] It was recently pointed out by Surgeon-Major Semple and myself (British Medical Journal, May 15th, 1897), that the requisites for undertaking a serum diagnosis may be narrowed down to (*a*) a supply of dead bacterial culture, and (*b*) a supply of sero-sedimentation tubes—or, in lieu of the ready-made sedimentation tubes, a supply of material for making these, to wit, a few lengths of glass tubing and an alcohol spray, which can by ignition be converted into a blowpipe flame. [2] These blood capsules, and all the other appliances for serum diagnosis which are described in this paper, may be obtained from Mr. A. E. Dean, jun., 73, Hatton Garden, E.C. [3] The beginner will find the mechanical appliance which is here figured very convenient; he can obtain the fine movements which are required for filling in the pipette by moving the controlling screw (B) and he can obtain the coarser movements which are re-



quired for mixing the contents of the tube by pressing directly with the finger upon the spring (A). My attention was called to this mechanical appliance by Mr. A. E Dean. [4] This method of dilution is obviously applicable to a great number of other purposes. It is applicable, among others, to hæmocytometrical and hæmalkimetrical purposes, and to the dilution of antitoxins. [5] If the total amount of fluid which is being dealt with more than suffices to fill the stem of the capillary pipette, the excess may at this stage be conveniently expelled from the tube.

ON THE DIAGNOSTIC VALUE OF TUBERCULIN.

By

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It is now more than six years since tuberculin was placed before the medical world as a possible reagent for the diagnosis of tuberculosis. Its employment in the veterinary profession is now so universal and so productive of accurate results that not to use it is to stigmatise oneself as being of low rank in that profession. For human tuberculosis, too,

it was at first employed with considerable success, though within a short time its value seemed indeed dubious, and as a diagnostic agent it fell more or less into disrepute. This, however, resulted mainly from two hypotheses, neither of which could be completely substantiated when the perfected method of using tuberculin had been employed. It was feared in the first place that the injections would rekindle quiescent foci in the tissues, or transform a local phthisis to a disseminated condition. Instances are on record where this seems undoubtedly to have occurred; but the doses were evidently far in excess of those now employed. Certainly it cannot be said that any recent observers, in injecting 5 mg. or less of tuberculin, have ever had evil results attributable directly or indirectly to the injection.

Another and more appreciable reason for the disfavour into which the tuberculin test has grown is the apparently contradictory results which have followed its employment. Cases of undoubted tuberculosis have failed to react, while, *per contra*, patients in whom there was no demonstable evidence of the disease have often afforded pronounced reactions. We have ourselves met not infrequently with instances of tuberculosis where a reaction failed, and are inclined to believe that the fault lies mainly in one of three conditions: First, early cases of pure tuberculosis may fail to react through insufficient dosage; secondly, we have commonly observed that where marked mixed infection is present, the reaction may be much less pronounced, or at times quite absent; and, thirdly, patients suffering from advanced phthisis are often quite incapable of reaction from the very nature of their impoverished tissues and their impaired metabolism. We will refer to this, however, later on.

It is certainly a curious circumstance that the test should so have fallen into disrepute in face of the most noteworthy results obtained by the German authorities, many of whom, after prolonged investigations, strongly advocated its advantages as a diagnostic aid. Senator, for example, who examined 46 cases of tuberculosis, obtained a positive reaction in every instance; 4 others among his cases, however, apparently non-tuberculous, likewise reacted to the reagent, a fact which at the time was not satisfactorily explained. This point, indeed, introduces an important feature of the literature, inasmuch as the proofs of the presence of tuberculosis cannot depend on clinical investigation alone. It is impossible to say of any individual from physical examination that there is no tuberculous lesion in his body; and hence the difficulties of proving the fallacies of the test in this regard. The experience of advanced veterinarians along these lines should certainly carry an important weight; and they bear out in every respect the value of the reagent. Time and again a positive reaction has been obtained in cattle which have been considered by sceptics in every way healthy; and examinations have been made *post mortem*, only to show the tuberculous focus somewhere or other, though often so very minute as almost to escape detection, consisting frequently of merely some bean-sized caseous gland in the mesentery or mediastinum.

It does not seem unfair to apply the same analogy to human beings, and to assert that the presence of a decided reaction must indicate that somewhere or other tuberculosis does exist, even though the stethoscope and pleximeter fail to detect it. Certainly the proofs on the analogy of bovine tuberculosis are more than striking; and it may reasonably be hoped that some day it will be computed an error to say that people not having tuberculosis may react to tuberculin; in other words, to argue in that way is virtually begging the question. One cannot be blamed for regarding the question in this light; the very prevalence of tuberculosis argues in its favour; and the hundreds—nay, thousands—of tuberculous cases that come yearly to the necropsy table, in which no such conditions had ever been detected *intra vitam*, must surely be considered before we assert on physical grounds alone that tuberculin is reacting in people who are free from the disease.

The results of Finkler are even more striking than those of Senator, inasmuch as of 73 cases of tuberculosis 71 reacted positively and only 2 failed; while again the best results recorded by any observers are probably those of Guttmann. In the latter's interesting series of 62 cases he has had but one instance which renders the test even dubious. His figures include in the first place 14 healthy people who were inoculated with negative results, and 8 more patients ill with general diseases other than tuberculosis, who equally gave negative results. The remaining 40 patients examined were all tuberculous, and in every instance gave positive reactions when the tuberculin was injected.

The cases above referred to presented mainly pulmonary or intestinal tuberculous lesions; but equally good results were obtained in the surgical clinics where the tests were employed for external tuberculosis, thus confirming the original statements made by Koch concerning its diagnostic value. Trendelenburg, for example, examined in this way some 90 cases, including cutaneous, arthritic, and genito-urinary tuberculosis, and in only one instance did he obtain a negative result. His experience showed that for some reason a tuberculosis of the testis excited a reaction less readily than did that of any other part. The researches of Mikulicz, Doutrelepont, and others merely confirm those of Trendelenburg.

With reference to contradictory results, there are such striking instances as those of Mosler, who found a reaction in 17 out of 21 non-tuberculous patients. One may safely say on general principles, however, that when one or two isolated observers obtain results diametrically opposed to most others who are undertaking similar experiments, something is lacking either in the methods and technique or in the conception of the work; whether Mosler's ideas of what constitutes a reaction differ from others we cannot say, failing his original paper, but it seems difficult to conceive how his investigations are correct when such a host of opposing testimony is arrayed against him.

In our own observations we have not been able as yet to trace the ultimate results in all the patients in whom tuberculosis was suspected, and where a reaction was obtained; but, nevertheless, we may safely say that the sum total of our investigations has afforded a decided and satisfactory record in favour of the great diagnostic value of tuberculin.

Following upon the suggestions of Dr. Trudeau, it has been our practice to commence with an initial injection of $\frac{1}{5}$ to 1 mg., according as the patient was a child or an adult. Failing a reaction, we have waited two or three days, and then employed a second dosage of 2 mg.; and when no reaction followed, a final dose of 3 mg. was given two or three days later. When under such conditions a negative result supervened, we have concluded that no tuberculosis was present, though in one instance this conclusion proved absolutely false.

With reference to these results, which have been declared by many authorities to be either inevitable or at all events possible, we can only state that in not a single instance has any trouble arisen of the nature either of a local or general injury. Where tuberculous patients were inoculated, there was never any evidence from which to adduce suspicions of increased lesions or a more acute trouble; while, through due regard to cleanliness, the site of inoculation never occasioned any anxiety. Not infrequently there was local redness, pain, and tumefaction, but never any further sign of injection or abscess formation. So far as the general symptoms are concerned, such as collapse or syncope or erythemata, we have had no experience whatever, the reaction itself being the only manifestation noteworthy.

In our own observations in the hospitals we have noted mainly the following features:

1. Results of injection in patients where no clinical signs of tuberculosis could be detected, and where no suspicion of such a condition was present.
2. Results in undoubted cases of tuberculosis.
3 Examination of doubtful cases, such as pleurisy with effusion, pyonephrosis, etc.
4. Surgical tuberculosis, where efforts were made to remove all the tuberculous tissue present.

To satisfy ourselves on the first of these points, cases were employed of the most varied nature, the only requirement being that no appreciable amount of fever was present. There were tested thus, for example, 7 cases of chronic rheumatism, 5 cases of organic and functional nervous diseases, 4 of organic heart disease, 5 of pulmonary diseases other than tuberculosis, and a number of other maladies referable to one or other of the organs or tissues of the body. The series included in all more than 30 cases, and in not one instance

was there a rise of temperature or constitutional disturbance sufficient to warrant even a suspicion of a positive reaction to the tuberculin. The dosage was employed in most of the cases as above stated, and the results were eminently satisfactory.

Perhaps in none of these instances was there so striking an advantage in employing the test as in several cases of slowly-resolving pneumonia, where for a period of from five to six weeks after the the acute symptoms had subsided there was evidence of consolidation of the lung, and just such a condition as might be incident to a tuberculous process. The inoculations, however, proved negative, and a favourable prognosis was in each instance given to the relatives, while the course of the disease later on to recovery amply justified the conclusions drawn. In another case of pyuria the diagnosis of tuberculosis had seemed undoubted, though careful preparations of the urinary sediment had failed to reveal the bacilli of tuberculosis. Tuberculin, when injected, gave negative results, and the subsequent operation revealed merely the presence of a renal calculus the removal of which was attended by progressive amelioration and ultimate recovery.

Of the cases of undoubted tuberculosis tested, only those were employed where there was practically an absence of fever, or fever so slight as not to interfere with the reaction. The inoculations, too, were given late at night, so that any possible rise might occur during the time of day when least of all we would anticipate a tuberculous pyrexia.

Of these, 5 were cases of undoubted pulmonary tuberculosis, 4 of tuberculous pleurisy, 1 patient with tuberculosis and pyopneumothorax, and also 1 with genito-urinary tuberculosis. In all, positive reactions were obtained. Cases with Pott's disease and morbus coxæ gave similar results, and, as a rule, marked reactions. Six were unsuccessfully inoculated in this manner, though 2 others failed to react. In each of these latter there was wasting, and a large local cold abscess associated with the primary disease. Two cases of tuberculous cervical adenitis were injected, and gave positive reactions, as did also 3 cases of tuberculous arthritis of the knee-joint.

With reference to the third point, namely, the observation of doubtful cases, such as pleurisy, where the etiology was obscure, there was some difficulty in accurately establishing the value of the test. The attempt was made to inoculate the pleural effusions into guinea-pigs, and thus to ensure a diagnosis of tuberculosis in suspected cases; but, in common with other observers, we here obtained negative results. In all cases, likewise, the suggestions of Eichhorst to inoculate the fluid in large quantities was followed, but the results, even so, proved quite unsatisfactory.

In the second place, where patients failed to react, and where it was believed that no tuberculosis was present, the cases after leaving the hospitals never reappeared for examination. Apart, however, from the 4 undoubted cases above mentioned, were 2 others in whom at first there was merely a suspicion of tuberculosis of the pleura. The diagnosis in these, established by the inoculation of the tuberculin, was later verified by development of the disease in the lungs. In one of these cases an insidious onset of the effusion and significant family history aroused the suspicion of its bacillary origin; but a guinea-pig inoculated by the fluid was unaffected; the injection, however, of $\frac{1}{2}$ mg. of tuberculin was followed by marked rigors, *malaise*, and a temperature of 104.4°. In the course of a few weeks the pleural effusion subsided, and the patient left the hospital greatly improved; two months later she returned to the outdoor department, with definite signs of pulmonary destruction in the apex of the previously affected side, obviously a tuberculous condition. The case before mentioned where a pyuria gave difficulties in diagnosis is likewise of interest in this connection, as showing the value of the reaction in clearing up obscure cases.

The examination of cases in which operations have been performed for the removal of tuberculous tissue has just been commenced, and we have injected but two patients, both of whom had undergone excision of the knee-joint. Both patients reacted mildly to the tuberculin; although there was no discoverable evidence of remaining lesions, local or elsewhere. Our investigations, however, are still in progress.

It will be seen from the cases just recorded that more than 30 patients in whom no tuberculosis could be discerned failed to respond in any degree to the inoculation of the reagent; that, on the other hand, 21 cases of undoubted tuberculosis reacted positively. Several failures remain to be recorded, however, these having occurred under small doses of the tuberculin, and before we had become aware that a dose larger than 3 milligrammes was sometimes necessary. Guttmann, in his long series of cases, had observed that with a dose of 3 milligrammes he invariably obtained as marked a reaction as with any larger dose; but our own observations have led us to conclude that at times there is an individual susceptibility or idiosyncrasy which enables a very small pose to produce a marked reaction, while in other instances no result is obtained till a larger quantity is administered. It is in this way we would account for a distinct failure in a young man with incipient pulmonary tuberculosis, showing very few local signs, but in whose sputum tubercle bacilli were found. The inoculation of three successive doses of 1, 2, and 3 milligrammes was attended with negative results; and believing it wiser at the time not to administer more, the patient was allowed to leave the hospital before a larger dose could be injected. In one case of tuberculous tarsitis, and one of Pott's disease, the same negative results were obtained with similar small doses; but with these instances ends the total number of cases where the diagnostic value of the test seems doubtful.

As to the criterion of what constitutes a reaction, there has evidently been considerable variation of opinion. In our own cases, unless the rise of temperature was more than $1\frac{1}{2}$° to 2° F. above that previously existing, we have not considered the reaction positive; and usually the febrile condition subsided gradually in about 36 to 48 hours. In the majority of cases the constitutional symptoms were slight, including mainly headache and slight *malaise* with nausea. Distinct rigors were uncommon. The highest temperature obtained was 105° F., and that after the injection of only $\frac{1}{2}$ milligramme.

In conclusion, we would record our hearty thanks to Drs. Trudeau and Hewetson, of Saranac Lake, for their manifold kindly suggestions and generous supply of tuberculin, while we are further indebted to the clinicians in attendance at the General and Royal Victoria Hospitals for the use of material so freely granted.

A QUANTITATIVE METHOD OF SERUM DIAGNOSIS BY MEANS OF DRIED BLOOD.

BY

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Widal suggested[1] the plan of simply dissolving the dried blood drop in a fixed number of drops of water. Dacosta advocates the same plan. The objection to this is that the previous volume of the blood drop cannot be determined after it has been dried, and they have not attempted to estimate the limit of possible dilution.

The plan adopted by us is that of taking the sample by means of a loop of standard size, made of No. 20 gauge copper wire, 2 mm. inside diameter. This gives a considerable quantity of blood which, when dried and spread on a glass slide, can afterwards be dissolved by means of a definite number of loopfuls of water. The solution thus obtained is abundant enough to yield much more blood solution than is necessary for quantitative measurement of the reaction. To ensure greater accuracy a small outfit was used in which the original loop used in taking the blood is returned, and employed in making the dilutions.

The dried blood drop is dissolved in five loopfuls of water used *seriatim*, the solution from each drop being sucked up by a capillary tube, and the whole mixed. From this stock solution standard sub-solutions are made in a straight capillary tube bound by a rubber band to a thermometer scale. The advantage of this plan is that the exact quantity of blood taken is immaterial. The tube is easily washed. The

method of placing the loopfuls separately on the glass, as recommended by Delépine, was found very reliable.

In testing, a small platinum loop of the blood solutions is mixed with as many loops of water and bouillon culture as may be needed to give the required dilution, and make the volume of the diluted blood as nearly as possible equal to that of the culture. For convenience a table of the formulæ for dilutions was made, and is useful when one is ascertaining the extreme limit of dilution possible, as this often reaches into the hundreds.

For an ordinary test—to learn, for instance, if the blood reacts at 1 to 10—all that is necessary is to mix a loop of the stock 1 to 5 solution with one of the culture. By mixing it with four loops of water and five of culture, a dilution of 1 to 50 is readily obtained. The time required when this simple test only is needed does not exceed five minutes.

We have made duplicate observations to ascertain the average limit of error, and find this to be about 10 per cent. after some familiarity has been obtained with the method. It is much more accurate than a plan previously suggested by one of us of taking the standard of colour as a guide.

Comparative tests, when the duplicate samples consisted either of serum or of watery solutions of fresh blood taken by a Zeiss-Thoma barometer pipette, gave us results practically identical with those by the dry blood method, the latter being slightly lower, however, as a rule. So that if the dry blood showed a given intensity, the serum would show at least that, and perhaps 10 per cent. more.

Drying for a few days did not make any great difference in the intensity, though it slightly lessened the reaction. We defer the publication in detail of our results until our observations are more numerous.

The result of the quantitative dry method so far has convinced us that it is delicate and accurate enough to give results sufficiently close for practical purposes or for comparison with other methods of testing. It has not yet been found necessary to use the quantitative test for the ordinary routine diagnostic work; but where the results are to be used for recording doubtful or exceptional cases for scientific publication, we think quantitative data preferable.

It does not appear necessary, however, to use quantitative tests in ordinary routine diagnostic work. Our experience has been that in no case hitherto examined by us have we been able to obtain a decisive reaction by the use of quantitative methods of fluid blood or serum, when it could not also be obtained by the dried blood test without quantitative complications.

At the same time, we fully agree with the views expressed by Professor Welch on a recent occasion, that for scientific observations it was very desirable that the dried blood method should be also made a quantitative one, and our work in that direction was prompted by a friendly suggestion coming from him, for which we wish here to express our thanks.

REFERENCE.
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THE CONDITION OF TEST CULTURES ESPECIALLY AS REGARDS TITRATION FAVOURABLE TO CLEAR SERUM REACTIONS BY THE DRIED BLOOD METHOD.

BY
WYATT JOHNSTON, M.D., and D. D. McTAGGART,
[From the Laboratory of the Board of Health of the Province of Quebec.]

THIS matter was referred to in the discussion at Philadelphia on June 3rd, 1897, before the American Medical Association, by Bates Block and one of us. We found that by varying the composition of the medium and the conditions under which the culture is kept, it is possible to obtain a culture which will yield excellent results or the reverse. We can now at will obtain a bouillon culture which can be left in contact with solutions of non-typhoid blood for 24 to 48 hours without giving any reaction, and will react promptly with typhoid blood. On the other hand, we can by neglecting certain details, get a test culture which will give one of two pseudo-reactions with almost any blood solution or serum. Pseudo-reaction A is a decided clumping of over 95 per cent. of all the bacteria, but without loss of motion. Pseudo-reaction B culture with most blood solutions will show cessation of motion, with defective clumping. The former (A) we found to occur with cultures made very active by daily transplantations, and the latter (B) to growth in rather too alkaline bouillon.

Our earliest observations happened to be made with bouillon giving satisfactory results. These became unsatisfactory for a few weeks under daily transplantations and good again on returning to monthly changes of stock cultures. After a few months a change in the laboratory *personnel* with different assignment of duties led to the second class of pseudo-reactions troubling us for a few weeks. Attention to the reaction of the culture medium remedied this difficulty, which seemed entirely due to a trifling increase in the alkalinity of the laboratory bouillon. At another laboratory in charge of one of us there was still a supply of bouillon remaining which gave satisfactory results. This reacted 3.5 per cent. acid to phenolpthalein and just verged on the acid point with litmus. The adoption of bouillons having a reaction requiring 3.5 per cent. of normal alkali to restore the tint of phenol-phthalein led to satisfactory results once more. The reading of the end point varies somewhat with the observer and the optimum reaction varies slightly with the particular culture and the composition of the medium, but always lies between 3 and 4 per cent.

The pseudo-reactions here described occur in bouillons giving a heavy growth and some sediment at the end of twenty-four hours at 37° C. They show a tendency to the spontaneous clumping mentioned by Widal, but this is greatly exaggerated by adding blood solution. Serum does not have the same tendency to cause pseudo-reaction A. Dilution alone did not prove in our hands a satisfactory remedy.

We believe that these anomalies explain the statements of some writers that all serums tend to cause clumping sooner or later. The optimum reaction depends somewhat on the temperature of the thermostat and the age of the culture. Satisfactory cultures show gentle clouding only at twenty-four hours, and have no sediment or serum. If the culture medium is made too acid it becomes insensitive, loses motility, and does not react promptly, but gives no pseudo-reaction.

We note for the first time in the BRITISH MEDICAL JOURNAL of December 4th, 1897, that Delépine had already in the JOURNAL on April 17th, 1897, called attention to the danger of pseudo-reactions if the bouillon is alkaline. He recommends neutral bouillon, whereas we found acid bouillon preferable. The question is one of intensity of growth rather than of pure alkalinity alone, since the pseudo-reactions can also be avoided by raising the alkalinity till the growth becomes scanty. Personally, our interest lay more in deciding the most suitable reaction for dried blood work.

ON SERUM REACTION WITH BACTERIA OTHER THAN THE USUAL PATHOGENIC FORMS.

BY
WYATT JOHNSTON, M.D., and E. W. HAMMOND.
[From the Pathological Laboratory, McGill University.]

SOME observations made jointly by us have shown the occurrence of a serum reaction when cultures of the specific organism of the Picton cattle disease are brought in contact with the serum of cattle attacked by this disease or with that of other animals (goat, rabbit, and guinea-pig) infected with it. The blood of healthy animals did not give the reaction. Its diagnostic value has not yet been thoroughly tested clinically. The reaction was obtainable in dilutions of 1 in 25, and was evidenced by the formation of distinct clumps, the control specimens remaining free from them after many hours.

Injection of cultures sterilised by heat produced a moderate blood reaction and some degree of immunity. The results will be more fully reported elsewhere by E. W. Hammond. The organism in this disease is a small non-motile diplobacillus, the constant occurrence and specific relation of which to this disease was established some years ago—in 1893—by Dr. Adami.

A few preliminary observations were also made jointly by myself and Mr. Hammond with a view of determining whether bacteria considered to be in the ordinary sense of the word non-pathogenic, for example, the ordinary water bacteria, could be made to give a serum reaction sufficiently marked to be of service in the differentiation of species, groups, and races. This appeared to be a desirable subject of study owing to the marked influence shown by race peculiarities in the degree of serum reaction obtained in the case of the pathogenic spirilla.

The observations are not sufficient to warrant any general conclusions, and are only mentioned here as suggesting a possible new means of diagnosis with a class of micro-organisms which form a great stumblingblock to progress in the direction of systematic bacteriological classification. We gather that the agglutinative phenomena when slightly manifested serve to indicate racial rather than specific affinities.

[I would state that while the suggestions in connection with the Picton disease observations came from me, the technical work has, subsequent to the first successful observation, been almost entirely done by Mr. E. W. Hammond. The blood samples used were the same that had been in scale tubes for from 1 to 3 years, and had been left in the laboratory by Dr. Adami, who was absent in England at the time.—W. J.]

ON THE RED ALLY OF UROHÆMATOPORPHYRIN: A RETROSPECT OF TWELVE CASES.

By DAVID FRASER HARRIS, M.D., B.Sc.Lond., F.R.S.E.,
Muirhead Demonstrator of Physiology in the University of Glasgow.

A case of disease is, from one point of view, a great physiological experiment performed by Nature, which often presents us with processes arrested and functions perverted at very instructive stages. The appearance in the urine of the pigment known as hæmatoporphyrin, or one of its allies, in place of the amber-coloured pigment normally there, is an example of an arrested process—that of katabolism of pigmentary matter derived from the blood, and taking place, on the largest scale, in the liver.

The term "urohæmatoporphyrin" dates from 1885, when MacMunn, in a paper[1] on the colouring matters of bile and urine, rechristened what he had five years earlier named "urohæmatin."[2] In 1880, in a case of rheumatic fever, he found "urohæmatin," and about the same date made it artificially by reduction of the pigment hæmatin. Urohæmatin was then found in a case of pericarditis, and on several occasions in the urine of Addison's disease. Since 1885 this pigment has always been known as urohæmatoporphyrin; it gives to urine an orange colour, and has been detected in a number of diseases, namely, in addition to the three given above—peritonitis, meningitis, cirrhosis of liver, peritoneal blood effusion, croupous pneumonia, typhoid fever, measles, and Hodgkin's disease.[3 4]

In all these cases the colour of the urine, if not quite orange, is of a tint of amber deeper than the normal. Examined with the spectroscope, urohæmatoporphyrin shows a four-banded spectrum, the wave-lengths of whose bands are published in many of the above-mentioned monographs, but briefly put the bands are—one in the red to the left of D, two between D and E, and one near the F line. This spectrum closely resembles that of a laboratory pigment alkaline hæmatoporphyrin also four-banded, whose bands differ slightly from those of the urinary pigment in situation and intensity. Hæmatoporphyrin as a laboratory pigment has been long known both in acid and alkaline solutions. Thudichum in 1872 called it "cruentine."[5] The acid solution is two-banded and very characteristic, the pigment is iron-free. MacMunn found it in several of the lower animals, in the integument of certain slugs, star-fishes, the earth-worm, and in some birds' egg-shells.

Previously to 1890 this was all that could be said about hæmatoporphyrin and its urinary ally, but early in that year MacMunn saw for the first time two specimens (sent him by Dr. S. M. Copeman) of a "Burgundy-red urine" which contained no proteid, blood, or bile. Towards the close of the same year Mr. Cant of Lincoln, and Dr. Noël Paton of Edinburgh, each sent MacMunn a specimen of urine similarly pigmented.

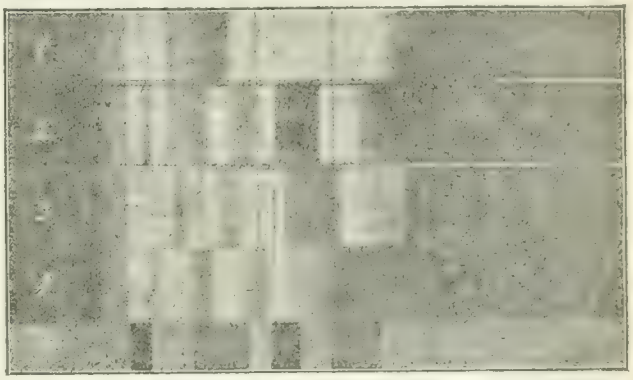


Fig. 1.—(1) Acid hæmatoporphyrin. (2) Alkaline hæmatoporphyrin. (3) Acid urohæmatoporphyrin. (4) Alkaline urohæmatoporphyrin. (5) Meio-de oxyhæmatoporphyrin, or α-hæmatoporphyrin, the red ally of urohæmatoporporphyrin. (Nos. 1 to 4 are from the charts accompanying MacMunn's paper *Journal of Physiology*, vol. x. No. 5 is from one of my own drawings.)

Mr. Cant's case was that of a woman, aged 40, with exophthalmic goître, who had excreted red urine for three years (corpuscles 2,250,000 per c.mm. and HBO_2 40 per cent. of normal). She had taken a good deal of sulphonal. There was some patchy pigmentation of skin, and bullæ filled with a red alkaline fluid. To three of these urines Dr. Halliburton[7] alludes on p. 751 of his *Textbook* (1891), in a footnote, where he states that MacMunn regards this red pigment as "intermediate between urohæmatoporphyrin and hæmatoporphyrin." He refers the reader to two other similar cases (described by Drs. Ranking and Pardington[8]), which occurred in neurotic women and terminated fatally. The spectroscopic report on these two urines was made by Dr. MacMunn—the pigment was the same as in the first four cases, of deep garnet-red colour, yielding a four-banded spectrum resembling urohæmatoporphyrin, but differing, on careful comparison, in the position of the wave lengths of the absorption-bands: these were, however, not published, nor was the pigment named.

Two other cases of Burgundy-red urines were met with in 1890, both by Dr. Vaughan Harley[9]—one in Edinburgh (in the Royal Infirmary under Dr. John Wyllie), the other in Christiania. Both were of women who had been taking sulphonal, and who exhibited "nerve disturbances" and sleeplessness. The urine had no proteid, blood, or bile; in the foreign case the wave lengths of the centres of the absorption-bands were published: first band at λ562, second at λ526, third at λ482, besides a feeble absorption in the violet.

On March 21st, 1891, Dr. Halliburton showed to the Physiological Society a specimen of red urine from a case of a lady, aged 30, who had excreted the pigment for seven weeks. She had been taking sulphonal since the previous November, and for more than a year had suffered from melancholic monomania. The urine was similar on examination to that of the former eight cases. The specimen was sent him by Drs. Blandford and Alliot, of Sevenoaks.

In 1894 Dr. Oswald,[10] then assistant-physician to the Glasgow Royal Asylum, watched a case of mania in a woman to whom large doses of sulphonal were given. Between April and August she took 2,200 grs. of sulphonal, and at intervals during that time excreted a "claret"-coloured urine, which had no bile and did not give the guiac test. Though the case was described as an example of hæmatoporphyrinuria, there is now no doubt that the pigment was not urohæmatoporphyrin, but the red ally of it.

In December, 1896, I saw for the first time a Burgundy-red urine, sent me from the wards in the Western Infirmary, Glasgow, from a patient under the care of Dr. McCall Anderson.[11]

The urine contained no proteid, sugar, blood, or bile, gave

a four-banded spectrum convertible, after treatment with cold concentrated H_2SO_4, into the characteristic two-banded one of acid hæmatoporphyrin. This reaction the majority of the observers above alluded to had used with the same result. The case was that of a young fisherman, aged 25, from Stornoway, who had suffered annually from April to October from an eruption of a vesicular kind to which at first the name dermatitis herpetiformis bullosa was given, but which was subsequently named hydroa æstivale. His corpuscles were normal in number, but his HbO_2 only 60 per cent. of normal.

In August, 1897, I was sent from the same wards a second specimen of dark red urine with a note saying it was being passed by the brother of the man who had been a patient in December, 1896.[12] His urine was precisely similar to that of his brother, and in it, without any dilution, I measured the wave lengths of the four bands of absorption which are in millionths of a millimetre.

First band (in red) from λ638 to λ620, centre at λ630.
Second band (orange region) from λ586 to λ551, centre at λ563.
Third band (green region) from λ538 to λ522, centre at λ530
Fourth band (near green-blue junction) from λ517 to λ490 or λ488, the righthand edge is hazy, and varies with the dilution, centre about λ498, besides considerable absorption in the violet.

Comparing these bands with those above detailed as published by Harley, we find that in the pigment he described no band to the left of D, that is in the red, was found. I regard this as very peculiar, since every kind of hæmatoporphyrin has a band in the red region, its exact position varying with the different pigments. In acid hæmatoporphyrin and acid urohæmatoporphyrin it is very close to D; in the two alkaline solutions of these, respectively, it is farther from D, while in the case of the red ally it is most distant of all from D. On diluting the solution it quickly disappears. All that I can suggest is, either that there was less pigment per cent. present in the foreign case or that it was diluted for the examination. There can be no doubt that it was this red α-hæmatoporphyrin. I would say a band in the red was one of the characteristic features of the absorption-spectra of all the hæmatoporphyrins.

Being led to reflect upon the genetic relationship of these pigments to those of bile and urine,[13] I found it awkward not to have a name for the red ally of urohæmatoporphyrin, and so devised one which endeavoured to express what MacMunn believed to be its position relative to hæmatoporphyrin and urohæmatoporphyrin, namely, its being intermediate as a reduction product, between the two. I therefore named it meio-de-oxyhæmatoporphyrin. It might, however, be well to call it by a term that connoted no particular view as to its origin, so that the red pigment might be merely known as α-hæmatoporphyrin and the orange one as β-hæmatoporphyrin. In a sense they are *both uro*hæmatoporphyrins probably in different stages of reduction.

Of the twelve cases mentioned, seven have been in women, and in four of these, sulphonal had been administered. In all there was grave nervous disturbance. Of these seven cases, five were fatal. Having already discussed, to some extent, elsewhere, the seat of origin of these pigments, I refrain from again entering upon that topic, but would only say that the liver is probably the chief seat of the abnormal katabolism of blood pigment through hæmataporphyrin (iron-free) to the iron-free pigments of bile and urine. Had I not seen Professor McCall Anderson's first case, in which the excretion of red pigment has recurred for years and the man is still living, I should say this red urohæmatoporphyrinuria was a most grave symptom, a precursor of a fatal issue—such at any rate it seems to be in the case of women.

I ought to add that α hæmatoporphyrin is very stable. In the first specimen of it, which I received a year ago, the pigment has preserved its chemical and spectroscopic integrity. In this respect it is exactly like laboratory acid hæmatoporphyrin which never seems to decompose. Its presence has also some power in greatly retarding the putrefaction of the urine itself.

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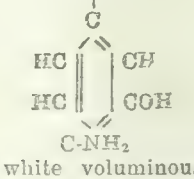
THE LOCAL TREATMENT OF PAINFUL ULCERATIONS BY ORTHOFORM,

WITH SPECIAL REFERENCE TO THE UPPER AIR PASSAGES.*

BY EUGENE S. YONGE, M.D.EDIN.,
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UNDER the name of orthoform, a new synthetic product related in constitution to cocaine has been introduced by Professor Einhorn and Dr. Heinz, of Munich, for the production of local anæsthesia.[1] From a chemical[2] point of view the history of the building up of orthoform is of some interest, and may be epitomised as follows. The authors of the investigation set themselves the task of finding the hypothetical molecule hidden in cocaine or its derivatives which would produce local anæsthesia without accompanying toxic effects.

It is assumed that cocaine is constituted of a double ring in which a benzoyl-oxy-piperidine-carboxylic methyl-ester (having a methyl group attached to the nitrogen) is associated with a hydro-aromatic ring of the hydr-benzoyl-oxybenzoic methyl-ester. The analytical observations of Stockman,[3] Filehne,[5] Ehrlich,[6] and Poulsson,[7] who split up the molecule and showed that none of the products obtained by this process were capable of producing local anæsthesia; and the more or less synthetical experiments of Liebreich, Poulsson, and Ehrlich elucidated matters so far that it became a question as to whether the peculiar anæsthetic quality of cocaine was dependent on its double-ring nature, on some property of the first ring, or on an influence existing in the hydro-aromatic ring. The last was a reasonable hypothesis, more especially since it was known that certain other aromatic substances, such as methylene blue,[8] possessed the property of relieving pain. Impelled by the foregoing considerations, a prolonged and elaborate investigation was undertaken by Einhorn and Heinz into a large number of these substances, with the result that they were led to conclude that all aromatic amidoxyesters cause local anæsthesia, though in differing degrees of intensity and with varying powers of irritation. A substance (p-methyl amido-m-oxybenzoic acid) of this class, to which the trade name of "orthoform" has been given, appeared to act most strongly as an anæsthetic and not at all as an irritant. It has the following constitutional formula[1]:



Orthoform is a white voluminous crystalline powder without taste or smell; it is not hydroscopic, and melts at 120° C. Free orthoform combines with hydrochloric acid, forming a hydrochloride which is more soluble than the basis powder, but causes irritation to some mucous membranes on account of its acid reaction. The hydrochloride (price 6s. 6d. per ounce) is the preparation on the market, and the dose is 8 to 16 grains. The anæsthetic presents a triple claim to recognition, in that it is sparingly soluble, is non-toxic, and is powerfully antiseptic. On the other hand, it is a disadvantage that the substance will not act on unbroken skin nor, with certain reservations, on intact mucous membranes, for its strong anæsthetic properties are only manifested where nerve endings are exposed. The slow solubility leads the anodyne to exert its action economically on the tissues, and, unlike its rapidly soluble congener cocaine, only sufficient is dissolved to produce and keep up local insensibility, which therefore becomes prolonged. In from 5 to 10 minutes after application anæsthesia of the denuded surface to both touch and pain commences, and it reaches its consummation within a short period of time. The effect lasts from a few hours to five or six days, and there is, in the majority of cases, perfect

* Read before the Manchester Therapeutical Society.

or nearly perfect analgesia, the patient experiencing the sensation of the offending part having been cicatrised over or "enamelled." Suppuration is usually markedly diminished and healing accelerated.

The observations which I have made on the pharmacology and clinical effect of orthoform have been principally confined, on the one hand, to a consideration of such preparations as would be suitable for applying to the upper air passages, and on the other hand, to the effect of the drug on ulcerations of these regions. Orthoform is soluble in water, the basis powder very sparingly and the hydrochloride much more freely. It is also dissolved by ether and spirit. The drug is practically insoluble in normal saline solution, in glycerine, and in paroleine, and although suspended in the last-named vehicle, the particles of powder are too large to pass through the ordinary atomiser. The most suitable preparations appear to be:

(1) *The crude powder*, either alone or mixed with equal parts of lycopodium, which should be accurately insufflated on to the required area, since orthoform only takes effect where it comes in contact with the abraded parts, and its influence does not extend to the tissues beyond.

(2) *Pastilles*, with the following formula: ℞ Orthoformi, gr. iij to v; liq. cocci, q.s.; saccharin, gr. ¼; glyco-gelatini, q.s. The pastilles are useful in mouth, tonsillar, and posterior pharyngeal affections, but less so than the two succeeding preparations.

(3) *A saturated solution of orthoform in collodion*, forming a species of "varnish." This is useful in those cases in which an ulcer is exposed to much friction, but as it causes acute smarting it is advisable to primarily anæsthetise the ulcer either with cocaine or with orthoform in powder.

(4) *A spray*, with this formula: ℞ Orthoformi, gr. v; sp. vini rect., aquæ, āā, ℥l. This is perhaps the best form in which to administer orthoform for nasal and laryngeal ulceration. The spirit evaporates shortly after contact with the parts, leaving the precipitated powder evenly distributed over the affected area.

(5) *An ointment* (10 per cent.) made with any good ointment basis.

(6) *An aqueous solution* (10 per cent.) of the hydrochloride as a paint.

The action of orthoform on the unbroken mucous membrane of the mouth, naso-pharynx, and larynx is, in my experience, the following: Neither the free orthoform (basis powder) nor the hydrochloride anæsthetise sufficiently to allow of surgical action. When applied to the tongue, inner surface of the cheek, or to the pharynx, a numb sensation supervenes in the course of about five minutes, but there is little real anæsthesia. The effect on the larynx is to reduce reflex irritability. A peculiar feeling, described as similar to that produced by cocaine, is experienced in five minutes; in a few more minutes this relative loss of sensation vanishes, but if before its subsidence a probe be introduced and the vocal cords and interior of the larynx touched, although a species of "gagging" ensues, there is no laryngeal spasm or cough. In the same patient a similar procedure without the previous introduction of orthoform causes intense discomfort and a fit of coughing. The intact nasal mucous membrane is also slightly amenable to the influence of the drug. A feeling of numbness is evidenced in about two minutes, and this merges into real anæsthesia, which is, however, feeble and transient.

I have had the opportunity of testing the anæsthetic value of orthoform in eighteen patients who suffered from painful ulcerations of the upper respiratory tract, and a few representative cases are now quoted.

Case x.—L. F., aged 24. Tuberculous ulceration of the epiglottis; phthisis. The pain on swallowing and on coughing was intense, and the patient had avoided any but liquid food for three months. A 10 per cent. solution of cocaine gave more or less ease for six hours. Five grains of orthoform were insufflated on to the ulcerated surface, and relief began within an hour and lasted for thirty hours. The pain on swallowing and coughing was reduced almost to *nil*, and the patient succeeded in taking food with comfort for the first time for more than three months.

Case iii.—H. H., aged 56, clerk. Epithelioma of soft palate and tonsil. There was an offensive cavity in the position of the left tonsil, a large ulcer to the outer side, and advanced glandular infection. The patient suffered intense pain on swallowing, and also was much afflicted by severe and constant neuralgia from the deep pressure of the growth. Orthoform (5 grains) was blown into the cavity and upon the ulcer, and relief began in the course of half-an-hour. Almost all pain on swallowing was abolished, and this improved condition lasted a week. The man ate some solid food (about half a mutton chop with bread) within a few hours of the application after a long abstinence from all but liquids. The neuralgia was not diminished at all.

Case vi.—Mrs. H., aged 35. Tuberculous ulcer on posterior and upper surface of the right arytenoid. Phthisis. There was some dysphagia, and it was a matter of difficulty, owing to the peculiar situation of the breach of surface (exposed as it was to constant friction), to persuade any drug to remain in contact with it. A thick paint of orthoform and collodion was applied, with the result that the patient expressed herself considerably relieved from the dysphagia—this condition lasting about twelve hours.

Case vii.—E. M., electrician, aged 54. Laryngeal and pulmonary phthisis. Had pain on swallowing for two months before admission to hospital. This was gradually getting worse, and solids, semisolids, and liquids caused great discomfort. He "could not take any breakfast at morning" in consequence. Orthoform (grs. 5 of the basis powder) was insufflated into the larynx, and relief began within half an hour, when saliva could be painlessly swallowed. A solid meal of chop, bread, and potatoes was taken three hours after the application with little or no inconvenience. A feeling of dryness in the laryngeal region began after the meal, but relative relief lasted for twelve hours. The next morning the throat was extremely sore.

Case ii.—H. B., aged 40, striker. Laryngeal and pulmonary phthisis. Interarytenoid thickening and an ulcer on the left cord posteriorly. There was considerable pain on swallowing even liquids or semisolids. The patient—a very intelligent man—was instructed to use a laryngeal spray of a solution of orthoform. After the first application the drug, which "acted like cocaine" (to which he had been accustomed), gave relief in five or ten minutes, and this lasted for four hours. A second application gave comfort for two hours, and a third (of the powder) gave complete ease for three hours and modified comfort for twelve hours. The ulcer rapidly improved, and the pain eventually ceased to trouble the patient.

Case i.—F. B., aged 19. Scarlatina anginosa with much injection and ulceration of tonsils and fauces. Excessive discomfort on swallowing. Orthoform gave relief for twelve hours, and the youth could take his meals comfortably.

Case xvi.—L. G. Syphilitic ulcer of left tonsil causing great pain and dysphagia. Pain absolutely relieved by powder in 10 or 12 minutes; the parts were then painted over with a saturated solution of orthoform in collodion. The patient, who had been unable to eat for some days without agony, took, on reaching his home, a good meal of beefsteak with comfort, but was disappointed to find that two hours after the relief commenced the pain was beginning again, and in another hour was as bad as ever. A similar result followed a second insufflation and painting.

Case ix.—G. S. Intranasal ulcer of catarrhal origin which had become irritated or septic. Situated on floor of nose, about 1½ cm. from external nares, and extending on to septum. Infiltration of surrounding parts, and great pain and tenderness of nose generally. After insufflations of orthoform, relief began in 5 or 6 minutes, and lasted several hours. The breach of surface also began to heal rapidly.

I am indebted for the notes of Cases ix, xvi, and vi to my friend, Dr. Haring, whose patients they were.

Toxic effects were not noted in any of the cases, but there was occasionally some slight burning for a few minutes after the application of the hydrochloride. This failure to discover toxicity is compatible with the statements[1] that over 12 drachms have been sprinkled on a broken surface in the course of the week, also that 30 to 60 grains have been administered daily to rabbits, and 45 to 90 grains to dogs, without evil effects during life or the *post-mortem* discovery of visceral changes. Orthoform fails to produce any results on an ulcer unless the dual precaution is taken to apply the drug directly to the loss of surface and to ensure its retention there.

No relief was experienced by patients suffering from either catarrhal pharyngitis or quinsy.

The drug in doses of 8 to 16 grains is said to be of value as an anodyne in ulcer or cancer of the stomach. In cases of ulcer, complete relief for three or four hours has been obtained, and one patient with cancer benefited in this way for twelve hours. Orthoform is also declared useful in burns, ulceration of the vulva, chronic cystitis, traumatic lesions of the urethra, gonorrhœa, and other cases.

The antiseptic action of orthoform appears to be demonstrated by the rapid diminution of purulent exudation in several of the cases encountered, and the speedy healing of the ulcer. In a case of acute gonorrhœa[1] injections of orthoform solutions were followed by the disappearance of gonococci in four days, and the complete cessation of the blenorrhagia.

Finally, if further observations confirm the results already published, it would appear that orthoform is entitled to take a position in the gamut of local anæsthetics applicable to the upper air passages. It seems probable that it will replace—by virtue of its insolubility and innocuousness—its relative, cocaine, when long anæsthesia on ulcerated surfaces is wished for; be replaced by the more reputed drug when short insensibility of intact mucous membrane is desirable, and on occasion supplement it.

My best thanks are due to Professor Dr. Einhorn, of Munich, who has on several occasions assisted me in the most courteous manner; also to Drs. Hodgkinson, Hutton, Moritz, Haring, and Fenn, on the staff of the Manchester Consumption Hospital: to Dr. Wild, Physician to the Manchester Skin Hospital: to Dr. Mercer and Dr. Hodge, all of whom have very kindly given me clinical material or other generous help.

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[1] *Münchener med. Woch.*, August 24th, 1897. [2] *Münchener med. Woch.*, November 2nd, 1897. [3] Abstract of papers by Einhorn and Heinz, also Neumeyer, by Leech in *Manchester Med. Chron.*, December, 1897. [4] *Pharm. Journ.*, (3) xvi, 1897. [5] *Berl. klin. Woch.*, 1887, p. 107. [6] *Deut. med. Woch.*, 1890, No. 32. [7] *Archiv. für exper. Path. und Pharm.*, 1891, p. 301. [8] Ehrlich and Leppmann, *Deut. med. Woch.*, 1890, p. 23. See also *Pharmaceutical Journal*, September 25th, 1897; EPITOME of the BRITISH MEDICAL JOURNAL, ii, 1897, pars. 279 and 533.

A NEW VOLUMETRIC METHOD OF ESTIMATING URIC ACID IN URINE.

BY F. W. TUNNICLIFFE, M.D., M.R.C.P., and OTTO ROSENHEIM, Ph.D., F.C.S.

IN a preliminary communication in the BRITISH MEDICAL JOURNAL,[1] one of us (Tunnicliffe) drew attention to the solubility in water of urate of piperidine, the salt formed by the action of piperidine on uric acid. This property of piperidine to combine in molecular proportion with uric acid and the solubility of the resulting salt form the fundamental principles of our method.[2]

If the uric acid is separated from the urine by any of the known methods, and the resulting acid be suspended in water to which a few drops of an alcoholic solution of phenolphtalein have been added, there will be no colour reaction upon the addition of piperidine solution until all the acid is dissolved. If after this point has been reached any further piperidine be added it will remain as such, and by virtue of its alkaline reaction will cause the development of a red colour. Until all the uric acid is dissolved, any piperidine falling into the liquid will be at once converted into piperidine urate, which latter produces no colour reaction with phenolphtalein. By using a solution of piperidine of known strength, the amount which must be added to produce the clearing of the liquid and the development of the purple colour, gives by a simple calculation the amount of uric acid present.[3]

The method resolves itself into three distinct procedures:

1. The preparation of the standard piperidine solution.
2. The obtaining of the uric acid in a pure state from the urine.
3. The titration of the same with the standard solution.

1. We found a $\frac{1}{20}$ normal piperidine solution most suitable. This may be standardised by estimating the amount of it which is required to neutralise a certain amount of a $\frac{1}{20}$ normal acid solution. We do not purpose here giving any fuller directions with regard to the preparation of the $\frac{1}{20}$ normal piperidine solution. To those possessed of a chemical training this would be superfluous, those unpractised in the preparation of standard solutions are advised to purchase the solution from a firm of manufacturing chemists.[4]

2. The uric acid may be obtained from the urine in several ways. The one which we have used, and consider the best, is the method described by Hopkins,[5] which consists in precipitating the uric acid from the urine with ammonium chloride, that is as ammonium salt, and subsequently decomposing with hydrochloric acid. The uric acid obtained from 100 c.cm. of urine by this method is carefully filtered and freed from hydrochloric acid by washing with water until the washing shows no reaction with Congo paper. For this purpose we have found 15 to 20 c.cm. of water suffice, if an unreasonable excess of hydrochloric acid has not been taken.

3. The pure acid is rinsed with 20 to 30 c.cm. of hot water off the filter paper into a small vessel. Although the urate of piperidine, as we have shown elsewhere, is soluble at 15° C. to the extent of 5.3 per cent., we regard it as advisable in order to obtain a sharp end reaction to bring the fluid which is to be titrated up to the boiling point. A few drops of an alcoholic phenolphtalein solution are then added, and the piperidine solution allowed to run in from a burette, the liquid being the while kept hot. The complete saturation of the uric acid present is shown by the appearance of a red colour which remains on shaking, and also by the fact that no uric acid remains undissolved.

Since 1 c.cm. of a $\frac{1}{20}$ normal piperidine solution corresponds to 0.00425 g. piperidine, and this is equal to 0.0084 g. of uric acid, the number of c.cm. required to produce the end reaction described above multipled by 0.0084 will give the amount of uric acid present. In those cases in which 100 c.cm. of urine was the amount originally taken, it is obvious that the number thus obtained will give the percentage of uric acid in the urine.

It may be of interest here to subjoin the following comparative table, which gives the amounts of uric acid present in several urines, as estimated by weighing and by titration with piperidine. The method was to take two portions, of 100 c.cm. each, of each urine, and to estimate the uric acid by titration in one case, and by weighing in the other.

	Uric Acid by Weighing (Hopkins).	Uric Acid by Titration.	Difference.
			Mg.
Urine with an abnormally large percentage of uric acid ...	0.1056	0.1042	− 1.4
Normal urine	0.0809	0.0809	± 0
,, ,, ...	0.0818	0.0827	+ 0.9
,, ,, ...	0.0849	0.0846	− 0.3
,, ,, ...	0.0640	0.0647	+ 0.7
,, ,, ...	0.0799	0.0786	− 1.3
,, ,, ...	0.0550	0.0559	+ 0.9
,, ,, ...	0.0424	0.0422	− 0.2
,, ,, ...	0.0716	0.0728	+ 1.2
,, ,, ...	0.0809	0.0809	± 0
,, ,, ...	0.0923	0.0909	− 1.4
,, ,, ...	0.0799	0.0777	− 2.2
,, ,, ...	0.0674	0.0674	± 0
,, ,, ...	0.0426	0.0423	− 0.3

From these experiments it will be seen that the average difference between these two methods amounts to $-\frac{1}{10}$ mg. The difference is so small as to be practically negligible. The probable explanation of it is that the urinary pigments thrown down with the uric acid are, in the case of the weighing estimations, weighed with it; in the case, however, of the titration, they remain unattacked by the piperidine solution, and thus do not vitiate the result.

NOTES AND REFERENCES.

[1] February 27th, 1897. [2] For the proof that piperidine and uric acid combine in molecular proportions readers are referred to the authors' article in *Centralblatt für Physiol.*, xi, No. 14. [3] BRITISH MEDICAL JOURNAL, February 27th, 1897. [4] At the request of the authors Messrs. Baird and Tatlock, of Cross Street, Hatton Garden, have undertaken to supply the piperidine solution ready for use. [5] *Jour. of Path. and Bact.*, 1893, p. 458. See also G. v. Ritter, *Zeitsch. für phys. Chemie*, xxi, 288.

MITRAL STENOSIS: A STATISTICAL INQUIRY.

BY D. W. SAMWAYS, M.D., D.Sc., M.A., B.C., ETC.,
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IN the BRITISH MEDICAL JOURNAL of November 28th, 1896, I communicated a paper on the above subject, and endeavoured to show, from the *post-mortem* statistics of cases of mitral stenosis during four years at Guy's Hospital, that "the characteristic alteration in the left auricle in mitral stenosis is not dilatation but hypertrophy," and that the necropsy excessively exaggerates the importance of dilatation, which probably is introduced only with the auricular breakdown, and is thus an "old age phenomenon in the history of mitral stenosis."

I have lately analysed the *post-mortem* reports of all the cases of death at Guy's Hospital in the ten years 1886 to 1895 inclusive, in which stenosis of the mitral orifice was found present. The results appear to me sufficiently interesting to be worth recording.

In 4,791 necropsies during this period, there was a total of 196 cases (about 4 per cent. therefore of all examined) in which

the mitral orifice measured 3½ inches or less. If the measurement exceeded 3½ inches (2 fingers), the stenosis was considered doubtful, and neglected. The stenosed orifice exceeded 2½ inches (1 finger) in circumference in 108 instances, and measured 2½ inches (1 finger) or less in 85. It is not clear from the statistics in which of the two catalogues 3 cases should be included. Of the 196 cases, 107 were females and 89 males.

The average age of death for the males was 38½ years, that for the females was also 38½ years. The average age of death for the cases of severe stenosis (1 finger or less) was 33.6 years; for the less severe cases (1 to 2 fingers, or 2½ to 3½ inches), 43.6 years. The average was the same for males and for females.

In 32 cases the heart is stated to have weighed 20 ounces or upwards. Of these 24 were males and 8 females. The heaviest, that of a female, is entered, probably incorrectly, as 31 ounces.

In 32 instances tricuspid and mitral stenosis were present together. Of these 21 were females and 11 males. The tricuspid stenosis accompanied almost exclusively the severe form of mitral, which included 24 of the total 32 cases. In 28.2 per cent., therefore, of the more severe cases (1 finger or less) of mitral stenosis, tricuspid stenosis was also present, whereas in only 7.4 per cent. of the less severe was stenosis remarked on the right side. The presence of tricuspid stenosis at all with these less severe forms would seem to indicate that it was not consequent on the severity of the mitral stenosis; and that its frequent association with the more severe stenosis is due to a common cause, severe or general enough to affect both orifices, while producing considerable contraction of the mitral.

The tricuspid orifice measured less than 3 inches in circumference in 4 cases only, and between 3 and 4 inches in the remaining 28. The orifice was not considered stenosed if the circumference exceeded 4 inches.

In a large proportion of all the cases the aortic valves were thickened, distorted, or otherwise defective, but were seldom referred to as stenosed.

Neglecting the reports for the year 1886 (which were not made with sufficient care to be useful for most statistical purposes), there remain 77 cases of the severe, and 96 of the slighter form of mitral stenosis for the nine other years. In the 77 severe cases the left auricle is entered as greatly hypertrophied in 22 instances, as hypertrophied (to what extent is not indicated) in 17 others, and as slightly hypertrophied in 5 more. In the 96 less severe cases it was considerably hypertrophied in 14, hypertrophied (amount not indicated) in 2 others, and slightly in 5 more. Auricular hypertrophy, more or less considerable in amount, was therefore recorded as present in 44 of the 77 cases of severe mitral stenosis, and in 21 of the 96 slighter cases, that is in more than half of the one, and in less than a quarter of the others; it is therefore associated especially with severe stenosis.

The left auricle is recorded in the 77 cases of severe stenosis as much dilated in 14, dilated (amount not stated) in 18 others, and slightly dilated in 7. Among the 96 less severe cases it was much dilated in 8, dilated (amount not indicated) in 15, and slightly dilated in 6. Dilatation would, therefore, seem on the whole to be more marked at the necropsies on the severe than on the slighter cases, but the statistics are not carefully enough recorded for conclusions of much value to be drawn on this point.

In the 77 cases of severe stenosis the right ventricle was given as considerably hypertrophied in 22 cases, hypertrophied (amount not defined) in 15 others, and slightly hypertrophied in 4. Hypertrophy, therefore, was present in 41 of the 77 cases; making thus about the same proportion as given for the hypertrophy of the left auricle. In the 96 cases of slighter stenosis hypertrophy of the right ventricle was considerable in 11, was present (amount not recorded) in 8, and slight in 6; which again differs but little from the proportion given for the auricle in these cases.

In the 77 severe cases the right ventricle was stated to be greatly dilated in 16, dilated (amount unrecorded) in 18, and slightly in 6. Among the 96 slighter cases dilatation of the right ventricle was considerable in 7, was present (amount unrecorded) in 17, and slight in 3. The right ventricle is therefore evidently more likely to be found dilated at the necropsy in cases of severe than of slight stenosis of the mitral orifice.

The left ventricle was generally normal or small; rarely enlarged by either hypertrophy or dilatation.

Of the total number of cases 23 were from the surgical wards where death was not due to asystole from organic lesion. In these instances, though stenosis was present, dilatation of the left auricle was only found on 4 occasions. Dilatation of the auricle would therefore appear to be but rarely associated with mitral stenosis not directly fatal, hence it probably appears late in the disease, causing or accompanying cardiac failure. My statistics, published last year, led me then to the same conclusion.

Pericarditis had been present in nearly one-third of all the cases, and frequently where no definite pericarditis could be traced there was an unusual quantity of fluid in the pericardium. The pericardium in 35 instances was universally adherent. The influence of this pericarditis on cardiac hypertrophy or dilatation could not be determined from the statistics.

Sudden death occurred in at least 7 cases.

Advancing age—60 and upwards—seems to be a factor in the development of stenosis of the mitral orifice, as it was found on 19 occasions in persons of this age, in only 3 of whom was there a history of previous rheumatism. Dilatation of the mitral orifice appears more likely to be followed by dilatation of the left auricle than does stenosis.

My statistics further indicate that a presystolic murmur is heard some time in the course of the disease in about three-fifths of all cases, and a thrill in about one-third or rather less; while a history of rheumatism may be traced in upwards of 60 per cent. of all cases.

The above statistics are, unfortunately, limited in their value and accuracy by the *post-mortem* reports, from which, with some assistance from the ward reports, they are taken. The records of necropsies are sometimes very vague and unsystematic in their account of cardiac lesions. This applies especially to the manner in which hypertrophy and dilatation of the ventricles and auricles are recorded and distinguished.

REPORT OF A CASE OF HERNIA OF THE LUNG, WITH REMARKS.

By C. FRANK WIGHTMAN, F.R.C.S.Eng.,
House Surgeon to the Bolton Infirmary.

The occurrence of hernial protrusions of the lung is exceedingly rare, and the literature on the subject is by no means abundant, and as one would naturally expect, is almost confined to papers published by military and naval surgeons. The standard textbooks, such as Erichsen's *Science and Art of Surgery*, and Treves's *System of Surgery* dismiss the subject with but a very brief allusion to this interesting condition, and we are left for the study of these herniæ to Morel-Lavallée's valuable essay.

As these cases then are so rare, every case that is met with ought to be put on record, and it is for this reason that I have been led to publish the following very rare form of pneumocele.

I must here acknowledge my indebtedness to Dr. George Patrick, under whose care the case came, for his ready assent to my publishing it,

D. F., aged 41, a striker, was seen on August 15th, 1896, and complained of a painful lump in his back.

History.—He had been playing his musical instrument (the trombone) on a certain Saturday about the middle of July; he felt nothing at the time, but on the Sunday night following, at about 6 P.M., whilst standing in the street he felt a sudden pain "like the stab of a knife" in his back. He went straight home and went to bed, and applied hot water and turpentine. He stayed in bed over Monday and Tuesday, and went to work on the Wednesday as the pain, although still present, was much better. He had no cough, no hæmoptysis, no vomiting. He noticed no lump till Thursday, August 6th, but had had pain, sometimes better and sometimes worse, since the first attack.

Present State.—On examination a swelling was found about 3½ inches long and 2 inches wide, situated opposite the seventh and eighth dorsal spinous processes on the left side about 1½ inch from the processes, freely movable in all directions, not tender, but painful; no dimpling of skin on pinching it up. The swelling was lobulated, and had a distinct edge, which slipped from under the finger. It felt very like a lipoma, and was evidently situated beneath the muscles.

Operation.—The patient was put under chloroform, an incision made,

and the tumour exposed lying under the trapezius and erector spinæ. On exposure it looked very much like the free edge of the lung, being of a dirty brown colour and lobulated. The tumour was freed all round, and was found not to communicate with the cavity of the chest, neither could any opening into the chest be found. The tumour was quite circumscribed, and was covered by a thin shining membrane; it was non-crepitant, and microscopically was found to be normal collapsed lung. The patient made an uninterrupted recovery, but never lost the pain.

The causes of hernia of the lung are: (1) *Traumatic*, in which case the hernia is generally consequent upon extensive wounds of the chest rather than upon small or moderate sized wounds. A few cases are on record in which a hernia has appeared some time after a fracture of the ribs without any wound. (2) *Congenital*, the hernial mass protruding through congenital sternal clefts or through gaps left in the thoracic wall by arrested growth of the ribs. Under this head would also be included those cases in which the lung is found to reach high up in the neck. (3) *Spontaneous*, in this variety the hernia appears without any previous trauma, and is the result of some great or long-continued strain, such as coughing, straining during parturition, or during the use of wind instruments, etc. The above recorded case comes under this heading.

The position of a pneumocele is usually in front, and especially in the lower intercostal spaces; the next commonest place seems to be the side, and the rarest position is behind. This can readily be accounted for anatomically; the anterior inferior part of the chest has much less muscular support than either the anterior superior part, the sides, or the posterior part; and the lower costal cartilages are more widely separated than the rest. The case under consideration is remarkable in its position; not only did it occur posteriorly, but it occurred in that part of the back covered by the powerful erector spinæ and trapezius muscles.

The appearance of the hernial mass is usually sudden, and always occurs during a forced expiratory effort, when the lung is subjected to increased pressure, and the part least supported protrudes; this protrusion is aided, the glottis being closed, by air which is forced out of the lung on the one side into that on the side of the hernia. In playing wind instruments the obstruction is, of course, not the closed glottis, but the instrument itself.

A recent hernia is usually easily reduced, but very soon adhesions take place, and render the hernial protrusion irreducible, hence treatment, short of the operative, is useless as a remedial agent after the first day or two. Here again the above case is remarkable; not only was the hernia irreducible, but it had become completely cut off by Nature from the thoracic cavity, and lay beneath the muscles as an isolated and clearly circumscribed tumour. No opening whatever could be found leading into the chest.

Should operative interference be advised in these irreducible cases? This is a difficult question to answer, as one's individual experience in these cases is very limited, and the number of recorded cases is not great. Personally I am of the opinion that they ought to be left alone, and the patient allowed to go about with a pad and bandage properly applied. If the condition were causing the patient much inconvenience I should advise operation, the escaped lung being reduced, after freeing it from adhesions, if possible; if impossible, a ligature should be placed round it and the mass removed; but we must remember that this need not necessarily rid the patient of his pain, for, as occurred in the above case, the patient may suffer just as much from pain after the operation as he did before, the pain being possibly caused by the lung dragging on some adhesion at the spot at which the hernia protruded.

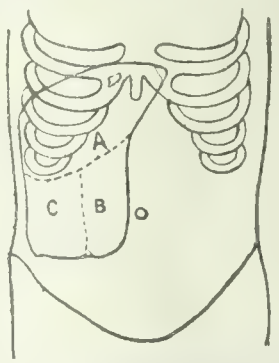
A CASE OF CHOLELITHIASIS AND BILIARY OBSTRUCTION COMPLICATED BY PERITONEAL ABSCESS.*

By W. F. BROOK, F.R.C.S.,
Senior Surgeon to the Swansea Hospital

The patient, a married woman aged 48, was first seen by me in consultation with Mr. Jabez Thomas on November 28th, 1896. She was suffering from jaundice, and pain and swelling in the right side. Five years previously she had been ill for three weeks with jaundice, severe abdominal pain, vomiting, and constipation. A second similar attack followed two years later, and a third—a slight one—about a month before the present illness. At each attack the stools were clay coloured. At the time of the second she had noticed some swelling below the right ribs, which had reappeared from time to time since, accompanied by abdominal discomfort.

The present, her most severe illness commenced a fortnight previously, with continuous pain, becoming acute at intervals, in the epigastric and right hypochondriac regions, jaundice, vomiting, and the passage of clay-coloured stools. The swelling became larger, and during the week before she was seen she had two or three shivering fits, followed by profuse sweating. The pain had ceased during the last two days. On examining, in addition to deep jaundice, there was tenderness and swelling extending from the right costal margin to 2½ inches below the umbilicus and from the midline into the flank. There was doubtful fluctuation and dulness over this area. The temperature was 102°. The next morning she went into hospital. The temperature was 101°, and she was in no pain. On December 1st a white motion was passed after several doses of sulphate of magnesia, and in the evening the temperature rose to 104°.

The following day I opened the abdomen in the line of the gall bladder, and after prolonging the incision downwards to the extent of 4 or 5 inches, to clear the edge of the liver, which was much enlarged, came upon the gall bladder distended, and reaching 3 inches below the umbilicus. To the right of the incision it was adherent to the abdominal wall, while to the left it was free. A second incision was then made in the right flank, and about a pint of fœtid and bile-stained pus evacuated. The abscess cavity was bounded above by the liver, behind by colon, and on either side by distended gall bladder and



A. Liver. B. Gall bladder. C. Abscess.

parietal peritoneum respectively. No gall stone was found. The gall bladder was then aspirated, and 10 ozs. of healthy-looking bile removed. It was found to contain gall stones, forty-three of which were removed through an incision in the anterior wall. The ducts were thoroughly explored by the finger in the peritoneal cavity, and a long probe passed up the cystic duct. No further stones could be detected, and no communication was found between the abscess and bladder or duct. The opening in the gall bladder was fixed to the abdominal wound, and the wound closed. The abscess cavity and the gall bladder were drained under dressings carefully shut off from one another. The next day the temperature became normal, and remained so.

The abscess was kept open as long as possible, as it was thought a stone might have been overlooked. It, however, closed in ten days, without the appearance either of a stone or bile. For the same reason a tube was kept in the gall bladder for three weeks, for, as the stools remained clay coloured it seemed likely that a stone, the original cause of the mischief, had been overlooked. At the end of that time the tube was removed, and the opening in the gall bladder closed by a well-fitting cork, with the result that all the bile which had hitherto escaped by the fistula now found its way into the intestines. The fistula was then allowed to close, and the patient made an uneventful recovery. Every motion both before and for some days after the bile had re-entered the intestines was carefully examined, but no stone was found.

* Communicated at a meeting of the South Wales Branch of the British Medical Association at Cardiff.

The immediate cause of the abscess was never ascertained. Doubtless the attack, like the preceding ones, was due to the temporary impaction of a stone in the common duct. The peritoneal abscess may have been caused by perforation of the duct by the stones, in which case it must have been dissolved in the pus. The improbability of this explanation is rendered greater by the facts that the pus was bile stained only to the same extent as were the peritoneum and tissues of the abdominal wall, and that no bile ever appeared in the sinus after the operation. More probably the cause of the abscess was septic absorption, or rather penetration at an ulcerated spot at the seat of impaction. According to Naunyn, B. coli commune is generally found in the stagnant bile in cholelithiasis both in the bladder and ducts, and may give rise to cholangitis and cholecystitis. Its penetration of the wall of the duct at the damaged spot would be merely a repetition of its not infrequent behaviour in intestinal ulceration.

The stone was probably passed into the bowel two days before the patient was seen, when the pain ceased, the obstruction, however, being maintained by the pressure of the abscess.

A PRELIMINARY NOTE ON THE GOLGI IMPREGNATION OF FORMALIN-HARDENED BRAIN

By JOSEPH SHAW BOLTON, B.Sc., M.D., B.S.Lond.,
Demonstrator of Physiology in Mason University College, Birmingham.

The investigation, of which the present account is a preliminary notice only, was commenced some months ago in order to ascertain a method of performing Golgi impregnation on brains which had been hardened whole in 5 per cent. formalin.

Excepting a statement by Schäfer[1], that previous hardening in formol does not interfere with Golgi's method, I have been unable to find any reference to the subject in the recent literature. Mixtures of formalin and bichromate have, however, been recommended by Strong,[2] Durig,[3] Kopsch,[4] and Fish[5], and of Müller's fluid, formalin, and osmic acid by Fish[6], as substitutes for the osmium-bichromate mixture of Golgi's silver-chrome process.

I have obtained the best results from the brains of cats and half-grown kittens, which, after preliminary washing to remove blood, had been placed in 5 per cent. formalin five weeks previously. I have, however, had nearly equally good results from brains that have been in formalin for as long as four months. Impregnation can also be obtained in adult human brains that have been in formalin for six months. On the other hand, I have obtained poor results, or none at all, from brains, even when small, that have been hardened from three to seven days only. In the last cases the real hardening process, though apparently complete, was probably not so.

The pieces of brain used should be not larger than a quarter of an inch square and one-eighth of an inch in thickness. Ammonium bichromate is the best chrome compound, used in strengths of from 0.5 to 2 per cent., and the most satisfactory time for the bath is one to five days. Potassium bichromate of the same strength and Müller's fluid give nearly equally good results, but the impregnation is usually not so black, and the tissue tends to be stained yellow. Chromic acid and chrome alum give no result, although the latter in my hands gives more successful Weigert-Pal preparations than those obtained either from the chromates or from any other salt of a heavy metal. This is evidence in favour of the Golgi stain being, as is now supposed, a compound of silver with CrO_3, whilst the Weigert-Pal logwood lake is due to interaction between hæmatoxylin and a salt—or osmium salt—of one of the heavy metals.

The strength of the chrome bath, and the length of time it is used, very much influence the degree and kind of impregnation. A 5 per cent. solution in four days prevents the process, as does a weaker solution after a proportionately longer interval. This probably explains why Van Gehuchten[6] has not obtained good results from the substitution of formalin for osmic acid in the normal Golgi process.

I find that a 1 per cent. solution of silver nitrate is better than a 0.5 or 0.75 per cent. The silver bath should last twenty-four hours, except in cases where Müller's fluid is used, when it may advantageously be continued a second day. Formic acid is unnecessary, and causes a too rapid precipitation of silver chromate.

References.
1 *Practical Histology*, 2nd edition, p. 154. 2 *Anatomischer Anzeiger*, 1895, p. 494. 3 *Ibid.*, p. 659. 4 *Ibid.*, 1896, p. 727. 5 *Proc. Amer. Mic. Soc.*, 1895, p. 319. 6 Bolles Lee's *Microtomists' Vade-Mecum*, 4th edition, p. 428.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PNEUMOTHORAX: REPEATED PARACENTESIS: INCISION: RECOVERY.

C. J., a publican, aged 34, had left pleurisy in April, and again in August, 1896. Severe cough followed the second attack. In January, 1897, he consulted a London physician, who said there was commencing disease at the left apex, and sent him to Torquay. His cough, which was most violent and distressing, persisted until the middle of March. After its disappearance he rapidly improved in general health, and put on flesh, gaining over 2 st. in two months. I saw him for the first time in June, and beyond some slight emphysema could detect no evidences of lung disease.

On July 29th "he felt something give way in the right side" on turning in bed. Difficulty in breathing and pain in right hypochondrium and epigastrium followed. Signs of pneumothorax were detected the next day.

On July 31st, at 11 P.M., dyspnœa was so urgent that I punctured the right side with a fine trocar and cannula. He was immediately relieved, but during the night almost general subcutaneous emphysema supervened, the legs only being unaffected. The next morning paracentesis was again necessary; this time the cannula was not removed, a piece of goldbeater's skin being placed on the external orifice to act as a valve. A cannula was kept in almost continuously till August 6th, when it was removed, as only clear fluid was escaping. There was slight cough and a little nummulated muco-purulent expectoration. The temperature was 101.8°.

On August 12th dyspnœa was again severe with constant cough, which resulted in his expectorating some clear straw-coloured fluid. The subcutaneous emphysema entirely prevented examination of the chest.

With the assistance of Dr. C. Nankivell, to whom I am indebted for much kind advice and help, I made a free incision into the pleura through the sixth interspace, and inserted a largish rubber drainage-tube. No fluid, but air only escaped through the wound.

On August 18th air had ceased to come through the tube, which was removed, and the wound plugged with iodoform gauze. The subcutaneous emphysema was very slowly absorbed, but about August 20th it was possible to determine that there was dulness at the right base, below the angle of the scapula, with absence of breath sounds and diminished vocal resonance.

The wound remained open until October 18th as a fistulous track which appeared to communicate directly with the lung. During cough material similar to that expectorated was discharged through the wound. On three or four occasions, once after gentle probing, there was smart hæmorrhage from the sinus accompanied by hæmoptysis. A gentle injection of carbolic lotion into the wound immediately excited cough, and the patient could taste the carbolic; the sputum also tasted of iodoform, which was used in the dressings. His recovery is now complete; he has no cough, and except for a little shortness of breath is in good health. The right lung is resonant throughout, and natural breath sounds are audible to the base.

Remarks.—Paracentesis had been repeatedly performed in this case, and the air had been allowed to escape for more than three days continuously, until the fluid which was collecting in the pleural cavity reached the level of the cannula. When the urgent symptoms recurred incision was decided

upon partly on account of the difficulty of retaining a cannula of ordinary length in position owing to the subcutaneous emphysema, and partly because it was expected to find fluid which, if not already purulent, was, it was thought, certain to become so. It is interesting that suppuration did not under the circumstances take place. In view of Dr. West's paper on pneumothorax, published in the BRITISH MEDICAL JOURNAL of November 27th, 1897, I hope these short notes of this case may not prove uninteresting.

Torquay. F. D. CROWDY, M.D.Oxon.

EMPYEMA OF THE ANTRUM IN A CHILD THREE WEEKS OLD.

ON October 5th, 1897, I was called to see a child aged 3 weeks, who was reported to be suffering from an inflamed eye. The face presented an unusual and striking appearance; the right cheek was swollen, the right eyeball protruded, the eyelids were hyperæmic, and the conjunctiva congested. The extreme protrusion of the eye suggested a growth of some nature at the back of the orbit. On looking into the mouth, I observed that on the right side the roof was bulging into the cavity of the mouth. The superior maxillary bone was prominent in every direction. Pressure over the cheek caused pus to exude from the right nostril.

The diagnosis of empyema of the antrum was arrived at, and an opening made inside the mouth, external to the alveolus; pus flowed freely. Subsequently the cavity was washed out by syringing through the opening in the mouth with boracic lotion, free egress being afforded through the opening into the nose.

The case did well. The threatened bursting of the abscess into the region of the orbit was averted by the free drainage: the distortion of the right side of the face gradually disappeared, and the right eye has practically returned to the normal level. The child is now in perfect health.

By a curious coincidence, since making these notes with a view to publication on account of the extreme rarity of the case, I observe that a somewhat similar case has just been reported by Mr. D'Arcy Power in the BRITISH MEDICAL JOURNAL for September 25th. In his notes, Mr. D'Arcy Power states that he has only been able to find one other case recorded in detail, and that was fifty years ago. With regard to etiology, I have been unable to learn that there was any difficulty whatever in the birth of the child in my case; the mother was not attended by a medical man. It is perhaps worth noting, however, that for the first week after birth the mother's nipples were sore, and discharging "matter."

The symptoms did not appear for a fortnight after birth, when the nurse thought it necessary to apply lotions for what she called "an ordinary sore eye."

ALEXANDER DOUGLAS, M.A, M.B., C.M.Edin.

Oamaru, New Zealand.

FOREIGN BODIES RETAINED IN THE CORNEA.

IN reading the report of the discussion on the above subject at the British Medical Association meeting at Montreal, which appeared in the BRITISH MEDICAL JOURNAL of January 8th, apparently the longest duration of such retention mentioned was four years. That it is possible for a metallic foreign body to be retained for a much longer period without causing trouble is illustrated by the following case, which came under my notice in April, 1895.

The patient, O. J., aged 63, gave the following history. In October, 1873, whilst acting as a marker at the rifle range near Usk, a "splash" from a bullet struck him on the left cornea. Within a day or two he went to Bristol, where he was treated by Mr. Bartley, and several attempts were made to remove the foreign body. He was told at last that it was embedded so deeply that any further attempt would be dangerous, but that it was possible it would heal over, or would become loosened spontaneously. In a few days all inflammatory symptoms disappeared, and he has had to depend on that eye ever since, as the right eye had been capable of little more than perception of movement for many years, the result apparently of old kerato-iritis. All had gone well until two months before I saw him, when, whilst milking a cow, he got a "swish" from the tail on the left eye; shortly after that the eye became very irritable, occasionally there was great pain and photophobia, but this had not been so marked during the last fortnight.

I found an almost circular ulcer of the cornea just below the lower pupillary margin, not very deep, its edges slightly infiltrated, the floor of a pale orange colour, there was considerable injection of the vessels at the adjacent sclero-corneal border.

Thinking it possible from the history that the foreign body might still be present, and that the recent irritation might be due to its having been disturbed from its long rest by the blow, I put the eye under the influence of cocaine, and scraping carefully with a "spud" found the ulcer filled with soft cell tissue, which readily came away, and revealed a dark metallic object lying deeply in the corneal tissue. Carefully working at the edge of this, I was able to lift out of its setting a shell-shaped fragment 3 mm. by 25 mm., which proved to be lead. So deep was it lying, that the thin layer of tissue remaining bulged forward on the slightest pressure being applied to the globe. The eye was dressed with mercuric perchloride solution and iodoform ointment, and a supporting absorbent pad applied. Recovery was very rapid and complete, the patient being able to resume full use of the eye in fourteen days. His $V = \frac{6}{9}$ and with $+3$ D he could read Jaeger 1.

I think that this case may be taken as illustrating the retention of a foreign body in the cornea for twenty-two years; indeed, had it not been for the accidental disturbance by the cow's tail, it might have been retained in a quiescent state indefinitely.

J. TATHAM THOMPSON, M.B.,
Ophthalmic Surgeon to the Cardiff Infirmary.

PUERPERAL VOMITING.

ON December 4th, 1897, in the afternoon, I attended Mrs. B., aged 27, in her first confinement. Everything was normal though rather tedious. There was a history of occasional vomiting during the pregnancy, though not to any great extent. She was sick several times during the labour, not more than one often meets with. She complained of feeling sick before I left the house, but I thought nothing of it and told her it would pass off. However, she vomited all next day; even soda water and milk was not retained. During the next two days she continued in the same condition in spite of ice, bismuth, sinapisms, etc. On the evening of December 7th I stopped everything by the mouth except ice and soda water, and fed her with nutrient suppositories, but it was not till the evening of December 10th (six clear days) that the feeling of nausea left her. From that time she rapidly got well. Pulse and temperature were normal throughout, and the tongue was perfectly clean.

I believe the vomiting was reflex, but the case is interesting, as in 1,300 cases I have never seen it before or heard of it either. A brother practitioner, Dr. Walter, who saw the patient in consultation with me, had also never seen a case like it. Mr. Taylor of Birmingham says he has only seen one at all similar, and I can find no mention of it in the text-books. No anæsthetic was used and the urine was free from albumen.

W. M. BUXTON, M.B.Dunelm, M.R.C.S.Eng.

Southshore, Blackpool.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

THE GENERAL HOSPITAL, BIRMINGHAM.

DEATH UNDER CHLOROFORM.

[WE are indebted to Dr. W. J. McCardie, anæsthetist to the hospital, for the following notes of case of death under chloroform, which occurred recently in that institution.]

On December 15th M. R., aged 5 years, an in-patient, was brought to the theatre for removal of enlarged tonsils and adenoid growths of the naso-pharynx. She was a rather

delicate-looking child, but on examination of heart and lungs no evidence of any disease was found. She had had some pleurisy several months ago. The patient being, as throughout the administration and operation, recumbent, I administered the A.C.E. mixture on a Skinner's mask, and she took it well and without struggling, the breathing being light. When she was anæsthetic I continued to keep her so by administering chloroform on a double layer of flannelette when necessary. The pulse and respiration were both good at this time. The tonsils had both been removed, and the child began to show signs of coming round, so I gave her a little more chloroform preparatory to the removal of the adenoids. She had hardly taken one or even two shallow breaths when her eyes suddenly became fixed, respiration ceased, and the pulse stopped. The child was at once inverted over end of table and artificial respiration kept up for about twenty-five minutes, air entering freely into the lungs. Strychnine was injected. During artificial respiration there were two spasmodic gasps at an interval of a few minutes. There was at no time any respiratory obstruction, for the throat was kept well free from blood, and air always had free entrance to the lungs. A.C.E. used was ℥ij and $CHCl_3$ ℥j, of which latter drug much was wasted.

Post-mortem.—One adhesion of the left lung was found, but no other lesion. The blood was fluid, and the right side of the heart was rather dilated. The trachea contained a very little blood.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

J. F. Payne, M.D., President, in the Chair.

Tuesday, February 1st, 1898.

Umbilical Hernia in an Infant.

Mr. W. G. Spencer exhibited a specimen of the above from a child which came under observation when 5 days old, with a sloughing swelling at the umbilicus. The skin and anterior wall of the subjacent intestine were gangrenous, an artificial anus, with well-pronounced spur, subsequently forming. The author did not regard it as an example of strangulated and gangrenous intestine, but thought that the gangrene extended from without.

Mr. J. H. Targett considered that the fact of the hernia being covered in with skin placed it out of the category of the true congenital umbilical form, as in the latter the gut lay within the substance of the umbilical cord at its insertion into the abdominal wall; the hernia exhibited must have been acquired, so to say, during fœtal life.

Mr. D'Arcy Power, like the last speaker, did not think that the specimen should be termed umbilical; it should be classed as ventral.

Dr. Charlewood Turner ventured to think the case one of prolapse of the intestine at the umbilicus.

The Immunisation of Animals against Streptococcus Infection.

Mr. T. J. Bokenham concluded his remarks on this subject, from a previous meeting. There was considerable variation in the virulence of different streptococci; and an immunised serum did not affect all equally. In his work he had used several strains. The medium that had been recommended by Marmorek as the best for maintaining the virulence of the organism was a mixture of human serum and bouillon. The author used veal broth; in this the organism remained active for many generations; or the veal broth might be mixed with ascitic fluid. The age of the culture should not be more than three weeks; by this date the microbe would almost have ceased to grow. The lethal dose was tested on rabbits and guinea-pigs, the former being the more susceptible; in experimenting with the immunised serum, ten times the lethal dose was used in all cases. The virulence of the streptococcus was raised to its highest point by intraperitoneal injection carried out through a series of rabbits; eventually half a loop injected intraperitoneally would kill a rabbit in twenty-four hours. The properties of the antistreptococcus serum were tested by the injection of small doses into the subcutaneous tissue, and afterwards by that of ten times the lethal dose of a culture of the organism into the peritoneal cavity. In unsuccessful experiments, that is, in those where the diseased process was not stayed, phagocytosis failed, streptococci accumulated in the peritoneal cavity, and the blood was found teeming with the microbe. When the final result was successful, the phagocytosis was complete within the first hour. Marmorek had rightly stated that his own antistreptococcus serum was not bactericidal; it had an agglutinating effect, but the author did not regard this as marked enough to be of diagnostic importance with respect to the microbe. Marmorek had failed in obtaining results from the use of filtered cultures, and employed only those in which the organism was living; the failure arose, apparently, from the use of too small a quantity. The author, using 50 cubic centimetres, or even 600, and repeating such a subcutaneous injection daily for some while, obtained a definite reaction in horses and asses, as evidenced by the rise in temperature. Rabbits could be killed by considerable doses of the filtrate. As to the serum itself, if the blood was drawn from the horse or the ass too soon after the last injection of the filtrate, the serum would cause local inflammation; an interval of at least a week should elapse. The serum could be used as a preventive or as a curative. As a curative, if animals were injected within two or three hours after infection, their lives were with certainty saved; if six hours elapsed death took place. Upon the human subject the good effects of the serum were witnessed in loss of headache and cessation of restlessness; in the advent of drowsiness; in moistness of the skin and fall of temperature, although a rise in the latter was the immediate result of the treatment. The usual dose was 10 c.cm., but this must be regulated according to the effect produced upon the temperature. The author afterwards exhibited lantern slides showing cloudy swelling of the renal epithelium, and glomerular nephritis, in animals into which the filtrate had been introduced; these, as the President remarked, were much like those seen in scarlatina.

In answer to Mr. D'Arcy Power, the author stated that the blood of a horse or ass retains its therapeutical properties four or five weeks after the discontinuance of the injections of the filtrate.

Dr. Lazarus-Barlow referred to the experiments of Charrin with bacillus pyocyaneus, in which it was found that seventeen days or so must elapse after the last injection of the bacillus before the blood was drawn; otherwise the concluding dose of the toxin had not left the animal, and the serum was thereby contaminated.

The President inquired whether Mr. Bokenham had used the serum in those cases of acute endocarditis where the streptococcus was present.

Mr. Bokenham, in reply, observed that in one instance he had so used the serum, but without result; the case was severe and advanced. In a second of milder type, the serum had been injected, and here recovery ensued. If unpleasant local inflammation arose from the use of the serum, it did not appear as a rule within the first twenty-four hours.

Aortic Incompetence without Valvular Disease.

Dr. Newton Pitt said he was induced to exhibit examples of this in consequence of its occurrence being still doubted in authoritative works on medicine. He demonstrated its truth by means of three specimens from Guy's Hospital Museum, in all of which the dilatation of the left ventricle proved the aortic incompetence, although the valve itself was healthy. In all the aortic orifice was dilated in consequence of atheromatous disease of the vessel. The subject had long since been drawn attention to by the late Dr. Moxon. In a fourth case, the speaker had diagnosed the condition and verified the diagnosis after death. Here there was a to-and-fro aortic *bruit*, and the dilatation of the orifice was found to be due to the formation of an aneurysm of the aortic arch. Similar cases he had been able to find in the hospital records.

Card Specimens.

Dr. Newton Pitt: Sarcoma of the Suprarenal Body.—Dr. William Hunter: (1) Typhoid Lesion of the Vermiform Appendix; (2) Tuberculous Suprarenal from a case of Addison's Disease; (3) Acute Tuberculosis of Spleen; (4) Localised Tuberculosis of Lung due to Softening of Caseous Bronchial Glands.

CLINICAL SOCIETY OF LONDON.

JOHN LANGTON, F.R.C.S., President, in the Chair.

Friday, January 28th, 1898.

SUDDEN DEATH IN ACUTE RHEUMATISM.

DR. HERRINGHAM read notes of a case. The patient was a girl, aged 16, who was admitted on February 27th, 1897, on the second day of a first attack of rheumatic fever, with a temperature of 103° F., a pulse of 128, and respiration of 32. Many joints were inflamed. The heart was not enlarged, the apex beat being within the nipple line; but there was a double apical murmur. She complained much of pain in the umbilical region, for which no cause could there be found. The joint pains quickly ceased under salicylate of soda; but she continued to feel much pain in the epigastric and precordial regions, and became pale and cyanotic. The heart enlarged, the apex beat passing beyond the left nipple; small *râles* became audible over the lungs, and the fever persisted. Impairment of resonance was found over the left lung, and the respiration rose to 64. This state continued until March 11th. During the previous night she had slight hæmoptysis, and at 10.30 A.M. a sudden change for the worse occurred, and she died in a few minutes. A *post-mortem* examination showed œdema of both lungs, and fatty degeneration of the walls of the left ventricle, with much increase of cells in the interstitial connective tissue—acute myocarditis. This acute change in the heart was probably the usual cause of the few cases of sudden death in rheumatic fever. A certain diagnosis appeared impossible; but suspicion should be aroused if along with cyanosis, for which there appeared no sufficient cause in the lungs, there existed considerable pain in the epigastric or precordial region.

Dr. MACLAGAN, after thanking the author, said that myocarditis was not usually regarded as occurring independently of endocarditis and pericarditis, and when it occurred with one of these it was generally regarded as due to extension of inflammation from the membrane to the muscle. In connection with pericarditis, this no doubt was sometimes the case; but it was scarcely possible with endocarditis, since the inflammation was entirely confined to the valves, and never affected the membrane lining the muscular wall. Long ago Corvisart divided cases of myocarditis into two classes—(*a*) the distinct, in which the symptoms pointed to the cardiac lesion, and (*b*) the latent, in which there were no cardiac symptoms. In these latent cases the symptoms were almost entirely those of disturbance of the nervous system, chiefly delirium. One of the earliest and best recorded cases of this kind was reported by Mr. Stanley in the *Medico-Chirurgical Transactions* in 1816. The case was that of a boy, who presented symptoms of acute meningitis, which was believed during life to be his ailment, who had no symptom to attract attention to the heart, but whose brain and its membranes were found *post mortem* to be quite healthy. The only lesion found was inflammatory softening, with minute points of suppuration in the muscular walls of the heart. Where there was no hyperpyrexia and no pneumonia, delirium occurring in the course of acute rheumatism almost certainly indicated myocarditis. That the muscles suffered in acute rheumatism there could be no doubt, for only by increased metamorphosis of muscle could one explain a characteristic feature of the disease—excessive formation of lactic acid. The rapidity with which the muscles wasted was due to this cause. If the voluntary muscles thus suffered there was no reason why the heart muscles should not also sometimes be affected. The condition when it affected the whole of the left ventricle (for it was the left ventricle which suffered) was a grave one. Treatment consisted in keeping the heart going by nourishment and stimulants, and by treating the rheumatic condition; but to give only 10 grains of salicylate of sodium every four hours (the dose given in Dr. Herringham's case) was to give a quite inadequate dose; 20 grains every hour should be given at first and only gradually reduced. But as there were many cases in which such doses of the salicylate depressed the heart's action, it was wiser in these cardiac cases to give salicin, which had no such depressing action. Dr. Herringham had remarked that rheumatic hyperpyrexia was due to the action of the rheumatic poison on the nervous centres. He gave no reasons for this opinion, but the speaker ventured to say it was one which Dr. Herringham would find it difficult to substantiate. Hyperpyrexia was not peculiar to rheumatic fever; it occurred in pneumonia, in typhoid fever, in measles, in pyæmia, and other conditions in which the rheumatic poison had no existence. It was only more common in rheumatic fever because in that fever the heat-forming apparatus of the body (the muscles) was specially affected.

Dr. LEES thought that in every case of acute rheumatism a microscopical examination should be made of the cardiac muscle. Unless definite *post-mortem* evidence were obtained the clinical symptoms afforded them very little ground on which to arrive at a diagnosis of the exact nature of the cardiac lesion. He referred to the condition of acute dilatation of the heart in rheumatic fever to which his attention had been drawn in the course of researches on pericardial disease in children. Careful observation and measurements had led him to remark acute dilatation of the heart which he attributed at first to the weakening effect of the pericarditis on the cardiac wall, regarding it in fact as a myocarditis which had spread inwards. In another case where there was no evidence of pericarditis or endocarditis, no rub nor murmur, the cardiac dulness had gradually increased, and subsequently diminished under treatment. This made him believe that there was, apart from pericarditis, a definite enlargement of the heart. The progress of recovery was watched by the aid of tracings made without reference to those taken on the preceding day, and a series of such tracings showed that at first there was great dilatation, which rapidly diminished to normal under treatment. In one case, a young man in whom there was neither rub nor murmur, the cardiac dulness returned to normal, and he left the hospital. A short time after he returned with a fresh attack, and again the cardiac enlargement was noticed. The symptoms—delirium, pain, dyspnœa, and a tendency to cyanosis—were not in themselves proofs of genuine inflammatory condition of the cardiac substance, but were more probably due to some toxic action of rheumatism. He was disposed to think that the supposed injurious action of the salicylates was perhaps partly a question of idiosyncrasy, and was really an error of appreciation, the depression being really due to the pericarditis.

Dr. GLOVER said the rarity of the lesion in question had led him to look out the notes of a case under his care fifteen years ago. A gentleman, aged 50, with chronic bronchitis and emphysema, had been ill ten days with pains in the arms and faintness. On the occasion of first seeing him the patient fell back in his chair and died. *Post mortem* he found a patch the size of a five-shilling piece on the front aspect of the heart, of a red or greyish-red colour, as if it might have sloughed out. There was a corresponding patch on the opposing surface of the pericardium, which at another spot was ecchymosed. There were decolorised clots in the aorta and pulmonary vessels. The lungs were congested and emphysematous.

Dr. ALEXANDER MORISON remarked that the value of the case recorded by Dr. Herringham consisted in its accurate anatomical detail of morbid appearances. He called attention to the pulmonary evidences of cardiac failure in the case as they illustrated a point insufficiently discussed in the literature of the subject. He had observed that although in many, if not in most, cases the ultimate engorgement of the right inferior lobe was most marked, in the majority of cases pulmonary engorgement at first revealed itself in the left lung. In some cases, as that related by Dr. Herringham, this sinistral pulmonary engorgement preponderated throughout, especially in mitral constrictive lesions, on account of pressure by the much dilated left auricle upon the bronchi and vessels as they entered and left the left lung. This point had been pointed out by the late Dr. Wilkinson King many years ago, but had been much overlooked. The clinical value of this state had impressed itself upon Dr. Morison after years of attention given to the point in question.

Sir DYCE DUCKWORTH supposed that no one who had had a large experience of cases of rheumatic fever had failed to meet with untoward examples such as those described that night. One such was related by the late Dr. Bland Radcliffe some thirty years ago at the Royal Medical and Chirurgical Society, and attributed to myocarditis. That was in the days of the

alkaline treatment of rheumatism. He thought no one could entertain doubt as to the fact of rheumatic myocarditis, whether regarded from the clinical or from the dead-house standpoint. In respect of the former, sufficient stress was hardly laid by the reader of the paper on the physical signs and symptoms which preceded the fatal issue. These were generally observable, and consisted in a gradual loss of tone of the cardiac sounds, especially of the first one, and a corresponding failure of arterial tension in the pulse. The end might, however, come suddenly and unexpectedly. Yet we should always be wary in cases where there was evidence of some endocarditis or pericarditis. He had certainly, in contradistinction to Dr. Maclagan's view, met with *post-mortem* evidence of progressive myocarditis passing from the endocardium, and with the same passing from the visceral pericardial surface into the heart's wall, and he believed that in either case the myocardium might come to be involved. He believed, too, that the toxic matter of rheumatism might alight upon the myocardium without materially involving the serous structures on either aspect of it. He regarded salicylate of sodium as a drug which could depress the heart's action, and which must, therefore, be carefully used, and often supported by the administration of brandy; and where there was any doubt as to its benefit, one might do well to replace it by a combination of quinine, digitalis, and iodide of potassium, which had both a tonic and an alterative action. In all cases much depended upon the intensity and persistence of the toxin, and much also on the personal peculiarities and vulnerability of the patient.

Dr. Herringham, in reply, stated that salicylate of soda was only given to relieve the pain of rheumatism. Stimulants were also administered.

Internal Strangulation of Small Intestine by Fibrous Ring.

Mr. J. Hutchinson, jun., showed a specimen from the London Hospital College Museum, which displayed the sac of a right inguinal hernia together with a small fibrous ring which had become detached from the neck of the sac, and had caused fatal strangulation of a loop of small intestine. This had been taken by Mr. MacCarthy from a man aged 61, who had long had a right inguinal hernia. This became strangulated and was reduced by taxis. Symptoms of peritonitis followed, and he died. *Post mortem* they found in the left hypochondriac region a loop of intestine about a foot in length, gangrenous, and very tightly constricted by a fibrous ring. This was evidently the detached margin of the upper part of the sac. His own patient was a man, aged 50, who had had a large inguinal hernia for four years. On August 28th he was unable to reduce it, and on that day he was seized with abdominal pain, vomiting, etc. He was admitted on September 1st, and the hernia, which was not strangulated, was easily reduced. Nothing passed *per rectum*, and enemata brought away only small hard scybala. As on the third day the symptoms were practically unaltered, he opened the abdomen below the umbilicus. There was no sign of peritonitis, and the cause of obstruction was quickly found, namely, a loop of small intestine passed through a complete fibrous ring, exactly like stout catgut. This ring was quite free from any attachment. It was cut through, and there seemed no reason to fear gangrene. The ring measured about an inch in diameter. The bowels were spontaneously open the day after the operation, and the patient left the hospital three weeks later, wearing a truss on the right side. He suggested that this rare and interesting form of obstruction occurred only in cases of hernia in which taxis was frequently performed by the patient, which rendered the formation and detachment of the ring easy. It would have been quite impossible to have reached or detected the seat of obstruction through the inguinal canal, and this remark applied equally to the case he had referred to. These cases, therefore, were in favour of opening the abdomen in the middle line when the symptoms of obstruction persisted after reduction of a hernia.

The President said these cases were somewhat rare. A similar specimen was in the Musée Dupuytren (No. 215), namely, there was a circular band constricting a piece of small intestine, which was found *post mortem*, and was believed to have been originally a fibrous band at the neck of the sac, which had become detached by the repeated passage of the intestine. As to treatment, he raised the question whether one ought to operate through the inguinal canal, splitting it up, or through the median line. When the site was not quite certain, he thought that it would be well to make the incision in the middle line in order to be enabled to make out exactly where the obstruction was situated. He could not agree with Tait's suggestion, that strangulated hernia should be relieved by median laparotomy, which was dangerous, especially in obturator herniæ, for if the neck were split from the inner side and the intestine withdrawn, if this were gangrenous one was sure to have extravasation of the contents into the peritoneal cavity, which would involve great risk to the patient.

Arteritis Obliterans Affecting Three Limbs.

Mr. Spencer described the case of a patient who had been shown at the clinical meeting on January 14th. He also demonstrated the fibrous thickening of the intima shown in the microscopical sections of the arteries of the leg which had been amputated. Mr. Pearce Gould had described a similar case in 1884, and since then the patient had been under observation, so that there was a continuous record for more than ten years. The characteristic features of Mr. Gould's case were the occurrence of obliterative arteritis in the arm of a young man, in the absence of any of the recognised causes of arterial disease, which progressed for two years, and then became spontaneously arrested. Following this there was a return to good health, which had been maintained for a long period. Mr. Spencer's case was a man aged 27. Nothing in his previous history, neither syphilis, nor alcoholism, nor any of the other causes of arterial changes accounted for the disease. The man first suffered from coldness of the left leg and foot during August, September, and October of 1897: this was followed by pain and commencing dry gangrene. The pain increased and the gangrene spread, so that amputation through the left thigh became necessary, and this was followed by a quick return to good general health. Before this the right leg had been cold and the femoral artery formed a pulseless cord, whilst a threatening dark spot appeared on the great toe. After the amputation the right leg became warmer, and the skin of the right foot desquamated, but no pulsation returned. The vessels of the right arm, from the right subclavian to the radial and ulnar, showed a greatly diminished pulsation. The vessels of the left arm, the temporal arteries, and all the other organs of the patient were normal. In amputating through the left thigh the femoral artery was found to be quite blocked, the femoral vein was patent, only one other bleeding point required a ligature, and there was very little oozing. The change shown in photographs of microscopical sections of the smaller arteries was a fibrous thickening of the intima commencing between the endothelium and the elastic lamina, causing a projection into the lumen and then spreading to involve the elastic lamina, and to a less extent the middle coat. The larger arteries showed no alteration in the wall, but a firmly laminated adherent clot, the outer laminæ blending with the endothelium and the intima within the elastic lamina.

Dr. Parkes Weber asked if there was any round-cell infiltration in the muscles of the amputated part. He thought that what was termed myositis in such cases might really be a trophic disturbance due to the ischæmia resulting from arterial stenosis. In this case it might be compared to the changes in the cardiac muscle consequent on arteritis obliterans in the coronary circulation. In fact, whenever the blood supply of a part was imperfect, there was a tendency to atrophy of the more highly differentiated cells (such as striped muscle) and to overgrowth of the less differentiated cells (connective tissue elements). An interesting point in connection with the severe painful muscular cramps which preceded the gangrene in Mr. Spencer's case was that it was by analogy with cramps of this kind that Sir Benjamin Brodie endeavoured to explain the phenomena of angina pectoris. The previous history of Mr. Spencer's case left the question of syphilis quite open.

Mr. Spencer, in reply, said there was a certain amount of small-celled infiltration but no increase of connective tissue,

the process not having gone far enough. He admitted that it was open to anyone to form the opinion that the man had had syphilis, though he had taken every possible care to exclude it, but he pointed out that Mr. Gould's case was in a teetotaller who had never had any venereal disease, and Dr. Hadden's case was in a nursemaid presumably exempt from syphilis.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Henry Eales, M.R.C.S., Vice-President, in the Chair.

Thursday, January 27th, 1898.

Epithelial Xerosis of the Conjunctiva.

Mr. Sydney Stephenson made a communication upon this ailment, which he said was not uncommon in England, since among 6,209 children he had found no fewer than 1.87 per cent. affected. At particular places the examples of xerosis ranged from 0 66 per cent. to 9 47 per cent. After describing the appearances and bacteriology of the affection, the author passed on to consider its relationship to night blindness, which he regarded as something more than merely accidental. He pointed out that xerosis, in the absence of hemeralopia, was supposed to give rise to no symptoms beyond such as were presented by the conjunctiva. He had found, however, changes in the visual field—namely, (*a*) a reduction in size and a transposition of the red and green fields, and (*b*) a slight contraction in the limits of the field for white. The former was constant, the latter not always present. The retinal reflexes in these cases appeared also to be exaggerated. Mr. Stephenson concluded that every eye with epithelial xerosis was in a state of torpor retinæ. In discussing the causes of xerosis he laid stress on two factors—first, lowered nutrition, and, secondly, dazzling by bright light. Most of his patients suffered from internal otorrhœa, hypertrophied tonsils, peripheral vascular opacities of the cornea, relapsing pustular eruptions of the face or scalp, or other signs of "scrofula" or tubercle. Hæmoglobin, according to Mr. Stephenson, was always reduced in amount, averaging in his cases of xerosis 65 per cent. of the normal, as tested by Gowers's hæmoglobinometer. As the conjunctival changes disappeared the proportion of hæmoglobin rose, but never to normal. This led him to inquire whether among children it was always below par. In conjunction with Mr. G. C. Burton he examined 164 healthy children, with the result that it was found to vary from 65 per cent. to 95 per cent., and to average 76.62 per cent. of the normal. Mr. Stephenson further claimed that in xerosis the red blood cells were sometimes reduced in number. As to treatment, he strongly recommended iron, preferably in the form of Blaud's pill. Mr. Stephenson quoted a number of cases, and illustrated his paper by cultivations and microscopical preparations of the xerosis bacillus.

Mr. Arnold Lawson spoke of the resemblance which the bacillus of xerosis bore to the Klebs-Loeffler bacillus of diphtheria; the remarkable thing about it was its inertness, as it was so plentiful and swamped all the other bacilli.

Mr. Breuer said that constitutional ailment and not the xerosis was the cause of the symptoms in this disease. In one case in which a *post-mortem* examination was made xerosis of the liver was found, bile acids dissolved the visual purple, and there might have been some relationship between the night blindness and the altered function of the liver.

Mr. Eyre had attempted by raising the pathogenicity of the xerosis bacillus by varying the conditions of growth, and by injecting toxin to impair the resistance of the subject, to produce some effect by injecting it, but all his results had been negative, the bacillus remained inert.

Dr. Drake-Brockman had seen a great deal of this affection in the East and was glad to find his own observations in every respect confirmed. It was especially frequent in badly nourished children or those affected with tubercle or syphilis, or the subjects of intestinal parasites; it occurred among adults during famines. He found iron preceded by the removal of intestinal parasites the best treatment.

On the Function of the Rods of the Human Retina.

This paper was read by Mr. A. Breuer, and dealt with the new theory of von Kries regarding the function of the human visual apparatus. He described experiments of his own, which tended to confirm the statement, that the function of the rods differed from that of the cones. By means of experiments after adaptation of the eye for dark he demonstrated that the sensibility of the periphery of the retina for feebly illuminated objects was very much greater than that of the macula. Under these conditions (dark adaptation) the macular part of the visual field was represented by an absolute scotoma, the exact extent of which was found to vary according to the intensity of the illumination employed. The weaker the illumination and the longer the adaptation of the eye for the dark, the greater this area became. Other experiments made by von Kries illustrated the same fact. He found, for instance, that colour equations found by direct fixation and in a strong light no longer held good with peripheral vision under feeble illumination. These changes, moreover, were most marked when employing lights of short wave length. All these points were modified examples of the well-known phenomenon of Purkinje, who showed first, that when blue and red objects of equal luminosity were selected, the blue gained considerably in brightness as the eye was longer adapted for the dark. This difference however, as von Kries had shown, did not take place in small fields which fell entirely within the macula. Hence it was clear that the functions of the periphery of the retina and the macula were distinct. Other authorities attributed these differences to the presence of the yellow pigment in the macula. Mr. Breuer detailed an experiment, which proved that this assertion was not supportable. Further, Mr. Breuer, in a paper published in *Zeitschrift für Physiologie und Psychologie der Sinnesorgane*, Band xiv, measured quantatively the amount of absorption effected by the macular pigment for spectral lights of different wave lengths, and found it quite inadequate to account for the differences between peripheral and central vision. These and many other observations made it highly probable that the theory of von Kries was correct—namely, that a division of function seemed to exist between the apparatus connected with rods and cones respectively. According to him the latter, the cones, formed a trichromatic apparatus—that was, one capable of distinguishing the spectral colours, and requiring for its exercise higher intensities of light, resulting in greater definiteness and clearness of perception. The rods, on the other hand, constituted an apparatus adapted for exercise of function at far lower intensities of light with the natural drawback of being able only to distinguish between light and dark, and not between colours. Generally speaking it was the cones that were exercised in strong light and the rods in weak. Briefly summed up, this special kind of vision, or the function of the rods, was characterised by (1) its inability to distinguish colours; (2) a very pronounced sensibility for weakly illuminated objects; (3) a preference for rays of medium and short wave length: (4) its total absence in the macula.

The Localisation of Foreign Bodies in Eye and Orbit by Means of Roentgen Rays.

Mr. Mackenzie Davidson made a few introductory remarks as to the method of localisation of foreign bodies by the Roentgen rays he had recently devised and fully described in the British Medical Journal of January 1st, 1898. He then demonstrated the special application of the method for the detection, localisation, and estimation of size of foreign bodies in the eyeball and orbit. The patient was seated upright, and his head fixed in a rectangular rest. The photographic plate was placed against the temple of the affected side behind cross wires. A lead wire was made to touch the edge of the lower eyelid opposite a known point on the eye, and the patient fixed his eye on a distant object during the exposures. These were made in the same way as for other parts of the body, and the interpretation of the skiagraphs was carried out by the use of the "cross-thread localiser."

Mr. Treacher Collins then gave a description of four cases in which this method had been applied. In none of them could the presence of a foreign body be certainly determined from the clinical appearances. In two of the cases the chip of steel was subsequently withdrawn by the introduction of an electro-magnet in the direction in which it had been ascertained to lie. The size of one of these bits of steel was practically the same as had been estimated previous to its removal. In another case, the eye being quiet, and two months and a-half having elapsed since the injury, operative pro-

cedure was not thought justifiable. In the remaining case, which was the first they had dealt with before they had obtained sufficient experience of the method, the foreign body was found to lie in the orbit when they thought it was lodged in the eyeball. Mr. Collins also mentioned three cases where the presence of a foreign body in the eye was suspected in which they had by means of the *x* rays been able to assure themselves none was there. In one of their patients, in whom a large number of exposures had been made, some loss of hair occurred a month afterwards from the temple which was directed nearest to the tube.

Card Specimens.

The following were the card specimens:—Mr. G. Hartridge: (1) Foreign Body lodged in Eyeball. (2) Rupture of Choroid with extensive Retinal Pigmentation the result of a Severe Concussion of the Globe.—Mr. Lawford: Newly Developed Blood Vessels in the Optic Disc.—Mr. Rolston: Case of Keratitis.—Mr. Poulet Wells: Result of Scraping Calcareous Film of Cornea.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

J. M. Purser, M.D., President, in the Chair.

Friday, January 14th, 1898.

Specimens.

Drs. Norman and Rambaut demonstrated a specimen of Aneurysm of Heart, which was discussed by Drs. McWeeney and Croly; and Dr. Norman replied.—Dr. H. T. Bewley showed a specimen of Cirrhotic Liver with Adenomatous Tumour, which was discussed by Drs. Norman, the President, McWeeney, and Croly; and Dr. Bewley replied.—A specimen illustrative of Dissecting Aneurysm of Aorta was shown by Drs. Norman and Redington, and discussed by the President of the Academy (Professor Bennett), Drs. Croly, Knott, and the President of the Section.

Intraocular Sarcoma.

Mr. A. H. Benson described two cases: (1) E. M., a girl, aged 22. Extensive detachment of retina; high tension; total blindness; enucleation of globe; diffuse, flat, pigmented tumour from ciliary body to near the equator, almost crescentic on section; spindle-celled melano-sarcoma. No recurrence after thirteen months. (2) K. F., a woman, aged 52. Funnel-shaped detached retina, with intraocular hæmorrhages visible; high tension; vision totally lost; pain intense; enucleation; pedunculated pale tumour, about the size of a good pea, growing near optic nerve. No recurrence after a year and ten months. The tumour was a leucosarcoma, entirely devoid of pigmentation.

Mr. Croly wished to know if it was in the brain or in the other eye that recurrence took place after removal of the contents of the orbit for sarcomatous tumour. Sarcomatous tumours were not likely to recur in their original positions, and sarcomatous tumours spread through the blood vessels, not the lymphatics. It was his experience to find sarcomatous tumours in the young, and he had seen sarcoma of the tonsil at 17 years of age.

Dr. Benson, in reply, said that in speaking of recurrence he alluded to local recurrence. Of course, in eye cases, general recurrence occurred also, and that came into Fuchs's fourth stage generalisation. Intraocular sarcomata recurred in young people, but very much more commonly in older people. If, in removing the eye, the optic nerve was found implicated, as much of the latter as possible was also removed; but extirpation of the orbit was an impossible thing to do completely, and some of the diseased tissue was liable to get introduced into some of the crevices in the neighbourhood.

PATHOLOGICAL SOCIETY OF MANCHESTER.

C. E. Richmond, F.R.C.S., President, in the Chair.

Wednesday, January 19th, 1898.

The Antrum of Highmore.

Mr. Westmacott read a short paper on the antrum of Highmore, its variable anatomy with reference to empyema of the cavity, giving an account of recent work on the subject he had done in Vienna, and showed a number of dried and spirit preparations of the superior maxilla which he had prepared to illustrate the dimensions, situation, orifices, and relations of Highmore's cavity, as well as several photographs and lithographed plates. Mr. Westmacott's remarks showed the almost constant variation in the size of the antrum, in some cases differing very markedly on the two sides of the same individual, and the difficulties that are met with in deciding where an operation for the relief of empyema should be performed. He gave one or two practical guides, however, which would help the surgeon in his choice of the different situations. Finally, Mr. Westmacott spoke of some anatomical conditions which detracted somewhat from the value of transillumination of the antrum.

Pneumonia and Tuberculosis consequent upon an Injury.

Dr. Harris exhibited specimens and recorded a case where, immediately following an injury to the chest, an apparently typical acute croupous pneumonia of the lower lobe of the left lung had resulted, but where the pneumonia did not show any signs of resolution, and the patient, who was a man 68 years of age, gradually sank, and died between ten and eleven weeks after the accident, up to which time he had had perfectly good health. At the *post-mortem* examination a thickened pleura over the lower lobe of the left lung was found, together with consolidation of the lower lobe and lower part of the upper lobe of the left lung. At several points the consolidation, which was evidently of comparatively recent origin, was breaking down into small cavities. At two or three points in the lung were old quiescent calcareous and fibroid foci, evidently the result of a long antecedent tuberculosis. The right lung was studded with recent acute miliary tubercles. The question of the origin of pneumonia from contusions of the chest was considered, and the possibility, in rare cases, of injuries predisposing to the development of pulmonary tubercle In the case recorded it was considered probable that an ordinary acute lobar pneumonia resulted from the accident, and that tuberculosis became grafted upon the simple inflammatory lesion. The possibility of the tuberculous virus having been absorbed from the old patches of obsolescent tubercle was referred to.

Exostosis of Nose.

Dr. Milligan showed an exostosis of unusual size, removed from the nose of an elderly man by external operation.

Multiple Vesical Calculi.

Mr. Stocks exhibited thirty-seven calculi removed from the bladder by lateral lithotomy at one sitting. They appeared to have originated from some "rape-seed" calculi passed from the kidney, and, being detained in the bladder, became enveloped by a deposit of uric acid (?). This deposit, although showing evidence of concentric layers, exhibited some peculiar lines radiating from the central "rape seed," something like the lines seen on a transverse section of an orange. These stones had gone on increasing to about half an inch in diameter, when some of them had split in the bladder, forming nuclei for a fresh crop of calculi. Thus there were two series of calculi: (1) originating in the "rape-seed" calculi—the original stones; (2) originating in the portions into which the former ones had split—secondary stones. They all were covered by a thick deposit of phosphates, and differed in appearance from each other in nowise save in their size.

Card Specimens.

Dr. Kelynack: Double Duodenal Ulcer, with perforation.—Dr. Yonge: Blastomycetes in Hypertrophied Tonsils.—Dr. Higginson: (1) *Ante mortem* Clot of large size, from right auricle of heart in a tuberculous case; (2) Calcareous Tuberculous Mesenteric Glands.

MIDLAND MEDICAL SOCIETY.

J. W. Taylor, F.R.C.S., President, in the Chair.

Wednesday, January 19th, 1898.

New Members.

The following gentlemen were elected members of the Society: Dr. J. R. Plant, Dr. Wm. Murray, and Dr. Peter Campbell.

Operation for Tuberculous Peritonitis.

Mr. Leonard Gamgee showed a case of tuberculous peritonitis which had recovered after operation. The abdomen began to swell in September, 1895, when the child was 4 years old. In September, 1896, the abdomen was distended with fluid, and so laparotomy was performed. Many pints of clear straw-coloured fluid were evacuated. The peritoneum was studded with small tubercles. The abdomen was closed without drainage. Since operation the fluid had never re-accumulated, and the child was now, sixteen months after operation, in perfect health.

Hysterical Paraplegia in a Child.

Mr. F. H. Simpson showed a case of hysterical paraplegia in a girl aged 7 years. Six weeks before examination the child got her legs wet, and a week later complained of pains in the lower extremities. She was then kept at home; at the end of another week she was found one morning to have lost the use of her legs. Mr. Simpson saw the case three weeks from onset of paralysis. The patient's condition was then as follows: Complete paralysis of both lower extremities, muscles of left leg flaccid, those of right were in a state of over-tonicity scarcely amounting to "contracture" by offering some resistance to passive movement. Left knee-jerk normal; right knee-jerk appeared to be absent, a result really due to involuntary contraction of the flexors of the knee preventing extension. No ankle clonus. The attempt to flex the foot on the leg demonstrated great variability in the contractions of the paralysed muscles. Anæsthesia of both legs limited above by a horizontal line about 4 inches above knee. Loss of sensibility to both tactile and painful impression. No muscular atrophy. Concentric contraction of right visual field (moderate), absolute inability to stand without support and assistance. The attempt caused an emotional outburst. The patient recovered the use of her legs completely and suddenly, three days after examination.

Cases of Vesical Tumour.

Mr. Barling related the following cases which had recently been under his care, and showed the specimens. (1) *Recurrent Fibropapilloma.*—Mrs. L., aged 35, was admitted to the General Hospital, November 1st, 1897, complaining of great pain in passing water and of blood in the urine. This patient had been operated upon four years previously for papilloma of the bladder, and had remained quite well for rather more than three years. The growth at the first operation had a rather broad and almost sessile attachment to the left side and floor of the bladder. The first symptom of recurrence was hæmorrhage, and at the end of about three months frequency of micturition and discomfort in the act began to be felt. These symptoms all increased until micturition became very frequent and the pain extreme; eventually practical incontinence was produced. Suprapubic cystotomy was performed on this occasion as on the previous one, and the cavity of the bladder found filled with soft growth arising from the site of the previous tumour and from the posterior wall of the bladder as well. There was no induration or ulceration at the base of either growth, and both were removed mainly with Thompson's forceps and with nasal polypus forceps. The hæmorrhage was so severe that the patient was rather collapsed at the time; but she made an excellent recovery, her comfort being greatly added to by the use of Sprengel's pump to drain the bladder, by which means her dressing was kept dry. Her case at the time of her first operation was an illustration of the value of the cystoscope in diagnosis. The patient had suffered from hæmaturia for a long time, and on going to a hospital had been sounded for stone. None being felt the bladder was washed out, upon which cystitis followed. What with pain, frequent micturition, and hæmorrhage she was worn to a shadow, and looked like a patient with advanced malignant growth. The cystoscope showed at once the cause of her trouble, and after removal of the tumour she was restored to excellent health and condition again. (2) *Pedunculated Papilloma.*—W. B., male, aged 45, was admitted to hospital on November 4th, 1897, complaining of frequent micturition and of pain during the act. He noticed a year ago a little blood in his urine. This increased in quantity, but was intermittent in character. At the end of a few months frequent micturition in the day time came on, then pain, and occasional sudden cessation of the stream of urine. The cystoscope showed a pedunculated papilloma on the floor of the bladder just behind the left ureter. Bimanual examination failed to show any infiltration or thickening of the bladder wall. The prostate was found generally enlarged. Suprapubic cystotomy was performed, and a small pedunculated tumour removed by ligaturing its pedicle and snipping off with scissors. As in the last case, Sprengel's pump was used to great advantage. (3) *Sessile Patches of Papilloma.*—Male, aged 62, was admitted to the General Hospital, December 30th, 1897, complaining of hæmaturia. He had been an invalid and unable to follow his occupation for some years, and during the last two months he had suffered constantly from hæmaturia, and at the same time from dropsy. On admission the patient was very pale and anæmic; his urine ran away from him almost constantly; his legs were œdematous; there was a large quantity of blood in the urine; and his pulse was very feeble. Examination *per rectum* showed he had a generally enlarged prostate. The patient was far too ill for complete investigation of his case, and died of cardiac failure two days after admission. On *post-mortem* examination small patches of sessile papilloma were found in the bladder and a large prostate. As far as could be determined the papilloma was the source of the hæmorrhage. The patient had marked cirrhosis of the liver. (3) *Epithelioma.*—Miss M., aged 63, was first seen in September, 1897, complaining of hæmaturia of which she had had several attacks in the preceding 3 months. Examination with the cystoscope showed a growth of about the size of a shilling on the floor of the bladder behind the trigone. Its surface was covered with papillæ; it was quite sessile, and was commencing to ulcerate at its margin. Examination of the urine showed that it had a high specific gravity, and contained sugar, but there was no thirst or polyuria. It was believed that the tumour, although malignant, was just within the reach of excision, but the condition of the urine and the rather senile condition of the patient made the operation hazardous, and she was advised not to undergo operation unless pain or other symptoms become troublesome. In November, pain on micturition began to trouble the patient, and increased in severity, whilst at the same time increase in frequency in micturition arose until it became almost incessant, and the hæmorrhage remained persistent and severe. On December 30th the patient was admitted to hospital, seeking relief if operation were feasible. Examination with the cystoscope showed that the growth had hugely extended and was widely ulcerated, whilst bimanual examination showed that its base had infiltrated until it fixed the bladder firmly to the front of the uterus. The patient died of respiratory failure during the administration of chloroform whilst she was being examined. It might be mentioned that the sugar persisted in the urine. *Post-mortem* examination confirmed the clinical examination, showing a widely ulcerated epitheliomatous growth very fixed, and so extending through the coats of the bladder that the omentum was adherent. There was no gland infection. The main feature of these cases, and the earliest subject of complaint on the part of the patients, was hæmaturia. In the first case cystitis was eventually associated with it, and this appeared to have arisen from the unfortunate treatment of washing out the bladder, a method often resorted to with very little justification. In the second case the symptoms of very painful micturition gave rise to the belief that the tumour might be malignant, until cystoscopic examination negatived this. It was probable that both these symptoms and the occasional sudden cessation of the stream of urine were due to the floating of the tumour into the vesical orifice, and its becoming engaged therein. In Case III the hæmorrhage was most profuse, and confirmed the observation not infrequently made that the amount of hæmorrhage was no criterion of the size of the tumour.

Colectomy for Carcinoma of Sigmoid Flexure.

Mr. Barling read a note on two cases. The first patient was a man, aged 39, who, for about nine months before operation, had suffered from constipation associated with attacks of pain in the left iliac fossa. Some thickening was felt at times during the sixth month of the symptoms, but examination under an anæsthetic failed to find a tumour. Three months

latter there was a large and somewhat fixed tumour. This was excised by Paul's method, but the patient declined to have the artificial anus closed. A year later recurrence took place. This was excised, and the bowel anastomosed with Murphy's button, but the patient died on the third day, of volvulus of the small intestine. The second patient was a female, aged 30, with intestinal obstruction, and six months pregnant. Her symptoms commenced three weeks before operation, with constipation. It was intended to perform sigmoid colotomy, but the growth being found it was with difficulty brought out of the wound, and the obstruction relieved by opening the bowel just above the growth. On the eighth day the growth was removed. The patient went to the full term of her pregnancy, and a living child was born. Recurrence took place at the end of a year, and this was not removable. Microscopic examination showed both growths to be columnar-celled carcinoma.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

H. W. Langley Browne, F.R.C.S.Edin., in the Chair.

Thursday, January 20th, 1898.

Nephrolithotomy.

Mr. Lawson Tait showed a phosphatic calculus of large size which he had removed in London a week before from a lady sent from Barbadoes. The remarkable feature of the case was the nature of the calculus, accompanied by an extraordinary loss of pus and blood, and yet not the least invasion of the kidney structure by suppuration. She had recovered without trouble.

Linear Unilateral Ichthyosis.

Dr. Leslie Phillips showed a young man with ichthyosis in streaks (the so-called neuropathic papillomata or nævus neuroticus). The disease affected the left side only, and the history of origin was lost in infancy. As usual, the lesions were linearly arranged in a transverse direction on the trunk, and sharply limited by the middle line, except in one place, where there was a slight extension on to the other side, as was sometimes seen in zoster. On the limbs the arrangement was longitudinal.

Foreign Body in Vagina.

Dr. Purslow showed a bone crotchet hook which he had removed *per vaginam* from a married woman aged 30. The hook, which was 5½ inches in length, had been introduced by the patient herself six months previously, under the impression that she was pregnant. The point could be felt through the vaginal wall, about 1 inch below and to the right of the cervix, and when she was placed under an anæsthetic the other end could also be felt projecting about 1½ inch above the fundus uteri posteriorily and to the left. A small incision was made through the vaginal wall, and the hook seized with forceps and withdrawn. The only symptom complained of had been some pain on movement, and there was no sign of any inflammatory trouble. The patient left the hospital in a few days.

Whistle Removed from the Œsophagus by Œsophagotomy.

Mr. George Heaton showed a whistle which he had removed four days previously from the œsophagus of a boy aged 4½. The whistle was localised by a skiagraph, which was also exhibited, in the œsophagus at the level of the sterno-clavicular joint. All attempts to withdraw it were unsuccessful, so œsophagotomy was performed low down in the neck, and the body removed with considerable difficulty. The œsophagus was closed with a double row of interrupted sutures. The lower half of the external wound was left open. The boy was making an uninterrupted recovery.

Coins in Œsophagus.

Mr. Haslam showed skiagraphs of two children, one aged 5, with a halfpenny in the œsophagus at the level of the sternal end of the second rib, the coin having been swallowed four months before admission; and the other aged 3, who had swallowed a halfpenny ten days before admission, which was clearly seen just below the upper end of the sternum. The coin catcher was used in each case, and in each the halfpenny was removed at the first attempt.

Papers.

Dr. E. N. Nason read a paper on the Influence of Locality on the Prevalence of Malignant Disease.—Mr. Leedham-Green read a paper on the Value of Lumbar Puncture in the Diagnosis of Cerebro-spinal Disease.

LIVERPOOL MEDICAL INSTITUTION.

W. Macfie Campbell, M.D., President, in the Chair.

Thursday, January 20th, 1898.

Cases.

Dr. Hunt showed a case of Malignant Disease of the Larynx.—Dr. Richard Williams showed a case of Tubercle of the Iris in both eyes.—Mr. W. T. Clegg read notes of two cases of Bladder Tumour and two cases of Latent Renal Disease, in which the cystoscope at once threw light upon the source of the symptoms.—Dr. T. R. Bradshaw showed: (1) A well-marked case of Congenital Syphilis in a boy aged 11. There was a history of hemiplegia first on the right, then on the left side, with late rigidity now of the left arm and dislocation forward of the head of the radius. The face strongly resembled that of a cretin, but although sight and hearing were affected, there was no impairment of intelligence. (2) Two rare Urinary Deposits. Hanging drop preparations of (*a*) cystin and blood; although blood corpuscles were present in large numbers the urine did not give the guaiacum reaction; (*b*) a deposit from alkaline urine consisting of triple phosphates, and spheres and dumb-bells, which he believed were calcium carbonate. The deposit was dissolved by acetic acid with effervescence. Dr. Buchanan said the last specimen might be urate of ammonium or a rare form of uric acid. Such a form of uric acid could be artificially stained. Calcium carbonate being colourless would serve to distinguish it from the specimen shown, which was deep orange in colour. Urate of ammonia and calcium carbonate were both soluble in acetic acid, the calcium salt with evolution of gas, urate of ammonia being decomposed and uric acid set free.—Dr. Caton showed a youth, who, during acute rheumatism, developed a Systolic *Bruit* at the mitral valve, with accentuation of the second sound at the pulmonary valve. This was one of about 60 cases in which by prolonged rest, treatment by small blisters and potassic iodide, Dr. Caton had sought to promote resolution of the endocarditis without injury to the valve cusps. In this case, and in 40 other cases the *bruit* had disappeared; in the remainder it was persistent. Dr. Carter, on the general question of blistering, was surprised to find how greatly, and as he believed unreasonably, medical opinion had changed as to its supposed utility in acute rheumatism since the time when the late Dr. Herbert had seemed to demonstrate on the secure basis of fact the good effects that followed its employment. A few years ago on his prescribing blisters for the inflamed knee of a negro, one of the students at the bedside asked him if he thought they were useful. He asked the student to watch the result and form his own opinion. On inquiring what had prompted the question a manual of clinical medicine for students was produced, in which, without a tittle of evidence, the practice of employing blisters was condemned. It was stated by some writers on therapeutics that blisters over the heart would act as irritants. They had the successful cases of Dr. Caton in opposition to this, and some years he (Dr. Carter) had blistered the precordia of white rabbits severely, and in none of them was there any evidence of pericarditis or endocarditis found on killing the animals.—Mr. Robert Jones exhibited a boy with Congenital Hypertrophy of the First and Second Toes of the Right Foot, the great toe being 4¼ inches long, the second 3 inches. An *x*-ray photograph showed the phalanges correspondingly enlarged.—Mr. Arthur Wilson showed a cast of marked Hypertrophy of the Second and Third Toes in an infant.

Vaginal Hysterectomy for Uterine Fibroids.

Dr. Briggs detailed the clinical histories of 13 cases of uterine fibroids—weights 9 ozs. to 2 lbs. 2¾ ozs.—and submitted that in the treatment of these and similar cases

vaginal hysterectomy had advantages worth considering in the present unsettled state of the surgical treatment of uterine fibro-myomata. In each of the 13 cases there were severe symptoms of considerable duration. Two patients were past the menopause (four and three years); in them and four others (ages 44, 43, 40, and 45) invalidism was due to pressure symptoms; in four pallor from hæmorrhage, and in one pelvic pain, not relieved by long periods of total rest and other minor treatment, called for radical operation. One patient, aged 27, had had acute peritonitis, which became chronic and associated with an apoplectic ovary and adhesions low down. One patient, aged 41, in hospital for two months with intermittent febrile attacks (103° at night), not relieved by attention to the bladder, was completely relieved by the removal of the uterus and the necrosing fibromyoma. All the patients now expressed themselves as cured. Ten retained both appendages, and three had each lost the diseased appendage of one side.

Dr. J. E. GEMMELL considered the operation might be suitable for many cases; yet it seemed hardly a true surgical procedure to remove an organ because a tumour grew on its wall. In vaginal hysterectomy he favoured Doyen's method of splitting the uterus and cutting out V-shaped pieces if it was necessary to reduce the large bulk to facilitate delivery.

Drs. MURRAY CAIRNS and E. T. DAVIES also spoke.

HUNTERIAN SOCIETY.—At a meeting of this Society on January 26th, the President, Dr. G. E. HERMAN, in the chair, Dr. HINGSTON FOX read a paper on the Treatment of Constipation. The condition was met with in two forms: (1) General or peristaltic constipation; (2) rectal constipation; or both forms might be present. The paper was concerned with the latter form only, and its object was to point out that most cases began from neglect of the habit of periodic relief, and that the impairment of the evacuant function of the rectum was the primary feature. The mechanism of defæcation was described, and the steps by which the act became gradually altered, less automatic and more voluntary in its character, and the rectum became no longer merely a passage and an evacuant, but a receptacle like the bowel above. The habitual use of aperients was discussed, and opposed as unscientific, for the difficulty was in the lowest portion of the canal, and was not properly met by stimulants directed to the bowel generally or to a large part of it. To regain the lost habit of rhythmic relief, several practical rules were submitted: (1) Absolute regularity in the solicitation of the bowels twice daily, that is, after breakfast and in the evening, when fatigue often relaxed the tight sphincter; (2) easy posture (Lauder Brunton), the use of a footstool helped; (3) diversion of the mental attention; (4) in cases of difficulty, postponement of vesical relief until after breakfast, so as to get simultaneous relaxation of both sphincters; (5) removal of all local sources of irritation; (6) occasional small enemata. Dr. F. J. SMITH referred to the relief obtained in cases of piles by an action of the bowels nightly, whereby venous congestion was obviated. Mr. A. H. TUBBY inquired why a glycerine enema in some cases acted as an irritant and in other cases not, and referred to the importance of peristaltic action. Dr. COTMAN spoke of the remedies which acted on the lower bowel. Dr. ARTHUR DAVIES referred to the value of iron combined with aloes. The PRESIDENT spoke of the practice of prehistoric man, who swallowed much indigestible matter, such as seeds, vegetable fibre, bone, gristle. Civilised man eliminated all indigestible matter, and thereby removed natural aperients from his diet. He usually ordered in constipation brown bread, oatmeal porridge for breakfast, and fruit such as figs at night. He referred to the importance of habit as the true explanation of constipation, especially such as occurred in women. Dr. BOWKETT referred to the value of taking large quantities of fluid. Dr. FOX replied.—Dr. DAWSON read a paper on the Physical Signs of Stomach Disease and their Relations to Diagnosis and Treatment. He first referred to the methods employed by him (1) inspection, (2) palpation, (3) splashing, (4) percussion and auscultatory percussion, (5) inflation, (6) illumination, the last being of course used with caution in cases of ulcer. Taking functional disease of the stomach first of all, dilatation was more common in what was conveniently called chronic dyspepsia than was usually imagined, and this knowledge was a help to treatment. In many cases of anæmia with dyspeptic symptoms there was pain after food, but the vomiting was not frequent, and not emphatically related to food or pain. The treatment consisted in iron and arsenic from the first, with bismuth if necessary. In cases of chronic dyspepsia without anæmia, with sedentary habits and sometimes large ingestion of fluids, dilatation might be marked, and the sequence of events consisted in loss of expulsive power, retention partly due to nervous insensitiveness, stagnation, putrefaction, and so further atony and dilatation; in such cases lavage was a necessity to be combined with electricity and massage and arsenic and alkalies. Taking the next group of cases with pyloric disease and consequent obstruction to the outlet due to such causes as carcinoma, cicatrisation of gastric ulcer, fibroid stricture (syphilitic or otherwise), adhesions around the pylorus, and pressure from without, it was found that in almost half the cases of pyloric cancer no tumour was felt, and in such an accurate mapping out of the stomach wall was very valuable in helping to form a diagnosis. Dr. Dawson quoted a case in illustration, which had been diagnosed as cancer of the pylorus, but inflation and illumination showed that the tumour, though probably in the pyloric region, was outside the stomach wall, and an operation showed it to be a healed gumma or hydatid adherent to the pylorus. Passing to the last group of cases, namely organic disease of the stomach fundus, everyone would admit the great difficulties of diagnosis, which was often impossible without surgical exploration. In 19 consecutive fatal cases, where a *post-mortem* examination showed malignant disease of the fundus, no tumour was felt. In such cases an accurate mapping out of the stomach by means of inflation and illumination might definitely prove the tumour to be part of the stomach wall. The paper was illustrated by photographs of cases quoted. Dr. F. J. SMITH thought that the suggestion that the gastric symptom in anæmic girls were due to incipient dilatation was probably correct, and this explained the constant success of the administration of iron and arsenic in such cases, irrespective of a doubtful gastritis. Mr. A. H. TUBBY quoted the views of some physiologists who considered the stomach as not being a digestive organ, but as one whose acid secretion helped to prepare the way for the later digestive action. Dr. HINGSTON FOX alluded to the method of auscultatory percussion in mapping out the stomach as taught by Dr. Fenwick. He found dieting of great use, and nitrate of silver valuable in such cases. The PRESIDENT was struck with the confident tone of Dr. Dawson as to the inferences drawn from the methods of examination of the stomach as compared with the qualified opinion of Professor Ewald on such means. Dr. RAWES referred to the enlargement of the stomach due to previous habits of life. Dr. DAWSON replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—The annual dinner of this Society took place at the Café Monico on January 26th, when some sixty members and guests were present, and the President of the Society, Mr. MAYO ROBSON, occupied the chair.—After the usual loyal toasts that of "The Sister Societies" was proposed by Dr. CLEMENT GORDON, who said that since 1880 the number of the medical societies of London had just doubled. The presidents of the Medical, the Harveian, the Obstetrical, the Clinical, and the Anæsthetists' Societies being present, he made kindly allusions to those societies and the good work they are doing.—Dr CULLINGWORTH, President of the Obstetrical Society, replied, and said that the papers read at the meetings of that Society during the past year were, he found, exactly half obstetrical and half gynæcological, He thought the Medical Society—the oldest of all the medical societies of the metropolis—was the type of what a medical society should be; it advanced with the times, and discussed papers on all kinds of subjects, by which its members were kept from a groovy specialism.—Mr. JOHN LANGTON, in proposing "The British Gynæcological Society," said that, like other societies, it enabled young men to record their views of disease and its treatment, and was a great boon.—The PRESIDENT, in responding, said the Society was now 14 years old, and had done extremely good work. The study of the special diseases of woman, apart from obstetric

diseases, formed its *raison d'être*. The importance of the gynæcological branch of medicine since the Society was founded) whether a *post hoc* or a *propter hoc* of that event he would not pretend to decide) had been more thoroughly recognised. It had been said that the societies ranked before the universities and licensing corporations as the distributors of medical knowledge. It was at any rate certain that they (societies) opened the way to the recognition of individual merit.—The toast of "Our Guests" was proposed by Dr. Routh, who thought the ladies should in future be numbered amongst the guests at the Society's dinner.—Dr. Sansom (President of the Medical Society of London) replied.—Dr. Macnaughton Jones, President-elect of the British Gynæcological Society, in proposing "The Chairman," said that he came from a provincial school (Leeds) which had given to English surgery some of its greatest representatives. The specialist might not be a good general surgeon, but the general surgeon could, as in the case of Mr. Robson, be a good specialist. The toast was received with musical honours.—Mr. Robson, in replying, said that the broad view of the British Gynæcological Society was shown in the circumstance that it had asked him, a provincial and a general surgeon, to be its President.—Dr. Granville Bantock proposed "The Health of the Secretaries," Dr. George Keith and Dr. Giles, who briefly replied.—Mr. B Jessett proposed "The Editor of the *British Gynæcological Journal*," which culled from all parts of the world a synopsis of gynæcological advance.—Dr. F. F. Schacht acknowledged the toast.—A programme of music by the French Orchestra and two songs by Mr. Templar Sykes added to the enjoyment of the evening.

Society of Anæsthetists.—At a meeting on January 20th, Dr. Dudley Buxton (President) in the chair, Mr. Alexander Wilson (Manchester) opened a discussion on the Methods of Treatment in Emergencies under Anæsthetics. After reviewing the mechanism of the usual accidents which occurred under anæsthetics, and especially under chloroform, he pointed out the various measures mostly employed fell under one of six classes: (1) External applications—for example, cold, Corrigan's button to epigastrium, ammonia vapour to nostrils which excited upon respiration reflexly; (2) reflex excitation and respiration by mechanical means—for example, rhythmic traction on tongue (Laborde), dilatation of sphincter ani; (3) stimulation of heart by mechanical and electrical means, including actual puncture; (4) artificial respiration; (5) measures counteracting circulatory failure—for example, posture, transfusion, etc.; (6) various drugs—for example, nitrite of amyl, strychnine, atropine, etc. It was pointed out in (1) and (2) that it was necessary that the nervous tissues should be sufficiently alive to convey stimuli. In dealing with measures the aim of which was to stimulate the circulation, faradism to the cardiac region, hot and cold applications to the skin, and precordial percussion, were adversely criticised; while artificial respiration was held to be an effectual measure in failure of the circulation. The influence of posture on the circulation was said to be at present not clear, probably a good deal depending on the degree of arterial tone and the influence exerted by gravity. Artificial respiration probably acted in a threefold manner, by removing the anæsthetic vapour, supplying fresh air, and promoting blood circulation. Inflation and Sylvester's method of artificial respiration were considered the most efficient, but faradisation of the phrenic nerves, especially in old subjects with rigid chests, had in Mr. Wilson's cases succeeded, other methods failing. All these measures might fail when persistent spasm of the larynx existed; cases verifying this point were cited. In circulatory failure, inversion with pressure on the abdomen was recommended; the danger of emptying the heart by the vertical position, since the cranial circulation was simultaneously depleted, was pointed out. Transfusion was not considered by the speaker to be devoid of drawbacks. Subcutaneous injection of drugs was open to the objection that for their absorption some degree of circulatory activity was necessary, while it was difficult to estimate whether a given dose, given to a person apparently moribund, might not upon his resuscitation set up toxic symptoms of its own.—Dr. Bowles had always thought that too much might be done in attempts to restore patients. Referring to the methods of artificial respiration, he favoured that of Marshall Hall, as by it there was less danger of fluids, for example, beef-tea, grumous matters, vomit, etc., being pumped into rather than expelled from the air passages. In cases of pus or blood in the lungs, for example empyema, patients should be placed with the bad side down, and the Sylvester method employed with one arm only, the prone posture being carefully avoided. When there was fluid in the lungs, somewhat the same procedure was recommended as in dealing with those apparently drowned.—Professor Schäfer contended that the respiratory, vasomotor, and other centres in the medulla were probably affected by anæsthetics almost simultaneously, although possibly some were more susceptible than others. At a certain stage of the action of chloroform blood pressure rapidly fell; this went on *pari passu* with paralysis of the respiratory centre, while the heart's action grew weak itself, probably in consequence of paralysis of the vasomotor centre, the effect on the vasomotor centre being the most fatal in cases of chloroform poisoning on account of the absence of efficient and ready means of counteracting it. Mere failure of respiration could easily be counteracted, as comparatively slight interchange of air was necessary provided the circulation was unaffected. Chloroform-laden blood probably injured the muscular tissue of the heart rather than interfered with its nervous mechanism. In performing artificial respiration he regarded the performance of expiration as most important. Hering and others had shown that the diminution of the size of the pulmonary alveoli led to inspiration. He advocated the employment of atropine before the giving of the chloroform as the means of preventing arterial dilatation, thus checking the dangerous fall of blood pressure. Two drugs which promoted the greatest contraction of arterioles, and so would counteract the greatest danger of chloroform—the fall of blood pressure—were, according to his experience, nicotine and extract of suprarenal capsule. His experience of atropine was by intravascular injection; he had no doubt hypodermic or intraserous injection would prove equally effectual. Extract of suprarenal capsules possessed an extraordinary effect on the heart, increasing the rate and force of its beat. He thought these two substances would go a long way towards enabling patients to recover from vasomotor and partial cardiac paralysis.—The discussion was continued by Dr. Silk, who referred to Professor Wood's admirable work on the subject. Strychnine he regarded as a valuable prophylactic agent. Referring to overstimulation of the patient by ether, he thought too-energetic measures did harm; in the main, he agreed with Mr. Wilson's contention. Oxygen in forced artificial respiration he thought was often advantageous, and the actual grasping of the heart to empty it had in some cases proved beneficial.—Mr. Barnard inquired whether morphine would not be a useful adjuvant to chloroform, as he had seen it employed abroad with satisfactory results. He had found the injection of ammonia into the circulation efficacious in chloroform poisoning. Hydrocyanic acid he considered a dangerous drug.—The President pointed out that morphine in conjunction with chloroform had been employed for many years, although not with uniform success. The late Sir B. W. Richardson had advocated intravenous injection of ammonia as a means of counteracting chloroform poisoning nearly thirty years ago.—Dr. Wilson replied.

Dermatological Society of Great Britain and Ireland.—At a meeting on January 26th, Dr. Robert L. Bowles (in the unavoidable absence of Dr. F. Payne) in the chair, Mr. J. Hancocke Wathen (Clifton) read a paper on a Personal Reminiscence of the Local Effects of Iodoform in which he described the attacks of bullous dermatitis of the hands which had followed the handling of dry iodoform gauze. The cause of the skin condition was at first thought to be gout. Mr. Wathen referred to the similar personal experience of Mr. Jessop (Leeds), and stated with regard to treatment that great relief had been obtained by the firm application of bandages to the fingers, with boracic ointment and occasionally thick gruel, followed by a visit to Harrogate and Ilkley with the use of Aix douche baths. There had been no fresh attacks since the avoidance of iodoform. In the discussion Dr. Bowles insisted on the great importance of recording such cases of morbid conditions arising from the

use of drugs, either locally or internally. Mr. PERNET said he had seen a few cases of iodoform dermatitis. In one an acute localised vesicular eruption followed the application of iodoform powder to a varicose ulcer. Dr. ABRAHAM stated he had had a similar experience. — The following cases were shown: Dr. P. S. ABRAHAM: (1) A gentleman presenting peculiar Unilateral Keloidal Scarring about the upper part of the right side of chest. (2) Syphilitic (?) Lesions about the Vulva of a child, aged 2 years. (3) A male patient with Xanthoma Diabeticorum. previously brought before the Society. (4) A case for Diagnosis: Rupoid Eruption in a young woman. (5) A lad with Ulcers, probably syphilitic; they had been regarded as tuberculous. (6) A case of Acute Dermatitis in a man; the question was whether the condition had been produced by chrysarobin or whether it was ordinary eczema.—Dr. T. SAVILL: (1) A case of Leucoderma in a girl aged 16, who was very emotional, had an enlarged thyroid, and at times a very rapid pulse; the skin condition had been treated by the limited local application of phenol. (2) Symmetrical Atrophy about the Fingers in a young woman. - Dr. DAVID WALSH: A case of Myxœdema (?), with Acne and Loss of Hair, in a young woman.—Dr. ALFRED EDDOWES: (1) A case of Lichen Planus Verrucosus, previously shown. (2) Xeroderma in a man who had presented symptoms of Myxœdema. (3) A case for Diagnosis. Dr. Eddowes also showed the photograph of a case of Folliculitis Necrotica.—Photographs of the two cases of Leprosy observed in the island of Lissa (Dalmatia) by Dr. Dojmi von Delupis were shown by Mr. PERNET.—The cases were discussed by Dr. BOWLES, Dr. PHILLIPS CONN, Mr. HARE, Mr. PERNET, Dr. ABRAHAM, Dr. EDDOWES, Dr. SAVILL, and Dr. TRAVERS SMITH.

MANCHESTER THERAPEUTICAL SOCIETY.—The third meeting for the session 1897-98 was held at the Owens College, Manchester, on January 26th, Professor LEECH (President) in the chair.—Dr. EUGENE S. YONGE read a paper on The Local Treatment of Painful Ulcerations by Orthoform, with special reference to the upper air passages, which is published at page 362. Dr. LEECH mentioned his experience of the use of orthoform, and several other members spoke on the subject.—Professor LEECH then showed specimens of Eucaine A, Eucaine B, and Holocaine, and opened a discussion on Local Anæsthetics. He showed the chemical relationship of the eucaines to cocaine and of holocaine to phenacetin. The eucaines had proved to be less poisonous than cocaine, Eucaine B being less toxic than Eucaine A. Both had been used successfully in ophthalmic practice. Holocaine had been very highly spoken of by Mr. Brudenell Carter; it was, however, not so free from toxic properties as Eucaine B. Professor Leech also referred to Anesin—a solution of trichlorpseudo-butyl alcohol—which had been recently introduced as a local anæsthetic, and employed in laryngeal cases, in dentistry, and for injection to prevent the pain of incisions. In the discussion which followed members spoke of the use of cocaine, ethyl chloride, pyoktanin, antipyrin, and Schleich's infiltration method for the production of local anæsthesia.—Dr. R. T. WILLIAMSON exhibited some Diabetic Foods entirely free from carbohydrates, and described the method of preparing them from aleuronat and cocoanut.

CAMBRIDGE MEDICAL SOCIETY.—At a meeting on November 5th, 1897, Dr. JOSEPH GRIFFITHS (Vice-President) in the chair, Mr. MIDELTON and Dr. LLOYD JONES read notes of cases of Puerperal Fever treated by Antistreptococcus Serum. Dr. Jones referred to another case in which the serum had been used with success; but he had perhaps quite as much success without serum, although he must say that this case seemed the better for the serum treatment. Dr. KANTHACK said that possibly in time to come an antitoxic streptococcus serum might be obtained. At present there was none, and therefore it must remain doubtful whether good would result from serum injections. In a case of puerperal fever he would use it, that is, if streptococci were found, because no harm could ensue, and because good might follow, but he would not say that it must be used; he would trust rather in asepsis and preventive measures. If the serum were used, large doses were required, say 30 to 50 c.cm. per injection, and these must be administered two to three times daily; small doses were useless. At present then it was impossible to express an opinion regarding the value of the serum treatment in puerperal fever.—Dr. LAURENCE HUMPHRY showed a specimen of Congenital Malformation of the Heart, which had been removed from an infant aged 4 months, which died of bronchopneumonia. It was cyanosed during life, and had attacks of difficult breathing; one testicle was undescended. The right ventricle was considerable larger than the left, and the walls thicker than natural; there was an aperture at the upper part of the interventricular septum, throwing the left ventricle and origin of the aorta into communication with the sinus of the right ventricle; the aorta was of large size, and arose mainly from the right ventricle, but communicated with the left ventricle through the aperture in the septum; the pulmonary artery was much stenosed, the orifice being buried behind a prominent columna cornea, and would only admit a small probe. The cavity of the left ventricle was very small and appeared to be almost thrown out of the circulation; the auricles communicated by an incompletely closed foramen ovale. A small vessel was given off from the aorta at about the situation of the ductus arteriosus, which ran alongside of the left branch of the pulmonary artery and joined it before supplying the lung.—Mr. DEIGHTON read notes of a case of Traumatic Rupture of the Urethra, successfully treated by perineal section and suture of the two ends.

WIGAN MEDICAL SOCIETY.—At a meeting on December 21st, 1897, Mr. C. R. GRAHAM (in the absence of the President) in the chair, the following cases were exhibited:—Mr. HUGH E. JONES showed the following cases: (1) Paralysis of External Rectus Muscle with Intracranial Aneurysm; (2) Proptosis of Eyeball; (3) Traumatic Ptosis; (4) Wounds of Cornea, Iris, and Lens; (5) Interstitial Keratitis: (6) Convergent Strabismus. Mr. GRAHAM showed specimens of (1) Gallstone, (2) Ovarian Dermoid Cyst. Dr. WHITE showed a specimen of a Unilocular Ovarian Cyst, and the following cases: (1) Eczema Erythemato-papulosum; (2) Dermatitis Herpetiformis.—At a meeting on January 20th, Mr. C. T. STREET, President, in the chair, the following office-bearers for 1898 were elected:—*President:* W. Berry, F.R.C.S.I. *Committee:* The President (Mr. W. Berry), Mr. C. T. Street (ex-President), Messrs. C. R. Graham, W. Mitchell Roocroft, E. H. Monks, C. M. Brady, R. H. Cowan, M. Benson, R. P. White, and L. Cooke. *Honorary Treasurer:* Mr. E. H. Monks. *Honorary Secretary:* Mr. C. F. France.—Mr. C. R. GRAHAM read a paper on Cholecystotomy. Messrs. REES, BRADY, and WHITE took part in the discussion.—Mr. C. R. GRAHAM now took the chair in the President's absence, he having been called away.—A paper illustrated by lantern slides, on Harelip and Cleft Palate, was read by Mr. R. W. MURRAY. A discussion followed in which Messrs. GRAHAM, MONKS, WHITE, COOKE, REES, and JONES took part.—A cordial vote of thanks was passed to Mr. Graham and Mr. Murray for their papers, to which both replied, and a vote of thanks to Mr. Graham for presiding concluded the meeting.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this Society, on January 20th, Mr. RECKLESS (ex-President) in the chair, Dr. GWYNNE showed a case of Hodgkin's Disease in a girl, aged 9, who had been suffering from the disease for three years and a-half. It came on after whooping-cough. The glands on the right side of the neck became enormously enlarged. As the breathing was embarrassed from pressure, the glands were removed on two occasions. The spleen, which was noticeably enlarged two years and a-half ago, now filled most of the abdominal cavity. The ordinary remedies did no good. Some temporary improvement followed a course of bipalatinoids of ferrous carbonate and red marrow.—Mr. PYE SMITH showed a Papillomatous Growth which he had removed from the bladder.—Mr. ARCHIBALD CUFF showed a specimen of Malignant Growth of the Kidney, obtained by operation; also a Renal Calculus which he had removed.—Mr. LEE showed (1) Heart with large Foramen Ovale and Diseased Aortic and Mitral Valves from a boy, aged 12. (2) Sarcoma of Kidney with Secondary Growths, one of which caused a fracture of the humerus and another a fracture of a dorsal vertebra. (3) A specimen of Cancer of the Lung. (4

An Aortic Aneurysm which had Ruptured. — Dr. Arthur Hall showed Ringworms of Scalp, which appeared analogous to "kerion Celsi."—Dr. Wearne Clarke showed a Fœtus with Kraniorachischisis.— Dr. Bermingham read a short paper entitled, a New Mode of Treatment applicable to Many of the Major Affections of the Respiratory System.—Mr. Reckless, Dr. Porter, Mr. Pye-Smith, Mr. Cuff, Dr. James Martin, Dr. Sweeten, Dr. Gwynne, Dr. Addison, Dr. Richards, and Dr. Wearne Clarke made remarks.

Bradford Medico-Chirurgical Society.—At a meeting on January 11th, Dr. Arnold Evans (President) in the chair, Dr. Major gave a Microscopical Demonstration.—Mr. Morton showed a Kidney Tumour weighing 6 lbs. 2 oz., which had been removed *post mortem* from a child 2 years of age. During life there had been an abdominal tumour, which did not move on respiration. There was no pain and no pus in the urine. Microscopically the tumour proved to be a sarcoma, containing in places striped muscle tissue. Drs. Miall, Major, and Campbell made remarks, and Mr. Morton replied.—Mr. Basil Hall showed (1) a Cutaneous Horn removed from the Ear; (2) 180 Gall Stones and 3 Stones from the Urinary Bladder; the stones were removed *post mortem*, not having given rise to symptoms during life; (3) a Plaster Cast of a Palatine Tooth.—Dr. Kerr showed a patient with Sub-conjunctival Dislocation of the Lens upwards.—Mr. Basil Hall read a paper on the Occurrence of Air Embolism during Surgical Operations. After alluding to historical notices of air embolism, Mr. Hall discussed the subject from the following points of view: (1) the causes of the entry of air into veins, (2) the *post-mortem* appearances, (3) the locality of the wound, (4) the symptoms, and (5) the treatment. Cases illustrating this condition were cited, especially one which Mr. Hall had recently met with, when, in clearing out some cancerous axillary glands, the axillary vein was wounded. Air was heard to enter; the patient became pallid, ceased to breathe, and to all appearances was dead. After employing artificial respiration and the hypodermic injection of strychnine the patient slowly recovered. The paper was discussed by Drs. Evans, Major, Campbell, Kerr, Goyder, Horrocks, and Bronner, and Mr. Hall replied.—Mr. Handcock read notes on a case of Chorea Complicating Labour. Under chloroform the patient was delivered with forceps, and ultimately made a good recovery.

REVIEWS.

Abdominal Surgery. By J. Greig Smith, M.A., F.R.S.E., Surgeon to the Bristol Royal Infirmary, etc. Sixth Edition. Edited by James Swain, M.S., M.D.Lond., F.R.C.S., Professor of Surgery, University College, Bristol; Assistant Surgeon to the Bristol Royal Infirmary. In two vols. Bristol: J. W. Arrowsmith. London: J. and A. Churchill. 1897. (Roy. 8vo, pp. 1,232, 224 illustrations. 36s.)

It is with great satisfaction that the profession will learn that so useful and valuable a work as the late Mr. Greig Smith's *Abdominal Surgery* has been reissued since its author's lamented death, under the superintendence of an editor who is a competent authority as a surgeon and as a teacher. We feel sure that this well-known treatise will enjoy a new lease of life under the auspices of Mr. James Swain.

Perhaps the best proof of the editor's capacity is the fact that the sixth edition consists of just as many pages as the fifth, yet the work has been thoroughly revised. The editor has fulfilled his duties with the great advantage that he had already assisted the deceased author in the preparation of several previous issues. We are then relieved from any fear that the book is likely to become bulky, which would be a misfortune to the medical public, and ruinous to the publication itself. Mr. J. Swain wisely keeps out many of the innumerable varieties of operations on the pelvic organs vaunted by specialists abroad, but not yet widely sanctioned even by experts. Readers seek its pages for direction and the records of experience, and not for arguments defending and opposing conflicting opinions.

Excellent indeed are the directions which make up the backbone of this work, and have brought it up to its present high position. Opinion is certainly demanded by the reader, as a work on surgery by an operator cannot be absolutely impersonal, and though the reader seeks not for twenty ideas on one procedure, he naturally wishes to know the author's own views. Mr. Greig Smith and his continuator wisely indicate the danger of working for statistics "without a death." The surgeon must not flinch from a dangerous case, and thereby, as our author indicates, he will save lives though he will ruin his statistics. He must study his own after-treatment, and unceasingly endeavour to improve upon it; Mr. Greig Smith ever insisted on the study of after-treatment.

When it is a question of legitimate criticism, we may say that some modifications would be desirable in this deservedly popular treatise. The practice of closing a ventral hernia without opening the peritoneal cavity is dangerous, especially when the hernia is caused by the stretching of a cicatrix. It has been shown that even small intestine may be adherent to the wall of a very small sac. More definite teaching and information as to the application of sutures to the abdominal wound would be desirable.

At page 113 we find the familiar elaborate sketch of the continuous suture in separate layers, with such expressions in the text as "I have often used silkworm gut as a buried suture," whilst two pages further back we find the sentence, "I look upon the separate suturing of each parietal layer as a refinement always and as a superfluity usually, provided that the single group suture is properly placed." The discrepancy of these statements is evident. An erroneous statement regarding the use of bichloride of methylene is retained at page 96. We know on the best authority that it had been discarded, at the hospital named by the author before the first edition of *Abdominal Surgery* was published. The remarks on temperature after ovariotomy (page 214) should be modified; the inexperienced operator is always alarmed at a rise and rightly so, nor should an expert hold it as a trifle. Lastly, the paragraphs on pancreatic cyst need much revision. The sentence at 1054 beginning "As the stomach and the colon lie above and below the cyst . . . ." is misleading, since the stomach may be found on the lower part of its anterior surface. The editor has not availed himself of the valuable monograph by Heinricius on pancreatic cysts which appeared last spring in the pages of *Langenbeck's Archiv*.

A System of Practical Medicine by American Authors. Edited by the late A. L. Loomis, M.D., LL.D., and W. Gilman Thompson, M.D. Vol. II. London: Henry Kimpton. 1897. (Roy. 8vo, pp. 941. Fig. 74. Plates 15. 25s.)

We welcome the second instalment of this work, which succeeds the first after but a short interval. It deals with the diseases of the respiratory, vascular, and urino-genital systems, and is capitally illustrated by figures introduced into the text and beautiful coloured plates. In 83 pages Dr. S. E. Solly gives a succinct description of the diseases of the nose, nasopharynx, and larynx. There are two introductory articles dealing with the physical signs of pulmonary and cardiac disease respectively by Dr. E. G. Cutler, who has also written a compact account of hæmoptysis. Dr. Fitz of Boston describes the various forms of pneumonia and broncho-pneumonia; the section on lobar-pneumonia is a very complete and useful contribution. The term "fibrous" pneumonia is used in preference to interstitial pneumonia, since in this affection the fibrous tissue is often found in the alveoli. Pulmonary tuberculosis has been, as has already been seen, incorporated in Professor Osler's masterly article on tuberculosis in Vol. I.

Satisfactory accounts of bronchitis and asthma with references to recent advances are given by Dr. A. L. Mason, but his article on bronchiectasis is too short and this is especially true of his remarks on the treatment of this disease. Syphilitic disease, new growths, and parasitic affections of the lungs are briefly summarised by Dr. W. W. Gannett. Under non-tuberculous diseases of the pleura, Dr. H. R. Witney gives an admirable description of pleurisy and empyema, and by drawing on his extensive knowledge of the bibliography of the subject has provided a useful and standard article of reference. Summaries of diaphragmatic,

chylous, and pulsating pleurisies, and of pneumothorax are included in his contribution, and are of a high standard of excellence. The article on pericarditis is divided into acute and chronic pericarditis and adherent pericardium by Dr. W. Coleman. The same writer deals with dilatation and hypertrophy of the heart.

Dr. Whittaker's articles on neuroses of the heart and on the diseases of arteries are perhaps the best in this volume; they show not only a thorough knowledge of the subject but—and this is essential in a good article—a sense of the due proportion and importance of the various parts of the subject. The section on the blood is contributed by Drs. F. C. Shattuck and Cabot, and is interesting and well illustrated. In their introductory remarks they touch on the value and on the limitations of blood examination in diagnosis and point out that the negative evidence thus obtained is often of great importance. In the technique the abstraction of blood from the lobe of the ear, and not from the finger, is recommended. In the section on pernicious anæmia the discussion as to its causation and pathology is far from exhaustive, and the work of Dr. William Hunter does not receive proper recognition.

Dr. H. P. Loomis's articles on nephritis, amyloid degeneration, and renal hyperæmia bear the impress of much careful research and thought. Nephritis is classified on the microscopic appearances, and is therefore divided into acute diffuse, and chronic diffuse, the latter again being subdivided into parenchymatous and interstitial. In 200 cases of lardaceous disease the spleen was affected in 98, the kidneys in as many as 97, the intestines in 65, and the liver in 63. The statement that it has not been possible to produce lardaceous change experimentally is perhaps a little too absolute, and requires some little qualification and discussion. The diseases of the bladder and prostatitis are described by Dr. Danforth; and the volume closes with articles on abnormalities of the urine and uræmia by Dr. T. D. Coleman.

In all systems of medicine written by numerous contributors the standard of the various articles must necessarily vary somewhat. This is rather more evident in the second than in the first volume of the *System* now before us, but there is no doubt of its value, and as a whole it reflects high credit on the labours of the editor and his contributors.

REPORT OF AN INVESTIGATION OF THE EPIDEMIC OF MALARIAL FEVER IN ASSAM, OR KALA-AZAR. By LEONARD ROGERS, M.B., B.S.Lond., F.R.C.S.Eng., Surgeon-Captain Indian Medical Service. Shillong: Assam Secretariat Printing Office. 1897. (Roy. 8vo, pp. 258).

FOR the last ten or fifteen years the deadly disease which forms the subject of this report has excited a good deal of attention among Indian medical men, and has been specially investigated and reported on more than once. It has been known as occurring in the Garo Hills since 1869, and it seems probable that it existed there for many years even before that date. In consequence of its gradual extension and high attendant mortality, reports were issued on the subject in 1882 by Clarke, in 1883 by Eteson, and in 1884 by Dobson. By these writers it was regarded as a form of malarial fever. The disease continuing to spread, Giles was specially appointed in 1889 to inquire into the matter, and sent in a report in 1890 in which he concluded that, although malaria might have some prejudicial influence on the patients, kala-azar was essentially ankylostomiasis. Although some demurred to Giles's conclusions, there could be no question that he had demonstrated that the ankylostoma was present in the vast majority of cases, and, for a time, opinion seemed to be satisfied that he had solved an important etiological problem, and had indicated appropriate prophylactic measures. But when in 1891 Dobson showed that 77·78 per cent. of healthy Indian coolies were affected with the ankylostomum, in greater or less abundance, in other words about as frequently as the victims of kala-azar, a fresh investigation of the disease *ab initio* seemed necessary. Accordingly Surgeon-Captain ROGERS was last year appointed to restudy the whole question. In his report, which is now before us, he concludes from clinical, epidemiological, and *post-mortem* evidence that kala-azar is an intensified form of malarial poisoning, the germ, from special circumstances, having acquired special and unusually virulent characters. In every instance he found that patients suffering from kala-azar were liable to recurring attacks of fever, that their blood contained the malarial parasite, that in certain instances the disease was amenable to large doses of quinine, that the attendant anæmia was that characteristic of malaria, and that *post mortem* the organs presented the pigmentation pecular to that disease.

This being the case it is to be regretted that Surgeon-Captain Rogers has not given a fuller description of the type of the malaria parasite which he found in these cases. If his statements are confirmed—that it was in the main a non-pigmented parasite, and that he never found it associated with crescent bodies—he has certainly made a new and important observation, and one which ought to be carefully followed up. In every other locality in which malarial cases of the type resembling kala-azar have been studied, the parasite has been, so far as we are aware, almost invariably of the crescent-forming type, a type which, judging from Ross's and Carter's observations has often been found in India and, as we are informed, in Assam malarial fevers, contrary to Surgeon-Captain Rogers's experience. If it be correct that all malarial parasites have a flagellated phase, and if kala-azar be a malarial disease, it is reasonable to conclude that in it, too, the parasite has a flagellated phase. It would be highly interesting to know how this is formed, whether from a crescent body or otherwise; not only interesting from a biological point of view, but because it would be of use in identifying the type of parasite. The author would do well to fortify his position in this direction, for it must be remembered that concurrence does not always mean cause and effect, and that possibly the same argument which he has so successfully used against Giles's conclusions might be with equal justice advanced against his own. We confess, although we are inclined to believe that kala-azar is a malarial disease, that we should have liked to see a more complete study of one or two instances of the disease from beginning to end, comprising a daily examination of the blood parasites. Until this has been done it is impossible to feel quite satisfied that the kala-azar problem has been solved, and that kala-azar may not be a new disease *plus* malaria. Meanwhile, we have to thank Surgeon-Captain Rogers for much valuable information.

NEUE UNTERSUCHUNGEN ZUR POCKEN-UND-IMPFRAGE. [Small-pox and Vaccination; new Investigations.] Von Dr. Med. H. BOEING. Berlin: S. Karger; Glasgow: F. Bauermeister. 1897. (Royal 8vo, pp. 202. 5s.)

THIS book is a consequence of the debates in the Reichstag last year, when an attempt was made to obtain a fresh Commission on Vaccination; and as it is likely to afford weapons for the antivaccinationist arsenal, it may be well to indicate in the first place the line of argument upon which the author chiefly relies. The author, who sat on the Commission of 1884, says in this book that Jenner's discovery has been "a benefit to humanity," and that "the laurel wreath which many thankful nations have placed on Jenner's brow has been well deserved"; but he is doubtful whether compulsory vaccination is necessary, and asserts that the effects of vaccination early in this century have been greatly exaggerated. Dr. BOEING would place his main reliance on isolation of cases, with disinfection. The book consists for the most part of a minute examination of the statistics (especially in Swedish) put forward last year by the Gesundheitsamte, together with a detailed examination of the way in which small-pox was regarded and treated in the eighteenth century, taken chiefly from *Juncker's Archiv*. At that time small-pox was considered inevitable in children, hence no attempts at isolation were made, and in fact a sort of fatalism overspread all ranks of society. The disease was even bought from a favourable case: "Sell me twopenny-worth of your small-pox, and the healthy child received a crust from a small-pox scab, and closed his hand on it." Juncker initiated efforts towards isolating patients, and towards the end of the century the world was waking up to the recognition that, after all, it was not an immutable law of Nature that everyone should have small-pox. The conditions of life among the peasantry also improved. Under better

treatment small pox began to decline, and just then came the discovery of Jenner, and got more than its due share of credit. According to Boeing, the decline in Sweden was as far as a sixth, while the vaccinations could only have caused a decline of one half. Such is the argument, most ably and temperately put forward. In Germany they have had no extensive outbreak of small-pox for twenty-five years, so the argument may appear stronger to a German than to an Englishman; for in England this argument loses most of its force by the mere mention of Sheffield and Gloucester. Dr. Boeing's graphic representation of small-pox in Sweden on p. 21 is not quite fair. The waves of epidemic outbreaks are drawn as steadily lowering down to 1809, so as to support the argument, but the outbreak of 1800 does not get due recognition. The author unflinchingly exposes several errors of antivaccinists, and, on the whole, is a prophet of the stamp of Balaam. The immense importance of revaccination is brought out. Various other statistics—Prussian army, Munich, Scotland—are examined. In conclusion, Dr. Boeing thinks that compulsory vaccination is not required, except during epidemics; but he would have vaccination optional. This conclusion is not in accordance with the facts brought out by himself.

Le Phénomène de l'Agglutination des Microbes et ses Applications à la Pathologie. Par le Dr. Raoul Bensaude. Paris: George Carré et C. Naud. 1897. (Super roy. 8vo, pp. 304. Fr. 12.)

Among the many subjects discussed at the recent medical congresses, whether in Europe, in the United States, or in Canada, none perhaps received so much attention as the question of serum diagnosis. Thousands of cases were brought forward and the value of the reaction was further emphasised. At the same time a few more anomalous instances of the failure of the test were put on record, which served the purpose of making the investigator more careful, but did not detract from the broad fact of the agglutinating property of certain serums or of the importance of this in the diagnosis of certain fevers.

A work, therefore, like the present, clearly written, fairly concise, and well printed, in which is collected most of that which has been done by researchers in this particular field, and to which is added a considerable number of further examples of the importance of the phenomenon of agglutination in diagnosis, cannot fail to be of use and interest.

M. Bensaude prefaces his work with an historical survey of the whole subject and then proceeds to divide his matter into, first, the application of the phenomenon of agglutination in typhoid and other infective processes; and secondly, into an inquiry into the nature of the agglutinating substance.

In the historical survey he mentions the observations of Charrin and Roger, Pfeiffer, Metchnikoff, and Baudet, upon the behaviour of certain pathogenic organisms in the presence of serum derived from animals rendered immune to these same organisms. He then brings us to the year 1896, when Gruber and Durham described the now familiar heaping together of typhoid and cholera bacilli when treated with typhoid and cholera serum. Up to this point research had shown the value of the method for testing particular organisms. The next step was to prove the value of the same organisms in testing particular diseases. M. Bensaude gives the credit of this far-reaching discovery to Widal, mentioning that Widal's reaction was confirmed amongst others by Grünbaum in this country. But earlier in the year Gruber had himself, at the Wiesbaden Congress, pointed out the service the reaction would render as a means of diagnosis for typhoid fever, whilst at the same time Grünbaum, working in his laboratory, had practically applied the test. The merit of the discovery belongs to Gruber and Grünbaum, but the energy of Widal in making the test rapidly known deserves great credit.

Under technique, the author recommends a dilution of 1 in 10, kept under observation for half an hour, but he lays stress upon the importance of several examinations, and other degrees of dilution when in doubt. For the reaction to be decisive the field of the microscope must be "placarded with heaps like islands in an archipelago."

In choosing the particular stock of the bacillus of Eberth he selects one which readily agglutinates, but he does not think that great differences in this respect exist between the various samples of bacilli. In discussing the practical value of the method the author endeavours to answer the two principal questions: (1) Does the absence of the agglutinating reaction finally exclude the diagnosis of typhoid fever? (2) Does the presence of the reaction always indicate typhoid? The author analyses his own cases. He found that the reaction appeared before the eighth day in 23 out of 52 cases. In 45 hospital cases the reaction was present on the day of entry into the hospital. In 2 cases out of 83 the reaction was retarded.

He concludes, with Widal, in answer to the first question, that absence of reaction, especially later on in the course of the disease, indicates a strong probability that typhoid is absent, but that before finally concluding several trials at different dates should be made.

In answering the second question, he admits that a very few cases exist where a positive reaction has occurred in the absence of typhoid; but there is also the possibility of a previous unrecognised attack of typhoid, having left a long-persisting reaction. "In the great majority of cases the agglutinating power of typhoid blood exceeds 1 in 50, and can reach 1 in 500, 1 in 2,000, or even more; in normal subjects or in those not having typhoid it is *nil*, or does not attain 1 in 10."

Very instructive clinical cases are detailed in answering both questions and in proving the utility of the reaction. A very considerable portion of the book is devoted to examining the value of the reaction in diseases other than typhoid—namely, cholera, Malta fever, plague, pneumonia, streptococcus infections, tetanus, glanders, diphtheria, and other infective processes. Arloing found that the serum of animals immunised with the pneumo-bacillus bovis produced agglutination. This is interesting in view of Wyatt Johnston's observations in Canada in regard to the organism of Picton cattle disease.

Lastly, the author touches upon the nature of the agglutinating substance, and records the various observations which show the resisting properties of this body to sunlight, temperature, drying, etc. But it is very evident that this is the part of the subject that we know least about.

Handbuch der Anatomie des Menschen. Herausgegeben von Professor Dr. Karl von Bardeleben, in Jena. Siebenter Band: Zweiter Teil: Zweite Abteilung. Harn- und Geschlechtorgane. Die Muskeln und Fascien des Beckenausganges. (Männlicher und weiblicher Damm), von Professor Dr. M. Holl, in Graz. Mit. 34 Original-Abbildungen im Text. [Handbook of Human Anatomy, Vol. vii, Part 2, Section II. The Muscles and Fasciæ of the Pelvis—the Male and Female Perineum]. 34 Illustrations. Jena: Gustav Fischer. 1897. (Roy. 8vo., pp. 161-300. M. 5.)

This instalment of Professor von Bardeleben's treatise on anatomy deals with the muscles and fasciæ of the true pelvis. The general arrangement of the pelvic muscles is first described, and then follows a detailed description of the individual muscles and fasciæ, the first section dealing with the former and the second section with the latter.

The muscles of the male pelvis are divided into four groups; the first comprises the muscles of the caudal extremity of the vertebral column or those of the rectal portion of the pelvic diaphragm; the second the muscle of the anus or the external sphincter ani; the third the muscles of the urinogenital region; and the fourth those of the urogenital diaphragm.

In the first group Holl describes the M. ischiococcygeus or the coccygeus and the levator ani of English anatomists, which is divided up into three segments, to which the terms M. iliococcygeus, M. pubococcygeus, and M. puborectalis are applied. The levator prostatæ is called the "pars urethralis des menschlichen afterhebers." The muscles of the urinogenital region are divided into the M. transversus perinei superficialis, ischiocavernosus, bulbocavernosus, ischiobulbosus, compressor bulbi proprius, constrictor radicis penis,

and compressor hemisphærium bulbi. The muscles of the urino-genital diaphragm are named M. ischiopubicus transversus perinei profundus, compressor gland Cowperi, sphincter urethræ membranaceæ, and sphincter urethræ prostaticæ. The method of description of the muscles and the nomenclature follow the lines which have been recommended by the Committee of the German Anatomical Society. The musculature of the female pelvis is described in a similar manner, the muscles being divided into four groups. The description of the anatomy of the muscles is complete, and is supplemented by a number of woodcuts nearly all of which are original.

Next Holl gives an account of the homologies and the phylogenesis of the different muscles of the pelvis. The first section concludes with an account of the unstriped muscles and the elastic tissues of the pelvic outlet. The second section is devoted to a consideration of the fasciæ of the true pelvis. The fascial coverings of the different muscles which have been already described in connection with the pelvis is first given, then a detailed description of the fasciæ as seen from the perineal aspect, and finally a description of the fasciæ when they are viewed from above or from the abdominal aspect. A bibliography of the important works which have been published on the subject of pelvic anatomy completes the fasciculus.

This section maintains the standard which has been set in the previous portions which have appeared, and it can be recommended to anatomists as presenting a complete account of our knowledge of the anatomy of the pelvic muscles and fasciæ.

PAPERS PRINTED TO COMMEMORATE THE INCORPORATION OF THE UNIVERSITY COLLEGE OF SHEFFIELD. Contributed by Members of the College. Printed for Private Distribution. 1897. (Octavo, pp. 288, with 15 plates.)

THE Editing Committee of this handsome volume state in a preface that the papers which it contains are printed in commemoration of the foundation of University College, Sheffield, by Royal Charter and the incorporation in it of Firth College, the Sheffield Technical School, and the Sheffield School of Medicine as the Faculties of Arts and Science, Technology and Medicine. The volume is intended for private distribution only, and is presented as an earnest that the new College may in the future be distinguished, not only for the students it has trained, but also as a place for the advancement of knowledge. The papers are arranged in three classes. Part I contains contributions to mathematical and physical science, Part II biological science, and Part III miscellaneous papers. The papers on biology are the most interesting to students of medicine, but amongst the miscellaneous papers is an interesting one by Mr. Moore Smith on the older and more interesting books in the College Library. It is illustrated with two plates of the commoner kind of stamped pigskin bindings of the sixteenth and seventeenth centuries, and it shows that the library contains no fewer than twenty official publications of the Revolutionary period in France.

The essay by Dr. Addison, the newly-appointed Arthur Jackson Professor of Anatomy, is particularly valuable, and and is evidently the outcome of a long course of careful and accurate observation. It deals with the Shape and Position of the Pancreas and Adjoining Viscera—a subject of great practical importance, and one in which it is evident that there still remains much to be done.

TRAITÉ DE MÉDECINE ET DE THÉRAPEUTIQUE. Publié sous la direction de MM. P. BROUARDEL et A. GILBERT. Tome quatrième. Maladies du Tube Digestif; Maladies du Péritoine. Paris: J. B. Baillière et Fils. 1897. (Roy. 8vo, pp. 822. Fr. 12.)

IN this volume the maladies of the mouth and pharynx are treated by Drs. Teissier and Roque, and are adequately described. The section on the pharynx, which gives more scope to the authors, is excellent, bucco-pharyngeal tuberculosis and other important recent work of the kind being well represented.

The next chapter is devoted to the diseases of the œsophagus. The question of the respective shares of this tube and of the orifice of the stomach in the generation of cancer are not discussed, so far as we can see; but as usual in French medical works there is no index.

Diseases of the stomach are confided to the able hands of Hayem and Lion. In a careful and interesting introduction the methods of exploration of the stomach—the physical and chemical—are given with the fulness we should expect; and this part of the article is very valuable, as indeed is the whole of the chapter. The pathology of the several forms of gastritis are well done and illustrated by microscopic sections taken from various parts of the viscus. The article concludes with a section on neuroses of the stomach. Dyspepsia is carried off to a later place, being delayed until the intestinal disorders are dealt with, so that dyspepsia may be treated as a whole—as a gastro-intestinal condition. M. Laboulbène is the author of the chapter on intestinal worms, and his name is a sufficient guarantee of the completeness of this section.

In the article on the peritoneum M. Dupré discusses the question of primary malignant disease in a competent and interesting manner; and M. Galliard enters into the difficult subject of chronic disorders of the colon with much ingenuity and fulness of knowledge. The dyspepsia and diarrhœa of children are discussed by MM. Hutinel and Thiercelin in a separate section, a very convenient plan for clinical reasons.

In all these sections this work maintains its own standard of excellence, and although we have recently had the advantage of the well-known *Charcot and Bouchard*, the last volume of which only appeared in 1894, yet in a science such as medicine, which happily is quickly progressive, this new treatise may be welcome; certainly it is no wit inferior to its admirable predecessors.

These serious works of the French school are most stimulating in their merits and in their faults. We cannot recommend them without reserve to the young student, but to the experienced physician they are full of interest. French writers on medicine for the most part are over subtle, too ingenious in speculation; and the reader, fascinated by these qualities and by the lucid methods of presentation in which our neighbours are so adept, believes himself prematurely to be in possession of solutions of some of the most difficult problems in medicine; and it is with pain and difficulty that too often he has to part with hypotheses which stimulate thought but are not prepared to stand the wear and tear of practical application. At the same time such brilliant surveys of the field of medicine are invaluable to the cautious and wary thinker, as they supply that theoretical side and that regard for form in which our own physicians are too often wanting.

As we have said, the main fault of the work is that, like *Charcot and Bouchard*, it contains no indexes, and thus is almost useless as a work of reference. In works of these dimensions this is a great fault, and we trust that the services of a good indexer may be secured in order to append to the last volume full indexes, both of authors and of matter. On two occasions we have had to lay these volumes aside without being able to light upon the subject to which we would have referred.

NOTES ON BOOKS.

Convergent Strabismus and its Treatment. An Essay. By EDWIN HOLTHOUSE, M.A., F.R.C.S. (London: J. and A. Churchill. 1897. Demy 8vo., pp. 190. 6s.)—This book consists of a somewhat lengthy dissertation on the subject of convergent strabismus, and is based on the study of 144 cases, of which 142 were hypermetropes and 2 myopes. A system of tables is drawn up from which the conclusions are drawn, and at the end of each section these conclusions are arranged in order. The causes of the bad vision in so many cases of strabismus are elaborately gone into, and the author is led to the conclusion that in most cases, if not in all, a congenital defect must be held to be accountable for the amblyopia, as in a large number both eyes are affected, although it may be much more marked in one than in the other. He does not think that by exercise the more amblyopic eye is likely to be very greatly benefited, certainly not to be made to come

up to the normal acuteness of vision. This explanation he considers will not account for the cases of alternating strabismus in which both eyes see equally well and have practically no refractive error. In these he holds "that it is probably caused by those infantile disorders which set up nervous disturbance, especially such as are connected with dentition." Rules are laid down for treatment by glasses or by operation according to the degree of the squint. It can hardly be said that many new features of the affection are brought to light as the result of the research, and the constant tables that are encountered are perhaps slightly perplexing and tend to give the reader the idea that the matter is somewhat spun out. However, the book is a careful compilation of facts observed in the treatment of a large number of cases, and will, we feel sure, be of assistance to those who wish to go carefully into the question for statistical and other purposes.

The Bower Manuscript. Edited by A. F. Hoernlé, Ph.D., Principal, Calcutta Madrasah. Parts III to VII, in one vol. (Calcutta: Office of Government Printing, India.)—The circumstances of discovery and the character of the contents of this interesting manuscript have been indicated in a previous volume of the Journal.[1] The present instalment, the third, completes the text, and the reproduction, transliteration, translation, and annotation are executed by Dr. Hoernlé with the same industry, accuracy, and erudition as the former portion. Looking to the mutilated and time-worn character of the leaves, the result of his labours is simply marvellous. A concluding part containing an introduction dealing with the history of the manuscripts, their age, contents, etc., and indices is promised. The work is published as an issue of the Archæological Survey of India (new Imperial series), and will when completed constitute a most valuable record.

REPORTS AND ANALYSES

DIASTOL.

A further sample of diastol, prepared by the Standard Malt Extract Company, has been examined with regard to its diastatic power, and the following is the analyst's report: Diastol, Standard brand: When heated with an excess of soluble starch for one hour at 70° C., it forms 2.9 times its weight of maltose, while when similarly heated with soluble starch at 60° C., 8.4 times its weight of maltose is produced. As during the process of diastatic starch inversion dextrine is formed besides maltose, it follows that the starch-inverting power of diastol is larger than is expressed by the above figures. It follows further that at a temperature of 60° C. nearly three times as much maltose is produced as at 70° C.

PARAHYDROPIN.

Messrs. Lorimer and Co., Britannia Row, Islington, N., have introduced under the name of "parahydropin" a mixture of theobromine, spartein sulphate, calomel, and camphor, and they claim for this preparation that it acts regularly and definitely by reason of the purity of its components. Theobromine is allied to caffeine, being chemically viewed as dimethyl-xanthine, and caffeine as trimethyl-xanthine. This difference in chemical composition renders theobromine less apt to affect the nervous system and cause sleeplessness than caffeine. Spartein is a valuable diuretic, not cumulative, definite in composition, and superior to the galenical preparation of the broom-cytisus scoparius. Parahydropin is a white insoluble power, and is best administered in the form of cachet.

HYPODERMULES.

With reference to the system of hypodermic medication described under this title in the British Medical Journal of January 15th, page 156, Mr. George Lunan, pharmaceutical chemist (Edinburgh), writes: At the suggestion of Dr. Graham Brown, of Edinburgh, I prepared similar tubes and filled them with sterilised solutions for hypodermic exhibition more than eight months ago. Further, I believe that this form of exhibiting sterile solutions for hypodermic purposes has been in use on the Continent for some years.

[1] *Vide* Archæologica Medica, British Medical Journal, June 1st, 1895, p. 1216.

THE GENERAL MEDICAL COUNCIL ELECTION.

The following correspondence relates to a charge made during the course of the recent debate on the conduct of the Reference Committee of unduly condensing a report of a meeting held in Manchester for the promotion of Mr. Victor Horsley's candidature for a seat on the General Medical Council: [Copy.]

The British Medical Journal, 429, Strand, W.C.,
January 28th, 1898.

Sir,—In the speech delivered by you at the meeting of Council on January 19th, in moving the resolution condemning the action of the Reference Committee in allowing the Journal to be used officially in furthering the interests of a particular candidate for a seat on the General Medical Council, there occurs, according to the report in the British Medical Journal of January 29th, p. 312, of which a proof was sent to you, the following passage:

> "We had a meeting in support of Mr. Victor Horsley's candidature in Manchester, a largely attended meeting—I am told a better meeting than you had in support of Sir Walter Foster, but you did not devote in the Journal half the space to the report of that meeting which you did to that of Sir Walter Foster, and you have no excuse, because at the request of this office, I personally paid 2 guineas to a local reporter, who sent you a verbatim report of every speech made. Of course an hour's speech by Mr Horsley, and other speeches of greater or less length in his support, could be condensed in a way that was not possible to a meeting called in support of another candidate."

I presume this refers to the report of the meeting held in support of Mr. Victor Horsley's candidature in Manchester on September 21st, 1897. I was Acting Editor of the Journal at that time, and I beg leave to inform you that no condensation of the kind implied in the above statement was made by me or by anyone else in this office. The report sent by the local reporter whom (through the Assistant Secretary) I asked Dr. Brassey Brierley to engage on behalf of the Journal, was published exactly as sent, with the exception of thirty-eight words containing a somewhat personal reference to Dr. Rentoul, the omission of which in no way altered the sense of the speech in which they occurred. The only other alteration made in the report was that the words "get at these legislators" were changed to "influence these legislators."

I have the honour to forward for your inspection the transcript of the local reporter's notes as it was received. If you will compare it with the report published in the British Medical Journal of September 25th, 1897, p. 835, you will see that it was not condensed in the way you suggest.—I remain, Sir, your obedient servant,

(Signed) C. Louis Taylor.

Sam. Woodcock, Esq., M.D., J.P.

[Copy.] Old Trafford, Manchester,
January 29th, 1898.

Dear Sir,—I beg to thank you for your letter and enclosure. I am very sorry to have done you an injustice. It is, however, quite evident that you were in no way responsible for the abridgment of the report of Mr. Horsley's Manchester meeting on September 21st.

Dr. Brierley agrees with me that the report sent to you, and which you are kind enough to submit for my inspection now, was not as full as we expected it to be from the instructions given to the reporter by our Committee.

I have no hesitation whatever in accepting your disclaimer, and I trust you will have none in accepting this expression of my regret.—I am, dear Sir, yours faithfully,

Louis Taylor, Esq. (Signed) Sam. Woodcock.

Corrections.

Dr. Michael Beverley desires to correct the report of a remark made by him during the discussion in the Council with regard to the action of the President of Council and the Journal during the recent election to the General Medical Council. On page 309 Dr. Beverley, in reply to an intervention by the President of Council, is reported to have said, "If people are not ready to accept my word." He desires to correct this to, "If the President is not ready to accept my word."

In the same report, page 310, left-hand column, lines 29 and 30 were accidentally transposed. They should have read:—"was passed. This letter is as follows: 83A, Edmund Street, Birmingham, September 27th, 1897. Dear Sir, I shall be greatly"

NAVAL AND MILITARY MEDICAL SERVICES.

DISTRIBUTION OF PRIZES AT THE ARMY MEDICAL SCHOOL, NETLEY.

The prizes won in the recent examinations for the Army Medical Staff were presented on January 31st by General Sir Henry W. Norman, at the Army Medical School at Netley. The following is the list of surgeons on probation of the Medical Staff of the British Army who were successful at both the London and Netley examinations:

ARMY MEDICAL SERVICE.

	Marks.		Marks.
*H. O. B. Browne Mason ...	5,322	A. H. O Young	3,996
†F. S. Penny, ...	5,999	E. A. Bourke	3,866
B Watts	4,756	M. M. Lowsley	3,597
H. G. Martin	4,519	A. C. Lupton	3,520
J. G. Berne	4,221	G. B. Carter	3,497
F. F. Carroll	4,123	N. H. Ross	3,493
J. D. G. Macpherson ...	4,069	P. H Collingwood ...	3,120
W. P. Gwynn	4,055	C. J. O'Gorman	3,795
S. de C. O'Grady ...	4,020		

INDIAN MEDICAL SERVICE.

	Marks.		Marks.
‡T. H. Delaney	5,754	S. Hunt	4,844
§J. W. F. Rait	5,619	A. G. Sargent	4,784
S. R. Douglas	5,466	W. H. Cox	4,799
‖E. J. O'Meara	5,392	de V. Condon	4,740
¶G. Tate	5,072	H A. J. Gidney	4,641
R F. Baird...	5,050	H. Kirkpatrick	4,619
A. T. Gage	4,892	F. D. S. Fayrer	4,432
G. C. Laing...	4,857	P. H. Chitale	4 421
G. Macpherson	4,851	W. Lethbridge	4,115

* Gained the MacLean Prize for Clinical and Ward Work.
† Gained the Pathology and Parkes Memorial Bronze Medal.
‡ Gained the Pathology and Herbert Prizes.
§ Gained the Montefiore Medal and Prize of 20 guineas, and the De Chaumont Prize in Hygiene.
‖ Gained the Martin Memorial Gold Medal.
¶ Gained the second Montefiore Prize in Surgery.

Sir Henry Norman, in presenting the prizes, urged the recipients not to consider that they had learned everything they ought to know, for there were matters which would come under their notice from which they would derive more knowledge every day of their career. He referred to the great progress that had been made in the Army Medical Service of Japan in recent years, and said Japan was as well up in surgical knowledge as any European country.

Sir Joseph Fayrer, Bart., K.C.S.I., said that he had been asked unexpectedly to perform a duty, which, however, was a very agreeable one, for he felt that there should be no difficulty in offering to the successful candidates his congratulations upon having won a prize, for such it was to have gained their commissions and brought their long and arduous studies to a successful termination. He congratulated those who had won prizes in particular subjects, but it was not necessary for him to remind them that those prizes should be looked upon not as merely testimonials of success and hard work, but as incentives to continue to work in the same earnest way, and to emulate the lives and work of those distinguished men whose names those prizes bore. Sir Henry Norman, in speaking about the progressive changes which had taken place in the medical officers and their work, had referred to the long and distinguished career of a medical officer, which had begun with a battle in the Peninsular War and ended with the siege of Delhi, and suggested to you what changes and developments he must have seen in the Medical Service. "I also," Sir Joseph Fayrer continued, "can say to you that it is rather more than fifty years since I occupied the position in which you are now, but under what different circumstances! I think of the advantages you have compared with the few that I had! I know of no young men who have undergone so complete a system of culture and training for the work that lies before them as that which you have enjoyed in the pursuit of your medical studies before you came here, and its continuance under the able professors of this school, where you have learnt to concentrate all your energies upon the special subjects which are to be your pursuit in future. I am now referring especially to your service in India, for whether you belong to the Indian service or not, to India you will have to go sooner or later. Those of you who are directly bound for India will become acquainted with that great empire at a peculiarly interesting stage of its history. Never, probably, since the times of the Israelitish exodus has any nation been more afflicted than has India during the last year; war, pestilence, famine, sedition, murder have all been there, and they have as yet by no means ceased. However, let us hope that the influence of a strong and wise Government will subdue it all, and as far as pestilence and the effects of famine are concerned that you, with your colleagues in India, will form no small element in their subjugation." In India, he continued, there was an enormous field for work; whole provinces of knowledge in that country were still open to exploration and research. Great problems concerning the causation and diffusion of disease were still unsolved. He invited them not to commit themselves too early to hypotheses which it might grieve them afterwards to be obliged to abandon, but to go on investigating, storing up knowledge for future use. No one, he said, held these questions in higher repute or more thoroughly recognised their value than he, but he earnestly entreated them not to concentrate their attention solely on one thing, neglecting perhaps thereby all the other conditions, statical and dynamical, that might be of greater or equal importance. Sir Joseph Fayrer then referred to the dissatisfaction which seemed to be general with reference to the position of the medical services. "While this," he said, "is a subject of general conversation, and is discussed in almost every newspaper, it would be mere affectation to pass it over. I have less hesitation in alluding to it, since there seems to be reason for hoping that the difficulties which still stand in the way will ere long be modified, if not altogether removed. Whatever may be the merits or demerits of the case, I need not remind you that no consideration arising out of this question should be allowed to interfere with your duties and responsibilities as medical officers. You may depend on it that sooner or later all will be well. It seldom happens in this country that any real grievance is not ultimately rectified, and so it will be with this. Withal, the Service is an excellent one; it holds out the prospect of doing useful and honourable work and of ensuring a fair provision, if not wealth.

A vote of thanks to Sir Henry Norman was adopted on the motion of the Director General.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel W. H. McNamara will join the staff of Major-General W. F. Gatacre, C.B., D.S.O., who has left England to assume command of the British troops with the Nile Expedition. Brigade-Surgeon-Lieutenant-Colonel McNamara has been serving in Egypt since the close of 1895, previous to which he was in command of the Training School at Aldershot. He had already seen service in Egypt, having been in the war of 1882, including the battle of Tel-el-Kebir, and being in possession of a medal with clasp and the Khedive's bronze star for that campaign.

Deputy-Surgeon-General William Ord-Mackenzie, M.D., late 3rd Hussars, of 37, Belsize Park Gardens, N.W., and Culbo, Ross-shire, died on January 26th. He was appointed Assistant-Surgeon, January 4th, 1839; Surgeon, January 8th, 1847; Surgeon-Major, January 4th, 1859; and Honorary-Deputy-Surgeon-General on retirement on half-pay, February 13th, 1866.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant Henry A. D. Dickson, F.R.C.S., L.R.C.P., Bengal Establishment, died at Sandgate on January 27th, aged 27. He was the third son of the late Rev. George D. W. Dickson, M.A., Vicar of King's Somborne, Hants, and entered the service as Surgeon-Lieutenant, July 29th, 1896.

ARMY MEDICAL RESERVE.

Surgeon-Major W. H. B. Crockwell, having resigned his appointment in the Volunteer Medical Staff Corps, ceases to belong to the Army Medical Reserve, February 2nd.

Surgeon-Major John Sutcliffe resigns his commission, February 2nd.

THE VOLUNTEERS.

The under-mentioned officers have resigned their commissions, February 2nd: Surgeon Captain I. Scarth, M.B., 2nd Middlesex Artillery; Surgeon-Lieutenant T. Easton, M.D., 1st Ayrshire and Galloway Artillery; Surgeon-Lieutenant W. Griffiths, M.D., 5th (West) Middlesex Rifles.

The following gentlemen have been appointed Surgeon-Lieutenants in the corps specified, February 2nd: Leonard A. Bidwell, 2nd Middlesex Artillery; John E. Bates, M.B., 2nd Volunteer Battalion the East Surrey Regiment; Frederick S. Hogg, 20th Middlesex (Artists') Rifles.

Surgeon-Captain J. J. de Z. Marshall, from the 1st Cinque Ports Volunteer Rifle Corps, is appointed Surgeon-Captain in the 3rd Volunteer Battalion the East Surrey Regiment, February 2nd.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 5th, 1898.

LUNACY LEGISLATION IN IRELAND.

There is a prevailing impression in Ireland that the forthcoming proposals of the Ministry with regard to Local Government legislation will include a revisal of the laws pertaining to lunacy. It is true, however, that the Ministry has not pledged itself to legislate on the subject, which is, we fear, too large and too difficult to be dealt with in an "omnibus" Bill.

The comments of the lay press are of some value as showing the state of public opinion. One of the Nationalist newspapers understands that it is intended to commit lunacy matters to the care of a strong Board, and protests against the further development of Irish Boards. Another newspaper, which represents the opposite political views, advocates a return to the suggestion made by the Trench Commission, of placing the administration of lunacy in the hands of the Local Government Board, and commits itself to this most unfortunate statement: "The insane poor of our asylums are the same as the pauper inmates of workhouses." Of course, in every civilised country nowadays the insane are recognised as being sick, but to brand the inmates of Irish asylums as paupers is particularly unhappy, since, unlike the majority of English county asylum patients, they are not even paupers in the legal acceptation of the term.

On the other hand, our contemporary the *Irish Times* strongly presses the views set forth in the report of the Commission presided over by Sir Arthur Mitchell—a document no doubt able and useful in many ways, but in other ways so little adapted to the particular wants of the country as to call forth when it was published a strong protest from the Irish judicial Bench. The writer in the *Irish Times* appears to put forward the strictly official view of the lunacy question; he sighs for a "strong" central Board, and seems to think that the Lunacy Commissioners' functions ought to include the personal conduct of the proceedings of the asylum committees—a notion very repellent to English ideas either of local government or of good management. It is hard to see why a "strong" central Board should be specially wanted in Ireland, or, if it be wanted, it is impossible to see how the wit of man could frame anything stronger than the departmental control which has heretofore been exercised over the asylums. Under the existing laws the Lord Lieutenant appoints the Governors (Committeemen) of asylums; and, although he has of late years accepted the nominations of local bodies for a proportion of members, his advisers have always the power of tuning the Committees as they please. The medical superintendents of the asylums are appointed by the Lord Lieutenant, and the officers of the asylum can be appointed only with his sanction. The duties of the Governors and the mode of management of the asylums are strictly laid down in a common body of rules, not drawn up by Governors or Superintendents, but by the advisers of the Privy Council, and adopted by the Lord Lieutenant. But the power of spending money, except on maintenance, and even then under limits, is not given to the local bodies (Boards of Governors). The property on which a district asylum is built, and all its structures, are vested in a Central Board, called the Board of Control, appointed wholly by the Lord Lieutenant, and having among its members the two Inspectors of Lunatics in Ireland. The function of this body is to provide accommodation for the lunatic poor, to build, alter, and add to asylums. It is entirely a Government Board, and, once constituted, does not appear to be responsible either to Parliament or even to the Lord Lieutenant. It is not easy to imagine how any measure of local Government likely to be adopted in modern times could organise anything "stronger" than the departmental power thus secured. But in its apparent strength lies its real weakness. The fact is that a bureau is always feeble in a country possessing any measure of self-government. A bureau, being conscious that it is not representative, and that an attack upon it will always be popular, is by its very nature timid, and unable to advance. It always keeps well in the rear of popular opinion, hoping to secure its own safety.

It is no answer to this to say that in certain very bureaucratic countries many public affairs are well managed. In such countries there is not the clashing of popular representation, and a bureau, if intelligent and free, may be truly strong. Probably the arrangements of lunacy affairs in Germany are too bureaucratic for English ideas, but every teaching centre in Germany has its psychiatric clinic, maintained at a great expense for the mere purpose of teaching. The London County Council was the first body in these islands to improve upon the example set by the old Committee at Wakefield and to give material assistance to learning and teaching in relation to mental disease. A bureau in England would have feared the accusation of wasting the ratepayers' money if it attempted such a step.

The endeavour to manage the Irish public asylums on bureaucratic lines has so notoriously failed, however, that we cannot think any Government will try to re-establish this system. In the capitation grant of 4s. a week for each non-paying patient, the Government possesses a weapon quite strong enough for any purpose. Instead of defending antiquated methods and bolstering up mere officialism, the Government should say: "We require a certain standard of humane care for the afflicted poor, who being, through their infirmity, unable to provide for themselves or even to make their voices heard, must be regarded as the wards of the people and the children of the State. We fully recognise the right of popular and local control, but we claim the exercise of our power to withhold the State contribution unless our standard is maintained."

Beyond and outside this power the Government should

interfere as little as possible with the management of the affairs of individual asylums. The Irish commissioners or inspectors, by whatever name they may be called, will always be able to exercise vast powers in educating popular opinion and in advising Government. If they were once freed from the cares of executive work at present thrown upon them, and if they built up their activity upon the bottom rock of care for the insane, their position would be unassailable, and their influence for good immense. At present, with two medical men at the helm of lunacy affairs, Ireland presents the melancholy spectacle of being the most backward country in Europe in everything connected with the science of psychiatry. In a country where an enlightened bureau rules supreme, we should expect that clinical teaching and pathological research would attain a high perfection. Have they done so in Ireland?

Again, what about the proper nursing of the insane? Why was that not inaugurated where central control is supreme? Or does the central body here wait, as the Irish Local Government Board does, till public opinion is stimulated by protests from outside before it ventures to express its long-cherished convictions?

In such details, hitherto appropriated by the department, as the construction and enlargement of asylums, we cannot help thinking that a healthy rivalry between individual districts is the best thing in the long run, and we cannot believe that the Irish have so large a dose of original sin that they are quite beyond the influence of such feelings. We see the example of Scotland, where, with the maximum of freedom from departmental control, local committees have taken and kept the lead in the United Kingdom in the designing of asylums, and we find that the Committee of the Edinburgh District, leaving penultimate methods, even though these were Scotch, have now adopted for their new asylum the Alt-Scherbitz plan, which thoughtful observers have for some time recognised as the type of asylum construction which will ere long probably become universal. We have never heard of anything new in the way of plans originating in Ireland, nor has anything been adopted there that has not stood the test of time.

Who can doubt that if poverty-stricken Irish local bodies had had the control of their own affairs they would have adopted long since some modification of those systems of boarding out which have found favour in some of the wealthiest and most enlightened countries in Europe—Belgium, Scotland, France, and Germany? Were such methods too troublesome for the bureau to work, or, if the Prussian mode were to be adopted, would they confer too much power upon the local authority? As economy would have been popular, we must suppose there was some reason sufficiently strong to persuade the official mind against the adoption of boarding-out.

An intelligent department should see that the question of boarding-out is one of vast importance, since in a country so poor as Ireland, unless some saving can be effected, it will be impossible to obtain the money required for the modern treatment of that class of the insane, whom it is important to study and to treat.

The law with reference to the admission and discharge of patients is in a very confused and imperfect state. Patients are generally arrested by the police, tried in the magistrates' courts, and committed by warrants to the asylum. The effect of this proceeding upon sensitive melancholics may be imagined! Though the Government regulations lay down other methods of admission, the zeal of the police appears to be irrepressible, for, while everybody, from the inspectors down, complains of this mode of admission it continues the prevalent one.

There is, it may be said, no provision for middle-class patients in Ireland, and the rules as to the admission of paying patients to the public asylums are such that they produce no appreciable relief to the rates or to the class intended to be benefited. Save the tiny Stewart Institution near Dublin there is no special provision for idiots in Ireland, which is probably behind every other European country in this respect. There is a statute permitting the erection and institution of provincial asylums for imbeciles, which perhaps might have been utilised for the foundation of idiot asylums, but nobody seems to have thought it worth while to set the machinery in operation.

All the details of admissions, certifications, discharges, and so forth, can easily be dealt with in a Bill such as the Lord Chancellor would introduce into the House of Lords if the matter were an English one. These matters are probably safe in the hands of the Irish Chancellor, Lord Ashbourne, who has shown much interest in the insane, and who may be trusted not to add to the present confusion by attempting legislative enactments which will not fit the conditions of the common law of the country.

The real difficulty arises in the complicated relations that are sure to exist between the new local bodies and the outgoing depositories of power. It is earnestly to be hoped that the unhappy lunatics will not between the two be treated as the mere pawns in a political game.

The central authority, under medical guidance, should labour to efface the old superstition so prevalent everywhere where education has been neglected, that there is something mysterious and incomprehensible about insanity, should heartily endeavour to combat that profound disbelief in the methods of medicine with which the official mind has always at first met and checked every advance in public hygiene. Then the Irish asylums, officered with earnest medical men, whose interest and pleasure it would be to go ahead, would fall into line with the noble work being done in London and Edinburgh, work by and through which, unless all our science is an imposture, and our art a fraud, knowledge must sooner or later be advanced, and with the advance of knowledge must be obtained that power of alleviating suffering and checking the spread of disease, which is the goal of all our efforts, and the sole sanction for the great claims that we make upon public charity. That there is in Ireland little recognition of the need of the scientific study of insanity is the natural outcome of the system under which asylums have been managed, and is the reproach of those who for the last fifty years should have been the instructors of public opinion.

DEATH FROM SUPERFICIAL BURNS.

IN these days of antisepsis, successful operating, and anti toxins, the profession must not overlook the pathology and treatment of burns. The symptomatic aspect of the subject is only too easy and evident. The wards of a general hospital seldom lack cases of burns, but many are admitted mori-

bund, to be calmed by anodynes, whilst the treatment of a bad but localised burn is fairly understood. An extensive burn, though superficial throughout, is a deadly accident. Death within forty-eight hours is highly probable if two-thirds of the surface of the body be involved, even though the burn has locally produced little more than an erythema. Hence the attention of the practitioner and hospital surgeon ought to be turned to the valuable researches of Dr. Bardeen, of Baltimore. He studied the cases of five children, between 16 months and 8 years of age, who died of extensive superficial burns. The time which elapsed between the burn and the death varied from four to nine and a half hours. All the necropsies were made very soon after death. The chief gross changes noted by the pathologist were cloudy swelling of the liver and kidney, enlargement and softening of the spleen, hyperæmia of the thoracic and abdominal organs, which in all cases was moderate, contrary to the general ideas of most surgeons, and swelling of the lymphatic glands and the gastro-intestinal lymph follicles. The larger and deeper vessels of the skin and subcutaneous tissues contained a few thrombi, but the blood showed considerable poikilocytosis, and there was marked leucocytosis, chiefly polymorphonuclear, as well. Visceral thrombotic and embolic changes were not conspicuous.

The lesions found in the lymphatic tissues were remarkable for their wide distribution throughout the body, their severity in spite of the few hours elapsing between the burn and the death, and their nature. Lymph sinuses and vessels were found greatly damaged, but the glands suffered most severely. A general œdema throughout, especially marked at the germinal centres of the lymph follicles, seemed to be the earliest stage of the process. A certain degree of venous and capillary congestion might be seen. It was at this stage, if any, that there was an increased activity in cell multiplication, and a few karyokinetic figures could usually be made out, though in the later stages they were rarely seen. Very marked degenerative changes followed in two or three hours. In the Malpighian bodies of the spleen the same morbid alterations were seen as in the follicles of the lymphatic glands. In the swollen tonsils, areas of necrosis, identical with those seen in the glands, were to be detected. Similar areas were found in the follicles of the stomach, but the most severe effects of the burn on the lymphatic system were exhibited in the intestines. The follicles, both solitary and agminated, were so swollen as to extend above the surface of the mucosa, and laterally into the adjacent membrane.

It has been taught that perforating ulceration of the duodenum is most frequent in little children, but that it is a late complication, rare till ten days after the burn. Yet Erichsen admits, though in language which implies that he thought the case extraordinary, that in a child 9 years of age, who died on the fourth day, he found an ulcer of the duodenum about the size of a shilling with sharp cut edges. Dr. Bardeen's researches make us now wonder, not that Erichsen found that deadly lesion so early, but rather that it does not appear early as a rule and far more frequently.

Dr. Bardeen also points out that the lymphatic changes must not only imply grave mechanical mischief, but also represent general infection. He insists that the changes seen in all the internal organs are very similar to those observed after fatal cases of certain fevers, the main effects of which are ascribed to toxic substances circulating in the blood. Thus these lesions of the lymphatic tissue furnish most important additional evidence of a toxæmia after superficial burns. It is highly important that the physician and surgeon should both seek enlightenment from the visceral changes observed after extensive superficial burns. The surgeon who triumphs in the field of abdominal surgery knows only too well what his great enemies are, but he needs more knowledge as to certain points in respect to sepsis, peritonitis, and paralysis of the intestine. Does tympanites with dangerous symptoms after ovariotomy mean obstruction caused by peritonitis or peritonitis caused by obstruction? Is the ugly dark vomit purely the result of intestinal irritation caused by sepsis, or does it indicate sepsis produced by intestinal changes? Lastly, may not all these conditions which harass the operator be due sometimes to damage from extensive exposure of integument and peritoneum, a damage homologous to a wide superficial burn?

[1] *Journal of Experimental Medicine*, New York, September, 1897.

THE ABUSE OF OUT-PATIENT DEPARTMENTS.

The Duke of Devonshire is so universally recognised as one of the most clear-headed of our statesmen, and one of the most experienced in affairs of all kinds, that the observations which he made at the annual dinner of the West London Hospital with regard to the question of hospital abuse will be felt to be deserving of the most serious consideration. In the course of his speech, which has been reported in full in the *Quiver* for this month, he said that he had lately seen in some of the newspapers certain statements, and that his attention had been called to the reports of the proceedings of the Hospital Reform Association, in which allegations had been made as to the existence of certain abuses mainly, if not entirely, connected with the administration of relief to outdoor patients at our hospitals. Those abuses were stated to have been and to be prejudicial to the interests of the hospitals themselves, and also to those of the medical profession as a whole.

The Duke confessed that he had not been able to give the subject the amount of attention which would justify him in attempting to form a judgment upon the allegations, but he added that he had been struck by the absence of a positive or confident denial of the truth of some of those statements on the part of those who had been connected with the administration of our hospitals. On the contrary, it appeared to him to be admitted by many of them that there did exist a certain liability to abuse in the administration of the outdoor department of relief in the hospitals, but that at the same time the remedy was an extremely difficult one to find. He considered it to be of the highest importance that these allegations, whether well founded or unfounded, should receive the most careful examination and investigation by those connected with the administration of the great hospitals. He then proceeded to observe that apart altogether from the intrinsic importance of the question itself nothing could be more prejudicial to the sources of support upon which hospitals relied, and must always rely, than that allegations of this character should be made without contradiction and without investigation and examination. He feared that all were only too willing to avail themselves of any excuse which might relieve them from a most obvious duty, and there was nothing which could provide a better

excuse to those who were unwilling to meet their undoubted obligations in this respect than allegations such as these, which might enable them to conceal their want of liberality under the cloak of conscientious scruples. In conclusion he said he looked confidently to "the intelligence of the medical profession" to find out the truth about these allegations and to provide a remedy.

As we have said, the Duke of Devonshire's observations will command the most respectful attention, but he is careful to guard himself by saying that he has not studied the question. We take leave to say that had he done so he would at once have perceived that it was one as much for lay as for medical intelligence and effort.

The Hospital Reform Association was undoubtedly formed by medical men and consists mainly of medical members; but it is not, as the Duke of Devonshire seems to suppose, alone in its "allegations" that abuses prevail to some extent in the out-patient practice of our hospitals. It forms the latest of a long series of public bodies, medical and lay, who have tried for more than twenty-five years to rouse public attention to this fact; and as to "allegations," the word is hardly an appropriate one to use about what is a notorious fact, which hardly any of our hospital officers themselves contest.

It is perhaps a question whether the Hospital Reform Association has not made a slight mistake in fixing its attention so strongly on the pecuniary abuses of the out-patient departments. There is always a "conservative" (as its enemies would call it a "stick in the mud") party which is only anxious to be let alone. We do not wish to say anything disrespectful of this party, but they appear to do all they can to narrow the question, when it is so put before them, to its mere money aspect. They seem to assume that if they can show that the great majority of the out-patients could hardly pay the ordinary fees of a consultant, they have shown that no abuse exists worthy of public attention.

If the question is argued as one merely of money it is difficult, as the Duke of Devonshire says, to find a remedy. But if the matter is looked at in a broader way it is easy both to see the nature of the abuse and to find a remedy for it. The abuse consists in the dispensation of charity without previous inquiry, and the remedy must be the due organisation of such inquiry. If there is any one doctrine which the experience of modern times has established on a secure footing, and which is unquestioned by all public men of any competency, and which the Duke of Devonshire of all men would be the last to question, it is that charity without proper inquiry is bad. "It is twice cursed, it curseth him that gives and him that takes." If you throw your doors open to all that come and beg them to come in and be relieved you are preparing ruin for your charity and pauperisation for its clients. Plainly, then, inquiry is the first necessity to sift the proper from the improper applicants.

Nor can such an inquiry be only into their money affairs. A man may be as poor as Job without being a proper applicant for out-patient treatment—in fact, if absolutely destitute he may be dealt with by the Poor Law. Besides the pecuniary investigation, the medical aspect of his case should be considered, and considered by persons who know the nature of hospital treatment, which must differ essentially from home treatment. If we were writing a treatise instead of a short comment, we might fill a volume with the various considerations that should govern such a hospital reform as we have here hinted at. On the present occasion it must suffice to have pointed out what seems to be the point at which it should begin.

If a satisfactory solution of the difficulty is to be found it must be recognised by those responsible for the management of hospitals and by the public at large that the prevention of the abuse of out-patient departments is not merely a medical question. The intelligence of all who are interested in our hospitals, and of the outside public both poor and rich, should be brought to bear on the question, and it should be recognised that it is not a contentious question. The word "abuse" is not used as implying conscious wrong doing. The wish of the Hospital Reform Association is not to injure, but to strengthen and improve the hospitals. True indeed it is, as the Duke says, that persons who wish for excuses for not doing their duty may fasten on the fact that the hospital system is not perfect as an excuse for not subscribing. But how is this to be helped? Such persons if they had not this excuse could easily find some other. Improvement cannot be obtained without pointing out defects, and the more widely such defects are known the more confident we may be that they will be remedied. With all its defects our hospital system is, we believe, the best in the world, and, like all other good things, it can bear its defects to be known and discussed as publicly as its merits are.

THE "MANDATE" THEORY AND MEDICAL LEGISLATION.

One of the most subtle changes that have taken place in Parliamentary legislation of recent years is exemplified by the difficulties experienced in carrying through any legislative reforms that are not either originated or included in the programme of the Government of the day. Each session sees time filched from the private member, and no time can be found except for the discussion of Government measures, which are expedited by the help of the closure. To select only a few subjects which are seriously in need of legislation, we may take as instances the Vaccination laws and the University of London Commission Bill, to which may be added the Amendment of the Libel Laws so as to protect newspapers against vexatious articles, for which a leader in Monday's *Times* makes a pathetic appeal. In the House of Commons the very least and most insignificant obstruction can wreck any of these needed reforms, provided they are introduced as private Bills; in the House of Lords their chances of passing are somewhat greater. Writing more than ten years ago, Sir Henry Maine pointed out that the House of Commons was gradually abandoning its legislative authority to a Cabinet of Executive Ministers, and since then this feature in the constitution has become more pronounced, while, with a Cabinet of its present size, we are led to suppose that there is an inner circle which possesses all the initiative. Assuming these facts to be so, it is interesting to note what view the members of the Cabinet take of their legislative powers. When pressed to expedite the passage of the London University Bill, Mr. Arthur Balfour is reported to have used the following line of argument: "It is true that I have a large majority; this majority was given to me for settling political questions; the University of London Commission Bill is not a political question, therefore I cannot use my majority." This doctrine is an entirely novel one in the British Constitution, and implicitly recognises the "mandate" as part of our constitutional machinery. A mandate (a phrase seemingly borrowed from the French *mandat impératif*) is an express direction from a constituency to its representative, given at

the time of his election, ordering him to vote for certain measures; in America such directions would be known as the delegate's ticket. This mandate is probably imposed upon all candidates by the party caucus, and the elected representative goes to the Legislature to vote for those measures and no others. Mr. Balfour's argument implies that he cannot find that his supporters have any mandate to expedite the settlement of the university question. In England a parliamentary candidate is pledged to promote the promises in his election address, but it is a novel doctrine to suppose that his legislative capacity is confined to what is mentioned in that address. An obvious inference from Mr. Balfour's theory would be that the Government prefers to use its party majority to advance its party programme, and those Bills which have not become party measures must wait. An elector, therefore, who is interested in a non-party Bill would do well at an election to exact a pledge from his representative in Parliament to forward that scheme. But, in fact, the "mandate" does not apply to any but great constitutional changes. The duration of a Parliament is fixed by law not to exceed seven years. If the mandate doctrine as laid down by Mr. Balfour is correct, supposing a Government to have carried through its programme it should at once dissolve. It is true that it would be contrary to constitutional precedents to spring some great change upon the country at the end of a parliament, but there are safeguards which would compel the constituencies to be consulted before it could take effect. If Mr. Balfour's views were accepted as correct, it would be hopeless to expect that what should be non-partizan measures can ever pass into law, and the vaccination laws, and London University, and hundreds of other non-party measures might have to wait indefinitely for settlement. We believe, however, that the doctrine attributed to Mr. Balfour only has application, and that in a limited degree, to great changes intended to affect the established constitution.

THE DISASTROUS EXPLOSION NEAR NEWCASTLE-ON-TYNE.

On Saturday last a great fire occurred in Manson's Grease Works at Walker Gate, three or four miles from Newcastle. A large crowd was watching the conflagration when a huge iron tank, containing some 16 tons of creasote oil, gave way under the heat, and a terrific blaze, rather than an explosion, burst right into the faces of the firemen and the assembled multitude. There was a moment's pause, and then came a stampede, in which, fortunately, the injuries sustained were only slight. One man, however, was killed by the fall of a ladder. It was estimated that about 100 people were more or less burned. Those severely injured were sent on to the Newcastle Infirmary, and the others were attended to by Drs. Russell, Greenhough, Yoakley, Dagger, and Cresswell, who were on the spot, and worked with the utmost energy. The explosion occurred about 5 P.M., and a little before 6 P.M. the injured men began to arrive at the infirmary, when they were at once taken to the Ravensworth Ward. Mr. Williamson, the surgeon of the week, who had been summoned by telephone, was already there with his house-surgeon, dressers, and nurses, but the work was so severe that it was found necessary to call upon every medical officer, sister, and nurse who could be spared from duty in other parts of the building to help. The scene in the ward was most extraordinary. New beds were being prepared, temporary mattresses were laid down, the injured were undressed and got into bed, dressings were applied, sedatives or stimulants administered, and the appearance of the ward was like that of a military hospital after a battle. The men's faces and hands when they came in were absolutely black, their features unrecognisable, their hair burnt off, the clothes scorched and torn. Twenty men were admitted to this ward, and in forty minutes all of them were in bed with their injuries dressed. The parts burned were in all cases the same, varying only in the severity of the injury. The fire caught the exposed skin of the head, neck, ears, face, and hands, and the blaze had been so sudden that apparently there was not even time to put up the hands to protect the face. The patients were perfectly quiet, and allowed everything to be done for them without a complaint, and with scarcely a moan. Five children similarly burnt were admitted to the children's ward, making 25 admissions for burns. A few less severely injured were dressed and sent home. There was only one case of a different description, that of a young lady who, in her anxiety to seek a place of refuge from the fire, got under some railway trucks, without noticing that they were moving, and she was crushed beneath the wheels. The right thigh had to be amputated high up, and there was a compound fracture of the arm. She is doing well. At 10 P.M. the same night the ward was as quiet as usual, but the difficulties of the nursing began to be felt. As each man had his hands injured and bandaged and had to lie on his back on account of the condition of the ears, not one of them could do anything for himself, and, in addition to an increased nursing staff, male attendants were put on duty. On Sunday the faces and heads of the patients were much swollen, the lips were protruded and everted, and the eyelids closed up. On Monday much of the swelling had gone down, and the eyes were open. It was seen at the time of admission that the eyes themselves had all escaped severe injury, so that the patients were at once reassured on the point about which they were most anxious—namely, their eyesight. One man died a few hours after admission, another was in a dangerous condition, but the rest seem likely to do well. The tax on the resources of the institution was severe, but it was well met, and perfect order and discipline were maintained throughout. On Monday afternoon the injured men were all conveyed to the children's ward, where beds had been specially prepared for them, the little patients being previously removed to another part of the building. Apparently no women were seriously injured by fire, as none were brought to the hospital.

THE EPIDEMIC OF INFLUENZA.

Influenza has further increased in London during the past week, and medical practitioners in all parts of the town are finding their hands very full. The epidemic seems to be very prevalent also in some of the home counties, especially in Kent and Surrey, and it prevails also in Devonshire and Cornwall. In some parts of the latter county business is being seriously interfered with, and it has been found necessary to close the elementary schools at Helston. The epidemic now prevalent, in some districts at least, differs in its character from those from which we have suffered in previous years. It has long been recognised that the disease may present at least three distinct types, according to whether it attacks most severely the respiratory, the nervous, or the digestive systems. In the earlier epidemics in recent years the majority of cases belonged to the first type, and many deaths were caused by bronchitis and pneumonia. Later, the prevalent type was the nervous, and men were left in a condition of mental and physical depression which for many months greatly limited their activities, and in too many cases helped to fill the asylums. The present epidemic is remarkable for the very large proportion of cases which show symptoms of profound disturbance of the digestive system. The symptoms are in many cases so severe and pronounced that the most experienced physicians have in individual cases felt some hesitation for several days in rejecting the diagnosis of typhoid fever. A striking example of this peculiar character of the present epidemic is afforded by the outbreak at the Warwick Asylum which has caused so much alarm in the neighbourhood. From inquiries made on the spot we are able fully to support the opinion of Dr. Millar, the medical superintendent, that the disease is really a

peculiar type of influenza, and has no connection whatever with food poisoning, as had been too hastily assumed in the locality. It is a curious and interesting confirmation of the views above expressed to find that although the mortality from diseases of the respiratory organs in London showed a marked decline, the deaths from influenza showed a further increase. The fatal cases of this disease, which had been 40 and 73 in the two preceding weeks, further rose to 88 during the week ending Saturday last, January 29th, a higher number than in any week since March, 1895. Of these 73 deaths, 20 were of persons under 40 years of age, and 25 of persons aged between 40 and 60 years; while 43, or nearly half the total deaths, were of persons aged upwards of 60 years. Influenza continues to be much more fatally prevalent in South London than in any other part of the metropolis, especially in Battersea, Wandsworth, and Camberwell. In Kensington also the disease appears to be very fatal.

THE ISOLATION OF INFLUENZA.

WITH the recrudescence of epidemic influenza comes a not unnatural irritation in the public mind that the means by which other infectious diseases are prevented with more or less success are not effectual, are not even put in force, against this malady. A correspondent suggests that influenza should be made a notifiable disease, and there is no doubt that its gravity in the aggregate would justify this recommendation if any effectual use could be made of the information thus obtained. If the earliest cases in a community could be isolated, doubtless much good would result, but the value of isolation depends largely on the possibility of its being effectually carried out. If we could hope that, even at the expense of a panic, such isolation as is likely to be practised in an ordinary house could "save the risk of infection," we could hardly avoid advising it. But would it do so? If we look back to the manner in which the influenza of 1889 diffused itself over the land, and consider the very slight chain of infection by which it was carried to isolated country districts, the hopelessness of isolating the disease in a house to which it has once gained access is strongly borne in upon us. Again, in a large family there are always many chances that more than one person has been exposed to the original infection, and that while the most marked case is being with much difficulty isolated, the least marked case is wandering at large. Further, it must be remembered that in slight cases prolonged isolation is out of the question. The liberty of the guest is as great a difficulty here as the liberty of the subject is in other sanitary affairs. And, finally, we have to ask what is really meant by isolation in an ordinary house, where the maid does the lady's hair, the housemaid tosses up the bed, and all the teacups go downstairs to be washed? But it is perfectly possible to avoid visiting an infected house, and we think it fair to urge that when people have influenza among them they should keep to themselves, and that even people with "common colds" should not visit their neighbours.

PARADISE OR INFERNO?

DR. WEIR MITCHELL'S striking description of the peculiar chain of symptoms and hallucinations produced by the mescal button will be fresh in the memories of our readers. It will be remembered that "mescal buttons" are portions of the leaves and stalks of a cactus, anhelonium Lewinii, carefully dried, and will find an account of their physiological action in the EPITOME for 1896, vol. ii, No. 373. In an article in the *Contemporary Review* entitled "Mescal: a New Artificial Paradise," Mr. Havelock Ellis records in glowing language the effects of doses of mescal upon two poets, an artist (variety not stated), and himself. The accounts of the subjective sensations of these subjects are interesting enough, though lacking the scientific introspectiveness displayed in the well-known paper by Dr. Weir Mitchell. Mr. Ellis tried the effects of music upon the visions, which he found amplified thereby, a conclusion long ago arrived at by the Kiowa Indians, whose mescal orgies are conducted to an instrumental accompaniment. But, while admiring the vivid descriptive powers of Mr. Ellis and his friends, we must venture to point out that such eulogy of any drug is a danger to the public. We cannot, in fact, congratulate him on his first appearance as a bird of Paradise. Mr. Ellis himself is a licentiate of the Society of Apothecaries, and his professional knowledge will no doubt enable him to check any tendency to excess on his own part, but we notice that the unfortunate artist received an overdose which produced most unpleasant symptoms, and that one of the poets, who has a "weak heart," was seized with severe respiratory trouble. Mr. Ellis, it is true, states that in his opinion the habitual consumption of large amounts would no doubt be injurious, but he goes on to claim "that for a healthy person to be once or twice admitted to the rites of mescal is not only an unforgettable delight, but an educational influence of no mean value." Surely this is putting temptation before that section of the public which is always in search of a new sensation; and this temptation to mescal drugging is enhanced when Mr. Ellis "explains" that the taking of this substance can never degenerate into a habit. The reasons for this view are certainly curious. First, the delectable effects are only obtained by those who are in good physical health: no one of course can gainsay that the mescal habit is unlikely to arise in a person killed by the first dose of the drug. Then, again, it is argued that the visions are not sufficiently attractive to set up a mescal mania, because they appeal only to the intellect of the subject, affecting mainly what the author calls the most intellectual of the senses. To use his own words, "the artificial Paradise of mescal, though less seductive, is safe and dignified beyond its peers." But surely Mr. Ellis must see that he is thus making the subtlest of all appeals to the vanity of his readers. The opium eater seeks his drug because he likes it, the mescal drinker will fly to his for the sake of his intellect. In fact Mr. Ellis goes so far as to suggest that no one can appreciate Wordsworth who has never tasted mescal. One is tempted to regret that the poet himself did not partake of the drug in order to see the full beauty of his own thoughts. But in all seriousness it is at least unfortunate that Mr. Ellis should see fit to extol a drug the use of which has been suppressed by law in America, where its sale or purchase is subject to heavy penalties; and we have yet to learn that the Kiowa Indians are the most intellectual of the inhabitants of the sister Continent. We rather fear that Mr. Ellis, instead of being the discoverer of a new Paradise, has only shown the way to a new Inferno.

THE ETHICS OF NOTIFICATION.

WE have received lately several inquiries on questions of procedure arising out of notification. One correspondent asks what he should do where, on calling at the house to inquire about a case of diphtheria which has been reported, he learns that the lad, apparently in good health, has just made a hearty dinner of meat and potatoes. Can he insist upon a consultation or make a bacteriological examination? Another has twice lately been informed by the sanitary authority that cases of scarlet fever have been notified by other practitioners in patients under his care, though he rather ridicules the idea that the disease existed in either case. Yet another correspondent tells us of a medical officer of health in practice to whom a case of erysipelas is notified. He visits, upbraids the patient (who is an old client), obtains a portion of an overdue bill on account, and our correspondent, we are told, is informed that he need not return. We do not need to enforce the position that no medical man has a right on any account whatever to certify the existence of diphtheria or scarlet fever unless he has reasonable grounds for thinking the disease exists. Neither does it require any enforcement from us that it is not only not the duty of a medical officer of health, but not the part of an honourable

man, to use information supplied to him under statutory compulsion for his own private ends. These commonplace ethical positions will be accepted by all. What we should like, however, to suggest to our three correspondents is that those against whom they allege the above delinquencies are alike with themselves members of a profession which especially plumes itself upon its disinterestedness. Ought we not to to remember this, when on the evidence of a third—and perhaps not a disinterested third—party a brother practitioner would appear to have done a shady thing? Accuracy in stating facts is not a common faculty, and the conditions which make the narrators our patients are not always the conditions which conduce to it. Inaccuracy may be intentional, or due to carelessness or to an inability to discern clearly—unfortunately it is common. We should advise the correspondent last mentioned not to accept too unreservedly the statement of an invalid, who having got herself into a fix, criticised one of her two doctors to the other. As to the question of the diagnosis of diphtheria and scarlet fever there are possibilities other than *mala fides*. Positive symptoms seen once may justify a positive diagnosis. On the other hand, like the great Dr. Johnson, who was taxed with the omission of some small word from his dictionary, the error may be due to "simple ignorance." As Professor Green used to say, "We are none of us infallible, not even the youngest." The Notification Act requires "every medical practitioner attending on or called in to visit the patient" to certify. If a man called in has reason to regard a case as one of scarlet fever, he is only obeying the statute in so certifying, and if, as in one of the above-mentioned cases, he accompanies his notification by a communication to the health officer to the effect that the practitioner in regular attendance takes, he believes, a different view, the harm done does not seem very great. On the other hand if his opinion is justified, and symptoms of importance have been overlooked, and he has not notified and other cases occur he would share the blame of any disaster.

A CRITICISM OF HOSPITAL REFORM.

At the festival dinner in aid of the funds of University College Hospital held on Wednesday evening, the Duke of Bedford, who presided, in proposing prosperity to the hospital, appealed against any attempt on the part of outside individuals to interfere with the control of the hospital. He maintained that each charity should be free to be managed by those immediately concerned in its welfare. At the same time he deprecated any attempt at numerical competition between the out-patient departments of various hospitals, and expressly stated that he would rather close the whole out-patient department than render any more beds vacant. He referred gratefully to the gift of £120,000 by Sir J. Blundell Maple and the donation from the Prince of Wales's Fund, which had enabled the institution to reopen 25 beds. The health of the medical staff was proposed by Mr. Henry Lucas and acknowledged by Mr. Christopher Heath, who gave his opinions as to recent movements towards hospital reform. He ridiculed the scheme of the Hospital Reform Association, which would only admit patients to hospitals on the recommendations of medical men, characterising it as an attempt to interpose the profession between the hospitals and the public. He emphatically denied that in his own wards any abuse was permitted. It was true that he sometimes admitted doctors and clergymen, their wives and daughters; but his experience was that they were among the most deserving of all cases, having as a rule spent as much and often more than they could afford on medical advice before admission. He then turned his attention to the plan formulated by the Charity Organisation Society, pointing out that the Central Hospital Board proposed by this body would be very different from the Board managing the Paris hospitals. There the organisation found the funds and completely controlled the whole of the institutions; here it was proposed that a part of the management of the hospitals was to be handed over to a body which could not be responsible for their pecuniary support. Mr. Heath next referred to the fact that Guy's and St. Thomas's Hospitals supplemented their funds by the reception of paying patients; he did not consider the system at St. Thomas's Home fair, as although the institution was extensively advertised as being connected with the hospital, the staff of the latter had, unless specially engaged, nothing to do with the treatment of paying patients. He finally commended to the consideration of his hearers, though without himself expressing a final opinion, a system which he had observed in America. Here the hospitals receive, in addition to the ordinary class of cases, patients who pay for admission, and also pay the ordinary fees of their medical attendants who visit them in the wards. The contributions of the well-to-do were thus utilised, and indeed almost provide for the treatment of the poor. During the evening subscriptions and donations were announced which exceeded £3,000.

THE CHAIR OF FORENSIC MEDICINE IN GLASGOW UNIVERSITY.

The Chair of Forensic Medicine in the University of Glasgow is now officially declared to be vacant, and the applications of intending candidates must be lodged by February 22nd. For some years Professor Pierce Adolphus Simpson has been in failing health, and has required to reside at various health resorts during the winter months. In the beginning of session 1895 he suddenly broke down, and an assistant had to be appointed to carry on the classes for that session. The rest then obtained so restored him that during 1896 he was able to take his classes again, but during last year illness once more compelled his absence from work, and the University Court appointed an assistant to perform the duties of the chair. Dr. Simpson's resignation has now been accepted, and the Secretary for Scotland is ready to receive the names of candidates for the vacancy. The candidates already in the field are Dr. Ebenezer Duncan, Physician to the Victoria Infirmary; Dr. John Glaister, Professor of Medical Jurisprudence and Hygiene in St. Mungo's College; Dr. R. M. Buchanan, Professor of Medical Jurisprudence in Anderson's College Medical School; and Dr. Hugh Galt, the present assistant professor. At this time the desirability of founding a separate Chair of Public Health is being considered, and if the necessary funds for endowment were forthcoming no doubt this would be soon accomplished. At present the duties of the Professor of Forensic Medicine include the teaching of public health, but it is hoped that before long a new chair may be established for the latter subject, so that in all probability the commission of the professor now to be appointed will contain some provision bearing on such a contingency.

THE NEW OPERATING THEATRES AT THE WESTERN INFIRMARY, GLASGOW.

Among the recent improvements to the Western Infirmary, which include electric lighting, a new pathological institute, new laundry and washing houses, etc., the most important, perhaps, has been the erection of the new operating theatres which during the last week, without, however, any formal ceremony have been opened for work. The new theatres are three in number, one above the other, in a building which has been erected at the south-east angle of the Infirmary, each theatre being connected by a corridor bridge with the corresponding floor of the Infirmary. The highest one adjoins Professor Macewen's wards, and has been reserved for his exclusive use. The others are to be used by the other surgeons whose wards are in close proximity. The construction of these theatres has engaged the attention of the managers for some years, and it was only after the principal operating rooms in this country and on the Continent had been visited that the various details of the present building were settled. Altogether the result is very satisfactory, and pro-

bably these new theatres are second to none either at home or abroad. With each theatre there are rooms for sterilisers, dressings, etc., and a surgeon's room, and above these, and with a separate entrance, there is sitting, or rather leaning, accommodation for sixty students. All this has been planned so as to give as few surfaces as possible for the collection of dust, and the materials used are such as can resist rapid variations of temperature, and can be freely drenched, either with water or with steam. A feature of the building is the large windows of the operating rooms, the uppermost of the three (Dr. Macewen's) having roof light in addition; the electric lighting also has been carefully planned. The floors throughout are of terrazzo, the central portion of the operating-room floor being of white unglazed tiles, which reflect the light and diminish shadow. The lower part of the walls is lined with white glazed tiles, and the upper part and the ceilings are finished in Parian cement enamel painted. Both the floors and walls are rounded off at the corners, so as to facilitate thorough cleansing. The whole of the plumbing work is exposed, the pipes being kept well out from the walls, and all the fittings are of glass or enamelled iron. Each theatre is heated by coils of copper pipes round the windows, each coil hinging out so as to allow of its recess being cleaned, and there is a special system of ventilation by means of two shafts which rise to the top of the building, the current being induced in each shaft as required by a compressed air nozzle. The architect is Mr. John James Burnet, A.R.S.A.

LEPROSY IN LONDON.

THERE is a real need for an institution where patients suffering from leprosy and other chronic and repulsive complaints of the skin can be suitably maintained and treated. As matters now stand, unless their friends are well off and able to provide the poor creatures with proper care and nursing, they must either remain more or less neglected, as objects of disgust and alarm to all around, or perhaps they may drift into the Poor-law infirmaries, where also they are not always welcome. The proper place for such cases is in an annexe to a hospital for diseases of the skin, as at St. Louis in Paris, and we commend this idea to the authorities of these hospitals—Blackfriars, for instance. Philanthropists might well be appealed to for assistance in establishing such a place, and it might very well be carried on without being called a "lepers' home," or by any other title which might have the effect of attracting fresh cases from other countries. Some public attention has recently been directed to what is called the "startling discovery" of a case of leprosy in London, and it is made a subject of complaint—not, it must be admitted, an unjustifiable complaint—that, "instead of being isolated in a hospital, she lies in a private house in one of the busiest parts of the town." Assuming that the case is one of true leprosy—and this seems to be probable from the description—there is, of course, nothing so very alarming or remarkable in the circumstance of a leper being in London, for, as Dr. Abraham showed in the BRITISH MEDICAL JOURNAL of November 13th, 1897, there are now, and always have been since our close intercourse with India and the Colonies, cases of the disease in our midst, and that nevertheless the disease does not spread, in this country at any rate. It appears that this patient had been refused admission in a hospital or home for incurables, and this has been a common experience in reference to other cases.

GLYCERINATED CALF LYMPH.

THE report on the influence of glycerine in inhibiting the growth of micro-organisms in vaccine lymph by Drs. Monckton Copeman and F. R. Blaxall has been reprinted from the *Annual Report of the Medical Officer of the Local Government Board (1895-96)*, and will be found well worthy of study by all public vaccinators. From bacteriological experiments Dr. Copeman arrives at the opinion that there can hardly be a question that the opacity of old stored lymph is, in the main, the outcome of the multiplication in it of aërobic bacteria, the ancestors of which were present in the lymph when first collected, although their numbers were then so comparatively small as not to render it in any way turbid. These bacteria evidently find in the lymph, especially when removed from the body, a suitable medium for their subsequent multiplication, while at the same time it would appear that their growth and multiplication has the result of gradually inhibiting the specific effect proper to the vaccine virus itself. It was therefore felt to be very desirable to find some substance which when mixed with the lymph would destroy the adventitious organisms without deteriorating the vaccinal efficiency of the lymph. This was found in chemically pure glycerine. The admixture of glycerine with lymph is not a new device, but one which has been resorted to on more than one occasion in the past, chiefly with the view of increasing the bulk of vaccinal material when the supply has been short in time of emergency. The point, which has only been recognised in recent years, owing largely to the investigation of Dr. Copeman himself, is that the addition of glycerine removes all microbes, including those which are pathogenic, should such chance have obtained access to the lymph. This germicide action of glycerine is exercised gradually, so that the lymph in this respect actually improves with keeping. This is demonstrated in a very graphic manner by photographs of plate cultivations made by Dr. Blaxall, and appended to the report. They show that a glycerinated lymph which had not been stored contained a considerable number of microbes capable of growing on agar, whereas a plate made from the same lymph, which had been stored for a month, contained none at all. Further, there is evidence that the vaccinal efficiency of the lymph actually increases by storage when mixed with glycerine, so that a larger number of successes are obtained than with the lymph in the earlier stage. The vaccine vesicles obtained by vaccination with the glycerinated lymph are very typical and satisfactory, a fact which is illustrated in the report by two photographs showing the condition of the arm on the tenth day after vaccination. One of these photographs is that of an infant, one of a series of 36 cases all vaccinated in five insertions each, by Dr. Cory on the same day and with the same sample of glycerinated lymph. The lymph had been stored for four weeks, and was found when tested by the method of plate cultivation to be free from extraneous micro-organisms. In this series Dr. Cory obtained 100 per cent. of insertion success. Reference is made to the report of a German Commission, of which Dr. Schmidtmann was president, and Drs. Koch, Pfeiffer, and Frosch, together with the directors of the Vaccinal Institutes of Berlin, Cologne, and Stettin were members. This Commission, with the view of ascertaining to what extent glycerine was capable of destroying the vitality of various definitely pathogenic microbes, mixed numerous streptococci and diphtherial bacilli with specimens of lymph. It was found that the streptococci were killed in eleven days, and the diphtheria bacilli in twenty days. Dr. Copeman recommends that the lymph should be prepared by the addition to the vesicular pulp obtained from a vaccinated calf of a sterilised 50 per cent. solution of chemically pure glycerine in distilled water, and the storage of the mixture in capillary tubes previously sterilised by heat.

THE ROYAL COLLEGES AND THE ARMY MEDICAL SERVICES.

THE absence of the Presidents of the Royal Colleges of Physicians and Surgeons of London from the deputation which waited on the Secretary of State for War was commented on by those who were little aware how heartily and completely the distinguished representatives of these bodies are in accord with those who put the case of the Army Medical Service so clearly before Lord Lansdowne. Should there be any doubt on the point it will be completely removed by the admirable

joint letter addressed to the Secretary of State for War which we print in the report of the proceedings of the Royal College of Physicians. The remarks of the President (Sir Samuel Wilks) show how thoroughly he is in accord with the views expressed by his distinguished predecessor, Sir Andrew Clark, on the Army Medical question; and Sir William Mac Cormac, as representing the Royal College of Surgeons, has been so long and closely identified with the Army Medical Service as to be reckoned almost one of themselves.

UNQUALIFIED ASSISTANTS.

The letters which continue to appear in our columns on the subject of unqualified assistants show that, although the General Medical Council has undoubtedly taken a step in the right direction by its issue of the recent regulations with regard to the employment of unqualified assistants, the step is not regarded with unmixed favour, especially by that considerable section of the profession who are in the habit of employing them. It is argued that to carry the resolution into immediate effect would in a large number of cases particularly in those in which there is a contract between the parties, be harsh both to the assistants and to their employers. It would no doubt be recognised by the Council that a proper and reasonable time must be allowed to the employer to terminate his agreement with his unqualified assistant, and we observe that the notice adopted by the Council has not yet been issued to medical practitioners in accordance with the resolution to this effect, which directed "that the notice adopted by the Council in reference to the employment of unqualified assistants be issued to every medical practitioner on the *Register*." We may assume that the Council recognised that it would be acting in the best interests of the whole of the profession by tempering justice with mercy in this way, so that existing engagements might be terminated by the customary notice of reasonable length. By adopting this course the Council will be better able to set aside any extenuating plea which might otherwise be set up when the question of inflicting punishment arose. It may perhaps not be out of place to call attention in this connection to the remarks reported to have been made by a coroner which are reproduced in the letter of a correspondent printed on another page. There is a certain family likeness between the line of argument which found favour with the coroner and that which has been adopted by some of our correspondents with regard to unqualified assistants. The coroner's remarks, in fact, reduce the argument to an absurdity. The only criterion of competence recognised by the law or by the medical profession is registration. Nurses, male and female, midwives, and others, may be able to render assistance within certain strictly-defined limits, but attempts to induce the public to believe that such persons are competent practitioners of medicine must be strenuously resisted.

THE SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

Those of our readers who are engaged in Poor-law medical practice, and others who are in any way interested in it, will doubtless have read with much interest the correspondence between the President and Council of the British Medical Association and the Local Government Board, in reference to the Superannuation Act, which was published last week, and which will be found in full at page 238 of the British Medical Journal of January 22nd. The correspondence arose out of the action of the Pershore Guardians, who advertised for medical officers willing to contract themselves out of the Superannuation Act. It will be seen that the Local Government Board have decided that this Act is to be strictly observed, and that any private arrangements made by guardians, either with their present officers or with any others they may elect in the future, will not be recognised as binding and will not be sanctioned by the Local Government Board as any part of the contract entered upon. This decision, might at first sight appear to be a definite and even permanent settlement of the whole question but we are not without apprehension, that some medical officers who now hold their appointments subject to annual re-election may at some future time find themselves at a disadvantage when they may in the ordinary course have to apply for reappointment. The question may therefore be now fairly asked whether it is desirable that any Poor-law medical officer who has held office sufficiently long to be once re-elected should, after such re-election, be annually subject to a repetition of the trouble and anxiety almost of necessity associated with it. The history of the Poor-law Service of England and Wales, fails to show that any good whatever has resulted from medical officers being subject to annual re-election; and this impression is certainly confirmed by a somewhat recent regulation of the Local Government Board, which now permits guardians to elect some of their medical officers for a period of three years, instead of annually as was at one time compulsory. We have never been able to understand on what grounds this annual or even triennial election is considered necessary, as the Local Government Board have doubtless the power to alter a district, and thereby determine any existing appointment, whether made for life or for any specified time. As long as the present regulations continue in force, it would appear possible for any Board of Guardians opposed to the Superannuation Act to find some pretext for the non-re-election of their old officers, who may be approaching a time for claiming their superannuation allowance, and instead of re-electing them putting in their place some junior in the profession, who would have to work for about forty years before any pension could be claimed. The action of the Pershore Guardians would seem to show that any such possible treatment of old officers as this should be strictly guarded against by regulation. At present there is nothing whatever to prevent a stranger being elected to the post previously held by an old official, and this without any previous notice of opposition on the part of the guardians to the reappointment of the latter. It is very desirable that the Local Government Board should take steps to provide that all Poor-law medical appointments, instead of some only, should be made for life after one annual re-election. This would give some security of tenure to those who will otherwise continue to hold their appointments only so long as the guardians may be pleased to reappoint them when their year of office terminates. The working of the Superannuation Act would appear to point strongly to the necessity of making this change of regulation as soon as possible.

PERSONAL EXPERIENCES OF THE PASTEUR TREATMENT.

Professor Allen has published in the *Birmingham Medical Review* a most valuable account of his personal experiences of the Pasteur antirabic treatment. He was bitten on the hand through a glove by a stray dog that had the ordinary signs of rabies. He cauterised the bite, started at once for Paris, and was under treatment within forty-eight hours of the accident. We most heartily congratulate him, and at the same time thank him for his delightful account of the work of the Pasteur Institute. It is pleasant to hear that the multitudinous patients take their troubles lightly, and are much livelier than the drilled and silenced ranks of our own hospital out-patients. Save that they must take a bath on the first day of treatment, and every second or third days afterward, no rules are laid upon them; "not a word is said as to diet, exercise, rest, or amusement." Medical men are allowed to witness the inoculations; and we are ashamed to be told that "English and American medicals have a bad reputation at the Institute for their aggressive domineering manners." The details of the treatment are carefully described, and its local and general effects. "The chief constitutional symptoms that I noticed was a peculiar form of lassitude occurring in the afternoon and early evening. I felt

an extreme incapacity for exertion, either bodily or mental, and found it necessary to sleep for hours every afternoon. This lassitude only occurred in the latter half of the day." Professor Allen had no headache during the course no fever, no troubles of digestion or of nerves, only this "toxic" feeling of tiredness and sleepiness. He quotes the report for 1896. "The average mortality during the last five years has been 0.34 per cent. for persons treated promptly. This compares very favourably with the mortality in persons who are bitten and not treated, which is calculated at about 16 per cent." He observes that England affords but few patients to the Pasteur Institute, thanks to our dog tax, our muzzling orders, and our freedom from wolves. His whole paper should be read by all medical men, and by everybody who wants to know the work and the achievements of the Institute.

DIPHTHERIA IN LONDON.

There was a very marked increase in the prevalence of diphtheria in London during last week. Although there was but a small rise in the number of fatal cases, the notifications of this disease increased by no less than 40 per cent. The deaths referred to diphtheria in the metropolis, which had declined from 52 and 33 in the four preceding weeks, rose again to 36 during the week ending Saturday last, January 29th. Of these 36 fatal cases, 5 were of persons belonging to Battersea, 4 to Kensington, and 4 to Camberwell sanitary areas. The notifications of diphtheria in London, which had been 194 and 205 in the two preceding weeks, further rose to 287 during the week ending Saturday last. Compared with the preceding week, the prevalence of the disease remained almost stationary in East London, while in the rest of the metropolis there was a considerable increase, which was most marked in West and South London. Among the sanitary areas of West London the new cases showed the largest excess in Kensington, Fulham, Paddington, and Chelsea. Among the various sanitary areas of North London there was a slight further increase in the prevalence of diphtheria in Hackney; and in St. Pancras the new cases, which had been 8 and 9 in the two preceding weeks, further rose to 16 last week. Among the sanitary areas of Central London the increased prevalence of the disease was most marked in Clerkenwell, where 14 new cases were reported, against 7 and 6 in the two preceding weeks. In East London the rise in the number of notified cases was very slight, and only in Limehouse was there any considerable increase in the prevalence of diphtheria. In the sanitary areas of South London, however, there was a general increase in the number of new cases of the disease. In St. George Southwark the new cases numbered 11, against 2 and 6 in the two preceding weeks; in Battersea 20 new cases were notified, being double the number in the preceding week, and in Wandsworth, Camberwell, and Greenwich the new cases exceeded those recorded in any recent week. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 161, against 134, 111, and 123 in the three preceding weeks; and 1,055 cases remained under treatment in these hospitals on Saturday last.

A GRACEFUL TRIBUTE.

At the last meeting of the Committee of the Gloucester Infirmary it was resolved to name one of the wards the Ancrum Ward, in recognition of the long and valuable services rendered to the institution by Dr. W. R. Ancrum, who for many years was Chairman of the Governors. The Earl of Ducie observed that he was happy to think that they were thereby not paying a posthumous honour to Dr. Ancrum, who would have the satisfaction of knowing in his lifetime that his services had been recognised. Dr. Ancrum, who became a Member of the Royal College of Surgeons in 1839, and a Fellow by examination in 1850, at one time practised in Chili, where he gained an eminent reputation. He was enabled to retire from practice some thirty years ago, and settled in Gloucestershire. There he has been a leading and guiding spirit in relation to the hospital and asylums, public and private, and in all matters connected with the public health. Dr. Rayner W. Batten, in supporting the motion to give Dr. Ancrum's name to the ward, said that those who like himself could remember what the hospital was in the past, especially those who could remember what it was when Dr. Ancrum first took charge of it, and who knew what it was at the present day as he had left it, were alone able fully to appreciate the value of his services. It was a matter of pardonable pride to recall that all the powers which he had displayed in the service of the public had been called forth, developed, and perfected in the practice of medicine. The identification of Dr. Ancrum's name with one of the wards of the hospital would bring home to all a lesson of how a life might be made noble and dignified by unwearying energy, by strong conviction and strength and force of will, by perfect fairness transparency and conscientiousness, and by unswerving and fearless loyalty to truth. Mr. Ellis in a few words re-echoed the sentiments expressed by Dr. Batten, and paid a particular tribute to the loyalty of Dr. Ancrum's character.

The Prince of Wales has been pleased to appoint Mr. Herbert W. Allingham, F.R.C.S.Eng., to be Surgeon to His Royal Highness's household.

It is stated that Surgeon-Captain T. H. J. C. Goodwin, A.M.S., is to be recommended for the Victoria Cross for distinguished gallantry displayed at Shabkadr on August 9th, 1897.

With regard to the statements to the effect that enteric fever is prevalent at Teneriffe and Grand Canary, we have received from Dr. Perez (Puerto Cruz) a telegraphic communication to the effect that four cases of typhoid fever occurred in December in two private houses; no fresh cases had occurred, and visitors, at the time of the despatch of the telegram, were entirely free. As already stated, we are informed that Madeira is quite free from the disease.

The annual general meeting of the Hunterian Society will be held at the London Institution on Wednesday, February 9th, at 8 P.M. The Hunterian Oration will be delivered by Dr. P. Horrocks on The Structure of the Placenta with Special Reference to the Maternal and Fœtal Circulations and their Bearings on Heredity. The annual dinner will take place at the First Avenue Hotel on Friday, February 11th, at 7 P.M., when the chair will be taken by Dr. G. E. Herman, President.

The adjourned discussion at the Royal Medical and Chirurgical Society on Mr. Sheild's paper on Immunity and Latency after Operation for Reputed Cancer of the Breast, will be resumed at the meeting of the Society on February 8th. The first speaker will be Sir Thomas Smith, and among those who have already signified their intention of taking part is Mr. Howard Marsh. It is greatly to be desired that at the outset clear definitions of the terms "immunity," "latency," and "cure" should be laid down, for even arbitrary definitions would be better than none, or than several definitions of each term. As we have already pointed out, the subject is of immense practical importance. It is one upon which the experience of senior members of the profession would be particularly valuable, and it is to be hoped that it may result in a considerable addition to our knowledge of the subject.

Presentation.—On January 24th Dr. John McPhail Dougall was presented with a handsome travelling clock by the male and female members of the ambulance classes, recently held at Welburn, York, under the auspices of the St. John Ambulance Association.

THE MEDICAL AND THE DENTISTS ACTS.

Representation of Dentists on the General Medical Council.

At the dinner of the Metropolitan Branch of the British Dental Association on January 27th the guest of the evening was Mr. Victor Horsley. The chair was taken by Mr. Sidney Spokes (President), and the toast of "The Visitors" was given by Mr. Charles Tomes, who referred to the movement which is on foot to obtain for the dentists representation on the General Medical Council. He added that the representative would not have a bed of roses, but he insisted upon the necessity of combined action, and referred to the reception which had been accorded to a deputation, of which he and Mr. Victor Horsley formed part, which waited upon the Board of Trade.

Mr. Victor Horsley, in the course of his reply, referred to the same deputation, and observed that it related to the prevention of unqualified practice. I believe (he continued) that the same oversight has been committed in interpreting the Dentists Act as I have recently shown has been made in reading the Medical Acts, because our Acts and yours are practically the same. My views, which have been published in the medical journals of the past fortnight, received encouragement on that occasion, although they are receiving anything but encouragement now. My point is the reading of Section v of your Act, which, like Section vi of the Medical Act of 1886, confers upon you a privilege as a class, and that privilege is the right to practise your profession. It does not say that anybody else is entitled to do it. There are no Acts dealing with this subject excepting the Apothecaries' Act which confer such privileges, and therefore I ask, how can it be contended that our Acts do not protect our livelihood? How could it be a common law right that anybody through the world might practise any calling they liked in this country of ours? Well, gentlemen, when the deputation, including Mr. Tomes and myself, visited the Government office aforesaid, and interviewed a Minister of the Crown to prevent by amendment of the Companies Act the evasion of our Acts, the Minister said to us: "What sort of clause do you wish us to put into the Bill?" and we told him we had drafted a clause which we thought was in harmony with the penal section of the Medical Act; and as our legal advisers informed us that our Acts protected only our titles, we had so arranged the clause. His reply to us was: "You cannot expect me to go into the House of Commons and propose to offer you a mere shadow of protection like that. The only thing you can ask me seriously to propose is something that will deal with practice." Here, then, was a man with no legal bias, who looked upon the matter from a plain common-sense point of view. His idea was that we needed an amendment of our Acts, which would in this matter of the Companies Acts protect us in the practice of our profession. Well, gentlemen, I think that one of the most important statements ever made by a Minister of the Crown. I personally believe our Acts do go further than we thought they did. I do not think it would be worth the while of your Association to spend a farthing on this subject, for the reason that at the last session of the General Medical Council the Council was persuaded to institute proceedings, the effect of which will be to bring this question before the High Court. I may say I shortly intend to publish a paper giving what I believe to be the true legal aspect of the case, and setting out the same more fully than was possible for me to effect in the medical press recently. Now, I say this matter is going into court—I said by a slip of the tongue the High Court—but perhaps the idea that the case would, in all probability, go there was father to the word. Of course, in the first instance, the case will be heard in a magistrate's court; and we are taking care that the case thus brought forward shall be one of superlative enormity, so that it would be very difficult for the judges of an Appeal Court to refuse us that recognition of right and justice which I believe is ours and yours. But speaking of registration, your Act has recently suffered the worst attack that has ever made upon it. It suffered that attack because your branch of the profession had no direct representative on the Council, for if you had had a representative member on the Council he must have been put on the Executive Committee. The danger arose from what I believe to be strictly speaking an illegal standing order, which provides that the Dentists Act shall be administered by the Executive Committee of the Council. Section ix of the Medical Act, 1858, truly provides that the Council may devolve certain of its powers to the Executive Committee, but it certainly never meant that a whole Act of Parliament—dated 1879—was to be handed over to a half-dozen men who might or might not be present at a meeting of the Committee. The result is what might have been expected—a serious fiasco. At the next meeting I am going to move a resolution that this standing order shall be rescinded, and I shall further ask that the Dentists Act shall be administered by the Council as a whole. The situation I may say has what we may call a humorous side, for it has distinctly a sort of grim humour about it. The first thing I complained of was the resolution of the Executive Committee (published in the minutes) that a certain unqualified person should be put on the *Register*. This the Committee followed up by an order that Mr Muir Mackenzie should be instructed to draw up a description of the qualifications which had to be put in the fourth column of the *Register*. But that is to say Mr. Mackenzie is ordered to describe the qualifications of a gentleman who has no qualifications. So far as we know he has been trying for the last six weeks, but, as nothing has been received at the office, he has apparently not yet succeeded, and I think it is somewhat humorous to think that any responsible person should imagine he could succeed in performing an impossibility. Of course, we saw to it that the Registrar did nothing of that which he had been ordered to do by the Executive Committee. But there is another side to all this, and this other side is not humorous, because what this incident involves is this: all the members of the Council are by the standing order referred to made responsible for this discreditable transaction, although we had not the slightest voice in preventing its occurrence. It is no little aggravation of this unjust responsibility that the details of the affair have been revealed to the public by the breach of confidence lately committed by Mr. Brudenell Carter. To turn to pleasanter thoughts, gentlemen, you may rely upon it that you have more friends on the General Medical Council than you think for; but if you want to obtain your rights you must really set to work and ask for them. Nothing is got in this world without asking and working, and you must not hesitate to make your wishes known. I think you ought to ask for the next Crown vacancy without any beating about the bush. This is a public affair, and we cannot have any sentiment in matters of this sort. They are matters of ordinary justice which bear printing so that every one can read them. Surely, now is your opportunity. I hope very much that ere long you will have a direct representative on the General Medical Council; and in expressing that hope I wish before I sit down to point out that your representative when he takes his seat at the Council Board will not find the place a bed of roses, not, perhaps, for the reason Mr. Tomes had in his mind, but because, in order to economise time, a great strain will be put upon him to have everything ready *ad unguem*. All he has to do is to take care that when he rises he shall contribute facts to the discussion, facts which he knows to be true, and the documentary proofs of which he has in his pocket. If he does that he will have, as I have experienced, a most patient and courteous hearing from the members of the Council. If he does succeed in winning an entrance he will have the opportunity of doing a great work, and I feel sure that practically every member of the Council will assist him.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The ordinary quarterly comitia of the Fellows was held on Thursday, January 27th, Sir S. Wilks, Bart., M.D., F.R.S. (President), in the chair.

The President announced that Drs. Theodore Williams, Vivian Poore, and Sidney Coupland were the examiners for the Weber Parkes Medal and Prize in 1900, the subject of which would be connected with the Etiology of Human Tuberculosis. He appointed Sir D. Duckworth Harveian Orator, and Dr. W. M. Ord Bradshaw Lecturer, and announced that the Council had appointed Dr. G. V. Poore Milroy Lecturer for 1899. The President then referred to the steps which had been recently taken with respect to the reintro-

duction into Parliament of the Bill for a Statutory Commission in reference to the establishment of a Teaching University in London. He had been invited to a meeting of the delegates of Colleges interested at the University of London, and had also attended with the deputation from that body who waited on the Lord President of the Privy Council on January 24th, when the Duke of Devonshire had acknowledged that they had made out a strong case for him to bring before Parliament. He thought that the suggestion of applying for a charter should be resisted. The President next spoke of the subject of the reform of the Army Medical Service. After referring to the great services in this connection of a former President (Sir A. Clark) and the action of the British Medical Association, which had been most valuable in the matter, and most creditable to the Association; he said that, in conjunction with Sir William MacCormac, he had written the following letter:

To the Right Honourable the Secretary of State for War.

My Lord,—We, the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England, desire respectfully to call your attention to the serious absence of competition for entrance to the Army Medical Service, and the discontent within its ranks.

The number of officers in the Service is now much below the proper establishment, and within the Department itself we are informed there exists a widespread dissatisfaction with the conditions of the Service.

The medical officers complain that they possess only a departmental rank—that is, rank within a department of the army—and no properly defined army rank at all, and that the absence of such rank materially interferes with and curtails the effective discharge of their duties in time of peace, and still more so in time of war. They also state that it tends to place them in a position outside of the army, and prevents them from forming, as they consider they ought to form, an integral and corporate portion of it.

We hope that it may be possible for your lordship to grant the wish which we are informed is practically universal in the Department, and amalgamate the Army Medical Staff and Medical Staff Corps into an Army Medical Corps, homogeneous and complete, at the same time conferring real army rank, with limited command, upon the medical officers, and with that rank the military titles which in the army are alone respected, appreciated, and understood.

The formation of an Army Medical Corps appears obviously desirable, and was recommended by the Royal Commission presided over by Lord Morley, while the title of Captain or Colonel, Army Medical Corps, would, like Captain or Colonel, Army Service Corps or Army Ordnance Corps, be simple, logical, and intelligible.

We believe it to be a matter of the utmost public concern that the medical service of our army should be effective. In time of war very much depends upon the medical officer, and in time of peace he is to a large extent responsible for the health and well-being of the troops.

A discontented department, short in numbers and remaining insufficiently recruited from outside on account of its increasing unpopularity in the schools, seems to us to call for the most earnest search for a remedy to restore its prestige, and to make it the noble and attractive vocation it ought to be.

We shall be happy, should your lordship desire it, to wait upon you for the purpose of further explaining our views on this very important subject.

We have the honour to be,
My Lord,
Your obedient Servants,
S. Wilks, President of the Royal College of Physicians.
W. MacCormac, President of the Royal College of Surgeons.

Since then, as was well known, there had been an influential deputation from the British Medical Association to the Marquis of Lansdowne, the members of which had been well satisfied with their reception.

Subscriptions were invited for a portrait of Dr. Munk, the Harveian Librarian, to be placed in the College in recognition of his long services.

The following were admitted Members: Thomas Beattie, M.D.Durh.; Edward John Cave, M.D.Lond.; Arthur Carlyle Latham, M.A., M.B.Oxon.; Leonard Rogers, M.D.Lond.; Robert Briggs Wild, M.D.Lond.

The Licence was granted to 109 gentlemen, all of whom presented themselves before the Conjoint Board, and 41 of whom came under the five years' curriculum.

The Diploma of Public Health was granted, in conjunction with R.C.S., to Stanley Longhurst Box, L.R.C.P., and M.R.C.S.; William Butler, M.B., M.S.Glasg.; Godfrey Carter, M.R.C.P.Edin. and M.R.C.S.; Naoroji Beramji Darabseth, M.B., M.S.Aberd., M.R.C.S.; Donald Frederick Dymott, M.B.Lond., M.R.C.S.; George Holbrey Hunter, M.R.C.S. and L.S.A.; John Lea Walton Kitching, L.R.C.P. and M.R.C.S.; Morgan John Morgan, L.R.C.P. and M.R.C.S.; Percy Wood Nicol, M.B., M.S.Edin.; Frederic William Forbes Ross, M.D., M.S.Edin.; David Richard Rowlands, M.B., M.S.Edin.; William Wallace, M.B., M.S.Edin.; and John Wilkinson, M.B., M.S.Edin.

Communications were received from the Secretary of the Royal College of Surgeons relative to the proceedings of the Council of that body.

Communications were also received from Dr. Francis Bond, Honorary Secretary of the Jenner Society; from the Chancellor of the University of London; and from the family of the late Professor Heidenhain.

Dr. Theodore Williams was elected to represent the College on the Governing Body of Mason College, in place of Dr. W. Howship Dickinson.

A communication from the Westminster Tramways Opposition Committee was referred to the Committee of Management.

A communication from the Committee of Delegates of the Medical Schools on the Teaching University, urging the advisability of a deputation to the Government, was referred to the University of London Committee, with power to act.

Drs. Pollock, Corfield, Galabin, and Savage were elected to fill vacancies on the Council.

A report from the representative of the College on the General Medical Council was received.

On the recommendation of the Library Committee the application of Mr. J. W. Harvey for leave to search the College records was refused.

A report from the Conjoint Finance Committee, and the annual statement of that Committee, were received and adopted.

The quarterly report of the Finance Committee was received and adopted.

Reports from the Committee of Management and the Laboratories Committee were received and adopted.

The annual return of the Examiner for the year 1897 was received and adopted.

The thanks of the College were returned for books and other gifts during the past quarter.

THE EPIDEMIC AT HATTON ASYLUM.

An epidemic of somewhat startling character, owing to the rapidity with which it has spread and the alarming symptoms which it produces, has been causing great distress at the Warwick County Lunatic Asylum for the past two weeks. The circumstances of the case have been rendered all the more disquieting to those responsible owing to the rumours circulated by the local press. There is no doubt that the disease in question must be considered as a form of influenza with marked gastric symptoms.

The disease presents the characters of an acute infectious disorder, preceded by rigors, and accompanied at its onset in most cases by pains in the head, limbs, and back of the neck. Many of the patients complain of pain behind the eyes, and a large proportion suffer from coryza. These symptoms are rapidly followed by nausea and diarrhœa. The stools may become pale, and the skin assume a slight icteric tinge. In one of the cases the stools were bloody. The temperature rises suddenly at the onset of the diarrhœa, and ends in a crisis. The temperature falls rapidly, and often drops below normal. The crisis is usually accompanied by profuse perspiration, and the patient is left languid and weak. If death occurs it is with typical collapse.

It so happened that in the present epidemic the largest daily incidence of cases took place the day after the annual attendants' ball, which was held on Friday, January 21st. This fact, together with the marked gastric symptoms, led to the starting of the theory that the patients were suffering from poisoning due to food eaten at the supper. So far has this theory been carried that it has even been asserted that arsenic was put into the food by some of the patients of the asylum who are well enough to work in the kitchen.

By the courtesy of Dr. Miller, the Medical Superintendent, we have been enabled carefully to investigate the whole facts of the case, and the following considerations will show that the food poisoning theory cannot be maintained.

In the first place, the disease is infectious; of this there can be no doubt. In one case a lady who visited the asylum and ate nothing in it developed the disease on returning to her home. In another case a priest who visited some of the patients carried the disease home to his housekeeper, though

he himself did not catch it. Other similar cases might be mentioned.

That it is a milkborne or waterborne epidemic diarrhœa is rendered highly improbable not only by its infectious character, but also by the fact that all the water used in the asylum is from a deep well except that used for making tea or coffee, for which purpose the deep well water is too hard. A shallow well supplies the water for these purposes. It is always boiled in huge copper pans immediately on being brought to the asylum. No other communication exists with this supply. That the milk has nothing to do with it is evidenced by the fact that for the last week it has all been boiled, and cases have still continued to occur. The entire kitchen arrangements are of the most perfect description, and all the food used in the asylum is taken from the farm attached. Altogether there have been 164 cases, with 5 deaths. The cases have taken place as follows:

Date.	Number.	Date.	Number.
January 11th	1	January 24th	25
,, 14th	1	,, 25th	17
,, 15th	2	,, 26th	12
,, 18th	1	,, 27th	13
,, 19th	1	,, 28th	4
,, 20th	2	,, 29th	5
,, 21st*	2	,, 30th	7
,, 22nd	26	,, 31st	3
,, 23rd	41	February 1st	2

* Attendants' ball.

Of the 5 fatal cases there was marked organic disease present in 4. The fifth case was that of a weak debilitated idiot. One of the fatal cases suffered from phthisis and chronic heart and kidney disease.

Other epidemics of a similar nature are reported from Banham in Norfolk and elsewhere. It seems as if the present epidemic of influenza had taken on a gastro intestinal character. One of the cases at Hatton suffered from metastatic parotitis during convalescence.

Hatton Asylum has been fortunate in the possession of an isolation hospital separate from the main building and self-contained. Had it not been for this provision the epidemic, which is now practically over, would probably have been more severe than it has been.

THE PLAGUE IN INDIA.

Native Rising against Segregation.

The news from India that a native rising had taken place against the efforts at segregation employed in the Nasik district shows how deeply-seated is the resentment against this method of dealing with plague. Sinnur, the town in which the rising occurred, is some 100 miles north-east from Bombay. The immediate cause was the removal, on January 28th, of some plague-affected persons from their homes to the hospital and the isolation of the relatives. The mob, once aroused, not only destroyed the hospital, but also killed the native hospital assistant, levelled the segregation camp, and wrecked the post office. So serious had the riot become that the police opened fire and wounded several of the mob Since then some 150 arrests have been made. Surprise is expressed at the outbreak, on the ground that the plague has only just made its appearance in the town, and the total mortality does not exceed forty. It is satisfactory to note that the sanitary authorities are alive to the situation, and that they are dealing promptly with the epidemic in its initial stage.

The astonishment expressed, however, that the mob has risen at the first attempts at stamping out the disease is scarcely intelligible. It is the newness of all such steps that the Indians, in common with all other Asiatics, resent. In Poona we have evidence that it was only at the commencement of the outbreak that any trouble arose. When once the natives became accustomed to the practice, and grasped the good likely to ensue from rigid segregation, no more difficulties arose, and they aided the plans of the authorities in every way possible. It is to be hoped that the same result will obtain in Sinnur.

High Mortality in Bombay.

The recrudescence of plague in Bombay has attained serious proportions, and as yet there is no sign of abatement. The mortality returns for the city of Bombay for the week ending January 26th, shows 834 deaths from plague, and 1,726 deaths from all causes. This gives a death-rate of the enormous proportion of 108 7 per mille of the population.

Poona is gradually emerging from its plague trouble, the number of seizures being below 20 daily.

Quarantine against Persia and the Hedjaz.

Twenty days' quarantine is being imposed at Constantinople on all arrivals from the Persian Gulf, Muskat, and Mahammerah. Entrance to Jeddah, the port for Mecca, is strictly forbidden for all travellers from the Persian Gulf and the western shores of India.

Haffkine's Serum.

The hope of staying the spread of plague and limiting its mortality is, by the laity more especially, centred in the treatment devised by M. Haffkine. So convinced have the natives become of the efficacy of the treatment that many come forward voluntarily to submit to it. In order to set an example to his subjects, His Highness Aga Sultan Mahomed Shah on January 12th, at Poona, invited Drs. McConachy and Sabnis to his residence, and there in presence of his followers had himself inoculated with Haffkine's serum.

At a lecture delivered at Poona, M. Haffkine claimed for his method a substantial success; and he quotes the following facts in support of his contention: First, as regards animals being rendered immune. Twenty rats from a ship newly arrived from Europe were seized; of these 10 were inoculated. Subsequently the 20 rats were kept together in a cage, into which a rat suffering from plague was introduced. Of the uninoculated 9 were seized with plague, and died: whereas of those rendered immune only 1 contracted the disease. Secondly, at Uran, a village possessing 1,000 inhabitants, when plague broke out, 429 persons were inoculated by the serum in question. Of these only 7 were attacked by plague, and all recovered; whilst of the uninoculated 26 were seized and 24 died. Thirdly, in the town of Lower Damaun 2,197 persons were inoculated, 6,033 remaining unprotected. Of the latter 1,482 died, whereas only 36 of the persons inoculated succumbed to the disease. Fourthly, at Lanowli, a village with 700 inhabitants, some two hours' distance from Bombay, 323 persons were inoculated, and 377 were content to remain unprotected. Amongst the former there were 14 cases and 7 deaths; amongst the latter, that is, the uninoculated, 78 persons contracted the disease, of whom 58 died. Fifthly, at Kirkee, out of a total of 1,530 inhabitants, 671 availed themselves of the treatment, whilst 859 remained unprotected. Of the latter, 143 had plague, with 98 deaths; whereas of the inoculated 32 cases occurred, with 17 deaths only.

These results are very striking, and few dwellers in a plague-stricken community will have the courage to run the risk of not utilising this method of treatment, however much they may in theory traduce the benefits claimed for it.

The Future.

Judging from previous experience, gained from a knowledge of the disease in Canton and Hong Kong, Bombay will be free of plague by the month of May or June. In Bombay we have had plague in its three stages: epidemic, sporadic, and recrudescent. In all large cities these three stages seem inevitable, and as in Canton so in Bombay it is but fair to expect that with the subsidence of the third or recrudescent stage all traces of plague will disappear. The recrudescence which has given rise to so much alarm in Bombay was, to one acquainted with the nature of plague, inevitable. Canton, without inoculation of serum, without any sanitary authority or attempt at sanitation, got rid of plague in two years from its first appearance; and in Bombay we have a right to assume that, with strict sanitary laws superadded, plague will finally disappear in two years from its date of outbreak.

[From Our Special Correspondent.]

Severity of the Epidemic in Bombay.—Haffkine's Inoculations. —Decline in Poona and Elsewhere.

It cannot be denied that the plague is raging fearfully in Bombay, and that it is probably as bad as it was in the primary outbreak last year. There is a systematic resort

to concealment and deception marking this recrudescence, as in the primary outbreak, the Mohammedans particularly raising obstacles to the Committee's work. The registration of deaths is so inaccurate that only the total mortality can give a fair estimate of how the disease is raging. The deaths for the past week in excess of the mean of five years were no fewer than 926, and only 450 were put down to plague. The rate of mortality for the past week was 81.18 per 1,000, as against 102.06 for the corresponding week last year, while the average of the past five years is only 43.59. There is an extraordinarily large return of deaths from phthisis and diseases of the respiratory organs—a very large part of which is probably due to plague, as there is no cause otherwise to account for the excess. The Committee have now got power to compel registration of death from whatever cause, each death to be reported by the chief member of the family or occupant of the house to the nearest district or sub-divisional medical officer, whereas formerly the attendant at the cemetery merely made a return of the death on the statement of the friend.

The municipality are strongly supporting M. Haffkine's preventive inoculations, and have started six inoculating stations, and there is a move to still further increase the facilities. The Plague Committee on the other hand have done nothing in this matter. It is stated that they do not consider it to be part of their duty to take measures in the direction of increasing protective inoculation against the plague, and do not approve of any proposal to apply the funds at their disposal to the purpose, as they consider the opportunities offered by the municipality meet the requirements of the case. The results of the method at Mora, Damaun, Kirkee, and Lanowli appear to prove it to possess very considerable value. As there are no indications that the masses are averse to it, it is probable that, as facilities for inoculation increase, the number of applicants for it will also probably increase.

In Poona the recrudescence has nearly spent itself, and the authorities there are now placing a cordon round the city in view of the return of large numbers of its people. Disinfecting sheds will be established near the principal roads. In other places in the Presidency a decline of the disease is also reported.

THE DR. HALL HAINS DEFENCE FUND.

DR. HERBERT CARRE-SMITH, 3, Turnham Green Terrace, Chiswick, W., in writing to acknowledge the following further subscriptions, states that the fund is now closed, and a cheque for the amount received will be presented to Dr. Hall Hains on this (Friday) evening at the house of the Chairman of the Committee, 15, Bath Road, Bedford Park, W.:

	£	s.	d.
Amounts previously acknowledged	100	3	6
Edmund H. Gonin, Esq., M.D.	2	2	0
E. Osborne Fountain, Esq., M.D.	1	1	0
Surgeon-Major Russell Cree...	10	0	0
Total ...	£113	6	6

BATTLE OF THE CLUBS.

MEDICAL PRACTITIONERS AND MATERNITY NURSES.

FROM the *Stratford Express* of January 22nd it appears that an attempt has been made to found a nursing home in the East Ham district, and has met with considerable opposition from the local profession.

In the early part of last December a drawing room meeting was held at Durban House, at which Lady Selborne was present, with the object of extending the work of the Plaistow Maternity Charity and District Nursing Home, and an influential committee was appointed, although it is worthy to note that on this committee there was not a single representative of the profession.

A circular was issued later, in which appeared the very questionable statement that "all critical and difficult cases are placed in the hands of fully qualified nurses." A reply to this circular, signed by nearly all the medical men of the district, was published after two meetings had been held by the local profession to discuss the matter, and the following grave objections to the scheme have been formulated:

1. That the nurses attended cases of midwifery for a fee of 5s., and were not particular as to the social position of their patients, often accepting those well able to pay an ordinary doctor.

2. That there was no real necessity for the proposed undertaking, as the Poor-law medical officers were quite able to cope with the demands of the poor in their various districts.

3. That from the wording of the circular published by the committee the proposed use of the nurses was illegal, namely, to take charge of critical and difficult cases.

4. That the local medical men did not object to district nurses, but that they considered the present supply exceeded the demand.

THE BRITISH COMMERCIAL TRAVELLERS' PROVIDENT SOCIETY.

A PROSPECTUS, together with the rules of this Society, has been received. It would appear that the medical officer is paid a fee of 5s. for examining members and 2s. 6d. a visit within a radius of two miles from the doctor's residence. While these terms compare very favourably with those offered by most other friendly societies if the medical benefit is intended only for those in comparatively poor circumstances, it should not be forgotten that if a considerable proportion of the members consist of those able to pay at least 3s. 6d. or 5s. a visit it would be an organisation which the medical profession could not consistently support. Further, we find in the circular sent to the profession an offer to widely advertise to the public the names of its medical officers. The last paragraph is as follows: "It is intended to print a list of doctors for the Society, which will be widely distributed amongst members *and others*," etc. (The italics are our own.) Advertisement of this kind is not calculated to gain the favourable opinion of respectable members of the profession.

RATES OF PAYMENT.

MEMBER writes: I see that a correspondent in the BRITISH MEDICAL JOURNAL of January 22nd mentions that the clubs and friendly societies in the Gateshead district pay not less than 4s. per member per annum. Medical practitioners in this district have taken no new clubs at less than that amount since 1896, whilst surgeons to others are requiring 6s. per member. It is to be hoped that this will shortly become the usual fee for all contract patients. If medical men showed one half the loyalty and self-sacrifice exhibited by the engineers in their unfortunate dispute, we should be far more successful in removing the evils under which we labour, and fewer complaints as to the difficulty of obtaining a decent living would be heard.

FEMALE LODGES OF FORESTERS' COURTS.

A CORRESPONDENT writes to say that a Foresters' Court to which he is the surgeon is proposing to form a "ladies' branch," and that he would like to know what is the experience elsewhere of such.

*** Experience is strongly against such branches as far as the interests of the surgeon are concerned. It has been repeatedly pointed out in the columns of the BRITISH MEDICAL JOURNAL that female members of friendly societies ought to pay a distinctly higher rate of premium than male members, as their rate of sickness will, as a rule, far exceed that of the latter.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The spring clinical meeting will be held at the Swansea Hospital on Thursday afternoon, February 17th. Notices of papers, cases, etc., are requested to be sent in

not later than Saturday morning, February 12th.—A. Sheen, Cardiff, D. Arthur Davies, Swansea, Honorary Secretaries.

Midland Branch.—A meeting will be held at Leicester Infirmary on Wednesday, February 9th, at 3.30 P.M. Business: To discuss the report of the Constitution Committee of the Association. The President, Mr. C. J. Bond, will be glad to see members at afternoon tea after the meeting. Any member wishing to bring forward any subject of importance to the Association or Branch for discussion is requested to send notice to the Secretary at least two days before the meeting. Members of the Association may be elected members of the Branch at the meeting, and are requested to apply to the Secretary, Frank M. Pope, M.B., 4, Prebend Street, Leicester.

Southern Branch: South-East Hants District.—The next meeting will take place at the "Medical Library," 5, Pembroke Road, Portsmouth, on Tuesday, February 8th, at 9 P.M. Gentlemen desiring to make communications or to show patients or specimens are requested to communicate with the Honorary Secretary, C. C. Claremont, M.D., 57, Elm Grove, Southsea.

BATH AND BRISTOL BRANCH.

The third ordinary meeting of the session was held at University College, Bristol, on January 26th, F. Richardson Cross, M.B., President, in the chair. Forty-six members were present.

The Constitution Committee.—The Council presented their recommendations on the report of the Constitution Committee of the British Medical Association as follows:

They consider that the proposal in the first paragraph with reference to the "Election of Members of Council" would tend to diminish the value of membership of the Branches, and they therefore do not approve of it. They strongly support the suggestions of the Constitution Committee in the paragraphs headed in the report:

(*a*) "Members to be registered as Electors in only one Branch."
(*b*) "Members of the Association to be elected by the Council of any Branch within the area of which they reside."
(*c*) "Expulsion of Members."

They disapprove of the recommendations in the paragraphs of the report headed:

(*a*) "Association to pay Election Expenses."
(*b*) "Council to report in first instance to the Branches."

And they do not feel themselves in a position to express an opinion on the recommendations in the paragraph headed "Appointment of an Executive Committee by the Council," and consider that this question should be decided by the Central Council of the Association.

The recommendations of the Local Council were unanimously adopted by the meeting.

Cases.—The President showed a large number of extremely interesting cases of Congenital Diseases of the Eye.

Recurrent Tumour of Neck.—Mr. Monro Smith reported a case of a Recurrent Tumour of the Neck, having the clinical and pathological signs of sarcoma, which spontaneously disappeared. The patient had other sarcomatous deposits, from which he ultimately died. Messrs. W. H. Harsant, C. A. Morton, W. M. Barclay, Drs. E. Markham Skerritt, Michell Clarke, and the President took part in the discussion which followed the paper, and mentioned other cases where a supposed sarcomatous tumour disappeared spontaneously.

Intestinal Obstruction.—Mr. W. M. Barclay read an account of two cases of Intestinal Obstruction in which laparotomy was performed. Both cases recovered. In the one obstruction was due to sinking of a coil of the ileum from the presence of contractions and adhesions, in the other to an annular carcinoma of the sigmoid flexure. The operation was done in the latter case in two stages, and he pointed out the advantages of this method of procedure. Messrs. W. H. Harsant, J. P. Bush, and J. L. Firth discussed the cases.

Trephining the Mastoid.—Mr. T. Carwardine showed a number of specimens illustrating the variations in the relations between the lateral sinus, mastoid cells, and basis cranii, and pointed out that the position formerly recommended for trephining the mastoid would in some cases open the lateral sinus or cranial cavity. He advised that the opening should start in the external auditory meatus at the commencement of its upper and posterior wall.—Mr. C. A. Morton said that he had adopted the plan of making the opening as much as possible in the posterior wall of the meatus.

Embolism of Basilar Artery in Diphtheria.—Dr. F. M Edgeworth gave an account of a case of diphtheria in which death occurred on the twentieth day, with a temperature of 106°; death was preceded by opisthotonos and tonic spasms of the limbs. The pupils were dilated. On *post mortem* examination a clot, probably embolic in origin, was found at the upper end of the basilar artery. The heart was healthy and free from clot, and the origin of the thrombus could not be discovered.

Malignant Disease of Œsophagus.—Dr. G. Parker read notes of a case of malignant growth involving the œsophagus, and pressing on the left recurrent laryngeal nerve. There was dysphagia and paralysis of the left vocal cord. The chief points in the differential diagnosis from aneurysm were the presence of leucocytosis and occasional attacks of pyrexia.

NEW SOUTH WALES BRANCH.

The usual monthly meeting of the Branch was held in the Royal Society's Room, Sydney, on November 26th, 1897; Dr. Clubbe, President, in the chair. There were forty-one members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The President announced the election of the following new members: Dr. John MacMaster, Summerhill; Dr. MacKnight, Urana; Dr. G. R. P. Hall, North Sydney.

Communications.—Dr. Bennett exhibited two patients, one suffering from Paget's Disease of the Nipple, and a case of Elephantiasis.—Dr. Jamieson read notes on a case of Congenital Heart Disease, and exhibited some specimens.—Dr. Scot Skirving read Clinical Notes on Enteric Fever as observed in Prince Alfred Hospital. Drs. Newmarch, Litchfield, Sawkins, Angel Money, Crago, F. H. Quaife, A. J. Dick, Neill, and Fiaschi discussed the paper. Dr. Scot Skirving replied.

Alteration in Articles of Association.—Dr. Rennie moved the confirmation of the alterations in the Articles of Association. Seconded by Dr. Quaife, and carried.

DUBLIN BRANCH.

The annual meeting of the Dublin Branch of the Association was held in the Royal College of Physicians on Monday, January 31st, when the chair was taken by the out-going President, Dr. Wallace Beatty.

Report of Council.—The report stated that the members numbered 190, and that the balance in the bank amounted to £16 os. 3d., all expenses having been paid. It referred further to the deputation which recently waited on the Marquis of Lansdowne regarding the grievances of army medical officers, and to the hopeful nature of the reply which was given. Dr. Grimshaw, C.B., in moving the adoption of the report, declared his opposition to the Association taking up the duty of medical defence, and stated that if that were done he for one would resign. Dr. Bennett seconded the motion, which was adopted.

Election of Officers.—The following officers were then declared elected for the ensuing year: *President:* Sir C. Nixon, M.D. *President-elect:* F. T. Heuston, M.D. *Vice-Presidents:* H. C. Tweedy, M.D.; Sir C. Cameron, M.D. *Council:* C. B. Ball, M.D.; Wallace Beatty, M.D., ex-President; E. H. Bennett, M.D., ex-President; H. T. Bewley, M.D.; J. Lentaigne, F.R.C.S.; J. W. Moore, M.D., ex-President; R. D. Purefoy, M.D.; J. M. Redmond, M.D.; W. G. Smith, M.D., ex-President; W. J. Smyly, M.D.; Sir Wm. Stokes, M.D., ex-President; J. B. Story, F.R.C.S. *Representative on the Council and on the Parliamentary Bills Committee of the Association:* J. W. Moore, M.D. *Honorary Secretary and Treasurer:* James Craig, M.D., 35, York Street, Dublin.

Vote of Thanks.—Sir Christopher Nixon having taken the chair, a vote of thanks to Dr. Beatty was passed, on the motion of Sir George Duffey, seconded by Dr. J. W. Moore.

President's Address.—The President then delivered an address on Medical Reform, which is published at page 353.

The One Portal System.—Sir William Stokes, in moving a vote of thanks, expressed his opinion that the one portal system would mean the extinction of schools outside London. The Scotch schools in the past and at present undersold both Ireland and England. If the one portal were adopted for each country, would there be anything to prevent the Scotch Board

from underselling the others? He was of opinion that the system of visitation would do all that was necessary. He blamed the General Medical Council for having sent gentlemen to report on surgical examinations who knew nothing of surgery, and so in the other subjects of medicine and midwifery.—Dr. J. M. REDMOND seconded the motion, which was carried.

Annual Dinner.—In the evening the members of the Branch dined together, and there were several guests. Among those present were the Right Hon. C. T. Redington, Sir George Morris, Dr. Grimshaw, C.B.; Dr. J. W. Moore, Dr. C. B. Ball, Dr. Beatty, Dr. W. J. Longley, the Right Hon. C. H. Hemphill, M.P.; Sir Henry Toynne, C.B.; Sir William Kynsey, C.M.G.; Dr. W. G. Smith, Dr. E. H. Bennett, Dr. Macan, Dr. Woodhouse, Dr. J. Craig, and Dr. Heuston.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

AT a meeting of this District held at Lambeth Infirmary on January 27th, Dr. HECTOR MACKENZIE read a paper on the Symptoms, Diagnosis, and Treatment of Movable Kidney. After a short discussion the meeting then adjourned to the wards, where several cases of movable kidney were shown. —Dr. QUARRY also exhibited several cases of Alcoholic Neuritis.

BORDER COUNTIES BRANCH.

A MEETING was held in Newtown, St. Boswell's on January 28th. Dr. MENZIES (President) (Galashiels) occupied the chair. Eighteen members were present.

Operations for Empyema.—The PRESIDENT showed three patients on whom he had operated for empyema by incision and the insertion of a drainage tube. In one case he first demonstrated the pus by means of a hypodermic syringe, the use of which he advocated for purposes of diagnosis. In the third case shown the chest symptoms came on after diphtheria, but after operation the cure was rapid.—Dr. HADDON complimented the President on his successful results. He advocated early tapping in all cases of pleural effusion where the fluid did not become absorbed in three or four days after reaching its maximum.—Dr. THOMAS mentioned having been called to several cases in which the empyema had spontaneously discharged, and where perfect recovery followed.

Blood-Letting in Eclampsia.—Dr. THOMAS read a paper on the treatment of eclampsia by blood-letting only. He detailed three cases, the particulars of which are briefly these:—First case: Primipara, aged 43 years, dropsical, convulsions occurred suddenly; there was no trace of labour beginning; the os undilated. He at once bled to the extent of two broth platefuls; the fits ceased for a considerable time. On recurrence he removed another broth plateful; the fits ceased entirely; in the meantime labour had been quietly progressing; he now turned and delivered; a fit occurred on the removal of the placenta; thereafter recovery was complete. Second case: Primipara, 23 years; had been eight hours convulsed. He bled to the extent of two broth platefuls; convulsions ceased; labour went on quietly, and ended naturally. Complete recovery followed. Third case: The mother of eight children, with general anasarca, one hour convulsed when bled to the same extent as in the previous cases; gave citrate of caffeine; the swelling disappeared, and ten days after the labour ended naturally.—Dr. MAIR related two cases in which he had used blood-letting, having heard Dr. Thomas at a meeting of the Branch recommend such treatment two years ago. In one, neither chloral and bromide nor chloroform had any effect, but after blood-letting there followed sound sleep, and the patient never had a bad symptom. In the second case, chloral, bromide, the induction of premature labour, and removal of the child failed to cause cessation of the fits, but blood-letting was followed by complete and immediate recovery.—Dr. TYRELL related two cases. The first was a primipara, and the fits were rapid; the uterus was emptied; the placenta came naturally, with little loss of blood. One fit followed another in rapid succession. All the usual remedies were tried, but without avail. The second case was also a primipara. The os was well dilated, when one-half pint of blood was withdrawn; the forceps completed the delivery. After removal of placenta the fits went on as before; another half pint of blood was removed; it had no effect, and death followed in twenty hours after the birth of the child.—Dr. HAMILTON related four cases occurring in a mother and her three daughters, which, to his mind, proved heredity and a nervous cause.—Dr. CULLEN mentioned a case of great severity in which the fits occurred before, during, and after labour. Chloral was used before, and chloroform during, delivery with forceps of twins. After labour, for three days, chloroform had to be given on every occasion when the patient required to be moved in bed, otherwise a fit was induced. She ultimately got quite well. He considered some cases epileptoid as distinguished from the albuminuric. In the former bleeding was no use.—Dr. HADDON said that, if we could ascertain the cause, we might form some theory as to the action of remedies. He had found by the use of the sphygmograph that with the beginning of pregnancy, high tension of the pulse commenced, which disappeared on the completion of labour. And if high pulse tension had any causative relation to puerperal eclampsia, he could then understand the beneficial effect of blood-letting, seeing it at once reduces tension. He had never seen a case in his practice, although he had several times met with cases of general anasarca and albuminuria to such an extent as to boil solid. Seeing that in such cases no eclampsia occurred, the kidney might be exonerated from being the organ at fault, and it was probable that the derangement of some other organ was necessary before eclampsia would occur, such as the liver.—Dr. MUIR did not think Dr. Thomas had made out his case. One required a large number of cases to speak authoritatively. In the pre-chloroform days venesection was the universal remedy. After chloroform the mortality fell enormously, from 35 to 15 per cent. In plethoric women it was a good remedy. In almost all the cases, however, there is albuminuria, and the blood is watery, therefore it is not good to bleed in these cases. In all his own recent cases, he gave chloroform and emptied the uterus, and every one recovered. —Dr. MENZIES had not found it very beneficial; he looked on it as one resource to be remembered. Pilocarpin he had found do excellently, but it was dangerous, as it sometimes caused effusion into the bronchi, and must be used with caution. In one case he gave chloroform continuously for two days, and complete recovery followed.—Dr. MARR specially advocated the use of veratrum viride.—Dr. CALVERT remarked upon the diversity of opinion as to the treatment of eclampsia. He thought this due to the uncertain nature of the disease—the most hopeless case, to all appearance, would recover, and another, seemingly mild, would progress steadily towards death. The prognosis of the disease being so difficult, it was small wonder that the treatment was varied and indefinite. Morphine he had found of great use in arresting convulsions. He thought one result of the debate would be that no member present would allow a case to die without having given the patient the benefit of the remedy so ably advocated by the writer of the paper.—Dr. THOMAS, in reply, remarked that some of the members had wandered far from his original thesis. He referred to the use of blood-letting in those cases only where fits occurred previous to labour. Some members had referred to chloroforming and at once turning and delivering, but he advocated his remedy in cases in which this was impossible.

Specimens.—Dr. MACGREGOR showed a specimen of a Neuroma of a Cutaneous Nerve and related two cases: one of a cystic goître treated with injection of iodine, and the other of hysterical paraplegia with speechlessness in a girl aged 9 years, probably caused by the shock of an attempted rape, and resulting in recovery.—Dr. CULLEN showed a Larynx which had been excised by Professor Annandale, of Edinburgh, and described an original method for the administration of chloroform during such an operation.

Unqualified Practice.—Dr. TYRRELL read a paper on unqualified practice. He dealt with unqualified assistants, prescribing chemists, bonesetters, and advertising quacks who assume medical titles.

Formation of a New District.—Dr. CALVERT informed the members present that the Council had agreed to the formation of a section for the counties of Roxburgh, Berwick, Selkirk, and Peebles, and it was arranged that the first meeting be held at Newtown, St. Boswells early in May.

Dinner.—Ten members dined together in the hotel immediately after the meeting.

SPECIAL CORRESPONDENCE.

PARIS.

M. Albert Robin on Bleeding and Blistering.—Typhoid Fever and the French Army.

At a recent meeting of the Academy M. Albert Robin admitted that he undertook an ungrateful task—that of restoring to favour bleeding, emetics, and blistering. M. Robin considers that the three categories of hæmorrhage—the natural, the pathological, and the therapeutic, produce the same results—nutrition is stimulated by them. Bleeding is justified in cases where there is faulty nutrition resulting from the function of nutrition working imperfectly. Bleeding may be useful in pathological conditions widely differing from each other when organic oxygenisation is insufficient. In certain cases of intoxication and auto-intoxication bleeding is recommended by M. Robin, and specially in uræmia, more oxygen is absorbed and more carbonic acid eliminated. The influence of emetics produces such important chemical changes that he considers their use should be maintained. Ventilation is increased, the quantity of oxygen absorbed by the tissues is from 35 to 160 per cent. This active exchange of gases, resulting from emetics, is evidently due to mechanical conditions, particularly increased pulmonary capacity. There are also considerable chemical changes. Emetics in bronchial infections play the same part as purging in intestinal infection. Concerning blisters, M. Robin says that they have been unjustly condemned. Blistering has a purely mechanical action. M. Robin, however, in advocating the use of blisters, does not deny the danger of its abuse. The old system of therapeutics is about to crumble away, says M. Robin, and he considers it wise to attract attention to those therapeutic agents that our ancestors have based on long and patient observations.

Dr. L. Thoinot, Agrégé of the Paris Medical Faculty, and member of the Consultative Sanitary Committee, in a letter to the *Temps*, calls upon the Government to compel garrison towns to take the necessary precautions for the prevention of typhoid fever. Epidemics of that disease would never, he argues, break out where the water supply is pure, that is to say, free from noxious germs, and where all *débris* are quickly and thoroughly removed. From 1875 to 1892—a period of eighteen years—132,276 cases of typhoid fever, with 16,249 deaths, were notified as having occurred in French barracks. In the towns where the sanitary conditions have been improved a decrease in typhoid mortality has been observed, both in the civil and military populations. Rennes is a striking example of this. In Paris, where less Seine water than formerly and more spring water is supplied to the inhabitants, the typhoid statistics are much lower. Unfortunately, the list of towns thus improved is a very short one. In the War Department the directors of the Health Service, Dr. Dujardin-Beaumetz and Dr. Dieu have done all they can to purify the water supply in the French barracks, and the result has been to diminish the mortality, but typhoid fever has not disappeared, and Dr. Thoinot declares that it will not do so until in garrison towns there is a municipal service supplying absolutely pure water. But even if the barrack water supply could be assured to be free from contamination, it is impossible to prevent the men from drinking polluted town water when they are out of barracks. Dr. Thoinot declares that the yearly mortality from typhoid fever, counting men and women from 18 to 25 years of age, whether civil or military population, amounts to 8,000 or 10,000 a year. The question of the depopulation of France is causing great anxiety. Instead of discussing how to increase the birth statistics, which Dr. Thoinot believes is almost impossible in a country of such an advanced civilisation as France, it would be more useful to study how to preserve the living beings. The Roussel law protects newborn children and infants, but young men from 18 to 25, about to render services to their country and become fathers of families, are abandoned to typhoid fever. In 1870 and 1871 small-pox killed more men than the enemy's bullets. Dr. Thoinot predicts that if unfortunately France has to go to war, typhoid fever will play the part that small-pox played in 1870. The towns in which the troops will be concentrated are now known to have typhoid fever epidemics resulting from impure water supply. During the Tonkin expedition, a reserve division quartered in the Pas-des-Lanciers camp had to be evacuated on account of a typhoid fever epidemic. In Tunis a fifth of the troops were *hors de combat* from typhoid fever. Dr. Thoinot urges that a law should be passed giving the State power to compel towns to render themselves sanitary. The Chamber of Deputies has already voted such a law, but the Senate has adjourned the debate *sine die*.

ABERDEEN.

Bacteriological Diagnosis. — Arrangement between Professor Hamilton and the Town Council.—Notice to the Profession by Dr. Matthew Hay.

A very important step has been taken in Aberdeen with regard to the bacteriological examination of infectious diseases. A draft agreement between the Town Council and Dr. Hamilton, Professor of Pathology in the University of Aberdeen, has been submitted and approved. Under it Professor Hamilton undertakes to conduct examinations in all suspicious cases brought under his notice, on payment of £120 per annum.

The Town Clerk has been instructed to communicate with the various surrounding local authorities, requesting them to participate in the system now introduced, on payment of sums to be agreed upon. Dr. Matthew Hay, medical officer of health, is instructed to communicate with the medical practitioners in the city, intimating the fact of Professor Hamilton's appointment, and requesting them to forward material from suspicious cases under their charge to the Pathological Laboratory at the University for bacteriological examination.

The system now to be introduced must be felt most distinctly to supply a want. A considerable amount of similar work has been hitherto carried on in the pathological department by the courtesy of the Professor, but hesitation has been felt by many practitioners in sending specimens to the department, where they know the officials to be fully occupied with the teaching work of the University, and the superintendence of original research. With a salaried assistant for the special object under the agreement, such hesitation will no longer be felt, and the system may be fully expected to lead to a more thorough recognition, and thus to more scientific treatment of many cases of infectious disease throughout the district. The Town Council is to be applauded for their foresight in providing assistance towards a system which, it may be hoped on all accounts, will meet with more general adoption, not only in Aberdeen but throughout the country, than heretofore.

LIVERPOOL.

Annual Report of the Royal Infirmary.—Retirement of Dr. John Wallace.

The annual meeting of the supporters of the Liverpool Royal Infirmary took place on January 31st. The report stated that there had been an increase of the work done in the Infirmary last year as compared with previous years both in the in-patient and out-patient departments. The average number of beds occupied was 248, being the largest on record, and there was an increase in the number of major operations. The average length of residence in the hospital had, however, been reduced, partly by making a greater use of the Convalescent Fund. In compliance with the recommendation and resolution of the City Council accommodation for a horse ambulance was being provided to serve the district of which the Infirmary is the centre. Much regret was expressed at the final resignation of Mr. Hamilton B Gilmour, who has filled the office of Chairman of Committee since 1879. Mr. Gilmour resigned the Chairmanship last year, and was appointed President, but on account of the lamented death of his successor a few weeks after his election Mr. Gilmour consented to act as Chairman during the year of his office as President. Mr. Gilmour, in

moving the adoption of the report, stated that the expenses during the past year had been £2,000 in excess of the income, and he regretted that the maintenance fund, which had guaranteed a certain amount of support for the infirmary during the first few years of the existence of the new building, was steadily becoming exhausted. The institution was thus rapidly going into debt, in spite of the fact that it had been proved by statistics that the cost per bed in the infirmary was, with one exception, less than the cost in any other provincial hospital with a medical school attached. The work of the institution was steadily on the increase.

The retirement of Dr. John Wallace, who has been for two years surgeon to the Thornton Wards (gynæcological), is announced. The election of his successor will probably take place some time in March. The appointment is certain to be eagerly sought after, as it generally carries with it the Professorship of Obstetrics in the College. The election committee consists of about a hundred trustees of the infirmary. The candidates who are generally believed to be in the field are Dr. Henry Briggs, Dr. T. B. Grimsdale, and Dr. Francis Imlach.

CORRESPONDENCE.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

SIR,—Your correspondent, Dr. R. J. Collie, appears to ridicule the truism expressed by Mr. Carter that "as a political force the profession is powerless," and he goes on to suggest that "an organised determined effort to interview and obtain pledges from all parliamentary candidates" should be made. Having interviewed the candidate and extracted the pledge, what is gained? Absolutely nothing. A pledge is a long way behind an Act of Parliament.

Election managers know that about seven-eighths of the profession give an inalienable, unswerving allegiance to one party, that they form only a microscopic percentage of the electorate, and for practical purposes do not count. Again, chiefly through local jealousies, it is next to hopeless to attempt organisation among medical men in any given parliamentary division.

But why do not the medical profession seize the University seats, and return ten reforming doctors in place of ten party men as at present? Such a task is practicable, and ten medical agitators of a determined type might influence Parliament from inside the House of Commons.—I am, etc.,

Southwark, S.E., Jan. 31st. THOMAS MASSIE.

MR. VICTOR HORSLEY AND THE GENERAL MEDICAL COUNCIL.

SIR,—It is quite clear from the recent letter and manifestoes which have appeared in the BRITISH MEDICAL JOURNAL that Mr. Horsley requires something more than moral support in his campaign undertaken in the interests of those who practise the profession of medicine. Now it appears to me that those who have elected him to the position which he now holds as direct representative upon the General Medical Council are in this quandary: They cannot get rid of those who publicly abuse him and those who privately are engaged in defeating him. Moreover, they cannot put him in a majority upon the Council. They cannot do either because the Legislature has ordained that they are to be denied the right of choice in representation.

The time has now come when some radical change must be effected in our government, and the best course to be pursued is, in my humble opinion, for our Association to demand a Royal Commission to inquire into the constitution and government of the medical profession. I am prepared to give notice that at the next annual meeting I will propose that "The Council of the Association be directed to take steps to obtain the appointment of a Royal Commission to inquire into the constitution and government of the medical profession and into the grievances of its members."—I am, etc.,

Hatfield, Jan. 31st. LOVELL DRAGE.

THE ARMY MEDICAL STAFF.

SIR,—It is well known to everyone that the present Government purposes to introduce an Army Bill early in the coming session of Parliament. The whole nation is anxiously waiting to learn what the nature of that Bill will be, with the result that this anxiety, coupled with recent events in distant corners of the Empire, has stimulated such a keen interest in our country's army as has not been displayed for many years past. The present is an exceptional opportunity, therefore, for securing the long sought-for army medical reforms, and one which, if permitted to pass by unutilised, may never occur again.

I venture to suggest to your readers who are interested in this question—and, after all, where can there be a British subject who is not, seeing that it is not merely a medical question, but most essentially a public one also—that great advantages would accrue from making every member of Parliament thoroughly well informed on all the points involved, because I believe many of them as yet know little or nothing about them, and from the British public being similarly enlightened whenever and wherever medical men at the present time have the opportunity afforded them of doing so. Further, that the members of our profession who are resident in each town and county throughout the kingdom should forthwith in each instance organise a deputation, and waiting upon their local parliamentary representative point out to him the salient features of this controversy, the extreme importance that he should personally bestir himself in it, and the real necessity that he should exert most ardent efforts towards securing that settlement, which has so long been demanded by the whole British medical world. That to ensure his support it should likewise be convincingly demonstrated to him that the point which is at issue very intimately concerns both the highest and the lowest in the land. That it is as much a people's question as it is a medical one.

I would go further than this, and would urge that with as little loss of time as possible every medical society in the country should pass a resolution and forward it to Lord Salisbury, calling upon the Government to forthwith remedy the present unsatisfactory state of affairs in this department. Were such a course pursued by the civil medical profession as I have endeavoured to indicate, there could be no doubt as to the result. Such action would carry much more weight and much more conviction than the total resultant from the deputations which have hitherto presented themselves at the War Office.

It is not the War Office which requires enlightenment; it is the nation and the House of Commons, and through them the Government of to-day.—I am, etc.,

Nottingham, Jan. 28th. R. RITCHIE GIDDINGS.

CONSULTATION WITH HOMŒOPATHS.

SIR,—Your correspondent, "An Open-Minded General Practitioner," defends the practice of meeting homœopaths in consultation. While upholding their methods, he asks: "What about the new serum treatment? Does it not savour of *similia similibus curantur?*" On the contrary, I think not. The horse is known to be immune to diphtheria, and we proceed to make it more so by injecting it with the virus of that disease, the result being that the blood of the horse assumes an intensely antagonistic action to diphtheria. We then use the serum of the horse thus treated as a powerful antidote and inject our patients with it, and happily cure them; but we do not inject them with an attenuated virus in any sense of the term, as your correspondent would imply. I have heard others use this argument in favour of homœopathy, but to my mind it is unsound.—I am, etc.,

Linden Gardens, W., Jan. 29th. R. C. PRIESTLEY.

SIR,—Like your correspondent, "An Open-Minded General Practitioner," I am much exercised at the reopening of the question, "Should homœopaths be met in consultation?" but from a very different point of view than that seen by him.

I claim to have some small right to speak on this subject, because in the early stage of my career much pressure was put on me to induce me to become a homœopathic practitioner. I was introduced to a gentleman practising on Hahnemann principles, and I read much literature upon the subject.

True homœopathic treatment—not the bastard homœopathy now generally practised—rests on the due observance of these two axioms: 1. That a drug which will induce a given disease in a healthy subject will, when that disease spontaneously arises, be a specific for its cure (giving rise to the formula, *similia similibus curantur*). 2. The more minutely the drug is divided into doses the greater its potency for effecting a cure.

Now either these principles—these theories—are true or they are false. There can be no hair-splitting in the matter, true or false. Investigation, scientific and practical, has denounced them as false as they are absurd, by the vast majority of the medical profession, who are ever open to the reception and adaptation of scientific facts. It is therefore impossible that we can give the right hand of professional good fellowship to any man who practises homœopathy or meet him in consultation when we know his very premisses to be untrue in science and practice.

But the matter is rendered still more insuperable by reason of the bastard homœopathy which is chiefly practised in the present day. By bastard homœopathy I mean a homœopathy which is practised upon a supposititious idea of drug action upon a healthy subject, but which has never been put to practical proof. Hahnemann himself lamented the inadequacy of material for this purpose, and the late Dr. Fearon, of Birmingham, who was a true homœopathic practitioner, and to whom I was indebted for much information on this subject, stated that homœopathy was much straitened from this same cause. Consequently a large number of homœopathic drugs must be prescribed empirically.

Then there is a great divergence of opinion concerning the accuracy of the second axiom, that of the dose. Some using even what is termed mother tincture, whilst others go in for the most minute doses—of $_{100000}$ of a grain or even less. But to render the matter still more difficult there are a large number of what we might term bastard homœopathic practitioners; by this I mean men who practise with the principles of Hahnemann as adulterated in the present day, or allopathy, according to the wishes or principles of their patients. Now, it is not common honesty to run with the hare and at the same time hunt with the hounds. Either the principles of Hahnemann are true or false. It is impossible to believe in them and at the same time act on those which govern allopathic practice. The excuse made is that there is allied truth in both systems. This statement is both absurd and untenable. Their foundations rest upon different bases, and their superstructures are antagonistic. But there is worse behind. Allopathic drugs are often prescribed as homœopathic—when their action must be known to be purely the former. I have before me a prescription signed by two homœopaths in this town, and it contains an order for iodide of potassium in allopathic doses for an aortic aneurysm, and yet no amount of iodide of potassium will produce an aneurysm; and the patient for whom this was prescribed consulted these two practitioners as homœopathists, and was under the impression she was taking homœopathic medicine. And this is by no means an isolated case, as numbers of my allopathic professional brethren can testify.

How, then, can we for a moment be expected to meet these practitioners in consultation, or attend with them, except upon the distinct understanding that nothing based upon so-called homœopathic principles shall be allowed to enter into the consideration of the case? And if this is so, how can the supporter of Hahnemann principles reconcile his conscience to the fact of resigning his patient to a course of treatment which he believes in his heart to be detrimental? You cannot reconcile the two courses of therapeutics, and it is dishonest action on the part both of the allopath and his homœopathic *confrère* to attempt to do so. There is only one way to answer the question propounded, and that is by a decided and very emphatic negative.—I am, etc.,

Liverpool, Jan. 31st. ARTHUR WIGLESWORTH.

UNQUALIFIED ASSISTANTS.

Sir,—While agreeing in the main with Dr. Wardle, allow me to express a difference of opinion with him as disclosed in his remarks on General Opinion 4 in the British Medical Journal of January 22nd. When a man has been in medical practice for some time, when he has gained the confidence of the general public, worked for and acquired a good reputation for knowledge and skill, and a good *locus standi*, then, by virtue of these, he should be able to raise his fees in spite of any competition by the newly qualified man who is yet without honour. His fallacy arises from his inability to carry out what he has termed "the ideal condition." In a colliery district, or with that class of a population, the above is often a difficult thing to do, as there is often but little difference in the wealth and social position of the mass of the people. Even then, however, the people are as a rule willing to pay more for the man with the experience.

As things are, we generally find the old-established practitioner, instead of raising his fees, adding to the number of his assistants to the extent of three or more. Charging the same fees as before, and thus by his greater amount of capital and his established position compelling the newly-qualified man to lower his prices; as what with the opposition of quacks, patent medicine vendors, hospital abuse, and a class of midwives freely provided to undersell him by his more fortunate medical brethren, he would otherwise be unable to live.

I would remind "M.O.H." that what he is pleased to term "a sordid traffic, dangerous to the patients and degrading to the general practitioner," is not necessarily or generally so. I would recommend him to read or re-read *A Doctor of the Old School*, and with his co-operation will enable him to prove, to his lasting satisfaction, that under existing circumstances the unqualified assistant is often a necessary evil, and has but a very small share in the underselling of the profession at large.—I am, etc.,

January 25th. VOX.

Sir,—As a North-Country surgeon I think the resolution issued by the General Medical Council a most unjust one. Practising here for over twenty years I have employed unqualified assistants, men who were a few years ago legally advertised and recognised, and found capable of fulfilling their duties. Many married, and amongst those who have served me have been sons of professional men, but unable for want of means to continue their studies to the end of their curriculum. What a sudden blow for this unfortunate class, for whom many of us have so much to be thankful for!

My own experience of qualified men has been most unsatisfactory, and shall never be repeated. Unqualified men are usually of mature age, with knowledge of the world, good dispensers, and well used to midwifery. All this is required by an elderly medical practitioner (who is naturally unwilling to perform much country night work).

I am not defending covering, as I never allowed an assistant to attend a case (midwifery excepted) unless under my supervision, and he was always within call.

But, again, I can picture in the North a simple graduate being placed in charge of a pit village in Durham or Northumberland; he would be absolutely useless, and in every probability become a drunkard in a few months. The rule has been too hasty and too rash. The Council gentlemen, who have never placed themselves in contact with their poorer professional brethren, might with advantage have modified, or at least have allowed more time for so important a revolution in our ordinary practice to take place.

Even now, I should myself if necessary take an unqualified man into my house in preference to one newly qualified.—I am, etc.,

Hexham, Feb. 1st. COTTENHAM FARMER.

A MIDWIFE'S OPINION.

Sir,—The enclosed quotation is taken from the *Sheffield and Rotherham Independent* of January 27th, 1898:

The Coroner and the Diploma in Midwifery.—Mr. D. Wightman, the city coroner, yesterday held an inquest at the Royal Hotel, Attercliffe Common, touching the death of Florence Mabel Flint, eight weeks old, the daughter of Joe Flint, ironworker, of 15, Warden Street, Carbrook. The child died suddenly while in bed with its mother, and Dr. Blythe gave as his opinion of the cause of death that it was due to consumption. The midwife, however, who, although not holding a diploma, had had eighteen years' experience of her profession, had reason to think that the child had died from convulsions. The coroner said he was inclined to trust a woman of eighteen years' experience in preference to a man who had, perhaps, had little experience beyond passing an examination. Such a woman knew more than some doctors. Many women did not take the trouble to sit for the certificate, but he should think that a woman of eighteen years' experience could walk through that examination. Under

the circumstances, he should have little hesitation in advising the jury to record a verdict of "death from convulsions." Verdict accordingly.

Had I not seen it, I could not have believed that any man of education, let alone a man with legal training, could have made the remarks with which this paper credits Mr. Wightman. His whole statement is one calculated to do inestimable harm. The idea of putting the diagnostic powers of an ignorant midwife before those of a qualified medical man is to me preposterous. How many of us have had to listen to their rubbish as to "inward convulsions," etc.

Dr. Blythe is quite unknown to me, but he has my sympathy in the outrageous indignity which has been put on him by a man who ought to know better.

I shall be curious to know what your opinion and that of the members of our Association is with regard to this matter. I am, etc.

January 29th. PRACTITIONER.

*** Dr. Blythe in a letter which appeared in the *Sheffield and Rotherham Independent* of January 28th, states that he had not seen the child since December 16th, and that when informed of its death by the father, he did not express any opinion whatever as to the cause. He adds that when called upon by the coroner's officer he stated that he knew nothing about the case. The coroner's remarks, therefore, appear to be quite uncalled for, and are an example of the slipshod way in which too many inquests are conducted.

SCARLATINA: WHEN MALIGNANT, WHY SO?

SIR,—In a hospital report in the BRITISH MEDICAL JOURNAL of January 15th, page 145, I find a fatal case of scarlatina maligna. The writer speaks of the comparative rarity of the malignant form nowadays, and remarks that we do not know what "this change of type" is due to. A large experience of the complaint in all its varieties during forty-six years has led me to form a very decided opinion as to the cause of malignancy in this disease—and, I venture to add, in measles also. I believe it is due to local surroundings—either to overcrowding, to faulty or stopped drains, or to a tainted water supply. Looking back for many years, I can vividly call to mind many cases of the bad type where in after-days and under other circumstances I have found the drinking water bad or the drains foul or blocked up or inefficiently constructed. The writer alludes to the immunity enjoyed by very young infants. Is not this to be accounted for partly by the fact that they drink no water—one of the fruitful causes of malignancy?—I am, etc.,

Stourbridge, Jan. 27th. ALFRED FREER, M.R.C.S.L., L.S.A.

ST. JOHN AMBULANCE LECTURES.

SIR,—The BRITISH MEDICAL JOURNAL of January 29th contains a letter from "Hygiene" that raises an important question respecting the appointment of lecturers who are not medical men to do the work of the St. John Ambulance Association. I cannot conceive a more dangerous experiment than to allow "the clergy, school teachers," etc., to undertake the work of lecturing on hygiene, especially as no attendance before examination for a lecturing certificate is required. The branch of which I am chairman take this view, and has forwarded to the head office the following resolution:

That the Executive Committee think that the proposed employment of lecturers other than medical men, who have always hitherto officiated in that capacity, to conduct classes on hygiene in connection with the home hygiene course is much to be deprecated, and cannot be carried out without loss of prestige to the St. John Ambulance Association.

It is to be devoutly hoped that a firm stand will be made against this innovation.—I am, etc.,

BERTRAM M. H. ROGERS,
Chairman of the Bristol Branch of the St. John Ambulance Association.

Clifton, Feb. 1st.

ON THE CAUSE OF DEATH BY ELECTRIC SHOCK.

SIR,—In the paper on this subject by Professor Oliver and Dr. Bolam, which appears in your issue for January 15th, the authors give tracings of blood pressure and respiration curves to show that death by electric shock is due to arrest of the heart's beat and not to respiratory failure. I therefore beg leave to draw your attention, and that of your readers, to the fact that this very matter was fully dealt with by me in a paper in the BRITISH MEDICAL JOURNAL of March 2nd, 1895. Anyone referring to that number will see that the experiments, the tracings, and the deductions drawn from them all correspond exactly with those of the present paper, the only exception being that Professor Oliver and Dr. Bolam used an alternating current while I used a continuous. Although my paper has been overlooked by them, it is noteworthy that the authors refer to the existence of an opinion that death in these cases might be due to heart failure. That opinion was put forward in 1890 by Dr. Tatum after experiments made by him, and it was supported and confirmed by the experiments reported in my paper of March, 1895, at a time when the profession generally was accepting the view of d'Arsonval that death in these cases was due to respiratory failure. It is gratifying to me to find that the repetition of the experiments by Professor Oliver and Dr. Bolam confirms so fully the results which I published in 1895, and shows that alternating currents act in the same manner as continuous.

My paper was printed in the BRITISH MEDICAL JOURNAL, reproduced in the *Electrical Review*, embodied in a short paragraph in the second edition of my book on medical electricity, and made the subject of a communication to the Physiological Society, therefore no great amount of research is required to discover it.

Upper Wimpole Street, W., Jan. 17th. H. LEWIS JONES.

WILLIAM COWPER, THE ANATOMIST.

SIR,—In the interesting sketch of William Cowper, the anatomist, published in the BRITISH MEDICAL JOURNAL of January 15th, it is said that he died and was buried at Petersfield, Hants. This is not strictly correct, for his grave is, I believe, in the churchyard at Bishops Sutton, a village near Alresford, some 10 to 12 miles to the north-west of Petersfield. I append a copy of the inscription on a stone placed by his widow in the church. Until about five years ago this stone was on the chancel floor, but in the restoration of the edifice (it is of Norman architecture) the stone was removed and fixed on the wall.

I also quote Dr. Mead's words in the preface to the second edition of Cowper's "Myotomy," which bears out the reason for his retirement to the country and the cause of his early death given in the inscription.—I am, etc.,

Queen Anne Street, W., Jan. 15th. SIDNEY COUPLAND.

Sacred to the Memory of
William Cowper,
youngest son of
Richard Cowper,
of this County, Esq.
A Citizen and Surgeon of London.
Distinguished for Genius, Knowledge, and
Experience, most humane and successful
in every branch of his Profession, most
eminent in the Science of Anatomy,
which, whilst he prosecuted with
unremitting perseverance, anxious
to compleat his Treatise of Myotomy
he ruin'd his Constitution by severe
labour and watchings, seiz'd at the
first with Asthmatick complaint,
and afterwards with the Dropsy
He died prematurely
on the 8th day of March,
in the year of our Lord 1709
and in the 43d year of his age.
His afflicted Wife erected this Monument
to the best of Husbands.

Dr. R. Mead in his "Advertisement" to the edition of the *Myotomia Reformata*, which did not appear until 1724 says that "it is of no importance to the publick to know why its publication has been delayed for 13 years after the death of the author, but the reader may expect to know in what condition it was left by the author." He goes on to say that the author had "finished the plates of the book a little before his death and was preparing to put in order the text, when he found his weakness occasioned by frequent fits of an Asthma, which had brought him into a Dropsy to press upon him so fast, that he should not be able to complete his design. He therefore resolved to retire and end his days in the country, having first delivered his papers into my hands, and desired me, with the assistance of his intimate friend, Mr. Joseph Tanner, an ingenious Anatomist and skilled Surgeon, to take care of the publication of his book."

*** Miss Moberley writes to point out that Cowper is rightly described as a Hampshire man since Petersfield is within the borders of Hampshire.

THE HUMAN FOOT IN ART.

Sir,—Professor Cleland is hardly fair to me. I have never given "advice" that shoes should be "turned in at the toe." The only outline of sole that I have ever suggested can be seen in *The Human Foot* (p. 100), where I have explained why, while agreeing with Professor Meyer on essential points, I disapprove (p. 113) of the outline which he recommends. There, also, I have described and depicted (frontispiece and Fig. 1) the change in the form of the sole according as the toes are pressed on the ground or extended upwards, a "readily ascertainable but much neglected fact," of which Professor Cleland seems to suppose that I am "unaware." Its importance from a surgical point of view I have discussed in a paper which the Royal Medical and Chirurgical Society has honoured with a separate publication,[1] as well as a place (vol. 80) in its *Transactions*.

The great toe, when at rest, is extended upwards and everted; when pressed against the ground or the sole of the boot, as it should be in every step, it comes, or ought to come, into line with the inner margin of the foot. This is the very reason why room in the boot to allow of the movement should be given. I know that such room given in my own boot is used, and I am conscious that my foot is physiologically more efficient than it could possibly be if this movement were obstructed. It must be obstructed in a median-pointed boot, even though "properly fitting" the foot when at rest. And yet this is "the ordinary and historic pattern" which, as Professor Cleland tells us, "conforms exactly to the shapes and requirements of the foot, not deforming it in the least." He also tells us that if feet be undeformed, "the great toes will certainly lie in contact one with the other in their whole length," the feet being placed together on a flat surface. I wonder how many of your readers have ever seen this condition in an adult who has worn boots. In England it is certainly rare. Dr. Lovett, of Boston,[2] states that it "practically never exists in the adult civilised foot." I ask, then, if boots (and stockings) do not cause the deformity, what does? And I repeat that while such lamentable conflict of authority exists, even on questions of fact, anatomists cannot claim to dictate to artists as to what are the "essential characters" of the human foot.—I am, etc.,

Gloucester, Jan. 15th. T. S. Ellis.

P.S.—Professor Cleland speaks of "discovering the path of movement" which causes a change in the outline of the sole. I described it in the British Medical Journal (1887, vol. i, p. 1157) in a paper on Deformities of the Great Toe. Professor Cleland described it in *Memoirs and Memoranda in Anatomy*, published in 1889.

A GERMAN VIEW OF ENGLISH MEDICAL EDUCATION.

Sir,—As you have done me the undeserved honour to report so exhaustively and kindly on my little article on Medical Education in England, I trust you will allow me to add a few explanatory words.

Board schools, as you rightly assume, should be boarding schools, and for 72 per cent. 42 per cent. should stand; both errors, however, are due to the fact that no proof was sent to me before the paper was published. In using the word "Chinese" I thought less of your examination system itself than of the, in my opinion, unmerited esteem in which these higher examinations are held in this country.

The several examinations I have passed, and the observations I have made in different countries (for instance in Paris), have led me to the firm belief that the passing of examinations, thorough and stringent though they may be, proves nothing but the good memory of the examinee. I am therefore adverse to all so called higher or competitive examinations. There are but few men who can pass the said examinations without a great amount of cramming and coaching (*vide* the advertisements in the press); and I think that the time spent in this way could be used to greater advantage in the wards and laboratories of a large hospital. Let there be one uniform examination for all, and let those who aspire to the higher positions in the profession acquire the necessary knowledge by working several years as assistant to an authority in their special branch of our science, and let them show by their practical and scientific work that they are well prepared for the appointments they wish to obtain.

The tying down of a student to one particular school is, I think, to be regretted, because it deprives a man of the opportunity to hear and see different men and methods, and must not seldom lead to a *jurare in verba magistri*, which is not always the best thing in medical practice. I was very glad to read that you also regret the short time allotted to each of the examinees, and that you think it hard for a man to give an account of his five years' curriculum in a few hours.

Finally, I should be very sorry if, by my article, I should deter any foreigner from following my example and settling in this country. As I, however, had often noticed that medical men abroad seemed to underrate the difficulties of the English examinations — doubly difficult for a foreigner—and to overrate the fees paid in England (the guinea is for many of them the standard coin in which a practitioner's services are paid), I thought a little warning not superfluous. I have been through the mill, and I know that there are many difficulties to overcome, but I am thankful to acknowledge that neither the Examining Boards nor the profession put any obstacles in the way of a foreigner who is willing to comply with the laws and rules of the profession.

Hoping that I have not trespassed too much on your valuable space, I am, etc.,

Finsbury Square, Jan. 17th. J. P. zum Busch.

THE PREVENTION OF INFLUENZA.

Sir,—May I ask you why no means are taken to check the spread of the most contagious, widely spread, and formidable epidemic—namely, influenza? One cannot take up a paper or consult any friend without seeing or hearing of someone being either ill or dead or permanently affected by that dreadful disease. It is quite a common case to hear invalids say "never the same since the influenza." From 50 to 100 deaths weekly in London directly due to influenza, besides those who recover, very many of them being permanently invalided, which is no small matter.

Those recovering from influenza (which is most undoubtedly highly contagious, and often contracted severely by almost almost momentary contact with very slight cases) are allowed to go travelling about—to concerts, theatres, churches, and elsewhere—while those recovering from scarlet fever, measles, and such like complaints would be heavily fined (which has had a very desirable effect).

Why cannot this fearful scourge be included in the Notification of Diseases Act, and treated accordingly? I expect that will be the only way of checking the vast amount of misery and loss of life this disease causes, and the sooner it is adopted the better.—I am, etc.,

Worcester, January 31st. W. Woodward, M.D.

THE DIFFICULTIES OF THE LONDON STUDENT.

Sir,—I think that in his letter in the British Medical Journal of January 29th "An Old Student" has considerably exaggerated the difficulties in the way of students desirous of obtaining the London M.D. degree.

There is no doubt that a man of average intelligence can make certain, if he works well, of obtaining this degree; and surely it is no argument in favour of lowering the London University standard to say that Scotch and Irish degrees can be obtained on less work. Would it not be better to raise the standard of these?

Again, in his analysis of the results of the recent M.D. Pass List, "An Old Student" has surely fallen into an error when he states that 55 per cent. failed, for I believe I am right in stating that only 57 candidates sat for the examination, and this would put the failures at less than 44 per cent.

Again, I should imagine that if the dates of passing the M.B. degree of these 44 per cent. were know, it would probably work out much the same as the list he gives, and would not include many more older men.

A student of ordinary capacity can pass his Final M.B. four years from taking his Preliminary Scientific, that is to say, quite as soon as he can pass the Conjoint Board. Of course,

[1] *On some Points in the Surgical Physiology of the Foot.* The Society and H. K. Lewis. 1s.

[2] *Boston Medical and Surgical Journal*, March 4th, 1897.

if he does not do so, but is foolish enough to go into residence at a hospital before taking the M.B., he will probably have more difficulty in doing so. Now, if he obtains a First Division at the M.B., and then goes into residence, he can enter for his M.D. degree in one year's time from this, and this he can do even whilst actually in residence.

In support of this statement I may say that at the recent M.D. examination, six of the residents entered from the hospital to which I have the honour to belong, and of these all were in residence at the time of the examination, and had been so for periods varying from five to eighteen months previously. All six passed.

Surely this speaks for itself, and shows that clinical work tells as much, if not more, than reading at this examination, as I can assure you from personal experience, as one of the six, that we had very little time for bookwork.

I for one should be very sorry to see any reconstitution of the present London University that would in any way lower the standard of the examinations in medicine in order to attract students to London medical schools by the promise of an easier degree, whilst trading on the well-deserved reputation of the University as now constituted.—I am, etc.,

February 1st. M.D.

THE DISPOSAL OF THE DEAD.

Sir,—Although this question has been much discussed during many years, and some reforms have been effected upon the lines indicated in your article in the British Medical Journal of January 29th, much remains to be done to render the disposal of our dead, either by cremation or inhumation, more decent and rational, as well as less costly and inconvenient, than it now is.

I am inclined to think that the whole question might be considered with advantage, and by none better than by members of the medical profession.

If this question were brought under discussion in the State Medicine Section at the Edinburgh meeting of our Association, a committee might be appointed to report upon it, and doubtless some practical conclusions arrived at.

I remember that the former Editor of the British Medical Journal, whose recent death we all deplore, took a deep interest in this as in so many other rational reforms that make for sanitary righteousness.—I am, etc.,

West Worthing, Feb. 1st. Francis H. Parsons, M.D.

THE WANTS OF THE GENERAL PRACTITIONER: A REJOINDER.

Sir,—It has perhaps not struck Mr. T. Dobson Poole and others that there are some slight objections to the scheme they advocate. Medical students or their parents are not as a rule millionaires. At present it takes at least five years to complete one's curriculum. If the student be then lucky enough to get through his final, Mr. T. D. Poole would then wish that he be unregistrable, and therefore unable to sign death certificates or claim any fees.

As it is now, one's parents are more than satisfied with the cost of their son's education, and as a general rule, when one has qualified, he is told to shift for himself. To do this the opportunities are not great. He may become an assistant to a general practitioner, for which he may receive from £60 to £80 per annum indoor; he is expected to be available on every conceivable occasion, and as a rule signs a bond to the effect that he will not attempt, under heavy penalties, to start in opposition to his principal. The unfortunate assistant is required to be a veritable Erichsen and Fagge rolled into one, but, should he venture to suggest that he has seen a little midwifery, it is quietly implied that a little knowledge in obstetrics is a very dangerous thing. What is he to do in a case of a "breech" or any delayed labour? What is he to do in these apparently insurmountable difficulties? The answer is obvious: send for the expert in midwifery; or the qualified unregistered man may squander his time in becoming a resident at some hospital, knowing full well that he has to spend another year at the end of his term of office in which to become legally qualified.

It seems to us that the old unqualified assistant was in a far better position than the new student will be under Mr. Poole's regulations.—We are, etc.,

January 30th. Two Junior Practitioners.

FORCED REDUCTION OF LATERAL CURVATURE OF THE SPINE.

Sir,—Mr. Noble Smith's reply in the British Medical Journal of January 29th is as unsatisfactory as the statements in his original paper published January 8th. Mr. Smith says: "I certainly believe that I have succeeded in lessening or overcoming rotation by mechanical means in a large number of cases." In the very next sentence he adds: "No one, however, could imagine that I inferred in my paper that any appreciable change in the shape of the bones or cartilages had occurred in three weeks." Now "osseous deformity" and "rotation" are practically synonymous terms, so that "lessening or overcoming rotation" means to any surgeon diminution or effacement of the osseous deformity. Mr. Smith is therefore on the horns of a dilemma; he says he lessened rotation in three weeks, and then proceeds to deny that any appreciable change in the shape of the bones or cartilages had taken place. These statements contradict each other, and cannot both be correct. My opinion is that under a misapprehension he simply photographed the patient in his habitual and best possible position at intervals of three weeks instead of, as might have been done, on the same day. In every case of lateral curvature under my treatment, I try to obtain the best possible position of the spine, and my prognosis is that the case can be cured to that extent (that is, the best possible position becomes the habitual one). I employ, like Mr. Smith, daily manual manipulations and exercise (Mr. Smith prefers calling it "the movement cure;" I do not); and in addition training of the patient's muscular sense. It is, therefore, hardly fair for Mr. Smith to remark, no doubt with reference to me, "those who discard the use of apparatus (in lateral curvature) have no object in forcing the spine into a better position."

There are several well-known methods of recording the degree of rotation in the vertebræ in lateral curvature, and if Mr. Smith declines to show a case at the Clinical Society previous to and after his course of treatment, it goes far towards proving his powerlessness, in common with other surgeons, to reduce or to efface osseous deformity when once present.

In conclusion, I have one further request to make to Mr. Smith: it is to exhibit the patient of the photographs at a medical society six months after the conclusion of his treatment, that is, six months after the young man has given up wearing any spinal support, and to invite Messrs. Barwell, Gerard Smith, and myself to be present.—I am, etc.,

Queen Anne Street, W., Jan. 29th. Bernard Roth.

THE PREVENTION OF ENTERIC FEVER.

Sir,—I hope you will give me space to make some observations on two topics introduced in the course of the recent discussion at the Royal Medical and Chirurgical Society on the prevention of enteric fever. I allude to the dry closet system as worked in India, and the *rôle* of flies as carriers of infection.

For some years past I have held the opinion that in India the latrines may be a factor in the diffusion of enteric fever. The pans used in the latrines, being of rough, ill-glazed earthenware, become easily fouled by a slow absorption of organic matter derived from the stools and urine. The "sweepers" in charge of the latrines are supposed to keep the pans clean, and they do so after a fashion, but a thorough cleansing of the pans owing to their roughness is not easy, and indeed must not be expected from the hard-worked barrack sweeper.

Recent experiments made by Drs. Sidney Martin and Robertson prove that the addition of organic matter to soil will enable the bacillus typhosus, if placed in such soil, not only to exist but to multiply in it for close on a year. In our Indian latrine pans, as I have described them, we have constantly present a condition very similar to the soil experiments just mentioned. They contain organic matter in plenty, and the presence of a stool from an ambulatory case of enteric fever at once supplies the specific bacillus.

Now, if the theory that enteric infection can be received by inhalation be correct, there can be no difficulty in understanding the facility with which the fever can be spread among those using the latrines who are susceptible to the enteric poison. To eliminate as far as possible this element

of danger, I advocated the substitution of white enamelled iron pans for the rough earthenware ones. Expense standing in the way of that proposal, I adopted the following plan for the purification of the earthenware pans. I had two sets of pans issued to each latrine so as to allow a change of pans to be made each week, and directed that the pans not in use should be well washed and soaked in a strong solution of perchloride of mercury, and freely exposed during their week of rest to the bactericidal action of the sun. So far as I could judge this plan worked satisfactorily, and the latrines were unmistakably sweeter.

Next, as to the *rôle* of flies as carriers of infection. Indian kitchens at all times, but especially during the preparation of food, are infested with flies. It is impossible to keep the flies out of the kitchens, equally impossible to prevent their lighting upon most of the articles of food; and when in this connection we remember that in Indian barracks the latrines are always, comparatively speaking, close by the kitchens, it is obvious how easily the soldier's food can be infected by the ubiquitous fly.

In connection with this subject I well remember an experience in Poona which will bear relating. Enteric fever, at the time I speak of, was very prevalent at that station, and a close investigation was being made in relation to the cause of the outbreak. Among other matters it was considered advisable to make an inspection of the place where the sewage of the native city of Poona was deposited. This place was some two miles from the city, and about an equal distance from the barracks. When some half a mile from the odoriferous spot we were in search of, a "booming sound" was heard, the cause of which was a mystery. We continued our journey; the "booming sound" steadily increased in intensity, and explained itself on the sewage ground being reached. There we found three large tanks, one full the others partly full, of putrescent filth, giving out an overpowering stench; on the surface of these filth tanks was an incredible swarm of flies, all busily engaged in sucking in the foul, green corruption; the buzzing of these flies was the cause of the booming sound which had so puzzled us when first heard over half a mile distant.

The putrid contents of the tanks was eagerly bought by natives for agricultural purposes. But what of the poison-laden flies? Did they migrate. Where to? Who can say? —I am, etc.,

Richard H. Quill, M.D.,
Brigade-Surgeon-Lieutenant-Colonel A.M.S.

Chatham, Jan. 30th.

SKIN CHANGES IN RHEUMATIC FEVER.

Sir,—The Epitome of January 22nd contains an account of a paper by Singer on the skin changes in rheumatic fever. In one passage it says of the idiopathic forms of rheumatism: "In many instances the eruptions betoken the skin localisation of micro-organisms circulating in the blood." The author then states that erythema multiforme is, *par excellence*, a septic skin disease, because staphylococci and streptococci are always found in that condition.

This relation of symptomatic rashes to rheumatism is of special interest to me personally, as I pointed it out first at the British Medical Association meeting in 1890. I then advanced the view that many of these symptomatic rashes were due to the elimination by the skin of irritant bodies, drugs, micro-organisms (or their products), and certain morbid tissue products—for example, the gouty poison. The whole process I ventured to name "Excretory irritation," and pointed out that the skin was affected as one of a series of excretory organs. In a book under the foregoing title, published in 1897, I wrote: "The poison of rheumatism appears to be partly eliminated by the skin, if we may judge from its association with erythematous and urticarial rashes, and with the remarkable purpuric manifestation peliosis rheumatica. Besides these definite eruptions there can be little doubt that rheumatism is obscurely connected with a number of other skin lesions" (p. 30).

If this theory of "excretory irritation" be correct, its admittedly imperfect proof will be strengthened by further discovery of facts. So far that has happened, as witness the proof of toxicity of normal sweat, and of the elimination of tuberculin in phthisical sweats. Singer's paper (seven years after my original suggestion) offers additional proof in another direction. The test of a general law is its universal application, and it may, I think, be urged that this theory offers rational explanation for many skin inflammations that would otherwise be either altogether obscure, or purely conjectural as to their origin.—I am, etc.,

The Temple, E.C., Jan. 22nd. David Walsh, M.D.

Obituary.

Mr. John Steele Perkins, who died at Exeter on January 28th, in his 91st year, was one of the oldest surgeons of the city. He qualified as L.S.A. in 1828, and three years later took the diploma of M.R.C.S. He was elected a Fellow of the College in 1875. Although of so great an age he was in possession of his faculties until within a fortnight before his death. He was for half a century Surgeon to the West of England Institution for the Blind. He was connected for many years with the Volunteer movement being first Surgeon to the 5th Devon Volunteer Artillery, and afterwards Brigade-Surgeon.

The death is recorded of Dr. William Lewis Mackesy, of Waterford. Dr. Mackesy took the degree of M.B.T.C.D. in 1872, and in the same year obtained the diploma of L.R.C.S.I. Among the appointments which he held were those of Physician to the Waterford County Infirmary, Medical Officer to the St. Dominick's Industrial School, and Medical Officer to the Waterford Prison. He leaves a widow to mourn his loss.

MEDICO-LEGAL.

PAYMENT FOR POLICE CALLS.

We have on many occasions found it necessary to comment on the want of proper provision for payment by the police authorities in the provinces to members of the medical profession whose services have been requisitioned by a constable or sergeant, and as a rule cheerfully rendered, only to find, when the time of payment arrives, that objection is taken by those in authority to the most modest demands. In some cases responsibility for the amount is denied altogether, and the applicant is referred to the sergeant or constable who called him to the case. A surgeon practising in Cheshire has forwarded some correspondence which has taken place between himself and the Chief Constable of the Cheshire Constabulary, in which the following facts are brought out. The surgeon was asked by the police-sergeant in charge of the district to go and see a woman who had been confined, so as to be able to give evidence at Quarter Sessions that she was unable to appear in a case in which her evidence was considered important. The woman lived more than two miles from the surgeon's house, and the latter was told by the police-sergeant that the usual fees would be paid. Accordingly he visited her, and the following day gave evidence at the sessions, for doing which he received a fee of 1 guinea, and 6s. 6d. expenses, from the magistrate's clerk, but was referred to the police for payment for his visit to the woman to qualify to give evidence. On sending in his account for 1 guinea to the police, he received a letter from the Chief Constable objecting to the charge as excessive, and ultimately another offering to pay 10s. 6d. for the visit. While it seems to us ungracious on the part of the Chief Constable to object to pay a sum which cannot be considered extravagant for the services rendered, we fear there is no such general enstom to appeal to as would warrant our correspondent in persisting in his demand, and we therefore counsel him to accept the half guinea.

ATTEMPTED BLACKMAILING.

At the Manchester Assizes on January 28th, Frederick Leech was, according to the *Daily Telegraph*, sentenced to penal servitude for three years for attempts to blackmail Dr. Hudson Leslie Jones, of Manchester. All imputations were withdrawn by counsel on behalf of the prisoner, who pleaded guilty. The facts of the case were stated in a report which appeared in the British Medical Journal of December 11th, 1897, p. 1764.

CHARGE OF MANSLAUGHTER AGAINST A MIDWIFE.

Mr. Braxton Hicks resumed, on February 1st, at the Battersea Coroner's Court, the adjourned inquiry touching the death of the infant child of Ernest Bruce Davy, who died soon after its birth on December 17th last. Mrs. Hollis, a midwife of York Road, Wandsworth, is alleged to have given a certificate of stillbirth, although the child had had a separate existence. After a prolonged inquiry, the jury, according to the report in the *Daily News*, returned a verdict of "Manslaughter" against Mrs. Hollis, and added a rider recommending the authorities to investigate the present system of disposing of stillborn children.

UNQUALIFIED ASSISTANTS.

Assistant.—We fail to understand the exact force of our correspondent's statement that he is qualified in medicine and midwifery, and not in surgery. What are the diplomas that he holds?

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

DEGREES.—At the congregation on January 27th the following medical degrees were conferred: *M.D.*: Russell Coombe, Caius. *M.B. and B.C.*: N. B. Harman, B.A., St. John's; C. S. Myers, B.A., Caius; A. E. Jeaffreson, B.A., Christ's. *M.B. only*: B. H. Slater, B.A., Trinity. *B.C. only*: E. S. St. B. Sladen B.A., Caius.

UNIVERSITY OF DURHAM.

AT a Convocation held on February 1st, presided over by the Warden of the University (Dean Kitchin, D.D.), the following report of the Senate was agreed to:

"In pursuance of the provisions of the Supplementary Charter granted to this University by Her Majesty in Council on August 25th, 1897, the Warden and Senate report that Lewis Lamb Bailes, upon whom the degrees of Master in Arts, Bachelor in Medicine and Bachelor in Surgery, and the title of Associate in Science, have been conferred by this University, was on July 6th, 1894, at the assizes holden in and for the city and county of Newcastle-upon-Tyne, convicted of a crime, and was upon such conviction sentenced to penal servitude, and that the crime in respect of which the said Lewis Lamb Bailes was so convicted as aforesaid is one which renders him unfit to be a member or graduate of this University."

UNIVERSITY OF BOMBAY.

THE *Calendar* for the year 1897-98 has recently been issued. It contains the regulations of the University and specimens of the examination papers. It is published in Bombay, price Rs.2 8.0.

CONJOINT BOARD IN ENGLAND.

FIRST EXAMINATION.—The following gentlemen have passed this Examination in the subjects indicated:

Practical Pharmacy.—A. C. Austin, St. Mary's Hospital and private study; W. L. Baker, St. Mary's Hospital and private study; H. P. W. Barrow, Guy's Hospital; V. T. C. Bent, Guy's Hospital; F. G. Bourns, Westminster Hospital and private study; G. R. H. Chell, Mason College, Birmingham; V. J. Crawford, Guy's Hospital; J. Davey, London Hospital and private study; R. E. Drake-Brockman, St. George's Hospital; H. H. J. Edwards, St. Thomas's Hospital; F. H. Ellis, St. Bartholomew's Hospital; A. J. Evans, University College, London; F. H. Foulds, Glasgow, Charing Cross Hospital, and private study; C. M. Goodbody, St. Thomas's Hospital; G. Griffin, London Hospital and private study; W. W. Halstead, St. Thomas's Hospital; R. J. Hanbury, St. Bartholomew's Hospital; W. H. Harland, Middlesex Hospital; F. W. James, University College, London; F. B. Jefferiss, King's College, London; J. McK. Jefferiss, King's College, London; A. Kinsey-Morgan, Guy's Hospital; R. Lamb, University College, Liverpool; F. F. Lobb, St. Mary's Hospital; P. T. Nicholls, Middlesex Hospital; W. Nicholson, Owens College, Manchester; J. F. Paul, St. George's Hospital; S. J. Peake, King's College, London; C. C. Reece, private study; F. G. Richards, St. Bartholomew's Hospital and private study; A. H. S. Richardson, Westminster Hospital; I. B. Richardson, Mason College, Birmingham; C. Shepherd, Guy's Hospital; H. J. Smith, Yorkshire College, Leeds; G. A. W. Spear, St. Bartholomew's Hospital; E. H. B. Stanley, University College, London; J. Taplin, Mason College, Birmingham, and private study; C. B. Thomson, Guy's Hospital; H. C. Woodyatt, Owens College, Manchester, and University College, London.

Elementary Biology.—J. W. W. Adamson, St. George's Hospital; W. B. Barnes, University College, Bristol; S. Bazalgette, St. Thomas's Hospital; H. F. Bellamy, Charing Cross Hospital; J. G. de G. Best, St. Bartholomew's Hospital; D. Bridges, Charing Cross Hospital; C. H. Bubb, Guy's Hospital; P. P. Cole, Guy's Hospital; C. Corfield, Merchant Venturers' Technical College, Bristol; H. J. Cundell, St. Mary's Hospital; C. F. Day, Charing Cross Hospital; E. M. de Wilton, St. Mary's Hospital; K. C. Edwards, St. Mary's Hospital; R. T. Edwards, St. Mungo's College, Glasgow, and University College, Liverpool; E. S. Ellis, St. Bartholomew's Hospital; H. Emerson, St. Mary's Hospital; L. E. Gerady, Royal College of Surgeons of Ireland, Dublin, and St. Bartholomew's Hospital; F. T. Gerrard, Charing Cross Hospital; T. Gibson, St. Thomas's Hospital; J. J. C. Gisborn, London Hospital; C. M. Halsall, University College, Liverpool; E. M. Harrison, St. Paul's School, London; J. G. Higgins, St. Mungo's College, Glasgow; E. C. Hulseberg, Westminster Hospital; L. C. Hunt, St. George's Hospital; C. C. Ind, St. Thomas's Hospital; H. Jacques, London Hospital; J. D. Keir, St. Mary's Hospital; R. P. Kennedy, St. Mungo's College, Glasgow; A. E. Landmann, Yorkshire College, Leeds; C. S. Lee, St. Paul's School, London; I. Lewis, University of South Wales, Cardiff; R. Lewis, University College, Liverpool; W. Lovell, St. Mary's Hospital; O. L. Lowsley, St. Mary's Hospital; C. H. Morris, London Hospital; R. Moyle, Guy's Hospital; N. H. Mummery, University College, London; E. E. Naggiar, St. Mary's Hospital; J. P. Nettell, London Hospital; F. Paine, University College, London, and Middlesex Hospital; J. D. Pearson, Guy's Hospital; G. H. Richard, St. Mary's Hospital; A. H. S. Richardson, Westminster Hospital; V. Ruediger, University College, London; H. J. Smith, Yorkshire College, Leeds; H. T. B. Soper, St. Paul's School, London; A. C. Stacey, University College of South Wales, Cardiff; J. H. Teasdale, Owens College, Manchester; A. H. Turner, Guy's Hospital; F. C. D. Walker, London Hospital; H. E. Wooderson, St. Thomas's Hospital; F. C. Whitmore, Guy's Hospital; R. F. B. Wilbraham, St. Mary's Hospital; H. L. Willcox, King's College, London.

CONJOINT BOARD IN IRELAND.

FOURTH PROFESSIONAL EXAMINATION.—Candidates have passed this Examination as undernoted:

Completed the Examination.—Honours Division.—F. J. Palmer. *Pass Division.*—R. V. Brews, P. Coffey, W. C. W. Glenny, N. J. Keller, F. B. Lindé, E. J. Lynch, D. Massey, W. H. Odlum, D. J. O'Regan.

In Medicine.—D. B. Bradlaw, A. A. Cooper, Miss A. M. Cooper, A. Daly, F. A. Benson, T. A. J. White.

In Surgery.—J. C. Baskin, J. A. Browne, A. Daly, J. J. Foley, C. A. Kenny.

In Midwifery.—F. A. Benson, A. A. Cooper, Miss A. M. Cooper, R. Hassard, M. J. Hynes, W. F. Kennedy, G. R. McDonald, A. F. Studderd, T. A. J. White.

In Ophthalmology.—J. A. Browne, Miss A. M. Cooper, A. Daly, G. R. McDonald, T. A. J. White.

In Forensic Medicine, etc.—D. B. Bradlaw, J. A. Browne, A. A. Cooper, Miss A. M. Cooper, A. Daly, F. J. W. T. O'Rorke.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

IN the list of those passed for the membership of the Royal College of Physicians of Ireland Mr. F. C. Martley should have been described as M.D., not M.B.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW.

DR. JOSEPH CARROLL, M.B., C.M.Glasg., D.P.H.Camb., has been appointed Lecturer on Hygiene and Public Health at this school in room of the late Dr. J. Pearson Munro. Dr. Carroll has been for the past ten years medical officer of health for the bourgh of Ilkeston. He has lectured on sanitary subjects for the Derbyshire County Council, and has been for some years a member of the County Health Committee.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DARENTH ASYLUM.

ON November 30th of last year a patient, aged 35, died at the Darenth Asylum of childbirth and exhaustion. She was chargeable to the parish of Hampstead, had been admitted in August, 1896, and had been in residence at the asylum ever since. When in July last her condition was discovered she named an employee of the asylum as the person who was the cause of it.

The Committee of the Darenth Asylum in reporting the matter to the Asylums Board on December 18th, 1897, added that the Commissioners in Lunacy, before whom a full statement of the facts had been laid, had expressed the opinion that the documents in the case did not disclose any such corroboration of the charge brought against the employee as would lead to his conviction of the offence charged, and they did not therefore propose to institute proceedings against him. The accused person had since left the service, having been summarily dismissed for an offence of a gross nature, entirely unconnected with the offence previously charged against him.

This report was referred to the General Purposes Committee, who appointed a special committee, consisting of Sir Edwin Galsworthy, Chairman of the Metropolitan Asylums Board; Mr. Hardcastle, Mr. Hunt, Mr. J. R. Hill, Mr. Scovell, and Dr. W. R. Smith, to investigate the matter.

This Committee reported on January 20th to the following effect:

"(1) Inasmuch as Dr. White, the acting medical superintendent, has had no obstetrical experience since his student days, prior to 1882, we think that he was very unwise in undertaking what was likely to prove a difficult case. We do not find that he ever expressed unwillingness or made any protest. He, however, states that in conversation with members of the Committee (whose names he cannot give) he suggested in the interests of the institution that the woman should be sent away for her confinement.

"(2) Although Dr. White became aware of the pregnancy on July 22nd, we find no entry in the case book till after her death, November 30th. Neither bed card nor written instructions as to the conduct of the case from day to day exist. In fact, there is a total absence of records.

"(3) We do not find any report of the pregnancy among the acting medical superintendent's written reports to the committee.

"(4) We do not find that any qualified or experienced nurse was provided to attend to the case, or that any application was made to the committee by Dr. White for the employment of such a person.

"(5) We find that no communication was made to the coroner .....

"(6) There was no *post-mortem*."

It is also stated that Dr. White and his assistants appear to have spared no pains and neglected no attention suggested by their experience for the welfare of the patient during her confinement, "but we consider the above-mentioned errors of judgment and omissions of duty so serious on the part of Dr. White that we feel bound to recommend the immediate termination of his engagement."

In regard to the Darenth Committee the report goes on to say:

"Although there is no report by the acting medical superintendent on the subject of the pregnancy, the Darenth Committee were aware of the facts, for in their report of December 13th, 1897, they state that the Clerk to the Board and the Chairman of the Committee made minute inquiries into the facts, and a special committee meeting of the committee thereon was held on August 18th, 1897.

"The Darenth Committee do not appear to have taken into consideration Dr. White's want of experience in confinement cases, and it does not appear to have occurred to them to provide a qualified or experienced nurse, notwithstanding that the occurrence of a birth in an asylum of this character is so unexpected and exceptional as to be quite unprovided for.

"The Darenth Committee, in the same report, give the substance of the first portion of the reply of the Commissioners in Lunacy of August 25th, 1897, on this case, but omit any mention of the latter portion of the same letter animadverting on the administration of the asylum.

"We consider that in failing to apprehend the gravity of the situation,

and in neglecting to make proper arrangements for the case by securing experienced medical and nursing attendance, and in omitting to report to this Board the full contents of the letter of the Commissioners in Lunacy, the Darenth Committee have failed to discharge as they ought the duties entrusted to them."

We have given the above almost at full length because it is important that it should be recognised that, although punishment has fallen upon the medical superintendent, it is quite clear that in what he did he did but take his part and his place in a general system of laxity which was accepted by the Committee under whom he acted and whose servant he was.

At the ordinary fortnightly meeting of the managers of the Asylums Board, held last Saturday, January 29th, this report and the recommendations of the General Purposes Committee upon it came up for discussion. It was moved and seconded that Dr. White be called upon to resign immediately. Mr. Muspratt moved as an amendment that Dr. White should revert to his former position of assistant medical officer. He said that as soon as Dr. White made the discovery he reported the matter to the Chairman of the Committee. This amendment was seconded, but on being put to the vote was lost, and after some further discussion the motion was carried by 33 votes to 6. Mr. Hensley then moved that the interim report of the Subcommittee, which he said practically amounted to a vote of censure on the Darenth Committee, be approved and adopted. This was seconded, and after a long discussion was carried by 27 votes to 14.

It is impossible to read the reports of this unfortunate affair without feeling that there is much behind which does not meet the eye. What is clear is that the managers were much more ready to make a scapegoat of their medical superintendent than they were to mete out a proper share of blame to the Darenth Committee. That Dr. White acted wrongly in not making proper official reports of the facts as they came to his knowledge may be admitted, but we can hardly have a doubt that he thought he had made all clear and put himself right by mentioning the matter to the Chairman of his Committee. The Committee would seem to have known about the matter, and still allowed things to drift. They trusted to events, and in ultimately reporting the matter to the Board failed to report their own condemnation. This seems to show a laxity of management and an enfeebled sense of responsibility, which as a public matter is more serious than the error of judgment shown by the medical superintendent in reporting the matter privately to the Chairman instead of in due form to the Committee. His sins of omission are greatly to be deplored but the very fact that these omissions were made in such an ordinary and open sort of way seems to show that the whole system under which he was working had drifted into a condition of considerable laxity.

ROYAL ALEXANDRA (CHILDREN'S) HOSPITAL, RHYL

The report read at the annual meeting of the Royal Alexandra Hospital, Rhyl, on January 31st, stated that in addition to the erection of a new laundry, which is being proceeded with, it was proposed that the new hospital block should be commenced at once, the funds not being sufficient to warrant the building the proposed new administrative block at present. Dr. Eyton Lloyd explained that the hospital was not only strictly a hospital, but also a large convalescent home, and the centre of a considerable nursing district. Another feature was that it was to all intents and purposes a marine hospital. Dr. Banks also pointed out that the institution was in a great many respects entirely different from an ordinary hospital, and as a convalescent home there were many requisites for it which would not be required in an ordinary hospital. On the motion of Sir R. A. Cunliffe, seconded by Colonel Mainwaring, it was unanimously resolved that the plans of the new hospital block be adopted and carried out.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

The Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the fourth or autumn quarter of 1897, and to the marriages during the three months ending September last. The marriage-rate was equal to 16.8 per 1,000 of the population; this rate was 1.2 per 1,000 above the mean rate in the corresponding periods of the ten preceding years, and, with one exception, exceeded the rate recorded in the third quarter of any year since 1873.

The births registered in England and Wales during the three months ending December last numbered 225,958, and were equal to an annual rate of 28.9 per 1,000 of the population, estimated by the Registrar-General to be rather more than thirty-one millions of persons. This rate was 0.8 per 1,000 below the mean rate in the corresponding periods of the ten preceding years. The birth-rates in the several counties ranged from 21.4 in Westmorland, 22.9 in Oxfordshire, and 23.2 in Sussex, to 32.0 in Nottinghamshire, 32.2 in Monmouthshire, 33.6 in Staffordshire, and 35.6 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 30.1 per 1,000, and exceeded by 1.2 per 1,000 the general English rate. In London the birth-rate was equal to 29.5 per 1,000, while it averaged 30.5 in the thirty-two provincial towns, among which it ranged from 23.0 in Halifax, 23.3 in Bradford, 24.8 in Huddersfield, and 25.3 in Brighton to 34.2 in Sheffield, 34.6 in Liverpool, 35.0 in Wolverhampton, and 35.8 in Gateshead.

The births registered in England and Wales during the quarter ending December last exceeded the deaths by 93,262; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that 45,791 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these, 23,526 were English, 3,591 Scotch, and 5,253 Irish, while 13,421 others were of foreign origin. Compared with the averages in the corresponding periods of recent years, the proportion of emigrants from England and Ireland showed a marked decline, while those from Scotland showed a slight increase.

During the fourth quarter of last year the deaths of 132,696 persons were registered in England and Wales, equal to an annual rate of 17.0 per 1,000 of the estimated population, which was 1.4 per 1,000 below the mean rate in the corresponding periods of the ten preceding years. The lowest county death-rates last quarter were 11.7 in Westmorland, 12.4 in Berkshire, 12.7 in Surrey, and 12.9 in Rutlandshire; while the highest rates were 18.0 in Norfolk and in the West Riding of Yokshire, 18.6 in Warwickshire, 19.0 in Staffordshire, and 19.5 in Lancashire. In the urban population of England and Wales, estimated at rather more than twenty-one millions of persons, the rate of mortality during the quarter under notice was equal to 17.9 per 1000; while in the remaining and chiefly rural population of nearly ten millions the rate was 14.9 per 1,000. The urban rate was 1.6, and the rural rate was also 1.6, per 1,000 below the mean rates in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 19.0 per 1,000, or 2.0 per 1.000 in excess of the death-rate in the whole country. In London the rate was 19.4 per 1,000, while it averaged 18.8 in the thirty-two large provincial towns, among which the rates ranged from 12.6 in Croydon, 13.3 in Cardiff, 14.3 in Brighton, and 14.5 in Portsmouth to 20.8 in Birmingham in Bolton, and in Sheffield, 20.9 in Norwich and in Leeds, 21.7 in Preston, and 22.9 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of about three and a-half millions, the mean death-rate was 16.9 per 1,000, or 2.1 per 1,000 below the rate in the thirty-three great towns.

The 132,696 deaths from all causes registered in England and Wales during the three months ending December last included 4,274 which were referred to measles, 2,410 to diarrhœa, 2,309 to diphtheria, 1,964 to whooping-cough, 1,939 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 1,433 to scarlet fever, and 2 to small-pox; in all, 14,331 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.83 per 1,000, or 0.13 per 1.000 below the mean rate in the corresponding quarters of the ten preceding years. The mortality from small-pox, scarlet fever, whooping-cough, and diarrhœa was below the average, and that from "fever" corresponded with the average; while that from measles and diphtheria was above the average. Only 2 fatal cases of small-pox were registered in England and Wales during the quarter under notice; of these, 1 occurred in Bristol and 1 in Eston Urban District.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 145 per 1.000, and was slightly below the average proportion in the corresponding periods of the ten preceding years. In London the rate of mortality was 152 per 1,000, while it averaged 166 in the thirty-two provincial towns, among which it ranged from 95 in Brighton, 119 in Croydon, 122 in Cardiff, and 123 in Plymouth and in Hull to 192 in Norwich, 200 in Oldham, 233 in Burnley, 259 in Blackburn, and 269 in Preston. The mortality in England and Wales last quarter among persons aged between one and sixty years was equal to an annual rate of 8.9 per 1,000 of the estimated population at this group of ages, and was 0.9 below the mean rate in the ten preceding fourth quarters. In the thirty-three great towns the mortality at this age-group averaged 10.8 per 1,000, and ranged from 6.0 in Croydon, 7.6 in Brighton, and 7.7 in Cardiff to 12.1 in Manchester, 12.2 in Wolverhampton and in Leeds, and 13.9 in Liverpool. Among persons aged sixty years of age and upwards the death-rate in England and Wales last quarter was equal to 65.0 per 1,000 of the estimated population at this age-group, and was 5.9 per 1,000 below the average rate. In the thirty-three great towns the rate was 71.0 per 1,000, ranging from 53.6 in Portsmouth and in Cardiff, 56.9 in Wolverhampton, and 58.0 in Croydon to 80.2 in Manchester, 80.5 in Bradford, and 83.1 in Bolton.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 46.0°, and was 2.4° above the average in the corresponding quarters of 126 years; it was above the average in each month of the quarter, the excess being 1.6° in October, 3.2° in November, and 2.4° in December. The rainfall during the quarter amounted to 3.69 inches, which was little more than half the average.

VITAL STATISTICS OF ENGLAND AND WALES FOR 1897.

In England and Wales 921,104 births and 541,426 deaths were registered during the year 1897; the birth rate was equal to 29.7 per 1 000, and with two exceptions was lower than in any other year on record; compared with the average rates in the ten preceding years, it shows a decrease of 1.0 per 1 000. The death-rate was equal to 17.4 per 1,000, which was 1.2 per 1,000 below the average rate in the ten preceding years. Excepting 1894 and 1896 the death-rate last year was the lowest on record. The rate of mortality among infants was in the proportion of 156 per 1,000 births registered, which was 8 per 1,000 above the average. Among persons aged between 1 and 60 years the death-rate was equal to 8.8 per 1,000, and among persons aged 60 years and upwards it was equal to 66.2 per 1,000 of the estimated populations at these groups of ages. The 541,426 deaths from all causes registered in England and Wales during 1897 included 25 from small pox, 12,456 from measles, 4,492 from scarlet fever, 7,461 from diphtheria, 10,887 from whooping-cough, 4,873 from "fever" (principally enteric), and 26,857 from diarrhœa. In all 67 051 deaths resulted from these principal zymotic diseases, equal to a rate of 2.15 per 1,000 living, against 2.17 and 2.21 respectively in the two preceding years.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,785 births and 4 031 deaths were registered during the week ending Saturday last, January 29th. The annual rate of mortality in these towns, which had been 20.6 per 1,000 in each of the two preceding weeks, declined to 18.7 last week. The rates in the several towns ranged from 11.3 in Croydon, 12.2 in Huddersfield, 12.6 in Gateshead, and 13.0 in Oldham to 22.4 in Birmingham, 22.6 in Brighton, 22.9 in Norwich, and 29.6 in Wolverhampton. In the thirty-two provincial towns the mean death-

rate was 17.6 per 1,000, and was 2.8 below the rate recorded in London, which was 20.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.7 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, and was equal to 3.0 in Gateshead, 3.1 in Bristol, 3.6 in Sunderland, and 4.1 in Wolverhampton. Measles caused a death-rate of 1.4 in Birkenhead, 1.6 in Blackburn, 1.8 in Sunderland, and 2.0 in Bristol; and whooping-cough of 1.1 in Portsmouth and 1.9 in Norwich. The mortality from scarlet fever and from "fever" showed no marked excess in any o the large towns. The 82 deaths from diphtheria in the thirty-three towns included 36 in London, 6 in Cardiff, 6 in Wolverhampton, 4 in Birmingham, 4 in Liverpool, and 4 in Leeds. No fatal case of small-pox was recorded last week either in London or in any of the thirty-two large provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 3,149 at the end of the nine preceding weeks, had further fallen to 3,061 on Saturday last, January 29th; 244 new cases were admitted during the week, against 239, 215, and 248 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, January 29th, 911 births and 525 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined f om 24.3 to 19.0 per 1,000 in the three preceding weeks, further fell to 17.4 last week, and was 1 3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 9 5 in Leith and 15.8 in Edinburgh to 20.0 in Aberdeen and 21.3 in Greenock. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Greenock and Dundee. The 251 deaths registered in Glasgow included 6 from measles and 18 from whooping-cough. Three fatal cases of scarlet fever and 5 from whooping-cough were recorded in Edinburgh; 2 of scarlet fever in Dundee; and 3 of whooping-cough in Greenock.

ZYMOTIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the fourth quarter of last year. The fluctuations of each disease, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-pox.— No death was referred to small-pox in London last quarter, the corrected average number in the corresponding periods of the ten preceding years having been 5. No small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals during last quarter.

Measles.—The fatal cases of measles, which had been 168, 298, and 302 in the first three quarters of 1897, further rose to 1,166 during the three months ending December last, and were 530 above the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in St. James Westminster, Shoreditch, St. George-in-the-East, St. Saviour Southwark St. George Southwark, Newington, St. Olave Southwark, and Bermondsey.

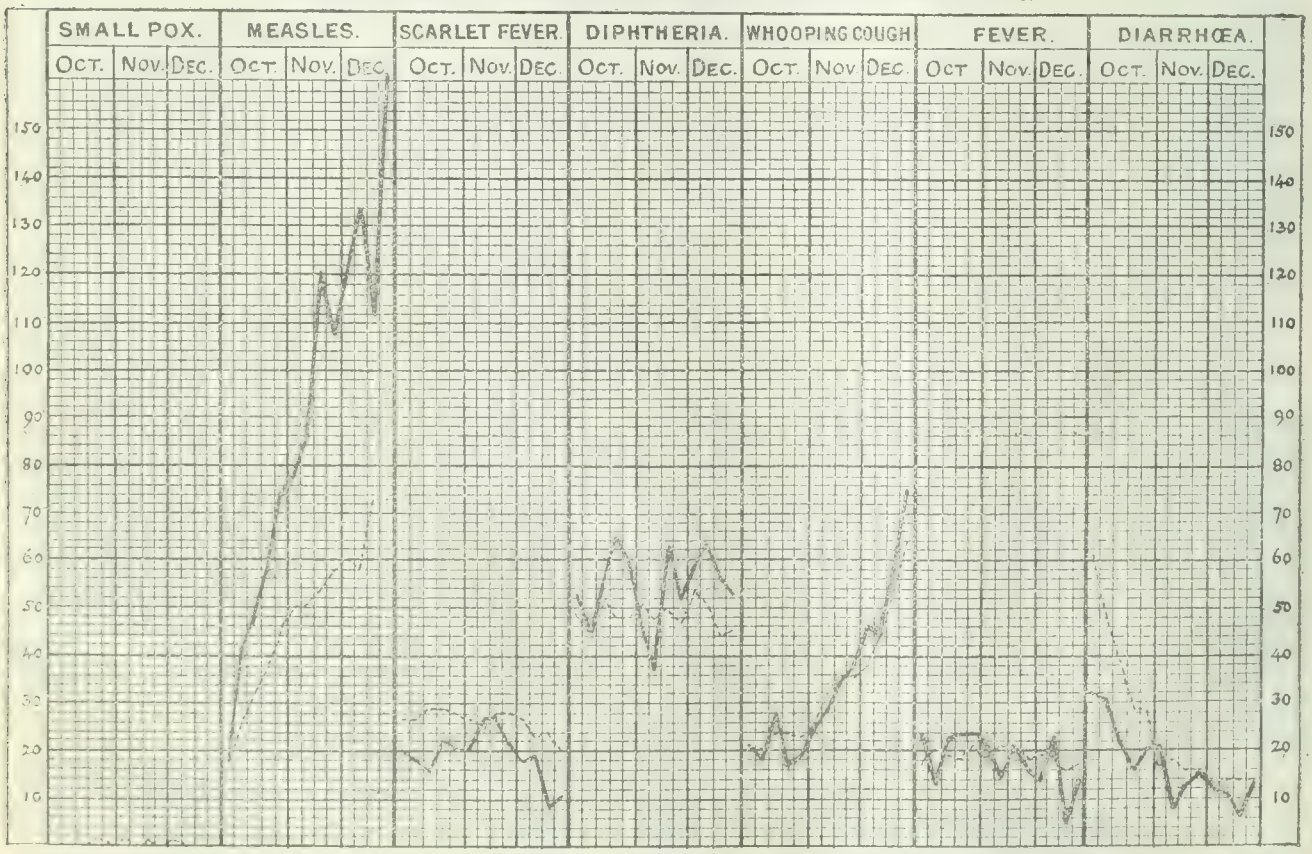
Scarlet Fever.—The deaths referred to this disease, which had been 166, 151, and 216 in the three preceding quarters, further rose to 248 during the three months ending December last, but were 93 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionally most fatal in St. James Westminster, St. Luke, St. Saviour Southwark, St. Olive Southwark, Bermondsey, and Rotherhithe. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which has been 2,468, 2,786, and 3,585 at the end of the three preceding quarters, had declined to 3,507 at the end of December last. The number of cases admitted into these hospitals, which had been 2,934, 3,289, and 4,592 in the three preceding quarters, fell to 4,441 during the three months ending December last.

Diphtheria.—The fatal cases of diphtheria registered in London, which had been 641, 428, and 488 in the first three quarters of 1897, further rose to 705 during the three months under notice, and exceeded by 71 the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Hackney, Clerkenwell, Poplar, St. Saviour Southwark, Battersea, Woolwich, and Plumstead. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of December last was 1,066 against 776, 864, and 1,033 at the end of the three preceding quarters; 1,995 new cases were admitted during last quarter, against 1,328, 1,437, and 1,832 in the three preceding quarters.

Whooping-cough.— The deaths from this disease, which had declined from 543 to 373 in the three preceding quarters, rose again to 454 during the three months ending December last, and slightly exceeded the corrected average number; among the various sanitary areas whooping-cough was proportionally most fatal in Hackney, St. Luke, Bethnal Green, Limehouse, Mile End Old Town, and St. Olave Southwark.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 127, 85, and 144 in the three preceding quarters, further rose to 237 during the three

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE FOURTH QUARTER OF 1897.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the ten preceding years, 1887-96.

months ending December last, but were 7 below the corrected average number. Of these 237 deaths from "fever," 235 were certified as enteric fever, 1 as typhus fever and 1 as simple continued fever. Among the various sanitary areas the highest proportional fatality of "fever" was recorded in Westminster, City of London, St. George-in-the-East, Mile End Old Town, and Woolwich. The Metropolitan Asylums Hospitals contained 116 enteric fever patients at the end of December last, against 75, 70, and 173 at the end of the three preceding quarters; 281 new cases were admitted during last quarter, against 188, 148, and 322 in the three preceding quarters.

Diarrhœa.—The 220 cases of diarrhœa registered in London during the three months ending December last were 108 below the corrected average number.

In conclusion, it may be stated that the 3,030 deaths referred to the principal zymotic diseases in London during the fourth or autumn quarter of last year were 406, or more than 15 per cent., above the average number in the corresponding periods of the ten preceding years, 1887-96, owing principally to the excessive fatality of measles. Among the various sanitary areas the lowest zymotic death-rates last quarter were recorded in Hammersmith, Lee, Paddington, Hampstead, St. Martin-in-the-Fields, Lewisham, and Wandsworth: and the highest rates in Clerkenwell, Shoreditch, St. George-in-the-East, St. Saviour Southwark, St. George Southwark, Bermondsey, and St. Olave Southwark.

THE MAIDSTONE INQUIRY.

The Local Government Board inquiry into the recent outbreak of typhoid fever was opened on January 31st at the Session House, Maidstone before Mr. J. S. Davy, Mr. G. W. Willcocks, and Dr. Theodore Thomson, Departmental Inspectors. At the opening of the proceedings, Mr. J. F. Parker explained that he appeared for the Maidstone authorities because they had no power to engage counsel under the Public Health Act without the consent of the Local Government Board, which had declined to sanction the expenditure. So far the examination of Mr. Percy Adams, the Deputy Medical Officer, and Mr. Mathew Adams has occupied the two sittings that have been held. Dr. Washbourn was examined as to his report on the bacteriological examination of the water, an abstract of which has already been given in these columns. Dr. Sims Woodhead was called, and stated that he was not in a position to contradict Mr. Adams's statement that the outbreak was due to the Farleigh water. He did not accept the evidence as to the identification of the bacillus coli.

SMALL-POX AT MIDDLESBOROUGH.

The too usual want of preparedness for an outbreak of small pox has been manifested at Middlesborough. This county borough, with its 75,000 inhabitants, has a block intended to hold 10 cases of small-pox. Into these 10 bed spaces 14 beds and 2 cots have been placed. An adjoining building, meant for 4 beds, and intended for isolation purposes, has had 7 beds crowded into it. Thus into these 11 bed spaces have there been crowded 21 beds and 2 cots, and in these have been placed 25 small-pox patients, and there are others to send in. We are glad to see that the Sanatorium Committee have authorised Dr. Malcomson to purchase a hospital tent or corrugated iron structure for the emergency. It seems not unlikely that an unrecognised case of small-pox—fatal before the eruption appeared—has been the fact precedent to many of the cases. It is well that anyone called in to a case of severe lumbago with high temperature should be on the look-out for malignant variola.

LONDON WATER COMMISSION.

The seventh and eighth sittings of this Royal Commission were held on January 31st and February 1st in the Moses Room of the House of Lords, under the presidency of Viscount Llandaff. Sir Alexander Binnie, Engineer-in-Chief of the London County Council, was recalled, and said that his object was to submit to the Commission a practical scheme for the solution of the London water question. Speaking roughly, his suggestion was that the undertakings of the water companies should be purchased by a central water authority, that the existing supply should be maintained as at present as long as might be reasonable, and that any supplemental supply should be drawn, not from the Thames, but from some other source. He advocated a central authority on which the water consumers of London should be represented in proportion to the quantity of water which they consumed. His idea of a central authority was one upon which the County Council should be represented to the extent of 80 per cent.; the City of London should also be represented.

Mr. Harry Edwin Haward, Comptroller of the London County Council, gave evidence as to the probable financial results of purchase, and his examination was not concluded when the Commission adjourned till February 7th.

DISPOSAL OF KITCHEN REFUSE.

W. A. F. G. asks for information as to the best kind of box for dust and kitchen refuse, to be placed in the street at night to await the daily passage of the collecting dustcart, or as to where such boxes can be obtained.

*** Where the house dust and kitchen refuse is put into receptacles overnight and these are placed in the forecourts of premises or by the roadside for the purpose of a daily collection, the most suitable receptacle is one of galvanised iron, fitted with two drop handles for lifting and also a cover. They are made of several patterns—rectangular boxes, cylindrical boxes, or of the shape of an ordinary pail. The two last-mentioned shapes are to be preferred, from the circumstance that they present no corners and are therefore more easily emptied and cleaned. These receptacles should measure about 18 in. across and 24 in. in depth; they vary in cost from 12s. to 15s. each. We are informed that one of the largest makers in this country is Mr. F. Bird, 11, Great Castle Street, Regent Street, London, W., from whom an illustrated catalogue and price list can be obtained on application.

MEDICAL NEWS.

Mr. Philip E. Hill, M.R.C.S., Public Vaccinator for the Crickhowell District of the Crickhowell Union, has been awarded the Government grant for efficient vaccination for the tenth time in succession.

The annual dinner of the West London Medico-Chirurgical Society will be held at the Trocadero Restaurant, Shaftesbury Avenue, on Thursday, February 17th, at 7.30 P.M. Further particulars can be obtained from Dr. McCann, 5, Curzon Street, Mayfair, W.

A memorial statue of the late Dr. James Dorrian, of Bolton, was unveiled in Queen's Park, Bolton, on January 29th. The statue, which is of Portland stone, bears the following inscription: "James Dorrian, M.D., 1826-1895. Erected by public subscription to commemorate a life of usefulness."

The fifty-ninth annual general meeting of the Newsvendors' Benevolent and Provident Institution will be held at Memorial Hall, Farringdon Street, on Tuesday, February 15th, at 7 P.M. The chair will be taken by the Right Hon. Lord Glenesk.

A general strike is in progress among students of German birth in Austria as a protest against the prohibition by the Bohemian authorities of the use of the club colours and insignia in the streets of Prague. The strike consists in a refusal to attend lectures, but at Graz it takes the rather ludicrous form of a request addressed to the professors to suspend their lectures as as a mark of sympathy.

The twenty-fifth course of lectures and demonstrations for sanitary officers arranged by the Sanitary Institute will be given at Parkes Museum in Margaret Street during February, March, and April. The introductory lecture will be given on Monday, February 21st, by Dr. Louis Parkes, at 8 P.M. Further particulars can be obtained from the Secretary of the Institute, Margaret Street, Regent Street, W.

At a special meeting of the Board of Delegates of the Hospital Saturday Fund, held on January 22nd, it was resolved that £17,627 2s. 1d. be divided among the 169 participating institutions, as follows: 34 general hospitals, £6,624; 57 special, £5,187; 32 dispensaries, £1,036; 20 convalescent homes, £1,653; 26 miscellaneous institutions (including ambulance, distribution, and surgical appliance committees, also institutions for the gratuitous nursing of the sick poor in their own homes), £3,126. The total receipts for the past year slightly exceeded £20,000. The awards were less than those of 1896 by £482.

Foot-and-Mouth Disease in Hong Kong.—Our Special Correspondent writes: For some weeks past an epidemic of foot-and-mouth disease has prevailed among the cattle throughout the colony, and a regular milk famine has been the result, even the hospitals being almost without milk supply. Stringent measures have been adopted by the Government to stamp it out, and fortunately several of the dairies which were closed have now been reopened. It is hoped that in a short time the disease will have disappeared from the island.

Presentation.—Dr. Thursfield, who vacated the office of Mayor of Leamington last November after holding it for three years, was recently presented with a testimonial in recognition of the admirable manner in which he had filled the civic chair, and the signal service he had rendered by advocating and carrying to a successful issue the Leamington Private Improvement Act. A sum of £200 was subscribed, and the presentation took the form of a set of silver candlesticks and of gold watches for Dr. and Mrs. Thursfield. The presentation was made by the Mayor, and suitably acknowledged by Dr. Thursfield. Viscount Peel also spoke, and paid a tribute to Dr. Thursfield's public services.

Guy's Hospital London University Club.—The annual general meeting was held at the Café Royal, Regent Street, on January 28th, when the following officers for the ensuing year were elected: Sir S. Wilks, Bart., M.D., F.R.S., Presi-

dent; Drs. Savage and Horrocks, Vice-Presidents; Mr. F. Durham, M.B., Honorary Treasurer; and Dr. J. H. Bryant and Mr. C. H. Fagge, Honorary Secretaries, together with a Committee of twelve members. The annual dinner afterwards took place, with Mr. H. G. Howse in the chair. After the toast of "The Queen," the Chairman proposed "The University of London," and remarked that the "value of the degrees of the University would rise, as in the future they would certainly become more difficult of attainment." Mr. A. H. Tubby, M.S., replied. Dr. J. H. Galton proposed "Guy's Hospital," and Dr. W. F. R. Burgess responded. Dr. P. Horrocks proposed the toast of the evening, "Guy's Hospital London University Club," giving an interesting account of its foundation in 1889, and its growth since that date. Dr. J. H. Bryant replied for himself and his co-Secretary, who was unavoidably absent. Mr. F. Durham proposed "The Visitors," coupling with the toast the names of Dr. S. W. Bushell, C.M.G., Physician to H.M. Legation, Pekin, and Dr. Smith. Dr. Bushell responded. Mr. Eastes proposed "The Chairman." The toast was received with musical honours, and Mr. Howse replied.

THE AFTER-CARE ASSOCIATION.—The annual meeting of this charity was held on January 31st. Sir William Broadbent, who presided, stated the objects of the Association to be the assistance of poor persons discharged on their recovery from asylums for the insane, which was effected (1) by boarding them out to gain strength in suitable homes until convalescence was fully established; (2) by making grants, when required, of money and clothing; and (3) by procuring for them suitable employment. In consequence of prevalent prejudice against those who had suffered from an attack of insanity, however slight, the last was often a difficult task, and took up a large amount of the time both of the Executive Committee and of the officers of the Association. The supervision of such cases demanded much judicious and personal attention on the part of the Association's officers, which implied expenditure; but Sir William Broadbent remarked that he knew of no society which did so much work so economically on a small income. Dr. G. H. Savage, treasurer, moved the adoption of the annual report. This showed that during the past twelve months there were 147 cases before the Council, and upwards of 100 of these had been suitably assisted. Subscriptions and other contributions had amounted in 1897 to £561 7s. 9d. The Archdeacon of Westminster, in seconding the motion, expressed entire sympathy with the objects of the Society. Professor Ernest White, M.B., in supporting the motion, pointed out the advantages that would be derived from the formation of branch local organisations. The Rev. E. S. Hilliard and Dr. Norman Kerr also spoke, and Dr. Rayner, Chairman of Council, set forth the practical working of the association, which he said was entitled to call itself a society for the prevention of relapse in cases of convalescents from insanity.

MEDICAL VACANCIES.

The following vacancies are announced:

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; doubly qualified; unmarried; and, when elected, under 30 years of age. Salary not exceeding £30 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by February 23rd.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Resident Clinical Assistant. Appointment tenable for six months. Board, etc., and honorarium. Applications to Dr. Goodall, Medical Superintendent.

CHARING CROSS HOSPITAL.—Resident Medical Officer. Salary, £100 a-year, with board and residence. Applications to Arthur E. Reade, Secretary, by February 14th.

DEVONPORT ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months, ending August 15th, 1898. No salary; board, lodging, and washing provided. Applications to be addressed "Chairman of Medical Committee" by February 9th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, rent, and taxes free; also coal, light, water, and cleaning, or in lieu thereof £20 per annum. Knowledge of Welsh desirable. Applications to Thomas Thomas, Secretary, by February 21st.

FROME UNION.—Medical Officer for the Coleford Medical District. Salary, £30; midwifery 10s. per case; certifying lunatics 10s. per case. Must reside within the district. Applications to George W. Bradbury, Clerk, Public Offices, Frome, by February 21st.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Applications, to be sent under cover to the Secretary by March 19th.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon, to attend to Out-patient Department. Appointment for five years, and may be reappointed. Applications, to be addressed to "The Chairman, Committee of Management," by February 8th.

LANCASTER: ROYAL LANCASTER INFIRMARY.—House-Surgeon; unmarried, and doubly qualified. Salary, £80 per annum, with residence, board, attendance, and washing. Applications, on forms provided, to be sent to the Secretary by February 17th.

LEEDS CITY HOSPITALS.—Junior Resident Medical Officer. Appointment tenable for six months. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Chairman of the Hospitals Committee, Fever Hospital, Beckett Street, Leeds, by February 8th.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Appointment for twelve months, but eligible for re-election. Honorarium of £42, with board, washing, and residence at the infirmary. Applications to the Secretary, at his office, 24, Friar Lane, Leicester, by February 14th.

LINCOLN COUNTY HOSPITAL, Bank Street, Lincoln.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by February 10th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence board, and washing provided, and an honorarium on satisfactory completion of term. Applications to A. W. Bodger, Secretary, by February 21st.

MANCHESTER CHILDREN'S HOSPITAL, Pendlebury. Medical Officer doubly qualified. Salary, £180 per annum; also Junior Resident Medical Officer, doubly qualified. Salary, £80 per annum, with board and lodging. Appointment for one year. Both officers must devote their whole time to the service of the charity. Applications to the Chairman of the Medical Board by February 9th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer for the North-Western Fever Hospital, Haverstock Hill, N.W.; doubly qualified, unmarried, and must not exceed 35 years of age. Salary, £160 during the first year, £180 the second, and £200 during the third and subsequent years of service, with board, lodging, attendance, and washing. Applications on forms to be obtained of T. Duncombe Mann, Clerk to the Board, Chief Office of the Board, 1, Norfolk House, Norfolk Street, Strand, W.C., to be sent in by February 17th.

NORTHAMPTON: BERRY WOOD ASYLUM.—Assistant Medical Officer; under 30 years of age; unmarried and doubly qualified. Salary, £150, increasing to £200, with board, lodging, washing, and attendance. Appointment for five years, but eligible for re-election. Applications to the Medical Superintendent by February 9th.

ST. SAVIOUR'S UNION, Surrey.—Medical Officer for the Seventh District. Salary at the rate of £130 per annum, inclusive of all extra fees, except those in respect to quarterly returns of lunatics. Applications, marked outside "Applications for the Appointment of Medical Officer, Seventh District," to be sent to Howard C. Jones, Clerk, Union Offices, John Street West, Blackfriars Road, S.E., by February 8th. Also Public Vaccinator for the Fifth Vaccination District Union. Remuneration at the rate of 1s. 6d. for each successful case of primary vaccination, and 1s. for each successful revaccination. Applications, marked outside "Applications for Appointment of Public Vaccinator," to same address and by same date.

SALFORD UNION.—Assistant Resident Medical Officer at the Union Infirmary, Hope, near Eccles. Salary, £130 per annum, with furnished apartments and attendance (but not rations) in the infirmary. Appointment for twelve months. Must be doubly qualified. Applications, endorsed "Assistant Medical Officer," to F. Townson, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by February 15th.

SEAMEN'S HOSPITAL SOCIETY (*DREADNOUGHT*), Greenwich.—House-Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E., doubly qualified. Salary, £75 per annum, with board and residence, and an additional £25 per annum if certain clinical work is performed satisfactorily. Applications to P. Michelli, Secretary, by February 7th.

SHEFFIELD: THE ROYAL INFIRMARY.—Junior House-Surgeon; doubly qualified. Salary, £50 per annum, with board, lodging, and washing. Appointment for three years, but eligible for re-election. Also the offices of House-Surgeon, salary, £120; House-Physician, at £80; and Senior Assistant House-Surgeon at £60 per annum, are vacant, but the present resident officers are candidates for these appointments. Applications, to be addresssed to the "Medical Staff of the Sheffield General Infirmary," to the care of the Secretary, by February 17th.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon; doubly qualified. Appointment for six months, but renewable. Honorarium at the rate of £30 per annum, with residence, board, and washing. Applications to Joseph Worall, Infirmary Office, Cambridge Arcade, Southport, by February 12th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon, doubly qualified. Salary, £2 per mensem, with residence, board, and washing. Appointment tenable for six months. Applications to Major C. Tyler, Secretary, by February 10th.

TAVISTOCK UNION.—Medical Officer and Public Vaccinator for the Beer Ferris District. Salary, £30 per annum, and usual fees for vaccination. Candidates must attend meeting to be held at the Workhouse at 2 P.M. on February 11th. Applications to J. D. Johnstone, Clerk, 1, Church Lane, Tavistock, by 10 A.M. on February 11th.

UNIVERSITY COLLEGE, London.—Assistant Physician to the Hospital.—Applications to the Secretary by February 8th.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea, S.W.—House-Physician; doubly qualified. Appointment for twelve

months. Honorarium, £50, with board and lodging in the hospital. Applications to the Secretary at the Hospital by February 19th.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary, £100 per annum, rising £10 yearly up to £150, with board, etc. Applications to the Medical Superintendent by February 19th.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM, Powick.—Head Medical Superintendent, doubly qualified. Salary commencing at £800 per annum, with partly-furnished house, coals, gas, and garden produce. Applications to W. Price Hughes, Clerk to the Committee, 40, Foregate Street, Worcester, by February 12th.

MEDICAL APPOINTMENTS.

BELCHER, H. E., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer for the West Bridgford District of the Basford Union.

BENNETT, Dr. J. M., appointed Medical Officer for the Ruddington District of the Basford Union.

BUCHANAN, James, M.B.,R.U.I., M.Ch., appointed Medical Officer for the Watford District of the Watford Union.

COOK, J. N., M.R.C.S., L.R.C.P., appointed Medical Officer of Health for Calcutta, *vice* W. J. Simpson, M.D.Aber., D.P.H.Camb., resigned.

DAVIDSON, Peter, M.A.Edin., M.B., C.M., reappointed Honorary Physician to the Liverpool Infirmary for Children.

DICKSON, T. G., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Radnorshire District of the Hay Union.

ELKINS, Frank A., M.D., appointed Medical Superintendent of the Metropolitan Asylum at Leavesden, Herts.

GREEN, G. R., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health to the Ripon City Council, *vice* Charles Husband, resigned.

GREAVES, Frank, M.R.C.S., appointed Assistant House-Surgeon to the Derbyshire Royal Infirmary, *vice* R. G. Knox, M.R.C.S.

HALLSWORTH, F. A., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Bodenham District of the Leominster Union.

HANWELL, G. L., M.R.C.S., L.R.C.P., appointed Clinical Assistant to Out-patients at Chelsea Hospital for Women.

HARDING, William, M.D.Edin., M.R.C.P., appointed Medical Superintendent, Northampton County Asylum, Berry Wood, *vice* R. Greene, F.R.C.P.Edin., resigned.

HORROCKS, Herbert, M.D.Lond., D.P.H., appointed Assistant Pathologist and Bacteriologist to the Public Hospital, Perth, Australia.

HUDSON, Godfrey, M.B., C.M.Edin., appointed Medical Officer for the Workhouse and the Worlington District of the Mildenhall Union.

LOCKWOOD, W., M.D.Edin., appointed Honorary Surgeon to the Royal Halifax Infirmary.

LORD, John R., M.B., C.M.Edin., Resident Clinical Assistant at the Joint Counties Asylum, Carmarthen, South Wales, appointed an Assistant Medical Officer at the London County Asylum, Hanwell.

LOWE, Percy Rycroft, B.A., B.C.Camb., appointed House-Surgeon to the Derbyshire Royal Infirmary, *vice* Richard S. Oliver, M.R.C.S.

MAPPLEBACK, W., L.D.S.,R.C.S.I., reappointed Honorary Dental Surgeon to the Liverpool Infirmary for Children.

MARSH, Nicholas Percy, M.B.Lond., M.R.C.S.Eng., reappointed Honorary Physician to the Liverpool Infirmary for Children.

MILNES, Dr. J. G., appointed Medical Officer for the Gislingham District of the Hartismere Union.

MORISON, Albert E., M.B., C.M.Edin., F.R.C.S.Edin., appointed Honorary Surgeon to the Hartlepool Hospital.

MURRAY, Robert William, F.R.C.S.Eng., L.R.C.P.Lond., reappointed Honorary Surgeon to the Liverpool Infirmary for Children.

SELLERS, W. H. Irvin, M.B., C.M.Edin., M.R.C.S.Eng., appointed Honorary Surgeon to the Preston and County of Lancaster Royal Infirmary.

SHEPHEARD, John, B.A.Camb., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the North Walsham Urban District Council.

SMITH, Dr. E., appointed Medical Officer of the Brownlowhill Workhouse of the Parish of Liverpool.

SMITH, T. Wilson, M.D.Lond., M.R.C.S., L.R.C.P., appointed Honorary Physician to the Royal United Hospital, Bath, *vice* T. Cole, M.D.Lond., resigned.

SMYTH, Thomas Edward, M.D.Dub., B.A., M.B., reappointed Medical Officer for the Milton Abbott District of the Tavistock Union.

STILES, Harold J., M.B., C.M.Edin., appointed Surgeon to the Edinburgh Royal Hospital for Sick Children, *vice* Joseph Bell, M.D., F.R.C.S., appointed Consulting Surgeon.

TICKELL, Henry Morris, M.A., M.D., B.C.Camb., M.R.C.S., appointed House-Physician to the Derbyshire Royal Infirmary, *vice* W. E. L. Horner, M.B., B.S.Lond.

TURNER, Oliver Polhill, M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the Warwick County Lunatic Asylum, Hatton, *vice* Joseph Nelson, M.R.C.S., L.R.C.P.

WEBSTER, W. F., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Third "A" District of the Hailsham Union.

WOOLLISCROFT, William Winfred, M.R.C.S., L.R.C.P., appointed a House-Physian to Charing Cross Hospital, *vice* W. Curling-Hayward.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Mr. J. H. Morgan: The Affections of the Urinary Apparatus of Children. Lettsomian Lecture I.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN, 40, Leicester Square, W.C., 8 P.M.—Paper by Mr. H. L. Albert. Casual Communication by Mr. F. W. Barrett.

TUESDAY.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Lecture by Dr. Buzzard.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Mr. Edward Cotterell: On the Surgical Treatment of Paralytic Deformities; with cases.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Adjourned discussion on Immunity and Latency after Operations for Reputed Cancer of the Breast, to be opened by Sir Thomas Smith.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, 4 P.M.—Dr. Green: Cases in the Wards.

HUNTERIAN SOCIETY, London Institution, Finsbury Circus, E.C., 8.30 P.M.—Annual general meeting and the Hunterian Oration on the Structure of the Placenta with special reference to the Maternal and Fœtal Circulations and their Bearing on Heredity, by Dr. Peter Horrocks.

DERMATOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 5.15 P.M.—Exhibition of Clinical Cases. Special meeting in evening. Discussion: Dermatitis Herpetiformis. Opening paper by Dr. Allan Jamieson (Edinburgh).

LARYNGOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 5 P.M.—Cases and specimens will be shown by Drs. Patterson, Lambert Lack, David Newman, Scanes Spicer, Tilley, Waggett, Hill, Mr. Charters Symonds, and others.

WEST LONDON POST-GRADUATE COURSE, West London Hospital, W., 5 P.M. Dr. Abraham: Cases of Skin Disease.

THE SANITARY INSTITUTE, Parkes Museum, Margaret Street, W., 8 P.M.—Discussion on Purification of Water for Barracks, Prisons, and other Institutions, to be opened by Professor J. Lane Notter.

THURSDAY.

BRITISH GYNÆCOLOGICAL SOCIETY, 20, Hanover Square, W., 8.30 P.M.—Mr. Bowreman Jessett will show specimens of (1) Sarcoma of the Ovary; (2) Fibromyoma of Uterus; (3) Myomatous Uterus removed after Oöphorectomy; (4) Ectopic Gestation. The President (Dr. Macnaughton-Jones) will deliver the Inaugural Address. At 10 P.M., *conversazione*, by kind invitation of the President.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Dr. Abercrombie: Demonstration of Medical Cases in the Wards.

FRIDAY.

EPIDEMIOLOGICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Surgeon-Captain Leonard Rogers, I.M.S.: On the Relationship of Variations of the Groundwater Level to the Incidence and Seasonal Distribution of Malarial Fevers in India.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E., 4 P.M.—Dr. Coutts Scurvy in Infants.

CLINICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Mr. David Newman; Cases of Malformation of the Kidney, and Displacement without Mobility. Mr. H. Betham Robinson: Hydronephrosis with Stone in the Left Ureter. Successful Retro-peritoneal Uretero-lithotomy. Dr. William Ewart: On Latent and Ephemeral Pericardial Effusion. Dr. Samuel West: Case of Serous Pleural Effusion of Fifteen Months' Standing Treated by Incision.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

ANDERSON.—On January 30th, at Faversham, Kent, Maud, wife of Charles Macdonell Anderson, of a son.

FREER.—On January 20th, at Holmwood, Woodford Green, the wife of G. D. Freer, M.R.C.S., L.R.C.P. (Colonial Surgeon, Resident, Penang, Straits Settlements), of a son.

MARRIAGE.

STORRS—PHILLIPS.—On January 25th, at St. Peter's, Earley, Reading, by the Rev. H. J. Storrs, late Vicar of Eastham, Cheshire, father of the bridegroom, assisted by the Rev. C. E. Storrs, D.D., Rector of Selsey, uncle of the bridegroom, the Rev. A. Grisewood, M.A., Rector of Daylesford, cousin of the bride, and the Rev. F. T. Colson, M.A., Vicar of St. John's, Reading, Kenneth Simonds Storrs, M.B.Cantab., of Springfield, Chelmsford, to Rosa Mary, fourth daughter of Major Phillips, late of the 8th Hussars, of Inglemere, Reading.

DEATHS.

AITKEN.—On January 22nd, at 28, Northenden Road, Sale, William Browne Aitken, M.B., C.M., eldest son of the late Thomas Aitken, M.D., Inverness, in his 35th year.

ALLEN.—On January 28th, at 3, Kensington Crescent, W., Mrs. Flora Allen, widow of Dr. P. Allen, of 117, Harley Street, aged 71.

JONES.—On February 2nd, T. W. Carmalt Jones, F.R.C.S., of 6, Westbourne Street, Hyde Park Gardens, in his 51st year. No flowers.

MACKESY.—On January 17th, at his residence, 48, Lady Lane, Waterford, William L. Mackesy, M.B.T.C.D., and L.R.C.S.I., aged 48.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 12.30 and 1. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 3 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electro-, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

F.R.C.S. wishes to know if there are any recorded cases of recovery after simultaneous ligature of popliteal artery and vein for arterio-venous aneurysm without loss of limb.

H. M. W. asks where he can obtain information as to the constitution and properties of "non-alcoholic beers," "hop bitters" and such advertised substitutes for malt liquors. He is often asked about them by teetotal patients.

DR. F. VINCENT DENNE (5, Sterndale Road, West Kensington, W.) asks to be informed of an establishment for inebriates under the Act where a gentleman would be taken for from 25s. to 30s. per week. His friends cannot possibly go beyond the larger sum.

HYDRO writes: The directors of a neighbouring hotel contemplate the erection of a hydropathic establishment as an addition to their present attractions to invalids, and have requested me to furnish them with the particulars requisite for this end. Could you or any of your readers direct me to the books or other channels from which I could best gather my information? I am not a German scholar, and yet am desirous the company should adopt those methods which so powerfully influence the Continental migrations from our shores.

BARTS asks: In starting practice two and a half miles from a large city, is it necessary to call on all the medical men in such city to apprise them of one's intention to practise?

*** We are advised that our correspondent is under no obligation to call on all the medical men in the city, but that it might be wise and politic for him to call on those whom he may be likely soon to meet in consultation.

FORMULÆ WANTED.

K. would be glad to know (1) a good formula for chlorodyne, colourless, which is perfectly miscible with water in ordinary doses; (2) What is the formula for iodoform emulsion to be used for sinuses.

DISINFECTORS.

M.O.H. writes: My authority having practically decided to invest in a new disinfecting apparatus, I shall be extremely obliged if you or any brother medical officer of health can tell me the most economical, but at the same time most efficient, apparatus to acquire. We have an isolation hospital (where the apparatus would be fixed) containing 16 beds, and a population of about 17,000.

GALVANIC BATTERIES.

J. W. H. writes: I shall be much obliged if you will inform me (1) what is the best galvanic battery for use in general practice; (2) what ought such a battery to cost, and where may it be obtained?

*** There are a great number of batteries made by various manufacturers. One which we are informed is likely to meet our correspondent's wants is made by Messrs. Miller and Woods, 2, Gray's Inn Road, W.C., with improved galvanometer, price 10 guineas. It contains both an induction coil and a constant current battery, and is strongly made.

ANNOUNCEMENT OF HOURS.

A CORRESPONDENT requires to know "whether it is strictly ethical to put on his doorplate at a place where he attends once weekly the hours of his attendance."

*** Little exception can be taken to this, if the object be only to inform the public when the practitioner may be consulted. It is, however, a practice which may be greatly abused for the purpose of advertisement.

CARRIAGE LICENCES.

P. N. writes: Now the time has come for professional men to pay their carriage licences for the ensuing year, I should be glad to inquire if any medical men have their names painted on their carriages. If so, it frees them from paying licences. There are few of us, I imagine, who keep our carriages for anything beyond our professional work, and to do this it is a necessity in most cases to keep a carriage of some kind. In these "hard" times, an annual tax of 15s., 30s., or £2 is a consideration.

FRIENDLY SOCIETIES' MEDICAL OFFICERS.

T. P. complains of the medical officer of the Hearts of Oak Friendly Society visiting professionally one of his patients on behalf of that Society without consulting him in any way. He states that he should not have known about it had not the patient's wife casually mentioned the fact.

*** The medical officer of a friendly society, if required to visit a member officially, ought never to do so without first communicating with the member's own doctor, and giving him the option of being present.

ELECTRO-PLATING.

CAIAN asks for a treatise on or informating regarding the electro-plating of small instruments with nickel or silver. In the case of the former metal the double sulphate of ammonium and nickel has been used, but the deposition has occurred in a dull form. The strength of the battery and of the solution have been varied, but with no success. Is a further process of polishing necessary?

*** Our correspondent will probably get the best results by using Desmur's solution for nickelling small articles. It is made up as follows: Double sulphate of nickel and ammonium 7 kilos., bicarbonate of soda 800 g., water 100 litres. The bicarbonate of soda must be added when the nickel solution is warm, in small quantities at a time, otherwise

wise the effervescence which occurs may cause the solution to overflow. The bath is to be worked up to nearly boiling point. If after working for some time the deposit becomes of a darkish colour, a small lump (about the size of a nut) of sulphide of sodium should be added. Full information on the whole subject will be found in *Electro-Deposition*, by Alexander Watt, published by Crosby Lockwood and Son, London.

SOUTH AFRICA.

QUESITOR asks to be referred to books recently published treating on South Africa as a resort for a case of incipient phthisis; also, as to the likelihood of the patient, who is an exceptionally well-experienced clerk, with an available capital of £250 or so, obtaining a livelihood in a locality suitable to his disease. He proposes that his wife and son of 9 years should accompany him.

*** We may refer our correspondent to the *Guide to South Africa*, edited by A. S. Brown and G. G. Brown (London: Sampson Low, Marston, and Co. 1897. 2s. 6d.) reviewed in the BRITISH MEDICAL JOURNAL of January 15th, page 154. There is also an excellent treatise on *South Africa as a Health Resort* by Dr. Arthur Fuller (London: W. B. Whittingham and Co. 1886).

THE COURTESY OF THE PROFESSION.

ETIQUETTE asks for opinions on the following cases: (1) A doctor asks me to see his father, who is a tradesman doing an excellent business. (2) A doctor asks me to visit occasionally his mother, who lives with him, but has a separate income sufficient for her own maintenance. (3) I am sent for late at night to see the son of a doctor's assistant. The said son, who lives with his father, is earning his own living as a clerk.

*** 1. Inasmuch as the father referred to is not a medical practitioner, the fact of the son being such does not entitle his parent to gratuitous attendance. He should be charged according to his true position in life and ability to pay.

2. The principle enunciated in the *Code of Medical Ethics* is to the effect that the widow of a practitioner left in independent or well-to-do circumstances, may be charged as an ordinary patient, although we believe this to be unusual.

3. The son, under the circumstances related, has no claim to the free services of a medical practitioner, even though the father be the qualified assistant of a doctor.

THE M.B.LOND. EXAMINATION.

A THIRTY YEARS MEMBER, whose son (now abroad) wishes to read for the M.B.Lond. examination, asks to be advised as to books on surgery (diseases of the eye, genito-urinary diseases, gynæcological and abdominal, and general operative surgery), medicine, skin diseases, malarial diseases, etc., particularly tropical.

*** We understand that the following textbooks are in general use by candidates preparing for the M.B. examination for the University of London: Either Fagge's *Principles and Practice of Medicine*, London, J. and A. Churchill, 40s., or Osler's *Principles and Practice of Medicine*, London, Young J. Pentland, 24s.; Erichsen's *Art of Surgery*, London Longmans, Green, and Co., 1895, 48s.; Green's *Pathology*, edited by Montague Murray, London, H. Renshaw, 1895, 17s., and Sims Woodhead's *Practical Pathology*, London, Young J. Pentland, 25s.; Galabin's *Midwifery*, London, J. and A. Churchill, 1897, 15s., and Lewers's *Diseases of Women*, London, H. K. Lewis, 1897, 10s. 6d. The special subjects mentioned by our correspondent are dealt with in these textbooks sufficiently for the purposes of the examination he mentions. Should he wish for further references on these points we would advise Greig Smith's *Abdominal Surgery*, edited by J. Swain, vols. i and ii, London, J. and A. Churchill, 1897, 36s.; W. H. A. Jacobson's *Operations of Surgery*, London, J. and A. Churchill, 1897, 34s.; *Skin Diseases*, by Malcolm Morris, London, Cassell and Co., 10s.; *Tropical Diseases*, by A. Davidson, and *A Practical Treatise on Urinary and Renal Diseases*, by Sir William Roberts, London, Smith, Elder, and Co., 1885, 12s. 6d.

BOOKS FOR THE D.P.H.CAMBRIDGE.

PSYCHO asks for advice as to the books usually read by candidates for the D.P.H.Cambridge.

*** We learn on inquiry that of those books included in the list which was issued by the University of Cambridge a year or two ago, the following are those which are most generally read by candidates for the Diploma in Public Health of that University: Wynter Blyth's *Manual of Public Health* (London: Macmillan and Co., 1890, 17s.); *The Theory and Practice of Hygiene*, by Notter and Firth (London: J. and A. Churchill, 24s.); McVail's *Vaccination Vindicated* (London: Cassell and Co., 1887, 5s.); Wanklyn's *Water, Air, Milk, and Bread Analysis*, four separate manuals (London: Kegan Paul, Trench, Trübner, and Co., 5s. each); Fox's *Sanitary Examination of Water, Air, and Food* (London: J. and A. Churchill, 1886, 12s. 6d.); Daniell's *Textbook of the Principles of Physics* (London: Macmillan and Co., 1896, 4s. 6d.); Crookshank's *Manual of Bacteriology* (London: H. K. Lewis, 1896, 21s.) Klein's *Micro-organisms and Disease* (London: Macmillan and Co., 1896, 10s. 6d.); Corfield's *Dwelling Houses: their Sanitary Construction and Arrangements* (London: H. K. Lewis, 1894, 4s. 6d.); Statton's *Public Health Acts* (London: Knight and Co., 7s. 6d.); Knight's *Annotated Model Bylaws* (London: Knight and Co., 12s); Newsholme's *Vital Statistics* (London: Swan Sonnenschein and Co., 1889, 7s. 6d.). The list is, however, an old one, and does not include many of those which are most generally read at the present day, such as Whitelegge's *Manual of Hygiene* (London: Cassell and Co. 7s. 6d.); Wilson's *Handbook of Hygiene* (London: J. and A. Churchill 12s. 6d.); Wynter Blyth's *Manual of Public Health*; Louis Parkes's *Hygiene and Public Health* (London: H. K. Lewis, 10s. 6d.); Notter and Firth's *Theory and Practice of Hygiene*: Wanklyn's *Water Analysis*; Smith's *Laboratory Textbook of Public Health* (London: Henry Renshaw, 1896, 21s.); Kenwood's *Public Health Laboratory Work* (London: H. K. Lewis, 10s. 6d.); Balfour Stewart's *Elementary Physics* (Oxford: Clarendon Press, 7s. 6d.); Muir and Ritchie's *Manual of Bacteriology* (London: Young J. Pentland, 12s. 6d); Crookshank's *Manual of Bacteriology*; Corfield's *Dwelling Houses*; McVail's *Vaccination Vindicated*; Newsholme's *Vital Statistics*; Statton's *Public Health Acts*; Knight's *Annotated Model Bylaws*; Stevenson's and Murphy's *Treatise on Hygiene and Public Health*, 3 vols, for reference on special subjects (London: J. and A. Churchill, 80s.).

ANSWERS.

M.B., C.M.—It is the custom to address Bachelors of Medicine as doctor except within the precincts of their University.

MEDICAL STUDENT AND FIBRIN.—We cannot take notice of anonymous communications.

MEDICAL DEFENCE.—The Secretary of the Medical Defence Union is Dr. A. G. Bateman, and the offices are at 20, King William Street Strand, W.C.

CHORTON.—The book referred to is not in the Library of the British Medical Association. There is a card catalogue of the books in the Library, but the additions continue to be so numerous that it has not been thought desirable to print it.

THE D.P.H.

A MEMBER.—As our correspondent graduated in medicine and surgery at Edinburgh University in the year 1881, he is eligible for most of the examinations for Diplomas in Public Health, and the new regulations do not apply to him. It will be almost impossible to qualify without attendance on a special course of instruction in public health, laboratory work, and bacteriology, a practical knowledge of which subjects is fully tested in all examinations for Diplomas in Public Health. These examinations are all conducted on much the same lines, and there is little difference between them, but our correspondent will probably find it most convenient to present himself for the Diploma in Public Health of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow.

BACTERIOLOGICAL DIAGNOSIS.

DR. HERBERT JONES, D.P.H., medical officer of health Rhondda Urban District Council, writes: While I was medical officer of health for the borough of Crewe, bacteriological diagnoses of cases of diphtheria were made at the cost of the corporation for any practitioner who chose to avail himself of the privilege, and I believe the practice is still in force. In the Rhondda District similar diagnosis is now made both in the case of diphtheria and of typhoid fever at the expense of the District Council.

DR. HELEN GREENE (Derby) writes in answer to "Medical Officer of Health": The Derbyshire County Council was the first to make bacteriological examinations free of charge for its medical officers of health. The Derby Town Council medical officer of health has followed suit, and any pauper case is examined free of charge to the medical attendant. I believe that the Birmingham Town Council is going to do the same.

DR. MEREDITH YOUNG, medical officer of health for Crewe, writes: I beg to state that the Town Council of Crewe in December, 1896, on the advice of the then medical officer of health, Dr. Herbert Jones, accepted an offer of Professor Delépine, of the Owens College, Manchester, to conduct bacteriological examinations of suspected diphtheria cases. During the present month the Council have, on my advice, decided to take a further advantage of Professor Delépine's kindness, and have extended the arrangement to typhoid fever. Professor Delépine will, I imagine, be pleased to reply to any inquiries "Medical Officer of Health" may make as to terms, etc. If I can be of any further help to your correspondent I shall be glad to hear from him.

MUSCULAR EXERTION IN CYCLING.

SURGEON-LIEUTENANT-COLONEL WM. GEO. ROSS, M.D. Retired (London) writes: With reference to the question as to the work done in cycling compared with walking, I shall feel obliged if you will kindly allow me space to show how I have provisionally solved the question for myself.

The formula in general use for calculating the work done in walking is, in my opinion, quite inadequate to determine with sufficient accuracy that done in cycling. The value of C, or co-efficient of resistance or traction, is a variable quantity. For a man walking at the rate of 3 miles an hour it is the fraction $\frac{1}{30}$; at 4 miles an hour it is $\frac{1}{18}$, both on the flat.

Now, as one who takes a considerable amount of both walking and cycling exercise, I have come to the conclusion that, on fairly level roads in good order, and in calm weather, I do as much work in walking 12 miles at a rate of 4 miles an hour as I do in cycling 30 miles in the same time under like conditions, that is, I feel about as much fatigued in the one case as in the other. The problem is thus narrowed to ascertain the

value of C, and as my weight is 164 lbs., and that of my cycle 36 lbs., I perform the following work in foot tons:

(*a*) In walking 12 miles in 3 hours,

$$\frac{164 \times 12 \times 5280}{2240} \times \frac{1}{16} = 289.9 \text{ foot tons.}$$

(*b*) In cycling 30 miles in 3 hours I do, by assumption, the same amount of work, namely, 289.9 foot tons. What is the value of C, or co-efficient of traction?

$$\frac{(164 + 36) \times 30 \times 5380}{2240} \div 289.9 = \text{C, that is, C} = 48.7.$$

Thus, by using the ordinary formula and multiplying, say roughly, by the fraction $\frac{1}{8}$, I think that under the average conditions of roads and weather a fair and tolerably accurate and practical result may be arrived at as to the work done in cycling.

NOTES, LETTERS, Etc.

A CORRECTION.—With reference to our report of the dinner of the Northern Hospital, Liverpool, published in the BRITISH MEDICAL JOURNAL of January 29th, page 339, we are asked to state that Mr. C. W. Harvey therein mentioned is joint architect of the institution with Messrs. Pennington and Sons.

THE QUESTION OF TABLE SALT IN CHRONIC GOUT.

DEPUTY-SURGEON-GENERAL writes: By an oversight, till reminded by Dr. Braithwaite's note, I have delayed corroboration of Dr Luff's views on treatment of gout by an extended experiment. Nineteen years ago I had enlarged finger-joints, chiefly of the right hand. I could scarcely hold a knife. I ceased to take common salt, substituting for a few days bicarbonate or chlorate of potash, but it was disagreeable.

From that time, 1879, I have never taken salt with my food—very rarely even with an egg—except what is used in cooking. My joints soon recovered, and retain no traces of lithia deposit. The whole body was washed daily with soap and water, before only partially, and a tumbler of cold water night and morning completed the permanent treatment. For many years I was extremely sensitive to any salted food, but less so now. For forty years (from the age of 7 or 8) previously I had been subject to lithic acid attacks, and also since I used the above general treatment, but the attacks have become milder and of shorter duration I am not now obliged to carry about my crutches for knees, and feet cause no inconvenience in progression.

I induced an old gentleman, aged 83, to lessen his salt. He only followed the suggestion partially. He did not live long enough to benefit as he would have done, but in less than two years he improved wonderfully. I have a man who comes to me occasionally with enormous deposits in wrists and fingers. I gave him Sir Alfred Garrod's treatment of guaiacum. He improved, and I saw him no more for a long time. Other patients also benefit by the no salt process, and when a little better disappear.

These attacks have been a great drawback to me throughout life, interfering with mental work, but in India and elsewhere I never went on sick list, I did my work on crutches. Can a pure combatant officer say as much when he sneers at the doctor for having a "substantial equivalent" for his grievances?

DR. JOHN T. FAULKNER (Stretford) writes: The utterances of Dr. Luff on any question connected with gout are always interesting, and command the greatest respect. But why does he not own up and at once declare himself a vegetarian, in theory at least? this seems to be the goal he is making for, though he has pursued a circuitous route. It would probably save valuable time if he would only take the short cut.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) Altiora Peto; J. Appleyard, M.B., Bradford; J. Adam, M.B., Hamilton; Dr. F. J. Allen, Birmingham; Dr. F. S. Arnold, Manchester; Mr. W. Aldridge, Reading; A. S. W. **(B)** Mr. J. Barker, Maidstone; Dr. A. Brown, Shanklin; Dr. F. Brannan, Dalkey; Dr. D. Buxton, London; Dr. R. Broadbent, Leicester; Mr. B. Brooks, Hull; Dr. G. S. Buchanan, London; Dr. R. Bell, Glasgow; Dr. H. T. Bulstrode, London; Dr. R. W. Batten, Gloucester; Dr. F. T. Bond, Gloucester; B.A., M.B London; Dr. M. Beverley, Norwich; J. Broom, M.B., Kirriemuir; Mr. G. T. D. Belcher, London; Mr. C. J. Bond, Leicester. **(C)** Captain Reserve of Officers; W. H. Coates, M.B., Patrington; Mr. M. L. B. Coombs, Newport, Mon.; Dr. J. M. Clarke, Clifton; Dr. T. Cole, Bath; Chorton; Caian; Dr. W. H. Calvert, Melrose, N.B.; Clinical Society of London, The Secretary of the, London; Mr. P. A. Colmer, Yeovil; F. J. H. Coutts, M.B., Manchester; Mr. W. G. Cant, Derby; Mr. H. Carre-Smith, London; Mr. R. Carter, London. **(D)** Mr. A. Davies, London; Dr. C. R. Drysdale, London; Dermatological Society of Great Britain and Ireland, The Secretary of the, London; F. Deighton, M.B., Cambridge; Dr. E. Deanesly, Wolverhampton; Miss L. Dawker, Helmsley; Dr. L. Drage, Hatfield; Deputy Surgeon-General; Dr. J. M. Dougall, York; Mr. G. Dyson, London; Mr. W. H. Dolamore, London; Dr. F. V. Denne, London. **(E)** Mr. T. S. Ellis, Gloucester; Enquirer; E. W. F.; R. C. Elsworth, M.B., Swansea. **(F)** Fair Play. G. C. H. Fulton, M.B., Middlesboro'-on-Tees; Mr. A. Freer, Stourbridge; Mr. E. J. Fox, Warrington; Mr. F. C. Fitzgeraid, Hanley; F.R.C.S.; W. W. Fyfe, M.B., Johnstone; Dr. J. T. Faulkner, Stretford; Fibrin; Mr. C. Farmer, Hexham. **(G)** Dr. A. E. Giles, London; Mr. L. N. Gibbles, London; Dr. H. Greene, Derby; R. M. Gibson, M.B., Hong Kong; R. R. Giddings, M.B., Nottingham; A General Practitioner. **(H)** Mr. G. B. Hudson, Hertford; Mr. W. F. Haslam, Birmingham; Mr. C. L. Hayes, Millhouses; Dr. S. Hyde, London; Mr. P. E. Hill, Crickhowell Dr. J. Haddon, Denholm; The Hunterian Society, The Secretary of the, London; Mr. A. E. Holden, London; Mr. W. B. Hemsley, Kew; Mr. M. A. Hooper, London; Dr. T. B. Hyslop, London; Mr. W. J. H. Haslett, London; S. H. Hawley, M.B., Birmingham; D. F. Harris, M.B., Glasgow; Mr. N. Hardy, London; Hydro; Sir F. S. Haden, Alresford. **(J)** J. W. H.; Mr. H. H. Jennings, London; Mr. H. Jones, Pentre, London; Dr. H. L. Jones, London. **(K)** Dr. H. R. Kenwood, London; Messrs. Chas. Kinloch and Co., Limited, London. **(L)** Liverpool Medical Institution, The Secretary of the, Liverpool; Dr. F. Little, London; Mr. E. B. Leonard, Southport; Mr. W. E. Longton, London; Mr. J. R. Lord, Carmarthen; Dr. W. Lockwood, Halifax; Rev. J. Lawrence, London; Mr. W. L. Lovett, Colne; J. C. H. Leicester, M.B., London; Laryngological Society of London, The Secretary of the, London. **(M)** J. F. MacGregor, M.B., Oban; Medical Defence; Dr. J. W. Moore, Dublin; Member; Messrs. Mackey, Mackey, and Co., London; Mr. H. H. Miller, Chiswick; Dr. R. Maguire, London; Mr. B. F. Meadows, Hastings; Dr. W. MacLennan, Glasgow; T. Massie, M.B., London; Dr. W. H. Maidlow, Ilminster; M.D., Dulwich; G. P. Matthew, M.B., London; G. J. Mackesy, M.B., Waterford; M.D.; Mr. C. Marshall, London; M.B, L.R.C.P.; M.L.; Mr. J. Y. W. MacAlister, London; A. E. Morison, M.B., Hartlepool; Dr. F. C. Martley, Dublin. **(N)** Sir C. J. Nixon, Dublin; N. D. F.; Mr. P. Newell, Crowborough; Nemo. **(O)** Mr. W. H. Orton, Brighton; Dr. J. Oliver, London; Mr. S. Osborn, London; Ophthalmological Society of the United Kingdom, The Secretary of the, London; Dr. J. E. Ogle, Reigate; Dr. J. O'Conor, Buenos Aires; Mr. J. E. S. Old, London. **(P)** Dr. H. S. Purdon, Belfast; Mr. T. F. Pearse, Bombay; Messrs. J. B. Peter and Sons, London; Mr. J. A. Phillips, Cardiff; Mr. F. Pamphilon, Gloucester; Mr. V. Pendred, London; Practitioner; R. C. Priestley, M.B., London; Mr. T. Partridge, Stroud; Mr. H. H. L. Patch, Chudleigh; Mr. R. Pollock, London; Mr. T. H. Pounds, Derby. **(Q)** Quaesitor. **(R)** Mr. A. E. Reade, London; Dr. C. Rogerson, Huddersfield; Richmond; Mr. H. F. Rogers, Ottawa; Messrs. Reynolds and Branson, Leeds; Mr. B. Roth, London; Mr. D. C. Rees, London; Rebman Publishing Company, London; Rustic; Mr. J. Round, Birmingham; **(S)** Professor R. Stockman, Glasgow; Dr. A. Sheen, Cardiff; Mr. F. Saunders, Peterborough; Society of Arts, The Secretary of the, London; Dr. E. J. Slade-King, Ilfracombe; Dr. W. K. Sibley, London; Dr. D. W. Samways, Mentone; Mr. W. Steinthal, Disley; Dr. T. D. Savill, London; Sydney and New South Wales Branch, The Secretary of the, London; Sheffield Medico-Chirurgical Society, The Secretary of the, Sheffield; Dr. S. Sunderland, London; Mr. W. B. Saunders, Philadelphia; Mr. J. Snell, Leeds; W. H. I. Sellers, M.B., Preston. **(T)** Mr. A. H. Tubby, London; Mr. R. Tuxford, Dudley; Tourist; Mr. T. Thomas, Holywell; Twelve Years Lecturer of the St. John's Ambulance Association; D. W. Torrance, M.B., Tiberias Syria. **(V)** Vox. **(W)** Dr. T. J. Wood, Bradford; Mr. C. Welby, London; Mr. C. F. Wingate, New York; Dr. D. Walso, London; Mr. C. H. Whiteford, Plymouth; C. Woodhouse, M.B., London; Wigan Medical Society, The Secretary of the, Wigan; Dr. F. Willcocks, London; Mr. P. S. Wainwright, Sheffield; R. P. Williams, M.B., London; E. Willett, M.B., London; Dr. W. Woodward, Worcester; Mr. A. Wiglesworth, Liverpool; Mr. W. Whitehead, Manchester; West London Medico-Chirurgical Society, The Secretary of the, London; Mr. G. E. Williamson, Newcastle-on-Tyne; Mr. J. H. Way, Southsea. **(Y)** Dr. M. Young, Crewe; Messrs. C. Yarrow and Co., London; etc.

BOOKS, Etc., RECEIVED.

Ergebnisse der allgemeinen Pathologie und pathologischen Anatomi des Menschen und der Tiere. Herausgegeben von Prof. O. Lubarsch und Prof. R. Ostertag. Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1898. 22s. 9d.

Oral Surgery. By E. W. Roughton, M.D., B.S., F.R.C.S. London: J. P. Segg and Co.

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THE LETTSOMIAN LECTURES

ON THE

AFFECTIONS OF THE URINARY APPARATUS IN CHILDREN.

Delivered before the Medical Society of London.

By JOHN H. MORGAN, M.A.Oxon., F.R.C.S.,
Surgeon, Charing Cross Hospital and the Hospital for Sick Children, Great Ormond Street.

Lecture I.

Congenital Abnormalities.

Like other organs of the body, the kidneys are not exempt from certain eccentricities of development, but as the majority of instances have been found in the bodies of adult persons who have died from causes unconnected with such conditions, it is seldom that these abnormalities have to be reckoned with in early life.[1] A recognised variation from the normal is found when the two organs are united, either by renal tissue or by a fibrous band, constituting the horseshoe kidney. Its convexity always faces downwards, and it lies transversely over the lumbar spine, generally rather lower than the level of the normally-placed gland. There are usually two ureters which pass in front, but sometimes behind the organ, and the vascular supply is also double. Of this condition there are occasional variations, but so far as regards our present subject, the horseshoe kidney is of interest only as an abnormality, since I have not met with an instance where, in the case of child, it has been in itself the source of disease or of difficulty in the diagnosis of other affections.[2]

The kidney may retain more or less its lobulated fœtal form into adult life without any impairment of efficiency. The absence of one kidney and a corresponding hypertrophy of the other is a possibility that may have to be reckoned with. The left is by far the most frequently found to be defective.[3]

When the kidney is absent, the corresponding suprarenal capsule is also wanting in one out of every ten. In Morris's work, and in the volumes of the Pathological Society's *Transactions*, will be found many instances of abnormal position of a single kidney; but although the possibility of such an occurrence may be borne in mind in the diagnosis of obscure tumours, they are exceedingly rarely met with, and need only be suspected when there also exists some other congenital malformation. Roberts states that in 21 cases of congenital malposition of the kidney which he had been able to collect and to compare, the abnormality was in every instance confined to one kidney, and the left was much more commonly affected than the right (left 15, right 6). The most frequent of these deviations was to find the kidney lying obliquely on the sacro-iliac synchondrosis. In some of the cases the organ was fixed beside the uterus, or transversely between the rectum and bladder, or across the prominence of the sacrum. Such abnormalities have led to mistakes in diagnosis and even of treatment in the case of adults, and in women to trouble in parturition. Only two instances are to be found in our tables, and in children it is so easily possible when the muscles are relaxed by an anæsthetic, to examine the abdomen, that the absence of a kidney from its normal position or its presence in an unusual one would hardly fail of detection if once suggested. It is of the greatest importance in considering this question that the condition of the organs of generation should be carefully examined, since they frequently exhibit concomitant variations where the kidneys are abnormal.

Although instances of complication from this condition are very rare, it is one that it is important to bear in mind when dealing with cases of sudden and complete suppression of urine, since in such cases it is possible that one kidney is congenitally absent and the remaining ureter obstructed. Especially is it important, both in adults and in children, when the question of nephrectomy has to be entertained that all indications of the absence or atrophy of one kidney should be carefully regarded. Although some cases of movable kidney have been reported as occurring in children where the gland is suspended in a peritoneal fold of its own, the mesonephron, and where the vessels are of undue length, the condition so rarely gives rise to symptoms as to require no discussion.

Congenital Hydronephrosis.

The ureters show frequent aberrations from the normal type. Dr. Ewart has described a case where each organ had two separate ureters, which began in distinct pelves and terminated independently in the bladder. All four were pervious. Sometimes two ureters leaving the pelvis of the kidney unite before entering the bladder at the usual situation. In 5 instances of double ureter noted in the books of Great Ormond Street, 4 were on the right side and 1 on the left. In no case were they the source of disease. It is with regard to their causative relations to congenital hydronephrosis that the abnormalities of the ureters are of special interest. In 20 out of 52 cases of hydronephrosis Roberts found a congenital malformation. Among the necropsies at the Hospital for Sick Children there were 12 cases of dilated pelves or hydronephrosis; 2 of these were complicated by imperforate anus and 1 by harelip, another by cleft palate. In several of the London museums are specimens of hydronephrosis in young persons due to phimosis, and Mr. Morris and Dr. Alexander James have both pointed out that dilatation of the ureters and pelves may be the result of increased frequency of micturition, which, by exciting frequent contraction of the walls of the bladder and frequent closure of the vesical orifices of the ureters, owing to the anatomical arrangement whereby the ureters traverse the parietes of the bladder, thus occasion frequent resistance to the outflow of urine from the ureters. The same explanation may account for the dilated and tortuous condition of the ureters, which is generally found to exist in cases of ectopia vesicæ, when, as can be seen, the discharge from the orifices of the ducts is constant.

Newman describes a specimen from the body of a stillborn child in which a cyst about the size of a walnut completely occluded the right ureter and caused enormous distension of the renal pelvis, and a similar case occurred at Great Ormond Street, where both kidneys and ureters, which were double on the right side, were dilated in consequence of a small cyst which was found in the bladder, and a few specimens are recorded as resulting from an imperforate urethra. Sutton has recently described four cases of congenital hydronephrosis, in two of which the dilatation of the pelvis was due to the minuteness of the opening of an inadequate ureter; in a third, which was obtained from an infant, the right kidney only was present, the infundibula, pelvis, and ureter were widely dilated, and at the point where the ureter opened into the bladder there was a small circular diaphragm-like valve which, though offering no obstruction to the flow of fluid from the ureter into the bladder after death, probably acted as a mechanical obstacle during life.

These being the main congenital causes of hydronephrosis, it is important to notice the frequency with which both kidneys are affected. Out of 20 cases collected by Roberts, in 13 the condition was bilateral, a statement which must be borne in mind in considering the question of nephrectomy. Two of these perished stillborn, 1 lived six hours, 1 thirty, and 1 forty-six hours, while 1 died twenty days and another between three and four months after birth. In other cases where life was prolonged "we must assume," says Sir W. Roberts, "that the impediment to the urinary flow was at first incomplete, though the malformation was congenital, and that its effects were not fully developed until a subsequent period, and then probably with extreme slowness."

It is unnecessary to describe here the well known appearance of kidneys affected by this condition. Generally they present a mere fibrous skeleton of the gland with the pelvis and calices enormously dilated, and the secreting structure to a great extent and sometimes entirely absorbed. The surface shows numerous rounded elevations bounded by fibrous septa, and corresponding to the lobules of which the fœtal kidney is composed. The fluid which is contained in such a sac is of a low specific gravity, and contains little urea or uric acid.

As already indicated in the foregoing enumeration of causes, the effects may be immediate or remote. If the condition affects both kidneys, death usually occurs at a very early period. If, on the other hand, it be unilateral and due

to permanent obstruction of the ureter, there may be no symptoms, and life may be prolonged to its natural term. When, however, the cause is intermittent, as in many instances that have been given, a tumour is produced which requires to be differentiated from other similar swellings. In the absence of any history of severe crush or blow, it will not be confused with a perirenal hæmatoma or perinephritic abscess. Notably it may need to be distinguished from ascites, especially if both kidneys are involved, which can, however, hardly ever be the case; and where the one kidney only is affected, the permanent dulness on the affected side in all positions, and the uneven surface of the tumour, will probably make the distinction an easy matter. From the rare cases of ovarian cysts in children, the tumour would be distinguishable by the presence of colon in front of the tumour and by the dulness in the lumbar region of the side affected. Hydatids of the kidney are very rare in children, and their presence could only be surmised by the detection of the hydatid fremitus and by the passage of cysts with the urine. The presence of pus in the urine and the accompanying pyrexia would indicate the condition of pyonephrosis, whether engrafted upon the cystic condition or arising in consequence of a calculus in any part of the tract, or due to tuberculous disease. The region of the kidney is occasionally the site of tumours of the character of cystic hygroma, and other congenital cysts are found to occur in the neighbourhood. Such are the various forms of mesenteric cysts described by Mr. Treves in his work on surgery, and others related by Mr. Moynihan.[4]

Two interesting cases in which the cysts were removed have recently been related by Mr. Eve in a paper at the Royal Medical and Chirurgical Society. In congenital hydronephrosis there is one sign which only occasionally is given, but which is definitely reliable as indicating the nature of these tumours, namely, the sudden subsidence of the swelling, followed by an increase in the flow of urine.

If the dilatation becomes sufficient to form a tumour, which it may do at any time between the third and eleventh year, or even later, the necessity for surgical interference will arise, partly as a means of diagnosing the exact nature of the swelling, and partly to relieve the patient of the inconvenience, and sometimes even of the pain and the effects of pressure upon the intestines which occasionally result. A trial may first be made of systematic rubbing, which was successful in the case of a girl, aged 8 years, under Sir William Roberts, who suddenly passed a large quantity of urine, when the swelling subsided and did not return. The same treatment was temporarily successful in a child of three months under Sir W. Broadbent, and in a third case under Mr. Thurnam, in a boy aged 4 months. But where this treatment is not available either on account of the pain caused or the risk of rupturing the cyst, the fluid must be withdrawn by the aspirator or trochar. In the absence of any very distinctly fluctuating area Morris directs that in the case of the left kidney the puncture should be made just anterior to the last intercostal space; whilst on the right side, to avoid all risk of injuring the liver, it should be half way between the last rib and the crest of the ilium, between 2 inches and $2\frac{1}{2}$ inches behind the anterior superior spine of the ilium. The fluid thus released often amounts to a very large quantity, and is of a brownish colour, and contains urates and urea. As a rule it accumulates very rapidly, and fresh tappings are required. Although this proceeding is occasionally successful, and the insertion and retention of a drainage tube has been followed by temporary relief, the operation that is most satisfactory is nephrotomy, followed by tapping of the cyst, and attachment of the margins of the incision in the tumour to the edges of the wound in the loin. Through the india-rubber drainage tube which is inserted all discharges can readily pass, and can be caught in a suitable appliance. Newman quotes four cases in children under 12 years of age, all of which were successful. In three the lumbar incision was used, and in one the cyst was reached from the abdominal surface.

Should the sac suppurate, and the discharge become a source of exhaustion, and should there be evidence that the renal tissue is incapable of performing its function, lumbar nephrectomy may be called for. Newman's tables give 8 cases in children under 12 years of age, where the kidney was removed for hydronephrosis, 6 recovered and 2 died. In 4 the abdominal incision and in 4 the lumbar was resorted to, one death occurring to each. To these may be added a case of a girl, aged 13, from whom a large hydronephrotic kidney was successfully removed by my colleague, Mr. Owen.[5] The possibility of involvement of the opposite kidney must always be borne in mind in operating upon these cases.

Only recently a child who had for some months been in the medical wards of the Hospital for Sick Children suffering from symptoms of intestinal obstruction was transferred to the surgeons on account of a tumour which developed on the right side of the abdomen. The urine had for some time been purulent. The child was aged 4, and was otherwise well formed. Mr. Pitts opened the abdomen by Langenbuch's incision, and felt what he took to be a healthy kidney on the left side. The tumour, which proved to be an intensely dilated kidney with most of the secreting structure destroyed, was then removed. No urine was subsequently passed, and the child died at the end of three days. At the necropsy it was found that the left kidney was almost non-existent, and quite incapable of function. A ureter of the natural size and patent opened into the bladder at the normal site, and the suprarenal capsule was normal in size and position. The right ureter was greatly dilated, and its orifice was exceedingly small.

Congenital Cystic Kidney.

In the Hunterian and a few other London museums are to be found specimens of kidneys taken from fœtuses or newly born children where the whole gland is converted into a congeries of cysts. Quite recently Dr. Still has described a specimen which was removed from the body of a girl, aged 8 weeks. It was born prematurely at the eighth month. Both kidneys were affected, and on section had a honeycomb appearance due to numerous small, more or less tubular, cavities separated from one another only by fine septa; these cavities seemed to be more developed in the cortex than in the pyramids. The pelves and ureters were normal. The liver in this case, as in many others that have been described, also showed on section numerous small cavities. This condition is bilateral, and is ascribed by Virchow to intrauterine nephritis, or to impaction of the straight tubules with uric acid, both of which lead to atrophy of the papillæ and obliteration of the pelvis of the kidney. Koster considers it to be due to a malformation of the lower urinary tract. Shattock, regarding this condition from the developmental point of view, argues that it results from a want of differentiation of the metanephric blastema, out of which the permanent kidney is developed, from that of the mesonephron or Wolffian body. The proper tissue of the kidney grows into that of the Wolffian body, while the remnants of the latter become the seats of the cysts scattered through the proper renal tissue. The enlargement of these cysts may, by irritative tension upon the intertubular tissue, produce an excess of this tissue, and cause the origin of the urinary retention cysts, and the presence of these cysts would certainly produce secondary pressure on the proper renal tubules and thus lead to the formation of true renal retention cysts. Dr. Still, whose interesting paper will be found in the next volume of the *Transactions of the Pathological Society*, adopts this view, and, putting aside the theory of intrauterine inflammation, believes that the same cystic condition which is found in adults of 50 to 70 years of age is due to the presence of glomeruli and tubules which for a long period retain a healthy condition.

Injuries of the Kidneys.

Children, and particularly boys, are liable to injuries from crushes or from the passage of wheels over the abdomen which produce lesions of the kidney or ureter, or the tissues which envelop them. In the latter case there may be nothing but a circumscribed collection of effused blood which may be absorbed or may become surrounded by lymph in which it is encapsuled, and from changes of the constituents a cyst is formed which is variously styled perirenal or paranephric. Or again, the effusion may break down, and forming an abscess, give rise to all the constitutional effects of suppuration, and ultimately point in the ilio-costal region. But this perirenal extravasation is often followed at a period of from two weeks to two months by a swelling containing more or less clear fluid with some of the constituents of the urine. These have been shown by Barker to vary inversely to the amount of pressure within the sac which forms around the extravasation. These effusions are liable to suppurate or to rupture into the peritoneum.

From a consideration of the more important of several recorded cases the course and symptoms of this accident can

be gathered. After the first symptoms of shock, followed generally by vomiting, there is more or less hæmaturia lasting for two or three days. If the ureter becomes blocked with clots there is considerable pain which is referred to the loins and runs down to the testes. These symptoms may be induced by a simple bruise of the kidney, but if there be rupture of the ureter or pelvis, or laceration of the gland structure, in the course of time a tumour will appear which may attain a very large size, and form what has been termed a spurious hydronephrosis.

Unless it becomes necessary to cut down upon the kidney, or to remove it, the actual lesion can only be guessed. The ureter may be blocked with clots, which when passed will allow the passage of urine, and the patient shows no further sign of the injury. Or the amount of blood may be such as to excite an acute cystitis, as in the case that is described by Dr. Rawdon, of a boy aged 12 who injured the right kidney by a fall. The hæmaturia was followed by cystitis, and to avoid further hæmorrhage the kidney was removed by a lumbar incision, and was found to be torn completely across. Four days later lateral cystotomy was performed, and a free drain established. The patient died on the fortieth day from pyelitis and circumscribed suppuration of the left kidney.

The treatment of these injuries, therefore, is in the first instance to check further hæmorrhage and to subdue pain; then to watch carefully for any changes indicating suppuration in the effusion or the formation of swelling by the secretion of the kidney. Aspiration may be tried and supplemented by gentle massage, but if the swelling increase, or if there be any signs of suppuration a lumbar incision must be made and the state of the kidney investigated. If this be ruptured it must be removed, but if not, a drainage tube must be inserted and the cavity washed out with antiseptic solution until it closes.

In removal of the kidney under these circumstances the surgeon may count upon the healthy state of the opposite organ, unless there is reason to fear that it also has been damaged by the accident, although one case is recorded where rupture took place of a single hypertrophied kidney.

Perinephritis.

Apart from traumatic causes perinephritis and perirenal abscess are very rare in children. The *post-mortem* books of the Hospital for Sick Children record very few instances, and the majority of these are due to pyæmia. Calculus in the kidney, though producing pyelitis, seldom gives rise to inflammation in the surrounding tissue. Dr. Gibney reports 28 cases of primary perinephritis in children, the majority occurring between the ages of 3 and 6 years. Most of the cases had been diagnosed as disease of the hip-joint or of the spine. Resolution followed in 12, and 16 ended in suppuration. Personally I have met with few.

One case that was sent to me was that of a young gentleman aged 8 who presented many of the features of hip-joint disease. A large abscess soon presented itself in the iliac region which was not due to spinal caries, and was not apparently perityphlitic. There was a history of a kick upon the loin some time previously. A large abscess was opened and drained through the lumbar region. All the hip symptoms passed away, and he is now strong and healthy. Exploration showed the abscess to surround the kidney.

The Significance of Hæmaturia.

Before passing to other diseases of the kidney, it may be well to review the causes of the presence of blood in the urine. Hæmaturia may indicate a local or a general disease, and the detection of its origin must always be of primary importance. It may arise from any part of the track, and may be so minute as to escape all but the most careful search by the microscope or by tests. It may be constant and slight or profuse and intermittent. Apart from poisoning by such drugs as chlorate of potash, cantharides, turpentine, carbolic acid and rhubarb, small quantities of blood are found in the urine of young infants as the result of irritation of the tissue of the kidney by uric acid and other crystals; when more abundant it occurs in connection with the other evidences of scurvy rickets, of which it is sometimes the earliest symptom. In purpura, the hæmorrhage from the kidney is often profuse with intervals of intermittence, and in hæmophilia it is also common.

Dr. J. Abercrombie has recorded a case of Raynaud's disease in which a little boy passed bloody urine day after day for six weeks together in the colder seasons, which ceased when the child was kept warm before the fire. In vol. xv of the *Transactions* of this Society will be found a very interesting account of a case of Raynaud's disease with paroxysmal hæmoglobinuria by Dr. Haig, in which he says that his previous researches led him to believe that both the Raynaud's disease and the hæmoglobinuria in this case (that of a girl, aged 6 years) were due to excess of uric acid in the blood (uric-acidæmia), and this theory affords a most simple explanation of their evident connection. Blood in smaller quantities occurs in Bright's disease, in hæmorrhagic measles, in scarlatina, diphtheria, and small-pox. What has been named Winckel's disease, in which cyanosis, jaundice, and hæmoglobinuria attacks newborn children on or about the fourth day and causes death in forty-eight hours, has not been observed in this country; but paroxysmal hæmaturia or hæmoglobinuria, where no blood corpuscles can be detected but the urine is nevertheless stained with blood pigment, has been fairly often detected. Herringham has described the cases of two sisters, 3½ and 4½ years of age, who were hereditarily syphilitic; and Dr. Voelcker, who has noted several others, finds a syphilitic taint in all of them. I have, however, seen a typical case in private where no such suspicion could have existed.

But it is as a symptom of local affections that hæmaturia is of diagnostic value to the surgeon, and of these I shall have to speak later. As a general rule, hæmorrhage from the kidney is more profuse than from the bladder, and is seldom accompanied by pain unless it gives rise to the formation of clots in the ureter, when the pain may be referred to the loin, the testes, or the thigh, but ceases as soon as the clot is washed onwards to the bladder. The origin of the hæmorrhage from the kidney is generally confirmed by the presence of casts and epithelium. In examining cases of supposed hæmaturia it is well to keep one's eyes open to the possibility of deception, as instanced by the case narrated in the *Clinical Society's Transactions*, vol. xxiv, by my late colleague, Mr. Leopold Hudson, of a boy, aged 11, who gave a history of suffering from the usual symptoms of stone, and brought a specimen of his water with a red stain, which was afterwards found to have been produced by steeping in his urine a piece of rag stained with Turkey-red dye.

Tuberculosis.

The acute miliary form of tuberculosis which affects the kidney is only a local manifestation of a general disease, and is very commonly in children associated with tuberculous phthisis or meningitis. Dickinson found that in nearly a sixth of all children dying thus affected, tubercle was present in the kidneys, and states that renal tubercle is nearly three times more frequent under than over the age of 12. Of 28 children under 12, both kidneys were affected in 19, 1 only in 9, and the sexes were attacked impartially. Out of 24 children dying under the age of 12 with the kidneys involved, 13 died under 5 years of age, and 11 between the ages of 5 and 12 years. This corresponds with the estimate of Rilliet and Barthez, who found that in 315 tuberculous children tubercle of the kidney was present in 49, or 15 per cent., and that, therefore, the kidney was three times more liable to tuberculous deposits in children than in adults. The invasion of this organ is seldom marked by any distinct symptoms and the affection of the kidney is disguised by the more evident signs of disease which are manifested in the lungs or the brain. Such conditions, therefore, admit of no surgical treatment. When the disease originates in the urinary organs, the infection may be conveyed by three sources. The principal and commonest is by the blood. Secondly, it may ascend by the ureters or lymphatics from the bladder; or thirdly, it may extend from the surroundings of the gland. I shall have to speak of the second of these sources when dealing with tuberculosis of the bladder.

Chronic localised tuberculosis or strumous disease of the kidney is by no means frequent in children. Out of 15 cases collected by Morris, there was not one instance in a child younger than 11 years. The pathological history of the affection is the same as that of the disease in other organs. The bacilli conveyed in the blood stream to the glomeruli for elimination must of necessity cause great risk of infection, and consequently the principal seats of the early deposits are the apices of the papillæ, the calices, or the

pelvis of the gland. First are deposited the miliary nodules, and these coalesce to form caseous masses. As these break down fresh nodules are deposited in other parts, and the caseous necrosis that ensues lays bare an ulcerating surface in the pelvis, whilst in the periphery they form irregular cavities. As more and more renal substance becomes involved these cavities coalesce and the secreting structure may be entirely destroyed. Generally the pelvis of the kidney and the ureter become thickened, the mucous membrane ulcerates, and its lumen is occluded. If the ureter remains pervious, the *débris* may be washed away, and in its course will almost surely involve the parts below, and thence the disease may ascend to the opposite organ. If, however, the ureter become blocked, the whole organ may be converted into a large abscess cavity or series of cavities with caseous *débris*—tuberculous pyonephrosis. Sometimes the obliteration of the ureter causes the whole organ to be converted into a shrunken, putty-like mass, or large abscesses may result by the access of pyogenic organisms.

In view of the rarity of this affection in childhood it might seem hardly worth while to linger over its symptoms or its diagnostic difficulties, yet there has been a sufficient number of cases in which operation has been satisfactory to encourage the hope that a larger number of successes might follow an earlier recognition of the affection. This is, however, a matter of peculiar difficulty at all ages, and especially in young patients, since symptoms in the earlier stages are little marked and local signs are absent; whilst, on the other hand, when evidence is more pronounced—when the urine becomes constantly purulent and vesical irritation is a marked characteristic, the disease has so far involved other portions of the tract that only palliative treatment can relieve.

It becomes, then, of the utmost importance to examine closely all signs which may indicate an early invasion of the gland. The symptom, so common to many other affections—thamuria, or frequency of micturition—is here also that which directs attention to the possibility of some morbid condition in the kidney, and when all other causes can be eliminated, the region of the kidneys should be carefully palpated and the question of tenderness investigated, and any history of pain in the loin or in the testes examined. Any increase of size in either gland can best be appreciated with the aid of an anæsthetic. The urine offers few indications in the earlier stages except that its quantity is often increased, and the specific gravity is frequently low. At a later period it becomes purulent, and, as distinguished from calculous pyelitis where the amount of pus is intermittent, in scrofulous disease it is always continuous unless the ureter becomes blocked. Even with large quantities of pus the urine in the early stages is generally acid. Examination for the tubercle bacillus should never be omitted, and must be most carefully carried out, but no reliance can be placed upon its absence. I have frequently been disappointed in searching for it, even in marked cases of tuberculosis of the bladder and other parts of the tract. Blood is only to be found at intervals, and seldom in large amount. It is, especially in the earlier periods, a matter of the utmost difficulty to differentiate between the pyelitis of tubercle and that of calculus; but in the latter the inflammation of the pelvis does not spread to the ureter or bladder, and there is therefore no dysuria such as forms a very distressing symptom in the later stages of the former. Whenever, then, these early stages have been observed the constitutional symptoms must be carefully watched for—the evening pyrexia, the night sweats, pallor and emaciation which ordinarily accompany the invasion of tubercle in other parts. Even if catheterisation of the ureters were possible in the case of children the plan is not advisable for fear of spreading disease in the healthy ureter, and the use of the endoscope is prohibited except in a few cases, so that there is no aid from such sources for detecting whether pus comes from one or both ureters.

If, then, from such evidences there arise a strong suspicion that one kidney is affected by scrofulous disease, the question has to be decided whether surgical interference is justified. Speaking of the disease generally, Dickinson states that both kidneys are affected as often as one alone, and only one case in seven occurs in which the disease does not affect other organs. Aldibert has collected 12 cases of children in which nephrectomy was performed. Of these 9 recovered and 4 died, two of the deaths not being traceable to the operation or to the original disease. No recurrence had taken place in one at the end of eight years, and none in another after three. Gross's tables give 20 instances of removal of the kidney at all ages for scrofulous disease; 12 recovered, 8 or 40 per cent. died. Tubercle was limited to one kidney in only 65 per cent. In 8 cases of preliminary nephrotomy relief was not afforded, so that this proceeding is not recommended.

Morris, on the contrary, recommends that nephrotomy should first be tried in cases that are not advanced, in the hope that it may check progress by opening and draining the abscess cavity. Nephrectomy may be performed later if strength improves or if lardaceous disease threatens. He adds: "It is in the scrofulous kidney especially that we so much need the means of ascertaining the working capacity of the other kidney, and it is in these cases also that the difficulty of doing so is almost insuperable."

Gross, from this point of view, recommends the operation in an early stage by means of a ventral incision, by which both kidneys can be examined, and of which he states the mortality to be 14.28 per cent. against 53 84 per cent. by lumbar method. Newman's tables, published in 1888, record 2 cases of nephrotomy for this condition in childhood, both of which ultimately recovered, though one (Morrant Baker's) subsequently had the kidney successfully removed, and 5 cases of nephrectomy, 4 of which recovered. To these may be added a case by Wright, in which at intervals nephrotomy, cystotomy, and nephrectomy were performed, the child dying with much ulceration of the bladder; and a case by Eve, where in a child aged 3 years and 9 months nephrotomy was first performed, and seventeen days later the kidney was removed through a prolonged incision. The child recovered and was in perfect health seven months later.

In the light of these results it would seem that where abscess is large nephrotomy and drainage should first be tried, and later nephrectomy; but where suspicion of an early state of disease is tolerably certain, the two kidneys should be examined by means of a ventral incision, and if one be found healthy and the other extensively diseased it should be at once removed.

REFERENCES.

[1] Englisch (*Wiener med. Zeitung*) states that a fœtus may attain the age of 7 to 8 months with the kidneys wanting or rudimentary, the ureters obliterated, and bladder undeveloped. In some 40 cases he had found atresia of the urethra or absence or defects of the ureters, the fœtus reaching 8 to 9 months; and Rayer and others have recorded the absence of kidneys in the fœtus. But notwithstanding some cases which have been published, it may at once be said that the subjects of such deficiencies are not viable. [2] The rarity of its occurrence may be judged by the figures of Morris, who found only 9 instances in 14,318 necropsies, or about 1 in every 1,600. From the records of the *post-mortem* books of the Hospital for Sick Children, extending over twenty years (1878 to 1897), which have been searched for this purpose by Mr. Templeton the surgical registrar, out of 2,594 necropsies only 3 instances of horseshoe kidney are noted. In 1 the left ureter was dilated, and 1 was complicated by imperforate anus. [3] Mr. Morris has been at great pains to estimate the proportion of individuals in which this congenital atrophy of one gland occurs, and from a large number of figures he reckons it as happening in 1 out of rather more than 3,500. Quoting again from the hospital statistics, there are 5 instances of aborted kidney in the *post-mortem* books of the Hospital for Sick Children. Two were on the left side, 2 on the right, and in 1 the side is not noted; 2 were complicated with imperforate anus and 1 had the foramen ovale patent; in another the suprarenal capsule was absent, and there was also hypospadias. In a girl, aged 10, who died after operation for cleft palate, the left kidney was atrophied and left ureter dilated. One instance occurred in which the right kidney was small, and consisted of three lobes; the left kidney was a bag of pus; the child died of uræmia. [4] *Annals of Surgery*, July, 1897. [5] *Lancet*, December, 1897.

THE WOUNDED IN THE MUTINY.—Deputy-Surgeon-General C. A. Innes has written to the *Army and Navy Gazette* to point out an error in Lord Roberts's book, *Forty-one Years in India*. Lord Roberts in Volume I writes: "Anæsthetics and antiseptics were then unknown, consequently few of the wounded recovered, and scarcely a single amputation case survived." Deputy-Surgeon-General Innes points out that chloroform had been discovered some time before 1857, and that during the siege and assault on Delhi all operations performed by him were done under chloroform. Antiseptics were unknown. As to mortality Deputy-Surgeon-General Innes says that in his regiment (the 52nd Light Infantry) 60 per cent. of the operations performed before Delhi recovered. There must be other medical officers who can verify or correct the latter part of the quotation from Lord Roberts's work.

FOUR CASES OF GASTRO-ENTEROSTOMY FOR PYLORIC CANCER.

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We are so much in need in this country of completed series of the various operations on the stomach to enable us to judge of the proper cases in which to perform them, and to estimate their risks—that I venture to give a brief account of my last four cases of gastro-enterostomy, which, with two previously recorded, complete my experience of this operation. The records of the cases before me are very full and complete, but I trust I shall not omit anything essential in the abstract which follows:

Case III.—A lady, aged 43, extremely emaciated and anæmic when I first saw her on October 28th, 1892. Her medical attendant, Dr. Preston, of Canterbury, had already, after a very careful examination of her symptoms, and an analysis of the vomited matters, and the discovery of a tumour of the pylorus, come to the conclusion that she was suffering from carcinoma ventriculi, with distinct symptoms for at least six months—a view which I had only to confirm. As the lady was suffering great pain and distress from pyloric obstruction and dilatation of the stomach, it was decided to give her relief if possible by gastro-enterostomy. This operation I performed on October 29th, 1892. Her room and all surroundings had been previously arranged in the most complete manner by Dr Preston, leaving very little chance of anything being overlooked which could contribute to the success of the procedure. The method adopted was precisely the same as in my first case, published in the British Medical Journal of 1886, where I practised a method of suture original with myself, which has since been frequently employed by others, but not always acknowledged. The operation (anterior gastro-enterostomy) was not specially difficult, and was completed in 1 hour and 43 minutes. The patient recovered fairly from the operation, but 12 hours later became very weak, and gradually sank from exhaustion, dying just 24 hours after the completion of the operation. There was, I believe, no *post-mortem* examination.

Case IV.—J. C., aged 39, was admitted into Dr. Ringer's ward at University College Hospital on October 17th, 1895, complaining of general wasting and loss of appetite. He dated his trouble from the previous August. It began quite gradually with wasting and loss of appetite; vomiting followed, and continued daily for the last month, with constant nausea and burning pain after food. Bowels confined; motions small and very white. There was on admission a small tumour to be felt to the right of and a little below the umbilicus which was slightly tender. There was considerable dilatation of the stomach. Sarcinæ were discovered in the vomited matters. While in hospital there was very rapid loss of weight. The diagnosis of pyloric growth with stenosis having been made, with very rapid and extreme emaciation, it was felt that the only prospect of relief was to be looked for in a gastro-enterostomy. This I performed in the usual way, but employing a Murphy's button, on November 4th, 1895. There was no difficulty either in deciding as to the course to be pursued or in the operation. The pyloric growth was far advanced, and there were numerous secondary deposits in the glands. I therefore united the anterior wall of the stomach with the jejunum at the usual spots with the button, and closed the abdomen. Two days later the patient died quietly of asthenia.

Post mortem Examination.—Everything in the abdomen was found satisfactory. The button lay well in position, pressing a little on the colon.

Case V.—E. C., a nurse, aged 47, was transferred to my charge through the kindness of my colleague, Dr. Roberts, under whose care she had been admitted into University College Hospital on October 4th, 1897. Her symptoms then were pain in the stomach after meals, constipation, and vomiting. She had had symptoms of indigestion for the past seven years, the constipation alternating of late with diarrhœa, the motions being often of a dark colour. Had never noticed blood in the vomited matter. A lump in the epigastrium was noticed eighteen months ago. The patient's mother had died of cancer of the rectum. There was considerable dilatation of the stomach.

No difficulty in diagnosis was experienced, namely, cancer of the pylorus with stenosis and dilatation of the stomach. The washings of the stomach on several occasions sometimes showed the presence of hydrochloric acid and sometimes none as tested by Gunsberg's phloroglucin vanillin reagent. No sarcinæ present, but diplococci were found in abundance, which in appearance and behaviour to stains were indistinguishable from the organism of pneumonia.

As the patient's general strength appeared fair, and she was very anxious for relief from the distress due to the tumour and the pyloric stenosis, I performed an anterior gastro-enterostomy on November 4th, 1897, with considerable hope that I should be in time to give her relief and prolong her life. The operation was done precisely as in Cases I and III, my own method of suture being employed in preference to the use of any of the many buttons or plates now in use. Continuous sutures were employed to unite the viscera. There was no difficulty throughout the operation, which was completed within fifty-five minutes. The tumour proved to be a pyloric cancer, with invasion of the glands.

There was some shock afterwards, but this was relieved by enemata of hot water and brandy. After this there was a steady improvement, the patient being soon easy and cheerful, and taking an ever-increasing amount of fluid food, which was digested fairly well, and produced normal stools. On November 23rd—that is, at the end of the third week—the patient had a rigor (temperature 103° F.), the cause of which could not be determined. On November 25th there was again a rigor. On November 26th the patient vomited about 15 ounces of blood clot and became very weak, and the hæmatemesis continued in smaller quantities until the next day, when she sank gradually, and died on the twenty-fourth day after operation.

At the necropsy made by Mr. Bolton perfect primary union of the abdominal incision was found. The peritoneal cavity was healthy in every respect. The anastomosis between stomach and jejunum was in the right place, and was perfect as regards suture and union. There was no kinking or distension anywhere in the bowels. On opening the stomach, which had completely recovered from its dilatation (indicating that the new opening had worked regularly and well), the diagnosis of cancer of the pylorus was confirmed. The growth was very hard and annular, and ulcerated on the surface, but evidently had not furnished the blood vomited. Examining further, a small scar of a simple ulcer the size of a sixpence was found about 2 inches from the pylorus near the smaller curvature. A smaller ulcer, fresh and with sharp-cut edges, was found on the anterior wall about midway between the curves and 2 inches from the artificial opening. "At the base of this ulcer was a punched-out opening into an artery filled with recent clot which projected over the surface. This opening, which was obviously the source of the fatal bleeding, admitted a fair-sized knitting needle. The walls of the stomach were thin, and the mucous coat atrophied. The rest of the intestinal tract was normal, but stained by the altered blood from the stomach." The previous discovery of multitudes of diplococci in the stomach is especially interesting taken with the presence of a recent sharp-cut ulcer.

Case VI.—H. P., aged 40, was transferred to my care at University College Hospital by my colleague Dr. Roberts, whose diagnosis during the month she had been under his care pointed to carcinoma of the stomach. There was at the time of admission pain in the epigastrium associated with a tumour and with vomiting and wasting. These symptoms had begun two years before, but had been aggravated for the past seven months, during which the vomit was often "like coffee grounds," but never showed pure blood. Emaciation was extreme, and there were dark hollows under the eyes. There was little or no evidence of dilatation of the stomach. The tumour in the epigastrium was about the size of a small egg. No free hydrochloric acid was found in several washings of the stomach.

The patient being very anxious for some operation which should relieve her pain and vomiting, and there being a fair prospect of giving this by gastro-enterostomy, I performed this operation on November 4th, 1897, together with the previous case. The tumour proved to be a carcinoma of the pylorus with extensive invasion of the adjacent glands. There was no difficulty in the procedure, which was carried out by continuous suture exactly as in the previous case, and which lasted under 50 minutes. A gland was removed for examination, and showed advanced carcinoma. The recovery after operation was most satisfactory, the patient being most cheerful, and soon enjoying a fairly abundant liquid diet. The bowels moved naturally. At the end of the second week she was able to take meat and milk puddings, and expressed herself as better than she had been for nine months. On November 18th she had a rise of temperature to 101.8°, and the next day to 104.6°, with collapse, and she died in the evening on the fifteenth day after operation.

At the necropsy the abdominal wound was found to be perfect, as also the union of the stomach and jejunum. On opening the stomach, a large mass of cancer was found in the pylorus deeply ulcerated, and at the base of this ulcer was a large perforation leading into the sac of the omentum, sufficient to admit the whole of the index finger. There had not been time for general peritonitis to follow on the fatal perforation. The new opening in the stomach uniting it with the duodenum was perfect in every respect. But an interesting fact must be recorded here: On examining the coil of jejunum united to the stomach, I found that I had reversed the direction of the gut. The afferent part, which was about 18 inches from the duodenum, approached the stomach from right to left, the efferent passed from left to right. There was no evidence, however, that this had in any way produced any inconvenience by kinking or pressure, as the colon and the bowels had, besides, acted regularly since the operation.

In reviewing these four cases it is necessary to remark that they were all operated on too late. Cases III and IV died of the operation—the first of shock, the latter of inanition, perhaps aggravated a little by shock. The two last cases recovered thoroughly from the operation, the parts uniting perfectly, and leaving nothing to be desired as regards the functions of the new openings. But in Case V the stomach, injured by prolonged dilatation and putrescence of food with bacterial fermentation, was the seat of ulcers, one of which perforated an artery, causing fatal hæmorrhage. In Case VI, although the relief of symptoms after operation was most marked, the cancerous ulcer was too far gone in destructive change, and opened into the peritoneum just when we hoped the patient would be able to leave the hospital.

This last series, taken with two others already recorded, completes my experience of gastro-enterostomy. Case I lived for a year and a week, and grew fat and strong enough to resume domestic duties, dying ultimately of generalisation of the carcinoma. Case II left hospital improved, and walking about. Some time after he got an attack of pneumonia, and died. Through the kindness of the doctor in attendance I was enabled to secure the stomach, which showed an excellent anastomosis with the proper spot in the jejunum.

Out of six cases therefore I have had two deaths directly from the operation. In the four remaining cases the operation was successful, except that in the two last it was not done early enough to save the patients from perforation which must have been pending at the time, but which it is

fair to assume might have been altogether prevented or at any rate delayed by an earlier relief to the stomach.

In Case I I used my own method of suture; in II Senn's plates; in III, V, and VI my own method again, and in IV Murphy's button. As far as this experience, taken with other cases of intestinal surgery, justifies me in forming a conclusion I should certainly prefer simple suture with fine silk to any other contrivance. The time in my last cases spent over the operation was not excessive, and I had no fear in them of the button falling back to the stomach or jamming in the intestine.

The absence of free hydrochloric acid in the two last cases in most of the washings of the stomach strengthens the view generally held on this point.

This experience is on the whole not very cheering as regards gastro-enterostemy for advanced cancerous disease of the stomach, but as far as it goes appears to deserve to be recorded, and it strengthens the belief that if done early the operation can give relief.

THE TREATMENT OF ACUTE GENERAL PERITONITIS ORIGINATING IN THE VERMIFORM APPENDIX,

WITH ILLUSTRATIVE CASES.*

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THE observations of surgeons and pathologists during the last ten years have conclusively proved that the various diseases recognised clinically under the names of typhlitis, perityphlitis, and certain forms of peritonitis all have their origin in certain morbid conditions of the vermiform appendix. According to the nature and degree of the primary lesion in the appendix and the nature and extent of the secondary results to which it gives rise, the clinical picture presents many varieties, the recognition and treatment of which have given rise to much discussion. Of these varieties the most severe and fatal is that in which disease of the appendix gives rise to acute general peritonitis, and the object of the present paper is to make a few remarks on the treatment of cases of this kind.

It was in these cases that *post-mortem* examination first clearly revealed the importance of the appendix as a pathological agent. As it was often found to be perforated by a foreign body or small faecal concretion, this was naturally regarded as the origin of the mischief. The exact part played by foreign bodies and concretions is even now by no means clear; but it is certain that general peritonitis may have its origin in an appendix which contains no solid body and in which no perforation exists; it is certain also that in all cases the peritonitis is due to the invasion of the peritoneal sac by micro-organisms derived from the interior of the appendix, whether they escape from it through an actual perforation or penetrate its intact but damaged wall.

With regard to the distinction between local and general peritonitis it is difficult logically to draw a hard and fast line, for even in the worst and most fatal cases the inflammation is hardly ever universal; but for practical purposes the case may be termed general when pus or septic fluid is found in the pelvic pouch, in both flanks, and among the small intestines as high as the navel, and when the inflammation is nowhere limited by firm adhesions. Such a condition, even when the upper part of the belly and the peritoneum covering the stomach, liver, and spleen is not obviously affected, is almost always fatal, and gives rise to a clinical picture quite distinct from that of a localised peritoneal abscess however large. Moreover it demands a different and much more energetic treatment.

Acute general peritonitis, thus defined, may arise in several ways, each way presenting somewhat different clinical history and symptoms. The first and most characteristic may be called the acute fulminating variety. Pathologically this consists of a very acute septic invasion, spreading with such rapidity that the greater part of the peritoneum is involved in twenty-four or thirty-six hours, and in which the virulence of the micro-organism is so great, or the resistance of the tissues so feeble, that the inflammation is not limited by the formation of durable adhesions among the surrounding intestines. The absence of the power of resistance is also shown by the tardy formation of pus, for even on the third or fourth day the abdomen may be found to contain little pus, but an abundance of turbid stinking serum. Clinically this type of acute appendicitis presents a familiar picture, in which a quite sudden onset of acute abdominal pain, rapidly followed by vomiting, distension, constipation, and collapse with abdominal facies, form the chief features. If nothing is done death occurs with all the familiar features of general peritonitis from the seventh to the tenth day. The history and symptoms of such a case, together with the actual state of the appendix forty hours from the onset of the illness, are well illustrated by the following case, which occurred recently in my practice.

CASE I.—On the night of August 21st, 1897, a man, aged 30, went to bed feeling quite well. After a somewhat disturbed sleep he woke at 6 A.M. with a severe gnawing pain in the right iliac region of the abdomen. He took a little brandy, and a quarter of an hour later vomited. The pain continued during the day, and he vomited two or three times; the bowels also acted once. The pain having become more severe he took aperient pills and some salts, but vomited both back without effect. After this the stomach rejected everything soon after it was taken. About thirty-six hours after the first onset of pain I saw him in consultation with his medical attendant. He had then a typical abdominal facies, a quick, full pulse, a temperature of 101°, and a somewhat distended and rigid abdomen, with considerable tenderness, but no swelling in the region of the cæcum. I had no hesitation in diagnosing acute appendicitis, and on opening the abdomen a few hours later found acute general peritonitis of the lower abdomen on both sides, with about a pint of turbid inodorous fluid with flakes of lymph. The appendix was swollen to the size of a man's forefinger, intensely injected, and its tip covered with recent lymph. After removal it was laid open and found to be filled tightly with dark recent blood clot adherent to a much swollen and injected mucous membrane. The operation was borne well, and the subsequent progress of the first four days appeared most satisfactory. Vomiting ceased, food was retained, the bowels acted, all distension and tenderness disappeared, and the normal respiratory movement of the abdomen was restored. The temperature, however, remained between 100° and 101°. On the fifth day he became maniacal, incessantly talking nonsense, and refusing food. These symptoms grew worse; he had no sleep, rapidly emaciated, and died exhausted on the eighth day without any return of abdominal symptoms. No *post-mortem* examination was permitted.

The above case is a good example of the acute fulminating variety. Another variety is that which follows the bursting of a localised abscess around the appendix by some mechanical cause, such as a blow or strain. In many cases there is a distinct history of this kind, and I have known a case in which the history and symptoms appeared to point clearly to rupture of the intestine, prove to be one of acute general peritonitis supervening on old quiescent mischief in the appendix. In the following case, although there is no history of a blow or strain, the fact that a localised swelling in the right iliac region was detected on the third day of the illness, and that on the following day the patient had a sudden attack of agonising pain followed by general collapse makes it probable that a localised abscess had suddenly burst into the general peritoneal cavity. The history is as follows:

CASE II.—On January 4th, 1897, a healthy boy of 14 felt poorly, and was given two aperient pills by his mother. The following day he was purged, and vomited, and complained of pain in the belly of sudden onset. On the third day the doctor in attendance found a swelling in the right iliac region. The next day, after a sudden agonising pain followed by collapse, a consultation was held, and a few hours later I opened the abdomen, and found a quart or more of turbid, semipurulent, very offensive fluid in the general abdominal cavity. There was acute general peritonitis on both sides as high as the navel. On separating some adhesions round the appendix a collection of more purulent fluid escaped. The appendix, which contained a concretion, but was not perforated, was removed, and the lad, after passing through a condition of prolonged and dangerous collapse, eventually made a good recovery.

There is one more variety of acute general peritonitis originating in the appendix. In this variety the onset is less acute and the early symptoms less severe. In fact, clinically it appears to be an ordinary case of what used to be called typhlitis. There is little pain, moderate fever, a tender swelling in the right iliac region, and constipation, but no vomiting after the first day; but the swelling, instead of gradually disappearing, or coming to the surface in the form of a localised abscess, becomes lost in increasing general distension, which begins in the lower part of the abdomen and then spreads upwards. These symptoms point to a gradual spreading of peritonitis beyond the area to which it was at first confined by intestinal adhesions. The general symptoms

* Read before the Birmingham and Midland Counties Branch of the British Medical Association.

do not quickly become alarming, and cases of this kind may last a fortnight or more before death occurs, as it invariably does unless relief is given by operation. The following is the history of such a case:

Case III.—On July 16th, 1897, a boy aged 11, apparently in good health, fell from a wall. During the whole of the following week he complained frequently of pains in the belly. On July 22nd, as the pain was worse and he began to vomit and to pass slimy, offensive motions, a doctor was summoned. Under small doses of morphine he at first greatly improved, but on July 27th, eleven days after the fall from which he dated the first symptoms, he seemed worse, and I saw him in consultation. The boy was slightly flushed, but had a perfectly tranquil expression. Just before my arrival he had got out of bed and passed a normal motion. The mouth was dry; the abdomen showed slight general distension and marked rigidity and tenderness, the latter chiefly on the left side, to which most of the pain had also been referred. There was no localised swelling in the right iliac region, and no tenderness of McBurney's point. *Per rectum* there was a tense, elastic swelling in the recto-vesical pouch. The diagnosis hesitated between general peritonitis arising from the appendix, and intussusception only partially strangulated. On opening the abdomen, a large quantity of stinking pus was found in the pelvis and in both flanks. The appendix was perforated, and a small concretion which had escaped from it was found in the pelvic pouch. The appendix and a large piece of infiltrated omentum were removed. The boy made an excellent recovery, and is now quite well.

These three cases were all treated on the same plan, which I will now describe. In the first place the operation from start to finish was carried out with strict antiseptic precautions. It would hardly be necessary to mention this but for the fact that some surgeons, once satisfied of the existence of pus or stinking fluid, appear to permit themselves considerable laxity in the details of asepsis, thinking that in the presence of unlimited quantities of septic organisms the introduction of a few additional ones is a matter of no great consequence. In the case of abdominal suppuration this is certainly a mistake, for in many cases of this kind only the bacillus coli is present, and the introduction of staphylococci or streptococci may be a fatal complication. Certainly the presence of the former in the peritoneal cavity does not necessarily prevent the primary union of the parietal wound, and if suppuration occur in this, a mixed infection, original or added by the surgeon, may be suspected.

The abdomen was in each case opened by a median hypogastric incision. Without this it is impossible either to cleanse the left flank or to drain the pelvis. On the other hand, it is not difficult to reach and resect the appendix, and complete the operation through a median incision, as was done in two of the three cases which I have quoted. In the other, I found it necessary to make a second incision over the cæcum in order to remove the appendix, although I was able to find and examine it through the median incision.

With regard to the method of removing the appendix, I believe the quickest and best way is to make a circular incision round it, about an inch from the cæcum, and, after stripping the peritoneum and subserous layer back to the cæcum like the sleeve of a coat, to ligature the denuded appendix close to the cæcum with fine silk. The appendix having then been removed and the ends of the ligature cut short, the peritoneal sleeve is drawn down and ligatured over the stump. The meso-appendix and its vessels are ligatured with a separate ligature.

The removal of the appendix I consider to be an essential part of the treatment of cases of general peritonitis. In the case of a localised abscess it is generally held, and I believe rightly, to be unwise to disturb adhesions more than necessary for fear of generalising the infection. For the same reason it is not advisable to make a prolonged search for the appendix, after opening and draining a localised abscess, and it is certain that leaving it in such cases is no bar to recovery. In general peritonitis, on the other hand, the only chance of averting a fatal result is to remove the focus of infection and as much of the toxic products as possible. In other words, the appendix must be removed and all intestinal adhesions thoroughly separated in order to liberate and remove the collections of pus and lymph among the coils. In all my cases I found and removed large quantities of pus or semi-purulent fluid, not only from the neighbourhood of the cæcum but from the pelvis and the left flank.

The abdomen was cleansed in all cases by means of sponges on holders without the use of irrigation, which I have discarded. It is quite impossible either by sponges or by irrigation to remove all the septic matter from the abdomen, and experience has shown it to be unnecessary. If the greater part be removed, together with the infective focus, the peritoneum can deal with the remainder, even when this is considerable. The great objection to irrigation is the danger of carrying septic matter into the upper part of the abdomen, which, as we have seen, generally remains free even in the worst cases.

After cleansing the abdomen as thoroughly as possible the wound was sutured, and a large glass tube passed to the bottom of the pelvis. In one case a gauze drain was also passed through the lateral incision down to the stump of the appendix, but I believe it was unnecessary. Very little fluid came away through the tube, except in the third case, which continued to discharge pus for over a week. The glass tube was left in for two to four days, and then replaced by a small rubber one. I am not sure that in cases of operation within 36 to 48 hours of the onset of peritonitis, like the first case, it would not be better to close the abdominal wound and dispense with drainage. This has been done successfully, but I have not yet ventured to do so.

NEPHRECTOMY AND ITS RELATION TO PREGNANCY.

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During the last fifteen years, the energies of surgeons all over the world have been directed extensively to the disorders of the kidney. As a result, the removal of a diseased organ has more and more frequently been resorted to with success in a very large proportion of the cases. Such a result has necessarily permitted a fairly considerable number of the population to continue their existence under vastly improved conditions, and amongst these, women have formed a large percentage. To a number of such, when restored to health, the question, whether they are justified in marrying, or, if married, in bearing children, must have presented itself. I do not propose to enter into the question of how far the loss of one kidney affects all individuals subjected to the operation, but I purpose rather to see how far that loss may be expected to influence the after-life of such small proportion of women as may become pregnant. At present I know of no data which may lead one to judge how far such a loss may affect the question of length of life—taking all individuals so operated upon from an insurance standpoint. It is, however, possible to judge to some extent of the dangers to be run by a woman, who has had to undergo nephrectomy, should she afterwards become pregnant. Particulars of six pregnancies at full term in women under these circumstances are on record, and I wish to bring before you particulars of three more such pregnancies, as well as of one case of nephrectomy during pregnancy. From these, it is possible to draw some deductions as to what risks are run by the mother, so far as her own health is concerned, during the period of pregnancy and afterwards, and also whether the development of the child is in any way affected.

The cases on record are those of Schramm[1]—one confinement; pregnancy occurred 2¾ years after operation; Fritsch[2]—one confinement; no particulars given; Israel[3]—one confinement; the operation having been performed on a primipara when the woman was four months pregnant; Tridondani;[4] three pregnancies in the same woman; first confinement thirteen months after operation. In my three cases one woman has had one pregnancy, another has had two pregnancies, whilst in the third the operation was performed while the woman was in the third month of pregnancy.

Case I.—*Calculous Pyelitis: Nephrotomy followed by Nephrectomy. Pregnancy seven months later.*—Mrs. F., aged 32, multipara, came into hospital in July, 1893 suffering from pain and swelling in the right loin. She had had vomiting in the morning for some months, and also night sweats. Menstruation had ceased for eleven months. When examined, a tense fluctuating tumour was felt, occupying the upper half of the right side of the abdomen. Dulness on percussion was continuous with that of the liver, and palpation was painful. The woman stated that she had passed gravel at times. The urine was acid, with a thick deposit of pus. The other organs were healthy.

On August 2nd, 1893, the abscess was opened in the loin by an incision parallel to the rib. The kidney consisted of a series of cysts full of pus.

* Read before the West London Medico-Chirurgical Society.

from which a large stone and also a smaller one were removed, and the whole wound was thoroughly syringed out and a large tube put in. She recovered rapidly.

On September 6th, the ureter was catheterised to see if there was another stone present. The urine then was, sp. gr. 1014, acid, no albumen, all pus coming by the wound. She went home for six weeks, but was readmitted on October 30th, stating, that whilst at home pain had been constant, and that micturition had been unduly frequent, with, on one occasion, blood, and that there was a marked increase in the sediment. The pain had been much more acute whenever she passed large quantities of pus, but no gravel or portions of stone were found. Temperature 103.2°, pulse 92, urine, sp. gr. 1010, alkaline, containing albumen and pus. The kidney was removed through the old incision on November 1st, 1893. In separating the kidney from the peritoneum, to which it was very adherent, the latter was torn for about two inches. After removal of the organ this was sewn up and healed perfectly. She made an excellent recovery, except for a sinus in the loin. On the Easter Monday following she fell into the sea, and on reaching home, found the ligature from the stump protruding from the orifice of the sinus, which closed within a fortnight.

This patient became pregnant in May, 1894, seven months after the operation. She suffered no more than she had done in her three previous pregnancies, except that the morning sickness was more severe, and that she felt very exhausted at times. The urine, when examined on September 6th, 1894, at the completion of four months' pregnancy, was neutral, sp. gr. 1012, faint trace of albumen, no sugar, with a deposit of mucus but no pus, urea 0.8 per cent. Examined again in December, at the completion of seven months, it was neutral, sp. gr. 1010, a trace of albumen, urea 1.1 per cent. Labour came on in February, 1895, the pains were exceedingly strong, and under her expulsive efforts the cicatrix yielded, and there was a large projection outwards of the abdominal contents. In order to prevent a ventral hernia, chloroform was given, and she was delivered by forceps as soon as possible. She is now perfectly well, with a healthy child. Though there was a large quantity of liquor amnii, it could hardly be called excessive.

CASE II.—*Periureteritis: Pyonephrosis: Nephrectomy: Two Pregnancies.*—For the notes of this case, I am much indebted to Dr. Collingwood, who sent the patient to me.—Mrs. K., aged 39, married fifteen years, mother of six children, all natural labours. Cystitis first occurred when the third child was four months old; and again, seven months after the birth of the fourth child, when she "caught cold in the bladder." Retroversion of the uterus occurred at this time, followed by a miscarriage and further bladder symptoms, such as incontinence; at the same time she noted that her eyesight was bad. After three months' treatment, the bladder was explored under chloroform, with no relief. In 1890 she complained of severe cutting pain, referred to the left ovarian region, incontinence of urine, straining and smarting during micturition, with pain in the left lumbar region. Some pus was found in the urine, which was acid. A calculus in the ureter was suspected.

An exploratory laparotomy was performed on December 26th, 1890, by Drs. Collingwood and McCormick. The kidneys were normal to palpation, as also the uterus and appendages. At the lower end of the left ureter, within three-quarters of an inch of the bladder, there existed a thickening from one-half to three-quarters of an inch long, involving the wall of the ureter, but as no calculus could be felt, the ureter was not opened. Some amelioration of symptoms followed until July, 1892, when pus in large quantities was noticed intermittently in the urine, and the left kidney was found by palpation to be much enlarged. The patient was admitted into the hospital, and on September 21st, 1892, I removed the left kidney. It is a point of interest that a uterine sound was passed from the bladder up to the kidney, the ureter being of the calibre of at least the femoral artery.

Mrs K. became pregnant in November, 1893, fourteen months after the operation, quickened February 6th, 1894, and was confined in August. Urea tests taken during the pregnancy, and subsequently, gave the following figures:

February 7th	3rd month.	Urea	1.40 per cent.
March 21st	4th ,,	,,	1.20 ,,
April 10th	5th ,,	,,	1.15 ,,
May 12th	6th ,,	,,	0.70 ,,
June 28th	7th ,,	,,	0.55 ,,
July 7th	8th ,,	,,	0.70 ,,
August 16th	9th ,,	,,	1.20 ,,
,, 24th	Confinement.		
October 14th		,,	2.20 ,,
December 10th		,,	1.60 ,,

A decrease in the percentage to the seventh month, with a rise to the normal after the confinement.

She again became pregnant in June, 1895, and was confined in March, 1896. On both occasions the labour was normal, and the amount of liquor amnii was not excessive. She nursed both children, and they are the healthiest she has had.

CASE III. *Pyonephrosis: Nephrectomy while Pregnant: Abortion: Uræmia.*—In this case, a rather delicate lady, aged 32, mother of four children, had never had any illness previous to her marriage in 1881, except that a horse fell and rolled on her when she was fourteen years old, with apparently no ill-effects. She miscarried three months after marriage, and pain in the left side began directly after. The attack was very severe, and persisted for weeks. She was taken to Melbourne for consultation, but got no relief, and was brought home in a moribund condition. After a very strong sleeping draught, a large quantity of water passed, and she was relieved, but had attacks of pain every fourteen days, for twelve months. Pain ceased after she quickened with the first child, born in April, 1883, but returned three days after confinement; and she then passed a quantity of what she described as "dirty brown water like nasty tea, with a curious white sediment." A large firm tumour was detected in the left hypogastric region, close to the umbilicus. She recovered from this, and was free from attacks for some years. In 1890-91 commencing myxœdema was suspected, but passed off under liq. arsen. hydrochlor. She bore children in 1892 and 1893.

In 1893-94 the attacks returned, and in September, 1894, she passed urine thick with pus. The swelling in the loin was of the shape of a kidney, but twice its size. Another attack followed a fortnight later, and the enlarged kidney was distinctly recognised before the discharge of the pus. An extremely severe attack followed in November, the tumour increasing perceptibly daily, till it was as large as a child's head, only 12 to 20 ozs. of urine being passed per diem. She was then in the third month of pregnancy.

No nourishment could be retained, nor could she sleep; having to be propped forward in bed in the position described by Dr. Newman.[5]

Nothing gave relief. When seen in consultation it was decided that, owing to her weakened condition, immediate interference was necessary.

This was done on December 4th, 1894, by the loin incision, and the kidney was found to consist of a huge cyst by the side of the spine, containing a quart of dirty brown purulent offensive fluid. The sac formed by the pelvis of the kidney extended down by the side of the ureter for from 2 to 3 inches—the kidney itself consisting of a series of cysts. The question whether such a kidney could be of any further service, the risks attendant on leaving in a weakly woman a foul mass which could not be properly drained, the certainty of a permanent fistula, and its eventual necessary removal, were considered. It was decided to remove it at once, which was accordingly done. No calculus was found. The wound was completely healed on the seventeenth day. The urine gave a result of 6 ozs. on the first day, and an average of 38 ozs. per day for the next fortnight. On examining the organ after removal, it was noticed that the ureter ran in the wall of the pelvis of the kidney, in a manner similar to that in which it enters the bladder; and consequently, the greater the tension in the cyst the more firmly the ureter was closed.

It was an exact instance of the condition described by Simon, of the afteration in the relationship of the kidney and its duct, quoted by Dr. Newman.[6]

It was quite expected that the interference with the kidney would have brought on a miscarriage, as the patient had already miscarried on three occasions, and had had severe pain in the pelvis, before the operation. However, this did not occur, and hence another serious difficulty arose—should the pregnancy be allowed to go on? At that time no cases had been published, and as there was no need for her to run any extra risk in order to have a child (she had four living), a miscarriage was brought on, and the ovum came away on December 31st, 1894. This patient had a mild uræmic attack, with semi-consciousness for some hours, and albuminuria when in New Zealand recruiting, within two months of the operation, led up to by a very rough passage across from Sydney. She was sent home at once, and on her arrival had only a trace of albumen. The husband, writing fifteen months later, stated she had not required medical attendance since I left, in June, 1895.

Each of the three cases has a point of interest. In the first, a ventral hernia was only prevented by rapid delivery. The second discloses an interesting pathological history. An inflammatory periureteritis, possibly originating from some pressure or injury during confinement (the marked symptoms began four months after the third child was born), was recognised at the lower end of the ureter by an exploratory laparotomy, and examined. The kidney on the affected side and other organs were found to be healthy. That this periureteritis continued upwards was proved by the state of the ureter at the time of operation, and it eventually led to the disorganisation of the kidney previously recognised as healthy. It may have been tuberculous in nature (though there was then no other evidence of that), for I have heard lately, that since her last confinement in March, 1896, she has had further bladder trouble, with an ulcer on the posterior wall, thought to be tuberculous, which was scraped, with relief of all her symptoms. At the same time it must be remembered that Hurry Fenwick[7] states that solitary ulcers of the bladder are rarely tuberculous.

In the third case, the combination of pregnancy with pyonephrosis was sufficiently serious, but when complete obstruction to the discharge of the pus occurred, it added considerably to its gravity. The removal of the kidney at the time I believe to have been the better course, although the immediate shock was greater. As to the miscarriage, the after-history of the case seemed to justify the course then taken. The risk of throwing the function of depurating the blood of a mother and her child, at a stage at which the latter was beginning to develop rapidly, on a single kidney, which had not had time to hypertrophy, is very considerable. That the remaining kidney was scarcely able to meet the requirements of the mother's system alone is shown by the uræmic attack from which she suffered, when the action of the skin was interfered with during the stormy passage to New Zealand. Had the pregnancy been allowed to continue, eclampsia or uræmic coma would have supervened, and the fœtus would have been lost at a later period in all probability.

Tridondani[8] when discussing the effects of the loss of one kidney, admittedly greater in a pregnant woman, does not accept the belief that there is sufficient compensating power in the other kidney simply by hypertrophy to deal with the excrementitious materials of the body. He states that the elimination through it is greater of retrograde tissues, and especially of urea. If, on the one hand, the

work of elimination is more active at other times than in pregnancy, on the other, this creates conditions by which the renal activity can be more or less interfered with.

The nutrition of the glomeruli is affected by the venous stasis in the kidneys and the irritation caused by an excessive amount of urea, and a nephritis results, followed by the albuminuria of pregnancy; and Tridondani quotes Murri as supporting Heidenhain that albuminuria depends on slowing of the blood current in the kidneys. Such stasis Tridondani believes is induced (1) by the pressure of the enlarged uterus on the renal veins; (2) by the engorgement of the abdominal vessels which follows on the emptying of the uterus, and (3) by the fact that the uterine arteries, arising so close to the renal, take off a large proportion of blood from the kidneys during pregnancy. He believes that such stasis is prevented by an increased *vis a tergo* by hypertrophy of the left ventricle of the heart, and that by that the dangers of pregnancy are avoided, and, if the heart be sound, women may expect to get through a confinement without undue risk.

If his contention be right, that such a venous stasis in the kidney occurs during the pregnancy by pressure from the uterus, it is evident that pressure cannot occur before the seventh month, or the sixth, at the earliest, from the anatomical position of the vein. Further, if the uterus presses on the renal vein, it presses surely more on the vena cava and iliac veins, and should cause a similar stasis below the point of pressure, but œdema of the legs is specially remarked as being absent in several of the cases, and not mentioned in the others. As to the engorgement after confinement, it is to be noted that the albuminuria of pregnancy usually disappears in the first week or so after the emptying of the uterus.

Again, if hypertrophy of the heart be the means of safety for a pregnant woman, one would expect to find a hypertrophy, possibly not as great, but present in all cases in whom only one kidney remains. That hypertrophy of the heart takes place in all pregnant women, to a certain extent, is now generally accepted; but such hypertrophy does not free them from eclampsia or uræmia, although they possess two kidneys.

That hypertrophy of the sound kidney occurs in cases of disease unoperated on, has been proved by necropsy, but I have seen no *post-mortem* record of any case some months after nephrectomy. But by experiments on animals, Bradford[9] showed that if two-thirds of the total kidney substance remained, the animals were not affected, and that he could not be sure of cardiac hypertrophy even after six months, though in dogs it was difficult to decide.

My own view as to wherein the safety of women under these conditions lies, is that the answer is to be found in an increased action of all the emunctories of the body and not in hypertrophy of the remaining kidney or heart only. I fully allow that these conditions are large factors in the question, but have we not been too long under the impression that eclampsia depends solely on the work done by the kidneys? Dr. Clifford Allbutt[10] and Mr. Simpson[11] have brought forward the question of the possibility of a serum toxin in pregnancy and its elimination by the liver and bowels. The toxin acts as an irritant to the kidneys leading to albuminuria, which thus becomes the symptom of the depth of the intoxication of the system, and not the real cause of the eclampsia. They point out that eclampsia is more common in primiparæ as they have not become inured to the poison, but in subsequent pregnancies the same women usually escape owing to their inoculation in their first pregnancy. I believe that the skin, bowels, and lungs all do an extra amount of work. That the skin does so, is shown by the effect of the chill on my patient No. 3, who developed a mild attack of uræmia consequent on diminished action of the skin, caused by the cold wet passage from a warm to a cooler climate. There is also a very interesting case reported by Mr. Bartlett,[12] in which uræmia came on four days after nephrectomy, and was relieved by profuse action of the skin. This increased action of the other emunctories is also, I believe, further shown by the analysis of the excretion of urea.

Winckel[13] states that in normal pregnancy the secretion of urine is increased from 1,500 c.cm. to 1,750 c.cm., while the daily excretion of urea (28 g. = 432 gr.) is as great as in the non-pregnant state. The urine, for this reason, is lower in sp. gr. and simply shows an increased excretion of water. Many other authors practically agree with this, but Drs. Liscia and Passigli[14] have made a careful examination of this point. From thirty-seven observations they came to the conclusion that the quantity and density agree with the figures for normal urine. Urea is diminished, chlorides remain normal, acids (sulphuric and phosphoric) are slightly diminished, kreatinin slightly increased. A comparison of the percentage of urea from their normal cases with mine after a nephrectomy (if one may judge from so small a number) seems to point to the excretion of urea by the kidney under these circumstances as being less than normal.

Percentage of Urea in Normal Pregnancy and after Nephrectomy.

In Normal Pregnancy (Liscia and Passigli).				After Nephrectomy.		
No. of Cases.	Months of Pregnancy	Average per cent. of Urea.	Lowest per cent. of Urea.	No. of Cases.	Average per cent. of Urea.	Lowest per cent. of Urea.
3	3	1.30	1.080	1	1.40	—
2	4	1.23	0.910	2	1.00	0.80
1	5	1.42	—	1	1.15	—
1	6	2.00	—	1	0.70	—
—	7	—	—	2	0.82	0.55
22	8	1.51	0.522	1	0.70	—
8	9	1.73	1.200	1	1.20	—
				2 months after confinement 2.2		
				4 months after confinement 1.6		

This comparison shows, so far as it goes, that the percentage in my cases only equals the lowest percentage in their normal pregnancies, instead of a higher one as was expected. Should this prove correct upon further examination, the balance of urea must be got rid of by other organs. Analysing all these cases it will be found that:

1. All the women made good recoveries who went to term, although Schramm notes a long recovery.
2. Slight albuminuria was noticed in Schramm's case and in No. 1 of mine.
3. A tendency to ventral hernia in one case.
4. Liquor amnii was not excessive in any case.
5. Marked œdema is not noticed in any case.
6. Schramm notes an irregularity of the pulse shortly after the confinement, although hypertrophy of the left ventricle was present.
7. Morning vomiting was severe, but not dangerous, in one case.
8. The forceps were used in one case only, and then merely to prevent ventral hernia.
9. Eclampsia or uræmia did not occur in any case that went to full term, but did in my case No. 3 shortly after the miscarriage.
10. All the children were healthy, and in Tridondani's and my case No. 2, it is specially remarked that they were the healthiest the woman bore.
11. In all the cases the mothers nursed their children.

Hence I think we may fairly conclude that women can, after a nephrectomy, bear children without very great danger to themselves, provided their organs and the remaining kidney are healthy.

I may add that I have heard of another case in which mother and child did well, but I have not been able to obtain particulars as yet. The cases show that seven women have undergone the ordeal, and that ten healthy children have been born at term.

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A CASE OF EXTIRPATION OF THE KIDNEY FOR SARCOMA.

BY W. H. MAIDLOW, M.D., F.R.C.S.,
Ilminster.

THE scantiness of the literature on abdominal nephrectomy for so-called renal sarcoma in adolescence in comparison with the importance of the subject of these tumours, and the somewhat unusual pathological features of the growth under notice, are points which afford me justification in making this short communication.

Mrs. P., aged 25, primipara, after a normal confinement on August 9th, 1897, found that her abdomen still remained large, an enlargement which, on examination, I found to be due to a tumour having the usual characters of one connected with the left kidney. Its surface was bossy (the largest boss being as large as a golf ball), hard in texture, fairly movable, and only causing discomfort of a dragging nature. A small swelling had been noticed twelve months previously, but had given no trouble, and so was neglected. There was no history of hæmaturia, and the urine, except for containing a cupric oxide reducing body, due to lactation probably, was always normal on subsequent examinations. In the right axilla there was a supernumerary nipple which was secreting milk freely. Abdominal section was advised and performed by me on August 31st, three weeks after the confinement. No attempt was made to arrest lactation, which gradually ceased spontaneously after the operation.

After the incision and opening in the middle line of the abdomen, the tumour was found to be sessile, and attached to the left kidney, covered externally by a rather lax peritoneal capsule, which was divided, clamped at its base, and peeled off. Under this was a fibrous capsule continuous with that of the kidney, which was adherent to the tumour over an area the size of a penny, and expanded over for about ½ in. on each side of this, like an egg-cup over an egg. Attempts to remove the mass from the kidney first led to such severe hæmorrhage that it was necessary quickly to ligature the renal vessels and remove the kidney with the rest of the tumour. She suffered much shock from the bleeding and length of the operation, but except for slight femoral thrombosis of both legs, which quickly passed off, and a curious remittent range of temperature (99° to 102° F.) for the first three weeks she made a speedy convalescence, and on October 19th walked unaided into the garden; and at this date (January 28th) her condition is very satisfactory.

The tumour weighed 7 lbs., and had an average diameter in any direction of 6½ in. Its naked-eye appearance was typically sarcomatous, with patches of softening and blood extravasation, and was everywhere encapsulated. Microscopically (Clinical Research Society), it is a mixed celled sarcoma, with patches of mucoid change. Considering the obvious non-involvement to any extent of the kidney, and the very definite capsule continuous with that of the kidney, one would have expected to find some adrenal elements derived from one of those accessory or aberrant adrenal bodies described by Mr. Bland Sutton, but no such elements were found in the portions examined. Nevertheless, the growth has probably originated from some such source, as its subcapsular anatomy was very obvious. The future events will be interesting to note, and also very interesting is the association with the supernumerary nipple in the axilla. There was never the slightest anxiety concerning the opposite kidney, which could easily be examined through the very loose peritoneum during the operation. The kidney, except for about ¼ inch subjacent to the point of attachment of the tumour, seemed quite free from disease. It appeared to have been involved only secondarily.

THE BISHOP OF LONDON will take the chair at a dinner to be held at the Hôtel Métropole on Thursday, April 28th, in aid of the Hospital for Sick Children, Great Ormond Street, when a special appeal will be made for £30,000 for the purchase of the adjoining hospital of St. John and St. Elizabeth.

THE London County Council has resolved that from April 1st next coroners' jurymen in the County of London, when summoned by rota, shall be paid if they demand it 2s. each per attendance.

MULTIPLE CYSTS OF STOMACH AND SMALL INTESTINES.*

BY HARRY B. ANDERSON, M.D., C.M. TORONTO,
Professor of Pathology, Trinity Medical College; Pathologist to Toronto General, Sick Children's, and Western Hospitals.

APART from mucous cysts, parasitic cysts, and cysts from degeneration in tumours, the walls of the stomach and intestines appear rarely to be the seats of these accumulations, in so much that I consider the present case worthy of presentation before this Association.

Mrs. A., aged 59, born in England, but had lived in Canada since childhood. Had one child. Health had always been good until about ten years ago. Since that time she had been troubled with chronic diarrhœa and bilious attacks, which were becoming progressively more frequent and severe, being much worse during the last few years. She was well developed and well nourished, maintaining her weight until about four months before her death, when she began to lose rapidly. This was coincident with and attributed to her more frequent attacks of diarrhœa and vomiting, and her inability to take food. She would often feel quite hungry, as if she could partake of a good meal, but on eating a small quantity her desire would be satisfied.

She was first seen on July 5th, 1897, by Dr. D. W. Macpherson, of Toronto, to whom I am indebted for clinical notes of the case and permission to report it. She had had a severe attack of diarrhœa about a week before, but for three days previous to his seeing her she had persistent constipation.

Examination revealed the presence of a tumour in the left umbilical and hypochondriac regions about 6 inches in diameter. It was movable upwards and to the left. There was no pain or tenderness in connection with it. Slight fluctuation could be made out. The area of the tumour was dull on percussion, the rest of the abdomen being markedly tympanitic. The patient had first noticed the presence of the tumour herself about six weeks previously, and she said it was slowly enlarging. Purgatives and enemata were resorted to, and on July 9th there was a profuse evacuation of a very offensive, slightly greenish-yellow material with some scybalous masses from the bowels. After this the bowels began to act well and the motions became normal in appearance. The vomiting, however, continued; she could take no nourishment and was continually getting weaker, and an exploratory incision was decided on, which was made on July 15th.

The abdomen was opened by a median incision above the umbilicus. The peritoneum was normal in appearance. On entering the peritoneal cavity, a tumour the size of an infant's head presented. It was intimately connected with the anterior surface of the stomach and adherent to the transverse colon and some coils of the small intestines, rendering separation impossible. The tumour was sutured to the abdominal incision and opened. About 500 c.cm. of reddish-brown fluid was evacuated. This was not preserved for examination. The vomiting ceased; the patient remained conscious, suffered no pain, but sank slowly and died twenty-four hours after the operation. Dr. Macpherson made a necropsy the same day and submitted the specimens to me for examination.

Besides the cyst opened at the time of operation five others were found, as described later. The mesenteric and retroperitoneal glands were slightly enlarged and dark in colour; the pancreas was much atrophied—chronic interstitial pancreatitis. The distal end of the pancreatic duct was greatly enlarged, resuming its natural size 2 inches from the opening in the duodenum. The liver, gall bladder, and biliary passages were normal. The other abdominal and thoracic organs were examined, but showed nothing worthy of special note. There is a large unilocular cyst in the posterior wall of the stomach 4 inches wide, extending from the lesser to the greater curvature, and 6 inches long, extending from the cardiac end to within 4 inches of the pylorus. It is situated between the peritoneal and muscular coats, and does not communicate with the in-

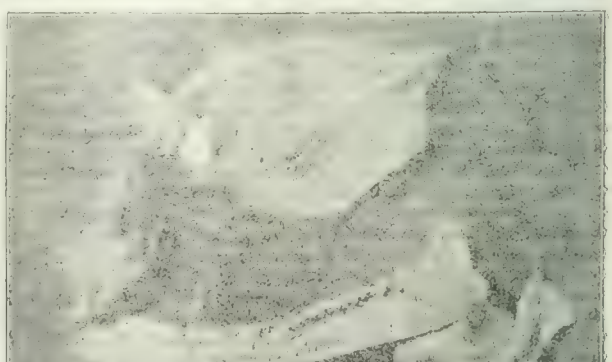


Fig. 1.—Anterior view (stomach opened along lesser curvature); *a*, lesser curvature; *b*, cyst in posterior wall; *c*, cyst; *d*, jejunum; *e*, cyst; *f*, cyst; *g*, colon.

* Read before the Pathological Section at the Annual Meeting of the British Medical Association held in Montreal, August-September, 1897.

terior of the organ. It contained 160 c.cm. of a thick grumous materia of a reddish-brown colour. The colour was not uniform throughout, but there were redder, alternating with light grey, portions throughout the mass. On standing a small quantity of yellowish-grey fluid separated out, leaving a thick pultaceous mass at the bottom. The inner wall of the cyst is smooth, except in places where the inspissated contents are adherent to it. Microscopic examination of the contents shows large numbers of degenerating red blood corpuscles, fat globules and granules, crystals of cholesterin, bright, colourless needle-like crystals, compound granular cells, yellow pigment and granular *débris*, and some columnar epithelial cells, occurring singly and in transversely segmented groups of three or four. Among these were some goblet cells. On the anterior

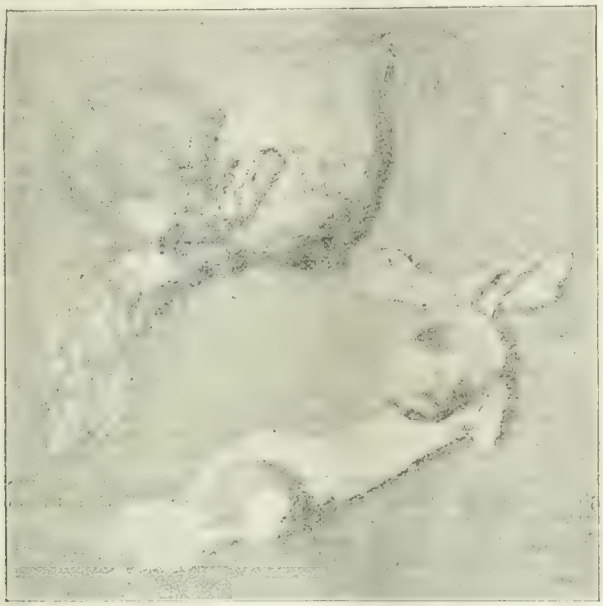


Fig. 2.—Posterior view; *a*, stomach; *b*, cyst; *c*, cyst; *d*, cyst on posterior wall; *e*, cyst; *f*, pancreas; *g*, colon; *h*, cyst; *i*, cyst; *j*, jejunum.

surface of the stomach are the remains of an irregular cyst cavity opened at the time of operation; the greater part of its interior is smooth, but the lower part is rough and irregular from papillomatous ingrowths. This is continuous behind the omentum with a multi-molecular cyst irregular in outline, with some whitish caseous-looking material lining its cavities. Some of the smaller loculi show a black pigmentation. A small cyst with hæmorrhagic contents was found behind the pyloric end of the stomach. The cavity of the stomach was greatly reduced in size from encroachment on it of these cysts, which formed prominences beneath its mucous coat. It consisted of a long, narrow slit-like space which comfortably admitted the extended hand. The mucous membrane showed no inflammatory action, was thick, and the glands prominent.

The large unilocular cyst in the jejunum contained 150 c.cm. of material similar to that before described. This cyst is beneath the peritoneal coat, and is quite smooth in outline. Its long diameter parallel with the long axis of the bowel is 3½ inches, its short diameter 2½ inches. It begins at the mesenteric attachment, and extends halfway round the circumference of the gut. Its inner wall is quite smooth and glistening, except in places where the inspissated contents are adherent, and at one part where there is a small papillomatous ingrowth. The cyst is attached by old fibrous adhesions to the descending colon. A smaller cyst in the jejunum, containing about 60 c.cm., is similar in structure to the large one, but its contents are quite fluid, lighter in colour, and comprise immense numbers of bright glancing bodies, visible to the naked eye. Microscopically, the contents consist of granular *débris*, fat globules and granules, crystals of cholesterin, remains of epithelial cells, and a small number of degenerated red blood corpuscles. The walls of the cyst consist of laminated connective tissue, quite vascular in some parts, with considerable dark pigmentation from disintegrating hæmoglobin. At places on the inner wall are to be found a few epithelial cells, probably the remains of the lining membrane of the cyst. In other places there are distinct papillomatous ingrowths into the cyst cavities, showing the structure of adenomata at times assuming a malignant type.

As no epithelium is normally found in the situations of these cysts, it would appear that they originated after the fashion of dermoids from inclusions or embryonal rests left over in the process of development of the alimentary canal. The presence of so large a quantity of blood is not readily explained by the vascularity of the cyst wall.

A review of British and American medical literature found records of only four cases at all similar. In the *Transactions of the Pathological Society of London*, 1857, vol. viii, p. 218, Mr. Hutchinson describes a cystic tumour of the stomach the size and shape of a walnut. It was near the pylorus between the peritoneal and muscular coats of the organ, and was constricted in the centre like an hour glass, where it passed through the muscular coat. It contained half an ounce of thick, opaque, pinkish fluid, glistening with plates of cholesterin. No microscopic examination of the cyst or its contents was made. In 1869, also in the *Transactions of the Pathological Society of London*, vol. xx, p. 173, Green reports an encysted accumulation of blood between the peritoneal and mucous coats of the small intestine. The accumulation was 2 inches long, had a blue-black gangrenous appearance, situated about the middle of the ileum, the rest of the gut being perfectly healthy. The cyst was multilocular; the individual cavities being about the size of a grape, and communicated with each other in many places. Their contents appeared to be dark fluid blood.

Finell, in reporting a case of cancer of the pylorus with secondary nodules in the liver, mentions that a cyst the size of a fœtal head was found attached by a narrow pedicle to the pyloric end of the stomach; it was filled with a reddish fluid. No microscopic examination was made.[1]

Another case is described by H. H. Read, of Halifax,[2] in which a man, aged 62, died after an illness of five weeks. At the necropsy a large cyst was found completely enveloping the stomach; it had a thin serous covering, and contained, besides fluid, numerous lumps of fatty substance intermingled with black streaks of extravasated blood. In this case the presence of the cyst accounted for the symptoms during life. In the three cases first mentioned the cysts were found accidentally at necropsy in cases of death from other causes.

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[1] *New York Medical Journal*, 1874, vol. xx, p. 641. [2] *New York Medical Record*, 1882, vol. xxi, p. 628.

THE FATE OF BONE REIMPLANTED AFTER TREPHINING.

By C. MANSELL MOULLIN, M.D., F.R.C.S.,

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The following case is of interest, as showing the destiny of bone reimplanted after trephining, and the consequences that may result from it in cases of traumatic epilepsy:

The patient, a sailor, aged 47, was admitted into the London Hospital on May 23rd, 1897. In March, 1894, he had fallen from a yard-arm, and sustained a severe injury to the left parietal region. The next six months he spent in hospital at Trieste. After that he went to sea again, though he was far from well, and suffered from constant pain in his head. In November, 1895, he began to have fits, as many as five or six in a week, affecting the right side of the face and body. At the same time he lost power over the right arm and leg, and became aphasic. For this he was trephined at San Francisco in April, 1896. After the operation the paralysis and the aphasia improved, though they did not disappear completely, and the fits ceased for a time. In February, 1897, the fits commenced again. At first there were only two or three in the week. Latterly there had been as many as one or two each day.

On admission it was noted that there was some loss of power over the right side of the body. The right leg was dragged in walking, and the patient could scarcely support himself upon it. The grasp of the right hand was very weak. There was no paralysis of facial or ocular muscles. Sensation was impaired, roughly speaking, over the ulnar side of the forearm and the outer side of the thigh, but the anæsthetic area did not correspond with the distribution of any nerve. The superficial reflexes were exaggerated, especially upon the right side. The skin over the spine was hyperæsthetic. Optic atrophy with choroidal pigmentation was well marked in the left eye, and evident, but not so far advanced, in the right. There was no incontinence of urine or fæces.

On the head there was a wide semicircular scar over the left parietal region. The scalp inside the scar was soft and yielding under pressure. The bone had evidently been removed over an area the size of the palm of the hand, and replaced after having been divided into fragments. Two spots were especially tender—one about the centre of the trephined area, the other at the posterior extremity of the scar.

The patient during the first three weeks had one and sometimes two or three fits each day. Any sudden emotion or pressure upon the tender spots on the scalp would bring one on. They began with a feeling of pressure and pain on the top of the head. The patient was unable to move or cry out. Then the head turned to the right, the right hand began to twitch, and the movements extended in order to the right arm, right leg, left leg, and left arm. The right hand continued to twitch for some time after the general fit had subsided. The teeth were clenched, but as a rule the facial muscles did not twitch. There was no foaming at the mouth. The lips and tongue were not bitten. Consciousness was lost sometimes, and the patient usually remained dazed for an hour or two after the fit had subsided. In the intervals the patient's mental state was fairly clear, but he was throughout exceedingly difficult to manage. There was nothing noteworthy about his other organs.

As the patient did not improve upon bromides the scar was explored with the view of ascertaining if there was any exciting cause that could be removed. The scalp was reflected over approximately the same area as before; the posterior angle examined first, and a portion of the sound bone at the edge removed, without anything being found. The dura mater over the old wound was covered in with a mosaic of bony fragments, each about three-quarters of an inch in length and half in width. They were slightly adherent to the scalp above and the dura beneath, but they could be detached with the greatest ease. In one or two places where they were in contact some very narrow bridges of bone connected them together. The upper surface was smooth, the lower studded with little pits corresponding to granulations springing from the soft structures below. The edges, except where the bridges joined them together, were smooth, rounded, and very thin. The greatest thickness was not more than that of thin cardboard, and the absorption seemed to have affected the outer and inner tables in an equal degree. In the centre, corresponding to the sensitive point upon the scalp, one fragment of bone had slipped beneath another, and the underlying one had grown out into an irregular, toothed projection of intensely hard bone, as large as a small pea. This fitted into a little pit in the dura, which here was very much thickened and condensed. The rest of the mosaic was not interfered with, and the scalp was laid down again to cover it in. The patient recovered without a bad symptom, and during the six weeks he remained under observation no more fits occurred.

In such a case as this it is not possible to say definitely that the fits were due to the irritation caused by the bony outgrowth. It is true that the dura underneath it was quite different from the rest, resembling dense scar tissue; that pressure upon the overlying scalp always caused pain, and sometimes brought on a fit; and that removal was followed by cessation; but though this renders it highly probable, it cannot be considered proof. It is well known that after similar operations epileptics not infrequently enjoy a temporary remission. It does show, however, that the re-implantation of extensive areas of bone in broken up fragments is of little service to the patient (for there can be no doubt that in this case absorption will continue until the fragments are completely removed), and that it may occasionally prove to be a very serious source of trouble.

A CASE OF STRANGULATION OF TWO SEPARATE LOOPS OF BOWEL.

BY A. ERNEST MAYLARD, M.B., B.S.LOND.,
Surgeon to the Victoria Infirmary, Glasgow.

IN the BRITISH MEDICAL JOURNAL of October 9th, 1897, Mr. Alexis Thomson reports a case of stricture of the intestine following upon a strangulated hernia, and referred to other similar cases, remarking both upon the rarity of the lesion and the still greater rarity of its successful treatment. Only two days before this date there was admitted into the Victoria Infirmary a case similar in many ways to those above referred to, but differing in one remarkable respect, which renders its record I believe almost, if not quite, unique. As will be gathered from the following report, the peculiar features of the case lay in the strangulation of a loop of ileum through an opening about the region of the umbilicus, while a second loop existed within the abdomen, also strangulated apparently by old adhesions, the result of frequent hernial protrusion and partial strangulation.

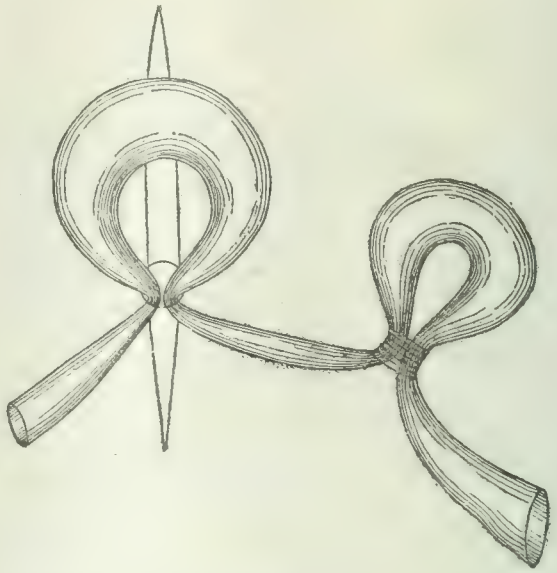


Fig. 1.—Showing two separate loops of ileum strangulated, one through an orifice at the umbilicus, the other by adhesions within the abdomen.

Abstract of report taken by the resident assistant, Dr. Vost:

Mrs. S., aged 45, stated on admission to the infirmary on Thursday, October 7th, 1897, that she had suffered for two years from a swelling about the level of the umbilicus. It first appeared one day while washing when she was seized with vomiting which lasted for two days, and ceased on partial disappearance of the swelling. Since this first attack she has at intervals of about a fortnight or three weeks had several similar ones. She had always noticed during these seizures that the lump became hard and her bowels did not move. As soon, however, as the lump became soft again, all her symptoms disappeared. Her present seizure commenced on Thursday, September 30th, when severe vomiting set in, and the lump gradually became very painful. Between the date of commencement of her attack and her admission to the infirmary her vomiting has been incessant, neither flatus nor fæces have passed, and the lump has become more inflamed and painful. On admission the vomit is found to be fæcal, the abdomen distended, and the swelling, which is situated a little above and to the left of the umbilicus, is covered by œdematous and inflamed skin.

Operation.—A vertical incision was made over the most prominent part of the swelling, and the hernial sac opened. Fœtid pus escaped and some grey sloughs of fibrous tissue. It was found that a gangrenous loop of bowel existed in a sac formed by a mass of omentum, itself in a gangrenous condition. The omentum was removed and the sac washed out and stuffed. The constricting ring was then divided and the gangrenous loop withdrawn. It was easy to pull out the bowel at one end, but it could only be withdrawn to a limited extent at the other. The gangrenous loop was excised and the bowel ends united by a Murphy button. As one half of the button did not fit comfortably (that inserted into the portion of the gut which could not be freely withdrawn) it was thought advisable to leave the loop *in situ*. The parts around were packed with gauze, and the wound dressed so as to prevent any pressure upon the exposed bowel. The patient rallied from the operation slowly and incompletely. The next morning at 10 A.M. she was seen to be much weaker, and although there was no vomiting, there had been no passage from the bowels of either fæces or flatus. There was occasional hiccough. Collapse gradually increased, and the patient died in the afternoon.

Post-mortem Examination.—On opening the abdomen it was found that the segment of the canal, into which at the operation one-half of the button fitted easily, was part of the ileum at a distance of about $4\frac{1}{2}$ feet from the cæcum; while the other segment led in about 3 inches into a loop which was matted together and constricted at its two ends by plaques of tough fibrous material. The portion of the gut between this loop and the button, as well as the loop itself, was gangrenous.

REMARKS.

Neither of the two prominent pathological conditions found in this case, when taken separately, present anything very remarkable. The loop strangulated at the umbilicus is typical of its kind, and the loop strangulated within the abdomen by old adhesions is, although of rare occurrence, not without parallel in the records of various writers. Thus, Jonathan Macready, in his *Treatise on Ruptures*, quotes some three or four cases of obstruction after strangulation due to a

kinked and matted loop. But these two features taken together constitute, so far as I have been able to ascertain, a case quite unique in the records of strangulated herniæ.

There can be but little doubt that the constantly-recurring attacks of temporary strangulation from which the patient suffered for a period of two years were due to the excursions of the second or intra-abdominal loop. And inasmuch as these attacks sometimes lasted for two days, it is not unlikely that they were accompanied with a certain amount of inflammation in the sac, the result of which would be to permanently cement together the coils thus engaged. It is not possible to say whether the loop which was found strangulated at the umbilical orifice had presented there before or whether this was its first excursion. In any case, however, to it must be attributed the patient's final symptoms; and whatever part the second loop may have played in causing obstruction, it seems more likely that the effects produced by it arose subsequently to, and possibly as the result of, the primary conditions brought about by the strangulation of the umbilical loop. This explanation is rendered the more probable from the fact that while the portion of bowel between the two loops did not present at the operation a perfectly normal appearance, or such as one would have expected on the proximal side of the strangulated loop, it held no comparison to the almost gangrenous condition in which it was found at the *post-mortem* examination.

At the operation we were misled by believing that the reason why the supposed proximal end of the bowel could not be withdrawn was that we were dealing with the upper part of the jejunum, and therefore prevented from further extracting it by the duodenum and its suspensory ligament. As, however, was revealed by the *post-mortem* examination, the real preventative to withdrawal was the second matted loop. Whether the result might have been different had we discovered at the operation the presence of this second obstructive loop, and removed it also, it is not possible to say. The somewhat extreme condition of the patient, however, due to the long delay before operative relief, might reasonably be assumed to render very doubtful the success of an enterectomy.

By a mistake in the drawing, the second loop is shown as free except at its neck, whereas the whole loop was matted together.

ON THE IMMEDIATE CORRECTION OF ANGULAR DEFORMITY OF THE SPINE.

By J. JACKSON CLARKE, M.B.Lond., F.R.C.S.,

Assistant Surgeon at the City Orthopædic and North West London Hospitals.

For some time past, following the example of my colleagues at the City Orthopædic Hospital, I have used Chance's splint for every case of tuberculous disease of the vertebræ. The simplest form of the splint is shown in Fig. 1, which represents the back of a little boy I showed at the meeting of the Clinical Society, November 26th, 1897. Six months ago the patient when under treatment for tuberculosis of the right carpus first showed symptoms of tuberculosis of the spine. There was a localised lateral deviation of the upper lumbar vertebræ, accompanied by rigidity and pain. The splint was applied as soon as possible, and the boy has now worn it for six months. So long as the apparatus is worn, the patient is able to run about without any discomfort, and during six months no appreciable increase of deformity has taken place.

This case is one of several that I have now under my care, and is an example of a case in which the patient need not be confined to bed. When the disease is more active, I apply the same splint and place the patient on a prone couch until all signs of activity have passed away. When the patient is to be washed he is placed on pillows in the prone position, the splint is then easily removed without disturbance of the diseased spine. My experience of this method of treatment is now a considerable one, and, as far as London children are concerned, I cannot hope for a better. I need hardly mention that the splint requires to be readjusted from time to time by the surgeon.

There is, however, one circumstance that led me to study with interest the reports of Calot and others upon the newly-revived operation for immediate reduction of hump-back. It is this: In many children after wearing this splint for two or three years all evidence of disease has ceased. The spine is firm and free from tenderness; some degree of deformity may remain, but it is nearly always less than it was at the beginning of treatment. In some such cases, especially if the angle be in the upper dorsal region, although the disease has been cured, the residual deformity increases when the splint is left off: as the mothers put it—"the hump grows with the child." I was led to hope that, if, in suitable cases, the deformity were corrected before applying the splint, the treatment might commence with a straight back, and if recurrence of the deformity could be prevented the patient after two or three years might be able to leave off the splint

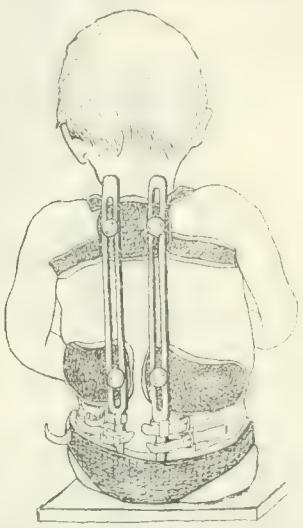


Fig. 1.—The back of a boy showing Chance's splint applied for lumbar caries. (From a photograph by Mr. C. P. Allen.)

without fear of the hump growing from an altered direction of growth in the sound parts of the spine. This consideration led me to perform immediate correction on a little girl, aged 2½ years in August last. The case was a favourable one, of two months' duration, and uncomplicated. There was an angle of about 20° opposite the sixth dorsal spine. The operation was easy, and the patient was put up in plaster strengthened by an iron framework extending from the head to the pelvis. The child seemed to be in no way disturbed by the operation. At the end of six weeks the plaster cuirass had to be removed on account of the presence of vermin which had appeared in spite of careful nursing. We then found that most of the deformity had recurred. The spine was again straightened, and the child put up on a metal plaster apparatus so arranged that the spine was over-extended, and that extension could be applied to the armpits and the lower limbs. The patient was perfectly comfortable in this position for a month, when the spine was again examined. The deformity was certainly diminished but not removed.[1] The part was now free from tenderness, and on giving an anæsthetic it was found that there was now more resistance, pointing to some bony ankylosis having taken place, so the remaining deformity was not corrected. The patient was replaced in the apparatus. A fortnight later a Chance's splint, with an occipital piece as shown in Fig. 2 was applied.

At the present time—three and three-quarter months after the first operation—the child can sit up without discomfort and without fatigue.

The results of the operation in this case are a slight improvement in the deformity and a certain amount of repair, as shown by ankylosis; but neither the improvement in shape nor the degree of repair is greater than I should have expected from careful general treatment, combined with the use of a Chance's splint. It may be that a better mode of

fixation after operation would give a greater improvement. In this connection I would refer briefly to the double Thomas's splint recommended by Messrs. Tubby and Jones. That this instrument needs careful management is evidenced by the extensive scars frequently seen in patients who have



Fig. 2.—E S., aged 2 years and 9 months, sketched sitting up wearing a Chance's splint three months after forcible reduction of angular deformity.

used them without proper supervision. Mr. Tubby mentioned two or three years as the period during which the patient would be likely to be required to remain in this instrument. This, to my mind, would be a very serious bar to the method. I have lately had brought to me a little girl, aged 5, who had lain for four years on a double Thomas's splint for high dorsal caries. Although the splint was well-constructed and carefully watched, a dorsal abscess had formed and opened, and left a sinus. The general condition of the patient was unsatisfactory: she was extremely wasted, the lower limbs especially. Since the double Thomas's splint has been replaced by an apparatus similar to that shown in Fig. 2, the child has gained strength rapidly.

The outcome of my experience leads me to await the final results of operations already done by other surgeons before applying the treatment to other cases of my own. I believe that, by the subsequent use of Chance's splint, three months of complete fixation by a double Thomas's splint, or other means, would on an average be sufficient, as in the case I have related above. I have to thank Mr. Eldon Scott, late senior resident medical officer of the North-West London Hospital, for his valuable help during the progress of the case.

I may add that since this note was written the patient has left the hospital and is being treated as an out-patient. There is no pain or tenderness in the back, and the improvement in position is well maintained.

NOTE.

Photographs which were shown at the meeting of the Clinical Society on November 26th, 1897, showed a diminution of about 6°.

NEGRO LETHARGY.—A bacillus has been found by Cagigal and Lepierre of Coimbra in the blood of a young negro who had suffered for three years from that curious disease—negro lethargy or sleeping sickness—which is endemic on the West Coast of Africa. Cultivations of the bacillus when inoculated into rabbits cause depression, paresis of the hind limbs, wasting and death in from twenty-five to fifty days. Should these observations be confirmed the disease will afford a most remarkable example of the latency of a pathogenic organism, for the symptoms in some cases do not develop until years after the patient has left the endemic area.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

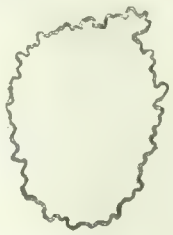
REMOVAL OF FOREIGN BODY FROM THE NOSE AFTER TWENTY-THREE YEARS.

MRS. C., aged 30, somewhat anæmic, thin and rather small-chested, came to me on November 13th, 1897, saying that there was something in her right nostril, and requesting me to remove it.

When 7 years old she was pushed down, falling partially on some other girls, but with her face, she thinks, on the ground. She had nothing in her mouth at the time; when she rose she felt there was "a stone in her nose," but she could give no particulars as to how it got in. She tried to get it out, without success, and her parents were sceptical as to the presence of the foreign body.

From that time she suffered more or less trouble with her nose. At the age of 11 a polypus was removed at the Victoria Hospital for Children; and again at the age of 13 she was operated upon at that institution. Of the nature of the operation she could tell nothing, save that they "unstopped her nose," and that it was not under chloroform.

The symptoms continued; she had the feeling of something in the nose, and of its occasionally shifting its position somewhat. She never dared blow her nose strongly for fear of pain. Epistaxis occurred from that nostril; and also hæmoptysis occasionally, which the patient herself attributed to blood trickling down from the back of the nose. There was a free discharge of thin muco-pus which was at times markedly fœtid. No further operative treatment was adopted until three years ago, when a medical man "removed ten small polypi." At this time she had lotions to syringe the nostril, and from the time of the operation till she came to me there had been no further hæmorrhage or discharge. The sensation of an object in the nostril and the inability to blow the nose forcibly remained.



Profile view of Stone; × 2 (linear).

She had been stooping a good deal at her work, and on blowing her nose gently she felt as if the obstruction had shifted to an unusual extent. There was only very slight indication of nasal obstruction in the timbre of her voice, less than with a moderate cold. Inspection with a Fraenkel's speculum showed, about three-quarters of an inch from the opening, in an upward and backward direction, a small rough white body. Seizing this with a pair of Lister's forceps, it did not move, and on cautiously using the forceps as a probe a large rough body was felt. After one unsuccessful attempt it was firmly grasped in the forceps, and without much trouble extracted. The hæmorrhage was trifling, and within five minutes the patient remarked on the great relief she experienced. A lotion of hamamelis and carbolic acid was given her to use with a syringe, and the progress has been absolutely uneventful.

The whole stone was covered with a layer of blood-stained incrustation about as thick as a sheet of paper, and thickly studded over this were many rough projections, of which one or two groups were specially prominent. On drying, the incrustation became friable, and did not remain in sufficiently good condition to photograph; but the profile given indicates pretty well the form and size of the projections.

REMARKS.—The length of time—twenty-three years—during which the foreign body remained in the nose has been exceeded, as in Dr. Handford's case[1] (twenty-seven years) and

[1] BRITISH MEDICAL JOURNAL, 1892, ii, 117.

n Dr. Heberton's case [2] (forty years). In my case, unlike Dr. Handford's, it had caused symptoms all the time, and the patient had been thrice operated on without its presence being detected. Apparently the child's attempts to get it out resulted in its being pushed above the inferior turbinate, and hence escaping detection. This position would also account for the voice being almost unaltered. It is of some importance to notice that during this long period the incrustation had not gone on to such an extent as to cause doubt about the nature of the object. This is opposed to the supposition that rhinoliths are often formed around a foreign body, which they completely hide.

Norwood, S.E. S. W. Carruthers, M.B., C.M.

ERYTHOL TETRANITRATE IN ANGINA.

The following note on the use of erythrol tetranitrate may be of interest:

A weaver, aged 29, came to me in February, 1897, complaining of pains in the precordium and down the left arm. The pain seemed to have been precipitated by an attack of influenza. It was severe during the night or on slight exertion, and caused him great anxiety. He looked his years, was somewhat anæmic, had decided arcus senilis, an intermittent pulse, but no noticeable rigidity of radial arteries. The heart was not enlarged, but there was a soft systolic murmur at base and down the sternum. Sodium salicylate and liquor ammoniæ acetatis, ammonium bromide, potassium iodide, amyl nitrite, and nitro-glycerine, were all tried without effect. He was then given erythrol tablets, ½ gr., thrice daily, and got prompt relief. He continued them a fortnight, and has not required them since, though he has still some pain on walking up hill. This is the only case in which I have felt called on to try the remedy.

Hamilton, N.B. James Adam, M.A., M.B.

DISLOCATION OF UNGUAL PHALANX.

A further instance of the above dislocation may prove of interest. The accident occurred under similar circumstances to three of those recorded in the British Medical Journal. The patient while keeping wicket was struck by the ball on the extremity of the extended ring finger of the right hand, the ungual phalanx being dislocated forwards and remaining in the same position as in Dr. Richmond's case. Being one of the team I saw it immediately, and reduced it without the slightest difficulty. The patient resumed his place in the field, and felt no further discomfort.

Richard A. Coles, M.B., C.M. Aberd.

Barham, near Canterbury.

ROENTGEN RAYS AND LOCALISATION.

Following the idea of Dr. Davidson's article in the British Medical Journal of January 1st, I have devised the following apparatus, which is, I think, rather simpler than his: The stand of my focus tube is 7 in. wide and about 18 in. long, and I fix the tube so that its centre is 7 in. above the

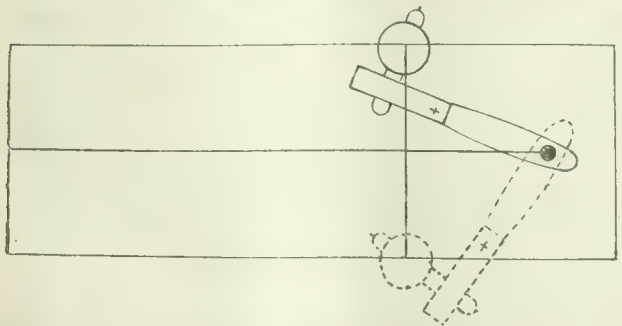


Fig. 1.—Showing the positions of the focus tube.

board. The tube can be moved to either side, and a point is marked on the extreme edge of the board on each side, directly under its centre. These points are joined by a straight line, and a line is drawn at right angles through the centre of the first line. The sensitive plate should be so placed that its centre coincides with this point. A photograph is taken with the tube over each of the lateral points in succession on the same plate, and the distances of the images of the foreign body from the sides of the board must be accurately measured.

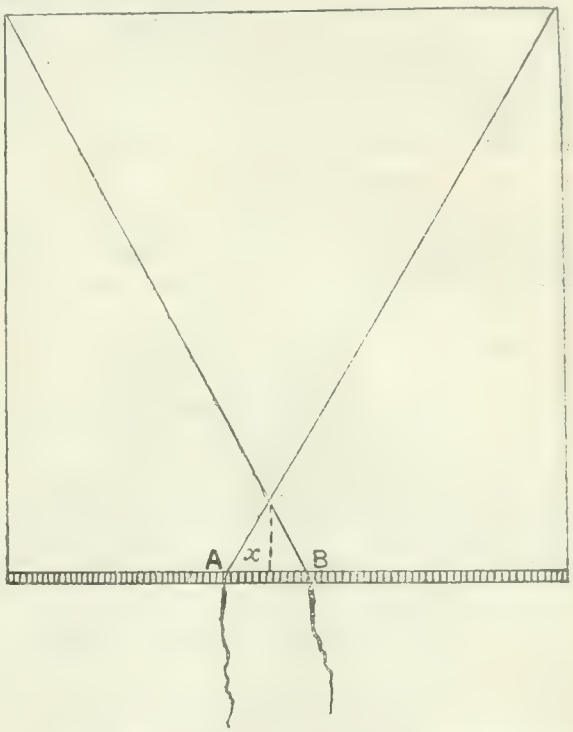


Fig. 2.—A B being the distance between the two images, x will be the height of the object above the plate.

I now draw on a board a square of 7 in. and divide one side into a scale. On this scale I mark the distances of the images of the object from the sides of the board with two pins. I also fasten two pins at the two opposite corners of the board. Two threads are now fastened to these pins and passed round the pins on the scale. Their point of intersection will show the position of the object.

Ealing. George Harrison.

ON THE USE OF NITROUS OXIDE GAS FOR PROLONGED OPERATIONS.

Following the memorandum of Dr. Paterson on this subject in the British Medical Journal of January 22nd, p. 211, it may interest him and other of your readers if I give short notes of a case which, I believe, was the first in which a prolonged operation was performed under gas alone.

Seventeen years ago (January 13th, 1881) I performed ovariotomy on a patient, aged 34; the gas was administered by Mr. Tom Bird, and the operation lasted twenty minutes. The patient was admitted into the Hospital for Women, February, 1878, with a tumour in the abdomen, reaching above the umbilicus. For various treatment (uterine) she was at times placed under different anæsthetics, when it was found that every one of them induced violent vomiting, lasting several days. On December 31st, 1880, the fluid tumour was aspirated, and a fluid rich in albumen and cholesterin was drawn off. In consequence of the patient's intolerance of the ordinary anæsthetics, I asked Mr. Bird, then anæsthetist to the hospital, if he could give gas for a sufficient length of time to enable me to operate. He promised me 90 seconds to begin with, and after that he would do what he could. The patient was placed under nitrous oxide gas at 2.8 P.M. on January 13th, and at 2.10 I rapidly made a free incision. One tumour was tapped, and its fluid contents drawn off, the main tumour being a dermoid; a further cyst, the one tapped on December 31st, was found growing from the main tumour. Both were

[2] *Pulte Quart.*, Cincinnati, 1891, ii, 31.

brought out of the wound; the pedicle, a broad one, transfixed and tied with China twist, the tumours (of the left ovary) cut away, and the wound closed with eight silkworm-gut sutures. Though the operation lasted twenty minutes two or three minutes should be subtracted, as the patient retched just after the tumour was cut away. Mr. Bird kept up the anæsthesia by interrupted inhalations; the patient, well under its effect, apparently only feeling (? reflex) when the pedicle was dragged upon, and when one of the stitches was being introduced. There was no subsequent sickness, and the patient did well.

Harley Street, W. Heywood Smith, M.A., M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

ST. MARY'S HOSPITAL FOR CHILDREN, PLAISTOW, E.

ANGIOMA OF THE QUADRICEPS EXTENSOR OF THE THIGH.

(By Ernest A. T. Steele, M.R.C.S., L.R.C.P., Honorary Surgeon to the Hospital.)

A boy, aged 4 years, was admitted on November 16th, 1897, for a tumour on the left thigh, which had been noticed since birth, but which during the last six months had increased in size and begun to cause lameness. On examination a soft indefinitely lobulated tumour of a flattened oval shape was found on the lower and outer part of the left thigh; it measured about 3 inches in its greatest diameter. In the relaxed state of the extensor of the thigh the growth was movable, but became fixed when the muscle was put on the stretch.

A vertical incision having been made the tumour was found to be composed of blood vessels and fibrous tissue and embedded in the vastus externus and crureus. Owing to the absence of any capsule or definite limitation between the growth and the muscular tissue its removal was somewhat tedious. The hæmorrhage was not excessive, and was checked by forcipressure. The wound in the muscle was closed by buried silk sutures, and the skin incision by continuous suture. Healing took place by first intention, but a small portion of the upper end of the cicatrix broke down again and discharged for a few days before finally closing. Macroscopic and microscopic section of the tumour showed it to be made up of thin-walled blood vessels with much interstitial fibrous tissue.

Remarks.—The preponderance of fibrous tissue may be accounted for by the late rapid increase in the size of the tumour. In Pepper's *Surgical Pathology* it is stated concerning these tumours: "When development is active the vessels are small as compared with the width of the intervening connective tissue trabeculæ, but subsequently this disparity is reversed." Angiomata occurring in muscle are not common and have given rise to considerable difficulty in diagnosis. In the recorded cases they have been taken for lipomata, cysts, deep-seated chronic abscesses, bursitis, etc. In the present instance a previous diagnosis of sarcoma had been made and amputation proposed. The majority of these tumours appear to be situated in the lower extremities, but they have been described as occurring in various other positions, for example, supinator longus, deltoid, etc.

Bacteriology of Sewage.—The systematic examination of sewage and other waste waters, the need for which was strongly insisted upon by Professor Boyce, of Liverpool, during the recent discussion on typhoid fever at the Royal Medical and Chirurgical Society, has been undertaken by the Municipal Observatory at Montsouris, near Paris. The drinking water is also examined as well as the river water, but it is recognised to be important also to gain an acquaintance with the flora of sewage and waste water which may in one way or another find its way into the drinking water supplies.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

W. H. Dickinson, M.D., President, in the Chair.

Tuesday, February 8th, 1898.

Adjourned Discussion on Mr. A. M. Sheild's Paper on Immunity and Latency after Operations for Reputed Carcinoma of the Breast.

Sir Thomas Smith, on resuming the debate, expressed his high opinion of the author's paper, and especially of the impartiality which characterised it. So free from dogmatism was the paper, that he had, until Mr. Butlin mentioned that Mr. Sheild practised the "complete" operation, been under the impression that he performed the so-called incomplete operation and that the cases in the paper showed that its results were satisfactory. It was high time for this subject to be discussed; it was twenty-four years since the same subject had been under debate; then it was at the Pathological Society, and naturally the points raised were in connection with pathology. The author had not drawn a comparison between the old and the new operation, but had been content to give examples of the vagaries of mammary cancer. All the cases on the paper were presumably operated upon by the old methods; it might be thought by some that the results were too favourable, but he himself thought that they were fairly representative. The terms "complete" and "incomplete" as applied to the operations were rather unfortunate, as "incomplete" implied some reproach; he would use "new" and "old" instead. The tone of the present discussion was much the same as that which prevailed in the debate at the Pathological Society twenty-four years ago, and no real progress had been made in our knowledge of the nature of the disease. In contrast to the tone of Mr. Watson Cheyne's book and the author's paper were the dogmatic assertions of some surgeons who performed the new operation. Born in America, bred in Germany, the new operation had perhaps been adopted too hastily; and while surgeons who kept to the old operation had said little, those who practised the new were rather too dogmatic. But the time had now come for those practising the old operation to state their opinion. The three ideas underlying the new operation were (1) that cancer was a local disease; (2) that it was curable by operation; and (3) that it should be regarded as cured if the patient remained immune for over three years. The local nature of cancer was discussed at the previous debate at the Pathological Society. It might be a local disease, but if so he could not understand when it became generalised. It required a robust belief in its local character to justify removal of the upper extremity at the shoulder-joint. It had probably ceased to be local when the intra-clavicular glands were affected, but some surgeons thought it was always local. He compared it to syphilis in this respect. That disease became generalised so early that removal of the hard sore did not prevent general infection. He admitted that breast cancer differed from syphilis, for no one could say when the former became generalised. But if a long interval occurred between the existence of cancer as a microscopic object in the breast and the period at which it became a tangible tumour there was abundant time for constitutional infection. As to its being curable by operation this was true if the three years' limit was adopted, but he was convinced that it recurred long after three years, and quoted an example in which twenty-four years had intervened between the primary operation and the recurrence. Gross in his statistics estimated that recurrence took place in only 2 per cent. of cases which remained immune for three years, but later statistics brought the percentage to 15 per cent. He regretted the use of the word "cure;" it had a bad effect both on the public and on the surgeons. It had come to this that some surgeons were said to be able, and some were said not to be able, to cure cancer. He had noticed some points that were difficult of explanation on the local theory of cancer. When there were small local recurrences a longer lease of life was sometimes obtained than after the complete operation, when death often occurred from visceral infection. From his experience of cancer, which extended over nearly fifty years, he was convinced that it was no good comparing opera-

tions performed further back than twenty years ago with those of the present day, since the conditions and facilities for operation had undergone such great alterations. Sir James Paget's opinion was very depressing, but it was justified by his data, and he (the speaker) thought that people lived longer now, and possibly the type of disease had altered. The period of immunity might, he thought, depend on the date at which removal was undertaken. Thus, a woman who had had cancer for two years would do better than one who had had it for four. The period of immunity might also depend on the structure of the growth, and, as the author had insisted, on the soil. Thus, florid young women suffered from earlier recurrence. He thought it possible that removal of healthy glands might tend to induce recurrence. He quoted two cases in which removal of the growth—the breast being left—was followed by remarkable results: (1) a lady, between 50 and 60 years of age, with cancer involving the nipple and areola. The growth was removed, caustics applied, and after seven years' immunity it recurred in the axilla in three successive years, the breast remaining free. The patient was now, ten years after the original operation, in good health. (2) A lady with a similar growth removed in the same way, except that caustics were not applied, who now (ten years later) had had no recurrence.

Mr. Jonathan Hutchinson's experience coincided with that of the author. He believed in the operative cure of cancer, and quoted two cases operated upon by Mr. Phillips of the Westminster Hospital in 1849, both of which were shown by the microscope to be carcinoma. One was well twenty-one years after the operation and the other died after an interval of twenty years with what was called keloid of the opposite breast, but was probably cancer. From pathology they had learnt that cancer was akin to chronic inflammation and was a local infective disease. He did not think the analogy with syphilis was worth much. No doubt syphilis was local for a time, and if the infected spot was at once cut out general infection would not occur, but removal of a hard sore was too late. With regard to the question whether cancer was a local or constitutional disease it must always be remembered that there was general predisposition as well as a local lesion, and that after operation the constitutional tendency remained. Some of the cases in which long immunity had been observed might fairly be regarded as examples not of recurrence but of independent new growth. He laid great stress on the importance of early operation. If there was the slightest indication he cleared out the axilla, but did not make it his invariable practice as in former years. He regarded cancer as a local disease, and would always operate if the growth could be removed, for it could not be said at what time general infection occurred, and even if this had occurred the patient gained by removal of the growth. As regarded the selection of cases, his most successful ones had not always been those which appeared most promising. He quoted a case of a soft rapidly-growing carcinoma which was freely removed fourteen years ago, the patient being quite well now, and another in which extensive removal of an ulcerated growth was followed by a lengthy period of immunity and no recurrence. He took a hopeful view of the disease when operated upon early, and thought that the explanation of the more successful results of modern times was to be found rather in early than in extensive operations. This hopeful view was applicable to the other forms of external cancer.

Mr. T. W. Nunn mentioned that with regard to the use of the terms "complete" and "incomplete" as applied to operations on the breast, his late colleague at the Middlesex Hospital had in 1867 in his paper in the *Transactions* of the Society, vol. l, employed the term inadequate. Was it possible to say what form of operation was adequate? In this connection it would be well if cases in which rapid and early recurrence took place, cases where death resulted within twelve months of the first symptom, were collected. In such cases the lymphatic system was extensively infected, and no operation was adequate. Case No. vii in Moore's paper[1] was one on which the speaker had previously operated in 1864; in 1867 two nodules appeared near the scar, and Moore decided not to operate. The patient lived till 1870, seven years after the origin of the disease, and died from recurrence in the liver and brain, and not in the way which Moore had surmised. This case was referred to since Mr. Sheild had quoted it. The author of the paper had, he thought, rather under-estimated the frequency with which recurrence took place in the opposite breast; Dr. S. Coupland had found that this occurred in 19 per cent. From his own experience it appeared that 1 in 13, or 8 per cent. of patients, operated on survived for periods of 10 to 20 years. Cancer was a form of molecular destruction and degeneration. Whether metastasis was disposed to by the "complete" operation was a point worthy of investigation. He concluded by inquiring whether there were three classes of operation—the adequate, inadequate, and pre-adequate.

Mr. Howard Marsh said there could be no doubt that a great improvement had taken place of late years in the method of operating for cancer of the breast. The proceeding of former years, in which the surgeon removed only that part of the breast which was immediately concerned in the disease, or left parts of the gland here and there in the wound, and did not open the axilla, was finally abandoned. But the question was whether the pendulum had not swung a little into the opposite extreme, with the result that an operation of unnecessary severity was performed. This was his opinion. There were four structures which were especially involved in cancer of the breast: (1) The breast itself; (2) the skin over it; (3) the fascia beneath it; and (4) the lymphatics of the axilla. In any adequate operation these structures must all be freely removed, but when this had been done he did not think that the further step of freely removing the pectoral muscles was any additional protection against recurrence. Of course if the muscles were found to be involved at the time of operation they must be freely cut away. The muscles, however, were structures in which secondary deposits scarcely ever, so far as he knew, originated. If, or when, recurrence took place, it would almost certainly be situated primarily either in the skin, in the areolar tissue beneath the scar, or in the lymphatics. The point at which the operation was most likely to fail lay in the impossibility of completely removing the lymphatics situated in the immediate neighbourhood of the large vessels on a level with the clavicle. It was here and not in the pectoral muscles that recurrence was likely to take place. It could not be denied, he thought, that the extensive operation recommended by Halsted was attended with serious drawbacks. Patients had died after it of shock, and in others the shock had been dangerously severe. In some, again, the arm was fixed to the side, the hand became œdematous, and there was a good deal of neuralgic pain. Of course, if the operation should prove to secure a very long immunity these drawbacks must be accepted, but he did not think that at present this was the case. He thought it was impossible to feel affected glands in the axilla in all cases through the skin.

Mr. A. E. Barker spoke in answer to Mr. Teale's expressed wish that those who used the more extensive operation would relate their experience of its risks as compared with those of the older operation. He had tabulated his cases for twenty years—for the last twelve years of which he had done a more complete operation consisting of cleansing the pectoral muscle, removing the contents of the axilla, and taking away as much skin as was compatible with closing the wound; but no kind of operation could be called complete. He was convinced that there was no increased risk in the new operation. Under it the patient's comfort was much improved, and less danger was incurred; during the last fifteen years he had only lost one case, which was due to sepsis and not to the shock. It was difficult to reconcile the improved results, as regarded immunity, of modern times with the suggestion that removal of healthy glands favoured recurrence, for it was almost invariably the custom at the present time to clear out the axilla. He was sure that affected glands could not always be felt through the skin of the axilla. He quite agreed that the best results sometimes followed operation in cases that appeared to be hopeless, and quoted as an example in point a most unpromising case in which immunity for nine and a-half years followed removal of the breast.

On the motion of Mr. A. Pearce Gould, seconded by Dr. Norman Moore, the discussion was further adjourned to the next meeting.

[1] *Medico-Chirurgical Transactions* vol l

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

WM. V. SNOW, M.D. (Bournemouth), President, in the Chair.

Wednesday, January 26th, 1898.

THE EXTERNAL TREATMENT OF CARDIAC AND CIRCULATORY AFFECTIONS BY BATHS, EXERCISES, AND CLIMATE.

DR. S. HYDE (Buxton) pointed out that these methods, although not new in principle, were comparatively new to practice, and that they had not yet emerged from the necessary stages of trial and verification. He had added climate, but admitted that the two factors around which recent interest and discussion had centred were the balneological and gymnastic methods of treatment. In describing these methods and their physiological and therapeutical effects, whilst recognising the potency and usefulness of the effervescent saline baths, he was inclined to believe that well-regulated exercises combined with suitable change of air were sufficient to obtain equally good results without the baths. He also pointed out the usefulness of forced respiratory exercises in cardiac treatment. As to the alleged shrinkage in the size of the heart, he admitted the probability of a gradual but limited diminution as part of the improved nutritive changes in the general organism, but doubted whether the evidence at present available justified more than this. The difference was probably more one of decrease of perspective area arising from a change of position by the more vigorously acting heart. The subject of the effects of various mineral baths upon the heart and circulation, he said, had been much neglected by bath physicians, and he contended that many cardiac cases were benefited during the routine practice of baths, exercise, and climate for other maladies, and that much greater benefit might be expected if cardiac affections were treated with definite and set purpose by the ordinary bath and other resources at our home resorts. He further pointed out the dangers of overlooking the cumulative effects of hot and warm baths by which cardiac weakness previously existing was often aggravated and bad symptoms before absent developed. Much of the success of the treatment at Nauheim was doubtless due to the accessory conditions of change of air, change of diet, separation from drawbacks to treatment, inspiration of hope, and so forth. He spoke in strong terms as to the use of unqualified attendants, describing it as "fast growing into a gigantic and monstrous evil—an evil which (he was persuaded) was fraught with grave danger to the public and serious damage to the profession." In conclusion, whilst desiring to accord to the methods of Dr. Schott a true and just estimate of their value, he expressed a hope that he had succeeded in showing that the fundamental principles of the so-called Nauheim treatment of heart disease, although much obscured, had long been recognised and practised in this country, and that it was possible to obtain equally striking results by a more methodical and systematic application of these principles without strict resort to the special Nauheim methods.

DR. GEORGE OLIVER (Harrogate) described experiments undertaken with the view of ascertaining the effect of baths and resistive exercises on the peripheral circulation of the blood, on the blood itself, on the arterial pressure, and on the pulse-rate. Both baths and exercises, he found, produced a transfer of a considerable volume of blood to the systemic periphery. Every form of exercise was followed by a rise in the percentage of corpuscles, due, he thought, to a rapid fluid transfer through the capillary walls into the tissue of the muscles and the lymphatic spaces. Most physiologists agreed that all forms of active exercise were followed by a rise in the blood pressure, but it had been doubted whether resistive exercises which did not accelerate the breathing produced a rise or a fall. Lauder Brunton and Tunnicliffe concluded from experiments that during the exercise itself the pressure first rose above the normal, but during its continuance began to fall, till at the end it had reached the normal, and continued to fall after the cessation of the exercise, remaining so for half an hour or longer, and then gradually rising to normal. He had himself found that any form of exercise, so long as it was slow and did not disturb the respiration, was followed by a fall of blood pressure. The exercise also produced a slowing of the pulse. Lauder Brunton and Tunnicliffe had suggested that in contraction of muscle some material was generated, possessing a vasodilator property of the nature of nitroglycerine. He had himself found the effects of exercise and of nitroglycerine to be identical. The reduction of the volume of blood as the result of exercise might be another factor in disposing to lowering of arterial pressure and easing of cardiac work. Resistive exercises might favour compensation by relieving the stress of blood in the weak areas. He had investigated the influence of the respiration upon the circulation, especially where there was impairment or complete paralysis of the splanchnic control, so that the blood in the erect position of the body drained down into the splanchnic area and away from the radial vessels, while in the recumbent position the radial measurement was normal. By a series of respiratory exercises, which he described, the radial calibration was restored to normal, and frequent repetition of these re-established the vasomotor tone, and the general health was greatly improved.

DR. DOUGLAS KERR (Bath) had found the new treatment useful in certain chronic forms of heart disease characterised by dilatation with a feeble or soft pulse, which might be intermittent or irregular, but more especially when such conditions were due to functional rather than structural change in the organ. He emphasised the importance of exercises, which should not be relegated to a subsidiary position.

DR. WILLIAM EWART, who said he had availed himself of the new doctrine, thought much difficulty had arisen in connection with observations regarding the treatment by attempting demonstrations on hearts which could not contract, and in missing the time for observing contraction which did occur. Of the reality of such contraction there could be no doubt.

DR. BEZLY THORNE believed that the heart did undergo shrinkage, and submitted skiagraphs from Dr. Schott in support of this view. Of the baths and the exercises, he considered the baths the more effectual, their effects being apparently more permanent. The diminution in the area of dulness was due, he thought, to diminution in the size of the heart, and not to change of position. The influence of climate, both before and after treatment, was most important, dry air and altitude being very beneficial. The employment of unqualified assistants in the application of the treatment could not be too strongly condemned. Speaking of bath exhaustion, he believed a great deal of failure was due to making brief experiments in the treatment. There were no two persons for whom the same "dose" of baths and exercise was suitable, so that the powers of reaction and of resistance should be carefully ascertained in each case, and never be exceeded.

DR. LEONARD WILLIAMS considered cases of recent chronic heart disease—cases in which compensation had not been established, or had only just been established—were unsuited to the treatment. In his opinion the effect of the treatment on the heart was a secondary one.

DR. ALEXANDER MORISON thought Dr. Bezly Thorne had over-emphasised the condition of shrinkage just as Dr. Thorne believed he had over-emphasised the fact of change of position. Probably the truth lay between the two. As for peripheral pressure he thought a distinction was not always drawn between pulse pressure and pulse tension. The tension might yield very materially, while the pressure might be raised. The large quantity of blood thrown into the periphery seemed to him sufficient to account for the difference in the cardiac and peripheral conditions without the assumption, made by Dr. Oliver, of interstitial effusion.

DR. HERRINGHAM had never been able to satisfy himself that there was any immediate alteration in the size of the heart at all. Skiagraphs must be accepted with a certain reservation, as it was impossible to get a patient into exactly the same position twice consecutively.

DR. WETHERED urged the necessity of comparing the number of pulse beats at the wrist with those of the heart when ascertaining the effects of exercises and baths, as some of the smaller beats seemed not to reach the wrist. It was well also to judge of the effects not merely by the heart and pulse, but also by the general improvement and all the cardiac symptoms.

Dr. Havell (Felixstowe) believed that cases of cardiac failure following on atheroma benefited almost beyond controversy by the treatment.

On the motion of Dr. Symes Thompson, seconded by Dr. Shirley Jones (Droitwich), the discussion was adjourned until the next ordinary meeting on March 2nd.

OBSTETRICAL SOCIETY OF LONDON.

Charles J. Cullingworth, M.D., President, in the Chair.

Wednesday, February 2nd, 1898.

Specimens.

Dr. Dakin: (1) Uterus Ruptured during Unobstructed Labour (with a microscopic section). Remarks were made by Drs. Handfield-Jones, John Phillips, Champneys, and Ilott. (2) Uterine Fibroid, clinically resembling Sarcoma. Remarks by Dr. Champneys and Dr. Giles.—Dr. Handfield-Jones: A specimen of Cancer of the Body of the Uterus removed by combined vaginal and abdominal section.

Annual Meeting.

The annual general meeting of the Society was then held. The report of the Treasurer was read. On the proposition of Dr. Champneys, seconded by Dr. Walter Tate, the following motion was passed:

That the audited report of the Treasurer, just read, be received, adopted, and printed in the next volume of the *Transactions*, and that the most cordial thanks of the Society be accorded to Dr. Potter for his valuable services during his term of office.

Report of Honorary Librarian.—It was proposed by Dr. Horrocks, and seconded by Dr. McCann, that the following motion be put:

That the report of the Honorary Librarian (Dr. Griffith) be received, adopted, and printed in the *Transactions*.

Passed *nem. con.*

Report of the Chairman of the Board of Midwives.—It was moved by Dr. Watt Black and seconded by Dr. Remfry, and passed *nem. con.*,

That the report of the Chairman of the Board for the Examination of Midwives (Dr. Boulton) be received, adopted, and printed in the *Transactions*.

President's Address.—The President then delivered his annual address. It was moved by Mr. Doran and seconded by Dr. Pollock, and carried with acclamation:

That the thanks of the meeting be given to Dr. Cullingworth for his most interesting address, and that he be requested to allow it to be printed in the next volume of the *Transactions*.

Votes of Thanks.—Votes of thanks to the retiring Vice-President (Dr. Nesham) and members of Council, and the retiring Honorary Secretary (Dr. Dakin) and Honorary Librarian (Dr. Griffith), were passed.

Election of Officers.

The balloting list recommended by the Council as follows was adopted: *President:* Charles James Cullingworth, M.D. *Vice-Presidents:* William Duncan, M.D.; John H. Galton, M.D.; *William Radford Dakin, M.D.; Jamieson Boyd Hurry, M.A., M.D. (Reading). *Treasurer:* *James Watt Black, M.D. *Chairman of the Board for the Examination of Midwives:* Percy Boulton, M.D. *Honorary Secretaries:* John Phillips, M.A., M.D.; *Herbert R. Spencer, M.D. *Honorary Librarian:* *Amand Routh, M.D. *Other Members of Council:* *A. H. Freeland Barbour, M.D. (Edinburgh); John Walters, M.B. (Reigate); Joseph Thompson (Nottingham); *George Francis Blacker, M.D.; Arthur Nicholson, M.B. (Brighton); Richard Pinhorn (Dover); Thomas Watts Eden, M.D.; *John Dysart McCaw, M.D.; Frederick John McCann, M.B., C.M.; William Gandy; George Henry Pedler; *Augustus W. Addinsell, M.B., C.M.; *John Ford Anderson, M.D.; *Arthur Edward Giles, M.D.; Angus Fraser, M.D. (Aberdeen); Harold A. Des Vœux, M.D.; Charles Hubert Roberts, M.D.; *George Ernest Herman, M.B. Those gentlemen to whose name an asterisk is prefixed were not on the Council or did not fill the same office last year.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Joseph Bell, M.D., F.R.C.S.E., President, in the Chair.

Wednesday, February 2nd, 1898.

Patients.

Dr. W. Allan Jamieson showed: (1) Case of Favus, Cured. The patient, a girl aged 16, had had the disease for ten years. When admitted to the Royal Infirmary on June 15th, 1897, the whole scalp was covered with favus crusts. These were removed by poulticing with boric starch jelly, and an ointment composed of precipitated sulphur 15.0, carbonate of potass. 4.0, tincture of iodine and pix liquida each 50.0, lanoline 100.0, as stated by Pirogoff to be curative without epilation, was employed according to his directions for more than a month without effect. Systematic epilation was then resorted to, the head washed daily with superfatted potash soap and warm water, and the same ointment rubbed thoroughly in daily. On December 6th she seemed well, and was sent out. The hair was now growing well; there was no trace of disease, though there were some bald areas. She still continued to wash the head and apply a little of the ointment as a precautionary measure. (2) A case of Syphilis, with Peculiar Pigmentary Developments. The patient was an unmarried woman, aged 39. Four months since an eruption appeared on the arms, chest, and back, and gradually spread. When admitted on January 6th, 1898, an eruption, consisting of blotches, macules, papules, and nodules was seen covering the greater part of the body. The inguinal glands were markedly, the cervical slightly, enlarged. There were sores on the throat and tongue, the hair was thinning, and there were nocturnal headaches. The most prominent feature was pigmentation, varying from a pale to a very dark brown, occurring in patches, at the margins of which were small papules arranged as circles. The eruption had greatly diminished under mercurial inunction, and the papules had faded, being replaced by perifollicular dots of pigment. She had a skin very sensitive to pinches or blows, and she never had any green vegetables as a constituent of her diet, though, as she took a good deal of milk, the tendency to scorbutus was thus lessened.—Dr. Norman Walker showed: (1) A young woman with Lichen Planus. (2) A man with Papillomatous Development on and about the Foot, of fourteen years' standing, which was being treated with mercury and was showing improvement.

Specimens.

Dr. George Gibson showed a specimen of a Heart from a case of Tricuspid Stenosis. There was distension of the right ventricle and hypertrophy of its wall. The apex of the heart was the right ventricle. The cone diameter of the tricuspid valve was 5, that of the mitral 3.—Dr. Harvey Littlejohn showed: (1) A specimen from a case of Cut-throat presenting unusual features. It simulated a homicidal wound; the intervertebral disc was severed anteriorly; (2) a Dislocation of the Third and Fourth Cervical Vertebræ due to a weight falling on the back of the neck; (3) Stomach and Œsophagus from a case of carbolic acid poisoning.—Dr. William Russell showed: (1) A Heart from a case of rapidly fatal Endocarditis in a boy of 16; the known duration was about forty hours; (2) A perforated Gastric Ulcer which had been operated on, but with a fatal result.—Mr. Cotterill showed: (1) a large Oxalate of Lime Crystal removed from the bladder. There were few symptoms, and these only pointed to a recent cystitis. The patient was a young man of 20, and the calculus weighed 627 grains; (2) specimen of Meckel's Diverticulum from a youth aged 18. It was 6 inches long, was attached to the umbilicus, and not to the ileum.

On Localisation of Foreign Bodies by the Roentgen Rays.

Dr. Dawson Turner said that he had recently had the pleasure of seeing Dr. Mackenzie Davidson's method of localising foreign bodies, in the British Medical Journal of January 1st, 1898, p. 10. He gave details as to this method, which he considered to be a very useful and complete one. There was, however, a much shorter method of determining the exact depth of a foreign body which did not involve the use of Dr. Davidson's apparatus. Two photographs of the foreign body were taken and three distances measured. Then by means of a simple equation the exact depth of the body might be at once calculated. Dr. Turner then showed an adjustable focus tube in which the distance between the electrodes could be varied by means of a magnet while a photograph was being taken. The quality of *x* rays emitted depended upon the distance between the electrodes. He demonstrated this by means of several experiments. He had recently taken a skiagraph with the short exposure of 1 minute 50 seconds through the skull of an adult, which showed a lead pellet in the eye.

On the motion of Mr. David Wallace, Dr. Dawson Turner was awarded a vote of thanks for his interesting paper and demonstration.

ULSTER MEDICAL SOCIETY.

J. A. LINDSAY, M.D., President, in the Chair.

Thursday, February 3rd, 1898.

CASES.

DR. CALWELL showed a case in which Atrophy of the Muscles of the Forearm, with rigidity of the muscles, had followed an injury to the elbow.—Professor BYERS showed a Cystic Tumour of the Left Ovary, one loculus of which was dermoid, and contained a pultaceous mass of fat, sebum, and shed hair.—Dr. JOHN CAMPBELL showed a specimen of Malignant Disease of the Uterus.

APPENDICITIS.

Dr. DARLING opened a discussion upon appendicitis. He related the history of a recent case of suppurative appendicitis, which, he said, raised most of the points at present in controversy. The patient was operated on and made a good recovery from the immediate effects of the operation, but died some weeks subsequently from acute dilatation of the stomach. The special points in the case were: (1) A history of repeated attacks prior to the one which was the immediate occasion of the operation. (2) The evidence afforded by the *post-mortem* examination that these successive attacks had led to adhesion of the appendix and occlusion of its lumen, then to perforation with formation of an abscess limited by adhesions, and then escape of matter to another abscess, these various stages in the progress of the disease being associated with attacks of illness of ever-increasing severity. (3) The apparently almost complete recovery after each attack, although there evidently remained so much disease. The only sign which remained in the intervals between the attacks was tenderness at McBurney's point. (4) The evident inadequacy of careful dieting after the disease had reached a certain point. (5) The recovery from the immediate effects of a prolonged and difficult operation and subsequent sinking from acute dilatation of the stomach. Speaking regarding the subject generally he was inclined to think that when a second attack had taken place further recurrence was to be feared, and the question of operation should be faced. The results of Treves and others showed how safe the operation was in skilful hands. He believed that a large proportion of the cases of acute peritonitis arising suddenly were due to rupture of a suppurating appendix. It was especially in recurring cases that operation should be pressed upon patients.

Professor SINCLAIR described a difficult operative case similar to that of Dr. Darling with multiple abscesses in the abdomen, the result of perforative appendicitis, and he expressed the opinion that it was better to do too little than too much in the management of such cases. It was better to open the original abscess and allow the secondary abscess to find a vent through it than to tear up adhesions in the search, with consequent diffusion of the pus throughout the whole abdomen. He also instanced cases with abscess formation simulating other maladies, for example, psoas abscess, lumbar and scrotal abscesses, and subphrenic abscesses, and expressed surprise at the number and capacity of latent appendicular abscesses, which gave practically no sign of their presence. He asked to what extent rectal examination had helped in diagnosis, having been impressed with the inutility of this method in his own cases. He had been struck with the absence of abscess in cases in which recurring rigors, sweating, and emaciation appeared to point clearly to this condition. He considered abiding tenderness with swelling or thickening more reliable guides than the general symptoms of the existence of abscess. The most unfavourable sign in appendicitis in his experience was a rising pulse combined with a falling temperature, notwithstanding amelioration of the other symptoms by treatment. He did not recommend operation after one attack, unless persistent tenderness remained, and gave his experience of recovery by medical treatment alone as higher than 70 per cent., as noted in America, more probably 90 per cent. His experience of recurrence among surviving cases did not accord with the transatlantic estimate of 50 per cent. of recurrences in the first year. He had found recurrence in fewer than two-thirds of his cases. Apparently the greater tendency to catarrhs of various kinds in the United States and some national dietetic habits accounted for the extraordinary prevalence of appendicitis in that country. It was remarkable how few cases were admitted to hospital suffering from appendicitis, showing that the disease was especially one of the upper and middle classes. The higher mortality in children's cases was alluded to and the consequently stronger argument for operating during the acute stage in such instances; nevertheless, from what he had seen of the difficulties and risks of appendicectomy in the acute stage, he was very slow to recommend or adopt the measure, save in a few cases with clear indications. Extirpation of the appendix in a quiet interval—three weeks after an acute seizure—was one of the most successful and satisfactory of operations, and should be oftener performed than it was in cases which have had two or three recurrences. He had not had a fatality in his own practice when the operation was performed in a quiet interval with normal pulse and normal temperature. The possibility of the appendicular inflammation being tuberculous was mentioned and a case described. Such cases were favourable for extirpation, and the opening and draining of the abdomen might have the same happy effect as it appeared to have in tuberculous peritonitis. Dr. Sinclair approved of the following rules for estimating the eligibility of appendicitis candidates for life assurance—namely, a quiescent period of two years after a single attack, of three years after recurrent attacks, and after appendicectomy a six months' interval to ascertain whether ventral hernia threatened. If not, an operated case might be accepted at ordinary rates. He was not in favour of an initial purgative in appendicitis.

Dr. JOHN CAMPBELL said that with reference to operative treatment cases might be divided into four classes, namely, (1) Those in which no permanent tumour could be felt even after several relapses. These should not be operated upon, as they recovered without operation. (2) Those in which a permanent tumour existed. These required operation. Where there had been one or two recurrences and the tumour persisted between the attacks, it should be removed during a quiescent interval. The rule which had been laid down that cases which had had two attacks should be operated upon was an unsound one. The better test was the presence of a tumour which did not disappear between the attacks. (3) Those in which perforation had occurred. In these cases operation was practically useless and should not be attempted during the acute stage, as it only took away any chance of recovery which the patient might have. Many cases of apparent perforation recovered under medical treatment; others recovered with the formation of a localised abscess which could be evacuated later on; and the remainder in which extensive extravasation had taken place died whether they were operated upon or not. (4) Those in which an abscess had formed. If the abscess could be directly incised and a drain inserted the sooner the operation was done the better, but if the abscess was deeply placed among adherent coils of bowel operation did not afford a good chance. It led to general peritonitis from dissemination of pus in the abdomen. He had seen several cases of abscess suddenly bursting into the general peritoneal cavity and causing death in which the existence of appendicitis had not been suspected. Probably in many of these a timely recognition of the disease and drainage of the abscess might have saved the patient.

Professor BYERS thought that more information was needed as to the mortality of appendicitis. His own experience in private practice indicated that taking all the types of the disease, severe and mild, together, the mortality was not high, and during his connection with the Belfast Hospital for Sick Children he had seen no fatal cases there. Therefore he believed that the great majority of those attacked got well under medical treatment, namely, rest, careful dietary, and sufficient morphine to relieve pain. As to cases requiring surgical interference, he thought that where there was a localised abscess it should be opened and drained on ordinary principles, but no determined effort should be made to remove the appendix, and great care should be taken not to break through the adhesions, which shut off any communication with the general cavity of the peritoneum. In the acute or fulminating cases, where the appendix perforated early into the abdomen, his experience of operating in acute peritonitis from pelvic diseases made him very shy of recommending this procedure. The difficulty in such cases was

low by irrigation or sponging to sterilise the peritoneum, and quickly to restore intestinal peristalsis. The best results from the surgical point of view were obtained by removing the appendix in recurring cases during a quiescent interval, the difficulty being to say when this course should be recommended, as some patients, even after several attacks, got quite well without further attacks. He thought if a patient had two or more attacks of appendicitis operation should be urged during an apyretic interval; first, because there was always the risk of recurrences; and, secondly, because any of these subsequent attacks might prove fatal. In conclusion, he urged the importance of early surgical consultation in these cases.

Dr. Calwell related the particulars of three cases of appendicitis. The first was a typical case of slight relapsing appendicitis, the attacks being brought out by various causes, including cold feet and mental strain. Painful "appendicular colic," came on generally from 1 to 4 A.M.; tenderness was often present along the course of the colon, and much mucus was usually discharged *per anum* after the attacks, pointing to a catarrhal colitis as the origin. In this case a liberal dietary caused a free action of the bowels and prevented attacks. In the second case there was a swelling as large as a fœtal head, which ultimately disappeared without the development of any complication. The third case was one in which typhoid fever had been at first suspected, but rectal examination revealed a hard mass on the right side of the pelvic brim. He pointed out that appendicitis was comparatively very rare in out-patient hospital practice, and comparatively frequent in private practice. He advocated complete rest, starvation, and opium, with poulticing in the slight cases, which were by far the most frequent. As soon as pus formed it should be evacuated. He agreed generally with the points laid down by Professor Sinclair as guides in connection with the subject of life assurance. He would be inclined, however, to insist upon a minimum limit of one or two years in cases which had been operated upon.

Dr. M'Kisack urged the necessity for careful diagnosis. The mild cases, which, if suitably treated with rest and warmth, almost always recovered, might easily be aggravated by improper treatment and become dangerous. Hence the importance of making up one's mind as to the relative merits of purgatives and opiates. He recognised fully the necessity of surgical interference in certain cases, but condemned strongly the indiscriminate removal of the appendix which seemed to prevail in some countries. He referred to the difficulty of being sure of the presence of pus and the possibility of small collections of pus being absorbed.

Dr. A. B. Mitchell said that the initial pain in appendicitis was usually either general over the abdomen or referred to the umbilicus, and was not localised in the right iliac fossa until about twenty-four hours had elapsed. McBurney's point usually indicated the seat of maximum tenderness; but this was not always so, as the appendix might be abnormally situated. Pain on micturition was important, and was probably dependent upon an inflamed appendix lying over the pelvic brim. While the great majority of cases got well under medical treatment, surgical interference was indicated (*a*) when the symptoms pointed strongly to the formation of pus, an abscess should be opened at the earliest opportunity; (*b*) in acute perforating appendicitis, but to be of any service the operation should be done not later than five or six hours after perforation; (*c*) in severe relapsing cases.

The President said the subject of appendicitis was of special interest to him, as he had recently had the opportunity during a visit to the United States of comparing impressions. He thought a more conservative feeling was beginning to prevail there, and that there was a reaction against the too ready adoption of operative procedure in these cases. It was very important to determine the normal mortality in appendicitis under medical treatment alone. McBurney put this at a little under 50 per cent. Fitz, of Boston, to whose classical paper on the subject much of their knowledge was due, at 25 or 30 per cent. His experience did not corroborate these figures, and he thought the estimate given by Professor Sinclair—10 per cent.—much nearer the mark. Like other speakers, he had been struck with the rarity of the disease in hospital practice. He thought that the diagnosis was not usually difficult, and that the confusion of appendicitis with typhoid fever was not frequent. In his experience of hospital practice no case sent in as typhoid fever had ever turned out to be appendicitis or *vice versâ*. The pain and localised tenderness in the latter affection usually made the distinction easy. The administration of the initial purgative seemed to him a doubtful procedure. Cases of appendicitis sometimes pursued a baffling and unexpected course. It seemed reasonable to sanction operative interference where pus had formed or where there had been several recurrences.

Dr. Darling concluded the discussion by a brief reply.

LIVERPOOL MEDICAL INSTITUTION.

W. Macfie Campbell, M.D., President, in the Chair.

Thursday, February 3rd, 1898.

A vote of congratulation to Dr. M'Murray on his election to the mayoralty of Bootle was proposed by the President, seconded by Mr. Banks, and carried with acclamation.

Dr. M'Murray thanked the members.

Colicystitis and Enteric Fever.

Dr. C. A. Hill read notes on colicystitis which complicated a case of enteric fever in the second week. The patient was a man, aged 55, a patient of Dr. Glynn, in the Royal Infirmary. Bacteriologically the only organism present was the bacillus coli communis.

Drs. Carter and Hill Abram spoke.

Myxœdema.

Dr. A. Davidson read notes of a case of myxœdema occurring in a woman, aged 50; all the characteristic symptoms were present, and no perceptible thyroid gland could be made out. The patient had been under his care twenty-four years previously, with marked exophthalmic goître. Photographs were shown.

Dr. Carter thought it was not necessary to wait for atrophy of the thyroid body in order to get myxœdema. They were so much under the tyranny of theory as to think that the concurrence of an enlarged thyroid and that condition must be incompatible. He instanced the case of a lady in which the two conditions were present in a very marked degree. He spoke highly of the good effect of hydrofluoric acid, the tumour having markedly decreased in size under its influence. The neck measurement was reduced from 15 to 12 inches. The acid was continued, and thyroid tabloids (5-grain) prescribed. The myxœdema disappeared, and none of the other symptoms were re-excited.

Removal of the Tongue.

Mr. Mitchell Banks gave a brief outline of the various methods hitherto employed for the removal of the tongue, in whole or in part, all of which he had tried with the exception of the thermo-cautery. In many serious cases in which the disease was extensive and far back he had employed a preliminary laryngotomy, which saved loss of blood, and which notably prevented the septic pneumonia, so fatal in tongue cases, by avoiding the sucking of the blood into the lungs during the operation. During the last few years he had made use of the semicircular incision under the jaw which was first thought of by Regnoli fifty years ago. By this a remarkably free access to the diseased parts was obtained, so that the tissues might be quietly clipped with scissors down to the lingual arteries, which were secured before being cut. The whole proceeding could be effected without any bleeding into the throat at all; the blood ran outside the mouth, not into it. Again, if the incision was not quite closed, admirable drainage was obtained from the very offensive discharge which would otherwise accumulate in the floor of the mouth, and did not get well away after the ordinary operations. Finally, the affected glands could be readily eradicated.

A Series of Operations for Dilated Stomach.

Mr. Rushton Parker read a paper based on a series of seven cases explored or otherwise operated on for dilatation of the stomach. The first was a woman, aged 37, who had suffered from "indigestion" for many years, and latterly from symptoms of gastric ulcer, for which she had been in hospital for several months. The stomach was greatly dilated, and it was inferred that a contracted pylorus existed.

At the operation in August, 1895, the pylorus was found to be contracted to the thickness of a cedar pencil. This was freely incised, and one of Mayo Robson's decalcified bone bobbins inserted, after which the widely separated sides of the incision were attached in their new attitude, while the ends were approximated, thus adding greatly to the width of the pylorus. The operation was performed by the method described and figured by Mr. Robson in the British Medical Journal for July 20th, 1895. The patient made a quick and simple recovery, ate fish on the tenth day, and was well in a fortnight. She reported herself on February 3rd, 1898, as having been in excellent health ever since. The second case was that of a young man, aged 22, suffering from vomiting, dilatation of the stomach, and tumour in the region of the stomach. Exploration revealed a hard tumour close to the pylorus, thought to be malignant, and further operation was abandoned. He died soon after, and the growth showed no evidence of malignant disease, leading Mr. Parker to regret not having at least done pyloroplasty, which perhaps might have saved the patient's life. In the third and fifth cases the symptoms attended by tumour existed. Pyloroplasty was performed, and a growth found close to but not implicating the pylorus. In both cases the immediate effects of the operation were good. Quick healing occurred, with relief of symptoms, which returned only in one—a man, aged 52—after nine months, and in the other—a woman, aged 35—after three months. Both were still living, and the ultimate result could not be stated. In the fourth case, in a man, aged 38, after similar symptoms pyloroplasty was done, and although locally all was healthy, the patient died of inanition in four days. A sixth case, operated on January 31st, 1898, under the same conditions was so far going on simply and well. In applying pyloroplasty to cases of carcinoma, producing narrowing of the pylorus by proximity only in some cases, in others actually partly invading the tube, the principal object after inspection was temporary relief of the obstruction. This relief was so great in two cases and so enduring in one of them as to lead to the supposition that the growth was inflammatory rather than cancerous. Incidentally, then, the operations had been found of service in the exploration of cases of dilated stomach owing to pyloric obstruction. The seventh case was one of gastric dilatation explored with the discovery of a widely dilated pylorus. Nothing further was done, but all the symptoms had ceased, the case apparently being one of abdominal ptosis.

Mr. Paul referred to a case of supposed simple stricture of the pylorus, in which the patient died of dissemination of cancer.

Dr. C. A. Hill referred to a case of idiopathic dilatation, in which a large fold was tucked in by operation, and the edges of the fold sutured together, with marked relief.

Mr. Banks having spoken,

Mr. Rushton Parker, in his reply, drew attention to the striking difference manifested after death in the growth in the two fatal cases as compared with the condition observed during the operation. In both cases a hard, distinctly prominent growth had become soft and level, and on section there was great indistinctness of microscopical structure. This appeared to him to be due to *post-mortem* digestion. None of these tumours surrounded the pylorus, and only in one (the last) did he feel strongly inclined to perform pylorectomy. The conditions favourable to that proceeding seldom occurred, owing to the most important one, strength of patient, being wanting.

West London Medico-Chirurgical Society. — A meeting of the Society was held on February 4th, Dr. H. P. Potter (President) in the chair.—Mr. C. A. Ballance introduced a discussion on the Transmission and Dissemination of Cancer. For a great number of years he had been working at the subject of cancer in conjunction with Mr. Shattock. He stated that he believed that the death-rate from cancer was on the increase. There were three main theories as to the origin of malignant tumours, and possibly also of innocent ones: (1) spermatic; (2) embryonic; (3) parasitic. Having briefly discussed the two first problems, he dwelt chiefly upon the third. He alluded to the writings of Sir James Paget, particularly instancing his statement that micro-parasites, or substances produced by them, would some day be found in essential relation with cancers and cancerous diseases. Mr. Ballance emphasised the facts that carcinoma sometimes had a purely local origin, giving as an example epithelioma of the lip; and that metastasis in carcinoma and sarcoma by lymphatics and blood vessels was such as occurred in tuberculosis. He touched on the question of latency of carcinomatous deposits in lymphatic glands. He discussed auto-inoculation, and the evidence for the transference of cancer from one animal to another of the same species. Geographical distribution of cancer was dealt with, and particular reference made to noted cancer houses and districts. The phenomena of atavism were noticed, as well as some other considerations. Mr. Ballance then proceeded to give a detailed account of the elaborate experiments conducted by Mr. Shattock and himself in order to discover a protozoic parasite. All these experiments had, however, been negative in their results. Infective experiments also met with the same unsuccessful ending. Further, he alluded to the chemistry of carcinomatous growths, especially noticing the facts that in cultures of pathogenic bacteria albumose was present, but in malignant growths none was found, and that encapsulated protozoa had chitin or cellulose in their capsules, but neither substance was found in fresh scirrhous tumour. Dr. Brodie had kindly made this research. Mr. Ballance concluded by affirming that the doctrine of the parasitic origin of cancer recommended itself as bringing the essential pathology of malignant growths into natural relation with other diseases, the parasitic pathology of which admitted of scientific proof.—Mr. Alban Doran congratulated Mr. Ballance on his work and paper. He alluded to the theory that organs subjected to irritation during devolution were apt to become the site of malignant disease. He further contrasted the operative procedures in carcinoma of the mamma and of the uterus. In neither did he think it was at all likely that all the lymphatic channels of metastasis were entirely removed. He referred to the subject of deciduoma malignum, and asked for Mr. Ballance's opinion of the cause of it. — Dr. McCann showed a series of specimens illustrating the various forms of Malignant Disease of the Uterus. He considered that heredity was an important factor in the causation of uterine carcinoma; as also probably were gonorrhœa, septic processes, and subinvolution after the menopause. He averred that uterine cancer was really a local carcinoma, and that the cachexia seen in it was due to sepsis.—Dr. Herbert Snow doubted the parasitic origin of cancer. He thought an autositic origin of cancer most probable. He did not think contagion in cancer other than very rare, but auto-inoculation was common. He greatly doubted that geographical distribution was proved in the case of carcinoma, but thought that heredity occurred in about 20 per cent. of the cases.—After some remarks by Dr. Chapman, Mr. T. R. Atkinson (who gave some interesting clinical experience), and the President, Mr. Ballance replied. He suggested that deciduoma malignum might be analogous to those cases of acute traumatic malignancy with which surgeons were familiar. With regard to extensive operations for malignant disease, he hoped the day would come when they would be replaced by the use of an antitoxin.

North of England Gynæcological and Obstetrical Society.—The annual meeting was held at Owens College, Manchester, on Friday, January 21st, the senior Vice-President, Dr. Lloyd-Roberts, in the chair, until the new President, Dr. J. W. Martin, of Sheffield, was elected. The following gentlemen were elected office-bearers for the year: *President:* John W. Martin, M.D., Sheffield. *Vice-Presidents:* T. A. Helme, M.D., Manchester; D. Lloyd-Roberts, M.D., Manchester; John Wallace, M.D., Liverpool; T. B. Grimsdale, M.B., Liverpool; Jas. Braithwaite, M.D., Leeds; Chas. Richardson, M.R.C.S., Leeds; G. E. K. Thorpe, M.R.C.S., Sheffield; J. Benson, M.R.C.S., Sheffield. *Honorary Treasurer:* J. Nelson Cregeen, M.R.C.S., Liverpool. *Council:* Owen Bowen, M.R.C.S., Liverpool; H. Briggs, F.R.C.S., Liverpool; Archibald Donald, M.D., Manchester; Richard Favell, M.R.C.S., Sheffield; W. E. Fothergill, M.D., Manchester; D. L. Hamilton, F.R.C.S.Ed., Manchester; H. Harvey, M.B., Wavertree; Arnold Lea, M.D., Manchester; H. A. Lediard, M.D., Carlisle; T. D. Leigh, M.R.C.S., Liverpool; T. W. Napier, M.B., Egremont; J. J. O'Hagan, M.B., Garston; Benjamin Scott, M.D., Manchester; W. Japp Sinclair, M.D., Manchester; David Smart, M.B., Liverpool; A. Stookes, M.B., Liverpool; E. W. Thomson, L.R.C.P.E., Sheffield; A. J. Wallace, M.D., Liverpool; W. K. Walls, M.D., Manchester; W. Walter, M.D., Manchester; A. E. L. Wear, M.D., Leeds; R. E. Williamson, M.B., Leeds.

Honorary General Secretary: J. E. Gemmell, M.B., Liverpool. *Honorary Local Secretaries:* John Scott, M.D., Manchester; W. Fingland, L.R.C.P., Liverpool; Edward O. Croft, M.R.C.S., Leeds; Hugh Rhodes, M.D., Sheffield.

Dr. Walter (Manchester) showed (1) a Fibroid the size of a pigeon's egg removed on January 17th from the anterior lip of the cervix uteri. The patient, aged 48, had suffered from menorrhagia for eight months, up to which time the catamenia had been regular; and (2) a Fibroid removed from the fundus uteri by vaginal hysterectomy on January 10th from an unmarried patient aged 30, who for eighteen months had been losing flesh and strength consequent on metrorrhagia and excessive pain. Anterior colpotomy was first performed, and the front wall of the uterus divided from the cervix upwards with a view of removing the tumour by *morcellement*, and then suturing the uterus. Owing, however, to the tumour being firmly embedded in the fundus, and to the great difficulty in traction experienced on account of extreme narrowness of the vagina, it was found necessary to resort to hysterectomy. This was rendered possible by bisecting the lower two-thirds of the posterior walls of the uterus as well as the anterior. Part of the tumour could then be removed by *morcellement*, the remainder by enucleation. The uterus being now divided into separate halves was removed after ligation of each broad ligament. The wound and vagina were packed with iodoform gauze, and the after-progress of the case was uneventful.—Dr. Alexander (Liverpool) read a paper on the Enucleation of Multiple Uterine Fibroids. Drs. Lloyd-Roberts, Walter, and Donald took part in the discussion which followed.

Association of Registered Medical Women. — The February meeting was held in the Library, New Hospital for Women, on Tuesday, February 1st, at 8 P.M., Miss Cock, M.D. (President), in the chair. The following cases were shown:—By the President: 1. Transverse Dorsal Myelitis in a girl aged 16; shown now to demonstrate the improvement which had taken place since the November meeting. 2. Extreme Emaciation with Constipation in a woman aged 34.—By Mrs. Stanley Boyd: Excision of Right Elbow-joint for Tuberculous Disease.—By Miss Helen Webb: Abdominal Enlargement with Constipation in a girl who had been operated on in infancy for imperforate anus.—Miss Ellaby read a paper entitled Some Obscure Forms of Retinal Disturbance in Children and Young Adults, illustrated by drawings of the ophthalmoscopic appearances of the cases quoted.

REVIEWS.

Lectures on the Theory and Practice of Vaccination, By Robert Cory, M.A., M.D., F.R.C.P. London: Baillière, Tindall, and Cox. 1898. (Demy 8vo, pp. 130, 15 plates. 12s. 6d.)

Dr. Cory's experience in the practical work of vaccination is, perhaps, almost unique in this country, and the attention that he has paid to its theory is well known to all who have made any study of the subject. His new work, therefore, is very welcome, and is worthy of careful perusal, both for what it contains and for what it suggests. It is limited in extent by the fact that it consists only of the substance of six lectures periodically given to pupils, and it is limited in its view of the subject by the other fact that the whole work was written before the final report of the Royal Commission on Vaccination was issued, so that Dr. Cory is able to say: "I am not, therefore, indebted to this for any information, and it may be taken, so far as I am concerned, as entirely independent." This being so, the book contains no reference to such questions as domiciliary vaccination or the proposed deferment of infantile vaccination to the age of 6 or 12 months. Nor does it discuss the effects of the admixture of glycerine with calf lymph, either in the way of preservation of the active qualities of the lymph or of destruction of extraneous micro-organisms. From the careful and interesting detail into which Dr. Cory enters with regard to the methods of direct vaccination, both arm-to-arm and calf-to-arm, it seems just possible that he sees no particular need for radical change of practice, so far as concerns actual safety and efficacy of vaccination. Speaking of syphilis he says, "Syphilitic children during the latent or incubatory period of the disease are not infective, but become so immediately the symptoms declare themselves." Indeed, in considering the proposed systematic introduction of glycerinated lymph, it should be kept clearly in view by everyone that medical men of the widest experience have no want of faith in arm-to-arm vaccination, that they use it freely in their own families, and that the main reason for any alteration in practice will be to remove unreasoning prejudice, and make misrepresentation more difficult. Children with a tendency to skin eruptions will not be prevented by calf lymph from developing such symptoms, but it will surely be impossible for their parents to believe, even under the influence of the most careful misrepresentation by opponents of vaccination, that such eruptions are owing to infection from diseased infants.

Dr. Cory is strongly impressed with the evils attending small-pox hospitals in populous places, and, referring to Mr. Power's well-known researches on aërial diffusion, and to the great saving of life which has resulted from giving due heed to the lessons derivable therefrom, he says:

> The outcome of Mr. Power's observations was, that cases of small-pox when notified have been sent out of London to ships or hospitals quite away from human habitation. The result has been quite phenomenal; for small-pox deaths, which on the average for the ten previous years to the deportation of small-pox had been 1,121, fell in the succeeding nine years to a yearly average of only 43·4, or one twenty-sixth of what they had been.

This is a splendid result, and yet there lurks a danger in its very success. So long as the field for small-pox is limited by vaccination, isolation in hospitals which are themselves well isolated will be very valuable, but in proportion as vaccination is neglected hospitals will become more and more impotent to cope with small-pox.

The pages of the book abound with points of interest. At Lamb's Conduit Street, Dr. Cory has vaccinated, or attempted to vaccinate, 1,692 women who already bore scars of vaccination, and in less than 3 per cent. did he get a result exactly like a primary vaccination in all respects. On the other hand, among 82 women who had no scar of primary vaccination, a typically perfect result was got in nearly 27 per cent. Here is a case which helps to show how statements come to be made regarding severe small-pox in the well-vaccinated:

> A girl, 23 years of age, "had her face scarred in the manner faces are scarred when a person has never been vaccinated; and, moreover, the severity of the attack was further evinced by her having lost an eye through the disease, which she had, as she stated, when she was only 14 months old, after vaccination. Upon questioning her as to her vaccination, she alleged that she was vaccinated before she had small-pox, and on examining her arms six large foveated and well-marked scars of vaccination existed, three on each arm, and arranged in the same pattern as my predecessor, Mr. Marson, was in the habit of placing his insertions of lymph. From the appearance of the scars I could not doubt but they were done before her attack of small-pox. So much, then, was all that could be gathered from the patient herself; but I ascertained her mother's address, and, upon calling, her mother told me that her husband was seized with the small-pox one Wednesday, and she took her children, who had not been vaccinated, to Surrey Chapel on the following Tuesday, and that the child in question was taken ill with small-pox on the following Saturday.

The explanation, therefore, was that the child had been vaccinated too late, after the small-pox had reached its seventh day of incubation. Lecture III, under the title of "The Difference between a Primary and a Secondary Vaccination," contains a most interesting discussion of the *rationale* of Bryce's test, the "return journey" of a vaccinated person towards susceptibility to small-pox, the increased fatality of small-pox among the unvaccinated, as compared with some fatality rates recorded in the last century, and other cognate questions. It is impossible, however, within the limits at our disposal, even to indicate all that the book contains. Lectures II and IV on the Histology of the Vaccine and Small-pox Vesicles, and the Eruptions that occasionally follow Vaccination, are illustrated by a number of coloured plates, most of them very good. In Lecture VI the author argues that cow-pox and horse-pox probably had their origin in human small-pox, and that the frequency of cow-pox in Jenner's time, and again in the days when Ceely, Estlin, and Badcock carried on their researches, was due to the great prevalence of small-pox in these periods. Here and there a trifling error may be detected, as in the mis-spelling of a name on page 41, a curious blunder in the

first footnote to page 54, a misprint near the foot of page 64, and another ("vesicle" instead of "vessel") on page 71. These, however, are of little moment.

The volume is appropriately and feelingly dedicated "To the memory of my dear friend, Sir George Buchanan, F.R.S., whose example was as an ensign to all that was true and noble, but as a drag to that which was false and dishonourable." That is a sentiment to which all who knew Sir George Buchanan will be able to add a hearty amen!

THE PRACTICE OF SURGERY: A TREATISE ON SURGERY FOR THE USE OF PRACTITIONERS AND STUDENTS. By HENRY R. WHARTON, M.D., Demonstrator of Surgery in the University of Pennsylvania, and B. FARQUHAR CURTIS, M.D., Professor of Clinical Surgery in the New York Post-Graduate Medical School. London and Philadelphia: J. B. Lippincott Company. 1898. (Roy. 8vo; pp. 1248; 823 illustrations. 25s.)

THE authors of this work hope that it will prove a useful guide to the student in the beginning of his surgical work, and also assist the general practitioner in the solution of the surgical problems which may from time to time be presented to him. In accordance with these objects they have endeavoured, and indeed with full success, to render their book an eminently practical one. They have, moreover, illustrated it well and with regard both to the principles and all the practical details of surgery, have presented a clear review of the latest teaching. Notwithstanding the able and conscientious manner in which the authors have endeavoured to carry out their idea, we cannot regard this book as a great success. Their aim has been a very difficult, if not an impossible, one, as a work on modern surgery can hardly meet the requirements of of both student and practitioner, affording elementary instruction to the one, and serving as a book of reference in doubtful and complicated cases to the other. The authors themselves candidly recognise the fact that to give a synopsis of surgery in one volume is a very difficult task, and it would have been well, we are disposed to think, if they had fully considered the extent of this difficulty, and decided that it was hardly feasible at the present day to condense within the limits of one cover all the information required in a complete treatise on their subject.

The introductory chapter on surgical bacteriology affords much instruction on this subject, but from the extreme compression of its matter is likely to be found dry and uninteresting. This tendency to crowd a number of facts into a small space without elucidation or comment is shown in many other parts of the book. The authors, however, recognising the difficulty of presenting a full treatise on surgery in the compass of a single volume, have intentionally given some subjects in a very condensed form, and treated others at full length. Whilst regretting that the conditions of their task compel such uneven treatment, we quite agree with them as to the importance of the subjects to which they have devoted more than the usual amount of space. The chapters on tumours, injuries and diseases of the bone, injuries of the head, and abdominal surgery, leave nothing to be desired with regard to the detailed treatment, as well as to the excellence of their matter. The chapter on the injuries and diseases of the eye, by Professor de Schweinitz, though it deserves the warm commendations of the authors of the rest of the volume, is too brief and condensed to be of much practical value.

THE OXYGEN TREATMENT FOR WOUNDS, ULCERS, BURNS, ETC. By GEORGE STOKER, M.R.C.P.I., M.R.C.S., L.R.C.S.I., Physician to the London Throat Hospital. London: Baillière, Tindall and Cox. 1897. (Roy. 8vo, pp. 39. 2s.)

INSPECTION of cases which have been treated at the Oxygen Home in Fitzroy Square affords strong evidence that the continuous action of dilute oxygen is of the very highest value in chronic ulcers of the leg and in extensive destruction of the tissues by burning; for such cases as these it is truly a discovery, and a very significant advance in surgery. Not only does it bring about healing in cases that seemed hopeless, but the new skin is wholly unlike scar tissue; it is soft, thick, smooth, fair, loose, warm skin, not ridged or seamed, and hardly to be distinguished from healthy structures.

Some of the chronic ulcers thus cured had gone on for fifteen or twenty years or more; they had been duly dressed and rested for long periods. We may admit that other things work together in Dr. STOKER'S method to ensure success—prolonged rest, good food, daily cleansing of the sore, clearing away the film from its healing edge; but the fact remains that he cures ulcers which had been unhealed for a quarter of a century, and obtains such a covering for them as none of the usual dressings can obtain.

As he goes further afield his results are less striking. Where he has to deal not with simple ulceration but with tuberculous disease, not with a large flat surface but with a small deep, irregular, suppurating cavity, such as the nose or middle ear, his method is less valuable. He does not prove that it is of much use in lupus of the face, if he has scraped the lupus first; or in mastoid disease with otorrhœa, if he has to scrape the mastoid afterwards. There are objections to its application in cases of rodent ulcer and in any sort of uterine disease. But in all cases of chronic intractable destruction of a large area of the skin his method, patiently and skilfully carried out, appears to give far better results than we have hitherto been able to obtain.

RICERCHE SULL' ANATOMIA NORMALE E PATOLOGICA DELLE TERMINAZIONI NERVOSE NEI MUSCOLI STRIATI. [Investigations into the Normal and Pathological Anatomy of the Terminations of Nerves in Striated Muscles.] By L. T. CIPOLLONE. Roma: Giovanni Berteru. 1897. (Roy. 8vo, pp. 282, with five plates.)

THE exact termination of nerves in muscles is a subject of considerable interest, and the author has investigated it by means of the various methods of staining, etc., including the newer ones. The method most often used by him is one devised by Löwit, which is a gold method combined with the employment of formic acid. The author details his investigations conducted upon frogs, lizards, pigeons, and rabbits under (1) the normal appearances, and (2) the alterations produced under pathological conditions, such, for instance, as after section of the sciatic nerve, etc. There are, apparently, certain differences in these nerve terminations in such animals as the frog, lizard on the one hand, and rabbits, dogs on the other. Thus anastomoses between the terminal branches are rare in the former but common in the latter. The terminal ramification of the axis cylinder varied in all the animals investigated. After section, resection, compression, etc., the motor terminations begin to degenerate the products lose their power of staining and disappear. These changes commenced at once, but were slower in animals whose metabolism is sluggish.

Chapter IX contains an interesting research upon the reaction of degeneration in the muscles after section of the sciatic nerve, the condition of the nerve termination being carefully noted. The electrical reactions resembled those seen in man. These changes developed alongside with the alteration in the nerve terminations, so that the reaction of degeneration thus really represents the way in which the muscle responds when deprived of its nerve.

The tenth chapter contains an investigation into the neuro-muscular spindles.

This volume represents a careful study of a question still requiring elucidation, and it may be warmly commended to the attention of those interested in the subject.

LA FATIGUE ET L'ENTRAINEMENT PHYSIQUE [Fatigue and Physical Training]. Par le Dr. PHILIPPE TISSIÉ. Avec 22 gravures dans le texte. Paris: Félix Alcan. 1897. (Cr. 8vo. pp. 360. Fr. 4.)

DR. TISSIÉ, who is the inspector of physical exercises in the schools and colleges of the University of Bordeaux, has published in this book the researches he has made, and the observations he has collected on the psycho-dynamics of physical training, and the mental reaction provoked by severe training. With regard to physical training, he sub-

mits, among others, the following propositions: the individual should progress gradually; should know how to breathe properly, and be able to do it; should never force his heart, should avoid excesses of all kinds, and drink no alcohol. He should remember that all training which suppresses the appetite and increases thirst is injurious, and should seek for the fatigue which acts as a tonic and avoid great fatigue which enervates.

He then examines the effects of physical fatigue, as shown by runners or bicyclists who remained on the track for twenty-four hours or longer, and finds that even in persons with good constitutions, excessive fatigue produces a condition characterised by dreaminess and loss of the faculty of attention. This condition is due to the fact that prolonged exercise produces a state of auto-intoxication caused by imperfect action of the liver and kidneys. Next he observes the effect of fatigue in what he terms *fatigués*—that is, persons of a weak nervous constitution, who are either depressed or excited, and in whom the muscles and nervous system, when fatigued, take a long time to become restored to their normal condition. In these persons the principal functions of the body are sometimes, if not always, compromised by an interference with nutrition; the consequence is auto-intoxication and elevation of temperature and the action of these on a nervous system already exhausted as a consequence of heredity or of physical or psychical fatigue.

As a remedy against undue fatigue, Dr. Tissié recommends a course of gymnastics. He examines the Swedish, French, and English systems, but recommends a method of his own, which consists in regulating the number and intensity of the movements, or the efforts he wishes to bring out, according to the nervous reactions of each individual. His method consists chiefly in developing the chest, and he increases the number of inspirations by means of a graduated course of muscular movements. The height, weight, chest capacity, cardiac pulsations, respiratory movements, and dynamometric force are taken before and after the movements. Dr. Tissié wishes to introduce these methods in the schools throughout France, and pleads that a longer time should be given to physical exercise. The book will be useful to medical men, schoolmasters, and all who are interested in education.

Kliniske Undersogelser over Kvaelstofudskilningens forhold til den diaetetiske Behandling ved Diabetes Mellitus. [Clinical Investigations regarding the Condition of the Excretion of Nitrogen in the Dietetic Treatment of Diabetes Mellitus.] Af Marius Lauritzen. Kobenhavn: Andr. Fred. Host and Son. 1897. (Roy. 8vo, pp. 197 and 20 tables.)

Into this work, his graduation thesis, Dr. Lauritzen has put a great deal of careful and elaborate investigation. To say that it embodies a research into the excretion of nitrogen during the dietetic treatment of diabetes mellitus in seventeen cases is to give but an imperfect notion of its thoroughness, both as regards the study of the literature of the subject and the careful recording of clinical details; the author has spared no pains to make his thesis a valuable addition to our knowledge of the physiological chemistry of the disease.

The cases occurred in the Copenhagen Hospital, and consisted of eleven men and six women, varying in age from 20 to 70 years; the chemical investigations were carried out in the physiological laboratory of the University.

The excretion of nitrogen and of sugar was determined daily, and the estimation of the other urinary constituents was not neglected; the food, also, was carefully analysed. Esbach's ureometer was used. Eleven out of the 17 cases had diabetes of a severe type, 6 had it slightly, 12 had it in an uncomplicated form, 3 had also phthisis, 1 parametritis, and 1 heart disease and cystitis. In the uncomplicated cases of the severe type it was found that with ordinary mixed diet there was more nitrogen in the urine than in the food, and the loss in weight was marked; in the less severe cases there was also loss in weight, and the urinary nitrogen was greater than that in the food, allowing for the small quantity passed in the fæces.

With a mixed diet rich in albumen the patients gained weight and the ordinary nitrogen was not greater than that in the food after the deduction of that excreted in the fæces. This state of affairs lasted so long as the appetite remained good, and there was no fever. Even in a case complicated by phthisis, there was a gain in weight so long as the patient was free of fever. Interesting results also attended the adoption in three grave cases of Weintraud's dietetic treatment, and the analyses immediately before the supervention of diabetic coma showed an increase in the excretion of albumen. In early cases of diabetes more nitrogen was excreted during the day, while in those in the later cachectic stage the nocturnal loss was greater than the diurnal. There are many other details which cannot fail to reward the reader of Dr. Lauritzen's valuable monograph.

NOTES ON BOOKS.

Uber das Vorkommen von scharfbegrenzten Ektasien im Augengrunde und über partielle Farbenblindheit bei hochgradiger Myopie. [On the Occurrence of sharply-defined Ectasia in the Fundus Oculi, and on Partial Colour Blindness in High Myopia.] Von Dr. L. Weiss, Professor an der Universität Heidelberg. (Wiesbaden: J. F. Bergmann; Glasgow: F. Bauermeister. 1898. Royal 8vo, pp. 78. 5s.)—The writer figures and describes the appearance of the fundus oculi in several cases of high myopia (mostly 15 to 20 D. or more). The point to which he draws special attention is the existence, to the nasal side of the disc and at a varying distance from it and its surrounding atrophic ring or crescent, of a dark vertically-placed crescentic line. Retinal vessels, crossing this line, here dip down on their way to the disc, thus indicating a difference of level, which is confirmed by direct ophthalmoscopic examination and by the parallactic movement which can be obtained. In some cases the dark line is present without there being any difference of level. Various defects in the field of vision both for white and for colours may exist in myopic eyes, even when the above changes are not to be met with. They take the form chiefly of scotomata at or about the site of the optic nerve entrance, though the field may be contracted concentrically, or, rarely, on the nasal side only. The "blind spot" may be considerably enlarged, even in the absence of any "staphyloma porticum." The significance of these defects in the field is an open question. Numerous charts of the fields and of the scotomata met with are appended. The points raised by Dr. Weiss are well worth the consideration of ophthalmologists.

Manual of Urine Testing. By John Scott, B.A., M.B., B.Ch., B.A.O. Third edition. (Dublin: Fannin and Co.; London: Baillière, Tindall, and Co.; Edinburgh: James Thin; Bristol: John Wright. 1897. Fcap. 8vo, pp. 52. 1s. 6d.)—In this little guide the author not only gives a good account of the various tests in clinical use, but also appends the information which is to be derived from them. He has also indicated the fallacies to which these tests are liable. The arrangement followed is the usual one. Under the quantitative examination several figures of apparatus are introduced. We have looked in vain for any mention of the centrifugal machine for obtaining deposits, yet no clinical laboratory is complete without one. There are several cheap and excellent hand centrifuges now in the market. Cut and dried tables of differential diagnosis, mostly borrowed from Mr. Hurry Fenwick's writings, figure rather largely in the earlier part of this book; such tables do not meet with universal approbation. The subject matter of this work is well arranged, and the directions are clearly given. This handy guide will, no doubt, continue to prove of considerable service.

Die therapeutischen Leistungen des Jahres, 1896 [The Therapeutical Advances of 1896]. Von Dr. Arnold Pollatschek. VIII Jahrgang. (Wiesbaden: J. F. Bergmann. 1897. Roy. 8vo, pp. 350. M. 7.)—In scope and plan this publication resembles its predecessors. Dr. Pollatschek has compiled from a considerable number of German medical journals abstracts of their more important therapeutic papers, and, under the headings of various diseases and diseased conditions, has

woven them into short articles. The volume gives a very good summary of German contributions to therapeutical literature during the year.

Encyclopædie der Therapie [Encyclopædia of Treatment]. Herausgegeben von Professor OSCAR LIEBREICH unter mitwirkung von Dr. MARTIN MENDELSOHN und Dr. ARTHUR WÜRZBURG. Vol. II, Part I. (Berlin: August Hirschwald. 1897. Roy. 8vo, pp. 160.)—The previous parts of this large compendium have already been reviewed, and its arrangement described. In this instalment the first article is on Flatulence and the last on Glykokoll. The articles are by well-known authors, and deal with all departments nearly or remotely connected with therapeutics; drugs, methods of treatment, spas, and all kinds of disease come in for consideration. The information is concisely accurately given, but in the somewhat uninviting literary style of encyclopædias in general. As a reference book its value is certainly high.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A PORTABLE COMBINED OPERATING TABLE.

DR. ROBERT W. MERRICK (Surbiton) sends us a description of a portable combined operating table which he has designed for use in the consulting room and at private houses, also in infirmaries and cottage hospitals. The advantages which Dr. Merrick claims for it are that it can be used for surgical

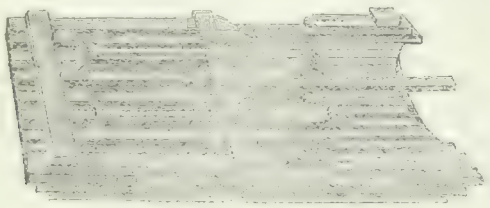


Fig. 1.

and gynæcological work; that it is extremely portable, light (36 lbs.), perfectly rigid and steady, neat, and strongly made; that it can be washed and carbolised, the varnish coat being very lasting; further, as it is a combined table, the use of two is dispensed with. It can be brought into requisition with readiness and facility, and when folded and put aside takes up very small space. Fig. 1 depicts the compactness and portability. Fig. 2 shows the table set up, and gives a view of all its parts, the usages of which are obvious. The length is 5 ft. 10 in., width 20 in. It can be made 22 to 24 in. wide, height 3 ft. $\frac{3}{4}$ in., or less if necessary. Dr. Merrick states that he has found the table to be of very great utility. The price is 7 guineas, and the manufacturers are Messrs. Arnold and Sons, London.

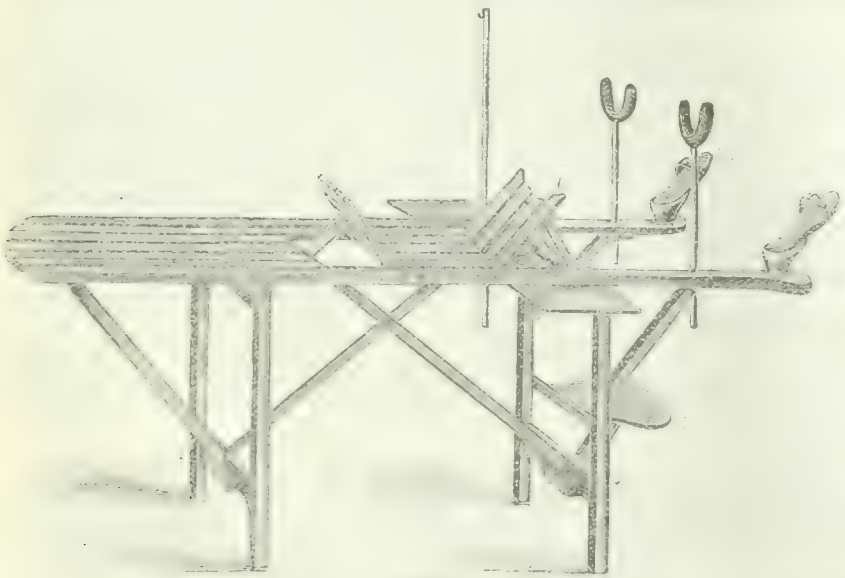
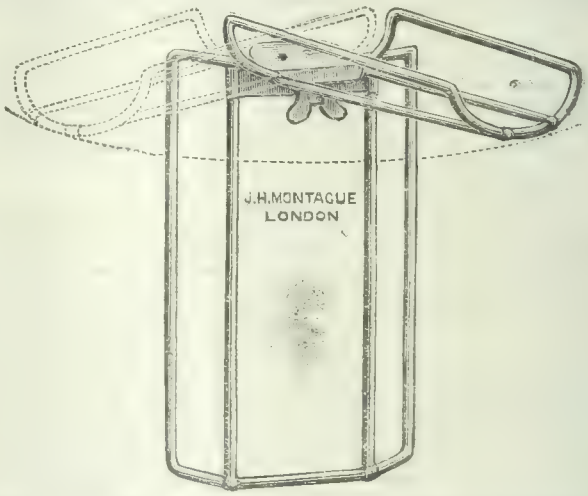


Fig. 2.

A RECTANGULAR SPLINT FOR USE AFTER REMOVAL OF THE BREAST.

MR. EDWARD COTTERELL, F.R.C.S.Eng., considers that it is the practice of most modern surgeons, when removing a breast for scirrhus, at the same time to clear away the underlying pectoralis major, and thoroughly clean out the axilla.



When such cases are dressed in the ordinary way with the arm tightly bandaged across the chest, it very frequently happens that a great deal of discomfort and pain is experienced by the patient, and after the wound has healed the movements of the shoulder are generally very limited and painful.

On November 8th, 1897, Mr. Cotterell showed a patient at the Medical Society of London, sixteen days after removal of breast, sterno-costal part of pectoralis major, and axillary glands, to demonstrate the very great advantages to be derived from keeping the arm at a right angle to the body instead of tightly bandaging the limb across the chest, as is the usual practice.

Mr. J. H. Montague, of 101, New Bond Street, London, has made a rectangular splint, as illustrated, fitted with a movable joint, for treating this class of cases.

The advantages Mr. Cotterell claims from the use of this splint are:

1. The position is a most comfortable one for the patient. The forearm and hand being free, there is no cramp or stiffness of elbow, wrist, or fingers.
2. When the splint is removed there is no stiffness of the shoulder, the patient being able within a fortnight of the operation to dress her own back hair and hook her own dress.
3. Requisite pressure can easily be maintained to keep the surfaces of the wound in contact.
4. Where much skin has been removed, should the position of abduction cause too much tension upon the stitches, the arm can be brought forwards, and so relax the parts, by altering the joint of the splint to the required angle.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness and Accident Society was held at 429, Strand, London, W.C., on January 28th.

There were present the Chairman, Dr. de Havilland Hall, Dr. J. B. Ball, Dr. J. W. Hunt, Mr. F. Swinford Edwards, Dr. M. Greenwood, Dr. F. J. Allan, Dr. A. S. Gubb, Dr. W. Knowsley Sibley, Dr. Walter Smith, and Mr. R. S. Charsley.

The accounts presented showed that, as usual at this period of the year, a large amount was being disbursed as sickness pay. During the last few weeks the number of sickness claims has been unusually great, more than half of them arising from influenza, which, as on previous occasions, has incapacitated a large number of medical men. So far the claims arising from influenza, although numerous, have been of much shorter average duration than during previous epidemics, and the experience of the Medical Sickness and Accident Society seems to show that the worst cases produced by this disease arise when it is no longer epidemic, but are attributable to various forms of its sequelæ. Some very serious cases of this kind are now on the Society's claim list.

This being the first meeting of the year, the Committee carefully examined all the cases of chronic incapacity now on the list. It was found that no fewer than twelve members are incapacitated from causes which leave little hope that they will ever be able to resume professional work, and their claim on the funds of the Society is practically that of annuitants.

The Committee have to deplore the loss they have sustained by the death of Mr. Ernest Hart, the founder of the Society. The following resolution was passed, and a copy ordered to be sent to Mrs. Hart:

The Committee of the Medical, Sickness, Annuity, and Life Assurance Friendly Society beg to express their sympathy with Mrs. Ernest Hart in the loss she has sustained; and they desire to place on record their appreciation of the services rendered by Mr. Ernest Hart as Chairman of the Executive Committee for ten years, and afterwards as President of the Society.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

NOTES ON HEALTH RESORTS AND SANATORIA.

SALSOMAGGIORE: ITS WATERS AND BATHS.

By John Harold, L.R.C.P.Lond., M.R.C.S.Eng.,
Late Medical Registrar, Charing Cross Hospital,
and
Percy A. E. Richards, F.I.C., F.C.S.,
Public Analyst to the Parish of St. Martin-in-the-Fields.

Salsomaggiore has, as yet, been but little frequented by English health seekers, and its iodobromine waters seem to be scarcely known in this country.

Salsomaggiore is situated in the province of Parma, about 28 miles from Piacenza, and 20 miles from the town of Parma. It is 520 feet above the sea level, and is practically at the foot of the Apennines. The population of the whole district is about 5,000. To the seekers for health it presents various attractions, and mountains easy of ascent can be readily reached by train. Surrounding Salsomaggiore are little hills dotted with vineyards, gardens, and chalets, whilst not far distant lies the picturesquely-situated Tabiano, with its old feudal castle standing conspicuously on the crest of a hill. The country surrounding Salso consists of undulating and verdant slopes, the lofty Apennines closing in the background, and completing a most attractive panorama. Salso abounds in pleasant walks, and the roads, some of which are shaded by trees, afford suitable opportunities to the cyclist for interesting excursions to—amongst other places—the Castle of Pallavici, the ruins of the Castle of Scipione, and Vigolino with its natural grotto. The Emilia Road, which goes from Milan to Rome, also runs quite close to Salsomaggiore.

One of the roads leading to Tabiano is named after the philosopher Gian Dominico Romagnosi, who was born there, and to whose memory the inhabitants have erected a statue, carved by Margaroli. The ease with which Salso can be reached by rail is important. It is connected with the chief towns of Northern Italy by a light railway, which puts it in communication with the main line passing through Borgo St. Donnino, thereby placing it within about thirty-four hours journey from London, *vid* the St. Gothard and Milan route.

The neighbouring health resort, Tabiano—noted for its sulphur baths—lies but three miles distant, and is a pleasant drive or walk. The air of Salsomaggiore possesses that clear bright property so characteristic of Northern Italy, and, during the bathing season—May to November—rain rarely falls, and the sky is cloudless. The prevailing winds are from the north-west, but a complete series of meteorological observations are not as yet obtainable. A good supply of drinking water is brought from the neighbouring hills—far removed from any possible source of contamination—by a special aqueduct, and this water is likewise used for diluting the concentrated natural water from the Salt Pits, known as the "mother water," the reputation of which, like our own Woodhall Spa, is based on its richness in iodine and bromine. The hotel accommodation at Salsomaggiore has been much improved during the past few years, and the town now contains many well-appointed establishments, the proprietors of which are keen in providing for the comfort of their visitors. In addition to hotels there are many establishments adapted for those who do not care for hotel life, so that the cost of living at Salsomaggiore need not be great.

The chief attraction to the place from a medical standpoint is the reputation its iodobromine waters have so long enjoyed. The knowledge of these waters dates back in all probability before the Christian Era. The springs in the Middle Ages were under the jurisdiction of the Bishops of Piacenza, and from them passed into the hands of the Farnesi about the year 1557. It was not until 1839 that their therapeutical properties were generally recognised, and later, in 1852, the medicinal effects of the diluted "mother water" were tried in cases of scrofula and syphilis. Count Adhemar, who was at that time concessionary of the Salt Pits, erected a bathing establishment which, eight years later, was enlarged considerably, whilst in 1880 a new establishment was built adjoining the old one. This was opened in 1883, and since then it has been enlarged on two occasions—1889 and 1893. The visitors at present number about 6,000 a year. Rooms for inhalations, douches, massage, iodosalt mud baths, and atomised sprays for nasal and faucial treatment in chronic affections of the respiratory tract have also been provided, consequently Salsomaggiore now possesses a well-arranged and extensive establishment of baths so erected as to meet all the requirements of modern balneology. Great care is taken to disinfect all garments, towels, etc., used in the various baths, this being effected by the Geneste-Herscher steriliser. Every garment after being thoroughly washed and aired is placed in the steriliser, and, after disinfection, is delivered by the machine in another wing of the building. The old process of obtaining the water was by manual labour; but this soon proved inadequate, and in 1864 an artesian well was constructed (1,700 feet) which gave a daily yield of about 7,000 gallons. At the present time several such wells are in operation, the principal one having a depth of over 2,200 feet; the average total daily yield of saline water is now about 50,000 gallons. In some of the wells the water reaches the surface spontaneously, being emitted in spurts, accompanied by a considerable amount of petroleum oil and gas. The latter, consisting mainly of methane and other light paraffins, is carried off by separate pipes, and utilised for illuminating purposes in Salsomaggiore. The separation between the water and oil is effected by means of various tanks, the water being siphoned off at the bottom whilst the oil rises to the top. After separation of the petroleum the water is allowed to stand in open tanks exposed to the air, and in about twelve hours loses its bright and clear appearance, becomes brown and turbid as it deposits the iron it contains in the form of ferric oxide.

In order to satisfy ourselves as to the accuracy of the published analyses of the composition of the water at Salsomaggiore, a sample of the clear water was taken as it left the first tank. It gave the following results:

Analysis of Salsomaggiore Natural Water.

Specific gravity (at 15° C.) 1121.
Reaction neutral.
Taste strongly saline.
Deposit distinct and ruddy brown in colour

A litre of the water at 15° C. contained the following constituents:

	Grammes.
Sodium chloride	141.598
Potassium ,, ...	0.620
Lithium ,, ...	0.041
Ammonium ,, ...	0.778
Calcium ,, ...	13.243
Magnesium ,, ...	5.971
Aluminium ,, ...	0.217
Magnesium bromide	0.212
Magnesium iodide	0.069
Calcium sulphate	0.426
Ferrous carbonate	0.133
Organic matter	traces
Total	163.308

Hence, Total chlorine=100.078 g. per litre
,, bromine= 0.184 g. ,,
,, iodine = 0.063 g. ,,

The water, on leaving the iron precipitation tanks, is either stored in reservoirs for use in the bathing establishments or is utilised for the preparation of the "mother water." For the latter purpose the whole of the iron is removed by precipitation with milk of lime added in calculated amount, and then the greater part of the sodium chloride is extracted by boiling down in open pans. This is continued until the density rises to 1265, when the residual liquid is drawn off from the great bulk of salt crystals, and constitutes what may be called the "crude mother water." The salt is then taken possession of by the Government, whose monopoly it is.

On submitting a sample of the crude mother water to analysis, we found it to have the following composition:

Analysis of Crude Mother Water.

Specific gravity (at 15° C), 1205.
Reaction alkaline.
Taste strongly saline.
Deposit slight and of a whitish character.

A litre of the mother water at 15° C. contained the following constituents:

	Grammes.
Sodium chloride	84.224
Potassium ,, ...	7.100
Lithium ,, ...	0.240
Ammonium ,, ...	1.819
Calcium ,, ...	197.218
Magnesium ,, ...	66.124
Magnesium bromide	2.549
Magnesium iodide	0.806
Calcium sulphate	0 350
Calcium hydrate	2 275
Organic matter	traces.
Total	362.705

Hence, Total chlorine=231.556 g. per litre.
,, bromine= 2.216 g. ,,
,, iodine = 0.737 g. ,,

This "mother water," the strength of which varies with the degree of concentration to which it is carried, is suitable for use in baths, and for this purpose it can be diluted to any desired strength. If, however, it is intended for use internally, the calcium and magnesium salts are precipitated as carbonates by boiling with carbonate of sodium, and the supernatant liquid drawn off and then concentrated or diluted as required.

The preceding analyses clearly show how rich the Salsomaggiore waters are in both bromine and iodine, and the following table gives, for comparison purposes, the amounts of these elements present in other well-known waters of a similar character:

Results expressed in Grains per Ten Gallons.

Name.	Iodine.	Bromine.
Kreuznach	1½ grains	25 grains.
Leamington	1 ,,	4 ,,
Woodhall Spa	4 ,,	33 ,,
Aix-la-Chapelle	½ ,,	2½ ,,
Salsomaggiore	41 ,,	129 ,,

In writing about the effects of medicinal waters the debated point always is the question whether absorption takes place through the unbroken skin—what, in short, is the true pharmacological behaviour of the external application in the form of baths of medicinal waters. Writing on the application of Woodhall water, Dr. Robert Barnes[1] states that he has no doubt whatever as to the entry of active agents in aqueous solution through the skin. To insure this entry it is necessary, Dr. Barnes says, that

what one may call the tide of osmosis must be turned inwards by the fasting condition of the body, entailing diminution in the amount of circulating fluids. Hence to obtain the most efficient action by skin absorption the bath should be taken after a comparative rest, and not soon after meals.

According to Dr. Lauder Brunton,[2] the absorption of watery liquids, or of substances dissolved in water, occurs very slightly, if at all, from the unbroken skin. Again, the distinguished Strassburg pharmacologist, Professor Schmiedeberg, states that water can neither penetrate the epidermis nor directly alter it to any material degree. The superficial layers of the epidermis swell up only after protracted bathing. Of course the case is different when we are dealing with morbid portions of skin, or in cases of wounds where the epidermis has been removed. Here the therapeutical effect is similar to that produced on the stomach by the imbibition of large draughts of water. The application of water in the form of a medicinal bath is therefore "a purely physical agent, which exercises those balneologically important effects upon the temperature of the body and metabolism, as well as upon respiration and circulation."[3] In the form of baths the saline ingredients of a water exercise a stimulant effect on the skin, this effect, owing to the resistance of the epidermis already mentioned, being a superficial one. The separate constituents of a medicinal saline bath are quite indifferent, and no other kind of action is therefore imaginable, because the salts are not in the slightest degree absorbed from the watery solution by the skin when perfectly sound. In the form of douches, irrigations, pulverisations—the application of saline waters to accessible mucous membranes—a more powerful stimulation is doubtless produced.

The class of cases likely to be beneficially influenced by the external application of the iodobromine waters of Salsomaggiore comprises tertiary syphilides, chronic rheumatic arthritis, urethral arthritis, scrofulous disease of bones and joints, chronic inflammatory pelvic deposits, catarrhal affections of accessible mucous membranes, uterine fibroids, and chronic neuralgic conditions. Internal administration of the water may supplement that of the baths.

Those who like simplicity of surroundings and quietness, who require the greatest change of all—the change of rest—such as overworked, mentally fatigued, and neurasthenic patients, will find in Salsomaggiore all the conditions they need.

THE SANITATION OF SLAUGHTERHOUSES.

Garbage Cremators and Knackery Appliances.

THE "Dixon Furnace" for burning garbage has now been in use at Dayton, Ohio, for about a year. The four-in-one furnace and buildings cost 33,000 dols., and the working requires about 4,500 dols. a year, the fuel costing 300 dols. a month. Natural gas is used for burning garbage, and coke for heating the ventilating stack. Night soil and the carcasses of diseased animals find their way to this destructor, though as 20 cents. is charged per barrel for burning the former, and the night soil men are only paid 35 cents. for its collection, they are not averse to finding less expensive tips. The conditions are doubtless different in America from those which obtain here. We should regard a destructor requiring fuel as scarcely up to date in England.

A deputation from the Corporation of Nottingham travelled lately to Essen, in Westphalia, not to visit the great Krupp foundry, with its 50,000 employees, but to examine into the working of the Otte desiccators at the public abattoirs. This apparatus (there are two in work at Essen) consists essentially of a jacketted cylinder, 10 feet long and 4½ feet in diameter,

[1] *The Climates and Baths of Great Britain*, p. 577.
[2] *Lectures on the Action of Medicines*, p. 19.
[3] *Op. cit.*, p. 120.

within which is a revolving, perforated drum, containing a roller and certain projections or shovels. The inner cylinder can either oscillate or revolve as required. The diseased meat or other material being introduced to the inner cylinder, steam is turned into the jacket of the outer one, while the drum oscillates and grinds up its contents. Any gases formed are extracted by a pump, and sent into the boiler furnace. Then the pump is stopped, and steam admitted within the apparatus itself, the drum meanwhile revolving and centrifugalising its pounded contents through the perforated periphery. Fat and gelatine find their way into a separator, and steam is turned off from the chamber and into the jacket to desiccate the residue; the partial vacuum caused by the pump, now again at work, assisting the process and preventing smell. The Nottingham Council, we believe, are erecting an apparatus of the kind at their own abattoir, preferring apparently to save the sterilised and separated fat, size, and desiccated flesh and bone to burning all such refuse in their destructor. The dry residue is said to be valuable as a manure, or even, suitably treated (perhaps with a few grains of salt), as a food for pigs.

The report of the visit of the deputation, drawn up by Dr. Boobbyer, contains also a valuable account of the municipal abattoirs at Essen and Cologne. The killing and dressing, as well as the inspection, classification, and subsequent stamping of the meat, is at both places in the hands of Corporation servants. The meat at both places is conveyed to a chilled chamber. The removal of the meat from the cold stores to the shops of the salesman is, at Cologne, in the hands of a company, who employ specially constructed covered carts in which the joints, or even the carcasses, can be separately suspended during transit. Both market and slaughter-houses are on the outskirts of the town.

NAVAL AND MILITARY MEDICAL SERVICES.

THE HEALTH OF THE NAVY.

The Statistical Report of the Health of the Navy for 1896 (ordered to be printed July 28th, 1897) has been issued, and it is in many particulars a very satisfactory return.

As an important starting point it may be noted that the total force in the service afloat in 1896 was 72,620 officers and men, that is, 44,010 between 15 and 25; 20,610 between 25 and 35; 6,940 between 35 and 40; and 1,060 above 45 years of age. The aggregate number of cases of disease and injury shows only a ratio of 911.07 per 1,000 of the mean force, the lowest recorded during the past 40 years. There would be naturally also a decrease in the death-rate, which we find to be 5.28 per 1,000, and the lowest recorded since the year 1856. Nevertheless, it is interesting to observe how one particular circumstance may affect a general statistical statement. Thus, in 1895, in consequence of a more than usual amount of river work on the West Coast of Africa Station, a proportionate amount of malarial fevers helped to swell the total number, but in 1896, with a reduction in the river service, the ratio went down to 632.37 per 1,000, which, of course, very sensibly affected the sum total in the present return.

The cases of disease and injury entered on the sick list amounted to 66,162, which is in the ratio of 911.07 per 1,000, being a decrease compared with the previous year of 48.25 per 1,000, and of 61.17 per 1,000 when compared with the average ratio of the last nine years. The average number of men sick daily amounted to 2,838.14 in the ratio of 39 08 per 1,000. and showed a decrease compared with the previous twelve months of 1.96 per 1,000 and of 2.55 compared with the average of the last nine years. The number invalided was 1,987, that is, 1,847 for disease and 140 for injury, but 688 of the gross number were ultimately able to resume their duties. It is usually found that when foreign invalids reach home, many of them have sufficiently recovered to take on active service immediately, or, at least, after a temporary stay in hospital.

The highest sick-rate, as usual, was on the home station, that is, 41.85 per 1,000, and the lowest on the south-east coast of America, that is, 31.78 per 1,000. The East Indies with 41.3 and China with 41.09 in this respect approach more nearly to the home station, but the average ratio of sickness for the total force was 39.08 per 1,000, which is a decrease of 1.96 when compared with the preceding year. The deaths amounted to 384, 1.32 per 1,000 less than in 1875, and 1.73 per 1,000 less than the average of the last nine years.

The returns from the naval hospitals at home and abroad embody very important information in respect to the local sanitation in each case. Thus, taking the two principal home hospitals for comparison, we find that enteric fever is not even mentioned in connection with Haslar, while 22 cases are returned from Plymouth. Moreover, the medical returns of the home station include 54 cases of this affection with 13 deaths. In the *Vivid* alone 8 cases occurred and 3 in the *Lion*, and it is presumed that the immediate neighbourhood is responsible for the majority of them, as sporadic cases are said to have been not uncommon all over the three towns. Other cases might be adduced to show that typhoid fever making its appearance on board ship is almost sure to have been contracted ashore. There were altogether 155 entries for this disease during the year.

Three cases of plague are returned, namely, one from the East Indies and two from the China station. They occurred in the persons of natives, and all proved fatal. The East Indian case is reported from the *Magdala* at Bombay by Staff-Surgeon Robert H. Nicholson. This case occurred in the person of the warrant officer's cook, a Goanese, while on shore attending to his son, who had died of the same complaint some days previously. He was therefore sent to hospital as soon as possible. There he rapidly developed buboes, first in the axilla, then in the groin, and died of cardiac failure on the fifth day. The whole of his bedding, etc., was immediately disinfected and sunk overboard. The medical officer next furnishes a most interesting report on the plague epidemic at Bombay, its origin, the conditions favourable to its evolution, native opposition to the efforts of the sanitary authorities and all preventive measures. The pathology of the disease, bacteriological investigations, and the detection of a special diplococcus and a bacillus with the results of cultivation on agar agar, etc. This instructive report given *verbatim* occupies about four closely-printed pages of the statistical volume.

At the Royal Naval Hospital, Haslar, under the head of venereal diseases, there has been an increase of 252 as compared with 1895, while at Plymouth there has been a decrease of 246. The appendix, which occupies nearly one-half the bulk of the volumes contains a number of valuable and carefully-drawn-up tables for general reference, and one would say the settlement of the most complex statistical questions.

THE NAVY.

Fleet-Surgeon Myles O'C. McSwiny has been placed on the retired list, at his own request, February 1st. He was appointed Surgeon, September 30th, 1876, and Staff-Surgeon, September 30th, 1888.

Fleet-Surgeon Robert F. Yeo has been placed on the retired list at his own request, February 3rd. His commission as Surgeon dates from March 31st, 1876, and that of Staff-Surgeon twelve years thereafter. Whilst Surgeon of Malta Hospital he received the expression of their Lordships' satisfaction with his efficient performance of his duties during the war in Egypt in 1882.

Staff-Surgeon Alfred M. Page has been appointed to the *Magdala*, February 7th, and Staff-Surgeon Robert H. Nicholson to the *Brisk*, February 7th.

ARMY MEDICAL STAFF.

Consequent on the reduction of the Army Staff of the Tirah Field Force, Brigade-Surgeon-Lieutenant-Colonel R. G. Thomsett returns to his ordinary duty in the Peshawar district.

The following officers have been detailed for duty in Egypt in consequence of the increase of British troops in that command: Brigade-Surgeon-Lieutenant-Colonel H. J. W. Barrow; Surgeon-Majors G. W. Robinson, R. W. Barnes, and J. R. Stuart; Surgeon-Captains A. L. Borradaile and E. S. Marder; Surgeon-Lieutenants E. W. Bliss, S. L. Cummins, and C. H. Hopkins; and Lieutenant and Quartermaster J. Tandy. Of these officers five will be required for service at the front with the troops under command of Major-General Gatacre.

Surgeon-Captain Arthur James Lattey died at Calcutta on February 3rd, aged 28. He was the eldest son of the late James Lattey, M.R.C.S., and entered the Army Medical Service as Surgeon-Lieutenant, July 29th, 1893, becoming Surgeon-Captain three years later.

Surgeon-Lieutenants William S. Harrison, M.B., Harry A. L. Howell, Douglas Lawson, Edwin B. Steel, M.B., Charles W. Profeit, M.B., Frederick Kiddle, M.B., Henry E. Staddon, James A. Murison, M.B., Samuel J. C. P. Perry, and Arthur F. Heaton, having completed three years' full pay service, are promoted to be Surgeon-Captains, January 29th.

INDIAN MEDICAL SERVICE.

The following Surgeon-Lieutenants are promoted to the Surgeon-Captains from January 29th:—*Bengal*: C. J. Milne, M.B., A. F. Stevens, C. H. Bensley, F. H. Watling, M.B., A. Gwyther, M.B., E. J. Morgan, M.B.,

W. Carr, M.B.; J. A. Hamilton, M.B. *Madras:* F. Wall M. Mathew. *Bombay:* S. Evans, M.B.; J. H. McDonald, M.B.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant S. Oliver is seconded for service un the Foreign Office, February 9th.

THE VOLUNTEERS.

Surgeon-Captain John Turville Smith, late Captain 1st Volunteer Battalion the South Lancashire Regiment, resigns his co n ission, and is appointed Lieutenant in the 3rd Volunteer Battalion the ancashire Fusiliers, February 2nd.

Surgeon-Major J. Mackay, M.B., 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders), is promoted to be Surgeon-Lieutenant-Colonel, February 2nd.

Surgeon-Lieutenant W. A. Bond, M.D., 2nd London Rifles, is promoted promoted to be Surgeon-Captain, February 2nd.

The undermentioned officers have resigned their commission , dated February 9th:—Surgeon-Lieutenant-Colonel W. S. Burrows, 1st Sussex Artillery, Eastern Division Royal Artillery (retaining his rank and uniform); Surgeon-Captain A. E. Odling, 1st Volunteer Battalion the Lincolnshire Regiment; Surgeon-Lieutenant B. G. A. Moynihan, M.B., 3rd Volunteer Battalion the Prince of Wales's Own West Yorkshire Regiment; Surgeon-Major H. F. Stokes, 1st London Rifles (retaining his rank and uniform); and Surgeon-Lieutenant W. R. Duguid, jun., M.B., 6th Volunteer the Gordon Highlanders.

Surgeon-Lieutenant J. H. Blakeney, 1st Worcestershire and Warwickshire Artillery, is promoted to be Surgeon-Captain, February 9th.

Surgeon-Major J Macfie, M.D., 4th Volunteer Battalion the Cameronians (Scottish Rifles), is promoted to be Surgeon-Lieutenant-Colonel, February 9th.

MIXED BOARDS.

A board for the selection of sites for some new military buildings was ordered to be assembled last December at Trincomalee, Ceylon, with the still usual announcement, "a medical officer will be in attendance."

THE ARMY MEDICAL SERVICE.

At a recent Conservative banquet in Nottingham, Dr. Giddings, in submitting the toast of "The Army, Navy, and Reserve Forces," among other matters of army reform, spoke out very strongly on the subject of army medical reform. He said: "The blackest and weakest points in the army at the present moment was the Army Medical Department. For years and years the lay medical profession had cried out at the indignities which were heaped upon their professional brethren in the service, and at the unsatisfactory and anomalous position in which they were placed under present day arrangements. . . . . The army and the Empire were dependent on the maintenance of the health of its troops, and the health of the troops was dependent upon the skill and expertness of its army surgeons. . . . . The reforms sought for were perfectly well known to the authorities, and the medical profession he was certain were most anxiously hoping that Lord Lansdowne would not allow the present magnificent opportunity to pass by of removing one of the blackest spots in connection with the present British army."

We trust these remarks will not be lost on the Parliamentary representative in whose presence they were made.

PRESS COMMENTS ON THE DEPUTATION TO THE SECRETARY OF STATE FOR WAR.

The *Globe* somewhat bitterly says it "has religiously opposed the granting of combatant titles to army medical officers, but we admit at once that we have been defeated by the Commander-in-Chief, who has no feelings in this or in any other military matter beyond a determination to reduce everything and every person military to the lowest possible level. . . . . On parade and in official correspondence the new titles must be observed, but on every other occasion I feel sure that 'the doctor' will for every remain the only intelligible title."

Lord Wolseley is well able to defend himself. We thought the titles in question were called "military," but our contemporary now dubs them "combatant," although borne by a host of non-combatants in the army: nor could we guess that the "lowest possible level" these titles could be reduced to would be the conferring of them on army medical officers!

The *Evening Standard* says: "Lord Lansdowne has remedied some complaints, and he sees no objection to the demand for the formation of a Medical Corps. The cumbrous titles in use may be simplified if official ingenuity can find a substitute. Any concession that makes the Service popular will be welcomed by the public."

MILITARY RANK FOR MEDICAL OFFICERS.

N. D. F. writes: As showing the views, at all events of a section of military officers, on the subject of army rank for medical officers, the following is the substance of a recent conversation with an officer of high rank:

He said, if army medical officers persisted in the demand for military rank, an appeal would be made to the civil profession of medicine against them. On being told that would be futile, he then said, "Oh we can get German doctors!" He was then asked, if Holland Norway, Turkey, Egypt, Greece, Servia, Roumania, Switzerland and the United States give their army medical officers military rank, why not in our army? His reply was, "Republics may give such rank, a monarchy could not." When asked whether the medical profession was barred under monarchical institutions against measures considered essential to its development, the reply was "Yes." On being told that was all nonsense, he repeated, "Republics may, but monarchy never!"

If such really be the inward views of high-placed military officers, can we wonder at the fierce resistance towards giving army status to medical officers? It is curious to note that under the same sovereign the rank of medical officers in Sweden is relative, in Norway real. Rank really depends upon the amount of autonomy or responsibility granted or thrown upon a medical corps. In our army the fullest responsibility is placed upon the medical department, yet it is denied army status. Both the abolition of purchase and of corporal punishment were carried notwithstanding the opposition of military advisers, and so will this rank question. The social drawbacks from which medical officers suffer are directly the result of the want of protection which definite army status gives.

MEDICO-LEGAL.

ACTIONS FOR LIBEL.

It appears from the report in the *Great Yarmouth Advertiser and Gazette* that the cases of Collier *v.* Palmer and Collier *v.* Buckle have been happily terminated without trial, the judge at the assizes, after hearing counsel for the plaintiff and defendants, having allowed the cases to be withdrawn. It would appear from the statement of counsel that certain libels were published by Mr. Danby Palmer in the *Yarmouth Mercury*, of which Mr. Buckle is printer and publisher, some two years since in connection with Dr. Collier's conduct with the superintendent nurse at the Yarmouth Workhouse at that time. A similar action on the part of the nurse, it is reported, had already been settled in a similar way. Dr. Collier (counsel stated) had seen his way to accept the terms offered by the defendants, namely, to withdraw every kind of imputation upon his personal character made either by Mr. Palmer or the newspaper, and to pay all his costs incidental to the litigation as between solicitor and client. Mr. Danby Palmer, through his counsel, expressed his sincere regret that he had caused any suffering to Dr. Collier, and desired to make an unqualified withdrawal of the slander complained of, and to express his sorrow that through any unguarded conduct on his part this trouble should have been caused to the plaintiff. In like manner Mr. Buckle, the printer and publisher of the *Mercury*, desired to express his regret that he should have caused any pain to Dr. Collier in having allowed the correspondence complained of to appear in the journal of which he was publisher. We congratulate Dr. Collier on this very satisfactory termination of the case, and the successful vindication of his honour and reputation.

RECOVERY OF CHARGES.

A correspondent submits the following: B., a medical practitioner, is sent for by C. to attend her nephew D., a youth living under her charge. B. in due course sends C. his account. After two years C. calls on B., and wishes a reduction, and says the account is excessive. B. declines; he has been neglected so long; moreover, the charge is reasonable. Can B. by suing in county court obtain payment?

*** On the facts stated we think there is no doubt that B. would be able to recover the amount due from C. by an action in the county court in the usual way.

UNQUALIFIED PRACTICE.

"Member" inquires if it is illegal for a chemist to visit and prescribe, and, if so, what steps can be taken to prevent it.

*** It is illegal for a chemist to visit and prescribe for persons requiring medical treatment, and if particulars of two or three cases are furnished to the Clerk to the Society of Apothecaries, Blackfriars, London, proceedings would doubtless be taken by the Society under the Apothecaries' Act, 1815.

Leprosy in India.—The Indian Legislative Council has passed an Act enabling local Governments to prevent lepers from begging, trading, or annoying the public within the restricted areas and providing for the segregation of lepers under certain conditions.

New Troopship for India.—The *Warren Hastings* (Indian trooper) is to be replaced by a vessel whose design aims at securing in the highest possible degree the health and comfort of the troops by means of improved hospital, latrine, and lavatory arrangements, better ventilation, provision for refrigerating, disinfecting, and drying, and generally to afford sufficient accommodation to meet all the requirements of the trooping season.

Typhus Fever in Skye.—It is reported that no case of typhus fever has been notified since January 7th, but the outbreak has been the most serious which has occurred in Skye for many years. The first case was reported on November 24th, and there have been in all 17 cases with 4 deaths. Some of the patients were isolated in the Portree Fever Hospital, others in the Sconser School, converted temporarily into a hospital. One of the 6 nurses employed contracted the disease, but recovered. All the patients have now been discharged, with the exception of one, who is convalescent. The infection has been traced to a single house, and it is felt that had it not been for the prompt action by the district medical officer (Dr. Dewar) in isolating the infected persons, and obtaining the services of qualified nurses, the epidemic would probably have spread to an alarming extent. On the recommendation of Dr. Dewar the house from which the infection started is to be completely destroyed by burning, as it was reported to be impossible to disinfect it by ordinary means owing to its extremely insanitary condition.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 12TH, 1898.

SMALL-POX HOSPITALS.

Our correspondence columns have lately been the arena of a a passage at arms between most competent disputants on the ever interesting subject of the aërial diffusion of small-pox from hospitals. In his report on the Warrington small-pox epidemic, Dr. Savill concluded "that the diffusion of small-pox by aërial currents as above defined (that is, to a distance of over twenty yards) was not an appreciable factor in the Warrington epidemic; and, further, that a close examination of the facts renders it unnecessary to assume any such hypothesis." Our reviewer very naturally concluded that this referred to Warrington, but Dr. Savill wrote to explain that what he had meant was that in all circumstances "the theory is untenable," and it is to this misunderstanding that we owe the correspondence. This being so, though the question is perhaps one of the most interesting in present day epidemiology, we are glad to be able to agree with Dr. Savill that in its practical aspects it is of comparatively little importance. Here there can be no misunderstanding, yet, for the sake of clearness and convenience, we cannot do better than adopt the language of the Warrington report: "The question whether small-pox will spread through the air to a distance is, from a practical point of view, not one of very prime importance, since, on account of the ignorance and foolishness of patients and their friends, and the inevitable human fallibility of members of the staff of a hospital, it is very difficult—at least it would seem so—to prevent a highly infectious disorder, such as small-pox, being spread around a hospital by these means. At any rate, spread often does occur. In selecting, therefore, a site for the isolation of this disease, it is well, on these grounds, to choose one at some distance from a densely-populated area."

It is very important to emphasise this wise and lucidly expressed deliverance at the present time. Indeed, in the correspondence, nothing has struck us so much as the indication of a tendency to think that if aërial diffusion, either as a fact or as a theory, could be got rid off, difficulties as to sites for small-pox hospitals would also, at least to a great extent, be got rid of. Now, in one sense, this notion may be true. If a sanitary authority were told that there was no possibility of aërial spread of small-pox, then, in looking for a hospital site, it might well forget that "inevitable human fallibility" had also to be guarded against, and that this of itself meant that the hospital should be away from a densely-populated area. No doubt sanitary authorities in these days are meeting with great trouble in trying to find safe, and at the same time convenient, building ground for small-pox hospitals. But that should never be made the excuse for spending public money in placing hospitals in situations which would be likely to make them spread small-pox, either aërially or by human intercourse. If the aërial theory be untrue then the inevitability of spread by other means becomes practically demonstrated. In London the Metropolitan Asylums Board bent all its energies to the task of preventing small-pox infection from the hospitals which it had built at so great a cost. Everything that skill and experience and financial resources could do was done to check this evil, and everything so done resulted in miserable failure. This fact must be looked upon as strong evidence of atmospheric diffusion, but if it be argued that this was not so, then in the face of such experiences how can we ever hope to prevent spread by ordinary means from hospitals situated in or very close to populous places? It would be the height of folly for local authorities to neglect the lessons taught by London. The erection of such hospitals, while getting rid of temporary difficulties, would in the end do much to bring sanitary administration into well deserved contempt. The fact is that no one need have any hesitation in considering the theory of atmospheric diffusion strictly on its own merits, for its disproof would matter little or nothing as regards the selection of safe sites for small-pox hospitals.

And now we are free to refer very shortly to the theory itself. Dr. Savill argues that it is very difficult to get perfectly unequivocal evidence. Independently of distant aërial conveyance, he has formed the highest opinion of the ability of variola to find ways and means of spreading from persons and things, and hence, at least in part, the strength of his opinions both as to the need for extra-urban sites and as to the impossibility of proof of the truth of the aërial theory. In such circumstances Bishop Butler's views on evidence are very much to the point. In his *Analogy of Religion* he writes: "In questions of difficulty, or such as are thought so, where more satisfactory evidence cannot be had or is not seen, if the result of examination be that there appears on the whole any, the lowest presumption on one side and none on the other, or a greater presumption on one side though in the lowest degree greater, this determines the question even in matters of speculation; and in matters of practice will lay us under an absolute and formal obligation in point of prudence and of interest, to act upon that presumption or low probability, though it be so low as to leave the mind in very great doubt which is the truth." If therefore the question of sites really did depend on the heed to be paid to the aërial theory, the mere fact of the theory being in the nature of things very difficult to prove would be no reason for refusing to give effect to it in practice. Inherent difficulties as to proof for or against the theory would lead rather in the opposite direction, and the responsibility of building a small-pox hospital within city boundaries would be a very serious one in the absence of certainty that the hospital could do no harm. For any prudent local authority the question of site, indeed, would have to depend on the difficulty of disproof rather than on the difficulty o proof.

Dr. Savill's notes on the workhouse and brewery experiences are worthy of very careful attention, and cannot be neglected by any student of the question. "Epidemiologist" showed that in the workhouse near the hospital there really had been excessive prevalence of the disease, but the infection seems at least explicable in the manner stated by Dr. Savill. It would be interesting to know whether the circumstances of workhouse life compared with the life of the ordinary population, and the time spent indoors and out of doors would affect favourably or unfavourably the risks of aërial infection. When another opportunity arises it is to be hoped that a careful census of any such workhouse population will be made, stating ages, the number of persons who have previously had small-pox, the number of the vaccinated, and the dates of vaccination, and the character of vaccination marks, and other relevant points. As regards those Warrington works whose employees were going freely about the neighbourhood, and yet escaped with comparatively little small-pox, there are some people, even in the medical profession, who are so blind to evidence as to believe small-pox to be a very slightly infectious disease by any kind of agency, either aërial or direct, and they might claim such facts in support of their opinions. On the other hand, Dr. Buchanan has pointed out the curious persistence with which small-pox prevails in the neighbourhood of small-pox hospitals, and that its prevalence diminishes according as the distance from the hospital increases, and that ordinary routes of traffic are not specially favoured by the disease. We have already noted how ineffectual were all the efforts made in London to prevent this hospital influence; and it is not easy otherwise than by atmospheric conveyance to account for the way in which occasionally a simultaneous infection manifested itself here and there all over a neighbourhood, the infection being characterised by a graduated incidence with relation to the adjoining hospital. On the whole we are afraid that Bishop Butler's teaching would not lead to a rejection of the aërial theory, even as a working hypothesis if that were necessary, and it almost looks as if the theory had come to stay.

REGULATIONS FOR MEDICAL OFFICERS OF HEALTH AND SANITARY INSPECTORS IN SCOTLAND.

Under the Public Health (Scotland) Act of 1897 local authorities are required to regulate the duties and relationships of medical officers of health and sanitary inspectors, subject to the approval of the Local Government Board. Under the former Public Health Act the framing of regulations was optional, but the central authority, then the Board of Supervision, formulated a model code, which they sent down to local authorities over the country, with a strong "recommendation," which was generally accepted as a command, that it should be adopted.

In addition, the Board of Supervision issued codes of regulations, under the Local Government Act, which they "recommended" should be adopted for sanitary inspectors of counties. A perusal of these regulations suggests the reflection that the appointment of county medical officers was a work of supererogation. The sanitary inspector was to "afford the County Council information and advice on all matters affecting the sanitary condition of the county." He was even to "give advice" to the county medical officer. On receiving information that any disease had become epidemic in any part of the county, he was to co-operate with the local authority and their sanitary inspector in carrying out the measures required for preventing the spread of the disease! He was to report to the County Council whenever it appeared to him that the Public Health Acts were not being properly put into force in any district. In his annual report as district sanitary inspector he was required to report as to "the character of the house accommodation of the labouring classes," and as to "the means of isolation of persons suffering from infectious diseases"! This surely was antimedicalism run riot. The result might have been foreseen.

There was conflict of jurisdiction between the medical officer and the sanitary inspector. There was jarring and clashing. Again and again the aid of the Board had to be invoked to quell the spirit they had raised. But they felt bound to adhere to their dictum that it was incompetent to place the medical officer at the head of the Health Department.

With the new Public Health Act a new condition of affairs supervened. Local authorities were expressly endowed with powers to arrange the relations of the sanitary officers to one another, and that notwithstanding an extraordinary provision of the Burgh Police Act, to the effect that the sanitary inspector was to "superintend and execute the Public Health Acts." The new Act is, broadly, based on the English and London Public Health Acts.

The Local Government Board for Scotland is more modest than its predecessor. It has not suggested that local authorities should swallow a cast-iron official code, but in issuing a draft code of regulations for medical officers of health and sanitary inspectors to such local authorities as may apply to them, the Board has rendered a great service to the community. As the new Public Health Act is based on the English Acts, so, most naturally, the model regulations of the Scottish Board run on the same lines as the regulations of the English Board, and thus, broad-founded upon precedent, they are not open to any charge of partisanship to which any other course of procedure might have rendered them liable. Some additional regulations, consequential to provisions of the new Act, have been introduced. Every local authority in Scotland should apply for copies of this most valuable and suggestive model code.

HOSPITALS AND WORKING MEN'S CONTRIBUTIONS.

We do not know whether it is of any use to comment further on the affairs of the Newport Infirmary as far as individuals are concerned. We learn, from a report of the annual meeting of the subscribers, published in the *South Wales Argus* of February 1st, that "a cordial vote of thanks" was passed by acclamation to the medical staff, including Mr. Ensor, the mover saying that "these gentlemen did all they possibly could for the good of the institution," and also that Mr. Ensor's dismissal was approved; and now we hear that his successor has been appointed. The personal question, then, seems to be ended, but we should like to call the attention of our readers to what we regard as a very grave question of hospital management which arises

out of this lamentable dispute. The annual report of the directors contains this passage: "Time with its ceaseless change may by-and-by necessitate alterations in the character and working of the hospital; and such possibility was referred to in the directors' last report. Formerly, working men had neither the means nor organisation which now enable them to contribute so largely to its funds. Should it be found hereafter that the institution is regarded in the nature of a provident association, or a sick club, then a charge could not be long delayed. At present, it is believed due care is exercised in the distribution of notes of recommendation, and for one-third of working men's subscriptions, no equivalent is asked."

Our readers will doubtless remember that Mr. Ensor's complaint referred to two cases, both of them recommended by a club of workmen who subscribed from the works of a large manufacturing firm, and who directly threatened the withdrawal of their subscription if the patients were refused treatment. Neither case was urgent. The father of one applicant was earning 45s. a week, and in the other case the applicant (a lad) and his father earned more than 50s. a week between them. If trivial cases are to be treated as out-patients under such circumstances as these, is it not obvious that the hospital is indeed being regarded as a sick club—only with the difference that the doctor is unpaid?

Now, will such a state of things be allowed to continue? No one can say that any element of charity enters into the matter in any way. The workmen are quite able to pay the ordinary fees of a club or provident dispensary; the cases are such as could well be treated at such an institution; the patients are in no danger and do not need any exceptionally skilled treatment; there is no statement even of what sums the parents contributed to the workmen's fund, if any. And yet the surgeon is ordered to attend the cases, and because he refuses is dismissed.

That the dismissal may be technically justified because Mr. Ensor refused to obey the commands of the directors is quite possible; but can such management be justified? If the infirmary is really a workmen's sick club and is dependent on the contributions which, according to the report, the workmen give "so largely to its funds," it should, like other clubs, pay its doctors, though even then strict rules should exist by which well-to-do persons are prevented from getting attendance for a wholly inadequate payment. But if it claims to be a charity definite rules should be made and enforced whereby persons are excluded who can in no respect be regarded as objects of charity.

We do not mean, of course, that a working man, or a member of his family, is not a fit object for hospital relief in grave emergencies—for example, when requiring a major operation; but to sell the out-patient department of the hospital to a workmen's club for two-thirds of the coin subscribed is a wholly unjustifiable abuse. And this, if we understand right, is what the Newport plan comes to. The club subscribes so many pounds, and tickets are issued to the assumed value of two-thirds of the sum. If any of those tickets are not honoured, the club, knowing that it is the paymasters, threatens to withdraw its subscription, and the doctor is at once told to do the bidding of his directors, or he will be dismissed. Throughout the whole transaction he is looked on by both sides as the mere servant of the lay governors. True, like other servants, he can withdraw, but he has had no voice in making the laws under which he acts, and no part in investigating any case of which he complains.

In the instance before us the directors decided that the man earning 45s. a week was justified in sending his daughter to the hospital because he was temporarily out of work from an accident, as if "medical providence" had never been heard of; and in the second case in which the father earned 35s. a week and his son either 18s. or 24s. (for two different figures are given) that the son's earnings alone were to be reckoned. These, of course, are only excuses on the part of the directors for not offending their supporters. But if such a system became prevalent the hospitals would be captured by the higher grade of working men, who would use the contributions of the governors for the purpose of providing themselves with medical relief for wholly inadequate fees, and, as far as the medical officers are concerned, for no fees at all.

We have in this article only touched the fringe of a large subject. There are many other questions with relation to patients' contributions in general which demand very careful consideration at the hands of the medical profession.

WESTERN MEDICINE IN CHINA.

A little over four years ago Surgeon-Major Heuston, A.M.S., was appointed European Director of the Imperial Medical College at Tientsin, and we published a description of the College, with illustrations and an account of its organisation. The scheme was to educate Chinese students in Western medicine, and Surgeon-Major Heuston, with the powerful support of Li Hung Chang, then in the zenith of his power, was able to lay down a regular curriculum, and begin work with three Chinese who had received their education at the Viceroy's Hospital at Tientsin to act as assistant teachers. Elementary instruction was given by these Chinese assistant teachers, and the director himself gave more advanced instruction in all the subjects of the medical curriculum. Clinical instruction was given in the local hospital under the direction of Dr. Irwin. The students were diligent, and some of them showed marked ability. A scheme was then worked out and received official approval under which some of the cleverest would have been sent to continue their studies in European medical schools, with the expectation that they would eventually return to China to act as teachers. The whole complexion of affairs, however, was changed by the Japanese war. Li Hung Chang fell from power, and to escape from the too pressing attentions of impecunious officials in Pekin gladly started on his pilgrimage round the world, taking with him Dr. Irwin. The new viceroy and his satellites were afflicted with the true Chinese pride of race and contempt for foreigners. Some of them possessed also the truly Chinese conviction that any public revenue which did not find its way into their own pockets was misapplied. An effort was made to capture the College by ousting the European director. This was defeated, and the Chinese schemers realised that the attack on his position must be made by a flank movement, the Chinaman being no match for the Irishman when it comes to a direct assault. Surgeon-Major Heuston then found that first his assistant teachers, and then his students, were being subjected to various annoyances, including imprisonment on trumped-up charges. When Dr. Irwin went away his place at the hospital was filled by stopgaps, who did not, it is said, take a very serious view of their duties, and when he returned he could not obtain reappointment. The hospital was allowed to remain empty, or nearly so, so that the students could obtain no clinical instruction worthy of the name. Wearied out by a continual fight against obstruction and corruption, Surgeon-

Major Heuston declined reappointment when his four years tenure of office expired, and has returned to service in the Army Medical Staff. He carries with him extremely polite letters from the Chinese officials, eulogising his services, and promising him further Imperial honours, which, however, will not compensate for the fact that the work of the last four years would appear to have been thrown away, and that the Tientsin Medical College may only too probably soon have to be reckoned among those efforts for the opening up of China which have failed owing to the defects which appear to be inherent in Chinese administration. It is, however, satisfactory to know that eleven of the senior class of students have passed their four yearly examinations, and completed the full course of studies, obtaining high marks from examining Boards composed of qualified medical men in no way connected with the College, and may therefore be considered as qualified exponents of Western science. It now rests with the advisers of the Chinese Government, of whatever European nation they may prove to be, to decide as to how the remaining students shall be treated, and as to whether the only College and hospital established by the State in China shall hereafter prove a disgrace or a credit to that country.

A REMEDY FOR BABY FARMING.

THERE is no doubt that a wide scope exists for philanthropic enterprise in assisting to check the abuses and lessening the evils of baby farming. Perhaps if years ago a strong organisation had been formed among philanthropic ladies with the sole purpose of meeting the difficulty of providing for illegitimate children whose mothers are compelled to work for their support, an Act dealing with the protection of infant life would not have been necessary. Somehow, however, despite the obvious benefits which such an association could confer, no effort has ever been made to found one. Women are generally hard upon members of their own sex who stray from the paths of virtue, and it may be that this sentiment of "no compromise" has had much to do in preventing the realisation of a scheme of this nature. We are glad, nevertheless, to see that the subject has been broached, and that, on paper at all events, it cannot but appeal strongly to those who are both desirous and willing to help their fallen sisters. A lady in the current number of the *Fortnightly Review* contributes an article explaining in a most practical way how such help could be administered. She describes her scheme as "a remedy for baby farming," pointing out that with the concerted action of philanthropic women, carrying on their work in conjunction with lying-in hospitals, parish doctors, and midwives, the necessity for baby farms would soon tend to cease. "The most important part of the scheme," she writes, "is the creation of an organisation consisting of a central committee of ladies and members in every town and district, whose services, knowledge, and counsel would be available to the inexperienced, ignorant young mother, anxious to work for her infant, and utterly at sea as to any safe refuge where it can be placed." Organised upon such a basis, no doubt, the scheme could not fail to be immensely useful. Moreover, all the official duties of inspection and supervision would be carried out by women, thus rendering the work of the Association as little as possible objectionable to those whom it was designed to benefit. Furthermore, the Association would provide financial assistance to those mothers who were unable, from their very limited means, to pay the whole cost of the child's maintenance. In short, the whole scheme would have for its main object the humane provision for illegitimate children who are now still imperfectly protected by the Infant Life Protection Act. It is quite possible, then, to conceive under these circumstances that its operation would in time lead to the cessation of the baby-farming system, the horrors of which, even under the new Act, are never likely to be entirely suppressed. The only exception which it seems possible might be taken to a scheme of this nature is that it might be urged that to make such excellent provision for the care and maintenance of illegitimate children would be equivalent to making the penalty of this form of immorality too light. But an objection of this kind could not seriously be considered. Reflection would show that an act of immorality is not one of premeditation, but an impulse of the moment.

MUNICIPALITIES AND WATER GAS.

IT appears to be necessary again to direct attention to the persistent attempts of certain municipalities to introduce such a dangerous product as carburetted water gas, in spite of sound advice to the contrary. Carbon monoxide, owing to the fact that it has no smell, is properly regarded as a most subtle and poisonous compound. Since it is of a very low specific gravity it diffuses readily into the atmosphere, and with its strong affinity for the hæmoglobin of the blood, from which it is with the greatest difficulty dissociated, people may be exposed to its presence and breathe it unawares, and ultimately become unconscious. Water gas seldom contains less than 30 per cent. of carbon monoxide, and for such a large quantity of carbonic oxide to be added to ordinary coal gas, whatever its advantages as an illuminant may be, is certainly to court danger. Even when a very small quantity of carburetted water gas escapes through a leaking pipe into a house it cannot but be prejudicial to health, and be the cause of illnesses that are badly defined, but of which anæmia, headache, lassitude, and certain neuroses are prominent features. Town councils should hesitate before rashly committing themselves to the purchase of plant, and the production and supply of a gas the inhalation of which is generally admitted to be injurious to health. Apart from the health side of the question, the economical also should be studied. Glasgow tried water gas for three years, and renounced it simply because it could not be produced at anything like the same price as coal gas. The sanitary aspect of the problem is, however, of greater importance than the financial.

UNIVERSITY CHAIRS.

AT the present time, when the public mind is turned so much towards questions connected with university education and the foundation of university chairs, a recent issue of the *Cambridge University Reporter*, containing a complete list of University officers, is not without a special interest. It appears that there are altogether forty-two professors in the University of Cambridge. Of these, five, or if we include the Professorship of Ecclesiastical History, six, are divinity chairs; three belong to the faculty of laws; eight professors are charged with the teaching of various dead languages; there are two chairs of moral and mental philosophy, one of Political Economy, one of History, one of Archæology, one of Fine Art, and one of Music. There are six chairs concerned with mathematics, physics, or astronomy, and one with Applied Mechanics. In science there are chairs of Chemistry, Geology, and Mineralogy, and two chairs in biology—the Professorship of Botany founded in 1724, and that of Zoology and Comparative Anatomy founded in 1866. In the Medical Faculty there are six chairs. The oldest is the Regius Professorship of Physic, founded in 1540 at the same time as the Regius Professorships of Divinity, Civil Law, Hebrew, and Greek. The next in order of seniority is the Chair of Anatomy, founded in 1707; the next the Downing Professorship of Medicine, founded in 1801. The chairs of Physiology and Surgery were founded in 1883 and that of Pathology in 1884. In addition to the professorships there are seven Readerships, two of which—those of botany and animal morphology—deal with biological subjects. Lastly, there are the University Lecturers, who number thirty-nine and include eight who are engaged in the teaching of physiology, anatomy, medical jurisprudence, medicine, surgery, and midwifery, and six others who are concerned with subjects nearly related to medical education. Altogether

we arrive at a total of eighty-eight officers recognised as Professors, or Readers, or University Lecturers. As has been said, many of the chairs are old foundations, and no doubt if the University could be constituted again at the present moment the distribution would be somewhat different: but it cannot for a moment be supposed that the staff is numerically in excess of the needs of a great University. It may be interesting to compare Cambridge with a German university, and for this purpose the University of Heidelberg may fairly be taken. There are five Faculties, and in each faculty there are professors, extraordinary professors, and *Privat-docenten*. If we excluded the last class of teachers, and reckon the Readers and University Lecturers at Cambridge as equivalent to the extraordinary professors at Heidelberg, we shall at least not be unfair to the former seat of learning. We find then that there are at Cambridge all told 88, whereas at Heidelberg there are 109. In the medical faculty we find at Heidelberg 27, at Cambridge 14, so that it would seem that in numbers at least it cannot be pretended that Cambridge has an excessive staff in its medical faculty, but rather the contrary. The same is true of the faculty of science.

THE DANGEROUS TRADES' COMMITTEE.

Last week the Dangerous Trades' Committee of the Home Office, which is composed of Mr. H. J. Tennant, M.P. (Chairman); Mrs. H. J. Tennant, formerly Her Majesty's Superintendent Inspector of Factories; Professor T. Oliver, M.D., Newcastle-upon-Tyne; and Commander Hamilton Smith, Her Majesty's Inspector of Factories (Secretary), visited Birmingham and the neighbourhood with the object of inquiring into the operation of certain trades that are alleged to be injurious to the health of the workpeople. The Committee sat at the Grand Hotel, where several witnesses attended, and a considerable amount of evidence was taken. In its inquiry the Committee received valuable assistance from Mr. Seymour Knyvett and Major Roe, Her Majesty's local Inspectors of Factories. The industries visited in Birmingham were lithographing works, in which metallochrome powder is employed, and glass polishing, in both of which, since lead is used in one form or another, several of the workpeople have suffered from colic, wrist drop, and other symptoms of plumbism. The galvanising of iron was also inquired into, owing to the fumes of the molten spelter, which contains lead, having been stated to be deleterious to health. Redditch in Worcestershire, and Studley in Warwickshire, were also visited. In these seats of the needle trade precautions are adopted for testing the soundness of grindstones preparatory to running them. The Committee extended its inquiry to Droitwitch, with the view of ascertaining what means have been adopted for the safety of the workers at the salt pans, and to Wolverhampton, where the galvanised-iron industries that employ female labour were visited, and the trades engaged in the tinning of kettles inspected.

THE PROPOSED WESTMINSTER IMPROVEMENT SCHEME.

The fortunes of the "Bill to authorise the construction of an extension of the Victoria Embankment and certain street improvements and the taking of lands in the parish of St. Margaret and St. John the Evangelist, Westminster, in the County of London, and for other purposes," which is to be introduced in the coming session of Parliament, should be watched with interest, as the measure involves considerations of much public importance. The Syndicate which is promoting the Bill has undertaken a scheme of great magnitude. Doubts have been expressed as to whether the proposed capital of one million will prove adequate for the purpose, and it may be noted that the company asks for power to borrow a further sum of half a million on mortgage or bond if necessary. The area which it is intended to acquire extends "southward along the foreshore of the River Thames from the southern end of the garden adjacent to the Victoria Tower of the Houses of Parliament to the northern end of Lambeth Bridge, and from the precincts of Westminster Abbey and Dean's Yard to Horseferry Road; and westward from the River Thames to the premises of the Gas Light and Coke Company." The London County Council has a scheme for the widening of Millbank Street to 60 feet, but the Syndicate's proposals dwarf this project almost to insignificance, involving, as they do, several considerable street improvements, the extension of Victoria Embankment, and the clearance of what has been dubbed the Hinterland, the streets and alleys which lie at the back of the area immediately abutting upon the river. The promoters point out that a large portion of the area referred to is at present occupied by a class of buildings which are very unsightly and unsuitable to the neighbourhood of the Houses of Parliament and Westminster Abbey. Those who know the locality will endorse this opinion, though a critic of the scheme has insisted upon the antiquarian interest of the Hinterland. He even speaks of three old streets "full of charm and homely dignity, impressed with the quietude of a cathedral city, and for the most part occupied by dwellers whose appreciation of these attractions has brought them there." How much depends upon the point of view! The promoters further alluded to buildings "which from their insanitary condition might at any moment become a hotbed of epidemics, and be a positive danger to the community at large." Here, again, the critics complain, and apparently with some justice. The medical officer of health (Dr. Norton) is said to have characterised the statement as "absolutely untrue." Perhaps the discrepancy is in part accounted for by the fact that the Syndicate have in view some particular alley or group of houses, while the objectors are thinking rather of the sanitary condition of the area as a whole. The statement that the proposed improvement will have the effect "of making sanitary one of the most insanitary districts in London," has led to a comparison being made by "a resident in the Hinterland," between the statistics relating to certain notifiable diseases as they affect some of the principal streets proposed to be acquired, and other parts of Westminster. Most important, perhaps, of all considerations, from a public health point of view is the nature of the provision to be made for persons displaced from the area. If the chief outcome of the scheme is to be, as is suggested, the erection of a number of large residential flats, those inhabitants of the Hinterland who look for "charm and lonely dignity," and appreciate the "quietude of a cathedral city," may perhaps not look in vain; but what is to become of those Hinterlanders who live more than two in a room in tenements of less than five rooms? This section of the population constituted upwards of 20 per cent. of the whole population of Westminster at the census of 1891, it may be assumed that they constitute no inconsiderable proportion of the inhabitants of the Hinterland. The nature and extent of the accommodation to be provided for them needs to be carefully considered, should the scheme be proceeded with, for otherwise the improvement will seriously aggravate the overcrowding difficulty, which is clearly already sufficiently serious in Westminster.

THE VITALITY OF THE PLAGUE BACILLUS.

In a report presented to the Surgeon-General of the Bombay Presidency, Mr. E. H. Hankin records certain investigations into the vitality of the plague microbe in the soil, in urine, in cow dung, in the chief grain exports from Bombay, and into the action of disinfectants on it. Mr. Hankin found the isolation of the plague microbe, when mixed with the microbes commonly present in dirt, to be almost impossible, and he doubts Yersin's statement that the plague microbe can be found by existing methods in the soil of infected localities. An attempt was made to obtain some idea of its probable behaviour in the outside world by testing the duration of its life in various substances that might possibly act as its nidus. This was done by adding the plague microbe to

the substances to be tested after they had been sterilised. In acid urine it was found that the microbe could remain alive for twenty-four hours. In acid human fæces it appears to die out sooner. Similar results were obtained with acid cow dung, but in alkaline cow dung the plague microbe appeared to be able to keep alive for four days. Grain which has fermented usually acquires an acid reaction, and it was found that the plague microbe died out within twenty-four hours when placed in sterilised liquid obtained from putrid grain. Mr. Hankin was unable to confirm the statement of Wilm and Abel, that the plague bacillus could remain alive in sterilised water for many days or even weeks. Cultures of the plague microbe added to different grains usually exported from Bombay perished within thirteen days. Mr. Hankin confirmed the views of Kitasato and Abel that the plague microbe is not particularly sensitive to carbolic acid. Phenyl, a distillation product containing various phenols and cresols, appeared to be more active; while izal was still more active, for in a strength of 1 to 500 it appeared to kill the microbe in five minutes. But as phenyl and izal are insoluble in water, and merely form an emulsion, it is questionable whether their activity would be as great under the conditions that exist in Nature. This objection cannot be raised against lysol, which seems to be equally efficacious. Napthalin had no disinfectant action. Formic acid 1 in 100, acetic acid 1 in 142, lactic acid 1 in 333, nitric acid 1 in 333, hydrochloric acid 1 in 500, sulphuric acid 1 in 1,429 destroyed the plague microbe in five minutes, while permanganate of potash in a strength of 1 in 10,000 destroyed the microbe. On the whole, however, Mr. Hankin suggests that the disinfectants to be used for infected buildings should be sulphuric acid 1 in 250, and a solution of corrosive sublimate 1 in 1,000 to which hydrochloric acid in the proportion of 2 in 1,000 has been added. We doubt very much whether the strength of the corrosive sublimate would effect the object in view, for we have known of corrosive sublimate double the strength proposed being ineffective in sterilising soils.

OVERPRESSURE IN SCHOOLS.

We referred recently to the investigations of Dr. Kemsies, the headmaster of a large German school, into the relative fatigue value of various school classes. As the matter has an important bearing on overpressure in schools, it may be of interest to explain the method which Dr. Kemsies followed, a method which appears to be in accord with those of the newest school of experimental psychology. Dr. Kemsies's first article was published in the *Deutsche medicinische Wochenschrift*, for July 2nd, 1896; but before this Mosso had written on the subject, and Sikorsky, and also Dr. Laser, of Königsberg, had noted the time at which mental fatigue became apparent, by examining the results of the lessons in dictation and arithmetic, and noting down the point at which the mistakes began; by examining the whole class they found that the onset in time of mistakes in spelling or want of attention in sums was fairly constant in the majority of the class. Dr. Kemsies asserts that he has obtained a more scientific result by employing an instrument called the ergograph, invented by Mosso. The half-supinated arm is attached to a horizontal support, a cord from a ring round the middle finger passes over a pulley and carries a weight, the hand is kept in position by two tubes, into which the index and ring fingers are inserted; the successive elevations of the weight by flexion of the middle finger are recorded on a revolving cylinder. In this manner curves are produced showing the fatigue of the muscle. Mosso pointed out that the fatigue curve was characteristic for each person, and that the amount of work done by the muscle could be expressed in terms of work as kilogrammetres; he also showed that mental fatigue, in so far as it affected the general nutrition of the body, could also be estimated in kilogrammetres. Acting on this suggestion, Dr. Kemsies employed the ergograph systematically for a year in two large schools in Berlin. Curves were taken before and after lessons, and the particular lesson was noted. The general result of these experiments was that the pupils showed greatest fatigue after gymnastics. With regard to mental exercises, mathematics headed the list; then came foreign languages, religion, and history; natural history showed least fatigue. A specimen of a day's experiments is as follows: After 9 hours' sleep, 5,657 kilogrammetres; after 1 hour lecture, afternoon, 4,086 kilogrammetres; after walk and bath, 5,282 kilogrammetres; after evening lesson, 4,094 kilogrammetres. The fatigue passes off again after two hours from its commencement, if the lesson has been changed.

A MEDICAL DICTATOR.

The Governor of Jamaica, not content with threatening, has actually dissolved the Kingston Town Council. Their impotence for good was sufficiently manifested at their last meeting, when the Mayor stopped all criticism by dismissing the Council at the very beginning of the agenda. The snubbed members met, drew up a protest, and sent it in duplicate to the Governor and the Mayor. The former next day dissolved the Council, and appointed a medical commissioner to the sanitary control of the city. Mr. Ogilvie, we believe, formerly held the chief magistracy of Kingston with very general approval. He knows the town and its sanitary needs. Unfortunately his dictatorship lasts only a few weeks, when the citizens will, however, have an opportunity of showing their approbation or otherwise of their late rulers. Much, however, may be done executively in a month. Let us hope when a new Council assembles the members will pull well together, and rid the fair city of the western isle of its present unenviable notoriety. Since the above was written we learn that U. S. Consul Dent has certified Jamaica as free from yellow fever. His newspaper critics are now inclined to revise the nice "derangement of epitaphs" with which they greeted his frank communication on the state of the island three months ago. It is to be hoped that the newborn zeal for sanitary improvement will not grow cool because the particularly infectious malady has temporarily disappeared. There are enormous arrears of work of an elementary sanitary character yet to be cleared off in some parts of the island.

POVERTY, IGNORANCE, AND THE DEATH-RATE.

The parish of Kensington presents a noteworthy instance of how a certain locality may furnish, by reason of the poverty, ignorance, and vice of the inhabitants, a death-rate which is very largely out of proportion to that of the whole parish. For the past two years Dr. Orme Dudfield, the medical officer of health, has directed the attention of his Sanitary Committee to "The Notting Dale Special Area," the dwellers on which furnish a recorded death-rate which is three times as great as that of the parish as a whole. The vestry, on the advice of their medical officer of health, has, of course, done much to make the area more sanitary. Several streets have been paved, sewers have been ventilated by high shafts, a house-to-house inspection of the area has been carried out, and a large number of sanitary defects in the houses have been remedied; the paving of yards and the trapping and ventilation of house drains are also important matters which have received attention, and as many houses as possible have been placed upon the Register of Houses-let-in-Lodgings. The saddest part of the story of such areas is well illustrated by the case in point, for here, as in too many instances elsewhere, the efforts of the Sanitary Department have failed to reduce the excessively high death-rate. The Notting Dale Special Area has a population of about 4,000, and the death-rate in 1896 was 50 per 1,000; in 1897 it rose to 55·7, and the rate of infantile mortality for that year was 431 per 1,000, that is to say, nearly half of the children born on this area died before one year of life was completed. The reason why these measures have borne so little fruit is not far to seek. It is mainly the conditions of the homelife

of the people which determine such high death-rates, and the remedy lies in the amelioration of these conditions. The remedy is extremely difficult of application; but the inclusion in our system of compulsory education of a little elementary instruction on the laws of health and disease prevention and on the rearing of children would in time remove much of the parental ignorance which is responsible for so many deaths each year among those who occupy the poorer parts of our large cities. It may be hoped that it would tend also to breed a more general desire among them for cleanly and wholesome lives and surroundings. The removal of all "rookeries," and their replacement by suitable model dwellings—the tenancy of which is subject to strict regulations, would do a great deal towards reducing the number of deaths which result directly or indirectly from vice; while repeated visits from the clergy and other district visitors, the establishment of recreation grounds, reading rooms, and *crèches* in such areas would also be productive of much good.

THE EXPANSION OF ABERDEEN UNIVERSITY.

The extension scheme of Aberdeen University has for some time been proceeding under difficulties, but new circumstances have arisen which may reasonably give some hope of more speedy progress in the near future. While excellent provision has been made in the new buildings for several departments, others are in urgent need of improved accommodation, and want of funds has recently brought matters virtually to a deadlock. Negotiations with the Town Council have been on foot relative to the completion of the scheme, but a new feature has arisen owing to the munificent offer by an anonymous donor of £10,000. This offer is made on the condition that £20,000 is obtained from Government for the same object. The Chancellor of the Exchequer has agreed to receive a deputation on behalf of the movement. It is much hoped by the friends of the University that these sums will be subscribed, as further assistance may be expected from the town should the £30,000 be thus raised. With these moneys the buildings should be in a fair way towards completion at no distant date.

JUVENILE PAUPER EMIGRANTS.

Among the defects in Poor-law administration unearthed by the Poor-law Schools Committee was the condition of some of the children whom the guardians thought they had successfully emigrated to Canada. Evidence given showed that the outfits provided at the expense of the rates had been both inadequate and unsuitable to a Canadian winter. Education had not been demanded for the children, and even the Chief Secretary of the Local Government Board was not able to say whether the Canadian Department had undertaken to make a report upon each child annually or only a general report. The recommendations of the Departmental Committee and some questions in Parliament have been followed by the issue of a circular by the Local Government Board calling attention to an Act passed recently by the Legislative Assembly of the Province of Ontario, under which almost all the Departmental Committee's recommendations will be carried out. In future all societies and agents entrusted with the duty of immigrating the "indigent neglected or dependent children" shall "at least four times in every year or oftener" be inspected or reported on to the lieutenant-governor. Each child is to be supervised until it is 18 years old by "personal visits," and "a permanent home or shelter" is to be maintained to which the young emigrant can return in the event of the foster parent being "unable or unwilling" to retain the custody or control of the child, and failure to return the child to such homes is punishable by fine or imprisonment. Other clauses empower and compel the agency to examine into any complaints of a child being ill-treated, overworked, or not properly educated, while provision is also made for the punishment of persons who yield to the temptation to treat the children as general helps, and deprive them of the time essential for education. This Act shows a right consideration for the child, and an intention to foster juvenile immigration and to encourage the best people to come forward as foster parents. Joined to our hearty congratulations to Ontario we add the hope that other provinces and colonies will soon follow its example.

"THE HABITANT."

Dr. W. H. Drummond, of Montreal, who is a member of the Medical Faculty of Bishop's College, Montreal, may be said to be the discoverer of the French Canadian peasant—"the habitant"—for until he began to write his charming dialect poems nobody knew—nobody at least outside of the old Province of Quebec knew—what manner of man the French-Canadian farmer was. Dr. Drummond has now gathered together his fugitive pieces into a beautiful volume,[1] which will be a source of real pleasure to anyone who has a feeling for the poetry of human nature. It is true that the poems are written in dialect, but the dialect is not difficult to understand and the swing and lilt of the verse carries the reader over the obstacles which at first beset his path. The habitant, as we come to know him through Dr. Drummond's sympathetic verse, is seen to be a singularly simple and genuine character. He is not a scientific farmer, but he loves his Canadian home and has all the perseverance, industry, and thriftiness of his French forbears. He has something of the French gaiety of heart touched to a soberer note by the solemnity of Canadian forests and the immenseness of Canada's lakes and rivers. If he has a little of the Frenchman's love of politics he has something more than the average Frenchman's love of Nature, and enjoys his hard battle with the elements. One of the most charming set of verses in this volume is that which gives the peasant's estimate and picture of the character and life of "Ole Docteur Fiset," who has "got ninety year or so:"

> But Docteur Fiset, not moche fonne he get,
> Drivin' all over de whole contree;
> If de road she 's bad, if de road she 's good,
> W'en ev'ryt'ing 's drown on de Spring-tam flood,
> An' workin' for not'ing half tam' mebbe!
>
> Let her rain or snow, all he want to know
> Is jus' if anywan 's feelin' sick,
> For Docteur Fiset 's de ole-fashion 'kin',
> Doin' good was de only t'ing on hees min',
> So he got no use for de politique.

We are glad but not surprised to learn that Dr. Drummond's volume has already met with conspicuous success. The copy before us is marked ninth thousand, and we understand that the sale is still rapidly proceeding. Dr. Drummond was recently entertained at supper by a number of medical friends in Montreal, and Sir William Hingston, who presided, expressed in a few felicitous words the justifiable pride at the distinguished position which the author has won for himself as the poet of Canada.

MADEIRA AND TENERIFFE.

We have received advices by mail with regard to the alleged occurrence of typhoid fever in epidemic form in Madeira and Teneriffe. With regard to Madeira, we are informed that one case occurred in the person of a delicate boy in respect to which it was impossible to trace the source of infection. No other case is known, in spite of the fact that the island has a very large number of visitors this year. There is also a significant freedom from the diarrhœa common in the island, and so often aggravated at times when cases of typhoid fever occur. All the water for the hotels, even that used for baths, is "Pasteurised," and no watercresses are allowed to be eaten unless previously treated with boracic

[1] *The Habitant and other French Canadian Poems*, by William Henry Drummond, M.D., with an introduction by Louis Frechette, and with illustrations by Frederick Simpson Coburn. New York and London G. P. Putnam's Sons. 1898. 12s. 6d.

acid. With regard to Teneriffe, we are informed that the hotels and villas have been free from the disease, with the exception of two private houses, in which four cases of typhoid fever have occurred. These have been the only cases in the English colony. The inmates of these two houses get their drinking water from a spring, which is stated to be irreproachable, but for baths, kitchen use, etc., water is laid on from a neighbouring open tank and aqueduct, which during the heavy rains in November and December may have become polluted at some point of its long course through a populated district of peasant houses where some cases of typhoid fever had been under treatment. The aqueduct, although not intended to be used for drinking, is about to be covered in along its whole course, some four miles long. The water brought by the aqueduct comes from a deep spring reached by tapping the mountain by means of a tunnel quite a mile in length. It is believed that when this aqueduct is covered in there will be practically no possibility of its water becoming contaminated in transit.

THE SURVIVAL OF THE PRIVY MIDDEN.

It is astonishing how long some of our northern towns have clung to such abominations as privy middens, and how tenaciously the property owners adhere to the sanitary ideals of fifty years ago. The Salford Hundred Sessions recently decided an appeal by a property owner against the finding of the Eccles magistrates that a privy midden attached to certain premises was a nuisance, and that waterclosets and dry receptacles for ashes were to be substituted. The sessions, as was to be expected, dismissed the appeal, and it remains to be seen whether the Property Owners Association will carry their obstructive tactics any further. One interesting feature in the evidence was that of Professor Delépine, who found in two samples of earth collected by the sanitary inspector from crevices of the ashpit the bacilli of typhoid fever. Since the adoption of notification Dr. Crocker has had 325 cases of typhoid fever reported from houses with midden privies and only 25 from those with waterclosets. It would be interesting to know how these figures compare with the number of dwellings in the town whose occupants use these several classes of conveniences. Are the privy houses to the watercloset houses as 13 to 1?

PUERPERAL INFECTION.

A coroner's inquest was held last week at Market Harborough, Leicestershire, upon a woman who died of puerperal fever. The circumstances pointed to infection of the woman by the midwife who attended her. But the medical evidence was not absolutely clear as to the facts, and the medical opinions were not expressed without the admission of a doubt. The evidence was that on January 1st the midwife delivered a woman, who died of puerperal fever. It was said that the medical officer of health then directed the midwife that she ought not to attend a case of labour for at least a month. The midwife said she had not understood this, and the jury gave her the benefit of the doubt, and accepted her statement on the point. The midwife attended another woman on January 20th, who did well. She then attended, on January 25th, the woman on whom the inquest was held, who died of puerperal fever. Two of the doctors who gave evidence at the inquest, said that, although they thought it probable that the midwife had given puerperal fever to the patient, yet they could not be absolutely certain of it. The jury accordingly found that the woman died from puerperal fever; that there was not sufficient evidence to show that the patient's death was due to the midwife's negligence; that the midwife had been guilty of gross and culpable negligence, which was deserving of punishment, and that they thought she ought to be severely censured. We do not see how, upon the evidence, the jury could have come to any other verdict. We observe a comment in a local newspaper to the effect that, from the conduct of the midwife court, and the way in which she replied to the coroner it was evident she did not realise the serious nature of the case. This shows that it is well that inquests should be held in such cases, in order to impress upon the public and upon midwives that puerperal fever is a preventable disease, and that it is somebody's fault if it is not prevented. The case raises the question as to the efficacy of abstinence from practice as a means of purification. It is the opinion of many leading obstetricians (as may be seen in the discussions of the Obstetrical Society) that without disinfection no mere lapse of time will prevent conveyance of infection; and, if thorough disinfection is carried out, it is not necessary for a doctor or midwife to discontinue practice for a longer time than that necessary for the disinfection. No lapse of time will sterilise a septic dress or syringe, nor will it change the habits of a woman who never uses a nailbrush. On the other hand, if the midwife will burn her infectious garments and put on clean ones, will scrub her nails till they are spotless, make a practice of boiling her syringe, catheter, etc., and of carrying about and using antiseptics, it is not needful that she should abstain from practice. This, we believe, is the current teaching of those who are best qualified to form an opinion on the subject.

THE PRISON MEDICAL SERVICE.

The assistant surgeons of the Prison Medical Service memorialised the Secretary of State in the early part of last year in reference to their status, pay, and prospects of promotion. They have now been granted by the Treasury an improved scale of pay, which will enable officers of this rank to rise to a maximum of £350 per annum instead of £300 as formerly. The Secretary of State has also already approved of the change of title from "Assistant Surgeon" to "Deputy Medical Officer." We called attention some time ago to the disabilities under which the service laboured, and have reason to know that these concessions have given much satisfaction to the Service. Owing to a combination of causes, but more especially to the steady decrease which has taken place of late years in the number of the prison population and of the prisons, both convict and local, promotion was becoming hopelessly blocked, so that the outlook for deputy medical officers was not encouraging. We are glad to find, however, that the Secretary of State and the Prison Commissioners have been so far successful in representing this unusual state of affairs to the Treasury as to induce them to recognise the grievance. The duties of prison surgeons, both senior and junior, are nowadays so multifarious, and are carried on under such special conditions calling for knowledge and skill in matters relating to hygiene, as well as in mental and physical diseases, that their claims on the State for adequate remuneration are unquestionable.

A "CANCER CURER" AND THE NEW ZEALAND PARLIAMENT.

That a Government should desire to bring a Bill before Parliament in order that an existing law restraining unqualified persons from practising should be successfully evaded seems almost worthy of a Gilbertian opera, but the fact remains, incredible as it might appear to be. An extract from the *Canterbury* (*New Zealand*) *Times* of December 14th, 1897, states that a communication was brought before the House relating to the desire of certain persons that a man the subject of cancer, pronounced by medical experts to be incurable, should be permitted to be treated by a quack locally known as a "cancer expert." It appeared that the man whose treatment was so desired refused to "take the case in hand unless he received a guarantee that he would not be prosecuted for so doing." The member of the House who brought the matter forward said he hoped that the Government would allow a permit to be issued to enable what was desired to be done. The report goes on to state that the Premier in reply mentioned that one of his oldest and dearest friends had come to him lately and asked a similar permission, As the law now stood, he

added, the Government could not give the permission desired, and the only thing to be done was to amend the law so that cases of this kind could be met. He reminded the House that if it were its desire that such a Bill should be brought in there was already a Bill on the order paper in which a clause dealing with this subject could be introduced. He would take the feeling of the House, and if it were found that there were no opposition he would bring in the Bill. We trust that there was sufficient common sense left in the House to prevent any such measure being carried through; fortunately medical practitioners in the Colonies by their very education and abilities are to be found in large numbers in the various Legislative assemblies, and very often in the respective Cabinets as Ministers of the Crown, and can exercise direct pressure upon legislative matters in a manner not yet possible perhaps in England.

WATERING-PLACES AND INFECTIOUS DISEASE.

The policy of concealment still reigns at Bridlington—not only concealment from their guests, but concealment from themselves. While enlightened health resorts like Brighton and Blackpool, Scarborough and Southport, have adopted the Notification Act, Bridlington still determines ostrich-like to defy its enemies by closing its own eyes. There seems to be hope, however, in this matter for Leeds-upon-the-Sea. In 1890 the proposal to adopt the Act found a seconder and a supporter; in 1893 the numbers were 4 in favour and 7 against, later in the same year 5 to 6. In 1896 there was a tie, and the chairman would not decide. Last week the matter came up again, and again there was a tie. One argument against adopting the Act was at least intelligible—it was the absence of an infectious hospital. The natural corollary should of course have been a notice of motion on the part of this objector that the Council should provide such a hospital. A hospital for contagious cases is a necessary complement of a modern health resort; it need not be very large, but it should be instantly available. If Bridlington is to cater effectively for visitors it must come up to date. The demand for protection against contagion is growing steadily in the northern counties, and Bridlington cannot safely lag behind.

THE INCREASE IN PLAGUE.

A Reuter's telegram, dated February 3rd, gives the number of deaths from plague in Bombay for the previous week as 927. A later telegram states that the number of deaths from plague had exceeded 200 in one day. The general mortality in the city of Bombay is trebled. Quarantine barriers have been erected everywhere to prevent the exodus from the city. Affected persons are called upon to remove themselves and their families to the camp at Sith Janna, across the harbour, on a group of islands including Hog and Elephant islands. Elsewhere huge camps have been erected some ten or twenty miles from the city to accommodate the healthy native population. This is considered to be the only means of dealing with the serious proportion that the epidemic has now assumed. It is stated that Haffkine's prophylactic treatment is steadily gaining ground in the good opinion of both natives and Europeans. Of 8,142 persons inoculated in Bombay, only 18 were attacked; and 2—who may have been infected at the time of inoculation—died. Similar results are recorded in other places in the Bombay Presidency. It is curious to note how little of the plague mortality is contributed by castes not professing Hinduism of some sort. While Europeans and Parsees have been almost exempt, Mohammedans—many of whom must be as poor and underfed as Hindus—have suffered little. Flesh eaters have been more fortunate than vegetarians; perhaps this may be accounted for by the fact that they are generally cleaner in their habits and dwellings, and drink less impure water. Some fifteen have been attacked by the disease, but that is a very small proportion. For those who have relatives in Western India, where the plague seems to have revived with increased virulence, it is reassuring to know that throughout the epidemic Europeans have enjoyed remarkable immunity from the disease. Some figures which have just been prepared bring this fact into striking prominence. Taking the mortality returns from September 22nd, 1896, to July 26th, 1897, during which period the first outbreak lasted, it is shown that out of a native population of 821,764, there died of plague 18,638, or 22.6 per cent. During the same period, out of a total European population of 11,290, only 22, or 1.9 per cent., died. The disproportion, it is believed, was actually even greater than these figures disclose, as, owing to the defective returns, a very large number of deaths from plague among natives were included under other heads.

THE DEPUTY INSPECTOR OF CHINESE CUSTOMS.

The appointment of Dr. R. B. Bredon as Deputy-Inspector-General of the Chinese Imperial Maritime Customs possesses special interest for the medical profession, for he holds the degrees of M.B. and M.Ch. of the University of Dublin. After graduating in medicine, he entered the British army as a surgeon, but about twenty years ago he joined the Imperial Maritime Customs service, in which he was at once appointed Commissioner. As long ago as 1880 he was Chief Secretary to Sir Robert Hart, and for a time acted as Inspector-General conjointly with Mr. Hippisley during Sir Robert's temporary absence. He has an intimate knowledge of China and the Chinese, and bears the reputation of being an able man, a hard and conscientious worker, and thoroughly alive to diplomatic usage. He is reported to be one of the best speakers of Chinese in the East, and in all difficult questions his linguistic powers are called in. No mere Sinologue or grammarian, he speaks to be understood, even in the subtle and intricate shades of expression which characterise the diplomatic language of China. Dr. Bredon is connected by marriage with the family of the Inspector-General, and, apart from his great abilities, this fact no doubt is in his favour with the Chinese, who attach great importance to family ties and influence.

LUSTIG'S PLAGUE VACCINE.

It is announced that Professor A. Lustig, Director of the Institute of Experimental Pathology in the University of Florence, has responded to a request from Bombay to forward a quantity of his plague vaccine by promising to send his assistant with an ample supply. The vaccine serum was tested last year in Bombay and Poona on patients with an encouraging result. When the injections were made at an early stage a beneficial effect was noticed in six hours, the high fever and delirium ceased, and general improvement ensued; the glands ceased to be painful after two or three injections, and convalescence was less prolonged than in cases which recovered without this treatment. Of thirty cases of the disease subjected to this serum treatment, only four died. In healthy persons the serum does not produce any disturbance, but there is reason to believe that it has the effect of protecting against plague infection This, however, is a point upon which further evidence is required, as Professor Lustig when in Bombay found it impossible to overcome the objections of the natives to submitting to the necessary injections. It will be remembered that his method of vaccinating animals against the plague bacillus was described by Professor Lustig and Dr. Galeotti in our columns last April.

SMALL-POX AT MIDDLESBROUGH.

The serious outbreak of small-pox which began in Middlesbrough towards the close of last year has within the past few days assumed epidemic proportions, some 310 cases having been notified, 50 being heard of in one day during the present week. The permanent hospital accommodation has proved quite inadequate, and temporary provision is being made. Meanwhile the hospital would seem to be dangerously overcrowded with cases of malignant type,

the spaces between the beds being utilised for patients. Another feature of the epidemic is that lack of isolation accommodation has led to the home treatment of many cases, with resulting danger of further spread of infection from numerous foci of disease. One thing in favour of Middlesbrough is the factor of a large proportion of vaccinated persons in the town, the Vaccination Acts having been fairly well administered in the past by the Board of Guardians. This body is now actively co-operating in the strenuous efforts being made by the Town Council for the repression of the epidemic by having a house-to-house visitation made for the purpose of urging vaccination or revaccination of inmates as may be requisite. Facilities are also granted to the public in the shape of extra stational attendances for gratuitous vaccination and revaccination. Cases of the disease have been reported in Ormesby, Thornaby, and South Bank, and in these and other adjacent places steps are being taken to cope with the malady. School authorities are also placing every aid in their power at the disposal of the sanitary officials. Speaking generally, the disease, especially in its severer forms, has shown a partiality for the unvaccinated members of the community, and the data to be collated will prove interesting, especially at the present moment, when legislation on the subject of vaccination is to occupy the attention of Parliament. We trust that there will be a Government inquiry into the epidemic.

INDIAN MEDICAL SERVICE.

The candidates for the Indian Medical Service who have recently passed through the Army Medical School, Netley, have been warned to hold themselves in readiness to proceed to India at an early date. The leave which is usually given at the close of the Netley session will probably be materially curtailed. This is no doubt due to demands arising from the plague and the anticipated spring operations on the frontier. The young surgeons must console themselves with the reflection that they will have a more agreeable journey and more favourable date of arrival in India than if the usual period of leave were granted. The order is, however, a further proof of the serious strain which at present exists on the resources of the Indian Medical Service, for, as we have already stated, leave to officers of the service serving in India has been stopped except for sickness.

SCROPHULÆ AND STRUMA.

Dr. Percy Boulton has recently presented an interesting engraving to the Library of the British Medical Association. It is a contemporary woodcut of Jacob van Thetenbul, of Holstein, aged 17, before and after the removal of "a scrophula or struma" of the neck. The tumour was removed at Amsterdam, November 9th, 1656, by M. Jacob Cornelisz, assisted by Mr. Claes van Dalen, his brother, and M. Pieter Adriaensz. The boy evidently made an excellent recovery, with very slight scarring. Nothing is known of Jacob Cornelisz, but van Dalen was the name of an illustrious medical family living at The Hague during the seventeenth century, and one of its members was Martin van Dalen, "Doctor to his Royal Highness of Great Britain" (the Prince of Orange, our William III). Scrophulæ and strumæ, being the older terms, were often used as synonyms for "the King's evil," but they really embraced a wider group of pathological changes. They were used originally of any tumour of the neck, and struma is defined by Maister Peter Lowe (? 1550-1612), the founder of the Faculty of Physicians and Surgeons of Glasgow, as "an inflammation of the blood and pituite (slime) in the soft and glandulous parts, as under the jawes, armes, at the rootes of the thighes, and in the paps. It is engendered of a rotten, thick matter and congealed blood. The cause is falles, strokes, or humour pituitous mixed with melancholie; also drinking of evill waters, whereof I saw many infected at the siege of Paris (1589); also by retention of excrements of the braines, which should avoyde by the mouthe, nose, eares, and eyes." It is clear from this that all glandular abscesses, lymphomata, fibromata, and perhaps some forms of new growth were included under this term. The "King's evil," on the other hand was, says Wiseman, the great surgeon of the Commonwealth and Restoration, "a tumour arising from a peculiar acidity of the serum of the blood, which whensoever it alights upon the glandule, muscle, or membrane, it coagulates and hardens, and when it mixeth with marrow alway dissolves it and rotteth the bone."

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

Papers to be read at the ninth International Congress of Hygiene and Demography, which opens in Madrid on April 10th, should be sent to the Secretary-General, Dr. Amalio Gimeno, by March 15th, and should be addressed to him at the Ministry of the Interior, Madrid. The young King of Spain and his mother the Queen Regent are patrons of the Congress, and the Minister of the Interior is President of the Organising Committee. An exhibition, which will remain open until the middle of July, will be held in connection with the Congress.

The official announcement of the baronetcy conferred upon Sir Samuel Wilks last June was made in the *London Gazette* of February 4th.

Professor Waller will give an address on Dosage in Anæsthetics on Thursday, February 17th, at 8.30 P.M., before the Society of Anæsthetists at the house of the Royal Medical and Chirurgical Society, 20, Hanover Square.

At the meeting of the Royal Statistical Society on Tuesday next at 5 P.M., Mr. Edwin Cannan, M.A., will read a paper on the Demographic Statistics of the United Kingdom; their want of Correlation and other Defects.

The notice by the General Medical Council as to the employment of unqualified persons as assistants, or otherwise, is now being issued by the General Medical Council. The text of the notice, as extracted from the *Minutes* of the Council, will be found in the British Medical Journal of January 22nd, 1898, p. 228.

The portrait of Sir Samuel Wilks, Bart., President of the Royal College of Physicians, by Mr. Percy Bigland, has been reproduced for the committee of the *Guy's Hospital Gazette*, and copies can be obtained from Messrs. Ash and Co. Limited, price £1 1s. The portrait when exhibited at the Royal Academy last year was considered to be an excellent likeness, and the reproduction, which has been made by the Swan Electric Engraving Co. is very well executed, and does justice both to the artist and to the sitter.

The Muzzling of Dogs.—The London County Council has made an arrangements under which the police will in future take out summonses and conduct prosecutions against persons infringing the Muzzling of Dogs Order. The Council undertake to pay out-of-pocket expenses. The total number of dogs seized without a muzzle between April 10th, 1897, when the order came into force, and January 22nd, 1898, was 27,975. Of these only 9,753 were claimed by their owners, a curious and instructive comment on the sentimental objections made by those who are leading the ignorant and cruel crusade against the muzzle.

The Ventnor Consumption Hospital.—The report presented to the annual meeting on February 9th of the Governors of the Royal National Hospital for Consumption on the separate principle stated that 848 in-patients had been treated during the past year, the average stay of each completed case having been sixty-two days. When the new block of houses, the foundation stone of which was laid by Princess Henry of Battenberg last July, are completed, the number of beds will be raised to 155. The medical report was read by Dr. Sinclair Coghill, and the reports were adopted on the motion of the Attorney-General.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

St. Stephen's presented a very animated appearance at the opening of the session, and although foreign affairs naturally occupied most attention, medical questions were not altogether forgotten in the conversations of members. The promoters of the Midwives Bill were not idle over the chances of the ballot, and may possibly have this year the luck to secure a better place for their pet measure. The profession, however, need not be unduly alarmed, as there are nearly 400 members balloting for Bills, so that the odds are heavy against any single Bill. It will not, moreover, be a good session for the private member. His opportunities are never very great, but this year between the late opening of the session, the interest shown in army and foreign affairs, and the large amount of time likely to be occupied by Irish legislation, there will not be even the usual chances for private legislation.

The Irish Local Government Bill, which promises to give wide local self-government on the English pattern, is sure to touch medical interests. The Poor-law arrangements will naturally come in for considerable change. Boards of guardians will be elected differently, and it is possible that there may be an attempt to simplify county administration by alteration of the areas of Poor-law unions. The Public-health officers, as well as the Poor-law officers, will thus have to watch the Bill carefully in order to guard the medical interests involved. It is also quite on the cards that, as we indicated last week, those interested in lunacy may discover in the Bill clauses that affect their position.

There are two Bills mentioned in the Speech from the Throne which directly interest the medical profession—namely, the Bill for the Creation of a Teaching University in London, and the Bill for the Amendment of the Vaccination Law. As regards the University Bill, it will, it is generally understood, be on the same lines as last year. The Vaccination measure will not be very revolutionary in character. Cumulative penalties will have to be abolished, and such changes as will bring about domiciliary vaccination may be expected. The age, too, it is thought, may be extended with advantage, but beyond this the Bill is not expected to go far. It is well known, however, that the President of the Local Government Board has a strong view on the advantages of glycerinated calf lymph, and something may be done to offer this vaccine to the public. If the Bill ever gets into Committee there is sure to be an attempt to abolish compulsory vaccination, and there is no doubt a very active and increasing party in favour of the abolition of compulsion. The medical profession will, however, as hitherto, be able to resist any such demand. When the ballot has been taken, and private members have introduced their Bills, we shall no doubt find on the Order Paper many of the old Public Health Bills, as well as some new proposals affecting the profession.

The annual spring inspection of the hygienic machinery of the House of Commons has not discovered any defects in construction or working requiring addition or repair, and the most sensitive senator will continue to inhale his iced or warmed and filtered air, and to move about with perfect confidence in a building where drainage and ventilation have reached the dignity of fine arts. The only change brought about by the whirligig of time is the retirement of our old friend Mr. Prim, under the inexorable age limit of the Civil Service. He thus ends a long and honourable career of good work as resident engineer. His many friends will be glad to learn that the natural vigour of this useful public servant remains unabated, and that he is now devoting his superfluous energy to the improvement of the electric lighting of the National Liberal Club. His successor, Mr. Palfreeman, brings an excellent character from his last place, and has the satisfaction of reflecting, on leaving the Law Courts, where he has been professionally engaged, that their disordered ventilation has been successfully treated, and an atmospheric equilibrium established to the satisfaction of even the most critical judge.

"Old Parliamentary hands" are agreed that despite the threatening storm clouds which seem to hang over party politics, and the unusual length of the Queen's Speech, the proceedings in either House on the opening night of the session were tame enough to calm the most excitable mind. Though, as Mr. Balfour aptly put it, they do little more than "prepare a general survey of the field of battle," it is no uncommon thing to hear keynotes struck which foretell vigorous encounters in foreign and domestic politics. And notes of this kind were struck on Wednesday, but they had mostly a foreign or colonial sound, and save in the case of the Irish Local Government proposals, had little of the true ring of domestic turmoil.

It is true that the Queen's Speech bristles with home references, but if the value of these may be gauged out of the mouth of the chief critic of the Government—and he it is who provides most of the music, though Ministers may call the tune—one sentence in the right hon. member's oration may be taken as instructive. Towards the end of his speech—which lasted nearly an hour and a half—he said, "I am not going to detain the House on the subject of domestic legislation. In that legislation there is the usual Parliamentary collection of uninsurable lives." This was received with a burst of merriment, which showed the House to be fully in sympathy with the right hon. gentleman's view as to the facts of the situation, however much the prospect of an unusually heavy slaughter of the innocents may be deplored by individuals or sections of members. Mr. Balfour went on tiptoe over the question of home legislation, and his words on the subject, few as they were, must not be weighed seriously. They were plainly nothing more than an apology for not dealing with that portion of the speech from the Throne. He said: "As to domestic policy I need not say anything, because we shall have ample opportunities no doubt of dealing with these matters."

Amongst the measures, some of which may go by the board, are one or two of special medical interest. There is, for instance, the promised Bill for the prevention of the adulteration of drugs and food, but as this holds absolutely the last place on the list of Bills its prospects can hardly be regarded as of the brightest. Then there is to be a Bill for the Amendment of the Vaccination Law, and as this occupies a paragraph of the Speech from the Throne to itself, and as it is the outcome of the report of an important Royal Commission, a more hopeful prognosis may be made as to its chance of survival. There are also measures for the constitution of a teaching university for London, for the amendment of the law relating to prisons, and for dealing in part with the subject of secondary education, but whether all of these will be seriously entered upon, to say nothing of being carried through all their stages, time alone can tell. It must be borne in mind that the session begins a month later than last year, and that the atmosphere of the House is thick with foreign and colonial questions, the fog of which may have a choking effect. It must also be remembered that the Irish Local Government Bill promises to make a large claim on the attention of legislators. As a foretaste of the kind of session we are to have, there are no fewer than fifteen notices of amendment to the Address.

The Speech from the Throne referred with exceptional fulness to the question of plague and famine in India. Her Majesty was made to say:

> The plague, which appeared more than a year ago in Western India, returned in the autumn; and, although the mortality is less alarming than it was at this time last year, it is still such as to cause anxiety. No effort will be spared by my Government in the endeavour both to limit its extent and to mitigate its effects; and I am confident that they will receive the loyal assistance of my Indian subjects in this arduous task. I rejoice, on the other hand, to inform you that the famine, which prevailed for many months over several large districts, may now be said to be at an end excepting within a small tract in Madras; and that there is reason to anticipate a prosperous year, both for agriculture and commerce, throughout my Indian dominions.

Full, however, as the reference to the Indian plague and famine was in the Speech, there was little said about them in the course of the opening debates. In the Lords, it is true, the mover of the Address welcomed the assurance that the famine was well-nigh over, but regretted that Her Majesty was not able to use equally reassuring language in regard to

the plague, "although," he said, "we may derive some satisfaction from the knowledge that it is not of so destructive a type as before." And it is also true that the mover in the Commons referred to the plague, declaring it to be a pleasing fact that in the recrudescence the natives instead of resisting as they formerly did the efforts being made to put a stop to the disease were now assisting. He also said, "The tact and devotion shown by the doctors and troops while engaged in that difficult task were beyond all praise." Mr. S. Smith also dealt with the question of famine and plague, pointing to these as two of the reasons—although amongst the less important—why pecuniary relief should be given to India by this country. But beyond this hardly anything was said upon the topics in question. It is understood, however, that Sir William Wedderburn has prepared an amendment to the Address in which he asks Her Majesty:—

Looking to the miseries patiently endured by the Indian people from famine, plague, poverty, and other afflictions during the past year, to direct that special forbearance be shown towards them, and that careful inquiry be made into their present condition in order to restore confidence among the suffering masses, and thus prepare the way for healing measures tending to bring back peace and prosperity.

There were only two notices of motion on the first sessional batch of minutes of proceedings issued from the Upper House, but one of these was an intimation in the name of Lord Stanley of Alderley to the effect that he intends to ask the Government for surgical reports on the wounds of Piper Findlater and others caused by Dum-Dum bullets "so that the country may judge whether these are not contrary to the spirit of the Convention against explosive bullets." He will also inquire whether the Government sanctioned the issue of those bullets for military purposes.

The Fifty-First Report of the Commissioners in Lunacy, which amongst other things details the visits made to patients by the Commissioners and Visitors pursuant to the Lunacy Act during the past year, was presented to both Houses; also a copy of the Order in Council approving of regulations made by the Pharmaceutical Society; the Report of the Inspector of Retreats under the Inebriates Acts; the Report to the Local Government Board on Glycerinated Calf Vaccine Lymph; the Report of Dr. Sydney Stephenson, on an inquiry undertaken by him at the request of the Local Government Board as to the ophthalmic state of poor children in the metropolis; and a supplementary Report relating to the Jew's Hospitals, Dr. Stainer's Homes, and Dr. Barnardo's Homes.

THE PRINCE OF WALES'S FUND.

THE first annual meeting of the Council of this Fund was held at Marlborough House on Friday, February 4th. The PRINCE OF WALES was in the chair, and a large number of peers and other notabilities, including the Presidents of the Colleges of Physicians and Surgeons, and Dr. Collins, Chairman of the London County Council, were also present.

The report of the Executive Committee stated that the distribution of grants to the hospitals had been effected in accordance with the directions of the General Council given on December 20th, 1897.

This report, the annual report, and the accounts were received and adopted.

The BISHOP OF LONDON highly commended the sale of Jubilee Hospital stamps, and believed that a number of people would take advantage of these stamps and albums to subscribe to the hospitals. He moved that Sir H. Burdett, in conjunction with the Executive Committee, be requested to undertake the arrangements connected with the sale of the stamps for the present year.

The DUKE OF NORFOLK seconded, and alluded to the extreme trouble Sir H. Burdett had taken in the matter, and conveyed to him the thanks of all those interested in the Fund for his efforts.

The PRINCE OF WALES endorsed this statement and spoke of Sir Henry Burdett's unwearying labour and attention.

The resolution was carried unanimously.

Sir W. MAC CORMAC moved the appointment of a Committee of inquiry to visit and examine the hospitals previous to the allocation of the funds received in 1898.

The Rev. J. GUINNESS ROGERS seconded the resolution.

The PRINCE OF WALES thought this a most important matter, as it would show which hospitals were really deserving and managed in a proper way. The inquiries would be kept private; but the authorities of the Fund might offer advice in cases where it was necessary, and if the hospital accepted that advice, the authorities of the Fund might then consider the question of the grant.

Lord ROTHSCHILD though that if they had not received as much money as was expected, they had, at any rate, roused in the metropolis an interest in the hospitals which must be beneficial to them in the future. It had been their constant endeavour to distribute the money to the hospitals which they thought were the best managed

The resolution was carried unanimously.

In conclusion, the PRINCE OF WALES thanked the members of the Council, and those of the Executive Committee especially, for their assistance. He hoped all would serve again. The Fund was now well started, and he hoped the public would see that their object was to maintain the great hospitals of London, to do everything possible to assist those in need of funds, and to prove a lasting memorial of the sixtieth anniversary of the reign of the Queen.

The meeting then separated. The report stated that the total sum paid to the credit of the Fund during the eleven months ending on December 31st, 1897, was £227,553 12s. 5d. The sum of £56,286 5s. was distributed amongst the hospitals during 1897, and £167,022 19s. 8d. were invested. The expenses amounted to £3,704 7s. 9d., so that the sum received by the Fund was raised at the small cost of £1 12s. 6d. per cent.

THE SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting of the Scottish Poor-law Medical Officers' Association was held recently in Glasgow, when the Executive Committee presented their annual report. The report stated that the number of members was now 174, an increase of 25, but pointed out that as there were nearly 750 medical men connected with the Poor-law Medical Service in Scotland there was still room for a large increase. The hope was expressed that in the near future the whole body of Poor-law medical officers would have joined the Association, as it was only by weight of numbers and by financial strength that their just claims would be gained.

The most important subject dealt with by the Executive Committee during the year had been that of "tenure of office." A Bill amending Clause 51 of the Local Government (Scotland) Act, 1894, had been drafted, and a copy sent to every Poor-law medical officer in Scotland. Nearly 400 medical officers had signified their approval. The report further pointed out that the Bill would be supported by the British Medical Association, and that it was important for every Poor-law medical officer to urge his Parliamentary representative to give support to the Bill, which will be introduced into Parliament by the Honorary President of the Scottish Poor-law Medical Officers' Association. The report further stated that the Bill will be backed by the following members of Parliament: Sir W. Priestley, Sir Charles Cameron, Bart., Sir Walter Foster, Sir W. Arroll, Dr. Farquharson, and Mr. Donald M. Nicol.

After the meeting a dinner was held at which representatives of some of the most important parish councils in Scotland were present. They were unanimous in their approval of the terms of the Bill, and some spoke strongly in favour of a scheme of superannuation for Scottish Poor-law officials.

THE DR. HALL HAINS DEFENCE FUND.

A MEETING was held at the house of Dr. Joseph Smith, the Chairman of the Committee on February 4th, to present Dr. Hains with a cheque for the subscriptions received. The accounts, kindly audited by Dr. J. Ball, were found to be correct. Subscriptions to the amount of £113 6s. 6d. had been received, and after deducting £1 10s. 6d. for the expenses of typewriting, postage, and stationery, there remained a sum of £111 16s.

In presenting a cheque for this amount to Dr. Hains, the CHAIRMAN referred at some length to the case. He had watched it carefully, and was convinced from the first of the unfounded nature of the charge. He warmly congratulated Dr. Hains on having left the court without a stain on his character, and on the fact that so many of his brother practitioners had come forward in the manner they had done. Undoubtedly a great many had not subscribed owing to the fact that they considered Dr. Hains should have belonged to

some medical defence association. He had great pleasure in handing to Dr. Hains what he considered to be a very substantial sum.

Dr. Hall Hains, in reply, said that words failed him to express the gratitude he felt to Dr. Joseph Smith and the subscribers for coming forward in a manner so extremely kind. No one who had not experienced it could understand the terrible mental distress he suffered whilst these charges were hanging over his head, and it was only the knowledge of his complete innocence that enabled him to bear up. He heartily thanked the subscribers for their great kindness in expressing their confidence in him in so substantial a manner.

Dr. Arthur Walker proposed a vote of thanks to the Hon. Secretary and Treasurer.

Dr. J. Ball, in seconding this, said he quite appreciated the necessity of every medical man joining some defence association, yet at the same failure to insure in this manner was no reason why his brother practitioners should not help in a case of this kind. Having regard to the difficulty in collecting sums in these cases and also the many calls made on medical men, he thought the sum a very substantial one.

Dr. Herbert Carre-Smith, in reply, said that, knowing the case as he did, he was only too glad to help in every way he could. There never had been a case in which a man had more completely established his innocence; and it was very strong evidence of this that Sir Edward Clarke—a former law officer of the Crown—had written to say that Dr. Hains was "not even guilty of an indiscretion" in the matter. Dr. Carre-Smith also thought that the Colleges of Physicians and Surgeons should protect their Members in cases of this kind. He begged to thank the gentlemen who had been kind enough to propose a vote of thanks to him, and he could only say that he was very glad to have made the acquaintance of Dr. Hains.

A vote of thanks to the Chairman for his hospitality brought the proceedings to a close.

LITERARY NOTES.

We have received the first six fasciculi of the second edition of Penzoldt and Stintzing's handbook of therapeutics which is now being published by Gustav Fischer of Jena under the title *Handbuch der Therapie innerer Krankheiten*. We have so recently reviewed the first edition of this valuable work (December 12th, 1896) that we need not do more than call attention to this new edition.

Messrs. Sampson, Low, Marston and Co., who are preparing to publish early in the spring volume v of the *English Catalogue of Books 1890-97*, request us to say that they will be glad to receive from any of our readers who may have published books between January 1st, 1890, and December 31st, 1897, the full titles, sizes, prices, month and year of publication, and authors' and publishers' names. Communications should be addressed to the Editor, *English Catalogue of Books*, c/o Messrs. Sampson Low, Marston and Co., St. Dunstan's House, Fetter Lane, E.C. Particulars of books which have already appeared in the annual volumes are not of course required.

The *Asylum News*, the journal of the Asylum Workers' Association, which is printed and published at the County Asylum, Lancaster, is essentially a practical paper, and its intimate connection with asylum work is shown in the fact that it issues from an asylum press. It is intended as a means of communication and of "self-help" between asylum officers, and in the latter term nurses and attendants are chiefly referred to, though medical officers, chaplains, and others are interested and their work recognised. It is a social rather than a scientific force. The news of the day, changes in asylum officers, in the Commission, etc., are recorded. The journal has reached its second year, and the Association has now over 2,500 members, so that its usefulness is evident. Combination and co-operation are the mottoes. It aims at getting more reasonable hours of work for the attendants, who now have generally about fourteen hours' duty a day and insufficient holidays. It also hopes to get the pensions and allowances on a better scale than those of the ordinary Poor-law regulations. For the Asylum Workers' Association feel, and we must allow, that attendants at asylums have greater strain and risk to bear than the other Poor-law servants. The *Asylum News* hopes by union to call attention to matters which, though important, have never reached the ears of the public, for those interested have hitherto been but the voices of those crying in the wilderness of separate counties and were unheeded. A home of rest has been made available, and has already been found of great service for the workers, and we wish it the success it deserves. There is clear evidence of combined self-help which ought to be encouraged. The periodical is, we understand, edited by Dr. Shuttleworth.

BATTLE OF THE CLUBS.

Our contemporary, the *Stratford Express*, in its issue of the 29th ult., reports a largely attended meeting of the local profession at East Ham to consider what steps should be taken to prevent the abuse of medical charity in suburban Essex. It was unanimously resolved to form the Suburban Essex Mutual Medical Protection Society, and to call a meeting of all registered medical practitioners practising in suburban Essex to draw up the rules of the Society and combine for the suppression of abuses in the medical charities of the district and the promotion of professional amity. Dr. F. J. Smith, Senior Assistant Physician to the London Hospital, presided. In a leader on this subject our contemporary expressed sympathy with the doctors and drew special attention to the difference between the use of properly trained nurses under the supervision of medical men and competition of midwives or maternity nurses with the profession, where the former are enabled by the abuse of charity to largely undersell the latter. Readers may be referred to the note which appeared in the British Medical Journal of February 5th, page 398, headed "Medical Practitioners and Maternity Nurses."

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—The spring clinical meeting will be held at the Swansea Hospital on Thursday afternoon, February 17th. Notices of papers, cases, etc., are requested to be sent in not later than Saturday morning, February 12th.—A. Sheen, Cardiff; D. Arthur Davies, Swansea, Honorary Secretaries.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting will be held at the East London Hospital for Children, Shadwell, E., on Thursday, February 17th, at 4 P.M., Dr. St. Clair Shadwell, Vice-President of the District, in the chair. A demonstration of cases of Diseases in Children will be given by members of the staff. Visitors will be cordially welcomed.—Herbert E. Powell, Honorary Secretary, Glenarm House, Upper Clapton.

Gloucestershire Branch.—The next ordinary meeting of this Branch will be held at the General Hospital, Cheltenham, on Tuesday, February 15th, at 7 P.M., under the presidency of Mr. A. S. Cooke. Agenda: Mr. C. Mouat-Biggs: Notes on a Case of Infantile Cerebral Paralysis, with remarks. The patient will be shown. Dr. E. T. Wilson, Cheltenham: A paper upon Enteric Fever, with especial reference to treatment. A discussion upon the Position of the Surgeons of the various Branches of the Gloucestershire Conservative Working Men's Benefit Society will be introduced by Dr. Cox, of Winchcombe.—S. T. Pruen, Honorary Secretary, Sherborne Lodge, Cheltenham.

Staffordshire Branch.—The second general meeting of this session will be held at the Staffordshire General Infirmary, Stafford, on Thursday, February 24th, when the new wards and operation room will be open for the inspection of members at 4.30 P.M. The President, Mr. G. A. Phillips, will take the chair at 5 o'clock in the Board Room. Agenda: Minutes of the last General Meeting. Correspondence. Consideration of the Report of the Constitution Committee, and to express an opinion upon it. Exhibition of Living Cases, Pathological Specimens, etc. Dr. S. King Alcock: Case of Aneurysm of the Aorta. Mr. Blumer: Case of Puerperal Septicæmia treated by Antistreptococcic Serum. Dinner at the North-Western Hotel at 7.15; charge, 5s.—F. Milnes Blumer, Honorary Secretary, Stafford.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.

A meeting of the District was held at the Western Dispensary on Friday, January 28th, Dr. G. Crawford Thomson, Vice-President, in the chair. The minutes of the last meeting were read and confirmed.

Communications.—Dr. Sims Woodhead gave a very interesting, practical, and instructive address on Serum Therapeutics. He went minutely into the *modus operandi* of collecting and using the antidiphtheria serum. Dr. Woodhead strongly advocated its early use, and stated that the strength of the dose must be increased when the injection of the serum was delayed. Dr. Woodhead also mentioned antityphoid serum, and said the young medical officers of Netley attached such faith in it that they were being injected with it as a prophylactic before leaving for India. A discussion followed, in which Drs. Winslow, Dobson, Miss Helen Webb, and Messrs. Kiallmark and Lawrence took part. Dr. Woodhead briefly replied. Mr. George Eastes in a few complimentary words proposed a hearty vote of thanks to Dr. Woodhead for his interesting address; this was seconded by Dr. Dutton, and carried with acclamation.

Clinical Cases.—Dr. Winslow and Mr. Lawrence showed many rare clinical cases.

Tea.—The members were invited to afternoon tea.

GLOUCESTERSHIRE BRANCH.

An ordinary meeting of this Branch was held at the General Infirmary, Gloucester, on Tuesday, January 18th, at 7 P.M. Mr. A. S. Cooke, President, in the chair.

Cerebral Topography.—Dr. Herbert Bramwell read a paper upon Cerebral Topography. After having most carefully described the relation of the contents of the skull to the external skull markings which could be felt under the scalp, he described two cases in which such knowledge was first put into practice. One a man who after fracture over the middle of the right Rolandic area suffered paralysis of left arm with no defect of sensation; another, a woman who after embolism of part of the right middle cerebral artery had paralysis of left arm and leg, and in whom partial recovery was followed by a spastic condition of hand and foot. Trephining over the right Rolandic area was followed by the escape of serous fluid from a cyst, and resulted in permanent relief though not in cure.

After this paper a proposal that in future the ordinary meetings should take place after instead of before the supper was negatived by a large majority. The meeting then terminated.

CORK AND SOUTH OF IRELAND BRANCH.

A general meeting of the Cork and South of Ireland Branch, was held on Monday, January 31st, in the Medical Society Rooms, 118, Patrick Street, Cork, at 4 P.M., Dr. J. Guisani, President-elect, in the chair. The minutes of last meeting were read and confirmed.

Letter from President of Queen's College, Cork.—The Honorary Secretary read a letter from Sir Rowland Blennerhassett, Bart., President of Queen's College, Cork, in reply to resolution passed May 29th, 1897, *re* inadequate representation on the Senate and Board of Examiners of the Royal University, "stating that the whole question of representation of the School of Medicine in Cork in connection with the Royal University was engaging his attention, and that he would be glad to do what is possible to have any inadequacy remedied."

Report of Constitution Committee.—It was proposed, seconded, and carried unanimously, that the report of the Constitution Committee be adopted.

Medical Aid Associations.—In accordance with resolution of East Anglian Branch, it was carried unanimously:

That no medical men belonging to medical aid associations be elected members of the Cork and South of Ireland Branch of the British Medical Association.

Also a request that the Council of the British Medical Association should take similar action.

Legislation for Inebriates.—Resolution and memorandum on the subject was read.

Spread of Venereal Disease in the Indian Troops.—Resolution on the subject was read from the Worcestershire and Herefordshire Branch.

Hospital Abuse.—It was resolved that the Secretary summon a meeting at an early date to consider the whole question of hospital abuse; and as the question affects the county as well as the city of Cork, it was decided to summon both the city and county practitioners to the meeting, in order that remedial measures may be suggested.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

The sixty-sixth quarterly meeting of this District was held at the Pier Hotel, Sandown, on January 21st, 1898; Dr. Harland (President) occupied the chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

Unqualified Dentists.—A letter was read from the Southern Branch of the British Dental Association *re* the question of meeting unqualified or advertising dentists. Discussion was postponed till next meeting, when Dr. Green promised a resolution on the subject.

New Members.—Wm. Whitelaw Scott, L.R.C.S.I., L.R.C.P.I., of Shanklin, Norman B. Robinson, M.R.C.S.Eng., L.R.C.P. Lond., of Sea View, already members of the British Medical Association, were elected members of the Isle of Wight District.

The Late Mr. Ernest Hart.—Dr. Groves (Carisbrooke), then proposed a resolution as follows:

That this meeting of the Isle of Wight District of the Southern Branch of the British Medical Association, having heard with great regret of the death of Mr. Ernest Hart, so long the Editor of the British Medical Journal, hereby record their appreciation of the great services rendered to the British Medical Association, and also to the profession of medicine, and particularly to that branch known as preventive medicine by the late Mr. Hart.

This was seconded by the Hon. Secretary, and carried unanimously.

Intestinal Surgery.—Dr. Buck read some clinical notes of cases of surgery of the intestines, with especial reference to resection of bowel *versus* artificial anus in cases of (1) gangrenous hernia, (2) intestinal obstruction. Owing to the uncertainty as to the portion of intestine presented in hernia (if this were high up the patient would certainly die of inanition) he advocated resection in all cases of gangrenous hernia provided the condition of the patient allowed the operation to be sufficiently prolonged. He discussed the various methods of fixation of the gut in the wound in operating for artificial anus. As to the shortest period at which an opening might be made with reasonable safety where great urgency for relief of distension pressed the operation being performed *à deux temps*, he found this to be about forty-eight hours, giving his experiments and experience in arriving at this conclusion. For cases undertaken in "cold blood" he would prefer the regulation four or five days to a week.—A general discussion followed.

Cases and Reports.—Dr. Ewen then showed the following cases: (*a*) Comminuted Fracture of Humerus close to Epiphysis; (*b*) Compound Fracture of Tibia; (*c*) Perityphlitis, with some Complications; Operation; Good Recovery, and read some notes on a case of Phthisis complicated by Pneumonia, successfully treated by oxygen gas. The patient was an old man, 75 years of age, with a family history of phthisis and cardiac disease. There have been chest complications for four years. In 1896 the right apex was much affected, there being considerable consolidation with tubular and cavernous breathing; in 1897 from a sharp attack of pneumonia, he became in almost a dying condition, all but unconscious, face cyanosed, respirations 40 per minute, and heart failing. A large dose of oxygen was given (6 cubic feet). Ten minutes after the cyanosis had disappeared, breathing 28; he recovered consciousness, and went into an easy sleep. The gas was continued at short and then long intervals for some months. A considerable tract of lung recovered; much the same healing effect produced as after the application of oxygen to an old-standing ulcer. Very simple apparatus was used in this case, and no extra benefit was found either from warming the gas or by passing it through water before administration. This paper was very favourably received by all present.

Next Meeting.—The next (annual) meeting of the District was fixed for the third Friday in April, at the Bugle Hotel, Newport; and Dr. Banks promised to show a case of Bilateral Bronchocele and the operation for removal of one-half with the Isthmus.

District Rules.—The meeting was then resolved into a general meeting to receive the report of the Subcommittee appointed to revise the present district rules. This revision, showing some few slight alterations, was adopted by the meeting and ordered to be submitted for confirmation to the next annual general meeting.

Dinner.—This concluded the business, after which the President and members dined together.

SPECIAL CORRESPONDENCE.

PARIS.

Disinfection in Paris.—The Vital Statistics of France.—Phototherapy.—Vomiting Caused by a Living Shrimp.—The Dangers of the Profession.—Illegal Medical Practitioners and the Law Courts.—Wells in the Chalk.—General News.

M. Landrin's report on the disinfection service of Paris states that in the course of seven years, with a staff of eighty, more than 171,000 disinfections have been effected; the yearly average is 40,000. In 1886, before the disinfection service was organised, there were 6 000 deaths from epidemic diseases; in 1896, ten years afterwards, the mortality had gradually decreased, and was less than 2,000. There is no doubt that the increased supply of spring water has been an important factor in the improved sanitation of Paris, but since the disinfection service was organised, the mortality from zymotic diseases has fallen. These diseases were formerly responsible for a tenth of the total mortality. From 1891 to 1895 they were the cause of the eighteenth; in 1896 of the twenty-sixth, and in 1897 the twenty-seventh. M. Landrin asserts that mortality from tuberculosis does not decrease, because the prophylactic measures are not generally adopted. The report concludes by expressing the wish that measles, the zymotic affection which is the most fatal at the present time, should be included in the list of illnesses of which the notification is compulsory, in accordance with the law of November 30th, 1892.

The statistics of 1896 concerning the French population are less unsatisfactory than those of previous years, but that does not say that they are satisfactory. The births are 865,586, 23 per 1,000, whereas the average European natality is 38 per 1,000; this, however, is a gain on last year, when the births were 31 413 fewer. The increase of births this year brings the statistics nearly up to those of 1891 (866,377), a low natality which then caused great anxiety, and drew from the pen of Jules Simon a series of articles on French depopulation. At the present time the unfortunate demographic position of France is such that the present statistics appear less lamentable than in 1891, when they were more satisfactory as far as regarded births. The statistics of 1896 chronicle the fact that the rate of mortality is low, so that 93,700 more births than deaths were registered, a fact unknown for fourteen years, though previously the excess of births was higher. Notwithstanding these comparative statistics, there is the plain fact that all other European countries every year add to the number of future workers and soldiers. According to M. Jacques Bertillon, France remains as she was. This year, notwithstanding the low rate of mortality, there are twenty-eight departments where the deaths exceed the births. L'Alliance Nationale pour l'Accroissement de la Population de Paris has taken the subject in hand, and has issued a programme which has been adopted by the general councils of forty-seven departments.

M. Henry de Varigny has published an excellent popular account of the therapeutic effects of light. The investigations of French scientists are quoted, as are those of the Danish physician, Dr. Niels Finsen, who some time ago described his method of treating small-pox in red light, as well as those of Dr. D'Arcy and Dr. Hardy. M. de Varigny proposes to name the treatment by light "Phototherapy," and concludes his article by stating that a "window tax" is only worthy of nations governed by savages. It means taxing health, and shows unpardonable ignorance or wickedness on the part of the governing section, and incredible stupidity on the part of the governed.

At a recent meeting of the Académie de Médecine, a living fresh water shrimp (gammarus pulex) was shown to the members on account of its curious history. Dr. Dubois, of Melun, treated a patient suffering from incurable vomiting. He had used for drinking water well water supplied by the Seine. When he had vomited the shrimp after fifteen days' suffering he recovered. Professor Laboulbène, who exhibited the shrimp, assured the Society that the facts were authentic. Professor van Beneden in Germany had recorded a similar fact.

Dr. Charpentier, physician attached to the Bicêtre Hospital, has twice in one year been attacked by an insane patient. The last attack occurred a few days ago. The patient was allowed a certain freedom, and went about the hospital. He laid in wait for Dr. Charpentier hidden behind a pillar, and struck him on the head with a 2 lb. weight. One of the hospital subordinate staff happened to pass at the time and rescued Dr. Charpentier, who had a short time previously asked for this very patient to be liberated.

The South-East Medical Syndicate recently sought to obtain a conviction against a priest for practising medicine illegally. Two members of the syndicate consulted him several times, were examined, auscultated, percussed, and prescribed for, each time paying a fee of 2 francs. With this evidence the syndicate proceeded against the "curing priest." The case was heard at the Grenoble law court. The court delivered the following judgment: "Proof is furnished that medical treatment was given, but as neither of the witnesses was ill there is no proof of illegal medical practice."

M. E. A. Martel calls attention to the contamination of a spring in the Gard Department. This is caused by infiltration through the fissure of the chalk soil on which the city of Sauve is built. M. Martel has proved by an experiment with fluorescine that this spring is in direct contact with a pit 13 metres deep and at 85 metres distance, which is in the centre of a stable yard into which all the dirt drains.

The friends and pupils of M. Tarnier wish to erect a monument to his memory.

Dr. Miquel has made a bacteriological examination of sewage water, and states that the drains of Gennevilliers are freer from microbes than they were in previous years, but that the Marne-Seine river waters are ten times more impure.

BERLIN.

Law and Medicine.—The Balneological Congress.—Professor Esmarch.—The Medical Curriculum and Popular Therapeutics.

The Central Committee of the Berlin Medical Associations has decided to organise a course of lectures by distinguished lawyers on legal subjects connected with medicine. The

lectures, each of which is to be followed by a debate, will be open to all medical men in Berlin and the suburbs.

This year's Balneological Congress is to be held in Vienna from March 11th to 15th. Professor O. Liebreich (Berlin) will be its President. Among the papers announced are the President's on the Effect of the so-called Indifferent Baths; Professor Benedikt's (Vienna) on Logical Thought in Balneotherapeutics; Dr. Römpler's (Görbersdorf) on the Question of Contagion in Tuberculosis as against Heredity; and Professor Winternitz's (Vienna) on Hydropathy.

Professor Esmarch, of Kiel, one of the veterans of surgery, intends to retire from his professorship very shortly. Esmarch is 75 years old, and has held his chair at Kiel for more than forty years.

There is much talk in medical circles of proposed alterations in the medical curriculum, and in connection with this question an article in the *Deutsche medizinische Wochenschrift* advocates increased attention to hydropathy, Swedish gymnastics and massage, dietetics, balneology, and climatology. The writer says that the average doctor, when "let loose on mankind," has little more than a shadowy notion of such things as "packs," "Scotch douches," "half baths," or the methods of massage and Swedish gymnastics; that his ideas of invalids' feeding are bounded as a rule by the three names "fluid," "low," and "full" diets; and that he is ignorant of all but the elements of sick nursing, its modern aims and achievements. Not only do the patients suffer from his imperfect familiarity with practical methods, but the profession suffers too, since clever quacks cultivate these neglected branches of therapeutics, and become dangerous competitors of the legitimate practitioners.

EDINBURGH.

The Muir Hall of Residence for Women Medical Students.—New Asylum on the Segregation System: Details of the Requirements.

The Muir Hall of Residence for Women Medical Students at No. 12, George Square, Edinburgh, was formally opened on Thursday, January 27th, by the Duchess of Buccleuch. It is called the Muir Hall in memory of the late Lady Muir, the wife of the Principal of the University, who always took a warm interest in the well-being and comfort of women medical students. The Hall is in the hands of a limited company, and is managed by a Committee. There are two common rooms—a drawing room and a dining room—on the ground floor, both very warmly, artistically, and tastefully decorated and furnished, especially the former room. There are 21 bedrooms, or rather bedroom studies (two of these double), capable of accommodating twenty-three students, and already there are twelve students in residence. These bedroom studies most resemble tiny drawing rooms, so skilfully is the bed-room part disposed of. The bed precisely resembles a delightfully comfortable and spacious sofa, and the other furniture has been so devised as to be consonant rather with a sitting than a sleeping room. Each room has a large and useful writing desk, the sloping top of which can be raised to serve the purpose of a tea table. A curtain across one corner gracefully conceals a hanging wardrobe. The carpet in colour and tone, as well as wall paper and painting and hearth tiles, all make for comfort and rest. The rooms vary in size, and this, with the outlook, determines the cost of living at the Muir Hall. The inclusive charges vary from 16s. 6d. to 25s. per week. A certain number of students come into the Hall for dinner only and this is provided for them on five days of the week at the very modest sum of 3s. 6d. per week, something like 8½d. per dinner. The Hall is under the judicious and kindly care of Miss Robertson.

The Edinburgh District Lunacy Board having acquired the estate of West Bangour, situated in the Parish of Ecclesmachan, Linlithgowshire, about two miles west of Uphall, for the purpose of establishing a district lunatic asylum, are now inviting architects to submit competitive designs. Four premiums are offered for these designs, £250 for the best, £200 for the next, £150 for the third, and £100 for the fourth. Competitors will, on application, be supplied with plans and sections of the selected site, instructions, a memorandum on the plans of modern asylums for the insane poor by Dr. John Sibbald, and a report of a deputation from the Edinburgh District Lunacy Board appointed to visit certain asylums in France, Germany, and England.

It is intended by the Board to erect asylum buildings on the segregated system, most fully illustrated by the asylum at Alt-Scherbitz, in Prussian Saxony, to accommodate in the meantime 600 patients, but capable of extension so as ultimately to accommodate 1,000. In some of the buildings it will obviously be desirable to provide at once the necessary accommodation for the larger number. Some others will be designed to meet the immediate wants, but be capable of extension. This will be the first asylum of the village type in Great Britain. While the attention of competing architects is specially directed to the asylum at Alt-Scherbitz, it is only as the best illustration of the principle of segregation, and not as suggesting that the details of the arrangements there should be slavishly imitated. The governing principle of the system is set forth in Dr. John Sibbald's words as "the approximation of the buildings so far as possible to the character of ordinary private dwellings, as regards their size, their style of architecture, their internal arrangements, and their grouping."

There is no doubt that the new asylum will mark a new departure as far as this country is concerned, and it is expected that it will be more truly of the "village type" than even Alt-Scherbitz. The buildings required will fall into three classes: (1) administrative and general; (2) those of the hospital or medical section; (3) those of the industrial or non-medical section. Under each of these classes falls an enormous mass of details. Under the first, one notes, in connection with the mortuary block, a laboratory, with apartments for pathological research, photographing rooms, etc. There will be a detached villa for the residence of the medical superintendent, a nurses' home with parlour and bedroom accommodation for 20 nurses, as well as apartments for the matron. In the hospital or Medical Section there will be an Admission and Observation House for 35 male patients, containing three day rooms, including a dining room, dormitories for 30 patients, a waiting room, admission room, etc. Similar arrangements will exist for 35 female patients. An infirmary or sick room for 40 male patients, dormitories for 30 patients, and 10 single bedrooms, and the same for female patients, will be built. A hospital for 15 male and 15 female patients, two asylum buildings or houses for excited patients for 30 male patients and the same for 30 female patients, complete this part of the scheme. Under the Industrial Section it is intended to build ten villas, five for men and five for women, varying in size and arrangement, accommodating from 25 to 40 patients each, and in the aggregate 150 male and 150 female patients.

BIRMINGHAM.

The Health of the City in 1897.—Increased Birth-rate.—Increased Mortality from Measles and Diarrhœa.—Recommendations.—Alleged Defects in Sewerage.

At the last meeting of the City Council the Health Committee presented the annual report for the year, from which it appears that the birth-rate was during the year slightly in excess of the average for the past five years, being 33.2 per 1,000.

The death-rate for the year was 21.1 per 1,000, which is considerably higher than the rate for the past five years. This increased death-rate was due partly to an excessive mortality from measles, which caused 414 deaths, or an excess of 185 above the average; but it was chiefly due to an extraordinary mortality from diarrhœal complaints, particularly in young children, during the summer months. No fewer than 923 deaths were registered from diarrhœa and 521 from enteritis. The two complaints caused 691 deaths in excess of the quinquennial average.

On the other hand, deaths from scarlet fever and diphtheria were considerably below the average. Dr. Hill, the medical officer of health for the city, treating of the insanitary conditions existing in the city in a special report, has made the following recommendations: (1) The paving and better scavenging of courts, (2) the abolition of the pan system and of ashpit privies and the substitution therefor of water-

closets, (3) the demolition of all houses situated in crowded courts which have been closed as unfit for habitation. It is sincerely to be hoped that these and other measures to be adopted by the Health Committee will be the means of raising the sanitation of the city, and be followed by considerable diminution in the zymotic death-rate.

Complaints, however, are frequently being made in the columns of the local press of the foul odours emitted from many of the sewers in the city, and it is feared by many that the whole system of the sewers will have to be reorganised before we can hope to effect any radical improvement in the sanitation of the city.

NEWCASTLE-UPON-TYNE.

The Royal Infirmary.—The Victims of the Creasote Fire.—The Revocation of a Degree.

The annual meeting of the governors of the infirmary took place on February 3rd, the Mayor of Newcastle being in the chair. The report for the year showed a steady increase in the number of patients and in the number of operations. In spite of the overcrowded condition of the wards, the percentage of recovery after abdominal operations was considerably better than in the preceding year. The pressure in the wards had been very severe at times, and the necessity for a new infirmary was demonstrated over and over again. References were made to the site for the new building, and although the steps are unavoidably slow, the technical and legal difficulties are gradually being surmounted. Mr. Riley Lord reported that with the exception of a few residents near the Leazes, the whole of the subscribers to the jubilee fund had agreed to allow their subscriptions to stand for an endowment fund, instead of for the building fund, as was originally intended. The sum already subscribed is more than £100,000, and this large endowment will yield a most welcome addition to the annual income of the institution.

Three of the twenty-five patients admitted into the Royal Infirmary, Newcastle, for burns received at the Walker Gate fire have died, but with two or three exceptions the men are doing well. The cold weather caused much suffering, and there was a general rise in temperature with some delirium at night. With warmer weather, however, these symptoms abated. Ventilation of the ward is a matter of some difficulty now that the sloughs are separating.

At the ordinary Convocation of the University of Durham on February 1st the University for the first time exercised its recently acquired power of revoking degrees. The report, which was read to the members of Convocation by one of the Proctors, was published in the British Medical Journal of February 5th, p. 408. It was agreed upon this report that the degrees should be taken away, and they were accordingly revoked. The name was struck off the *Medical Register* for the same crime at the first meeting of the General Medical Council held after the passing of his sentence.

BRISTOL.

The Convalescent Home.—Constitution of the Public Health Committees.—Housing of the Working Classes.

The establishment of the convalescent home has progressed one step which is almost the final one. The Site Committee last week recommended the purchase of a large house known as Waynflete. This is a fine brick building capable of holding from 80 to 100 patients, and by those in favour of the home being in Bristol, no better place could have been selected. The house is the property of the Rev. J. Wilkinson, who, as an ardent Wykehamist, named it after the founder of his old school. Mr. Wilkinson some years ago bought the site, and erected this large house for a private school, and now a good offer having been made—it is said £20,000—he is willing to part with it. It is situated on the edge of the Down, and has about 3½ acres of gronnd attached, and can with very little alteration be made very suitable for a convalescent home. The recommendation of the Site Committee was accepted by the General Committee, and the arrangements for purchase, subject to conditions of title, etc., are now going on. There is a report that the Prince of Wales will be asked to open it.

Before the enlargement of the boundaries in December the health of the city was superintended by the Sanitary Committee of the Town Council, which for convenience was subdivided into various subcommittees to carry on the work of the numerous departments that came under the sanitary authority. The new arrangements have simplified this, and the Sanitary Committee is now separate from the Health Committee, a new body which will take over those duties of the old committee which were particularly concerned with the health of the city. To facilitate work three subcommittees have now been formed, one to deal with departmental work and finance, one for the city hospitals—which by the way are rapidly approaching completion—and a third for the housing of the working classes.

The Bishop of Bristol recently referred to the squalid condition of many of the houses of the poor, which he said compared unfavourably with those of East London, his former diocese. But while it is admitted that there are still many courts and alleys that should be opened up or cleared away, there are many who question whether the time has yet arrived for the city authorities to erect houses for the working classes, as Mr. Gilmour Barnett wishes them to do. No doubt this gentleman will, as Vice-Chairman, work hard to gain this object, which he has for a long time advocated, but it is very doubtful whether a strong Conservative Town Council like that at Bristol can be induced to approve a measure which many members will regard as tainted with socialism. It is, moreover, urged that the experience of most towns is that so-called industrial dwellings are generally filled by a class of people who could afford to pay a higher rent than that charged, and that the truly poor when a clearing is made are only huddled together more closely than before, as they cannot afford to live in the dwellings that are specially erected for them.

CORRESPONDENCE.

QUALIFICATION AND REGISTRATION.

Sir,—The degrees or diplomas conferred upon graduates or licentiates by the various universities and corporations of Great Britain confer no legal right to practise medicine, surgery, or midwifery, in any part of her Majesty's dominions. These qualifications are merely "qualifications for registration," and it is only the subsequent registration which enables those registering to become "duly qualified medical practitioners," within the terms of the Medical Acts.

Under the Medical Acts certain bodies duly scheduled became possessed of powers entitling them to grant "qualifications for registration," and by 39 and 40 Vict., cap. xli, these powers were extended to their women diplomates and graduates. The word "qualifying" is repeatedly used in this sense, and in Part I of the Medical Act, 1886, a qualifying examination is defined as being an examination "for the purpose of granting a diploma or degree conferring the right of registration." Not the right of practising, it must be noted.

It is clear from a careful reading of the Medical Acts that it is registration alone which entitles the individual to legally practise. It has been already established by the General Medical Council that it is "infamous conduct" in a professional respect to "cover" an unregistered person, and that the latter is in their eyes unqualified, although he may actually hold diplomas and even medical degrees capable of registration. The privileges conferred by law upon duly qualified—that is registered—practitioners are as follows:

1. They can sue for their fees.
2. They can sign valid certificates.
3. They are exempt from serving as jurors, and also from the militia ballot.
4. They are entitled to practise medicine, surgery, and midwifery in the United Kingdom.

A privilege conferred by Acts of Parliament becomes a legal right capable of enforcement by law, and it follows that all persons other than those duly registered cannot legally, in addition to other disqualifications, practise medicine, surgery, or midwifery in the United Kingdom.

It may be asked, What penalty is incurred by those who do so practise without being registered? To this the only answer can be that by so practising they usurp the legal

rights of the duly qualified, and that by doing this they imply to a credulous public that they are registered, and that Section XL of the Medical Act, 1858, could be put in force against them. If magistrates and judges in dealing with these cases could be brought to understand that registration is the only portal for legal practice of medicine, no difficulty would ensue in dealing with unqualified practice. In cases about to come before the courts these points will be driven home, and, it is trusted, with success.—I am, etc.,

Devonshire Street, W., Feb. 9th. A. G. BATEMAN.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

SIR,—Assuming for the moment, for those who wish to deal earnestly with the problems of medical reform, that Mr. Horsley's interpretation of the present Medical Acts is the correct one, and that the man in the street is not entitled to practise, and, further, that the obvious inference to be drawn from Section VI of the Medical Act of 1886 is that any person not on the *Register* should be prosecuted, one is at once driven to look through the Acts for the penal clause or clauses to insist upon the fact, if possible, that such person shall not practise, and what does one find?—Section XL of the Act of 1858, which in effect provides that a man can be prosecuted who fraudulently represents himself to be what he is not.

Inferences may be drawn, and one may contend that a practice or a procedure is wrong in the abstract even by statute, but unfortunately an Act of Parliament is hardly a problem of *Euclid*, and unless there exists some concrete means of suppressing the evil, such philosophical contentions become a mere ploughing of the legal sands.

Mr. Horsley admits that it is most difficult under present conditions to obtain a conviction; indeed, judicial decisions seem to indicate that "a legally qualified practitioner" means a person registered under the Act, privileged to recover fees; to claim immunity from serving on juries, etc.; to hold public medical appointments and—the irony of it!—to sign death certificates; but not a person alone privileged to practise medicine, etc. Undoubtedly "all that is apparently wanted is a slight rearrangement of words," making it penal for any person not registered to practise for pay medicine, surgery, or midwifery; it is gratifying therefore to observe that the Council of the British Medical Association have appointed a subcommittee, in which Mr. Horsley is included, to draft a new Medical Bill.

Your correspondent Mr. Massie, begins his letter by asserting, in contradiction to Dr. Collie, that it is a truism that "as a political force the profession is powerless," and finishes by demonstrating the ways and means of fortifying the political force of the profession by the return of the University members pledged to medical reform; but there are other means. If the Medical Council itself will not move in the matter, and seek the aid of a Government Bill to provide it with the powers to carry to its logical conclusion its recent action in suppressing unqualified practice within the ranks, and the suppression of a worse kind of unqualified practice outside the profession—it will remain for some private member to introduce the Bill, and in such case the rank and file of the profession, independent of its supposed corporate representation, will have to back it in the various constituencies. Mr. Massie seems to slight pledges of hon. members. He says, "Having interviewed the candidate and extracted the pledge, what is gained?—absolutely nothing." But it may be pointed out that members having had their attention drawn to the Bill (even though giving no pledge) would be more likely to attend the House and hear what is to be said for a private Bill on which they have information than for one of which they have no knowledge.

Failing the action of the General Medical Council, and failing the passing of a private Bill, Dr. Lovell Drage's suggestion is an excellent one: but the profession would probably fare better if they tried one thing at a time. Can the wrecking or foundering of the score of past medical Bills be attributed to aught else than overlading? Mr. Massie suggests that "about seven-eights of the profession give an inalienable, unswerving allegiance to one party." That may be doubted; but to which party does he refer? Lawyers organised get, I was going to say their reforms, but one should rather say their protection—to which side do the majority of them belong? He further states that "chiefly through local jealousies it is next to hopeless to attempt organisation among medical men in any given Parliamentary division." Why, every other profession have their jealousies, yet they unite as against outsiders.

Those who, like Mr. Carter, take up the position of *laissez-faire* seem to assume that the ardour of medical reformers is due solely to the idea of financial gain to the practitioner, whereas it is the chief contention of reformers that a State recognition for its own purposes only—that is, to hold Poor-law appointments, etc., is a very tardy recognition of an honourable and hardworking profession, wherein it is no uncommon occurrence for its members to be informed by their own patients that they have been, or intend going, to some unqualified person, a so-called specialist on the eye, ear, or bones—such is the popular ignorance on the subject.

Medical reform is no party question; it is a cause common to both political parties—to the one side which claims so many suggestions as reforms, and to the other as a conservation of all that is good and true—purged from the shameful degradation of unscrupulous quackery—in the art and science of healing—I am, etc.,

Leeds, Feb. 5th. J. H. WIGHAM.

THE DARENTH ASYLUM.

SIR,—The report of the proceedings of the Asylums Board in the BRITISH MEDICAL JOURNAL of February 5th, leads to the inference that a gross injustice has been inflicted on a professional brother.

The special committee charges him with an "error in judgment" in undertaking the delivery of a woman, although having at his back medical assistants, a large staff of nurses, and the resources of a large institution. Probably every superintendent of a lunatic asylum in the country has committed such an "error of judgment" on one or more occasions.

Then it is alleged that he was guilty of an omission of duty in not having entered in the "case book" a matter which he had so reported to his Committee that it had become the subject of a special inquiry and correspondence with the Commissioners of Lunacy. Could any charge be more palpably absurd?

It is monstrous that a medical man's career should thus be ruined on such inadequate grounds, and that his reputation should be damaged by the insinuations conveyed in this ridiculous report. The question I wish to ask is, "What action do we as a profession intend to take on behalf of one of our number so grievously wronged by this public body?"—I am, etc.,

February 7th. MEDICUS.

HOSPITAL ABUSE.

SIR,—Last week a young woman, who is earning her living as a teacher, consulted me with regard to an epulis. I explained to her the nature of the disorder and suggested that as it had already been removed and recurred I should do a small but radical operation. She left me on the understanding that she should consult her mother as to what she should do. Imagine my surprise when this morning I got a letter from her saying that following her mother's advice she went to St. Thomas's Hospital, where she is to be admitted as an in-patient. I give her all credit for writing to let me know what she has done, and also for adding, "Should you think proper to make a charge for advice please let me know."

It does indeed seem hard if country practitioners may have entering into competition with them not only the local institutions there may be in their own towns, but also those great charitable hospitals in London to which as past students we have a right to look for fair play.—I am, etc.,

Newport, Mon., Feb. 7th. B. W. GOWRING.

FORCED REDUCTION OF LATERAL CURVATURE OF THE SPINE.

SIR,—I am sorry to have to ask you to give me space to explain what I thought was clearly described in my former letter. There is no contradiction in my statements in that letter. My remarks were based upon the assumption that whatever improvement in position of a crooked spine can be attained, either by muscular exertion, by gentle pressure

with an apparatus, or by strong manual force, such position will in time become permanent if kept up by a properly constructed support. In other words, if the spine be constantly held in its best available position sufficiently long, the bones will adapt their shape to such position in the course of time. We all know that by any of the above-mentioned means a spine may be immediately altered to a better position, but it would be absurd to suggest that the bones and cartilages can alter their shape in a moment, nor will they alter to an appreciable degree in three weeks, but in the course of months such a change will take place. The treatment resolves itself into placing the spine as quickly as possible into as good a position as can be attained, and in keeping it there until the bones have changed their shapes. By forced reduction, as a help in this treatment, the joints have been in some cases stretched into a straighter position than could be accomplished by less powerful means; and a similar effect is brought about in cases of flat foot by means of a wrench.

The *modus operandi* of the treatment is well shown in a case of genu valgum. Here one joint only, that of the knee, being involved, the effect of treatment by mechanical means is very easily demonstrated. By applying a straight splint along the outer side of the leg from the pelvis to the foot and drawing the crooked joint by means of a knee cap out to that splint, the limb may, in moderate cases, be immediately straightened. Now it is obvious that by such a method the joint is forced into a straight position by altering the relation of the joint surfaces to one another, and it is a matter of experience that if we retain the limb in this straight position sufficiently long, that is, for some months, the structures of the joint will gradually readjust themselves so that they return to their natural level condition. This is doubtless a lengthy process, but it is a certain one, and it can be carried out without laying the patient up for a single day or a single hour.

Now, although after some months we shall find a distinct change in the shape of the joint, we could not reasonably expect to find an appreciable change of this kind in three weeks. The same argument applies to the treatment of a crooked spine, although undoubtedly it is a far more difficult matter to alter the positions of the many vertebral joints than it is of the one knee-joint. I have used forced reduction in lateral curvature of the spine as a means of simplifying the process of straightening; but although I am well satisfied with the results, I do not pretend that the more severe cases can be cured. Every degree of straightening is, however, of material benefit to the patient, and will relieve him in after-life of a proportionate amount of trouble and pain.

Muscular development alone will enable the patient to hold himself in a better position, but it will not do much, if anything, to alter the shape of the vertebral joints because of its intermittent action. If the advocates of this treatment would only add to their efforts by keeping up the improved position they would obtain much better results. Forced reduction is a detail of mechanical treatment which I recommend others to try. I think they would find, as I have done, that it would enable them in certain cases to do something more than can be done without it.—I am, etc.,

Queen Anne Street, Feb. 8th. Noble Smith.

*** This correspondence must now cease.—Ed.

THE QUESTION OF TABLE SALT IN CHRONIC GOUT.

Sir,—In the British Medical Journal of February 5th Dr. John T. Faulkner refers to some remarks of mine on the treatment of gout, and expresses the opinion that I ought to declare myself a vegetarian. Why Dr. Faulkner holds that opinion I know not, for if he will refer to the paper I read last month before the Harveian Society on The Pathology and Treatment of Gout, he will find that I expressly state that "a rational mixed diet is the one best suited for gouty patients. . . . . The assumption that a purely vegetable diet is best for the gouty is erroneous." In the same paper I advise amongst the dietary for the gouty the use of whiting, soles, turbot, plaice, bacon, and meat. It is true that I referred to a series of investigations that I had conducted which showed the marked power exercised by the mineral constituents of certain vegetables in increasing the solvency of gouty deposits, but surely the remarks I have quoted above should exonerate me from the onus of declaring myself a vegetarian.—I am, etc.,

Weymouth Street, S.W., Feb. 7th. Arthur P. Luff.

Sir,—The following particulars may be of interest in connection with the use of salt in chronic gout, seeing the frequent, if not invariable, association of digestive disturbances and gout.

During some experiments on the digestive powers of different substances, I found that the presence of salt hindered or prevented the action of scale pepsin.

Hard Boiled White of Egg.

0.5 per cent. sol.	hindered slightly.				
1.0	,,	,,	hindered to extent of	8.3	per cent.
2.0	,,	,,	,,	13.3	,,
4.0	,,	,,	,,	54.1	,,
6.0	,,	,,	,,	75.0	,,

Raw Beef.

0.5 per cent. sol.	hindered to extent of			10.0	per cent.
1.0	,,	,,	,,	15.0	,,
2.0	,,	,,	,,	35.0	,,
4.0	,,	,,	,,	72.5	,,
6.0	,,	,,	,,	entirely.	

The meat in these cases became contracted and corky in appearance. I found, however, that raw beef soaked for two days in salt solutions of varying strengths, and then washed, was digested with equal facility, whatever strength of salt solution had been used.—I am, etc.,

W. Hubert S. Fosbery, M.D. and B.C.Camb.

Reading, Feb. 7th.

THE PREVENTION OF INFLUENZA.

Sir,—A wise old lady, from whom I learned much, would not permit herself to converse on subjects of an unpleasant nature, and had no scruples about requesting her friends not to visit her when suffering from catarrh. Excellent rules both, but it does not appear that influenza can be materially checked by isolation and disinfection. In an epidemic which occurred here in 1891, stringent precautions were observed from the first in the hope of limiting the spread of the disease. These utterly failed, and the distribution of the cases was most irregular, as reported in the British Medical Journal of May 14th, 1892. In the epidemic of 1890, on the other hand, although 9 out of 28 male officials were attacked, not one of the 50 male patients suffered.—I am, etc.,

A. R. Urquhart.

James Murray's Royal Asylum, Perth, Feb. 7th.

CONSULTATION WITH HOMŒOPATHS.

Sir,—In common with many others, I welcome the appearance in your columns of the letter signed "An Open-Minded General Practitioner," as an indication that a better state of things in the domestic policy of the profession may be at hand.

Your other correspondent (Dr. Wiglesworth) has evidently taken some pains to understand what homœopathy is, but I must ask your readers to go to Hahnemenn's works rather than accept Dr. Wiglesworth as a competent interpreter of his doctrines. For I do not wonder that with Dr. Wiglesworth's misapprehensions of them, he declined to become one of the body he imagines homœopaths to be. But homœopathy is not what he paints it. For one thing, homœopathy has no "specifics for diseases." It has a method by means of which a probable specific may be found for any given case of disease; but the remedy in every case must be selected in accordance with the particular disease manifestations present. Corrosive sublimate produces symptoms found in many cases of dysentery, and will cure cases, otherwise arising, in which these particular symptoms are prominent; but it will not cure all cases by any means, and it is therefore no "specific for dysentery." Rhus and bryony produce rheumatic symptoms, but neither the one nor the other is a specific for rheumatism. The pains produced by rhus are relieved by motion, and those produced by bryony are increased by motion, and each drug will only cure those cases in which the corresponding characteristics are met with. The great virtue of homœopathy lies in this, that it supplies a method by which the appropriateness of any remedy may be ascertained beforehand in any case. The question of dose is a matter for experience to

decide, and until the limits of the sensitiveness to drug influence of the human organism is ascertained it is useless to dogmatise on this point.

I should like to remind Dr. Wiglesworth that the practice of homœopathy is not quite as simple a matter as "falling off a log," that there are many degrees of adeptship among those who accept the truth of the doctrine on which the rule of *similia* is based, and also that there are many degrees of similarity between drug effects and disease conditions, any of which may be utilised for therapeutic purposes.

With regard to the question of consultations between allopaths and homœopaths, I should like to suggest that the point be referred to the General Medical Council. Should the Council decide that it constitutes "infamous conduct in a professional respect," that will practically settle the matter. On the other hand, supposing a registered practitioner of either school should be in need of professional help in any case and should be refused the same for doctrinal reasons, I should like to know whether or not the Council would deem the conduct of the refuser to be "infamous."—I am, etc.,

Clarges Street, W., Feb. 5th. JOHN H. CLARKE.

DENTAL REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

SIR,—Should a dentist at any future time be chosen one of the Crown nominees on the General Medical Council, I should, in common with my *confrères* generally, hail such an appointment with satisfaction, as a deserved compliment to an important body of surgical specialists. But I should not expect a dental millennium to ensue on such an appointment.

The most important dental business transacted by the General Medical Council is the framing of a minimum curriculum. The Council has recently proposed to make some reduction in this curriculum, and it seems certain that had there been a dental representative on the Council his attitude towards this proposal would have been determined by his nationality; for while the College of Surgeons of England recommends and supports this reduction, the Scotch licensing bodies are opposed to it.

On no dental question does anything like unanimity prevail; the profession includes such diverse elements and conflicting interests that it is hardly an exaggeration to say that a dental representative would represent nobody but himself. To those who are demanding a dental representative I should like to point out that, of all who hold the dental licence of any of the corporations, it is incorrect to say that they are without representation. The representatives of their respective corporations, I am sure, regard them as constituents, and would at all times be willing to hear and consider any views concurred in by a large or representative body of Dental Licentiates, and would also doubtless do their best to advocate and forward any improvements or reforms which had the strong support of such a body.

Therefore, until I am assured that such efforts as I have indicated, to secure the ear and aid of our present representatives have been made—and failed—I shall decline to join in the cry for a dental representative.—I am, etc.,

Edinburgh, Jan. 25th. WILLIAM GUY, F.R.C.S., L.D.S.Edin.

SIR,—As one of those deeply interested in the progress and education of the dental profession, may I be allowed to add a few words to those already expressed in the BRITISH MEDICAL JOURNAL on the subject of the dental profession having a direct representative on the General Medical Council? The subject, I need hardly say, is not a new one to us, as it has for a long time past been under discussion by the Council of the British Dental Association, who saw how urgently a representative was required if the public and the profession were to reap the benefits which the Dental Act of 1878 was passed to confer.

We have many gentlemen in the profession who would be an acquisition to the General Medical Council, not only capable of legislating for the dental but also for the medical profession; but we could hardly expect the medical profession to put aside its privileges of electing a gentleman practising as a medical man in favour of one practising the branch of dental surgery. Our hopes, therefore, seem to me to be in the Privy Council recognising not only the justice of the claim, but the urgent necessity of it, if the General Medical Council is to do its best in the interest of the public and the profession.—I am, etc.,

FREDERICK CANTON, M.R.C.S.Eng., L.R.C.P.Lond., L.S.A., L.D.S.Eng.

Upper Wimpole Street, W., Jan. 25th.

THE IMMUNISATION OF ANIMALS AGAINST STREPTOCOCCUS INFECTION.

SIR,—In a report of my paper on the immunisation of large animals against streptococci I notice that there appear some errors, due no doubt to a failure on my part to make my meaning absolutely clear when speaking before the Pathological Society. As I am most anxious to prevent any misconception, I venture to ask you to kindly find room for the enclosed brief summary of the main facts which I presented to the meeting of February 1st.—I am, etc.,

Devonshire Street, W., Feb. 9th. T. J. BOKENHAM.

[ABSTRACT.]

1. Immunity to one streptococcus does not confer immunity to all other strains of streptococci. In like manner the serum from a "singly immunised" animal, while protective and curative in respect of the particular microbe first used, is not generally protective or curative towards equal physiological doses of all streptococci.

2. The culture medium used was veal bouillon, with the addition of ascitic fluid, alkali-albumen, or serum (ass). In all cases cultures were incubated for at least three weeks so as to ensure greater uniformity of results.

3. Virulence of the cultures used was raised by the "method of passage," so that $\frac{1}{10^{10}}$th c.cm. of a 24 hour old culture killed a guinea-pig inoculated in the peritoneal cavity; $\frac{1}{10^{11}}$th c.cm. by intravenous injection was also fatal to a rabbit in 48 hours.

4. Effect of a lethal dose (intraperitoneal):

(*a*) A fluid poor in cells.

(*b*) Appearance of many phagocytes (one to two hours).

(*c*) Marked but incomplete phagocytosis; numerous free microbes.

(*d*) Free streptococci numerous; cells badly stained and breaking down.

(*e*) Fluid rich in free streptococci.

(*f*) General infection; blood teems with cocci (*Cf.* Bordet, *Ann. Inst. Past.*, 1897).

5. Effect of less than lethal dose:

(*a*) Phagocytosis rapidly complete, but inoculations with exudation succeed during the first two or three hours.

(*b*) As stated by Bordet, a reinfection may occur in certain cases.

6. Effect of inoculation on a protected animal: Phagocytosis is rapidly complete, even when multiples of the lethal dose are given; animal shows no sign of illness.

7. Preparation of a protective serum: Large animals received frequent large doses of filtrates from mature cultures of streptococci of different races. It was shown by numerous charts and lantern slides that very marked reactions followed such injections. The failure of Marmorek to obtain corresponding results may be due either to differences in the cultures used or to insufficient dosage. The serum of prepared animals acquires very definite protective properties.

8. Properties of immunising substances on small animals:

(*a*) Fatal doses in rabbits produce acute nephritis, gastritis, and hæmorrhages into gastric mucous membrane; febrile temperature; paresis (lantern demonstration).

(*b*) Repeated small doses produce passing rise of temperature, and finally immunity to both filtrates and cultures.

9. Activity of serum: This was tested against ten lethal doses of culture by method used by French observers.

(*a*) Dose far too small; there is first phagocytosis, then failure of the process, with general infection.

(*b*) Dose nearly sufficient; phagocytosis at first complete, but recrudescence with fatal result occurs after more or less delay.

(*c*) Dose sufficient; phagocytosis complete and animal keeps well.

10. Bactericidal action: None could be positively demonstrated.

11. Agglutinative action: Quite atypical.

12. Intravenous injection of culture into a normal rabbit causes rapid septicæmia.

13 Intravenous inoculation of a prepared rabbit is followed by prompt disappearance of streptococci from the blood; animal remains well.

14. Local action of serum: Taken too soon after an immunising injection pain and swelling may occur, after a delay, at point of injection. Taken not sooner than eight to ten days after an injection there are no unpleasant sequelæ. With Marmorek's method of immunisation an interval of a month must elapse between injection and bleeding.

15. Serum is protective if given in sufficient dose before inoculation, and curative (when cultures used are not extremely virulent) if given within four or five hours of inoculation. Repeated small doses answer better than single large ones.

16. Antitoxic action: No such action has been demonstrated clearly.

17. In the infected human subject injection may be followed by loss of headache and local pains, a comfortable somnolence, free perspiration, fall of temperature after brief initial rise, improvement of pulse, and disappearance of local erythemata or erysipelatous signs. No dangerous sequelæ have ever been seen to follow the use of serum.

THE USE OF THE WATER VACUUM APPARATUS IN ABDOMINAL SURGERY.

SIR,—In the BRITISH MEDICAL JOURNAL of January 22nd, is an interesting communication with reference to drainage on the above principle by Mr. George Heaton of Birmingham.

During the last five years I have used the modified water Sprengel pump in my abdominal operations at the Women's Hospital in this town. I have not hitherto used it for drainage purposes as Mr. Heaton suggests, but only at the time of operation in conjunction with the mixing ball flushing apparatus (which I have previously described in the Journal) and have found the combination simply invaluable. My object in introducing this principle was to get rid of sponging, with all its attendant evils, as far as possible; sponging means peritoneal traumatism, and the less of it the better. The water vacuum apparatus I use is practically the same as that used by dentists to remove saliva, and is worked by the town water supply, thereby giving a powerful vacuum. To prevent the omentum, etc., being drawn into the suction tube, the latter is surrounded at its lower end by a small wire cage. Of course with suitable mounts, the powerful vacuum could be used for other purposes, such as aspiration, but I have hitherto only used it as above.—I am, etc.,

Derby, Feb. 1st. T. Henderson Pounds, F.R.C.S.

CANCER HOUSES.

Sir,—From time to time letters have appeared in the British Medical Journal illustrating the possibility of infection in cancer. I should be glad to learn what deductions may be drawn from the following series of cases and what advice should be given to the occupant of one of the houses (No. 1) concerned:

A. Mother, and B. Daughter. Residing in No. 1, moved to No. 2, and died of cancer there a few years ago.

C. Mr. X., residing in No. 1, died of cancer in 1892 or 1893.

D. Wife of Mr. X., left No. 1 in 1895, and is said to be suffering from cancer now.

E. An intimate friend of Mr. X., residing in No. 2, died recently of cancer.

F. Mrs. Y., residing in No. 3, died of cancer in 1894 or 1895.

G. Mr. Z., residing in No. 4, died of cancer in 1894.

In addition to the above four other persons are reported to have died from or to be suffering from cancer in neighbouring houses.—I am, etc.,

Reigate, Jan. 31st. John G. Ogle, M.D.

ŒSOPHAGEAL DIVERTICULA.

Sir,—With the object of drawing still further attention to the interesting and instructive article on Diverticula of the Œsophagus, by Mr. Butlin, which appeared in the British Medical Journal of January 1st, I am tempted to supplement the cases of successful excision referred to by Mr. Butlin by three others which I found, and have recorded in my work on the *Surgery of the Alimentary Canal*. These were two by König,[1] and one by Mandach.[2]

I may further venture to add that as the result of considerable investigation into this interesting subject of œsophageal pouches, I arrived at much the same conclusion as Mr. Butlin, and, as I expressed it in the chapter on the subject in the work above referred to, I believed them to be of much commoner occurrence than is usually supposed. Both dilatation and strictures—especially the latter—are the conditions most likely to be diagnosed when the real cause of the dysphagia is a "pouch."

One of the best contributions to the subject written in recent years is by Huber, in the *Deutsches Archiv für klinische Medicin* (1894, Band iii, p. 103).—I am, etc.,

A. Ernest Maylard, B.S.Lond.,
January 18th. Surgeon, Victoria Infirmary, Glasgow.

THE HOSPITAL REFORM ASSOCIATION.

Sir,—Whilst thanking you for your kindly references to the Hospital Reform Association, perhaps you will allow me to point out that you are apparently in error when you state it has fixed its attention too strongly on the pecuniary abuses of the out-patient department. I think I may say that we have really paid more attention to that form of abuse which consists in the attendance of people when only suffering from trivial or minor ailments than to any other form. We have from time to time stated that the out-patient department was never intended for the treatment of such ailments as could be quite as (if not more) efficiently dealt with in the homes of patients. Hospital treatment should be limited to the treatment of (1) cases of severe accident, (2) of difficult and obscure cases of disease, and (3) to cases where operations are necessary. The researches of our Committee on the Special Hospitals of the Metropolis found (1) that large numbers of patients were treated for disorders quite outside the scope of the particular diseases for which the institutions were founded, and (2) that at many of the special hospitals people attended when suffering from trivial complaints.

The whole question of medical relief in the metropolis is in such an unsatisfactory condition that I venture to prophesy that no really satisfactory solution will be arrived at until a full and searching investigation has taken place by a Government department.—I am, etc.,

T. Garrett Horder,
Cardiff, Feb. 7th. Hon. Sec.

P.S.—I may say that the Association will welcome any criticisms of the proposals published in the British Medical Journal of January 29th, p. 333. The more the subject is discussed the greater are the chances of arriving at a satisfactory solution of it.

MAGNESIUM SULPHATE IN DYSENTERY.

Sir,—Seeing in the British Medical Journal of January 29th, Dr. Wyatt-Smith's interesting remarks on the treatment of tropical dysentery by sulphate of magnesium, will you allow me to say that he has been anticipated in this method by Dr. Wm. Heberden, born 1710? In his *Commentaries on the History and Cure of Disease* (Second edition: London, 1803) at page 154 he thus remarks on the treatment of dysentery:

"The readiness with which the neutral salts (especially the cathartic salt) purge, their power of controlling and quieting the irregular motion of the bowels and their aptness to stay upon the stomach without being vomited up, made me conceive hopes that they would make a valuable addition to the antidysenteric medicines. At first I gave one drachm every six hours, which soothed the pains very soon, and before it had any effect as a purge. In other cases larger quantities were given, and with the double good effect, both of affording present ease, and afterwards entirely removing, by effectual evacuations, the cause of the disorder."

I have frequently prescribed 20 to 60 gr. of mag. sulph. with 5 drops of tinct. opii in some peppermint water every two hours for dysenteric diarrhœa—a hint I derived from a relative, the late Dr. T. H. Purdon, of this city.—I am, etc.,

Belfast, Jan. 29th. H. S. Purdon, M.D.

Obituary.

EDWARD LUND, F.R.C.S.

We regret to announce the death of Mr. Edward Lund, which occurred on February 4th at his house in Whalley Range, Manchester. Mr. Lund was in his 75th year. Towards the close of last year he manifested symptoms of cardiac failure, and since then he had been confined to the house.

Edward Lund studied at Guy's Hospital, and took the diploma of F.R.C.S. in 1863. He settled in Manchester more than 50 years ago, and very soon his abilities and energy made themselves felt not only in Manchester, but throughout the north-west of England. Mr. Lund was a born teacher, and had in a remarkable degree the power of conveying information to his pupils in a pleasant and genial manner. Whenever he was called upon to address an audience he always did so in well-chosen and suitable language, and invariably with an impressiveness which brought conviction to his hearers.

Mr. Lund soon associated himself with the then Medical School of Manchester, and throughout his whole career he evinced the liveliest interest in the progress and evolution of medical education in Manchester. His career began as Demonstrator of Anatomy, then he became Lecturer in Anatomy, and by his lectures and his great capacity for imparting his knowledge to others, he largely contributed to the success of the Pine Street School of Medicine.

The natural evolution was from anatomist to surgeon, but even in his earlier days Mr. Lund was laying the foundations

[1] *Berliner klin. Woch.*, 1894, No. 42, p. 947.
[2] *Journal of Laryngology and Rhinology*, 1895, vol. ix, p. 285.

of an extensive private practice. He early became Dispensary Surgeon, which led him to apply his energies amongst out-patients to the teaching of surgery.

At the amalgamation of the Pine Street School with the Chatham Street School under the title of the "Manchester Royal School of Medicine," Mr. Lund, along with Mr. Turner, Mr. Smith, and Mr. Southam, kept high the standard of medical education in Manchester. Shortly afterwards Mr. Lund became full Surgeon to the Royal Infirmary, where he did a large amount of work, the results of which he published from time to time. He was one of the earliest pioneers of antiseptic surgery in Manchester, for both by his example and his writings he did much to popularise the "antiseptic system" of his friend (now Lord) Lister. Mr. Lund resigned his office in 1882, and thereafter he became Consulting Surgeon to the Royal Infirmary.

Mr. Lund took an active part in bringing about a union between the Medical School and Owens College in 1872, and throughout the quarter of a century which has elapsed since that time has always showed the greatest interest in the prosperity of the Medical School of Owens College. When leisure afforded he liked to "look in" and hear a lecture on some subject which interested him.

Mr. Lund and Mr. Southam (senior) were appointed Joint Lecturers on Surgery, and on the death of the latter he discharged the duties of the chair until 1888, when he resigned, but he retained an honorary connection with the College as Emeritus Professor until his death. He took an active interest in Victoria University, for he was a Professor when the Supplementary Charter enabling the University to confer degrees in Medicine was obtained, and, moreover, he helped to frame its curriculum for those degrees.

In 1876 Mr. Lund was elected a member of the Council of the Royal College of Surgeons of England—an evidence of the wide esteem in which he was held as a surgeon throughout the North of England. He attended the meetings of the Council with the greatest regularity. He became Hunterian Professor at the College in 1885; for several years he acted as one of the Examiners on the Board of the Royal Colleges. Some years ago, owing to a slight illness which affected him whilst attending to his duties at the College of Surgeons in London, he resigned his seat on the Council.

Mr. Lund published from time to time accounts of his cases and of the many modifications in various surgical procedures which his inventive ingenuity so readily supplied.

By the death of Mr. Lund Manchester has lost a good and conscientious surgeon, the College a warm supporter and attached friend, while a wide circle of friends and patients are left to deplore the loss of one who by his willingness to devote himself unreservedly to their best interests proved himself a friend indeed.

At the meeting of the Medical Society on Monday last, the President, Dr. A. E. Sansom, referred with deep regret to the death of Mr. E. Lund, who had been a Fellow of the Society for thirty years, and had filled the offices of Orator and Councillor. A vote of condolence with the family in their bereavement was moved from the chair and carried, and the President intimated that he had requested a Fellow residing in Manchester to represent the Society at the funeral.

RINGROSE ATKINS, M.D.,

Waterford.

We have to record, with deep regret, the death of Dr. Ringrose Atkins, Resident Medical Superintendent of the District Asylum, Waterford. A few days ago he had an attack of suppurative appendicitis, which ran a very rapid course and ended in his death on February 4th at the age of 47.

Dr. Atkins was educated in Queen's College, Cork, and afterwards graduated in Arts in the Queen's University, Ireland, winning the Gold Medal in Physics. Subsequently he took the degree of M.A. with great distinction. Turning to medicine, he took the degrees of M.D. and M.Ch. in 1873, and soon afterwards he obtained the appointment of Assistant in the asylum at Cork. Later on he was selected to fill the office of Resident Superintendent at Waterford Asylum, a position which he occupied until his death. He contributed many papers on subjects specially connected with the departments of medicine in which he practised. Among these may be mentioned Arterio-Capillary Fibrosis, On Morbid Changes in Blood Vessels and the Nerve Elements of the Brain of the Insane, Pathological Illustrations of the Localisation of the Motor Functions of the Brain, and the Morbid Histology of the Spinal Cord in Insanity. For his recreation he was an ardent traveller and photographer, and he extended his studies into various departments of art and history. His wide knowledge of many subjects made him a most attractive lecturer, and he frequently gave delightful addresses descriptive of his journeyings, illustrated by admirable photographs. Dr. Atkins's death will be deeply deplored by his brethren who knew him best, as it is by the people among whom he lived and to whom he had long endeared himself.

JULES EMILE PEAN, M.D.,

Paris.

Dr. Péan, the distinguished French surgeon who recently fell a victim to influenzal pneumonia, was born at Chateaudun in the Department of Eure-et-Loir on November 29th, 1830. His father was a miller, and Péan used to relate with much glee how his thoughts were first turned towards surgery as a career. Péan *père* had a boil on his neck, for which he placed himself in the hands of a Paris surgeon, who charged him a stiff fee. On his return he said to his son, "Look here! you will have to go to Paris and learn surgery. There is no business like it for bringing grist to the mill. Just think! Dr. ——— only saw me; did a little something which did not take him five minutes, and I had to pay him 1,000 francs." Péan took the advice, and, it may be added, that he fully avenged his father.

After receiving his preliminary education at Chartres, he entered on the study of medicine in Paris at the age of 19. In 1853 he won by competitive examination the coveted post of *interne*, coming out first in the list. He early attracted the notice of Nélaton, whose favourite pupil he was. In 1860 he took his doctor's degree, and was appointed Prosector to the Paris hospitals. In the same year he published a monograph entitled *La Splénotomie*, which contained an account of a case of complete ablation of the spleen. In 1865 he was appointed one of the Surgeons of the Bureau Central, and two years later he became Surgeon to the Paris hospitals. He was attached successively to the Hôpital des Enfants Assistés, to Lourcine, to Saint-Antoine, and finally in 1876 to Saint-Louis. In 1892 he had to resign his public appointments under the age rule, and soon afterwards he founded the Hôpital International, a private surgical hospital in the Rue de la Santé.

It was at the Hôpital Saint-Louis that Péan won the great position as an operating surgeon which he kept till the end of his life. He was the leading pioneer of ovariotomy in France, his first successful case having been performed in 1864.

He was unquestionably the foremost operator in France, and one of the leading surgeons in Europe. His fees were often large, but so was his heart, and if he levied tribute from the rich, he was prodigal of his skill to the poor. He is said to have made a large fortune, and his wife was one of the leaders of Parisian society.

In person he was a short, thickset man, with a massive head, bearing a striking resemblance to Jules Ferry, the statesman.

Péan was elected a member of the Académie de Médecine in 1887. He received the distinction of the Legion of Honour in 1870, being promoted Officer of the Order in 1878, and Commander in 1893.

His published works include two volumes of clinical lectures; a monograph entitled *La Forcipressure*, published in 1875; another, *Pincement des Vaisseaux comme Moyen d'Hémostase* (1877); and a large work in two volumes on the diagnosis and treatment of tumours of the abdomen and pelvis (1880 1885). He had also a considerable share in the preparation of the second edition of Nélaton's *Elements of Surgical Pathology*.

At the funeral service the pall-bearers were Dr. Jaccoud, President of the Academy of Medicine; M. de Selves, Prefet of the Seine; M. Peyron, Director of the Assistance Publique; Dr. Pozzi, Member of the Academy of Medicine and Senator; M. Segond, Surgeon to the Paris hospitals; M. Jacquin,

Secretary to the Grande Chancellerie de la Légion d'Honneur; and M. Mézières, Member of the French Academy.

We regret to have to record the death of Mr. John Holden, which took place suddenly at his residence in Preston on January 9th. Although for the past few months he had been in indifferent health, yet he had continued his busy life as usual, and had seen patients only the evening before his death. His family had been associated with Lancashire for generations, and his father, James Fawcett Holden, was in practice in Preston at the time of John Holden's birth. Mr. Holden, who received his medical education at the Manchester School of Medicine, obtained the diplomas of L.R.C.P. Edin., M.R.C.S.Eng., and L.S.A., and settled down in Preston as a general practitioner in 1867. He had previously been House-Surgeon to the Ardwick and Ancoats Dispensary, and Preston Dispensary. He was one of the Honorary Surgeons to the Preston and County of Lancaster Royal Infirmary, an ex-President and Secretary of the Preston Medico-Ethical Society, and a Vice-President of the Lancashire and Cheshire Branch of the British Medical Association. He took a very active interest in medico-political questions, and his voice was frequently heard in Preston and Manchester. In addition to an active professional life he was a very prominent figure in the social and municipal life of the borough. For the past twenty-one years he had been an active member of the Municipal Council. He held the office of Mayor in 1893-94, and was appointed Alderman at the termination of his year of office. In 1887 he was placed on the Commission of the Peace for the borough. As a man he was the soul of honour, as a friend he was genial and kindly, and in spite of his many-sided life was always glad to give helpful advice to others, and especially to the younger members of the profession in the town, who have lost by his untimely death a friend whom it will be impossible to replace. Among the poor he will always be remembered as a benefactor and a friend. On the day of his funeral flags half-mast and closed shutters bore silent testimony to the love and respect in which he was held by his fellow townsmen.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Balfour Studentship.—Dr. Arthur Willey, the discoverer of the eggs of *Nautilus*, has been re-elected Balfour Student in Animal Morphology.

Advanced Student.—Dr. G. Elliot Smith, M.D., Ch.M.Sydney, advanced student of St. John's College, has been approved for the Certificate of Research entitling him to the B.A. degree. His memoirs deal with original researches on the origin of the corpus callosum, and the relation of the fornix to the margin of the cerebral cortex, and have lately been published in the *Transactions* of the Linnean Society and the *Journal of Anatomy and Physiology*.

Congress of Hygiene and Demography.—Mr. H. E. Durham, M.A., M.B., of King's College, has been appointed one of the delegates representing the University at the Madrid Congress to be held next April.

Electors to Professorships.—The following appointments to the electoral Boards for various professorships are announced:

Chemistry: Sir E. Frankland, K.C.B., F.R.S.
Anatomy: Sir W. Turner, F.R.S.
Botany: Professor D. Oliver, F.R.S.
Zoology: Lord Walsingham, F.R.S.
Physics: Lord Kelvin, F.R.S.
Physiology: Professor Schäfer, F.R.S.
Surgery: Lord Lister, P.R.S.
Pathology: Dr. J. F. Payne.

UNIVERSITY OF LONDON.

Intermediate Examination in Medicine.—The following candidates have satisfied the Examiners:

Entire Examination.—First Division: T. C. English, St. George's Hospital; L. Jones, St. George's Hospital; W. H. Lowman, King's College; H. Stuart, University College. Second Division: F. C. E. Atkinson, St. George's Hospital; P. G. A. Bott, St. Mary's Hospital; D. L. Davies, University College; F. W. W. Dawson, Westminster Hospital; L. E. Dickson, University College, Liverpool; H. A. Easton, St. Thomas's Hospital; Sarah Louise Fraser, London School of Medicine and Birkbeck Institute; G. H. J. Hooper, Charing Cross Hospital; F. M. Howell, St. Bartholomew's Hospital; J. Klein, St. Mary's Hospital; C. J. I. Krumbholz, University College; R. H. Paramore, St. Bartholomew's Hospital; Hilda Mallinson Rowntree, London School of Medicine and Royal Free Hospital; H. Schofield Owens College; C. D. Soutter, Mason College; W. L. Stuart, King's College; J. Tattersall, St. Mary's Hospital; H. Terry, Owens College; R. C. Turnbull, London Hospital; J. E. Utley, Owens College; Kathleen Olga Vaughan, London School of Medicine for Women; Blanche Elinor Walters, London School of Medicine for Women; S. R. Williams, Bristol Medical School.

Excluding Physiology.—Second Division: J. C. M. Bailey, St. Bartholomew's Hospital; A. Birch, St. Mary's Hospital; R. H. Birtwell, B.A., London Hospital; H. F. W. Boeddicker, Mason College; R. C. Bowden, St. Bartholomew's Hospital; A. B. Brown, St. Bartholomew's Hospital; W. C. Dawson, Mason College; Alice Debenham, London School of Medicine for Women; S. Hunt, St. Thomas's Hospital; E. T. Jensen, Guy's Hospital; A. H. John, St. Bartholomew's Hospital; D. T. C. Jones, University College; E. W. Jones, Mason College; J. T. M. McDougall, Guy's Hospital; Annie Mooney, London School of Medicine for Women; D. L. Morgan, Guy's Hospital; E. M. Niall, St. Bartholomew's Hospital; T. M. Pearce, St. Bartholomew's Hospital; A. Pearson, Guy's Hospital; Mary Elizabeth Phillips, University College, Cardiff; Mary Ariel Stuart, London School of Medicine for Women; F. G. Thompson, St. Mary's Hospital; W. A. Trumper, St. Mary's Hospital; E. Wethered, St. Bartholomew's Hospital; P. W. White, Bristol Medical School; Gisela Wilmersdoerffer, London School of Medicine and Birkbeck Institute.

Physiology only.—First Division: A. J. V. Betts, Westminster Hospital; J. E. Chapman, University College, Sheffield; L. Cook, Westminster Hospital; A. G. Ede, St. Bartholomew's Hospital; W. Ferris, St. Mary's Hospital; B. R. Lloyd, Cardiff Medical School; D. T. Price, Bristol Medical School; A. T. Pridham, St. Bartholomew's Hospital; T. P. H. Stedman, University College; C. W. Wirgman, University College. Second Division: Josephine Brown, London School of Medicine for Women; W. S. Danks, St. Bartholomew's Hospital; Margaret Bernard Dobson, London School of Medicine for Women; C. E. Etheridge, Middlesex Hospital; C. S. Frost, St. Bartholomew's Hospital; T. H. Gandy, St. Bartholomew's Hospital; A. Jones, London Hospital; P. T. Manson, Guy's Hospital; J. C. Marshall, St. Bartholomew's Hospital; M. F. Reaney, London Hospital; W. E. Ruttledge, University College; Mary Ethel S. Scharlieb, B.A., London School of Medicine for Women; F. W. Sheppard, St. Bartholomew's Hospital; N. F. Stallard, University College; A. B. Vine, Middlesex Hospital.

Preliminary Scientific Examination.—The following candidates have satisfied the Examiners:

Entire Examination.—First Division: Beatrice Mary Kidd, Westfield College and Bedford College, London; H. C. C. Mann, Dulwich College and Guy's Hospital; H. V. Wenham, St. Bartholomew's Hospital. Second Division: W. Ball, University College, Liverpool, and Alwyne Institute; F. M. Bishop, St. Bartholomew's Hospital; Margaret Lucy Augusta Boileau, University College and University Tutorial College; J. H. Burgess, Royal College of Surgeons, Edinburgh, and University Tutorial College; R. E. French, Dulwich College; A. A. R. Green, Mason College; H. A. Haig, Birkbeck Institute and private study; O. Ievers, St. Mary's Hospital; G. E. J. A. Robinson, Dublin University and University College; J. L. Rushton private study and University Tutorial College; E. W. Strange, Epsom College and Guy's Hospital; L. L. A. W. Thomson, St. Mary's Hospital; H. Tipping, Guy's Hospital.

Chemistry and Experimental Physics.—*Mary Cecilia Bell, Ladies' College, Cheltenham and University Tutorial College; A. C. Brown, St. Bartholomew's Hospital; H. S. Brown, University College and Guy's Hospital; G. L. Bunting, Westminster Hospital; H. Catling, St. Thomas's Hospital; P. G. Easton, St. Mary's Hospital; V. Hetherington, St. George's Hospital; *C. H. M. Hughes, Westminster Hospital; A. G. Jackson, University College, Liverpool; *F. S. Langmead, St. Mary's Hospital; R. Larkin, St. Olave's Grammar School, Southwark; L. Llewelyn, University College, Cardiff; *L. H. Moiser, private study; F. Paine, University Tutorial College; *A. E. Pinniger, Middlesex Hospital; *W. P. Price, St. Bartholomew's Hospital; *E. G. Pringle, St. Bartholomew's Hospital; C. M. Roberts, St. Paul's School; *E. S. Routly, St. Mary's Hospital and Plymouth Technical Schools; *H. B. Simpson, University College and University Tutorial College; *D. Smith, private tuition and Middlesex Hospital; *E. B. Smith, St. Bartholomew's Hospital; *R. W. Sprague, St. Paul's School; J. B. V. Watts, University College, Bristol; *Hilda Kate Whittingham, private study and University Tutorial College; H. T. Wilson, Bedford Grammar School.

Biology.—*J. Acomb, Yorkshire College; *J. E. Adams, St. Thomas's Hospital; *H. R. Allingham, King's College; *K. Anderson, Guy's Hospital; C. S. Archer, Yorkshire College and University College, Nottingham; *C. H. F. Bailey, Westminster Hospital; *A. J. Beadel, Guy's Hospital; *A. Beeley, Yorkshire College; *G. E. Bellamy, University Tutorial College; *W. B. Blackburn, Yorkshire College; *T. E. Blunt, London Hospital; *G. A. Bosson, Epsom and University Tutorial Colleges; *J. Braithwaite, Guy's Hospital; *H. J. Brewer, Epsom College; G. H. Brown, Owens College and private study; *H. W. Burman, Mason College and private tuition; *P. C. Bushnell, University Tutorial College; *Rose Lilian Humphrey Davy, University Tutorial College; *H. De Vine, Merchant Venturers' Technical College, Bristol; *R. A. Eastmond, London Hospital; *Mary Gertrude Edis, University College and private study; *M. Feldman, London Hospital; *J. W. Fox, University College, Sheffield; *C. J. Galbraith, King's College; *D. Gray, Charing Cross Hospital; *R. A. Greeves, Queen's College, Belfast; W. C. F. Harland, St. Bartholomew's Hospital; *A. W. Iredell, Guy's Hospital; *S. Johnson, Wyggeston School and St. Mary's Hospital; *W. K. Legassick, University College and University Tutorial College; *A. Lewthwaite, University College and University Tutorial College; *C. J. A. N. Mercier, Charing Cross Hospital; *R. H. Miller, St. Mary's Hospital; *O. Mills, St. Thomas's Hospital; R. V. G. Monckton, St. Bartholomew's Hospital; A. C. Motta, St. Mary's Hospital; *L. G. Nash, Guy's Hospital; *Agnes Agatha Parson, Ladies' College, Cheltenham; *Enid Marian Smith, Ladies' College, Cheltenham; Mary Marguerite Louise Taylor, University Tutorial College and private tuition; Mary Campbell Train, University Tutorial College; *G. Wale, private study; Ada Miles Whitlock, University Tutorial College; *Henrietta Leila D. Williams, King's College and University College, Cardiff; F. R. E. Wright, St. Thomas's Hospital.

* These candidates have now completed the examination.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following are the arrangements for the usual courses of lectures for 1898. The lectures in each case are given at 5 P.M.:

The Arris and Gale Lectures: Dr T. G. Brodie, on February 14th, 16th, and 18th, on the Place of Formation and Chemical Properties of the Antitoxins.

The Erasmus Wilson Lectures: Mr. H. J. Waring, F.R.C.S., on February 21st, 23rd, and 25th, on the Pathology and Treatment of those Diseases of the Liver which are amenable to Direct Surgical Interference.

Mr. F. G. Parsons, F.R.C.S., on February 28th, March 2nd, and 4th, on the Muscles of Mammals, with special relation to Human Myology.

Professor C. Stewart, F.R.S., on March 7th, 9th, 11th, 14th, 16th, and 18th, on the Vertebral Column, and some additions to the Museum.

Mr. Henry Morris, F.R.C.S., on March 21st, 23rd, and 25th, on the Surgery of the Kidney.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations of this Board resulted as follows:

First Examination, Four Years' Course.—Of 8 candidates entered, the following 4 passed the examination: Lieutenant-Colonel L. A. Clutterbuck, C. V. Craster, J. D. Sauer, and J. Malone; and 1 passed in Chemistry.

First Examination, Five Years' Course.—Of 17 candidates entered, the following 6 passed the examination: R. P. Parker, P. Carroll, W. D. Sutherland, E. T. Evans, J. Skelley, and R. P. H. Blackstock; and 5 passed in the division of Biology and 3 in Chemistry.

Second Examination, Four Years' Course.—Of 24 candidates entered, the following 14 passed the examination: F. E. Dowling (with distinction), W. O'Farrell, H. R. Loverock, G. J. Stones, T. G. Davies, W. M. M. Jackson, J. A. Angus, W. R. Jones, B. Connolly, J. W. Lax, H. V. Craster, W. J. Baty, J. G. Gray, M.A., and W. L. Norwood; and 1 passed in the division of Anatomy and 1 in the division of Physiology.

Second Examination, Five Years' Course.—Of 22 candidates entered, the following 12 passed the examination: T. S. Logan, G. H. F. Graves, Evelyn J. Evatt, A. W. Gibson, A. Scoular, H. M. Newton, Mary J. D'Vaz, W. A. Dawson, R. E. Moorhead, W. O. Prichard, J. Bygott, and F. M. O'Driscoll; and 3 passed in the division of Anatomy and 8 in Physiology.

Third Examination, Five Years' Course.—Of 16 candidates entered the following 10 passed the examination: Annie M. Watson (with distinction), D. Campbell, F. P. Walsh, J. N. Meade, D. Coffey, G. Potts, R. J. Love, R. W. Jubb, D. M. Macgregor and W. A. Pitt; and 2 passed in the division of Anatomy, 1 in the division of Pathology, and 3 in the division of Materia Medica.

Final Examination.—Of 91 candidates entered the following 35 passed in the examination, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P.S.G.: T. K. Greenfield, G. G. Wilson, G. Hall, G. J. Goldie, L.D.S.Edin.; R. J. Isaac, J. M. Murphy, J. K. Calder, E. Ryan, A. H. H. Barclay, D. L. Thomas, J. Johnson, Lilian M. Blong, M.D.; R. E. Roberts, H. N. Barnett, C. K. Darnell, P. J. H. Mulholland, F. Carter, W. L. Cribbes, J. M. Donovan, F. Fulton, F. W. Whyte, G. J. Chipperfield, M.D., C.M.; J. Davies, W. R. Graham, J. Reidy, Helen W. Stanley, C. R. White, W. W. Forbes, C. Simpson, H. E. Denny, T. P. Flynn, W. S. Fraser, R. Brodie, J. J. Binny and R. Owen; and 9 passed in the division of Medicine, 1 in Surgery, 13 in Midwifery, and 16 in Medical Jurisprudence.

THE APOTHECARIES HALL OF IRELAND.

THE following candidates have passed at the January Examinations and completed their first Professional:

J. Thomson, Francis G. Adye-Curran, L. Farrell.

W. P. Harding (Second Professional), passed in Materia Medica and Physiology.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DEVON AND EXETER HOSPITAL: THE MEDICAL STAFF AND THE EXECUTIVE COMMITTEE.

WE have received an interesting account of the general meeting of governors of the Devon and Exeter Hospital held on January 28th to discuss a report from a committee appointed to consider the financial position of the hospital, which is in difficulties for the very simple reason that its expenditure exceeds its income on an average by £1,400 a year. These difficulties have been met hitherto by the unlimited use of legacies as income, but it has lately been felt that such a course was hardly advisable, and an inquiry was commenced into the affairs of the hospital generally: (1) How far it is possible either to reduce the expenditure or to increase the ordinary income. (2) How to deal with this question of the application of legacies; and (3) whether any other improvements could be made in the management of the hospital likely to increase public confidence and so attract increased support.

On the first head the report is not final, but nothing has as yet been done to reduce expenditure. A new wing has been built, which is expected, in some way not here explained, to save £600 a year in the maintenance expenses, but as it will cost £13 000, which is at present paying 4 per cent., it will save little or nothing, even if the estimated decrease in the annual expenses is actually realised, which is of course as yet quite doubtful. The second question with regard to the application of legacies was so far settled that it was decided to use as income only half the sum realised; but it is really of little importance. If the money is wanted it must be had, and whether it is taken out of the legacies just received or out of the invested funds is of no consequence, unless the thought that some part of their legacies will in any case go to increase the endowment fund may render people more willing to bequeath. The most important is the third question, whether the management can be so improved as to attract increased public support. The improvement suggested, which most interests us as medical men, and which we are glad to see was carried, though not without considerable opposition, is to make the medical staff *ex-officio* members of the executive committee. The need for this change could not possibly be put in a clearer light than in the following remarks of Mr. Roper, one of the surgeons, and Dr. Davy, the senior physician.

Mr. Roper said he did not think the result of excluding the staff of the hospital from the committee was fully understood. The Devon and Exeter Hospital was the only medical charity in Exeter which excluded its medical officers from its committee. From his experience he ventured to say that the hospital was the one in which it was the least pleasant for the medical staff to work, because there was not that free exchange of opinions between the medical officers and the committee that there should be. Nine-tenths of the work of the hospital was done by the honorary medical officers. He would point out to the governors that they were doing an act of injustice in excluding the medical staff from an institution in which they had a greater interest than the committee itself.

Dr. Davy said that the committee of the Devon and Exeter Hospital had in all probability caused more friction and managed affairs worse than the committee of any other hospital in England. He would refer to the time when the nursing of the hospital was carried out by old women, who came into the hospital to look after the patients by night. The medical staff opposed their coming into the hospital half asleep, uneducated, and untrained. There were no members of the staff on the committee, and the latter allowed this state of affairs to go on until a nurse allowed a patient to bleed until the blood trickled into the passage. It was only by his saying that he would bring the matter before the governors that they were able to alter the nursing. They knew that the nursing had been a disgrace to the hospital and to the committee. There was a wide distrust among the general public at the way in which the hospital was managed by the committee. Unless they were prepared to consult with the staff, they would still carry on the business in a way which would be unsatisfactory, and would never get the public to support them in any way.

Holding as we do most strongly the opinion that no hospital can work satisfactorily in which the medical staff do not take a constant and a large share in the management, we congratulate the Exeter Hospital on this wise decision, and hope it will be the commencement of an era of renewed prosperity.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,483 births and 4,133 deaths were registered during the week ending Saturday last, February 5th. The annual rate of mortality in these towns, which had been 20.6 and 18.7 per 1,000 in the two preceding weeks, rose again to 19.2 last week. The rates in the several towns ranged from 11.1 in Bolton, 13.4 in Derby, 13.6 in West Ham, and 14.1 in Bradford, to 20.4 in Oldham, 21.4 in Birmingham, 21.5 in London and in Portsmouth, and 23.7 in Plymouth. In the thirty-two provincial towns the mean death-rate was 17.6 per 1,000, and was 3.9 below the rate recorded in London, which was 21.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the rate was equal to 2.6 per 1,000, while it averaged 1.8 in the thirty-two provincial towns, among which the highest rates were 2.8 in Birkenhead, 3.2 in Oldham, 3.3 in Leeds, and 3.5 in Cardiff. Measles caused a death-rate of 1.1 in Halifax and Sunderland, 1.2 in Bristol, 1.5 in Leicester, and 2.1 in Brighton; and whooping-cough of 1.2 in Sheffield, 1.4 in Oldham and in Leeds, and 1.5 in Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 79 deaths from diphtheria in the thirty-three towns included 42 in London, 7 in Cardiff, 6 in West Ham, 6 in Leeds, and 5 in Liverpool. No fatal case of small-pox was recorded last week either in London or in any of the thirty-two large provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,318 to 3,061 at the end of the ten preceding weeks, had further fallen to 2,964 on Saturday last, February 5th; 209 new cases were admitted during the week, against 215, 248, and 244 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, February 5th, 909 births and 543 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.3 to 17.4 per 1,000 in the four preceding weeks, rose to 18.0 last week, but was 1.2 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.0 in Leith and 15.3 in Greenock to 18.6 in Paisley and 18.7 in Glasgow. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Dundee and Glasgow. The 260 deaths registered in Glasgow included 7 from measles, 4 from scarlet fever, 5 from diphtheria, 15 from whooping cough, and 2 from "fever." Two fatal cases of diphtheria were recorded in Edinburgh, and 3 of whooping-cough in Paisley.

DIPHTHERIA IN LONDON.

THERE was a further increase last week in the mortality from diphtheria in London. The deaths referred to this disease, which had been 33 and 36 in the two preceding weeks, further rose to 42 during the week ending Saturday last, February 5th. Of these 42 fatal cases 5 were of persons belonging to Hackney, 3 to Fulham, 3 to Mile End Old Town, and 3 to Poplar sanitary areas. The notifications of diphtheria in London, which had been 194, 205, and 287 in the three preceding weeks, declined to 246

during the week ending Saturday last, February 5th. Compared with the preceding week there was an increase in the prevalence of the disease in North London, but in each of the other groups of sanitary areas there was a decline. Among the sanitary areas of West London the decline in the prevalence of diphtheria was most marked in Fulham and Chelsea; while in Hammersmith and in Westminster the new cases notified exceeded those recorded in any recent week. The rise in the prevalence of the disease in North London was due to the marked further increase of new cases in Islington and in Hackney; in the former sanitary areas the new cases rose to 19, against 10 and 13 in the two preceding week; and in Hackney 25 new cases were notified, against 16, 17, and 19 in the three preceding weeks. In East London the prevalence of diphtheria showed a marked decline, especially in Bethnal Green and in Limehouse. In most of the sanitary areas of South London there was also a decline in the prevalence of the disease, especially in St George Southwark, Battersea, and Greenwich: in Newington, however, 13 new cases were notified, against 2 and 7 in the two preceding weeks. There was also a slight further increase in the number of new cases in Wandsworth. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 153, against 111, 123, and 161 in the three preceding weeks; and 1,046 cases remained under treatment in these hospitals on Saturday last, February 5th.

THE MAIDSTONE INQUIRY.

This inquiry was resumed on February 3rd. Many of the now well-known details were elicited in the course of the examination and cross-examination. From a map and diagrams put in by Mr. Bunting, the borough surveyor, it appeared that the distribution of the sewers showed that sewage from several infected districts drained into sewers which passed through the portions of the town that had not been affected by fever. It was estimated that about half the house drains in the town were trapped and ventilated on approved methods, plans and drawings of which were produced. Mr. Sidney Stallard, surveyor, and inspector of nuisances to the Rural Sanitary District, considered that privies in hoppers' houses were quite useless, and when provided were a greater nuisance than if there were none.

On February 8th, Mr. W. Jackling, sanitary inspector for the borough, said that he did not consider the state of the drainage was in any way contributory to the cause or spread of the recent epidemic.

The taking of evidence was concluded on February 9th, and Mr. Dickens, Q.C., addressed the Inspectors on behalf of the Water Company, protesting against it being taken as proved that the epidemic was water-borne. The inquiry was adjourned.

STATUTORY ISOLATION HOSPITAL.

Dr. E. J. Slade-King (Medical Officer of Health, Ilfracombe) asks for opinions on the following points:

A. If an urban district council have power to make rules for the internal discipline and regulation of their hospital generally?

B. If the urban district council have power to prevent a convalescent patient who has of his own free will entered the hospital, from discharging himself before he is pronounced by the medical officer to be in a proper condition to be so discharged?

C. Also if a district council have power to prevent a married man insisting on an entry into the hospital to visit his wife or children during the time of his wife's or children's voluntary detention therein?

D. Also what power a district council have to prevent the postage of letters and parcels from infectious patients while in hospital?

*** A. The power to make rules and regulations for the conduct and management of their hospital is conferred upon a "hospital committee" formed under the Isolation Hospitals Act, 1893, by Section XIII of that Act. An urban district council may provide a hospital for reception of sick under the Public Health Act, 1875, Section CXXXI. The Act is silent as to management.

B. Infectious Disease (Preventive) Act, 1890 (Section XII) where adopted, enables any Justice, acting in and for the district, upon proper cause shown, to order the detention within an infectious hospital of any inmate of such hospital suffering from any infectious disease, who would not on leaving "be provided with proper lodging or accommodation, in which proper precautions could be taken to prevent the spreading of the disorder by such person."

C. They can lock their own doors. It is generally advisable, however, to endeavour to satisfy the reasonable desire of relations to know their friends are well done by. Strict measures of disinfection for visitors have a wholesome effect in limiting the number of their visits. Absolute refusal to admit appears tyrannical.

D. Not only letters and parcels exposed to infection, but probably also the wearing apparel of visitors, could be disinfected under the Infectious Diseases Prevention Act, Section VI. The Act and Section are adoptive.

NOTIFICATION FEES IN SCOTLAND.

Enquirer (Scotland).—1. As district medical officer of health our correspondent is entitled to the usual fee of 2s. 6d. for each case of infectious disease in his private practice which he notifies to the County Council, and to a fee of 1s. for each case occurring in his parochial practice.

2. A medical man is only required to notify, and entitled to a fee, when "attending or called in to visit" a patient suffering from infectious disease.

3. When called in by the School Board to advise, our correspondent is entitled to recover a fee. The coming into operation of the Infectious Disease (Notification) Act does not relieve the School Board of their indebtedness to him in such a case.

MEDICAL NEWS.

Successful Vaccination.—Dr. R. Nesbitt, of Sutton-in-Ashfield, Notts., has been awarded for the third time in succession the grant for efficient vaccination.

A memorial tablet erected by friends to the memory of the late Mr. Walter Charles Rand, Special Plague Commissioner at Poona, who was assassinated in that city when returning from the Governor's reception on the day of the Diamond Jubilee of Queen Victoria, was unveiled at St. Peter's Church, Dulwich Common, by Mr. H. M. Birdwood, on Saturday, January 29th. Mr. Rand, who belonged to the Indian Civil Service, was the son of Mr. John Rand, F.R.C.S.

The Austrian Government has held out the olive branch to the University students on strike. The lectures are to be suspended for the remainder of the term, but the term is to be allowed to count. At the commencement of the next term, on March 21st, all students will be required to renew their undertaking conscientiously to observe the academic regulations, and render obedience to those in authority.

The Sick and Wounded from the Frontier War.—Since the Tirah expedition commenced no fewer than 1,756 soldiers, sick and wounded, passed through the British field hospital at Khushalgurh. In one week alone 78 wounded arrived from Kohat and were sent on to Rawal Pindi. The native field hospital has treated 1,400 sepoys and over 1,700 followers who were either wounded or invalided through fever or dysentery. Sick convoys pass on the sick and wounded, except those cases too serious to be moved.

At the annual meeting of the South Devon and East Cornwall Hospital it was reported that Mr. Paul Swain had recently resigned the office of honorary surgeon. The committee of the hospital expressed their sense that by this resignation the institution had not only lost a valued friend but a most able professional adviser, and expressed sincere pleasure in nominating him consulting surgeon to the hospital, by which means the institution would continue in some measure to have the benefit of his experience and advice.

Cathode and *X* Rays.—In his lecture at the Royal Institution last week Mr. Campbell Swinton added some experimental data to the already vast number recorded in connection with cathodal and *x* radiations. One of his experiments was particularly striking. The rays from two concave electrodes were focussed on a piece of lime, when it was raised to brilliant incandescence. The glass wall of a tube exposed to a similar influence was found to be eroded as if etched by a sand blast. Such experiments go far to show that the cathode stream is molecular, an explanation first suggested by Tesla. Admitting this explanation, what are the *x* rays? How do they differ in nature from the cathode rays? Possibly the difference is of the nature of polarisation.

Legislation for Inebriates.—The terms of a resolution passed on February 1st, on the motion of Mr. Herbert Philips, J.P., seconded by William Carr, at a meeting of the Macclesfield Board of Guardians, may be strongly recommended to other Boards and public bodies throughout the kingdom. The resolution was as follows: "That in the opinion of this Board it is of the greatest importance that further provision should be made by legislative enactment for the care and treatment of habitual drunkards; and that the Home Secretary be and is hereby respectfully urged not to let another session of Parliament pass without introducing a Bill for this purpose." The clerk was instructed to forward a copy of the resolution to the Home Secretary. It is hoped that other Boards may respond to the appeal of the Association Inebriates Legislation Committee, by adopting and forwarding to the Prime Minister, Lord Chancellor, Chancellor of the Exchequer, and the Home Secretary, a resolution couched in somewhat similar language. The motion to the same effect, carried by the Justices of Manchester, early in January, was communicated to the mayors of eighty boroughs. Many answers have been received, engaging that the matter shall be dealt with by the justices of the various boroughs at an early date.

THE CHAIR OF PUBLIC HEALTH IN OWENS COLLEGE.—When Dr. Paget resigned the Lectureship in Hygiene and Public Health in Owens College, the Council of the College approached the Manchester Corporation with a view to secure the services of Dr. Niven, medical officer of health, for this important post. The City Council have resolved: "That, with a view of granting the application of Owens College, the Council be advised to assign to the medical officer of health the additional duties of Lecturer on Public Health at the College for a period of one year."

MANCHESTER ROYAL INFIRMARY.—At a meeting of the Manchester City Council on Wednesday, Sir John Harwood, Chairman of the Special Committee appointed to report on the infirmary site scheme already referred to in the BRITISH MEDICAL JOURNAL, made a statement in the course of which he said that the infirmary Board would relinquish their rights with regard to the esplanade, and make a clear open space, selling land to the Corporation for the widening of Piccadilly at a reasonable rate. He explained the advantages to the city of acquiring land the property of the infirmary, and appealed to the Council not to neglect the opportunity. In view of the importance of the question, one which is vital to the interests of the community at large, the discussion of the report of the Special Committee was by a general understanding adjourned for a fortnight.

CALF VACCINE LYMPH.—We published a note, in the BRITISH MEDICAL JOURNAL of January 29th, p. 307, on the results of an examination of samples of vaccine lymph sent us for that purpose from the Birmingham Calf Vaccine Establishment. Of the terms of that notice the director now complains, and encloses a cutting from a local paper, in which General Phelp, the well-known antivaccinator, endeavours to make capital out of our description. As a matter of fact, General Phelp's letter is by no means justified by the facts of the case, for the lymph, as compared with other trade supplies in use at the present time, is a good one, the number of organisms being comparatively small. We must, however, adhere to our statement that the claim as to its being aseptic cannot, in the case of the specimen examined, be maintained, seeing that although no streptococci were present all the colonies which developed on agar plates inoculated and incubated in the usual manner, consisted of two different forms of staphylococci, both of which have on occasions been described as associated with suppurative processes. The absence of moulds, hay-bacillus, etc., shows that the lymph is produced with due precaution as to cleanliness.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House-Physicians. Appointment for six months. No salary; residence, board, and washing provided.—Applications to Howard J. Collins, House Governor, by February 26th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; doubly qualified; unmarried; and, when elected, under 30 years of age. Salary not exceeding £30 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by February 23rd.

BRISTOL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon; doubly qualified. Salary, £100 per annum, with rooms and attendance (not board).—Applications, endorsed "House-Surgeon," to H. Lawford Jones, Secretary, by February 26th.

CARMARTHEN: JOINT COUNTIES ASYLUM.—Resident Clinical Assistant. Appointment tenable for six months. Board, etc., and honorarium. Applications to Dr. Goodall, Medical Superintendent.

CHARING CROSS HOSPITAL.—Resident Medical Officer. Salary, £100 a-year, with board and residence. Applications to Arthur E. Reade, Secretary, by February 14th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House-Surgeon. Appointment for six months. Board and residence provided, with honorarium of £15 15s. at the expiration of term.—Applications to Thomas Hayes, Secretary, by March 12th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, rent, and taxes free; also coal, light, water, and cleaning, or in lieu thereof £20 per annum. Knowledge of Welsh desirable. Applications to Thomas Thomas, Secretary, by February 21st.

FROME UNION.—Medical Officer for the Coleford Medical District. Salary, £30; midwifery 10s. per case; certifying lunatics 10s. per case. Must reside within the district. Applications to George W. Bradbury, Clerk, Public Offices, Frome, by February 21st.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Applications, to be sent under cover, to the Secretary by March 19th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Anæsthetist.—Applications to Lewis H. Glenton-Kerr, Secretary, by February 16th.

LANCASTER: ROYAL LANCASTER INFIRMARY.—House-Surgeon; unmarried, and doubly qualified. Salary, £80 per annum, with residence, board, attendance, and washing. Applications, on forms provided, to be sent to the Secretary by February 17th.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Appointment for twelve months, but eligible for re election. Honorarium of £42, with board, washing, and residence at the infirmary. Applications to the Secretary, at his office, 24, Friar Lane, Leicester, by February 14th.

LINCOLN COUNTY HOSPITAL, Bank Street, Lincoln.—Assistant House-Surgeon. Appointment for six months, but eligible for re election. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by February 19th.

LIVERPOOL, CITY OF: INFECTIOUS DISEASES HOSPITAL, Parkhill.—Resident Medical Officer; doubly qualified, unmarried, and must not exceed 30 years of age. Salary, £120 per annum, increasing £10 per annum to £140.—Applications, endorsed "Resident Medical Officer," to the Chairman of the Port, Sanitary, and Hospitals Committee, under cover, to the Town Clerk, Municipal Offices, by February 21st.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence, board, and washing provided, and an honorarium on satisfactory completion of term. Applications to A. W. Bodger, Secretary, by February 21st.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer for the North-Western Fever Hospital, Haverstock Hill, N.W.; doubly qualified, unmarried, and must not exceed 35 years of age. Salary, £160 during the first year, £180 the second, and £200 during the third and subsequent years of service, with board, lodging, attendance, and washing. Applications on forms to be obtained of T. Duncombe Mann, Clerk to the Board, Chief Office of the Board, 1, Norfolk House, Norfolk Street, Strand, W.C., to be sent in by February 17th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the South-Eastern Fever Hospital, Hatfield Street, New Cross Road, S.E.; unmarried, doubly qualified, and age not to exceed 35 years.—Applications on forms to be obtained at the Chief Office of the Board, Norfolk House, Norfolk Street, Strand, W.C., where they must be received by 10 A.M. on February 12th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Clinical Assistant (Female) for Out-patient Department.—Appointment for one year.—Applications to M. M. Bagster, Secretary, by February 23rd.

NORWICH UNION.—Medical Officer for the Sixth District; doubly qualified. Candidate appointed will also be appointed Medical Officer of the Girls' Home in St. Augustine's. Salary as District Medical Officer, £100 per annum, with the usual fees for midwifery cases and visits to lunatics and orphans. Salary as Medical Officer of the Girls' Home, £5 per annum, with an allowance of 30s. per annum for drugs.—Applications to John Cross, Clerk, 4, Surrey Street, Norwich, by February 15th.

POPLAR HOSPITAL FOR ACCIDENTS, East India Road, Poplar, E.—Assistant House-Surgeon. Salary £65 per annum, with board and residence.—Applications to the House Governor by February 14th.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Junior House-Surgeon, to assist Senior House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.—Applications to L. K. Given-Wilson, B.Sc., Secretary, by February 19th.

SALFORD UNION.—Assistant Resident Medical Officer at the Union Infirmary, Hope, near Eccles. Salary, £130 per annum, with furnished apartments and attendance (but not rations) in the infirmary. Appointment for twelve months. Must be doubly qualified. Applications, endorsed "Assistant Medical Officer," to F. Townson, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by February 15th.

SHEFFIELD UNION.—Medical Officer for the South-East District. Salary, £75 per annum, to include all extra fees (except for visiting lunatics).—Applications to Albert Edward Booker, Clerk to the Guardians, Union Offices, Westbar, Sheffield, by February 15th.

SHEFFIELD: THE ROYAL INFIRMARY.—Junior House-Surgeon; doubly qualified. Salary, £50 per annum, with board, lodging, and washing. Appointment for three years, but eligible for re-election. Also the offices of House-Surgeon, salary, £120; House-Physician, at £80; and Senior Assistant House-Surgeon at £60 per annum, are vacant, but the present resident officers are candidates for these appointments. Applications, to be addresssed to the "Medical Staff of the Sheffield General Infirmary," to the care of the Secretary, by February 17th.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon; doubly qualified. Salary, £70 a year, with board, washing, and residence.—Applications to Major C. Tyler, Secretary, by February 23rd.

SUNDERLAND BOROUGH ASYLUM.—Medical Superintendent; must give his whole time to the duties; doubly qualified. Salary, £350 a year, with furnished house, board for self and wife (if married), washing, coals, light, two servants, and use of garden.—Applications, endorsed, "Medical Superintendent," on forms to be obtained of Fras. M. Bowey, Clerk to the Visiting Committee, Town Hall, Sunderland, to whom they must be sent by February 21st.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's Road, Chelsea, S.W.—House-Physician; doubly qualified. Appointment for twelve months. Honorarium, £50, with board and lodging in the hospital. Applications to the Secretary at the Hospital by February 19th.

WALLASEY DISPENSARY.—House-Surgeon; must give whole time to the duties. Salary, £150 per annum, with furnished house, coal, and gas.—Applications to Mr. William Heap, Elm Mount, Penkett Road, Liscard, Cheshire, by February 22nd.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary, £100 per annum, rising £10 yearly up to £150, with board, etc. Applications to the Medical Superintendent by February 10th.

WISBECH UNION.—Medical Officer and Public Vaccinator for the First, Second (*a*), and Eighth Districts of the Union. Salary for First District, £70 per annum. Second (*a*) District, £10, and Eighth District, £15 per annum, with extra fees.—Applications to G. Carrick, Clerk, Union Offices, Wisbech, by March 2nd.

MEDICAL APPOINTMENTS.

BEATTY, W. J., L.R.C.P.Edin., L.M., L.F.P.S.Glasg., J.P., appointed Certifying Factory Surgeon for the Stockton District, *vice* Dr. Dale, J.P.

CARROLL, Joseph, M.B., C.M Glasg., D.P.H.Camb., appointed Lecturer on Hygiene and Public Health to the Anderson's College School of Medicine, Glasgow, *vice* Dr. J. Pearson Munro, deceased.

DENING, Edwin, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Stow-on-the-Wold Urban District Council.

FITZGERALD, James, B.A., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HARLAND, G. R., L.R.C.P., L.R.C.S Edin., appointed Assistant Medical Officer of the Workhouse of the Gateshead Union.

HORROCKS, Herbert, appointed Assistant Pathologist and Bacteriologist at the Public Hospital, Perth, West Australia.

MACKINTOSH, Dr., reappointed Medical Officer of Health to the Clay Cross Urban District Council.

MATHEW, C. P., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Hatherleigh District of the Okehampton Union.

MAUNSELL, R. Charles B., M.B., B.Ch.Dub., appointed Surgeon to the Mercers' Hospital, Dublin, *vice* Montgomery Ward, deceased.

MILLER, G. Victor, M.B., C.M.Edin., appointed Ophthalmic Surgeon to the Northallerton Hospital.

OWEN, Arthur Dunley, B.Sc., M.R.C.S., L.R.C.P.Lond., appointed Government Surgeon at Enkeldoorn, Rhodesia, South Africa.

PORRITT, Ernest E., M.B., C.M., appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

PRATT, John Wyatt, L.R.C.P.Edin., L.M., M.R.C.S.Eng., reappointed Medical Officer of Health to the Wiveliscombe Urban Council.

RACE, John Percy, L.S.A.Lond., appointed Junior House-Surgeon to the Ancoats Hospital, Manchester.

SLADE-KING, Edwyn John, M.D.Edin., L.R.C.P.Lond., reappointed Medical Officer of Health to the Dulverton Rural District Council.

SMITH, T. Wilson, M.D.Lond., appointed Honorary Physician to the Royal United Hospital, Bath, *vice* Dr. Cole, resigned.

SUTHERLAND, G. A., M.A., M.D., M.R.C.P., appointed Assistant Physician to the North-West London Hospital.

TANNER, Charles Edwd., M.D.Durh., F.R.C.S.Eng., reappointed Medical Officer for the North and Seal District of the Farnham Union.

THEOBALDS, A. J. A., M.B., C.M.Aber., appointed Medical Officer for the Wargrave District of the Wokingham Union.

TODD, J., M.R.C.S.Eng., L.S.A., appointed Medical Officer of the Workhouse of the Gateshead Union.

WILKINSON, Dr., appointed Medical Officer of Health for the Borough of Oldham, *vice* Chas. Hermann Tattersall, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

YOUNG, F. C., B.A.Camb., M.B., B.C., reappointed Medical Officer for the Twyford District of the Wokingham Union.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Clinical evening. Dr. Seymour Taylor: Case of Innominate Aneurysm. Mr. Stanley Boyd: Case of Removal of the Frontal Bone for Tuberculosis. Mr. Maurice Ling: Case of Empyema after Operation. Dr. Morgan Dockrell: Case of Angioma Serpiginosum. Mr. W. H. Evans: Case of Unusual Rickety Deformity of the Knee. Dr. Robert Maguire: A Demonstration of Palpation and Auscultatory Percussion. Mr. W. H. Battle: (1) A patient after the Operation for Removal of the Appendix Vermiformis; (2) Plastic Operation after Removal of Extensive Rodent Ulcer of the Face; (3) Partial Intrauterine Amputation of Leg.

LONDON POST-GRADUATE COURSE, London Throat Hospital, 204, Great Portland Street, W., 8 P.M.—Dr. Herbert Tilley: Examination of the Ear, Throat, and Nose.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 P.M.—Dr T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. Lecture I.

TUESDAY.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Dr. Harry Littlewood: Sarcoma of the Tongue. Mr. Percy Furnivall: An Unusual Cyst of the Tongue. Dr. C. H. Bond: A Case of *Post-mortem* Emphysema of the Liver. Dr. Arthur Voelcker: Ulceration of a Caseous Gland into a Bronchus—Death from Asphyxia. Dr. Cyril Ogle: Ulceration of a Caseous Gland into the Trachea with a Rapidly Fatal Result. Dr. L. Freyberger: Double Hydronephrosis with Calculi in the Right Kidney. Mr. Littlewood will show several card specimens.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Mania—Acute Hysterical, Acute Delirious. Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Phineas Abraham: Acne and Rosacea.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Dr. Tooth: Cranial Nerves.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. Harry Campbell: On Peripheral Neuritis; with cases.

CITY ORTHOPÆDIC HOSPITAL, 5.30 P.M.—Mr. J. Jackson Clarke: The Principles of Instrumental Treatment of Deformities.

WEDNESDAY.

NORTH-WEST LONDON CLINICAL SOCIETY, North-West London Hospital, Kentish Town Road, 8.30 P.M.—A discussion will be opened by Dr Harry Campbell on the Beneficial Effect of One Disease upon Another. Drs. James Taylor, Sidney Phillips, Morison, Sibley, Sutherland, and Messrs. Mansell-Moullin, C. B. Lockwood, Templeton, and others are expected to take part.

LONDON POST-GRADUATE COURSE, Parkes Museum, 74A, Margaret Street, W., 4.30 P.M.—Professor Wynter Blyth: Refuse Removal and Disposal, etc.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 P.M.—Dr. T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. Lecture II.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, 4 P.M.—Dr. Wethered: Cavities in Pulmonary Tuberculosis.

WEST LONDON POST-GRADUATE COURSE, West London Hospital, W., 5 P.M.—Mr. G. L. Cheatle: Treatment of Infection in Surgical Cases.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover Square, W., 8 P.M.

ROYAL METEOROLOGICAL SOCIETY, 25, Great George Street, Westminster, S.W., 7.30 P.M.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 P.M.—Dr. Samuel West: Granular Kidney and the Causes why it is often Overlooked.

LONDON POST-GRADUATE COURSE, Central London Sick Asylum, 5.30 P.M.—Dr. James Cantlie: Treatment of Hepatitis.

SOCIETY OF ANÆSTHETISTS, 20, Hanover Square, W., 8.30 P.M.—Dr. Waller: Dosage of Anæsthetics.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.

LONDON TEMPERANCE HOSPITAL, 2 P.M.—Dr. Soltau Fenwick: Clinical and Pathological Demonstration to Senior Students—Cardiac Disease.

CHARING CROSS HOSPITAL, Post-Graduate Class, 4 P.M.—Mr. J. Astley Bloxam: Selected Surgical Cases in the Wards.

FRIDAY.

LONDON POST-GRADUATE COURSE, Bacteriological Laboratory, King's College, W.C., 3 to 5 P.M.—Professor Crookshank: The Microscope and Methods of Cultivation, etc.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 4 P.M.—Dr. T. G. Brodie: The Place of Formation and Chemical Properties of the Antitoxins. Lecture III.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

COWEN.—At Gosport, Hants, on February 1st, the wife of Surgeon-Major W. A. Cowen, Army Medical Staff, of a daughter.

DODD.—On January 31st, at 14, Goldstone Villas, West Brighton, the wife of Arthur Herbert Dodd, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., of a son.

GILLESPIE.—At 23, Walker Street, Edinburgh, on February 8th, the wife of A. Lockhart Gillespie, M.D., F.R.C.P.E., of a daughter.

HARCOURT.—On February 6th, at the residence of her father, John Ellison, C.C., Stoneleigh, Oakfield, Liverpool, the wife of R. Eugene Harcourt, M.D., M.Ch., late of Las Conchillas, Uruguay, of a son.

MARRIAGE.

HUMPHRIS—HESKETH.—On February 20th, at the Church of the Resurrection, Brussels, by the Rev. N. S. Hodson, Chaplain, assisted by the Rev. Dr. Kerr Gray, Incumbent of St. George's Chapel, Albemarle Street, London, and the Rev. J. Thompson, F. Howard Humphris, M.D., M.R.C.P., eldest son of F. H. Humphris, J.P., Ilkley, to Ethel Marion, eldest daughter of Colonel Hesketh, I.S.C.

DEATHS.

CARMALT-JONES.—On February 2nd, at his residence, 6, Westbourne Street, Hyde Park, T. W. Carmalt Jones, F.R.C.S.Edin., late Surgeon of the Central Hospital for Diseases of the Throat and Ear, and late of Abchurch House, E.C., in his 51st year, eldest son of the late Thomas Jones, Q.C.

HOLDEN.—On January 9th, at Cromwell Terrace, Garstang Road, Preston, Lancs, John Holden, youngest son of the late Dr. James Fawcett Holden, aged 55.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Th., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Tu., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Tu., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Tu., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Tu., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Tu., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

VIDIAN asks where a good model of the brain could be obtained.

M.D. desires to hear of the experience of any member with Tallerman's bath in conditions other than rheumatoid arthritis.

BETA asks for the name of an asylum within fifteen or twenty miles of Birmingham where a female patient, whose parents are poor, would be admitted at one guinea a week.

FATTY DEGENERATION OF PLACENTA.

A. W. asks for information as to the results of treatment in any case parallel to the following: Premature delivery of a dead child in 1896 and 1897 at 5½ and 6 months respectively. The patient is now pregnant for the third time (about the third month). No definite history of syphilis.

TREATMENT OF RODENT ULCER.

J. L. H. asks for suggestions for a simple non-irritating dressing for a very chronic rodent ulcer on the side of an old lady's nose. For some time it has been dressed with an antiseptic zinc ointment on lint, kept in position by gutta-percha tissue fixed with collodion. This suits very well, only the collodion causes much smarting. A less irritating fixing agent is desired.

SHORTHAND.

LEARNER writes: Mr. Semple, in the BRITISH MEDICAL JOURNAL of September 14th, 1889, recommends the use of "Cursive" shorthand, by Hugh Callender, as easier to learn, and quicker to read and write, than Pitman's; while Dr. Herschell, in the JOURNAL of June 29th, 1889, claims the same advantages for the "Script" system, for which he states Pitman's has been abandoned by many teachers. Has eight years' experience of these systems confirmed these views?

WORKS APPOINTMENTS.

L.R.C.P., L.R.C.S.EDIN.—A correspondent writes that he was last year re-elected surgeon to a large quarry by an overwhelming majority—only eleven and three voting for his opponents, Drs. A. and B., respectively: that a fortnight ago he was surprised to hear that Drs. A. and B. had offered their services to the men who had voted for them, and that they had accepted their services. Our correspondent asks for an opinion on these facts?

*** If the facts are correctly stated the conduct of Drs. A. and B. would appear to have been reprehensible.

NORDRACH.

E. A. L. asks if any readers have any personal knowledge of or have seen any cases which have undergone the "cure" for phthisis as practised by Dr. Otto Walcher at his sanatorium at Nordrach in the Black Forest.

*** We may refer our correspondent to an article in the BRITISH MEDICAL JOURNAL for August 7th, 1897, page 362, and to a further note in the JOURNAL of October 23rd, 1897, page 1190.

PHARMACY AND MEDICINE.

M.D. (Dulwich).—A correspondent asks if any action could be taken under the following circumstances: The friends of a patient going to a local chemist are asked questions by the latter as to the condition of the patient, and whether he is being treated satisfactorily by his doctor. Finally the chemist brings to their notice the name of a local doctor. Could anything be done if such conduct were of frequent repetition?

*** Any arrangement of the nature suggested between a chemist and a medical practitioner would be unprofessional, but it would be very difficult to prove that such an arrangement existed. If it could be proved the matter might be brought to the notice of the General Medical Council.

A CASE FOR DIAGNOSIS.

N.Y.L. writes: On January 21st I was called to see a child, aged 9 weeks, who was supposed to have had a convulsion, although no one had seen any muscular twitchings; previous to this it had been perfectly strong and healthy. On arrival I found the child in a state of collapse; pulse rapid and very feeble, respiration frequent and shallow, reflexes absent, pupils contracted; there was slight blueness of the fingers and toes, but otherwise no cyanosis. The child was at once placed in a hot bath, and afterwards in blankets, with hot cloths over the heart and spine. As no improvement took place, a subcutaneous injection of ether was administered, and artificial respiration resorted to. After this had been continued for an hour and a-half the child commenced to cry; small quantities of warm brandy and water were then administered, and it had soon apparently completely recovered. Ten minutes later it died quite suddenly of syncope.

DURATION OF LACTATION.

DR. L. CHARLES FITZGERALD (Hanley, Staffs) writes: I have during the past fortnight met with two cases of prolonged lactation in multiparous women. One of them states she has nursed her child at the breast for three years because it was delicate, and the other for two years and seven months, in order, as the mother declared to me, to prevent a future pregnancy, and she would have continued to nurse it were it not that the child got measles, and refused the breast. I should be glad to hear from any of your readers if such cases are usual.

*** We believe that instances of prolonged lactation, such as our correspondent relates, are far from uncommon. The limits within which infants are suckled at the breast differ a good deal in different races. Comby (*Traité des Maladies de l'Enfance*, T. i, p. 23) recommends French mothers to suckle their infants for fifteen or twenty months at least, unless they suffer from some distinct disease, from

weakness or anæmia, or become pregnant again. He states that lactation is often prolonged to two, three, or four years among many savage races, African and Asian; and adds that in Japan, where the usual period of lactation is three or four years, the mortality among children under 5 years of age is low, since of 1,000 born 276 die before the age of 5 years in Japan, whereas 341 die in France.

SWISS AND GERMAN CLIMATE AND SCHOOLS.

A. Z. desires to hear of any healthy spot in Switzerland or Germany where the climate in winter is mild or in summer not too relaxing, and where a European girl, 8 years of age, born and bred in Burmah, could live *en pension* with her mother and obtain educational advantages.

*** Lausanne, on the Lake of Geneva, is a well-known centre for education; the extremes of heat and cold are greater there than in England, but this is the case everywhere in Switzerland and Germany. Clarens and Montreux, also on the Lake of Geneva, are more sheltered and warmer in winter; the schools for children are also very good. In all these places French is the language spoken and there are numerous first-rate *pensions*. In Germany, Heidelberg or Wiesbaden would probably be found most suitable. In the German part of Switzerland the schools are excellent, but the climate is everywhere more severe than on the Lake of Geneva.

HOME FOR IMBECILE.

F.W.K. (London, E.) desires to know of an institution for an imbecile boy of 16 years, harmless, but with very slight promise of any improvement in mental power. His parents cannot afford to pay more than 10s. or 12s. per week.

*** The case might be admitted at the Imbecile Asylum, Darenth. Application should be made to the relieving officer of the district.

ANSWERS.

ENQUIRER.—There are a variety of such "cures." As they are proprietary secret remedies or processes we are unable to afford any information.

PROVIDENT.—No information has been received for some time as to the position of the association mentioned.

RUSTIC will find a number of receipts for the various pastes, etc., used in the saddle room in *Workshop Receipts for the Use of Manufacturers, Mechanics, and Scientific Amateurs*, by Ernest Spon, published by E. and F. Spon, 125, Strand, W.C.; price 5s. The last edition of the work was published in 1895.

SIMULTANEOUS LIGATURE OF POPLITEAL ARTERY AND VEIN.

DR. MALCOLM MARGRAVE (Newton Abbot) writes: In reply to "F.R.C.S.," whilst a dresser under Mr. John Langton at St. Bartholomew's Hospital, in 1888, I well remember a butcher being admitted with a traumatic aneurysm of the popliteal space, the result of a stab with a sharp-pointed knife. Mr. Langton cut down upon it, and simultaneously ligatured artery and vein, the patient making an excellent recovery.

UNQUALIFIED DENTISTS AND OTHER PRACTITIONERS.

MEMBER.—A registered medical man, who by administering anæsthetics to the patients of an unqualified dentist or other unqualified practitioner, and thereby enables the latter to practise as if he were duly qualified, would probably be held to have rendered himself liable to be convicted of the offence known as "covering." If convicted his name might be erased from the *Register* by order of the General Medical Council.

COLOURLESS CHLORODYNE.

DR. ROBERT F. CAMPBELL (Wark-on-Tyne), in answer to K., sends the following formulæ: ℞ Chloroformi 5x, spt. vini rect. 5xij, ether. 5iij, morphin. acet. gr.xl, acid acet. q.s., acid. hydrocyan. dil. 3vj, tr. capsici 3iij, ol. anisi mxxx, ol. menth. pip. mxx, syrupi ad. 3x. Mist. Dose 5 to 10 m. Shake the bottle. ℞ Tinct. capsici 3iv, chloroformi 3iij, spt. vini rect. 3iv, morphin hyd. gr.lxxx, atropin. sulph. gr.j, acid. hydrocyan. dil. 3vj, ol. menth. pip. mxvj, glycerin. ad. 3xx. Dose 5 to 10 m.

BACTERIOLOGICAL DIAGNOSIS.

DR. BOND, Medical Officer of Health for the Gloucestershire Combined District, in answer to the inquiry on this subject, informs us that all the leading authorities for whom he acts have agreed to pay for the examination of throat specimens in cases of diphtheria and of blood in cases of typhoid fever. An arrangement has been made for the purpose with the British Institute of Preventive Medicine.

DR. ALBERT BRINDLEY (Bacteriological Department, Owens College, Manchester) writes: I beg to state that in this department of the College we make such examinations for many sanitary authorities in this neighbourhood. The work done here is paid for by these sanitary authorities, the practitioner incurring no expense whatever, but, on the other hand receiving the usual notification fee in every case examined, whatever be the result of such examination. The chief authorities who send typhoid and diphtheria specimens to us are the following: The Corporations of Manchester, Salford, Oldham, Blackburn, Stockport, Crewe, and the Urban Districts of Whittington, Stretford, Haydock, Darwen, etc.

THE M.B.LOND. EXAMINATION.

IN the answer published last week to "A Thirty Years Member" as to the books frequently read for this examination the names of the following works were inadvertently omitted and should be added to the list there given: Medicine, *A Manual of the Practice of Medicine* by Frederick Taylor, M.D., fourth edition (London, J. and A. Churchill, 1895, price 15s.). Surgery, *System of Surgery*, edited by Frederick Treves, F.R.C.S., vols. i and ii (London, Cassell and Co., 1896, price 48s.); special subjects, *Lectures on Renal and Urinary Diseases* by Robert Saundby, M.D., second edition (Bristol, John Wright and Co., 1897, price 10s. 6d.); *Manual of Diseases of the Nervous System*, by Sir William R. Gowers, M.D., second edition (London, J. and A. Churchill, 1893).

NOTES, LETTERS, Etc.

ERRATA.

IN the notice of the presentation of the Jubilee medal to Dr. Richard Domenichetti in the BRITISH MEDICAL JOURNAL of January 29th, it should have been stated that Dr. Domenichetti resided at Belshford Rectory, Horncastle.

IN Surgeon-Lieutenant-Colonel Ross's note on Muscular Exertion in Cycling in the BRITISH MEDICAL JOURNAL of February 5th, page 415, para. 2, line 2, the word "inadequate" should read "adequate."

IN the Liverpool Correspondence in the BRITISH MEDICAL JOURNAL of February 5th, page 402, line 13, by a printer's error, the duration of the surgeoncy of Dr. John Wallace was given as two years; it should have been twenty.

CONTRACT PRACTICE.

DR. JOHN BROOM (Kirriemuir, Forfarshire) writes: In the BRITISH MEDICAL JOURNAL of January 29th there is a letter regarding the departure of the St John Ambulance Association from their usual employment of medical men solely, as lecturers, to the employment of laymen, clergy, etc. Does "Hygiene" only now awake to the fact when it affects himself that this ambulance association has only been doing what medical aid associations, Foresters societies, and our great charitable infirmaries have also been doing, namely, lowering the professional wage and getting work done for nothing for empty glory? What right has any member of our profession to do such work for nothing? You may say, or "Hygiene," he can do so if he likes. Well, then, the rest of us can boycott such a one if we like, as I have boycotted a medical aid association three years ago, and a neighbouring practitioner more recently who is a Foresters' Society doctor, and who expected me to attend his 4½d.-a-month patients in his absence for professional reciprocity. In this place there are only three doctors, so that we know each other and the people pretty well. It is not enough to kill the medical aid associations. Let us combine and kill every society that contracts for doctoring at all. Let us boycott every brother practitioner who is engaged by any combination or society exclusively to its own advantage, and to the exclusion of other doctors. Let us refuse certificates to any society, insurance or otherwise, which goes entirely to one doctor in the place to the exclusion of others. Let every man reciprocate only with those who do justly with him, and are free from contract work of any kind.

MALE AND FEMALE NURSES' ASSOCIATION.

MR. W. E. LANGTON (Secretary of the Male and Female Nurses' Association, 69, Wigmore Street, W.) writes: It has come to the knowledge of my Committee that statements have been made to medical men and others calculated to injure the work carried on by the Male and Female Nurses' Association at No. 69, Wigmore Street, Cavendish Square, W. It is obviously for the benefit of the medical profession at large that an association of this character should be protected from attacks of the above description, that I feel sure that any of your readers to whom any of the statements complained of have been made will give such information to me, as will enable my Committee to take proper action against the offending parties. I need hardly say the Association court the fullest investigation.

THE DIFFICULTIES OF THE LONDON STUDENT.

AN OLD STUDENT writes: In answer to "M.D.'s" letter on this subject, allow me to point out that I suggested removing "unnecessary blocks" from the student's path rather than lowering the standard of the London University. "M.D." says that average intelligence is sufficient for the London University course. Yet numbers of able, hard workers are debarred from the degree by not having a clue to the labyrinth of Conjoint and University examinations when they start. The Colleges examine in: (1) Preliminary sciences, biology, etc.; (2) special sciences, anatomy, etc.; (3) final subjects, medicine, surgery, etc., like the University for the M.B. They give marks which are more or less known by which candidates could easily be divided into classes. The examiners for the Colleges and University (in some instances individually identical) are always intimately associated with one another as teachers. Under these circumstances it must seem monstrous that a scheme cannot be agreed upon by which students who take a high place in the Conjoint tests should be relieved of the infliction of double examinations to a reasonable degree. Again! Why should not the examination in medicine, which stamps a man a pure physician, be recognised by the London University as sufficient in that subject for a first-class general practitioner? The examination can hardly be inadequate. London University examiners are sometimes R.C.P. Censors.

That six residents from one hospital should pass the M.D.Lond. together is remarkable and very creditable, but as they would have had every facility for working together their circumstances were very favourable for success. I still believe my figures are correct, but I am certain more than fifty-seven candidates entered. Further, it is extremely improbable that the dates of passing the M.B. could "work out much the same" in the lists of passed and rejected. It is not likely that all, or nearly all, the eligible M.B.'s of 1896 entered. There were only 16 in the first class, yet 8 passed, 2 qualifying for medals, and beating the M.B.'s of 1894 and 1895. Again: it is highly improbable that the M.B.'s of all previous years contributed only 4 candidates. "M.D." seems to strengthen my position rather than weaken it. The fact that two London medical teachers and examiners (one of them M.D Lond.) have expressed cordial approval of my first letter has emboldened me to trespass a second time on your valuable space.

FLIES AS CARRIERS OF INFECTION.

SURGEON-MAJOR J. BATTERSBY, M.B., D.P.H., A.M.S., writes: The recent discussion at the Royal Medical and Chirurgical Society on the prevention of enteric fever has recalled a letter of mine which you did me the honour of publishing in your valuable JOURNAL dated August 10th, 1895. In that article, in addition to the waterborne theory, I drew particular attention to the part taken by the common house fly as a possible carrier and disseminator of the disease. Any person who has visited Egypt or the plains of India during the earlier months of the hot weather can, I think, bear corroborative testimony as to the clouds of flies everywhere met with. Observation soon teaches us as to their disgusting habits and modes of feeding, utter disregard being shown as to whether they swarm in unenviable competition on the stools passed by enteric, choleraic, or dysenteric patients, etc., or choose the articles of food and drink of which we may be the unhappy partakers. In their rapid movements from one sort of filth or food to another, have we not got strong presumptive, if not demonstrative, evidence as to a possible manner in which the morbific material may be conveyed to the alimentary canal? Those of us who have witnessed the marvellous way in which the comma bacilli of cholera can multiply on agar jelly within twelve hours from the minutest inoculation do not wonder why other bacilli (enteric, for instance) cannot act a similar part when carried and deposited by flies, either by their limbs or dejecta, on suitable pabula. The bacillus typhosus has been demonstrated in the dejecta of flies previously fed on enteric matter.

SURGERY IN THE COTTAGES OF THE POOR.

MR. HORACE E. HAYNES, M.R.C.S. (Evesham), writes: In the following case I should have much preferred to have moved the patient to our excellent cottage hospital, but did not feel justified in jolting her over five and a-half miles of rough road, and moreover it would have entailed some hours' delay.

On April 27th, 1880, I was summoned to an old woman, aged 70 years, living in a village five miles away, who was suffering from strangulated femoral hernia on the right side. I sent for my brother and partner, Mr. Allen Haynes, and under an anæsthetic we tried to reduce the rupture, but this proved impossible. I then proceeded to operate, and found the stricture in the neck of the sac; I divided this and the patient made a good recovery. She then wore a truss on the right side, but two or three years afterwards on examination I found a rupture on the left side, and so she wore a double truss.

On January 6th, 1898, I was called to the same woman, and found her suffering from irreducible femoral hernia on the left side, which had come down in the middle of the night when coughing, and when, of course, she was not wearing a truss. I sent for my brother, who gave an anæsthetic, and I operated on the old woman, and again the stricture was in the neck of the sac. She made an excellent recovery, though about a fortnight after the operation she nearly succumbed to debility owing to insufficient nourishment. She is now quite well, and will be 80 years old on February 21st.

LETTERS, COMMUNICATIONS, ETC., have been received from:

(A) A. D.; Messrs. Arnold and Sons, London; Dr. F. R. B. Atkinson, London; A. Z.; Dr. F. H. Alderson, London; Mr. A. Atkinson, London; A. W.; Dr. J. Alexander, Galston; Messrs. Armour and Co., London; Mr. A. P. Aitken, Edinburgh. **(B)** Dr. R. L. Bowles, London; Dr. A. E. Brindley, Manchester; Dr. M. Beverley, Norwich; R. T. Bakewell, M.B., London; Dr. J. W. Ballantyne, Edinburgh; Mr. G. Biggs, London; J. Battersby, M.B., Mullingar; Mr. C. J. Bond, Leicester; Mr. W. G. Burnie, Bradford; H. Blake, M.B., Great Yarmouth; B.; F. M. Blumer, M.B., Stafford; Mr. G. H. Broadbent, Manchester. **(C)** Mr. A. H. Cheatle, London; Dr. J. Craig, Dublin; Mr. J. J. Clarke, London; Miss J. Crossfield, M.D., London; Dr. J. H. Clarke, London; Country Doctor in Favour of New Regulations; Mr. H. L. Carre-Smith, London; Mr. A. Clark, London; Dr. H. Coates, Southsea; C. B. G.; Mr. J. Collinson, London; Mr. H. R. Carter, London. **(D)** Mr. W. J. Dawes, Longton; Dr. H. Dutch, Dudley; Dr. C. Dukes, Rugby; Dr. T. Dutton, London; J. D. Davies, M.B., Swansea; Durham Bank; J. M. Davidson, M.B., London. **(E)** Enquirer; Mr. J. Edwards, London; An Electric; W. McA. Eccles, M.B., London; Dr. R. T. Edes, Jamaica Plain, U.S.A. **(F)** Mr. T. Farrant, Exeter; F. W. K.; Mr. J. Fitzgerald, Edinburgh; F.R.C.S.I., L.K.and Q.C.P.I.; Mr. J. F. Fry, Shepton Mallett; Dr. W. H. S. Fosbery, Reading; Dr. W. S. Fenwick, London. **(G)** Dr. L. G. Guthrie, London; J. E. Gemmell, M.B., Manchester; Glasgow Southern Medical Society, The Secretary of the, Glasgow; Mr. H. B. Gardner, London; Mr. B. W. Gowring, Newport, Mon.; Mr. L. M. Griffiths, Bristol. **(H)** Dr. W. P. Herringham, London; H. M. W.; Dr. W. Harding, Northampton; Mr. R. F. Hutchinson, West Cults; Mr. W. J. Haslett, London; Mr. T. Hawkins, London; Mr. W. H. Hall, Frant; Dr. J. Haddon, Denholm; J. Hamel, M.B., London; Dr. V. D. Halstein, Paris; Dr. J. R. Hamilton, Hawick; Dr. H. E. Haynes, Evesham; Mr. T. G. Horder, Cardiff; Dr. F. T. Heuston, Dublin; Harveian Society of London, The Secretary of the, London. **(J)** J. L. H.; C. R. Jones, M.B., Tarporley; Dr. H. M. Jones, London; J. L. R.; Justice; Mr. J. J. Jackson, Hertford. **(K)** Dr. H. Kenwood, London; Mr. B. Kuhn, London; Mr. T. J. Kennedy, Nenagh; Dr. J. Keser, London; Kidderminster Medical Society, The Secretary of the, Kidderminster; Kensington. **(L)** G. V. Lockett, M.B., Kingston, Jamaica; Mr. N. Y. Lower, Stantonbury; Mr. W. Livesey, London; Learner; Dr. J. F. Little, London; Dr. A. P. Luff, London; Mr. F. H. Lane, Burford; Dr. O. Levy, London: Mr. J. Louis, London; Dr. E. A. Lermitte, London. **(M)** Mr. W. J. Midelton, Harston; Dr. W. Milligan, Manchester; Mr. J. McKay, London; H. C. Mactier, M.B., Wolverhampton; M.O.H.; Messrs. Moseley and Co., Sheffield; Midland Branch B.M.A, The Secretary of the, Leicester; R. Montgomery, M.B., Dublin; Mr. F. Marsh, Birmingham; Mr. C. D. Marshall, London; M.D.; Mr. E. Morgan, Ventnor; Member; Dr. J. Murphy, Sunderland; Mr. F. MacCarthy, Worcester; Medicus; Dr. A. M. Murdoch, Glasgow; Milk Preparation Company, Brentwood; Dr. J. A. Myrtle, Harrogate; J. L. I. Moore, M.B., Market Harborough; Mr. J. Maclean, Sheffield; Mr. M. Margrave, Newton Abbott; Mr. C. A. Morton, Clifton; Medical Society of London, The Secretary of the, London; M.D., M.O.H. **(N)** Mr. W. S. Naylor, London; N. N. **(O)** Dr. T. Oliver, Newcastle-on-Tyne; Mr. A. D. Owen, Enkeldoorn, Rhodesia; Mr. R. S. Owen, Washaway; Open-minded General Practitioner. **(P)** Mr. J. W. Plaxton, Kingston, Jamaica; Dr. R. Peteh, York; Mr. J. H. Potter, Cullompton; Dr. L. Parkes, London; Mr. C. C. Preston, Hove; Mr. H. E. Powell, London; C. F. Ponder, M.B., Kalimpong; Mr. J. Poland, London; R. Parker, M.B., Liverpool; Dr. S. T. Pruen, Cheltenham; Mr. G. N. Parker, London; Dr. J. D. Poole, Wolverhampton; Mr. W. H. Parkes, Market Harborough; Dr. C. B. Plowright, King's Lynn. **(R)** Dr. W. G. Ross, London; Mr. H. D. Ryser, London; Dr. J. J. L. Ratton, London; Mr. J. P. Race, Manchester. **(S)** Mr. L. Soudillon, Paris; A. M. Sheild, M.B., London; Dr. P. L. Sclater, London; Dr. W. K. Sibley, London; Dr. T. D. Savill, London; Mr. E. A. T. Steele, Southend on-Sea; Mr. N. Smith, London; Sufferer; Dr. G. A. Sutherland, London; Mr. O. T. Slatter, London; Dr. E. M. Shirtliff, Ryde. **(T)** T. M. Thomas, M.B., Newport, Mon.; Dr. St.C. Thomson, London; J. C. Taylor, M.B., Glasgow; Dr. H. Tilley, London. **(U)** Dr. A. Urquhart, Perth. **(V)** Vidian. **(W)** Dr. F. J. Waldo, London; Mr. T. R. Wiglesworth, Cinderford; Mr. W. R. Williams, Machynlleth; Mr. S. Willard, London; Mr. C. H. Whiteford, Plymouth; Mr. W. W. Williams, St. Davids; Dr. F. Willcocks, London; Dr. E. F. Willoughby, London; Mr. J. H. Wigham, Leeds; Dr. H. Weber, London; Dr. J. P. Wills, Bexhill; Dr. R. H. Wolstenholme, Manchester; G. E. Williamson, M.B, Newcastle-on-Tyne; etc.

BOOKS, ETC., RECEIVED.

Inaugural Address on Medical Geography as an Aid to Clinical Medicine, also Phthisis and the Isle of Man. By A. Haviland, M.R.C.S. London: John Bale, Sons, and Danielsson. 1897. 1s.

The Yearbook of Treatment for 1898. London: Cassell and Co. 7s. 6d.

Outlines of Rural Hygiene. By H. B. Bashore, M.D. Philadelphia: The F. A. Davis Co. 1897. 0.75 dollar.

Elements of Latin for Students of Medicine and Pharmacy. By G. D. Crothers, A.M., M.D., and H. H. Bice, A.M. Philadelphia: F. A. Davis Co. 1897. 1.25 dollar.

Textbook of Nervous Diseases. By C. L. Dana, A.M., M.D. Fourth Edition. London: J. and A. Churchill. 1898. 20s.

The Tallerman Treatment by Superheated Dry Air. Edited by A. Shadwell, M.A., M.B., M.R.C.P. London: Baillière, Tindall, and Cox. 1898. 3s. 6d.

The Retrospect of Medicine. Edited by J. Braithwaite, M.D.: assisted by E. F. Trevelyan, M.D., B.Sc., M.R.C.P. Vol. 116. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1898. 6s. 6d.

Physiologie et Pathologie de la Sécrétion Gastrique. Par Dr. A. Verhaegen. Paris: Masson et Cie. 1898. Fr. 1.25.

The Pathology of Relapsing Fever. By L. J. Pisani, F.R.C.S., I.M.S. Calcutta: Thacker, Spink, and Co. 1897.

Atlas der Syphilis und syphilisähnlichen Hautkrankheiten. Von Dr. M. Chotzen. Heft V und VI. Hamburg und Leipzig: Leopold Voss. 1897.

Introduction to Chemical Methods of Clinical Diagnosis. By Dr. H. Tappeiner. Translated from the Sixth German Edition, with an Appendix on Micro-Biological Methods of Diagnosis. By E. J. McWeeney, M.A., M.D., L.R.C.P.I. London: Longmans, Green, and Co. 1898. 3s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

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REMARKS
ON
THE DISTAL LIGATURE IN THE TREATMENT OF ANEURYSM.

By CHRISTOPHER HEATH, F.R.C.S.,
Holme Professor of Clinical Surgery in University College; Senior Surgeon to University College Hospital.

We are now within two years of the end of the nineteenth century, when no doubt the progress of surgery during that period will be summed up by one or more competent persons. With the view of contributing to accuracy in dealing with the treatment of aneurysm, I wish to record a few facts relating to the use of the distal ligature, and to give my personal acquaintance with the subject. I am induced to do this because I find in the most recent works on surgery various inaccuracies, and I also note a tendency to ignore historical facts which are of interest.

Brasdor is credited by Boyer with having proposed, at the end of the last century, to place a ligature on the distal side of an aneurysm instead of on the cardiac side as recommended by Hunter. Desault was in the habit of quoting Brasdor's proposal with approval, but never carried it into practice. Deschamps, his cotemporary, first applied a distal ligature in a case of large femoral aneurysm, but the tumour increased so rapidly in size that, four days later, the old operation of opening the sac (Antyllus) was performed, and the patient sank from hæmorrhage. Sir Astley Cooper adopted the operation in a case of aneurysm of the external iliac, tying the common femoral, and the tumour diminished considerably, but eventually burst and killed the patient.

James Wardrop now took up the subject, and in 1825 tied the common carotid for aneurysm of the root of that vessel with success, the patient being alive and well three years later. In 1826 Wardrop had a second similar case, but the patient died four months later from causes unconnected with the operation, and the *post-mortem* examination showed no distinct aneurysm, only "a manifest dilatation" of the carotid corresponding to the position of the tumour present before the operation, and the artery was pervious throughout. Wardrop was followed in 1827 by Lambert, whose patient died two months later from hæmorrhage at the site of ligature, and by Bush, of New York, whose patient was cured.

In 1827 Wardrop performed what he termed his "new operation" by tying the third part of the subclavian artery in a case of innominate aneurysm, where the carotid had ceased to beat, and was supposed (erroneously) to be obliterated. The patient (Mrs. Denmark) was greatly relieved, notwithstanding the fact that pulsation in the carotid recurred on the ninth day and persisted. She survived over two years.

It is with this operation, in which the open branches of the subclavian intervene between the ligature and the aneurysm, that Wardrop's name is usually connected, whereas Brasdor's name is applied to the ligature of the common carotid, where no branch intervenes. It is obvious, however, from Wardrop's own words,[1] that he regarded the obstruction of the carotid as an important preliminary to his proceeding, and later on (p. 87) he says, "it surely would be advisable to imitate Nature in this respect, and to place the final ligature on the carotid in preference to the subclavian.....When under these assumed circumstances the carotid has been tied, the propriety of afterwards placing a ligature on the subclavian must be decided by the effects produced on the aneurysm."

Wardrop's proposal of tying the common carotid in cases of innominate aneurysm was adopted by several surgeons with more or less success, but his suggestion of consecutive ligature of the third part of the subclavian was not followed till 1836-38 by Fearn, of Derby, whose beautiful preparation in the College of Surgeons museum shows that a cure of the innominate aneurysm had been effected. Wickham tied both vessels consecutively in 1839 unsuccessfully, and Malgaigne tied the carotid and axillary consecutively in 1845 unsuccessfully. In 1843 Rossi for the first time tied both the carotid and subclavian simultaneously, but appears to have placed his ligature to the inner side of the scalenus, thus tying the first part of the artery. Death followed in six days from insufficient blood supply to the brain. Cuvellier tied both vessels simultaneously in 1859, but his case was not published till much later. The patient died.

In November, 1865, at the Westminster Hospital, I tied the right common carotid and the third part of the subclavian in a woman of 30, suffering from what I and many other surgeons believed to be an innominate aneurysm.[2] She recovered from the operation, and her condition greatly improved, the tumour subsiding and all pressure symptoms disappearing, but pulsation never being arrested. I brought the case before the Royal Medical and Chirurgical Society in December, 1866,[3] and it excited a good deal of discussion, but it was not published in the *Medico-Chirurgical Transactions*. My patient was a drunkard whom it was impossible to control, and as a result of her excesses after about two years the tumour began to increase, and eventually the aneurysm burst externally in December, 1869, more than four years after the double operation. The aneurysm proved to be purely aortic, involving the ascending portion of the arch, the innominate not being involved in the sac. The preparation is in the museum of the College of Surgeons, and an account of it with a drawing is given in the Pathological Society's *Transactions* for 1870.

In a paper published in the *Lancet* of July 2nd, 1870, I gave the details of the above interesting case in full, and will quote one passage from it: "The preceding case appears to raise a very important question in practical medicine and surgery—whether in cases of aneurysm of the arch of the aorta it is not possible to afford relief by surgical interference. There can be no question that my patient's urgent symptoms were relieved by the double ligature, and that her life was prolonged very considerably under the most untoward circumstances. Dr. Cockle has already[4] urged ligature of the left carotid in cases of aortic aneurysm which are making progress in spite of medical treatment; and when the disease involves the transverse portion of the arch I should be inclined to follow the suggestion as regards the left carotid. But when the disease involves the ascending portion of the arch, I believe the only hope of success will be in tying both the right carotid and subclavian, so as to diminish as far as possible the current through the innominate."

My example of applying double simultaneous ligatures in cases of presumed innominate aneurysm was followed by several surgeons[5] with varying degrees of success, and in 1877 Mr Barwell thus operated upon four patients, one of whom died from the anæsthetic, and three survived for various periods, one as long as two years, and then proving to be mainly aortic, so that all are claimed as having been cured. Mr. Langley Browne also had a successful case in 1881, which survived for two years, and in whom all symptoms of aneurysm subsided. I did not myself have the opportunity of repeating the double ligature until the year 1887, when a patient with presumably innominate aneurysm was transferred to my care by Dr. Bastian. For the following notes of the case, which have not hitherto been published, I have to thank Mr. Drew, late Surgical Registrar of University College Hospital.

F. W., male, aged 33, admitted to University College Hospital under Dr. Bastian, October 18th, 1887, complaining of pain in the neck and shoulder on the right side, and difficulty in breathing.

Previous History.—Temperate; had served in the army for eight years, and subsequently as a porter at Covent Garden, where he often had to lift heavy weights. About ten years before he contracted syphilis, and received a six months' course of treatment.

Present Illness began 12 months before admission with pain of an aching character in the right side of the neck, gradually increasing in intensity. The pain is situated at the level of the angle of the jaw. About six weeks ago difficulty in swallowing and weakness in the voice came on, and also a cough, the latter being occasioned by the constant feeling of something to be coughed up. During the last three months he has had rheumatic pains in both shoulders, extending down the arm on the right side, and also an aching pain at the junction of the clavicle and sternum. The swelling over the right collar bone had been noticed for a fortnight.

Present State. October 20th, 1887.—Powerfully built man, well nourished; arteries rather fibroid; pulse 68, regular, full, and high tension; symptoms as above. On examination the sternal end of the right clavicle is pushed forwards, forming a distinct swelling; the swelling pulsates in an undulatory manner from below upwards. Pulsation of a heavy heaving character can be felt, no thrill is present, the pulsation extends into the suprasternal notch. The percussion note over the upper half of the manubrium is wanting in resonance, and over the swelling is quite dull. There is distinct systolic murmur over the swelling, and the second heart sound is distinctly heard. No displacement of the heart's impulse, which is heaving. Cardiac dulness not increased; the first sound at the apex loud and booming, and second sound distinctly heard. No stridor present when lying quietly in bed, but on movement there is distinct inspiratory and expiratory stridor, and a few rhonchi are heard

over chest. The patient was under observation in the medical wards for six weeks, and was treated with potass. iodid., rest, and ordinary diet. The pain continued severe, and there was some weakness of the right shoulder. The other symptoms remained the same, and the patient was transferred to Mr. Heath.

Operation.—On December 7th, 1887, Mr. Heath tied the subclavian artery in its third part. There was no difficulty in the operation beyond some venous bleeding, which was arrested by ligature. The vessel was tied with carbolised silk, and the wound closed with drainage. The common carotid was then tied just above the omo-hyoid.

After-History.—The wounds healed by first intention. There were no unfavourable symptoms after the operation, except that the cough was troublesome. On January 16th, 1888, the swelling at the right sterno-clavicular articulation was much smaller, and the pulsation less marked. The cough was more troublesome, and it was suggested that extension of the deeper part of the aneurysm had occurred. This continued until patient left the hospital on January 27th, 1888. The breathing was much better, and the difficulty in swallowing had nearly disappeared.

It was subsequently ascertained that the patient had died at Acton on May 1st, 1888, from bursting of the aneurysm internally, and that no *post-mortem* examination was made, hence it is impossible to make certain of the diagnosis.

In 1879 Mr. Barwell had the opportunity of following my suggestion of applying simultaneous ligatures to the carotid and subclavian arteries in a case of aortic aneurysm diagnosed as such, and his patient survived fifteen months. In 1880 his example was followed by Lediard, whose patient survived for eight and a-half months, and by Wyeth, whose patient lived a year. It should be noted that in all three cases Mr. Barwell's ox-aorta ligature was employed.

Returning now to Dr. Cockle's proposal to tie the left carotid in cases of aneurysm of the arch of the aorta, I first performed that operation in 1872, and the patient was greatly relieved, and lived over four and a-half years.[6] Mr. Holmes and Mr. Barwell had each a successful case of the kind, but Mr. Holmes's proved, after twelve years, to have been a case of malformation of the heart.[7] In 1874 I again performed the operation on a man, aged 44, who had undergone a variety of treatment, including iodide of potassium, venesection, and compression of the left carotid before he came under my care for supposed aneurysm of the aorta, which was making progress. The right radial pulse was not to be felt, and the arm had been swollen. I tied the left carotid with catgut on January 21st, but the patient died two hours afterwards from failure of the respiration. At the *post-mortem* examination a large innominate aneurysm was found, and the right subclavian artery was impervious up to the sac, death having resulted from want of blood supply to the brain.

In October, 1878, I tied the left carotid for the third time in a man, aged 44, with an aneurysm of the arch, chloroform being given for the skin incision only, and even then producing great cyanosis. Immediately on the ligature being tied the patient became pale, his heart weakened, and he became profoundly unconscious, the left pupil being widely dilated. After bleeding to ʒx and the administration of brandy and beef-tea by œsophagus tube and enemata, the patient recovered consciousness, but never properly rallied, and died twenty hours after the operation. The *post-mortem* examination showed an aneurysm of the size of an orange from the junction of the ascending and transverse portions of the arch, both of which were considerably dilated and pressed on the trachea.

In 1885 I tied the left carotid for the fourth time in a man of 43 who had noticed a pulsating tumour of the episternal notch and left side of the chest for nine months, which was increasing in size. Cocaine was the anæsthetic used, 15 minims of a 20 per cent. solution being injected in the line of incision fifteen minutes before the operation. The artery was tied with carbolised silk. In the evening he was found to be aphasic, and the following morning there were facial paralysis and palsy of right arm. The wound healed and the aneurysm became more solid, and did not pulsate so forcibly as before the operation.

The power of speech gradually improved, and on the fifty-eighth day was reported good, though there was a tendency to reduplicate the first syllables of some words; the aneurysm remained *in statu quo*. He was transferred to the medical wards on the sixtieth day, and remained there two months, and was then discharged at his own request in much the same condition. I have ascertained that this patient died at Birkenhead in June, 1886, the certified cause of death being "thoracic aneurysm."

Dr. Elwin Harris has recorded in the *Clinical Soc. Trans.*, 1891, a case of aortic aneurysm occurring under his care in the St. George's-in-the-East Infirmary, in which I tied the left carotid under cocaine only in March, 1890. The patient lived two months, and at the *post-mortem* examination the aneurysm was found to be filled with clot, mostly laminated.

Lastly, in November, 1890, I had a sixth case, thanks to the kindness of my friend, Dr. Robinson, of the Mile End Infirmary. The patient was a woman, aged 61, who had had symptoms of aneurysm of the aorta for three years, for which she had been treated in the London Hospital. In July, 1890, when admitted to the infirmary there was marked pulsation in the suprasternal notch, with a *bruit*. She was unable to lie down, and suffered from an irritating cough. After four months' treatment by rest and iodide of potassium without improvement, the operation was performed without an anæsthetic. Three days after it was noted that respiration, which had been distinctly noisy, was quite quiet. Six days after the operation she was able to sleep for seven hours.

In January, 1891, she complained of a return of pain in the right shoulder. In February, the tumour pulsating above the sternum was found to have undergone diminution, and all her symptoms becoming ameliorated she took her discharge on August 8th, 1891.

On September 3rd she was admitted into the London Hospital with a pulsating tumour at the inner end of the right clavicle, which could be felt just above it. About the middle of November she began to complain of great pain shooting through the sternum and between the shoulders, and died suddenly on November 29th, more than a year after my operation.

The *post-mortem* examination showed the first part of the arch to be uniformly dilated. From the right superior aspect of the transverse arch (between the innominate and left carotid) was a large aneurysmal sac of the size of an orange, with an opening into the aorta of the size of half-a-crown. The sac was adherent to the trachea, and almost completely filled with laminated clot.

It will thus be seen that of six cases in which I have tied the left carotid, as suggested by Dr. Cockle, the first was by far the most successful. In the second case the diagnosis was incorrect, the aneurysm proving to be innominate, and the proper vessel to have tied would have been the right carotid. In the third case the embarrassment of breathing caused by the anæsthetic was so great that I abandoned its use in my subsequent operations, and strongly advise the employment of cocaine in all future operations on the large vessels of the neck. The results, taken as a whole, are perhaps not very encouraging, but it must be borne in mind that in dealing with a practically incurable disease, a prolongation of life for even a few months may be worth attempting.

References.

1 *On Aneurysm*, p 61. 2 *Lancet*, December 2nd, 1865. 3 *Ibid*, January 5th, 1867. 4 *Lancet*, April 10th, 1869. 5 *System of Surgery*, vol. iii. 6 *Clin. Soc. Trans.*, vols. v, vi, x. 7 *Ibid*, 1888.

REMARKS ON THE DISTRIBUTION OF CERTAIN SENSORY SPINAL ROOTS,

FOUNDED ON A CASE OF SPINAL CARIES.*

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So much attention has been given within recent years to the question of the sensory distribution of spinal nerve roots that it seems desirable to record individual cases which bear upon this point. I am greatly indebted to Professor Ogston for having had an opportunity of observing and recording the following case, in which it was possible, mainly by the help of the recent work of Head, Thorburn, and others, to arrive during life at an approximately accurate diagnosis of the site and extent of the lesion, as confirmed at the necropsy.

J. F., aged 61, a printer, was admitted into the Aberdeen Royal Infirmary under the care of Professor Ogston on April 30th, 1896. He complained that his legs had become weak, so that walking was difficult, and gave him a sensation of "pins and needles" up the legs. The following is a summary of notes taken while J. F. was in the infirmary:—

The family history showed nothing worthy of note, except that one brother was lame—attributed to an accident in childhood (tuberculous?).

* Read before the Aberdeen, Banff and Kincardine Branch of the British Medical Association.

Previous History of Patient.—At the age of 2, he had measles (?), which caused temporary loss of power in the legs. Ten or eleven years before admission he was under treatment for a weak back—"spinal caries," he says. He wore a plaster of paris jacket for a month, and was then able to resume work, but since that time his back has been bent and he has suffered almost continuously from a feeling of constriction and pain in the lower region of the spine and round the loins, especially on the left side. This pain disappeared in bed, and was most intense at the moment when he got out of bed, gradually wearing off after he had walked a little. Eight years ago he had an abscess over the left trochanter major, and a cicatrix remains. For a few years he has been subject to bronchitis and attacks of "shortness of breath." Within the last year, when washing his face he had felt a staggering feeling and could scarcely stand erect. He drank heavily about twenty years ago, but has been temperate for many years. No history of specific disease can be made out.

History of Present Illness.—On April 8th, 1896 (that is, three weeks before admission) he felt a "sleepy" sensation in his left foot and noticed that his left leg trailed behind him in walking. A week later, he noted that he could not move the toes of his left foot and that his left leg occasionally "started" at night. A week later still, his right foot began to be affected with a sleepy sensation and, by this time, the numb feeling in the left foot had gradually spread up the leg to the thigh.

Condition on Admission.—(April 30th, 1896.) The patient is short of stature and poorly nourished, weighing 7 st. 8 lbs. Examination of the spine shows a well marked angular kyphotic curvature about the mid-dorsal region, while the normal lumbar and cervical curves are exaggerated. There is also a certain amount of scoliosis. The skin over the kyphosis is red and soft, but there is no note of pain or tenderness there. There is no loss of power in the arms and little, if any, in the right leg. There is defective power of movement at all joints of the left leg, especially at the ankle, where the range and power of movement are very limited. The left ankle is held rigid. Objectively, sensation to touch seems good everywhere, except about the toes of the left foot. There is some inaccuracy in distinguishing heat from cold, especially on the feet. Subjectively, there is a numb and cold feeling in the feet, which perspire freely. The knee-jerks and plantar reflexes are both exaggerated. There is no affection of the sphincters; bowels are constipated. The muscles of the leg show fair nutrition, but are distinctly wasted all over, from the gluteal region downwards. There is no special wasting of any muscle or group of muscles. The heart and lungs are normal, and the urine shows nothing abnormal (sp. gr. 1021, acid, light straw colour, no albumen or sugar).

After-History.—May 11th. The numb feeling is gradually extending up the right leg, which has now become weak and twitches occasionally. May 23rd. The patient was transferred to the medical side of the infirmary, under Professor Finlay. He cannot move either leg voluntarily. Both legs are often drawn up involuntarily, and he cannot straighten them. Sensation is impaired on both legs, especially the right. He feels a touch, but it appears quite different from a touch on the arms. He cannot definitely distinguish between heat and cold on the legs, especially the right. Subjectively, he has "pins and needles" in the legs. The plantar reflexes and knee-jerks are much exaggerated, especially on the left side. There is marked ankle clonus and knee clonus, especially left. The patient's condition got continuously worse. The spastic condition of the legs increased; the legs became markedly rigid, the knee-jerks tremendously exaggerated, and the ankle clonus and knee clonus very readily elicited, especially on the left side. Muscular spasms of the legs were frequent during the night. There was absolute paraplegia until August 28th, when a slight power of movement of the toes of the left foot was noted. The numb feeling in the legs spread up as far as the pelvis, and complete loss of sensation of all forms gradually developed on the legs as far up as the groins. On June 30th, it was noted that all the muscles of both legs reacted to both faradism and galvanism, and that sometimes the reaction was rather excessive, for example, in the adductors of the right thigh. From the end of June onwards, there was complete retention of urine, which necessitated continuous catheterisation. Only once was there incontinence of urine. The bowels remained very constipated. He continued to complain of pain in the lower region of the spine, but there was no note of pain or tenderness in the region of the kyphosis. The temperature remained rather subnormal, ranging usually between 97° and 98.6° F., with an occasional evening temperature of 99° to 100° F.

He returned to the care of Professor Ogston, who performed the operation of laminectomy on September 14th, 1896. The spines of the fifth, sixth, and seventh dorsal vertebræ were nipped off with bone pliers, and the corresponding neural arches were removed. The fifth and sixth neural arches, especially the sixth, were seen to press on the spinal cord and make a visible constriction; the sixth was grown to the dura mater by bone. It was not necessary to open the dura. No pus was found. The wound of operation healed by first intention.

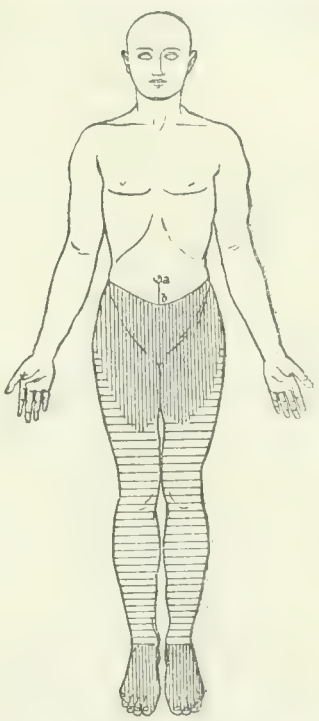
History Subsequent to Operation.—Improvement in the patient's condition was observed as early as two days after the operation, for on September 16th it was noted that some sensation was present in the legs, especially the right one. He felt manual pressure applied to either leg, but was not certain which limb had been handled. He could feel the stab of a pin applied to any part of either leg, and there was considerable recovery of the power of distinguishing heat and cold. On September 18th (that is, four days after the operation) he was able to empty his bladder partially without a catheter. On September 25th he completely emptied his bladder without the aid of a catheter, having been unable to do so for over sixteen weeks. Sensation had improved on the legs, and he had re-acquired some power of the coarser movements of the right leg, while the left was in the same condition as before operation.

Condition of the Nervous System Three Weeks after Operation.

I was asked by Professor Ogston to examine the patient. The following is a synopsis of the notes made on October 5th, 1896. The spine cannot be examined owing to the weakness remaining after the operation. Both legs are markedly rigid, especially the left. The right leg shows strong power of flexion and extension at the hip and knee, while dorsal flexion of the ankle is weak, and is effected mainly by the tibialis anticus and extensor longus hallucis, so that on an attempt to flex the ankle the sole of the foot looks inwards. The left leg shows movements at the hip and knee fairly strong, but weaker than on the right side; there is practically no power of dorsal flexion of the ankle, and very slight power of flexion and extension of the toes.

Sensation.—On the front of the trunk, at a level about 2 inches beneath the umbilicus, there is a fairly sharp line, separating the upper part of the abdomen where tactile sensation is perfect from the lower part where the sensation of touch is absent. On the legs, especially the left, the sensation of touch is very indefinite all over; it is very deficient (absent?) on the front and inner sides of the thighs, on the dorsum of both feet, and on the left sole. There is no defect of tactile sensation on the genital organs. Localisation of touch is markedly defective on the legs, a touch at one part being often referred to quite a distant region on the same or even the opposite leg. The sensation of pain seems normal on the legs, pain being felt as such everywhere; localisation is, however, slightly defective. The temperature sense is very defective on the legs; hot is often called cold, while cold as a rule is appreciated aright, but is sometimes called hot, especially about the feet. The muscular sense is also very defective; there is no appreciation of passive movement of the toes of either foot, and very little appreciation of movements at the ankles and knees.

Reflexes.—The knee-jerks are tremendously exaggerated, and both



Vertical lines denote marked defect (or absence) of tactile sensibility.
Horizontal lines denote defect of tactile sensibility. (*b* — 2 inches).

ankle clonus and rectus clonus are very readily obtained on either side. No cremasteric reflex can be elicited on either side. The plantar reflexes are much increased. No abdominal reflex can be obtained below the level of the umbilicus, while above that level the abdominal and epigastric reflexes are readily elicited on the right side, but are absent on the left side. There are no bladder troubles, but marked constipation is present. Nothing abnormal can be detected about the arms or in the region of the cranial nerves, except fine tremor of the lips and tongue, probably of alcoholic origin. The urine is acid and normal in other respects.

After-History.

October 7th.—There is some return of tactile sensation on the dorsum of both feet and on the sole of the left foot, and there is slight appreciation of passive movements of the toes of the left foot.

From this time till he left the infirmary on January 20th, 1897, there was a gradual falling off in the patient's condition. His legs regained no further power and became more and more rigid, with more frequent twitching and drawing up of the legs, which caused very severe pain over the abdomen and in the lumbar region. Practically no objective change in sensation was noted, as compared with the condition on October 5th and 7th. He complained greatly of pain in the spine, in the region of the lumbo-dorsal junction, where there was distinct tenderness on pressure, but no irregularity; while no tenderness could be elicited by pressure over the seat of operation. The pain in the spine would often shoot round the pelvis, especially on the left side, about the level of the iliac crest. There was marked fibrillary tremor of the abdominal muscles on both sides, as high up as the umbilicus. From October 21st onwards, he suffered from cystitis, and the catheter revealed a considerable quantity of strongly ammoniacal residual urine. This condition improved under treatment, but recurred again and again; and even when the urine became acid, there was a quantity of residual urine. About January 1st,

1897, he became affected mentally; he had delusions, and sometimes got very excitable and noisy, imagining that he was being drugged, etc. After leaving the infirmary on January 20th, 1897, his general condition remained the same, and his chief complaint was the difficulty of micturition, which required the almost constant use of a catheter. He came under the care of the medical officers of the Aberdeen Dispensary, and finally of the Parish Council, and died on August 19th, 1897, two days after the commencement of an attack of acute pleurisy.

From the examination of the patient on October 5th, 1896, the following conclusions were arrived at:—

A.—THE NATURE OF THE LESION.

The whole clinical course of the illness pointed to an extra-medullary lesion rather than to a primary myelitis or growth in the cord itself. The following points were in favour of a lesion causing compression of the cord from without:—(1) the feeling of constriction and pain round the abdomen for years before the onset of the paraplegia, these root symptoms being usually a late and not very prominent symptom in myelitis and growths within the cord; (2) the rather gradual onset of symptoms in the legs, beginning in one leg and spreading along it, and then similarly affecting the other leg; (3) the rapid recovery—up to a certain point—of sensation, motion, and vesical function after the operation of laminectomy.

As to the cause of the compression, there seemed little doubt that caries of the spine was the lesion. Although no very distinct tuberculous family history could be made out,[1] there were the following points in the personal history of the patient:—(1) Ten or eleven years before, he had been treated for weakness of the back, which, according to his own account, had been diagnosed as "spinal caries," and since that time he had the angular curvature of the spine at the mid-dorsal region; (2) eight years before, he had an abscess over the left trochanter major, probably tuberculous, the scar of which still remained at the time of examination. (3) Although he had suffered from root pains for many years, they had never reached the intensity so common in cases of growths in the vertebræ; further, although these pains disappeared in bed and appeared when he rose, they gradually wore off after he had walked a little. There was thus not the relation between movement and intensity of the pains so constantly seen in vertebral growths. The pains, too, were confined to a definite limited area in the lumbo-dorsal region of the cord, thus making the diagnosis of pachymeningitis improbable.

The following facts were rather against the diagnosis of caries:—(1) The first symptoms, namely, weakness of the back, appeared about the age of 40. Gowers,[2] however, has known caries of the spine commence at 50, and says it has been met with as late as 70. (2) The symptoms appeared first in one leg and then in the other. In caries of the spine, "both legs usually suffer together" (Gowers), but this rule is not invariable. Gowers[3] mentions a case, verified *post mortem*, in which the first symptom in the legs was "pins and needles" about the right knee; in three days the right leg became almost powerless; two weeks later, there was a similar sensation in the left knee, and, a week later still, in the left foot. During the next three weeks the left leg became powerless, so that at the end of six weeks from the onset both legs were motionless. This case has many points in common with the case of J. F., who first felt a sleepy sensation in the left foot, which gradually spread up the leg. One week later the left leg became weak; one week later still there was the same sleepy sensation of the right foot, and the weakness and numbness in the legs gradually increased, so that at the end of six weeks from the onset there was complete paraplegia and numbness of both legs up to the groins.

B.—THE SITE AND EXTENT OF THE LESION.

Granted that caries of the spine was the probable lesion, it was more difficult to decide on the site. The most natural conclusion was that the well-marked angular curvature at the mid-dorsal region marked the site, and this seemed to be confirmed by the condition found by Dr. Ogston on performing laminectomy there, namely, a visible constriction of the cord opposite the fifth and sixth dorsal neural arches.

Against this view, however, were these facts:—(1) The position of the long-continued pain in the lower part of the spine, about the lumbo-dorsal junction. (2) The position of the girdle pain, far below the level of the umbilicus; a lesion about the sixth dorsal vertebra would have caused a girdle pain distinctly above the umbilicus, probably nearer the xiphoid cartilage. (3) The position of the upper limit of anæsthesia, namely, about two inches beneath the umbilicus. This was too low to be explained by a lesion as high as the sixth dorsal vertebra. Many recorded cases might be quoted to prove this, but it will be sufficient to cite two Thorburn[4] records a case of fracture dislocation of the sixth dorsal vertebra, in which *post mortem* the cord was found completely divided opposite the sixth dorsal vertebra. There was complete anæsthesia on the trunk as high as the eighth rib. Again, Hale White[5] records a case of spinal caries, with backward projection of the seventh to the tenth dorsal spines, in which *post mortem* the cord was found softened and compressed opposite the seventh dorsal vertebra. The upper limit of loss of sensation on the trunk was well above the umbilicus.

Much attention has been devoted within recent years to the subject of the sensory distribution of the spinal segments and nerve roots, and the results obtained by workers, following entirely different lines, are wonderfully similar. Thus Thorburn, Starr, and others have studied the question from the clinical point of view, that is, they have carefully observed cases of injuries and disease of the cord and compared the areas of anæsthesia found in these cases with the *post-mortem* results. Head and Mackenzie, on the other hand, have studied the areas affected by herpes zoster and the areas of pain and cutaneous hyperæsthesia (or rather hyperalgesia) seen in disease of the various viscera. Head[6] has found that there is a definite limited number of these areas, and he assumes, from comparison with the results of gross organic lesions of the cord, that each of these areas represents the distribution of a particular segment of the cord. According to him, the tenth dorsal segment (that is, the segment of the cord from which the tenth dorsal roots spring) is connected with that zone of the body, the upper border of which passes from the first lumbar spine to the umbilicus, and the lower border from the fourth lumbar spine to a point about 2½ to 3 inches below the umbilicus in the middle line of the abdomen in front. Thorburn,[7] however, thinks it probable that the umbilicus lies "not at the junction of the ninth and tenth dorsal fields, but certainly no higher than the lowest part of the tenth," and he is inclined to place it, with "Quain," between the tenth and eleventh. The upper limit of anæsthesia in the case of J. F. seemed, therefore, to point to a lesion of the cord not higher at least than the level between the tenth and eleventh dorsal segments. This level was seen, on consulting the diagram framed by Gowers,[8] to correspond to the space between the bodies of the ninth and tenth dorsal vertebræ and to the tip of the ninth dorsal spine.

The conclusion arrived at, therefore, as to the upper limit of compression was that it did not implicate the spine higher than the body of the tenth dorsal vertebra, or the origin of the eleventh dorsal roots. The fact that, above the line of anæsthesia, the abdominal reflexes could not be elicited, especially on the left side, was taken to indicate secondary myelitis, which is so common in cases of compression of the cord.

[NOTE.—Professor Reid[9] has found, from examination of six spinal cords, that the level of origin of the spinal nerve roots relatively to the spines of the vertebræ varies considerably. By his kindness, I have recently had the opportunity of examining several of these cords, and I find that the site of a lesion, implicating the eleventh dorsal roots, and leaving the tenth intact, corresponds fairly constantly to the level of the middle or lower third of the ninth dorsal vertebra and to the interval between the eighth and ninth dorsal spines. Thus the level of origin of the tenth dorsal root, relatively to the bodies or spines of the vertebræ, may be rather higher than is depicted in the diagram of Gowers, but is still a long distance beneath the level of the sixth neural arch, where the operation showed constriction of the cord in the case of J. F.]

The probable lower limit of the lesion was determined from consideration of the lowest level to which the nerve roots (or the central functions of the cord) were damaged. The following facts seem to indicate a lesion implicating the second lumbar roots but not lower: (1) The cremasteric reflexes, effected by the first and second lumbar nerves, were quite absent. (2) The knee-jerks, effected by the second, third, and fourth lumbar nerves, were so excessive that it seemed unlikely that they could be due to the fourth lumbar nerves alone. (3) There was no sign of special wasting in the

muscles which receive their nerve supply, partially or wholly, from the third lumbar nerves (Ferrier and Yeo,[10] Paterson[11]). (4) Although the chart, showing the area of anæsthesia after partial relief of the compression by laminectomy, indicated affection of the third lumbar roots according to Thorburn,[1] the other facts mentioned above made one inclined to adopt the view of Head[6] and Starr,[12] according to whom the second lumbar roots would be the lowest involved.

The diagnosis, therefore, made during life was that the lesion, probably of the nature of caries of the spine, implicated the cord by pressure between the level of origin of the eleventh dorsal and second lumbar roots inclusive.

I am indebted to Dr. J. Scott Riddell for having had an opportunity of performing a very partial necropsy. The condition found was as follows:

Necropsy.

An incision was made over the spine, when a considerable quantity of pus escaped, coming apparently from the lower dorsal region of the spine. The spinal canal was opened upwards and downwards from the site of laminectomy. No irregularity of the spine was noted in the lower dorsal or upper lumbar region. The cord was removed through the whole lumbar region and the greater part of the dorsal region, and it was found that there was marked thickening of the dura mater along the whole length of cord removed. There was no pus within the dura. The bodies of certain vertebræ were in great part destroyed and replaced by old caseous nodules, which, being firmly adherent to the thickened dura, were removed along with the cord and were found to project through the dura, causing depressions in the cord opposite. The mass pressed on the anterior and lateral aspects of the cord as far back as, and including the origin of, the posterior roots, while the dura was very thick and firm over the posterior columns. The extent of cord compressed in this way included the part from above the origin of the eleventh dorsal roots to the level of the origin of the second lumbar roots. The cord showed a marked constriction between the origins of the tenth and eleventh dorsal roots. The lower two dorsal roots were much atrophied, and contrasted forcibly in point of size with the tenth dorsal root, which seemed normal. The nodular mass, when examined microscopically, was found to show beautiful old tubercles.

The probable course of events in this case is interesting. There seems little doubt that J. F. did suffer, many years before, from spinal caries about the region of the sixth dorsal vertebra. This caused the angular curvature, and, although the cord remained compressed as shown at the time of operation, any signs of paralysis that may have been present passed away. The disease at that site became quiescent, but another focus appeared lower down, causing the long-continued root pains, and eventually ending in complete paraplegia. The disease at that site did not cause any obvious irregularity of the spinous processes. The rapid improvement after the operation, performed by Dr. Ogston at the level of the sixth dorsal vertebra, was no doubt due to the fact that removal of pressure at any part of the cord would relieve compression on the cord at any and every other part.

The order of recovery of the conducting functions of the cord was in accordance with what is the general rule in cases of compression of the cord or spinal nerves, that is, sensation first and most, motor power last and least. The relative degree of affection of the various forms of sensation, as shown by the record (see diagram, p. 479) taken soon after the operation, was unusual. As a rule, in organic lesions of the cord or its roots, the loss to touch is less extensive and less definite than the loss to pain, while in J. F. there was a distinct area of anæsthesia (*v.* diagram) corresponding to the distribution of certain dorsal and lumbar roots, and the sensation of touch was markedly defective on the rest of the legs, whereas painful sensation was appreciated as such everywhere. The degree of affection of the sensations of pain and temperature was also unusually dissimilar. There could be no doubt as to the defect of the power of differentiating heat and cold at places where a painful sensation was acutely felt. It is difficult to say why the various forms of sensation should be affected in different degrees in cases of compression of the cord. Attempts have been made, without much success, to find an explanation in the degree of pressure exerted on the different parts of the cord. Thus it is supposed that pressure on the lateral parts of the cord would affect pain (and temperature) mainly, and pressure on the posterior columns would involve touch. If this were true, there should have been more affection of pain than of touch in the case of J. F., as the caseous mass pressed on the anterior and lateral aspects of the cord, while the posterior columns were intact (except for the thickened dura).

Inferences from individual cases are always uncertain, but any deduction that may be drawn from the case of J. F., with regard to the sensory distribution of the various spinal roots, would accord with the views of Head rather than of Thorburn. As the eleventh dorsal roots were undoubtedly much compressed, and the upper limit of anæsthesia was well below the umbilicus, the case would indicate that the area supplied by the eleventh dorsal root does not reach so high as the umbilicus, as Thorburn is inclined to believe. Again the area of anæsthesia embraced the region supplied by the third lumbar root according to Thorburn, whereas *post mortem* that root was seen to be free from pressure except that exerted by the thickened dura, which pressed quite as much on the fourth and fifth lumbar roots as on the third.

Note and References.

[1] Since these notes were made I have ascertained that there was a distinct tuberculous family history. [2] *Diseases of the Nervous System*, second edition, vol. i, p. 241. [3] *Op. cit.*, p. 248. [4] *A Contribution to the Surgery of the Spinal Cord*, 1889, p. 69. [5] *Brain*, vol. xvi, 1893, pp. 375-381. [6] *Brain*, vol. xvi, 1893, pp. 1-133. [7] *Brain*, vol. xvi, 1893, p. 368, and *Medical Annual*, 1896, pp. 97-101. [8] *Op. cit.*, p. 163. [9] *Journal of Anatomy and Physiology*, vol. xxiii, 1889, pp. 341-353. [10] *Brain*, vol. iv, 1882, p. 226. [11] *Journal of Anatomy and Physiology*, vol. xxviii, 1894, p. 183. [12] *American Journal of the Medical Sciences*, 1892.

REMARKS
ON
PYLORECTOMY,

WITH NOTES OF TWO CASES, AND A DESCRIPTION OF A NEW METHOD OF ATTACHING THE DIVIDED STOMACH TO THE CUT DUODENUM.

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In January, 1896, I operated on a patient for simple stricture due to cicatrical contraction of the pylorus. When the abdomen was opened the stomach and duodenum appeared to be united by a mere cord, and it was obvious that the ordinary operation of pyloroplasty would not meet the requirements of the case. The operation then performed suggested to me the modification of pylorectomy to be described; and finding that it could be satisfactorily done on corpses, and that its details were in accordance with what I believed should be principles in gastro-intestinal surgery, I described the proposed operation to surgical colleagues in the infirmary here six months before the opportunity of practising it presented itself. Before giving a report of the cases I deem it proper to relate certain points in connection with the operation. In the preparation of the patients, 5 grains of calomel, followed by small, frequently-repeated doses of a saline purgative two days before the operation, thoroughly cleared the gastro-intestinal tract. A rest in bed and a limited diet of equal parts of milk and barley water, with ℥ss of whisky and ℥ss of water half an hour before the operation, completed the general preparations. The stomach was not washed out in either. The abdominal wall was prepared in the usual way, by a thorough cleansing and disinfection for several hours with a towel wrung out of a 1 in 1,000 corrosive sublimate solution, and every detail of the operation was conducted with scrupulous antiseptic precautions.

The pylorus was then excised in both cases in the usual way.

The modification I have introduced refers to the method of connecting the remainder of the stomach to the cut duodenum, and will be best understood by a reference to the accompanying diagram (Fig. 3) made by Dr. W. G. Richardson. The opening into the stomach is, as would be expected (and as is shown in the diagram), larger than the opening into the duodenum made by cutting it transversely. In order to overcome the difficulty of uniting the two without the aid of complicated sutures an incision over 1 inch in length was made down the centre of the anterior wall of the already transversely divided duodenum. By spreading the longitudinal cut transversely the duodenal opening was so widened as to correspond approximately with the larger opening in the stomach. All that now remained was to connect the two by a satisfactory suture. Before describing the

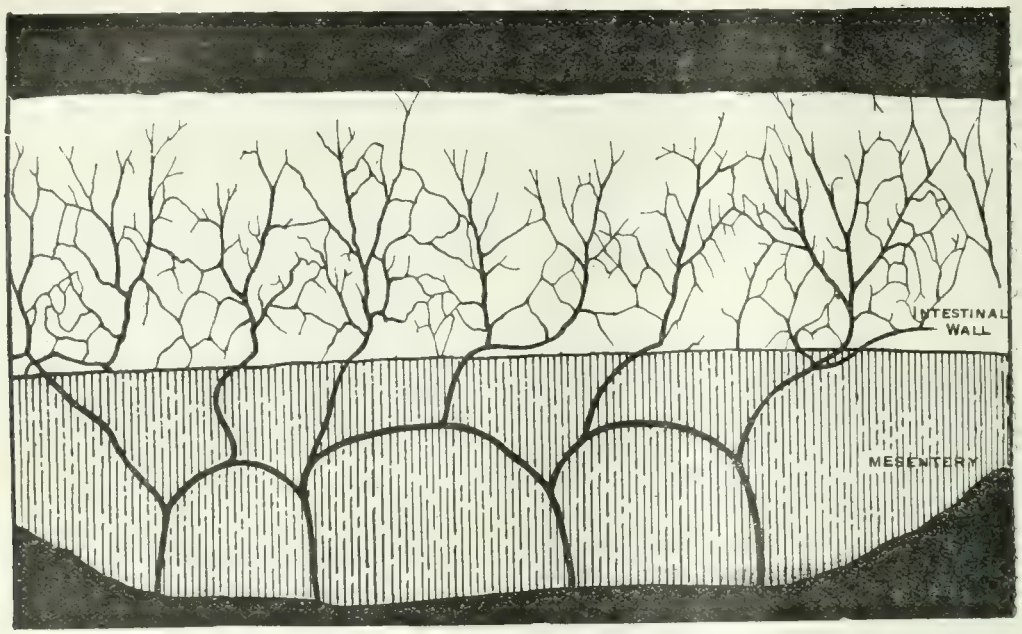


Fig. 1.—Portion of human small intestine injected.

form of suture employed I should mention that I regard the purely mechanical advantage of this modification which has been described, though important enough to lay some stress upon, yet as the least satisfactory reason for its adoption.

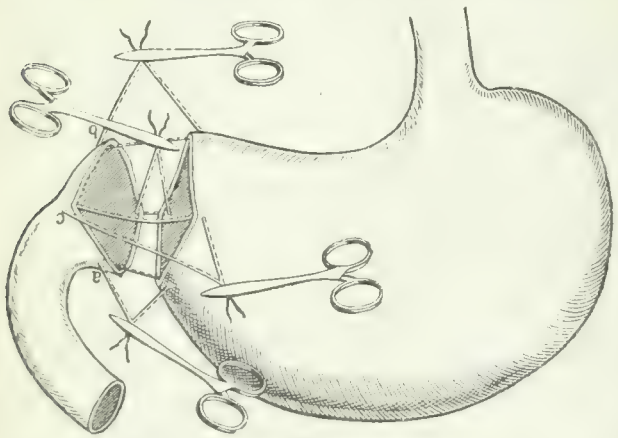


Fig. 3.

It appears to me that the consideration given by surgeons to stomach and intestinal wounds and operations has been too much limited to the purely mechanical problem of how to secure such close apposition as to make the juncture water tight. This is easy to do with an indefinite number of appliances or sutures on the operation table, but the majority of *post-mortem* examinations show that the death of the patient has arisen from septic peritonitis due to a leak somewhere in the junction line. The faulty union is not found near the mesenteric attachment, as is usually thought, but at or about the convexity of the gut. An examination of the vascular supply of the intestine suggests how this may be brought about, and by what form of operation its occurrence may be made less probable. Fig. 1 is an accurate drawing from a portion of injected human small intestine, prepared for me by Dr. Bolam, of the College of Medicine, Newcastle-on-Tyne. From the mesenteric border the larger vessels will be seen to take an almost directly transverse course over the side of the gut to reach its convexity. Close to their origin, and for some distance in the wall of the intestine, a free anastomosis exists between the larger trunks.

Further on this intercommunication gradually diminishes until the convexity is reached, when the vascular supply has become so limited that in certain places no visible vessels can be demonstrated. (Fig. 2, a drawing of the same portion of gut as Fig. 1. shows its convexity and illustrates this point.) A similar vascular supply is found throughout the small intestine. It follows that when a transversely-divided duodenum is attached to the stomach by sutures or any apparatus, a watertight juncture being effected, the circulation of the convexity of the gut, at least, is completely arrested, that union can only occur in parts beyond the suture line, and that at the convexity of the gut a certain amount of gangrene must result. The operation suggested so alters the direction of the blood vessels that instead of running transversely on the convexity, they take an oblique course towards the divided duodenal edges, and many of them will escape the strangulating effect of an interrupted suture. It also ensures a vascular supply at and in the neighbourhood of the angle *c* (Fig. 3), because its vessel of supply is not annihilated by a suture at the corresponding portion of the mesentery.

The difficulty of uniting the cut ends satisfactorily has developed a taste for plates, bobbins, buttons, and other mechanical devices. The only advantage (a most important one, however) which can reasonably be claimed for any of them is that by their use the operator is enabled to see and know more or less exactly what he is doing. This is not so easy as it may appear, and in using sutures alone without any systematic scheme it is difficult to avoid getting into confusion, and finishing the operation with the uncomfortable but definite knowledge that the result depends more upon luck than the surgery brought to bear upon it. If, however, the simple plan of inserting temporary sutures, suggested to me first by Mr. Caird, of Edinburgh, be followed (see Fig. 3, *a*, *b*, *c*) this difficulty is overcome, and the junction can be made as rapidly and more effectually with sutures alone as with any of the ingenious apparatus employed. The posterior wall of the opening which is to serve as the artificial pylorus is first made. A long catgut suture threaded in an ordinary needle is introduced through all the coats in the position of one of the outer three temporary sutures (see Fig. 3) used to show the exact relation of parts. This suture is securely tied, has its short end clamped in hæmostatic forceps, and takes the place of the temporary suture. The longer threaded end is used as a continuous stitch through all the coats of the

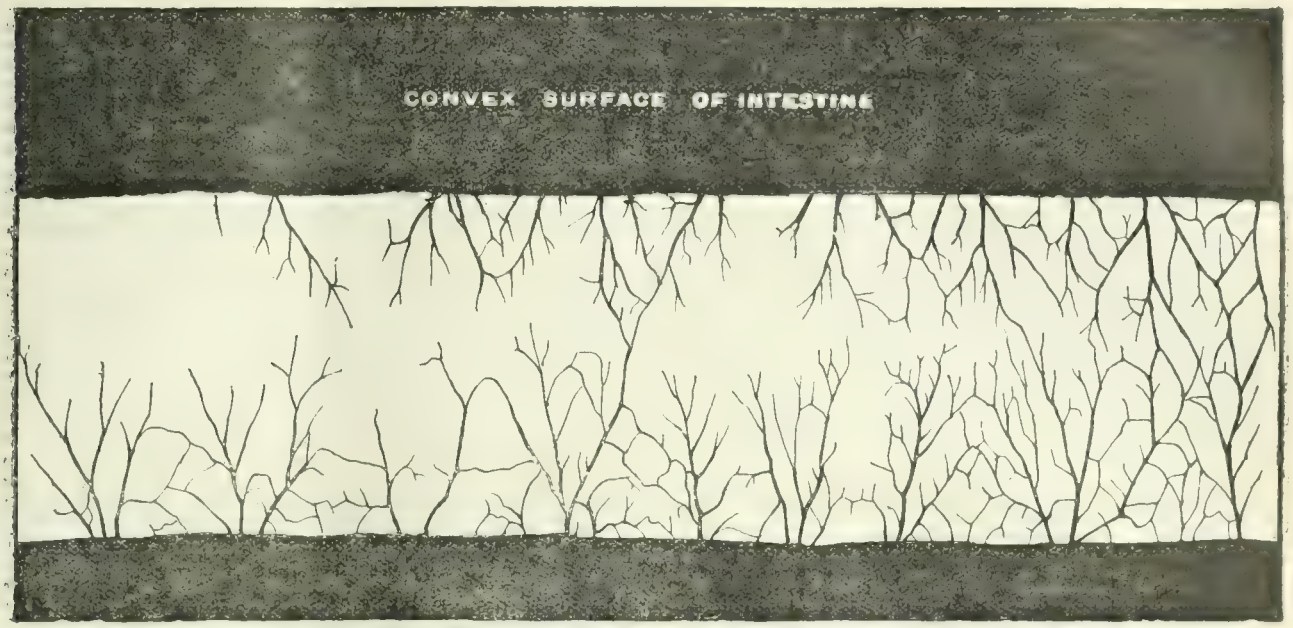


Fig. 2.—Injected small intestine (showing convexity).

stomach and duodenum, and brings their apposed surfaces into firm apposition. The middle temporary suture being reached it is withdrawn, and the continuous stitch travels on to the further temporary one, which it replaces.

The posterior wall is now formed by a continuous catgut suture passed from within outwards through all the coats, and bringing the peritoneal surfaces of stomach and duodenum into firm apposition. The anterior wall is next made in a similar way by a continuous catgut stitch through all the coats, but here the suture cannot be passed from within, and of course does not bring the peritoneal coats into apposition as it does posteriorly. The object of this continuous catgut stitch is to secure a temporary watertight junction between the two viscera. To secure broad permanent adhesion between stomach and duodenum, a ring of fine silk interrupted sutures through peritoneal and muscular coats only, is placed all round the temporary junction effected, and completely buries it.[1] For the purpose of producing permanent adhesions the use of a continuous suture, which necessarily interferes with a proper blood supply to the parts enclosed by it, is to be condemned. Experience has taught me that the combination I have described and introduced several years ago may be relied upon to secure satisfactory union.

Case I.—J. G., aged 48, was admitted to the Royal Infirmary, Newcastle-on-Tyne, on July 1st, complaining of pain in the stomach, and vomiting. About ten months ago he began to feel pain in the stomach region, which was not aggravated, but if anything relieved, by taking food. It was worse at night, especially when he lay on either side. Eight months ago he began to vomit, and brought up such large quantities "he did not know where it all came from." The vomited matter frothed a little, and was occasionally brown. Latterly the pain had become so severe that sometimes he was obliged to get up and walk about at night groaning. His bowels were much constipated, and required strong medicine to move them. He lost over 2 st. in weight after his illness commenced. Twenty years ago he had an attack of stomach pain, and for three days vomited a quantity of black stuff. Except for this he never had any illness. The patient, a fair-complexioned man, looked thin, but not anæmic. His pulse was 80, and small, and temperature subnormal. Examination of the abdomen by inspection, palpation, percussion, and auscultation of the stomach showed considerable dilatation of the stomach. A fair-sized tumour, difficult to define, could be felt midway between the umbilicus and ensiform cartilage in the middle line. The diagnosis of carcinoma of pylorus with stricture and dilated stomach was made.

Operation, August 3rd, 1897; anæsthetic, chloroform.—The abdomen was opened by an incision extending from below the ensiform cartilage to above the umbilicus, and the pylorus involved in a firm tumour drawn out. No doubt was felt as to the malignant character of the swelling, and the operation of pylorectomy was performed as described, the vertical slit in the duodenum being about 1½ inch long. (When slit up the induration and tumour were found to be inflammatory, and surrounding a typical circular ulcer the size of a shilling on the posterior wall of the stomach and involving the pylorus.) The abdominal wall was closed with silk sutures, and the patient was sent to bed in good condition.

After-Progress.—For twelve hours nothing was given by the mouth, and rectal enemata of milk and beef tea were administered every four hours. During the next twelve hours he had frequent sips of hot water. On the afternoon of the second day small quantities of milk and barley water were allowed and gradually increased. For the first eight days he progressed without a hitch, the highest temperature recorded being 100° on the evening of the fourth day, and afterwards normal, his pulse continuing between 70 and 80 throughout. By this time he was taking food freely—fish, milk pudding, etc.—and enjoyed everything, as his stomach trouble had entirely disappeared. Then he was troubled with a slight cough. On the tenth day the dressings were removed for the first time and the stitches taken out. The wound had entirely healed by first intention. I did not see him again till August 28th (fourteen days later) I then found that his cough had gradually increased, and he now had free expectoration of muco-purulent matter, with a temperature highly suggestive of pus somewhere. His general condition was good; he could eat, and enjoyed anything, and nothing wrong about the scar or in the abdomen was discoverable. There were a few bronchial *râles* in his chest, and at his right base a limited dull area, with distant tubular breathing. The following day (August 29th) I inserted a hypodermic syringe into the dull area, and drew out a little pus. The diagnosis made was subdiaphragmatic abscess, but this was not confirmed by my medical colleagues who were called in consultation. On August 30th (a month after pylorectomy) I resected portions of the eighth and ninth ribs in the posterior axillary line, and on dividing the costal pleura found the lung solid from pneumonia (I did not know whether it was lung or liver for some days after) adherent to the chest wall. A hypodermic syringe again found pus, and an opening was made at the spot where this was detected. Not more than 5j in all escaped; but, as further search failed to reveal any other collection, a large drainage tube was inserted. The expectoration continued in spite of a free discharge from the tube, but his cough was easier, and his temperature steadily fell. On September 8th (nine days later), as there had been no discharge from the tube for some days, and his morning and evening temperature were normal, the tube was removed. On September 10th (two days later) his temperature began to rise again, and the cough was more troublesome. On September 15th I made another attempt to find pus, but failed, and by this time the bulk of lung appeared to be solid from pneumonia. On September 21st he died, seven weeks after having pylorectomy performed. No *post-mortem* examination could be obtained.

Case II.—J. H., aged 40, was admitted to the Royal Infirmary under my care on October 18th, 1897. She complained of pain in her stomach and vomiting. Five months ago she suffered from an attack of abdominal pain and diarrhœa, which lasted for a day. From this time she had been troubled with pain after food. About two months ago vomiting commenced. The vomited matter was frothy and brown, had an offensive smell, and amounted to more than she took. The sickness was worst at night, and the usual programme was as follows: Either lying on her right side or taking food or drink brought on a "working" in the stomach, which at times would "gather up into a lump," then the pain commenced and got worse, till she vomited, when it was relieved. Her bowels were much constipated, and required enemata to move them. Latterly she had been confined to bed from weakness, and could only take a little milk. After her illness commenced she became very quickly emaciated. She had had no illness of any note hitherto, and no trouble with her stomach previously. The patient was very thin and feeble, foul breath, coated tongue, pulse 84, temperature normal. Red patches on conjunctiva with

slight muco-purulent discharge from sleeping with her eyes open (an ominous sign). On examination of the abdomen the stomach could be seen contracting at intervals, forming a large swelling, and evidently much dilated. At the umbilicus a rounded swelling about the size of a tangerine orange could be seen through the thin abdominal wall, ascending and descending with respiration. This mass on palpation was hard, nodular, freely movable in every direction and not tender. The diagnosis made was malignant growth causing stricture of pylorus.

Operation, October 21st, 1897.—On opening the abdomen above the umbilicus the disease was found to be limited to the pylorus, and the operation of pylorectomy was performed as described. The patient stood the operation well, and appeared to be no worse at the finish than when it was commenced

After-Progress.—Shortly after being put to bed she became much collapsed, lying with her mouth and eyes open, face and breath cold, shallow breathing, and pulse imperceptible at the wrist. Three pints of normal saline injected into the median basilic vein produced a marked improvement, and from this time her recovery was straightforward, the wound being healed when the dressing was removed on the twelfth day. Three weeks after the operation the patient was shown at the Northumberland and Durham Medical Society meeting. She was then able to eat and enjoy ordinary food, and had so much improved in condition that she was allowed to go home the following day.

February 8th 1898. This patient recently visited the infirmary to report. She can eat anything; has gained 1½ stone in weight, and feels quite well.

Microscopically the growth was scirrhous carcinoma.

In both cases there was a well marked pyloric obstruction to be seen in the specimens excised.

NOTE.

[1] The needles used for this purpose are specially made for me by Messrs. Down Brothers, of London, and are the only good intestinal needles I know.

ON PALPATION AND AUSCULTATORY PERCUSSION.

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IN the paper which I published last year in the *Practitioner* (April), I drew attention to palpation as a method of physical examination of the chest and abdomen. On first reading or hearing, it seems impossible that the method should perform all that I claimed for it, and I find that medical men are inclined to discredit the matter until the facts are demonstrated to them, and until they have actually tried the method and found how easy it is of application. Further experience has confirmed my opinion that palpation is for most purposes much more delicate than percussion, and, after a little practice, much more free from fallacies. It must, however, be understood that it does not altogether take the place of percussion. Each will tell something that the other does not, but I maintain that palpation is a very valuable method of examination, and in no way painful to the patient, while percussion, as frequently practised, often is.

If an experienced operator will analyse his thoughts as he examines a patient, he will find that the more he percusses chests, the more he unconsciously relies upon the resistance which is felt by his percussing and percussed finger respectively, and the less he relies upon the sound elicited by the percussion, though the latter is, of course, very valuable. Now if this be so, why should we not estimate the resistance without percussion by simple palpation? In the paper alluded to I gave tracings from the chest showing the outlines of the heart, liver, and spleen, determined by both percussion and palpation, which speak for themselves of the accuracy of palpation; indeed, a small error of percussion was corrected by palpation.

To practise the method it is well at first to press lightly and alternately with the first and second fingers of the right hand upon the part desired, using just a little more pressure than one would employ in testing the eyeball for glaucoma. If this be done there will be found in various parts of the chest wall, ignoring the bony and cartilaginous prominences, many spots in which the resistances vary. In trying the method it is important to throw one's knowledge of anatomy on one side, and approach the matter with a quite open mind. After a little practice, too, it is unnecessary to use the alternate pressure of the fingers described, and it suffices to pass the fingers, pressing lightly, over the chest wall. Try in the former way the first and fourth interspaces of the left side in the parasternal line (one inch and a-half outside the edge of the sternum), and the fourth space will be found to be the harder, from the presence of the heart beneath it. Again, compare the second and the seventh spaces in the right nipple line, and the liver resistance will be felt in the latter space. One of my colleagues objected that the differences in width of the intercostal spaces might account for this, but the error can be avoided in a simple manner. Press with the ball of the thumb on the upper part of the thorax on the right side, and again on the part below the nipple, and the difference of resistance will be obvious. So far we have only tested the soft parts, but the cartilages show similar signs, as will be perceived when the resistances of the second and the seventh cartilages on the right side are compared.

It is astonishing, but nevertheless true, that differences of resistance can be felt through solid bone like the sternum. Test the resistances of the sternum opposite the first and the fourth intercostal spaces, and the resistance of the heart will be felt in the lower spot, though this requires a little care to detect. A case illustrating the value of this sign occurred to me lately. A man came to my out-patient room complaining of dyspeptic symptoms, but on hearing his voice I at once told the students that he probably had an aneurysm. On that day there happened to be no convenience at hand for examining the larynx, but on examining the chest carefully I could find no trace of aneurysm. On the man's next visit, wishing to demonstrate the method of palpation, I chose him as a subject, thinking that he had a normal chest, but I found that the upper part of the sternum was more, instead of less, resistant than the lower part, and further examination by other methods showed that he really had an aneurysm of the aorta pressing on the recurrent laryngeal nerve and paralysing the left vocal cord, the signs of which had not been developed at his former visit.

Practised as described, palpation can define delicately and more accurately than percussion the areas of the heart, liver, and spleen. We know the dulness of the normal spleen which percussion ought to define. In the mid-axillary line it should extend from the ninth to the eleventh rib; below it should follow the line of the eleventh rib; and anteriorly it should not pass beyond a line representing the junction of the ribs with their cartilages, which is approximately shown by a line drawn from the left sterno-clavicular articulation to the tip of the eleventh rib on the left side. But the results of such percussion are notoriously uncertain, because of the overlapping of the stomach and large intestine. By palpation, however, the resistance can be felt in spite of these. This I have found to be particularly valuable in the early diagnosis of enteric fever, which can be simulated so closely by, among other disorders, intestinal influenza. The addition of enlargement of the spleen to the other symptoms is important. Again, the kidneys can only be defined by the usual methods of percussion, with difficulty and uncertainty, while by palpation the upper border of the left kidney can be felt at the back, a little inside the scapular line, at the level of the eleventh rib and its lower border about 2 or 2½ inches lower. The upper part of the right kidney lies in front of the liver, and therefore cannot be felt from behind, but its lower border can be defined to lie somewhat lower than that of the left kidney. It is a manifest advantage of palpation that it can accurately show the area of the heart, for percussion is here uncertain, and in advanced cases of emphysema gives no reliable results. In the routine examination of the chest it has often occurred to me to find small areas of resistance which have yielded no other physical signs, but the patient has given a history of pleurisy or pneumonia in these spots. Probably the undue resistance was caused by a little thickening of the pleura or of the lung tissue, too small to be otherwise detected. I have tested the method in every possible way, including experiments on the dead body, and strongly recommend its trial by physicians.

Auscultatory percussion is not at all a new method, as has been supposed, for it was used by Laennec and Piorry. It was afterwards revived by Camman and Clark, and is mentioned by Gerhardt, Weil, and Walshe in their text-books. But it has not received as much attention as it deserves, for it is a method of physical examination which is capable of value, if only it be used with a proper knowledge of its *rationale*. At the present time it is in danger of falling into disrepute because of having been mistakenly employed to determine the size of the heart, in connection with the Nauheim method of treatment. Let me say at once, then,

that it cannot give the slightest clue to the size of the heart, as will be apparent when the conditions of its mechanism are understood. Place two books on the table with their edges touching, and listening with the stethoscope over one, tap with a finger over the other: a dull knock is heard. Tapping over the farther book, and gradually approaching the nearer one, the same dull knock is heard until the nearer book is percussed, when a sharp click reaches the ear. This gives the *rationale* of the method, and on this point I think all other observers have been mistaken. It is not an ordinary percussion note which is heard, but the knock of direct contact, and the quality of the percussion sound is of no importance. In applying the method to physical examination, the stethoscope is to be placed over a part of an organ in direct contact with the body wall, the position of which is known, and percussion is applied over some distant part, gradually approaching the stethoscope, until the sharp click is heard. Then one knows that the stethoscope and the percussing finger are over the same organ, and by percussing in different directions, the outline of the organ over which the stethoscope is placed is defined.

But there are certain limitations to this conclusion, and overlooking these has led to the errors to which I have alluded. Suppose that it be desired to define the outline of the stomach—say in a case of gastric dilatation. If the whole of the stomach be in contact with the abdominal wall, the defined outline will be correct. But if the transverse colon lie over the stomach, then the outline will be that of the line of junction of the colon with the stomach, and the portion of stomach which lies under the colon will be overlooked. This is the error which is made in regard to the heart, for if the stethoscope be placed over the small exposed portion of the heart, and percussion be practised towards this spot, no change of sound will be heard until the percussing finger reaches again the exposed portion of the heart, that portion of the heart which lies under the lung giving no response. We define only the line of contact of exposed heart and neighbouring lung, or what is called the superficial cardiac dulness, which has as its only value the determination of a small amount of emphysema. But, returning to the examination of the abdomen, the method will define the exact outline of distended large intestine, a matter which may be of importance to the surgeon before operating for intestinal obstruction. The physician can by this method define the outlines of the various lobes of the lungs and the direction of their separating fissures. This is of great importance in deciding the locality and the spread of a phthisical lesion. A tuberculous lesion beginning in the middle lobe of the right lung is generally much more serious than one in other parts, and the spread of phthisis to the middle lobe indicates a late stage of the disease, whatever may be the condition of the lesion in other parts. A common method for the spreading of tuberculosis in the lung is by insufflation of sputum from one upper lobe into the upper bronchi of the opposite lower lobe and the localisation of the results of the latter accident guides the prognosis. Incipient phthisis of the apex of the lung can only be diagnosed with certainty by combining the results of all methods of examination, and slight shrinking of the apex is an important sign. This can be determined at the back of the chest by comparing the heights of the two apices. By percussion this is possible, but only to a highly-trained observer with a very delicate ear, while by auscultatory percussion it is easy to anyone. By the same method the upper line of a pleural effusion is determined without difficulty, just as by palpation as described above. For these reasons auscultatory percussion should not be allowed to pass into disuse.

It is stated that the produce of chestnuts in France amounts to 300,000 tons annually. The chestnut is a valuable food, containing as it does a large amount of fat, and nearly as much albuminoids as cereals, but it is much neglected in this country.

Experiments made by M. Fonveille in Paris appear to indicate that under all conditions of weather pneumatic tyres on a macadamised road give traction results never less than 10 per cent., and sometimes as much as 35 per cent., better than iron tyres.

THE TREATMENT OF SYPHILIS IN THE ARMY BY INTRAMUSCULAR INJECTIONS OF MERCURY.

By Surgeon-Major F. J. LAMBKIN, A.M.S.,

Success of the Method in India.

The Army Medical Report for the year 1891 contained a paper by me advocating the treatment of syphilis in the army by intramuscular injections of mercury, and expressing a hope that the treatment be given a trial by army medical officers. This trial has been given to it, more especially in India, with favourable results. In the last two Army Medical Reports the Surgeon-General with Her Majesty's Forces says that the treatment has been generally successful in that country, not only in the actual treatment of the disease itself, but also in lessening the admissions into hospital for syphilis—that is to say, the admission-rate, high as it was, would have been still higher but for the treatment of the disease by the intramuscular method.

The chief advantages which I claimed in the paper referred to were:

1. That by the intramuscular method the soldier can be treated whilst out of hospital at his duty for that length of time during which it is absolutely necessary he should be with any hope of curing the disease. This is nearly impossible with other modes of giving mercury.

2. That the treatment is absolutely in the surgeon's own hands, and he knows for a certainty whether the patient gets his treatment or not.

3. That mercury given hypodermically does not produce diarrhœa and indigestion, which it so often does when given internally.

4. By this mode of treating syphilis the State becomes a distinct gainer, in that the time actually spent in hospital by the syphilitic soldier is much lessened, whilst the chances of his readmission for the same is reduced to a minimum.

Results.

As far as my own practice is concerned, during the six years which have elapsed since the publication of the above paper, the intramuscular method has given me the very best results, in not only getting rid of the primary symptoms in a wonderfully short time, but also in preventing further outbreaks of the disease, and in some cases, when I was able to observe for a lengthened period, probably curing the patient completely.

The soldier, on first getting syphilis, is kept under treatment in hospital only as long as any of the more active primary or secondary signs of the disease exist; when these disappear he is discharged to his duty, and ordered to attend hospital on one day a week for an injection. In the army there is no difficulty in seeing that the men attend regularly, and they are taken away from their duty for not more than a few minutes a week.

The Preparation to be Used.

The preparation of mercury which I recommended for injection was as follows: Hydrarg. 3j; lanolin. pur. 3ij; ol. carbol. (2 per cent.) 3j. Maximum dose 10 m. for an injection. At first I used a solution of perchloride (gr. ½ to 20 m.), as also of sal alembroth, but was obliged to give them up, principally on account of the pain which followed at the site of injection, and also because in one case a large abscess formed after an injection of the perchloride solution. To within the last six months I continued to use nothing but the mercurial cream above described, and with it I have given over 6,000 injections, not one of which has been followed by abscess. In some slight induration remained at the site of injection for a few days; the operation itself was practically painless, and only in a small number did any pain occur afterwards. I can truly say that not one soldier who has been injected by me has been incapacitated (through the injection or its results) from doing his duty. I have always been sensible of the fact that the mercurial cream possesses very great drawbacks, for it requires a certain amount of care in compounding and dexterity in injecting. In cold weather it becomes semi-solid, whilst in hot the reverse occurs, so

that the metal is no longer suspended. These defects can of course be remedied. I have used the preparation in mid-winter in England and in the plains of Jamaica with the greatest success, but at the same time a certain amount of trouble is required, which is sure to militate against the preparation being generally used.

While serving in Jamaica I tried a solution of sozoiodol of mercury. It was supplied to me in tablets, but I did not meet with the same success as when using the mercurial cream. Since coming home, and during the last six months, I have given the sozoiodol of mercury a further trial, and have used the following solution: Sodii iodidi, gr. 10; hydrarg. sozoiodol, gr. 5; aquæ distillate, 200 ♏; 10 to 15 ♏ as an injection. This solution is made up in the hospital dispensary, and I have met with much more success than when I used the tablets. I find that (1) at the time of, and for some time after, the injection more pain is caused by the sozoiodol solution; but this soon passes away, leaving no ill result. (2) It does not seem to me to have quite so rapid an effect on the disease as the cream; still, bearing in mind that it possesses none of the disadvantages of the latter, I have no hesitation in recommending it for general use in the army.

General Treatment.

Whatever solution of mercury is used, the following has been my mode of carrying out the treatment: When in hospital, patients undergoing the treatment are kept on a liberal diet and generally allowed a bottle of stout or beer a day. They are allowed up and advised to be as much as possible in the open air, and also to wash their teeth after each meal. Should there be any signs of the gums becoming spongy, they are given a strong mouth wash of alum and acetate of lead to use frequently.

Patients in hospital usually receive one injection weekly of 10 ♏. of either of the above solutions, but there can be no definite rule as to the number or amount of the injections, and the surgeon must use his own judgment. One of the great advantages of giving mercury hypodermically is that we can gauge the amount given in that way far better than when administered by any of the other methods, so that the number of injections and amount given ought to be varied to suit circumstances.

Method of Injection.

The site of injection is almost invariably the gluteal region. The needle is dipped in a 1 in 20 solution of carbolic acid, and is then pushed with a rotatory motion into the muscle as far as it will go. The syringe which I use is made of vulcanite. The one originally supplied to me by Messrs. Krohne and Sesemann, of London, in 1890, I still use, and it is as good as ever. The needles are about 1 inch in length; I have used longer, but found no advantage in so doing. Platino-iridium needles penetrate better, and do not bend or rust. One accident liable to happen to these needles is that they very often split at the side, and care must be taken to examine them.

Cases Treated.

The cases of syphilis, numbering some hundreds, which have been treated by me by the intramuscular injections of mercury have represented the disease in every form, both primary and secondary: the former from the hard papule without any abrasion to the phagedænic sore rapidly destroying tissue; the latter from the secondary effects of syphilis, as represented by general glandular enlargements with cachexia accompanied by one of the milder rashes, to cases covered with rupial sores (these also destroying tissue), and others presenting symptoms of grave internal lesions.

Although I have before me the notes of all the above cases with the exception of two, I do not intend alluding to them in this paper further than to remark that the intramuscular treatment was a marked success all round, being just as successful among the negro soldiers as with the white.

The majority of these cases I was able to observe thoroughly. Most of them were kept under treatment for from five to six months, and others for much longer. They all, without exception, derived the greatest benefit from it. The average number of days in hospital was twenty days. The average time under treatment, but doing duty, was five months. Some of these cases I saw two years later, after all treatment had been suspended; they had had no return of the disease, but were in the best of health, and all glandular enlargements had disappeared. It is, of course, impossible to be certain, but I truly believe that these men were cured of syphilis.

I will mention two of the above cases:

Private P. was a patient in hospital in Newcastle, Jamaica, suffering from secondary syphilis. He was in a fearful state. There was a phagedænic sore on the penis, two-thirds of the glans of which it had eaten away: he was covered with rupial ulcers from head to foot, totally confined to bed, cachectic, and so emaciated that he was a mere skeleton. Every known treatment had been tried, and mercury given in every way except by the intramuscular method, but the patient went from bad to worse, until his condition was considered to be most precarious. On October 4th, 1893, by order of the senior medical officer, the patient was handed over to me for treatment, and on that day I have him as a first injection 10 ♏. of the mercurial cream. As this case has already been fully reported, it will suffice here to state, that from the above date the patient began to improve in a marvellous manner, and that he, who was in a moribund condition when handed over to me was, five weeks later, having had six injections, out and about. Subsequently he was kept under treatment for months, and eventually went to the Reserve apparently quite restored in health.

I would here mention that from this and other cases which I have had I have learnt the important fact that mercury can be given safely and with the greatest success in cases of syphilis accompanied by phagedæna. This is contrary to the teachings of the late Dr. Carmichael, of Dublin, who emphatically condemned it in such cases. Personally, I have seen cases like this go from bad to worse when given mercury internally.

Another case which seems to me to be of particular interest is the following: At Jamaica, Corporal B. complained of feeling languid, having headaches, losing flesh, and being quite unable to continue at his duty. He said he had been ailing ever since his arrival in the West Indies early in 1894. He looked very anæmic and debilitated. Thinking his state of health was simply the result of climatic changes, I ordered him tonics, etc. He did not improve, but in fact got, if anything, worse. On closer examination I found inguinal and cervical glandular enlargements, and learnt that in 1892 he had had syphilis—a sore on the penis—followed by a slight sore throat and a roseolar rash. He had been treated at the time in hospital for a month, and was then discharged to duty. Since then he had had no further treatment, as he did not report sick, although suffering now and then from sore throat and ulcers in the mouth, which were probably specific. On obtaining this information I concluded that his present debilitated condition was due to the syphilitic poison. All internal remedies were stopped, and injections of mercury given. From the first injection he began to look better, and one month later when he had had five injections he had gained 12 lbs. in weight, and looked a different man. He continued to attend to receive an injection once a week for five months; at the end of this time he was apparently quite well. A year after I saw this man, and he had had no return of the disease, but was in the best of health.

This case is especially interesting, and an illustration of what happens with the early discontinuance of specific treatment. The syphilitic patient goes into hospital, is there treated until all active signs of the disease have passed away; there may have been an indurated chancre and one of the milder rashes; these vanish in perhaps a month's time; then he is discharged, and all treatment, of course, stopped. Should the patient be of robust physique, temperate in his habits, and the general surroundings and climate healthy, the disease may not trouble him again during his life. If, on the contrary, the physique be not of the very best, and he proceed to the tropics, during the first hot weather his general health falls below par, then the disease lays hold of him. This is what happened in the case just related. One cannot help thinking how many similar cases go undetected, until the disease declares itself, either by some fearful external ravages, or by still worse internal lesions. Treatment is then too late, and the man is either invalided out of the service or dies.

The Length of the Treatment Required.

The above state of affairs will go on as long as the older methods of treating syphilis remain. We must recognise the fact that with any hope of curing syphilis (and that it can be cured is now, I think, an accepted fact), treatment must be continued for months after all signs of the disease have disappeared.

Now, in the case of the soldier, is it to be expected that he be kept in hospital over all this long period? And is it possible to treat him whilst out of hospital by any of the older methods? I maintain that it is not; still to bring about his cure this is what is absolutely necessary.

The introduction of the intramuscular mode of giving mercury gets over this difficulty, for by it the soldier can be treated just as well out of hospital as in, and for as long a period as one wishes, with absolutely no trouble to himself, the only loss to the service being that he is taken away

from his duty for half an hour each week. Who would suggest the treatment of the soldier whilst at his duty by one of the other methods—say the internal? Is there any possibility that it would be carried out regularly and systematically? In answer to this I would merely remark that it is hard enough to carry it out among the better-educated classes; how much harder would it be among soldiers?

I think the best indication as to continuing or interrupting the injections is the patient's weight. He ought to be weighed regularly, and if he gains weight or if it remains stationary and he appears to improve otherwise, continue the injections; if he does not appear to improve, and weight be lost, then the treatment ought to be interrupted for, say, a month, and then recommenced, when it will be found that weight will go up. I think that in the majority of cases, with interruptions, treatment ought if possible to extend over a period of from six to eight months.

The efforts of the medical profession to sustain measures to prevent the spread of the disease have long since been frustrated, and now that the Contagious Diseases Act has apparently been finally done away with and full sway given to syphilis to work its worst amongst our soldiers, its treatment becomes of more moment than ever. In the intramuscular method I believe we are in possession of a plan of treatment which increases our chances tenfold of not only alleviating but of curing the syphilitic soldier and rendering him fit to meet the many hardships of tropical service.

Finally, in the essay published in the Army Medical Report, 1891, I expressed a hope that medical officers would give the intramuscular treatment a trial. This they have done, at least in India, with most favourable results. Let me in this paper tell them that my reason for advocating so strongly this mode of treatment is not so much because mercury, given in this manner, is more beneficial in the treatment of syphilis than when administered by other methods (personally I think it is far superior) but that it is actually the only reasonable method by which the syphilitic soldier can be kept under treatment over that period which we know to be necessary to ensure his cure; and I would ask them, whatever solutions of mercury they prefer to use, to give this method a fair trial, and they will not be disappointed with their results. Moreover, I feel certain that, if the treatment becomes general, it will not be long before the admissions, invaliding, and death-rates of the army show a marked decrease.

OPERATION UPON THE GASSERIAN GANGLION BY THE HARTLEY-KRAUSE METHOD FOR FACIAL NEURALGIA: THREE YEARS AFTER.

By J. LYNN THOMAS, F.R.C.S.,
Assistant Surgeon to the Cardiff Infirmary.

History.

Mrs. M., aged 61, was referred to me by Dr. J. D. Williams for advice in November, 1894, and after careful consideration we advised an intracranial operation upon the nerves affected. She was taken ill quite suddenly in 1887, with tic douloureux of the right supraorbital and infraorbital nerves; this attack lasted about five weeks, and one of her teeth was extracted. Two years later another violent attack came on suddenly, and attacked the infraorbital and inferior dental nerves, the supraorbital nerve escaping this time; she had six teeth extracted with no relief to her pain, and ever since she has not passed one day without a twinge of pain. The stabbing pain woke her up when sleeping at night or by day, occasionally it was so intense that she became delirious; the nerves affected were the right infraorbital, inferior dental, and the auriculo-temporal. She had three tender spots: the points of exit from their canals of the infraorbital and inferior dental nerves, and one near the angle of the mouth on the upper lip.

She had tried many drugs, the constant current battery, and change of air, with no relief. During the last twelve months life had been a misery, and her few hours of ease had been spent in dreading the onset of another attack; she had only drunk liquids, and these only on the left side of her mouth; she could only open her mouth a short distance without bringing on a "terrible twinge" along the course of the inferior dental nerve. On this account she lived on liquids alone, and had lost a great deal of flesh. A slight draught of air, the sudden movement of her body or the slamming of a door brought on an attack along the course of the infraorbital, inferior dental, and auriculo-temporal nerves. The right half of her mouth was swollen, and the red portion of the lips dry and encrusted, owing to her fear of moistening them; the swollen condition was possibly due to trophic or vasomotor changes, but the volitional immobility of the whole right side of the face might perhaps have contributed to the existence of this condition.

She had not combed the right side of her head for a long time owing to tenderness and the fear of exciting a sensory spasm. There was almost complete analgesia over the distribution areas of the second and third divisions of the fifth nerve; sense of gentle touch was unimpaired, but hard touch was described as tenderness; sense of heat was less acute than on the left side; the condition of the tongue could not be tested for obvious reasons. She had had ten children, and had always led an active life. Her existence was one of utter misery, and she said her only hope of relief from pain was death.

I advised under the circumstances an intracranial operation in preference to multiple external operations, because I considered that the disfigurement would be much less by the first method, and the risk to life about the same in both; whilst the time required for, say, a Carnochan's operation and that for exposure of the Gasserian ganglion leaves but little room for choice.

Operation.

On December 17th, 1894, I exposed the middle fossa of the base of the skull by the Hartley-Krause method, and at once divided the superior maxillary nerve with ease, and then pushed the end out of sight into the foramen rotundum, its proximal end was eventually torn away from the partially divided Gasserian ganglion. I divided the Gasserian ganglion

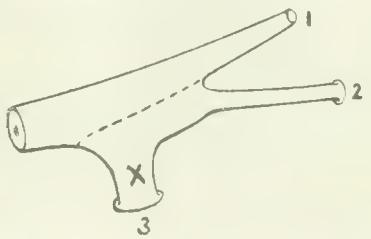


Diagram showing (1) ophthalmic, (2) superior maxillary, (3) inferior maxillary, branches from the Gasserian ganglion. × the point where hæmorrhage took place.

until I saw the motor root of the inferior maxillary nerve lying underneath it, my intention being to save it. When I was cutting about halfway through the inferior maxillary nerve at the foramen ovale at the spot marked X in the diagram there was a sudden and rather alarming flooding of the field of operation with blood, which was stopped by plugging and removal of the brain retractors. Proceeding with the operation, I had to stop after tearing away the superior maxillary nerve owing to intermittency of the brain pulsation being noticed by Dr. J. D. Williams. The wound was drained for twenty-four hours and fourteen days later the patient left the private hospital with the wound healed up.

After-History.

Within a month she had a few twinges of pain along the course of the inferior dental nerve from its exit at the mental foramen to the middle of the lower lip. She has had occasional recurrence of the pain along this nerve up until now (December, 1897), but for months at a time she has been quite free from any pain. There has been no recurrence of the pain along the second division of the trigeminal nerve nor along the course of the auriculo-temporal nerve.

I once saw her in an attack of pain along the inferior dental nerve, and I suggested reopening the scar to complete the operation originally intended, but she replied that "The pain is not so bad as that."

The areas of distribution of the auriculo-temporal and infraorbital nerves were quite anæsthetic for several months after the operation, but now she knows that one touches her and the parts feel "quite numb" or, as the patient prefers it, "quite deadified." There was never any motor paralysis.

Remarks.

Perhaps it would have been much wiser if I had done the operation in two stages, as Horsley recommends in any serious intracranial operation, instead of attempting it in one stage as is advised by Krause in this particular operation. Although the whole operation only took an hour and five minutes, there being very little trouble in exposing and manipulating the outer half of the Gasserian ganglion, owing, I think, to the patient being dolichocephalic, still the shock proved to be rather serious, judging by the intermittency of the pulsation of the cerebral mass. There is no doubt that manipulation intracranially in these cases is more difficult in brachycephalic skulls owing to the increased depth of the ganglion from the surface. The Hartley-Krause method is comparatively simple compared with that of Rose, and the free removal of bone towards the base with rongeur forceps, and the free use of Horsley's wax over the cut bone, saves much time.

At present the depression in the temple seems very firm and non-pulsatile, and I do not think that an osteoplastic flap of the skull in this region is worth the making with its risk of dividing the middle meningeal artery in the bone, and so causing an unnecessary loss of blood before the bone flap is turned down, and also the risk in the future failure of the bone performing what is expected of it; with a ¼-inch trephine and a pair of rongeur forceps one can expeditiously and with safety make the necessary opening as low as possible towards the base of the skull. The middle meningeal artery running to the foramen spinosum caused no trouble in this case.

An elaborate and valuable paper by Louis McLane Tiffany deals with 108 cases of intracranial operations for the cure of facial neuralgia, and most of the points of interest in those cases are fully considered in the *Annals of Surgery*, November, 1896.

The sensory condition of the face in my case before the operation suggested that the cause of the neuralgia was distal to the Gasserian ganglion, because there were no analgesia and blunting of the sense of heat in the distribution of the ophthalmic division of the fifth; one would hardly expect a primary pathological condition of the Gasserian ganglion itself to be so territorially limited as to cause a neuralgic distribution of pain to two or one only of its main efferent branches; nevertheless, the second and third branches are the ones most commonly affected, and hence, in all probability, when disease of the ganglion exists in such cases, it is due to extension from the affected nerves.

It is but rarely that an intracranial operation has been done for neuralgia without the previous performance of one or more peripheral operations, but in this case it seemed to me that there would be more shock and greater difficulties in doing the necessary peripheral operations than at once to do what I decided upon.

The bleeding which prevented my completing the operation was probably from the small meningeal artery by the side of the inferior maxillary nerve, and I think I am justified in stating that had I completely divided the nerve without the bleeding there would not have been any recurrence of pain along the inferior dental nerve. Had the patient allowed me to operate the second time I should have attempted the division of the inferior maxillary nerve and ganglion by a fine electro-cautery, whilst the nerve would be held taut by a fine hook; by this means I hoped to avoid bleeding, and the sudden yielding of the hooked nerve would indicate complete division.

If Dr. Williams had not notified me of the intermittency of the cerebral pulsation I should have continued the operation, and possibly might have overstepped the operative tolerance of my patient, hence my concluding remark is like the first one: perhaps it would have been much wiser if I had done the operation in two stages, as Mr. Horsley advises.

My thanks are due to Dr. Williams for his vigilance whilst giving the anæsthetic, and to Mr. Morland for assisting me at the operation.

FRAGILITAS OSSIUM:

NOTES ON THE HISTORY OF A FAMILY IN WHICH IT APPEARS TO BE HEREDITARY.

By J. HUNTER, M.B., C.M.Glasg.,
Senior House Surgeon, Macclesfield Infirmary.

On entering upon duty here as House-Surgeon there was a lad who had been admitted a few weeks previously with fracture of the femur. I discovered that he had broken his leg several times, and on further inquiry at his home obtained the following history:

At the age of 9 he fell about 7 feet, fracturing the right femur. Three years afterwards, when sliding, he fell and fractured his right femur. Two years later, when playing football, he fell and fractured the left femur. Two years later still he was knocked down when playing football, and fractured the right femur.

He has a sister who fell while playing, eight years ago, and broke the left femur.

Another sister fell a few feet and broke her right femur.

She and her brother were dismissed on the same day from the infirmary with the fractures completely united. On the way home she rested her back against a door, which gave way, and she fell, fracturing the left femur this time.

Another brother sustained a fracture of the right femur when playing. About two months after, on being lifted out of bed and placed on the floor, his foot caught the leg of a table near, breaking the femur again at the same point evidently, as the limb, which was everted after the previous fracture, became straight again on union taking place.

His father has had several fractures, four of the right and three of the left femur. The first occurred at the age of six months, the last nine years ago. He is 50 years of age, and states that he has always had good health. He is about 4 feet 10 inches in height, with marked disproportion between the length of his body and limbs. There is some deformity, with considerable shortening of both femurs, the right being about 2 inches shorter than the left. The remainder of the family, aged 15, 6, and 2 years respectively, have never sustained any fracture, and with the exception of the youngest seem to be in good health. The grandfather is still living, and states that none of his relations ever suffered in the same way.

I consider the above history rather interesting, as the family seem healthy, and there is nothing to indicate any particular diathesis. The seat of fracture seems to be always about the junction of the middle and upper thirds, and the degree of violence necessary to produce one is comparatively slight. Union is complete after the usual period has elapsed.

MULTIPLE PAPILLOMATA OF THE LARYNX IN YOUNG CHILDREN TREATED BY TRACHEOTOMY ONLY.

By T. C. RAILTON, M.D.Lond., M.R.C.P.,
Physician to the Children at the Manchester Clinical Hospital for Women and Children.

Case 1.—Cure after Wearing a Tube Forty-five Months.

Dorothy S., a girl aged 3 years and 3 months, was brought to the hospital on February 13th, 1894, with well-marked symptoms of laryngeal obstruction, including stridor during inspiration and expiration, inspiratory recession of the chest walls, chronic hoarseness, and a frequent croupy cough. At times she was quite voiceless. Her parents were healthy, and had no other children. The patient's hoarseness had been observed for nearly two years, and an attack of whooping-cough six months previous to her admission had aggravated it considerably. Latterly she had suffered from alarming attacks of dyspnœa in the night time, and these had induced her parents to seek medical aid. The diagnosis of multiple papilloma of the larynx was arrived at in spite of the fact that repeated attempts had failed to obtain a view of the larynx, on account of the smallness of the space available and the restlessness of the patient, but

the opinion was subsequently confirmed by the appearance of growths at the wound, sprouting round the tracheotomy tube. On several nights after her admission the child suffered from serious attacks of dyspnœa, accordingly tracheotomy was performed by my colleague, Mr. Southam on February 23rd with an immediate relief of all the urgent symptoms.

A week after the operation the silver tube which had been used was replaced by a soft rubber one, and this kind of tube (changed three times a week) was worn from that date until November 16th, 1897, when it was finally removed—a period of 3 years and 9 months—and the opening was then allowed to contract and was ultimately closed by a small plastic operation on December 16th.

The diagnosis of papilloma of the larynx was verified, as I have said, by the appearance at the tracheotomy wound some six months after the operation of growths sprouting round the tube These were shaved off, and small doses of arsenic were administered internally. With the exception of a slight recurrence eight months later, which was similarly dealt with, there has been no drawback to the child's perfect recovery. The voice and breathing were observed at intervals during the wearing of the tube (by temporarily closing the opening), but it was not thought advisable to remove it until every trace of stridor or hoarseness had disappeared. The tube produced no inconvenience beyond the tendency it caused for the child to take cold easily. The larynx has recently been examined by Mr. Larmuth, who pronounces it to be perfectly healthy. Both breathing and voice are absolutely normal.

Case II.—Cure after Wearing a Tube Twenty-five Months.

Frances G. L., a girl of 4 years, was brought to the hospital on March 29th, 1894, with a history of chronic hoarseness, noisy breathing and croupy cough, with paroxysms of dyspnœa coming on at night. Her parents and four other children were said to be healthy. Two other children had died from croup.

On admission it was observed that she had inspiratory stridor with marked recession of the chest walls (suprasternal and supraclavicular regions and slightly at the ensiform cartilage and outwards). She was very hoarse and had a hoarse cough which was very troublesome. During the night the breathing became more difficult, but there were no paroxysms of dyspnœa. She was examined with the laryngoscope by Mr. Larmuth, and at the third attempt he was able to see warty growths projecting from the ventricle of the larynx and other masses coming between the true cords.

Tracheotomy was performed by Mr. Southam on May 9th and a rubber tube was worn until June 5th, 1896, when all traces of obstruction having disappeared, and the voice having regained its natural clearness, it was finally removed.

Mr. Larmuth has recently examined the larynx for me and finds that after a lapse of eighteen months there is not the slightest symptom of the recurrence of the disease.

Remarks.

It was determined at the beginning of the treatment of these cases to limit it to tracheotomy, the more radical operations of thyrotomy or endolaryngeal extirpation having proved so very unsatisfactory in children, even at the hands of the most skilful operators. It would appear that the spontaneous atrophy of the papillomata depends upon the removal of all causes of irritation in breathing and more particularly in coughing. I do not attach much importance to the effect of the arsenic administered in the first case, in the second none was given.

I must acknowledge my indebtedness to Dr. G. Hunter Mackenzie's communications[1] for the idea of depending upon tracheotomy alone.

References.

[1] *Edinburgh Med. Journal*, 1884; *Lancet*, April 6th, 1889; and British Medical Journal, September 12th, 1896.

The Metric System.—The *Pharmaceutical Journal* announces that with the view of encouraging and assisting the general adoption of the metric system of weights and measures by pharmacists, all quantities will in future be given in its pages in accordance with the metric system.

A CASE OF CHRONIC INTUSSUSCEPTION.

By J. ORTON, M.R.C.S., L.R.C.P.Lond., D.P.H.Edin.,
Foleshill, near Coventry.

J. K., aged 58, first seen November, 1893, was then complaining chiefly of the extremely offensive character of his motions, and of pain located over the cæcal region. The offensiveness of the stools had first been noticed in the early part of the summer, and it had gradually become more intense, and was accompanied by some amount of pain on straining at stool. On examination of the abdomen, a soft, doughy mass was felt in the iliac fossa, which was thought to be fæcal, and disappeared with enemata, without, however, benefiting the pain, which seemed gradually to increase in severity in spite of a careful dietary and drug treatment. Chronic typhlitis with ulceration was diagnosed, and consultation with several other medical men failed to improve upon this diagnosis.

As all palliative treatment had little effect in mitigating his condition operative treatment was discussed, but the possibility of the disease being malignant did not seem to justify its strong recommendation, and the patient did not give his consent. The condition, however, became worse. The pain would cease perhaps for a day or two, only to recur with renewed vigour, and he continued to lose weight. Nothing abnormal, however, was to be found on palpation of the abdomen; the bowels acted fairly regularly, a loose motion being passed, occasionally streaked with blood. The intermissions of rest from the pain, however, became fewer and fewer, and he died from exhaustion in November, 1896, after an illness which had lasted three years and a half, having been for the last six months or so almost constantly under the influence of morphine. As he had expressed a decided wish during his lifetime for a *post-mortem* examination to be performed, this was done the day succeeding his death. The body was very emaciated, the abdomen retracted, and on opening the latter no cæcum was to be found in the right iliac fossa. This, together with the ascending, transverse, and descending colons were all involved, together with a great portion of the small intestine, in an intussusception which filled up the left side of the pelvis, and extended to the first part of the rectum. The condition was so chronic that it was impossible to reduce the intestines, the adhesions being so very firm; part of the invaginated portion had become but a fibrous coat. On following up the narrow lumen of the canal with scissors, the part corresponding to the cæcum was found to be occupied by a gangrenous, ulcerated mass, the size of a small egg, which had no doubt given rise to the offensive stools.

Remarks.

The case seems worthy of being reported chiefly on account of the probable great length of time that the intussusception had been forming, and of the large extent of intestine involved without gangrene of any portion taking place. It is hard to say when the intussusception commenced, but it certainly must have extended over many months, as evidenced by the tough, fibrous condition of the tube. The primary mischief was doubtless the chronic inflammation and ulceration of the cæcum, which first became invaginated and gradually involved the other parts, and the patient only died very slowly from exhaustion.

SOME CASES OF PELVIC SUPPURATION IN THE FEMALE.

By JAMES OLIVER, M.D., F.R.S.Edin., F.L.S.

The following cases which have occurred in my practice appear to me to present features of interest:

Case I. *Abscess of Ovary: Symptoms Developing One Month after Parturition: Operation: Recovery.*—A. M., aged 28, and married six years; has had three children, and no miscarriage; the last child was born four months ago. This child was not suckled. The menstrual discharge reappeared 2½ months after this confinement, and on this occasion it was slightly excessive, but in the following month it was of the usual amount. One month after the last confinement the patient was seized with severe pain in the lower abdomen and back, and during the twenty-four hours succeeding the onset of this attack the catheter had to be used twice, as there was complete retention of urine. Thereafter, and up to the present time, some difficulty has been experienced in voiding urine, and the act has always been accompanied with severe pain. Since the attack, one month

after parturition, that is, for three months, she has complained more or less constantly of pain in the abdomen and lower part of the back.

Physical signs: There is an ill-defined fulness in the left iliac region, but otherwise there is nothing to note abdominally. Vaginal examination: The cervix uteri is located high, and far back. The body of the uterus is felt in front on the right side, slightly enlarged. By bimanual examination a small, firm swelling is detected in the left pelvis close to the uterus. The temperature is normal

Operation: The tumour, which was the left ovary, was of the size of a hen's egg. It was adherent to the posterior surface of the left broad ligament and the left Fallopian tube was involved in the adhesions. The uterus was half as big again as it should have been. The ovary, when cut into, was a sac containing creamy inoffensive pus. The left Fallopian tube was thickened and very patent, but contained no purulent material.

In this case the patient had apparently recovered well from her confinement, and one month after this event she was suddenly seized with pain. She evidently had had no rigor, and when I saw her there was no elevation of temperature. The left ovary when removed four months after parturition was converted into an abscess, and no trace of ovarian tissue remained.

Case II. *Suppuration (Tuberculous?) in the Left Fallopian Tube: Operation: Recovery.*—E. H., aged 28, and married three years, has never been pregnant. Since marriage the menstrual discharge has recurred regularly, and has been of the usual amount. Eight months ago, during a menstrual period, she was suddenly seized with severe pain in the lower abdomen. This pain continued off and on for seven days, and then gradually subsided. She was confined to bed for one month. Two months later, in consequence of the continuance of a general feeling of indisposition and loss of flesh, the doctor in attendance advised her to go to Hastings. This change produced some improvement. Ten weeks after her return from Hastings (eight months after the onset of the illness) I was asked to see her, as a small lump detected (four weeks previous to my visit) in the lower abdomen had gradually increased in size, and she was losing flesh.

Physical signs: The patient is emaciated. The hypogastrium is occupied by a central globular and cystic swelling, which pushes forward markedly the contiguous portion of the anterior abdominal wall. It extends upwards from the pelvis to a spot 1½ inch below the umbilicus.

Vaginal examination: The cervix uteri is pushed toward the right wall of the pelvis. The vaginal roof, anteriorly and toward the left side, is pushed down by a globular and cystic swelling, which is a portion of the abdominal swelling. The body of the uterus is felt to the right of, and in close apposition with, the abdomino-pelvic tumour. The temperature is 100° F.

Operation: On opening the abdomen in the median line, a large tense swelling was seen lying in front and to the left of the uterus. It was adherent to the anterior abdominal wall. The adhesions were separated and the tumour tapped. About a pint of thick creamy inoffensive pus was evacuated. The interior of the cavity presented a markedly tuberculous appearance. On account of the pelvic adhesions it was found impossible to remove the sac, consequently it was stitched to the abdominal wall and drained. The left ovary was felt adherent to the posterior wall of the tumour very low in the pelvis. Tubercle bacilli were detected in the pus and scrapings of the sac.

The illness in this case was accompanied by elevation of the body temperature and loss of flesh.

Case III. *Suppuration of an Ovarian Cyst: Inflammatory Thickening of the Cyst Wall: Operation: Recovery.*—E. B., aged 42, and married twenty-two years, has had one child; the child was born 21 years ago. Menstruation recurred regularly until two months ago, since which time there has been complete amenorrhœa. For two years she had remarked that her abdomen was increasing in size. Two months ago she was seized with severe pain in the left iliac region and with sickness, and since then she has complained more or less of pain all over the lower abdomen. She seems to have had an elevation of temperature during the fourteen days succeeding the onset of this attack, and she was confined to bed for one month.

Physical signs: The abdomen is prominent. It is occupied by a central and globular swelling which extends upwards from the pelvis to 8½ inches above the pubes. The tumour over its lower 6 inches feels solid, whilst the upper portion is distinctly cystic.

Vaginal examination: The cervix uteri is located centrally. The vaginal roof on the left side and posteriorly is markedly drawn up. The body of the uterus is directed slightly backwards. The abdominal tumour is firmly fixed, but it appears to be attached to the uterus. The temperature is normal.

Operation: The tumour was firmly incorporated with the anterior abdominal wall over the lower three-quarters of its anterior surface by a pad of dense fibrous tissue an inch and a half in thickness. The omentum, which was greatly thickened, was extensively adherent to the tumour on its upper and posterior surfaces. The tumour was removed entirely. It was a thick-walled cyst of the left ovary, and contained most fœtid pus.

In spite of the fœtid and purulent fluid in the tumour the temperature was normal, and the state of health of the patient was good. The solid feel of the lower portion of the tumour was due to the organised inflammatory material which had incorporated it with the abdominal wall.

Female Medical Practitioners in Switzerland.—The number of legally qualified medical women now practising in Switzerland is 24; of these 10 reside at Zurich, 4 at Geneva, 2 at Basel, 2 at Lausanne, while Bern, St. Gall, Winterthur, Aarau, Schinznach, and Samaden have 1 each.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

FRACTURE OF RIB DURING COUGH.

Mr. G. some few weeks ago had a very smart attack of influenza, with a good deal of bronchitis. Partial recovery took place, leaving a most obstinate tracheo-laryngeal catarrh, the cough resulting being most distressing. In spite of advice to go to the South Coast for a short time, he went to business intending to "work it off." One morning, on arrival at the office, and whilst in the act of hanging up his coat, he was seized with a sudden and severe coughing bout, and before he could get his hand to his side a pain took him, which, as he expressed it, was like a knife being driven in. Three hours after I saw my patient at his own home, he having travelled by rail some miles, and on examination found a marked fractured rib on the left side. Being a somewhat unusual accident I thought it possibly worth recording.

On February 7th I saw an elderly woman, aged 58, who had had influenza for the previous five weeks with bronchitis and a most persistent cough. On February 5th she was sitting up but complained of her right side. I found the cartilage separated from the rib and crepitus easily felt, in fact almost heard. These cases raise the question of the treatment of the very severe and persistent cough which has followed many of the attacks this season.

Green Lanes, N. Amb. Atkinson.

SCARLATINA MALIGNA.

The publication in the British Medical Journal of January 15th, p. 145, of a case of scarlatina maligna which proved rapidly fatal recalls to my mind a somewhat similar case, in which, however, the rash was suppressed, which occurred in my practice some twenty years ago, where cold affusion rescued the patient from almost certain death.

I was attending a case of enteric fever in a young man living in the country, when one day his sister, a girl of 19, who appeared perfectly well up to 2 P.M., was suddenly seized with green vomiting and stools, headache, and delirium; she "ran about the house like a mad woman." Next day, when I first saw her, the temperature was 105.6°, pulse 160, respiration 60. She had intense headache, delirium, and great thirst. As her brother had typhoid, at first sight the possibility of her being attacked with same disease, but with a very anomalous mode of onset, suggested itself; but I expressed the opinion that the symptoms were more like what might be expected in suppressed scarlatina. Brandy and ammonia were ordered, and a full dose of quinine. At 6 P.M. I saw her again in company with an elder practitioner, when she appeared to be in a moribund condition. No pulse could be felt except a mere flicker; the first sound of the heart was inaudible, temperature 105°, eyes congested, her face pale. On speaking loudly to her she opened her eyes and stared stupidly at us, but could not be got to utter a word or put out her tongue. She seemed *in extremis*. My friend threw up his hands with a significant gesture, implying that it was "all up" with her.

However, we decided to try the effect of cold affusion as a last resource. Her hair was rapidly removed, and her head brought over the edge of the bed, and two large jugsful of cold water poured over it. The result was marvellous. Her intelligence returned, she spoke almost immediately, and said she was frightened, and put out her tongue, then seemed inclined to fall into a somnolent state. A blister to the nape was ordered, turpentine to the chest and back, ℥ss of brandy every half hour, and carb. ammon. mixture.

At 11 P.M. I saw her again; her pulse could just be counted, but was the merest thread, and as she seemed likely to fall into the same comatose state as previously, the douche was repeated, and this time she violently resisted it. Next morning the temperature was 101.2°, pulse 136, respiration 36. Her intellect was clear, she said she was better, but remembered nothing of what had happened. The following morning the temperature had fallen to 100.8, and a bright scarlet rash had made its appearance on her feet, legs, and back of hands. In

five days she was convalescent, and some days subsequently desquamation set in.

This case, and others of a kindred nature, would seem to indicate that where the cerebral centres are overpowered by a morbid poison, and life thereby endangered, cold affusion is the remedy *par excellence*. It is probably hardly used as often as it might be (in the coma of typhus and uræmia, for example), and valuable lives might be saved by its timely employment.

Enniscorthy. Thomas Drapes, M.B.

MALARIAL CRESCENTS AND SPHERES.

On reading Surgeon-Captain Duggan's communication to the British Medical Journal of January 15th on the parasite of malaria in the fevers of West Africa, I was unable to make sure if he wished to convey the idea that crescent bodies originate from the pigmented spheres which are seen in blood preparations taken from æstivo-autumnal infections. If he did mean to infer this, I should like to say that although I have had some good opportunities of studying the parasitology of malaria, I have never seen this phenomenon occur. I have, however, seen hundreds of crescents become spheres, passing through the following successive stages: (1) Crescents, (2) oval bodies, (3) spheres, (4) flagellated bodies, (5) degenerate spherical bodies. Knowledge of the life-history of the malarial parasite is not yet complete, but many facts have come to light which tend to prove that these changes are intimately associated with the development and multiplication of the plasmodium outside the body; to say, therefore, that crescents originate from spheres is equivalent to saying that a mother originates from her offspring. We recognise at this hospital the three following varieties of spheres as being present in blood preparations from æstivo-autumnal cases, namely:

1. The normal crescent-derived sphere which subsequently under favourable conditions becomes a flagellated body. This sphere has three zones, namely, the central clear, the middle pigmented, and the peripheral clear.
2. The degenerated sphere. This is usually smaller than the above-mentioned variety. It contains a large amount of scattered pigment; sometimes, however, two zones can be recognised, namely, a central clear zone and a peripheral pigmented zone. This sphere is the remains of the flagellated body, it is often irregular in shape, and frequently entirely engulfed by the phagocytes.
3. The large spheres or discs with scattered pigment in active Brownian movement. These are mechanically injured parasites. They are most frequently seen in badly prepared specimens in which pressure has been applied to the cover glass, or which have been imperfectly ringed and then allowed to stand. When examining preparations I have by screwing the lens too firmly on the cover glass converted a normal sphere into one of these bodies. This variety is rarely present in carefully prepared fresh specimens, especially if Marshall's method for promoting rapid exflagellation be employed.

I have never seen spores in oval bodies, but I have frequently observed fragments of red corpuscle adhering to the side of the crescent and oval bodies. I have also on one or two occasions noticed a bud-like process develop at the periphery of the crescent body as it is passing into the oval form, but there is no evidence that this is a spore; it is probably due to the artificial conditions in which the crescent is placed. Dr. Manson first demonstrated to me the presence of preformed flagella in active movement within the outer zone of the crescent-derived sphere, and I have observed them in specimens since. Could Surgeon Captain Duggan have seen these flagella commencing to appear in the oval body?—I am, etc,

Seamen's (Branch) Hospital, Albert Dock, E. D. C. Rees.

Overworked Druggists' Assistants.—A Bill has been introduced in the New York State Legislature which is intended to relieve assistants in druggists' shops within the City of New York from extra long hours of work. The ostensible object of the measure is the prevention of mistakes in mixing the wrong drugs owing to mental confusion caused by overwork. The Bill provides that no assistant shall work more than ten hours a day, except on Saturdays, when he may work twelve hours. On Sundays and holidays only six hours' work is allowed.

Bequests.—The late Sir Charles Hutton Gregory, who died on January 10th, has bequeathed £500 each to the Westminster Hospital, the London Hospital, the Middlesex Hospital, and St. Mary's Hospital.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SUSSEX COUNTY HOSPITAL, BRIGHTON.

AN UNUSUAL CAUSE OF LEAD POISONING.

(By E. Hobhouse, M.D., M.R.C.P., Assistant Physician.)

The following case of lead poisoning is of same interest, as it was due to a very unusual cause:

J. P., aged 55, a foundryman, came to the out-patient room complaining of loss of power in both arms of six weeks' duration. It was chiefly in the muscles of the upper arm, especially the deltoid, biceps, and triceps, which were very flabby and evidently wasted. There was no wrist drop, and pronation and supination of the forearm was good. There was no anæsthesia. He had had some pain in the arms. There was no history of colic, but a distinct punctate blue line on the gums.

On being questioned as to lead he denied the possibility of poisoning, but admitted having had syphilis. On his second visit, however, he said he had forgotten that for two or three months he had been washing out his nose with a solution of sugar of lead, of which he dissolved one pennyworth in half a pint of water. He did this to stop a discharge from his nose. On examination extensive destruction of the septum was visible, and ulceration in two or three spots. I do not know how much lead acetate can be bought for a penny, but it was clear that he had used a pretty strong solution two or three times daily on a surface well calculated to absorb it.

The distribution of the paralysis, which was almost symmetrical, was somewhat unusual, and but for the blue line I was inclined to think that it might be due to a syphilitic affection of the nuclei in the upper cervical region, but the subsequent history cleared up all doubt.

It is interesting to note that though the extensors of the forearm were still capable of extending the hand at the wrist-joint, and therefore the most characteristic feature of lead palsy, dropped wrist, was absent, they showed the reaction of degeneration; while the muscles of the upper arm, which seemed the feeblest (elevation of the arm being more especially feeble) reacted to faradism better on the left side than the right. The most obvious symptom was the inability to raise the arms on either side, characteristic of deltoid palsy; after that the biceps, spinati, triceps, and brachialis anticus—forming the so-called Duchenne-Erb group—were affected in the order named, as regards loss of power. They were capable of use, but showed weakness and flabbiness, even when contracted, in a very marked degree, considering that the man was well developed and a foundryman.

Erb, quoted by Dr. Oliver in Allbutt's *System*, vol. ii, seems to have found somewhat the same phenomena in a case investigated by him. It is difficult to say what is the pathology of a condition in which the muscles perform their appropriate actions fairly well yet do not react to faradism, though, as Sir William Gowers says, voluntary power may return before faradic irritability, therefore they cannot be absolutely correlated. On the other hand, the fact that the deltoids and spinati reacted to faradism, though obviously much weakened, would certainly look as if there might be some direct action on the muscles themselves; in fact, coupled as it was with distinct softness and flabbiness of the muscular tissue, it is hard to see what other explanation is possible, though Sir William Gowers says such primary action on the muscles is doubtful. He himself quotes some facts which would seem to point to the same conclusion.

Sterilising Water for Troops.—The military authorities at Bangalore, which has an evil reputation for typhoid fever, intend to erect a Larymore boiler for sterilising drinking water for the use of the British troops, and a committee has been appointed to select a site for the purpose. The evil reputation of Bangalore for the prevalence of enteric fever points to this important measure not being taken a day too soon.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Samuel West, M.D., Vice-President, in the Chair.

Tuesday, February 15th, 1898.

Sarcoma of the Tongue.

Mr. Harry Littlewood recorded a case of the above somewhat rare condition. It occurred in a boy, aged 17, admitted into the Leeds Infirmary. The growth followed upon a scald of the tongue, which led to the formation of an ulcer; mercury and iodide of potassium were administered without avail. The much-enlarged organ was excised, and a few weeks later there were removed the enlarged lymphatic glands beneath the lower jaw, which had been left owing to the shock occasioned by the removal of the tongue itself. The growth occupied the middle two-fourths of the organ, and was found to be a round-celled sarcoma. No recurrence took place in the stump, but a growth appeared later in the left tonsil, and the adjoining lymphatic glands. Mr. Targett had in the *Guy's Hospital Reports* collected eleven instances of sarcoma of the tongue, and others had since been placed on record. By English writers the terms "round-celled sarcoma" and "lymphosarcoma" appeared to be used synonymously.

Mr. Targett observed that sarcoma of the tongue had clinically to be differentiated from deep-seated abscess and from actinomycosis, and this was at times very difficult. Lymphosarcoma did not concern the tongue, the tumours being all true sarcomata arising from the connective tissue of the muscular substance. In regard to sarcomata of the digestive track in general, it was noteworthy how they differed in characters.

An Unusual Cyst of the Tongue.

Mr. Percy Furnivall described the above in a man in whom a swelling had been noticed under the anterior part of the tongue. Puncture was not followed by complete removal of the swelling. Iodide of potassium produced no effect. On second operation a mass of fibrous tissue was found, and a V shaped piece excised from the organ. In doing this a circular hole was noticed, and through it a probe could be passed along the substance of the tongue and out by the foramen cæcum. The fistulous track was an inch and a half in length, and felt firm like the vas deferens. It was lined with stratified epithelium. He thought the best explanation to be that it arose from faulty fusion of the anterior single eminence, tuberculum impar, and the two posterior lateral, from which the organ was developed.

Post-mortem Emphysema of Liver.

Dr. C. H. Bond exhibited an example of this condition. It was obtained from a man eighteen hours after death, the weather at the time being cold. There was no emphysema of the other organs or of the blood. The liver was very fatty, and sections showed a bacillus in large numbers between the cells—doubtless that described by Welch and Flexner as causing the change, and termed bacillus aërogenes capsulatus. Professor Kanthack had described a similar condition, as due to bacillus coli. The two organisms might be mixed. Injected into animals before and after death, the first-named bacillus produced emphysema. Emphysematous cellulitis was caused by the same bacillus. The patient had died of senile dementia and heart failure; there was no cutaneous abrasion and no intestinal lesion; hence it was difficult to explain the entrance of the micro-organism. The bacillus was present at times in the intestine, yet, if it was a common inhabitant of this, it was not easy to see why the emphysema was not observed more commonly.

Dr. Arthur Voelcker had seen two examples of emphysematous liver, in both associated with cystitis and consecutive nephritis.

Dr. R. Hebb had some years ago exhibited such a liver at the Society, and shown the presence of bacilli in it. Since then he had seen many instances, and in all, associated with heart disease, the latter allowing of the ingress of bacteria before death actually took place.

Ulceration of a Caseous Gland into a Bronchus.

Dr. Arthur Voelcker cited an instance of this in a girl, aged 5 years, who was found dead, having been before apparently in good health. No cyanosis was noticed, and there was no distension of the right side of the heart, whence he concluded that death, though it was due to sudden impaction of a caseous gland immediately below the glottis, arose from cardiac inhibition, and not from asphyxia. The caseous mass had escaped by ulceration into the right bronchus from a tuberculous lymphatic gland. The accident had been described by Laennec, and since by many observers. Most of such cases happened in children; and it was usually the right bronchus, not the left, that was perforated, a result possibly due to its shortness, and the close disposition of the lymphatic glands upon it. Escape into either bronchus was more frequent, again, than into the trachea itself.

Dr. Cyril Ogle showed a similar specimen from a patient taken with sudden cough and dyspnœa; tracheotomy failed to relieve.

Dr. Lazarus-Barlow commented on the fact that although experimental stimulation of the vagi would not arrest the heart, yet it seemed in Dr. Voelcker's case as though an afferent impulse from the larynx due to the impaction of the foreign body had led to this result.

Dr. Batten pointed out that the greater frequency with which the glands of the right side were affected had also been insisted on by Dr. Gee.

Dr. R. Hebb observed that the test commonly taken as against death by asphyxia—namely, absence of dilatation of the right side of the heart—was by no means constant and reliable. He had known many instances where death in infants, for example, had been admittedly due to suffocation, and in which no distension of the right side existed; the lungs, moreover, in such circumstances might be free from congestion.

Professor Rose Bradford pointed out that in the dog, at least, it was certain that irritation of the central end of the vagi produced extreme inhibition of the heart, even if it did not cause arrest, and possibly enough inhibition to bring the circulation to a standstill.

Dr. Cyril Ogle, in reply, was unable to say whether in his case the right side of the heart was distended or not. In a case recorded by Dr. Kidd it was noticed that distension was absent.

Double Hydronephrosis with Calculi in the Right Kidney.

Dr. L. Freyberger exhibited this specimen, which was remarkable chiefly on account of the absence of symptoms, although so much disease existed.

Dr. Arthur Voelcker cited two cases where symptoms were remarkable by their absence, in one of which a large vesical calculus compressed both ureters, and in the other a collection of calculi lay in the lower end of one ureter.

Card Specimens.

Mr. Harry Littlewood: Clavicle removed for Myeloid Sarcoma; Scapula removed for Malignant Growth; Sarcoma of Hand; Multiple Fibromata of the Tunica Vaginalis; Undescended Testicle from an Adult with Complete Twisting of the Cord; Kidney removed for an Adenoma; Lipoma removed from the Deltoid Muscle.

CLINICAL SOCIETY OF LONDON.

John Langton, F.R.C.S., President, in the Chair.

Friday, February 11th, 1898.

Retro-peritoneal Uretero-lithotomy.

Mr. H. Betham Robinson described a case of hydronephrosis from stone in the left ureter, and the operation which he had performed. The patient, a girl aged 16, was admitted into St. Thomas's Hospital on August 7th, 1897, under the care of Dr. Hector Mackenzie. She had had symptoms of renal colic for ten years, but for the last two years the attacks had become frequent with an almost regular periodicity of six weeks attended with hæmaturia. During the intervals she was perfectly free from pain. Latterly, the pain had been most severe, and a hydronephrosis had developed on the left side. On vaginal examination a hard body, presumably a calculus,

could be detected in the course of the left ureter just posterior to where it had relation with the vagina. On August 19th an incision of 5½ inches was made from just above the internal ring upwards and outwards, but with a slight curve inwards of its upper end. The abdominal wall was divided to the subperitoneal tissue, and the peritoneum was carefully displaced off the iliac vessels and from the upper part of the pelvic wall. The ureter was thus exposed much dilated, and was bared to the spot where it entered the wall of Douglas's pouch. A 1-inch incision was made in the length of, and on the outer aspect of, the ureter, and there was a great gush of smoky urine. When this had drained away and the wound had been swabbed out, the right index finger was passed in and a stone felt within reach. The calculus was tightly gripped by the mucous membrane, and, as the stone was spiny, great care had to be taken in its separation. With the help of the other index finger in the vagina it was pushed up and freed and then extracted with forceps. The stone was composed of oxalate of lime, and measured ⅝ in. in length, and ⅜ in. in diameter. Its weight was 25 gr. After cleansing the wound, the ureter was stitched up with fine silk and the wound united layer by layer. A gauze drain was left in the lower angle, passing down to the neighbourhood of the ureteral wound. The girl made an uninterrupted recovery, without any rise of temperature or other complication. The gauze drain was removed at the end of the second day, and there was no leaking from the ureter. A small drain was kept just through the abdominal wall for a week and then removed. The whole wound was soundly healed at the end of a fortnight. All the fulness in the kidney region had disappeared, and she felt no pain at all. This case was almost the exact counterpart of one published by the same operator in the British Medical Journal of September 11th, 1897, which was equally successful. In both of them this operation was preferred to Cabot's operation (vaginal uretero-lithotomy). In each, from the posterior position of the stone, such attempt would have courted possible disaster at the time, and it was certain almost, if the stone were removed, that the sequel would be a troublesome, if not incurable, uretero-vaginal fistula.

Mr. W. G. Spencer said that it would have been possible to reach the stone by two other routes, namely, through the vagina, or through the bladder. He quite agreed that the retro-peritoneal method was preferable to the vaginal route, but he thought that there would be some advantages in operating by way of the bladder. There was a great tendency for stricture of the ureter to be present, and the ureter could be dilated at the time of the operation from its vesical orifice, with the view of preventing recurrence of the malady. He asked how far the stone lay from the bladder.

The President said that the condition was unsatisfactory to deal with if there was ureteral obstruction, as there was risk of recurrence, and Mr. Spencer's suggestion was a useful one; but the removal of the stone would be a very difficult matter from below, as the orifice was so small and difficult to feel. He remarked that the stone could be more accurately localised in this patient than in a man, as observations could be made both by rectum and vagina. He agreed that the route adopted by Mr. Robinson was the best for reaching the ureter.

Mr. Makins, who had witnessed the operation, said that it appeared to be performed with great ease by Mr. Robinson, and the removal of the stone was certainly easier than it would have been from the bladder. It would be quite easy to dilate the lower end of the ureter from above through the wound.

Mr. Robinson, in reply, said that anatomically the stone was at some distance from the bladder, and it would have been extremely difficult to extract it that way.

Latent and Ephemeral Pericardial Effusion.

Dr. Ewart read a paper on this subject. He said that the limited and transient pericardial effusions forming the subject of his paper had been observed by him with growing frequency since his attention had been directed to them. In clinical literature they had received little notice, whilst it was generally pointed out that even large effusions were often overlooked. This circumstance raised a doubt whether these effusions, which were equivalent in a degree to the early stages of larger effusions, were often diagnosed. Walshe alone seemed to have made direct reference to their occurrence, and pointed to their frequency in Bright's disease and rheumatic fever. The three instances brought before the Society occurred in the course of cardiac and renal affections, and it was significant of the relative frequency of this condition that these cases happened to be under observation simultaneously. The same coincidence had occurred with three cases reported in the *Lancet* for November 21st, 1896, which illustrated the common causation of the effusion from rheumatism, valvular disease, and albuminuria. The recognition of effusion was difficult only when the method for its detection was imperfectly applied, and it was most often entirely overlooked because its presence was not suspected. The obvious dulness to which it gave rise anteriorly seemed to be frequently mistaken for that of cardiac dilatation, from which it differed in its outline, as well as in giving rise to a characteristic patch of dulness in the back (the dorsal dull patch of pericardial effusion).[1] Tracings taken day by day in the cases brought forward demonstrated both the rapid variations in the size of the effusion and its early reabsorption—sometimes within a day or two. In two of the cases there was a relapse of the effusion, and in one of them *post-mortem* evidence of some recent pericarditis was found soon after the clinical observations had been made. The conclusions arrived at related (1) to the hitherto apparently unsuspected frequency of these minor effusions; (2) to their short duration; (3) to their moderate size; (4) to the absence of the painful symptoms of pericarditis and of the severe pressure symptoms of large effusions; (5) to the obscurity of their pathological etiology; (6) to the desirability of their being recognised, since by that means the earlier stages of more dangerous effusions, from which they were indistinguishable by mere percussion, would then no longer so often escape detection, as seemed to have been the case in the past. Notes of two recent cases were given: In one, W. P. aged 19, admitted January 24th, 1898, for cough and right pleuritic pain with coarse friction at the right anterior base but no evidence of pleuritic fluid, the characteristic signs, both anterior and dorsal, of pericardial effusion were under observation for two days. As shown by tracings they had entirely disappeared on the third day (January 26th). No pericardial friction was heard at any time. The pleuritic pain had existed for seven days prior to his admission, but it was impossible to say how soon it might have been followed by pericardial effusion. A. C., aged 47, was admitted on January 20th, 1898, with acute rheumatic arthritis. On examining his chest the next day, well-marked signs of moderate pericardial effusion were recognised. There was no pericardial friction; but great tenderness was localised with subsequently slight swelling over the right fourth and fifth chondro-sternal junctions. The arthritic pain and swelling were rapidly relieved by treatment, and no cardiac murmur was heard, the heart sounds being distant. The signs of effusion were less extensive on the second day. On the third day the precordial area of dulness was normal, and the "dorsal dull patch" was replaced by normal resonance, although the patient still maintained the dorsal decubitus of acute rheumatism.

Dr. J. K. Fowler said that Dr. Ewart's observations had been made with much care; but physicians generally were not well acquainted with the condition described. He inquired at what point of the pericardial sac the earliest sign of pericardial effusion was distinguishable. How was the area of dulness made out, and how was he certain that the area of dulness was due to pericardial effusion rather than enlargement of the heart?

Dr. S. West observed that these cases rested on physical signs for their diagnosis, and there was extreme difficulty in diagnosing pericardial effusion from dilated heart. On what did Dr. Ewart rest his diagnosis? Pericardial effusion was often diagnosed during life, and not found *post mortem*. It was also discovered after death when it had not been suspected beforehand.

Dr. F. L. Benham inquired what were the limits of the dorsal dulness, and was it not equally present in cases of dilated heart?

[1] *Lancet. Loc. cit.*

Dr. TOOGOOD asked if Dr. Ewart had noticed a dull patch a the angle of the left scapula in cases of pericarditis, which gave all the signs of a patch of pneumonia.

Dr. EWART said that the patch referred to by Dr. Toogood extended to the spine, and was part of the posterior cardiac dulness. The signs of pneumonia arose because the descending bronchus passed near, and compression gave rise to the bronchial breathing. It occurred both with pericardial effusions and with dilatation, and might be found with a large heart in a small chest. Pericardial enlargement pressed on the posterior part of the lung, so that the anterior fringes of the lung took on extra work. The fluid in pericardial effusion doubtless collected at the most dependent part of the pericardial sac, near the left nipple, but if the patient was in the recumbent posture the dulness might not be found there. Dulness at the fifth right interspace ("Rotch's sign") was the earliest sign of effusion which could in every case be found. This dulness was also angular.[2] If instead of an angle the line of dulness formed a rounded curve, there was no pericardial effusion present, except in rare cases of adherent pericardium, with a small effusion. The second point at which such effusion was found was below the left nipple; this was an angular projection, but it was liable to be interfered with by dilated stomach, etc. It was said that fluid also welled up at the base of the heart, but he had never witnessed this, nor had Dr. Rotch. In none of his cases was any friction sound audible. The absolutely distinctive sign between pericardial effusion and enlarged heart could be made out by percussion. If the curved outline of the heart from the apex to the right auricle were not lost it indicated enlarged heart; but with pericardial effusion this outline was sharply angular near the right nipple. This showed enlargement of the pericardium, though it might not be an effusion in all cases. Again, with pericardial effusion there was a square dorsal patch of dulness, just below the convexity of the diaphragm,[3] always present in the adult, not in the child. This patch was situated on each side of the last three dorsal vertebræ. It was not present in cases of enlarged heart. It was the dulness of the liver made evident, added to the dulness of the pancreas and other solid parts in front of the spine.

SEROUS PLEURAL EFFUSION OF FIFTEEN MONTHS' STANDING TREATED BY INCISION: IMMEDIATE RE-EXPANSION OF THE LUNG: RECOVERY.

Dr. SAMUEL WEST, in relating this case, said that about two years ago he recorded the case of a lady, aged 31, who had had an effusion into the pleura on the right side for a period of more than twelve months. This had been deliberately left alone and not tapped. He performed repeated paracentesis, and when this failed to cure it he had the side opened and treated like an empyema. The patient ultimrtely recovered completely, and was left without any deformity of the chest. He had now to record a second case of the same kind. The patient was a man, aged 39, who had the right side of his chest full of fluid for twelve months when he came under observation. There was a strong family history of consumption, and the man was probably phthisical himself. In the course of the next few weeks the chest was tapped three times, on the last two occasions with the removal of 80 and 47 ozs. respectively. As the fluid reaccumulated on each occasion it was decided to lay the side open, and this was done three months after the patient first came under observation, that is to say, fifteen months from the commencement of his illness. A large quantity of fluid was evacuated but no rib was excised. The patient greatly improved; the temperature, however, rose a little, and at the end of a week the discharge became purulent. The lung completely expanded, and in the course of a week was in close contact with the ribs everywhere, with the exception of the track in which the tube lay, and very shortly the amount of discharge did not exceed more than 2 or 3 ozs. in the twenty-four hours. The patient rapidly recovered and gained flesh and strength, but it was not possible to leave the tube out; a track extended a long way down, nearly to the spine. The discharge from the cavity was about 2 ozs. daily, which was found to contain tubercle bacilli. The patient was sent into the country, and subsequently taken again into the hospital with the object of seeing whether anything more could be done with the tube. At the present time (twelve months after the operation) the patient was still wearing the tube, but was now engaged in light work, and came up every now and then to be seen. He was otherwise well, and except for the track of the tube the lung was completely expanded and working well. The side was somewhat contracted, but there was no great deformity. Attention was drawn to the following points of interest: 1. The long duration of the two cases—eighteen months and fifteen months respectively—before the incision. 2. That, though so long compressed, the lungs yet were not bound down, but re-expanded at once, and within a very short time came in contact with the chest walls. In a case of pyopneumothorax recently published, the lungs rapidly expanded in a similar way immediately after the operation. A protest was lodged against the statement that the development of tubercle was checked in a lung which was compressed by air or fluid in the pleura, or that tubercle tended to develop rapidly when the compression was removed. Excision of the ribs should not be practised as a routine part of the operation, but done only when necessary for efficient drainage. The operation, too, should only be performed in a case of serous effusion when all other simple means had failed. The case should then be treated as if it were an empyema.

Dr. SUTHERLAND inquired if Dr. West had tried the effects of persistent siphonage in these cases. He thought enforced respiration, as by the Silvester method, was of service, as the muscles of the chest wall had been so long out of gear that they did not act efficiently. The extra movement would hurry the circulation, and allow the absorption of the effused fluid. He thought the tube in Dr. West's case had been kept in too long.

Mr. W. G. SPENCER said that the treatment advocated by Dr. West had the sanction of Hippocrates, who treated effusions by paracentesis. He did not think the author had shown sufficient reason for not resecting a rib. If the opening had been made further back, and the rib removed, no drainage tube need have been used, nor germs have thereby passed into the pleura. The late Dr. Sturges was at one time opposed to the removal of a rib in paracentesis, but afterwards changed his mind, as the results were much less fatal when the rib was taken away. Now, with early incision and removal of rib, the death-rate was almost *nil*. If there was difficulty in the cavity closing, he would pack it with iodoform gauze, and let the cavity fill up with granulation tissue. The patient should not be sent out with a tube in his chest.

Dr. W. EWART said that the sooner tubes could be done away with the better. Physicians were usually credited with a horror of opening these cavities; but this procedure should now be advocated. And if it came to that necessity, they were all the better off for what Dr. West had so persistently advocated. Again, he thought distension of the pericardium should be treated by a bold incision rather than by the needle. He thought collapsed lung was less liable than healthy lung to tuberculous infection, as less air, less blood, and less lymph passed through the collapsed organ.

Dr. J. K. FOWLER said that Mr. Godlee's views on the subject were almost directly opposed to those enunciated by Dr. West. The foundation of the belief that compression by fluid had an effect in checking the growth of tubercle was probably due to the classical case which was published by the late Dr. Hughes in the *Guy's Hospital Reports*. He thought that it was held by many competent surgeons that the cavity ultimately closed by granulation. In this case the cure did not seem to have been complete, as there was still a discharging sinus, which might lead to amyloid disease.

Dr. WEST, in reply, said that although the man could not do without a drainage tube, he was well enough to earn a living. He still thought that resection of rib, although occasionally necessary, could be dispensed with in the majority of cases. Although there seemed to be some evidence that the spread of tubercle was checked by compression of the lung, he did not think that that consideration should induce the physician to leave a long-standing effusion unrelieved.

[2] *Vide* diagrams to illustrate this point in the BRITISH MEDICAL JOURNAL, March 21st, 1896, page 718.

[3] BRITISH MEDICAL JOURNAL, March 21st, 1896, page 720.

MEDICAL SOCIETY OF LONDON.

Clinical Evening.

A. E. Sansom, M.D., President, in the Chair.

Monday, February 14th, 1897.

Innominate Aneurysm.

Dr. Seymour Taylor showed a man, aged 43, who came complaining of pain in the right shoulder and a lump over the inner end of the right collar bone. He was a temperate man, and had not had syphilis. He presented a pulsating tumour involving the inner thirds of the supraclavicular and infraclavicular regions, and also, to a slight extent, the manubrium sterni. The sterno-clavicular articulation was partially dislocated. There was dulness over the tumour, a diastolic shock, and at times a distinct thrill. The heart was hypertrophied. There was a faint systolic murmur, loudest at the apex. The only pressure signs involved the venous system—namely, marked engorgement of the veins at the root of the neck and upper part of the chest. The left pulse was somewhat smaller than the right, and the same remark applied to the left pupil. No cough, no dysphagia, and no paralysis of vocal cords.

The President mentioned that in innominate aneurysms it was frequent for the aorta itself to be dilated. He himself had felt the tracheal tug in this case.

Dr. Maguire took the view that as little success attended the treatment by iodide of potassium and rest, it was better to allow such patients to get about, merely modifying their occupation in accordance with the requirements of the case.

Dr. A. H. Robinson mentioned a case of supposed aortic aneurysm, in which exceeding relief had followed ligature of the left carotid artery. The patient died some months later, and *post mortem* an aneurysm of the innominate artery was discovered.

Tuberculous Disease of the Frontal Bone.

Mr. Stanley Boyd showed a lad, aged 19, who was well until 12 years of age, when he began to suffer from bad eyes, with photophobia. He was operated upon for double cataract at the Westminster Ophthalmic Hospital. A swelling had formed in the frontal region, which had burst and discharged much pus. On admission there was an ulcer the size of a shilling, its base consisting of carious bone. No signs pointing to congenital syphilis were found. He cleared away tuberculous glands and an abscess cavity from the side of the neck, and ultimately the frontal bone was cut down upon, and was found to be everywhere worm-eaten, being eaten through in several places where sequestra lay, and was of a pale, opaque, yellow colour. The sequestra were removed, and the bone was gouged away until healthy bone was reached. The greater part of the squama of the frontal bone, the orbital arches, and much of the orbital plates, were thus removed. The dura exposed was covered with opaque yellow matter, tearing in laminæ. Some difficulty was experienced in keeping the frontal flap in position, but ultimately the wound healed perfectly, and an excellent recovery ensued.

Mr. Spencer Watson asked if there was any proptosis.

Mr. Marmaduke Sheild related a case in which the occipital bone was affected in much the same way, and was removed almost in its entirety, in a boy, aged 6. That case was attributed to congenital syphilis. He insisted on the difficulty of distinguishing between congenital syphilis and tuberculosis in certain cases. He thought that the author's case was probably a mixed one.

Mr. Stanley Boyd, in reply, concurred in Mr. Sheild's views, and raised the question whether tuberculous disease of the bones of the skull was really as rare as was supposed. He added that there was slight proptosis, most marked on the left.

A Case of Empyema in which a Sequestrum of Rib was Removed by Means of Injections of Dilute Sulphuric Acid.

Dr. M. E. Ling showed a man, aged 25, who five months after empyema with expectoration of pus came complaining of pain and tenderness, with bulging of the lower part of the right chest. An incision was made and four pints of pus escaped. Five weeks later a piece of the sixth rib was removed and a counter-opening made posteriorly in the ninth space, a large drainage tube being passed through both openings. The anterior wound was allowed to heal. A probe inserted in the posterior opening could be felt in the anterior triangle of the neck and bare bone could be felt on the track. Water injected into the sinus went into a bronchus. Five years later, the opening into the bronchus having closed, dilute sulphuric acid was injected repeatedly, but at the end of a fortnight there was sharp hæmorrhage from the sinus, which then healed up in a few days. A substance like crumbled bone was said to have come away with the blood. It was remarkable how rapidly the clubbing of the fingers disappeared after the healing of the sinus.

Angioma Serpiginosum.

Dr. Morgan Dockrell showed a woman, aged 21, whose face showed a number of telangiectatic lesions, some constituting a series of nævi aranei disappearing on pressure. A number of flat scars were to be observed. The condition involved not only the face but also the limbs, less so the trunk. She had suffered from the disease ever since she was three months old.

Unusual Case of Ricketty Knee.

Dr. Wilmott Evans showed a child, aged 3, whose left knee "clicked" on bending, with displacement of the tibia outwards. He attributed this phenomenon to an alteration in the articular curves of the tibia consequent upon rachitic disease.

Palpation and Auscultatory Percussion.

Dr. Maguire gave a demonstration of palpation as a method of physical examination of the chest and abdomen. The paper is published at page 484.

The President confirmed what the author had claimed for palpation except in regard to determining the outline of organs, and agreed that a considerable amount of valuable information could be obtained in this way. He had found this sense of resistance over the apices in certain cases in which there was no other evidence of phthisis, though subsequent events proved that the inference was correct.

Plastic Operation for Rodent Ulcer.

Mr. Battle showed a man, aged 55, who for upwards of twenty-six years had suffered from rodent ulcer of the face which had constantly recurred, and had ultimately attained considerable dimensions. The ulcer opened into the nostrils and mouth, and was most disfiguring. What he did was to dissect the nose free, and carry the flap of skin over the cavity left after removal of the diseased tissues and subjacent bone. The result had considerably improved the patient's appearance.

HARVEIAN SOCIETY OF LONDON.

J. F. Goodhart, M.D., President, in the Chair.

Thursday, February 3rd, 1898.

Treatment of Inoperable Sarcoma by Coley's Fluid.

Mr. Mansell Moullin read a paper upon the treatment of inoperable sarcomata by means of Coley's fluid—the mixed toxins of the streptococcus of erysipelas and the bacillus prodigiosus—and gave details of 10 cases which had been under his care. In 3 the tumours disappeared and there had been no recurrence. In another the original growth—a spindle-celled sarcoma of the superior maxilla—was entirely absorbed, but meanwhile a secondary growth developed in the head of the tibia; and in a fifth the tumour, which was a slowly-growing sarcoma, diminished in size, but only for a time. Of the remaining 5, 2—a recurrent carcinoma of the breast and a lymphosarcoma of the neck—were not benefited in the least. A third patient refused further treatment after two injections, and 2 had died. Mr. Mansell Moullin also gave an account of some of the cases in which malignant growths had disappeared after attacks of erysipelas, and quoted Coley's statistics of the results of his method of treatment in his own hands. After considering the pathological changes that had been observed in some of the tumours and the results that had been obtained by other observers, Mr. Mansell Moullin suggested that the following conclusions—though some of them might require modification later—were justified by the facts that he had brought

forward: (1) It could not be denied that there was a considerable number of cases in which sarcomata that had been given up as hopeless, often after repeated operations, had absolutely and entirely disappeared under this method of treatment. There was no other treatment—except infection with the streptococcus of erysipelas itself—of which this could be said. (2) Some of these cases had remained free from recurrence for upwards of three years, the period which, in the case of excision of the breast for scirrhus, was regarded by many operators as justifying the use of the term "cured." (3) Several of the cases in which sarcomata had disappeared after an attack of erysipelas had remained free from recurrence for seven years and upwards. (4) The fact that there might be a very few cases recorded in which sarcomata had disappeared, either spontaneously or after such diseases as acute specific fevers, had nothing to do with these conclusions. (The statement that sarcomata did occasionally disappear was repeated with great regularity, but well authenticated cases in which this had taken place, verified in the way in which Coley's had been verified, were very difficult to find.) (5) These conclusions were not in any way invalidated by the fact that injections of the mixed toxins were sometimes followed by the disappearance of other growths such as lupus, keloid, syphilitic deposits, carcinomata, etc. It might make the disappearance of sarcomata more difficult to understand, but it in no way disproved it. (6) The proportion of cases of sarcomata that were cured by the injection of the mixed toxins depended, among other things, upon the histological character of the growths. Spindle-celled sarcomata were by far the most successful. This suggested the conclusion that the mixed toxins had a selective action, even if it was not specific. (7) The disappearance of sarcomata was not due to inflammation, but to an intensely rapid form of fatty degeneration, comparable only to that which affected the hepatic cells in acute yellow atrophy of the liver. Inflammation and sloughing, when they did occur, were septic complications. (8) Degeneration and absorption might occur whether the toxins were injected directly into the tumour or into some distant part of the body. In the former case, however, the effect was more rapid and the constitutional symptoms more severe. (9) The method was attended with a considerable degree of danger. It should, therefore, be adopted only in those cases for which there was no other remedy. The chief risk appeared to be from collapse and pyæmia. There must always be danger of the latter if there was a suppurating or sloughing sore. It might be argued that patients whose lives were immediately threatened by a malignant growth would never be cured by any remedy that did not involve some degree of risk. (10) The toxins were no use unless the cultures were taken from a virulent case of erysipelas, or were made virulent by passing the streptococcus through rabbits. (11) The bacillus prodigiosus, in spite of theoretical objections, had the effect of immensely increasing the reaction. (12) The effect was most striking in the case of rapidly-growing sarcomata. Slowly growing ones appeared to have much more resistance. Probably this merely meant that masses of embryonic cells, with little organisation, gave way to injurious influences more readily than those that were more closely knit together. (13) Patients often gained in weight and strength while under treatment. (14) Treatment should be continued until the whole growth had vanished, or until it had become so small that it could be removed. (15) If there was a recrudescence of the disease it did not follow that the toxins would be as efficacious the second time as they were the first. Whether this was the result of tolerance being established could not be said. (16) Recurrence in other parts of the body might take place after many years. (17) The severity of the reaction was very variable. Probably this depended upon the rapidity with which the injection was absorbed, rather than upon any cumulative action it might possess.

DR. INGLIS PARSONS suggested that in those cases in which no result followed the injections, the patients were immune to erysipelas, and their blood contained sufficient antitoxin to neutralise the amount of toxin injected, it might be possible to overcome this by increasing the virulency of the toxin or the amount injected. He had tried Denisenko's treatment in two cases of cancer beyond operation. The extract of chelidonium majus was obtained from Parke, Davis, and Co. Drachm doses were given by the mouth twice a day, and once a week from mxl to ʒii were injected into the growth. This was continued in one case for three months, and in the other for six weeks. Giving the drug by the mouth seemed to have no effect on the growth, but the injections caused pain and usually a rise of temperature, followed by a breaking down, and sometimes suppuration in the area injected. The drug appeared to him to have no effect on those portions of the disease which could not be reached by injection. Its action appeared to be quite local, and similar to that of any other irritant.

HUNTERIAN SOCIETY.

G. E. HERMAN, M.B., F.R.C.P., President, in the Chair.

Wednesday, February 9th, 1898.

HUNTERIAN ORATION.

THE Hunterian Oration was delivered by Dr. PETER HORROCKS, who gave William Hunter's description of the placenta of 100 years ago, and showed that in its essential features it was identical with the latest description, namely, that given by Professor Leopold, of Dresden. He pointed out that the maternal and fœtal circulations were quite separate and distinct, although the two bloods were brought into very close contact, and that there was no nerve connection between mother and fœtus. He then described the ovum and the sperm. Many illustrations were shown on the screen by means of limelight lantern slides. He discussed the heredity of an individual derived from the germ, and also from the sperm, and then showed that the united germ and sperm was influenced by the mother through her blood causing the growing embryo and fœtus to be modified in such a way as to give it additional heredity, which might be called intra-uterine maternal heredity. He showed how this might be modified by conditions in the mother herself, such as food, work, environment, and disease. He showed that there was good reason for believing that poor living and hard work tended to produce males, whilst high living, especially abundance of fat, warmth, and leisure, tended to produce females. The statistics of the Guy's Lying-in Charity, taken entirely amongst poor people, and collated by the late Dr. Braxton Hicks, Dr. Galabin, and himself, showed the ratio of 100 boys to 89 girls, whilst our own Royal Family showed in the Royal Blue Book that out of 54 descendants of the Queen 30 were girls and 24 boys, the ratio being 100 girls to 80 boys. Dr. Horrocks then dealt with the subject of syphilis, and showed that the ovum in the ovary, the fertilised ovum *in utero*, and the embryo and fœtus *in utero*, might each one become syphilised through the mother. The subject of maternal impressions was mentioned, and details of published cases were given, but on the whole it was doubtful if they could be accepted as scientific, and from the numberless instances where mothers during pregnancy were profoundly affected by some great fright or other emotional disturbance, and yet no result whatsoever was manifest in the child, it was very unlikely that the fœtus ever was or could be affected in such a manner. The total absence of all nerve connection between mother and offspring *in utero* bore out the same idea. The effect of the united germ and sperm, and of the growing embryo and fœtus *in utero* upon the mother was then described, and it was shown that there was very good reason to believe that the mother was affected through the contiguity of her blood with the offspring by the father of her child, through the sperm, and that therefore a wife who became a mother was so affected by the father of her child as to show such influence upon succeeding children by a different father. The subject of transmutation in transmission was discussed, and also the question of heredity of diseases now said to be caused by microbes.

EDINBURGH OBSTETRICAL SOCIETY.

J. HALLIDAY CROOM, M.D., President, in the Chair.

Wednesday, February 9th, 1898.

SPECIMENS.

PROFESSOR A. R. SIMPSON showed: (1) Two Anencephalic Fœtuses; and (2) a Subperitoneal Fibroid Uterine Appendages.—Dr. J. W. BALLANTYNE showed: (1) Frozen

Sections and Photographs of an Anencephalic Fœtus; (2) Sections and Drawings of Fœtal Chondrodystrophia.—The President showed: (1) A Sessile Ovarian Cyst which was covered by the broad ligament; (2) a Fibroma of the Anterior Wall of the Vagina, which was definitely encapsuled and was removed by simple shelling out.—Dr. Angus Macdonald, for Dr. N. T. Brewis: (1) a Dermoid Cyst removed from a lady aged 72; it had two complete twists, contained fatty and cheesy matter, and had caused several attacks of peritonitis; (2) also some other Dermoid Cysts; (3) a doubtful Cystic Mass lying in contiguity with the Fallopian tube; (4) what was apparently a Bony Ovary, probably dermoid in nature; and (5) Ovaries with myxo-sarcomatous degeneration.—Dr. Church showed a garment which had successfully prevented and cured masturbation in a girl of 5 years.

Senile Uterine Catarrh.

The President read a paper on this subject. The condition was much more frequently met with in hospital than in private practice, probably because the poor sought relief only under more or less urgent circumstances. Various monographs had been written on the subject, and under various titles—for example, "fœtid endometritis of old women," "post-climacteric endometritis," "leucorrhœa of old women," and "senile uterine catarrh." The last term seemed best to describe the group of symptoms. A due appreciation of uterine catarrh occurring after the climacteric would save many an unfortunate woman from vaginal hysterectomy, which, with improved methods and increased safety, was too apt to be had recourse to without adequate reason. The differential diagnosis from malignant disease was the great difficulty in such cases. Sexton thought most cases occurred soon after the menopause, and advocated the term "post-climacteric endometritis." But many sought advice years after the climacteric, and these were the most marked cases, and the most difficult to diagnose. Case I. Patient, aged 70, pale, sallow, emaciated; muco-purulent, fœtid discharge; constant pain in the back, irregular colic in the pelvis; no hæmorrhage; uterus 2½ inches, retroverted and mobile, os gaping; duration eighteen months. A probe dressed with pure carbolic acid was passed from time to time, hot douching and arsenic, and a cure effected in three months. Case II. Patient, aged 65; profuse leucorrhœa, sometimes streaked with blood, occasionally a clot. Backache and griping pelvic pain; uterus 3½ inches, hard and globular. The cervix was dilated, and the cavity curetted and packed. After the lapse of six years she was perfectly well. Case III. Patient three years after menopause extremely emaciated, sudden and profuse hæmorrhage, no pain, os gaping and soft, uterus 3½ inches, hæmorrhage at intervals of two or three days for three weeks, cervix dilated, scraping of mucous membrane and escharotic; cavity drained by iodoform gauze. After five years no recurrence. These three cases illustrated what Dr. Croom considered the three forms of senile uterine catarrh: (1) Those associated with fœtid discharge and no hæmorrhage; (2) those associated with leucorrhœa and slight hæmorrhage; (3) those in which hæmorrhage was the main, if not the only, symptom. Everyone was aware that post-climacteric hæmorrhages were in the main due to: (1) The beginning of cancer; (2) the recrudescence of a fibroid; (3) occasionally in gouty women, but then only a form of uterine catarrh with gouty endometritis as its basis. The symptoms were extremely like those of malignant disease. There was vaginal irritation, general cachexia, sallow skin, and emaciation, occasional rigors and night sweats, the latter symptoms really due to a slow sepsis. The most striking symptom was the discharge, which was more offensive than in cancer. The uterus was slightly enlarged, more often normal, not normally atrophied; the sound caused great pain; a scraping showed inflammatory changes and granular degeneration. In cancer the uterus was always markedly enlarged and more fixed. Real "floodings" were much more common in cancer. With appropriate treatment senile catarrh improved in a week or two. As to the differential diagnosis between primary cancer of the body of the uterus and senile catarrh, the following points were noted: (1) Periodic and severe pain was in most cases an early and prominent symptom of cancer, whereas in the senile condition it was irregular and colicky, or if not it was slight and constant. (2) Fœtid discharge in the earlier stages of cancer was unusual, because the os was closed and the surface of the cancer protected from external influences. In catarrh fœtid discharge was a prominent and early symptom. (3) In cancer uterus distinctly enlarged, sensitive, heavy, and fixed early. In senile catarrh normal or slightly enlarged, freely movable throughout. (4) Dilatation and local exploration revealed the presence of a neoplasm in the one case and absence of all irregularities in the other. It was difficult to speak with certainty as to the causes of senile uterine catarrh. (1) As a rule no suffering during menstrual life meant freedom after physiological atrophy. On the other hand, a fibroid tumour, displacement of the uterus, any form of inflammation, might keep the uterus large after the menopause—it might become affected with post-climacteric inflammation. Such a history during menstrual life was not an essential pre-condition. (2) Tilt pointed out that very often the cervix shrank, whereas the body of the uterus was inflamed, fluid became pent up, and colicky pains resulted. Thus Matthews Duncan several times punctured the cervix to allow the fluid to escape. Tilt's cases were mainly senile inflammation of cervix and vagina, not so much of the body, and he strongly recommended caustics. Senile uterine catarrh was not among the prodromata of malignant disease; the two conditions were quite distinct. Dr. Croom had never seen a case of the simple condition later become one of cancer. As to treatment, rest was best when the condition was non-malignant or doubtful, and with rest hot douching and the exhibition of arsenic, strophanthus and Chian turpentine. The last-named drug had an equally good effect in clearing up purely uterine inflammation and cervical inflammatory hypertrophy. Nothing gave better results than the application of escharotics by means of dressed sounds, or still better the curettage of the mucous membrane with subsequent packing and draining. The main point Dr. Croom wished to insist upon was the fact that these cases were so often mistaken for malignant conditions, and patients were repeatedly sent for hysterectomy for supposed malignant disease when in reality they were sufferers from the simpler condition which quickly yielded to treatment.

Dr. Halliday Croom's paper was discussed by Professor A. R. Simpson, Drs. Barbour, Haig Ferguson, J. W. Ballantyne, Fordyce, and Church, and the President replied.

Intrauterine Typhoid.

Dr. W. Fordyce read a paper on this subject, with notes of a case that had come under his observation. It was already fully known clinically that syphilis, variola, scarlatina, and measles could be transmitted from the mother to the fœtus *in utero*. In diseases like typhoid, where there were less patent physical appearances, the evidence of transmission was not so manifest. Bacteriological and microscopical methods had now made this more easy. On November 9th, 1897, Dr. Fordyce saw a multipara who was aborting at the the fifth month, and whose condition was obviously grave. She was semicomatose; could be roused with difficulty; made feeble expulsive efforts during uterine pains; face pale, with dull malar flush; tongue, lips, and gums dry and cracked, and covered with thick brown sordes; pulse rapid and difficult to feel; extremities cold and clammy; axillary temperature 102° F.; pupils dilated. A strong presumption of typhoid fever was thus established. Six weeks before the patient was supposed to have had an attack of appendicitis. A week later blood was passed by the bowel. The temperature was 102°. There was no diarrhœa, but the patient was getting morphine for the abdominal tenderness. Ordinary diet having been resumed, there was a recrudescence of the more serious symptoms; the temperature rose to 103°; there was headache, sleeplessness, vertigo, and diplopia. Then improvement, and again a relapse during which labour pains came on. At this time the urine gave the Ehrlich-diazo reaction. The os uteri was small, uterine contractions were feeble, and occurred at long intervals; there was some hæmorrhage. The os was dilated, the membranes ruptured, the fœtus turned and delivered. The placenta had some adherent clots on the maternal surface. The uterus contracted well. After this the patient improved, but soon relapsed into a semi-comatose state, and died eighteen hours after delivery. Most authorities were agreed

that pregnancy *per se* had no unfavourable influence on the course of enteric fever. Vinay in 183 cases from different reporters found a mortality of 17 per cent., which was not above the average in non-pregnant women. Enteric fever, however, materially influenced the course of gestation, since abortion occurred in something like two-thirds of the cases. Thus Sacquin collected 310 cases, and found abortion in 199, while Martinet found 66 abortions in 109 cases. What were the causes of abortion? In one it might be the high temperature, in another the accumulation of toxins in the blood, the death of the fœtus with consequent placental changes, hæmorrhage between the placenta and uterine site in consequence of the typhoid, etc. Then there was the personal factor, for in typhoid of even a mild type abortion might occur very early in the disease, while in a case of the gravest description gestation might go on to full time. Returning to his own case, Dr. Fordyce said the fœtus was a fresh and healthy 5 months' specimen. On opening the abdomen antiseptically a small quantity of serous fluid was found. This and blood from the cord were retained for Widal's test. The intestines seemed healthy, while the liver and spleen were not enlarged. Inoculations were made from kidney, spleen, intestinal contents, blood of left ventricle into tubes of agar-agar and gelatine. The first three inoculations gave a culture of a bacillus identical with that of Eberth's bacillus, while the tube inoculated from the blood remained sterile. To eliminate the possible fallacy of the presence of the bacillus coli communis Widal's agglutinative test was tried. The diluted serum taken from the peritoneal cavity was brought into contact with a pure culture of typhoid bacilli, and gave rise to the characteristic clumping and agglutination of the active bacilli. The result of the experiment with the blood from the left ventricle was not so striking. Further, the bacilli from the cultures noted above produced no curdling of milk; therefore the bacillus coli communis was excluded. Microscopic sections of liver, spleen, kidney, placenta, and umbilical cord had as yet failed to show the specific bacilli of enteric fever, but this failure was not unusual. In the earliest investigations on this subject proof of the existence of fœtal typhoid was naturally sought for in lesions of the intestine. Thus Manzoni in 1841, and Charcelay in the same year, described changes in the small intestines of two fœtuses that suggested enteric fever. In 1862 Weiss described another case. But it was not till 1885 that bacteriological examination of the fœtal organs was first undertaken by Reher, when a sixth-month fœtus born on the nineteenth day of typhoid fever gave pure cultivations of Eberth's bacillus from its liver and spleen. Neuhauss in 1886, in a four-month fœtus gave similar results, and in 1887 the observations of Neuhauss and Widal were further confirmed. In 1893 Eberth on a third-month fœtus expelled with intact membranes got pure cultivations of the typhoid bacillus from the blood in the heart and the various fœtal organs. Similar observations have been published by Freund and Levy, Ernst, Durk, and others. In cases published last year Widal's test had been applied with varying result, mostly, however, confirmatory. The following conclusions seemed to Dr. Fordyce to be warranted: (1) That typhoid fever could be communicated to the fœtus *in utero*. (2) That as a result of this infection the fœtus might die and be expelled prematurely. (3) That the fœtus might be born alive but weakly and evidently suffering from the infection. (4) That the fœtus might be born alive and healthy, having passed through the infection *in utero*. Finally, it might be added that infection of the child in cases of maternal typhoid did not of necessity follow. Cases were on record where the most careful bacteriological examination failed to discover the pathogenic organism in the fœtal organs, for example, the cases recorded by Fraenkel and Kinderlen. The conditions under which the fœtus became infected were difficult to determine. The first experiments in the lower animals seemed to show that the epithelium covering the fœtal villi formed a barrier to the migration of pathogenic organisms as well as to the passage of other substances not in a state of solution. This, however, was not in accordance with clinical experience, and since 1882, when Arloing, Cornevix, and Thomas found the specific bacillus in a young sheep the mother of which was affected with anthrax, numerous experiments with the specific organisms of chicken cholera, glanders, septicæmia, tuberculosis, recurrent fever, and erysipelas prove conclusively that migration in these diseases could and did take place from the maternal to the fœtal circulation. According to Malvoz and others, this could take place only when there was some placental lesion destroying the villous epithelium. Others hold that living micro-organisms could directly penetrate this epithelium. Positive proof that there was no placental lesion in any given case was almost impossible. If such a lesion were necessary, then it might be produced by the organs accumulating on the villus, where it hung free in the maternal circulation. The theory of Malvoz best explained how it was that in twin pregnancies in certain infectious diseases the one fœtus was infected and the other not. Dr. Fordyce appended a bibliography.

The paper was discussed by the PRESIDENT, Professor A. R. SIMPSON, Drs. J. W. BALLANTYNE, CLAUDE B. KER, HAULTAIN, and BARBOUR; and Dr. FORDYCE replied.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

MALCOLM BLACK, M.D., President, in the Chair.

Wednesday, December 22nd, 1897.

COMPLETE OCCLUSION OF OS UTERI.

DR. MALCOLM BLACK reported a case of complete occlusion. The patient was a primipara, and had been in labour for over twenty-four hours before admission into hospital. Careful examination was made under chloroform, but it was impossible to discover any os. A small transverse incision was made in the cervix and labour allowed to progress. As tearing began two other incisions were made in the anterior and the posterior lips. The forceps was then used. Some bleeding occurred at the upper part of the vestibule, requiring two ligatures for its arrest. Beyond a little sloughing at this point the patient made a good recovery. Dr. Black afterwards referred to the etiology, and gave a historical summary of such cases.

SOME UNUSUAL CASES.

Dr. BALFOUR MARSHALL read notes of several unusual cases: (1) Six Months' Retention of Urine, probably due to the presence in the base of the bladder of a needle which made its way into the vagina under the influence of massage; (2) Supernumerary Nipples in the groin of a primipara; (3) Pernicious Vomiting at the eighth month of pregnancy requiring induction of premature labour.

MELANOTIC SARCOMA OF CLITORIS.

Dr. BALFOUR MARSHALL read a paper on a case of melanotic sarcoma of the clitoris. The patient, aged 57, passed through the menopause at 45, and had since been well. Her first symptom, noted about four months before operation, was irritation at the anterior part of the vulva, and a small tumour about the size of a large pea was felt. When first seen by Dr. Marshall it was about the size of a walnut, and had implicated the inner aspect of the nymphæ, but had not spread deeply. Two smaller nodules were also seen near the larger mass. There was slight enlargement of the inguinal glands, and the neighbouring area of skin was pigmented. At the operation there was no difficulty in keeping clear of the urethra. Microscopic specimens were shown. Dr. Marshall remarked that sarcoma of the vulva was very rare; he had been able so far to collect only 19 cases, and of these 13 were melanotic sarcoma, but only 2 seemed to have started in the clitoris. Melanotic sarcoma was rapid in growth and exceedingly malignant, spreading by the lymphatics, and giving rise to metastatic growths in other organs. Operation was unsatisfactory, only 2 cases being reported as cured. It had been alleged that this form occurred chiefly in young women, but he found that, with one exception, the age of first appearance was 40, or between 40 and 72. As to origin, Veit held that it arose from a pigmented nævus, while Taylor said that it began as a purple spot in the deep layers of the mucous membrane, which became nodular and grew rapidly into a warty tumour. The tumour shown by Dr. Marshall showed all the three conditions—namely, pigmented spots, two small nodules, and a slightly lobulated fungoid tumour.

Specimen.

Dr. Robert Jardine showed a 6-month Fœtus with an intrauterine amputation of the foot, and deformities of the other foot and hand.

Wednesday, January 26th, 1898.

Alex. Miller, L.R.C.P.Ed., L.F.P.S.G., Senior Vice-President, in the Chair.

Placenta Biloba.

Dr. Edgar showed a placenta biloba with velamentous insertions of the cord from a case of placenta prævia. The funis was 20 inches long and was inserted into the membranes 3 inches from the edge of the portion of placenta which had overlapped the internal os. The umbilical vein divided an inch from the insertion into two main branches which diverged and, accompanied by the arteries, joined the placenta 5 inches apart, the child being born through this space and rupturing one of the arteries which had entered the placenta an inch within the point of entrance of the vein.

Primary Carcinoma of Uterine Body.

Dr. Samuel Sloan reported a case of primary carcinoma of the uterine body (adenoma malignum) in which vaginal hysterectomy had been performed. The uterus itself and a microscopic section were shown. The patient, aged 57, had had four children and menstruated last three years ago. There had been a vaginal hæmorrhage for nine months with increased leucorrhœal discharge for two months, but never any disagreeable odour from the discharge. The cervix was normal in size and smooth. The uterine cavity measured 3¼ inches and with the sound felt rough. Curetting was advised, to be followed if necessary by hysterectomy. The dilatation of the cervix was suspiciously easy. A considerable quantity of soft material was removed which on microscopic examination proved to be cancerous of the glandular type. Vaginal hysterectomy was therefore performed three weeks after the curetting and the patient made a rapid recovery, all discharge ceasing after the silk ligatures came away on the sixteenth day. Five weeks after operation the roof of the vagina was found to be completely closed and only a smooth soft line of cicatrix could be felt.

Veratrum Viride in Eclampsia.

Dr. Sloan read notes of four cases of eclampsia in which veratrum viride was used. No convulsions had occurred after the first dose of the drug, and the pulse had diminished in frequency and tension. After a study of the cases he had come to the conclusion (1) that veratrum viride was a powerful or a dangerous drug according to the way in which it was used; (2) that it could be relied on, if pure, to reduce the force and frequency of the pulse where these were abnormally high; (3) that it might be of signal service as a preventive of eclampsia in cases where such a calamity threatened; (4) that it was safe to predict that the pulse would fall much lower than it had done fifteen minutes after an injection. He intended in future to allow thirty minutes to pass before repeating the dose, and, as a rule, would give no more than two injections within two hours.

Drs. W. L. Reid, Miller, Jardine, Edgar, Balfour Marshall, and J. Coulson Howie took part in the discussions.

Specimens.

Dr. Robert Jardine showed a Uterus from a case of Cæsarean Section. The patient was a 2-para, aged 22, having been previously delivered of a macerated fœtus at the seven months by craniotomy two years ago. The conjugate measured less than 2 inches. There was a vaginitis, probably gonorrhœal. The patient did well for two days but then had a rigor, and the temperature rose to 103 4° but soon fell, and did not rise above 100° again. She fell into a semiconscious condition, and died on the fifth day after operation. At the *post-mortem* examination pus was found anterior to the uterus, and there was general peritonitis. The bacillus coli and a coccus, which could not be definitely identified as the gonococcus, were cultivated from the pus. The true conjugate measured 1⅝ in. Dr. Jardine regretted that he had not done a Porro's operation in this case, and in all future cases of Cæsarean operation he intended to keep the incision as near the fundus uteri as possible. Dr. Jardine also showed two Silk Stitches which had come away eleven months after Cæsarean section. Dr. Jardine also read a detailed description, and showed drawings of the Deformities of Fœtal Limbs shown at the last meeting. Dr. Lindsay had made the drawings and provided the description.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Friday, January 28th, 1898.

Sir George F. Duffey, M.D., P.R.C.P.I., President, in the Chair.

Laryngeal Necrosis in Enteric Fever.

The President made a communication on this uncommon complication of enteric fever, based on a case that had been recently under his care in the City of Dublin Hospital. He referred generally to the occurrence of laryngeal complications in enteric fever and their relationship to the typhoid process, and mentioned the opinions that had been advanced as to their being of a specific or of a non-specific nature. The patient was a delicate-looking labouring man, aged 22. His attack of fever was characterised by a continuously high temperature, bronchitis, drowsiness, and great prostration. In the fifth week, when he appeared to be convalescing, he complained one morning, after a fit of coughing, of pain in his throat and difficulty of breathing. These symptoms were slightly relieved by treatment, but recurred next day in an aggravated form, and accompanied with noisy stridor, hoarse and weak voice, slight dysphagia, and great prostration. The epiglottis was very dependent, but there was no obstruction to the entrance of air into the lungs. He died on the seventh day after the onset of the laryngeal symptoms—the forty-fourth day of his illness. *Post-mortem* examination showed typical typhoid ulceration in the ileum in process of cicatrisation, with enlargement of the mesenteric glands and of the spleen. The larynx, which was exhibited, presented on its removal a small dirty-yellowish spot on the external and posterior surface of the plate of the cricoid. An incision through this spot opened a small abscess, which contained about half a drachm of pus. The abscess cavity separated the swollen perichondrium from the underlying cartilage, which was roughened and eroded. The President referred to a very similar case that he had reported seventeen years ago,[1] and to the comparatively few cases of the kind occurring in Great Britain and Ireland. He quoted statistics as to the frequency of laryngeal complications in enteric fever, and discussed the question of performing the operation of tracheotomy in cases presenting such urgent symptoms as those that had occurred in both his cases.

After some remarks by Dr. W. G. Smith,

Dr. E. H. Bennett said that he had a considerable time ago published the case of a man who was seized with laryngeal perichondritis a fortnight after dismissal from hospital, where he had run a protracted course of typhoid fever. Immediate tracheotomy was necessary to relieve dyspnœa. There was no suppuration. The tube could not be afterwards removed, and the patient wore it for 14 years, when he died of malignant disease. He had the specimen of a second case, in which there was an abscess in the larynx following typhoid, and in the abscess lay two pieces of necrotic cartilage.

Dr. J. Magee Finny related a case where laryngeal complications occurred in a strong, healthy Norwegian about 19 years of age. Tracheotomy had to be performed by Dr. Taylor. Recovery followed. The tube was removed in 17 days.

Dr. Hayes said it was very curious that the records of laryngeal complications from necropsies and clinical records were so different, the number from necropsies being much in excess. This, he thought, showed that the cause of the complication was very slow and insidious. He believed that in those cases of tracheotomy where the tube could not be removed afterwards the reason was that the lesion occurred on the posterior part of the larynx, where all movements in the glottis were carried out, and where, if cicatrisation should occur, the motion of the arytenoids would be impeded, and,

[1] *Dublin Journal of Medical Science*, vol. lxxi, p. 555.

therefore, stenosis would occur, so that the tube must be retained.

Sir C. NIXON thought that if tracheotomy had been performed the symptoms would have been relieved, and probably the patient's life saved. Ziemssen said that laryngeal complications were much lessened by the antipyretic treatment, but he (Sir C. Nixon) had failed to see the truth of this.

Mr. HENRY GRAY CROLY had performed tracheotomy on a case under Dr. Parsons, but with very little immediate relief to the patient. Extraordinary emphysema occurred in the neck and chest.

Dr. G. JAMIESON JOHNSTON had seen Sir G. Duffey's case in consultation. Respiration at that time was bad, but there was plenty of air entering the chest, and no cyanosis. Muscular exertion was necessary to carry out respiration, which, along with the toxin from typhoid, he thought caused death. He would not hesitate to operate again in a similar case. He thought that the lesion was primarily a perichondritis. Had tracheotomy been performed, he believed that the tube would have had to be retained, as the necrotic piece of cartilage would almost certainly ulcerate its way out through the mucous membrane at the back and lead to stenosis.

Dr. A. R. PARSONS had not seen any laryngeal complications in typhoid fever till three years ago. A patient of his, 22 years of age, had a moderately severe attack of typhoid fever, and in convalescence complained of some difficulty in swallowing. On the following evening the temperature was 104°, and he had severe dyspnœa, accompanied by well-marked laryngeal stridor. Sweating and cyanosis were present. Tracheotomy was immediately performed, but with little relief, and very soon emphysema occurred, extending down to Poupart's ligament. Death occurred fourteen hours after operation. *Post-mortem* examination showed extensive œdema of the epiglottis, enormous swelling of the arytenoids and ary-epiglottidean folds, with the formation of ulcers over the mucous surfaces. The ulcers were covered with something like a diphtheritic membrane, but more in the nature of a slough, and no pus was present. Microscopic examination showed this whitish material to be swarming with cocci of various kinds. He had seen Sir G. Duffey's case before the consultation, and, owing to the man's prostrate condition, a satisfactory examination of the larynx could not be made, as the epiglottis was dependent and could not be raised. The epiglottis itself was somewhat infected. He did not consider that the great physical prostration was to any material extent dependent on the dyspnœa. He did not think that the patient would have lived had tracheotomy been performed. Such cases he thought more likely to be cases of secondary infection by staphylococci and streptococci on account of the impaired vitality of the tissues.

The PRESIDENT, in reply, said it seemed to him that there were two classes of cases in which tracheotomy was necessary—one in which the complication occurred comparatively early, and the other class, like Dr. Bennett's patient and Trousseau's cases, in which the complication occurred after convalescence. Trousseau said that if the operation was to be done at all it should be done early rather than late. Statistics showed that a very fair number of such cases recovered after tracheotomy. The great difficulty was to keep the larynx open after the operation. He thought that this patient's death was due to great muscular exhaustion and fatigue. He agreed with Dr. Parsons that the case was one of perichondritis, and it had been proved that the disease might occur as such without any ulceration whatever.

ACUTE GOÎTRE SUCCESSFULLY TREATED BY THYROID EXTRACT.

Dr. RICHARD A. HAYES read notes of a case, and showed the patient. A. S., aged 22, applied at the Throat Department, National Eye and Ear Infirmary, on October 14th, 1897. He presented a soft goître involving both lobes and isthmus, which he stated was of three weeks' duration only. His neck measured 18½ inches over tumour; pulse 84, and quiet. A loud systolic *bruit* and venous murmur were heard over the tumour; there was marked dyspnœa, with loud inspiratory stridor on the least exertion or excitement, but the arytenoids moved outwards normally during quiet inspirations, but in a jerky manner. There was no exophthalmos, and the heart sounds were normal. The patient was ordered iodide of potassium, gr. x; tincture of strophanthus, ♏x *ter die*. After a week the tumour was almost unaltered, but the pulse-rate had gone up to 96. Five-grain tabloids of thyroid extract (B. and W.) twice daily were then ordered, and at the end of a week the dyspnœa and stridor had completely disappeared, and the systolic *bruit* and venous hum could no longer be heard. The tumour had also somewhat decreased in size. The treatment was continued, and on December 16th, or two months after the case was first seen, the goître had almost entirely gone, a slight enlargement of the left lobe alone remaining, the neck measuring 16 inches. This case probably belonged to the exophthalmic variety of goître, and on looking over the BRITISH MEDICAL JOURNAL and *Lancet* for the past eighteen months, he had found 5 cases reported as successfully treated by thyroid extract, all being exophthalmic. He had, however, at present under his care a marked case of this kind with extremely rapid pulse and much general prostration, in which not only did the thyroid extract give no relief, but he was obliged to discontinue it on account of unpleasant effects on the patient. In forms of goître other than exophthalmic he had found the results of treatment by thyroid extract very unsatisfactory, but several cases had been reported as cured and improved. In the BRITISH MEDICAL JOURNAL, January, 1897, a case of "simple" goître of nine months' standing was reported as cured in three months. In the BRITISH MEDICAL JOURNAL EPITOME, March 21st, 1896, K. P. Serapin reported good results, but gave no details; and in the BRITISH MEDICAL JOURNAL EPITOME December 7th, 1895, Marie, in the *Sem. Méd.*, November 13th, reported a successful case of five years' standing. He also quoted Sené and Bruns in "simple" goître, Bruns having in 60 cases 14 cures, 20 marked improvements, and 9 decided improvements. No details being given of these cases, it was possible that many of them might have been of the exophthalmic variety with goître only.

Sir C. NIXON had seen cases of myxœdema with complete atrophy of the gland treated with thyroid extract with extraordinary results. He understood that the administration of thyroid extract in exophthalmic goître made the symptoms worse. This was easily understood, as the giving of thyroid extract increased the amount of secretion already in excess. How was it explained that the action of thyroid extract was remediable in two opposite conditions?

Surgeon-General POTTER had seen many cases of simple goître when in India. The goîtres, although extremely large, did not cause the slightest trouble to the person. The swelling in the neck generally went away after one application of biniodide of mercury.

Dr. A. R. PARSONS said that the case was interesting, inasmuch as the enlargement of the thyroid seemed to have occurred without any definite cause; and in the absence of knowledge was it not possible that the whole thing should have subsided without thyroid extract as rapidly as it had come on?

The PRESIDENT said that perhaps some of the cases to which Sir C. Nixon had referred, and also Surgeon-General Potter's cases, were not similar to Dr. Hayes's. He took it that Surgeon-General Potter's cases were endemic, such as were common in Switzerland and in some parts of England, where the so-called Derbyshire neck existed. He saw a number of cases in the north of England similar more or less to the Swiss cases—namely, cretinous, which Dr. Murray found were much benefited by thyroid extract.

Drs. CROLY and KNOTT also spoke.

Dr. R. A. HAYES, in reply, said that their use of thyroid extract must be to a certain extent empiric. It would be a happy thing if they could adopt Sir C. Nixon's simple theory to explain cases of exophthalmic goître. How would he (Sir C. Nixon) explain those cases frequently met with of exophthalmic goître with cardiac symptoms excessively marked, and no goître at all present? He believed that Surgeon-General Potter's cases were of the endemic type; and he could himself bear out that, in certain classes of cases, good results were obtained from the application of biniodide of mercury with arsenic internally. He was inclined to agree with Dr. Parsons, because he had seen cases of exophthalmic goître get well of themselves, and rapidly; but in a case like

the present, where the patient was suffering from dyspnœa and nervous symptoms, he thought it only right to try to alleviate his trouble in whatever way seemed best.

MANCHESTER MEDICAL SOCIETY.

G. A. Wright, F.R.C.S., President, in the Chair.

Wednesday, February 2nd, 1898.

President's Address.

The President gave an inaugural address, entitled Some Unsolved Problems, chiefly Surgical.

General Peritonitis with Intestinal Obstruction.

Dr. Arnold W. W. Lea read notes of a case of general peritonitis with intestinal obstruction, the result of appendicitis. The patient, aged 18, was seized with severe abdominal pain and pyrexia. This continued for ten days. At the end of this time the abdomen became enormously distended and vomiting became incessant. When first seen the patient's general condition was good, the pulse being 100. The abdomen generally was excessively tender and very tense, the bowels had not acted for five days, and for twelve hours the vomiting had been fæcal. Rectal examination revealed a large mass of exudation filling up the pelvis, and continuing up to the brim on the right side. The abdomen was opened in the middle line. Sero-purulent fluid escaped freely from the general peritoneal cavity; the coils of intestine were reddened and much distended. The finger passed down towards the right iliac region revealed numerous recent adhesions. These were separated, and a large abscess was opened. Over a pint of fæculent pus escaped. The abscess cavity filled the pelvis, and lying on its outer wall, below the level of the pelvic brim, the appendix was felt. It was not removed. The cavity was flushed out and a large drainage tube inserted. Sutures were now inserted in the abdominal wound to shut off the abscess cavity from the general peritoneum. As the distension of the coils of bowel was so extreme, a loop of small intestine was pulled out and punctured with a large trocar. Over a pint of fluid fæces escaped. The puncture was closed by Lembert's suture and the loop returned. Several collections of sero-purulent fluid were now discovered amongst the coils of bowel. The adhesions were broken down and several strips of moist sterilised gauze passed among the intestines in various directions. The patient stood the operation well, the pulse being 100 half an hour later. The vomiting ceased, and flatus was passed within six hours, and the next day the bowels acted freely. The after-progress of the case was very satisfactory. The gauze was removed at the end of forty-eight hours, and the tube was taken out in a week. The patient was now—ten months after the operation—in excellent health, and had had no further trouble with the appendix. General peritonitis secondary to appendicitis was in most cases rapidly fatal, but recently several successful cases had been recorded. The diagnosis of the cause of the peritonitis was at first obscure. There had not been at any time a localised swelling in the iliac region nor any dulness. In these cases the appendix lay in the pelvis, and rectal examination was of the utmost value in making a diagnosis of appendicitis. The intestinal obstruction was secondary to paralysis of the gut, the result of bacterial invasion and peritonitis. In the treatment of these cases after draining the abscess cavity and the general peritoneum, the management of the distended bowel was of the highest importance. If nothing were done to relieve the tension, obstruction was likely to continue after operation and prove fatal from paresis of the gut. Puncture and drainage of the intestine relieved the over-distended coils of bowel and enabled active peristalsis to again commence. In this case a small trocar acted well, but it might be advisable to make a small incision, and allow free drainage for a short time and then suture the wound in the bowel wall. The gauze drains in the general peritoneal cavity were of great use in preventing any reaccumulation of fluid among the adjacent coils of bowel. This did not appear to cause any pain, and could be removed without difficulty.

Suppurative Disease of Frontal Sinuses.

Dr. Milligan read a paper upon the etiology and treatment of suppurative disease of the frontal sinuses. The anatomical relation of the parts was first dealt with, special reference being made to the importance of the fronto-ethmoidal cells both scientifically and clinically. The occurrence also of the occasional continuation of the infundibular tract directly into the opening of the ostium maxillare was pointed out and its importance emphasised. Acute catarrhal and acute suppurative frontal sinusitis were considered in some detail and various methods of treatment mentioned. The etiology of latent empyema of the frontal sinus was next considered and the difficulty of its accurate diagnosis pointed out. Its coexistence also with suppurative disease of the ethmoidal labyrinth was detailed and the relation of this to subsequent treatment pointed out. With regard to its treatment, it should be considered both as regards operative and non-operative interference, intranasal and extranasal. The non-operative treatment was then reviewed—namely: The use of antiseptic lotions, syringing by means of a specially constructed cannula *per vias naturales*, pinning down redundant mucous membrane by means of an escharotic, the use of antistreptococcic serum, and the employment of oxygen gas. The operative treatment was next reviewed—namely: Anterior turbinectomy (middle turbinated body) and the various methods of opening the sinus externally. A median incision was advocated, and the importance of securing free fronto-nasal drainage was considered an absolute essential for a successful termination of the case. The various methods of dealing with the mucosa lining the frontal sinuses were then reviewed, and Kuhnt's method was specially commended. Of 15 cases which had been operated upon, 9 of the patients were males and 6 were females. In 13 cases the sinusitis was unilateral, in 2 cases bilateral. In 5 cases the right sinus was affected, in 12 cases the left. In all the cases with the exception of one (a subacute case) other accessory sinuses were similarly involved, and a statistical review of the sinuses implicated was then mentioned.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, February 10th, 1898.

Microscopical and Pathological Section.

F. T. Paul, F.R.C.S., in the Chair.

Sebaceous Adenomata.

Mr. G. G. Hamilton read a note on sebaceous adenomata. He endeavoured to distinguish these from all other growths of the skin, and to limit the use of the term "adenoma" to what he conceived to be its true meaning. He described a great many pathological conditions, which he had found to be included in the general term "wen." The note was illustrated by casts and lantern and microscopic slides.

The Chairman said he thought they were much in want of evidence as to what constituted a typical sebaceous adenoma. The sections shown as adenoma of the scalp were derived from a well-known case of Mr. Rushton Parker's, in which the growths were clearly proved to have arisen in the sweat glands.

Messrs. Rushton Parker, Buchanan, Newbolt, Larkin, and Boyce also took part in the discussion.

Action of Leukæmic Blood on Typhoid and Anthrax Bacilli.

Dr. Buchanan read a note on the action of the blood from a case of spleno-myelogenous leukæmia upon typhoid and anthrax bacilli. His experiments were carried out by means of hanging-drop preparations of the blood inoculated from a twenty-four hour culture of typhoid or anthrax. The preparations with controls were kept in an incubator, and were examined in a suitable manner at various intervals up to thirty-two hours. The characters and behaviour of the cells and bacilli were minutely described. The fine oxyphile and hyaline cells exercised the most marked phagocytosis towards the anthrax bacilli. The myelocytes showed none. There was no phagocytosis of the typhoid bacilli. The various changes in the bacilli were pointed out. He stated that, contrary to the general opinion, he found that the coarse eosinophile leucocyte was phagocytic towards the anthrax bacillus.

A discussion followed, in which Professor Sherrington, Dr. Grünbaum, and Mr. Ross took part.

THE SERUM DIAGNOSIS OF TYPHOID FEVER.

Dr. CHRISTOPHERS read a note on the action of normal serum in relation to the differentiation of the typhoid bacillus from allied forms. He held that serum diagnosis was not of as much use as had been expected in the differentiation of the typhoid bacillus. He, in common with others, had found that most typhoid human serums caused agglutination of undoubted colon bacillus, even when the serum was considerably diluted (1 to 30 to 1 to 200). This action he found was just as powerful in normal human serum and in horse's serum. Colon organisms from milk, sewage, shellfish, and other sources were experimented on with like results. He thought the varying degrees of dilution he had to use depended upon the degree of attenuation of the organisms and not on the serum used. After describing in detail, with lantern illustrations, his various experiments, he urged (1) that it was of very great importance in serum diagnosis of typhoid bacilli to recognise the extreme state of attenuation and consequent susceptibility in which organisms might exist in natural media, such as milk and water, (2) that unless the state of attenuation of an organism were first determined it was useless to apply a specific serum as a differentiating agent; (3) that it was probable that this action of normal serum on greatly attenuated organisms was capable of explaining many contradictory results in the diagnosis of the typhoid bacillus by the serum method.

Professor BOYCE and Drs. GRÜNBAUM and ABRAM discussed the communication.

SPECIMENS.

The following specimens were shown besides those illustrating notes:—Dr. DUTTON: Endothelioma (with lantern demonstration).—Mr. PAUL showed a purely Colloid Cancer, from centre to margin, with a single colloid gland, from a woman, aged 41.—Professor SHERRINGTON showed a very beautiful series of Preparations of Salamander Epidermis illustrating Karyokinesis.—Mr. DOUGLAS CRAWFORD showed a section of a fragment of Laryngeal Carcinoma removed by Mr. Bark for diagnostic purposes. He also showed a pathological preparation illustrating a cause of painful Interphalangeal Joint.—Dr. BUCHANAN showed microscopical preparations illustrating the characters of Asthma Sputum. He demonstrated that the cells of this sputum were almost entirely coarsely granular oxyphile leucocytes. He also showed a specimen of Charcot-Leyden Crystals and several of Curschmann's Spirals. He demonstrated that these latter might be simple or compound, and described the physical and chemical characters, their microscopical constituents, and how he believed they were formed.—Mr. S. KELLETT-SMITH showed some Gall Stones from the duct of a horse, illustrating a rare result of mutual compression. They were all perfect cubes.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on January 28th, F. MARSH, F.R.C.S. (Birmingham) Vice President, in the chair, Mr. ATWOOD THORNE showed for the PRESIDENT, a man, aged 21, who had been operated on for an Extradural Abscess. The patient made an uninterrupted recovery, and until lately had had no pain. During the last few days he had had some pain, and granulations were seen to be present. Dr. MILLIGAN said it was remarkable how serious intracranial conditions might be accompanied by comparatively few prominent symptoms, for a time at least. Dr. WILLIAM HILL and Mr. MARSH suggested that a further mastoid operation would be needed. It was frequently necessary to operate more than once.—Mr. F. MARSH read a paper on Five Cases of Cerebral Abscess due to Ear Disease.—Mr. BALLANCE read a paper on Some Lessons in the Diagnosis and Treatment of Intracranial Complications in Otitis Media gleaned from twelve fatal cases. Dr. MILLIGAN said he had had only once had the opportunity of using antistreptococcic serum in a case of septicæmia following chronic suppurative middle-ear disease, and it had not proved to be of the slightest value. In Manchester they had had an unusual experience of cerebral abscess following influenza in several of which the abscess had been located in the frontal lobe. Dr. LUNN remarked on the usefulness of Mr. Ballance's suggestion to fasten the jugular vein to the skin incision.—Mr. ST. GEORGE REID read notes of a case of Traumatic Rupture of the Tympanic Membrane in a child, aged 9 years, caused by a fall on the point of the chin. There was no loss of consciousness or any symptom of fractured base; slight oozing of blood was noticed from the external meatus, and on examination a linear perforation was found in the posterior segment running in the direction of the fibres, with raw edges from which the blood was oozing. There was slight temporary deafness but no other injury of the head whatever. He believed this was the only case recorded of rupture of the membrane from this form of violence.—Mr. ATWOOD THORNE showed for the PRESIDENT a case of Lupus of the Nose, and also a man, aged 50, with a black patch of Pigmentation on the Soft Palate, which the patient had first noticed four years previously, and was uncertain whether it had increased or not. The degree of pigmentation had not altered; the patch was not raised, caused no trouble, and was only discovered in the routine examination of the mouth.—Mr. F. MARSH showed a case of Multiple Papillomata of the Larynx. The patient, a man aged 36, had suffered for seven years from aphonia, and latterly from aching pain in the throat after using his voice, which was now a hoarse whisper. When seen four months ago by Mr. Marsh there were two bunches of papillomata on each of the true cords at about the junction of the middle and anterior thirds. A spray of pure rectified spirit had been used with some slight benefit, and removal by thyrotomy was contemplated, as the patient was not willing to submit to intralaryngeal removal. Dr. MILLIGAN would advise touching the growths with the galvano-cautery, as the patient's larynx was a roomy one and very easy to examine.—Mr. WYATT WINGRAVE showed a man, aged 48, suffering from Ulceration (Malignant) of the Right Tonsil, extending to the faucial pillar and tongue, which had commenced as a small sore on the tonsil, and was thought to be of syphilitic nature by the patient. A portion was removed, and microscopic examination showed simply small cell tissue. Under iodide of potassium it entirely disappeared, but seven months ago the ulceration reappeared, and further microscopic examination showed well-marked stratified epithelioma. He had but little pain, and had only lost 4 lbs. in weight during fourteen months. Mr. MARSH agreed with Mr. Wingrave that the case was another illustration of the frequency with which epithelioma supervened on tertiary syphilitic ulceration in the buccal cavity.—Dr. FURNISS POTTER showed a case (previously exhibited at the Laryngological Society of London) of Malignant Disease infiltrating the Left Side of the Larynx in a Man, aged 64. There was no history of syphilis. The only symptoms complained of were hoarseness for nine weeks previously, with a slight pain occasionally shooting into the left ear; there was no dysphagia, but slight stridor occasionally. Iodide of potassium had been taken in doses increasing to grs. xx, but with no appreciable effect. Mr. MARSH thought that, as the growth was not of long duration, was as yet limited within the walls of the thyroid cartilage, and as there was no evidence of glandular infection, there was a reasonable chance of a complete extirpation, and was of opinion an excision should be performed. Dr. MILLIGAN would be disposed to perform a thyrotomy. In the event of the disease being found much more extensive than appeared on laryngoscopic examination he would advise partial excision of the larynx.

KIDDERMINSTER MEDICAL SOCIETY.—At a meeting on January 28th, Mr. S. STRETTON, President, in the chair, Mr. J. L. STRETTON showed: (1) Two Enlarged Bursæ Patellæ, removed from two girls, aged respectively 21 and 22. The wounds in both instances healed in ten days, and the girls were able to be about again within three weeks. (2) A Large Sequestrum removed from the upper end of the Humerus of a lad aged 18. He had been working in a coal pit, and did not feel anything wrong until a month before admission, when his arm began to pain and gradually became swollen. There was no injury, but a distinct tuberculous history. After operation he gained 2 stone weight in a month. Mr. J. L. Stretton also read notes of the following cases: (1) Enlarged Prostate in a youth aged 19. He was of a neurotic temperament, and complained of indefinite pains in the perineum. Upon examination the prostate was felt as large as a bantam's egg. He denied masturbation. After being treated for some time without benefit he was put upon thyroid tablets thrice daily, with

the result that the enlargement entirely subsided, and his neurotic symptoms were considerably reduced. (2) A youth, aged 18 years, who on January 6th, while playing with a dirty game carver, pierced his Abdomen. On admission there was a wound about an inch long in the middle line, midway between the umbilicus and the ensiform cartilage, through which a small tag of omentum was protruding. Under an anæsthetic the wound was slightly enlarged, and the omentum returned. There was no evidence of bleeding, no escape of gas, no fæcal odour, and nothing abnormal could be detected with the finger. The wound was closed, and dressings applied. No bad symptoms supervened, and he was up and about in nineteen days' time. (3) A youth, aged 17, who was admitted with what appeared to be Malignant Disease of the Left Tonsil and Soft Palate. On admission the left tonsil was as large as a walnut, and spread forwards along the soft palate and outer pillar of the fauces, and backwards and downwards along the posterior wall of the pharynx. The glands of the neck on the same side were enlarged. A portion of the growth was sent to the Clinical Research Association, and they reported that it was an innocent enlargement. On December 16th the tonsil and uvula were removed. Following this there was considerable swelling, and an appearance of growth at the seat of operation. No improvement took place until January 11th, when he was seized with an attack of acute rheumatism, during which the throat cleared up, and there was now very little enlargement to be seen. Mr. Stretton also showed an Ovary removed from a lady, aged 43, who had suffered from intractable neuralgic pains. She made a satisfactory recovery.—Mr. Oliphant showed a case of Exophthalmic Goître, and read a paper on the subject.

Birkenhead Medical Society.—At a meeting on February 11th, Dr. Lambert in the chair, Dr. Gilson read notes and showed a patient suffering from Progressive Muscular Atrophy.—Dr. Francis Johnston opened a discussion on the Therapeutics of Bleeding and Cupping. Drs. Lambert, Hughes, Stansfield, Edgar Stevenson, and Pinkerton took part in the discussion, and Dr. Johnston replied.—Dr. Stansfield read notes and showed a specimen of Hair which he had removed by operation from a case of Parovarian Dermoid Cyst. Dr. Lawton gave the history of the case previous to being operated on.

West Kent Medico-Chirurgical Society.—At a meeting on February 4th, at the Miller Hospital, Greenwich, Dr. E. H. Ezard, Vice-President, in the chair, a discussion took place on the Serum Treatment of Disease. Dr. G. Sims Woodhead first explained the principles on which antitoxin was produced. It was the result of interaction between toxin when introduced into the body and certain cells of low specialisation, such as those of the connective tissue group. The best method of producing antitoxin was by accustoming a horse to gradually-increased doses of toxin. Antitoxin was thus produced in the blood. The animals had then two kinds of immunity: active, which enabled the tissues to react against toxin, and passive due to the presence of antitoxin. Smaller doses of antitoxin were efficacious in the earlier stages of diphtheria than in the late, as it was easier to neutralise the toxin when circulating in the blood than when it had attacked the cells, and degenerative changes in the latter could not be undone by antitoxin. Large doses injected in the early stages acted magically. One of the dangers was that improvement was so marked that people were likely not to be so careful, and syncope might result. Dr. Woodhead dealt with serum treatment of tetanus, plague, typhoid fever, etc., explaining the differences in principle between the treatment of some of those and of diphtheria. He mentioned the fact of cultures of the streptococcus of erysipelas and bacillus prodigiosus being said to cut short the growth of carcinoma. About 200 units of antitoxin were sufficient to protect a person against diphtheria for about three weeks, but on the first day of the disease about 600 to 1,000 units were required, and much larger doses on the second day. An erythematous rash and pains in the joints were often produced, especially in prophylactic injections, and were due to the person getting about and not being dieted. Wine and brandy predisposed to them. The unit of toxin was the amount which would kill a guinea-pig of 250 grammes in four days. The unit of antitoxin was the amount which would protect the same guinea-pig against 100 lethal doses of toxin. The discussion was continued by Drs. Hartt, Parke, Meggison, Bowen Williams, Payne, Henry, and Ezard; and a vote of thanks to Dr. Woodhead was carried. Dr. Woodhead replied, and the meeting adjourned.

South-West London Medical Society.—The monthly meeting of the South-West London Medical Society was held on February 9th; the chair was taken by the President, Mr. T. A. I. Howell. Mr. Donald Gunn read an interesting paper on the Ocular Troubles occurring during Pregnancy and Parturition.

REVIEWS.

Clinical Diagnosis; the Bacteriological, Chemical, and Microscopical Evidence of Disease. By Professor Dr. v. Jaksch. Translated from the Fourth German Edition, and Enlarged by James Cagney, M.A., M.D. Third Edition. London: Charles Griffin and Co., Limited. 1897. (Demy 8vo, pp. 550. With numerous Illustrations, partly in Colours. 28s.)

It is almost impossible to look through this work without being struck by the enormous amount of practical knowledge contained in it. The excellence of the book is in great measure explained by the fact that Professor v. Jaksch stands among the very first of clinicians deeply conversant with laboratory methods.

We have in former reviews indicated the scope of this work, so that here it will suffice to point out some of the additions and alterations. In the first place, it may be stated that the book has been brought thoroughly up to date. Among bacteriological subjects additions have been made to the account given of the influenza, tetanus, and diphtheria bacilli, and the pyogenic microbes. The author observes that the influenza bacillus is of diagnostic value only when its cultivation peculiarities have been elicited. As might be expected, the space given to the diphtheria bacillus has been considerably enlarged. In the observations on the coating of the tonsils a paragraph is given to deposits due to the streptococcus, staphylococcus, and diphtheria bacillus, and a full description has been added of the method to be pursued in making a bacteriological examination of suspected exudation from the throat. An account of the serum diagnosis of enteric fever has been most properly introduced by Dr. Cagney. It is largely borrowed from Professor Delépine's well-known contributions to this subject. A more definite expression of opinion as to its value than that to be gathered here by merely reading through the text would have been of service. That Widal's test has limitations is very generally conceded. The present view would appear to be that the test is a valuable adjunct to our resources, but as in the case of nearly every single sign or symptom, a diagnosis cannot rest exclusively upon it.

An account of the vegetable and animal parasites infesting the skin might have found a place in this work, as it is very inconvenient to have to consult different textbooks for closely allied subjects. Considering the fulness with which chemical and microscopical methods are very properly dealt with, it is somewhat disappointing to find that only 20 pages are allotted to methods of bacteriological research. The descriptions are in consequence so brief as to be of little value in a laboratory even to a beginner. In the chapter on animal intestinal parasites nearly all the illustrations are new, and include a few additional ones. They are mostly taken from Dr. Cori, and are beautifully executed, as indeed are all the illustrations in this work.

Kjeldahl's method of estimating the total amount of nitrogen in the urine, together with an illustration, has been very fitly added, as the investigation into metabolic processes has received much attention lately. Under Glycosuria a paragraph on alimentary glycosuria is included, but its possible diagnostic value in early diabetes is only just hinted at. Hoppe Seyler's test for sugar as well as the resorcin test have also been introduced here. What in one or two instances may

appear to English readers as strange omissions are supplied by Dr. Cagney; we refer especially to Gowers's hæmatocytometer.

It will be readily admitted by those who have used Professor v. Jaksch's book that it ought to find a place in every laboratory intended to supplement clinical observation. Not only has the translation been admirably done, but Dr. Cagney has even increased the value of the work by his additions, such additions being placed in square brackets. The single feeling of regret inspired by this book is that Dr. Cagney is no longer with us, but that untimely death has recently carried off this promising physician and worker.

MEDICAL DIAGNOSIS: A MANUAL OF CLINICAL METHODS. By J. J. GRAHAM BROWN, M.D., F.R.C.P.Edin., F.R.S.E. Fourth Edition. Revised and enlarged. Edinburgh: William F. Clay. 1897. (Crown 8vo, pp. 428, 112 illustrations. 9s.)

THIS book, after having been out of print for a considerable time, now appears in its fourth edition revised and enlarged. After an account of the general aspects and condition of the patient, the author details the examination of the various systems, commencing with the alimentary. Then after a description of the examination of the blood he deals in order with the circulatory, respiratory, integumentary, urinary, and nervous systems. A sufficient account of the examination of the throat, nose, and eye is also included. Under each system a short description is first given of the symptoms more or less common to diseases of the organs belonging to it. The chemical and microscopical examination is also described, and is mostly well up to date. The cholera vibrio is by some mistake stated to be 2 μ long and 5 μ broad. Under the examination of the sputum the directions are not always quite precise enough for the beginner. In making cover-glass preparations it is simpler to put a few drops of the stain on the cover glass, and to heat this over the flame rather than to use watch glasses. The specimen should in the first instance be examined in water. The chemical examination of the urine both quantitative and qualitative is given at much length. The author's perigraph is described under mensuration of the chest. The descriptions in this book are clear and full, and the subject matter is well arranged. At times it errs, if anything, on the side of being too full, if this is to be looked upon as a fault.

CATECHISM SERIES: SURGERY. Part V. Injuries and Diseases of Muscles and Nerves (Club Foot, Whitlow, Ganglion, etc.), Venereal Diseases and Regional Surgery, Injuries and Diseases of the Head. Edinburgh: E. and S. Livingstone. (Cr. 8vo, pp. 64, 8 illustrations. 1s.)

THE system of teaching a subject by a book of "questions and answers" may be of much service in imparting a knowledge of history to young pupils, but is entirely out of place when applied to such a subject as surgery or anatomy. On this account we cannot recommend the present volume to the student of medicine. If, however, such a method of imparting a knowledge of the principal facts of surgery be considered by a teacher to be advisable, the book adopted ought to be absolutely correct in all the statements which are made. Such, however, is not the case in the book published by Messrs. Livingstone.

In discussing the subject of tenotomy of the tibialis posticus, the tendon is stated to be "on a level with the internal malleolus," and "the risks of the operation" are said to be "wound of the dorsal artery of the foot, and wound of the long saphenous vein." We presume that in this case the tibialis anticus is intended. Under the heading of Talipes Equinus, one of the important causes of the affection mentioned is "irritation caused by worms, or nervous disturbances during teething."

When dealing with the after-treatment of osteotomy, the use of "a single or double long splint, with extension if necessary," is mentioned, but no reference is made to the value of encasing the affected limb in a plaster-of-paris covering. In dealing with the treatment of a whitlow it is recommended that "a whitlow must be opened *with brains*."

Another example of a loose description is met with on p. 25, where the contents of a ganglion are said to be "a clear, jelly-like substance resembling in consistence and appearance the eye of a cod-fish;" whilst the treatment for this affection is to "puncture and squeeze out the contents, and apply pressure, iodine, or blisters." In the section on venereal diseases, the vagina and vulva are said to be the parts which are chiefly involved when the disease affects the female. In the third section the answer to the question, "What takes place in suppuration under the pericranium?" the following statement is given: "The pus gravitates to the most dependent positions until arrested by its attachments, and, according to its position, may form a bag bulging over the orbits, the root of the nose, or above the zygoma, or passing down towards the neck behind."

SYSTEM OF DISEASES OF THE EYE, BY VARIOUS AMERICAN AND EUROPEAN AUTHORS. Edited by WILLIAM F. NORRIS, M.D., and CHARLES A. OLIVER, M.D. Vol. II. London and Philadelphia: J. B. Lippincott Company. 1897. (Roy 8vo, pp. 556. 21s.)

THE second part of this elaborate work comprises the following branches of ophthalmology: Method of Determining the Acuity of Vision, by Herman Snellen; Mydriatics and Myotics, by Herman Snellen, jun.; the Examination of the Eye by means of various Optical Instruments, by L. Laqueur, G. M. Gould, E. Jackson, A. Javal, jun.; and W. S. Dennett; the Balance of the Extraocular Muscles, by G. T. Stephens; Perimetry, by T. R. Pooley; Colour Blindness, by W. Thomson and Carl Weiland; School Hygiene, by S. D. Risley; the Causes and Prevention of Blindness, by J. Minis Hayes; Antiseptics as applied to Eye Operations, by J. A. Andrews; Micro-organisms of the Conjunctiva and Lachrymal Sac, by Joseph McFarland.

As is natural with a work compiled by various authors, all of whom have made the subject of their article more or less their own, a very complete and thorough treatise is produced, and the different individualities of the authors lend a special interest to the volume. On the other hand, we almost necessarily have much repetition: thus, those who have read Dr. Edwin Jackson's book on *Skiascopy* will find little which will strike them as fresh; the same applies to Dr. Stephens's chapter on Eye Muscles as well as to others. It is, however, a common occurrence that those who have made a special study of a certain subject are asked over and over again to write articles on it, whereas it would be interesting to hear the views of others who are perhaps as capable as the author of greater repute. The extremely important subject of colour vision is ably treated, and the article on school hygiene is one which it is hoped will attract the attention of those who are responsible for the education and the housing of boys and girls at this most important period of their lives.

The chapters on antiseptics and bacteriology as applied to ophthalmic surgery should be very useful to the practical surgeon, who possesses frequently but a rudimentary knowledge of the subject.

The illustrations are excellent, and the volume is worthy of the many eminent men who contribute to the "System."

NOTES ON BOOKS.

YEAR BOOKS.

The Municipal Year Book for 1898, edited by ROBERT DONALD (London: Edward Lloyd, Limited. Cr. 8vo., 2s. 6d.) is something more than a directory, for under the head of each town a description is given of the main features of its municipal administration, and special articles describe the characteristics of the municipal code in England, Scotland, Ireland, and London. Special chapters are given also to the large industries which in recent years have been more and more generally taken up by the municipalities (water, gas, electric light, tramways, artisans' dwellings). A table showing the rates levied in various towns might be extended with advantage. The volume has been enlarged to include an account of some of the larger district councils. This edition, it is stated, has been revised from official sources, so as to ensure

accuracy, and its general character is such as to make it very convenient for general reference.

The Local Government Annual: an Official Directory, is now in its seventh year of publication. It contains the usual lists of boards, vestries, and councils, with their officers. There has been added to the present edition an abstract of local government legislation in 1897, summaries of legal decisions, outlines of the chief powers of various local authorities, and certain statistical information bearing on public health and Poor-law administration. The volume is published by the *Local Government Journal* (London: Cr. 8vo. 2s. 6d.)

We need hardly do more than announce the appearance of a new edition, the thirty-fourth, of *Herbert Fry's Royal Guide to the London Charities*, edited by John Lane. (London: Chatto and Windus. Cr. 8vo. 1s. 6d.) The volume is invaluable to all persons who may be called upon to advise as to giving charitable assistance, and a great deal of time and correspondence might be saved if it were more generally used.

We have received a copy of *Dod's Parliamentary Companion* for 1898. (London: Whittaker and Co. 4s. 6d.) The work contains a list of the House of Lords, of the House of Commons with biographies of members revised by themselves, and lists of the present and late Ministries. Among the additions to the House of Lords is to be noticed the name of Baron Lister. The publication is a very useful work of reference, and contains a great deal of information. It is in its sixty-fourth year (seventy-fourth edition).

Elements of Latin for Students of Medicine and Pharmacy. By G. D. Crothers, A.M., M.D., and H. H. Bice, A.M. (Philadelphia: F. A. Davis Co., 1898. Cr. 8vo, pp. 254. 1.25 dol).—We fail to see the purpose with which this book was written. It is a very incomplete Latin grammar, in which the words used as examples and in the exercises are medical terms. Its Latinity may be judged from the fact that the words "*omni bihoris*" are said to be the Latin for "every second hour." Those who know Latin will not take the volume seriously, and to those who do not it will not, we fear, be of much use.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

STERILISED HUMANISED MILK.

Four samples of Sap Brand Humanised Milk have been submitted to bacteriological examination. In each instance the presence of spore-bearing organisms was detected, the bacillus mesentericus vulgatus being the most common; the bacillus subtilis was found in two samples. The milk in each case was sweet, normal in appearance, and contained a good proportion of cream. No pathogenic organisms were observed, but a detailed investigation to exclude their presence was not undertaken, the chief object being to ascertain whether the milk was sterile or not, in samples which to appearance and taste were suitable for consumption. In expressing an opinion whether a sample of "sterilised milk" fulfils thi condition, a distinction must be drawn between the term "sterile" as used in its strictly bacteriological sense, or as implying for practical purposes that degree of sterility which is necessary for the proper preservation of the milk, and for ensuring the absence of directly pathogenic organisms. The samples under consideration appear to fulfil this latter condition, since the spores of only highly-resistant and innocuous organisms were detected. As is well known to bacteriologists, the majority of "sterilised milks" which are on the market are not sterile strictly speaking, for it appears to be an impossibility to ensure this condition and at the same time preserve the taste, appearance, and probably the nutritive qualities of the milk.

For practical purposes, if the milk in the bottles at the time of opening is sweet to the taste, normal in appearance, without acidity, ropiness, or clotting (apart from the collection of cream at the surface), it may be considered as fit for consumption. Such milk cannot be guaranteed so absolutely sterile as regards harmful spore-bearing organisms, though the risk is reduced to a minimum, and is less than in the case of ordinary, fresh, unsterilised milk, for it must be remembered: (1) The degree of sterilisation employed has been sufficient to destroy all except the resistent, spore bearing, and for the most part harmless, micro-organisms; (2) the milk is preserved under practically anaërobic conditions, and hence the spores in most instances will not develop; (3) obvious changes, for example, clotting, will be produced if any growth has taken place in the case of some of the more common organisms, for example, bacillus mesentericus; (4) though it is possible that an anaërobic, spore-bearing, pathogenic organism such as the bacillus enteritidis sporogenes might be present, yet the presence of this organism might be detected by keeping the unopened bottle of milk at a temperature of 39° C. for twenty-four hours, when clotting would be observed.

In conclusion, although this milk cannot be guaranteed as absolutely sterile, in practical use no harm may be anticipated from its consumption if the milk is normal in appearance and taste when the bottle is opened.

If further certainty is deemed necessary, the precaution may be taken of (1) keeping the milk warm at about 39° C. for twenty-four hours before use; (2) pasteurising, or boiling the milk immediately before consumption. The milk is prepared by the Milk Preparations Company, Brentwood, Essex.

MIDWIVES AND OBSTETRIC NURSES.

We print below the text of the Midwives Registration Bill, 1898, for a copy of which we are indebted to Mr. Rowland Humphreys, L.R.C.P., etc., Honorary Secretary of the Midwives Bill Committee. The Bill is identical with that introduced by Mr. Tatton Egerton last year, but the fortune of the ballot has decreed that the first name on the list of its backers this year shall be that of the Right Hon. J. B. Balfour, Q.C., Lord Advocate of Scotland in Lord Rosebery's Ministry. The Bill was read a first time on February 11th; and Mr. Humphreys adds that, as it has the first place on the list for May 11th, the second reading cannot be "blocked," and a division must be taken.

We also publish the text of the Obstetric Nurses Registration Bill, prepared by a Subcommittee of the Parliamentary Bills Committee, and, by direction of the Committee at its last meeting, forwarded to members of the Council of the British Medical Association for consideration prior to the next meeting of Council.

MIDWIVES REGISTRATION BILL.

MEMORANDUM.

The chief object of this Bill is to enable the public, and especially such of the poor as are in the habit of employing midwives, to distinguish between those midwives who have been trained and have given evidence of being competent for their duties, and those who have not.

This Bill provides that henceforth no woman shall call herself a midwife unless she has been placed on the midwives' register, and that in order to be placed on the register she must produce evidence either (1) of having undergone a proper training and subsequent examination or (2) of having (at the time of the passing of the Bill) been in *bonâ fide* practice as a midwife for a specified number of years. It is not proposed to make it illegal for a friendly neighbour to render assistance to a lying in woman in an emergency.

A system of examination and certification by various voluntary bodies has been established for several years in the chief centres of population It proposed to place the duties hitherto undertaken by these voluntary bodies in the hands of a duly constituted Board, acting under State control. It is further proposed to make provision for the efficient regulation and supervision of the practice of midwives under rules approved by the General Medical Council, and for the exercise of discipline amongst those who are enrolled upon the register.

See Reports of Select Committee on Midwives Registration, together with the proceedings of the Committee. Minutes of Evidence, Appendix

and Index, ordered by the House of Commons to be printed June 17th, 1892, and August 8th, 1893.

ARRANGEMENT OF CLAUSES.

Clause.
1. Short title.
2. Definitions.
3. Registration.
4. Provision for existing midwives.
5. Constitution and duties of the Midwives Board.
6. Fees and expenses.
7. Appointment of registrar.
8. Supplemental provision as to register.
9. Local supervision of midwives.
10. Notice of death of a midwife.
11. Penalty for obtaining registration by false representation.
12. Penalty for wilful falsification of register.
13. Prosecution of offences.
14. Appeal.
15. Act not to apply to medical practitioners.
16. Extent of Act.

A BILL FOR THE REGISTRATION OF MIDWIVES.

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title.*—This Act may for all purposes be cited as the Midwives Registration Act, 1898.

2. *Definitions.*—In this Act

The term "midwife" means a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act.

"Midwives register" means a register of midwives kept in pursuance of this Act.

"Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

3. *Registration.*—(1) From and after the first day of January, one thousand eight hundred and ninety——, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act, or is specially qualified to act as a midwife unless she be registered under this Act.

(2.) Any person who, after the first day of January, one thousand eight hundred and ninety——, not being registered under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding five pounds.

(3.) No woman shall be placed on the midwives register until she shall have complied with the rules and regulations to be laid down in pursuance of the terms of this Act.

(4.) The certificate of registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate, or any certificate of the cause of death.

4. *Provision for Existing Midwives.*—Any woman who, before the expiration of two years from the passing of this Act, claims to be registered under this Act, shall be so registered provided she produces evidence, satisfactory to the Midwives Board, that at the passing of this Act she has either been in *bonâ fide* practice as a midwife for a period of two years, or holds a certificate in midwifery from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the Board.

5. *Constitution and Duties of the Midwives Board.*—On the passing of this Act a Midwives Board shall be constituted by the General Medical Council, and shall consist

(1) Of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute; and

(2) Of six persons to be appointed for terms of three years by the Lord President of the Council.

One-third of the elected members of the Board shall annually retire, but shall be eligible for re-election after the lapse of one year. The duties of the Midwives Board shall be as follow:

To make rules for regulating the conditions of admission to the register, and the mode of conducting the qualifying examinations.

(*b*) To appoint examiners.

(*c*) To decide upon the places where, and the times when, examinations shall be held.

(*d*) To frame for approval by the General Medical Council rules regulating the admission to the register of women already in *bonâ fide* practice as midwives at the passing of this Act.

(*e*) To prepare and publish annually a register of midwives.

(*f*) To frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives.

(*g*) To decide upon the conditions under which a midwife may be suspended from practice.

(*h*) To decide upon the removal from the register of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Midwives Board or for other misconduct, and to decide upon the restoration to the register of the name of any midwife so removed.

And generally, to do, subject to the approval of the General Medical Council, any other duty which may be necessary for the due and proper carrying out of the provisions of this Act.

6. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination or registration such fees as the Midwives Board may, with the approval of the General Medical Council, from time to time determine. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. The said Board shall devote such fees to the payment of expenses connected with examination and registration, and to the general expenses of the Board. Should these fees not equal the expenditure of the Midwives Board, the deficiency shall be supplied from the respective local county funds, in proportion to the number of registered midwives resident in the county.

7. *Appointment of Registrar.*—The Midwives Board shall appoint a registrar who shall be charged with the custody of the register, and shall also act as secretary to the Board.

8. *Supplemental Provision as to Register.*—A copy of the midwives register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always, that in the case of any woman whose name does not appear in such copy, a certificate under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

9. *Local Supervision of Midwives.*—Every local sanitary authority throughout England and Wales shall, on the passing of this Act, appoint its medical officer of health or other registered medical practitioner or practitioners, as the local supervising authority over midwives in the sanitary district. It shall be the duty of the local supervising authority—

(1) To exercise general supervision over all midwives practising within the sanitary district in accordance with the rules to be laid down under the provisions of this Act.

(2) To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within his district, and, if he consider that a *primâ facie* case is established, to report the same to the Midwives Board.

(3) To report at once to the Midwives Board the name of any midwife practising in his district convicted of a misdemeanour or felony.

(4) To keep a current copy of the midwives register, accessible at all reasonable times for public inspection.

(5) To satisfy himself, in the case of any midwife practising or desiring to practise within his district, as to the validity of her claim to be placed on the register.

10. *Notice of Death of a Midwife.*—The local supervising authority shall at once report to the Midwives Board the death of any midwife, or any change in the name or address of any midwife in his district, so that the necessary alteration may be made in the register.

11. *Penalty for Obtaining Registration by False Representation.*—Any woman who procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding five pounds, or to be imprisoned, with or without hard labour, for any term not exceeding two months.

12. *Penalty for Wilful Falsification of Register.*—Any person appointed to keep the register of midwives, wilfully making or causing to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanor, and shall be liable to a fine not exceeding ten pounds, or to be imprisoned with or without hard labour for any term not exceeding three months.

13. *Prosecution of Offences.*—Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction, may be recovered in manner provided by the Summary Jurisdiction Acts. The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place.

14. *Appeal.*—(1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act, or of any of them.

(2) Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

15. *Act not to Apply to Medical Practitioners.*—Nothing in this Act respecting midwives shall apply to legally qualified medical practitioners.

16. *Extent of Act.*—This Act shall not extend to Scotland or Ireland.

[Prepared and brought in by Mr. J. B. Balfour, Mr. Tatton Egerton, Mr. Schwann, Mr. Skewes-Cox, Mr. Bonsor, Mr. Heywood Johnstone, Mr. Hazell, and Mr. Tennant.]

OBSTETRIC NURSES REGISTRATION BILL.

ARRANGEMENT OF CLAUSES.

Clause.
1. Short title.
2. Definitions.
3. Registration.
4. Privileges of registration.
5. Provision for existing midwives.
6. Constitution and duties of Obstetric Nurses Board.
7. Training and examination of candidates.
8. Confirmation of rules.
9. Fees and expenses.
10. Register of obstetric nurses.
11. Publication of register.
12. Notice of death of obstetric nurses.
13. Penalty for obtaining registration by false representation
14. Penalty for wilful falsification of register.
15. Prosecution of offences.
16. Civil and legal liabilities of midwifery nurses.
17. Exemption for registered medical practitioners.
18. Extent of Act.

A BILL FOR THE PROTECTION OF PREGNANT AND LYING-IN WOMEN AND NEWLY-BORN CHILDREN, BY PROMOTING THE BETTER TRAINING OF WOMEN AS OBSTETRIC NURSES, AND THEIR COMPULSORY REGISTRATION AS SUCH.

WHEREAS it is expedient that lying-in women and newly-born infants be protected against the evils arising from the practice of midwifery or midwifery nursing by ignorant and untrained persons:

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled, and by the authority of the same as follows:

1. *Short Title*.—This Act may for all purposes be cited as "The Obstetric Nurses Act, 1898."

2. *Definitions*.—In this Act

The term "obstetric nurse" means a woman who attends in cases of natural labour, and during the lying-in period, under the rules, regulations, and medical control or supervision set forth in this Act.

"Obstetric Nurses Register" means a register of obstetric nurses kept in pursuance of this Act.

"Obstetric Nurses Board," hereinafter called the Board, means the Board constituted under this Act for the purpose of carrying out the provisions of the Act under the authority, control, and direction of the Privy Council.

3. *Registration*.—(1) From and after the first day of January, one thousand eight hundred and ninety —, no woman shall be entitled to take or use the name or title of obstetric nurse, midwifery nurse, or midwife (either alone or in combination with any other word or words) or any name, title, addition, or description implying that she is registered under this Act, or is in fact possessed of the skill necessary to act as an obstetric nurse or midwife unless she be registered under this Act.

(2) Any person who, after the first day of January one thousand eight hundred and ninety-—, and whose name is not upon the register provided under this Act, shall take or use the name of obstetric nurse, midwifery nurse, or midwife, or any such other name, title, addition, or description as aforesaid, or who habitually and for gain shall attend or undertake to attend lying-in women, shall be liable upon summary conviction to a fine not exceeding five pounds.

(3) No woman shall be placed on the Register until she shall have complied with the rules and regulations for admission to registration, to be laid down in pursuance of the terms of this Act by the Board acting under the direction of the General Medical Council.

(4) Any person or persons in *bonâ fide* practice as a midwife or midwifery nurse at the date of the passing of this Act, failing to register as an obstetric nurse within a period of one year after such date, who shall, habitually and for gain, attend or undertake to attend women during labour, unless registered under this Act, shall be liable to a penalty not exceeding £5 for each offence, or indictment for a misdemeanour; provided always, that nothing in this Act shall apply to any person or persons attending a woman during labour in a case of emergency, where the services of a person registered under this Act, or of a duly qualified medical practitioner, are not available.

4. *Privileges of Registration*.—A woman registered under this Act shall be entitled to act as obstetric nurse in England and Wales. From and after the first day of January, one thousand eight hundred and ninety —, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as an obstetric nurse unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as an obstetric nurse in cases of natural labour only in accordance with the terms of this Act, and under the rules, regulations, and medical control or supervision set forth in this Act, and any amendments of, or additions to, such regulations which may be laid down by the Board in pursuance of the terms of this Act. A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same in respect of such certificate or to assume any name, title, or designation implying that she is by law recognised as qualified to practise medicine or surgery or midwifery, or to act otherwise than as an obstetric nurse as aforesaid, or that she is qualified to grant a certificate of death or of stillbirth or any medical certificate. Provided always that no obstetric nurse shall be entitled to recover any fee or charge for attendance as such, unless she has either personally or by a substitute (who must be a person registered under this Act) performed the duties specified by the Board.

5. *Provision for Existing Midwives*.—Any woman who at the passing of this Act has been in *bonâ fide* practice as a midwife, or midwifery nurse, of which fact the Board shall be the sole and final judge, or has obtained such certificate in midwifery as may be approved by the Board, and claims to be registered before the expiration of one year from the passing of this Act, and produces to the satisfaction of the Board both evidence of her title to be so registered and evidence of good character, shall be entered on the Obstetric Nurses Register at such fee as the Board shall prescribe.

6. *Constitution and Duties of the Board*.—(1) Within six months after the passing of this Act the General Medical Council shall appoint a Board consisting of twenty-four registered medical practitioners as members of and to constitute a Board, which shall meet on an appointed day to draft rules, arrange meetings, appoint a chairman, registrar, treasurer, and other officials, and an Executive and other Committees. The members of the Board shall be elected for a period of three years, and on the death, resignation, or withdrawal of a member, the General Medical Council shall elect a successor from the district vacated.

(2) The Board shall be selected as follows, from registered medical practitioners resident in or practising in or prepared to do duty in the following districts as defined by the Registrar General:—

London and South Eastern	7	Reps.
South Western, West Midland, and Welsh ...	6	,,
Eastern, North Midland, and South Midland...	5	,,
York and Northern	4	,,
North Western...	3	,,

(3) No member of the Board shall act as teacher instructor or examiner of obstetric nurses, and no member of the Board shall take any part in any inquiry respecting the conduct of any obstetric nurse to whom he has acted as teacher or instructor.

(4) The Board shall

(*a*) Lay down rules for education and training for qualification of obstetric nurses.

(*b*) Make rules for conducting and superintending the examinations for qualification of obstetric nurses.

(*c*) Conduct the examinations and appoint the examiners.

(*d*) Decide upon the places where and the times when examinations shall be held.

(*e*) Frame and if necessary from time to time alter rules and regulations governing the practice of obstetric nurses.

(*f*) Frame regulations for the proper conduct and inspection of any premises an obstetric nurse may reside in or rent or be tenant of, and wherein she receives for obstetric care and attendance a pregnant or lying-in woman.

(*g*) If any obstetric nurse shall be convicted in England or Ireland of any felony or misdemeanour or in Scotland of any crime or offence or shall after due inquiry be judged by the Board to have been guilty of misconduct as an obstetric nurse the Board may if they see fit direct the Registrar to erase the name of such obstetric nurse from the Register, or suspend her registration certificate for a definite period. For the purposes of this Bill misconduct as an obstetric nurse shall include any omission to send for a registered medical practitioner where the case is not one of natural labour. The Board may after due inquiry restore to the Register the name of any person removed therefrom.

(*h*) The Board shall have power to delegate the duty of inquiry into cases of misconduct to Committees of their number, and such Committees shall have power to suspend the registration certificate of any nurse pending inquiry by the Board.

(*i*) And generally, by Committee or otherwise, do any such duty as may be necessary for the due and proper carrying out of the provisions of this Act.

7. *Training and Examination of Candidates*.—(1) For the purpose of the examination of women desiring to act as obstetric nurses the Board shall as soon as may be after the passing of this Act frame rules regulating the conditions of admission to examination, the course of study to be pursued previous to examination, the method, the period, and the subjects of such examinations, and the general standard to be attained by women passing the examinations.

(2) Evidence of attendance on a course of lectures on, or of practical instruction in, obstetric nursing shall not be accepted as entitling the holder to enter for the pass examination, unless such lectures and practical instruction shall have been given personally by a registered medical practitioner.

8. *Confirmation of Rules*.—The Board shall submit all rules approved by them to the Privy Council for confirmation, and the rules, when so confirmed, shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office.

9. *Fees and Expenses*.—There shall be payable by every woman presenting herself for examination such fee as the Board may from time to time determine. Should a candidate fail to pass, the fee paid by her for any subsequent examination should not exceed half the amount of the first fee. All the expenses of the Board, and such as are necessary for carrying out the requirements of this Act, shall be defrayed by the Board, and all moneys paid in respect of fees or otherwise shall be paid to the Treasurer of the Board.

10. *Register of Obstetric Nurses*.—The Board shall provide by their regulations for the keeping and the publication from time to time of a Register of Obstetric Nurses.

11. *Publication of Register*.—The Board shall cause a new edition of the Register kept by them under this Act to be printed and published before the end of January in each year, and a copy of such Register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence until the contrary be made to appear that such woman is not registered according to the provisions of this Act, unless evidence is produced that such persons have been disregistered, when the onus of proof of reregistration or restoration shall lie upon the respondent. Provided always that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the Register shall be evidence that such woman is registered under the provisions of this Act.

12. *Notice of Death of Obstetric Nurses*.—The local registrar of deaths shall at once transmit the notice of death of any obstetric nurse in his district to the registrar of the Board, with particulars of time and place of death, and may charge the cost of such certificate and transmission as an expense of his office, and on receipt of such certificate the registrar shall erase the name of such deceased obstetric nurse from the Register.

13. *Penalty for Obtaining Registration by False Representation*.—Any woman who wilfully procures, or attempts to procure, herself to be placed on the Register of Obstetric Nurses by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be liable to a fine not exceeding £10, or to be imprisoned with or without hard labour for any term not exceeding three months.

14. *Penalty for Wilful Falsification of Register*.—Any person who wilfully makes, or causes to be made, any falsification in any matter relating to the Register of obstetric nurses shall be deemed guilty of a misdemeanour, and shall be liable to a fine not exceeding £20, or to be imprisoned with or without hard labour for any term not exceeding six months.

15. *Prosecution of Offences*.—Any offence under this Act punishable on summary conviction, may be prosecuted, and any fine under this Act, recoverable on summary conviction, may be recovered in manner provided by the Summary Jurisdiction Acts; and all penalties shall be paid to the Treasurer of the Obstetric Nurses Board, anything contained to

the contrary in the Metropolitan Police Acts or any Act passed before the passing of these Acts notwithstanding.

16. *Civil and Legal Liabilities of Midwifery Nurses.*—In any civil or criminal proceedings against any person practising midwifery or obstetric nursing (except in emergency by an unregistered person who has sent for a duly-qualified practitioner or registered midwifery nurse if obtainable), such person shall be liable for any conduct or practice which shall fail to show a reasonable amount of skill or knowledge in the delivery or subsequent attendance of a lying-in woman.

17. *Exemption for Registered Medical Practitioners.*—Nothing in this Act contained shall prejudice persons registered under the Medical Acts.

18. *Extent of Act.*—This Act shall not extend to Scotland or Ireland.

MEMORANDUM BY THE BRITISH MEDICAL ASSOCIATION OF THE REGULATIONS PROPOSED FOR ADOPTION BY THE OBSTETRIC NURSES BOARD.

Women who are registered as obstetric nurses in England, and who wish to act as such, must conform to the following regulations and instructions:—

Section A.—General.

1. The instruments which an obstetric nurse must always keep carefully clean and in order, and take with her when called to a confinement, are the following:—

A medium sized syringe with a vaginal tube, a flexible catheter, a pair of umbilical cord scissors, a clinical thermometer, and a nail brush.

Besides these, the obstetric nurse must take with her in clean, well-stoppered bottles the following or other antiseptics and lubricants which may be approved by the Obstetric Nurses Board.

(1) 3 oz. of liquefied carbolic acid, *B.P.*, for making a disinfectant solution of the strength of one tablespoonful to a pint of water (1 in 40).

(2) 2 oz. of vaseline, with which is incorporated 5 per cent. of carbolic acid.

As carbolic acid in crystal and liquid state, and also in strong watery solutions, is corrosive when applied externally, and when given internally is a poison, the obstetric nurse must take particular care to avoid its misuse.

The obstetric nurse must not leave any of the above appliances with the pregnant or lying-in woman.

An official appointed by the Obstetric Nurses Board shall from time to time inspect the appliances, to see if they are kept in complete working order.

Every obstetric nurse must possess an approved book of instruction for obstetric nurses.

2. Obstetric nurses must keep themselves scrupulously clean, and avoid contact with sick persons and decomposing substances of every kind so that their fingers, appliances, or clothes may not contain any infective material which might be conveyed to the lying-in woman during examinations, and thereby produce puerperal fever. Obstetric nurses are strenuously enjoined before touching a lying-in woman to wash their hands and instruments thoroughly with a disinfectant.

3. If an obstetric nurse has charge of a lying-in case she must not leave during the delivery, and must stay with the woman at least one hour after the expulsion of the afterbirth in a normal labour. In cases of abnormal labours, or in threatened danger, she must always await the arrival of the doctor, and remain with the case as long as he thinks necessary and faithfully carry out his instructions.

4. In cases of threatened danger, or in abnormal conditions occurring to women either pregnant or in labour, or to their newborn children, or at the sudden death of a pregnant or lying-in woman, the obstetric nurse must at once see that a registered medical practitioner is called in.

5. In apparently dead children of viable age in whom no signs of putrefaction have developed, the obstetric nurse, in the absence of the medical practitioner, who must be summoned at once, should practise the methods for resuscitation taught her, for at least half-an-hour, or until the child breathes regularly.

6. Any obstetric nurse who procures the death or expulsion of a fœtus, the substitution or changing of a child, or who is accessory thereto, is performing a criminal action.

7. Obstetric nurses must conscientiously guard the secrets of their patients, and must only divulge them if the law requires them to do so.

8. The obstetric nurse shall be responsible for the cleanliness, comfort, and proper dieting of the mother and child during the lying-in period, which shall be held in a normal case to mean the time occupied by the labour and a period of ten days thereafter.

9. If a registered medical practitioner be also in attendance, the obstetric nurse shall act in accordance with the instructions given by him, and shall be responsible for the carrying out of the same.

10. A "normal case of labour" (styled "natural labour" in the Act) shall, for the purposes of the Act, and of this its appendix, be held to mean a labour which occurs at full time, in which the presentation is that of the vertex, and in which there are none of the conditions specified in Section C.

Section B.—Instructions for Obstetric Nurses.

Precautions for the obstetric nurse to avoid the risk of carrying infectious diseases especially puerperal fever.

1. The obstetric nurse must be scrupulously clean in every way, because the smallest particle of decomposing matter may set up puerperal fever.

It is particularly dangerous for an obstetric nurse who is attending a lying-in woman, where there are foul smelling emanations, to go direct to another case without first thoroughly cleansing her hands and appliances and changing her clothing.

Unless the cleansing process be thoroughly carried out, even after a healthy confinement, there will be remains of blood, lochia, or liquor amnii on the fingers, and especially under the nails, which will there decompose, and thereby be dangerous to the next case attended. The obstetric nurse must, therefore, keep her nails cut short, and preserve the skin of her hands from chaps, injuries, and indurations.

2. The obstetric nurse shall see to the proper ventilation of the lying-in chamber, and to the keeping of the bed and body linen in a thorough state of cleanliness.

3. An obstetric nurse must not attend cases of general illness of an infective or contagious character. In the case of a lying-in woman contracting puerperal fever or any septic condition whatever, the obstetric nurse must notify the same to the sanitary authority, and abstain from attending any other woman at the same time, until she have obtained the written permission of the medical officer of health for the district.

4. An obstetric nurse must not under any circumstances assist in the laying out of dead bodies.

Section C.—Concerning the Summoning of Registered Medical Practitioners.

1. An obstetric nurse is bound, in all cases of abnormal pregnancy, labour, or lying-in, as well as in illness of the child, to demand medical assistance. She must, under the following circumstances more particularly, insist upon a registered medical practitioner being called.

(*a*) *In the Case of a Pregnant Woman:*

(1) When she suspects, or has discovered, a narrow pelvis.
(2) When there is hæmorrhage.
(3) When the patient is threatened with an attack of any illness.
(4) When the patient dies suddenly.

(*b*) *In the Case of a Woman during Labour:*

(1) In all cases of abnormal position of the child, if possible, before the liquor amnii escapes.
(2) In presentation of hands, feet, or when the cord presents with the head.
(3) In every case where either from the smallness of the pelvis, or largeness of the child's head, or from any cause whatever the normal descent of the head is interfered with, by which undue pressure may be caused to the parts between the child's head and the pelvis.
(4) In disturbance of the labour pains, leading to delay of birth, or in cases of excessive pains followed by exhaustion. To this category belong the cases where a child whose head has already deeply descended is not delivered for two hours after the opening of the mouth of the womb and the escape of the liquor amnii.
(5) In hæmorrhage, at whatever time in the labour it may occur.
(6) In presenting placenta, even when the obstetric nurse does not at the moment of the examination perceive any bleeding.
(7) If the placenta be not expelled an hour after the birth of the child, even if no bleeding has occurred.
(8) In all cases of rupture of the perineum, as soon as such occurs.
(9) In all cases where abortion or premature labour is threatening or has occurred.
(10) In twins, or multiple births, or monstrosities.
(11) In all cases of apparent sickness or threatened danger, as well as in the event of the sudden death of the woman.
(12) In the apparently dead newborn child.
(13) In all cases of stillbirth, no matter what the stage of development of the child.

(*c*) *In the Case of Lying-in Women and in the Case of Newly-born Children:*

(1) In the lying-in woman, when she notices a rise of pulse or temperature, rigor, tender abdomen, stoppage of the lochia, or bad smell of the same.
(2) In all cases of illness attacking the newly-born child.

2. When a doctor is sent for to a protracted labour, the obstetric nurse shall, when possible, send a written description in a few words of the cause of the delay, such as, narrow pelvis with head presentation, cross presentation, hæmorrhage during the afterbirth period, so that the doctor may at once know what it will be necessary for him to bring with him.

3. If a patient or her relations wish for the doctor to be called in, even if the obstetric nurse does not see any abnormal symptoms, she is not to object, or try to persuade them not to do so.

The choice of the medical practitioner rests with the patient or her relations, and the obstetric nurse is not to express any opinion unless requested to do so.

4. The obstetric nurse must inform the medical practitioner truthfully and accurately of all that she has observed about the case previous to his arrival, and stay as long as he wishes, to assist him, and conscientiously carry out his orders.

Section D.—Concerning the Day Book.

Every obstetric nurse must keep an accurate account in a day book of all the cases she attends in her capacity of obstetric nurse.

An official appointed by the Obstetric Nurses Board shall from time to time examine the day book, which must be delivered to him on demand.

Upon demand the day book must be laid before the medical practitioner called in to the labour, who shall be at liberty to write his own remarks upon the same.

Liqueur Beans.—It has been stated by Mr. A. L. Scarr, in a letter to the *Leeds Mercury*, that in Yorkshire many confectioners have been selling large quantities, especially to children, of "liqueur beans," a quarter of a pound of which have on analysis been declared to have contained 7.21 per cent. of proof spirit. Mr. J. K. Archer, in the *Yorkshire Post*, writes that he found these alcoholised articles being consumed by the majority of the audience at a temperance meeting. The *Morning Leader*, having instituted an inquiry among London confectioners, reports that this sweetmeat is unknown in the metropolis. It is to be desired that the Inland Revenue authorities will inquire into this alleged traffic in Yorkshire, as everyone taking alcohol should have an opportunity of knowing of its presence.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 19th, 1898.

THE MIDWIVES REGISTRATION BILL.

The promoters of the Midwives Bill have this year been very lucky. They drew by the fortunate hand of the late Lord Advocate (Mr. J. B. Balfour) the eighth place out of 330 members balloting; and so the Bill is almost certain to have a full discussion this year. The name of Balfour is curiously connected with this measure. It was Lord Balfour of Burleigh who in 1894 introduced and passed the Bill through its second reading in the House of Lords, and now another Balfour, sitting on the front Opposition Bench, has a good chance of even greater success this session. The names on the back of the Bill are Mr. J. B. Balfour, Mr. A. de Tatton Egerton, Mr. Schwann, Mr. Heywood Johnson, Mr. Hazell, Mr. Cosmo Bonsor, Mr. Tennant, and Mr. Skewes-Cox—a striking illustration of the absence of party influences, as four are Conservatives and four Liberals.

Last year, when the Bill had not a first place on a Wednesday, it was effectively blocked. A notice that a Bill be read that day six months is an effective block to a Bill, if it can only come on at the end of Government business, as that means usually after midnight, and then if any member will stay up and say the magic words "I object," the Bill is blocked for that sitting. But when, as has happened this year, a private member's measure by the luck of the ballot gets a first place on a Wednesday—the day given up to private members' proposals—a blocking notice cannot prevent debate; and as there are five to five hours and a half on a Wednesday for discussion, a division is certain to be taken if the second reading is opposed.

There is every reason, therefore, to believe that the Midwives Bill will, unless some grave necessity arises to compel the Ministry to take May 11th for Government business, be debated, and the second reading possibly carried. The text of the Bill is presented at page 505, and at page 506 will be found the text of the Obstetric Nurses Registration Bill of the Parliamentary Bills Committee of the British Medical Association.

The position is one which no amount of vigilance could have prevented. It only remains for the opponents of the Bill to use all their influence to induce members to oppose the second reading, and if that stage is passed, to amend the Bill in Committee. There is time before May 11th to present petitions against the Bill, and the number and character of these will influence the opinion of the House. In opposing a measure of this kind it is always important to show, on the second reading debate, that there is a widespread dislike of the proposed legislation. There is in our knowledge a large section of the profession in this instance opposed to legislation on the lines before Parliament. It is the duty of these opponents to urge their representatives in the House to take part in the debate on the second reading. If the opposition be unsuccessful the same representatives will no doubt be prepared to continue the fight in Committee.

A great deal will depend upon the Committee to which the Bill is remitted. If to a Committee of the whole House the opportunities of opposition will be plentiful; if to a Grand Committee they will be much more restricted. There is a third course which might be followed, and we rather think it would be the best course by which to secure a really satisfactory enactment, and that is a reference of the Bill to a Select Committee empowered to consider also the Obstetric Nurses Registration Bill and the whole nursing question. Such an inquiry has already been talked of. There is a wide and important field for investigation, and much valuable reform to be secured. It is hardly likely, however, to be accepted by the promoters of the Midwives Bill, as it would delay legislation, and in Parliamentary warfare a bird in the hand is worth two in the bush.

PROPOSED CHANGES IN THE LAW OF VACCINATION.

The Queen's Speech states that a measure for the amendment of the vaccination law will be recommended to the earliest attention of Parliament.

The public announcement which was made at Lincoln last month by Mr. Chaplin, President of the Local Government Board, to the effect that a supply of calf lymph ought to be available for all vaccinations, and that vaccination ought to be made domiciliary, must be regarded as indicating some of the principal lines of this proposed Vaccination Bill, and as such the announcement calls for careful consideration, especially by the large number of medical practitioners who hold the post of public vaccinator.

This particular statement with regard to calf lymph does not stand alone, for Mr. Chaplin's issue, first as a departmental document and then as a parliamentary paper, of the report of Sir Richard Thorne and Dr. Copeman on the preparation and use of glycerinated calf lymph must be taken to indicate that, when he speaks of a supply of calf lymph to be available for all, he refers, in the main at least, to glycerinated calf lymph. If the decision which appears to have been come to in this respect is carried out, it will, of course, be fully in accord with the recommendation of the Royal Commission on Vaccination; it will tend to eliminate sources of risk which, though remote, are peculiar to the use of humanised lymph; it will do away with such chances of traumatic infection as may at times arise owing to the opening of vesicles for the purposes of taking lymph to vaccinate from arm-to-arm; and it will render unnecessary any risks of infection which may attend the aggregation of mothers and infants at vaccination stations. Mischief, as the result of these several risks, is rare in the extreme, considering the millions of vaccinations performed in this country each decade. Some of the alleged risks are practically unknown in Great Britain: but when change in the law is in

question, the Government are clearly right in their desire to meet every reasonable objection.

At the present moment the Local Government Board are sanctioning the payment of a special extra fee for each vaccination done by public vaccinators with calf lymph; and as the calf lymph which these officials purchase is usually glycerinated lymph, it may be assumed that the Government will, in connection with their Bill, arrange either to provide all public vaccinators with a gratuitous supply of this lymph, or give power to sanction the additional payment necessary to cover the cost of its purchase. On this part of Mr. Chaplin's announcement we need not further enlarge, for, although some medical practitioners still express a decided preference for arm-to-arm vaccination and for the use of humanised lymph, yet it must be admitted that the growing feeling in favour of the use of calf lymph finds justification in the recent experiments made with glycerinated lymph.

But the announcement that vaccination is to be domiciliary has much more importance in so far as the work of public vaccinators is concerned. The Government in arriving at their decision as to this have doubtless been guided in part by the advice of the Royal Commission, who more than once extolled the system of domiciliary vaccination as carried out in Scotland, and also in part by considerations as to any risk of infection to which children may become exposed by reason of the stational aggregations.

But, whatever the reasons may have been, it is quite certain that the abolition of stations and the institution of a system of domiciliary vaccination will completely revolutionise the system of public vaccination which has hitherto been carried out in England and Wales; and that it will very seriously alter the nature of the duties, and also the amount of work which public vaccinators will have to do. In so far as the performance of the actual operation of vaccination is concerned, there will, of course, be no need for stations the moment that glycerinated lymph in tubes can be carried from house to house. But apart from this one aspect of the question the position of the public vaccinator is likely to be one of difficulty. If he is to go from house to house, who is to guarantee that on his first visit he will find the child he seeks ready for vaccination, and on his second visit ready for inspection? If the vaccination districts remain as they are, then the distances to be travelled to seek individual children will add enormously to the work which the public vaccinator will have to do; and for this added work it is obvious that he should receive a substantial increase over the present fees. The Scottish system, which seems to be taken as the basis for the proposed change, leaves vaccination almost entirely as a matter to be arranged between the parents and their private medical attendant, and the question of public vaccination and that of the intervention of an official vaccinator only arises in the few cases of default which are heard of in that country. The parallel between Scotland and England is therefore hardly a real one; and it becomes very much a matter of surmise as to what will be the results of the adoption of the proposed change in England and Wales, where the work of vaccination has hitherto been largely, if not mainly, carried out gratuitously by public officials, and where the people themselves have come to take it for granted that a public station is provided at definite intervals of time for their convenience.

If the domiciliary system of vaccination is carried out in England, there is reason to fear that it may, in the first instance at least, tend to increase the number of inefficient vaccinations which are now performed, especially in our large towns, in the homes of the people, especially perhaps in the homes of the poorer classes, as distinguished from the vaccinations performed at public stations by officials who carry out definite instructions laid down for them, and who are not subject to the objections of ignorant parents. We know in the past how people with marks of insufficient vaccination have preponderated in small-pox hospitals, and we are glad that the Royal Commission have recalled this fact, and have urged that vaccination should be performed in an effectual manner by multiple insertions. The Commission, indeed, show in a most forcible manner how increase in fatality of small-pox goes hand in hand with decrease in the number of vaccination marks; but they offer no suggestion as to how the requisite standard of protection is to be attained under the domiciliary system, unless, indeed, it is to be assumed that in pressing again and again the extreme importance and value of revaccination they mean to imply that any defects in the primary vaccination ought to be made up for by the practice of revaccination before entrance on the age of adolescence. At present we see no means by which this aspect of the question can be met unless revaccination be placed on precisely the same footing, in so far as requirement by the State is concerned, as will apply to primary vaccination.

It is generally believed that the "honest objector" to primary vaccination is to be given the opportunity of placing his objection on record, and that he will then not be subject to any compulsory clauses of the Act; if so, the least that can be asked in order to secure a genuine protection from small-pox during youth and early adolescence, is that revaccination should be required, subject to the power of acquiring immunity from compulsion in the same way as in regard to primary vaccination. With regard to adults we have nothing to recommend. They have arrived at a period of life when they may fairly be held to have responsibility for, and to be able to bear the consequences of, that which they do or leave undone in a matter relating to personal health. It is otherwise with infants and boys and girls, who, in this and in many other matters, need protection by the State against the ignorance of others. Already we hear that "honest objectors" do not like the idea of having their honesty registered; but, in the interests of the public health of the nation, it will be essential when small-pox comes to have some other means by which to differentiate the unvaccinated from the vaccinated than the severity and the fatality of the disease, which it will be the object of the State to prevent.

THE PRINCE OF WALES'S HOSPITAL FUND.

A BRIEF report of the first annual meeting of the Prince of Wales's Fund was published in the BRITISH MEDICAL JOURNAL of February 12th. There are many particulars in this report which ought to engage the attention of anyone who is interested in hospital management. We shall confine ourselves now to two only. In the first place, how far has the Fund succeeded in its primary object, so sagaciously selected by the Prince, and so plainly stated in his original letter? That object was to raise a sum of £100,000 to £150,000 a year

from persons who were not subscribers to hospitals at all. What has been done hitherto (apart from the sum realised by the sale of Jubilee stamps, which is treated as exceptional) has been to raise £22,050 for the year 1897. How much of this sum was provided by persons who were already habitual subscribers to hospitals is not, and probably cannot be, known; but it is probable that the proportion is large and if this be so, the fact is a great drawback to the advantage conferred on the institutions which share in the distribution. But let us leave this point with the pious wish that next year and coming years will show a better result.

The second point is even more important. The Council of the Prince's Fund proposes "that a committee of inquiry be at once appointed to visit personally and examine the various hospitals of the metropolis with a view to ascertaining their present conditions, needs, and merits for the allocation of the funds received during 1898," and the Prince expressed the view that the membership of this committee should be confined to the members of the Council. This was approved and the proposal carried unanimously. This, we have already ventured to say, would be found necessary. A public body administering large funds (and though the funds last year were disappointingly small they may, and very likely will, increase) is bound not to do so without proper inquiry, and a glance at the long list of hospitals, general and special, comprised in the list of those sharing in the "special donations" would probably convince anyone acquainted with hospital matters that there is a wide field for inquiry.[1] A list in which St. Thomas's Hospital gets nothing while "Phillips's Memorial Homœopathic Hospital" (whatever or wherever that may be) gets something would certainly repay inquiry.

We are quite convinced however that no respectable hospital would shrink from inquiry, and inquiry is what we have always advocated. Only the inquiry should be conducted by persons who understand the subject, and then the very difficult question occurs whether the Prince's Council do understand it. No doubt there are persons on the Council who do, as well as any in the world, for example, Lord Lister, the Presidents of the two Colleges, and Sir Henry Burdett. But all these persons, we imagine, are too busy to spend time in personally visiting and examining over 100 hospitals. The present list contains over ninety and there are no doubt many not included which think they have as good claims as many that stand there. They, too, ought to be personally visited and examined. We may add that these examinations, on which is to be founded a classification in order of merit of all the medical charities in London, ought to be made on a uniform plan, and if possible by the same people. But who is sufficient for so gigantic a task? It is in no spirit of disrespect to the authorities of the Sunday Fund that we say that their Distribution Committee certainly is not. Such an inquiry must be conducted by a small body, and the numbers of that body must be equally versed in all the departments of hospital management, and especially in those from which the Hospital Sunday Fund has wisely stood aloof, knowing that it was not fully competent for the investigation. These comprise all those matters which can only be judged of from within—all matters of internal organisation and treatment—the government of the hospital, the privileges of its subscribers, the method of admission of patients, their accommodation, nourishment, nursing, medical treatment, and numerous other matters, which need not now be specified, but which the Prince's Committee will have to think over carefully, and reduce into some kind of schedule, to form the basis of their inquiry. Those who make the inquiry will not, we may be sure, be satisfied with formal "cut and dried" answers, but will ground themselves on the actual observation and personal inspection of experts. Such an inquiry would, indeed, be worth making; and its results might be valuable enough to bear down any objection to the somewhat inquisitorial nature of the process, to which the Prince's authority and gracious influence might dispose the hospitals subjected to it more readily to acquiesce. But they could not reasonably be expected to do so unless the composition of the inquiring body is announced, and is such as to command public confidence. A hasty *pro formâ* inquiry by persons who were not experts might and probably would end in providing a screen for the less deserving institutions.

Again, when the inquiry is made, and its results reported by whom are those results to be weighed, and the final distribution settled? Surely this duty cannot be entrusted to the general body—for this would merely mean that the Committee of Inquiry would be constituted the sole arbiter of all the hospitals of London—provided the Prince's Fund succeeds according to its author's wishes. The General Committee could not possibly discuss the details of its Inquiry Committee's award, but must necessarily adopt it. Therefore it seems as if, behind the as yet unknown Committee of Inquiry there rises the shadow of a still more potent body—the Committee of Distribution.

Now on all these bodies the institutions concerned have no representation whatever, and as far as we can see are not intended to have any. This Journal has always advocated the fullest possible investigation into every detail of our hospital system, and the most thorough reform of every abuse or imperfection which can be detected in it. We see, as everyone sees, the urgent need for increased funds, and admit, as we hope every one admits, the principle that those funds should be allocated in proportion to the merits of the institutions benefited. But we have never advocated any scheme in which the hospitals inquired into are to be dissected and demonstrated on as if they were dead subjects, or called up to receive doles like beggars. A scheme better adapted to the actual constitution of our voluntary hospitals would be the formation of a Board out of the hospitals themselves which would undertake the necessary inquiries and conduct in public the necessary discussion. The leading hospitals, most unwisely as we think, did not favour this scheme, and the Prince's Committee would have nothing to do with it. Still it remains the only practical scheme yet suggested, and sooner or later it will force itself upon public attention.

[1] The list is given in a special supplement to the *Hospital* February 5th.

GUARDIANS AND PENSIONS.

We learn from the *Evesham Journal* that at a recent meeting of the Pershore Guardians, the report of a Committee appointed to report upon the Superannuation Act of 1896, and the Local Authorities Officers' Superannuation Bill of 1897, which is to be again brought before Parliament, was brought up and discussed at some length. In moving the adoption of this report, General Davis, who presented it, said that

the Act of 1896 was only the thin edge of the wedge, and, since it had been passed, there was a general desire from other quarters for superannuation on similar lines, and there was no knowing how far this might go. The speaker did not hesitate to say that many Boards of Guardians had, previous to the passing of this Act, given it their support when in complete ignorance of its provisions. He considered it absurd that officers who had taken salaries with a knowledge they were not to have pensions should now obtain them after paying only small contributions towards them. He was good enough to say that he was in favour of pensions if these could be granted without taxing the ratepayers—or, in other words, if the officers who obtained them paid these pensions themselves. This report, after being freely discussed, was adopted, with the exception of one paragraph, the purport of which has not been made very clear. General Davis then proposed that a memorial be presented to Parliament against the Bill above mentioned, and that the other District Councils of Worcestershire be requested to petition against it. It is perhaps not very surprising that those Boards of Guardians which have acquired a reputation for unfair parsimony should now be disappointed when they find the ground on which they formerly rested giving way, and that in consequence of an improvement of the law they are now compelled to act with greater justice towards the officials they engage. We should hardly under any circumstances have anticipated any such determined opposition to the ordinary working of the Superannuation Act as has been displayed at Pershore, and we are the more surprised at this when we find that this opposition appears to be led by a member of a service which has long enjoyed the advantages of a pension system. Are we to understand that the duties performed by officers in the army are to give a right under all circumstances to a pension, but that the duties of Poor-law medical officers, though performed at all hours of the day and night for as long a period as forty years or more without any leave whatever except that obtained at their own cost, are to be considered to be so well paid as to establish no claim for pensions in any form, unless these can be secured for them without any tax on the ratepayers? We hardly think that the Poor-law guardians will succeed in convincing Parliament that they take a just view, or that there is any such great difference between these two classes of public officials in reference to pension claims as they would wish others to believe. The necessity for the Superannuation Act of 1896 was brought about by the refusal of so many Boards of Guardians to award pensions in deserving cases when the law, then in operation, gave them the option of deciding for or against the grant. This power was so generally abused that fresh legislation in reference to pensions for Poor-law officials became necessary. Probably the Act of 1896 would never have been passed if guardians had shown a disposition to act with fair liberality towards their old servants. The Act, however, is now in operation. It may, and probably will, in the near future be amended and improved, but no action taken by Boards of Guardians either at Pershore or elsewhere, will have the effect of getting it erased from the Statute Book. Guardians in fact have themselves to thank if under the new law some officials may be able to claim pensions when the contributions they may have paid towards them may be little compared with the value of the pension accruing. Time will remove this imperfection, if it be one; and in the future no pension will be secured unless it has been fairly earned.

THE PROPOSED CHAIR OF PUBLIC HEALTH IN GLASGOW.

SIR WILLIAM GAIRDNER has made an earnest appeal for the establishment of a chair of Public Health in the University of Glasgow. Owing to the vacancy in the chair of Forensic Medicine, which has hitherto included the subject of public health, the moment seems opportune for urging the proposal. In a memorandum which he has submitted to the University Court, Sir William Gairdner has pointed out that within the last twenty or thirty years the importance of the subject of public health has gone on increasing by leaps and bounds, until it has in the minds of most persons engaged at all in public life outstripped in the large scope and variety of its details and principles not only medical jurisprudence, but many other subjects in the medical curriculum. Sir William then referred to the great public health achievements of Glasgow in the initiation of which he, as we recently had occasion to recall, had so large a part. It was indeed, he continued, an anomaly that the teaching of the subject had so greatly lagged behind the actual civic example. Glasgow was in fact one of the greatest if not the greatest of object lessons in regard to the prevention of disease over a large and crowded area populous to a degree that had made, and still made, the correction of inherited errors a matter of the greatest difficulty, and of corresponding importance in the illustration of broad general laws and lines of action. From a squalid and unwholesome notoriety as one of the most degraded cities, Glasgow, Sir William Gairdner said, had emerged into the position of one of the most advanced in dealing with all the manifold problems of prevention. Why, he asked, has the University which ought to be the centre of light and leading, and in which all great questions affecting the community might be expected to be adequately represented, remained almost in the same state as regards this great subject as it was forty or fifty years ago? He thought it expedient in the highest degree to raise the question whether forensic medicine, a subject of vast extent and great variety of detail, ought not to be permanently separated from public health, with the view of raising the latter subject to the rank required, so that the teaching might be adapted to the requirements not only of medical students and candidates for a diploma in Public Health, but also of all those, including sanitary inspectors and men engaged in local government, who might be expected in the future to participate in the desire for systematic and practical teaching in this great department of knowledge. The difficulty of endowing a chair and providing an adequate laboratory and other means of practical instruction was, he admitted, in the first instance a financial one; but as, by the termination of the Universities Commission, the initiative in all proceedings with regard to new chairs belonged to the University Court, the matter deserved to be brought forward in order that, after conferring with the Senate, a careful statement might be drawn up affirming the expediency and even the urgency of separating these two departments. Sir William Gairdner's words will rouse a sympathetic echo in the minds of old Glasgow men, and also let us hope in the minds of Glasgow millionaires. He himself, we are glad to see, appears to be sanguine, for in concluding a recent lecture he said "We must have a chair of public health at whatever cost." Medical opinion will thoroughly sympathise with these aspirations, for it cannot but be felt that it will be somewhat of a reproach to the great University of the largest city in Scotland if this opportunity of filling a vacant place in its teaching organisation is allowed to slip.

THE EPIDEMIC OF INFLUENZA.

THERE was a slight decline last week in the mortality from influenza in London. The deaths directly referred to this disease, which had been 40, 73, 88, and 102 in the four preceding weeks, fell to 98 during the week ending Saturday last, February 12th. Of these 98 deaths, 25 were of persons under 40 years of age, and 28 were of persons aged between 40 and 60 years: while 45, or nearly one half, were of persons aged upwards of 60 years. The decline in the fatal prevalence of influenza in London last week was confined to East and South London, where the fall was considerable, although the

disease still showed excessive mortality in Battersea, Wandsworth, and Plumstead. This decline was, however, nearly counterbalanced by a very marked increase in the number of fatal cases in West and North London. In West London the deaths referred to influenza last week were nearly double those recorded in any recent week, and the mortality from the disease was excessive in Kensington, Hammersmith, and Fulham. In North London the number of fatal cases showed a marked further increase upon those registered in the two preceding weeks, and were most numerous in Marylebone and St. Pancras. Although the type of influenza in London during the present epidemic has taken a gastro-intestinal form, the deaths referred to diarrhœal and other intestinal diseases during the past six weeks of the current year have been slightly below the average. The deaths from these diseases in London among persons aged upwards of 40 years have averaged only 3 weekly since the beginning of the year. The epidemic has been particularly widespread in certain parts of Cornwall: it was reported, for instance, that in Redruth 700 persons were suffering from the disease last week, and it is said to be spreading in the fishing villages of the West. The epidemic is also prevalent in the neighbourhood of Bristol, but is of a mild type. It is also widespread in the eastern counties of England, and our Edinburgh Correspondent writes that for some weeks past there has been a considerable visitation of influenza in Edinburgh—no doubt, in an attenuated form, but still sufficiently obvious in some of its broad characters, pre-eminently profound and prolonged prostration. That it has not been a very fatal visitation is proved by the fact that the death-rate during the month of January was equivalent to an annual mortality of 17.17 per 1,000, whereas the average death-rate of the five Januarys preceding 1898 was 20.24. Further, it has been different from previous epidemics of influenza, in that it has not so specially selected the respiratory organs as its particular habitat; for of the total 543 deaths in January last, only 159, or 37.58 of the total, were due to diseases of the chest. We say only, because in some of the former outbreaks of influenza the deaths from diseases of the chest were considerably over half of the total deaths. In Edinburgh, as elsewhere in the kingdom, the gastric, or perhaps more correctly the gastric, duodenal, hepatic, and intestinal organs have been specially the seats of greatest disturbance.

THE BRITISH MEDICAL ASSOCIATION AND HYPNOTISM.

In his evidence in an action for slander recently tried at Manchester, the plaintiff (a medical man), in reference to the subject of hypnotism, is reported to have stated that it was recognised officially by the British Medical Association as a correct means of treatment by medical men, and that whenever he had practised hypnotism, he had always practised it under the conditions laid down by a committee of the British Medical Association, and these conditions were practically the conditions he had previously written in his report, and every one of his suggestions was adopted by the Association. Mr. Justice Wills, in the course of his summing up, apparently adopted the plaintiff's statement, for he is reported as stating that the efficacy of hypnotism had been recognised by the British Medical Association. Such a statement, however, is altogether incorrect, and in order that there may be no misunderstanding as to the course adopted by the British Medical Association with regard to hypnotism, we propose briefly to recall the facts. In October, 1890, a committee was appointed by the Council of the Association to report on the subject. At the annual meeting held at Bournemouth in 1891, this Committee explained that the time had been too limited to enable them to arrive at any definite conclusion. At the annual meeting held at Nottingham in 1892, the Committee presented a report in which they said they had satisfied themselves of the genuineness of the hypnotic state. They were of opinion also that, as a therapeutic agent, hypnotism was frequently effective in relieving pain, procuring sleep, and alleviating many functional ailments. As to its permanent efficacy in the treatment of drunkenness, the evidence before the Committee was encouraging but not conclusive. The Committee also gave their views generally on the phenomena of hypnotism, and made suggestions as to the care required in its user. At this meeting it was moved that the report of the Committee on Hypnotism for the year 1891 be received and adopted, but, on an amendment, subsequently carried as a substantive motion, the report was referred back to the Committee. At the annual meeting at Newcastle in 1893 the report of the Committee, in the same words as that submitted to the annual meeting at Nottingham in 1892 (except as to an appendix of some documentary evidence on the subject) was again presented, and it was moved that such report be received, and that the Committee be thanked for their services. This was on account of an amendment being moved "that the report lie on the table," but the amendment was subsequently withdrawn on the understanding that the report be not adopted, and it has never since been adopted by the Association. From the foregoing recital of facts it will appear that the treatment of hypnotism has not been officially recognised by the British Medical Association as a correct means of treatment by medical men. It may be added that the Council of the Association at the meeting at Newcastle in August, 1893, did not reappoint the Committee.

THE INLAND SANITARY SURVEY, 1893-95.

A pathetic interest attaches to a report just issued from the medical department of the Local Government Board in continuance of the report of the medical officer for 1894-95, seeing that it emanates from the pen of the late Dr. Barry. The volume has reference to the inland sanitary survey of 1893-95. The coast line of England and Wales was inspected in 1893, when cholera was threatening to gain an entry, and when it did obtain a temporary footing in a few places. Certain inland districts were inspected in the two following years, but Dr. Barry, in his uncompleted introduction to the compilation of summaries which constitutes the main part of the volume, deplores the fact that the work has not been extended to the whole country. The volume[1] was practically ready more than a year ago, but had to be delayed owing to a serious accident which Dr. Barry then sustained, and he seems only just to have begun his introduction when he died on October 12th, 1897. The book has been issued apparently just as it left his hands, so that we miss the masterly handling of the data which might have been expected of him. Sir Richard Thorne pays to Dr. Barry a touching tribute of praise for his splendid piece of work, all but completed, in connection with the inspections undertaken by the staff of the medical department of 396 districts during 1893-95, namely, 14 county boroughs, 66 municipal boroughs, 140 urban districts, 42 rural districts, 74 riparian district, and 60 port districts. Dr. Barry had the entire supervision of this work, and has produced two volumes giving the results of the undertaking, in addition to his report on cholera in England in 1893. Examples of detailed reports made by the inspectors to the Local Government Board are given in the volume, and these show how full was the information which was conveyed to Whitehall as the result of visits which were yet as rapid and as brief as possible. These examples, as much as anything in the volume, demonstrate the value of the survey. Each inspection was preceded by an interview with the local health authority, and was also followed by an interview, the latter being the more important because at it the inspector laid before the authority a set of recommendations carefully drawn up applicable to the needs of the particular locality. The points to which special attention was paid were: (*a*) General sanitary circumstances, including dwellings, water supply, sewage and house drain-

[1] London: Eyre and Spottiswoode. Edinburgh and Glasgow: John Menzies and Co. Dublin: Hodges, Figgis, and Co. Price 1s. 5d.

age, sewage disposal, excrement disposal and removal, and trades; (*b*) sanitary administration, embodying character and efficiency of local administration, work of sanitary officials, adoption of by-laws, and so on; and (*c*) cholera precautions, both as to steps already taken and as to measures which could be brought into operation in time of emergency. Dr. Barry gives a map, showing each of the 396 localities inspected; also the departmental forms used by the inspectors in collating local data, and an excellent index.

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THE arrangements for the forthcoming International Congress of Hygiene and Demography to be held in Madrid from April 10th to 17th are proceeding satisfactorily, and it is expected that there will be a large gathering of sanitarians from all parts of Europe. Those intending to present communications should send notice on or before March 15th to the General Secretary, Dr. Amalio Gimeno, Ministerio de la Gobernacion, Madrid. Papers may be written in Latin, Spanish, Portuguese, Italian, French, English, or German. The fee for membership is 25 pesetas (£1), which may be sent to Dr. Corfield, 19, Savile Row, W., or to Dr. Pablo Ruiz de Velasco, Tesorero de la Junta y Presidente de la Camara de Commercio, de Madrid. Ladies accompanying members of the Congress can enjoy the full privileges of membership only if they have a professional title, but they can be admitted to the ceremonies, entertainments, excursions, etc., on payment of a contribution of 10 pesetas. The Spanish railway companies will grant a reduction of 50 per cent. to members of the Congress and those accompanying them; the Compañia Transatlantica Española will also grant a reduction of 33 per cent. to members using their boats for the journey both ways. An international exhibition of hygiene and demography will be held in connection with the Congress, and will remain open until July 10th. The Queen will hold a reception in the Palace. Other official receptions will be held in the Presidency of the Council of Ministers, in the Ayuntamiento, and elsewhere. The people of Madrid, on hospitable thoughts intent, are making extensive arrangements for the entertainment of their visitors. Excursions from Madrid to Toledo, the Escurial, Aranjuez, Grenada, and other places of interest are being organised. Altogether there appears to be every reason to anticipate a most successful meeting from the social as well as the scientific point of view.

THE QUEEN OF PORTUGAL AND THE STUDY OF MEDICINE.

SOME time ago it was stated in the BRITISH MEDICAL JOURNAL, on what appeared at the time to be trustworthy authority, that the Queen of Portugal, who is well known for her interest in all that concerns the welfare of the poor and the sick, had, from philanthropic motives, gone through a regular course of medical study. This paragraph went the round of the European press, and although, in consequence of more accurate information supplied by a Portuguese correspondent, we immediately published a contradiction of the statement, it has continued from that time to this to appear in medical journals as well as in ordinary newspapers in its original form. Recently it found its way into the columns of a French paper, from which it was copied into the *Chronique Médicale*. Dr. Cabanès, the editor of the latter periodical, doubtless seeing in the paragraph further possibilities of interesting "copy," took the somewhat bold course even for a journalist of writing to the Queen of Portugal for full particulars. His enterprise was rewarded by a letter from Count de Ribeira Grande, Chamberlain to the Queen, to the following effect; "Her Majesty the Queen desires me to thank you for the numbers of the *Chronique Médicale* which you have been good enough to send her. Her Majesty has never studied medicine, and is not now studying it; consequently no information can be given regarding her medical career, since it does not exist. All the interest which Her Majesty takes in the progress of medicine has a purely humanitarian object, nothing more." As we were the means of giving wide publicity in the first instance to an erroneous statement, we think it right to publish this authoritative denial. It would, however, be too much to hope that even this will finally bring the career of the inaccurate paragraph to an end. It is too useful to distressed journalists in want of something to fill up a column to be readily given up.

MEDICAL LITERATURE.

A CORRESPONDENT of the *Deutsche medicinische Wochenschrift*, Dr. E. von Düring, of Constantinople, has made a pathetic appeal on behalf of the numerous practitioners who are out of reach of University towns and medical libraries, but wish to employ their spare time in enlarging their knowledge of special subjects with a view to original work. The medical papers at present in existence do not, he says, satisfy their thirst for knowledge. What is really wanted, he thinks, is a standard book of reference to contain all important communications relating to medical science. Books, journals, transactions of societies, and every other published matter are to be included in this desired reference book. Dr. von Düring is not unaware that year-books are published, but he is not satisfied with them, for he finds that they may not contain matters which appear to him to be of first-rate importance, and sometimes give him erroneous impressions. We have said that this appeal is pathetic, but it is also naïve. The imagination shudders at the task which Dr. von Düring would place upon the shoulders of some enterprising publisher and his staff of contributors, not merely because it is gigantic, but because the duty of selection would be so difficult that not even the most skilful could hope to satisfy everyone. A gallant attempt to fill the vacant place has been for years made by Dr. Charles E. Sajous, who in the preparation of the *Annual of the Universal Medical Sciences* has seventy associated editors and over two hundred corresponding editors, collaborators, and correspondents. The issue for 1896, containing the result of all this labour of so many hands, is before us. It forms five large octavo volumes, and is published in Philadelphia by the F. A. Davis Company. How many pages it contains cannot be ascertained without a good deal of calculation, but some idea of its dimensions may be gained from the fact that the analytical index occupies 327 pages, and that the mere index of titles covers more than sixteen pages printed in very small type in treble columns. The editor tells us that the edition for 1896 exceeds by over half a million words previous issues, yet he has to confess for himself and his staff of collaborators that "in the vast field before us we can at best but gather the salient points of what we read." The magnitude of the undertaking so lightly proposed by Dr. von Düring may also be gauged by efforts which have been made to deal with special departments. For instance, Professor Charles Richet, of Paris, a couple of years ago started the *Bibliographia Physiologica*. It is arranged on the Dewey decimal system, and the first issue, which deals with the physiological literature of 1895, covers 109 pages, yet the entries give no more than the titles of the papers. Even so, in order to get out the bibliography promptly, to make it complete, and to render it possible to publish it at a low price (4 francs a year) Professor Richet found it necessary to exclude embryology, anatomy, histology, botanical physiology, poisons, microbes, diseases, and the biological inter-relations of various species. Altogether therefore this is a work of limited scope. Again we may take as an object lesson the *Bibliographischer Semesterbericht der Erscheinungen auf dem Gebiete der Neurologie und Psychiatrie*, which is published annually in two fasciculi under the editorship of Dr. G. Buschan, by the firm of Gustav Fischer, of Jena. The issue for the year 1896 costs 7 marks 50 pf., and contains 344 large octavo pages. The bibliography again consists merely of a

classified list of the titles of papers published on the subjects with which it deals. The enormous growth of medical literature, and the difficulty, even for those who dwell in university towns or have the opportunity of consulting large medical libraries, is, we fear, not to be surmounted so easily as Dr. von Düring appears to suppose.

RECENT SANITARY WORK IN SURREY.

The address of the Chairman, delivered at the recent meeting of the Surrey County Council—the last before the coming elections—contains an interesting review of work performed during the last three years. After some preliminary observations, in the course of which he congratulated the Council on the business-like character of its proceedings and upon having abstained from discussions on abstract matters—considerations intended possibly to suggest that the Council is not as other councils are, and to convey impressions concerning the breadth of the hem of garments—the Chairman seriously devoted himself to a painstaking review of the work done by the numerous committees of the Council during the last three years. It is particularly satisfactory to note the prominence which is given to the work of the County Council's Sanitary Committee and Medical Officer, and the statements made under this head may be cited as affording a good idea of the Council's policy in reagard to sanitary administration. The action taken by the Council with the object of protecting water supplies first comes under review, and the Chairman states "that the Council may fairly claim for themselves and their medical officer a very considerable share in the improvement which has taken place in many of the Surrey streams." He adds that the question of protecting sources of water supply from springs, etc., below the surface of the ground, has also been considered, and he emphasises the fact that the function of the Council in this respect is analogous to that described in the matter of river pollution. He then referred to the subject of hospital accommodation. In one case the Council, it appears, has been forced into taking action under the Isolation Hospitals Act of 1893, and, notwithstanding opposition, certain hospitals have been established in the period under consideration. Again, the Chairman points out that "to prevent the sale of infected foods, etc., to stop the spread of infection at schools, to facilitate early and accurate diagnosis, and to institute inquiries respecting sources of infection, is, practically and humanly speaking, to prevent epidemics." "Surely," he says, "there can be no worse policy than that of undervaluing the work of medical officers in this respect." After referring, in this connection, to the system of internotification between medical officers and authorities, which has been established in the county, the Chairman brought his remarks upon sanitary administration to a conclusion by paying a well-deserved tribute to the unselfish labours of the County Medical Officer of Health (Dr. Seaton) in the interest of public health, and to his tact and discretion in dealing with the many sanitary questions upon which he is called upon to advise throughout the county.

DEATH IN A SULPHUR CHAMBER.

The Coroner for Leeds recently held an inquiry into the death of a blanket stover who contracted his fatal illness through being accidentally incarcerated within a sulphur chamber. The strong odour attaching to new blankets is due to the presence of a large amount of sulphur with which in the act of curing they have become impregnated. In the process known as "stoving" the blankets are hung up in a chamber in which sulphur is burned. During the act of combustion sulphurous acid is formed. It is this compound which forms the fumes that when inhaled are so irritating to the respiratory passages, and as a gas it is known to be deleterious to vegetable and animal life. Once the blankets have been placed in the stove and the sulphur lit no person is allowed to remain therein. Unfortunately, the workman whose death became the occasion of a coroner's inquiry was accidentally imprisoned in one of these sulphur chambers for four hours. Though stoving chambers can be entered by two doors, these for some unexplained reason have hitherto only opened from the outside, and to this trivial circumstance the death of the workman is due. It was not until a few hours after the man was missed, the factory in fact having been closed, that he was liberated from the chamber where for hours he had been inhaling the fumes of sulphurous acid. When seen by a medical man shortly after his release, the symptoms exhibited were great mental excitement and physical exhaustion, very rapid and irregular action of the heart. Two days subsequently, and without any improvement in the cardiac condition, bronchitis developed, which was rapidly followed by pneumonia, to which, combined with exhaustion, the man succumbed nine days after his exposure. The medical man who attended the inquest stated that this was the first death on record due to such a cause and under such circumstances, but that under other circumstances where people had inhaled sulphurous fumes, they had died from acute irritation of the lungs and of shock and syncope. Mice are known to have died in three hours after being exposed to a similar atmosphere containing 1 in 1,000, but the workman whose death forms the subject of these remarks was breathing for a longer time an atmosphere much more heavily charged with sulphurous acid, as may be gathered from the statement of the manager of the factory that 35 lbs. of sulphur had been lit in this particular stove. It is needless to remark that in future one of the doors of sulphur chambers in blanket works is to open from the inside.

THE NOTIFICATION OF MEASLES.

The Penzance Town Council has recently resolved to delete measles from the list of those diseases the notification of which is compulsory, and the reasons of its decision are precisely those which have prompted some other sanitary authorities to take the same course. Without provision for prompt hospital isolation it has been found that little or no value attaches to the notification of the disease, while, on the other hand, the measure entails a considerable expense. The provision of the necessary amount of hospital isolation in order to check the spread of measles materially appears to be almost beyond the pale of practical politics. The large number of beds required during epidemic periods, and the great difficulty and expense of nursing the many infant sufferers, would present enormous difficulties, if all the cases requiring such isolation could be got into the hospital; but owing to the tender ages of the very large proportion of those attacked, parents cannot be induced to part with them in sufficient numbers to affect the incidence of the disease very much. As a consequence, where such provision has been made on a small scale, little good has resulted. It is mainly from these considerations, and from the very important fact that a large proportion of the cases escape such notification where it is in force, that many do not regard the compulsory notification of the disease as a measure which is best calculated to reduce the high preventable mortality from measles. They consider that the matter is fundamentally one on which the public stands in need of education, and that the existence of the disease can be ascertained, and measures taken to prevent its spread through the medium of school attendance, more satisfactory than by the operation of the Infectious Diseases Notification Act. In such a scheme the school attendance officer furnishes the medical officer of health with a weekly list of absentees, together with the causes of absence, and thus the medical officer is able to note the varying incidence of the disease week by week, to cause handbills of advice and information to be distributed in the infected streets, and to close the schools promptly when desirable. These measures, supported by the co-operation of the teachers in excluding all suspicious scholars, yield, in the opinion of many, better results and at

considerable less cost and trouble than notification under the Act. Up to the end of last year some 105 districts had adopted compulsory notification of measles, and it has subsequently been revoked in nearly a third of these cases. It is but fair to add, however, that in some instances the scheme has scarcely had a sufficient trial, and during the last year or two the Local Government Board has generally made it a condition of their approval that the experiment shall be carried on for at least four or five years.

DOCTORS AND DUELS.

The ordinary English practitioner in these days is not likely to have anything to do with duels, either as a principal or in his professional capacity. Still, as young medical men take their part in the expansion of the Empire all over the world, they have to be prepared for whatever may turn up, including duels. To some, therefore, it may not be uninteresting to have what may be called the medical ritual of the *duello* described by so competent authority as Dr. P. Devillers. In an article which recently appeared in *La Médecine Moderne* he discusses the function of the doctor in duels in all its aspects. Nothing need be said here as to the surgical equipment which he recommends, which is much the same as that required by an army medical officer in the field. On the eventful morning etiquette demands that the carriage which conveys the principal and his seconds should be sent to the doctor's house. There seems to be no rule as to the seat in the carriage which should be allotted to the doctor, but it is customary for him to sit beside the principal. One might perhaps hazard a conjecture that this arrangement is made in view of possible contingencies, such as are euphemistically described by Bob Acres as "trembling with excessive valour." On reaching the ground the doctors retained on each side should meet in a fraternal spirit. If the sword is chosen the doctor's first professional duty is to render his principal's weapon as far as possible aseptic. Dr. Devillers prefers the use of an antiseptic fluid for this purpose, inasmuch as flaming spoils the temper of the blade. In the case of duels with pistols, Dr. Devillers somewhat regretfully admits that no trustworthy method of making bullets aseptic has yet been found. One somehow gathers that he is not partial to pistol duels, and he hints that they are more dangerous to the bystanders than to the combatants. When a wound has been inflicted and the doctor's opinion is asked, he should confine himself strictly to the terms of the reference, by which he is to decide whether the wound places the combatant in a condition of marked inferiority. Dr. Devillers takes credit to himself for never stopping a duel for a graze or scratch, as he has too much respect for the duel to sanction anything that may bring it into ridicule—a declaration which seems to imply that other doctors are less exacting in pronouncing that honour is satisfied. But what is to be done when the doctors differ as to whether the duel should go on? In these circumstances the decision of the question rests with the seconds, "in spite of their incompetence." It is added that the doctor whose opinion is overruled acts improperly if he leaves the field, as sometimes occurs. Even if deserted by his doctor, however, a combatant has no right to allege this as a reason for declining to continue the fight. There remains the question of the legal position of a doctor present at a duel. Dr. Devillers states that if he keeps strictly within his professional province he can, even if one of the combatants be killed, only be cited as a witness; the whole legal responsibility lies on the seconds. We should have thought the other combatant shared at least to some extent in the responsibility, but that is one of those things that are managed differently in France. A curious question discussed by Dr. Devillers is whether a doctor can be at once second and surgeon. It appears that the La Société d'Encouragement de l'Escrime expressly disapproves of this practice, but Dr. Devillers is not altogether of the same way of thinking. He sees no objection to doctors being present if desired as seconds, without prejudice to their resuming their proper profession if their principal be hurt. He himself has often been present at duels in the twofold capacity of doctor and second with the thoughtful object of saving his friends expense. When called upon to officiate by a person to whom he is not bound by ties of friendship, the doctor has a right to ask for a considerable fee, not only on account of the loss of time, but of the possibility of "the annoyances without number" that may ensue. Dr. Devillers sums up the professional function of the doctor at a duel by stating that he must insist that the duel shall take place near an inhabited region, and that he must be ready to give the benefit of his skill to whichever party may be wounded.

THE UNIVERSITY OF LONDON BILL.

The prospects of the London University Commission Bill are somewhat uncertain, for at the time of writing no definite promise as to the date of its introduction has been obtained from the Government. As will be seen from the report of the last meeting of the Council of the Royal College of Surgeons, which is published in another column, that body has agreed to join, in conjunction with the Royal College of Physicians, in the deputation which the Committee of Delegates of the metropolitan medical schools are arranging to interview the metropolitan members of Parliament with the view of gaining their support for the promised Bill. The London Unionist members are organised as a Committee for dealing with questions affecting the welfare of London, but this is not a party question, and the deputation will seek to enlist the sympathy of London members of all parties. As has been observed on previous occasions this appears to be from many points of view a move in the right direction, and it is to be hoped that other educational institutions in London may be induced to join with the representatives of the medical schools in enlisting the interest of metropolitan members of Parliament.

WINTER HOLIDAYS IN NORWAY.

A small pamphlet has just been issued by the Norwegian Winter Tourist Association on the sports and pastimes on ice and snow in Norway. Mr. Somerville, the late British Pro-Consul of Christiania, has written a most interesting introduction on the life in Norway during winter. Probably in no other country in Europe can winter sport be better enjoyed than in Norway; yet it has remained almost an unexplored field for Englishmen in winter. Not only can sleighing and skating be obtained, but also in the neighbourhood of Christiania and other towns, owing to the numerous mountains, much exercise and amusement can be got from the *kjoelke*, a form of toboggan or small sledge on runners, which being dragged up a hill is allowed to run down the frozen road, guided by a long steering pole held between the arm and the body. The pace got up on some of the hills which are a few miles in length is astounding and the excitement great. The use of the *ski*, which consists in walking on long planks in the snow, is undoubtedly a most exciting and health-giving sport. In flat countries the *ski* can only be used as a means of locomotion, but in the mountainous countries there is the excitement of climbing, and the still greater excitement of shooting down, the slopes—an experience once indulged in never forgotten. Of late years the townspeople have taken up the sport, ladies no less than the men. The degree of skill that can be attained on *ski* is marvellous. The leap, or hop, which was originally brought into notice by the Thelemarken peasants, has now become general, and the great "hoprend," or leaping, competition corresponds to our Derby. Crowds go to the meeting, which is held near Holmenkollen, a few miles from Christiania, and the sight is well worth seeing. The competition consists in shooting down a slope of about 180 yards; when two-thirds of the way down a leap is made from a platform—the jumper springs into the air and alights on his feet some hundred feet below. In spite of the apparent danger of this task,

only one serious accident has occurred. The excitement is tremendous, and it shows to what perfection balance can be obtained with *ski*. Visitors can hardly hope to indulge in leaping, but even invalids can gain health and enjoyment by practising with *ski*. In the large hotels in the neighbourhood of Christiania, which are special health resorts, the accommodation is excellent, so that even invalids might be sent there, for they could enjoy either the walks on *ski* round the neighbourhood, or sleigh drives. The more vigorous could well make trips up country, where the accommodation is naturally more rough. Those knowing the beauties of Norway in summer can hardly realise the still greater beauties of winter. The whole landscape enveloped in snow, the green firs and the sparkling crystals of ice, the cool fresh air and the blue sky combine to create a wish for outdoor sport, and to produce a magnificent appetite. There are tourist offices now open in Christiania which will give information to intending visitors, and the cost of living in Norway is distinctly moderate. Those who know the country in winter find it a matter of wonder that more people do not make use of that country as a bracing winter resort.

DISSECTING IN PARIS.

Paris used to have the reputation of being the paradise of the dissector, a promised land of anatomy where "parts" offered themselves, so to speak, of their own accord to the scalpel of the student. According to the *Gazette des Hôpitaux*, however, things are not altogether what they seem in this respect in the French capital. During the winter the total number of students dissecting has been 1,159; in addition to this 406 students worked at operative surgery during the summer. For these two categories of workers together the number of bodies supplied was 1,573, of which only 1,117 could be used, the remainder being in an advanced condition of putrefaction when delivered. In reality the 1,159 dissecting students had only 453 subjects, less than half a body per head. Further, the majority of these bodies consisted only of the four limbs, a preceding necropsy having made the thorax and abdomen useless to the dissector. Our French contemporary asks how, under these circumstances, students are to learn the anatomy of the viscera? They are driven to get such information as they can from books and models, with the result that in examinations candidates are often found to have a difficulty in distinguishing the aorta from the œsophagus. Evidently the abundance of dissecting material which used to attract the student from many parts of the world to Paris is now a thing of the past, or perhaps it was at all times more apparent than real.

MEDICAL APPRENTICESHIP IN AMERICA IN THE LAST CENTURY.

The first medical school in North America was organised by the University of Pennsylvania in 1765. Before that the colony was largely dependent on the mother country for its supply of doctors. Those of home growth were trained under a system of apprenticeship, the instruction which they received from their masters being in some instances supplemented by further study in Europe. In a recent number of the *Occidental Medical Times*, Professor Ellinwood, of San Francisco, prints a copy of an indenture bearing date 1733, by which one Hollister Baker, then aged about 16, was apprenticed to a physician in Marlboro', twenty miles from Boston. By this deed Baker bound himself to be an apprentice under Benjamin Gott, in the county of Middlesex, physician, to learn his art, trade, or mystery, and with him the said Benjamin Gott, after the manner of an apprentice, to dwell and serve for and during the full and just term of five years and four months from the date of indenture. During all the said term he was to serve his master and mistress honestly and faithfully and to keep close their secrets. He was not to waste, embezzle, purloin, or lend unto others his master's goods, nor suffer the same to be wasted or purloined. He was not to frequent taverns or alehouses, nor to play at cards, or dice, or any other unlawful games. He was not to commit fornication nor contract matrimony with any person during the said term. In return for which services Benjamin Gott covenanted, promised, granted, and agreed that he would teach his apprentice or cause him to be taught, by the best ways and means which he might and could, the trade, art, or mystery of a physician according to his own best skill and judgment (if the said apprentice were capable of learning), and would find and provide for and unto the said apprentice good and sufficient meat, drink, washing, and lodging during the said term, both in sickness and in health; his mother all said term finding said apprentice all his clothing, of all sorts, fitting for apprentice for said term; and at the end of said term to dismiss said apprentice with good skill in arithmetic, Latin, and also in Greek through to the Greek grammar. Did Benjamin Gott make Hollister Baker an efficient practitioner; or was the latter an idle apprentice? At any rate, the indenture gives an interesting glimpse into medical education as it was "in good old Colony times."

EDINBURGH ROYAL INFIRMARY.

On Friday, February 11th, in the Edinburgh Royal Infirmary, Professor Annandale successfully repeated the procedure of the late Professor Syme in a case of diffuse left carotid aneurysm. There was not room to compress the artery on the cardiac side of the tumour, and the condition was rapidly increasing. A small incision was made directly into the aneurysm, and the finger introduced so as to control the hæmorrhage at the point of communication with the artery; the cavity was then freely incised upwards and downwards, and the artery tied above and below the ruptured point.

ORK AND PLAY.

Two foreign writers have recently expressed their admiration for the Englishman's power of playing. We use the term "Englishman" for want of a better to express the nation or nations of mixed parentage who now inhabit these islands from Wick to the English Channel, some parts of the North of Ireland, and many parts of the British colonies in North America, Australia, and New Zealand. Mr. J. N. Ford, in a letter published some time ago in the *New York Tribune*, wrote: "I should like to know what it is that enables Englishmen to accomplish more in the way of work than Americans usually do. Two reasons suggest themselves to my mind—one, that Englishmen go about their work more methodically than Americans; the other, that their climate is better adapted to work in. They have no such enervating summers as fall to our lot. A man may live in London for twelve months of the year, and feel no worse for it; but I defy a man to live in New York for twelve months straight through without feeling the worse for it." Mr. Ford, however, concludes that the real secret of the Englishman's increased output is due to the fact "he never wastes time and the consequence is that he never seems busy; while we waste so much that we seem always to be driven to death with work." M. Ed. Demolins also, who is a serious student of social science, is much struck by the Englishman's power of playing. In his work entitled *A quoi tient la supériorité des Anglo-Saxons?* he gives much space to its consideration. He says that a lover of paradox might undertake to prove either that the English are the people who work the most or that the English are the people who work the least. He says that there is in fact nothing comparable to the Englishman's power of work except his power of resting. The Englishman, he says, gives in the least time possible the greatest quantity of work possible, in order to be able afterwards to give himself the greatest possible quantity of rest. By rest (*repos*) M. Demolins does not mean doing nothing, for he finds the true cause of the desire to do work rapidly in order to have the more leisure in the Englishman's love of

the country, which again he puts down in large measure to the love of a home, a place apart, where a man may be independent and "comfortable"—a word which, together with "home," he finds it impossible to translate into French. He notices that if we swarm into towns in early manhood we stream out again in large numbers as soon as a competency is made. Further, he notices that even when in full work many city workers contrive to have their homes in the country, and many others to steal the Saturday to Monday with a great approach to regularity. It is rather comforting to find that a keen observer like M. Demolins is so strongly impressed by the Englishman's love of country life, for the enormous growth of our town populations might make one fear that this hereditary characteristic was dying out. His explanation of our habits of work may not be complete, for he hardly gives sufficient weight to the love of sport, but his explanation is sound as far as it goes, and is much to be preferred to doubtful speculations as to climatic influences on the power of working.

THE ABUSE OF MEDICAL CHARITIES IN NEW YORK.

According to the New York *Medical Record* the number of persons who received free medical and surgical relief at the dispensaries of that city last year amounted to 49.7 per cent. of the entire population. Of this number it has been estimated by those competent to judge that fully 70 per cent. were abundantly able to pay a medical practitioner at least a moderate fee for his services. The abuse is so flagrant that it has stimulated the Medical Society of the County of New York and other medical societies to take steps to promote legislative action on the subject. They have recently caused a Bill to be submitted to the Legislature providing for an amendment to the State Charities Law of 1896. This Bill clearly defines a dispensary, and provides that all such institutions shall be placed under the control of the State Board of Charities. All dispensaries are to obtain a licence from the Board under which to conduct their operations, and the Board is empowered to refuse such licences, or if granted to revoke them in case the rules and regulations which the Bill authorises it to make are not complied with. No dispensary is to be conducted in a drug store or tenement house, and violation of the provisions of the Act or of the rules and regulations of the Board is made punishable by a fine of not less than 10 dollars (£2), and not more than 250 dollars (£50). The date specified for the Act to come into force is October 1st, 1898.

RUSSIAN CLAIMS—IN GYNÆCOLOGY.

We hear a great deal in the daily press about Russian claims in political questions. The recent Medical Congress at Moscow has induced the Russian doctors to put forward other pretensions, and not without justification. At a recent meeting of the Obstetrical Society of St. Petersburg Dr. Kakoutschkin made a speech, in which he maintained, on the strength of the published reports, that his countrymen had learnt nothing whatever from the Congress; that the foreign members had shown great ignorance of Russian medical literature; and, lastly, that not a word had been spoken in Russian at the sittings, though the majority of the members of the Congress were Russians. He thought it but fair that the full *Transactions* should at least be published in his countrymen's tongue with parallel readings in one other language. Professor Ott made an eloquent harangue in favour of Russian obstetrics and gynæcology. He began by noting that it had been said of other congresses besides those which met in Russia that nobody learnt anything from them. He allowed that the Germans had been the great teachers of the Russians, but Russia, he could show, was getting ahead of its teachers. Men with a great name in their country—Olshausen, Küstner, Martin, and others—dwelt at the Congress on matters which they treated as new, though the Russians already knew all about them several years ago. Olshausen still dreaded wounding the placenta in the Cæsarean operation, and warned the Russians that the elastic ligature might cause suffocation of the fœtus. He evidently had never studied Stolipinsky's work on the subject. Berlin surgery, Ott declares, confesses to 30 per cent. of hernias of the cicatrix after abdominal section; Russian surgeons find hernia in only 3 per cent. of their cases. This, by the way, is a very grave assertion, and should be made good by full reports. Doyen's hysterectomy, much vaunted in Russia, has proved inferior in safety to total removal of the uterus as performed in that country. Ott further urged a very strong claim on behalf of the soundness of Russian medical principles. Several operative procedures such as vaginal fixation of the uterus, already fallen into disfavour in the land where they were devised, were never accepted in the empire of the Czar. In conclusion, Professor Ott felt sure that Russians had learnt at least one interesting fact at the Moscow Congress. So far from being behind their foreign brethren, they were in some respects in advance of them. Russians studied foreign works and carried out what they learnt from them, while he lamented that foreigners will not master the intricacies of the language of the Russian empire.

The *Army Medical Department Report* for 1896 was issued on February 17th. In the United Kingdom the ratios for sickness and mortality were lower than in 1895, and considerably below the average for the preceding ten years. Enteric fever showed a decided decline. In India, however, the sickness from this disease and from other continued fevers and cholera was greater. Malarial fevers accounted for almost one-fifth of the total number of admissions into hospital in India, and venereal diseases for more than one-third.

The honorary surgeons of the Metropolitan Brigade of the St. John Ambulance Association will shortly form a deputation to wait upon Lord Knutsford, the Chairman of the Executive Committee, to lay before him reasons which should lead to a reconsideration of the decision to allow others than medical men to give courses of lectures on hygiene for the Association.

The first Hunterian Lecture before the Hunterian Society on "What Operation can do for Cancer of the Tongue" will be given by Mr. H. Trentham Butlin, D.C.L., F.R.C.S., on Wednesday, February 23rd, at 8.30 P.M. at the London Institution, Finsbury Circus, E.C.

Lieutenant-Colonel Commandant and Honorary Colonel Pearson Robert Cresswell, 3rd Volunteer Battalion Welsh Regiment, has been appointed a Companion of the Most Honourable Order of the Bath. Mr. Cresswell, who is a Fellow of the Royal College of Surgeons of Edinburgh, is Senior Surgeon to the Merthyr General Hospital.

Dr. Dudley Buxton has been appointed Consulting Anæsthetist to the National Hospital for the Paralysed and Epileptic, Queen Square, which he has served in the capacity of anæsthetist for several years. This is, we believe, the first instance of the election of an anæsthetist to the consulting staff of a London hospital.

A report recently made by the Medical Officer of Health of Cardiff (Dr. Walford) to the Sanitary Authority was to the effect that diphtheria had recently been prevalent over South Wales, including Cardiff. At the Severn Road Board School, in that town—a large school for about 1,800, where there had been some suspicion of overcrowding, the proportion attacked by diphtheria amounted to less than 1 per cent., this being the highest proportion of any of the elementary schools in the district. Any overcrowding which may have existed in this school is already relieved by the opening, last week, of a new Board school in the immediate neighbourhood.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

The report of the Departmental Committee on the staff of the Local Government Board has been laid upon the table of the House, and will shortly be published. There is no doubt that the department has been undermanned for some years, while the work has been enormously increased by the Local Government Acts of 1888 and 1893, and by the Agricultural Rating Act of 1896. The complaints from the public of delays in the office have been very general, and it was high time that an increase in the staff should be made. There is, however, a general feeling that the report does not go far enough. It will add a good deal of strength to the clerical staff, and increases the estimates by some £18,000 a year. The department will, however, in the natural course of the growth of its work, still be insufficiently manned. A complete reorganisation is really necessary. The Poor-law, the Public Health, the Local Government Departments should be each made complete and under a distinct official head with an adequate staff. This would be costly process, but in the end the most economical. As regards the Public Health Department the report recommends the appointment of two temporary medical inspectors. This is almost worthless as a remedy for the present burdens of the office. It takes many months for men with the highest qualifications to become expert in these duties, and then when they become useful they may under the pressure of the Treasury have to be dropped. During the last cholera invasion four excellent temporary inspectors were appointed, but if we are not misinformed one or more of the best have since been lost to the department. It is bad economy to starve a great administrative and advisory office of this kind, and it is this policy which reinforces the demand for a Minister of Health with a strong permanent staff to meet the increasing demands of the country for investigation and assistance in local difficulties connected with public health. The whole question is pretty sure to be discussed on the Estimates, but for the present nothing more than the report recommends is likely to be granted.

The influential deputation which the British Medical Association lately formed to wait upon the Secretary of State for War for the purpose of urging certain reforms in the Army Medical Department is likely to be followed by good results. The action of the Association was most opportune, for the possibilities of foreign complications make it a matter of urgency that the Medical Staff should be strengthened, and to do this the service must be rendered more attractive. The proposal to form an Army Medical Corps is being favourably considered, and there is a good prospect of its being accepted. The compound titles which are most unpopular in certain quarters, and which Lord Lansdowne admitted to be very unsatisfactory, are a difficulty, and in a corps established on the lines of the Army Service Corps substantive rank would be given. Such a recommendation, it is believed in the House, would go far to restore the popularity of the department.

On Thursday afternoon Sir Howard Vincent asked the Under Secretary of State for War whether there was still a dearth of suitable candidates for the Army Medical Department and how many vacancies there were, whether the standard of medical and surgical attainment had had to be lowered, and what steps the Secretary of State proposed to take to put the Department on a better basis. Mr. Brodrick, in reply, said: "I regret to say that there is still a dearth of candidates for the Army Medical Department. There are 38 vacancies and 21 probationers to fill them. The standard of medical and surgical qualification has not been lowered. The steps it is intended to take to put the Department in a better position will shortly be announced."

There are still a number of amendments on the paper of divers kinds, and emanating from all sections of parties. Amongst the number is one in the name of Mr. Kearley, a provision dealer, which says: "We venture humbly to represent to Your Majesty the urgent need of a measure for checking the widespread adulteration of food products, and to express our regret that no assurance is given that such a measure will be proposed to this House during the present session of Parliament." As was pointed out last week, one of the measures which this session is most deeply interest the medical profession is that promised in the Queen's Speech dealing with vaccination. Its prospects ought to be good for the reasons already indicated. It is, however, a circumstance of ill omen that the Government do not seem to have made up their minds at what period of the session their proposals shall be submitted to Parliament. General Russell made it his businss to interrogate them from his place on Monday, but the reply vouchsafed by Mr. T. W. Russell, Secretary to the Local Government Board, on behalf of his chief was that "his right hon. friend was not able to say when the Bill would be introduced."

Another Bill of leading importance is that for the registration of midwives, of which notice has been given by Mr. J. B. Balfour. This, it is understood, is the Bill of which Mr. de Tatton Egerton took charge last year. In the scramble for a place—a scramble made more orderly than of yore by the process of balloting in Committee Room No. 10—the Bill has secured the eighth place. That, no doubt, sounds well, seeing that the competing Bills were 322 in number; but, as a matter of fact, the appropriation of seven Wednesdays before this particular measure can be brought under discussion relegates it to May 11th—a month after Easter, or within two or three weeks of that critical period when for private members' bantlings the "slaughter of the innocents" begins. After Whitsuntide those private Bills with which progress has already been made have precedence over all others. And by that time who can say what may not have happened? Not even the First Lord of the Treasury himself can say that the whole of the time of the House (save perhaps Fridays, which are ear-marked for Supply) may not have been seized for the Irish Local Government Bill or some equally important Ministerial measure.

Anent the Tuberculosis Commission, Mr. Chaplin has informed Mr. Field that their report is still under consideration, but that pending its issue he has no power to modify proceedings on the part of local administrative authorities, nor could he alter the existing law or its administration by the sanitary authorities.

Amongst the good things in the womb of time is a motion for leave to introduce a Bill "to amend the law relating to patent and proprietary chemical compounds" by Mr. Wootton Isaacson; a motion by Mr. Drage to call attention to the state of the Poor Law (for which no day is fixed), and another by Mr. Knowles "to call attention to the treatment of habitual drunkards."

Bills of interest to the medical profession include Sir F. Powell's Rivers Pollution Prevention Bill, the second reading of which is set down for March 9th; the Working Men's Dwellings Bills of Sir A. Hickman and Sir Howard Vincent, the second readings of which are fixed respectively for February 16th and 23rd: the Shops Bill (Dilke), February 22nd; the Shops Early Closing Bill (Lubbock), February 22nd; the Street Noises Bill (Jacoby), May 25th. Most of these, with sundry coal mine regulation Bills and Bills for the regulation of steam engines and boilers, may now fairly be regarded as hardy annuals, which, however they may be cut off by the winter of parliamentary discontent or the slaughtering process, always come up smiling at the commencement of the session. Since the ballot was taken Mr. Flower introduced a Bill "to extend and amend the provisions of the Poor-law Act, 1889." It bears the names of Sir H. Bemrose, Mr. Davitt, Captain Greville, Mr. Hazell, Mr. Alfred Hutton, Mr. William Jones, Mr. Samuel Smith, and Mr. Harry Samuel, in addition to that of Mr. Flower.

On the interesting subject of colour vision the President of the Board of Trade was asked whether it was true that of the sailors his department had rejected as colour blind 41.6 per cent. had been passed on appeal, and whether the Board proposed to take any steps to revise their tests. Mr. Ritchie replied that 5,017 persons were examined in colour vision during the year 1896, and of this number 56 failed to pass. Of the 56, 12 availed themselves of the right of appeal and 5 were successful. The present system of sight test was based on a report of a Committee of the Royal Society specially appointed to inquire into the subject. He was advised that no case had been made out for revising it.

The Attorney-General was asked by Mr. Tennant whether his attention had been called to the case of three girls who in the course of their work in the potteries had become blind through the action of lead poisoning, and the hon. and learned gentleman answered in the negative. In response to a further query as to whether the Workmen's Compensation Act would provide a remedy in such cases, he said he could not answer such an abstract question, as every case must depend upon its own special circumstances as to whether the injury was the result of an accident. Mr. Loder has given notice of his intention to ask the Home Secretary whether he can state how many deaths attributable to lead poisoning occurred last year amongst boys under 18 years of age, and whether he proposes to take any steps to prevent boys of that age from

being employed in lead factories. Mr. Orr-Ewing questioned the Home Secretary on a somewhat kindred subject. He wished to know whether an inquiry could be held as to the working of the existing special rules bearing on the sickness and mortality in the potteries, and the advisability of referring such inquiry to one of the Departmental Committees now investigating dangerous trades—such, for example, as that which had the advantage of the services of Dr. Oliver. The Home Secretary, in reply, said he had observed with concern the number of cases of lead poisoning which still occurred in certain branches of earthenware manufacture. The special rules to which Mr. Holland referred were based on the recommendations of a Committee which made a full inquiry into the subject in 1893, and he (the Home Secretary) hardly thought it necessary at present to refer the subject again to the Committee. Constant attention, however, had been given to the subject by the factory inspectors, and he had directed special inquiry to be made into the working of the rules, and he should be prepared if necessary to amend them, and to take any steps that might be required to secure their being strictly observed by employers and employed.

Mr. Lough has obtained the first place for March 15th, when he will move a resolution deploring "the alarming increase of lunacy in Ireland," and declaring the House to be of opinion that it arises "largely from economic causes, some of which might be removed or diminished by legislation." Mr. Daly has given notice of a question showing hostility to the order of the Local Government Board, directing that only paid nurses shall take charge of the sick poor in Irish workhouses.

THE INTERPRETATION OF THE MEDICAL ACTS.

An ex'ra supplement to the *Clinical Journal* of February 9th contains a communication from Mr. Victor Horsley, entitled The True Interpretation to be Placed upon the Medical Acts. It is a closely reasoned discussion of the degree and extent of the protection afforded to the medical profession in the United Kingdom by the Medical Acts of 1858 and 1886. The argument is somewhat technical, but we have endeavoured to give below its main gist:

Mr. Horsley first examines the opinion that the Medical Acts, though they strictly bind the practitioner, do nothing in any way to protect his means of livelihood. Mr. Horsley finds it difficult to understand the idea that the Medical Acts only protect the title and do not protect a registered practitioner's personal privilege to practise medicine, surgery, and midwifery. The point is nowhere mentioned in the Acts, for the very good reason that medical titles *per se* did not and do not require such protection.

Mr. Horsley points out that the Medical Acts lay down that if anybody falsely uses a title in order to make the public think that he is registered under the Medical Acts, certain liabilities follow. Mr. Carter and others leave out the following words in the clause: "implying that he is registered under this Act, or that he is recognised by law as a physician or surgeon, or a practitioner in medicine, etc." Section VI of the Act of 1886, which is a modified version of the repealed Section XXXI of the Act of 1858, describes the right to practise medicine, surgery, and midwifery, which is a privilege attaching to registration, and shows that no one but a registered person possesses such a right.

Mr. Horsley contends that the title to the right to practise medicine, surgery, and midwifery is registration, and that Section XL of the Act of 1858 provides for the complete protection of registration as alone conveying this right. A person practising without being registered violates the Acts, and comes under the penal provisions of Section XL, which provides for the punishment of unqualified, that is unregistered, persons.

Mr. Horsley then argues that the dictum in the *Medical Directory* that "registration is not compulsory upon medical men" is erroneous, the Medical Act containing within itself everything that makes registration compulsory. Registration, according to Mr. Horsley, is compulsory, for if omission of the name from the *Register* be proved, then the unregistered person is shown to be unable to practise and to enjoy the rights appertaining to a qualified—that is, a registered—practitioner. Mr. Horsley contends that the belief that a "qualification" is to all intents and purposes a statutory licence to practise is an error. The Medical Act of 1858 says that any person who possesses one or more qualifications referred to shall be "entitled to be registered," no mention being made of such qualifications entitling its owner to practise. The Medical Act of 1886 also makes no mention of qualification alone conferring any right to practise; such is confined to a registered person, and is his sole right and privilege.

A "qualification," therefore, Mr. Horsley concludes, is at the present time useless without registration, and he observes that Mr. Upton, the clerk to the Apothecaries' Society, has recently given his unqualified confirmation to this contention. Mr. Horsley, referring to the other privilege conferred by Section VI of the Medical Act of 1886, namely, that of recovering fees by process of law, maintains that it is inaccurate and inconsistent to admit the possession of one and to dispute the other, for what applies to one obviously applies to the other.

In conclusion, Mr. Horsley says that should the courts not confirm the validity of his views, such an adverse decision would add force to the other reasons which exist for obtaining amendments to the Medical Acts, for it would not be denied that the members of the medical profession, who have a far more harassing and expensive training to go through, ought to have the same meed of protection as that which lawyers enjoy.

CHLORIDES IN DRINKING WATER.

In the very complete report on the chemical and bacteriological examinations of the Maidstone water supply by Mr. Adams and Dr. Washbourn to which we lately drew attention (British Medical Journal, January 8th, 1898, page 108), and to which we refer again elsewhere, the distinguished health officer and county analyst states that he has from frequent analysis during twenty-five years been able to construct for the waters issuing from the Hythe beds of the lower greensand—locally described as the "ragstone"—a pure water standard. In the report mentioned he shows to what extent each of the twenty-two samples chemically examined departed from this standard as to total solids, loss on ignition of residue, amount of chlorine, of oxidised nitrogen, of free and of albuminoid ammonia, oxygen absorbed after a quarter and after four hours, total and permanent hardness, colour, smell, presence of phosphoric acid, and appearance of the burnt residue. The chlorine present as chlorides, for instance, he gives as 2 30 grains per gallon in the local standard. In the 22 samples, analyses of which are given, the average was 2.45. In 6 of the 22 the amount found varied from 2.0 to 2.2, just a trifle below the standard. In 2 it was 1.9 and in 2, 1 8, appreciably below the standard. In 5 it was 2 4 or 2.5, just above the standard. In 1 it was 2.7 and in another 2.9. In the remaining 5 it varied from 3.0 to 3.3. In 3 of these 5 the nitrogen as nitrites and nitrates was 144 per cent. above the local normal. In 1 of the 3 the albuminoid ammonia was 7 times the normal (700 per cent. increase), in the second there was no albuminoid ammonia, in the third it was double the normal. None of the three were bacteriologically examined, and Mr. Adams, from the small amount of oxygen absorbed and other characteristics, regarded all three as containing no unoxidised polluting matter. In the two others with a considerable excess of chlorine (3.0 and 3 2 respectively) there was 22 and 37 per cent. more oxidised nitrogen than the standard. Free ammonia, however, was absent, and albuminoid below the standard, as was also the power of absorbing oxygen. Mr. Adams regarded these also as having been somewhat polluted, but as having recovered themselves. The bacteriological examination of one of them (sample collected two days later than for analysis) showed thirty-seven colonies to 1 c.cm., but none resembling B. coli or B. typhosus. Some growths occurred on Elsner plates, but no B. coli or B. typhosus.

The excess of chlorine in four out of these five samples did not therefore correspond to the actual presence of an excess of sewage matter in the water, though it was compatible with a recent, and in three of the five cases very considerable, pollution. In one case the organic matter was far from all oxidised.

On the other hand, in four waters, all both chemically and bacteriologically examined, the chlorine was 2.1, 2.2, 1.8, and 1.9 gr. respectively, against a normal of 2.3. These four waters had 73 per cent., 90 per cent., 33 per cent., and 22 per cent. of oxidised nitrogen in excess of the normal. There was free ammonia in the first, second, and fourth, the quantity in the second being six times the normal. Albu-

minoid ammonia was also considerably in excess in the first, second, and fourth (1,100 per cent., 700 per cent., and 900 per cent.), and slightly so in the third. The colonies in one c.cm. were 776, 406, 19, and 165 respectively, and in the first the colonies resembled those of the colon, but there were no true typhoid bacilli. The first of these four sources had been previously examined a month earlier, when it contained 2.5 grs. of chlorine (9 per cent. excess), had an excess of oxidised N. of 52 per cent., no free ammonia, but a great excess (800 per cent.) of albuminoid ammonia; it also took more than the usual amount of oxygen from the permanganate solution. There were on this earlier occasion 560 colonies to the 1 c.cm., and many coli-like bacilli, though probably not the actual typhoid germ. This was the spring credited chiefly with the mischief, and it was not examined till September 19th. Even at this time, although the new cases were at about their daily maximum, the water had apparently considerably righted itself. Many analysts would still have looked upon it as unsafe, containing as it did, along with a slight increase of chlorine, a considerable excess of organic ammonia.

In some American States—Massachusetts and Connecticut are two—maps have been prepared with iso-chlor lines, showing the observed proportions of chlorides found in what are regarded as safe natural waters. As might be expected, the lines run largely parallel to the sea coast. The examination, even quantitatively, of chlorides is so simple that rural medical officers would be glad if it could be relied upon. It would perhaps be worth while, notwithstanding the contradictory evidence afforded, as we have just seen by Maidstone, for some county officers to prepare maps of this kind. Certain fallacies as to depth of well, nature of strata, quantity of surface and fall water, would naturally have to be kept in mind. Season, recency of rainfall, and direction of wind, especially if near the coast, might also have to be taken into account. In any case, a water containing an amount of chlorine in excess of that in neighbouring and similar sources ought to have its character established by other chemical and biological tests before being allowed to enter the water bottle except through the kettle.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary Council was held on February 10th, Sir William MacCormac, Bart., President, in the chair.

The minutes of the preceding meeting were read and confirmed.

A motion was passed by the Council expressing their deep regret at the death of their former colleague, Mr. Edward Lund, and their sympathy with the members of his family in the loss which they had sustained, as well as expressing their appreciation of the services rendered by Mr. Lund to the College as a member of the Council and of the Court of Examiners.

The Council determined not to confirm the resolution adopted on December 9th, 1897, but adopted the following in its place:

That the mover of the second and third resolutions carried at the annual meeting of Fellows and Members be informed that on June 10th, 1897, the Council passed a resolution to the effect that they were willing to consider any evidence which might be submitted to them respecting canvassing for patients directly or indirectly by any individual Fellow or Member of the College, with a view of determining whether or not such Fellow or Member has been guilty of a breach of the by-laws. To this resolution the Council adhere, but in their opinion, whilst so many different and dissimilar institutions are included under the denomination of "medical aid associations," many of them, such as the friendly societies, being legalised institutions, the Council cannot make any general pronouncement respecting the connection of medical men with these associations.

In reply to a letter from a Member of the College respecting a provident association in a provincial town, the Council adopted the following answer:

1. That if well-to-do members of a provident association avail themselves of the services of the medical officers of that association without adequately remunerating them, such conduct is reprehensible.

2. That the Council have no control over the management of such associations, and they consider that the proper way to deal with such an abuse is to submit the facts to the managing officials.

A letter of January 25th was read from the Committee of Delegates of the Metropolitan Medical Schools, asking the College to join a deputation to the Metropolitan members of Parliament, to ask their support in carrying the promised London University Commission Bill. A motion was carried that the College, in conjunction with the Royal College of Physicians, was willing to join the deputation provided that it is not proposed by the deputation to urge amendments.

An offer from an unknown donor of a framed oil copy of the portrait of Sir Erasmus Wilson, which was painted by Mr. Stephen Pearce, and exhibited at the Royal Academy in 1872, was accepted with thanks.

The President, Sir William MacCormac, Bart., was declared Hunterian Orator for 1899. Mr. T. Pickering Pick was appointed Bradshaw Lecturer for 1898.

A resolution was carried to the following effect: That Clause 4 of Section XXIII of the Regulations relating to meetings of Fellows, be altered to the following, namely:

A meeting shall be held in each year on the first Thursday in July, after the annual election to the Council on that day.

The January meeting will thus, in future, cease to be held.

LONDON HOSPITAL MEDICAL COLLEGE.

Tenders have now been accepted for the erection of the buildings that are to be added to the London Hospital Medical College. The demolition of the buildings which at present occupy the site will shortly be commenced, and the last portion of the College built in 1854 will have disappeared. This portion of the building was left untouched when the College was remodelled and almost entirely rebuilt in 1886-7, as it was felt that requirements then unforeseen might arise, and that it would be wiser to leave some space which might in such a case be dealt with. The rapid progress of medical education and the enlargement of the requirements of the Examining Boards have rendered it imperative to give more space for the teaching of such important subjects as bacteriology, public health, and biology, and arrangements will be made in the new block of buildings for the adequate teaching of these subjects, as well as the encouragement of private research.

On the basement will be the department of public health, containing a large museum, professor's room, class rooms, etc. On the ground floor will be the biological laboratory, class rooms, and the materia medica museum. On the first floor the chemical theatre and laboratories and the balance room. On the second floor the physics laboratory, the chemical laboratory for the diploma in Public Health classes, the operative surgery room, and a large anatomy class room leading from the dissecting room. On the third floor will be the Bacteriological Department, with general laboratory, research laboratory, class rooms for D.P.H. work, sterilising room, animal room, etc. Other portions of the building will be thus left for additional development, and advantage will be taken of this to provide special class rooms for students studying for the Preliminary Scientific, the Intermediate M.B. London, and other examinations. Additions will also be made to the present Physiological Department, giving rooms for original research and for special class work for the higher examinations.

For all these departments special teachers have already been appointed, who are devoting their entire time to the particular subjects that they have undertaken. In addition to these alterations and additions, arrangements have been made in the hospital for additional clinical teaching. The physicians and surgeons will make an additional visit each week. The assistant surgeons, who formerly had no beds, will now have twenty beds each, so that the vast clinical material of the hospital will be more fully utilised than formerly, and more opportunity will be given for the development of operative surgery. To meet this, another operating theatre will shortly be built.

The work of the session will be carried on without interruption while the buildings are in progress, and it is hoped that all will be completed by the commencement of the winter session, 1898-9.

The Goldsmiths Company have sent a donation of £1,000 to the London Hospital Maintenance Fund Appeal.

THE LATE MR. ERNEST HART.

MRS. ERNEST HART wishes to thank her many friends, at home and abroad, who have written to express their sincere sympathy with her in her great loss. The large number of letters she has received renders it impossible for her to answer them individually, as she would have wished to do. Mrs. Hart would be greatly obliged to those who have records of public work done in conjunction with Mr. Ernest Hart, who have letters of interest from him, or who can give personal reminiscences of him, to be so good as to communicate with her, as she is anxious to collect the material for a "Life" of her husband, which she intends to prepare for publication.

Mrs. Hart has received the following resolutions:

"*The Yorkshire Branch of the British Medical Association* wish to convey to Mrs. Ernest Hart and family their sincere regret at their sad bereavement. They feel that the Association has lost a true friend, to whose untiring efforts the success of the BRITISH MEDICAL JOURNAL is largely due."

"*The State Children's Aid Association* offer to Mrs. Ernest Hart their deep and sincere sympathy in the loss she has so recently sustained by the death of Mr. Ernest Hart, a member of the Council of this Association. The Committee are aware of Mr. Hart's long public work in connection with any sort of wholesome reform in the Poor-law system or its administration; they know, too, that he was never afraid to stand up for what was right and just with a few, though he lived to see his ideas accepted by the many. In regard to this Association the Committee will in the future greatly miss his inspiriting suggestions and his helpful counsels."

The *Sanitary Institute* passed the following resolution at the meeting of the Council on January 12th, Professor H. Robinson in the chair: "That the Council of the Sanitary Institute have heard with deep regret of the death of Mr. Ernest Hart, who was for many years a member of the Council of the Parkes Museum and the Sanitary Institute, and they desire to record their appreciation of his indefatigable labours in the cause of hygiene, and of the services that he rendered in the work of the Institute. The Council desire also to express to Mrs. Hart and the members of his family their most sincere sympathy in the sad loss which they have sustained."

Mrs. Hart has also received a letter from Dr. Louis Henry, of Melbourne, in which he writes that he desires "to express, not only on my own behalf, but on behalf of all the members of the various Branches of the British Medical Association in Australasia, their keen regret at the loss of so valuable a member, and also their sympathy with you in your bereavement." Dr. Henry adds that it was during a visit which he paid to London in 1879, "that the idea originated of establishing Branches of the Association in Australia. Mr. Hart was most enthusiastic in working out the details of the scheme, and I had the honour of being entrusted with its execution. The result is shown by the growth and development of Branches all over Australasia, forming as they do a strong bond of union with the Branches in Great Britain. It must be a source of gratification for you to know that as long as the Australian Branches retain their association with the British Medical Association, so long will the name of Ernest Hart be perpetuated as the author of their creation."

CORPORATE AND MEDICAL REFORM COMMITTEE.

A MEETING of the Executive Committee was held by permission at the residence of Dr. Tom R. Taylor, F.R.C.S.Eng., on Saturday, February 5th, Dr. T. Granville Hockridge in the chair.

In Select Committee of members of the British Medical Association it was resolved:

To communicate to the Branches memorials addressed by members of the Association to the Council, complaining of maladministration and other grievances; and, on the ground that the Council is withholding them and other matters from the Association, and denying to members their right under the ninth article of association to communicate with other members through the medium of their JOURNAL, to appeal to the medical and lay press for that publicity and means of intercommunication of the right to which, in their own JOURNAL, they are oppressively deprived.

In Select Committee of Fellows and Members of the Royal College of Surgeons of England it was resolved:

A draft petition by way of requisition to the Council of the College, was adopted, praying the Council to make the necessary arrangements for an election by the Members of the College, including the Fellows thereof—of a person to be a member of the General Medical Council—and that, having regard to their views expressed on the questions addressed to candidates at the recent election of a direct representative for England on the General Medical Council, direct representatives being Fellows or Members of the College be invited to sign and support the petition.

In Executive Committee it was resolved:

1. That general meetings of the Committee and of the Select Committees for the College of Surgeons—Universities of London and Edinburgh—and British Medical Association be convened for Saturday, 12th inst., at 4 P.M., at the residence of Dr. Tom R. Taylor, F.R.C.S.Eng.

2. That this Committee thanks the Parliamentary Bills Committee of the British Medical Association, and particularly Mr. G. Brown, Dr Shuttleworth, Mr. V. Horsley, and Mr. Parkinson for the action taken on the memorial of this Committee inviting the Association to take the lead in measures to secure the reforms desired by the profession, but t a letter be written to point out that the chief object—the co-ordination o the action of the profession—is not dealt with, and to suggest that the Subcommittee invite the co-operation of all the direct representatives and of public bodies in the profession obtaining power, if necessary, for the purpose.

3. To invite the direct representatives to take steps by way of requisition to convene a special meeting of the General Medical Council to consider the matters dealt with in Mr. Victor Horsley's report to the registered practitioners of England and Wales.

With a vote of thanks to the Chairman, and to Dr. Tom R. Taylor for his hospitality, the Committee adjourned to Saturday, 12th inst., at 3 30 P.M.

THE PLAGUE IN INDIA.

WE regret to have to record that Miss Florence Morgan, the Acting Lady Superintendent of the General Plague Hospital and Nursing Establishment, died at Bombay on February 14th from plague. Miss Morgan has succumbed a martyr to duty, and her loss will be keenly felt and deeply regretted.

The news from Bombay shows no signs of improvement as regards plague deaths. According to the mortality returns for the week ending February 10th, 1898, there were 2,067 deaths from all causes, being a death-rate of 120.21 per 1,000 inhabitants. The number of deaths from plague alone was about 200 daily.

In Poona the mortality from plague has fallen from about 80 a day a few weeks ago to an average for the week of 15 a day. The inhabitants in Poona, at one time time noted for their fierce opposition to all measures meant for the suppression of plague have shown how their opinions have veered, for they have combined to present the surgeons in charge of the plague work with a courteous address, presents, and words of thankfulness. We congratulate Surgeon-Lieutenant-Colonel Street and Surgeon-Major Reade, the officers so honoured, upon their tact and skill in bringing about so satisfactory a state of affairs.

From the Punjab comes the news that plague is assuming alarming proportions in the districts in and around Jalandhar and Hoshiapore. This is not so terrifying as would at first appear, for plague has been in these districts for some months, and the infected area does not seem to be widening at a rapid rate. Moreover, these districts are close to the mountainous provinces of Kumaon and Gurwhal, where for many years plague has been endemic.

The report that plague has occurred in the territory of the Nizam of Hyderabad is not new, nor does it indicate any serious outbreak. The Nizam's territory is conterminous with Bombay Presidency, and that a few cases of plague should the find their way across the border is only to be expected. No serious outbreak of plague, however, has as yet laid hold upon the State of Hyderabad.

The most depressing news in connection with plague is that Haffkine's serum is being disregarded as a prophylactic. It appears that it has got into the public prints that Dr. Haffkine has declared that his serum is not a success. We are thus for the first time informed of this, as up to quite recently Dr. Haffkine has been stating publicly the benefit of his method. Dr. Khaja Abdulla, it is reported, has cently

stated that he has had six inculated cases die of plague. Surely this has not proved sufficiently deterrent evidence to cause Dr. Haffkine to cease preparing more serum, as is reported in the daily papers to be the case.

Although at the commencement of this notice of plague we had unhappily to record the death of a European from the disease, there still is no doubt that Europeans possess a marked immunity therefrom. The question of reinoculation is occupying the minds of the medical men and the laity at the present moment. The chief question is not, Does Haffkine's serum cause protection, but how long does the protection last? Evidence seems to be forthcoming that the weaker fluid now in use does not afford protection for more than a few months. This being the case it is considered necessary to reinoculate every three months, and the objection of the native to be subjected a second time to the process is no doubt the chief cause of the objections raised to the whole principle and efficacy of the prophylactic serum inoculations.

BOMBAY.

[From our Special Correspondent.]

The Work of the Plague Committee.—District Work in the City.—Paid Informants.—House-to-House Visitation.—Cemetery and Hospital Returns.—Separation of "Contacts."—House Vacation and Demolition.—Camps.

The work of the Plague Committee involves a vast organisation. The work is decentralised by dividing the city into districts or wards, each district having its office, at which all the business is transacted. A European medical officer has authority in each ward, and has one or more subdivisional medical officers (generally native) to assist him. For purposes of protection he and his subordinates are supplied with twenty or thirty military sepoys. The duties of the medical officers consist in finding out cases, sending them to hospital, removing persons who have been in contact to observation camps, having the premises disinfected, and ordering the most insanitary houses to be vacated or destroyed.

In consequence of the dread of the natives of going to hospital or camp all sorts of devices are adopted to secrete their sick and dead; consequently the chief difficulty consists in finding out cases. To do this several plans are adopted. Persons who know the particular district, who know its inhabitants, and who are likely to hear all the gossip, are employed as informants, and for every case of plague discovered by their assistance they are paid 1 rupee. This is the chief method. Then the hospital and cemetery returns of cases not previously discovered are made use of to find out others. There is also regular house-to-house visitation, but this is attended with small results comparatively in consequence of the ingenuity of the natives in evading the search parties. Houses in which cases have occurred are repeatedly examined. Combined inspection of extensive blocks of dwellings or streets by separate large search parties, organised from the head office, aided by a cordon of troops to prevent all egress, is also carried out daily in different parts of the city.

Notwithstanding all these measures, it is found that hardly half the cases of plague are discovered before the friends take the patients off to their own hospitals or to the cemeteries.

The house inspection is done by the medical officer. Every room, passage, shed, and corner is examined. Lady doctors or nurses are engaged to examine the Mohammedan women in order not needlessly to offend the customs of the people. The locks of rooms are picked where necessary, or an entrance otherwise forced. Every inhabitant is carefully scrutinised. No reliance whatever can be placed on the statements of the friends or the occupants of the dwellings. When a case is discovered an ambulance is sent for and a sepoy put in charge, with the order for removal to the cemetery or to the hospital, as the case may be. Doubtful cases of illness are sent to the observation wards.

A subofficer sees to the removal of "contacts"—that is, of those who have been living with the patient—to the observation camp, his staff being the police. Any infected clothing of the patient is piled up on the roadside and burned. The room is then closed, and reported to another subofficer for disinfection. This consists in washing with solution of perchloride of mercury (1 in 1,000), and afterwards with lime. After this disinfection the apartments are permitted to be occupied again. The house is marked, however, for future guidance. Many dead bodies are found by the roadside or in outhouses every day, as well as cases of all sorts of illness. Destitute cases remain practically uncared-for, only sick people being taken to the general or plague hospitals.

The majority of the houses are in a most insanitary condition and fearfully overcrowded. Those that are particularly bad are ordered to be demolished; others are emptied and declared unfit for human habitation; others have the tiles removed from the roof in order to let in sunlight and fresh air; and others are simply cleaned and disinfected. If it were known what new streets were to be opened up under the proposed great sanitary improvement scheme for Bombay, advantage might be taken of the present epidemic to clear a much larger number of houses or else order their destruction.

Such are some of the details of the sectional work under the Plague Committee of Bombay. It is not without its dangers. Many of the natives employed have been attacked and succumbed to the disease, and not a little physical risk is run in the occasional disturbances which arise. The reward can hardly be considered great, for the deaths are recorded as 96 per cent., and the number of cases reaches nearly 1,000 every week.

POONA.

Surgeon-Captain J. Lloyd T. Jones, in charge General Plague Hospital, Poona, and member of the Poona City Plague Committee, writes: In the British Medical Journal of January 8th your Special Correspondent gives a short account of the General Plague Hospital (at Poona), which is in my charge. While thanking him for the kind way in which he has spoken of the hospital, I think it only fair to Miss Hunter, the lady doctor referred to, to say that her work ever since she was appointed one of the medical officers under me has been exactly the same as that of her three male *confrères*, except that she has no male adults to treat, her cases being some of the females and children. Your correspondent very frequently came round the hospital, so I cannot understand why he should make the statement that her duties are "very similar to those of a house-surgeon." The duties of house-surgeon are here done by the hospital assistants, a most useful and hard-working class of men; they go round twice daily with the various medical officers, and they are responsible for their cases, and see that the orders given by their respective medical officers are properly carried out. Strangely enough, males have of late been more frequently attacked than females, and our daily reports for some time have shown some twenty more male than female patients. Plague has very markedly diminished in Poona, and our total in hospital has come down to under 200 from over 500. This has allowed the medical officers more leisure for scientific work, and Drs. Marsh and Hunter are availing themselves of this leisure, and are doing useful work in the small laboratory we have had erected.

LITERARY NOTES.

The *Scientific Papers of Thomas Henry Huxley*, edited by Professors Michael Foster and E. Ray Lankester, now in course of publication by Messrs. Macmillan, will occupy several volumes.

Mr. W. Somerset Maugham, the author of *Liza of Lambeth*, who is, we believe, a medical student, has written a new story dealing with a revolution in a little Umbrian town in the fifteenth century.

Dr. Weir Mitchell's novel *Hugh Wynne* is said to have achieved a success in America rivalling that of *Trilby*. Forty thousand copies of the book in its two volume form have been sold in the States. In this country the sale of the one volume edition has been large. Dr. Weir Mitchell has lately written another story entitled The Adventures of François, Foundling, Adventurer, etc., during the French Revolution, which is to be published as a serial in the *Century Magazine*.

Mr. Riccardo Stephens, the author of *The Cruciform Mark*, who is a medical graduate of the University of Edinburgh (M.B., C.M., 1893), has finished a book which Messrs. Bliss, Sands will publish early in the spring, called "Conversations with Mrs. De la Rue Smythe," some parts of which have ap-

peared in the *Westminster Gazette*. It will be illustrated by Mr. W. G. Burn-Murdoch. "The Prince, the Minor Poet, and the Undertaker" is the probable title of another book Mr. Stephens has in hand, which may perhaps be described as a fantastic romance.

Dr. David Christison, of Edinburgh has written a work on the early fortifications of Scotland, which will shortly be published by Messrs. Blackwood. The book embodies the substance of Dr Christison's series of Rhind Lectures for 1894, and contains a large number of illustrations and maps.

Mr. H. K. Lewis announces for early publication a new volume in his Practical Series, entitled *Diseases of the Nervous System*, a handbook for students and practitioners, by Dr. Charles E. Beevor, Physician to the National Hospital for the Paralysed and Epileptic, etc.

We have received from Messrs. J. B. Lippincott Company, London and Philadelphia, an English translation, with the title *Vade Mecum of Ophthalmological Therapeutics*, by Dr. E. Neyman, of Milwaukee, of the German volume, by Drs. E. Landolt and P. Gygax, a review of which was published in the BRITISH MEDICAL JOURNAL of January 1st, 1898, p. 27.

El Criterio Catolico en las Ciencias Medicas is the title of a new medical periodical which has recently appeared in Spain. It is published in Barcelona, and is stated to be the official organ of the Medico-Pharmaceutical Society of SS. Cosmas and Damian. In spite of its name the journal so far has no aggressively theological character.

Trewinnott of Guy's is the title of a novel dealing with medical life by Mrs Coulson Kernahan, which is published by Mr. John Long. The dedication of the book has been accepted by Sir Samuel Wilks, Bart., President of the Royal College of Physicians, with whom Mrs. Kernahan's first husband, the late Mr. G. T. Bettany of Guy's Hospital and Caius College, Cambridge, collaborated in writing a *History of Guy's Hospital*.

To the February number of the *Phonographic Record* Dr. E. S. Reynolds contribu es a paper on Some Curious Aortic Aneurysms; Mr. H. E. Gray reports some clinical remarks made by Dr. H. B. Donkin on a Case of Partial Hemiplegia and Complete Hemianæsthesia occurring in the course of a case of heart disease; and Dr. R. B. McVittie gives the history of a case of Recurrent Melancholia in a Man.

Our volatile contemporary, the *Guyoscope*, over whose premature demise we shed an unnecessary tear a few weeks ago, was, it would appear, imitating the tactics of Fuzzy Wuzzy, who "is generally shamming when he's dead." At any rate here it is again as lively as ever, though in somewhat altered form and higher in price. It is related that Lord Brougham caused an announcement of his death to appear in the *Times* in order that he might read his own obituary. Of course we do not suggest that the *Guyoscope* was guilty of such a trick, but it was worth while going through the valley of the shadow of death to read the glowing obituary notices which are reprinted in the first number of the resuscitated *Guyoscope*, to which we heartily wish a long lease of its restored life.

Messrs. Swan Sonnenschein and Co. have in the press a work on Epidemic Diphtheria by Dr. Arthur Newsholme, Medical Officer of Health of Brighton and Examiner in State Medicine at the University of London, which will be ready at an early date. The work embodies a research on the origin and spread of the disease from an international standpoint. Although dealing largely with statistical data, it will be almost free from figures, the facts being stated graphically by means of diagrams, which abound in the book. The author's conclusions on many points will be found to be novel and contrary to accepted opinions.

TESTIMONIAL TO DR. J. T. ARLIDGE.

DR. CHARLES F. MOORE, 10, Upper Merrion Street, Dublin, Honorary Secretary of the fund, writes to acknowledge the following additional and final subscriptions which he has received. He adds that this does not include funds collected in Staffordshire:

	£	s.	d.
J. Challoner, Esq.	1	1	0
Mrs. Baker (Leamington)	2	2	0
William S. Brough, Esq.	1	1	0

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting will be held at the London Temperance Hospital, Hampstead Road, on Wednesday, March 2nd, at 4.30 P.M. Dr. Morton will preside. Dr. H. A. Caley will read a paper on Prognosis in Appendicitis and its Relation to Treatment. Dr. Soltau Fenwick will show cases of interest in the wards of the hospital. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Honorary Secretary, Broudesbury, N.W.

BATH AND BRISTOL BRANCH.—The fourth ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Wednesday, February 23rd, 1898, at 7.30 P.M., F. Richardson Cross, M.B., President, in the chair. A discussion on the Treatment of Melancholia will be opened by Dr. Lionel A. Weatherly.—W. M. BEAUMONT, Bath; J. MICHELL CLARKE, Bristol, Honorary Secretaries.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT. The next meeting of the above District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 10th, at 4 P.M., Mr. J. Sidney Turner, of Anerley, in the chair. Dinner at 6 P.M.; charge 7s., exclusive of wine. Agenda Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for Representatives on the Council of the Association. The following papers, etc., will be read: Professor A. E. Wright, M.D.: (1) Demonstration of the Technique of Serum Diagnosis (2) Demonstration of Method of Determining the Coagulability of the Blood. Dr. F. J. Smith: Pleurisy and Pleuritic Effusion; Their Diagnosis and Clinical Significance. Mr. A. H. Tubby; The Diagnosis and Treatment of Infantile Hernia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—HENRY J. PRANGLEY, Honorary Secretary, Tudor House, Anerley.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will take place at the West Kent Hospital, Maidstone, on Wednesday, March 23rd, Mr. A. H. B. Hallowes, in the chair. Members desirous of reading papers or exhibiting specimens are requested to communicate with the Honorary Secretary without delay.—E. GROUND, M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

STAFFORDSHIRE BRANCH.—The second general meeting of this session will be held at the Staffordshire General Infirmary, Stafford, on Thursday, February 24th, when the new wards and operation room will be open for the inspection of members at 4.30 P.M. The President, Mr G. A. Phillips, will take the chair at 5 o'clock in the Board Room. Agenda: Minutes of the last General Meeting. Correspondence. Consideration of the Report of the Constitution Committee, and to express an opinion upon it. Exhibition of Living Cases, Pathological Specimens, etc. Dr. S. King Alcock: Case of Aneurysm of the Aorta. Mr. Blumer: Case of Puerperal Septicæmia treated by Antistreptococcic Serum. Dinner at the North-Western Hotel at 7.15; charge, 5s.—F. MILNES BLUMER, Honorary Secretary, Stafford.

NORTH OF IRELAND BRANCH.

The winter meeting of this Branch was held at Belfast, on January 27th. Dr. Gray (Armagh), President, occupied the chair, and 33 members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—Dr. Farrington, Lisburn Road, Belfast; Dr. W. Calwell, Duncairn Gardens, Belfast; Dr. Hugh McAvoy, Rathfriland, co. Down; and Dr. H. J. Ritchie, Shankhill Road, Belfast, were elected members.

Allocation of Association Funds.—Dr. Cecil Shaw moved—

That this Branch is of opinion that in allocating the funds of the Association the Council should attach more weight to the claims of the provincial members.

He pointed out that in the distribution of grants for original research the greater proportion of the money was spent in London, by men residing in the metropolis, and that the claims of men working in provincial laboratories received slight attention. He particularly referred to the small amounts granted to persons working in Irish laboratories, and dwelt upon the slight recognition which those engaged in researches in the laboratory of Queen's College, Belfast, had recently received. This resolution was seconded by Dr. James Lynass, and supported by the President, Dr. Lorrain Smith, and Dr. Lindsay, and it was further agreed to instruct the Secretary to communicate with the other Irish Branches with a view to getting their co operation in bringing pressure to bear on those responsible for the distribution of grants.

Communications.—Dr. R. M. Fraser read a paper entitled The Association as an Agent in Medical Reform, which gave rise to a good deal of discussion, in which Dr. Bingham, Dr. Wadsworth, Dr. Morrow, Dr. John Campbell, Dr. St. Clair Boyd, Dr. Trimble, and Dr. Lynass took part.—Dr. J. Campbell Hall (Monaghan) showed a specimen of Osteosarcoma of the Femur, for which he had amputated through the hip-joint.—Dr. John M. Mac Cormac showed a case of Hemiplegia, and gave the history of it.—Dr. Darling (Lurgan) showed a patient from whom he had removed the entire tongue, with a mass of submaxillary glands, three and a half years ago.—Dr. Trimble showed an interesting case of Skin Disease; and Dr. John Campbell showed the contents of a Suppurating Dermoid Cyst, which he had removed with success.

MIDLAND BRANCH.

A meeting of this Branch was held in the Leicester Infirmary on February 9th, Mr. C. J. Bond in the chair. Twenty members were present.

New Members.—The Council reported that the following members of the Association had been elected members of the Branch:—W. Cecil Sharpe, M.B., Darley Dale; C. H. Harcourt, Stone Broom, near Alfreton; Wilfrid Jameson, Ashover; S. Hyde, M.D., Buxton; Josiah Court, Staveley, Chesterfield; F. B. Thornton, M.B., Osmaston Road, Derby; F. D. Holmes, Duffield; George Booth, M.D., Chesterfield; F. C. Wood, Ripley; C. Symington, M.B., C.M. Glasg., Fennel Street, Loughborough; R. R. Young, M.D., C.M.Ed., Melbourne Road, Leicester; F. E. Bissell, Anstey; E. H. Ellison, M.A., Syston; J. S. D. McCormac, Leicester; Alfred Orchard, Ashby-de-la-Zouch; Hugh Alston, M.D., Billesdon; Montagu S. W. Gunning, Narborough; Alexander Skipton, Barrow-on-Soar; John Orton, M.D., Manor House, Beeston; M. W. Oldham, 53, West Gate, Mansfield; George Y. Polson, M.B., Southwell; R. R. Giddings, M.B., Mansfield Road, Nottingham; W. G. Laws, M.B., East Circus Street, Nottingham; G. A. Robinson, the Dispensary, Nottingham; J. W. Noble, M.D., 26, Burns Street, Nottingham; E. H. Houfton, M.B., Shirebrook, Notts; A. T. Rimell, Long Sutton; D. Harris-Liston, The Lawn Asylum, Lincoln; G. M. Lowe, M.D., Castle Hill House, Lincoln; C. J. West, The Grove, Fulbeck, Grantham; W. W. C. Robson, Walkeringham, Gainsborough; E. D. M. Cuffe, M.D., Woodhall Spa; E. B. F. Eminson, Scotter, Lincoln; Robert Cuffe, Woodhall Spa.

Report of the Constitution Committee.

The report of the Constitution Committee of the Association was considered. The following resolutions with regard to the several paragraphs were proposed:—

Election of Members of Council.—Proposed by Dr. Benthall, seconded by Dr. Emmerson:

This Branch considers that the existence of so many members of the Association not attached to Branches is undesirable, and that endeavours should be made to induce them to join Branches; but this Branch does not approve of unattached members being allowed to vote for Branch representatives.

Carried unanimously.

Rider.—Proposed by Mr. Blakesley, seconded by Dr. Pratt:

That as a means of bringing unattached members within the Branches, a uniform subscription should be fixed which would cover the whole expenses of Association and Branch.

Carried by a considerable majority. [The next two paragraphs fall to the ground if the first is not carried into effect.]

Council to Report in First Instance to Branches.—Proposed by Mr. R. C. Stewart, seconded by Dr. Henry:

While it is desirable that the report of Council be issued somewhat earlier than is now done, no good purpose would be served by the Branches discussing the report before it is presented to the annual meeting.

Carried *nem. con.*

Members of Association to be Elected by the Council of any Branch within the Area of which they Reside.—Dr. Butt proposed, Mr. Blakesley seconded:

This Branch approves of the paragraph if the words after "present" in Line 7 to after "Branches" in Line 10 be omitted.

[This would give sole power of election to Branch Councils, but still confine voting powers to members of Branches.]

Carried by 7 to 6, some not voting.

Expulsion of Members.—Dr. Pope moved, and Dr. Thomas seconded:

The possession of such power by the Branches is most desirable.

Carried.

Appointment of Executive Committee by the Council.—Dr. Thomas moved, and Mr. Douglas seconded:

To confine the executive duties at present performed by the whole Council to a small Committee would prevent the Branches having that direct share in the government of the Association which they now possess by means of their elected representatives. The Branch therefore strongly opposes this recommendation.

Carried unanimously.

SOUTH-WESTERN BRANCH.

A special meeting of the Branch was held at the Devon and Exeter Hospital, Exeter, on February 2nd; the President (Dr. Davy) in the chair.

New Members.—The following gentlemen were elected members of the Association and Branch: R. D. Boase, M.R.C.S., L.R.C.P., Penzance; C. G. Grummitt, M.R.C.S., L.R.C.P., Kingsbridge; Surgeon M. L. Vaudin, Devonport. and following, already members of the Association, were elected members of the Branch: J. A. Fox, L.S.A., L.R.C.P., Penzance; P. H. Stirk, M.R.C.S., L.R.C.P., Devon and Exeter Hospital.

New Rules.—The new rules, as drawn up by a Subcommittee of the Branch Council and approved by the Council, were considered and were agreed to as follows:—

1. That the area of the South-Western Branch of the British Medical Association be the counties of Devon and Cornwall, and that the subscription to the Branch be 2s. 6d. per annum.

2. That the Branch consist of the president, vice-presidents, council, honorary secretary, and ordinary members resident in this area at the time of their election.

3. That the council shall consist of *ex-officio* members and representative members. The *ex-officio* members shall comprise the President, President-Elect, Vice-Presidents, Ex-Secretaries who have been elected as such, and Honorary Secretary.

4. That at the annual meeting of this Branch the President-Elect (who shall enter upon the office at the annual meeting next ensuing), Honorary Secretary, and the representatives of the Branch on the General Council of the Association and on the Parliamentary Bills Committee be elected, and the election of members of the Branch Council be reported.

5. That any member who has served the office of president may be elected a vice-president and an *ex-officio* member of Council, and that any member who has served as honorary secretary for a period of not less than five years may be elected as *ex-officio* member of council; in both these cases these *ex-officio* members of council shall remain in office so long as they remain members of the Branch.

6. That the Branch be divided for purposes of representation into the following divisions corresponding to the parliamentary divisions, both

borough and county, throughout Devon and Cornwall, namely, Barnstaple, Tiverton, South Molton, Exeter, Honiton, Torquay, Ashburton, Totnes, Plymouth, Devonport, Bodmin, Launceston, Tavistock, Truro, St. Austell, Falmouth, Camborne, St. Ives, and that each of these return one representative member (divisional member) to the Branch council. The members of the Branch residing within the area of each division shall be the electorate for the election of the representative of that division. Each divisional member shall hold office for three years after 1899.

6A. That the Honorary Secretary be instructed to make the necessary arrangements for the election of the representative member of Council in each division and locality.

7. That in addition to the above representatives, three members (local members) shall be elected each year from the division in which the annual meeting is to be held, and these shall hold office for three years

8. That it shall be one of the duties of local members to make arrangements for the annual meeting in their locality, in conjunction with the President-elect and the Honorary Secretary.

9. That it shall be one of the duties of the divisional members to keep a list of all medical men in their division, and to do their utmost to induce all those who are not members of the Branch to become members.

10. That meetings of the Council be held not less than four times in the year, on such dates and at such times as may be decided upon by the Council or by the President and Honorary Secretary.

11. That, in accordance with the direction of the General Association, the annual meeting of this Branch take place within the counties of Devon and Cornwall at least five weeks before the anniversary meeting of the Association. That at this meeting the members assemble to receive the President's address and the report of the Council, to elect officers for the ensuing year, in accordance with Rule 4, and to transact necessary business; but no papers shall be read at this meeting.

12. That on this meeting being adjourned or concluded the annual dinner be held.

13. That intermediate meetings may be held at such places and at such times as may be determined by the President, provided that such meetings shall not be held less than once in three months, nor twice consecutively in the same place.

14. That a special meeting may at any time be called by the President and Council on their own authority, and shall also be called by them on receiving a requisition from twenty members of the Branch; but that at least seven days' notice of the same, and its objects, shall be communicated by circular to each member. Only the business on the agenda paper shall be entertained at these meetings.

15. That changes in the rules of the Branch require the concurrence of a majority of two-thirds of the members assembled at general or special meetings.

16. That the proposal of any new rule, or the alteration of any old one, shall not be entertained unless notice of the same shall have been given to each member seven days previously to the annual or special meeting.

17. That the voting at any meeting of the Branch shall be by ballot, provided that three of the members present desire it.

SPECIAL CORRESPONDENCE.

PARIS.

Medical Providence.—The "Foot test" of Crime.—Influenza in La Vendée.—The Acarus of Rouget.—Donation to the Pasteur Institute.

THE Central Society of the Association Générale de Prévoyance et de Secours Mutuels for medical men has recently held its thirty-eighth annual meeting. The Society was founded in 1859. Since then other similar societies have been organised which have interfered with the continued prosperity of the older society. There are only fourteen new subscribers to replace twenty who have died. The financial position of the Society is, nevertheless, satisfactory, owing to donations, legacies, and interest on funds invested. The yearly subscription falls short of the expenditure. The Treasurer's report states that the available capital of the Central Society is £2,499 12s; £2,400 is placed as a reserve fund in the Caisse des Depôts et Consignations; £99 12s. is deposited with the Treasurer. The non-available funds amount to £84 6s. 8d., representing a capital of £2,600; the Society has also a revenue of £240 a year, the interest of the Huguier legacy.

The medical press comments on Colonel du Paty de Clam's "foot test" (*l'épreuve du pied*), described in Court during the Zola trial, and applied to establish the guilt of the ex Captain Dreyfus. Needless to say, the comments are not respectful. This test of medical jurisprudence is as follows: Agitation when felt by persons who can master themselves and hide their feelings is often betrayed by a trepidation of one of the feet when the legs are crossed. M. Paty du Clam appeared without warning at the prisoner's bedside and he assured the Court that he had observed this fact, which, added to others, deepened his belief in the guilt of the accused. It is asked if, after these extraordinary revelations, the medical faculty ought not to be invited to study this new method of psychological investigation.

There is a serious epidemic of influenza at Velleine in La Vendée. Its principal victims are elderly people. At the Villers Cotterets Asylum there is an epidemic of the same disease. According to the *Agence Nationale* there have been 78 deaths in it from influenza since January 1st.

M. Brücker has discovered the species of acarus which causes the autumnal eruption called *rouget* (the measles of pigs). *Rouget* is the larva of a large bright red acarus, the trombidium gymnopterorum; formerly it was attributed to the holosericum, the larva of which never attacks the human subject.

Mme. Emile Durand has given £1 600 to the Pasteur Institute for the purpose of making further researches on tuberculosis. The donation has been accepted.

SYDNEY.

Public Health Act.—Medical Bill.—Need of an Indecent Advertisement Act.—University Medical Examinations.

PUBLIC health legislation is slowly but steadily progressing in the colony. For some years past notification of leprosy and small-pox has been compulsory, but till the passing of the Public Health Act, 1896, no steps have been taken to deal with other infectious diseases in a similar manner. Although the Public Health Act was passed in 1896, and nominally came into force on January 1st, 1897, a year has elapsed before a decision has been arrived at as to what are to be considered infectious diseases within the meaning of the Act, and only now have we had a notice in the *Gazette* of the regulations passed by the Governor in Council affecting the notification of infectious diseases. So far only three diseases have been specified, namely, scarlet fever, diphtheria and membranous croup, and typhoid fever. Other infectious diseases no doubt will be added to these in course of time. Meanwhile we must be thankful for such advance in the prevention of infectious disease. It is to be hoped that the Board of Health, acting upon the well-known facts of the contagiousness and dual infection in tuberculosis, will in course of time take some steps to secure the notification, if not of individual cases of pulmonary phthisis, at any rate of dwellings in which phthisical patients have lived and died.

Unfortunately the Medical Bill, which has been so long a promised Government measure, has again been hung up; and as this year sees the end of the present Parliament, there is little ground for hope that this very necessary and important piece of legislation will be proceeded with for some considerable time. Meanwhile, all kinds of unqualified practitioners flourish, and thrust their pernicious literature upon an ignorant and unsuspecting public.

Another very urgently necessary piece of legislation is the passing of an Indecent Advertisement Acts similar to that in force in Great Britain. This was strenuously advocated a year or two ago, when a well known abortion-monger, who had served a sentence of ten years for a similar offence, was taken almost red-handed, and paid the last penalty of the law for wilful murder. But the matter has again been allowed to drop, although every now and again the evil deeds of those nefarious practitioners, male and female, are brought to light in the law courts.

The annual medical examinations at the University have just closed. Twenty-two candidates have obtained the degrees of M.B. and Ch.M. A large number of candidates passed the examinations in the earlier years of their career. In the second-year examination nearly 50 per cent. failed to satisfy the examiners, and were referred for further study.

ABERDEEN.

The Aberdeen Royal Infirmary.—The Cost of the Buildings.—The Work of the Infirmary.—Miss Lumsden.—The Convalescent Home.—Need for the Extension of the Asylum.

ON Wednesday, February 9th, at the annual meeting of the Corporation of the Aberdeen Royal Infirmary and Lunatic Asylum, Colonel Allardyce, Chairman of the Board of Directors of the Infirmary and Convalescent Home, presented for adoption the report of the Directors and the financial state-

ment for the past year. He stated that the Directors had the satisfaction of announcing that the new infirmary was now completed, that the forecast which they had made three years ago of the sum needed for the building had not been exceeded, and also that, of the funds available for the new Convalescent Home, there was still a considerable balance in hand. As to the cost per bed of the new infirmary, putting it at £73,000 with accommodation for 232 beds, it comes out at £315 per bed. This compared well with the other first-class hospitals of Scotland, to which medical schools were attached, being £130 per bed less than at Edinburgh, and £120 per bed less than the Victoria Hospital at Glasgow.

With regard to the work of the infirmary for the past year, Colonel Allardyce stated that there had been 53 more cases under treatment than in 1896, and that, as soon as increased accommodation was offered by the opening of the new Medical Pavilion, the number of patients had increased from about 170 to 190. Since then it has reached 206, which figure seems to offer fair promise of what may be expected in the future. The average cost per bed for the past year has been £51 14s. 5d. He said that the figures regarding the out-patient department were especially worthy of notice, having risen from 3,249 in 1896 to 5,557 in 1897.

He also asked the Corporation to place upon the records of the infirmary their appreciation of Miss Lumsden's invaluable services to the infirmary during the twelve years that she had held her post of honorary superintendent. This request was received with much cheering. With regard to the convalescent hospital, Colonel Allardyce stated that the number of cases admitted there had been 175, at the cost per patient of £2 15s. 8d. for an average stay of from two to three weeks. He also mentioned in passing that the convalescent hospital is not intended solely for patients from the Royal Infirmary, but that as soon as accommodation is available arrangements will be made for the admission of other patients.

Mr. Wilson, Chairman of the Asylum Board of Directors, after presenting the report and accounts of the institution for the past year, submitted resolutions authorising the adoption of a scheme of extension comprising the completion of purchase of some 76 acres of land and the erection of new buildings. In 1892 the number of patients in the asylum was 639. A scheme of extension and reconstruction initiated then had only partially been completed, and seeing that there were some 150 more patients in the asylum than at that date additional accommodation was urgently needed. To carry out the new scheme it was found necessary to ask authorisation for the borrowing of £35,000, in addition to the £50,000 authorised in 1892.

MANCHESTER.

Infirmary Trustees Meeting: Proposed Sale of the Infirmary Site.—Aberdeen University Club Dinner.—Southern Hospital.

The annual meeting of the trustees of the Manchester Royal Infirmary was held recently, when the principal subject of discussion was the provision of additional accommodation for in-patients, and the scheme of rebuilding the infirmary on its present site. The Board of Management reported that while fully sensible of the onerous nature of the conditions attached to the proposed sale, they came to the conclusion that the arrangement, if carried into effect, would remove the difficulties which have hitherto prevented the necessary extension of the infirmary being made, and decided by a large majority to report to the Corporation representatives that if the scheme received the approval of the City Council they would be prepared to recommend the trustees to give it their sanction. Dr. Harris, one of the physicians of the infirmary, speaking, however, in his capacity as a trustee of the institution, opposed that part of the report referring to the proposed sale of part of the infirmary site. Moreover, he was not convinced that a hospital built on the pavilion principle would meet all the requirements in a perfectly satisfactory manner. He was convinced that a non-pavilion hospital, if properly constructed, would be perfectly sanitary, could be economically administered, and would meet all essential requirements and cover a much less area than one of the pavilion type, which was an ideal of pre-antiseptic days. A smaller type of hospital to the existing one, built on new foundations with improved details, and with a higher elevation, would produce the best results. Mr. G. A. Wright, in seconded the amendment, condemned the scheme contained in the report as the worst of all that had been proposed. He would even go further than Dr Harris, and say: "Let us have the old building completely rebuilt on this site, a perfect hospital worthy of Manchester, or else sell the whole plot of land and build elsewhere." After discussion Dr. Harris withdrew his amendment, on condition that the subject would again be brought before the trustees at a special meeting to be called as early as possible.

The annual dinner of the Aberdeen University Club of Manchester was held at the Queen's Hotel on February 11th, when Dr. George Thomson, of Oldham, presided. The chief guest of the evening was Lord Strathcona and Mount Royal, Lord High Commissioner of Canada. There was a particularly large attendance of Aberdeen graduates and their friends. Lord Strathcona, who is Chancellor of McGill University, delivered an interesting speech. Referring to the University of Aberdeen, he remarked that it had been said that Aberdeen University could not compare with some of the Southern seats of learning, but he himself doubted very much whether it had not in its way done as much good for its graduates and for humanity as any one of the other universities. It began by teaching them frugality, and it made them feel on going out into the world that in them the reputation and character of their old university was at stake. The students went out not only to England, but to the country of which he had been a citizen for about 60 years, and he could say for those of them he had met out there that they did credit to their Alma Mater. The system of university education in Canada, he might say, was based more on that of the Scottish than on that of the English universities. Although they had not the advantage in Canada of any State aid, yet in many respects McGill was not far behind any university in America, and not far from being abreast of any university in this country. It was particularly strong in the direction of applied science, and that was owing to the generosity of a Scotsman—a Macdonald. Canada had room for all the good Scotsmen and all the good Englishmen who would go to her. She had resources within herself capable, if they were developed, of making her one of the richest and greatest countries in all the civilised world.

The Chairman of the Southern Hospital has issued a serious appeal for more funds to carry on the work of this most deserving charity. It seems that the failure of the scheme proposed by the David Lewis trustees has been fraught with considerable disadvantages to this hospital.

CORRESPONDENCE.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

Sir,—Your correspondent, Mr. Wigham, says that lawyers, organised, get their protection, and asks why not medical men. The answer seems to be that about 150 members of the House of Commons belong to the legal profession, and that the law is, and always has been, represented on every Government by the Lord Chancellor and the law officers of the Crown. In other words, the law is politically powerful.

A few stray medical men do sit in the House of Commons, and once in a lifetime a doctor may be seen sitting on the Treasury benches. But if the profession has the political power a few of your correspondents seem to think it has, where is the great State Minister and Parliamentary head (duly registered) of a Public Health Department? Why is not the President of the General Medical Council a Cabinet Minister? One Lord Chancellor goes and another comes, but the head of the legal profession is always inside the Cabinet. Even the Bishops have a score or so of seats in the Lords, and can and do influence legislation.

Mr. Wigham is in error when he says that I slight pledges of private members. My point is that they are helpless, and their pledges useless. To show this I cannot do better than quote two extracts from your article in the British Medical Journal of February 5th, p. 388. You say, "One of the most subtle changes that have taken place in Parliamentary legislation of recent years is exemplified by the difficulties in

carrying through any legislative reforms that are not originated or included in the Government programme." And again: "Ten years ago Sir Henry Maine pointed out that the House of Commons was gradually abandoning its legislative functions to a Cabinet of Executive Ministers."

Mr. Wigham suggests a private Bill, but you, Sir, well point out that the slightest obstruction destroys a private Bill. Does not the Government practically mortgage each Parliamentary session in advance? In the *Echo* of February 12th I read the following: "Yesterday nearly two hours of the time of the Chamber were occupied in the common-place formality of bringing in the Bills balloted for. The majority of these will never have to face the music of Parliamentary debate. Yesterday they numbered 72. But the 72 is only a tithe of the full number which are destined by their authors to pave the floor with good intentions."

This, then, is the utmost limit of the pledge! All will agree with Mr. Wigham that medical reform is not a party question, and most will agree with Mr. Carter that "as a political force the profession is powerless," both in Parliament and the constituencies.—I am, etc.,

Sout wark, S.E., Feb. 14th. THOMAS MASSIE.

SICK AND OBSTETRIC NURSES BILL.

SIR,—This Bill, which was recently referred to in the BRITISH MEDICAL JOURNAL, is now in print, and copies will be immediately sent to the medical journals for review, and to a limited number of members of Parliament. Anyone interested in the subject can have a copy by applying to me. We want the best Bill available, and this one is the outcome of special experience here, and I think it will meet the views of the medical and nursing professions and of the general public.—I am, etc.,

East Sheen, Feb. 12th. ALEX. MCCOOK WEIR.

VEGETARIANISM AND GOUT.

SIR,—In last week's BRITISH MEDICAL JOURNAL Dr. Luff protests against Dr. Faulkner writing that he (Dr. Luff) should declare himself a vegetarian, and quotes from his paper on the Pathology and Treatment of Gout, in which he states that "a rational mixed diet is the one best suited for gouty patients.....The assumption that a purely vegetable diet is best for the gout is erroneous."

I read with interest his lectures on gout and was much impressed by his investigations, which showed the marked power exercised by the mineral constituents of certain vegetables in increasing the solvency of gouty deposits.

It has long been known that vegetarians not only do not suffer from gout but are free from those digestive derangements the treatment of which forms such a large part of our work, more especially among those who lead a sedentary life, and Dr. Luff has been the first so far as I know to enunciate a theory in explanation of that fact.

1. If it be true that the mineral constituents of certain vegetables increase the solvency of gouty deposits, is it not our duty to give our patients the benefit of our knowledge and advise them to use such vegetables?

2. If it be possible to live upon a vegetarian diet in health and comfort, are we not bound to put our gouty patients upon such a diet?

3 If it has been found by thousands, I might almost say millions, of our fellow men that a vegetarian diet is not only capable of supporting the human body in all climates under any amount of work either physical or mental, why should we desire to be exonerated "from the onus of declaring ourselves vegetarians," at least in theory? On the contrary, if we had the courage and self-denial to act upon our convictions or were compelled by loss of digestive power, would we not all become practical vegetarians?

4. Vegetarians look upon the various medical aids to digestion, more especially that ephemeral fad of the physician in peptonising foods, with feelings which it would be difficult to describe, while he thrives upon his simple fare without any such assistance.

It is surely time that the profession in this country paid more attention to diet in the prevention and cure of disease if it desires to uphold its position, for it is certain that neither Acts of Parliament nor regulations of the General Medical Council can stem the progress of common sense among the people in regulating their diet.—I am, etc.,

Denholm, N.B., Feb. 13th. JOHN HADDON, M.D.

HOSPITAL ABUSE.

SIR,—With reference to a letter from a Mr. Gowring appearing in the BRITISH MEDICAL JOURNAL of February 12th, p. 464, under the heading of "Hospital Abuse," I should be glad if you would allow me to give you the facts of the case.

The young woman is in receipt of the large salary of 23s. a week, on which she has to keep up a respectable appearance as a teacher, and she lives in lodgings in a town where she has no relatives. She was informed, on consulting Mr. Gowring, that it would be necessary for her to remain in bed for some days and undergo an operation for the removal of the recurrent epulis. It is, therefore, I should think, scarcely surprising that on consulting her stepmother she applied for admission to St. Thomas's, where a friend had been trained as a nurse. After inquiry she was admitted. If this is not a proper case for help from a hospital, I should very much like to know what is.—I am, etc.,

SYDNEY PHILLIPS,
St. Thomas's Hospital, London, S.E., Feb. 14th. Steward.

P.S.—I should say that the patient presented herself with a governor's letter, but notwithstanding this very careful inquiries were made before she was admitted.

ERYTHROL TETRANITRATE: A CORRECTION.

SIR,—In the last three reports on the use of this drug there has been a tendency to lapse into the simple name erythrol for the unwieldy name of erythrol tetranitrate. This is unfortunate, for physiologically erythrol tetranitrate has nothing in common with erythrol. The latter is a tetrahydric alcohol, and probably could be taken in very large amounts without much effect; it is only by introducing nitrate radicles into this compound that it comes to be a vasodilator. The physiological action is therefore due not to the erythrol but to the nitrate groups, and it is misleading as well as erroneous to denote the nitrate by the name of the parent substance. If a shorter name is required the simpler one of erythrol nitrate would be best, as no other nitrates of erythrol besides the tetranitrate are at present known. Others undoubtedly exist, but even when discovered it may be confidently predicted that they will find no use in medicine. Misunderstanding is therefore not likely to arise. The name tetranitrate was given by Professor Bradbury advisedly, and although it may appear somewhat cumbersome now, there can be little doubt but that the next generation will recognise its utility. Pharmacology may be taught in two ways: one is to treat drugs as individual units; the other is to group them according to their predominant effects, and more especially the predominant effect of a contained radicle. This will be the method of the future. It will entail less work, and will lead to a more rational therapeutics. As yet, this is far from being realised, but with the further development of organic chemistry and a deeper knowledge of the effects and modifications produced by different radicles, it must inevitably come. Professor Bradbury's Bradshaw Lecture was a step in this direction.

The best abbreviated name, apart from that indicating its chemical constitution, is one suggested privately, I think, by Dr. Tunnicliffe. It is tetranitrine. This name shows its relation to trinitrine, and if one happened to remember the composition of nitroglycerine one would have little difficulty in deducing that of the newer drug. The old name, nitro-erythrol, revived by Dr. Lauder Brunton at the International Congress last year, is not to be recommended, as it is erroneous. The substance has not a nitro body, and it is only bewildering to the student to denote it by this name, and then tell him it is not such.

While on the subject of the organic nitrates, I may perhaps be allowed to make a suggestion. Some time ago someone stated that erythrol tetranitrate was so expensive as to be quite beyond the reach of hospital patients. But why not use mannitol (hexa-) nitrate? It possesses the same action as the erythrol compound, although it is not so powerful. Hitherto it has not been tried therapeutically. It can be readily prepared, and would be much cheaper, especially if

not crystallised, than the erythrol ester. The expense in the latter case is due, to a great extent, to the initial cost of the erythrol. This used to be 20s. to 24s. per ounce; mannite or mannitol can be bought for 1s. per ounce, and even less, and it is probable that the nitrate would not cost very much more.—I am, etc.,

Cambridge, Feb. 14th. C. R. Marshall.

CONSULTATION WITH HOMŒOPATHS.

Sir,—I venture to think that the letter of your correspondent, "An Open-Minded General Practitioner," fairly expresses the views of many of the more enlightened members of the profession. That his letter should have appeared in your columns augurs well for the future, and seems to herald an era of tolerance and even of goodwill towards men who are working honestly according to their convictions in therapeutics. It is now too late in the day to characterise such practitioners as either "fools or knaves." They have graduated (some with distinction) in the regular schools, and there are no grounds for the uncharitable assumption that they are actuated by other than honourable considerations.

Looking at the situation from the standpoint of one conversant with the inner facts, your correspondent suggests that the antagonism to homœopathy, to say the least of it, is rather unseemly. The majority of those who stigmatise homœopathy as something akin to quackery, and its practitioners as "irregular," have extremely vague notions of the doctrine and no experience of the practice which they denounce. Those who have carefully worked at the subject, as your correspondent has done, recognise the great acquisitions to our knowledge of therapeutics which have resulted from the labours of the homœopathic school. The extent to which such knowledge has been utilised is set forth in the standard textbooks on treatment, but is clearly legible only to those who have studied homœopathy.

The real truth of the matter is that the so-called "irregular" therapeutic method of one generation is placidly accepted as sound practice by the next. And so it is obvious that in the domain of therapeutics (the proverbial "backward boy") there is no room for dogmatism. Let us therefore, as members of a liberal profession, relegate penalties for heresy and schism to another tribunal, "prove all things and hold fast that which is good."—I am, etc.,

January 31st. M.D.

Sir,—The "bell, book, and candle" sort of tone of Mr. Burnie's letter on the above subject is distinctly funny. Dr. Hime is a contributor of a different calibre, and condescends to give reasons for his conclusion that "allopaths" (do Dr. Hime's colleagues accept the designation?) should not consult with homœopaths. The question of consultation argued as Dr. Hime argues it is, however, in the main an academic one at the present day. In practice the question has been decided against Dr. Hime, and Bradford is one of the very few places left where homœopaths have any difficulty in obtaining the professional advice and assistance of men of eminence, and of wide clinical and therapeutic experience, when they require it. Dr. Hime's statement that the consultant's treatment "would not be carried out, and that his therapeutical advice would be laughed at and ignored so far as the administration of drugs is concerned," is as baseless as it is offensive.

Dr. Hime says "allopaths cannot possibly believe in homœopathy." It would be as reasonable for a man whose study of algebra had been confined to the section dealing with algebraical addition, to say that he could not possibly believe in the binomial theorem. Dr. Hime simply has no right to an opinion on the matter. The truth or falsehood of homœopathy, and its value as a principle of drug selection, can only be determined by actual experiment, and dogmatic opinions such as that expressed by Dr. Hime, based, not on experiment, but on assumptions, are of profound scientific worthlessness and unimportance. If Dr. Hime can for a moment drop the "medico-ethical" and assume the scientific habit of thought, he must see this for himself. Dr. Hime falls into the common error of supposing that homœopathy involves the infinitesimal dose. This is an entire delusion, as has been many times pointed out. A man may be a consistent homœopath without ever using or even believing in infinitesimals. At the same time the evidence in favour of the action of infinitesimals is practically overwhelming, and much of it has been provided by authorities whose orthodoxy Dr. Hime could not impugn. Darwin, for instance, in his work on *Insectivorous Plants*, describes the vigorous physiological reaction exhibited by the leaf glands of drosera rotundifolia to 1·20,000,000th of a grain of phosphate of ammonia.

Naegeli's more recent experiments on the power of dilute solutions of metallic salts to inhibit the growth of certain vegetable organisms, such as spirogyra, carry the proof of infinitesimal action far beyond Darwin's twenty millionth of of a grain, and should remind Dr. Hime that in matters admitting of the experimental test the "cannot-possibly-believe" attitude is foolish. It was adopted by certain very positive gentlemen who had a controversy with one Galileo, and its appearance in Dr. Hime's letter only shows how very thin is the scientific veneer on some of our latter-day "scientists."—I am, etc.

Manchester, Jan. 31st. F. S. Arnold, M.B.

ANALYSTS' CERTIFICATES.

Sir,—I shall be obliged by your publishing the enclosed letter, which I have addressed to the Managing Director of Vimbos, Limited. The letter explains itself.—I am, etc.,

A. P. Aitken.

Chemical Laboratory, 8, Clyde Street, Edinburgh, Feb. 8th.

Chemical Laboratory, 8, Clyde Street, Edinburgh,
February 8th, 1898.

To the Managing Director Vimbos, Limited, Edinburgh.

Dear Sir,—In October of last year there came under my notice a circular issued by your Company containing an analysis of Vimbos lozenges addressed from my laboratory and bearing my signature. As I had no recollection of making an analysis of Vimbos lozenges, I found it necessary to write you on the subject, when it transpired that the analysis in question was one I made in 1886, for your private information only, of some lozenges you were at that time experimenting with. I then pointed out that the analysis, which was made solely to assist you in your experiments, and without charge, was incomplete, and in the form employed in the advertisement entirely misleading; and also directed your attention to the fact that my permission to use it as an advertisement had neither been asked nor given. On your undertaking to immediately withdraw the advertisement from circulation I allowed the matter to drop, but I find this undertaking has not been carried out and that you continue to circulate the misleading and unauthorised analysis. A box of lozenges purchased direct from your factory the other day was wrapped up in the circular you promised to withdraw. I therefore feel that in justice to myself I must give publicity to this matter, and I am accordingly communicating this letter to the press.—Yours truly,

(Signed) A. P. Aitken.

DENTAL REPRESENTATION ON THE GENERAL MEDICAL COUNCIL.

Sir,—In reply to the letter of Mr. William Guy I should like to point out that for the last 19 years the General Medical Council has been engaged on vastly more important dental business than "the framing of a minimum curriculum," as witness their labours in the formation and purification of the *Dentists' Register*, etc. This difficult and onerous task would have been greatly facilitated had a dental representative had a seat upon the Council; and it is notorious that many of the difficulties they have encountered, and errors into which at times they have fallen, would have been avoided by this simple expedient.

Though it is true that diversity of opinion exists on many dental matters, yet it will hardly be contended that unanimity prevails on all matters purely medical. Mr. Guy, however, will scarcely urge that as a reason for believing the present members of the Council subordinate the wishes of their constituents to their own. And, after all, a dental representative would but suggest and explain; it would be for the Council at large to decide upon all matters brought before it for consideration.

Mr. Guy also considers that the licentiates in dental surgery are sufficiently represented by the members of the Council nominated by the corporations from whence their diplomas are derived. I would, however, point out that every medical man is, in the same manner, represented by at least one of the medical corporations. Yet it has been considered advisable for the profession at large to elect five members to the Council as their direct representatives, and irrespective of the corporations altogether.

Surely, then, there is no inconsistency in asking that one dental representative should be returned for the elucidation of the purely dental business.—I am, etc.,

STORER BENNETT,
F.R.C.S.Eng., L.D S.Eng.

George Street, Hanover Square, W.,
Feb. 14th.

Obituary.

LEONARD REMFRY, M.A., M.D.CANTAB., M.R.C.P.

A CAREER of singular promise has been cut short by the untimely death of Dr. Leonard Remfry, Assistant Obstetric Physician to St. George's Hospital, at the early age of 37.

Dr. Remfry was a member of an old Cornish family settled in the neighbourhood of Truro. His father was a partner in the house of Remfry Brothers and Co., East India merchants (now Brookes Brothers and Co.), and his mother was the daughter of the late Robert Young, President of the Wesleyan Conference in 1856. Dr. Remfry was born in Calcutta, but received his education at Dulwich and at Christ's College, Cambridge, proceeding subsequently to St. George's Hospital in 1882. He became a member of the Royal College of Surgeons in 1885, a Licentiate of the sister College in the following year, and took his doctor's degree at Cambridge in 1890, becoming a Member of the Royal College of Physicians immediately afterwards. He was House Physician to St. George's Hospital in 1887, Obstetric Assistant during 1889, and in 1894, on the creation of an Assistant Obstetric Physiciancy to the hospital, he was unanimously elected to fill that post. He had previously been appointed Obstetric Physician to the Great Northern Hospital, which office also he continued to hold up to the time of his death.

Dr. Remfry was a man of solid intellectual qualities, of independent thought, and of remarkable perseverance. By the papers he had from time to time published and by his systematic methods of teaching he had established even at so early an age a distinct position both in his own school and in the obstetric world, and substantial reward in the shape of private practice had already commenced to flow in upon him. His high and honourable character was joined to a singular kindness of heart and consideration for his fellow men; and the esteem of his friends, the affection of his pupils, and the respect of his colleagues alike attended his well-deserved success.

A competent critic furnishes us with the following appreciation of Dr. Remfry's published papers: When obstetric assistant to St. George's Hospital he aided Dr. Dickinson in researches in albuminuria, and Dr. Remfry's investigations on the condition of the urine at birth are published as part of a paper by the elder physician in the *Transactions of the Pathological Society* (vol. xl).

Within the last eight years Dr. Remfry made several important literary contributions to medical science. In the spring of 1891 his earliest production of this kind, A Case of Pulmonary Embolism, was read before the Clinical Society of London. In the autumn of 1892 he wrote in the *Lancet* on a case of collapse after ovariotomy where he saved the patient by prompt transfusion of two pints and a half of salt and water into the right median basilic vein. This proceeding, it must be not be forgotten, was a bolder undertaking then than it is now, when many have undertaken it.

In 1894 he discussed before the Obstetrical Society of London two subjects, the one essentially scientific, being Fœtal Retroflexion, the other surgical and clinical. The second was embodied in a paper On Ligature and Division of the Upper Part of both Broad Ligaments, and the Result as compared with that following Removal of the Uterine Appendages. "The operation," he admitted, "is not likely to be repeated." The record of an imperfectly successful proceeding was a duty from which he did not shrink. A year later appeared his very instructive monograph on *Ovariotomy in Women over Eighty*. He himself figures as a successful operator on a patient 83 years of age. In 1896 a fourth contribution of Dr. Remfry's was read before the Obstetrical Society. It was a valuable clinical record of The Effects of Lactation on Menstruation and Impregnation. All these four papers showed careful preparation, and were free from the evidences of hurry so painfully apparent in many similar productions. Lastly, he discussed in *International Clinics* the conservative treatment of uterine fibroids.

HENRY A. D. DICKSON, F.R.C.S., L.R.C.P.,

Surgeon-Lieutenant Indian Medical Service.

WE regret to record the death of this young officer at the early age of 27. He was born on November 15th, 1870, and was the son of the late Rev. George D. W. Dickson, for many years Vicar of St. James the Less, Westminster. He was educated at St. Paul's School, and having chosen a medical career he entered at St. Thomas's Hospital. His career as a student was distinguished, and after taking the M.R.C.S. and L.R.C.P. in 1893, he held the posts of Assistant House-Surgeon and House-Surgeon at St. Thomas's Hospital in 1895, and passed the final examination of the F.R.C.S. in the same year.

On leaving the hospital he decided to enter the Indian Medical Service, and passed into Netley seventh on the list, his place on passing out being fifth. He went to India in October, 1896, and in February, 1897, was sent for plague duty to Kalyan, near Bombay. His duties here were extremely arduous, consisting for the most part in the inspection of the numerous passengers of all the trains entering or leaving Bombay by the route on which he was posted. The nature of his employment prevented anything like prolonged rest either by day or night, and the heat of the climate added to the severity of the task. Henry Dickson's devotion to his duty soon made inroads upon a constitution never robust. Febrile symptoms began to manifest themselves in March, and this with a rapid loss of weight and increasing weakness induced him to apply for leave. This could not be granted, and he continued to struggle on under conditions that would have overwhelmed a less courageous man. He found, however, that he was becoming more and more unequal to cope with the responsibilities of his position, but his repeated representations to the authorities were met by the answer (reluctant we doubt not) that leave could not be granted. At length he was ordered to join his regiment at Agra, a distance of 800 miles. On his arrival the Medical Board at once decided that his condition was so grave that he must return to Bombay, and obtain the best advice. This was to the effect that he should go home on a year's sick leave.

He left India on July 10th. On arriving in England he consulted Dr. H. P. Hawkins, who found him to be suffering from acute pulmonary phthisis, which had already made considerable inroads into the pulmonary tissue. It was soon evident that his case was by this time hopeless, and after some months of suffering, bravely borne, he died on January 27th, 1898.

Henry Dickson's career at his hospital had marked him out as a man likely to rise to eminence in the service, and by the many who knew him, either as house-surgeon or as student, he will be remembered as a man of undoubted ability, whose zeal for his profession was manifested by his unsparing and unremitting devotion to the work that lay to his hand. Those who had the privilege of his intimacy knew that his somewhat reserved manner concealed a kindly and affectionate nature, great refinement of thought and feeling, and sterling honesty of character. To them his early death will be an irremediable loss.

All must sympathise most deeply with his widowed mother, but it is to be hoped that she will be consoled by the thought that he lost his life as an English officer and a gentleman by his courageous endeavour to do his duty at all costs.

HONORARY SURGEON-GENERAL SAMUEL FULLER, Retired List, Army Medical Staff, whose death is announced at Woodlands, Orchard Hill, near Bideford, on February 7th, entered the service in July, 1855, becoming Surgeon-Major and Deputy-Surgeon-General respectively in 1873 and 1881. He retired in November, 1886. His war services were in the Indian Mutiny and in Egypt. During the former he served with the 9th Lancers, and was present at several actions, including the siege and capture of Lucknow, receiving a medal with clasp. In the Egyptian war he was Principal Medical Officer of the Cavalry Division, and was present at the actions of Kassasin and Tel-el-Kebir, and received a medal with clasp and the Khedivial star. The deceased officer was deservedly very popular.

NAVAL AND MILITARY MEDICAL SERVICES.

THE MONTHLY ARMY LIST.

The new monthly Army List, the appearance of which had been awaited with some interest, seeing that no less than two months was required for its revision, was published on February 8th. On the whole it seems an improvement on the old one; somewhat thinner, from being set up with entirely new and smaller type, and from the omission of some redundant matter; it is also printed by a firm new to the Stationery Office.

The first improvement to be noticed is the paging; the tantalising 78*a* or 88*b* no longer exists, but the pages are numbered in plain consecutive figures. The greatest change is found in the infantry regimental lists, in which not only the linked militia battalions, but the volunteer corps affiliated to territorial regiments, are all given in one list. But the alterations in the medical lists, which are very considerable, are of most interest to our readers.

The active Medical Staff list remains unchanged, together with the stations of companies of the Medical Staff Corps, which immediately follow it; we should have liked to have seen the companies placed at the head of and before the list of officers, as in the Army Service Corps and Ordnance Department, thereby foreshadowing a complete amalgamation and organic incorporation of the medical services.

The table, "medical officers serving on the West Coast of Africa," is now omitted, and the officers so serving are shown in the general list with "West Africa" after their names. The table, "medical officers on the retired list liable to be recalled to service," is also omitted—we know not why, unless it be intended to give it only quarterly with the retired and non-effective lists, or to confine it wholly to the large quarterly official *Army List*. We would suggest that when and wherever it appears the names only of officers fit to respond to a recall should be given; it is notorious that hitherto officers have been retained in it up to 55 years of age who were hopelessly unfit to serve either at home or abroad. Some even of those kept on were, it has been said, of unsound mind. It is time to purge such a misleading list.

But the most important, if not significant, omission, is that of the "Army Medical Reserve of Officers." These officers, being nearly all volunteers, are now only shown in their regimental lists; they are, in fact, now only counted once, and what has been called the "stage army trick" of counting them two and three times has been dropped. We do not suppose the so called "reserve" is to be abolished, but as there is nothing to show who belongs to it in the regimental list of volunteer medical officers, it may be intended to publish it quarterly only with the large *Army List;* but published it must be somewhere, otherwise how are principal medical officers of districts to know to whom to offer and give "prior claim" to "contract rates" when employment with troops is going?

Finally, the redundant general lists of "Militia Medical Staff" (a mere handful), and of "Volunteer Medical Staff," are both omitted.

There are thus important alterations in the new *Army List* so far as the medical services are concerned, but nothing whatever to indicate the character of the changes Lord Lansdowne may contemplate towards them.

THE QUEEN AT NETLEY HOSPITAL.

Few of the many acts of simple kindness which the Queen has performed have given rise to more universal approbation than her recent visit to Netley Hospital. So far as things outside the hospital went, the visit was ceremonial, but as soon as the building was reached all formalities were at an end, and nothing remained to show the royal rank of the visitor except the queenly simplicity of her sympathy with the sick and wounded.

In 1885 a Royal visit took place to Netley Hospital on the occasion of the return home of the wounded from the Egyptian expedition. The object of the present visit was to see the men wounded during the operations on the Indian frontier who are now under treatment. The Queen was conducted in her wheeling-chair through the wards. The results of war were not seen at their worst, for the wounded men from the front now in hospital are for the most part convalescent. In each ward the Queen spent some time, and for every man who had suffered in her cause she had words of comfort and encouragement.

Her Majesty was received at the hospital by General Davis, C.B., who presented Surgeon-Major-General W. Nash, M.D., the Principal Medical Officer. The following Professors and Assistant Professors of the Army Medical School were presented to the Queen by the Principal Medical Officer: Surgeon-Colonel J. L. Notter, M.D., Professor of Military Hygiene; Surgeon-Colonel W. F. Stevenson, M.B., Professor of Clinical and Military Surgery; Brigade-Surgeon-Lieutenant-Colonel W. E. Webbe, M.D., Professor of Clinical and Military Medicine, in charge of Medical Division; Surgeon-Major W. Dick, M.B., Professor of Clinical and Medical Surgery, in charge of Surgical Division; and Surgeon-Major Kelly, M.D., Secretary and Adjutant.

EXAMINATION FOR THE INDIAN MEDICAL SERVICE.

The following is the list of the candidates for Her Majesty's Indian Medical Service who were successful at the competitive examination held in London on February 4th and the following days. Thirty-six candidates competed for fifteen appointments, and thirty-three were reported qualified.

Names.	Marks.	Names.	Marks.
T. Hunter	3,470	G. F. S. Genge	2,904
W. R. Battye	3,345	E. F. G. Tucker	2,886
H. B. Meakin	3,215	W. G. Liston	2,876
G. Hutcheson	3,157	F. S. C. Thompson	2,805
R. W. Anthony	3,066	H. J. R. Twigg	2,770
G. E. Stewart	3,046	C. W. McG. Orpen	2,745
H. Boulton...	2,994	T. S. Novis...	2,721
J. W. Watson	2,962		

EXAMINATION FOR THE ARMY MEDICAL SERVICE.

The following is a list of the successful candidates for commissions in the Army Medical Staff at the recent examination in London. The number of commissions advertised was forty but the number of candidates who competed for the appointments is not stated.

Names.	Marks.	Names.	Marks.
W. H. S. Nickerson	2,775	E. J. Dobbin	2,154
A. E. Walter	2,693	A. R. O'Flahertie	2,148
G. S. Nickerson	2,017	H. Herrick...	2,127
A. E Weld	2,504	C. W. Mainprise	2,103
J. S. Gallie...	2,474	G. J. S. Archer	2,069
G. B. Crisp	2,439	R. S. H Fuhr	2,066
H. B. G. Walton	2,324	B. O. Hall	2,058
W. Jagger	2,323	F. J. C. Heffernan	1,994
A. B. MacCarthy	2,275	J. Cowan	1,965
R. Selby	2,196	E. P. Hewitt	1,943
A. E. Thorp	2,163		

THE NAVY.

The following appointments have been made at the Admiralty: William R. Center, M.B., Surgeon, to the *Fox*, February 11th; Leo E. James, Surgeon, to the *Cambridge*, February 16th; Leonard H Kellett, M.A., M.D., Fleet Surgeon, to the *Vernon*, March 3rd; Timothy J. Crowley, M.D., Staff-Surgeon, and Edward Sutton, Surgeon, to the *Bonaventure*, March 3rd.

ARMY MEDICAL STAFF.

Surgeon-Major Frederick S. Heuston, F.R.C.S.I., from the Seconded List, is restored to the establishment, *vice* A. Perry, retired, February 1st. Surgeon-Major Heuston has been serving under the Chinese Government since 1894.

The under-mentioned Surgeon-Captains, having completed twelve years' full-pay service, are promoted to be Surgeon-Majors, January 30th: M. T. Yarr, F.R.C.S.I., L. P. Mumby, M.B., C. H. Melville, M.B., B. L. Mills, M.B., M.D., F.R.C.S., G. S. Cardew, M.B., H. Cocks, M.B., J. B. Wilson, M.D., J. G. Black, M.D., J. Kearney, M.D., F. A. Saw, M.B., F. W. G. Hall, M.B., A. Kennedy, H. P. G. Elkington, J. B. W. Buchanan, M.B., F. T. Skerrett, F.R.C.S.I., H. M. Adamson, M.B., T. G. Lavie, H. Brown, M.B., T. H. Corkery, W. R. Crooke-Lawless, M.D., W. P. Squire, and S. J. W. Hayman.

The following Surgeons on probation to be Surgeon-Lieutenants, January 28th: H. O. B. Browne-Mason, F. S. Penny, B. Watts, H. G. Martin, J. G. Berne, F. F. Carroll, M.B., J. D. G. Macpherson, M.B., W. P. Gwynn, S. de C. O'Grady, M.B., A. H. O. Young, E. A. Bourke, M. M. Lowsley, A. C. Lupton, M.B., G. B. Carter, M.B., N. H. Ross, M.B., P. H. Collingwood, and C. J. O'Gorman.

ARMY MEDICAL RESERVE.

Surgeon-Captain W. C. James, M.D., resigns his commission, February 16th.

Surgeon-Lieutenant H. P. Job to be Surgeon-Captain, February 16th.

Surgeon-Lieutenant J. C. Wright, M.B., 2nd West Riding of Yorkshire Volunteer Artillery, to be Surgeon-Lieutenant, February 16th.

THE VOLUNTEERS.

The Volunteer Officers' Decoration has been conferred upon the following:—Surgeon-Lieutenant-Colonel W. Stephenson, 2nd Volunteer Battalion the East Yorkshire Regiment; Surgeon-Captain R. Blair, M.D., 1st Volunteer Battalion the King's Own Yorkshire Light Infantry; Surgeon-Lieutenant-Colonel T. F. Young, M.D., 4th Lancashire Artillery; Surgeon-Lieutenant-Colonel W. J. Fleetwood, M.D., 4th Volunteer Battalion the King's Liverpool Regiment; Surgeon-Major R. de la P. Beresford, M.D., 2nd Volunteer Battalion the King's Shropshire Light Infantry; Surgeon-Lieutenant-Colonel J. L. Leckie, 3rd Volunteer Battalion the Welsh Regiment; Surgeon-Lieutenant Colonel J. Adams, 21st Middlesex (the Finsbury) Volunteer Rifles; Surgeon-Lieutenant-Colonel J. Mackay, M.B., 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders).

Second Lieutenant J. H. F. Way, L.R.C.P., L.S.A., 2nd Hampshire Volunteer Artillery is promoted to be Lieutenant, January 19th.

Surgeon-Lieutenant H. P. Job, 4th (Nottinghamshire) Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), is promoted to be Surgeon-Captain, February 16th.

CHANGES OF STATION.

THE following changes of Station amongst the officers of the Army Medical Staff have been officially notified to have taken place during the last three months:

		From.	To.
Surg.-Colonel	J. H. Hughes, M.D.	Chester	Quetta.
,,	R. C. Eaton	N'castle-on-Tyne	Bombay.
Brig.-Surg.-Lt.-Col.	J. H. Moore	Bombay	Portsmouth.
,,	J. D. Edge, M.D.	,,	Curragh.
,,	H. J. W. Barrow	Curragh	Egypt.
Surg.-Lt. Col.	W. L. Chester. M.B.	Portsmouth	Netley.
,,	J. J. Morris. M.D.	Dover	Bengal.
,,	P. H. Johnston, M.D.	Hong Kong	Strts. S'ments.
,,	I. B Emerson	Colchester	Madras.
,,	W. T. Johnston, M.D.	Devonport	Dublin.
Surg.-Major	J. Tidbury, M.D.	Portsmouth	Winchester.
,,	A. A Lyle	Bombay	York.
,,	C. Seymour, M.B.	Chatham	Bengal.
,,	F R. Barker, M.B.	Dover	Shorncliffe.
,,	C. A. Webb	Devonport	Exeter.
,,	G. W. Robinson	Aldershot	Egypt.
,,	A. H Burlton	Dover	Bengal.
,,	P. Mulvany	Belfast	Punjab.
,,	J. M. Jones	Devonport	Bombay.
,,	R. W. Barnes	Hounslow	Egypt.
,,	E. L. Maunsell	Woolwich	Bengal.
,,	J. H. Nicholas	Madras	Devonport.
,,	S. C B. Robinson	Leeds	York.
,,	G. Coutts, M.B.	Punjab	Aldershot.
,,	H. J Allport, M.D.	Fermoy	Madras.
,,	J. Gibson, M.B.	Bengal	Netley.
,,	R. Porter, M.B.	Winchester	Bombay.
,,	J Maconachie	Pembroke Dock	Madras.
,,	J. W. Beatty, M D.	Enniskillen	Bombay.
,,	F. O Nichols, M.B.	Madras	Manchester.
,,	S. J. Rennie	Hulme	Bengal.
,,	A. F. Russell, M.B.	Gibraltar	Edinburgh.
,,	T. A. P. Marsh	,,	Gosport.
,,	W. B Thomson	York	Madras.
,,	J R Stuart, M.B.	Shorncliffe	Egypt.
,,	B. W. C. Deeble	Dublin	Enniskillen.
,,	H. J. Wyatt	Bombay	Newbridge.
,,	F. S. Heuston	China	Dublin.
,,	H. A. Haines. M D.	Limerick	Buttevant.
,,	C. W. Johnson, M.B.	Madras	Pembroke Dk.
,,	A. T. I Lilly	Bombay	,,
,,	W. E. Berryman	,,	Portsmouth.
,,	B. A Maturin	Colchester	Punjab.
,,	A. P. H. Griffiths	Chester	Bombay.
Surg.-Capt.	H. V Dillon	Trowbridge	Egypt.
,,	C. H. Melville, M.B.	Madras	Bombay.
,,	J. Fallon	C. of Good Hope	Mauritius.
,,	C J W. Tatham	Mauritius	C. of G. Hope.
,,	H W. Austin	Tregantle	Gibraltar.
,,	J. R. Burrows, M D.	Egypt	Chester.
,,	E S. Marder	Devonport	Egypt.
,,	J. S Edye	Newcastle	Ceylon.
,,	H. C. Thurston	Madras	Colchester.
,,	B. H. Scott, M.D.	Portsmouth	West Africa.
,,	E A. Burnside	Fort George	Punjab
,,	J. W. Cockerill	Lydd	Canterbury.
,,	A. O. C. Watson, M.B.	Edinburgh	Punjab.
,,	D. Stell, M.B.	Malta	Crete.
,,	C A. Young	Dublin	Punjab.
,,	J C Weir, M.B.	,,	,,
,,	S. F. Clark, M.B.	Shorncliffe	Hong Kong.
,,	J Girvin	Fort Camden	Cork
,,	A J. Luther	Crete	Malta.
,,	A. I. Borradaile, M.B.	Colchester	Egypt.
,,	L. Way	Canterbury	Shorncliffe.
,,	A E. Smithson, M.B.	Bengal	Portsmouth.
,,	B. Forde, M.B.	Belfast	Bengal
,,	F. W. Hardy	Fort Popton	Devonport.
,,	D. D. Shanahan	Madras	Dublin.
,,	A. Pearse	Bengal	Woolwich Arsenal.
,,	C. Dalton	Punjab	Belfast.
,,	O. L Robinson	Egypt	Ballincollig.
,,	G E. Hughes	Cahir	1st Life Gds.
Surg.-Lieut	R. J. Blackham	Aldershot	Punjab.
,,	A. H. Waring	,,	Madras.
,,	E G. Forrest, M.B.	Curragh	,,
,,	G. B. Riddick	Portsmouth	Punjab.
,,	R. W. Clements, M.B.	Limerick	Madras.
,,	M Swabey	Manchester	,,
,,	H. Hewetson	Curragh	,,
,,	L. Addams-Williams	Devonport	Horfield.
,,	E. W. Bliss	Shorncliffe	Egypt.
,,	S L. Cummins, M.B.	Cork	,,
,,	C H Hopkins	Portsmouth	,,
,,	H L. W. Norrington	Ashton-under-Lyne.	Preston.
,,	H. G. F. Stallard	Colchester	Egypt.
Quart.-Master	G Merritt	Malta	Aldershot.
,,	T. Bond	Belfast	Malta.
,,	J. Tandy	Aldershot	Egypt.
,,	W J. Diggins	Shorncliffe	Hong Kong.
,,	A. Bruce	—	Belfast.

The undermentioned officers on retired pay have relinquished their charge of troops at the stations named: Brigade-Surgeon J. Wilson, M.B., Warwick; Surgeon-Lieutenant-Colonel H. C. Guinness, Clonmel; Surgeon-Lieutenant-Colonel A. W. Roche, Glencorse.

Brigade-Surgeon-Lieutenant-Colonel M. M. Gallwey, retired pay, has been transferred from Portsmouth to Newcastle-on-Tyne; and Surgeon-Lieutenant-Colonel H. Scott, M.B., retired pay, from Halifax to Great Yarmouth.

Surgeon-Lieutenant-Colonel C. K. Powell, M.D., retired pay, has been appointed to Clonmel: and Surgeon-Captain P. G. Ievers to Dorchester.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE DARENTH ASYLUM.

AT the meeting of the Metropolitan Asylums Board held on February 12th, the matter of the Darenth Asylum came up again. The first discussion arose on the receipt of letters from Messrs. Cochran and Smith, and Miss Bramston, resigning their seats on the Darenth Asylum and School Committee. On this it was moved and seconded that these members be asked to withdraw their resignations, and this motion having been supported by the Chairman and others, and carried by a considerable majority, these members announced that they would fall in with the evident wish of the Board and remain on the committee.

The final report of the General Purposes Subcommittee who had considered the circumstances and examined witnesses relating to the occurrence of pregnancy in the case of a patient lately deceased at the Darenth Adult Asylum was submitted for approval, and the General Purposes Committee recommended that a copy thereof, and certain other documents be forwarded to the Local Government Board with an intimation that if they thought any further inquiry necessary or needful, the managers would be prepared to afford every information in their power.

The following text of the paragraph from the letter of the Commissioners in Lunacy, which had been omitted from the report of the Darenth Committee of December 13th, 1897, was submitted: "It appears to the Commissioners that there was evidently great laxity of supervision, and an absence of due separation of the sexes, sufficient to have rendered possible such an occurrence as that under consideration. It was, in their opinion, very improper that a female patient should have been employed in scrubbing the waterclosets for the male laundry attendants, during which occupation it would appear that she was alone and without any female attendant to supervise; and in the morning work of cleaning the corridors and visiting room there must, according to your account, be considerable want of care if male patients can obtain access to those parts of the asylum without hindrance."

After several amendments had been proposed and rejected the report was adopted

The Darenth Asylum and Schools Committee reported that Dr. White had declined to resign his appointment as acting medical superintendent of the asylum, and that they had therefore determined his appointment by resolution. It was resolved to pay him three months' salary in lieu of notice.

This, then, is how the matter stands at the present moment, but we can hardly believe that this is the end of the case.

MEDICO-LEGAL.

ILLEGAL PRACTICES.

AT the recent sessions of the Central Criminal Court, George Walters, 36, described as a medical man, Neville Shorthouse, 38, a medical man, and Francis Wardale, 24, a chemist, were indicted for conspiring to commit illegal operations on women, the first two being charged with committing this offence. A verdict of guilty was found, and Mr. Justice Lawrance sentenced Walters and Shorthouse to seven years' penal servitude, and Wardale to twelve months' hard labour.

MEDICAL FEES AT INQUESTS.

IN the Brentwood County Court on February 11th his Honour Judge Paterson had before him an action brought by Dr. Charles Julian Horner, of St. Mary's Road, Walthamstow, to recover from Mr. Charles Edgar Lewis, the South Essex Coroner, the sum of two guineas, fees for making a *post-mortem* examination and giving evidence at an inquest held in August last on the body of a child named Palmer. Mr. W. E. Hempson, solicitor to the Medical Defence Union, appeared for the plaintiff; and Mr. A. Braxton Hicks was counsel for the defendant, representing the Coroners' Society for England and Wales.

In the course of his opening statement, Mr. Hempson, according to the report in the *Morning Post*, said that Dr. Horner was honorary medical officer of the Leyton, Walthamstow, and Wanstead Children's and General Hospital at Walthamstow, and in that capacity he attended the child Palmer, who subsequently died. By order of the coroner he made a *post-mortem* examination, and attended and gave evidence at an inquest, but though he applied for his fees for so doing he had not been paid. The plaintiff therefore brought his action, contending that he was a duly-qualified and registered medical practitioner within the meaning of the Medical Acts, 1858 and 1886, and as such was legally authorised and entitled to recover all fees which were due to him. It was held by the defendant, however, that he was justified in refusing such payment by virtue of Section XXII (Subsections 1 and 2) of the Coroners Act, 1887. He would at once say that the action was brought in that Court with the view, whichever way his Honour might decide, of carrying it to the High Court, as there was no recorded decision under that particular section of the Act, which had been the cause of friction alike to coroners and medical men, and they desired an authoritative decision on the subject.

In reply to a question by his Honour, Mr. Braxton Hicks said that if he as a Coroner were surcharged a fee which he had paid his only remedy against the County Council would be by mandamus for repayment, and he would have to bear the costs. The present action was the only way of getting the matter amicably settled. Coroners were quite in sympathy with medical men on the subject, but the Act of Parliament prevented the payment of the fees.

Mr. Hempson said he would admit it was the plaintiff's duty to attend the deceased; the hospital annual report would show that he was the medical officer. The subsections of the Act referred to said that no fee should be paid to a medical officer where an inquest was held on the body of a person who had died in a county or other lunatic asylum, or in a "public hospital, infirmary, or other medical institution, or in a building or place belonging thereto," etc., but he was going to argue most strongly that this was not a public hospital, and that the plaintiff was not a medical officer within the meaning of the subsections As to the first point, the hospital was founded for the purpose of admitting poor persons from only three parishes, and he contended that the limitation took it out of the category of "public" hospital

Mr. Braxton Hicks pointed out that in the annual report it was stated that "this hospital has been founded to meet the pressing requirements of a population of 160,000 persons." If that did not constitute it a public hospital he was at a loss to know what would He would ask his Honour to interpret the subsection of the Act and give judgment on them. If the hospital was a public institution it was admitted that the plaintiff was the medical officer.

His Honour said he was very glad the case was likely to go elsewhere whatever his decision might be, because he considered it a matter which should be determined by a higher authority than the County Court, affecting as it did a large body of medical men and a great many coroners. The Act provided for the payment of certain fees, but there was the proviso, which precluded certain medical men from receiving fees. He was not going to inquire why that was so; it was not necessary. His duty was only to carry out the Act of Parliament. It was very difficult to determine what was or what not a public hospital, but he did not understand a public hospital necessarily meant "for all the public;" it must be limited to a certain section of the public. However, he preferred leaving that point to the High Court. He held that this hospital came within the meaning of Subsection 2 of the Act, and that the plaintiff was not entitled to recover. He granted leave to appeal.

THE TRUCK ACTS.

ALTIORA PETO.—If the questions raised by our correspondent are *sub judice*, we think it would be undesirable at present to express any opinion thereon.

RECOVERY OF FEES.

W. J. M.—We are advised that from the facts stated by our correspondent it is probable that the employer has rendered himself responsible for medical attendance on his groom, but we would recommend our correspondent to consult his solicitor before actually taking legal proceedings.

NOTICE TO DETERMINE ENGAGEMENT OF MEDICAL OFFICER.

NEMO. We do not think that an unsigned notice could be substantiated as a valid notice to determine the employment, but there may be attendant circumstances which would lead to a modification of this opinion, and we would recommend our correspondent to consult a solicitor before testing the point by legal proceedings.

M.D BRUX.

L.R.C.S I. and L.K. and L.C.P I. wishes to know whether, if he obtains the degree of a Doctor of Medicine of Brussels, there would be any objection to his using the letters M.D. on his doorplate, and after his signature, the above degree not being registrable.

*** We think there would be no legal objection in such a case to our correspondent using the letters and word "M.D.Brux." on his doorplate and after his signature, but not the letters M.D. alone, which might be held to imply a registrable qualification. It is not, however, usual to put the letters M D. on a doorplate.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

MEDICAL SCHOOL BUILDINGS.—The Regius Professor of Physic has sent the following circular letter to resident graduates of the University:—

Cambridge, February, 1898.

DEAR SIR,—During the last twenty years the School of Medicine in Cambridge has grown and developed in a very remarkable way, bringing no little success of more than one kind to the University This progress we owe in the first instance to the great work of Sir George Paget and Sir George Humphry, in later years to the labours of others in the advancement of the ancillary sciences, such as anatomy and physiology, which are, however, by no means exclusively departments of the medical school. The medical school properly so called can hardly be said to be housed at all. Moved from one temporary habitation to another, medicine is at present accommodated in a building never intended for it, nor adapted to its uses; a building, moreover, now suffering from acute dilapidation. The departments of medicine, other than the hospital, for which provision is most urgently required, are those of Pathology (including the Museum) and of Pharmacology. Certain other apartments are also needed, such as rooms for examinations and the keeping of Acts, and private rooms for the professors and other teachers. By the courtesy of Downing College, and the liberality of the Downing Professor, apartments and apparatus are provided for the pharmacological work; this is but a temporary provision, and the work is moreover at a great disadvantage in its remoteness from the departments of chemistry and physiology on which it is closely dependent.

In the words of the Vice-Chancellor "the Medical School of Cambridge, while its reputation is second to that of no other school in the world, is the worst housed medical school in England." Its very existence is jeopardised by the want of due provision for the ordinary work; and this at a time when in Europe and America schools of medicine, already equipped in a way scarcely dreamed of here, are adding persistently to their resources, and not only turning out apt pupils, but also forwarding the progress in pathology and therapeutics which is so remarkable a feature of the medicine of our own time.

To provide the buildings required a sum of least £20,000 will be needed; in the hope of raising a portion of so large an amount we are calling a meeting of Cambridge medical graduates in London on March 2nd, when the Vice Chancellor, Mr. Balfour, Professor Jebb, and other representatives of the University, have kindly promised to be present. Our medical graduates are, however, for the most part still young men unable to contribute largely in money; by their efforts and our own we must endeavour to raise money from other sources also. The Mercers' Company has already given us a generous donation, and I have good reason to hope that in this year or next other City Companies will follow its example.

My object in sending out this letter to resident members of the Senate is to inform them of our needs, and of our efforts to bring our School within some degrees of comparison with the schools of other universities. To rival their establishments we cannot hope, but at least we would not fall grotesquely short of them.

A site for our new buildings has been assigned to us by the Senate almost without discussion. I make no appeal to resident members of the Senate outside the teachers of medicine, knowing too well how large are the claims upon their small official stipends; still it may be in the power of many of them to give us indirect aid, and a few may be able to extend to us a more substantial support.

The list of subscriptions paid or promised up to the present date is published on the opposite page. Subscriptions are payable in instalments during the years 1898-1901 inclusive, or at any early date or dates, as may be convenient to the donors.

Faithfully yours,
T. CLIFFORD ALLBUTT, R.P.P.

List of Subscriptions.

February 8th, 1898.

	£	s.	d.
The Mercers' Company...	1,050	0	0
Professor Bradbury ...	100	0	0
W. A. Brailey, Esq., M.A., M.D.	20	0	0
F. Deighton, Esq., M.A., M.B.	21	0	0
J. Griffiths, Esq., M.A., M.D.	50	0	0
Sir Reginald Hanson, Bart. (on condition that nine other non-medical graduates give the same)	100	0	0
H. W. Hoffmann, Esq., M.A., M.B.	100	0	0
Lady Humphry	*300	0	0
A. P. Humphry, Esq., M.A., LL.M., and Mrs. Humphry	*200	0	0
Miss Humphry	*100	0	0
Dr. L. Humphry	*100	0	0
Donald MacAlister, Esq., M.A., M.D.	50	0	0
The Regius Professor ...	250	0	0

* To be reserved for such part of the buildings as may be dedicated to the memory of the late Sir George Humphry.

PROFESSORSHIP OF SURGERY.—The following Report appears in the *Cambridge University Reporter* of February 15th:

REPORTS.

Report of the General Board of Studies on the Professorship of Surgery.

February 9th, 1898.

The General Board of Studies beg leave to report to the Vice-Chancellor for publication to the Senate as follows:

In their Report dated 25th November, 1896 (*Reporter*, p. 263), the General Board stated that, "in the opinion of some persons well qualified to judge, the conditions at present affecting the Professorship of Surgery are such as to limit seriously the choice of the Electors," and in consequence they recommended the temporary suspension of the Professorship. This opinion was supported by a letter from Lord Lister printed in their Report.

Since the date of this Report it has become clear to the Board that the absence of any certain opportunity of clinical teaching and of hospital practice will seriously limit the number of suitable candidates for the professorship

It appears impossible at present to make arrangements whereby beds in a hospital in Cambridge could be secured to a Professor of Surgery, and in these circumstances the Board are not prepared to recommend the assignment of a stipend to the Professorship

A Memorial presented to the Council of the Senate on December 9th, 1896 (*Reporter*, p. 343) by Graduates in Medicine suggested that the appointment of a Professor should be postponed "until such an arrangement has been made as shall place the Professor on the staff of a hospital and in full charge of in-patients"

A similar course was recommended to the Board in a letter to the Vice-Chancellor dated January, 1897, signed by seven former Examiners in Surgery. This letter is printed as an Appendix to this Report.

The Board concur in thinking such a course advisable.

Accordingly the Board have agreed to recommend the suspension of the Professorship until such time as the University otherwise determine.

If this recommendation be accepted by the Senate, it would become necessary to appoint an officer to discharge some of the duties now assigned to the Professor of Surgery. The Board are of opinion that such an officer should hold the position of Reader, and they suggest that a Readership in Surgery should be established, and that a Reader in Surgery should be appointed to hold office for five years, unless a Professor of Surgery be appointed before the end of that period. In this case the duties assigned to the Reader would again fall to the Professor, and the Board are of opinion that the Readership should lapse.

It would be the duty of the Reader to deliver lectures and to conduct practical teaching in Surgery in connection with the Special Board for Medicine, to be responsible, under the direction of the Regius Professor of Physic, for the general arrangement of the surgical side of the Examinations for degrees in Medicine and Surgery, and to act in place of the Professor of Surgery in those Examinations. He would be permitted to exercise the private practice of his profession. In the opinion of the Board the stipend attached to the Readership should be £240 per annum.

The General Board of Studies therefore recommend:

1. That the Professorship of Surgery established by Grace 14 of May 10th, 1883, be suspended until the Senate otherwise determine.
2. That the duties with regard to the Examinations for Degrees in Medicine and Surgery assigned by the Ordinances for Students in Medicine to the Professor of Surgery in Regulation 25 (*Ordinances*, p. 182) and in Regulation 6 (*Ordinances*, p. 187) be discharged by the Regius Professor of Physic so long as the Professorship of Surgery is suspended.
3. That there be established in the University a Readership in Surgery in accordance with the provisions of Statute B, Chapter VII. and in connection with the Special Board for Medicine, provided that if a Professor of Surgery be appointed at any time the Readership in Surgery shall lapse at the end of six months from the date of that appointment
4. That subject to the proviso contained in Recommendation 3 a Reader in Surgery be appointed for a period of five years
5. That the Reader in Surgery be subject to the following regulations:
(i) It shall be the principal duty of the Reader to teach and illustrate the principles and practice of Surgery, and to apply himself to the advancement of the knowledge of these subjects and to promote their study in the University.
(ii) The Reader in Surgery shall be an Examiner *ex officio* for the Third Examination for the Degree of Bachelor of Medicine and for the Degree of Master in Surgery.
(iii) It shall be the duty of the Reader to be responsible under the direction of the Regius Professor of Physic for the general arrangement of the Surgical parts of the Examinations for degrees in Medicine and Surgery.
(iv) In case the Reader is prevented by illness or other reasonable cause from taking part as Examiner *ex officio* in the Examinations for Degrees in Medicine and Surgery it shall be competent for the Regius Professor of Physics to nominate a Graduate in Surgery who is a member of the Senate to examine in his stead, subject to the approval of the Vice-Chancellor, and such Examiner shall be paid by the Reader such sum as the Special Board for Medicine shall determine.
(v) The Readership of Surgery shall not be tenable with another Readership or with a Professorship in the University.
(vi) The stipend attached to the Readership of Surgery shall be £240 a year.

ALEX. HILL, *Vice-Chancellor*.
JOHN PEILE.
W. CHAWNER.
V. H. STANTON.
F. W. MAITLAND.
T. CLIFFORD ALLBUTT.
W. H. GASKELL.
H. SIDGWICK.
JAMES WARD.
J. N. KEYNES.
E. W. HOBSON.
J. N. LANGLEY.
ALAN GRAY.
A. T. CHAPMAN.
J. W. CARTMELL.
R. T. GLAZEBROOK.
J. ADAM.

APPENDIX.

(Letter from former Examiners in Surgery dated January, 1897.)

To the Vice-Chancellor of the University of Cambridge.

SIR,—We the undersigned, who have acted as Examiners in Surgery, are convinced that a Professor of Surgery to the University is really essential in the interests of the Medical school.

That he should have charge of in-patients at a Hospital and be engaged in the active practice of his Profession is in our opinion necessary if the Professor is to remain a teacher of any value.

If these advantages cannot be secured for the Professorship at the present time it would be advisable in our judgment to appoint a Reader in Surgery until these conditions are fulfilled.

Your obedient servants,

WILLIAM H. BENNETT.
W. WATSON CHEYNE.
H. H. CLUTTON.
HOWARD MARSH.
HERBERT W. PAGE.
FREDERICK TREVES.
ALFRED WILLETT.

The outcome of the foregoing report is that all the duties of the suspended Professorship, other than certain merely ministerial functions relating to lists of candidates, etc., will fall to be performed by the new Reader, and that the latter must apparently be one of the surgeons to Addenbrooke's Hospital. The late Sir George Humphry had no stipend from the University; his successor in function though not in status will have £240 a year.

DEGREES.—On February 10th the following degrees in Medicine and Surgery were conferred:

Doctor of Medicine.—C. Todd, B.A., Clare; A. V. Clarke, B.A., Caius.
Bachelor of Medicine and Bachelor of Surgery.—C. Jephcott, M.A., Caius; T. H. Molesworth, B.A., Caius; C. E. Michael, B.A., Selwyn.

UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.—At a meeting of the Court of Edinburgh University on February 14th Dr. John Wylie, Edinburgh, was appointed additional Examiner in Medicine in its bearings on Public Health, for one year from January 1st. The recognition of Drs. Harvey Littlejohn and W. G. Aitchison Robertson as teachers whose courses of instruction in medical jurisprudence and public health qualify for graduation was continued until such time as the separate Chair of Public Health may be instituted and filled up. In the event of the Chair of Public Health being established prior to the beginning of next summer session, their recognition was continued in medical jurisprudence and in public health respectively. It was agreed, on the recommendation of the Senatus, to institute a tutorship in clinical gynæcology for the ensuing summer session, and to appoint the University Assistant in Midwifery to the office. A recommendation of the Senatus that Dr. J. W. Ballantyne should be permitted to give within the University a course of six lectures on Teratology and Ante-Natal Disease was approved. Mr. A. E. Mettam, Professor of Anatomy, Royal Veterinary College, Edinburgh, and Mr. David Sharp, M.A., F.R.S., Cambridge, were appointed additional examiners for the examination of theses for the degree of D.Sc.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,036 births and 4,448 deaths were registered during the week ending Saturday last, February 12th. The annual rate of mortality in these towns, which had been 18.7 and 19.2 per 1,000 in the two preceding weeks, further rose to 20.7 last week. The rates in the several towns ranged from 11.3 in Croydon, 14.1 in Cardiff, 14.8 in Wolverhampton, and 14.9 in Bradford, to 24.0 in Bristol, 24.3 in Brighton, 26.1 in Swansea, and 26.3 in Plymouth. In the thirty-two provincial towns the mean death-rate was 19.6 per 1,000, and was 2.6 below the rate recorded in London, which was 22.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.7 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.7 in Birkenhead, 3.8 in Bristol, 4.0 in Derby, and 5.5 in Brighton. Measles showed a death-rate of 1.6 in Halifax, 1.8 in Birkenhead, 2.2 in Sunderland, 2.6 in Brighton, 3.0 in Bristol, and 3.1 in Swansea; scarlet fever of 1.0 in Leicester and 1.4 in Birkenhead; whooping-cough of 1.2 in Sheffield, 1.6 in Plymouth, and 1.7 in Brighton; and "fever" of 1.0 in Burnley. The 77 deaths from diphtheria in the thirty-three towns included 45 in London, 4 in West Ham, 4 in Birmingham, 3 in Manchester, and 3 in Leeds. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns, and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,944 in the eleven preceding weeks, had further fallen to 2,871 on Saturday last, February 12th; 232 new cases were admitted during the week, against 248, 244, and 209 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, February 12th, 946 births and 607 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.4 and 18.0 per 1,000 in the two preceding weeks, further rose to 20.1 last week, but was 0.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.3 in Perth and 16.4 in Dundee and in Leith to 21.1 in Aberdeen and 22.4 in Glasgow. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Aberdeen and Leith. The 312 deaths registered in Glasgow included 15 from whooping-cough, 11 from measles, 3 from scarlet fever, and 3 from diphtheria. Two fatal cases of diphtheria and 2 of scalet fever were recorded in Edinburgh, and 2 of "fever" in Aberdeen.

VITAL STATISTICS OF ENGLAND AND WALES FOR 1897.

T.H.R.—The following are the statistics for 1897 for England and Wales asked for by our correspondent:

	Per 1,000 Living.
Birth-rate	29.7
General death-rate	17.4
Urban ,, ...	18.2
Rural ,, ...	15.8
Infant ,, (per 1,000 births)	15.6
Zymotic ,, ...	2.15
Phthisis ,, ...	(Not yet tabulated.)

A JUDGE ON VESTRIES.

THE safeguarding of the purity of local government is a matter of so much importance to every citizen that Mr. Justice Wright deserves public thanks for having, in the course of a recent judgment in a case relating to the sanitation of a house, made some observations upon the subject. The Judge, according to the report in the *Times*, said that there was one matter of importance which did not affect the question in the case, but which called for remark, and that was the system by which members of a vestry were enabled to work into each other's hands. It appeared that a member of the vestry was employed by the landlord of this house and his agent; the agent employed another member of the vestry, who was a contractor, to do work in the house; and the work was, after its completion, inspected by the contractor's son, who was a sanitary inspector of the vestry. Such a state of things was a reproach to the whole system of local government, and was calculated to lead to abuses and scandals. It, at any rate, must lead to persons being placed in difficult positions with regard to their public and private duty. How could a son be expected to check his father's work? His lordship trusted that effect might be given to the suggestion that that state of things ought not to exist. Mr. R. C. Glen stated, on behalf of the Paddington Vestry, that on October 15th, 1896, the Sanitary Committee of the Vestry passed the following resolution: Resolved: "That where any sanitary works are executed in this parish by a contractor related to the inspector of the district in which such work is situated, such fact shall be reported by that inspector to the medical officer of health, who shall thereupon instruct another inspector to supervise the work."—Mr. Justice Wright observed that this was a small step in the right direction. At the last meeting of the Paddington Vestry the matter was referred to the Sanitary Committee for consideration and report.

J.M.—The parish council has power to discontinue the services of their medical officer, and there is no appeal to the Local Government Board.

MEDICAL NEWS.

It is announced that the centenary of the Royal Institution will be celebrated next year.

H R.H. the Duke of York has graciously consented to become President of the National Society for Employment of Epileptics.

The tenth Congress of Russian Scientists and Physicians will be held at Kieff from August 21st to 30th, under the presidency of Professor J. Rachmaninow.

Lady nurses are to be employed in the British general hospitals in the Punjab command until active operations cease and the hospitals are closed.

The Duke of Cambridge, President of the Sanitary Institute, will preside at the annual dinner of the Institute to be held on Wednesday, March 23rd.

Professor Huerthle has been appointed to succeed Professor Heidenhain, whose assistant he formerly was, in the Chair of Physiology in the University of Breslau.

Indian Dairies.—The Government of India have sanctioned Rs.24,900 for the extension of the model dairy farm at Umbala, and Rs.8,000 for the improvement of existing Government dairies in the four commands.

Presentation.—Dr. Sidney Matthews was presented on February 10th, by the members of his ambulance class, held under the joint auspices of the West Sussex District Council and the St. John Ambulance Association, with a silver card case in acknowledgement of his services as lecturer.

In Buenos Ayres there is one physician to each 1,000 inhabitants, and it has been proposed there to close the medical schools for five years to prevent overcrowding of the profession. In the United States there is about one physician to every 500 inhabitants.

The trooping service between England and India will be very heavy this relief season, for a very large number of sick and wounded men have to be sent home owing to the frontier operations, while more drafts to fill the gaps in the ranks will be required. The transport *Dunera* will make an extra voyage out and home at the end of the service.

A Bill intended to limit the lawful use of hypnotism to legally qualified practitioners of medicine will shortly be introduced into the New York Legislature, on the ground that its use by irresponsible persons is dangerous and opposed to the public interest.

Compulsory Vaccination in Portugal.—In the Portuguese Chamber of Deputies Viscount da Serra de Tourega recently reintroduced a Bill to make vaccination compulsory, which was brought forward in 1891 by Senhor Adriano Monteiro. A Bill with the same object was introduced two years ago by Dr. Moraes de Carvalho.

Dr. Macnaughton-Jones will on February 25th, at 8 p.m., at Bloomsbury Hall, give an address to the Public Dispensers Association, which was founded last year to protect and further the interests of public dispensers, and in particular to secure for them adequate remuneration and a general improvement in their status.

The Negus on Vaccination.—The *Perseveranza* of Milan makes the somewhat startling announcement that at the next meeting of the International Medical Congress, to be held in Paris, Dr. Mandon will present, on behalf of the Emperor Menelek of Abyssinia, a communication by that monarch on "Small-pox and Preventive Vaccination as it has been practised in Abyssinia for Two Centuries."

German Surgical Congress.—The twenty-seventh Congress of the German Surgical Society will be held this year in Berlin in the Langenbeckhaus, from April 13th to the 16th, under the presidency of Professor F. Trendelenburg, of Leipzig. In connection with the Congress there will be an exhibition of preparations, instruments, etc., and a display of Roentgen photographs. The General Secretary of the Congress is Professor Gurlt, Keithstrasse Nr. 6, Berlin, W.

A memorial of August Kekulé, the famous chemist, is to be erected in the Chemical Institute of Bonn, where he was Professor for nearly thirty years. A Committee for this purpose has been formed, of which Privy Councillor von Rottenburg is the Honorary President, and Dr. Curtius, Director of the Chemical Laboratory, the Acting President. Contributions should be sent either to the Treasurer of the German Chemical Society, Dr. J. F. Holtz, Müllerstrasse, 170, 171, Berlin, N., or to Consul Jos. Zuntz, Popplesdorferalle, 63, Bonn.

Leprosy in the United States.—According to the *Philadelphia Medical Journal* the Committee on Public Health has reported favourably to the United States Senate on a Bill authorising an investigation into the prevalence of leprosy in the United States. The investigation will be undertaken with the object of confirming or disproving a prevalent opinion—and one to which the Surgeon-General of the United States Marine Hospital Service has given expression—to the effect that there exist in the United States many more cases of leprosy than are known.

International Congress of Hydrology and Climatology.—The fifth International Congress of Hydrology, Climatology, and Geology will be held at Liége this year, from September 25th to October 1st, under the patronage of His Royal Highness Prince Albert of Belgium. Among the Honorary Presidents is M. De Bruyn, Minister of Agriculture and Public Works. The President of the Organising Committee is Professor G. Dewalque, the Vice-President being Dr. V. Desguin, President of the Royal Academy of Medicine, Belgium. The General Secretary is Dr. J. Jorissenne, of Liége. The work of the Congress will be divided among three Sections: (1) Medical Hydrology, (2) Medical Geology, including General Hydrology, and (3) Climatology. French, Flemish, German, or English may be used in the discussions.

New Zealand and Tuberculosis.—A Bill introduced by the Hon. Mr. Carroll into the New Zealand Legislature provides that the master of any vessel arriving in New Zealand shall not allow any passenger who is suffering from any form of tuberculosis to land in New Zealand, nor shall it be lawful for any such person to do so, the penalty being £10. If any passenger is found to be suffering from any form of tuberculosis within three months of landing in New Zealand, he shall, until the contrary is proved, be deemed to have been suffering from that disease when he was landed in New Zealand. The master of any ship engaged in the New Zealand coast trade is to be liable to a penalty not exceeding £50 if he allows any passenger suffering from any form of tuberculosis to occupy the same cabin as any other passenger. For the purpose of the principal Act, tuberculosis and syphilis are declared highly infectious disorders, dangerous to the people, and dangerous infectious diseases.

Medical Inspection of Schools in Boston, U.S.A.—For the last three years every public and parochial school in Boston, Mass., has been subject to daily medical inspection, and the results of this measure are said to have been eminently successful. For the purpose of medical visitation the city is divided into fifty districts; each inspector has from one to five schools to visit. Every teacher in the school is required to report to the master any case of apparent illness; if the child seems to be sufficiently ill to make absence from school desirable he is sent home at once. In no case does the medical inspector interfere with the practice of the family doctor. A report for one year states that 8,964 pupils were examined, of whom 1,156 were found to be too ill to remain at school. The diseases from which the children were suffering are classified as follows: Specific infectious diseases, 267; oral and respiratory diseases, 3,934; ear diseases, 66; eye diseases, 382; skin diseases, 628; miscellaneous diseases, 3,687. The President of the Board of Health describes how an epidemic of diphtheria was prevented by taking a whole school in time. In a primary school of 40 pupils, 14 were attacked with diphtheria within eighteen days. Thorough treatment of the sick and care for the entire school and disinfection of the premises limited the disease to those who were known to be infected when the epidemic was discovered.

Small-pox at Middlesbrough.—Local data as to the number of cases of small-pox which have occurred at Middles-

brough are somewhat conflicting and confusing. Only 236 cases were shown in the authorised lists on February 9th. Since then there would seem to have been some 120 cases, an average of 20 a day, with a total to February 16th of 365 cases. Dr. Reece, one of the medical inspectors of the Local Government Board, proceeded to Middlesbrough on February 10th, and has been of immense usefulness to the numerous local authorities. A vast amount of primary vaccination and revaccination is being done, not only in Middlesbrough, but also in the outlying townships of the union, and house-to-house visitation in the borough is in process of being carried out. The town is severely handicapped by the presence within it of a migratory population, with children who in other places have escaped vaccination; and hence the local effective administration of the law as regards Middlesbrough-born infants has proved quite ineffectual to limit the spread of infection on account of imported unvaccinated individuals. The closure of schools, of lending libraries, and other precautions for lessening risks of spread of disease have been adopted; but the inadequacy of isolation accommodation in the earlier phases of the outbreak and the home treatment of scores of cases in the poorer tenement dwellings of the town, have doubtless given an impetus to the disease, which the present enlarged number of hospital beds will do little to counteract for some time to come.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street, S.W.—Surgeon to Out-patient; must be F.R.C.S.Eng. Also House-Surgeon. Appointment for six months. Board, lodging, and washing found.—Applications to the Honorary Secretary, before March 6th.

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House Physicians. Appointment for six months. No salary; residence, board, and washing provided.—Applications to Howard J. Collins, House Governor, by February 26th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; doubly qualified; unmarried; and, when elected, under 30 years of age. Salary not exceeding £30 per annum, with board, washing, and residence in the hospital. Applications to the Secretary by February 23rd.

BRISTOL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon; doubly qualified. Salary, £100 per annum, with rooms and attendance (not board).—Applications, endorsed "House-Surgeon," to H. Lawford Jones, Secretary, by February 26th.

CAMBERWELL: PARISH OF ST. GILES.—Medical Officer for the Infirmary at Havil Street, Camberwell, and their Workhouse at Gordon Road, Peckham. Salary, £350 per annum, increasing £25 annually to a maximum of £400, with unfurnished house, water, gas, and coals. Must devote his whole time to the duties.—Applications, on forms to be obtained of the Clerk, to be sent to Charles S. Stevens, Clerk to the Guardians, Guardians' Office, 29, Peckham Road, S.E., by February 25th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Rord, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House-Surgeon and Dispenser. Salary, £50 per annum, with board, apartments, and laundress.—Applications to the Secretary by March 3rd.

DARENTH (ADULT) ASYLUM, near Dartford, Kent.—Assistant Medical Officer, unmarried; doubly qualified; and must not exceed 35 years. Salary £160, rising at the discretion of the Committee to £200, with board, lodging, attendance, and washing.—Applications, on forms to be obtained at the Chief Offices of the Board, Norfolk House, Norfolk Street, Strand, W.C., where they must be received by March 1st.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House-Surgeon. Appointment for six months. Honorarium £10 and board, residence, and washing provided.—Applications to Walter G. Carnt, Secretary, by February 24th.

DUBLIN, MERCERS' HOSPITAL.—Resident Medical Officer.—Applications to the Registrar by February 24th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House-Surgeon. Appointment for six months. Board and residence provided, with honorarium of £10 10s. at the expiration of term. Also Casualty Officer. Appointment for six months, and is renewable. Salary at the rate of £100 per annum. Applications to Thomas Hayes, Secretary, by March 12th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 a year, with furnished house, rent, and taxes free; also coal, light, water, and cleaning, or in lieu thereof £20 per annum. Knowledge of Welsh desirable. Applications to Thomas Thomas, Secretary, by February 21st.

FROME UNION.—Medical Officer for the Coleford Medical District. Salary, £30; midwifery 10s per case; certifying lunatics 10s. per case. Must reside within the district. Applications to George W. Bradbury, Clerk, Public Offices, Frome, by February 21st.

GLOUCESTER: BARNWOOD HOUSE HOSPITAL FOR THE INSANE.—Junior Assistant Medical Officer. Salary, £100 per annum, with board lodging, etc.—Applications to the Medical Superintendent.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Applications, to be sent under cover, to the Secretary by March 19th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon, salary, £80; Assistant House-Surgeon salary £30 Board, residence, and laundry found in each case.—Applications to the Hon. Secretary, at the Hospital, by March 8th.

LIVERPOOL, CITY OF: INFECTIOUS DISEASES HOSPITAL, Parkhill.—Resident Medical Officer; doubly qualified, unmarried, and must not exceed 30 years of age. Salary, £120 per annum, increasing £10 per annum to £140.—Applications, endorsed "Resident Medical Officer," to the Chairman of the Port, Sanitary, and Hospitals Committee, under cover, to the Town Clerk, Municipal Offices, by February 21st.

LIVERPOOL ROYAL INFIRMARY.—Honorary Gynæcological Surgeon.—Applications to the Chairman of the Committee of the Royal Infirmary, Liverpool, by March 10th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence, board, and washing p ovided, and an honorarium on satisfactory completion of term. Applications to A. W. Bodger, Secretary, by February 21st.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Clinical Assistant (Female) for Out-patient Department.—Appointment for one year.—Applications to M. M. Bagster, Secretary, by February 23rd.

NORTH DUBLIN UNION.—Second Medical Officer for the North City (No. 1 East) Dispensary District. Salary, £145 per annum, with an addition of £25 per annum as Medical Officer of Health, and his proportion of vaccination fees. Applications to Thos. J. O'Neill, Hon. Secretary, 62, Lower Dorset Street, Dublin, by February 23rd.

OMAGH DISTRICT ASYLUM.—Assistant Medical Officer; unmarried; doubly qualified, and not more than 30 years of age. Salary, £100 per annum, with allowances of furnished apartments (including fuel, light, and attendance), washing, milk, and vegetables, and £50 in cash in lieu of all other rations. Candidates must attend at the Asylum at 10.30 A.M., on March 4th.

SALFORD ROYAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. The present Junior House-Surgeon is a candidate, and, in the event of his being appointed, there will be a vacancy in the post of Junior House-Surgeon. Salary, £50 per annum, with board and residence. Must be doubly qualified.—Applications to the Secretary by February 28th.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone Road, N.W.—Pathologist.—Applications to George Scuda more, Secretary.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon; doubly qualified. Salary, £70 a year, with board, washing, and residence.—Applications to Major C. Tyler, Secretary, by February 23rd.

SUFFOLK COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 a year, with board, lodging, washing, and attendance. Must be unmarried; doubly qualified; and under 30 years of age. Appointment for three years, and thereafter as may be agreed.—Applications to the Medical Superintendent, County Asylum, Melton, Suffolk, by March 1st.

SUNDERLAND BOROUGH ASYLUM.—Medical Superintendent; must give his whole time to the duties; doubly qualified. Salary, £350 a year, with furnished house, board for self and wife (if married), washing, coals, light, two servants, and use of garden.—Applications, endorsed, "Medical Superintendent," on forms to be obtained of Fras. M. Bowey, Clerk to the Visiting Committee, Town Hall, Sunderland, to whom they must be sent by February 21st.

TOTTENHAM HOSPITAL.—House-Surgeon. Salary, £40 per annum. Board, washing, and lodging in the institution.—Applications to Director, Evangelical Protestant Deaconesses' Institution and Training Hospital, South Tottenham, by February 23rd.

WALLASEY DISPENSARY.—House-Surgeon; must give whole time to the duties. Salary, £150 per annum with furnished house, coal, and gas.—Applications to Mr. William Heap, Elm Mount, Penkett Road, Liscard, Cheshire, by February 22nd.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon; unmarried; doubly qualified. Salary £60 per annum, with board and residence in the hospital.—Applications to the Honorary Secretary, by March 2nd.

WISBECH UNION.—Medical Officer and Public Vaccinator for the First, Second (a), and Eighth Districts of the Union. Salary for First District, £70 per annum, Second (a) District, £10, and Eighth District, £15 per annum, with extra fees.—Applications to G. Carrick, Clerk, Union Offices, Wisbech, by March 2nd.

MEDICAL APPOINTMENTS.

ANNING, George Paul, M.R.C.S.Eng., L.R.C.P.Lond., appointed one of the House Physicians at the General Infirmary, Leeds.

BAKEWELL, R. T., M.B., M.R.C.S., L.R.C.P., appointed Anæsthetist to the National Hospital for the Paralysed and Epileptic, Queen Square, *vice* Dudley Buxton, M.D.Lond., appointed Consulting Anæsthetist.

BROSTER, Arthur E., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Brassington District of the Ashbourne Union.

BURY, A. T., L.R.C.P.Edin., L.M., M.R.C.S.Eng., reappointed Medical Officer for the Alstonfield District of the Ashbourne Union.

CAMPBELL, John, M.A., M.D., F.R.C.S.Eng., appointed Examiner in Anatomy at the Apothecaries' Hall, in Ireland.

CAVE, E. J., M.D.Lond., M.R.C.P., appointed Honorary Assistant Physician to the Royal United Hospital, Bath.

Cheatle, G. Lenthal, F.R.C.S.Eng., appointed a Surgeon to the Hospital for Epilepsy and Paralysis, Regent's Park.

Deravin, H. A., M.B., Ch.B.Melb., appointed a Clinical Assistant to Outpatients at the Chelsea Hospital for Women.

Dodson, G. E., M.R.C.S., L.R.C.P., appointed Temporary Assistant Medical Officer at the Workhouse of the Nottingham Union, *vice* G. J. Blackmore, resigned.

Frost, T. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Llanhilleth District of the Pontypool Union.

Gardner, William, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for the Nunney District of the Frome Union.

Gould, A. Pearce, M.S.Lond., F.R.C.S.Eng., appointed Consulting Surgeon to the Hospital for Epilepsy and Paralysis, Regent's Park.

Gunther, Theodore, M.D.Tübingen, L.R.C.P.Lond., reappointed Medical Officer of Health to the Hampton Wick District Council.

Harnworth, E. M., M.D., B.S., B.Sc.Lond., F.R.C.S.Eng., appointed Honorary Assistant Surgeon to the Hull Royal Infirmary, *vice* Dr. Lowson.

Hall, Alfred, M.R.C.S.Eng., reappointed Medical Officer for the Calton District of the Ashbourne Union.

Hanson, R. J. E., M.B., B.C.Cantab., appointed a Clinical Assistant to Outpatients at the Chelsea Hospital for Women.

Hill, Dr., appointed Medical Officer for the Beerferris District of the Tavistock Union.

James, W. E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the Mynyddislwyn District of the Newport Union.

Lane, Jas. Oswald, M.D.Camb., M.R.C.S.Eng., reappointed Medical Officer for the Burghill District of the Hereford Union.

Littleton, Philip Richard, M.R.C.S.Eng., reappointed Medical Officer for the Union Workhouse and Ashbourne District of the Ashbourne Union.

MacCarthy, Eugene, L.R.C.P.I., L.R.C.S.I., L.M., appointed as an Additional Physician to the British Hospital for Mental Disorders and Brain Diseases, Euston Road.

Morris, Edgar Freeman, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Fownhope District of the Hereford Union.

Pronger, C. E., F.R.C.S., appointed Ophthalmic Surgeon to the Harrowgate General Hospital.

Richards, J. B. O., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Swinhope District of the Caistor Union.

Thomas, C. N., B.A.Camb., M.B., B.C., appointed Medical Officer for the Lydney District of the Chepstow Union.

Thomason, Richard, M.R.C.S.Eng., L.S.A., reappointed Medical Officer for the Dewchurch District of the Hereford Union.

Thomson, H. Campbell, M.D.Lond., M.R.C.P., appointed Physician to Outpatients and Registrar to the Hospital for Epilepsy and Paralysis, Regent's Park.

Turner, John Andrew, M.B., C.M., D.P.H.Camb., Medical Officer of Health to the Combined Districts of East Herts and Essex, appointed Medical Superintendent to the Hertford and Ware Joint Hospital for Infectious Diseases; and Honorary Pathologist and Bacteriologist to the Hertford General Infirmary.

Turner, Waldren, M.D.Edin., F.R.C.P.Lond., appointed to take charge of In-patients at the Hospital for Epilepsy and Paralysis, Regent's Park.

Wade, Dr., appointed Medical Officer for the Mark District of the Axbridge Union, *vice* J. Ford, M.R.C.S.Eng., resigned.

Watts, A. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer and Public Vaccinator for the First District of the East Ashford Union.

Wilkinson, James B., M.D., C.M.Edin., D.P.H.Vict., appointed Medical Officer of Health for the County Borough of Oldham, *vice* Dr. Tattersall, resigned.

Williams, Robert, M.B., C.M.Edin., reappointed Medical Officer of Health to the Leominster Town Council.

Wilson, Francis Kenneth, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P., appointed House-Surgeon to the Seamen's Hospital in the Royal Victoria and Albert Docks, *vice* Mr. Rees, resigned.

DIARY FOR NEXT WEEK.

MONDAY.

London Post-Graduate Course, London Throat Hospital, 204, Great Portland Street, W., 8 p.m.—Dr. Woakes: Nasal Neurosis.

Royal College of Surgeons of England, 5 p.m.—Mr. H. J. Waring: On the Pathology and Treatment of those Diseases of the Liver which are amenable to Direct Surgical Interference. Lecture I.

Medical Society of London, 11, Chandos Street, Cavendish Square, W., 8.30 p.m.—Mr. J. H. Morgan: The Affections of the Urinary Apparatus. Lettsomian Lecture II.

TUESDAY.

Royal Medical and Chirurgical Society, 20, Hanover Square, W., 8.30 p.m.—Adjourned discussion on Mr. Marmaduke Sheild's paper: Immunity and Latency after Operations for reputed Carcinoma of the Breast.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 p.m.—Dr. Craig: Melancholia and Hypochondriasis.—Hospital for Diseases of the Skin, Blackfriars, 4.30 p.m. Dr. Phineas Abraham: Alopecias.

National Hospital for the Paralysed and Epileptic, Queen Square W.C., 3.30 p.m.—Lecture by Dr. Colman.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4.30 p.m.—Dr. Fletcher Beach: General Paralysis of the Insane, and other Disorders of the Nervous System, characterised by General Paralysis; with cases.

WEDNESDAY.

Hunterian Society, London Institution, Finsbury Circus, E.C., 8.30 p.m.—Mr. H. T. Butlin: On what Operation can do for Cancer of the Tongue. Hunterian Lecture I.

Evelina Hospital, Southwark Bridge Road, S.E., 4.30 p.m.—Dr. Nestor Tirard: Albuminuria in Children.

London Post-Graduate Course, Hygiene and Public Health at Parkes Museum, 74a, Margaret Street, W., 4.30 p.m.—Professor Wynter Blyth: Construction of Dwelling Houses, etc.

Royal College of Surgeons of England, 5 p.m.—Mr. H. J. Waring: On the Pathology and Treatment of those Diseases of the Liver which are amenable to Direct Surgical Interference. Lecture II.

Hospital for Consumption and Diseases of the Chest, Brompton, 4 p.m.—Dr. Biss: Asthma.

West London Post-Graduate Course, West London Hospital, W., 5 p.m.—Dr. Turner: Neurological Cases.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, London, W., 5 p.m.—Dr. A. Eddowes: On a Case of Ringworm contracted from a Hedgehog. Patients will be shown by Dr. T. D. Savill and others.

THURSDAY.

Neurological Society of London, 11, Chandos Street, W., 8.30 p.m.—Clinical Meeting. Dr. Donkin: (1) Condition resembling Thomsen's Disease in a child aged 3 years; (2) Hemianæsthesia (including special senses) alternately appearing and disappearing in a man aged 50. Dr. Mott: Case for Diagnosis. Dr. Herbert Hawkins: Case of Muscular Atrophy. Dr. Beevor: Case of Pachymeningitis. Dr. Leonard Guthrie: Unilateral Syringomyelia. Dr. James Taylor: Acute Bulbar Paralysis. Dr. Ormerod: Peculiar Form of Athetosis. Dr. F. E. Batten: Friedreich's Disease with Mental Defect. Dr. Stephen Mackenzie: Case of "Head Nodding."

London Temperance Hospital, 2 p.m.—Dr. Soltau Fenwick: Clinical and Pathological Demonstration to Senior Students Pulmonary Disease.

Charing Cross Hospital, Post-Graduate Class, 4 p.m.—Dr. Montague Murray: Demonstration of Medical Cases.

London Post-Graduate Course, Cleveland Street Sick Asylum, 5.30 p.m.—Dr. Gilbart Smith: Clinical Lecture.

Hospital for Sick Children, Great Ormond Street, W.C., 4 p.m.—Mr Kellock: Demonstration of Selected Cases.

FRIDAY.

Clinical Society of London, 20, Hanover Square, W., 8.30 p.m.—Clinical evening. Patients in attendance at 8 p.m.—The following cases will be shown:—Mr. J. Hutchinson, jun.: Case illustrating the Result of Laminectomy for Paraplegia eighteen months after operation. Dr. A. E. Garrod: Achrondroplasia in a child. Mr. G. R. Turner: (1) Retained Testis and Abdominal Tumour; (2) Hypertrophy of the Gums. Dr. Cayley: Muscular Wasting following Operation for Double Empyema. Dr. Pringle: Case of Xeroderma Pigmentosum. Mr. E. Cotterell: (1) Case of Paraplegia due to Spinal Caries, to show Walking Power after Treatment by M. Calot's Method; (2) Case of Gastro-jejunostomy; and other cases.

Royal College of Surgeons of England, 5 p.m.—Mr. H. J. Waring: On the Pathology and Treatment of those Diseases of the Liver which are amenable to Direct Surgical Interference. Lecture III.

East London Hospital for Children, Shadwell, E., 4 p.m.—Dr. Arnold Chaplin: Chronic Pulmonary Induration (Fibroid Phthisis).

London Post-Graduate Course, Bacteriological Laboratory, King's College, W.C., 3 to 5 p.m.—Professor Crookshank: Examination of Air, Soil, and Water, etc.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

MARRIAGE.

Hargreaves—Jessop.—On December 18th, 1897, at St. Michael and All Angels, Christchurch, New Zealand, by the Rev. A. W. Averill, M.A., Walter Herbert Hargreaves, M.R.C.S., L.R.C.P.Lond., of Akaroa, N.Z., to Alice, third daughter of Z. Jessop, Esq., The Park, Nottingham, England.

DEATHS.

Duffus.—On February 5th, at North London Fever Hospital, London, of scarlet fever, John Charles Grant Duffus, M.A., M.B., C.M., late of Springbarn, Glasgow, and Cullen, Scotland, aged 36 years.

Longmore.—On February 7th, at Luxor, Upper Egypt, Thomas William Muir Longmore, M.R.C.S., L.R.C.P.Lond., eldest son of the late Sir Thomas Longmore, C.B., F.R.C.S., aged 33.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—M. W. Th. F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

London. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Tu., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

North-West London. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electrics, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London: those concerning business matters, non-delivery of the Journal etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to his private house.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are directed will be found under their respective headings.*

QUERIES.

Arm would be glad to know if there is any charity or fund for the purpose of supplying the poor with artificial limbs.

Policy asks for a book that would serve as a guide to the general practitioner in the examination for life insurance.

*** Our correspondent might consult either of the following works: *Medical Handbook of Life Assurance*, by J. E. Pollock, F.R.C.P., and J. Chisholm. Fourth edition. (London: Cassell and Co. 1895. 7s. 6d.) *The Medical Adviser in Life Assurance*, by Sir Edward H. Sieveking, M.D. Second edition. (London: J. and A. Churchill. 1882. 6s.)

Bicycling and Lactation.

A. M. S. asks if bicycling "for the first time" is likely to bring on menstruation in a nursing mother, child 3 months old. Should the nursing be continued and the cycling stopped?

Cottage Hospitals.

Hospital asks for information as to the starting and management of a cottage hospital for a small town.

*** Our correspondent might consult *Cottage Hospitals*, by Sir Henry Burdett, K.C.B. Third edition. (London: Scientific Press. 1896. 10s. 6d.)

Medical Partnerships.

M.B., L.R.C.P. asks for the name of some books on the usual regulations in medical partnerships.

*** *Medical Partnerships, Transfers and Assistantships*, by G. B. Stocker and Wm. Barnard (Stevens, 119, Chancery Lane. 8s. 6d.) will probably meet our correspondent's requirements.

Ambulance Wagons.

Surgeon-Captain James Turton, Commanding Sussex Volunteers Brigade Bearer Company (71, Middle Street, King's Road, Brighton) writes: Will any medical officer of volunteers whose corps may be in possession of an ambulance wagon kindly furnish me with particulars of where it was obtained and the cost? I wish to procure one for the bearer company under my command.

Vertigo and Sea Sickness.

F. B. asks for hints as to the advice which might be given to a patient who states that on one or two voyages across the Atlantic he suffered very much from vertigo, which obliges him to remain lying in his berth for the first two or three days, and that he is then all right. He is never really sea-sick. He also states that on the return voyage he has not been so affected.

Roentgen Rays in Diagnosis.

Kensington asks whether demonstrations are given in *x* ray work at any London hospitals, or where it is constantly used for diagnostic purposes.

*** Our correspondent will find the *x* rays in daily use at St. Bartholomew's, the London, and St. Thomas's Hospitals, among others. We are not aware of any regular demonstration, those in charge are usually glad to give any information.

Hard Water.

F. H. L. asks which is the best kind of filter to use for water which is obtained from a shallow well, not under pressure. The well is situated in limestone rock, and the water is hard, but not polluted in any way so far as is known.

*** If our correspondent is perfectly satisfied that the well water is not in any way polluted, and wishes merely to get rid of the hardness, Maignen's anti-calcaire added to the water will do all that is required. If, however, he wishes to filter it, a Pasteur or a Berkefeld filter with some pressure apparatus should be used. If large quantities are required, it would be advisable to use a Berkefeld filter.

District Medical Officer as Member of Rural District Council.

Member writes to ask whether being district medical officer he is eligible for election to the district council (rural), under which he holds his appointment.

*** If our correspondent holds this appointment under the rural district council, he is, of course, ineligible for election as a member of that body.

Instruction of Defective Boy.

P. G. McR asks to be put into communication with a home where a boy aged 5 could be taught to speak. He is sharp, intelligent, and very clean in his habits. At 3 years old he was operated on for "cleft palate" (partial). His head is large, and rather hydrocephalic in shape. Hearing is defective. The boy is in good health. His parents could pay a small sum weekly or monthly for his support and instruction.

The Risks of Practice.

B.A., M.B.Lond. wishes to know how far a medical practitioner's responsibilities extend under the following circumstances: A married woman is suffering from primary vulvular syphilis, for which she has declined treatment. Subsequently pelvic symptoms develop, which indicate most urgently a complete vaginal examination. Is the medical attendant either legally or morally bound to take the risk of infection to himself? Some time ago a comparable case occurred to our corre-

spondent in a man who was bleeding furiously from a sloughing chancre which had eroded a branch of the dorsalis penis artery; free local manipulation was necessary, the condition being urgent. In this case he took the risk, using $HgCl_2$ lotion freely. The circumstances of the woman's case forbade the purchase of special gutta-percha gloves, his experience of which, moreover, is not encouraging.

*** We have referred this question to a surgeon of great experience, who has been good enough to favour us with the following opinion: "I should regard the risk, if a man anoints his hands well, and washes well afterwards, as infinitesimally small. A surgeon is bound, when his patient's interest demands it, to encounter such risks, and I should regard a man as unfit for his profession who should shirk them. If he hesitates, surely he should explain his fears to his patient, and let her seek the assistance of a more courageous surgeon."

Poor-Law District Medical Officers and their Titles.

Chorton writes to ask what is the shortest title by which a parish medical officer may properly describe himself on his brass plate.

*** We believe it to be very unusual in England for any Poor-law medical officer to describe himself as such on his doorplate. Any such description would not be a title, but a definition of an appointment held by him. Parish medical officers are by the Local Government Board defined as "district medical officers."

Medical Ethics.

Perplexed writes: R. calls at my house. I learn that he is dissatisfied with X. (his usual medical man), and has dismissed him. R. is very unwilling for me to correspond with X., and flatly refuses to see him again, and wishes to place himself under my care. What is the proper course for me to take?

*** If R. has dismissed X. "Perplexed" is free to accept R. as his patient. But "Perplexed" should write to X. Such a course is the true courteous one, the best means of preserving the *entente cordiale* with a medical brother, and preventing the whims of patients from being foci of professional discord. Further, X. recognising the civility may communicate to "Perplexed" matters profitable for him to know.

Death Registration and Coroners' Inquiries.

E. S. writes: A case has recently come under my notice in which notice of death of an infant 5 days old was given by the midwife to the registrar without any medical certificate and accepted by that official without question. I have failed to find anything in the Registration Acts prohibitive of this course, but I cannot bring myself to believe that there is no Section bearing directly on the point, and I should be obliged if you would refer me to it.

*** Registration law as it now exists makes no provision for the due certification of the cause of death if no registered medical practitioner was in attendance during the last illness of the deceased person unless the case be reported to the coroner, and the coroner, in the exercise of his discretion, decides whether an inquest should be held. Unfortunately all cases similar to the one referred to by our correspondent are not referred to the coroner, and in a very large proportion of cases so referred no inquests are held.

ANSWERS.

Government Inspectorships.

Member.—Appointments for inspectorships under the Local Government Board are, we believe, within the gift of the President, to whom all applications should be addressed. The salary of a medical inspector is £500, with rises to £800, and other offices are open to the staff, the principal medical officership, for example. We do not know of any vacancies in the Board's inspectorate.

The Courtesy Visit.

Z. Y. X.—As it is desirable that members of the profession practising in the same neighbourhood should be personally acquainted with each other, we think it can be regarded only as an act of courtesy on the part of a new comer to seek an introduction to his professional brethren. We believe this custom is usually adopted in such districts as the one alluded to by our correspondent.

Nordrach.

Dr. Wm. Armstrong (Buxton) writes: In reply to the query of "E. A. L." regarding the open-air treatment of phthisis as carried out at Nordrach, I can say that several patients of mine have been there, and in almost every instance have received very considerable benefit, even when cavities of considerable size have been present. There has always been a considerable gain in weight, and a diminution, or even disappearance, of the tubercle bacilli.

NOTES, LETTERS, Etc.

Errata.

In Dr. Adam's note on erythrol tetranitrate in angina in the British Medical Journal of February 12th, p. 431, the age of the patient should have been given as 79.

In Dr. W. A. De Wolf Smith's note on practice in British Columbia in the British Medical Journal for December 25th, p. 1387, col. 2, the date of registration should have been given as June 30th, 1887, and not as stated.

Crowner's Quests.

J. H. writes: Your comment at the bottom of "Practitioner's" letter (British Medical Journal, February 5th, p. 404) upon the slipshod manner in which many inquests are held, recalls to my mind a case which happened three or four years ago in a large provincial town. I was called by a policeman on a bitterly cold winter's morning to attend a woman who had just been delivered of an illegitimate child, which had been found in an open air midden. The child appeared to be none the worse for the exposure, and when I left seemed perfectly well and healthy; two hours afterwards, however, I was surprised to hear that it was dead. Of course I refused a certificate, and when the coroner's officer called upon me and inquired if I could give him any opinion as to the cause of death, I told him I could give him no information. A day or two afterwards the coroner's officer again called, and informed me, somewhat to my astonishment, that the coroner had come to the conclusion that there was no necessity to hold an inquest, and that he would give a certificate for burial.

The Midwives Question.

Dr. Charles Moore Jessop (Redhill) writes: For some time it has appeared to me that the word "midwife" was one which should not be employed in legislation, for it produces a false impression of what is sought to be gained in the registration of women acting as monthly nurses, who have to obey and not to take the place of a duly qualified and registered practitioner or accoucheuse. I venture to hope that all monthly nurses will be compelled to register as such.

Advertisements of Lectures.

A correspondent writes to protest against the mode in which a course of lectures by a medical man has been advertised in the West End of London. As, however, he has fallen into an error of fact in describing the course we cannot publish his letter. The attention of the authorities of the institution for which the lectures are given has been called to the matter, and there is reason to hope that more circumspection will be observed on a future occasion.

Battersea Provident Dispensary.

The annual report for 1897 of the Battersea Provident Dispensary has been received. This institution appears to be in a flourishing condition, and the balance sheet shows that the receipts during the financial year were over £3,000, and that nearly £2,000, or about 57 per cent. of the members' payments were distributed among the medical staff. Only two classes of members are taken: (1) those where the family earnings are under 30s. a week, (2) where the family earnings are under 50s. a week; and the scale of payment made by the two classes is different, the former paying 4d. and the latter 6d. per week, to include medical attendance on wife and all children under 14 years of age.

The chief criticism to be made on this institution is that the contributions of members are too low. If they were doubled, and wage-earners receiving 50s. per week were required to pay 1s., or 1-50th part of their earnings as an insurance against sickness in their families, it would be no more than just, and the burden on the working classes would not be a crushing one, nor would the doctor be overpaid. Exception must likewise be taken to the custom of accepting members when ill for a special entrance fee. This fee has been repeatedly condemned in the columns of this Journal.

A Curious Advertisement.

A correspondent sends us an advertisement cut from a Yorkshire paper in the following terms: "Wanted a qualified medical man for two hours a day to assist a patent medicine vendor." As our correspondent points out, any medical man who so far forgot his duty to himself and to his profession as to ally himself with an advertising quack would, there is little doubt, find that the General Medical Council would take steps to recall him to a sense of his duty.

The Prevention of Snoring.

Member B.M.A. (Halifax, Nova Scotia) writes: Snoring, unconnected with either immediate or reflex pathological lesion, may be prevented by lying, on either side, with the head on a cylindrical pillow, the whole face projecting over the truncated end of the pillow, in semiprone position. The pillow should be 6 inches in diameter by 12 inches in length, stuffed full and firm to prevent the head sinking into it towards a supine position. The stuffing of the pillow should be best feathers without quills, which would hurt the ear in contact therewith. This pillow leaves the body horizontal, and will be found most comfortable and healthful for everyone.

Cancer Heredity: Cancer Houses.

Dr. Herbert Snow (Gloucester Place, W.) writes: May I be permitted to point out that your necessarily condensed report of the discussion on cancer at the last meeting of the West London Medico-Chirurgical Society entirely misrepresents my oft-repeated views? I am reported to have "thought" that heredity occurs in 20 per cent. of cancer cases. My actual reference was to a former analysis (British Medical Journal, October 10th, 1885) of 1,000 such; together with three sets of control statistics drawn from other non-cancerous sources, namely, doctors in practice, patients at the consumption hospital, and people with miscellaneous ailments. It was found that the ratio of persons with cancer in some near relation was practically identical in all; and was assuredly no higher in cancer patients than in the general population. The necessary inference was that hereditary influence as a predisposing cause of cancer is *nil*. But the chief argument against heredity lies in the clinically proved fact that no single case of cancer, whatever the family history, is ever found to arise without a direct and definite exciting cause. Hence also the phenomena of "cancer houses" referred to by speakers at the discussion, as well as by your correspondent Dr. Ogle, are hardly of scientific value without full details of the causation, as well as of the variety, in each separate case. Without more careful analysis of the supposed event than has hitherto taken place, there is risk of its assuming more importance than any evidence so far published warrants.

A SWALLOWED COIN.

DR. ALFRED W. ROBSON (Aston, Birmingham) writes: E. P., aged 3 years, whilst at play, swallowed a halfpenny on March 27th, 1897. Having found that the coin had passed into the stomach, I advised a diet of oatmeal porridge, to be followed by a castor-oil purge. This treatment was kept up for a few days, but the halfpenny was never discovered in the motions. The child suffered no discomfort, and was apparently well. However, to satisfy the anxieties of the parents as to the whereabouts of the coin, recourse was had to the Roentgen rays. On three separate occasions the child was photographed, with the result that there appeared to be something in the left iliac region. A clearly defined outline of a coin was not obtained. On January 16th, 1898, over nine months having therefore elapsed, the child complained of feeling sick, and in a short time vomiting commenced, and the halfpenny was ejected with the contents of the stomach. It was considerably corroded, the images on both sides being more or less deleted. During the time the coin was in the body the motions were noticed to be dark, at times almost as dark as ink. There are, to me, two points of interest: First. Where was the coin stopped? I cannot believe that it ever passed the ileo-cæcal valve. Secondly, the time that a copper coin may remain in the body without giving rise to symptoms. Medical men are often asked the question in such cases by parents, "Will the copper poison the child?"

LETTERS, COMMUNICATIONS, ETC., have been received from:

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(**O**) One of the Old School. (**P**) Mr. G. Pernet, London; Mr. C. E. Pronger, Harrogate; Dr. E. F. Potter, London; Dr. F. M. Pope, Leicester; Dr. C. B. Plowright, King's Lynn; Mr. S. W. Puffer, Rochester, New York; Dr. G. V. Poore, London; Perplexed; Mr. S. Phillips, London; P. G. McR; Policy; Mr. J. D. Price, Dudley; Messrs. Parke, Davis, and Co., London; Mr. H. J. Prangley, Anerley; Puzzled. (**Q**) Quackery. (**R**) Mr. H. S. Rogers, London; Dr. E. Rice, Abingdon; Dr. H. D. Rolleston, London; Mr. W. R. Rix, Bickley; Royal Hospital for Diseases of the Chest, Secretary, London; Mr. R. J. Reuter, London; Mr. J. Robinson, Dublin; Dr. T. C. Railton, Manchester; Dr. G. E. Rennie, Sydney; A. A. Robb, M.B., Aberdeen; Dr. J. S. R. Russell, London; Miss E. M. Reed, London; Mr. A. R. Reck, Copenhagen. (**S**) Mr. H. Scott, Great Yarmouth; Mr. Munro Scott, London; Mr. A. W. Senior, Levenshulme; Dr. R. M. Simon, Birmingham; Mr. N. Stevenson, London; Dr. H. Snow, London; S. 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Wingrave, London; Mr. A. Wiglesworth, Liverpool; Dr. T. J. Wood, Bradford; N. S. Whitney, M.B., Eastbourne Mr. N. J. Whelan, London. (**Z**) Z. Y. X.

BOOKS, ETC., RECEIVED.

Transactions of the Royal Academy of Medicine in Ireland. Vol XV. Edited by J. B. Story, M.B., F.R.C.S. Dublin: Fannin and Co. 1897.

A Textbook of Zoology. By T. J. Parker, D.Sc., F.R.S., and W. A. Haswell, M.A., D.Sc., F.R.S. In two Volumes. London: Macmillan and Co. 1898. 36s.

Vade Mecum of Ophthalmological Therapeutics. By Dr. E. Lando and Dr. P. Gygax. Translated by Dr. E. Neyman. London and Philadelphia: J. B. Lippincott Co. 1898. 3s. 6d.

Fat and Blood; an Essay on the Treatment of certain forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M.D., LL.D. Seventh Edition. London and Philadelphia: J. B. Lippincott Co. 1898. 5s.

La Goutte, Essai d'une Nouvelle Psycho-Pathologie des Epithéliums. Par E. Piaggio. Paris: Henri Jouve. 1897.

Ueber Gedeihen und Schwinder im Säuglings-Alter. Von Dr. O. Heubner Berlin: August Hirschwald. 1898. M. 1.

Old Age Pensions. By W. Birkmyre. Glasgow Aird and Coghill.

Winter Life in Norway. Description of Sports and Pastimes on Ice and Snow. Edited by the Norwegian Tourist Association. 1898. Christiania: W. C. Fabritius and Sonner.

Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome Sixième. Paris: J. B. Baillière et Fils. 1898.

Religio Medici, and other Essays. By Sir Thomas Browne. Edited by W. Lloyd Roberts, M.D., F.R.C.P. London: Smith, Elder, and Co. 1898 3s. 6d

Transactions of the Glasgow Pathological and Clinical Society. Vol. vi. Sessions 1895-97. Edited by A. E. Maylard, M.B., B.S. Glasgow: Alex. Macdougall. 1897.

The Pocket Formulary for the Treatment of Disease in Children. By L. Freyberger, M.D., M.R.C.P., M.R.C.S. London: Rebman Publishing Company. 1898. 6s. 6d.

The Tragedy of the Korosko. By A. Conan Doyle. London: Smith, Elder, and Co. 1898. 6s.

Diseases of Women. By J. C. Webster, B.A., M.D., F.R.C.P. Edinburgh and London: Young J. Pentland. 1898.

A Practical Guide to the Examination of the Eye. By Simeon Snell. F.R.C.S. Edinburgh and London: Young J. Pentland. 1898.

Zur Muschelfrage. Von Dr. E. Zuckerkandl. Berlin: Oscar Coblentz. 1897. M. 2.

Ueber den therapeutischen Wert des Alkohols bei acuten Krankheiten. Von Dr. B. Kantorowicz. Berlin: Oscar Coblentz. 1898. M 1.

Die Pathologie und Therapie der Sterilität beider Geschlechter. Herausgegeben von Dr. E. Finger und Dr. Saenger. Teil I. Leipzig: Arthur Georgi. 1898. M. 3.

Grundriss der klinischen Bakteriologie. Von Dr. E. Levy und Dr. F. Klemperer. Zweite vermehrte und verbesserte Auflage. Berlin: August Hirschwald. 1898. M. 10.

Encyklopaedie der Therapie. Herausgegeben von Professor O. Liebreich. Zweiter Band. Berlin: August Hirschwald. 1898.

*** In forwarding books the publishers are requested to state the selling prices.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

THE HUNTERIAN LECTURE
ON
WHAT OPERATION CAN DO FOR CANCER OF THE TONGUE.

Delivered before the Hunterian Society, February 23rd, 1898.

By HENRY T. BUTLIN, F.R.C.S., D.C.L.,
Surgeon to St. Bartholomew's Hospital.

I.—The Advantage of Early Operation.

Among the problems on which my attention has been fixed for some time past in relation to the operative surgery of cancer of the tongue two have occupied the foremost place; and when I received the courteous invitation of your Society to deliver the Surgical Address for the year I determined to see what my experience would teach in regard to the necessity of removal of the entire tongue in every case of cancer, and what proportion of the patients die from affection of the glands of the neck without recurrence in the mouth. With these objects in view I began last October to put together all my cases, and to search out the further history of the patients. Excluding those in which I had not performed the first operation, and taking only my own proper cases up to the end of 1896, I found that I had operated on 102 patients. For the purpose of search and research they were divided into two groups—hospital and private; and when I had been some time at work I discovered that a comparison of the two groups would prove singularly interesting. By a curious chance they were almost equal in number—53 in hospital, 49 in private practice, so that they may be regarded as two practically equal groups. I had, of course, thought there would be some difference in the results of the operations in the two groups, for I knew that the mortality due to the operation itself was singularly small among my private patients. But I was quite unprepared for the much more satisfactory results, so far as cure of the disease is concerned, in the private patients. The results are compared in these two tables, and it will be seen that I have had the good fortune to trace all except 7 of the 102 patients, although some of them were operated on thirteen or fourteen years ago.

Table I.—*Hospital Cases.*

	Cases.
Died of operation	9
Lost sight of	7
Recurrence *in situ*	8
Affection of glands without recurrence	16
Died later, cause unknown (probably cancer) ...	4
Well within three years after operation	2
Well more than three years after operation ...	7
Total	53

Table II.—*Private Cases.*

	Cases.
Died of operation	1
Recurrence *in situ*	10
Affection of glands without recurrence	12
Died of other causes than cancer of the tongue within three years	4
Well within three years after operation	9
Well or died of other causes more than three years after operation	13
Total	49

The number of deaths due to operation in the hospital group is no fewer than 9, while I have only lost one of my private patients, a gentleman, for whom half the tongue back to the epiglottis, part of the floor of the mouth, and all the contents of the anterior triangle of the neck, were removed, and who died within a few hours of exhaustion. The number of cured cases—and by that I mean the persons who were alive and free from disease more than three years after the last operation, or who had died of some other cause after three years, in the hospital group—was 7, while the number in the other group was 13. And this table holds out hope of yet greater success, for there are still 9 of the patients well and free from disease between one and three years since the operation, while there are only 2 of the hospital patients who may still prove complete successes. The hospital group might furnish a little better return if I could trace each one of the 7 patients who have been lost sight of, but I doubt whether I should find more than 1, or at the most 2, of them yet alive and well. So that the percentage of cured cases (on the three years' limit) would not even then amount to more than 16, or at the most 17, against 26 in the group of private cases, to which may still probably be added a large proportion of the patients who are alive and well during periods of shorter duration than three years.

Why are the results of private practice so much better than those of hospital practice? The answer to the question contains an admirable illustration of the justice of the claim which surgeons have made in regard to cancer operations during many years, that they would be able to show better results if they had the cases earlier for operation. The tongue is a part of the body in which the occurrence of cancer is usually detected at an early period, especially if the disease is situated in the anterior two-thirds of the dorsum or borders. People in good or even moderate circumstances are not only better educated in the possibility of cancer of the tongue, but they are more apprehensive of danger; and they will not put up with the fungating offensive masses of cancer which are so frequently seen in the mouths of hospital patients. I speak of the general rule, for now and then there come to me wealthy patients with such horrible cancers of the tongue as I should never have thought any person who could help it would bear, and I can only suppose that they were deterred from coming earlier by the fear of an operation. The condition of the tongue in many of the hospital patients has rendered large operations necessary. The same condition has made it impossible for the patient to be properly nourished before the operation, so that the chance of recovery from a severe operation is much smaller for the hospital patient. And I do think that these tongue operations do better, and are in less danger of septic pneumonia and the like, in private houses or in a well managed nursing home than in the open wards of a hospital. The explanation of the heavy mortality following operation on the hospital patients is, then, the extent of the disease and the bad condition of the patients. And the explanation of the much larger percentage of cures among the private patients is the comparatively early period of the disease at which the operation was performed.

The study of the cases which may be claimed as cured shows that the disease, in the large majority of them, was situated in the anterior two-thirds of the tongue. This is only what has been suspected and suggested, but hitherto I have not been able to prove it by a sufficient number of cases. That disease far back in the dorsum, or along the border in the neighbourhood of the anterior half-arches of the fauces, should be particularly fatal is also what might reasonably be expected. But there is evidence to show that even some of these cases may be treated with success, provided the disease has not invaded the tonsillar and neighbouring regions.

Among the private (cured) cases there is not one in which the glands were removed either at the time of the operation on the tongue or afterwards; and had the private cases been the sole material for study, the opinion might have been formed that affection of the lymphatic glands renders the prospect of a cure hopeless. The hospital (cured) cases correct this impression in a very striking manner. In 5 of the 7 cases the glands were removed at or after the operation on the tongue, and in 4 of the 5 they were not only enlarged, but were proved by microscopical examination to be cancerous.

II.—Is Removal of the Entire Tongue Necessary in every Case?

I have never been in the habit of removing the entire tongue as a routine operation in every case of cancer; and I did not know until lately that there are surgeons in London who feel the necessity of this practice so strongly that they decline to operate for the removal of half or a portion of the tongue. Let the following facts be studied by those who are interested in the matter. The whole tongue was removed in only one of my successful cases, whether in hospital or private practice, and not in one of the patients who are still alive and free from recurrence between one and three years after the operation. In the complete group of 102 cases, the entire tongue was only removed 16 times, and an analysis of those 16 cases discovers that 4 of the patients died of the

operation and 2 of them shortly after their return home to the country (of bronchitis and laryngitis); that 5 suffered from recurrence *in situ*, and that only 1 can be claimed to have been cured.

TABLE III.—*Removal of Entire Tongue.*

	Cases.
Died of operation	4
Died very soon of other causes	2
Recurrence *in situ*	5
Affection of glands without recurrence	1
Lost sight of	3
Well more than three years after operation ...	1
Total	16

This question of the removal of the entire tongue is one of considerable importance. The operation is much more dangerous than the removal of the fore part or of one half of the tongue. The patient is cruelly maimed, his speech is very defective; he has difficulty in taking solid food; he suffers from the collection of mucus and saliva in the mouth; and, if his occupation depends on speech, even in a moderate degree, he is forced to abandon it. The relation, therefore, of the removal of a part of the tongue to the removal of the entire tongue is widely different from the relation of the removal of a part of the breast to the removal of the entire breast. The latter is a disfigurement, the former is a serious mutilation. There is ample proof that removal of a portion of the tongue is sufficient to cure a considerable percentage of patients, and to save a much larger percentage from recurrence of the disease within the mouth. The operation of removal of the entire tongue as a routine operation can only be justified by proving, as far as it is capable of proof, that a very considerable proportion of the persons who suffer from recurrence in the mouth would have been preserved from that recurrence had the entire tongue been removed. My cases show that, out of some 66 patients[1] in whom local recurrence might have taken place, it was observed only in 18—little more than one quarter of the total number. In 5 of the 18 the entire tongue had been removed, and in 5 other cases recurrence took place in the floor of the mouth or in the anterior half arch of the palate, or in some part which would not have been more freely dealt with had the entire tongue been removed. In 2 instances the disease was found during the operation to extend back to the epiglottis, without producing obvious induration of the back part of the tongue, so that the incision, which was as far back as practicable, was actually through the disease. In one patient an error of judgment led to the removal of too small a portion of the tongue, so that there only remain 5 cases in which it is possible that removal of the entire tongue would have done more for the safety or comfort of the patient than was done by the smaller operation. In 2 of these I think that I should have done wisely to remove the entire tongue; but, in the remaining cases, a little more than was done would certainly have sufficed.

I always aim at removing the cancer with three-quarters of an inch of apparently healthy tissues around it in every direction. Where the disease is on the border of the tongue the routine treatment of my practice is to remove half the tongue to an inch behind the margin of the disease. In cases in which the disease is near the tip or forepart of the dorsum, the forepart of the tongue is removed. The results show how much can be done by such an operation in suitable cases.

TABLE IV.—*Successful Cases.*

Duration since operation:		
1 to 2 years	6	
2 to 3 years	4	
3 to 4 years	5	
4 to 5 years	3	
5 to 6 years	4	
6 to 7 years	1	
7 to 8 years	1	More than 3 years, 20 patients.
8 to 9 years	0	
9 to 10 years	1	
10 years	1	
12 years	2	
Total ...	30 cases	

A comparison of these results with those which I was able to furnish ten or eleven years ago is so satisfactory that I am led to take a much more hopeful view of the operative treatment of cancer of the tongue than formerly. Barker's collected statistics,[2] which I then quoted, afforded only 5 per cent. of cures (on the three years' limit) in a total of 170 patients. And, 70 cases which I had previously collected,[3] and in each one of which a microscopical examination had been made, furnished a percentage of 8.5 cured cases. The analysis of my own 102 cases, hospital and private, furnishes a percentage of 20 cured cases. And, if the 50 private cases are analysed, the percentage of cured cases is 26, with a goodly number of promising cases, which may, in the course of the next two years, furnish several more cured cases. It seems fair to say that the prognosis of cancer of the tongue, when the disease is situated in the anterior two-thirds, whether in the substance or on the border of the tongue, is not by any means bad, when compared with the prognosis of cancer of most other parts of the body.

III.—WHAT CAN BE DONE TO PREVENT AFFECTION OF THE LYMPHATIC GLANDS?

Unhappily, the satisfaction which cannot but be felt at these improved statistics is tempered by considerations which have been disagreeably forced upon me from time to time, and which reached their climax in the course of the year 1896. Every surgeon who is accustomed to deal with cancer of the tongue knows that the glands are, in every case, liable to become cancerous, and that in some cases they become cancerous at a very early period of the disease. Von Winiwarter, in his excellent *Beiträge*,[4] set down in a special table the period of the disease in which the glandular enlargement had first been noticed by the patient or his medical attendant. In most cases it was not until the disease of the tongue had existed for several months. But, in other instances, the glands were noticed to be enlarged within a few weeks of the outbreak of the primary disease. And, in a certain few cases, the glandular disease and the cancer in the mouth were discovered at the same time. My tables show how frequently successful treatment of the cancer of the tongue has been spoiled by secondary affection of the glands, which had appeared normal at the time of the operation. A series of cases which came under my notice during the year 1896 affected me deeply, for, in addition to the disappointment I experienced as a surgeon, I took great personal interest in several of the patients.

During that year it so happened that five persons for whom I had operated successfully for cancer of the tongue died of affection of the lymphatic glands. Two of the cases may be taken as examples of the whole. Captain B. first came under my care in February, 1894, when I removed from the border of his tongue a warty growth, which had neither the general nor the microscopic characters of cancer. In September, 1895, he had a small ulcerated epithelioma on the same border of the tongue, close to the scar of the previous operation. Half his tongue was removed, and the operation was quite satisfactory, for there was no recurrence in the mouth. But, within three or four months, the glands of the neck became enlarged, and when I saw him in April, 1896, the disease was advanced, and there was no hope of benefit from an operation. He died at the end of 1896, and his mouth was quite healthy to the last.

Mr. C. was sent to me in December, 1895, with a small flat epithelioma of the fore part of the dorsum of his tongue. He had only noticed it two or three weeks, and, as soon as he showed it to his medical man, was at once sent up for consultation, so that the least possible time was lost, and the removal of even a portion of the fore part of the tongue sufficed to secure him from recurrence of the disease. In August, 1896, he came to my house one morning to show me a swelling in the neck which he had only just discovered, and the importance of which he was well aware of. It was an enlarged gland situated over the bifurcation of the carotid artery, and was so little movable that I did not press the question of operation strongly, because it was not at all certain that an attempt at removal might not do him more harm than good. He died little more than a year after the operation on his tongue, and with the mouth quite free from recurrence.

In the summer of the same year a gentleman, whose case is not included in my tables, about 45 years old, making a large income as an accountant, and with a young family dependent on him, was brought to me by his medical man for an opinion on an enlarged gland behind the angle of the jaw.

It appeared to have arisen from a chill almost suddenly a few days previously; but a few months before a small epithelioma was reported to have been successfully removed from the corresponding border of his tongue. Within a fortnight of that time I tried to remove the gland, but found that it was only one of a series of cancerous glands which formed a solid mass beneath the parotid gland, and which were adherent to the most important structures in that region of the neck.

These cases produced so sad an impression on me that I began to review the whole subject of cancer of the tongue, and to consider what measures could be taken to avert these and similar catastrophes. Looked at in its proper light cancer of the tongue (squamous-celled carcinoma) is a malignant disease, but it is locally malignant, for it is so constantly limited to the tongue and the neighbouring lymphatic glands of the neck, that the prospect of dissemination of the disease may be dismissed. About 70 per cent. of the cases can be so successfully treated by operation that there is little fear of recurrence *in situ;* but of these 70 persons probably 30 will die, perhaps as many as 40, of affection of the glands of the neck. If these 30 or 40 persons could be protected against secondary affection of the cervical glands, there seems no reason to doubt that the lives of many of them might be saved. What means, then, can be taken for the protection of patients with cancer of the tongue against secondary affection of the glands? It must be admitted that we have yet no means of discovering which cases of cancer of the tongue are likely to be associated with secondary cancer of the glands, unless there is enlargement of the glands at the time of operation on the tongue. Nor can we foretell how soon the removal of the cancer of the tongue will be followed by secondary affection of the glands of the neck. Under these circumstances every patient with cancer of the tongue must be regarded as having the glands of the neck already inoculated with cancer, and if the inoculation is successful glandular disease will be apparent almost certainly within eight months of the operation.

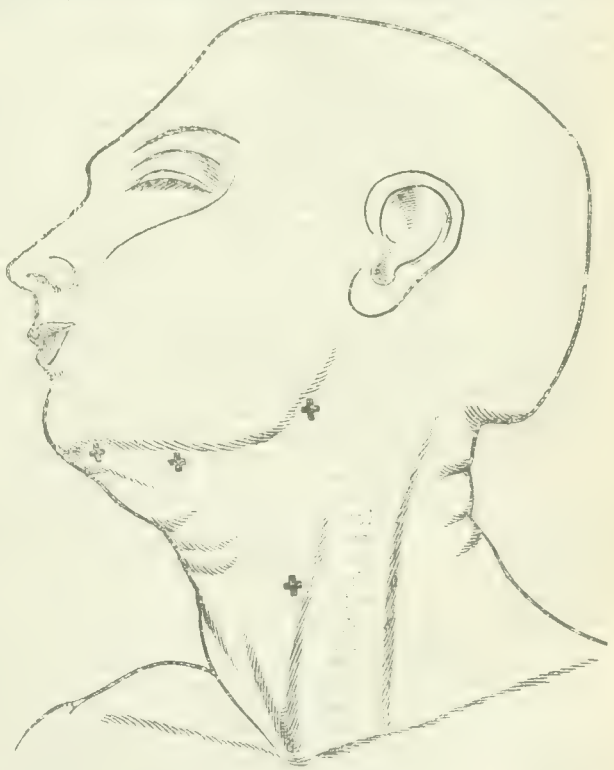
Two alternatives at once suggest themselves—to clear out all the glands which correspond with the affected portion of the tongue, just as the axillary glands are cleared out as a part of the routine operation for cancer of the breast, or to remove the glands as soon as the slightest enlargement of them is apparent.

Let us take the latter alternative first on account of its plausible aspect. In favour of it may be urged that enlargement of the glands of the neck must necessarily be discovered early. The enlargement of the glands would determine which glands require removal. The patients (perhaps 20 per cent.) who are cured by an operation limited to the disease of the tongue would escape an unnecessary operation for removal of the glands of the neck. Unfortunately, experience shows that this expectant method is fraught with grave disappointment. By the time the glandular enlargement is apparent to the patient or his medical attendant, the affected glands are usually so fixed or so numerous, or both, that it is useless to attempt to remove them. The cases which have been mentioned are examples. In two of them the enlargement in the neck was shown to me within a few days of its discovery by the patient; but the glands were already so large and fixed that I could not press for a second operation. And to those who say, Why not at least attempt the removal? the reply must be that an unsuccessful operation may leave the patient in a much worse condition than if he had never been touched. Some years ago a retired officer of the army consulted me on account of an ulcerated cancer of the fore part of his tongue. I advised removal, and the operation was performed at Norwich. Within a few months he was sent to me again with an enlarged gland over the bifurcation over the carotid. I advised that it should be removed, and was then requested to perform the operation. I found a chain of glands adherent to the sheath of the carotid artery and jugular vein, and could only separate them with great care and difficulty. The wound had scarcely closed ere recurrence took place and it opened up again. The disease progressed with startling rapidity, and the patient, who was well before I interfered with his glands, suffered horribly from a few days after the operation until his death. The difficulty of discovering the glands through the structures which cover them sufficiently early to remove them with success has been demonstrated in many of the cases under my care. In more than one of the fatal operation cases the *post-mortem* examination discovered cancerous glands which had not been felt, although they had been searched for when the patient was under an anæsthetic. And in one case in which I performed a set operation for the removal of what I believed to be sound glands, I found a cancerous gland as large as a filbert beneath and behind the submaxillary salivary gland. Yet the patient was thin, with a long neck, and the greatest pains had been taken to discover glandular enlargement.

As the expectant method offers so small a prospect of success, why not adopt the first alternative and remove the lymphatic glands at the time of the operation on the tongue, whether they are obviously diseased or not? Here, again, we are met by singular difficulties. In spite of the study which has been made of the lymphatics of the tongue and of the beautiful quicksilver injections by Sappey,[3] the greatest uncertainty exists on the all-important point of the group of glands which is likely to be affected in any individual case of cancer of the tongue. Sometimes the affected glands are behind the angle of the jaw; sometimes they are in the floor of the mouth, behind the symphysis of the lower jaw; sometimes they are halfway down the neck on a level with the thyroid cartilage. No sufficiently regular rule seems to be observed to justify the removal of a particular group of glands in each case of cancer of the tongue. The knowledge of these facts has, no doubt, deterred other surgeons besides myself from a routine removal of the glands in cases of cancer of the tongue.

IV.—A Routine Operation for Removal of the Glands.

In spite of this uncertainty I have become so convinced of the necessity of a routine operation if cancer of the tongue is to be dealt with by operation more successfully that I have devoted a great deal of attention to the subject during the last two years. A study of Sappey's plates, aided by a careful



study of the clinical course of cases of cancer of the tongue in which the glands have been affected, shows that the lymphatics of the tongue are so disposed that they may pass through one or more of four groups of glands: (1) the sub-

mental group, which lie beneath the floor of the mouth behind the lower jaw; (2) the submaxillary, some of which actually lie in the substance of the salivary gland; (3) the parotid, and (4) the carotid, which lie over the course of the carotid artery and particularly over the bifurcation of the common carotid.

Speaking generally, it may be said that, although the lymph from the anterior portion of the tongue does occasionally pass, directly or indirectly, through the parotid group of glands, it does so only rarely, and the rule is that all the lymphatics from the anterior half of the tongue, whether from the dorsum, the border, or the under aspect, pass through one or more of the three anterior groups of glands. This is the more fortunate because the anterior half or two-thirds of the tongue is much more subject to cancer than the posterior part; also because there is much greater uncertainty respecting the relation of the parotid group of glands than there is respecting the relation of the three other groups. For example, I have not been able to discover whether lymphatic glands are embedded in the substance of the parotid salivary gland, as they frequently are in the substance of the submaxillary salivary gland. So far as the majority of cancers of the tongue are concerned, especially of the cancers which can be removed so that they are not likely to recur within the mouth, it may be foretold that they will inoculate one or more of the three anterior groups of glands, particularly the submaxillary and carotid groups. The removal of these three groups, then, would offer a reasonable prospect of preserving the patient, in any given case, from glandular affection. And if, in addition, the parotid glands, or those of them most likely to be affected, could be removed during the same operation, an increased prospect of success would be afforded. With this in mind I have devised and carried out on many occasions during the last eighteen months or two years, an operation which removes all the contents of the great anterior triangle of the neck, including the submaxillary salivary gland. And, although I have not yet operated on a sufficient number of cases, and time enough has not yet elapsed to allow the routine to be judged, the results have already been so good as to encourage an extended trial of the method of operating.

The time has not yet arrived to give an account of the operation, further than to say that the anterior triangle is thoroughly exposed by an incision about 7 inches long on the anterior border of the sterno-mastoid muscle from the mastoid process to below the thyroid cartilage, and a second incision from the symphysis of the lower jaw to the first incision about the upper level of the thyroid cartilage, and raising up the two triangular flaps which are thus mapped out. The dissection is commenced from the apex of the triangle, below, and carried upwards. The large vessels are exposed for a considerable distance. The vessels which are cut are clamped before, or as, they are divided; and, finally, the submaxillary salivary gland is taken out. A very careful dissection is made of the triangle, so that the connective tissue and glands are all taken out in one continuous mass. Search is made between the muscles in front for one or two deeper-seated lymphatic glands, and the glands in front of the parotid gland and about the angle of the jaw are removed with the other contents of the triangle. The submental and parotid glands are not so easily and certainly removed *en masse* in this operation as the submaxillary and carotid groups. Both the latter groups are very readily removed, and require no special search to be made for them. This is fortunate, because they contain the lymphatic glands, which are by far the most likely to be affected. The dissection occupies from an hour to an hour and a quarter, but the wound heals very rapidly, so that patients have been able to go out of doors eight or ten days after the operation. At first I performed it at the same time that I removed the affected portion of the tongue. But, experience has taught me that this is too hazardous. The disease of the tongue should be first removed. And, when the patient has had time (three or four weeks) to recover from this operation, and can take food well, the removal of the contents of the anterior triangle may be undertaken without fear. Both within the hospital and out of it I do my best to persuade nearly every patient who comes to me with cancer of the tongue to submit, after the removal of the cancer, to the operation on the glands of the neck. In the course of the next two or three years I hope to be able to judge of the results of this preventive method. Thus far, I can only say that the glands have been found to be enlarged, but not cancerous, in several cases in which no enlargement was suspected. And, in one instance, to which reference has already been made, a cancerous gland, as large as a filbert, was removed with the submaxillary salivary gland, by which it had been shadowed and concealed. I shall at some future time publish a more detailed account of the steps of the operation, and a note of the patients on whom it has been performed, and of the fortune, good or bad, which has attended it.

In the meantime, I trust that the results which have been recorded in this paper will serve to encourage medical men and their patients to take a more hopeful view of the operative treatment of cancer of the tongue, particularly when the disease is situated in the anterior two-thirds of the tongue, and, above all, when the operation is performed at an early period of the disease.

NOTE AND REFERENCES.

[1] These 66 patients are made up of the 18 patients who actually suffered from recurrence *in situ*, 28 who died of affection of the glands without recurrence in the mouth, and 20 patients who remained well more than three years after operation. [2] Holmes, *A System of Surgery*, 3rd edition, 1883; *Diseases of the Tongue*, E. A. Barker, vol. ii, p. 604. [3] *Sarcoma and Carcinoma*. 1882, p. 156. [4] *Beiträge zur Statistik der Carcinome*, p. 214. Stuttgart, 1878. [5] *Anatomie, Physiologie et Pathologie des Vaisseaux Lymphatiques considérés chez l'Homme et les Vertébrés*, Paris, 1874-85.

THE LETTSOMIAN LECTURES

ON THE

AFFECTIONS OF THE URINARY APPARATUS IN CHILDREN.

Delivered before the Medical Society of London.

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LECTURE II.

TUMOURS OF THE KIDNEY.

THE tumours of the kidney in childhood are almost without exception malignant, and the great majority are of the nature of sarcomata, though a few bear affinities to the adenomata, and in rare instances show pigmentation. They are by far the most frequent of all malignant tumours occurring in the abdomen in childhood, and originate either from the cortex, and invade the gland, or in the perirenal tissue. Very rarely they commence in the adrenals, sometimes surrounding, sometimes infiltrating, the whole of the kidney. By pressure the tumour may cause hydronephrosis, and adhesions may be found to other structures. The pressure effects may cause ascites or œdema of the lower extremities. They are frequently bilateral. Neither traumatism nor antecedent disease has much to do with their origin.

Occurring for the most part in very early life, and confined at first to one side of the abdomen, they present a smooth rounded outline, as distinguished from the sharp edge of an enlarged liver, or the notched surface of a hypertrophied spleen. On bimanual examination they are found to be movable, but attached to the neighbourhood of the lumbar spine. They grow forwards, and do not bulge in the lumbar region. Though dull on percussion, except where crossed by intestine, they are often so soft as to give an obscure sense of fluctuation, and have thus been mistaken for ovarian cysts. They are invariably crossed by a portion of the colon and in an early stage are influenced by the movements of respiration. There is generally a space into which the fingers can be pressed between the upper margin of the renal growth and the ribs.

So rapid is usually the advance of these neoplasms that they present only two symptoms in their earliest onset, namely, that of a large rounded tumour commencing in the loin, which most often is the first indication, and hæmaturia. In 12 per cent. this latter is said to be the primary symptom. Both might well, in the earliest onset, be mistaken as due to

hydronephrosis, or the presence of calculi in the pelvis of the kidney. But the nature of the swelling is soon evidenced by the rapidity of its increase, and the hæmaturia differs from that resulting from calculus or scrofulous pyelitis in its abundance and its intermittence, the urine in the intervals being clear. It may be so abundant as to form clots in the bladder or ureter, when pain will occur as an additional symptom. If hæmaturia occur without an assignable cause, the patient should be strictly watched for several weeks. By this means Israel found a growth very early, and removed it successfully. Cachexia does not appear until late, and then the wasting is rapid, and the effects of pressure become evident in dyspnœa, vomiting, and indigestion.

The conditions are few which give rise to any difficulty of distinction between these rapidly-growing tumours of the kidney and those of other parts. Malignant disease of the suprarenals is rare, and its results are similar to those in the case of the kidney, which is generally encompassed. The origin of such growths may be indicated by pigmentation of the skin and an abnormal growth of hair about the pubes and other parts of the body. Enlarged lymphatic glands form a movable swelling which may closely resemble a renal tumour.

Clearly the treatment of these cases resolves itself into the question of whether operation is justifiable or no. This has been examined by many able critics. Gross in an admirable paper forbids the operation altogether. He states that of 16 patients operated on for sarcoma between the ages of 16 months and 7 years 7 survived and 9 died, a mortality of 56.25 per cent.; 5 died of recurrence in a few months, and of 2 others there is no further history. In the *Archives of Pediatrics*, February, 1896, Dr. Emily Lewi has tabulated 60 cases of nephrectomy for renal sarcoma in children. The operation mortality was 28½ per cent. But recurrence took place in nearly all the cases, and at the time of writing only 3 cases had passed the three years' limit. Newman gives 19 cases in patients under 6 years of age; 13 died and 6 recovered from the operation, but the after-history is not given. Aldibert collected the results of 45 cases; 20 deaths occurred soon after operation, two-thirds of them from shock. In 11 cases death was caused by recurrence within nine months. Sutton has tabulated 21 cases of operation in children under 6 years. Most of these are identical with those of Newman. There were 9 recoveries and 12 deaths; of those which survived the operation all were dead within a year. From 74 cases collected by Dr. Walker he calculates that the ultimate mortality lies between 74.32 per cent. and 93.22 per cent.

Thornton points out that the progress of renal sarcoma in children is rapid, quickly involves surrounding tissues, speedily recurs extensively, and leads to an amount of suffering altogether beyond what is seen when the disease is allowed to run its natural course in the kidney. Butlin altogether opposes the operation in the case of children. Quoting the last three of the successful cases just mentioned, Mr. Jacobson considers the opinions expressed by Butlin and Thornton as too pessimistic, and suggests that as some growths are less malignant than others, the operation may occasionally be justifiable. The older the patient and the smaller the tumour the greater is the probability of success.

In the cases which have come before me I have only once felt justified in attempting to remove such a tumour, though I have more than once opened the abdomen in order to see the conditions and surroundings, and this I consider a justifiable proceeding, since it does nothing to hasten the patient's inevitable end, and may give some hope of being able to proceed to the removal of the tumour.

As to the choice of proceeding in the event of nephrectomy being decided upon, the lumbar operation gives a smaller mortality than the abdominal, but with no great difference. On the other hand, the latter gives more room for the removal of a large tumour and for dealing with bleeding vessels. Abbé in both his cases used a long transverse incision, placing the patient in Trendelenburg's position. Malcolm opened the abdomen in the course of the linea semilunaris, and this has been more favoured by other operators.

Calculus.

The origin, development, and progress of calculi in early life have been investigated and described by so many excellent observers that I should be guilty of needless repetition were I to say much upon this subject. That a calculus may actually be formed during intrauterine life is shown by the fact that one was found by Langenbeck in the kidney of a fœtus of six months, and Jacobi found 6 cases of congenital renal calculus in 40 necropsies; but it is a matter of very frequent observation to find deposits of crystals in the cortical portions of the gland in newborn infants, which in the ordinary process are washed away by the fluid components of the mother's milk. These so-called infarcts consist of amorphous urate of ammonium mixed with crystals of uric acid, and are found occupying the straight tubes of the pyramids.

But it is to the later manifestations of lithuria, or the uric acid diathesis, that attention is more seriously called, and which are a direct result of the injudicious feeding of the infant. Independent of the actual development of calculus, all the symptoms which indicate its presence in some part of the tract may be caused by an excessive amount of uric acid salts, and this excessive elimination, when continuous, is always evidence of a serious disturbance of nutrition. The urine is frequently of low specific gravity, often 1006, pale as water, and containing very little urea. The explanation of the deposit lies in the small proportion in which the alkaline phosphates, the presumed solvent of uric acid, exist in the urine of infants. "In children," says Sir B. Brodie, "the deposition of lithic acid sand by the urine will not infrequently produce not only pains in the glans, but bloody urine and all the other symptoms of stone in the bladder." Besides uric acid, oxalate of lime concretions are not infrequent, as well as small calculi of the urates of ammonia and soda.

The symptoms produced by these conditions are to be observed in children at a very early age, and have been pointed out by Dr. Gibbons in his excellent paper on Renal Colic in Infants. No calculus is formed, but blood, mucus, and crystals are found in the urine, and pain, tenderness, and colic occur in the lumbar region. The patients are children of well-to-do parents, who are almost invariably themselves gouty. Dr. Dickinson gives several instances of a similar condition occurring at about the period of teething and giving rise to hæmaturia. These cases he describes as scorbutic, and in all the diet had been conspicuously wanting in fresh milk. That these symptoms are not always ascribed to their proper cause, and are attributed to intestinal colic, is due to the small amount of blood which passes with the urine, so that attention is not directed to the kidneys and ureters as the site of pain. On the other hand, this may sometimes be excessive.

Besides hæmaturia, pain is the most constant symptom, generally occurring suddenly and without warning, and referred to the lumbar or hypochondriac region, and running down the course of the ureter towards the groin, the bladder, and the penis, and frequently causing retention of urine; and this may exist to the extent of producing reflex irritation of an extreme character, as in the case of a child described by Henoch, who passed round fragments of the size of a pin's head, which were recognised as urid acid concretions. She cried always before passing water, and developed first convulsions and subsequently contractures of the toes of both feet and of the fingers and knee-joints. The attacks will intermit with greater or shorter intervals, and there is extreme tenderness to touch of all parts in the region of the kidney affected.

It is, however, between the ages of 2 and 6 years, according to the tables of Sir Henry Thompson, that stone in the bladder is met with more frequently than at any age before 50; that is to say, that the deposits from the tubules are more excessive soon after the first dentition, when the organism is most in need of appropriate nourishment and most liable to reject those constituents which it cannot assimilate.

As to the frequency of stone in the children of the poor, Mr. Cadge agrees in the main with Sir Thomas Smith in attributing it to insufficient and almost arrested cutaneous excretion from imperfect clothing and uncleanliness, tending to disturb the due proportions of the normal constituents of the urine,

and lead to a relative or absolute excess of some one constituent, while the digestive organs are constantly liable to disarrangement from unsuitable food or from irregularities in the mother's diet, and he lays much stress on the impossibility of these children obtaining a proper and sufficient supply of sound milk. Dr. Cunningham accounts for the prevalence of stone in India as being due to the mountain ranges of limestone bounding the districts in which it is of most frequent occurrence, the rivers depositing lime in the soil from which the drinking water is drawn. Hot, dry summers inducing much perspiration, the urine consequently becomes concentrated, and the salts crystallise out on any provocation, such as a diseased state of the urinary organs. Hot days and chilly nights are another predisposing influence, especially where clothing is insufficient.

It is remarkable how frequently a stone may be latent in the kidney of a child and afford no evidence of its presence beyond the pyuria. In the 2,594 necropsies at the Hospital for Sick Children to which I have previously referred, I find that there were 26 cases in which calculi were lying in the pelvis or in the ureter. Seeing the much greater frequency of stone in the bladder of boys than of girls, it is very remarkable that the majority of 14 occurred in females; 11 were on the right side, 9 on the left, 5 were on both, and in 1 case the side is not stated. The ages of the patients varied from 9 months to 9 years. Most of them died of affections not directly referred to the urinary apparatus, and it may be presumed that in a large majority there were no symptoms pointing to the probable existence of calculus, unless it were suspected from the existence of pyuria. In this list one case at least is not included—that of a boy, aged 8¼ years, upon whom I operated in 1892 for a calculus which was found blocking the commencement of the ureter. Nephrolithotomy is, however, but rarely called for in children. Calculi are not infrequently impacted at the upper portion of the ureter, but seldom in any other part of its course. There are, however, one or two specimens in London museums, and notably one at the Hospital for Sick Children, showing calculi impacted at the vesical end of the ureter, and others I shall refer to later.

There is one symptom of calculus vesicæ in children to which full weight is hardly given in the textbooks; that is, the rough and almost gritty condition which the surface of the bladder presents to the sound when the symptoms of stone seem to warrant an exploration. This is constantly found to exist when no stone is present, and when not even phosphatic concretion can be extracted. It is caused, I believe, by the extreme acidity of the urine exciting a spasmodic contraction of the muscular fasciculi of the bladder and throwing them into ridges and folds, against which the point of the sound impinges. The condition is so frequent that it is one to remember as leading to a possibly mistaken diagnosis of stone, but it passes away as soon as the child has been kept warm in bed and the urine has been rendered less acid by means of drugs.

Operations for Stone in the Bladder.

Time and the improvement of modern instruments have greatly altered the views of surgeons of the present day with regard to the treatment of stone in the bladder of children. This change of front is due in great measure to the advocacy by Indian army surgeons, with their unrivalled experience, of litholapaxy in preference to any cutting operation. Successful as lateral lithotomy has proved in the hands of many former surgeons, there are still objections to its general adoption.

According to Sir Henry Thompson, the mortality varies during the period of from 1 to 12 or 14 years from 1 in 11, or 1 in 28 cases, or about 1 in 16. On the other hand, Mr. Bryant states there was no death in 100 consecutive operations on boys at Guy's Hospital; and the results of the operation upon natives at the hands of such surgeons as Keegan, Freyer, Cunningham, and many others, have given a very small mortality. Yet it is from these very surgeons that the strongest advocacy of litholapaxy comes. Besides the troubles incidental to a cutting operation, particularly hæmorrhage, which is often severe and difficult to check, there are many difficulties in lateral lithotomy which have proved formidable to the most skilful and practised surgeons. But the more serious objections are found in the later consequence such as stricture, fistula, and sexual impotence. Greig Smith, in the latest edition of his work, says: "I have seen in the last nine years five operations for perineal fistula following perineal lithotomy, and I have been concerned in the treatment of one case of stricture and one of fistula from the same cause" these occurring in a district where stone is far from frequent. Recto vesical fistula is one of the most troublesome accidents which a surgeon can be called upon to rectify, and is certainly not an infrequent consequence of the operation. Although Sir Henry Thompson questions the possibility of injury to the vesicula by the knife, yet, difficult as it must necessarily be to obtain evidence on the point, there is much to warrant the belief that impotence in the adult not infrequently follows this operation in the child. Teevan reported 4 cases of sterile husbands among lithotomised patients. Langenbeck has called attention to the same danger, and Keegan believes the operation to be frequently followed by emasculation. It must be remembered that the statistics of lithotomy are largely derived from the results obtained by Cheselden, Thompson, Cadge, and others, who had special opportunities of practising that operation, just as Indian army surgeons have lately had of studying litholapaxy; but for those to whom the opportunity comes but seldom, the lateral operation presents as many, if not more, dangers and difficulties as litholapaxy, which, on the other hand, has far fewer after-consequences.

Litholapaxy.

On the other hand, it has been shown by Keegan that the objections urged against litholapaxy in children are really invalid, that the bladder of a boy gives ample room for the working of a small lithotrite and a medium sized aspirator tube, while the sensitiveness of the urethra is overcome by means of an anæsthetic. The liability to laceration of the mucous membrane of the bladder and urethra is theoretical, and need not be feared if care and gentleness be exercised; and with regard to the smallness of the urethra he shows that if the meatus be divided the urethra of a boy from 3 to 6 years of age will admit a No. 7 or No. 8 lithotrite, and of a boy of 8 to 10 years a No. 10, 11, or even 14. The size of the urethra does not depend upon age. He advocates litholapaxy in male children principally for two reasons—rapidity of cure, and the absence of a cutting operation.

With regard to the size of stones that have been dealt with by this method Freyer has removed a calculus weighing 808 grains from a boy of 9 years, and Keegan one of 700 grains (uric acid) from a boy of 9½ years. The largest stones in the collection at the Hospital for Sick Children are a uric acid calculus encrusted with phosphatic material, and weighing 229 grains from a boy, aged 2 years and 6 months, a uric acid stone of 178 grains from a boy 5 years and 5 months, and one with a uric acid nucleus of 450 grains from a boy of 11 years. All these were successfully removed by the lateral operation.

Most recent writers are inclined to be converted to these views. "The operation of election for stone in the bladder," says Greig Smith, "is undoubtedly Bigelow's. Lithotrity is an operation at least as good as, possibly better than, lateral lithotomy, while as regards remote results there can be no comparison." Southam, in describing two cases of lithotrity in boys of 3½ and 10 years, mentions that of all the 11 stones previously removed by him by lithotomy each might have been successfully dealt with by lithotrity.

The objection raised by Jacobson as to recurrence after lithotrity is met by Keegan's conclusion from an experience of 110 cases of his own, "that recurrence of stone does not follow litholapaxy in male children any oftener than it does lateral lithotomy, provided the former operation is skilfully performed."

The fenestrated lithotrites that are now employed render it possible completely to pulverise any stone which they are capable of grasping, supposing that its components are not so hard as to risk injury to the instrument, and thus none but the smallest fragments are left in the bladder. These by the aid of the large sized evacuating tubes, which can easily be passed into the bladder, can be removed by repeated injections from the evacuator, so that nothing but the finest particles is likely to remain. The bladder of a child, being much more sensitive than that of an adult, would be much more ready to

resent and to expel any fragment left, and from the undeveloped condition of the prostate, and the absence of any depression or pouch behind it in which fragments could lie, as well as the healthy state of the mucous membrane as compared to that of an elderly person, there would be far less liability to formation of stone in the bladder. Any fresh calculus is much more likely to have descended from the kidney, seeing how frequently when found in that organ they are multiple. Again, as I have formerly pointed out, it is easy by a second washing out of the bladder, after a few days' interval, to minimise the possibility of any fragments remaining.

The Suprapubic Operation.

The suprapubic operation has, owing to recent improvements in the method of its performance, been rendered much less difficult than formerly, and its dangers have been very greatly diminished. The higher position of the bladder in children and the small amount of tissue which intervenes between it and the transversalis fascia render it more accessible than in adults, while from the small size of the veins and the thinness of the fatty layer which overlies the bladder the amount of hæmorrhage is seldom great and can easily be controlled. The peritoneum is not often seen, and can easily be avoided. With care in the extraction of the stone the wound of the bladder need not be large, nor should it in ordinary circumstances be lacerated.

One question which time only can answer with regard to this operation is the condition of the bladder in an old patient who has had suprapubic lithotomy performed during youth. A line of cicatrix in the anterior wall must necessarily interfere to some extent with the normal power of contraction of the viscus; and if in addition the cicatrix be adherent to the anterior abdominal wall, as in many cases it must be, not only is the shape of the bladder greatly altered, but its power of expulsion must be considerably curtailed.

Recurrence.

As regards the recurrence of stone, I published a case[1] in which I crushed a calculus weighing 130 grains which had formed in the bladder of a young man who exactly twelve months previously had undergone the suprapubic operation at the Seamen's Hospital when a calculus of 338 grains had been removed.

Results of Operation.

The subject of the treatment of stone in children has an extensive literature, which teems with statistics. These, however, are drawn either from the writings of surgeons who practised before the days of antiseptics or the introduction of litholapaxy, or from the experience of Indian army surgeons upon native children, and are therefore open to objection on these grounds. For the sake of comparison, therefore, I have had collected, thanks to Mr. Templeton, the results of operations in children under 12 years of age from six hospitals in various parts of the kingdom during the last ten years.[2] These are as follows:

	No.	Recovered.	Died.	Percentage of Death	Percentage of veries.
Litholapaxy ..	49	45	4	8 1	91.8
Lateral lithotomy	17	16	1	5.8	94 1
Suprapubic	65	59	6	9 2	90.7
Total ..	131	120	11	8 3	91.5

The percentage of recoveries after the lateral operation is nearly the same as in a collection of 75 cases operated on at the Hospital for Sick Children before 1890, and a little below that in the tables of Sir Henry Thompson (95 41), but above that of Mr. Charles Williams at the Norfolk and Norwich Hospital (93 73). The percentage of recoveries of the total number is, however, smaller than that in any of the three tables of the results of lateral lithotomy. Mr. Barling in the British Medical Journal, 1895, has collected the results of the three operations in children under 10:

	No.	Recovered.	Died.	Percentage of Recoveries.
Litholapaxy	44	43	1	97.7
Lateral lithotomy ..	50	48	2	96.0
Suprapubic	56	46	10	82.6
Totals ..	150	137	13	91.3

This puts the suprapubic operation in a much less favourable light, and gives to litholapaxy the highest percentage of recoveries of any of the three operations. These figures are of course too small from which to draw any definite conclusions. It may be presumed that in a certain number at least the suprapubic operation was selected in preference to either of the other alternatives on account of the size of the stone, the smallness of the pelvis, or for some other reason, and this would account for its showing a heavier mortality than the others. In a paper which I read before the Royal Medical and Chirurgical Society in 1890, I detailed the results of 114 consecutive operations for stone at the Hospital for Sick Children. Out of 75 cases of lateral lithotomy there were 71 recoveries, a percentage of 94 6. Hæmorrhage, abscess, erysipelas, and orchitis were among the immediate casualties that followed the operation. To supplement the table in this paper there have been since its publication 16 patients operated on for calculus vesicæ at the Hospital for Sick Children:

	No.	Recovered.	Died.
Lateral lithotomy	3	3	—
Litho'apaxy	7	6	1
Suprapubic	6	4	2

These are included in the first of the above tables; the death after lithotrity was due to pyonephritis and morbus cordis. One case which came under my own care was instructive. A boy, aged 6, was found to have a moderate-sized stone, which was easily seized with the lithotrite, and a small amount of material was crushed, but the remainder was so hard that no impression could be made upon it, and I desisted from further attempts from fear of breaking the lithotrite, and at once removed the stone by the lateral operation. It weighed 2½ drachms, was composed of oxalate of lime with a slight covering of phosphatic material, which had been partly detached by the lithotrite.

Dr. White, in an excellent article in Starr's *Textbook of Diseases of Children* urges "that in every case of calculus in male children litholapaxy, on account of ease of performance, low mortality, speedy recovery, and absence of danger of emasculation should be the operation of predilection." He quotes as the most recent statistics of the three operations those of Cabot. As all the cases were operated upon after 1878, and as they are classified according to age, they are especially valuable for the purpose of this paper. They may be compared as follows for children under 14:—

	No.	Deaths.	Mortality.
Suprapubic	591	74	12.52 per cent.
Perineal lithotomy	539	16	2.96 "
Litholapaxy	241	4	1 66 "

I am therefore inclined to emphasise rather than to retract from the propositions offered in my former paper:—

1. That in the cases of boys and girls, stones of moderate size should be dealt with by litholapaxy.

2. That stones composed of oxalate of lime, or of such size as not to be readily grasped between the blades of a lithotrite, should be removed by the lateral operation in the case of boys.

3. That the suprapubic operation should be reserved for stones of very large size or inconvenient shape in boys or girls, or cases of calculus embedded in a saccule of the bladder or impacted in the mouth of a ureter.

That these propositions are not absolute must be evident. Cases have occurred to myself and others where the lithotrite cannot be introduced owing to some puckering of the mucous membrane of the urethra, and the lateral operation may be forbidden on account of a narrowed and rickety pelvis, but I think it is proved by the above tables that the tendency of surgeons is, when possible, to use the lithotrite instead of the knife, and that with proper care such a course is followed by the best results, and is free from the after-consequences of a cutting operation. At the same time, it is not every surgeon who has had experience of the use of a lithotrite, and to such must be left the choice of one of the other operations. In girls, unless the stone be very large, when it should be removed by the suprapubic operation, lithotrity is always easily available, and it avoids the troublesome after-consequences of over dilatation of the urethra or the danger of a vesico-vaginal fistula.

The advice here given is entirely from the point of view of the patient, but to the practitioner who is called upon to deal with a stone, and who has not had personal experiences of lithotrity, it is difficult to offer suggestions. To see lithotrity performed by Sir Henry Thompson, or some of those who have had large experiences in India, is like witnessing the feats of Roberts with a billiard cue. But the manipulative dexterity which is certainly essential is only acquired by a long apprenticeship and considerable experience. On the other hand the pitfalls of the lateral operation are many and often alarming to those who are not in the habit of witnessing or performing it. The suprapubic operation is in itself simple and easy of performance, and is probably that which under such circumstances should be adopted. At the same time, though I do not place much reliance upon statistics, it is the one that in the above tables presents the most unfavourable results, and in my own, and in the opinion of many other surgeons, the results would appear still worse if it were possible to collect all the cases in which this operation has been performed in recent years.

It must not be forgotten that where there is a stone in the bladder there is or has probably been some amount of pyelitis, and Southam, in his relation of the two cases mentioned above, gives some very good advice with regard to the previous treatment of the patient: Rest in bed, milk diet, and sterilisation of the urine by boric acid or salol given internally, and, if the urine contain much pus, the bladder should be washed out thoroughly more than once with an antiseptic solution. Shock should be avoided by thorough protection of the patient against surface chilling.

There must always be met with some rare cases for which the suprapubic operation is alone available, such as are indicated in the third of the above propositions. In connection with the impaction of calculi at the vesical orifice of the ureter, my colleague, Mr. Pitts, has favoured me with two most interesting cases of this condition:

A boy of 9 years was admitted to Great Ormond Street with symptoms of stone in the bladder, which was verified by the sound. On bimanual examination two stones were felt, one on each upper lateral portion of the bladder, that on the right side about the size of an almond and fixed, that on the left movable and of the size of a cherrystone. The suprapubic operation was performed and a stone removed of the size and shape of a plumstone. No other could be felt by the finger in the bladder, but, on repeating bimanual examination, a stone could be plainly felt in the position of entrance of the right ureter. Careful examination of this spot within the bladder revealed a protrusion of the mucous membrane, and, by probing the apex of this protrusion, a stone could be felt encysted in that part of the ureter which passes through the bladder wall. The mucous membrane was incised with scissors, and the stone, which was pyramidal in shape, made to project into the bladder by the finger of an assistant in the rectum. After very prolonged and careful manipulation it was finally loosened and extracted by aid of a bent director. It was about half an inch in its longest diameter, somewhat pyramidal in shape, with the apex projecting at the orifice of the ureter and the base firmly grasped by the surrounding structures. The wound united and the boy was discharged well in less than six weeks.

A second case which was under Mr. Pitts's care at St. Thomas's Hospital is of still greater interest and rarity. A thin cachectic child, aged 4 years, who had had symptoms of calculus vesicæ for two months, had been admitted to another hospital, where he was sounded under an anæsthetic, but nothing abnormal found. The child became much worse, and three months later came under Mr. Pitts's care. There was then retention of urine, the bladder was distended to the umbilicus, the penis swollen, great pain complained of when catheter was passed, and the urine found to be very offensive, thick, and looking like pure pus, escaping very slowly through the catheter, in the eye of which a small stone was found. On April 6th a suprapubic incision was made. No stone was found, the wall of the bladder was much inflamed, the surface of the mucous membrane red and granular, with some indications of sacculation. A large drainage tube was inserted, and the patient placed in a boracic bath. This was changed for boracic irrigation on the sixth day, owing to signs of bronchitis. Six weeks later an attack of jaundice supervened, which was followed by inflammation of the right testicle and cord. On June 30th the tube was still in the bladder, and no urine coming through the penis, on July 18th an examination was made under chloroform. The bladder was found empty, but on rectal examination a hard nodular mass was felt on the left side between the rectum and the bladder. The cystotomy wound was enlarged, and an ulcerated opening was found in the trigone of the bladder near the neck, which led to a cavity outside the bladder, which contained four oval stones that were with difficulty dislodged and manipulated from the pouch into the bladder, and so removed. The largest of these calculi was of the size of a small plumstone. The boracic bath was repeated, and the child made a good recovery. Mr. Pitts adds as a note to this exceedingly instructive case, that in the absence of any stone on first opening the bladder, and from the suppurative condition found, together with the subsequent inflammation of the epididymis and cord, the condition was for a long time believed to be tuberculous. Hence the delay in the second operation, which resulted in finding the stones and curing the patient, a result which redounds to the credit of the surgeon.

Such cases as these admit of no other treatment than by the suprapubic operation, which was clearly indicated beforehand in all of them.

NOTE AND REFERENCE.

[1] *Clinical Journal*, 1896. [2] The hospitals from which these statistics were kindly supplied were the Hospital for Sick Children (Loudon), Children's Hospital (Pendlebury), the General Infirmary (Leeds), St. Peter's Hospital (London), Royal Hospital for Sick Children (Aberdeen), Royal Hospital for Sick Children (Edinburgh).

RECENT EVIDENCE AS REGARDS THE PRODUCTION OF SUGAR IN THE LIVER AND ITS UTILISATION IN THE TISSUES.

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THE busy practitioner frequently finds it no easy matter to weigh the value of the theories put before him, simply because he has not the time to study the evidence bearing upon the views advanced. For this reason it is the duty of anyone who presents his views to his professional brethren to state as clearly as possible all the evidence forthcoming, not merely the evidence derived from his own work, but of that derived from the work of others. It may be that in the opinion of the author the work is of no value, but he must at least give it consideration, and indicate where it is erroneous.

The universally-accepted views in regard to the action of the liver upon carbohydrates have recently been assailed, and my object in giving the following very brief account of some of the more important recent work upon the subject is to enable the practitioner to form an intelligent judgment upon a matter which bears so directly upon so important a question as the treatment of diabetes.

Briefly stated, the usually accepted glycogenic theory is:

1. That when there is an excess of carbohydrates in the food, the liver stores it as glycogen.

2. That in the absence of carbohydrates in the food, the liver converts its stored glycogen into sugar, and, when this is exhausted, forms sugar from other substances and passes it to the tissues.

3. That the sugar in the blood is used by the tissues.

Serious objections to these conclusions have been offered by only two investigators:

1. Seegen maintains that the liver does form sugar, but that the sugar is not formed from glycogen.

2. Dr. Pavy maintains that the liver stores carbohydrates as glycogen, but that it does not reconvert this to sugar. He considers that the great function of the liver is to prevent sugar passing into the circulation, and that, if sugar does pass into the circulation, it is not used by the tissues but is simply excreted by the kidneys.

The evidence in favour of the production of sugar in the

liver and its utilisation in the tissues may be stated as follows:

A.—Evidence of the Formation of Sugar in the Liver.

1. Glycogen, under the influence of zymins, acids, micro-organisms, etc., is very readily converted to sugar. This alone is not an argument for the conversion of glycogen to glucose in the liver, since many processes which go on outside the body do not occur inside. But it is rendered of importance by the fact that this conversion does go on inside the body in various conditions.

2. Glycogen diminishes and glucose accumulates in the liver when the circulation through the organ is stopped.

3. After an animal has been killed there is at first a rapid and then a slower conversion of glycogen into glucose.

4. During the life of the animal many different conditions undoubtedly lead to the conversion of glycogen into glucose in the liver:

(*a*) Puncture of the floor of the fourth ventricle is known to cause a diminution of the store of glycogen in the liver, an increase of glucose in the blood, and the appearance of glucose in the urine.

(*b*) Pavy showed[1] that the passage of more highly oxygenated blood through the liver, and the inhalation of carbonic oxide,[2] caused the appearance of sugar in the urine. These latter observations have been confirmed by Araki.[3] It is right to state that Garofalo denies that this occurs,[4] while Straub[5] maintains that the sugar is formed from albumen

(*c*) Many drugs bring about a rapid conversion of glycogen to glucose in the liver. Among these may be mentioned strychnine and curare.[6]

(*d*) Stimulation of certain nerves and section of others causes the disappearance of hepatic glycogen and the increase of the sugar of the blood. The brothers Cavazzani[7] show that the stimulation of the cœliac plexus causes the glycogen to diminish in the liver. If the circulation is stopped glucose accumulates; if the circulation is intact the glucose is, of course, carried away. In a less satisfactory series of experiments Morat and Dufourt[8] show that stimulation of the spinal cord causes the disappearance of glycogen from the liver. The experiments of Levene[9] tend to prove that stimulation of the vagus causes an increased production of sugar in the liver. Butte[10] shows that stimulation of the peripheral end of the cut vagus increases the amount of sugar in the blood leaving the liver.

According to Dr. Pavy, all these examples of the conversion of glycogen to glucose are not to be considered as exaggerations of a normal process, but as due to the sudden development of a ferment or zymin. This theory has been met by E. Cavazzani, who in his experiments on the change of glycogen to glucose brought about by stimulation of the cœliac plexus,[11] investigated whether the blood, coming from the liver, and the liver parenchyma showed any increase in their sugar-forming action as they should have done if a zymin had been developed. No such increased action was found, and Cavazzani therefore concludes that the change must take place in the liver protoplasm, and is not due to a zymin action.

Dr. Pavy's idea that a zymin can suddenly develop in a gland which he says is not designed for producing an amylolytic zymin[12] is difficult to comprehend when the evidence he adduces for the existence of such a zymin in the liver at all times is considered. He holds that the liver after treatment with alcohol has a powerful amylolytic action. He seems to consider that this is due to the formation of a zymin in the liver after death and not to the formation of a zymin by the action of the alcohol. If the zymin is formed after death, then treating the liver of a living animal with alcohol should yield a less powerfully amylolytic product than the treatment of the same liver after death.

The following experiment shows that no such increase in the amylolytic power of the liver occurs immediately after death, and that, if alcohol simply fixes a pre-existing zymin, that zymin is just as abundant in the living liver as in the liver after death:

A cat was chloroformed and the abdomen was opened, and one-half of the liver was excised, plunged in alcohol, and minced, and then pounded. The remainder of the liver was removed, kept for thirty minutes, and then treated in the same way. After twenty-four hours the alcohol was poured off each, and the liver substance dried. One g. of each liver was placed in 20 c.cm. of solution of glycogen, and kept in the incubator for four hours and three-quarters. An equal portion was at once boiled. Glycogen was extracted by Külz's method.

	Glycogen in Grammes.	
	Before Incubation	After Incubation.
Liver during life	0.305	0.158
Liver after death	0.280	0.131

The idea of a production of a zymin in the liver immediately after death is opposed by this experiment.

5. The amount of sugar in the blood of the hepatic vein is frequently greater than that in the blood of the portal vein.

If sugar is formed in the liver, it must under certain conditions—that is, when the supply of sugar from the food is cut off—be more abundant in the hepatic than in the portal blood. On the other hand, if the liver can take up and store sugar as glycogen, the difference may occasionally be the other way, and there may be less sugar in the blood coming from than in the blood going to the liver. Thus, in a very large number of cases, no marked difference is to be expected in the amount of sugar in the blood going to and in the blood coming from the liver.

Again, it must be remembered that the amount of blood passed through the liver is enormous, and that therefore very small additions of sugar to each cubic centimetre means an enormous supply of sugar to the circulation. These considerations are sometimes forgotten when the evidence as regards glycogenesis is being considered.

It is not my intention to consider the results of older experimenters. These I have already dealt with in a previous communication.[13] But within the last few years certain investigations have been published bearing upon this debated point.

Butte[14] gives a series of observations on the normal dog and on the dog kept without food, in which the peripheral end of the vagus was stimulated. In four experiments on the normal animal the average amount of glucose in the portal blood was 0.087 per cent.; in the hepatic blood 0.115 per cent.

6. The amount of sugar in the blood of the hepatic vein is, even in starving animals, greater than that in the blood in the arteries.

Mosse,[15] working under Professor Zuntz, in order to obviate the objection that the sugar production in the liver was the result of operative procedure, left the abdomen unopened and catheterised the hepatic vein from the right jugular vein, and also bled the animal from the crural artery. The following are the results of his analyses of the glucose present, made by Allihn's gravimetric method. The dogs had starved for twenty-four hours:

No. of Experiment.	No. of Bleeding.	Sugar in 100 c.cm. of Blood.	
		Artery.	Hepatic Vein.
II. Dog	1	0.103	Lost
,, ,, ...	2	0.093	0.145
III. ,, ...	1	0.107	0.110
,, ,, ...	2	0.147	Lost
IV. Sheep	1	0.070	0.052
,, ,, ...	2	0.040	0.078
V. Dog	1	0.058	0.070
,, ,, ...	2	0.113	0.119
VI. ,, ...	1	0.050	0.071
,, ,, ...	2	0.087	0.115
VII. ,, ...	1	0.145	0.132
,, ,, ...	2	0.154	0.165
VIII. ,, ...	1	0.071	0.092
,, ,, ...	2	0.075	0.101

Average:

Arterial blood	0.093
Hepatic vein	0.107

Thus even in dogs which had been without food for twenty-four hours there was a greater quantity of glucose in the blood leaving the liver than in the arteries.

7. The exclusion of the liver from the circulation diminishes the amount of sugar in the blood.

(*a*) Schenck[16] showed that after bleeding there is an increase of sugar in the blood, but that this does not occur after exclusion of the liver by ligature, and that it is very small in starving animals, where, of course, the glycogen stored in the liver is small in amount.

(*b*) Tangl and Harley[17] showed that, in dogs fed on flesh, ligature of the intestinal arteries diminished the amount of sugar in the blood. Here the supply of sugar from without was, from the nature of the diet, cut off before the operation, but it was only when the blood supply to the liver was interrupted that the amount of glucose in the blood fell.

Even in prolonged starvation the amount of sugar in the blood is not diminished. How, if the kidneys are constantly excreting it, and if it is not being constantly manufactured in the body, is this supply kept up?

B. Evidence of the Disappearance of Sugar in the Tissues.

1. E. Cavazzani[18] shows that after muscular work there is a diminution in the amount of sugar in the blood, and that this is not due to any increased action of a diastatic zymin. The older experiments of Seegen and of Chauveau and Kaufmann had given similar results.

2. Vaughan Harley[19] records the results of a series of experiments upon dogs which confirm the older investigation of Limpert and Falck, and of Brasol, that glucose when injected into the blood is not all excreted by the kidneys, and that, even when the ureters are ligatured and renal secretion thus stopped, the glucose rapidly disappears from the blood. This disappearance is not due to a storage as such in the tissues, or to a conversion to glycogen, and it is accompanied by a rise in the respiratory quotient, showing an increased oxidation. These experiments Dr. Pavy has not, so far as I am aware, considered, although they overthrow his most oft-repeated argument in support of his theory.

3. F. Voit[20] records a series of experiments on the subcutaneous injection of various sugars in the human subject. Using a 10 per cent. solution, he finds that very large quantities can be administered without causing any disturbance. The simple sugars (monosaccharids) experimented with gave the following results:

	Injected.	Excreted in the Urine.
	Grammes.	Grammes.
Dextrose	100.00	2.64
,, ...	60 00	Trace
,, ...	11 24	None
Lævulose...	10.94	0.99
,, ...	10.13	Trace
Galactose	9.23	0 16
,, ...	9 58	Trace

These results with dextrose—ordinary blood sugar—are supported by the previous investigations of Leube,[21] who found that in dogs the injection of 50 c cm. of a 50 per cent. solution of dextrose caused no glycosuria. The disaccharids—cane sugar and lactose—sugars which do not normally pass as such to the circulation, but which are broken up into monosaccharids in the intestine, he found were entirely excreted by the kidneys.[22]

These experiments are directly opposed to the statements made by Dr Pavy at p. 188 of his *Physiology of the Carbohydrates*. These statements are based upon experiments in which an increase of the sugar of the urine was found to follow the injection of even small quantities of sugar into the blood. No attempt was made to ascertain whether all the sugar injected was excreted. In the face of the experiments of Harley and of Voit, the conclusion—which Dr. Pavy makes the most important proof of his theory of the physiology of the carbohydrates—cannot be considered satisfactory.

The evidence may therefore be considered as establishing:

1. That glucose is formed in the liver.

2. That glucose is used in the tissues and is not all excreted by the kidneys.

Dr. Pavy's theories, again enunciated in his supplementary Croonian Lecture, without any mention of the work of other investigators, are thus found to be opposed by a large amount of careful work. Dr. Pavy ignores the fact that in his views he stands alone, and that he is attacking the position to which physiologists have been driven, not by the study of the investigations of one individual but by the consideration of a large amount of independent work. He must, therefore, be prepared to consider and refute the existing evidence before his views can be accepted by those who are capable of forming a judgment on the matter.

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PIGMENTED CELLS IN MOSQUITOS:

By Surgeon-Major RONALD ROSS, I.M.S.

In the BRITISH MEDICAL JOURNAL of December 18th, 1897, you did me the honour to publish an article by me on this subject, together with notes by Surgeon-Major Smyth, Dr. Manson, Mr. Bland Sutton, and Dr. Thin, on the original preparations. My sincere thanks are due to these gentlemen for the interest they have taken in the matter, and for the courtesy of their remarks, and I hope that the existence of the cells as attested by them may now be considered as established. As to the nature of the cells, however, doubt still remains, and I should therefore like to give two more instances in which they have been found, both having an important bearing on this point.

It will be remembered that the pigmented cells were not found in large a number of brindled and grey mosquitos, unfed or fed on healthy or crescent-bearing blood, but were seen for the first time in two large "dapple-winged" insects (Cases I and II) of a rare species, fed on crescent blood. Since then (September, 1897) I have observed them in two more insects. Case III: Some scores of small dapple-winged mosquitos, unfed or fed on healthy blood, had been examined without finding the cells. At last two of this species were persuaded to feed on a patient with crescents. One of them was killed next day; no pigmented cells could be found. The second was killed forty-eight hours after feeding; numerous pigmented cells were present. They were all small, much smaller than epithelial cells, ovoid, about 7 μ in the major axis, and each contained about 20 granules of typical pigment which were often arranged circumferentially, just as in the malaria parasite. No more insects of this species fed on malarial blood have since been examined. Case IV: A hundred or more grey or "barred-back" mosquitos (wings, legs, belly plain; back of abdomen transversely striated) unfed, or fed on healthy or crescent blood, have been dissected without finding the pigment cells. At last one was observed feeding on a patient whose blood that morning had been seen to contain numerous mild tertian parasites. I judged for many reasons that it had been feeding occasionally on the same man for several days. It was killed three days afterwards, when it must have been quite a week old (after hatching from pupa). Its stomach contained a large number of pigmented cells of all sizes, from 8 μ to 25 μ. They were very defined and distinct, especially the larger ones, and contained each from 10 to 20 granules of typical pigment. Some of the largest cells appeared to have a uniform structure without vacuoles, but with a central nucleus (?)

I thought I observed a few similar bodies without any pigment. Besides these cells the stomach cavity contained numbers of swarm spores, never before seen in any Secunderabad mosquito, but found in the mosquitos of the malarious Sigur ghat. In May a number of these swarm spores had been given to a person who volunteered to drink them, and he had been attacked with fever five days afterwards.[1] I could trace no connection between the pigmented cells and

the clusters of swarm spores; that is, I could find no pigment in the latter; though it would have been difficult to do so even if it had been present, owing to the numbers of struggling flagellulæ. Since then I have examined no more grey mosquitos fed on tertian blood; and, indeed, have not been in a position to continue researches on malaria; but I have dissected thirty horse flies (tabanus), parasitic on tame pigeons, whose blood contained halteridium (Labbé). Though halteridium was found in the blood in the insects' stomach cavity, the stomach walls never contained pigmented cells; yet the histology of tabanus is closely like that of culex. It is interesting to note that in the four instances in which the cells have been found, their size is in proportion to the length of time between the feeding and death of the insects—namely, 7 μ after two days, 17 μ after four days, 19 μ after five days, and 25 μ after about a week

I must correct an error due to the unfortunate use of formalin as a preservative in the two specimens sent to England. Pigment appears to have been found, not only in the pigmented cells, but also in the ordinary stomach cells, and elsewhere; and Dr. Thin draws the natural inference from this that the former are an altered form of the latter, induced by the absorption of malarial pigment from the stomach cavity. The effect is due to formalin, which not only blackens the green and yellow granules and globules always found in the tissues of culex, but converts traces of hæmoglobin in the stomach cavity into a multitude of minute acicular crystals very like pigment, and even has the same effect on the pigment of the pigmented cells. I know this to be the case from specimens in my possession, one of which now appears to contain pigment everywhere. I can say with confidence, and after special and repeated search for it, that when the specimens were fresh pigment was to be found nowhere else in them except in the pigmented cells; nor, except in the pigmented cells, have I ever found pigment in the stomach walls of mosquitos fed on malarial blood.

So long as the cells had been found only in two individuals (the only two properly examined) of a rare species of mosquito, it was quite possible to suppose them some kind of physiological cell, either pigment-producing or pigment-absorbing; the new facts show them to be too exceptional for this. If they be normal pigment-producing cells they should be found in most individuals of a species in one of which they have been observed; but Cases III and IV show that they may occur in a single individual out of many scores of the same species examined, while, except in these four instances, I have never observed them in allied diptera (pulex, tabanus, musca), nor even in allied species of culex. If, as Dr. Thin believes, they be ordinary epithelial stomach cells which have taken up the pigment of dead malarial parasites from the stomach cavity, they should, if found in one individual of a species fed on malarial blood, be found also in others of the same species similarly fed; but Case IV, in which they were observed in an insect fed on tertian blood, but not at all in many insects of the same species fed on crescent blood, is in direct opposition to this postulate—unless we can venture to assume that the stomach cells of this species are capable of taking up tertian pigment to the exclusion of crescent pigment. But there are now many reasons against Dr. Thin's theory. Thus, in Case III, the cells were much too small to be epithelial cells. Again, the pigmented cells are not like phagocytes in one important particular—they all contain roughly the same amount of pigment and an arrangement of it, which, as Dr. Manson says, forcibly recalls the arrangement of pigment in the malaria parasite. Phagocytes contain varying amounts of pigment, from one granule to several large clumps of it, according to the quantity they have been able to seize (compare phagocytes with parasites in malarial blood for example). Still further, if the pigment in the cells is due merely to phagocytosis, how comes it that they do not contain other granules from the stomach cavity besides, such as the yellow detritus of ingested blood corpuscles? Lastly, it remains to be proved that the stomach cells of culex are capable of taking up solid particles from the cavity. I have never seen any evidence of such, either in culex or in other families of diptera. Yet the stomach of the larva and imago contains multitudes of coloured vegetable and hæmoglobinous particles which could easily be detected if contained in the interior of the cells of the stomach wall. I have never observed such a phenomenon. Why, then, should these cells absorb matter so exceptional in the ingesta as malarial pigment, and reject the numerous other granules which are much more commonly presented to them? The cells of the stomach are not scavengers like the phagocytes of the blood; what object can they possibly have in taking up the pigment of dead parasites, which otherwise will be naturally evacuated by the bowel? Or, are we to suppose that this dead pigment has the power of forcibly entering the cells? In short, I doubt whether this hypothesis will bear careful scrutiny.

Hence, the facts already collected, especially the new ones, make it difficult, if not impossible, to believe that the pigmented cells can be any kind of normal physiological cells, whether pigment-producing or pigment-absorbing cells. It would seem then that they must be some kind of pathological cells. What kind—whether new growths, or parasites peculiar to the mosquito, or a developmental form of the parasites of malaria in the mosquito—I cannot say. If not the last of these, it will always remain a curious coincidence that they should contain pigment so closely like malaria pigment, and that they should as yet have been found only in insects fed on malarial blood.

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EUCHININ IN MALARIA.

By ST. GEO. GRAY, M.B. B.Ch.Univ.Dubl.,
St. Lucia, West Indies.

Since last August I have been observing the effect of euchinin on malarial fevers, and, as far as my experience goes, I find it highly satisfactory in suitable cases.

Up to now I have only employed it in undoubted cases of malaria where I find it superior to quinine in being tasteless and requiring a smaller dose to reduce the temperature However, I must differ *in toto* from the statement reproduced in the British Medical Journal of December 11th. 1897, that euchinin does not cause cinchonism, for I have seen it cause tinnitus aurium, deafness, and derangement of vision and sensation in a more marked degree than the same dose of quinine.

Contrary to the statement of Professor von Noorden, that 15 grains of quinine are equal to 25 or 30 grains of euchinin, I find that euchinin is a more powerful antipyretic than quinine, and that, in malarial fevers at least, 10 to 15 grains of euchinin are as efficacious as 20 to 25 or 30 grains of quinine sulphate, and that it nearly always, in doses of 12 to 15 grains, causes buzzing in the ears if not other symptoms of cinchonism.

The largest dose I have given has been 15 grains once or twice a day, always commencing with a good purge, which I consider essential in the treatment of all malarial fevers. This is sufficient in most cases, following the treatment with tonics and change of air if possible after the temperature has remained normal for a few days. I append notes of a few cases:

Case I.—August 11th. 1897. A. J., a young negro woman, had had quotidian ague for eight days; temperature 104°; severe headache, constipation. She was ordered a purge and euchinin gr. xv twice a day. August 12th, temperature 98.4°. Patient states that the fever left her one hour after the first dose of euchinin. August 15th, temperature has been normal since evening of August 11th; fever has not returned, but patient feels weak. Ordered tonics. She had buzzing in her ears while taking euchinin.

Case II.—August 11th, 1897. J. J., husband of above, says that he also suffered from fever every day. He took one of his wife's powders, and and says that the fever left him after it, and has not returned. No buzzing in ears. I did not see him during the attack of fever.

Case III.—August 14th, 1897. F. E., European male, aged 34. Quotidian ague for five days. Temperature 102.8°. He was ordered a purge and quinine sulph. gr. xx, acetanilid gr. v, once a day. On August 15th he was no better Temperature 102.8°; weak from purge. No tinnitus. He was ordered euchinin, gr. xiij. at bed time. He could not sleep from buzzing in the ears and other unpleasant sensations, but the fever was gone next morning. He felt well but weak, and the temperature was 98.2°. He was ordered tonics. He has had one attack of ague since then, but was afraid to take euchinin on account of the cinchonism, which was not caused by the large doses of quinine with which he finally got rid of the fever.

Case IV.—October 22nd, 1897. W. B., a young negro from the goldfields of French Guiana. Quotidian ague for several weeks. He was ordered

euchinin gr. xv once a day. On October 30th he returned to me to report that he had had no fever after the second dose. He said that he was taking a supply of euchinin back to Cayenne with him. He had some tinnitus, but not much.

CASE V.—November 8th, 1897. Rev. ——, European, had tertian ague. He was ordered euchinin gr. xv once a day. The fever left after first dose, and did not return. He found it "stronger" than quinine, and said that half the dose was sufficient to keep away ague, while even that caused noises in the ears.

I have used euchinin in many other cases, but they are all similar to the above. To sum up:

1. Euchinin is as effective as quinine in malarial fever.
2. It causes cinchonism.
3. It is tasteless, therefore easily administered. This is its great advantage over quinine.

The readiest form of administering euchinin is the simple powder placed dry on the tongue and washed down by a little water. As it is very bulky, some patients prefer it in cachets; but all solutions of euchinin that I have seen are decidedly bitter, presenting no advantage whatever over quinine.

I do not consider cinchonism such a fatal objection as the intensely bitter taste of quinine. My experience of malarial fevers is that quinine and the malarial poison being antidotes to one another, cinchonism is the sign that a sufficient quantity of quinine has been taken to overcome its antagonist the malarial poison, as mercurialism is the sign that the syphilitic poison is under control.

If euchinin can be proved to be even nearly as effectual as quinine, its tastelessness alone should recommend it to many as a substitute, notwithstanding that it is not altogether free from some of the other objections to quinine.

REMARKS ON A CASE OF HORSESHOE KIDNEY SIMULATING MALIGNANT DISEASE OF THE ABDOMEN.

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,
Physician to the Royal Infirmary, Newcastle-upon-Tyne.

THE following case is reported with the view of directing attention to the simulation of malignant disease by an abnormal kidney, and of the need for physicians and surgeons giving consideration to the possibility of the existence of such an abnormality before undertaking an exploration of the abdominal cavity. In most cases it must be that the existence of a horseshoe kidney is diagnosed only after the abdomen is opened. It was so in my own patient in whom there were no physical signs that strongly suggested such an abnormality.

Wm K., aged 51 years, a coal miner, was admitted into the Royal Infirmary, Newcastle-on Tyne, complaining of headache and loss of appetite of seven years' duration, and of pain over the region of the stomach and down the spine of two months' duration. There is nothing in the family history that calls for comment. He has been married thirty-one years, is the father of eleven children, one of whom died in infancy. His wife has had two miscarriages. He has had a good home and plenty of food: he has been a teetotaller for the last eighteen years. As he has suffered much from indigestion he has been extremely careful in regard to his diet, particularly within the last twelve months, taking principally rice, fish, milk, and fresh eggs, etc. At the age of 24 years he had pneumonia; seven years ago he had influenza, and for the last ten years he has been more or less a dyspeptic.

Two months ago, while hewing coal in the pit and working in a bent position, he was seized with pains in the region of the umbilicus. It was so severe that he felt faint and was obliged to lie down for a little. He could work no more that day on account of pain, which by degrees gradually subsided. Afterwards he only felt the pain after eating, and although it often made him feel sick it only caused him to vomit once about a month ago.

He is on the whole a well-nourished man, but he states that within the last few weeks he has lost flesh considerably. Myxœdema is well marked. He has the jaded look and mental depression so frequently observed in old dyspeptic subjects. His tongue is dirty brown and coated. Chest: Heart and lungs are healthy. Abdomen: On inspection very distinct pulsation can be observed over a circumscribed area of 2 ins. in diameter just above the umbilicus. A hard rounded mass with smooth borders can be felt, through which apparently the pulsation of the aorta is being transmitted. The tumour lies rather to the right than to the left of the aorta, and is felt to move up and down with respiration. It is painful on deep pressure, but is not attended by any sickening sensation when handled nor by a feeling of faintness. As the patient lies on his back a soft blowing systolic murmur can be heard through the stethoscope placed a little above rather than either over the tumour or below it. On placing him in a sitting posture the pulsation can hardly be detected and no *bruit* is thus heard. Turned on his face there is no longer pulsation felt when the hand is placed in the umbilical region until it is plunged deeply in, and even then it is not very distinct. On auscultating the spine no *bruit* is heard nor is pain elicited on percussing the spinal column. The legs are well developed; the knee-joints are normal. The bowels are regular and there is no trouble with the bladder. The urine is acid Specific gravity 1028, no albumen, no sugar.

A diagnosis was never really made. Taking into consideration the history of the case, the long continued dyspepsia, recent pain, the presence of a circumscribed solid tumour in the abdomen almost in the middle line and movable during respiration, the age of the patient and his emaciation, and the fact that the physical examination excluded aneurysm, it is only right to say that the probability of malignant disease suggested itself, although there was nothing that helped us to locate the tumour in any particular organ in the abdomen. It was a case in which there was a large element of doubt in the diagnosis, and as it was evident that medicine could do nothing but palliate, and as the patient on account of pain was unable to follow his employment, he himself pressed for an abdominal exploration so that his mind might be placed at rest. My surgical colleague agreeing with me that the operation would at any rate enable us to make a complete diagnosis, Mr. Williamson on July 27th, 1897, opened the abdomen by an incision 6 ins. in length slightly to the right of the middle line. After examining the contents of the cavity the tumour was found to be a horseshoe-shaped kidney, the central part of the arch of which was lying upon the aorta. The abdominal incision was at once stitched up and in ten days thereafter the patient was practically well again and has remained so since, having lost all his pain and other unpleasant symptoms.

The question naturally arises, Was the operation justifiable? The end justifies the means, and as the end obtained was the cure of the patient, mental and physical, quite apart from the making of a diagnosis, I have no hesitation in answering the question in the affirmative. It is more than likely that strain at work loosened the attachments of the kidney, and by pulling upon delicate nerves caused the severe pain and feeling of faintness. Probably it was in consequence of this strain that the arch of the fused kidneys became movable. The range of movement was extremely limited, up and down during respiration only, and in extent nothing like what is observed in ordinary floating kidney, which has frequently been mistaken for a tumour of the omentum or mesentery. The possibility of a horseshoe kidney misleading the physician in his diagnosis is thus alluded to by Mr. Henry Morris in *Surgical Diseases of the Kidney*, p. 104: "It might easily happen that a horseshoe kidney or two kidneys more or less completely fused and situated in the median line of the abdomen or in some part or other of the pelvis might give rise to the opinion that a morbid growth existed." It was rather a morbid growth than an abnormal organ which the physical signs and symptoms presented in my patient, and as one horseshoe kidney is met with in every 1,600 *post-mortem* examinations, the value of my remarks will be enhanced if they direct attention to the necessity of giving some consideration to the possibility of fused kidneys in the diagnosis of obscure tumours of the abdomen.

SYMMETRICAL PARTIAL DETACHMENT OF FINGER NAILS FROM THEIR MATRICES.

BY J. STANLEY KELLETT SMITH, F.R.C.S.ENG.

THE accompanying photograph (p. 553) illustrates a curious condition of symmetrical partial detachment of the finger nails from their matrices.

The patient, a young married woman, aged 30, states that about a year ago, without any apparent cause, the skin beneath the free edges of the affected nails began to peel away in whitish shreds. This continued for three to four months, at the end of which period the excavations beneath the nails had reached their present limits.

The fingers attacked are the index, middle, and little fingers in each hand. The nails themselves are lustrous and healthy looking, growing with an even free edge, and presenting no scaly, fibrillar, or opaque appearance. Over the area of separation, into which a probe can easily be passed, the matrix looks glazed, and is cicatricial to the touch. So marked is the symmetry of the condition that not only are the corresponding nails in the two hands affected, but the



Symmetrical partial detachment of nails from matrices.

extent of detachment of each nail is closely imitated by that of its fellow.

The cause of the lesion is quite obscure. The patient is, and always has been, a healthy woman with a good personal and family history. She has not been pregnant. She has never suffered from syphilis, congenital or acquired, and has taken no mercury. There is no account of any symmetrical vasomotor disturbance suggestive of Raynaud's disease.

A FORM OF NEURALGIA OCCURRING IN CYCLISTS.

By W. H. BROWN, F.R.C.S.I.,
Surgeon to the Leeds General Infirmary.

During the last few months I have been called upon to deal with a number of cases of neuralgia occurring in persons addicted to the use of the bicycle; and in view of the largely increasing population who pass a by no means small portion of their lives astride of one of the so-called safety machines, it occurred to me that it might be worth while to direct attention to instances of ailments—in some cases severe ailments—caused by this popular means of locomotion.

In July last I was consulted by a young man who complained of sickening pain in both testicles. Upon examining the skin of the scrotum it was found to be unusually sensitive, and the testicles themselves, together with the perineum, were extremely tender. All the symptoms had come on after a long ride, during which he had attempted to break records of high speed. This patient had ridden at intervals for some years, but had only lately attempted the higher flights, or rather more rapid rides of the cyclist which are now in vogue.

I should not have attached much importance to the case had it not been followed in quick succession by others of a like nature. As the symptoms in each instance had a general resemblance, it dawned upon me that I was face to face with a new disorder, which for want of a better name I at the time dubbed cyclist's neurosis, and began to note more closely the conditions under which it arose. A fresh instance in the person of a "champion" wheelman—a man who has won many races and broken many records—gave me the opportunity. His complaints were of scrotal and testicular pain, as in the other cases; in addition the skin on the inner side of both thighs was so sensitive that he could hardly bear his clothes to rest upon them. This man had a day before performed a feat which had called for prolonged riding at a high speed. He, at my request, showed me his attitude whilst racing. Beneath the skin of the perineum were slight extravasations of blood as evidence of signs of pressure.

A man, aged 40, next claimed my attention, and his complaint was that, after a couple of hours' ordinary riding, the penis became insensitive, and he could pinch the skin hard and feel no pain, whilst the glans had lost its normal sensation. He had once suffered from retention of urine after a prolonged journey. The anæsthesia in this case passed off three or four hours after the saddle was quitted, but returned again several times, and on the last occasion he sought advice.

These cases—eight or nine in number—are, I think, sufficient to show that there is an injurious pressure brought to bear upon the nerves of the perineum by cycling under certain conditions. Whilst thousands ride immune, a small percentage will suffer in the way I have related, and a preventive is called for.

That the pain thus caused is no trivial discomfort is proved by the fact that one of my patients was laid up for over a month, part of that time in bed and hardly able to move. This, of course, may be said to be exceptional, and I should not like to think otherwise, but I can quite understand how such a condition might become permanent or relapsing as in other well-known forms of neuralgia.

So far I have spoken only of the sufferings occurring in men, but I have also had to deal with lesions arising in the female votaries of the wheel. Some three or four ladies have complained of pain at the anus and the skin round about. In one instance defæcation caused great distress, although there was nothing visible in the way of piles or fissure to account for such suffering.

The cause of the complaint in all the cases I have mentioned being obvious, the treatment consisted in its removal, and when necessary the application of local sedatives to the affected area; in two cases when the pain was excessive opium was needed. All ultimately recovered, and most of them have again resumed their favorite occupation, but under improved conditions, that is, altered saddles. I do not advocate the claims of any patented saddle; I say only that if a saddle causes neuralgia it is a bad one, and from what I have seen a well-fitting saddle is as difficult to get as a well-fitting boot. I have no doubt that there are many who have ridden for years and escaped, so far, from the annoyance—to use no stronger word—that I have described, but since I have made inquiries amongst my friends I find that many could add a case or two of this painful affection.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TWO CASES OF EXTREME HÆMATEMESIS TREATED BY PERCHLORIDE OF IRON.

The notes of the two following cases may be of some interest, instancing as they do the advantage of the perchloride of iron treatment in extreme hæmatemesis.

The first was a woman of about 43, who for some months had been suffering from pain of a more or less acute character after food. She had not, however, been under treatment for it, and was at work when the hæmatemesis occurred. When I saw her she was apparently dead. The floor and her clothes were soaked with blood, and there was half a small washing basin full of blood beside her.

On examination, faint pulsations of the heart could just be detected There was no pulse at the wrist-joint, the lips were colourless, and the pupils widely dilated. Under the usual treatment this state of things improved slightly, and in two hours a mixture of pounded ice, glycerine, and a solution of perchloride of iron was administered in teaspoonful doses every hour, causing some griping pain but not of a severe character. In about twelve hours the quantity of ice and glycerine was increased, the iron remaining about the same, that is, 10 to 15 minims. In two days she was taking an ounce of the above mixture every four hours, ice water being substituted for the ice. Nothing else whatever was allowed by the mouth, and she was kept absolutely still on her back. For 15 days she was fed by the rectum, after which she began with beef essence and milk. She made a perfect recovery, and is now, eight months after the attack, able to undertake the hardest work, and to eat any food whatever without the slightest inconvenience.

The second case was that of a delicate woman aged about 33. She had been under treatment for about a month for gastric ulcer and hæmatemesis, and had vomited blood three times during that period—the two first occasions about a pint, the last occasion, just before I saw her, a very much greater amount, but I did not see the vomit. She was very collapsed, pulse very faint and rapid, breathing shallow, the lips quite white. She could recognise those about her but was unable to make any sound. I adopted the same treatment as in the previous case, and she made a slow but steady recovery. The griping pain was complained of for a longer period, and appeared to occupy a larger extent of surface. Her husband informs me she is now, five months after the attack, perfectly well, and without the slightest pain after food.

St. George Reid, M.R.C.S.Eng.,
Consulting Surgeon for Diseases of the Throat and Ear, Croydon Infirmary.

DIAGNOSIS OF EMPYEMA OF THE ANTRUM.

An interesting case of suspected empyema of the antrum, which had been under treatment for three months without benefit, was brought to me for examination with the electric lamp which I have constructed, and which I described, in the British Medical Journal of February 8th, 1890.

All the ordinary signs of chronic empyema, including purulent discharge from the nostril, neuralgia, and consequent exhaustion, existed. The state of the teeth gave no clue to this condition of things, although two diseased bicuspids had been recently extracted on account of it

When the 5 candle lamp was used I was surprised to find that its rays were equally distributed through each orbit; it was therefore evident that there was nothing wrong in the antrum. The difficulty was now to account for the symptoms. The second molar had been occasionally tender on pressure; I therefore determined to extract it. In doing so, however, the third molar and all the alveolar process, with the surrounding tissues, came away in one mass, so that there was difficulty in finally removing them. A day or two afterwards the symptoms had all disappeared, and in a week the patient was well.

The diagnostic value of the lamp and the unusual sequence of a common alveolar abscess are my excuse for troubling you with this communication.

Wimpole Street, W. N. Stevenson.

MAGNESIUM SULPHATE IN TROPICAL DYSENTERY.

[Communicated by the Director-General of the Medical Department of the Navy.]

The value of magnesium sulphate in dysentery does not appear to be generally known, judging from the scanty references to it in textbooks, but I can endorse Dr. Wyatt-Smith's experience of it from my own. In two cases under my care on board Her Majesty's gunboat *Peacock*, then lying in the Yangstze River, China, five years ago, one was treated with ipecacuanha, and eventually died in the Shanghai Hospital with extensive gangrenous ulceration of the bowel; the other was given drachm doses of a saturated solution of Epsom salts, in combination with 10 minims of dilute sulphuric acid, every hour, as described in the *Lancet* of October 4th, 1890, and recovered without a single complication.

So striking and immediate was the effect of magnesium sulphate on the symptoms, that in any future case of dysentery I should give it first trial, before resorting to ipecacuanha with its uncertain action. Considering the number of cases which occur in the ships of the Royal Navy serving on the coasts of China and the East Indies, I certainly think that this method of treating the disease should be more widely known.

V. Gunson Thorpe,
Her Majesty's Dockyard, Sheerness. Surgeon, R.N.

I was very interested in the memorandum communicated by Dr. Wyatt-Smith in the British Medical Journal of January 29th on the treatment of tropical dysentery by magnesium sulphate, as I can fully corroborate all his statements. For several years in Nicaragua, C.A., I treated dysentery with ipecacuanha, and notwithstanding its vaunted efficacy I cannot say that I know of one single case which derived much benefit from it. The "textbooks" say that a patient suffering from dysentery can retain large doses of ipecacuanha in a remarkable manner, but in my experience this is far from being correct, although anti-emetics were in all cases given previous to its administration. It was not until I read in a medical paper (the name of which as well as that of the author I have unfortunately forgotten) the treatment of dysentery by magnesium sulphate and dilute sulphuric acid that I had any success. I then gave half-ounce doses of a saturated solution of magnesium sulphate and fifteen minims of dilute sulphuric acid every two hours, with milk diet, and in the words of Dr. Wyatt-Smith it "acted like magic." In most cases pain and all traces of blood disappeared from the stools in twenty-four hours, and there was of course a complete absence of the distressing nausea which is always present in the treatment by ipecacuanha.

I feel certain, if the magnesium sulphate treatment were carried out, that in the majority of cases tropical dysentery would be shorn of half its terrors.—I am, etc.,

Thomas R. Wiglesworth, L.R.C.P.Lond., M.R.C.S.Eng.
Cinderford, Glos.

A CASE OF EMBOLISM.

Miss E., aged 20, was, on January 1st, 1890, seized with acute rheumatism. One knee, one ankle, one wrist were affected. The pulse was 90, the temperature 101° F., and there was a presystolic *bruit*, soft and prolonged at the apex. Two years before she was the subject of the profoundest anæmia, absent catamenia, œdematous legs, up high in the abdomen, and I believe she had plugging of the iliac veins. Then she made the best recovery under iron and arsenic, and no one ever had eighteen months' better health.

In three days the rheumatic symptoms waned entirely, the temperature and pulse were down, and the patient felt well. On the fourth day all was well, and she sat up in bed for her sister to do her hair. Suddenly she shouted out that she was going, struggled, fainted, and fell back in a state of collapse. I was with her as soon as I could be. The *bruit* was much less audible. Her face and conjunctivæ were black as if she had been fighting. She was conscious then, and complained of being sick and giddy, and

deaf. Presently she vomited some blood. The bowels had acted; the evacuation contained blood. She had great pain over the right hip. I found an enormous extravasation of blood, 8 inches by 6 inches, which subsequently sloughed so deeply and widely as to leave a large cavity, which subsequently healed. The right foot was half gangrenous, the outer side being involved. She lost a great part of the foot—two toes and part of another. A few days elapsed and she became jaundiced. This lasted a fortnight. Hæmorrhage from the kidneys ensued, and the albumen did not disappear for some time. There was dyspnœa, and there were scattered *râles* over the chest. The cardiac *bruit* remained in the quieted way it assumed on the day when all the trouble came six months before. She made a magnificent recovery. Patience and perseverance brought about a cure. The patient was well sustained on food and alcohol. Plain simple dressing and strict cleanliness were used, and from time to time iron and arsenic, etc., were given with great success.

Thomas Cole, M.D.Lond., F.R.C.P.Lond.
Late Senior Physician to Royal United Hospital, Bath.
Bath.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

WORTHING INFIRMARY.

CASE OF MYELOID SARCOMA OF THE FEMUR TREATED BY SCRAPING.

(By Frank Hinds, M.D., B.S., Honorary Medical Officer.)

W. O., a male, aged 34, a wheelwright, was admitted to the hospital in June, 1895. He complained of aching pains about the right knee, which he had noticed for fifteen months. Latterly he noticed the knee was bigger than that on the opposite side. He was not prevented from getting about and doing his work.

He was a healthy-looking man, with nothing noteworthy about his personal or family history. The lower end of the femur was felt to be enlarged, particularly in the direction of the inner tuberosity, and there was slight tenderness on pressure over this part. There was no impairment of movement in the knee-joint, and no enlarged glands could be felt in the groin.

Operation.—A diagnosis of probable central necrosis at the lower end of the femur was made, and an operation for the removal of the sequestrum was commenced. As soon as the incision was carried down to the bone, its thin expanded condition and the bluish colour of the subjacent structure showed the nature of the disease. A piece of bone about the size of a crown piece was removed with scissors, and the growth, which was dark red and firm, scraped out with a sharp spoon. The bleeding was very profuse, and was checked by an elastic tourniquet. The removal of the growth left a cavity in the lower end of the femur involving both condyles, extending upwards into the shaft, and measuring 4 inches in depth from the opening in the internal tuberosity to its outer side. The surface of it was scrubbed with chloride of zinc solution (gr. xx ad ℥j), and was packed with cyanide gauze.

The patient convalesced without noteworthy incident, but at the end of six weeks, the appearance of the granulations at the wound not being satisfactory, the cavity was again scraped out and scrubbed with zinc chloride solution; no definite masses of growth were recognised at this operation.

Convalescence was uninterrupted; the leg was put up in a Thomas's knee splint and kept in it for nine months, and afterwards a leather splint was worn for a further period of nine months.

Present Condition of Patient.—His general health is perfect; there are no signs of growth to be detected anywhere. The knee has only a very slight degree of flexion; there is no pain in it; the patient gets about well on it, using it practically as a stiff leg. There is a sinus about 1 inch deep on the inner side, which discharges enough pus just to soil a dressing in twenty-four hours. Under the microscope the growth was seen to be a myeloid sarcoma with very numerous giant cells.



Remarks.—The case appears worth reporting as showing the locally malignant character of a myeloid sarcoma, there being no sign of any recurrence after four years from the date when the earliest symptoms were noted, and 2½ years after operation. The advantage of removing the growth by scraping instead of by amputation of the limb is obvious, and the earlier it is resorted to the better the prospect will be of saving the bone in a condition in which repair may take place to such an extent as to result in a useful limb. The very thin condition of the bone was the reason for keeping the knee free from bearing weight for so long a period; possibly a bolder treatment in the way of earlier movement of the knee-joint would have resulted in a better limb. The skiagraph, kindly taken for me by Mr. Ernest Payne in November, 1897, shows the extent to which the bone had expanded; there has been no alteration in shape since the time of the operation.

A proposal for the establishment of a radiographic service in each of the hospitals under the control of the Assistance Publique is now under consideration by the Paris Municipal Council. The service is to be under the direction of the medical staff of the hospitals.

The French Minister of Public Instruction recently announced to the Academy of Inscriptions that he had received a letter from Dr. Jules Rouvier, Professor in the French Medical Faculty of Beyrout, announcing that he had discovered several Phœnician burial vaults of the second century before the Christian era. The vaults were found in a region to the south of Beyrout, which for years has been buried in sand.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

W. H. Dickinson, M.D., President, in the Chair.

Tuesday, February 22nd, 1898.

Adjourned Discussion on Mr. Marmaduke Sheild's Paper on Immunity and Latency after Operations for Reputed Carcinoma of the Breast.

Mr. A. Pearce Gould, in resuming the discussion, said that the subject was so wide that it was difficult to discuss, and that one was met on the very threshold by a serious drawback, namely, one's ignorance of the real nature of the disease and of its developments. Cancer was a protean disease, and this was more especially true of cancer of the breast; it might prove fatal in a few months or might last for thirty years, remain local or rapidly generalise, and the secondary growths might increase slowly or with great rapidity. All this made the discussion of the treatment very difficult. There were two series of cases in the author's paper; the first in which there was no return of the disease after operation, and the second in which, after immunity for many years, recurrence took place. In the first series treatment had apparently been successful, but in order to be absolutely sure of this it would be necessary to know that each of the patients had lived for over the longest period after which recurrence had been known to occur, and secondly that every organ had been examined by a skilled pathologist. This, of course, was not practicable. As regarded the second series, were they justified in saying that the long period of immunity was due to the operation? For every case of long immunity there were, of course, many in which recurrence was rapid. With the help of Mr. Sydney Hulke, Surgical Registrar to the Middlesex Hospital, he had tabulated the cases of cancer of the breast that had proved fatal during the last ten years at the Middlesex Hospital. In 26 patients in whom no operation was performed, and where the disease might be said to have run its natural course, the average duration of life after the disease was first noticed was 45 months, the longest being 12 years, and the shortest 4 months. In 48 cases operated upon one or more times the average duration of life was 46.85 months, the longest being 25 years, and the shortest 4 months. Of the cases not operated upon, 61.5 per cent. died within 3 years, as against 50 per cent. of those operated upon; while, taking a longer interval, of those not operated upon, 76 per cent. died within six years, as against 89 per cent. of those submitted to operation. From these figures it appeared doubtful whether long immunity was due to operation. With regard to the question whether the occurrence of cancer after long immunity was a recurrent growth or a fresh outbreak, he thought that, except for those cases where the growth occurred in the opposite breast, they were true recurrences; recurrences took place at all dates, and no line could be drawn between the early and the late recurrences; the late recurrences occurred in the same situations as the early ones, and in positions where primary carcinoma could not occur. With regard to the effect of operation on cancer, if it was simply removal of an infected and infecting centre, it was equivalent to amputation, and could not be regarded as a cure. Amputation did not cure gangrene of the leg. Sometimes removal of the infecting growth was in time, sometimes it was too late to prevent infection. The wider the operation the longer was the period of immunity, and the less likely to get local, and the greater the likelihood of visceral recurrence. In conclusion, the words "complete" and "incomplete," or "adequate" and "inadequate" were inadvisable, and it would be better to use the terms "successful" and "unsuccessful" according as to whether infection was prevented or not.

Mr. Watson Cheyne said that the discussion had chiefly turned on the merits of the old and the new operations. Nothing had occurred to alter the opinion he expressed in the Lettsomian Lectures delivered two years ago before the Medical Society. At the end of this year he intended to tabulate the 61 cases which would then have passed the three years' limit. In 22 cases, which were qualified, 13 had had no recurrence or were successful. From investigations into the statistics of the old operation, it appeared that from 10 to 18 per cent. remained free for three years and over. In Mr. Sheild's paper there were two appendices; in the first it was shown that the results of the old operation were not so universally bad as was usually thought. It was necessary to know what meaning should be attached to "universally bad." He did not consider a successful result in 10 per cent. bad. He advocated removal of the primary lymphatic area in every case of cancer of the breast, as the recurrence was very irregular. From the irregularity of recurrence recoveries might occur under the older operation. He agreed with Heidenhain and Stiles in thinking that removal of the breast and its lymphatic area produced more successful results. The question was, were they to remain content with 10 to 18 per cent. recoveries, or to subject all patients to a more extensive operation with 40 to 50 per cent. of recoveries? The question was analogous to that of antiseptics; in both cases microscopic objects were being dealt with and had to be eliminated. He admitted that in his 20 successful cases, 3 or 4 would have been equally successful under the old operation, but which he could not say, and in addition the outlook in those cases would not have been so good, since tissues suitable for recurrence had been left behind. There was no evidence of immunity being produced by operation; cancer, like tubercle, was more likely to recur in a person who had once had it. The second appendix dealt with the question of latency. Latency might be explained in three ways: the cancer cells might possibly remain dormant, they might grow very slowly, as in atrophying scirrhus, or the growth might be really an independent outbreak of cancer and not a recurrence. The cases in the author's second appendix fell into (1) those in which recurrence occurred in or near the scar, and (2) those in which recurrence took place away from the breast—only about twenty in number. With regard to the first group, he should not call these latent; they might be regarded as a new and independent development of cancer. In answer to the objection that had been raised to that view, why if that were so did the growth not occur more often on the opposite breast, he would ask, Why did cancer not more often develop simultaneously in both breasts? There must be some local cause why cancer developed unilaterally. As Stiles had shown, the breast was not really completely removed by the old operation; the local disposition to cancer therefore remained, and might lead to a fresh outbreak in the remains of the breast. These cases were really strong evidence in favour of the Heidenhain-Stiles operation, for the recurrence nearly always took place in connection with acini of the gland. With regard to the 20 cases where recurrence took place away from the breast, he could not admit latency in all of these, for some might be due to very slow but continued growth. Really satisfactory cases of latency were those induced by Dr. Beatson's cases of oöphorectomy for inoperative cancer. In one case where rapid disappearance of the growth resulted, recurrence took place two years and a half later. He had had 2 cases of oöphorectomy for cancer of the breast; in one the growth dwindled away, but recurred in six months' time. The recurrence of cancer in the axillary glands was a strong argument in favour of the Heidenhain-Stiles operation, for in that course of procedure they were removed. With regard to the use of the term "cure," the worst statistics showed that of the cases under the old operation that remained immune for three years, 85 per cent. had no recurrence. With the Heidenhain-Stiles operation, there would, he thought, be less than 15 per cent of recurrences. Of his own cases there had, as far as he knew, been no recurrence in those that had remained free for three years. If he removed a large tumour from the breast, and the patient remained immune for three years, he would feel that there was little or no chance of recurrence; but if the growth was an atrophic scirrhus the prognosis was not so good. As to the greater frequency of internal deposits after the Heidenhain-Stiles operation he pointed out that 90 per cent. or more of all fatal cases of mammary cancer had internal or visceral growths. Under the old operation patients had local recurrence, and so might die before the internal growths reached any size. Whereas with the Heidenhain-Stiles operation local recurrence was rare, and if it took place anywhere it was in the internal organs, where it grew

to a large size before death occurred. There was no evidence that the operation induced visceral deposits. In conclusion, the terms "complete" and "incomplete," though employed by himself, might not be quite satisfactory, but no reflection was intended on those who practised the "incomplete" operation. It was unfair to call the new operation by Halsted's name, for it was planned and described in detail by Heidenhain and Stiles, and had been carried out by several operators before Halsted.

Dr. Norman Moore thought that the pathological aspect had been too much neglected in this debate. The occurrence of an independent growth in the opposite mamma had been referred to. In his experience the occurrence of two independent cancers in the same person was extremely rare. He referred to the spread of cancer, and indicated the advantages that might accrue to the knowledge of recurrence in mammary carcinoma from a more extended study of the localisation of second growths.

Mr. W. H. Bennett considered that the use of the word "cure" for those cases which remained immune for three years after operation was not justifiable. Patients could not be promised freedom from recurrence if they remained immune for three years; to do so would endanger our reputation for candour and honesty. It had been said that if recurrence did not take place within a reasonable time cancer might be regarded as cured, and it had been compared to other diseases, pneumonia among others. He could not agree that there was any analogy between cancer and a disease like pneumonia. Mr. Hutchinson had said that in a number of cases the occurrence of growth after a period of immunity was not necessarily a recurrence, but might be a genuine fresh outbreak; this view he could not adopt for the ordinary cases where recurrence followed operation. As examples of the vagaries of cancer, he referred to 2 cases in both of which he removed both breasts for cancer six years ago; in one profuse recurrence took place, and was followed by death in nine months, in the other no recurrence occurred, and the patient was alive and well. It was always advisable to clear out the axilla, as affected glands could not be otherwise made certain of. If necessary, the pectoral should be removed, but not as a matter of course, for this certainly might affect the utility of the arm, and it was doubtful whether it had a great influence in preventing recurrence. That growths did occur on the pectoral he knew by experience, but it was rare. The important questions to be answered were, Did very extensive operations, involving removal of the pectorals, provide any greater immunity for the patient, and what was the mortality from the operations? Did the better results, if such there were, obtained from the very extensive operations, compensate for the dangers they involved?

Mr. F. Treves thought that the time was hardly ripe for discussion of this subject as there was not sufficient evidence to go upon. Their knowledge of morbid anatomy was very complete, but the pathology of cancer of the breast had not made much advance during this century. As points illustrating this, he instanced the geographical distribution of cancer and the irregularity of its recurrence. As Mr. Bryant had pointed out, nodules of carcinoma might appear on the skin of the breast and then disappear. These nodules might last for years and then vanish without any treatment. Another unexplained phenomenon was the effect of removal of both ovaries. Was it correct to assume that the proper treatment of cancer of the breast was removal? At the present time it appeared to be the best available, but it might not be the absolutely best treatment. Years ago aneurysm had been thought to be malignant disease, and the treatment adopted was amputation. He did not think that statistics always showed the new operation in a favourable light, or justified the contempt sometimes expressed for the old one. Were there not dangers attached to the performance of the new operation? He had seen two patients a year after they had been operated upon by the new method, and in both of them the result was deplorable. In both recurrence had taken place; the arms were firmly bound to the sides and the hands were œdematous and neuralgic. He thought that as time went on the new operation would take a less prominent place.

Mr. A. M. Sheild, in reply, said that as often happened the debate had taken lines different from those which had been intended in his paper. He had had no intention of comparing the results of the greater (complete) and of the lesser (or so-called incomplete) operation. But from this discussion the medical public would gather a definite expression of opinion on this subject. By the "lesser" operation he meant removal of the breast without its prolongations and without removing the contents of the axilla, and by the "greater," the operation advocated by Stiles and Heidenhain. In the discussion very different operations had been classed together by different speakers, and this led to some confusion, so that it was necessary to mention these definitions. By "universally bad" results he was expressing the views of Agnew and Paget. He had not brought forward all the available good results from the lesser operation; there were others available, such as 35 cases recorded by Mr. H. Morris. As shown by the debate, the senior surgeons, like Sir Thomas Smith and Mr. Teale, favoured the lesser operation, while others, of whom Mr. Cheyne was the apostle, advocated the greater. Volkmann's three-year limit had not met with much support. With regard to the question whether the occurrence of cancer after long immunity was to be regarded as a fresh outbreak or as a recurrence Mr. Hutchinson and Mr. Butlin, both past presidents of the Pathological Society, supported the former view, but he had no doubt that it was a true recurrence, for in 43 per cent. the growths were in the lungs and liver, while they also sprang up in bones and in lymphatic glands, where primary carcinoma could not occur. The phenomena of recurrence emphasised the importance of early operation. It was, he thought, unwise to adopt any one operation rigidly in the face of the infinite variety of the disease; thus, when cancer occurred in an accessory mamma the lesser operation was all that was required. It was quite impossible to detect infected glands without opening the axilla, and the safest course was to clear out the axillary fat and glands in every case. The operation he performed was not Halsted's. He had found removal of the sternal part of the pectoralis major useful when the axilla was invaded. He insisted that removal of the breast was by no means a trivial operation, and laid stress on the fact that this operation was now often done by persons without sufficient surgical experience. Operations which involved sawing through the clavicle or removal of the arm did not come within the pale of legitimate surgery. Mr. Cheyne had defended the use of the word "cure" with a warmth which was worthy of a better cause. Tubercle and cancer both presented remarkable vagaries, and a patient had lived to see the funeral of the doctor who had prognosticated his death. The word "cure" was often used by medical men in a somewhat modified sense, a sense which the public would neither understand nor appreciate. His paper had been far from pessimistic, and he thought that if the results of the lesser operation had been fairly good, those of the greater might prove to be better.

EPIDEMIOLOGICAL SOCIETY.

Professor Lane Notter, M.D., President, in the Chair.

Friday, February 18th, 1898.

Ground Water and Malarial Fever.

Surgeon-Captain Leonard Rogers, I.M.S., read a paper on the Relation of Variations in the Level of the Ground Water to the Incidence and Seasonal Distribution of Malarial Fevers in India. The constant association of these fevers with a waterlogged soil was, he said, a matter of common observation, and scarcely less so was the general relation subsisting between the rains and the annual recurrence of the illness, whether this occurred during the rainy season or the subsequent drying of previously-inundated ground. But no accurate or continued observations had been made on the influence of the rise and fall of the ground water alone, such as he had taken in 1895 at Doranda in Chota Nagpur, a district cited by Hirsch as one in which malaria prevailed on a dry, deep, porous soil, and remote from marshes or standing water. He took daily notes of the level of the water in several wells around the lines, the temperature of the soil at a depth of 6 feet, and a complete meteorological record; and to the clinical reports of the cases he added examinations,

often successful, of the blood as to the presence of plasmodia. During the hot, dry months and the cold season, when there was very little fever, and these cases of relapses only, the ground water was 25 to 35 feet below the surface, whereas during the rains when fever prevailed it rose to within 10 to 5 feet. His own observations and the records of previous years showed a constant relation between these phenomena, each oscillation in the one being reflected in the other wholly irrespective of the temperature or of the actual rainfall, whether on the same site in different years or on sites in close proximity, but in which from physical conditions the water stood at very different levels at the same time. He did not forget, however, that the susceptibility of the men in any regiment was greatly dependent on the prevalence of fever at the station where they had previously been. Information supplied by medical men attached to certain tea gardens in Assam and his own observations when in that district fully bore out his conclusions. In Lower Bengal, on the other hand, fever was at its lowest while the land was entirely submerged, but prevailed more or less throughout the year, the ground water being never more than a few feet from the surface, though the fever reached its maximum during the period of rapid drying of the ground and evaporation. These were the extreme examples; elsewhere, with heavier soils and lesser variations of the ground water, both factors operated together or successively. There was in a very malarious part of Assam a spot that enjoyed almost complete immunity, which he ascribed to the disappearance of the streams from the mountains in a deep subterranean basin from which they emerged further down. In the Punjab fever prevailed after the rains, which were irregular, and this too in places where the ground water never rose nearer than 50 feet from the surface, but the land was irrigated and the nights cold. In Assam there was a peculiar form of fever which was communicable from the sick to the healthy, even in localities naturally exempt, when a man had contracted it elsewhere. Whether they accepted the mosquito theory, which he doubted, or not, it seemed indisputable that in this form at any rate the organisms that had entered the body from without escaped from it; and he thought that they did so with the breath.

Dr. Manson denied the identity of coincidence or correspondence, however constant, with true causation, and believed that there must be intermediate causes of which they as yet knew nothing. The mosquito theory was not, as Dr. Rogers imagined, an inference from analogy between such diverse organisms as filaria and plasmodia, for he had seen the latter in the stomachs and in the tissues of those insects; but they were essentially intracorpuscular organisms, and could not leave the body save in the substance of blood corpuscles which certainly never were inhaled. Mauritius was formerly free from fever, and many South Sea Islands, where apparently all the conditions necessary were present, enjoyed entire immunity, and would do so until the plasmodia and the corresponding species of mosquito, of which there were hundreds, should both have been introduced.

Dr. K. McLeod considered stagnation of far more importance than the level of the ground water; to this was due the alarming increase of fever in the irrigated districts of the North-West Provinces, and Dr. Rogers had admitted this in respect of the Punjab. Again, at Hong Kong there was no ground water, but the moisture retained in the *débris* filling hollows in the granite rock gave rise to malaria, and the same thing occurred in places in the rainless Sahara.

Dr. Pringle spoke of the disastrous influence on the health and the fertility alike of the country between the upper Ganges and the Jumna exerted by the unscientific system of so-called irrigation, or rather inundation, begun thirty years ago, and carried out in the teeth of the protests of medical officers, and even of some of the engineers engaged in the work, their reports being suppressed. The ground water had been raised 15 to 25 feet, the soil waterlogged and "rotten," and covered with a salty incrustation, while a peculiar haze might be seen spreading over the land as far as the eye could reach. Malaria had meanwhile increased in amount and severity, though of late better counsels had prevailed, and, as in the Cawnpore district, much improvement had been effected by drainage.

Dr. Bulstrode asked if the plasmodium could live in water, and expressed doubt as to any organisms rising from moist surfaces, much less by evaporation.

Dr. Notter remarked that Crudeli's observations indicated a greater complexity of causes than were as yet apprehended, and he pointed to the absence of agues from Ireland, where the conditions seemed so favourable. Other diseases—as cholera and typhoid—were influenced by the movements of the ground water.

Dr. Rogers replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

F. W. Kidd, M.D., President, in the Chair.

Friday, February 11th, 1898.

Exhibits.

Dr. Alfred Smith exhibited a Pregnant Uterus, showing fœtus *in situ*, with large fibromyoma, removed by Porro's operation.—Dr. Kidd exhibited a Papillomatous Ovarian Cystoma removed by abdominal section.—Dr. Jellett exhibited a Subserous Myoma Uteri removed by myomectomy.

Vaginal Colpotomy: its Advantages and Limitations.

Dr. T. Henry Wilson read a paper on this subject. Having described the method of anterior colpotomy, he pointed out the facility with which the adnexa might be drawn down and examined, adhesions of the ovaries separated, and tubes and ovaries removed, or, if found healthy, replaced. Small subperitoneal myomata, if pedunculated, might be ligated, or, if sessile, incised, removed, and the peritoneum closed over. Small ovarian and parovarian cystomata might likewise be easily treated, or if too large the contents might first be evacuated, the pedicle tied, and the cyst removed. He expressed disapproval of the operation of vaginal fixation for retroversion, except in cases past the child-bearing period, or for the control of hæmorrhage impossible by other means. He then dwelt specially on the treatment of pyosalpinx by this method, and laid stress upon the usual site of rupture of the pus sac when separating adhesions—namely, the posterior surface, which was the most unfavourable situation in operating by cœliotomy, but favourable when by vaginal colpotomy. He strongly advocated removal of the uterus in severe cases of pyosalpinx with dense adhesions of long standing. Having described the operation of posterior colpotomy, he discussed the question of pelvic hæmatocele and pelvic abscess, pointing out the great advantage this method presented for efficient drainage. Densely-adherent ovaries deeply situated in Douglas's pouch he regarded as suitable for the posterior operation, but he deprecated treatment of ruptured tubal pregnancy by the vaginal method. Two difficulties in colpotomy were emphasised, namely, rendering the vagina aseptic and reaching the peritoneum. He also drew attention to the ever-present danger of wounding the ureters. He compared the separation of adhesions by Schultze's method and vaginal colpotomy, with the danger of concealed hæmorrhage in the former, and expressed his preference for the latter method as being more under control. He insisted strongly that no one should undertake vaginal colpotomy who was not prepared to open the abdomen if found necessary, as there was always present the danger of uncontrollable hæmorrhage, and the possibility of being unable to complete the operation from below. He then mentioned certain cases not suited to this operation, as large dermoid tumours, deformity of the pelvis, rendering the operation very difficult; large ovarian tumours, and advanced ectopic gestation. He claimed as advantages the absence of risk of ventral hernia, less shock, absence of the distressing thirst so common even after exploratory abdominal incision, and more speedy convalescence. In summing up, he thought the question to ask oneself was, Can this be done by the vagina?

The President said that in some cases it was absolutely impossible to diagnose whether one were dealing with a single or a double salpingitis. As regards the renewal of small subserous fibromata when the uterus was taken down, it was his experience to meet with a lot of these which never did the patient the slightest harm. There were a good many cases of intestinal adhesions when, if one were unfortunate enough in bringing them down so as to injure the intestines

or the vermiform appendix, the operation might possibly have to be finished by the abdominal method.

Dr. A. J. Smith did not think it the correct operation for ruptured tubal pregnancy, as a large blood clot sometimes extended up to above the umbilicus, and he thought that this clot could not be as efficiently removed as by the abdominal method. He thought that for prolapsed ovaries and catarrhal tubes it was a matter of slight difference whether the abdomen was opened from below or above.

Dr. Henry Jellett thought that enough importance was not given to vaginal cœliotomy as a means of diagnosis pure and simple. In certain cases of dysmenorrhœa, where it was ovarian, he thought it was justifiable to examine the ovaries if any sign of pathological condition could be obtained by a bimanual examination.

Dr. Smyly said that when posterior or anterior colpotomy should be performed depended upon the circumstances of the case—whether the uterus was anteverted or retroverted—and where the pathological condition was situate. He did not approve of Dührssen's method of anterior colpotomy, but of Mackenrodt's. As regards vaginal fixation, he did not altogether agree with Dr. Wilson; he did not think it a good method for ruptured tubal pregnancy on account of the difficulty of knowing when all the clots were cleared away. He had performed the operation for ovarian tumour for pyosalpinx in several cases, and for ruptured tubal pregnancy. With regard to pyosalpinx, he said that the uterus was really infected before the tubes, and unless the uterus were removed the disease was not cured.

Dr. R. D. Purefoy thought that vaginal colpotomy was very suitable for small movable tumours, whatever their origin. He was of opinion that it was not as good as laparotomy for most cases of pyosalpinx and tubal pregnancy. Sometimes the operation was very troublesome. He was quite unable to accept the proposition that in every case of pyosalpinx the uterus should be removed.

Dr. Winifred Dixon thought it a great advantage not to have an abdominal incision.

Dr. Wilson, in reply to the President, said that he was far from saying that every time a fibroma or myoma was diagnosed a colpotomy should be done. It was not always the size of a myoma which caused the symptoms. The vermiform appendix was often seen in operations by the vagina, and might be taken out and put back without danger. Adhesions of the intestines to the uterus, ovaries, and tubes could be easily separated. He (Dr. Wilson) thought Dührssen's method very bad, and Mackenrodt's nearly as bad. If the fundus was not brought through the peritoneum most probably the operation would be a total failure, and the fundus would subsequently retrovert. He did not think with Dr. Smyly that an abdominal section should be done to separate adhesions preparatory to removal of double pyosalpinx by the vagina. He believed that it was in separating the tubes from their adhesions that they burst. With reference to prolapse operations he thought that perhaps extirpation was the best method in elderly women. For younger women he thought that an anterior and posterior colporrhaphy and a properly fitting pessary was best.

LIVERPOOL MEDICAL INSTITUTION.

W. Macfie Campbell, M.D., President, in the Chair.

Thursday, February 17th, 1898.

Cases.

Mr. T. H. Bickerton showed cases of: (1) Molluscum Contagiosum; (2) Double Glaucoma, in a child aged 8 years; and (3) Crystalline Lens undergoing absorption after removal of a piece of steel by electro-magnet.—Dr. G. Stopford Taylor showed a boy, aged 13, affected with Ichthyosis. The disease was general and symmetrical in distribution, the scales greyish green. The axillæ, flexures of elbows and knees, the intergluteal furrow, genitals, the femoro-scrotal regions, the inner sides of the thighs, and the plantar surfaces of the feet and toes were not affected, the skin being supple and moist there.

Hour of Meeting.

It was resolved that a poll of the members should be taken as to the desirability of altering the hour of commencing the ordinary meetings from 8 to 8.30 P.M.

Acute Anterior Poliomyelitis.

Dr. T. R. Bradshaw showed a man, 26 years of age, who had suffered from an attack of acute anterior poliomyelitis. There was wasting of various muscles in both arms, the appearance suggesting progressive muscular atrophy. The paralysis came on acutely during a sharp febrile illness last May, and was followed by rapid wasting. The legs were not affected at any time, there was no tendency for the atrophy to spread, and a gradual improvement was taking place. It was pointed out that the mode of onset, distribution, and wasting indicated that the affection was of the same nature as the acute spinal paralysis of infants, and allusion was made to its extreme rarity in adults.

Arterio-venous Popliteal Aneurysm.

Mr. G. P. Newbolt read notes of a case of arterio-venous aneurysm of the popliteal vessels in which he ligatured the popliteal artery in two places, likewise the vein. The patient made a good recovery.

The President, Mr. Paul, and Mr. Larkin made remarks.

Blackwater Fever.

Mr. Stanley Kellett Smith read a note on this subject based on his experiences of the disease in Central Africa. Taking the opinion that "blackwater" was entirely malarial in nature, he thought it possible that the failure of quinine in many cases might be due to the aggressive action of the drug upon the malarial parasite being cloaked by its own chemical effects upon the blood and excretory organs.

Dr. Carter drew attention to the great value of Warburg's tincture in the disease, and instanced a case where its administration changed the nature of the fever from remittent to intermittent, the patient recovering. The patient also had a dose of opium.

Drs. Abram, Given, Burns, Gemmell, Craigmile, and A. Davidson spoke.

The Value of Antistreptococcus Serum in Puerperal Fever.

Dr. Nathan Raw read a paper on this subject. He mentioned a case admitted into the Mill Road Infirmary fifteen days after confinement, with a temperature of 106°, semi-unconscious, suffering from streptococcic infection. He dilated the cervix under chloroform, and curetted and thoroughly washed out the uterus of stinking *débris*, afterwards injecting 20 c.cm. of serum. This produced good results, and was followed by three more injections of 10 c.cm. each. The later injections caused severe symptoms, including thrombosis of veins and acute pyelonephritis, which led him to suspect the serum to be impure. Bacteriological examination by Dr. C. A. Hill showed the dried serum to contain living streptococci, probably accounted for by defective filtration. Dr. Raw was of opinion that in acute streptococcic infection the serum was of great value, but urged that such a powerful remedy should be only used after bacteriological examination had proved that the patient was suffering from streptococcic infection, otherwise the serum could be of no value whatever.

Dr. C. A. Hill recorded the results of his examination of the dried serum, also of the patient's blood and urine, all three containing living streptococci.

Dr. Heatherly drew attention to a paper read before the Guy's Physical Society by Mr. Turner, in which it was stated that the Pasteur Institute had succeeded in obtaining a serum by injecting pure toxins, thereby placing it on the same basis as diphtheria antitoxic serum. The details were being kept secret, but it was apparently very powerful.

Dr. E. T. Davis thought the case recorded one of sapræmia, and that by the clearing away of *débris* and blood clot with subsequent douching the resolution might have occurred without any "serum" injection. He suggested caution with such a dangerous remedy.

Dr. Abram pointed out that in most of the cases mentioned where no apparent benefit followed the use of the serum, there was no proof that the patient suffered from streptococcic infection. Every case ought to be bacteriologically diagnosed before resorting to the serum.

An interesting discussion was kept up by Drs. Stansfield, Alexander, Buchanan, Grünbaum, Gemmell, Monsarrat, and Thelwall Thomas, opinions being somewhat divided.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

James Braithwaite, M.D., in the Chair.

Friday, January 14th, 1898.

Relapse in Typhoid Fever.

Dr. Churton showed a boy, aged 17, who had had a relapse of typhoid fever three weeks after defervescence. He was admitted on the twelfth day of his first attack, with diarrhœa, excessive indicanuria, and noisy delirium. Small doses of calomel were given and afterwards salol; the rectum and sigmoid were several times washed out with water. After defervescence on the twenty-first day of the fever he was exceedingly impatient of restriction in diet, and had occasional high temperature. He obtained food from other patients, and ate increasingly large quantities. At length, twenty-two days after defervescence, a regular relapse began and lasted three weeks. To prevent his desire for solid food he was placed in a private ward, out of sight and smell of the general ward meals. There he took with perfect contentment no other food than milk for four weeks; afterwards on the usual graduated diet his temperature was never above normal. Three months after recovery he was exceedingly well, and had become very stout. The charts, etc., were shown.

Division of Heredity.

Dr. Churton related some cases observed by him which seemed to justify the proposition that a person was liable to or had a proclivity to the diseases of the parent whom he most distinctly resembled, and not to those of the other parent. Thus (1) a man, aged 63, with no apparent cause for any illness, had cancer of the œsophagus. His father died at 78 of apoplexy, but his mother, whom he closely resembled in features and disposition, died at 63 of cancer of stomach. (2) A lady, complaining of various neuroses, stated that she was one of a family of eleven; that of these all having dark complexions, like the mother, were alive and strong, but all with fair complexions, like the father, were delicate, and except herself, were all dead. (3) A man, aged 37, had wasting diabetes. His mother, whom he greatly resembled, died of that disease at 40. His brothers and sisters, the eldest aged 47, resembled the father, and were quite well. Several similar instances were mentioned. Apparent exceptions had been met with, but none of them had hitherto withstood investigation. Thus (4) a man, aged 37, dreaded phthisis because his father had died of that disease at 38. He stated, however, that he resembled his mother, who was alive but dyspeptic. No positive signs of phthisis could be found, but he was dyspeptic from alcoholic excess. Six months later he was reported to be decidedly consumptive. Inquiries then elicited that he had been wrong in his statement, and that his resemblance to his father was very close; he was unlike any of his brothers and sisters, who all resembled the mother. Details of cases in which a like mistake had been made by other patients were given. Dr. Churton hoped either then or at a future meeting to receive information of (*a*) cases in which persons markedly resembling either parent had had the same disease as that parent, especially the fatal disease; or (*b*) on the contrary side, cases in which persons markedly resembling either parent in features, etc., had resembled the other parent in proclivity to disease, especially the fatal disease.

Cerebellar Tumour.

Dr. E. W. Selby (Doncaster) read a paper on a case of cerebellar tumour. A healthy boy of 7, with a good family history, was seized with severe frontal headache, vomiting, and giddiness. He rapidly became weak in the legs and back, developed a staggering gait, and a week after the onset could not sit upright, and could only stand and walk with assistance. There was marked paresis of the legs, with great ataxia; the arms were unaffected. There was no muscular tremor or rigidity, and sensation was everywhere normal. The knee-jerks and plantar reflexes were absent, the other superficial reflexes were present. The sphincters were active. The pupils were widely dilated and equal; they reacted slowly both to light and to accommodation. There was no ocular paralysis, but there was marked nystagmus on lateral movement. The initial headache and vomiting soon subsided. Drowsiness and apathy, deepening into coma, speedily supervened, and great and progressive emaciation occurred, in spite of an abundant supply of liquid food. Optic neuritis commenced in both eyes a fortnight after the onset, and attained a great intensity in a fortnight. The pulse was usually slow, varying from 60 to 80, and the temperature was persistently subnormal. The child had seven slight general convulsions in the fourth week of his illness, and in the sixth week partial right facial paralysis was observed. Death occurred at the end of two months. At the necropsy a soft, smooth, globular tumour the size of a large walnut was found in the centre of the cerebellum, springing from the middle lobe. The growth did not reach the surface, being covered above and below by the vermiform processes and laterally by the cerebellar hemispheres. The ventricles were dilated and full of fluid. On section, the growth was found to be a round-celled sarcoma.

Gastrorrhaphy.

Mr. Moynihan read a paper on this subject, with notes of a case. The various methods adopted by Bircher of Aarau (the first performer of the operation, which had been forecasted by Ewald) Weir of New York, Brandt of Klausenberg, and Bennett of London were detailed. The method adopted in this case was a modification of the latter. The operation, which required but a brief period for its performance, was singularly easy, and reduced the bulk of the stomach to something very near its normal dimensions. A series of purse-string sutures were introduced in the anterior wall, extending from the greater to the lesser curvature. On drawing these tight, a roll was produced in the interior of the stomach of about the thickness of one's finger, and there were bulgings at each end of the line of suture at the cardiac and pyloric ends. In these positions other sutures were introduced to round off the outline of the stomach. All the cases so far recorded, including the one now described, were attended with a very marked relief to the symptoms of gastric dilatation.

Dr. Barrs thought that the operation was limited in application, many of the cases being due to pyloric obstruction not necessarily malignant. The question to be decided was as to the permanency or otherwise of the relief; if digestion was normal, it might be permanent, but if the mucous membrane was unhealthy, he believed the conditions would recur.

Dr. Johnston (Bradford) thought that in suitable cases the operation should be successful, but that many cases were sufficiently improved by dieting and careful medical treatment.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Robert Saundby, M.D., President, in the Chair.

Thursday, February 10th, 1898.

Congenital Deformity of Forearm.

Mr. William Thomas showed a child about 2 years old, the subject of a congenital deformity of the right forearm. The radius and thumb were absent, and the hand with four fingers extremely abducted. He was keeping the child under careful observation, especially with regard to the power of use present in the limb, as this would determine what instrumental or operative proceeding might be required.

Injury to Lower Radial Epiphysis.

Mr. Thomas also showed a skiagraph of a case of injury to the left lower radial epiphysis, arrest of growth of radius, and deformity resulting from continued growth of the ulna. As the patient had very free and quite painless movement of the wrist, he did not think it would be wise at present to attempt to correct the deformity by operative proceedings. The skiagraph showed the ulna projecting about half an inch lower than its proper relation to the radius; the epiphysial cartilage of the radius obliterated, but that of the ulna quite normal—so that probably some further growth of the ulna would take place.

Calculus Removed from the Ureter.

Mr. Barling showed a small calculus removed from the right ureter of a woman, aged 32. The patient's history extended back to childhood, since when she had almost constantly suffered from pain in the lower part of the abdomen, with acute exacerbations and vomiting. About four years ago she was under treatment in a hospital when the abdomen was opened, and she was told that her ovaries were removed. As soon as she had recovered from operation she found that the pain remained the same. About a year ago, when she had severe pain in the right side of the abdomen, she was under the care of another surgeon, who removed her right kidney. This gave relief to the pain in the right side, but the old pain at the lower part of the abdomen remained. The nephrectomy wound healed and then broke open again after several days of acute pain in the right loin, and a quantity of matter was discharged. When first seen by Mr. Barling there was a discharging sinus in the right loin, there was pus in the urine, and the cystoscope showed a small orifice from which pus was oozing on the right lateral wall of the bladder. Bimanually a mass about the size and shape of the terminal joint of a man's thumb could be felt through the vaginal roof in the course of the right ureter about 2 inches above the lower end of that tube. Calculus in the ureter was diagnosed, and was removed by splitting the vaginal roof. The wound was now healed, as also was the sinus in the loin; the patient was free from the pain she had suffered for so many years, and since the operation, seven weeks ago, had improved very much in her general condition.

Alopecia Areata with Seborrhœa.

Dr. Leslie Phillips showed photographs of a woman, aged 40, who had been under his care occasionally during the last eight years with relapsing severe seborrhœa of the scalp and body. When she came on the last occasion, in addition to the seborrhœa corporis et capitis there was present alopecia areata in addition. Clinically the association of marked examples of the two diseases was not common, although they did occasionally coexist.

Congenital Cyst of Neck.

Mr. F. Marsh showed this specimen, removed on December 2nd, 1897, from the neck of a girl, aged 12. When admitted into the Queen's Hospital there was a soft semifluctuating swelling the size of a large orange on the right side of the neck between the large vessels and the hyoid bone. It had been noticed only a short time prior to admission. When exposed it appeared gelatinous, with numerous processes dipping deeply into the surrounding tissues and beneath the carotid sheath. It did not communicate with the pharynx. Dr. Stanley, pathologist to the hospital, reported "that it was dermoid in character, and contained a large amount of cholesterin."

Scirrhous Carcinoma of the Breast.

Mr. George Heaton showed a breast with a scirrhous carcinoma in it, which he had removed ten days previously from a patient, aged 85. Removal of the growth was advised, despite the patient's great age, for the following reasons: The patient was otherwise quite sound, strong, and of good constitution. The growth was beginning to involve the skin and cause much pain. The prospect of complete immunity after removal was very good. The patient made a rapid and uninterrupted recovery from the operation.

Intussusception.

Mr. Haslam showed a child, aged 5, on whom he had operated ten months ago for an intussusception of twenty hours' duration. As inflation under an anæsthetic failed, the abdomen was opened and the bowel reduced.

Central Sarcoma of Fibula.

Mr. Jordan Lloyd showed the middle third of a left fibula removed by operation from a boy, aged 12, for early central sarcoma. The growth was "giant celled," about the size of a walnut, and was completely shut in by surrounding bone. Symptoms of pain had existed for four or five months, and a month or so after their onset slight enlargement of the bone was noticed.

Papers.

Mr. Jordan Lloyd read a paper on the Common Wry Neck of Childhood: its Cause and its Treatment.—Mr. L. P. Gamgee read a paper on Some Syphilitic Affections of the Joints.

Pathological and Clinical Section.

Robert M. Simon, M.D., President, in the Chair.

Friday, January 28th, 1898.

Popliteal Aneurysm.

Dr. E. N. Nason read a note on a case of popliteal aneurysm which was cured by digital compression. The patient, a man of 60, complained of pain in the right knee which caused him to walk lame. On examination, the popliteal space was found to be occupied by a swelling which was about the size of a small orange, with free expansile pulsation, which was at once controlled by pressure applied to the femoral artery. He was admitted to the Nuneaton Cottage Hospital on November 3rd, and on November 5th digital compression of the femoral artery just below Poupart's ligament was kept up for two and a half hours, at the end of which time pulsation had almost ceased in the sac of the aneurysm. The man bore the compression very badly at first, becoming collapsed, so that it was necessary to give him brandy. He, however, rallied from this sufficiently to justify the continuance of the compression. Three days later, as there was still a feeble pulsation in the sac, pressure was applied to the femoral again for one hour. After this the pulsation became very feeble, and, without any further compression of the femoral artery, ceased entirely five days later. During all this time there was a slight rise in temperature, which did not reach normal for nearly three weeks. He was discharged cured on December 3rd, and there was now no lameness nor pain, and very little thickening in the popliteal space.

Cirrhosis of Liver in a Child.

The President showed a case of cirrhosis of the liver in a child, aged 5 years. The patient had been admitted into the General Hospital a month before with well-marked jaundice. She had had a similar attack three months previously, but before that had been a healthy child. She had taken beer (half to one glass) at night for the last three years. There was no history of syphilis. She was said to have vomited blood, and several attacks of epistaxis had occurred in the hospital. The spleen and liver were hard and greatly enlarged.

Congenital Narrowing of Aorta.

Dr. Kauffmann showed a case of congenitally narrow aorta from a well-developed man aged 35. The aorta measured 3.7 cm. in the thoracic, and 2 8 cm. in the abdominal part beneath the origin of the cœliac axis, as against 4.5 and 3 5 cm. minimal normal measure. Associated with this condition was general enlargement of the heart, which weighed 20 ounces; diffuse endocarditis of the left ventricle, affecting chiefly the region of the papillary muscles and cordæ tendineæ, and leaving the mitral valve free from evident deformity. The aortic valves showed a little atheroma, and the proximal part of the aortic arch the same; the coronary arteries likewise showed a few patches of atheroma, but nothing of notable degree. The man had suffered severely from symptoms of cardiac failure, orthopnœa, and pain, and hyperæmia of the liver, which was much enlarged. His dyspnœa had commenced with passing attacks twelve years ago. These had become more frequent, and since last September he had been confined to his bed. Treatment did not influence his condition in the least degree.

Cystic Disease of Fourth Ventricle.

Dr. Codd showed a specimen of cystic disease of the fourth ventricle from a man aged 33. Seven months before admission the patient had a fit followed by coma; and three months later began to have difficulty in walking. On admission, the gait was ataxic, but he stood still easily, and did not become unsteady on closing his eyes. Pupils normal. Reflexes and tendon jerks well marked. Vision was affected and double optic neuritis present. He had one attack of reflex vomiting. The end came rather rapidly on the twenty-sixth day after admission, ushered in by severe headache,

coma, and irregular respirations. The ventricles were found full of fluid. The ependyma of the fourth ventricle was thickened and had a gelatinous appearance. On the floor in the position of the choroid plexuses was a number of cysts of various sizes. The foramina of Majendie were obliterated. A somewhat similar specimen was from a servant girl, aged 22, in the employ of a surgeon. Without premonitory symptoms she suddenly developed intense headache, became comatose, and died. Here, too, the ventricles were distended with fluid, and the ependyma of the fourth ventricle thickened, while on the lower part of the floor was a cyst about the size of a cherry, containing a solid body in its interior, but bearing no resemblance to an entozoon.

Drs. Codd, Kauffman, Stanley, and White were appointed a subcommittee to investigate and report upon Dr. Codd's specimen.

Cerebral Tumour in a Child.

Dr. Douglas Stanley showed the brain of a child who had developed signs of cerebral tumour. The most striking symptoms were paralysis of the right facial nerve and the motor portion of the fifth. On the same side the right sterno-mastoid was also paralysed.

Sarcoma of Vertebræ.

Dr. Foxwell showed one of two sarcomatous vertebræ taken from a man aged 47, who had been admitted into the Queen's Hospital under his care with the suggested diagnosis of renal calculus. On admission he was found to be a sallow-faced man of nervous temperament. He complained of severe acute pain in the right loin, but chiefly radiating downwards and forwards over the right hip. This pain frequently amounted to agony. No evidence of renal tumour or deep tenderness could be detected on either side, but the extreme and persistent rigidity of the abdominal walls prevented accurate investigation. The urine gave evidence of chronic Bright's disease, and this condition was found *post mortem* to exist in association with an imperfect horseshoe kidney. The nature and situation of the pain led to a diagnosis of new growth affecting the roots of the lumbar nerve. But the absence of any nerve affection of the legs, beyond some increase in both knee-jerks, made one think of a growth external to rather than one involving the substance of the vertebræ. Dr. Foxwell wished especially to emphasise two points—(1) the board-like rigidity of both lumbar and abdominal muscles, which was so marked and persistent; (2) the ease with which the patient could move in bed, and even get out of bed, unassisted up to a few days before his death. This, notwithstanding the large disorganisation of the two vertebræ, was no doubt rendered possible by the persistent muscular contraction before mentioned.

Tubal Abortion.

Dr. Thomas Wilson showed: (1) An incomplete tubal abortion from a patient aged 38, who had had one previous pregnancy eighteen years before. Symptoms began a fortnight after the end of a regular period, and in spite of rest and other treatment, continued until operation five weeks later. (2) Salpingitic closure of the Fallopian tubes, from a case of chronic salpingitis, with recurrent acute attacks. The affection dated from a labour at term three years before operation.

A Pneumonia Temperature Chart.

Dr. Simon showed the temperature chart of a case of pneumonia in which the temperature remained at a high level, from 104° to 105°, for a period of sixteen days, finally descending by lysis.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Thursday, February 3rd, 1898.

James W. Allan, M.D., President, in the Chair.

Clinical Evening.

Hip-Joint Disease: Psoas Abscess.

Dr. Parry showed a case of hip-joint disease in the early stage, also a case of psoas abscess. These were carefully compared and photographs of similar cases distributed among those present. The abduction test was insisted on as the best method of diagnosis and differentiation. In hip-joint disease the pelvis moved with the affected limb on abduction, in psoas abscess it did not. If pencil lines were made joining the umbilicus and symphysis and the anterior superior spines



Fig. 1.—Psoas abscess. Fig. 2.—Tuberculous disease of the hip joint.



Fig. 3.—Psoas abscess. Fig. 4.—Tuberculous disease of the hip joint.

of the ilium this movement was clearly shown, as in the illustrations appended. Abdominal palpation would confirm a diagnosis of psoas abscess in an early stage.

Kraske's Operation.

Dr. Parry showed a successful case. A preliminary colotomy greatly favoured success in this operation. It allowed of an exact diagnosis; the parts concerned could be examined by the abdominal wound. It relieved the patient and gave the surgeon control over the parts below. The patient might go to the country and come back in a better condition locally and generally and more fit to stand the serious operation.

Dr. Alex. Napier mentioned that some time ago he had devised a glass plug which could close the colotomy wound, and had found this serviceable.

Acute Intestinal Obstruction.

Dr. Parry also showed three cases of acute intestinal obstruction. (1) The patient, who was sent in by Dr. Davidson, of Cathcart, had indulged in a very free dinner of salmon, Scotch broth, etc., and this induced a bilious attack, to which attacks she was subject, acute incessant vomiting not yielding to dietetic or medicinal treatment. On admission to hospital her condition was very critical, and the prognosis decidedly unfavourable. Operation was speedily performed, a band passing from the pelvis to the abdominal wall above the crest of the ilium, and a few smaller bands, remnants of a general peritonitis, were found and dealt with. Recovery. (2) The patient who was sent by Dr. Wilson Cameron suffered from tuberculous disease of the lungs, and was under treatment when symptoms of obstruction set in. Opium and gruel injections were used. Operation found two coils adherent and twisted. (3) The last case was that of a girl admitted to hospital on December 11th. Sickness had existed from December 3rd, at first mucous vomiting, then of darker material. A history of diarrhœa during the summer, unaffected by medicine. Distension of the abdomen, tenderness; no flatus or fæces passed for a week. It looked like a case of tuberculous disease. Tuberculous peritonitis found at operation, with adhesions due to a band. In such cases the operation should be made as short as possible, so as to prevent undue exhaustion and chloroform sickness; get the patient back to bed as soon as possible. A rapid and methodical search for the cause, and dealing with it; no wasting time beyond this. After opening the abdomen examine first the sigmoid; if this is distended there is probably disease of the rectum. Colotomy meantime only is performed. Large steel retractors are very useful in the search. If the obstruction is in the small intestine a radical operation must be done at once; it cannot be deferred. A stream of warm salt solution, 60 grains to the pint, temperature 100° F., plays on the site of operation all the time, and is used to irrigate the abdominal cavity; on completion, one or two pints are left in; this method keeps up the temperature effectually. Dr. Parry's results were only equalled by Professor Macewen's, and were much better than any other hospital out of Glasgow. Good and careful nursing contributed greatly to this. He could safely leave the after-treatment in the hands of his "ward sister," who had now had a large and long experience in this class of case. Champagne was the only stimulant used, and freely. (4) This was a case of diffuse intraperitoneal hæmorrhage following rupture of tubal pregnancy. Operation. Recovery. The patient, a young, healthy woman, was sent in by Dr. Peden, who diagnosed as above. The illness commenced with a severe crampish pain in the abdomen, followed by collapse and evident signs of internal hæmorrhage. Dr. T. W. Jenkins could find nothing abnormal bimanually with the uterine appendages, although the history favoured this. Operation showed the cavity full of blood. The pelvis and abdomen were quickly washed; a small tear was found in the right tube, which was ligatured and removed, warm salt solution used throughout, and a quantity left in the abdomen, also two pints injected into the median basilic vein. (5) This was a case of cerebral abscess; operation a fortnight previously; patient recovering. There was a history of discharge from the ear, but no discharge on admission; complained of earache and neuralgia; pain at side of head, coma. Pulse 60; temperature 100°. right pupil dilated. Practically no anæsthetic was required; a little ether was given more to keep the heart going than anything else. The abscess was opened and evacuated through the mastoid. Gradual improvement. (6) This was a case of cholecystotomy in a patient sent to hospital for ventral hernia after four unsuccessful attempts in which the gall bladder was explored, and a large number of stones removed. The history of recurring attacks of pain indicated gall stones; this diagnosis could not be confirmed by careful local examination, or even when the gall bladder was exposed; nor until an incision was made into it, and the finger introduced, could one be certain of their presence. (7) This was a case of perforation of stomach and diffuse purulent peritonitis; operation, recovery. The recovery in this case was in large measure due to Dr. Brown, who sent the patient into hospital early as a case of ruptured gastric ulcer. In this case the use of salt solution was most advantageous.

PATHOLOGICAL SOCIETY OF MANCHESTER.

C. E. Richmond, F.R.C.S., President, in the Chair.

Wednesday, February 9th, 1898.

The late Professor Lund.

The President, before the business of the evening, referred to the great loss the Society and the profession generally had suffered in the death of Professor Edward Lund, and a vote of condolence with the relatives was adopted by the meeting.

Tuberculous Tumours of the Brain.

Dr. Trevelyan (Leeds), in describing the physical properties of these tumours, drew attention to the minute tubercles sometimes to be seen on their surface. Although tuberculous tumours were well defined and could often be shelled out, they were rarely encapsuled. The question of the starting point in the meninges, cortex, and subcortex was discussed, and two specimens of tuberculous tumours of the dura mater were shown. No satisfactory evidence was as yet forthcoming to explain their predilection sites under their pathological course. Attention was drawn to the rarity of calcification. The frequency of tuberculous meningitis as the terminal stage, and the almost constant presence of tuberculous lesions elsewhere, were illustrated from the pathological reports of the Leeds General Infirmary. Finally, the evidence obtained from the morbid anatomy in support of the quiescence or cure of these tumours was exemplified by a case taken from the above-mentioned reports, as well as by similar published cases. Illustrative specimens were shown.

Sarcoma of Thyroid Gland.

Mr. Thorburn, after a reference to the malignant tumours recorded in connection with the thyroid gland, showed specimens from a case of spindle-celled sarcoma occurring in a woman, aged 58. There was a history of nine months' growth, and the primary mass involved mainly the left lobe of the thyroid gland. Metastatic growth in the right humerus was followed by spontaneous fracture of the bone. At the necropsy nodules of metastatic growth were found in the lungs and heart, and the primary growth had penetrated the left jugular vein. Death resulted from involvement of the vagus, with cardiac failure. The capsule of the thyroid gland was distinguishable throughout, but was distinctly infiltrated.

Calcified Hæmatocele.

Mr. J. E. Platt showed a large scrotal cyst with extensive calcareous degeneration of the cyst walls. It had been removed from a patient aged 65, who stated that it had been in existence for nearly twenty years, and that it had first appeared after a blow upon the scrotum. The cyst wall was very thick; its inner surface was rough and shreddy, and almost all over presented large calcareous plates. Microscopic examination showed it to be composed of laminæ of fibrous tissue without an epithelial lining. The cyst surrounded the greater part of the testicle, and apparently had originated in the tunica vaginalis. The various kinds of scrotal cysts which might undergo calcareous changes were mentioned, and the opinion was expressed that the specimen under consideration was a calcified hæmatocele.

Specimens.

Dr. Moore exhibited and described preparations of a so-called "Chloroma" from the Mediastinum of a Rabbit.—Dr. Wilkinson exhibited preparations of Bilateral Malignant

Growth of the Kidneys from a child aged 1 year. The following card specimens were also shown: Dr. BROOKE: Illustrations of various Cutaneous Affections.—Dr. FOTHERGILL: Gynæcological Specimens.—Dr. HELME: Double Ovarian Cysts (2 cases), Submucous and Polypoid Myomata of Uterus.—Mr. LANCASHIRE: Photographs of Skin Diseases.—Mr. J. E. PLATT: (1) Epithelioma of Penis; (2) Polypus of Small Intestine causing Intussusception; (3) Amputation Neuromata; (4) a piece of Intestine from a Hernial Sac, showing ulceration from pressure of the neck of the sac.—Mr. RAY: Sections of Calculi in the Prostate Gland of Man and Rabbit.—Mr. J. W. SMITH: Sarcoma of Tarsus.—Dr. STEELL: Adrenals from a case of Addison's Disease.—Dr. WIGHTWICK: (1) Imperforate Rectum; (2) Congenital Cystic Kidneys; (3) Malignant Growth of Jaw.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

ARNOLD EVANS, M.D., President, in the Chair.

Tuesday, February 1st, 1898.

DEMONSTRATION.

DR. MAJOR gave a microscopical demonstration.

MYXŒDEMA.

Dr. T. JASON WOOD read a paper on myxœdema, in relation to a case exhibited at a previous meeting. After reviewing the knowledge of the disease, since its first recognition twenty-four years ago, Dr. Wood described a typical case, together with the mode of treatment by thyroid preparation, and laid stress upon the dangers to be avoided during such treatment.

EMPYEMA.

Dr. BERRY and Dr. METCALFE read papers on several cases of empyema and their treatment. Dr. Berry first drew attention to the unusual frequency of empyema cases during the past year. In the Keighley district chloroform was the anæsthetic used; the incision was made in the posterior axillary line; resection of the rib was not usually practised in the first instance, and solid fibrinous material was removed as far as possible. The average duration of treatment was six or eight weeks. Dr. Berry showed a tube, devised by Mr. Hutton of Edinburgh, which had been used in one case. It consisted of an ordinary flange tube, to which a longer tube was attached by a glass angle, and the outer end of this terminated in a valve opening outwards into the dressing. The rubber flange was made to fit practically airtight to the skin by means of a piece of gutta-percha tissue, and thus the contents of the pleural cavity were allowed to escape with every expiratory effort, but air was prevented from returning by the valve. It was claimed that much more perfect expansion of the lung was attained by this means, and that a tube need only be worn for a much shorter time. Respiratory exercises (for example, the use of a wind instrument) were recommended during convalescence.

The paper was discussed by several members, and Drs. BERRY and METCALFE replied.

CONGENITAL SPASTIC PARAPLEGIA.

Dr. KERR read notes of a case of congenital spastic paraplegia shown at a previous meeting. The patient was a girl, aged 5. She did not walk till 3, and then only imperfectly, turning in the toes and not putting down the heels. There was nothing noteworthy at birth, but during the first three weeks of life the patient suffered from convulsions. During the five months previous to her fifth birthday she was getting worse, talked peculiarly, and spilled her food at meals. On examination, she was well grown, with an expressionless face, and spoke in a slow, "scanning" way. There was no strabismus or nystagmus, and the optic discs and pupil reflexes were natural. There was no pain, but tremors were present on voluntary movements of the hands, and occasionally when at rest. The tremors could be partly controlled, and did not increase in violence as the movements continued. The gait was spastic, and she could not stand or walk without assistance; the attempts at walking were very imperfect; the heels were not put down, and the toes seemed to catch the floor. There was no sign of spinal column or joint disease, no wasting of muscles, and the electrical reactions were normal. For some days the presence of the knee-jerks could not be demonstrated. The patient was given nux vomica, and in four or five days the knee-jerks were excessive. The mental condition was rather dull. From this time the patient rapidly improved, and was discharged at the end of three weeks. Since June last she had gone on taking strychnine for about a fortnight in each month, and could now run and jump, and had improved in every way except speech. Dr. Kerr discussed the diagnosis from birth palsy, and pointed out the hopeless nature of cases resulting from injury during birth. In these cases there was probably an arrest of development in the pyramidal tract resulting in the spastic condition, and they were generally associated with mental defect due to the cranial injuries.

Drs. MAJOR, EURICH, and MANTLE discussed the case, and Dr. KERR replied.

HUNTERIAN SOCIETY.—At the annual meeting held on February 9th, Dr. G. E. HERMAN, President, in the chair, the report of the Council was read and adopted; also the balance sheet, having been duly audited by Messrs. Gordon Brown and Hope Grant, was passed. The report of the Honorary Librarian was read.—Mr. J. ADAMS proposed a hearty vote of thanks to the President, Dr. Herman, for his valuable services during the past year. This was seconded by Dr. F. J. SMITH, and carried unanimously. Dr. HERMAN replied.—Dr. COTMAN proposed, and Dr. F. J. WOODS seconded, a vote of thanks to the Vice-Presidents, Treasurer, and Librarian for their services during the past year. This was carried unanimously, and Dr. TURNER replied.—Dr. OLIVER proposed a vote of thanks to the Council, Secretaries, and Auditors; this was seconded by Dr. FORTESCUE FOX, and carried unanimously. Mr. A. H. TUBBY replied.—The Scrutineers, Dr. BEST and Dr. G. MICHAEL, having examined the balloting papers, declared the following gentlemen elected as office-bearers for the ensuing year:—*President:* J. S. E. Cotman, M.R.C.P.E. *Vice-Presidents:* S. H. Appleford, M.D., Fred J. Smith, M.D., A. H. Tubby, M.S., J. F. Woods, M.D. *Treasurer:* F. Charlewood Turner, M.D. *Trustees:* H. T. Fotherley, M.D., F. M. Corner. *Librarian:* T. Arnold Chaplin, M.D. *Orator:* Sir Hugh Beevor, Bart., M.D. *Secretaries:* Arthur T. Davies, M.D., J. H. Targett, M.S. *Council:* John Adams, F.R.C.S., A. Berrill, Bertrand Dawson, M.D., Fortescue Fox, M.D., A. W. Galloway, Hope Grant, F.R.C.S.E., W. A. Grogono, G. E. Herman, M.B., John W. Oliver, M.D., William Rawes, M.D., F.R.C.S., Henry J. Sequeira, James H. Sequeira, M.D. *Auditors:* F. Gordon Brown, Hope Grant, F.R.C.S.E., T. Glover Lyon, M.D., W. Rawes, M.D., F.R.C.S.—The Society then adjourned to the Theatre of the London Institution to hear the annual Hunterian Oration given by Dr. PETER HORROCKS, an abstract of which was published in the BRITISH MEDICAL JOURNAL of February 19th. At the conclusion of the oration the PRESIDENT proposed a hearty vote of thanks to Dr. Horrocks, which was accorded with acclamation.—The annual dinner was held on Friday, February 11th, at the First Avenue Hotel, the PRESIDENT in the chair. Sixty-six Fellows and guests were present. After the usual loyal toasts had been given by the PRESIDENT, the following were duly honoured: "The Hunterian Society," proposed by Dr. HINGSTON FOX, and replied to by Dr. PYE-SMITH; "The Royal Colleges," proposed by Dr. F. WALLACE, and responded to by Sir SAMUEL WILKS and Mr. T. BRYANT; "The Sister Societies," proposed by Dr. COTMAN, and replied to by Dr. SANSOM; "The Orator and Hunterian Society's Lecturer," proposed by Dr. RAWES, and responded to by Dr. HORROCKS and Mr. VICTOR HORSLEY; "The Visitors," proposed by Dr. FORTESCUE FOX, and responded to by Mr. R. W. FRAZER; "The President," proposed by Mr. J. H. TARGETT; "The Retiring Honorary Secretary," proposed by the PRESIDENT, and responded to by Mr. A. H. TUBBY.—During the intervals glees and other songs were sung.

SOCIETY OF ANÆSTHETISTS.—At a meeting on February 17th, Dr. DUDLEY BUXTON (President) in the chair, Professor WALLER, F.R.S., read a paper on Dosage in Anæsthetics. He quoted Snow's conclusions that definite dosage of chloroform produced results proportionate to the quantity inhaled. Paul Bert's and Waller's experience agreed with Snow's, and proved that a lethal dose was double that necessary to produce anæsthesia. Waller, working upon the action of chloroform vapour on detached nerve, found from 1 to 2 per

cent. caused anæsthesia; Paul Bert's method of titration also led to this result, thus agreeing with Snow's figures. Titration methods were too cumbersome for common use, but an approximate method of dosage was possible with Junker's apparatus. The "open" or "slap dash" method, as Professor Waller preferred to call it, allowed no such precision. Professor Waller described his method of experimentation, and quoted the results before the Montreal meeting of the British Medical Association.[1] From his experimental data he could now advance a step further and say that 1 per cent. chloroform excited, 2 per cent. anæsthetised, and greater strength destroyed nerve. Knowing the lung capacity and the weight of the blood of the animal, it was easy to arrive at the dose requisite for the individual. Ether as compared with chloroform was seven times less powerful, otherwise it acted similarly upon nerve.—Dr. Dudley Buxton was glad Dr. Waller had emphasised that chloroform acted directly in proportion to the quantity taken in a given time. Although admitted theoretically by most persons, this belief did not always influence methods. Impeded elimination often caused danger and even death. Unless this were recognised, and attention given to the output as well as the intake, overdosage by accumulation was apt to occur. Dr. Waller had referred to Dr. Carter's published cases as proof of how little chloroform was required to maintain anæsthesia, but in these the operations undertaken and the shortness of the period of anæsthesia made them out of parity with the severer cases met with in hospital practice. It was rather in the latter class of case and patient that the difficulty of maintaining accurate dosage occurred. Dr. Buxton thought, however, care and experience would succeed even though an apparatus was as yet wanting which fulfilled every requirement.—Dr. Bradford had found that animals died in two ways under chloroform. If the dose were gradually increased asphyxia supervened, but the heart was not paralysed and recovery ensued; if an overwhelming dose were given the heart at once stopped, and recovery never took place. His experiments proving this had never been answered or disproved.—Dr. Wright, while believing that death from chloroform was always asphyxial, had found that opening the carotid artery removed the chloroform-saturated blood, and by annulling arterial pressure lessened the work to be done by the heart.—Mr. Grant Morris thought, although they had a theory on dosage, a method did not exist; but Mr. Woodhouse Braine pointed out that Mr. Clover's method was a successful application of the theory of dosage.—Dr. Heywood Smith said his father had very early invented an apparatus with that object. The patient aspirated air over chloroform, and took less and less as his respirations became weaker.—Dr. Cooke's experience led him to believe that chloroform, as given in the A.C.E. mixture, was usually administered without any attempt at exact dosage.—The President having made some remarks, Professor Waller replied, and gave a lantern slide demonstration of the effect of anæsthetics upon isolated nerve.

British Gynæcological Society.—At a meeting on February 10th, Dr. Macnaughton Jones, President, in the chair, Mr. Bowreman Jessett showed the following specimens: (1) Sarcoma of the Ovary; (2) Fibro-myoma of Uterus; (3) Uterine Myoma removed subsequent to Oöphorectomy; (4) Extrauterine Gestation. The discussion on these was postponed to the next meeting.—The President delivered his inaugural address on the Position of Gynæcology To-day.—Mr. Jessett moved, and Dr. Armstrong (Buxton) seconded, a hearty vote of thanks to the President for his interesting address.—At 10 p.m. a *conversazione* was held at the invitation of the President. Over 100 Fellows and guests attended. A selection of music was given by Ashton's Croatian Orchestra, and Mr. M. B. Spurr gave a series of songs and recitations, which were much appreciated. In one room an exhibit of gynæcological instruments was shown by Messrs. Arnold and Sons; and some therapeutic remedies were shown by Messrs. Oppenheimer. In the room of the Royal Society of Literature, kindly lent for the evening, an exhibit of microscopic specimens was held. There were over fifty slides, illustrating pathological conditions of the Fallopian tubes, ovaries, uterus, and vulva, as well as various micro-organisms, lent by Mr. J. Bland Sutton, Mr. J. H. Targett, Dr. T. W. Eden, Dr. Macnaughton Jones, and Dr. A. E. Giles.

[1] British Medical Journal, November 20th, 1897.

Society of Medical Officers of Health.—At a meeting on February 11th, Dr. E. Seaton, President, in the chair, Dr. E. Sergeant read a paper on the Inspection of Cowsheds, submitting to the Society resolutions in favour of uniform regulations throughout the country on the basis of model by-laws to be issued by the Local Government Board, and the execution of these orders by the county councils, who might appoint qualified inspectors, or at any rate that the county council should have the power of control and of compelling the local authorities to exercise an effective supervision of the cowsheds and dairies within their districts. He referred to the numerous and severe outbreaks of typhoid and other fevers clearly traced to milk supplies collected by the late Mr. Ernest Hart, but maintained that the aggregate mortality from minor outbreaks and untraced sporadic cases, the fatal summer diarrhœa of infants, and most of the mesenteric tubercle—all in one way or another connected with milk—was far greater than that from the more alarming epidemics. He adduced Dr. Niven's inquiries into the milk supply of Manchester and bovine tuberculosis. Tried by the tuberculin test, 15 to 50 per cent. of the cows in different parts of Lancashire proved to be affected; he had found 1½ per cent. in which the udders were implicated, and the admixture of their milk with that of others would infect the whole. Dr. Hope detected the bacillus in 2·8 per cent. of samples of Liverpool milk, but in 24 per cent. of those taken at a certain railway station—for the condition of cowsheds in rural districts was worse than that in and near towns. In Manchester and Salford dairy companies had been formed on the Copenhagen system, which involved the testing of all cows and the exclusive employment of animals absolutely free from the disease, but he was not aware that tuberculin had been thus used elsewhere. Some medical officers of health permitted no milk to be brought into their towns unless the producers complied with certain conditions, but this he feared was *ultra vires*. In many counties there was neither registration nor regulations, and where there were such they were not enforced. The usual standard of cubic space, if there were any, was 450 to 600 cubic feet; rarely 800, which ought to be the minimum.—After some remarks from Dr. F. T. Bond, Dr. Spottiswoode Cameron, and Dr. Newsholme, Dr. Armstrong (Newcastle) deprecated the exclusive attention to the presence of tubercle in the udder, on the authority of Nocard, who admitted that almost the whole veterinary profession in France differed from him.—Dr. E. F. Willoughby said the standard of cubic space must be determined by the kind of building and the time during which it was occupied. The outside control mentioned by Drs. Sergeant and Bond might be practicable where a dozen milk shops were regularly supplied by a score of farmers, but not so in large cities. It was only the great dairy companies that could control the conditions of milk production. His experience had convinced him that questions of paving, draining, and cleaning of sheds were of even more importance to the purity of milk, the bacillus coli present in myriads per c.cm. being the chief factor in souring, etc., and in this respect much could be learnt from the farmers of the south and east of Scotland.—Dr. Groves (Isle of Wight) believed that much might be done by educating the British farmer, and diffusing information which, though at first treated with contempt, would, however slowly, bring about the desired result. He called attention to the advantages and practicability of warming cowsheds by hot water or steam pipes, which had to his knowledge been done at very moderate cost, the hot water being available for dairy purposes generally.—Dr. Legge and others having spoken, Dr. Sergeant replied, and the resolutions were put and carried *nem con.*

Forfarshire Medical Association.—At a meeting on February 4th, Dr. Alex. Campbell, President, in the chair, Dr. Don showed a lad with a peculiar eruption on the right leg and thigh. The eruption had broken out twelve months before, and extended over the thigh and leg, following the dis-

tribution of the cutaneous branches of the sciatic in the thigh and the musculo-cutaneous in the leg. There were no vesicles, but crops of papules with marked pigmentation, accompanied by itchiness of the parts affected.—Dr. MACKIE WHYTE showed Two Hearts, the one with clots in the superior vena cava and left subclavian vein, the other with a large left auricle. In both there was mitral stenosis; in the latter during life there was a diastolic thrill at the pulmonary area.—Dr. GUILD read a paper on Nasal Obstruction. He pointed out how the condition affected the upper part of the respiratory system, and that hypertrophy of adenoid tissue would recur after removal if an anterior cause of obstruction were not removed. He described the symptoms produced by hypertrophies of the inferior turbinate bones, which were the commonest causes of nasal obstruction. Other causes of nasal obstruction were considered. Removal of the cause was indicated where there was deafness from implication of the Eustachian tubes, chronic bronchial or asthmatic symptoms. He advocated cocaine and the electric cautery as most efficient in treatment.—Dr. MACVICAR read notes of a case of Visual Aphasia and Amnesia Verbalis occurring in a young man, a painter by trade, whose head was struck forcibly against the edge of a dresser on December 27th, 1897, the injury being over the right parietal eminence. He suffered from symptoms of concussion, and after recovery from this was unable to read. He gradually improved, and could read simple sentences in fourteen days and numerals in nineteen days after the injury. The lesion was supposed to be of the nature of a hæmorrhage due to *contre-coup* over the left angular gyrus, and possibly affecting the supramarginal and posterior part of the third temporo-sphenoidal convolutions. Dr. WHYTE and Dr. STEELE MOON made remarks.—Dr. KYNOCH read notes on a case of Labour complicated by Ovarian Tumour, subsequently removed by operation. The patient was aged 37, and had had seven children. The last two labours were complicated by an ovarian tumour, which, on account of the softness of its contents, became flattened out between the head and posterior pelvic wall, allowing delivery to be completed by forceps. Ovariotomy was performed a few months after the last confinement, the tumour proving to be a dermoid cyst.—Dr. MACKIE WHYTE showed a case of Congenital Diplegia and read notes of the case. The patient was a man, aged 48, and 4 ft. 5 in. in height. The trunk was short, measuring 21 inches from the top of the sternum to the symphysis pubis, 34½ inches round the chest. The ribs on both sides were close to the iliac crest. The patient was unable to feed himself. The movements of the arms were chiefly adduction of arms across the body at the shoulder-joint. The arms were small, both rotated inwards, and the hands were in a state of pronation. The lower extremities were poorly developed, the feet were in the position of talipes equino-varus. The joints were all freely movable. There was a scoliosis of the spine most marked in lower dorsal vertebræ. The patient was quite intelligent. Dr. Whyte stated that Dr. Sarah Macnutt had shown a meningeal hæmorrhage at birth to be the cause of this disease.

SHEFFIELD MEDICO CHIRURGICAL SOCIETY.—At a meeting on February 3rd, Dr. SINCLAIR WHITE (President) in the chair, Mr. SNELL showed recent Specimens Mounted in Formol (Priestley Smith's method) of three cases of Sarcoma of the Choroid, one being a leucosarcoma and glioma of retina. Photographs of Fibroma of the Upper Eyelid were shown with Stereoscopes, together with Microscopic Slides of the Sarcomata.—Mr. ARCHIBALD CUFF showed a Boy, who had fallen over a broken bottle in June, 1897, opening the left elbow-joint from side to side, cutting off the olecranon process and severing the ulnar nerve. The treatment consisted in thoroughly cleansing the parts, suturing the bone ends with chromic catgut periosteal sutures, and suturing the cut ulnar nerve. The wound, which was extensive, healed by primary union. There was now perfect movement; the bony fragments were united by bone, and there was almost complete return of the functions of the cut nerve. Mr. Cuff also showed a case of Circular Ulcer of the leg of seventeen years' standing now perfectly healed. The treatment consisted in ligation of the saphenous vein, cleansing of the ulcer, and the application of lead plates to its surface.—A discussion on Efficient Vaccination was introduced by Mr. DALE JAMES and Mr. WILLIAM SKINNER; the PRESIDENT, Mr. KILHAM, Mr. LONGBOTTOM, Mr. SNELL, Dr. GILES, Mr. GALE, Dr. RICHARDS, and Dr. KEELING made remarks.

ERRATUM.—In the report of Dr. Dawson's paper read before the Hunterian Society on January 26th, which appeared in the BRITISH MEDICAL JOURNAL of February 5th, p. 376, line 33, the sentence, "In 19 fatal consecutive cases where a necropsy showed malignant disease of the fundus, no tumour was felt," should read, "No tumour was felt in one half.

REVIEWS.

ENGLISH SANITARY INSTITUTIONS. By Sir JOHN SIMON, K.C.B. Second Edition. London: Smith, Elder, and Co. 1897. (Demy 8vo, pp. 536. 18s.)

WE welcome this second edition of a book which has described so graphically for us the growth of our present sanitary system. Little altered, save here and there in the addition of a line to the tablet of a fellow worker gone, this new issue affords opportunity to a new generation of health officers of learning the history of the Acts they have to administer. A couple of appendices rescue from ephemeral form two charmingly written essays of permanent and lasting value. Of these, the first, reprinted from the *Nineteenth Century*, deals with the ethical relations of early man, the other with the more urgently modern question of the disabilities imposed by the Mortmain Acts on the willing of property for charitable purposes. This latter, which appeared in the columns of the BRITISH MEDICAL JOURNAL of November 1st, 1890, led to important legislation in the direction indicated.

For the benefit of those who cannot readily refer to the full notice of the first edition, which appeared in the JOURNAL when the first edition was published, we may shortly indicate the nature of the contents of the volume before us. Dealing briefly but thoughtfully in the first chapter with the Juventus Mundi, the writer passes in the second to Roman Institutions, and, through Post-Roman Anarchy in the third, to the subject of Mediæval Philanthropy. He tells us how Francis of Assisi, "taking Poverty to be his Bride..... adopted all her kindred as his own, and. vowing himself to that wedlock.....vowed himself the Servant of the Poor." Part II, Post-Mediæval England, depicts the growth of the medical profession in Tudor times, tells of the Act of Henry VIII, instituting Commissions of Sewers, and of the Poor-law Acts, by which the State undertook functions formerly left to the monk. In the sixth chapter we find a sketch of what London was, sanitarily, in Elizabethan times.

But it is Part III, New Momenta, which is most interesting to those who care to know the forces which brought about our Victorian sanitary legislation. Touching lightly, but with reverent pen, on the fathers of Modern Preventive Medicine, he points out how the growth of "humanity" became a factor in social politics, and goes on, in Chapter IX, to relate some of the moral effects of the first visit of Asiatic cholera to Europe. This leads naturally to the beginnings of the Public Health legislation of 1848. Sir Edwin Chadwick (who died at the age of 90, the year the first edition came out), Dr. Southwood Smith, Dr. Neil Arnott, Dr. James Phillips Kay (afterwards Sir J. P. Kay-Shuttleworth) and their work are not forgotten. Each receives his graceful, if brief, tribute. The various Commissions and Committees of the Forties, their work and their impotences, are fully set forth. The various Clauses Consolidation Acts, which preceded the great sanitary charter of 1848, are described. Then comes the history of the Board of Health, and we are glad to see the footnote is retained to Chapter XI, giving Dr. Rumsey's little joke about the two lords and a barrister appointed to care for the health of the living, and how, after two years of doubtful success, a physician was called in to bury the dead.

The remaining half of the book deals with our health history since 1848, and the whole work brings out clearly the beneficent influence of cholera and other conspicuous plagues in saving life. The book is one which all who wish to understand how our present system of Public Health administra-

tion has come into existence should read, and it is needless to say that the author's style would carry the reader along were his subject even less fascinatingly interesting.

Official Nursing Directory. Edited by Sir Henry Burdett, K.C.B. London: The Scientific Press, Limited. 1898. (Crown 8vo, pp. 576. 5s.)

The compilers of the *Directory*, of which this is the first issue, deserve full credit for the excellence of their intentions, but the result is disappointing, even when allowance is made for the difficulties attending the first issue of a book such as this, which is intended to serve the twofold purpose of a book of reference for nurses, and of a list of nurses with addresses and qualifications for the convenience of the public. We are glad to be able to praise the legal information which forms the first section. The nurse who is brought in contact with the law in any form will find here valuable advice given in simple language. The next two sections deal with the training schools of London and the provinces classified as those with over and those with under a hundred beds. We note that, for some inexplicable reason, the vast hospitals under the Metropolitan Asylums Board are placed in the latter division. In this section the name of the recently-appointed matron of St. George's Hospital is correctly given, but on page 202 the same lady is said to be matron of the Private Nursing Institution connected with the Hospital for Sick Children.

In the section which deals with associations for the benefit of nurses, etc., Lady Roberts's Fund is mentioned, but without name or address of any official from whom inquiries can be made; this omission may be in accordance with the wish of the foundress, but it certainly requires explanation. The facts given about the Royal Red Cross are meagre, and the fact that it is conferred by Her Majesty is not mentioned. The objects of the Guild of St. Barnabas are not correctly stated, and the secretary's address is wrong. The list of homes is by no means exhaustive. In such a matter a certain discretion must, of course, be used, but no professional grounds can require the exclusion of the Nurses' Co-operation in Belgrave Road, of the Nurses' Hostel, and of the Nurses' Institute in Delamere Crescent (to mention only three out of many), while the "Church Army Nurses," who have, we believe, only three months in hospital, find a place in the list.

Turning to the directory proper, we are disappointed by the number of inaccuracies which a cursory examination has revealed. Well-known individuals whose careers are, as it were, public property, are entered as "private nurses to date," apparently because imagination could picture no other occupation for one who is no longer connected with a hospital or with an institution recognised by this *Directory*. Many addresses are wrong; some, whose maiden names are here, are married, some are dead, others are not credited with the responsible positions which they now hold. Such societies as the Chartered Nurses and the Registered Nurses, though mentioned in Part I, are not noticed in the *Directory* itself, where the number in the address might be merely that of a private house; yet the Nurses' Co-operation in New Cavendish Street is always given in full. The apologetic tone of the preface is amply justified. The editors may urge that they have received no help from the individuals in the case of incorrect entries; but if a nurse did not supply information, it would have been better either to omit the name altogether, or to indicate by a sign that the entry is unverified. The difficulties have no doubt been very great; but the editors have added to them enormously by spreading their work over three years. The perpetual change and movement which go on among nurses make it essential that the data should be verified shortly before publication.

Outlines of Veterinary Anatomy. By O. Charnock Bradley, M.R.C.V.S., Professor of Anatomy in the New Veterinary College, Edinburgh. London: Baillière, Tindall, and Cox. 1897. (Cr. 8vo, pp. 428; 47 Illustrations. 10s. 6d.)

In the preface to this work the author states that he has endeavoured to present the most important facts of veterinary anatomy in as condensed a form as possible consistently with lucidity. It is also stated that it has been long felt that such a book was wanted by students preparing for examination. The latter statement is strikingly true, for we have rarely met with a student of anatomy preparing for examination who did not desire some more ready means of attaining his object than those already at his disposal. With Chauveau, Strangeways, McFadyean, and others at his command, the veterinary student had small cause for complaint. It is too much to hope that the present work will leave nothing for him to desire.

Professor Bradley's book is arranged in three parts. The first treats of the anterior and posterior limbs, the second of the trunk, and the third of the head and neck. Its author disavows any pretensions to originality (other than treatment) or completeness. Though, as in many other works of a like character, the attempt at conciseness is sometimes made at the expense of lucidity, yet the matter is, as a whole, laid with clearness before the student. Professor Bradley would probably have more nearly attained his object if he had more consistently adopted the broader views of comparative anatomy. For instance, the nomenclature used in the description of the carpus and tarsus is open to criticism. If one thing more than another renders the study of anatomy more easy and attractive, and its effects more lasting, it is that part of the teaching which inculcates principles.

As a dissecting-room manual this little book will undoubtedly prove of assistance to students, but it should not be allowed entirely to replace the larger and more comprehensive works now at his disposal.

The Dwelling House. By G. Vivian Poore, M.D., F.R.C.P., etc. London, New York, and Bombay: Longmans, Green, and Co. 1897. (Crown 8vo, pp. 188, 36 illustrations. 3s. 6d.)

This interesting work, consisting as it does largely of papers previously published, suffers in its method of covering its subject from incompleteness and redundancy. The leading ideas associated familiarly with Dr. Poore's name as a sanitarian are impressed again and again throughout the little book, often in almost the very same words. Individually the six chapters are pleasingly written and not without humour. As in the author's suggestive work on Rural Sanitation, the part played by the bacteria of the upper layer of the soil in the nitrification, or as he perhaps wisely prefers to it "humification," of fæcal matters is insisted upon, and his experiments in horticulture at Andover are again described. Much stress is laid upon the purity of the water in a shallow well in the centre of this little Eden, notwithstanding the large amount of fæcal matter and, if we understand rightly (page 80), slop water, with which the surface of the ground is treated. Dr. Poore reiterates, not unnecessarily, that it is only the humus close to the surface that is to be trusted with this work of purification, and that organic substances deeply buried decay slowly and are specially dangerous to wells in doing so. That houses ought to be rated according to cubic content, not cost, thus giving some advantage to the larger curtilage; that building by-laws, contrived for dense town populations, should not be forced on rural districts; that modern conveniences of water supply and well sewered streets tend directly to overcrowding, and that overcrowding is about the most powerful factor in shortening life, are amongst the positions ably advocated by Dr. Poore.

Handbuch der Ernährungstherapie und Diätetik. [Handbook of Dietetic Treatment and Dietary]. Herausgegeben von E. von Leyden. Band I. Abteilung I. Leipzig: Georg Thieme. 1897. (Imp.8vo, pp. 422. M. 10.)

In this handbook it is proposed to deal with dietetic treatment in all its branches, and, as there is no work quite of its kind, it will undoubtedly supply a want. It is to be complete in two volumes, the fasciculus before us being the first part of Vol. i. After a historical survey by Professor Petersen, Professor Rubner treats of the physiology of food and feeding in a very complete and thorough article. Chapter III, by Professor Müller, is on the general pathology of nutrition,

and, as it deals with the general disturbance of nutrition under the various organs, it has a considerable practical value. The fourth chapter on the general treatment by diet is a very important one. It includes a section by Professor v. LEYDEN on the indications for dietetic treatment, one by Professor Klemperer on food stuffs and artificial preparations, one by Professor Liebreich on medicinal agents of service in supplementing dietetic treatment, and one by Professor Senator on baths and climatic and exercise treatments.

In dealing with the indications for dietetic treatment Professor v. Leyden begins with a consideration of the diet in health, and finally concludes with remarks on a quantitative diet. Amongst other matters the author discusses the medicinal action of food stuffs, and he is of opinion that beyond the thyroid treatment, and perhaps that by testicular extract, very little is really definitely known of the great number of tissue extracts more or less recently introduced under the general title of organotherapy.

In Professor Liebreich's article the remedies of service in various unhealthy states of the alimentary tract are chiefly considered. The remaining part of the first volume will contain an account of the technique of feeding as well as artificial feeding and the various so-called dietetic cures. The second volume will deal with the special dietetic treatment of disease under the various systems and organs.

The subject of nutrition and feeding is undoubtedly one of the most difficult chapters in normal and pathological physiology, and yet it is one in which considerable advance has been made in recent years. The present work has been rendered possible and even necessary by this increased knowledge.

THE SPAN OF GESTATION AND THE CAUSE OF BIRTH: a Study of the Critical Period and its Effects in Mammalia. By JOHN BEARD, D.Sc., University Lecturer in Comparative Embryology and in Vertebrate Morphology, Edinburgh. Jena: Gustav Fischer. 1897. (Roy. 8vo., pp. 132. 3s.)

THIS book is an attempt to elucidate the cause or causes which govern the time at which offspring are born into the world. The author thinks the key to the enigma is to be found in what he terms the "critical period." The critical period is the time when "the embryo has acquired its equipment; when its parts, though not yet fully elaborated, are all in existence" (p. 19). This critical period is marked by the commencing degeneration of those structures which have no place in the fully-developed organism. All non-placental mammals are born at the critical period. Only the evolution of an allantoic placenta can carry the birth over till a later period. The allantoic placenta commences to develop some little time before the critical period is reached, but it first enters upon its functions at or during the critical period. The period of time from fertilisation to the critical period the author terms the "critical unit" There is a correspondence between the length of the development *in utero* and ovulation (p. 34). The length of the critical unit is in man 46 to 47 days, about twice that of the "ovulation unit," which the author puts at "23½ days, or perhaps more, though hardly 24 days" (p. 76). The gestation period in man amounts to six critical units. In different mammals the multiple of the critical unit varies, but the length of pregnancy is always a multiple of the critical unit.

The author's views are supported by arguments and observations the collection of which must have involved much labour, and his thesis certainly displays ingenuity. Whether he has solved the question or whether he has merely restated the problem in a different form of words, we must leave our readers to judge for themselves. It is to be hoped that those interested in the subject will read the book before forming a judgment.

HISPANO-PORTUGUESE SURGICAL CONGRESS.—It has been decided to hold a Hispano-Portuguese Surgical Congress every year. The first meeting will be held at Madrid in April, 1898, immediately before or after the International Congress of Hygiene and Demography. The President of the Organising Committee is Dr. José Calvel y Martin, the Vice-President Dr. Rafael Cervera.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS

A CHEST EXPANDER.

DR. ROBERT M. SIMON, F.R.C.P. (Physician to the General Hospital, Birmingham) desires to bring before the notice of the profession an appliance for patients suffering from asthma, bronchitis, and heart weakness. He writes: I have made a careful trial in my own practice with highly satisfactory results. The ordinary bed rests made to support patients suffering from asthma, heart disease, angina pectoris, so fail inasmuch as they do not relieve the chest from the superincumbent weight of the shoulders, neck, and head, and the enfeebled muscles are thus handicapped in the effort of breathing. The appliance in question, of which the illustration gives a good idea, supports the weight of the upper



extremities; at the same time it in no way compresses the walls of the chest. The bands of suspension are attached to carefully-adjusted springs in such a manner as to give the greatest degree of elasticity and freedom of movement, while at the same time maintaining the support. The apparatus takes up but little room in the bed, and the patient can raise or lower himself to any desired level by means of the side adjustment, without disturbing the pillows.

Particulars as to attachment are supplied by the makers, the Asthma Suspender Company, who have appointed Messrs. Salt and Sons, of 69, Corporation Street, Birmingham, surgical instrument makers, as their agents. The appliance, which was the invention of a patient suffering from asthma, would appear likely to be of use in any case, either medical or surgical, in which it is required to relieve the trunk from the weight of the head, shoulders, and arms.

I have found this appliance especially useful in asthma; by its use the attacks are diminished in severity and lessened in frequency.

BRITISH MEDICAL JOURNAL REPORTS.

REPORTS ON THE HYGIENIC CONDITION AND ADMINISTRATION OF METROPOLITAN DISTRICT AND SEPARATE SCHOOLS.

BASED ON THE EVIDENCE LAID BEFORE THE DEPARTMENTAL COMMITTEE.[1]

(By Our Own Commissioner.)

XIV.—THE SCATTERED HOME SYSTEM.

THE evidence laid before the Committee on this system is meagre, three witnesses only having either had experience in or given thought to the subject—two from Sheffield, and one (Mr. James Brown) (4954) from Whitechapel. In Sheffield the plan had been at work less than two years (11505) when Mr. Wycliffe Wilson and Mr. Ashbury (11495) described it to the Committee. The description is given with a knowledge and sympathy which show that the work is conducted *con amore*.

The distinctive features of the Scattered Home plan are two: (1) No child is ever allowed to enter the workhouse or come into contact with adult paupers (11498); (2) The homes rented and supported (11500) by the guardians, are placed in pairs in the industrial quarters of the town, and all the conditions are made as far as possible to resemble those of an average home of a respectable artisan (11914). Thus no home contains more than fifteen children. Boys are reared with girls up to 13 years of age, and each cottage has its baby (11903) which is taken charge of by the elder girls. The children attend the Board schools, local place of worship, and "if the Sunday schools have Bands of Hope or other week evening arrangements the children are facilitated to go to these occupations" (11500).

The health of the children is under the care of the local medical man (11874), who receives 10s. a year for reporting on each child, whether there is sickness or not (11875). For this sum he visits and examines each child once a month (11873), and reports to the guardians every quarter. All cases of trivial ailments or non-infectious disease are nursed in the homes, but the more serious cases are removed to the Children's Hospital. The children wear non-uniform clothing (11581), and take their places in sports, interests, and occupations with the other children of the locality.

THE CENTRAL BLOCK.

The supporters of this system claim for it that amongst its advantages is that no costly buildings are required, neither is pauperism commended to the poor. The only buildings erected have been a receiving home into which all children are drafted on becoming chargeable, and three blocks (11883)—one for girl "ins and outs," one for boys of the same class, and one for Roman Catholic children. In these buildings the children undergo a process of sifting according to their characters (11888) before being drafted into the Scattered Homes. Here also reside the master and matron, whose daily duty it is to visit the homes and to distribute stores.

That the scheme has grown out of careful thought generously expended on every detail no one can doubt who reads the evidence. Moreover it has proved to be economical, it avoids the herding together of large numbers, it secures for the pauper children something nearly resembling family life, and an association on equal terms with other children who are living under happier conditions. Added to these benefits it has awakened the interest of a large number of the inhabitants in different parts of the suburbs of Sheffield, and has thus greatly increased the chances of finding suitable and varied employment for the children.

THE COST OF THE SCATTERED HOMES.

The question of cost is so influential a factor affecting the spread of any system, however good, that it may not be out of place to produce here a table showing the relative costs of the various systems we have had under review. It will be seen that the cost of the Scattered Home system is among the lowest:

COST OF EACH CHILD.

	Per Annum. £ s. d.	Per Week. s. d.
District and separate schools	29 5 6	11 0½
District and separate schools exclusive of loan repayment and interest on loans ...	24 3 1	9 1¼
Scattered homes (Sheffield system)	15 12 0	6 0
Certified homes:		
Normal children	15 12 0	6 0
Special cases	18 4 0	7 0
Boarding out	13 6 8	5 1¼

RESULTS OF DIFFERENT SYSTEMS.

BOYS.

Of the results of the different systems it is not possible to speak with any certainty, first, on account of the conflict of the evidence, and, secondly, because it is impossible to set up a standard for moral conduct or social success which can be either gauged or tabulated.

The evidence concerning boys from the barrack schools and their subsequent careers includes that of a guardian, (8163), of a schoolmaster (17380) belonging to Sutton Schools, who received a small salary (17399) for keeping up a registry and a correspondence (17418) with those lads who leave the school to take situations or enter the army, a lady, Mrs. Lascelles (17,383), whose kindness and religious devotion led her to befriend all the lads trained in the Banstead Village community; and seven superintendents of working lads' homes to which certain boys were sent on leaving the pauper schools in order that they might obtain work. A good deal of this evidence is very conflicting; but perhaps the opinions of the superintendents of the working lads' homes is most to be depended on, inasmuch as they have dealings with the sons of the industrial poor as well as with pauper-reared boys, and also because, living in daily contact with the lads, they are able to see them more naturally than the lady whose relation with them is but casual, or the schoolmaster whose main means of communication is the post office.

In health matters these gentlemen find little difference between the barrack school boys and others. Those who do observe differences find the pauper boys are more subject to boils, sore heads, ringworm, and "given to wet the bed." One says "most of the boys seem strong and robust, but a good few show signs of early neglect, and are undergrown." The general opinion is that in physique they are on a fair average with boys of the same grade outside the schools, not, we contend, a very good result, considering that each child costs more in the schools (11s. 0½d. a week) than any workman (however skilled) could afford to spend on each of his children. The replies relating to mental training and education are, however, more uniform, some masters adding that "different schools produce different results." Thus we are told that the "Tooting boys might be compared to imbeciles on admission, but that the lads from Hanwell are up to the sixth and seventh standard," though another report says that usually Poor-law sixth standard boys have a difficulty in doing third or fourth standard work after leaving school; "the pauper lad appears to have had the thinking done for him;" "they seem dull of comprehension, and lack the ability to grasp even the simplest instructions;" "they show utter ignorance of money, and the coinage is a great trouble to them at first;" such reports point to some of the evils which we have demonstrated to belong to the system. The replies to the questions concerning the moral tone and spirit speak of the lads as being "depressed," "dull and listless," "rather crushed," with "a marked lassitude and disinclination to take part in actual exercise or usual boyish recreations." One gentleman, after one year's experience, which he adds "may be exceptional," finds that "many of the boys are quite ignorant of the vices of London boys," but another after superintending three homes during ten years, writes that in spite of a knowledge of scripture "their ideas seem debased, obscene language and habits are more common among them, and many of them show signs of the practice of personal bad habits." The opinion of one of

[1] The previous articles appeared in the BRITISH MEDICAL JOURNAL of January 2nd, 1897, p. 39; 9th, p. 90; 16th, p. 163; 23rd, p. 214; February 6th p. 340; March 13th, p. 667; March 27th, p. 812; April 10th, p. 935; May 1st, p. 1102; July 31st, p. 285; August 14th, p. 413; September 11th, p. 617; and October 16th, p. 1095.

these superintendents is that if "pauper boys have had any moral training it is latent," but another, after stating that "many of the boys are wanting in honesty and truthfulness," asserts the value of "the influence of an earnest Christian chaplain and officers." It is, however, encouraging to be told that the boys from cottage homes are "very bright."

GIRLS.

The conflict of evidence on this point is so great that this was probably the reason why all mention of results is omitted in the Report. On the one hand we have the evidence of the lady who is the secretary (4023) of the central office of a large philanthropic society whose *raison d'être* is to befriend these girls, and in her opinion all is satisfactory. On the other hand one of the branch secretaries (6088) of the same Association concludes from careful figures and an extensive personal knowledge of the subject, that the statistics of the Central Society are misleading, and based on returns which are not altogether to be depended on.

In the main the latter opinion is confirmed by the evidence of another officer of the same association (6802, 6773, 6793) and by guardians (7968, 8152, 3076), medical men (39, 3615), clergyman (3471), and philanthropists. Indeed, Dr. Barnardo speaks of the "amazement" which the mental condition of the girls caused him. He refers to "their dulness and incapacity, and especially the animalism of their tempers" (9242), he himself having given up his own barrack school "on account of the revelations which came to him (9250) of the evil results of massing large numbers of girls together." "I have had very few girls (9243) come from Poor-law institutions who have not apparently been more or less contaminated" he says, and this is hardly testimony which would prepare anyone to expect a good output for the labour of the world; and yet, owing largely to the immense labours of more than a thousand ladies (4048) connected with the Metropolitan Association for Befriending Young Servants, and at the cost of over £3,000 a year (4142), a certain percentage of these girls are "successfully" launched on the world, though the standard of "success" demanded by the statistics of the Association is low. To be equal to what is termed the "local girls"—girls, that is, belonging to some of the lowest strata of society (4165)—is all that seems to be required from or on behalf of the girls, although close on £30 a year has been spent in the attempt to train them and lift them out of the ranks of pauperism. A few extracts from the Leavesden report will illustrate the standard demanded:

The reports classified under "fairly satisfactory" for the Leavesden girls run thus:

No 1. "Honest and steady, but very rough and dirty in her work; is now under notice to leave on this account" (6128).
No. 2. "Changes her places very often, and is not much of a servant."
No. 3. "Can work well, but has a very bad temper."
No. 4. "Has had nine places since she left the schools. She is 15 years old, no very serious fault is found, but she is idle and careless."
No. 5. "Does not keep her place; is slow, and picks the food."
No. 6. "Behaved very badly in her first place, and was most tiresome and untruthful."
No. 7. "Left her first place as her sight was so poor" (an instance of how these ophthalmic ravages affect the wage-earning power of the rate-dependent class); and the last is "not doing very well, so very lazy" (6129).

That these girls should be classed among the "fairly satisfactory" is surely a condemnation of the system which produces them.

The point is not unimportant. "Do these girls succeed or fail in life?" is often asked by the practical politician, the taxpayer, or the ordinary citizen, who wishes well to the pauper, but who has neither leisure nor skill to examine into different schemes of education. "We affirm that they do well" says the Society, and appeals to its tables to show that 72 per cent. are "satisfactory," or "fairly satisfactory." Everything depends, however, on the further question, What is usually implied by "satisfactory"? The examples quoted above, and the admission made by officials in the inquiry as to departures from accepted definition, induce impartial observers to conclude that the Society's statistics afford no basis for the conclusion that the girls do well. Miss Townsend's conclusions on the cases she laid before the Committee are probably a better index of the real state of things. She says (6134): "40 are thus reported to the guardians by the central office:

Satisfactory	28	or 57½ per cent.
Fairly satisfactory	12	,, 30 ,,
Unsatisfactory	5	,, 12½ ,,
Lost sight of	2	,, 5 ,,
	40	,, 100 ,,

In my judgment, based upon these reports, the proportion should be thus stated:

Satisfactory	11	or 27½ per cent.
Fairly satisfactory	4	,, 10 ,,
Unsatisfactory	25	,, 62½ ,,
	40	,, 100 ,,

And her opinion is borne out by the Rev. T. W. Horsley, who, from his experience as prison chaplain, says (6307): "I believe in the work of the Metropolitan Association for Befriending Young Servants, but not in its figures; very frequently a much larger proportion of success is claimed than I consider to be true."

RESULTS OF BOARDED OUT CHILDREN.

These are from all accounts so good (11382, 12177) that they would be misleading if it were not remembered that at present the "flower of the flock" only are boarded out, and that therefore for purposes of comparison the statistics are practically worthless. The great difference between the after-care of barrack school children and those who are boarded out is, that in the latter case a few children are befriended by a few ladies and gentlemen in the villages where they were brought up, as in the case of the villagers' own family; and in the other the "cases" are too numerous to be looked after by the matron or schoolmaster supposed to do this work, and their supervision must be handed over to strangers. The one is the friendly interest naturally shown in the children who live in the village and attend the schools, and the other is altogether artificial. When children have homes and have found their places in the world of the affections as well as in the world of industry it is the best result that they should be not lost sight of, but absorbed into the working class population, and lead lives which need neither philanthropic assistance nor elaborate tabulation.

THE ONE-PORTAL SYSTEM: A HISTORICAL STUDY.

I.—LORD RIPON'S BILL, 1870.

WHAT "THE ONE-PORTAL SYSTEM" MEANS.

THE recent Presidential address of Sir Christopher Nixon to the Dublin Branch of the British Medical Association brings once again before the profession and the public the whole question of medical reform—the reform, that is, (*a*) of the statutory conditions on which registration is obtainable, and (*b*) of the disciplinary powers of the General Medical Council for the protection of the public and the profession. With regard to the former, Sir Christopher thinks that educational reform is required in two directions. He desires to see (1) a uniform and improved standard of preliminary examination, and (2) a uniform standard of professional examination. The latter—the "one-portal system," as it is often called—is in some respects the more important question, not only for the profession, but for the public, which it concerns very directly; for it must never be forgotten that the demand for the one-portal system is a demand for a monopoly—a thing of evil odour to Englishmen. There is, however, nothing in the state of the law to prevent voluntary combinations among the various licensing bodies in each of the three divisions of the kingdom for the purpose of creating a single conjoint examination for their respective divisions, subject to the approval of the General Medical Council.

PERMISSIVE COMBINATION INEFFECTUAL.

But it is notorious that all the licensing bodies will not so combine without compulsion. So it has been throughout the whole history of this question, extending over nearly half a century; and so no doubt it will be until Parliament steps in. It should indeed be recorded to the credit of the English licensing bodies that they did all, after prolonged negotiation, agree upon a conjoint scheme applicable to the whole of England; and that this scheme received the unanimous sanction of the General Medical Council on May 27th, 1877. But, as we shall see later, the Irish and Scotch

bodies would not do likewise for their respective divisions, and so England's labours were lost. For it is obvious that any one licensing body remaining outside the combination, and granting registrable qualifications on its own terms, can paralyse and render futile the disinterested efforts of all the rest.

Parliamentary History of the Question.

We propose to pass in review the Parliamentary history of this question, to trace its vicissitudes and to examine as impartially as possible the causes which have led to the failure of repeated efforts, some of which came very near to success, to establish by legislation a compulsory one-portal system for the United Kingdom.

To guard against confusion let it be understood that we use the phrase somewhat loosely, as Sir Christopher Nixon and most reformers have done, meaning not necessarily a single examination or series of examinations for all persons throughout the United Kingdom, but including as well the more favoured scheme of three portals—one for each division of the kingdom, an English gate, a Scottish, and an Irish gate—all under the control and supervision of the General Medical Council.

Early Movements.

The two most important movements in this direction culminated respectively in the Government Bills of 1870 (Lord Ripon's) and 1879 (the Duke of Richmond's). With the latter was associated Dr. Lush's Bill of the same year.

The British Medical Association.

But as far back as the year 1839 the British Medical Association, through its Medical Reform Committee, petitioned in favour of "An adequate and uniform education for the whole profession, so that all who enter it shall pass through the same course of preliminary medical instruction, be tested by the same examinations, and when approved be entitled to the same privileges."[1]

The profession at large was not strong enough then, nor for many years afterwards, to make its voice heard in the councils of the nation. The Act of 1858 laid a splendid foundation for medical reform, and very distinctly encouraged the idea of conjoint action in each kingdom. But it did not go beyond authorising voluntary combination. And, in fact, no use was made of this permission.

The Triple Conjoint Board Scheme of 1870.

For thirty years no notice was taken of this voice crying in the wilderness. Then at last the Lord President of the Council (Lord Ripon) and the General Medical Council put their heads together, and the Lord President having appealed to the General Medical Council to aid him in "a bold reorganisation of licensing," the latter body by a majority of 17 to 1 passed a resolution in favour of "a joint examining board in each of the three divisions of the United Kingdom." Here, then, in the beginning of the year 1870 we find the General Medical Council (representing all the licensing authorities and the Crown) adopting, with only one dissentient voice, the principle so long contended for by the British Medical Association, and the Government of the day prepared to give legislative effect to it. Surely now, it might be thought, victory is at hand.

Lord Ripon lost no time in bringing forward the Bill. He moved its second reading in the House of Lords on May 5th, 1870, and in doing so stated very clearly the problems to be solved. "On considering how uniformity of examination and equality of qualification could best be secured, it was apparent to my mind that the most complete mode would be a single examining Board for the whole country." There were, however, obvious practical objections to this plan, and he therefore fell back upon the recommendation of the Medical Council. "The Bill therefore proposes," he said, "that the existing licensing bodies, or the majority of them, in each part of the United Kingdom shall be at liberty within a certain time to propose a scheme for the establishing of a medical examining board, to be submitted to the General Medical Council, and, if approved by it, submitted to the Privy Council for confirmation, their sanction being the final step for giving it validity. If within that specified time they are unable to agree upon a scheme, the duty will devolve on the General Medical Council, who will then be empowered to draw up a plan and submit it to the Privy Council ..... The three Boards will act under the general supervision of the General Medical Council, and the latter will be directed to take care that there is a uniform standard of examination."

The clauses providing for uniformity of examination were cordially welcomed by most of the noble lords who expressed any views on the subject.

The Marquis of Clanricarde, who presented a petition from the Irish College of Physicians, regretted that the measure proposed no change in the election of the General Medical Council so as to place it on a wider basis; he expressed a fear that the Bill would create too much of a monopoly, shutting out practitioners who might have a preference for methods of treatment differing from those which were generally adopted; and, above all, he objected to the "tremendous power" which would be given to the Privy Council, who would be advised by their medical officer, an officer appointed for life, during which time many inventions and improvements might occur which, under his direction, the Privy Council might ignore or reject. These objections now seem obsolete.

Objections to the Privy Council as the Legislative Body for the Medical Profession.

Lord Cairns, as Chancellor of the University of Dublin, declared that that University "would gladly see passed into law the clause providing for uniformity of examination," and even thought that a single Examining Board for the whole United Kingdom was not impracticable. "But," he went on, "the provisions of the other part of the Bill seem to be very serious and to be deserving of much attention. The plain English of them all is that they constitute the Privy Council the licenser for medical degrees throughout the whole country. It is true the majority of the licensing bodies on the General Medical Council may prepare a scheme and submit it to the Privy Council; but the Privy Council will be able to modify it, and the scheme which finally becomes law will be the scheme of the Privy Council."

The Marquis of Salisbury went straight for the same blot on the Bill, and attacked it with even more than his usual directness. Without a word of commendation to preface his onslaught he bluntly declared: "This Bill may be shortly described as an attempt on the part of that voracious body, the Privy Council, to eat up all the licensing bodies of the United Kingdom, some of them being universities.....It cuts the knots of difficulties of legislation by enabling the Government to hand over questions of detail to a permanent department to legislate as it pleases. The mode of doing it is in the Bill concealed by certain provisions which enable the medical authorities to submit any number of schemes for the approval of the Privy Council; but, after all the pantomime, the Privy Council has power given it to make, alter, modify, or confirm whatever rules it pleases. In fact, the Privy Council is constituted the permanent legislative body. .....We all know the enormous power possessed by the permanent officials of the department.....They all write under that mystic name, 'My Lords,' and exercise almost undisputed powers." He hoped, therefore, that the Lord President would be content with reserving to the Privy Council "what alone it has a right to—the power of approval."

The Question of the Curriculum.

With respect to the other portions of the Bill, Lord Salisbury expressed the fear that the great danger was that it would destroy the independent schools of medicine in this country, and introduce a vicious and imperfect test of efficiency for practice—the test of mere examination. "In the matter of medicine, and still more in that of surgery, it is absolutely childish to be satisfied with your examination. I think the public bodies and the public will be dissatisfied with this Bill, unless it contains provisions which will require from those who are allowed by the Government to practise in this country something beyond the mere book learning which is all that an examination can test."

We have given Lord Salisbury's views at some length, because, apart from their intrinsic merits, it is obvious that they must be taken account of in any legislation which may be proposed in the near future.

[1] Report of the Select Committee of the House of Commons, 1879, p. 116.

DIRECT REPRESENTATION.

But Lord Ripon's Bill was attacked for its sins of omission as well as for its sins of commission, and more especially for its omission to provide for the "direct representation" of the profession on the Council. Lord Clanricarde, as we have seen, drew attention to this on the second reading, and at a subsequent stage the Earl of Lichfield presented a petition from the British Medical Association, which pointed out that "the measure would not be acceptable to the profession generally unless some provision for direct representation were inserted in it."

Notwithstanding these criticisms the Bill was allowed to pass through the Upper House with a few amendments, and was sent down to the Commons in July, 1870. There, however, it was silently dropped before it saw the light, Lord Ripon, no doubt, recognising the many defects, positive and negative, which critics from all sides had pointed out, and seeing no prospect of passing it into law that session. Commenting upon his Bill eight years afterwards, Lord Ripon spoke of it as "having failed to pass the House of Commons partly owing to want of time, and partly from the opposition of certain medical reformers." And the Duke of Richmond, in introducing his Bill in 1879, spoke of the question of the constitution of the General Medical Council as "the rock on which shipwreck was made in 1870."

It is worthy of remark that at this time (1870) the opposition of the Scottish universities to compulsory conjunction was of the slightest. They contented themselves with demanding that their students should not be required to pass the earlier examinations of the medical course before the Conjoint Board, but merely the final examination in medicine and surgery. Their demand was conceded, and they refrained from further opposition to Lord Ripon's Bill. But later, as we shall see, Scottish opposition became much more pronounced, and even assumed a sort of national character.

[*To be continued.*]

LITERARY NOTES.

Appleton's Popular Science Monthly for January contains an article on the Causes and Distribution of Infectious Diseases, by Dr. George M. Sternberg, Surgeon-General of the United States Army. The subject is treated historically, and includes a brief outline of the more serious epidemics of the past hundred years.

Les Annales d'Electrobiologie is the title of a new periodical devoted, as its name imports, to electrobiology, electrotherapeutics, and electrodiagnosis, which is published under the direction of a committee consisting of Drs. A. d'Arsonval, A. Tripier, G. Apostoli, E. Doumer, and P. Oudin, Dr. Doumer being the editor. The first number contains papers by Dr. d'Arsonval on the physiological and therapeutic action of currents of high frequency; on the electrical treatment of neurasthenia by Drs. Apostoli and Planet; on the treatment of diseases of the skin and mucous membranes by currents of high frequency and tension by Dr. Oudin, etc.

The *British Dental Journal*, of which the first number has been sent to us, explains the objects of its existence as follows: "(1) To bring into line with medicine and surgery that branch of the profession which devotes itself to dental matters; (2) to do our best to extinguish those pests of legitimate dentistry the 'advertising' and the 'quack' dentist; (3) to provide a reliable record of everything useful or of interest to the dental surgeon; (4) to eventually be recognised as representing the best interest of the dental profession as a whole, unfettered by ties to any clique or party whatsoever." Our young contemporary recognises that this is an ambitious programme not unlikely to land it in hot water before being carried through to a successful conclusion. As far as can be judged from the first number, the *British Dental Journal* appears to be journalistically viable.

The *Western Medical and Surgical Gazette*, which has lately been founded at Denver, and which is conducted under the direction of the professors in the Gross Medical College, is (*Science* believes) the two hundred and twenty-sixth medical monthly now being published in the United States. This would allow one monthly journal for every 500 medical practitioners in that country, and probably not one half of them subscribe for any journal. It is not necessary (adds our American contemporary) to predict whether mediocrity or progress through survival of the fittest will result.

The Rebman Publishing Company's new books include a new *Pocket Formulary for the Treatment of Disease in Children*, by Dr. L. Freyberger, of the Great Northern Central Hospital, London; and a work on *Surgical Diagnosis and Treatment*, by Dr. J. W. Macdonald.

Anton Czechow, the most widely read of modern Russian novelists, is a practising doctor. At a very early age he published humorous sketches and psychological studies remarkable for maturity of thought and style. His *Windbags*, *Waldoga the Great and Waldoga the Little*, and *Ariadne* appeared in 1896 and 1897, following rapidly on *Russian Love*, a volume of short studies, which, in a translation, enjoys an immense popularity in Germany, and has run through several editions. His latest novel, *The Peasants*, caused a great sensation in St. Petersburg. In it the Russian peasantry are painted with a realism as ruthless as the French peasants are pourtrayed in Zola's *La Terre*.

In the January number of the *Indian Magazine* Mr. Alexander Rogers points out that the epidemic of plague now raging in the Bombay Presidency bears a striking resemblance to one which occurred about 250 years ago at Agra and in the North West. In illustration of this he quotes the following passages from the Emperor Jehángír's autobiography (referring to the thirteenth year of that monarch's reign, *circa* A. H., 1028):

The daughter of the deceased, Asaf Khán, who is in the house of Abdullah Khán, son of the Kháu-i-Aazam, told me a strange and wonderful tale. I made particular inquiries into its truth, and write it on account of its strangeness. She said that one day in the courtyard of her house she saw a mouse falling and rising in a distracted state. It was running about in every direction after the manner of drunkards, and did not know where to go. She said to one of her female slaves: "Take it up by the tail and throw it before the cat." The cat, delighted, jumped up from its place, and seized it in its mouth, but immediately dropped it and showed aversion to it. By degrees an expression of grief and pain showed itself in its face. The next day it was nearly dead, when it entered into her mind to give it a little treacle (tiryák-i-fáúk). When its mouth was opened its palate and tongue appeared black. It passed three days in a state of misery, and on the fourth day came to its senses. After this the grain of the plague dánah or bubo) appeared in one of the female slaves, and from excess of temperature and increase of pain she had no rest. Her colour became changed; it was yellowish, inclining to black, and the fever was high. The next day she was free of fever and died. Seven or eight people in the house died in the same way, and some were ill. On the day I went to the garden from that halting place those who were ill in the garden died, and in that place the bubo did not appear again. Briefly in the space of eight or nine days seventeen people became travellers on the road to annihilation. She also said: "Those on whom the boil appeared, if they asked another person for water to drink or bathe in, these also caught the infection, and at last it came to such a pass that through excessive suspicion no one would pass near them."

A previous passage runs as follows:

At this time those who were loyal represented that the disease of the plague (Taún) was prevalent in the city of Agra, so that in a day 100 people, more or less, were dying of it. Under the armpits, or in the groin, or below the throat a lump comes, and they die. This is the third year that it has raged in the cold weather, and disappeared in the commencement of the hot season. It is a strange thing that in these three years the infection has spread to all the towns and villages in the neighbourhood of Agra, and there has been no trace of it in the Fattehpur (Sikhri), and as far as for two and a half koss from Amanabad to Fattehpur. The people of that place have forsaken their own homes and gone to other villages.

The Belgian *Pharmacopœia* was first published in 1823. In 1858 a revised version appeared under the title of *Pharmacopœia Belgica Nova*; a second edition of this was published in 1885, and two supplements have since been issued, in 1892 and 1896. A further revision has now been decided on, and a Committee has been appointed by royal decree for the purpose. The Committee is composed of Dr. J. Heymans, of the University of Ghent; Dr. L. Stiénon, of the University of Brussels; MM. A. Jorissen, of the University of Liége, and Ranwez of the University of Louvain; M. Nélis, Inspector of Pharmacies; and MM. Hendricks, of Antwerp, and Van Hulst, of Ixelles, pharmaceutical chemists.

DISEASES OF THE CONGO.—A gift of £1,000 has recently been made to the Society of Colonial Studies of Brussels to be applied in furtherance of the study of the diseases of the Congo. The Committee formed to make arrangements for the proper disposal of the money has decided that two prizes shall be awarded: one of £100 to the person who shall make some notable addition to our knowledge of the evolution of the hæmatozoon of Laveran within and without the body; and a second of equal amount to the person who shall establish the real origin of hæmoglobinuric fever.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 26th, 1898.

THE IRISH LOCAL GOVERNMENT BILL.

The new Local Government Bill for Ireland, which was introduced by the Chief Secretary on Monday night, was received with general approval. Thoroughgoing as it is in the changes which it will bring about in Ireland, it is clear that it will pass into law after amendment. Some of its provisions will affect medical interests, and generally we may say that the new order of things will be better than the old. One of the horrors of the workhouse will be got rid of. The lunatics who are now confined there will be transferred to the asylums and provided with all the care which is so necessary to their miserable state.

The Irish Workhouse Reform Association may congratulate itself on having one of its proposals adopted. A few weeks ago a deputation waited on Mr. Gerald Balfour in Dublin, and urged that one-half of the cost of the trained nurses in the workhouses should be paid by the Government. The case was argued with great force, and the Chief Secretary was sympathetic although he saw difficulties. His Bill will provide for the payment of half the cost of one trained nurse. This is not much, but it is a recognition of a principle. It will at all events hasten the sweeping away of the pauper nurse, and provide means of intelligent supervision in the internal management of workhouse hospitals.

The dispensary committee will disappear, and we hope it will carry all its uselessness with it. We learn, however, that its duties are to be entrusted to a new committee, to be appointed by the county council. No advantage will follow in the country districts if there is to be no improvement in the type of member as he now exists. But the county council will be a superior body, elected on the parliamentary franchise, and we can only hope that it will recognise how important are the functions which the new committee will have to discharge, and will make its choice accordingly.

The duties heretofore allotted to Poor-law guardians as rural sanitary authorities will be transferred to the district councils. We are yet unaware what this exactly means. It may be a mere change of control. If nothing more is to be gained, then we think there will be lost a great opportunity for placing the sanitary administration of the whole of Ireland on a satisfactory basis. At present, outside the chief cities, there is no sufficient recognition of the importance of effective sanitation. The officers are paid a merely nominal sum, and there is no attempt to deal with the matter in a comprehensive way. We cannot hope for much from a district council, and we should like to see this question referred in the first instance to the county council for the special purpose of securing well-paid and efficient supervision.

As we anticipated, the control of the district lunatic asylums will be in the hands of the county councils much as it is in England. That the proposed abolition of the Board of Control was received with general approval is not surprising. Mr. Morley was justified in saying that it is a most anomalous body. The appointment by the Lord Lieutenant of Boards of governors and officers of asylums will cease. The county councils will act through a committee or council, or, when an asylum district comprises more than one county, through a joint committee.

It is somewhat vaguely stated that the ultimate control of the executive, where the county council fail to carry out their duties, is sufficiently maintained by a variety of provisions, and the concurrence of the Lord Lieutenant will be required in case of the appointment or removal of the resident medical superintendent or assistant medical officer. Apparently the rights of existing officers are to be safeguarded by provisions similar to those adopted when the English asylums were transferred from the county magistrates to the county councils, the right of retiring on pension being conceded. The assistant medical officers in Ireland, however, will, we fear, be rather disadvantageously affected by the Bill. Hitherto they have been promoted by the Lord Lieutenant to superintendencies as those offices became vacant. In future it would appear that they will have only local interest to depend upon, and as many of them have served long periods in what was virtually a Government service their position is a hard one.

There can, however, be no doubt that, on the whole, the delegation of an immense amount of work and responsibility from a somewhat unmanageable bureau to local bodies will eventually improve the condition of the insane by the only method which can be considered sound in modern times and present conditions, namely that of arousing in their behalf the interest of a large body of citizens. The Irish public, it is true, have been badly educated with regard to asylums, but time and the sense of responsibility will do much, and we can now hope before long to see Ireland fall into line with other countries heretofore more advanced in lunacy matters.

THE MIDWIVES REGISTRATION BILL.

We do not doubt that the promoters of the Midwives Registration Bill are sincerely anxious to safeguard the interests of the public, and of that class especially who are in the habit of employing midwives. It is of the utmost importance, however, that any measure dealing with this subject should be so framed as to prevent a contravention of the Medical Acts by unregistered persons, and to limit the scope and functions of the partially educated women it is proposed to register. This is imperatively required in the interests of the public welfare

While it is most desirable that steps should be taken to amend the existing state of things, and that women undertaking to attend midwifery cases for gain should be obliged to give some evidence of competency, it is none the less necessary that they should be strictly limited in their functions, and that wilful violation of clearly defined regulations should be made penal. These conditions are not fulfilled by

the Midwives Registration Bill introduced into Parliament by the Right Hon. J. B. Balfour. The Bill is, indeed, extremely defective in many particulars, and if passed into law as it stands would be calculated rather to aggravate than to diminish some of the abuses it professes to remedy.

One of the most obvious faults in the Bill is that it reproduces glaring defect in the Medical Acts, inasmuch as it provides no penalty for the illegal practice of midwifery, but only for the false assumption of a title. This weak point in the Medical Acts has been so interpreted by the Courts as on many occasions to render the protection of the public intended to be afforded by the Medical Acts of no effect, and the evil is likely to be only more flagrant in midwifery. Again, Subsection (4) of Section III is equally defective as a provision against the encroachment upon medical practice of midwives who might be registered under the Bill, inasmuch as it would merely enact that registration would not confer upon any woman a right to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant a medical certificate or a certificate of the cause of death. No penalty is suggested, and so far as the wording of the Act goes there would be nothing to prevent a woman registered by the proposed Midwives Board from calling herself a licentiate in midwifery, and the objection appears to be somewhat aggravated by the terms of Clause 4, which makes special provision for the registration of persons holding a certificate of midwifery from the Royal College of Physicians of Ireland, and from the Obstetrical Society.

Again, while it is illegal for a fully qualified medical man to employ an unqualified assistant, there is nothing in this Bill to prevent a registered midwife from employing unregistered women as assistants, as, we understand, is a common practice of busy midwives in many populous places now.

The proposed constitution of the Midwives Board is far from satisfactory. It would consist of twelve registered medical practitioners and of six "persons" nominated by the Lord President of the Privy Council. One-third of the elected members would retire annually, and would not be eligible for re-election until after the lapse of one year. There is perhaps nothing to be objected to in this last provision; it might even be claimed to be advantageous, inasmuch as it would bring new men with perhaps new ideas on to the Board, and thus prevent it from falling into a rut, but this advantage would be rendered nugatory, owing to the fact that the "persons" to be appointed by the Privy Council would be eligible for reappointment on the expiration of their term of office of three years, and so on again and again, so that it might not unreasonably be anticipated that the effective power of the Board would in time tend to fall more or less completely into the hands of the Crown nominees. Further, the mode of appointment of the twelve registered medical practitioners is far from satisfactory, for they would all be nominees either of the three London corporations or of the Incorporated Midwives' Institute.

We await with some curiosity the action of medical officers of health and of the bodies which represent them with regard to Clause 9 of the Bill, which proposes to place upon the shoulders of medical officers of health the duty of the local supervision over midwives practising in their sanitary districts. In many districts it would be quite impossible for the medical officer of health efficiently to discharge the duties the Bill proposes to assign to him. There is, as far as we can see, no provision for the inspection of private lying-in houses —places, as is well known, where "ladies who have got into trouble" are received. The Bill does not indicate the conditions under which a midwife shall be compelled to call for skilled medical aid. It does not interfere with or prevent the most unsatisfactory state of affairs whereby a midwife is the instructor not only of the pupil midwives but of medical students. We hold strongly that these tutorial duties should be undertaken and discharged only by fully qualified medical practitioners.

Last week we printed side by side the Midwives Registration Bill and the Obstetric Nurses Bill as drafted by a subcommittee of the Parliamentary Bills Committee of the British Medical Association, and though the latter is no doubt capable of improvement, it does, nevertheless, make adequate provision for the prevention of many glaring abuses quite possible under the operation of the former. There are many points of detail to which it is not possible here to make allusion; but the limitation of function and the nature of the duties properly to be undertaken by midwives are of the first importance.

It is clearly the duty of members of the British Medical Association to make themselves acquainted with the character of the proposed legislation upon a matter of vital importance to the public and to the medical profession. Those who believe the Bill to be defective should approach personally or by letter the members of Parliament in their respective localities, and should clearly indicate to them where the proposals of the Midwives' Institute are inadequate to protect the interests of the public.

The attempt on the part of the Parliamentary Bills Committee of the Association to provide an alternative scheme is an honest endeavour to afford to Parliament a clear indication of the lines upon which legislation should be directed if it is to be effectual in remedying existing evils, and in preventing further injury to the public health. There is need for prompt and vigorous action, for it is clear that the position and influence of Mr. J. B. Balfour, the member in charge of the Midwives Registration Bill, will alone make it almost certain that the Bill will secure a large measure of support in the House. The second reading is fixed for May 11th. It would appear to be incumbent on those who are responsible for alternative schemes to frame such amendments as are necessary to obviate the evils that would follow the passage of the Midwives Registration Bill in its present form, as it is unfortunately by no means certain that the Obstetric Nurses Bill can be submitted to Parliament in such a way as to secure the equitable consideration and attention which the gravity and importance of the subject demand.

The Treasurer of St. Thomas's Hospital states that during 1897 the Roentgen rays were used in 416 cases, and that it has been found necessary to appoint an assistant to the officer in charge.

Medical Magistrate.—Dr. William S. Mavor of Waltham Cross has been appointed by the Lord Chancellor to the Commission of the Peace for the County of Hertford.

ENTERIC FEVER IN THE BRITISH ARMY.

Of the total mortality of the British army at home and abroad, 32 per cent. was in 1896 caused by enteric fever. In other words, were this element eliminated, the death-rate would be 5.6 per 1,000 instead of 8.14. In actual figures, 531 lives were lost during the year from this cause alone, and of these deaths 445, or 84 per cent., occurred in India. The proportion of the British army serving in India being 35 per cent., the excessive prevalence of enteric fever in this section of the army is very apparent. The admission rate for 1896 was 25.5 per 1,000, and the death-rate 6.31. The corresponding rates for the decennium 1886-95 were 19.2 and 5.6. The incidence and mortality of the disease are therefore increasing. The Indian decennial rates are exceeded by those of Bermuda (37.3 and 6.58) and Egypt (32.3 and 8.39). Egypt continued in 1896 to present high rates (24.8 and 5.87), due in considerable part to the Dongola expedition; but the Bermuda figures of 1896 (19.5 and 2.88) present a most striking and satisfactory improvement on those of previous years.

Some other tropical and subtropical stations give high enteric rates—especially Mauritius, South Africa, China, Ceylon, and Malta; but they range far below the Indian rates. The West Indian and Ceylon rates are moderate and improving; the Straits Settlements present a strange immunity; Canada, always low, is blank, and the United Kingdom has rates of 0.9 and 0.21 for 1896, and 1.3 and 0.27 for 1886-95. These are capable of still further reduction by sanitary improvements at Dublin and some other places where outbreaks are still apt to occur.

These facts have been culled from the *Army Medical Department Report for 1896*, and two very important questions arise from a consideration of them, namely, under what circumstances has the very striking improvement in the prevalence and mortality of enteric at Bermuda taken place? And what are the influences which condition the progressive excess in India, and what is being done to combat these?

As regards Bermuda, the defective arrangements for storage and conservancy of water, and for the disposal of sewage, were undoubtedly the main causes of that pre-eminence in typhoid which the figures of 1886-95 assign to it. The soil and subsoil are exceedingly porous, the latter being coralline; and the system of conservancy was exclusively the cesspool system. Enteric fever prevailed extensively, and still prevails, among the native population, and general and specific soil pollution occurred. The principal source of drinking water was rain, which was collected and stored in tanks, "some of which are underground, the water being conducted to them in underground earthenware pipes." Wells there are, but their water "is always polluted, and is not sufficiently brackish to prevent its being mistaken for drinking water." The brackishness is itself a strong evidence of the porosity and permeability of soil.

The measures which have been adopted to remedy these defects are, in brief, increased care in the storage of water and the disposal of sewage. Barrels and tanks, isolation and cleanliness of which are strictly looked after, have been provided; the water is boiled daily, old contaminated camp sites have been vacated and new ones occupied; "a water carriage system for the removal of foul water has been gradually introduced throughout the command in place of the old cesspools;" sea water is used for conservancy purposes, and latrine arrangements have been improved.

As regards India, the report contains a large mass of information indicating that, though much has been done in the way of improving the water supply and conservancy, the conditions in these respects are still very unsatisfactory, and offer numerous possibilities of typhoid diffusion. Take, for example, the case of the hill station of Subathu, where a very severe outbreak of enteric fever occurred among the men of the Black Watch—109 cases from March to October, of which 15 died.

This is what is reported regarding the water supply: "The main water supply is derived from a spring situated south-east of the station, about 100 yards below the Kasowli Road, at the bottom of a hill on which the hospital and other habitations are built. The ground surrounding the reservoirs was covered by dense jungle, which afforded facilities for the natives to use the place as a latrine. A surface drain carrying surface washings from the hill above was found to cross the masonry which was supposed to protect No. 1 spring." The men are supposed to have carried the fever with them from Umballa; but obviously every facility existed for its dissemination. The microbe was found in the water and in the leather "mussacks" and "pakhals" used for its distribution.

Details of this sort might be multiplied, but it is more to the purpose to turn to the report of Surgeon-Major-General A. A. Gore, M.D., Principal Medical Officer in India, in order to ascertain what is being done in this matter. Sanction has been obtained for the introduction of efficient filters at Dinapore and Peshawur. The "Larymore boiler" has been found to work well, and is being distributed. Incinerators are also on trial. An experimental Government dairy has been established at Umballa with a view of instructing subordinates in the management of such places. Increased attention is being paid to the supply of milk and butter to regiments and the manufacture of aërated waters. Some improvements have been introduced in conservancy and the disposal of excreta. A special officer has been appointed to investigate the causes and conditions of typhoid prevalence and spread, and preventive inoculation is to be tried. Metal vessels are also being substituted for leathern for water conveyance and attention is being paid to many "little things," such as the cleanliness of cook houses and messes, the personal cleanliness of servants, the sterilisation of milk and water, supervision and disinfection of wells, etc. These measures are admirable as far as they go, but it is a question for very serious thought whether such fragmentary and tentative expedients are adequate to meet the large danger to health and life which surrounds the British soldier in India, and whether inquiry and effort on a much wider and deeper scale are not imperatively called for, as we venture to think they are.

LIGHT ON UNQUALIFIED PRACTICE.

The trial and conviction at the Central Criminal Court recently of George Walters, Neville Shorthouse (both described as medical men), and Francis Wardale (chemist), indicted for using an instrument on a woman with intent to procure miscarriage, is interesting, not so much in itself as for the light which the statements of counsel and of one of the prisoners throw upon the facilities which at present exist for unquali-

fied practice. Wardale, the chemist, had pleaded guilty after he had quite voluntarily made a statement to the police. It was stated by the prosecution that persons who had purchased medicine from Wardale had been recommended by him to go to Walters when the medicine failed. It was pleaded on his behalf that he had been led into temptation by Walters, and had only placed two women in communication with him, and the sentence passed upon him was the comparatively light one of twelve months' hard labour. Walters, according to the case for the prosecution, called himself "an eminent American specialist," but he was not a qualified medical man, though it was suggested on his behalf that he held an American diploma. Shorthouse, it was stated, was qualified, and his name had been on the *Medical Register*, but had ceased to be there owing to his frequent changes of address. Walters and Shorthouse were found guilty, and Mr. Mathews, the prosecuting counsel, then stated that Walters, the "eminent American specialist," had been convicted of stealing boots in 1876, and sentenced to twelve months' imprisonment. He again stole boots, and was sentenced to another term of imprisonment. In 1891 he started a "Medical Hall." Walters, apparently in mitigation of punishment, made a statement to the effect that he could not have performed the alleged operation as he had no knowledge of the subject. He was a specialist in a class of diseases, and when in doubt he used to call in Shorthouse to advise him, for which he paid him. It is really hardly necessary to comment upon this story, for here we have a man twice convicted for petty thefts who dubs himself an "eminent American specialist" and sets up a "Medical Hall." This business apparently he might have carried on for an indefinite period had it not happened that the particular speciality in which he indulged was the procuring of abortion. This brought him within the meshes of the criminal law, and he has been sentenced to seven years' penal servitude. The case of Shorthouse, his confederate, who also was sentenced to seven years' penal servitude, raises a rather curious point, inasmuch as his name is not on the *Medical Register*, although he is stated to possess a qualification. It is extremely difficult to trace the identity of a person who has been removed from the *Register*, but so far as can be ascertained this individual was registered as M.R.C.S. and L.S.A. in 1883. It would appear from the *Calendar* of the Society of Apothecaries for 1896-97 that he was then no longer a Licentiate of the Society, but a name appears in the list of Members of the Royal College of Surgeons for 1897 which, from the correspondence of dates, may be that of the convict. The matter appears to be one which will require the attention of the Council of the College.

BRITISH DIPLOMAS ABROAD.

A curious illustration of the ambiguity which, to the eye of the foreigner, attaches to British degrees and diplomas is afforded by the story which Dr. Stuart Tidey of Florence tells in another column. He was called upon to produce evidence that he was entitled to practise in Great Britain, and found, for various reasons set out in his letter, that the degree of the University of London, the diplomas of the Royal Colleges of Physicians and Surgeons, and the licence of the Society of Apothecaries were one by one rejected as not affording the necessary legal evidence. Had it not been that he happened to possess the diploma of the Swiss Federation he could not have produced evidence that he was entitled to practise anywhere, and even as it is, though a well-known and highly respected British practitioner, he will appear in the Italian official record as a Swiss practitioner. The story emphasises also the fact that the possession of a diploma or diplomas qualifying for registration does not legally entitle the holder to practise medicine in this country. We do not draw from Dr. Tidey's experience exactly the same moral as he does. It appears to be the duty rather of the General Medical Council than of the Medical Corporations to define the rights of British practitioners, for the Medical Corporations can only give the right to registration and it is registration which confers the title to practise. It seems very desirable that the Council in issuing its Certificate of Registration should state clearly upon its face that the holder is entitled to practise medicine, surgery, and midwifery in the United Kingdom. The certificates at present issued contain the statement that "all persons whose original registration is dated after June 30th, 1887, are persons legally qualified for the practice of medicine, surgery, and midwifery." The certificate does not go on to give the countries to which this privilege extends, and the general form and appearance of the document is not perhaps calculated to impress the mind of a foreign official, nor, indeed, is it commensurate with the legal importance of the document itself. In the particular instance in point, this certificate would probably not have served Dr. Tidey's case, even if he had thought of it, which, curiously enough, apparently he did not do. He was registered before 1887, and his certificate probably does not bear any reference to a title to practise, but is merely a certified copy of the entry in the *Medical Register*.

THE MIDWIVES QUESTION.

The Midwives Bill Committee of the General Medical Council met on February 22nd. This Committee, which was reappointed by the Council at its meeting last November, consists of Sir Richard Thorne (Chairman), Mr. Brudenell Carter, Dr. Glover, Mr. George Brown, Dr. Cameron, Mr. Victor Horsley, and Dr. Atthill. The provisions of the Midwives Registration Bill introduced by the Right Hon. J. B. Balfour into the House of Commons on February 11th were very fully considered during a meeting which lasted between three and four hours. A further meeting of the Committee will be held early next month, when a draft report will probably be presented for consideration. While it was, we understand, generally recognised that the regulation of the practice of midwives was necessary in the interests both of the public and the medical profession, it was felt that the Midwives Registration Bill as it stands is extremely defective. The report of the Committee will probably be directed to pointing out the provisions as to which amendments will be required should the Bill pass the second reading on May 11th, as appears to be far from improbable unless the Government should before that date consider it necessary to take all the time of the House, including Wednesdays, for Government business. There is this weak point in the position of the Midwives Bill Committee of the General Medical Council, that it is a Committee appointed by the whole Council, and must therefore report to a plenary meeting of the Council. Under the standing orders the next meeting of the General Medical Council will be held on May 24th, nearly a fortnight after the date set down for the second reading of the Bill. The only solution of the difficulty would seem to be that a special meeting of the Council shall be summoned at an early date to receive the report of the Midwives Bill Committee, but perhaps some less costly means may be found of bringing the report of the Committee under the notice of the Privy Council, and of giving its contents to the public. A meeting of the Special Subcommittee of the Parliamentary Bills Committee of the British Medical Association has been summoned for this day (Friday).

MEDICINE AT THE NATIONAL PORTRAIT GALLERY.

Nothing is more remarkable in a survey of the pictures at the National Portrait Gallery than the remarkable scarcity of physicians and surgeons who have made their reputation solely by the practice of their art at the bedside. Medical men there are in abundance, but they have won their laurels in the fields of science, literature, and adventure, rather than in the wards of hospitals or at the homes of their patients.

Sir Henry Halford, indeed, is there—the courtly physician; and Sir Andrew Clark, the great President; but their presence only emphasises the absence of others. The gallery possesses no single likeness of a great operating surgeon, yet Cheselden and Pott, Cooper and Brodie, Fergusson and Syme, Crampton and Colles, might well find places amongst our national portraits. Many of the medical men whose pictures adorn the walls of the gallery have had curiously varied careers. John Allen (1771—1843) though he was a Doctor of Medicine, yet served as Master of Dulwich College, and is celebrated as the author of *An Inquiry into the Rise and Growth of the Royal Prerogative in England;* John Wolcot, better known as Peter Pindar, and Tobias Smollett represent literature; Sir John Richardson and David Walker are examples of members of our profession who have gained their title to remembrance by adventure, for they braved the horrors of Arctic exploration with Franklin; whilst Dr. Livingstone tempered his life of adventure with religion and philanthropy. Richard Mead and Sir Hans Sloane have gained admission for far other reasons. Both were *virtuosi*, and to both we owe, in part, the British Museum. Edward Jenner, Sir Charles Bell, and Sir Richard Owen show how pure science may divert the best types of intellect from the study of medicine, whilst the bust of Sir Edwin Chadwick reminds us that we owe to the legal profession some of the greatest advances in public health.

THE LATE EXAMINATION FOR THE ARMY MEDICAL SERVICE.

We published in the British Medical Journal last week the results of the recent examination, which showed that, notwithstanding the undoubtedly clever official expedient of mixing up the Indian and army examinations together, only 21 candidates were secured for the latter, to fill the advertised 40 nominal vacancies. The result of the new scheme must be very disappointing to the official opponents of the Army Medical Services, who had hoped by a little manipulation to stave off reform. Under the new system the public are not told how many competitors went up for each branch of the service, and what was the proportion of failures; but it is not difficult to see that, but for the new scheme, the last examination would have been an even more lamentable fiasco than its predecessors. There appear to be good grounds for the inference that a considerable number of the 21 successes for the army were drawn from those who had not been successful in obtaining commissions in the Indian Service, for the highest candidates for the former very suggestively just follow after the lowest for the latter. Then, quite half of those successful in the army did barely more than secure qualification by a minimum of marks, so that it is hard to say whether the failure in quality is not even greater than in quantity. It is rumoured that there were originally 43 army candidates, which, if true, proves that more than a half were found physically and professionally unfit. We think the public may take it that had not a certain proportion of the rejected of India been secured for the army, there would practically have been a mere handful of candidates for that service. To what a miserable estate has the Army Medical Service fallen! Mr. Brodrick announced to the House of Commons last week, as was stated in the Journal of February 19th, that the steps which will be taken to put the Department in a better position will shortly be announced, and it is certain that reform cannot be long delayed.

TRUE HYGIENE.

Those who remember the immortal story of *Lorna Doone*, and have been as thoroughly entranced by it as all lovers of robust English and romantic enterprise must be, will turn with considerable interest to Mr. Blackmore's most recent novel, *Dariel, a Romance of Surrey*. In this delightful book Mr. Blackmore shows much of his former power of graphic delineation of scenery and of character, though there is here and there an attempt at didactic writing, with occasional sly knocks at certain political views which are scarcely in place in a romance. Apart from allusions to the London County Council and to Free Trade of a not altogether complimentary character, one requires to be a landlord to appreciate the remark: "Of savage people I know nothing, save of income-tax commissioners, who charged us twice for our land—once for our crime in owning it, and once for the profit which they alone were able to make out of it." It does not require much knowledge of veterinary hygiene to appreciate the reference to the man "who steals his house water from a horse trough, and deserves to get glanders for it." But the chapter that will most commend itself to the physician is the sixth, on True Hygiene. In this we learn of the genius who has invented a new disinfecting powder, and who thus speaks to his brother: "In country places there is seldom any outbreak of virulent diseases until they set up a Local Board. I shall leave a score of hygioptarmic boxes in your charge. The rest are meant for places where the authorities stir up the dregs of infection, and set them in slow circulation. And the first thing a Local Board always does is that." This is a too true picture of hygiene as applied to villages and even to small towns, in many instances. It is evident that if the author of *Lorna Doone* could be persuaded to put his experiences in writing, we might have an even more eloquent advocate of the views so ably taught by Dr. Vivian Poore. But if it is desired to know the true utility of the hygioptarmic powder, the full and graphic account of the encounter between the Armenian hound and the bull-dog must be read. It is not likely when read to be soon forgotten.

THE REGULATION OF MIDWIVES IN NEW YORK.

The regulation of midwives is as burning a question in America as it is here, and the medical profession of New York appears to be grappling with it in earnest. A movement for the abolition of midwives, or for the restriction of practice by them, was started not long ago in the Society of Medical Jurisprudence, and a Committee of that body has since been in conference with similar Committees of several other medical societies. The subject was debated in the Section on Obstetrics and Gynæcology of the New York Academy of Medicine on January 27th, when Dr. H. J. Garrigues read a paper in which he dealt with the whole subject of practice by midwives. He recalled the fact that in 1884 a Bill had been introduced into the Legislature the object of which was to give a charter to a certain institution for midwives. He, along with Dr. Warden, had been deputed as a Committee of the New York County Medical Society to prevent the Bill becoming law, and in this endeavour they had been successful. There is no general State law, he said, for midwives, but there are two special laws concerning them, one for the city of Buffalo, the other for Rochester. Both these laws were enacted in 1895, Buffalo having been the pioneer in the movement. In New York City there are absolutely no restrictions. Anyone can practise as a midwife, with or without qualifications; the law only requires registration. There are at least five "schools" of midwifery in New York where instruction is given and diplomas are issued. Dr. Garrigues gave the midwives of New York as a class a very bad character; he said they not only did harm by their ignorance of obstetrics, but they were notorious and inveterate quacks, and did not shrink from administering potent drugs and producing abortion. The latter form of practice is, according to him, largely due to the fact that midwives are allowed to give certificates of still-births. He holds strongly that midwives are a relic of barbarous times; although they have never been recognised by law, they have been tolerated so long that, in order to do away with them, it would be necessary to pass a law distinctly limiting such practice to properly-qualified practitioners. In the discussion which followed, although considerable diversity of opinion was expressed, the general feeling of the Section was decidedly against practice by mid-

wives. The majority of the speakers advocated total abolition, and all were in favour of restricting their practice within well-defined limits. At the close of the debate, the following resolution was adopted: "That the Section on Obstetrics and Gynæcology strongly recommends taking immediate steps to secure the passage of a law providing for the supervision of all persons, not legally-qualified physicians, now engaged in the practice of midwifery, and debarring from such practice all persons proving not to be competent and qualified."

THE SMALLEST BACTERIA.

The conclusions of the German Commission on Foot and Mouth Disease, as reported by Professors Loeffler and Frosch in the *Deutsche medicinische Wochenschrift*, are anything but final. The Commission wish to continue their experiments, and hope to arrive at a more definite result both from a scientific and practical point of view. It appears that there is some similarity between the poison of tetanus and that of foot and mouth disease in this one particular—that the poison introduced into the body of an animal underwent a similar process of dilution throughout the body. After prolonged experiments, however, it has been found that whereas, in the case of tetanus, the evidences of poison could easily be detected in the blood and organs of the animal, in foot and mouth disease they could not. It requires from 50 to 100 c.cm. of blood in order to produce the disease in healthy animals. It seems very possible that the whole mass of poison, or at any rate the greater part, is expelled from those parts where bullæ are noticed. A classical case is given, where the prepared lymph had been used. The animal was injected with $\frac{1}{50}$ c.cm. of filtered lymph, and if the contents of the bullæ that result on all four feet, tongue, and mouth amount to about 5 c.cm., then in this case the original quantity of poison now present has increased from $\frac{1}{50}$ to 5 c.cm.; this increase would represent a dilution of 1 in 150. A pig of 30 kilog. is killed in two days by $\frac{1}{50}$ c.cm. of this lymph injected intravenously. The Commission explain the great virulence of the poison by supposing that it is capable of multiplying to an enormous degree within the body. The only other explanation would be the presence of a bacterium. This, however, according to Professor Abbé, of Jena, would have to be so small that no modern microscope could reveal it. The smallest known bacteria are those found by Pfeiffer in influenza; the foot and mouth disease bacteria must be smaller than these in order to pass through the filter used in preparing the lymph.

ABORTION ADVERTISEMENTS.

We have received from Dr. W. K. Rix copies of some advertisements which from time to time appear in the pages of provincial papers, relating in no uncertain terms to the removal of "obstructions" and "irregularities" in women. That these remedies are intended for the production of criminal abortion there cannot be the shadow of a doubt, and the language employed is certainly sufficiently explicit. These advertisements are addressed to "married and single ladies," and amongst the so-called testimonials we find such expressions as these: "Everything came all right in twelve hours, and, contrary to my expectations, no pain or sickness was caused;" "your invaluable remedy took immediate effect, and in less than twelve hours I was all right, after eighteen weeks of misery and hopelessness." The great difficulty in getting at these people from a criminal point of view is that the remedies so extensively lauded contain no active ingredient, and are not at all likely to produce the effect attributed to them. It is not by any means clear, however, that this would constitute a good defence, especially as women are urged to write privately and at once "with full hope and confidence," and are assured that "failure is impossible." The law is sufficiently comprehensive, for it is enacted that "whosoever shall unlawfully supply or procure any poison or other noxious thing, or any instrument or thing whatsoever, knowing that the same is intended to be unlawfully used or employed with the intent to procure the miscarriage of any woman, whether she be or be not with child, shall be guilty of a misdemeanour." The fact of supplying noxious things with a knowledge that it is intended to be used to procure a miscarriage constitutes the essence of the offence, and if this could be proved a conviction would undoubtedly follow. Possibly, too, the printer and publisher of the paper in which the incriminating advertisement appears might find themselves in an unenviable position. It is strange that responsible people, for the sake of a little extra gain, should run the risk of inserting these dangerous and fraudulent invitations to commit a felony, and it is still more surprising that the advertisements should appear day after day in publications of wide circulation which in their editorial columns pose as protectors of public morality. Dr. Rix informs us that as the result of a personal appeal to various editors these advertisements have to a certain extent been discontinued, but there is still room for improvement, and we trust that the day is not far distant when they will no longer disgrace our press.

BRIGHTLINGSEA OYSTERS AND TYPHOID FEVER.

In 1894, when Dr. Bulstrode visited Brightlingsea for the purpose of inspecting the oyster layings, and reported to the Local Government Board, he found the layings were so near the three sewer outfalls that there could be no question as to the risk to which the oysters deposited on the foreshore were liable. He also stated that Dr. Cook, the medical officer of health, had taken energetic steps to bring about a better state of affairs, but that hitherto his efforts had been unavailing. After the lapse of over four years, matters remain in much the same condition, notwithstanding the pressure put upon the District Council by the Local Government Board and the County Council. Meanwhile, however, several outbreaks of typhoid fever had been attributed to the consumption of Brightlingsea oysters. In 1896 several cases of typhoid fever occurred in Ipswich, the persons attacked having partaken of oysters at Brightlingsea. These oysters were traced by the medical officers of health for Ipswich and the Essex County Council to certain beds on the foreshore, and were found to be Portuguese oysters laid there to fatten. In October last a series of cases occurred in Clacton and other districts believed to be due to the eating of Anglo-Portuguese oysters which Dr. Cook, the Medical Officer of Health for Clacton, traced to the Brightlingsea laying. Soon afterwards an outbreak of typhoid fever occurred in St. Osyth, and Dr. Cook found that each person had eaten oysters purchased from a Brightlingsea salesman. About the same time four cases of typhoid fever occurred in different parts of Colchester, and Dr. Brown, the Medical Officer of Health for the Borough, reported that "all had eaten oysters from Brightlingsea, and the circumstances conspired to lead to the opinion that these oysters were the sole cause of the outbreak." The Brightlingsea Urban District Council have taken umbrage at this report, and have asked both Dr. Brown and the Colchester Town Council for the evidence upon which the Brightlingsea oysters are alleged to have caused the outbreak. This evidence not having been furnished, the Council at its last meeting ordered a minute to be drafted for presentation to the County Council representing that a great injury had been done to the town by this report. It is difficult to see what benefit the town will derive from such a course of action. It is to be regretted that Dr. Brown has not furnished the council with details of the investigation by which he was led to attribute the outbreak of typhoid fever to the consumption of oysters from Brightlingsea; but had he done so it is not likely that the facts would have received more credence than those submitted after the previous outbreaks referred to, or that any definite action would have been taken by the council. The discussions at

the council meetings serve to keep alive an interest in the matter, and to advertise the fact that rightly or wrongly oysters from Brightlingsea are suspected to have been the cause of typhoid fever. If such advertisement prevents lovers of the bivalve purchasing oysters which have been laid on the foreshore, the council only have themselves to blame. Were the members to take a tithe of the interest exhibited in Dr. Brown's report in the completion of a system of sewerage for the town, the foreshore could speedily be placed above reproach. So long as crude sewage continues to be discharged in the immediate proximity of the oyster layings, so long will the oysters—whether natives or Anglo-Portuguese—continue to be regarded with suspicion, the protests and opinions of the members of the Council notwithstanding.

CORONERS' INQUIRIES.

A coroner's inquest held recently at Manchester affords a further illustration of the loose manner in which these inquiries are too often conducted even by experienced coroners. It would appear that a man employed in glass works was seized with a fit and taken to the Ancoats Hospital. He was afterwards removed home, where he was seen by Dr. R. Bishop, who found him still unconscious. The man died some hours later, and Dr. Bishop came to the conclusion that the seizure had been epileptic, and, though he was aware that the patient had been exposed to the influence of lead in his work, as he was unable to ascertain that the patient had presented any of the ordinary symptoms of lead poisoning, he gave a certificate of death from epilepsy. The coroner, acting within his rights, ordered a *post-mortem* examination to be made by Dr. Reynolds, who came to the conclusion that death was due to lead poisoning. So far there does not appear to be reason for criticism; but at the inquest the coroner made the observation that the death certificate given was to a certain extent false, because it did not suggest that lead poisoning had brought on epilepsy, or had had anything to do with the death. He added, according to the report in the *Manchester Guardian*, that the fault in this instance might be due to a mistake, but expressed the hope that medical men would be more careful in such cases. Before making these remarks, it seems to us that it would have been an obvious act of justice to have invited Dr. Bishop to attend the inquest and to have heard any explanation which he might desire to give. The remarks of coroners made in their official capacity are privileged, and no action could lie against a judge of a court of record (and a coroner is such a judge) for any matter done by him in the exercise of his judicial functions, as, for instance, for slander in summing up. This, which is a common law rule of great antiquity, should render coroners extremely careful not to pronounce a condemnation on the conduct of persons who have not been summoned to give evidence.

PILLS AGAINST EARTHQUAKES.

Was it not Horace Walpole who, writing to a friend about the regularly recurring earthquakes which were scaring London a century ago, suggested the taking of "bark" as an antiperiodic? One is certainly reminded of the itinerant hawker of those days who, vending his goods on London Bridge, offered the lieges certain pills as "good against an earthquake," by the almost equally humorous enterprise of a contemporary in Middlesbrough who proposes to protect his readers against small-pox by impregnating his broadside with some chemical disinfectant. Had the enterprising proprietors confined their promises to a guarantee that each copy of their paper had been carefully protected against infection by their patent process, one might have supposed that they were merely parodying Charles Keene's joke in *Punch* about the cabby who assured the old lady that she ran no risk of infection from small-pox in using his cab, as he had "had the hind wheel vaccinated." But they claim that their sheet will "not only be disinfected itself, but be made an agency of disinfection," and in so doing they encourage a confidence which has no basis in science. There is, of course, a process by which every soul in Middlesbrough can, almost to a certainty, be rendered immune to the attack of small-pox. It is the process by which the doctors and nurses of our small-pox hospitals are kept free from the disease, though their wards are frequently in epidemic times fearfully overcrowded. The introduction of the glycerinated calf lymph has minimised the objections—always ridiculously exaggerated—to the process of vaccination, and we unhesitatingly affirm that recent successful vaccination, or revaccination, as the case may be, is for all practical purposes an efficient and complete protection against small-pox, and the only complete protection we can conceive in a small-pox infected town short of living in a sterilised glass case, breathing sterilised air, drinking sterilised water, and eating sterilised food, not to mention reading only sterilised newspapers. If all Middlesbrough were vaccinated or revaccinated to-day, there would not be a single new case amongst its inhabitants three weeks hence.

THE FRONTIER WAR.

Several correspondents have drawn our attention to the remarkable omission of reference to the medical services in the despatches published relative to the frontier operations in October last. These include Sir William Lockhart's report of the two severe actions fought at Dargai; and despatches from Sir Bindon Blood, commanding the Malakand Field Force, enclosing reports from Colonels Reid and Montanaro, describing operations of a detached column in the Cis-Swat Utman Khel country. Either the medical services were well or ill carried out in these operations; if done well, then medical officers and men were entitled to the due recognition of meritorious services, with other members of the force; if done badly, then the truth should be known, and the failure traced to its source. The omission is invidious, ominous, or both. The public have been kept sadly in the dark regarding the working of the medical services in this frontier war; and it behoves some member of Parliament to extract from the War Secretary information on the subject, which seems to be unaccountably withheld in despatches.

THE BACTERIOLOGICAL TREATMENT OF SEWAGE.

The success which has attended the septic tank treatment of sewage at Exeter and elsewhere, and the growing conception of the importance of bacterial activity in what may be called the natural processes of the purification of sewage fully justifies the decision of the Government to appoint a Royal Commission to inquire into the subject. The question is largely a scientific one, since the practical details are comparatively simple when once the necessary bacteriological information has been obtained. The announcement of one of our Lobby correspondents that the Government intend to secure the services of an eminent bacteriologist as a member of the Commission will therefore be read with satisfaction. It may be said that all satisfactory types of sewage treatment involve two processes more or less distinct: first, the disintegration and disposal of the suspended solid matters; and, secondly, the conversion of the soluble organic residua into harmless constituents of the effluent. As usually practised the first of these processes is effected by one of the innumerable chemical or precipitation methods, but the "sludge" thus produced is almost as difficult to deal with as the original material. For the accomplishment of the second of these processes there are many plans, nearly all of which result in some method of soil filtration or irrigation. Recent experience gives reason to believe that the two processes can be more expeditiously performed by taking advantage of the peptonising and oxidising activities of certain bacteria, many of which are normal inhabitants of crude sewage. In the already numerous varieties of the septic tank process these results are obtained by allowing the

sewage to remain in large reservoirs in which the preliminary solution of organic suspended matters is effected by a process of bacterial digestion. This dissolving action may be effected either by aërobic or anaërobic organism; in either case the result is a sewage solution in which most of the original solid constituents exist in a soluble form, the rest having escaped as organic gases. The resulting solution is then subjected to a filtration process through various materials. Whatever material be used the effect is the same — the soluble organic constituents are oxidised by the bacteria into stable and inert materials. This process, in its various modifications, has now been worked in various parts of the kingdom, and a great number of facts and data have been obtained as the results of the numerous trials already carried out, but they do not rest on any uniform basis of experiment. One of the points to which the Royal Commission may be expected to give special attention is the particular process best adapted to various types of sewage. In order to arrive at trustworthy conclusions it will be necessary to institute comparable experiments, in order to afford definite information as to the best modes of working a process which is likely to become more and more general in the near future.

HOSPITALS AND POLICE CASES.

THERE is a passage in the report of the annual meeting of the Southern Hospital, Liverpool, which is worth a little consideration. It occurs in a speech of the President of the Hospital, Mr. W. Adamson, who is not, be it remarked, a medical man. After adverting to the number of cases of serious accident admitted from the docks and railways in the neighbourhood, he adds: "I do not allude to cases from the slums, of which there were on one Saturday night as many as 31, all more or less the result of drink. These seldom go beyond the out-patient department, and few are sent into the wards, but they receive the necessary attention and are allowed to go home again. They chiefly arise from domestic broils, and I maintain should receive treatment at the police station instead of the hospital, and so save the latter being in such instances made into a temporary Bridewell." We do not doubt the reality of the abuses to which Mr. Adamson pointed, though we believe the remedy which he suggests is impracticable. It may be, and we think it is, an abuse that a hospital should be "made into a temporary Bridewell"; but it would be a still greater abuse to try to turn a Bridewell into a hospital. The accidents which occur in the streets are of all grades of severity, and whether they are caused by misadventure, by the patient's own misconduct, or by that of others, is a matter of no medical importance. They are all brought into hospitals, and treated there solely with a view to the safety of the injured person. But if they were brought into the police station for treatment the police would have in the first instance to investigate the circumstances, so as to separate those which are pure accidents from those in which some criminal charge may be contemplated. This would involve delay and needless pain to the innocent sufferer, who would then have to be forwarded from the station to the hospital. Another, and to our mind a still greater, objection is that police cells are the most unfit places in the world for the treatment of any serious injury. It would be necessary to have supplementary hospitals added to each station, properly constructed and organised, and with an adequate staff of physicians, surgeons, and nurses in constant attendance—an immense burden on the rates, and quite useless so long as thoroughly adequate hospitals are at hand to receive the cases. Of course it is an arguable proposition that police cases ought to be paid for out of the police fund; and we should say that much more efficient and sensible regulations should be made for rendering the patients to whom Mr. Adamson alludes, or those who have caused their injuries, criminally responsible. All police cases might be notified to the police authorities on the following morning in order, first, that the police fund should be charged for their maintenance, as the Asylums Board now is in London for cases of enteric fever admitted by the hospital at its request; and, secondly, that the patient himself, if it is a case of drunkenness or injury received in an attempted criminal action, or the person criminally causing his or her injuries may be identified, and made responsible on discharge from hospital. Such a system would act as a powerful deterrent to misdemeanours of this class; but the cumbrous regulations now in force on the part of the police allow the great majority of such criminals to go scot free.

THE LONDON UNIVERSITY BILL.

THE text of the London University Commission Bill, 1898, which was introduced into the House of Lords by the Lord President of the Council on February 21st, and read a first time, does not differ from the Bill of 1897 except in the omission of the names of the Commissioners. It is no doubt considered to be more convenient to introduce these names in Committee. The Schedule which embodies the scheme which the Commissioners are to carry out differs in a few respects from that appended to the Bill of 1897. Part I of the Schedule is headed "Provisions to which effect is to be given." The constitution of the Senate is modified by giving to the Council of the City and Guilds of London Institute one member, and by reducing the number of Crown nominees from five to four. The number of members of the Senate is thus retained at the same figure, 55, or with the Chancellor, 56. In the paragraph dealing with Faculties the subsection recognising examiners appointed by the University as members of the Faculties has been omitted. The instructions to the Commissioners as to examinations are practically the same, and the Senate will be required to hold separate examinations for internal and external students unless it otherwise determine, "either generally by regulation, or as to a particular subject by order." But there is this rather important addition, that the Senate will be required to communicate any such regulation to Convocation. Part II of the Schedule is now headed "Matters for which provision must be made." These include the adequate protection of all classes of students whether external or internal, collegiate or non-collegiate, the recognition of teachers of the University, and the regulations for the admission of internal students. The subclause dealing with this last point has been modified, and as it now reads persons to be recognised as internal students will be "students who have matriculated at the University, and are pursuing a course of study approved by the University under one or more of the recognised teachers of the University."

THE TREATMENT OF DANGEROUS HÆMORRHAGE.

FOR many years it was assumed that the blood of a healthy living person should be injected into the veins of a patient sinking from hæmorrhage. As this method of transfusion was found to be unsatisfactory, blood prepared after different fashions was employed. Details would now be almost archæological, for Wooldridge showed that when a patient recovered after transfusion of blood by any method it meant that the transfusion had failed, the blood having escaped into the cellular tissue outside the circulation; whilst transfusion, mechanically successful, was in itself deadly. A great gain to humanity was secured by the labours of British and German physiologists, not twenty years ago, who showed that a subject who had bled to death still had in his body enough blood to have supported life, if only it could have circulated. This was prevented by the great fall in blood pressure. What is necessary, then, to prevent fatal syncope when a patient has bled gravely, is to inject into the veins not blood but fluid sufficient to raise the blood pressure to its former height. This theory has proved successful in practice. Saline water,

"artificial serum," answers admirably. A teaspoonful of salt dissolved in a pint of hot water constitutes this not very mysterious solution. Great simplifications in transfusion have been effected, and Dr. Horrocks's simple apparatus is now widely used. As for operators, no doubt their adoption of Mr. Lawson Tait's practice of flushing the peritoneum with hot water signifies that they have performed transfusion many a time without knowing it. That flushing floats out clots, etc., and dilutes germs till they become harmless most authorities were aware from the first, but it was not until about 1890 that Pozzi and other operators distinctly noted that not only was the hot water a handy hæmostatic, as Mr. Keetley showed twenty years since, but its employment was in part a true transfusion. The hot water left in the peritoneal cavity is soon absorbed, and some operators purposely leave a pint or two there with the express aim of allowing of its absorption. The best known advance in the direction of simplification is subcutaneous injection of saline water most conveniently in the subscapular or submammary region. Many experienced operators employ it in preference to intravenous injections. Still the inexperienced may fear to force a pint or so of fluid into cellular tissue, nor can they always manage to do it; the process is also painful, and the water must be carefully sterilised before use. Rectal injection affords a simple substitute. Pouchet, of Paris, believes in the enema of artificial serum even after operations. He uses a solution of table salt in water (8 in 1,000) at 100°, and injects 6 to 12 ounces every three hours, so that about 5 pints are taken up in twenty-four hours. These enemata (which are used also in this country) lead, when successful, to restoration of the pulse, and the kidneys are again enabled to eliminate toxins. Unfortunately, the hot-water enema acts slowly, and in bad cases the rectum often fails to retain sufficient water, while some subjects cannot retain the enema when they become conscious. Nevertheless, it is better than doing nothing.

DEATH OF SIR JAMES MACKIE.

Sir James Mackie, K.C.M.G., formerly Surgeon to the British Consulate in Alexandria, and British delegate to the International Quarantine Board of Egypt, died in Alexandria on February 23rd after a long illness. Sir James Mackie, who was in his 60th year, graduated M.B. at Aberdeen University in 1860, and in the following year proceeded to Egypt. The services which he rendered to this country during his long tenure of office as a member of the Egyptian Quarantine Board were of the greatest importance and value. He was much trusted by the British Government, by whom he was appointed a delegate to the International Conference at Venice in 1891, and was greatly respected by the British colony in Egypt for his sterling qualities of mind and heart.

SURGICAL DRESSINGS FOR DUELLISTS.

In connection with the subject of "Doctors and Duels," recently referred to in the British Medical Journal, it may not be uninteresting to give the experience of another French doctor, who evidently was not so familiar with these affairs of honour as Dr. Deviller. Dr. Helme, in *La Médecine Moderne* of February 17th, gives particulars of an encounter between two students. The combatants thirsted for each other's blood, and accordingly it was arranged that they should fight with pistols at a short distance and in a covered walk, a combination of conditions which would seem to have made it difficult for them to miss each other. Nevertheless, with the good luck that presides over such combats in France, shots were exchanged, but no one—not even the seconds—was hurt. The doctor who officiated on the occasion was a house-surgeon of the St. Louis Hospital, and he appeared on the field of honour laden with bullet forceps and other weapons of an alarming character, and with all his pockets bulging with dressings of the newest and most scientific kind. When the bloodless combat was at an end, and honour was satisfied, the doctor finding his surgical armamentarium inconvenient to carry, left the dressings on the field, as Sir John Cope is said to have left his army. The party then adjourned to a neighbouring inn, and there relieved their overwrought feelings by a joyful banquet, where copious libations were poured to peace and brotherly love. So demonstrative did they become in their display of these excellent sentiments that a bottle was broken, and a wound of greater severity than is usual in French duels was inflicted on one of the company. The doctor's services were then called for in real earnest, but as he had no dressings the situation was somewhat embarrassing. At last he found in the bottom of a pocket book a small piece of the adhesive paper which surrounds postage stamps, and with this he dressed the wound successfully. The moral of this strange eventful history would appear to be: "Don't go as doctor in a duel without a supply of gummed stamp paper."

THE COLONIAL MEDICAL SERVICE.

A meeting will be held under the presidency of Sir Joseph Fayrer, Bart., K.C.S.I., in the East Conference Hall of the Imperial Institute, on Wednesday, March 2nd, at 3.30 p.m., when Mr. James Cantlie, will give an address on the organisation of the Colonial Medical Department. The scheme which will be proposed for consideration will, we are informed, be based upon that contained in a paper on the Organisation of the Colonial Medical Service, by Surgeon-Lieutenant-Colonel Evatt, which was published in the British Medical Journal of September 26th, 1896. The main points in this scheme are that all appointments for the service should be made after a competitive examination to be held in London at stated intervals; that successful candidates should undergo a special training in tropical medicine before taking up their duties; that fixed titles, periods of service, and pay proportional to such periods of service should be arranged, and that a Director-General should be appointed to control the Colonial Medical Service. It is suggested that a medical officer, on appointment and for two years after joining, should have the grade and title of Assistant Surgeon, for the next ten years that of Surgeon, from twelve to twenty years of service that of Staff-Surgeon, after twenty years that of Senior Surgeon, after twenty-five years that of Deputy Inspector-General, and after twenty-eight years that of Inspector-General. It is further suggested that distinguished officers of the service should be privileged in proportion to their number, and, in turn with naval and military medical officers, to be nominated honorary surgeons and physicians to the Queen. We are asked to state that any of our readers who may be interested in the matter are invited to join in the discussion of the subject.

ISOLATION OF CONSUMPTIVES.

It will be remembered that Dr. Hermann Biggs, the Pathologist and Director of the Bacteriological Laboratories of the New York City Health Department, in the course of his address on Public Medicine before the British Medical Association at the Montreal meeting, gave an interesting account of the New York Board of Health's long-continued efforts to curtail the ravages of tuberculosis. We learn from the *Boston Medical and Surgical Journal* that, at a recent meeting of the Board of Estimate and Apportionment, a further step forward was taken. The Board decided to appropriate the sum of 60,000 dols. (£12,000) to enable the Health Department to send poor patients suffering from the disease to an isolation hospital. President Wilson and Dr. H. M. Biggs appeared at the meeting as the representatives of the Board of Health. The former stated that it was in 1893 that the department first considered the subject of the isolation of consumptive patients. The idea was not then well received, and in the first year only 216 cases of the disease were reported. This year, however, 1,740 cases were reported by practitioners and 7,948 by hospitals

and public institutions, and the Board of Health was enabled to map out the habitat of the disease. A map showing the cases for New York for three years and the houses infected was reproduced in our report of Dr. Biggs's address in the British Medical Journal of September 11th, 1897, p. 632. Dr. Biggs told the Board of Estimates that most of the private hospitals in New York refused to accept consumptive patients, and about forty were turned away each week. If the Board of Health were given the opportunity patients might be taken away from their homes in suitable cases, and grave sources of contamination would thus be done away with. One-fourth of all the deaths among working people was due to tuberculosis. The resolution passed by the Board of Estimate authorises the Health Department to send tuberculous patients to any desired hospital, and the latter has selected Seton Hospital as the most suitable for the purpose. It is well situated in a isolated position on Fordham Heights, near Spuytenduyvil, and is one of the best-constructed and best-equipped hospitals in the United States. It was erected in 1894, and was especially designed for the treatment of tuberculosis. When opened it had a ward capacity of 120, besides accommodation in private apartments; but this can be extended indefinitely as occasion may require. It is understood that no patient will be forced to go there, but all the poor affected with this disease can avail themselves, if they wish, of the opportunity thus afforded for isolation, pure air, and the best scientific treatment. It will be seen that Dr. Sims Woodhead in his recent address to the Cheshire Chamber of Agriculture (p. 588) urged the desirability of including tuberculosis in the schedule of infectious diseases in this country.

THE LUNACY ACTS AMENDMENT BILL.

The Lunacy Acts Amendment Bill of last year will, we understand, again be introduced by the Lord Chancellor. The Bill will most probably be in the form in which it reached the House of Commons last July, and will not contain the Pension Clauses. There is a very widespread desire among asylum officers that these clauses should be enacted, and a very strong petition has been sent to the Lord Chancellor; but there are great difficulties in the way, and we would counsel the advocates of the clauses to bring all their influence to bear on the unfavourable local authorities. In a question of this kind it is above all desirable to convert the local governing bodies in the first instance, as a few dissenting authorities are often sufficient to prevent the passage of a scheme even when largely supported.

THE LAW OF MURDER.

The memorial of the Humanitarian League to the Home Secretary, on the subject of the law of murder, raises a number of difficult and debatable questions. The memorial will command sympathy and approval as regards its tone and spirit, and as regards some at least of its proposals. The operation of the law is stated with perfect accuracy in perfectly temperate language, and without a single misleading illustration. The principal object of the memorial is to urge that certain forms of homicide which are regarded by the law as murder ought not to be so regarded. The first principle laid down by the memorial is that "the death sentence should never be carried out unless there was an intention to kill on the part of the prisoner." Some carefully-defined limitations to this general principle would certainly be required to meet, for instance, the case of deliberately cruel and wanton infliction of injuries likely to cause death, even though no positive intention to kill was present. Even without these limitations, the proposed principle—which, by the way, has been adopted by most of the States of the American Union—would be an advance on the existing law, which declares if a man while attempting to commit a felony, in itself comparatively trivial, has the ill-luck accidentally to kill another—perhaps his dearest friend—he is guilty of wilful murder. Take, again, the curious case of two persons agreeing together each to take his own life: one of these accomplishes his purpose, while the other fails; the survivor in this case is held guilty of the wilful murder of the one who killed himself. The memorial urges that the nature of the offence should not depend upon the result of the act, inasmuch as that may depend upon extraneous circumstances over which the prisoner has no control. If by that is meant that intention should be the sole criterion of the nature of an outrage, while its consequences are not to be considered at all, we must demur to the principle. It would land us at once in the conclusion that an unsuccessful attempt to murder should be treated precisely as if it had been successful, the intention being the same. This would not only be repugnant to common sense, but would also be impolitic so far as it removes a motive for stopping short of the completion of a criminal attempt. So long, therefore, as it remains doubtful whether the attempt has succeeded or failed, the penalty to be ultimately awarded must also remain undetermined. But when the injured man ultimately dies from the results of his injuries, even though he might have recovered but for his own faulty constitution or his unfavourable surroundings, or his surgeon's want of skill (provided always that the surgeon was possessed of reasonable skill, and acted *bonâ fide*), the attempt to murder has succeeded, and his crime is wilful murder.

A MARRIAGE EXAMINING BOARD.

A reformer in the Ohio Legislature has introduced a Bill requiring persons applying for marriage licences to pass a medical examination. The Bill forbids the issue of a licence to any person suffering from dipsomania, insanity, or tuberculosis. It provides for a marriage examining Board of three physicians in each county. A measure of this kind has been advocated by many reformers of society from Sir Thomas More down to our own day, but if science is strong human nature is stronger. It is pretty certain that love which laughs at locksmiths will not show more respect for medical certificates.

A discussion on Waterborne Typhoid will be opened at the Sanitary Institute on Wednesday, March 9th, by Dr. Christopher Childs. The chair will be taken at 8 p.m. by Mr. Shirley Murphy.

The annual general meeting of the Medical Defence Union will be held at St. Martin's Town Hall, Charing Cross Road, London, W.C., on Monday next, at 5 p.m., when the annual report of the Council and statement of accounts for the year 1897 will be presented.

Sir William Broadbent will give a clinical lecture at St. Mary's Hospital Medical School on Wednesday, March 2nd, at 3.15 p.m., on a Case of Pneumonia with Abortive Crisis, and Premature Resolution, followed by Suppuration of Bronchial Glands.

The Milroy Lectures at the Royal College of Physicians of London, by Dr. Monckton Copeman, on the Natural History of Vaccinia, which were to have been commenced next week, have been postponed to the first week in May, owing to the indisposition of the lecturer. The Goulstonian Lectures on the Pathology of the Kidneys will be given by Dr. J. Rose Bradford on March 15th, 17th, and 22nd. Sir Richard Douglas Powell's Lumleian Lectures on the Principles which Govern Treatment in Diseases and Disorders of the Heart will be given on March 24th, 29th, 31st.

Brucker is reported to have proved that the "harvest bug"—that variety at least which, in the Côte d'Or, produces the well-known and disagreeable eruption and itching—is the hexapod larva of *Trombidium gymnopteron*. As is pointed out in the *Pharmaceutical Journal*, it is possible that in other localities other Trombidian larvæ may attack man.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE LOCAL GOVERNMENT BILL FOR IRELAND was introduced by the Irish Secretary on Monday, and was received with a general chorus of approval. It follows very closely the English and Scotch Acts, and places the whole local administration of Ireland in the hands of county and district councils elected by ballot on the democratic Parliamentary franchise. It will affect the medical profession in several important particulars. In the first place the Poor-law guardians will also be elected on the broad franchise, and *ex-officio* guardians are to disappear. The sanitary administration of the country will be placed in the hands of urban and rural district councils, and the chairman of each rural district council will be a member of the county council. The dispensary committees will be abolished, and their functions taken over by the guardians, who will, however, be able to delegate their duties to a committee of district councillors and guardians. As regards lunacy the Board of Control is to disappear, and the appointment of boards of governors and officers of asylums by the lord lieutenants is to cease, and be transferred to the county councils, which will manage the asylums by a committee, or in cases of an asylum belonging to two counties by a joint committee. There is also provision for appointing members to serve on committees who are not on the county councils. As regards the dismissal of medical superintendents and assistant medical officers, these officers will be protected by a requirement that the Lord Lieutenant must consent. As we indicated last week it is intended, as far as possible, to make the boundaries of Poor-law unions and district councils conterminous with the county boundaries. The friends of Poor-law reform will learn with pleasure that it is intended to facilitate the transfer of lunatics from workhouses to county asylums, and the payment of half the salary of a trained nurse in each Poor-law union will probably be provided for from the Imperial grant.

THE TREATMENT OF SEWAGE will, it is understood, form the subject of inquiry by a Royal Commission. The Local Government Board has for some years had difficulty with local sanitary authorities in consequence of the requirements laid down as to sewage farms and irrigation. In some parts of the country it is practically impossible to acquire land suitable in area and quality for the purpose and in other cases the great expense necessitated by treatment on the land acts as a deterrent to poor local authorities. It is high time that an inquiry should be made into the whole subject of sewage disposal and especially into the experiments which have been carried out in recent years in connection with the "bacterial" method and with the chemical treatment. The Commission is expected to be strong in the scientific element and will very probably have the services of a distinguished bacteriologist as a member.

THE COTTON CLOTH FACTORIES ACTS (1889-97) have been the subject of a report by a departmental committee whose recommendations the Home Secretary has submitted to the House in a series of regulations. They are important from a sanitary point of view, and order that in every factory where artificial humidity is produced, pure (or presumably pure) water is to be used, that the pipes introducing the steam shall be as small as possible, and that the ventilation shall be so regulated that there shall not be more than 9 volumes in 10,000 of carbonic dioxide. Other regulations refer to periodical whitewashing, and the provision of proper cloak rooms.

FOOD ADULTERATION was the subject of a smart little debate before the address was voted. The words in the address seemed to Mr. Kearley and others not sufficiently strong as a pledge of legislation this year, and they were admitted by the Government to be only "a qualified assurance." The great point of the discussion, however, was the decided opinion expressed on both sides of the House in favour of a stronger Bill than that introduced last year. The general feeling was that no enactment will be satisfactory unless it ensures effective administration of the law by local authorities, and establishes a Board of Reference for the purpose of fixing standards of purity, as unanimously recommended by the Select Committee.

THE LONDON UNIVERSITY BILL was read a first time on Monday in the House of Lords, on the motion of the Lord President of the Council (the Duke of Devonshire). The Bill has been printed and differs very little from that of last year, and its early introduction is a satisfactory assurance that this year the Government mean to do their best to pass it.

A BILL TO AMEND THE LOCAL GOVERNMENT (SCOTLAND) ACT, 1894, was introduced on Tuesday by Mr. A. Cross. Its object is to give medical officers in Scotland the same security in their offices as their brethren enjoy under the English Poor Law. This is a reasonable proposal, and, as the Bill is short and simple, there ought to be no difficulty in passing it if the Scotch Office will only assent. In this, however, comes the difficulty, which may prove insurmountable.

IRISH LUNACY ADMINISTRATION will be largely affected by the Bill for the Reform of Irish Local Government. Mr. Gerald Balfour in the course of his speech, which occupied an hour and a half, touched upon the point only briefly, but he afforded sufficient indication to show that the Bill will have results in regard to important Irish lunatic asylums.

In the first place, it proposes the abolition of the Board of Control—an announcement which evoked loud cheers from the Nationalist members. The appointment of Boards of Governors and of officers of asylums by the Lord Lieutenant will cease. The Bill will constitute county councils, and amongst the multifarious duties they will have to discharge will be that of "providing and maintaining sufficient accommodation for the lunatic poor in the county, and to manage the lunatic asylums." Mr. G. Balfour explained that the County Council in this matter would act through a Committee or where an asylum district comprised more than one county through a joint committee in which each council would be represented in proportion to the expenditure which it had to defray in connection with the asylum. The right hon. gentleman pointed out that one-fourth of the members of a committee might be appointed from among persons other than county councillors, and stated that while the powers and responsibilities of county councils in connection with lunatics would be considerably greater than those of existing Boards of Governors the ultimate control of the executive in cases where the County Council failed to carry out their duties was sufficiently maintained by a variety of provisions. Though the appointment and removal of the officers would rest with the County Council acting through their Committee, "the concurrence of the Lord Lieutenant" would be required in the case of a resident medical superintendent, and in the case of the assistant medical officers. *Ex-officio* guardians are to be abolished together with dispensary committees, the functions of the latter being transferred to guardians. In the financial clauses provision is to be made to pay, amongst other disbursements, one half of the salary for one trained nurse in every union in Ireland if actually employed and possessing the prescribed qualification. And there will be sufficient to provide against an increase in the lunacy charges caused by the transference to asylums—which he hoped under the new system might be expected to take place—of the lunatic poor at present in workhouses. Such transference, however, he admitted, could not take place all at once. Mr. Morley, who was the first to offer a word of criticism on the Government project, assented to the Irish Secretary's description of the Bill as framed on broad and democratic lines. He in particular expressed approval of the changes as to lunatic asylums, declaring that he had always considered the Board of Control a most anomalous body, and the constitution of boards of governors of lunatic asylums one of the most troublesome and thankless duties imposed on a Chief Secretary. The Irish members, Nationalists, and Conservatives were never as harmonious as in their reception of this Bill. Even Mr. Timothy Healy hymned in tune. Mr. Flavin (member for North Kerry) showed anxiety to know what would be the position of the existing medical officers under the Bill and no doubt his curiosity will be satisfied on the second reading. That stage was nominally put down for about a fortnight hence, but it will, of course, be deferred to a later period. Indeed, it by no means goes without saying that it will be entered upon before Easter.

The Bill was read a first time before the dinner hour, a most unusual occurrence in the case of a Government scheme affecting our interests; but the Nationalists, though of opinion that such a Bill should have emanated from an Irish Parliament, appeared to be satisfied; and the Irish landlords represented by Colonel Saunderson accepted in it a tribute to the spirit of the age, and appeared to be resolved not to accept it sulkily.

LEAD POISONING, upon different aspects of which the Home Secretary has already been questioned, was the subject

of inquiry by Mr. Loder, who elicited from the right hon. gentleman that last year 37 cases of lead poisoning were reported as occurring among boys under 18, two of them being known to have ended fatally. He (Sir M. W. Ridley) was not prepared, however, to make any statement as to the steps which would be taken in regard to the processes in which lead poisoning was most common; but the whole subject was engaging his earnest attention. Asked by Mr. Holland as to the nature of the reports received from inspectors as to surprise visits they had paid to works in the Potteries when investigating the circumstances of certain cases of lead poisoning, the Home Secretary said he had no doubt that at a later stage he should be able to inform the House as to the general results of the inquiries which had been made. Surprise visits were of course useful in ascertaining how far some of the existing rules were enforced, but that was only a part of the subject.

RABIES has been again under discussion. Mr. Walter Long, the Minister for Agriculture, has informed Mr. McKenna that under the muzzling orders now in force sporting dogs are exempted from being muzzled while being used for sporting purposes. There was, he said, no exemption in favour of sheep dogs as such, nor would it be possible for such an exemption to be allowed consistently with the success of the operations which the Government had undertaken for the extirpation of rabies. Responding to a query by Mr. Whitmore as to the progress made in the extirpation of rabies since the imposition of the muzzling orders by the Board of Agriculture "and not by the local authorities" (as the hon. member significantly added), Mr. Long said: "The number of cases of rabies in dogs in Great Britain was 438 in 1896 and 151 last year, when our operations began. The figures during the four quarters of the year 1897 have been 48, 42, 40, and 21, and during the first seven weeks of the current year only five cases are known to have occurred. The first of the series of muzzling orders which we have imposed took effect as from the 6th April last, so that we have every reason to be satisfied with the progress we have made towards the eradication of rabies in this country."

The Irish Secretary, replying to Mr. Daly, who asked, amongst other things, whether he was aware that an order had been issued by the Local Government Board directing that only paid nurses should take charge of the sick poor in Irish workhouses in future, which would entail heavy expense on the ratepayers, said that the substitution of paid trained nurses for pauper assistance, while perhaps entailing some additional expense, would undoubtedly result in increased efficiency in the management of the union hospitals, and in the treatment of the patients therein. For many years the Local Government Board had continually impressed upon Boards of Guardians the necessity of providing trained or experienced nurses in workhouse infirmaries and fever hospitals, and it was in consequence of the unwillingness of some Boards of Guardians to carry out the recommendations of the Local Government Board to appoint qualified persons as nurses that the order in question, which was practically to the same effect as the English order, had been issued. Boards of Guardians were not consulted as to the issue of the order. As to "whether he would direct that half the salaries of paid nurses in Irish workhouses be provided out of the Imperial Exchequer," Mr. G. Balfour added that the question was under consideration, but that at present he was not prepared to make any further statement on the subject.

The health of the army in India formed the subject of a statement by Mr. Brodrick, who said that ninety-two men of the first battalion of the Royal Irish Fusiliers were found unfit for active service through venereal disease when the battalion was inspected at Alexandria on February 7th. Dealing with a question put by Sir U. Kay-Shuttleworth as to the education of defective and epileptic children, Sir John Gorst stated that the Departmental Committee which had sat to consider the subject had made a very interesting report, which would in due course be laid before Parliament.

There have been several notices given which are deserving of notice. Bills are promised by Mr. W. F. D. Smith to amend the Pharmacy Acts, 1852 and 1858, and by Sir A. Hickman to amend the Public Health Acts. Mr. Weir proposes to ask the Secretary for the Colonies whether he is aware that the principal medical officer at Sandakan is in the employ of the British North Borneo Company, and that he also fills the office of sessions judge; and whether arrangements can be made by which the office of sessions judge shall be held by an official who is not employed by the company in a medical capacity.

Sir Charles Dilke will ask the First Lord of the Treasury whether it is proposed that the University of London Bill of the present session shall be substantially the same Bill as that of last year; whether steps can be taken to meet the complaint that under the Bill examinations would be mainly conducted by the teachers of the candidates; and whether it would be possible so to modify the Bill as to secure the examination of candidates for degrees by independent examiners.

Finally, Lord Stanley of Alderley will ask Her Majesty's Government whether they will lay on the table any surgical reports on the wounds of Piper Findlater and others, caused by Dum-Dum bullets, so that the country may judge whether these are not contrary to the spirit of the Convention against explosive bullets; and to ask whether Her Majesty's Government sanctioned the issue of the Dum-Dum bullets for military purposes.

Petitions against State regulations in the matter of certain contagious diseases in India have been presented from Weston-super-Mare, Whitehaven, Braunton, Hampstead, Victoria Docks, Edgbaston, Whitby, Newcastle, Penarth, Leeds (2), Wallasey, Harborne, Birmingham, and Edinburgh. A petition for prohibition of vivisection has been presented from Bristol.

THE CONTAGIOUS DISEASES ACT IN INDIA.

A MEMORIAL protesting against the measures recently enacted for dealing with venereal disease in the Indian Army (East India Contagious Diseases, No. 6, 1897, C 8,538) was forwarded on February 1st to Lord George Hamilton by 73 registered medical women practising in the United Kingdom and India.

The memorial is arranged under four headings:

I.

The Cantonment Rules of 1897 cannot, in our opinion, be applied to venereal disease without resorting to methods degrading both to men and women, and which may in their execution lead to abuse and blackmail of the worst kind, and which are inconsistent with the restrictions so admirably laid down by your lordship in Paragraph 11 of your despatch of March 26th, 1897.

[In support of this point attention is drawn to:

(*a*) The unsatisfactory nature of the evidence accepted as sufficient ground for summoning a given person for examination.

(*b* and *c*) The essentially compulsory and periodical character of the examination demanded by these rules as shown by the fact that it was found necessary to repeal the Cantonments Act Amendment Act of 1895.]

II.

We urge that from the nature of venereal disease the legislation embodied in the Cantonment Rules cannot materially reduce its amount, and that the objections proved against previous methods apply equally to them. We would indicate the following practical points, which appear to render it impossible to class venereal diseases with other infectious and contagious diseases, for purposes either of prophylaxis, segregation, or treatment.

[The points urged under this heading are:

(*a*) That the mode of contagion renders it ordinarily possible for the individual to avoid infection.

(*b*) The prolonged course of venereal disease renders adequate detention impossible on the score of expense, accommodation, and justice.

(*c*) The difficulties of diagnosis, and the fallacious character of certificates of health given to patients who have once suffered from venereal disease.]

III.

In comment on the arguments which have been brought forward in support of the legislation embodied in the new Cantonment Rules we offer the following considerations:

(*a*) Much stress has been laid on the occurrence among our soldiers returning from India of syphilis in its most severe forms.[1] It is recognised in civil practice that after the symptoms have disappeared and the patient is able to return to his ordinary occupation, anti-syphilitic treatment must be persisted in for at least some months in order to prevent the further development of the disease. We are informed that a soldier suffering from syphilis is treated in hospital until the symptoms disappear. He is then returned to duty without treatment until fresh symptoms occur, when he is readmitted to hospital; and this may be repeated again and again, the interruptions of treatment extending over many consecutive months. If our information is correct, the absence of continued treatment would appear to account in some degree for the severity of

[1] We note that in the list of serious cases of venereal disease furnished from Netley, quoted in Appendix III of Lord Onslow's Committee, 10 out of 40 were cases of gonorrhœa. We are aware that by the non-medical public syphilis is regarded as the graver venereal disease, and indeed in its worst forms its gravity and its serious consequences to the next generation can hardly be exaggerated. At the same time gonorrhœa is profoundly deleterious to the health of the nation at large. It is responsible for much permanent ill-health in both sexes, for many cases of sterility in married women, and it is the cause of much disease in women which is dangerous to life and necessitates the performance of major operations. We would therefore urge that this disease should receive no less careful and prolonged treatment than syphilis.

many cases of the disease, and for the fact that so many men are liable to break down on active service.

We would therefore suggest that one of the first steps in checking both the severity and the spread of disease should be a systematic and prolonged treatment of the soldier. If such treatment were carried out with due regard to privacy and with some attempt to impress upon the men the importance of their co-operation, we cannot believe that it would be impossible to secure the necessary attendance without in the majority of cases admitting them again and again to hospital.

(*b*) With regard to the prophylaxis of disease in the civil population, we believe that the practice of inducing patients to come voluntarily for treatment for a long period would be much more advantageous to themselves, to those with whom they may consort, and to future generations, than their compulsory detention for a few weeks in hospital without subsequent treatment. To this end outdoor dispensaries should be numerous and well staffed.

(*c*) In view of the lack of uniformity and method in the statistics at present available, we suggest that it would be advantageous to initiate a system of detailed and uniform investigation concerning the variations in prevalence and malignity of disease in English regiments quartered abroad. We believe that some such system, widely carried out, would yield in a few years data of great value. We further suggest that such returns should refer to regiments as well as to stations.

IV.

We are in favour of such legislation as would materially diminish the amount and severity of venereal disease, founded on the principle of making vice difficult, and in a practical way dishonourable to the troops.

(*a*) We suggest that there should be an organised and determined effort on the part of the authorities to suppress the trade of prostitution in cantonments. With this view we suggest that Rule 12 of the Cantonment Act of 1889 should be altered to: "The cantonment authority *shall* prohibit (*a*) the keeping of a brothel, (*b*) the residence of a public prostitute," instead of "*may* prohibit" as it now stands, and that paragraph 13 be erased.

(*b*) We suggest that moral character should be made an important element in the promotion of the individual and in the bestowal of appointments, and that as regards a regiment or other military unit, a bad record in respect of venereal disease should diminish the chance of selection for honourable and honour-bringing service.

(*c*) As regards the physical care of the soldier, we suggest that every man on joining the army should have it made clear to him that immorality will neither be countenanced nor excused, and that he is expected to live chastely. In this connection we desire to express our grateful recognition of the principles laid down in the recent General Order to the army of the late Commander-in-Chief in India, General Sir George White.

In presenting this memorial, we are animated by a desire to diminish sexual immorality as well as to prevent and cure the resulting disease. We wish to emphasise that we can give no approval to any measures containing features of the old Contagious Diseases Acts, which were equally repugnant to our moral sense and to our scientific convictions.

Professor George M. Stratton, of the University of California, has, we learn from *Nature*, recently made an experiment upon himself by wearing for eight days a mask fitted with lenses which invert the visual image, thus projecting it upon the retina in an erect instead of the normal inverted position. He soon learned to refer all objects to their correct positions—in other words, to see them right side up; but, on removing the apparatus at the expiration of eight days, everything appeared to be upside down at first. He therefore concludes that the seeing of objects right side up is due to a mental rectification of the visual image actually projected upon the retina.

THE PLAGUE IN INDIA.

Haffkine's Prophylactic Inoculations.

It is with unfeigned pleasure that we are able to record the satisfactory solution of the discussion we mentioned last week as having arisen concerning the alleged failure of Dr. Haffkine's prophylactic serum. The foundation for the adverse criticism was an apparently accurate account of six inoculated persons who had died after believing themselves protected. Dr. Khaja Abdulla published the results, and the immediate effect was a falling off in the number of persons who came forward to be treated by inoculation. Dr. Haffkine has carefully analysed the cases on which the alleged failure of the treatment was based. He deals with the six cases specified *seriatim*.

Case I had been inoculated eight months and a-half previously with 2 c.cm. Case II felt ill at the time of inoculation and died within eight days, obviously affected with plague at the time of the operation. Case III ten days after inoculation developed plague; this case seems to have *recovered*. Cases IV, V, and VI were *not* inoculated at all. Case IV is further interesting, as the sufferer was the only person in the family who was not inoculated, and she was the only person attacked.

Thus instead of the exposure being to the detriment of the serum inoculation, as practised by Dr. Haffkine, the very cases used as proof against the system add but additional guarantee of its usefulness. One thing which has damaged the good repute of inoculation amongst the natives is the fact that a short time ago persons inoculated by Haffkine's serum were exempt from quarantine; now this law is rescinded, and those who have undergone inoculation have no advantages in this direction. The privilege has no doubt been withdrawn for some very good reason; and it need not necessarily be that the Government have ceased to believe in the efficacy of the serum; but that for some cause, possibly attempts at deceit, they have been compelled to act as they have. It, however, behoves the authorities to state plainly the reasons for the withdrawal, otherwise the natives are sure to interpret it as meaning that the Government no longer believe in its efficacy, and therefore it is not worth while to undergo the operation. The lay papers beseech the Government not ostentatiously to discourage inoculation, and with all due deference to the Plague Committee we cannot help thinking the much-abused Municipal Council has a balance of right on its side in the endeavour to allay public excitement by encouraging prophylactic inoculation.

The Present Area of Plague.

The actual area of plague at the present is becoming daily more and more circumscribed. Poona is well nigh rid of the disease, and it is practically in Bombay alone that there is anything like an epidemic. Here, however, the recrudescence is rife, as the returns show. The deaths from plague during the week ended February 17th numbered 1,257, showing an increase of 144 on the previous week's returns. The total mortality was 2,195, being at the rate of 137.44 per 1,000.

A most sad and untoward occurrence was the destruction of the Parsee Hindu Hospital by fire. Although no lives were lost, the loss of hospital accommodation at the present moment is much to be regretted. The patients and nurses lost all their personal effects, and we are glad to see that a fund has been opened for the benefit of the nurses. The initiative in the matter had been taken by Lady Sandhurst, and a large number of subscriptions are being received towards the fund.

The History of Plague in Bombay.

On February 18th, before a largely attended meeting of the Indian section of the Society of Arts, held at the Imperial Institute under the presidency of Earl Spencer, Mr. Birdwood, C.S.I., formerly a member of the Council of the Governor of Bombay, delivered a lecture on the plague in Bombay, in the course of which he gave a summary of the epidemics that had occurred since the middle of the seventeenth century. The first, at Agra, continued for three successive years; others appeared in the Emperor Aurungzebe's camp in 1684, and again in 1689; at Surat in 1684 and 1690, at Bassein in 1690, at Bulsar in 1690, at Tatta in Sind in 1696, when 30,000 people died of plague; and in Bombay at intervals from 1689 to 1702. The disease disappeared in the eighteenth century to reappear at intervals in different places

in the nineteenth, but possessing no great force until the present epidemic, which approached more in character the epidemics of 200 years ago.

In discussing the commencement of the epidemic in Bombay in 1896, Mr. Birdwood quoted two mild cases in officers of the Byculla Infirmary of the Great Indian Peninsular Railway Company which were treated by Dr. Kay so early as in February or March, 1896. In the light of later experience Dr. Kay has no doubt that they were cases of bubonic plague. This is a very interesting point taken with the cases which occurred in Calcutta in a similar fashion but which were detected and isolated, with the result that the disease did not spread. It is apparent that plague is a disease which gains ground but slowly in a new locality, and that the discovery of first cases, however mild, is of vast importance. It is this quality of slowness of development which has been noted in Western India, Calcutta, and Hong Kong that affords the best hopes for preventive measures which shall be effective. A map prepared by Surgeon-Captain Grayfoot and shown by the lecturer demonstrated that when the plague was once established in Bombay and large numbers of the inhabitants fled to distant towns and villages, the fugitives took plague with them. It is estimated that from October, 1896, to April, 1897, the actual mortality from plague in the city was close on 20,000, while for the Presidency to the end of 1897 it had reached not fewer than 70,000.

The measures taken by the Bombay Government, as described by Mr. Birdwood, consisted mainly in despatching medical assistance to the municipality and appointing a scientific Committee to ascertain the nature and history of the disease. In March, 1897, a Plague Committee, consisting of Mr. Snow, the Municipal Commissioner; Mr. James, the Municipal Engineer; Surgeon-Major Dimmock, and General Gatacre as President were appointed. From a medical point of view we should have liked to have seen more medical men and more experienced sanitarians on the Committee, but it must be admitted that the Committee did excellent work, supplementing that already carried out by Surgeon-Lieutenant-Colonel Weir, the Health Officer of Bombay. It established numerous plague hospitals, organised a systematic inspection of houses, provided ambulances and segregation camps, and removed plague stricken patients to hospital. Mr. Birdwood paid a well-deserved tribute of praise to the self-sacrifice and devotion of all those engaged on plague work.

In the subsequent discussion, Sir Richard Thorne referred to the deep and painful impression which Surgeon-General Cleghorn's account of the insanitary condition of Bombay, given to the Venice Conference, had made on all its members. The overcrowding and the pollution of soil were excellent factors for the continued life of the plague bacillus. Chawls without light and fresh air, crowded with human beings, ought to be got rid of. Dr. Simpson remarked that a sanitary service was necessary to deal with these epidemics, that individual efforts alone could not cope effectually with the plague in India, and he hoped that the medical officers recently sent out by the India Office would be retained, and be allowed to form the nucleus of a properly organised sanitary service. Mr. Acworth, C.I.E. (late Municipal Commissioner for Bombay) pointed out the impossibility of dealing with the chawls, owing to the defect of the law, and Mr. Baldwin Latham drew attention to the connection between epidemics of plague and drought.

THE MEDICAL GUILD.

The annual report presented by the Council to the members of the Medical Guild at its meeting in Manchester recently stated that the Guild had taken an active part in promoting the meeting held in Manchester last May to consider hospital reform, and in the appointment of a joint committee representing the hospitals and medical societies of Manchester and Salford. With regard to this matter, the Council had adopted the following resolution:

That the Council of the Medical Guild places on record its strong dissatisfaction with the present practice which obtains in the majority of the hospitals of Manchester and Salford of charging patients for services rendered, as, in its opinion, hospitals supported by voluntary contributions and which are charitable institutions, ought not to exact such fees.

In conjunction with the Medico-Ethical Association an inquiry into clubs and allied practices had been conducted and a joint report issued. Definite action had already been taken at Middleton, where the profession had formally resolved not in future to accept clubs at less than 4s. a member per annum.

The Council of the Guild had also adopted the following resolution with regard to medical aid societies:

With reference to the promotion of provident medical aid clubs by laymen, the Council of the Medical Guild strongly deprecates the action of any medical man who, by giving such aid as permits of the intervention of any third party between medical practitioners and their patients, deals a severe blow at the best interests of the profession as a whole.

The report also gives a synopsis of the work done by the Guild during the year, which shows that much has been done to achieve its aims, which are the organisation of the profession in order to secure united action and the co-operation of all for the common good; to gather up and guide medical opinion in all matters affecting the profession, and give public or private expression thereto when deemed advisable; and to foster *esprit de corps*.

The report was adopted, and Professor J. Dixon Mann, M.D., was elected Chairman of Council; Dr. Richard Wolstenholme, Vice-Chairman; Dr. C. G. L. Skinner, Harpurhey, Honorary Treasurer; and Dr. Alexander Stewart, Eccles Old Road, Pendleton, Honorary Secretary.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on April 13th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 24th, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: North London District.—A meeting will be held at the London Temperance Hospital, Hampstead Road, on Wednesday, March 2nd, at 4.30 P.M. Dr. Morton will preside. Dr. H. A. Caley will read a paper on Prognosis in Appendicitis and its Relation to Treatment. Dr. Soltau Fenwick will show cases of interest in the wards of the hospital. The District Committee will meet at 4.15 P.M.—H. J. Macevoy, Honorary Secretary, Brondesbury, N.W.

South Eastern Branch: East Surrey District. The next meeting of the above District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 10th, at 4 P.M., Mr. J. Sidney Turner, of Anerley, in the chair. Dinner at 6 P.M.; charge 7s., exclusive of wine. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for Representatives on the Council of the Association. The following papers, etc., will be read: Professor A. E. Wright, M.D.: (1) Demonstration of the Technique of Serum Diagnosis. (2) Demonstration of Method of

Determining the Coagulability of the Blood. Dr. F. J. Smith: Pleurisy and Pleuritic Effusion; Their Diagnosis and Clinical Significance. Mr. A. H. Tubby; The Diagnosis and Treatment of Infantile Hernia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—Henry J. Prangley, Honorary Secretary, Tudor House, Anerley.

South Eastern Branch: West Kent District.—The next meeting of this District will take place at the West Kent Hospital, Maidstone, on Wednesday, March 23rd, Mr. A. H. B. Hallowes, in the chair. Members desirous of reading papers or exhibiting specimens are requested to communicate with the Honorary Secretary without delay.—E. Ground, M.D. Honorary Secretary, 1, Ashford Road, Maidstone.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

A clinical meeting of the Branch was held at the Swansea Hospital on February 17th. Dr. Ward (Merthyr), the President, was in the chair and twenty-one members were present.

Cases, Specimens, etc.—Mr. J. Arnallt Jones showed photographs, casts, and drawings of (1) Fœtus Acardiacus, (2) Congenital Absence of Radius, (3) three cases of Deformed Hands. He also read notes on (1) a case of Hydatidiform Mole, (2) a case of Atrophy of the Testicle.—Mr. J. Lynn Thomas showed specimens of (1) Extrauterine Gestation, the ovum being still *in situ* in the inner third of the tube; (2) two large Vesical Calculi, (3) Skiagram of a Fœtus in Utero.—Dr. T. D. Griffiths showed a patient from whom he had removed a pedunculated loose cartilage in the back of the knee joint.

Communications.—Mr. W. F. Brook read notes on (1) two cases of Trans-sacral Excision of Rectum, (2) Double Nephrolithotomy, (3) cases illustrating the use of Lane's Screws in Osteoplastic Surgery, (4) two cases of Thyroidectomy.—Dr. Cameron read notes on (1) two cases of Fungous Endometritis, (2) case of Gall Stone, with specimen.

Votes of Thanks.—Votes of thanks to members who had showed cases and specimens and to Dr. Ward for presiding were cordially passed.

THE DISCUSSION ON INSOMNIA AT MONTREAL: A CORRECTION.

Dr. Robert T. Edes, of Jamaica Plain, Mass., has called our attention to an error in the report of the discussion on Insomnia in the Section of Pharmacology and Therapeutics at the annual meeting at Montreal, which was published in the British Medical Journal of October 2nd. The paper read on that occasion by Dr. Edes was attributed to Professor R. Ferguson of the Western University. We regret the error, but it is only fair to ourselves to point out that the mistake arose, as Dr. Edes himself rightly conjectures, from his omission to write his name on the paper. The MS. was sent on to this office without any clue to the identification of the author being supplied. One had therefore to be sought for elsewhere, and that unfortunately proved misleading. But while we cannot take upon ourselves the blame of the occurrence, we feel called upon to apologise both to Dr. Edes and to Professor Ferguson for the error.

SPECIAL CORRESPONDENCE.

PARIS.

Inadequate Hospital Accommodation in Paris.—L'Œuvre des Enfants Tuberculeux.—The Teaching of Hygiene by Lantern Slides.—Armenian Students in Paris.—General News.

It is an ascertained fact that the Assistance Publique of the city of Paris can dispose only of 7,529 beds. The vacant beds are on a yearly average 1,200; the number of applicants recognised to be in a suitable state for admission is 8,200. The Municipal Council has had to remedy this condition by instituting "representative relief," a system under which a certain sum is paid to indigent sick in lieu of being received into a hospital. Moreover, others are sent to the Nanterre, or Villers Cotterets retreat, or to lunatic asylums. These measures have slightly palliated the evil, but it is evident in order to remove it there is only one course open, which is to refuse admission to those who are not born Parisians, and to pay their journey back to their birthplace where they can obtain relief. In the present state of feeling such a scheme could scarcely be proposed, but it is believed that later on it will inevitably be put in practice. M. Lamperé, a municipal councillor, is much troubled by the increasing number of hospital applicants who are refused admission, and will shortly propose to his colleagues to establish in the environs of Paris, where the air is better than in Paris, a hospital with 6 000 beds, which will place at the disposal of the Public Assistance 13,529 beds; the expense will be £1,728,000. To meet this expense M. Lamperé proposes to increase the octroi taxes, and to erect a new paying home containing 500 beds.

The general meeting of L'Œuvre des Enfants Tuberculeux was held a few days ago. M. George Picot, perpetual secretary of the Academy of Moral and Political Sciences, was in the chair. M. Picot stated that at the hospital Villiers-sur-Marne, where the adolescent patients are treated, the cures in 1897 were on an average 26 per cent. At the Ormesson Hospital, where children are treated, the cures reached 34 per cent.

The Société Pedagogique has organised lectures in some parts of France appealing to the ignorant and unlettered by means of lantern slides illustrating the subject of the lecture. The medical press calls on the hygienic societies, especially the Société de Médecine Publique et d'Hygiène Professionnelle, to organise lectures on this system for the purpose of teaching peasant girls and women the elements of hygiene indispensable to those who become mothers, or who undertake to rear their children. Medical men who practise in remote districts of Brittany and La Vendée could give terrible illustrations of the ignorance which sacrifices all notions of cleanliness and also common sense in feeding babies.

Under the patronage of M. Lavitte and M. A. Leroy Beaulieu a Committee has been formed for the purpose of helping Armenian students who in consequence of recent events are unable to continue their studies in Paris—students of all the faculties and important schools, irrespective of religious belief or opinions.

It is said that in the Paris Postal Department among 12,000 clerks 300 are down with influenza.

A second case of "Zola-mania" is chronicled in the press. The victim is under treatment in a prison infirmary.

ROME.

Foreign Practitioners in Italy: Report to the Supreme Council of Health: The Reciprocity Proposal.

A large section of the Italian profession are still very active in endeavouring to induce the Italian Government to introduce a project of law this session for the purpose of restricting the practice of foreign doctors in Italy, even among their own countrymen. The chief supporter of these proposals in the Italian Chamber of Deputies is Dr. Santini, a retired naval surgeon. In reply to a question recently asked by him in the Chamber as to the intention of the Government in the matter, Signor Arcoleo, the new Under-Secretary of State to the Minister of the Interior, stated that a project of law would be introduced this session in the lines of reciprocity with other foreign nations. He added that the number of foreign doctors practising in Italy was about 100, and not 1,500 as Dr. Santini had declared. It is evident, therefore, that the Government is disposed to take a much broader view of the question than the Italian medical men desire. Another proof of this is to be found in the report of the Director-General of the Administrative Services of the Kingdom to the Superior Council of Health, January 1st to November 30th, 1897. It is there stated that the replies to a circular addressed by the Government to the Prefects asking for information as to the number of foreign medical men practising among foreigners only show that the number is very little over 100. The report points out that the number is not large in proportion to that of the foreigners who for a great part of the year reside in Italy, and consequently should not cause any concern to Italian medical men. "Nevertheless," the report goes on to say, "protests have been raised by various medical societies of the kingdom (and have been repeated in Parliament) against the injurious competition that the foreign doctors have made with the Italian doctors in two ways, that is, by

practising their profession among foreigners, and also abusively practising among Italians [this is certainly not true as far, at least, as far as British practitioners are concerned.] The Minister of the Interior, after consultation with the Minister of Foreign Affairs, had thought of satisfying the complainants by modifying Article 23 of the Sanitary Law, proposing that the practice of medicine and surgery in Italy by foreign practitioners should be subject to the condition of their having passed in our language the examination for the doctorate in an Italian university. With this proposal, however, the privilege of free practice was left to the foreigners appertaining to the States in which Italian physicians and surgeons were treated in the same manner.

"To protect our practitioners and to place them in a position not inferior to that of the foreigners in their respective countries was the aim of that scheme; but the investigations subsequently made determined the Minister not to persist in his intention, it having been demonstrated by them that there is no real reason for restricting the practice of foreign doctors, whilst, on the contrary, the residence of foreigners amongst us would be rendered less comfortable, the sentiment of hospitality which is honourably traditional would be offended, and the liberal principle accepted in our civil code, through which, without the condition of reciprocity, a foreigner is admitted to enjoy all civil rights, including those that regard public offices, would be annulled.

"I believe that, setting aside all proposals as to new restrictive regulations, to protect the Italian physicians and surgeons against the illegal competition of foreigners, due supervision of foreign practitioners will be sufficient to prevent them practising also among the citizens when they do not comply with the sanitary law in force. Nevertheless, for the better protection of the Italian doctors, without injuring other interests, the initiation, at an opportune moment, of a treaty with other foreign States to obtain reciprocity of regulations shall not be wanting."

The justice and liberality of this official declaration may be willingly admitted. Much, however, still remains to be done to neutralise the pressure that the Italian practitioners are bringing to bear on the Ministry and on individual deputies, and, therefore, the British practitioners are very desirous of obtaining the support of their Government to carry out, as soon as possible, the necessary arrangements for the adoption of reciprocity between England and Italy.

MANCHESTER.

Infirmary Site Question.—Hospital for Consumption.—Clinical Hospital.—Epileptic Colony.—Dental Hospital.—Tuberculous Disease in Cattle and its Prevention.

THE "hospital question," or rather the Manchester Infirmary question, seems to be one which, like the poor, we have always with us. After deliberating for many months, a joint committee of the City Council and the Board of Management arrived at a scheme whereby it was proposed that the Corporation should purchase a certain area of land round about the Manchester Infirmary for £286,000. The report of that Joint Committee was duly considered by the City Council last week. After discussion, it soon became apparent that the scheme as drafted did not satisfy all the members of the Council. Eventually it was agreed "that the report be referred back, and that the Committee be requested to report further upon this subject." In this connection, however, it is important to observe that Sir John Harwood, who moved the adoption of the report of the special Committee, said that "it would be suicidal to cut off the negotiations," that is, the negotiations with the infirmary. The question is shelved for the moment, but there is good reason to believe that although the question has been long before the public of Manchester, the bodies representing the infirmary interests on the one hand, and those of the public of Manchester through the corporation on the other, will ultimately arrive at a decision which will redound to the credit of the ratepayers of Manchester, which will increase the usefulness of the infirmary to the suffering poor, and last, but not least, which will afford unrivalled facilities for the education of the medical students of Owens College who attend the hospital.

The present is the time for balancing accounts and making financial statements regarding the great medical charities of the city. There have recently been issued the annual reports of various hospitals. From the Manchester Hospital for Consumption (twenty-third annual report) we gather that the experiment of sending a certain number of cases to Bournemouth has not been altogether successful. The financial statement showed a balance due to the bank of £1,937.

The annual meeting of subscribers to the Clinical Hospital for Women and Children was particularly interesting. From the report it appears that to this institution many cases come from adjoining towns, and hence the Committee appealed earnestly for subscriptions from those towns. Again, we have the same tale, namely, that the balance due to the treasurer has been considerably increased since last year.

Incidentally, however, a remark was made by one of the speakers which foreshadows the establishment near Manchester of a great colony for epileptics. The late Mr. Edward Lund, F.R.C.S., had a strong desire to see an epileptic colony established. It appears that the Manchester and Chorlton Union Guardians are uniting to form such a colony, the order of the Local Government Board having been obtained. This will be the first colony of its kind in the North of England. It is likely that funds will be forthcoming from a collateral source to place the colony on a secure financial basis.

The Victoria Dental Hospital is doing excellent work in the city, not only as a hospital, for it is steadily and rapidly developing as a school where dental students can acquire a practical knowledge of their profession. At the present time there are about twenty dental students in attendance—the largest number that has ever attended. The dental students "take out" their other courses at Owens College Dental Department, and this department, with the cordial co-operation of the authorities of the Victoria Dental Hospital, bids fair to develop at no distant date into one of the most successful of the medical school. From the financial side, however, the hospital report states that there is still an increasing adverse balance.

The Cheshire Chamber of Agriculture have adopted a plan which might with great propriety be imitated by other such and similar bodies. They held a meeting at Crewe on February 21st to hear an address by Dr. G. Sims Woodhead on "Tuberculosis in Cattle; its Relation to a Pure Meat and Milk Supply." Statistics, the lecturer said, showed that in Copenhagen, where the cattle were stringently inspected, 17.6 per cent. showed evidence of tuberculous disease, while only 0.2 per cent. of calves showed any trace of tuberculosis. About one-sixth of the entire number of pigs slaughtered were tuberculous. The disease is exceedingly rare in sheep. Similar results were recorded from Berlin. As to the liability of meat and milk to convey tuberculosis, it was pointed out that the tuberculous kernels were found in almost every part of the body. Even in animals fed with cooked meat, 1 per cent. might become tuberculous. The bacilli did not exist in the meat as such, but in the glands. The lecturer attributed the affections of glands in the neck, which occurred in many weakly children, to the consumption of milk from cows with tuberculous udders, while to the same cause was to be attributed a large number of cases of tuberculosis of the bowels amongst children. Dr. Woodhead strongly urged that no person suffering from tuberculosis should be allowed to have anything to do with the care of cattle, or the preparation, collection, or distribution of milk or meat supplies. Any scheme for the eradication of the disease would involve the introduction of measures for the maintenance of the health of animals liable to tuberculous disease, such as systematic and regular inspection, the use of tuberculin as a diagnostic agent, and notification of the disease, which should be scheduled as an infective disease. There should be compensation to owners whose animals had to be destroyed.

THE FRENCH CONGRESS OF ALIENISTS AND NEUROLOGISTS.—The ninth Congress of French Alienists and Neurologists will be held this year at Angers on August 1st and following days. The questions proposed for discussion are the following: (1) Post-Operative Psychical Disturbances; (2) The Part Played by Arteritis in the Pathology of the Nervous System; (3) Transient Delirium from the Medico-Legal Point of View.

CORRESPONDENCE.

REGULATIONS FOR OBSTETRIC NURSES.

Sir,—I have been reading with some surprise the regulations proposed by the Association for adoption by the Obstetric Nurses Board. I do not know who is responsible for them, or what the proposed Board's idea of antiseptic midwifery is likely to be, but to me they seem open to very strong objection.

I was under the impression that the experience of the General Lying-in Hospital, and other similar institutions, had clearly shown that the most reliable antiseptic for midwifery is the 1 in 1,000 perchloride of mercury solution, which anyone, male or female, can carry about with perfect safety in the form of soluble tabloids. Of this no mention is made at all, but instead a 1 in 40 solution of carbolic acid, "or other antiseptics or lubricants which may be approved by the Obstetric Nurses Board," is recommended. I may say *en passant* that the latter clause seems to me to open the door to all sorts of abuses. Certainly hundreds of women will not take the trouble to ascertain what antiseptics the Board does or does not approve of. A drop or two of Condy's fluid in water, or some other useless combination, will be employed, and the "obstetric nurse" may claim that she is complying with the regulations laid down for her, so that the Board is practically leaving the matter to her own sweet will.

What I especially wish to point out, however, is that my experience long ago taught me that no woman, whether she be a highly trained monthly nurse, or a midwife, or what I take to be the same thing called by the new-fangled and cumbrous name of an "obstetric nurse," can ever be got to use a solution of carbolic acid as an antiseptic solution should be used, and this because it roughens and irritates the skin, a thing no woman will habitually submit to.

At one time I myself used a carbolic solution, and insisted on my monthly nurses thoroughly soaking their hands in it before touching their patients. I soon found that, for the reason I have mentioned, they could seldom be got to use it properly. All they did was to dip the tips of their fingers into it, and then flick off the fluid, leaving their hands as unprotected as before. When I took to using the 1 in 1,000 solution, which is bland and unirritating, no difficulty of the sort arose.

If this was the experience with monthly nurses in private practice, would it not be a good deal worse with "obstetric nurses," whose supervision, under ordinary circumstances, would be merely nominal?

For these reasons it seems to me that it is a pity that the advisers of the Association who have drawn up these regulations have not proposed a form of antisepsis not only reliable in itself, but which there is some chance of being regularly and efficiently employed.—I am, etc.,

Grosvenor Street, W., Feb. 19th. W. S. Playfair.

HOSPITAL REFORM.

Sir,—I beg to send you a copy of the Recommendations as amended by the Committee of the Hospital Reform Association:—

Recommendations.

1. That in the casualty department of the general hospitals only cases of urgent importance should be attended to.
2. That in the out-patient department patients bringing notes from medical men should have, *cæteris paribus*, a prior claim to treatment. That a resident physician should be appointed whose duty it shall be to see all out-patients in the first instance, and select those that require immediate treatment, and decide which do not require hospital treatment. That after patients have received "first aid" their circumstances shall be inquired into by a competent officer. That the honorary medical officer shall not be required to treat more than twenty new cases at one sitting.
3. That the circumstances of all in-patients with the exception of cases of accident, etc., should be carefully inquired into before admission.
4. That in the case of well-to-do people who are admitted to hospitals in consequence of accidents, etc., the hospitals should have the power at their discretion of recovering adequate fees for attendance.
5. In the case of small provincial hospitals that the plan adopted at the Oldham and Dorchester Infirmaries be recommended for trial.
6. That both in the large general hospitals and in the smaller ones out-patients coming from outside districts should be requested to bring notes from medical men before being treated.
7. In the case of special hospitals: (*a*) That payments by patients should cease; (*b*) that the eligibility for free treatment should largely depend on the recommendation of private practitioners; (*c*) that some provision should be made outside the hospitals for people who are in a position to pay a reduced fee, but are not in a position to pay the ordinary fee of specialists.

I may be allowed to add that the Association will gladly welcome any criticism that members of the profession may think proper to make. It is evident that hospital managers will be compelled to take some practical steps to reduce the amounts now expended in the working of the casualty and out-patient departments; and it is to be sincerely hoped that they will not be induced to adopt the objectionable system of payments by patients as a remedy. The charging of a fee of a few pence for either medicines or appliances will be certain to increase the amount of abuse, and will also tend towards increasing the number of cheap dispensaries.—I am, etc.,

Cardiff, Feb. 19th. T. Garrett Horder.

MEDICAL REFORM.

Sir,—I have read with very considerable interest the very practical address of Sir Christopher Nixon, which epitomises concisely and clearly the various reforms Mr. Victor Horsley and other medical reformers have for a long time contended, such as the "one portal system," "increased disciplinary powers of the General Medical Council," and that the General Medical Council should obtain discretionary power to inflict a less grave form of punishment than that of erasure of the name from the *Register*. That this amendment is needed must be acknowledged by all who have taken any interest in the subject of medical defence, and also the necessity of being able to examine witnesses on oath, and, too, the vitally important want that all criminal prosecution in the future should be undertaken by the police, and the fines obtained by conviction remitted to the Council.

The urgent need of the one-portal system—that is, one Licensing Board to be established in each division of the kingdom, holding an examination of a uniform standard, and granting a diploma or rather a registrable qualification in medicine, surgery, and midwifery, having no connection with any existing universities or licensing bodies, is forcibly striking by the fact mentioned by Sir Christopher that there are at the present time no fewer than four examining bodies in the city of Dublin, each granting a registrable diploma.

A State diploma, securing as it would the much-desired and long-wanted "minimum uniform standard," free from the suspicion of anything that would suggest corporate competition, would, I believe, do more than anything else to relieve the enormously congested state of the medical profession.

And now, sir, to the special object of my letter. May I suggest yet one other addition to these much-needed amendments to our Medical Acts that should be drafted in any new Medical Bill—that is, that the General Medical Council should send a member to Parliament who should be a medical man and have an *ex officio* seat on the General Medical Council and be elected not by the privileged learned few, but by every registered medical practitioner. If these amendments and the profession's M.P. be obtained, increased and improved direct medical representation will as a natural sequence certainly follow.

We have been lately twitted by Mr. Brudenell Carter on our political insignificance. If we as a united profession sent a member to Westminster this would do something towards increasing our political power, and I think the profession's member of Parliament would prove a very great convenience to the Government, and would doubtless become an able adviser to the Cabinet on matters concerning public health and medical matters generally.

Sir Christopher Nixon concludes his useful lecture by indulging a hope that he will live to see the principles for which he so ably contends realised. I most heartily re-echo this desire, for I believe if these important amendments are added to our Medical Acts, it will remedy our righteous grievances, and not only give increased dignity to the medical

profession, but prove of much public utility, and allay the present unrest and dissatisfaction that very generally exists among so large a section of hard-worked and deserving medical practitioners.—I am, etc.,

FREDERICK H. ALDERSON, M.D.,
President of the Western No 1 Branch of the London and Counties Medical Protection Association.

Glenthorne Road, W., Feb. 6th

SIR,—We beg herewith to enclose to you a copy of a requisition addressed to the Honorary Secretary of the Yorkshire Branch of the British Medical Association, and request you to publish it in the next issue of the BRITISH MEDICAL JOURNAL.—We are, etc.,

JAMES A. MYRTLE,
THOS. WHITESIDE HIME.

Bradford, Feb. 21st.

[Copy.]

Requisition to the Honorary Secretary, Yorkshire Branch of the British Medical Association.

Harrogate, Feb 1st, 1898.

Sir,—We, the undersigned members of the Yorkshire Branch of the British Medical Association hereby require you to convene a special meeting of the Branch, in accordance with the by-laws, to discuss the whole question of medical reform, and the claims of the Council to supreme power over the Association, and to consider and, if approved, adopt the following resolution:

"That in order to enable the British Medical Association to take an effective part in the promotion of reform, the representatives of this Branch on the Council of the Association be instructed to move in the Council the legalisation of the special resolution passed at Birmingham, and confirmed at Carlisle in 1896, amending the Memorandum of the Association, enabling the funds of the Association to be applied in the maintenance of the honour and the interests of the medical profession, and vote a sum of £—— for the promotion of medical reform."

Visiting members of other Branches, if present, being allowed to take part in the discussion.—We are, etc.,

JAMES A. MYRTLE, M.D., J.P., Harrogate.
NEVILLE WILLIAMS, M.A., M.B.Cantab., Harrogate.
ERNEST SOLLY, M.B Lond., F.R.C.S.Eng., Harrogate.
G. T. A. ATKINSON, M.D., C.M.Edin., Harrogate.
HENRY J. HUNT, L.R.C.P., etc., Surgeon Bath Hospital, Harrogate.
A. W. HINSLEY WALKER, M.D., L.R.C.P Lond., Harrogate.
F. LEVER, B.Sc., M.B.Lond., Harrogate.
J. GORDON BLACK, M.D.Lond., Harrogate.
J. RILEY WATSON, B.A., M.D., D.P.H., Harrogate.
C. ERNEST PRONGER, F.R.C.S.Eng., Harrogate.
THOS WHITESIDE HIME, B.A., M.D., Bradford.
A. RABAGLIATI, M.D., Surgeon to the Infirmary, Bradford.
WM. H. HORROCKS, F.R.C.S.Eng., Surgeon to the Infirmary, Bradford.
L. S. MACKENZIE, M.D., Bradford.
R. S WILLIAMSON, M.B. and C.M.Edin., Otley.
THOMAS JOHNSTONE, M.D.Edin., Medical Officer to the Hospital, Ilkley.

To the Honorary Secretary,
Yorkshire Branch, British Medical Association.

SIR,—I quite agree with Dr. Lovell Drage in his suggestion as to the necessity of a Royal Commission being appointed "to inquire into the constitution and government of the medical profession and the grievances of its members," but after our experience at Carlisle and London, where the President of Council stated, in answer to a question put by me, "that the Council of the British Medical Association refused to be bound by any vote passed at the annual general meeting," I fail to see what result we should attain by passing his suggested resolution in Edinburgh. The truth was plainly stated by an influential member of Council to the members of the Yorkshire Branch at the meeting held in Bradford on January 26th, namely, that "the Council of the Association maintain that they hold supreme power over the Association, and do not mean to hand over that power until beaten by action at law in the Court of Queen's Bench."—I am, etc.,

JAMES A. MYRTLE, M.D., J.P.

Harrogate, Feb. 7th.

*** The Council of the Association has always been glad to carry out the wishes expressed by resolutions at the annual meeting, and will doubtless continue to do so, so far as such resolutions are consistent with the general objects and interests of the Association.

UNQUALIFIED ASSISTANTS.

SIR,—I am extremely glad to find that there are some members of our noble and charitable profession that have ventured into print on behalf of those most unfortunate, and, if I may venture to use the expression without running any risk of being considered guilty of "infamous conduct in a professional sense," most hardly used men—the unqualified assistants, who, after performing for a lengthened period all the hard work and drudgery of many practices are now to be cashiered and left with their wives and families to struggle for bread as best they can. I sincerely trust that the numbers of those who have the courage to speak out may demonstrate the fact that the charity of the profession extends to those who have acted long as its non-commissioned officers, and that in its anxiety to safeguard the interests of the public it may not overlook the claims of long, arduous, and sometimes able service. In the army distinguished service and good character are sometimes rewarded by the gift of a commission, and it seems to me that the equitable treatment of unqualified assistants that have served in that capacity for say over fifteen years, and during that time have borne excellent characters, would consist in granting them a registrable diploma.

It can hardly be maintained that a man of ordinary intelligence, who has worked hard in the practice of medicine under the supervision of a principal for such a period of time, who has read a medical paper for fifteen years, and who during that time has constantly consulted both his principal and his principal's medical works, would be less qualified to undertake the treatment of a medical case than the student who under the pressure of a short period of "cram" has just managed to squeeze through a qualifying examination. I have a shrewd recollection of what the medical portion of the M.R.C.S. consisted of twenty-one years ago. I remember that what the students spoke of as "little Tanner" used to be considered as amply sufficient to meet the exigencies of the solitary paper in medicine and the two periods of ten minutes each that were devoted to *vivâ voce* on that subject. Again, it must be remembered that degrees and diplomas are no indication of what a man really knows at any given time. They simply mean that at a certain date which may be five, ten, twenty, or fifty years ago he was possessed of sufficient medical and surgical knowledge to satisfy his examiners. What percentage, I wonder, of the men who passed fifteen years ago would be able to pass now, without any preparation, the Anatomical and Physiological Examinations of the Conjoint Board? The percentage would probably have to be denoted by a fraction or a decimal. The fact is that while the qualified man has been forgetting that part of his knowledge that is not essential to successful practice, the intelligent unqualified assistant has been learning that part that is essential to successful practice. I hope I may not be misunderstood to advocate the retention of the system of unqualified assistance. I am quite satisfied that it is an anachronism. I am only pleading for fair play to those who by long and good work and good character may be considered to have acquired a vested interest in the profession. I only plead that in setting its house in order the profession should not ignore the claims of those unqualified men who can by long and useful service prove a good claim to just and generous treatment on its part.

I will now give particulars of a case which I believe no fair-minded man in the profession will deny to be one of peculiar hardship and deserving of generous treatment.

Mr. X. was apprenticed thirty years ago to a gentleman with a large practice in the country, who besides minor qualifications held the diploma of F.R.C.S.Eng. and was an M.D. He was with him five years. He then went in succession to two medical men of good standing in the same county as assistant, and afterwards went back to the gentleman to whom he was apprenticed, remaining with him for five more years. He then became assistant to a doctor in the south of England, remaining with him four years. He then devoted about six months to study, intending, if possible, to obtain a qualification, but his health gave way under the strain, and he was obliged to leave London. He then returned to the doctor in the south of England, and remained about twelve years more with him. In these various assistancies he won the esteem and regard both of his employers and their patients, and obtained excellent testimonials. When his principal in the south of England sold his practice the purchaser made it a condition that Mr. X. should remain as his assistant. He did so for three years, but the new Pharoah knew not Joseph; and it is easily conceivable that with an assistant who had been for sixteen years in the practice, and who was highly popular with the patients, the position of the principal was to a certain degree trying. There was a good deal of friction and perhaps a want of tact

on the part of Mr. X., and the assistancy was terminated. Since that time the position of Mr. X. has become more and more pitiable, and now the action of the General Medical Council with regard to unqualified assistants has made it impossible for him to maintain himself, his wife, and family by continuing the work to which he has devoted thirty years of his life. He has worked his hardest, never sparing himself in the interests of employers and patients, gaining the confidence of the former and the affectionate regard of the latter. At the termination of the last three years' assistancy he received numerous most gratifying testimonials and several presents in money. One testimonial consisted of an illuminated address and a purse of £100, and it was presented to him at the largest gathering in the neighbourhood in the remembrance of the inhabitants. In the course of his work he has attended between 1,000 and 2,000 cases of midwifery, and I am informed that in all that number he has not had one fatal case.

Can it be maintained that Mr. X. is not as well qualified after all this thirty years' of work—and successful work—in the prime of life, to do the ordinary work of a country practice as well as the young qualified man who has just obtained a diploma and attended his thirty cases of midwifery?

Is it too much to ask that exceptional cases such as his should meet with exceptional treatment? Is it in accordance with the traditional charity and generosity of the profession that a man like Mr. X. should be driven from the work he loves, and in which, if testimonials go for anything, he has shown himself proficient, to enter, untrained, some unfamiliar walk of life to seek the means of subsistence for himself and his family?

I trust that the recital of the case of Mr. X. may meet the eyes of some of our ardent reformers, who are rightly keen to exterminate all unqualified practice, and that it may suggest to them some method by which their laudable intentions may be carried out without entailing misery and penury upon those who, through long association with the practice of medicine, might be considered to have acquired a prescriptive right to their consideration and help.—I am, etc.,

January 11th. QUALIFIED.

*** We have received in addition to the above a large number of letters upon this subject, which we find it impossible to publish in full, more especially as in the main they repeat arguments already advanced by other correspondents.

"J. L. R.," while expressing sympathy with the disestablished unqualified assistants, expresses the opinion that it is time that the interests and rights of regularly qualified and registered men should be safeguarded from an illegal competition. He expresses the hope that the General Medical Council and other authorities will see that this does not become an opportunity for a harvest to the prescribing chemists who now, especially in country towns, do more to delude the public and to starve the doctor than can be adequately conceived.

"A Sufferer" writes: There is a proposition I should like to see answered by some of the Council. Supposing one of the unqualified secures a post as dispenser and bookkeeper under the latest rule, in a small town where there may be only one qualified man (his employer) and no other within two or three miles. His employer is out upon his rounds, and his return is uncertain. An accident is reported: a man badly wounded and bleeding very much, and no one at hand knows what to do. Is the dispenser (who may have gone through his full curriculum, dressing, etc., at a recognised hospital) to tell the informer to call in the next nearest qualified man, and allow the patient to die, knowing that he could, in all probability, stop the hæmorrhage, but is not allowed to do so by the General Medical Council? There are other instances in which prompt and able assistance is necessary, for example, drowning, poisoning, "flooding," etc., yet under the regulation lately passed a dispenser, though perhaps able to render valuable assistance and save life, is to stand by, look on, and see the patient die, for fear that his employer may have to suffer at the hands of the General Medical Council. Is a man who has been through a full hospital curriculum, attended midwifery (according to the rules laid down by the Conjoint Board of England), done his dressing, etc., to be put upon a lower level than a man who has attended a course of lectures of the St. John Ambulance Class, a certificated midwife, or a chemist?

"One of the Unqualified" thinks that it may be interesting to friends and foes alike to know that the number of unqualified assistants is something between 80 and 90, and certainly does not exceed 100. He adds that very few are under 30, the great majority between that age and 60. All are men of several years' experience, and some possess a full curriculum. He considers that unqualified assistancy is dying out, as some are removed by death, and others are becoming qualified.

"Durham Bank," once an unqualified assistant, but now qualified, resents the charges made against qualified assistants, and quotes a case within his personal knowledge in which the change from an unqualified to a qualified assistant was attended by great advantage to the practice. He agrees with Dr. Mark Wardle that there are dozens of ex-labourers who know nothing whatever about medicine who are yet making a good income in the county of Durham. He thinks that it is high time that the General Medical Council should take some steps to put down such practice, as it is a more pressing evil than the employment of unqualified assistants.

"Justice" urges that it is against all precedent, and not in accord with present day public opinion, suddenly to render destitute a considerable body of men without adequate compensation. He does not desire to defend the employment of unqualified assistants, but thinks that the General Medical Council ought to compensate those whom they have suddenly deprived of the ability to earn their bread and butter. This, as a matter not of pity merely, but as a simple right, ought to take the form of registration under some such conditions as the following:—

1. Unqualified practitioners of five years' standing.
2. Complete curriculum at some school or university.
3. Testimonials from employers, past and present, with regard to probity and skill.
4. Testimonials from at least two persons (say magistrates) of standing in the locality in which the applicant was resident.
5. The register to be open for two calendar months; thereafter no addition to be made to the list.

Dr. Hamilton Hall (Frant), in the course of a letter in which he criticises the comparisons which have been drawn between the unqualified and qualified assistants to the disadvantage of the latter, writes: "This abuse of the qualified assistant is self-interested. Those practitioners who indulge in it will not secure any acceptance of their views until they can satisfactorily answer this simple question, How did they themselves survive the disastrous consequences of obtaining their own qualifications?"

THE BRITISH MEDICAL ASSOCIATION AND HYPNOTISM.

SIR,—My attention has been called to your note under the above heading in your issue of the 19th inst., and I hasten to express my regret if on being unexpectedly called upon to give evidence concerning matters which happened nearly five years ago I inadvertently failed to make myself quite clear to the press.

You and I have unfortunately a sufficient knowledge of the legal procedure in cases of libel or slander to appreciate the unusual tactics of the defendant in this case. The defence set up was that the words if used were privileged, but when the judge disposed of this defence the defendant's counsel endeavoured to prove justification by making an attack upon the genuineness of the hypnotic condition.

Mr. Justice Wills commented very severely upon such a method of defence, which he called "cruel and unjust," and pointed out that it gave me no opportunity of consulting my papers or calling evidence to support my statements. Under these circumstances I was very careful to explain that the Association had appointed a Committee (of which I was a member) in 1890 to investigate the subject of hypnotism, that after three years the Committee had presented its report, in which they officially recognise hypnotism as a legitimate mode of treatment by medical men, and that they had adopted every one of my suggestions as to the methods to be used for the safeguarding of the practice from abuse.

I thought I had made the distinction between the Com-

mittee and the Association quite clear, and I think I must have done so as far as Mr. Justice Wills was concerned at any rate, for in his summing up, which I send you verbatim, he used these words:

What does Dr. Kingsbury say? He says the subject has been investigated by the British Medical Association. About that I apprehend there is no doubt. Things of that kind cannot be said by a man in the medical profession except they are true, because every medical man who listens to those words will know whether it is true or not. He says that a Committee sat for three years investigating the subject, and came to the conclusion that under certain conditions and with certain reserves it was a real though unascertained and uncomprehended influence, and that it was one which under certain conditions might be usefully employed by medical men. He says that he had studied the question before then and "the Committee adopted what I had already suggested"—that that important body adopted what he had already suggested, and he says, "In that sense and in that way and in no other have I practised hypnotism."

You will see from the above extract that the judge was quoting from his own notes, and that his version of what I stated as to the connection of the Association with hypnotism and your own version seem to correspond.

However, if I did not make myself sufficiently clear to minds less acute than that of the learned judge, I am quite willing to accept your statement of the affair as given in your note now under consideration.

The Committee, consisting of eleven eminent physicians and myself, officially appointed by the Association, investigated the subject of hypnotism as a therapeutic agency and reported favourably; the Association, represented at Newcastle in 1893 by a handful of gentlemen not having investigated the subject, felt that it was wiser for them to "receive" the Committee's report with thanks than to formally "adopt" it.

The concluding sentence in your note is true, but it is not the whole truth. The Council did not reappoint the Committee, but it would have been more generous on your part if you had stated that the Committee did not seek reappointment, having concluded their work and submitted a final report.—I am, etc.,

Blackpool, Feb. 21st. GEO. C. KINGSBURY.

THE DIAGNOSIS OF TYPHOID FROM ABDOMINAL INFLUENZA.

SIR,—In view of the asserted prevalence of influenza accompanied by symptoms of an abdominal type and of the difficulty of distinguishing between this affection and genuine enteric fever, it would be interesting to know if any of your readers have applied Widal's test to any cases which might be assumed to be influenza but for their reacting with this test, as the blood in unquestionable typhoid does.

The problem is obviously a difficult one to solve, for, if Widal's test is to be regarded as absolutely diagnostic of typhoid, even when not only enteric but other characteristic symptoms are absent, we shall have to widen very much our idea of the disease, especially when, as in cases which have come recently under my own observation, no intelligible explanation can be given of the origin of the infection on any of the ordinarily-accepted theories of its diffusion.—I am, etc.,

Gloucester, Feb. 21st. FRANCIS T. BOND, M.D.

BRITISH PRACTITIONERS IN ITALY.

SIR,—In connection with the contemplated change in the sanitary law of Italy in its bearing on foreign practitioners, I was this week requested to present my titles to practise in other countries at the Office of Hygiene in Florence. The following were the first impressions they made on my friend Signor Boncinelli, medical officer of health. I first handed him my London University M.D certificate. This, he said, states that you are a Doctor in Medicine, but it does not state that it entitles you to practise; the same remark applied to the M.R.C.P. diploma; the diploma of the Royal College of Surgeons only states that you are thereby entitled to practise surgery; the diploma of the Society of Apothecaries grants you permission to practise medicine, surgery, and midwifery, but as it is granted by a pharmaceutical society, how can it be a licence to practise as a medical man? Finally the diploma of the Swiss Federation met the case, and gave entire satisfaction. This may serve as a hint to our various licensing bodies to revise the wording of their certificates so that they may be comprehensible *urbi et orbi*. It is also to be hoped that the Italian authorities will acquaint themselves with the relative values of the various British and Irish diplomas.—I am, etc.,

STUART TIDEY, M.D.Lond., M.R.C.P.Lond.,

Florence, February 19th.

PROPOSED CHANGES IN THE LAW OF VACCINATION.

SIR,—Allow me to urge on your readers who are public vaccinators and general practitioners to thoughtfully peruse the leader in the BRITISH MEDICAL JOURNAL of February 9th headed as above, else they will find themselves suddenly poverty stricken.

Who can provide all the necessary heifer vaccine for universal vaccination with such lymph and can guarantee it? How is the large amount of heifer vaccine now used obtained? Greatly through dispensing chemists and surgical instrument makers, and what check is there upon them?

The other point mentioned in your leader which seems to me to present very great difficulties is, how is "domiciliary vaccination" to be carried out? Your readers will remember the unnecessary suspicion with which "the family doctors" viewed the relationship of medical officers of health to their patients. As you remark, domiciliary vaccination in England is apt to "increase the number of inefficient vaccinations which are now performed." Who are to perform domiciliary vaccinations? Are they to be entrusted to young and inexperienced midwives, or to experienced public vaccinators who will form a separate department of the sanitary service and do no other work? Moreover, how will they be received by the children's parents?

The question bristles with difficulties, and the antivaccinators, having got the thin end of the wedge in, are driving it hard and skilfully.—I am, etc.,

Aylesbury, Feb. 22nd. P. MURRAY BRAIDWOOD, M.D.

SIR,—I would point out one serious objection to domiciliary vaccination in working class districts that seems to have been overlooked, and that is the uncleanly condition of many of the houses in which the operation would have to be done. When children are brought to a vaccination station they are, as a rule, washed and in clean clothes; if done at home they would be in their usual state.—I am, etc.,

Rhymney, Feb. 21st. T. H. REDWOOD.

LEGISLATION AS A REMEDY FOR MEDICAL GRIEVANCES.

SIR,—I have no desire to labour the discussion of this subject. With regard to the members of the legal profession in Parliament, I admit that the numbers are about what Mr. Massie states, but of these the greater majority are barristers, the smaller number solicitors, and it was the members of the latter branch of this profession throughout the country that so strenuously and successfully opposed the Land Transfer Bill as it stood—to which I referred in a letter dated January 1st, and published by you on the 15th; and although it was introduced by the Lord Chancellor, "politically powerful" and "the head of the legal profession inside the Cabinet," they reduced the provisions for compulsory registration of title to voluntary provisions, a vast difference to future conveyancing practice, which forms so considerable a part of solicitors' work.

I hardly suggested a private Bill, as Mr. Massie states; I referred to the proposed draft measure of the British Medical Association being such if the General Medical Council failed to rise to the occasion in seeking Government support on a Bill of its own suggestion; but even so, that the promotion of a private Bill is not so hopeless a subject as Mr. Massie suggests is evidenced by the progress and prospects of the lay midwifery reformers. I still venture to assert that steady, sober, persistent agitation among Parliamentary candidates and members, if undertaken, will record its ultimate success in medical reform.

The General Medical Council, as I said, is supposed to be the corporate representative of the profession; can it be questioned, to take an instance, that a Midwifery Bill submitted to the Government by it, even if afterwards deputed to private members to introduce, would have been decidedly more satisfactory than one drawn and "bossed" by outsiders? Take alone the penal clause of the present Bill: it

has the same defects as the penal clause of the Medical Act—the protection of name or title, and not of practice. That being so, if the Bill is passed as it stands in this respect, what is to stop the practice of women not placed on the register by the saving clause for past practice of two years, or of an unexamined class arising again *de novo*? A penal clause, of course, should read that "any person not on the register who shall habitually and for gain attend or undertake to attend" shall be liable to the penalty. I personally know of women in this city in large midwifery practice who themselves never have taken "the name or title of midwife," whatever other people may call them. What has occurred in the past may occur again if the name or title and not practice has to be protected.

If the Council claims that it has no *locus standi* even to suggest measures to Government with respect to the profession, do the individual members not think it is time it had? When they say so emphatically its position will be strengthened, and its powers of necessity enlarged.

Whatever may be said about political powerlessness, it does not improve matters for the profession, as a whole, to sit—as it practically has for forty years—with folded hands, without raising a finger to help itself. Seek only and find, if not political power, then political sympathy, is a lesson of history.

When no official murmur is raised, can it be wondered at if it is concluded in political circles that the medical is a silent and therefore an absolutely contented community? Whereas the fact is that, while the evils are generally admitted, the advice from those who should know better than give it, and who should lead the way, appears to be that the profession should be silent, even "as a sheep before her shearers is dumb."—I am, etc.,

Leeds, Feb. 19th. J. H. Wigham.

MEDICAL DEFENCE.

Sir,—When all professions and other callings are self-protecting, either *per se* like the Church, Bar, Army, and Navy, through having acknowledged powerful heads and political influence, or like the Merchant Service and Engineers, who safeguard their independence and interests by means of such powerful associations as the Merchant Service Guild, the Associated Society of Engineers, etc., it is quite certain that any profession not so self-protected must go to the wall.

That the medical profession is in this most unsatisfactory position all the world over is shown in many ways. In England, by the undisguisedly antagonistic attitude of friendly societies, Boards of Guardians, governors of hospitals, and by hospital abuses, position of army medical officers, as well as many other matters too numerous to mention. On the Continent, by the severe laws passed in regard to mistakes made by medical men, and also the endeavours to make medical work compulsory at less than a labourer's remuneration. In the United States of America, by the outrageous abuse of hospitals and dispensaries by the middle and richer classes, by the general tendencies of these classes to claim the right of treatment free at any hospital they or their friends may subscribe to, and by the position of assistant surgeons in the United States navy. In all countries, by the almost universally unfair treatment of medical men by juries, by the general tendency to depreciate and undervalue medical services of all kinds, by the honours and rewards when given at all to medical men being nearly always second rate, and by economies in all countries, and in all services, establishments, and institutions, military or civil, public or private, beginning, if possible, with the doctor, who, if not eliminated, has either pay decreased or work increased.

This conclusively shows that the tendency to undervalue the services of and to exploit the medical profession is the same under any form of Government, whether despotic or republican, imperial or monarchical. As the profession throughout the world suffers from similar disabilities, medical defence should not be national but international.

To direct medical defence should be added the indirect but equally powerful influence of taking a more active part in general politics. Mr. Cleveland, the late President of the United States, alluded to this very strongly in a recent address to the New York Academy of Medicine, stating that the profession not taking part in national and local politics, while being a loss to the State, was more particularly prejudicial to themselves, as frequently matters of vital interest to the medical profession were decided without any of its representatives having a voice in the matter; and the profession was often referred to untruthfully, unjustly, and harshly by the laity when there was no medical voice present to bring forward the other side of the question. —I am, etc.,

New York, Jan. 27th. Captain, Reserve of Officers.

VEGETARIANISM AND GOUT.

Sir,—In last week's issue of the British Medical Journal Dr. Haddon, while discussing my paper on "The Pathology and Treatment of Gout," remarks that we should give gouty patients the benefit of our knowledge that the mineral constituents of certain vegetables increase the solvency of gouty deposits by advising them to use such vegetables. With this remark I entirely concur, and in the paper in question I have strongly advised the liberal use of such vegetables by the gouty. I do not, however, quite agree with Dr. Haddon's inference that because such a power is possessed by certain vegetables, and because it is possible to live on a vegetarian diet, therefore all gouty persons should become vegetarians. The removal of gouty deposits should not be our only aim in the treatment of the gouty. It is an undoubted fact that an exclusively vegetarian diet disagrees with many gouty subjects by producing some form or other of dyspepsia. I think, too, that there is a common error in the assumption that animal proteids are more productive of uric acid than vegetable proteids. The following extract from my Goulstonian Lectures of last year illustrates my view of this matter and also gives one of the reasons which led me to investigate the influence of the mineral constituents of vegetables on gout:

> My own view is that as regards the production of uric acid from proteid matter it is of little importance whether the proteid is of animal or vegetable origin; the same harm may result from an excessive consumption of either form of proteid. But although animal and vegetable proteids may react alike with regard to the production of uric acid, it is quite possible that the different saline constituents of animal and vegetable foods might very materially affect the solubility of sodium biurate and therefore influence its precipitation.

I can assure Dr. Faulkner and Dr. Haddon that if ever I become convinced of the superior advantages of an exclusively vegetarian diet for either the gouty or the healthy I shall not hesitate to declare that conviction, but at present I am by no means of that opinion.—I am, etc.,

Weymouth Street, W., Feb. 21st. Arthur P. Luff.

MAGNESIUM SULPHATE IN DYSENTERY.

Sir,—With reference to Dr. Wyatt-Smith's note, in which he relates a case which confirms him in his belief that magnesium sulphate is a specific in acute tropical dysentery, I think it is interesting to recall the fact that Professor Samson Gemmell, whilst lecturing on dysentery to the class of medicine in Anderson's College, Glasgow, about ten years ago, related the case of a gentleman who was invalided from India with chronic dysentery. On his arrival home he consulted many eminent physicians who prescribed as many different preparations, the employment of which had no effect in controlling the dysenteric discharge. At last, when the patient was well-nigh worn out, sulphate of magnesia was tried, and this after a very short time produced a permanent and complete cure.—I am, etc.,

Galston, Ayrshire, Feb. 7th. J. Alexander, M.D.

THE TEMPERANCE QUESTION.

Sir,—Dr. Reid, in his letter to the British Medical Journal of January 29th, gives reasons against dealing with the alcohol question by prohibition and restriction, which must be met by the temperance party. He grants at once that alcohol does harm to the race, both physically and mentally, and that cravers for alcohol are being eliminated by suffering and death; but, he says, because the alcohol-producing organism cannot be destroyed, this process of elimination of alcoholic cravers must not be interfered with. Surely in evolution countless factors are working, and there is no necessity to limit ourselves to the working of one factor only. The end to be achieved—a race of men who do not touch alcohol in any form—could very well be achieved by: (1) Universal conviction by indisputable proof that alcohol is

deleterious to each man who takes it, and thereby to all others who do not. (2) By prohibiting the manufacture of alcohol, or making it extremely difficult and expensive to get. A temperate race is, therefore, at once evolved without intense suffering and many thousands of lives lost, which is the present method.

A large number of facts in past evolution prove that bodily adaptability to environment is not necessary if other means can be found. This is a very important part of the process of evolution with regard to man. For instance, the old progenitors of man, being compelled to face the cold, killed animals and took the fur for their own warmth; by this one practice man has been saved centuries of suffering till a form had evolved which either developed fur enough to protect from cold, or was able to bear any amount of cold without clothing. We must now always wear clothes for warmth; we can also always prohibit the manufacture of alcohol in a community. It must not be forgotten that cravers for alcohol are the first to desire that they may not be able to get it when their craving comes on; thus it will not be difficult to keep up repressive legislation. Besides, when alcohol cannot be got, who can crave for it? How many people, for aught they know, would crave for opium, ether, henbane, if they had experience of these drugs? But as it is difficult to get these things, nobody becomes a craver or desires to try them. Therefore, there being no craving for alcohol if there is no experience of it, let us totally and permanently prohibit its manufacture, and an end that evidently Nature is working for is splendidly attained without enormous waste of life and suffering.—I am, etc.,

HONITON COATES, M.D Brux., L.R.C.P., D.P.H.

Southsea, Feb. 7th.

Obituary.

JOSEPH O'DWYER, M.D.,

New York.

DR. JOSEPH O'DWYER, whose premature death was recently announced in the BRITISH MEDICAL JOURNAL, was born at Cleveland, Ohio, on October 12th, 1841. His boyhood was spent at London in Canada, where he received his preliminary education. He began to study medicine under Dr Anderson of the same city about the year 1863. In 1864 he entered the College of Physicians and Surgeons of New York taking his degree in 1866. Soon after graduation he became an *interne* in the Charity Hospital of New York, the visiting staff of which at that time included J. Lewis Smith, Loomis, Flint, Van Buren, and Sayre. During his service in the hospital an epidemic of cholera broke out in New York, and a special hospital for sufferers from that disease was established at Blackwell's Island, of which Dr. O'Dwyer was placed in charge. During his period of service in that institution an additional epidemic of typhus fever broke out there. Dr. O'Dwyer was attacked, and only recovered after a long illness.

In 1868-69 he became Examining Physician for the hospital under the Commissioners of Charities and Corrections. In 1873 he was appointed Physician of the New York Foundling Hospital. At that time tracheotomy had fallen into such evil repute in the institution—the record of deaths being 100 per cent.—that the physicians as well as the Sisters of Charity had come to regard the operation as a useless torture. O'Dwyer began to give his mind to the subject in 1880. His first device was a wire spring; this quickly gave way to a spring bivalve speculum; then came the changes to a tube of plain oval form, tubes with collar and constriction to receive the vocal cords, and tubes with a retaining swell at the upper portion of the tube, thickening and blunting of the lower end and other details, as fully set forth by O'Dwyer himself in an article entitled Evolution of Intubation, published in the *Archives of Pediatrics*, June, 1896. After five or six years of experimental work in this direction, O'Dwyer was somewhat reluctantly induced to operate on patients in private practice.

Besides his Physicianship to the New York Foundling Hospital, a position which he held for twenty-five years, Dr. O'Dwyer was President to the American Pediatric Society, Consulting Physician to Willard Parker Hospital, Lecturer on Intubation at the Post-Graduate Medical School and Hospital, and later at the Belle Vue Hospital Medical College, and Attending Physician to St. Vincent's Hospital.

Dr. O'Dwyer was a devout Roman Catholic and a man of somewhat retiring disposition, easily hurt by harsh criticism. He was, says his friend Dr. W. P. Northrup (from whose account this brief notice of Dr O'Dwyer's career is taken), "a martyr to intubation. Thinking of its development by day, grew into thinking at night." "Intubation," adds Dr. Northrup, "is O'Dwyer's monument. It is equally true that it killed him."

DRUCE JOHN SLATER, M.D.Lond.

THE circumstances attending the death of Dr. Druce Slater were peculiarly unfortunate. On Saturday, January 29th, as he was returning from a day's shooting, he stumbled over a hedge; both barrels of his gun were discharged and their contents lodged in his chest. Some little time intervened before the keeper discovered him where he lay collapsed on the ground. He could just murmur "I fell," and in a very few minutes he passed away. At the inquest a verdict of accidental death was found. The body was brought to London and conveyed to its last resting place in Brookwood Cemetery on February 3rd.

The news of Dr. Slater's sudden death came as a profound shock to all of his friends. For many years he was Visiting Physician to the Alexandra Home in South Kensington, and, on the fact of his death being communicated to the Princess of Wales, who is patroness of the Home, she immediately sent from Sandringham a telegram of condolence to Mr. Samuel Slater, expressing sorrow at the sudden death of his son, and grief that the Alexandra Home should be deprived of the services of one of its best servants.

Druce Slater was born in November, 1856, and, after completing his education in France, he entered St. Bartholomew's Hospital in 1878. In 1883 he graduated M.B.Lond., and also became M.R.C.S.; he took the M.D. degree in 1888. In 1884 he was appointed House-Physician to the late Dr. Matthews Duncan at St. Bartholomew's Hospital. It was during his tenure of office that the agitation was commenced in favour of an improved status for the junior staff. Foremost in the fray was Druce Slater, and no one was more pleased than he when at last the movement, of which he was one of the originators, was crowned with success. After leaving the hospital he was elected Clinical Assistant at Moorfields, House-Surgeon to the Shadwell Hospital for Children, and lastly Clinical Assistant at the Brompton Hospital. His studies completed, he went abroad on yachting tours and with shooting parties, and was away from England a year and a half.

In the course of one of these expeditions the party was pursuing wild game in Arabia, when one of the beaters—a member of the yacht's crew—was attacked by a wounded leopard, and would undoubtedly have been killed but for the unerring shot of one of the sportsmen. The man was very severely mauled about the left shoulder; they were about four days' journey from Alexandria, and it was feared he would die on the way. But Dr. Slater overcame all difficulties, and stayed with his patient till he was sufficiently restored to be sent back to his home in Kent; then only did Slater rejoin his comrades and partake once more in that exhilarating pastime of which he was so fond.

Dr. Druce Slater soon acquired a very considerable practice in South Kensington, and was trusted and respected by all his fellow practitioners. All his patients were his friends, and his buoyancy of spirits affected all with whom he came into contact. He was a man of great physical strength and great powers of endurance, but during the influenza epidemic he taxed it very severely, and at last he fell a victim to the malady. As frequently happens in strong constitutions with nervous temperament, the influenza left him in a state of profound prostration. Last year he travelled to Jersey, the Canary Islands and South Africa, and returned to England in September, 1897, when, after sojourning for one month at the seaside, he resumed his practice. His general health had been considerably restored, and since the new year he had continued to make still further improvement, to the great satisfaction of all those around him.

THEOPHILUS PARVIN, M.D.,

Philadelphia.

We regret to announce the death of Dr. Theophilus Parvin, the well known American obstetrician and gynæcologist, which took place at Philadelphia on January 9th. He had been gravely ill for some weeks with cardiac asthma. Dr. Parvin, who was descended from Cæsar Rodney, one of the signatories of the Declaration of Independence, was born at Buenos Ayres, where his father was a missionary, on January 9th, 1829. Early in childhood he came to Philadelphia, where he received his preliminary education. After graduating in arts in the University of Indiana in 1847 he entered the Medical Department of the University of Pennsylvania, where in due course he took his doctor's degree. He practised for a time at Indianapolis, and was afterwards Professor successively in the Ohio State Medical College, the University of Louisville and the Indianapolis Medical College. He was appointed to the Chair of Obstetrics and Gynæcology in the Jefferson Medical College in 1883. This position he continued to hold until his death.

Dr. Parvin contributed largely to the literature of his speciality. He was the author of an excellent treatise entitled *The Science and Art of Obstetrics*, and he was the editor of a translation of Winckel's work on diseases of women. He was a highly accomplished man, with a good grounding of scholarship, and his knowledge was vivified by a keen sense of humour. He was an honorary member of several obstetrical societies in Edinburgh, Berlin, and elsewhere.

J. CLELLAND CLARKE, M.B., M.R.C.S.

We regret to announce the death of Dr. Clarke, of Long Causeway, Farnworth, in his 49th year. About a month ago, during the course of his professional work, Dr. Clarke contracted typhoid fever. Notwithstanding the assiduous attention of his brother, Dr. Carson Clarke, the younger brother succumbed on February 16th. The interment on February 19th at Farnworth Cemetery, Bolton, was attended by deputations representing many public bodies. Dr. Clelland Clarke was a Justice of the Peace and a County Councillor, and was highly respected in the neighbourhood in which he practised.

Dr. Clarke studied at Edinburgh University, where he graduated as M.B., C.M. in 1871, and in the same year he became M.R.C.S.

Surgeon-General Alexander Maclean, M.D., died suddenly last week, at the age of 66, at his residence in Thurso. He entered the Army Medical Department in 1854, and had a distinguished record of service. He took part in the Crimean campaign, and was present at the battle of Balaclava. He also served through the mutiny in India, and took part in the siege and fall of Lucknow. During this period of service he was attached to the Black Watch. After his retirement he took an active interest in local affairs, and was a member of the Thurso School Board and a county councillor.

We regret to announce the death of Mr. William Groom, J.P., of Wisbech, which took place on February 14th. Mr. Groom was the son of Mr. Joseph Groom, a former Chairman of the Wisbech Board of Guardians, and one of the original members of the Corporation. After receiving his preliminary education at Wisbech, he studied medicine at King's College, London, becoming a Member of the Royal College of Surgeons and a Licentiate of the Society of Apothecaries in 1856. Mr. Groom then settled at Wisbech, where he held the position of Medical Officer for nearly all the districts in the Union at different periods, and for the Wisbech district for thirty-seven years. He was also Medical Officer to several of the local friendly societies, and was held in high esteem by rich and poor. He was President of the Cambs and Hunts Branch of the British Medical Association. He was Justice of the Peace for the Isle of Ely and Borough of Wisbech. He was a member of the Wisbech Corporation for nearly forty years, having been elected in 1859. In 1871 he he was elected Alderman of the Borough, and in due course served the office of Mayor. He was also a County Councillor for the Central Division of Wisbech, and President of the Wisbech Liberal Association for several years, and took an active part in elections and in other incidents of political life. Mr. Groom was a man of great energy and decided activity, and in all the many spheres of action upon which he entered he worked strenuously and won the good opinion of his fellow citizens. During the last two or three years he had been in failing health, but he did not take to his bed till two or three days before the end. He leaves a daughter and two sons, both of whom are members of the profession in practice at Wisbech.

We regret to announce the death of Mr. Ezekiel Rouse, of Bideford, who passed away on February 9th after a long illness. He was the only son of the Rev. E. Rouse, of Moorwenstow, Cornwall, where the early years of his life were spent in study for holy orders. After a somewhat chequered career in the Colonies he returned to his native land and settled down to work hard at Edinburgh with a view of qualifying for the medical profession. He qualified as M.R.C.S.Eng. and L.R.C.P. and L.M.Edin. in 1871. Mr. Rouse practised for many years in Bideford, and was Honorary Surgeon to the Bideford Infirmary and Dispensary. Among the public appointments which he held were those of Medical Officer of Health and Analyst to the Bideford Rural District, Medical Officer of Health to the Northam District Council and to the Barnstaple Port Sanitary Authority. His funeral, which took place on February 12th, was a military one, attended by the North Devon Volunteers, in which corps he had for years taken an active interest, holding the post of Surgeon-Captain. He had received the volunteer long service medal.

We regret to announce the death of Professor Rudolf Leuckart, the distinguished entomologist and parasitologist of the University of Leipzig. He was born at Helmstedt in 1823, studied medicine and zoology in the University of Göttingen, where he was a favourite pupil of Rudolf Wagner. In 1847 he became Privat-Docent at Göttingen, and in 1855 he was appointed Ordinary Professor of Zoology in the University of Giessen. In 1870 he accepted a call to the corresponding chair at Leipzig, which he occupied till his death. His great work, *Die Parasiten des Menschen*, which appeared in 1863, is still the classic treatise on the subject, and he contributed largely besides to the literature of the special department of medical science which he had chosen for his own. As a teacher he held a unique position, for he was justly regarded, not only in Germany but throughout the scientific world, as the greatest authority on the subject which he professed. He was an excellent comparative anatomist, and contributed articles on the subject to Wagner's *Handwörterbuch der Physiologie* and to Graefe and Saemisch's *Handbuch der Ophthalmologie*, besides collaborating with Bergmann in a treatise on Comparative Anatomy and Physiology.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are: Professor Waldemar von Schroeder, Director of the Pharmacological Institute of Heidelberg; Dr. Karl Nikolas, Professor of Hygiene in Lausanne; Dr. Otto von Essen, of St. Petersburg, a Russian dermatologist of considerable repute, aged 35; Dr. Mesnet, Member of the Académie de Médecine, Physician to the Paris Hospitals, and author of several works on the nervous system and hypnotism, aged 77; Dr. Ludwig Ruge, aged 81, the oldest practitioner in Berlin; Professor Leopold Auerbach, of Breslau, well known as a writer on neuropathology, aged 69; Dr. de Pietra-Santa, of Paris, formerly private Physician to the Emperor Napoleon III, editor of the *Journal d'Hygiène*, and an ardent advocate of sanitary progress, aged 77; Dr. Paul Hasse, formerly Medical Director of the Brunswick Lunatic Asylum at Königslutter, aged 68; Dr. L. H. Ripping, for many years Superintendent of the Lunatic Asylum at Duren; Dr. William A. Love, one of the oldest and best known physicians in Georgia, formerly Professor of Physiology in the Atlanta Medical College, of which he was also President, aged 74; and Dr. Joseph F. Edwards, of Atlanta City, formerly Editor of the *Annales of Hygiene*, aged 45.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

DOWNING PROFESSORSHIP.—Sir W. H. Broadbent, Bart., has been appointed an Elector to the Downing Chair of Medicine.

SCIENCE FELLOWSHIP.—Mr. John Graham Kerr, B.A., First Class in Parts I and II of the Natural Sciences Tripos, has been elected to a Junior Fellowship at Christ's College.

EXAMINATIONS FOR DEGREES.—Parts I and II of the Third Examination for the degree of M.B. and B.C. will commence on Tuesday, April 26th. The examination for the degree of M.C. will commence on Friday, April 29th. Notice must be given through the Prælectors of the respective colleges on or before Thursday, March 31st.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen, having passed the necessary examinations and conformed to the By-laws and Regulations, have been admitted Members of the College, and have received their diplomas:

Addison, J. B.	Harness, H. N.	Osborne, A.
Akers, W. D.	Harston, G. M.	Owen, L. E.
Allfrey, F. H.	Hatfield, R.	Parsons, A. C.
Ashe, Frank	Hayford, E. J.	Parsons, W. B.
Austin, N. H.	Haylock, S. J.	Peile, H. D.
Barlow, H. C.	Hewer, E. S. E.	Phillips, H. J.
Bendle, J. H.	Hollings, G. B.	Phipps, G. C.
Beringer, F. J. A.	Horton, W. A.	Pierce, R. W. C.
Blakiston, F. C.	Humby, W. J.	Powers, R. H.
Bramsdon, W. A.	Johnson, R. D.	Prichard, A. H.
Chater, H. J.	Jones, G. W. G.	Prior, G. P. U.
Chennell, E. P.	Joy, N. H.	Ransford, S. T. G.
Collens, E. H.	Kendal, N. J.	Rivers, W. C.
Collum, R. W.	Kilvert, J. E.	Robinson, A. C.
Collyer, B. J.	King, J. W.	Rose, F. H.
Curme, D. E.	Knight, C. V.	Rose, S. F.
Darbyshire, D. E.	Langley, J. I.	Ross, A. M.
Davies, T. J.	Lee, F. W.	Ross, E. H.
Davies, W. J. E.	Lloyd, E. E.	Shedden, A. W.
Dee, M. V.	Lloyd, L. N.	Skevington, J. O.
de Gannes, J. L. F.	Lloyd, R. H.	Steele, G. H.
Denyer, S. E.	Lobb, F. F.	Stock, W. S. V.
Dowding, E. F. C.	Lovegrove, F. T. A.	Sweetlove, J. W.
Dupigny, E. F. C.	McKinlay, J. R.	Thwaites, G. B.
Eastment, A. G.	MacLellan, W.	Tolputt, A. G.
Ellery, E. E.	Millar, A. F.	Trevor, A. H.
Elliott, A. E.	Milne, J. W.	Way, A. O.
Fairbank, C. B.	Moore, P. W.	Weber, E. A.
Fairweather, W. E.	Morgan, W. E.	Welby, S.
Flood, F. G.	Morris, I. L.	Wernet, A. J.
Fuller, W. A.	Mort, J. H.	Whitehead, C. B.
Geach, R. N.	Mottram, G. N.	Whiteside, H. C.
Ghany, M. A.	Naesmyth, D. L. K.	Whitfield, L.
Glover, J. A.	Nanjapa, C. A.	Wijeyesakere, W.
Greg, A. H.	Nicholson, C. R.	Willis, J. D.
Halliday, S. D. T.	Nolan, M. J.	Wood, J.
Hamilton, J. J. C.		

CONJOINT BOARD IN ENGLAND.

THE following gentlemen having passed the necessary Examinations have been admitted Diplomates in Public Health:

S. L. Box, L.R.C.P. Lond., M.R.C.S. Eng., M.B. Lond., St. Bartholomew's and King's College Hospitals; W. Butler, M.B. & C.M. Glasg., Glasgow University and University College Hospital; G. Carter, M.R.C.S. Eng., M.R.C.P. Edin., Yorkshire College and General Infirmary, Leeds; N. B. Darabseth, M.R.C.S. Eng., M.B. & C.M. Aberd., Aberdeen University and University College Hospital; D. F. Dymott, M.R.C.S. Eng., M.B. Lond., Surgeon-Major I.M.S., University College Hospital; G. H. Hunter, M.R.C.S. Eng., L.S.A. Lond., University College Hospital; J. L. W. Kitching, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., St. Thomas's Hospital; M. J. Morgan, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., Guy's Hospital; P. W. Nicol, M.B., C.M. Edin., Edinburgh University, Charing Cross, and King's College Hospitals; F. W. F. Ross, M.D., C.M. Edin., Edinburgh University, Royal College of Surgeons, Edinburgh, and University College Hospital; D. R. Rowlands, M.B., C.M. Edin., Edinburgh University and St. Bartholomew's Hospital; W. Wallace, M.D., C.M. Glasg., Glasgow University and Mason College, Birmingham; J. Wilkinson, M.B., C.M. Edin., Edinburgh University.

Three gentlemen were referred for six months.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THE following candidates having passed the examination for the licence in medicine of the Royal College of Physicians of Ireland have been admitted as licentiates.

J. Douglas Macdonogh, L.R.C.S.I.; W. Arthur Winter, M.D.

CONJOINT BOARD IN IRELAND.

DIPLOMA IN STATE MEDICINE (PUBLIC HEALTH).—The following have passed this examination:

Honours Division.—Surgeon-Major S. Westcott, A.M.S. *Pass Division.*—M. G. McElligott, L.R.C.P. & S.I., L.A.H.D.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, February, 1898.—The following candidates passed in

Surgery.—E. L. Anderson, Liverpool; H. Clough, Leeds; G. C. Hobbs (Section I), St. Bartholomew's Hospital; B. Hogan, London Hospital; M. Jenkins, Guy's Hospital; J. A. Perdrau (Sections I and II), University College Hospital; A. M. Weir, Royal Free Hospital.

Medicine.—R. L. Argles, St. Mary's Hospital; J. B. Cautley (Section II), St. Bartholomew's Hospital; F. H. Fawcett, Middlesex Hospital; H. F. Forty, Middlesex Hospital; A. R. Henchley, Middlesex Hospital; R. Holt, Royal College of Surgeons, Ireland; J. A. Perdrau (Sections I and II), University College Hospital; D. C. M. Shaw, Manchester; H. Spinks, Manchester; F. A. St. John, St. Mary's Hospital; L. Tong, Manchester; H. J. Watts, Manchester.

Forensic Medicine.—R. L. Argles, St. Mary's Hospital; J. C. R. Curtis, University College Hospital; H. J. De Saram, Middlesex Hospital; F. H. Fawcett, Middlesex Hospital; E. Fryer, Guy's Hospital; A. R. Henchley, Middlesex Hospital; R. Holt, Royal College of Surgeons, Ireland; J. A. Perdrau, University College Hospital; H. Spinks, Manchester; F. A. St. John, St. Mary's Hospital; L. Tong, Manchester.

Midwifery.—H. A. Ahrens, King's College Hospital; R. L. Argles, St. Mary's Hospital; J. S. Barnes, St. Thomas's Hospital; D. Davies, London Hospital; H. J. De Saram, Middlesex Hospital; F. H. Fawcett, Middlesex Hospital; H. F. Forty, Middlesex Hospital; J. A. Perdrau, University College Hospital; G. M. F. Pereira, Calcutta and Royal Free Hospital; D. C. M. Shaw, Manchester; L. Tong, Manchester; W. A. H. B. Smith, King's College Hospital.

The diploma of the Society was granted to the following candidates: Messrs. E. L. Anderson, J. B. Cautley, J. C. R. Curtis, F. H. Fawcett, H. F. Forty, R. Holt, J. A. Perdrau, L. Tong, and Miss A. M. Weir.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON CAPTAIN who has been stationed for two years at Malta is willing to exchange further east.—Address "Nomad," Holt and Co.

THE ARMY MEDICAL REPORT FOR 1896

THIS important Blue Book has made its annual appearance on the opening of Parliament, and displays in its compilation the care invariably shown in these reports.

The total strength of the British army (Europeans) for 1896 was 203,000, of which nearly 100,000 were stationed at home and the rest abroad. At home the ratio of admissions per 1,000 of strength was 645 against 755, and the constantly sick 38·52 against 43·54 average in the decade 1886-95, thus showing material improvement under both heads. Of specific diseases enteric fever, which always attracts attention, showed decided decline in 1896, but Dublin as usual retained its bad pre-eminence in this preventable disease.

Among the troops abroad there was also in the aggregate some improvement, both in the ratio of admissions and of constantly sick, compared with the averages of a decade, but of course the improvement was not shown universally.

The following stations showed improvement: Gibraltar, Egypt (with Cyprus), Bermuda, Mauritius, and last, but first in importance, India. The following kept at the average: South Africa (with St. Helena), and the Straits Settlements. The following exceeded the decennial average: Canada, Malta, West Indies, Ceylon, and China.

It is satisfactory to note the steady and progressive decline of sickness among our troops in Egypt, which was maintained in 1896, notwithstanding the Dongola expedition; but the death-rate was higher due to trying service "up the Nile." The unusually high ratio of admissions in Ceylon is accounted for by the arrival in the command of a regiment from India, which, it is stated, was "saturated with malarial poisoning."

In the West Indies and China malarial fevers and venereal diseases were the chief causes of excess in the ratios.

In India, most important of all, although the ratio of admission showed diminution, there was increase in the number constantly sick, arising from a higher average sick time for each soldier, and increase in the duration of each case.

Of specific diseases, cholera caused 70 admissions and 63 deaths, an advance on 1895, but under the average of the decade. Enteric fever also showed an increase over the average of the decade. It occurred in every district, and, with 18 exceptions, in every station in India. The highest ratio of admissions was in Allahabad district, but the greatest number of cases was at Quetta. It was found most difficult to account for the severity of the disease in that station; unless from polluted food and drink obtained by the soldiers in the native bazaars. Indeed, it becomes more and more evident that this disease must be combated in India by

greater attention to the sanitary condition of cantonment and neighbouring bazaars.

Venereal diseases, as usual, were responsible for a vast amount of inefficiency in India The ratios were lower than in 1895, but still over the average of the decade. In 1896 no fewer than 3,162 of the European garrison of 70,000 men were constantly non-effective from these diseasee, while 448 were invalided for secondary syphilis.

THE NAVY.

STAFF SURGEON GEORGE W. BELL has been promoted to be Fleet-Surgeon, January 31st. He was appointed Surgeon, September 29th, 1877, and Staff-Surgeon twelve years thereafter. He was surgeon of the *Helicon* at the bombardment of the Alexandria forts in 1882, and during the Egyptian war (medal with clasp and Khedive's bronze star). He also landed with the Naval Brigade for service in the Soudan with the Nile expedition in 1884-85 (clasp).

The following Surgeons, having completed twelve years' full-pay service, are promoted to be Staff-Surgeons, February 18th: FREDERICK W. STERICKER, B.A., M.B.; WILLIAM W. PRYNN, GRAHAM E. KENNEDY, JEROME BARRY M.D.; ALFRED J. PICKTHORN, JOHN ANDREWS, M.D.; HENRY J. HADDEN, B.A., M.B; VIDAL G. THORPE, and EDWARD H. MEADEN. Of these, Staff-Surgeon Barry served in the Naval Brigade, landed from the *Raleigh*, *Alecto*, *Magpie*, *Satellite*, and *Widgeon*, at Bathurst, on the River Gambia, West Coast of Africa, in February, 1894, in co-operation with two companies of the 1st West India Regiment, for the punishment of Fodi Silah, a rebellious slave-raiding chief (medal with clasp); Staff-Surgeon Hadden, while Surgeon of the *Dolphin*, was engaged in the operations at Tokar, Eastern Soudan, February 18th, 1891 (Khedive's bronze star). The other officers mentioned have no war record.

The following appointments have been made at the Admiralty: FREDERICK W. STERICKER, B.A., M.B., Staff Surgeon, to the *Amphion*, February 16th; JEROME BARRY, M.D, JOHN ANDREW, M.D., and HENRY J. HADDEN, B.A., M.B., Staff Surgeons, to the *Thunderer*, February 16th; EDWARD H MEADEN, Staff-Surgeon, to the *Fearless*, February 16th; MICHAEL J. SMITH B.A., M.B., Surgeon, to the *Sirius*, February 17th, and to the *Pigeon*, undated; WALTER S. H. SEQUEIRA, M.B., Surgeon, to the *Sirius*, February 17th, and to the *Eclipse*, undated; EDWIN FOLLIOTT, Surgeon, to the *Jason*, February 17th; HERBERT A. JULIUS,, Surgeon, to the *Sphinx*, February 17th; ALBERT O. ROBARTS, Surgeon, to the *Dart*, undated; MONTAGUE H. KNAPP, Surgeon, to the *Plassy*, undated; JAMES W. W. STANTON and ROBERT S. BERNARD, Surgeons, to the *Sirius*, undated; HENRY MACDONNELL, C.B., Inspector-General, to Haslar Hospital, March 9th; GEORGE HEWLETT, M.B., Surgeon, to the *Wildfire*, additional, February 22nd; FRANK H. NUMMO, Surgeon, to the *Hearty*, February 22nd.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON DAVID CHAMBERS MCFALL died on February 8th at Orford Barracks, Warrington, where he had been Medical Officer to the depôt nearly twenty years, in the 66th year of his age He entered the service as Assistant-Surgeon, September 15th, 1857, and was made Surgeon, December 23rd, 1871; Surgeon-Major, no date being stated; and Honorary Brigade-Surgeon on retirement, February 2nd, 1881. He was Acting Assistant-Surgeon on board H.M.S. *James Watt* during the Baltic Expedition in 1854-5 (medal). He was also in the Indian Mutiny campaign in 1857-8.

Dr. JAMES TOWNSEND OSWALD JOHNSTON, M.D., Deputy-Inspector-General of Army Hospitals, died on February 11th, at Ryde, Isle of Wight aged 84 He passed as a Licentiate of the Royal College of Surgeons, Edinburgh, so long since as 1834, and was admitted an M.D of the Edinburgh University the following year. Joining the Army Medical Service in 1838, he was Assistant-Surgeon to the 48th Regiment and surgeon of the 33rd Duke of Wellington's Regiment. He had also been Principal Medical Officer of the Isle of Wight. Dr. Johnston was placed on the retired list in 1863 with the honorary rank of Deputy-Inspector-General.

The undermentioned Surgeon-Majors, having completed twenty years' full pay service, are promoted to be Surgeon-Lieutenant-Colonels, February 3rd: WILLIAM KEAYS, F.R.C.S.I., ROBERT T. BEAMISH, M.D., WALTER A PARKER JAMES ANDERSON, M.B, JULES I. ROUTH, HENRY GRIER, HUGH L. DONOVAN, M.D., NICHOLAS LEADER, F.R.C.S.Edin., JAMES TIDBURY, M.D, ALLAN A. LYLE, HENRY A. H. CHARLTON, PERCY G. R YOUNG. The war services of these gentlemen are as follows: Surgeon-Lieutenant-Colonel Keays received the thanks of Sir Robert Biddulph, High Commissioner of Cyprus, for his services to the Civil Government during a virulent epidemic of fever in Nicosia in 1881. During the Egyptian war of 1882 had medical charge of the 1st Battalion Royal Sussex Regiment (medal and Khedive's star); also in the Soudan campaign in 1885 with No. 2 Bearer Company, and present in the engagements at Hasheen and Temai (clasp). Surgeon-Lieutenant Colonel Beamish—Burmese expedition in 1886-87 (medal with clasp). Surgeon-Lieutenant-Colonel Donovan—Egyptian war of 1882 (medal and Khedive's star); Soudan campaign in 1885, and present in the engagement at the Tofrek zereba (mentioned in despatches, granted the higher rate of pay, two clasps) Surgeon-Lieutenant-Colonel Leader—Egyptian war of 1882 (medal and Khedive's star): also the Soudan campaign in 1885 and present in the engagement at the Tofrek zereba (two clasps) Surgeon-Lieutenant-Colonel Tidbury—Egyptian war of 1882 in medical charge of the 1st Battalion of the Gordon Highlanders, and present at the reconnaissance in force from Alexandria on August 5th, and at the battle of Tel-el-Kebir (medal with clasp and Khedive's star). Surgeon-Lieutenant-Colonel Grier has no war record, but he has received the Albert medal of the Second Class for the following service: On August 26th, 1880, Lieutenant Graham, 10th Regiment, was dying of diphtheria, when Surgeon Grier performed upon him the operation of tracheotomy, and, observing that no inspiration followed, at the imminent risk of his own life applied his lips to the wound and by suction restored to the patient the power of breathing. Lieutenant Graham's life was thus saved for the time, although unfortunately on the following day the disease extended to his lungs, and he died.

The undermentioned Surgeon-Lieutenant Colonels retire on retired pay, February 23rd: WALTER A. PARKER, HUGH L. DONOVAN, ALLAN A. LYLE and HENRY A. H. CHARLTON. Particulars of their commissions and of Surgeon-Lieutenant-Colonel Donovan's war services may be found in the preceding paragraph.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR H. F STOKES and Surgeon-Captain A. E. ODLING, having resigned their Volunteer appointments, cease to belong to the Army Medical Reserve, February 23rd.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL GEORGE KING, M.B., C.I.E., Bengal Establishment, is permitted to retire from the service from February 28th. He was appointed Assistant-Surgeon, October 2nd, 1865, and became Brigade-Surgeon-Lieutenant-Colonel from April 2nd, 1889. He has held the office of Superintendent of the Royal Botanical Gardens, Calcutta, uninterruptedly since May 22nd, 1871.

The Indian Medical Service appointments of personal assistants to the principal medical officers in the four commands will, it is stated, in future be filled by recruiting, and not, as heretofore, from the reserve. The object is to strengthen this overworked department, and thus to some extent improve the prospects of furlough of the officers of the Indian Medical Service generally

Inspector-General J. FRANCIS ANDERSON, M.D., late of the Bengal Establishment, died in London on February 10th, in his 85th year.

Surgeon-General GEORGE BIDIE, C.I.E., Madras Retired List, is appointed Honorary Surgeon to the Queen, *vice* Deputy Surgeon-General H. V CARTER Bombay Retired List.

The Queen has approved of the following admissions to the Indian Medical Service, to be Surgeon-Lieutenants, January 28th:—THOMAS H. DELANY JOHN W F RAIT, STEWART R. DOUGLAS, EUGENE J O'MEARA, GODFREY FATE ROY F. BAIRD, ANDREW T GAGE, GEORGE C LAING, GEORGE MCPHERSON, SPENCER HUNT, ALFRED G. SARGENT, WALTER H. COX, DE VERE CONDON, HENRY A. J GIDNEY, HENRY KIRKPATRICK, FREDERICK D. S. FAYRER, PADMAHAR K. CHITALE, WILLIAM LETHBRIDGE

Surgeon-Lieutenant-Colonel HUGH MCCALMAN, M.D., Bombay Establishment, has been transferred to the Half Pay List, February 13th.

The undermentioned Surgeon-Lieutenant-Colonels have retired from the service from the dates specified:—GORDON PRICE, M.D., Bengal Establishment, January 16th; HENRY ADEY, Bombay Establishment, December 18th, 1897; HORMASJI D. MASANI, Bombay Establishment, January 16th

The undermentioned Surgeon-Lieutenant-Colonels of the Bengal Establishment, whose first commission dated from March 30th, 1872, are promoted to be Brigade-Surgeon-Lieutenant Colonels from the dates specified: G C HALL October 1st, 1897; J. T B. BOOKEY, October 24th, 1897; J. YOUNG, M.B, October 24th, 1897. Brigade-Surgeon-Lieutenant-Colonel Bookey served with the 6th Punjab Infantry in the Jowaki Afreedee expedition in 1877-78 (medal with clasp); in the Mahzood Wuzeeree Expedition in 1881; with the Burmese expedition in 1886-88 (mentioned in despatches, clasp); with the Hazara expedition in 1888 (mentioned in despatches (clasp); with the Miranzi expedition in 1891 (mentioned in despatches, clasp); and with the Waziristan Field Force under Sir William Lockhart in 1894-95 with the 1st Battalion 5th Goorkhas (mentioned in despatches, clasp) Brigade-Surgeon-Lieutenant-Colonel Young was with the Burmese expedition in 1885-86, receiving the Frontier medal with clasp. Brigade-Surgeon-Lieutenant Colonel Hall has no war record.

The Secretary of State has approved, as a temporary measure, of the postponement of the abolition of the post of Secretary to the Surgeon-General, Bombay, and the retention of Surgeon-Captain GRAYFOOT in that appointment until the work connected with the plague is at an end.

THE YEOMANRY AND VOLUNTEERS.

SURGEON-LIEUTENANT C. T STREET, Lancashire Hussars, resigns his commission and is appointed Second Lieutenant, February 23rd.

The under mentioned gentlemen are appointed Surgeon-Lieutenants in the corps specified, dated February 23rd: THOMAS HARPER M.B, 1st Ayrshire and Galloway Artillery; ALFRED A KANTHACK, M.D., and ERNEST L. JONES, M.D., 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment; HENRY C. GROVES, 4th Volunteer Battalion the South Wales Borderers; NEWTON WADE, 2nd Volunteer Battalion the Worcestershire Regiment; CHARLES J. DEYNS, 1st Bucks Rifles.

Brigade-Surgeon-Lieutenant-Colonel T M. WILLS, 4th Volunteer Battalion the King's Liverpool Regiment, resigns his commission, February 23rd; he is permitted to retain his rank and uniform, vacating at the same time his appointment as Senior Medical Officer to the Mersey Volunteer Infantry Brigade

Surgeon-Captain F J. WALKER, M.D., 1st Volunteer Battalion the Lincolnshire Regiment, is promoted to be Surgeon-Major, February 23rd.

Surgeon-Lieutenant EDWARD J. SIDEBOTTOM, 3rd Volunteer Battalion the Cheshire Regiment resigns his commission and is appointed Captain, February 23rd.

Surgeon-Lieutenant-Colonel J. L. LECKIE, 3rd Volunteer Battalion the Welsh Regiment, resigns his commission, retaining his rank and uniform February 23rd

Surgeon-Captain C. BOYCE, 1st Volunteer Battalion the Queen's Own Royal West Kent Regiment, is promoted to be Surgeon-Major, February 23rd.

MR. FREDERICK J M'CANN, M.D., is appointed Surgeon Lieutenant in the 1st Middlesex (Victoria and St. George's) Rifles, February 16th.

Surgeon-Major W. G. STEVENS, 2nd (Renfrewshire) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Lieutenant-Colonel, February 16th.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN 1897.

IN the accompanying table will be found summarised the vital statistics of 1897 relating to the thirty-three large English towns dealt with by the Registrar General in his weekly returns.

The 336,740 births registered during 1897 in these thirty-three large towns were equal to a rate of 30·7 per 1,000 of their aggregate population, estimated at nearly 11 millions of persons. This rate corresponded with that recorded in the preceding year, but was 1·5 per 1,000 below the mean rate in the ten years 1887-96. In London the birth-rate last year was equal to 30·0 per 1,000, while it averaged 31·2 in the thirty-two provincial towns, among which it ranged from 22·5 in Halifax, 23·4 in Huddersfield, 24·6 in Bradford, and 24·7 in Brighton to 34·6 in Sunderland, 35·1 in Wolverhampton and in Salford, 35·3 in Liverpool, and 35·8 in Gateshead.

The 209,412 deaths registered last year in the thirty-three towns were equal to a rate of 19·1 per 1,000; this rate showed a slight increase upon that recorded in 1896, but was 1·5 per 1,000 below the average rate in the ten preceding years 1887-96. The death-rate in London during 1897 was equal to 18·2 per 1,000, while it averaged 19·7 in the thirty-two provincial towns, among which it ranged from 13·1 in Croydon, 14·9 in Cardiff, 15·1 in Brighton, and 15·7 in West Ham to 22·0 in Bolton, 22·5 in Wolverhampton, 23·1 in Manchester, 23·9 in Salford, and 24·4 in Liverpool and in Preston.

During the year under notice 31,479 deaths were referred to the principal zymotic diseases in the thirty-three towns, equal to a rate of 2·87 per 1,000, which slightly exceeded the mean rate in the ten preceding years 1887-96. The zymotic death-rates in these towns last year ranged from 1·36 in Swansea, 1·39 in Halifax, 1·43 in Croydon, and 1·50 in Huddersfield to 3·98 in Burnley, 4·02 in Bolton, 4·22 in Wolverhampton, 5·50 in Salford, and 5·64 in Preston. The 31,479 deaths referred to the principal zymotic diseases included 13,617 which resulted from diarrhœa, 6,049 from measles, 4,453 from whooping-cough, 3,417 from diphtheria, 1,967 from scarlet fever, 1,958 from "fever" (principally enteric), and 18 from small-pox. The death-rate from diarrhœa was equal to 1·24 per 1,000; this rate was considerably above the average, and exceeded that recorded in any year since 1884. In London the rate of mortality from diarrhœa was equal to 0·02 per 1,000, while it averaged 1·46 in the thirty-two provincial towns, among which the highest rates were recorded in Wolverhampton, Birmingham, Liverpool, Salford, Preston, Sheffield, and Hull. The rate of mortality from measles was equal to 0·55 per 1,000, and was slightly below the mean rate in the ten preceding years; in London the death-rate from this disease was equal to 0·43 per 1,000, while it averaged 0·63 in the thirty-two provincial towns, and was highest in Birmingham, Bolton, Manchester, Salford, Burnley, Blackburn, and Preston. The death-rate from whooping-cough was equal to 0·41 per 1,000, and was 0·14 below the mean rate in the ten preceding years; in London the rate of mortality from this disease was equal to 0·41 per 1,000, and almost corresponded with the mean rate in the thirty-two provincial towns, among which the highest rates were recorded in Plymouth, Liverpool, Manchester, Blackburn, and Sunderland. The death-rate from diphtheria, which had been 0·35 and 0·38 per 1,000 in the two preceding years, declined to 0·31 during the year under notice, but slightly exceeded the mean rate in the ten years 1887-96; in London the death-rate from this disease was as high as 0·51 per 1,000, while it averaged 0·18 in the thirty-two provincial towns, among which the highest proportional fatality of diphtheria was recorded in West Ham, Cardiff, Wolverhampton, Birmingham, Leicester, and Burnley. The death-rate from scarlet fever was equal to 0·18 per 1,000, against 0·21, 0·18, and 0·22 in the three preceding years, and was considerably below the mean rate in the ten years 1887-96; in London the rate of mortality from this disease was equal to 0·18 per 1,000 and corresponded with the average rate in the thirty-two provincial towns, among which scarlet fever was proportionally most fatal in Leicester Liverpool, Salford, Huddersfield, Sheffield, and Hull. The death-rate from different forms of "fever" (including typhus, enteric fever, and simple and ill-defined forms of fever), which had been 0·20 and 0·19 per 1,000 in the two preceding years, further declined to 0·18 during 1897, and was slightly below the average rate in the ten years 1887-96. In London the "fever" death-rate did not exceed 0·13 per 1,000, while it averaged 0·21 in the thirty-two provincial towns, and showed the highest proportional fatality in Wolverhampton, Norwich, Liverpool, Salford, Blackburn, Preston, and Sheffield. During the year under notice 18 fatal cases of small-pox were registered in the thirty-three towns; of these, 16 occurred in London, 1 in Bristol, and 1 in Hull.

Infant mortality, measured by the proportion of deaths under one year of age to births registered, was equal to 177 per 1,000, and exceeded by 10 per 1,000 the mean rate in the ten preceding years. In London the rate of infant mortality was equal to 159 per 1,000, while it averaged 189 in the thirty-two provincial towns, among which it ranged from 131 in Huddersfield, 135 in Croydon, 140 in Swansea and in Halifax, 144 in Brighton, and 149 in Bristol to 206 in Nottingham and in Blackburn, 214 in Birmingham, 217 in Wolverhampton, 219 in Salford, 220 in Burnley, and 262 in Preston.

The causes of 2,727, or 1·2 per cent., of the 209,412 deaths in the thirty-three towns during 1897 were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon and in Derby; in the other towns the lowest proportions of uncertified deaths were registered in Portsmouth, Plymouth, Bolton, and Oldham, and the highest in West Ham, Birmingham, Liverpool, Preston, Huddersfield, and Sheffield.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,430 births and 4,384 deaths were registered during the week ending Saturda

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Year 1897.

Towns.	Estimated Population middle of 1897.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	10,992,524	336,740	209,412	30.7	19.1	2.87	31,479	18	6,049	1,967	3,417	4,453	1,958	13,617	177	1.3
32 Provincial Towns	6,529,355	203,122	128,469	31.2	19.7	3.06	19,954	2	4,120	1,187	1,156	2,611	1,365	9,513	189	1.7
London	4,463,169	133,618	80,943	30.0	18.2	2.58	11,525	16	1,929	780	2,261	1,842	593	4,104	159	0.6
West Ham	273,682	8,779	4,273	32.2	15.7	2.62	714	—	140	30	101	99	48	296	172	2.7
Croydon	121,171	3,015	1,579	25.0	13.1	1.43	173	—	17	12	8	31	9	96	135	—
Brighton	121,401	2,986	1,823	24.7	15.1	1.64	198	—	17	12	12	25	22	110	114	0.8
Portsmouth	182,585	4,897	2,951	26.9	16.2	2.53	462	—	35	11	28	64	43	181	168	0.4
Plymouth	97,658	2,773	1,855	28.5	19.0	2.17	213	—	49	5	13	53	8	85	185	0.3
Bristol	232,242	6,430	3,984	27.8	17.2	1.83	425	1	57	18	35	116	47	151	149	0.9
Cardiff	170,063	5,279	2,514	31.1	14.9	2.19	372	—	75	17	90	34	21	135	151	0.9
Swansea	100,309	2,939	1,583	29.4	15.8	1.36	136	—	45	10	11	42	7	21	140	1.2
Wolverhampton	87,287	3,054	1,910	35.1	22.5	4.22	367	—	46	21	54	38	24	184	217	0.6
Birmingham	505,772	16,803	10,859	33.3	21.6	3.88	1,958	—	398	93	147	221	92	1,007	214	3.2
Norwich	110,154	3,354	2,062	30.5	18.8	2.21	243	—	3	11	10	47	32	140	194	1.5
Leicester	203,599	6,206	3,586	30.6	17.7	3.13	637	—	14	71	73	82	39	358	205	2.4
Nottingham	232,934	6,717	4,363	28.9	18.8	2.81	652	—	48	36	21	113	49	385	206	1.1
Derby	103,291	2,792	1,651	27.1	16.0	1.91	197	—	17	10	9	22	26	113	168	—
Birkenhead	111,249	3,507	2,026	31.6	18.3	2.45	272	—	55	23	26	32	27	109	164	1.1
Liverpool	633,078	22,289	15,384	35.3	24.4	3.83	2,412	—	340	206	126	351	168	1,221	200	3.4
Bolton	121,433	3,942	2,660	32.5	22.0	4.02	486	—	215	23	6	41	25	176	186	0.2
Manchester	534,299	17,708	12,306	33.2	23.1	3.81	2,032	—	629	124	47	300	100	832	195	1.2
Salford	213,190	7,454	5,083	35.1	23.9	5.50	1,168	—	473	61	32	112	66	426	219	1.8
Oldham	145,845	3,793	2,789	26.1	19.2	2.61	378	—	97	20	11	77	20	153	183	0.2
Burnley	106,122	3,151	2,065	29.8	19.5	3.98	420	—	141	5	60	63	19	132	220	1.5
Blackburn	131,330	3,625	2,554	27.7	19.5	3.45	453	—	146	7	8	82	38	172	206	2.2
Preston	115,103	3,659	2,796	31.9	24.4	5.64	648	—	318	5	4	30	35	256	262	3.2
Huddersfield	101,454	2,366	1,659	23.4	16.4	1.50	150	—	27	32	20	21	15	35	131	2.8
Halifax	95,747	2,150	1,574	22.5	16.5	1.39	134	—	48	21	9	9	16	31	140	2.5
Bradford	231,260	5,679	4,024	24.6	17.5	2.22	510	—	81	9	15	43	31	331	179	1.2
Leeds	409,472	12,911	8,118	31.6	19.9	2.80	1,140	—	163	94	67	96	80	640	150	0.6
Sheffield	351,848	12,071	7,438	34.4	21.2	3.49	1,222	—	195	50	44	142	110	641	198	2.8
Hull	225,045	7,485	4,166	33.3	18.6	3.25	731	1	24	61	32	56	56	501	181	1.6
Sunderland	142,107	4,905	2,792	34.6	19.7	2.56	363	—	63	11	4	77	38	170	165	1.0
Gateshead	101,070	3,612	1,842	35.8	18.3	2.33	234	—	50	17	8	31	20	108	172	0.7
Newcastle-on-Tyne	217,555	6,791	4,141	31.3	19.1	2.09	452	—	74	21	25	61	34	217	153	0.9

last, February 19th. The annual rate of mortality in these towns, which had increased from 18.7 to 20.7 per 1,000 in the three preceding weeks, declined to 20.4 last week. The rates in the several towns ranged from 14.5 in Blackburn, 14.9 in Sunderland, 15.2 in Burnley, and 15.5 in Oldham to 23.4 in Liverpool, 24.5 in Bristol, 25.0 in Swansea, and 20.0 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 19.6 per 1,000, and was 1.0 below the rate recorded in London, which was 21.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the rate was equal to 1.6 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Leicester, 3.6 in Salford, 5.1 in Swansea, and 5.8 in Bristol. Measles showed a death-rate of 2.1 in Brighton, 2.5 in Gateshead, 3.2 in Leicester, 4.4 in Bristol, and 4.6 in Swansea; whooping-cough of 1.0 in Birmingham and in Salford, and 1.1 in Portsmouth; and "fever" of 1.0 in Derby. The mortality from scarlet fever showed no marked excess in any of the large towns. The 71 deaths from diphtheria in the thirty three towns included 33 in London, 7 in Cardiff, 6 in Liverpool, 4 in Wolverhampton, 3 in West Ham, 3 in Bristol, and 3 in Salford. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,871 at the end of the twelve preceding weeks, had further fallen to 2,781 on Saturday last, February 19th; 233 new cases were admitted during the week, against 241, 209, and 232 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday, February 19th, 873 births and 614 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.4 to 21.0 per 1,000 in the three preceding weeks, declined to 20.4 last week, and corresponded with the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.3 in Leith and 17.4 in Aberdeen to 24.1 in Paisley and 26.4 in Greenock. The zymotic death rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Dundee and Paisley. The 302 deaths registered in Glasgow included 13 from measles, 5 from scarlet fever, 2 from diphtheria, 13 from whooping cough, and 5 from "fever." Two fatal cases of scalet fever and 2 of diphtheria were recorded in Edinburgh; 3 of scarlet fever in Dundee, and 5 of whooping-cough in Paisley.

DIPHTHERIA IN LONDON.

There was an increase in the prevalence of diphtheria last week in London, although the fatal cases registered showed a decline. The deaths referred to this disease, which had been 36, 42, and 45 in the three preceding weeks, fell to 33 during the week ending Saturday last, February 19th. Of these 33 deaths, 6 were of persons belonging to Islington, 5 to Poplar, 3 to St. Pancras, 3 to Newington, and 3 to Wandsworth sanitary areas. The notifications of diphtheria in London, which had declined from 287 to 245 in the three preceding weeks, rose again to 266 during the week ending Saturday last. Compared with the preceding week there was a marked decline in the prevalence of diphtheria in South London, but an increase in each of the other groups of sanitary areas. In most of the sanitary areas of West London there was an increase in the number of new cases of the disease, especially in Kensington, where 12 cases were reported, against 6 and 0 in the two preceding weeks. On the other hand, the 7 new cases notified in Fulham were considerably below those recorded in any recent week. Among the sanitary areas of North London the increase in the prevalence of diphtheria was most marked in Islington, where 27 new cases were notified, against 19 in each of the two preceding weeks; and in Hackney the new cases numbered 29, against 25 and 24 in the two preceding weeks. The increase in Central London was due to an outbreak in Strand sanitary area, 6 cases being notified. Among the sanitary areas of East London the increase in the prevalence of diphtheria was most marked in Whitechapel and Poplar; in the former sanitary area the new cases notified rose to 10, against 1 and 3 in the two preceding weeks; and in Poplar 18 new cases were reported, against numbers steadily declining from 13 to 7 in the four preceding weeks. As before stated, there was a considerable decline last week in the prevalence of the disease in South London, the sanitary areas showing the greatest fall being Lambeth, Wandsworth, and Plumstead. In Lambeth the 9 new cases were only half those notified in the preceding week; and in Wandsworth the 15 new cases showed a decline of 9 from the number in the preceding week. On the other hand, the 16 new cases notified in Camberwell showed a further increase upon recent weekly numbers. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 146, against 161, 153, and 135 in the three preceding weeks; and 1,054 patients remained under treatment in these hospitals on Saturday last, February 19th.

THE RURAL DEATH-RATE OF ENGLAND AND WALES.

E. S.—The "rural" death-rate from all causes in England and Wales during 1897 was equal to 15.8 per 1,000 persons living; the zymotic death-rate for the same population is not published by the Registrar General, but only that for England and Wales *less* the 100 chief towns.

	1897. England and Wales.		England and Wales *less* the 100 chief towns.
All causes	17.4	... ...	16.4
Principal zymotic diseases	2.15	... ...	1.62
Small-pox	0.00	... ...	0.00
Measles	0.40	... ...	0.29
Scarlet fever	0.14	... ...	0.12
Diphtheria	0.24	... ...	0.19
Whooping-cough	0.35	... ...	0.31
Fever	0.16	... ...	0.14
Diarrhœa	0.86	... ...	0.57

MEDICAL NEWS.

Dr. StClair Thomson has been appointed Surgeon to the Royal Ear Hospital in the room of Mr. Cresswell Baber, who has resigned.

The Clothworkers' Company have sent a subscription of £200 to the London Hospital Maintenance Fund. They will subscribe £200 annually for the next five years.

A dance in aid of the funds of the Westminster Hospital was held at the Institute of Painters in Water Colours, Piccadilly, on Thursday, February 17th.

Students in Italian Universities.—According to a recently issued official report the total number of students in the 17 Government Universities and the 4 free Universities of Italy in the academic year 1896-97 was 22,982, not including 253 who entered only for special courses. Of the matriculated students 6,634 belong to the Faculty of Medicine.

Instruction in Colonial Hygiene.—The University of Brussels has just founded a Chair of Colonial Hygiene, and has appointed thereto Dr. George Treille, formerly Professor in the French School of Naval Hygiene, and Inspector-General and Director of the French Colonial Health Service.

At the annual general meeting of University College, Sir J. Blundell Maple, Mr. Justice Wills, and Mr. R. J. Godlee were elected members of the Council. Among those elected Fellows of the College were Dr. H. M. Richards, Dr. W. M. Stevens, and Dr. B. A. Whitelegge.

The Earl of Dartmouth, who presided at the eighty-first annual meeting of the Royal Ear Hospital, Soho, stated that the Committee had acquired a suitable site in Dean Street, Shaftesbury Avenue, and that plans were in course of preparation for a building which would be specially adapted for the treatment of diseases of the ear, and would be fitted with the most approved appliances.

A fund to endow a cot in the Children's Hospital, Great Ormond Street, as a memorial to the author of *Alice in Wonderland*, has been opened by the Editor of the *St. James's Gazette*. A strong Committee has been formed, and Mr. J. P. Black, of Messrs. A. and C. Black, Soho Square, will act as Treasurer. It is hoped to raise the sum of £1,000, and the cot will be known as the "Lewis Carroll," the name under which Mr. Dodgson wrote his admirable books.

Liverpool Royal Southern Hospital.—At the annual meeting of this hospital the President, Mr. William Adamson, referred to the endowment, in connection with the celebration of the Queen's Diamond Jubilee, of a cot at the Children's Convalescent Home, West Kirby, for the benefit of patients in the hospital. He added that children would be admitted into the home, even though they might be suffering from wounds requiring treatment. All surgeons and hospital managers will coincide with Mr. Adamson in saying that this will be a great help to the convalescence of the small patients. He referred also to the extensive use of the Roentgen rays in the hospital. The apparatus had been employed in the diagnosis of fifty-seven cases. He mentioned further the adoption of the method of immediately straightening angular curvature of the spine, which had been used with success in seventy cases.

St. John Ambulance Lectures.—We are asked to state that the following resolution was unanimously adopted at a meeting of the Committee of the Local Centre at Weston-super-Mare: "The Committee of the Weston-super-Mare Local Centre of the St. John Ambulance Association having considered the regulations of the home hygiene course, the scope of the syllabus for lecturer's certificate and for the elementary certificates, feel that these cannot be efficiently carried out by anyone who has not passed through the complete curriculum of a medical education and that, moreover, it will be lowering of the status of the St. John Ambulance Association that non-medical persons be now for the first time admitted to the lecturing staff, which has hitherto proved itself thoroughly adequate, both as to numbers, efficiency, and expert knowledge. The Committee would strongly urge the Central Executive to reconsider the new and somewhat revolutionary rule regarding lecturers, so inconsistent with the underlined note in pamphlet T.C. 1895,

'No lecturers whatever can be recognised who are not duly qualified medical practitioners.'"

The Epidemic of Influenza.—The present epidemic of influenza appears to have affected Cornwall more severely than any other part of the country. The Sanitary Committee of that county, in their report for January, state that scarcely a single district in the county is free, and that, although no statistics can be given, it is certain that a very large percentage of the population has been affected. The illness both among teachers and children has been so general that elementary schools have had to be closed. Although only 26 deaths have been returned as due to influenza, the deaths registered are considerably in excess of the average for the month, and the number of old people who have died has been remarkable. The fact that there was last week a slight decline in the mortality from influenza in London is a hopeful sign The fatal cases of this disease, which had been 88, 102, and 98 in the three preceding weeks, fell to 87 during the week ending Saturday last, February 19th. Of these 87 deaths, 24 were of persons under 40 years of age, and 21 of persons aged between 40 and 60 years; while 42, or nearly 50 per cent., were of persons aged upwards of 60 years. This decline in the mortality was, however, to be observed in West and North London. The number of fatal cases in Central London showed a slight increase, and those in East and South London a marked increase, upon those recorded in the preceding week. In West London there was a general decline in the prevalence of influenza, although in Paddington the fatal cases were more numerous than in any week during the present epidemic. In North London the deaths from this cause were fewer than in any recent week, the decline being most marked in Marylebone and Hackney. Among the sanitary areas of East London the prevalence of influenza appears to be now confined to Limehouse, Mile End Old Town, and Poplar. More than half the total deaths referred to influenza in the metropolis last week were recorded in South London; the disease showed excessive prevalence in Lambeth, Wandsworth, Camberwell, Greenwich, and Plumstead.

Royal Medical and Chirurgical Society.—The annual dinner of the Society took place at the Hôtel Métropole on February 17th. The President, Dr. W. H. Dickinson, occupied the chair, and was supported by Sir W. Mac Cormac, President of the Royal College of Surgeons, Dr. Alex Hill, Vice-Chancellor of the University of Cambridge, and about a hundred Fellows of the Society and their guests. After the toast of "The Queen" had been duly honoured, Dr. Clifford Allbutt proposed "The Society," and referred to its fine library. With the help of such societies the brotherhood and great traditions of medicine were raised and local professional pettinesses overcome. In acknowledging the toast the President alluded to the enormous advance of medicine and surgery since the foundation of the Society ninety-three years ago The indebtedness of the Society was yearly growing less; and he mentioned that Dr. Robert Barnes had just presented £200 to the Society. He touched upon the proposed amalgamation of London medical societies in an Academy of Medicine, but expressed the opinion that at present the objections seemed insuperable. Mr. Jonathan Hutchinson proposed "The Royal Colleges of Physicians and Surgeons," and Sir W. Mac Cormac, in response, remarked that his College had not the great traditions of its sister in Pall Mall, but that it had endeavoured, in conjunction with that sister, to produce a class of practitioners not equalled in any other country of the world. Sir R. Douglas Powell, referring to the remarks which had fallen from Dr. Dickinson, said that it would perhaps have been well if their Society had been originally framed on such large lines as to take in all the other societies, but the rivalry between them had never been tinged with animosity or bitterness. At his suggestion a telegram of kindly greeting was sent to the members of the West London Medico-Chirurgical Society, who were then dining together elsewhere. A cordial reply was soon afterwards received and read. Mr. Langton, President of the Clinical Society, said that all the sisters (societies) were attractive, good, and vigorous, and each filled its special niche in the temple of medicine. Mr. Timothy Holmes, in proposing "The Guests," alluded to the inauguration during his presidency of this annual dinner, which he now hoped might be carried on to endless generations. Their special guests were Dr. Alex Hill, Professor Allbutt, and Mr. MacAlister, to the last of whom the Society probably owed more than to any other person. Dr. Alex Hill, responding, said that when Dr. C. J. Hare, who was present that night, entered Cambridge in 1838, there were 6 medical students in that University; some years later the number had increased to 30; this year there were over 700. This enormous growth was chiefly due to the energy of Sir G. Paget and Sir G. M. Humphry. The fact that he, a member of the medical profession, was now Vice-Chancellor, showed that the medical school of the University had obtained recognition, and that medicine had asserted its claim to a position in the University. Sir Alfred Garrod proposed the health of the President, which was very cordially received. Dr. Dickinson, in reply, mentioned that he had sent in his first paper to the Society fifty years ago, and his last communication a year and a-half since. He considered his position in the Society the greatest honour he had ever had put upon him.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street S.W.—Surgeon to Out-patient; must be F.R.C.S.Eng. Also House-Surgeon. Appointment for six months Board, lodging, and washing found.—Applications to the Honorary Secretary, before March 6th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright Street, Birmingham.—Clinical Assistant: appointment for three months.—Applications to J. E. Hartley, Honorary Secretary, by March 4th.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane Square, S.W.—Honorary Visiting Surgeon to the Western District.—Applications to Austin E. Cooper, B.A., M.D., Secretary, by March 1st.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield,—Resident Junior House Surgeon and Dispenser. Salary, £50 per annum, with board, apartments, and laundress.—Applications to the Secretary by March 3rd.

CORK DISTRICT LUNATIC ASYLUM.—Assistant Medical Officer; unmarried; not more than 30 years of age. Salary, £100 a year, with furnished apartments, washing, fuel, light, attendance, and £50 in lieu of rations.—Applications to the Resident Medical Superintendent by March 5th.

DARENTH (ADULT) ASYLUM, near Dartford, Kent.—Assistant Medical Officer, unmarried; doubly qualified; and must not exceed 35 years. Salary £160, rising at the discretion of the Committee to £200, with board, lodging, attendance, and washing.—Applications, on forms to be obtained at the Chief Offices of the Board, Norfolk House, Norfolk Street, Strand, W.C., where they must be received by March 1st.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House Surgeon. Appointment for six months. Board and residence provided, with honorarium of £15 15s. at the expiration of term.—Also Casualty Officer. Appointment for six months, and is renewable. Salary at the rate of £100 per annum. Applications to Thomas Hayes, Secretary, by March 12th.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Physician. Honorarium, £40.—Applications to the Secretary by March 8th.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Applications, to be sent under cover, to the Secretary by March 19th. Also House-Surgeon and Assistant House Surgeon; doubly qualified. Salary, for the former, £100 per annum. Board, residence, and washing supplied in each case—Applications to the Secretary by March 12th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon, salary, £80; Assistant House-Surgeon salary £30 Board, residence, and laundry found in each case.—Applications to the Hon. Secretary, at the Hospital, by March 8th.

HALIFAX ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.—Applications to John S. Hurst, J. L. Cox, Honorary Secretaries, by March 17th.

HULL ROYAL INFIRMARY.—Senior House-Surgeon; unmarried. Salary, 100 guineas per annum, with board and furnished apartments. Appointment for one year, but eligible for re election.—Applications to the Chairman of the House Committee by March 1st.

LEICESTER INFIRMARY.—Surgical Dresser and also a Clinical Clerk. Appointment for six months. Board and apartments in the Infirmary provided.—Applications to the Secretary by March 14th.

LIVERPOOL ROYAL INFIRMARY.—Honorary Gynæcological Surgeon.—Applications to the Chairman of the Committee of the Royal Infirmary, Liverpool, by March 10th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence in the hospital, board, and washing

provided, and honorarium on satisfactory completion of term.—Applications to A. W. Bodger, Secretary, by March 16th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House Physician, House-Surgeon, Assistant House-Physician, and Assistant House-Surgeon. Appointments tenable for six months. The House-Physician and House-Surgeon will each receive salary at the rate of £40 per annum, and the other officers at the rate of £20 per annum.—Applications to Charles H. Byers by March 14th.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, Bowdon, Cheshire.—Resident Medical Officer. Appointment for twelve months. Salary, £60 per annum, with board, apartments, and washing.—Applications to C. W. Hunt, Secretary, by March 1st.

OMAGH DISTRICT ASYLUM.—Assistant Medical Officer: unmarried; doubly qualified, and not more than 30 years of age. Salary, £100 per annum, with allowances of furnished apartments (including fuel, light, and attendance), washing, milk, and vegetables, and £50 in cash in lieu of all other rations. Candidates must attend at the Asylum at 10.30 A.M., on March 4th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £30 per annum, with board and washing.—Applications to the Secretary.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross, S.E.—Honorary Surgeon.—Applications to the Committee of Management by February 26th.

ST. GEORGE'S HOSPITAL, S.W.—Surgeon and Assistant Surgeon: must be F.R.C.S.Eng. Assistant Obstetric Physician; must be F. or M.R.C.P. Lond.—Applications to the Secretary by March 5th.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Junior House Surgeon; appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and laundry.—Applications to the secretary, by February 28th.

SALFORD ROYAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. The present Junior House-Surgeon is a candidate and, in the event of his being appointed, there will be a vacancy in the post of Junior House Surgeon. Salary, £50 per annum, with board and residence. Must be doubly qualified.—Applications to the Secretary by February 28th.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer at the Workhouse Infirmary, Fir Vale, Sheffield; unmarried; doubly qualified. Appointment for six months. Honorarium, £12, will be granted.—Applications to Albert E. Booker, Clerk to the Guardians, Union Offices, West Bar, Sheffield, by March 5th.

SUFFOLK COUNTY ASYLUM.—Second Assistant Medical Officer. Salary £100 a year, with board, lodging, washing, and attendance. Must be unmarried; doubly qualified; and under 30 years of age. Appointment for three years, and thereafter as may be agreed.—Applications to the Medical Superintendent, County Asylum, Melton, Suffolk, by March 1st.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House Physician and House Surgeon. Appointments tenable for six months.—Applications to R. J. Gilbert, Secretary-Superintendent by March 23rd.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon; unmarried; doubly qualified. Salary £60 per annum, with board and residence in the hospital.—Applications to the Honorary Secretary, by March 2nd.

WISBECH UNION.—Medical Officer and Public Vaccinator for the First, Second (*a*), and Eighth Districts of the Union. Salary for First District, £70 per annum, Second (*a*) District, £10, and Eighth District, £15 per annum, with extra fees.—Applications to G. Carrick, Clerk, Union Offices, Wisbech, by March 2nd.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer, unmarried. Salary, £100 per annum, rising to £120 in a year, with board, lodging, and washing.—Applications to the Medical Superintendent, The Asylum, Powick, near Worcester, by March 16th.

MEDICAL APPOINTMENTS.

BAYS, James T., M.D Lond., M.R.C.S., appointed Medical Officer of Health to the City of Grahamstown, Cape Colony.

BLAKISTON, A. A., M.R.C.S.Eng., appointed Medical Officer for the Fourth District of the Shepton Mallet Union.

BOOTH, John, M.B., B.Ch., B.A.O.R.U.I., appointed House-Surgeon to the South Charitable Infirmary and County Hospital, Cork, *vice* R. P. Crosbie, M.B., B.Ch., resigned.

BRAINE HASTNELL, George M. P., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer and Superintendent of the Worcester County and City Lunatic Asylum.

BUBB, William, M.R.C.S., L.R.C.P.Lond., appointed Senior Assistant Medical Officer and Deputy Superintendent of the Worcester County and City Lunatic Asylum.

BURD, George V., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer for the Bratton, Clovelly, and Northlew Districts of the Okehampton Union.

BUSH, J. P., M.R.C.S., L.S.A., appointed Lecturer on Operative Surgery at University College, Bristol.

BYERS, Professor J. W., M.A., M.D., M.A.O. (*Hon. Causâ*), R.U.I., reappointed Examiner in Obstetric Medicine to the Royal University of Ireland.

COOPER, C. M., M.B., Ch.B.Edin., appointed Resident Medical Officer at the Royal Sick Children's Hospital, Edinburgh.

FLUX, George Belhan, M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., appointed Anæsthetist to the Great Northern Central Hospital.

GOODALL, J. K., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer for the Heath District of the Chesterfield Union.

GREGORY, W. H., M.D Edin., appointed Medical Officer No. 4 District of the Beverley Union, *vice* H. Walker, M.D.Edin., resigned.

GRIEVE, James, M.B., C.M.Edin., appointed Junior Assistant House-Surgeon to the Hull Royal Infirmary.

HAMILTON, R. K., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Hasland District of the Chesterfield Union.

HARDENBERG, E. F. H., M.B Lond., M.R.C.S., L.R.C.P., appointed Certifying Factory Surgeon for the Watford District.

KELLEHER, T. A., M.B., B.Ch., B.A.O.R.U.I., appointed Assistant House-Surgeon to the South Charitable Infirmary and County Hospital, Cork, *vice* John Booth, M.B., B.Ch.

LEE, Barnard J., L.S.A., reappointed Medical Officer for the North Wingfield District of the Chesterfield Union.

MOXON, William, M.D.Durh., reappointed Medical Officer of Health to the Matlock Urban District Council.

NICHOLL, Dr. W. J., appointed Medical Officer for the Fourth District of the Chipping Norton Union.

OAKSHOTT, James Albert, M.D., appointed Resident Medical Superintendent of the Waterford Lunatic Asylum, *vice* Ringrose Atkins, M.D.

PULFORD, Herbert, M.A., M.B., B.C.Cantab., appointed Second Assistant Medical Officer in the Worcester County and the City Lunatic Asylum.

REYNOLDS, J. H., M.B. and C.M.Edin., appointed Junior House-Surgeon to the Miller Hospital, Greenwich.

ROWBOTTOM, Arthur Joseph, M.R.C.S.Eng., reappointed Medical Officer for the Newton-on-Trent District of the Gainsborough Union.

SHARPLEY, John E., M.R.C.S., L.R.C.P.Lond., reappointed Medical Officer for the Blyborough District of the Gainsborough Union.

SHIACH, S. A., M.D.Edin., appointed Medical Officer for the Llanishen District of the Cardiff Union.

SMITH, T. H., L.R.C.P., L.R.C.S.Edin., D.P.H.Camb., reappointed Medical Officer of Health to the Reddish Urban District Council.

SMYTH, J. C., M.R.C.S.Eng., L.R.C.P.Lond., reappointed Medical Officer of Health for the Wells Rural District.

STEPHENSON, William, M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Beverley Rural District Council, *vice* H. Walker, M.D.Edin., resigned.

THOMSON, StClair, M.D Lond., F.R.C.S.Eng., appointed Surgeon to the Royal Ear Hospital, *vice* E. Cresswell Baber, resigned.

TURNOR, Philip W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Penkridge District of the Cannock Union.

WYLLYS, Henry J. M., L.R.C.S., L.R.C.P.Edin., appointed House-Surgeon to the Norfolk and Norwich Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, Cavendish Square, W., 8.30 P.M.—Mr. Frederick Treves: Abdominal Section as a Medical Measure.

LONDON POST-GRADUATE COURSE, London Throat Hospital, 204, Great Portland Street, W., 8 P.M.—Dr. George Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor F. G. Parsons: On the Muscles of Mammals, with special reference to Human Myology. Lecture I.

TUESDAY.

LONDON POST-GRADUATE COURSE, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Stupor, Katatonia, Dementia, and Senile Insanity.—Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M. Dr. Phineas Abraham: Atrophic Conditions.

CITY ORTHOPÆDIC HOSPITAL, 5 P.M.—Mr. Noble Smith: The Use of Apparatus in Orthopædic Surgery.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck Street, W., 4.30 P.M.—Dr. T. D. Savill: On Cases of Facial Paralysis and Monoplegia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C., 3.30 P.M.—Mr. Victor Horsley, F.R.S., Surgery of the Nervous System.

ROENTGEN SOCIETY, 11, Chandos Street, Cavendish Square, W., 8 P.M.—Papers will be read on the Photographic Activity and Penetration of Roentgen Rays at different vacua, by Mr. J. H. Gardiner. Other papers by Mr. Wilson Noble and Mr. Hall Edwards (Birmingham). Mr. Isenthal will show some new apparatus.

PATHOLOGICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8.30 P.M.—Messrs. T. W. W. Stephens and W. Meyers: On Test Tube Reactions between Cobra Poison and its Antitoxin. Mr. George Heaton: (i) Circumscribed Traumatic Aneurysm of the Innominate Artery; (ii) Congenital Sarcoma of the Liver. Mr. C. P. White: A Case of Ulceration of the Small Intestine. Mr. Thos. Carwardine: A Pendulous Hydatid Cyst of the Liver resembling an enlarged gall bladder. Mr. C. B. Lockwood: A Retroperitoneal Cyst supposed to have originated in the remains of the Wolffian body. Dr. William Hunter: A Complete Case of Acromegaly, with casts and formalin preparations. Dr. Raymond Crawfurd: A Heart with a Tumour of the Pulmonary Valves. Dr. Parkes Weber: Speckled Kidneys, due to an irregular fatty degeneration, possibly caused by plugging of the small

blood vessels shortly before death. Mr. S. G. Shattock: Mycetoma Papillomatosum. Mr. Cecil F. Beadles (card specimens): (1) Primary Carcinoma of Kidney; (2) Malignan Structure of the Sigmoid Flexure.

WEDNESDAY.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, 4 P.M.—Dr Arkle: Mitral Disease

EVELINA HOSPITAL, Southwark Bridge Road, S.E., 4.30 P.M.—**Mr. F. S Eve: Mastoid Abscess: Its Complications and Treatment.** Post-Graduate Lecture

LONDON POST-GRADUATE COURSE, Hygiene and Public Health at Parkes Museum, 74A, Margaret Street, W., 4.30 P.M.—**Professor** Wynter Blyth: House Drainage, etc.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor F. G. Parsons: On the Muscles of Mammals, with special reference to Human Myology Lecture II.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY, 20, Hanover Square, W., 8 30 P M—The adjourned discussion on the Treatment of Cardiac and Circulatory Affections by Baths, Exercises, and Climate, will be reopened by Dr. Sansom. The following are expected to take part in the discussion: Dr. Clifford Allbutt, Dr Ward Humphreys (Cheltenham), Dr. Shirley Jones (Droitwich), Dr Black Jones (Llangammarch), Dr Symes Thompson, Dr Heron, Dr. Andrew Myrtle (Harrogate), Dr Fortescue Fox (Strathpeffer Spa), Dr. Watson (Tunbridge Wells), Dr. Gifford Bennet (Buxton), and others. Dr Wm Bain (Harrogate) will read a short note on The Action of Some of the Natural Mineral Waters on the Flow of Bile—an Experimental Research.

OBSTETRICAL SOCIETY OF LONDON, 20, Hanover Square, W., 8 P.M.—Specimens will be shown by Drs Hellier, C. Hubert Roberts, John Phillips, and others. Papers:—Dr. Addinsell: Intermenstrual Pain (Mittelschmerz). Dr. H. R. Spencer: Two Cases of Fibromyoma of the Uterus removed by operation from women under 25 years of age.

THURSDAY.

HARVEIAN SOCIETY OF LONDON, Stafford Rooms, Tichborne Street, Edgware Road, W., 8 30 P M—Clinical Evening.

CHARING CROSS HOSPITAL, Post Graduate Class, 4 P.M.—Dr. Mott, F.R.S.: Demonstration of Medical Cases.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture, or Demonstration of Recent Specimens.

LONDON POST-GRADUATE COURSE, Cleveland Street Sick Asylum, 5.30 P.M.—Mr. A. Pearce Gould: Clinical Lecture.

FRIDAY.

LONDON POST-GRADUATE COURSE. Bacteriological Laboratory, King's College, W.C., 3 to 5 P M—Professor Crookshank: Anthrax and Malignant Œdema etc.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, 5 P.M.—Professor F. G. Parsons: On the Muscles of Mammals, with special reference to Human Myology. Lecture III.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell, E., 4 P.M.—Mr. R. W. Parker: On Hip Disease.

WEST-LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital, Hammersmith, W., 8 P M—Clinical Meeting. Cases will be showed by Dr Potter Dr. Seymour Taylor, and others.

WEST KENT MEDICO-CHIRURGICAL SOCIETY, Royal Kent Dispensary, Greenwich, 8.15 P.M.—The following clinical cases and specimens will be shown: Dr. Toogood: Cases from Lewisham Infirmary. Dr Sholefield: (1) Notes of a case of Typhoid Fever; (2) Diagrams of a case of Symmetrical Scotoma with Hemi achromatopsia. Dr. Tayler: A specimen of Aneurysm of the Heart and Ruptured Auricle. Dr. Dockrell: Some Dermatological Cases. Mr. Ernest Clarke: (1) A series of mounted specimens of Eyes, illustrating the Disastrous Effects of Iridocyclitis: (2) Some Living Cases. Mr. Joscelyne: Notes of a Case of Embolism of the Lung.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

MARRIAGES.

GORNALL—DAWSON.—On February 17th, at St. Margaret's Church, Binsey, Oxford, by the Rev. C. E. Adams, M.A., Vicar of Earley, Reading, John Guest Gornall, M.A., M.B. Cantab., of Latchford, Warrington, eldest son of John H. Gornall, J.P., Medical Officer of Health for the Borough of Warrington, to Constance Maria Dawson, third daughter of the late Frederick Hill Dawson of Cumnor, Oxfordshire.—At home from March 8th.

HUSBAND—LEAN.—On February 22nd, at St. Stephen's Church, Bath, by the Venerable Archdeacon of Bath, Walter Edmund Husband of Ebor Lodge, Higher Broughton, Manchester, to Mary Isabel Lean of Grove Lea, Bath, youngest surviving daughter of the late George Stuckey Lean, Esq., of Bath.

MACMILLAN—FAED.—On February 22nd, at St. Cuthbert's Parish Church, by the Very Rev. James Macgregor, D.D., one of Her Majesty's Chaplains for Scotland, David Macmillan, M.A., M.D., Prestwich, Lancashire, youngest son of the late William Macmillan, Esq., of Chapel, Kircudbrightshire, to Mary, youngest daughter of Mr. James Faed, Edinburgh.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2 30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30); Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1 30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Tu., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Tu., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W. 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Tu., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; (Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological) Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

NEUROTIC asks where he can find the best account of neurasthenia of gastro-intestinal origin?

C. F. would be much obliged if any reader would tell him where he could obtain a skiagraph of an eighth-month fœtus and of a full-term fœtus.

GALLUS asks whether there is any reliable book treating of the anatomy of the fowl, and particularly the function of the egg organs and the formation of the egg. Is there, besides, any reliable work that deals pathologically with the diseases peculiar to poultry?

DR. A. MUMFORD (Chorlton-cum-Hardy) asks whether clinical experience had shown that "vegetarianism" had any influence on the rate of recovery from acute illness such as pneumonia, measles, etc. He has two cases which seem to show very slow recuperative powers, and he would like to be able to determine how far this was due to peculiarities of the individual constitution, and how far it was affected by diet.

TREATMENT OF SEBORRHŒA CAPITIS.

HAIR asks for a good lotion for scurf of the scalp causing irritation. The hair is thick and dry. Preparations with glycerine make the complaint worse.

RECTAL SURGERY.

T. H. writes, with reference to Mr. Bryant's paper on Rectal Surgery before the Medical Society of London, of which an abstract appeared in the BRITISH MEDICAL JOURNAL of January 29th, page 301, as follows: Cocaine is now said to aggravate the congestion of the mucous membrane of the nose in catarrh. Is it the same with the mucous membrane of the rectum? Of the three operations mentioned—clamp, ligature, and carbolic acid—which causes least pain and inconvenience to the patient? Should hæmorrhoids be operated on when inflamed and painful, or in an interval? Afterwards are these relapses ulcers, fissures, or stricture?

DOMESTIC MEDICINE.

NAZARETH asks to be recommended to a volume on domestic medicine suitable for a lady residing in Palestine.

*** Probably the most useful book for the purpose will be a *Manual of Family Medicine and Hygiene for India*, by the late Sir William Moore, of which a new edition has just been published by Messrs. Churchill (12s.). Although primarily intended for use by residents in India, its remarks on the treatment of disease are of general applicability. A general manual of nursing, with a sketch of elementary physiology, such as that by Laurence Humphry, published by Charles Griffin and Co. (3s. 6d.), might also be of service.

PRACTICE ON THE RIVIERA.

DR. G. A. asks what examinations he must pass before he could practise in Cannes or Nice.

*** For practice on the Riviera a degree of Doctor of Medicine obtained from a French faculty is essential under the new law. These can be obtained from any one of the seven faculties of France—namely, Paris, Montpellier, Bordeaux, Toulouse, Lille, Nancy, Lyons. We believe that all the curriculum, in the sense of the courses of study to be attended, and a certain part of the examination, can be dispensed with by authority of the Minister of Public Instruction. To obtain this it is necessary to forward to the Minister a full statement as to the place and other details of medical education gone through and qualifications (including the nature and scope of the examinations passed) obtained by the candidate. The candidate should also state before which of the French faculties he proposes to present himself. We believe that the parts of the examination which are dispensed with are only in the preliminary scientific subjects—for example, botany, zoology, chemistry, and perhaps, to a certain extent, anatomy and physiology. The final examinations—medicine, midwifery, surgery, and so forth—must in every case be passed.

SEWER GAS AND TYPHOID FEVER.

MODESTINUS asks: (1) Will any of your readers kindly inform me what is the composition of sewer gas?

(2) Is it probable that a person should have typhoid fever twice in a lifetime after middle age?

*** (1) The article on the Disposal of Refuse in Vol. I of Stevenson and Murphy's *Treatise on Hygiene and Public Health* (London: J. and Churchill, 1892) states as follows:

"As regards chemical composition, sewer air varies very widely. In modern well ventilated sewers the air is by no means foul. Samples collected by Dr. W. J. Russell from the metropolitan sewers in the Paddington district during the month of August, 1869, were found to contain 0.51 volume of CO_2, 20.7 of oxygen, and 78.79 of nitrogen in 100 volumes." There was very little ammonia and no hydrogen sulphide.

(2) Murchison says: "Well authenticated instances of persons contracting enteric fever a second time are more common than is generally believed." He also says the disease is "chiefly met with in youth and adolescence." Having regard to the rarity of attacks after middle age, and the infrequency of second attacks, the *a priori* probability of two attacks after middle age must be practically *nil*.

INFLUENZA.

H. O. C. desires any information about the history of influenza, as to its origin, when it first appeared in England, and the first mention made of it in medical works.

*** Our correspondent might consult *Influenza: an Historica Survey*, by E. Symes Thompson, M.D. (London: Percival and Co. 1890. 21s.); and there are two reports on influenza presented to the Local Government Board by Dr. Parsons (*Report on the Influenza Epidemic of 1889-90*, 2s. 11d.; and a *Further Report and Papers on Epidemic Influenza, 1889-92*, 2s. 8d.), to be obtained of Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C., and Westminster, S.W.; or John Menzies and Co., 12, Hanover Street, Edinburgh, and 90, West Nile Street, Glasgow; or Hodges, Figgis, and Co., Limited, 104, Grafton Street, Dublin). We might also refer our correspondent to an editorial article in the BRITISH MEDICAL JOURNAL of January 23rd, 1892, p. 183, and to numerous other articles issued in the JOURNAL subsequent to that date.

ANSWERS.

RETIRED.—We believe that such visits would be regarded as an act of courtesy by medical men practising in the town.

BOMBAY DUCK: ARDENT READER: VIATOR.—No notice can be taken of communications not authenticated by the name of the writer.

NEUROTIC.—The offices of the National Society for the Employment of Epileptics are at 12, Buckingham Street, Strand, London, W.C.

A. S. D.—There would be no objection in principle to the issue of such a notice to the families upon whom our correspondent is accustomed to attend.

J. D. P.—We are not aware that there are any special institutions for the Weir-Mitchell treatment in England or Scotland. It can be carried out without difficulty in any nursing home, or, for the matter of that, in a private house.

QUACKERY.—We know nothing of the asthma curer mentioned, but will cause inquiries to be made. The testimonials, if genuine, would seem to require consideration by the corporation which it is alleged bestowed its licence upon the qualified practitioner whose name is appended to it.

ANXIOUS.—The following books may be recommended for the Primary Examination for the Fellowship of the Royal College of Surgeons of England: *Quain's Anatomy* (10th edition) (London: Longmans Green, and Co); Cunningham's or Ellis's *Manual of Dissections* (London: Smith, Elder, and Co., 1876); Stewart's *Textbook of Physiology* (London: Baillière, Tindall, and Cox, 1895, 15s.); Foster's *Textbook of Physiology* (London: Macmillan and Co, 1898); Stirling's *Manual of Physiology* (London: C. Griffin and Co., 1895. 9s); Wiederheim's *Structure of Man* (London: Macmillan and Co, 1895. 8s.); and Flower's *Osteology of the Mammalia* (the chapters referring to man only). It is advisable to go through a practical course of physiology and also of anatomy if these subjects have not been done recently.

NORDRACH.

DR. W. D. JOHNS (Bournemouth) writes: In answer to "E. A. L.'s" query in the BRITISH MEDICAL JOURNAL of February 12th, perhaps "E. A. L." might be interested to know that the open-air treatment of phthisis of Nordrach is almost exactly the same as that now being successfully carried out at Bournemouth, cases of which will be published shortly.

FATTY DEGENERATION OF PLACENTA.

M.B. writes: I think that "A. W." will find, as I have, that a more or less continuous administration of potassium chlorate during pregnancy will generally result in the delivery of a healthy child at the full term in cases in which former premature labours have been due to placental disease. Five to ten grains may be given three times a day throughout pregnancy, with occasional intermissions. A small dose of grey powder twice a week at bedtime is advisable, even in cases where there is no specific disease.

NOTES, LETTERS, Etc.

"THEY DO THESE THINGS BETTER ABROAD."

THE following is quoted verbatim from the current number of the *Ophthalmic Record* (Chicago): "A certain firm of opticians, located not less (*sic*) than a thousand miles from Chicago, has the assurance to send out the following circular letter:—'Dear Sir,—We will pay you 3 dollars cash out of the first money received, for every case of cataract you can send us. We have a remedy, "Jubanica," which cures cataracts, even senile cataracts, by absorption. It is perfectly harmless when used as our oculists prescribes (*sic*) it, and is absolutely curative in curable cases. We employ a physician whose opinion is reliable, and who passes upon each case. Upon request we will mail you literature regarding the remedy, "Jubanica." Below please find blanks for names. Your own name will not be mentioned to the patient unless you desire it.—Yours respectfully, ——— ——.'"

*** Our correspondent thinks they do these things better abroad; perhaps they do, but the old country is not very far behind. Our attention has recently been called to an advertisement issued by an optician in a provincial town in England. He states that "when medical treatment is necessary he will make arrangements for his clients free of charge whereby they may receive the advice and skilful treatment of the most eminent eye surgeons." He states also that he "has been honoured by the recommendations of some of the principal eye surgeons in the medical profession." The last clause may signify

nothing more than that certain ophthalmic surgeons have sent to him patients to have suitable spectacles made, but the first clause we have quoted appears to stand in need of explanation.

NEPHRECTOMY AND PREGNANCY.

MR. HENRY E. MABERLY, B.A., M.R.C.S. (Peckham) writes: Mr. Twynam's interesting paper on this subject leads me to publish the following. In July, 1896, I attended in her first confinement a woman whose left kidney had been removed for stone two years previously, and whose remaining kidney shortly afterwards showed signs of being affected. Craniotomy had to be performed by Dr. Horrocks on account of a general contraction of the pelvic brim, and a week after this she had one slight and one severe convulsion. Making, however, eventually a good recovery she became again pregnant, and in September last I induced labour on what was believed to be the 250th day of the pregnancy and delivered with the forceps a child weighing slightly over 3½ lbs. Kept for the first seven weeks in a thermostatic nurse this child is now of a good size and weight. The mother bore her second pregnancy and confinement remarkably well and is now to all outward appearance in thoroughly good health, notwithstanding that she passes constantly a large quantity of pus with her urine.

CASE OF PSEUDO-HERMAPHRODITISM.

MR. ARTHUR SOMERS, M.B., B.Ch., B.A.O.Univ Dub. (Thornfield, New Mills, Derbyshire), writes: The following case may be of interest to some of your readers. A short time ago I was summoned to see an infant 8 days old. The child was stated to be suffering from diarrhœa, and passing blood from the bowels. I was informed by the mother that she did not know to which sex the child belonged, and on examination I found the following condition of the external genital organs. An apparently well-developed penis, but no evidence of a meatus in the normal situation. At each side an integumentary fold, which appeared to represent the labia majora, and containing on each side a body which was apparently a testicle. These bodies were at times retracted, when the part of the integumentary fold in which they had been became empty and relaxed. The penis had a well developed frænum, below which was situated the urinary meatus. There was no indication of a vaginal orifice. There was a considerable ecchymosis over the position of the right external abdominal ring, which was first noticed by the mother on the seventh day after birth, and did not, she was positive, exist before that time. The child soon developed convulsions, which terminated fatally. As a necropsy was not permitted, the question as to whether this was a case of abnormal development of the clitoris and a hernial descent of the ovaries into the labia, or a case of hypospadias in which the penis might be mistaken for a hypertrophied clitoris could not be accurately determined. The facts of ecchymosis being present over the position of the external abdominal ring on one side, and the retraction of the bodies from their positions in those parts which were, or appeared to be, the labia, are points of interest.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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A CLINICAL LECTURE
ON
A CASE OF PNEUMONIA,
WITH ABORTIVE CRISIS AND PREMATURE RESOLUTION,
FOLLOWED BY SUPPURATION OF BRONCHIAL GLANDS.

Delivered at St. Mary's Hospital,

By Sir WILLIAM BROADBENT, Bart, M.D., F.R.S.,
Physician in Ordinary to H.R.H. the Prince of Wales; Consulting Physician to St. Mary's Hospital.

By the kind indulgence of my colleagues I have once more the privilege of giving a clinical lecture to the students of St. Mary's Hospital. I call it a clinical lecture, although you did not watch the course of the illness and follow the development of the symptoms with me at the bedside, inasmuch as I take a case as a text and comment upon it as I go along. The physical signs are such as you will easily understand from description, and I hope to make clear the inferences and conclusions based upon them.

The patient, a strong, healthy looking boy of 12, was taken ill on the evening of Thursday, December 2nd, 1897, when he was sick, and felt chilly. There was no distinct rigor. On the previous Saturday (five days before) he had played in a football match, and on the Monday had been out in the storm to watch the wrecking of the Broadstairs Pier. He had a slight cold and cough, as also had other boys in the school, but there was nothing suggestive of influenza in the symptoms. The attack speedily assumed the characteristic features of pneumonia, and when I saw him on the 5th, the temperature was 105°, the pulse 120, the respirations 48. There was a harsh cough, without expectoration, and pain in the right side, but in the abdomen rather than in the chest. The physical signs developed slowly, and it was only on the morning of this day that Dr. Raven had recognised indications of commencing consolidation at the right base. These were more distinct at the time of my visit, and distant tubular breathing was also to be heard above the spine of the scapula. We were agreed that the case was one of pneumonia, that the attack was severe, but that there were no special grounds for anxiety. A high temperature in pneumonia is not necessarily a very serious matter, especially at the age of 12. The respiration, it is true, was very rapid, and we should have liked to have had a good crop of herpes on the lips, but we saw no reason to apprehend a fatal issue. We prognosticated a crisis on about the seventh day, and recovery in due course. On Tuesday, Dr. Raven reported that the right lung was consolidated from top to bottom posteriorly, the temperature and symptoms generally remaining much the same. So far there was nothing unusual in the course of the attack.

On Wednesday, however, instead of the crisis we were expecting, with a rapid fall of temperature to normal or subnormal and a general amelioration in the symptoms, the temperature only fell to 103°, and the boy, instead of being better, was obviously worse in all respects; he became delirious, and the pulse went up to 144 and the respirations to between 50 and 60.

I was therefore asked to see the patient again, and reached his bedside at Broadstairs about 10 A.M. on Thursday, the 9th. The boy was lying on his left side, which was his usual position throughout, and although naturally very alert, he took no notice of what was passing in the room; from time to time he made some rambling remark, but when roused he knew me, and expressed surprise at seeing me. There was a deep crimson circumscribed flush on each cheek, the pulse varied from 130 to 140 and upwards, and he was breathing at the rate of 64 times a minute. The temperature had just been taken, and was found to be 103°.

On proceeding to examine the boy, instead of the dulness on percussion which I expected to find, there was everywhere resonance. At no point was there a trace of the consolidation which less than forty-eight hours before had involved almost the entire lung. On auscultation again air penetrated freely every part of the lung, and neither rhonchus nor sibilus nor redux crepitation could be detected anywhere. The inspiratory murmur was harsh, and the expiratory murmur was distinct. Dr. Raven confirmed these observations, which contrasted in the strongest manner with what he had found only the day before.

Nothing could be more grave than the state of things thus revealed. We should expect so striking a deviation from the usual course of events in pneumonia to be serious on various *a priori* grounds, and as a matter of experience the patient who is the subject of this lecture is the only one whom I have known to survive. Happily such cases are rare. As you are all well aware, the usual termination of pneumonia is by crisis; the temperature falls, the pulse quiets down, the respiration becomes less frequent, the tongue cleans, and a tranquil sleep brings to an end the delirium or stupor, the muscular tremor or twitching, or other evidence of nervous prostration or disturbance, which may have supervened; but the crisis relates to symptoms only, not at all to physical signs, and while the patient may have all the appearance of convalescence, dulness, tubular breathing, and bronchophony are found to be as distinct as ever, and a week or ten days will be occupied in removing the exudation from the air cells. Now whatever view we may take of the intimate changes which bring about the crisis, whether we attribute it to the death of the pneumococcus or to the formation of some antitoxin, or to the completion of some process of elimination, the crisis with which we are familiar is clearly Nature's method of bringing the disease to an end, and with each day of delay in its appearance anxiety as to the result increases. When it is postponed beyond the ninth day it may usually be concluded that something underlies the pneumonia, such as tubercle or septicæmia; but even more serious than delay of the crisis is an abortive attempt. Nature has made her effort and failed, and nothing more is to be expected of the constitution; but there was another obvious source of danger. Two days previously the air vesicles of a great part of the lung had been choked with exudation which had now entirely disappeared; it had certainly not been expectorated or brought up and swallowed; it could only have been absorbed, and from its character there was every reason to fear that it would play the part of a poison in the blood. The patient indeed was evidently under the influence of a poison.

It is not easy to understand such rapid absorption, and I make no attempt to explain it. I cannot help thinking, however, that the deep and frequent respiration is a factor in the causation. In the only other case of the kind in which I have had the opportunity of minute and continuous observation there was frequent and deep breathing and incessant loud, distinct talking, at first sensible and coherent, gradually becoming incoherent. In this case, which was watched minutely, the clearing up of the consolidation took place from below upwards, redux crepitation and entry of air being first heard at the extreme base, first of one lung, then of the other, the pneumonia having been double. Both lungs were clear in less than thirty-six hours.

The boy then lay in the condition of torpor with muttering delirium, just described, and a point, which at once struck us, and to which I call your attention, was that, while the degree of fever explained the frequency of the pulse, there was nothing whatever in the state of the lung or heart to explain the inordinate frequency of the breathing, which, as I have said, was at the rate of 60 or 64 respirations to the minute. Such a departure from the normal relation between the pulse and respiration added greatly to the gravity of the symptoms. It could only be due to an effect of some poison on the nervous system, or, as was suggested by the sequel and by another case which I have seen, to some irritation at the root of the lung. After the examination, as the temperature seemed to be rising, it was again taken and found to be 103 8°; half an hour later it was 104 8°, upon which the boy was twice freely sponged with cold water, and an ice bag was applied to the head. This had little effect, since in another hour the temperature had further risen to 105.5° or 105.6° Upon this the patient was enveloped in a dripping sheet, which was so disposed as to favour abstraction of heat from every part of the surface, and the moisture was continually renewed by droppings of ice-cold water from a sponge. The temperature was taken at the mouth every few minutes, and it was fully twenty-five minutes before any impression at all was made on the heat. Of this the first indication was paling of the flush on the

cheeks, and when this became very decided the wet sheet was withdrawn, the boy, still naked, being covered by a single blanket. He enjoyed the cold application very much, and became quite sensible. The temperature fell to about 103° for a time, but the wet sheet was again required three hours later for a period of a quarter of an hour. Five grains of quinine were given after the first wet pack, and again later in the day.

There can be little doubt that the wet sheet saved the boy's life. He was getting visibly worse in every respect from hour to hour, and was apparently drifting rapidly into hyperpyrexia.

From this time the temperature gradually fell for some days, always, however, touching 101° at some period in the twenty-four hours, and there were at times oscillations which demanded a dose of quinine. The pulse remained frequent, and the respirations maintained a great relative rapidity of about 40. The intellect was clear, and the patient took his food well. Cough persisted, and the lungs were frequently examined with a view to the detection of any morbid condition which might have been overlooked, or of any new complication which might arise, or of anything which might explain the rapid breathing and persistent temperature. During the afternoon of the 10th a very scattered, coarse crepitation was heard for a moment over the upper part of the right lung anteriorly, but it was dismissed by an act of coughing, and from time to time afterwards fugitive signs were detected at different points. We had in mind in particular the possibility of an empyema imprisoned between the base of the lung and the diaphragm, or in the fissure between the lobes of the lung, but no evidence of any such complication presented itself.

At the end of a week, during which there had been apparently a distinct though slow progress towards convalescence, the temperature rose slightly to 102° and 102.6°, and the cough became more violent and continuous, but without expectoration, beyond such as was excited by the act of coughing itself, and on December 21st I again saw the patient. By this time the paraxysms of coughing were uncontrollable, and would go on for two or three hours without intermission. No linctus gave relief, and inhalations of pine oil and of hot vapour with benzoin afforded no alleviation whatever. The cough was almost like that of whooping-cough, and from time to time provoked vomiting. An attempt was finally made to quiet it by inhalations of chloroform, but nothing short of complete anæsthesia sufficed to cut short the paroxysms. There was then an interval of quiet sleep, and the cough did not recur for some hours. It was observed that talking, eating, and turning on the right side provoked attacks.

There could be no doubt as to the significance of a cough of such a character; it could only be due to enlarged bronchial glands. Irritation and inflammation of the glands at the root of the lung had obviously been set up by the material absorbed from the air vesicles. The lymphatics had thus been one channel by which the exudation had been removed.

Small doses of iodide of potassium were given, in the hope of reducing the size of the glands, and the cough was quieted as far as possible by an opiate and bromide linctus and by inhalations of vapour with tinct. benzoin and succus conii, or of pine oil, or from time to time of chloroform. On the 23rd a chill, scarcely amounting to a rigor, and a sudden rise of the temperature to 104.2°, announced suppuration. This could scarcely be elsewhere than in one of these enlarged and inflamed bronchial glands, and unmistakable evidence was furnished of pressure upon the root of the lung by imperfect entry of air into the right lung generally, with distant tubular breathing in the first space near the sternum, and slight impairment of resonance in the right interscapular space about the level of the spine of the scapula. On the 24th, when I again saw the patient, it was further found that the heart was considerably displaced to the left. The apex beat was outside the anterior axillary line, and unduly high. Next day it was as far out as the mid-axillary line, and about the level of the nipple, and the upper line of dulness ran along the second space. These physical signs raised the question of acute general dilatation of the heart and of effusion into the pericardium, but the apex beat and right ventricle impulse were too definite and the sounds too distinct and too nearly normal for either of these conditions. There was, moreover, no dulness to the right of the sternum, and the heart sounds were scarcely audible outside its right border. The heart was evidently carried bodily to the left, and as there was no fluid in the right pleural cavity, either free or encysted between the diaphragm and the base of the lung, the only assignable cause was swelling of the mediastinum, possibly an abscess there. Corroborative evidence of mediastinal implication was present in conduction of the tracheal breath sounds to the manubrium, especially over its right half, but there was no pressure on the vena cava, the veins of the neck not being full.

The outlook at this stage of the case had again become very uncertain. There could now be no doubt that suppuration had taken place in the mediastinum. We could be practically certain that it had started in a bronchial gland at the root of the lung, but there was reason to fear that it might have extended into the connective tissue of the mediastinum. Everything depended on the outlet which the matter might make for itself. We hoped it might be into a bronchial tube, but we could not be sure of this, even if the abscess had formed in a gland. A mediastinal abscess properly speaking could only be expected to open into the pleural cavity, and that after a long and trying period of suppurative fever.

Happily on December 25th a small quantity of pus suddenly appeared in the scanty colourless expectoration, which was all that had hitherto been seen, and soon afterwards a single streak of blood. The amount could not have been anything like a drachm, but its escape was followed by a temporary amelioration of the symptoms; for three days the temperature did not exceed 101.4°, and the cough became much less violent and the respirations less frequent. The temperature, however, again rose to 102.6°, and had a suppurative character, and there were profuse night sweats. The displacement of the heart was unchanged, so that the menace of perforation of a mediastinal abscess into the pleural cavity was not entirely withdrawn. In view of this contingency, the boy's condition now permitting of the journey to London, he was brought up from Broadstairs by Dr. Raven on December 29th. There was now dulness at the right base posteriorly more than half way up to the angle of the scapula and round the lateral aspect of the chest, with absence of breath sounds, impairment of vocal resonance, and extinction of vocal vibration; there was, in fact, for the first time, fluid in the pleural cavity. This seemed like a preparation for rupture of a mediastinal abscess in this direction, and I rather welcomed the appearance of this fluid, first because I had in a previous case of abscess in the mediastinum known serous effusion, seen to be such when withdrawn by aspiration, to precede the penetration of pus into the cavity; secondly, because I thought the fluid might dilute the pus and diminish the irritation of the pleura which it would set up.

The anticipation based on the appearance of pleural effusion was, however, never realised. A second expectoration of a small quantity of pus took place on December 31st, but after this the fever was rather higher, and the oscillations and perspirations more marked, till on January 4th another and more copious expectoration of pus took place. It was not preceded by cough, but came on after a slight effort, and so suddenly that the first outburst could not be collected. From what I saw I estimated the amount to have been 3 or 4 drachms. Considerable coughing followed the appearance of the pus for the rest of the day.

There had been improvement from the time of the first expectoration of pus; it continued steadily and more rapidly after the final discharge. The temperature speedily fell to the normal level or below it, and the perspirations entirely ceased. The boy got up for the first time on January 8th, and left for the country on January 24th, not, of course, very strong, but otherwise apparently well. The heart had not regained its normal position, and the second sound was reduplicated, and there was still a zone of dulness round the base of the lung.

The improvement has continued. Dr. Walter Broadbent reported on January 28th the apex beat to be 1 inch outside the nipple line, and the second sound to be reduplicated at the base. A week later the apex was was only ¼ inch outside the nipple, and the aortic and pulmonic second sounds were synchronous. On February 15th the heart had practically regained its normal position in the chest; tracheal breathing

was no longer heard over the manubrium, and all that remained at the base of the right lung was a scarcely recognisable impairment of resonance and of respiratory murmur.

As I have discussed each phase of the illness in the order of its occurrence, no formal commentary on the case as a whole is necessary, but I must not conclude without an acknowledgment of the zealous and intelligent co-operation of Dr. Raven.

ABDOMINAL SECTION AS A MEDICAL MEASURE.

Read before the Medical Society of London, February 27th.

By FREDERICK TREVES, F.R.C.S.,

Surgeon in Ordinary to H.R.H. the Duke of York; Surgeon to the London Hospital.

I might be permitted, at the outset of this paper, to offer some explanation of its title. The President, when he did me the honour of asking me to read this communication, suggested that the subject should be "Abdominal Operations in Medical Cases." I was a little afraid to adopt this reading owing to some uncertainty as to what constituted a medical case. Surgery has of late years rather aggressively extended its boundaries, and the map of the human body, which was at one time precisely divided into medical and surgical territories—to the great advantage of medicine—has recently been much modified by the aggressions of the descendant of the barber. Although the surgeon is still in awe of the stethoscope his profane fingers have invaded the abdomen, the sacred thorax, and the brain. It is a question if even the pineal body, which as the reputed seat of the soul must be a purely medical district, is really immune from what is rather rudely called "surgical interference."

The difficulty of properly defining a medical case has therefore led to the present title. I may add in further explanation that I understand the President's wish to be that I should deal with such surgical measures in abdominal disease as appear to act upon the patient through other than accepted surgical lines; and, further, that attention should be drawn to matters incident to abdominal operations which are likely to be of interest to the physician. That a paper with such an object must be fragmentary and rambling is, I am afraid, inevitable.

The first cases to which I would direct attention are those in which the mere opening of the abdominal cavity appears to effect, in spite of all surgical prejudices, either the cure of a disease or at least its temporary amelioration. Prominent among these conditions stands tuberculous peritonitis. The results of the treatment of this disease by simple incision have been little short of miraculous. The large series of collected cases—that compiled by Aldibert—deals with 308 examples of this form of peritonitis treated by operation, and shows a percentage of cures estimated at 69.8 per cent., of which number 33.4 per cent. may be regarded as complete recoveries. An examination of this record shows that the most favourable results on the whole have been those attending the mere opening of the abdomen. This practically applies to generalised peritonitis without suppuration, and to the non-suppurative encysted forms. In a certain series of instances the diagnosis has been made of an ovarian cyst or of some other such growth. The surgeon has proceeded to open the abdomen, to remove the hypothetical tumour; has discovered simply tuberculous peritonitis, has hastily closed the incision, and has therapeutically fled. In due course he has heard, to his amazement, that the patient has made an excellent recovery. In a certain number of the recorded operations the peritoneal cavity has been washed out or drained, or into the inflamed area has been introduced some such medicament as iodoform. In these instances some better result might be anticipated, inasmuch as the operation has been a little more full of purpose and more in accord with the surgical habit in dealing with inflammatory affections; but, strange as it may appear, these more elaborate measures have, except in suppurative cases, not been attended with such good results as have followed the mere incision made by mistake. Indeed, the incision made by mistake can claim some of the most brilliant achievements of surgery in connection with tuberculous peritonitis.

Some of the more extreme of the cases can excite nothing but amazement. Not long ago I was operating upon a cachectic patient—a young man—who was suffering from chronic perityphlitis. There was a strong suggestion of a tuberculous element in the case. I started with the intention of removing the vermiform appendix, but found that much-sought-after organ imbedded in a mass of adhesions which had implicated other viscera. Its removal would have involved an operation of considerable duration and difficulty. Moreover, the adjacent peritoneum so far as the fingers could reach was covered with advanced tuberculous deposits. It seemed utterly futile, in the face of this grave condition, to persist in the attempt to remove the appendix. The abdomen was therefore closed, and the patient's friends were told that the condition was beyond the reach of a reasonable operation. The man made a perfect recovery; his abdominal symptoms vanished, and when I heard of him some months after, he had returned to his work as a shop assistant. How such operations act it is impossible to say. It is assumed by some that the beneficial effect is due to the admission of light into the abdomen. This is hard to believe, and it is possible that a satisfactory answer to the problem will be furnished when we know more of the degree and effect of intra-abdominal pressure.

As a further illustration of the unknown power of a simple abdominal incision, I might allude to a case of pylephlebitis which I reported some four years ago.[1]

> The patient was a young girl, aged 15, who was recovering from a sharp attack of perityphlitis, the acute manifestations of which had practically subsided by the seventh day. On the eighth day she had a rigor, and the temperature rose from normal to 103°. From that time the temperature kept high, reaching 104.4°, and almost every day the patient had an exhausting rigor. There was great prostration, vomiting, delirium, enlargement of the liver, and pain over the hepatic region. The symptoms resembled those of abscess of the liver, and as the child was becoming steadily worse, I was asked to make an exploratory incision in search of pus. This I did on the thirty-first day of the disease. The liver was very much enlarged, and was remarkably soft to the touch—as soft almost as the lung. It was dotted all over with minute yellow specks and presented the appearance met with in suppurative pylephlebitis. I considered the case quite hopeless, and closed the wound. The child never had another rigor, and made a rapid and perfect recovery. Yet she was so ill at the time of the operation that it seemed scarcely worth while to make even an exploratory incision. How this strange recovery is to be explained I am at a loss to say.

Another series of cases belonging to the present category is represented by those in which a mere incision into the peritoneal cavity has led to the rapid shrinking of certain malignant growths and to the temporary improvement of the patients. These cases must have come within the experience of all surgeons. In most instances a tumour of doubtful nature has been discovered, the abdomen has been opened, the growth has proved to be sarcoma, and nothing has been done. After the operation the mass has dwindled in size, and, in some recorded instances, seems to have vanished, certainly for a time. I have met with instances of this character in which sarcomatous tumours of the peritoneum or retro-peritoneal sarcomata have undergone most remarkable diminution in size. In one instance, in a young man of 25, a retro-peritoneal sarcoma the size of two fists became so reduced after a mere abdominal incision that it was scarcely to be felt, and some three months elapsed before the growth began to increase again. After this it rapidly led to the patient's death. In another example I some years ago performed laparotomy in a doubtful case of obstruction of the pylorus. A malignant growth of the pylorus was discovered. It was impossible to remove it—the operation of gastro-enterostomy had not then been perfected—and the abdomen was closed, the case being regarded as hopeless. The patient's symptoms vanished, the distension and sickness disappeared, his appetite returned, and he was actually able to return after a short period to his duties as a gate porter. It is needless to say that in due course the symptoms of the disease reasserted themselves and led to the patient's death.

Another series of cases in which relief unexpectedly follows abdominal section, with or without some further operative procedure, is illustrated by the large class of cases somewhat hopelessly styled nervous. These may be divided into two categories: those in which the symptoms of well-recognised diseases are imitated, and those in which the clinical phenomena are simply bizarre and fantastic. Of the former class of cases two examples may be given.

I was asked to operate upon a middle-aged lady, who had already had personal experience of surgery, and who for some twelve months had been invalided owing to an abdominal condition which was spoken of as "chronic perityphlitis." There was pain in the right iliac fossa, great difficulty with the bowels, occasional vomiting, and always very acute tenderness over the situation of the appendix. It is noteworthy that this tenderness was purely superficial, and appeared to be a matter of the skin. So intense was it, however, that no satisfactory examination of the right iliac fossa could be made. The patient's health was impaired by long confinement and by the constant use of hypnotics. So long as she remained motionless in bed no great trouble was complained of, but as soon as she attempted to get up, or even sit up, the pain returned in the same place. These symptoms were associated with phenomena of exhaustion, depression, and other expressions of the so-called neurotic state. All medical measures had failed, and it appeared that the only possibility of saving the patient from a career of chronic invalidism lay in an abdominal exploration. She herself was convinced that she had a diseased appendix, and with the symptoms produced by that trouble she was remarkably familiar. I made an incision in the right iliac fossa and found nothing abnormal. I considered it discreet to remove the appendix for other than surgical reasons. This structure, when examined after removal, proved to be absolutely free from any suspicion of disease. The patient's symptoms all left her, she discontinued the use of hypnotics, her nervous troubles vanished, and she made a perfect recovery.

Another example of somewhat like character is afforded by a young lady, some 25 years of age. She also was familiar with the troubles incident to a diseased appendix. She suffered from extreme constipation, and the abdomen was constantly tympanitic. There was occasional vomiting and marked anorexia. So hyper-sensitive was the skin over the right iliac fossa that no detailed examination without an anæsthetic could be made. She appeared greatly prostrated, would lie for hours in a state of apparent stupor, and, at the time when I saw her, she had been confined to her bed for some months. Examination under an anæsthetic was consented to only on condition that any diseased organ discovered should there and then be dealt with. Under ether, examination of the right iliac fossa revealed nothing abnormal, but in face of the distressing and hopeless condition into which the patient had drifted, it was considered politic to make an exploratory incision. This was carried out in the right semilunar line. All the organs within reach were free of any traces of disease. It seemed desirable, or at least politic, for the same reasons which held good in the previous case, that the appendix should be removed. After removal, a minute examination revealed no disease in any part of it. The patient made a rapid and complete recovery, and lost all evidences of her long-continued nervous condition.

As an extreme instance of the second class of cases in which the symptoms conform to the manifestations of no known disease the following example may be given. The patient was a woman, aged 24, who was admitted into the London Hospital under my care on February 5th, 1897. The following was her somewhat exceptional history: She had been quite well until twelve months before admission. A year ago she had been seized with violent pain of a paroxysmal character in the left side of the abdomen. This pain lasted some two or three hours, and came on, as a rule, twice a day. The bowels became very confined, and five months before admission she was seized with fæcal vomiting. Previous to the onset of this vomiting no action of the bowels of any kind had taken place for four weeks. She was admitted into a metropolitan hospital, and the abdomen was opened. Nothing abnormal was found. For a week after the operation she was perfectly relieved of all her symptoms; at the end of that time the symptoms of intestinal obstruction, with fæcal vomiting and rise of temperature, returned; it was then noticed that injections given by the rectum were returned almost immediately by the mouth. It was assumed that some fistulous communication existed between the stomach and the colon. A second abdominal section was therefore carried out; the stomach itself was opened; no kind of communication between it and the bowel was discovered, and both viscera were free of adhesions. As after her discharge from the hospital her symptoms of obstruction, with pain, fever, and vomiting, still continued, she sought admission into the London Hospital. Shortly after admission she exhibited definite hysterical attacks. She had, by some means, acquired the power of causing the mercury in the clinical thermometer to rise to the limits of the instrument. One medical man who had attended her, wrote to say he had recorded a temperature of 110°. No action of the bowels could be obtained. She would howl with pain for hours. All food taken by the mouth was vomited; nutrient enemata were given by the rectum, but they also were vomited. A careful investigation of this vomiting of enemata was carried out by my house-surgeon, Dr. Sears, with the aid of the sister of the ward. An enema of castor oil was given; within ten minutes from the time of the introduction of this drug into the rectum the whole of the castor oil, as demonstrated by actual measurement, was vomited from the mouth, together with a small scybalous mass. A few days later, in order to further test this phenomenon, an enema of one pint of water stained a deep colour by methylene blue, was injected into the rectum by the sister, in the presence of the house-surgeon. The whole of this enema, to the amount, that is, of one pint, was vomited by the mouth in ten minutes. I was extremely ill-disposed to carry out a third abdominal section. The only excuse for it was that while at the previous operations the stomach had been carefully examined, an equally detailed examination had not been made of the colon. As the patient resisted all forms of treatment, vomited all she took by the mouth, vomited nutrient enemata, and had no action of the bowels, and as she was becoming somewhat alarmingly feeble, I resolved once more to carry out an abdominal section as a forlorn hope. The abdomen was opened in the left semilunar line above the level of the umbilicus. The rectum and the whole length of the colon were examined with the greatest care and minuteness, and found to be absolutely normal. Some few adhesions existed around the scar of the wound in the stomach, but, with this exception, the abdominal cavity did not exhibit any trace of disease. The patient thought fit to be very ill after the operation; her respirations at one time reaching 140; she could not be induced to speak, and she went through all the popular phenomena of dying with startling effect. As these death-bed displays were not encouraged, she took finally to screaming, and became so intolerable in the ward that she was removed to an isolated room. The absence of an appreciative audience appeared to have an immediate effect upon her symptoms, for she soon ceased to complain, the bowels acted without difficulty, the vomiting ceased, the temperature remained normal, and before she left the hospital on March 19th she may be said to have been perfectly restored to health. The highest temperature she was able to develop while in the hospital was 109°. She had stated that she could produce this heroic fever by very slowly squeezing the bulb of the thermometer between her teeth. An attempt to produce this elevation of the mercury by the means indicated only led, however, to the destruction of two thermometers.

Beyond cases so extreme as this there are many others in which the patients suffer great distress, in which it is impossible to give any name to the disease, or to offer any explanation of the symptoms. That a great many of these cases are relieved, and indeed cured by abdominal section after all medical measures have failed must have been demonstrated by many. One lady, 27 years of age, who had for long exhibited symptoms of terrible abdominal pain, with constipation, vomiting, anorexia, and exquisite tenderness of a certain part of the abdomen, came under my notice when in a state of extreme exhaustion. No measures that had been devised had had any effect upon her symptoms. I somewhat reluctantly consented to make an exploratory incision, and made it over the seat of the pain—namely, just to the left of the umbilicus; nothing abnormal was discovered. The symptoms were in no way relieved by the operation. The patient declined all food, and vomited such as was introduced into the stomach by force. Nutrient enemata soon returned; pain was stated to be as intense as ever, and within a week or so of the performance of the operation the patient died. *Post-mortem* examination revealed no trace of

disease in any part of the abdominal cavity. In such an example as this it would appear that the disease is a disease of the nervous system or a disorder of the mind, and that the abdominal symptoms are no more substantial than are the ghosts which take part in the hallucinations of the insane.

There is a somewhat more definite form of abdominal trouble that may, I imagine, lay claim to the term "intestinal hypochondriasis." Many of the patients who are the victims of this condition are men—mostly men of middle age. Nearly all, if not all, have been the subjects of chronic colitis. They are apt to complain of fixed pain and tenderness at a spot a little below and to the left of the umbilicus. The spot indicated would be not far removed from the inferior mesenteric vessels and plexus. These patients suffer from troublesome constipation, from dyspeptic troubles, from sickening pain in the abdomen, and from infinite depression. Their whole mind is engrossed by the consideration of their bowels, and the contemplation of the concerns of their abdomens. They give elaborate accounts of the intestinal symptoms, and are prone to attempt to demonstrate that there is a narrowing of the bowel at the seat of the pain. In two instances which have come under my notice the patients were retired medical men, both of whom had had colitis, and no arguments that I could use could induce them to give up the idea that there was an actual stricture of the bowel just to the left of the umbilicus. In all these patients it is common to be able to feel through the parietes a contracted sigmoid flexure. There is no doubt, from the study of these and of similar cases, that the sigmoid flexure is a very irritable part of the alimentary canal. I have felt this portion of the bowel to contract under the fingers until it feels like a firm cord, about the width of a man's thumb. It is possible that, in these cases, long continued catarrh has led to a permanent state of irritability of the muscle forming the bowel wall, to a condition of abiding spasm, which may well cause pain and the sensations of obstruction.

As an illustration of this subject I may mention such a case as the following: A patient, 50 years of age, had had so long as he could remember a somewhat irritable condition of the colon. It had always been his habit to have an action of the bowels two to three times every day. After a while this condition was replaced by constipation, or at least by an indisposition for the intestines to act. Any action of the bowels was preceded by troublesome tenesmus and a sense of difficulty in emptying the rectum; much mucus was passed. Enemata acted better than aperients. Examination of the rectum revealed nothing abnormal. Through the abdominal parietes could be felt some 4 inches of the rigidly-contracted sigmoid flexure. It seemed as if the long over-stimulated bowel had at last passed into a condition of tonic spasm, spasm of such a degree that it scarcely admitted the contents of the bowel to pass along it. That such an interpretation is probable was shown by the fact that, on more than one occasion, in spite of the reputed constipation, quantities of fluid could be found to be present in the upper region of the bowel. This contraction of the sigmoid flexure may explain the tenesmus, the perpetual sense of uneasiness in the lower part of the bowel, the idea of cramp and of some obstacle to the passage of the contents of the gut, the impression that something has to come away. Certain of these cases are conspicuously relieved by opium, the opium acting distinctly as an aperient. Indeed, I should think they afford one of the best examples of the conditions under which opium has the effect of an aperient.

To leave these cases and to deal with others of a different character, it may be interesting to state the anatomical conditions which I have found in cases of obstinate constipation in which the abdomen has been opened. In certain of these cases the operation has been performed on account of constipation only, but in other instances the constipation has been merely a circumstance associated with other and more pressing disorders. It must be allowed that an operation for the relief of simple constipation, no matter how obstinate, is somewhat of a reflection upon the possibilities of medical treatment. The cases, however, in which surgical interference is necessary are certainly exceedingly few. They are represented by instances in which all ordinary measures to secure an action of the bowels seem destined to fail. Aperients of all kinds, in all doses, produce little effect beyond abdominal pain. Enemata of various sorts, administered in various positions, have uncertain results. The patient has become lethargic, despondent, and dyspeptic, and is the subject of a depressing series of nervous phenomena. His life centres around the inactive intestine; an anxious and intense importance attaches to the evacuation of the alimentary canal, and this simple physiological act becomes indued with extravagant responsibilities. It may be assumed that massage has been tried, that electricity has been made use of, that digestive remedies of all sorts have been employed, that every phase of diet has been tried, and that the patient has had resort to one or other of the many spas which have a reputation in connection with the cure of this disorder. After many months, or possibly years, of futile medical treatment, the patient's condition seems to his mind to be so hopeless, so utterly depressing, that the mere opening of the abdomen by an exploratory incision appears to him to be a measure not only of little moment, but one which he may heartily welcome. In certain of these cases I have found an exceptionally long sigmoid flexure, conforming more or less to the outline of a gigantic omega, lying helpless, ponderous, and inert in the hollow of the pelvis. It would seem in such cases as if the power of the patient's abdominal nervous system were insufficient to unfold this listless coil. Now and then the condition is aggravated by adhesions, or possibly by the pressure of a pelvic tumour. In other examples the transverse colon appears to be mainly in fault—it is unduly long, it is loaded, and is bent in the form of the letter V, so that its central portion reaches to the pelvic brim, or even enters into that cavity.

In another set of examples the sigmoid flexure is unduly short, and appears bound down to the margin of the pelvis. One can imagine that its very fixity encourages feebleness in its muscular tunic. Not infrequently one finds the peritoneum, which forms the sigmoid meso-colon, dense, thickened, and opaque. The cause of this condition of the serous membranes is hard to seek. Now and then the state of the membrane is such as to merit the term "peritonitis deformans," although independently of tuberculous gland disease this form of peritonitis has but a doubtful existence, and the condition which I have alluded to has, in my experience, been met with only in connection with the sigmoid flexure.

In more than one case of quite intractable constipation I have found the meso-colon throughout its entire length so enormously distended with fat that it was easy to imagine that the movement of a peristaltic wave along the bowel could be a matter of some difficulty. This development of fat is quite striking. It may or may not be associated with a like fatty deposit in the mesentery and omentum, and it may be found in patients who can in no sense be considered corpulent, and indeed in some who may be classified as thin. Finally, one has met with examples in which no explanation can be afforded other than that of atony, or general disorder in the action of the muscular apparatus of the bowel. The thin-walled bowel is distended with gas, or there is dilatation of the gut in one place and contraction in another.

As a matter which is incidentally connected with constipation, or at least with disturbance of the colon, I may mention a form of pelvic peritonitis, or more probably of pelvic cellulitis, which is very apt to give rise to difficulties of diagnosis. In connection with such cases, it is necessary to point out that inflammatory conditions of the intestinal wall may be transmitted to the tissues beyond the limits of the gut. Our knowledge of ulcerative processes in the colon, although much extended in recent years, is as yet by no means complete. Perforating ulcers may occur in the colon with very little, if any, antecedent suggestion of intestinal trouble. This fact is illustrated by cases (by no means common) in which a communication has been formed between the colon and the bladder. Contrary to what may be expected, the cases in which such communications exist are not usually examples of malignant disease. In the great majority, indeed, of these recorded instances, the absence of carcinoma has been demonstrated. If the ulcer of the colon can so spread beyond the bowel wall as to form a fistulous communication with the bladder, it is no matter of surprise if one finds instances in the tissues beyond the affected intestine. In

illustration of this condition I may cite the two following cases—one to illustrate an acute process, the other a chronic one.

The first case was that of a man of 48, who was much over-worked, and often exposed to all kinds of weather. After a severe chill he developed symptoms of acute enteritis. These symptoms, after lasting for some little time, were followed by severe pain in the perineum and rectum. There was discomfort which took the form of a feeling as of a foreign body in the bowel which could not pass. The bowels became irregular and constipated, and much mucus was passed. There was loss of flesh. A rectal examination made some time after the advent of these symptoms revealed a solid mass in the pelvis, which appeared to occupy the whole of that cavity. It seemed, indeed, as if some firm material like wax had been poured into the pelvic basin. As the patient was weak, anæmic, and wasted, it is no matter of surprise that the diagnosis of pelvic sarcoma suggested itself. The trouble in the rectum was long abiding. As soon the swelling began to disappear it was evident that the trouble had taken the form of what was probably a pure pelvic cellulitis.

In the other instance the patient was a man, aged 70, with an enlarged prostate and its concomitant troubles. He was the victim of troublesome constipation, which he to some extent neglected. Now and then he suffered from a form of spurious diarrhœa. After one such attack he became conscious of increasing trouble about the rectum, much pain was felt in the gluteal regions and about the outlet of the pelvis. There was some fever; there was great prostration, and after many days some wasting. A rectal examination revealed a solid mass, which, like the mass in the previous case, had no precise limits and appeared to occupy the pelvic cavity. I ventured to diagnose sarcoma of the pelvis. This diagnosis was confirmed by an eminent London surgeon; an unfavourable prognosis was given, and colotomy was discussed. Time went by, and the symptoms, instead of increasing, diminished; the swelling became less, and in the course of months it entirely vanished. Several years have elapsed since this case came under my notice, and I am glad to say that the patient, in spite of his advanced years, is still hearty and well.

Cases such as these make one a little suspicious of the diagnosis of "sarcoma of the pelvis" when the patients are men past middle age. I have met with no example of this condition, nor have I heard of one, in a female subject.

Another point of interest which surgery has helped to elucidate within recent years has been the subject of so-called "idiopathic dilatation" of the hollow viscera. Any part of the alimentary canal, from the stomach to the rectum, may be the seat of a form of dilatation which may possibly merit the term "idiopathic." This term carries with it an important significance, because it was at one time assumed that dilatation of any part of the alimentary canal was dependent upon some obstruction in its lumen, and that above this obstruction distension took place. It was considered that dilatation of the stomach, for instance, more or less definitely implied some obstruction possibly of a temporary character at the pylorus, and that marked dilatation of the bowel involved some stenosis or occlusion of the tube beyond the distended portion. It has now been fully demonstrated that distension of the stomach or intestine, attaining even to an extreme degree, may be met with independently of any obstruction to the lumen of the adjacent portion of the canal. Obstruction in the lumen of the intestine is indeed not the most ready means of inducing meteorism. Interference with the innervation and blood supply of the bowel wall will cause a much more speedy tympanites. In animals the ligaturing of the main mesenteric vein is followed by quite intense meteorism, and one of the most extreme examples I have seen of tympanites of the small intestine in the human subject was due to thrombosis of the superior mesenteric vein. One of the most interesting examples of idiopathic dilatation is provided by the condition known as "ballooning of the rectum." Here, on introducing a finger into the anus, the rectum is found to be apparently dilated to its utmost. It may be dilated in the same way as one speaks of the iris as dilated, but it is certainly not distended, and the term "ballooning," which suggests extreme inflation with gas, is entirely misleading. The ballooned rectum is not distended with gas, but its condition is due to some phase of paralysis. If two fingers be introduced into such a rectum so as to allow gas to escape the ballooning remains the same. It is the muscular wall of the gut which is at fault and not its contents. On the other hand, if the patient be anæsthetised the ballooning vanishes. Idiopathic dilatation of the colon is well seen in what may be termed masked peritonitis. Indeed a little inflammatory focus within the abdomen, and without the pelvis, is a common cause of persisting dilatation of the bowel. As an example of masked peritonitis, I may take such a case as the following.

An abdominal section—such as the removing of a diseased vermiform appendix—is performed. For a day or two all goes well, and then appear the phenomena of masked peritonitis. There is great distension of the epigastric region due apparently to dilatation of the transverse colon. The patient is very frequently sick, and can retain little or nothing in the stomach. He has obstinate and often most persistent hiccough. There is no pain, or next to none, no tenderness of the abdomen, and no board-like hardness of the abdominal muscles. The abdomen may be perfectly soft in all parts, there is no rise of temperature, the bowels respond to enemata, and to such an aperient as calomel; but the dilatation of the colon, the irritability of the stomach, and possibly the hiccough persists. After the bowels have acted there is some little diminution in the epigastric distension, but it is only temporary. The symptoms may last for many anxious days, and at last end in recovery. It may be mentioned that in this condition no drug answers so well as strychnine administered hypodermically.

As regards the stomach, it is needless to say that certain forms of dilatation of that organ are described in which there is no evidence of any obstruction of the pylorus. There is a good deal to suggest that some forms of rapid dilatation of the stomach may depend upon nerve influences which have their starting point in some infective or inflammatory process within the abdomen. I have seen acute dilatation of the stomach follow upon severe and extensive contusion of the abdomen from which the patient ultimately recovered, and in which there was no evidence that there was at any time obstruction of the pylorus.

An interesting example of non-obstructive dilatation of the stomach is afforded occasionally by gastrostomy. In this operation the stomach is fixed to the abdominal wall and opened. Nevertheless, now and then after this procedure I have found the stomach, not contracted as it might be supposed to be, but dilated, and I have seen this dilatation very marked in spite of the fact of there being a free opening leading into the gastric cavity. When, however, one comes to consider the cases of "idiopathic dilatation of the colon" which have of recent years crept into medical literature, it is a question whether the majority can be ranked with the cases just enumerated—cases in which the dilatation is due to no mechanical cause, but rather to changes in the innervation and blood supply of the viscus. In these reputed cases of idiopathic dilatation of the colon there are certain common phenomena. The distension of the colon, and especially of the lower part of it, is simply enormous; it may be so great as to lead to shortness of breath, palpitation of the heart, œdema of the legs, and albuminuria. There is marked constipation, usually vomiting, and often hiccough. In one series the patients are adults, mostly males, and are over 50 years of age. In the other series of cases the patients are children, and symptoms of abdominal trouble have been more or less apparent from birth. In a recent paper[2] on this subject I have ventured to raise the question whether these cases in children, or at least the majority of them, justify the name "idiopathic." I have brought forward evidence which makes it probable that in no small proportion of these cases the dilatation is not "idiopathic," but is dependent upon some congenital defect in the lower part of the intestine. I have illustrated this by the following case:

A little girl, aged 5 years and 9 months, almost from her birth had suffered from extreme constipation followed by enormous distension of the abdomen. The case, in its clinical features, exactly coincided in all points with the reported cases of idiopathic dilatation of the colon. In this particular instance no treatment that was devised was other than imperfectly successful. When the child came under my notice the abdomen could only be described as enormous. As I knew that in all the reported cases of this type death had followed, excepting in one in which an artificial anus had been made, I resolved to attempt a radical cure. The details of this measure I have described in the paper alluded to. Suffice it to say that I found a congenital narrowing of the rectum and sigmoid flexure, and an enormous dilatation of the descending colon above it. I excised the anus, the entire rectum, the entire sigmoid flexure, and the descending colon, and I brought the transverse colon through the hole in the perineum, to the margins of which I attached it. The child made a perfect and uneventful recovery. To this case certainly the term "idiopathic" was not applicable.

Time will not permit of the discussion, even in a fragmentary manner, of certain points which are of medical interest in connection with the stomach and pancreas. The excellent work of Mr. Mayo Robson has, for a time at least, exhausted the subject of the surgery of the liver and bile ducts. I will only venture to add a brief account of three cases which bear upon peculiarities in the anatomy of the

liver. One cannot fail to be struck with the fact when operating upon the liver that in adult female patients that organ often occupies a much lower level than is usually ascribed to it. In the two following examples a normal liver was mistaken for a tumour in the lumbar region:

The first patient was a woman, about 30 years of age, who had developed a localised peritonitis beneath the liver—a perihepatitis. The cause of this was never made evident, but it is not improbable that it had its starting point in the colon. After all the inflammatory symptoms had subsided there remained an indefinite lump beneath the liver and between the last rib and the iliac crest. The patient was still confined to bed and still complained of much pain in the lumbar region. Her temperature was not quite normal, but the persistence of pain and of a certain amount of tenderness, together with the continued illness of the patient, suggested the presence of pus. I opened the abdomen in the right semilunar line and found that the gall bladder was free from adhesions and contained no gall stones. Below the region of the gall bladder was a confused mass of adhesions, among which was found the hepatic flexure, which was with some difficulty separated from the liver. In front of the vaguely defined kidney was a well-rounded mass, covered by adhesions and bound firmly to the lateral and posterior parietes of the abdomen. It could not be separated from the liver, but, as it reached almost to the iliac crest, I did not for a moment suppose that it was hepatic structure. I imagined it to be the wall of an abscess, and after having failed owing to the adhesions, to identify its deeper connections, I made a small incision into it. I immediately found that I was cutting into normal liver tissue. It then became apparent that the extreme right side of the right lobe of the liver extended downwards almost to the iliac crest; it was buried in adhesions, and, as the incision showed, was of normal texture. It had a close resemblance to the "linguiform process" described by Dr. Hellier, Mr. Mayo Robson, and Professor Riedel. Most of those who have written upon the subject of "Riedel's lobe," as it is called, have assumed that this condition is due to gall stones; but in this case, and in one quoted by Mr. M. Robson, such association did not exist.

The second case was that of a woman past middle life, who complained of vague but troublesome pain over the region of the right kidney. She had never had hepatic colic nor jaundice, she, however, volunteered the statement that she had vomited gall stones. Between the liver region and the iliac crest was a well-rounded mass; this mass moved on inspiration; it could be pushed forwards, but no pressure from the front could make it sink back into the renal fossa. It was not dull on percussion from the front. The case was considered to be one of movable kidney, and I had been requested to suture the floating organ. On the examination I made previous to the operation, I felt so very nearly assured that the tumour was not renal that I made an incision in the right semilunar line, some little way below the ribs. I discovered then that the tumour was made up of Riedel's lobe, that it was perfectly normal, and quite free from adhesions. It reached well into the right iliac fossa. It formed so definite and remarkable a projection that at first sight it was difficult to believe that it belonged to the liver. The gall bladder contained many small stones, which I removed; the opening in the gall bladder was sutured and the abdominal wound closed. Both this patient and the one already described made perfect recoveries. They were both patients in the London Hospital within the last few months.

The third case is a little more remarkable. The patient was a young lady, aged 19, whom I saw in consultation with Mr. Alfred Cooper and Dr. Cornish. Since the age of 2 years her symptoms were such as to make it evident that no bile passed into the intestines. Since the time mentioned, that is for seventeen years, she had been deeply jaundiced; so stained was the skin that it was hardly possible to believe that the patient was a European. The motions had always been white; the urine was a deep mahogany colour; vomiting was frequent; bleeding from the gums and nose was of almost daily occurrence, and the patient was liable to attacks of fever in which the temperature ran up to 102° to 104°. The urine was often offensive, and she had only menstruated twice. There was chronic dyspepsia and abiding *malaise*. Dr. Lauder Brunton, who saw the patient, considered the case to be one of stenosis of the bile ducts, probably of congenital origin. The liver was no longer enlarged, but it had been enlarged when the patient was 10 years old. Her condition was deplorable, and it was the opinion of those under whose care she was that unless some relief could be obtained, her life could not be long extended. From a surgical point of view there was little to encourage an operation upon a patient who had had persistent jaundice for seventeen years, and who suffered from hæmorrhage from the gums and nose. The desperate state of the patient, however, appeared to me at least to justify an exploratory incision. I opened the abdomen, and was pleased to find a gall bladder, the size of a hen's egg, filled with clear mucus. A probe could be made to enter the cystic duct, and pass a little way into the common duct. About a quarter of an inch from the commencement of the common duct that tube ended in a firm, fibrous nodule, and beyond this nodule no trace of the duct could be discovered; there was, in fact, an absence of the terminal part of the duct. I established a communication between the gall bladder and the jejunum. The operation was performed on the 9th of this month, and so far the patient's recovery has been uneventful. For the first time in seventeen years bile-stained motions have been passed, and it is evident from the marked improvement shown in all the symptoms that the bile has at last a free means of escaping into the small intestine. I have no means of explaining how it happened that for the first two years of the patient's life, assuming the trouble to be congenital, there was no jaundice. This instance serves to illustrate that even the most unpromising of cases may prove to be worth at least an exploratory incision.

In conclusion, I cannot avoid one word on the subject of this self-same exploratory incision. That this simple procedure has been of enormous value no one will doubt; that it has been the means of saving many a life has been amply demonstrated; that it has enabled a correct diagnosis to be made and a logical treatment to be carried out in hundreds of obscure cases needs not to be insisted on; but there must arise in the minds of many the question whether the exploratory incision, infinite as its value may be, is an entirely unmixed blessing. I notice that there are indications which tend to allow this ready measure to replace the admirable labour of clinical observation. The incision is so simple, the collecting and arranging and judging of clinical evidence is so difficult and tedious. With a scalpel in the hand, the patient, searching examination of the abdomen as practised in older days is no longer needed, and it is a question whether the education of those who wish to become acute clinical observers has not suffered a little thereby.

References.

[1] *Lancet*, March 17th, 1894, p. 662. [2] Idiopathic Dilatation of the Colon, *Lancet*, January 29th, 1898.

THE OPERATIVE SURGERY OF THE JOINTS.*

By HOWARD MARSH,

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There is an obvious parallel to be drawn between the joints and the abdomen in regard to the results that have followed the introduction of asepsis into surgical practice. Formerly the peritoneum and the joints were equally regarded as forbidden ground; while to-day, of all the structures that can be named, none are more favourable for operative procedures. Moreover, the structure and the physiological endowments of the peritoneum on the one hand, and the synovial membranes on the other, which formerly so often conduced to disaster, are precisely those to which, at the present day, rapid repair after surgical interference is so largely due. Both membranes consist of an epithelial layer resting on a substratum of loose areolar tissue, richly supplied with blood vessels. Thus both are the seat of rapid tissue change, and from the surface of each absorption is very active. Such structures are highly favourable to the development of processes of an infective type whenever septic micro-organisms have gained an entrance, but they are also very favourable to the processes of repair when infection is excluded. The importance of the latter fact was speedily established so far as the peritoneum is concerned, for, by a fortunate circumstance, the date of the introduction of the aseptic method coincided with a very active period of abdominal surgery in the instance of ovariotomy, with the result that a full demonstration was forthwith obtained of the amount and rapidity of repair of which this membrane is capable.

In the case of the joints, however, the powers conferred by the aseptic method have not even yet, I am inclined to believe, met in all quarters with full recognition. In saying this I do not allude to those surgeons to whom the performance of large operations is an every-day occurrence, and whose experience inevitably brings them to a full conviction of the certainty with which repair follows in wounds, wherever situated, when asepsis is maintained. I refer rather to those to whom, from the circumstance that they are busily occupied in other departments of practice, the knowledge of the recent progress of surgery is to some extent only second hand. To such the opening, for instance, of the knee-joint, would present itself as a proceeding which they would hesitate to recommend, or even to countenance, except in cases of absolute necessity. Yet it is certain that it is just as safe to open the knee, or any of the other joints, as it is to open the abdomen, and that, as in the case of the peritoneum so in that of the synovial membranes, the old view that these structures are in some way inherently unsuitable for operative treatment is erroneous. I think it may be worth while to illustrate this fact in respect to the joints, so as to bring this department of operative surgery, so to say, into line with that of the abdomen.

Operations on the Semilunar Cartilages of the Knee.

The treatment of the more severe cases of detachment or other injury of the semilunar cartilages of the knee is a good example of the recent development of the surgery of the joints. The main facts in regard to these appendages of the knee-joint are well known. Although either may be involved,

* Read at a meeting of the East London and South Essex District of the Metropolitan Counties Branch of the British Medical Association.

it is the internal cartilage which is in the great majority of instances at fault. The cartilage may be torn from its circumferential attachments to a variable extent, and it is the anterior horn that is usually concerned. The laceration may involve the anterior third or much more of the cartilage. In one case Sir William Fergusson found a semilunar cartilage in a dissecting-room specimen almost completely separated, so that it lay entirely behind the condyle of the femur. In another dissecting-room specimen described by Mr. Godlee the cartilage was lying in the intercondyloid notch in the middle line of the joint. It may be not only separated from its moorings, but also torn completely across so that it forms a thong, whose end is freely movable and is liable to get between the bones. The cartilage may be split up into longitudinal striæ. The symptoms, of course, vary with the case. In some instances of "internal derangement" but little inconvenience is produced. Displacement of the cartilage may occur only at long intervals, and be only slight and attended with slight symptoms; but when considerable laceration of its attachments has taken place it slips frequently and widely, and the patient suffers from repeated attacks of synovitis, and is unable to use the limb for periods varying from two or three days to a fortnight or even more. As this condition o things is common in young adults, who are anxious to be active either in their work or in their amusements, and as in many instances it prevents active exercise, it is important that some adequate treatment should be available.

There are three methods from which to choose: (1) The knee clamp shown in Fig. 1 may be applied. There is no doubt

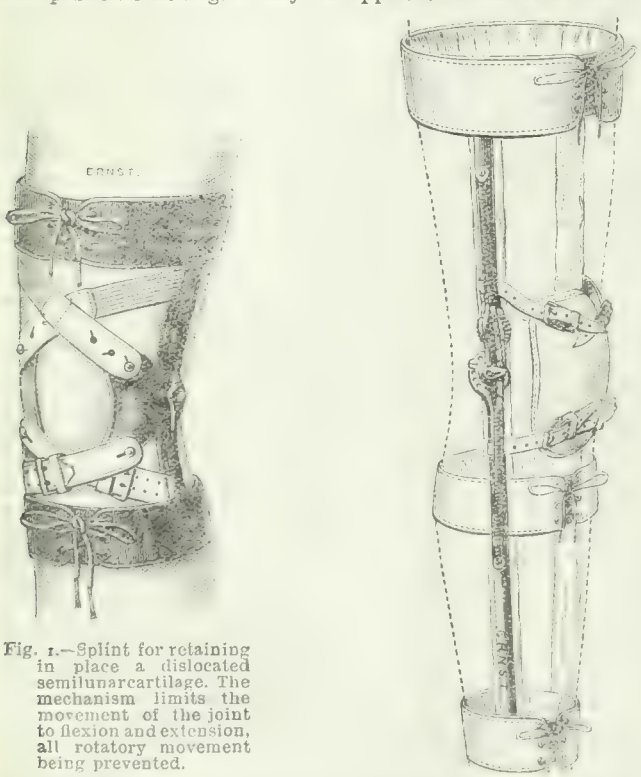


Fig. 1.—Splint for retaining in place a dislocated semilunarcartilage. The mechanism limits the movement of the joint to flexion and extension, all rotatory movement being prevented.

Fig. 2.—The apparatus consists of double steels on either side of the limb, extending about 9 inches above and 10 inches below the centre of the knee-joint, these steels being attached by metal thigh and leg plates. The chief feature of the appliance is the construction of the knee joint This is a combination of ring catch and regulating movement, enabling the patient to walk first, with the leg absolutely fixed, and then increasing the movement gradually.

that for slight cases, and for those who can still follow their occupation while they wear the clamp, this apparatus, if its use is continued for twelve months, is often adequate. It leaves flexion and extension uninterrupted, so that it does not interfere with ordinary exercise. It, however, prevents riding and swimming, and it would be an imperfect protection for the joint in the rough work of the navy or army, and in football, tennis, and other forms of strong muscular exercise; and it could hardly be depended upon by those who have to go abroad, or into districts where it could be neither renewed nor repaired. In the more severe cases the clamp often fails to keep the cartilage in its place. Under any of these circumstances operative interference may, when due care is taken, be safely recommended, for there is, of course, no more danger in opening the knee-joint to treat a damaged semilunar cartilage than for suturing the patella (*infra*). The choice as to operation will lie between (2) suture as originally recommended by Annandale, and (3) removal of that portion of the cartilage which has been torn from its connections. For myself I can speak only of the results of removal. I have not performed suture; first, because the operation of removal appears free from any appreciable risk; secondly, because removal does not, so far as I have seen, in the least degree impair the functions of the joint; thirdly, because removal affords a more definite guarantee against any further inconvenience than mere suture can. Cases have occurred in which after suture the symptoms have returned—a result which seems not improbable if the original laceration has been extensive.

In each of the 12 cases in which I have operated, the internal cartilage has been involved, and it has been the anterior segment that has been concerned. In one the cartilage had been torn completely across, so that its free end projected beneath the skin in such a way that it was taken for a pedunculated nodule of cartilage developed in a hypertrophied fringe of synovial membrane. When it was exposed it was drawn out like a thong an inch in length, and was cut off as far back as its separation from its normal connections extended. The operation has been performed by making a horizontal incision over the line between the condyle of the femur and the head of the tibia, and extending from the side of the ligamentum patellæ backwards to the anterior edge of the internal lateral ligament. In two or three cases it has been necessary to divide the anterior fibres of this ligament. When this has been done, the divided ligament has been accurately sutured. In all of these cases primary union has occurred without complication of any kind, all the symptoms have been removed, and the joint has manifested no defect, and given no further trouble. As soon as the wound has healed, that is in the course of a week, the splint has been removed, and the patient has been allowed to begin using the limb.

Loose Bodies.

The usual operation for the removal of a loose body from the knee, carefully performed, is well understood to be devoid of any appreciable risk, but I have lately met with two cases in which much more extensive proceedings were necessary, and in which the tolerance of the joint to active interference was very clearly demonstrated.

CASE I.—A gentleman, a patient of Dr. Chapple, of Weybridge, 22 years of age, had loose bodies in his knee.[1] Five were easily felt, and he had also a cyst in the popliteal space in the position of the semimembranosus bursa, and as large as a moderate-sized hen's egg, which appeared to be occupied by numerous loose bodies which gave a crunching sensation as they moved over each other. The joint was opened by a vertical incision on the inner side of the patella, an inch and a half in length, and five loose cartilages were removed, not, however, without difficulty and delay, as some of them slipped back into the recesses of the joint. The cyst in the popliteal space was then opened, and from its cavity twenty-nine cartilaginous bodies were extracted. All except one were loose, but this was attached by a short pedicle to the inner wall of the cyst at its upper end, where it could be just touched with the tip of the finger, but could not at first be secured. The cyst was therefore freely laid open so that the cartilage could be drawn down and removed. The operation lasted more than half an hour, and during this time the interior of the joint was necessarily very freely handled. The case ran a perfectly aseptic course, and both the wounds were healed in a week. For some time the joint was stiff, and painful on any attempt at movement, and on three occasions it was manipulated under gas.[2] All the movements in the joint have long been quite natural. The (fibro-cartilaginous) bodies removed varied in size from a pea to a Spanish nut, and were irregular in shape and nodulated like a mulberry.

CASE II.—A young lady, aged 25, was seen in February of last year. She gave the history that in the previous July she had violently wrenched her knee by a fall. The accident was followed by a good deal of pain and swelling, but she walked half a mile to her home. When she walked, however, there was an audible crack in the joint, and she cried out with pain. The joint was put up in a splint, and in a fortnight she was able to use the limb. On examination six months later it was found that the joint could neither be fully bent nor completely extended, but that it was free from swelling and all other signs of disease. The patient limped, and complained that when after sitting down she got up, she could not use the

limb until the joint cracked. She stated that if she used the limb much it became a little swollen and hot. Its condition seemed to vary very little, and she had only slight pain in it. She travelled for a commercial firm, and found that the condition of the knee interfered very much with her occupation. The trouble, whatever its nature, appeared to be situated at the back of the joint, and she had never felt a loose body or had any pain or tenderness over either of the semilunar cartilages. I advised that the joint should be explored. I then learned that she had consulted Mr Walsham, and that he had given her the same opinion. A few days later Mr. Walsham opened the joint by sawing transversely through the patella, and dividing the fibrous structures on either side of it. On flexing the joint a loose piece of cartilage three-quarters of an inch long by half an inch in width was found imprisoned behind the crucial ligaments, and there was a hiatus in the articular face at the back of the internal condyle, from which this piece of cartilage had apparently been separated. The joint was washed out, and the patella sutured by wire in the usual way. Healing took place by primary union. As the joint at the end of a fortnight was stiff it was moved under gas. The patient made a complete recovery, and Mr. Walsham informs me that she is now dancing and taking all other forms of active exercise without any defect.

SUTURE OF THE PATELLA.

A test operation, as it may be termed, is suture of the patella, by the open method, in recent or old fractures of the bone. The results obtained appear to show conclusively that this operation has taken its place on the list of recent advances in the practice of surgery, and the evidence it affords as to the tolerance of the joints of active interference is sufficiently conclusive. During its performance the whole synovial cavity is often exposed, and when the parts are vascular so that free bleeding takes place, a sterilised sponge may be placed in the joint, just as it would be in the cavity of the peritoneum during an operation on the gall bladder or on the appendix. It is advisable on the following grounds: (1) Experience shows that it is practically safe. At St. Bartholomew's Hospital in the last five years it has been performed 28 times for recent fracture, and in no instance has suppuration occurred. In the early operations in cases of old fracture two or three cases of septic inflammation were met with, but no such result has occurred in the last six years. (2) During the operation I have often found, as others have described, that an aponeurotic flap, torn from the superficial surface of one of the fragments, has dropped into the interval so as to prevent their intimate contact, and twice in the last 10 cases I have found that one of the fragments was tilted so that its broken surface presented towards the skin, and the cartilaginous surface faced the other fragment. This displacement was not in any way apparent on external examination, nor does it seem possible to recognise it until the fracture is exposed. (3) The operation allows of very accurate adjustment of the fractured surfaces; and further incidental advantages are that blood extravasated into the cavity of the joint can be removed, and that the torn structures on either side of the patella can be adjusted with sutures. (4) The patient is able to be active on the limb well within a month of the accident, wearing an apparatus (Fig. 2) which at first prevents, but subsequently allows, a gradually increasing degree of flexion of the joint.

EXCISIONS.

The general safety with which excision of the joints can now be performed is best illustrated by the results obtained in the case of the knee—the largest of the joints, and that in which an operation involves the most extensive wound of the soft parts, and the largest exposure of cancellous bone. Yet when care is taken to select appropriate cases, primary union after excision of the knee is as certain to take place as it is after ovariotomy or removal of the appendix. So that when once the conclusion has been formed that, in regard to the future of the limb, excision of the knee is advisable, there need be no more hesitation in resorting to the operation than there is in performing laparotomy. The selection of cases, however, must always be a matter of primary importance, and a few remarks may be offered respecting this. (1) As to age. Excision of the knee has become thoroughly established as one of the great operations of surgery in patients between 12 or 14 and 45, in whom the length of the limb has been mainly or completely accomplished, and strong synostosis may be confidently reckoned upon. In patients under 12, although the immediate result may be excellent, there are two very serious drawbacks with which every surgeon is familiar. These are arrested growth, and—the tendency to firm synostosis being defective—yielding at the line of union, so that serious deformity is apt to take place. In patients over 45 the cases calling for excision must be rare; indeed I have not met with them: but if the general health is sound there seems to be no reason why the operation should not be performed, in certain cases, for instance, of tuberculosis in patients up to the age of 50. (2) In some cases deformity—consisting of flexion, combined with backward displacement of the tibia—is so great that the limb cannot be straightened without cutting away almost the whole of the condyles, and leaving a cross section of the femur so small that it does not in any way correspond with that of the tibia. (3) In cases in which at the time of the operation an active growth of tubercle, either in the synovial membrane or the ends of the bones, is going on, there is the danger that although the external wound may close by primary union, and the parts appear for some weeks in a perfectly satisfactory condition, a renewal of the tuberculous growth may take place. In such instances, in six weeks or two months from the date of the operation, considerable bulbous swelling is developed, the skin becomes dusky and infiltrated, the union between the bones breaks down, and amputation has to be performed. In these acute cases excision should not be performed until by rest and blistering, or the actual cautery several times applied, followed by careful elastic bandaging, the active growth of tubercle has been checked. Should suppuration have occurred the operation should be postponed until pus has been removed by opening, scraping, and draining the abscess cavity.

No doubt those instances in which there is an extensive growth of tubercle in the synovial membrane, so that there is great pulpy thickening with fusiform swelling, are comparatively unfavourable for excision, yet if the disease is not in active progress at the time, and if the whole of the synovial membrane is removed, sound healing will usually take place.

A favourable group of cases for excision is that in which, while tuberculous disease is of long standing, it has led to no material deformity, but in which prolonged rest has been followed by no adequate improvement. In such cases probably one of two conditions is present: (*a*) The synovial membrane has been the seat of a chronic plastic inflammation, very similar to that which is found in fibroid phthisis of the lung. A joint thus affected is the seat of adhesions, which are sensitive, so that the joint as soon as it is used becomes hot, swollen, and painful. In such instances the patient may go on for several years with a crippled joint, and no treatment short of excision will relieve him.

CASE III.—A groom, aged 28, was in St. Bartholomew's Hospital for an affection of his right knee, for which he had been lying up for nearly two years. There was no deformity, only limited swelling, and no fluid. The synovial membrane was only moderately thickened; movement was restricted to a range of about 30 degrees; there was very marked muscular wasting. The case was regarded as one of chronic tuberculous disease, and the joint was kept at complete rest in leather splints for six months, and repeatedly blistered. At the end of this time, however, gentle exercise immediately produced pain and heat. The opinion was then formed that the joint was the seat of persistent tuberculous inflammation of a low grade, with the formation of adhesions. As there seemed no prospect of recovery, excision was performed. The disease proved to be confined entirely to the synovial membrane, which was reduced to tuberculous scar tissue. The cavity of the joint was completely obliterated. The cartilages were almost entirely destroyed by erosion, but such portions as remained in the form of small islets, or thin plates, were still firmly adherent to the bones and natural in appearance.

(*b*) There is a deposit of obsolete tubercle in the end of one of the bones, which is too large for absorption, and which, without leading to any active symptoms, remains as a continuous source of irritation.

CASE IV.—A man, aged 26, in St. Bartholomew's Hospital, had had tuberculous disease of the knee for four years, and during the greater part of this time he had been unable to walk upon the limb. The joint, however, was in good position, and allowed of smooth movement through a range of 25° or 30°. There was only slight swelling, and indeed it was not easy to say why the joint could not be used. It had been treated by persistent rest for six months in a country hospital, without any material improvement. Suspecting the presence of tuberculous deposit in one of the bones, I opened the joint, and then found numerous adhesions, and, buried in the substance of the internal condyle, and just beneath the cartilage, a mass of caseous tubercle, about as large as a chestnut. The joint was excised, and the deposit of tubercle removed; and the cavity which had contained it was freely scraped. The patient made a good recovery.

These two cases are examples of a group which at the present day should be carefully borne in mind. In both alike all active tuberculous disease had come to an end without having, so far as external appearances went, produced any very serious result. As a matter of fact, however, conditions had been established (irritable adhesions in the one,

and tuberculous sequestrum in the other) which rendered the joint practically useless, and which no amount of rest or counter-irritation would have sufficed to remove.

Another group of cases for which excision should be employed are those in which the knee has been the seat of an infective process (such as may follow gonorrhœa or childbirth), and as the result of which plastic inflammation has occurred and has led to incomplete fibrous ankylosis, attended with persistent pain and swelling after exercise. Patients are sometimes met with in whom, in spite of treatment, the joint is still useless a year or more after the original attack. In some instances deformity has also occurred. A common feature in these cases is that, although the joint on inspection and external examination does not appear to be extensively damaged—"it looks too good for excision"—it is yet in a condition in which no treatment will render it serviceable to the patient. In such instances excision should be recommended, and this may be done with the more confidence because the joint, when deformity is limited and no active disease is present, is in a very favourable state for the operation.

I need say little about the method of procedure in the operation of excising the knee-joint, but I may briefly draw attention to the importance of the mechanical treatment to be adopted. The knee in regard to excision is peculiar in being the only instance in which synostosis is a *sine quâ non*. In all the other joints, except the hip, synostosis would be a distinct drawback. In the ankle it would leave the foot not only useless, but an encumbrance. Syme's amputation and an artificial foot for the sake of appearance would generally give a much better result.[3] In the wrist, synostosis would interfere very seriously with the usefulness of the hand. In the elbow, the hip, and the shoulder the ideal result of excision is union by a strong interosseous ligament, just long enough to permit free without flail-like movement. In none of these joints therefore is it requisite to keep the bones in close apposition. But this is absolutely necessary in the knee, and the splint employed is therefore very important. I have used Gant's[4] splint combined with the sterilised steel pins, employed by the late Morrant Baker. These pins keep the bones firmly adjusted, and so obviate the necessity for tight bandaging of the thigh. They are removed in about ten days. I have never seen them do harm, and they certainly favour synostosis.

Operations in Sacro-iliac Disease.

In the last ten years some important papers have been published on the operative treatment of sacro-iliac disease. In 1889 Mr. Mayo Collier[5] related a case of early disease in which he had trephined the joint, and the patient had made an excellent recovery. In the Clinical Society's *Transactions*,[6] in an exhaustive and very interesting paper, Mr. Makins discussed sacro-iliac disease in order "to render prominent the fact that the prognosis, perhaps particularly in children, is better than is generally stated, and to urge that the treatment of disease of this articulation should run on exactly the same lines as that of diseases of the joints in general, since cures may undoubtedly be effected even when disease has reached a very advanced stage." This author gives cases to illustrate the advantage of operative interference.

In the *Transactions* of the same Society,[7] Mr. Golding-Bird has described a systematic proceeding (which he first employed in 1880) for examining and treating the articulation by trephining the ilium where it borders the joint, and he has related cases in which he operated with complete success. These and later papers have done good service by calling attention to an important subject. Formerly the treatment of sacro-iliac disease was in the highest degree unsatisfactory. When suppuration occurred pus was allowed to burrow widely in the neighbouring tissues; sinuses formed and sepsis occurred, and not infrequently the patient ultimately died of exhaustion. There is now, however, ample evidence to show that when operative treatment is adopted early, and when the treatment is conducted on aseptic lines, recovery will take place in a large proportion of cases, even although the disease has advanced to the stage of suppuration, and sinuses have already formed. I have lately operated on 4 cases.

CASE V.—The patient was a woman, aged 28, who had long-standing sacro-iliac disease. Suppuration had occurred a year before, and there was a sinus still discharging over the dorsal aspect of the joint. This was enlarged, and on being exposed the joint was found occupied with granulation tissue and a few small fragments of carious bone. The iliac border of the articulation was removed with a chisel and mallet, and all the granulation tissue and damaged bone were scraped away. The wound healed slowly but soundly, and the disease has not recurred.

CASE VI.—A man, aged 28, from Wales, had had a small sinus for several months, behind the great trochanter, which, when he was admitted into the hospital, was discharging about half a drachm of sero-pus daily. A probe passed along this sinus was found to run towards the posterior inferior iliac spine. In this situation an incision was made upon its joint. A director introduced through this incision went straight into the sacro-iliac-joint. The wound was therefore enlarged, and the joint fully exposed. The iliac border of the articulation was now cut away with a chisel and mallet, so that the joint could be examined. It proved to contain a quantity of granulation tissue and a small plate of dead bone. The granulation tissue was removed, together with the sequestrum, and the surface was freely scraped. The wound healed by primary union, and two months later the patient returned to the country able to walk without either lameness or pain.

CASE VII.—A lady, aged 61, a patient of Mr. Currie, of Ipswich, had suffered for some years with pain about the back of the pelvis on the right side, and down the back of the thigh, and an abscess had formed and discharged itself through a sinus situated above and behind the great trochanter. This sinus had remained. Sometimes it nearly closed, and then after a few days, during which the patient was in pain, and had a rise of temperature, two or three drachms of pus escaped. The sinus ran straight to the upper extremity of the sacro-iliac joint, and, upon operating, a piece of dead bone, three-quarters of an inch long by half an inch broad, was removed. The wound soon closed, except at one point, where a sinus, just large enough to admit an ordinary probe, remained for nearly a year. At length a ligature escaped, and then the sinus quickly closed. As the disease was of long standing, and as she was 61 years old, the patient was kept at rest for six months, and then was allowed to move about for a short time each day. The wound is still soundly healed, and she is now, eighteen months after the operation, taking exercise in the ordinary manner.

This case seems an important one. It was probably an example of senile tuberculosis—a condition which, when it involves a large joint, generally tends to advance. I do not myself remember to have seen any example of recovery from tuberculosis in a patient over 50, involving either the hip or the knee, or even the wrist or ankle, and repair in this instance shows that the sacro-iliac joint is by no means unfavourable for operative interference.

CASE VIII.—A boy, aged 10, was lately in St. Bartholomew's Hospital for what at first sight appeared, from the flexed and adducted position of the limb and the position of sinuses at the back of the trochanter, to be advanced hip-disease. On careful examination, however, the joint was found within a certain range freely movable, and the sinuses led not towards the joint, but upwards and backwards towards the sacro-iliac articulation, into the chink of which the end of a probe could be distinctly felt to pass. When the joint was exposed it was found to be the seat of extensive disease. Its borders at its lower part were extensively ulcerated, so that a cavity had been formed about 1½ inch long and ½ inch wide. This contained a quantity of granulation tissue and some bone detritus, but it presented, when it had been cleared, firm and apparently sound walls. At the present time, two months after the operation, although healing is going on the wound is not closed, so that the ultimate result cannot yet be stated. The limb has been brought into a good position by means of weight extension and the boy's temperature is normal.

CASE IX.—A fifth case of sacro-iliac disease has lately been under my care in St. Bartholomew's Hospital. The patient was a woman of 64 who was admitted with a large subpluteal abscess just below the iliac crest. This was opened, and then it was found that the sacro-iliac joint was completely disorganised, and that the articular borders of the ilium and sacrum were extensively bare and bathed in pus. The abscess cavity was cleared of all its granulation tissue and freely irrigated, and a drainage tube was introduced. In a fortnight only a sinus remained. It was then proposed to examine the joint for the purpose of ascertaining whether operative interference was advisable, but the patient declined further treatment and went home.

The subject of this paper appears worthy of discussion. The joints like other organs, such as the kidney, the lungs, and the central nervous system, undergo degenerative changes that produce disabilities which treatment can do little to relieve and to palliate, which is all that can be done. In such instances no very material advances have been made, or are to be anticipated, at all events at present. But when attention is turned to operative surgery it is at once apparent that the joints have fully participated in the progress that has taken place, and that many conditions for which only a few years ago nothing could be done can now be successfully dealt with.

Notes and References.

[1] The pathology of cases in which large numbers of loose bodies are found in the knee-joint seems to be obscure. Some years ago Sir Thomas Smith removed 415, and in another case Mr. Berry removed 1,300 from this joint. [2] The synovial membranes resemble the peritoneum in the readiness with which adhesions form when a joint has been opened aseptically—for example, the knee, for the removal of multiple loose cartilages, or suture of the patella. The joint will soon become still from adhesions if it is kept at rest, no matter how aseptic the operation may have been. These adhesions, however (as in recent adhesions in the peritoneal cavity) are not very firm, and can easily be dealt with by (cautious) manipulation, under an anæsthetic and subsequent passive movement. [3] In young subjects, however, in whom ankylosis, whether bony or fibrous at the ankle-joint, has occurred, the foot may still be useful or the mediotarsal

joint may gradually acquire a great degree of compensatory movement. I lately saw a man, aged 19, whose ankle-joint, after urethral arthritis, had become ankylosed in a position of rectangular talipes, but who, owing to the increased movement in the mediotarsal joint, walked without appreciable defect. [4] Gant's *Science and Practice of Surgery*, 2nd edition, vol. ii, p. 16. [5] *Lancet*, vol. ii, 1889. [6] vol. xvi, p. 127. [7] vol. xviii, p. 136.

A REPLY TO THE ACCUSATIONS MADE BY MR. LEONARD HILL AGAINST THE HYDERABAD CHLOROFORM COMMISSION.

BY T. LAUDER BRUNTON, M.D., F.R.S.,
Physician to St. Bartholomew's Hospital.

THE action of anæsthetics is of constant interest to the medical public; but the admirable address of Dr. Augustus Waller and the other papers read at the annual meeting of the British Medical Association have increased the attention which the subject usually excites. For some time back I have been anxious to discuss some questions regarding the causation of death during anæsthesia, especially in relation to the work of the Hyderabad Commission; but the subject is so large and the time at my disposal is so limited that my intention has been postponed from week to week. I now feel that before either discussing the subject or replying to criticism I must first of all answer certain accusations which have been brought against me by Mr. Leonard Hill.

In the BRITISH MEDICAL JOURNAL for April 17th, 1897, a lecture was published by Mr. Hill on the Causation of Chloroform Syncope, and it was favourably noticed in a leading article of the JOURNAL for April 24th. In this lecture Mr. Hill not only criticised severely the work and conclusions of the Hyderabad Commission, but he brought against it charges of (1) prejudice, (2) carelessness, (3) ignorance, and (4) incompetence. At the time when Mr. Hill's lecture appeared the pressure of other engagements made it absolutely impossible for me to do more than write a few lines in the BRITISH MEDICAL JOURNAL of May 1st, asking readers to suspend their judgment on the question.

Had Mr. Hill been a medical student trying to gain a scientific reputation for himself by trying to detract from that of others I might have left his accusations unanswered; but Mr. Hill has already gained for himself a name as a scientific worker; he is a lecturer on physiology at the London Hospital; he is Secretary of the Physiological Society, and the opinions he expressed in his lecture have not only been quoted with approval by a number of subsequent writers, but they were endorsed by a leading article in the BRITISH MEDICAL JOURNAL of April 24th, 1897, and consequently, however disagreeable the task may be to me, I must reply to his charges.

Although nominally directed against the Hyderabad Commission, all these charges, with the exception of the first, are really directed against me personally, for, as Surgeon-Lieutenant-Colonel Lawrie says in his letter to the JOURNAL of September 4th, 1897, p. 617: "The work of the second Commission was directed throughout by Dr. Lauder Brunton." For this work I am, in fact, responsible, and I am ready to admit that for any faults or shortcomings I alone am to blame. The most important deficiency in the research is one to which Mr. Leonard Hill refers, not in his lecture, but in a letter to the BRITISH MEDICAL JOURNAL of July 31st, 1897, p. 313, where he says that the Commission failed to throw any light on "the causation of those accidental deaths which take place in the primary stage of anæsthesia." These deaths in man are probably due in great measure to fear, anxiety, or other emotional excitement, and may arise from the respiratory and circulatory changes, either caused directly by these emotions or indirectly through the increased susceptibility to shock from pain or suffocation which they produce.

The members of the Commission were quite conscious of this deficiency, and they carefully considered whether it was not their duty to attempt experimentally to produce in animals, by causing pain and terror in them, a condition similar to that which may occur in nervous human beings previous to an operation under anæsthetics. They unanimously decided against doing so on the ground that the pain and terror they would have to inflict upon animals in order to produce in them a state at all like that which occurs in exceptionally sensitive human beings would be so great that they did not feel justified in doing the experiments. In coming to the decision to apply the anæsthetics so as to cause neither pain nor terror to the animals, they were perfectly conscious they were excluding two of the most powerful factors of shock from their experiments, and laying themselves open to the charge which Mr. Leonard Hill brings against the Commission in his letter.

That there are some other deficiencies I am perfectly ready to acknowledge. It would have been advisable to repeat several experiments if we had had time, and it might have been advantageous on several occasions to use other apparatus if it had been available. But there are few, if any, researches which are free from defects, and I hope to show that in that of the Hyderabad Commission there are none of sufficient gravity to warrant the sweeping condemnation Mr. Leonard Hill has passed upon it. I have no excuse whatever to offer for these deficiencies except the shortness of time at my disposal. This time was shorter than might at first be supposed. I had less than a fortnight in which to collect apparatus, for though I received notice of Surgeon-Lieutenant-Colonel Lawrie's proposal a few days before it was published in the *Lancet* on September 21st, yet the P. and O. steamer *Kaisar-I-Hind* left Southampton on September 27th, 1889, and luggage had to be on board a few days before. I reached Hyderabad on the evening of October 21st, and the Commission began work without apparatus on October 23rd, with apparatus on the 25th, and continued until December 18th. I had *carte blanche* from the Nizam's Government with regard to instruments and with the aid of my friend the late Professor Roy I collected quickly together all the apparatus which I thought would be requisite. I had in all, however, less than a fortnight in which to collect the equipment of a laboratory, four days in which to fit it up and, Sundays being excluded, forty-seven days in which to do the work with apparatus. But with the exception of time, nothing was left to be desired. The generosity of the Nizam, the intelligent interest taken both by himself and his Ministers in the work, the courtesy and zeal of Surgeon-Lieutenant-Colonel Lawrie, as well as of everyone connected with the Commission, afforded every possible assistance in carrying out the work. In his letter to the *Lancet* of September 21st, 1889, Surgeon-Lieutenant-Colonel Lawrie undertook to place the Hyderabad Commission entirely at the disposal of the representative of the *Lancet*, and to act under his direction. The Commission, he said, "will provide all instruments and appliances, and everything which may be required for the experiments, and will, without bias, do all in their power to assist the representative of the *Lancet* in arriving at the truth." This promise Surgeon-Lieutenant-Colonel Lawrie loyally carried out. He placed everything at my disposal, so that (1) I drew up the general plan of the research, and (2) stated what experiments I thought were necessary; (3) I did the first one or more of every set of experiments myself; and (4) I was present and superintended all the experiments till near the end of the research, when I was obliged to be absent for some time owing to an attack of dysentery. I am therefore personally wholly responsible not only for the plan of the research in general, but for the plan of each experiment in particular, and for the execution or supervision of each experiment, as well as jointly responsible with my colleagues for the general conclusions. Having now shown how it is that Mr. Hill's accusations, although nominally directed against the Hyderabad Commission, are really made against me personally, I shall take them up and answer them *seriatim*.

His first accusation is that of prejudice, and of a desire on the part of the Commission to prove the correctness of a preformed conclusion, instead of trying to find out the truth. He says on page 957, "The prejudiced enthusiasm of Surgeon-Lieutenant-Colonel Lawrie," and page 960, "The Hyderabad Commission engaged on a wild goose chase to prove that respiration ceases before the heart fails, find in their tracings the proof that the failure of respiration is the primary cause of death. I, on the other hand, maintain that not only my own tracings but theirs too, conclusively prove that the

failure of circulation is the primary cause of the failure of the respiratory centre."

The first part of those quotations is directed personally against Surgeon-Lieutenant-Colonel Lawrie, but in the second Mr. Hill attacks us both. Now, whatever the views of Lawrie may have been, my own decided view when I went out, was that stoppage of the heart was certainly one of the dangers to be apprehended from chloroform anæsthesia. Nearly twenty-five years ago I was accustomed to show to my class an experiment by which a current of air from the same bellows was divided by a Y tube into two equal parts, one of which passed through chloroform into the trachea of one animal while the other passed through ether into the trachea of another similar animal. Both animals were thus thoroughly anæsthetised, and the movements of the heart in each were made visible to the class by a needle, to which a long straw bearing a flag at the top was attached. When the anæsthetic was pushed by working the bellows rapidly, the heart of the chloroformed animal was quickly stopped, while that of the etherised animal went on beating with hardly any change. In a paper on One of the Causes of Death during the Extraction of Teeth under Chloroform, British Medical Journal, December 4th, 1875, I had also expressed the opinion that syncope from failure of the circulation was one of the causes of death during chloroform anæsthesia.

In my *Experimental Investigation of the Action of Medicines*, *Appendix*, p. iv, I said: "In operations on the abdominal viscera in dogs, for example in making gastric fistulæ, death sometimes occurs from shock, although the animals are completely under the influence of chloroform. For such operations ether is preferable, as it increases rather than diminishes the power of the heart."

My own expectation, therefore, was that we should find syncope from failure of the heart and circulation to be a powerful factor in death during chloroform anæsthesia, and the first experiment with a manometer made by the Commission on October 25th was on the effects of various operations likely to produce shock. To the evidence which led me to alter my views I will afterwards refer, but I think that the following annotation from the *Lancet*, December 7th, 1889, p. 1183, shows that I did not go out on a wild goose chase to prove that the respiration ceases before the heart fails, and that this accusation of Mr. Hill is unfounded.

> We have just received from Dr. Lauder Brunton the following telegram, which we print *verbatim*: "Four hundred and ninety dogs, horses, monkeys, goats, cats, and rabbits used. One hundred and twenty with manometer. All records photographed. Numerous observations on every individual animal. Results most instructive. Danger from chloroform is asphyxia or overdose; none whatever heart direct." "These results apparently indicate such a complete reversal of the view held by Dr. Lauder Brunton at the time he left England—that one of the dangers resulting from chloroform is death by stoppage of the heart—that the details of the experiments made by Dr. Brunton, and the reasons for the conclusions he has evidently arrived at, will be awaited with the greatest interest by the profession."

The second accusation brought by Mr. Leonard Hill is that of carelessness. He says "upheld by a series of experiments, many so careless in execution that they could not for one moment be accepted by a trained physiologist."[1] This sweeping statement of Mr. Hill's practically condemns every experiment of the Hyderabad Commission, for he does not specify those to which the condemnation applies, and in the absence of such specification his condemnation may apply to all. It appears to me that Mr. Hill, in bringing such a sweeping accusation against the Commission was bound to support it by reference to definite experiments, and I now call upon him to adduce his evidence. I have looked through Mr. Hill's paper carefully, but the only evidence which I find he brings forward of carelessness is that of the imperfect application of electrodes to the vagus. Just at the time when I began to direct my own attention chiefly to the supervision of the mercurial kymograph, and to delegate to Mr. Chamarette the task of introducing cannulæ into the arteries and veins, or of exposing and irritating the vagi, the experiments were not always completely successful. Thus in No. 68 the introduction of the cannulæ was not accomplished without damaging the artery, and the vagus was not rightly exposed, but on every occasion where we had the least reason to suspect any imperfection in the experiment—for example, in experiment No. 95, where there was a doubt whether the vagus had been rightly stimulated—such imperfection was carefully recorded in order that it should not mislead either ourselves or others in the interpretation of our experiments. With the exceptions which the Commission carefully recorded, the experiments were done with the greatest care, and unless Mr. Hill can bring forward more definite evidence to support his assertion that many of the experiments were so careless in execution that they could not for one moment be accepted by a trained physiologist, I believe that every physiologist will decide that his accusation is unwarranted.

In regard to the cases of accidental death, Mr. Hill draws a comparison between the carelessness of which he accuses the Commission and his own accuracy, for, as he tells us, in all cases of chloroform syncope occurring during primary anæsthetisation he carefully observed the symptoms. The Chloroform Commission carefully observed the symptoms in a much larger number of cases than Mr. Hill, but when deaths occurred during careful observation they were not classed as accidental. I still fail to see how Mr. Hill could properly class his cases as accidental if he was observing them all the time. One of the accidental deaths occurred while I was performing tracheotomy upon an animal, and was of course in a favourable position for observing its respiration, but my attention was concentrated upon the operation, and I failed to notice the failure in respiration until too late. This may no doubt be put down to carelessness upon my part, but it was just such instances of carelessness which form one of the most valuable parts of the report as tending to throw light upon the causes of so-called accidental death occurring in actual practice.

Thirdly, I shall now take up Mr. Leonard Hill's charge of ignorance of physiological methods. Considering that I have been trained by Brücke, Rosenthal, Kühne, and Ludwig, this charge seems *a priori* improbable; but such training does not disprove Mr. Hill's charge. I will therefore take the instances which he brings forward. He says: "The Hyderabad Commission failed to obtain this effect although they injected 20 c.cm. of pure chloroform into the jugular vein in successive doses. The cause of this failure is to be found in the ignorance of precise physiological methods which was unfortunately betrayed throughout much of the work of the Commission."[2] Mr. Hill states that in our experiments the drug remained in the veins. If this statement of his were true the chloroform ought not to have produced either narcosis or death as it did. He adduces the fact that we injected the chloroform into the jugular vein after ligature as one evidence of my want of knowledge of exact physiological methods. I have many times injected drugs into the veins of animals in which the blood was freely circulating, but the advantages of this method do not, I think, counterbalance its defects. Mr. Hill may think that this is a mere opinion of mine founded on ignorant stupidity or prejudice, but some eminent physiologists have come to the same conclusion as myself. The method I employed is the one described by Burdon Sanderson in his *Handbook for the Physiological Laboratory*, p. 238; by Claude Bernard in his *Leçons de Physiologie Opératoire*, p. 262; by Cyon in his *Methodik der physiologischen Experimente*, pp. 49 and 50; and by Gscheidlen in his *Physiologische Methodik*, p. 538. It is true that Claude Bernard describes[3] the method of intravenous injection which Mr. Hill regards as the only proper one, but the only advantages which he attributes to it is that of simplicity. Livion, who reproduces Bernard's figures and also describes both methods,[4] mentions the advisability of having a ligature round the vein in order to prevent possible bleeding. As the two latter authors describe both methods they may be absolved from ignorance, but as Burdon Sanderson, Cyon, and Gscheidlen all recommend the method which I adopted, they must all necessarily fall with me under Mr. Leonard Hill's condemnation of being ignorant of physiological methods.

Besides ignorance of exact physiological methods Mr. Hill accuses me of incapacity to interpret aright the tracings of the blood pressure which the Commission obtained. I have already[5] admitted that I am responsible for the interpretation of the tracings, so this accusation of Mr. Hill's is brought against me even more directly than the others. He says: "Now on examining the tracings of the Hyderabad Commission I find an absolute agreement between their results and my own. . . . ." "Although the tracings are so much alike, the interpretations are widely different. The Hyderabad Commission engaged on a wild goose chase to prove that

respiration ceases before the heart fails, find in their tracings the proof that the failure of respiration is the primary cause of death. I, on the other hand, maintain that not only my own tracings but theirs too, conclusively prove that the failure of circulation is the primary cause of the failure of the respiratory centre.[6] From this statement I think any unprejudiced reader would infer that it was upon their tracings that the Hyderabad Commission relied for proof that failure of respiration is the primary cause of death, but this was not the case. The proof that failure of respiration is the primary cause of death from chloroform narcosis consisted in the fact that 141 animals were chloroformed to death by the first Commission, and 430 by the second, and in every one of these 571 animals the respiration failed before the heart. It was evidence of this sort that led me to modify my views regarding the risk to the heart by the action of chloroform directly upon it.

A similar charge of inability to interpret the tracings correctly was brought against me by Drs. Gaskell and Shore, who say regarding the Hyderabad Commission: "Their large number of curves confirm again and again the observation of others, and point to heart failure as the cause of the fall of blood pressure.'

In his letter of July 31st, 1897,[7] Mr. Hill says: "The truth which I seek to establish is that chloroform kills by primarily paralysing the whole of the vascular mechanism." But in his lecture of April 17th, 1897, it is upon the paralysis of the vessels that he lays most stress. A comparison between Mr. Hill's lecture and the above quotation from Drs. Gaskell and Shore, will, I think, show how just was the conclusion arrived at by the Hyderabad Commission in the interpretation of the curves we obtained; for as I pointed out,[8] "it was precisely because the second Hyderabad Commission, when going over their experiments, thought that although their results indicated paralysis of the vasomotor centre as a cause of the fall in blood pressure, yet the evidence before them was not conclusive that they did not formulate any conclusion on the subject." They left it as a point to be decided by further research.

To one statement made by the Hyderabad Commission, Mr. Leonard Hill says that he "must give a direct denial." This statement is to the effect that inhalation of chloroform has no effect on the length of the period in which the heart can be maintained in arrest by electrical excitation of the vagus. One would have thought that only an intense feeling of duty would have led Mr. Leonard Hill to the use of such language, yet later on he states that while he has "been able to kill animals by repeated and prolonged vagal arrest of the heart, such complete vagal arrest of the heart is never induced by chloroform, and therefore these experiments are of no clinical interest."

Fourthly, the last accusation may be regarded as one either of ignorance or carelessness, for he does not say which it is; but had his account been accurate, Mr. Hill would have been perfectly justified in condemning me as incompetent. He says: "The Hyderabad Commission carried out a few experiments on the effect of the alteration of the position during chloroform narcosis. The workers paid no attention to the fact of the absolute necessity of placing the arterial cannula in the axis round which the animal is turned. Their experiments were thus vitiated by the hydrostatic effect of gravity on the column of fluid in the tube which connected the cannula with the manometer. By the neglect of such a simple precaution the experiments on this point were rendered entirely worthless."[9] I have sometimes felt inclined to ridicule the strong language in which some foreign writers, and especially very young ones, criticise each other's work and denounce each other's statements as absolutely false, and to rejoice that scientific literature in this country was free from this blemish. In his lecture Mr. Hill met one statement of the Hyderabad Chloroform Commission with a flat denial where, perhaps, less strong language might have been admissible, but I little thought it would be my own lot to use the expression "absolutely false" in relation to any statement contained in a scientific paper, yet there is no other by which I can characterise Mr. Leonard Hill's statement, for it is without the slightest foundation in fact. When I read it I thought that it must be a misprint, and that he meant to say that we had paid no attention to having the axis round which we turned the animal pass through the indifferent point in its vascular system, which, as Herman and his scholars Blumberg[10] and Wagner[11] have shown, passes through the apex of the heart. Had this been the objection raised by Mr. Hill to our experiments, it would have involved a matter of opinion, and something might have been said on both sides. But his statement involves a matter of fact, and not of opinion, and as such it can only be met by an absolute denial. The precaution which he says *was not taken* by the Hyderabad Commission *was taken* most carefully. For knowing the fallacy to which he refers I made it my own special charge to see that (1) the cannula in the carotid, (2) the axis upon which we turned the animal, and (3) the horizontal limb of the manometer, were in the same horizontal plane, or, in other words, were at the same level, and remained so throughout the experiment. I cannot think that Mr. Leonard Hill would publish a falsehood wilfully, but a falsehood his statement certainly is, and I shall be curious to learn how he has been led to make it.

I now leave it to the "trained physiologists," whose mouthpiece Mr. Leonard Hill has constituted himself, as well as to the whole medical profession, to decide whether the evidence that Mr. Hill has brought forward is sufficient to justify the charges of (1) prejudice, (2) carelessness, (3) ignorance, and (4) incompetence, which he has brought nominally against the Hyderabad Chloroform Commission, but really against me personally.

References.

[1] Brit. Med. Journ., April 17th, 1897, p. 957. [2] *Ibid.*, p. 958. [3] *Leçons de Physiologie Opératoire*, p. 265. [4] *Manuel de Vivisection* p. 53. [5] Brit. Med. Journ., March 11th, 1893. [6] *Ibid.*, April 7th, 1897, pp. 959, 960. [7] *Ibid.*, July 31st, 1897, p. 313. [8] *Ibid.*, March 11th, 1893. [9] *Ibid.*, April 17th, 1897, p. 960. [10] Blumberg, *Pflüger's Arch. f. Physiol.*, 1885, vol. 37, p. 467. [11] Wagner, *Pflüger's Arch.*, 1886, vol. 39, p. 371.

A CASE OF SUCCESSFUL OVARIOTOMY IN A CHILD FOUR MONTHS OLD.

By D'ARCY POWER, F.R.C.S.Eng.,
Surgeon to the Victoria Hospital for Children.

The following case is remarkable on account of the tender age of the patient, as well as the successful issue of the operation. It shows that abdominal section is not very serious even in the youngest children, if proper precautions be taken to minimise shock.

I am indebted to Messrs. P. C. E. Tribe and Walter Allingham for the careful notes of the case.

G. A. R., a breast-fed girl, aged 4 months, was admitted into the Victoria Hospital for Children, under the care of Dr. Carr, February 7th, 1898, suffering from distension of the abdomen. The child was in fairly good health until three weeks ago, when the abdomen began to swell. The child was not in pain. On admission the abdomen was enormously distended, and was very tense. It was dull on percussion, except in the left flank, and the area of the dulness did not alter with the position of the patient. A well-marked thrill could be obtained with ease. The child measured 20½ inches in circumference at a point 2 inches above the umbilicus, and 10½ inches from the symphysis pubis to the tip of the xiphisternum. The urine was normal, and there was no œdema of the legs.

An abdominal section was performed on February 10th, an incision 3 inches long being made in the linea alba above the umbilicus. A small quantity of fluid escaped as soon as the peritoneal cavity was opened, and a thick walled cyst immediately presented at the opening. The cyst wall was bluish in colour, and many delicate blood vessels ramified over its surface. It was quite smooth, shiny, and there were no adhesions. A very fine cannula and trocar were inserted into the cyst, and about two pints of clear yellow fluid were drawn off as slowly as possible, to enable the circulation to adapt itself to the altered abdominal conditions. The whole cyst was then drawn out of the abdomen, a large incision was made in its wall, and the remainder of the fluid was allowed to escape. The total contents of the cyst amounted to 59 ounces. The cyst was then found to be attached by a pedicle about the size of a slate pencil in thickness. The pedicle was transfixed, tied in the usual manner with fine silk, divided, and was allowed to drop back into the abdomen.

The child was a little collapsed after the operation, but it soon rallied, and made a perfectly uneventful recovery, being ready to leave the hospital within a fortnight of the operation.

Subsequent examination of the cyst showed that it was a simple sac containing in its wall one or two thickened nodules which were themselves undergoing cystic degeneration.

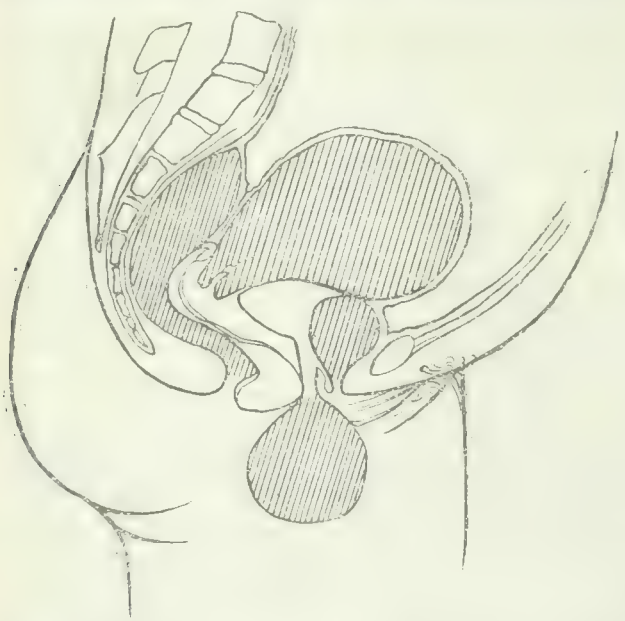
MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

EXTRUSION OF UTERINE FIBROID.

The following case may be of interest to some of your readers. I have failed to find any reference to a similar case.

I was called to see M. W., aged 37, who I was told was in labour (she being pregnant six months and a half), the child's head having been born. On arrival I found a large tumour between her thighs which had the appearance of a child's head in membranes. On examination I found the tumour had no connection with the bladder or uterus, having descended from between the bladder and uterus, taking with it the anterior wall of the vagina, by which (stretched out) it was covered. The veins over its surface were very



much enlarged, and a good deal of hæmorrhage had taken place from one of these which had ruptured, either from rough handling or otherwise. We gave her chloroform, and on opening up found a large fibroid, which shelled out easily. It had the appearance of an ordinary fibroid, nearly round in shape, and weighed 1½ lb. I sutured the opening, and on the second day after the operation she was delivered of a 6½-months' child.

It seems strange that a large tumour should have existed without causing any symptoms, the first she felt of it being the symptoms of labour, as she thought. Two years before she gave birth to a healthy child at full time.

I have to thank Mr. J. K. Couch for his assistance.

Manselton, Swansea. John D. Davies, M.B.

RHEUMATIC HYPERPYREXIA.

On January 13th I was asked to see S. F., a dairymaid, and found her suffering from rheumatic fever, the heart labouring badly, and a mitral murmur. I put a blister over the heart, and gave her 10-gr. doses of sodium salicylate every four hours. On January 17th the affected joints were quite relieved, but from that time the daily temperature was about 105° F. Thinking that the salicylate might be disagreeing, I stopped it. On January 19th, about midday, the temperature was fully 106° F. She complained of a sinking feeling at her heart, and there was slight tympanitic distension of the belly; otherwise she did not look very ill. I ordered 10-gr. doses of phenacetin, of which she only got one dose. I was called through the night and found her dying. About two or three minutes before she died I put the thermometer in her armpit, which was wet with perspiration, and found that after a very short exposure it stood at 110.7° F. After the breathing had ceased for a short time I put the stethoscope over her heart before pronouncing her dead, and was astonished to find the heart beating regularly and distinctly. The thermometer is an ordinary one but registered at Kew, and has been in use for a few months.

Lesmahagow, N.B. J. Lindsay, M.D.

THYROID EXTRACT AS AN AID IN THE DEVELOPMENT OF BACKWARD CHILDREN.

In all that concerns the well-being of children—in their growth and development, in their education, and in their treatment in abnormal conditions—I am keenly interested. My position naturally leads me mainly to the consideration of well-to-do children, who are sound and well-grown in every respect; the delicate and backward have little part or lot in healthy school life. Were it not for this fact I should have withheld the communication until I was enabled to bring forward other like cases. But inasmuch as it may rarely, if ever, fall to my lot to see another such case as I am about to relate, I have thought it advisable to lay it before the profession, so that those who have more scope for the investigation of such children may follow it up, and establish the fact on a firm basis, to the infinite gain of backward children whose educational life is not one of the happiest.

It may be that the fact is already well-known, as there is nothing new under the sun. Anyway it may bring the fact anew before others who are not cognisant of it.

In a large family to whom I am the medical adviser there is one child, of whom all that can be said is that she is backward. Were her age not known no remark would be made concerning her except that she is pale. When told that she is over 13, one would naturally say, Why, I thought she was between 8 and 9. She is well formed and intelligent; eats, drinks, and sleeps well, and is very well nourished; takes her part at home and at school the same as other children; she is affectionate and amiable. In fact, she is exactly like all the other members of the family with these exceptions: She is short in stature, and small made altogether; she is very pale, which neither arsenic nor iron have ever remedied. At the age of 13 she measured 52⅝ inches, instead of 58½ inches, and weighed 62 lbs. instead of 88 lbs. Her sister, who is only 8 years old, measures 50⅜ inches, and weighs 60½ lbs. The remarkable results obtained from the administration of thyroid gland upon still more backward children, such as cretins, led me to try the effect of the gland upon her. I commenced giving one 5-grain tabloid a day, and after a month two a day. Her pallor has disappeared, and a healthy aspect has taken its place. She is much more brisk and lively; and she has started growing. In fact, she is a different child altogether.

Clement Dukes, M.D.Lond.,
Physician to Rugby School, and Senior Physician to Rugby Hospital.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BASE HOSPITAL, NOWSHERA, NORTH-WEST FRONTIER OF INDIA.

NOTES ON GUNSHOT WOUNDS.

(By Surgeon-Captain J. M. Crawford, I.M.S.)

Sixty-two cases of the gunshot wounds received in the attack on the Malakand on July 26th, 1897, and in the operations immediately following it, were transferred to the Base Hospital for native troops at Nowshera for treatment.

Nowshera is forty-eight miles from the Malakand, the journey being covered in four marches, the intervening camps being Hoti-Mardan, Jalala, and Dargai, at each of which a section of a field hospital with an I.M.S. officer was stationed, the sick being transferred from the front in ambulance tongas and dhoolies.

Five of the British infantry barracks at Nowshera, each to accommodate 75 men, have been set apart for the base hospital for native troops, additional accommodation for the milder cases being provided in "European privates" tents, each of which accommodates 8 sepoys.

On the date of writing (October 21st, 1897), 4 out of the 62 cases have died; 10 are still remaining under treatment in the base hospital, all of which, with 1 exception, are convalescent; 7 have been sent back to their respective corps at the front; 9 have been sent to their regimental depôts for duty, not being considered fit for the extra hard strain of field service; and 32 have been sent on sick leave to their homes. These latter consisted largely of cases having some stiffness in the muscles or joints, the result of being laid up in splints, and which merely required slight passive movements and time to complete their cure.

The first cases were received in the base hospital on August 16th, and more were sent down from the front from time to time, as the condition of their wounds and the amount of available transport admitted. The main characteristics of the wounds were those which would have been caused by non-explosive projectiles, namely, there was not a very marked difference between entrance and exit wounds, very little splintering or shattering of the bones, and an absence of injury to the soft tissues and unimportant structures in the immediate vicinity of the track of the bullet, all of which point to a non-explosive projectile and a comparatively low velocity.

The general good health of the wounded, the absence of tetanus and septicæmia, and the small mortality, all point to the care with which antiseptic treatment at the front had been carried out, as well as to the good hygienic surroundings of the wounded in the base hospital. Of the 4 fatal cases, 1 died of fever (probably malarial), 2 from hectic fever, and 1 from gangrene the result of injuries in the region of the axillary artery.

Appended is a tabular statement giving a rough classification of the injuries treated, together with brief notes on four of the more interesting cases:

Nature of Gunshot Injuries.	Remaining in Hospital at Base on October 21st, 1897.	Discharged to Duty.	Discharged to Depôt.	Sent on Sick Leave.	Died.	Total.
Flesh wounds of head and neck ...	—	1	—	1	—	2
Flesh wounds of trunk	—	—	1	4	1	6
Flesh wounds of upper extremity ...	—	4	2	3	—	9
Flesh wounds of lower extremity ...	2	2	3	9†	1	17
Penetrating wound of chest	—	—	3	2	—	5
Penetrating wound of abdomen ...	—	—	—	—	—	—
Compound fracture of humerus ...	—	—	—	1‡	—	1
Compound fracture of radius or ulna, or both	—	—	—	1	—	1
Compound fracture of bones of hand or wrist	1	—	—	6	—	7
Compound fracture of femur	3	—	—	2*	—	5
Compound fracture of tibia or fibula, or both	4†§	—	—	—	1*	5
Compound fracture of foot	—	—	—	—	—	—
Compound fracture of head	—	—	—	—	—	—
Compound fracture of face	—	—	—	2	—	2
Compound fracture of trunk	—	—	—	1	1	2
	10	7	9	32	4	62

* Implication of knee-joint in one case.
† Implication of ankle-joint in one case.
‡ Implication of shoulder-joint in one case. § Secondary amputation.

a. Sepoy U. B., 31st Punjab Infantry, aged 30. Service seven years. Wounded at Malakand on July 30th, and admitted here on August 17th. This man was wounded by two bullets: (1) the bullet entered the inner side of the right thigh, 3 inches above the internal condyle of the femur, and came out at the inner and back surface of the knee; it then re-entered the calf of the leg, and passing between the tibia and fibula, had its exit close to the ankle on the outer side of the leg. The man was kneeling on his right knee when hit. (2) The other bullet, after grazing the inner condyle of the right elbow, entered the body 4 inches above the posterior superior spine of the right ilium, and travelling under the skin, came out 3 inches posterior to the wound of entrance. Both wounds were simple flesh wounds. He was discharged from hospital, and sent on four months' sick leave on October 11th, as there was some stiffness of the leg remaining.

2. Sepoy B., 31st Punjab Infantry, aged 29. Service ten years. Wounded at Malakand on July 28th, and admitted to Base Hospital, Nowshera, on August 13th. The bullet entered the right arm, just below the coracoid process, and passed out close to the axillary border of the scapula, causing a comminuted fracture of the the head and neck of the humerus. A large fragment of necrosed bone was removed on August 21st. The facture united with comparatively free movement of the shoulder-joint. He was discharged, and sent on six months' sick leave on October 12th.

3. Sepoy M. S., 45th Sikhs, age 20; service two years. Wounded at Malakand on July 27th, and admitted to the Base Hospital, Nowshera, on August 13th. The bullet, after passing through his water-bottle, entered his right side 1 inch below the iliac crest, and 1 inch in front of its posterior superior spine, making a circular hole through the bone and entering the pelvis. There were no abdominal symptoms. An exploratory incision was made, but the bullet could not be found. The man never complained of pain which would give any indication as to the site where the bullet had lodged. There was much hectic fever, with profuse suppuration, and he died on September 22rd. Unfortunately, owing to caste prejudices, no *post-mortem* examination could be made.

4. Sowar S. S. 11th Bengal Lancers; service, nine years. Wounded on July 17th, between Chakdara and Khar, and admitted to the Base Hospital at Nowshera, on August 23rd. He was wounded while in the saddle. The bullet, after drilling a round hole in the butt of his carbine, entered at a point midway between the great trochanter and tuber ischii, on the right side, and passed out 2 inches from the centre of the middle line of the perineum. He made a good recovery, and was discharged on September 2nd, and sent on two months' sick leave.

The above four cases are of considerable interest for the following reasons:

1. In that it shows, first, how necessary it is to place the man in the position in which he was when struck to get a good idea of the course of the bullet; and, secondly, it shows how a bullet sometimes travels in the closest proximity to important bones, vessels, and nerves without causing any lesion of these structures.

No. 2 is a good example of the excellent results that can be got from antiseptic surgery at the front.

No. 3 is also interesting in that there were no abdominal symptoms; this was accounted for by the fact that the bullet probably lodged in the iliacus muscle or thereabouts, and never really penetrated the abdominal cavity.

In No. 4, when the Sowar was hit, he was galloping to the relief of Chakdara, and had it not been for the bullet passing through the stock of his carbine, which must have decreased its velocity very considerably, he would probably have been severely injured, as the bullet would have passed into his left thigh also; as it was it passed between his right thigh and the saddle.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

W. H. DICKINSON, M.D., President, in the Chair.

Tuesday, March 1st, 1898.

ANNUAL GENERAL MEETING.

REPORT OF COUNCIL.

AFTER the minutes of the last annual meeting and of the special general meeting held on June 8th, 1897, for alterations in the by-laws had been read and confirmed, the report of the Council was read by the Senior Secretary, Mr. R. W. PARKER. During the past year 5 resident and 10 non-resident Fellows had died, while 28 new Fellows had been elected, the total number of Fellows being 818. The recent alterations in the by-laws sanctioned in the earlier part of the session had been found to work well; some of the more important of these changes were the reduction of the radius for resident Fellows from fifteen to seven miles and the establishment of fortnightly instead of monthly Council meetings. The library was now opened at 11 A.M. instead of 1.30 P.M. so as to extend its usefulness. An important discussion on the prevention of enteric fever had taken place, and at it several distinguished authorities, though not Fellows of the Society, had expressed their views. The

Treasurer's report showed that the Society was financially sound, and that Dr. R. Barnes had generously returned debentures for the sum of £200 to the Society. The Library Committee's report showed that £422 had been spent on books during the past year—a considerable increase on that of the preceding year. Valuable presents of books had been received from Drs. C. J. Hare and F. J. Payne. The reports of the Committee on Climatology and Balneology showed that a second volume had been prepared. After some discussion of the Treasurer's report by Mr. A. P. GOULD, and the reply of Dr. W. S. CHURCH (senior treasurer), the report was, on the motion of the PRESIDENT, adopted.

PRESIDENT'S ADDRESS.

The PRESIDENT then delivered the annual address. A review of the past year proved that the work and sphere of usefulness of the Society had been maintained. A house dinner held on February 17th, 1898, had been attended by 88 Fellows and their guests, and had proved so successful, and at the same time enabled the hospitality of other societies to be returned in a fitting manner, that he hoped it would become a yearly fixture. He referred to Mr. T. Holmes's resignation of the office of chairman of the House Committee, which he had held to the great benefit of the Society. He referred in graceful terms to the valuable services of the retiring Secretary, Mr. R. W. Parker. The death-roll included the names of Mr. Oliver Pemberton, a provincial surgeon of more than provincial renown, who had been prominent in many capacities in Birmingham. Dr. James Andrew was the type of a scholarly physician. One of three brothers, all Fellows of Oxford Colleges, he was himself eventually an Honorary Fellow of Wadham He was at his best as a clinical teacher, and being very incapable of advertisement, was less widely known than his merits warranted. Mr. Greig Smith died at the early age of 43, having crowded into a few years the work of a lifetime, and had left behind him as a memorial of his energy a great book on abdominal surgery. Mr. Walter Rivington had been eminent as a writer and speaker, and probably would have succeeded extremely well in Parliament. Sir R. Alcock joined the Society in 1839, and at the time of his death was almost the senior Fellow; he was a surgeon first, but gave up the profession for diplomacy, in which his services had been great. Dr. Leonard Remfry, Mr. L. Hudson, Professor C. S. Roy, Mr. H. Freeman, and Dr. T. B. Fletcher had also died within the year.

Dr. W. S. CHURCH proposed that the best thanks of the Society be given to the President for his address, and that he be requested to allow it to be printed in the *Transactions*.

Mr. T. BRYANT seconded the proposal, which was carried unanimously.

The usual votes of thanks to the retiring Vice-Presidents (Dr. Pollock and Mr. Tomes), Secretary (Mr. R. W. Parker), and members of Council (Drs. Abercrombie, Ferrier, R. A. Gibbons, and Ormerod), were passed.

Dr. C. J. HARE proposed in sympathetic terms a special vote of thanks to Mr. Holmes on his retiring from the office of chairman of the House Committee. He had served the Society in all its offices, had spent much time and devotion as chairman of the Building and House Committees, and his services might well be regarded as unique.

Mr. A. WILLETT seconded the proposal, which was carried by acclamation.

ELECTION OF OFFICERS AND COUNCIL.

The following officers were elected for the ensuing season: *President:* *Thomas Bryant. *Vice-Presidents:* *George Fielding Blandford, M.D.; William Marcet, M.D., F.R.S.; Frederick James Gant; *Reginald Harrison. *Honorary Treasurers:* William Selby Church, M.D.; J. Warrington Haward. *Honorary Secretaries:* Norman Moore, M.D.; *Alfred Pearce Gould, M.S. *Honorary Librarians:* Samuel Jones Gee, M.D.; Rickman J. Godlee, M.S. *Members of Council:* *William Henry Allchin, M.D.; Robert Leamon Bowles, M.D.; John Mitchell Bruce, M.D.; *Francis Henry Champneys, M.D.; *George Henry Savage, M.D.; William Watson Cheyne, F.R.S.; Henry Hugh Clutton, M.B.; Frederic S. Eve; William Appleton Meredith, M.B., C.M.; *Edgcombe Venning. Those Fellows against whose names asterisks are placed were not on the Council, or did not fill the same office last year.

The PRESIDENT then called on the President-elect, Mr. Bryant, and formally invested him with the insignia of office, and handed to him the master key of the Society's house.

Mr. BRYANT thanked the Society and expressed a wish that the insignia might carry with them some charm that would render him as efficient and successful as the outgoing President.

PATHOLOGICAL SOCIETY OF LONDON.

F. J. PAYNE, M.D., President, in the Chair.

Tuesday, March 1st, 1898.

TEST-TUBE REACTIONS BETWEEN COBRA POISON AND ITS ANTITOXIN.

MESSRS. T. W. W. STEPHENS and W. MEYERS said that the object they had in view in conducting these experiments was to throw light on the much-disputed question of the mode of action of antitoxins. In brief the two main views were: (1) That the cells of the animal body were necessary for the action of an antitoxin to make itself felt; (2) that the antitoxin and toxin reacted chemically upon one another, and that they could do so without the assistance of the living organism. The actual experimental observations which suggested the particular mode of experimenting were the following. Professor Kanthack in October, 1896, before the Physiological Society demonstrated the observation made by D. S. Cunningham that cobra poison, when mixed with shed blood in a test tube, prevented coagulation, but he also showed that this action could be prevented by previously mixing the poison with antivenomous serum—the mixture coagulating as normal blood did; and finally he showed that the action of the serum was specific. In 1897 Ehrlich performed experiments upon the action of a solution of ricin *in vitro* on citrated blood. The action was a "clumping" out, the corpuscles were gathered together in masses and precipitated. He further showed that this action could be completely done away with by previously mixing with the ricin definite quantities of antiricin serum. He further made the important observation that such mixtures of the toxin and the antitoxin which did not clump were innocuous on injection into mice. The authors accordingly were led to look for other reactions between a toxin and its antitoxin which could be demonstrated *in vitro*, and at Professor Kanthack's suggestion were led to examine (1) the action of cobra poison on the blood *in vitro*; (2) the effect of Calmette's antitoxin upon this action; (3) whether the "neutral point" *in vitro* was also the neutral point *in corpore* for the animal whose blood was used in the experiment. When cobra poison was added to shed blood *in vitro* two effects were noticeable: (*a*) Hæmolysis, meaning thereby destruction of the red corpuscles and laking of the blood; (*b*) delay or complete absence of coagulation. The authors in this communication confined their observations to the former phenomenon. Two methods were described: (1) A fixed volume of blood was mixed with a fixed volume of cobra poison (of known strength) in a hæmocytometer pipette, and the corpuscles in a given field counted from time to time; the advantage of this method was that the action of the poison could be expressed numerically; but most of their observations were made by method (2) which consisted in mixing known volumes of blood and poison solutions in small test tubes and—after about twelve hours—noting which of a series of tubes showed any hæmoglobin in solution. They pointed out the necessity for dissolving the poison in solutions which were isotonic or only slightly hypertonic for the particular blood under investigation, so that the action of the poison alone could be estimated. A considerable difference was found to exist in the resistance of the red corpuscles of various animals to the influence of the poison. The authors then proceeded to show the action of antivenomous serum on this hæmolytic phenomenon, and here again they used an isotonic solution of serum, which they found by experiment to consist of 55 parts of serum to 45 parts of water. They then found that the hæmolytic action could be completely arrested by definite quantities of serum. The same results were obtained by varying the poison and keeping the serum constant. Repeated observations showed that 0.1 c.cm. of isotonic serum was always sufficient to arrest the hæmolytic action of 0.1 mg. of poison on guinea-pig blood. Further, they showed that this relation held good for multiples of these numbers, and they drew the conclusion that the antivenomous serum possessed the power of neutralising the hæmolytic action of cobra poison on the blood *in vitro* in the same manner as antiricin neu-

tralised ricin in the test tube. The reaction was, moreover, specific as other horse serum, such as the diphtheria antitoxin, tetanus antitoxin possessed no such power. The authors finally proceeded to try whether there was any correspondence between the neutral point *in vitro* and the protective action of the serum *in corpore*. They found that for a guinea-pig weighing from 250-350 grammes, 0.1 mgm. of cobra poison was the minimum lethal dose, death ensuing in from five to eight hours. The hæmolytic action of this quantity of poison, as shown above, was neutralised by 0.1 c.cm. of isotonic serum, and such a neutral mixture they found was never fatal to the animal, but if the hæmolytic action was incompletely neutralised, the guinea-pig might or might not die; they summarised their results in the following table:—

	Animals injected subcutaneously.	Deaths.
(1) Mixture of 0.1 mgm. C.P. + 0.1 c.cm. of isotonic serum	12	0
(2) 0.1 mgm. C.P. + less than 0.1 c.cm. of isotonic serum	13	9
(3) 0.1 mgm. C.P. alone (controls) ...	13	13

The authors found, however, that when they used larger amounts of poison, although completely neutralised as regards hæmolysis—yet on injection they were rapidly fatal—5 died out of 6. Thus they pointed out that 0.6 mg. of cobra poison + 0.6 c.cm. of isotonic serum was a non-hæmolytic mixture, yet it quickly killed a guinea pig. They based their explanation of this fact upon the work of Mitchell and Reichart, and Martin, who had come to the conclusion that snake poisons were composed of at least two, probably more, proteid constituents. They suggested accordingly that the poison might contain in addition to the toxic substance which was neutralised by the serum, a toxic substance which was not so neutralised by the amount requisite to prevent hæmolysis. The similar observation made by Wassermann on pyocyaneus toxin was by the latter author explained on the supposition that the large quantity of toxin present paralysed the cells in the body, and prevented the tissues modifying the antitoxin from its inactive to its active form. The authors, however, agreed with the opinion expressed by Ehrlich that the toxin and antitoxin reacted chemically *in vitro*. They summarised their results thus: 1. Cobra poison is strongly hæmolytic *in vitro*. 2. This action is neutralised by antivenomous serum, and the action of the latter is specific. 3. For certain doses (0.1 mg.) the measure of this neutralisation *in vitro* is a measure of the neutralisation *in corpore* for guinea-pigs. 4. This neutralisation is chemical and not cellular or vital.

Circumscribed Traumatic Aneurysm of the Innominate Artery.

Mr. GEORGE HEATON recorded this case, which concerned a man, aged 20, who was admitted in a state of collapse with a small oblique wound above the right sterno-clavicular articulation, from which blood was oozing; he had been stabbed with a penknife. The bleeding ceased, and he was discharged convalescent. He was afterwards readmitted with recurrence of the hæmorrhage, but again recovered and was discharged; at that time there was dulness behind the manubrium, and abductor paralysis of the right vocal cord. As there was some enlargement of tonsils, these were excised; collapse took place, and death ensued twenty-nine days after the date of the injury. After death the pericardium was found distended with blood, the sac of the aneurysm having ruptured into that of the pericardium. The aneurysm was the size of a tangerine orange, was lined with clot, and communicated with the innominate artery by an oval aperture about ¾ inch in length. Cases in which life had been prolonged some days after wound of the innominate had been recorded, but the author had found none similar to that described.

Congenital Sarcoma of the Liver.

Mr. HEATON also exhibited an example of round-celled sarcoma in a child of 8 weeks; there had been no jaundice or ascites. The other organs were healthy; the liver was much enlarged.

Ulceration of the Small Intestine.

Mr. C. P. WHITE showed the small intestine of a patient who had suffered for five years from attacks of acute abdominal pain, death being sudden. There were many ulcers of different sizes, some covered with a false membrane, which microscopic examination proved to be due to necrosis of the mucosa. Perforation had taken place at the sites of some, and had been followed by general peritonitis. There was no enlargement of the solitary or Peyerian glands.

Pendulous Hydatid Cyst of Liver simulating an Enlarged Gall Bladder.

Mr. THOMAS CARWARDINE recorded the above from a woman 48 years of age, who presented the physical signs of enlargement of the gall bladder; the recurrence of febrile attacks was noteworthy in the clinical history. The cyst was exposed by abdominal incision and opened at a second subsequent operation; when incised a bile-stained fluid escaped, and later on the parasite. Death arose from uræmia. After death the cause of the febrile attacks and rigors was found in suppuration of the gall bladder. The prominently projecting cyst was thinly covered with hepatic tissue, and was contiguous with the gall bladder.

Retroperitoneal Cyst possibly arising in the Wolffian Body.

Mr. C. B. LOCKWOOD recounted the case of a young woman who presented a swelling beneath the left linea semilunaris. On the abdomen being opened a cyst was found, retroperitoneal in position and in contiguity with the jejunum or terminal part of the duodenum. The pancreas was not seen at all, and there was no connection between the cyst and the kidney. The cavity was full of somewhat recent clot; its wall was composed of fibrous tissue and highly vascular. Sections of the human embryo about the seventh week exhibited portions of the Wolffian body lying in front of the ureter between the kidney and pancreas, and the author thought that the cyst possibly arose in remains of this body. Mr. Bowlby had removed a cyst from almost the same position, though in this case the cavity was multilocular. He suggested that certain retroperitoneal cysts might have been erroneously classed as pancreatic.

Dr. H. D. ROLLESTON observed that a cyst shown at the Medical Society by Mr. Malcolm as pancreatic was possibly a retroperitoneal one of this class. Mr. Alban Doran had at the time made the same suggestion. Remnants of Wolffian body had been described on the round ligament. And as regards the adrenals, stray pieces had been noticed as low as the epididymis; the adrenal itself might descend over the kidney as far as its middle.

Mr. S. G. SHATTOCK stated, in regard to the multilocular cyst removed by Mr. Malcolm, that an examination of its contents which he had made showed very marked amylolytic properties, the action upon starch solution being particularly rapid.

Dr. H. D. ROLLESTON judged that the marked reaction was the chief point relied upon, as a certain amylolytic property was possessed by many fluids; and Mr. C. B. LOCKWOOD spoke to the same effect.

Macrodactyly due to Diffuse Lipoma.

Mr. D'ARCY POWER showed a specimen and skiagraph of a case of macrodactyly which had been sent to him for exhibition by Mr. Robert Jones, of Liverpool. The specimen consisted of the first and second toes of the left foot of a boy, aged 13. There was a little movement in the toes before amputation, but there had been so much pain on walking that it was considered better to remove them. The case occurred sporadically in the family. The deformity was congenital. The *x*-ray photograph showed the bones of the first and second toes to be greatly hypertrophied, the hypertrophy being in direct proportion to the thickening of the soft structures covering them. There was a certain degree of hallux valgus, and all the toes were displaced outwards. A microscopical examination of the hypertrophied tissue showed that it had the characters of a diffuse lipoma.

TUMOUR OF THE PULMONARY VALVES.

Dr. RAYMOND CRAWFURD exhibited a specimen, which was obtained from a man 72 years of age. There was no sign of cardiac trouble till a month before death; a murmur at the pulmonary orifice was the physical sign present. Examination after death revealed an ovoid tumour 5 cm. in length, growing from the posterior cusp of the pulmonary valve. The growth extended partly into the ventricle, partly into the artery, the channel of which was nearly blocked. There was a kind of fibrin over the growth, which itself contained fibrous tissue and collections of cells of spindle shape, though the author was not inclined to regard the condition as malignant. The initial nucleus the author believed to be probably a thrombus, of gradual formation, which had become replaced by connective tissue derived from the endocardium. There was no invasion of the arterial wall.

Dr. A. F. VOELCKER observed that in certain spots the new growth closely resembled a sarcoma.

Dr. ROLLESTON made a similar remark, whilst allowing that part was probably due to the organisation of a thrombus.

LOCALISED FATTY DEGENERATION OF KIDNEYS.

Dr. PARKES WEBER exhibited portions of kidneys speckled and streaked with white, some of the areas being wedge-shaped and suggestive of anæmic infarcts. Certain of the vessels were filled with rod-shaped organisms, probably the colon bacillus. He thought that the vascular plugging arose during life, and that this had been followed by localised degenerations. The case was one of chronic cardiac failure.

MYCETOMA PAPILLOMATOSUM.

Mr. S. G. SHATTOCK exhibited a specimen of Madura disease of the foot, in which there was present an unusual and highly pronounced papillary condition of the skin. No similar case had been described by Dr. Vandyke Carter or others, and he ventured (following the example of dermatologists) to give it a new name—mycetoma papillomatosum. The coarse papillary processes, some of which were smooth, whilst others bore papillæ like those on the intervening integument, were hollowed out by spaces holding the fish-roe-like grains or colonies of streptothrix Maduræ. Whether the anomalous result arose from an unusual invasion of the cutis by the microphyte, or from some other less specific cause, he could not say. In filarial elephantiasis a somewhat similar cutaneous condition was well known, and in rare cases a papillomatous condition followed upon eczema, a condition which had been named by Bazin "éruption papilliforme consécutive à l'eczéma," and was classed in the dermatological catalogue of the College of Surgeons museum as elephantiasis papillomatosus.

CARD SPECIMENS.

Mr. CECIL F. BEADLES: (1) Primary Carcinoma of Kidney, (2) Malignant Stricture of the Sigmoid Flexure.

CLINICAL SOCIETY OF LONDON.

JOHN LANGTON, F.R.C.S., President, in the Chair.

Friday, February 25th, 1898.

CLINICAL EVENING.

PRESSURE PARAPLEGIA TREATED BY LAMINECTOMY.

MR. J. HUTCHINSON, jun., showed a girl, aged 12, whose spinal symptoms came on eighteen months before admission, the spinal curvature having occurred long before that. She had been treated by rest, galvanism, etc., and on admission there was complete motor paralysis of both legs, with ankle clonus, marked anæsthesia of legs and abdomen, exaggerated knee-jerks, extremely marked plantar reflexes, and imperfect control of bladder. Laminectomy was performed in December, 1895, the laminæ of four upper dorsal vertebræ being removed. The patient was sent out in February, 1896, still with motor and, to a less extent, sensory paralysis, and with tendency to frequent involuntary flexion of thighs. She was readmitted in July, 1896, for cystitis, and at that time a note was made that no benefit had accrued from the operation, although pressure had been completely removed from the back of the cord. The apparent failure of the operation to improve the paralysis pointed to chronic inflammatory change in the cord itself as the result of the operation having been too long deferred. About nine months after the operation, however, the patient began steadily to improve, sensation being the first to return. Ultimately muscular power was completely restored. She could now walk several miles, the back was perfectly strong, and it felt as if new bone had developed at the site of the operation.

Mr. F. C. WALLIS showed a man, aged 38, on whom he had performed laminectomy for paraplegia two years ago. There was a strong family history of phthisis. He was admitted in March, 1896, having complained eighteen months before admission of pain at the bottom of the spine, "pins and needles," loss of power, etc., for two months previously. There was no anæsthesia, no bladder trouble, but he complained of girdle pain. When admitted he had complete paraplegia and prominence of the lower dorsal vertebræ. On March 28th three laminæ were removed. Ten days later the pain had disappeared, and three weeks later power began to return in the legs.

ACHONDROPLASIA IN A CHILD.

Dr. A. GARROD showed a girl, aged 6, who exhibited the characteristic features of achondroplasia—a deep depression at the root of the nose, marked lordosis, very short limbs, especially well marked in the humeri. The thyroid treatment had been tried for some months without any obvious benefit. He pointed out that in this disease, which had been described as fœtal rickets, the cartilage cells underwent some alteration resulting in a condition of dystrophy and arrest of ossification. While ossification from periosteum went on in the usual way, the process in cartilage was arrested, the bones becoming very dense but not increasing in length. The disease was apparently limited to the first half of intrauterine life, so that the patients who survived exhibited the results of the disease and not the disease itself. He thought syphilis might be excluded in this case.

Dr. DRYSDALE showed three sisters who displayed a somewhat similar dystrophic condition. The three elder children in the family, all boys, were quite healthy. The thyroid treatment had been tried without appreciable benefit.

XERODERMA PIGMENTOSUM.

Dr. PRINGLE showed a girl, aged 4, who displayed the characteristic appearances of this rare condition. It began with marked freckling associated with some desquamative dermatitis and a moderate number of the teliangiectases usually met with. Many minute horny growths were seen on the upper lip. The application of a fatty basis, containing eosine and "primrose yellow," had been tried with well-marked results. He showed a coloured drawing of another girl suffering from the same complaint in 1888, but at a more advanced stage. The treatment in the latter case had been the persistent removal of the growths as they formed, and (she being then 7 years of age) after 16 they ceased to appear.

The PRESIDENT referred to a case which had been under Sir Dyce Duckworth's care, in which the patient was covered with minute epitheliomatous growths.

RETAINED TESTIS AND ABDOMINAL TUMOUR.

Mr. G. R. TURNER showed a man, aged 56, the father of six children, who had noticed a swelling in the groin ever since childhood. He was ruptured in the usual way. He went abroad, when he had malarial fever, after which the tumour began to form. There was at present a large abdominal tumour on the left side, chiefly occupying the inguinal and lumbar regions. The tumour was now resonant, but a few days before it had been dull. It gave an impulse on coughing. It had been variously diagnosed as a cystic condition of the retained testis, a fatty tumour—possibly one of the retroperitoneal fatty tumours—and interstitial hernia. He himself inclined to the latter view.

The PRESIDENT observed that if, as he surmised, it was a case of interstitial hernia it was a congenital condition. In such cases the testis usually lay within the ring, usually not far from the internal ring. This was most frequently small and tight, compressed by the intercolumnar fascia. In many cases it pierced the internal oblique, ripping it up, so to speak; the protrusion coming to lie just beneath the skin and the aponeurosis. He would not advise operation, as such tumours rarely gave rise to much inconvenience, though if

they became strangulated the condition would be a serious one, because one could never know where the internal ring would be found.

Dr. Rolleston thought it might be an instance of congenital perirenal lipoma. When he examined the patient a day or two since the tumour was certainly dull.

Muscular Wasting Following Operation for Double Empyema.

Dr. Cayley showed a lady, aged 20, who after resection of the tenth rib on both sides for double empyema, developed wasting of the serrati and infraspinati. Some amount of recovery had taken place under treatment by strychnine and galvanism.

Paraplegia due to Spinal Caries Treated by Calot's Method.

Mr. Cotterell showed a child, aged 5, who was admitted in June, 1897, suffering from complete paraplegia due to caries of the spine in the upper dorsal region. She was treated by rest and double extension, but without any improvement. In September, 1897, he extended the spine under chloroform, and fixed the patient in a plaster jacket. Within a week movement in the legs began to return, and progress had since been steadily maintained. The jacket was removed on February 18th, 1898. The patient could now walk, run, and jump without pain or discomfort. The operation had been done not to remove the deformity, but the paraplegia.

Mr. Wallis pointed out that this was really the first actual result seen here after removal of the plaster jacket, and that it raised hopes for the future of other cases similarly treated.

Mr. Jackson Clarke referred to a similar case of his own treated in this way. There was evidently not much to fear from the operation, but he himself would not care to apply it in a large number of cases, feeling that as far as the deformity was concerned equally good results could be obtained by gentler means.

Lupus of the Nose Cured by the New Tuberculin.

Dr. Heron showed a man, aged 27, who had come to him with lupus vulgaris involving the whole of the left nostril within and without, the bridge of the nose and the left ala. There was another patch on the front of the lip and the right ear. The treatment was completed on August 20th, the T.R. tuberculin being used. The total amount administered was 126.5 milligrammes, given in sixty-two injections. The dose varied from 1-500th to 4 milligrammes. Early in July scar tissue only was seen over the sites where the lupus patches had been, and by July 18th these had entirely healed. The man gave a history of syphilis, consisting in a chancre with a sore throat, but, personally, he thought the chancre was probably a patch of lupus. He pointed out that the temperature after the injections rose to 102°, and was maintained at about 100°. He thought this reaction was useful from a diagnostic point of view.

Mr. Balmanno Squire thought the scars pointed to their having followed a tertiary syphilitic eruption. He admitted that tuberculin was not supposed to excite any reaction in syphilis, but the healing of the patches in three months was not inconsistent with their being syphilitic.

Mr. Cotterell said he had tried tuberculin in a similar case in which there was no question as to the diagnosis. The treatment was continued for two months, and as there was no improvement it was discontinued. The patient's temperature used to rise to about 101.2°, usually accompanied by slight headache.

Dr. StClair Thomson suggested that it would be interesting to know whether syphilitic subjects reacted to tuberculin. He agreed that the disease in the interior of the nose was probably syphilitic, as there was necrosis which followed syphilis but not lupus.

Mr. J. Hutchinson, jun., pointed out that the author's patient was stated to have had a node on the shin which was treated with iodide of potassium at or about the time of the healing of the patches.

Dr. Heron, in reply, explained that the node was the result of a blow, and admitted that iodide had been given, but as a matter of routine. He pointed out that the scars were not unilateral, and he questioned whether from the appearances it would be possible for anyone to diagnose their syphilitic nature.

Congenital Dislocation of Hip treated by Operation.

Mr. Brodhurst showed a man, aged 20, the subject of a congenital dislocation of the hip, on whom he had operated by dividing the adductors and certain trochanteric muscles. He was then enabled to restore the head of the bone to its place with excellent results.

Restoration of Defective Ligamentum Patellæ.

Mr. Watson Cheyne showed a man who was brought to the hospital having, it was thought, ruptured the ligamentum patellæ. On cutting down, however, he found little trace of any such structure, the rupture, if any, having evidently taken place some three or four weeks previously. He was unable to find any ends of the ligament to join, so he inserted a wire through the patella and tibia, drew together those bones, and took advantage of the opportunity to bring together the shreds of tissue that remained. The man left the hospital eighteen days after the operation, and now had very good movement, though he was careful at present not to bend the knee too freely. The wire was still in position under the skin but caused no inconvenience.

Gastro-jejunostomy.

Mr. Cotterell showed a man, aged 58, who in November, 1897, had come with symptoms of pyloric obstruction. He steadily became worse, so he (the speaker) cut down and performed jejunostomy. The patient's weight at that time was 8 st. 12 lb. and had since risen to 11 st. 12 lbs., a gain of 3 stone. The patient declared that he had never felt better in his life than at present.

MEDICAL SOCIETY OF LONDON.

A. E. Sansom, M.D., President, in the Chair.

Monday, February 28th, 1898.

Abdominal Section as a Medical Measure.

Mr. F. Treves read a paper on this subject, which is published at page 607.

Dr. Lauder Brunton suggested that abdominal section was not only of benefit in abdominal tuberculosis, but also in certain cases of pulmonary disease, and he related a case in which a lady in an advanced stage of phthisis, with a large cavity in one lung, had insisted upon undergoing abdominal section for the relief of attacks of pain, with the result that not only was the abdominal condition relieved but the lungs improved, and she had since recovered a fair condition of health. On operation they had simply found, as he expected, some tuberculous thickening, and the peritoneum was studded with tubercle. He admitted that it was a difficult matter to offer any explanation of these cases, but he suggested that possibly the admission of air to the abdomen induced certain changes in its albuminous contents which had for effect to lead to the production of an antitoxin on a large scale. He suggested that the time might come when they would open the abdomen not only for the relief of abdominal tuberculosis, but with the idea of benefiting phthisis. He alluded to a very troublesome class of cases in which patients complained of pain in the abdomen which came on in the early morning, giving rise to a suspicion of adhesions of the sigmoid. In the case of a medical man under his observation, the pain was so severe that the patient insisted on the abdomen being opened, when adhesions were found, but on the opposite side to the pain. There had been no return of the symptom, but the case was as yet too recent for any definite conclusion to be drawn.

Mr. Bryant suggested that many of the cases related by the author might be considered as mistakes in that the results had not confirmed the views which the surgeon had in his mind when he began the operation. The paper reminded him of the time when he used to give two lectures every year on his mistakes. He related one case in which he had acceded to the request of an obstetric surgeon to operate on a case of what was described as undoubted ovarian disease. This was at a time when ovariotomy was in its infancy, and on opening the abdomen no trace of ovarian disease was found. That lesson had not been thrown away on him, though he had been much humiliated at the time at having performed such an

operation. In another case, when he came down to the peritoneum, or what he took to be the peritoneum, he was unable to dissect it off, and he yielded to the representations of the obstetric physician, who asserted confidently that it was not the peritoneum at all, with the result that he cut into the intestine. No ill result followed, and eighteen months after the operation the patient was comparatively well. He urged that they should not be too ready to operate on nervous cases or to perform exploratory operations, otherwise they ran the risk of bringing all such operations into disrepute. He would have liked to have had some assistance from the author in respect of the diagnosis in cases of dilated or misplaced colon.

Dr. F. J. Smith asked the author whether he thought one was justified in evacuating ascitic accumulations by incision in preference to tapping? The method of incision presented certain advantages in that if a cause were found for the ascites it might be possible to remove it forthwith. Then, too, there was the peculiar influence of abdominal section of which he confessed he was quite unable to offer any explanation. On the other hand, if the abdomen refilled, it was obviously impossible to repeat the operation indefinitely, as with tapping, and it required an anæsthetic. The only real drawback, however, was the difficulty of securing antisepsis in the homes of the poor. He referred to a case in which he had tapped, but on withdrawing the cannula the hole did not close, causing him some anxiety. The wound leaked for a day or two, and then gradually healed, and no harm resulted. He remarked that no organ varied so much in position as the appendix, the most common position being tucked up behind the ascending colon, or close to the right ovary. He mentioned a case of fæcal vomiting in which a hard mass, four inches in length, had been vomited.

Mr. Alban Doran mentioned the case of a young man who had fæcal vomiting following symptoms of irritant poisoning induced by a meal of walnuts and mackerel. It looked like a case of acute perityphlitis, but on the day after the fæcal vomiting the bowels acted and the patient began to convalesce. He thought that the coincidence of obstruction and irritation might account for this symptom. He suggested that the cases mentioned by the author and by Mr. Bryant were probably cases of old tuberculous peritonitis, or else cysts of the urachus.

Mr. Treves, in reply, admitted that there was such a thing as fæcal vomiting, but he wished to protest against the indiscriminate use of a term which applied to what was really a very rare condition. He mentioned that what was often taken for fæces was really coagulated milk, of which he recalled a striking instance.

HARVEIAN SOCIETY OF LONDON.

J. F. Goodhart, M.D., President, in the Chair.

Thursday, February 17th, 1898.

Granular Kidney: and why it is so often Overlooked.

Dr. Samuel West read a paper on this subject. He said granular kidney was very often overlooked, not because the diagnosis was difficult, but because there was little in the symptoms to draw attention to the kidneys. The symptoms of granular kidney became pronounced as a rule in the middle period of life, but the disease had existed long before. Cases of granular kidney in young people, or even in children, had been recently recorded in fair numbers. The relation between granular kidney and acute nephritis was often misinterpreted; granular kidney did not often take its rise in an acute nephritis. It was possible that acute nephritis might, if it lasted long, lead to a form of interstitial nephritis, but whether the disease recognised as granular kidney could result from acute nephritis was another question. Simple acute nephritis in the adult was by no means common; when acute nephritis occurred it was generally because the kidneys were already unsound, and granular kidney was a very frequent antecedent. As in a child acute nephritis raised the presumption of antecedent scarlet fever, so in the adult it raised the presumption that the kidney had been diseased beforehand. Two cases were quoted in which apparently an acute nephritis ended in interstitial change, and in one of these albuminuric retinitis developed. One of the common results of granular kidney was hæmorrhage, and this might take place in almost any part of the body; thus it was common in the brain, and was a common cause of apoplexy, especially in early life. It was a frequent cause of epistaxis, and a case was quoted in which epistaxis was almost the first symptom of serious disease, and the patient died of uræmia within six weeks from the commencement of the symptoms. Hæmorrhages might also take place from the gums, pharynx, stomach, and bowels, and a case of hæmatemesis in the course of granular kidney was mentioned. Hæmoptysis also probably occurred, but was rare. About hæmorrhage from the bladder more was known, and it might sometimes be profuse and produce very puzzling symptoms. Cases of this kind were quoted in which the diagnosis had to be made from a calculus in the bladder, but *post mortem* nothing was found but granular kidney. Recurrent hæmaturia was a frequent occurrence in small amount, and was a point of diagnostic importance. Hæmorrhages into the retina were part of albuminuric retinitis, and attachment of the retina was not altogether uncommon, but generally the effusion was not blood, but serum. Hæmorrhage had also been observed beneath the conjunctiva and behind the orbit, the latter producing puzzling symptoms during life. Hæmorrhages into the skin were not known. Heart failure was a more common symptom, and the cases might present themselves as cases of angina. Pericarditis was by no means a rare complication, and might produce no symptoms, so that its discovery was more or less accidental and made by physical signs. A case was recorded in which pericarditis was the first grave symptom to be recognised, and the patient died within six weeks from the time when he was thought to have been in perfect health, the first complaint being some defect of eyesight. General failure of vision was a marked symptom in the later stage of the disease, and might amount almost to what one might call cachexia. Such cachexia, developing in early middle life without other obvious cause, should always raise the suspicion of granular kidney, and it might considerably modify the course of other diseases, as in two cases of morbus cordis quoted, in which, though the patients had morbus cordis, the symptoms were due to granular kidney, and of that they died. As intestinal symptoms were common, the cases might be diagnosed as dyspepsia, or as some other form of "intestinal affection." In the latter connection an interesting case was recorded in which uncontrollable diarrhœa occurred. Of this the patient died, but in the end nothing was found but granular kidney. General acute or subacute skin eruptions bore a very important relation to granular kidney, for they were almost without exception fatal; two or three striking instances of this were recorded. Other symptoms which developed might be very misleading. Thus, headache might resemble hemicrania. It might also suggest cerebral tumour, especially when associated with optic neuritis. Cases of this kind were recorded. Cramp, especially when associated with general loss of power, might suggest various forms of nerve disease, and an instance was recorded in which the case very closely resembled one of locomotor ataxia. Another case presented itself as an instance of peripheral neuritis. The association of gout and lead poisoning in granular kidney was well known, and often produced difficulties in diagnosis. The toxic conditions were generally ranged under the heading of uræmia; but this occurred in two forms—the chronic uræmia, or, as it might be called, "chronic renal toxæmia," no doubt explained many of the symptoms which had been already described. Acute uræmia in the granular kidney was of course generally fatal; it was often very difficult to diagnose from apoplexy, epilepsy, diabetic coma, and some other conditions. A case was quoted in which the patient was admitted into the hospital as a case of apoplexy, but proved to be one of uræmia, and although the case was a well-marked instance of granular kidney, the patient completely recovered, and had been now well and at work again for some months, without any further symptoms. From the cases quoted it was obvious that it was only too easy to be misled by the prominent symptoms, and to miss the prime cause of the disease—namely, granular kidney. The early diagnosis of granular kidney was important, for although it was true that in the later stages little could be done, still in the early stages it was probable, if the disease were sooner recognised, that a good

deal might prove possible either to prevent its development or at any rate to check its progress.

Dr. Robert Maguire said that it was impossible to discuss the paper fairly until it had been read carefully, but his general impression on hearing it was that Dr. West laid too much stress upon the anatomical condition of granular kidney, which was in most cases only a consequence of the disease. If the term "granular kidney" meant the actual condition of the kidney, he must give as his answer to Dr. West's question, that granular kidney was often overlooked because it was not present—that is, that either the kidney was healthy; or, if diseased, its condition was not the cause of the symptoms observed. It was not often that opportunity occurred to examine such causes *post mortem* before the development of the granular kidney, but occasionally it happened that death resulted at an early stage of the disorder, and he himself had met with several instances of this. He quoted two—one of death from enormous hæmorrhage into the stomach without lesion of the mucous membrane, but with thickened arteries and hypertrophy of the left ventricle, indicating the long-continued high arterial tension which had been the immediate cause of death, but with no change in the kidneys; the other a case in which similar anatomical conditions existed, and death had been produced by œdema of the brain and effusion of serum into the lateral ventricles. If such things could occur without the granular kidney, it was obvious that if the state of the kidney were not normal, that could not be the cause of the symptoms. At the same time, however, it must be remembered that a certain number of cases of granular kidney with its accompanying symptoms did result from a primary attack of nephritis. Dr. Maguire thought that the change in the kidney was not an interstitial nephritis, but a devolution change in which, by reason of a lack of vitality, the evolution force, there was a growth of a lowly-organised tissue at the expense of the highly-organised tissue of the kidney. It was in fact, a local form of growing old, remembering that age must not be counted by the number of birthdays. Dr. Guthrie had collected a number of cases of granular kidney occurring in young children. He (Dr. Maguire) had gone further back, and had found marked excess of the fibrous tissue of the kidneys before birth, in aborted fœtuses, probably syphilitic, of a period between the third and fourth months of pregnancy. Here the condition could not be looked upon as a devolution, but as an aberrant evolution, the vitalising energy being not sufficiently powerful to produce highly-organised kidney tissue. Dr. Maguire looked upon the peculiar change in the retina as a degeneration and not as an inflammation, and had elsewhere given his reasons for that view. He believed it to be due to the fact that the enormously high arterial tension present in such cases, high even for Bright's disease, hindered the circulation of blood to the parts of the retina remote from large blood vessels, and so interfered with their nutrition. The change in the retina was important in prognosis, for such patients rarely lived longer than eighteen months or two years after the first appearance of the retinal change. He himself, however, had observed a case in which death had occurred from influenza eight years after Mr. Critchett had diagnosed the retinal condition.

Local Traumatic Neuroses.

Mr. E. W. Roughton read notes of this case. M. H., aged 62, a lay brother in a monastery, injured his right elbow in October, 1896, whilst shovelling some coals. He took no particular notice of the injury, and continued at work for ten days. The pain then became so severe that he sought medical assistance, but without obtaining any relief up to the time of his admission to the Royal Free Hospital on September 24th, 1897, nearly a year after the injury. The dresser's note on admission reads as follows: "Looks pale and ill. Complains of severe pain in right arm from shoulder to hand, but especially just below the outer side of elbow-joint. The whole limb is exquisitely tender to the touch, especially over the course of the nerves and at the seat of the injury. No swelling, deformity, or other signs made out on examination." The nurse reported that the patient did not sleep for more than two hours at night. The treatment consisted in administering doses of iodide of potassium *ter die* and constant current to arm twice daily. After a fortnight there was much improvement, and the pain was practically limited to the seat of injury, which was still so tender that it could not be satisfactorily examined. He then determined to explore the seat of injury. Mr. Roughton's reasons for deciding to operate were: (1) He thought he might discover some lesion which he could not detect by ordinary methods of examination. (2) All other kinds of treatment with which he was acquainted had been tried and failed. (3) The patient was anxious for an operation, having been sent to the hospital for that purpose. He seemed to think that an operation would cure him. Mr. Roughton thought it quite possible that it might, although he did not see how. (4) He did not think the operation would make him any worse. (5) He thought he would remain a chronic invalid unless his pain was cured. On October 11th, having confidently assured the patient that he was going to cure him, he cut down upon the upper third of the radius. All the tissues exposed appeared absolutely normal. He requested the nurses to tell the patient on his recovering consciousness that he had found the cause of the pain and cut it out. The day after the operation the acute pain had gone, but the patient said the arm felt bruised. On the second night after the operation the patient slept for seven hours, and the pain disappeared and had not again returned. On October 19th, eight days after the operation, the wound was dressed and the stitches removed. The patient was discharged free from pain on October 21st. At the present time (February 17th, 1898) he is "very well and quite free from pain."

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Surgery.

Sir William Thomson, P.R.C.S.I., President, in the Chair.

Friday, January 21st, 1898.

Ligation of Left Subclavian Artery in its Second Stage.

Mr. Henry Gray Croly related a case of traumatic aneurysm which involved the third stage of the left subclavian, and the third stage of the axillary arteries. He ligatured the subclavian in its second stage. The patient, who was exhibited to the Section in January, 1897, and again on the present occasion, a year after operation, was in perfect health, could use his left arm as well as his right, and was at work daily as a garden labourer.

The President remarked that the actual mode of applying the ligature was important, the walls of the vessels not being injured, but only approximated, allowing the irritation to produce entire occlusion and adhesion of the walls.

Sir William Stokes said that the result showed that a clot formed at the situation of the ligature—a thing which some authorities said was impossible. In the operation it was of great importance not to wound the phrenic nerve. He asked Mr. Croly if it were necessary in cases like his to divide any portion of the scalenus anticus muscle in order to take out the vessel in its second stages. He (Sir W. Stokes) had performed the operation several times on the dead body, and found that by drawing to the inside the scalenus anticus, and without any division of the muscular tissue, he could get at the second stage very well, and thought that by this means the phrenic nerve could be avoided. He thought Mr. Croly's method of passing the aneurysm needle from below upwards and outwards was the best, as, by so doing, the subclavian vein ran least risk of being injured. Some textbooks said that the needle should be passed in the opposite direction—from without inwards—in order to avoid including the last cord of the brachial plexus; but he considered the subclavian vein a much more important structure, and that the nerve could be avoided.

Mr. T. E. Gordon considered that the method of applying the ligature was among the most important factors which gave the brilliant result. He thought that it made little difference what the ligature was made of provided it was perfectly sterile; silk was excluded. He had been practically satisfied with the use of catgut boiled in superheated alcohol, a method which did not render the catgut brittle. He had found kangaroo tendon very brittle. He would like to ask Mr. Croly in what way the wounding of the pleura was specially dangerous. He was inclined to think that a large number of the fatal cases that had occurred from

wounding the pleura were due to want of aseptic precaution.

Mr. M'Causland asked if the scalenus muscle were drawn aside, and if the phrenic nerve were in the position already referred to, any result would follow the traction on the nerve?

Mr. Croly, in reply, said he had always been keen on approximating the coats of an artery by Scarpa's method. There was no case on record of secondary hæmorrhage from any artery in its continuity where Scarpa's method had been adopted. With regard to Sir William Stokes's remarks, he could only say that to have exposed the second stage of the artery without cutting the muscle would have been an utter impossibility. The scalenus anticus could be drawn over in the dead subject. He always attempted to pass the aneurysm needle unarmed.

Litholapaxy.

Surgeon-Major Baker brought forward a report on a series of 404 operations performed by him when acting as civil surgeon in Hyderabad during the period from February 1st, 1896, to January 21st, 1897, together with 14 lithotomies performed for various reasons during the same time, and exhibited the calculi removed during these operations.

The President said that they might congratulate themselves on the fact that the work in this particular operation for stone done in India had been mainly done by Irishmen.

Mr. Croly said that the cause of stone was not known. It had been attributed in Scotland to the porridge. Alluding to recurrence, he said that he had taken two stones out of a man's bladder, and took two more in another couple of years from the same man. He had operated on a good many children for stone, and had found that he could get a No. 7 staff into the bladder without any dilatation of the urethra. There were in the museum stones which he thought Surgeon-Major Baker would not be able to crush owing to their hardness. Some books denied that a stone got attached to the coat of the bladder, but he had once to scoop out a stone which was adherent on all sides of the bladder. He asked why the crushing was complicated with the cutting operation? If a cutting operation was going to be done, why not cut out the stone and drain the bladder? Draining of the bladder was now considered a most important point.

Brigade-Surgeon-Lieutenant-Colonel Potter considered litholapaxy to be infinitely superior to lithotomy. He thought that the water of the country had a good deal to do with the frequency of stone, and possibly heredity might also have something to do with it.

Surgeon-Major Baker, in replying, said that to Dr. Keegan was due the credit of having proved that crushing of stone in children could be carried out satisfactorily. Mr. Freyer had precisely the same proportion of recoveries in his work in London, including adults and children, as he had in India. Weiss's instrument for children was No. 5 in the shank and No. 7 in the bend. His difficulty on hearing of Mr. Keith's operation first had been exactly the same as Mr. Croly's, and he had thought that crushing combined with cutting was wrong. First of all a grooved staff was passed, the urethra opened with a tenotome, a grooved director passed in, then a small female sound, and finally a large one, and a small lithotrite was then easily passed into the bladder. He did not believe that the wound existed for more than an hour after the operation. Not a single drop of urine ever came away afterwards—a fact which he could not explain. Keith gave as an explanation that the opening was valvular. The operation was entirely different from perineal lithotomy, which consisted in making a large wound in the perineum and introducing something like a pair of calipers. He had no doubt that Mr. Croly had met with stones which would defy any lithotrite. He was sure that stones sometimes became adherent to the bladder.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Jas. W. Allan, M.D., President, in the Chair.

Thursday, February 17th, 1898.

The Use of Forceps in Midwifery Practice.

A discussion on this subject was opened by Mr. J. Stuart Nairne, who handed round some old and rare volumes with plates illustrating the subject. Chamberlen's forceps were compared with those of modern date. Mr. Nairne asked and answered three questions: 1. When to use forceps? 2. What kind of forceps to use? 3. How to use forceps? Since the introduction of chloroform their use had been much extended. In easy cases a woman might have a choice; in some cases they must be used, and when used they must be used skilfully. With an anæsthetic it was not bad midwifery to expedite delivery in all cases. As to benefits to the patient (*a*) mentally she need suffer nothing; (*b*) physically the period of delivery might be much shortened. Properly conducted, instrumental delivery never hindered recovery. But as in everything else the personal equation came in. Accidents might be avoided. Dangers: (*a*) Too early application; (*b*) not applying them at all—errors both due to stupidity and ignorance; again the personal equation came in, and the proper remedy was the elimination of the stupid person. That forceps were abused to the extent recently asserted Mr. Nairne absolutely denied. He spoke for Glasgow, and was of the opinion that there the error was one of omission and not of commission. In easy cases forceps ought not to be applied without the offer of an anæsthetic; in tedious and in difficult cases an anæsthetic should be insisted on. In easy cases help (forceps) should be offered as soon as the patient desired; in tedious cases chloroform and forceps should be insisted on. In difficult and dangerous cases forceps ought to be compelled. In reply to a query Mr. Nairne said that when in general practice he used forceps almost in every case. He had not a percentage mortality; he had not had six deaths in all his obstetric practice.

Professor Murdoch Cameron did not agree with all that Mr. Nairne had said. Before using forceps a man should measure the conjugate and ascertain if a head could come through. Version should always be done before using forceps, not as usually after they had failed. Leishman's long straight forceps, in his opinion, tended to lacerate the vagina and perineum. The perineum and the vaginal passage should be prepared; introduce the hand into the vagina, close the fist, and withdraw, and repeat this until there was dilatation sufficient to allow the passage of the head. The dorsal position was by far the best. In easy cases put on the forceps first and chloroform afterwards; very little was required; the patient inhaled readily. Dr. Cameron showed a large variety of forceps, and made comments. Anderson's Barnes-Simpson forceps was recommended for general use. Neville's forceps with axis traction arrangement was to be preferred to Milne-Murray's or Simpson's, as in these complications in construction favoured sepsis. Smellie's wooden forceps was shown, and Professor Cameron declared he had, on an emergency, effected delivery with the handles of two soup spoons. His antero-posterior axis traction forceps and cephalotribe on the same type were specially commended.

Dr. Jas. K. Kelly said that when in general practice he used forceps in 1 in 10 cases. Forceps were used to supply defective power—the weak pains, weak relatively to the size of the pelvis and the size of the head which had to be born, or weak as to time. Before using forceps (1) the membranes must be ruptured; (2) the os sufficiently dilated or dilatable; (3) the head should have entered or engaged, or should not be movable above the brim. The head should be of suitable size for forceps, neither too large nor too small. Forceps should not be used to a hydrocephalic head or to that of a six-months' fœtus. When the pelvis was small a difference of opinion as to the use of forceps came in. When delivery was possible without diminishing the size of the head forceps might be used, and they might be laid down to very great degrees of contraction; owing to the structure and mobility of the pelvic joints a wedge-like action of the head was possible. The beneficial use of Walcher's position and symphysiotomy showed that there must be such mobility of the pelvic joints, and if there were such, even to a small degree, it justified a trial of the forceps. In an experience of over 3,000 cases of general practice he had had no craniotomy, embryotomy, or Cæsarean section. His only operation had been forceps. In this series of cases there must have been a very considerable number of contracted pelves. Yet he had no accidents, such as rupture of the uterus. He had always used the instrument he was taught to use—Leishman's straight

forceps—even above the brim, and preferred it to the double-curved forms, with which one uses a large amount of force.

The discussion was adjourned to the next meeting.

NORTH OF ENGLAND GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

J. W. Martin, M.D., President, in the Chair.

Friday, February 18th, 1898.

Specimens.

Dr. Glynn Whittle (Liverpool) showed some Lubricating Pessaries.—Dr. Briggs (Liverpool) showed the Uterus and Microscopic Sections from a well marked case of Adenoma Malignum of the Uterus.

Hysterectomy for Perforation of Uterus.

Dr. Donald (Manchester) read notes of a case of perforation of the uterus, in which vaginal hysterectomy was performed. The patient had been attended by a medical man for profuse uterine hæmorrhage, who, while exploring the uterus on December 16th, 1897, discovered a hole in its posterior wall. He at once asked Dr. Donald to see the case with him. The patient was found in a state of extreme collapse, very blanched, and with a pulse, as far as it could be counted, of 150. Respirations were shallow and sighing, and there was considerable restlessness. On vaginal examination the finger passed into the uterus, and then through an aperture in its posterior wall into the abdominal cavity, and into the tissues of the left broad ligament. Ether was administered and an opening made with a snip of the scissors through the posterior vaginal fornix into the pouch of Douglas. This allowed of the escape of a large quantity of fluid and clotted blood which had collected in the abdomen, and permitted the nature and extent of the tear to be made out from the peritoneal aspect. The uterus was then rapidly excised by Doyen's method, being first split up into two halves, each half dragged down to the vulva, and a pressure forceps placed on each broad ligament from above downwards. The points of the forceps were then turned up into the pelvis, and the gap in the vaginal vault was packed with iodoform gauze. The operation was performed in a workman's cottage at 4 o'clock on a December afternoon, with the assistance of a district nurse, and lasted about ten minutes. Dr. Donald chose hysterectomy in preference to suture of the tear or plugging with gauze, because of the rapidity with which it could be carried out and of the security against further bleeding. He thought the method might be adopted with advantage in some cases of rupture of the uterus during labour. The great advantage of the vaginal as compared with the abdominal incision lay in the almost complete absence of shock. The advantage of forceps over ligature in cases in which rapidity was essential was obvious.

Cæsarean Section.

Dr. Grimsdale (Liverpool) read notes of a case of Cæsarean section for cancerous tumour obstructing delivery. The patient was a young woman, aged 29, whose pelvis was blocked with a cancerous tumour originating in the rectum. Intestinal obstructive symptoms had necessitated the performance of lumbar colotomy, by Mr. Thelwall Thomas, at the fifth month of pregnancy. On what was reckoned to be the 268th day of gestation Dr. Grimsdale performed Cæsarean section. Both mother and child were alive.

Paper.

Dr. Glynn Whittle (Liverpool) read a note on a Gynæcological Aspect of Criminal Responsibility.

MIDLAND MEDICAL SOCIETY.

J. W. Taylor, F.R.C.S., President, in the Chair.

Wednesday, February 2nd, 1898.

Transposition of Viscera.

Dr. Short showed a case of transposition of the heart, liver, spleen, and stomach. The patient, a man aged 20, came under treatment in October, 1897, for subacute rheumatism, when the abnormal position of the organs was discovered. The *x* rays were passed through the body, and the position of the heart and liver were plainly seen on the screen. A skiagraph was taken, which will be shown at a future meeting. The unusual position of the stomach was demonstrated by inflating it. The patient was not left-handed, and had had no previous illnesses.

Fæcal Concretion discharged at the Umbilicus.

Mr. George Heaton showed a patient in whom after a short illness a large fæcal concretion was discharged at the umbilicus. The patient before his illness and since the discharge was in perfect health. There was no history or evidence of any tuberculous mischief. Mr. Heaton suggested that perhaps the concretion had become impacted in a Meckel's diverticulum, had set up ulceration, and, fortunately for the patient, had been discharged at the umbilicus.

Cancer of the Body of the Uterus.

Mr. Christopher Martin showed a specimen of cancer of the body of the uterus, removed by him nine months before by the operation of hysterectomy from a patient, aged 52. There was a history of severe and continued hæmorrhage for nearly twelve months. On examination a large, hard, mobile fundus was felt, and a diagnosis of myoma was made. The question was raised as to whether the appendages should be removed or vaginal hysterectomy performed. Fortunately for the patient hysterectomy was performed. It was only after the removal of the uterus that the malignant nature of the disease was evident. The patient made an excellent recovery, and so far had no signs of recurrence.

Paper.

Dr. J. W. Russell read a paper on Iodoform in the Treatment of Phthisis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

James Braithwaite, M.D., President, in the Chair.

Friday, February 4th, 1898.

Specimens and Cases.

The following specimens and cases were shown: Mr. W. A. Stott: Hysterectomy during fifth month of pregnancy for fibromyoma blocking pelvis.—Dr. Bronner: Case of Extradural Cerebral Abscess and Thrombosis of Lateral Sinus; operation; recovery.—Mr. E. Ward: (1) Œsophagostomy and Thyroidectomy for Malignant Disease of Pharynx; (2) Miliary Tuberculosis of Knee-joint; Arthrectomy.—Mr. Brown: (1) Case of Hæmophilia treated by Inhalation of Oxygen: (2) Compound Depressed Fracture of Skull; two cases; Dr. Hellier: Intraligamentous Multilocular Cyst.—Dr. T. Wardrop Griffith: (1) Meckel's Diverticulum with band to mesentery; (2) case of Myxœdema at beginning of treatment.—Mr. Jessop: Tumour of Kidney.

Cerebral Abscess.

Mr. Roper described a case of cerebral abscess under his care. E. M., aged 14, had left otorrhœa for two years. Lately the discharge had become fœtid, and there had been severe pain in the left ear and side of the head, lasting three to four days. Afterwards there was loss of memory for words, slow pulse, slight rise of temperature, vomiting, loss of power in the right arm. There was no mastoid tenderness. Double optic neuritis was present. Mr. Littlewood operated. The mastoid cells were opened and found to be healthy. The temporo-sphenoidal region of the brain was explored, and an abscess found and drained. A hernia cerebri formed a few days after the operation, and after increasing in size for some days shrank, finally disappearing entirely under the application of pressure, and the wound healed. The use of the arm very soon recovered, but the memory only returned gradually.

Mr. Littlewood remarked on the difficulty of diagnosis in some of these cases, and drew attention to the size of the opening into the skull which was necessary in this case.

Dr. Bronner (Bradford) made remarks.

Malignant Scarlet Fever.

Dr. Trevelyan read notes of a case in a patient, aged 25. The illness began within twenty-four hours after exposure. A patchy rash appeared on the second day, and some petechiæ on the fourth day. There was diarrhœa and blood-

stained discharge from the nose and throat. An almost continuous pack moderated the high temperature, and to a still greater extent the delirium and restlessness. There was total inability to swallow from the eighth to the twelfth day, suggesting at first a complicating diphtheritic infection with early paralysis. Rectal feeding had to be solely relied on during this time, as nasal feeding proved impossible. Death occurred on the thirteenth day from a deglutitive bronchopneumonia. Dr. Trevelyan raised the question whether the injections with antistreptococcus serum should have been further pushed in this case.

LARYNGOLOGICAL SOCIETY OF LONDON.—At the annual general meeting held January 12th, 1898, Mr. H. T. BUTLIN, President, in the chair, the ballot for officers for the ensuing year resulted as follows: *President:* H. Trentham Butlin, F.R.C.S. *Vice-Presidents:* J. W. Bond, M.D.; A. Bronner, M.D.; F. de Havilland Hall, M.D.; Scanes Spicer, M.D.; T. J. Walker, M.D. *Treasurer:* W. J. Walsham, F.R.C.S. *Librarian:* J. Dundas Grant, M.D. *Secretaries:* Herbert Tilley, M.D.; William Hill, M.D. *Council:* A. A. Kanthack, M.D.; Sir F. Semon, M.D.; W. R. H. Stewart, F.R.C.S.Ed.; StClair Thomson, M.D.; P. Watson Williams, M.D. An ordinary meeting was subsequently held, the President being in the chair. The PRESIDENT showed two Pressure Pouches of the Œsophagus removed from living subjects.[1]—Mr. CRESSWELL BABER read notes of a case of Nasal Hydrorrhœa.—Mr. ERNEST WAGGETT showed (1) a patient on whom he had performed Luc's operation five weeks previously for Right Frontal Sinus Suppuration of many years' standing; (2) a Galvano-cautery Point, practically of the same shape as Jones's turbinotome, a hot platinum wire taking the place of the cutting edge. He had used it to remove hypertrophies of the mucous membrane of the turbinates, particularly moriform bodies.—Mr. WALTER G. SPENCER showed a case of Trigeminal Neuralgia relieved by Turbinectomy.—Mr. WYATT WINGRAVE exhibited microscopic sections of Tonsils showing small islands of hyaline cartilage representing the subpharyngeal cartilage, a rudiment of the third visceral arch. He had found 3 examples in about 200 cases examined.—Dr. HERBERT TILLEY showed the Larynx of a patient shown at a meeting on November 10th, 1897. Shortly afterwards the patient died, after suffering for three or four days from fever, intense headache, and delirium. Only the larynx and the brain were available for examination. The base of the latter was thickly covered with lymph and other evidences of meningitis. The larynx exhibited extensive superficial ulceration of the right vocal cord and process, but the left side was healthy. A small track led through the mucous membrane of the right arytenoid cartilage, the latter being felt bare at the end of the sinus. When shown during life the almost unanimous opinion was that it was a case of malignant disease, but the exhibitor thought that the recent history indicated tuberculous laryngitis.—Dr. FURNISS POTTER showed a case of Malignant Disease of Larynx in a man aged 64.—Dr. BRONNER (Bradford) showed a large number of Papillomata removed from the larynx of a man aged 48. On several previous occasions growths had been removed, the last time in March. Various local and internal remedies had been used.—Mr. SYMONDS exhibited (1) a man of 61 showing the Left Cord lying in the Cadaveric Position. The patient had a stricture of the œsophagus 12½ inches from the teeth, and gave a history of nine months' dysphagia, with loss of voice for four months. The case was brought forward to illustrate paralysis of the lateralis muscle following upon that of the posticus, which was presumed to have preceded the present stage. The patient also exhibited well the inability to speak a sentence of more than a few words, and gave a good view of his larynx. (2) A case in which Half the Larynx had been removed. (3) A case of Subglottic Carcinoma (?).—Dr. WATSON WILLIAMS (Bristol) showed a case of Formative Osteitis (leontiasis ossium).—Dr. LAMBERT LACK showed a case of Clonic Spasm of the Pharynx.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At a meeting on February 23rd, Dr. J. F. PAYNE, President, in the chair, Dr. A. EDDOWES read a paper on a Case of Ringworm contracted from a Hedgehog, occurring in a girl, aged 15, who consulted him for tinea circinata on her chin and right wrist. He had since heard of another case of a similar nature caught from another hedgehog. He also mentioned the case of another young lady patient of his who had contracted favus, in all probability from a monkey. The following cases were brought before the meeting:—Dr. J. H. STOWERS: 1. Lupus Erythematosus of the Scalp in a woman. 2. Lichen Planus in a boy. 3. A man suffering from a well-marked Papulo-tuberculous Syphilide.—Dr. J. H. BUNCH: A Case of Sclerema Neonatorum (?).—Dr. P. S. ABRAHAM: 1. A Case for Diagnosis. 2. Localised Pustular Rosacea in a man.—Dr. T. SAVILL: A man with an Ulcer of the Bend of the Elbow (for diagnosis).—Dr. A. EDDOWES: Eczema in a child, following nasal catarrh.—The PRESIDENT referred to the case of Sarcoma Cutis previously shown by him. The tumours had been excised by Mr. W. Anderson successfully, and there had been no recurrence.—A letter was read from Professor A. Wolff, of Strassburg, inviting the members of the Society to take part in the Congress of the Deutsche Dermatologische Gesellschaft, to be held at Strassburg at Whitsuntide.—The following members took part in the discussion of the cases:—The PRESIDENT, Mr. HARE, Dr. STOWERS, Dr. ABRAHAM, Mr. PERNET, Dr. SAVILL.

BRISTOL MEDICO CHIRURGICAL SOCIETY.—At a meeting on February 9th, Dr. J. E. SHAW in the chair, Dr. B. BARON showed a patient with Carcinoma of the Larynx.—Dr. SHAW showed a patient with Cerebellar Ataxia.—Mr. BARCLAY read a paper on Tuberculous Disease of the Foot. (The patients were shown.) Mr. F. MORTON made remarks.—Professor E. FAWCETT showed numerous specimens which had recently been added to the school museum, including plaster casts showing the Position of the Internal Organs, models of the Internal Ear, a Set of Bones showing the Centres of Ossification in the Humerus at Various Ages, and several Coloured Dissections of the Brain.—Mr. J. L. FIRTH read notes of a case of Ovariotomy in which a large ovarian dermoid and three small omental dermoids were removed.—Dr. AUST LAWRENCE, Mr. EWENS, Mr. MORTON, and Mr. CARWARDINE spoke on the paper.—Dr. F. H. EDGEWORTH read a paper on Hysterical Paroxysmal Œdema. Dr. MICHELL CLARKE made remarks.

CAMBRIDGE MEDICAL SOCIETY.—At a meeting on December 3rd, 1897, Dr. HOLDEN, President, in the chair, Mr. WHERRY read a paper on Spiral Growth, illustrated by shells, climbing and twining plants, carpenter's shavings, horns of the koodoo, and distorted hoofs of Falkland sheep.—Dr. JOSEPH GRIFFITHS read notes of two cases of Carcinoma of the Kidney: (1) A man, aged 52, was admitted into Addenbrooke's Hospital on May 31st, 1897. In the left loin there was a tender, movable elastic swelling which occupied the position of the kidney. On April 29th he passed bloody urine for the first time. On further inquiry it was found that for about three years he had had periodic attacks of pain in the left loin, associated with slight changes in the urine, but these were so trivial that he took no notice of them. The kidney was removed through a lumbar incision on May 4th, 1897. He recovered well and left the hospital within a fortnight. As was usual the urine became scanty after the operation, but gradually the right kidney increased its work, and soon secreted the usual amount of natural urine. He remained quite well and was at work. (2) A man, aged 53, admitted into Addenbrooke's Hospital on October 25th, 1897. He was well in every respect, except that he passed blood with his urine, which contained albumen and numerous small round cells like white blood corpuscles, but no casts. In the left lumbar region there was a large, slightly movable, lobulated, and tender mass, extending as high as the tenth rib. This was dull on percussion and its area of dulness was directly continuous with that of the spleen, which, however, was not enlarged, the colon being pushed downwards and to the right. The left flank was also dull. At Christmas, 1896, he had darting pain in the left loin, associated with retraction of the testicle, and first passed bloody urine containing worm-like clots, which caused retention, relieved only by the passage of a catheter. Since he had had about twenty similar attacks, which generally lasted from twelve to twenty-four hours. Lately, attacks of pain in the left side, associated with blood

[1] *Medico-Chirurgical Transactions*, vol. lxxvi, p. 269, 1893; and BRITISH MEDICAL JOURNAL, 1898, vol. i, p. 8.

in the urine had become more frequent, and he had lost flesh and become weaker. On October 26th Dr. Griffiths removed the enlarged kidney through an anterior incision (which had to be enlarged at a right angle backwards), making use of this route as the mass was too large to extract easily through the loin. The colon was found as it was delineated during life, to the right and below the enlarged kidney. The lower part of the mass was adherent to the descending colon, but after careful dissection the parts were separated. In its removal, the renal artery and vein were torn through, but no bleeding took place. Fearing hæmorrhage the renal artery was exposed at its origin from the aorta, but as the wound kept dry nothing further was done. Recovery was uneventful. The patient left the hospital in a little over fourteen days. On November 20th he returned, complaining of pain in the leg, which was caused by thrombosis of the popliteal vein. Since he had got worse.—Professor Kanthack showed the following specimens: (1) Kidney and Suprarenal Capsule of a Case of Addison's Disease. The suprarenal capsule was greatly enlarged, and converted into a caseous mass. (2) Sections of a Lung showing the Lesions characteristic of Glanders. (3) Tuberculous Disease of the Middle Ear. (4) Tuberculous Disease of the Fallopian Tubes. (5) Microscopic Specimens and Original Drawings of the Hæmatozoa of Malaria, illustrating the complete cycle of development of the hæmatozoon of tertian ague. Professor Kanthack further demonstrated a specimen of blood charged with crescentic bodies from a case of æstivo-autumnal fever (West coast of Africa). These forms were never seen with tertian or quartan ague. He described the effect of the treatment of ague by quinine and the mode of administration of the drug.

Nottingham Medico-Chirurgical Society.—At a meeting on February 16th, Dr. Cattle (President) in the chair, a paper was read by Mr. R. C. Chicken on Some Operations on on the Digestive Organs. He limited his remarks to the consideration of four questions—excision of the rectum, the necessity of operating in dysphagia, the advisability of an exploratory examination in all obscure diseases of the abdomen, and the treatment of infantile hernia. It was pointed out that the success of all operations on the digestive organs depended upon their early performance. Preference was given to Cripps's operation for excision of the rectum as being easier, less dangerous, and affording all the necessary space. The operation of gastrostomy was recommended in all cases of dysphagia, whatever the cause of obstruction, should the patient be suffering from want of food. The objections to the use of œsophageal bougies and the operation of œsophagostomy were mentioned. The advisability of an early exploratory examination being made in all obscure diseases of the abdomen was instanced by the narration of several cases. The importance of an operation for the radical cure of all herniæ in infants was strongly urged. The paper was discussed by Dr. Cattle, Mr. Willis, Miss Gray, and Mr. Kingdom.—Mr. Chicken showed a case of Excision of the Rectum, performed six months previously; and a case of Gastrostomy, which had been operated on thirteen months.

REVIEWS.

Anomalies and Curiosities of Medicine. By George M. Gould, A.M., M.D., of Philadelphia, Pa., and Walter L. Pyle, A.M., M.D., of Washington, D.C. With 295 Illustrations in the Text, and 12 Half-Tone and Coloured Plates. Philadelphia: W. B. Saunders. 1897. (30s.)

This work is accurately described on its title page as being "an encyclopædic collection of rare and extraordinary cases, and of the most striking instances of abnormality in all branches of medicine and surgery, derived from an exhaustive research of medical literature from its origin to the present day, abstracted, classified, annotated, and indexed." The value of such a work is obvious. The practitioner who meets with an anomaly of any kind can, by reference to it, readily discover whether similar cases have been recorded. The essential points of each case are given, and references are appended so that the subject can be followed up by those who wish for fuller information. The work may also on occasion afford help in prognosis by showing what extraordinary and extensive injuries have been recovered from. Again, it may be useful in medico-legal questions, as, for instance, with regard to anomalies of gestation; to malformations giving rise to uncertainty as to sex; to the viability of children, like Macduff, "from their mother's womb untimely ripped"—an operation which, as may be learned from this book, has several times been performed by the mother herself, and in a few cases by the still rougher surgery of horned cattle; to unusual forms of injury, self-mutilation, murder, and suicide; to the simulation of diseases, "malingering," and frauds of various kinds; and to feats of strength and endurance, showing what the human body can be trained to do and to suffer.

But beyond the medical value of such a work, it has a wider scientific interest as revealing Nature in her workshop, moulding the clay which is to form the tenement of the *divinæ particula aëraï*, and her journeymen about her trying their hands at making men and not making them well. It is of interest also to the student of human nature as throwing light on many curious points of character and disposition, the key to which is to be found in peculiarities of physical structure. Everyone, in short, who can say with Terence, *Homo sum; humani nil mi alienum puto*, will find something to amuse, if not to edify him, in a work like the *Anomalies and Curiosities of Medicine*, which deals with everything in man that most "smells of mortality," and which shows the human body in its strength and its weakness, and all the wonders of its structure and functions, and their excesses, defects, and perversions.

Drs. Gould and Pyle have surveyed mankind from China to Peru, and have ransacked the literature of all ages and countries for records of marvels and monstrosities. It is impossible to review in detail a work covering so vast a field, but a general survey will serve to give an idea of its scope and character. Beginning literally *ab ovo*, the authors in the first four chapters discuss anomalies of the reproductive process, from menstruation to "multi-marriages." The next three chapters are devoted to monstrosities and anomalies of stature, size, and development. Then comes a chapter on longevity. This is followed by one on "physiologic and functional anomalies," which, in respect of the "fine lot of miscellaneous feeding" provided therein for the inquiring mind, recalls the Scotchman's definition of a sheep's head. Bloody sweat; gynecomazia; the odours of individuals, of races, of diseases, and of different emotional states; fasting girls; "human salamanders;" magnetic, electric, phosphorescent individuals; ventriloquists; "strong men;" Masochism; idiosyncrasies of all sorts; suspended animation, human hibernation; death from joy, from grief, and from fear, are a few of the subjects included in the chapter. Surgical anomalies of the head and neck, of the extremities, of the thorax and abdomen, of the genito-urinary system, are dealt with in other chapters.

A chapter on "miscellaneous surgical anomalies" contains a large amount of curious information as to marvellous recoveries from multiple injuries, infant vitality, remarkable feats of surgical art, self-performed operations, therapeutic effects of lightning stroke, "needle girls," manufacturers of cripples, professional leg breakers, cosmetic mutilation, ceremonial ovariotomy, eunuch making, castration as a religious rite, and many other things. "Anomalous types and instances of diseases," "anomalous skin diseases," and "anomalous nervous and mental diseases"—including the numerous family of "phobias"—are treated of in subsequent chapters. An account of historic epidemics brings the book to an end.

It will be seen that in the compilation of a work of so encyclopædic a character the authors have undertaken a veritable labour of Hercules. The work is planned on the heroic scale of the old days of the leviathans of scholarship whose huge folios strike awe into degenerate moderns. Nor is the manner in which Drs. Gould and Pyle have executed their task unworthy of their ambitious design. Here and there, indeed, places may be discovered where the work appears to have been somewhat hastily done. For instance, the chapter on longevity appears to be largely made up of newspaper cuttings. While the Paris correspondent of the *Daily Telegraph* is quoted as a scientific authority, Sir George Murray

Humphry is not mentioned; and the collective investigation of the British Medical Association on centenarianism is dismissed in three lines. In speaking of "stigmata," the case of Louise Lateau is quoted, but nothing is said of the scientific controversies which make the case celebrated in the records of hysterical imposture. One of the subjects treated under the head of "physiologic and functional anomalies" is the therapeutic value of music; here we have references to Diermerbroeck, Bonet, Baglivi, and others who are said to mention the efficacy of melody in phthisis, gout, hydrophobia, the bites of venomous reptiles, etc.; but no allusion is made to the interesting experiments on the treatment of insomnia and excitement by Canon Harford and the members of the St. Cecilia Guild reported in the BRITISH MEDICAL JOURNAL a few years ago. Here and there the authors show a holy simplicity worthy of the ages of faith. Thus they positively affirm that the hair, beard, and nails may grow after death, and they treat the dangers arising from the "wind of a cannon ball" with a gravity worthy of a better cause. Throughout the book the proportion of criticism to facts—and anything is treated as a fact which has been stated anywhere by anybody in print—is as Falstaff's poor half-pennyworth of bread to his intolerable deal of sack. On nearly every page one meets with statements which, as Huck Finn said of the *Pilgrim's Progress*, are "interesting but tough." Indeed we may say, as the legendary bishop said of *Gulliver's Travels*, that there are things in the book which we really cannot believe.

This, however, does not seriously detract from the value of the work, which is itself one of the curiosities of medicine. It is a guide to Nature's museum of teratology, a mine of instances, ancient as well as modern, and a forest of references Yet it is not one of these *biblia abiblia*, as Charles Lamb called them, which are fit only to fill a vacant space on a bookshelf. So skilfully have the authors marshalled the vast mass of facts which they have collected that the book can be read with pleasure, as well as consulted with profit. A famous teacher of physiology used to mention as a fact, of no particular importance in itself, but likely to be an interesting subject for table talk, that the elephant has an enormous cæcum. Persons ambitious of shining at the dinner table by more recondite lore of a similar kind will find the work an ideal *Conversations-lexicon* for the purpose. Like Burton's *Anatomy of Melancholy* in another sphere, their work will doubtless be used as a mine where materials for a cheap display of learning can always be found.

The work of Drs. Gould and Pyle is, we venture to predict, destined to become a classic in medical literature. As an unequalled collection of facts clearly stated, lucidly grouped, and, last but not least, fully indexed, it will live while more scientific treatises become obsolete as, in the words of Weir Mitchell, "knowledge dies of newer truth." It is only fair to add that the publisher has done his part of the work well. The print is clear, the illustrations are admirably executed, and the book presents a handsome appearance. It can hardly, however, be called light literature, nor can it be conveniently read, as Macaulay says the scholar should read Plato, with one's feet on the fender. The bulk of the work is, however, the defect of its quality, for it would have been impossible for the authors to get so enormous a mass of material into a smaller compass without reducing the volume to a mere catalogue.

THE YEAR BOOK OF TREATMENT FOR 1898: A Critical Review for Practitioners of Medicine and Surgery. London, Paris, and Melbourne: Cassell and Company, Limited. (Crown 8vo, pp. 484. 7s. 6d.)

THIS, the fourteenth, issue of the *Year Book of Treatment*, retains in undiminished excellence all the features which have won for it the favour of the medical profession. The contributors are: Dr. G. A. Gibson (Diseases of the Heart and Circulation), Dr. Gustave Schorstein (Diseases of the Lungs and Organs of Respiration), Dr. E. S. Reynolds (The Treatment of Nervous and Mental Diseases), Dr. Herbert P. Hawkins (Disease of the Stomach, Intestine, and Liver), Dr. Francis D. Boyd (Diseases of the Kidney, Diabetes, etc.), Dr. Archibald E. Garrod (Gout, Rheumatism, and Rheumatoid Arthritis), Dr. Sidney Phillips (Infectious Fevers), Dr. Dawson Williams (Medical Diseases of Children), Dr. Dudley W. Buxton (Anæsthetics), Mr. W. Rose and Mr. A. Carless (General Surgery), Mr. W. J. Walsham (Orthopædic Surgery), Mr. Edmund Owen (Surgical Diseases of Children), Mr. Reginald Harrison (Diseases of the Genito-urinary System), Mr. Alfred Cooper (Diseases of the Rectum), Mr. J. Ernest Lane (Venereal Diseases), Dr. G. E. Herman (Diseases of Women), Dr. M. Handfield-Jones (Midwifery), Mr. Malcolm Morris (Diseases of the Skin), Mr. Henry Power (Diseases of the Eye), Mr. G. P. Field (Diseases of the Ear), Dr. StClair Thomson (Diseases of the Nose and Throat), Dr. Patrick Manson (Tropical Diseases), Dr. E. F. Willoughby (Public Health and Hygiene), Dr. A. P. Luff (Medical Jurisprudence), and Dr. N. Tirard (Summary of the Therapeutics of the Year 1896-97, chiefly in reference to new remedies). This list will serve to indicate the completeness with which the whole field of treatment in every department of the healing art is covered, while the names of the contributors afford a sufficient guarantee of the knowledge and judgment with which the work has been done. We may perhaps be pardoned for expressing a feeling of gratification at the use of our EPITOME OF CURRENT LITERATURE which has been made by several of the contributors.

A detailed review of a book which is itself an abstract and brief chronicle of therapeutic progress during the past year could serve no useful purpose. It is sufficient to say that in respect of its compactness of form and convenience of arrangement, as well as of the practical character of its contents, *The Year Book of Treatment* stands alone among similar publications. Not its least merit is the copious index which makes reference easy even to what might be called *obiter dicta* to which the headings furnish no clue. To the busy practitioner who wishes to keep himself "up-to-date" with the least possible trouble in the matter of treatment, this *Year Book*, embodying as it does the results of a judicial sifting of the therapeutic records of the year, is simply invaluable. It may be added that its usefulness is not a little increased by the punctuality with which it appears.

THE BRITISH GUIANA MEDICAL ANNUAL. Edited by J. S. WALLBRIDGE and C. W. DANIELS. Georgetown, Demerara: Baldwin and Co. 1897. (Demy 8vo, pp. 170. 5s.)

THIS *Annual* contains contributions on special subjects relating to tropical diseases, together with the *Transactions* for 1896 of the British Guiana Branch of the British Medical Association. Dr. Ozanne describes a case of post-dysenteric paralysis, and Dr. Law records his experience of the treatment of dysentery by salines, which is to the effect that in cases of a mild type the treatment is efficacious, but not in those of a severe nature; and in 25 per cent. even of the mild cases ipecacuanha had to be resorted to. The maternity statistics of the Public Hospital, Georgetown, are discussed by Dr. C. W. Daniels, and Drs. Ozzard and Daniels record observations on filarial embryos found in the aboriginals of British Guiana. The filaria sanguinis hominis *(nocturna)* has long been known to be very prevalent in British Guiana, and its accompanying lesions, such as elephantiasis, chyluria, lymph scrotum, etc., are also well known. In December, 1896, Dr. Ozzard collected the blood of some aboriginals, and forwarded the specimens to Dr. Manson, who found in six, not filaria nocturna, but two other varieties, one a blunt-tailed animal resembling filaria perstans, and the other a sharp-tailed animal about the size of filaria Demarquai, and somewhat resembling it, but not possessing a sheath. In two slides both sharp-tailed and blunt-tailed filariæ were present. Further investigations by Dr. Ozzard demonstrated that more than half the aboriginal Indians harbour these parasites in their blood. The question arises, Are they two distinct species, or are they one and the same animal? Dr. Manson inclines to the view that the sharp-tailed worm is a new species and the blunt-tailed one filaria perstans. Dr. Ozzard, on the other hand, thinks that his observations justify him in considering that the blunt tail and the sharp tail are one and the same animal, the blunt tail being simply the very fine sharp-pointed tail retracted, and he looks upon it as a new species. Dr. Daniels inclined at first to support Dr. Ozzard's view of the identity of the two forms, but has, owing to further observations, abandoned this view and supports that

of Dr. Manson. He found in one specimen which he examined a marked preponderance of sharp tails (9 to 1), and in the other sixteen sharp and no blunt tails. As far as has hitherto been observed no symptoms are recognised to be caused by these embryos.

In another paper Dr. Law has some interesting notes on ankylostomiasis, and shows that this disease is being imported into the colony by Indian coolies. Dr. Kennaird has a paper on the treatment of leprosy by hypodermic injections of perchloride of mercury, and his experience leads him to the conclusion that there is no hope for cure in this treatment, but that the pain and the intense pruritus present in some cases may be thus alleviated. Dr. Conyers contributes some notes on malaria, referring particularly to cases in children associated with coma and convulsions, a frequent form of the disease in the colony. The treatment adopted is to apply the hot pack, clear out the bowels with enemata, and at once to begin the rectal administration of quinine, with or without stimulants according to circumstances. He also discusses the dosage of quinine, and is in favour of large doses being given at first. A very able medical summary of the local diseases occurring in the colonies is given in the annual by Dr. C. W. Daniels.

Altogether the papers in the *Medical Annual* form a valuable record of some of the more important diseases in the colony. The contributors are, however, few in number, and the work devolves much on a few, which is a source of anxiety to the editors. We trust that the appeal of the editors for more general support from the members will not be made in vain, for it would be a decided loss to tropical medicine were this publication to be discontinued for want of a sufficient number of contributors.

NOTES ON BOOKS.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Second Series, vol. ii. (Washington Government Printing Office. 1897. Imperial 8vo, pp. 954)—This volume of the Index Catalogue comprises entries from B. to Bywater. According to the notes affixed by Dr. D. L. Huntingdon, Deputy Surgeon-General and Lieutenant-Colonel United States army, the volume contains 15,732 author titles, representing 6,383 volumes and 14,802 pamphlets. It also contains 5,774 subject titles of separate books and pamphlets and 21,725 titles of articles in periodicals. The series is of considerable value as a work of reference, even to those who have not the advantage of being able to consult the magnificent library of the Surgeon-General's Office.

Lexique Formulaire des Nouveautés Médicales [A Formulary of Medical Novelties]. Par Professeur Paul Lefert. (Paris: J. B. Baillière et Fils. 1898. Fcap 8vo, pp. 336. Fr. 3.)—This little work has evidently been prepared by the author from notes taken during his ordinary reading of current medical literature, and is, therefore, far from being exhaustive. While it contains the exact meaning of many new terms of unusual nomenclature, and gives a short account of the most recent discoveries and theories in all departments of medicine, it also takes into consideration such well-known subjects as Colles's law, diathesis, phosphorus, aconite, and others. The derivations of medical terms are very carefully given, and a special feature is the care which has been taken to include all the diseases known by the names of eminent physicians and surgeons. The information it contains is rather heterogeneous in character, but is eminently useful for ready reference in practice.

International Clinics. Edited by Judson Daland, M.D.Phil., J. Mitchell Bruce, M.D Lond., and David W. Findlay, M.D.Aberd. Seventh Series, 1897-98. Vols. I and II. (London: Thomas Lewin and Co. Royal 8vo, pp. 374 and 378. 12s. 6d. each).—This publication is in fact a quarterly magazine containing clinical lectures and articles on treatment by professors and other practitioners of medicine and surgery in the United States, Great Britain, Germany, Austria, France, and Canada. The majority of the contributors appear to be either American or British, and in the list are comprised the names of a large number of eminent members of the profession. The volumes do not lend themselves to the ordinary work of the reviewer, and it must suffice to say that they contain a large number of lectures which will repay perusal, and that many of these lectures are adequately illustrated by photographs and reproductions of microscopical specimens.

Year Books.

Who's Who for 1898 (London: A. and C. Black. Demy 8vo, pp. 864. 3s. 6d.)—The second year of the new issue, but the fiftieth year of the series, contains, the editor Mr. Douglas Sladen informs us, over 1,000 new biographies. A number of tables have been added, including a list of abbreviations of societies, of university degrees, of university professorships, of news agencies, and a table of societies. There is also a list of representative British newspapers, as well as of the leading Indian, Colonial, and American papers which have offices in London. Altogether the volume is very complete and so far as we have been able to test it extremely accurate.

The Annual Charities Register and Digest (London: Longmans, Green, and Co., and the Charity Organisation Society, 1898, demy 8vo, pp. 894, 4s.) contains in its annual issue for 1898 some additional information which will be useful for reference. The volume consists of a classified list of charities in or available for the metropolis, and is furnished with an elaborate alphabetical index which renders reference easy. The classification of the charities is of use to those who are searching for an organisation which will meet a special want, and the task of such a searcher is rendered the more easy by the introduction which has been prefixed to most of the sections by persons having special experience. Thus Mr. Warrington Haward has written an instructive note on the means which exist for dealing with cripples and invalid children. The general introduction is supplied by Mr. C. S. Loch, Secretary to the Council of the Charity Organisation Society, whose name is a sufficient guarantee for the care and discrimination which has been exercised in the production of the work.

Transactions.

The Transactions of the Pathological Society of London for 1897, vol. xlviii (London: Smith, Elder and Co., demy 8vo, pp. 414) form a somewhat larger volume than some of those recently issued. The meetings of the Society have been reported regularly in our columns, and it will suffice to say that the reputation of the Society for the excellence of the illustrations which it publishes in its annual volume is fully maintained in the present issue. We are inclined to protest against the use of the word *per* in the title of a paper, as for instance "Cystic Tumour in the Pelvis of an Infant, etc., by R. P. Cockburn, M.B. (*per* H. Morley Fletcher, M.D.)." If Mr. Cockburn was introduced to the Society by Dr. Fletcher, as we presume we are intended to gather from the statement quoted, would it not have been better to say so?

The Transactions of the American Orthopedic Association, vol. x (Philadelphia, 1897: Published by the Association. Demy 8vo, pp. 316) contain the report of the eleventh session, which was held at Washington under the presidency of Dr. Samuel Ketch, of New York, in May, 1897. There are a number of skiagraphic illustrations, most of which might have been better reproduced; the best appears to be a skiagraph showing congenital absence of the radius, a case reported by Dr. H. Ling Taylor, of New York.

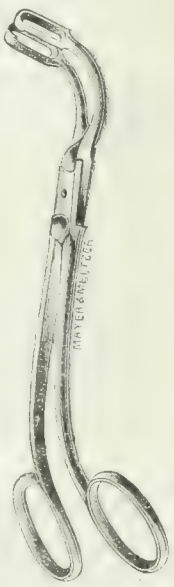
The Metropolitan Public Gardens Association.—The many undertakings mentioned in the fifteenth annual report of the Metropolitan Public Gardens Association which have been carried to a successful issue may be roughly classified as follows: The laying-out of three disused burial grounds as gardens in thickly-populated districts—Pentonville, Bethnal Green, and Bow; the provision of gymnastic apparatus, drinking fountains, and seats; the planting of trees; and the giving of assistance in the preservation, acquisition, or improvement of thirteen open spaces. The success that has already attended the operations of the Association, together with the importance of the work in which it is engaged, render it one altogether worthy of support.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FORCEPS FOR NASO-PHARYNGEAL ADENOIDS.

Dr. StClair Thomson (London,) writes: Of the various modifications which have been effected in the shape of the post-nasal forces originally made by Löwenberg, I think the one designed by Jurasz has not met with the attention it deserves. In this form the extent of the cutting surface and the size of the fenestræ allow of large portions of the growth being grasped, so that very few introductions of the instrument are required. I venture to think that, in common with most forceps used in the removal of these growths, those of Jurasz are unnecessarily large, long, and heavy. In the pair which Messrs. Mayer and Meltzer have made for me the instrument only weighs 1 ounce, instead of $3\frac{1}{2}$ ounces, and in a straight line it measures 6 inches, instead of $10\frac{1}{2}$ inches. The hinge is of a different construction, allowing the instrument to be easily taken to pieces to be purified, and at the same time it is so arranged as to diminish any risk of the uvula being caught in the joint. The slighter build leaves more room for the index finger to be manipulated along with the forceps in the post-nasal space, while the shorter handles gives more power. I have found this 6-inch pair sufficiently large for patients up to 16 years of age. The forceps have also been made with straight handles, as in Ruault's modification, for those who prefer this form.





DIABETIC BROWN BREAD.

We have examined a loaf of the brown bread manufactured by Messrs. Callard and Co., of 65, Regent Street, for the use of diabetics. Our analysis shows that the sample contained: Moisture, 25.4 per cent.; total nitrogen, 3.402 per cent.; proteid matter, 21.26 per cent.; and that it was quite free from starch and sugar. The bread bears a close resemblance to ordinary brown bread, and is well made and palatable. We consider it to be well worthy of the attention of the profession.

BEEF-TEA TABULES.

Messrs. Brand and Co., of 74, South Lambeth Road, have sent us some samples of "Beef-tea Tabules" for examination. We find that the tabules consist of a well-prepared meat extract containing meat fibre and some wheat flour and dried in the form of cakes. The tabules contain only 5.3 per cent. of moisture, and were found to be free from chem cal preservatives, as claimed by the manufacturers. The retail price of each tabule is $2\frac{1}{2}$d., and one is stated to be sufficient to make a breakfast cup of "beef-tea."

BRITISH MEDICAL ASSOCIATION.

FACTS ABOUT SMALL-POX AND VACCINATION.

Issued by the Council of the British Medical Association December, 1897.

The prices are: for the leaflets, 1s. 3d. per 100, 2d. per dozen; for the tracts, 6s. 6d. per 100, 10d. per dozen, 1d. for a single copy.

Some considerable time ago we called attention to the fact of the Antivaccination Society containing within itself an inner circle or letter-writing ring, which has special functions delegated to it in the way of propaganda. Mr. Alex. Wheeler, of Darlington, himself a well-known letter writer, took it upon him flatly to deny the existence of any such inner circle, but we had no difficulty in proving, from the evidence of Mr. J. T. Biggs of Leicester, the truth of our statement; and since that time, so far as we are aware, no denial has been attempted. It is the duty of every member of this ring to send to the public press at least one letter a month making an attack on vaccination.[1]

While medical men throughout the country are thoroughly acquainted with the value of and necessity for vaccination, most of them have no time and no desire to investigate all the misstatements and misrepresentations that may be made by its opponents in the public press and elsewhere. Similarly, public vaccinators and private practitioners are not infrequently met by objections to vaccination on the part of parents who have been misled by the efforts of the letter-writing ring or of local societies. Considering such facts, the Council of the British Medical Association has caused to be prepared two documents, a leaflet and a tract, both entitled "Facts about Small-pox and Vaccination." The leaflet consists simply of short definite statements, and is intended to be handed to parents or others raising objections to, or making inquiry regarding, vaccination. The tract repeats these statements, and also gives evidence in support of them. The evidence itself is set down in very concentrated form, and is little more than an indication of the superabundant proof that exists of the value and necessity of vaccination. It is thought, however, that in this concentrated form it may be useful in the hands of medical men who may have issued the leaflets to patients or entered on discussion in local newspapers. At the same time, a long list of marginal references is given for the guidance of those who may desire to go into the matter in greater detail. These references are not in every case to original sources of information, but rather to such writings as are conveniently available. It should be noted, with regard to some of the references, that where appendices to the Final Report of the Royal Commission are mentioned, these appendices are not to be looked for within the covers of the Final Report, but are published separately, and consist of special reports on outbreaks of small-pox in Gloucester, Warrington, Leicester, etc. To our readers in general we submit the tract as a contribution to the columns of the British Medical Journal:

1. The Mortality from Small-pox is much Less now than in Prevaccination Times.

Bernouilli, the famous mathematician, calculated that no fewer than 15,000,000 of human beings in the last century died of it every twenty-five years. Süssmilch, an eminent statistician of the time of Frederick I, estimated that nearly everyone had small-pox, and that it carried off a twelfth part of mankind. In London in 1660-79, of every 80,000 deaths, 4,170 were from small-pox. In Iceland in 1707-9, it killed 18,000 persons in a population of 50,000. In Glasgow, a large and very insanitary town, in 1783-1800, of 31,088 deaths or burials from all causes, 5,959 were due to small-pox. Chester, which on the other hand was described by an eminent authority of the time as a town of "almost incredible" healthiness,

Dr. Edwardes, in the *Practitioner*, May 1st, 1896.

Dr. McVail, *Vaccination Vindicated*, pp. 9 and 154. *Sanitation or Vaccination*, published by Jenner Society Gloucester.

[1] British Medical Journal, 1893, i, pp. 709 and 863.

had fewer than 15,000 inhabitants, and contained in the year 1775 only 1,060 persons, or 1 in 14, who had not had small-pox. In Kilmarnock, with 4,000 or 5,000 inhabitants in 1728-64, of every 1,000 children born alive 161 died of small-pox. In the village of Ware, in Hertfordshire, after an epidemic in 1772, only 302 persons in a population of 2,515 had never had the small-pox. Such examples could easily be added to. Great diminution of small-pox mortality occurred after the introduction of vaccination where small-pox inoculation never prevailed, and also in places where small-pox inoculation had prevailed.

Mr. C. E. Paget in *Transactions* Epidem. Soc., 1883-4.

Vaccination Vindicated, p. 25.

Royal Com. Report, vol. vi, p. 282.

2. The Greatest Diminution in the Small-pox Mortality is found in the Early Years of Life, in which there is most Vaccination.

In Geneva, in the period 1580-1760, during which there were 25,349 small-pox deaths, 961 of every 1,000 were under 10 years of age. In Kilmarnock, in 1728-64, of every 1,000 small-pox deaths 988 were under 10 years of age. In a total of 36,755 deaths from small-pox at all ages occurring in Kilmarnock, Edinburgh, Manchester, Warrington, Chester, Geneva, and the Hague in various prevaccination periods from 1580 onwards, 17,252 were under 2 years of age. In the present day, on the other hand, vaccination being performed in infancy and having its greatest protective influence in the earlier years of life, small-pox has to a great extent departed from children and transferred itself to later and less-protected ages. In London, in 1884, of 1,000 small-pox deaths, only 343 were under 10 years old. But this calculation includes both vaccinated and unvaccinated persons. In the vaccinated community the corresponding figures were not 343 but 86, and in the unvaccinated not 343 but 612. Among the unvaccinated the 612 is better than the Geneva 961, and the Kilmarnock 988 of prevaccination times. Vaccination, by lessening the opportunities for infection and increasing the intervals between epidemics, has helped even the unvaccinated. Yet among the unvaccinated in London, Leicester, Dewsbury, and Gloucester, small-pox is still to a great extent a disease of childhood.

Supplement to Local Government Board Report for 1884.

Royal Com. Report, vol. vi, p. 270.

Supplement to Local Government Board Report for 1884.

Royal Com. Final Report.

In prevaccination times, small-pox, measles, and whooping-cough were diseases of childhood. Measles and whooping-cough are still diseases of childhood, but small-pox, and especially fatal small pox, has been to a very remarkable extent driven from vaccinated childhood by means of vaccination. In the same way, what still remains of it can be driven from later periods of life by means of revaccination.

The manner in which small-pox differentiates between the vaccinated and unvaccinated is seen in the incidence of the disease on towns where it has recently prevailed. In Gloucester, for example, there had been extreme neglect of infantile vaccination, and the disease attacked a school and spread there, the scholars being children. In Leicester the infection was accidentally introduced into the scarlet fever hospital, and the children being unvaccinated, the disease began to spread there. The hospital was then emptied of scarlet fever, and no more cases were admitted, and in the town of Leicester scarlet fever cases increased to thousands. In Warrington, on the other hand, infantile vaccination had been well carried out, but there was a want of adult revaccination and the disease fastened on the workmen in a large ironworks. Then the workmen's committee in charge of the sick fund resolved "that any member who remains unrevaccinated after Monday, November 21st, 1892, shall not be entitled to any sick benefit should he be afflicted with small-pox;" and in consequence over 1,400 men were revaccinated by the works' doctor, and many others privately. The result was that after the middle of December there were only 12 cases among the employees, and the health officer of Warrington reported that these were among men who had refused revaccination or joined the works subsequently.

Royal Com. Final Report, Appendix VII

Appendix VI.

Appendix V.

Royal Com. Final Report.

The following table teaches a lesson that cannot easily be misread:

Percentage of Total Small-pox Deaths borne by Children under 10 Years of Age in Recent Outbreaks.

	Vaccination Default in Antecedent Years.	Percentage of Total Small-pox Deaths Borne by Children under 10 Years of Age.
Warrington	Very slight	22.5
Sheffield ...	Very slight	25.6
London ...	In 1883-91, 10 per cent.	36.8
Dewsbury...	In 1882-92, 32.3 per cent.	51.8
Gloucester..	In 1885-94, 10.6 to 81.5 per cent....	64.5
Leicester ...	In 1883-92, 43.8 to 80.1 per cent....	71.4*

* Or 66.6. The difference depends on the exclusion or inclusion of 3 deaths which occurred owing to the attack of several children in a scarlet fever ward through proximity to the small-pox hospital.

3. In Countries where there is much Vaccination and Revaccination relatively to the Population, there is little Small-pox.

In Prussia both vaccination and revaccination are compulsory, and small-pox mortality is almost abolished.[1] Beginning with the year 1816, it is found that in that country previous to the law of 1874 the small-pox death-rate was 309 per annum per million of population. Since then, ending with 1892, it has been 15, and in the last ten years of the period only 7. Moreover, the compulsory vaccination age is the second year of life, and investigation showed that in 1886-90 more than two-fifths of the few deaths that occurred from small-pox were under 2 years of age. In Austria, where vaccination is not compulsory, the rate instead of being 7 per million as in Prussia, was 458 in the same period. In Belgium also vaccination is not compulsory, and in 1875-84 it had a rate of 441 per million as compared with Prussia's 22 in the same period. In Italy since 1888 vaccination of infants has been compulsory, as has revaccination of children attending *public* schools. Already a great improvement is indicated. In 1881-90 the small-pox death-rate was 355 per million per annum, and in 1891-94 it was only 65. At the time of the European epidemic of 1870-75 Scotland, England, Sweden, and Bavaria had a compulsory vaccination law, and their small-pox rates per million in the worst years were 1,470, 1,830, 1,660, and 1,660 respectively. Prussia, Holland, and Austria had no general compulsory vaccination, and their rates in the worst years were 5,060, 5,490, and 6,180. Coming to 1877-86, with vaccination not compulsory in Austria, with only infantile vaccination compulsory in England, and with vaccination and revaccination compulsory in Prussia, the average death-rate per million from small-pox in the capitals of these three countries was in Vienna 670, in London 250, and in Berlin 10. In London the rate would have been less but for the disease spreading from the small-pox hospitals that it then contained.

Dr. Edwardes in *Practitioner*, May, 1896.

Dr. Sweeting in *Practitioner*, 1892.

Practitioner, May, 1896.

4. In Classes among which there is much Vaccination and Revaccination there is little Small-pox.

In epidemics, as in London, Sheffield, and Warrington, revaccinated postmen and policemen remained safe in the midst of exposure to infection. Sir Charles Dilke stated in 1883 that the average strength of the permanent postal service in London was 10,504 in 1870-80, and yet during all that period, including the great epidemic, there was not a single death from small-pox, and only 10 slight cases. In 1891-4, the employees of the General Post Office were over 55,000, yet there were only 17 cases of small-pox and 1 death, though postmen owing to the nature of their duties are specially exposed to infection.

In the army and navy, where a large majority of the men are successfully revaccinated, there is very little small-pox—very much less than before revaccination became so prevalent.

Royal Com. Final Report, ss. 340.

Royal Com. Final Report, ss. 331-9.

No persons are so terribly exposed to infectious diseases as are the nurses in fever and small-pox hospitals. As regards fever nurses, Dr. Collie, Medical Superintendent of Homerton

[1] As regards the Prussian vaccination laws see Brit. Med. Journ., 1894, vol. ii, pp. 12 and 13, and Dr. Edwardes in the *Practitioner* of May, 1896.

Hospital, declared that "the only way in which nurses become seasoned against fever is by taking the disease." At Homerton, Stockwell, and Liverpool Road Fever Hospitals, in the ten years ending 1881, 133 of the staff were attacked by various fevers, and 25 died. The Gateshead Medical Officer wrote: "Every nurse who has been more than a fortnight in the typhus wards has suffered from typhus." In Newcastle in 1882 only 5 out of 14 nurses escaped typhus, and among the 9 attacks there were 2 deaths. In the hospitals of the Metropolitan Asylums Board in 1887-95, no fewer than 704 of the attendants contracted scarlet fever, diphtheria, or enteric fever.

Vaccination Vindicated, p. 106.

Sir Richard Thorne in Royal Com. First Report, p. 38.

Royal Com. Final Report, s. 329.

How is it as regards small-pox? At Homerton Hospital in 1871-77, 366 persons were employed. All but 1 were revaccinated, and she was the only one who took small-pox. In the Highgate Hospital the Royal Commission found that since May, 1883, of 137 nurses and attendants, 30 had had small pox before entering the service. Of the other 107 all except the gardener were revaccinated, and the gardener was the only one who took small-pox. In the Sheffield hospitals, in the year ending March 31st, 1888, there were treated 1,798 small-pox patients. The total number of attendants, etc., was 161; of these, 18 had had small-pox previously and escaped attack; 63 had been vaccinated in infancy, of whom 6 were attacked and 1 died; the other 80 were successfully revaccinated, and not one contracted small-pox. In Leicester, however, where vaccination is neglected, some of the nurses refused revaccination. In the outbreak there the total hospital staff consisted of 40 persons; of these 14 had either had small-pox or had been revaccinated before the outbreak, and 20 were vaccinated owing to the outbreak. Among these 34 (14 and 20) 1 mild case occurred in a nurse whose revaccination was ten years old. Six of the 40 attendants, etc., appear to have been imbued with antivaccination opinions and refused revaccination. Only one of the 6 now needs any protection against small-pox; 5 of them took it and 1 died.

Royal Com. Final Report, s. 314, *et seq.*

5. In Places where Small-pox prevails it attacks a much Greater Proportion of the Unvaccinated than of the Vaccinated, especially where the Vaccinations are comparatively recent.

In the Homerton Small-pox Hospital in over 10,000 cases treated by Dr. Gayton nearly 21 per cent. were unvaccinated, and among children under 10 the unvaccinated were no less than 47.6 per cent. The unvaccinated at this time (1873-84) in the population from which the cases were drawn did not amount nearly to 21 per cent., much less to 47 per cent. On the other hand, there is one hospital (Highgate) which does not admit children under 7, and which draws its patients from a more universally vaccinated section of the population, and this hospital differed from others in London in that the percentage of unvaccinated patients was found to be much less, the difference being due to the difference in the ages of admitted cases and the difference in the prevalence of vaccination in the population from which cases came.

Royal Com. Final Report, s. 248, etc.

Dr. McVail, Epidem. Soc. *Transactions*, 1896-7.

6. In Houses invaded by Small-pox in the Course of an Outbreak not nearly so many of the Vaccinated Inmates are Attacked as of the Unvaccinated in Proportion to their Numbers.

Taking children under 10 years old in infected houses in Dewsbury, 10.2 per cent. of the vaccinated were attacked, and 50 8 per cent. of the unvaccinated; in Leicester, 2.5 per cent. of the vaccinated, and 35 per cent. of the unvaccinated; in Gloucester, 8.8 per cent. of the vaccinated, and 46 3 per cent. of the unvaccinated. These places are selected here because they are centres of antivaccination, as to which it cannot be truthfully alleged that the unvaccinated are weakly children whose vaccination has been postponed by medical certificate, or that the vaccinated and unvaccinated children belong to different classes, especially when they are compared in the households actually invaded by the disease. It is urged by antivaccinationists that vaccination does not protect against small-pox, but on the contrary tends to weaken the system against all disease; yet the vaccinated were attacked in much less proportion than the unvaccinated.

Royal Com. Final Report, ss. 234-247.

7. The Fatality-rate among Persons Attacked by Small-pox is much Greater, Age for Age, among the Unvaccinated than among Vaccinated.

Taking the 10,403 cases treated in Homerton Hospital in 1873-84, the deaths among the vaccinated 8,234, were 869 or 10.5 per cent., and among the unvaccinated 2,169 were 938, or 43.4 per cent. We shall see shortly that the deaths among the well-vaccinated were only 3 per cent. Taking the epidemics in three towns, Dewsbury, Leicester, and Gloucester, where vaccination has been neglected, we find that under 10 years of age, among 72 vaccinated children attacked, two died or 2.7 per cent., but among 961 unvaccinated children attacked 350 died, or 37.3 per cent. Taking persons over 10 years old, among 1,959 vaccinated persons attacked, there were 136 deaths, or 6.9 per cent., and among 331 unvaccinated persons there were 75 deaths, or 22.6 per cent. Again it is to be noted that as vaccination was practically optional in these towns, the unvaccinated children, according to antivaccination theories, should have been more able to resist death by small-pox than those who had been subjected to an operation which is alleged to weaken the system and render it more liable to disease and death.

Vaccination Vindicated, p. 88.

Royal Com. Final Report, ss. 202-230.

8. It cannot be Truthfully alleged that Independently of Vaccination Small-Pox is a Milder Disease now than in former Centuries.

If it were the case, as is sometimes argued by antivaccinationists, that the small-pox fatality-rate in the last century was about 18 per cent.[2] of persons attacked, then the much higher rate now occurring among the unvaccinated would show the disease to be much more severe now than then. But in the last century, as in the present century, the fatality varied greatly in different outbreaks, as does the fatality of scarlet fever, diphtheria, measles, etc., in the present century. And in epidemics in the present century, whether they be mild or severe, whether the fatalities be few or many, and whether there be much or little vaccination in the community, it is found that both the attack-rate and the fatality-rate are much greater in the unvaccinated than in the vaccinated in proportion to their numbers.

9. The Degree of Protection conferred by Vaccination corresponds to the Thoroughness with which the Operation has been performed, Three or Four Marks being much better than One or Two, and a Large Mark much better than a Small One.

In Dr. Gayton's 10,403 cases at the Homerton Hospital, 2,085 had good marks, and the fatality rate was 3 per cent.; 4,854 had indifferent marks, and the fatality rate was 9 per cent.; 1,295 were alleged to be vaccinated, but had no marks, and the fatality rate was 27 per cent.; and 2,169 were unvaccinated, and the fatality rate was 43 per cent. Taking "good" marks only, and attending to their numbers, Dr. Gayton found that with one mark the fatality rate was 4.1 per cent.; with two marks, 3.3 per cent.; with three marks, 2.3 per cent.; with four or more marks, 1.5 per cent. The cases on which these percentages are founded were 529, 649, 518, and 389 respectively. Taking nearly 7,000 cases observed in recent years, the Royal Commission found that the small-pox fatality rate in persons with one mark was 6.2 per cent.; with two marks, 5.8 per cent.; with three marks, 3.7 per cent.; and with four marks, 2.2 per cent.

Vaccination Vindicated, p. 88.

Royal Com. Final Report, ss. 272-298.

It is comparatively seldom that cases come to hospital with the small-pox eruption so far advanced and profuse as to obscure the vaccination marks, but in hospital statistics in this country a column is provided for "doubtful" cases, and if the figures for any large hospital be examined, it will be seen that the inclusion of such cases either as "vaccinated" or "unvaccinated" does not alter the lesson taught by the statistics.

[2] This rate is based mainly on a prevalence of the disease in certain towns in the West Riding of Yorkshire in certain years between 1720 and 1730, but no average either for a century or for a country can be calculated on such limited data. (*Vaccination Vindicated*, pp. 57-59.)

10. Sanitation Cannot Account for the Facts above Set Forth.

Whooping-cough and measles deaths still belong to childhood as in the last century, while small-pox deaths have been removed from childhood to later periods of life. How could sanitation account for this differentiation? If it be suggested that because sanitation confers a special benefit on children it may have altered the age incidence of small-pox, the answer is got by looking at facts. In Germany, as we have seen, vaccination is not compulsory till the second year, and over 40 per cent. of all the small-pox deaths occur under two years of age. In Scotland the vaccination age is six months, and children under six months make just about the same contribution (138 deaths per 1,000 deaths) to the total small-pox deaths as they did (139 deaths per 1,000) before the vaccination law was passed. But in the next half-year of life—the half year of vaccination—the contribution has fallen from 153 to 47. Surely this is vaccination and not sanitation. In a community attacked by small-pox, how could sanitation at home protect postmen going from door to door day after day in infected districts? In Leicester, how could sanitation account for the revaccinated nurses escaping small-pox, and the nurses who had refused revaccination taking small-pox? How could sanitation cause small-pox to pass over vaccinated children and seize on unvaccinated children in houses invaded by small-pox in Dewsbury and Leicester and Gloucester? How can sanitation have caused the fatality of small-pox cases to be much less among the vaccinated than among the unvaccinated in these towns, especially if vaccination weakens the system and makes it less resistant to disease as is alleged by antivaccinationists? How could sanitation cause children with three or four vaccination marks to have a less fatality from small-pox than children with one or two vaccination marks? In Glasgow, while sanitation was going from bad to worse in the early part of the century, vaccination was introduced and small-pox underwent an enormous diminution, though hospitals and isolation and disinfection were entirely out of the question. In Gloucester, vaccination had been neglected, and in 1891 the Secretary to the Antivaccination League declared to the Royal Commission that Gloucester was a very clean town, and had always been well abreast of sanitary improvements, and that its death-rate was very low. The Board of Guardians also wrote to the Commission on the same lines. But small-pox came, and the town suffered from a terrible epidemic, and ever since then the antivaccinationists have been declaring that there was a great want of sanitation in Gloucester. What was wanting was vaccination.

Royal Com. Final Report, s. 174.

Sanitation or Vaccination. Jenner Society's publications.

Royal Com. Reports, vol. vi, p. 11.

Vaccination Inquirer. Dec. 1st, 1889.

For convenience the Registrar-General many years ago grouped together places whose death-rate was low, and classified them as "healthy districts." They were nearly all found to be sparsely populated rural districts where, though houses may be damp and overcrowded, and other insanitary conditions prevail, there is little opportunity for infection. In such places, in spite of bad sanitation, there is a lower death-rate than in towns, because, independently of sanitary effort, the atmosphere is purer. Also there is less small-pox, and it comes at a later average age, because there is less facility for spread of infection on account of the smallness of the population and the distance of house from house and village from village. In such circumstances, though there is little sanitary effort, there is little small-pox, and unvaccinated persons have a better chance of escaping small pox attacks than they have in large towns where sanitary arrangements are more elaborate.

11. Though Isolation of Small-pox Cases in Hospitals is a Useful Auxiliary to Vaccination it is no Substitute for it.

In an unvaccinated nation it would be utterly impracticable to provide sufficient small-pox hospitals. For whooping cough and measles hospital accommodation has not been seriously attempted, though these diseases cause an enormous mortality. Where, owing to vaccination, liability to small-pox is limited, hospitals are very useful and help to give time for general revaccination But in an unprotected community their almost certain breakdown is obvious. Who would have attended to the sick in Leicester if all nurses had had the same experience as the nurses who refused revaccination? In an unprotected community instead of small-pox being limited, it would spread in rapidly widening circles. Where a person protects himself by vaccination and revaccination he can defy small pox. He carries his protection with him wherever he goes and a father can obtain protection both for himself and his family. Even if isolation in hospitals were made more stringently compulsory than vaccination has ever been in this country there could be no complete security. The protection of the individual might fail at any moment. It would depend not on himself but on other people. His cordon of protection would be a chain the measure of whose strength would be its feeblest link, and over not one link would he have efficient control. Failure of parents to observe the symptoms of illness; failure to call in a doctor; failure of the doctor to recognise small-pox; failure in promptitude of removal; inadequacy of hospital accommodation; insufficiency of disinfection of persons and things—these would be among the risks to which even a law of compulsory isolation would leave him exposed. Obviously the risk of collapse of voluntary isolation would be much greater.

12. Vaccination is very Safe.

Nothing done by human beings is entirely without risk, but the risks of vaccination have been grossly exaggerated. Some of the earliest antivaccinationists held that the countenance of a vaccinated child might be transformed so as to assume "the visage of a cow." Later on, in the Fifties, vaccination was accused of making people bald-headed, short-sighted, lazy, and of causing degeneracy in music, painting, oratory, poetry, etc. Still later, the habit has been to get statistical returns of increasing and decreasing diseases from the Registrar-General, and to attribute the increasing diseases to vaccination, and to use the decreasing diseases to illustrate the view that small-pox also might decrease without vaccination. But a disease may be increasing at one time and decreasing at another. Thus at one time cholera and enteric fever and scarlet fever were attributed to vaccination, but when these diseases began to decrease their decrease was, and still is, held to show the needlessness of vaccination.

Vaccination Vindicated, pp. 115, 117, 123-7.

One foul disease in particular has been blamed on vaccination. It happens that since Leicester gave up vaccination that disease has increased there much more rapidly among infants than in the rest of England. So also erysipelas, while it decreased in England by 16 per cent., increased in Leicester by 41 per cent. Similarly, diarrhœa, dysentery, and bronchitis, all of which have been blamed to vaccination, increased much more in Leicester than in England. The periods under comparison are 1863-67 and 1883-87. It is not to be supposed that the increase in these diseases is due to want of vaccination; but if, instead of increasing, they had diminished in Leicester, it is undeniable that their diminution would have been attributed by antivaccinationists to diminution in vaccination, just as increase of many sorts of disease has been attributed by them to vaccination where vaccination is not neglected, as in Leicester. The Royal Commission made most careful search for injuries resulting from vaccination, and, after the fullest consideration, arrived at the deliberate conclusion that such injuries are "insignificant" and "diminishing," and can be still further diminished. So insignificant are they that vaccination is nowhere more nearly universal than in the families of medical men, who love their children as other men do, and who know much better than other men can do the exceeding safety of vaccination.

Royal Com. Final Report, s. 390.

Royal Com. Final Report, s. 434.

13. Calf Lymph is now available to Boards of Guardians, etc., for the Vaccination of every Child in the Country.

Reverting to the foul disease which has formed the principal allegation by antivaccinationists, it is to be noted that the use of calf lymph makes its occurrence through vaccination an absolute impossibility, as calves are not subject to that disease.

The following is the text of the leaflet as to which further particulars are given above:

FACTS ABOUT SMALL-POX AND VACCINATION.

Issued by the Council of the British Medical Association, December, 1897.

1.—The mortality from small-pox is much less now than in prevaccination times.

2.—The greatest diminution in the small-pox mortality is found in the early years of life, in which there is most vaccination.

3.—In countries where there is much vaccination and revaccination relatively to the population, there is little small-pox.

4.—In classes among which there is much vaccination and revaccination there is little small-pox.

5.—In places where small-pox prevails it attacks a much greater proportion of the unvaccinated than of the vaccinated, especially where the vaccinations are comparatively recent.

6.—In houses invaded by small-pox in the course of an outbreak not nearly so many of the vaccinated inmates are attacked as of the unvaccinated in proportion to their numbers.

7.—The fatality-rate among persons attacked by small-pox is much greater, age for age, among the unvaccinated than among the vaccinated.

8.—It cannot be truthfully alleged that independently of vaccination small-pox is a milder disease now than in former centuries.

9.—The degree of protection conferred by vaccination corresponds to the thoroughness with which the operation has been performed, three or four marks being much better than one or two, and a large mark much better than a small one.

10.—Sanitation cannot account for the facts above set forth.

11.—Though isolation of small-pox cases in hospitals is a useful auxiliary to vaccination it is no substitute for it.

12.—Vaccination is very safe.

13.—Calf lymph is now available to boards of guardians, etc., for the vaccination of every child in this country.

THE MEDICAL PROFESSION AND ADVERTISING.

Introductory.

From time to time we receive communications from correspondents with regard to the prevalence within the ranks of our profession of various modes of advertising, and during the course of the year the number of such complaints is altogether very large. In the medical, as in the other learned professions, it has always been considered that the attempt by advertisement to seek to assert an assumed superiority, and so to obtain an advantage over fellow practitioners, is to act in an improper manner, and that such conduct merits reprobation, if not punishment.

Prevalence of Advertising.

That there is a reprehensible amount of professional advertising no one will deny, though few of the chief culprits will be prepared to admit the impeachment. As we have said, individual instances are from time to time brought to our notice. Other cases engage the consideration of the councils of the Branches of the Association, or of their ethical committees, and in many cases with the most satisfactory results. Many cases come before the General Practitioners and Ethical Committee of the British Medical Association, while others are noted in the columns of the British Medical Journal. On the whole, however, we are glad to be able to express the opinion that the medical profession is in the main very clean handed in this respect, and that the loud complaints sometimes heard of the prevalence of this offence are elicited rather by the just indignation which a few instances inspire, than by the relative number of cases in proportion to the number of members of the profession.

While expressing this opinion, we would guard ourselves against appearing to imply that there is not great cause for watchfulness, and for the exercise by the medical corporations of any disciplinary powers they may possess over their diplomates who may be guilty of offences of this nature. On the contrary, it seems clear that these powers, which are very considerable, should be systematically put in force, and that where necessary ampler powers should be obtained and arrangements made for employing them more readily and more uniformly than is at present the case.[1]

Diversity of Cases.

When we come to consider offences of this nature in detail, we find that they differ greatly in degree. At one end of the scale are such practices as touting by means of canvassers, printed cards, or notices in the public press, and at the other such comparatively venial matters as an over-large brass plate or a florid and rather too widely circulated notice of change of address. Between these two extremes is a mass of cases, of which a large number would be at once condemned and an equally large number passed over by the majority of the profession; but in addition there remain, and always will remain, many about the ethical nature of which it is probable that no two men, however apparently alike in mental capacity and judical habits of thought, would entirely agree.

Dr. Radcliffe Crocker, in an address given at University College at the opening of the medical session 1887-88, dealt with some aspects of this subject, and sketched out a classification of cases. In speaking of "Direct Advertisement," he expressed the opinion that very few went so far as to advertise directly, as they thereby ran too much risk of being expelled from the profession. It is not often, indeed, that we see a direct advertisement—"a card" it is called—in the newspapers; but we do sometimes, and an instance has been quite recently brought to our notice. Not many years ago there seemed to be quite an epidemic of handbills, such as the touting coal merchant or greengrocer pokes under the front door. These gave the name and address, sometimes the address only, of a practitioner who thus announced his willingness to treat patients at low fees. At present these announcements, when they are made—and we are glad to think that the practice, never extensive, is becoming less common—would seem to be generally printed on neat cards such as the milliner and the mineral water dealer mostly affect.

We might add to this list, but it is really hardly worth while, for the mere mention of such practices is sufficient to condemn them. It is a standing wonder that the medical corporations permit them to continue even in the rare cases in which they are still resorted to.

Dr. Crocker's next class is more heterogeneous and less easy to deal with. It is that of the "Advertiser Circumstantial," who while appearing to praise something else is really putting himself forward. As the most flagrant instances, he mentioned men who lend their aid in puffing sundry trade articles, either directly by writing testimonials to the vendors or indirectly by allowing extracts from their works to be reprinted by the vendors of drugs, foods, or hygienic articles and sent round as circulars or left in public places. Another plan is to write works as "bread and butter" books, of more or less pretension, on common diseases such as "gout," or some fashionable or new treatment such as "massage," to give the impression that the writer is an authority on the subject.[2] To this list we may add such practices as: The long continued advertisement of works in the medical press with a list of all the appointments that have been held and the honours gained by the talented authors. The circulation broadcast through the profession and not merely to the writer's friends or men known to be specially interested in the subject, of pamphlets containing more or less useful or scientific information. The adver-

[1] The Royal College of Physicians of London exercises certain control over its diplomates through its Censors' Board, and the Royal College of Surgeons in England through a disciplinary committee of its Council. These bodies investigate the cases brought to their notice, but both might probably with advantage have greater powers of initiating inquiries. The Universities exercise practically no control over the ethical conduct of their medical graduates.

[2] The resolution of the Royal College of Physicians on this subject is as follows: "That the system of extensively advertising medical works and the custom of giving, whether for publication or not, laudatory certificates of medicinal and other preparations, or of medical or surgical appliances, is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians."

tisement of health lectures or ambulance lectures all over the walls of a town with the lecturer's name, degrees, and appointments. The issue of frequent bulletins signed by medical attendant or attendants with regard to the illness of some person of general or local celebrity; the press notice by the industrious reporter of "the care and attention of Dr. So-and-So to our distinguished fellow townsman"; the circulation broadcast of notices of the admission of a new partner or of a change of address. To this list, which does not pretend to be complete but to afford rather instances of classes of advertisement, ought perhaps to be added the use of the red lamp, once almost universal in many neighbourhoods but now condemned by many.

There is one very special case to which our attention is sometimes called: it is that which occurs when a contest arises for an appointment on the medical staff of a hospital where the selection is made by the votes of the whole body of governors. A perfectly well-intentioned and honourable man may have a form of advertisement thus forced upon him if, as sometimes the case, canvassing both personally and by copies of testimonials is not only allowed but expected, and is, in fact, necessary to any person seeking the appointment.

We hear sometimes of medical men being condemned by their neighbours and rivals in practice for being on the town council, for taking the lead in local or parliamentary politics, for singing in public for charities, and even for having a wife who takes a prominent position in society; indeed, for anything which may seem to the aggrieved person to put him in a position of inferiority.

The Criterion.

It seems clear that some of the actions to which we have just referred are in themselves harmless, and only become unprofessional when it is obvious that they are employed deliberately for unfair ends. It must also be maintained that the fact of a man being a registered medical practitioner is not, and cannot be, a bar to his taking a position in society, local government, or any other sphere which is open to his fellow citizens; in fact, the very reverse is often the case when his professional status indicates him as the fittest person for such positions.

Some critics of the actions of their fellows are apt to confuse two very different things—good taste and ethics—and to forget that it is possible to offend grievously against the canons of the former without actually transgressing the rules of the latter.

Remedies.

What, then, should be our attitude in relation to professional advertising?

We would in the first place deprecate any attempt to define too strictly by rules or by-laws what actions are and what are not permissible to members of the profession as we hold that any such rules only offer a premium to their ingenious evader, and that a man who sails as close to the wind as he dare in procuring notoriety will not be deterred by any such code.

Some good might perhaps be done, though it is impossible to feel very sanguine about it, by warnings addressed to senior students by their teachers, and by the presiding officer at the time their diplomas are granted. The fact is, however, that it is not when a man is flushed with hope on entry to the profession, but later on, when he finds failure staring him in the face, that he is disposed to listen to the voice of the tempter, and indulge in the more blatant forms of advertising

With regard to the grosser cases, those which according to the classification above quoted are instances of "direct advertising," it appears to be the duty of the medical licensing bodies to exercise the disciplinary powers which they possess, or to take immediate steps to obtain such powers. In cases of recalcitrancy, and in cases in which the person offending is not a diplomate of a medical corporation having and exercising disciplinary powers, we conceive it to be the duty of the General Medical Council to exercise its penal powers, and we are disposed to think that certain practices ought to be distinctly condemned in principle by that Council. As an instance we may refer to the touting for patients by means of printed notices or paid canvassers.

With regard to those forms which have been classified as "circumstantial advertising," that form which consists of giving testimonials to trade articles, proprietary drugs, and so forth, ought to be entirely condemned, and instances of such errors should be brought to the notice of the governing body of the medical corporation to which the offender belongs, by collective action if possible, on the part of other diplomates of the same body. Under other circumstances similar representations might be made to the council of the Branch of the British Medical Association to which the offender belongs, or if he be not a member of a Branch, but yet a member of the Association, the matter might be brought to the notice of the General Practitioners and Ethical Committee of the Association. These cases must be judged on their merits, and in flagrant cases the Association might certainly exercise its *ultimo ratio* of expulsion after due representation and remonstrance had failed.

With regard to the advertising and canvassing for hospital appointments, we have consistently urged that the true remedy for this custom, which is objectionable in any case and very liable to abuse, is that the medical staffs of the hospitals should urge upon the governing body the propriety of delegating the selection of a suitable candidate to the medical staff, or to a special selection committee upon which the medical staff is fully represented.

In all doubtful matters a friendly opinion should be, if possible, obtained as to any particular case, and for this purpose the councils of the Branches, or their ethical committees when such have been appointed, or the General Practitioners and Ethical Committee, are also available.

When the offence is principally or wholly against good taste we must trust to the wider diffusion of a right feeling on such matters and the appreciation by the public of the fact that whatever degrades the medical profession must in the long run be injurious to its patients.

THE MEDICAL DEFENCE UNION.

The annual general meeting of the Medical Defence Union was held on February 28th at St. Martin's Town Hall. The chair was taken by the President, Dr. W. S. A. Griffith.

The annual report and statement of accounts for the year 1897 was presented. The report stated that the organisation of the Union continued to work smoothly, and that in all cases involving a professional principle brought under notice advice was given either by the Council or the Executive Committee, which met at frequent intervals. Regret was expressed at the loss of the valuable services of Mr. Victor Horsley, who upon his election to the General Medical Council had been compelled to resign the office of President of the Council. His place had been filled by Dr. Walter Griffith, who had been a Vice-President and member of the Council for many years, and was thus familiar with the work of the Union, so that the continuity of action would not be broken. Mr. George Brown had also resigned his Vice-Presidentship, owing to his election as a direct representative, and Dr. Granville Bantock, who had retired from the office of Treasurer after acting in that capacity for many years, had been succeeded by Dr. J. A. Masters. Though membership of the Union had steadily increased, it was still far below the number which ought to be obtained, and the Council had to lament the large number of members who were in arrear with subscriptions. It was stated to be unfortunate that the strength of the profession should be wasted by a multiplicity of small organisations, each endeavouring to obtain for its members defence and protection. The scheme which proposed that the British Medical Association should take over defence duties was discussed at some length in the report:

> In theory it is held that a Society like the British Medical Association, with its large funds and organisation, could perform the work of medical defence efficiently and with success; but in practice the position is not quite so clear. Our Union, with its membership of about 4,000, requires the services of its Council once in each month, and of its Executive Committee nearly every week, in order that the numerous cases brought up for consideration should be dealt with promptly and efficiently. Seven hundred cases have been dealt with, for instance, this year, or a proportion of one case for every five members. To multiply this by the number of members of the Association who would compulsorily join the Defence Branch, and whose cases would have to be considered by the Council, would entail a very considerable expenditure of time on the part of the members acting as the executive, who, if unpaid, would find the attendance seriously interfere with their ordinary professional avocations; and, if paid, would

naturally require to be properly reimbursed for loss of practice, and the sum of money required would be considerable. Again, the work must be entrusted to those who thoroughly understand the duties, and it would be difficult, apart from those who have had the training upon the Council of the Union, to find these. At least one executive officer must be obtained who would be required by the multiplicity of cases to give up the whole of his time to the work, and for this, again, considerable expense would be involved. Decentralisation in matters of medical defence has always been proved to be a mistake: the cases must be dealt with by one responsible body, and that responsibility cannot be shared by Branch Councils. Even in legal details it has been found by the Union that where solicitors, other than those appointed by the Council, and in touch with them and with special training, have been employed the result has not been satisfactory. It is quite clear that the British Medical Association, if it undertakes the duties of medical defence, will have no light task before it even in formulating its administration, and in obtaining the absolutely necessary skilled assistance. A considerable time must elapse, too, before any alteration of the Memorandum of Association, as well as the necessary amendments of the Articles, can be carried through the courts of law. It behoves the members of the Union to think well before they throw over the actual substance of the protection afforded them by their own Society for the wholly shadowy defence proposed by certain members of the Association To leave a union which has for so long done its duty, and which has earned such a large measure of success for an uncertainty would be foolish in the extreme. If, later on, the British Medical Association can find the men to carry on more efficiently the duties of medical defence, then the Council of the Union will call the members together, and ask them to decide what shall be done with the Society to which they belong. No medical defence machinery can ever be worked satisfactorily which cannot be set in motion promptly when promptness is required; there must be no "circumlocution drag" upon the wheels, and no "red-tapeism" to check the pistons and motive parts of the works, and so deaden or interfere with its free moving power. In the opinion of the Council, it would be far more to the benefit of the profession were the British Medical Association to extend its protective hand to the collective defence of the profession by prosecutions on a large scale of unqualified practitioners, and by the promotion and assisting in carrying through Parliament of Bills for the general advancement of the interests of registered practitioners. By doing these things and leaving the work of individual defence to the Union which understands it, and has done it well for many years, the profession would be benefited to a far greater degree. It is to be hoped that a wise caution will be exercised by the members of the Association, and that they will seriously consider the *pros* and *cons* of this very important question.

With regard to the regulations as to unqualified assistants recently issued by the General Medical Council, the report observed that they would throw open the position of assistant to men newly qualified, and would at once be conducive to the well-being of those who had earned their diplomas after due curriculum at recognised hospitals. A hope was expressed that the status of the profession would be improved, and that no more cases of covering would have to be reported to the General Medical Council. The new regulations would also have the effect of making medical students realise the importance of "getting through" their examinations as quickly as possible, as there would be no opportunities in future for making up for lost time by taking unqualified assistantships, "with time for reading." The report of the legal adviser showed that there had been a marked increase in the work of the Union, upwards of 180 cases having been legally advised upon, and conducted by him in the course of the year 1897. Instances were given of important cases defended, as well as a long schedule of cases dealt with either by the legal adviser or by the Council or Executive Committee of the Union. The report of the Council concluded with an expression of thanks to the Royal Colleges of Physicians and Surgeons, to the Society of Apothecaries, to the Pharmaceutical Society, and to the Executive of the General Medical Council. In all instances in which these bodies had been requested to deal with any matters the Union officials had met with the greatest consideration and courtesy.

The CHAIRMAN, in moving the adoption of the report, first dealt with the question of arrears, to which the Council had lately given a great deal of consideration. Joined as they were in medical and mutual defence, it seemed almost impossible to take compulsory steps against members in order to obtain their arrears, yet it appeared that nothing short of that strong course would effect a satisfactory solution of the difficulty. The increased number of cases during the year had been conducted by the solicitor at a less expense. It was quite certain that the result of the two important actions of Kettle *v.* Brisbane and Coe *v.* Hairsine would be of a far-reaching character, and would have a deterrent effect to speculative actions being taken up on the part of a certain class of the legal profession. A number of important cases were now in the hands of the solicitor, and there appeared to be no prospect of any diminution in the amount of work. The members would feel a very great debt of gratitude to the honorary members of the Council if they had any idea of the amount of work which they accomplished. The Union possessed a long list of vice-presidents, and it had been thought that if these vice-presidents would not feel any offence, after they had held office for two or three years, in making room for others, it would enable a larger number of members to circulate through the Council and learn a little of the work which it was doing for the benefit of the Union.

Dr. STAMFORD FELCE, in seconding the motion, congratulated the solicitor and the members on the fact that during the past year an adverse decision had not been given in any case that the Union had taken up. The number of cases that collapsed directly it was known that the matter had been taken up by the Medical Defence Union was remarkable, and the larger the Union grew the more that would be the case.

Replying to a question from Dr. BOUSFIELD regarding amalgamation with another Society,

The CHAIRMAN said he was certain that the feelings of antagonism were too strong for the Union to waste its time on such matters. If there was a reasonable and possible chance of amalgamation, however, the Union would embrace it; but he thought the offer should come from the other Society.

The motion for the adoption of the report was then unanimously carried.

Drs. Griffith, Roche Lynch, and Stamford Felce, the retiring members of Council, were re-elected; the accounts, as audited by Mr. Hardy, the auditor, were received, adopted, and entered on the minutes; and Mr. Hardy was elected Auditor for the current year. A sum of £100 was also allotted *pro ratâ* to the provincial members of the Council as payment or part payment of their railway fares whilst attending Council and Executive meetings.

The CHAIRMAN then moved:

That the members of the Union in general meeting assembled do hereby express their great appreciation of the valuable work done for the Union by Mr. Victor Horsley whilst their President for so many years, and do also congratulate him most heartily upon his election to the General Medical Council.

Dr. ROCHE LYNCH, in seconding the motion, said that Mr. Victor Horsley was a unique man in a peculiar situation, and to have done his work in the way in which it had been accomplished was a boon, not only to the medical profession generally, but to the Medical Defence Union.

Dr. HALL proposed the following addition to the resolution:

The members of the Union further desire to express their sincere sympathy with Mr. Horsley in the attacks that have been made upon him in the discharge of his duties to his constituents, and to assure him of the hearty support of the Union.

Dr. BOUSFIELD seconded the addition, which, together with the original resolution, was unanimously adopted.

The meeting then terminated.

THE YARROW HOME, BROADSTAIRS.—Since the opening of this institution, a little over two years ago, 1,299 children have been benefited by a stay there. This home differs from the large number of convalescent homes in many parts of the country in not being intended for the very poor, but for children whose parents cannot afford to send them to the seaside entirely at their own expense. The home is endowed, but parents are required to pay 5s. a week towards the maintenance of the child and the railway fare (1s. 9d.) from London. We are informed by the Secretary of the Home that, although during the summer months the applications for admission are far in excess of the capabilities of the institution, yet during the winter months it is only partially filled, and the trustees being most anxious to maintain its utility equally throughout the year point out that the home is far from being an undesirable resort during the inclement part of the year. The building is thoroughly warmed and ventilated, and there are play corridors in the buildings as well as playgrounds without. There is no doubt that if this excellent institution were as well known as it deserves to be as a winter resort it would be equally full during the whole year. The London offices are at 73A, Queen Victoria Street, E.C.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 5TH, 1898.

"L.M." OR NURSE.

Dr. C. J. Cullingworth has contributed to the *Contemporary Review* for March an article on the Registration of Midwives, in which he states once more, but with commendable clearness and brevity, the arguments advanced to prove the need for some system of registration of midwives. As to the need of securing an effective control over midwives in their practice, everybody will be disposed to agree. Dr. Cullingworth admits the magnitude of the subject from the mere numerical point of view. He estimates that "from one half to three quarters of the confinements in England and Wales are attended by midwives and not by doctors." As there are, or were, in the decennium 1881-90 about 900,000 births a year in England and Wales, this would mean that from 450,000 to 675,000 women were attended yearly by midwives. As to the number of midwives, Dr. Cullingworth quotes Sir James Stansfeld's estimate of 10,000, but expresses the opinion that the number is now much larger. Taking the lowest estimate of the number of midwives and the highest estimate of the number of cases attended by them, we get an average of 67 or 68 cases for each midwife, which certainly seems low, even if we allow a considerable addition for stillbirths of which the Registrar-General knows nothing. Dr. Cullingworth admits that many women of the poorer classes will continue to employ "the old-fashioned and untrained midwife." The number of cases which a midwife in active work will attend in the course of a year must often be much greater than 68, and, if that be so, there must be a large number of women, so-called midwives, who attend many fewer than 68. These are, there can be no doubt, just the "old-fashioned and untrained midwives" of whom Dr. Cullingworth speaks—persons half monthly nurse and part midwife, not good as monthly nurses, for they think they know too much, and wholly bad as practitioners of midwifery for they certainly know too little. Dr. Cullingworth no doubt is fully justified in attributing to them much of the puerperal fever and other accidents of childbirth which give rise to the terrible mortality of 4.73 mothers per 1,000 births. The Midwives Registration Bill now before Parliament would forbid these women to call themselves midwives if it could be proved that they had done so (Clause III, 3), but even Dr. Cullingworth is not sanguine enough to hope that the Bill will stop their practice, at any rate for the present, although he expects that it will do so in the future.

Dr. Cullingworth tells us "that the object of the Bill is not to create a new order of midwifery practitioners." We accept that statement fully as a description of the motives of those who are promoting the Bill. It will, however, be a distinct recognition by Parliament of an order of midwifery practitioners which has hitherto had no legal position. And unfortunately good intentions in the minds of promoters count for absolutely nothing when once a Bill has become an Act of Parliament. Indeed, in the long run they are rather worse than useless, because they are apt to blind the most candid to the modes of evading the new law which will probably, or rather certainly, be sought by unprincipled persons. Once a Bill becomes an Act it is no longer a question of intentions, but of the strict legal interpretation of the *ipsissima verba*. Now Clause III (4), as we have already pointed out, would enact that the certificate of registration under the Midwives Registration Act "shall not confer upon any woman any right or title to be registered under the Medical Acts, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner *in medicine or surgery*." (The italics are ours.) But it does not say that she may not call herself a licentiate in midwifery, and if she chooses to do so, will there be power in any body, either in the General Medical Council or in the Midwives Board, to punish her or so doing? If not, it seems to be as clear as noonday that midwives or some of them will call themselves "Licentiates in Midwifery." They will put "L.M." on their cards and on their doorplates, and the less instructed members of the public may well be excused if they imagine that the title is a medical qualification when they see it held out by a woman who practises midwifery, and, as is so commonly the case, takes charge of infants suffering from various ailments during the early days of life. This is all the more likely to occur since "Licentiate in Midwifery" (L.M.) is already a recognised medical title. Who is to prevent the midwife from styling herself "Licentiate in Midwifery"? The Midwives' Board? But the Board will have to administer Clause III (4). Will it be able to penalise a woman registered as a midwife for assuming the title of L.M.?

It is argued that parturition is a natural process. But this is really to trail the tail of the coat, for nobody has ever denied it. If the midwife is merely to assist a woman in childbirth to accomplish a physiological act, she is a nurse, and should be so termed, and not allowed to flourish the title of Licentiate in Midwifery to the confusion of the public mind.

This is what the Bill of the Parliamentary Bills Committee proposes should be done. It would forbid any woman not registered to make use of the name or title of "obstetric nurse," "midwifery nurse," or "midwife," and would distinctly provide that a person registered under the Act should not assume "any name, title, or designation implying that she is

by law recognised as qualified to practise *medicine, surgery, or midwifery.*" (The italics are ours.)

INQUIRY OFFICERS AT HOSPITALS.

The thoroughgoing opponents of a Central Hospital Board for London base their opposition on the very plain and intelligible ground that the present governing bodies of the various hospitals are the masters and managers of their own institutions, and will no more tolerate interference from outside than any private person would in the management of his own property. But there is an obvious flaw in the analogy. A man is master of his own house only as long as he is independent. If he appeals to his friends for assistance, he must submit to their conditions, or dispense with their aid. So with our hospitals. So long as their governing bodies can provide the requisite income, those bodies may claim exemption from outside interference. If they ask for or accept the assistance of public funds, they must expect that the administrators of those funds will claim the right of laying down the conditions under which alone that assistance shall be given. And this is what we see done both by the Prince of Wales's and the Hospital Sunday Fund. The former body, as we reminded our readers in the British Medical Journal of February 19th, is claiming the right of personally visiting each hospital in the metropolis, and judging of their relative merits. The Metropolitan Sunday Fund announces that in the distribution of its gifts it will lay great stress on the consideration whether or no the hospital keeps an inquiry officer to investigate the circumstances of the applicants.

With regard to the proposal of the Committee of the Prince's Fund, we tried to show how much good might be done by a thorough inquiry carried out by competent persons. We would now ask our readers to reflect on the Sunday Fund's proposal in a similar spirit. Far from denying the need of inquiry, we have always strenuously asserted it. But that inquiry, like the other, ought to be thorough, and conducted by competent persons, if it is to do good and not harm. Let us consider the elements of the problem before us. Take the out-patient room of a large hospital under the present system—if that word is not a misnomer. There are, say, 70, 80, or 100 men, women, and children applying. How can any one officer inquire even into their pecuniary circumstances? And when he has made his inquiries, how is the truth of the replies to be ascertained? Yet the pecuniary circumstances of the applicant are but a part, and not the most important part, of the question. The medical circumstances of the case are of even greater importance in determining the fitness of the applicant. This is a matter which cannot be judged of by the ordinary "inquiry officer."

On this subject we may quote from a letter lately received from a hospital officer. He writes: "We have had the matter under consideration at the ——— Hospital, and we came to the conclusion that, as the abuse of out-patient departments resided quite as much, or more, in the admission of cases medically unsuitable as in the admission of those financially unsuitable, the best course was to appoint a qualified and registered medical practitioner as a casualty officer, with instructions to select the cases in the first place on medical grounds. If any cases appear to him *primâ facie* to be in a financial position to pay medical fees, he will be instructed to refer the applicant to the secretary of the hospital for further inquiry in this respect."

The same course, we believe, is followed at other hospitals, and it is much better than the mere inquiry into wages, which is all that the Hospital Sunday Fund seems to contemplate.

The bulk of the enormous number who figure as "out-patients" in the reports of our hospitals, general and special, consist of casual cases which are seen once, and would in all probability never come again, whether any inquiry is made into their circumstances or no. At any rate, if these cases do not form the numerical majority they form a very large proportion. It cannot be worth while to inquire into their circumstances after they have once been seen. But is it worth while to see them at all? And if so, ought they to be seen at a hospital? It is sometimes said to be intolerable that any poor person should be turned away from the doors of a hospital. Yet what is done in that very large section of London in which there are no hospitals—a section larger, we believe, than the area in which hospitals are accessible? What good is done by such enormous "casualty" departments as are open, for example, at St. Bartholomew's? No such "omnium gatherums" are found necessary in other parts of the town quite as crowded, and quite as poor, where no hospital provision has been made.

Medical charity is far more important than pecuniary alms. We have now been made fully aware of the evil consequences of dispensing money without previous inquiry. Why, then, should we throw away, broadcast, the rich treasures of medical and surgical relief without any attempt to discover whether or no they will be properly bestowed? The inquiry, when made, ought to be a serious and practical one. We ought to inquire into the medical as well as the pecuniary aspect of the case; and all the cases ought to be investigated. The "inquiry officer" system cannot be applied, in large institutions, to more than a small proportion of the cases, and even in these it does not exhaust the question; an applicant may be perfectly fit pecuniarily, but quite unfit medically.

And here we may say, in reply to our esteemed correspondent Mr. Horder, that in saying that the Hospital Reform Association had fixed its attention strongly on the pecuniary abuses of the out-patient departments, we did not mean to imply that they had not considered the medical abuses, for we are well aware that they have. But the result of their action has been to draw public attention strongly to the pecuniary aspect of the matter—too strongly, as we think—and this is, in our point of view, somewhat to be regretted, though it is only a slight set-off to much good work done by the Association.

The present position of the question shows the absolute necessity for some central authority, composed of members of the hospitals themselves interested, knowing what inquiries should be made and how to make them. It shows also the immense risks which the hospitals are running of falling under the dominion of bodies, no doubt most benevolent and well meaning, but who have never shown yet that they possess the knowledge which is essential to the proper distribution of large funds.

In connection with this matter we cannot do better than call attention to the report of the Royal Free Hospital. That institution, anxious to reform any abuses in its out-patient department, has for the last three years availed itself of the services of a lady almoner, introduced to them by the Charity Organisation Society. This wise step reduced their numbers last year from 38,892 to 35,118, or, in other words, relieved the charity of the burden of 3,774 improper applicants. If so much can be done by an inquiry into the pecuniary aspect only of the question, how great an improvement might be effected by a thorough investigation of its medical aspect also.

In perusing the same report, we see that the Royal Free Hospital welcomes the formation of the Central Hospital Council - that is, the Council lately constituted by the hospitals with medical schools attached. So do we, but only because we hope that the Council (which has taken power to admit fresh hospitals into its body) will gradually develop into a Board on which all hospitals will be fairly represented.

DEFECTS IN THE POPULATION STATISTICS OF THE UNITED KINGDOM.

THE readable and racy paper read by Mr. E. Cannan, M.A., at a recent meeting of the Royal Statistical Society, brings out very clearly some of the anomalies of our present methods of collecting and correlating the official statistics as to population.

First, as to estimates of population between the decennial enumerations, it is pointed out with considerable force that the so-called "estimates" of population in England and Scotland are not what anyone believes the population to be. 'They are merely the population which would have existed supposing the previous intercensal rate of increase had been maintained." The erroneous character of this assumption was proved very strikingly by some figures published several years ago, showing for the twenty-eight great towns the difference between the population estimated to the middle of 1891, as based on the rate of increase in 1871-81, or on the 1891 enumeration *plus* the assumed rate of increase of 1891-1901 respectively. Thus, at one extreme Salford was 20.9 per cent. below the estimate based on the earlier census, Liverpool was 16.6 per cent. below, and Nottingham 15.6 per cent. below the corresponding estimate; while, at the opposite extreme, the population of Newcastle-upon-Tyne was 13.6 per cent. above and of Portsmouth 10.9 per cent. above the estimate based on the rate of increase in 1871-81. In the remaining towns the population, based on the enumeration of 1891, approached more nearly that based on the rate of increase between 1871 and 1881, but in none of them can the method of calculation be regarded as altogether satisfactory. Mr. Cannan does not, however, suggest in the case of the great towns any alternative method of calculation, though he does this for the whole of the country, basing his recommendation on what is already done in Ireland. In that country there is a special machinery for collecting emigration returns, and from these returns, combined with the balance of births over deaths, an estimate very near the truth is obtained. The real evil for England and Scotland lies in the imperfect methods of the Board of Trade and the lack of co-ordination and co-operation between this Board and the General Register Office. It may be that the information as to emigration and immigration in this country is imperfect, but it was precisely this information which enabled Dr. Longstaff to estimate the population within 10,251, at the time when the Registrar-General's assumed figure was 701,843 in error.

In urban districts the error of assuming that the same rate of increase will continue as in the last decennium is apt to lead to serious errors. As the suburban districts become covered with houses, building operations overstep the urban boundaries, and the growth goes on chiefly without instead of within the urban districts. It is, for instance, highly improbable that the population of the County of London will continue to increase at the rate of 10.3 per cent. as in 1881-91, or still less at the rate of 17.2 per cent. as in 1871-81.

Mr. Cannan throws considerable doubt on the comparability of the special census facts of 1896 in London with those of the preceding imperial census. He bases this conclusion on the general statement, with which we incline to agree, that a simple census will be more complete than a complex one, and that a partial census will enumerate a larger number of persons in the part than the general census will enumerate in the part.

The ineptitude of the Board of Trade's methods of compiling immigration and emigration statistics without regard to registration or census returns receives suitable criticism at the hands of Mr. Cannan, and it is to be hoped that his criticisms will lead to comparison and testing of results obtained by different methods and from different sources. We have not space to consider the fallaciousness of the returns of the Board of Trade as to the nationalities of immigrants, but may say a few words on the third subject of Mr. Cannan's paper, that of internal migration. These statistics, like those of the Board of Trade as to emigration and immigration, are "not altogether satisfactory." The fundamental requirement that for the purpose of acquiring information as to internal migration the area used in recording deaths should be the same as that used in enumerating the birthplaces of inhabitants and the habitation of natives is not fulfilled. Were this so, it would be easy by comparing the difference between the births and deaths with the increase or decrease of population, to ascertain the net migration to or from a given area.

Unfortunately, the local registration of deaths is arranged in connection with the administration of the Poor Law, and the Poor-law Union is the unit for the registration of births and deaths. It is notorious that this does not correspond in a very large number of instances with the municipal or the Parliamentary borough. In rural districts parochial parishes were federated into registration districts, which often do not coincide with county boundaries. Some extraordinary examples of this are furnished by Mr. Cannan, who adds: "There was nothing to prevent the Registrar-General from arranging the births and deaths according to ancient counties, though they were collected in unions. It is merely a matter of easy book-keeping. But it has never been done." The importance of assimilating boundaries for different purposes has been recognised to some extent in the General Register Office. Mr. Cannan's paper will, we hope, be followed by in-

creased efforts in this direction, aided if necessary by legislative enactment. There has been too much unwillingness to interfere with boundaries, however anomalous these may be. There is often more error in refusing to extend, for instance, the statistical areas of towns whose population is undergoing a rapid centrifugal movement, than in allowing the statistical area to remain stationary, with the result that an area which once included the whole of a town comes gradually to include only the centre of it, and the statistics of the suburbs are arbitrarily severed from those of the centre to which they normally belong.

TUBERCULOUS POULTRY AS FOOD.

A CORRESPONDENT has communicated to us a disquieting occurrence which recently befell him. The cook, when she came to dress the Christmas turkey, thought the liver "looked bad" and put it aside. The bird was cooked, and was partaken of by a party of children. Our correspondent found the liver of the turkey (which had been supplied by an important firm), to be "studded all over with tuberculous masses," this diagnosis being confirmed by microscopical examination. On inquiry he found that the bird had been reared in one of the home counties, where the firm bought annually over 2,000 turkeys. The story is unpleasant, but it is reassuring to know that, according to the present state of knowledge, there is not much ground—though the question cannot be said to be quite settled—for believing that avian tuberculosis can be transmitted to man by ingestion. The experiments of Strauss and Wurtz and of Strauss and Gamaleïa seem to show that birds are almost immune to tuberculosis of human origin. Rivolta and Maffucci have found that tubercle bacilli of avian origin have only slight pathogenic properties in regard to mammals. Koch himself has insisted upon the cultural differences between the two bacilli. On the other hand, we know that Gilbert, Roger, and Cadiot have been able to produce tuberculosis in rabbits by inoculating them with the avian bacillus. The same authors have also shown that hens may, under certain conditions, be infected with the human tubercle bacillus. These results have been confirmed by Courmont and Dor, Nocard, Delépine, and, we believe, also by Macfadyean. The guinea-pig, which is so easily affected by tuberculosis of mammals, is very resistant to avian tuberculosis, but is not so immune as some believe. We must therefore admit that avian tuberculosis may occasionally be transmitted to mammals. All our domestic birds (common fowls, turkey, guinea-fowl, peacock, pigeon, pheasant, etc.) are liable to it; indeed, epizoötics may occur in poultry yards and entail serious pecuniary losses. Once a place has been infected the disease becomes enzoötic, and is very difficult to eradicate unless all the birds in the poultry yard are destroyed and the place thoroughly disinfected. It is easy to understand this feature of the disease. Birds are usually infected through the alimentary canal; when a bird is tuberculous its excreta after a time teem with tubercle bacilli; the soil, straw, food, water, perches, nests, walls, etc., are rapidly soiled with these excreta, and in this way the bacilli may rapidly find their way into the alimentary canal of any number of birds. Even admitting that there is some danger of the disease being communicable to man, it does not seem likely that it would be communicated by ingestion. When a fowl is "cleaned" previous to cooking, the organs usually affected with tuberculous lesions (liver, spleen, intestine, peritoneum) are removed more or less completely. A cook would usually have no difficulty in recognising that a liver in a marked state of tuberculosis is diseased, and not fit for food. Birds are usually cooked very thoroughly. It is true that occasionally tuberculous livers may have been prepared for food. Moulé has recorded a case in point. In a village where fowl tuberculosis was very prevalent, people were in the habit of preparing a paste with livers in an early stage of the disease. They were under the impression that the tuberculous lesions were indications of fatty changes, and, under this impression, they considered that these *foies gras* were great delicacies, and they partook of them accordingly. Indeed, all *paté de foie gras* is under suspicion. Still, admitting the possibility of transmission to man, we must look for danger in another direction. It is evident that the contamination of the soil and various objects with excreta teeming with bacilli will cause the dust raised from an infected place to be loaded with these. It must be remembered also that the avian bacillus is capable of growing rapidly outside the body. It is not an obligatory parasite, and can be grown on vegetable substances even at a temperature much below that of the body. It is not killed by drying. We know so little of the changes to which this bacillus is liable when growing outside the body that we are as yet unable to say if it is capable of acquiring special virulent properties under these conditions, and whether this dissemination of tuberculous dust constitutes a serious danger to man or some of the domesticated animals. So far we have no clear evidence of the existence of such a danger.

MEDICAL LITERATURE.

WE referred recently in a paragraph under this title to the increasing difficulty which attends a search in medical literature for information with regard to any particular point. A great many of the best clinical and pathological records are published, and, it is to be feared, too often buried, in the annual *Transactions* of medical societies. No one who has not undertaken the task can form any adequate idea of the amount of time which may be spent in looking through the indexes in the several volumes of the *Transactions* of a single society. Further, to make it worth while to undertake the task at all, it is necessary to have a complete set of the volumes, and such sets are, as a rule, only to be found in public libraries. The Clinical Society of London will, therefore, not only have earned the gratitude of the medical profession, but also set an example which may, we hope, be followed by other societies, in publishing an index to its *Transactions* since the beginning. The Council of the Society recognised that the work was one which could be satisfactorily accomplished only by a member of the medical profession, and it was fortunate enough to secure the services of Dr. Archibald E. Garrod. The *Index* forms a large octavo volume of 206 pages, and represents an enormous amount of work on the part of the compiler, who will have succeeded, however, in saving much labour to others, while gathering for himself, let us hope, not a little curious and useful information. For Dr. Garrod has fortunately taken his duties very seriously, and has made his index of the thirty volumes of the Society's *Transactions*, not by throwing together in a mechanical way the indexes of each annual volume, but by reading each volume through for the purpose of making this comprehensive *Index* to the series. In the subject index, which occupies 136 pages, wherever the same series of references occurs under more than one heading, and fuller details are given in one place than another, cross references are inserted as guides to the heading under which most details will be found. Again—and this is perhaps the feature in the *Index* which will give it most permanent value—the contents, as well as the titles of the papers, have been indexed, so that sometimes the page referred to is found to be part of a paper the title of which has no connection with the point indicated in the index, one which has been, perhaps, mentioned incidentally by the author. Again, when different names have been employed by different authors for the same disease, it has been indexed under a single head, but cross references have been given from the alternative designations. These things are the very luxury of indexing, and, having said that they have been attended to, it is almost unnecessary to add that no minor or more humdrum detail has been omitted to make the *Index*—which it should have

been said includes the reports of the Committees on Myxœdema and on the Periods of Incubation and Contagiousness of Infectious Diseases, which were issued in separate volumes—as perfect as industry and perseverance, combined with knowledge and good judgment, could make it. The index of names was a simpler task, but it occupies 69 pages, the papers of each author being set out in chronological order. Altogether the volume reflects the greatest credit on the Society and on Dr. Garrod, and we can only hope that the high standard thus set may serve to stimulate and not to inhibit similar action by other societies.

THE PARIS PSYCHO-PHYSIOLOGICAL LABORATORY.

A recent issue of the *Revue des Revues* contains an interesting account, with illustrations, of the Psycho-physiological Laboratory, which was established in Paris by a ministerial decree, dated January 29th, 1889. The laboratory is connected with the École des Hautes-Études (Section of Natural Sciences). The first Director was M. H. Beaunis, Professor of Physiology in the Medical Faculty of Nancy. The laboratory now occupies four rooms on the third floor of the Nouvelle Sorbonne; it is fairly well equipped, although the funds allotted to it appear very inadequate. At first it received a grant of £20 a year, in 1893 this was raised to £32 a year, now it is £56. In 1894 M. Alfred Binet, formerly Assistant Director, succeeded M. Beaunis, who was compelled to resign on account of ill-health. The work done in the laboratory is published in a periodical well known in the scientific world, entitled *L'Année Psychologique*, which is now in its third year of publication. The recent work of the Laboratory has related chiefly to the capillary circulation and the influence thereon of various physical and psychical phenomena. Another subject to which a good deal of attention has lately been given in the Laboratory is the psychology of dramatic authors. M. Binet recently published in the *Revue des Revues* the results of an inquiry made by him on the Sociétaires of the Théâtre Français relating to the psychological problem known as the "paradox of Diderot" which has been so much debated. This paradox is that an actor renders an emotion best when he does not feel it; the Horatian precept, *Si vis me fiere dolendum est primum ipsi tibi*, it will be remembered, applies not to acting but to writing. One branch of experimental psychology to which M. Binet and his assistants have given special attention is individual psychology, that is to say, the examination of a given individual by all the resources of the experimental method. The Paris Laboratory has by means of these researches established the fact that what distinguishes the individual is not the times of reaction and sensation, but memory, judgment, etc.; that is to say, the fusing together of the sensations which, it has been said, knock at the door of thought. As the École des Hautes-Études gives no diplomas, but only certificates, the number of pupils is very small. During the first six months the pupils are utilised as subjects. The length of the course is theoretically three years. The laboratory is open from October to July. Foreign scientific men are admitted either to do work or to study the methods. Instruction is entirely gratuitous. Experimental psychology attracts very few French students, the majority being foreigners—Germans, Italians, Americans, English, Roumanians, Swedes, etc. In Europe there are now laboratories of experimental psychology in Cambridge, London (University College), Paris, Rennes, Geneva, Liége, Louvain, Copenhagen, Groningen, Rome, Reggio-Emilia, Moscow, besides several in Germany. In America there are 30, of which 26 are in the United States. A laboratory is shortly to be established in Tokio.

DEFECTIVE AND EPILEPTIC CHILDREN.

The long-expected report of the Departmental Committee appointed early last year by the Lord President and the Vice-President of the Committee of Council on Education "to inquire into the existing systems for the education of feeble-minded and defective children," and "to report as to the provision of suitable elementary education for epileptic children" has at length, at the instance of Sir Ughtred Kay-Shuttleworth, M.P., been laid on the table of the House of Commons. It contains much that concerns the medical, as well as the teaching, profession. We are glad to be able to publish in another column a summary of its contents. Sir John Gorst referred to the report as "an extremely interesting one"; and it will be seen that the Committee express a most definite opinion that the ultimate discrimination of mental abnormality, which is so often associated with, if not dependent on, physical abnormality, is essentially a matter to be determined by a medical expert acting in concert with educational experts. It is recommended also that each school authority should appoint a medical officer to advise in that and other matters. It seems strange that the Educational Department, as the supervising authority of elementary schools throughout the country, should not long ago have had a medical adviser, and in view of the new work foreshadowed by the report such an appointment would seem more than ever necessary. It will not be denied by those who have given any attention to the subject that there is urgent need for the introduction of a rational system of dealing with that unfortunate class of children who are below the usual standard of mental organisation, but are yet not imbeciles. With proper care and training they are capable of being made into fairly useful and self-supporting members of the community. Treated by the happy-go-lucky methods which have hitherto been their lot, they too commonly swell the ranks of the paupers and incorrigible beggars, even when they do not join those of the habitual criminals. We are glad to see that there is to be no suggestion to lump them together in big institutions, but that it is recommended that they should be kept as much as possible in family life. It is satisfactory also to note that when the Committee finds itself compelled, as in the case of epileptic children, to recommend that the State should take complete charge of the nurture and education of the child, the advantages of the principle of small homes in place of big asylums are fully recognised.

PRACTICE BY UNREGISTERED PERSONS.

Mr. Muir Mackenzie, representing the General Medical Council, applied to Mr. Sheil, the magistrate sitting in the Westminster Police Court, on March 2nd for a summons under Section xl of the Medical Act, 1858, against William Mansell Collins, of Cadogan Place, S.W., for the false assumption of a medical title. Counsel stated that the person whose name was mentioned had for an offence had his name erased from the *Medical Register*. Notwithstanding this he continued to practise, using the titles implying that he was still a registered practitioner. The magistrate questioned whether registration was compulsory if a man possessed the qualifications. Mr. Mackenzie contended that it was, and that otherwise a man is not entitled to practise. Mr. Sheil asked counsel to produce anything which said that a man who had his degrees was prevented from practising through non-registration. Mr. Muir Mackenzie cited cases and a judgment of Lord Coleridge in a particular case very like the present one. In that instance a man was struck off the *Register* for misconduct. Mr. Sheil observed that that would not make him any less M.D. if he had ever taken that degree. Mr. Muir Mackenzie replied that Lord Coleridge inferred that a man who used the title M.D. implied that he was registered. Counsel pressed for a summons, as it was most essential to have it decided at law whether a person struck off the *Register* for grave misconduct was entitled to continue practice just as though he were registered. Mr. Sheil said that he did not think that there was anything in the Act which made it obligatory for a qualified man to be registered, though there ought to be such a provision. He declined to grant the summons and must leave Mr. Mackenzie to seek his remedy elsewhere. We are glad to see this important

point raised, and we presume that the next step will be to apply to the Queen's Bench for a mandamus to the magistrate to grant a summons. It is to be hoped and anticipated that the General Medical Council, having thus deliberately raised the point, will not rest until a final decision upon it has been obtained in the highest courts.

MOTOR TRICYCLES IN MEDICAL PRACTICE.

THE experiments which are being made in various countries with the view of dispensing with the use of horses have a particular interest for members of the medical profession, especially those who practise in country districts. We publish in another column a note from a correspondent on a motor tricycle made for him by a well-known English company, from which it appears that he is well satisfied with its performances. It would seem, however, that in this particular line of invention France has hitherto taken the lead, and it may be interesting to give the experiences of a medical practitioner in a country district of France, published recently in *Le Concours Médical*, for comparison with those of Dr. Pritchard Roberts. The writer of the article is Dr. G. Duchesne, of Orbec-en-Auge (Calvados). He believes that the petroleum-driven tricycle is destined to render great services to country practitioners, provided that the roads are good and the hills not too severe, and he adds that with a little assistance from the feet on the pedals the machine can be got up an incline of 1 in 12.5. Its greatest enemies are snow and newly-stoned roads. He has travelled at a rate of 25 kilometres ($15\frac{1}{2}$ miles) an hour on the average, and has made as much as 30 kilometres an hour (19 miles nearly). The reservoir holds about $3\frac{1}{2}$ litres (6.16 pints) of the petroleum used, which is amply sufficient for 60 kilometres ($37\frac{1}{4}$ miles) on average ground in dry weather. The fatigue experienced is not excessive, although the attitude becomes a little crampy when a long journey is made. Further, he says that the management of the machine is easily learnt, and that the cost of fuel is small. The prime cost of the machine is not mentioned, but the main objections to its use appear to be that the rider is very much exposed to the weather; that on wet roads the travelling is very heavy, and that he is compelled to dismount on coming to a newly-stoned piece of road.

ARTIFICIAL FECUNDATION BEFORE THE INQUISITION.

ARTIFICIAL fecundation is not a subject which is generally looked upon as within the sphere of practical medicine in this country. It is known to have been practised on one occasion by John Hunter, and some cases are reported by Marion Sims in his *Clinical Notes on Uterine Surgery*, but the bulk of such literature as there is on the subject is French. The recent death of Dr. J. Gérard recalls a half-forgotten scandal in connection with this matter which occurred in Paris about thirteen years ago. Dr. Gérard, who was a man of splendid physique, had served in the Cent Gardes under the Second Empire. At the age of 40 or thereabouts he turned his attention to medicine, and with the most determined perseverance passed all the literary and scientific examinations required for the doctor's degree. When the time came for the presentation of his thesis, in 1885, he offered an essay entitled *A Contribution to the History of Artificial Fecundation*. The subject had been approved by Professor Pajot, who had signed the thesis as President, but while it was being printed the Faculty became alarmed, and ordered the printing to be stopped and all the copies already in type to be destroyed without leaving even one for the author. Gérard was, however, able to rescue a duplicate set of proofs with which his cook was about to light her fire, and the essay was published, but only some months later when Gérard had presented himself with a thesis on another subject, and had been duly pronounced *dignus intrare in nostro docto corpore*. The condemned thesis was of little account from a scientific or any other point of view; but, it is almost needless to say, an attempt was made to represent Gérard as a martyr to the foolish prudery of the Faculty. Not long before the incident which brought his name prominently before the public, however, a French law court had shown itself equally unsympathetic on the same subject. On the 23rd of August, 1883, the Bordeaux tribunal, in giving judgment in a case, declared that the practice of artificial fecundation was a veritable danger to society, and could not be recognised as a legitimate form of medical practice. Thus condemned by Law and Physic, artificial fecundation has now come under the ban of the Church. The question having been referred to the highest ecclesiastical tribunal in the Roman Church, it has been decided by the Holy Office that the practice is unlawful. We give the text of the decision as a curiosity:

"Feria IV, die 24 Martii, 1897.

"In Congregatione Generali S.R. et U. I. habita coram Emis. Rmis. DD. Cardinalibus contra hæreticam pravitatem Generalibus Inquisitoribus, proposito dubio:

"An adhiberi possit artificialis mulieris fœcundatio?

"Omnibus diligentissimo examine perpensis præhabitoque

"DD. Consultorum voto, iidem Emi. Cardinales respondendum mandarunt:

"*Non licere.*

"Feria vero VI, die 26 ejusdem mensis et anni, in solita audientia R. P. D. assessori S.O. impertita, facta de suprascriptis accurata relatione SSmo. D.N. Leoni, Papæ XIII, Sanctitas Sua resolutionem Emorum. Patrum adprobavit et confirmavit.

"I. Can. Mancini S.R., et U. I. Not."

It is curious enough to find law and medicine agreeing on a scientific question, but it is still more curious to find the medical faculty of Paris, which is hardly remarkable for orthodoxy, in complete harmony with the Holy See.

HEREDITY IN RELATION TO LIFE ASSURANCE.

DR. HERMANN WEBER, in his recent Presidential address delivered to the Life Assurance Medical Officers' Association, took for the subject of his discourse Heredity in Relation to Life Assurance. The first part of his paper was devoted to the consideration of a kind of heredity which has not yet received the amount of attention it merits: the heredity of the duration of life. People may be divided into three groups: (1) Those belonging to families, most of whose members reach adult life, and die between 60 and 72, unless cut off by infectious diseases or other unfavourable circumstance; (2) long-lived families, that is, families in which there is a tendency to very long life; (3) short-lived families, almost all the members of which die before 60, ill-defined conditions, coming under the head of a general breakdown, playing an important part in bringing about early death. To the first group the bulk of the assured belong. The second group is a very profitable one to assurance companies, and Dr. Weber was able out of his ripe experience to give examples of applicants whom he had recommended for assurance, in spite of very considerable flaws in their records, solely on the ground that they belonged to long-lived families, the result being satisfactory to the office. The experience of assurance offices in regard to the third group is frequently of a disastrous character. And it is especially in respect to this class that officers are liable, quite unintentionally on the part of the applicant, to be deceived. A man of 24 or 25 applies for assurance; in reply to the usual question as to whether his father and mother are alive and well? he answers, Yes. The fact being that the parents, possibly being under 50 years of age, have not reached the period of life at which the breakdown occurs. Hence, for young lives, it may be necessary to extend our inquiry into family history beyond the father, mother, brothers, and sisters of the applicant. Dr. Weber takes what is no doubt the correct view as to the influence of heredity with regard to phthisis. He considers it "a very powerful element," and it will probably be admitted that some of those who have written on the

infectious nature of tuberculosis have hardly laid sufficient stress on the predisposition to phthisis which is met with as an innate condition in some families. In estimating the risk of heredity in phthisis, Dr. Weber agrees with the general view that it is greatest up to 30; it then diminishes gradually up to 40, and still more so from 40 to 50. He maintains, however, that it never ceases entirely, and states that he has repeatedly met with persons with hereditary taint who after 50 have fallen victims to tuberculous phthisis, when their circumstances in regard to living, hygienic, mental, and other conditions had changed from good to bad. The hereditary tendency to emphysema and chronic bronchitis is a point to be borne in mind in estimating the value of a life for assurance purposes. Experience as to the heredity of diabetes supports Dr. Weber's recommendation to refuse an applicant under 30 if one of his parents and a brother or sister have died of the disease. Between 30 and 40 the life might be taken with a large extra, and with a smaller addition later. The hereditary tendency to degeneration of the smaller arteries is generally accepted, as is shown by the questions about apoplexy and paralysis in most proposal forms; but Dr. Weber rightly insists that heredity in regard to the heart and blood vessel is hardly sufficiently appreciated, yet that it is present, not only as a disadvantage, but also as a good element. Many other hereditary conditions are discussed in this thoughtful paper, which will well repay the medical man who reads it, even though he be not directly connected with life assurance work.

SIR WILLIAM GAIRDNER, K.C.B.

The members of the Glasgow and West of Scotland Branch of the British Medical Association entertained Sir William T. Gairdner, K.C.B., at dinner after the annual meeting of the Branch on February 24th. Over 100 sat down under the chairmanship of Dr. Freeland Fergus. The health of Sir William Gairdner was proposed by Dr. Finlayson, who said that it was just fifty years ago since Sir William had commenced his career as a teacher of medicine by forming a class in Edinburgh for the study of morbid anatomy and histology. Among his early pupils were Sir John Kirk, K.C.B., Sir Henry Littlejohn, Dr. Warburton Begbie, and others who had risen to high distinction. Sir William Gairdner's bent of mind which rendered him anxious to ascertain facts truthfully and state them accurately, and as far as possible absolutely, had fitted him in a very exceptional way to be an instructor of students. Moreover he had been throughout his life not only a diligent teacher but a keen student. The toast was received with great enthusiasm, and Sir William Gairdner in the course of his reply gave many reminiscences of his early days and of those who had been his pupils.

BOARDED-OUT CHILDREN.

The return issued recently by the Local Government Board, at the instance of the late Mr. Mundella, relates only to children boarded out beyond the limits of the unions to which they are chargeable, and does not touch the larger class who are boarded out within the union at whose cost they are relieved. The total number of children boarded out with committees at the time when the return was made was 1,957—a very small number out of the 60,000 fed, housed, and clothed from the purse of the State. The first boarding-out order was issued in 1870, and yet in the twenty-eight years which have elapsed only 4,784 children have been thus dealt with. The return shows also how small is the number of Boards which avail themselves of the order. London shows the best, for out of 30 Boards of Guardians, 20 have boarded out their children. In the country, out of 631 unions, only 38 have used this means, and the number of committees with which they are in touch is proportionately small. Those unions which have adopted boarding out are evidently continuing to do so. Some Boards, such as St. Pancras, have over 100 children now boarded out, and a roll of 382 in the past. The three unions (Shoreditch, Chelsea, and Kensington) which house the children in their own pauper villages, have between them but 13 children boarded out, illustrating anew what we have before noticed, that the guardians are so satisfied with these institutions that they do not seek ordinary homes for the orphans, so that they might be absorbed into the working-class population of the country. To stamp a child a pauper is to do it an irreparable wrong, and, moreover, may cost the ratepayer the weekly sum of 14s. 5½d. a head, as at Hornchurch, instead of 5s. 6d. when boarded out.

"THE ANGLO-INDIAN."

This term denotes a large and various population in India. It embraces persons of pure British blood, the descendants of white parents, who for sundry reasons made India their permanent domicile, and a much larger number of persons of mixed parentage whose interests and hopes are bound up with India. This population numbers about a million, and is scattered throughout the Indian Empire, concentrated principally in the larger towns. It is a thoroughly loyal English-speaking population, and retains in great measure the physique and the habits of mind and disposition inherited from the race from which it has descended, tempered largely, perhaps to some extent deteriorated, by hybridity, climatic influences, and social degeneracies. Some of its members have attained success and position in commerce and official employ, and most of them have done useful work in Government and mercantile offices, and in occupations and industries of great variety, public and private, and not a few in times of emergency have rendered serviceable help in a military capacity. These people constitute an element in the Indian body politic which it is well to encourage and strengthen. They are eager for education, for social elevation, and anxious to take a large share in civil and military employment. Last year Dr. James Robert Wallace, a successful medical practitioner of Calcutta, while on a visit to this country, spent much of his time in urging on persons of influence the advantage of fostering and promoting this laudable ambition for better education and position. To this end he urged the formation of an Imperial Anglo-Indian Association in London, and the starting of an Anglo-Indian Patriotic Fund to defray necessary expenses connected therewith. On his return to India enthusiastic meetings of welcome were held in Bombay and Calcutta at which his efforts were warmly acknowledged and proposals unanimously accepted. The attitude of energy and self-help which these proceedings display is much to be commended; and we wish the Anglo-Indian all success in his competition with the European on the one hand and the native of India on the other.

THE PROPHYLAXIS OF TUBERCULOSIS BY INGESTION.

In an admirable report on the health of Carlisle in 1897, Mr. William Brown deals specially with the subject of tubercle and its propagation by milk. The tuberculous conditions in cattle, he points out, have the same localisations as in the human subject. In England lung tuberculosis is remarkably common, and tuberculosis of the brain and its membranes, while almost uniformly fatal, is unfortunately also of frequent occurrence. Tuberculous diseases of the lymphatic glands, the kidneys, bladder, bones, and joints afflict a large portion of the patients who present themselves for treatment at the Cumberland Infirmary and the Carlisle Public Dispensary. The principal tuberculous diseases accounted for 10.2 per cent. of all the deaths in Carlisle during the past ten years. After still further popularising the pathology of tubercle, Mr. Brown points out that of thirty carcasses of cows condemned as unfit for food at the slaughter house on account of generalised tubercle, one in every five had marked tuberculous disease of the udder. Some of these cows, their udders and milk ducts sometimes teeming with tubercle bacilli, had been milked up to a short time before their

removal to the slaughter house. He advised (1) regular veterinary inspection of all dairy cattle; (2) a more rigid enforcement of the by-law as to cubic space in cowsheds; and (3) the addition of phthisis, tuberculous meningitis, and tabes mesenterica to the notifiable diseases. The first and third of these recommendations have been adopted by the Council, and it is intended, after the County Council election, to endeavour to get that body to combine with the City in taking common action in regard to tuberculosis. Mr. Brown has added one more to the long list of health officers who, though in practice, are yet able to show good work in sanitary science.

THE FEES OF MEDICAL WITNESSES.

IN the Rotherham Police Court a few days ago a curious complaint was made by the prosecuting solicitor in a charge of assault. He had applied to the house-surgeon for information as to the nature of the man's injuries, definite information on this point being necessary to enable the prosecution to decide whether the prisoner should be charged with "unlawful wounding" or only with the much less serious offence of "common assault." The house-surgeon, it seems, refused to give any information, beyond saying that "the injuries were serious," unless a fee was paid down then and there; and, as this condition did not commend itself to the solicitor, he complained to the court that he did not know which charge to proceed on, as he could not tell how far the medical evidence would support the graver charge. The house-surgeon explained to the Bench that he acted under the belief that if he gave the certificate he would not be called to give evidence, the certificate serving instead. Experience, no doubt, had taught the necessity for precautions which elsewhere we should have thought unnecessary. As the solicitor does not appear to have repudiated the witness's suggestion, we can only suppose that this kind of thing is considered smart in certain legal circles. What we do not understand is that the magistrates should wink at it, as apparently they must have done on other occasions, or the house-surgeon would hardly have taken the course he did. The report in the papers does not say in what form the request for information was conveyed. But probably a policeman called, and announced himself as having "come for the certificate." The practice of demanding certificates from medical men without paying anything for them ought to be strenuously resisted. The State is the worst offender in that respect. Coroners are often blamed unjustly because they have to administer an unjust law. It is for medical men to combine and get the law altered.

THE DIAGNOSIS OF NOTIFIABLE DISEASE.

WE have received from a correspondent in general practice, who is also medical officer of health for his district, a letter in which he raises a difficult practical question. He is concerned about his course of action where the diagnosis of an infectious malady turns out afterwards to have been mistaken—where, for instance, a case notified as small-pox turns out to be hydroa, or one returned as enteric fever to be acute tuberculosis. These notifications, made in good faith and after due care, he very properly adds, will be paid for; but his difficulty is: Should he enter them in his report under the diseases for which they were mistaken or under what they proved to be? To alter the heading, he thinks, might look like publicly advertising the mistakes of his fellow practitioners. We feel that our correspondent's difficulty is one that varies almost inversely as the square of the population. In a large community such statistics are buried in a table which only experts examine. In a small village every line of a report is possibly scanned by curious eyes. On the whole, however, we think that in most cases a column for "other or doubtful cases" meets the difficulty. It is not, of course, the duty of a medical officer to verify the diagnosis of every case returned to him. Where he is responsible for sending the patient into hospital it is sometimes necessary to do so, not only for the patient's sake but for the sake of the other inmates of the institution. It is dangerous, of course, to send a case of hydroa into an occupied small-pox ward, though, if that has been already done by a colleague, the risk to the patient may be minimised by prompt vaccination. It is even more serious to have a case of measles sent amongst his scarlet fever patients. But where a case is treated at home it is not necessary to be too careful in one's inquiry into its exact nature. It is very important to encourage medical men to err on the side of too much rather than too little notification. A note of interrogation placed after the name of the disease is sufficient to call the health officer's attention to its doubtfulness. We know one officer in a large town who says to the resident physician at the fever hospital: "You sort them when you get them." This method, unless the accommodation is ampler than is ordinarily provided, has its disadvantages; but the dangers of refraining from notifying doubtful cases are even greater. Several outbreaks of small-pox have been traced to cases regarded as varicella and not notified. On the whole, therefore, we recommend our correspondent to invite his colleagues to query their doubtful cases, and to introduce into the table in his report a sufficient column headed "other or doubtful."

WINES FOR THE SEDENTARY.

UNDER the above heading an article appears in a recent issue of the *Spectator* intended to give advice as to the wines most suitable for brain workers and sedentary persons. The article advises the use of wines in strict moderation, and so far the advice is commendable, but, apart from that advice, we fear that some of the precepts may result in a considerable amount of harm to those readers who may be influenced to carry them into practice. The article is mainly a pæan in praise of port wine, which is described as "probably the healthiest, as it is the most delicious, of all wines." The statement, however, which in our opinion is calculated to work the greatest amount of harm is the writer's assertion that port "is not gouty, though it is believed to be so." We would point out that the knowledge patiently acquired during a long period of time as to the undoubted action of port wine in precipitating an attack of gout in many individuals subject to that disease cannot be rendered nugatory by the *ipse dixit* of an anonymous writer—a writer too, who not content with sounding the praises of moderate port wine drinking, states that he "had personal knowledge of a man who was sobered by a bottle of port after drinking eighteen wine glasses of whisky." We trust that no one will be led to repeat such an experiment.

A TRAMP WITH PROGRESSIVE MUSCULAR ATROPHY.

DR. TARGOWLA gives an account, in a recent number of the *Nouvelle Iconographie de la Salpêtrière*, of a tramp, aged 65, who has suffered for thirty years from progressive muscular atrophy of the Aran-Duchenne type. The curious point about the case is the extraordinary ingenuity of the tramp in devising means for enabling him to lead his nomad life although his limbs are disabled. In order to sit down he first falls on his knees, then throws himself back upon his ischial tuberosities. He cannot crouch, so he is obliged to lean on his hands and knees in order to defæcate. When naked and without support he cannot stand upright, but when dressed and strapped up he can do so, leaning on two sticks. In order to rise from the sitting position he has to bear on his hands and knees, and climb up along some fixed object. To keep himself upright he has invented a complicated system of straps; these fix his knees and thus give him a fulcrum for his hips, the muscles of which are unimpaired. His knees are protected by leather caps. The man is always on the move, walking from two to three kilometres a day. This he is able to do by means of shoes of his own invention; these are very large, 35 centimetres long, 14 wide,

and he stuffs the inside of them so as to protect his toes, which have a tendency to claw-like curvature. His toilet, as may be readily understood, is a very laborious process and takes a long time, but he disdains all assistance and dresses himself. He has no home, and says of himself that he is the only citizen of the French Republic who pays no taxes, though it can hardly be said that he has "no visible means of support." He is, however, a philosopher, and, unlike Job, does not curse the day that he was born; his philosophy may be partly due to the fact that he has no wife to reproach him with his afflictions. He is gentle and amiable in character, and to a certain degree educated, so that he is always well received by the country people, who let him sleep in the stables and cow-houses. He much prefers his wandering homeless life to being admitted to a hospital, where he fears he might be deprived of his supporting apparatus.

MEDICAL LEGISLATION.

At the meeting of the special Subcommittee of the Parliamentary Bills Committee, which was held on February 25th, the Midwives Registration Bill which has been introduced into the House of Commons, and the Obstetric Nurses Bill—both of which were printed in the British Medical Journal of February 19th, page 505—were under consideration. It was resolved to summon a special meeting of the Parliamentary Bills Committee on Friday, March 18th, at 5 P.M., in order that the matter may then be further considered and means concerted for bringing the views of the profession under the notice of Parliament in a suitable form. The Subcommittee on the amendment of the Medical Acts will sit on March 17th and 18th to prepare a Bill.

THE ARMY ESTIMATES.

Lord Lansdowne's memorandum and Mr. Brodrick's lucid speech have put the country in possession of the intentions of the Government regarding reforms in the army. What more immediately interests us is that the army establishment for 1898-99 is increased by 16,000 over and above 9,000 added last year, or by about 25,000 men in all. According to the usually accepted proportion of four medical officers per 1,000, this addition to the army will require 100 additional to the present nominal establishment. Taking that to be 890, and regarding the odd 90 as representing the present real shrinkage, about 200 medical officers will be required within, say, two years to complete establishment up to the proposed increase in the army. That of course is a pretty "large order," but we have little doubt it can be met if the War Office effect such reforms in the medical service as will prove acceptable to the medical profession. But Mr. Brodrick did not vouchsafe a word as to any proposed dealing with the medical service, although he was reminded of the omission by several speakers who followed him. We suppose, therefore, his intentions will not be made known until, perhaps, the medical vote comes up for discussion; then indeed there will be no shirking the matter, and the plans proposed to rehabilitate the medical service must be disclosed.

LAUDANUM: ITS VARIETIES AND ETYMOLOGY.

Mr. C. Wolley Dodd in an interesting note in the *Gardener's Chronicle* upon the origin of the term "laudanum," maintains that laudanum, ladanum, and labdanum are different ways of spelling the same word. Ladanum corrupted into laudanum was the Arabic and classical term for the gum of the Syrian cistus. It was used outwardly as an anodyne, and about the middle of the sixteenth century Paracelsus invented his wonderful panacea which he called laudanum, keeping its composition secret. Mr. Dodd thinks that the laudanum Paracelsi was probably a mixture of opium and the gum of the cistus, which would operate powerfully as an anodyne, and become as universally popular a remedy as chlorodyne at present is in France. Laudanum is now used as a synonym for the tinctura opii, but in the seventeenth century it was a generic term for any specific anodyne. There was the laudanum opiatum quercetani containing extract of opium, extract of saffron, powder of hyacinths, coral, terra sigillata, bezoar stone, unicorn's horn and ambergris; the pectoral laudanum of Sala consisting of the liquid extract of opium, saffron, flower of sulphur with gum Benjamin, fine aloes, and myrrh, to which spirit of salt was added. The simple laudanum of Plater was made by mixing opium dissolved in spirits of wine with bdellium refined in juice of plantain. The laudanum of Clossœus was made by digesting opium in vinegar, whilst liquid laudanum or ladanum was made by infusing a tincture of opium in a closed vessel with spirit of vitriol. The laudanum vitrioli was much more complex. It was an electuary made by mixing anodyne sulphur of vitriol with magistery of pearls, extract of the wood of aloes and of saffron, oriental bezoar, unicorn's horn, the oils of clove and cinnamon with syrup of corn poppy flowers. The far-famed London laudanum had the following composition: ℞ Theban opium (extracted in spirits of wine) ℥j, saffron (in like manner extracted) ℥iss, castor ℥j. Let them be made up with tincture made (of species diambræ ℥iss) with spirits of wine. Then add ambergrease, musk āā gr. vj, oil of nutmegs gr. x. Lastly evaporate by the heat of a bath and make a mass. This was called the specific anodyne. It was given in doses of one to four grains, and was "most excellent for easing all manner of pains almost in a moment, in any part of the body from head to foot, whether inward or outward. It causes rest and sleep and stops all sorts of catarrhs. It infallibly cures agues of all sorts, being given dissolved in a glass of sack about three hours before the fit comes."

FORECASTING THE SEX.

It would appear that from time immemorial the question of the determination of sex before birth has excited the interest and curiosity of mankind. From time to time the most crude answers have been given, but we appear to be no nearer the true solution than was Aristotle. The subject has lately excited an undue amount of attention in the thoughts of the general public and of some members of the medical profession owing to the theory advanced by Dr. Schenk, of Vienna, that the nutrition of the parents influences the sex of the offspring. This is no new theory, for does not Falstaff say to Prince John of Lancaster, "There's never any of these demure boys come to any proof, for thin drink doth so overcool their blood, and making many fish meals, that they fall into a kind of male green sickness, and then, when they marry, they get wenches"? Mr. C. T. Fields-Clarke, too, contributes to *The Farmer and Stockbreeder* his views on the regulation of sex in mammals, particularly in horses and cattle. He says that horses and cattle, as a rule, give off a single ovum from the right and left ovary alternately at each menstruation, the sex being determined by the particular ovary from which the ovum emanates, the sex being in no way affected by the male fluid, except as a germinating element. This statement leads him to the hypothesis that one ovum contains male eggs only, and the other female eggs, and he is further convinced that the left ovary generally contains the female ovum and the right ovary the male ovum. The first ovum which escapes into the uterus at the age of puberty is from the right or male ovary, and at each succeeding menstruation the sex of the ovum alternates. The regulation of sex, therefore, is merely a matter of careful observation after the sex of the first fœtus has been determined, for each menstrual period changes the sex alternately. Unfortunately for this extremely simple method of predicting the sex, it does not apply to the human being, even if it be granted that it is approximately true for cattle, for there are cases on record in which children of both sexes have been borne by a mother, one of whose ovaries has been completely removed by a competent operator. If birds are produced on the same lines as mammals, and the generative apparatus

throughout the animal kingdom is the least liable to change its type, the hypothesis does not explain the origin of cocks, for in birds, as a general rule, there is but one ovary and one oviduct, that of the left side, the corresponding organs of the right side being rudimentary or absent. All birds, therefore, should be hens.

THE QUEEN'S VISIT TO THE RIVIERA.

THE arrangements for the Queen's visit to Nice are now, we understand, quite complete, and we are able to confirm our previous statement that the sanitary matters which were in dispute at the beginning of the season have been arranged satisfactorily. Everything in the Regina Hotel, Cimiez, and in its neighbourhood is in excellent order from the sanitary point of view. Her Majesty will have the enjoyment of the same fine set of gardens, some sixty acres in extent, for her morning drives in her donkey carriage, as before. The winter in Nice has been very dry, and except that there has been an epidemic of influenza of a mild average type the health of the town has been good. The influenza epidemic now shows signs of diminishing.

EVADING THE NURSING ORDER IN IRELAND.

THE Local Government Board of Ireland will, we hope, keep a sharp look out for evasions of their order regarding trained nurses in workhouses. An attempt was lately made in a union to appoint a woman whose only required qualification was that she should produce certificates from medical men stating that she was experienced in the care of the sick. That proceeding, however, has been properly stopped. Now we see that the Killarney Guardians advertise for an "attendant," and in this way they apparently hope to be able to appoint an untrained person. The difficulty of making the ordinary guardian appreciate the value of the changes in the interests of the poor is shown in the case of the Cavan Union, where a night nurse and midwife has been advertised for at a salary of £5 a year. Of course no one is likely to be found to take up the duties on such ridiculous terms, but these cases show very well how the guardians view the whole question. We hope the superior authority will be strong enough to deal with such stupidity.

THE SUPERANNUATION OF POOR-LAW MEDICAL OFFICERS.

AT the meeting of the Poor-Law Medical Officers Association, held on March 1st, it was unanimously resolved that "the best thanks of this Council be given to Dr. Saundby, President of the Council of the British Medical Association, for the assistance he has rendered the Poor-Law Service generally, by directing the attention of the Local Government Board to the action of the Pershore Guardians in their attempt to evade the provisions of the Superannuation Act of 1896." It will be remembered that shortly after the facts became known Dr. Saundby addressed a letter to Mr. T. W. Russell, M.P., Under-Secretary of the Local Government Board, pointing out the nature of the attempt on the part of the Pershore Guardians to drive a coach-and-six through the Act of Parliament. It must be gratefully remembered, also, that Mr. Russell promptly took very decided action to recall the guardians to a sense of their duty by distinctly informing them that the arrangement proposed was not one to which the Local Government Board could consent.

WE are glad to be in a position to state that there is no foundation for the report that plague has made its appearance in Madras.

THE many friends of Sir Frederick Bateman, of Norwich, will be pleased to learn that his progress since the recent attack of hemiplegia from which he suffered has been uninterruptedly satisfactory. He has now recovered from the attack, and is able to resume his professional pursuits.

THE annual dinner of the Irish Medical Schools' and Graduates' Association will be held at the Café Monico, London, on St. Patrick's Day, March 17th. The chair will be taken by Rear-Admiral Lord Charles Beresford, C.B., and it is anticipated that there will be an unusually large attendance. Further particulars may be obtained from Mr. P. J. Freyer, F.R.C.S., 46, Harley Street, London, W.

THE report of the Committee appointed to inquire into the sufficiency of the clerical staff and general organisation of the Local Government Board has been issued. It recommends that the present nine departments should be grouped into the five following: Poor Law; Public Health and Audit Appeals; Audit, Statistics, Local Finance, and Local Acts; Sanitary Administration and Local Areas; Legal and Order. It further proposes that an assistant secretary should be appointed at the head of each department. We regret to find that the Committee reports in favour of the expedient of appointing two temporary medical inspectors in place of making the permanent increase in the staff which is so urgently needed.

A CONGRESS of Midwives is to be held in Turin next June.

THE Clothworkers' Company have given £100 to the North-Eastern Hospital for Children, Hackney Road.

THE Bishop of London will take the chair at the annual general meeting of governors of the Dental Hospital, which will be held at the hospital, Leicester Square, on March 17th, at 5.30 P.M.

THE new Hospital Infirmary and Nurses' Home (which have been erected at a cost of £24,000) in connection with the Portsea Island Workhouse was opened on February 22nd by the Mayoress of Portsmouth.

MR. GEORGE STOKER will give an address on Thursday evening, March 10th, before the Northumberland and Durham Medical Society, at Newcastle-on-Tyne, on The Method of Treatment by Oxygen.

THE Albert medal of the Society of Arts was on February 26th presented by the Prince of Wales to Mr. G. J. Symons, F.R.S., in recognition of the important services he has rendered by his tabulation of systematic observations on rainfall carried on at over 3,000 stations established largely through his exertions.

TYPHUS FEVER IN DUNDEE.—Since the beginning of the year there have occurred in all about 10 cases of typhus fever. The first outbreak comprised 3 adults, of whom 2 died; the second 3 adults and 3 children, and of these 2 adults died. In neither instance has it been possible to trace the source of the outbreak, and both have been promptly checked by removing the patients to hospital.

ENTERIC FEVER IN INDIA.—Enteric fever has broken out among the troops at Jamrud and Lundi Kotal. The water supply at the former place is unsatisfactory, owing to the impossibility of diverting the stream from the vicinity of a number of villages. There are about a dozen cases of enteric among the troops at present.

HAMPSTEAD HOSPITAL.—Princess Christian visited Hampstead Hospital on February 26th, and named two beds which are to be maintained by a grant of £1,500 made by the Hampstead Jubilee Fund Committee. The Princess was received by Sir Samuel Wilks, Consulting Physician, Mr. William Anderson, Dr. Heath Strange, and other members of the medical staff. After the ceremony Mr. W. F. Malcolm and Sir Samuel Wilks gave a short account of the work of the hospital.

THE next examination for the Charles Murchison Scholarship in Clinical Medicine will be held at the Royal College of Physicians of London on Monday, April 18th, and following days. Candidates must be registered medical students of not less than four nor more than six years' standing at a hospital in London or Edinburgh recognised by the College or by the University of Edinburgh. Candidates may or may not hold a medical qualification.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE PHARMACY ACTS AMENDMENT BILL has been the subject of a good deal of talk in the Lobby of late in consequence of the great activity of the chemists and druggists all over the country in personally writing to their representatives for support. The Bill has no chance whatever of passing if opposed, and is a measure which under ordinary circumstances would excite no particular interest, but the energy of the country chemists more especially has given it just now some considerable importance. The Bill has three objects: First, to render persons who have passed the preliminary examination required by the Pharmacy Acts eligible to become "student associates" of the Pharmaceutical Society "instead of students as heretofore." It is thought that as the majority of the students of the Society are not educated in the Society's school it is better they should be called student associates. The second object is to render every person whose name appears on the *Register of Chemists and Druggists* eligible to become a member of the Society. It is said that two-thirds of the persons who keep chemists' shops are at present ineligible, and they have consequently no direct representation on the Council of the Society. Thirdly, the Bill provides for the retirement of one-third of the Council every year by rotation instead of by ballot. There is some talk of an amendment to create two orders of members in order to save the status of those who possess full privileges now.

THE PUBLIC HEALTH ACTS AMENDMENT BILL has been again introduced, but is not down for second reading till June 8th, a date which almost certainly precludes a chance of its enactment this session. It is framed on the principle of the Public Health Acts Amendment Act, 1890, and seeks to enable local authorities to adopt under the procedure of that Act many of the clauses which are now only sanctioned by Parliament in private Acts. The sanitary clauses would be especially valuable in checking the spread of infectious diseases, and in the removal of nuisances, while those that refer to parks and recreation grounds have been very favourably received by the local authorities in many watering places. It would be a great saving of time and money if local authorities could adopt the powers referred to in this Bill, without applying to Parliament for a private Bill in every case.

THE WYMONDHAM WATER BILL was the subject of an interesting discussion on Tuesday. The promoters of the Bill sought for powers to take in a large area, including Wymondham and sixteen villages, and to acquire the rights for five years to create a supply of water. The Bill was opposed in the name of the parish and district councils and of the parish meeting, all of which had passed resolutions against it. The fact that the district, like most rural districts, was dependent on surface wells, and that in 1894 7 cases of typhoid occurred in one house and 2 other cases near which were traceable to bad water, made up the case of the promoters. A much smaller outbreak of typhoid also occurred in 1896. The death-rate of Wymondham was shown to be 14 6 and the zymotic death-rate 0.36 per 1,000. The House rejected the Bill, mainly on the ground that the water supply of a whole district ought not to be handed over to private persons, but should be left in the hands of the district council. This is, perhaps, a proper recognition of the principle of local self-government; but it should be backed up by strong action on the part of the Local Government Board wherever a locality is neglected by its sanitary authority in respect of its water supply.

THE RIVERS POLLUTION PREVENTION BILL is a Bill which the promoters hope may get a second reading early this session. It seeks to apply to the whole of England the provisions of the Lancashire and West Riding Acts. It forbids putting into any stream solid refuse or liquid sewage matter, with saving clauses for building operations and for the drains of sanitary authorities under certain conditions. It also makes it an offence to allow any polluting liquid other than sewage to flow into a stream under similar conditions to those accepted by manufacturers under the Lancashire Act. The Bill differs from that of last year in making the Councils of non-county boroughs authorities under the Act, as well as Councils of county boroughs and counties. It also provides for saving sanitary authorities from liability to penalty in case of flooding of their sewers by unusual rainfall. By these concessions a larger municipal support has been gained.

PROMOTION IN THE ARMY MEDICAL DEPARTMENT was the subject of a question by Sir Walter Foster in the House on Tuesday, and a rather unsatisfactory answer was obtained. It appears from the question and Mr. Brodrick's reply that three surgeon-colonels who were eligible for promotion to the rank of surgeon-major-general were recently passed over, on the ground that, being over 57 years of age, three years' full service in the higher rank could not be made in their cases on account of the compulsory retirement at 60. It was admitted that this rule has never been published. It does seem a very hard case that these officers should, after long and excellent service, find themselves under an unpublished rule, not only deprived of a desirable step in rank, but also of the increased pay of that rank amounting to some hundreds a year, together with the increased retiring allowance which it will carry. As promotion is made by selection, there is no compensation to be made in these cases. A rule of this nature ought certainly to be made known by the usual channels to the whole Medical Department, and ought not to have a retrospective effect. No service can be popular in which incidents like this are liable to occur.

THE UNIVERSITY OF LONDON BILL was to have formed the subject of a debate in the House of Lords, the measure having been put down for second reading on Tuesday in the name of the Lord President of the Council; but at half-past four o'clock the noble duke was not in his place, and the measure was of necessity postponed. There had previously been a reference to it in the other House, but, of course, only in the form of a question. Sir C. Dilke had asked whether it was proposed that the Bill should be substantially the same as that of last year; whether steps could be taken to meet the complaint that under the Bill the internal examinations would be mainly conducted by the teachers of the candidates, and whether it would be possible so to modify the measure as to secure the examination of all candidates for degrees by independent examiners. In reply, Mr. A. J. Balfour said that the Bill had been circulated in the House of Lords, and the text was therefore obtainable. He went on to say:

> It has not been deemed expedient to attempt to define the way in which the Senate of the University is to arrange for the conduct of the examinations, but it will be seen on reference to the Bill that provision has been made for separate systems of examination for internal and external students, and for securing adequate protection for the existing University in the composition of the new Senate.

It is stated on reliable authority that the opposition to the Bill is not likely to be of a protracted character, if an earnest is given by the Government of their fixed determination to pass it this session. The second reading, of course, will be challenged, and the main clauses in Committee, but there is no probability of the order paper being swelled with amendments on points of detail with the idea of smothering the measure. The Government last year made some concessions, and these have more or less blunted the edge of the opposition.

THE HABITUAL DRUNKARDS BILL may be made the subject of discussion even early in the session, as Mr. Lees Knowles has a motion on the paper to raise the whole question of the treatment of habitual drunkards. This motion cannot come on if the Home Secretary introduces his Bill shortly, but the qualified promise given this week does not hold out any certain hope of a speedy introduction of the Government measure. When it is produced it will extend to Scotland.

THE PLAGUE IN INDIA formed the subject of a statement in the House of Lords by the Earl of Onslow. In reply to Lord Reay, the noble earl said that the last telegram received from India showed an improvement, this being the first time for ten weeks that their weekly telegram had not shown a

progressive increase in the reported plague deaths in the city of Bombay. Immense efforts had been made in a systematic way to combat the disease. He went on to say:

The hospitals are well organised, the supply of doctors and nurses is sufficient, reinforcements being sent from home at two or three days' notice whenever asked for. Ten more doctors went this week. In all 59 men and women doctors and 61 nurses have been sent.

His lordship announced, with deep regret, that two of the lady nurses—Miss Morgan and Miss Macdougall—had succumbed to the disease during the performance of their duties. Outside Bombay city there had been a marked decrease in the epidemic. Having given exhaustive statistics, he dealt with the measures taken to prevent the spread of the plague, pointing out that travellers by railway, steamer, and boat from plague districts to other parts of India were examined by medical men and women, disinfected, and, if necessary, retained in segregation camps, before being allowed to disembark at their destination. Like precautions were taken in the case of persons leaving infected districts. With regard to preventive inoculation, the noble lord in concluding his statement said:

This has been largely employed after the system of Dr. Haffkine, and the Government of India consider that the result of his experiments made at Damaun is so encouraging that they are not without hope that protection may be proved to be possible by means of prophylactic inoculation. They think that every opportunity should be taken to test its efficacy, and local governments and administrations have been directed to procure a supply of serum for the use of persons who desire to have themselves inoculated. Dr. Haffkine himself has recently been instructed to proceed to Baroda to carry out inoculation there. Information on this and other subjects will be laid before your lordships in a Blue Book, which is now passing through the press.

ARMY REFORM has been the main topic of discussion in the House of Commons. Mr. Brodrick's mind, however, seems to have been too much engrossed with his scheme for increasing the strength of Her Majesty's battalions to allow him to give attention to the doctors, who are "more than armies to the common weal;" and the "service members," who have been so much in evidence of late, have followed in full cry after the right hon. gentleman.

Dr. FARQUHARSON called attention to the desirability of doing something to bridge over the terrible dietetic chasm which takes place between the dinner of the soldier at 12.30 one day and his breakfast next morning. Referring to the Army Medical Department, he said that it was once very popular, but was at present practically boycotted, and good men were not now to be obtained for that branch of the service. It was, he said, far below its proper strength, and affairs had come pretty well to a deadlock. Probably this is all that will be heard of army medical reform until the medical vote is reached, when some statement of policy may be wrung from the representatives of the War Office.

Mr. CHAPLIN, in answer to a query put by Mr. THOMAS BAYLEY, said that inquiries were made by inspectors of the Local Government Board with reference to typhoid fever at King's Lynn in 1892 and last year, and if it was desired, their reports could be presented to Parliament. The Town Council were proceeding with a new scheme of water supply as rapidly as possible, and it was expected that the works would be completed in about four months. It was much to be regretted that the scheme was not carried out at an earlier date. The Town Council had proceeded with sewerage works. The right hon. gentleman added: "It is the practice to direct investigations by medical inspectors of the Board when there are serious epidemics of typhoid fever. The facts in these cases are, however, ascertained by the inspector making detailed personal inquiries, and, as a general rule, it has been found in practice that the necessary information is better obtained by these means than by a public inquiry."

THE EMPLOYMENT OF WHITE PHOSPHORUS in the manufacture of matches in this country formed the subject of a statement by the Home Secretary. He said that it was not the case that the use of this substance was forbidden in all foreign countries. It was not prohibited in Germany, Austria, and Belgium, for instance. In England, its use was regulated by special rules, which had been so far successful that last year only two cases of phosphorus poisoning occurred, neither of which were fatal. In those circumstances he did not think there was a sufficient case for prohibiting the use of the substance.

THE EXERCISE OF JUDICIAL FUNCTIONS BY MEDICAL MEN formed the subject of two questions addressed to Ministers during the week. In one case the Secretary for Ireland informed Mr. Gilhooly that it was true that Dr. Barrett, J.P., Medical Officer of the Macroom Workhouse, as a magistrate adjudicated during the month of October last, and previously at the Petty Sessions held in Macroom, in cases of insubordination in the workhouse brought by the master at the instance of the guardians. He had no information as to the Local Government Board Inspector in November, 1896, reporting that there was then a great deal of insubordination amongst the inmates of this particular workhouse, and that the master was obstructed in his duties. In reply to a further question Mr. Gerald Balfour stated that there was no rule debarring a union official from holding a Commission of the Peace. It was obviously undesirable that a justice should adjudicate in cases affecting the management of a workhouse of which he was an officer, and the Lord Chancellor had been in correspondence with Dr. Barrett relative to those matters, and had accepted his assurances as to the *bona fides* of his action, whilst at the same time expressing the desire that he should refrain from adjudicating in similar cases in future. Dr. Barrett had readily given that undertaking, and no further action was called for. In the second case, replying to Mr. Weir, Mr. Chamberlain said that it was true, according to information which had reached him, that the principal medical officer of Sandakan also held the office of sessions judge, and that the arrangement worked to the satisfaction of the Government and of the inhabitants. Her Majesty's Government did not interfere with the internal administration of North Borneo.

THE "DUM-DUM" BULLET has been a fruitful source of question and answer during the week, a number of Radical and Nationalist members having become seized with the idea that the missiles are explosive, and that in using them against the Afridis the authorities have been guilty of strange barbarity. Lord George Hamilton, in the first instance, in answer to Mr. Hedderwick, said that the bullets, which were not explosive, had been used against Her Majesty's troops in the recent frontier campaigns, and were probably part of a quantity of ammunition captured from a convoy by the Afridis in the advance on Maidan. He added that the use of these bullets was not opposed to any international law, or to the customs of war. He acknowledged, in reply to Mr. Dillon, that the bullets had been used by Her Majesty's troops against the tribes. On a subsequent occasion it was stated that the Lee-Metford bullets had been found deficient in "stopping" power, and had been replaced by the "Dum-dum" bullets, which were more efficacious. Anyone could convert a Lee-Metford into a "Dum-dum" by merely flattening its head. It was insisted upon, however, that the bullets so transformed inflicted less injury than the old Snider or Martini-Henry bullets. No medical report in regard to the effect of the "Dum-dum" bullet had yet been received, although such report had been called for. A similar reply to the forgoing was given in the House of Lords by the Earl of Onslow to Lord Stanley of Alderley.

THE MUZZLING ORDER.—It was stated by the Home Secretary, in reply to Mr. Schwann, that in 1896 there were 25,000 prosecutions and 21,491 convictions. Other offences besides infringements of the muzzling orders were included in those figures. The statistics for 1897 would not be ready for some months.

THE LONDON SCHOOL BOARD, it was explained by Sir J. Gorst, in reply to Mr. S. Smith, does not "sanction" the use of textbooks dealing with vivisection, but it could disallow their use if they considered them unsatisfactory. The books in question would be examined and considered by the department.

NEW BILLS.

Amongst the new Bills which have been brought in is one by Sir A. Hickman to amend the Public Health Acts. It is backed by Sir Walter Foster, Sir Albert Rollit, Mr. Staveley Hill, Mr. George Whiteley, Mr Baldwin, Mr. Ernest Spencer, and Mr. Heath.

LITERARY NOTES.

La Tuberculose Infantile is the title of a new medical journal of which the first number has just appeared in Paris. The editors are Drs. L. Dereeq and George Petit.

The Leipzig Chamber of Commerce has just published its annual report on the number of books printed in Germany. The total number was 23,339. Of these, 1,545 belong to the category of medical and surgical sciences.

We are asked to state that Dr. Cory is indebted to Mr. Towry Whyte and Mr. Lapidge for the illustrations and microscopical drawings in his book recently published, *The Theory and Practice of Vaccination.*

Brigade-Surgeon-Lieutenant-Colonel David Chamber McFall, who died recently at Warrington, in the 66th year o his age, was the husband of Madame Sarah Grand, author o *The Heavenly Twins*, *The Beth Book*, etc.

Messrs. J. and A. Churchill will shortly publish the follow ing new works: *A Manual of General Pathology for Studen and Practitioners*, by Dr. Lazarus-Barlow, late Demonstrat of Pathology in the University of Cambridge; a *Manual Bacteriology*, by Dr. Hewlett, Assistant in the Bacteriologic Department at the British Institute of Preventive Medicin and a *Manual on Dental Metallurgy*, by Mr. Ernest A. Smi Assistant Instructor in Metallurgy at the Royal College Science, London.

REPORT OF THE DEPARTMENTAL COMMITTEE ON DEFECTIVE AND EPILEPTIC CHILDREN.[1]

Constitution of the Committee.

The appointment by the Lord President and Vice-President of the Committee of Council on Education of a Departmental Committee on Defective and Epileptic Children was announced in our issue of January 9th, 1897.[2] The Committee, as originally nominated, consisted of the Rev. T. W. Sharpe, C.B., then Her Majesty's Senior Chief Inspector of Schools; of Messrs. Pooley and Newton, of the Education Department; of Mrs. Burgwin, Superintendent of Special Instruction under the London School Board; of Miss Pauline D. Townsend, a lady of experience in the industrial training of feeble-minded girls; and of Dr. G. E. Shuttleworth, formerly Medical Superintendent of the Royal Albert Asylum, Lancaster. To these the name of Prof. Wm. Smith, M.D., Medical Officer to the London School Board, was added, so that the Committee ultimately consisted of three officials of the Department, two ladies of special experience, and two medical men. Mr. H. W. Orange (Examiner at the Education Department) acted as Secretary.

The Scope of the Inquiry.

The Committee, under the presidency of Mr. Sharpe, held 28 meetings and examined 46 witnesses, in the lists of whom we find the names of Drs. Fletcher Beach, W. S. Colman, Ferrier, Harris, Holm, Kerr, Shuttleworth, Tait, Walmsley, and Warner. Information as to the Darenth Schools for Imbecile Children was given by the Clerk to the Metropolitan Asylums Board, by the present and the late Medical Superintendent, and by the Head Schoolmistress. The officers of the other English institutions for idiots and imbeciles furnished a conjoint memorandum in reply to questions sent to them, but did not attend as witnesses. Dr. Alexander of Liverpool also furnished a memorandum with regard to the treatment of epileptics at the Maghull Institution. Amongst other witnesses were Sir Douglas Galton, Mr. C. S. Loch, Mr. Penn Gaskell, Mr. Van Praagh, Mr. Knollys, of the Local Government Board, Mr. Scott Lidgett, Miss F. A. Cooper, Miss Sewell, and Miss Margaret Hodge. Full information as to the special classes now in existence in London, Leicester, Bradford, Brighton, and Bristol was derived from personal inspections, and also given both *viva voce* and in writing by the managers and teachers attached. Several of Her Majesty's inspectors stated their views with regard to these classes.

Classification of Children.

The topics discussed in the report include definitions of terms, the description and number of the children referred for inquiry, and the state of the law affecting these. Proposals are submitted with regard to modes of discrimination of defective children; an examination of the present system of dealing with such children is made, and certain desirable changes are pointed out. The cases of physically defective and of epileptic children are considered.

It is remarked that the term "feeble-minded" (used in the reference) is open to the objection that it has come to be applied to all classes of mentally-defective children, including imbeciles; and it is explained that, as the reference expressly excludes the cases of idiots and imbeciles, "the word 'feeble-minded' as used in the report denotes only those children who are not imbecile, and who cannot properly be taught in ordinary elementary schools by ordinary methods."

"Feeble-minded" as Distinguished from Imbecile Children.

Of such children the Committee approximately estimates the number at 1 per cent. of the school population. In arriving at this estimate, the experience of the German auxiliary classes, the observations of Dr. Warner in London, and of Dr. Kerr at Bradford, the evidence of managers of certain provincial centres for special instruction, and local inquiries made by several of Her Majesty's inspectors are taken into account.

With regard to the state of the law affecting feeble-minded children, it is pointed out that "if children are not legally provided for as idiots or imbeciles, they are in the same position as any other children during their school life." They are subject to the same laws and by-laws relating to school life, but cannot be compelled *qua* feeble-mindedness to attend special classes rather than an ordinary school.

The law relating to imbeciles is briefly stated so far as it affects school authorities in their relations with mentally deficient children. The public provision for the training of imbeciles in institutions being very inadequate, there is a tendency for children of this grade to be sent to special classes where such exist, and it is important that the boundary line between imbecility and mere "feeble-mindedness" be so defined as to exclude from the classes children so deficient as to be incapable of receiving proper benefit from instruction therein. It is pointed out that there is an essential difference between the modes of training pursued in imbecile institutions and those practicable in public elementary schools worked under the Education Acts.

With regard to the discrimination of "feeble-minded" from non-educable children, the Committee recommend that each school authority should appoint a medical officer whose duty it should be to examine every child who, by reason of any mental or physical defect, is not sent to school; and that his certificate should be in the form that the child is either (1) capable or (2) incapable of receiving proper benefit from instruction (*a*) in ordinary schools, or (*b*) in special classes for feeble-minded children. If incapable of benefit from the latter, the certificate should be in such a form as to render it available for the child's admission (if desired by the parents) to an imbecile institution.

Special Classes for Feeble minded Children.

After reviewing the modes of admission to special classes at present constituted, it is recommended that the medical officer of the school authority should receive from the teacher presenting the child alleged to be "feeble minded" a form, duly filled up, containing a statement of the child's attainments, and that after conference with Her Majesty's inspector and the teachers of the child and of the special class, he should make his recommendation to the school authority in the form:

I certify that A. B., not being imbecile, is, by reason of (1) physical, or (2) mental defect, incapable of receiving proper benefit from the instruction in ordinary schools, but capable of receiving instruction in the special classes.

It is anticipated that with all these safeguards there would be no great difficulty in arriving at or in enforcing a decision; but in doubtful cases there should be an appeal to the Education Department, which "should have at their disposal the services of a medical adviser." It is also recommended that, besides other school records, medical records should be kept of the cases selected for special instruction, and that a regular medical examination should be held of every class, every twelve months, by the medical officer.

With regard to school age it is not proposed to admit children younger than 7 to the special classes, as it is thought that infant school teaching is in such cases sufficient. But pupils should be retained in the classes up to 14 years of age, school managers having discretionary power, on the recommendation of their medical officer, to provide for suitable cases being kept at school up to 16.

Some hints are given as to the special training of teachers, and as to the school hours and time table appropriate to special classes. It is pointed out that, while it is not desired to thrust the "three R's" into the background, manual instruction is of special importance in the case of feeble-minded children, and this may partake of the Kindergarten character for younger pupils and of technical instruction for the oldest. The choice of suitable physical exercises adapted to feeble-minded children, especially with a view to their physical defects, is commented on. Such forms as breathing drill and eye movements are particularly referred to.

With regard to feeble-minded children residing in districts where, owing to paucity of population or otherwise, special classes have not been established, it is proposed to give school authorities powers of boarding-out near centres of instruction—with the consent of the parents—as in the case of blind and deaf children, one defective child only being as a rule lodged in the same house. In certain cases it is con-

[1] Eyre and Spottiswoode, 1898, pp. 42.
[2] British Medical Journal, vol. i., 1897, p. 105.

sidered desirable to provide for maintenance at institutions, which must be exclusively confined to children under 16 and not contain more than 20 inmates. It is thought that such training homes might be specially serviceable in the case of feeble-minded girls leaving school at 14 and requiring careful preparation for work in the outer world. As regards rural schools, it is suggested that voluntary aid in the special instruction of the one or two feeble-minded children therein should be, as far as practicable, utilised.

Children Physically Defective.

With respect to physically defective children, it is recommended that they should be admitted to special classes only when chronic ill-health renders them incapable of receiving proper benefit from instruction in the ordinary school. It is not thought right that children of normal intellect should be educated with mentally defective children simply because of a physical defect which renders their care amongst ordinary scholars a matter of difficulty.

Epileptic Children.

The number of epileptic children is estimated at 1 per 1,000, of whom one-sixth are severely afflicted. It is recommended that epileptic children of normal intellect should be left in ordinary schools if the fits are not frequent or violent fits do not occur in school, and that teachers be provided with instructions as to the treatment of children known to be epileptic. Feeble-minded epileptics may be received into special classes when the epilepsy is not severe; and for such cases it may be necessary to provide guides or conveyance between the home and the school. With regard to severe cases, whether mentally feeble or otherwise, treatment in residential homes seems essential, proper classification being provided. Each house of residence should consist of one floor only, and should not contain more than twenty inmates; but there may be an aggregation of such homes round an educational centre, as in the colony plan. It is recommended that school authorities should have power both to provide homes and to contribute to voluntary homes which conform to the conditions laid down.

Summary of Recommendations.

Legislation is suggested so as to provide for the education of feeble-minded children under similar conditions to those laid down in the Blind and Deaf Act, 1893, which is printed as an appendix. School authorities are to be required to appoint medical officers to advise them as to the discrimination of defective and epileptic children; and, as a corollary, it is recommended that the Education Department, as the supervising authority, "should consider whether a medical adviser should be appointed, whose duty it should be to advise the department on all matters arising out of the education of defective and epileptic children, and to inspect homes and classes for such children when required."

The minutes of evidence extend to 283 pages. Although valuable evidence was taken on the financial aspects of the proposed changes, no reference is made to this in the report, which states that with regard to grants, it was understood to be no part of the duty of the Committee "to make specific recommendations on this head."

THE LOCAL GOVERNMENT (IRELAND) BILL.

I.—Introductory.

It would be an interesting inquiry, perhaps, how it comes to pass that the introduction of a democratic, and in some respects a revolutionary, measure, such as the Local Government (Ireland) Bill, should fall to the lot of a Conservative Government. Such a line of investigation, however, is quite foreign to our present purpose, and may safely be left to those who derive enjoyment, if not profit, from studying the vagaries of politics. At first sight, indeed, it might seem that the medical profession had no direct interest in the Chief Secretary's Bill, and that we might look on as mere passive and passing spectators while Mr. Balfour piloted the ship which "carries Cæsar's fortunes" safely into port. But this is exactly what we cannot do, having due regard to the public weal and to the interests of the profession in the sister country.

The introduction of the Local Government Bill marks a new era in the social and economic life of Ireland, and it should also mark a new era in the sanitary organisation of that country, on the efficiency of which organisation the health and welfare of the people so largely depend.

Historical.

In order to understand the subject it is necessary briefly to trace the development of sanitary legislation in Ireland. Previously to 1866 various Acts of Parliament had been placed on the Statute Book for removal of nuisances and other matters connected with Public Health. The administration of these measures was entrusted to different authorities, so that there was a divided responsibility. The Sanitary Act of 1866 (32 and 33 Vict., cap. 108) was passed, and made applicable to all Ireland. To a certain extent it codified previous enactments, but unfortunately its powers were merely permissive, and the various sanitary authorities did little. The next step was taken in 1872, when by the Local Government Board Act (35 and 36 Vic., cap. 69), a general supervision over the local sanitary authorities was vested in the Irish Local Government Board. In 1874 the first Public Health (Ireland) Act (37 and 38 Vic., cap. 93) made compulsory the sanitary powers which had previously been only permissive.

The Existing System.

Between 1874 and 1878 the conviction gained ground that the sanitary system established in Ireland by the Act of 1874 was eminently unsatisfactory.

For the purposes of the Public Health Act of 1878, Ireland is divided (Section III) into sanitary districts, urban and rural, each of which is subject to the jurisdiction of a sanitary authority. Urban sanitary authorities are (Section IV) the town councils of corporate towns, the commissioners, municipal commissioners, town commissioners, or township commissioners of other specified towns or townships. Every urban authority may appoint (Section V) out of their own number a committee or committees to transact the business of the authority with certain exceptions. The area of every Poor-law Union, with the exception of those portions (if any) of the area which are included in urban sanitary districts, forms (Section VI) a rural sanitary district, and the guardians of the union are the rural sanitary authority, subject to certain specified conditions. Section VII of the Act empowers the Local Government Board, by provisional order, to alter sanitary districts on petition from the towns, townships, or districts affected by such order, but, in the event of any objection being taken by any person so affected, not until after due local inquiry.

Sections XII and XIII authorise the formation of a united sanitary district, governed by a joint Board, for (1) the procuring a common supply of water; or (2) the making a main sewer or carrying into effect a system of sewerage for the united district; or (3) any other purposes of the Act.

The eleventh section is so pertinent to our present purpose that we quote it *verbatim*:

Sanitary Officers and Superintendent Officers of Health.—Every medical officer of a dispensary district shall be a sanitary officer for such district, or for such part thereof as he shall personally be in charge of, under the title of medical officer of health, with such additional salary as the sanitary authority thereof may determine, with the approval of the Local Government Board; and every sanitary authority, whether urban or rural, shall appoint such other sanitary officers, including a medical superintendent officer of health when deemed necessary, as the Local Government Board shall in each case direct, with such salaries or additional salaries as the said sanitary authority shall determine, with the approval of the Local Government Board; and the said Board shall assign to the medical officers of health, and to the other sanitary officers, if any, and to the medical superintendent officer of health, if such an officer be appointed for the sanitary district, their respective duties and functions in the discovery, or inspection, or removal of nuisances, in the supply of pure water, in the making or repairing of sewers and drains, or in generally aiding the administration of the sanitary laws within the district.

Provided that with regard to salaries or additional salaries whereof any portion is to be recouped to any local fund from moneys voted by Parliament, the amount of any new salary and the proportion between any existing salary, and the addition thereto, shall be approved by the Commissioners of Her Majesty's Treasury.

Every such salary or additional salary so determined or approved shall be payable from such local fund as the Local Government Board shall indicate as properly chargeable therewith, and such part thereof as Parliament shall from time to time determine shall be recouped to such local fund out of the moneys to be voted by Parliament; and the Local Government Board shall have the same powers with regard to the qualification, appointment, duties, regulation of salary, and tenure of office of

every sanitary officer as they have in the case of the medical officer of a dispensary district.

It is to be observed that this section confers the title of "medical officer of health" in lieu of the objectionable title "sanitary officer," which was applied to the dispensary medical officers by the corresponding section of the Public Health (Ireland) Act of 1874. Further, in Sections LXXXVII and LIX respectively, the meaningless terms "executive sanitary officer" and "sanitary subofficer," introduced in the Act of 1874, are represented by the intelligible designations "clerk of the sanitary authority" and "inspector of nuisances."

Such is the existing sanitary organisation in Ireland. So far as its medical aspect is concerned it has signally failed, mainly from two causes—first, want of independent supervision; and, secondly, inadequate remuneration. The Act of 1878, by Section XI, gives only a *permissive* power to the Local Government Board to provide independent supervision, and naturally this power in consequence has not been exercised. Again, the remuneration allowed to medical officers of health by the various sanitary authorities under the sanction of the Local Government Board is—except in a very few instances—so shamefully inadequate that the only possible result is practically to render the Act a dead letter, so far as medical inspection or advice is concerned.

Supervision and Remuneration.

Anyone who will consider the relations existing between the district medical officers of health and the district sanitary authorities will scarcely deny the expediency—nay, the necessity—of providing independent supervision.

When the Act of 1878 was before the House of Lords, Viscount Powerscourt, at the request of the Council of the Irish Medical Association, placed the following amendment on the Notice Paper of the House, namely:

> The Local Government Board shall, from time to time, appoint so many fit persons as the Lords Commissioners of Her Majesty's Treasury shall sanction, being practising physicians or surgeons, to be inspecting medical officers of health, to assist in carrying out the provisions of this Act, and may remove all or any of such officers and appoint others in their stead.
>
> There shall be paid to such inspecting medical officers of health such salaries as shall, from time to time, be appointed by the Lords Commissioners of Her Majesty's Treasury, out of any money which may, from time to time, be provided by Parliament for that purpose.
>
> Within six calendar months after the passing of this Act the Local Government Board shall divide the whole of Ireland into districts, for the purposes of sanitary inspection, and every such district shall be subject to the supervision of an inspecting medical officer of health.

As the Government represented that the insertion of this clause would probably provoke such opposition in the Commons as would imperil the passage of the Bill, Lord Powerscourt withdrew his amendment. Strong representations, however, continued to be made on the subject of independent supervision, and these were invariably met with an official reply to the effect that the Local Government Board had the power already to establish such a system if they thought it necessary to exercise it; or, in other words, that independent supervision was a matter for administration, and not one requiring legislation. Be this as it may, at present no such thing as independent supervision exists in Ireland except in the large cities of Dublin and Belfast. On the contrary, the sanitary authorities have been satisfied with appointing a nondescript class of officials called "consulting sanitary officers." These gentlemen are generally the workhouse medical officers, directly dependent on the Boards of Guardians, who appoint and pay them. "*Pay* them!" Hear the report of the Local Government Commission on this point: "*In name* there is generally a consulting sanitary officer, *at a ludicrously small salary*, but *he is rarely consulted*, and, except at Belfast, it is a perfect misnomer."

On May 17th, 1877, when the Public Health Bill, which became the Act of 1878, was before Parliament, a deputation from the Irish Medical Association waited on Sir Michael Hicks Beach, then Chief Secretary to the Lord Lieutenant. Addressing the Chief Secretary on that occasion, Dr. Archibald H. Jacob showed what is the result of this want of inspection and supervision. He said:

> The *onus* of detecting and reporting all nuisances lies upon the dispensary medical officer, who by virtue of his position is the sanitary officer. He is the person who is assumed to move, and whose duty under the Act of Parliament it is to move in the first instance in these matters. Now, who is the sanitary officer? He is a man who is directly connected with the sanitary authority; he is dependent on the sanitary authority; he receives his salary from them, and his personal income is dependent on them. And whom is he to report? The tenants and subtenants of the sanitary authority. Sometimes he is supposed to report the sanitary authority themselves, who are the persons entrusted with the carrying out of the sanitary laws; and therefore I submit that in leaving the dispensary medical officer as the sanitary officer without inspectorial control, you are putting him in a position the duties of which it is impossible he can effectually discharge. Therefore the first point we earnestly desire to urge on the Government is the absolute necessity of providing some control independent of the Board of Guardians and the sanitary officer. The dispensary medical officers are most anxious to do their work in the majority of cases, but they have no power, and we ask the Government to provide them with a shield, so that they may be able to say: "You cannot complain of us for doing our duty in reporting such and such nuisances, for the inspector will come down and report us for not doing our duty if we neglect it." Therefore, sir, we would most earnestly urge on the Government this question of inspection as perhaps the most important we have to bring before you. The result of the absence of inspection is that in a great many districts in Ireland sanitation is absolutely unheard of.

Another burning question which awaits solution, and should be settled by the provisions of the Bill now before Parliament, is that of the remuneration to be awarded to the medical sanitary staff of Ireland. This is a far-reaching topic, and must be dealt with in a separate article.

The New Proposals.

Meanwhile, we would observe that the proposals of the Chief Secretary include the establishment of elective councils throughout Ireland, local administration being distributed between county councils, urban district councils, rural district councils, and six county boroughs—namely, Dublin, Belfast, Cork, Limerick, Londonderry, and Waterford. Here, it is plain, we have a machinery for public health administration which, if properly used, could not fail to benefit the people of Ireland throughout the length and breadth of the country.

THE ONE-PORTAL SYSTEM: A HISTORICAL STUDY.

II.—THE CONSTITUTION OF THE GENERAL MEDICAL COUNCIL.

The Slaughter of the Innocents.

For the next eight years after the failure of Lord Ripon's effort the Government did nothing. But the subject of medical reform was not allowed to drop. No fewer than fifteen Bills were introduced into the House of Commons by private members during those eight years, in most of which provision was made for the establishment either of one Examining Board for the whole kingdom, or of one for each of the three divisions. Outside Parliament the reformers had been endeavouring to bring about voluntary agreements between the licensing bodies for a conjoint scheme for each division. Complete success crowned these efforts so far as England was concerned, for in 1877 all the English licensing bodies agreed upon a joint scheme, and the General Medical Council sanctioned it. In Ireland the matter was dropped informally after an agreement had been almost arrived at, but in Scotland the Branch Council, in consequence of the attitude of the universities, resolved that it was "expedient to desist for the present from the attempt to form a Conjoint Board for Scotland."

In 1878, the Government once more took up the question of medical reform, and the Duke of Richmond, as Lord President, introduced a Bill into the House of Lords. As first introduced this Bill made "conjunction" between licensing bodies of each division of the kingdom optional, in deference to the wishes of the Scottish bodies, instead of, as in the Bill of 1870, compulsory.

Compulsory Co-operation.

But in Committee, on the second reading, the Duke of Richmond frankly acknowledged that the representations made to him by the medical authorities of both England and Ireland convinced him that nothing short of a compulsory Conjoint Board, including all the licensing bodies, for each of the three divisions, would meet the necessities of the case. "The chief opposition to this proposal came from the universities of Scotland, but he hoped that his endeavours in the way of compromise would show them that he had, as far as possible, deferred to their views ..... and that they would appreciate his motives and see that he was doing what he believed to be best for the medical profession and the

public generally."[1] He had, indeed, in the interests of the Scotch universities suggested a compromise, namely, that the principle of compulsion should apply only to the medical corporations, leaving it to the various universities to come in if they saw fit. This suggestion he had circulated throughout the country, and in reply "the various medical corporations in England condemned his proposal ..... The English universities took the same view, the representations from Ireland were to the same effect, and from various medical societies in the metropolis, who treated the question in a very impartial manner, he had received representations in the same direction." As a specimen of the protests which the Duke of Richmond's suggested compromise evoked from the medical corporations, we may quote from that of the Royal College of Physicians :—

> The College desires to express its extreme regret and disappointment that the Bill altogether fails to provide for that compulsory establishment of Conjoint Examining Boards ....for which the College had strenuously laboured during many years.....This object, admitted on all hands to be of supreme importance in any scheme of medical reform, would certainly be hindered rather than advanced should the present Bill become law.

The Surgeons and the Apothecaries were as emphatic as the Physicians, and the London University took the same view.

Opposition of the Scottish Universities.

The hope expressed by the Lord President, and re-echoed by his predecessor, that the Universities of Scotland would withdraw their opposition to the Bill, was doomed to disappointment. The Scotch universities were not to be coaxed into assenting to a scheme which, as they urged with considerable force, was unsuited to their circumstances. We cannot here discuss their objections, our aim being historical, not controversial. It is sufficient to note that the substitution of compulsion for permission turned them into active opponents of the Bill.

Affiliation to a Medical Authority.

A further alteration, introduced in Committee at the instance of Lord Ripon, doing away with the necessity for the "affiliation to a medical authority" of those who should pass the Divisional Board examination, met with the disapproval of the General Medical Council, only two voices, both of them Crown nominees, supporting it. This was a heavy blow, coming from the body which had hitherto supplied the motive force to the Government.

It was known besides that the Government Bill would meet with considerable opposition in the House of Commons, where no fewer than four Bills on medical reform—two of them backed by Dr. Lush, and covering a much wider field than the Government Bill—had been introduced by private members. The Government Bill was accordingly withdrawn almost immediately after reaching the Commons.

But the Duke of Richmond had no intention of abandoning the cause of medical reform. Early in the next session (1879) he reintroduced his Bill in its amended form into the House of Lords. Divisional Boards were to be obligatory, and their qualifying certificate was to be necessary for registration. On the vexed subject of "affiliation" a curious compromise was adopted. With a view to securing that every Licentiate should be "attached" to some medical authority. It was proposed that the holder of a qualifying certificate from a Board should apply to one at least of the medical authorities of his division for a diploma (to be granted without fee) before he could be registered; provided that if the authority refused such diploma for the space of a month he could be registered without it as a "Licentiate in Medicine, Surgery, and Midwifery." The object of this proviso was to prevent the exclusion of women from the *Register* by a combination among the bodies granting diplomas.

The Duties of Divisional Boards.

Examination rules and a curriculum of study were to be framed by the General Medical Council for each of the Divisional Boards, but all such rules were to be subject to confirmation and modification by the Privy Council, to whom also each medical Board and authority had the right to appeal. These provisions were reproduced almost verbatim in Dr. Lush's Bill.

[1] Speech in Committee, May 24th 1878.

The Constitution of the General Medical Council.

The Bill did not deal with the constitution of the Council; and, fearing that it might on this account be opposed, as Lord Ripon's Bill had been, the Government announced that that subject would be inquired into by a Select Committee of the House of Commons. The opportunity for delay was seized on by the Scotch universities. The Duke of Buccleuch, speaking for them, asked that the whole question of medical reform might be referred to this Committee before proceeding with the Duke of Richmond's Bill. In the General Medical Council a motion in favour of this course was only defeated by 14 votes to 8, a majority of the Irish but not one Scotch representative taking the English view in favour of proceeding with the Bill.

The Select Committee of 1879-80.

The Government ultimately gave way to the opponents of the Bill so far as to agree to refer it to the Select Committee, and on that understanding it passed the Lords, and was read a second time in the Commons. On the same understanding the Bill of Dr. Lush, and the very similar Bill introduced by Mr. Mills, were read a second time, and all three Bills referred together to a Select Committee, on which sat Dr. (now Sir Charles) Cameron, Dr. Lush, Dr. (now Lord) Playfair, and Mr. O'Leary, with others representing the public and various interests.

The Select Committee examined a number of eminent medical witnesses from England, Ireland, and Scotland, but on July 29th they reported that it was not possible at that late period of the session to complete the evidence bearing on the Bills.

The following year (1880) the Committee sat again, but the dissolution of Parliament put an end abruptly to their labours before they could arrive at any recommendations as to amending the Bills, which of course were then dropped, finally as far as the Duke of Richmond was concerned.

Medical Reformers in the Commons.

Meantime, in the House of Commons, the party of reform was forcing the hand of the Government. Hitherto no Bill on the subject had succeeded in getting beyond a second reading; but the great interest felt in these questions by the profession and the public was evidenced by the extraordinary number of Bills which session after session made their appearance, no fewer than twenty such Bills having been introduced by private members in the ten years 1870 to 1879.

Lush's Bill.

At the time when the Duke of Richmond's Bill was going through its final stages in the House of Lords, there were (amongst others) two Bills before the Commons almost identical with each other, and so far as the conjoint scheme was concerned, almost identical with the Duke of Richmond's. These were Dr. Lush's Bill and Mr. Mills's Bill. Both of these dealt fully with each of the three great questions of reform which were at that time agitating the profession, namely:

1. The direct representation of the profession on the General Medical Council.
2. The establishment of the one-portal system.
3. The prevention of unqualified persons from using medical titles.

The Government measure dealt only with one of these—the conjoint scheme. Dr. Lush and his friends were not content with such a half measure, and feared that if it was allowed to pass it would be taken as a settlement of the whole question of medical reform, and the burning question of the constitution of the Council would be shelved for an indefinite time. He therefore urged, but for a different reason from that of the Scottish universities, that the whole question should be referred to the Select Committee, and that the Government Bill should not be proceeded with until that Committee had reported.

Dr. (now Sir Charles) Cameron (University of Glasgow) warmly supported Dr. Lush's Bill as an eclectic measure combining all that was best in all the Bills that had attempted to deal with medical reform, but he considered that the question of the constitution of the Council was by far the most important of the proposed reforms, and until that was effected

to attempt other reforms was to put new wine into old bottles. He admitted that the conjoint scheme was a step in the right direction, but it would reduce to one level minimum the standard of medical education. Still, for the sake of its principle, he would support the Bill on the understanding that it was to be referred to a Select Committee.

Dr. Lyon (now Lord) Playfair (Edinburgh and St. Andrews) vigorously opposed Dr. Lush's Bill, defended the General Medical Council, while expressing sympathy with the desire for direct representation; but said the Bill compelled every university member in the House to vote against it, because it proposed to degrade the universities by giving them only a small fractional representation in the Council, while at the same time the universities were expected to counteract by their high standard the tendency towards a minimum of efficiency which must result from enforcing a uniform pass examination. The representatives of the English and Irish universities protested no less indignantly on the same point.

It is perfectly clear from this debate that the great opposition aroused by Dr. Lush's Bill came from the universities of the three kingdoms, that of London excepted. Nor can we wonder at it when we find that the colleges and corporations of England and Scotland were to have each one representative, while Oxford, Cambridge, and Durham were to have only one between them, and in Scotland the four universities—Edinburgh, Glasgow, Aberdeen, and St. Andrews—were similarly treated. The Apothecaries Society of London was to have as much weight in the supreme Medical Council of the nation as all the universities of Scotland put together.

Lord George Hamilton explained the views of the Government, and the intentions of the Duke of Richmond as to his Bill, which, it will be remembered, had not yet passed the Upper House. He said that as to the General Medical Council, the Government were satisfied with it, and could not undertake to alter its constitution in their Bill; but in deference to the strong wish both inside the profession and outside it that the question should be considered that year, the Lord President had no objection to the appointment of a Committee to investigate the subject. "The Bill (of Dr. Lush) embodied the principle that the General Medical Council must be reformed, that members of the profession outside must be directly represented upon it, and that that object must be achieved by diminishing and curtailing the amount of representation at present enjoyed by the medical corporations."[2] Under these circumstances, he suggested the appointment of a Committee to inquire into the constitution of the Council, and into nothing else. Dr. Lush reluctantly agreed to this course, but, as we have seen, the Government subsequently gave way, and allowed all three Bills to be referred to the Select Committee. The result undoubtedly justified the reluctance of the Government to allow their Bill to be referred, instead of pressing it through as it stood; for, as Lord George Hamilton had foreseen, the Committee took so long over their task that, after sitting through the remainder of that session and the whole of the next, they did not even finish the taking of evidence, and never got to the stage of making any recommendations at all.

Causes of Failure of Duke of Richmond's Bill of 1879.

If, therefore, we ask what was the cause of the failure of the Duke of Richmond's Bill, it is clear that this reference of it to the Select Committee was the immediate cause. For this action friends and enemies of the conjoint scheme appear to be alike responsible. The Scotch Universities were open and avowed enemies. The Scotch corporations were more or less hostile, too. The English and Irish universities were acquiescent if not actively helpful. In Ireland generally there were divergences of opinion on matters of detail, but no organised antagonism. In England the great corporations had worked for it heart and soul for years, and so had the General Medical Council as a whole.

[2] This must include the universities.

The London Hospital has received from the members of the Stock Exchange the sum of £6,527 10s., being the amount collected in response to a special appeal on behalf of the hospital. The sum of £500 has also been received from the Governor and directors of the Bank of England to the same fund.

THE COLONIAL MEDICAL SERVICE.

A paper on the Organisation of the Colonial Medical Service was read in the East Conference Hall of the Imperial Institute on March 2nd, by Mr. James Cantlie, F.R.C.S.

Sir Joseph Fayrer, Bart., K.C.S.I., who occupied the chair, in introducing the lecturer, expressed the hope that the outcome of the reading and discussion of the paper would be that a great Colonial Medical Service, analogous to the Indian Medical Service, would be established. The matter was in embryo at present, but advantages should be held out that would encourage the best men to enter the service.

Mr. Cantlie then read his paper, a short epitome of which we published in the British Medical Journal of February 26th, p. 581.

Sir William des Veaux (late Governor of Hong Kong), in opening the discussion, expressed the opinion that it would conduce very largely to the improvement of the Medical Service in the Colonies if a general service were established, and if there were a hope that those who were appointed to the smallest Colonies at the smallest salaries could rise to the higher positions where better salaries were paid. The expense of preparation in England would be considerable, and in the case of small Colonies which could not afford to pay more than a certain sum, it would be a little hard on them to be obliged to take the very youngest men with the least experience. The general principle, however, of giving a young man who entered the service every right to suppose that if he did his duty he would rise to a higher position in the general organisation of the medical service was most acceptable.

Dr. Hillier thought there was a possibility of pressing for appointments by the Colonial Office to an injudicious extent. Many of the appointments must necessarily be small in nature, both in work and pay. The appointment of officers in such cases would be better filled if left in the hands of the local authorities than they possibly could be by the authorities at home. A certain amount of work in the Colonies should in the interests of the public and the profession and the Government itself go to the private practitioner.

Dr. Manson remarked that many of the Colonies were peopled by aliens subject to the British Crown. In Mauritius the majority of the settlers were French by sympathy and extraction, and would not care to have an English surgeon nominated by a Board in London thrust upon them. If any good well-thought-out scheme which could be worked economically were shown to the Government, they would certainly jump at it. The question of education in tropical diseases was an important one. For a young man practically untrained in diseases of tropical climates to be plunged into a tropical country in which the diseases peculiar to it were acute, was extremely undesirable and reprehensible. He knew that the Government was not indifferent to the subject of the Colonial Medical Service, and that the sympathy of the authorities was very much in the direction of Mr. Cantlie's wishes. The difficulties were to find a good plan which would reconcile everybody, and the lack of funds. There was a splendid opportunity for a millionaire philanthropist to establish a tropical medical school and a school for the education of men who intended in future to practise in tropical countries.

Brigade-Surgeon-Lieutenant-Colonel McLeod (Netley) was strongly of opinion that instruction in tropical diseases ought to be post-graduate and not part of the curriculum of the student. It would be better and cheaper that men selected for the Colonial Service should be sent to Netley, than that imperfect and meagre arrangements should be made for them elsewhere.

Dr. Manson objected to the existing institute at Netley being used for the education of men in tropical diseases, as it was entirely devoted to English soldiers, whereas the Colonial Service was particularly devoted to natives and their diseases.

Dr. Thin was astonished at the accuracy and extent of the knowledge of tropical diseases which students acquired at Netley, but it was impossible to obtain that knowledge from only a short course of study.

Dr. Simpson (Calcutta) suggested that a committee should be appointed with the object of advancing Mr. Cantlie's views.

Mr. Cantlie, in reply, thought that a school dealing with tropical diseases was absolutely necessary outside any existing institution. Malaria and dysentery were not the only diseases of which a man had to have knowledge before going to the tropics. There was more experience to be gained in the London docks on that subject than in any other place in Europe. It was a capital plan to provide that private practitioners in the Colonies should be made visiting surgeons to the hospitals, and called outside-surgeons, but they should not be treated as part of the covenanted staff of the medical department, and participate in the rank, benefits, and pensions to which the regular surgeons were entitled.

The Chairman had hoped that the meeting would have furnished an opportunity for doing justice to what had always seemed to him to be a very grossly neglected branch of the service. He wished to see the great and important Colonial Medical Service given the same standard of position as the medical services of the Army and Navy. It was true there was a Colonial Medical Service at the present moment, but it was not organised; it was disunited and not bound together by any bonds. He thought the school at Netley was most complete for education in the particular subjects that were required, and advocated its extension. He thoroughly endorsed the proposition that the Government should be solicited to construct the Colonial Medical Service upon the same basis as its other medical service, having an exactly analogous position.

It was resolved that a committee should be formed to deal further with the question, to formulate a scheme and bring it before the notice of the Government, and to consider the best means of constituting a public Colonial Medical Service.

THE CAMBRIDGE SCHOOL OF MEDICINE.

On March 2nd a meeting of medical graduates of the University of Cambridge was held at the house of the Royal Medical and Chirurgical Society, in connection with the project to raise a sum of £20,000 to erect buildings for the new School of Medicine at Cambridge. The chair was taken by Dr. W. H. Dickinson.

Professor T. Clifford Allbutt, F.R.S., read a letter which had been received from the Right Hon. A. J. Balfour, M.P., in which he said he much regretted that his attendance at the House of Commons prevented his being present, which was "very unfortunate"; but at any rate he sent a subscription of £20, and added that he wished he could do more. The Right Hon. Sir John Gorst had telegraphed, "Regret impossible to attend meeting to-day."

Dr. Dickinson then briefly stated that the reason of the meeting was the notorious inadequacy of the buildings of the Cambridge Medical School. The number of students when he was first on the spot could be counted almost on the fingers of one hand, whereas now the school was one of the largest in England. It had professors who were second to none in the world, but the accommodation was very bad, inasmuch as the buildings which had to be occupied were merely so many temporary sheds, totally unworthy and incapable of repair. Great efforts ought to be made to recreate the buildings. The cost would be £20,000, and the money must be asked for chiefly from outside resident members of Cambridge, inasmuch as resident members of the University could not be expected to find much of what was needful.

Professor Jebb, M.P., then moved:

That a Committee be formed in London consisting of Cambridge graduates for the purpose of taking such steps as may be thought useful or the advancement of the Cambridge medical school.

He said they were all proud of their medical school and of the eminent names connected with it. They were further proud of the high standard of scientific acquirements which it had maintained, and which he believed had had a valuable influence upon medical education throughout the country. The resources at Cambridge, however, were very inelastic, while the demands of science and of higher education were continually increasing. All in Cambridge were undoubtedly unanimous in acknowledging that the needs of the school were most urgent and imperative. Indeed, the urgency of the matter was more than a university question, it was a national one. The Cambridge medical graduates formed a body whose influence was necessarily and justly very wide and powerful; and they might be assured that they would have behind them the active good will and strenuous support of all Cambridge men.

The motion was seconded by Professor Clifford Allbutt, who, by means of a large map, explained the provision which it was proposed to make. In the first place, however, he pointed out that the University had recently thought it right to purchase two parcels of ground in the immediate neighbourhood of the present buildings which had come into the market. Had this not been done the opportunity might never have recurred, and, by taking advantage of it, space would be afforded for future extensions of the buildings of the University. But this wise and necessary expenditure had exhausted the funds of the University available for such purposes. It was therefore not in a position to find money to defray the cost of the new buildings necessary if the medical school was to continue to meet the increasing needs of medical education. The present buildings were not only unsuitable, but they were actually tumbling down. The sum of £20,000 now asked for would be devoted mainly to meeting the urgent necessities of the pathological and pharmacological departments for suitable laboratories, museums, and class rooms. The buildings would occupy the site at the corner of Downing and Corn Exchange Streets. The University had required that the frontage in Downing Street should be built of stone and should possess some architectural merit. This was a reasonable demand, but it increased the cost. Still, he trusted there was a sufficient feeling of attachment to their Alma Mater among the medical graduates of Cambridge to make the object one not too difficult of attainment. He referred to the large expenditure which Germany found it possible to make on university buildings, and to the splendid clinical institute which had been erected at the cost of the citizens of Moscow. In America also expenditure on university buildings was on a magnificent scale. Still, he hoped that if the money now asked for were forthcoming Cambridge would be able by its *personnel* and by its mode of work to beat the big battalions.

The resolution was carried unanimously, and Professor Allbutt said that subscriptions promised might be paid in yearly instalments spread over five years.

The Vice-Chancellor (Dr. Alex Hill) moved a resolution that a committee with power to add to their number be appointed. As regards obtaining the funds from the University money chest, he felt sure that that was impossible. He had percussed the chest in connection with a recent annual examination of the finances of the University, and the note elicited was so loud and clear that the veriest tiro would pronounce it absolutely tympanitic. Cambridge had not got the money, but it certainly had the men. Heaven helped those who helped themselves. If the Medical School started a fund on its own account it might be hoped that the new school buildings would be erected within a reasonable period.

Mr. Davies-Colley seconded the motion, which was carried *nem. con.*

Dr. Dickinson was appointed Chairman on the motion of Mr. T. Holmes, seconded by Professor Alex. Macalister, and Dr. Norman Moore and Mr. Herbert Page were appointed Secretaries to the Committee on the motion of Professor Michael Foster, seconded by Professor Kanthack.

MEDICAL AND CORPORATE REFORM.

At a meeting of the Corporate and Medical Reform Committee held on February 12th, a petition to the Council of the Royal College of Surgeons to hold an election by the constituency of a member of the General Medical Council was adopted for signature. A letter was read from Mr. George Brown referring to the appointment by the Parliamentary Bills Committee of the British Medical Association of a special Committee to take up the question of reform of the Medical Acts. Mr. Brown added that he fully agreed that it was very desirable that all the direct representatives should act in unison. He thought that on main principles they were, with perhaps one exception, pretty well agreed, and he believed that they would in time be able to act still more in unison. Measures to incorporate the Committee as the

"Corporate and Medical Reform Association," with an annual subscription to members of 10s. 6d., were considered, and it was resolved that in addition to members there should be a roll of "associators" paying a voluntary subscription.

At a meeting of the Harrogate Medical Society on February 17th, Mr. F. N. Ozanne, in the chair, Mr. R. B. Anderson delivered an address on medical reform, in the course of which, after referring to the injustices he had himself suffered, he explained the grounds of the claim that the General Medical Council and qualifying bodies were under an obligation to enforce medical rights. He described also the efforts of the Corporate and Medical Reform Committee to obtain the combined action of the profession to secure reform of the General Medical Council and medical corporations, including the effective control of these bodies by the several constituencies.—Dr. Gordon Black said that the profession, and especially the members of the Association, were entitled to expect that the British Medical Association would take vigorous action in favour of such measures. He moved:

That this meeting of the Harrogate Medical Society expresses its cordial agreement with the work of the Corporate and Medical Reform Committee as explained by Mr. Anderson, and undertakes to urge upon all its members the importance of doing all they can as individuals to support the movement.

—Dr. James Myrtle seconded the motion, and stated that by a two line section in the Scottish Universities Acts, 1889, the University Courts had obtained the legal right to appoint the University members of the General Medical Council. This right was illegally exercised by other bodies. Scottish graduates could only recover their rights by means of an Act of Parliament, which they were resolved to obtain. The resolution was carried unanimously, and the petition to the Council of the Royal College of Surgeons of England to hold an election of a member of the General Medical Council was signed by Fellows and Members present.

At a meeting of members of the profession in and near Bradford on February 21st, held at the invitation of the Bradford and District Medico-Ethical Society, and under the chairmanship of Dr. Hime, President of the Society, Mr. R. B. Anderson gave an address on medical reform. He dwelt on the necessity for a larger representation of the profession as distinguished from Corporations on the General Medical Council. He contended that it was the intention of the legislature in passing the Medical Act, 1886, that the members representing the various medical corporations on the General Medical Council should be elected by the members of those corporations and not by their councils or boards. An interesting discussion ensued, and a resolution was adopted unanimously expressing sympathy with the efforts of the Corporate and Medical Reform Committee to secure reform in this and other directions.

Dr. A. Garrod Thomas, of Newport, Mon., has been made a Deputy Lieutenant for Monmouthshire, of which county the Duke of Beaufort, K.G., is Lord Lieutenant.

The Swiss Federal Council has awarded the prize founded by Dr. Binet—consisting of the interest for five years on a capital sum of 10,000 francs—to M. Henry Dunant, the founder of the Red Cross Association. The prize amounted to 1,780 francs 10 centimes.

German Medical Congress.—The Sixteenth Congress for Internal Medicine will be held at Wiesbaden from April 13th to the 16th under the presidency of Professor Moritz Schmidt. Among the subjects proposed for discussion are Clinical Medical Education (to be introduced by Professors Von Ziemssen of Münich and R. von Jaksch of Prague); and Intestinal Intoxications and Antisepsis of the Bowels (to be introduced by Professors Müller of Marburg and Brieger of Berlin). At the special request of the Organising Committee Professor Leo of Bonn will deliver an address on "The Present State of the Treatment of Diabetes Mellitus." Among other communications promised are a paper on the Chronic Diseases of the Heart Muscle by Dr. Schott of Nauheim, and one on the Functions of the Stomach by Dr. von Mering. In connection with the Congress there will be an exhibition of apparatus, instruments, preparations, etc. The General Secretary of the Congress is Dr. Emil Pfeiffer, Parkstrasse Nr. 9B, Wiesbaden.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

March 2nd, 1898.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Lancashire and Cheshire Branch.—A meeting of this Branch wil be held in Liverpool on April 6th. Members wishing to read papers or make any other communication should write at once to the Secretary. Applications for membership should be addressed to Dr. Barr, Honorary Secretary, 72, Rodney Street, Liverpool.

Southern Branch: South East Hants District.—The next meeting will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, March 8th, at 9 P.M. Mr. E. Willmer-Phillips will read notes of a Case of Cerebral Hæmorrhage. Gentlemen wishing to make communications are requested to inform the Honorary Secretary, C. C. Claremont, M.D., Elm Grove, Southsea.

West Somerset Branch.—The spring meeting will be held at the Railway Hotel, Taunton, on March 25th, at 4.30 P.M. Agenda: To consider Report of Constitution Committee; the Resolution of Annual General Meeting on Inebriates Legislation; and Resolution of Worcestershire and Herefordshire Branch on Venereal Disease in India. Notes of a case of Syphilis, by Dr. Rutherfoord; of a Case of Complete Inversion of Uterus three days after Delivery, by Mr. Routh; of a Case of Head Injury and of a Case of Hysterectomy, by Dr. Pringle. Notice of any other communications should be sent to the Secretary. There will be a dinner at the Railway Hotel at 6.30; price 5s. exclusive of wine. Those intending to be present should inform the Secretary before March 18th.—R. Liddon Meade-King, M.D., Honorary Secretary, Taunton.

South Eastern Branch: East Surrey District. The next meeting of the above District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 10th, at 4 P.M., Mr. J. Sidney Turner, of Anerley, in the chair. Dinner at 6 P.M.; charge 7s., exclusive of wine. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for Representatives on the Council of the Association. The following papers, etc,, will be read: Professor A. E. Wright, M.D.: (1) Demonstration of the Technique of Serum Diagnosis (2) Demonstration of Method of Determining the Coagulability of the Blood. Dr. F. J. Smith: Pleurisy and Pleuritic Effusion; Their Diagnosis and Clinical Significance. Mr. A. H. Tubby; The Diagnosis and Treatment of Infantile Hernia. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—Henry J. Prangley, Honorary Secretary, Tudor House, Anerley.

South Eastern Branch: West Kent District.—The next meeting of this District will take place at the West Kent Hospital, Maidstone, on Wednesday, March 23rd, Mr. A. H. B. Hallowes, in the chair. Members desirous of reading papers or exhibiting specimens are requested to communicate with the Honorary Secretary without delay.—E. Ground, M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

Midland Branch.—The Honorary Secretary and Treasurer has received postal orders for £1 3s. 6d., name of sender not enclosed; post mark Grantham.

PERTHSHIRE BRANCH.

A special meeting of this Branch was held in Perth Infirmary on Friday, February 11th. Dr. Robertson, of Scone, was called to the chair in the absence of the President.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed by the Chairman.

Edinburgh Excursion.—The Secretary reported what had

bee done in reference to the Perth and Dundee excursion in connection with the next annual meeting, and the Committee was continued with powers.

Calf Lymph for Scotland.—Dr. Ferguson drew the attention of the meeting to a matter of urgent importance—namely, the proposed gratuitous distribution of calf lymph in England to the exclusion of Scotland. He moved that the matter be remitted to a small Committee for investigation, with powers to communicate with Members of Parliament to urge the claims of Scotland to equal rights, and to request the representative member to bring this under the notice of the Council meeting in London next April. Dr. Niven seconded. The Committee was named—Dr. Ferguson and Dr. Liddell, with the Secretary. Carried unanimously.

Cases.—Dr. Ferguson showed (1) a boy who had been in the infirmary for fourteen weeks ending May 27th, 1897, suffering from Scarlet Fever, followed by long-continued desquamation. Lately the boy had returned for treatment of another disease, and the desquamation was evidently still going on. He had not carried the infection to other members of the family. (2) Fatal case of Tuberculous Meningitis. The notes taken by Dr. Lyell, the house surgeon, showed that the malady had run a rapid course, and that the symptoms observed were correlated with the *post-mortem* appearances in respect of localisation of brain function. It appeared that the affection was at first basal, and afterwards spread to the motor area, specially affecting the left cortex. (3) Similar to the above, except that the base of the brain remained apparently unaffected. (4) Ulceration of Stomach with two perforations, anterior and posterior, almost exactly opposite. The anterior was closed by peritoneal adhesions. The posterior had permitted of escape of stomach contents, and proved fatal by rapid peritonitis. The points arising on these cases were fully discussed by the members present.

Calculus.—Dr. Liddell showed a biliary calculus lately passed by one of his patients; it was cylindrical in form, facetted at each end, $1\frac{1}{16}$ inch long and $\frac{3}{4}$ inch in diameter.

Operating Theatre.—Dr. R. Stirling showed the operating theatre as lately remodelled.

Decision as to Branch Excursion.—The meeting decided that no Branch excursion to the country should be made this year.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A meeting of this District was held at Guy's Hospital, on February 24th, Mr. Frederick Wallace, President of the Branch, in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Cases.—The following cases were shown: Mr. Dunn showed a case of Malignant Stricture of Ascending Colon, in which the growth had also implicated a loop of small intestine. The cæcum was opened, and an artificial anus made. Five weeks later the growth was removed, and the large and small intestine joined separately by Murphy's buttons.—Dr. J. H. Bryant showed three cases of Fibroid Lung with bronchiectasis, illustrating contraction, deficient movement of one side of the chest, displacement of cardiac impulse, dulness, bronchial breathing, and large *râles*, clubbing of the fingers, and occasional attacks of hæmoptysis. Special attention was drawn to the points distinguishing such cases from phthisis. Dr. Bryant also showed a case in which gastrojejunostomy had been performed successfully for Malignant Growth at the Pylorus, and a Case of Aneurysm of the first part of the Aorta.—Mr. Howard showed a case of extensive scald of the back (2nd and 3rd degree). The child was put under an anæsthetic, and the wound cleaned with turpentine and soft soap, dressed with lint, soaked in picric acid solution (picric acid gr. l, absolute alcohol ℥iiiss., aq. ad Oj) and salicylic wool. The dressings were changed on the third and seventh days, then ung. ac. borici applied. The patient did very well. No suppuration occurred. The whole surface healed in three weeks. The temperature never rose above 100°, although for the first five days the pulse was 140 to 160, and the patient was seriously ill.—Mr. Richmond showed a case in which there had been local suppurative peritonitis, with turbid serum in the general peritoneal cavity following appendicitis.—Mr. Stamford showed: (1) A case in which the Larynx had been Extirpated for malignant disease; (2) a case of Enlargement of Bones about the Elbow, simulating Charcot's disease but without nervous symptoms.—Mr. Collins showed a case of Tuberculous Shoulder-joint with ankylosis, in a child aged 7 years.

Votes of Thanks.—The President proposed a vote of thanks to the gentlemen who had shown such an interesting series of cases, and the meeting closed with a vote of thanks to the Governors of Guy's Hospital for having afforded facilities for the meeting.

BATH AND BRISTOL BRANCH.

The fourth ordinary meeting of the Session was held at Bath on February 23rd. F. Richardson Cross, M.B., President, in the chair. There were thirty-five members and visitors present.

New Members.—The following gentlemen were elected members of the Association and of the Branch: W. H. Symons, M.D.Brux., M.R.C.S., L.R.C.P., D.P.H.Oxon., Bath; G. J. K. Martyn, B.A., M.B., B.C.Cantab., D.P.H.Lond., Bath; D. L. Beath, M.R.C.S., L.R.C.P., Bath; R. C. Leonard, M.B.Durh., M.R.C.S., L.R.C.P., Clifton.

Melancholia.—Dr. Lionel Weatherly, in opening a discussion on Melancholia, spoke of it as a disease *per se* and pointed out how important it was to recognise it in its early stages. He laid great stress on the importance of proper feeding, as in these cases the disinclination to take food was often mistaken for dyspepsia, and so a decreasing amount was allowed until the patient got into a very exhausted condition. In concluding his address Dr. Weatherly summarised the important points to aim at in the treatment of melancholia as follows: Make the patient put on fat; give him alternate short periods of open air exercise and varied occupations indoors, but never allow physical or mental work to reach fatigue point. Procure sleep by natural methods if possible and guard against the ever-present danger of suicide.—In the discussion which followed the President, Dr. Spencer-Cobbold, Dr. Stewart, Mr. Hopkins, Dr. Shingleton Smith, Mr. Flemming, Dr. Michell Clarke, Dr. Watson Williams, Dr. Pearse, and Mr. Drake took part.

STAFFORDSHIRE BRANCH.

The second general meeting of the session was held at the Staffordshire General Infirmary, Stafford, on February 24th. Mr. G. A. Phillips took the chair, and nineteen members were present.

Confirmation of Minutes.—The minutes of last general meeting were read, approved, and signed.

Correspondence.—A letter from the General Secretary was read, forwarding from the Council copy of resolution passed at the annual meeting in London respecting legislation for inebriates.—A letter from the General Secretary was read, forwarding a copy of the Obstetric Nurses Bill as finally considered and passed by the Subcommittee of the Parliamentary Bills Committee appointed for the purpose.

Report of the Constitution Committee.—The report of this Committee having been fully discussed, the following resolution was passed unanimously:

> That this meeting, having considered the report of the Constitutional Committee concerning the election of members of Council by unattached as well as attached members, recommends that the proposal be not adopted.

Specimens.—Dr. F. Edge showed: (1) a Uterus, removed by vaginal hysterectomy for the radical cure of complete procidentia, in a woman, aged 56, where other methods had failed; it was too recently removed for the result to be given. (2) A Uterus, removed by vaginal hysterectomy for metrorrhagia, which repeated curetting and other means had failed to relieve.—Dr. S. King Alcock showed (on behalf of Mr. John Alcock) a specimen of Alibert's Keloid removed from the skin over the sternum of a joiner, possibly attributable to local irritation from the use of a brace-bit.—Mr. T. M. Taylor (M.O.H. for Burslem) showed specimens of Cysticercus Cellulosæ from "measley" pork. The meat had been seized by the sanitary authority. The butcher was prosecuted, and a sentence of six weeks' imprisonment with hard labour was imposed.

Papers.—Dr. S. King Alcock read a paper on a case of

Aneurysm of the Aorta.—Mr. F. M. Blumer read a paper on a case of Puerperal Septicæmia treated by Antistreptococcic Serum.

Inspection of the New Infirmary.—Previous to the commencement of business the members were entertained at tea in his room by the House-Surgeon, Mr. J. F. Fernie, and were then conducted over the operation room and wards of the new infirmary. The building has recently been completed, being constructed and fitted on the most approved principles.

CANTERBURY SECTION OF THE NEW ZEALAND BRANCH.

The late Mr. Ernest Hart.—At a meeting of this Section a vote of condolence to the relatives of the late Mr. Ernest Hart was unanimously carried, and a further vote of condolence to the parent Association was also moved and carried. Various members of the Section expressed their sincere sympathy with the family of Mr. Hart, and their deep regret at the loss they had sustained in the death of so untiring a worker for the good of the public and for the advancement of the profession.

GRAHAMSTOWN AND EASTERN PROVINCE (CAPE COLONY) BRANCH.

A meeting was held at the Albany General Hospital on Friday, February 4th, Dr. Greenlees (President) in the chair.

Election of Officers.—The office bearers for 1898 were elected as follows: *Honorary President:* W. G. Atherstone, M.D. *President:* J. T. Bays, M.D. *Vice-President:* W. Roger Chew, M.B. *Secretary and Treasurer:* J. McD. Troup, M.B.

Communications.—A paper by Dr. Conry on a case of Abscess of the Liver, was read in his absence by the Secretary. This gave rise to considerable discussion.—Dr. Greathead showed Pathological Specimens and Photographs illustrating three cases difficult of diagnosis: (1) An old hydatid cyst with calcareous walls, situated on the sacral promontory, retroperitoneal, simulating fibroid of the uterus. (2) An old suppurating extrauterine fœtation of about five months' pregnancy, with some calcareous deposit, situated in front of the uterus in the right broad ligament, simulating fibroid of the uterus. In this case pregnancy had occurred fully a year after the tumour was originally noticed, and a seven months' miscarriage had followed. (3) Hydatid cyst of the orbit.—Dr. Greenlees showed two cerebral cases: (1) Of Bulbar Paralysis; (2) of Cerebral Tumour.

HONG KONG AND CHINA BRANCH.

A meeting of this Branch was held in Hong Kong on January 21st, Dr. F. W. Clark in the chair.

Confirmation of By-laws.—The By-laws of the Branch as revised by the Council were submitted by Dr. J. C. Thomson, Hon. Secretary, and confirmed.

Communications.—In the absence of Dr. G. P. Jordon, the Hon. Secretary read for him notes of a case of Operation for the Radical Cure of Congenital Right Inguinal Hernia, and showed the patient.—Surgeon C. M. Beadnell showed a case of Emphysema of the Frontal Region, due to a Fall on the Occiput.

New Member.—John Bucknill Fowler, M.R.C.S., L.S.A. Lond., was elected a member of the Association and of the Branch, and C. Marsh Beadnell, Surgeon R.N., already a member of the Association, was elected a member of the Branch.

TRINIDAD AND TOBAGO BRANCH.

The annual general meeting of this Branch was held at the Colonial Hospital on January 31st.

Report of Council.—The report of the Council for 1897 showed a balance in favour of the Branch. There were 49 members of the Branch. Three—Drs. Lenehan, Blakeley, and Leon were new members. Dr. H. Mitchell, C.M.G., an octogenarian member, died during the year. Although so advanced in years, he was one of the most constant attendants at their meetings, and always enlivened the discussions by references to medicine (as practised in the Thirties in Trinidad). During his long, useful career he had served the colony as Protector of Immigrants for very many years.

Election of Officers.—The election of officers for the present year resulted as follows:—*President-elect:* H. M. Alston, M.B., C.M.Edin. *Council:* S. M. Laurence, M.B., C.M.Edin.; J. A. Rodriguez, M.B., C.M.Edin.; W. V. M. Koch, M.D., C.M.Edin.; E. A. G. Doyle, M.R.C.S.Eng.; J. A. de Wolf, M.A., M.D. *Secretary and Treasurer:* E. Prada, M.R.C.S.

Death of Mr. Ernest Hart.—The Hon. Dr. Lovell, C.M.G. Surgeon-General (the retiring President) stated that by the last mail they had had the sad news of the death of Mr. Ernest Hart, which occurred on January 7th. Exactly one year ago they had had the pleasure of seeing Mr. Hart in that island, and had seen with grief the weak condition in which he was. He was highly pleased with Trinidad, and had written in very eulogistic terms both of the island and of its medical service. They all knew the services that Mr. Hart had rendered to sanitary science and to the medical profession. He moved a vote of condolence and sympathy with the widow in her sad bereavement.—Dr. J. A. de Wolf seconded.

CEYLON BRANCH.

A meeting of this Branch was held on January 29th at the Colonial Medical Library, Colombo. Dr. J. Loos presided in the unavoidable absence of Dr. A. Perry, the new President.

Haffkine's Antiplague Serum.—Dr. H. M. Fernando read a paper on the Haffkine plague prophylactic, and the results of its inoculation. He first dealt with the manufacture of the prophylactic. It was important to realise the true nature of the plague prophylactic. It contained not only the products of the life activities of the bacillus in the medium in which it was grown, but also the dead bodies of the organisms themselves. It was not a living vaccine nor was it an antidote. The inoculation was performed either in the flank or in the arm, and from 3 to 5 cubic centimetres were injected at one time. A second and even a third injection was recommended at intervals of a week. This second and third inoculation did not correspond to revaccination as performed against small-pox. By administering a dose of calcium chloride at the time of the inoculation, the pain and the inflammation at the seat of the injection were considerably lessened. From the results of the inoculations at the epidemic in the Byculla Gaol in Bombay, it was clear that even a day after the inoculation its good effects were felt. The time necessary for the plague prophylactic to produce its protective effect was shorter than in any preventive treatment known, this period being in the anticholera inoculation four days, in vaccination against small-pox seven days, in the inoculation against anthrax twelve days, in the inoculation against rabies fifteen days. Dr. Fernando then gave a summary of the report of the plague epidemic and the results of the inoculations conducted at Damaun (Portuguese India). The course of the epidemic disproved the theory frequently put forward that plague was limited to a belt or zone above the latitude 19° N., which was the latitude of Bombay. Plague had occurred in an epidemic form at Kholapur, which was below 17° north latitude, a small township in the Southern Maharatta country, where nearly 160 deaths took place. Two indigenous cases of plague had occurred in Madras, which was further south still.—The Chairman touched upon one or two points mentioned by Dr. Fernando, and observed that there could be only one opinion as to the able manner in which Dr. Fernando had drawn up his paper, and the value of the information he had given them.

Medical Defence.—Dr. V. C. J. Vanderstraaten read a paper on medical defence, and advocated the suppression of irregular and unqualified medical practice. He gave notice that at the next meeting he would move:

> That the members of the Ceylon Branch of the British Medical Association unanimously approve the scheme of medical defence proposed to be undertaken by the parent body, and agree to pay an additional subscription by each member, of not less than 5s. and not more than 10s. per annum to meet the extra expenditure rendered necessary.

The Chairman said it was a large subject, and would require careful consideration.

X-ray Apparatus.—A demonstration of the hospital *x*-ray apparatus was then given by Mr. M. Silva, the general hospital artist and electrician. This apparatus is now in full working order, and several skiagraphs were exhibited by the use of which surgical operations in gunshot wounds and

injuries to bone, as in fractures, had been materially helped.

Cases.—Two interesting clinical cases and some microscopic specimens were demonstrated to the members present by the Honorary Secretary.

Vote of Thanks.—The meeting terminated with the usual vote of thanks to the Chairman.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Grimaux and the Zola Case.—Transmission of Typhoid Germs by the Atmosphere.—Benefit Societies and the Choice of a Doctor.—An Algerian Lady Doctor.—Feeding Bottles.—Another Case of "Zola-mania."—General News.

At a recent meeting of the Biological Society, the assembled members (numbering 40) decided to express to Professor Grimaux their sympathy and esteem for him. This decision was taken because Professor Grimaux was one of the witnesses on the side of Zola in the recent trial, and in consequence has been deprived of his professorial chair of Chemistry at the Ecole Polytechnique. When Professor Grimaux appeared at the meeting all present rose, and Professor Richet made the following speech: "It is the custom at the Biological Society to congratulate its members when an honour is conferred on them, or when a memorable event occurs in their career. To-day we offer the homage of our affection to M. Grimaux, our master, our friend, and our colleague. He has been severely treated. It is not for us to criticise this act, but we desire to express to him the admiration, the respect, and sympathy, which animate the hearts of us all." M. Grimaux, who was considerably affected by this expression of sympathy, replied: "Certainly the law has been violated. Witnesses who give evidence according to their conscience should be protected. I repeat, I listened only to the dictates of my conscience. I swore to tell the truth and I told it. I am prepared always to do my duty in the same way." Professor Grimaux was formerly lecturer on chemistry at the Paris Medical Faculty.

According to the *Journal d' Hygiène*, recent experiments have proved that the typhoid germ can be transmitted by the atmosphere. The germ preserves its vitality a considerable time, not only in damp surroundings, but in others apparently dry, such as linen, wood, earth, dirt, and refuse. By the process of desiccation the greater part of the bacilli perish. A few however escape, and these may become a source of danger, not only by being transmitted by the surrounding air, but also because imperceptible fragments containing them, by being brought into contact with the buccal mucous membrane, either from fingers, food, etc., produce infection.

The following curious case has recently occurred. A member of a Mutual Help Society consulted the medical officer of the Society. He was suffering from ocular disturbance, and was told to consult a specialist at Nantes. The patient preferred consulting another medical man whom he knew better. The Society, under those circumstances, refused to pay the fees. The patient proceeded against the Society to recover the sum paid. The *juge de paix* decided in favour of the patient. The Society appealed against the judgment. The Civil Court decided in favour of the Society, and condemned M. Denis, the patient, in costs.

Mlle. Chellier is the first Algerian lady student who has obtained a Paris medical degree. She is well known by her medical missions in Algiers. Speaking the different Arab dialects, she was able to treat the poor Arabian women. Mlle. Chellier will shortly become Mme. Castelli. Her future husband, Dr. Castelli, gained the Cross of the Legion of Honour in the Madagascar campaign. In the medical press it is observed that if lady doctors do not make brilliant positions in the profession they marry well. Dr. Déjerine, Dr. Jacques Bertillon, Dr. Sollier, and Dr. Pilliet have chosen wives among lady doctors.

The Minister of the Interior has addressed a letter to the Academy of Medicine, acquainting that body of the desire of the Superior Committee for the Protection of Infant Life to have the importation and sale of feeding-bottles with tubes forbidden by law. The Minister asks if such a proposition should be made to the Chamber of Deputies. The question has been referred by the Academy to the Committee of Infant Hygiene.

The "Zola mania" does not spare foreigners. A third case has occurred, the victim being a Russian who was taken into custody for addressing incoherent speeches to passers-by. Before the police commissary the name of Zola constantly recurred in his excited speech. Finally he became violent and dangerous. He is now under treatment. This man has resided only a few months in Paris, where he rents a very handsome flat.

At the suggestion of Professor Brouardel, the Academy of Science has appointed a special Commission to study questions relating to the effects of tuberculosis and the propagation of that disease.

The Academy of Medicine has awarded the Monbinne prize of £60 to Dr. Huguet, army surgeon, to enable him to continue his scientific mission for exploring Mount Zab.

LIVERPOOL.

Complimentary Dinner to Dr. Henry Rawdon.—The Progress of Cremation.—Extension of the Toxteth Park Union Infirmary.—The City Coroner and Medical Witnesses.

On Saturday evening, February 26th, Dr. Rawdon's medical friends entertained him at dinner at the Exchange Station Hotel, on the occasion of his retirement from hospital and private practice in Liverpool. Dr. Caton presided. The Chairman, Mr. Newton, and Mr. Banks, referred to Dr. Rawdon's long and honourable association with the Royal Southern Hospital, the Children's Infirmary, the Bluecoat School, and other charities. Mention was made of his abilities as a surgeon, and particularly of his signal success in operations for cleft palate and hare-lip, and of the faithful and conscientious manner in which he had always devoted himself to the interests of his patients. The guest of the evening was complimented on his exceptional physical vigour and activity, after a professional career extending over nearly forty years. The hope was expressed that he might long enjoy the period of well-earned rest to which he is looking forward, and which he proposes to spend in some rural part of the south of England. Much regret was expressed at his departure from Liverpool. Dr. Rawdon replied in a few well-chosen words. The dinner was at first intended to be a small informal gathering, but owing to Dr. Rawdon's great popularity the numbers had to be increased to the extreme limit of the available accommodation, and if it had been proposed to throw the dinner open to all who wished to join, the guests would probably have exceeded 100. The loss of Dr. Rawdon will be felt by a large number of friends both in the profession and outside it, and all will wish him many years of health and happiness in his well-earned retirement.

A certain number of cremations have already taken place at Anfield since the crematorium was completed in September, 1896, two of them being of the remains of persons belonging to the working class.

A substantial addition has lately been made to the Toxteth Park Union Infirmary in Smithdown Road, consisting of wards containing 420 beds, an administrative block, and a nurses' home. The building is to be fitted up with all the most recent sanitary appliances, the pavilions are bright and cheerful, and a dark room for ophthalmic work has been provided. There are still other wards to be added before the hospital is complete.

Coroners seem at times to entertain the mistaken idea that the ends of humanity are served by exercising severity towards the junior members of the medical profession who as house-surgeons undertake the treatment of the poor in our hospitals, and have to give evidence at inquests without fee or reward of any kind except the experience they gain. An inquest was lately held by the city coroner on the body of a child 3 years of age. It appears that the child, who was recovering from an attack of measles, was left alone in a room with a fire while the mother was drinking tea with a neighbour. On the mother's return she found the child badly burnt, and with the clothes still on fire. It was then wrapped up and taken to the Royal Infirmary, where it was

seen by one of the house-surgeons, who was not told that it was recovering from an infectious disease. It was suffering from shock, and did not seem to be in pain, and as the wards were full the friends were directed to take it at once to the infirmary for children, which is close by. The coroner commented in strong terms on the fact that the house-surgeon did not dress the burns before sending the child to the infirmary, and his remarks as reported in the daily press seem to imply that the house-surgeon had thereby been guilty of a serious dereliction of duty. The coroner is clearly not aware that infrequent dressings are of the first importance in the treatment of extensive burns, and that if the child was to be admitted to another hospital it was much to be preferred that the dressing should be done there, by the aid of an anæsthetic if needed, rather than that the burns should be exposed at the Royal Infirmary, and possibly have to be dressed again after the removal to the other hospital, a proceeding involving two dressings when one would have sufficed. Censure of this kind from an official who, whatever his general attainments may be, can know nothing of practical medicine or surgery, can be of no real service; the only effect it can possibly have is to provide some lukewarm supporters of hospitals with an excuse for withholding their subscriptions, and so hampering them in their great work of alleviating the sufferings of the poor. The medical profession here have long maintained that a medical training is that best fitted to qualify for the office of coroner, and a little practical acquaintance with the treatment of injuries would probably have led the coroner to a juster estimate of the merits of the course adopted by the house-surgeon.

CORRESPONDENCE.

THE BUSINESS OF THE GENERAL MEDICAL COUNCIL.

Sir,—I find that some misunderstanding prevails in reference to Mr. Carter's statements that the President of the General Medical Council ought not to have been approached by myself (since December 22nd, 1897) on questions affecting the business of the General Medical Council, and that he is disabled by illness from attending to the same. Permit me to point out that these statements are contrary to fact.

In the first place, as regards the President's inability to deal with matters laid before him, it is the fact that he retains the business of the Council in his hands, that the Registrar takes his instructions from him, and that quite lately, in response to a request that he should summon a Committee appointed to recover if possible certain monies due to the Council and wrongfully impounded by the police, he (the President) wrote me, under date February 15th, a letter couched in forcible and undesirable terms.

The profession must clearly understand that, so long as a President of the General Medical Council retains office, the sole power of convening certain Committees and dealing with urgent business rests with him and him only. That I have been obliged to apply to him for these objects is the inexorable effect of the standing orders and his retention of office. If Mr. Carter's statements were true, then to prevent the public business of the Council stagnating for six months it would, of course, be necessary for the President to resign an office the duties of which he could not fulfil.—I am, etc.,

Cavendish Square, W., Feb. 28th. Victor Horsley.

THE SOCIETY OF APOTHECARIES AND THE LONDON UNIVERSITY BILL.

Sir,—I shall be extremely obliged if you will publish the annexed copy resolution of the Court of Assistants in this week's British Medical Journal, and which has not been previously forwarded for the following reasons:

The omission of the Society from the Senate has come as a surprise, the Lord President having intimated that he would fully consider the question, and it being generally understood that the Royal Colleges and the main body of medical teachers throughout the metropolis are favourable to their inclusion.

—I am, etc.,

March 1st. James R. Upton,
Clerk to the Society of Apothecaries.

Resolution passed at a Court of Assistants of the Society of Apothecaries of London held on February 8th, 1898.

"That the Society of Apothecaries of London, having considered the provisions of the London University Commission Bill of 1897, are of opinion that the omission of the Society from the Senate of the proposed University, thereby taking away the place assigned to the Society by the report of the Cowper Commission, is eminently unsatisfactory, and that the Bill, unless amended in this respect, will fail to meet the requirements of medical education in London."

MIDWIVES REGISTRATION BILL.

Sir,—Although I am of opinion that registration is necessary to protect the poor from the results of ignorance on the part of midwives, yet I think that the present Bill should be stoutly opposed, and for the following reasons:

(1) Because it will not prevent unregistered women from acting in the capacity of midwives.

(2) Because it does not prohibit midwives registered under the Act from assuming the title of licentiate in midwifery.

(3) Because the proposed constitution of the Midwives Board is objectionable from every practitioner's point of view, that is to say, it will be a body with the constitution of which the general practitioners of this country will have no part or lot. We cannot for a moment allow the two Royal Colleges and the Society of Apothecaries to exercise powers of nomination. Neither can we see the necessity of giving so large a representation to the Privy Council.

(4) Because the provision made in the Bill for the local supervision of midwives is impracticable. How, in the name of common sense, is the medical officer of health of a large town to exercise supervision over all the midwives practising in it?

It is clearly manifest that if we are to oppose this Bill we must without delay, both individually and collectively, appeal to our representatives in Parliament. We must also ask our Council to take energetic steps to make known the views of the Association.—I am, etc.

Cardiff, Feb. 26th. T. Garrett Horder.

CONSULTATION WITH HOMŒOPATHS.

Sir,—On reading the recent correspondence in your columns on the above subject, I have been particularly struck with two points: one is the number of medical men who appear to be coquetting with homœopathy, and the other is the shallowness of the arguments they adduce in support of their view. Thus one writer, in support of infinitesimal dosage, brings forward the inhibitory action of dilute solutions of metallic salts on the growth of spirogyra. But how can any comparison be drawn between an organism bathed in unlimited supplies of a toxic solution and the administration of an infinitesimal but definite quantity of a drug to an animal body?

Again, the same writer contends that Darwin's success in stimulating the leaf glands of Drosera rotundifolia with $\frac{1}{20000}$ gr. of ammonium phosphate is an argument in favour of infinitesimal dosage. A few days ago I measured one of these little glands; it was $\frac{1}{10000}$ inch in length by $\frac{5}{10000}$ inch in diameter. If we assume that it weighs $\frac{1}{1000}$ gr. (it is probably not one-tenth of that, but the larger estimate will suffice for my purpose), and we prescribed for a man weighing 150 lbs. in proportion, we should have to give about 50 gr., a decidedly "allopathic" dose.

But the fact is that medical science is but little concerned either to attack homœopathy or to defend allopathy. We are not allopaths or any other "'paths." We are practitioners of the science and art of medicine. The causes of disease are so various and their pathology so different that the problems involved in their treatment are far too complicated to obtain a solution in any such bald general formulæ. Attempts to relegate treatment to any such so-called "systems" are not rival solutions of a scientific problem, but, as Dr. Pye-Smith has aptly remarked, ignorant answers to an absurd question. Just as there is no one cause of disease, so there can be no one system for its cure. The true principles proceed on other and far different lines, and he is the most enlightened physician who follows out his plan of treatment, not in deference to a general formula but in pursuance of a scientific reason.

For the physician who has grasped these principles homœopathy falls naturally into its own proper place among

obsolete medical theories, and the question of consultation with homœopaths answers itself. There must be a common ground of agreement between the consultants or consultation is out of the question. Let orthodox medical men consult together and let the homœopath consult with his own *confreres*. *Thrasyllus a Thrasyllo consilium petat.*—I am, etc.,

Bolton, March 1st. W. H. Brazil, M.D.Lond.

BRITISH DIPLOMAS ABROAD.

Sir,—Your note under the above heading in the British Medical Journal of February 26th, reviews the points mentioned in my letter on British Practitioners in Italy most clearly. I am still, however, of opinion that it would be most desirable that the diploma issued by any individual member of our licensing bodies should bear testimony to the holder's competency in the subject or subjects for proficiency in which the diploma is issued. Had my London University degree set forth that I was thereby qualified, on registration, to practise medicine, surgery, and midwifery, the question of actual registration would probably have been disregarded. The reason for this is that in Italy the M.D. degree does not necessarily qualify for practice, while the idea of the M.B. degree as a qualification is scouted as absurd both in Switzerland and here. The Swiss are a practical people, and, when seeking admission to the examination for the Federal Diploma, I was directed to send my credentials to Professor Courvoisier, at Basle, who had been appointed especially to assess the value of foreign diplomas both as to their technical and as to their arts standard; for, said the President of the examinations in Geneva, "it makes all the difference whether you have done quadratic or only simple equations, whether you have read Horace or only Cæsar." Never before had I so forcibly realised the value of my classical studies. I sent all my London University certificates from that of the matriculation upwards, together with the examination papers, to the professor, with the result that I was admitted to the final examination for the diploma.

With regard to obtaining evidence here as to my title to practise at home, I naturally referred to my registration certificates, selected those obtained since June 30th, 1887, bearing the crucial information in a footnote, pinned each to the corresponding certificate, and left them for perusal at the Uffizio d'Igiene. So that, after all, I shall appear on the Italian register as a true Briton. Doubtless the registration certificate alone would have answered the purpose, but, as you suggested, the general appearance of that document is not calculated to carry conviction to those not familiar with insular customs. Information as to its validity for practice throughout the British Empire would greatly add to the importance of the registration certificate in Continental opinion.—I am, etc.,

Stuart Tidey, M.D.(Lond.), M.R.C.P.(Lond.).

Florence, Feb. 28th.

THE WANTS OF THE GENERAL PRACTITIONER.

Sir,—In the British Medical Journal of February 5th "Two Junior Practitioners" evidently base their "slight objections" to the medical reform I advocated entirely on a student's point of view. While recognising that the medical student is deserving of the consideration due to him, it is plainly the duty of those who are entrusted with supplying the community with servants such as medical practitioners to see that they shall be as capable, willing, and trustworthy as circumstances admit.

Referring to the five years' curriculum, "Two Junior Practitioners" say: "If the student then be lucky enough to get through the Final, Mr. T. D. Poole would then wish that he be unregistrable, and therefore unable to sign death certificates or claim fees." This is precisely the case—unregistered until he has served twelve months in a general practice; but as regards the signing of death certificates, the countersignature of the practitioner would be needed in addition to that of the unregistered assistant when it should so happen that the practitioner had not personally attended the case. But as to his claiming fees, he would probably receive a salary not less than that which the present registered assistant is now receiving, since there would be a greater demand for assistants on account of their reliability.

"Two Junior Practitioners" say that parents expect their son after he has qualified to "shift for himself"; and indeed if he commences practice in these days immediately after qualifying without having first had some practical experience, he does literally "shift for himself" unless he is supported by private means.

The "new regulations" are merely a scheme to compel what every sensible man seeks to do—namely, to act as assistant in a good general practice prior to commencing on his own account, to place the post of assistantship on a firm basis, honourable in the sight of the public and profession, and to remove from it the stigma which at present pervades this desirable complement to medical training.

The scheme does not imply the abolition, as is sometimes threatened, of the licence-conferring powers of the existing medical corporations, rather by its ramifications a knitting together through the agency of the General Medical Council of the households of every medical practitioner with these corporations, thus not only elevating the position of the practitioner, but also encouraging a more healthy competition in the medical schools themselves.—I am, etc.,

Wolverhampton, Feb. 8th. T. Dobson Poole, M.D.

CONTROL OF MIDWIVES.

[We have received from Dr. McCook Weir of East Sheen a copy of a Bill entitled a Sick and Obstetric Nurses Bill which he has drafted. Its principles, he states, are:

(1) To abolish the practice of midwifery by ignorant and incompetent persons; (2) to protect poor parturient women and their infants from such persons; (3) to make better provision for the nursing of the sick and parturient poor, and (4) to administer the Act by local authorities with medical assistance.

With regard to the Bill of the Parliamentary Bills Committee he writes that it is disappointing:]—

"It is involved and overburdened with useless detail, and it would perpetuate the practice of midwifery by the ignorant and incompetent, Clauses 4 and 5 actually proposing to 'register' the 'dirty Gamps' if in *bonâ fide* practice at the date of the passing of the Act. The Bill takes no account of 'sick nurses,' while professing to be a nursing Bill. It is, therefore, too limited in its scope, and the Midwives Board which it is proposed to set up would be a most expensive luxury—a veritable white elephant—and such a Board would have no local knowledge or control, both of which are absolutely essential, and are provided for under my Bill. The proposed 'control' of the medical officers of health under the Midwives Bill is acknowledged to be a farce, and the Parliamentary Bills Committee put nothing in its place. Of course it is impossible to impose police duties on a medical officer of health or on any other medical man. The appended memorandum to the Bill of the Parliamentary Bills Committee is an extraordinary document. Under Section c, the powers entrusted to the obstetric nurse are almost absolute. It would require a highly-trained medical man or woman to interpret that most formidable list which includes most of the diseases of parturient women and their infants. My Bill sets aside all this by placing a medical practitioner at the bedside; and pray what more natural and humane?

"By way of apology for my interference in this question, permit me to say, in conclusion, that I have lived in a district above five years which has a certificated midwife and a district trained nurse, who are employed by a Nursing Association and paid £80 and £100 respectively. The midwife commenced operations in May, 1892, and attended 26 cases till the end of the year. In the year 1896 she attended 108 cases, being nearly 60 per cent. of the midwifery, 'the Gamps and neighbours' doing the remainder, with the exception of a few stray cases. The wage limit fixed by the association was 50s. down to a year ago, when I succeeded in having it reduced to 30s., and during those years innkeepers and well-to-do tradespeople availed themselves of the certificated midwife's services at fees of 7s. 6d. and 10s. per case. One resident doctor here, who wrote me that his midwifery practice had fallen, through the midwife, from 60 to 90 per cent., and promised to support me at the annual meeting of 1897, failed to do so at the critical moment, and instead received the lady secretary in private audience!

"The sick nurse is a boon to the poor, but her 'practice'

wants regulating as is proposed in Clause 6 of my Bill. Her tendencies, like almost all professional nurses, are to exceed her duties, and this results in misunderstanding and friction."

Obituary.

We regret to have to record the death at Manchester, at the age of 54, after a painful illness of two months' duration, of Mr. John Patrick Balbirnie, L.R.C.P., L.R.C.S., L.M.Edin., of Staveley, Westmorland. Before commencing his medical studies the deceased served in the army for five years, and was present at the Bhootan campaign of 1864, receiving the medal and clasp. He subsequently entered Queen's College, Belfast, and, after qualifying, practised for some time at Dalton-in-Furness, where he acted as Surgeon to the Furness Railway Company and the Barrow Hæmatite Iron Ore Company. Fifteen years ago he settled at Staveley, Westmorland, where he continued to practise up to the time of his last illness. The deceased, who was a member of the British Medical Association, was Medical Officer to the Union and to several local friendly societies. The funeral took place with military honours on February 17th.

The death is announced of William Evans, M.D., F.R.C.S., who entered the Indian Medical Service in 1831. He was posted to the 4th Madras Infantry in June, 1833, and served with the Field Force in Coorg. He afterwards served with the 20th and the 18th Madras Infantry, and became Civil Surgeon at Guntoor in 1844. In the following year he became Medical Officer on the Nilgerries, and in 1847 Surgeon of the First District. He was promoted Surgeon in 1849, and posted to the 35th Madras Infantry. In the following year he was appointed Surgeon of the General Hospital and Professor of Medicine and Clinical Medicine. Dr. Evans, who retired in November, 1859, died at his residence, Fairlawn, Hadley, in his 90th year.

We regret to announce the death of Dr. Ernst Ludwig Schwimmer, Professor of Dermatology in the University of Budapest, which took place after a short illness on February 25th. Professor Schwimmer, who was in his 61st year, was one of the leading representatives of his speciality in Europe and only last autumn he celebrated his jubilee as Professor, on which occasion a *Festschrift*, to which many of the leading dermatologists of Germany and other countries contributed, was produced in his honour.

Dr. Charles Nicolas, of Neuchâtel, Extraordinary Professor of Hygiene in the University of Lausanne, who died suddenly in the street on January 28th, was born in 1846. After receiving his preliminary education in his native town of Neuchâtel, he proceeded to the University of Erlangen, afterwards to Würzburg, and finally to Berne, where he took his doctor's degree in 1870. He worked for a year as Assistant to Briesky, the distinguished obstetrician. During the Franco-Prussian war he served at Nancy and elsewhere with the Swiss ambulance organised by Demme, and afterwards with the German ambulance at Belfort. After the war he pursued his studies at Prague, Berlin, and elsewhere, and finally settled at Neuchâtel about the end of 1872. He was at first a general practitioner, with a special leaning to otology, to which he had given much attention in Berlin. When a special hospital for infectious diseases was established at Neuchâtel, Nicolas was appointed Medical Director of the institution. Afterwards he was appointed Surgeon to the Hôpital de la Providence. Here he acquired a great reputation as an operator; but in a few years he was compelled, on account of an affection of the heart, to resign his post. From the beginning of his career he had taken interest in hygiene, and he now devoted himself to that branch of medical science almost entirely. He was appointed Vice-President of the Health Committee by the Government of Neuchâtel, and, when the University of Lausanne was founded, he was invited to fill the Chair of Hygiene there. In this new sphere he increased his reputation, and did much work of the greatest value to his fellow citizens and his countrymen at large. In Dr. Nicolas Switzerland has lost one of her foremost sanitarians and the Swiss medical profession one of its most prominent members.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Mariano de la Paz Graells, one of the oldest professors in Spain and a distinguished naturalist, aged 90; Dr. M. H. Sänger, formerly Professor of Obstetrics and Gynæcology in the University of Groningen, aged 64; Dr. W. Moldenhauer, Extraordinary Professor of Laryngology and Rhinology in the University of Leipzig, aged 53; Dr. Oscar Hasse of Nordhausen, who at one time was prominent as an advocate of the transfusion of lamb's blood, aged 61; Dr. J. C. Busch of Krefeld, who had given much time and labour to the advancement of the interests and the improvement of the social condition of the medical profession in Germany, aged 50; Dr. George C. Briggs, sometime Professor of Materia Medica in the University of Vermont, U.S.A., aged 68; and Dr. Didier, Lecturer on Physiology in the Catholic Medical Faculty of Lille and Vice-President of the Anatomo-Clinical Society of that town.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Bequest of Books.—The late Mr. Frank Chance, M.A., M.B., of Trinity College, has bequeathed 400 important books on philology and biblical criticism to the University library.

Science Departments.—The Museums Syndicate report that owing to the admission of advanced students, the greater number of graduates engaged in research, and the marked increase of ordinary students in certain departments, a larger annual grant for the maintenance of the laboratories has become necessary.

Diploma in Arts.—The Local Lectures Syndicate make an important proposal for the better organisation and encouragement of the work of extension students. For those who pass through a prescribed course of study and examinations a Diploma in Arts, analogous to the Diploma in Public Health, is projected. As the diploma would be obtainable by women as well as men, it is clear that the proposal may have far-reaching results.

Degrees.—At the Congregation on February 24th the following medical and surgical degrees were conferred:—*M.B. and B.C.*: G. C. Jackson, B.A., St. John's; W. R. Wilson, B.A., Corpus; J. G. Forbes, B.A., Christ's; R. Mathias, M.A., Christ's. *M.B. only*: J. McD. McCarthy, B.A.

Professorship of Surgery.—The proposed suspension *sine die* of this chair was adversely criticised in the discussion by the Senate on February 24th. It was stated that the late Sir George Humphry had left it on record as his last wish that the professorship should be continued under the existing conditions, with or without stipend. The General Board, however, had not seen fit to regard his wish. It was pointed out that the new Reader in Surgery would require for effective teaching the same clinical opportunities as were deemed necessary for a Professor; but the Secretary to the General Board hinted pretty clearly that while they were prepared to appoint one of the hospital surgeons as Reader, and charge him with all the duties of a Professor, they declined to give him the title. This attitude of the Board has been surmised, but it has never yet been expressed. Mr. R. T. Wright, though a member of the Board, characterised its action in this respect as ungenerous. Professor Kanthack, while supporting the proposal, was sanguine enough to hope that the Readership and the Professorship might both be maintained hereafter. The question comes on for decision by the vote of the Senate on March 10th.

UNIVERSITY OF ST. ANDREWS.

University Court.—At the last meeting of the University Court a minute from the Committee as to proposed professorships of anatomy and materia medica was read. The Committee was enlarged by the addition of two members, and was instructed to consider the question of the establishment of a professorship of physiology. A resolution was passed declaring all the Berry Fund bursaries open to women students, with the exception of the medical bursaries. A report of the medical faculty on schemes of courses, syllabuses of lectures, ect., for the summer session, 1898, and the winter session 1898-99, qualifying for graduation in medicine was approved.

UNIVERSITY OF DUBLIN.

The following degrees in Medicine, Surgery, and Midwifery have been conferred:

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—C. H. Carr, C. T. Costello, J. R. Delmege, R. Dowden, S. B. Smith, and H. G. Yeo.

Doctores in Medicinâ.—C. H. Carr, R. Dowden, E. E. Goodbody, W. A. Higgins, and A. T. Johns.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The following candidates, having passed the necessary examination, have been admitted Fellows of the College:

F. C. Dwyer, B.Ch., M.D.; Miss E. E. Eberle, M.B., B.Ch.; R. Friel, M.B., B.Ch.; G. J. Johnston, M.B., B.Ch.; A. J. Smith, L.R.C.P. and S.I.; H. T. J. Thacker, M.B., B.Ch.; L. Werner, M.B., B.Ch.

The following candidates have passed the primary part of the examination for the Fellowship of the College:

T. G. Stevens, L.R.C.P. and S.I.; D. Hadden.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE DEATH-RATES OF LONDON SANITARY AREAS DURING 1897.

In the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the year 1897. The mortality figures relate to the deaths of persons actually belonging to the respective sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided

The 133 618 births registered in London during 1897 were equal to a rate of 30.0 per 1 000 of the population, estimated at 4,463,169 persons in the middle of that year; this rate was lower than in any of the ten preceding years, during which the birth-rate averaged 31.2 per 1,000. In the various sanitary areas the birth-rates showed, as usual, wide variations, owing principally to the differences in the age and sex distribution of their populations. In St. George Hanover Square, St. James Westminster, Hampstead, St. Martin-in-the-Fields, City of London, and Lee, the birth-rates were considerably below the average; while they showed a marked excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Olave Southwark, and Bermondsey sanitary areas

The deaths of persons belonging to London registered during last year were 78,971, equal to a rate of 17.7 per 1,000 of the population, against 17 4, 19.4, and 18.2 in the three preceding years. The rate in 1897 was 1.8 per 1,000 below the mean rate in the ten preceding years, and with one exception was lower than in any year on record. The lowest death-rates last year in the various sanitary areas were 11.8 in Hampstead, 12.8 in Lewisham (excluding Penge), 13.2 in St George Hanover Square and in Lee, 13.4 in Wandsworth, 13.7 in Plumstead, and 14 3 in Stoke Newington; the highest rates were 23.1 in Holborn, 23.7 in St George Southwark, 24.6 in St. Saviour Southwark, 25 1 in Limehouse, 25.7 in St. Luke, and 26.4 in St. George-in-the-East.

During the year under notice 11 453 deaths resulted from the principal zymotic diseases in London; of these, 4,089 were referred to diarrhœa, 2,240 to diphtheria, 1,927 to measles, 1,837 to whooping-cough, 778 to scarlet fever, 566 to different forms of "fever" (including 1 to typhus, 557 to enteric fever, and 8 to simple and ill-defined forms of fever), and 16 to small-pox. These 11,453 deaths were equal to a rate of 2 56 per 1,000, against 2.64, 2 62, and 3.11 in the three preceding years; this rate was lower than that recorded in any year since 1891, and was 0 18 per 1,000 below the mean rate in the ten preceding years, 1887-96. In the various sanitary areas the zymotic death-rates ranged from 1.10 in St. George Hanover Square, 1.16 in Hampstead, 1.19 in St. Martin-in-the-Fields, 1.43 in Lee, 1.61 in Marylebone, and 1.63 in St Giles to 3.61 in Clerkenwell, 3 66 in St. Saviour Southwark, 3.82 in St. Luke, 4.07 in Shoreditch, 4.27 in St. George-in-the-East, and 4.35 in St. George Southwark and in Bermondsey. Compared with the averages in the ten preceding years, the mortality from small pox, measles, scarlet fever, and "fever" was below the average, while that from diphtheria and from diarrhœa showed an excess. The 16 fatal cases of small-pox registered in London during 1897 exceeded by 7 the number in the preceding year, and included 5 which belonged to Camberwell, 2 to Strand, and 2 to Greenwich sanitary areas. During the year under notice 86 cases of small-pox were admitted into the Metropolitan Asylums Hospitals, all of which were admitted during the first seven months of the year; and no patients have been under treatment in these hospitals since August last. Measles showed the highest proportional fatality in St. Luke, Bethnal Green, Shoreditch, St. George-in-the-East, Limehouse, St Saviour Southwark, St. George Southwark, and Bermondsey sanitary areas. Scarlet fever was proportionally most fatal in St. James Westminster, St. Luke, St. George-in-the-East, St.

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the Year 1897.

SANITARY AREAS.	Estimated Population middle of 1897.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
LONDON	4,463,169	133,618	78,971	30.0	17.7	2.56	11,453	16	1,927	778	2,240	1,837	1	557	8	4,089	7,629	158
West Districts.																		
Paddington	126,161	3,018	1,814	24.0	14.4	1.94	243	—	2	21	64	44	—	9	1	102	142	149
Kensington	171,427	3,683	2,677	21.5	15.7	1.78	304	—	32	30	81	19	—	21	1	120	247	166
Hammersmith	105,959	3,139	1,760	29.7	16.7	1.99	211	—	5	11	30	28	—	8	1	128	146	171
Fulham	120,040	4,106	2,034	34.3	17.0	3.04	362	—	51	26	63	61	—	12	1	148	184	162
Chelsea	96,692	2,549	1,713	26.4	17.8	2.55	244	—	18	17	54	41	—	14	—	100	175	161
St. George Hanover Sq.	80,330	1,369	1,059	17.1	13.2	1.10	89	—	17	7	17	13	—	10	—	25	93	133
Westminster	53,027	1,237	1,004	23.4	19.0	2.47	131	—	26	13	23	16	—	6	—	47	143	166
St. James Westminster	22,576	459	393	20.4	17.5	1.87	42	—	13	8	3	6	—	3	—	9	51	163
North Districts.																		
Marylebone	140,808	4,135	2,572	29.5	18.3	1.61	227	—	9	9	46	41	—	14	—	108	246	136
Hampstead	77,275	1,479	911	19.2	11.8	1.16	90	—	9	6	17	25	—	5	—	28	57	127
St. Pancras	242,255	7,017	4,518	29.0	18.7	2.47	597	1	87	24	114	124	—	38	—	209	486	168
Islington	341,134	9,845	5,387	28.9	15.8	1.91	653	1	99	61	129	134	—	45	—	184	491	136
Stoke Newington ...	34,136	835	488	24.5	14.3	2.12	72	—	7	2	19	15	—	10	—	19	40	121
Hackney	216,698	6,312	3.573	29.2	16.5	2.90	626	—	127	37	134	97	—	35	—	196	310	147
Central Districts.																		
St. Giles	37,840	981	696	26.0	18.4	1.63	61	—	9	7	7	18	—	6	—	14	113	146
St. Martin-in-the-Fields	12,711	169	206	13.3	16.3	1.19	15	1	1	2	3	5	—	1	—	2	33	178
Strand	23,552	570	501	24.3	21.3	2.06	48	2	10	3	5	6	—	4	—	18	79	161
Holborn	30,493	781	703	25.7	23.1	2.79	85	—	6	14	16	19	—	5	—	35	84	184
Clerkenwell	66,162	2,092	1,459	31.7	22.1	3.61	238	1	49	14	48	49	—	11	—	66	155	184
St. Luke	41,279	1,860	1,056	45.2	25.7	3.82	157	—	40	13	21	28	—	4	—	51	128	149
London City	30,228	478	642	15.9	21.3	1.66	50	1	7	8	10	10	—	9	—	5	57	130
East Districts.																		
Shoreditch	121,883	4,314	2,627	35.5	21.6	4.07	496	1	116	29	78	63	—	20	—	189	247	183
Bethnal Green	129,098	4,818	2,761	37.4	21.4	3.41	439	—	114	25	84	57	1	17	1	140	255	174
Whitechapel	79,724	3,150	1,623	39.6	20.4	2.16	171	—	45	15	34	16	—	8	—	53	200	148
St. George-in-the-East	47,917	2,029	1,262	42.5	26.4	4.27	204	—	68	14	28	24	—	10	—	60	132	197
Limehouse	58,508	1,997	1,462	34.2	25.1	3.54	206	—	63	12	29	37	—	4	—	61	149	193
Mile End Old Town ...	111,883	4,257	2,085	38.2	18.7	2.97	330	—	77	12	62	58	—	23	—	98	156	149
Poplar	169,811	5,849	3,353	34.5	19.8	3.07	519	—	83	28	120	83	—	30	—	175	319	170
South Districts.																		
St. Saviour Southwark	24,919	769	611	30.9	24.6	3.66	91	—	32	7	12	12	—	2	—	26	80	195
St. George Southwark	60,388	2.114	1,426	35.1	23.7	4.35	262	1	67	14	28	32	—	10	1	109	171	189
Newington	122,191	4,248	2,588	34.9	21.2	3.59	439	—	85	33	65	82	—	9	—	165	269	177
St. Olave Southwark	11,480	434	253	37.9	22.1	2.96	34	—	6	2	2	8	—	1	—	15	33	154
Bermondsey	85,629	3,176	1,883	37.2	22.1	4.35	371	—	76	34	62	62	—	13	—	124	174	190
Rotherhithe	40,643	1,258	766	31.0	18.9	3.26	132	—	21	22	21	17	—	2	—	49	64	174
Lambeth	300,048	9,388	5,247	31.4	17.5	2.65	791	—	140	42	144	144	—	26	—	295	500	151
Battersea	168,877	5,266	2,734	31.3	16.2	2.79	470	—	79	47	106	79	—	19	—	140	251	162
Wandsworth	195,612	5,042	2,606	25.8	13.4	1.91	370	—	27	29	111	42	—	16	1	144	222	135
Camberwell	257,575	7,483	4,276	29.1	16.6	2.91	750	5	141	32	170	111	—	31	—	260	386	159
Greenwich	178,367	5,563	3,058	31.3	17.2	2.27	405	2	35	32	70	57	—	29	—	180	263	157
Lee	39,215	881	516	22.5	13.2	1.43	56	—	6	3	17	5	—	3	—	22	43	135
Lewisham	86,152	2,186	1,099	25.4	12.8	1.71	147	—	17	9	36	19	—	7	—	59	81	129
Woolwich	41,409	1,307	735	31.7	17.8	2.54	105	—	2	8	33	8	—	4	—	50	79	158
Plumstead	61,057	1,975	834	32.4	13.7	1.97	120	—	3	6	24	22	—	3	1	61	95	116

Saviour Southwark, Bermondsey, Rotherhithe, and Battersea sanitary areas; 15,256 scarlet fever cases were admitted into the Metropolitan Asylums Hospitals during 1897, and 3,507 patients remained under treatment at the end of December last. Diphtheria caused the highest proportional fatality in Hackney, Clerkenwell, Shoreditch, Bethnal Green, Poplar, Bermondsey, Battersea, Camberwell, and Woolwich sanitary areas: there were 6,592 admissions of diphtheria patients into the Metropolitan Asylums Hospitals during 1897, and 1,066 cases remained under treatment at the end of December. Whooping-cough was proportionally most fatal in Holborn, Clerkenwell, St. Luke, Limehouse, Newington, St. Olave Southwark, and Bermondsey sanitary areas; enteric fever in Stoke Newington, City of London, St. George-in-the-East, Mile End Old Town, and Poplar sanitary areas; and diarrhœa in Fulham, St. Luke, Shoreditch, St. George-in-the-East, St. George Southwark, Newington, St. Olave Southwark, and Bermondsey sanitary areas.

During the year under notice 7,629 deaths from phthisis were registered in London, equal to a rate of 1.71 per 1,000; this disease was much more fatally prevalent in Central and in East London than in any other part of the metropolis. In West London the phthisis death-rate was 1 53 per 1,000: in North London 1.55, and in South London 1.62; while in East London it was 2.03, and in Central London as high as 2.69 per 1,000. Among the various sanitary areas the lowest rates were 0.74 in Hampstead, 0.94 in Lewisham, 1.10 in Lee, 1 13 in Paddington, 1.14 in Wandsworth, and 1.16 in St. George Hanover Square; and the highest rates 2.84 in St. George Southwark, 2.88 in St Olave Southwark, 2.99 in St. Giles, 3.11 in St. Luke, 3.22 in St. Saviour Southwark, and 3.36 in Strand.

Infant mortality in London during 1897, measured by the proportion of deaths under 1 year of age to registered births, was equal to 158 per 1,000, and slightly exceeded the mean rate in the ten preceding years. The lowest rates of infant mortality were 116 in Plumstead, 121 in Stoke Newington, 127 in Hampstead, 129 in Lewisham, 133 in St. George Hanover Square and in City of London, and 135 in Wandsworth; while they ranged upwards in the other sanitary areas to 183 in Shoreditch, 184 in Holborn and in Clerkenwell, 189 in St. George Southwark, 190 in Bermondsey, 193 in Limehouse, 193 in St. Saviour Southwark, and 197 in St. George-in-the East.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,568 births and 4,500 deaths were registered during the week ending Saturday last, February 26th. The annual rate of mortality in these towns, which had been 20.7 and 20.4 per 1,000 in the two preceding weeks, rose to 20.9 last week. The rates in the several towns ranged from 12.6 in Croydon, 12.9 in Derby, 14.5 in Bradford, and 15 8 in Oldham, to 24.7 in Liverpool, 25.1 in Gateshead, 26 0 in Bolton, and 30.2 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 20.3 per 1,000, and was 1.6 below the rate recorded in London, which was 21.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the rate was equal to 2.7 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.0 in Gateshead, 3 7 in Birkenhead, 5.1 in Bristol, and 6.7 in Leicester. Measles showed a death-rate of 1 2 in London and in Wolverhampton, 1.7 in Brighton, 1.8 in Birkenhead, 4.1 in Bristol, and 6 0 in Leicester; and whooping-cough of 1 2 in Newcastle-upon-Tyne, 1.3 in Bolton, and 1.5 in Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 69 deaths from diphtheria in the thirty-three towns included 46 in London, 5 in Cardiff, and 3 in Liverpool. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns: and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,871 at the end of the thirteen preceding weeks, had further declined to 2,764 on Saturday last, February 26th; 199 new cases were admitted during the week, against 209, 232, and 233 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 26th, 840 births and 619 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17 4 to 20.4 per 1,000 in the four preceding weeks, further increased to 20.5 last week, but was 0.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.5 in Greenock and 17.4 in Dundee to 30.3 in Paisley and 37.4 in Perth. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow, Perth, and Greenock. The 280 deaths registered in Glasgow included 14 from measles, 7 from scarlet fever, 11 from whooping-cough, 5 from "fever," and 9 from diarrhœa. Two fatal cases of diphtheria were recorded in Edinburgh, and 2 of scalet fever in Perth.

DIPHTHERIA IN LONDON.

THERE was a marked increase in the mortality from diphtheria in London last week. The deaths referred to this disease, which had been 42, 45, and 33 in the three preceding weeks, rose again to 46 during the week ending Saturday last, February 26th, and exceeded the number recorded in any week during the past two months. Of these 46 fatal cases, 10 were of persons belonging to Hackney and 4 to Islington sanitary areas. The notifications of diphtheria in London, which had been 245 and 266 in the two preceding weeks, declined to 212 during the week ending Saturday last. Compared with the preceding week there was a decline in the prevalence of diphtheria in each group of sanitary areas except in South London, where the number of new cases corresponded with that recorded in the preceding week. In most of the sanitary areas of West London there was a decline in the prevalence of diphtheria especially in Kensington, but in Fulham and in Hammersmith there was a slight increase. In North London there was a marked decline in the number of new cases, especially in Islington, where only 9 cases were notified, against 19 and 27 in the two preceding weeks. In Hampstead, however, 5 cases were reported, against 1 in the preceding fortnight. Among the sanitary areas of East London the decline in the prevalence of diphtheria was most marked in Whitechapel and in Poplar; in the last-mentioned sanitary area the new cases declined to 6, against 7 and 18 in the two preceding weeks. In South London generally, as before stated, the prevalence of the disease remained stationary, although in Lambeth, Wandsworth, Plumstead, and Lee the new cases notified exceeded those recorded in the preceding week. On the other hand, there was a marked decline in the prevalence of diphtheria in St. George Southwark and in Camberwell. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 124, against 153, 135, and 146 in the three preceding weeks; and 1,057 patients remained under treatment in these hospitals on Saturday last, February 26th.

THE LONDON WATER COMMISSION.

AT recent meetings of the Royal Commission, Mr. C. L. Gomme, Statistical Officer of the London County Council, gave evidence as to the results of the purchase and administration of water undertakings by provincial municipal bodies. He thought that the general advantages of municipal supply were a smoother administration for the reason that consumers paid attention to the rates of corporations because they were conscious of the fact that the water supply was their own. The special advantages consisted of services performed by the municipalities for the benefit of the consumers, which were not undertaken by the companies. He contended that the general tendency of municipal control was to reduce the water charges and in support of his opinion produced a new table, showing the effect of the municipalisation of the water supply of Glasgow. At the meeting of the Commission on February 28th, Mr. W. H. Dickinson, Chairman of the Water Committee of the London County Council, gave evidence as to the conditions of purchase.

CHESTERFIELD WATER SUPPLY.

THE health of the borough of Chesterfield seems to be endangered from two sources—first, the inadequacy of the public water service, with resulting resort to sources of questionable character in seasons of scarcity; and, secondly, because of the continued use of private wells sunk in a soil polluted by the drainings of privy middens, etc. The annual report of the health officer for 1897 tells of a notable degree of fatal typhoid fever, 59 cases in 45 houses, among a population of 24,000. He attributes the cases to two main causes—the agency of polluted soil and personal infection. It is evident that filthy as is the prevalent mode of excrement disposal, the wells also—if not indeed for that reason alone—need close watching and speedy closure; whilst a public water supply which renders desirable a recommendation as to "boiling of all water used for dietetic purposes" during many weeks of the summer, calls for remedial activity.

BORIC ACID IN MILK AND BUTTER.

DR. WALFORD recently reported to the Cardiff Health Committee on the use and abuse of boric acid as a preservative in food. He pointed out that the use of even so small an amount as 0 1 per cent. in milk might result in the consumption, by an infant taking a quart of milk daily, of some 17 or 18 grains (the newspaper report said 14, but that is probably a misprint) of boric acid daily, and even this small quantity continued might have inconvenient cumulative results. He certainly thought it should not be exceeded. As the actual quantity of butter consumed is less, and as 0 25 per cent. is sufficient, the 17½ grains contained in a pound would probably be spread over a week. Certainly no excess of the drug should be permitted.

Section VI of the Food and Drugs Act, 1875, permits the addition of an ingredient not injurious to health, if the same is required for the protection or preparation of the article in a state fit for carriage or consumption. It may be a difficult matter to determine what amount of boric acid might be injurious to health. There are certainly those amongst our patients to whom we might wish absolutely to prohibit its use. Even if harmless in small quantities to many persons, it is clearly a foreign ingredient, the presence of which in milk or butter should be declared, and if a new Food and Drugs Act passes this year we hope it will contain a clause requiring even innocent foreign bodies introduced into our food to be declared. Section VIII does this to a limited extent, but should the practice of using boric acid increase and be tolerated, the requirement of Section VIII should be made to cover at least the first proviso in Section VI. Were it admitted that boric acid were harmless it might be argued that the declaration was unnecessary, and that the exemption of Section VI (1) rendered it so.

Clearly the public have a right to know what unnatural substances are put into food to make it keep. This is the more necessary if they are tasteless.

WATERBORNE TYPHOID.

KING'S LYNN.

THE report of Dr. F. St. George Mivart to the Local Government Board on the recent outbreak of enteric fever at King's Lynn furnishes another object lesson in the history of waterborne epidemics. Dr. Mivart was at pains to find cause for the disease in any of the known factors outside water supply, but alike as regards sewerage and drainage, excrement disposal, milk supply, and general sanitary circumstances, he signally failed, and he shows good reason for his negative conclusions. Whether by churchyard drainage, by village slop water, by the soakage of privy contents and the drainage of waterclosets and urinals; by the drainage of slaughter houses and farm houses and manured allotment gardens, Dr. Mivart shows that the water supply at its source, along its route, and at the water works, is subject to dangerous contamination, just as it was in 1892, when Dr Bruce Low reported on the outbreak of enteric fever which that year visited the same districts under local circumstances which prevailed equally at that time.

The one bright spot in the whole report is the paragraph which tells of an entirely new scheme of water supply as at last in process of being carried out, yet even now against an "opposing section of the inhabitants."

WADEBRIDGE.

Dr. Buchanan has reported upon an outbreak of enteric fever at Wadebridge in Cornwall. The area of epidemicity is served by one public

and three private wells, and Dr. Buchanan states that the first known case of the disease occurred within this area some three weeks prior to that of any other sufferer, and he demonstrates the means by which contamination of the wells could have been the result of the treatment at home of this initial attack.

A NOVEL POINT.

AN Irish member of the Association asks our opinion under the following circumstances. He is an *ex-officio* Poor-law guardian. The dispensary doctor being absent, our correspondent was sent for to see a bad case of labour. He asked for and received an order from the relieving officer authorising him to attend, which he did. The guardians referred his claim for a guinea to the Local Government Board, who replied that if our correspondent accepted the fee "he would be disqualified as a guardian."

*** We are advised that the Local Government Board is right. The 25th and 26th Victoria (Poor Law Further Amendment Act, 1862) provides that "no person receiving any fixed salary or emolument from the Poor rates in any union shall be capable of serving as a guardian in such union." Our correspondent acted for the moment as *locum tenens*, and in that capacity has a right to his fee; but he cannot remain a guardian if he takes it. Although the case is in some aspects hard, it is obvious that it would be dangerous to allow guardians to take money for services done to the particular union which they happen to represent.

RIGHTS OF PUBLIC VACCINATORS AND VACCINATION INSPECTORS.

R. J. asks the following questions: 1. Can a public vaccinator charge the guardians for a case vaccinated by him as a private patient? 2. Can the same officer charge the guardians for a case vaccinated by a private practitioner as a private case if he (the public vaccinator) signs the certificate stating that the operation has been successfully performed? 3. Has the vaccination inspector the right to inspect cases vaccinated by others than the public vaccinator? 4. Has the public vaccinator any right to consider that all vaccinations in his district, either legally or morally, belong to him?

*** 1. No. 2. No. 3. He has probably equal rights in reference to both classes of cases. 4. Certainly not.

THE CONTROL OF INFECTIOUS DISEASES IN SCOTLAND.

M.D.—THE powers of local authorities with respect to removals to hospital have been considerably enlarged in Scotland under the new Public Health Act. A person suffering from any infectious disease who is "so lodged that proper precautions cannot be taken for preventing the spread of the disease" can be removed compulsorily. Of course there is room for difference of opinion as to what would constitute proper precautions. A four-apartment house does not of itself constitute means of proper precaution.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

STAFF-SURGEON GEORGE J. FOGERTY has been placed on the retired list, February 21st. He was appointed Surgeon, September 30th, 1876, and Staff-Surgeon, twelve years thereafter. He was Surgeon of the *Carysfort* during the Egyptian war in 1882 (medal and Khedive's bronze star), and also during the operations near Suakin, in the Eastern Soudan, in 1884 (clasp).

The following appointments have been made at the Admiralty: JAMES H. BEATTIE, Staff-Surgeon, to the *Venus*, February 23rd; FRANCIS A. JEANS, Staff-Surgeon, to the *Benbow*, March 5th; I. H ANDERSON, M.D., Fleet-Surgeon, to the Portsmouth Division Royal Marines, March 1st; WILLIAM B DREW, Fleet-Surgeon, to the *Pembroke*, March 1st; VIDAL G. THORPE, Staff-Surgeon, to the *Northampton*, February 28th; GEORGE T. BROATCH, Surgeon, to the *Wallaroo*, undated; EDWARD H. MCSHERRY, Surgeon, to the *Royal Arthur*, additional, undated; FRANCIS H. A. CLAYTON, Surgeon, to Yarmouth Hospital, lent, February 28th.

THE VOLUNEERS.

SURGEON-LIEUTENANT J. C. M GIVEN, M.D., 4th Lancashire] Artillery, is promoted to be Surgeon-Captain, March 2nd.

Mr. JOHN C. MACKAY, M.D., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Duke of Cornwall's Light Infantry, March 2nd.

Surgeon-Major M. BENNY, M.D., 4th (Stirlingshire) Volunteer Battalion the Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Lieutenant-Colonel, March 2nd

Surgeon-Major W. H. BULL, 1st Bucks Volunteer Rifle Corps, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on being appointed Senior Medical Officer to the Home Counties Volunteer Infantry Brigade, Februry 16th.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-MAJOR J. E. SQUIRE, M.D., the London Companies, is promoted to be Surgeon-Lieutenant-Colonel, and to command, February 16th.

Major-General H. TROTTER, commanding the Home District, will distribute the prizes of the Volunteer Medical Staff Corps on Saturday, March 5th, at 7 P.M., at the Headquarters, Calthorpe Street, Gray's Inn Road, W C.

Surgeon-Lieutenant J. R. WHAIT, M.B., the London Companies, is promoted to be Surgeon-Captain, February 23rd.

Quartermaster J. W. BENNETT, the London Companies, is granted the honorary rank of Captain, February 23rd.

THE ARMY MEDICAL REPORT FOR 1896.

THE appendices to this volume have now been issued. They contain much interesting matter. Professor Lane Notter continues the excellent series of reports on the Progress of Hygiene: and Professor Stevenson contributes notes of Surgical Operations at Netley, and gives some results of the aid in diagnosis obtained from skiagraphy. Special reports are printed regarding the medical history of the Chitral relief operations, the Dongola expedition, the field service in South Africa, and the Niger expeditionary force. There are also useful papers on the Columbus meeting of the Association of United States Military Surgeons, and the Moscow International Congress, on disordered heart in young soldiers serving in India, on Mediterranean fever, West African fever and plague, on marching as an element in training, and phlegmon of the face.

THE MONTHLY ARMY LIST.

A CORRESPONDENT writes: In your notice of the revised Army List, you did not allude to the effect of omitting the separate list of medical officers serving on the West Coast of Africa. It implies, I believe, that all army medical officers are now held as available for service on the coast, whether in peace or war. We know that last year medical officers were ordered to serve there *nolens volens*, and were thus treated differently from other officers who volunteer. It is, indeed, a very serious matter for those who may contemplate entering the Army Medical Department; more especially in that many more medical officers are likely to be required in these pestilential regions in the future. Another point in the revised list is that the "staff for engineer services" is printed immediately before the medical staff; one would imagine its proper place would be immediately after the Royal Engineers; but being civil, of course their proper place is among the other civil departments. Is that so?

*** The matter of West Coast service is very important, and a question which should engage the attention of the House of Commons. The Engineer Staff is of course placed "alphabetically" among the departments; we would like to know whether that staff are commissioned, and under the articles of war?

MEDICO-LEGAL.

THE PAYMENT OF DISTRICT MEDICAL OFFICERS.

AT the Stow County Court recently the guardians of the Stow Union were sued by Dr. R. M O. Wood, one of their district medical officers, to recover a fee of £2, which he considered was due to him for his attendance on the wife of a labourer residing in his (Dr. Wood's) district. Mr. A. F. Vulliamy appeared for the plaintiff, and Mr. E. H. Wilkes for the defence.

It appears from the evidence given at the trial of this case that on March 2nd, 1897, Dr. Wood received a medical order to give medical attendance to the patient in question, and on visiting her found that the case was not one of actual illness, but that her confinement was then pending. He gave all requisite attention to the patient, and continued in attendance up to the end of the March quarter, and subsequently beyond this up to April 14th following. The claim made by Dr. Wood at the end of this March quarter was for the sum of 10s, this being the fee he considered himself entitled to for attendance on the case as one of ordinary midwifery. As time advanced, however, Dr. Wood found that some puerperal complication had arisen, and that a further and more prolonged attendance was necessary, and he consequently at a later period claimed a special fee of £2 (instead of 10s.) under Art. 183 Consolidated Order, July, 1847, for this long subsequent attendance. The guardians declined to pay any fee whatever for Dr. Wood's attendance on this patient, because the order given by the relieving order did not state that it was given as a midwifery order, there being nothing stated in it to show that it was one of this class, and that as no special order for midwifery had been granted, the medical attendance on this patient, though actually for midwifery, came within Dr. Wood's ordinary duty as district medical officer, for which he was paid by fixed salary. This technical objection raised by the guardians did not satisfy Dr. Wood, and he (supported by the Medical Defence Union) decided to take legal steps to recover the fee he claimed.

When the case came for trial before Judge Eardley Wilmot, a further defence was set up (though the first was not withdrawn)—namely, that the claim made was then barred, as it had not been paid within three months of the expiration of the half-year during which it had become due, and on this point, in addition to that of refusal on the ground that the order given by the relieving officer did not state that it was for midwifery. The Court had to decide the question at issue.

The solicitor for the plaintiff explained that his client was not contesting this case for the purpose of obtaining the fee, but that a great principle was involved, which affected the medical profession generally.

The Judge remarked that the case was a complicated one. He could not understand why the guardians should make such a technical defence. The doctor, he said, had been sent on a fool's errand, because the order given was not for illness as indicated on it; he (the doctor) gave the necessary attendance, and the guardians refused to pay. The judge described the defence as the shabbiest he had heard. He reserved his decision on the points of law involved. The decision was given at a later date. It was as follows;

"I think the defendants are bound by the act of their relieving officer; it was his duty to have stated on the order that the case was one of confinement, if it was one, and it was his duty to have ascertained that fact beforehand. The defendants cannot evade payment of the fee by reason of what may have been merely an oversight or clerical omission on the relieving officer's part. I do not think the plaintiff established his claim to the £2, as the case was not in my opinion one of the greatest difficulty, or requiring long subsequent attendance; secondly, on the question of being out of time, I think the plaintiff must fail. The Act 22 and 23 Vict., c. 49 and 51, says that claims must be paid within the half year in which the same have been incurred, or within three months afterwards. The

half yearly accounts would be made up to September 29th. The plaintiff, therefore, had till that date, namely, September 29th, or three months after, which would be December 29th, within which to get paid. The Act does not say within which to take proceedings or make a claim, but says distinctly within which to get paid. The plaintiff, therefore, had at latest till December 29th within which to get paid, so that by delaying till December 24th to take out his summons he was too late, as no Court was sitting till January 21st; so that by no possibility could he get paid by December 29th. There must therefore be judgments for the defendants, but under the circumstances, without costs."

Leave was given to appeal.

In this case two important medico-legal questions are dealt with:

1. That a medical order granted by an authorised person carries the right, in certain cases, to a special fee, even if it be not given as a special order. We ourselves never had any doubt on this point, though this question has been frequently raised. It would really be ridiculous if, on the ground of a medical order not properly describing any case, or, in other words, on which the result of an incorrect medical or surgical diagnosis (and this by a non professional person) had been inserted, the medical officer who attended in obedience to instructions thereon, should lose his right to any special fee he might have been entitled to had the case been properly described. Moreover, should any such imperfect or inaccurate description of a case be generally recognised as barring all claim to a proper fee, it would open a door to a gross abuse, as it would then be possible for overseers or relieving officers to deprive district medical officers of all special fees by some accidental or even intentional erroneous description of the case in any medical order issued by them, and this practice might become habitual, and might even be upheld by guardians in order to save expense. On this first point of law which the judge had to consider, his decision is clear and satisfactory, though unfortunately it does not carry a verdict in favour of the plaintiff.

On the second question, as to whether plaintiff's claim was barred by the 22nd and 23rd Vict., the judgment is also clear, and the decision given should be remembered and recorded. Medical officers should bear in mind that by statute law all Poor-law claims against guardians (this does not include claims for any sanitary service) must be paid, if at all, within a very short time of becoming due. This may be very hard on certain claimants who may find that their demands for payment may be appealed against, and so the necessary time altogether lost within which their claims might otherwise have been recovered. It seems scarcely equitable that any ordinary contract debt (other than that associated with the Poor law) should remain recoverable at law for a period of six years, but that any claim against guardians should only be so for about as many months.

Notwithstanding that the decision in this case has been given against the plaintiff, he is deserving of thanks for having carried it into court. The thanks of the whole medical profession are certainly due to the judge for the opinion he has not hesitated to express in reference to the defence of the action. We hope the Stow guardians are now satisfied with the decision of the judge, and the action they have taken in reference to this claim against them certainly appears to us to deserve all possible publicity.

MIDWIVES AND STILLBIRTHS.

We learn from a report in the *Morning Advertiser* that on February 23rd, Amelia Hollis, a certificated midwife, of 401, York Road, Battersea, answered to a summons, before Mr. Denman, charging her with unlawfully making a false statement as to a child born alive having been stillborn.

Mr. Braxton Hicks, the coroner, was called, and stated that he had given directions that all midwifery certificates of deaths should be submitted to him before burial.

Dr. M'Manus, who had taken part in the *post-mortem* examination of the child, informed the magistrate in answer to an inquiry that a lot of charwomen in the neighbourhood discharged midwifery duties, and gave certificates of death, and this was a kind of thing which the coroner desired to put a stop to.

Mr. Bell, in defence, pleaded that the woman had only been guilty of an error of judgment.

Mr. Denman said he had no difficulty in convicting her, because she had clearly ignored her responsibilities. He imposed a penalty of £5 or one month in default. An application for costs was refused.

DEATH FROM SECONDARY *POST-PARTUM* HÆMORRHAGE AFTER DELIVERY BY A MIDWIFE.

A report of an inquest held at Belper has reached us which presents some points of interest. The woman, according to a report in the *Belper and Alfreton Chronicle*, was delivered of an illegitimate child on February 6th. A doctor was sent for but his services could not be obtained, and, therefore, the patient was attended by a midwife. This woman attended daily, and up to February 11th stated that the patient was going on well. On February 13th a doctor was sent for, who found the patient almost moribund from hæmorrhage, and in a shockingly filthy condition. He did what was necessary to stop the bleeding and to make the patient clean. At 4 A.M. on February 14th the hæmorrhage recurred. The doctor again attended, and found the patient so collapsed that he proposed to inject saline fluid into a vein. But the man who was the father of the child, although not married to the patient, refused to allow it to be done, in spite of clear explanation that there might be hope if it were done but none without. The woman died at 10 A.M. The jury found that the deceased died from hæmorrhage primarily and from puerperal fever secondarily following upon confinement. The coroner instructed the jury that he did not think the evidence would support a verdict of manslaughter.

Three points call for comment in this unfortunate case. First, the neglect of ordinary cleanliness. This was not legally important, because not the direct cause of death. Secondly, the occurrence of secondary *post-partum* hæmorrhage. The report gives no information as to the cause of this; but its most common cause is the retention of some part of the secundines *in utero*; it is an accident which by proper means can generally be prevented. Thirdly, the omission of the means which might have save life. Probably the doctor at the time supposed that the man who was forbidding him to do what offered the only chance of life was the patient's husband, and would have disregarded his objections had he known that the man had no right to give any instructions as to the woman's treatment. But had the objector been the patient's husband, he would have assumed the gravest responsibilities in dictating to the medical man as to what he should or should not do in the treatment of so grave a case.

AN UNREGISTERED DOCTOR.

At the Mile End Coroner's Court, Mr. Wynne E. Baxter held an inquest on the 12th inst. concerning the death of Fanny Yaffee, aged 16 months, the daughter of a boot-finisher. According to the evidence as reported by the *Daily Telegraph*, the deceased had been a member of the National Medical Aid Company, and as such had been attended by the company's officer, Dr. Liebster. It was shown, however, that Dr. Liebster was a medical graduate of the University of Vienna, but had no qualification entitling him to registration in this country, and therefore could not legally give a death certificate. The coroner severely commented on the fact that a public company should appoint as their medical officer an unregistered practitioner, and censured Dr. Liebster for his "foolish act" in taking away from the patient's house the bottle of medicine he had been administering, and throwing away the contents. The divisional police surgeon gave evidence that the cause of death was exhaustion following pleurisy, and the jury returned a verdict accordingly.

THE ADMINISTRATION OF ANÆSTHETICS.

A correspondent inquires if a dentist has the right to administer gas to a patient without the presence of a qualified medical man.

*** We are not aware of any legal decision on this point, and it is one on which there may be some diversity of opinion. We think, however, that a dentist not possessing a medical qualification must incur serious responsibility if he administers anæsthetics. He would, we think, have no more right than a layman in this respect, and would be in the same position.

CONTRACTS IN RESTRAINT OF PRACTICE.

A correspondent submits the following question:

A. takes an assistant, B., who gives the usual bond. Some years after A. takes a partner, C. If A. dies or retires from practice, does B.'s bond hold good to C.?

*** We are advised that if C., by arrangement or purchase, acquires A.'s practice, the benefit of the bond by A. would enure in favour of C.

M.D. BRUX.

Sigma asks the ollowing questions:

(1) If I take the M.D Brux. by examination, can I get it registered with my other qualifications?

(2) If I sign myself "M.D." in any official or other paper, or put it on my door plate, am I legally compelled to add "Brux." after the "M.D.," or is it only a matter of etiquette?

(3) Can I describe myself in a public paper (say a nomination paper) as "M.D.," without anything further?

*** (1) No foreign degree acquired since 1886 is registrable, either with or without other qualifications.

(2) A registered medical practitioner possessing an unregistrable foreign medical degree should place after his name his registered qualification, and after the latter the unregistrable degree with the name of the university granting it, otherwise he might render himself liable to the penalty prescribed by Section XL of the Medical Act, 1858.

(3) The reply to No. , we think, covers this question also.

MEDICAL NEWS.

Presentation.—Dr. Wm. S. Young, of Garlieston, has been presented by the members of his ambulance classes with a marble timepiece in recognition of the zeal and ability with which he had performed his duties as lecturer.

Queen Charlotte's Lying-in Hospital.—The annual report adopted at the meeting on February 28th stated that 1,101 patients had been delivered in the hospital during the year. Many of the cases were grave and difficult ones, but no death had occurred. In the out-patient department 1,124 were delivered, and 1 patient died, giving a death-rate of 0.88 per 1,000.

The Budget of the Metropolitan Asylums Board.—It appears from the statement of the Chairman of the Finance Committee that the expenditure of the Board for the year ending Michaelmas last was £665,400. The total expended on the infectious sick was £328,000: on imbeciles, £134,000; and on boys on training ship £18,200, making a total expenditure on inmates of £480,200. The daily cost per head was as follows: imbeciles, 5¾d.; fever patients, 8½d.; boys, 10¼d.

Another death from beri-beri has occurred at the Richmond Asylum, and the coroner's jury again complained of the overcrowding of the asylum, which now contains 1,900 patients. It is gratifying to see that by the Irish Local Government Bill the Board of Control is to be abolished, so that we may hope that this chronic scandal is within measurable distance of coming to an end at last.

The Epidemic at Hatton Asylum.—If any additional evidence were wanted as to the true nature of this epidemic, or at least as to the absurdity of the poisoning theory, it is afforded by Dr. Stevenson's report on his examination of the viscera of a case that ended fatally. At the coroner's inquiry which was concluded at the County Asylum, Hatton, on February 25th, the jury returned a verdict of death from natural causes.

The German Public Health Association will this year hold its annual meeting at Cologne from September 14th to 17th. Among the subjects to be discussed are the German law for the prevention of infectious diseases; the sanitary supervision of dwellings; the purification of the sewerages of towns; and the sanitation of railway carriages.

German Balneological Society.—The German Balneological Society will hold its ninth public meeting on March 11th and following days in Berlin, under the Presidency of Professor Liebreich, who will deliver the opening address. Among the communications promised are: The Question of Contagiousness of Tuberculosis, by Dr. Römpler, of Görbersdorf; the Effect of so-called Indifferent Mineral Waters, by Professor Liebreich; the Hydrotherapy of Simple Ulcer of the Stomach, by Professor Winternitz, of Vienna; and Vegetable Diet Cures, by Dr. Strasser, of Vienna.

The Cost of a Typhoid Epidemic.—At the half-yearly meeting of the Maidstone Water Company, it was reported that £1,651 had been expended by the directors during the six months, and that there were still further accounts to be delivered. But it is not on the company that the heaviest burden of expense has fallen. At a meeting of the Urban District Council, the Mayor mentioned that the Council had up to the present overdrawn at the bank to the extent of £14,039. Alderman Ellis gave it as his opinion that the total cost of the epidemic would not be less than £20,000. Principal and interest on a loan of that amount would involve a rate of 2½d. in the pound.

Stockport Infirmary.—The history of this institution has been a prosperous one. Originally started as a dispensary in 1792, it has continued to increase with the growth of the neighbourhood, and now a further extension is being undertaken. A new wing is to be built, and provision is to be made for additional beds for the treatment of diseases of women and children, together with a new operating theatre. The cost of these additions will be nearly £10,000, of which over £7,000 has been promised in subscriptions. The present building was opened in 1833, enlarged in 1871, and reconstructed in 1885.

Irish Workhouse Reform Association.—The second annual meeting of this Association was held in the Mansion House, Dublin, on February 24th, under the presidency of the Right Hon. the Lord Mayor. The report showed a balance in hand, and referred to the success which had followed the Association's efforts to effect reforms by the issue of the order of the Local Government Board abolishing pauper nursing, and by the proposal of the Chief Secretary to provide for half the payment of one trained nurse in each union. The speakers included Lord Monteagle, Lord Emly, Mr. Field, M.P., Dr. Moorhead, Dr. Smythe, and several others, and the whole proceedings were marked by enthusiasm.

Small-pox at Middlesbrough.—We learn with great regret of the death of Dr. Malcomson, the medical officer of health for Middlesbrough. The increasing epidemic in the town is stated to have produced overwork and worry which undermined his health. The epidemic of small-pox still continues at Middlesbrough. The total number of cases notified down to February 28th is upwards of 700. Many of the cases notified during recent days have been secondary attacks in houses from which the first patient had not been removed to hospital. Vaccination and revaccination continue to be performed, one estimate giving 25,000 as the number of persons operated on since the outbreak commenced. The Board schools remain open. The Town Council have in hand hospital provision which will accommodate some 600 patients, and, if needed, 200 beds are to be put in use in the local lunatic asylum now ready otherwise for its proper inmates.

The Price of National Health.—The subject for discussion at the monthly dinner of the "Article Club" on Wednesday, March 2nd, was "The Price of National Health." The subject was introduced by Mr. Wolf Defries, B.A.Lond., who pointed out that a statistical study of the subject showed that if the value of life were reckoned on Dr. Farr's estimate, a total minimum loss of over £10,000,000 was incurred by the nation from deaths due to preventable disease, an amount which exceeded in value the whole spirit trade of the United Kingdom and was double the trade in copper. Dr. Robert Saundby, in opening the debate on the address, pointed out that it was a mistake to suppose that the resistance of civilised was less than that of uncivilised nations. The latter lived on the verge of starvation, and when they were attacked by zymotic disease the mortality was usually enormous. The evils of zymotic disease were far greater than would appear from a consideration of the chairman's figures, for in addition to the immediate, there was a subsequent, mortality accounted for by the power of such acute attacks to set up chronic organic disease.

The English Hospital at Nice.—The English colony in Nice resolved to commemorate the Queen's Diamond Jubilee by adding a small wing to the Asile Evangélique or Protestant hospital in Nice. The hospital is intended for the use of Protestants of all nations, and for the poorer members of the Greek Church. The French authorities do not permit it to take Roman Catholic patients. It is managed by a Committee consisting of French, Swiss, English, and German Protestants, with a representative of the Greek Church, generally the Russian Consul. The English Consul is President of the Committee. The new wing provides a special ward for one or two English patients, and two or three other rooms for the general purposes of the hospital. The fund raised has been sufficient, after defraying the cost of the building, to endow one bed. A second bed will be added when sufficient funds have been collected for its endowment. It is hoped that one of the members of the Royal Family who will accompany the Queen to Cimiez may consent to open the new wing.

Midwives and Puerperal Fever.—An inquest is reported in the *Yarmouth Advertiser* on a woman who died from puerperal fever near Yarmouth. It appeared that the patient was delivered on February 2nd, and was attended by a midwife, who did not arrive till after the birth of the child. There was some difficulty and delay in the third stage of labour: the report does not explain from what cause. The midwife did what she thought necessary; and did not see the patient again until February 7th. A doctor was called in on February 9th, who stated that the patient was suffering from "puerperal blood poisoning." She died on February 13th. At the inquest he expressed the opinion that the midwife "had shown herself as competent as an unskilled person could be." He also said that "the completion of the confinement should have taken place much earlier than it did," and that the midwife should have been "in daily attendance after the confinement." The jury censured the midwife for her want of attention in the case; and the coroner advised her to attend no further cases. The midwife stated that she had been in practice for thirty-eight years. Therefore she had begun practice when antiseptics were unheard of; and had probably passed the teachable age before their utility in midwifery practice had been demonstrated. This we take to have been the real explanation of the death. If she poisoned the patient by her manipulations with dirty fingers in the third stage of labour no amount of after-visiting would undo the mischief so set up. But if such a midwife could be taught to keep her hands and her dress in a state of thorough surgical cleanliness she might with impunity disregard the coroner's admonition (wise as it was considering the age and circumstances of the person to whom it was addressed), and even please herself as to the number of after-visits that she paid to her patients.

Plague in Bombay.—The news from Bombay is reassuring, and the virulence of the epidemic is on the wane. During the past week the deaths from plague numbered 1,082, showing a decrease of 175 as compared with the preceding week. We regret to have to record the death of another English nurse (Miss McDougall) who died of plague on February 23rd. A report in the Indian daily papers that Miss McDougall was infected by a particle of sputum which a plague patient coughed into her eye needs confirmation. The Queen has shown her interest in the health of her people, and her sympathy with the sufferings of the plague stricken by telegraphing her expression of regret at the sad news of the death of Miss Morgan.

Testimonial to Dr. Hall Hains.—Dr. Hall Hains, who recently received a similar tribute of sympathy from the medical profession, was presented on February 23rd by Major-General Goldsworthy, M.P., acting on behalf of a large number of Dr. Hall Hains's friends and patients, with an address and a purse of gold containing 178 guineas. Dr. Hall Hains made a suitable response for himself and Mrs. Hall Hains, who was associated with him in this presentation. Votes of thanks to the honorary secretary and treasurer of the fund, to General Goldsworthy, and to Dr. Joseph Smith and Dr. Carre-Smith, chairman and secretary of the medical fund, brought the proceedings to a close.

The St. John Ambulance Association.—A deputation of the honorary surgeons of the Metropolitan Corps of the St. John Ambulance Brigade, headed by Mr. Osborn, the Chief Surgeon, waited recently upon Sir Herbert Perrott, the Chief Secretary of the St. John Ambulance Association, with reference to the circular on Home Hygiene issued by the Central Executive Committee of the Association. After the objections to the circular had been stated by Mr. Osborn, Dr. Black Jones, and Dr. Howard, Sir Herbert Perrott said that he could positively assure the deputation that the committee would not sanction lay lecturers in first aid and nursing. Home hygiene was now taught in evening continuation schools, and it was thought that there would not be sufficient medical men who would lecture at the small fee; but he was certain that medical lecturers would be preferred to lay lecturers. The scheme under criticism had received the approval of the medical men on the Central Executive Committee. The standard of examination lay entirely with the Examining Board, and he was certain that it would be made a thorough test.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester Street S.W.—Surgeon to Out-patients; must be F.R.C.S.Eng. Also House-Surgeon. Appointment for six months. Board, lodging, and washing found.—Applications to the Honorary Secretary, before March 6th.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Infirmary, Havil Street, Camberwell, and the Workhouse, Gordon Road, Peckham, and relief duty at Constance Road Workhouse. Appointment for one year. Salary, £50, with apartments, board, and washing. Applications on forms provided to be sent to Charles S. Stevens, Clerk to the Guardians, 29, Peckham Road, S.W.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

CITY OF LONDON ASYLUM, near Dartford, Kent.—Second Assistant Medical Officer, unmarried; doubly qualified, and under 30 years of age. Salary, £100 per annum, with board, lodging, washing, and attendance. Applications, on forms to be obtained of the Clerk, to be sent to Charles Fitch, Clerk to the Visiting Committee, Guildhall, E.C., by March 15th.

DUDLEY: THE GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided. No salary. Applications to the Secretary by March 17th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House-Surgeon. Appointment for six months. Board and residence provided, with honorarium of £15 15s. at the expiration of term.—Also Casualty Officer. Appointment for six months, and is renewable. Salary at the rate of £100 per annum. Applications to Thomas Hayes, Secretary, by March 12th.

FINSBURY DISPENSARY, Brewer Street, Goswell Road, E.C.—Physician. Honorarium, £40.—Applications to the Secretary by March 8th.

FISHERTON ASYLUM.—Assistant Medical Officer, about 28 years of age, unmarried. Salary, £100 a year, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to William George Black, Secretary, 88, West Regent Street, Glasgow, by March 21st.

GLOUCESTER: GENERAL INFIRMARY AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Applications, to be sent under cover, to the Secretary by March 19th. Also House-Surgeon and Assistant House Surgeon; doubly qualified. Salary, for the former, £100 per annum. Board, residence, and washing supplied in each case—Applications to the Secretary by March 12th.

GOLD COAST AND LAGOS COLONIES.—Appointments in the Government Medical Services; doubly qualified, and between 25 and 30 years of age. Initial salary, £350 a year, with free quarters and free passages (or allowances in lieu thereof). Applications, marked "West African Medical Appointments," to the Assistant Private Secretary Colonial Office.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Resident House-Surgeon, salary, £80; Assistant House-Surgeon salary £30 Board, residence, and laundry found in each case.—Applications to the Hon. Secretary, at the Hospital, by March 8th.

HALIFAX ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.—Applications to John S. Hurst, J. L. Cox, Honorary Secretaries, by March 17th.

ISLINGTON: GUARDIANS OF ST. MARY.—Resident Second Assistant Medical Officer. Remuneration, £80 per annum, and rations, apartments, and washing.—Applications, on forms to be obtained at the Guardians' Offices, and must be sent to Edwin Davy, Clerk, Guardians' Offices, 131, St. John's Road, Upper Holloway, N., by March 8th.

LEICESTER INFIRMARY.—Surgical Dresser and also a Clinical Clerk. Appointment for six months. Board and apartments in the Infirmary provided.—Applications to the Secretary by March 14th.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £80 for the first and £90 per annum afterwards, with apartments, board, and attendance. Applications to R. R. Greene, Secretary, 34, Moorfields, Liverpool, by March 9th.

LIVERPOOL ROYAL INFIRMARY.—Honorary Gynæcological Surgeon.—Applications to the Chairman of the Committee of the Royal Infirmary, Liverpool, by March 10th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence in the hospital, board, and washing provided, and honorarium on satisfactory completion of term.—Applications to A. W. Bodger, Secretary, by March 16th.

MANCHESTER: TOWNSHIP OF.—Junior Assistant Medical Officer for the Workhouse at Crumpsall; unmarried, and doubly qualified. Salary, £100 per annum, with furnished apartments, fire, light, washing, and attendance.—Applications, endorsed "Medical Appointment," to be sent to Geo. Macdonald, Clerk to the Guardians, Poor Law Offices, New Bridge Street, Manchester, by March 9th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House Physician, House-Surgeon, Assistant House-Physician, and Assistant House-Surgeon. Appointments tenable for six months. The House-Physician and House-Surgeon will each receive salary at the rate of £40 per annum, and the other officers at the rate of £20 per annum.—Applications to Charles H. Byers by March 14th.

NORFOLK AND NORWICH HOSPITAL.—House-Physician; doubly qualified, unmarried, and not more than 30 years of age. Salary, £60 per annum, with board, lodging, and washing. Applications to Poole Garrett, Secretary, by March 15th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Resident Medical Officer. Appointment for one year, but eligible for re election. Honorarium, £40 per annum, with board, lodging, etc. Applications to William J. Morton, Acting Secretary, 41, Fitzroy Square, W., by March 7th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Commencing salary, £140 per annum. Applications to the Secretary.

ROCHFORD UNION.—Medical Officer and Public Vaccinator for the Hadleigh District. Salary, £45 per annum, with extra fees. Must reside within the District. Applications to Frederick Gregson, Clerk to the Guardians, Southend-on-Sea, by March 7th.

STAFFORD: COTON HILL REGISTERED HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer; doubly qualified. Salary commencing £100 per annum, with two annual increases of £25 each to a maximum of £150, with board, lodging, and washing. Applications to the Medical Superintendent by March 22nd.

TEIGNMOUTH HOSPITAL.—House-Surgeon; doubly qualified. Salary, £60, with board and lodging. Applications to the Chairman of Committee, The Hospital, Teignmouth, South Devon, by March 10th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Appointments tenable for six months.—Applications to R. J. Gilbert, Secretary-Superintendent by March 23rd.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer, unmarried. Salary, £100 per annum, rising to £120 in a year, with board, lodging, and washing.—Applications to the Medical Superintendent, The Asylum, Powick, near Worcester, by March 16th.

MEDICAL APPOINTMENTS.

Alford, H. T. M., L.R.C.P., M.R.C.S., appointed Junior Obstetric House-Physician to St. Thomas's Hospital.

Andrews, Samuel, L.R.C.P.Lond., M.R.C.S.Eng., reappointed Medical Officer for the No. 2 District of the Basingstoke Union.

Babington, S. N., L.R.C.P., M.R.C.S., appointed Junior Ophthalmic House-Surgeon to St. Thomas's Hospital.

Breton, Lancelot M., L.R.C.P., M.R.C.S., L.S.A., appointed Medical Officer to the Southampton Dispensary and Provident Medical Institution.

BURKE, A. St. L., L.R.C.P., L.R.C.S Irel., appointed Medical Officer for the Bushbury District of the Cannock Union.

COBB, E. H., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

DICKSON, T. G., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Bredwardine Rural District Council.

GEPP, Maurice, L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health for the Borough of Shrewsbury.

GIBBON, A. H., L.R.C.P.Edin., L.R.C.S.Edin., appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital (extension).

GILBERTSON, W., B.A., M.R.C.S., L.R.C.P., appointed a Clinical Assistant to Out patients at the Chelsea Hospital for Women.

GRANT, A. J., M.D.Brux., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

GREAVES, F. L. A., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

GREEN, G. R., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of Health for the Borough of Ripon.

GREG, A. H., B.A.Camb., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

GREGORY, W. H., M.D., C.M.Edin., appointed Public Vaccinator to the Second District of the Beverley Union, *vice* H. Walker, M.D.Edin., resigned.

HALL, J. S., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

HASLAM, H. C., M.A., M.B., B.C.Camb., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital (extension).

HEWITT, H. E., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital (extension).

HOLDEN, J. F., M.B., C.M.Edin., appointed Medical Officer for the Fourth District of the Preston Union.

JONES, J. T., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Llansilin Rural District Council.

LLOYD, Dr. Evan, appointed House-Surgeon to the Flintshire Dispensary, *vice* C. B. Rossiter, L.R.C.P., L.R.C.S.Edin., resigned.

MCCLEAN, J. F., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital

MARTIN, Antony A., M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the South-Eastern Fever Hospital, Hasfield Street, S.E.

MARTIN, F. R., B.A.Cantab., L.R.C.P., M.R.C.S., appointed Clinical Astant in the Special Department for Diseases of the Ear at St. Thomas's Hospital (extension).

MILES, Alexander, M.D., F.R.C.S.Edin., Surgeon to Leith Hospital, appointed Assistant Surgeon to the Edinburgh Royal Infirmary, *vice* Harold J. Stiles, F.R.C.S., resigned.

MILLAR, A. F., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

MOONEY, Herbert C., M.B., B.Ch., F.R.C.S.I., appointed Assistant Surgeon to Molesworth Street Branch of the Royal Victoria Eye and Ear Hospital, Dublin.

MURRAY, J. Ivor, M.D., F.R.C.S.Edin., appointed an Honorary Consulting Surgeon to the Sea Bathing Infirmary, Scarborough, *vice* J. W. Teale, M.A.Oxon., F.R.C.S.Eng., deceased.

NUTHALL, Alex. W., M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, *vice* Dr. Nicoll, resigned.

NUTTING, P. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Third District of the Malmesbury Union.

OSBORNE, A. A., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

PARSONS, A. C., L.R.C.P., M.R.C.S., appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

PEET, J. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the No. 8 District of the Basingstoke Union.

REYNOLDS, C. A., B.A., M.B., B.Ch.Oxon., appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

ROBINSON, A. C., L.R.C.P., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

SANGUINETTI, H. H., B.A., M.B., B.Ch.Oxon., L.R.C.P., M.R.C.S., appointed House-Surgeon to St. Thomas's Hospital.

SCOTT, H. H., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.

SHEA, H. F., M.B., B.S.Durh., L.R.C.P., M.R.C.S., appointed House-Physician to St. Thomas's Hospital.

STEPHENSON, William, M.R.C.S.Eng., appointed Medical Officer to the Beverley Rural District Council, *vice* Henry Walker, M.D.Edin., M.R.C.S., resigned.

TAYLOR, S. T., M.B.Lond., reappointed Medical Officer of Health to the Chingford Urban District Council.

TENCH, S. E., M.R.C.S., L.R.C.P., appointed a Clinical Assistant to Out-Patients at the Chelsea Hospital for Women.

THURNELL, H. L., M.A.Camb., M.R.C.S., L.R.C.P., appointed Medical Officer of Health for the Borough of Gravesend.

TRUMPER, O. B., M.B., Ch.B., appointed Medical Officer of Health to the Market Rasen Urban District Council.

TURNER, S. D., L.R.C.P., M.R.C.S., appointed Senior Obstetric House Physician to St. Thomas's Hospital.

TYRRELL, F. A. C., B.A., M.B., B.C.Camb., L.R.C.P., M.R.C.S., appointed Senior Ophthalmic House-Surgeon to St. Thomas's Hospital.

WYNNE, Dr., appointed Medical Officer for the No. 2 District of the Rye Union, *vice* Henry Harratt, M.R.C.S.Eng., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture I.

Odontological Society of London, 8 P.M.—Papers by Mr. George Brunton and Mr. J. F. Colyer. Casual communications by Mr. F. W. Richards and Mr. A. F. Colyer.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr. Geo. Stoker: Impaired Movement of the Vocal Cords.

Medical Society of London, 8.30 P.M.—Mr. J. H. Morgan: The Affections of the Urinary Apparatus of Children. Lettsomian Lecture III.

TUESDAY.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Dr. Harry Campbell: On Disorders of Reflex Action, and Trophic Lesions in Disorders of the Nervous System.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Mr. Ballance: Surgery of the Nervous System.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Delusional Insanity, Paranoia.—Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Drug Eruptions.

Royal Medical and Chirurgical Society, 8.15 P.M.—Dr. Norman Moore will show Two Adult Brothers with Symptoms of Disease of the Lateral Columns of the Spinal Cord, of which the first indications were observed shortly before puberty.—8.30 P.M.—Dr. Joseph Griffiths: Microcephaly and its Surgical Treatment, with notes of a case. Mr. C. T. Dent: Removal of the Entire Upper Extremity for Recurrent Carcinoma after Removal of the Breast.

WEDNESDAY.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture II.

Evelina Hospital, S.E., 4.30 P.M.—Mr. G. H. Makins: Selected Surgical Cases. Post-Graduate Lecture.

Medical Society of London, 7.30 P.M.—Anniversary Dinner at the Whitehall Rooms, Hotel Métropole.

Hospital for Consumption and Diseases of the Chest, Brompton, 4 P.M.—Dr. Kidd: Cases of Laryngeal Tuberculosis.

Dermatological Society of London, 11, Chandos Street, W., 5.15 P.M.—Exhibition and Discussion of Clinical Cases.

Hunterian Society, 8.30 P.M.—Pathological Meeting. Specimens will be shown by Dr. F. J. Smith, Dr. Hingston Fox, Dr. Arnold Chaplin, Dr. T. H. Sequeira, Dr. Butler Harris, Dr. Arthur Davies, Mr. A. H. Tubby, and Mr. John Adams.

London Post-Graduate Course, 4.30 P.M.—Hygiene at Parkes Museum. Professor Wynter Blyth: Sources of Water, etc.

Sanitary Institute, Parkes Museum, 8 P.M.—Discussion on Waterborne Typhoid, to be opened by Dr. Christopher Childs.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Dr. G. D. Robinson: Gynæcological Cases.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases will be shown by Mr. W. R. H. Stewart, Mr. E. Roughton, Dr. H. Tilley, Dr. H. L. Lack. Drawings by Sir R. Christison of Removal of Fish Hook from Gullet will be shown by Dr. T. J. Walker. Specimens will be shown by Mr. Charters Symonds and Dr. Waggett. Clinical communications will be made by Mr. Walsham, Dr. Willcocks, Mr. Atwood Thorne, and Dr. Wm. Hill.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Dickinson: Demonstration of Selected Cases.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Mr. Gibbs: Demonstration of Surgical Cases.

London Temperance Hospital, 2 P.M.—Dr. Soltan Fenwick: Clinical and Pathological Demonstration to Senior Students.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Dr. A. Ernest Sansom: Clinical Lecture on Mitral Stenosis, with especial reference to recent investigations.

British Gynæcological Society, 8.30 P.M.—Specimens of Sarcoma of the Ovary will be shown by Mr. F. B. Jessett, Dr. Elder (Nottingham), and Dr. Jellett (Dublin). Dr. George Newman: Demonstration on Micro-organisms in Relation to the Female Genital Organs. Dr. W. Alexander (Liverpool): Enucleation of Uterine Fibroids.

Ophthalmological Society of the United Kingdom, 8 P.M.—Card Specimens will be shown by Mr. Rockliffe, Mr. Herbert Fisher, Mr. Cargill, Mr. A. S. Morton, and Mr. C. D. Marshall.—8.30 P.M.—Papers by Dr. A. Macgillivray: The Aseptic Treatment of Wounds in Ophthalmic Surgery. Mr. Marcus Gunn: On Ophthalmoscopic Evidence of General Arterial Disease. Mr. Percy Flemming: A Case of Retinitis Proliferans in which the eye was examined after death.

FRIDAY.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture III.

East London Hospital for Children, Shadwell, E., 4 P.M.—Dr. Morley Fletcher: Nutritional Changes in the Skeleton occurring in Early Life.

Incorporated Society of Medical Officers of Health, 197, High Holborn, W.C., 8 P.M.—Dr. J. Wright Mason: Secondary Scarlatina and Return Cases.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Professor Crookshank: Tuberculosis and Leprosy, etc.

Clinical Society of London, 8.30 P.M.—Dr. David Newman: Cases of Malformation of the Kidney and Displacement without Mobility. Mr. F. C. Wallis: Three Cases of Perforating Wound of the Knee-joint. Dr. G. A. Sutherland and Mr. W. Watson Cheyne: A Case of Chronic Hydrocephalus treated by Intracranial Drainage.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

MEYER.—On February 24th, 1898, at Amwell Place, Hurstpierpoint, Sussex, the wife of W. R. Meyer, L.S.A.Lond., of a son.

O'CALLAGHAN.—On February 24th, at 137, Harley Street, W., the wife of Robert O'Callaghan, F.R.C.S.I., of a daughter, who only survived her birth some hours.

VERNON.—On February 27th, at Greek Street, Stockport, the wife of J. J. Vernon, M.B., of a daughter.

DEATH.

MALCOMSON.—On March 1st (suddenly), at 29, Grange Road West, John Andrew Malcomson, M.D., Medical Officer of Health, Middlesbrough-on-Tees.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 8; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Tu., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. F., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M., Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th. 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p. W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological) Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

G. W. asks: What would be the best way of removing a tattoo mark from the back of the arm. Would electrolysis leave a bad scar?

CONSULTATION FEES.

A. C. F. S. writes that, at the request of Mr. C. the employer of Mrs. P., patient living a mile and a half away, who was seriously ill, he held consultation with Dr. S. Mr. C. now refuses to pay to our correspondent a consultation fee of one guinea.

*** Our correspondent no doubt has equitable claim to a fee, but we believe that his solicitor would advise him that to establish a legal claim he must produce a written request to attend from Mr. C.

DISINFECTION OF CLOTHING AND BEDDING.

UNINFORMED writes that there is no disinfector in the sanitary area or neighbouring ones. He wishes to disinfect a patient's bedding. He asks whether there are private disinfectors where bedding could be sent to be thoroughly and reliably done.

*** The best plan, probably, would be to soak in boiling water such articles as will stand this treatment, and to destroy the remainder by burning. Proper disinfectors should undoubtedly be supplied by local sanitary authorities.

HOME FOR CRIPPLED BOY.

S. I. asks where a cripple lad of 17 could be received. He is small and and deformed (infantile paralysis soon after birth). He cannot talk beyond Yes and No. His parents could afford a small weekly sum.

*** The only institution with which we are acquainted which is likely to receive such a case is the Northern Counties Hospital for Incurables, Mauldeth, Heaton Mersey, Manchester, where cases are received either by election by subscribers, or on payment (sum determined by Board of Management). Idiots and epileptics not received. Applications to Mr. James Ferguson, Secretary.

ODDFELLOWS AND SURGICAL FEES.

A CORRESPONDENT writes that he attended a short time ago a member of a court of Oddfellows for a fracture of the thigh, and later on sent in an account to the patient. The latter brought the matter before the lodge, who ruled that our correspondent being the surgeon to the lodge had no right to charge for any surgical attendance on a member. He wishes to know whether it is usual in the case of friendly societies generally to expect the surgeon to attend to surgical injuries of this kind for the payment of 4s. per annum.

*** In the absence of special stipulation to the contrary the club surgeon would be bound to attend to such cases without extra remuneration. Medical men should think of this when they consent to give their services for such inadequate remuneration.

ANSWERS.

C. T.—There does not appear to be any reason to believe that the use of metal curling pins has the slightest effect on the eyesight.

A. A. F. P.—The result of the investigations made for the BRITISH MEDICAL JOURNAL on filters are given in the JOURNALS of November 10th, 17th, 24th; December 15th, 29th, 1894, and January 22nd, 1898, and are about to be republished in pamphlet form. The apparatus to which our correspondent refers would probably not be found reliable except in the hands of skilled persons. It is a chemical process, filtration being a secondary matter.

MEDICAL ETIQUETTE.

JUNIOR.—Our correspondent has so far acted with due courtesy, and has been guided by a true interpretation of medico-ethical rules. He would be ill-advised now to claim the fee. We may perhaps add that it is always well under circumstances such as those related by our correspondent to leave a written and not a verbal communication for the other practitioner.

NORDRACH.

DR. J. BRISCOE STEPHENSON (Bristol) writes: In further reply to your correspondent "E. A. L.," I have seen several cases returned from Nordrach all vastly improved—in fact, apparently cured. One of these has been back now more than twelve months, has had no relapses, and is following his ordinary occupation. At the request of a patient of mine, suffering from advanced phthisis, I am treating him on exactly the same lines as at Nordrach in his own house and garden; and although it is as as yet early to speak as to the ultimate result, I may say he has gone on steadily improving, gained a stone in weight, and the impaired lung shows evident signs of healing.

ACUTE TUBERCULOSIS.

T. H. S.—Acute miliary tuberculosis can produce death within a very short time after the onset of serious symptoms. Marfan, for example, has recorded 2 cases in which death occurred within forty-eight hours. No doubt in all such cases symptoms of failing health may be detected for some weeks at least, but they may be slight and quite indistinctive. There is also a form of acute tuberculosis in which the prominent symptom is dyspnœa without auscultatory signs sufficient to account for it. The average duration of this form is stated to be twenty to thirty days (*Traité de Médecine*, Charcot, Bouchard, Brissaud, T. iv, p. 741).

AMBULANCE WAGONS.

SURGEON-CAPTAIN R. R. SLEMAN, Artists R.V., writes: With reference to the inquiry of Surgeon-Captain Turton on p. 559 of the BRITISH MEDICAL JOURNAL of February 19th as to the price of ambulance wagons, I

write to say that detailed information on this point can be obtained by consulting the *Priced Vocabulary of Stores*, which can be obtained at any Government publishers. The newest pattern (Mark V) ambulance wagon costs about £143, accommodates twelve persons, but would require four horses to draw it. The ambulance carts are much lighter, and will carry four patients sitting or two recumbent, the cost of Mark II being about £94. It should be remembered that none but the strongest wagons or carts will bear the strain of manœuvres over rough or broken ground.

NOTES, LETTERS, Etc.

ERRATUM.—In Dr. Braidwood's letter on proposed changes in the law of vaccination in the BRITISH MEDICAL JOURNAL of February 26th, page 592, col. 2, line 26, for "midwives" read "medicoes."

INJUDICIOUS FRIENDS.

DR. M. G. MCELLIGOTT writes to say that he deprecates most emphatically the publication of a paragraph in the *Derbyshire Advertiser* in which he is congratulated for obtaining the diploma in State Medicine of the Irish Colleges. The paragraph was inserted by a mistaken well-wisher without Dr. McElligott's knowledge or consent.

A MOTOR TRICYCLE.

DR. T. PRICHARD ROBERTS (St. Albans) writes: Some weeks ago, in the BRITISH MEDICAL JOURNAL, a question was mooted as to the best autocar or motor for the use of a medical man. After an exhaustive trial of a motor tricycle built for me by the Beeston Cycle Company, Cheylesmore, Coventry, which I have run nearly 500 miles during the last month without any accident whatever, I thoroughly recommend this make. There is little trouble in either starting or stopping, good break power, and scarcely any noise or vibration. Petrol or doubly-distilled benzoline, of specific gravity 680, is the oil used for propulsion, which costs about 1s. per 100 miles. Tube ignition is preferred to the electric spark for the explosion of the vapour. The speed can be regulated to anything between 4 miles and 20 miles an hour by a small lever immediately in front of the rider. With an extra-power cylinder any ordinary hill can be climbed, and the steepest with a little assistance by pedalling. This is a great boon to a medical man, as he can cover from 50 to 60 miles a day with little exertion and at a trifling cost. A motor is easily got ready at night. On arriving at the patient's house the lamp can be turned out, and the machine put away in a small space. I may add that the petrol can be obtained at Messrs. Carliss, Capel, and Co., Chemical Works, Hackney Wick, London.

AN UNPROFESSIONAL CARD.

THE following card, which has been sent us by two members of the Association, is said to be widely circulated in the district in which the practitioner whose name it bears resides:

Dr. ———

Physician and Surgeon,

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PALPATION IN THE DIAGNOSIS OF DISEASES OF THE CHEST.

DR. H. NELSON EDWARDS (Shrewsbury) writes: With reference to the article by Dr. Maguire on Palpation and Auscultatory Percussion, in the BRITISH MEDICAL JOURNAL for February 19th, I think perhaps he, and those of your readers interested in the subject, may like to see an article in *St. Bartholomew's Hospital Reports*, vol. ii, 1866, written by my late brother, Dr. G. N. Edwards, on The Value of Palpation in the Diagnosis of Tuberculous Disease of the Lungs, with a table of 50 cases which he diagnosed by palpation, his diagnosis being confirmed by the auscultatory phenomena observed by others.

EARLY CLOSING ASSOCIATION AND GRATUITOUS MEDICAL SERVICES.

A CORRESPONDENT complains that certain medical practitioners whose names are being advertised in the press are giving their professional services to members of this Association gratuitously. He maintains that such conduct on the part of medical men is more detrimental to the profession than charging sixpenny fees, inasmuch as they who do the latter at least "fix a certain value to their services." There is a good deal of truth in our correspondent's contention. The practice of giving gratuitous professional services to the public is only justifiable as a matter of charity, where there is efficient machinery for preventing abuse. The *Mid-Surrey Gazette* of February 5th reports that the Early Closing Association has enabled during the past year some 75,000 to 100,000 persons to enjoy seaside excursions, and has earned a profit of over £241 out of the fares paid by the excursionists, so that it is not easy to see on what grounds this Association claims gratuitous medical services for its members.

ANTISEPTICS IN OCULAR SURGERY.

MR. H. CARTER MACTIER (Wolverhampton) writes, with reference to Dr. Bell Taylor's letter published in the BRITISH MEDICAL JOURNAL of January 29th: Some time ago I performed extraction for a patient who had profuse conjunctivitis and some discharge from the lachrymal sac with an excellent result. For some time before the operation I treated the conjunctivitis with nitrate of silver, but discontinued it a few days before the performance of the extraction, being content with washing out the conjunctival sac with boracic acid lotion at the time of the operation, since I consider the film caused by the nitrate of silver gives rise to some irritation when kept in an enclosed space such as the conjunctival sac becomes when the eye is bandaged after operation. I find cutting instruments can be very satisfactorily sterilised by immersing them for a few minutes in a mixture containing equal parts of ether and absolute alcohol. The other instruments I boil, and then place them all in a tray containing carbolic acid lotion 1 in 40.

LETTERS, COMMUNICATIONS, ETC., have been received from:
(A) Mr. R. B. Anderson, London; A. T. S.; Administrative Medical Officer Retired; Anthrax; A. D. **(B)** Dr. E. G. Barnes, Eye; J. G. Brown, M.B., Bootle; F. M. Blumer, M.B., Stafford; Mr. W. M. Beaumont, Bath; Dr. P. M. Braidwood, Aylesbury; Mr. W. J. Beatty, Stockton-on-Tees; Mr. G. A. Bruce, London; Dr. J. Brittor, Strabane; Dr. A. J. Boyd, Ware; Mr. L. A. Bidwell, London; Mr. G. V. Benson, London; Dr. W. H. Brazil, Bolton-le-Moors; Dr. J. B. Brierley, Manchester. **(C)** Dr. W. J. Collins, London; Mr. L. Columbus, London; Mr. W. H. Cooper, Kendal; C. T.; C. R. Mr. J. M. Carvell, London; Cantab; Mr. H. L. Carre-Smith, London; Dr. C. C. Clarcmont, Southsea; Dr. E. J. Cooke, Sheffield; Messrs. J. and A. Churchill, London; Civis; Dr. R. Caton, Liverpool; Dr. G. W. Crowe, Worcester; Correspondent; F. J. H. Coutts, M.B., Manchester. **(D)** Dr. M. Dockrell, London; Dr. A. T. Davies, London; Messrs. Down Bros., London. **(E)** Mr. H. N. Edwards, Shrewsbury; Expectant; Mr. P. Edwards, Liverpool; Dr. F. W. Eurich, Bradford; Elberfeld Farben Fabriken Co., London; Mr. W. L. Emmerson, Leicester. **(F)** W. Forbes-Leslie, M.B., Brussels; P. C. Fenwick, M.B., Christchurch, N.Z.; Mr. E. A. Farr, Andover; Mr. W. T. Freeman, Reading; Messrs. Fassett and Johnson, London. **(G)** A. Gregor, M.B., Sutton-on-Trent; Dr. R. W. Garrett, Kingston, Ont.; W. W. Griffin, M.B., Brighton; J. E. Gemmell, M.B., Liverpool; Dr. A. E. Giles, London. **(H)** Mr. J. A. Hughson, Buffalo, U.S.A.; Dr. E. E. Holt, Portland, U.S.A.; Mr. D. Headridge, Manchester; Mr. H. C. Howard, London; Dr. T. B. Hyslop, London; Mr. G. Harrison, London; Dr. T. W. Hime, Bradford; Humber; Hunterian Society, Secretary of, London; W. H. Horrocks, M.B., Bradford; Mr. T. G. Horder, Cardiff; Mr. A. Harris, London; S. H. Hawley, M.B., Walsall; Dr. F. C. P. Howes, Lincoln; Mr. V. Horsley, London. **(I)** Mr. S. Infield, Hyde. **(J)** Dr. A. B. Judson, New York Mr. S. Job, Newark; Jenner Institute for Calf Lymph, London; Mr. G. E. Jeaffreson, Framlingham; Mr. R. W. Jolly, Peterborough; Mr. E. Johnstone, Manchester. **(L)** Dr. J. J. Lynch, Walsall; Mr. D. C. M. Lunt, Lymm; Dr. P. Leech, Halifax; E. A. Lermitte, M.B., London; J. F. Little, M.B., Dr. W. Lattey, Southam. **(M)** Dr. R. L. Meade-King, Taunton; Member; Mr. E. S. Medcalf, Hove; Mr. A. Mackenzie, Leeds; Dr. C. F. Marshall, London; Mex; M. Macnicol, M.B., Hooghly; M.B., L.R.C.P.Edin., Town Councillor; C. R. Marshall, M.B., Cambridge; Mr. M. G. McElligott, Belper; Dr. A. Mantle, Halifax; M.D.Edin.; Mr. J. G. Murray, Scarborough; Medicus. **(N)** Dr. E. W. Nason, Nuneaton. **(O)** Messrs. Oppenheimer, Son, and Co., London; Old Assistant. **(P)** Mr. J. F. Palmer, London; Dr. F. M. Pope, Leicester; Practitioner; Mr. W. P. Pain, London. **(R)** Mr. G. Rendle, London; R. G.; S. J. Ross, M.B., Bedford; Dr. C. E. Reinhardt, South Stoke; Mr. T. P. Roberts, St. Albans; Dr. J. A. Rigby, Preston. **(S)** Mr. T. H. Scutt, Staines St. Mary's Hospital Medical School, Dean of, London; E. Solly, M.B., Harrogate; Mr. A. C. F. Smith, Devonport; G. Stoker, M.B., London; Sigma; R. H. Shaw, M.B., Great Yarmouth; Dr. H. L. Smith, Bulawayo; A. J. Swallow, M.B., London; S. Stephenson, M.B., London; Dr. A. W. Stirling, Atlanta, U.S.A.; Dr. T. D. Savill, London; Surgeon-Major Retired Half Pay; Mr. H. de Styrap, Shrewsbury. **(T)** Mr. F. Treves, London; Dr. H. Tilley, London; J. McD. Troup, M.B., Grahamstown, S.A.; Messrs. Taylor and Weaver, London; Tuberculosus; W. E. Tressider, M.B., Nottingham; Mr. A. C. True, Washington; E. Thompson, M.B., Omagh; T. G. K. **(U)** Uninformed. **(W)** Mr. H. B. Wheatley, London; Dr. A. McC. Weir, East Sheen; Dr. F. Willcocks, London; Dr. W. White, Hadfield; Mr. M. Woodward, Pershore; Mr. W. E. Wyllys, Great Yarmouth; Dr. K. R. M. Wilson, Mauchline; Mr. T. M. Watt, Linton; J. Wallace, M.B., Weston-super-Mare; Mr. O. Williams, Burry Port.

BOOKS, ETC., RECEIVED.

"Cataphoresis," or Electric Medicamental Diffusion. By W. J. Morton, M.D. New York: American Technical Book Co. 1898.

A Run Round the Empire: Being the Log of Two Young People who Circumnavigated the Globe. Written out by their father, Alex Hill, M.A., M.D. London: Swan Sonnenschein and Co. 1898.

Epidemic Diphtheria. By A. Newsholme, M.D., M.R.C.P. London: Swan Sonnenschein and Co. 1898. 7s. 6d.

Textbook of Physiology. Edited by E. A. Schäfer, LL.D., F.R.S. Vol. I. Edinburgh and London: Young J. Pentland. 1898. 31s. 6d.

The Medical Examination for Life Assurance. By F. de H. Hall, M.D., F.R.C.P. Bristol: John Wright and Co. 1898. 2s. 6d.

On Maternal Syphilis, including the Presence and Recognition of Syphilitic Pelvic Disease in Women. By J. A. Shaw-Mackenzie, M.D. London: J. and A. Churchill. 1898. 10s. 6d.

A Study of Destiny. By L. de Hamong. London: Saxon and Co. 2s. 6d.

The Clinical Diagnosis of Lameness in the Horse. By W. E. A. Wyman, V.S. New York: W. R. Jenkins.

Verses and Ballads. By T. E. Amyot, F.R.C.S. Norwich: A. H. Goose. 1897.

A Degree for British Practitioners. By C. Reinhardt, M.D. South Stoke: Published by the Author. 2s. 6d.

The Medical Annual and Practitioner's Index. 1898. Bristol: John Wright and Co. 7s. 6d.

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ERASMUS WILSON LECTURES
ON
THE PATHOLOGY AND TREATMENT OF THOSE DISEASES OF THE LIVER WHICH ARE AMENABLE TO DIRECT SURGICAL INTERFERENCE.

Delivered at the Royal College of Surgeons of England.

BY H. J. WARING, M.S., B.Sc., F.R.C.S.,
Surgical Registrar and Demonstrator of Operative Surgery, St. Bartholomew's Hospital; Surgeon to the Metropolitan Hospital.

LECTURE I.—[ABSTRACT].
SUPPURATION OF THE LIVER.

[MR. WARING, in his first lecture, gave an account of the anatomical relations, vascular supply, and malformations of the liver. He said that the subject of his lectures might be divided into six groups. The first of these—suppurative inflammations of the liver, which lead to the development of one or more hepatic abscesses—was surgically the most important. Such inflammation was due to several causes, and from a study of a collection of some 55 cases it appeared that most of the cases which occurred in England fell into two groups—first, pyæmic abscesses; and, secondly, abscesses which were of the nature of tropical abscesses, and usually of dysenteric origin.

A pyæmic abscess might result from septic material being carried to the liver either by the portal vein or the hepatic artery. It was improbable that the vena cava inferior could afford the means of entrance. The commonest seat of origin of the septic process was the cæcum or colon, and occasionally the vermiform appendix.

Migration of colonies of septic organisms through the floor of an ulcer to the radicles of the portal vein was probably a frequent mode of infection. The most frequently-observed micro-organisms were the staphylococcus pyogenes aureus, bacillus coli communis, and the ray fungus.

Tropical abscesses were usually single. At most not more than two or three were present. It had been stated that no case had ever occurred in England in a patient who had not been abroad; this was certainly incorrect. In most of the cases amœbic dysentery was the exciting cause, and the amœba was usually present in the abscess contents. Hepatic abscesses might also be due to a pathological condition of some part of the biliary ducts, to injury, to animal parasites, to direct extension from adjacent organs, or be the result of acute specific fevers.

Having described the general symptoms and diagnosis of hepatic abscesses, Mr. Waring considered the subject of treatment. By reason of the frequency of suppuration along its track puncture with a trocar should be considered merely as a diagnostic measure, and in every case a free opening should be made, sufficiently large to allow of free evacuation wherever possible through the anterior abdominal wall. The after-treatment should be directed towards the removal of all secretion as soon as it was formed. In many cases it was necessary to operate through the thoracic parietes, and such an operation might, like the abdominal operation, be carried out in either one stage or two. In all operations the prime object was to afford a free exit for the pus without soiling the peritoneum or pleura. In some cases a lumbar incision was advisable.

Having discussed the complications and the consequences of spontaneous rupture, Mr. Waring concluded that a greater percentage of patients recovered among those who had been submitted to an abdominal or lumbar operation than among those who had been operated upon by the thoracic method.]

LECTURE II.
A.—SUBPHRENIC OR SUBDIAPHRAGMATIC ABSCESS.

A SUBPHRENIC abscess may be defined as a localised collection of pus or pus and gas between the inferior aspect of the diaphragm and the adjacent surface of the liver. The fact that the liver is only partially covered by peritoneum, and that the uncovered area lies for the most part in direct contact with the lower surface of the diaphragm, is of importance in the development of subphrenic abscesses, since the collection of pus may either be of the nature of a localised peritonitis in connection with the diaphragmatic surface of the liver which is covered by peritoneum, or it may be in connection with the uncovered portion. In the intraperitoneal variety the internal aspect of the abscess is in the early stages formed by peritoneum, whilst in the extraperitoneal this wall is formed by the fascia which covers the lower surface of the diaphragm and the fibrous tissue capsule of the corresponding portion of the liver. In most cases the superior surface of the right lobe of the liver forms the inferior boundary of the abscess, but in a certain number of cases the affection is confined to the superior aspect of the left lobe, and occasionally both lobes may be involved. When both lobes enter into the formation of the boundaries of the abscess it is usually extraperitoneal; occasionally, however, it may be intraperitoneal, in which case the inflammation spreads through the falciform ligament. The intraperitoneal form is more common than the extraperitoneal.

ETIOLOGY AND PATHOLOGY.

The pathological causes of the affection may be divided into the following groups:—

a. Traumatic Causes.—An injury of the hepatic region either perforating or non-perforating, more commonly the latter, may become the starting point in the development of a subphrenic abscess.

b. Affections of the Stomach.—Chronic ulceration of the gastric mucous membrane is the usual cause. Non-malignant ulcers are more frequently the cause than malignant ones. A chronic ulcer may by extension of the inflammatory process cause the formation of adhesions between the stomach and one of the adjacent structures, most commonly the anterior abdominal wall, the liver, or the inferior aspect of the diaphragm. Perforation of the base of the ulcer may then occur, and the contents of the stomach escape into the tissues around, usually a localised part of the peritoneal cavity which has been shut off from the rest by the formation of adhesions. The fluid which escapes contains micro-organisms, and soon inflammation and suppuration occur, and an abscess is the result. The perforation in the floor of the ulcer may either remain open or it may become closed, and simply represented by a scar. In the latter case the abscess will usually contain only pus, but in the former a quantity of gas will be present in addition. Gas, however, may be developed in a subphrenic abscess which does not communicate with the alimentary canal or the lung by gas-producing micro-organisms. Ulcers of the stomach in the region of the lesser curvature are more liable to be followed by subphrenic abscess than when they are situated near the greater curvature. The formation of adhesions may occur on either the anterior or the posterior aspect of the stomach, according to the position of the ulcer. When the ulcer is situated on the anterior aspect and near the lesser curvature, the anterior abdominal wall and the inferior surface of the liver are the parts which are first involved, whilst when it is situated on the posterior aspect adhesions take place between this surface of the stomach and the peritoneum on the anterior aspect of the posterior abdominal wall. In this case the formation of the abscess commences on the posterior abdominal wall near the posterior inferior border of the liver, the crura of the diaphragm, or the spleen.

c. Affections of the Duodenum.—Ulcers of the duodenum or the pylorus may perforate the wall of the intestine and become the cause of a subphrenic abscess in a manner similar to that mentioned in connection with the stomach. When the duodenum is the seat of ulceration it is usual for the resulting abscess to be situated primarily on the right side, but when it is extraperitoneal it extends to both sides of the middle line. When the duodenum is ruptured as the result of an injury, it is the lower part which is generally damaged, and in this case the extravasated matter tends to pass downwards, and does not cause a subphrenic abscess.

d. Affections of the Small Intestine.—That portion of the small intestine which lies below the duodenum is rarely the seat of an ulceration which causes the development of a subphrenic abscess.

e. Affections of the Large Intestine.—The cæcum and the vermiform appendix are frequently the seat of chronic ulceration, usually non-malignant, but occasionally malignant; subphrenic abscess may then arise in two ways: (1) Ulceration and perforation of the vermiform appendix may lead to the formation of a collection of pus in the right iliac fossa, behind that portion of the large intestine which is not covered by peritoneum. When this condition occurs the purulent matter tends to extend upwards behind the colon and in front of the kidney until the subphrenic space is reached. (2) Ulceration of the large intestine by septic absorption from the seat of ulceration, conveyance of the septic matter to the liver by the portal vein, formation of an abscess of the liver, and extension of this to the subphrenic space. This is a much less common mode of origin than the former. In the first group of cases of this kind the cæcum, vermiform appendix, or ascending colon is invariably the seat of the ulceration, whilst in the second group it may be in any part.

f. Affections of the Kidney and Perinephric Tissue.—When a kidney, especially the right, is the seat of a suppurative affection, this condition may first extend to the perinephric tissue, and then upwards to the space between the bare area of the liver and the diaphragm, and then cause the formation of an abscess in this situation. The suppurative condition of the kidney may be tuberculous, or it may be dependent upon a renal calculus, or the suppuration may have extended to the kidney from the ureters and the bladder. Cases have been met with in which a rupture of the kidney has been produced by an injury, hæmorrhage into the perinephric tissue has occurred and extended into the subphrenic region, and this collection of blood has become the seat of suppuration owing to infection by septic micro-organisms, and a subphrenic abscess has resulted.

g. Inflammatory Conditions of the Gall Bladder or the Bile Ducts.—When this viscus becomes inflamed owing to the presence of calculi or septic micro-organisms, or both, the free portion of the sac may become adherent to the adjacent part of the anterior abdominal wall and the diaphragm, and if perforation occur and the septic material from the gall bladder pass into the space between the right lobe of the liver and the diaphragm, an intraperitoneal subphrenic abscess will result. In an analogous manner suppuration of the intrahepatic bile ducts or cholangitis may lead to the formation of an abscess of the liver, which bursts on the surface of the organ, and allows septic material to pass into the subphrenic space, and so become the cause of an abscess. A similar condition may follow suppuration or septic inflammation in connection with the extrahepatic bile ducts, but this is not so common.

h. Diseases of the Thoracic Viscera.—Localised collections of pus in the lower part of the pleural cavities, especially the right, or gangrene of the base of the right lung, may by direct extension through the diaphragm cause suppuration in the subphrenic space. Suppurative affections of the pericardium do not usually last long enough to allow extension through the diaphragm to take place. Tuberculous disease of one or more ribs or costal cartilages may extend inwards, perforate the diaphragm, and become the direct exciting cause in the formation of a subphrenic abscess. This mode of origin, however, is rare.

i. Suppuration in a Hydatid Cyst.—The subphrenic space is occasionally the location of a hydatid cyst, and when this occurs the parasite may die and become the seat of a septic process owing to infection with micro-organisms. Occasionally a cyst situated in the upper part of the liver becomes the seat of suppuration, bursts in an upward direction into the subphrenic space, and so causes an abscess. A cyst in the upper portion of the spleen or between the spleen and diaphragm, may suppurate and give rise to an abscess in the subphrenic space on the left side.

j. Pyæmia.—Metastasis is a somewhat frequent cause of subphrenic abscess. It is more frequently observed in tropical countries, this increased frequency being associated with the occurrence of dysentery. It is usually due to some form of ulceration of the alimentary canal, or to pyæmic abscess in some other part of the body.

Frequency.

Occasionally cases occur which cannot be referred to one or other of the above causes. As regards the relative frequency of the different causes of subphrenic abscess, Maydl found that in a collection of 179 cases, 73 were due to affections of the alimentary canal, 24 to injuries of some kind or other, 20 to affections of the biliary system, 17 to hydatid cysts, 11 to diseases of the kidney or perinephric tissue, 11 to pyæmic conditions, 9 to diseases of the thoracic viscera, 3 to caries of the ribs, and 11 in which the cause was undetermined.

Diagnosis.

The affection is liable to be mistaken for an abscess in the upper portion of the liver, a solid tumour of the liver, a subphrenic hydatid cyst, a pleural effusion, and, when it contains gas, for a pyo-pneumothorax. In subphrenic abscess there is often a history of abdominal symptoms, and absence of expectoration, whilst in pleural effusion the reverse is generally the case. The heart is not generally displaced to any extent in subphrenic abscess, whilst in pleural effusion or pyo-pneumothorax it is usually a marked physical sign. On auscultation the vesicular breath sounds can be heard a variable distance below the clavicle, usually as far as the third space, and below this level there is an amphoric sound when the abscess contains gas, and dulness when it contains pus alone. In pneumothorax the vesicular breath sounds are absent on the affected side.

In order to make a diagnosis, however, it is often necessary to explore the swelling or area of increased dulness with the needle of an aspirator. When pus, or pus and gas, are withdrawn, it is clear that an abscess exists in the neighbourhood of the diaphragm. According to many observers, if the needle move upwards and downwards with the respiration, a subphrenic abscess is said to be present. This is due to the needle being fixed in the diaphragm. This sign, however, cannot be said to be pathognomonic as the needle may be fixed in the thick walls of an abscess, and not in the diaphragm, or if the latter structure be pushed upwards to a considerable extent the needle may pass into the abscess cavity and have no movements communicated to it. When an encysted purulent collection of the basal portion of the chest is under consideration it will be almost impossible to make a definite diagnosis and distinguish it from a subphrenic abscess. If, however, the swelling be shown to contain pus, this is a matter of little consequence since the treatment of both affections is similar. Whenever there is great doubt of the nature of a swelling in the subphrenic region it is permissible to explore it with the needle of an aspirator, but if purulent matter be withdrawn, the surgeon ought to be prepared to carry out a more extended operation for the evacuation and drainage of the pus-containing cavity.

Treatment.

Whenever a subphrenic abscess is diagnosed, surgical measures should be at once adopted for the evacuation of the pus and the drainage of the pus-containing cavity. The collection of pus may be reached by three different routes—either through the overlying portion of the abdominal wall, immediately below the costal margin, or through the overlying portion of the thoracic wall by resections of portions of one or more ribs and incision of the pleura and diaphragm, or from the lumbar region by an incision which is directly below the lower border of the last rib. The locality and connections of the abscess determine which of these routes should be adopted. When the abscess protrudes below the costal margin, an incision should be made through the abdominal wall over its most prominent part. This method of treatment should be adopted whenever possible as it does not involve opening the pleura. Occasionally, however, it will be necessary to resect portions of the costal cartilages or ribs in order to thoroughly expose the pus-containing cavity, and establish satisfactory drainage. This, however, need not in every case involve incision of the pleura, as often the sac can be pushed upwards out of the way. The method of treatment by incision through the abdominal wall is the best, and is most likely to be followed by a successful result. When, however, there is an empyema of the pleural cavity in addition to the subphrenic abscess, or if the abscess is situated entirely underneath the costal arches, it is necessary to make an incision in that portion of the chest wall which lies over the abscess, and to resect portions of one or

more ribs, open the pleural cavity, and then incise the diaphragm.

When the subphrenic abscess is due to extension from the perinephric tissues, or to suppuration in the region of the cæcum, the incision for its evacuation and drainage should be made in the lumbar region along the lower border of the last rib. When the abscess has been exposed and incised, the contents should be allowed to escape slowly so as to avoid unnecessary shock to the patient. When the purulent contents have been removed the interior of the abscess cavity is irrigated with an antiseptic solution, and drainage is established by the insertion of a large drainage tube. The main details which have to be observed in operations upon subphrenic abscess are similar to those recommended in the treatment of abscesses of the liver.

RESULTS.

Of the 9 cases of which I have notes 3 were not submitted to operation; of these 1 recovered after the abscess had burst into the right lung and the contents expectorated; the others died. Of the remaining 6, 4 were operated upon by the abdominal method, 2 recovered, and 2 died, 1 was operated upon by the thoracic method with a fatal result, and 1 by the lumbar method also with a fatal result. According to Lang, who has collected 176 cases from surgical literature, the percentage of recoveries after operation is 47.9 per cent., and of those not operated upon 12 3 per cent.

B.—HYDATID CYSTS OF THE LIVER.

Hydatid disease in general and of the liver in particular is much more frequent in some countries than others. It is not very uncommon in London, the records of St. Bartholomew's Hospital for the years 1887 96 showing that 25 cases have been treated in which the liver was involved. In the provinces, however, and in Scotland, it is much less common. This increased frequency in the metropolis is said to be explained by the fact that London dogs are far more frequently affected with the tænia echinococcus than those in the provinces and in Scotland. The affection is more common in Australia, and in Iceland it is so frequently met with that it is one of the important factors in the death-rate.

SITUATION.

Any part of the liver may be the seat of a hydatid cyst. Most commonly the antero inferior portion of the right lobe is involved. In my list of cases the cyst was in the right lobe in 17 cases, in the left lobe 5 times, and in both once. In 22 cases the cyst was single, in 1 it was double, and in 1 there were multiple cysts. The cysts may be either entirely hepatic or they may extend into the adjacent viscera.

DIAGNOSIS.

The diagnosis of a hydatid cyst of the liver is often somewhat difficult owing to the indefinite character of the symptoms. The presence of a slowly-growing, painless swelling in the hepatic region, and connected with the liver, which moves synchronously with the respiratory movements, is elastic or fluctuates on palpation, and causes few symptoms, will suggest the presence of a hydatid cyst. In doubtful cases it may be justifiable to puncture the swelling with the needle of an aspirator in order to withdraw some of the contents for examination. If the fluid contain hooklets and fragments of cyst wall the nature of the swelling will be determined. Ordinary hydatid fluid is neutral in reaction, colourless or slightly opalescent in appearance, with a specific gravity of 1010. The solids consist of inorganic salts, chiefly sodium chloride, with small quantities of phosphates, sulphates, and carbonates; whilst the organic constituents are very small quantities of sugar, urea, creatin, and a poisonous ptomaine which may be the cause of the urticarial eruption already mentioned. The most important affections from which a hydatid cyst of the liver has to be distinguished are localised solid enlargements of the liver, simple cysts, abscess, enlarged and dilated gall bladder, cystic and solid growths of the kidney, pleural effusion, hydatid cyst of the abdominal wall, hydatid cyst of the base of the lung, and subphrenic abscess or cyst. Careful attention to the symptoms and physical signs which are caused by these affections will, however, in nearly all cases, enable the surgeon to avoid making a mistake in his diagnosis.

The surgical treatment which has been adopted for the cure of hydatid cyst of the liver has varied at different times and in the practice of different surgeons. These methods may be divided into five groups, which are:

1. Treatment by puncture—aspiration, trocar and cannula, aspiration and injection of drugs.
2. The application of caustics.
3. Electrolysis
4. Incision—with drainage, without drainage.
5. Excision.

Puncture.—Three varieties of this operation have been practised—first, simple puncture with the needle of an aspirator and evacuation of a part or the whole of the fluid contents of the cyst; secondly, puncture with the needle of an exploring syringe, withdrawal of some of the fluid contents of the cyst, and then injection of a chemical substance such as a solution of perchloride of mercury, carbolic acid, iodine, or bile; and, thirdly, puncture with a trochar and cannula, the cannula being left in position in order to establish drainage. Simple puncture has in some cases been successful, but it is usually necessary to repeat it several times, and even then it fails to effect a cure in a large proportion of cases. It is, in addition, liable to be immediately fatal. Several cases have been recorded, one of which I have seen in which simple puncture has been at once fatal. No explanation appears to be forthcoming as to the cause of a fatal result. It has been suggested that death has been caused by the aspirating needle having injured the solar plexus or other important nerve centre. According to Thomas, who has collected the statistics of different observers, the mortality after this form of treatment has been 19 per cent., whilst there has been 46 per cent. of failures. Recently I had a patient under my care who was operated on by puncture four years previously. The cyst refilled, but was cured by incision and drainage. On account of the high rate of mortality which has followed the practice of puncture in its various forms and the uncertainty of its results, I strongly advise it should be discontinued as a radical method of treatment for hydatid cysts of the liver. Puncture, however, may be of value in the diagnosis of difficult and obscure cases; but when it has been performed and the presence of a hydatid cyst demonstrated, it is recommended that a safer and more efficient operation such as incision and drainage be performed without delay. Leakage from the aperture of puncture into the peritoneum or the pleura may occur, and unpleasant results such as suppuration follow. The most reliable of the puncture methods appears to be aspiration with a fine needle, withdrawal of a small quantity of fluid, and injection of a few drachms of a solution of perchloride of mercury. This method, however, is not advocated, as the results are not so satisfactory as by an open operation.

Caustics.—Caustics such as potassium hydrate or Vienna paste have been used with the object of opening and draining hydatid cysts of the liver. The mortality of this very unsurgical procedure was over 33 per cent, and on this account the operation has been wisely abandoned.

Electrolysis.—Electricity has been tried in the treatment of hydatid cysts, but the results which were obtained did not justify the retention of the procedure as a recognised surgical operation.

Incision.—This is the best and safest method of treating hydatid cysts of the liver. Several modifications of the operation were practised; these depend upon whether the operation is carried out in two sittings, or is completed at one time, the removal or non-removal of a portion of the cyst wall, and on the form of drainage which is established. Each of these operations, as in abscess of the liver or subphrenic abscess, is carried out either through the abdominal wall, through the thoracic wall, or through the lumbar region. In the majority of patients the operation can be carried out through an incision in the anterior abdominal wall. Abdominal operation at one sitting is recommended in all cases in which the hydatid cyst can be felt to protrude below the costal margin.

OPERATION.

The patient is anæsthetised, and the hepatic area rendered aseptic by the usual methods. Next, the abdomen is very carefully palpated so as to localise the cyst. The most prominent portion is selected, and a vertical incision 3 inches or more in length made over it. This incision may be either in the linea semilunaris, in the linea alba, or through one of the recti muscles. As the majority of cysts are situated in the right lobe of liver, the incision will be made in the linea alba, the right linea semi-

lunaris or through the right rectus abdominis muscle. If possible it should be made either in the linea alba or through the rectus. This avoids injury to the terminal portions of the intercostal nerves, as they go to supply the muscles. The incision is deepened until the peritoneal cavity is opened, or in those cases in which the cyst is adherent to the anterior abdominal wall the surface of the cyst is exposed. It is not usual to find adhesions between the cyst and the abdominal wall. When the peritoneum has been opened the cyst will generally be exposed in the bottom of the wound. If any omentum or intestine protrude they are returned into the abdomen and protected by packing with flat marine sponges. An incision 2 inches in length, and parallel with the parietal wound, is then made in the exposed portion of the cyst. The margins of this incision are seized with cyst forceps and the cyst drawn out of the wound. This proceeding helps to avoid the passage of the contents of the cyst into the peritoneum. The contents of the cyst are evacuated, the opening being enlarged if requisite. When the fluids and daughter cysts have been evacuated the interior of the cyst is examined with the finger in order to ensure that all secondary cysts have been removed, and also to ascertain if there is another cyst in the adjacent portion of the liver. This is not probable, but it is advisable to make a routine examination of this kind in order not to overlook a second cyst. When the cyst is of moderate size and does not extend deeply into the hepatic tissue it may be possible to dissect out the true cyst from the adventitious wall of fibrous tissue which has been formed around it. If this can be readily done the cyst is removed, and the margins of the wound in the liver substance united by the insertion of a series of silk sutures. The insertion of sutures and the approximation of the lips of the hepatic wound are facilitated by the resisting wall of the cyst, which is composed of fibrous tissue

If the cyst cannot be readily removed by dissection, it should be drawn well up in the parietal wound, and the distal portion, if practicable, cut away with strong scissors. Removal of a portion of the cyst wall enables the remaining part to close up by granulation more quickly, and the patient recovers in a shorter time than when the entire cyst is left behind. When this has been done the internal aspect of the cyst is well scraped with a Volkmann's spoon, in order to remove as far as possible the calcareous matter and the parenchymatous portion of the cyst wall. The interior of the cyst is then irrigated with an antiseptic solution and packed temporarily with a long strip of gauze or a sponge. Next the margins of the incision in the cyst are united to those of the upper portion of the abdominal wound by the insertion of a series of silk sutures. Each suture should pass through the marginal portion of the cyst, and then through the serous muscular and fascial layers of the abdominal wall. Some surgeons prefer to pass these sutures through the skin as well, but in my opinion it is an advantage not to pass them through the skin, since the sinus then closes up more quickly and a less marked scar results. That portion of the parietal wound which is not used for suturing the cyst is carefully closed by the insertion of a series of salmon-gut sutures. The packing within the cyst is now removed, and the interior of the cyst packed with a long strip of aseptic gauze, one end of which protrudes externally. This serves to absorb the secretion from the wall of the cyst, and to prevent the occurrence of hæmorrhage.

Ordinary aseptic dressings are now applied and fixed in position by bandaging. On the day after the operation the dressings are removed and the packing taken out from the interior of the cyst. The cavity is irrigated, a soft rubber tube of moderate calibre passed down to the bottom of the cyst and dressings applied. This method of dressing is repeated daily until the cyst cavity has closed up from the bottom and the external wound healed. The drainage tube is shortened as the cavity of the cyst contracts.

The silk sutures which have been used for attaching the cyst to the abdominal wall and for closing the external wound should be removed at the end of ten or fourteen days. Care must be taken to remove all of them, otherwise they may become a source of irritation and help to keep open a sinus or fistula longer than is necessary. I have several times seen a small persistent sinus remain after this operation which closed at once when the wound was examined and the stitches removed. A patient from whom I removed a cyst in this manner left the hospital with a sinus, which showed no tendency to close. After the expiration of several weeks I investigated the sinus and found several sutures. These I removed, and the wound at once closed. I saw this patient several months afterwards, when there was no sign of further trouble and the scar was quite sound.

It has recently been proposed to treat hydatid cysts in a manner somewhat different from the above. When the surface of the cyst is exposed through an abdominal incision its wall is incised and the contents completely evacuated. All hæmorrhage is arrested and then the cyst is dropped back into the abdominal cavity and the parietal wound closed. It is claimed for this method of treatment that the fluid which is secreted by the cyst is absorbed by the peritoneum without doing any harm, and that the period of treatment is considerably shortened. I have had no experience of this operation, but it appears to me that one runs a risk of contamination of the peritoneum, and subsequent development of cysts in connection with the peritoneum, and also of the possibility of adhesions being formed between the cyst and a coil of intestine which may become a cause of intestinal obstruction.

When the cyst extends upwards so as to encroach upon the thoracic cavity and is not readily accessible by the abdominal route without cutting through several inches of sound liver tissue, the parasite ought to be attacked through the chest wall by a transpleural operation such as the one described in connection with hepatic abscess and subphrenic abscess. The stages of the operation are similar.

When the cyst is situated in the posterior portion of the right lobe of the liver and projects below the last rib, it may be dealt with through a lumbar incision similar to the one mentioned in abscess of the liver or subphrenic abscess.

When a hydatid cyst of the liver has ruptured into the peritoneal cavity the abdomen is opened, and the contents of the cyst removed from the peritoneum as far as possible. Then the cyst is treated as above. In like manner when the rupture involves the pleura, the escaped contents are removed through a thoracic incision and afterwards the cyst is stitched to the margins of the wound and drained.

Prognosis.

Of the cases of which I have notes 21 were treated by an abdominal operation. Of these 16 recovered and 5 terminated fatally. Two of the fatal cases were suppurating at the time of operation, and in one death did not occur till four years afterwards, when suppuration occurred in a sinus which had remained not closed. One was treated by a thoracic operation with a fatal result. This was suppurating at the time of operation. Five cases were treated by aspiration, three of these were afterwards treated by an abdominal incision, and in the others the swelling still remained, but they were lost sight of and the final result was not known.

According to Thomas the mortality in cases which have been treated by the one-stage abdominal operation has been 10.29 per cent., and in those treated by the thoracic operation 29 4 per cent.

THE LETTSOMIAN LECTURES

ON THE

AFFECTIONS OF THE URINARY APPARATUS IN CHILDREN.

Delivered before the Medical Society of London.

By JOHN H. MORGAN, M.A.Oxon., F.R.C.S.,

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Lecture III.

Patent Urachus.

A patent condition of the urachus after birth is not exceedingly rare, and is one of the causes of those masses of granulations which are found springing from the umbilicus, out of the centre of which, and issuing from a minute aperture, a fluid with all the characteristics of urine often exudes in small quantities. A ligature applied to the base of this fleshy tumour at once destroys it, and obliterates the canal leading to the apex of the bladder. This condition is usually noticed in very young infants soon after the separation of the cord, but Sir Thomas Smith relates a case in which it occurred in a boy aged 2 years, and Bryant one in a boy of 8, and the patency will occasionally persist into adult life, as in the case described by Paget, of Leicester, of a man aged 55, from whom he removed a ring-shaped calculus by a finger passed down through the navel and into the urachus. This and another patent urachus in an infant he succeeded in closing by paring the edges and uniting them with harelip pins. Should ligature of the granulation growth fail to close the canal, this may be effected by means of the electric cautery or by a plastic operation. Cases are recorded in which the urachus was reopened by pressure of the urine from below. Sutton states that the urachus may sometimes grow equally with the bladder, retain a communication with it, and give rise to a so-called bifid bladder.

Hiatus of the Bladder.

Hiatus of the bladder is simply a persistence of the primitive cleft throughout the greater part of its extent, preventing the formation of the anterior wall of the bladder, the anterior abdominal wall, and the symphysis pubis, besides interfering with the formation of the external genitals. The cleft may be partly closed, forming various modifications of the deformity. In other words, it is an arrest of development which gives rise to this condition as well as that of epispadias. The extent may vary from a complete exposure of the posterior wall of the bladder, with separation of the recti and

imperfect union of the symphysis pubis, to the slightest condition of epispadias where only a portion of the wall of the urethra is exposed. Every variation between these two extremes may be met with. Sometimes the bladder, though in itself perfectly formed, may prolapse through the urethra or even the urachus.

The tortuous and dilated state of the ureters, which is a frequent accompaniment, may be due to the irritation of the surface from exposure, which induces a constant discharge from the ureters, and produces the same conditions as ensue from enuresis due to other causes. Although this complication has been frequently observed, it can hardly be constant, or the well known healthiness of some individuals afflicted with this deformity, and who pass into adult life, could not be maintained. The tendency, however, of these patients is to die of secondary inflammatory conditions and kidney complications. The state of hyperæmia and congestion of the mucous membrane are most favourable to the existence of micro-organisms and to their extension in the urinary tract. It is due to the establishment of these micro-organisms that there is maintained a chronic inflammation of the mucous surface, from which an alkaline or feebly acid urine is discharged which deposits phosphates in such abundance as to be the greatest cause of distress to the patient and the most troublesome obstacle to successful treatment by the surgeon.

The operative measures for the alleviation of this defect I have only space to enumerate. First, there are the methods of Dr. Ayres, Dr. Pancoast, Mr. Wood, and Mr. Holmes, which aim at forming a covering for the exposed mucous membrane by turning over flaps of skin from the surface of the abdomen, and so covering the exposed surface that the urine is directed on to the urethra, and guided into the orifice of an apparatus as it falls uncontrolled from the ureters. By this proceeding the urine is made to issue from a single aperture, and further attempts to improve the shape of this opening can be made by raising a flap of scrotal tissue and lifting it over the penis to attach it to one turned down from the surface of the abdomen. Many modifications of this plan have been followed by myself and others, and it is impossible to give outlines for the direction of the incisions, as they must be adapted to the requirements of each individual case, and tissue must be drawn from the parts where it can best be spared, and where resulting cicatrisation will be least harmful. I have found that the skin of the prepuce, which is usually redundant, can generally be made available to cover some part of the aperture.

It is remarkable how tolerant of operations are the subjects of this deformity. I have on several occasions removed the testes or ovaries on both sides with large hernial sacs as a preliminary to the plastic operation which has been performed at a later date. But notwithstanding these facts the proceedings are very disappointing as regards ultimate results. Complete covering is rarely obtained by one operation, and small apertures require to be dealt with by subsequent manœuvres. Trendelenburg in one case operated ten times, and one of my cases has been at least six times under my hands. The disappointments met with are due to the persistence of small openings caused by the permeation of urine through the edges of the united flaps, which it is very difficult to close. But the greatest drawback to success is due to the septic condition of the urine and the large quantities of phosphatic material which it secretes. Sometimes this will accumulate to such an extent as to form considerable calcareous masses. A child for whom I succeeded in making a very fair covering for the bladder requires every few months to have one or more of these masses removed. The hairs, too, which grow from the overturned flaps of skin become hypertrophied and form nuclei upon which these concretions collect. Distressing as this condition appears to observers, it must be borne in mind that many subjects of this deformity are in other respects strong and healthy and live to a good age, and personally it is only in the most urgent cases that I am inclined to propose an operation which is not without risk, entailing long confinement and many subsequent procedures, and which at best may afford but little alleviation.

Other methods have been tried, such as that recommended by Mr. Simon, of establishing a fistulous communication between the ureters and the rectum or removal of the mucous membrane of the bladder, and planting the ureters in the gutter of the penis or in the rectum; but the mortality after these proceedings is very heavy, mainly in consequence of inflammation spreading up the ureters and causing an acute septic interstitial nephritis. Trendelenburg and others have sought by dividing the sacro-iliac synchondrosis, which should be done before the fifth year, to narrow the interval between the pubic bones and to approximate the margins of the exposed bladder and then suture them together. Mr. Makins has published[1] an account of this operation which he performed upon a boy aged 5, and which was fairly successful. In the same way, when the ureters are healthy, I believe that much assistance might be gained by temporarily maintaining a catheter in each, and so preventing the urine from coming in contact with the mucous membrane or with the edges of the united surfaces.

A mode of operating which seems to promise greater success is that suggested by Mr. Milton, of Cairo, and which is described by Mr. Anderson.[2] This consists in dissecting up flaps of the mucous membrane of the bladder and urethra for about half an inch from without inwards, and uniting them by a double set of sutures over a large catheter. Two marginal skin flaps are then dissected up from without inwards, and, tension being relieved by two lateral incisions, their edges are brought together over the closed bladder by means of wire sutures and harelip pins.

Lastly, I must not omit to mention the ingenious suggestion offered by Mr. Reginald Harrison, who removed the left kidney from a boy aged 15, and eleven months later attached the upper end of the right ureter to a wound in the loin. The urine that issued was neutral and free from the tendency to form phosphatic deposits which existed when flowing over the surface of the bladder.

Epispadias.

Epispadias is not a frequent deformity, and may exist independently of any defect of the abdominal walls, and be confined only to that portion of the urethra which passes through the glans, or may extend backwards into the spongy portion of the canal. But since behind both these parts there exists more or less sphincter power, the results are not so distressing as in the more pronounced form, where the opening extends backwards to the prostatic region, although the bladder and the symphysis pubis may be normally formed, as in hiatus vesicæ the great obstacle to success is the constant and uncontrolled discharge of urine, although in these cases there is not the same tendency to phosphatic deposit owing to the normal and protected condition of the bladder. I have once attempted to remove this difficulty by draining the bladder through a perineal incision, though in this instance the result was disappointing.

Time does not permit me to describe the various plans which are recommended for the remedy of this defect, but by far the most practical suggestion is that recently described by Dr. Cantwell in *Annals of Surgery*, 1895. The patient should be at least 10 years of age. The bladder is first drained through a perineal wound. When this is established, two parallel lines of incision are carried down between the mucous membrane and the skin from the symphysis to the end of the glans, joining above the bladder opening. A flap is then formed of the whole urethra from the glans backwards, and this being held up the cavernous bodies are separated. The urethral flap is then laid in the gutter thus formed, and held in position by two sutures through the mucous membrane and the skin, and tied on the under surface of the penis. A silver catheter is then laid in the urethra, and a canal formed by continuous suture of the free edges of the mucous membrane over it. Above this the corpora cavernosa are brought together and reunited by a continuous suture. The skin flaps are joined over this, and a few stitches passed through the fat of the mons veneris. Mr. Clutton informs me that he has had three most satisfactory results from this plan.

In a very complete monograph[3] Dr. J. W. Ballantyne has drawn attention to that very rare malformation, so-called epispadias in women, of which he has collected thirty-three recorded observations. "It consists in the absence of a greater or smaller part of the anterior urethral wall, with the division of the clitoris into two parts, and the presence of a median gutter or groove in the region of the anterior commissure of the vulva; the symphysis pubis is normally closed, and so is the anterior bladder wall. In its least marked form the urethra simply opens above the clitoris instead of below it, but in all the other forms there is splitting of the clitoris, and the existence of a median furrow. Palliative treatment consists in the wearing of a urinal;

radical methods are found in plastic operations for the lengthening and narrowing of the urethra, and for the restoration of the anterior vulvar commissure and clitoris."

Hypospadias.

Hypospadias is a fairly common defect, and varies greatly in its degrees, and examples are frequently met with in which the opening of the urethra may be situate at any point between the perineum and the spot at which the frænum is attached to the body of the penis. The two chief points of interest in regard to this deformity are, as to the possibilities of procreation, and the question which not infrequently arises in extreme cases as to the sex of the individual. These I must not discuss, but must limit myself to the question only of its effects on the urinary apparatus.

There is, even in those cases where the orifice is in the perineum, a power of control, since the opening of the urethra is always in front of the membranous portion, but such patients are unable to micturate except in a sitting position, and an operation is necessary in order to direct the urine to a point nearer to the end of the penis. The most usual position for the opening of the urethra is just behind the attachment of the frænum. It is generally extremely minute, and many cases have come under my notice in which it has been declared that no opening existed, a state of things which is almost unknown. The minuteness of this opening, at whatever position it is situate, may lead to difficulty in passing water, and in some cases that I have seen the orifice has become so obstructed by mucus and dirt as to cause pain and delay, and in one instance a gleety discharge. This trouble is easily remedied by opening the urethra for a short distance, and attaching the lappet-like flaps by stitches to the skin on either side.

I have in several cases been able to trace a hereditary transmission of this defect, and Mr. Lingard[4] relates an instance in which it was traced through six generations, and tells of a case where it was transmitted by the widow of a hypospadian to four sons by a second husband who had no such deformity.

Cystitis.

A chronic catarrh of the bladder occurs from the presence of calculus or tumour or any cause inducing urinary retention, but an acute state of inflammation rarely arises spontaneously. But there occurs occasionally what has been named an "acid purulent cystitis," to which my notice was first called by Mr. Treves. The affection has been studied and described by foreign authors. Some years ago Clado directed attention to special rod-like organisms, associated with pus, which have since been identified as the bacillus coli communis, and it has been shown by Professor Schmidt and others that their passage into the bladder induces cystitis. The anatomy of the parts, as first insisted upon by Dr. Escherich explains the greater frequency of the condition in girls than in boys. Trumpp brings forward 29 cases which were under his own observation, 21 were girls and 8 boys, the youngest was 5 weeks and the oldest 9 years. He divides the cases into trivial and grave. In the former the symptoms are principally local and in no way affect the general health of the child. Ten were of this nature, three of them suffering from vulvitis at the same time. In the graver form rapid emaciation takes place, and severe local and constitutional symptoms manifest themselves. Apathy, somnolence, collapse, and vomiting are associated with strangury, hypogastric and lumbar pains, and in two of his cases pyelitis, uræmia, rapid emaciation, and death. The urine in both types is offensive, acid, and albuminous, with varying quantities of pus, leucocytes, and epithelium, according to the severity of the attack. It is usually of a pinkish or opalescent colour, and on bacteriological examination the bacillus coli is readily found. In severe forms the deposit may amount to half the total bulk of urine passed. Mild cases recover, on an average, in two weeks.

Tuberculous Ulceration of the Bladder.

Tuberculous ulceration of the bladder occurs much more frequently after the age of puberty than before, but I have met with a few cases in children, and there are records of others. The diagnosis presents even more difficulty in children than in adults, and the question of most vital importance as regards treatment, but which is at the same time most difficult to determine, is, whether the ulceration commences primarily in the mucous membrane of the bladder, or is secondary to disease in some of those organs which communicate with it. In the case of the testes or vesiculæ the primary focus is readily manifest, but in the case of the kidneys it is not so easily determined.

The diagnosis from calculus is not usually difficult, one pronounced feature being that in tuberculosis the frequency and pain of micturition are as great or greater during night, whereas rest allays and diminishes these symptoms in cases of calculus. The amount of hæmorrhage as a rule is slight, but may be excessive if ulceration is extensive or deep. In renal tuberculosis the urine remains acid, but when the bladder is invaded it usually becomes alkaline with the increase of purulent discharge. Reliance cannot be placed upon the absence of the tubercle bacillus from the urine, but when present in large numbers it indicates extensive disease.

I agree with Mr. Battle in preferring the application of chloride of zinc, which is so efficacious in the treatment of tuberculosis of other parts, to the use of the actual cautery. Mr. Cheyne believes that much of the benefit of this operation lies in the rest which is given to the bladder by the drainage of the viscus. The plan of injecting iodoform and other compounds has not proved satisfactory, although Professor Landerer claims value for the injection which he prescribes composed of balsam of Peru, sodium chloride, and other drugs.

Tumours of the Bladder.

Tumours of the bladder occur but rarely in childhood. Mr. Targett[5] groups together all the polypoid growths attached to the mucous coat of the bladder in children, which are described as mucous polypus, fibrosarcoma, fibromyxoma, myxosarcoma, and the like. He allows that the vast majority of primary vesical growths of children are of the polypoid type—that is, rounded elevations of the mucous coat, with more or less constricted pedicles, and arranged in clusters, and maintains that the minute structure of these formations is of subsidiary importance, that pathologically they are best considered as members of one group, and that clinically they have one common character—namely, that they are uniformly fatal, though death is chiefly, if not entirely, due to urinary obstruction and its backward effects upon the kidneys. The growths may extend in the substance of the mucous coat, into the muscular tissue of the vesical wall as secondary deposits in the cellular tissue outside the wall of the bladder, and as deposits in the neighbouring lymphatic glands. The only record of any innocent tumour is that described as a small papilloma, which was removed by Mr. Bryant in the eye of a catheter. Treatment must generally be limited to relieving the bladder of the confined urine either by a perineal or a suprapubic opening; but removal has more than once been successfully performed: thus Sir George Humphry removed, by means of lateral cystotomy and with forceps and fingernail, a fibrosarcoma from a boy, and a case of great interest occurred in the practice of Professor Billroth where, in a boy aged 12, a tumour, 8 inches in its longest diameter, 5 in its broadest, and 3 inches in basal circumference, was dissected out through a large suprapubic incision. It appeared to take its origin from the muscular coat, and had not attacked the peritoneum. It is described as principally a myosarcoma, and in some places a myocarcinoma. The boy was discharged in a month perfectly well.

Retention and Extravasation of Urine: Stricture.

Except from this cause retention of urine only occurs in children by reason of the pressure of an abscess in the perineum or the impaction of a stone in the urethra, which is at once readily detected by the sound or catheter. If the stone is arrested in any part of the urethra anterior to the scrotum it can be extracted with suitable forceps, or by means of an incision made directly upon it, but if it be further back, it can generally be pushed into the bladder, and can be removed later or at once by the lithotrite and evacuator. If, however, it remain obstinately lodged in the scrotal or perineal part of the urethra, it is easily removed by a median incision.

The impaction of a calculus or the opening of an abscess

into the urethra are the only causes which may give rise to extravasation of urine in young patients, with the exception of rupture of the urethra by falls upon the perineum, and the subsequent obstinate form of stricture which ensues upon that accident. The treatment of such injuries and their consequences in no wise differs from that followed in the case of adults, but considering the firmness of the cicatricial tissue which forms at the site of these lesions, the rapidity of its contraction and the speed with which destructive changes in the kidneys supervene, and the fistulæ which form, it may sometimes be necessary to resort to some extreme measure in order to avert these after-consequences.

Abnormalities of the Penis.

On the many baneful effects which result from an elongated or contracted prepuce I have no space to dilate, and can only allude to their effects upon the urinary apparatus. Reference has already been made to cases of hydronephrosis, which are ascribed solely to this condition, and as a reflex effect may be mentioned nocturnal enuresis and daily incontinence, and all the symptoms of calculus, including even hæmaturia. The hypertrophy of the bladder which ensues from this cause has been pointed out by Sir James Paget. The eczematous state which so often exists at the end of the prepuce frequently starts as slight urethritis in the region of the meatus, by which urination is rendered painful and at the same time frequent, and which, if permanent, causes the meatus to contract, and renders its division by the scalpel a necessity. For these and very many other reasons connected with the effects of this condition in youth and in later life, I consider that the simple operation of complete circumcision should be performed at an early age wherever complete retraction cannot easily be performed, and whenever the prepuce considerably overlaps the glans.

The urethra of girls is not often the site of any surgical affection, but Mr. Davies-Colley has described a case in which the orifice of the ureter protruded through the meatus in a girl, aged 18 months, Mr. Croft has related a case of inversion of the bladder in a girl of 14 years, and Mr. Bryant has described a case of extreme prolapse of the female urethra occurring in a girl aged 6 years. The prolapse seems to occur as the result of straining in the later years of childhood. It does not cause much trouble in micturition, but the protrusion is tender and the mucous membrane often bleeds. All these conditions must be carefully diagnosed from urethral caruncle, which, common enough in women, is found occasionally to exist in children.

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[1] *Med.-Chir. Trans.* [2] *Trans. Clin. Soc.*, 1892. [3] *Edinburgh Hospital Reports*, vol. iv. [4] *Lancet*, April 19th, 1884. [5] *Trans. Path. Soc. Lond.*, vol. xlvii.

THE INFLUENCE OF LOCALITY ON THE PREVALENCE OF MALIGNANT DISEASE.*

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The subject matter of this paper is the result of an investigation which was begun about three years ago, and which was suggested to me by the apparently disproportionate frequency in the occurrence of malignant disease in some districts compared with others. In one locality cases of malignant disease occurred with alarming frequency, while in another locality in close proximity to the first but few were met with. Who could refrain from asking the question Why?

Before attempting to find an answer to this question I determined to make quite sure of the fact itself, and to eliminate as far as possible the elements of chance or coincidence.

It seemed to me that if the death-rate for malignant disease could be obtained for various registration areas which differed in certain particulars, a confirmation or the reverse of my impression could be arrived at. I therefore wrote to the Registrar-General, but the answer I received, though promising some statistics, intimated that they would not be ready for some little time; and, moreover, I saw that they would embrace areas too large to be of any use for my purpose.

I then set to work to compile my own statistics for the districts in which I was chiefly interested. I have in consequence spent some considerable time in ascertaining and making a record of all deaths from malignant disease which have occurred in the registration districts of Nuneaton, Atherstone, Market Bosworth, and Ibstock during the years 1886 to 1896; and through the kindness of Dr. Nason, of Stratford-on-Avon, I have been able to obtain very similar statistics for the large registration area of Stratford-on-Avon.

A chart was prepared on which were marked the name, age, address, sex, and, where possible, the organ affected of nearly 500 cases in all. In doing this I have been able to divide the large registration areas into subdistricts and parishes, and thus with much greater exactitude to show that my impression was correct, for the large registration areas may contain two or more districts which, differing greatly both in physical characteristics and mortality from malignant disease, would counteract each other.

Taking the Market Bosworth Registration District first, I find this subdivided into Market Bosworth with a population of 6,100, and Ibstock with a population of 9,500. Each of these is again divided into a number of parishes most of which are too small to give separate statistics of any value on the result of a ten-years' survey.

Taking the two subdistricts, I find that 58 cases of malignant disease occurred in the Ibstock division while only 17 occurred in the Market Bosworth division, giving a percentage in the ten years of 0.61 in the former and 0.28 in the latter. This is a remarkable difference for two districts lying, so to speak, side by side, but it is even more remarkable that in Market Bosworth itself, with a population of 836 only, 1 death from malignant disease (carcinoma recti) was registered in the ten years, which would give a percentage of a little under 0.12.

The chief physical difference between these two subdistricts is that, as a whole, the Market Bosworth division has a much better fall, and stands on higher ground, Market Bosworth itself being 460 ft. above sea level, and having a steep slope to the west, south, and south-east. Ibstock, though 420 ft. above sea level, is still some 40 ft. below the surrounding country, and, moreover, has a small stream in close proximity, which Market Bosworth has not. The percentage of deaths from malignant disease for the whole district during the ten years is 0.48.

In the Atherstone District malignant disease is frequent, except in the large parish of Hartshill, where it is comparatively rare. The population of the whole of the Atherstone Registration District minus this parish is 13,316 with a percentage of deaths from malignant disease of 0.72 for the 10 years. The population of the parish of Hartshill is 1,485, with a percentage for the same period of 0.33. But, in reality, the difference is much more than this, when one comes to investigate the individual cases of death from malignant disease occurring in this parish. It happens that 3 of these cases had been patients of my own, and of these 2 were already suffering from carcinoma when they came from the Nuneaton district to reside, and, ultimately, to die in Hartshill, while the third, although registered in the parish of Hartshill, had lived in an outlying part of the parish close to the river Anker, where the physical characteristics were totally different from the rest of the parish.

Now, there is one most marked difference between this parish and almost all the others in the district. The parish of Hartshill, 460 feet above sea level, and 220 feet above the valley in which lie most of the other parishes, is on granite rock, and has a sharp fall in nearly all directions, and has no stream near it, except in the case of the outlying portion above mentioned. Atherstone itself, and nearly all the other parishes which go to make up the registration area, lie in the valley not far from the river Anker, which meanders through this district, is sluggish, is contaminated with sewage and liable to floods. In many of the smaller villages which lie along the banks of this stream the death-rate from malignant disease is very considerably above the average for the whole district, but the

* Read before the Birmingham and Midland Counties Branch of the British Medical Association.

population of these villages is individually too small to give data which are anything more than suggestive.

These points of difference led me in the case of the Nuneaton registration area to divide the district into two parts, in one of which were those parishes lying on low ground near the river, while in the other were those parishes lying on higher ground and at a greater distance from the river. Of the latter there were 4, of the former 5 parishes. The total population of the parishes lying near the river is 12,818, with 84 deaths from malignant disease, giving a percentage in the 10 years of 0.6. The total population of the parishes more or less removed from the river is 4,557, with 14 deaths from the same cause, giving a percentage of 0.3, or exactly half.

In the Stratford-on-Avon registration area, which comprises the subdistricts of Stratford, Wellesbourne, and Wootton Wawen with a total population of 21,893, no fewer than 178 deaths from malignant disease were recorded in the ten years 1886-96, giving a percentage of 0.81. Now almost every parish in these districts is in more or less close proximity to either the Avon, the Stour, or one of their immediate tributaries.

Dr. Nason, of Stratford-on-Avon, to whom the district is thoroughly known, has separated the parishes, over forty in number, into two divisions, placing in one, as far as possible, those parishes quite near the rivers Avon, Stour, or one of their tributaries, and in the other those parishes on somewhat higher ground and somewhat more remote from these streams. I then compared the mortality from malignant disease in the two cases, with the result that in the former case it was 0 9 per cent. in the ten years, while in the latter it was 0.6 per cent. These percentages, founded as they are upon a considerable number of cases, are most suggestive as showing that even in a district where all the parishes are situated in the vale of the Avon or one of its tributaries and none on very high ground, still the balance is 3 to 2 in favour of those which are higher and more remote from the streams.

All these statistics seem to point to one thing very clearly, namely, that the cases of malignant disease tend to group themselves chiefly about the low-lying land in the neighbourhood of the sluggish streams, or where there is little fall, and where the subsoil must in consequence be but indifferently drained. Furthermore, apart from statistics, I am convinced from direct observation made, especially in the Nuneaton district, that the closer to the stream the more frequent the occurrence of malignant disease. It may be that this connection only holds good where the stream is sluggish, contaminated by sewage and liable to flood, as is the case in all the districts I have specially investigated.[1]

As further bearing out this connection, let me instance a large parish in the north of England from which I have been able to obtain some statistics. In this parish, the population of which is 4,000 and which covers a wide area, nearly all of which is on high, well-drained land with no sluggish streams, only 5 cases of malignant disease occurred in ten years. Now one corner of this parish slopes rapidly down to a river, and it is in this part of the parish, on the first rise above the river, that 3 of the 5 cases occurred, while the remaining 2 arose in a part of the parish which, though on absolutely high land, lay in what was relatively a hollow in which the ground was always marshy and undrained. The percentage mortality for this district is 0.125, as is also roughly that of a certain district in Derbyshire which chiefly consists of upland country; that is, the percentage for these chiefly upland districts is only one-seventh that for the Stratford-on-Avon district, and only one-fifth that for the Atherstone and Nuneaton districts.

Such a pronounced difference for different localities as these statistics show cannot be without meaning. So far I have confined my paper to recording observed facts, but what is the explanation of these facts? First, then, the facts point most strongly to some direct connection between residence in the neighbourhood of sluggish streams or ill-drained, sodden, contaminated soil and the prevalence of malignant disease. On what does this connection depend?

Leaving the solid ground of fact and venturing into the regions of conjecture, there are still a few steps further which we may take with safety, still some points which seem tolerably clear. We must admit some external agency as one of the factors in the causation of malignant disease. Such external agency, whatever its nature, must be produced by, or have its habitat in, or at least be directly connected with, stagnant or nearly stagnant water or ill-drained soil. Persons residing in the near neighbourhood of such physical conditions would necessarily be more frequently brought under the influence of this external agency than those living at a greater distance. In this direction only, it seems to me, can we seek for an explanation of the marked increase in mortality from malignant disease in those districts where such conditions obtain. This external agency must act in one of two ways, either as the direct exciting cause or as an indirect predisposing cause. In the former case one must presuppose the existence of a micro-parasite as most probably the chief factor in the causation of malignant disease. This assumption explains certain peculiarities of malignant disease itself as well as of its distribution. In the latter case one must suppose that certain climatic conditions so influence the human body as to prepare the way for the development of malignant disease. This, however, would throw little light upon the disease itself, so that while not denying a possible predisposing influence of environment, I am inclined towards the former and more definite assumption.

If we assume that one of the factors in the causation of malignant disease is a micro-parasite, we must agree that such micro-parasite is most probably a protozoon, and may be comparable in some respects with the protozoon or protoa associated with the various forms of malaria. If such an organism exists, it is not improbable that it may undergo changes both within and apart from its host, and through the medium of discharges gain access to streams or ill-drained soil. Here it may find suitable media for its development and multiplication. Under such circumstances, it would not be unreasonable to conclude that, as in the case of the organisms connected with malaria, exhalations from water or sodden soil thus impregnated might be the means of conveying the infection; this would also explain the undoubted existence of "cancer houses." The perfectly healthy human body may no doubt be quite proof against any amount of such organisms; but, given favourable conditions such as chronic tissue irritation, traumatism, degeneration of tissues from disease or senile changes, or the presence of "fœtal remnants" as suggested by Virchow, added to which may possibly be in some cases individual or inherited proclivity, and a lodgment of the micro-parasite might follow.

That the development of micro-parasites in animal tissues may produce proliferation of cell elements is unquestionable, as, for instance, in the case of psorospermosis affecting the liver in rabbits, and also in the case of Paget's disease in the human subject. Whether such proliferation be due to the organism directly or to the chemical products of its growth and development is of secondary importance.

I am quite aware that the assumption of the connection between a protozoon and malignant disease lacks much direct evidence, but many competent and careful observers have described appearances found in microscopical preparations of both carcinomata and sarcomata consistent with this view. Another fact, which a study of the cases I have collected brings out, indirectly supports this assumption. When the organ or region in which the disease has developed is noted, it appears that in those districts on higher and better drained land where malignant disease is less common, a larger proportion of the cases which do occur have some more or less obvious predisposing cause, and, I am inclined to think, run a more chronic course. Here such cases as surface epitheliomata following definite irritation, carcinomata of breast, uterus or rectum are found in greater proportion. In close proximity to the streams, on the contrary, malignant disease of some of the less commonly affected organs or portions of the intestinal tract is found with unexpected frequency, and, I fancy, runs a more rapid course. This would suggest that in the neighbourhood of the streams, where the infective agent would presumably be in greater abundance, malignant disease attacks organs which would escape under more favourable circumstances.

Since writing this paper a paper has been published by Dr. Léon Noël in the *Revue des Maladies Cancéreuses* bearing upon this subject. The conclusions he arrives at confirm my own in a most striking way. He says: "Cancer regions exist

close to regions enjoying an immunity. These latter are generally in dry localities and some distance from streams. In these cancer regions one of two conditions prevail—either they are closely populated, or if the houses be spread about at some distance from each other a rivulet or stream connects them."

Having alluded to the disputed question of "heredity," I I cannot close my paper without recording one series of cases, the occurrence of which can hardly be explained without that factor. In one family of two generations numbering 16 individuals reaching adult years 10 have died; of these 10, 3 have died of carcinoma of uterus, 2 of carcinoma of the stomach, and 1 of carcinoma of the liver, while of the 6 yet living 1 has a large tumour of the neck, and 1 a tumour of the arm, which has recurred after removal.

The facts which this investigation has brought out, and which may readily be confirmed by anyone who will take the trouble to tabulate all the cases of malignant disease occurring in his own neighbourhood, seem to me to be of considerable importance. The explanation I have suggested may not be the correct one, but of the facts there can be no doubt.

NOTE.

[1] From inquiries recently made it seems probable that malignant disease in cattle is influenced by locality in a precisely similar way and is much more frequently met with in those pastures which are low lying or bordering on sluggish streams than it is in the upland pastures. It is also more common among shorthorns than among other breeds.

ON THE STRUCTURE OF THE NEUROGLIA.

By JAMES R. WHITWELL, M.B.,
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Of late years a considerable amount of attention has been directed towards the neuroglia and sustentacular apparatus of the nervous system, more particularly since the introduction of Golgi's epoch-making method, and still later the surprising results achieved by Weigert in his more recent work on this subject. It is unnecessary to enter in any way into an historical survey of the various transition stages which have resulted in our present state of knowledge; it will be sufficient to indicate the two opposing camps into which neurologists and histologists have divided themselves on the subject.

1. The neuroglia is composed entirely of greatly ramified cells (glia cells), the branches of which pass everywhere in the interstices of the proper nervous elements.[1] Various kinds of these cells have been described,[2] and some writers consider that the glia cells form the distal portion of the lymphatic system (Meynert,[3] Lewis[4]). Other functions have been attributed to them.

2. The neuroglia consists of a series of unbranching fibrils in the meshes of which certain cells lie, but not in organic continuity with the fibres, the so-called branching glia cells being an optical effect, the product of unsuitable methods (Weigert).[5]

It is undoubtedly true that the great bulk of authors believe the former theory to be true, and the examination year after year of preparations made by the Bevan Lewis or Golgi methods makes it difficult at once to believe that one could have been deluded by appearance to the extent that Weigert would have us believe, in spite of the fact that Ranvier's[6] specimens prepared by maceration in dilute alcohol offer suggestions in the same direction.

On the one hand, then, neuroglia cells with processes can be clearly shown by more than one entirely distinct method, and, on the other, a method has been devised which resolves the previously obtained picture into component parts; it is, therefore, essential that some other method or methods must arise to add their weight to one or other side before any definite conclusion can be arrived at.

I would venture the suggestion that perhaps our conception of the neuroglia and sustentacular apparatus generally is somewhat narrowed owing to the difficulty of obtaining a comprehensive survey of it as a coherent system having an individuality of its own, and this is doubtless largely due to the methods commonly employed in demonstrating it, and I would here propose a method which is exceedingly simple and yet gives a clear, though at first sight somewhat bewildering, view of its arrangement as a whole, a view which, like Weigert's nerve-fibre stain and his new neuroglia stain, displays one whole system to the necessary exclusion, or rather optical detrusion, of the others. If any properly hardened (chrome, alcohol, picric formol) section of the central nervous system be placed on a slide and allowed to dry in the air, the more delicate nerve cells and their processes become optically obliterated in favour of the less hydrated and more highly refractile connective elements; these, however, form such a highly complicated and dense mass that comprehension of their arrangement is impossible, and it is necessary, in order to evolve the picture, previously to apply some reagent that will produce slight expansion of the section equally and in all directions. Many chemical bodies will do this with more or less success, such as glacial acetic acid, lactic acid, and rodinal, but probably the best for all purposes is hot concentrated caustic potash. The section then is dropped into a relatively large quantity of hot caustic potash, and allowed to remain for a few seconds only, when it is caught up on a slide and transferred to warm water to wash for a few seconds, and again taken up on a slide and desiccated in the air, the most correct picture being probably obtained from sections where on the slide the sectional area most nearly corresponds to that of the piece of brain from which it was removed, previous to its original treatment with the hardening agent. When sufficiently dry a cover glass may or may not be put on, the edges only, however, should be merely sealed with Canada balsam.



Fig. 1.—× 800. Section of upper portion of cortex (asc. parietal), showing arrangement of fibrils of neuroglia. (These fibrils should all appear of the same diameter or nearly so).

On microscopic examination of this preparation with ordinary magnification but careful illumination, a more or less dense felted network of fibres is revealed, which may be seen to form a series of nests for the nerve cells, blood vessels, etc., and these can be readily seen *in situ* during the desiccation process. If this section be stained with any cell-staining reagent and mounted in Canada balsam, then the cell elements become visible, but the connective elements, being embedded in a substance so nearly their own refractive index, disappear.

The view presented by sections prepared this way is very striking, and shows clearly the vast sponge-like arrangement produced by a felted mass of neuroglia fibres, in the interstices of which the nervous and other elements lie. The arrangement of these fibres is at first difficult to follow on

account of the fact that, even in the thinnest sections, different layers are partly in focus and confuse the eye. The "astroid" arrangement of these fibres, however, which gives rise to the appearance of branching neuroglia cells, can readily be seen, and by the physical differentiation as readily analysed into a series of fibres which cross, pass under, over, and round the central cell, but show no sign of springing from it as processes. Conditions similar to those represented by Ranvier, and also the recurved fibres of Weigert, occur in abundance; at the peripheral layer of the cortex of the brain the horizontal series of fibres forming a limiting layer can readily be seen, and fibres can be seen passing up into it and helping to form it, and from it long fibres frequently pass down deeply into the grey matter; many of these are perhaps better seen in sections from frozen tissue desiccated either with gentle heat or in the air without previous treatment with either potash or osmic acid.

The nerve cells and blood vessels each have their own highly complex basket-work nest, and in the case of the nerve cells the glia fibres, when in the neighbourhood of an "astroid," may readily simulate the so-called "scavenger cell" appearance. The blood vessels have a series of fibres running parallel to the vessel wall, and others crossing it at a variety of angles, while fibres may be seen passing from "astroids" to the vessel sheath (simulating spider cells), some apparently blending with it, but in reality most of them can be seen to pass under or over or enter into the series of parallel fibres.



Fig. 2.—× 800. From section of cortex showing an "astroid" in relation to a blood vessel.

This expansion-desiccation method may be applied to Golgi sections, and I think by its use some key to the Golgi method may ultimately be obtained; there is, however, much difficulty in examining and blending the dead black picture obtained by the chrome silver method with the brilliant focussing picture of the highly refractile neuroglia fibres of the desiccation method; there is therefore much opportunity for error in interpretation. The felted network of glia fibres forming a sponge-like reticulum (as seen by the desiccation method) must apparently be regarded as constituting the peripheral channels and spaces of the lymphatic system of the brain (continuous with the perivascular lymphatics) and in the interstices of this each individual cell and fibre lies, bathed in its lymph. There are many reasons for believing that in all probability the Golgi reaction is brought about, not by a stain or deposit of or in the cells and fibres, but by a fluid element. The reasons for this belief have been most clearly shown in Dr. Hill's masterly address to the Neurological Society,[7] and the application of this method to Golgi specimens, showing spider cells, appears to offer some evidence in favour of this view, since there may certainly be seen in some specimens, the appearance of the silver salt deposited on the outside of these glia fibres, either running along one side or surrounding the whole fibre, and perhaps it is owing to this occurrence that by Golgi's method there may be observed such great variations in the appearance of thickness of the spider cell processes.

The relationships of the neurogliar fibrils, with their arrangement in "astroids," to the so-called spider cells may be seen, not only in Golgi specimens, but also in some fresh sections of brain (Bevan Lewis) fixed with osmic acid or permanganate of potash (probably better with the latter), subsequently stained with aniline blue-black, if careful illumination and focussing be attended to. In this case also the whole fibril seems sometimes to be stained, and at other times only one side of it; the exact relationship is, however, difficult to ascertain. The appearance of a much larger number of processes is probably due to the fact that in one case the microscopic view is obtained by dead staining, and is a colour picture, which notoriously obliterates slight differences of level, while in the other case the picture is due to difference in refraction rather than colour. It is a noticeable fact that the neurogliar fibrils are of practically the same diameter throughout, while many fibrils appearing as processes of cells by staining and other methods appear to taper.

The fibrils of the neuroglia seen by this method are about 1.5 μ in diameter, of varying length, fine cylindrical, smooth, translucent, and non-tapering, curved sinuous, and sometimes beaded (probably the result of preparation). They do not appear on careful examination to branch, though their arrangement frequently simulates branching, and lying in certain meshes formed by these fibrils are cells which apparently belong to the neurogliar network, though these do not appear to branch, are chemically different to the fibrils,

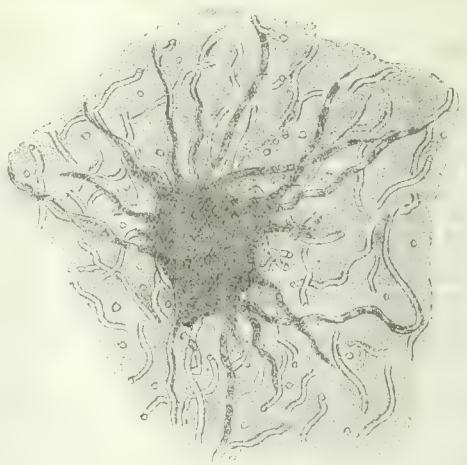


Fig. 3.—× 800. "Spider cell" from Golgi specimen subsequently treated by expansion-desiccation method, showing relationship to fibrils.

and these latter do not appear in any case to come off as processes of the cells. The neuroglia cells may, however, be the parent cells of the fibrils, and stand in something the relationship to them that the cells do in connective tissue or retiform tissue.

They may be separated by dissociation methods and examined in the desiccated condition in a more or less isolated state, showing sometimes exceedingly long fibrils, though dissociation by tearing and pressure appears frequently to break them up into shorter rods and even beads. In dissociated specimens it is frequently possible to see clearly the detailed basket-work surrounding the nerve cells, especially if the latter be stained; and the view thus obtained certainly sometimes suggests the idea that some of the crossing and interlacing fibrils may account for some of the peculiarities seen in Golgi specimens—for example, certain "thorns," and the appearance described under the name "fibres grimpantes" by Ramon y Cajal from Golgi specimens, sympathetic staining by contiguity being a well-known difficulty in the chrome-silver method. Chemically these fibrils do not correspond in their reactions to neurokeratin nor elastin, and are very refractory to staining agents.

There seems therefore some evidence to justify the following conclusions:

1. The sustentacular apparatus of the nervous system con-

sists of an interlacing network of fibrils, in the meshes of which lie cells both neuroglíar and nervous.

2. These fibrils show no evidence of being direct processes of cells, and do not appear to branch.

3. The sponge-like reticulum thus formed is to be regarded as the peripheral portion of the lymphatic system, consisting of lymphatic spaces and channels.

4. The fibrils form a complete basket-work for each element in the nervous tissue, including the blood vessels.

5. The fibrils consist of a highly refractile substance (refractive index about 1.5) with a considerable degree of elasticity, as is shown by their curvature on release.

6. Chemically the fibrils appear to be composed of a substance which is neither neurokeratin nor elastin.

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ISOLATION IN INFLUENZA.

BY ERNEST W. WHITE, M.B.LOND., M.R.C.P.,

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THE recent epidemic of influenza in the City of London Asylum having been successfully cut short by isolation, and the former epidemics in the institution since 1889 having been similarly treated, with equal success, I am prompted to give a brief account of these visitations, and the means adopted to arrest the extension of the disease.

We will commence with the latest outbreak; on February 10th I find a note in my Superintendent's Journal as follows: "Influenza has broken out in the female division (main block); four patients and a nurse were removed to the cottage hospital to-day." This hospital is usually tenanted (to guard against dampness) by 20 farm patients, who can be removed at an hour's notice. Our wards and dormitories in the main divisions of the asylum are only separated by glass screens, but the dining hall, chapel, and kitchen intervene between the male and female sides. The laundry block is attached to the female division by a covered way, as is the workshop block on the male side. The cottage hospital is distant 120 yards from the main building. Our resident community consists of 540 persons (250 female patients; 215 of these in main block, 35 in laundry), with 35 nurses, laundry maids, and servants, and 230 male patients with 25 attendants and resident artisans. On February 11th 6 patients and a nurse were removed to the cottage hospital with the disease, and the chief nurse was under treatment in her rooms away from the wards. On the 12th, 5 more patients were transferred to the cottage hospital with it. On the 13th, 11 patients and a nurse were removed to the cottage hospital, and 3 patients and a nurse were under treatment in the main building, but isolated, and with sheets saturated with carbolic acid solution over the doors of their rooms. On the 14th, 2 patients and a laundry maid were removed to the cottage hospital with it. The chaplain (non-resident) was also confined to bed at his home. On the 15th 1 patient was sent to the cottage hospital, and 1 old patient was placed under treatment in a small dormitory off the female infirmary. On the 16th there were 2 deaths of patients from influenza, ages 72 and 81; 1 other old lady, aged 90, was placed under treatment in the small dormitory off the female infirmary. On the 17th there was 1 death from it, age of patient 76. On the 18th 1 patient was removed to the cottage hospital, 3 old ladies (over 75) were placed under treatment in the small ward off the infirmary. On the 19th 1 patient was sent to the cottage hospital, and 1 old patient placed under treatment in the dormitory off the infirmary. There was also 1 death from it, age of patient 81. On the 24th there was 1 death from it, age of patient 82. On the 25th 1 of the 2 male attendants who carried the female patients to the hospital went down with influenza, and was isolated in the male end of the hospital: and on the 28th the other male attendant who helped to carry the patients to the hospital also developed it, and was isolated in male end of hospital.

The male division has throughout been free, with the 2 exceptions named, and accountable for. The laundry block has also been free, although only 30 yards from the main building, with the exception of the 1 laundry maid, who was the person who carried the linen from the laundry to the female division and entered the wards. She felt ill, her temperature was taken, and she was sent to the hospital at once.

The following are extracts from my annual reports since 1889 under the heading "General Health," and refer only to the influenza epidemics.

1890.

Epidemic influenza visited us at the beginning of the year. The first cases occurred on January 4th, and we were not free until March 10th. In all, 23 members of the staff, including all the officers and 20 patients, suffered. The disease was in some cases of a severe type, and relapses occurred, but we escaped without a death. Several patients had acute tonsillitis as a sequela. It was apparently brought into the building by the attendants and nurses, as it was prevalent in the neighbourhood, and six of the staff were first attacked. I therefore had the cases isolated in the detached hospital, and as a result a very small percentage of patients fell ill with it. Our resources were severely taxed during the epidemic, but we were able to tide over the crisis without obtaining outside assistance, thanks to the self-sacrifice of the nursing staff, which it affords me no small amount of pleasure to record. During the remainder of the year the general health was in every way satisfactory.

1891.

Epidemic influenza visited us for a second time on May 20th. The first case was that of one of the housemaids; then, on the 28th, six male patients in No. 5 ward contracted it, probably through one of their number who is employed in the carpenters' shop. On June 8th a male charge attendant and one of his patients fell ill with it. On the 15th we had three more cases, all members of the staff, and on the 20th two male patients took it. We have since been free until the commencement of the present year.

1892.

During January, February, and March we had a third epidemic of influenza of a severe type. At its outset, 3 male attendants of fine physique contracted it; then 2 nurses and a female patient; then the head male attendant and 2 other attendants, all strong healthy men; then I went down with it; next the chief male night attendant; then in succession a laundry maid, 3 nurses, 14 patients, the chief night nurse, and two other patients. It was of the broncho-pneumonic type, leaving its victims extremely debilitated for many weeks. This outbreak is accountable, directly or indirectly, for 7 of the deaths of 1892.

On July 11th, a fourth epidemic of influenza appeared, fortunately of a comparatively mild, though definite type. It was confined to 1 male and 8 female patients, who all, save one, who was suffering from pulmonary phthisis, made good recoveries. During every epidemic we have isolated our cases in the cottage hospital, believing, as I do, the disease to be distinctly infectious.

1893.

About the close of the month of February there were several mild cases of influenza affecting both staff and patients.

1894.

Early in the year, several cases of influenza were recorded, none of a severe type, and all made good recoveries.

1895.

Influenza of a comparatively mild type visited us towards the close of February, and remained with intervals of freedom until the end of April. Thirteen members of the staff and 6 patients had it, and all excepting 2 were isolated in the cottage hospital. The relatively large proportion of staff to patients is a further proof of the infectious nature of the disease and of its having been introduced from without.

1896.

Early in March, 2 attendants and several male patients had influenza, and were isolated in the cottage hospital.

1897.

For the first time since 1889 I have no epidemic of influenza to record.

MEANS OF ISOLATION ADOPTED.

As regards the recent epidemic, on February 10th I recognised that we had a definite outbreak. I therefore gave orders that the female division (main block) was to be isolated as far as possible; that the male and female patients were not to meet at chapel or the dining hall; that the meals were to be in the wards, the dining hall to be kept master locked; and the chapel service on Sundays to be attended by male patients only; the female service being held in a ward. All association of the sexes thus came to an end. The laundry residents were also to be kept away from the main division. The charge nurses were instructed to take the temperatures of all their patients who appeared to be at all out of sorts, and if the thermometer registered a temperature above 100°, the patient was at once to be wrapped up, and taken over to the cottage hospital. Patients over 70 years of age were to be treated in

a small dormitory off the female infirmary; carbolised sheets at the doors to be used to prevent infection being conveyed by these patients to the other ward residents. All patients sent to the cottage hospital were to remain there a week at least, and there was to be no communication between the hospital and the asylum. At one time we had 30 cases under treatment in the hospital. In all previous epidemics since 1889 we have adopted similar methods of isolation with equally good results.

I am of opinion that in this last epidemic the disease was brought to the asylum by my clerk (non-resident), who plays the piano in the dining hall during dinner, and who gave the influenza to a lady patient, who sits near the piano, and who was the first resident attacked.

WIDAL'S REACTION IN NATIVES OF INDIA.

By W. C. BROWN, M.D.,

Penang.

The article on The Supposed Immunity of Natives of India to Typhoid Fever, by Surgeon-Major Freyer,[1] reopens a question which has long been of great clinical interest, and deals with it from the advantageous diagnostic basis that has been obtained by the application of serum diagnosis.

The theory that almost the whole adult native population gains immunity from typhoid on account of universal prevalence of the disease in the form of mild and unsuspected attacks in infancy—that, in short, typhoid is so rare in adults because it is so common in infants—is not a new one. It has been propounded by several authorities on Indian fevers, and is referred to in an able article on Tropical Typhoid by Surgeon-Captain Whitehead.[2] Surgeon-Major Freyer adopts the view that natives, generally speaking, are immune to typhoid fever; and concludes, on what I venture to think is insufficient evidence, that this doctrine of immunity is confirmed by some remarkable experiments, in which he found that the blood serum of healthy natives gave a positive reaction to Widal's test. Surgeon-Major Freyer, therefore, advances the three propositions:

1. That natives of India, generally speaking, are immune to typhoid fever.
2. That a mild attack of typhoid in childhood confers permanent agglutinative powers on the blood serum.
3. That, generally speaking, the blood serum of healthy natives of India gives a positive reaction to Widal's test.

Perhaps it will be best to look at the last of these propositions first, and to see what are the results of the examination of the blood of healthy natives, and the consequent general applicability of Widal's test in India. In venturing a clinical and bacteriological criticism of Surgeon-Major Freyer's views, I would say that my clinical experience of natives of India has been limited to them as immigrants in the Straits Settlements in their various capacities of merchants, traders, sailors, servants, and coolies. I have, however, made numerous serum tests of their blood, chiefly for diagnostic purposes, and have compared the results with those obtained in Malays, Chinese, Burmese, Siamese, and other nationalities. So far, I have not found that the serum reaction of natives of India differs, either in health or disease, from that of Europeans or other races. The sanitary conditions that surround these other Oriental races are little, if at all, better than those of India.

In the appended table of the results of examinations of the blood of 15 natives of India of different castes, the first 8 were consecutive tests for Widal's reaction in the course of ordinary practice, Nos. 2 and 3 being control tests. The remaining 7 were the first of a large number of examinations carried out on healthy natives after I had read Surgeon-Major Freyer's article. It is difficult in the face of these results to come to any other conclusion than that the blood of healthy natives of India does not possess any special agglutinative power.

The basis on which Surgeon-Major Freyer's conclusion rests is his acceptance of the theory that a mild attack of typhoid in childhood will confer a permanent agglutinative power on the blood serum, but such a deduction is directly opposed to all the evidence which is before us as to the reaction, and is entirely contrary to the whole theory of serum diagnosis. No hard and fast rule as to agglutinative power or permanence can be laid down. In the blood serum of one and the same typhoid patient it varies from day to day. Sometimes it increases with convalescence, sometimes it decreases; before death it is sometimes greater, sometimes less; and so with its duration. But a primary characteristic of the reaction is that it is one of infection and not of immunity. The theory that the presence of Eberth's bacillus causes the secretion by the blood of an antitoxin which remains permanently in the system after a successful fight with the bacillus is a beautifully simple theoretical explanation of the reaction, but it is disproved by observation.

The time of the disappearance of the phenomenon after typhoid fever, like the tenacity of the agglutination, varies in different subjects; and according to Widal and Sicard[3] it is generally quite gone in two or three months after defervescence; and in one case they observed it disappear completely on the eighteenth and twentieth day.[4] Achard and Bensaude failed to get the reaction ten days after fever had cased; and Brewer, Thiercelin, and Lenoble had the same experience. Courmont[5] followed the progressive disappearance of the reaction in a child, and found the blood lost its agglutinative power completely in two months. In three children whom C. Fraenkel attended for mild attacks of typhoid fever, he found no reaction after some days of convalescence; and Eug. Fraenkel fixed the date of disappearance as the twenty-eighth day.[6] All the evidence at hand goes to prove that in mild attacks the blood serum loses its agglutinative power sooner than in severe ones. In two severe cases in children I have found a positive reaction in the blood three months after defervescence, and they are still under observation; but

Table of Results of Widal's Reaction in Natives of India.

	Name and Age.	Class or Caste.	Native of.	Reaction.	Remarks.
1	M., 18*	Hindu	Madras	Negative	A case of puerperal mania; patient had just recovered from severe puerperal fever.
2	V., 35	Hindu	Madras	Negative	Patient was quite healthy; never had any illness that he knew of except malaria.
3	S., 27	Christian Tamil	Madras	Negative	A control experiment; patient was quite healthy; said he had never been ill in his life
4	S. M., 35	Mati	Southern India	Positive	Test carried out for diagnostic purposes on the eleventh day of illness; dilution 1 in 14 and 1 in 20; both positive. Patient died with marked symptoms of typhoid.
5	S. C., 29	Hindu	Tanjore	Negative	Test for diagnostic purposes; case turned out to be malarial fever; recovery in four days
6	Sh. C., 10	Hindu	Coromandel	Negative	Diagnostic test made on sixth day of fever; patient recovered about eleventh day: malarial parasite found.
7	P., 26	Hindu Pariah	Negapatam	Positive	Patient very ill; recovered after severe hæmorrhage from bowels.
8	D., 16*	Christian Tamil	Southern India	Negative	A case of malarial remittent fever; blood examined many times; parasites always present.
9	M., 25	Hindu	Southern India	Negative	Patient was quite healthy.
10	R. S., 29	Sikh	Punjab	Negative	Patient was healthy.
11	P., 40	Hindu Pariah	Madras	Negative	Patient was healthy.
12	W. L., 20	Eurasian	Madras	Negative	Patient had hepatitis.
13	S., 19	Hindu	Negapatam	Negative	Patient was healthy.
14	K., 13	Hindu	Tanjore	Negative	Patient suffering from measles.
15	R., 40	Hindu	Madras	Negative	Patient was healthy.

* Females.

in mild cases where the reaction was marked during the course of the fever, I have not known one positive reaction after the fortieth day. Though it is true that a previous attack may detract from the absolute reliability of Widal's test, it is abundantly proved that a mild attack of typhoid cannot confer general permanent agglutinative properties on blood serum.

In the examination of blood serum in the tropics the great source of error is the formation of false clumps—a phenomenon which takes place more frequently and more rapidly than in temperate climates, and is due to the different conditions of the surroundings and not to any difference in the blood serums. It is absolutely necessary to use a virulent culture of bacillus, with a dilution of 1 in 10, and to fix a short time limit, say fifteen minutes, certainly not longer than twenty. All the recent evidence before us points to the necessity of shortening the time limit in order to get accurate diagnostic results. Results based on lengthened observations are quite unreliable.

As to the question of the immunity of natives to typhoid fever, more careful diagnosis and more systematic *post-mortem* examinations are showing us that their exemption is not nearly so great as has been supposed. In the older native hospital statistics, published by the Government of the Straits Settlements, typhoid fever had no place; but, in the municipality of Singapore, with a population of about 100,000, the health officer reported in 1896 186 cases of typhoid; 55 of the worst cases were sent to hospital; and of them 46 died. The diagnosis was verified in all, or nearly all, by *post-mortem* examination.[7] Natives have little, if any, less immunity to the disease than acclimatised Europeans, and the universality of typhoid fever and typhoid infection is now fully admitted. And, more, we have the strongest reasons for believing that the Eastern tropics are not only the home but the birthplace of typhoid fever. The universality of malaria and the difficulty of obtaining *post-mortem* evidence in native practice have been the causes of error; and serum diagnosis has come only to confirm an opinion which was already partly established.

Typhoid is mostly a disease of acclimatisation, but its prevalence during that period is due to the fact that the mucous membranes of the alimentary canal then offer from a variety of causes a more congenial soil to Eberth's bacillus than do those of older residents. It is not the case that new arrivals gain immunity by passing through a mild attack of the disease.[8] The acceptance of that theory, and of the permanent agglutination hypothesis, would involve us in the conclusion that not only every adult native, but every European in India would react positively to Widal's test, which would therefore be useless. The test has already proved of the greatest value in the tropics and has elucidated many difficulties in the study of the phenomena of tropical fever.

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TWO CASES OF SUBPHRENIC ABSCESS OPENING INTO THE LUNG.

BY W. CECIL BOSANQUET, M.A., M.D.OXON., M.R.C.P.LOND.,

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THE two following cases, occurring within a short time of one another, make a sufficiently interesting pair to be worthy of record. I have to thank Dr. T. H. Green, under whose care the patients were at Charing Cross Hospital, for his kind permission to publish these notes.

CASE I.—A. H., a boy, 10 years of age, was sent into hospital on July 3rd, 1897, for abdominal pain, supposed to be due to perityphlitis. There was nothing of interest as bearing on the case, in the family history or the previous health of the patient. The illness began on June 30th with vomiting, which recurred after all attempts to take food. There was scarcely any pain at this time, but, though the vomiting ceased, the boy remained ill until June 27th. He was then seized with severe pain in the lower part of the abdomen, chiefly on the right side. For the next few days the temperature was high, ranging between 99.8° and 102.6° F., and the patient was kept in bed; daily enemata were given, as the bowels were not open without this assistance, although described as being usually loose. On admission to hospital the boy appeared seriously ill. He lay on his back, with his legs usually drawn up, and resented all attempts to move him. His face was pale and his expression anxious. He was considerably emaciated. The tongue was coated with fur, and the breath slightly offensive. The pulse-rate was 118, the respirations not noticeably hurried. The abdomen was somewhat distended, especially in the right hypochondriac and epigastric regions, and there was considerable resistance in this area. The whole abdomen was tender on pressure, most so over the resistant region, and the respiratory movements of the abdominal walls were very defective. There was no lump or special tenderness in the right iliac fossa. There was some apparent fulness in the right lower axillary region and tenderness on pressure in the lower right intercostal spaces. Percussion here was impossible owing to the tenderness. The heart's apex beat was in the fifth space in the nipple line. Nothing abnormal was detected in the condition of the lungs or pleuræ.

The boy suffered considerable pain, chiefly on the right side of the abdomen, for which fomentations and leeches were applied without much relief being obtained. The motions were partly formed and normal in colour. On the third night after admission he was given 1 minim of hypodermic injection of morphine, which relieved the acute pain and procured him a good night's rest. On the following day (July 6th) his bowels were opened naturally three times, but nothing abnormal was noted with regard to the motions. The abdominal pain and general tenderness gradually subsided, and on July 7th all the signs of disease were definitely confined to the hepatic region. The skin here was slightly red; there were some enlarged superficial veins visible, and tenderness was still present in this area. On July 8th the tenderness and resistance in the right hypochondrium were distinctly limited below by a definite edge, apparently that of the liver, palpable about 2 inches below the costal margin. The dulness over this mass extended upwards as far as the fifth rib in the nipple line, and followed the curve of this rib into the axilla. Internal to the nipple line, over the cartilages of the fifth, sixth, and seventh ribs on the right side, was an area of tympanitic resonance. No breath sounds were audible over the dull area, but above it, in the fourth right intercostal space, just below the nipple, some crackling *râles* were audible. The apex beat of the heart was in the fourth space, an inch internal to the nipple. The edge of the spleen could be felt beneath the costal margin. In the back there was slight dulness at the base of the right lung, but no other morbid signs. On this and the following day the general condition appeared rather to improve, and the patient was brighter and slept better.

On the night of July 10th he was seized with a fit of coughing, and expectorated 4 ounces of very fœtid pus, brownish grey in colour. It contained no tubercle bacilli, but on cultivation colonies of staphylococcus aureus and albus were obtained. Unfortunately no special search was made for the colon bacillus. On July 12th the whole of the right side of the chest was dull on percussion. There was increased vocal resonance over the root of the lung behind, and, in front, blowing bronchial breathing at the apex and in the upper axilla. The area of tympanitic resonance near the right nipple was rather increased in extent; the edge of the liver and that of the spleen were still palpable, as before. Exploratory punctures were made by Dr. Green in the right chest, in the expectation of finding pus, but no fluid of any kind was withdrawn. On July 13th the cough still continued, and the respiration was hurried (40). The pulse was now 144 and the temperature 101.3° F. On this day the bowels were opened seven times, the stools being small, loose, and light in colour. On July 14th the upper part of the right lung was again fairly resonant and full of fine *râles*, and weak breath sounds were audible over the whole of that side of the chest. The diarrhœa continued, and a little more offensive pus was coughed up on the following day. From this time the condition of the patient gradually improved; the enlarged liver and spleen shrank until they were no longer palpable, and the signs on the right side of the chest disappeared. The boy left the hospital for a convalescent home on August 18th.

In this case, owing to the favourable termination, the diagnosis was not established beyond possibility of doubt; it was not possible to exclude the existence of an empyema, confined at first between the lung and the diaphragm, and finally opening into the former. In favour, however, of the diagnosis, finally adopted, are to be set forth the acute onset with vomiting, the entirely abdominal nature of the early symptoms and signs, the enlargement of the spleen, and the failure to find any pus in the pleural cavity on exploration. Where the abscess originally started is not clear, a perityphlitic origin being quite possible, but the subsequent symptoms are satisfactorily accounted for on the hypothesis of the existence of a subphrenic abscess, which finally perforated the diaphragm and caused partial collapse of the right lung.

In the following case the fatal issue rendered possible the confirmation of the diagnosis made during life, and the similarity of the signs in the two cases lends some additional support to the explanation given in the former instance:

CASE II.—F. S., a married woman, 48 years of age, was admitted on September 26th, 1897, for abdominal pain and shortness of breath. She had been the mother of eleven children, and had worked hard to support this large family. She had always been a temperate woman, but had long suffered from "indigestion," with pain and nausea after taking food. Her bowels were always constipated. Three months before coming into hospital she had had increased pain in the upper part of the abdomen, which

"went through to her back;" this gradually increased, and one week before admission she was suddenly seized with acute pain referred to the lower part of the abdomen, which compelled her to take to her bed. She applied hot flannels and hot sandbags to the abdomen, one of which was so hot that it produced a large burn to the left side of the umbilicus. Her bowels at first were constipated, but acted after an enema, and since this treatment she had passed frequent loose light-coloured motions. She vomited at intervals, but there was no hæmatemesis.

On admission she was a poorly nourished woman, who looked much more than her age. Her face was flushed, and she appeared worn and anxious. She lay on her back with her legs extended. Her voice was very weak, and she spoke in gasps. The breathing was hurried (40), and the pulse 128, small and weak. The abdomen was distended and tender throughout, most markedly in the upper part, the left side looking fuller than the right. Respiratory movement was diminished; no peristalsis was anywhere visible. Her temperature was 101° F., and she had some diarrhœa, the motions being loose but of normal colour. No physical signs of disease were discovered in the chest beyond a slightly diminished resonance at the base of the left lung behind. The apex beat was not palpable.

On September 28th the tenderness over the abdomen was less marked; the pulse was 144, respirations 52. On September 30th she had an attack of pain in the left side of the chest, with a feeling of suffocation and orthopnœa. She coughed up a very little fœtid sputum, and said she felt that she wanted to bring up more, but could not. The breath was now highly offensive. The heart could be felt beating in the fourth intercostal space, just internal to the nipple. There was tympanitic resonance, with very weak, slightly bronchial, breathing in the left axilla and over the lower part of the left lung in front. Behind there was bronchial breathing over the root of this lung, and diminished resonance with very weak breaths sounds over the base. There was a good deal of tenderness in the left hypochondrium and over the dull area behind. The pulse was now 148, respirations 60, temperature 100·8° F. Severe diarrhœa set in, and she passed seven loose light-coloured motions within about twelve hours. This continued on the following day, and on November 1st the patient passed several dark-coloured stools containing much altered blood. Later on she passed nearly 2 pints of bright red blood *per anum*, and also vomited about half a pint of clotted blood. The stools were now very frequent, being passed almost every half-hour, and still contained altered blood; this condition continued all the next day. She took her food well, and was not sick. The breath was very fœtid. There was some pain in the abdomen referred to the umbilicus, but not very severe. She died of exhaustion on November 4th.

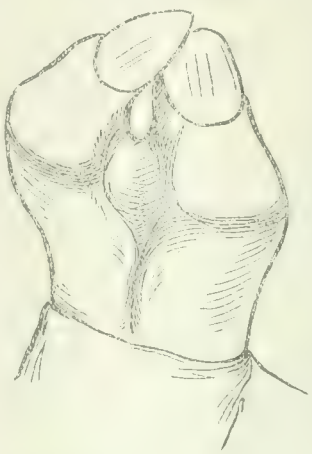
Necropsy by Mr. Cantlie.—The upper half of the abdominal cavity presented a condition of purulent peritonitis; the lower half was entirely free, being shut off from the upper by the adhesion of the great omentum to the anterior abdominal wall along a line running just above the umbilicus. The spleen and both upper and under surfaces of the liver were covered with recent lymph, the layer on the upper surface of the latter being nearly ¼ inch in thickness, and of the appearance and consistence of stiff custard. In the lower and anterior part of the first portion of the duodenum was an ulcer, with thickened rounded edges, the size of a half-crown. Round it on the peritoneal surface was a thick ring of tough lymph, suggesting that adhesions had first formed, but that these had subsequently given way and allowed the contents of the duodenum to escape into the peritoneal cavity. In the stomach, on the lesser curvature about 3 inches from the pylorus, was an old cicatrised ulcer, the floor formed by peritoneum; in the process of cicatrisation the last 3 inches of the stomach were narrowed to form a tube about ½ inch in diameter. In the centre of the left wing of the diaphragm was a large perforation the size of the palm of the hand, extending through into the left lung. The latter was adherent throughout to the diaphragm, and in the lower lobe was a large abscess cavity, with ragged walls, about the size of a Jaffa orange. It contained a small quantity of dark, offensive, purulent matter. The right lung was also partially adherent to the diaphragm, and a small collection of pus was found at the anterior border near the middle line, lying between the lung and the diaphragm.

In this case the symptoms were so well explained by the condition found *post mortem* that but few notes are necessary. The old history of indigestion was no doubt accounted for by the cicatrised gastric ulcer, the more recent attack of three months' duration being due to the duodenal lesion. Perforation of the latter into the upper part of the peritoneal cavity seems to have occurred at the date of the sudden acute attack of pain, the adhesions which shut off the lower part of the peritoneal cavity having formed ere this, owing to some localised subacute peritonitis. The abscess thus formed in the upper part of the abdomen first caused adhesion of the lungs to the diaphragm by spread of inflammation, and finally actually perforated into the base of the left lung at the time when the pain in this region and offensive expectoration occurred (September 30th), the small amount of pus actually brought up being due to the free communication with the abdominal cavity. The resemblance between the symptoms in the two cases is very close; in each the pain was at first referred to the lower part of the abdomen, while the morbid signs soon became confined to the upper part over the seat of the lesion; in each the perforation into the lung was accompanied by signs of pneumothorax and by profuse diarrhœa; the temperature in each case was irregular, and never very high. The severity of the lesion in the second case made recovery practically impossible, as, even if the exact condition could have been recognised at once, and an operation performed for suture of the ulcer and drainage of the peritoneum, a favourable result could scarcely have been hoped for in the exhausted state of the patient, whose severe symptoms were already of seven days' duration before admission to hospital.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

MALFORMATION OF THE THUMB.



THE accompanying rough sketch shows the right thumb of a patient who appeared at my camp dispensary recently. The metacarpal bone is single, but the proximal and distal phalanges are double. In fact, there are two complete thumbs, though the skin does not divide till a point slightly beyond the interphalangeal joint.

The proximal phalanges articulate evidently with one another, and move, though not freely, on one another. They have also quite distinct articulations with the metacarpal bone.

No inconvenience is felt by the owner, who says he can work quite well with the hand.

M. MACNICOL, M.A., M.B., C.M.Glasg.

Hooghly, Bengal.

TREATMENT OF GUINEA WORM BY INJECTIONS OF PERCHLORIDE OF MERCURY.

BEFORE my attention was drawn to this method of treatment by an article in the BRITISH MEDICAL JOURNAL, I was in the habit of employing the usual method of winding the worm, on its appearance superficially, on a piece of stick or lint. This manner of treatment was at its best long and tedious, and often, when the worm broke, attended by suppuration and considerable swelling. At the shortest the patient had to be kept in hospital for some weeks, which in the worst cases would extend into months. Moreover, the treatment was attended by considerable pain.

Since reading the above-mentioned article I have treated several cases now by the injection of perchloride of mercury solution into the mouth of and along the track. The method is simple: ℥xx of a 1 in 1,000 solution is injected first into the mouth of the sinus; if this is not sufficient, it is repeated further up the track after an interval of a few days.

My experience has invariably been that the worm has been killed, and absorbed in the same way as a catgut ligature, and instead of a period of weeks being necessary to effect a cure, a week or ten days sees the patient back at work. As this method is perhaps not generally known in the districts where guinea worm is common, I think it worth while to add my testimony to its efficacy.

GEORGE LAMB,
Surgeon Captain A.M.S.

Junior Army and Navy Club.

IMPACTION OF A COIN IN THE ŒSOPHAGUS: ULCERATION INTO AORTA: DEATH.

ON December 19th, 1897, I was called at 10 P.M. to see W. C. Y., a fine well-nourished boy aged 4 years and 7 months. A few minutes before I arrived a sudden attack of hæmatemesis had occurred, and, judging by the clots and stains, I estimated he had vomited about a pint of blood. The child was very pale, drowsy, and collapsed; the extremities were cold and the pulse was 127. I applied the usual remedies, and the condition remained unaltered until a little after 11 P.M., when he vomited about half a pint of blood. After this there was a distinct improvement, the pulse dropping to 104 and

becoming stronger until about 8 A.M., when death followed immediately on a violent attack of hæmatemesis.

The history of the case was that six months previously the child had swallowed a halfpenny, and up to the time of death had complained of pain, at times very acute, generally referred to the right side, after swallowing food, which usually had to be of a semi-fluid nature. There had been no blood in the fæces, no vomiting, regurgitation, or loss of flesh.

At the *post-mortem* examination I found a halfpenny impacted in the œsophagus, about an inch below the level of the aortic arch. The surfaces of the coin were facing backwards and forwards, and where the edges came in contact with the wall of the œsophagus were two deep ulcers, the one on the left communicating with the descending aorta by a passage large enough to admit a full-sized director.

The case seems to me to present several interesting points. Ten hours is, I should think, a long time to live with such a large rent in the aorta. Again, the coin was impacted at a very unusual spot. Foreign bodies are generally found at the lower end of the pharynx, or at the cardia. Finally, it is strange that a coin should remain in the œsophagus for six months without causing sufficiently marked symptoms to ensure diagnosis, either by the parents or by the medical attendant.

Walsall. S. H. Hawley, M.B.

SPONTANEOUS EVOLUTION.

Many years ago, when I was being examined for the L.R.C.P. Lond., one of the questions put to me was about spontaneous evolution. It was an easy question to answer, like many others which students know all about from textbooks. On my telling my tutor, the late Dr. Barron, that such a question had been asked, he remarked that the examiner might have occupied his and my time more profitably than by examining me on a subject which had little or no practical importance and was a literary curiosity, which only occurred once "in a blue moon," and when it did occur was the fault of the physician who allowed it to take place by waiting for it; that Denman and Douglas had argued over it to no useful end, each describing the same thing and calling it by different names. During a long experience I have had in my practice no fewer than three cases; the last occurred a few days ago, which I now describe.

I was called to see a black woman in her seventh month of gestation on account of severe flooding. She had been assaulted by her husband three days before, and the child had evidently died a few hours after. I found my patient very faint, the napkin being saturated with blood. The pains were feeble, and blood was oozing pretty freely. I at once ruptured the membranes and gave 15 grains of quinine, and dilated the os with my fingers. The pains became sharp, and the head of a dead child was forced down. The bleeding ceased. I left the woman in charge of the nurse, intending to return in a short time with chloroform and forceps, but a messenger soon followed me with a note from the nurse stating that the child had been expelled "feetwise," as she called it. On examining the dead child I found the placenta attached to it. There were no indications of its having been detached *in utero*. The hæmorrhage was clearly due to a relaxed condition of the uterus, which had been remedied by rupturing the membranes and the action of quinine. The child being dead and the uterus suddenly set in action from a relaxed condition, rendered the process of evolution an easy one.

My other cases, which happened many years ago, were shoulder presentations; one child lived.

Halfway Tree, Jamaica. Jasper Cargill, M.D.

EXTRAUTERINE PREGNANCY: FŒTUS AND PLACENTA IN PERITONEAL CAVITY.

On December 30th, 1897, I was sent for to see a Kaffir woman about thirty years of age, who was reported to have been in labour a week, having been attended by all the native doctors in the district.

Previous History.—She had four living children, and all her confinements had been pretty quick.

On my arrival I made a vaginal examination. The uterus was flabby, and the os dilated to admit three fingers, but no presentation could be detected. I then examined by palpation, and discovered the fœtus in the transverse position, head to the right side. I passed a No. 8 male catheter into the uterus, and found the catheter to pass half-way into the uterus, about 3 inches, without meeting any obstruction. No fœtal murmur could be detected on auscultation. I decided to have her brought to town, a distance of fourteen miles, for operation, as nothing could be done at the kraal. My partner, Dr. Abraham, went out to see her next morning, and further advised her being brought to town. She was brought that day on an ox-waggon over a rough country district.

Dr. Campbell, of Durban, being in town to meet me in consultation, I took him to see the patient, and he quite agreed in the diagnosis of extrauterine pregnancy. We passed the sound, the uterus being well dilated and pushed to the left side, admitting the sound for about 3 inches. Dr. Campbell then performed laparotomy on January 2nd, 1898. The fœtus was removed, and the placenta left *in situ*.

The child, a female, weighing 7 lbs., was alive on removal, but died in about half an hour, in spite of all our endeavours to save it.

Until the morning of January 6th the patient progressed favourably; the temperature was normal (taken night and morning). Then the placenta separated, giving rise to some internal hæmorrhage, causing complete collapse (owing to her already weak condition), from which she never rallied. I have no doubt that had the patient been seen earlier, and the operation performed, she and the child would have both been saved, as during the nine days previous she was in labour most of the time, and took very little nourishment.

R. A. Mate, L.R.C.P.&S.Ed., etc.

Dundee, Natal, S. Africa.

THE CAUSATION OF INFANTILE UMBILICAL HERNIA.

Compared with congenital umbilical hernia, this condition is much more frequent. According to statistics, congenital umbilical hernia is also not so easily treated with success. Its cause is readily found in the manner of development of the parts concerned; but the cause of infantile umbilical hernia is not quite so readily understood. The umbilical ring has not closed properly after birth, so that some omentum or small intestine protrudes. It is readily reducible, and proper strapping effects a cure in time.

Within the last eight months I have treated three such cases. I also attended these children at birth. In each case the cord was very short—Case I, 11½ inches; Case II, 13¾ inches; Case III, 14 inches. When the cord is very short it must be pulled upon during the latter months of intrauterine existence to a greater extent than when it is comparatively long. In these cases it will be noticed that the umbilical ring is more everted than normal, and of somewhat greater diameter. Is it therefore reasonable to imagine that such a condition predisposes to infantile umbilical hernia?

Eastwood, Notts. Robert Turner, F.R.C.S.Edin.

IMMUNISATION BY DIPHTHERIA ANTITOXIN.

I read the article by Dr. W. C. Aylward in the British Medical Journal of January 15th with much interest. While hoping at some future date to publish the results of antitoxin treatment in a number of cases under my care, I cannot refrain from giving at once my experience with regard to the prophylactic use of antitoxin serum.

I have used it for purposes of immunisation during an epidemic amongst children of ages varying from nine weeks to seven years. In one nursery alone, where 23 young children were congregated, 7 developed diphtheria, one after another within eight days; on the eighth day the remaining 15 were immunised (with Burroughs and Wellcome's serum), and no more cases occurred. In all some 60 children were immunised, and in no case did a child thus treated contract the disease at the time, although on a recrudescence of diphtheria some ten weeks later 2 of these children developed it. Two other children, aged 4 and 6 respectively, who had suspicious sore throats, were immunised and isolated with those suffering from marked diphtheria; both at the expiration of thirty days had the disease in a typical but modified form. As in the first instance in these cases no bacteriological examina-

tion was made, a doubt arises as to whether they suffered from a second attack of diphtheria, or whether it was a first attack at the expiration of a period of immunity.

All the adults in attendance upon or in communication with the cases were immunised with the exception of two of the nurses, of whom one unused to infectious nursing contracted the disease.

Constance E Long, M.D.Brux., L.S.A.
Resident Medical Officer Babies Castle, Hawkhurst, Kent.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

MANCHESTER ROYAL INFIRMARY.

A CASE OF LARGE SPINAL MENINGOCELE TREATED BY EXCISION OF THE SAC.

(Under the care of Mr. Walter Whitehead.)

J. M., aged 11 years, was admitted on October 7th, 1895, with a large spinal meningocele occupying the lumbar and upper sacral regions.



Fig. 1.—J. M., condition before operation.

History.—The meningocele was present at birth, being then about 2 inches in diameter, circular, somewhat flattened from before backwards, and puckered on its surface. It gradually increased in size up to the date of the patient's admission to hospital. At 5 years of age it is stated to have been twice the size of a "man's fist." There was a tendency to talipes calcaneo-valgus, but the boy could then walk without assistance. When 8 years old he began to lose the use of the lower limbs, and in a short time they became completely paralysed; about the same time incontinence of urine and fæces developed. During the past three years several ulcers of trophic origin have formed on the legs.

On admission, the boy was found to be fairly intelligent, and, although he was hydrocephalic, there was no marked mental defect. The meningocele, which was about the size of a child's head, occupied the whole of the lumbar and upper sacral regions. Its measurements were as follows: Circumference at base 16½ inches, circumference at widest part 18 inches, horizontal 11 inches. It was tense, semi-fluctuant, and translucent in every direction. The overlying skin was smooth and shining, evidently tightly stretched, and somewhat whiter than the surrounding skin. There was a distinct impulse in the tumour on coughing; the muscles of the legs were completely paralysed, with the exception of the adductors and extensors of the thighs, and these were very weak; all the muscles of the legs were wasted and flabby. The patient had no control over either bladder or rectum. The skin covering the tumour, and that over the scrotum, perineum, and the backs of the thighs, was quite anæsthetic, and sensation was almost lost in the other parts of the legs. It was difficult, however, to map out the exact limits of the anæsthesia owing to the somewhat unreliable answers of the patient. On both hips there were several large, indolent, trophic sores, and the legs showed many cicatrices, the result



Fig. 2.—J. M., condition after operation.

of old ulcers. The patient stated that he had never had any pain in his back. Both feet were in a condition of slight talipes calcaneo-valgus; there was also internal strabismus of the left eye. Under careful dressing the ulcers commenced to heal. The meningocele, however, became more tense, and the overlying skin was so thin that it was in great danger of giving way. Operative measures were therefore decided upon.

Operation.—On November 15th, 1895, chloroform having been administered, the patient was placed in the prone posi-

tion with the legs hanging over the end of the operating table. A vertical incision, 4 inches long, was made over the centre of the tumour. On opening the meningocele about a pint of clear cerebrospinal fluid, which had evidently been pent up under considerable pressure, escaped. The lining membrane of the sac was white and glistening, and showed the ramifications of numerous blood vessels. No nerves and no part of the spinal cord extended into the tumour. The opening into the spinal canal was about 1½ inch long, and was divided into four parts by narrow transverse bands of tissue. An attempt was made to close the opening by a number of fine silk sutures passed through its edges. An incision was then made through the lining membrane of the sac about half an inch from the opening into the spinal canal;



Fig. 3.—Case II, before operation.

the lining membrane was dissected up towards the opening, and its free edges united by a second row of sutures. The remainder of the sac, together with the redundant skin, was excised. The wound was closed with silk sutures, and was dressed with iodoform, sublimate gauze, and wood-wool wadding. After the operation the patient was somewhat collapsed, but soon rallied.

The wound was first dressed on November 18th, three days after the operation, and subsequently it was dressed daily. The skin sutures were removed during the second week after the operation. On December 2nd it was noticed that a clear fluid resembling cerebrospinal fluid was exuding from some of the suture tracks. The discharge of cerebrospinal fluid became very profuse, and continued up to January 14th, 1896, when for the first time it became purulent. On January 17th a counter-opening was made at the lowest portion of the scar and a drainage tube inserted. On the 20th a free incision was made under an anæsthetic; a large abscess cavity was laid open, and was thoroughly cleansed and packed with iodoform gauze. From this time the wound was syringed and repacked daily; it soon took on a healthier action, and the temperature, which up to this stage had been intermittent, gradually became normal.

On February 19th the patient was sent to the convalescent hospital. The wound was then a superficial granulating surface. There appeared to be some slight improvement in the paralysis, since he could flex and extend his knees to a slight extent. Sensation was about the same as before operation, and the trophic ulcers over the hips, although they had been carefully treated, were still unhealed.

The patient was examined two months later; the wound in the back was then completely and soundly healed, and there

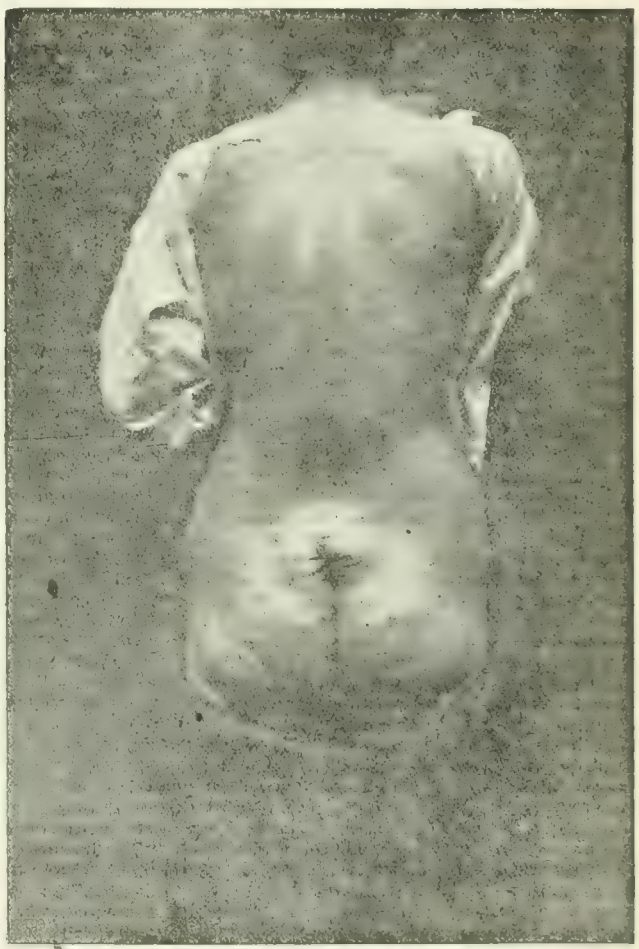


Fig. 4.—Case II, after operation.

was no bulging of the part. There did not, however, appear to be any further improvement in the condition of the legs.

Two years later (November 22nd, 1897) the patient's condition had undergone little change. There was no improvement in the paralysis of the legs. The cicatrix remained sound, and there was no tendency to bulging.

In recording this case I wish to acknowledge my indebtedness to Mr. J. E. Platt, who was at that time the Resident Surgical Officer at the infirmary, for collating the notes; and also to Mr. R. D. Cran, my then House-Surgeon, for the skill and care he devoted to the after-treatment; and I am further under considerable obligation to Mr. H. E. Scowcroft for the pains and trouble he took in taking the accurate photographs (Figs. 1 and 2) which illustrate the condition of the patient before and after operation. The second series of photographs (Figs. 3 and 4) represent the appearance of another patient upon whom I performed a similar excision, with the most happy results, in 1883.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. Bryant, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, March 8th, 1898.

The President, on taking the chair for the first time, thanked the Society for the high compliment of electing him to a position which, in his estimation, was only second to that of President of the Royal College of Surgeons. The Society was founded in 1805 by a physician to Guy's Hospital (Dr. W. Saunders), and Addison and Bright had subsequently been presidents. There had not, however, been a surgical president from Guy's for eighty years since Sir A. Cooper, and no medical president from that school since Dr. G. Babington in 1861. He therefore thanked the Society for the high honour that had fallen to his lot.

Family Lateral Sclerosis.

Dr. Norman Moore showed two brothers, aged 24 and 26 years, whose symptoms came on gradually at 15. They had spastic rigidity of the legs without any affection of the arms, sphincters, intelligence, or vision. There was no nystagmus. The speech was drawling. A sister who had no other symptoms had a similar affection of speech.

Microcephaly and its Surgical Treatment.

Dr. Joseph Griffiths read this paper. After making general remarks upon the nature of congenital microcephaly, he divided the cases into two main classes: (1) Those with small ill-filled but not deformed skulls, and (2) those with small and deformed skulls. The first class included those in which the brain was arrested in its growth in early embryonic life (three to four months) and in which the skull was natural but diminutive, the smallness being the result of a proportional diminution in all directions. In the second class the skull was not only small but misshapen, and the brain was not only diminutive but diseased, the disease giving rise to the alteration in shape, and the skull merely conforming itself to the enclosed brain. In the specimen described the skull showed no evidence of disease or of premature synostosis of its component parts. The following case illustrated the characters of Class 2: A. M., aged 16 months, a well-formed boy; his head was very small, measuring only 16¾ inches in its greatest circumference, and it was flattened from behind forwards, the hinder part being flush with the back of the neck. From front to back the head measured only 5⅛ inches, and from side to side 4½ inches, which was near the normal. He could not speak, nor could he sit owing to muscular rigidity of the lower limbs; this rigidity was also present, but to a less extent, in the upper limbs. Intelligence was very small. He was the firstborn of young, healthy parents, father and mother being 24 and 18 years of age respectively; forceps were used and chloroform administered at the birth. When 9 months old he suffered from fits for three days, being unconscious throughout one day and a night. On December 29th, 1896, linear craniectomy was performed on the right side, the idea being to make an artificial lambdoid suture. Recovery was uneventful and complete, and the operation was followed by marked diminution in the rigidity of the muscles of both upper and lower limbs; the boy became interested in all around him, and for the first time in his life showed a desire to play with toys. On January 12th, 1897, the opposite half of the artificial lambdoid suture was made. Infection of the wound followed, and septic meningitis supervened and produced death in five days. The brain was not only ill-developed, but it showed signs of disease affecting the cerebrum in more or less symmetrical patches. The skull was deformed, not from any disease or synostosis of its component parts, but merely from want of the natural stimulus that the enlarging brain gave to it. A summary and statistics of cases operated upon were given, and a list of the published cases operated upon in this country added. The conclusions were the following:—1. Congenital microcephalic idiots may be divided into two main classes (1) those with small ill-filled but not deformed skulls, and (2) those with small and deformed skulls. 2. In Class 1 the brain is at fault, being arrested in its development in an early period of embryonic life; in Class 2 there is in addition to arrested development of the brai evident disease of the cortex distributed in patches more or less symmetrically, the deformity of the skull being determined by the shape of the brain. 3. There is a hypothetical case in which the skull is prematurely synostosed and the enclosed brain more or less normal, but hitherto no evidence has been brought forward to show that such cases actually occur. 4. Craniectomy in all but the last-named (hypothetical) cases can be productive of no permanent good, as the original fault is in the cerebrum (or of the whole nervous system according to Giacomini) and not in the skull. 5. Where, however, there are symptoms such as general rigidity of the limbs, etc., which are in all probability due to irritation of the motor cortical centres, then operative interference (trephining or craniectomy) is likely not only to afford amelioration of the symptoms, but in some cases to lead to a substantial and even permanent improvement. 6. Hitherto the mortality from operations has been very high, but with experience it is likely that this will be materially reduced.

Mr. Warrington Haward thought this case a particularly interesting one, in that the necropsy showed the marked and primary nature of the changes in the brain; he therefore cordially endorsed the first four of the author's conclusions, but he did not agree with the fifth conclusion. All the cases he had seen had shown evidence of primary mental defect, and to operate on such cases would, he thought, tend to discredit cranial surgery.

Mr. E. Cotterell, in conjunction with Dr. W. W. Ord, had operated five years ago on a child, aged 19 months, who had apparently premature synostosis of the cranial bones. The child was now well and at a Board school. He had since operated on nine other cases, and in some improvement had taken place, especially with regard to the occurrence of fits and becoming more amenable to education. He did an extensive operation, turning down both parietal bones one at a time; this could be done practically without loss of blood if a tourniquet were employed. He had never met with hyperpyrexia of obscure origin after operation, such as had been observed by Mr. Victor Horsley. He admitted that craniectomy was useless if there was primary cerebral disease. He did not quite understand what was meant by an "ill-filled" skull.

Mr. Stanley Boyd had seen one case, a child, obviously an idiot, of between 2 and 3 years of age, with a long skull, and probably synostosis of the sagittal suture. There was general rigidity with flexion of the limbs. He trephined the skull, and then with Hoffmann's forceps cut round the skull rather low down, doing one side at the first operation, and the other side two weeks later. The cuts were joined anteriorly, but separated posteriorly by a small piece of bone. The roof of the skull was thus converted into a kind of valve. Although the periosteum was removed round the cut, bony union took place. The operation had not led to any appreciable improvement in the child's condition.

Dr. J. Griffiths, in reply, said that when there were obvious signs of cortical irritation operation might do good by acting as a counter-irritant. In addition it would prevent any further damage being done to the cortex by increased intracranial pressure.

Removal of the Entire Upper Extremity for Recurrent Carcinoma after Removal of the Breast.

Mr. Clinton T. Dent reported this case—S. T., aged 53. In December, 1894, the left breast was removed for a hard carcinoma first noticed two years previously. The axillary glands, which were affected, were also freely removed. In September, 1896, a recurrent nodule was removed from the neighbourhood of the cicatrix. Examination proved the growth to be a columnar-celled carcinoma (duct cancer), but showing transitional changes to the spheroidal-celled variety. The patient (age now 56) was readmitted into St. George's Hospital in October, 1897, with recurrent ulcerating growth high up in axilla. The arm was much swollen and the pain severe. On October 22nd, 1897, the arm, scapula, and outer two-thirds of the clavicle were removed by the method, save in a few details, advocated by M. Paul Berger. The subclavian artery, with its scapular branches and the

subclavian vein, were tied after removal of part of the clavicle. The hæmorrhage did not amount to more than two or three ounces, and there was no shock. The precautions advisable to obviate hæmorrhage and shock were discussed. The wound healed readily, and the patient left for a convalescent home on the twenty-sixth day after the operation, which had given great relief. An account of the dissection of the limb and of the microscopic appearances of the growth was given. The growth encircled the axillary artery and vein and the main nerve trunks. The coracoid process was replaced by growth. All the diseased parts appeared to have been removed. The free recurrence of duct cancer in this case and the rarity of secondary growths of this nature invading bone were commented on. This case appeared to be the fourth in which the operation had been performed for disease of the same nature. Suggestions were made as to certain details in the operation. The conditions in cases of recurrent carcinoma were contrasted with those met with in malignant tumours (sarcoma, chondroma, etc.) involving the bones about the shoulder, and the operation in the former was shown to be far less serious. Amputation at the shoulder joint as a method of treatment was alluded to. The propriety of advising removal of the entire upper extremity in suitable cases (likely to be very rare) of recurrent carcinoma after removal of breast was discussed. Favourable indications for this method of treatment were considered to be: (1) Previous removal of the breast with dissection of all the lymphoid tissue and fascia off the pectoral muscle. (2) Slow growth of the original tumour. (3) Slow growth of the recurrent disease. (4) Microscopic evidence that the carcinoma was of the columnar-celled variety. (5) Limitation of the recurrent growth. (6) The certainty of relieving pain. The contra-indications were also discussed. Tables of cases in which the operation had been performed (*a*) for recurrent circinoma, and (*b*) for other conditions, were given.

Mr. A. Willett hoped that as a result of this valuable paper more attention would be paid to these cases. On two occasions he had wished to perform the operation, but the patients had declined, possibly because he had not felt justified in urging such an extensive operation. He was sorry now that he had not done it, as he felt sure such an operation was in the best interests of the patients. He cordially agreed that the argument of the operation being a mutilation was not valid.

Mr. Stanley Boyd said this paper indicated that considerable caution was necessary in criticising adversely extensive operations. He had never seen or performed the operation in the living subject, but in following out Professor Berger's directions on the dead subject it had seemed to him that the skin covering was inadequate.

Mr. C. T. Dent, in reply, said that he had not performed Berger's operation exactly, and he thought the posterior flap would not, if the original directions had been followed, have been sufficient. Most of Berger's operations had been for large tumours, where, the skin being considerably stretched, a sufficiency was forthcoming. In this case union had been satisfactory. At the present time, the patient was ill and the liver, which at the time of the operation appeared normal, was much enlarged, and though no definite nodules could be felt, this was probably due to secondary growths. There was no local recurrence in the scar. Still, he was glad that the operation had been performed, as it had brought great relief from pain, and for this reason he would do it again, even if recurrence was certain.

HARVEIAN SOCIETY OF LONDON.

Clinical Evening.

J. F. Goodhart, M.D., President, in the Chair.

Thursday, March 3rd, 1898.

False Abdominal Tumour.

Dr. G. A. Sutherland showed a boy, aged 6 years, with a false abdominal tumour. After an attack of measles three years previously a bulging was observed on the left side of the abdomen below the ribs, which under the influence of coughing or straining became as large as a cocoanut. There were no special symptoms associated with the swelling, and no history of any local trouble. The child had suffered from severe rickets, with considerable deformity of the long bones and spine. He considered the swelling to be dependent on some congenital muscular defect in the abdominal wall which led to a hernial protrusion on straining.

Dr. James Taylor said that he thought most members would agree with Dr. Sutherland's view that the case was one of congenital absence of certain abdominal muscles. He could not, however, agree with Dr. Sutherland in regarding the lateral curvature as the result of rickets. He thought it much more likely to be due to the muscular inequality. The case he thought was probably analogous to cases which had been published in which there was congenital absence of a pectoral muscle.

Mr. Jackson Clarke agreed with Dr. Taylor that the muscular defect had determined the development of lateral curvature in this case, but the rickety softening of the bones, as shown by the marked knock-knees, would also aid in producing the deviation of the vertebræ. In cases of lateral curvature due to paralysis or to rickets, whether singly or combined, the use of a light and effective spinal support was imperative.

Double Congenital Club Foot.

Mr. Jackson Clarke showed a child under treatment for double congenital club foot. The general condition of the child was of interest, in that it afforded an example of stunted growth of a not uncommon type. In the treatment of congenital club foot in infancy Mr. Clarke had found that malleable metal splints gave better results than those of plaster of paris.

Dr. Leonard Guthrie thought the child presented a cretinoid appearance, although not typically myxœdematous. Thyroid extract might be worth giving in the case.

Dr. Sutherland thought that, taking into account the mental condition and the physical changes, the patient was probably a congenital imbecile of the Mongolian type, and that thyroid treatment was not likely to improve the condition.

The President agreed with Dr. Sutherland.

Hiatus Vesicæ with Epispadias.

Mr. Edmund Owen showed a boy of 12 years, who was born with the anterior wall of the bladder, from umbilicus to pubes, deficient. The pubes were absent, and the penis was cleft into the urethra through the entire length of the roof. When admitted to the Children's Hospital the boy had long hair, and was wearing petticoats. When exhibited, the bladder was entirely covered in except at one side, where the urine escaped through a small opening, and there was no trace of scrotum or penis. Mr. Owen had begun the operation by turning down a large flap from the epigastric region, and laying it, with the raw side upwards, over the tender bladder. He had then brought up the scrotum as a wide bridge, having freed it by transverse incisions made in front and behind it. The raw surface of the scrotal bridge he had laid upon the raw surface of the turned down flap. He removed the testes. The flaps united well, and in due course he covered in the gap left underneath the scrotal bridge by trimming its lower border, and uniting to it the face border of the prepuce, which, having vivified, he had turned upwards with the penis. After the various operations, the boy had for several days been kept in a warm boracic bath. The bladder was so entirely and completely covered in that a certain amount of urine remained in the new reservoir, which, constantly undergoing decomposition and depositing phosphates, was rendering the boy's existence extremely unhappy. The operation, in fact, had been so successful that the result proved disappointing, and Mr. Owen almost regretted that he had done it.

Dr. Ewart said the condition suggested the possibility that the prone posture might be of service in keeping the parts dry through an opening suitably placed in the middle line. The introduction of a seton to soak up and remove the urine as it trickled into the artificial bladder might do something towards alleviating the trouble.

Ischæmic Paralysis following Fracture.

Mr. Raymond Johnson brought forward the case of a boy, 8 years of age, who developed extreme contraction of the wrist and fingers after fracture of the lower extremity of the

humerus. The fracture had been treated with wooden splints, which, as the result of undue pressure, had produced a sore on the front of the forearm. An exploratory operation had shown that the condition of the limb was not dependent upon any damage to the nerves at the seat of fracture, and the case was regarded as an example of Volkmann's "ischæmic paralysis." The paralysis and contracture, especially affecting the flexor muscles, were dependent upon inflammation and subsequent fibrous degeneration of the muscles caused by the application of splints sufficiently tightly to seriously interfere with the circulation through the part. Some slight degree of contractility still remained in the affected muscles, and in order to relax the contracted tendons a short piece was excised from the middle of the shafts of the radius and ulna. The effect on the contracted wrist and fingers was satisfactory, but unfortunately the divided bones had repaired only by fibrous tissue, and a leather splint was necessary to give strength to the limb.

Mr. Owen had met with three cases of this sort, and he was inclined to regard them as incurable. So far as his experience went the condition occurred only in children, and whether or not it was the result of tight bandaging, it was, so far as he knew, always associated with a gangrenous or ulcerated patch upon the skin where the splints had unduly pressed. He gave particulars of a boy who had come under his care from Birmingham with his fingers and wrist firmly flexed and useless. There was little or no impairment of sensation. The fracture had been in the upper part of the forearm, and the mother said that when the splints were removed there was a sore place. Mr. Owen cut down upon the median nerve, but found it healthy; the flexor muscles, however, were in a condition of fibrous degeneration, as if the result of antecedent inflammation. Eventually he divided the flexor tendons with, as might be expected, a very imperfect result. He thought that resection of part of the radius and ulna was best calculated to improve the condition, though, as Mr. Johnson had remarked, the surgeon must be prepared for the occurrence of subsequent non-union.

Double-Headed Monster.

Dr. Owen Fowler showed a very rare variety of double-headed monster. This specimen had two heads and two necks, two normal arms, and an additional arm springing from where the necks diverged. This arm had at its extremity a double hand, with fingers partly fused together. There was no anus but a double penis, the second being small, and placed on the front surface of the scrotum. The legs were normal, the spine double, the body broad. The mother was a primipara, aged 28. A foot presented, the breech was brought down, and, except for a certain amount of traction to bring the head through the brim of pelvis, the labour was normal. No signs of life in the child. Mother made a good recovery. No family history of twins or anything else to account for this freak of Nature.

OBSTETRICAL SOCIETY OF LONDON.

Charles J. Cullingworth, M.D., President, in the Chair.

Wednesday, March 2nd, 1898.

Intermenstrual Pain (Mittelschmerz).

Dr. Addinsell read a paper on this subject. Having alluded to the paper by Sir William Priestley on Intermenstrual Dysmenorrhœa, he said the present paper was based on cases the chief characteristic of which was pain varying in intensity, referred to the ovarian region, and recurring with marked regularity fourteen days after the normal menstrual period. Case I: The patient was aged 29, unmarried, anæmic; she complained of great pain in the hypogastric region extending over the whole of the lower abdomen, the pain occurring regularly on the twelfth to the fourteenth day after the normal period. There were erosions of the os, anteflexion of the uterus, and an elongated swelling in the left broad ligament, which disappeared after the passage of thin watery discharge. The *Mittelschmerz* was not benefited by curetting. Case II: The patient was aged 31, unmarried, and suffered from constipation. The *Mittelschmerz* occurred on the fourteenth day and lasted two to three days. The uterus contained fibroids, and the left Fallopian tube was thickened. Oöphorectomy was performed, and the patient had had no pain or period since. Case III: The patient was aged 28. She complained of pain in the left ovarian region twelve or thirteen days after her period; menstruation was normal. She had passed clear watery fluid during the attack of pain. The uterus (retroflexed) contained fibroids. There was a soft elastic swelling in the left broad ligament. Case IV: The patient was 33 years of age. She had "middle pain" sometimes, and complained of discharge of clear fluid, after which the pain was lessened. The author remarked that in Croom's and Priestley's cases and his own there had been a fulness or a distinct swelling in the broad ligament which had been the seat of pain. After considering the views held as to the causation of the "middle pain," the author concluded that it was due to a painful effort on the part of the tube to expel its contents.

Dr. Herman preferred the designation "intermediate monthly pain" to "middle pain." He had found that the date of its recurrence varied. He was accustomed to accept the explanation put forward by Sir William Priestley, that it was due to monthly recurring painful ovulation. In most, but not all, of the cases he had seen there were signs of old inflammation of the uterine appendages. Adhesions offered a ready explanation of why the ovulation was painful.

Dr. Amand Routh saw no difficulty in explaining this intermenstrual pain if once it could be assumed that in certain cases there was an intermenstrual cycle as well as a menstrual one. The increased tension of the local lesion would give rise to the pain.

Mr. Bland Sutton remarked that he had long held the view that fluid distensions of the tubes did not discharge themselves into the uterus, and the old notions of intermitting hydrosalpinx and pyosalpinx were not sustained by reliable evidence.

Dr. Boxall was of opinion that they were far from being able to fix the cause of intermenstrual pain on any one pelvic lesion. He had seen a case in which there was throughout no sign of tubal disease. The patient became pregnant but miscarried, and afterwards, though she had a fibroid, she had little or no intermenstrual pain.

Dr. Heywood Smith considered that the disease was associated with intermittent tubal hydrorrhœa.

Dr. Arthur Giles thought that if a condition of intermittent hydrosalpinx were present, swelling of the mucosa during menstruation might lead to temporary occlusion of the uterine ostia of the tubes, and this to accumulation of fluid, which after some days would cause pain.

Dr. Ewen Maclean thought it possible that some of these cases might be regarded as an attempt at double menstruation.

The President said that it was evident that the cause of the phenomena was still far from understood; none of the theories put forward appeared satisfactory. Tubal distension with escape of the contents through the uterine end if it ever occurred must be an event of extreme rarity. An examination of the author's table did not seem to warrant the statement that "in nearly all the cases a tubal lesion was present," for in only 3 out of the 13 cases were the tubes known to be diseased. Watery discharges should not readily be regarded as having any pathological significance. He had known urine and even bath water pent up in the vagina mistaken for pathological discharges.

Dr. Addinsell, in reply, stated that he had satisfied himself that in his cases a swelling existed and disappeared after the copious discharge of clear mucus accompanied by pain.

Specimens.

The following specimens were shown:—Deciduoma Malignum by Mr. Targett for Dr. Hillier.—Uterine Fibroid with Pregnancy by Dr. William Duncan.—Double Pyosalpinx with enormous Distension of Tubes by Dr. C. H. Roberts.—Fibro-myoma of Vagina by Dr. John Phillips.—Broad Ligament Myoma by Dr. Maclean.—Cystic Intra-ligamentous Myoma with Double Uterus by Dr. Gow.—A Two-headed Monster by Dr. Owen Fowler.—Double Ovarian Dermoids by Dr. Rivers Pollock.

The Sultan has conferred the decoration of the Osmanieh in brilliants on his physician, Ismet Pasha.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Wm. V. Snow, M.D., President, in the Chair.

Wednesday, March 2nd, 1898.

Baths and Exercise in Heart Disease.

Dr. A. E. Sansom, in resuming the discussion on the Treatment of Affections of the Heart and the Circulation by Baths, Exercises, and Climate, which was opened by Dr. Hyde (Buxton) and Dr. George Oliver (Harrogate) on January 28th, said he believed that the effervescent character of the water employed at such places as Nauheim had some therapeutic effect—probably agreeably stimulating the sensory nerve terminals of the skin. Stokes of Dublin was the first (1854) to call attention to the value of muscular exercises in the treatment of heart disease. Systematised muscular exercise was undoubtedly of great value in the treatment of disorders of the circulatory mechanism. He thought the effect of exercise of the voluntary muscles was an accumulation of blood in the vessels supplying these muscles and a corresponding relief of congested areas, there being in some degree a derivation from the engorged veins and the right chambers of the heart. With Dr. George Oliver's view that during muscular exercise a rapid fluid transfer through the capillary walls into the lymphatic and interstitial spaces occurred, he was in complete accord. There was too much disposition, in questions of cardiac pathology, to ignore the great lymphatic circulation. The tendency to danger, even of overstrain, had been greatly exaggerated; the effects of physical stress upon the heart being promptly counteracted by equilibrating machinery. Not physical strain but the concurrence of physical with nervous overstrain constituted much of the danger. He advocated the combination of exercises and baths. Speaking of the estimation of therapeutic effects, Dr. Sansom described the cases presenting themselves for treatment as coming for the most part under the categories of (1) failing compensation in structural diseases of the heart valves; (2) dilatation of the heart and failing myocardium, including fatty infiltration, without evidence of valvular disease; (3) cardio-arterial disease, especially associated with morbid condition of the kidney; (4) disorders of nervous origin. All adverse signs might pass away without the adoption of the bath *plus* exercise treatment, while nervous complications might aggravate, and even induce, without organic changes, all the signs and symptoms. Dealing with physical evidence of enlargement of the heart, he said many of the outlines purporting to be those of the heart before and after Nauheim treatment were the results of a fallacious plan of physical examination, and did not accurately represent the size and position of the heart. Moreover, the heart varied in volume under so many different conditions, that to attribute its diminution to any given plan of treatment was not strictly justifiable. Disorders of the vagus and of the nervous mechanism of the heart had been too much overlooked as causes of dilatation of the heart chambers. He considered sphygmographic evidence of little value in demonstrating the success of any treatment. As for climate, whether a given patient were sent to a British or a Continental health resort was a *question de milieu*: but wherever the treatment was carried out, all the surroundings should be those of hope and cheerfulness, so that they should not have to deal with that most miserable of mortals—a cardiac hypochondriac.

Professor Clifford Allbutt said his study of the literature of the subject had produced much the same effect upon him as upon Dr. Sansom, and he had not therefore urged his patients to take advantage of these methods with the same freedom with which he should otherwise have done. It was to be regretted that diagrams had been published of conditions of the heart which could not in any possible way be arrived at. He believed the expansion of the lungs, in the production of which exercises were so largely concerned, to be an exceedingly important factor in reducing the venous, and thereby indirectly raising the arterial blood pressure. He thought there was a great want, in clinical medicine, of proper distinction between tone and tension. A heart could not possibly be improved without increasing blood pressure. They were apt to think that all blood pressure was peripheral. It depended, however, on the heart itself. If the heart was dilated and slack, the blood pressure would fall; on the contrary, it was raised if the tone were improved.

Dr. Heron thought it a matter of perfect indifference whether the bath water were supplied at a German spa or by the Middlesex Water Company, and that if the patient's skin were kept clean all the good purpose served by baths would be attained. He deprecated the tendency to create a professoriate of gymnastics in connection with the treatment of heart disease, believing that devotion to games had much better be cultivated than devotion to special gymnastics.

Dr. Harry Campbell considered muscular exercise infinitely the most valuable stimulant of the heart. A large amount of blood was determined towards the muscular system, a small amount of blood leaving the muscles in proportion to the exalted cardiac action. The venous right side of the heart was thus relieved. The contraction of the abdominal muscles, moreover, tended to diminish the flow of blood into the right heart. He suggested that the same results followed from the cold bath which produced a tonic contraction of all the muscles of the body. Respiratory exercises, too, by increasing the vascular area of the lungs, diminished the resistance to the flow of blood from the right side of the heart.

Dr. Bezly Thorne showed cardiagrams and said the attitude adopted by Dr. Sansom and others with reference to diagrams of the area of dulness and to sphygmograms might as well be taken up with respect to the thermometer, which had been equally abused. By a practice of delineating the results of percussion and preserving sphygmograms daily instruction was gained. He had sphygmographic tracings periodically taken by nurses trained by himself to take them, and he maintained that, with sufficient training and education of their powers of observation, their delicacy of touch and constant practice enabled them to produce sphygmograms with a reliability which he was prepared to pit against the skill and proficiency of any member of that Society.

The discussion was continued by Dr. Shirley Jones (Droitwich), Dr. Kingscote, Dr. Fortescue Fox, Dr. Louis Blanc (Aix-les-Bains), Dr. Black Jones (Llangammarch), Dr. C. W. Chapman, Dr. Andrew Myrtle (Harrogate), and the President; and Dr. Hyde (Buxton) replied.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

James Carmichael, M.D., President, in the Chair.

Wednesday, March 2nd, 1898.

Patients.

Dr. George Gibson and Mr. James B. Hodsdon showed a patient after operation for a Perforated Gastric Ulcer.—Dr. Norman Walker showed a case of Lichen Scrofulosorum.—Professor Annandale showed a man on whom he had operated for Dislocation Backwards of the Head of the Humerus, of old standing. When the joint was exposed it was found that the glenoid cavity had been fractured, and, as the head of the humerus could not be replaced satisfactorily, it was excised, and a good movable joint had resulted. Attention was directed to the incision which had been employed in this and other cases. This incision commenced at the junction of the middle and outer third of the clavicle, and a little below it, and was carried outwards to the posterior tip of the acromion process. In this incision the clavicular attachments of the deltoid muscle were divided, and a second incision being carried down the anterior aspect of the muscle, the muscle itself was turned downwards and outwards, and so gave free access to the affected parts. This incision had also the advantage that it did not interfere with the principal vessels and nerves which entered the muscle.—Mr. Harold J. Stiles showed: (1) a child, aged 1 year and 8 months, with a Right-sided Congenital Inguinal Hernia, in which the vermiform appendix could be distinctly felt by external manipulation through the scrotum. (2) A delicate child, aged 1 year and 8 months, with an ordinary Double Hydrocele, above which, on both sides, was what at first sight appeared to be a funicular hernia, but which was found on further examination to be a funicular hydrocele with a wide abdominal communication. The child's abdomen, which was very prominent, contained a considerable amount of fluid, and the case was no doubt one of tuberculous peritonitis, in

which the fluid had gravitated into the patent funicular peritoneal processes. (3) A child, aged 3½ years, presenting all the typical features of Congenital Dislocation of the Left Hip. As usual, nothing abnormal was noticed until the child began to walk.

Specimens.

Professor Annandale showed: (1) Parts from a Congenital Hernia in the Sac (tunica vaginalis), of which there was a patent Meckel's diverticulum measuring nearly 5 inches in length. This diverticulum was closed at its lower end, and was adherent to the testicle, so it was thought best to remove the tunica vaginalis, testicle, and diverticulum. The latter having been cut across about half an inch from the intestine, its open end was carefully stitched by two layers of Lembert's suture. The patient, a boy, aged 3, had made a good recovery. (2) An Appendix which, with a portion of the cæcum, was found attached to the anterior surface of the right lobe of the linea, the case evidently being one in which the embryonic position of the cæcum had remained persistent. (3) A Pedunculated Papilloma the size of a walnut, removed by suprapubic cystotomy from the bladder of a male patient. (4) Parts removed by excision from an old-standing Injury to the Elbow-joint. The joint was firmly ankylosed, and useless on account of the position of the arm. The principal injury had been a fracture through the upper end of the radius, and a large mass of callus had been thrown out, uniting this bone to the external condyle of the humerus. (5) Parts removed by operation from a Ruptured Tubal Pregnancy. The patient, who was supposed to be about six weeks pregnant, was suddenly seized with severe abdominal pain, and shortly after became collapsed. When admitted to the infirmary she was much collapsed, and the abdomen was swollen and tender. The abdomen was opened without delay, and was found to be full of extravasated blood fluid and in clots; the omentum was also infiltrated with blood. The clots having been rapidly cleared away, the uterus was felt for and found to be normal. The fingers were then passed from the uterus along, first, the right tube and ovary, which also were normal, and then along the left. A dilatation the size of a small orange was felt in the left tube, and, on drawing it forward to the hand, a rupture was seen in this dilated portion, and through it the transparent membranes, as yet whole, projected; behind the membranes could be seen floating in clear fluid a small fœtus about half an inch in length. A ligature having been passed round the tube on the uterine side of the rupture, the dilated portion, membrane, fœtus, and ovary were removed. The peritoneal cavity was then thoroughly washed out with warm boracic lotion, and a glass drainage tube introduced. The tube was removed upon the third day, and the patient had made a good recovery. (6) A large number of Seed-like Bodies removed from a Bursa under the anterior surface of the deltoid muscle.—Mr. Alexis Thomson showed: (1) a specimen illustrative of Arrested Development of the Colon; (2) the Intestines from a case of Obstruction of the Bowel, dating from birth, in which temporary relief was afforded by Enterostomy.—Dr. G. Gibson showing a drawing of Choroiditis in Waxy Disease.

The Various Forms of Cirrhosis of the Liver.

Dr. Alexander James read a paper on this subject. After alluding to the typical forms of hypertrophic and atrophic cirrhosis, he described a number of transitional forms. These had begun with jaundice and enlargement of the organ, and had ended in diminution of size with development of ascites and enlargement of the spleen. He next referred to cases of cirrhosis where that condition had apparently proceeded from cicatricial tissue, developed in connection with the exterior or interior of the liver. The question was then asked, How was it that as the result of some irritant an overgrowth of fibrous tissue, with a relative disappearance of parenchyma, occurred? To illustrate this, the conditions found in acute yellow atrophy were described and an analogy drawn between acute yellow atrophy and liver cirrhosis. It was held that in these two pathological conditions the process was the same, the difference being only of degree due to differences in the severity of the irritant. In the most acute forms of acute yellow atrophy the disintegration of the liver cells took place so quickly that the patient died before any overgrowth of the connective tissue could occur. In the less acute forms time was given for an overgrowth of fibrous tissue to occur to a slight extent. In the different forms of cirrhosis of the liver, on the other hand, the irritant acted much less severely, so that *pari passu* with the disappearance of liver cells there occurred increase in the connective tissue. A similar interference with the normal conditions of growth development and reproduction would, he held, account for the production of cancerous tissue in the liver in cases of cancerous cirrhosis.

The paper was spoken to by Drs. Muir and Russell and Mr. Cotterill, and Dr. James replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Anatomy and Physiology.

D. J. Coffey, M.D., President, in the Chair.

Friday, February 4th, 1898.

Exhibits.

Professor Fraser showed (1) a specimen of Left Superior Cava; (2) a Heart in which a large hepatic vein opened into the coronary sinus; (3) Cervical Ribs; and (4) microscopic specimens showing a "Pressure Pouch" in a sheep embryo.—Dr. H. C. Tweedy exhibited a boy with a Supernumerary Digit attached to his right thumb.—Dr. R. Travers Smith exhibited a man aged over 50 years, with Complete Absence of both Pectoral Muscles on the right side.

The Teaching of Histology.

The President, after some introductory remarks, said he thought it was the experience of most teachers of histology that a few months after the student had gone through his practical classes and lectures in this subject, in the great majority of cases he was quite incapable of making anything like a complete preparation of a tissue or organ for microscopic examination. He had forgotten what had been described to him of the technique of fixing, hardening, embedding, etc., because he had never practised these processes for himself. He had been taught histology rather as an adjunct to anatomy, and not at all as a practical method of study and investigation. He had left the laboratory stored with valuable information indeed, but devoid of a practical knowledge, which could be of the greatest use and interest to him in the study of pathology, or in application to many branches of biological science. Again, the value of microscopic methods in teaching physiological chemistry was lost sight of. Without attempting anything like a course of micro-chemistry, a properly systematised course of histology would obviously include, in the study of the action of the ordinary reagents, so many chemical demonstrations as to make the course a valuable help in teaching and learning physiological chemistry. It seemed most desirable that the histological teaching should be so conducted as to make it more useful on the physiological side, as well as thoroughly practical, so that the student would leave the laboratory equipped with something more than information—namely, a method of investigation. How could this be done? By extending the present course a little, and devoting, say, one-third of the whole to the study of the cell. Using the magnificent material available in almost all arthropod animals for a complete demonstration—first, of structure and of the action of the various reagents employed in fixing, hardening, etc., then of staining methods which would naturally be followed in investigating cell structure—students would be taken over the whole field of histological technique, and incidentally made acquainted with the methods and results of micro-chemistry. Histology would be taught in the rational way, beginning, so to speak, with its alphabet, and the gain to the student from all points of view would well be worth the additional labour—not very great—which it might impose on him.

Professor W. H. Thompson thought that it was the duty of the zoologist and botanist to teach the students cytology, and pass them on to the teachers of histology to be taught human histology.

Professor Fraser had no doubt that the teaching of the subject would remain in possession of the histologist, and would not be undertaken by the anatomist, botanist, or zoologist. With regard to adding on to the ordinary histological course a cytological one as well, and asking students in a short time to know so many subjects, and conduct what

would practically be more or less original investigation in histology, he was afraid that the ordinary student had not the time or the opportunity to do those things.

Professor McWeeney said that for students who did not take out a course of biology what he would urge was an attempt on the part of the teacher of histology to secure, by the better fixation of the tissues, a more accurate idea for the student of the real structure of cells, and, by higher microscopic powers, to get him to understand better what were the component parts of a cell. He would also suggest that the sections be cut of extreme thinness, and that the principles of staining be explained to the student. As regards the study of karyokinesis, pieces of embryonic organs taken at the proper time, and fixed in Flemming's or Hermann's solutions, would probably show the student almost every stage of mitosis.

Professor Scott said that no doubt all these subjects were of considerable importance, but there was only a short three months to get through the organs of the body under the present conditions. If the course were extended he was afraid that they would have more than it was possible to do in the time.

Professor J. M. Purser said that some speakers spoke about how students should be taught the structure and the constitution of the cell, but he did not think that anyone present would venture to say what was the structure of a cell. Fixing and staining methods were very difficult, and for these and other reasons he thought that to begin with cytology would be to begin at the wrong end.

The President, in reply, said that what he did suggest, and still believed possible, was that a portion—and that a very large portion—of the present histological course might be devoted to the study of the various histological methods, applying them to the cell, not taking the study of the cell in any other sense than to utilise it to teach the student methods; and in this way sufficient interest and knowledge would be gained to enable students afterwards to follow histological subjects for themselves. Let them have a sufficient knowledge of method, and of the meaning of method, and with that he thought students would have learnt a good deal of physiological chemistry.

The Effects of Peptones and Albumoses on the Kidney.

Professor W. H. Thompson presented a preliminary communication dealing with the influence of peptones and albumoses on the kidney when injected into the circulation. The following was a summary of the results at which he had arrived: 1. These substances do not exert so great an influence on the walls of the kidney blood vessels as they do on those of other splanchnic blood vessels. 2. They cause a marked increase in the secretion of urine, the maximum occurring during the second hour after injection. 3. The urine secreted is dilute, its percentage of urea and total nitrogen being diminished. 4. The total amount of urea and nitrogen is notwithstanding considerably increased. 5. Part of the peptone (or albumose) is excreted during the first hour after injection, but the greater part appears to be retained. The amount so retained, however, is not sufficient to supply enough nitrogen for the increased output of urea and other nitrogenous compounds.

Remarks were made by Professor Purser, who thought that the increased secretion of urine was due to a specific action of the peptones on the cells of the kidney, and, if so, one would suppose that more of the peptone ought to undergo secretion than had actually been the case, for it appeared that the excretion of peptone was completed in the second hour. It was clear that this substance must act chiefly on the blood vessels of the intestine, and there must be a great difference in the structure of the blood vessels of the intestine and the blood vessels of the kidney if the apparatus in the kidney was so slightly affected by the peptones, whereas the tone of the vessels in the intestines was so completely changed. This, he said, was a very interesting point as to the relation between one kind of blood vessel and another.

The Larynx in Marsupials, Cranio cerebral Topography, etc.

Professor J. Symington (*a*) described the peculiarities of the larynx in certain marsupials; (*b*) exhibited a series of scapulæ to show the mode of ossification of its coracoid elements, and discussed their morphological significance; and (*c*) gave details of a method he had adopted for demonstrating the relation of the skin and skull to both the external surface and the interior of the brain. The paper was illustrated by specimens and a series of photographs.

Professor Cunningham thought that the specimens which Professor Symington had shown were probably the most beautiful specimens of cranio-cerebral topography he had ever seen. Professor Symington was perfectly right in saying that the surface should always be combined with the interior, and by his method he was able to do this. Formalin was of enormous help in such work.

LIVERPOOL MEDICAL INSTITUTION.

W. Macfie Campbell, M.D., President, in the Chair.

Thursday, March 3rd, 1898.

Excision of Strangulated Inguinal Hernia.

Dr. Rawdon related two cases of inguinal hernia in which the strangulated bowel was excised and Murphy's button used with complete success. In the first case the bowel was so rotten that it gave way during a careful attempt to reduce it. The patient made a good recovery; the button had not yet been seen. In the second case the bowel was on the verge of gangrene. The button was passed on the twenty-first day.

Dr. Holland exhibited a radiograph demonstrating the position of the button four days before it came away.

Mr. Banks, Dr. Alexander, Mr. Puzey, and the President made remarks.

Friedreich's Disease.

Dr. T. R. Glynn showed a patient suffering from Friedreich's disease in whom apparently it was not hereditary.

Drs. Bradshaw and A. Davidson spoke.

Hydatid Cyst of Thigh.

Mr. Banks showed a hydatid cyst filled with daughter cysts removed from the adductor muscles of the thigh of a boy, aged 13, from Rhyl, North Wales. It had been present seven years, recently enlarging rapidly. He had noticed that many cases of hydatid disease came from North Wales.

Tuberculosis of Iris.

Mr. Richard Williams showed a case of tuberculosis of the iris in both eyes of a girl, aged 13, with a very tuberculous history. The case will be reported later after the patient has been subjected to the tuberculin treatment.

Mr. Shears spoke.

Treatment of Club Foot.

Mr. R. W. Murray read a note on the treatment of congenital club foot and brought forward a series of cases which had been operated upon during the last seven years. In infants he advocated subcutaneous division down to and including the calcaneo-scaphoid capsule, and at once overcorrecting the deformity and fixing the foot in plaster of paris. In children who had learnt to walk he removed a wedge of bone, irrespective of bones or joints, large enough to allow immediate correction. He had operated on fifty-one feet.

Mr. Banks thought wrenching in very young children sufficient, with judicious after-treatment, and he was in favour of removing the head of the astragalus in older cases.

Mr. Newbolt strongly advocated the wrench in nearly all cases of club foot. There was no risk, no loss of mobility, no shortening of the foot, and no scars by this method. The principles of the treatment ought to be thoroughly understood and continued from time to time until cure resulted.

Mr. Damer Harrisson and Dr. A. Macleod Ross spoke.

The New Tuberculin in Phthisis.

Dr. Abram read notes on a case of phthisis treated by tuberculin T.R.

Dr. Logan gave particulars of two cases. The first was treated with the old tuberculin in 1891. The lady, aged 35, being still free from bacilli. The second case was treated with the new tuberculin, and was now almost free from bacilli and much improved in health.

Dr. BUCHANAN thought very few cases of phthisis were cases of pure infection with tubercle, and questioned the science and logic of the treatment. Results hitherto published were not encouraging.

Drs. MACALISTER, GRÜNBAUM, and RAW joined in the discussion.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting on February 9th, Mr. H. T. BUTLIN, President, in the chair, Dr. PATERSON showed specimens and photographs of the Supratonsillar Fossa. The space which was met with in the majority of individuals was situated behind the anterior palatal fold in its upper part, and had been erroneously looked upon as an enlarged tonsillar crypt. His regarded it as the remains of the second visceral cleft. In two cases the exhibitor observed it as the starting-point of malignant disease, and its importance was increased by the fact of its being frequently the seat of infection in certain forms of disease. Dr. Paterson also showed a specimen of Papilloma of Tonsil obtained from a boy aged 10. It gave rise to no symptoms. Although situated on the anterior and inner aspect of the tonsil, it did not grow from that gland, but sprang from the plica triangularis, which was well marked.—Dr. LAMBERT LACK showed a new Snare for Throat and Nose Work.—Mr. WAGGETT showed a middle-aged woman with an eight years' history of Left Antral Empyema, during which time she had practised daily irrigation through a tube in the alveolus. He performed Luc's operation, making a large opening through the canine fossa, removing entirely the polypi and the thick purple papillated lining of the cavity, which was cleared until the white bone was laid bare throughout. The muco-periosteum was sutured over the canine fossa wound, which healed firmly. The drain tube into the bone was removed on the third day. No reaction followed the operation. From the day of operation, five weeks ago, no pus had been secreted in the cauity. Several speakers pointed out that an essentially similar operation had been described and practised in England before Luc published his cases.—Dr. WILLCOCKS showed a case of Immobility of the Right Cord, in a man, aged 70. There was no evidence of intrathoracic pressure of any kind. —Dr. HERBERT TILLEY showed a case of Early Epithelioma of the Cord in a man, aged 48. There was slight loss of movement on phonation.—Dr. WALKER DOWNIE showed a case of Primary Epithelioma of the Uvula, with two coloured drawings of the parts, and microscopic sections of the new growth. The patient was a man, aged 56. The whole of the uvula was removed under cocaine, the incisions going well into the soft palate. The surface was practically healed in four days, and now, at the end of six months, the man was in perfect health, and there was no evidence of recurrence.—Mr. LAKE showed a case of Interarytenoid Growth in a female. There were no subjective symptoms except loss of voice. The pieces shown were removed on February 3rd, 1898. Since then the patient had improved very much in her general condition.—Mr. SPENCER showed a Tumour which had occupied the upper epiglottis and superficially the base of the tongue. Under the microscope the growth was found to be a carcinoma. The tumour was taken from a man over 70, who complained of increasing difficulty in swallowing. His breathing had not troubled him, but his voice had become somewhat muffled. The lower part of the pharynx appeared to be completely filled by the tumour, which could be touched by the finger; but neither the opening of the larynx nor that of the œsophagus was visible. There was an enlarged superficial gland in the neck, which was breaking down, and was tense. Under an anæsthetic preliminary tracheotomy was at once done. Transverse subhyoid pharyngotomy was then done, the base of the epiglottis cut across, and the aryteno-epiglottidean folds divided. A pedicle was thus made, and the tumour was quickly removed by the galvanic *écraseur*. The wound in the pharynx was completely sewn up, the tracheotomy tube removed, and the broken-down gland in the neck incised, wiped out with a strong antiseptic, and the skin united. The patient did well until the fifth day, when some bronchitis started, and he died a week after the operation. There were no signs of pneumonia, either during life or *post mortem*. —Mr. STEPHEN PAGET showed a case of Epithelioma of the Left Vocal Cord in a man aged 43.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on March 1st, Miss COCK, M.D. (President), in the chair, after preliminary business, Miss KEITH, L.R.C.P. and S., showed an Intestinal Button of Decalcified Ivory, invented by Dr. Gil, of Malaga. The advantages claimed for it were rapidity of operation, sutures not being required, and complete digestion of the button, with no subsequent stenosis. The ivory was prepared in the same way as Professor Senn's bone plates.—Mrs. BOYD, M.D., read notes of two cases of intestinal obstruction necessitating intestinal suture. In the first case, where the uterus had been removed ten months previously for malignant disease of the cervix, obstruction was due to a mass of malignant iliac glands infiltrating the cæcum and lower end of the ileum. A lateral anastomosis was established between the ileum and transverse colon, junction being effected by a double line of suture, of which the deeper was completely buried. The patient recovered and did well, until some weeks later an abscess developed round about the malignant growth. In the second case the obstruction occurred within a month after abdominal section for a large multilocular ovarian cyst, and was due to strangulation of a coil of small bowel under a peritoneal band attached to the back of the pedicle. The bowel was sloughing at the line of constriction, and 8 inches lower down there was a second source of obstruction in an acute kink due to dense adhesion of walls of bowel. Eight inches of bowel were resected, and junction was effected by means of a Murphy's button. The patient did well except for a small collection of pus which developed beneath the abdominal scar in the third week. On opening this a trace of fæces escaped, but none came away after the first day. The button was passed on the twenty-eighth day.—Mrs. SCHARLIEB, M.D., M.S., read a short paper giving an account of her experience of the use of serumtherapy in septic cases, with a summary of the literature of the subject. The conclusion arrived at was that before statistics of value could be obtained there must be a greater uniformity than hitherto as regards dosage, time of administration, etc.

ULSTER MEDICAL SOCIETY.—At a meeting held on March 3rd, J. A. LINDSAY, M.D., President, in the chair, Professor THOMPSON gave a demonstration of his method of showing the effects of Peptone and Albumoses on the Kidney. —Professor SINCLAIR showed (*a*) a Subcutaneous Epithelial Tumour of the Neck, and (*b*) a Tumour of the Kidney.—Dr. LORRAIN SMITH showed a series of museum specimens preserved by the formalin method. The specimens thus preserved were not decolorised.—Dr. M'KISACK showed a series of microscopic specimens from a case of Malignant Stricture of the Intestines.—Dr. HOUSTON showed sections of a rare form of Epithelioma of the Skin.—Professor SYMINGTON showed a series of lantern slides illustrative of Craniocerebral Topography. -Dr. LORRAIN SMITH gave an account of his experiments on the Effects of Breathing Oxygen at High Pressure. The experiments now brought forward had been carried out with a view to discover the effects of oxygen at pressures lower than that which caused the strychnine effects. It was found that a pressure of oxygen as low as 130 per cent. of an atmosphere would in two to three days induce in mice a fatal pneumonia, and that if the pressure were higher than this the onset of the pneumonia was still more rapid. The pneumonic condition consisted in extreme congestion and exudation of a fluid into the alveoli and affected the whole of both lungs. It was found that for birds a pressure of three atmospheres of oxygen was sufficient to cause convulsions, whereas five atmospheres of pressure were required to produce this effect in mice. Birds normally showed a more active process of absorption than mice. Further experiments showed that by damaging the lungs of birds, and thereby reducing their power of actively absorbing the toxic effect of oxygen at three atmospheres pressure was abolished, but that this reappeared at five atmospheres. In reply to the PRESIDENT, Dr. LORRAIN SMITH said that he did not think that his experiments warranted any conclusion regarding the suitability of oxygen inhalation as a treatment in pneumonia.—Dr. CECIL SHAW read a paper giving the results of his research investigations regarding Sympathetic Ophthalmia.—Dr. TENNANT read a paper, illustrated by microscopic specimens, on local Necrosis

in Tumours. This occurred in both simple and malignant growths, and in those arising from every layer of the blastoderm. It gave rise to caseous areas which sometimes went on to liquefaction with production of cysts. There were several reasons against attributing this change to thrombosis or infarction, amongst others the progressive character of the degeneration, frequently showing necrosed and living cells side by side, and the fact that in some cases living blood vessels with apparently normal blood in them were observed both in tissues far advanced towards complete necrosis, and in others in which the necrosis was complete except in the vessel walls. An account was then given of the appearances in caseating areas of tuberculous tissue, showing that this lesion had a similarly progressive character, and exhibited the same changes in the nuclei as the tumour necrosis, and that the vascular conditions were the same in the two.—Professor Sinclair showed: (1) The Right Kidney, removed by abdominal nephrectomy, of a man, aged 54 years, affected with the so-called sarcoma of the kidney derived from "suprarenal rests." The patient sank from gangrene of the colon, and at the necropsy it was found that the other kidney showed a similar tumour about the size of a walnut sprouting from its cortex. (2) A remarkable Epitheliomatous Tumour, removed from the neck of a girl of 15 years. It was situated near the bifurcation of the carotid, and had been slowly growing for many years. It was oval, movable, and of almost stony hardness. There was no lymphatic glandular enlargement, nor had there ever been signs of inflammation. The removal was easy, and on section the interior showed the arrangement of cells met with in epithelial cancer. There were no "contents" such as one expected in dermoids. The opinion was expressed that, as it was situated at the third branchial cleft, it was probably epiblastic and congenital, and the prospects of the patient as regarded non-recurrence were probably excellent.

Manchester Therapeutical Society.—At a meeting on February 23rd, Professor Leech (President) in the chair, Professor Dreschfeld presented a communication on The Treatment of Gastric Ulcer by large doses of Bismuth. He pointed out the inconveniences and dangers of using the stomach tube in cases of gastric ulcer, and stated that he had obtained excellent results by giving large doses of bismuth by the mouth in cases where ordinary doses had not proved successful. Doses of 30 to 40, or even 50, grains of bismuth subnitrate were given three times a day suspended in water. Under these pain was rapidly relieved, vomiting ceased, digestion improved, allowing light nitrogenous foods, such as fish or fowl, to be given, and the ulcer quickly healed. In acid dyspepsia it rapidly relieved the symptoms. In neurasthenic conditions with symptoms resembling those of gastric ulcer it had also been of great service. Two cases of gastric ulcer, which were not relieved by large doses of bismuth given by the mouth, were cured by injecting the bismuth into the stomach after lavage. Several members took part in the discussion which followed.—Dr. Wild showed specimens of Diphtheria Antitoxin Serums, and compared the cost of the different preparations. The President stated that he was at first sceptical of the value of the antitoxin treatment, but a case in which a child of 18 months, with severe laryngeal symptoms, recovered under serum injections, convinced him that it had a powerful effect, as he had never seen a similar case in so young a child recover. Dr. Marsden said that at the Monsall Fever Hospital they used the serum of the British Institute of Preventive Medicine, injecting a dose of 3,000 units at once, except in children under 18 months, when they used a dose of 1,500 units. He had never seen any ill-effects from injecting the whole dose at once. Often there was no appreciable local effect by the end of 24 hours and even up to 36 hours after injection. By the end of 48 hours, however, the membrane was thinner or almost gone. The general effects of the antitoxin included relief of the throat symptoms, fall of temperature, and diminution of membrane. He thought it was desirable to inject antitoxin, even if the patient were not seen till the seventh or eighth day of the disease. He did not think antitoxin contributed materially to produce nephritis. The ill-effects which he had seen were troublesome rashes, but these were more frequent in the early days before the serum was supplied so concentrated. He had seen cellulitis occasionally at the site of injection, but in one instance only did this go on to suppuration. Dr. Dreschfeld said he had seen bad cases do very well when injected early, but he had also seen cases die, though injected on the first day. He had not found prophylactic injections very successful. Dr. Harris considered that antitoxin was certainly of great benefit in laryngeal cases, especially such as required tracheotomy. Mr. Coutts gave the statistics compiled by the Committee of the American Pediatric Society for the collective investigation of the value of antitoxin in laryngeal diphtheria, and also the figures recorded in the practice of Dr. O'Dwyer and in that of Dr. Dillon Brown, comparing the results obtained with and without antitoxin. These figures agreed in showing under antitoxin a reduction in the mortality from 70 per cent. to about 30 per cent. in cases of laryngeal diphtheria requiring intubation or tracheotomy. Dr. Wild suggested that members might note and compare the effect of the different preparations in view of the marked difference in cost. On the question of statistics he pointed out that, notwithstanding the introduction of the serum treatment, the number of deaths from diphtheria in London had remained practically unaltered. The number of cases of diphtheria notified had increased largely, perhaps owing to the addition of cases bacteriologically diphtheritic, but not so clinically. Mr. Platt had performed tracheotomy for diphtheria without antitoxin in 8 cases, all of which died. The only 2 cases in which he performed tracheotomy when antitoxin was given recovered. Dr. Hopkinson mentioned a case of sudden collapse after antitoxin injection. Dr. Marsden stated that sudden death from diphtherial toxæmia was not uncommon, and he would not be disposed to blame the serum injections for the fatal collapse.

Bradford Medico-Chirurgical Society.—At a meeting on March 1st, Dr. Arnold Evans (President) in the chair, Mr. Robson gave a microscopical demonstration. Among other specimens was a Section of a Tongue affected with Squamous Epithelioma, showing at the same time an encysted Trichina Spiralis.—Dr. James Kerr showed two brothers suffering from Friedreich's Ataxia.—Dr. Gladstone read notes on a case of Acute Yellow Atrophy of the Liver in an unmarried woman aged 24. She was taken ill six weeks before admission, and in two days was markedly jaundiced. At no time till two days before admission was there pain, vomiting, or diarrhœa. No history of phosphorus poisoning. Two days before admission she took some podophyllin pills which produced vomiting and diarrhœa; the legs also were swollen. She walked to the infirmary, but was in a peculiar drowsy mental condition. The skin was deeply bronzed, and the conjunctivæ yellow. The liver dulness extended from the fourth to the sixth space in the nipple line. There was slight œdema of the ankles. Frequent vomiting commenced on the evening of admission, and continued for three days. The mental dulness increased; she would not answer when spoken to, and threw herself over on to her face when disturbed. The day before death she was at first delirious, but afterwards passed into a comatose condition, and died on the fourth day. By this time the liver dulness only occupied the fourth and fifth spaces in the nipple line. The temperature was subnormal till the evening of the fourth day, when it rose to 100.6° F. just before death. The urine was loaded with albumen, and contained casts and blood. Leucin and tyrosin were not found in the urine. The *post-mortem* appearances were those of acute yellow atrophy, it was considered to be a case of that disease. Dr. Gladstone also read notes of a case of phosphorus poisoning in a labourer aged 54. He was admitted to the infirmary on September 29th, 1897, and discharged November 29th, 1897. He had been found in the street insensible, and was thought to be drunk, till a pot which had contained phosphorus paste was discovered. The stomach was at once washed out by the police surgeon. On admission he was violent, and had evidently been drinking. The stomach was again washed out, and the teeth cleaned to remove particles of the paste. Three grains of calomel were given at 11.30 P.M., and 2 grains of copper sulphate with 30 grains mag. carb. every two hours through the night. The mag. carb. was continued every two hours for four days. For the first four days he seemed quite well, and had no symptoms except slight fever and drowsi-

ness. The bowels were freely moved by the calomel. On October 2nd the temperature rose to 102°, and signs of bronchitis were present at both bases. On October 3rd there were vomiting, purging, and abdominal pain, jaundice appeared, and hiccough was present. The diarrhœa, vomiting, and hiccough, passed away after four days, but the jaundice deepened, till in a week the skin had a bronzed appearance. There was great muscular weakness, and the muscles were very flabby. The blood contained (October 11th) a normal quantity of hæmoglobin and red discs, but the leucocytes appeared granular, and did not stain. The jaundice began to clear about November 1st, and had quite disappeared by November 11th. Neither leucin nor tyrosin was found at any time in the urine, the quantity of urea showed some diminution; the lowest quantity was 206 gr. on October 6th. Deposit of phosphate during first week, no albumen. The liver edge was always palpable at or below the costal magin. In addition to the treatment before mentioned, ℥j ozonic ether was given thrice daily till October 27th, when a mixture of mercuric chloride, nux vomica, and acid nit. hyd. dil. was substituted. The case was discussed by Drs. EVANS, MAJOR, CAMPBELL, CARTER, and BRONNER, it being remarked that recovery was very unusual after jaundice was pronounced in cases of phosphorus poisoning.—Mr. HORROCKS read a paper on Hallux Valgus, showing that it usually resulted from the wearing of badly-shaped boots.—Dr. MCLEAN gave an analysis of 1,000 cases of Midwifery, and compared his statistics with those usually given in textbooks.—Dr STEVENSON showed a Placenta which had undergone fatty degeneration, and stated that the patient had had three stillborn children, and in each case the placenta had shown similar changes.—Mr. ALTHORP showed an Ovarian Cyst which had been successfully removed from a woman aged 35.

REVIEWS.

THE PATHOLOGY AND SURGICAL TREATMENT OF TUMOURS. By N. SENN, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College, Professor of Surgery Chicago Polyclinic, etc. Philadelphia: W. B. Saunders, 1895. (Roy. 8vo, pp. 710, 515 illustrations. 6 dols.)

THIS handsome book, the work of an accomplished and experienced surgeon, is welcome. Its scope is wider than that of the well-known work by Mr. Bland Sutton to which Professor SENN frequently acknowledges his indebtedness. Not only is the pathology of new growths here fully discussed but their operative treatment is amply detailed, the descriptions of surgical procedures being copious, clear, and often original. Operations such as nephrectomy, ovariotomy, and hysterectomy are fully described, and the different modes of performing them compared, so that in addition to its scientific value the book may be regarded as a sound guide to the operative surgery of tumours. Professor Senn is an avowed believer in the didactic value of repetition, and he points out that the reader of the book will meet with each class of tumour three times before he has finished. First, there is a general account of tumours from the morphological point of view, then a classification not differing essentially from Cohnheim's, and finally a systematic description of each group both pathologically and topographically, and including diagnosis, prognosis, and treatment. To bring together all the facts recorded has been a work of many years, so that the erudition of the work is equalled only by its conciseness. In every instance the views of recognised authorities are impartially stated and an honest attempt is made to decide between them. Nowhere is this more conspicuous than in the sections relating to treatment. The style is clear and simple, while many of the profuse illustrations—of which more than 100 are original—are both accurate and of high artistic merit. As is usually the case, however, the photomicrographs are by no means of equal value, and we question whether this form of illustration is not in general better suited to original papers than to books for teaching purposes. Another point of which we are inclined to doubt the wisdom is the total omission of references to literature though names are abundantly quoted throughout; the omission is no doubt intentional, but seems calculated to diminish the value of the book. The printing is clear and on the whole excellent save for a few slips, the most noteworthy of which are "scleroma" for "schema" on page 190 and "carcinomatous" for "sarcomatous" on page 534. The work is altogether well worthy of the great reputation of its author and may be accepted as a compact, trustworthy, and, indeed, standard guide on all subjects relating to morbid growths.

URIC ACID AS A FACTOR IN THE CAUSATION OF DISEASE. By ALEXANDER HAIG, M.A., M.D.Oxon., F.R.C.P. Fourth edition. London: J. and A. Churchill. 1897. (Demy 8vo, pp. 712; 65 illustrations. 12s. 6d.)

DR. HAIG is the principal advocate, and a most uncompromising one, of the part played by uric acid as the causative factor of a very large number of diseases. The industry that he has brought to bear on his advocacy of the subject, and the heroic manner in which he has dosed himself with all sorts of drugs, are beyond all praise. A careful perusal of the book, however, leaves us in considerable doubt as to the correctness of his views. His argument practically takes the form of a syllogism, of which the premisses are (*a*) that uric acid is formed in the system in a certain definite ratio to urea, and is also introduced in food ready formed; (*b*) that the excretion of uric acid varies in diseased conditions; the conclusion being that, therefore, the diseased conditions are due to the presence of uric acid in the system. The view that uric acid is formed in a fixed relation to urea is at variance with the results of other workers, while the plea that uric acid is introduced ready formed in food is simply and most unsatisfactorily based on the detection of something in articles of food by Haycraft's process, and the assumption that that something is uric acid. From the beginning to the end of the book there is no record of an attempt by Dr. Haig to prove the presence of uric acid, either in articles of diet or in the blood, although numerous workers have shown that uric acid is entirely absent from the blood of man in health, and also from the blood of other mammals and of birds. There is a tendency on the part of Dr. Haig in this edition to shift the responsibility from uric acid to xanthin, but this strategical move is unfortunate, for the process he has employed is one that does not allow of the estimation of xanthin.

The causation of an enormous number of diseases, attributed by Dr. Haig to uric acid, is explained by him on the assumption that uric acid is deposited in the colloid form throughout the capillaries of the body, and so interferes with the blood pressure and circulation throughout the organs and tissues of the body. This theory is unsupported by any evidence of positive value. Dr. Haig's explanations are absolutely dependent on the assumption that variations in the alkalinity of the blood affect the amount of uric acid present in it, but no single determination of the alkalinity of the blood is recorded by him. He simply assumes that variations in the acidity of the urine are a gauge of corresponding variations in the alkalinity of the blood. For instance, he explains the effect of fatigue by stating that muscular work produces an increased alkalinity of the blood, and so allows the passage of an excess of uric acid through it. This assumption of the increased alkalinity of the blood is entirely dependent on his determination of the acidity of the urine, and is completely at variance with the researches of many observers who have shown by careful experimentation with the blood itself that the effect of muscular work is to reduce the alkalinity of the blood.

DR. HAIG is very severe on beef eaters, who, in his opinion, are swallowing a quantity of uric acid in their food. On this point he expresses himself as follows: "Many of them, I verily believe, think that they can control the world and arrange everything better than omniscience.....In a word, they differ but little from the common asylum specimen, who fancies himself the creator and upholder of the universe." It is strange that for centuries the beef-eating Englishmen have managed to spread and advance knowledge and civilisation, and to acquire territory in all parts of the world, notwithstanding this hypothetical uric acid in their blood! But seriously, we would ask Dr. Haig whether he thinks that he helps to establish his views by implying that those who may differ from him are lunatics.

Fevers and Infectious Diseases: Their Nursing and Practical Management. By William Harding, M.D. Edin., M.R.C.P.Lond. London: The Scientific Press, Limited. 1897. (Fcap. 8vo, pp. 92. 1s.)

This is No. 4 of the series of Popular Nursing Textbooks. On the whole it is what it professes to be—a simple and practical treatise on the nursing of these diseases, given ample space and means at the disposal of the nurse. It would, however, be of little value in helping a nurse to deal with these troublesome complaints where her quarters were cramped and her employers economical. The author in his zeal for perfect cleanliness, lands his nurse on the horns of a dilemma; at p. 6 he says: "When any part of her clothing is the least soiled by any discharge from the patient, it should be at once taken off and disinfected." What is to happen to a delirious typhoid patient whilst the nurse is changing her garments over which he has vomited? In the paragraphs on feeding no mention is made of nasal feeding, and diphtherial paralysis is not sufficiently explained, nor is the nurse adequately warned how to be on the watch for its insidious approach. In the directions as to the posture to be maintained by the patient during the acute stages, it would have been well to insist on the recumbent position more explicitly, as the unskilled reader might interpret the direction to "change the position to avoid bedsore" into permission to raise the patient. Though we feel it our duty to point out these omissions, which can easily be supplied in another edition, on the whole we think this little volume will be of use to those for whom it is written.

The Principles and Practice of Veterinary Medicine. By W. Williams, F.R.C.V.S., F.R.S.E. Eighth Edition. Edinburgh; John Menzies and Co.; and London: Baillière, Tindall, and Cox. 1897. (Demy 8vo, pp. 880, 64 illustrations. 30s.)

The first edition of this work was issued about twenty years ago, and the appearance of an eighth edition is, of itself, evidence of the demand for a textbook of veterinary medicine. In this edition some of the "matter" of its predecessors is modified, but we feel bound to say we cannot regard its contents as fairly representative of veterinary medicine as it is taught in some of the veterinary schools of Great Britain.

In the opening paragraph of the book the author announces that "he has been compelled to completely recast the bacteriological portion of the work;" in the second, for support of a theory, an appeal is made to the view expressed long ago by Büchner that "the bacillus subtilis attains all the virulent properties of the bacillus anthracis after cultivation in animal media." Throughout the work, particularly in that part dealing with contagious diseases, too much space is given to keeping alive the memory of old and exploded ideas. We fail to see what useful purpose can be served by referring to the views of those who believe that rabies arises spontaneously, or is non-contagious, or by stating that "swine fever (which, by the way, is described under "swine plague") like cattle plague appears to arise from contagion and infection only." The chapter on glanders leaves no doubt as to the author's belief in the spontaneous origin of contagious disease. On page 235 we read, "Some veterinarians maintaining that it originates by contagion only, whilst others—with whom I agree—contend that it is capable of spontaneous origin and of propagation by contagion and infection." We fail to comprehend the purport of the following sentence on p. 279 in the chapter on anthrax: "It is a remarkable fact that wounds, simple in themselves, in cattle subjected to the influences causing charbon, although not suffering from it, often become mortal." Equally mysterious is the description on p. 291 of a "remarkable outbreak of charbonous fever amongst horses," which is apparently attributed by the author "to bacilli which appear to differ from anthrax bacilli." The horses were being fed on the Indian *muttar* pea. The symptoms described represent very fully a clinical history of *muttar* poisoning. The chapter on tuberculosis throws little new light on this important subject, while it includes a description of "scrofula without tubercle" in sheep, which is not referred to the bacillus tuberculosis. The chapter on pleuro-pneumonia of cattle, which is decidedly controversial, we cannot regard as fitted for a student's manual.

The published experience of reliable workers in this country might have been much more freely acknowledged and utilised with advantage. The absence of reference to the work of the Departmental Committee on Swine Fever and to reports on parasitic diseases amongst our stock is remarkable.

In a work devoting a special chapter to parasitic diseases, it is strange that one should look in vain for mention of the *strongylus rufescens*, or the small strongyles now so well known as a cause of extensive fatal outbreaks of gastro-enteric disease in our cattle and sheep. It is surprising to read, as we do at page 699: "The only recognisable causes of enteritis are over-fatigue, cold from exposure, and from washing with very cold water," etc.; and on page 735, that the author "is disposed to coincide with many veterinarians, that cystitis never occurs except as the result of the irritating effects of cantharidine or croton oil."

Space does not permit of reference to many other points which influence us in concluding that this work is not abreast of the time for which it is written. We do not detect the evidence of that science of method which is desirable, while it is too often evident that the methods of science have not been duly observed.

There is, however, a large amount of useful information clearly put forth in some of the purely clinical matters. It is, therefore, with regret that we are unable to speak more favourably of what is now the only large English textbook on the Principles and Practice of Veterinary Medicine.

Handbuch der medicinischen Gymnastik [A Manual of Medical Gymnastics]. Von Dr. Anders Wide. Stockholm and Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1897. (Royal 8vo, pp. 458, 95 illustrations. 11s.)

This book must be regarded as a textbook of manual medico-gymnastics, mechanical medico-gymnastics being mentioned only incidentally. The first 150 pages are devoted to an exhaustive consideration of the technique of the manual system. This comprises a description of the elementary positions of the body, and the different sets of movements arising out of, or derived from, each position. This part of the book is amply illustrated by figures. A special section is devoted to the technique of massage, the methods of producing all the varieties of which are considered.

Physicians who are not concerned with the actual administration of the exercises, but more especially with the prescribing of them, will find the latter part of the book, from p. 160 onwards, the most instructive. The author prefaces what he has to say with regard to the results of the treatment by gymnastics of various pathological conditions, by a few remarks upon what he terms "General Rules for Gymnastic Treatment." These are of importance, and should be carefully read by those interested in the subject. Dr. Wide lays stress upon the proper sequence of exercises, advising that the most severe ones should occupy the middle of the sitting; in other words, that the patient should begin and end with gentle exercise. This is sound advice. The occurrence of the unfavourable results heard of occasionally, especially in cardiac cases, is almost certainly due to failure in the observance of this rule.

A special section is devoted to the "care of the breathing during the exercises." The importance of this part of the subject is great. The striking manner in which expansion and contraction of the thoracic cavity sucks blood into, and pumps it out of the chest—in short, acts as an accessory heart—has long been known to physiologists, but has not received the attention it deserves at the hands of physicians. The importance of inspiring synchronously with that part of a given exercise which brings into play the extraordinary muscles of inspiration and *vice versâ* is emphasised by the author. We cannot, however, agree with Dr. Wide's remarks concerning pulse curves, which, indeed, apply to the whole graphic method. The author apparently fails to grasp what lends to a sphygmographic tracing, or, indeed, to any graphic record, either in physiology or medicine, its special value. A sphygmographic pulse tracing is the record of a pulse which has not passed through the mind of an

observer. It is the writing of the pulse itself, and this is the reason of its value. That a sphygmograph can be manipulated to show anything no one doubts, but it is more difficult and more palpably dishonest to manipulate a sphygmograph than to "manipulate" one's own mind.

The remainder of the book is devoted to a description of the gymnastic methods (including massage) suitable to various diseases. The account given of results sometimes savours too much of the enthusiast, and physicians in this country will be inclined to be sceptical with regard to the value of vesical massage in, for instance, diuresis nocturna, or enlarged prostate; still, according to the author, good results have followed these measures.

The book must be regarded as a valuable addition to the literature of the subject, and although especially written for gymnasts and masseurs, should be useful to physicians.

MASTOID ABSCESSES AND THEIR TREATMENT. By A. BROCA, M.D., Chirurgien des Hôpitaux de Paris, Professeur agrégé à la Faculté de Médecine, Membre de la Société de Chirurgie; and F. LUBET-BARBON, M.D., Ancien Interne des Hôpitaux de Paris. Translated and Edited from the French by HENRY J. CURTIS, B.S., M.D., F.R.C.S., Assistant to the Professor of Pathology, University College, London. London: H. K. Lewis. 1897. (Crown 8vo, pp. 268. Eleven coloured illustrations. 6s.)

THIS volume is a translation of a memoir entitled *Les Suppurations de l'Apophyse Mastoïde et leur Traitement*, which was awarded the Prix Meyot by the French Academy of Medicine in 1894, and published in 1895.

The work is divided into four chapters. The first deals with Mastoid Abscesses, the second with Mastoid Fistulæ, the third with Chronic Suppurative Inflammations of the Middle Ear with Latent Mastoiditis, and the fourth comprises an account of Results, Cases, and Statistics. The results are based upon a series of 146 operations which have been performed by the authors upon 129 patients.

In the operative treatment of mastoid abscesses BROCA and LUBET-BARBON state that in their opinion "Wilde's incision" is almost always useless and very often dangerous, since it gives a false security to the patient and the surgeon. They advise, after the soft parts overlying the mastoid process have been divided, that a portion of bone about 1 centimetre square should be removed from the base of the mastoid on a level with the upper half of the external auditory meatus, and about 4 or 5 mm. behind it. When this has been done, the mastoid antrum is opened, and any further measures which may be requisite can be readily carried out. Concerning the development of mastoid fistulæ, it is stated that when a mastoid abscess is left to itself or treated by "Wilde's or the simple incision," as a rule a fistula remains.

In connection with cerebral complications it is recommended that the mastoid operation should be the same, whether cerebral complications are present or not.

There are some interesting and suggestive paragraphs in this book, but scarcely sufficient to justify the translation of a volume of 268 pages. Many of the details of the cases might with advantage have been omitted.

The illustrations are taken from a series of preparations which were made by Professor Thane for the section of Superficial and Topographical Anatomy in the last edition of *Quain's Anatomy*.

THE ANALYSIS OF FOOD AND DRUGS. Part I. Milk and Milk Products. By T. H. PEARMAIN and C. G. MOOR, M.A. London: Baillière, Tindall, and Cox. 1897. (Demy 8vo, pp. 140. 5s.)

THIS volume forms the first part of a work on the *Analysis of Food and Drugs*, which is intended to embrace all such articles as may come into the hands of the public analyst. The book is written in a very concise style, and appears to contain accounts of all the processes likely to be required in ordinary work. It presents several novel characters. Thus, statistics are given of the numbers of samples of many articles examined by public analysts during the last few years, and of the number reported as adulterated. An excellent example is set by the authors in giving standards to which milk, cream, butter, and cheese should in their opinion conform. The need for standards of reasonable purity is at the present time great, the standards adopted by the chiefs of the Inland Revenue Department Laboratory, who are the referees under the Sale of Food and Drugs Acts being evidently founded upon the poorest quality of milks that have been known to be yielded by cows. The authors consider that the disgraceful state of the milk trade in this country is fostered, if not actually caused, by this ridiculously low standard, by which, of course, public analysts are compelled to abide, or take the risk of being overruled by the referees. The recent Select Committee upon Food Products Adulteration stated that the fixing of standards would be "one of the most important duties that would engage the attention of the proposed court of reference."

The book embodies a considerable amount of material which is the personal work of the authors, notably in the case of condensed milk and cheese. The method described of applying the Leffmann-Beam process to the estimation of fat in cheese will be found very useful. The article on cheese is a very complete one, and gives an excellent account of the principles on which cheese-making is based. The present volume promises well for the rest of the series, and if the following parts come up to the same standard the completed work will form a very valuable addition to the literature of food analysis.

THE PERITONEUM. By BYRON ROBINSON, B.S., M.D. Part I: Histology and Physiology. Chicago: C. V. Waite and Co. 1897. (Imp. 8vo, pp. 406, 247 illustrations. $3.75.)

DR. BYRON ROBINSON has made it well nigh impossible for any man to say anything more about the peritoneum. With amazing industry he has not only reviewed all that has ever been written about it, but has added to this great mass of literary work a vast number of microscopical and physiological observations made by himself. The chief part of this laborious treatise is the record of the minute anatomy of the peritoneum in man and in the lower animals, yet he gives more than a hundred pages to the consideration of its functions. He has studied with infinite patience every least detail concerning it. His list of references to the literature of the peritoneum and its diseases covers 109 pages over and above the 400 pages of the text. The illustrations are most of them original, and all of them excellent. Here is a monumental achievement: Chicago constructs her books, like her buildings, on a colossal scale.

We can hardly criticise a work so encyclopædic, or pick out passages for quotation. When a book is so complete it seems ungracious to take exception to a certain want of style in its sentences; such dissonant words as "frictionize" and "metamorphize" do not count in 400 pages of closely-written closely-argued fact. We can only wonder at the wealth of work put before us, and congratulate Dr. Robinson that he has accomplished it. We hope that his forthcoming volume on the pathology of the peritoneum will fulfil the promise given to us by what he has already achieved.

DIE AKROMEGALIE. [Acromegaly.] Von Dr. MAXIMILIAN STERNBERG, Privat-Docent an der Universität in Wien. Wien: Alfred Hölder. 1897. (Specielle Pathologie und Therapie, herausgegeben von Hofrath Professor Dr. H. NOTHNAGEL. VII Band, II Theile). (Roy. 8vo, pp, 116, 16 Figs. M. 4.20.)

THIS monograph provides in a concise form an exhaustive account of our knowledge of acromegaly, and is a valuable addition to the essays of P. Marie (1886) and Souza-Leite (1890), which were translated and published with additional cases by the New Sydenham Society in 1891. That a fresh review of the subject had become desirable is shown by the author being able to refer to clinical records of 210 cases and to 47 necropsies; many of these cases are not described sufficiently in detail, but the author has done good service in reconsidering our data on this disease.

Though first definitely described only eleven years ago, the existence of the disease has since been unearthed in a number

of cases, and the marked features of its victims have long been familiar as those of Punch and Punchinello, while it is quite possible that Rabelais drew on material derived from observation of a case of acromegaly in the description of his voracious hero.

After a full account of the history and a general description of the disease, the author gives in minute detail the morbid changes that have been found in the body after death. The bony lesions are exhaustively treated, this part of the subject being illustrated by some admirable photographs. Microscopical examination of the pituitary body has been recorded in 28 instances of acromegaly and a list of the various changes found is given which includes simple hypertrophy, adenoma, colloid degeneration, and several varieties of sarcoma. But it must be admitted that the data on this point can hardly be regarded as entirely satisfactory. Giant growth of the viscera or splanchomegaly may occur and is interesting as bearing on the relationship of the disease to gigantism. A useful summary of the morphology and physiology of the hypophysis has been added as an appendix to the chapter on its morbid anatomy. The symptoms are set forth in a thorough and systematic fashion, and the text is again illustrated by some excellent photographs of patients and by two skiagraphs. Cases of acromegaly fall into three categories: (1) the benign type, lasting as long as fifty years; (2) the ordinary chronic type, with a duration of from eight to thirty years; and (3) the acute or malignant form, lasting from three to four years. Of this latter variety there are six cases on record; in all of these there was a true sarcoma of the pituitary body found, and the disease ran a a rapid and similar clinical course. The relation of acromegaly to other diseases and conditions, such as myxœdema, Graves's disease, and giant growth are touched on, and a chapter is devoted to its diagnosis from these and other affections.

As to the pathogeny of the disease, four views exist, the nervous theory, the theory of atavism, the thymus theory, and the original and more generally accepted theory which we owe to Marie which connects it with changes in the pituitary body. The author considers it probable that pituitary inadequacy is responsible for the changes of acromegaly. The various methods of treatment are referred to, and the monograph closes with a most valuable and exhaustive bibliography.

In conclusion it need hardly be added that the work will undoubtedly take its place as a standard source of reference, and should be in the hands of all who are interested in this obscure disease.

Die Krankheiten der Frauen [The Diseases of Women]. Für Aerzte und Studirende dargestellt von Med. Dr. Heinrich Fritsch, Professor der Gynäkologie und Geburtshülfe an der Universität zu Bonn. Achte neu bearbeitete Auflage. London: Williams and Norgate. (Roy. 8vo, pp. 606. 12s. 6d.)

When a book has reached an eighth edition, it is impossible for the most malevolent critic to deny that it has some merit. In the case before us, the reasons of the book's success are easily seen. It is full and yet concise. Hardly anything, however rare, is left out; indeed, looked at from the point of view of the practitioner, the defect, if such it be, is that the apportionment of space to the different topics embraced in the work is not in proportion to their clinical importance. Aiming at completeness the author has given almost as much space to groups of rare conditions, which the ordinary practitioner may never in his life meet with, as to some common everyday maladies, which by reason of their commonness, are of supreme practical importance. This, however, we allude to only to show the fulness of the book. We may add that the style is clear, the expression concise and unequivocal, and the illustrations numerous, well chosen, and well printed.

Turning to the author's opinions on some controvertible questions, we observe that he regards it as doubtful whether vaginal fixation of the uterus should be performed on women liable to become pregnant, because grave complications are likely to follow. The reason why the author takes such a strong view is explained by his diagram of the operation, which represents the uterus stitched to the vagina throughout the whole length, right up to the fundus. We can understand that this should prevent pregnancy and labour going on normally; but does it follow that the fixation of a small part of the uterine body near the internal os will have the same effect? This is the question that experience will have to decide. In ventrifixation we notice that the author puts in no fewer than ten stitches through the fundus; a method equally thorough, or, as some would say, equally excessive. The author is not in favour of the so-called panhysterectomy. The arguments in its favour, he points out, are of a theoretical, *a priori* kind. The practical ones against it are that it takes longer and requires more sutures; while there is no good reason for removal of a small, healthy, perhaps atrophied, cervix.

The book is one which no one who pretends to a complete acquaintance with its subject can omit to read.

Erratum.—In the review of Drs. Gould and Pyle's *Anomalies and Curiosities of Medicine* published in the British Medical Journal of March 5th, the price of the book was erroneously given as 30s. instead of 34s. It should also have been stated that the publishers of the work in Great Britain are the Rebman Publishing Company, Limited, London.

NOTES ON BOOKS.

A Handbook of Therapeutics. By Sydney Ringer, M.D., F.R.S., and H. Sainsbury, M.D. Thirteenth edition. (London: H. K. Lewis, 1897. Roy. 8vo, pp. 758. 16s.)—By the time that a book has reached its thirteenth edition its reputation is so well established that a review is quite unnecessary. All our readers must have heard of this as a successful book, and most of them have at some time during the last twenty-five years read it for themselves. This edition shows no falling off from the previous twelve; it is very well brought up to date. It will doubtless be as popular as its predecessors.

Handbook on the Workmen's Compensation Act, 1897. By M. Roberts-Jones, Barrister-at-Law. Fifth Edition, revised and enlarged. (Cardiff: *Western Mail.* 1898. Price 2s. 6d.)—Five months ago we reviewed this handbook, and expressed our satisfaction with it. Since then, so favourable has been the reception accorded to the book, that it has now reached the fifth edition, the fourth edition of 5,000 copies having been disposed of within one month of its issue. To what we said previously of this monograph there is little to add. There is a growing feeling amongst all classes in the country in favour of the recognition of the claims of labour to something more than the weekly wage it is paid. Where workmen are thrown aside through injuries received at their employment, or where fatal accidents supervene, restitution is provided by the Workmen's Compensation Act of last year. Whatever will lead to the wounded workpeople or their dependents receiving the compensation they are entitled to without litigation, and therefore without expense, is to be welcomed. Such, according to many, is the hope held out by the Act which is to come into operation in July. Mr. Roberts-Jones's handbook is one of the best expositions of the Act that we have read. The terms of the Act are clearly stated, the more difficult parts are explained, and several examples are given, all of which tend to make it a safe guide for those who are interested in questions affecting the liability of employers towards employed.

Elementary Physiology for Nurses. By C. F. Marshall, M.D., B.Sc., F.R.C.S., late Surgical Registrar and Anæsthetist to the Hospital for Sick Children. 1897. (London: The Scientific Press. Pp. 89, with 28 illustrations.)—This is an unpretentious little book aiming solely at conveying the leading facts of physiology to nurses without impeding their work or wasting their time by a consideration of abstruse theories. It is well adapted to its object, being simply and lucidly written, and illustrated by useful, if rough, explanatory diagrams. In a work of this kind, rigid accuracy of detail is far less important than the clear and direct statement of broad general principles. Still we feel that the author has gone a little too far in omitting all reference to the ganglion on the posterior root of a spinal nerve. There are one or two bad

misprints, among which "hæmophyllia" is very noticeable. Still for its special purpose the book has a definite value, and we can cordially recommend its perusal by nurses of all grades.

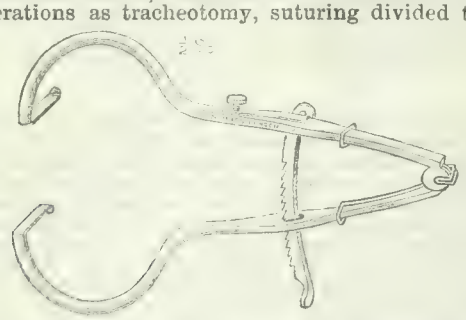
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

EUGOL.

We have received an antiseptic preparation, termed "eugol," manufactured by Messrs. Bayard, Sons, and Bayard, of New York, and 26, Bridle Lane, Golden Square, London, W. Eugol is a colourless, volatile liquid, of an agreeable odour, and perfectly miscible with water in all proportions. It contains the antiseptics beta-naphthol, boric acid, menthol, thymol, eucalyptol, and gaultheria, and the astringent hamamelis. Eugol appears to be specially adapted for dental work on account of its pleasant odour and the absence of irritating properties. Eugol would probably be found an agreeable antiseptic for use in the preparation of gargles and mouth washes.

A SELF-RETAINING RETRACTOR.

Mr. Arthur L. Flemming, M.R.C.S., L.R.C.P. (Freshford, near Bath), writes: The illustration below represents a self-retaining retractor made at my suggestion by Down Bros., of St. Thomas's Street, London. It is intended for use in such operations as tracheotomy, suturing divided tendons,



removal of needles from the palm, etc., where assistance is often difficult to get, and where the hands of assistants are apt to be in the way. In some cases its use will tend to obviate the sacrifice of valuable assistance which often occurs when skilled hands are devoted solely to the mechanical purpose of holding open a wound.

BAND DIVISION PLASTER.

We have received from Mr. M. Buchner, 149, Houndsditch, E.C., a number of samples of a new form of plaster prepared by E. Dieterich, Helfenberg, near Dresden. The novelty of the plaster is the way in which it is spread in broad or narrow bands, strips of uncovered material being left between them. This method of spreading enables any required length of plaster to be easily cut or torn out of the whole piece, the line being a convenient guide. This band division plaster is intended to be used also in place of the ordinary porous or perforated plaster, the material upon which it is spread being sufficiently porous in the unspread part. The plaster, especially that spread in very narrow strips, appears to be well adapted for adjustment to parts where there is much movement.

Congress of Gynæcology and Obstetrics.—The second periodical Congress of Gynæcology, Obstetrics, and Pediatrics will hold its next meeting at Marseilles from October 8th to 15th, under the Presidency of Professors Pinard (Section of Obstetrics), Pozzi (Section of Gynæcology), and Broca (Section of Pædiatrics). All communications should be addressed to Dr. Queirel, General Secretary of the Congress, 20, Rue Grignan, Marseilles.

THE HEALTH OF JAMAICA.

We were able to announce recently that the United States Consul had certified Jamaica as free from yellow fever. From the Colonial Office we learn that the Acting Governor has reported that on January 31st the island was entirely free from yellow fever. This authoritative statement will be welcomed heartily in this country, and especially by those who wish to send patients to that garden of the West. It may perhaps be well, however, to recapitulate a few of the features which made the recent outbreak conspicuous. In July a sailor died of yellow fever in the Kingston Hospital, then a succession of cases, the real nature of which seems at first to have been overlooked, occurred at Port Antonio on the northern coast of the island. The leader of an enthusiastic band of biologists from Boston, who had been three months in the island, just as he was leaving for home, sickened, and in a few days died of what was at the time regarded as malarial fever. Another of the same party was taken ill on shipboard, and died in the Massachusetts General Hospital. A few days earlier a workman who had been associated with them died in Kingston Public Hospital, and a little later a clerk died in the Port Antonio Hospital. An English lady's maid, who accompanied her mistress, sickened on September 26th, and died on October 4th. About the same time an American Consular Agent who had visited Port Antonio sickened. He died of yellow fever in Kingston five days after his return. During these three months there were 23 acknowledged deaths from yellow fever in the island, and it is thought about 53 cases. Up to this time an attempt seems to have been made to hush the matter up, and U.S. Consul Dent, who made the existence of the outbreak known in the States, was howled at by the local press. By the end of November the deaths had increased to 46, that is, excepting the single death in July, really in four months. The actual mortality (if we may, notwithstanding the early tendency to ascribe deaths to malarial fever, regard the published returns as to some extent indicative of the actual mortality) was fortunately not very great, and as the year drew to a close the cases became less frequent. While it is scarcely to be expected that an island within the yellow fever zone can altogether escape an occasional visitation, it can hardly be doubted that the outbreak, limited though it fortunately was, showed a state of unreadiness not altogether creditable to an English-speaking community. Kingston had a general hospital and a building—Bumper Hall—specially intended for the isolation of infectious cases. The latter, some four months after the first case, was still unready, although it had been years in the possession of the City. The sanitary survey of the island, which the alarm caused by the arrival of Yellow Jack brought about, revealed much that was wrong, and, so far, Jamaica has probably gained rather than lost by the visitation. Yellow fever, like typhoid, is generally thought to be most prevalent where filth is allowed most to accumulate, either above ground or in stopped sewers, and these conditions were not absent in many places where better things might have been expected. Jamaica pays a heavy tribute to diseases of the malarial type. In the year ended March 31st, 1897, the death-roll from this group was nearly 4 per 1,000, of which 3.47 was from the single group "fever undistinguished." In addition to these, 1.36 deaths per 1,000 were ascribed to typhoid, dysentery, diarrhœa, and simple cholera, making a total of 5.33, exclusive of small-pox, measles, scarlet fever, diphtheria, and whooping-cough. As might be expected in the capital, the group of "fever undistinguished" decreased, partly probably from more accurate diagnosis. Remittent and malarial fevers ranked higher, and so did typhoid, dysentery, and diarrhœa, the whole group causing 6.06 deaths per 1,000 in Kingston against 5.33 in the whole island. These rates, as just said, take no cognisance of deaths from diphtheria, whooping-cough, and the three more important exanthemata. The rate from all causes had been, as we have already mentioned, 24.2 in the whole island, 29.2 in Kingston. Certainly in both there is still room for improvement. We hope the recent scare may not be without its attendant advantages.

The figures just quoted are from the annual official return

of the Registrar-General for the island and are for the official year ended March 31st, 1897. They do not of course cover the mortality during the summer and autumn of 1897. In an article in the *News Letter*, published in Kingston on January 27th, we find it stated that "the death-rate for the city for the month of December, 1893, was 24.7 per 1,000, while the death-rate for December, 1897, reached the very serious proportion of 38.1 per 1,000." The same journal, comparing the averages of successive years arrives at the conclusion that "the average death-rate for the twelve months of 1893 was 24.3. In 1894 the average death-rate was 26.4; in 1895, 28.5; in 1896, 29.3, and in 1897, 30.2." The inference our contemporary seems to draw from these rates is that the new system of sewerage is at the bottom of the increased mortality, and that it should be abandoned in favour of some other. We offer no opinion upon the rival merits of the several methods. We think Kingston, having deliberately adopted a well-considered scheme, would be foolish to attempt an exchange of horses in crossing the stream. We note also that in Kingston itself the actual number of deaths in the official year ended March 31st, 1897, was fewer than in the year preceding it. We take the figures from Table H of the Registrar-General of the Island: Deaths in Kingston, 1895-96, certified 1,155, not medically certified 251; total 1,406, or including Port Royal 1,453; 1896-97, certified 1,046, not certified 332; total 1,378, or with Port Royal 1,420, a decrease of 33 deaths in the whole parish, and as the births exceeded the deaths by some two-fifths the death-rate must have been lower in the last official year than in that which preceded it. If the apparently increased rate in the calendar year be actually as calculated by our contemporary the increase must have occurred in the nine later months of 1897, including the period of the visitation of yellow fever.

Although we are accepting the official declaration of freedom from this disease as correct, it is only fair to say that from advices received from two separate and both reliable sources we know that cases of the disease existed in the island during the month of January.

THE GLOUCESTER SMALL-POX EPIDEMIC.

The Criticisms of Mr. T Bayley, M.P.

Mr. Thomas Bayley, M.P. for the Chesterfield Division, who occupies the prominent position of parliamentary leader in the prospectus of the Antivaccination League, has issued a pamphlet under the title of *The Present Aspect of the Vaccination Question. A Plea for Further Investigation into the Recent Epidemic of Small-pox in Gloucester*. So far as the first half of Mr. Bayley's title is concerned it may be dismissed without discussion, as the only portion of his pamphlet which refers to the vaccination question, apart from its relations to the Gloucester epidemic, is a brief and generally fair summary of the principal conclusions and recommendations of the Royal Commission, and an equally brief reference to the unsatisfactory position in which the administration of the vaccination law now is. The remainder of the pamphlet is devoted to a criticism of Dr. Coupland's report on the Gloucester epidemic, and to various suggestions as to points in which Mr. Bayley considers this report to be incomplete or unsatisfactory. It is only fair to Mr. Bayley to say that he appears from his pamphlet to occupy the position in regard to vaccination of a seeker after truth, which he seems inclined to think is to be found at the bottom of the Gloucester epidemic, if only it could be extracted from it by some means in his opinion more effective than have been as yet employed. Mr. Bayley certainly cannot be called an antivaccinist, in so far as he frankly admits that he has had his own children vaccinated. And, although he is dissatisfied with Dr. Coupland's report, he also admits that, if the statistics of the report are correct, it is clear that those who had been vaccinated and took small-pox at Gloucester had the disease in a milder form, and that the death-rate amongst them was considerably less than amongst the unvaccinated.

His contention apparently is that the epidemic itself may have been due to general insanitary conditions, and more especially to drinking sewage-polluted water and inhaling "sewer malaria," and that the results which Dr. Coupland has attributed to vaccination in regard to the modification of the attack may really have been due to treatment. He is apparently less concerned about the merits of vaccination as a preventive of small-pox than as to whether the disease may not be preventable by some method which is less open to contention. He says: "The danger that we may all be in at the present time is rather to take sides on the question of vaccination than to find out whether sanitation, good drainage, and cleanliness may not, if they are carried out with energy and judgment, take away from the disease the very food on which it lives."

The curious thing is that a man who deprecates the taking of sides on this question is yet a member and the parliamentary leader of a league whose objects include not only the entire repeal of the Vaccination Acts, but the disestablishment and disendowment of the practice of vaccination. We must confess that we have been under the impression that this problem, which he presents for our consideration as if it were one of a novel or unexplored kind, has been the subject of copious discussion, not only by the Royal Commissioners but by numerous other authorities, who have expressed their opinion upon it, both before and since, including especially the medical officers of health of the country. These gentlemen have even thought the matter so important that more than 1,100 of them have lately made it the subject of a special declaration, in which they have unhesitatingly expressed the opinion that small-pox cannot be effectually dealt with—at any rate under present administrative conditions—by the means which Mr. Bayley suggests, and that the only effective way of protecting both the individual and the community against it is by the aid of vaccination.

Mr. Bayley, therefore, in making his suggestion that we have yet to learn whether the sanitary provisions to which he alludes may not, if effectually enforced, take away the food on which small-pox feeds, and thus, as it were, starve it out of existence, has the weight of the opinion of these two important judicial tribunals against him. How does he meet it? So far as appears from his pamphlet he has no countervailing evidence of any kind to offer beyond what may be obtainable from the Gloucester epidemic, for we cannot think that he attaches any weight to the opinion expressed by Lieutenant-General Phelps, the President of the Anti-vaccination League, that small-pox "is due to a sewer malaria such as prevailed in the palaces of kings in the last century.' It will be time enough to discuss this very crude assertion when General Phelps can produce the smallest evidence in its favour. At present all our experience is directly opposed to it.

Now what is it that Mr. Bayley wants the Government to do? He asks, to use his own words, "that on an important matter like this they should appoint a fresh Commission, with the new materials they have had from two or three reports, especially Dr. Coupland's; they should continue the inquiry with open doors and evidence on oath, and, as it deals with the health and well-being of all classes of Her Majesty's subjects, spare neither pains nor money to fathom the real causes of what has been in the past one of the greatest scourges that has troubled suffering humanity." The duration and history of the late Commission are not such as are likely to predispose any Government to appoint another without a very strong case being made out in favour of it. Seven years of the valuable time of more than a dozen eminent men, all of whom must have found it a heavy sacrifice to expend it, as they so freely did, in listening to the kind of evidence to which so much of their inquiry was devoted, is of itself a heavy price to pay even for such a valuable report as they have produced. There is not the faintest ground for suggesting that the Commissioners have spared any pains in forming the conclusions at which they have arrived; and as to money, although £16,000, the expenditure which the Commission is said to have incurred, would be a very moderate price to pay for the settlement of the vaccination question, we fancy that any Chancellor of the Exchequer will have something to say before he assents to such a fishing inquiry as Mr. Bayley wants.

So far as general *primâ facie* evidence is concerned Mr. Bayley has, as we have seen, none to offer in support of his demand. He founds it solely on the assumptions that there

have been two or three reports issued since the publication of the final report of the Commissioners themselves, that had they seen these reports they might have altered their views, and that the additional reports, especially that of Dr. Coupland on the Gloucester epidemic, are imperfect and misleading. But, in making the first two of these assumptions, Mr. Bayley is under a complete misconception. Although the reports to which he alludes were not published, for some reason which has not been satisfactorily explained, but which is believed to be quite unconnected with the Commission itself, until some time after the Commission's report saw the light, it is a mistake to suppose that all the essential information they contain was not under the eye of the Commissioners when they issued their own report. The report itself shows that this was the case, for it expressly discusses the evidence which these reports contain, so far as it relates to the general issues on which the Commissioners were instructed to report. There is, therefore, not the least reason for assuming that if a new Commission, constituted as the last was, were to be again empanelled, it would derive any further information from these reports than the late Commission had before it, nor that the views as to the evidence, either for or against vaccination, which it might form, would be other than the late Commissioners have already expressed. Mr. Bayley thinks it necessary to ask, in connection with certain defects in drainage, water supply, etc., which were discovered in the city of Gloucester in the year 1893, whether the city surveyor can tell us "if there was an open inquiry held and witnesses put on oath and cross-examined?" But Mr. Bayley must surely know that neither city surveyors not sanitary committees have any power to examine complainants on oath, and that, even if they had, it would be a ridiculous abuse of such a power to exercise it with reference to the thousands of defects of the kind referred to which will be detected in a city of the size of Gloucester in the course of a year. It is part of the gravamen of the charges of those who, like Mr. Bayley, seek to discount the value of the reports of the Assistant Commissioners, that these gentlemen were not subjected to cross-examination, and it is boldly asserted that had they been exposed to this ordeal their evidence would have "crumbled to pieces," as it is alleged that of Dr. Barry, on the subject of the Sheffield epidemic, did. But this was clearly not the view of the Commissioners, for they distinctly state, that after modifying Dr. Barry's statistics in the sense insisted on by his critics, the inferences deducible from them were not materially affected. It would, no doubt, have afforded pleasure to those who insisted, at such weary length, on dissecting Dr. Barry's report, to submit those of Dr. Coupland, Dr. Luff, and Dr. Acland to a similar process, and it may, perhaps, be a subject of regret, in the interests of vaccination itself, that such an opportunity could not, by the force of circumstances, be afforded them. But it is quite possible to dissect a report without putting its author through a cross-examination. This is not what Mr. Bayley does. What he attempts to do is merely to dress up again in the form of questions, suggestions, and innuendoes a number of statements originally made by two notorious antivaccinators about the drainage, water supply, and the alleged generally insanitary condition of Gloucester which have been repeatedly and authoritatively contradicted not only by the Gloucester authorities themselves, but by independent witnesses. This is what Dr. Coupland says on the subject: "There is no sufficient evidence to support the contention that defective drainage or other insanitary condition was responsible for the development of the disease, and for its disproportionate incidence in the South Hamlet. But the conditions which favour contagion were abundantly present, especially the retention of a large number of cases within their homes, and in many instances also, the impossibility of isolating the attacked within the house."

Even if all that Mr. Bayley thus suggests as to the sanitary defects of Gloucester were as true as it is evidently unfounded, it would have no material bearing upon the really instructive facts of the epidemic, such as the great preponderance amongst the victims of the epidemic of unvaccinated children; the generally malign type of the disease in those children; the absence of fatal result in any vaccinated child under 10 years of age with one doubtful exception; and the rapid arrest of the epidemic as soon as the great bulk of the population had been got under the protection of vaccination. No sanitary shortcomings of the city or its population, however gross they might be, can modify the inferences from these facts. If Mr. Bayley wants to discredit them he must do something more than hash up again irrelevant assertions. He must produce substantial evidence which is entitled to credit, in order to justify the reopening of an inquiry which, in the opinion of all unprejudiced and competent judges, is *res judicata*. Dr. Coupland's report is a model of what such a document should be, and the Commissioners are to be congratulated on the good fortune which enabled them to delegate to so experienced and competent an investigator the delineation of the facts involved in this great object lesson.

DEATHS UNDER ANÆSTHETICS.

THE INCREASE IN THE NUMBER OF FATAL ACCIDENTS UNDER ANÆSTHETICS.

DR. ROBERT BELL (Glasgow) writes: The jubilee year of chloroform, after fifty years' experience of its use, has gone out with a record of 96 inquests held in England alone on cases of death in persons of both sexes and of all ages. This is the largest number of deaths from anæsthetics reported for any one year.

DEATHS UNDER ANÆSTHETICS.

26 deaths occurred in private practice: males, 15; females, 11=26
70 " " " hospitals, etc.: " 48; " 22=70

Private Practice.

From pure chloroform: Males, 12; aged, 5½, 8, 9, 10, 14, 15, 17, 23, 36, 40; 2 not stated.
From pure chloroform: Females, 7; " 7, 9, 22, 25, 27, 43; 1 not stated.
From A.C.E. mixture: Males, 2; " 45, 47.
" " " Females, 1; " 75.
" choloroform and ether: Males, 1; " 35.
" N.O. " : Females, 3; " 12, 61; 1 not stated.

26

In Hospitals, etc.

From pure chloroform: (See list below.) Males, 41; aged, from under 1 to 70 years.
From pure chloroform: Females, 14; " " " " "
" A.C.E. mixture: Males, 1; " 54 years.
" " " : Females, 1; " 6 "
" " " followed by chloroform: " 1; " 6 "
From chloroform and ether: Males, 2; " 35, 44.
" pure ether: " 3; " 37, 52; 1 not stated.
" " " Females, 4; " 16, 55; 2 "
From ether followed by chloroform: Males, 1; " 44.
From N.O. and ether: Females, 2; " 29, 44.

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Sex and Ages of Persons who Died from Chloroform in Hospitals in 1897.

	Under 1 Year.	1-5	6-10	11-15	16-20	21-25	26-30	31-40	41-50	51-60	61-70	Not Stated
Males ...	1	5	5	4	6	1	2	4	2	7	2	
Females	—	1	2	1	1	—	1	3	1	—	1	1

Two deaths from chloroform per year in Snow's days—1848-1850—against 96 deaths from anæsthetics in 1897, clearly shows that instead of improving the method of administration, the work of anæsthetics has greatly deteriorated.

During the last Forty Years: Average per Year.

Between the years 1848 and 1863 (12 years) 86 deaths were reported... 7.1
" " 1860 " 1891 (31 ") 631 " " ... 20.3

Per year.....	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Males	12	7	7	14	31	29	34	38	34	34	63
Females	4	4	5	3	15	11	9	22	27	29	23
Not stated	—	—	1	2	—	1	3	—	—	—	—
	16	11	13	19	46	41	46	60	61	63	96

These cases are collected from inquests reported in daily

papers, which are but a fraction of the number of deaths from anæsthetics which actually occur. Dr. Leonard Hill says: "In a certain institution in Great Britain, in the course of a recent year, no fewer than 12 deaths occurred." This is no exceptional case. The deaths from chloroform are not recorded in the medical journals, for these reflect upon the reputation of the administrator and the institution in which they occur."[1] And Professor Augustus Waller says: "A large proportion of the cases of death, undoubtedly caused by chloroform, are never published; how large a proportion it is impossible to say, yet almost certainly the largest proportion of the total number of deaths. At one hospital, from which two deaths from chloroform were reported during one year, nine deaths actually occurred."

Not only immediate but remote deaths follow frequently the administration of anæsthetics. Numerous persons die hours and days after a successful operation from the excess of vapour administered to them. The British Medical Journal, November 13th, 1897, mentions several cases of Post-Anæsthetic Paralysis. Obviously overdosing must do harm proportionately to the overdose. Rüdiger found in a fatal case of monoplegia after chloroform an area of softening of the cerebral cortex. Chipault observed an attack of right hemiplegia in a patient recovering from chloroform; death occurred shortly afterwards. Reboul describes a similar case; the patient was 60 years of age, and inhaled the chloroform well. Dr. Bändler again directs attention to the fact, that under certain conditions, acute fatty degeneration of the inner organs, especially the liver, is caused by an excess of chloroform in the system. These symptoms of poisoning by chloroform cause death in from four to ten days after inhalation.

In all the tabulated fatal cases from chloroform death was caused by sudden paralysis of the heart, and in a large number before the operation was commenced. The real cause of death from chloroform, whether pre-anæsthetic or post-anæsthetic, undoubtedly is, that in each case the patient has had an overdose. "I mean," says Snow, "more than was necessary to make the patient, or one of similar size and strength, insensible." By a dose of chloroform, however, must be understood the quantity that is in the system at one time, and not the quantity inhaled during an operation. For instance, when the inhalation is left off for two or three minutes a great part of the chloroform is exhaled by the breath, and the patient perhaps requires to inhale a little more. This should be considered a repetition, and not an increase of dose.

After Carter and others have confirmed the truth of Snow's calculation that, on his method, about 1 per cent. of chloroform vapour in the respired air is all-suffieient to cause perfect insensibilily in an adult in four minutes, and a less percentage is required when anæsthesia is induced in five or six minutes; and when it has been shown that about ½ per cent. of vapour is all-sufficient (when administered without waste) to sustain the anæthesia on an even level, it should be held proved that pre-anæsthetic and post-anæsthetic deaths from chloroform can on Snow's method be, with certainty, avoided.

"The first rule," says Snow, "therefore, in giving chloroform, is to take care that the vapour is so far diluted that it cannot cause sudden death;" and this, he maintained, cannot be ensured without the use of a properly constructed inhaler.

[1] British Medical Journal, April 17th, 1897.

A Definition of Medical Practice.—John Hunter said that "definitions are the most damnable things," and certainly the definition is often by far the most troublesome part of a proposed legal enactment. A Kentucky judge has recently given a definition of medical practice which seems to be fairly satisfactory. In pronouncing sentence upon an "osteopath" who was convicted of having subjected a child suffering from tuberculous disease of the hip-joint to cruel and unnecessary torture, he laid it down that "any person who for compensation professes to apply any science which relates to the prevention, cure, or alleviation of the diseases of the human body is practising medicine within the means of the statute." This concise definition is probably comprehensive enough to include every form of quackery.

THE LOCAL GOVERNMENT (IRELAND) BILL.

II.

In discussing the question of the remuneration which should be given to the medical public health staff of Ireland, it is desirable that we should know in the first instance what duties are expected to be discharged by medical officers of health in that country. They are specified in an order to sanitary authorities issued by the Local Government Board, under the Public Health Act of 1878, as follows:

Every medical officer of health who shall have been apprised officially by the sanitary sub-officer, or shall otherwise become cognisant of any matter demanding his attention, shall, as soon as practicable, visit the place, and if, after due inspection, he finds such matter to involve danger to public health, he shall report thereon to the sanitary authority, in the form (B) in the said Schedule B, showing the source from which he received the information, and the date thereof, and the date of his visit of inspection; he shall also give a sufficient description of the nature of the case, and the remedy which he recommends to be adopted, and shall preserve a duplicate of every such report.

Every medical officer of health shall inform himself, as far as practicable, respecting all influences affecting or threatening to affect injuriously the public health within the district in his charge, and shall from time to time, as occasion may require, report on the subject to the sanitary authority, and recommended the measures which, in his opinion, should be adopted for the protection or improvement of the public health in such district.

Every consulting sanitary officer, if such an officer be appointed for the sanitary district, shall attend meetings of the sanitary authority, whenever required to do so, and shall advise them on all matters and proceedings requiring medical knowledge and advice in the administration of the sanitary laws.

Every medical superintendent officer of health, if such an officer be appointed for the sanitary district, shall discharge all the duties imposed by this order on the consulting sanitary officer, and in addition to such duties shall perform the following duties, that is to say, he shall report monthly to the sanitary authority on the general sanitary condition of the rural sanitary district, and on the discharge of their duties by the medical officers of health and sanitary sub-officers of the district.

Every medical officer of health and sanitary sub-officer of the union shall attend meetings of the sanitary authority whenever required to do so, and shall assist in all proceedings in which his assistance may be required.

Every medical officer of health, and every other officer appointed under this order shall, in matters not specifically provided for in this order, observe and execute the instructions of the Local Government Board, and all the lawful orders and directions of the sanitary authority applicable to his office.

It shall be the duty of the medical officers of health and of the consulting sanitary officer or medical superintendent officer of health, if such an officer be appointed to the sanitary district, to furnish to the Local Government Board such statistical returns of sickness and disease as shall from time to time be required from them respectively.

Since the above order was issued additional responsible duties have been imposed upon medical officers of health under such statutes as the Labourers' Act, 1883; Infectious Disease Notification Act, 1889 (52 and 53 Vic. cap. 72); and the Infectious Disease Prevention Act, 1890 (53 and 54 Vic. cap. 4). These officers, therefore, hold an appointment which is no sinecure.

The history of the fixing of their salaries reflects no credit on the authorities. Immediately on the passing of the Public Health (Ireland) Act of 1874, the Irish Local Government Board sent a General Order to the sanitary authorities throughout the country to the effect that the salaries paid to the "sanitary officers" (medical officers of health) *should not exceed one-fourth of the amount of their salaries as dispensary medical officers.* By this extraordinary order of the Local Government Board, the prospects of sanitation in Ireland were virtually ruined for the time being. Owing to strong remonstrances made to the Government, the objectionable provision by which a *maximal scale* of remuneration was fixed for the services of the medical officers of health was withdrawn when the Act of 1878 became law.

The Local Government Board, on the passing of the Act of 1878, issued a circular to the local sanitary authorities, inquiring the amount of salary paid to the dispensary medical officers as such, the amount of salary paid to them under the Public Health Act of 1874, and the amount of "*additional salary* proposed to be paid to them as medical officers of health" under the new Act of 1878. As the wording of the circular did not seem sufficiently clear to the sanitary authorities, a second circular on the subject was promptly issued, explaining that the words "additional salary" used in the first circular were not meant to imply that *a salary in excess of that paid under the Act of 1874 was intended.* It goes without saying that this expression of opinion was hailed with delight by the sanitary authorities, and forthwith a *reduction* in the amount of the already inadequate salaries

was in many instances proposed, and in several instances carried into effect, with the approval of the Local Government Board. In a few cases, on the other hand, the salaries were increased beyond the limit of the repealed maximal scale, but the increase was actually vetoed by the Local Government Board.

How came it that the local authorities were permitted to fix such inadequate salaries? Let the eleventh section of the Act supply the answer:

Every medical officer of a dispensary district shall be—[note the *compulsory* phrase]—a sanitary officer for such district, or for such part thereof as he shall personally be in charge of, under the title of medical officer of health, *with such additional salary as the sanitary authority thereof may determine, with the approval of the Local Government Board.*

Even if public opinion is now being gradually brought to bear upon the subject, sanitation in Ireland received a check which the lapse of twenty years has not remedied.

Some such scheme as the following would meet the exigencies of the case. The inspecting medical officers of health should be paid, by the Treasury alone, a salary which would enable them to forego private practice in order to devote their whole time and talents to the discharge of their very responsible and very onerous duties. The district medical officers of health should be paid, in equal shares by the Treasury and by the local authorities, a suitable salary—not a nominal one—subject, if you will, to a *minimal*, but not to a *maximal* scale—this is, a salary which should not be *less* than a fixed amount, say, one-half their salary as dispensary medical officers.

A system such as we have here sketched would require an amendment to Section XI of the Public Health Act, which gives merely a discretionary power to the Local Government Board to direct the local sanitary authorities to appoint medical superintendent officers of health *when deemed necessary*. This section of the Act also contemplates the payment of the salaries of medical officers of health in part by the local authorities. No such favourable opportunity of redressing a great grievance has presented itself as that now afforded by the Chief Secretary's Local Government Bill, and we earnestly appeal to his sense of fairness and justice to see that medical officers of health in Ireland are sufficiently remunerated for their services in the cause of health.

THE DUBLIN BRANCH AND THE IRISH LOCAL GOVERNMENT BILL.

At a meeting of the Council of the Dublin Branch, British Medical Association, held on March 7th, the following resolutions were adopted in regard to the Local Government (Ireland) Bill:

1. Resolved: That in the opinion of the Council of the Dublin Branch, British Medical Association, the Local Government (Ireland) Bill should include provisions for the organisation of the sanitary administration of the country, especially in reference to the important subjects of independent supervision, proper remuneration, and the duties to be discharged by the dispensary medical officers acting as medical officers of health. The Council are further of opinion that the working of the sanitary organisation as so reformed should be vested in the hands of the county councils and not in those of the district councils.

2. Resolved: That the Bill should include provisions for the reorganisation of the Poor-law medical services.

3. That the resident medical superintendents of asylums should be chosen from the ranks of gentlemen who have served for a period of not less than five years as assistant resident medical officers in some accredited asylum or asylums.

POISONOUS OYSTERS AND GREEN OYSTERS.—Dr. Brocchi has recently made some researches into the effects of sea water on typhoid germs. He states that the typhoid bacillus is killed by the water of the ocean; an infected marine animal is soon cured of its germs if placed in deep sea water. On this account the French put their oysters for a week in pure sea water whenever oyster parks situated near estuaries have become in any way suspicious. In noting these facts the *Journal de Médecine et de Chirurgie Pratiques* adds a strange example of Anglophobia. Chromatism, whether green or red, has been asserted to signify poisonous properties in the oyster. It is principally in England, we are informed, that this assertion is specially prevalent. The *Journal* has no difficulty in seeing the aim of the British detractor of the green oyster; for that variety of the popular mollusc comes chiefly from the coasts of France!

ABUSE OF MEDICAL CHARITY.

THE Bradford Medico-Ethical Society has recently published in the *Bradford Observer* a protest against the abuse of medical charity in that large and thriving town. This protest has been forwarded to us, and though the whole document exceeds the space at our disposal, we very willingly quote from it those passages which seem to convey the main contention of its authors.

It is not to be supposed that the familiar term, "hospital abuse," implies that the managers, individually or collectively, are responsible for any dishonourable or even questionable proceedings. The abuses complained of (and in general with too much truth) consist in the almost unlimited extension of medical charitable relief to anyone and everyone who chooses to ask for it, regardless of his ability to pay, or of the question whether his ailment is so serious as to need charitable attendance at a hospital at all, and, further, in the fact that the ungoverned and unlimited distribution of medical charity is held to justify boards of governors in making unlimited and unceasing demands for more money to expend in the same way. Within these conditions are embraced, we believe, all the ordinary "hospital abuses"—and they are many.

Year by year the Boards report that the good work of the hospitals is extending, and is being more highly appreciated—because so many more thousands have accepted charity in its wards. Year by year they repeat this as their justification of their past management, and as an irresistible claim for larger subscriptions for the future. "We have given medical charity to 15,000 persons at a cost of £7,000," say one Board. "Give us £10,000, and we will soon pile up 3,000 or 4,000 more recipients."

From intimate knowledge of the facts we can assert that the present incomes of our medical charities are abundant for the treatment of all deserving cases; they are even superabundant, as suitable cases would include only such persons as were, first, too poor to pay for proper medical care; or who, secondly, were suffering from a disease which could not be properly treated in an ordinary house. No one would dream of performing a serious surgical operation in any of the wretched houses in which thousands of Bradfordians exist. Such a case should receive all the advantages that can only be found in a hospital, provided the patient is poor. But who will assert openly that the funds subscribed for the treatment of such cases are properly expended in treating scratches, slight bruises and cuts, pulling teeth, attending to styes on the eyelids, and the other thousand and one trivial cases which are treated in our public charities?

It is no credit to a Board to maintain an expensive institution like a hospital, and to avail themselves of the services of an honorary medical staff, and expect them to sit daily many hours merely to order cod-liver oil for rickety children, and to deal with other cases of a kind not calling for hospital treatment at all.

We do not wish to endorse the statement that the present incomes of our medical charities are abundant for the treatment of all deserving cases, an assertion which we think is not true for London, whether accurate or not at Bradford; but with the general scope of the letter we are heartily in accord.

BATTLE OF THE CLUBS.

GREAT YARMOUTH.

THE Friendly Societies' Institute of this town does not seem to keep its medical officers long. Doubtless the position is not a pleasant one for a practitioner respecting the opinion of his professional brethren. Medical men reading the advertisement of this institute in the lay press may not know of the controversy at Great Yarmouth, and of the attitude taken by the local profession, so that it is only right to caution those of our brethren who might contemplate taking the post advertised that in addition to accepting office on terms generally reprobated by the whole profession, they would have to face the most uncompromising opposition of of all the medical men in the town in the event of such acceptance, so that it is very desirable they should think seriously before taking this step.

WESTON-SUPER-MARE.

AT the first annual meeting of the Weston-super-Mare Provident Medical Association, Dr. Rossiter in the chair, Mr. Crouch, the Honorary Secretary, read the report of the year's work, which was considered very satisfactory for the first year. There were now over 400 members, and one of the most noteworthy results of the work was the extinction of the "medical aid," which had been in existence in Weston for some ten years. Mr. Crouch further reported that the chemists who supplied the medicine to members were satisfied with the rate of payment, which was 1s. a head a member, and that as the number of members increased so would the profits to the chemists. From the financial report read by Dr. Wallace, the Honorary Treasurer, it appeared that the receipts from members had been sufficient to pay off all preliminary expenses incurred in starting the Association, and during the third and fourth quarters' working they had been able to hand over to the doctors 50 per cent. of these receipts. He thought that soon the total working expenses might be reduced to 45 per cent. of members' payments.

It is satisfactory to learn that the energy of the local profession at Weston-super-Mare has been sufficient to extinguish one branch of a Medical Aid Society, and their example is to be commended to other districts plagued by its presence. With regard to the organisation of the Association, 45 per cent. appears to be a somewhat high estimate for working expenses.

ALDERSHOT.—The new hospital in the Marlboro' Lines has been used for the first time during the past week.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 12TH, 1898.

THE NEW PRISON RULES.

WHATEVER may be the ultimate effect of the new prison rules, just presented to Parliament, on crime in the abstract, they bear on the face of them striking testimony to an enlightened desire on the part of prison administrators to improve the prisoner's lot and brighten his prospects after he has passed out of their hands and regained his freedom. When a departmental committee was appointed by Mr. Asquith in 1894, with Mr. Herbert Gladstone as its Chairman, Sir Edmund Du Cane's management of our prisons had been somewhat severely handled in the *Daily Chronicle* and other papers. Charges were flung rather recklessly at the prison authorities in general, and official optimism was said to be a bar to all progress. Critics forgot the fact that prison rules were hard and fast, being based on Acts of Parliament.

Despite the fact, however, that prison officials were not properly represented on the Committee at all, no charges of maladministration or non-compliance with the Acts of Parliament were substantiated. Several of the recommendations of this Committee were obviously crude and unworkable in practice, others involved a very large outlay of public money for which the Treasury was not prepared, while others, again, involved fresh legislation. No fault was found with the sanitary state of prisons as a result of the centralisation of prison management under the Home Office. The very striking decrease in the death-rate, from the time when the prisons came under State control in 1877, of itself pointed to improved sanitation. The keynote of their report was that our then system entirely subordinated the reformatory idea of a sentence to its penal aims, and that nothing was done to elevate the prisoner and fit him for freedom. There can be no doubt that the Act of 1865 aimed primarily at deterrence and punishment, though it also did much for the criminal by placing him under more favourable conditions for reclamation, and gave him considerable help in the way of working out his own reformation if he showed any desire to do so.

The pendulum has now swung in an opposite direction, and modern ideas, influenced no doubt by the steady decrease of crime, tend to leniency of treatment and mitigation of the penal consequences of offences against law, in the hope that milder measures and moral influences combined may result in an increase of cures and a corresponding diminution of crime. The new system will now have a fair trial, and it will be interesting to note its effects on the habitual criminal, who has hitherto been the despair of the reformer. Statistics show that a sentence of imprisonment at present has a wholesome deterrent effect on the great bulk of first offenders, so that the new ideas would seem to be mainly held in the interest of those who live by crime. If chronic criminal habits are curable, all the systems hitherto adopted have been admitted failures, so that fresh methods of dealing with the problem should be welcomed.

No harm can result from the better classification of offenders. Though the Act of 1865 aimed at classifying all offenders by means of the separate cell system, modifications introduced from time to time in the interests of the prisoner have made it possible for the young and old to meet together in chapel, at exercise, and on other occasions. The risk of contamination thus created will now be ended, or at least very much minimised. Those who fall into crime young, whatever may be said of their elders, are eminently capable of reformation, and society has a right to protect them from contaminating influences in prison. First offenders, too, are hopeful material, and it is satisfactory to find that they are to be kept apart from other prisoners.

Another important feature of the new rules is that trades are to be taught more freely, and prisoners are to be enabled by good conduct and industry to gain remission of part of their sentences as convicts do at present. All these are educative and humanising influences, which, when coupled with a good supply of books for reading, ought to make the prisoner's lot happier, if not enviable.

Much was said before Mr. H. Gladstone's Committee about the insufficiency of prison diet. As was pointed out in the BRITISH MEDICAL JOURNAL, the sickness and death-rates of the prison population prove clearly that nothing serious has been shown to be defective in the dietary scales, which have been in use since 1878, and that medical officers have ample power to modify them so as to meet individual or special requirements. A few changes, however, have recently been made even in this direction in the interest of the prisoner.

MEDICAL RESPONSIBILITY IN THE OLDEN TIME.

PROFESSOR BROUARDEL, Dean of the Medical Faculty of Paris, dealt, in a recent number of the *Revue des Deux Mondes*, with the subject of medical responsibility, which has been much debated lately in the French press. We do not propose here to follow Dr. Brouardel's argument throughout, but only to give some illustrations, mostly taken from his article, showing the manner in which medical responsibility was understood in antiquity and in the Middle Ages. In ancient Egypt, according to Diodorus Siculus, there was a kind of sacred book of medicine, which contained all the rules of medicine to which all practitioners of the healing art were obliged strictly to conform. These rules had been laid down by the nearest and most celebrated successors of Hermes. When practitioners followed these rules exactly they were protected from all pursuit, even in the event of the patient dying, but if they did not they were punished with death however the case ended. In ancient Rome medical men came under the Lex Aquilia: the practitioner who caused the death of a slave had to pay an indemnity to his master for the loss of his property; if he caused the death of a free man he paid the penalty with his own life. This

Draconic law does not, however, appear to have been carried out very strictly, for we find Pliny complaining that medical practitioners were the only people who could commit murder with impunity. The old naturalist in this sarcasm anticipated Molière's "virtutem et puissanciam impune seignandi, taillandi, coupandi et occidendi impune per totam terram."

Before the fifteenth century, according to M. Brouardel, there was in France no legal penalty whatever for malpraxis except in cases where the doctor had intentionally caused grievous injury to his patient. This statement, however, would appear to be a little too sweeping if we may believe the story in the French chronicles of the beautiful Austrigilda, wife of Gontran, King of Burgundy and of Orleans, who, when dying, as she believed, from the effects of the remedies prescribed by her two physicians, made her husband promise that they should be buried alive with her. It is possible that "kings for such a tomb might wish to die," but the wishes of the unfortunate doctors were not consulted. There is also a decree of Henry II which sets forth that upon complaint being lodged by the heirs of persons who have died through the fault of their physicians, justice should be done as in the case of any other homicide. It is related by the legal French authority, Papon, that a physician charged before Parliament with having given too strong a medicine, and excusing himself by the plea that as the case was desperate he thought a desperate remedy might properly be used, was by decree dated April 25th, 1427, discharged "for this time" with an admonition not to do it again, otherwise he would be severely punished. In 1596 the Parliament of Bordeaux condemned the children of a surgeon who, in bleeding a patient, had wounded the brachial artery, in damages to the amount of 150 crowns.

In 1696 the Paris Parliament declared that physicians and surgeons are not responsible for accidents which may occur in the course of treatment, inasmuch as the patient must be held responsible for his choice of doctor ("quia ægrotus debet sibi imputare cur talem elegerit.") Some years later the same Parliament went out of its province to condemn transfusion of blood, and also the use of emetics; in the latter case, however, it very soon found it expedient to rescind its own decree, as Louis XIV, who suffered much from indigestion, was in the habit of relieving his overloaded stomach by that method. In 1710 the Bordeaux Parliament decided that a surgeon who maimed a patient through want of skill should pay damages for the injury; it further decided, however, that a surgeon should not operate except after a consultation, and he was compelled in such consultation to act on the opinion of the majority, even when he himself was the senior among them. Up to modern times the law in France was distinctly hard on surgeons, perhaps because mistakes made by them were visible, and their results as palpable to feeling as to sight. So serious indeed were the consequences of surgical mishap in the Middle Ages that Henri de Mondeville, Surgeon to Philip the Fair of France, strongly advised his pupils before undertaking a difficult case to insist on receiving something in the nature of a bill of indemnity from the relatives in case of failure. The physicians were lightly dealt with in comparison; hence Montaigne could say with some appearance of justice that physicians have "this good fortune that the sun shines on their success and the earth hides their faults."

MIXED FACTORS IN INFECTION.

While frequently one essential factor is necessary to a given result, it is seldom in medicine that one single cause can be credited with the entire responsibility for a pathological condition. This is more especially the case with those infective ailments which require a living contagion for their efficient cause. That one thing lacking, the disease does not result; that one thing present, the disease may or may not result, according, on the one hand, to the amount of the morbific agent introduced, and, on the other, to the resisting power of the subject, this latter being itself conditioned by the very circumstances which favoured the development of the peccant microbe.

In Maidstone, for example, the evidence from the special parts of the town in which the earlier cases occurred, from the particular houses in those parts first affected, points clearly to one particular portion of the town's water supply as containing the necessary cause of the earlier cases. The chemical examination of this particular source of supply again shows that certain springs were polluted by organic matters of animal origin, and the bacteriological examination of these particular springs shows that probably that pollution had been to a considerable extent fæcal in character. When these examinations were made so long a period had already elapsed since the original pollution that the actual bacillus, now generally recognised as the essential factor in the production of typhoid fever, could not be discovered, though some others, resembling it in the great majority of its morphological and cultural characteristics, were present.

The conditions, however, in the laboratory are not those in the human subject, and it is still possible that a bacillus which could not establish itself differentially in plates of Elsner's or other nutrient jellies might yet in more congenial circumstances have multiplied in a susceptible patient. The bacteriological examination of water is still in its infancy (though rapidly approaching adolescence); but, valuable as are the results of such examinations as those so carefully and systematically carried out by Dr. Washbourn on the Maidstone supplies when they yield positive results, he would be rash who laid too much stress on even a considerable number of such examinations in which the results were merely negative. Still, where the quantity of water passed through a Chamberland filter exceeded a couple of litres and the retained sediment in the hands of a capable experimenter yielded no positive result, there is at least a probability that no great number of typhoid bacilli had been present at the time and place when and where the sample was taken. Yet in Maidstone new cases were still frequent for a couple of months after the water had become so largely purified; nay, after the chief suspected supply had been actually cut off, and here come in the mixed factors of infection. Granted that the *fons et origo* of the Maidstone outbreak was to be found in the infected water from the particular spring, what, it may be asked, became of the infective materials multiplied in the persons of these earlier patients?

Maidstone is supposed to be a watercloset town, but the word "watercloset" is in some places applied to a convenience to which no water supply is attached, and so it is at Maidstone. Dr. Adams had already drawn attention to the large number of waterclosets dependent upon hand flushing. This means that in many instances the evacua-

tions of these typhoid patients would remain many hours in the traps of the closets; these traps in all probability would in many cases contain slop water, more or less alkaline, slightly warmer than the air outside, and holding organic matters, both dissolved and in suspension. Here, therefore, in or near the dwellings, visited daily by the occupants of those dwellings, were cultivating chambers for the growth of the bacillus. Can we wonder that so-called secondary cases sprang up first in the houses and streets earliest attacked, and later in other districts on the same system of sewerage?

But not only was there thus in all probability a reproduction of the essential and necessary bacillus in the homes of the people of Maidstone, but these very conditions of waterless waterclosets, insufficiently flushed sewers, and stagnant slop-containing traps, are they not some of the very conditions with which one would choose to surround persons whom one wished to render specially susceptible to attack from the typhoid germ? We know, in regard to phthisis, that it is the susceptibility of the individual—partly, perhaps, inherited, but largely fostered by insanitary surroundings—that predisposes the patient to succumb to the attack of the almost omnipresent tubercle bacillus. Medical men are certainly not amongst those least exposed to the contagion of consumption; and yet Dr. Tatham tells us their deaths from this cause are below the average. So in Maidstone, where the typhoid bacillus was present in large amount in the water supply, its ravages were not only immense, but distributed in a fairly impartial manner amongst those drinking the polluted Farleigh supply. As the bacilli decreased, however, other conditions began to assist in determining who should prove the victims of their attack; and, of these conditions, amongst the most potent were doubtless such items of deficient sanitation around their dwellings as have just been pointed out. And these, too, were entirely preventable; and, "if preventable, why not prevented?"

PAROCHIAL GRATITUDE.

A powerful argument in favour of the Bill now before Parliament to give to Poor Law Medical Officers in Scotland the same security in their offices as is enjoyed by their brethren in England is afforded by a flagrant case which has recently occurred in Mull. In calling the case flagrant we have the high authority of the Duke of Argyll, who has published a strongly worded letter upon the subject. The letter is addressed to Dr. Mackechnie, who has been for many years medical officer of the parish of Kilfinichen. The Duke says that he is well acquainted with the circumstances and history of the parish during this period, yet during the whole of the time "I have," he writes, addressing Dr. Mackechnie, "never heard of one word of complaint against you either on personal or professional grounds." "But," he adds, "there is more than this to be said for you. Seven years ago there was a dangerous outbreak of typhus fever in the Isle of Mull; it was especially bad in your district, it created such a panic that even the sanitary inspectors flinched from their duty. Your courage and devotion were then conspicuous. With a very few whom you rallied to your help you personally coffined and buried the dead." The report made by the special inspecting officer of the Board of Supervision, the Duke adds, was in the highest degree appreciative of Dr. Mackechnie's action in those trying circumstances. "Your name," he continues, "has a conspicuous place in honourable mention, and you, together with two other medical men in Mull, are all described as having 'exhibited the devotion to duty traditional in their noble profession.' And now it is admitted even by your enemies, that you have been assiduous and regular in the discharge of your duties over a wide and very exposed district of country." Yet this admirable officer has been dismissed by the Parish Council, who are advertising for a successor at the salary of £45 a year, with £5 for medicines and surgical appliances. The Duke of Argyll says that he has felt it his duty to investigate the circumstances under which a majority of the Parish Council has been misled to take a course so unusual and so unjust. "The result has been," he says, "a conviction on my part that you have been made the victim of some purely personal dislike, conceived without any reasonable justification, by one or two of the members of the Parish Council in matters entirely unconnected with your professional position." The case is so flagrant that the Secretary for Scotland has demanded some reason for such summary action against a public officer of long and honourable standing. In the course of his letter, Lord Balfour observed that the Parish Council had no moral right to dismiss a parochial medical officer on grounds which have nothing whatever to do with his professional duties. It appears that the majority of the Council have practically refused to give their reasons, and have returned an evasive answer; yet, as the Duke of Argyll points out, the significance of Lord Balfour's remark "in an official letter cannot be mistaken. It is the severest possible comment on the conduct of those to whom it is addressed." "When these facts are known," he adds, "it is very unlikely that any candidate of high character or honourable feeling will be found willing to take an appointment under such circumstances and under the apparently arbitrary power of such a Council." We would re-echo the expectation expressed by the Duke that this matter will be brought before Parliament in connection with the Bill to which we have already referred. In face of such facts the demand of the Bill that medical officers shall be removable from office only by or with the consent of the Local Government Board for Scotland becomes irresistible. We have reason to believe that there are several similar histories now being worked out in the West Highlands, though they have not yet come to so acute a point. We are told that such considerations as differences in religion and politics, and the position a medical officer has too often to take up in commenting on or condemning the sanitary arrangements of dwellings, houses, etc., are allowed to influence the minds of parochial councillors who ought to be influenced only by consideration for the public good. We would draw the particular attention of our younger readers to the observations of the Duke of Argyll with regard to possible applications for the office now declared vacant. The accusation of "trade unionism" has sometimes been made when on previous occasions similar appeals have been made to the profession not to stultify itself by making applications for appointments voided through gross acts of injustice. The Duke of Argyll is one of the most eminent of Scotsmen, and one of the most distinguished of British statesmen. Is he, we would ask our critics, the kind of man who would be likely to encourage or to appeal to the medical profession to pledge itself to trade unionism?

THE ROYAL ENGINEERS AS SANITARY EXPERTS.

In the report of the Army Medical Department for 1896 recently published there is an account of an outbreak of enteric fever at Pembroke Dock, which was noted in the British Medical Journal at the time, but which may be again referred to, as it points a moral that needs to be impressed upon the military authorities in the interest of the health of the people at large as well as of the army.

The disease was introduced into the station by a seaman from H.M.S. *Terpsichore*, who was treated in the infectious disease block, a small detached building in the highest portion of the grounds of the station hospital, from July 19th onwards. In this block there was a watercloset, sink, and bath, all ultimately emptying into a common drain beneath which a lead pipe, supplying the drinking water, was laid. Seventeen days after the admission of the seaman a emale servant of the medical officer was

attacked, and three days later (August 7th) the child of a staff sergeant of the Medical Staff Corps, who resided in the hospital, and the child of a civilian who used water from the hospital tap, were also attacked. On August 10th three children of a barrack sergeant, and on the next day a private of the Devonshire Regiment, who had been discharged from hospital on July 31st, were found to be suffering from enteric fever. Five days later the child of the medical officer, and on August 19th a private of the Devonshire Regiment, who had been discharged from hospital on August 12th, were attacked. Other cases followed, all among persons who obtained their water from the hospital tap, and this source of supply was eventually cut off on August 26th. The ground was opened up, and it was found that the drain from the infectious diseases block was defective and leaky, and that the water supply pipe, which passed beneath it, was corroded in a most remarkable manner for some 6 feet of its length, the corrosion commencing just where the water from the bath, in which the foul linen of the first patient had been soaked, ran into the soil in which the lead pipe lay. Almost every person attacked had taken water from the hospital tap, which was supplied from the faulty pipe, and the last case occurred twenty one days after the use of this water was discontinued. In all there were 20 cases and 2 deaths among soldiers and others, including a nursing sister, who probably contracted the disease while in attendance upon the sick. The outbreak was instructive, and typical of the manner in which a localised outbreak of enteric fever occurs and can be accounted for. The water supply and drainage of the infectious diseases ward and hospital have since been reconstructed.

We cannot refrain from saying that this deplorable outbreak might have been checked at the outset, if not altogether prevented, if the Royal Engineers had taken counsel with the Medical Department. It is the business of the Royal Engineers to see that drains and sanitary arrangements generally are, from the constructive point of view, in proper order and repair. In the present instance they must have known of the defective conditions in the infectious diseases block, and it was their obvious duty to have asked for the advice of the Principal Medical Officer on the matter. This, however, is contrary to their custom, which would appear to be as far as possible to ignore the medical branch of the service altogether. In so acting the Royal Engineers take upon themselves a heavy responsibility which they are apt to try to shift on to the Medical Department when things go wrong. As far as sanitary matters connected with the army are concerned, the Royal Engineers are simply in the position of experts in construction. They have necessarily no special knowledge as to the transmission of infectious disease, a matter which lies entirely within the province of the Army Medical Department. Their relation to the Medical Department is that of the district surveyor to the medical officer of health. We would suggest, therefore, that the Royal Engineers be enlightened by the War Office as to their true place and their exact sphere of action in military sanitary administration; otherwise, such outbreaks as that at Pembroke Dock, involving the loss of valuable lives, are certain to be repeated again and again, possibly on a much larger scale. The matter is one of the greatest gravity, and calls for the immediate attention of the authorities.

SOME REMINISCENCES OF SYME.

Dr. Donald Maclean, Professor of Surgery at Ann Arbor University, Michigan, and Ex-President of the American Medical Association, has published[1] some interesting personal reminiscences of Syme, whose pupil he was at Edinburgh forty years ago. Although no man could possibly be more abstemious in his habits than Syme all through his life, nevertheless he seems to have had a distinct feeling of dislike for teetotallers. Professor Maclean recalls how a boy of not more than 12 years of age presented himself suffering from a peculiarly loathsome disease. Syme, with an expression of disgust on his face, said to the youthful sinner: "Are you a teetotaller?" and when the boy replied "Oh yes, Sir," Syme quietly said, with an expressive twinkle in his eye: "I thought so." Coming once upon Dr. Maclean while sitting on the doorstep of the Royal Infirmary playing with a Skye terrier pup which had been given him by a grateful patient, Syme said, with an air of mock severity, "Permit me to inform you that there are just three steps to ruin for a young man: first a dog, second a pipe, and third a woman." Dr. Maclean recalls one of the boldest operations which even Syme ever performed. A shipwrecked sailor, in making a desperate leap for his life, ruptured the common iliac artery close to its bifurcation, with the result that an enormous aneurysm developed; Syme determined to operate, and asked Professor (now Lord) Lister to be present. The latter brought with him an instrument, now known as Lister's aortic compressor, which he had devised expressly for the case. Syme, who was naturally of a conservative disposition, was not particularly impressed by the instrument when shown to him. He proceeded to operate, and when he laid open the aneurysm terrific hæmorrhage took place, which but for Lister's instrument would undoubtedly have proved fatal. As it was, the aorta was controlled, and Syme was able to tie the common, internal, and external iliac arteries, and to save the patient's life. Syme was one of the pioneers in the operative treatment of cancer of the tongue by entire removal of the organ. His earliest cases were unsuccessful, and consequently he was somewhat severely criticised in certain quarters. Undeterred by this, however, at the meeting of the British Medical Association at Edinburgh in 1858 he performed the operation once more before a large number of distinguished surgeons from all parts of the kingdom. After the patient had been removed to his bed the audience loudly applauded the operator. Dr. Maclean continues: "The professor calmly turned round as he was drying his hands and pointed to a notice on the wall requesting order and silence in the amphitheatre. This facetious act elicited a fresh burst of applause. He then stepped forward with the evident intention of saying something, and instantaneously every sound ceased, every breath was held, every ear was eager to catch the slightest sound which dropped from his lips. Rumour has it that the following was what they heard: 'Gentlemen, permit me to assure you that I have reached an age and a position in the profession at which I care neither for censure nor commendation,' and he bowed politely and walked out of the amphitheatre." The last time Dr. Maclean saw Syme was in 1872, shortly after the great surgeon had had an attack of apoplexy. When he had shaken hands for the last time Syme seized the collar of his coat, and with a quick nervous movement turned him rapidly round so that he could look into his face, said, 'Be sure and keep your eye on Lister and his antiseptic investigations. I feel sure that there is something in them. And remember, sir, look forwards, do not look backwards.'" Prophetic words! But even Syme could hardly have foreseen how much there was in these investigations of his distinguished son-in-law.

[1] *The Medical Age*, Detroit

BACTERIOLOGICAL SEWAGE FILTERS: A CARPING CRITICISM.

We see from the *Leeds Mercury* of March 3rd that, at a recent meeting of the City Council, Alderman Harding expressed the satisfaction of his Committee with the results of the experiments made during the last six months with the Leeds sewage. There were certain special difficulties in applying the bacteriological filter to the sewage of a manufacturing town. So far only one manufacturing affluent received into their sewers had given rise to any very great amount of trouble. This particular product—an iron waste—acted to some extent as an antiseptic, and retarded bacterial action. This would in some way be dealt with. A second difficulty was more serious. When they began their experiments they wished to do so with crude sewage. Naturally they expected some filling-up of the beds, and were anxious to gauge its amount. The net capacity of their first bacteria bed was 80,000 gallons. Week by week it became reduced, till on February 1st it was something like 45,000. This, however, was not quite so serious as at first sight it appeared. They had reason to suppose that if they screened a certain amount

of fibrous matter out of their sewage the bacteria would digest the remainder. He hoped at the May meeting to tell them what result they got with screened sewage. If this was not all they wanted they would have either to rush the sewage over some precipitation tanks, so as to deposit the grosser matters, or to pass the effluent from the present existing precipitation tanks over some bacterial beds. Speaking of the results so far obtained, Colonel Harding said that, measured by oxygen absorbed, the degree of purification of the crude sewage obtained had averaged 80 per cent. On December 1st a dozen carp were placed in a trough through which the effluent flowed. Unfortunately several of them were killed by being forced too violently against a grate by the flow of the purified sewage. A screen had been fixed to prevent this, and since that none of the remaining ones had died. If they survived the vicissitudes of these experiments, he would suggest that they be brought to the mayor's parlour and be kept for the rest of their natural lives at the expense of the city. Certainly the survival of fish in a sewage effluent is somewhat of a triumph for Mr. Dibdin's process. The gallant alderman says nothing about the appearance of the effluent. Perhaps it is clearness itself compared with the purple stream into which it has to flow. We await with interest the further history of these important experiments, and hope to add to our collection of good fish stories.

"THE CASE OF THE ARMY DOCTORS UP TO DATE."

The above is the title of a powerful article in the *New Century Review* for March, from the pen of Mr. T. H. S. Escott, who in October last, in the same periodical, championed the case of army medical officers. He takes deserved credit for the "appreciable and satisfactory results" his previous arguments have had on public opinion, and commends the attitude of Lord Lansdowne on the subject, laying the blame of the continued deadlock on his military advisers, whom he describes as "those obstinate incarnations of British militarism," representing a school of thought which uses or misuses its great influence in preventing concessions to a class of professional men "essential for the service of humanity." He says that Lord Lansdowne does not deny that "justice and expediency are alike on the side of the army doctors;" and contends that, unless reforms are speedily effected, a great war must, in "the existing condition of our medical service, ensure the repetition of gratuitous misery and unavoidable suffering, with which those in Crimean days would by comparison be slight, to an untold number of British subjects." He contends that this is no overstatement, because, "while there are fewer healers available for our soldiers in the field than ever, the work which these healers have to do is immeasurably greater, more responsible, more exacting; demanding more labour of brain and skill of touch than can ever have been known in the history of war." This argument he justly bases on the great modern strides in antiseptic surgery, and all that it entails. While the demands for increased knowledge and skill daily advance, never were the qualifications of the healers so low. "Men who have fair degrees do not avoid the Indian or the navy services." Why should they avoid the army? Simply because "the Army Medical Service, as now constituted, presents only a combination of deterrents" to self-respecting medical men. He declares that "the remedy is, happily, as simple as the evil itself is glaring and calamitous;" and, in, effect, consists in "the request now made to Lord Lansdowne, as political head of the army, that the Army Medical Department should become one Army Medical Corps, and that this corps should include what is at present the Medical Staff and the Medical Staff Corps. These two would in effect be associated together, and would have their strength increased up to the point necessary for full efficiency; while its members would exchange the insult of military rank on sufferance for the medical due of military rank by title." He quotes the precedent of the Royal Artillery and Royal Engineers, both of which corps, essential in the constitution of any army we can now conceive, were at one time considered "foreign growths" upon it. He says "the Duke of Cambridge might recall a time when an artilleryman was quite outside the regular army lines." But surely His Royal Highness is not old enough for such a memory! It is, however, a mere question of historical dates, for in the so-called evolution of chivalry there was a time when only mounted knights in armour were considered the pure fighting article, and the foot soldier was held to be hardly a soldier at all. The objection to giving medical officers complete military status is, therefore, perhaps the last survival of mediæval feudalism, which first excluded the foot soldier, then the gunner, then the engineer, and now the doctor, from sharing in complete army status—with the mounted knight! The writer appeals to Lord Wolseley to rise to the occasion, and, superior to professional militarism, to concede "a professionally equitable, a popular expedient, and a nationally imperative reform," in the army medical service. Should he fail to do so, Mr. Escott reminds him that "the object of adequate medical attendance in the army is to obviate or minimise human suffering. To dispense with skilled aid for that end would be to relapse into savagery." We, who on our part have very persistently endeavoured to arouse public attention to the nationally calamitous condition into which the army medical service has been allowed to lapse, thank the writer for his outspoken and thoroughly well-informed article. Coming, as it does, from an entirely independent civilian and non-professional source, it ought to stimulate the War Office into speedily effecting sorely needed as well as much desired reforms in the status of the Army Medical Department.

THE MEDICAL DEPARTMENT, LOCAL GOVERNMENT BOARD.

Dealing with the *personnel* of the Medical Department, the Local Government Board Inquiry Committee describe the multifarious duties which devolve on the medical officer and the two assistant medical officers. They sum them up as involving all matters in which medical or public health considerations are concerned, and which come under the notice of the Board, whether at home or in connection with the interests of British shipping and commerce in any part of the world. They then proceed to state that the salary of £1,200 a year which Sir Richard Thorne had hitherto received for the supervision of all this work and of the Medical Department as a whole was not in their opinion inadequate. But, having made this statement, they point out that this work has entailed on the medical officer the additional work of acting on behalf of the Secretary of State for Foreign Affairs at a number of international sanitary conferences, and of advising the Foreign and Colonial Offices on subjects which tend indirectly to involve this country and its commercial marine. When it is remembered that even since 1893 Sir Richard Thorne has represented this country at three such international gatherings, and has been successful in so far limiting the restrictions which foreign Governments have tried to impose on our commerce both in the Suez Canal and in European ports, that he received full powers from the Queen to sign the three Conventions of Dresden, Paris, and Venice relating to cholera and plague, it may well be wondered how the Committee should come to such a conclusion as to adequacy of remuneration for work which they themselves describe as "very serious and responsible." Indeed, they find themselves obliged practically to recall their own words, for they immediately go on to explain that so long as these duties devolve upon the medical officer, his salary should rise from £1,200 to £1,500 a year, that the maximum amount should at once be assigned to Sir Richard Thorne, in recognition of past services, and that to the post of senior assistant medical officer an addi-

tional £100 a year, making it £1,100 in all, should be assigned. We congratulate the department on having thus secured some recognition of the character of the work they have so long carried out, but we can only hope that this is a first step towards a still further recognition of the responsible services rendered to the State by the officers concerned as well as by the medical inspectors as a body, for even now the remuneration attaching to the principal post is only restored to that which it was in Sir John Simon's time, and this without making any allowance for a further sum for services rendered by him to the Privy Council after he was transferred to the Local Government Board. But even in conceding this increase there is a somewhat curious passage in the report which might almost imply that the committee had no alternative but to grant the increased remuneration referred to. Thus they say: "Were Sir Richard Thorne to refuse to undertake this work, the Foreign and Colonial Offices would be compelled to seek the services of men in the first rank in the open profession at a very heavy charge." It is not very difficult to read between the lines here, and to see that the Treasury felt, or were told, that if they did not concede the reasonable demands made of them by the Local Government Board, they would have to face a more costly alternative; and this is known to be a form of argument which those who hold the pursestrings of the nation find it most difficult to resist. Then comes the announcement that Sir Richard Thorne had explained to the Committee that there was great delay in the work of his department owing to the insufficiency of the staff. This report is dated August 7th, 1897, and the staff remains precisely what it then was; for though, as we announced some time since, two medical inspectors were to be added to the staff to meet this state of affairs, they are, according to the Committee's recommendation, to be temporary only, and the question of renewing the appointments is to be settled by the Treasury at the end of one year. We believe we are right in stating that the two appointments have already been offered by the President of the Board to two medical officers of health, and we can only assume that the reason why proper effect is not given to the report in this respect is the notorious fact that it is a substantial permanent increase in the medical staff that is wanted, and not a mere temporary one, whether for one year or longer. The work of the Medical Department has increased enormously of late years; with the growing interest in public health matters the central department dealing with these subjects must necessarily go on increasing; and the sooner the requirements of the Service in this respect are properly met the better it will be. The report shows some progress in the right direction, and it is to be hoped that the recommendations constitute the first step towards the constitution of such a public health department as is now obviously required in this country in the interests both of the public and of the State.

MEDICAL OR LEGAL CORONERS.

VACANCIES in the office of coroner occur from time to time, and each election raises the still somewhat burning question as to whether the holder of the office should be a member of the medical or of the legal profession. As there always have been, and probably always will be, both barristers and solicitors anxious to obtain the office, the question will remain a debatable one, with arguments more or less plausible, available for the advocates of either candidate, medical or legal. But as some guide to county and city councillors who have to answer the question by their votes, certain facts may be stated which do not admit of dispute. It is an old legal dictum that possession is nine-tenths of the law, and as one-sixth of the total number of coroners in England and Wales, and one-third of the coroners in Ireland, are members of the medical profession, it is too late in the day for anyone to dispute the right of a medical practitioner to become a candidate for the office. This position is strengthened by the fact that the Coroners' Act of 1892 throws open the office of coroner and of deputy coroner to any fit person, repealing Section CLXXII of the Municipal Corporations Act, 1882, which limited the office of deputy coroner to a barrister or solicitor. This gave support to the argument that the coroner should be of the same profession as the deputy. All that is changed; the coroner and deputy coroner of any corporation, town, or city, or of any county in England and Wales, may be a member of the medical profession. Supposing the coroner appointed and duly sworn, one of the first questions which he will have to decide is whether he ought or ought not to hold an inquest in any case referred to him. For the third section of the Coroners' Act, 1887, not only allows but enforces a discretionary power, limiting his inquests to violent or unnatural deaths, sudden deaths of which the cause is unknown, deaths in prison, or in such place or under such circumstances as to require an inquest in pursuance of the Act. In other words, the coroner has to decide whether a death is the result of violence, a natural or an unnatural one. This is distinctly a medical, not a legal, question, and it is most important at the present day when the daily press teems with complaints from coroners' juries and others of the hardships of having to attend inquests, many of which are unnecessary and useless, and might have been prevented by a wise discretion. Moreover, many inquests are held in which no medical evidence is taken, thus making the inquiry into the cause of death a solemn farce, if indeed there be any solemnity in the matter. Solicitors contend that the object of the coroner's inquest is not to ascertain the cause of death, but who caused it. As, however, this latter question arises only in a very small proportion of cases, the contention is untrue as well as contrary to the words of the section of the Coroners' Act already quoted. Every inquest ought to be a solemn, painstaking inquiry into the exact cause of death, and this can be done only by a coroner who has had a medical training.

ACETYLENE VERSUS COAL AND WATER GAS.

IN drawing attention recently to the dangers of carburetted water gas, we stated that, owing to the large percentage of carbon monoxide which this gas contained and the absence of odour, it was dangerous as a general illuminant. As to its lighting properties there is no question, whatever there may be in regard to its cost of production. In Allbutt's *System of Medicine*, vol. ii, p. 959, there is an article on this subject, in which after an allusion to the dangers incidental to its lengthened inhalation, it is stated that carburetted water gas is prepared by acting upon burning charcoal with steam. One of the gases recently recommended as an illuminant is acetylene (C_2H_2). Acetylene is obtained from calcium carbide, and at the present time, with the numerous generators which are in the market, it can be so readily and cheaply prepared that for illuminating country houses it is thought it may supplant other methods. A special apparatus is required for the production of the gas, a gasometer or holder, and attached to this a small generator in which the calcium carbide is placed. The calcium carbide is supplied in waterproof coverings. Immediately water, which is added automatically in the generator in small quantities, is brought into contact with the carbide the calcium absorbs a certain amount of oxygen from the water, forming calcium oxide or the hydrated oxide, and acetylene gas is liberated, which at once passes into the holder through tubes. In escaping through water into the holder, ammonia, which has also been formed, is absorbed, and there remains a fairly pure acetylene gas ready for distribution through the house by ordinary gas pipes, and burned in the usual way. The flame obtained from acetylene is a brilliant white, and is cooler than that of coal gas. There is, too, practically complete combustion. It is said to possess illuminating properties sixteen times

greater than coal gas, and it is less poisonous than either coal or water gas. In poisoning by coal or water gas the individual dies asphyxiated, owing to the carbon monoxide entering into stable combination with the hæmoglobin of the blood, and from which it is with difficulty dissociated, but where a person breathes an acetylene atmosphere he becomes asphyxiated simply from the absence of oxygen, so that the moment he is brought out into the open air the symptoms of suffocation ought theoretically at once to decline. Acetylene catches fire much more quickly than coal gas, and this is undoubtedly one of its dangers. It is slightly more explosive than coal gas. A mixture of air and acetylene, for example, commences to be explosive when it contains 5 per cent. of acetylene, whereas it requires the presence of 8 per cent. of coal gas to make a similar mixture explosible. While the relative values of these two gases as regards explosibility stand as 8 to 5, it is estimated that there will escape through an open burner in an hour less acetylene than coal gas—the proportion being five cubic feet of coal gas to half a cubic foot of acetylene. The difference in the amount of gases escaping depends upon their specific gravity. Coal gas has a specific gravity of 400, whereas that of acetylene is 900. This circumstance therefore tends to render acetylene in practice about equally explosible with coal gas and as it too has an extremely unpleasant odour a very slight escape of it into a room can be readily detected. As in coal gas no naked light should be taken into a room where there is a strong smell of acetylene.

CHAIR OF MEDICAL JURISPRUDENCE AT GLASGOW.

Dr. John Glaister has been appointed to the Chair of Forensic Medicine in Glasgow University. Professor Glaister is a graduate of Glasgow University of nineteen years' standing. He also holds the D.P.H. of Cambridge, and is a Fellow of the Faculty of Physicians and Surgeons of Glasgow and of the Royal Society of Edinburgh. Since 1881 he has been Lecturer on Medical Jurisprudence and Hygiene in the Royal Infirmary Medical School, having been appointed to the chair in 1889, when that school became St. Mungo's College, and he has been Examiner to the Conjoint Board of the Scottish Corporations on these subjects for many years. On the subjects of forensic medicine and sanitary science he has been a prolific writer. We feel sure it will be freely recognised that by his ability and energy he has well earned his appointment, and that he will receive generous, as well as general, congratulation on his promotion.

PRISONS AND SMALL-POX.

A somewhat novel point has been raised by an inhabitant of Northallerton, who fears that the infection of small-pox may be imported into that town by the committal to Northallerton Gaol of prisoners convicted at Middlesbrough, where they may have lived in infected houses. He suggests that the prison authorities should refuse to receive such persons unless they have been previously placed in quarantine and certified to be free from infection. There would be obvious difficulties in carrying out this recommendation. Lawyers would probably consider that a criminal *in esse* was a greater danger to society than a small-pox patient *in posse*. In the absence of suitable prison accommodation at Middlesbrough it would appear to be inevitable that these prisoners should be taken to the nearest prison in the district. Moreover, nothing on the warrant of committal would justify the governor of the establishment in refusing to receive them because the district from which they are sent is an infected one. The officials at Northallerton Prison are, however, fully alive to the danger, and for their own sake, as well as in the public interest, keep a watchful eye on their receptions from Middlesbrough. It should be remembered that all prisoners are on their arrival bathed, supplied with fresh clean prison clothing, and isolated in separate cells. Meantime their private clothing is by order removed, disinfected, purified, and put away in store. Every prison is supplied with suitable means for carrying out this process, so that the risk of infection from clothing is reduced to a minimum. If after reception a prisoner should develop the disease, he can be removed by the Secretary of State's order to an infectious hospital, as has been done in several cases of imported disease, or, if it is decided that he should be dealt with in the prison, very stringent orders are laid down for his immediate isolation, under the care of special day and night attendants who are for the purpose temporarily boarded and lodged in the building. Further, all infected bedding, clothing, etc., is by order either disinfected or burnt. The result of these steps has been in the past that no epidemic has of late years made real headway in any of Her Majesty's prisons, so that the public may rest satisfied that every possible precaution is taken to prevent prisons becoming foci of contagion either for the inmates or for the people who live in the neighbourhood.

A PRIME MINISTER AND HIS WOODEN LEG.

The rapid progress made by the Japanese in adopting the arts and manufactures of the West has been watched in recent years with something like dismay by many traders, who fear that a profitable market may be lost to them by the development of native industry. There are still a few things, however, which the native of Japan who wishes for a superior article has to procure abroad. One of these is guns; another—not altogether unconnected with the first—is wooden legs. An American journal recently announced with natural patriotic pride that Count Okuma, the Prime Minister of Japan, had instructed the Japanese Minister to the United States to order a wooden leg for him in that country. The artificial limb, which, we are considerately informed, cost £20, was shipped to Japan in two weeks. This is said to be the second wooden leg which the Japanese Prime Minister has bought in the United States. In 1890 a Japanese fanatic named Hunekt Karushima threw a bomb into the Foreign Office, where Count Okuma was at work, the result being the destruction of the Prime Minister's right leg. A native cabinet maker made for him an artificial limb finely lacquered and inlaid with mother-of-pearl. This thing of beauty did not, however, prove a joy for ever, and when Count Okuma visited the United States in 1894 he procured a wooden leg which, if less artistic, was more serviceable. The American article was recently—to use the expression of an ex-Prime Minister of England—"smashed, shattered, and pulverised" in a street accident. Hence the necessity of a further patronage of American manufactures on the part of the Japanese statesman.

VACCINATION OF TEACHERS.

Mr. C. H. Hopwood, Q.C., ex-M.P. and Chairman of the Executive Council of the National Anti-Vaccination League, has written to the London School Board regarding what he calls a grievance of long standing. The requirement of vaccination or revaccination of teachers is, it seems, "one of a series of disabilities..... in this land of pretended enlightenment and liberalism." Mr. Hopwood urges that it is often boasted "that civil disabilities are no longer imposed on account of belief or unbelief in religious matters," but that, however this may be, "it is certain that in matters medical there is no such liberty," and that "it is high time to protest against the implication of a disability upon persons merely because they do not wish to submit themselves to be inoculated with cow-pox disease," and so forth. It may be well, therefore, to point out that no civil disability is imposed on anyone in this country on account of belief or unbelief "in matters medical." As regards vaccination, it does not matter to the School Board of London, or to any other School Board, whether candidates for a teachership believe or disbelieve. It does not matter even whether they do or do not

"wish to submit themselves" to vaccination. The question which the Board puts to candidates has no reference either to wishes or beliefs. It is perfectly simple. "Has he or she been successfully vaccinated?" For anything the Board cares the teacher may believe vaccination to be worse than all the plagues of Egypt provided he or she has been successfully vaccinated. The question is one of fact, not of opinion or desire. So also the teacher may believe that the earth is flat provided he teaches that it is round. He may believe every regulation of the Board to be wrong, he may believe the Board to be fools and Mr. Hopwood to be wise, so long as he does not act on these beliefs, but continues to obey the Board's regulations. But Mr. Hopwood, Q.C., seems incapable of understanding the difference between opinion and fact, belief and practice, and so he maunders on about religious liberty and civil disabilities. We are glad to see that the Management Committee has resolved to recommend the Board to explain to Mr. Hopwood "that they do not desire any further conditions as to vaccination beyond those required by the Education Department."

GLASGOW ROYAL INFIRMARY.

The scheme for the rebuilding of the Royal Infirmary, Glasgow, which was adopted as the city's memorial of the Queen's Diamond Jubilee, has made considerable progress. Of the total amount of £100,000 required, all but some £20,000 has been obtained, and it is confidently anticipated that the remainder will shortly be forthcoming. It seems to be quite settled that the new infirmary shall be erected on the site now occupied by the existing Royal Infirmary. It is felt that this site has many advantages, in particular that it occupies a central position in the busy manufacturing part of the city. The objection which has been made owing to its proximity to the necropolis is looked upon as being one of a sentimental nature. A more serious objection made to the site is the difficulty of erecting within its comparatively limited area an infirmary of sufficient size which will fulfil modern requirements as to cubic space, light, and ventilation. As against this it is urged that it is important to retain the infirmary in the part of the city in which it at present stands and that if need for greater accommodation arises in the future a new infirmary should be erected in the eastern part of the city. Plans for the new building on the present site have been prepared by the executive committee of subscribers. These have been submitted to the managers and medical staff of the Royal Infirmary, by whom certain alterations have been suggested. It is expected that in about a month's time the alternative plans will have been considered, and a final decision reached. In the meantime the managers of the Infirmary are arranging for the erection of a temporary brick pavilion for the reception of patients during the work of rebuilding. It is not expected that it will be considered necessary to make any alterations in the present north surgical house, which is one of the most modern parts of the infirmary.

"LA CHOSE JUGÉE" AT HOME.

The attempt to establish a much-needed Court of Criminal Appeal is, once again, to be made by a private member, Mr. E. H. Pickersgill, whose Bill on the subject is down for second reading in the House of Commons on March 16th. The evils of the present system are well stated in a very temperately written little pamphlet by "Lex," issued by a committee of the Humanitarian League. The problem to be solved is "to correct wrongful convictions and excessive sentences as speedily, as completely, and as publicly as possible." The Home Office is at present the only power that can intervene to save justice from committing injustice. But it is under no obligation to do so. If, "in its discretion," and in the exercise of its "clemency," it decides to look into an alleged injustice worked by a court of law it does so when and how it pleases, gives such relief (if any) as seems to be good in its own eyes, conducts its inquiries in absolute secrecy by means of agents whose names and very existence may be unsuspected, and whose sources of information are unknown. A court of appeal would consider complaints as a matter of right, not of favour; it would be independent of public agitation (which now often operates to the detriment of its object); it would listen to no private and confidential reports possibly coming from tainted sources; it would fearlessly put aside the opinions or prejudices of a judge who had contributed to a wrong conviction, or had inflicted an unreasonable penalty; and above all, it would do everything in the light of day, and pronounce reasoned decisions which would tend to bring law and public opinion into harmony, and serve as authoritative guides for judges and juries in like cases. Such a tribunal, in spite of the great difficulty in the way of its establishment, we hope one day to have. For medical, as for expert witnesses in general, such a court would have a special interest, because it is obvious that the abstract questions and hypothetical answers in which experts chiefly deal would be more justly appreciated by a bench of judges than by the petty jury of a criminal court.

TRAINED NURSES IN WORKHOUSES.

The meeting of the Central Poor-law Conference in London on March 2nd was an opportunity for those who have this question at heart to discuss the subject in the light of the new order. Dr. Rhodes, who is a veteran in the fight, contributed a valuable paper to the Conference. One point he makes is worthy of the consideration of all reformers; he classifies the workhouse infirmaries in three groups: "1. Those which are large enough to carry a permanent staff sufficient for all ordinary requirements. 2. Those which always require some skilled nursing, but in which one nurse with competent responsible assistance is sufficient to meet the normal conditions. 3. The few small houses where at times there are no sick, and where a nurse is only needed when there are inmates requiring nursing." It is this inequality in the circumstances of the various infirmaries under the Poor Law that constitutes one of the great difficulties in organising the nursing service. Dr. Rhodes suggested the amalgamation of the houses in the third division as being one method of meeting the difficulty, and it is probably the most practical way, and in these days of quick and easy transit it is quite possible. Dr. Rhodes also drew on his experience to emphasise the urgent need there is to improve the diet of the nurses and their quarters. In these matters too much is left to the discretion of each Board of Guardians; the Local Government Board as yet has not placed the trained nurse on the list of its superior officers, so that if a Board chooses to lodge the nurse and feed her as a second class officer there is no redress. This want of considerate treatment on the part of her employers is a real hindrance to the best style of nurse taking service under the Local Government Board.

HOSPITAL VENTILATION IN HOT COUNTRIES.

The foundation stone of the new buildings of the General Hospital for Europeans in Calcutta was laid recently by Sir Alexander Mackenzie, the Lieutenant-Governor of Bengal. The old hospital is not well adapted for modern requirements. The main building was originally constructed by a native gentleman as a garden and pleasure house in which to entertain his European friends, and was purchased by the Government for hospital purposes as far back as 1768. The two wings were built in 1795. Improvements were from time to time made in the buildings, but it was felt for many years past that the original defects were of so radical a nature that the only real remedy was a new hospital. Great credit in this respect is due to Brigade-Surgeon-Lieutenant-Colonel Crombie, the superintendent of the hospital, for having interested the Government and the public in the affairs of the hospital to such good purpose as to determine the authorities to build a new hospital.

He was fortunate in securing the hearty support of Sir Alexander Mackenzie, whose rule in Bengal has been distinguished by an active interest in the advancement of medical and sanitary institutions. The cost of the new hospital is estimated at 22 lakhs of rupees, and it is hoped that it will be completed in about five years, and will provide accommodation for 336 patients. A novel feature in the scheme of the new hospital, and one which will undoubtedly add immensely to the comfort of the patients, is its ventilation during the hot and rainy seasons by cold and dried air. The proposal, which will bring about an entirely new arrangement for hospitals in the East, emanated from Brigade-Surgeon-Lieutenant-Colonel Crombie. Like most new ideas, it has met with opposition, though the advantages seem sufficiently obvious. During the hot and rainy seasons Calcutta has a temperature varying from 85° to 95° F., and a humidity which frequently reaches 90 per cent. Both are subject to great vicissitudes due to sudden storms of wind and rain. Dr. Crombie proposes to establish a uniform temperature in the wards of from 75° to 80°, and a humidity reduced to about 60 per cent. as a necessary part of the process of cooling the air. The relief which this change will give to the cutaneous and exhausted nervous systems will be appreciated by those who have experienced the muggy heat of Calcutta at those seasons. As the cool, dry air is to be passed through screens of cotton wool there will be no mosquitos, and accordingly no necessity for punkahs and mosquito curtains. The advantages are that patients will secure quiet rest at night, and will not lie bathed in perspiration covered with prickly heat, made subject to the chills to which punkahs and sudden changes in temperature render them liable. The cases which will benefit most will be conditions of exhaustion, whether from climate or disease, cases of Bright's disease, and phthisis, for which the climate of Calcutta is particularly unsuitable.

IRISH ASYLUM APPOINTMENTS.

IN Ireland, up to the present time, a curious anomaly has existed in asylum appointments. The medical superintendents have been appointed by the Lord Lieutenant, while the assistant medical officers have been appointed by the Boards of Governors, local bodies, analogous to the old visiting justices of English asylums, save that the powers of the Boards of Governors were, as in this instance, more limited. The Lord Lieutenant, on the occurrence of a vacancy among the medical superintendents, generally appointed to the post a gentleman who had served as assistant medical officer in one of the Irish asylums. Under the provisions of the new Irish Local Government Bill the appointment of medical superintendent as well as that of assistant medical officer will be in the hands of the asylum committee of the county council, as in England. The example of English county councils leads us to hope that the new bodies in Ireland will deal fairly and intelligently with such patronage as falls into their hands. Circumstances, however, are such that local feeling will be stronger than in England. Hence assistant medical officers who have served for some time in the hope of such promotion as was bestowed upon them by Government may have reason to fear that their prospects are much limited by the new Bill. There is, however, one excellent provision in the Bill, the extension and completion of which may materially improve the position of assistant medical officers, but is very desirable, nay, even necessary, for other reasons. It is proposed that "every resident medical superintendent shall be a legally qualified medical practitioner of not less than seven years' standing, and shall have had experience in the treatment of the insane." The evident intention here is to insist upon special training, but the wording of the clause is not sufficiently precise for a legal enactment if the end in view is to be secured. Some definite period of service long enough to ensure that the man has acquired a good knowledge of this speciality, and shown an aptitude for his very severe and wearing task should be required. Every practitioner might lay claim to have experience in the treatment of insanity, while the obvious aim of this provision is to obtain for asylums the services of specialists.

THE CERTIFICATION OF OPTICIANS.

THE Spectaclemakers' Company, which is one of the old guilds of London, has approved a scheme for granting certificates, together with the freedom of the Company, to persons who submit to examination, and show themselves competent for the trade of optician. The examination, of which the first will be held next May, will be conducted by Professor Silvanus Thompson, Mr. G. Lindsay Johnson, F.R.C.S., and Mr. G. Paxton, optician. The examination conducted by Professor Thompson and Mr. Johnson will be divided into two parts, theoretical and practical; the first will include algebra, plane trigonometry, and heat and light, with simple problems relating thereto. The practical examination will correspond with the course of instruction adopted in these subjects at the Cavendish Laboratory at Cambridge, omitting the experiments on diffraction and polarisation. The standard of the examination will correspond roughly with the optics and heat required for the B.Sc. examination of the London University, with the addition of the practical part. No examination of patients will be allowed, nor any estimation of the refraction of the eye required, nor will the anatomy of the eye form any part of the examination, except in so far as it may be necessary to consider it from a purely physical standpoint. The examination, in fact, will be designed to test the knowledge of the optician as to the purely optical effects produced by lenses. Nothing will be permitted, we are informed by Mr. Johnson, which might encourage the optician to consider himself competent to correct visual defects of patients. On the contrary, it is intended that it should be clearly understood that this is the function of the ophthalmic surgeon. It appears to be necessary to make this statement, as a paragraph which has appeared in the newspapers might lead to a different impression. The examination of candidates in the technical work of the manufacture of spectacles in accordance with the prescription of ophthalmic surgeons will be conducted by Mr. Paxton.

HABITUAL DRUNKARDS.

A CIRCULAR on habitual drunkards signed by Dr. Norman Kerr, Chairman of its Inebriates Legislation Committee, has been issued by the British Medical Association to justices of the peace, Boards of Guardians, reformatory and prison authorities, the clergy of all denominations, and temperance societies. The circular states that the British Medical Association, the Society for the Study of Inebriety, and the Homes for Inebriates Association, strongly advocate certain reforms, in which they are supported by the recommendations of several official committees, especially the Government Departmental Committees on Inebriates in England and Scotland. The points to which it is considered legislation should have particular regard are: 1. Power to substitute curative and reformative treatment of criminal inebriate offenders for their existing ineffective imprisonment in gaol. 2. Power to seclude non-criminal habitual drunkards, with due regard to the "liberty of the subject," in special curative institutions. 3. Curative seclusion, at the public charge, for poor habitual drunkards. 4. Appearance of an inebriate desirous of admission to, and detention in, a retreat, before one justice or other authority, instead of before two justices as at present. The circular states that the Inebriates Legislation Committee of the British Medical Association recommends the adoption of a resolution expressing regret that the Government has not been able to find time for the introduction of the Bill for Amended Legislation for Inebriates, promised in the Queen's Speech last year, and a hope that in view of the urgency of

the case another session may not be allowed to pass without the enactment of the promised Bill. It is suggested that the resolution might be transmitted to the Premier, Lord Chancellor, Chancellor of the Exchequer, and Home Secretary. Resolutions of this character have already been passed and forwarded by the Manchester justices and the Birmingham Board of Guardians.

THE HEALTH OF THE QUEEN.

We are authorised to state that the reports with regard to Her Majesty's health which found circulation early this week were grossly exaggerated and quite unjustified by the facts. The slight indisposition from which Her Majesty suffered on Monday was of little consequence, and has quite passed away. It was considered to have been of too trivial a nature to justify any public announcement, and the circulation of the alarming reports to which we have referred has been a cause of much annoyance. The publication of such incorrect and authorised reports regarding a minor indisposition is to be deprecated.

THE ETIOLOGY OF MALARIA.

We have much pleasure in announcing that the services of Surgeon-Major Ronald Ross have been placed at the disposal of the Surgeon-General with the Government of India, in order that he may undertake a special inquiry as to the relation of the mosquito to the hæmatozoon of malaria. Surgeon-Major Ross has already done very important work on this subject, and it is not too much to hope that, with the special opportunities which will now be afforded to him, he will be able to clear up the question. Should he be able to establish on a sure basis the theory that the mosquito is the extracorporeal or alternative host of the malaria parasite, a great step in advance will have been made. It may not improbably render possible an intelligent prophylaxis against malarial fevers, for in no department of human activity is it more true that "knowledge is power" than in that of preventive medicine.

THE ARMY MEDICAL STAFF.

The Departmental Committee which is now sitting at the War Office to consider the terms of the new warrant for the Medical Department of the army, consists, we understand, of a representative of the military side of the War Office, a representative of the medical division of the War Office, with Mr. J. Powell Williams, M.P., Financial Secretary, as chairman. It is understood that the committee are going very thoroughly into the questions involved, and that a determined effort is being made to draft a warrant which shall embody a workable scheme. Various schemes are talked about. One, which is said to find much favour in certain quarters, is a proposal to convert the Army Medical Staff into a corps on the lines of the Army Service Corps, in which the highest rank would be Lieutenant-Colonel (Surgeon Army Medical Corps). If this scheme were carried out it would involve reductions in the administrative rank, and the money thus saved would be applied to increase the junior grades and to provide for the pay thereof. Speculation is, however, at present premature, and it is not thought probable that any final decision will be come to until the return to this country of Sir George White, who is about to leave India on vacating the office of Commander-in-Chief for that of Quartermaster-General at home.

ITALIAN DUELS.

The sad death of Signor Cavalotti in a duel will, it is to be hoped, do something to create a healthier state of feeling among his countrymen as to these foolish encounters, which are, as the Duke of Wellington said, a relic of barbarism. The wound by which the Italian statesman lost his life was a remarkable one; his adversary's sword entered his mouth, penetrated the tongue, and severed the jugular vein, causing almost immediate death. It is probable that in the impetuosity of his attack Signor Cavalotti spitted himself on the point of his adversary's weapon, as did General Boulanger, though with a less serious result, in his famous meeting with M. Floquet. There is a pretty general impression that Italian duels are of a peculiarly bloodthirsty character. This is not the case, though it is certain that they are not the stage combats by which honour is so easily satisfied in France. Duels are especially frequent in Italy amongst journalists, officers of the army, and members of Parliament. They are usually of no importance; serious wounds seldom occur, and death is extremely rare. They can be divided into two categories: First, *a primo sangue*, in which the adversaries fight till one of them is wounded or scratched; and secondly, *a ultimo sangue*, when the combat is continued till one of the adversaries is completely disabled. One or two doctors are always in attendance. The weapons used in Italy are the cavalry sabre and the fencing sword, and in rare cases the revolver. Duels *a primo sangue* are the most frequent; they generally end in a good supper. Cases like that which ended so tragically this week are happily rare, and are mostly the result of accident.

IMMORAL ADVERTISEMENTS.

A very important case was heard before Mr. Justice Darling and a common jury on March 9th. We quote the following report from the *Times:* The plaintiff, a vendor of certain medicines, sought to recover damages from the defendant, an advertisement agent, for breach of contract to insert certain advertisements in *Pick-Me-Up* with reference to medicines for women. The defence was that the defendant was merely an agent for the proprietors of *Pick-Me-Up*, and was not personally liable, and further that the advertisements were of an immoral and illegal nature. The plaintiff, it appeared, had paid the defendant in advance the price of the advertisements, which appeared in *Pick-Me-Up* for some time, but on a change of proprietorship the new proprietors refused to continue to insert them. The plaintiff, therefore, sought to recover the money paid in respect of the time during which the advertisements did not appear, and also damages for their non-insertion. The jury found that the plaintiff sustained no damage, and that the contract for the insertion of the advertisement was immoral. On this finding, his lordship entered judgment for the defendant, and ordered the payment to him of £101 11s. 7d., which amount he had paid into Court.

Mr. Alfred Eichholz, M.A., M.B., B.Sc., has been appointed one of Her Majesty's Inspectors of Schools. Mr. Eichholz, who was the first Jewish Fellow of Emmanuel College, Cambridge, has done excellent work as Demonstrator of Physiology and Lecturer in Chemical Physiology in the Cambridge Medical School.

The Council of University College have appointed Dr. Charlton Bastian, F.R.S., Consulting Physician to the hospital, and conferred on him the title of Emeritus Professor of Medicine and Clinical Medicine. At the same meeting Dr. J. S. Risien Russell, F.R.C.P., was appointed Assistant Physician to University College Hospital.

At the recent elections for the London County Council four members of the medical profession were re-elected: Dr. W. J. Collins (West St. Pancras), Dr. G. J. Cooper (Southwark, Bermondsey), Dr. E. B. Forman (North Hackney), and Dr. Longstaff (Wandsworth).

Presentation.—Dr. Wright, J.P., the first President of the York Union of Agricultural Clubs and Chambers of Commerce, has been presented by the members of that body with his portrait, a silver bowl, and an illuminated address in recognition of valued and distinguished services rendered to agriculturists in the formation of district clubs, and of the Yorkshire Union of Agricultural Clubs.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE UNIVERSITY OF LONDON BILL passed its second reading in the Lords at the end of last week, and as the Committee stage is fixed for Thursday in this week, we may expect it to finish its career in the Lords immediately. The second reading was quickly carried through, as the Lord President of the Council confined his remarks to a brief exposition of the Bill, which is based on the recommendations of the Gresham University Commission. A Statutory Commission will be set up to make the necessary changes in the University, and give London a teaching institution as well as an Examining Board. The modifications introduced into the Bill have limited to some extent the discretion of the Commission in respect of the constitution of the Senate and the regulation of examinations. These limitations will, it is hoped, allay the fears of those who apprehended a lowering of the value of the degrees and the increase of difficulties for external students. There is, indeed, so far little opposition to the Bill, and although it will excite more criticism in the Commons, there is a strong probability that, unless new opponents arise, it will pass comparatively early in the session.

HABITUAL INEBRIATES had the attention of the House for some time on Tuesday, for Mr. Knowles moved:

That inasmuch as the present position of the law relating to habitual inebriates, both criminal and non-criminal, is unsatisfactory, it is desirable that the Government should introduce legislation dealing with the subject, and extend in particular the Habitual Drunkards Act, 1879, and the Inebriates Act, 1888.

He urged the desirability of early legislation, and specially referred to the interest taken in the question by the British Medical Association. He quoted reports to show that a considerable percentage of cures had been effected by the discipline of retreats. The Acts had failed hitherto, because there was a want of knowledge on the part of the public of proper retreats for these cases, and also because the number of such institutions was too small. The absence of compulsory powers, and of a sufficiently long period of detention, and the difficulties of readmission were mentioned as among the causes of comparative failure. The Government should, it was also felt, provide for the poor as well as the criminal class in suitable institutions. The Home Secretary accepted the resolution, and expressed a hope of being able to bring in a Bill before long. As regards the non-criminal class, there would be some improvements in the law, but the liberty of the subject must be carefully protected. With regard to criminal inebriates, there would be a proposal to commit them, under due publicity and with safeguards, for a sufficiently long period of detention to reformatories for the separate treatment of these offenders. Private efforts could largely co-operate with such action, and add to the beneficial effect of such legislation. Sir Charles Cameron strongly urged the inclusion of the criminal inebriates under some such scheme, and urged that the dread of interference with the liberty of the subject was excessive, and that all danger in this direction could be avoided by simple safeguards. There is, it was admitted, a great interest being taken on this question by Poor-law authorities all over the country, and no measure will be satisfactory that does not make provision for the very poor who belong to the inebriate class, and enable guardians to give them the chance of the reformatory treatment.

THE ROYAL COMMISSION ON SEWAGE TREATMENT is nearly completed, and the names and the references will shortly be announced. The Government are wisely obeying an urgent necessity in appointing a body to inquire fully into the many new experiments that have been made in recent years in the disposal of sewage. For this purpose the Commission will consist largely of experts. The Engineering Department of the Local Government Board will be well represented, and so will the Health Department (probably by Sir Richard Thorne). A distinguished bacteriologist will bring his knowledge to bear on some of the newer methods of sewage treatment, and with another expert or two and a good chairman the Commission will be large enough for useful work. There is a strong desire in some quarters that the medical officers of health should be represented.

THE RIVERS POLLUTION BILL, to which reference was made last week, came in for second reading on Wednesday, and, in spite of the support of the Government, was talked out. Three-quarters of an hour was not enough for the discussion of a measure which affects so many interests. Even the offer of the promoters to safeguard the position of certain boroughs likely to be prejudicially affected failed to buy off the opposition. The debate stands adjourned, and the chances of the Bill passing this session are now very slender.

LEAD POISONING IN THE POTTERIES was the subject of a very interesting discussion in connection with the Estimates on Friday last. It seems that three cases of blindness have recently been reported among the workers in glazing pottery, and this unfortunate result of working with lead has naturally excited a good deal of attention both locally and at the Home Office. There should be some strict inquiry into these cases, for they are very unusual, and as the Home Secretary seemed fully informed on the matter he will no doubt issue a series of improved precautionary regulations for these workers after consultation with the Chief Factory Inspector. The importance of regular periodical medical inspection was enforced by some of the speakers. Among the girls in this trade some apparently are much more susceptible to the action of lead than others, and are really unfitted for the work. A periodical medical examination would save many of these from the graver ills of the poison and would do great good, moreover, in enforcing a stricter observance in the workshops of the precautions, and of the use of the appliances adopted to save those employed from the grave effects of their dangerous occupation.

THE PHARMACY ACTS AMENDMENT BILL passed its second reading on Monday night, and the Committee stage was fixed for March 17th. It was an unusual piece of good luck for the Bill to pass the first time of asking in spite of the 12 o'clock rule. The fatal words "I object" were uttered more than once, but an appeal from Dr. Tanner to his countryman who objected saved the situation, and the stage was carried. It will be interesting now to observe if any attempt is made in Committee to create two grades of members with equal rights in the government of the Pharmaceutical Society, but with some higher title than that of member given to those who have hitherto been the controlling class in the Society.

THE ARMY MEDICAL DEPARTMENT formed the subject of a question by Dr. Farquharson, who on Friday asked the Under-Secretary for War whether he would take an early opportunity of explaining to the House the changes proposed to be made in the constitution of the Department, to which Mr. Powell Williams replied that the changes in the Army Medical Staff would be announced as soon as possible on the Votes.

GLYCERINATED CALF LYMPH supplied Dr. Farquharson with another text. He asked the Lord Advocate whether the proposal to supply glycerinated calf vaccine lymph under certain conditions in England would be extended to Scotland, to which Mr. Graham Murray replied that he was not acquainted with the proposals referred to as having been made in England, but he understood that the Local Government Board were now considering arrangements for supplying this lymph in England. The question as to the provision of a supply to Scotland would be duly considered in connection with these arrangements. In reply to Dr. Tanner the Home Secretary said that the lymph at present distributed by the Local Government Board was not prepared with glycerine, but they were engaged upon a scheme for the preparation and distribution of glycerinated calf lymph. Attention was being paid to the reports of the Special Commission referred to.

A PHYSICAL LABORATORY FOR INDIA is one of the recognised needs of that country. Replying to Mr. Schwann, who asked the Secretary for India as to the result of the recommendation made to the Government of India in the summer of 1897 in support of the establishment of a physical laboratory in that country for advanced scientific teaching and research, Lord George Hamilton said the Government of India reported in a despatch received last week that the initial outlay on a physical laboratory of the kind described would be 60,000 tens of rupees, and that they regretted in the present state of the finances to be unable to entertain so costly a scheme.

SWINE FEVER AND RABIES in the North Riding of Yorkshire formed the subject of a query by Mr. J. Hutton. Mr. Long, in reply, took occasion to announce that in connection with the annual report of proceedings under the Diseases of Animals Acts for the year 1897, which would shortly be issued, a series of maps illustrating the progress made in the suppression of rabies would be published.

THE EPIDEMIC ON THE "BRITANNIA" gave an opportunity of interpellating Mr. Goschen, who in reply said that the epidemic on the *Britannia* consisted of measles and mumps. Proper and efficient provision had been made for nursing the sick by fully trained attendants. The present and previous outbreaks of epidemic disease had been traced to infection brought by cadets to the ship, and were not attributable to any insanitary condition.

CARBOLIC ACID formed the subject of a question addressed to the Home Secretary by Mr. S. Woods. Sir M. W. Ridley: I understand that the Privy Council, while not thinking it expedient to include carbolic acid in the schedule to the Pharmacy Act, are of opinion that regulations should be made with regard to its sale and the sale of other poisonous substances, and in accordance with the promise given have prepared a Bill for the purpose, which will shortly be introduced.

PETITIONS.

There has been a crop of petitions during the week from Saffron Walden, Harborne, Edgbaston, Leeds (3), Apperley Bridge (3), Lewes, Plymouth, and Rawdon against State regulation in India in connection with certain contagious diseases. In favour of altering the law in relation to food adulteration petitions have been presented from Yorkshire (2), Cheshire, South Wilts, Hingham, Chaddesley, Howden, East Sussex, and Hurstmonceux. For alteration in the law as to habitual drunkards there have been petitions from Salford and Great Yarmouth.

LITERARY NOTES.

EVERY ONE knows the story of the eager scientific student who sent to a local library for some work on anatomy, and was supplied with Burton's *Anatomy of Melancholy*. Mr. J. Shaylor, in the *Publishers' Circular*, gives some amusing examples of blunders made either by booksellers or their customers in the titles of books. Dr. Corfield's *Treatment and Utilisation of Sewage* was "translated" into the *Treatment and Civilisation of Savages*; and Dr. Galabin's *Treatise on Midwifery* into "*Galloping Midwives* or some such title." One is tempted to surmise that the perpetrators of the latter of these mistakes had been reading the copious literature in which the aspirations of our modern daughters of Lucina are set forth.

The New York *Medical Record* has been victimised by a contributor who palmed off upon it as an original article an extract from Sir William Broadbent's *Heart Disease*. Our contemporary, which frankly states the facts in its issue of February 26th, under the heading "A Case of Plagiarism," says that the only changes in the article which it published were omissions of credit given by the real author to other investigators for original work done by them. This case is a particularly impudent example of a fraud against which editors have to be constantly on their guard. We sympathise with our New York contemporary—*haud inexperti* of this particular misfortune; but that is another story, and it happened many years ago, and as we donned the penitential sheet as gracefully as we could at the time, there is no need to repeat the performance now. Moreover, our mishap, like the poor girl's baby, was a very little one. To lift bodily a chapter from a recent book by one of the foremost physicians of the day is a pitch of audacity to which the mere Britisher could hardly attain.

A correspondent asks who is the publisher of the works of the Russian novelist, Anton Czechow, whose writings were referred to in this column in the BRITISH MEDICAL JOURNAL of February 26th. We find on inquiry that the books can be got through Messrs. Williams and Norgate, Henrietta Street, Covent Garden, W.C.

The name of Dr. L. Pagello, an Italian physician who has just died at the age of 91, came prominently before the public some little time ago, when the correspondence of Georges Sand was published. Dr. Pagello, in the early part of his professional career, attended Alfred de Musset in what was probably an attack of typhoid fever at Venice. The poet was nursed by Georges Sand, who was then beginning to be a little tired of him. At any rate, her letters show that she fell in love with the handsome doctor, who followed her to Paris, but was before long cast off in his turn. Dr. Pagello seems to have been the immediate cause of Georges Sand's final rupture with Alfred de Musset, of which both writers and several of their friends made abundant "copy."

The Stethoscope is the title of a new medical students' journal published at Bristol. For the first year it will be issued every two months, with a break in the summer vacation, so that three numbers will appear in the winter and two in the summer session. Its object is to bind together students at the several institutions, and to show what is done at Bristol, and what Bristol men are capable of doing. Judging from the first number, the *Stethoscope* appears likely to fulfil this object in a thoroughly satisfactory manner.

We have received a reprint of Dr. Prosser James's paper entitled The Earliest Recorded Discovery of Thermal Springs, which appeared in a recent issue of the *Journal of Balneology and Climatology*. The record of the discovery is contained in a passage of Genesis (xxxvi, 24), which in the Revised Version reads as follows:

> And these are the children of Zibeon, Aiah, and Anah: this is Anah who found the hot springs in the wilderness as he fed the asses of Zibeon his father.

According to the Authorised Version what Anah found in the wilderness was not hot springs but "mules," and this error till recently robbed Anah of the glory of the discovery to which he appears to be justly entitled. Where was the hot spring which he found? Dr. Prosser James conjectures that it was within the border of Edom, or rather Seir. In the rugged mountain range of Seir, which has evidently been convulsed by the vast forces of Nature, he says, hot springs would be likely to issue; and perhaps it was in one of these mountain valleys that Anah first discovered the thermal spring. The effects of the water, he argues, must have been tried in disease, and unless it was found efficacious they would scon have been forgotten, and the record would not have mentioned them. Dr. Prosser James's paper is interesting in itself, and also as giving evidence of a Biblical scholarship necessarily rare among medical men engaged in the active practice of their profession.

In a recent number in the *Post-Graduate* of New York, Dr. W. O. Moore gives some account of the history of artificial eyes. He states that it is thought by some that artificial eyes were first made during the reign of Ptolemy II, surnamed Philadelphus (309 B.C. to 247 B.C.). The Egyptians were the first to use them, and mummies are occasionally discovered in whose orbits artificial eyes are still found. They were at first made of copper, silver, and gold; later glass was employed. At one time balls of glass were used, not only for human beings, but in statues; thus Pliny says that on the tomb of Hermias, a prince of the island of Cyprus, there was a remarkable figure of a lion having eyes of emerald. In the great marble lion discovered by Mr. Newton near Cnidus, now in the British Museum, there are in the place of the eyes deep sockets, which probably, as in the case of the Cypriote lion, were filled with coloured glass. It was not until the introduction of porcelain in the sixteenth century that any great step forward was made in the making of artificial eyes, and from that time till the present century the methods of manufacture were kept secret by the makers. Parisian eyes were long looked upon as the best; they were made by the family of Hazard-Mirault and by Desjardins, and so perfect was their handiwork considered to be that in the *Dictionnaire Médical*, published in 1820, it is said that the art of making artificial eyes had then reached such a pitch of perfection that it appeared impossible to go beyond it. Great improvements, however, were made in this art by Boissonneau between 1840-1866. Artificial eyes have been made of wax, of celluloid, of vulcanite, and not long since Dr. Moore saw a horse with an artificial eye made of horn. Glass, however, held the field almost from the beginning. Shakespeare makes Lear say to Gloster:

> Get thee glass eyes,
> And like a scurvy politician seem
> To see the things thou dost not

THE GENERAL MEDICAL COUNCIL.

Meeting of Executive Committee.

The minutes of the meeting of the Executive Committee of the General Medical Council, which was held on February 21st, have now been issued. The chair was taken by Sir William Turner in the unavoidable absence of the President. The other members present were Sir Dyce Duckworth, Mr. Carter, Mr. Bryant, Dr. Atthill, Dr. Heron Watson, Dr. Glover.

Army Medical Examination.

A letter was read from the Director-General of the Army Medical Department agreeing, in response to a request from the Council in regard to any candidates for the Army Medical Staff who may show a deficiency in general education, to state where such candidates had passed their preliminary examination.

Naval Medical Examination.

A communication from the Medical Department of the Royal Navy, giving the results of competition at an examination held on November 22nd, 1897, and a report on deficiencies in spelling, writing, and general education was received. It was resolved that the statement and report should be forwarded to all the medical authorities, and that those bodies whose candidates were found defective in respect of spelling, writing, and general education should be requested to favour the General Medical Council "with any observations that may occur to them." It would appear from the statement that 11 commissions were offered for competition, that 28 candidates applied, that 4 were rejected, and that 19 commissions were given. It would appear from the report that 5 candidates were found deficient in spelling, and that they passed the examination in general education at Trinity College, Dublin, the Royal Colleges of Surgeons and Physicians, Ireland, the Society of Apothecaries, London, Aberdeen, and the College of Preceptors respectively. The candidates from Aberdeen and from the Royal Colleges of Surgeons and Physicians, Ireland, were reported to be in one case "illiterate," and in another "generally ignorant."

The "British Pharmacopœia."

A letter was read from Sir Richard Quain, writing as Chairman of the Pharmacopœia Committee. The latter handed over to the Executive Committee for publication the finally revised proof of the *British Pharmacopœia* of 1898. The corrected work as reported by the Pharmacopœia Committee was adopted, and it was directed that 20,000 copies should be printed. The estimated cost of printing and binding is £2,312 10s., and the actual and estimated expenses of preparing the new edition, including the revision and re-editing and advertising, is £4,136 3s., making a total of £6,448 13s. The Registrar was directed to request the Privy Council, in view of the great expense necessarily incurred in the preparation of the work, to fix the price at 10s. 6d. Directions were given for the insertion of a notice of the publication of the *Pharmacopœia* in the *Gazettes* of London, Edinburgh, and Dublin, and of advertisements in the medical journals.

Apothecaries' Hall, Dublin.

In accordance with resolutions adopted by the General Medical Council on November 30th, 1897, Dr. Sidney Coupland was appointed as Inspector for the Council at all the examinations (Primary and Final) of the Apothecaries' Hall, Dublin. The inspector was instructed, in reporting to the Council, to give, in the event of insufficiency of the examinations, the ground for his opinion.

Foreign Practitioners.

A communication from the Privy Council, transmitting a letter from the German Ambassador requesting information as to the conditions under which the practice of medicine is allowed in the United Kingdom, as to whether the practice of medicine by foreigners is subject to particular conditions, and as to whether so-called quackery is forbidden, was considered. Similar inquiries were made as to dentistry. A letter was adopted as the answer of the Executive Committee. The letter pointed out that the profession of medicine is regulated by a succession of Acts of Parliament, and that the duty of forming and keeping a register of medical practitioners and a register of dental practitioners is imposed on the General Medical Council. The letter stated further that admission to the *Medical Register* is obtained by persons who have passed examinations held either by the medical and surgical corporations or by the universities. The duty of determining if the examinations are sufficient to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery is entrusted to the General Medical Council. The letter continued as follows:

All persons admitted to the *Register* become legally qualified medical practitioners, which term is to be construed to mean a person registered under the Medical Acts. Registration entitles a person to practise medicine, surgery, and midwifery, and in respect of such practice to recover in a court of law any expenses, charges in respect of medicaments, or other appliances, or any fees to which he may be entitled. The presence of a name on the *Register* is evidence in a court of law that the person is legally qualified to practise. Registered persons can be exempted from serving on juries and in the militia, and from filling certain non-medical offices which might interfere with the practice of their profession. On the other hand, no person can hold a medical or surgical appointment, or sign such a certificate as is to be given by a medical practitioner, unless the person signing is registered under the Medical Acts.

The term "quackery" does not occur in any of the Medical Acts. Penalties are, however, to be imposed on persons who wilfully and falsely pretend to be, or take or use a name, title, or description which implies that they are registered under these Acts, or that they are recognised by law as a physician, surgeon, licentiate in medicine and surgery, or a practitioner in medicine or an apothecary. The Apothecaries Act of 1815 provided a penalty against persons who practised as apothecaries in England and Wales, not having the certificate of the Society of Apothecaries; but there is no other specific enactment against the practice of medicine and surgery by non-registered persons. A non-registered person who engages in practice has no legal status as a practitioner, and is not entitled to any of the rights conferred by registration.

The Act regulating the practice of dentistry conforms in its main features to the Medical Acts.

The letter further pointed out that under the Medical Act Amendment Act, 1859, foreigners entitled to practise in their own country are entitled to act as medical officers of any hospital established exclusively for the relief of foreigners in sickness. "For any legal and recognised practice beyond this," it is added, "the Act of 1858 required that they should obtain a British qualification so as to be registered." It is then pointed out that various bodies granting diplomas have special regulations admitting foreigners holding a legal qualification in their own country to the final examinations here. The letter ended by stating the regulations of the Act of 1886 as to reciprocity with foreign countries.

Erasures from the Registers.

A communication from the Registrar-General was read acknowledging the receipt from the Registrar of the General Medical Council of copies of the list of erasures from the *Medical* and *Dentists' Registers*, corrected to December 1st, 1897. The Registrar-General stated that it was his intention to introduce the list, so far as it related to names entirely removed, into his official list every year for the future.

Penal Cases.

Communications were received from various licensing bodies with regard to the manner in which they had dealt with the cases of persons whose names had been erased from the *Medical Register*.—A communication was read from Mr. Julius Mostertz, L.S.A., against whom a charge of covering had been considered at the meeting of the Council on November 27th, 1897 (British Medical Journal, December 4th, 1897, page 1653). The Chairman had then informed Mr. Mostertz that the Council had come to the conclusion that the charge against him had been proved, but had adjourned the further consideration of the charge until the next session. Mr. Mostertz wrote on December 13th to say that he had dispensed with the services of the unqualified assistant and had ceased his connection with the establishment in Salisbury Road, Wood Green.

Informal Death Certification.

A letter was read from Mr. Henry Cunningham, legal Assistant Under-Secretary of the Home Office, asking for the observations of the Council upon communications made by the County Coroner of Cornwall with regard to the alleged issue of informal death certificates in Cornwall. The papers had reference to certain cases in which duly-registered medical practitioners who had not been in a position to give a formal death certificate had given informal documents stating that the patient had been seen on a certain day, had been prescribed for, and that the signer of the paper had been in-

formed that its death took place on a certain day. The Registrar of the Council was directed to address a letter to Mr. Cunningham. This letter points out as follows:

In November, 1896, the attention of the Council was drawn to a statement made by the registrar of deaths of Hetton-le-Hole to the effect that he was in the habit of receiving "notes of information" from the unqualified assistants of medical men in the district, from botanists, midwives, and others, informing him of the deaths of residents, and that he entered the same in the register without requiring a certificate signed by a registered and qualified practitioner, even when such a practitioner had been in attendance on the case.

Upon this the General Medical Council communicated with the Registrar-General, who stated, on December 8th, 1896, that he was unable to discover any irregularity of practice which it was in his power to prevent in the action of the registrar at Hetton-le-Hole when he accepted the statement from the unregistered, perhaps unqualified, attendant as part of the information of the informant of the death.

This position of affairs, in the opinion of the General Medical Council, calls for the serious attention of the authorities regulating registration, and the Council would repeat its sense of the urgency of the question.

The Council would also respectfully ask the Home Secretary to receive a deputation at his earliest convenience to urge upon him the importance of the amendment of the law so as to do away with the serious risks which of necessity attend this practice.

MIDWIVES' CERTIFICATES.

A communication from the Secretary of the Birmingham Lying-in Charity submitting a form of certificate granted by it to midwives was considered, and the Secretary was directed to be informed that the certificate was not in accordance with that approved for the Obstetrical Society of London.

MIDWIVES REGISTRATION BILL.

A communication was read from Sir C. L. Peel, stating that the Lord President of the Council desired that the General Medical Council should favour him with any observations that they might desire to offer on the Midwives Registration Bill reintroduced by Mr. J. B. Balfour, and put down for second reading on May 11th. It was stated that the Chairman of the Midwives Bill Committee had summoned a meeting for its consideration on February 22nd, 1898. (As to the meeting of this Committee, see BRITISH MEDICAL JOURNAL, February 26th, p. 576.)

MEDICAL REGISTRATION IN INDIA.

A communication was read from Dr. James R. Wallace, Secretary of the Indian Medical Association, asking for the support of the Council to a proposition that the Government of India should be requested in future to give State appointments only to men whose names are on the British *Medical Register*, and that evidence in courts of law and medical certificates for State or legal purposes should be received only from such persons, or from others whom the State, after due and proper examination, shall authorise to perform such offices. The Executive Committee resolved that it was not prepared to recommend the Council to take any action in the matter in the absence of any distinct proposal for legislation.

SECOND REPORT TO THE REGISTERED PRACTITION OF ENGLAND AND WALES.

By VICTOR HORSLEY, F.R.S., F.R.C.S.,
Direct Representative on the General Medica Council.

IT having been rendered necessary for me to bring to the notice of the profession in my first report to the registered practitioners of England and Wales in January of the present year the very serious mistake committed by the President of the General Medical Council in his officially informing the Privy Council on July 1st, 1897, that unregistered foreign practitioners enjoy the right to practise medicine unrestrictedly in this country, I am glad to be able now to report that my letter of protest, though never answered, has been adopted by those who act in the name of the Council.

The Executive Committee of the General Medical Council met on February 21st, 1898, and took upon itself to respond in the name of the General Medical Council to a request of the Privy Council dated January 21st, 1898, that they should inform the latter for the use of the German Government of the facts relating to the practice of medicine in this country by foreigners, and further that they should afford the Privy Council, in a second letter, comments on a letter addressed to them by Mr. Bousfield, who had drawn the attention of the Privy Council to the facts which I had published in my first report.

I need not repeat here in full detail the statements of the Executive Committee, but reference to the recently-published minutes shows that in their reply to the Privy Council the Executive Committee have adopted my statements respecting the restrictions which the Medical Acts impose on foreigners, as well as on other unregistered persons practising in this country, and have thus abandoned the erroneous position assumed by the President on July 1st, 1897. Though the Executive Committee have thus furnished the Privy Council with more accurate information, they have not withdrawn the erroneous letter of July 1st, 1897. The result, therefore, is that the Privy Council now has before it two official letters from the General Medical Council which are in absolute contradiction to each other.

There are further statements in the above-mentioned second letter of the Executive Committee to the Privy Council which are not only incorrect but constructively misleading. These, however, I must deal with at the session of the Council in May next.

THE ONE-PORTAL SYSTEM: A HISTORICAL STUDY.

III.—THE ROYAL COMMISSION OF 1881 AND THE ACT OF 1886.

A DEADLOCK.

The medical profession at large, represented by the British Medical Association, had been the great motive power behind the movement from its origin. Why, then, did they block the road against the Government proposal in 1879?

The apparent inconsistency is easily explained. They declared, and no doubt they had grounds for believing, that if they allowed this Bill to pass, the other reforms which they considered equally urgent, or even more urgent, would be shelved. They preferred waiting a little—a session or two at most, as they no doubt supposed—and then getting the whole question settled. As a matter of fact, they had to wait seven years for any reform at all, and then they got the Medical Act of 1886—a splendid triumph for the principle of direct representation, but not realising the one-portal ideal of the earlier reformers.

DIRECT REPRESENTATION.

Indeed, as late as 1884 this ideal was embodied in another attempt of the Government of the day—Mr. Mundella's Bill.

This measure was largely founded on the recommendations of the Royal Commission appointed in 1881 to carry on the unfinished labours of the Select Committees of 1879 and 1880. It frankly recognised the justice and policy of granting to the profession what had so long been vainly demanded—direct representation—the denial of which, Mr. Mundella believed, "had wrecked most of the measures hitherto introduced." It also proposed a scheme for Divisional Boards very similar to that of older Bills, but slightly modified to meet the suggestions of the Royal Commission.

THE ACT OF 1886.

Mr. Mundella's Bill was "talked out." But the discussion on it smoothed the way for the Act of 1886. This Act, as we all know, makes no attempt to set up Divisional Boards. Why a provision which was the main object of every preceding Government measure of medical reform from 1870 down to 1884, and which had been recommended (and its details carefully elaborated) by the Royal Commission which reported only four years before—why this provision should have been absolutely dropped out of the Government Bill of 1886 does not clearly appear from the proceedings in Parliament. But we get some light from a study of Sir Lyon Playfair's speeches on the Bills of 1884 and 1886.

THE HUXLEY-TURNER PLAN.

In a very brilliant and forcible speech on Mr. Mundella's Bill, Sir Lyon proposed an alternative to separate examination by the Divisional Boards. It was that these Boards should send their examiners to take part in the final examinations of the universities and conjoined corporations, so that candidates for admission to the *Register* might have the option of passing these examinations in lieu of the Board's.

examination. This alternative plan had been recommended by Professor Huxley and Professor (now Sir William) Turner, two members of the Royal Commission of 1882. This was the system in Germany. There the State sent examiners to the university, and associated professors with them in the conduct of the final examination. Germany had first tried the other system of having a central Licensing Board, but abandoned it because it was found to lower very materially the medical qualifications of licentiates. Sir Lyon pledged himself that the Scotch universities would allow the examiners of the Divisional Boards to take part in their final examinations in as full and complete a way as the General Medical Council and the Divisional Board might desire.

So great had been the improvement which had taken place in the examinations of the licensing bodies during the preceding few years that he believed that if the majority of the Royal Commissioners had had before them the schemes of conjoint examination afterwards adopted, they would have reported in favour of a combined examination such as he suggested rather than of a new and separate one, conducted exclusively by the Divisional Boards. The Scottish corporations, he admitted, were not favourable to the Bill, but he thought they would be when they recognised the effect of his proposal. He relied on voluntary conjoint action, together with the principle that no one should be registered until he had passed a sufficient examination in all three branches of the profession—medicine, surgery, and midwifery.

In explaining the provisions of his own Bill two years later he claimed for it nothing more than that it encouraged this voluntary action. Indeed, there can be little doubt that the opponents of compulsory conjunction were strong enough in 1886 to wreck once more any medical reform Bill which embodied that principle. But the public and the profession were thoroughly sick of the long and barren discussion both in Parliament and out of it, and were fain to take what they could get and be thankful. So, after all, the Scottish idea prevailed, having successfully resisted for a period of sixteen years no fewer than three successive Governments backed by the unanimous voice of England, and the nearly unanimous voice of Ireland.

Alternative Schemes.

The principle of a uniform standard minimum test for all persons—other than those with approved colonial or foreign qualifications—claiming to be admitted to the *Register* of qualified medical practitioners is sound. If its champions have not often made their voices heard of late years, it must not be supposed that they are silenced. Sir Christopher Nixon, in the address to which we have already referred, said:

> An examination is wanted for each division of the kingdom, conducted independently of the universities and corporate bodies, having no connection with any existing institution, ensuring a uniform standard of professional knowledge, and qualifying for a registrable licence to practise medicine, surgery, and midwifery.

We need not commit ourselves to every item of this demand. It is not at all clear, for instance, that the ideal system is not the literal one-portal—one and the same for all three divisions of the kingdom. Only by that means can a levelling down competition between the three divisions be avoided. Short of that, we transmute intranational into international underbidding; and, although the latter would be more easily controlled, still the evil tendency would be there. Geographical facts and national sentiment, however, may put difficulties in the way of the realisation of that ideal for a long time to come.

But, if the ideal is unattainable, what is the least with which we might be content? The more reflection that is given to the matter, the stronger will be the conviction that we ought to aim at nothing less than such a plan as was outlined by Sir C. Nixon. For what other plans have been suggested? Roughly speaking there are but two that we need consider. They are:

1. A modification of the existing plan by adding to the existing examining staff at the various licensing bodies a certain number of State-appointed examiners. Obviously this is not a one-portal system at all. As a means of attaining a certain approximation towards a uniform standard with the minimum disturbance of existing arrangements it has its advantages. Moreover, it would probably meet with little resistance from the universities. In fact, it is the plan proposed by Sir Lyon Playfair in 1884, and to which he pledged the Scottish Universities at a time when compulsory combination seemed staring them in the face. Although this concession to the one-portal movement was withdrawn the same compromise might possibly be found acceptable.

2. The plan of a compulsory combination of all the licensing bodies in each part of the kingdom to form a conjoint examining Board for that part. This would differ from the more thorough-going plan of Sir C. Nixon in that the licensing bodies would still be examiners, only they would examine in conjunction instead of each separately and independently. If their conjoint examiners were assisted by coadjutor examiners appointed by the State, the plan would differ in degree rather than in principle from Sir C. Nixon's, for as the State-appointed element was increased the importance of other elements would be reduced. This might prove to be the line of least resistance along which medical education reform can move. This plan, in either of its varieties, would abolish at least all intranational underbidding. Either variety would facilitate the gradual raising of the minimum standard qualification. The one would probably be preferred by the licensing bodies, and the other by the public, who would naturally feel most confidence in their own direct representatives. The public will prove in the long run the stronger, but meantime they do not know or care sufficiently about it.

The higher diplomas and degrees would doubtless under any scheme continue to be granted very much as they now are, and would be sought for very much the same reasons as at present. The value of these titles would depend, as it does now, upon the public estimation of the acquirements represented by them. To obtain such a title it would be necessary for a student to affiliate himself to the body which granted it, and submit to the conditions imposed by such body. The only competition between these bodies would then be to make their degrees represent, in the eyes of the public, the highest possible efficiency, and to facilitate in every way the attainment of that high standard by students.

LUNACY LEGISLATION IN IRELAND.

We have received from a correspondent who signs himself "An Irish Medical Superintendent" a very long letter, in which he criticises the article under this title published in the British Medical Journal of February 5th, p. 385. Our correspondent urges that a great part of the article must be set aside on the ground that any comparison between Ireland and England which leaves out of consideration the question of relative wealth must be misleading. With regard to another part of the article, he considers that a criticism of the evils of bureaucracy just at the moment when a Local Government Bill is being introduced in the House of Commons to sweep away the last vestiges is flogging a dead horse. He then proceeds to criticise certain points in detail as follows:

"First, as regards the idiot asylums in Ireland, if you will turn to pages 17, 18, and 19 of the Fortieth Report of the Inspectors of Lunatics for Ireland, the first report of the present inspectors (the thirty-ninth report being purely nominal), you will find this question fully discussed, the urgent need of an institute for imbeciles recognised, and suitable recommendations made. What more could the inspectors have done? To talk of the inspectors being always able to exercise vast powers in educating popular opinion and in advising Government is to display either the grossest ignorance of the methods of Government or a marvellous and childish credulity.

"Again, the article assumes that the reformation of English asylums, and all the good work that has been done, is due to the Lunacy Commissioners of England. This is not so. The reforms were originated by able superintendents, and nurtured by the Medico-Psychological Association. The Lunacy Commissioners never originated an important reform, but they have always been wise enough to support the introducers of improvement. Why do not the able superintendents in Ireland put their houses in order, and then work up the Irish branch of the Medico-Psychological Association, instead of hanging on to the coat tails of the parent Society as they do at present? Why do not the superintendents

attack the questions of (1) 'the proper nursing of the insane' and (2) 'boarding out?'

"As to the scientific study of mental disease and pathology, surely that is a matter for superintendents and assistant medical officers.

"Again, some asylums have excellent pathological laboratories and opportunities for clinical teaching, and if results have not been striking it is not the fault of the inspectors, whose sole power in such matters is to advise and encourage. They cannot make scientific men out of asylum officers who have no science in their composition, nor add one ounce to the brain power of the existing officials.

"I have no doubt that the apparent apathy of medical officers of Irish asylums can be explained by the facts that the small pay and slowness of promotion do not attract the best men. Again, the asylums are under-officered, and the entire energies of the doctors are spent in keeping the machinery going from day to day. The Boards of Governors of Irish asylums have no conception of the manner in which the county councils of England spend money. The Irish governors keep a main eye on the poor-rate, and the asylums are so much better than the wretched cottages they see on every roadside that no wonder they think the superintendents are extravagant if they seek to improve any further.

"It is useless to ask Boards of this kind to spend money on scientific research which for many a year would have no visible results. What benefit to the pauper lunatic is it to know that he will be finally beautifully dissected and placed in tinted slides under the eye of the microscope when the poor creature requires a more liberal diet and more healthy and comfortable surroundings?

"No! I give highest praise to the inspectors in that they have not been tempted to beguile Government and the public by high-flown scientific schemes which would tend only to the glorification of the Lunacy Office and their personal advancement. They have kept their feet firmly planted on the bed-rock of care for the insane, and there, unseen by the public, steadily, silently, and unobtrusively, have done a great work, and accomplished more in seven years than their predecessors in forty.

"The article is correct in saying that 'lunacy legislation is probably safe in the hands of the Irish Chancellor, Lord Ashbourne.' No doubt, quite safe; so safe in his hands that there is little prospect of it ever escaping to his head. No! The Chancellor is far too wise a man to embitter the later years of his hard-working life with such a difficult and thankless task as an Irish Lunacy Consolidation Bill. That will be the work of a younger and less wise man.

"I wish it to be understood that I hold no brief for the inspectors, that I have my own ideas, and my own grievances; but I think it my duty as a member of the British Medical Association to defend two brother members who are unable to defend themselves."

Our correspondent also states that when in 1890 the present inspectors of lunatics took up office, the Irish asylums were in a deplorable condition, forty years behind those of England. The inspectors had naturally to begin with elementary improvements; they wisely postponed the consideration of high-flown scientific psychiatry until they had obeyed the first principles of the humanitarian treatment of the insane. He adds that if inquiry were to be made of the twenty-two asylums of Ireland named on page 72 of the Forty-sixth Report of the Inspectors of Lunatics, it would be ascertained that the efforts of the Lunacy Department had secured enormous improvements under each and all of the following headings: (1) Heating; (2) Ventilation; (3) Sanitation and Hygiene; (4) Dietary; (5) Clothing and Bedding; (6) Airing Courts; (7) Restraint; (8) Appointment of Additional Medical Officers; (9) Pay of Attendants, etc.

Our correspondent is in error in assuming that our comments were intended as a personal attack on any individuals. They were directed to questions of principle. Our article was published more than a fortnight before the Local Government Bill was introduced, and dealt with the supposition that the measure might include a revisal of the laws pertaining to lunacy in Ireland. This has not been so, further than that certain powers hitherto vested in the Crown or its representatives have been transferred to the new County Councils.

That the idea of State control is by no means a dead horse in Ireland the numerous petitions that the State should take over the charge and management of the Irish asylums, which have been adopted by Boards of Guardians, Boards of Governors and Grand Juries, even since the introduction of the Bill, sufficiently show.

There was nothing in the article to imply that the reformation of English asylums and the good work done in them originated in the Commissioners. The assumption that the working of asylums should depend upon any such officials is exactly what we protest against. We cannot see how such a system would work in England. That it has not worked well in Ireland the history of the Commissioners of Control seems to show. We still think that when the Irish Lunacy Commissioners are freed from executive cares and are able to build up their activity upon the foundation of care for the insane, instead of spending a large part of their time wrangling with the Treasury, the Boards of Governors, and other laymen on whose education they have to wait, their position will be improved and their influence increased, and benefit to the insane will no doubt follow.

We find fault with the old system, and much that our correspondent says confirms us in our view. Reforms in management and advances in scientific work originated elsewhere and slowly found their way to Ireland. This may have been partly due to social conditions in that country; but the Irish system was designed or had grown up to meet these conditions, and yet the result has not been satisfactory.

We drew attention to the want of provision for imbeciles. Our correspondent points out that the inspectors in several reports discussed the urgent need of such provision and made suitable recommendations. He asks, What more could they have done? What indeed. But here we have a fine example of how the old system failed for want of real power placed in the hands of those who could be held responsible. Gentlemen who have the important duty of reporting on the condition of the insane, and who are the channel through which Government—which in Ireland appears to have supreme power in lunacy—communicates with the local bodies, report again and again, and nothing happens. The system, as we have shown, was inherently feeble.

Our correspondent—and another correspondent who signs himself "A Superintendent who has served under the Old and New Regime" has sent observations to the same effect—points out the enormous improvements which the Lunacy Department has secured since the present inspectors took office in 1890 in certain important matters connected with the structure and management of asylums, and he truly says that more has been done in those seven years than in the previous forty. He also says that the Irish asylums were, in 1890, forty years behind those of England. But during the forty years previous to 1890 the system was the same as it has been since then. On the system and not on the individuals we commented, and our correspondent's rejoinder amounts to this, that the system was one which permitted a period of inactivity lasting for forty years.

Government Control versus Local Government of Asylums.

The Grand Jury of the Queen's County, as we learn from the *Freeman's Journal* of March 2nd, is ill-satisfied with the prospects of local government as regards lunatic asylums. That body has adopted the following resolution, with, as it appears, one dissentient:

Resolved: That the Government, in order to give relief most urgently required by the cesspayers all over Ireland, should take over the entire charge of Irish lunatic asylums, in the same way that they have taken over the prisons, so that the Irish asylums should for the future be wholly maintained at the cost of the State as an imperial charge.

This appears to mean that England and Scotland, who already find the burden of lunacy weighing heavily upon them, will have to support the insane of Ireland as well as of their own island. It is an old complaint in Ireland that lunatics are deported thither from England and Scotland, especially the latter. Probably deportation on a very large scale would be adopted if the Queen's County resolution became law. From another point of view, it seems strange that local bodies, who have so often complained of the action and

inaction of the old Board of Control and of the constraint put upon them by the Irish Privy Council, should now, as the dissentient grand juror pointed out, call upon the Government to take over the asylums, just when their management is about to be popularised. There is surely something behind all this, some dread of the new county councils, such as their action in England has never justified. We can see no justification for the separation of the care of the insane from the other public business of the counties. For reasons sufficiently indicated in the British Medical Journal of February 5th we believe that the entire control of the Irish asylums by a body like the Irish Prisons Board would be a calamity for the insane, if indeed such a system could be attempted in juxtaposition with local government in other matters. Fortunately Government is not likely to make the attempt. The large amount of central control hitherto existing has not been a success, and Government has had so much trouble and so little credit from the Irish asylums that it will doubtless be only too glad to wash its hands of them. The Irish Local Government Bill gives the fullest control of lunacy matters to the county councils.

ROYAL EDINBURGH ASYLUM.

Decline in Admissions.

The annual report of Dr. Clouston, the Physician-Superintendent of the Royal Edinburgh Asylum, states that there were 937 patients in the asylum on January 1st, and 899 on December 31st, 1897; 411 patients (203 men and 208 women) were admitted during the year, and 346 (155 men and 191 women) were dismissed; 103 (53 men and 50 women) died during the year. The striking fall in the number of admissions was accounted for by the diminution of rate-paid cases. Edinburgh and Leith thus appeared to be 20 per cent. saner in 1897 than in 1896. This was one of those statistical facts that were very puzzling to explain. In the five years 1892-96 the average number of rate-paid patients admitted was 338, or 43 more than in 1897. For the five years before that—1891-95—it was 323, or 28 more than in 1897. Obviously, then, the insanity production of last year was considerably below the average, and, since explanation is not forthcoming, it must be called an "accidental" variation. One was encouraged to hope for a millennium of sanity from the improved conditions of life. The cases attributed to the excessive use of alcohol were 24 per cent. for both sexes, the women standing at 16 per cent, and the men at 32. These proportions were in excess of the usual figures.

Organic Lawlessness.

Were the whole organism improved by eliminating weakness and disease, the brain would be improved in its power of mental working, while conduct would be likely to improve on the lines of moral, social, and religious laws. A thoroughly sane man might not be a good man, but his badness would be likely to take a less immoral and antisocial form than the badness of the man tainted with brain instability, who would be likely to be, as it were, more necessarily wicked, and therefore less amenable to the influence of good motives. The heredity of right living would be likely to be less powerful in the bad-brained man. A sort of organic lawlessness would probably dominate his life in some way. Society then ought to work for sanity; it ought actively to aid all measures that made for sanity in a large sense. The real importance of mental disease in its relationship to the individual, the family, the medical profession, society, and the State, had not yet been fully realised by the public.

Dr. Clouston then discussed brain reactiveness and its effects, the necessity for stimuli from without and from within the body, and showed how human history was affected by abnormal brain reactiveness in great men. The critic of the future must be able to distinguish the normal from the morbid reaction. Had Frenchmen been able to do so, say of Rousseau or some of the revolutionary leaders of 1789, who knows but that France might have avoided some of the mistakes of the past hundred years? Normal brain reaction made for sanity, while abnormal reaction made for insanity. We seemed to be on the eve of a great generalisation as to mind and brain. We were waiting the advent of the man who was to shed the light of a great law on the most difficult of all scientific problems.

Is Insanity Increasing?

Dr. Clouston still replied to this question with his former answer: "No; this is not proved by the facts; the increase that appears in the Blue Books is mostly Act-of-Parliament lunacy and not medical fact. Where insanity has to be paid for out of private funds it does not augment much more than the population. It only appears to increase greatly when paid for out of the rates, just as fever hospitals, water rates, and town improvement rates increase. They are all part of the movement of our nineteenth century civilisation." There were no data on which to compare our amount of insanity with that of other countries.

The Poor Insane.

The number of private patients admitted for 1897 was 116, the highest on record. The average for the previous five years had been 99, and for 1887-91 it had been 85. The larger number of these were at the intermediate or lowest rates of board. An appeal for the poor but not the pauper insane was then strongly made. Since Mrs. Bevan and Miss Mowbray left, the charity and Bevan funds had not been adequately remembered. The rich Scotland of 1897 was not so charitable to the insane as the poor Scotland of 1800.

Types of Insanity.

The number of admissions of voluntary patients yearly increased. The general character of the admissions was of a milder type than usual. The melancholics still kept numerous. Before 1890 mania used to predominate by from 20 to 35 per cent.; now melancholia equalled or out-numbered the cases of brain exaltation and excitement mania. The change of disease type was attributed to the latter-day pestilence—influenza, and to its effects on the brain and nervous system.

Results.

Of the 346 patients discharged 156 were recovered, which was equal to a recovery rate of 38 per cent., 2.4 per cent. below the average, and rather over the rate of the Scottish Royal and District Asylums for the past five years.

At Craig House the recovery rate reached the remarkably high one of 56.5 per cent. The average numbers there go up, 170 in 1895, 187 in 1896, and 195 in 1897.

The death-rate on the average number resident amounted to 11.6 per cent., and on the total number under treatment to 7.6 per cent. More than one-half of the deaths occurred within the first year of admission, and over a fourth of them within three months' residence, clear proof that an unusual number of cases of serious brain disease was admitted.

In treatment good results had followed the use of thyroid; pituitary extract gave no results. Much good was looked for from the new laboratory of the United Scottish Asylums.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Friendly Society was held on February 25th, at 429, Strand, London, W.C.

There were present Dr. de Havilland Hall (Chairman), Dr. J. B. Ball, Mr. W. Thomas, Dr. Walter Smith, Mr. W. J. Stephens, Mr. F. S. Edwards, Mr. Edward Bartlett, Dr. W. Knowsley Sibley, Dr. M. Greenwood, Mr. J. Brindley James, Dr. J. Pickett, and Dr. J. W. Hunt.

The accounts presented showed that the heavy sickness experience of December, 1897, and January, 1898, had been continued through the month of February, and so far gives no sign of lessening. A large increase of sickness claims is naturally looked for in the winter months, when the members of the Society are specially liable to ailments arising from exposure to inclement weather. In addition, the epidemic of influenza appears to have claimed, as on previous occasions, a large number of medical men among its victims, and for some weeks past nearly 50 per cent. of the sickness claims of the Society have arisen from this cause. The result has been that the Society has during the last three months paid to its members in sickness benefit a larger amount than in any previous quarter since it was started in 1884.

So far, however, the sickness experience by the Society in a year has never exceeded the amount expected and provided

for in the table of premiums, and the accounts for 1897, which will be issued in May next, will show that, although a large amount has been paid away to the members, the increase has been still larger, and a substantial addition has been made to the reserves of the Society.

Prospectuses and all information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

MIDWIVES AND OBSTETRIC NURSES.

It may be interesting at the present time to give some particulars with regard to the regulations under which midwives are permitted to follow their calling in some foreign countries.

The French Law as to Midwives.

The Act under which they work in France is the *Loi sur l'Exercice de la Médecine* (1892). This law regulates also the practice of medicine and dentistry, but the provisions with regard to midwives are in the main distinct. Instead, therefore, of giving a general account of the law it will be sufficient for our present purpose to give translations of certain sections having special reference to midwives.

Section III.—Conditions as to the Exercise of the Profession of Midwife.

3. Midwives cannot practise the art of accouchement unless they are provided with a diploma of the first or second class granted by the French Government after examination undergone before a faculty of medicine, *une école de plein exercice*, or a preparatory school of medicine or pharmacy of the State. An Order issued with the advice of the Superior Council of Public Instruction will determine the conditions of the curriculum and the programme applicable to midwifery pupils. Midwives of the first and second class shall continue to exercise their profession under pre-existing conditions

4. Midwives are forbidden to employ instruments. In cases of difficult labour they shall call in a doctor of medicine [or *un officier de santé*]. They are likewise forbidden to prescribe medicines, except in the case foreseen by the decree of June 23rd, 1873,[1] and by decrees which may hereafter be made under the same conditions with the advice of the Academy of Medicine.

Section IV.

6. (This clause requires midwives to register their title within a month of their establishment in a district at the Prefecture or Subprefecture and with the civil tribunal.)

10. (This clause directs Prefects and the judicial authority in each department to keep a list of the names, residence, and date and source of the diplomas of midwives. These lists are to be posted every year in every commune of the department, and certified copies are to be sent to the Ministers of the Interior, of Public Instruction, and of Justice.)

15. (This clause requires midwives to notify to the public authority every case of an epidemic disease coming under their notice, the list of such diseases to be issued by the Minister of the Interior on the advice of the Academy of Medicine and of the Consultative Committee of Public Hygiene.)

Section V.—Illegal Practice—Penalties.

16. The following persons practise medicine illegally:—

(1) Every person who not provided with a diploma ..... of midwife ..... takes part habitually or in a continuous way *(par une direction suivie)* in the practice of the obstetric art, except in cases of extreme urgency.

(2) Every midwife who exceeds the limits fixed by Section IV of the present law for the exercise of her profession.

(3) Every person provided with a regular diploma who goes beyond the conditions imposed upon him by law, especially by giving assistance to persons referred to in the previous paragraph, with the object of withdrawing them from the provisions of the present law.

17. Infractions of the present law as laid down and punished herein shall be subject to prosecution before the Correctional Tribunal.

18. The illegal exercise of the obstetric art is punished by a fine of 50 to 200 francs, and in the case of a repetition of the offence by a fine of 100 to 500 francs, and by imprisonment for from six days to one month, or by one or other of these penalties only.

19. The usurpation of the title of midwife shall be punished by a fine of 100 to 500 francs, and in case of repetition of the offence by a fine of 500 to 1,000 francs, and by imprisonment for from one to two months, or by one or other of these penalties only.

A decree relative to the conditions as to study required of women desiring to obtain the diploma of midwife was promulgated on July 26th, 1893.

Article 1 lays it down that the period of study, which must be both theoretical and practical, for the diploma of midwife extends over two years.

Article 2 has reference to the diploma of the first class, and requires that the second year should be spent in a fully equipped faculty or school of medicine and pharmacy.

Article 3 has reference to the diploma of the second class, and equally requires two years of study, but neither need be spent in a fully equipped school of medicine and pharmacy, but may be spent in a preparatory school of medicine and pharmacy, or in a maternity.

Article 4 requires the candidate to pass an examination at the end of the first year in elementary anatomy, physiology, and pathology, and at the end of the second year in the theory and practice of obstetrics.

Article 7 requires from candidates, in addition to identifying documents, a certificate of vaccination and evidences of adequate primary instruction.

[1] This decree permitted pharmacists to sell ergot (a scheduled poison) upon the prescription of a midwife.

The Italian Law as to Midwives.

Attendance on women, during and after confinement, is regulated even in minute details in Italy. Under Article 14 of the Law of December 1888 on the protection of the public health, each commune is compelled to have at least one midwife (*levatrice*). Where the locality is too poor to offer a field for independent practice, it is provided that the municipality shall pay a midwife to attend poor women gratuitously. In case of need, two or more communes may combine to retain the services of a midwife.

Record of Case

A midwife on taking up her residence in a commune is provided with a register in which she has daily to enter the name, age, and address of all women delivered by her, their previous confinements and miscarriages, the mode of termination of the last pregnancy, the duration and result of labour, the sex and condition of the child the course and issue of the case, and accidents that may have occurred during its progress. When filled, this register is handed in to the communal authorities.

The rules to which the midwife is subject are defined by a Ministerial Ordinance, dated February 23rd, 1890.

Circumstances under which Medical Aid must be Sought.

The midwife is required to call in the help of a medical practitioner whenever the course of the labour shows any abnormality, and in particular as soon as the temperature taken in the axilla (the thermometer having been kept there for fifteen minutes) rises beyond 38° C. If no medical practitioner is available the midwife must report the case to the municipal authority, failure to do so being punishable by a maximum fine of £20, and in serious cases by imprisonment.

Operative Midwifery.

Midwives are forbidden to use surgical instruments and to practise manual operations on the fœtus within the uterus, except in cases of exceptional urgency or where it is impossible to obtain medical assistance; in such circumstances she must take the responsibility of her acts. Breach of this regulation is punishable by a fine of £4.

Puerperal Fever.

A midwife who has been in attendance on a case of puerperal fever must abstain from the practice of her profession for at least five days in places where other obstetric aid is procurable. During the period of abstention she must change her clothes, linen, etc., and disinfect them by immersion in boiling water during ten minutes. Before attending another case she must obtain the authorisation of the sanitary officer, who must satisfy himself that she has disinfected herself properly.

Antiseptic Precautions.

The midwife is bound to carry the following instruments: Brush, scissors, a file for the nails; 200 grammes of boric acid, divided into five equal packets, one of which dissolved in a litre of water is to be used for disinfection of hands, vagina, and instruments; and carbolised and sublimated lint for plugging the vagina. She must keep her ordinary instruments (catheter, irrigation cannula, scissors) in the antiseptic solution for at least ten minutes. With the sleeves of her dress rolled up above the elbow, she must wash her hands and forearms with soap, and clean her nails carefully with scissors, nail file and brush. She must then wash her hands and forearms again in the antiseptic solution She must ascertain the presentation and other physiological conditions of the fœtus by palpation and auscultation. She must next wash the patient's external genitals and neighbouring parts (perineum and upper part of thighs first with boiled water and soap, then with the antiseptic solution. She then again washes her own hands, and proceeds to make a vaginal examination. The latter procedure must be repeated as seldom as possible. Any instruments that have been used must be carefully cleaned, and steeped first in boiled water, and afterwards in the antiseptic solution.

The Midwives Registration Bill.

Mr. J. H. Wigham (Leeds) writes: Those of your readers who have followed your leading articles of the past two weeks, and who have also perused the above-named Bill with ordinary critical interest, will have observed that you have ably touched on the weak points of a very crude and inadequate measure. For those who have not read the Bill through and who have not consequently followed the whole tenour of your remarks, and even for those who, while reading your comments, have seen the points but have not got them at their finger ends, perhaps it would be permissible to formulate what might be called a brief on the defects of the Bill, together with a few suggested amendments which are really necessary for efficiency, if it cannot be defeated, in view of more thorough and better-considered legislation in the future.

Provisions against Non-registered Persons.

The Bill provides as a penalty clause, Sec. 3, Subsec. 2:

Any person not being registered under the Act who shall take or use the name of midwife, etc., shall be liable on summary conviction to a fine not exceeding £5.

This protects title only, *not* practice. The corresponding

clause of the draft Obstetric Nurses Bill reads practically as follows:

Any person who not being registered shall take the name of midwife or any other such name title, etc., or who habitually or for gain shall attend or undertake to attend any lying-in woman, shall be liable to the penalty, provided always that nothing herein contained shall apply to any person or persons attending a woman during labour in case of an emergency when the services of a person so registered or of a duly-registered practitioner are not available.

This protects *practice* as well as title.

Limitations of Practice and Title of Registered Persons.—The Bill provides by Sec. III, Subsec. 4:

The certificate of registration shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate, or to assume any name etc., implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate or any certificate of the cause of death.

This as regards *practice* is a mere declaration "a pious opinion" without any binding effect and without penalty, but as regards *title* it gives the midwife the implied position of a full licentiate or practitioner in midwifery, so that it is probable that any "*rules and regulations*" to the contrary drawn up by the Midwives Board to limit the practice to certain straightforward cases would be held at law as *ultra vires*, that is, the midwife would be recognised by *the Act* as a licentiate of this branch of practice, possibly including gynæcology. An amended clause might be suggested as follows:

Registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or *to practise as though she was*, or to assume any name, title or designation implying that she is under the Medical Acts recognised as a licentiate or practitioner in medicine, surgery or midwifery, or that under the said Acts or otherwise she is qualified to grant any certificate, including any certificate of the cause of death or of stillbirth, or that she is recognised by law otherwise than as a registered midwife. And any woman registered as aforesaid acting in contravention of this subsection by assuming any such name, title or designation as though she was registered under the Medical Acts or by granting any such certificate as aforesaid, or by practising medicine or surgery, or by practising midwifery further or otherwise than as a registered midwife under the rules and regulations for the time being in force for the regulation of such practice, shall be liable on summary conviction for each offence to a fine not exceeding £5. Provided always that such liability to fine shall be in addition to and not in substitution for any act that may be done or any proceedings that may be taken by the Midwives Board under such rules and regulations for the suspension of such registered person or for the removal of her name from the register.

Further Facilities for Enforcing Legitimate Practice.—The Bill by Section IX provides that every sanitary authority shall appoint a local superintendent of midwives, whose duty it shall be (*a*) to supervise, (*b*) to investigate charges of malpractice or misconduct, and if he considers there is a *primâ facie* case to report the same to the Board.

It would appear, therefore, that it is the intention of the Bill that the Board only would have to interfere or be interested in the observation of the rules and the punishment of offender, but this should not be so; a court of summary jurisdiction in the locality where the offence took place is always accessible, is a much better tribunal than a Board meeting held miles away and at long intervals. Such a court is open to everyone; an aggrieved patient, a local medical practitioner, or a medical defence union, and a conviction would relieve the Board of the great responsibility of investigation, their duty being then confined to suspension or removal from the *Register*, without further inquiry. All that would be required in addition to the suggested alteration of Section III, Subsection 4 to bring about this desirable condition of affairs would be the insertion of a clause declaring that the rules and regulations of the Midwives Board for the time being in force should apply as though incorporated in the Bill, and that such rules should be incorporated in the *Annual Register* (for which, by the way, the Bill should provide) and should thereupon be conclusive evidence in a court of law of the currency of such rules.

Education of Midwives, Assistants, etc.—On this subject the Bill is absolutely silent. Possibly the promoters intend this to be covered by "rules," but if these be as loosely put together as the Bill is, they will be far from satisfactory. Much doubt and many misgivings could easily be removed by the insertion of a clause in the Bill providing "That no midwife (as is the case now with the registered medical practitioner) shall keep or use under any pretence, or under any designation, unqualified assistants, whether described as pupils or otherwise," and in default and on conviction, fine and liability to suspension and removal from the *Register*. A large so-called home run by one or two registered midwives, with a numerous staff, would defeat the alleged object of the Bill, and be intolerable both to the public and to the profession. With some such alterations as these the Bill might be made a workable measure.

Constitution of the Midwives Board.

There is the further question of the constitution of the Midwives Board, which, as you point out, is also a grave defect. In the first place it is not directly representative; in the second, the Privy Council may appoint any six persons; and thirdly, the Midwives Incorporated Institute is hardly such a recognised body as to be entitled to send representatives. If this Bill unfortunately passes its second reading, then it behoves the profession to direct the attention of Parliament in Committee to a revision of the whole construction of the measure.

THE LATE MR. ERNEST HART.

The British Guiana Branch of the British Medical Association has passed a resolution expressive of their deep sympathy and condolence with Mrs. Hart on the great loss she has sustained; and informing her that the great services rendered to the Association by Mr. Ernest Hart will never be forgotten by them.

The Chester Medical Society has passed a resolution of sincere sympathy with Mrs. Hart, expressing their deep regret for the loss she has recently sustained, and stating that they will always revere the memory of the late Mr. Ernest Hart.

At the February meeting of the Metropolitan Public Gardens Association, the Secretary reported the death, on January 7th, of Mr. Ernest Hart, the first Vice-Chairman of the Association, and spoke of the interest he had always shown in the work of the Association. He said that Mr. Hart had liberally contributed for some years towards the up-keep of Christ Church Garden, Spitalfields; and during the past summer, notwithstanding his illness, he had set on foot a scheme, in regard to which he had sought the assistance of the Association, for the purchase of a part of the Golders Hill Estate as an addition to Hampstead Heath, and had secured promises of about £2,000 towards it, including £200 from himself. Sir William Vincent said that the loss of Mr. Hart was one which would be felt in many circles, medical and philanthropic, and moved a vote of condolence with Mrs. Ernest Hart, which was carried unanimously.

PLAGUE IN INDIA.

Bombay.

The Municipal Council of Bombay, since the first outbreak of plague in 1896, has found its powers curtailed. A committee was appointed to do the work that was peculiarly theirs, and now this committee and the municipality have come to loggerheads. The municipal authorities declare that the attempts of the committee have failed to stamp out the disease, and that they will in consequence not advance any more money towards promoting their system of separation, isolation, and segregation. It is the phrase "stamping out" which has caused trouble and revolt. Stamping out a disease is merely an expression, not a fact. Plague cannot be 'stamped out," any more than can typhoid fever or cholera, when they have got hold of a city. It may be possible to limit their ravages, but it is not by efforts, however heroic, made during an epidemic, that diseases are got under, but by sanitary steps taken during periods when apparent health prevails, when sanitation can be calmly considered and thoroughly administered.

The deaths reported this week in the city of Bombay exceed by 15 the number given last week, when we had the satisfaction of declaring an abatement in the excessive death-rate. This increase has probably excited native opinion against search parties, quarantine, and isolation. Towards the end of an outbreak of plague the death-rate always exceeds the new cases. That the number of deaths is increasing at the present moment need not necessarily indicate an increase of infection, but only that a number of the already sick have succumbed. Plague differs from most diseases, inasmuch as there is no falling-off in the percentage of deaths to new cases towards the end of an outbreak.

Serious riots occurred in the native town on March 9th, in

the course of which several persons were killed and injured. In various parts of the city, plague ambulances were burned and attempts were made to set fire to the hospitals. The Jamsetjee Hospital was attacked, and Dr. Gillespie, the House-Surgeon, was badly wounded; the mob was, however, driven back by rifle volleys.

PUNJAB.

In the Jullundur district there have been no fresh cases in the village of Jhanda Khura, and the villagers are returning to their homes, from the segregation camps. In the village of Shekepur in the same district, however, there is said to be an outbreak of plague. In the Hoshiarpur district, adjacent to Jullundur, plague is spreading slowly. It seems only too certain that in some cases the villagers, with the cognisance of the headmen, deliberately conceal the disease until the death-rate leads to its discovery by the authorities.

POONA.

The plague returns for the city of Poona show that the disease is occurring in merely a sporadic form. Whilst congratulating the Poona authorities upon the disappearance of plague in an epidemic form, it must not be assumed that they have got rid of the disease altogether. They have to ascertain whether they have been dealing with a recrudescence or not. If it is the original outbreak that has extended its ravages up to the present (and there is much in favour of such a supposition), a recrudescence must be looked for.

HYDERABAD.

The plague returns for the Nizam's dominions show an alarming spread of the epidemic. Up to February 12th 23 cases and 20 deaths had occurred at Sarati, 39 cases and 17 deaths at Kashegaon, 55 cases and 48 deaths at Dhotri, and 19 cases and 14 deaths at Warligaon. All these villages are on the Nizam's frontier, but the disease has crept up to within eighty miles of the capital. The Nizam is supporting the recommendations considered advisable by his European advisers, and strict precautionary measures are being enforced. Surgeon-Lieutenant Colonel Lawrie, in the name of the Nizam, is administering the plague work with tact and energy. He has directed the evacuation of all the infected villages, and ordered every hut where cases of plague have been found to be burnt. Here, in the province of a native prince, as well as in British States, the native subjects object to the intervention of hygiene and sanitary authorities.

According to telegrams in the daily papers, what was styled a new epidemic had broken out in Hyderabad. It would appear, however, from subsequent information, that the reported new disease is small-pox.

BELGAUM.

A monkey died at Belgaum city of plague. A *post-mortem* examination showed that there were as many as four buboes in the throat and groin. How the monkey was infected is not stated. Up to the present we have heard of no definite case of monkeys being affected apart from inoculation or direct contagion.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

March 2nd, 1898.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting will be held at the Town Hall, Walthamstow, on Thursday, March 17th, at 8.30 P.M. The chair will be taken by Dr. St. Clair Shadwell, Vice-President of the District. Mr. Charters J. Symonds will read a paper on The Surgical Treatment of Gall Stones. Visitors will be cordially welcomed.—HERBERT E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held in the Governors' Hall of St. Thomas's Hospital on March 24th, at 8.30 P.M. Cases of clinical interest from the wards of the Hospital will be shown, and demonstrated on by members of the staff.—THEO. B. HYSLOP, District Secretary (*pro tem.*), Bethlem Royal Hospital, S.E.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting will be held at the Grand Hotel, Brighton, on Thursday, March 31st, at 3.30 P.M. Dinner at 5.30. Charge 6s., exclusive of wine. Members are requested to give notice of papers, etc., to the undersigned before March 18th at the latest.—J. W. BATTERHAM, Honorary Secretary, Bank House, Grand Parade, St. Leonards.

SOUTH EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will be held at the West Kent Hospital, Maidstone, on Wednesday, March 23rd, at 4 P.M., Mr. Hallowes, in the chair. Agenda: Place, date, and chairman of next meeting. Election of Honorary Secretary. Dr. Travers: Notes of 51 cases of Typhoid Fever. Dr. Ground: On the Position of Antitoxin as a Remedy in Diphtheria. Tea and coffee will be provided at the close of the meeting. All members of the South Eastern Branch are entitled to attend this meeting, and to introduce professional friends.—E. GROUND M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—An ordinary general meeting of this Branch will be held in the Palace Hotel, Aberdeen, on Wednesday, March 16th, at 8 P.M. Business: Minutes, Nominations, etc. Dr. Rose (Aberdeen): The Treatment of Diphtheria with Antitoxin in the Sick Children's Hospital during the last three years. Professor Ogston: Case of Absence of Peritoneum. Dr. McKenzie Booth: (1) Case of large Bronchocele, Specimens, and Photograph; (2) Case of Epithelioma of Penis, with Specimen.—C. THISTLETON URQUHART and J. SCOTT RIDDELL (Aberdeen), Honorary Joint Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in Liverpool on April 6th. Members wishing to read papers or make any other communication should write at once to the Secretary. Applications for membership should be addressed to Dr. BARR, Honorary Secretary, 72, Rodney Street, Liverpool.

WEST SOMERSET BRANCH.—The spring meeting will be held at the Railway Hotel, Taunton, on March 25th, at 4.30 P.M. Agenda: To consider Report of Constitution Committee; the Resolution of Annual General Meeting on Inebriates Legislation; and Resolution of Worcestershire and Herefordshire Branch on Venereal Disease in India. Notes of a case of Syphilis, by Dr. Rutherfoord; of a Case of Complete Inversion of Uterus three days after Delivery, by Mr. Routh; of a Case of Head Injury and of a Case of Hysterectomy, by Dr. Pringle. Notice of any other communications should be sent to the Secretary. There will be a dinner at the Railway Hotel at 6.30; price 5s. exclusive of wine. Those intending to be present should inform the Secretary before March 18th.—R. LIDDON MEADE-KING, M.D., Honorary Secretary, Taunton.

LONDONDERRY AND NORTH WEST OF IRELAND BRANCH.

Appointments to the Lunatic Asylums.—At a meeting of this Branch, on March 2nd, the following resolution was adopted:

That in view of the fact that the appointment of resident medical superintendent of the various asylums has heretofore been made by his Excellency the Lord Lieutenant from the ranks of the assistant medical officers, generally according to seniority, we, the members of the Londonderry and North West of Ireland Branch of the British Medical Association, desire to call attention to Clause 56 of the Local Government (Ireland) Bill, which, if passed in its present form, will inflict a very great hardship on those assistant medical officers who have six years' and upwards service, and who might reasonably expect promotion in the near future.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE third meeting of the District was held at the London Temperance Hospital on March 2nd, Dr. MORTON in the chair.

Prognosis in Appendicitis.—Dr. H. A. CALEY read a paper on Prognosis in Appendicitis and its Relation to Treatment, illustrated by a series of 100 consecutive cases. The object of the paper was to show how, by attention to the clinical signs of a case, and to the history and associated conditions, it was often possible to establish the diagnosis of the anatomical conditions present, to base a prognosis, to differentiate a mild from a severe attack, and to advise medical or surgical treatment. The conditions calling for surgical interference were carefully considered, but the author expressed a decided opinion against routine operation in appendicitis.

Visit to Hospital Wards.—Dr. SOLTAU FENWICK took the members round the wards of the hospital.

GLASGOW AND WEST OF SCOTLAND BRANCH.

The winter meeting of this Branch was held in the Western Infirmary, Glasgow, on Thursday, February 24th, under the presidency of Dr. Freeland Fergus (Glasgow).

Constitution Committee, etc.—The Branch considered a number of matters of interest to the profession, including the report of the Constitution Committee, legislation for inebriates, and the Bill to Amend the Local Government (Scotland) Act.

Demonstration.—Afterwards a demonstration of cases of interest was given by members of the staff of the Western Infirmary; and the members of the Branch inspected the new operating theatre and new pathological institute of the Infirmary.

Representatives on Association Council.—At its business meeting the Branch—in terms of By-law 17 of the parent Association—in view of recent large increases in membership—unanimously elected Dr. Freeland Fergus (Glasgow) to be a second representative of the Branch on the Council of the parent Association. Dr. Bruce Goff (Bothwell), who has for some time alone represented the Branch, was also unanimously re-elected.

Dinner.—In the evening the Branch entertained at dinner as its guest Professor Sir William Tennant Gairdner, K.C.B., over one hundred members being present.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

An ordinary general meeting of the Branch was held in Aberdeen on February 16th, Professor Finlay (President) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and approved.

New Member.—A ballot was held for the admission of Miss Elizabeth Latto Ewan, L.R.C.S., L.R.C.P.E., who was duly admitted.

Antitoxin Treatment of Diphtheria.—Dr. Rose's paper on the results of treatment with antitoxin in the Aberdeen Sick Children's Hospital was postponed till next meeting, but he made a few preliminary remarks on the subject.

Acute Glaucoma.—Dr. Levack read notes of two cases of acute glaucoma, and remarked upon the rarity of the condition in this part of the country, and the necessity for treating it at once, otherwise the loss of sight was certain. Iridectomy was done for the pain, and if performed soon enough might save the sight to a certain extent.—An interesting discussion followed.

SPECIAL CORRESPONDENCE.

PARIS.

The Consultative Sanitary Committee.—The Depopulation Question in Rural Districts.—Stone Floors versus Wooden Floors.—Acquittal of Dr. Laporte.—General News.

The Comité Consultatif d'Hygiène Publique of France came into existence during the Second Republic on August 10th, 1848. Its organisation underwent few changes until 1884; from that time up to 1886 changes were frequent. At the present time it is composed of thirty-seven members. Among these eight only receive *jetons de presence*, scrips testifying their presence at the meetings and entitling them to receive 15 francs for such attendance. According to the decree which created the Comité Consultatif d'Hygiène the meetings were stated to be weekly and the sitting members were entitled to 15 francs each. In 1895 the sum necessary to defray the expenses of these sittings was expunged from the Budget of the Minister of the Interior. Some of the medical papers declare that it ought to be voted again.

The depopulation deplored in country communes is attributed by the General Councils in great measure to the absence of medical and charitable helps. The Council General of the Haute Marne department asserts positively that this want drives the country labouring classes to towns and cities, where there are hospitals, charitable societies, etc. The result is that robust stocks go to towns and become puny. It is the immigration of country populations to towns which increase the death-rate. In 1895 the Poor-law medical service was in working order in sixty-three departments owing to a law which had been passed on July 15th, 1893. In 1896 the service was established in eighty-three departments; in 1897 in all the departments except one, where the General Council and local medical men could not agree. The law passed in July, 1893, has furnished 167,569 more sufferers with medical help than did the former organisation.

M. Vallin, at a recent meeting of the Société de Médecine Publique et d'Hygiène Professionelle, pleaded in favour of stone floors, and condemned wooden floors or boards. Floors, he said, are impregnated daily with detritus swarming with microbes and with sputa. Wooden floors are inevitably dangerous; nevertheless stone floors are objected to because they are cold, and for this reason are believed to be dangerous, but Dr. Vallin affirms that having cold feet is not so dangerous as the chance of infection from boarded floors. He recommends a mineral covering for floors, and insists on a space being kept between the floor and the base of the floor.

Dr. Laporte, whose trial for manslaughter consequent on the death of a woman after delivery created so much sensation, and whose sentence of three months' imprisonment rendered null by the application of the First Offence Act, roused so much indignation in the medical profession, has been acquitted by the Court of Appeal. Professor Pinard made several demonstrations to establish Dr. Laporte's ability and proper treatment of the deceased woman. A subscription was organised for Dr. Laporte realising a fair sum. Dr. Laporte earns an honourable living as a shorthand writer.

Dr. Pierre Budin has been chosen to succeed Dr. Tarnier as Clinical Professor of Obstetrics. M. Porak replaces M. Budin at the Maternity. M. Maygrier replaces M. Porak at the Charité Hospital.

The last case of "Zola-mania" is the most painful of all. Eugene Robert, a draught-man, during the Zola trial, conceived the idea that he was Esterhazy, and was persuaded that the "syndicate" threatened him and would have him arrested. He sought protection by changing his appearance. He had his beard shaved off and all his hair, exclaiming, "If Picquart recognises me now he will be clever." Nevertheless his fears were not soothed, and during the night he threw himself out of window. By a curious coincidence two women lodgers in the same house not long ago committed suicide in the same way.

BERLIN.

Police Regulations as to Medical Practice.—The Department of Public Medicine.—The Berlin Board of Health.—General News.

The President of the Berlin Police has published a rescript of regulations for the purpose of dealing with unlawful competition in the medical profession. One paragraph rules that persons who have obtained a medical degree in a foreign country only may not use the titles "*Arzt*," "*praktischer Arzt*," "*praktische Aerztin*," except with a suffix clearly expressing that the title has not been obtained in Germany. Another paragraph deals with the various categories of bonesetters and quacks, and rules that persons who, without having passed medical examinations and obtained a degree, publicly offer to carry out medical treatment and give medical advice professionally, are forbidden henceforth to use titles such as "*Arzt*" (medical practitioner), "surgeon," "oculist," "obstetrician," "dentist," "veterinary surgeon," or even such as "homœopathist," "hydropathist," "specialist," "magnetopathist," "*Naturarzt*," etc. The title "qualified medical assistant (*Heilgehilfe*), and "masseur," or "masseuse," may be used only by such persons as have been qualified by the State medical officer in Berlin or Charlottenburg.

A proposal to detach the department of Public Medicine and Hygiene from the Prussian "Cultus-ministerium" (Ministry of Education, Religious Affairs, etc.), and to hand it over to the Ministry of the Interior, has been ventilated more than once in the Prussian Diet. The chief arguments brought forward are (1) that the "Cultus-ministerium" is already overweighted with affairs; and (2) that the Board of Health and sanitary police have a closer relation to the affairs of the Ministry of the Interior than to that of Education, etc. The Government itself fully acknowledges the weight of these arguments, though it has more than once put off a decision

on the subject, which naturally must involve considerable and complicated alterations in the service. It seems, however, that now the change has been resolved on—in principle at least—and that it will appear in the budget for 1899.

The question of a proposed separate municipal Board of Health for Berlin has been discussed at two meetings of the magistrates. There are difficulties in the way, for the head officials of the sanitary police are very much against transferring any part of their power to the municipal authorities; still *pourparlers* have begun, and will probably lead to victory for the Berlin municipality, which has proved itself such a brilliant organiser and successful director of its sanitary operations.

The German Emperor has conferred decorations on the members of the German deputation for research into the plague in India. Professor Gaffky of Giessen has received the second class of the Red Eagle Order, and Professor Pfeiffer of Berlin, Dr. Sticker of Giessen, and the Bavarian army surgeon Dr. Dieudonné have received the fourth class of the same Order.

In one of his university lectures the other day, Professor Virchow referred to Professor Schenk's much-talked-of method of regulating the sex of offspring, which he ridiculed in good set terms.

LIVERPOOL.

Coroner's Inquest on a Museum Preparation.—The Cremation Movement.—New Nurses' Home at Brownlow Hill.—New City Mortuary.—Election to the Royal Southern Hospital.

FOLLOWING hard upon the inquest commented on in the Liverpool correspondence published in the BRITISH MEDICAL JOURNAL of March 5th, the City Coroner has held an inquiry which is rare if not unique in the annals of "Crowner's Quest Law." About a month ago one of the laboratory attendants in the medical school noticed that a seven months' fœtus which was formerly used for demonstration purposes in the medical school had become somewhat offensive in consequence of the spirit having evaporated, and placed it in the yard. Shortly afterwards the corporation scavengers emptied the college ashpit, and, when the refuse was about to be consigned to the destructor in Chisenhall Street, one of the attendants discovered the fœtus included in it, and communicated the fact to the authorities. The police had no difficulty in tracing it to the school, where the officials in charge did everything in their power to make it clear that the body was that of an immature stillborn fœtus which had been used for demonstration purposes, and had been thrown away by some unfortunate mistake. In spite of this assurance, a *post-mortem* examination was ordered, and an inquest held in due form. It is hardly necessary to add that the examination proved that the fœtus had never breathed, and the jury brought in a verdict accordingly. It is generally understood that an inquest is held to determine the cause of death when it is doubtful, the coroner having full discretion to decide whether such doubt exists as to call for an inquiry. It is difficult to perceive what advantage can arise from the coroner's being invested with the discretion at all if it is not exercised to prevent the absurdity of holding a court to ascertain the cause of death of a fœtus which has been for years in a jar on the shelves of a medical school.

The advocates of cremation in Liverpool are endeavouring in various ways to awaken public interest in this method of disposing of the dead. Its advantages have been ably put forth from the pulpit, and the promoters of the movement have lately sent round a circular to the members of the medical profession drawing attention to the facilities which at present exist in Liverpool for carrying out the practice. The medical officer of health, in his annual report for 1896, drew a revolting picture of the deposit found in one of the sewers in the neighbourhood of the necropolis, the foul emanations from which were believed to have caused the illness of several of the workmen employed in removing it, an illness which was fatal in one case. The report draws attention to the obvious futility of taking elaborate precautions to prevent accidental contaminations of the subsoil so long as human remains are intentionally placed to decompose in it. The Ladies' Sanitary Association has also taken up the question, and the spring course of lectures given under the auspices of that society was opened by a largely-attended lecture on Cremation, by Dr. J. Curtis Webb. Dr. Webb, after describing the history of the practice in ancient times, and alluding to the crude philosophical conceptions which led to its abandonment in the fifth century, set forth the economical and sanitary advantages which might be expected to follow its general adoption, and pointed out the fallacy of the objections which are commonly urged against it. Having fully described the very complete crematorium in use in Anfield Cemetery, near Liverpool, he concluded by exhorting the members of the association to advance the cause, which they could do in various ways, but especially by leaving written directions to have their remains cremated.

The Union Hospital at Brownlow Hill, which has enjoyed a high reputation for its nursing since the time when Miss Jones came to reform the old nursing system, has lately been extended by the addition of a spacious home for nurses, erected by the guardians at a cost of £11,350. The new structure, which will be ready for occupation in about six weeks, contains accommodation for 60 nurses; there are a spacious dining room and sitting rooms, and all modern appliances.

A new mortuary, in addition to the one which has been for some years in existence at the Prince's Dock, is about to be erected by the city council in St. Martin's Churchyard, Vauxhall Road. It will be surrounded by an open space 100 feet long by 50 feet wide.

The office of Honorary Surgeon to the Royal Southern Hospital, which was rendered vacant by the resignation of Dr. Henry Rawdon, has been filled by the election of Mr. George Palmerston Newbolt, F.R.C.S. Mr. Newbolt began his professional career in connection with the Stanley Hospital, where he was first Senior House-Surgeon, and afterwards Honorary Surgeon. He had a large experience of the treatment of serious accidents as Surgeon to one of the sections of the Manchester Ship Canal during its construction, and in 1896 was awarded the Heath Scholarship of £200 in the University of Durham for his essay on Diseases of the Jaw.

CORRESPONDENCE.

MIDWIVES AND OBSTETRIC NURSES.[1]

SIR,—Mr. Garrett Horder, in your issue of March 5th, gives a brief epitome of reasons why the Midwives Bill now before Parliament should be opposed by the medical profession.

I must ask you, in fairness, to permit me to reply to his letter, and I will try to do so as briefly as possible.

1. The Midwives Bill will not prevent unregistered women from practising, for the same reasons as were given in respect of the Plumbers' Registration Bill, 1897. Sir Walter Foster, M.P., thus put it in the debate on the second reading:—

"It was objected that the Bill proposed to register persons who had been practising as plumbers since 1892. Anybody who had studied the history of registration would find that that was the course which had always been followed; and they were bound to recognise the members of the trade or profession it was proposed to register who were practising at the time the Bill was passed. (Hear, hear.)"[2]

This reply gives the Parliamentary view of registration.

2. His second reason, which is similar to that advanced in your leading article in the same issue, is that the Midwives Bill will not prevent a midwife from assuming the title of L.M.

You admit that this title is a "recognised medical title"; anyone using such a title *now*, and being unqualified to assume it, would be liable to prosecution. The Midwives Bill in no way interferes with such prosecutions, and, on the other hand, the regulations made under it, subject to the approval of the General Medical Council, will be directed to preventing any registered midwife from either practising as a medical practitioner or assuming medical titles. The Council has already appointed a standard for the L.M., and would not allow a different one or a lower grade to be imposed by a body under its general control.

3. Mr. Horder objects to the proposed constitution of the

[1] Further correspondence on this subject will be found at p. 724.
[2] *Times*, July 1, 1897.

Midwives Board. The only alternative proposal before the medical public is the formation of the Board entirely—virtually—from medical practitioners in general practice, with whom, it is said, midwives should be in direct competition. Surely this would not be a fair Board. Perhaps Mr. Horder can suggest some alternative.

4. Mr. Horder's last reason is based on a misreading of the Bill. The clause referring to supervision allows the local sanitary authority to "appoint its medical officer of health or other medical practitioner or practitioners as the local supervising authority." This allows of the appointment of a sufficient number of medical practitioners to cope with any number of midwives in the area affected. It was also intended to permit of the medical of health declining the task if he did not feel competent to its proper performance, or for any other reason.

I can assure Mr. Horder that, since he grants the necessity for registration, the Bill follows Parliamentary tradition, and is based on sound precedents.—I am, etc.,

F. R. HUMPHREYS, L.R.C.P.Lond.
Honorary Secretary, Midwives Bill Committee.

Buckingham Street, W.C., March 8th.

PROPOSED CENTRAL HOSPITAL BOARD FOR LONDON.

SIR,—I am desired to forward you the enclosed paragraph, which this Committee would be glad if you could insert in your columns.—I am, etc.,

C. S. LOCH.

General Committee for the Promotion of a Central Hospital Board for London, 15, Buckingham Street, Strand, W.C., March 3rd.

Proposed Central Hospital Board.

At a recent meeting of the Executive Committee for the Promotion of a Central Hospital Board for London, the following resolution was adopted:

That the Secretaries be asked to prepare, for the consideration of the General Committee, and for discussion at a public meeting of persons interested, a memorandum regarding the hospitals of London, similar to that submitted in 1889 to the Select Committee of the House of Lords on the medical charities of the metropolis, and bearing upon the question of hospital reform and the constitution of a Central Hospital Board.

CONSULTATIONS WITH HOMŒOPATHS.

SIR,—Some weeks ago a letter appeared in the BRITISH MEDICAL JOURNAL under the above heading from a distinguished surgeon in our neighbouring city of Leeds. In that letter he stated, *inter alia*, that he knew that "an eminent Bradford practitioner" met homœopaths in consultation. Subsequently, on January 22nd, Dr. Hime, President of this Society, wrote to you stating in general that he was convinced the members of the profession here were opposed to consultations with homœopaths. He further stated that few persons who could be classed as "eminent Bradford practitioners" were not members of this Society, and that members could not under our rules consult with homœopaths or any "irregular practitioner." Since then we have ascertained from Mr. Jessop the particulars of the consultation between an "eminent Bradford practitioner" and a homœopath referred to by him. We have the greatest possible satisfaction in being able to inform you that the gentleman in question has written in answer to our inquiries, and states that he met the homœopath in consultation inadvertently, and not knowing that he was such.

We trust you will give the fullest possible publicity to this explanation. The statement as to want of orthodoxy among the profession here in reference to homœopaths made by so eminent a man as Mr. Jessop has been regarded here as a serious reproach by the profession, and we have lost no time in dealing with it, and request you at the earliest moment to publish this letter.—We are, etc.,

JOHN DUNLOP,
L. S. MACKENZIE,
Joint Honorary Secretaries Bradford and District Medico-Ethical Society.

Bradford, March 7th.

SIR,—Dr. Brazil's criticisms of my remarks on infinitesimal action would perhaps have been more to the point had he made himself acquainted at first hand with the authorities I quoted. Darwin does not say that $\frac{1}{20000000}$th of a grain of ammonium phosphate is required to stimulate each separate leaf gland of Drosera, but that half a teaspoonful of water containing that amount of the salt, when poured over a leaf of the plant, caused "the inflection of almost every tentacle, and often of the blade of the leaf." The amount of the salt brought into action on any one gland by this process must obviously have been very much less than the $\frac{1}{20000000}$th of a grain. Dr. Brazil will have to restate his rule of three sum—that is to say, if he does not see that his argument is faulty in itself, even if his numerical data were correct.

The striking picture of an "organism bathed in unlimited supplies of a toxic solution" seems to be a product of Dr. Brazil's inner consciousness—at any rate, it has no relation to any of Naegeli's experiments. Naegeli's work is of great interest. Among other things, he found that 1 part of hydrated oxide of copper was sufficient to render 1,000,000,000 parts of water toxic to spirogyra. The amount of copper oxide, therefore, required to render 1 litre of water fatal to the organism growing in it was $\frac{1}{1000000}$th of a gramme.[1]—I am, etc,

Manchester, March 8th. F. S. ARNOLD, M.B.

THE MEDICAL DEFENCE UNION.

SIR,—Kindly allow me to state that the question as to amalgamation raised at the annual meeting of the Medical Defence Union was not asked by me. The only reference I made to the subject was the statement that the project was erroneously referred to in the report as a reason for the revision of the Articles of Association, with which, as a matter of fact, it had nothing to do, except that the report of the Revision Committee was held over whilst amalgamation was possible, in view of further action in the same direction. The Revision Committee having been appointed at a special general meeting of the Union, it appeared to me that its report should be presented at a similar meeting.—I am, etc.,

Old Kent Road, S.E., March 8th. EDWD. C. BOUSFIELD.

BUSINESS OF THE GENERAL MEDICAL COUNCIL.

SIR,—Mr. Horsley's letter in the BRITISH MEDICAL JOURNAL of the 5th inst. gives further evidence of the obstructionist tactics with which his attempts at reform are systematically met.

As Mr. Horsley was elected to the Council precisely that he might advocate a less apathetic policy and a less autocratic government, the electorate should take steps to show the Council that Mr. Horsley has the full approval and absolute confidence of his constituents in the fearless and straightforward policy which he has adopted.

This end can perhaps best be attained by a public meeting of the profession before the May session of the Council. There is not the least doubt that such a meeting would cordially endorse Mr. Horsley's action, and effectually prevent any affectation that he lacked the "mandate" of the electors.

The ground would thus be cleared and a plain issue raised. Those who support the present unconstitutional methods of procedure, or non-procedure, and those who are determined to suppress every attempt at reform will have the advantage of knowing that their action is opposed to the wishes of the profession whose interests they are supposed incidentally to protect. Those, also, if any, who doubt if Mr. Horsley has the support of the general practitioners will have their doubts resolved.—I am, etc.,

Frant, March 5th. HAMILTON HALL.

THE TEMPERANCE QUESTION.

SIR,—I should be better able to answer Dr. Coates were I capable of comprehending him. Apparently he thinks that a change in manners and habits, enforced by an Act of Legislature, ranks as a process of evolution. To be logical it seems to me that he should suggest some of the "artificial" means of getting drunk when alcohol is not available. Or would he propose to suppress the craving for warmth by an Act of Legislature, and so cause a notable piece of evolution to be "splendidly attained"?

Two things, I think, are not now seriously disputed by those who know the facts: (1) That alcohol, having been a great eliminating agency for thousands of years, has been the cause of an evolution against itself, which has rendered

[1] Ueber oligodynamische Erscheinungen in lebenden Zellen. Von Carl von Naegeli. H. Georg, Basel, Geneva, and Lyons. 1893.

South Europeans, who have longest been afflicted by it, more resistant (that is, less inclined to drunkenness) than North Europeans, and *a fortiori* than savages. (2) That cessation of selection as regards alcohol will—must—result in a retrogression towards the ancestral type when the craving for that state of mind which alcohol produces was as intense as it is among modern savages. Now, races such as the Greeks, Italians, and Spaniards, who have undergone much evolution against alcohol, are at the present day little injured by it, though they greatly relish the use of wine as a beverage. The question of abstinence from alcohol, consequently, is not a burning one among them any more than is the question of abstinence from tobacco among us. It is not likely, therefore, that these races will ever consent to prohibit the use of alcohol. But as means of intercommunication increase, the world grows more cosmopolitan every day. If, then, we enforced abstinence in England, how should we prevent our many travellers, our thousands of sailors and tourists, from acquiring habits of drink and seeking to reintroduce the poison? It must be remembered that since evolution against alcohol has been very rapid, retrogression would be very rapid also. Moreover, to be successful, prohibition must be eternal; it must endure as long as the human race endures. In the face of an increasing craving, how shall we secure this immortal permanence for a mortal law? What guarantee is there that a future generation of alcoholic degenerates will not repeal it? Dr. Coates thinks that when every one believes alcohol an evil no one will drink it. But, speaking practically, does not everyone believe it now? He further says that I grant alcohol does harm to the race. He is mistaken; I did not consider the question. I said merely that it did harm to the individual. Nevertheless, this much I do know, that, owing largely to the evolution Anglo-Saxons have undergone against alcohol and certain forms of disease, they have replaced many less resistant races, and have thus spread over a great portion of the world, the aborigines of the Western and Southern Hemispheres having perished, not mainly from powder and shot, but from drink and disease. Let us beware lest a like fate befalls our descendants.—I am, etc.,

Southsea, March 4th. G. ARCHDALL REID.

EFFICIENT VACCINATION.

SIR,—In the BRITISH MEDICAL JOURNAL of March 5th, 1898, an article is published entitled Facts about Small-pox and Vaccination, and paragraph 9 of this article says, "The degree of protection conferred by vaccination corresponds to the thoroughness with which the operation has been performed, three or four marks being better than one or two, and a large mark better than one small one."

During the epidemic of small-pox at Gloucester in 1896, I examined the arms of the children attending the elementary schools in Worcester, by order of the Board of Guardians, in order to detect the unvaccinated children, and the following figures were obtained: Of 7,529 children examined, 5 had suffered from small-pox, and 555 were found to be unvaccinated, and, of the remaining 6,974 children—

1,411	had one vaccination	mark.
1,491	had two ,,	marks.
960	had three ,,	,,
2,999	had four ,,	,,
108	had five ,,	,,

I may take it, I think, that the 3,107 children having 4 and 5 marks were vaccinated by public vaccinators, and the 3,862 children having 1, 2, or 3 marks were vaccinated by private practitioners, so that if the quotation is true I think I am justified in saying that 2,902 vaccinated by private practitions were inefficiently vaccinated.

As the law relating to vaccination stands at present, the public vaccinator is bound to vaccinate so as as to obtain not less than a certain number of marks, which shall have a certain total area; while the private practitioner is allowed to certify as a successful vaccination any case which shows a vaccination mark, no matter how small.

Surely, any alteration of the law should be so worded as to render the same standard necessary in all cases; otherwise, if the post of public vaccinator is abolished, and no standard fixed, vaccination would soon become a farce.—I am, etc.,

THOS. P. GOSTLING,
Worcester, March 6th. Public Vaccinator.

HOSPITAL REFORM.

SIR,—In the BRITISH MEDICAL JOURNAL of February 26th you publish a letter from Mr. Garrett Horder presenting certain propositions of the Hospital Reform Committee, and inviting criticism.

The first suggestion is that "only cases of urgent importance should be attended to." This is intended to relieve hospitals of the bulk of casualties usually treated in the accident room. Mr. Horder does not define urgent importance, nor does he say anything about first-aid treatment, but I presume that he would not send away any crush or wound without giving urgency treatment. The crux of the casualty room is the definition of a trivial accident. An accident which is surgically trivial is sufficient to prevent the man earning his weekly wage, and reduces a working man for the time being strictly to the status of a hospital patient. Take, for example, a crushed finger with laceration of the soft parts and fracture of the phalanx. A man in such a state is unable to work; if not properly attended to he runs the risk of suppurative teno-synovitis, stiff tendons, etc. An ordinary workman after such an accident is thrown on sick pay, which is probably only sufficient to keep the family in food without any means of paying for medical attendance. I do not know how far the new law will increase the employers' liability, but at present there seems no such provision.

If we take another class of casualties of frequency—I refer to fractures—I am afraid, if cases are turned away after adjustment of the fracture, the result will not be satisfactory. The surgeon who is afterwards called upon to attend the case can only accept partial responsibility, and should the result be bad both hospital and private attendant will get discredit. The best interests of the patient will not be served, and the hospital authorities or the doctor might be subject to action for malpraxis. It seems quite reasonable to make the strictest inquiry into the patient's means, and if ineligible to send him away with a note to his own doctor, but under present arrangements it is impossible to send away those who are undoubtedly poor and admittedly sick, even though their injuries come under the surgical definition of trivial cases.

The admission of patients with recommendations from their own medical attendants is one which must be carefully considered. It has been proposed to limit admissions altogether to those who have notes from doctors. This is quite an impossible position. The administration of the charity would thus be given to the outside doctors, who would not be under the control of its governors, who are responsible for the proper administration of the charity to the subscribers. It would make the position of the hospital staff difficult, as few would care to turn away a patient bringing a note from an outside doctor requesting admission, even if he considered the case unsuitable. If an unsuitable patient is admitted the charity is improperly administered, if sent away the medical recommender is affronted.

It seems quite reasonable that medical men, from their position, are well fitted to recommend cases, and patients sent by them should be properly treated, but no priority can be given to their claim for admission.

The admission must rest altogether on the individual claims of the case, as no casuistry can justify the admission of a trivial case sent by a medical man at the cost of dismissing a serious case sent by a subscriber.

The sixth proposition, that "out-patients coming from outlying districts should bring recommendations from medical men before being treated," is one which would greatly check an abuse which exists, but it must be universally adopted, or it would tend to increase the abuse at hospitals where it was not carried out. There are many other points of interest, but I trust these friendly criticisms will lead to fuller discussion of Mr. Horder's propositions.—I am, etc.

Bradford, Feb. 27th. WM. HORROCKS, F.R.C.S.

ABDOMINAL SECTION AS A MEDICAL MEASURE.

SIR,—Mr. Treves, in his valuable paper on the above subject, read before the Medical Society of London on February 28th, and reported in the BRITISH MEDICAL JOURNAL of March 5th, referred to the great benefit which often followed abdominal section in tuberculous peritonitis; and Dr. Lauder Brunton offered as an explanation the very feasible theory

that the benefit was due to the admission of atmospheric oxygen, which probably acted upon the albuminous contents of the abdomen, producing an antitoxin.

It would be of interest and value to know if Mr. Treves has:

1. Injected pure oxygen, and if so with what result.
2. If not, his reasons for thinking such a proceeding would not be beneficial.
3. If he has opened the abdomen in cases of tuberculous phthisis or tuberculous meningitis, not accompanied with tuberculous peritonitis, and, if so, with what result?
4. If not, whether he considered such treatment would be likely to prove beneficial, considering the result in the case of tuberculous phthisis combined with tuberculous peritonitis referred to by Dr. Lauder Brunton?

If Mr. Treves would kindly answer these queries, I feel sure many would feel obliged.—I am, etc.,

Wimpole Street, W., March 5th. Geo. Steele Perkins.

THE COLONIAL MEDICAL SERVICE.

Sir,—As the title of Mr. Cantlie's extremely interesting paper, The Organisation of the Colonial Medical Service, gave rise to some misapprehension in my mind, it occurs to me that a similar misapprehension may arise in the minds of some of our Colonial friends who had not the opportunity of being present when the paper was read by Mr. Cantlie and discussed by those present.

The term "Colonial medical service" being a somewhat wide one, I did not understand, until I heard the paper, that it was only intended to apply to the medical service of the Crown Colonies and protectorates, whose medical officers are principally appointed directly by the Colonial Office, and in no way to the great self-governing Colonies who, of course, make their own appointments in this as in all other branches of their public service.

That there should be an organisation to assist the Colonial Office in dealing with these appointments there can be little doubt, and Sir Joseph Fayrer's strong advocacy of some such scheme will encourage the deliberations of the Committee appointed to deal with the matter, and be welcomed by the profession at large, and, let us hope, by the Colonial Office.—I am, etc.,

Wimpole Street, W., March 5th. Alfred P. Hillier, B.A., M.D.

Obituary.

JOHN HODGSON WRIGHT, M.R.C.S., L.S.A.

It is with regret we have to record the death of Mr. Hodgson Wright, the oldest practitioner of Halifax, and until a few months ago the most active of practitioners. An attack of influenza last spring left him considerably debilitated, and unfortunately whilst recruiting his health in Wales after it he took too much exercise, and a cardiac neurosis of an anginal character developed, asserting itself after exertion, which it did finally at the meet of the Badsworth hounds, to which Mr. Wright had ridden as a spectator, and not as an active participator of the sport.

Mr. Wright was born in Halifax in 1833, and leaves a father aged 93, still active. He was educated at Charing Cross Hospital, and became M.R.C.S. and L.S.A. in 1855. After holding several appointments in London hospitals, he settled down to practice in his native town, and soon achieved success. He was elected Surgeon to the Halifax Infirmary, and speedily gained a considerable reputation, and his services were much in request in the town and surrounding districts as an operator.

After thirty years' faithful service upon the hospital staff, Mr. Wright retired from the position of Senior Surgeon only a month before his death, and was elected Consulting Surgeon. At the meeting of the Infirmary Board at which his resignation was announced, it was unanimously resolved to raise a fund sufficient to have a portrait of Mr. Wright painted to hang in the Board room, and a replica to be presented to himself, in appreciation of the great services he had rendered to the institution. Unfortunately, his untimely death will prevent the painting being accomplished, except from a photograph.

Much of the reputation which the Halifax Infirmary has gained must be considered as justly due to Mr. Wright's indefatigable work and surgical skill. The demands upon the institution have been so great as to necessitate the building of a larger and modern building with all the latest improvements for carrying on the work coming to it. The generous and interested manner in which Mr. Wright fitted up the operating theatre of this new and now "Royal" Infirmary forms a lasting and very fitting memorial of his long service as a distinguished surgeon of the institution.

But not only were Mr. Wright's time and thought given to the poor inside the infirmary, but with the co-operation of Mrs. Wright the poor of Halifax and neighbourhood have had four nurses for many years past nursing them in their homes, and four years ago Mrs. Wright established a home for the accommodation of at least twelve incurables in the administration of which her husband took an active part. In the Crossley Orphanage, one of the largest institutions of the kind, he also took a great interest, and acted as medical officer to it. He was very fond of sport, and occasionally got much relief from his busy life by having a day's fishing, shooting, or hunting.

It is not too much to say that Halifax has sustained a distinct loss by Mr. Wright's death. The high esteem in which he was held was shown on the day of his funeral, at which all sections of the community were represented. The large gathering of his professional brethren which followed him to his last resting-place testified to the high appreciation in which he was held in the profession both as a man and a surgeon.

JOHN ANDREW MALCOMSON, M.D.,

Medical Officer of Health, Middlesbrough.

Dr. Malcomson, Medical Officer of Health for the Borough of Middlesbrough, whose death was announced in the British Medical Journal of March 5th, was a member of an old yeoman family in Ireland, and graduated M.D. in the Queen's University, Dublin, at the age of 21. After spending a short time in Oxford as an assistant, he came to Middlesbrough in a similar capacity to the late Mr. Dickinson. Before many months had elapsed he obtained the vacant house-surgeoncy to the North Riding Infirmary, which he shortly afterwards resigned for the appointment of Medical Officer to the new Fever Hospital, from which Mr. Dickinson had retired. The Corporation speedily recognised the sort of man Dr. Malcomson was, and gave him appointment after appointment as it became vacant, so that at the time of his death he was, without any special desire of his own to be so, a veritable pluralist. He was Medical Officer of Health, Medical Officer to the Fever Hospital, to the Tees Port Sanitary Authority, to the Eston District Council, and the Middlesbrough District Council, and Honorary Medical Officer to the North Riding Infirmary. In addition to all this, he had a private practice as large as the time at his disposal would permit him to give attention to.

Dr. Malcomson was a man whose whole heart was in his work, and who was entirely devoted to professional duty. Many years ago a large post-pharyngeal abscess following scarlet fever in the child of a brother practitioner threatened immediate suffocation. Dr. Malcomson promply performed tracheotomy, and without hesitation, sucked the blocked tube.

Dr. Malcomson was a strictly upright and honourable man, and gained the respect and goodwill of all classes and of his professional brethren in particular; there was never any misunderstanding between the medical officer of health and the private practitioners of Middlesbrough and district. A genial nature and presence, a large share of Irish wit, more than an average share of tact and common sense, and a genuine belief in the goodness of mankind as a whole, kept him out of many a difficulty into which others less gifted would have fallen.

Masonic brethren will be interested to know that he was a Past Master of his Lodge, and that Provincial Grand Lodge had conferred upon him its highest honour, that of Senior Grand Warden. When Dr. Malcomson's sudden death, on March 1st, became known in the town a real shock was felt by all, followed by a feeling of deep sorrow and regret. It was felt that he had fallen at the post of duty. The present epidemic of small-pox had added very greatly to his labours and anxieties, and the death from cerebral hæmorrhage of a man of 46 of robust physique and previously healthy, as far

as was known, certainly suggests that he had sacrificed himself in his consuming zeal for the welfare of the town which he served.

Ten years ago Dr. Malcomson married Mary, only daughter of the late Dr. Smith, of county Derry, whom he leaves with three children to bear the burden of an irreparable loss.

On March 4th he was interred at the New Cemetery, Middlesbrough, with all the honours of a public funeral. The attendance was one of the largest and most representative that has ever taken place in the town, and was clearly indicative of the position he had held in the hearts of the public and his profession.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 5s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON-MAJOR, with only 18 months to serve in Jamaica, desires an exchange to remain at home.—Apply to F. D. E., 1, Richmond Hill, Monkstown, co. Dublin, Ireland.

THE NAVY.

THE following appointments have been made at the Admiralty: GRAHAM E. KENNEDY, Fleet-Surgeon, to the *President*, additional, March 2nd; FREDERICK J. LILLY, Fleet-Surgeon, to the *Pembroke*, February 28th; GEORGE GIBSON, Surgeon, to the *Liberty*, lent, March 15th; EUSTACE AKERWRIGHT, Surgeon, to the *Scotsman*, lent, March 15th; HAROLD E. FRYER, S. REID, Surgeon, to the *Martin*, lent, March 15th; HAROLD E. FRYER, Surgeon, to the *Pilot*, lent, March 15th; LOUIS E. DARTNELL, Surgeon, to the *Wanderer*, lent, March 15th; EDWARD F. POWER, Surgeon, to the *Nautilus*, lent, March 15th; ERIC E. KERSHAW, Surgeon, to the *Victory*, additional for the *Research*, March 19th; EDWARD CUFFERY, Surgeon, to the *Halcyon*, March 15th.

ARMY MEDICAL STAFF.

SURGEON-COLONEL R. C. EATON is brought on the administrative medical staff of the Bengal army from January 17th.

Surgeon-Major JAMES McM. BOLSTER is placed on temporary half-pay on account of ill health, March 4th. His commission as Surgeon dates from March 6th, 1880: that of Surgeon-Major from March 6th, 1892.

Surgeon-Captain GEORGE A. T. BRAY and Surgeon-Lieutenant CHARLES F. WANHILL are seconded for service with the Egyptian army, February 11th.

Deputy-Surgeon-General EDMUND J. MACGRATH died at Upper Norwood on February 5th, aged 60 years. He entered the service as Assistant-Surgeon, August 1st, 1857; became Surgeon, September 20th, 1871; Surgeon-Major, March 1st, 1873; Brigade-Surgeon, May 7th, 1882; and Honorary Deputy-Surgeon-General on retirement, April 23rd, 1885. He was in the Egyptian war of 1882, receiving the medal, the Third Class of the Order of the Medjidie, and the Khedive's bronze star.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL G. C. HALL, Bengal Establishment, is permitted to retire from the service, March 12th. He was appointed Assistant-Surgeon, March 30th, 1872, and Surgeon-Lieutenant-Colonel twenty years thereafter.

Surgeon-Major-General R. HARVEY, M.D., D.S.O., Bengal Establishment, will act as Director General of the Indian Medical Service during the absence of Director-General CLEGHORN on eight months' leave, which takes effect at the close of the cold weather.

Brigade-Surgeon-Lieutenant-Colonel A. CROMBIE, M.D., Bengal Establishment, has retired from the service from March 1st. He entered as Assistant-Surgeon, March 30th, 1872, and became Brigade-Surgeon-Lieutenant-Colonel, August 11th, 1896.

THE VOLUNTEERS.

SURGEON-MAJOR J. SUTCLIFFE, 2nd Volunteer Battalion the Duke of Wellington's West Riding Regiment, has resigned his commission, March 5th: he retains his rank and uniform.

Mr. HAROLD HEBBLETHWAITE is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Duke of Wellington's West Riding Regiment, March 9th.

Mr. JOSEPH N. BROWN, M.D., is appointed Surgeon-Lieutenant in the 5th (West) Middlesex Rifles, March 9th.

VOLUNTEER MEDICAL STAFF CORPS.

Mr. JOHN WILLIAM SMITH, M.B., is appointed Surgeon-Lieutenant in the Manchester Companies, March 9th.

The Rev. J. F. PHILLIPS, B.A., is appointed Acting Chaplain to the Leeds Company, March 9th.

THE INDIAN TOUR.

A.M.S. INDIA points out that although the concession of a five years' tour is supposed to have been in operation since 1896, there are at this moment a number of medical officers in their seventh year of service in India, and still uncertain as to their relief.

*** No doubt the frontier war will be the cause assigned for the extended tour.

THE RANK QUESTION.

LIABLE urges that the titles and rank conferred in any alteration of the medical service must be extended to those liable to recall. This has frequently been urged before.

THE NORTH-WEST FRONTIER RISING IN INDIA.

SOME further despatches from Generals in command of brigades on the North-West Frontier of India have appeared in the *London Gazette*. In publishing the report of Major-General G. C. Bird, C.B., of the operations of the Tochi Field Force (already partially noticed in the BRITISH MEDICAL JOURNAL of January 29th), the Commander-in-Chief in India "would draw attention to the excellent work which the Medical Department is reported to have performed during the operations." Major-General Bird says: "The Medical Department has been exceptionally hard worked throughout the operations, and my best thanks are due to all ranks of the profession.....The Medical Department has been administered by Surgeon Colonel R. H. Carew, D.S.O., Army Medical Staff; and I would bring to special notice the names of the following officers for good work performed: Surgeon-Lieutenant Colonel W. A. Simmonds and Surgeon-Major H. C. Enoson, both of the Indian Medical Service, and Surgeon-Captain L. P. Mumby, M.B., Army Medical Staff." The operations in question continued with little intermission from the middle of June till the end of October of last year.

SICKNESS IN THE TIRAH FORCE.

THE Tirah Field Force is at a strength of 18,300 of all ranks of whom 500 were on the sick list at the end of January. Of the total 6,000 are British and 11,000 native troops with 360 British officers of all ranks. The Peshawar garrison is stated at 6,750.

SPECIAL PLAGUE DUTY.

THE Secretary of State has approved, as a temporary measure, of the postponement of the abolition of the post of Secretary to the Surgeon-General Indian Medical Department Bombay, and the retention of Surgeon-Captain Grayfoot in that appointment until the work connected with the plague is at an end.

While the Government of India has fixed the extra allowance of combatant military officers detached on special plague duty at Rs.300 a month as laid down for famine duty, it appears that medical officers in charge of segregation camps are held to be entitled only to Rs.5 per day, or ordinary camp halting allowance. While the Rs.300 is pure gain in most cases to the combatant, the Rs.150 a month scarcely compensates the medical officer. For example, a Civil surgeon detailed for special plague duty drops his Rs.100 or Rs.75 a month gaol allowance and his private practice, be it large or small, and in return gets the pittance of Rs.5 a day extra for all the responsibility of railway train inspections and charge of camps.

THE RISING IN MASHONALAND.

THE *London Gazette* of February 18th contains a despatch from Sir Alfred Milner, High Commissioner for South Africa, transmitting the report of Sir Richard Milner, the Deputy Commissioner at Bulawayo, respecting the operations against the natives in Mashonaland last year. Sir Richard, after speaking of the difficult nature of the operations undertaken, and the success which had attended them, calls attention to the services of individuals, and goes on to say: "Surgeon-Major S. Hickson, A.M.S., I also wish to mention for the arrangements made for the comfort of, and attention paid to, the sick and wounded of the column to which he was attached.....Dr. Fleming, Medical Director of the British South Africa Company and Principal Medical Officer British South Africa Police, was in charge of the medical arrangements, which, owing to the size of the country over which the operations extended, required very careful organisation. He was most untiring in his efforts to alleviate the suffering of the sick and wounded, having frequently travelled all night to bring disabled men into hospital, and he deserves the thanks of officers and men for his good services. I would also mention Drs. Appleyard and Peel, who were present at most of the engagements."

MEDICO-LEGAL.

A CORONER ON UNQUALIFIED PRACTICE.

AT an inquest held at the Royal Hotel, Bury, a short time since, the coroner, as reported in the *Bury Guardian*, made some pertinent remarks upon unqualified practice. The inquest was held upon the body of an infant aged 6 months. The mother gave evidence that the deceased child had been attended by "Dr." Berry, whom she believed to be a doctor, and that he had seen the child two or three times a week, and was paid for his services. She also stated that Dr. France looked at the child once, but that he refused to attend as long as Mr. Berry was attending. The coroner pointed out to the jury that Dr. France would have been breaking the rules of his profession had he attended the child with Mr. Berry. The verdict of "Death from natural causes" was recorded. When the inquest was concluded, the coroner called Mr. Berry into the room, and stated that he considered it most essential that inquests should be held upon all cases when children died who had been attended by unqualified men. It was completely in the interests of the public that those who practise medicine should not only be by their knowledge and experience fully qualified, but that they should be under such regulations as the General Medical Council afforded, so far as such influence could be brought to bear upon them. It was essential for the administration of justice that those who practised medicine should be qualified and properly regulated, and it was even more essential in the interests of the poorer classes of the community. He knew nothing about Mr. Berry, but he did know that he was unqualified. The presumption was that he (Mr. Berry) lacked opportunity or knowledge to enable him to become qualified, and in addition he was not subject to the regulations of the General Medical Council. He (the coroner) the

fore desired that it should be known that in all cases of death where he found Mr. Berry was in attendance he would, in the interests of the public, hold an inquest. If Mr. Berry possessed sufficient medical knowledge to enable him to practise, he trusted that he would take steps to place himself under proper regulations.

It would certainly be to the interest of the public were other coroners to act as Mr. Butcher did in this case. If inquests were held in all cases where death followed unqualified practice such practice would be discontinued. The registrars should report all cases of uncertified deaths to the coroner, and it should of necessity follow that an inquiry be held into the cause of death with all attendant circumstances.

UNQUALIFIED PRACTICE.

IT is a matter for congratulation that the public is gradually but surely becoming impatient, at least, at the practice of medicine by unqualified persons. The numerous instances which have been recorded lately in the press in which coroners' juries have commented upon the fraud which is perpetrated upon the poor by unregistered practitioners show that the condemnation of such practice is by no means confined to the medical journals. At Sheffield lately an inquest was held, as reported in the *Sheffield and Rotherham Independent*, upon the body of George Slack, aged 13 years. The mother, a widow, deposed that her son came home from work and complained of pain in his leg. The next day, as the pain was no better, she took him to the surgery of Mr. Allan, in Mowbray, whom she looked upon as a fully qualified man. Mr. Allan saw the boy and prescribed for him. As she could not afford to continue payment, Mr. Allan later advised her to get assistance from the parish, but as some delay took place he continued to attend the boy. Later she obtained an order, and the district medical officer came and saw the boy. Upon examination it was found that the patient was suffering from pneumonia and was in a most critical condition. The boy died the same day. The medical evidence was to the effect that the signs of pneumonia were well marked, and that any competent man could have diagnosed it at least four days previously. A juryman asked the very pertinent question if the law allowed unqualified men to practise as doctors, and further added that it seemed a pity that as people could now obtain medical assistance for a "very reasonable figure" that they should go to an unqualified man. After discussion as to the addition of a rider, the jury returned a verdict of "Death from pneumonia," with a rider to the following effect: "And the said jurors further add that they are of opinion that had the deceased been seen on the Saturday previous to death by a duly qualified medical man there was a possibility of the deceased's life being saved." Every verdict of this character and every occasion on which jurors call attention to the dangers of unqualified practice should be forwarded to the Home Secretary by the coroners. Official attention would then be called repeatedly to this subject so that when the time is ripe for further legislation the Government would be more likely to support measures for the protection of the lives of the poor and to restrain unqualified practice more effectually than is the case at present.

PROSECUTION UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

A PROSECUTION for failing to notify cases of scarlet fever to the Medical Officer of Health of Peterborough resulted on February 25th in conviction with a fine of 10s. and costs in each case. The defence was to the effect that the illness in question was influenza and biliary catarrh, and not scarlet fever at all. After hearing the evidence, however, the Bench convicted both the practitioner in attendance and his assistant, the latter for "aiding and abetting" in the non-notification.

ACTION BY THE APOTHECARIES' SOCIETY.

WE learn from the *Lancashire Daily Post* that on March 7th J. Tempest of Oswaldtwistle was proceeded against in the Blackburn County Court by the Apothecaries' Society of London for having acted as an apothecary without having obtained a certificate as required by the Apothecaries' Act of 1815. Mr. Slinger, who appeared for the plaintiff Society, said that the defendant had practised at Oswaldtwistle for the last two or three years under an unrecognised American diploma. He had no qualification that was recognised by law and was a quack. Defendant had the word "Dr." over his door and he had given a bill to a patient on which he described himself as "M.D., U.S.A." The Defendant, who conducted his own case, made a technical objection which was overruled. Evidence was then called. One witness stated that he had seen handbills distributed. A handbill was handed to the judge, who asked the defendant what was the meaning of the letters "F.C.S.M." which followed his name. Defendant replied, "Fellow of the College of Safe Medicine, London," and added in reply to the judge, "It is a duly chartered college for botanic physicians. By that I have a licence to practise medicine in this country. I have practised as a physician and surgeon, but not as an apothecary." It was pointed out that defendant's name was not on the *Medical Register*, and this he admitted. The judge found that defendant had practised as an apothecary and had brought himself within the law, and that he had no alternative but to inflict the penalty of £20. Defendant asked for leave to appeal, which was granted.

LIABILITIES OF LUNATICS.

CANTAB writes: Some years ago I attended a lady through a prolonged illness which resulted in her removal to an asylum. Her trustees profess their inability to settle my account out of her ample means until she either leaves the asylum or dies. Are they right, and have I no remedy?

*** It is probable that the trustees of the will or settlement under which the lady in question may be interested are correct with regard to their inability to settle our correspondent's account, and we think that the proper course would be to take proceedings against the lunatic personally in the usual way, assuming, of course, that the debt is not statute barred in point of time. As there are certain technicalities attending proceedings against lunatics, our correspondent would be well advised to act through a solicitor.

M.D. BRUX.

L.R.C.P., L.R.C.S., L.F.P.S.G. writes: Is it legal or contrary to etiquette for a duly qualified and registered medical practitioner who is also an "M.D Brux" in addition, to put the prefix "Dr." before his name on his doorplate—that is, without putting M.D.Brux. after it?

*** We assume our correspondent here refers to a registered degree of M.D.Brux. as an additional qualification, and, this being so, there can be no objection to his prefixing the title of "Dr." before his name on his doorplate, without putting M.D.Brux. after it.

ASSISTANTS AND LEGAL FEES.

"A. D." submits the following question: Is the principal or his assistant entitled to the fee for medical evidence given by the assistant in the coroner's court, or in any other court of justice?

*** We think there is no doubt that the principal is entitled to the fee in such a case, in the absence of any special arrangement between the principal and assistant.

QUESTIONS AS TO COVERING.

MEX submits the following: A medical man is honorary physician to a maternity charity. He attends difficult cases (when sent for by the charity's nurses) and babies, if required during the nurse's attendance on the mother. Is he liable to a charge of "covering" or "unprofessional conduct?"

*** Having regard to the fact that the institution is a *bonâ-fide* charity, we do not think that the action of the medical man would be deemed covering by the General Medical Council.

A MEMBER.—We consider that a medical man in taking such a course would be acting very injudiciously, but we are not aware that the General Medical Council has hitherto been called upon to give any decision upon the point.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

PRIZE FOR PHYSIOLOGICAL RESEARCH.—The regulations for the biennial Gedge Prize, of the value of about £60, to be given for original observations in Physiology, in the wide sense of the term, have been issued by the Special Board for Biology. Candidates must have worked in the University laboratories, or attended University lectures for six terms, and must be of not less than five and not more than seven years' standing from matriculation. They may be asked to deliver their papers in the form of a lecture. If the prize is not awarded, the amount is to be transferred to the Museum of Zoology.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,573 births and 4,454 deaths were registered during the week ending Saturday last, March 5th. The annual rate of mortality in these towns, which had been 20.4 and 20.9 per 1,000 in the two preceding weeks, declined to 20.7 last week. The rates in the several towns ranged from 13.0 in Preston, 15.3 in West Ham, 15.7 in Blackburn, and 16.5 in Bradford to 23.9 in Sunderland, 24.0 in Birmingham, 25.0 in Bristol, and 26.1 in Gateshead. In the thirty-two provincial towns the mean death-rate was 20.6 per 1,000, and was 0.3 below the rate recorded in London, which was 20.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the rate was equal to 2.7 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.0 in Gateshead, 4.4 in Bristol, 4.6 in Swansea, and 5.5 in Leicester. Measles caused a death-rate of 1.6 in Blackburn, 3.5 in Bristol, 4.1 in Swansea, and 5.0 in Leicester; whooping-cough of 1.1 in Nottingham; and "fever" of 1.0 in Gateshead. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria in the thirty-three towns included 38 in London, 4 in Liverpool, 4 in Leeds, 3 in West Ham, 3 in Cardiff, and 3 in Birkenhead. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns; but one small-pox patient was admitted into the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,764 at the end of the fourteen preceding weeks, had further fallen to 2,534 on Saturday last, March 5th; 175 new cases were admitted during the week, against 232, 233, and 199 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 5th, 881 births and 659 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.4 to 20.5 per 1,000 in the five preceding weeks, further rose to 21.8 last week, and was 1.1 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.3 in Leith and 19.3 in Paisley to 24.3 in Glasgow and 25.5 in Perth. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Paisley and Glasgow. The 338 deaths registered in Glasgow included 18 from measles, 4 from

scarlet fever, 10 from whooping-cough, 3 from "fever," and 10 from diarrhœa. Three fatal cases of whooping-cough and 2 of scarlet fever were recorded in Edinburgh, and 3 of whooping-cough in Paisley.

DIPHTHERIA IN LONDON.

THE prevalence of diphtheria in London showed a slight increase last week, although the mortality from the disease showed a decline. The deaths referred to diphtheria in the metropolis, which had been 33 and 46 in the two preceding weeks, fell to 38 during the week ending Saturday last, March 5th. Of these 38 fatal cases, 5 were of persons belonging to Hackney, 4 to St. Pancras, 3 to Islington, and 3 to Battersea sanitary areas. The notifications of diphtheria in London, which had been 245, 266, and 212 in the three preceding weeks, rose again to 215 during the week ending Saturday last, March 5th. Compared with the preceding week there was a slight decline in the prevalence of the disease in West and North London, but a slight increase in Central, East, and South London. Among the sanitary areas of West London the decline in the prevalence of the disease was most marked in Fulham, where the 4 new cases were considerably below those recorded in any recent week. Among the sanitary areas of North London there was but little change in the prevalence of diphtheria, except in Islington, where the new cases rose to 15, against 9 in the preceding week. In Hackney the 24 new cases corresponded with the number notified in the preceding week. In East London there was a slight increase in the prevalence of the disease, owing to a further rise in the number of new cases in Bethnal Green, 10 new cases being notified, against 3 and 5 in the two preceding weeks. Among the sanitary areas of South London there was a marked increase in the prevalence of diphtheria in St. George Southwark and in Camberwell; in the latter sanitary area 15 new cases were notified, against 9 in the preceding week. In Battersea there was a slight increase in the prevalence of the disease, but in most of the remaining sanitary areas there was a slight decline. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 127, against 135, 146, and 124 in the three preceding weeks; and 1,044 patients remained under treatment in these hospitals on Saturday last, March 5th.

BACTERIOLOGICAL DIAGNOSIS AND THE SUPPLY OF ANTITOXIN.

A CORRESPONDENT sends us a circular letter he has received from the clerk to the Urban Council of "Esher and the Dittons." At the request of Dr. Senior the Council have determined to submit, through him, to the Clinical Research Association materials for bacteriological investigation in cases of "suspicious sore throat or doubtful diphtheria." A similar collection and examination of specimens is carried out, we believe, at the public expense at Aberdeen, Bristol, Croydon, Dundee, Leeds, Liverpool, Londonderry, Manchester, Newcastle, St. Helens, Sheffield, and probably other places. The provision of antitoxin at the public expense for those unable to afford it is, however, outside of hospitals, to some extent a new departure. Most sanitary authorities provide disinfectants free of charge for their less wealthy constituents, and there is a great deal to be said in favour of having a small stock of reliable serum readily accessible in each sanitary district. The ordinary druggist may have so few calls for it that the antitoxin he has stored may have lost its virtue before he is asked for it. We hope, though the circular does not say so, that Dr. Senior has a sufficient supply of sterilised syringes available for those who desire to use the serum.

THE VACCINATION REGULATIONS.

A CASE heard lately before the Bradford-on-Avon bench illustrates one of the weak points of the present mode of administering vaccination. Five parents were summoned for vaccination default, and under the advice of Mr. Schultess Young, by whom they were represented, pleaded as a justification that the regulations of the Local Government Board were not observed at the station by the public vaccinator. The correctness of this plea was, it was reported, substantiated by this gentleman himself, who admitted that he did not strictly carry out the Local Government Board instructions, which he thought unnecessary and vexatious, and that he never examined children when he took lymph from them. On this admission the Board dismissed the cases. Such incidents, regrettable as they are, would not be possible if there were an efficient system of inspection. The inspection hitherto carried on by the Local Government Board has been inadequate, owing to the insufficiency of the staff available for the purpose. If domiciliary vaccination is to be the system of the future, the need for more effective inspection will be even greater than it is at present, though the adoption of calf lymph will obviate some of the grounds on which inspection is required it will introduce others.

PENSION RECOMMENDED TO DISTRICT MEDICAL OFFICER.

WE are pleased to be able to state that at a recent meeting of the St. Saviour's Board of Guardians the Finance Committee reported that the application of Dr. Evans, one of their district medical officers, now 77 years of age, for superannuation allowance on resigning his appointment after thirty years' Poor-law service had been considered, and the Committee recommended that he be granted £81 8s. per annum. This recommendation was ordered to be reported to the Local Government Board. We hope the action of the Committee will be at once approved.

QUALIFICATIONS OF M.O.H.

ENQUIRER.—The only statutory provisions requiring a medical officer of health to possess a special public health qualification are the following: The Local Government Act, 1888, Section XVIII, Subsection II, requires that every medical officer of health must, if appointed after January 1st, 1892, to a district having at the last census 50,000 inhabitants or more, be registered as the holder of a Diploma in Sanitary Science, Public Health, or State Medicine, under Section XXI of the Medical Act, 1886; or have been, during three consecutive years prior to 1892, a medical officer of a district with a population (according to the last census) of not less than 20,000; or have been, for not less than three years, a medical officer or inspector of the Local Government Board. Section CVIII, Subsection II, Clause 1, of the Public Health (London) Act, 1891, is substantially the same as the above quoted subsection of the Local Government Act, 1888.

SOME QUESTIONS OF ETIQUETTE.

INQUIRER notified a case of typhoid fever. Next day, he tells us, the medical officer of health called, examined the patient, and made various suggestions and criticisms upon the treatment. He asks if this conduct is in accordance with medical etiquette, or within the scope of the duties of a medical officer of health.

CIVIS asks if a medical officer of health is within his rights (1) In seeing himself, or by his assistant, a case notified to him as infectious; (2) examining such patient by thermometer, etc.; (3) suggesting treatment; (4) if within his right, is it not customary to give notice to the practitioner in attendance of his intended visit?

*** Under ordinary circumstances it is no part of the duty of a medical officer of health to visit, examine, or prescribe for a case of infectious disease reported to him. He is required to visit the locality of "an outbreak." He may have to satisfy himself that isolation is efficient, and even to suggest measures to that end. If such measures involve anything that could be construed as treatment—such for instance as inunction in scarlet fever—the suggestion should be made through the medical attendant. Any question of diagnosis should be settled ordinarily in consultation with the medical attendant. There must be to all rules occasional exceptions. For instance, if "Inquirer" had certified small-pox, and asked for the removal of the patient to hospital, the health officer, if he were also the attendant at the hospital, might not unnaturally wish to satisfy himself with the least delay possible as to the accuracy of the diagnosis, and have to wriggle out of his difficulty as best he could if he found the case one of chicken-pox. Even in such a case he would, as a general rule, make some sufficient excuse for non-removal, communicate personally with the practitioner, and let him explain matters to the friends.

MEDICUS puts a somewhat different question. His letter is rather too long to quote in full; unfortunately it is also a little ambiguous in its wording. We gather, however, that a patient complaining to her medical man of smells in her house induces him to write to the medical officer of health asking him to have it examined. Then comes on to the scene a third medical man, who visits the first, and wants to know what was the matter with the patient, and whether her illness had any causal connection with the drains. This information the first doctor declines to furnish unless asked to meet the third in consultation. He says, also, he felt in no way bound to verify the existence of the smells before asking the health department to investigate them. Our correspondent suggests he ought rather to have advised his patient to consult her landlord, and, failing redress from him, to have herself communicated with the medical officer of health.

*** There is no reason why a medical man should not insure for a patient an examination of a possibly defective house. If the house prove all right or the reverse, his diagnosis may be assisted to some slight extent. If the reverse, his treatment may be rendered successful by the improvements the sanitary authority will insist upon. A man does not make up his mind before examining a chest whether or not the illness of his patient is due to the lungs or heart, nor does he only examine the urine where he is certain beforehand that there is Bright's disease: neither is it usual to discuss the ailment of a patient with a brother practitioner acting hostilely, unless with the patient's consent. It is sometimes well for a tenant to complain directly to a landlord; but occasionally to do so means immediate notice to quit. The sanitary authority will not put the owner to expense unless there is something wrong.

DRAIN OR SEWER.

VOLENS NOLENS says: A row of houses built some twenty years ago was provided by the owner with a "sewer" into which the slop-water drains discharged. This "sewer," which empties into a stream, is laid along private ground, and is now dilapidated. To whom does it belong, and who is responsible for its repair? "Volens Nolens" asks: Is the Public Health Amendment Act, 1890, retrospective? Does it annul the clause of the Public Health Act, 1875, which states that any drain conveying drainage from more than one house is a sewer, and belongs to the local authority? Has it not been decided that "once a sewer always a sewer," and that any drain belonging to the local authority before the Public Health Amendment Act, 1890, was passed remains their property still?

*** Section XIII Public Health Act, 1875, says: "All existing and future sewers within the district of a local authority.....except (1)..... (2) ..... (3) ..... shall vest in and be under the control of such local authority; provided ..... etc."

Section IV Public Health Act, 1875, defines a "drain" to mean "any drain of and used for the drainage of one building only, or premises within the same curtilage, and made merely for the purpose of communicating therefrom with ....., etc." The next paragraph says "'Sewer' includes sewers and drains of every description, except drains to which the word 'drain' interpreted as aforesaid applies, and except ....., etc."

It would appear, therefore, that the "sewer" of our correspondent is a sewer under the Act of 1875 (*Cf.* Travis *v.* Uttley, 1894, 1 Q.B. 233; 58 J.P. 85), and is by that Act vested in the local authority and is under their control. The Act does not say it belongs to them; the word is our correspondent's. When however, the Public Health Amendment Act of 1890 has been adopted, certain channels which would otherwise have been sewers" become "drains," or the purposes of one of its

sections. That section (P. H. Am. Act, Sec. XIX) lays down that "Where two or more houses *belonging to different owners* (italics our own) are connected with a public sewer by a single *private* drain, an application may be made under Section XLI of the P. H. Act, 1875.....and the local authority may recover.....from the owners of the houses in such shares and proportions as shall be settled by their surveyor....." etc., and that "(3) for the purposes of this section the expression 'drain' includes a drain used for the drainage of more than one building."

In the case of Travis *v.* Uttley, 1894 (1 Q.B. 233; 58 J.P. 85), the houses drained by a common pipe belonged to one owner, therefore Section XIX of the Public Health Amendment Act did not apply (Russel, C. J., in Bradford *v.* Mayor, etc., Eastbourne). If our correspondent's "sewer" drains only buildings belonging to one owner, this same difficulty—absurdity we might say—would render it a sewer repairable by the authority.

In the case Bradford *v.* Mayor, etc., Eastbourne, 1896 (2 Q.B. 205; 60 J.P. 501), a pipe or conduit constructed on *private property* and conveying the drainage of two or more houses belonging *to different owners*, had been constructed before the passing of the Amendment Act, which the corporation had adopted, and it was held that the single conduit pipe was a single private drain within the meaning of Section XIX of the Public Health Amendment Act, 1890. This judgment approved the finding in Self *v.* Hove Commissioners, 1895 (1 Q.B. 685; 59 J.P. 103), and dissented from that in Hill *v.* Hair, 1895 (1 Q.B. 906; 59 J.P. 374). It was followed in Seal *v.* Merthyr Tydvil Urban District Council, 1897 (61 J.P. 551).

The Eastbourne case decided therefore what might be a single private drain, and that a drain might be such though in existence prior to 1890. Whether the "sewer" described by our correspondent is not only entirely in private ground, but is not in any way usable by the general public, and serves properties belonging to different owners, whether also the Public Health Amendment act has been adopted in the district, he does not state.

DISTRICT MEDICAL OFFICERS AS MEMBERS OF PARISH COUNCILS.

Member of Association asks whether he being a district medical officer is thereby disqualified for membership of the parish council in the same district.

*** We are advised that a district medical officer is eligible for election to a parish council and can act on it if elected. No parish council has anything whatever to do in reference to the administration of the Poor Law; if overseers (appointed by the parish council) are occasionally called upon to grant medical orders in urgent cases, this action has nothing whatever to do with parish council, and is not subject to its supervision or sanction.

SALARIES OF MEDICAL OFFICERS OF HEALTH.

S.R. asks what might be considered a sufficient salary for a medical officer of health for a burgh having a population of 17,000 or 18,000?

*** Salaries of medical officers of health vary within wide limits, even in the case of towns with like populations. Salaries have also in the past been much higher in England than in Scotland, but the additional responsibilities devolving upon health officers under the new Scottish Public health Act will undoubtedly involve an increase of salaries all round in Scotland, unless officers shirk these responsibilities. The salary in the case of a town with a population of 17,000 or 18,000 in England may be set down as ranging from £60 to £100.

DISTRICT MEDICAL OFFICER AND ELECTION OF GUARDIAN.

District Medical Officer writes, saying that there is to be a contest in his parish for a vacancy on the Board of Guardians, and asks whether, by his official position, he is debarred from taking an active part in reference to the election.

*** Our correspondent is not in any way debarred from action, but we question whether any active part taken by him in support of either candidate would be judicious. As to this, he ought to be the best judge.

DUTY OF DISTRICT MEDICAL OFFICER IN REFERENCE TO LUNATICS.

J. F. F. asks the following question: When a parish doctor has seen a lunatic, is it his duty personally to call in the relieving officer and advise him? If not, what ought the parish doctor to do?

*** If the lunatic in question is a pauper (which is not stated) it is the duty of the district medical officer under Section XIV of the Lunacy Act, 1890, to give notice thereof in writing to the relieving officer of the district within three days after having obtained knowledge of the existence of the case.

The East London Hospital for Children has received through Mr. Benjamin L. Cohen, M.P., donations of £200 and £105 from the Baroness de Hirsch and Lord Rothschild respectively.

MEDICAL NEWS.

Dr. Pereira Dias, Professor in the Medical Faculty of Coimbra (Portugal) has been elected Rector of that University.

A Congress of the Italian Medical Association of Hydrology and Climatology will be held at Parma on April 3rd, 4th, and 5th.

The Worshipful Company of Clothworkers have made a further grant of £50 to the building fund of the Royal Westminster Ophthalmic Hospital.

A telegram from Sierra Leone announces that Surgeon-Captain Scott of the Army Medical Staff has been brought down from Karene seriously wounded.

A Hydrotherapeutic Clinic has been founded in the University of Heidelberg. The Baden Legislature has voted for this purpose a subvention of 10,000 marks.

The Duke of Connaught, President of the City of London Hospital for Diseases of the Chest, Victoria Park, will preside at the annual festival dinner at the Hotel Cecil on May 12th.

Dr. Heneage Gibbes, formerly Lecturer on Physiology at the Westminster Hospital Medical School, and afterwards Professor at the Ann Arbor University, Michigan, has been appointed Health Officer to the City of Detroit.

The next examination of the Medico-Psychological Association of Great Britain and Ireland for the Certificate in Nursing and Attending on the Insane will be held on May 2nd. Schedules to be filled up can be obtained from the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield, by whom they must be received by April 4th.

Presentation.—Dr. J. Gawler Murray, of Scarborough, has been presented by the members of the St. John Ambulance and Sick Nursing Classes, which he has conducted during the winter, with a travelling clock and a silver cruet, on which was engraved the monogram, "J. G. M., 1898," as a mark of their respect and esteem.

Mr. P. J. Freyer, M.D., M.Ch., R.U.I., has been appointed Surgeon to St. Peter's Hospital for Stone and Genito-urinary Diseases. The rules of this hospital were altered recently, and in future a Master in Surgery of a university, or a Fellow of any College of Surgeons in the United Kingdom will be eligible for election to the surgical staff of the hospital.

Smoking Concert at St. Mary's Hospital.—To assist in clearing off the debt on the new out-patient department, a smoking concert was held on March 3rd. The concert took place in the waiting hall. The following ladies kindly gave their services: Lady Frances Hope, Miss Clarke, Miss Etta Lane, and Miss Carpenter; as also did many gentlemen, amongst whom we would mention Dutch Daly, Charles Coborn, and Fred Russell.

Arsenic Poisoning.—From 40 to 50 men quartered at Hilsea Barracks, chiefly of the Royal Artillery, were seized one day last month with severe vomiting shortly after dinner. Several persons in the married quarters also suffered more or less from alarming symptoms. Analysis of samples of the vinegar from the men's plates and from a cask showed them to contain arsenic in poisonous quantity. A court of inquiry of an officer of the East Lancashire Regiment, an officer for supply inspection, and a medical officer has investigated the circumstance. The steward of the canteen where the vinegar was sold was acquitted of all blame. The firm which supplied the vinegar to the canteen has offered an explanation that "the vinegar was by mistake put into a wrong barrel." There has fortunately been no fatality, and the men who were under treatment were able to return to duty next day.

Female Students in the University of Berlin.—There are said to be 162 women now studying in the University of Berlin. Of this number, 98 are German, 26 American, 23 Russian, 4 Austrian, 4 English, 2 French, 1 Swiss, 1 Dutch, 1 Bulgarian, and 1 Hungarian. Three of the female students belong to the faculty of divinity, 3 to that of law, 1 to that

of medicine, and all the others to that of philosophy, or what in this country would be called Arts. Professor Benda, it is said, will in the next semester give a course of dissection and histology exclusively for women.

Factory Girls' Country Holiday Fund.—The tenth yearly report of the Factory Girls' Country Holiday Fund bears testimony to a continuation of the excellent work that this body has carried out during the few years it has existed. During the past year 1,250 women and girls have been sent to the country or seaside, at a cost of £1,230. It seems a pity that, as the report states, nearly half the cost of the holidays is the journey; the railway companies still refuse to grant any reduction in fares. The average cost of each girl's holiday is 10s. a week. Many girls pay a proportion of this themselves, though hardly any are able to pay the whole of it. Those who have had long sickness are sent free whenever necessary and possible throughout the year.

Metropolitan Police Surgeons' Association.—The annual dinner of this Association was held on March 8th at the Criterion Restaurant. The chair was taken by Mr. A. O. Mackellar, President of the Association, and Surgeon-in-Chief of the Metropolitan Police. In proposing the toast of "The Association," he said that Sir Edward Bradford and the other commissioners were anxious to do all in their power to support the surgeons, and he appealed to the surgeons to render loyal service. The toast of "The Commissioners" was acknowledged by Dr. Anderson, Director of the Criminal Investigation Department in a humorous speech, in which he expressed the opinion that the profession of medicine had made greater advances in the estimation of the public than any other profession.

Hospital Abuse.—The Liverpool Medical Club, in pursuance of the resolution published in the British Medical Journal of November 27th, 1897, has given notice that it intends to keep a book for the record of cases of hospital abuse, and has issued a circular to members of the medical profession practising in Liverpool and adjoining districts, asking that particulars of cases of abuse should be sent to the Honorary Secretary of the Committee, Dr. Percy Edwards, 1, Newsham Drive, Liverpool. The Committee propose to bring cases reported to it before the managers of the hospital against which the abuse is alleged. Further, when a sufficient number of well-authenticated cases has been brought together, it is intended to invite the various hospital committees to join with the Liverpool Medical Club in forming a committee to consider what means should be adopted for remedying the abuses.

The Prince of Wales's Hospital Fund.—The sixth published list of contributions for 1898 shows that the further sum of £1,802 11s. has been received in annual subscriptions and £45 0s. 6d. in donations annual and otherwise. The fund has received from Sir Frederick Abel, Honorary Secretary and Director of the Imperial Institute, the sum of £672 16s. 10d., which amount, together with the £500 received in November, represents the moiety (£1,172 16s. 10d.) of the net proceeds of the exhibition at the Imperial Institute of the gifts and addresses presented to the Queen on the occasion of Her Majesty's Diamond Jubilee. The trustees of the London Parochial charities have voted £1,000 per annum (until further order) to the fund conditionally on the same being applied towards the maintenance of convalescent hospitals.

Alcoholic Expenditure in 1897.—In his annual alcoholic budget to the *Times*, Dr. Burns recently estimated the drink bill of 1897 at £152,281,723. The estimated population of the United Kingdom having been 39,824,562, there was an average of £3 16s. 5¾d. per head. This is a slight increase over that of 1896, when the average per head was £3 15s. 6d. Whether this very slight increase is to be attributed to the celebrations of the Queen's Diamond Jubilee is difficult to say. The increase in the expenditure on alcohol in 1897 over 1896 was made up mostly of beer, on which the increase was £2,405,714. Spirits came next with an increase £911,141. Wine, however, showed a decrease of £7,362, leaving the net increase £3,309,493.

The late Dr. H. W. Freeman of Bath has left personal estate valued at £75,524. By his will the deceased has bequeathed to the Infirmary at Bideford, Devon, for investment, £1,000, free of duty, in addition to a similar sum to the Middlesex Hospital for the development of an obstetric scholarship; to the Samaritan Fund of the Royal United Hospital at Bath the reversion of a sum of money which is to be invested for the purpose of paying a life annuity of £100 to his brother. Dr. Freeman left also a sum of £15,000 in trust to pay the income to his widow during her lifetime, and after her death the sum to be paid to the Royal United Hospital for the purchase and maintenance of a convalescent home for the patients and sick staff of the hospital. The same hospital will receive his surgical instruments.

Harvard University.—The annual report of Harvard University for 1896-97 shows that in the medical school the number of students during that year was 600, of whom 50.32 per cent. were the holders of a degree in letters, science, or medicine. After the year 1900 no student will be admitted to the school unless he possesses such a degree. There were 101 candidates for the degree of M.D., of whom 71 passed and 30 failed. Of the 71 who were successful, 29 received the degree *cum laude*. Four new scholarships, each of the annual value of £40, were established during the year, and the school now offers nineteen scholarships. With the constant development of laboratory instruction and research, the demand for increased accommodation is becoming more and more pressing, and the enlargement of the school buildings is a question which, it is stated, will have to be seriously considered in the near future. Moreover, the clinical departments are asking for a hospital to be under the control of the school and the University.

The Delancy Hospital, Cheltenham.—This hospital, the isolation hospital of the town of Cheltenham, stands in a commanding position at the foot of the Cotswolds, in some six acres of land. It has been erected at a cost of about £32,000, the greater part of which has been derived from a few large benefactions, and the remainder from smaller contributions. Hitherto, whilst the hospital had separate installations for scarlet fever, typhoid fever, and small-pox, it had no special provision for diphtheria. A special wing for the reception of patients suffering from this disease was formally opened on March 5th by Mrs. Russell, the wife of General Russell, M.P. This wing consists of three wards, with two beds in each, a convalescent ward, nurses' room, bath room, stores, and other accessories, which make it complete in itself. The hospital is partly supported by private subscriptions, and partly by a grant from the Town Council, and has, since it was first established, done invaluable service to the town in stamping out the sparks of infection, which, without its aid, would often have blazed into an epidemic. For this noble building the town has largely to thank the exertions of Dr. E. T. Wilson, who has from its foundation acted as its Honorary Secretary and Director.

Congress for the Study of Human and Animal Tuberculosis.—The Congress for the Study of Human and Animal Tuberculosis will hold its fourth meeting in Paris fom July 27th to August 2nd, 1898. The questions proposed for discussion are: (1) Sanatoria as a Means of Prophylaxis and Treatment of Tuberculosis (to be introduced by MM. Le Gendre, Netter, and Thoinet); (2) Serums and Antitoxins in the Treatment of Tuberculosis (to be introduced by Professors Landouzy and Maragliano); (3) The *X*-rays (Radioscopy and Radiography) in the Diagnosis of Tubercle (to be introduced by MM. Béclère, Claude, and Teissier); (4) The *X*-rays in the Treatment of Tuberculosis (to be introduced by Professors Bergonié and Lortet); (5) The Struggle against Animal Tuberculosis by Prophylaxis (to be introduced by Professor Bang, of Copenhagen); (6) The Struggle against Human Tuberculosis by Disinfection of Places inhabited by Tuberculous Patients (to be introduced by M. A. J. Martin); (7) The Diffusion of Tuberculosis in the Army and its Prophylaxis (to be introduced by Professor Vallin). Whilst leaving members of the Congress liberty to choose a certain number of questions outside this programme, the Organising Committee calls special attention to the following points: The semeiological and prognostic value of tachycardia in pulmonary tuberculosis; tuberculous infection by milk (authentic instances) and the means of avoiding it; in particular the practical means of obtaining sterilised milk,

and of making the exclusive use of such milk general; the modifications in form of the tubercle bacilli and their pathological significance; the organic, cellular, and humoral conditions which constitute the tuberculous soil, and which predispose to tuberculosis.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum, with board and lodging, but no wine, spirits, or beer. Applications to the Chairman of the Weekly Board by March 21st.

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary, Workhouse, and Schools. Salary, £80 per annum, with board, washing, and apartments. Applications by March 21st.

BIRMINGHAM GENERAL HOSPITAL.—Two Assistant House-Physicians, two Assistant House-Surgeons, and Resident Surgical Officer. Residence, board, and washing provided in each case, with a salary of £100 per annum for the casualty officer. Applications to the House Governor by March 26th.

BRECON INFIRMARY.—Resident House-Surgeon, unmarried. Salary, £70 per annum, with furnished apartments, board, attendance, fire, and gas. Applications by March 19th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

CITY OF LONDON ASYLUM, near Dartford, Kent.—Second Assistant Medical Officer, unmarried; doubly qualified, and under 30 years of age. Salary, £100 per annum, with board, lodging, washing, and attendance. Applications, on forms to be obtained of the Clerk, to be sent to Charles Fitch, Clerk to the Visiting Committee, Guildhall, E.C., by March 15th.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Three Assistant Anæsthetists, must be duly registered medical practitioners. Applications by March 21st.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided. No salary. Applications to the Secretary by March 17th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to William George Black, Secretary, 88, West Regent Street, Glasgow, by March 21st.

HALIFAX ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon.—Applications to John S. Hurst, J. L. Cox, Honorary Secretaries, by March 17th.

LEICESTER INFIRMARY.—Surgical Dresser and also a Clinical Clerk. Appointment for six months. Board and apartments in the Infirmary provided.—Applications to the Secretary by March 14th.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Resident Junior House-Surgeon. Salary, 60 guineas per annum. Applications to the Chairman of the Medical Board by March 17th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer; doubly qualified. Appointment for six months. No salary, but residence in the hospital, board, and washing provided, and honorarium on satisfactory completion of term.—Applications to A. W. Bodger, Secretary, by March 16th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House Physician, House-Surgeon, Assistant House-Physician, and Assistant House-Surgeon. Appointments tenable for six months. The House-Physician and House-Surgeon will each receive salary at the rate of £40 per annum, and the other officers at the rate of £20 per annum.—Applications to Charles H. Byers by March 14th.

NORFOLK AND NORWICH HOSPITAL.—House-Physician; doubly qualified, unmarried, and not more than 30 years of age. Salary, £60 per annum, with board, lodging, and washing. Applications to Poole Garrett, Secretary, by March 15th.

OLDHAM INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications by March 25th.

PORTSEA ISLAND UNION.—Resident Assistant Medical Officer of the Infirmary Workhouse and schools. Salary, £150, rising £10 per annum to £200, with rations and furnished apartments. Applications to the Clerk, 1, St. Michael's Road, Portsmouth, by March 14th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications by March 26th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with board and lodging. Appointment for six months. Applications by March 22nd.

SIERRA LEONE GOVERNMENT RAILWAY.—Assistant Medical Officer. Age between 25 and 30. Salary, £30 per month. Applications to the Crown Agents for Colonies, Downing Street, London, S.W., by March 15th.

STAFFORD: COTON HILL REGISTERED HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer; doubly qualified. Salary commencing £100 per annum, with two annual increases of £25 each to a maximum of £150, with board, lodging, and washing. Applications to the Medical Superintendent by March 22nd.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, laundress, and attendance. Applications by March 23rd.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Applications by March 28th.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Third Honorary Physician; Dispenser. Salary, £60 per annum. Applications by March 28th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—Honorary Physician and Honorary Surgeon. Applications by March 21st.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer, unmarried. Salary, £100 per annum, rising to £120 in a year, with board, lodging, and washing.—Applications to the Medical Superintendent, The Asylum, Powick, near Worcester, by March 16th.

MEDICAL APPOINTMENTS.

BARNES, George, L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health for the Chard Urban District.

BASDEN, H. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Stanford-le-Hope District of the Orsett Union.

BASTIAN, Charlton, M.D.Lond., appointed Consulting Physician to University College Hospital, and Emeritus Professor of Medicine and Clinical Medicine at University College.

BENNETT, William B., L.R.C.P., M.R.C.S., has been appointed Assistant Resident Medical Officer in the Brownlow Hill Workhouse, Liverpool.

BERRY, H. Poole, M.D., M.B.Lond. M.R.C.S.Eng., reappointed Medical Officer of Health to the Grantham Town Council.

BEVAN, Richard, L.R.C.P.Lond., and D.P.H.Eng., reappointed Medical Officer of Health for Ashford, Kent.

BRYANT, J. H., M.D.Lond., appointed an Assistant Physician to Guy's Hospital.

CHATTERTON, H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Assistant Medical Superintendent at the St. Pancras Infirmary.

COURTNEY, Guy B., M.A., M.D., B.C., D.P.H.Cantab, L.R.C.P., M.R.C.S., appointed Honorary Surgeon to the Ramsgate and St. Lawrence Royal Dispensary, *vice* R. T. Bowden, M.D., resigned.

CROOKSHANK, G., M.D.Lond., appointed Assistant Medical Officer to the County Asylum, Berry Wood, Northampton.

DUNCAN, W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Western District of the Luton Union, *vice* M. R. Draper, L.R.C.P., L.R.C.S.Edin., deceased.

FARNFIELD, W. W., M.R.C.S., L.R.C.P., reappointed Resident Medical Officer to St. Mary's Children's Hospital, Plaistow, E.

FORSTER, Dr. James, appointed Medical Officer for the Conisborough District of the Doncaster Union, *vice* Anthony McGall, M.B., C.M.Glas., resigned.

FREW, J. F., M.B., C.M.Glas., appointed Medical Officer for the Sixth District of the Oldham Union.

FREYER, P. J., B.A. (R.U.I.), M.D., M.Ch., appointed Surgeon to St. Peter's Hospital for Stone and Genito-Urinary Diseases, Henrietta Street.

GIBBES, Dr. Heneage, appointed Health Officer to the City of Detroit.

GLAISTER, John, M.D.Glas., appointed Professor of Forensic Medicine in the University of Glasgow.

GOODLIFF, J. H., M.D.Aberd., appointed Assistant Medical Officer County Asylum, Berry Wood, Northampton.

GORDON, Dr., appointed Medical Officer for the Dalwood and Stockland Districts of the Axminster Union.

GROSVENOR, Dr., appointed Medical Officer of the Gloucester Union Workhouse, *vice* R. M. Cole, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

HATFIELD, J. R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Chirbury Urban District Council.

HIGGINSON, C. G., M.D.Lond., M.R.C.S., L.R.C.P., appointed Assistant Resident Medical Officer to the Chorlton Union Workhouse.

HILL, Reginald H., M.D.New York, L.S.A., appointed Assistant House-Surgeon to the Derbyshire Royal Infirmary.

HOMAN, W. T., L.M., L.Ch.Dublin, appointed Medical Officer for the Fourth District of the Rixbridge Union.

HORNER, W. E. L., M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed House-Physician to the North Staffordshire Infirmrry.

JACKSON, R. A., M.R.C.S.Eng., appointed Medical Officer for the Kirby Moorside District and the Workhouse of the Kirby Moorside Union.

JARVIS, Dr. H. C., appointed Medical Officer for the St. George's District of the Camberwell Union, *vice* Samuel Hague, M.D.St.And.

KEATS, W. J. C., M.R.C.S., L.R.C.P.Lond., D.P.H., appointed Medical Superintendent to the Havil Street Infirmary and Gordon Road Workhouse of the Camberwell Union, *vice* J. C. H. Beaumont, L.R.C.P., L.R.C.S.Edin., resigned.

MCKAY, Dr. H., appointed Medical Officer for the South-East District of the Sheffield Union, *vice* C. E. Strickland, L.R.C.P.I., M.R.C.S.Eng.

MARTIN, Fred. W., M.R.C.S.Eng., L.R.C.P.Ed., appointed Medical Superintendent of the Brighouse Joint Hospital for Infectious Diseases.

MIDDLEMASS, James, M.A., M.B., C.M., F.R.C.P.E., Senior Assistant Physician, Royal Edinburgh Asylum, appointed Medical Superintendent of Sunderland Borough Asylum, *vice* Dr. F. A. Elkins.

MORRIS, Sylvanus Glanville, M.D., M.S.Edin., appointed Medical Officer and Public Vaccinator for the Western District of the Llandilo Fawr Union.

MUIR, D. C., M.D., D.P.H., appointed Medical Officer for the Abertillery District of the Bedwellty Union.

ORD, W. W., M.D.Oxon., appointed Physician to the Salisbury Infirmary, *vice* G. G. Morrice, M.D.Cantab, resigned.

ROSE, W. D., M.B., C.M.Glasg., appointed Medical Officer of the Workhouse of the Luton Union, *vice* M. R. Draper, L.R.C.P., L.R.C.S.Edin.

RUSSELL, J. S. Risien, M.D.Edin., F.R.C.P., appointed Assistant Physician to University College Hospital.

SCHAUB, J. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second Assistant Medical Officer at the Parish of St. Leonard (Shoreditch) Infirmary.

SIDEBOTTOM, T., M.B., C.M., appointed Medical Officer for the No. 6 District of the Lincoln Union.

SMITH, Dr. A. H., appointed Medical Officer for the Yarm District of the Stokesley Union.

THOMAS, C. Nelson, B.A., M.B., B.C., appointed Certifying Factory Surgeon to the Lydney District and Surgeon to Lydney Tin Plate Works.

TURNER, William, M.B., B.S Lond., appointed Surgeon to the Royal Hospital for Diseases of the Chest, City Road, E.C., *vice* A. Pearce Gould, M.B., M.S.Lond., F.R.C.S., resigned.

VINES, Sidney K., L.S.A., appointed Junior House-Surgeon to St. Mary's Children's Hospital, Plaistow.

WADD, H. Randall, M.R.C.S., L.R.C.P., appointed Anæsthetist to the Great Northern Central Hospital, Holloway Road, N.

WALTER, E. C., M.R.C.S. Eng., L.R.C.P.Lond., appointed Medical Officer for the Cholesey District of the Wallingford Union.

WHITAKER, J. H., M.B. (R.U.I.), appointed Assistant Medical Officer to the North-Western Fever Hospital, London.

WRANGHAM, W., M.B.Lond., M.R.C.S., L.R.C.P., appointed House-Physician to Leicester Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Dr. Seymour Taylor: Gastric Ulcer. Dr. E. Kingscote: The Vagus Origin of Asthma and its Treatment.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture IV.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr. Herbert Tilley: Demonstration of Selected Cases.

TUESDAY.

Pathological Society of London, 8.30 P.M.—Dr. Eden: A Lantern Demonstration of the Age Changes in the Placenta. Dr. Morley Fletcher: (1) A Uterus and its Appendages with Pedunculated Tumour: (2) A Double Vagina. Mr. D'Arcy Power: Cyst from a Case of Ovariotomy in a Child aged 4 months. Dr. Raymond Crawfurd: A Tumour of the Large Bowel. Dr. William Hunter: A Case of Acromegaly with Casts and Formalin Preparations. Dr. L. Freyberger: A Congenital Tumour of the Left Kidney and Origin of the Left Vertebral Artery from the Aortic Arch in the same Subject.

Royal College of Physicians, 5 P.M.—Dr. J. Rose Bradford: Observations on the Pathology of the Kidneys. Goulstonian Lecture I.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Alcoholic Insanity, Insanity with Syphilis, Insanity with Organic Brain Disease.—Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Epithelioma and Rodent Ulcer.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Dr. Thomas D. Savill: On Electricity in the Treatment and Diagnosis of Diseases of the Nervous System.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Dr. James Taylor: Jacksonian Epilepsy.

City Orthopædic Hospital, 5.30 P.M. Mr. John Poland: Deformities of Bones after Injury. Lecture II.

WEDNESDAY.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture V.

Evelina Hospital, S.E., 4.30 P.M.—Dr. George Carpenter: The Differential Diagnosis of Abdominal Diseases. Post-Graduate Lecture.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Mr. Percy Dunn: Cataract, and Demonstration of Eye Cases.

North-West London Clinical Society, 8 P.M.—Annual General Meeting.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Hospital for Consumption and Diseases of the Chest, Brompton, 4 P.M.—Dr. Fowler: Prognosis in Valvular Disease of the Heart.

Royal Meteorological Society, 25, Great George Street, Westminster, 7.30 P.M.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Mr. R. Barwell: Clinical Lecture.

Harveian Society of London, 8.30 P.M.—Dr. William Armstrong (Buxton): The Symptoms and Treatment of Gastric Dilatation.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.

East London Hospital for Children, Shadwell, E., 4 P.M.—Mr. L. A. Dunn: Hernia in Childhood.

Royal College of Physicians, 5 P.M.—Dr. J. Rose Bradford: Observations on the Pathology of the Kidneys. Goulstonian Lecture II.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Willcocks: Demonstration of Medical Cases.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Mr. Alfred Coleman and Mr. Harvey Hillyard: On the Continuous Administration of Nitrous Oxide Gas for Prolonged Operations on the Mouth and Upper Air Passages. Clinical Cases.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Professor Crookshank: Actinomycosis and Glanders, etc.

Epidemiological Society of London, 8.30 P.M.—Dr. D. S. Davies: Milkborne Enteric Fever in Clifton in Relation to Distribution, Incidence of Attack, and Character of Illness.

Royal College of Surgeons, 5 P.M.—Professor C. Stewart: On the Vertebral Column and Some Additions to the Museum. Lecture VI.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTH.

HUGO.—On Wednesday, March 2nd, at Purley, Surrey, the wife of R. M. Hugo, L.R.C.S., L.R.C.P.I., of a daughter.

MARRIAGE.

RODGERS—PARKINSON.—On March 2nd, at Priory Place, Wesleyan Road, Doncaster, by the Rev. Joseph Westcombe, brother-in-law of the bridegroom, John William Rodgers, M.B., C.M., of Redfield, Bristol, eldest son of the late John Marshall Prime Rodgers, of Nuneborough Lodge, Leicestershire, to Helena Sophia, youngest daughter of the late George Parkinson, of Oakley House, Avenue Road, Doncaster.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30. Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2.; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Tu., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30. Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

S. asks where a patient only able to afford very moderate fees could undergo the Nauheim treatment for cardiac dilatation.

INQUIRER asks for directions for preparing permanent dried and varnished anatomical dissections.

J. M. A. would like to hear of an institution where a man, aged about 50, could be taken in. He is just recovering from excision of the jaw, and his friends cannot afford more than £40 a year.

HELP FOR THE UNQUALIFIED ASSISTANT?

MOTHER asks if there is any society or institution that would give a helping hand to a young man of 21 who has passed his Preliminary at Edinburgh, and has been assisting a surgeon in his general practice and four years dispensing, etc., for a leading practitioner in North Wales. As unqualified assistants are not tolerated, he stands as nothing. He has no means to proceed, but would willingly work in a hospital or any such place.

TOWN SEWAGE DISPOSAL

M B., L.R.C.P.Edin. (Town Councillor), wants to know the best books on the methods of disposal of sewage of towns; he has got Dibdin's book.

*** Our correspondent might consult *Papers read on Sewage Disposal and River Pollution* (at the Sanitary Congress held in Leeds, 1897). London: The Sanitary Institute. (Cr. 8vo, pp. 118. 2s. 6d.) Paper by T. W. H. Garstang, giving summary of above, *Public Health* for January, 1898, p. 115 (E. W. Allen, Ave Maria Lane, E.C., publisher). See also reference to a paper (in *Centralblatt der Bauverwaltung* of October, 1897) given at p. 162 of *Public Health* for February, 1898. Also see list of books to consult on sanitary engineering, water supply, and sewage on p. 549, BRITISH MEDICAL JOURNAL, Educational Number, August 28th, 1897.

CLUB RATES.

A CORRESPONDENT asks for advice as to the formation of a club of which he has been invited to become the medical officer.

*** It is impossible to do more than suggest a few leading principles: 1. There should always be a wage limit, and none but adult male members should be eligible for admission at that rate. 2. There should be a medical examination before admission, and no members should be allowed to join during sickness. 3. Women and children could only be safely admitted at rates which would be prohibitory for adult males.

HOME FOR UNDEVELOPED GIRL.

A. J. R. asks where an undeveloped girl (aged 20) suffering from acute hysteria, of which the worst symptom is dishonesty, could be received?

*** One of the homes for feeble-minded young women might receive such a case for training. Application might be made to Miss F. A. Cooper, Hon. Secretary, Association for Promoting the Welfare of the Feeble-minded, 49, Victoria Street, London, S.W., or with reference to a Home at Adcote, near Liverpool, to the Hon. Secretary, Miss Grayson, 29, Ullet Road, Liverpool. For such cases of a higher social grade there are some private educational establishments, the expense of which is however not less than £100 per annum.

TREATMENT OF INCONTINENCE OF URINE.

A.L.S. asks for suggestions as to the treatment of an obstinate case of incontinence of urine in a healthy boy of 6. He was circumcised four years ago, but has never got rid of the habit, though he sometimes goes for a week or two at a time without doing it. It occurs by day as well as by night, and is occasionally accompanied by involuntary action of the bowels. There has never been any pain or hæmaturia.

*** Several correspondents have spoken very highly of the following mixture, which was originally recommended in the BRITISH MEDICAL JOURNAL of October 11th, 1890: ℞ Tinct. lycopodii clav., ʒijss; tinct. cardam. co., ʒijss; syrup simp., ʒss; aq. ad., ʒij. Ft. mist.; sig. ʒss 4tis horis sum. Among the points that should be inquired into are: Habit of taking food shortly before going to bed; existence of stricture, ascarides, etc. Incidentally the following have been recommended: Tying a towel round the waist with a large knot over the spine to prevent sleeping on the back; setting an alarm clock to ring at 1 A.M. when the patient should empty the bladder; cold morning baths and a mixture of iron, strychnine, and dilute phosphoric acid. As to the use of lycopodium in the treatment of enuresis, Mr. E. Hurry Fenwick, in a clinical lecture delivered at St Peter's Hospital, on July 13th, 1887, gave it as his opinion that no drug was more satisfactory. As the spores of this moss are practically insoluble in water, they should be subjected to prolonged trituration with sugar of milk, after which they readily dissolve in spirit.

ANSWERS.

R. P. H.—We understand that the result of the inquiry by postcards addressed to members of the British Medical Association in regard to medical defence will be reported to the next meeting of the Council. It has been necessary to leave a considerable interval of time in order to permit answers to be received from the Colonies.

CYCLING AND HERNIA.

HUMBER.—1. We are not aware of any evidence tending to prove that cycling is more likely to produce hernia than most other forms of severe physical exercise, nor are we aware (2) that rupture is a common result of cycling. (3) As to whether cycling acts more or less as a preventive if indulged in to a moderate degree, it is probable that it has no effect either way. (4) If a person have a hernia he should employ an effectual truss when cycling. (5) There is no evidence so far as we are aware that cycling predisposes to inflammation or strangulation of a hernia.

VACCINATION AT MIDDLESBROUGH.

PRO VACCINE.—Local estimates give the number of vaccinations and revaccinations performed at Middlesbrough during the prevailing small-pox epidemic as considerably over 20,000. It is true that the children born in the town and living there are largely vaccinated in infancy, but Middlesbrough is a busy centre that attracts crowds of iron-workers from the surrounding counties, and children and adults thus coming to the place have swollen the numbers standing in need of primary and of revaccination.

ABORTION ADVERTISEMENTS.

M D., D.Sc. Powdered bitter apple or colocynth is very largely employed for procuring abortion. As the preparation mentioned is in the form of a mixture, it is probably suspended by mucilage. There would be no difficulty in recognising it. It is possible that the tincture of colocynth of the Prussian *Pharmacopœia* is employed, but this is hardly likely. Colocynth in large doses is distinctly toxic in its action, and many of the cases of "enteritis" in young women admitted into our hospitals are due to the use of the drug. A communication to the local police might do good. Another and less direct way would be to ascertain at Somerset House if the mixture needs a patent medicine stamp, and in the event of there being any infringement of the law they would prosecute fast enough and probably recover a substantial penalty.

TREATMENT OF SEBORRHŒA CAPITIS.

DR. E. A. LERMITTE (Stamford Hill) writes in reply to "Hair's" query in the BRITISH MEDICAL JOURNAL of February 26th to recommend the following treatment. For three nights the head should be well washed with liq. hydrag. perchlor. 1 in 1,000, or 1 in 100 if it does not cause irritation, and afterwards the following ointment should be rubbed into the scalp (not on the hair) every night. ℞ Ac. carbol. gr.x to xv; sulphur. precip. gr xv; tinct. benzoin q s.; lanolin ad ʒj.

PHENAD advises shampooing twice a week with Cook's antiseptic soap, with the subsequent application of practically the same lotion and ointment as recommended by Dr. Lermitte.

Dr. A. J. BOYD (Ware) recommends the following lotion. ℞ Chloral hyd. gr.60; boracis gr 60; aq. laurocerasi et aq. chloroformi āā ʒiij, to be applied to the scalp daily.

NOTES, LETTERS, Etc.

ERRATUM.

IN the report of the proceedings of the Clinical Society of London in the BRITISH MEDICAL JOURNAL of March 5th, p. 623, col. 1, line 9, for "lady" read "lad."

INCOME TAX.

THE INCOME TAX REPAYMENT AGENCY (6, Chichester Road, Paddington, London, W.) writes that no time must be lost in making claims for return of income tax on abatement, exemption, and life assurance premiums. In most cases the amount to be claimed is upwards of £21, while sometimes, in the cases of husband and wife being separately assessed it amounts to £42. The matter is therefore worth a little trouble.

A MOTOR TRICYCLE.

DR. T. PRICHARD ROBERTS (St. Albans) writes: There are several points in the letter on motor tricycles last week by the Frenchman, Dr. G. Duchesne, which are apt to be misleading. First, I maintain that in a good long mackintosh with a short warm overcoat underneath it matters very little what the weather is like; of course it is not pleasant, any more than being in an open vehicle. Secondly, I do not find the wet roads make such a material difference; of course the speed is slower, but that has the advantage of not splashing with mud. Thirdly, I have never yet had to dismount for stones, even when newly laid, as the tricycle I mentioned with the extra power cylinder easily runs over them. There is only one thing I should like to advise, and that is a pair of good mudguards fitted to the hind wheels; this not only prevents all splashing in very wet weather, but also saves a lot of cleaning.

THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY, MADRID. SENOR ANTONIO M. REGIDOR JURADO (Secretary General of the Spanish Chamber of Commerce, 23, Billiter Street, London, E.C.) writes: In case you think it convenient to mention the matter in the BRITISH MEDICAL JOURNAL, I beg to call your attention to the International Exhibition which will be held in Madrid, Spain, from April 10th to July 10th, 1898, in connection with the International Congress of Hygiene and Demography, and under the patronage of Their Majesties the King and Queen Regent of Spain. The exhibition will be divided into ten sections. (1) Didactic hygiene; (2) prophylaxis of transmissible diseases; (3) urban hygiene; (4) hygiene in relation to dwelling-houses; (5) hygiene in what refers to exercise and work; (6) naval and military hygiene; (7) hygiene of infancy and schools; (8) food and dressing; (9) demography and statistics; (10) miscellanea. Exhibitors will enjoy the following privileges:—No charge for spaces occupied at the exhibition. The goods will be imported into Spain free of customs duties. The railways of Spain will make a reduction of 50 per cent. from their tariff for carriage. Travellers attending the Congress will enjoy the following advantages:—The Spanish railways will reduce the price of the tickets by 50 per cent. The Compañia Transatlantica Española (Steamship Company) also make 50 per cent. reduction on their return ticket to Spain. They are entitled to attend the

excursion, receptions, and amusements prepared, or which will be given in connection with the said Congress. Among the proposed receptions there is one at the Royal Palace, Madrid; one of the Presidents of the Council of Ministers; and one at the Palace of the Municipality of Madrid. This Chamber will be pleased to give any information required in connection with the said Exhibition and Congress.

THE TITLE OF "DR."

M.D.EDIN., who writes from the North of England, states that he does not agree with the opinion expressed recently that it is not usual to put the letters M.D. on the doorplate. His experience is that it is customary to do so. He prefers to put that title on the doorplate rather than "Dr.," which, he says, is assumed by so many men who have absolutely no right to use it.

A SWALLOWED COIN.

DR. W. J. GARD (Stoke, Devonport) writes with reference to the case reported by Dr. Robson in the BRITISH MEDICAL JOURNAL of February 19th: A similar case occurred in my practice about three years since. A woman one morning brought a child to me saying it had swallowed a halfpenny. I gave the usual instructions about the feeding, and impressed on the mother the necessity of watching the motions. I heard nothing more of the case for thirteen months, when the mother again came to me bringing the halfpenny. Her story was that the child had been rummaging in the bed, and all at once told her that the halfpenny had moved, and after a few hours it passed by the bowel. In this case the coin was very corroded, but the child had not a bad symptom all the time. Of course at the time this case occurred I had no *x* rays for diagnosis of position.

DR. RICHARD NEALE (Finchley Road) writes: At p. 540 of the BRITISH MEDICAL JOURNAL of February 19th, Dr. Robson reports the case of a halfpenny vomited after nine months. In the *Medical Digest and its Appendix*, Section 853-4, a large number of similar cases are noted in which the coin was ejected after two to fourteen years.

THE HISTORY OF INFLUENZA.

DR. J. FOSTER PALMER (8, Royal Avenue, S.W.) writes: The first instance of influenza on record appears to be in 1173-74, when "the whole world was afflicted with a cloudy corruption, which occasioned a most universal cough and catarrh, fatal to many" (quoted from Short by Walford, *Chronology of Pestilences*). It occurred again in England in 1285 and 1299, and in Ireland in 1315 (Report of the Commissioners of the Irish Census of 1851); also in 1325 and 1334. It appears to have preceded the "black death" of this century, and was again very prevalent about 1436. From the time of the next recorded epidemic (1510) the best authority is the *Annals of Influenza*, by Dr. Theophilus Thompson, in one of the volumes of the Old Sydenham Society. Many of the earlier epidemics may also, in all probability, be referred to influenza, notably the fatal sneezing epidemic which prevailed in Rome in 590, and which was attributed to a peculiar mist in the air, probably either some poisonous gas or meteoric dust, or perhaps an abnormally-crowded aggregation of microbes. If "H. O. C." will give me his address, I shall be happy to send him a copy of my small work on *Epidemics*, which contains a few facts about influenza that may be interesting to him.

A WASP THREE AND A-HALF YEARS IN THE EAR.

DR. W. B. RUSSELL (Colwyn Bay) writes: On February 22nd last I was consulted by a Miss C. for deafness of one ear which had been noticed for more than a year. On examination with the speculum I saw a dark mass of nodular cerumen, which I proceeded to remove by syringing, but succeeded after more than an hour in displacing only a few flakes. I directed that glycerine and sodium bicarbonate should be instilled that night and next day renewed the syringing. After a long time I dislodged the mass, which to the surprise of myself and the patient consisted of a wasp of small size in perfect condition, including wings, except that the last joint of the abdomen was missing along with the sting. Now came out the history. Three years ago last July Miss C. was looking at some combs from a wasps' nest which her brother had captured, when one of the young wasps flew into her ear when she heard a buzzing, but afterwards as the disturbance ceased she thought it had escaped and took no further notice of the matter, as there was no deafness till about two years after in that ear. Probably the insect was too young to sting and became surrounded with cerumen, which preserved it like a fly in amber. There was no trouble after the removal of this remarkable foreign body. The drum appeared a little thickened, but not inflamed, and the hearing was perfect.

HÆMORRHAGE FROM THE STUMP OF THE FUNIS.

DR. WALTER LATTEY (Southam) writes: On p. 30 of the EPITOME of the BRITISH MEDICAL JOURNAL for February 19th, there is related a case of death occurring from bleeding in a newborn infant attributed to the cord not having been tied sufficiently tightly. Nothing, however, is stated as to what length was allowed for the stump of the funis. I opened a discussion on this subject in the JOURNAL in August, 1876, in which I endeavoured to establish the fact that however firmly the ligature may be applied it very soon becomes loosened by the process of contraction that occurs in the structure it surrounds. Moreover, Mr. Lawson Tait seemed to prove (in a pamphlet he was kind enough to forward to me on the anatomy of the cord) that a sinus exists in that part of the cord nearest the infant, and that this sinus, which has no definite walls, sometimes extends a considerable length, and that it is the laying open of this sinus when dividing the cord too near the infant's body that gives rise to the bleeding.

A year or two since I again called attention to the point after looking at all the works on midwifery I could find in the Association's Library, and I find that at least one author in his latest edition has allowed more length for the stump of the funis.

LETTERS, COMMUNICATIONS, ETC., have been received from: **(A)** Mr. R. B. Anderson, London; Dr. T. R. Atkinson, Sherborne; Army Medical Staff in India; Alpha; F. S. Arnold, M.B., Manchester. **(B)** Mr. G. V. Benson, London; Dr. J. Barr, Liverpool; Dr. L. J. J. Barnes, Erith; Dr. Ethel Bentham, Newcastle-on-Tyne Dr. J. Brown, Bacup; Mr. W. J. Beatty, Stockton-on-Tees; Mr. G. E. Brooke, Turk's Island, W.I.; J. W. Batterham, M.B., St. Leonard's; Mr. L. A. Bidwell, London; R. T. Bakewell, M.B., London; Beacon; R. McL. Banks, M.B., Lanark. **(C)** Dr. R. Cory, London; Clinical Society of London, Secretary of, London; Mr. M. P. Coghlan, Waterford; Miss M. Canney, London; Mr. F. W. Collingwood, London; Miss J. Crosfield, London; Dr. E. J. Cave, Bath; Dr. T. Churton, Leeds; Mr. H. L. Carre-Smith, London; Dr. J. S. Clayton, Accrington; Dr. J. Craig, Dublin. **(D)** Mr. P. J. Dempsey, Kingscourt; Director-General of the Medical Department of the Navy, London; De St.; Dr. T. Davies, Plumstead; District Medical Officer; Mr. R. Duff, Liverpool; Mr. E. J. Donbavand, London. **(E)** Ethics; Dr. E. H. Ezard, London; Edina; Enquirer; Dr. M. G. Evans, Caerphilly. **(F)** Mr. F. C. Fitzgerald, Dublin; Messrs. Flowerdew and Co., London; Mr. J. B. Fry, Esher; Dr. P. S. Fentem, Bakewell; F.R.C.S.; Fairfield. **(G)** Mr. A. Greenwood, London; Dr. L. G. Guthrie, London; A. Gregor, M.B., Sutton-on-Trent; Mr. T. P. Gostling, Worcester; Dr. E. Ground, Maidstone. **(H)** S. H. Hawley, M.B., Walsall; Dr. E. Haughton, London; Mr. G. Henslow, London; Dr. R. G. Hebb, London; Mr. W. E. Hoyle, Manchester; Dr. A. P. Hillier, London; Mr. D. de V. Hunt, Cardiff; Dr. J. Haddon, Denholm; Mr. W. H. Hall, Frant; Mr. W. C. Hawthorn, Blackburn; L. E. Hill, M.B., London; Mr. V. Horsley, London; Dr. T. B. Hyslop, London; R. E. Howell, M.B., Middlesbrough; Dr. F. Helme, Paris; Mr. R. P. Halliday, Leeds; H. R. Hunt, M.B., Christchurch. **(I)** Income Tax Adjustment Agency, London; Irish Medical Superintendent; Income Tax Repayment Agency, London. **(J)** Messrs. Johnsen and Jorgensen, London; J. M. A.; Junior Practitioner. **(L)** Mr. C. S. Loch, London; Mr. H. Lawrence, London; L.R.C.P.Ed., L.R.C.S.Ed., L.F.P.S.Glasg.; Dr. J. J. Lynch, Walsall; Dr. J. F. Little, London; Mr. F. W. Lowndes, Liverpool; Dr. H. L. G. Leask, Glasgow. **(M)** Dr. J. Murphy, Sunderland; M.B.Lond.; Dr. T. Myles, Wigton; Dr. J. T. Maclachlan, Glasgow; Dr. H. J. Macevoy, London; A. E. Maylard, M.B., Glasgow; H. C. Mactier, M.B., Wolverhampton; Mr. A. Maude, Westerham; Dr. W. Milligan, Manchester; Dr. J. Maxwell, Tobermory; Dr. L. S. Mackenzie, Bradford; A. E. Moore, M.B., Cork; Member B.M.A.; Dr. J. McG. Mac Cormac, Belfast; Mr. G. H. Makins, London; M.D.; Dr. A. S. McCausland, Swanage. **(N)** Messrs. George Newnes, Limited, London; J. H. Nicoll, M.B., Glasgow; Dr. R. Neale, London; Non Est. **(P)** Puzzled Dr. J. Priestley, Lee-on-the-Solent; Dr. G. C. S. Perkins, London; H. R. Phillips, M.B., Clevedon; Mr. H. H. Phipps, Woking; Mr. T. Partridge, Stroud; C. F. Ponder, M.B., Kalimpong; Mr. J. Poland, London; Mr. H. E. Powell, London. **(Q)** Quid Refert. **(R)** Messrs. Reynolds and Branson, Leeds; G. A. O'B. Reid, M.B., Southsea; Dr. T. O'C. Redwood, Dublin; Dr. J. A. Rigby, Preston; W. B. Russell, M.B., Colwyn Bay; Mr. R. Rauschke, Leeds; Mr. A. M. Regidor, London; Mr. T. P. Roberts, St. Albans. **(S)** Dr. A. E. Sansom, London; F. A. Southam, M.B., Manchester; Stylo; Dr. C. E. Shaw, Belfast; Messrs. Street and Co., London; Dr. J. O. Symes, Clifton; Schott; Dr. T. D. Savill, London; Mr. G. Stoker, London; Mr. P. R. W. De Santi, London; Mr. R. T. Smith, London; S. Stephenson, M.B., London; Dr. S. Sunderland, London; Dr. E. A. Snape, London; "Stafford Chronicle," Editor of the, Stafford; Superintendent who has served under the Old and the New Régime; Dr. F. H. Spooner, London. **(T)** Dr. L. B. Todd, Lincoln; Mr. A. J. R. Tyler, West Kirby; Mr. W. T. Thomas, Liverpool; Mr. C. Tweedy, Northallerton; E. C. Thompson, M.B., Omagh. **(U)** C. T. D. Urquhart, M.B. Aberdeen. **(W)** Dr. A. McC. Weir, East Sheen; H. J. Waring, M.B., London; Dr. W White, Hadfield; Dr. T. J. Wood, Bradford; Dr. S. West, London; Dr. F. Willcock London; Dr. E. M. N. Williams, Newcastle-on-Tyne; Mr. J. H. Wigham, Leeds; H. S. Willson, M.B., Weybridge; Dr. F. J. Waldo, London. **(X)** X.Y.Z.

BOOKS, ETC., RECEIVED.

Lehrbuch der Entwickelungsgeschichte des Menschen. Von J. Kollmann. Jena: Gustav Fischer. 1898. M 15.

Edinburgh Hospital Reports. Vol. V. Edinburgh and London: Young J. Pentland. 1898.

Skin Diseases of Children. By G. H. Fox, A.M., M.D. London: J. and A. Churchill. 1898. 12s. 6d.

Handbuch der allgemeinen und speciellen Arzneiverordnungslehre. Von Dr. C. A. Ewald. Dreizehnte vermehrte Auflage. Berlin: August Hirschwald. 1898. M.20.

Mittheilungen und Verhandlungen der internationalen wissenschaftlichen Lepra-Conferenz zu Berlin im October, 1897. III Band. Berlin: August Hirschwald. 1898. M.18.

Vaccination a Delusion: Its Penal Enforcement a Crime. By A. R. Wallace, LL.D., D.C.L., F.R.S. London: Swan Sonnenschein and Co. 1898. 1s.

Handbook on the Workmen's Compensation Act, 1897. By M. Roberts-Jones. Fifth Edition. Cardiff: *Western Mail* Office. 1898. 2s. 6d.

A Clinical Textbook of Surgical Diagnosis and Treatment. By J. W. Macdonald, M.D. London: Rebman Publishing Company. 1898.

Transactions of the American Orthopedic Association. Vol. X. Philadelphia: Published by the Association. 1897.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Second series, Vol. II. Washington: Government Printing Office. 1897.

Report on Bubonic Plague. By N. H. Chosky. Bombay: *Times of India* Steam Press. 1897.

A Handbook of Horse-Shoeing. By J. A. W. Dollar, M.R.C.V.S., with the Collaboration of A. Wheatley, F.R.C.V.S. Edinburgh: David Douglas. 1898.

Exercise for Health: Its Science and Practice. By H. H. Hulbert, B.A., M.R.C.S., L.R.C.P., and L. P. Phelan. London: C. A. Pearson, Limited. 3s. 6d.

Neo-Malthusianism: An Inquiry into that System, with regard to its Economy and Mortality. By R. Ussher. London: Gibbins and Co. 1898. 6s.

Treatise on the Diseases of Women. By A. J. C. Skene, M.D., LL.D. Third Edition. London: H. K. Lewis. 1898. 28s.

The Study of Children and their School Training. By F. Warner, M.D., F.R.C.P., F.R.C.S. London and New York: Macmillan and Co. 1897. 4s. 6d.

*** In forwarding books the publishers are requested to state the selling prices.

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A VALEDICTORY LECTURE

ON THE

PROGRESS OF OBSTETRICS AND GYNÆCOLOGY.

Delivered at King's College Hospital,

BY W. S. PLAYFAIR, M.D., LL.D.,

Emeritus Professor of Obstetric Medicine at King's College, and Consulting Physician to King's College Hospital.

GENTLEMEN,—I have been asked to devote this lecture—the last which I shall have the privilege of delivering in connection with King's College—to a consideration of the advances which have taken place in the subjects which I profess, since I assumed this Chair, now more than five and twenty years ago. I had hoped that the fact of this being my last lecture might have passed unnoticed; but, since it is not so, I feel that the subject proposed to me is an appropriate one, and the more so as my inaugural address was devoted to The Progress of Obstetrics and Gynæcology. As time goes on it is well to take stock of our movement with it. But that I should undertake to give anything in the least like a comprehensive account of our gains in obstetrics and gynæcology in less than an hour would be an absurd and useless endeavour. I shall not attempt so impossible a task, but shall content myself with a brief allusion to one or two matters that I hope may prove of interest to you.

It is, I think, certain that there is no department of medicine or surgery the progress of which in recent years can in the least compare with that of which we can boast. That is because our subject is to a great extent a new one. When I came to this hospital, now five and thirty years ago, gynæcology was practically in its infancy. If you look at any book on the diseases of women of those days—I think Churchill or West were the ones most used—you will be astonished to find that the subjects which now chiefly occupy the attention of gynæcologists were altogether unknown. There is in them practically no allusion to most of the work with which we are now daily occupied. Even such everyday matters as ovariotomy were only beginning to be considered, and were damned with faint praise. Morbid states of the Fallopian tubes, such as pyosalpinx, salpingitis, and the like, now known to play so large a part in the causation of pelvic diseases, were unknown, and operative and curative procedures now employed every day were undreamt of.

It was in the year 1854 that I became a pupil of that wonderful man, Sir James Simpson, to whose initiative we may fairly ascribe much of the progress made within the last half century in the departments of medicine I have mentioned.

> He was a man, take him for all in all,
> We shall not look upon his like again.

Many have depreciated his work, have called him ill-balanced and impulsive, lacking in judgment, and unreliable; and in a certain sense all this is true. But his boundless and contagious enthusiasm, his commanding personality, that indefinite something about him which men call "genius," his sweet and lovable disposition, which made him never see anything but good in others who would admit no good in him, combined to make of him a leader and a teacher such as I have never seen equalled in the past and never expect to see in the future. His enthusiastic study of all advances in his favourite pursuits, and the energy and zeal with which he advocated new methods and treatments, many of which have passed into the limbo of things that are justly forgotten, founded a school of disciples who have since worked hard at subjects which before his time were almost completely neglected. I crave your pardon for this brief allusion to my honoured master, since I am talking of ancient history unknown to most of you.

It is to my mind no objection to a man's work that all of it will not bear the test of time and experience. If that were always essential, who is there amongst us whose work would stand? Take, for example, Henry Bennet's book on *Inflammation of the Uterus*, which attracted a great deal of attention in its day. If ever there was a book which was thoroughly unsound, the views in which were completely untenable, and the practice based on them most pernicious, it is surely this. Yet who shall say that Henry Bennet's work did no good? It did at least this, it directed attention to diseases of the reproductive organs in women, it caused them to be recognised, studied, and diagnosed, and in due course of time its errors were realised and its mistakes avoided. And so it is with many things which for a time received undue attention, as, for example, Graily Hewitt's extravagant views on uterine displacements, which yet had an element of good in them, and other examples which I might give, but which, perhaps, I had better not dilate on.

The lesson from all this is one sadly needed, but rarely acted on, and that is a little less dogmatism, and a little more charitable consideration for views which do not commend themselves to us.

I might fill up the whole of the time allotted to me, and it would not be unprofitably spent, if I were to address you solely on the confident, absolute, and unhesitating condemnation passed by men who have no practical knowledge at all on the matters they condemn, on such mooted points in modern gynæcology, for example, as trachelorrhaphy, the use of electricity in gynæcology, laparotomy in pelvic inflammations, total extirpation and *morcellement* of the uterus, and many similar topics I could mention.

The well-known definition, "orthodoxy is my doxy, and heterodoxy is other people's doxy," surely applies with remarkable force to all matters gynæcological. What I have said reminds one forcibly, and the remembrance should teach us a valuable lesson, of the days, not so very long ago, when the benches of the Royal Medical and Chirurgical Society rang with excited cries of "Down with these belly rippers," when Spencer Wells had the temerity to bring before it a paper advocating the performance of ovariotomy. Even after I came to this hospital I well remember urging ovariotomy in the case of a near connection of my own who had a perfectly simple ovarian tumour. She was taken to several of the most eminent surgeons of the day, all of whom discouraged it, one of them telling her husband that I was recommending what was "mere butchery."

If there is one lesson more than another I should like to leave behind me here, it is that of charitable consideration for the views of others and deferred judgment.

If I were asked what is it more than anything else which has enabled obstetrics and gynæcology to take their present position, of course I should unhesitatingly say the principles of antisepsis. In directing attention to the changes which these have produced I am, of course, mentioning an obvious truism. In this hospital at least, which may make the proud boast of being, so far as London is concerned, the *fons et origo* of antisepticism, since Lister came to us from Scotland, no word need, perhaps, be said of it. You are so imbued with the knowledge of it that it is to you, I hope and believe, a second nature. To you the things I have seen before it became known would be absolutely incredible. If I were to tell you what I have seen from septic surgery in my early days in India, where I passed two or three years after I qualified, nay, even if I were to tell of things I have seen within these very walls in the way of abdominal surgery,

> I could a tale unfold.....
> Would.....freeze thy young blood,
> And make each particular hair to stand an-end
> Like quills upon the fretful porcupine.

I am not going to occupy your time by repeating the twice-told tale of what antiseptics have done for obstetric practice. That the very hospitals and wards which were, when I came here, hotbeds of puerperal septic disease are at this moment the safest place in the world for women to be delivered in is a very fairy tale of medical science which will always be remembered in connection with the time I am talking of.

It is worth while recalling in this connection a curious experiment made here just after I came, when a lying-in ward was established in what is now the Pantia Ralli. The mortality was so terrible that we had soon to close it, and the experiment of having a labour ward in a general hospital will, I hope, never be tried again; but such is the safety of antiseptic midwifery that if it were the results would, I fully believe, be very different.

It is a matter of deep regret that the mortality of ordinary domiciliary practice has not lessened with that of lying-in hospitals. This was conclusively shown only the other day in an interesting address by Dr. Cullingworth to the Obstetrical Society. It is certainly a preventable thing, and it should not be. But I am convinced that the blame does not

rest with the medical profession. Those members of it who neglect antisepsis will certainly become fewer day by day as younger men, trained of late years, get into practice. If ever some proper and effective control can be established over the midwives or obstetric nurses, or whatever you choose to call them, who practise so largely among the poor—attending, it is startling to hear, more than half the confinements in the country—then, and only then, will the mortality of domiciliary practice approximate to the vanishing mortality of our lying-in hospitals.

But the gain from the extended use of antiseptics in midwifery is very far from being limited to natural labours. Several of the more serious conditions which were practically hopeless when I joined the hospital are now treated with a fair prospect of success.

Cæsarean section was formerly considered an operation which was almost certainly fatal. Therefore it was never resorted to except under the direst necessity and under conditions which practically precluded the hope of recovery. Now, once more from the extension to it of the principles of antisepsis, as well as from our experience in abdominal surgery, it is no longer the dreaded thing it used to be, but can be resorted to as an operation which affords a fair chance of recovery, the mortality in the hands of experienced operators being little more than that of some other abdominal operations constantly performed.

There is another operative procedure which had practically fallen into disuse, that of symphysiotomy, which has again been brought into prominence, and is now safely performed, but more in other countries than in ours, which enables us sometimes to avoid the horrid alternative of destroying the living fœtus. This, again, is the direct result of the safety arising from antisepsis.

One of the chief improvements in modern midwifery, however, is the enormous strides we have made in the treatment of that far from uncommon and most dangerous condition —extrauterine fœtation. Five-and-twenty years ago if an accoucheur was called to a patient in early pregnancy who was collapsed and moribund, he might, and probably would, have diagnosed the existence of a ruptured tubular fœtation with intraperitoneal hæmorrhage, but he would have had to stand helplessly by and see his patient die. Now he would without hesitation operate, with a fair chance of snatching his patient from the jaws of death, and of adding one more to the many cases which have thus been successfully treated.

Another not very dissimilar condition as to its effects, before practically hopeless—rupture of the uterus during labour —is now well within the hope of successful treatment.

These are some of the gains which have accrued from antisepsis—surely a remarkable record.

I have no intention of going over all that has been done within the last quarter of a century in midwifery; these are only some illustrations of our progress.

There is one subject, however, on which I feel called to say a few words, and that is the modern practice in protracted labour from uterine inertia, and that because it has been strongly attacked by my friend, Professor W. Japp Sinclair, of Manchester, in his recent address to the British Medical Association at Montreal.

When I joined this hospital, the old—and I venture to think the bad—practice was common of leaving women to drag on very many hours in powerless labour from an unfounded dread of assisting them by forceps. No doubt many of the more advanced practitioners were gradually shaking themselves free of it, but the textbooks all adhered to the old dicta. If you want to see what this practice led to, I would ask you to read the account of the labour and consequent death of the Princess Charlotte of Wales, which I have introduced into the more recent editions of my book on midwifery. You will there see how that gifted Princess's life was sacrificed to thoroughly bad midwifery. Had it not been for this, our present gracious Sovereign would in all human probability never have come to the throne. The extent to which the dread of instrumental interference was carried may be judged of from the fact that in the Rotunda Hospital at Dublin between the years 1786 to 1793, Dr. Clarke, the master, used the forceps only 14 times out of 10,387 deliveries, and during the mastership of Dr. Labbatt (1815-1822) out of 21,867 births there is no record of the forceps having been used in a single instance.

The first edition of my book on midwifery was published in 1876, and I believe it to be the first systematic treatise in which the more rational, and I think now generally adopted, practice was openly advocated. This I did in fear and trembling, and deemed it necessary to offer a sort of apology in the preface. Happily my fears in this respect were not justified, the views I enunciated were generally approved, and the practice inculcated, with all proper reserve and safeguards as I maintain, was generally adopted.

It is very likely indeed that the pendulum has swung too far in the opposite direction. Injudicious practitioners abound everywhere, but apparently far more abundantly in and about Manchester than in London, for certainly here I do not come across the enormous numbers of lesions which Dr. Sinclair attributes to the use of the forceps, forgetful of the fact that the cervix used to tear, and the perineum to lacerate, long before the forceps were heard of. He forgets also, or at any rate minimises the fact, that in the good old times he so much laments lesions were abundant from not using the forceps, which are hardly ever seen now, such as vesico-vaginal fistulæ, which are not made nowadays because the forceps are more frequently used. So much is this the case that it is probable that most of the gentlemen I am addressing have never even seen the operation for their repair. Dr. Sinclair, however, rather lets the cat out of the bag when he tells us that in the quarter of a century before the introduction of antiseptics, which is practically the quarter of a century before I assumed this chair, Dr. Matthews Duncan, whom he very properly takes as a type of the obstetricians of that time, and his contemporaries "were long busy in repairing the characteristic ancient injury of vesico-vaginal fistula, for they had the accumulated misery of a whole generation of women to cure and ameliorate." The "accumulated misery" of generation after generation of women living before Marion Sims's great discovery was left uncured and unameliorated.

Nor does Professor Sinclair even mention one of the great glories of modern midwifery resulting from the practice he condemns—that is, the practical abolition of the operation of craniotomy, formerly so common. It would be a curious study to inquire what happened with regard to that in the *tempora acta* in the hands of injudicious practitioners, who I suppose existed then as now. I have heard of one distinguished obstetrician at least, celebrated for his hostility to "progressive" practice, who, when called in to a bad midwifery case, exclaimed in emphatic Doric, "Man, what's the deeficulty—dang out the brains!" I wonder how many lacerated cervices or torn perinea should be taken as the fair equivalent of even one human life saved from the deadly perforator?

Professor Sinclair sets himself to prove a most extraordinary thesis, let me quote his own words: "A thesis which I shall endeavour to maintain to-day is that gynæcology has become so largely surgical as the direct results of surgical interference in midwifery practice; the accoucheurs are the providers of material for the gynæcologist"; and, again, "for the material of his ordinary daily labour the gynæcologist has to look to the accoucheur." Surely these extravagant statements cannot be seriously meant? I was under the impression that the surgical expansion of gynæcology was due to such operations as ovariotomy, the removal of diseased appendages, vaginal and abdominal hysterectomy, colpotomy, and the like, which the wildest imagination cannot say are the production of the accoucheurs. If Dr. Sinclair had been content to preach against injudicious excess in operative midwifery, I should have heartily agreed with him, and welcomed his address as sure to do good. But he does far more than that, he advocates in effect, if not in so many words, return to the old bad times and disastrous practice against which, as one of the teachers and writers of the textbooks he so much blames, I feel bound to raise my voice. I do not, however, intend this as an answer to his criticisms; that I have attempted more at length in the forthcoming edition of my book on midwifery, but as a passing allusion to a topic of current interest.

That gynæcology is becoming year by year more and more surgical is a fact that cannot be denied. Indeed, nowadays a

gynæcologist who cannot operate or handle a knife, or is not allowed to do so by the rules of his hospital, if such fossil institutions still exist, is very like a modern soldier prohibited from using gunpowder.

If a gynæcologist must be either a surgeon or a physician, then in future he must certainly elect to be a surgeon. But on this I should like to say a few words, and to make them intelligible it is necessary to be a little retrospective.

Many of our London hospitals are very ancient institutions, and the more modern ones are modelled upon them. When they were founded midwifery was only practised by women, and gynæcology did not exist; so that the staff was naturally formed of members of the old corporations of physicians and surgeons only.

As time elapsed it became necessary to appoint obstetric physicians, who came in as interlopers, who were "neither flesh, fowl, nor good red herring." As they taught midwifery only they generally belonged to the College of Physicians. As gynæcology developed, the necessity arose for these gentlemen to operate. The first Fellow of the College of Physicians who had the boldness to shake off the shackles of precedent was the late Dr. Tyler Smith of St. Mary's, who performed ovariotomy, and has left a lasting name for himself in connection with the operation, since he introduced into this country the intraperitoneal treatment of the pedicle. I believe, although it was before my time, that he gave great umbrage by doing so.

Everyone who has the honour to belong to the College of Physicians is proud of it, and fond of it, but it is a very ancient institution, and like other ancient institutions it is not free from traditions and prejudices that are not altogether wise. Moreover it has a good many Fellows who are by nature fine old crusted Tories, whom everyone loves and respects, who would like to keep the College very much as it was in the time of Henry VIII. Possibly some of these may still object to obstetric physicians operating when they have an aptitude for doing so, and have such work to do. But if such views are still held, as is not unnatural, they have never done any practical harm. Under the judicious guidance of its successive presidents, the College of Physicians has been as progressive as such an institution can be expected to be, or, indeed, in my opinion, ought to be. From it, at least nowadays, no difficulties arise. Of the views on this subject of one of the wisest and most liberal-minded of its Presidents, the late Sir Andrew Clark, there can be no doubt, for I have often heard him say that a man should do exactly what he thought himself most capable of doing; and I have had practical proof of it by having on several occasions operated on gynæcological cases he sent to me for the purpose.

But I am told, for I have not myself seen it, that there is a cloud, at present no bigger than a man's hand, rising in another quarter. I am given to understand that our friends the hospital surgeons—or some of them—dismayed, let us hope, by the operative successes of their obstetrical colleagues, are beginning to clamour for protection, and are agitating for the enactment of a rule that no obstetrician is to operate unless he is a Fellow of the Royal College of Surgeons.

Now see for a moment what a grievance this would be. Take the case of a comparatively young obstetrician who has qualified by taking the very high diplomas of M.D. and M.R.C.P. Is such a man to be suddenly debarred from following the career for which he has prepared himself by being called upon, without previous warning, to pass the difficult examination necessary for admission to that very limited body, the Fellows of the College of Surgeons?

A man's skill as an operator depends on his brains and on his fingers, not on the letters he writes behind his name. I know Fellows of the College of Surgeons whom I would not trust to vaccinate a baby, and I know Fellows of the College of Physicians to whom I would unhesitatingly confide any operation they chose to undertake; and, *per contra*, if I were called to choose as obstetric physician to a hospital between a man who was an M.D. and F.R.C.P.Lond. whom I knew to be an inferior man, and a man who was a simple M.R.C.S. whom I knew to be a superior man, I would certainly select the better man of the two, irrespective of his qualifications.

If such a rule were to be enforced it would at once lead to a divorce between obstetrics and gynæcology. These subjects are each so large that I think it likely that such a separation will eventually take place, to the advantage of both, by mutual agreement; but we are not prepared for it as yet, and to force it on by such an enactment would completely dislocate the teaching machinery of our schools.

We boast of belonging to a country which has been wise enough to adopt free trade in commerce, yet we talk of adopting a protective measure which could not find a parallel in any other country of the world, in none of which do such mediæval distinctions between different branches of the profession exist.

Some of our more conservative friends tell us that we may with propriety interfere surgically in anything occurring in the course of our midwifery practice, but that the moment any surgical interference is required in gynæcology the case must be handed over to the surgeons. I do not envy the sensations and position of the accoucheur, nor, for the matter of that, of his patient and her friends, who, in deference to this opinion, has acquired no surgical experience, when suddenly called upon to cope with such an obstetric emergency as a Cæsarean section, or a symphysiotomy, or a ruptured tubular fœtation, or a ruptured uterus.

The plain fact is, and it is one which cannot be got over, that the evolution of medicine has produced a class of practitioners who are and must be "physicians and surgeons" in a higher sense, and the sooner sensible and unprejudiced men reconcile themselves to their existence the better.

I have been tempted to this somewhat polemical discussion because it is one of great moment, and it is well that a senior member of the obstetric branch should have his say on behalf of his junior colleagues, although he has himself no longer any personal interest in the matter. And I may speak all the more plainly because I have never myself experienced any difficulty of the sort, and have always received the most kindly, generous, and ungrudging assistance from all my surgical colleagues in anything of an operative nature which I have thought it right to attempt.

Do not suppose for a moment, however, that in arguing in this way I am advocating overmuch operative interference in gynæcology. None of you, I feel sure, to whom I and my work are well known, will accuse me of want of caution in that respect. There is, I am constrained to admit, a good deal of unwise excess amongst us which is much to be deprecated. As we have to acknowledge that injudicious practitioners have erred in carrying out what is, on the whole, a right principle in the management of protracted labour, so also we have to acknowledge that injudicious practitioners have interfered surgically far more than most of us think justifiable, and in a way that brings discredit to themselves and needless risk to their patients. *In medio tutissimus ibis* is the wise and safe principle which should guide you in shaping your course.

In the opposite direction we have to deprecate the tinkering practice adopted by the ultra-conservative gynæcologists who would shun surgical interference altogether, which was caustically described, not without some reason, by my friend Professor Clifford Allbutt, in an often quoted passage in which he talks of the patient as "being entangled in the net of the gynæcologist, who finds her uterus, like her nose, is a little on one side; or again, like that organ, is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year, except during the long vacation, when the gynæcologist is grouse shooting, or salmon catching, or leading the fashion in the Upper Engadine."

It is difficult to say which sort of error is eventually worse for the patient. It is to be feared that one or other of them will be met with until the halcyon days arrive when the possession of a diploma provides its owner with judgment that never errs, and enthusiasm so well regulated that it never leads him astray.

I have left myself no time, I regret to say, to direct your attention to our gains in gynæcology during the years we have under review. I can only make a mere passing allusion to some of them, but they are no less remarkable than in obstetrics, and they have practically all arisen also from the great principle of antisepsis which has done so much for midwifery.

One note of modern gynæcology which is remarkable is the increasing favour which the treatment of pelvic disease by the vaginal route is finding. Things are possible now, and with comparative safety, previously undreamt of. Thus malignant disease of the uterus, formerly practically left to run its course unchecked, can now be dealt with, if detected sufficiently early, which is unhappily often not the case, by the partial or total extirpation of the diseased organ and with a reasonable hope of success. Then, again, certain diseased conditions of the appendages may also be treated by this route with less danger than by abdominal section. So also some of the most troublesome cases of pelvic inflammation following on childbirth, or on morbid conditions of the tubes, are being thus dealt with with increasing frequency and success; and so likewise are certain diseases of the uterus, such as small fibromyomata, old-standing displacements producing serious symptoms, and other conditions which I merely mention without any expression of opinion.

Many other topics suggest themselves, some of them involving most vexed questions, such as the treatment of fibromyomata by hysterectomy; the removal of the appendages by laparotomy for various diseased conditions, or, unhappily, sometimes, for no diseased conditions at all; the treatment of pelvic inflammations by abdominal section, and many others which cannot even be mentioned.

One subject, however, I cannot pass over, as it has always interested me much, that is, the possibility of treating systematically and successfully the strange and manifold neurotic symptoms which so often shipwreck the lives of women, and reduce them to a state of chronic invalidism previously quite hopeless. That cases of this sort, unhappily so common, can so often, when properly managed, be restored to health, is, in my judgment, one of the greatest gains to practical medicine in the last quarter of a century. This is, perhaps, not strictly a gynæcological matter, but it is often so closely connected with it that this passing allusion to it may be pardoned.

I hope that even these few words may prove to you that gynæcology has not been at a standstill. It is my firm conviction that the more scientific basis on which it is being placed by pathological, histological, and bacteriological research will ere long give it a position which it has hitherto lacked, as is not unnatural in a subject of comparatively recent development.

And, now, gentlemen, I cannot conclude without a word personal to myself. It is just thirty-five years since I came to London to seek a livelihood, as so many of my countrymen have done since the time of that "high and mighty Prince" James I of England and VI of Scotland. It is not an exhilarating thing to put up your brass plate in a city such as this, in which you could count your acquaintances on the fingers of one hand. I was greatly encouraged when, in the same year, the Council of King's College elected me to be assistant obstetric physician to this hospital. I may say of it, and I say it with the deepest gratitude, that I was a stranger and it took me in. In retiring from the active work in connection with it, which for so many years has been the chief occupation, and interest, and pleasure of my life, it would be a comfort to me if I could carry with me the conviction that the generous confidence thus shown to an unknown young man has not been entirely misplaced. It is a painful thing to say farewell. I cannot do it better than in the words of a prayer often offered up within these walls: "God bless King's College, and King's College Hospital, and all connected with them."

THE French Society of Otology and Laryngology will hold its annual meeting on May 2nd and following days. The subjects to be discussed are (1) The Unification of Acoustic Notations (to be introduced by MM. Gellé, sen. and jun.; (2) The Pathology of the Lingual Tonsil (to be introduced by M. Escat).

SPANISH CONGRESS OF OTO RHINO-LARYNGOLOGY. — The Second Spanish Congress of Oto-rhino-laryngology will be held in Barcelona on September 20th and following days. The President of the Organising Committee is Dr. Roquer y Casadesús.

REMARKS
ON THE
ETIOLOGY OF SUNSTROKE
(SIRIASIS):
NOT HEAT FEVER, BUT AN INFECTIOUS DISEASE.

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VERY different conditions have been described by authors under the designation of "sunstroke," and at one time apoplexy was frequently accounted as such. In recent works we find two distinct conditions—heat exhaustion and thermic fever—classed together under the common title of "heat stroke," and most writers describe heat exhaustion as an initial stage of thermic fever. I believe heat exhaustion to be nothing more than syncope and thermic fever, a specific infectious disease which I shall mention in this paper by its oldest name, "siriasis."[1]

SYNCOPE.

When syncope occurs in an overheated atmosphere, it is commonly called heat exhaustion; but this appellation is misleading, because heat is by no means its primary cause. Syncope is really a symptom, not a disease. It occurs in persons of unsound constitution, and especially in those suffering from organic diseases of the heart. The original disease may have been latent, and the sudden prostration, under the stimulus of fatigue, excitement, alcohol, or heat, may be its first manifestation. Numerous necropsies prove this statement.[2] Syncope is common among old stokers—"stokers' collapse"—who are greatly liable to cardiac affections on account of their laborious occupation and of their free indulgence in strong drink. It is very frequent among soldiers, who likewise suffer exceedingly from circulatory disorders, as is well known.[3] Soldiers fall unconscious from syncope at parades or even in barracks, but far more frequently on the line of march, especially when oppressed by tight-fitting clothes and heavy accoutrements, and when obliged to march in "close order" and breathe the foul air which surrounds a close column. Striking examples are on record to show the effects of excessive exertion under unfavourable conditions. On July 4th, 1859, among the French army at the passage of the Mincio, 2,000 out of a force of 12,500 men were prostrated by syncope, and 26 died (Guyon).[4]

In syncope the skin is moist, pale, and cool; the breathing is easy though hurried; the pulse is small and soft; the temperature is at or below normal; the pupils are dilated; the loss of consciousness is incomplete, and though death may occur, an immediate recovery is the rule.

SIRIASIS.

The symptoms and conditions of siriasis are widely different from those of syncope. Siriasis is an acute disease characterised by hyperpyrexia, profound coma, and intense pulmonary congestion. Its mortality is exceedingly high. It has a peculiar geographical distribution; it prevails in the hot season, and occasionally in an epidemic form.

It seems surprising that syncope should have been confounded with siriasis, but it is so and it is all-important to remember this in studying siriasis, because it is the reason of the great confusion which exists in the description of its symptoms and of its *post-mortem* appearances, in the theories advanced to explain its pathology, and in the remedies suggested for its cure

ETIOLOGY.

Siriasis is universally considered as the most obvious effect of exposure to excessive heat, but opinion varies greatly as to the way in which elevated temperature acts in producing the peculiar symptoms of the disease.

Some authors attribute siriasis to a gradual heating of the blood to a degree incompatible with the maintenance of nervous function. Others believe that heat paralyses the centre or centres which are supposed to regulate the disposition of the bodily heat, and thus causes the hyperpyrexia

and other symptoms of the disease. This paralysis, according to some, is believed to cause a greater heat production. According to others, it causes retention of heat.

Little considered siriasis to be the result of pressure exerted upon the cerebro-spinal matter by the heat-expanded cerebro-spinal fluid.

Antonini thought it an acute neurosis of the vaso-motor system. Laveran suggested that the cause of the disease might be perhaps paralysis of the ganglia of the heart. Vallin put it down to the coagulation of myosin. Senfleben ascribed the malady to disorganisation of the blood and accumulation of urea. Bauer thought the main factor to be a more or less extended liberation of carbonic acid in a blood already saturated with gas. Smart attributed the symptoms of siriasis to a deficiency in the serosity of the body from long-continued profuse sweating. Baxter and Züber, on the other hand, thought that the great rise in the bodily temperature depended upon interference with heat loss as a result of suppression of cutaneous perspiration.

These explanations, however conflicting, are all based on the preconceived idea that heat is the sole efficient cause of the disease. But, on inquiring as to the effects of temperature on human beings, we find that man maintains an almost constant heat in all climates, and that he can endure very high temperatures without harm.

Multitudinous evidence might be adduced; I will take a few examples at random:

The Chinese expose their closely shaven heads to the hottest sun without ill-effects (Maclean).

The Andamanese, with their black heads generally clean-shaved and no cloth on the head, with the whole cranial surface presented in the most suitable manner for absorbing all the heat that falls on it, remain under a noonday sun within 12 deg. N. lat. of the equator, and never notice the heat (Brander).

At the Gold Coast it is a very common thing to see children secured to their mother's backs with the head exposed to the fierce glare and heat of noonday without suffering in the slightest (Clarke).

And not only natives, but also Europeans, work in many tropical countries almost without regard, and yet they enjoy robust health. In Arizona and South Colorado the ordinary avocations of farm and factory are pursued without inconvenience in temperatures of 118° to 128° F. (Greely).

The tea planters of Assam furnish a remarkable illustration of the safety with which Europeans may expose themselves in the hottest sun. Tea planters are a large class, and their duties require them to be out in the hottest season and at the hottest time of day. Mr. Berry White, who for upwards of twenty years had a large practice among Assam tea planters, never knew of a case of sunstroke in Upper Assam (De Renzy).

It is, indeed, surprising what power the human frame possesses of resisting the effects of high temperature. Many of our workmen, such as metal casters, glass blowers, furnace men, and stokers, are exposed for hours together to far greater heat than ever emanated from a tropical sun, yet they never suffer from siriasis.

In the United Consols mine at Gwennap in Cornwall, the temperature is 125° F. Siriasis has never occurred among its miners; their special disease is tuberculosis.

Stokers on large steam vessels work for as long as four hours at the time in ill-ventilated and dark stokeholes, at temperatures varying from 130° to 180° F., and, although occasionally one may be brought up from the furnace unconscious from syncope, or "stoker's collapse" as it has been called, they never show symptoms of siriasis.

Tillett states that the female assistants in the bakeries of La Rochefoucauld entered the oven at a temperature of 301.6° F. The workmen of Sir F. Chantrey were accustomed to enter a furnace in which his moulds were dried whilst the floor was red hot, and a thermometer in the air stood at 350° F.; and Chabert, the "Fire King," was in the habit of entering an oven the temperature of which was from 400° to 600° F. (Carpenter).

There is doubtless a point of heat upon exposure to which all human life would instantly perish, but no climate is subject to such heat.

Numberless experiments have been made on animals for the purpose of studying the effects of exposure to excessive heat, and we have learnt from them that the animal organism when exposed to intense heat, under special conditions, is liable to death, but the conditions to the action of which the animals experimented upon were subjected, and the results derived from them, differ greatly from those of siriasis.

In several diseases, as in scarlatina, typhus fever, erysipelas, variola, relapsing fever, etc., the heat of the body rises to 104° and 105° F., and often reaches 107° F. or even above this. The high temperature may remain constant for days and sometimes weeks, and yet the heat of the blood will not induce the symptoms characteristic of siriasis.

Formerly the term "fever" was not used to indicate simply an increased bodily temperature, but included the various symptoms found concomitant with pyrexia. Now we know that such symptoms are not due to pyrexia, but to the toxins produced by micro-organisms. A temperature which in one disease would be accompanied by pronounced nervous symptoms, may be found in another disease without any marked disturbance. Thus, while in certain cases of typhoid fever a temperature of 103° is attended with marked delirium, in relapsing fever a temperature of 106° occurs with the mind clear.

Fever is the symptom common to all infections, it is perhaps a means of defence of the constitution against its micro-parasitic assailants.

The theory which attributes siriasis to a paralysis of the heat-regulating centres need hardly be discussed; it is merely an hypothesis based upon another hypothesis because we know nothing about a heat-regulating centre, which is only surmised by physiologists, although some authors have ventured to place it in the median and basal portion of the corpus striatum, and others in the optic thalamus.

That the high temperature of siriasis and other fevers is not due to retention of heat is proved by the fact that under no condition is the mechanism of heat dissipation so wonderfully active as in fever.

Vallin's theory of a sudden rigidity of the left ventricle and diaphragm from the coagulation of myosin cannot be regarded in siriasis as a factor in its symptoms and death. In laboratory experiences mammalian muscle becomes rigid at a temperature of 113° F.; but death from siriasis generally occurs at a less degree of bodily heat than is necessary to coagulate the muscular substance, and cases with a temperature of 115° F. have recovered (Gannett-Norton).

The idea that siriasis is due to excessive heat is greatly derived from the fact that it occurs during the hottest season of the year, but such an argument is manifestly illogical. Although siriasis be intimately connected with the hot season it exhibits remarkable endemic characters. In one locality it is extremely prevalent, in another it is totally absent, though the region may be quite adjacent and under precisely similar climatic influences. Again, its ravages in the same locality, but in different years, vary immensely and quite irrespective of heat. It is well established that the infectious diseases exhibit a decided preference for certain seasons of the year, and many prevail only during the hot weather.

Colin, and recently De Santi, have considered siriasis as a form of malaria. Long before them Dr. Chevers and other Anglo-Indian surgeons had remarked on the probability of sudden attacks of the disease being caused by "malaria in a concentrated form." The success vaunted by several authors in the treatment of the disease with large doses of quinine seemed to offer further proof of the connection. The idea of malaria being the cause of siriasis probably sprang from the fact that those suffering from malaria are most liable to the disease; or, again, from the fact that pernicious malaria may closely simulate siriasis, but it is untenable because in many regions where malaria is most prevalent siriasis is unknown, and, on the other hand, it is greatly prevalent in places which have no malaria. Moreover, in siriasis, the spleen is not enlarged.

Some physicians have likewise speculated on there being a close analogy between siriasis and cholera. The malignity of the disease, the suddenness of its attack, the correspondence of some symptoms, the condition of the blood, and the occasional occurrence of fluid in the small intestine, similar to the choleraic exudation, led to this supposition (Longmore).

The belief that heat alone could not account for siriasis has often been expressed by those who were able to observe the disease in its habitat. Even the oldest Anglo-Indian surgeons, while admitting heat to be the cause of the disease, thought that there must be something else in the *fons et origo mali*, and frequently in their writings we find mentioned as causes of siriasis "sun or heat and something more."

The symptoms of the disease, its relapses, its morbid anatomy, its peculiar geographical distribution, its epidemic outbursts, the conditions of climate and soil under which it prevails, the relative immunity to its attacks afforded by acclimatisation all clearly point to the specific infectious nature of the disease. I know not how I can better prove my statement as by taking these points in succession, and offering a sort of running commentary upon them.

SYMPTOMS.

Onset.—The onset of siriasis is often sudden. Indeed, there are cases which are so sudden as to exemplify in a marked degree the characteristics of profound toxæmia. The patient falls as if shot, gives a few convulsive gasps, and dies. The same suddenness is witnessed in other infectious diseases, as, for example, cholera, plague, cerebro-spinal fever. This fulminant type occurs with variable frequency in epidemics. More commonly there are premonitory symptoms—headache, nausea, drowsiness, a general feeling of weakness, especially in the lower extremities, frequent desire to micturate. These symptoms may appear hours and days before the dangerous conditions set in. Attributing the disease to solar influence, we should expect it to occur in the hottest hours of the day, instead of which it happens mostly by night. It is a common occurrence in India that the stertorous breathing or the retching of the patient, who is apparently asleep in bed, first attracts the attention of room mates, who arouse him with difficulty. Sometimes the patient starts up suddenly, and attempts to escape, staggering about, and struggling violently if laid hold of, but in a few minutes he drops down unconscious.

Preliminary Stage.—Generally patients are seized with severe headache, an alarming sense of general oppression and exhaustion, a difficulty in breathing, and a distressing burning in the eyes associated with vertigo and chromatopsia (surrounding objects appear of uniform colour, usually red, blue, or purple). The skin becomes dry and intensely hot, the patient is pale and excessively thirsty. The pulse is rapid, full, and bounding. The respiration is hurried and oppressed. The temperature rises suddenly to 107°, 108°, and sometimes 110° F.; it may reach 112° or 113°, and even above. Vomiting is very common, and may be a special feature at the outset; purging is, in bad cases, almost always present. The dejecta are watery, colourless, and resemble the "rice-water" stools of cholera. The skin and breath have a peculiar mousy odour which is as distinct and unmistakable as is the odour of typhus fever, small-pox, and other diseases. Very often cramps occur in the calves of the legs or in the muscles of the back. A maculo-papular eruption has been described as occurring occasionally, but there is nothing characteristic about it.

Comatose Stage.—When the disease has fairly set in, insensibility follows. At first the patient may be partially roused, but he soon passes into a condition of profound coma. The muscles of the face and upper extremities show convulsive twitchings; sometimes there are general convulsions of the most violent description. Authors have described cases in which muscular rigidity amounted to opisthotonos so great that the body could be lifted by the head and heels. Frequently, however, from the commencement of the attack to its termination in death, the patient remains absolutely motionless. The reflexes are greatly diminished or abolished. The urine is scanty and often suppressed. It usually contains traces of albumen and a few hyalin and granular casts, with blood corpuscles adherent. The respiration is embarrassed and almost entirely diaphragmatic; the patient grinds his teeth and moans loudly at each expiration. A perfect tornado of *râles* and rhonchi are heard on auscultation. The face and the whole body become cyanosed from an almost complete arrest of capillary circulation. The eyes are fixed and turned slightly upwards, the conjunctivæ are excessively congested, and the pupils are contracted to mere pin points, and do not react to the light. The heart's action is rapid and irregular. After a time convulsions and vomiting cease, the sphincters relax, and the patient lies motionless in a state of low muttering delirium. The skin retains its burning heat, but becomes clammy; the respiration becomes slower and stertorous, with loud mucous rattling in the trachea. Frothy mucus, occasionally mixed with blood, is ejected, often in large quantity from the mouth or forced up the nostrils with each act of expiration. The heart's action becomes tumultuous, the pulse weaker and weaker, and at length the sufferer dies from asphyxia. In favourable cases the temperature falls, the pupils relax, and the patient regains consciousness. The first favourable change is an increased power of respiration, the pulse then quickly falls in frequency, and there is not uncommonly a discharge of urine, after which sleep follows. Termination is usually abrupt, by crisis, as in typhus or pneumonia, and, although the prostration may be extreme, convalescence is rapid.

Relapses.—When this desirable change has taken place, and temperature has returned to normal, the patient is by no means out of danger, because a relapse is not uncommon in siriasis. A relapse is a repetition of the original attack; it usually sets in after complete defervescence, and is a strong proof of the infectious nature of the disease.

MORBID ANATOMY.

The chief characteristics after death from siriasis are great congestion of the lungs, peculiar fluidity of the blood, extreme venous engorgement. The temperature of the body at death may be at about 110° F., and falls very slowly, if at all, in the first few hours. There may even be a marked *post-mortem* elevation of temperature, as in cholera, yellow fever, and tetanus. Suggillations form quickly and in quantity over the body. *Post-mortem* rigidity is of short duration, and putrefaction takes place rapidly.

The brain and the cord are anæmic and surrounded by effused serum; the ventricles are often distended with serum. The cerebral sinuses and the large venous trunks in the membranes are generally engorged, while the capillaries are empty or nearly so. There is never any sign of hæmorrhage. The ganglion cells exhibit an acute parenchymatous degeneration in every way similar to that produced by microbian poisons (Ira Van Giessen).

The lungs are in a state of hyperæmia without example in any other disease. Their appearance is striking; they are almost black in colour. The lung tissue is firmer to the touch; it still crepitates on pressure, though not so distinctly as healthy lung, and blood and serum exude abundantly from incisions made into its substance. The bronchi are filled with a frothy serous fluid.

The heart is dark in colour, the left ventricle is contracted and empty; the right chambers and pulmonary arteries contain a certain amount of dark blood only partly coagulated. While the left ventricle and arteries are empty, the venous engorgement is extreme, the fluid blood being all collected in the venous trunks.

The blood, as in all cases of septic diseases, is invariably fluid, extremely dark in colour, and decidedly acid. The red corpuscles, under the microscope, appear discoloured, crenated, and, instead of forming rouleaux, aggregate together in irregular clumps. There are often evidences of marked leucocytosis.

The mucous membrane of the stomach is swollen, and presents patches of a dark purple colour caused by the congestion of minute vessels. In cases in which diarrhœa has been a special feature the intestinal mucosa is also slightly suffused in patches, and the small intestine contains a turbid exudation similar in appearance to that which was passed in the stools.

The organs present parenchymatous changes such as are associated with all the acute infections. The muscular tissue is brown and fragile. The serous membranes show ecchymoses, and effused serum may be found within the pericardium and pleuræ.

GEOGRAPHICAL DISTRIBUTION.

In studying the geographical distribution of siriasis we are seriously handicapped, because other diseases have been mistaken for it and because it has been classed in statistics together with apoplexy and other widely different conditions. Lack of space prevents me from elaborating here a minute sketch of its geographical distribution, but I will trace its salient features, which are striking and important.

Siriasis is a widely spread disease in tropical and subtropical regions, but its endemic areas are strictly limited. Like yellow fever, it prevails only in the lowest regions, on coast districts, or in the valleys of great rivers; and its altitudinal range is even more restricted than that of yellow fever.

America.—The low regions of the United States between the Atlantic and the Appalachian Mountains is a well-known seat of siriasis. Almost every summer cases occur in the large cities of the coast, but their number varies greatly in consecutive years. Siriasis is also prevalent in the valley of the Mississippi and on the coast of the Mexican Gulf, but it is unknown in the Western States and in Central America, over the

whole extent of the Cordilleran Plateau. In South America, siriasis has been observed in the valley of the Amazon, in the States of La Plata, and on the South Atlantic coast, but information is scanty.

Europe.—Siriasis is unknown in Europe. Cases mentioned in England, France, Germany, and Italy as "sunstroke" are always mistaken cases of syncope, delirium tremens, cerebral hæmorrhage, tuberculous meningitis, or cerebro-spinal fever.

Africa.—It is very frequent in the valley of the Nile and on the shores of the Red Sea. It occurs also in Algeria. Borius mentioned "insolation" in Senegal, but his cases were evidently cases of malaria. His patients did not show symptoms peculiar to siriasis, but had rigors, profuse sweatings, and renewed paroxysms within twenty-four or forty-eight hours. Barclay mentioned cases of "sunstroke" in South Africa, on the Fish River, but they were cases of syncope.

Asia.—Siriasis is found in Syria. An epidemic of it broke out in Jerusalem in 1868. It is common on the shores of the Persian Gulf. In India it prevails in the great low plains drained by the Indus and the Ganges, but it is unknown on the plateau which forms the southern part of the Peninsula. Siriasis is said to be prevalent in Lower Burma, in Tonquin, and along the southern and south-eastern coasts of China.

Australia.—It is found in the Riverina along the River Murray and on the coast of Queensland. It is said to occur also in the plains of Sydney.

Occurrences at Sea.

Siriasis is characteristically a land affection. It is extremely frequent in the months of August and September on board ships steaming through the Red Sea or stationed at places on its coasts. Indeed, 90 per cent. of all cases in the British navy occur in the Red Sea (Lloyd), the disease having been contracted while coaling or stopping along its coasts. In the Persian Gulf cases are also of frequent occurrence. H.M.S. *Liverpool*, during her passage from Muscat to Bushire in the summer of 1831 lost 3 officers and 30 men in one day (Wellsted).

Crews of ships in harbours have been at times severely attacked. The French warship *Duquesne*, while at Rio Janeiro, had 100 cases out of a crew of 600, and most cases occurred at night.

Very few cases have been recorded as having taken place on the open sea, and although the necessary period of incubation might account for them, they were mostly only cases of syncope, which is not uncommon at sea, especially among stokers, cooks, and stewards.

Epidemics.

The number of cases of siriasis varies greatly in consecutive years, quite irrespective of heat; and at times, under favourable conditions, siriasis has prevailed in an epidemic form.

In June and July, 1872, it raged in the middle Atlantic States of North America, and nearly 1,000 cases occurred in New York city. A most remarkable outbreak occurred in 1802 in the central States, within certain geographical limits east of the Mississippi.

Immunity.

New arrivals in the regions where siriasis prevails are far more liable to be attacked than natives or old residents. This fact has been repeatedly observed both in India and America.

In the march from Nuddea to Berhampore of Her Majesty's 13th Light Infantry, though it was chiefly conducted during the night, the effects were fatal in a remarkable degree to Europeans, while none of the natives were taken ill. The soldiers consisted of older men who had recently returned from the first Rangoon campaigns, and recruits but recently arrived from England. Both the sickness and the mortality were principally confined to the recruits.

But if natives and old residents are much less susceptible to the disease than strangers, they do not enjoy an immunity.

Perrier mentions the terrible disasters from siriasis among the fugitive Arabs in Algiers at the time of the French occupation. He says: "La fuite de la Zmala d'Abd-el-Kader en 1843 a fournie un exemple: 'à chaque gâte,' disent les Arabes, 'nous laissions un petit cimetière.'"

Although natives are at times severely taxed, yet the enormous difference in the numbers of new arrivals attacked shows beyond doubt that acclimatisation reduces the susceptibility to siriasis as it does to yellow fever and enteric fever.

Meteorological Conditions.

Heat.—The prevalence of siriasis, like that of enteric fever, cholera infantum, and other infectious diseases is closely connected with summer. But it is important to remark that this connection with the hottest season does not necessarily imply a connection with the highest temperature. Indeed, it has often been observed that the hottest days and the hottest years are not those in which the disease especially occurs, and again it is not always found in the warmest regions. In its Indian habitat, siriasis is usually expected to appear when for several days in succession the temperature has reached 96° F. and the air is still. But it has prevailed at much lower temperatures, while it is unknown in places with temperatures of 120° to 130° F. In the United States it becomes imminent during the summer in temperatures varying between 74° and 90° F. In August, 1896, it was noticed that siriasis prevailed in Boston when the average temperature of the day reached 82°, but in New Orleans, with the same temperature, that year there was no siriasis (Phillips).

Moisture.—Opinion varies considerably on the importance of moisture as a factor in the prevalence of siriasis. Some authors hold that much atmospheric moisture is essential to its occurrence, because of the fact that a damp atmosphere diminishes tolerance to high temperatures, but this is an *a priori* argument, founded on the supposition that heat is the primary cause of siriasis, and is contrary to all experience. In India siriasis is mostly prevalent in May and the first part of June when the atmosphere is hot and dry. It ceases during the rains, and appears again, though to a less extent, in September and October, when the air is loaded with moisture. In North America, in 1896, the disease occurred in the valley of the Mississippi, with a relative humidity above the average, but on the Atlantic coast with a relative humidity decidedly below the average. And, although the absolute humidity was greatest during the maximum of siriasis, yet its variations did not appear to influence the number of cases. The amount of moisture in the subsoil is of much more importance than the hygrometric condition of the atmosphere, and we know for certain that the disease always ceases after a heavy rainfall, even though the temperature return to its previous height.

Wind.—Many facts are on record which seem to indicate that the disease may be carried by the wind, and the Hindus call it "*Loo-marna*," which means hot-wind stroke.

Brunel writes that the malady is prevalent in the River Plate States even in spring, when the hot and damp north or north-east winds blow from the plains of Brazil. Lindesay says that siriasis appeared in Chunar, Central India, in 1833, when a burning hot wind set in suddenly from the west after a long spell of east winds, and that it ceased when the wind blew again from the east. Mouat observed it among British troops on the march from Calcutta to Berhampore, on the sudden setting in of an excessively hot wind; and likewise McGregor, in 1840, saw it in Kampi appear and disappear with the wind.

Predisposing Causes.

Age.—Siriasis attacks all ages. Children are quite as susceptible to it as adults, but the disease has often remained unrecognised, being mistaken for cholera infantum, enteritis, etc. One of the earliest recorded cases was that of the child of the Shunamite woman (2 Kings iv, 18 21). In the outbreaks of 1872 and 1892 in the United States children suffered severely.

Sex.—Siriasis, like tetanus, cerebro-spinal fever, and other similar diseases, is far more common in men than women owing to greater exposure. Amongst children, the number of males and females is about equal.

Occupation.—Siriasis is not confined to any particular trade or occupation, and certainly it is not more frequent amongst workmen exposed to intense heat. The selection of soldiers as most frequent victims has made the disease a familiar guest in army life.

Intemperance.—The question of the previous abuse of alcohol is one about which there is a wide difference of opinion, but there can be no doubt that habitual intemperance lessens the power of resisting disease.

Unsuitable Clothing and Accoutrements.—Authors have unanimously pointed to the influence of tight-fitting clothing and heavy accoutrements, which constrict the chest and obstruct circulation, as a most potent cause of sunstroke, but in all instances mentioned we find that syncope was the condition incurred, and not siriasis.

Over-fatigue.—Excessive bodily fatigue is generally considered the chief predisposing cause, and several instances are mentioned of regiments which suffered severely from siriasis during long forced marches under oppressive heat, but there are likewise many instances on record when regiments exposed to the very same conditions were entirely free from the disease.

The dreadful march of the 43rd Light Infantry from Jubbulpore to Calpee is mentioned by several authors for the purpose of showing the effects of excessive fatigue under exposure to intense heat. I gather from it very different information. The 43rd Light Infantry had been four months and thirteen days in the field, and had marched 969 miles before a single case of siriasis occurred. The disease set in with the hot land winds; it was most destructive in the ravines of Northern Bundel-

cund, where the regiment was obliged to encamp for several days. After that, although the march continued and the effects of fatigue augmented, siriasis greatly diminished, and at Banda no cases occurred.

In the American Civil War, when the troops were hurried along at a rapid rate of thirty-five and forty miles a day, although many soldiers fell out of the ranks from exhaustion, not a single case of siriasis occurred.

Very frequently regiments have been attacked in barracks. Officers have been struck while riding at a gentle pace in the marching column (Smart).

Overcrowding.—It has been frequently noticed in India that siarisis is more prevalent under conditions of overcrowding, defective ventilation, and filth. Of the cases occurring on board ship, the majority are among the third-class passengers on account of their worse accommodation.

Previous Illness.—Siriasis may occur in robust and healthy individuals, but again and again it has been observed that it attacks more especially those exhausted by previous infections. Very frequently it supervenes on malarial diseases. In such cases the comatose stage of siriasis appears suddenly without any preliminary indications just as cholera might do, and not as if the former symptoms were merely aggravated (Longmore). In the epidemic at Assouan (1887) patients suffering from enteric fever were attacked (Hunter). Most interesting are the cases which occurred in 1868 on board the Abyssinian hospital ship (Annesley Bay). From May 12th to June 4th 7 cases occurred. One patient was brought in from the camp at Zoulla, but 6 cases happened on board ship in patients convalescing from dysentery and diarrhœa. It is important to note that no cases occurred in the cookhouse, with a temperature of 130° to 150° F., or amongst the firemen in the engine room with a temperature of 130° F., while they took place on the lower-after hospital deck in a temperature of from 82° to 90° F.

Mode of Infection.—The specific organism of siriasis is probably spread in the superficial layers of the soil, like other pathogenic micro-organisms, and may be conveyed to man with dust blown by the wind or thrown up under the tread of a marching column. It is then inhaled into the lungs, or ingested into the alimentary canal, where it produces the deadly toxin which probably, as in cholera, becomes absorbed and sets up the symptoms of the disease.

DIAGNOSIS.

Siriasis has marked characteristics, and now that we have a clear sketch of its symptoms it should not be confounded with syncope, alcoholic coma, cerebral hæmorrhage, and epilepsy. But there are two diseases with which it may be easily mistaken: cerebro-spinal fever and pernicious malaria.

Cerebro-spinal Fever.—Cerebro-spinal fever may closely simulate siriasis. In cerebro-spinal fever an early, frequent, and important symptom is the painful stiffness of the muscles of the neck; the patient lies with the body rigid and the head drawn back. The pupils may be contracted, but they are usually dilated or unequal. Strabismus is a frequent and important symptom. Herpes is very common. Cerebro-spinal fever begins with a chill which may recur several times in the course of the illness. In some cases the temperature may run as high as 106° or 108° F., but it usually averages from 101° to 103° F.; its characteristic in this disease is irregularity. The respirations are often increased in frequency; in the graver conditions breathing becomes embarrassed but not stertorous. Profound coma is exceptional, and delirium is always present at some stage of the disease. Constipation is the rule, and the urinary secretion is normal in quantity notwithstanding the fever. Foudroyant cases may end fatally in a few hours, but ordinary cases last from one to three weeks. Cerebro-spinal fever prevails mostly in temperate regions, and is more frequent during the colder months.

Many of the cases put down to sunstroke in England and France were undoubtedly cases of cerebro-spinal fever; take, for example, the cases described by Donkin[5] in 1888, some of those described by Bullar[6] and Strange[7] in 1868, by Armitage in 1881,[8] those reported by Ducleaux in 1859.[9]

Pernicious Malaria.—Manson and others have described a comatose form of malaria which greatly resembles siriasis. I am strongly inclined to believe that many of the cases reported as malaria in China and India were really cases of siriasis, but undoubtedly pernicious malaria may closely simulate this disease, and the diagnosis may be almost impossible, especially when the two conditions are found concomitant in the same patient, as not infrequently occur. Pernicious malaria never occurs with the first attack, but shows itself in the second or third. Rigors usually precede the paroxysm.

CONCLUSION.

I know the title of this paper will startle many, but what I think most surprising is that siriasis should have remained so long in the domain of astrology. I have endeavoured to extricate it from the confusion in which it was enveloped, and I hope I have succeeded in giving a clear and correct sketch of the disease, and of the conditions under which it prevails. To have a correct notion of the etiology of any disease is undoubtedly important, but in the case of siriasis it is especially so, because this malady has been used as the strongest argument to prove some of the most hypothetical theories on fever, and, in another field, the noxious influence of a tropical climate.

NOTES AND REFERENCES.

[1] The ancients called it siriasis because of its prevalence during the hottest season, when Sirius, the dog star, rises and sets with the sun, and they called it siriasis Ægyptiaca because they had observed it in the valley of the Nile and on the coasts of the Red Sea. [2] See Kelsch, *Bull. Acad. de Méd.*, Paris, 1895, 3 s., xxxiii, 168-176. [3] In 114 *post-mortem* examinations of soldiers dying at Netley Dr. Davidson found 22 cases of atheroma of the aorta, *Army Med. Dept. Repts.*, vol. v, p. 481. Dr. Lawson calculated that aneurysm was eleven times more frequent among soldiers than civilians. On the effect of exertion in war in causing cardiac hypertrophy, see Dr. Fräntzel's paper in *Virchow's Archiv*, Bd. lvii, p. 215. [4] This example has been frequently mentioned by authors, but erroneously, because they say: "The French army lost 2,000 men out of a force of 12,000." thus conveying the idea that 2,000 men died on that day of sunstroke. [5] *Westminster Hospital Reports*, 1888, iii, 163-169. [6] BRITISH MEDICAL JOURNAL, August 22nd, 1868. [7] *Ibid.*, August 29th. [8] *St. Bartholomew's Hospital Reports*, 1881. [9] *Comptes Rendus de l'Acad.*, 1860, i, 543.

ERASMUS WILSON LECTURES

ON

THE PATHOLOGY AND TREATMENT OF THOSE DISEASES OF THE LIVER WHICH ARE AMENABLE TO DIRECT SURGICAL INTERFERENCE.

Delivered at the Royal College of Surgeons of England.

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LECTURE III.

TRAUMATIC AFFECTIONS OF THE LIVER.

NON-PERFORATING.

A NON-PERFORATING injury may cause a solution of continuity in the hepatic tissue, together with the overlying portion of Glisson's capsule, or the injury may simply affect the hepatic tissue proper, the capsule remaining intact. When the capsule escapes the injury is called a contusion, and when it is involved it is called a rupture or laceration. Ruptures may be partial or complete, according to whether a portion is partially or completely separated from the rest.

The severity of the injury depends to a certain extent upon the condition of the liver tissue at the time of the injury. When the liver is hard and slightly cirrhosed, or more fibrous than usual, it is able to withstand the application of a physical force more easily and without suffering much damage; but when the gland has undergone fatty or amyloid degeneration, or is engorged with lymph and blood, and hence is much softer than usual, severe ruptures or contusions are very readily induced. Infiltration of the liver by a malignant growth or the presence of a hydatid cyst act as predisposing causes when the liver is exposed to mechanical injury. In the latter cases the bulk of the liver is much increased, and hence there is a larger area of the abdominal and thoracic walls to which violence may be applied and cause an injury to the liver. The fibrous tissue which forms the capsule of Glisson assists the liver to withstand slight injuries.

Direct Violence.—A blow with the foot or fist, a kick from a horse, a fall against an obstacle, or a blow in the hepatic region with a blunt body, such as a log of timber, are examples of this form of injury. Injuries of this kind vary in their effects according to the strength of the mechanical

force, the suddenness with which it is received, and the part of the hepatic area to which it is applied. Thus, if the violence is not severe and the abdominal muscles have time to contract, little or no injury is produced; but if the force is considerable and is suddenly applied, so that the abdominal muscles have no time to prepare for its reception, an injury is caused which may be anything between a small subcapsular contusion and the complete separation of one lobe of the liver from the other. The damage to the liver is usually less when the thoracic wall is the seat of the reception of the injury; in old people, however, in whom the ribs and costal cartilages are brittle, a severe blow upon the thoracic part of the hepatic area may cause fracture of several of the ribs, the extremities of which may be driven inwards so as to pierce the diaphragm and cause a severe and extensive laceration of the liver. In cases of this kind the pleura and lung are also damaged, and complications, such as pneumothorax and surgical emphysema, are induced. In young people fracture of the ribs, with laceration of the liver, rarely occurs as the result of a non-perforating injury, since the costal arches are very elastic, and it is with difficulty that they are fractured by a mechanical force.

Indirect Violence or Contrecoup.—This is generally due to a fall from a height, the patient alighting upon his feet, knees, or head. When the fall is upon the feet or knees, the rupture usually affects the upper part of the liver, and is associated with tearing of the suspensory and lateral ligaments, whilst in rare instances the inferior vena cava is torn through immediately below the diaphragm. The inferior aspect of the liver may be ruptured, owing to contraction of the diaphragm. The possibility of this must not be forgotten when an injured liver is being treated surgically. According to Heinzelman, out of a series of 151 cases of rupture of the liver, 52 were caused by indirect violence.

Pressure.—A patient may be knocked down or falls down, and the wheel of the vehicle passes over the hepatic region of the trunk. The liver is then compressed between the costal arches in front and the vertebral column behind, and a rupture results, the laceration of the hepatic tissue being most commonly in an antero-posterior direction, and in the region of the suspensory ligament of the longitudinal fissure. Other causes of rupture owing to pressure are buffer accidents, as when a patient is crushed between the buffers of two railway wagons, or he is crushed between a cart and a wall, or between two heavy bodies. In these cases there is usually no sign of external injury, although superficial bruising may be apparent. Ruptures of the liver which are due to pressure are generally severe, and often prove fatal.

Muscular Contraction.—This is rare. In one case (specimen shown) a large subcapsular hæmorrhage, was produced by a muscular contraction in a fit of vomiting, in a woman well advanced in pregnancy. Taylor has recorded the case of a man in whom a rupture of the liver was caused by a violent muscular effort made to evade the kick of a horse. Chiari mentions a patient with carcinoma of the liver, in whom a rupture of the liver occurred as the result of the muscular contractions necessary for turning in bed. This case, however, may have been due to a blow which was not noticed.

Situation of Rupture or Contusion.—The rupture or contusion is usually situated in the right lobe; in my list of 24 cases the right lobe was alone involved 16 times, the left lobe alone twice, the median portion twice, and both lobes twice. In Meyer's list of 85 collected cases, 54 ruptures were located in the right lobe, 21 in the median portion, and 10 in the left lobe, whilst in Ogston's list of 26 cases 11 were in the right lobe, 9 in the median portion, and 6 in the left lobe. In some cases the most protected part of the liver is the portion which is injured; this is due to doubling of the gland upon itself. This is especially the case when the upper and posterior portions of the right lobe are ruptured as the result of external compression.

Treatment.

The plan of treatment which ought to be adopted in dealing with injuries of the liver or abdominal injuries in which the liver is probably involved depends upon the character and severity of the injury, and the amount of internal hæmorrhage which takes place. In most cases the first treatment is that which has for its object the abatement of the symptoms of shock and collapse. The patient should be placed in bed and kept absolutely quiet, warmth applied, and, if the pulse is feeble, hypodermic injections of strychnine should be given. It is not advisable to administer either alcohol or ether, since both these substances dilate the small blood vessels, and tend to increase any hæmorrhage which may be taking place. After the patient has recovered from the shock and collapse, and there are no signs of internal hæmorrhage, or symptoms of injury to the abdominal part of the alimentary canal, rest in bed and careful nursing will often be followed by recovery. During the early stages it is not advisable to give highly nitrogenous foods, especially those which contain an excess of extracts, such as beef tea, since they throw increased physiological work on the liver.

When signs and symptoms of hæmorrhage into the peritoneal cavity develop and gradually or quickly increase, immediate recourse must be had to surgical operation. The sooner this is performed the greater are the chances of recovery of the patient. The patient, if he is not unconscious, should be anæsthetised, and the hepatic area rendered aseptic by the usual measures. The abdomen is then opened by making an incision either in the upper part of the linea alba or in the right linea semilunaris, usually the former. When the signs point distinctly to injury of the right lobe of the liver the incision should be made on the right side. The incision should be 4 inches or more in length, and should commence either at the ensiform cartilage or at the ninth costal cartilage. All hæmorrhage from the vessels in the abdominal wall should be arrested before the search for the seat of internal hæmorrhage is commenced. When this has been done an attempt is made to locate the source of hæmorrhage. All blood or other fluid should be removed from the exposed part of the peritoneum by careful sponging and the source of the blood traced. If the blood appear to come from the liver or a rupture of the liver at once become visible, the bleeding should be temporarily arrested, either by applying sponge pressure to the wounded area or by compression of the hepatic vessels as they lie in the gastro-hepatic omentum. Often it is advisable, when the blood appears to come from the liver, at once to apply pressure to the hepatic artery and the portal vein. This can be done either by passing the hand underneath the inferior margin of the right lobe, placing the forefinger in the foramen of Winslow, the thumb in front of the lesser omentum, and applying pressure, or by using an instrument such as the one I have here (Fig. 1). This instrument I have used in my later experiments upon dogs, and have found it very serviceable. It does not take up so much room as the hand, and is more efficacious in controlling the circulation. In order to apply it to the portal vein and the hepatic artery the blades are separated; the distal one is placed in the foramen of Winslow, the proximal is put in front of the gastro-hepatic omentum, and then the two are approximated until the circulation in the compressed blood vessels is arrested. When the hepatic circulation has been controlled, all traces of blood are removed by careful sponging and the extent of the injury made out. If either the anterior or the inferior portions of the liver are found to be the seat of injury and the site of hæmorrhage, it will generally be possible to at once deal with the damage through the abdominal wound. It may, however, be necessary to enlarge this incision in a vertical direction, or to make a second incision in the abdominal wall at an angle to the upper extremity of the vertical one. When the rupture extends to the



Fig. 1.—Compressor of Hepatic Vessels.

superior surface it may even be necessary to remove portions of the exposed costal cartilages in order to render the rent in the hepatic substance accessible for the application of sutures. In every case the damaged portion of the liver must be brought as far into the abdominal wound as possible. This may be facilitated by one assistant exerting pressure in a forward direction from the right lumbar region so as to lift up the organ, and a second assistant rotating it slightly from the front. The intestines should be carefully covered with flat marine sponges and kept out of the way. The repair of the rupture in the liver may now be proceeded with. The ruptured surface is carefully sponged so as to remove all blood clot, and any blood vessels which are visible on the surface of the wound are picked up with forceps and ligatured with silk. Next the pressure on the vessels in the portal fissure is relaxed, so as to make sure that a large branch of the hepatic artery or portal vein has not escaped observation.

When this has been done the margins of the rupture are brought into exact apposition, and fixed by the insertion of a series of sutures. The suture material should be medium sized silk: catgut is more liable to slip, and gives rise to secondary hæmorrhage. A fully curved Hagedorn's needle with a blunt point should be used for inserting the sutures. If too sharp a needle be used the hepatic vessels may be pierced and hæmorrhage take place from them along the sutures. Each suture should enter the liver tissue about one-third of an inch from the margin of the rupture, pass through the liver tissue to the bottom of the wound, and then through the liver tissue on the opposite side until it emerges at a point one-third of an inch beyond the other margin. These sutures should be introduced at intervals of one-quarter of an inch, and all should be inserted before any are tied. When all the sutures have been inserted they are carefully tied and their ends cut short. Great care is requisite in tying the sutures, otherwise they cut through into the wound. This is avoided by only tightening them sufficiently to hold the margins of the rent in apposition. Further injuries are now sought for, and if found treated in a similar manner. The area of operation is then sponged dry, and the artery compressor which controls the circulation in the hepatic artery and portal vein relaxed and removed if no further hæmorrhage occur. The sponges are now removed from the peritoneal cavity, and the exposed viscera examined for injury. If none is discovered and there is no sign of hæmorrhage, the margins of the abdominal wound are approximated and fixed in apposition by careful suturing. If slight hæmorrhage or oozing occur from the margins of the rupture or the suture apertures in the liver, a strip of aseptic gauze should be carefully packed over the bleeding part and one end brought out of the abdominal wound, a small part being left open for the purpose. This will usually arrest slight hæmorrhage; it is withdrawn at the end of twenty-four or thirty-six hours, when the wound is dressed.

I have made a considerable number of experiments in order to test this method of treatment, and with one exception have had good results. In one animal, however, in which I used catgut as the suture material some of the sutures gave way, and the animal died from intraperitoneal hæmorrhage. This may have been due to defective suturing on my part, but as far as I know I took the same precautions as when I used silk. Martin has recently reported a case of rupture of the liver which he successfully treated by immediate laparotomy and suture.

When the injury to the liver is extensive, and it is not possible to bring the margins of the rupture together, the best method of treatment appears to be ligature of all accessible bleeding points, and then careful packing of the entire injured area with long strips of aseptic gauze. This method of treatment will be required in those cases of injury in which the liver tissue is very friable, and also when, owing to the position of the rupture, it is not possible to gain access to its deepest part; this especially is the case when the convex surface is damaged and rupture extends far back underneath the diaphragm.

When a portion of the liver is completely detached, the shock and collapse will usually be fatal. This is a specimen in which a portion of the liver has been separated as the result of an injury, and become adherent to a coil of intestine. The patient lived for ten days after the accident. It seems possible, however, if the left lobe is the part detached, that opening the abdomen as soon as possible after the reception of the injury, and the adoption of treatment based upon the principles which I have just discussed, may in favourable cases terminate in recovery.

In order to control hæmorrhage when the extremity of the left lobe is the seat of the rupture, it will be sufficient to pass an elastic ligature around this portion of the liver, and tighten it until the circulation in the blood vessels of the part is arrested.

Penetrating Wounds.

Some wounds, such as a stab with a penknife, may be small and only penetrate the superficial part of the liver, whilst others, such as those produced by a bayonet, or wounds which have been inflicted with a homicidal intent, may be wide and pass through the greater part of one lobe, and divide large branches of the hepatic artery or portal vein, or even the inferior vena cava. The late President of the French Republic suffered from an injury of this nature.

Gunshot wounds differ considerably in severity owing to the varying size of projectiles. In some cases there is only a slight superficial grazing or grooving of the peritoneal and fibrous coverings of the liver, whilst in others there may be deep perforations and extensive lacerations which involve the greater part of one lobe, or even both lobes. These differences are due to the size, shape, velocity, and direction of the projectile which causes the injury. According to Otis, when a projectile is discharged from a firearm in the immediate neighbourhood of the person injured, a considerable and widespread laceration is the invariable result, even when the ball is discharged from a pistol or a rifle. Gunshot wounds of the liver are usually complicated by other viscera being injured at the same time.

Treatment.

When a patient is suffering from a wound in the hepatic region, and the symptoms point to an injury of the liver, the locality of the injury should be very carefully examined, and any surgical treatment which is necessary carried out without delay. The patient should be anæsthetised, and the external wound, if necessary, enlarged until the full extent of the damage can be made out. The main precautions which are to be observed are similar to those which have been recommended in connection with ruptures. Hæmorrhage should be controlled, and then arrested by the application of ligatures. The wound is closed by the insertion of a series of sutures. In the case of deep wounds it may be impossible to reach the bottom. When the injury is due to a bullet or other foreign body, and this remains within the liver, an attempt should be made to remove it with forceps; the track which it has made is then carefully irrigated and packed with strips of gauze. Packing with gauze will in most instances arrest hæmorrhage, except when one of the larger hepatic vessels has been injured. In this case, if packing does not suffice for the arrest of the hæmorrhage, the wound must be enlarged and the bleeding vessels picked up with artery forceps and ligatured.

An interesting case of this kind has recently been reported by Schlatter. A man, aged 20, was stabbed in the hepatic region of the abdomen. The liver was injured, and the transverse colon and great omentum protruded from the external wound. Three hours and a-half after the infliction of the injury the external wound was enlarged. The liver was found to be the site of a penetrating wound from which hæmorrhage was proceeding. The wound was sponged clean, the deep parts united by two buried catgut sutures, and the superficial parts fixed in apposition by the insertion of a row of silk sutures. The peritoneum was sponged dry, and the wound in the parietes closed by three tiers of suture. The patient recovered. A similar case has also been reported by Ruepp.

Injuries of the liver are frequently followed by the development of serious complications. The most important of these are the formation of an abscess, the occurrence of peritonitis, and the occurrence of secondary hæmorrhage. An abscess should be treated in the manner advised in my first lecture; peritonitis requires abdominal incision, irrigation, and drain-

age; whilst secondary hæmorrhage can best be combated by careful tamponade of the bleeding area. It is usually impossible to find the bleeding vessels in cases of secondary hæmorrhage. Secondary hæmorrhage from the liver is generally fatal. Injuries of the liver are frequently complicated by the occurrence of injuries to other abdominal viscera. These, if they are discovered, are treated by appropriate surgical measures at the time of the operation upon the liver.

Prognosis and Results of Operations.

The prognosis in injuries of the liver has improved considerably, since it has been considered possible to treat them by ordinary surgical measures.

I have been able to collect from surgical literature 25 cases of rupture of the liver which have been treated by a surgical operation; 16 of these terminated fatally, and 9 recovered. Terrier and Auvray state that in their list of 11 cases 6 recovered and 5 died. The time of operation appears to have an important bearing on the success of an operation for a rupture of the liver. The earlier this is performed the greater is the prospect of recovery.

Concerning perforating wounds of the liver which were submitted to operation, the prognosis appears to much better advantage than in the case of non-perforating ones. Thus in Terrier and Auvray's list of 34 cases 25 recovered and 9 terminated fatally. Of these 20 were incised wounds due to stabs or bayonet wounds, 15 recovered and 5 were fatal, whilst 14 were gunshot wounds, and of these 9 recovered and 5 were fatal.

Resection of the Liver.

By the term resection of the liver is understood the removal of a portion of the liver by a surgical operation. This is quite a modern operation, and it is only during the last ten years that surgeons have performed operations with the object of removing pathological growths from the liver. According to Keen, up to the present time 59 cases have been recorded, in which a portion of the liver has been removed.

In all operations upon the liver hæmorrhage from the hepatic blood vessels has been a source of trouble, and in some cases it has been the cause of death. In order to control hæmorrhage or to avoid its occurrence during removal of a portion of the liver, a number of different procedures have been devised.

I shall first deal with the control and arrest of hæmorrhage from the hepatic tissue, and then consider the separate forms of operation. There are five methods of dealing with hæmorrhage which may be employed:—

1. *Ligatures to the Cut Extremities of the Hepatic Vessels.*—Liver tissue, in which some of the blood vessels have been divided, tends to bleed freely, and so obscure the points from which the hæmorrhage is taking place. This renders the application of a ligature difficult. Firm sponge pressure on the bleeding part will, however, usually enable the surgeon to see the bleeding points, and seize them with artery forceps. The veins in the hepatic tissue have walls which are as resistant as those of the arteries, a circumstance which facilitates the application of ligatures. When the bleeding points have been picked up ligatures are applied. Floss silk of medium thickness should be used for the purpose, and each knot should be tied slowly and firmly. Too much force must not be exerted, otherwise the hepatic tissue and vessel will be cut through. This also occurs if the silk be too hard or too fine. In some cases it is advantageous to pass a ligature under the vessel with a needle. In this case the point of the needle should be blunted, otherwise it may pass through other blood vessels and cause fresh hæmorrhage. When large branches of the hepatic artery or portal vein are cut through, the hæmorrhage is severe and difficult to control by sponge pressure.

2. *Packing with Tampons or Strips of Aseptic Gauze.*—This is a valuable method of arrest of hæmorrhage when only small vessels are cut or torn through, but when large vessels are involved it is of little use. In arresting hæmorrhage by this method the bottom of the wound should be carefully packed with strips of gauze; this packing is continued until the entire wound is filled, and then firm pads are fixed in position over the incised portion with a bandage.

3. *Cautery.*—Paquelin's cautery has been used most frequently for this purpose, but a cautery iron, heated to a dull red heat, is more satisfactory. One objection to the use of a cautery is the necessary destruction of a layer of hepatic tissue. This must separate before healing of the affected parts can take place. This is not a very satisfactory method, as it fails to arrest hæmorrhage from large vessels, and it is difficult in its application. It is most useful in the incision of a deep-seated hepatic abscess, since the cauterised surface prevents absorption of septic matter as the pus escapes from the interior of the abscess. This method has been used by Keen for making an artificial pedicle to a tumour in order to apply an elastic ligature. When a Paquelin's cautery is used for incision of liver tissue it should be at the lowest dull red heat possible.

4. *The Elastic Ligature.*—The elastic ligature has been employed both for the temporary control of hæmorrhage and for the constriction of tumours which have either a normal or artificial pedicle. When the amount of liver which it is wished to constrict is large, a blunt cannula should be passed through the middle of the base of the tumour and a rubber tube drawn through. The pedicle can then be constricted in two halves. An objection to the use of the elastic ligature for the constriction of tumours, and the promotion of their separation by gangrene, is that the operation must be extra-peritoneal and the stump be left in the wound. When a tumour has been treated by elastic constriction and it has sloughed off, the base of the stump which remains usually takes a long time to heal.

5. *Compression of the Hepatic Artery and the Portal Vein in the Gastro-hepatic Omentum.*—This may be effected either by digital compression, the forefinger being placed in the foramen of Winslow and the thumb in front of the lesser omentum, or by the application of a compressor after the style of the one which I have devised, or by perforating the lesser omentum and applying a temporary ligature to the hepatic artery and portal vein. The safest and easiest of these methods is the application of the compressor. I have made a number of experiments to test the relative value of the different methods, and find that this is the most reliable and is moreover less likely to cause damage to the structures compressed. From a consideration of all these methods of controlling and arresting hæmorrhage during and after operations upon the liver, and in the treatment of hepatic injuries, I think that the best methods are the application of temporary pressure to the hepatic artery and portal vein as they lie in the hepatic omentum, and ligature of the separate vessels which are cut across.

Removal of Tumours.

1. *The Elastic Ligature.*—In this operation the abdomen is opened by making a vertical incision over the prominent portion of the hepatic tumour. The tumour with the adjacent portion of the liver is brought well into the wound, and fixed in this position by the insertion of a ring of sutures. Each suture passes through the abdominal wall and through the hepatic tissue immediately beyond the diseased part. When the liver has been fixed thus, an elastic ligature is applied to its base and tied tight enough to arrest the circulation in the part distal to the line of application of the ligature. Aseptic dressings are applied. This ligature causes gangrene of the tumour and the portion of liver beyond the ligature. At the end of ten days or less the gangrenous mass can be separated. The base of the stump will then heal up by granulation. Strict care must be taken to prevent the dead tissue becoming septic, otherwise suppuration will occur and give rise to unpleasant results. Many tumours of the liver cannot be treated by this method owing to the fact that they are embedded in the liver and have no distinct pedicle. In order to obviate this difficulty Keen proposes that a deep groove should be made in the hepatic tissue surrounding the tumour with the knife of a Paquelin's cautery. An elastic ligature is then applied at the bottom of this groove, and the parts are well packed with gauze. Keen has recently reported a case which he successfully treated in this manner.

2. *Fixation of the Affected Part of the Liver in the Abdominal Wound, and Removal at a Later Period.*—In this operation the abdominal cavity is opened by an incision over the hepatic tumour. The tumour and the adjacent parts of the liver are brought into the parietal wound, and fixed there by the insertion of a ring of sutures as in the preceding operation

Aseptic dressings are then applied. After the expiration of several days (three to five) the removal of the tumour is carried out. It may be removed either with a knife or with a Paquelin's cautery by cutting through the base of the tumour. As the liver is cut through, and the diseased part removed, the cut surface should be covered with a sponge, and pressure applied, so as to arrest temporarily any hæmorrhage which may occur, and also prevent the entrance of air into the intra-hepatic veins. When the portion of liver has been detached the sponge pressure is relaxed, and all bleeding points on the cut surface ligatured with silk. When all hæmorrhage has been arrested the cut surface is sponged dry, and aseptic dressings are applied. The wound which is left heals up by granulation. This often takes a long time, and a sinus from which bile is discharged may remain.

3. *Dissection of the Tumour or Cyst from the Liver: Suture of the Hepatic Wound, and Closure of the Parietal Wound.*—Tumours of the liver which are encapsuled, such as adenomata and some forms of hydatid cysts, may be separated from the liver by careful dissection. When this has been done the margins of the wound in the liver are brought into apposition, and fixed by the insertion of a series of silk sutures. The external wound is then closed in the usual manner.

4. *Excision of the Diseased Portion of the Liver by a "Wedge-shaped Incision."*—The operation is performed thus: The abdomen is opened and the diseased portion of the liver exposed. The circulation in the hepatic artery and portal vein is controlled by the application of pressure to the gastro-hepatic omentum. When this has been done the diseased portion is brought out through the parietal wound and surrounded with flat marine sponges. The liver is now incised by making an incision around the tumour. This incision is deepened in such a manner that the two sides of the incision meet one another in the substance of the liver beyond the tumour. The piece of liver with the tumour thus separated is now removed. It has the form and shape of a blunt wedge, and the wound which is left after the removal of the diseased portion presents two surfaces which can easily be brought into apposition in a manner similar to that in which the flaps of an amputation are approximated. The blood vessels which have been divided are now picked up with artery forceps and ligatured with silk. These vessels can be recognised by their open mouths. When all visible vessels have been ligatured the pressure on the blood vessels in the portal fissure should be gradually relaxed, and any further bleeding points which become apparent should be picked up and ligatured. The margins of the hepatic incision are now brought into apposition and fixed by sutures. When the wound is deep it may be necessary to unite the deeper parts by buried sutures, but usually this is not necessary. The sutures should be inserted with a blunt-pointed fully curved Hagedorn's needle. Each suture should enter the liver tissue one-third of an inch from the margin of the wound, pass to the bottom, and then through the tissues on the opposite side. The sutures should be inserted at intervals of one-quarter of an inch, and all should be introduced before any are tied. When all have been inserted they are tied and the ends cut short. Each suture is tied tight enough to hold the margins of the incision in apposition, but not tighter, otherwise it is liable to cut out. The stump of liver tissue is now sponged dry and returned into the peritoneal cavity. The protecting sponges are then removed, and the abdominal wound closed in the usual manner. If there is much oozing from the suture apertures in the liver tissue, it may be advisable to pack the area of the wound with a long strip of gauze, one end of which is brought out through the parietal wound, a small part of which is left open for the purpose. This, however, will generally be avoided if a blunt-pointed needle is used for inserting the sutures.

Indications.

The clinical conditions which may be considered to indicate the performance of a surgical operation for the removal of a portion of the liver are as follows:

1. Carcinoma of the gall bladder, in which the disease has not extended beyond the gall bladder and the adjacent portion of the liver, and there are no signs of secondary growths either in other parts of the liver or in other viscera.

2. The presence of a localised non malignant tumour of the liver, such as angioma, angio-fibroma, fibroma, or adenoma, which is increasing in size and is giving rise to trouble.

3. The presence of a localised hepatic tumour which is due to a mass of echinococcus multilocularis.

4. Congenital hernia of a portion of the liver in which the herniated portion cannot be returned within the abdomen.

5. Sarcoma, primary in the liver, occasionally occurs, and has been treated by excision. In one case the patient was alive two years afterwards, and in the other the disease recurred in a few weeks, and the patient died.

Primary carcinoma of the liver is exceedingly rare. If it is in the form of a localised tumour, an attempt may be made to remove it.

The liver is frequently the seat of secondary malignant growths; it is, however, a contraindication against the performance of a surgical operation for their removal.

When a tumour of the liver is under consideration, and there is a possibility that it may be due to syphilis, an operation should not be attempted until a course of antisyphilitic treatment has been tried, and failed. If by any chance the abdomen has been opened, and a tumour of the liver has been found to be a gumma, the wound should be at once closed, and no attempt at removal made. Antisyphilitic treatment should then be adopted.

In doubtful tumours in the hepatic region which do not improve under a course of antisyphilitic treatment, it is advisable to open the abdomen and make an examination of the tumour. No harm can be done if the strictest aseptic precautions are observed, and often much valuable information as to the condition of affairs may be obtained. When the tumour is found to be suitable for removal, the operation is proceeded with, and when it is found to be syphilitic or to be a secondary or a multiple malignant growth, or on account of its size and connections removal is not practicable, the wound should be at once closed.

Prognosis.

Of the 59 cases of removal of portions of the liver which have been recorded in surgical literature and collected by Keen, the operation has been performed for hydatids 14 times, for tumours syphilitic in character 11 times, for carcinoma 10 times, for adenoma 6 times, for angioma 5 times, for sarcoma 4 times, and for endothelioma, cystoma, angio-fibroma, and calculi each once. Of these cases 49 recovered, 9 terminated fatally, and in 1 the result was not known. The cause of death in 7 cases was shock, hæmorrhage, and exhaustion, and in 2 it was septicæmia.

I have made a considerable number of experiments upon animals with the object of ascertaining which is the most satisfactory method of removing a portion of the liver. The result of these experiments has been to show that in animals the best and safest method is that by the wedge-shaped incision which I have described, and intraperitoneal treatment of the stump. If care be taken to have a reliable assistant, and to properly control the circulation in the hepatic artery and the portal vein, removal of a portion of the liver can be carried out almost bloodlessly. I have, however, had no experience of Professor Keen's modification of the elastic ligature. I think that in this method there is a greater liability to the occurrence of hæmorrhage than by incision, and there are also the dangers of sepsis in connection with gangrene of the constricted part.

Amount of Liver which may be Removed.—In animals I have several times removed half the liver without producing any ill-effects. If, however, two-thirds or more of the organ are taken away the operation is usually fatal. Ponfick has made a similar series of experiments, and has come to like conclusions.

Regeneration of Liver Tissue.

The liver tissue appears to be regenerated by a new formation from the part of the organ which remains. If half the liver of the animal be removed, and it be killed at the expiration of two months the liver has regained its ordinary size.

From the series of experiments which I have made upon animals, and a study of all the recorded cases of removal of portions of the liver in man, I have come to the following conclusions, namely:

1. That the dangers of hæmorrhage after removal of portions of the liver have been much exaggerated.

2. That the best method of controlling and arresting hæmor-

rhage from liver tissue after it has been incised or torn is by temporary compression of the blood vessels in the gastro-hepatic omentum, and then ligature of the divided vessels.

3. That when the liver is the seat of growths such as I have mentioned a surgeon ought to be prepared to carry out an operation for their removal.

4. That the mortality which will result from operations of this kind is not greater than in many of the recognised abdominal operations, such as resection of the intestine.

THE HYDERABAD COMMISSION: A REJOINDER TO DR. LAUDER BRUNTON.

By LEONARD HILL, M.B.,
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Two Commissions were appointed by His Highness the Nizam's Government to examine into the alleged dangers of chloroform. The first Commission "was applied for by Surgeon-Major Lawrie because having always believed in the truth of Syme's teaching that chloroform can be used judiciously so as to do good without the risk of evil, he desired to show by experiments upon dogs that in death from chloroform the respiration always stops before the heart."[1] This Commission determined "that secondary syncope has no more real existence than primary syncope. In poisoning by chloroform the heart fails when the respiration ceases and never before. With the cessation of respiration the further accumulation of the drug in the blood necessarily ceases, and the heart rapidly or gradually stops beating as a direct result of the stoppage of respiration."[2] "This point having been proved, the second Commission was applied for because it was felt that Syme's principles, which both experience and experiment had shown to be practically sound, must be founded upon a firm physiological basis."[3] His Highness the Nizam's Government desired to offer £1,000 to the Editor of the *Lancet* to send a representative to Hyderabad to repeat and continue the experiments of the Hyderabad Chloroform Commission.[4] The Nizam's Government had "been advised that if the experiments are continued and amplified by the Hyderabad Commission associated with a trained scientist whose position and attainments will ensure the acceptance of his opinions by the profession the subject might be threshed out thoroughly, and the question whether chloroform does or does not affect the heart directly might be settled once for all."[5] The *Lancet* appointed Dr. Lauder Brunton as their representative. In announcing this appointment the *Lancet* fully recognised that "the question whether chloroform paralyses the heart or not is one of the greatest possible practical importance, for upon its correct solution the lives of thousands of people and the happiness of thousands of families may depend. Both in Europe and America," the *Lancet* continues, "clinical experience and physiological experiments have led to the conclusion that it has a paralysing effect on the heart, while ether exerts such an action in a very minor degree, if at all. It is almost impossible to believe that the conclusion at which European and American surgeons and scientists have arrived is, after all, destitute of foundation and little better than an idle dream."[6]

In Dr. Brunton's reply, in the British Medical Journal of March 5th, to my "accusations" he states that he had less than a fortnight in which to collect apparatus. "I reached Hyderabad," he says, "on the evening of October 21st, and the Commission began work without apparatus on October 23rd, with apparatus on the 25th, and continued until December 18th. I had in all less than a fortnight in which to collect the equipment of the laboratory, four days in which to fit it up, and (Sundays being excluded) forty-seven days in which to do the work with the apparatus." In the offer to the *Lancet* it is stated that "the gentleman selected should take a return ticket for three months, to be extended if necessary." We learn from these statements two things:

1. That 47 days' work was sufficient to give "the direct denial" to the "conclusion at which European and American surgeons and scientists had arrived."

2. That His Highness the Nizam's Government was advised that original scientific research work, like any other public work, could be done by contract in seven weeks.

We may also infer with some justice from Dr. Brunton's statement, that the work of the first Commission was carried out without apparatus or the proper equipment of a laboratory. It is a curious excuse to bring forward in defence of deficiencies that the work of scientific investigation was done in a hurry. Why, then, if "with the exception of time nothing was left to be desired," was not the three months' ticket extended? Every trained scientist is aware how impossible it is to undertake to carry out an investigation in a given time. Weeks slip by before the best methods of observation and the most fruitful line of research is determined upon, and years of training do not lessen this hindrance that meets one when tackling any fresh subject in that vast and unknown field the study of life. Surgeon-Lieutenant-Colonel Lawrie himself states that "the Hyderabad Commission did not discover the key to the safe administration of chloroform until they had made observations upon 565 animals, and had reached their 148th manometric experiment."[7] Now the total number of manometric experiments recorded is 186, and near the end of the research Dr. Brunton was unfortunately absent for some time owing to an attack of dysentery.

Had Dr. Brunton been allowed to carry on his research quietly and at his leisure in London, equipped with all the best apparatus and aided by the suggestions and criticisms of English scientific societies, I cannot help thinking that his results would have greatly advanced our knowledge of chloroform syncope. At this point I will take the opportunity of saying that I never intended any attack that I have made upon the conclusions of the Hyderabad Commission as a personal attack upon Dr. Lauder Brunton, for whose work I naturally have the highest appreciation. One can hardly be expected to have imagined that the whole Commission was personated by Dr. Brunton. Were Surgeon-Lieutenant-Colonel Lawrie and Dr. Lauder Brunton the first and second Commissions respectively and the Commissioners Bomford, Rustomji, Hehir, Kelly, Chamarette merely assistants? If so, why is the work of these two investigators upheld and glorified before the world in so Oriental a way? We read in the first page of the Commission "that His Highness the Nizam visited the laboratory on two special and memorable occasions. The Nawab Munir-ul-Mulk, son of the late Sir Salar Jung, the Maharajah the Peshkar, and the Nawab Fakhr-ul-Mulk also paid visits to the laboratory and witnessed several of the experiments. The same interest was displayed by the Nawabs Mohsin-ul-Mulk, Vikar-ul-Mulk, Imad-ul-Mulk, Fatteh Nawaz Jung, and Mr. Furdonji Jamshedji."

The Commission, equally with the *Lancet*, insists upon the fact that His Highness's Government had carried out "a work which is not only of scientific interest, but of the greatest practical importance to the whole human race." Its object was an essentially practical one, and could not be better defined than in the words of His Highness the Nizam himself, "to save people's lives."

Considering the gravity of the subject, and the Oriental pomp with which the work of the second Commission was thrust upon the scientific world, I have felt justified in attacking with some vigour a doctrine which I believe to be erroneous and dangerous.

My object, too, was essentially a practical one, and the strength of my attack is justified to the full by Dr. Brunton's statements that he stands alone responsible for the work of the second Commission—in other words, that no such thing as an independent Commission of trained scientists ever existed—and that the work was done in a hurry in 47 days, with such apparatus as could be scrambled together in a fortnight's preparation.

My attack was directed against the work of the Commission. Dr. Brunton has chosen to make it a personal attack upon himself. The Commission invites criticism. It states that as far as possible experimental data were given, "so that at any future time, and in any part of the world these data will be as available to others as to themselves, and may be used by them either for the purpose of criticising the Commission's conclusions, or drawing conclusions of their own." Dr. Brunton protests against the vigour of my criticism; he would clap me into an Oriental dungeon for *lèse majesté*, for daring to attack the Commission's experiments, and refusing to bow down the knee in spite of the witness of the Nawabs-

ul-Mulks, the Maharajah the Peshkar, and Fatteh Nawaz Jung.

The Commission has set me the example of vigorous criticism. Dr. Brunton says: "Mr. Hill accuses me of incapacity to interpret aright the tracings of blood pressure which the Commission obtained." The Hyderabad Commission make this same accusation in regard to the tracings of the Glasgow Committee. For example: "They have published a copy of the manometer tracing on which their conclusions are founded, and an inspection of this leads inevitably to the belief that the sudden and unlooked-for effects on the heart's action which the Committee attributed to chloroform are not really due to it at all."[3] Here Dr. Brunton states that Professor McKendrick was incapable of reading aright his own tracing. Dr. Brunton remarks on my expression "direct denial," and imagines "that only an intense feeling of duty would have led to the use of such language." On exactly the same subject the words of the Commission are as follows: "Other experiments were made to test the truth of the statement that chloroform increases the action of electrical stimuli applied to the vagus, and showed conclusively that it has no such effect." Does not the expression "direct denial" in two words, and with no more offensive meaning, convey exactly the same sense as the quotation from the writing of the Hyderabad Commission itself?

Dr. Brunton further takes exception to my expression that "many of the experiments of the the Commission were careless in execution." In reference to certain of Dr. Snow's experiments, the Commission writes that "death was not really sudden, but only rapid and the result of reckless administration of concentrated vapour in the first instance, and careless neglect of the condition of the respiration in the second." These are sufficient examples of the vigour of the Commission's criticism of others.

The trenchant nature of the criticism of the President of the Hyderabad Commission is almost too well known to exemplify. But here are a few instances quoted from the report of the Commission:

1. "The effect of the Glasgow Committee's report was enormous, far reaching, and disastrous."

2. "The teaching of the Glasgow Commission is wrong."

3. Professor Wood's "amazing and ridiculous contention that the heart of a dog in India is much less sensitive to chloroform."

4. Professor MacWilliam's "entire arrangement is so artificial that it is very difficult to accept any of his results, or to believe that he can make all his levers and tambours, six in number, work in the perfect way he describes, and at the same time that he can watch the condition of the pulmonary artery so narrowly (in the cat!) as to be able to assert that it was soft and compressible, and that the pressure within it was low."

5. "Mr. Braine writes as if the acceptance of the truth would be disastrous to anæsthesia specialists."

Herein we see that the President calls the teaching of Professor McKendrick wrong and disastrous, that of Professor Wood ridiculous, while he suggests that Professor MacWilliam, a scientist trained in cardiac research, is incapable of exact experiment, and lacks scientific accuracy. In the last criticism quoted there either runs a dubious innuendo, or else the sentence is meaningless to me.

In justification of my charge of carelessness, I can bring forward the following facts:

I. That the work of the first Commission was conducted by men unskilled in experimental methods, and apparently without apparatus.

II. That the second Commission was conducted in an out-of-the-way place with such apparatus as could be hurried together in the fortnight preceding Dr. Brunton's departure.

III. That the research was hurried through in forty-seven days.

IV. We may turn to the internal proof to be drawn from the experiments themselves.

A. An absolutely insufficient method was used to record the energy of the heart. A heart when poisoned with chloroform is thrown into paralytic dilatation; it continues to beat, but is incapable of emptying its cavities. A needle thrust into the heart would exhibit the efforts of contraction; it tells us nothing of the efficiency of action of that organ, and yet this was the method employed by the Commission. On page 99 an "attempt to connect with Roy's cardio-myograph" is recorded as failing. This attempt and failure is the one mention that I can find of the use of an apparatus which might have yielded valuable results.

B. That chloroform was injected into the jugular vein after ligature of the vein, and was not washed on into the heart by normal saline solution. Thus no syncope occurred. Considering that 5 to 10 mm. injected in the proper manner into the jugular vein of a cat produce profound dilatation and death of the heart, it is incredible that the Commission could have injected 20 c.cm., or roughly 340 mm., into the jugular veins of dogs (several times) in such a way that it ever reached the heart in one concentrated dose. It is not the method but the manner in which the injection was carried out that is open to severe criticism. The experiment of injecting into the jugular was repeated on four animals. It has been carried out with a contrary result scores of time by Wood, Gaskell and Shore, Barnard, and myself. Moreover, it is an operation commonly employed in laboratories to produce immediate death at the termination of physiological experiments.

In connection with the charge of carelessness, Dr. Brunton says that one statement of mine is "absolutely false," and he is curious to learn how I have been led to publish "this falsehood." In dealing with the effect of the alteration of position, I say that the Commission paid no attention to the fact of the absolute necessity of placing the arterial cannula in the axis round which the animal is turned, and that by the neglect of such a simple precaution the experiments on this point were rendered entirely worthless. It is this statement that Dr. Brunton calls absolutely false, and he says in the BRITISH MEDICAL JOURNAL of March 5th that this precaution was most carefully taken by himself. I have again searched through the report of the Commission, and have utterly failed to find any mention of this precaution. On the contrary, the detail of the experiments given in the report naturally leads one to the conclusion which I formed. On page 28 we read: "When the hind feet are lowered on to the floor so as to place the animal in the vertical position, a considerable fall of blood pressure in the carotid artery occurs, but when the animal is replaced on the table in the recumbent position the pressure is fully restored." Anyone who has done any experiments on the influence of gravity on the circulation would know that it was impossible to place different animals of a different length with their hind feet first touching the floor, and then returned back on the table, and yet maintain the position of the cannula in the same horizontal plane throughout the procedure. Such an experiment could only be accurately carried out with the aid of a swing board with a cannula fixed in the axis round which the board was swung. I gladly accept the statement of Dr. Brunton that precautions were carried out, but my original statement is justified unless he can direct me to any page in the report where the description of such precaution is given; otherwise I fail to see a justification for his expression "falsehood."

Granting that Dr. Brunton himself adjusted the animal and apparatus on each change of position, so that cannulæ, axis, and horizontal limb of the manometer were in the same horizontal plane, yet it is obvious that such adjustment would take time, and that the initial and immediate effects of turning an animal from the horizontal to the vertical position would not be accurately recorded.

The prejudiced enthusiasm of Surgeon-Lieutenant-Colonel Lawrie is illustrated by the passages which I have already quoted. I never extended this charge further.

My statement "that the Hyderabad Commission engaged upon a wild-goose chase to prove that respiration ceases before the heart fails," I consider to be substantiated by every line of the report of the Commission. Dr. Brunton says that the Commission did not rely upon their tracings for proof. The proof which he upholds that failure of respiration is the primary cause of death consists "in the fact that 141 animals were chloroformed to death by the first Commission, and 430 by the second, and in every one of these 571 animals the respiration failed before the heart. The doctrine founded upon this fact (II) is that the heart has nothing to do with producing the fall of blood pressure "unless its nutrition fails either from imperfect oxygenation of the blood due to

abnormal breathing, or from stoppage of the respiration from overdosing." The fact whether the respiration or the heart stops first is a matter of not the slightest importance, and yet the confirmation of this one point is that on which the Commission prides itself. What the Commission failed to give us is the reason why artificial respiration, even when applied before the pulse has stopped, frequently fails to bring about recovery. If an animal be simply asphyxiated the heart continues to beat for several minutes, and by artificial respiration the animal can be surely resuscitated. Now in Experiments Nos. 56 to 60 we find that the Commission failed more than once to smother an animal by means of a mouthpiece, and to kill it by asphyxia. On the other hand, when chloroform was pumped into the inhaler during partial asphyxia, death very rapidly ensued. In Experiment 59 the pulse stopped 22 minutes after the commencement of the smothering (with an empty inhaler). In the first four experiments chronicled by the Committee in which the animals were killed by means of a cloth inhaler filled with chloroform the pulse ceased (on the average) 27½ seconds after the respiration. In the last six experiments recorded by the Subcommittee in which the animals were also killed by means of chloroform on a cloth inhaler, and struggled violently during inhalation, the pulse ceased (on the average) 24 seconds after the respiration. The shortest interval noted in this set is 7 seconds.

We must remember that the experiments were conducted at a temperature which was generally 23 to 25° C., that is to say, similar to our hottest summer day. In consequence of the heat "the Commission had almost to cut off the air before they could get anæsthesia with ether." This shows the rapidity with which chloroform would also evaporate. Hence the difficulty of obtaining cessation of the pulse before the cessation of respiration. The effect of the climate is shown forcibly in the following quotation: "There were thus three accidental deaths in the course of this one day, which it may be noted was exceptional in being a wet day, and was characterised by constant blunders and mistakes committed by everyone engaged in the experiments and in every department." Dr. Brunton brushes aside the question of these and other accidental deaths. He says, "Accidental deaths in man are probably due in great measure to fear, anxiety, or other emotional excitement, and may arise from respiratory and circulatory changes." He continues that the members of the Commission quite realised the deficiency in its explanation of accidental deaths. Surely it is necessary before coming to any such final and momentous decision that the Commission should be in a position to eliminate this "probably," and make it either a certainty or negative it altogether. Then again the use of the expressions "great measure" and "may arise" surely imply that there are other causes at work even in Dr. Brunton's opinion. These causes the Commission has on its own showing not attempted to ascertain.

The tracings of the Commission show that the blood pressure falls very greatly before the respiration ceases. The Commission affirms that this has nothing to do with the heart and that the failure of respiration is the primary cause of death. If this be true, artificial respiration should with absolute certainty produce recovery in all cases of chloroform collapse. It does not do so, because the heart cannot be made to beat again with efficiency. Deoxygenation of the blood or asphyxia cannot possibly bring about this failure of the heart in the time chronicled by the Commission in many of the experiments. I maintain with Gaskell and Shore that the tracings are wrongly interpreted. They prove that the respiration fails in consequence of the fall of blood pressure. Not only has MacWilliam proved that chloroform dilates the heart, but Barnard and myself have demonstrated with a cardiometer that the heart of a cat is enormously dilated with the smallest doses of this drug. If the respiratory centre be cut out, an animal can be maintained alive efficiently for hours by artificial respiration. Let the Commission tell us why the patient whose respiratory centre is paralysed by chloroform cannot be similarly kept alive.

The Hyderabad Commission continually dwells on the vast number of animals on which experiments were performed. It is obvious that in 47 days Dr. Brunton could have personally investigated but a small proportion of the 571 animals. Day by day and year by year the sum of animals chloroformed by any busy physiologist grows to a far greater total than this. It is not only in experiment that he observes the effect of anæstheia, but also when the numerous animals are killed for class dissection.

I am in entire sympathy with Dr. Brunton when he writes: "It would have been advisable to repeat several experiments if we had time, and it might have been advantageous on several occasions to use other apparatus if it had been available."

Anyone who has read the controversy between Surgeon-Lieutenant-Colonel Lawrie and Drs. Gaskell and Shore will admit that my attack was mild in character compared with the controversial methods of the President of the Commission. I regret exceedingly that vigour of criticism should be regarded by Dr. Brunton as of personal offence. I rejoice, however, that so important a question as chloroform syncope should be once more reopened.

References.
[1] Report of the Hyderabad Commission, p. 1; [2] *Ibid*, p. 4; [3] *Ibid*, p. 1; [4] *Ibid*, p. 7; [5] *Ibid*, p. 7; [6] *Ibid*, p. 7; [7] *Ibid*, p. 342; [8] *Ibid*, p. 10.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CONCURRENCE OF WHOOPING-COUGH, SCARLET FEVER, AND VARICELLA.

A. R., aged 3 years, one of three sisters, came under my care recently with a well-defined attack of scarlet fever, evidently contracted from her elder sister, who had developed a similar attack seven days previously.

At the time I first saw her the child had marked paroxysms of whooping-cough, from which a younger sister was also suffering, and which continued during the greater part of the period of desquamation.

During the third week of the scarlatinal attack, her temperature suddenly rose, and she developed a typical eruption of varicella, which appeared in crops, and followed the normal course of that disease. I could not trace any possible cause of infection for this, except a fresh nurse who might have conveyed it.

Hence, during the third week of scarlet fever the child was capable of conveying infection of whooping-cough, scarlet fever, and chicken-pox, which appears to me to be a somewhat unusual occurrence, and worth recording.

Allan J. Swallow, M.B., B.S. Durh., L.R.C.P.,
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THE REACTION OF HEALING AND NON-HEALING WOUNDS AND ULCERS.

During the treatment of a large number of cases of chronic ulcers and recent wounds by oxygen gas, it was observed that in a small number of them the healing process became arrested. This change was usually traceable to some general or constitutional disturbance, notably influenza. Careful bacteriological observations were made, and it was found that this arrest of healing was accompanied by the almost complete disappearance of staphylococci from the wound or ulcer, and the appearance of rod bacteria, especially bacillus fluorescens. The reaction of the wound, etc., was taken with ordinary litmus and reddened litmus paper, and showed that wounds that were not healing were in a high state of alkalinity. Following this up, a large number of cases, healing and otherwise, were examined, and it was found that all healing wounds were but slightly alkaline, and in those that had been stationary as soon as healing began the alkalinity rapidly diminished. On the advice of Professor Wright, of Netley, the method of estimating alkalinity by the strength of the acid solution necessary to neutralise the fluid to be tested, as devised by him for blood examinations, was adopted.[1] Twenty-three observations were then made on cases of ulcers and wounds, recent and chronic, and the results are given in the following table:

[1] *Lancet*, September 18th, 1897.

Date of Observation.	No.	Complaint	Progress.	Micro-organisms.	Reaction.
Jan. 3	1	Chronic ulce	Doing well	Staphylococcus pyogenes aureus	N-50
,, 3	2	,, ,,	Improving	,, ,, ,,	N-50
,, 3	3	,, ,,	Doing very well	,, ,, ,,	Neutral
,, 3	4	,, ,,	Doing badly	Rod bacteria and streptococci	N-20
,, 25	4	,, ,,	Doing well and looking well	Staphylococcus pyogenes aureus	N-60
,, 3	5	Recent surgical wound	Doing well	,, ,, ,,	N-40
,, 5	5	,, ,, ,,	Improving very rapidly	,, ,, ,,	N-60
,, 3	6	Chronic ulcer	Not doing well	Rod bacteria and streptococci	N-25
Feb. 11	6	,, ,,	Improving	Staphylococcus pyogenes albus	N-35
Jan. 3	7	Chronic ulcer, 25 years	Doing very well	,, ,, ,,	N-65
,, 4	8	,, ,, ,,	Improving	Staphylococci	N-40
,, 5	9	Chronic ulcer	Doing badly	Streptococci, diplococci	N-20
Feb. 11	9	,, ,,	Healing rapidly	Staphylococcus pyogenes albus	N-35
Jan. 5	10	,,	Improving	,, ,, ,,	N-45
,, 4	11	Recent surgical woun	Doing very well	,, ,, aureus	N-60
,, 4	12	Ulcer afte burn	,, ,,	,, ,, albus	N-60
,, 5	13	Chronic ulcer for many years	Unhealed before treatment	Rod bacteria and streptococci	N-30
Feb. 11	13	Chronic ulcer	Healing well	Staphylococcus pyogenes albus	N-55
Jan. 7	14	Chronic ulcer, 1 years	Not doing well	Rod bacteria	N-30
Feb. 12	14	,, ,,	Improving rapidly	Staphylococcus pyogenes aureus	N-40
Jan. 11	15	Chronic ulcer	Before treatment, looking well	,, ,, ,,	N-50
,, 18	16	Chronic ulcer, 20 years	Unhealthy, smells badly	Bacillus fluorescens	N-20
Feb. 12	16	,, ,, ,,	Improving, smell gone	Staphylococci and a few rods	N-30

All these cases have been under oxygen treatment, but it is not suggested that the same results could not be obtained in cases treated in the ordinary way. It is not proposed that these comparatively few observations can be regarded as conclusive, but the matter seems of some importance, and this note is offered in the hope that it will lead others to further investigation, and be an indication as to the reaction of dressings and applications used in ordinary forms of treatment.

GEORGE STOKER, M.R.C.P.I.,
Physician London Throat Hospital, etc.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE HOSPITAL, ROYAL ASYLUM, ABERDEEN.

CASE OF SIMPLE FRACTURE OF HUMERUS TREATED BY PLASTER OF PARIS APPLIED IMMEDIATELY AFTER INJURY.

[By ANDREW A. ROBB, M.B.]

E. K., a female patient, sustained a fracture of the right humerus in endeavouring to get out at a lavatory window. On examination about five minutes after the injury it was found that there was a complete transverse fracture at the junction of the lower and middle thirds. From the restless, excited condition of the patient, a case of active melancholia, it was considered that treatment by any o the ordinary forms of splints would be inadvisable. Plaster-of-paris bandages were at once closely applied over a single flannel roll extending from close to the axilla to within about two inches from the wrist-joint, the forearm being flexed to slightly less than a right angle, and the hand placed over the chest. This was done before any sign of swelling or effusion had time to manifest themselves.

Next day the hand had become very much swollen and œdematous. Large blebs formed on the dorsal and palmar surface of the hand and on the fingers, so that the hand looked as if it had been severely scalded. These blebs coalesced, and later burst, giving escape to a large amount of clear serum, and leaving a raw, weeping surface. There was found to be no undue pressure in the axillary region, and as the hand remained quite warm, it was resolved not to remove the plaster of paris. The hand was dressed, and its condition gradually improved. At the end of three weeks it was quite normal again, and the skin renewed all over.

The plaster was removed at the middle of the seventh week after injury. It was found that the result was in every way favourable. Union was complete and firm. There was no excessive atrophy of muscles, and all movements at the elbow were good excepting a slight impairment of extension, which, however, has disappeared almost wholly since. Shortening was also very slight, and probably less than it would have been had the fracture been treated by ordinary splints.

The œdema of the hand was thought to have resulted from the effusion, not being able to take place at the site injury by reason of the plaster of paris, having gravitated down to the hand.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

JOHN LANGTON, F.R.C.S., President, in the Chair.

Friday, March 11th, 1898.

MALFORMATIONS OF THE KIDNEY AND DISPLACEMENTS WITHOUT MOBILITY.

DR. DAVID NEWMAN (Glasgow) read a paper and described illustrative cases. He said malformations and displacements might be classified under the following heads:—A. *Displacements without Mobility.*—1. Congenital displacement without deformity. 2. Congenital displacement with deformity. 3. Acquired displacements. B. *Malformations of the Kidney.*—I. Variations in number. 1. Supernumerary kidney. 2. Single kidney. (*a*) Congenital absence of one kidney. (*b*) Atrophy of one kidney. 3. Absence of both kidneys. II. *Variations in Form and Size.*—1. General variation in form, lobulation, etc. 2. Hypertrophy of one kidney. 3. Fusion of two kidneys. (*a*) Horseshoe kidney. (*b*) Sigmoid kidney. (*c*) Disc-shaped kidney. C. *Variations in Pelvis, Ureters, and Blood Vessels.*—The paper was illustrated by cases and specimens which had come under Dr. Newman's observation during the last twenty years. *Congenital Displacement without Deformity.*—Case I. Fixed displacement of the right kidney above Poupart's ligament simulating a perityphlitic abscess. There was a slight fulness of the abdomen in the right iliac and lower lumbar regions, and a rounded swelling occupied an area of about 2 inches in breadth, running parallel with Poupart's ligament. The swelling simulated an abscess, but on being incised was found to be a misplaced kidney. Case II. Left kidney displaced downwards and forwards in a patient on whom lumbar colotomy was performed. The lower border of the kidney was found during the operation directly above the centre of the iliac crest. The organ was slightly lobulated, but normal in size. Case III. Right kidney displaced downwards, and rotated on its antero-posterior axis; shortened ureter entered upper aspect of bladder. The convex aspect of the organ rested upon the brim of the pelvis; the concave surface looked upwards. *Congenital Displacement with Deformity.*—Case IV. Right kidney at the brim of the pelvis, below bifurcation of aorta, was supplied by two arteries, one directly from the aorta and a second one from the common iliac artery. The kidney was deformed. Case V. Malposition of both kidneys, one to right

of promontory of sacrum; other in iliac fossa. The right kidney small and with no hilum.[1] Case VI. Right kidney flat, oval in form, and situated at brim of pelvis, supplied with two arteries and one ureter from the anterior aspect. Right kidney a flat, oval body, about the normal size, supplied by two arteries from the aorta just above the bifurcation, right renal vein passing to vena cava. The ureter from the anterior aspect. Left kidney normal in size but lobulated slightly. *Acquired Displacements of the Kidney.*—Case VII. Acquired displacement of the right kidney by a perinephric abscess. The kidney with its convexity looking upwards and lying close to the diaphragm, while the pelvis was turned downwards. The organ firmly fixed by inflammatory adhesions. Renal vessels and ureter elongated. *Malformation of the Kidney.*—(1) Variations in number: One case of supernumerary kidney was described. *Single Kidney.*—(*a*) Congenital absence of one kidney. Case VIII. Complete absence of left kidney, ureter, and vessels; compensatory hypertrophy of right kidney, which weighed 12½ ozs. and measured 5 inches in length and 4 inches in breadth. Case IX. Congenital absence of the left kidney, vessels, and ureter, placed in the museum by Dr. J. Lindsay Steven; almost exactly the same as Case VIII. (*b*) Atrophy of one kidney. Case X. Extreme atrophy of left kidney, with double pelvis but single ureter. The organ about the size of a walnut, pelvis branched, no hilum. Limbs of the pelvis united about 1½ in. below level of the kidney. Case XI. Atrophied kidney; renal tissue almost entirely replaced by fat. The organ weighed half an ounce, and was completely embedded in firm fat. The right kidney was the seat of advanced chronic interstitial nephritis. Case XII. Atrophy of right kidney, with compensatory hypertrophy of left kidney, and disease of suprarenal capsules. The right kidney weighed 1 oz., the left 7½ ozs. Atrophied kidney, embedded in mass of adipose tissue, contained four cavities filled with pultaceous material. Ureter thickened, its lumen obliterated. Absence of both kidneys had only been observed in the lower grade of monstrosities, especially acephalous monsters. *Variations in Form and Size.*—Hypertrophy of one kidney. Case XIII. Simple hypertrophy of left kidney only, right kidney normal in size and appearance. Left kidney weighed 10¾ ounces, right weighed 6½ ounces. In all respects hypertrophied organ healthy. *Fusion of Two Kidneys.*—(*a*) Horseshoe kidney. Case XIV. Horseshoe kidney united by isthmus of fibrous tissue at level of bifurcation of aorta. Renal form well retained. Case XV. Horseshoe kidney with lobulation and complete fusion of both kidneys. Malformation of the pelves, and anomalous distribution of blood vessels. Case XVI. Horseshoe kidney with complete incorporation of the two organs, lobulation of both segments. The ureters deformed, and anomalous distribution of blood vessels. (*b*) *Sigmoid Kidney.*—Case of Dr. Lewis R. Sutherland. Complete fusion of two kidneys in sigmoid form, the upper hilum presented antero-internally, the lower anteriorly. The upper ureter united at the right, the lower at the left angle of the trigone, and the renal mass occupied the right lumbar region. *Disc-shaped Kidney.*—The hilum faced anteriorly and antero-internally. Two distinct pelves, one above the other. The lower ureter faced to the right of the trigone, the upper to the left.[2] Dr. Newman also referred to various anomalies in the pelves, ureters, and blood vessels, as illustrated by cases observed in the Royal Infirmary.

Mr. Howard Marsh, adverting to Mr. Newman's reference to repair taking place in tuberculous kidneys, remarked that this fact was a familiar one in clinical experience, and he mentioned the following case. In a patient who had for two years been passing pus and blood in the urine, and who suffered considerable pain in the right lumbar region, often aggravated by exercise, an exploratory operation was performed, and extensive tuberculous disease of the kidney was found. A good deal of tuberculous granulation tissue was scraped away, and the patient ultimately got quite well. At present, some four years since the operation was performed, he was still in good health. Similar examples were not rare in surgical practice.

Mr. Watson Cheyne said that in January last he had cut down upon a swelling behind the peritoneum, which proved to be a third kidney, as a kidney was also present in each loin, that of the left side being abnormally small.

Dr. Glover asked how the author diagnosed the cases as tuberculosis of the kidney.

Dr. Newman, in reply, said the diagnosis rested largely on the discovery of tubercle bacilli in the urine; further, the caseous masses found at operation were not present in other renal diseases. He had seen one case of third kidney at a necropsy. He looked upon such cases as extreme examples of segmentation; they were the rarest form of abnormality.

Perforating Wounds of the Knee Joint.

Mr. F. C. Wallis detailed 3 cases in which the knee-joint had been perforated. Case I. Man, aged 23, whilst getting over some iron railings slipped, and one of the spikes made an oblique wound in his left knee-joint. The joint became distended with blood and air. Twenty-four hours later, as temperature was rising and pain increasing, the joint was opened and a large ragged tear found in the capsular ligament. The joint was washed out and cleared of all blood clot, the capsule sewn up, and skin wound completely closed. No drainage. Aseptic recovery, with, ultimately, free joint movement. Case II. Girl, aged 13, admitted to hospital with perforating wound of left knee-joint, made by a pair of scissors, half an inch above the patella. Temperature on admission 102.2°. Joint distended and painful. As these symptoms increased, the wound was opened up forty-eight hours later. The synovial fluid was turbid, and large flakes of lymph escaped. Free irrigation with 1 in 3,000 perchloride, and joint closed without drainage. Nine days later wound reopened on account of pain and temperature, and joint drained. The patient made an excellent recovery, but walked too soon, and a certain amount of genu valgum resulted—this was treated with a Thomas's knee-joint splint. Case III. Boy, aged 11, admitted with punctured knife wound, of fourteen days' standing, on outer and upper side of left knee-joint, which was markedly distended, the skin over it being red. Semi-purulent fluid escaped from the wound. The joint was opened, and four ounces of semi-purulent fluid were let out. A corresponding incision was made on the opposite side, and the joint thoroughly irrigated with 1 in 3,000 perchloride, after which the wounds were closed without drainage. Three days later the wounds had to be reopened, and pus escaped freely. As the joint did not drain well a number of drainage tubes were inserted in different places, and continuous irrigation was carried out. Nine weeks later all the tubes were out. Four months after the operation, the patient was discharged in a Thomas knee-joint splint, with fibrous ankylosis of knee-joint. He ultimately had excision done on account of marked flexion of the knee-joint. Mr. Wallis remarked that only those cases recovered (that is, ran an aseptic course) which were immediately treated, and he quoted various cases in illustration of this. On the whole he thought the results were better without drainage. He defended his treatment of Cases II and III, where the joint was sewn up and had to be reopened, by quoting cases where he had opened joints for septic synovitis, and after thorough irrigation, had sewn up the wounds, which had healed without difficulty. The treatment of suppurating joints was next discussed, and it was shown that even prolonged suppuration did not necessarily mean ankylosis if certain lines of treatment were carried out.

Mr. Marsh remarked that Mr. Wallis had drawn attention to a subject of considerable importance. Formerly, cases such as he had related commonly ended either in the death of the patient from septicæmia, or, if this were escaped, amputation of the limb. At the present day it was seen how closely the synovial membranes of joints resembled the peritoneum in their tolerance of aseptic operative interference. He had lately met with the following examples which bore upon the subject. In a boy with recurrent sarcoma he had opened the knee-joint on four separate occasions. In another case he had four times opened and scraped out the cavity of the knee-joint for the removal of tuberculous granulation tissue. In a third case, a boy, aged 4, was run over in the street, and the knee-joint was widely torn down and inoculated with street mud. Some of the muscles were lost through gangrene. The joint, however, which was drained and irrigated, was so far

[1] Newman, *Surgical Diseases of the Kidney*, p. 7.
[2] Royal Hospital for Sick Children Museum.

repaired that two months afterwards the limb could be bent to a right angle. In a fourth case, in which the knee-joint had several days before the patient's admission been perforated with a rusty nail, very acute septic arthritis ensued. Copious suppuration occurred, and the ligaments were so far destroyed that the tibia moved in a flail-like manner on the femur. Repair, however, resulted, and, although the joint was at first very loose, so as to admit free lateral movement, the ligaments at length so far recovered themselves that abnormal movement was prevented. The patient was now walking upon the limb, and the joint was movable through a range of 120°. These cases, together with those related by Mr. Wallis, served to illustrate the degree in which the treatment of joint affections by active interference had been developed under methods at present in use.

Mr. BARKER referred to two points, drainage and irrigation. He thought drainage was often overdone, and considered that in many cases it was not required, as it often produced a large mass of granulation tissue. In his recent cases he had used no drainage at all. In septic cases, however, some drainage might be necessary. He believed that the liquid used in irrigation was often too irritating. If irrigation were necessary, the best liquid to employ was warm sterilised water. The action of irrigation was only mechanical, and warm water was consequently as efficacious as any other liquid. No surgeon hesitated now to open the joint, and he thought the good results of to-day were partly due to the fact that drainage was not employed, and that there was consequently no entrance of septic materials through the tube into the joint.

Mr. WATSON CHEYNE had also long protested against the practice of washing out septic cavities with antiseptic remedies. If a joint had been wounded, his practice was to incise it freely, sponge the soft parts around the wound with undiluted carbolic acid, and drain the joint for 24 or 48 hours, as this could do no harm. If things were then going well the tube might be removed. It was, at any rate, unsafe to stitch up a septic wound without drainage.

Mr. WALLIS, in reply, alluded to a case in which a sponge was inadvertently left in a joint. No improvement was effected by irrigation with water; but after the interior of the joint had been smeared over with pure carbolic acid recovery ensued.

CHRONIC HYDROCEPHALUS TREATED BY INTRACRANIAL DRAINAGE.

Dr. G. A. SUTHERLAND read for himself and Mr. WATSON CHEYNE notes of the case of an infant, aged 6 months, who was suffering from congenital hydrocephalus and hereditary syphilis. No improvement had followed after three months of medical treatment, and the head was steadily increasing in size. The condition at the time of the operation was one of very marked hydrocephalus, the bones of the skull being soft and widely separated, and the vertex occupied by a large membranous space measuring 9 inches in its widest diameters. The operation consisted in making a small opening in the dura mater opposite the left lower angle of the anterior fontanelle and introducing a catgut drain, one extremity of which was passed between the brain and the dura mater for a distance of 1 inch, and the other pushed through the substance of the brain into the expanded lateral ventricle. A very small quantity of ventricular fluid escaped, the opening in the dura mater was completely closed with catgut sutures, and the scalp wound sewn up and dressed in the ordinary way. On the fifth day after the operation, when the dressings were removed for the first time, the wound was entirely healed. From the date of the operation there was a steady and uniform diminution in the size of the head without the occurrence of any bad symptoms, and within a few weeks the spaces between the cranial bones were entirely obliterated, and the anterior fontanelle was much smaller, depressed, and pulsating. Later, symptoms of basilar meningitis developed, and the infant died of that affection three months after the operation. At the necropsy the membranes at the base of the brain were thickened and adherent, and a considerable quantity of fluid was present in the subdural space. The brain was small and cystic in parts, but there was no distension of the ventricles. Reference was made to the work of Dr. Leonard Hill, whose experiments on the absorption of fluids from the subdural and subarachnoid space suggested the line of treatment which had been adopted. By establishing a permanent communication between the ventricles and the subarachnoid space it was hoped that however much fluid was secreted in the ventricles it would be carried off at once by the veins, and in the absence of injurious pressure the brain would be left free to develop if it could. The result of the operation had shown that in hydrocephalus the excess of ventricular fluid could be removed by this method of intracranial or subdural drainage.

Mr. WATSON CHEYNE said they had brought a case for inspection which had been operated upon three weeks ago, and members could see for themselves what an enormous diminution had since taken place in the size of the skull. He did not suppose that in this case any useful result would accrue as regarded life, but the operation at any rate gave the child a chance. It proved, moreover, that if they could get these cases earlier, before the brain had been injured by pressure, there was a reasonable chance of permitting the development of the brain to proceed.

Mr. STANLEY BOYD raised the question whether the intracranial drainage was likely to prove permanent. In the account of the *post-mortem* examination in the first case the hole in the brain containing the strands of catgut was adherent to the dura mater, so that to some extent the object of the operation had been frustrated. In the other case he apprehended that when the catgut had become completely absorbed the brain might become adherent to the dura, and so obliterate the communication.

Dr. SUTHERLAND, in reply, said that if some obstruction supervened, the pressure of fluid in the ventricle would rise and would force a passage. He mentioned that in the patient under inspection a recent rise of temperature was probably due to such a rise in pressure, which had subsequently relieved itself. The operation was simple, and might at any time be done on the other side if it were required.

MEDICAL SOCIETY OF LONDON.

A. E. SANSOM, M.D., President, in the Chair.

Monday, March 14th, 1898.

GASTRIC ULCER.

DR. SEYMOUR TAYLOR, in discussing the causation of gastric ulcer, reminded his hearers that the stomach lay nearly vertically in the abdomen, so that the so-called upper curve was really the right or lesser curve, the lower or greater curve being to the left. Seven-eighths of the organ at least lay to the left of the median line. The dome of the cardiac end rose quite an inch (sometimes more) above the level of the cardiac orifice. He pointed out that the pylorus was not a valve, but a sphincter, and its aperture would admit the little finger. He described two well-recognised varieties of innocent ulcer of the stomach: (1) The so-called chronic ulcer; (2) the perforating or acute ulcer. He believed that these were distinct diseases, distinct in their etiology and in their pathology. The chronic ulcer affected males in the proportion of 72 per cent. of the cases, mostly between 45 and 60 years of age. It did not occur exclusively in the poor, but rather in those who led busy excited lives, and were well off enough to indulge in large table extravagances. The chronic or spreading ulcer was usually situated near the pylorus; it was irregular in outline, and the surrounding tissue consisted of the proliferated and heaped up cellular elements of the stomach coats. Before perforation could take place there was almost always inflammatory adhesion to some solid viscus. He quoted the observation of Dr. Sidney Martin, that "anatomy appears to show that the ulcer was chronic from the first, and that there is little evidence that it originated in the acute form of ulcer." As regards symptoms, there might be no premonitory sign, the lesion occasionally only being discovered *post mortem*. One characteristic feature was the large amount of the vomited matter. There might be intervals of comparative health and freedom from pain and distress, but they returned on the first indiscretion of diet. Such sufferers were peculiarly prone to errors of diet; in fact, their appetites were depraved, so that treatment was often disappointing. He insisted on the extremely infrequent occurrence of the clean punched-out ulcer in males; as far as his researches had gone in the London Hospital museums, only

two instances had been found. The perforating ulcer, was most frequent in women, being, indeed, almost limited to this sex. Moreover, the victims were mostly single women between the ages of 16 and 30. The influence of occupation and surroundings was well marked, and there was a great similarity of etiology between chlorosis and acute ulcer. In both diseases a great preponderance of cases occurred in single young women, whilst possibly domestic servants and dressmakers accounted for more examples than any other rank and calling. It was noteworthy that in almost every case of acute gastric ulcer there was a previous history pointing to chlorosis. The site of the ulcer was variable, but its shape was constant. Though most frequently situated near the lesser curve of the stomach, it might be found in the cardiac region, on either curvature and on either aspect of the viscus. In contrast with the chronic ulcer there was no marked inflammatory proliferated zone, and during the stage of active process there was no obvious alteration of tunics in the immediate neighbourhood. He suggested that the lesion was a nerve lesion of the nature of neurotic dystrophy. He commented on the marked differences in the symptomatology of the two varieties of ulcer, alluding incidentally to the fact that the severity of the symptoms was often in inverse ratio to the gravity of the pathological lesions. The pathological theories put forward to explain its occurrence were (1) mechanical, (2) vascular, (3) glandular, and (4) neurotic. He dismissed the hypothesis of thrombosis necrosis as untenable, and he was unable to admit that local traumatism could be incriminated. The vascular theory he regarded as unsatisfactory because it did not explain why the ulcer, if thus caused, should be single. The glandular theory did not commend itself to him because it ignored the fact that the disease was confined to one sex, and occurred only in early adult life. In fact, a local neurosis was to his mind the only satisfactory pathology. In support of this view he instanced the great preponderance of cases amongst young women, the character of the lesion, which reminded one of perforating ulcer of the foot in tabes as well as of those met with in herpes, and lastly, its undoubted association with chlorosis. He asked them to admit with him that chlorosis was a neurosis, because this was essential to his contention that both diseases had a common neurotic origin. He quoted numerous authorities in support of the view that the two conditions were closely associated, and he urged that the only satisfactory ground of argument for this view was to be found in the proposal that both chlorosis and acute ulcer were neurotic in their origin. In conclusion, he urged upon them not to delay affording such patients surgical skill, even though there was reason to suspect that the ulcer had perforated into the peritoneum. Delay meant death, and they ought not to allow any patient to perish for want of a laparotomy. Rather than overlook the urgency of the symptoms and allow a patient to die when the surgeon might have brought about a cure, he would advise the operation ten times over.

Dr. Theodore Williams said the late Sir Andrew Clark had ascribed anæmia largely to constipation, but he pointed out that in France, where constipation was the rule, anæmia was much less frequent than in this country. He himself thought the best treatment was to give up all feeding by the mouth for a time. He was not convinced of the close relationship alleged to exist between chlorosis and gastric ulcer seeing that the former was very common and the latter comparatively rare.

Dr. Maguire thought it was quite unnecessary to invoke the nervous system in explanation. In chlorosis the body as a whole was developing very rapidly while the blood-forming functions failed to develop *pari passu*. In this condition iron did no good except associated with arsenic, a drug which was recognised to have a powerful influence on the blood-forming function in other forms of anæmia. He thought that the condition of impaired vitality which resulted from this state might conceivably so influence the vitality of the stomach as to render it more susceptible to injury by the gastric juice, etc.

Dr. Bowles adopted the view that chlorosis was due to overwork during a critical period of development, and he pointed out that servants were peculiarly likely to suffer from such a cause. He pointed out that rheumatic fever, gastric ulcer, and anæmia were clinically closely associated, and the principal treatment required was absolute rest and general hygiene.

Mr. Wallis endorsed the author's concluding injunction to practitioners not to refuse or delay to avail themselves of surgical aid. He regretted that the author had not gone more into detail with regard to the pathological appearances of the cases recorded by him. He pointed out that in chlorotic patients ordinary abrasions were usually very slow to heal, and probably the same condition obtained in the stomach. He agreed that it was better to perform laparotomy ten times uselessly rather than to miss a case in which it would save life, but he recalled a case in which perforation was supposed to have taken place, in which on operation the symptoms proved to have been merely hysterical manifestations.

The President agreed that chlorosis usually occurred in young girls, particularly at the establishment of menstruation, but he confessed that he could not understand why in such a general condition a lesion should result which was limited to one organ and to one tissue of that organ, nay, to one part of that tissue. He suggested that the causation might be due to a trophoneurosis acting through the vascular system, that is, leading to a local contraction of vessels resulting in necrosis.

Dr. Seymour Taylor, in reply, agreed that rest—rest of body, rest of mind, and rest of stomach—constituted the best possible treatment. If the vomiting was a marked symptom he resorted to nutrient enemata, but not otherwise. It had occurred to him to try the oxygen treatment of these ulcers, but the project was still *in nubibus*. He pointed out that a mechanical lesion would not suffice to produce an ulcer, alluding to the fact that people who swallowed knives, etc., did not develop ulcers, because they were men and not young girls.

PATHOLOGICAL SOCIETY OF LONDON.

F. J. Payne, M.D., President, in the Chair.

Tuesday, March 15th, 1898.

The Age Changes in the Placenta and Membranes.

Dr. T. W. Eden commenced by observing that the structure of the placenta at term differed widely from that of the young and growing organ. The life of the placenta was a short one; it developed rapidly and as rapidly grew old, and was finally shed like a withered leaf. The ripe placenta showed marked structural changes, which were to be regarded as senile degenerations, and must be carefully distinguished from pathological processes proper. These senile changes could be found as early as the end of the seventh calendar month, and were slowly progressive up to term; they varied in extent in different cases, but could always be detected in greater or less amount in healthy placenta. Their recognition was an essential preliminary of the study of the pathology of the placenta, which was at present in a state of total confusion. This confusion was to a large extent due to two causes: first, to the frequent citation of the senile changes here referred to as evidence of disease; secondly, to the fact that the placenta of a macerated fœtus was generally selected for study, and in such no attempt was made to distinguish *ante-mortem* from *post-mortem* changes—that is, to distinguish changes which occurred previous to the death of the fœtus from those which occurred subsequently, while it was retained *in utero*. It was his object to describe the structure of the placenta at all periods of gestation, and to attempt to outline the changes which followed the death of the fœtus when the ovum was retained in the uterine cavity. It was convenient to regard the placenta as composed of two sets of structures, and to describe separately the fœtal and maternal elements. Attention being limited to the human ovum, no observations could be offered upon the stages prior to the fourth week of gestation. At this period the chorionic membrane was fully developed, its surface covered everywhere with arborescent villi, and the decidua reflexa completely enclosed it. The structure of the early chorion was then described, and the points indicated by which it was to be distinguished from the chorion as found in the later months of gestation. The structure of the decidua was also explained, and reference made to the changes which occurred

in the serotina in connection with the establishment of the maternal circulation through the intervillous spaces. At the mid-term of gestation the villi could be distinguished by their larger size and the better development of their connective tissue stroma, and blood vessels; considerable rigid stems from which villi arose were also found at this period. The following senile changes could be detected at term: (1) Endarteritis obliterans affecting considerable tracts of the middle-sized umbilical arteries; (2) degenerative changes in the chorionic epithelium and in the decidual cells of the serotina; (3) the formation of "white infarcts." (4) Thrombosis of a certain number of the subplacental sinuses and serotinal vessels. The presence of these changes in placental tissue sufficed to indicate that it belonged to the end of the gestation period. If the ovum was retained after the death of the fœtus, the maternal circulation was not at once suspended through the intervillous spaces. These became gradually obliterated by thrombosis, but areas remained for several weeks, in which the villi appeared to have undergone no change, and the maternal circulation had been maintained. Those villi which became affected by the thrombosis rapidly perished, and became reduced to structureless areas which contained none of their former character except their shape. The blood clot in the intervillous spaces did not become organised.

UTERUS AND APPENDAGES WITH PEDUNCULATED TUMOURS.

Dr. MORLEY FLETCHER exhibited the above specimen, which was obtained from an old woman who died of rupture of the heart. Attached by a slender pedicle to the broad ligament there was a calcified tumour about as large as an orange, and in its present condition, at least, quite unconnected with the uterus. A similar, but less calcified and considerably smaller, tumour was attached to the left ovary. The author thought the first growth had originally been connected with the uterus, and that both were probably calcified myofibromata. The same exhibitor showed also a specimen of double vagina, the body of the uterus being single, but the cervix double.

OVARIAN CYST REMOVED FROM AN INFANT.

Mr. D'ARCY POWER showed a cyst of the ovary which he had removed successfully from a child aged 4 months, whose abdomen had been increasing in size for three weeks before the operation. The cyst appeared at first sight to be perfectly simple and unilocular, but a closer examination disclosed two or three small nodules in its substance, and when the cyst was held up to the light it was seen to be studded with innumerable small points. Microscopic sections made through one of the larger nodules showed that it was hollow and was filled with an albuminous fluid. The lining membrane consisted of epithelium from three to five cells deep, the external layer being columnar, and the innermost layer flattened. In many places the innermost and intermediate layers of cells were undergoing karyomitosis. The cyst wall was composed of ovarian stroma containing minute Graafian vesicles. Each Graafian vesicle was itself undergoing a cystic change. Mr. Power considered that the cyst was truly ovarian, and was probably congenital in origin. It was multiple, though at first sight it appeared to be single, and the change seemed to have begun in the Graafian vesicles. The youngest child hitherto operated upon appeared to have been 20 months of age; in this case a dermoid cyst was removed, and the patient recovered.

TUMOUR OF THE COLON.

Dr. RAYMOND CRAWFURD related the case of a man who was subject to recurrent attacks of severe abdominal pain, and who was admitted with vomiting and flatulence; there was dulness in the umbilical region, and a palpable tumour. Death took place from collapse after a severe seizure of abdominal pain. After death the small gut was found perforated, a result due to an intussusception of the intestine into the ascending colon. Below the intussusception there was a sessile swelling, the size of a hen's egg, and apparently due to effusion of blood in the wall of the bowel. The author regarded the "tumour" as the initial lesion; upon this followed the intussusception, and the latter led to perforation.

CASE OF ACROMEGALY.

Dr. WILLIAM HUNTER exhibited some of the long bones of both upper and lower limbs, with the pituitary body, and casts taken during life of the hands, feet, and face of a case of the above. Death was due to cerebral hæmorrhage. Treatment by means of pituitary and thyroid extracts had been tried whilst the patient was under observation elsewhere. As *post-mortem* examination disclosed, the enlargement of the hands and feet was almost entirely integumental. The kidneys were abnormally large, the thyroid enlarged, the pituitary body highly vascular and the seat of recent hæmorrhage. The author classed the change in this body under what had been designated vascular hypertrophy. The various bones examined (foot, tibia, femur, humerus, radius, skullcap, basis cranii) all exhibited an unnatural hyperæmia of the medulla; in the tibia, moreover, there were blood extravasations in the engorged medulla. One tibia presented a localised thickening of syphilitic nature, but with this exception there were no marks of osteoplastic inflammation in the different bones.

Mr. PERCY FURNIVALL remarked that this condition of the pituitary body had been described in certain cases of acromegaly. In a case under his own observation no changes were present in the bone marrow.

ANÆMIC INFARCTS OF THE LUNGS.

Dr. L. FREYBERGER recorded an example of this somewhat uncommon condition, which occurred in a woman, whose alæ nasi became gangrenous and in whom a cardiac murmur was present. She refused to take food, and death ensued. After death, besides a double hydrothorax, both lungs contained anæmic infarcts. All infarcts were in their first stage anæmic, the capillary and venous engorgement followed, as it was, by hæmorrhage, occurring secondarily; but the first stage was not often seen. In the case reported the circulation was weak and the infarction had arisen shortly before death—circumstances which explained the character of the lesions.

CARD SPECIMEN.

Papilliferous Adenoma of the Kidney, by Mr. STANLEY BOYD.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

H. R. SWANZY, F.R.C.S.I., President, in the Chair.

Thursday, March 10th, 1898.

THE ASEPTIC TREATMENT OF WOUNDS IN OPHTHALMIC SURGERY.

THIS paper was read by Dr. A. MCGILLIVRAY. After referring to the changes in the treatment of wounds brought about by Lister, the author went on to speak of recent modifications in method. These modifications consisted chiefly in reducing the strength of the antiseptic solutions used for douching purposes, and the adoption of heat sterilisation for instruments and dressings. But when the importance of the natural antiseptic property, or natural immunity, of living tissues came to be more appreciated, some surgeons discarded chemical antiseptics in operations altogether, on account of their deleterious action on the tissues of the wound, and adopted sterilised physiological saline solution, as it produced no irritation, but tended to keep the tissues as nearly as possible in their physiological condition. Antiseptic solutions, however weak, irritated or benumbed the cut tissues of a wound, and thus their natural immunity became impaired. But the antiseptic solutions employed during operations had no germicidal properties unless when kept in direct contact with the micro-organisms for several hours or even days—a very undesirable procedure even if possible—so that their action was purely mechanical, and, so far as the removal of micro-organisms was concerned, was limited to those on the surface, just as in the case of douching with normal saline solution. The position, then, of the aseptician and antiseptician was perfectly clear. The aseptician, by employing normal saline solution for douching purposes, and studiously preventing any chemical antiseptic from coming in contact with the wound, trusted to the inherent antiseptic properties of the tissues themselves in warding off or destroy-

ing any micro-organisms that might have been left in, or that found access to, the wound subsequently. The antiseptician, on the other hand, by employing antiseptic solutions, impaired or destroyed the natural antiseptic property of the tissues, so that they were thus less able to cope with micro-organisms. A description of the operation for the removal of senile cataract was taken to illustrate aseptic technique in ophthalmic operations. From the time the patient entered hospital till he was discharged, no antiseptic was allowed to come in contact with the eye. The patient's face was carefully washed on the morning of the operation with warm water and soap, special attention being paid to the folds in the skin of the eyelids. The eyelashes were cut short, so as to allow the margins of the lids to be more easily treated and to prevent the eyelashes from coming in contact either with the instruments or with the wound during the operation. By means of a special douche the conjunctival *culs-de-sac* were flushed with sterilised salt solution (6 per cent.). The eyelids were in turn everted so as to allow their conjunctival surfaces to be carefully cleansed. This was of the utmost importance, as the conjunctival surface of the upper lid was the innermost, and therefore the most important, part of the dressing. After applying the speculum, the part of the eye corresponding to the wound was again douched, and the patient enjoined not to rotate the eye upwards till the operation was completed, so as not to allow the wound to come in contact with the margin of the eyelid for fear of contamination. Mechanical cleansing of the conjunctiva with a mop was soon discontinued, as it produced undue irritation. All instruments, lotions, mops, and dressings were sterilised by heat, so that everything that touched the eye was aseptic. Before removing the speculum the eye was douched with a gentle stream of salt solution, the solution being allowed to play over the wound to remove any cortical or capsular *débris*. Some of the solution invariably found its way into the anterior chamber, and was valuable in removing soft lens matter without causing any irritation. The dressing consisted of a piece of moist lint applied next the eye, and one or two thin layers of absorbent cotton wool, the whole being kept in position by means of a vertical and horizontal strip of adhesive rubber plaster; only the eye operated on was covered. Throughout the operation, and also during the preliminary treatment, every attempt was employed to avoid irritating the conjunctiva as much as possible, because conjunctival irritation produced hypersecretion; for the nearer the conjunctiva was to its normal condition the better for operative interference. Our motto in dealing with the conjunctiva should be, "Let sleeping dogs lie.'

Mr. Arnold Lawson had just completed the bacteriological examination of 96 apparently normal conjunctival sacs. In only 2 cases had he been able to find pathogenic organisms, the staphylococcus pyogenes albus; several non-pathogenic staphylococci were found, but these were all harmless. He had not found the streptococcus at all. He therefore did not consider that it was correct to say that the normal conjunctival sac was a receptacle for micro-organisms.

Mr. Mackinlay always boiled his instruments, and used saturated boric acid lotion for the eye during operations.

Dr. Bronner considered that it was not possible to make the conjunctival sac aseptic, therefore antiseptics were necessary; he always put his knives into absolute alcohol before using them. He believed that cocaine by its action on the cornea favoured suppuration.

Mr. Bickerton always boiled his instruments before the operation and again after using them. He irrigated the eye with perchloride 1 in 5,000. He had only seen two cases of suppuration, and both were in hospital practice.

Ophthalmoscopic Evidence of General Arterial Disease.

Mr. Marcus Gunn read this paper. After referring to a case which he had shown to the Society some years ago, he went on to describe the appearances seen in the arteries affected, as part of a change in which the arteries of the body generally and of the brain in particular shared. The general reflex from the vessel was brighter than normal, the central light streak was bright, and the whole artery was of a lighter colour than normal. This was due to a hyaline change in the arterial walls; as a consequence of this change the circulation in the veins was impeded, and in some cases the vein became invisible where crossed by an artery. As a further result of this venous obstruction, there was set up an œdema of the retina, which might be either general or partial, the effect of which was to blur the details of the fundus. In some cases the size of the arteries was not uniform, the vessel would be narrowed at one spot or increased in a certain part of its course; this change was most often seen in the small arteries in the region of the macula. The arteries were sometimes very tortuous. The central streak was narrow, bright, and with points of greater brilliance in it; this condition was also seen in hypermetropia, and after optic neuritis in the vessels arising from the optic disc, but in diseased vessels it was those of the second and third magnitude which should be looked at. There was a loss of translucency of the arteries, so that where the vein passed behind the artery it could not be seen. On the other hand, if the vein covered the artery, the artery could be unduly seen through the blood column in the vein, because of the thickening of the arterial coat, and partial emptying of the vein by the thickened artery as the two crossed each other. As a consequence of the hardness of the arteries, there was an interruption of the venous current, the vein was distended, and often hæmorrhages took place along its course. The change in the arteries was a change in the coats, an irregular thickening; with this there was a loss in carrying power, and hence tortuosity. The change in the veins was due to the damming back of the blood; the walls of the veins and capillaries underwent degeneration, hence arose the hæmorrhages. The question of etiology was one for the physician. The change usually occurred between 40 and 50. If well marked at this age the prognosis was grave. The patients had often been subject to migraine, indigestion, or gout. Chronic alcoholism was also a factor in the causation. In some of the cases known as hæmorrhagic glaucoma this affection of the vessels was the cause of the change which gave rise to the hæmorrhages. It was in close association with renal disease, but the vessels of the eye and brain might be affected before the kidney. He had examined the eyes of all the patients in the National Hospital at one time who had had hemiplegia. In 7 the arteries were normal, in 10 they were affected, and in 7 the changes were quite characteristic.

Remarks were made by Drs. James Tayler, Aldren Turner, Bronner, and Mr. Mackinlay; and Mr. Gunn replied.

THE SANITARY INSTITUTE.

Shirley F. Murphy, M.R.C.S., in the Chair.

Wednesday, March 9th, 1898.

Waterborne Typhoid Fever.

Dr. Christopher Childs read a paper introducing a discussion on this subject. He considered separately three aspects of the subject: (1) Proofs that typhoid fever was frequently waterborne. (2) Ways in which the infectious material was conveyed from the patient into water used for drinking. (3) Means by which this pollution might be prevented. The third of these was that chiefly considered. If general notification of the disease could be ensured, isolation of cases where necessary, complete disinfection of the patient and his excreta, protection from sewer gas and fæcal emanations, prevention of pollution of soil and of water with organic refuse and typhoid excreta, every year in England and Wales alone 4,000 lives would be saved, the suffering of 50,000 individuals would be prevented, and the rates would be lightened by some hundreds of thousands of pounds. The chief requirements for the prevention of pollution were thorough and reliable inspection. The indifference of the populace was the first and greatest obstacle in the path of necessary reforms in this direction. This indifference was born of ignorance, and would best be overcome by persistent and systematic education. Such a work might be well taken up by the Sanitary Institute. Dr. Childs formulated a scheme which was put in the form of a motion as follows:

That the Council of the Institute be requested to consider the possibility of organising and carrying out a scheme for diffusing knowledge with regard to the causes of typhoid fever and the means of preventing it throughout the whole kingdom.

That the Council of the Institute be requested to consider the best means for obtaining new and effective legislation for the protection of our water supplies from pollution, whereby it shall be enacted that:

1. All local sanitary authorities shall have free access to the water supplies--from source to distribution—which are distributed within their districts, whether the source and course of the water so supplied be within their district or not. That the sanitary authorities provide for the thorough and regular inspection of the water supplies distributed within their districts, and for the regular analysis of such water as often as may be deemed sufficient, and that the results of such inspections and analyses shall be regularly recorded and published.

2. That the waterworks companies shall prepare and publish records of their water supplies, such records containing a full account of every source and tributary of the water supply, and a full account of all reservoirs, conduits, filter beds, mains, and pipes by which the water which they supply is collected, stored, or conveyed to the houses supplied; such records also being fully illustrated by maps, plans, and sections, showing the relation of all houses, drains, sewers, cesspits, and all deposits of organic refuse in the immediate neighbourhood of any part of the water supplied by them, and that all such records, maps, plans, sections, etc., shall be freely accessible for the purposes of inspection to the sanitary authority within whose district the water is supplied, and to every customer of the waterworks company.

3. That the waterworks companies shall be required to make regular, constant, and thorough inspection of all parts of the water supplied by them—from source to distribution—with a view to preventing wilful, careless, or accidental pollution; also to make regular analyses of the water supplied by them, so often as may be considered necessary; and to make and publish reports of all such inspections and analyses.

4. That waterworks companies shall be made responsible for the consequences of the pollution of water supplied by them, if such pollution could reasonably have been prevented.

5. That wilful or careless pollution of any water supply shall be regarded and treated as a penal offence.

6. That authorities, representative of the interests concerned, be appointed for each watershed of the kingdom, who shall have the general care and supervision of the waters within each respective watershed; shall take prompt measures to prevent any threatened pollution, and to arrest any detected pollution of any water; and shall be responsible for the due and effective administration of the laws respecting the protection of water within their districts.

Major Flower emphasised the desirability of individual action.

Professor Lane Notter thought more good could be got from observation of the supply and its surroundings than from chemical and bacteriological analysis.

Dr. Rideal advocated domestic filtration as the best remedy.

Dr. Newsholme thought the control of water supplies should be transferred from water companies to sanitary authorities.

Mr. Wanklyn believed, however, that no case had ever been proved against a water company.

Dr. Louis Parkes urged the necessity of further legislation.

Dr. Reginald Dudfield thought that more stress should be laid upon the possible convection of typhoid fever from soil.

The Chairman gave the reasons which might be advanced to support the view that water should not be supplied for profit.

Dr. Childs, in reply, regretted the difficulty in obtaining the necessary reforms and again pleaded for the measures which he had chiefly advocated. Education, fresh legislation, and the responsibility to be thrown on the water companies.

EDINBURGH OBSTETRICAL SOCIETY.

Professor A. R. Simpson, M.D., President, in the Chair.

Wednesday, March 9th, 1898.

Exhibits.

Dr. Hamilton showed (1) Tuberculous Fallopian Tubes (Primary?) removed from an unmarried patient aged 52; (2) Uterine Appendages removed from a woman, aged 24, who had never menstruated, and where there was much interstitial thickening; (3) Photographs of a Large Ovarian Tumour (83 lbs.) removed successfully.—Dr. J. W. Ballantyne showed (1) Photographs of a Baby without Arms, with greatly shortened Legs, and with Three Toes on each Foot; (2) Skiagraph of a Baby's Arm showing Absence of Radius and Thumb.—Professor Simpson showed (1) a Dermoid from a Sheep, attached by a hair to the uterus, and with the kidney of that side absent; (2) a Soft Fibroid Tumour from a Woman, aged 52, with Inversion of the Uterus; (3) Skiagraph of a Naegele Obliquity, as shown at the Moscow Congress by Professor Budin, of Paris.

Missed Abortion.

Dr. Owen Mackness (Broughty Ferry) showed a missed abortion. The patient was pregnant for the fourth time, and her former labours had been precipitate. She menstruated last on May 23rd, but pregnancy could not have occurred before June 1st. On August 10th, after a long bicycle ride, fairly severe uterine hæmorrhage came on, but without pains or opening up of the os uteri. She was sent to bed for a fortnight. For five days she had viburnum prunifolium, but, as the hæmorrhage continued, ℥x of the fluid extract of ergot were given every four hours. After this it gradually ceased, and by August 27th the patient was again going about, though with great care and precaution. In the beginning of October the breasts were noticed to become flaccid—they had been enlarged and contained milk—and the enlarged abdomen was returning to its normal size. On December 10th a slight reddish-brown discharge was observed, which continued off and on till December 30th, on which day severe colic came on and the specimen shown was expelled. When fresh it was 5 inches long and 2½ inches in thickness, and the placenta was fatty. There was only slight hæmorrhage. The ovum probably ceased to grow soon after the hæmorrhage in August, though not expelled till four months later. It had become detached from the uterine wall some time before expulsion, and had remained as a foreign body within the uterine cavity.

The Use of Quinine as a Substitute for Ergot in Midwifery.

Dr. Owen Mackness read a paper on this subject. Quinine had recently been largely used instead of ergot, but still by a very small percentage of practitioners. The disadvantages of ergot were: (1) Its preparations were very unreliable in potency and action; it was apt to cause vomiting, difficult to keep, and if injected hypodermically caused pain, if not abscesses; (3) it caused "tetanic contraction of the uterine muscles, with occasional increases of violence; there was no complete relaxation between the spasms as in ordinary labour pains" (Lauder Brunton); the tetanic contraction was dangerous to the mother, and in a high degree to the child; asphyxiation was apt to occur; (4) it was said to cause hour-glass contractions of the uterus. The advantages of quinine were: It could be easily administered in pills, which kept for any length of time; it was thus tasteless; it hardly ever produced vomiting; its action was more certain than that of ergot in that there was no variability in its composition; it was easily soluble in the acid gastric juice, its effects were seen within twenty minutes; it did not produce tetanic contraction of the uterine muscle, but merely increased the strength of the "pains," and allowed of the natural periods of relaxation. It was specially of use in inertia pure and simple, where there was no obstruction or deviation from normal, or disproportion between passages and fœtus. In primiparæ it gave fresh tone to the exhausted uterine muscle, and it often obviated the necessity for forceps. Dr. Mackness was in the habit of using four-grain pills of the sulphate. Of these two were given, and if the pains did not increase sufficiently another pill was given in an hour, and yet another an hour later. It was rarely necessary to give the third dose, 12 gr. being generally sufficient. Cinchonism was hardly ever produced. Three typical cases in which quinine was used successfully were referred to. For the arrest of hæmorrhage ergot was useful, but was contraindicated in all cases of labour where ecbolic action was desired. For hæmorrhage during labour quinine was of more service, inasmuch as it set up regular contraction. The tetanic contraction due to ergot was no doubt serviceable in *post-partum* hæmorrhage by compressing the gaping vessels. When abortion was threatened, where there was bleeding, no pain, os uteri closed, then ergot in small doses was of great use by bringing into play the hæmostatic action of the drug. In subinvolution after delivery ergot was of service, especially if there was hæmorrhage. Dr. Mackness's conclusions were as follows: (1) Ergot is contraindicated in labour, but is useful in large doses in *post-partum* hæmorrhage. (2) Ergot is useful in repeated small doses in threatened abortion and in subinvolution. (3) For delay in labour due to exhaustion of the uterine muscle, 8 gr. of quinine followed by 4 gr. in an hour, and the latter dose repeated an hour later if need were, should be given.

This was not good treatment where the delay was due to obstruction in the passages, or deviation from the normal in the fœtus.

Remarks were also made by Professor A. R. Simpson, Drs. J. Ritchie, F. W. Haultain, A. H. F. Barbour, J. W. Ballantyne, Haig Ferguson, and Lackie; and Dr. Mackness replied.

Congenital Teeth.

Dr. J. W. Ballantyne read a paper in which he gave particulars of three additional cases of this condition:[1] (1) Mother, a multipara, who had nursed 6 cases of scarlet fever during her pregnancy. The presentation was a face, and the presence of the teeth rendered the diagnosis of this rather difficult. There was a "caul." The teeth were the upper central incisors, one well and the other poorly developed. The boy was now 16 months of age, vigorous, healthy, had eight teeth, including the two above noted, which appeared likely to remain, as they were larger and stronger than the others. The child was reared on the bottle. The combination of face presentation and congenital teeth was rare. The congenital teeth neither dropped out nor required removal, and they were well formed. (2) This case occurred in South Jarra, Melbourne, but full details were wanting. The teeth dropped out, necrosis of the alveolar process followed, and the child died. Whether the death was due to the presence of the teeth or not is uncertain. (3) The father had syphilis twelve years before the birth, and was treated for two years with iodide of potassium. The mother was non-syphilitic. One previous child nine years before, who suffered from eruption and died of marasmus. The weight of the present fœtus was 7 lbs. The teeth were two lower central incisors, movable in their sockets, and the alveolar process for about three-quarters of an inch was elevated three-eighths of an inch above the level of the gums on either side, and was also movable. Below this hinge process was an exostosis in the middle line of the symphysis menti, which disappeared later. The mobility and elevation disappeared later, and the teeth became fixed. The mother's nipple was wounded before the teeth were discovered, and a mammary abscess resulted. A few days after birth the child developed pemphigus, and when six weeks of age, "snuffles" and a papular eruption appeared. The latter disappeared under the use of mercury. Simultaneously, the teeth became soft and were removed by the finger-nail, but the roots remained. At the age of 11 months, the roots were filled with granulation tissue level with the gum, and no other teeth had appeared. Some of the irregularities here might have been associated with the syphilitic state, but it was possible that the process was an extra-alveolar dental sac, containing two supernumerary as well as congenital teeth.

Drs. Haig Ferguson and James Ritchie spoke; and Dr. Ballantyne replied.

The Cervix Uteri and Attitude of the Fœtus in Leopold's Sections.

Dr. A. H. Freeland Barbour read a paper on this subject. Leopold maintained that his sections gave no support to the view that the cervix was taken up, so as to form part of the cavity in which the ovum lay, whether mechanically by dilatation, or physiologically by differentiation. The mechanical taking up necessarily implied the shortening of the cervix. The more recent view, brought forward by Bayer, was that the cervix contributed to the lower pole of the uterine cavity by a process of growth, its mucosa being converted into a decidua, and its muscular fibre becoming transformed into that of the lower uterine segment. In this view the cervical mucosa in part continued as cervical mucosa, in part differentiated into decidua. Bayer's view was based on insufficient data. The most important recent contribution on this subject was a monograph on the cervix and lower segment by von Franqué, of Würzburg, who described 34 uteri in the Würzburg Museum, and gave a table of all the cases reported in medical literature, which comprised 117 uteri from pregnancy, 26 from labour, and 75 from the puerperium. His conclusions were, that the os internum remained closed during pregnancy unless "pains" were present, and that there was no constant difference between the length of the cervix in primiparæ and multiparæ. The length of the cervix at the various months of gestation varied within certain limits; it grew slightly in length in pregnancy. There was no evidence of its being taken up to form part of the cavity in which the ovum developed. In labour it did not become essentially elongated, the elongation from stretching being counteracted by shortening from dilatation. The firm attachment of the peritoneum which marked the upper limit of the lower uterine segment rose higher as pregnancy advanced. The relation of the bladder was variable. Von Franqué drew attention to six specimens in which the bladder was almost completely separated from the uterus, and the peritoneum descended correspondingly deep, coming into relation with the anterior fornix. Two of these were from non-pregnant patients, and its occurrence in pregnancy seemed simply to be the persistence in it of an anomalous disposition of the peritoneum found in some patients. The development of a contraction ring in normal labour and its presence in anatomical specimens he considered proved by the materials he had collected. He had never found cervical mucosa extending over the lower uterine segment. Leopold, in his discussion, accepted the conclusions come to in von Franqué's paper. As regards the attitude and position of the fœtus, 4 of Leopold's cases were of breech and 5 of head presentation. The large proportion of breech cases struck one, and these were from the sixth, seventh, eighth, and ninth months (lunar), therefore earlier than in our reckoning. The 5 head presentations were from the end of the ninth, the beginning of the tenth lunar month, and 3 from full term. In 2 of the breech cases the diagnosis was a vertex presentation, the change to a breech taking place in the agony. The commonest breech position thus arose from the second commonest head position by the fœtus turning a somersault. Attention was next drawn to the effect that the cord might have on the attitude of the fœtus as brought out by Leopold's specimens. Next, there was the turned fœtus from a case of placenta prævia. The child lay right, occipito-posterior. The os was dilated to the size of a three-mark piece, the fingers pushed in, the right leg (that nearest the sacrum) pulled down. The patient died a few hours later. The os externum gripped the right thigh just below the nates, so that the fœtus from this point upwards lay within the cervical canal and the uterine cavity. This preparation showed the attitude and shape of the turned child, the graduated wedge (which was of value for plugging and dilatation), but brought its weakness where the cervix was very rigid. When this occurred Leopold said it would be better treatment to dilate with a bag first, so as to make room for the breech to descend fully, or to be content with rupturing the membranes high up. He did not allude to the pulling down of both legs. He recommended that the anterior leg should be laid hold of, for if the posterior were brought down the anterior was extended and hitched on the pubes, and the fœtus could only be delivered by the trunk rotating so as to carry the extended leg towards the sacrum, and allowing the pulled down leg to slip out under the pubic arch. This section of Leopold's was compared with that of Zweifel on a similar case. Of Leopold's 5 cases of head presentation only 3 were reproduced, 1 from a normal pelvis, 1 from a slightly contracted justo-minor, and 1 from a flat rickety pelvis. The various points in these were pointed out and explained by Dr. Barbour, and reference was made to the sections by Chiari and Schroeder.

The paper was discussed by Drs. Haig Ferguson, James Ritchie, and J. W. Ballantyne; and Dr. Barbour replied.

[1] See British Medical Journal, March 26th, 1897, p. 744.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of State Medicine.

H. C. Tweedy, M.D., President, in the Chair.

Friday, February 18th, 1898.

The Housing of the Poor in Dublin.

The President in his opening address pointed out from statistics obtained from Sir Charles Cameron that 8,000 houses in Dublin were inhabited by 32,000 families, scarcely 1½ room being available for each family. It was the duty of the municipality to provide tenement accommodation of a suitable kind, and at a weekly rent of from 2s. a week downwards, for the class not earning the steady wages ea11 ed

by the ordinary artisan, for whom excellent dwellings were provided throughout Dublin. This could only be done at a financial loss, and the Corporation, though most anxious to forward the movement, were unable to do so from lack of funds. The President suggested the revival of a law which had fallen into abeyance—namely, that for the periodical revaluation of the city—and urged very strongly that the valuation should bear a fixed and definite proportion to the rent of each house. He also suggested that many well-built houses in streets now unfashionable might be purchased and adapted as tenement houses at a comparatively moderate cost.

Animal Vaccine.

Dr. Knox Denham stated that he believed that the best form of calf-lymph was that made in a glycerinated emulsion, glycerine being in every way preferable to either lanolin, vaseline, or lymph in the dried state, as on ivory points. Not only did experiments made by Professor McWeeney at the Calf Vaccine Institute prove this, but Dr. Denham threw on the screen a series of plate cultures made by Dr. Blaxall, which clearly demonstrated that although numerous extraneous microbes existed in all fresh calf-lymph, storage of glycerinated calf-lymph from four to six weeks caused the total disappearance of extraneous microbes, the activity of the vaccine remaining perfect, whereas, with lymph treated with lanolin for vaseline the original colonies of microbes continued rapidly to increase with the length of storage. Dr. Denham then gave an account of the various processes used by him in the manufacture of calf-lymph in Dublin. This portion of the paper was illustrated by a number of lantern slides, showing the different steps. No antiseptic was used, asepsis being obtained by the abundant use of sterilised water, scrupulous cleanliness through boiling of all instruments and corks, and the sterilisation of the capillary tubes in a hot air steriliser.

Remarks were made by Dr. A. Nixon Montgomery, Dr. Donnelly, the Registrar-General (who stated that Dr. Purcell had used glycerine as a means of preserving his lymph for the last twenty years or more) Dr. Doyle, Dr. Horne, and Surgeon-General Potter. Dr. Denham, in reply, threw another photograph on the screen to illustrate that the more glycerine there was the fewer microbes there were.

MANCHESTER MEDICAL SOCIETY.

G. A. Wright, F.R.C.S., President, in the Chair.

Wednesday, March 2nd, 1898.

A Point in the After-Treatment of Arthrectomy of the Knee-Joint.

Mr. Joseph Collier called attention to the possibility of preserving the power of extension in the knee-joint should it become flexed after arthrectomy, by keeping the patella moveable from the first. He pointed out that with the greatest care after this operation, as with excision, the knee tended in certain cases to become flexed even after many years, though apparently bony ankylosis in good position had taken place, and that this condition of flexion was especially liable to occur between the ages of 11 and 14. For many reasons given he considered this liability to flexion to be almost entirely due to the action of the hamstrings in walking, there being with the usual after-treatment no corresponding action of the quadriceps extensor possible, owing to the patella being glued down to the femur. He found that in a certain percentage of cases it was possible to keep the patella free by frequently moving it, and showed a case operated upon two years ago, in which though about quarter flexion had taken place after the removal of all fixing apparatus, still, owing to the patella having been kept free, full and forcible power of extension was present, giving considerable movement and almost a normal mode and power of walking. He therefore advised that though no active or passive effort at obtaining movement should be attempted until more cases had been treated by this method, the patella should be kept free by constant manipulation, so that even if flexion should take place a power of extension might also be present, when of course a much better result than fixation in extension would be obtained.

Retinal Changes in Cerebral Hæmorrhage, Embolism, and Thrombosis.

Dr. R. T. Williamson recorded the results of ophthalmoscopic examination in a number of cases. He drew attention to the fact that in cases of hemiplegia from cerebral hæmorrhage which terminated fatally, a hæmorrhage was not infrequently found in the retina, on the same side as the brain lesion, on ophthalmoscopic examination, whilst the opposite retina was normal. Occasionally the same condition was met with in cerebral embolism; also in cerebral embolism occasionally the retinal vessels were slightly dilated on the side of the brain lesion. In thrombosis of the middle cerebral artery, when the thrombus extended down into the internal carotid, the vessels of the retina on the side of the brain lesion might be markedly dilated and tortuous, whilst the retinal vessels of the opposite eye were normal.

Nephrolithotomy.

Mr. T. Jones reported the following case: Mr. S., aged 29, consulted him on October 15th, 1897. In 1889, the patient had a sharp pain in the left lumbar region just below the costal margin. It lasted ten or twelve hours, and soon afterwards it was noticed that the urine contained a considerable quantity of blood intimately mixed with it. No stone was passed, nor did he notice any gravel in his urine. There were three further attacks of pain similar in character to the first, at intervals of some months. Some years later the patient noticed pus in his urine, and this continued up to the time of Mr. Jones seeing him. He had been under treatment continuously for six or seven years, during which various remedies for clearing the urine had been tried without success. There were no bladder symptoms; the urine could be held for several hours without any inconvenience. No enlargement of the prostate could be detected, and the patient's general condition, which was excellent, excluded the possibility of any tuberculous condition of the urinary apparatus. Exploration of the bladder under chloroform gave negative results, but while under the influence of the anæsthetic abdominal examination revealed a very decided fulness in the left kidney region. This, combined with the history of acute pain in the same region eight years previously, led Mr. Jones to recommend an exploratory operation. The urine was examined on several occasions; it was alkaline and reactive, specific gravity 1022, and always contained a considerable quantity of pus, the first urine passed containing the most pus. On January 16th, 1898, after exposing the kidney, a hard mass was felt lying in the pelvis of the organ. An incision through the kidney substance and the introduction of the finger revealed the presence of a large stone which, after some difficulty, owing to its position and shape, Mr. Jones was able to dislodge and remove. The stone, mainly composed of oxalate of lime, was placed across the pelvis of the kidney, one end lying in the somewhat dilated pelvis moulded in a calyx; a small projection connected with the main mass was lying in the upper part of the ureter. The position and fixity of the stone accounted for the absence of symptoms. The pelvis of the kidney was washed out with a boric and saline solution, the ends of the incision were brought together, the middle being left open for the drain tube, which extended down as far as the kidney. The subsequent course of the case was most gratifying. The wound had healed in three weeks from the date of operation. No urine having come through the loin, the first dressings did not need renewal for five days. As soon as the urine was free from blood a marked diminution in the quantity of pus in it was observed. In a month even this had completely cleared away.

The Immediate Cause of Death in Peritonitis.

Mr. Alexander Wilson made a short communication on the immediate cause of death in peritonitis and its treatment. He advanced the theory that in peritonitis death was caused by the production in the peritoneal cavity and absorption into the system of a poison which acted chiefly on the circulation, and that the immediate cause of death was from vasomotor paralysis. He suggested that, in addition to operative treatment, measures should be taken to obviate the vasomotor paralysis by transfusion and the administration of drugs which raised the blood pressure, such as extract of suprarenal capsules.

LIVERPOOL MEDICAL INSTITUTION.

Microscopical and Pathological Section.

F. T. Paul, F.R.C.S., in the Chair.

Thursday, March 10th, 1898.

Bacterial Flora of Liverpool Water.

Professor Boyce and Dr. C. A. Hill brought forward a preliminary note on the result of their investigation of the bacterial flora of Liverpool water. They had examined not only the city tap water, but also the water at the gathering grounds at Rivington and Vyrnwy, and water taken direct from the wells that were still used, and also from the various reservoirs, etc. They had come to the conclusion that there was a specific flora for water, just as there was for sewage, milk, etc., and they held that it was possible to differentiate between these several groups. The methods of collection and examination employed were described, and a large number of cultivations and photographs were shown. They found that the identification of the individual members of the large numbers found was difficult, so they had adopted a simple system of classification which they now described. The results of the examination established the great purity of the Liverpool water; but the authors insisted upon the importance of routine examination at frequent intervals, and held that the delicacy of the bacterial analysis was much greater than that of the ordinary chemical method, especially in demonstrating the efficiency of filtration.

Mr. Paul and Dr. Carter considered that the authors had made out a case for the routine bacteriological examination of all drinking water. The latter said he had never quite believed in the efficacy of the chemical examination.

Dr. Kenyon (Chester) admitted the value of the bacterioscopic method, but held that it had confirmed in a remarkable way the results of chemical analysis, especially as regarded the efficiency of sand filtration.

Drs. Warrington and Nathan Raw also joined in the discussion; and Professor Boyce replied.

Specimens.

The following specimens were shown, as well as those illustrating the above communication: Dr. Macalister: A Spindle-celled Sarcoma of the Brain, involving the left temporo-sphenoidal lobe, and extending up to Broca's convolution.—Dr. Wiglesworth: A specimen of Old Softening of the Left Cerebral Hemisphere, from occlusion of the left middle cerebral artery in a man aged 51. He described the parts involved, from the cortex to the lower end of the spinal cord, pointing out certain differences from the usual type. He compared the lesions with the symptoms. The communication was well illustrated with pathological preparations and lantern transparencies. He also showed a Carotid Aneurysm from the same case.—Dr. G. G. Stopford Taylor showed Drawings and Microscopic Preparations of a Patch of Acute Folliculitis of the Skin of the Side of the Nose. It occurred in a cow-keeper, and seemed to be infective. He described the symptoms and treatment, and the histology of the part removed.—Mr. Larkin showed, for Dr. John Robinson (Runcorn): (1) A very large Sequestrum from the Calvarium. It measured 8½ inches antero-posteriorly, and 6¾ inches transversely. It comprised 2 inches of the apex of the occipital bone, both parietals—the left as far down as the eminence—the right to below the temporal ridge—and nearly an inch of the upper margin of the frontal bone. For a considerable area in the centre the whole thickness of the bone was involved. The patient from whom it came was also shown. He was an epileptic, aged about 50. He had fallen into the fire in a fit, and his scalp was burnt off and the bones charred. The sequestrum separated some months later on his striking his head violently in falling in another fit. The cerebral pulsations could be both seen and felt over a circular area some 3 inches in diameter to the right of the centre of the top of the head. (2) A Large Gallstone (40 mm. by 25 mm.) which he had removed from the rectum of a hypochondriacal patient. For comparison with this Mr. Larkin showed a somewhat smaller gallstone he had removed by operation from the ileum of a woman in whom it had caused intestinal obstruction. (3) A microscopic section of a Pedunculated Tumour of the Areola of the Nipple. It was of some interest as it was the subject of one of the plates in Mr. Hutchinson's smaller *Clinical Atlas*. The tumour was a pure fibroma covered on the surface with stratified pavement epithelium.—Dr. Buchanan showed some Crystals of Phenyl-Glucosazon from Diabetic Urine, and described the pathology of a case of Pleuropneumonia which occurred in a cattle-man. He illustrated his communication with numerous microscopical specimens and microphotographic lantern transparencies.—Dr. Nathan Raw showed a Fibro-sarcoma of the Right Auricle, with Rupture of the Inferior Vena Cava into the Right Pleura; also a Horseshoe Kidney, and a Primary Carcinoma of the Uterus with Secondary Deposits in the Brain.—Dr. Craig Dun showed a Dissection of the whole Posterior Abdominal Region in a case of Horseshoe Kidney recently met with in the anatomy rooms at University College.—Mr. Thelwall Thomas showed sections of a Primary Carcinoma of the Kidney in a woman aged 50. The kidney had been removed by operation. There had been hæmaturia for three months, and cystoscopic examination showed the blood came from the left ureter. A discussion followed. Dr. Bradshaw held that the cerebral tumour Dr. Macalister showed did not involve Broca's convolution. Mr. Paul and Mr. Larkin did not consider that Dr. Raw had made out that his cardiac tumour was a sarcoma. Drs. and Messrs. Warrington, Newbolt, Raw, Boyce, Buchanan, Wiglesworth, and Macalister also took part in the discussion.

Hunterian Society.—At an ordinary meeting on March 9th, Mr. A. H. Tubby, Vice-President, in the chair, the following pathological specimens were exhibited and discussed:—Mr. Tubby: Large Cystic Kidney, removed by operation.—Mr. Targett: Malignant Disease of the Uterus.—Dr. Rawes: Subserous Fibroid of the Uterus, showing necrosis of the centre, and calcification of the periphery.—Drs. Davies and Drysdale: Double Thoracic Aneurysm, simulating malignant growth of the left lung. The heart was displaced entirely to the right of the median line.—Dr. Drysdale: Sacculated Aneurysm of the Aorta.—Dr. Hingston Fox: Strangulation of the Ileum beneath an adherent Meckel's diverticulum.—Mr. John Adams: Bullet Wound of the Chest. The auricles, aorta, superior vena cava, and right lung were perforated.—Dr. Smith: Tuberculous Kidneys, Bladder, and Testes, with angular curvature of the spine.—Dr. Sequeira: Tuberculous Peritonitis in a Boy, with extensive adhesions of the intestines.

West London Medico-Chirurgical Society.—At a clinical meeting of the Society held on Friday, March 4th, Dr. H. P. Potter, President, in the chair, the President showed a Button Hook removed by Gastrotomy from a woman, together with a skiagraph taken by Dr. F. H. Low, showing the hook in the stomach before removal. Mr. Keetley alluded to a case in which a woman had swallowed a plate of false teeth, which had become impacted in the œsophagus and had led to a fatal result.—Mr. Keetley showed a man who had been Mauled by a Leopard. After the injury he had a very high temperature. He had been treated by antistreptococcic serum. Mr. McAdam Eccles mentioned the case of a man who had been severely wounded by a lion in the thigh, and who had died of septicæmia. Mr. Twynam related three cases of Sharkbites in Boys, in which there had not been any untoward result.—Mr. Keetley also showed a case of a boy on whom he performed Erasion of the Knee-joint for Early Tuberculous Arthritis. The result was all that could be desired. The President alluded to a case of a woman on whom he had performed Arthrectomy on both Knee-joints with very gratifying results.—Dr. Seymour Taylor exhibited a case of Locomotor Ataxia in a Man. Dr. Whitfield remarked that in some such cases there was delayed sensation and not true anæsthesia.—Dr. McAdam Eccles showed a case of a girl, aged 3, with Wandering Rash on the Tongue. He also brought forward a case of an Injury to the Lower End of the Left Radius in a Boy aged 14, and with it a Skiagraph taken by Dr. Low, which demonstrated the injury well.—Dr. Abraham showed a case of Acute Psoriasis in a Boy.—Mr. McAdam Eccles (for Mr. Bidwell) showed a man who Fractured his Right Patella some years ago, and more recently his left. This Mr. Bidwell had wired, but the same patella had

refractured a few months later, the wire breaking as well. It had been wired again. Mr. McAdam Eccles remarked that he believed possibly bony union of the patella was not always so much to be desired as was commonly thought.—Dr. WHITFIELD showed a case of Spasmus Nutans in an Infant. Mr. MCADAM ECCLES alluded to a similar case.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—At a clinical meeting on March 4th, the PRESIDENT (Mr. Arbuthnot Lane) in the chair, Dr. F. S. TOOGOOD showed the following cases from the Lewisham Infirmary: (1) Suprapubic Cystotomy in a boy of 4 years for stone. Persistence of sinus for 4 months. Ultimate closure by buried sutures around sinus. (2) Fractured Patella. Perfect union and complete mobility of joint secured by Barker's method of suture. (3) Hæmophilic Elbow-joint. (4) A girl, aged 23, in whom Lateral Curvature of Spine and Paresis of Legs and Left Arm dated from an attack of myelitis caused by a fall down stairs occurring 5 years ago. —Dr. R. E. SCHOLEFIELD read notes of a case of a man, aged 65, who showed no symptoms of typhoid fever during life, but in whom numerous Typhoid Ulcers were found *post mortem*. He also showed the perimetric charts of a case of Symmetrical Scotoma with Hemi-achromatopsia in a patient aged 50.—Dr. F. F. TAYLOR showed a specimen of Aneurysm of the Heart and Ruptured Auricle from a man who was found dead in a public-house watercloset.—Dr. MORGAN DOCKRELL showed (1) a case of Bazin's Disease; (2) a case of Tuberculosis of the Lips.—Mr. ERNEST CLARKE exhibited a series of beautiful mounted Specimens of Eyes in formalin and glycerine jelly, illustrating the disastrous effects of Iridocyclitis in producing (1) detachment of the retina; (2) glaucoma; (3) anterior synechiæ (complete) with exclusion and occlusion of the pupil; (4) anterior staphyloma.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 2nd, Dr. CATTLE, President, in the chair, in view of the Government's avowed intention of introducing an Army Bill into Parliament at an early date, Dr. GIDDINGS proposed, and Dr. CATTLE seconded, the following resolution, which was carried unanimously:

That the Nottingham Medico-Chirurgical Society, viewing the present unsatisfactory condition of the British army medical service with anxiety and dismay, hereby calls upon Her Majesty's Government to accede to the reasonable and persistent demands of the whole British medical world by forthwith adopting that scheme for army medical reform which has been submitted to it by the foremost physicians and surgeons of the day. That copies of this resolution be sent to Lord Salisbury, Mr. Balfour, and the local members of Parliament by the Secretary.

—Mr. GRAY read a paper on Non-suppurative Inflammation of the Middle Ear. After describing in detail the pathological changes in the mucous membrane of the middle ear in the two forms of non-suppurative inflammation—namely, the mucous catarrh and the dry catarrh, he discussed the various symptoms and signs. In the treatment he laid down four great indications: (1) Get and maintain patency of the Eustachian tube; (2) removal of the exudation in the middle ear; (3) reduction of the swelling of the mucous membrane of the middle ear; (4) very important—the treatment of any coexistent nasopharyngeal trouble.—Mr. ELLERTON showed a portion of a Heart with two Aortic Cusps only.—Dr. HANDFORD showed: (1) Mediastinal Tumour; (2) a portion of Brain showing a number of small Tuberculous Growths; there was also acute miliary tuberculosis.—Mr. ANDERSON showed: (1) The Wall of an Ovarian Cyst which was studded with warty growths; (2) an Ovarian Tumour of the cystadenomatous variety, and a Parovarian Cyst from the same case; (3) Ruptured Tubal Pregnancy; (4) Uterus with Fibroid Tumour complicating pregnancy, removed by Porro's operation.

FORFARSHIRE MEDICAL ASSOCIATION.—At a meeting held in the University College, Dundee, on March 4th, Dr. G. O. C. MACKNESS, Vice-President, in the chair, the SECRETARY showed for the PRESIDENT Shaw's Self-retaining Operating Vaginal Speculum, which Dr. Campbell had found very useful.—Mr. GREIG showed a specimen of Old-standing Intracapsular Fracture of the Neck of the Femur, which had during life simulated a dislocation of the femur into the sciatic notch.—Dr. G. F. WHYTE showed a Heart in which the anterior wall of the right ventricle was decalcified to such an extent as to be translucent. At the necropsy, there were numerous pericardial adhesions. He considered that it was from its appearance calcareous degeneration of muscle, and not atrophy following degeneration of pericardium.—Dr. KYNOCH showed: (1) a Uterus removed by vaginal hysterectomy for cancer of the cervix. The patient, who was 41, had a history of two months' hæmorrhagic discharge. The disease was limited to the posterior lip of the cervix. (2) A specimen of Myxœmatous Degeneration of the Chorion. The case presented unusual symptoms and difficulty in diagnosis.—Dr. STALKER read notes of a case of Spinal Myelitis of Syphilitic Origin. He discussed the main features of the case, and showed how it differed from ordinary cases of myelitis, from which Erb was the first to mark them off.—Dr. BUIST read notes of the Treatment of Cystocele, describing the operations which were formerly performed, and pointed out wherein they failed to accomplish a permanent cure. In a case under his own care he had made a vertical incision in the anterior vaginal wall, stitched the postero-inferior portion of the bladder wall in folds, and made the vertical incision into a transverse cicatrix. The result was relief without recurrence six months after. Dr. KYNOCH made remarks.—Dr. HALLEY read notes of a case of Acute General Erythema, following a septic ulcer, in a man, aged 70. Amputation was performed through the middle of the thigh. The case gave no trouble, the rash disappeared, and desquamation commenced immediately on its disappearance. Dr. Halley commented on the case.—Mr. GREIG read notes of cases he had had under his care when eczema and erythema had followed the application of antiseptic dressings. He considered that the erythema in these cases was due to the absorption of some toxic substance, but not due to sepsis.

REVIEWS.

A MANUAL OF OPERATIVE SURGERY. By LEWIS A. STIMSON, B.A., M.D., Professor of Surgery in the University of the City of New York; and JOHN ROGERS, B.A., M.D., Assistant Demonstrator of Anatomy in the College of Physicians and Surgeons, New York. Third Edition. London: H. K. Lewis. 1897. (Demy 8vo, pp. 598, 334 illustrations. 12s. 6d.)

THIS edition of Professor STIMSON's book was apparently published in America in October, 1895. It is stated that most of the volume has been rewritten in order to enable the authors to note the important changes which have taken place in operative surgery during the past ten years. Alterations have been made especially in the chapters which are devoted to the consideration of those operations which are practised upon the cranium and the abdomen. Most of the changes have been made by Dr. ROGERS, under the supervision of Professor Stimson, who revised the manuscript and read the proof sheets. We cannot altogether congratulate the authors on the manner in which they have done their work, for some important operations are omitted, and a number of obsolete procedures are included.

Some points in the terminology will prove confusing to English students. Thus, in the anatomy of the neck, the superficial layer of the deep cervical fascia is called the "superficial fascia," and is said to enclose the sterno-mastoid muscle. Throughout the volume the anatomical sections are in most cases difficult to follow owing to the nomenclature adopted, and to a want of clearness in the descriptions.

In the chapter on the ligature of arteries it is advised that the aneurysm needle should always be passed in a threaded condition. This will not be generally accepted as correct. Operations upon the veins have apparently been omitted, no mention being made of exposure and ligature of the internal jugular vein, or of those operations which are practised for the cure of varicose veins.

In Part V, under the heading Neurotomy and Tenotomy, the operations upon nerves and tendons are described, but, in addition, a group of miscellaneous operations, such as the

treatment of erectile tumours, osteotomies, operations for united fracture, laminectomy, etc., is included. This, we presume, is a printer's error, but it certainly appears curious to see a page headed Neurotomy and Tenotomy, and find it occupied by a description of the operation which is recommended for the removal of an ingrowing toe-nail.

When dealing with the subject of the treatment of strangulated hernia it is stated that "if the intestine is gangrenous, an artificial anus must be formed, and it is well to stitch the bowel fast to the edges of the hernial ring as in enterostomy," whilst no mention is made of the possibility of removing the gangrenous portion, and uniting the two ends of the divided intestine. A few pages further on, however, when discussing the treatment of strangulated inguinal hernia, it is stated that "if it (the gut) cannot be safely returned, it is resected or fastened in the wound as in enterostomy." Such inconsistencies as these ought not to occur, especially in a handbook which is intended for the use of students.

On page 431, in the figure, the femoral artery and vein are represented as lying in the abdomen above Poupart's ligament. They ought to be called the external iliac artery and vein respectively.

A description of operations upon the special senses, such as the eye, ear, etc., is given. Under the term "bronchotomy" are included those operations which are undertaken to open the larynx or cervical portion of the trachea.

The plan of this book is excellent, but the execution is somewhat faulty, as we have indicated above. Careful revision will make it a very useful student's handbook of operative surgery.

The Essentials of Experimental Physiology. By T. G. Brodie, M.D., Lecturer on Physiology, St. Thomas's Hospital Medical School. London, New York, and Bombay: Longmans, Green, and Co. 1898. (Demy 8vo, pp. 231; 177 illustrations; two plates. 6s. 6d.)

This book is the third of the "Essentials" series issued by Messrs. Longmans. The general arrangement of the work differs somewhat from that which Professor Schäfer adopted in his *Essentials of Histology*, and which was followed by Professor Halliburton in his *Essentials of Chemical Physiology*. Dr. Brodie has made use of three different types: a small type for the descriptions of apparatus and methods; a medium type forms the main text; and a heavy type is used for the fundamental experiments suitable for elementary classes.

The subjects of which the book treats are principally those in which the graphic method is employed, such as muscle and nerve, the heart and circulation, respiration, electrophysiology, reflex action, and vision. This department of physiology dates from the time when Carl Ludwig began his work, but its study in practical classes is comparatively recent. The teaching of the science has become more and more objective, and now every examiner seeks to obtain evidence that the students have been through a proper laboratory training. Hitherto teachers have laboured under the disadvantage of having no textbook of moderate compass which they could recommend to their students as an aid in their experiment work. Most have had to employ directions given either verbally or in the form of slips printed for distribution to the members of their classes. Here, however, we have at last the book which was so much needed, and we congratulate Dr. Brodie on the result of his labours.

The numerous figures which illustrate the apparatus are all good, and the reproductions of tracings are excellent; these Dr. Brodie has specially prepared for the purpose of the book, and they are a credit alike to his patience and his skill; every student who follows the clear directions here laid down should attempt to obtain equally good ones. A small number of the experiments described, like those on blood pressure, which involve vivisection, will necessarily be performed by the teacher and not by the students, but otherwise the author intends that his book should not merely be read, but should serve as a practical handbook in a class in which every member does the experiments himself. At this time of day it is a mere truism to say that practical work can only be learnt by doing it oneself. This has long been acted upon in the study of anatomy, and this latest addition to our physiological textbooks will help both teacher and student alike in carrying out the maxim in the field of physiology also.

Die chirurgischen Krankheiten und die Verletzungen des Pancreas [The Surgical Affections and Injuries of the Pancreas.] Von Dr. Werner Körte. (Deutsche Chirurgie, Lieferung, 45-d.) Stuttgart: F. Enke. (8vo, pp. 234, 18 illustrations. 9s.)

The plan of this very important work, which in its whole character is well worthy of its author, is as follows: It begins with a short historical sketch of the development of the views in regard to the anatomy and physiology of the pancreas, and goes on to treat briefly the gradual evolution of our knowledge in regard to its pathology. Then follows a short review of the earliest surgical efforts in the direction of the treatment of its graver affections. The present state of our knowledge of the pathology occupies the next chapter. Chapter III deals with the physiology of the organ as far as at present known. In Chapter IV we have the general symptomatology and causation of the affections of the pancreas, with an abstract of the notes of all cases treated in the author's hospital for diseases of the organ during the last two years. Chapter V deals with the pathology, symptoms, and surgical treatment of cysts of the pancreas; Chapter VI with the solid tumours of the organ. Chapter VII is concerned with the inflammatory diseases of the organ, their pathology, symptoms, and treatment. In Chapter VIII we have a review of what is known of the origin, etc., of the concretions in the organ and the modes of dealing with them. Chapter IX deals with the injuries of the pancreas; Chapter X with the variations in the position of the part; and Chapter XI with the association of diabetes with its morbid conditions.

It will be seen from this sketch of the arrangement of the book that it deals with the whole subject in a very complete manner; but a perusal of its pages shows this still more fully. Those who know the character of the work done by Dr. Körte, and his skill both in diagnosis and as an operator in the immense field with which his 300 beds at the Urban Hospital in Berlin supply him for pathology and surgery, will hail this expression of his views upon the subject treated as one of the most important and welcome additions to our literature which has appeared for some time.

Perhaps for English surgeons who have not been slow to grapple with the operative treatment of diseases of the pancreas, the most interesting chapters will be those in which he records his experience in the study and treatment of the affections known here as suppurative and hæmorrhagic pancreatitis.

His own pathological material during two years included 3 cases of suppurative inflammation of the pancreas, 3 of the hæmorrhagic form, 5 of fat necrosis and fatty degeneration, 4 of peripancreatitis, 31 cases of chronic inflammation of the organ, and 5 of hæmorrhages into the organ. Besides these, there were 8 cases of primary malignant tumours and 12 of secondary. These hyperplastic conditions were found in 3 cases and atrophy in 7. Finally, various unclassed conditions in 5 cases complete the series of 86 affections of the pancreas among 3,016 *post-mortem* examinations. Among these, 7 cases appear under two headings.

Clinical Lectures on Urine. By J. Rose Bradford, M.D., D.Sc., F.R.C.P., F.R.S. London Medical Publishing Company. 1897. (Cr. 8vo, pp. 128. 2s.)

After a few general remarks on the examination of the urine, the author deals in the first lecture with the variation in the quantity of the urine, together with suppression, and also the specific gravity. In Lecture II he includes under albuminuria the presence in the urine of proteid matter, of which albumoses, globulins, and albumins are the most prominent. Nucleo-albumins and true peptones may occur, but they are not of much clinical importance. The author is not impressed with the accuracy of Esbach's method, now perhaps rather widely employed.

Dr. Bradford wisely draws attention to the rule, sometimes apt to be forgotten and yet almost of universal application, in forming a prognosis in a case of albuminuria, that

all the facts of the case must be taken into consideration, and not only one fact—such as the albumen alone. In the third lecture the pigments of the urine are discussed, including urobilinuria, hæmatoporphyrinuria, chromogens, and the allied aromatic sulphates. Indicanuria is said to possess the same significance as excessive amounts of skatol pigments, and points to the excessive breaking up of proteid matter. As is generally taught now, the microscope is stated to be the best means of recognising blood in the urine; the hæmin crystal test is also a very good one, but the spectroscope requires expert hands and is therefore naturally of more limited value. Lecture IV contains an account of hæmoglobinuria and of the bile pigments. The warning against the incautious use of glycerine—which, when injected into the circulation of animals, produces hæmoglobinuria—is a timely one.

The question of obstructive and non-obstructive jaundice comes up once more under the bile pigments. Jaundice in phosphorus poisoning is due to an obstruction of the minute bile passages; this disposes of one group of cases of so-called non-obstructive jaundice, and the author boldly states that the cases in the remaining group are really urobilinuria. In Lecture V the nitrogenous constituents of clinical importance are described, including urea, uric acid, and creatinin. The last named is present in much larger quantities than uric acid, but has less clinical importance owing to its solubility. Again the author tells us with some decision that urea is not a very important constituent of the urine, as it varies largely with the individual's diet. He points out with much show of reason that the excess of urea present in diabetes is thus not necessarily derived from the nitrogen of the body tissues. The remarks on the soluble quadriurates and their relation to gravel and gout are interesting. Many important facts will also be found upon glycosuria at the end of Lecture VI and in Lecture VII. The salts of the urine are dealt with in the eighth and ninth lectures. A high percentage of salts is needed to keep the uric acid in the form of quadriurates. Phosphates are stated to be mainly derived from the food.

We can most cordially recommend these lectures to students and practitioners alike; they bring together in small space and in clear language numerous facts which otherwise would have to be collected from many sources. They are perhaps a little dogmatic in style, as all lectures must needs be, but they come obviously from an author deeply and practically versed in his subject.

A Textbook of Mental Diseases. By T. H. Kellogg, A.M. M.D. London: J. and A. Churchill. 1897. (Roy. 8vo, pp. 792. 25s.)

Messrs. Churchill have been so long recognised as publishers of works of the highest authority in mental diseases, that it is at once a kind of certificate of value when they publish a book on insanity. We, however, hardly recognise the necessity for bringing out in England this book written by an American physician, for though it is a big book, we find little or nothing original in it. It aims at providing the student, the practitioner, and the psychiatrist with a book of instruction and of reference. It certainly covers a very large field, extending from the early history of insanity and its treatment to the present day. We admit that this collection of statistics as to the prevalence of insanity is of interest, and seems to be trustworthy, but in the third chapter we have a tedious collection of the forms of classification extending from those of Stable and Sauvage to that of Sohmer in 1894, which is enough to frighten the student. The author's classification is very elaborate, and appears to be more complicated than convenient. It may be useful to the psychiatric student, but we doubt if the ordinary medical student will master it.

The chapter on the etiology of insanity is carefully prepared, and contains matters of interest in relationship to the conditions leading to insanity. The question of true education is ably considered.

A short but good chapter follows on the evolution, stadia, clinical progression, and termination of mental disorders; and this method of treating the various disorders together is preferable to the usual method of considering the various kinds of mania or melancholia as if they were specific mental entities.

The mental and the physical symptoms of mental disease are taken in separate chapters, and every care is given to their study and relative value. Some very fair photographs illustrate the physiognomy of mental disease, and sphygmographs of less value follow. The pathology and diagnosis of the forms of mental disease occupy two important chapters.

Treatment of the most scientific and humane kind is described at great length. Dr. Kellogg sums up his belief as to restraint thus: "Mechanical restraint, though often less outraging than the personal laying on of hands by attendants, and less apt to result in physical injury to the patient, is open to great facility of abuse, and is only to be applied in certain extreme cases." With regard to hypnotism, he is sceptical as to its utility in treating the insane. The illustration on page 495 of feeding with the stomach tube is liable to mislead, for if the head be bent back as here represented the passage of the tube would be almost impossible.

The second part of the book contains the description of the special groups and typical forms of insanity. These are not arranged in the ordinary way, but the plan is satisfactory.

Though, as we began by saying, we hardly see the need for the importation of this book, yet English asylum officers may learn something by its perusal.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A GLASS TANK FOR SURGICAL DRESSINGS.



Messrs. Reynolds and Branson (13, Briggate, Leeds) have forwarded a specimen of glass tanks they have devised for the storage of surgical dressings. These tanks are made in different sizes, and are likely to prove very useful to the surgical practitioner, since they supply convenient and secure receptacles for antiseptic appliances. They have the same diameter at the mouth as at the base, are strong and well made, and are furnished with closely-fitting covers, so that their contents are well protected from contamination.

NEW ENEMA.

Messrs. S. Maw, Son, and Thompson have sent us a new enema, sold by them at 21s. per dozen. The syringe sent us is certainly a very good one.

SOLOIDS.

Messrs. Burroughs, Wellcome and Co., Snow Hill Buildings, E.C., prepare in a compressed form various combinations of drugs for external use under the name of "soloids." The samples recently received include a soloid of zinc sulphate, lead acetate, opium, and tannin, another of zinc sulphate and alum, and one with borax and opium. These soloids are intended to be dissolved in lukewarm water to form solutions for use in gynæcological practice. The advantages of this form of compressed drug are portability and convenience for ready preparation of solutions.

Aluminium Cooking Vessels.—The Surgeon-General with the Madras Government has issued instructions to the medical officers of the General Hospital, Ophthalmic and Maternity Hospitals to test the value of aluminium vessels for use in hospital in place of copper and brass as at present. Samples of this class of vessels required are accordingly being sent to the Museum of the School of Arts, and the work will be set on foot at once when a large supply of the metal will arrive from England.

THE LOCAL GOVERNMENT (IRELAND) BILL.

III.

The Control of Infectious Diseases.

The Notification Act was drafted for England, and was more or less hastily made applicable to Ireland. In England the Poor-law system is quite different from that in Ireland as regards medical officers, their districts, and their duties. It appears that one or more of the Dublin suburban townships, when adopting the Act, sought information of the Local Government Board for Ireland as to the officer who should receive the notifications. That body were advised by counsel that the proper officer was the dispensary medical officer of the district, he being "medical officer of health for the district" under Section xi of the Public Health (Ireland) Act, 1878. It is impossible to suppose that this opinion is correct, and if it is correct it reduces the working of the Notification Act to what is little better than a farce.

Definition of Medical Officer of Health.

During the session of Parliament of 1896, the Public Health (Ireland) Act, 1896, a very important sanitary measure, passed into law. Section xviii proposes to remove doubts as to the meaning of the expression "medical officer of health" in the application to Ireland of the Infectious Disease (Notification) Act, 1889, and the Infectious Disease (Prevention) Act, 1890. As enacted the Section runs as follows:

xviii. In the application to Ireland of the Infectious Disease (Notification) Act, 1889, and the Infectious Disease (Prevention) Act, 1890, the expression "the medical officer of health of the district" shall mean the medical officer of the dispensary district. Provided that where a medical superintendent officer of health is appointed for a sanitary district, the Local Government Board may by order direct that for all the purposes of the said Acts such medical superintendent officer shall be substituted for the medical officer of the dispensary district, and upon the making of such order the said Acts shall have effect in their application to that sanitary district as if such substitution had been made therein.

In making representations to the Government on this Bill, the President and Fellows of the Royal College of Physicians declared their conviction that the time had now come for extending the provision of Section xi of the Public Health Act of 1878 relative to the appointment of "a medical superintendent officer of health when deemed necessary." The College drew attention to the fact that in issuing their "Orders" under the Public Health Act, 1878, the Local Government Board failed to utilise this provision, and created the office of "consulting sanitary officer." This led sanitary authorities to suppose that the services of their chief medical adviser in sanitary matters were to be invoked only on special occasions when they "consulted" that officer; and it carried with it but a small annual salary, or a fee whenever the "consulting sanitary officer" was "employed."

Notification in Ireland.

So far as notification and the prevention of disease are concerned, the results have been unsatisfactory. The medical officer of a dispensary district in Ireland is a man whose hands are full. What can he do to carry out the preventive measures to which notification is but the preliminary step? To be a success, notification should be made to an executive officer specially trained and able to devote the greater part, if not the whole, of his time to the discharge of his duties.

Up to December 31st, 1897, 30 out of the 159 Poor-law Unions into which Ireland is divided, acting as rural sanitary authorities, had adopted the Infectious Diseases (Notification) Act, 1889. In addition, the following cities and towns, acting as urban sanitary authorities, had adopted the Act up to the same date: Athlone, Ballymena, Belfast, Clonmel, Cork, Dublin, Enniskillen, Killiney and Ballybrack, Londonderry, Newry, Pembroke, Queenstown, and Rathmines and Rathgar, 13 in all.

Up to the end of 1895, 22 rural and 11 urban sanitary authorities had adopted the provisions of the Act, and during that year 333 cases of infectious disease were notified in the 22 rural districts, and 3,828 cases in the urban districts in question. This might at first sight appear to indicate a fair development of the principle of notification in Ireland; but of all the notifications in 1895 (4,161 in number) 2,497 were made in the city of Dublin alone, 155 in Pembroke Township —a suburb of Dublin—and 257 in Rathmines and Rathgar Townships, also suburbs of the Irish capital. The Infectious Diseases (Prevention) Act, 1890, had been adopted up to December 31st, 1897, by 15 rural and 14 urban sanitary authorities. Under both these Acts the dispensary medical officers acting as medical officers of health are called upon to discharge highly important duties, without additional pay, with little or no executive power, and to the serious detriment of their private practice.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary council was held on March 10th, 1898, Sir William Mac Cormac, Bart., President, in the chair. The minutes of the preceding meeting were read and confirmed.

Recognition of Teaching Institutions.—A report from the Committee of Management was adopted to the following effect:—

1. That the Technical College, Darlington, and the Higher Grade Board School, Hanley, be added to the list of institutions recognised by the Board for instruction in chemistry, physics, and practical chemistry.
2. That the Western University, London, Ontario, be added to the list of institutions recognised by the Board at which the whole curriculum of professional study may be completed, and whose graduates in medicine are admissible to the Final Examination.
3. That Mr. Thomas Cooke's Course of Operative Surgery be recognised for the current year.

Report of Laboratories Committee.—The ensuing report from the Laboratories Committee was read and adopted: Since December 3rd the Director has supplied 7,275 doses of antitoxic serum, each containing 2,000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and all the demands have been fully met. During this period, 14,550,000 units have been supplied, against 9,954,000 units last quarter, which, however, extended over a period of two months only, being an increase of 4,596,000 units. In fulfilment of one of the conditions of the grant from the Goldsmiths' Company, that antitoxin should be, if possible, supplied for use amongst the poorer classes of the community, the Director has continued the supply of antitoxic serum to various general and children's hospitals in London during the past quarter, as well as to certain medical practitioners for cases fulfilling the necessary conditions. The report contained, in addition, a list of those engaged on work at the Conjoint Laboratories.

Erasure of Name.—A Member of the College was removed from the list in consequence of professional misconduct.

Metropolitan Counties Branch, British Medical Association.—A letter was read from Dr. Isambard Owen, thanking the Council for granting permission to the Metropolitan Counties Branch of the British Medical Association to hold a *conversazione* at the College.

Midwives Registration Bill.—A letter from Mr. F. Rowland Humphreys was referred to a Committee for report. The letter related to the Midwives Registration Bill, which will come up for second reading before the House of Commons on May 11th.

British Practitioners in Italy.—There was referred to the President and Vice-Presidents for consideration a petition from Members of the College resident in Italy, asking the support of the Council in protecting their interests as British practitioners in that country in view of the proposed legislation of the Italian Government, enacting that qualified medical men of other countries shall not in future be allowed to practise in Italy without holding the degree of an Italian University.

Election of Representatives on General Medical Council.—A petition was read, signed by certain Fellows and Members of the College, claiming that the right of electing a representative of the College to the General Medical Council is, by Section vii of the Medical Act, 1886, vested in the Fellows and Members of the College, and requesting the Council to forthwith make arrangements to hold an election and enable the Fellows and Members to choose a representative to be a member of the General Medical Council. The petitioners were informed that the question raised was under consideration.

London University Commission Bill.—A letter was read from the Chairman and Honorary Secretary of the delegates to the metropolitan medical schools, stating that the deputation to the metropolitan members of Parliament on the subject of the London University Commission Bill will probably be re-

ceived after the Bill has reached the House of Commons, and suggesting that each institution interested in the Bill should appoint a small committee to see the member for the district in which the institution is situate, and urge upon him the importance of this measure to education in London. The President, together with Mr. A. G. Howse, was requested to take steps for the promotion of the Bill.

SMALL-POX AND VACCINATION IN GERMANY.

THE article which appeared in the BRITISH MEDICAL JOURNAL of January 15th was copied or quoted by several newspapers here and in Scotland, and has aroused the fury of the anti-vaccinationists. Volumes that we have handled and read have, they maintain, no existence. Three of the allegations now again put forward involve issues which they evidently look on as constituting the key of a position which they must carry *per fas aut nefas*. We appeal to the phenomena exhibited by the German and French armies during the war, and the German and all other peoples since. We do take the year 1874 as our era, our terminus *ad quem* and *a quo*, but not, as Dr. Hadwen insinuates, because, the awful epidemic of 1870-72 having well-nigh exhausted the susceptible material, Germany, in common with the rest of Europe, enjoyed a respite of a few years, beginning before the passing of the present Vaccination Act of 1874. We appeal to it because, while the lull was but short elsewhere, the mortality soon rising to or exceeding its former proportions, and epidemics recurring with their accustomed periodicity, Germany has been ever since exempt from epidemics, and the annual mortality has continuously and rapidly diminished as the last generation of persons who, born before 1860, escaped the provisions of the Act is dying out. Indeed, but for the frequent introduction of infection from abroad, small-pox mortality would probably ere long be reduced to zero.

The three allegations are: (1) that there are no, or no authentic, statistics of the small-pox deaths in the two armies; and that, even if the numbers were as we say, the explanation must be sought, like that of the mortality from typhus, in causes other than the relative degrees of vaccination, since (2) the French army was as thoroughly vaccinated as the German, and (3) the virtual extinction of small-pox in Germany must be ascribed to better sanitation, a higher standard of living, and spread of intelligence. They maintain that the civil population, at any rate in Prussia, was as generally vaccinated and revaccinated before, as it has been since, the passing of the Act of 1874, which was, say they, with a few slight alterations, the same as that previously in force in Prussia, but then extended to and imposed on the other States of the Empire. They say also that, as regards Prussia, the change was in the direction of less stringency, primary vaccination being required before the end of the second, instead of as previously the first, year of life. This last remark contains the only grain of truth in the whole contention.

(1) The absurdity of the suggestion that the medical service of the German army was "so disorganised" by the strain put on it in the war, "that no records of the deaths from small-pox were kept" must be patent to anyone acquainted with the perfection of the military system. The official report, indeed, comprises seven huge quarto volumes, including records and tabulated analyses of every case of wounds or illness admitted to the hospitals in the field or at home from over a million German troops and 375,000 French prisoners. The production of so colossal an undertaking was the work of years, and it was not published till 1886; but though it has been before the world for twelve years, its existence is denied on the strength of a statement of Earl Granville when Foreign Secretary, a post which he resigned in 1885, the year before it appeared. From it we learn that the mean strength of the army in the field was 788,213, though, adding those who were constantly being drafted from the reserves to take the places of the killed, wounded, dead, or invalided, over a million must have been actually engaged in the war. Among these the cases were 4,835=6.1 per 1,000 of the mean strength, and the deaths 278 (not, as we stated, 262). The French prisoners in Germany were 372,918, and among them the cases amounted to 14,178=380.19 per 1,000 on the mean strength of 262,496, and the deaths 1,963. The number would have been far greater had it not been that whenever any cases appeared in a detachment or fresh arrival of prisoners the rest were promptly vaccinated even, as in the Turco regiments, by force.

(2) The character of the vaccination in the French army may be judged from the fact that we find the authorities in 1884 congratulating themselves on the great improvement effected since the war, the proportion of successful operations having reached 30 or 35 per cent. In the German army anything less than 90 per cent. would not be considered satisfactory. We thus see that in 1884 not more than 1 French soldier in 3 was really revaccinated, and that the proportion was considerably lower in 1870; this, too, in the regular troops only, for the Gardes Mobiles, who formed a large portion of the army after the deportation of the garrisons of Strassburg and Metz and the surrender at Sedan, were under no such regulations, and the Breton regiments who suffered most were almost wholly unvaccinated.

(3) In the annotated edition of the Act of 1874, by Drs. Guttstadt and Martin, Dr. Guttstadt says that compulsion was unknown save in Hanover, Schleswig, and Nassau; that only in Saxmeiningen, Anhalt, and Nassau was any legal provision made for revaccination; and that in Nassau alone was there even a limited form of obligation in respect of revaccination. The Act of 1874 was, we repeat, adopted from the local regulations of the free city of Frankfort. These are not questions of opinion or inference, but matters of fact, which all who wish to learn the truth may verify by reference to statute books and official reports of statistics, to the BRITISH MEDICAL JOURNAL, 1894, vol. ii, p. 1213, and an article by Dr. Edwardes in the *Practitioner* of May, 1896.

ON THE EPIDEMIC OF ENTERIC FEVER AT KING'S LYNN, OCTOBER, 1897.

AN ANALYSIS OF 50 CASES.

By C. B. PLOWRIGHT, M.D.,
King's Lynn.

THE series of enteric fever cases known as the Lynn typhoid epidemic presented certain peculiarities which it is desirable to put upon record. While it is probably true that no two cases of enteric fever are ever exactly alike, yet the Lynn cases of last autumn had certain distinctive features, constituting a distinct type of disease. The statistical details of this epidemic have already been published in the able report of Dr. F. St. George Mivart. The present remarks deal more particularly with the medical aspect of the cases. They are derived from the examination of a series of 50 cases, part of which came under my care as their medical attendant, and part as medical officer of health for the Freebridge Lynn Rural District, into which a suburb of King's Lynn (Gaywood) extends. During the rush of an epidemic one does not get much time for note-taking, but I was fortunate in securing, at an early period of the outbreak, the help of Mr. H. W. Henshaw, M.R.C.S., L.R.C.P., who took great interest in the work, so that between us we were able to keep some little record of the cases which came under our care.

Period of Incubation.—A heavy rainstorm on September 29th, in which 2.25 inches fell in 24 hours, was followed in three weeks to a month by the bulk of the cases. To be more exact, on the twentieth day after this storm the first case of this series of 50 cases was notified, on the twenty-first day a second case, on the twenty-second day 3 cases, and on the twenty-third day 5 cases. In the borough of King's Lynn the epidemic began on October 23rd, as far as the notifications were a guide. The weekly notifications were as under:

Week ending	Number.	Week ending	Number.
Oct. 2nd	1	Nov. 13th	8
,, 9th	—	,, 20th	1
,, 16th	—	,, 27th	1
,, 23rd	10	Dec. 4th	1
,, 30th	19	,, 11th	1
Nov. 6th	7	,, 18th	1
Total cases	50		

In other words, instead of the commonly accepted period of 14 days our cases were from 3 to 4 weeks developing.

Abortive Cases.—Of these 50, four were distinctly abortive cases, in which the temperature fell to normal in a week or ten days. They all occurred during the week ending October 30th, when the epidemic was at its maximum. Headache with general *malaise* were the most marked symptoms. They had a commencing temperature of from 102.5° to 103.8°, falling to normal on the fifth to the ninth day. In one case a complete night and morning chart was obtained from the commencement of the attack, which is shown on Chart 1. This case is

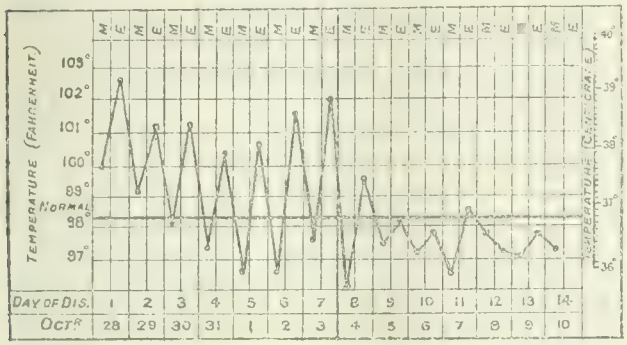


Chart 1.—Abortive enteric, Miss H. M. A., aged 15.

the more interesting because Dr. H. E. Durham observed the serum reaction three months later. These cases are of importance, inasmuch as they show that enteric fever can run a course of less than three weeks, and, moreover, there was no little discussion at the time as to whether these were really enteric cases or only influenza. They would have been called "febricula" in the olden days. Two other charts show a fall in the temperature between the twelfth to fourteenth days.

Mortality.—One case out of the 50 only proved fatal, that was on the twenty-fourth day from hæmorrhage. Taking the whole epidemic, which up to date has comprised well on for 500 cases, the mortality has been about 10 per cent. With regard to this difference, we must remember that the abortive cases were not generally notified, and that of these 50 only one was removed for treatment. A considerable proportion of them had skilled nursing early in the disease at their own homes.

Duration of the Disease.—It was not possible in all the 50 cases to find out the number of days the fever lasted. If we take the number of weeks spent by the patients in bed as a rough but fairly accurate indication of the duration of the disease, we shall find that excluding the 4 abortive cases the 46 averaged 6.2 weeks in bed. The subjoined table shows the number of weeks the 50 cases spent in bed respectively:

Weeks in bed	1	2	3	4	5	6	7	8	9	10	11	12
Patients	4	2	4	4	14	7	1	3	4	4	2	1

The influence of age upon the duration of the attack is shown below.

	Under 5 Years.	Five Years and under 15.	Fifteen Years and under 25.	Over 25 Years.
Number of cases	6	23	8	9
Average weeks in bed ...	3.8	6.3	7.25	6.5

Convalescence was often very slow; many of the cases were not able to resume their ordinary duties for ten, twelve, and even fifteen weeks. Of the 46 cases, 28 were males and 18 females.

The special characteristic of the outbreak was constipation, which was noted in 91 per cent. But upon further inquiry it become apparent that no less than 52 per cent. had diarrhœa, in most cases lasting one or two days, in others for three or four, in some few for a week or even ten days. In only 11 per cent. did it persist throughout the attack.

Rash was present in 82 per cent. of the cases.

Hæmorrhage was present in 9.5 per cent.

Epistaxis in 20 per cent.

Temperature.—It has been said that a "thermometric chart of the first four days showing a rise day by day with morning remissions" is suggestive of enteric fever, and without doubt this is often the case, yet it may be asserted that it was not characteristic of those cases in this epidemic in which we were fortunate enough to obtain night and morning temperatures during the invasion period of the disease. What we found was a comparatively sudden rise on the second, third, or fourth day to 104.5, 105, 105.5, 105.7, and in one case to 105.8°,

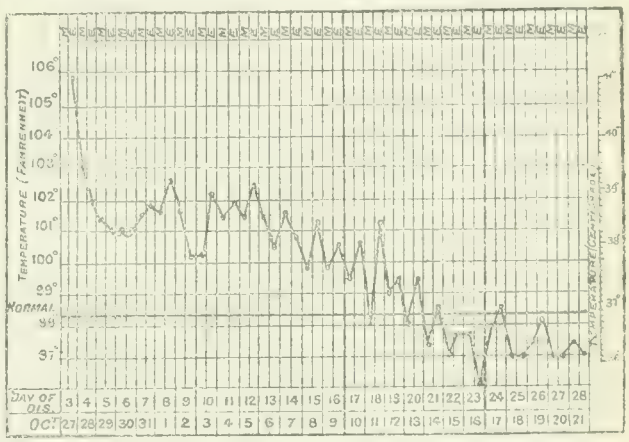


Chart 2.—Master J. G., aged 12.

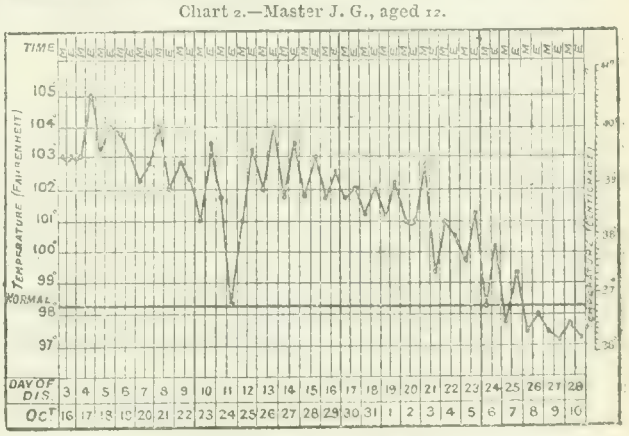


Chart 3.—Miss F. G. M., aged 12.

this was succeeded by a fall to 102 5 or 103 or 104° evening temperature lasting to the third or fourth week, when the characteristic morning remissions often, but not always, appeared. After the initial maximum temperature had been obtained the tendency was for the thermometer to show a gradual decline towards the end of the disease, as shown by the Charts 2 and 3. Although no regular day-by-day ascents were observed at the commencement of the attacks, yet they were often pronounced enough with relapses.

Delirium was noted in 48 per cent. of the cases, often very slight and transient, but in several of the cases both continuous and noisy, reminding me of what I used to see when a student, in the typhus wards of the Glasgow Royal Infirmary. One adult escaped from the house and was out-of-doors before his nurse could catch him. Four boys talked continually for three, four, and five weeks, two of them subsequently had transient aphasia.

Pain in the limbs was another of the distinctive symptoms of the epidemic; 46 per cent. had it while in bed and 54 per

cent. after they got about. Of those who had it during the course of the fever, some had it in all four limbs, but more frequently the thigh, the leg, the arm, shoulder, or wrist was affected. In 2 or 3 cases only could any increase in the circumference of the affected limb be made out on measurement, and then only the most trivial. Hyperæsthesia of the skin was frequently associated with the pain; in short, the pain seemed rather to be due to neuritis than thrombosis. Myalgic pains in the legs troubled the convalescents.

Desquamation was observed in 27 per cent. of the convalescents.

Anæmia was present in 72 per cent. No doubt anyone confined to bed for six weeks and fed on slop diet all the time would look pale; but the anæmia, when it did occur, was as distinctive as the post-scarlatinal anæmia; in fact, the three last-named symptoms, pain, desquamation, and anæmia remind one very much of scarlet fever.

The cases were characterised, therefore, by a rather long period of incubation, by their low rate of mortality, by their long duration, constipation, high initial temperatures, frequently violent delirium, pain in the limbs, and subsequent desquamation and anæmia. There was an absence of diarrhœa, of the tumid abdomen so frequently seen in enteric, and, as far as I could judge, of the enlarged spleen to which so great diagnostic importance is attached by some authorities. Whether the peculiar type of our cases was due to any extraneous cause operating upon the infecting medium—for instance, its free dilution with large quantities of water before it was administered to the population, or whether some special form of microbic life differing from the ordinary was at work amongst us—must be left for others to determine.

Various sequelæ were met with—for instance, periostitis of the tibia, orchitis ending in suppuration in the pus of which Dr. Durham found living typhoid bacilli, and in one case a mental condition approaching dementia but subsequently ending in mania.

My thanks are due to Dr. Durham for help in his special line of research, and to Mr. H. C. Allinson, Dr. Chadwick, Messrs. C. Jackson, A. L. Saunders, and G. A. Trevor-Roper for information freely given.

ARCHÆOLOGICA MEDICA.

XLIII.—BOERHAAVE'S TREATMENT OF SYPHILIS.

HERMANN BOERHAAVE (1668-1738) enjoyed the personal affection of his fellow citizens at Leyden very much in the same manner as did Sir James Young Simpson at Edinburgh. The personality of each man must have been very remarkable. It is told of Boerhaave that on January 11th, 1723, all Leyden was *en fête;* the bells were ringing merry peals, the houses were decorated and the streets were brightly illuminated because the founder of modern scientific medicine had recovered from a severe attack of gout. All Edinburgh was moved in 1850 when the discoverer of chloroform was laid up with blood poisoning.

Boerhaave's enormous practice and the great reputation he enjoyed amongst the members of his own profession render it certain that his method of treating syphilis was that adopted by the majority of his contemporaries. The tract in which he describes his treatment forms part of his famous *Aphorisms*, translated into English by Dr. Delacoste "from the last editions printed in Latin at Leyden in 1715." Boerhaave here recognises the acquired and the inherited forms of syphilis, and, for children at any rate, he acknowledges the extravenereal sources of infection, for he says: "Sometimes children get it by sucking unclean nurses ....Dry nurses will communicate it to children when, having pocky ulcers in the mouth or throat, they taste the children's papp or meat." He avoids the error into which John Hunter afterwards fell, of associating syphilis with gonorrhœa, though he indicates that they are often combined in the same individual, but he only classifies the various forms of venereal ulcer in the roughest possible manner.

Pustules and chankers must be consumed to the quick with mercurials and then cured with gentler means, still with a small mixture of them to the last. And you must all along use the internal means. ... But when the pustules are dispersed all over the body, pains invade the limbs and nightly uneasiness, large buboes, gnawings of the bones and often re-... d clap, all these show that the patient is Pox'd and nothing then will do but a salivation by mercury.

It is clear, therefore, that the great physician had no idea of the primary, secondary, and tertiary stages of the disease as we now recognise them, and that the treatment was purely empirical. The business of salivation was a serious one both for the physician and his patient. There was a period of preparation during which "the patient was to drink plenty of ptysanes. Then give him every two hours a small dose of mercurius dulcis." This far-famed preparation of mercury known as "the tamed dragon" was made by subliming a mixture of corrosive sublimate and mercury which had been beaten up in a mortar with a little vinegar. It was given in doses of 15 to 20 grains, and was renowned because "it brings forth all poisonous and vitious humours and rectifies the very marrow in the bones, yet works not at all by vomit." Boerhaave directs the mercury to be given

... ...until the breath begins to stink, the gums to ake, the teeth to grow loose and stick out. Then ought the Physician to attend carefully and consider whether he ought to go on, to stop, or even to make some diversion. If the patient spits three pints or two quarts in four and twenty hours it is sufficient. If he spits less, you must again give one or more doses (of mercury). If (it) is more than what his strength can bear you may suspend it with a gentle glyster, purge or sweating medicine. If the mercury runs violently downwards causing griping, and painful stools give an opiate and diaphoretic. If the mouth, gums, or jaws do swell or pain too much, you must use a soft, gentle liquid, gargle or wash or a glyster, purge or sweat. You must go on till all the symptoms are vanished which generally takes up to thirty-six days. Then you ought for thirty-six more days to give him still now and then a small dose of mercury to retain yet a small spitting. Nor is there any other sort of remedy requisite here to restore perfect health. The nodes are lessened with specific plaisters, or by scraping the bone after having laid it bare.

This was the active treatment meted out to the unfortunate sufferers from syphilis throughout Europe during the eighteenth century. It is no wonder if the remembrance of this period still lingers in the memories of the vulgar and sometimes disinclines them even now to enter upon that modified course of mercury which is essential to the radical cure of syphilis.

It would be of some historic interest to know how and why this severe salivation came to be looked upon as a necessary part of the treatment of syphilis. It is supposed that Giacomo Berengario da Carpi, who was Professor at Bologna from 1502 to 1527, was one of the first to use mercury in the treatment of syphilis. Benvenuto Cellini (1500-1571), the great Italian artificer of the Renaissance, says of him, "This able man, in the course of his other practice, undertook the most desperate cases of the so-called French disease. In Rome this kind of illness is very partial to the priests and especially to the richest of them. When, therefore, Maestro Giacomo had made his talents known he professed to work miracles in the treatment of such cases by means of certain fumigations." The results however were not very satisfactory, for in another place Cellini says, "He was a person of great sagacity and did wisely to get out of Rome, for not many months afterwards all the patients he had treated grew so ill that they were a hundred times worse off than before he came. He would certainly have been murdered if he had stopped." Cellini himself caught the disease, but he had it during the milder period which succeeded the first terrific outbreak and he cured himself with guaiac. John of Vigo (1460?-1517?), who was living when syphilis first appeared in Europe in an epidemic form used "a symple unction fortifyed wyth a lytle quyckesyluer quenched with spitle," but in 1519 Ulric of Hütten, the poet and valiant knight of the sixteenth century, in telling of his own case says that he had been eleven times salivated and was at last cured by guaiac. Ambroise Paré, the great French surgeon (1510-1590) and Clowes (1540-1604), the Englishman who wrote *De Morbo Gallico*, treated their syphilitic patients with inunctions and fumigations, whilst Wiseman (1620?-1676), the only surgeon of renown during the Commonwealth and Restoration periods, taught that "the methods of salivating are divers, but all by mercury."

A BELGIAN MEDICAL TEMPERANCE SOCIETY.—A Medical Temperance Society has just been founded in Belgium. The Provisional Committee is composed of Dr. Barella, President; Dr. de Vaucleray, Vice-President; and Dr. Bienfait, Secretary. Among the members are Dr. Van den Corput, Member of the Belgian Senate; Drs. Lentz, Moeller, Barella, and de Vaucleray. Members of the Brussels Academy of Medicine, Professors Francotte, Putzeys, Verviest, and Drs. Mahaim, Romiée, Voituron, Van Coillie and Wibo.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 19TH, 1898.

THE NEW "BRITISH PHARMACOPŒIA."

The production of the *British Pharmacopœia* (revised, 1898) is necessarily interesting to all engaged in prescribing or dispensing, and there seem to be good reasons for hoping that the new volume which has been so long anticipated will shortly be in the hands of the profession, for it is now in the hands of the printer. Before its publication, it may perhaps be worth while to consider the scope and the object of the *Pharmacopœia*. These are authoritatively set forth in the Medical Act of 1858, which committed the preparation of the volume to the General Medical Council. It is there enacted that the book shall contain a list of medicines and compounds, and the manner of preparing them, together with the true weights and measures by which they are to be prepared and mixed. And in addition a certain discretionary latitude is provided for in the clause which permits the introduction of such other matter and things relating thereto as the General Medical Council shall think fit. In the preface to the *British Pharmacopœia* of 1867, it is stated that the Council endeavoured to include in it all such remedies as the existing state of medical practice seemed to require. To judge from previous editions of the volume, the Council desires to deal only with drugs of established reputation; in other words, it proposes only to reflect current practice, and to establish a standard of purity, without assuming the task of instructing.

Each edition of the *Pharmacopœia* has, however, advanced further from the original limitations, and of late years, although the *Pharmacopœia* cannot be said to be a textbook for medical students, it has nevertheless very materially influenced the education of the medical profession. Even in the present day, although older practitioners may often be heard to speak scornfully of the volume, since it does not touch upon many of the newest remedies which are occasionally employed, yet the influence of the *Pharmacopœia* upon the younger generation can hardly be overestimated. It affords not only a standard for the purity of the drugs and preparations, but it also forms the basis of the textbooks of materia medica and therapeutics, and it establishes the standard up to which students are educated and examined.

The forthcoming edition will deserve very careful consideration, since there have been frequent indications in the reports of the Pharmacopœia Committee to the General Medical Council that a very great deal of care has been devoted to the perfection of the work. From these reports we learn that a large number of experts in chemistry, botany, pharmacology, and practical pharmacy have lent their aid to a Committee which was already strong both numerically and individually. When so many are concerned in the production of the volume, it may be anticipated that though it may gain in precision and accuracy, it must necessarily lose in individuality, and at best it becomes a compromise agreed upon by the majority.

Under such conditions, it is only to be expected that it will meet with a certain amount of adverse criticism from those whose recommendations have not been accepted in their entirety. Criticism of this nature is not, perhaps, likely to disturb the equanimity of those who have been actively engaged upon the production of the *Pharmacopœia*, since although to the general reader such criticisms might appear to indicate points which have been overlooked, yet to the initiated they may be only a restatement of views that have been fully discussed, considered, and, for various reasons, set aside.

In speaking of the *Pharmacopœia* before it comes to hand, it may be well to point out that on previous occasions it has scarcely had justice done to it, owing to some misunderstanding of the scope and object of the work. It is obviously not a book to be read through consecutively page by page. It is used almost entirely as a book of reference, and therefore it may be doubted whether its limitations as indicated in the preface have always been sufficiently borne in mind. To some extent it is to be regarded in the light of a dictionary, in which valuable information may be found concerning the principal properties and the composition of remedial agents so far as these are required for the establishment of a standard of purity, and the obvious intention is that it should enable practitioners at all times, and at all places, to obtain and employ particular drugs and preparations of uniform strength. It affords tests by which impurities may be detected, and to some extent it supplies information concerning the best modes of administering drugs. As an act of grace, it also indicates the average doses of the more important medicines for adults, but the compilers of former editions have been careful to throw all responsibility upon the practitioner with regard to dosage, and even in the edition of 1867 they distinctly stated that the doses were not authoritatively enjoined by the Council.

Frequently too much has been expected of the *Pharmacopœia*, and disappointment has been expressed because its information is not encyclopædic—that is, because it does not contain all that might be said about each drug that is mentioned, while the careful employment of the word "average" with regard to doses may perhaps have escaped observation. All these points have been dealt with in detail in the preface to former editions, and doubtless similar paragraphs will find a place in the preface to the new edition.

In the past the prefatory pages have included not only matters of history relating to the publication of previous editions, but also much valuable information which has been stated there once for all instead of being repeated constantly throughout the book. It is, therefore, the more important that before attempting to use the *British Pharmacopœia*, 1898, the preface should be carefully studied, since, judging from former precedents, the volume may otherwise be wrongly charged with numerous omissions, and the scope and limitations of the work may be entirely misunderstood.

DEATH CERTIFICATION.

There have been recently two remarkable cases in the courts which deserve attention in reference to death certification. In the first case Mr. Justice Grantham made some important remarks on the present system of putting away stillborn children. The occasion was the hearing of the case of a certificated midwife who was charged on the coroner's inquisition with the manslaughter of a male child. The evidence went to show that the child had been born alive, was afterwards seen on the midwife's lap covered up with a blanket, and was soon afterwards found to be dead. The Treasury, after considering the depositions, had come to the conclusion that there was no case of manslaughter on which the defendant could be justly charged, and the judge concurred in this view, in spite of the verdict of the coroner's jury. The coroner had himself taken the unusual course of pressing the matter on the attention of the judge, no doubt from the conviction forced upon him by the experience of his own court that these cases demand the strictest inquiry. The midwife had in this case given information to the registrar which had led him to enter the child as stillborn, and for this offence she had been fined £5 and costs for an infringement of the Registration Act. The judge directed a verdict of not guilty on the charge of manslaughter, on the ground that there was no evidence of neglect on the part of the defendant. It appeared, however, from the evidence that the woman had in three instances given certificates of stillbirth which were not true. The Judge is reported in the *Times* to have said "that the woman had been acting improperly in giving these certificates there was no doubt, and he quite endorsed the rider of the coroner's jury, in which they expressed a wish that the Home Office should be asked to investigate the present system of putting away stillborn children. He did not wish to prejudice anyone not before the court, but it seemed to him that a midwife and an undertaker could between them make some money. He did not say that it was done in this case, but it seemed that in the case of a stillborn child the undertaker had to pay a smaller fee than for a child not stillborn. It seemed that these certificates could be got from midwives, and if the child was stillborn the undertaker had to pay so much less. He repeated that he did not say that that took place in this case. He hoped that some notice would be taken of this. The defendant said she thought the child was dead when it was born. The evidence was that within a minute or two after its birth the child died. There was no evidence of any neglect on the part of the defendant. The child undoubtedly was not stillborn. A midwife had no right to give a certificate that was not true."

These remarks are amply supported by the report of the Select Committee on Death Certification issued in 1893. It was there shown that the difference in the expense of interment is from 1s. 6d. to 7s. 6d. less in the case of a child buried as stillborn. There is therefore, apart from the desire to hide crime, a clear money interest which encourages an infraction of the law such as occurred in this case. The Committee reported that the absence of legal requirement that stillbirths should be registered is fraught with a very serious danger to child life, and they recommended that stillbirths should be registered on the certificate of a registered medical practitioner, and that no body of a stillborn child should be disposed of until an order for burial had been issued by the registrar.

Even while we write there has come into our hands another illustration of the tendency of midwives to overstep the law in this matter of certification. In this instance the registrar refused to accept the midwife's certificate, and an inquest was held. It then appeared that the child had lived, and the midwife justified the giving of the certificate of death on the ground that the birth was premature, and stated that her certificates had been accepted by other registrars. The Manchester city coroner (Mr. Smelt) very properly said "that it would be very unfortunate if midwives were allowed to do such a thing. They were not intended to assume the position of doctors at all, they were only nurses. In this case the midwife was not present at the time of the child's death and did not know the cause. It might have been murder for all she knew."

The Druce case, which has aroused so much attention during the past week, affords another curious illustration of the laxity of the law as to the registration of death. We express no opinion as to the facts of the case; it is sufficient for our present purpose to observe that the Chancellor of the Diocese of London was presented with sufficient *prim facie* evidence to justify him in decreeing a faculty for opening a vault at Highgate in order to clear up the point whether a coffin placed in it with due funeral ceremonies on December 29th, 1864, really contained a body or not. That a judicial Court should even for a moment be compelled to entertain the idea that a sham funeral of an empty coffin should have been held shows that great laxity is known to exist.

Evidence was given before the Select Committee to show how an undertaker could dispose of two bodies on one certificate. The one body is buried under a given name, with the statement that the certificate has been forgotten. The cemetery authorities send word to the registrar, who refers to his book, and finds that a death has been registered under the name, and so the matter rests. The other body which it is desired to get rid of is buried at another cemetery, and the certificate produced, and no further inquiry is made. This shows that a burial certificate should be required for every body interred; but the case of bogus burial now attracting attention was one in which no medical certificate appears to have been given, and illustrates the necessity of requiring in every case that the fact of death shall be certified by a registered medical practitioner. Sir Walter Foster called the attention of the President of the Local Government Board to this case, but, as will be seen in our Parliamentary notes, he obtained no satisfactory answer as regards the much-needed legislation. On Tuesday, however, he elicited from the Home Secretary that the fees for stillborn children have been raised by the Home Office in its administration of the Burial Acts, and that the general subject of death certificates was under consideration between himself and the Local Government Board. It is now nearly five years since the Select Committee reported in favour of much-needed reforms in our registration laws. So far nothing has been done; and there appears to be no burning inclination to legislate. Children may be done to death with impunity and buried as stillborn; empty coffins may have all the ceremony of a funeral; bodies may be buried without any proper medical inquiry; and, what is most serious of all, crime of

the worst kind may pass undetected. "It is a dangerous fact," as a distinguished witness said in 1893, "that at the present moment 45 per cent. of the stillborn children and 5 per cent. of the liveborn infants dying within their first year are interred in Manchester without competent testimony as to the cause of their death." What is true of Manchester is true of other great cities, and we feel that a grave responsibility rests upon the Government to put an end by early legislation to a condition of things which endangers public safety and encourages crime.

IS SUNSTROKE AN INFECTIOUS DISEASE?

The very natural but very unscientific tendency to assume that a relationship of cause and effect necessarily exists between two concurrent phenomena is responsible for many gross blunders in pathology. When some crude etiological hypothesis arrived at in this way gets expressed in the nomenclature of a disease, the error, so emphasised, is apt to be perpetuated indefinitely and to be handed on from generation to generation as sound doctrine. No better example of this could be quoted than the generally accepted views on the cause and nature of the disease which is the subject of the important paper by Dr. L. Sambon which we publish to-day.

From our earliest acquaintance with Eastern diseases, endemic hyperpyrexia, or heatstroke, or, as Dr. Sambon judiciously elects to call it, siriasis, has been attributed to one of the meteorological conditions in which it occurs—to high atmospheric temperature—and this apparently for no better reason than that it does so occur. This crude etiological conception has found expression in, and is kept alive by, a confused and confusing nomenclature of which the idea of a thermic cause is the basis. Thus we have sunstroke, heatstroke, heat-apoplexy, and lastly thermic fever as some of its many names. All these terms embody the idea that heat is the cause of the disease they indicate. Some of the names, as heat-apoplexy, go even further and suggest a morbid anatomy at variance with observed facts. Perhaps the least objectionable of these names is thermic fever; but if the qualifying adjective, "thermic," be taken in an etiological sense it is probably wrong—at all events its appropriateness has not been proved; if it be regarded in a descriptive sense it is tautological and absurd, for all fevers are thermic.

Very little reflection will warn us against concluding that because a given fever occurs only in conditions of high atmospheric temperature, that fever is necessarily caused by the high atmospheric temperature. Were it so, then we should expect to find the disease wherever and whenever temperature is high. But, as Dr. Sambon points out, this is so far from being the case that siriasis is unknown in many of the hottest parts of the world. Nor in the endemic areas is the disease always most prevalent in the warmest years, or at the hottest season of the year. Dr. Sambon's contention is that siriasis is an infection, is in fact produced by a specific germ; and he has brought forward a body of evidence which is very interesting. His argument is clearly and logically stated, and cannot fail to arrest attention and to lead to a reconsideration of the whole doctrine of the etiology and pathology of heat stroke.

After showing the weak points in the various theories based on the thermal idea of the causation of sirlasis, he points to many carefully verified facts, to the geographical distribution, the endemicity, the occurrence of epidemics, the characters of the symptoms, the very definite lesions, the liability to relapse, and to other points in the natural history of the disease, as strong arguments for regarding siriasis as belonging to the same category as yellow fever, dengue, and certain other tropical affections universally acknowledged to depend on specific germs—germs for whose growth and transmission to man, and from man to man, high atmospheric temperature is necessary, but which though occurring in, are certainly not created by, high atmospheric temperature. Disease germs are as fastidious in their requirements as any other living organism; they must be studied in the same way, and from the same standpoints, as any other object of natural history.

It is interesting to note the striking parallel in the evolution of the ideas of pathologists as to the causes and nature of rheumatism and siriasis. Originally attributed to meteorological causes, in the one case to rheum or cold, in the other to heat, they were next attributed to autotoxis, in the one case to lactic acid, in the other to retained heat; and now they are both being referred to germs.

Whatever may be the ultimate fate of Dr. Sambon's theory, he certainly has given expression to an idea which is bound, directly or indirectly, to elicit much needed light on what, especially to Englishmen and Americans, is an important subject.

MEDICAL MEN AS INSPECTORS OF SCHOOLS.

The appointment as one of Her Majesty's Inspectors of Schools of Dr. Eichholz, a gentleman possessing medical and scientific as well as literary qualifications, would seem to be a new departure in the Education Department. The inspectorial staff, which consists of upwards of a hundred gentlemen of undoubted standing in the world of letters, will be none the worse for an admixture of the scientific element, especially when that scientific element brings in a practical knowledge of the health conditions of child life. There are frequent points of contact between the domain of education and that of hygiene, and an intelligent adjustment of the one to the other cannot fail to be of service to the rising generation. This principle has already been acknowledged by some school boards. A knowledge of medical subjects is becoming each year more and more necessary for those whose duty it is to inspect the work of local school authorities. There are many points of importance in education which would naturally come within the ken of the inspector with medical training, but would not be so obvious to others. We may mention, as examples, such matters as the physical indications of injurious schooling, the judicious selection of physical exercises for different classes of children in elementary schools, the health conditions of pupil teachers, and the measures to be taken for the discrimination and suitable treatment of children abnormal as regards sight or hearing, or physically or mentally defective. With regard to the last-named class, the necessity for medical diagnosis has been recognised by a Departmental Committee. In relation to the duties of inspection of resident institutions, such as those established under the provisions of the Blind and Deaf Act, 1893, as well as those recommended by the Committee on Defective and Epileptic Children, in which not only the teaching arrangements but those of a domestic character (including the feeding of the children) come within the purview of the Education Department, the value of a medical element in the inspectorate would be very great. While local school authorities ought to be made responsible for obtaining the necessary medical advice on such matters, it seems essential that the supervising authority should also be

furnished with the means of seeing that such duties are properly provided for and carried out. In another class of cases public health questions come much into relation with school management, and from time to time discussions crop up as to the part played by elementary schools in the spread of infectious disease, and local educational and sanitary authorities are now and again in disagreement as to structural arrangements alleged to affect the health of school children. For all these reasons it seems to us important that the Education Department should have at its command officials of medical training, whether in its staff of inspectors, which are its eyes, or in the central bureau, which is its central nervous system. It seems strange, indeed, that a great department like that of Education should be forced to borrow medical opinions when required from another Government Board, more especially as it owes much of its organisation to a member of the medical profession, the late Sir James Kay-Shuttleworth, in his capacity of Secretary to the Committee of Council on Education.

THE MEASLES EPIDEMIC IN LONDON.

The present outbreak of measles in the metropolis followed upon a period of twelve months during which there was a comparatively slight prevalence of the disease in London, and the mortality-rate was considerably below the mean for the corresponding period for twenty-five years. During the first half of 1896, there occurred one of the worst epidemics on record, which caused over 3,000 deaths. There were other marked epidemics in 1894, 1892, and 1890. In studying the records for the past forty-six years, it is noteworthy how regularly an epidemic has occurred in London at intervals of one year; and the occasions are very few where the inter-epidemic periods have extended to two years. In London, therefore, the infection finds sufficient susceptible material every other year to enable it to assume epidemic proportions. Not one of the larger sanitary areas is ever entirely free from cases of measles, and the determining factor of an epidemic must be regarded as almost entirely a matter of the accumulation of a sufficient amount of highly-susceptible material; for, given this, the general extension of the epidemic to the whole of the metropolis is simply a matter of time. The death-rates from measles for the epidemic year 1896 will serve to demonstrate how very evenly the disease distributes itself over the whole of London. They are as follows: London, 0.83 per 1,000 per annum; western districts, 0.86; northern districts, 0.71; central districts, 0.81; eastern districts, 0.92; southern districts, 0.87. The commencement of the present epidemic dates from the week ending September 25th, 1897, when the number of deaths from measles rose, for the first time in the year, above the corrected average for the corresponding weeks of the preceding ten years; since that date the mean of the number of deaths recorded each week has reached 90. The epidemic grew in proportions until the mortality figure for the week ending January 1st, 1898, exceeded by 91 the corrected average. This figure has never been reached since, although as yet there is no evidence of any very material decline. Measles epidemics in London generally extend over a period of from six to eight months, and although we may expect that the present epidemic will now commence to show signs of waning, we shall not see the end of it, in all probability, for another two or three months. There is a popular belief among the residents of the districts of Kensington and Hammersmith that the Barnum and Bailey show is responsible for the epidemic. Although any circumstance which causes the crowding together of large numbers of persons from all parts of the metropolis must be regarded as favouring the diffusion of infection, it is improbable that the show has played any great part in promoting the present epidemic; as a matter of fact, the epidemic had already made considerable progress several weeks before the company arrived at Olympia, and many weeks before the show was opened to the general public.

MEASLES AND THE LOWER ANIMALS.

Certain experiments of Behla which led him to the conclusion that measles could be communicated to pigs from the human subject were noted in the British Medical Journal some time ago, and it was observed that the very high mortality now produced by measles, which shows no tendency to diminish owing to the improved sanitation of recent times, lends special importance to inquiries into its etiology. Behla's experiments, which consisted in the application to the mouth and nose of the sucking pig of secretions from the mouth and throat of children suffering from measles, have been repeated by Dr. A. Josias, Physician to the Trousseau Hospital in Paris, but without result. He, however, extended his trials to certain monkeys. Macaque monkeys were found to be insusceptible, but monkeys belonging to the genus cebus were found in certain cases to contract a disease which presented striking points of resemblance to measles. The infective material used was obtained by swabbing the nasopharynx and throat of children suffering from measles at a period when the eruption was full out. The swabs were then rubbed into the nasal cavities and the throat of the monkeys. In two of the monkeys the disease began on the thirteenth and eleventh days respectively; in the third, a cebus capucinus, the eruption appeared on the twenty-seventh day. It should be added that all the monkeys were kept for some time in a room in which children suffering from measles were being nursed. In the case of the capucin the eruption was observed both upon the face and the limbs. In a cebus robustus it was marked upon the neck and abdomen. In neither of these animals was there definite coryza, but both sneezed a good deal. Dr. Josias has no hesitation in expressing the opinion that these monkeys suffered from measles, but before entirely accepting this view it would be desirable to have confirmatory evidence. It may be observed that the nature of the infective agent of measles is not known in spite of the very numerous researches which have been made with the view of identifying it. It is true that Canon and Pielicke, in 1892, described a small bacillus which they had found in cases of measles, and which they believed to be the specific agent, and it is true that Czajkowski has more recently recorded the existence of a bacillus, probably identical with that of Canon and Pielicke, which he believed to be the specific agent, but these researches require confirmation, and, so far as we are aware, Canon and Pielicke have not themselves returned to the subject. It is, perhaps, noteworthy that in small-pox, scarlet fever, and variola, as well as in measles, no specific bacterium has certainly been identified, and the opinion is held on *a priori* grounds by some authorities whose opinion is of value that it may possibly turn out that these specific diseases, which are clearly due to some contagium vivum, are produced by protozoa. In this connection it is interesting to recall that Döhle believed that he had succeeded in identifying protozoa in the blood, not only in measles, but also in scarlet fever and small-pox. These researches, published in 1892, still await confirmation or disproof. The mortality produced by measles at the present time in all civilised countries is so serious that it is eminently desirable that we should have more precise information as to the intimate nature of the infective agent.

"A YEAR'S PHYSIC AT GUY'S HOSPITAL."

In the *Guy's Hospital Gazette* of March 5th Mr. Collier gives some interesting figures showing the "epidemic constitution," in a pharmaceutical respect, of the past year in the great hospital in the Borough. These certainly bear out his remark that "there are no indications at Guy's that the belief in the use of drugs is on the decline." The new dispensation does not seem yet to have displaced the old to any great extent. Diphtheria antitoxin, antistreptococcus serum, and a small quantity of Koch's new tuberculin were used, but the demand for the older medicaments showed no falling off. There are, however, fashions in drugs as in clothes, and a curious illustration of this is seen

in the fact that musk has at present a considerable vogue as a remedy in typhoid fever. Musk is a substance in regard to which the whirligig of time has brought strange changes. By practitioners of a bygone day it was largely used; then it ceased to find favour in the eyes of the profession, and finally its name was erased from the *Pharmacopœia*. The musk treatment is somewhat expensive, as the cost in a single case of typhoid fever sometimes amounts to £5. The recent denunciations of blisters by certain French authorities have not found an echo in the Borough, for during the year 26 yards of emplastrum cantharidis, 8 inches wide, were spread. Leeches are rarely ordered; probably about one hundred are required in the year. Even this number strikes us as showing that *sanguisuga officinalis* in which the older physicians placed such reliance is once more coming into fashion. We have known the order of a few leeches in a London hospital of the first rank not so many years ago to cause consternation among the dressers; a consultation had to be held as to which was the "business end" of the leech, and the combined intelligence of the staff was then brought to bear on the problem "how to make him bite." Antiseptics, of course, bulk large in the bill; lysol is now the favourite at Guy's, where it has, in a great measure replaced carbolic acid. Iodoform, boric acid, corrosive sublimate, and creolin are "firm." Formalin rose from 9¼ lbs. in 1896 to 41 lbs. in 1897. As regards anæsthetics, 480 lbs. of chloroform, 584 of ether, and 90 of absolute alcohol were used, mainly in the form of the A.C.E. mixture. Of nitrous oxide gas 11,100 gallons were inhaled; this anæsthetic is now largely used in the hospital as distinct from the dental school. Cocaine is steady, remaining at 16½ oz.; ethyl chloride spray is occasionally used. Of the drugs most generally in use, the following figures show the consumption during the year: Conf. sennæ, 224 lbs.; ext. cascar. sag., 155 lbs.; ext. malt, 5,021 lbs.; cod liver oil, 600 gals.; chloral hydrat., 128 oz.; chloralamide, 128 oz.; antipyrin, 256 oz.; quin. sulph., 450 oz.; camphor, 201 lbs.; calomel, 26 lbs.; opium, 62 lbs.; pot. bromid., 252 lbs.; pot. iodid., 106 lbs.; sal volatile, 1,084 lbs.; oxygen gas, 5,000 gals. Surgical dressings cost the hospital over £1,500 last year. In 1897 there was a daily average of about 425 in-patients; 73,742 prescriptions were dispensed for out-patients; to supply the wants of in-patients and out-patients it was necessary to make 586,000 pills, 54,531 lbs. of ointments, 380 gallons of tinctures, 150 gallons of syrups, and to spread 10,832 yards of strapping plaster.

THE PRISONS BILL, 1898.

A memorandum has been issued by the Home Office explaining the provisions of the Prisons Bill, 1898. Foremost amongst these is one for vesting the management of both convict and local prisons in one administrative body. This so-called amalgamation is not intended to alter the present system by which convict and local prisons are separate establishments, or to assimilate a sentence of imprisonment to one of penal servitude. When, by the Prisons Act of 1877, all local prisons were handed over to Government, separate administration for these prisons was expressly provided for by the new Act. The opponents of Sir Richard Cross's Bill, in fact, laid much stress on this provision. Circumstances, however, have changed so much since then that few persons will question the wisdom of the present proposal. In the year 1879 the daily average number of convicts was 10,300, and that of local prisoners just under 20,000. In the year 1897 these numbers had been reduced to 3,000 and 14,000 respectively. While this satisfactory decrease in the number of criminals has been in progress, despite a large increase in the general population, signs of improvement have also been shown in various directions. The increase in the medical staff has resulted in better sanitation, more careful regulation of labour, and a diminished death-rate. Fewer punishments have been incurred by prisoners, and uniformity of discipline has been attained. The proposed amalgamation would seem therefore to be justifiable on the grounds of efficiency as well as economy. Among the chief amendments is one for giving the Secretary of State power to make a code of rules for local prisons—as he does at present for convict prisons—but subject to the veto of Parliament. This fresh power will "include the regulation of the nature of hard labour with some regard to the varying characteristics and circumstances of prisoners." As the Prison Commissioners have already decided to abolish all unproductive hard labour, this new provision will afford them more scope for the substitution of remunerative industrial employment for the crank and treadwheel, which cannot be regarded either in a medical or a moral point of view as therapeutic agents of much value. "A treatment somewhat less rigorous than that of ordinary prisoners" is to be applied to a new class of misdemeanants, which is to include debtors and petty offenders who are not real criminals except in a legal sense. Remission of sentence as a reward for industry in local prisons, and the appointment of visiting committees for convict prisons are also provided for in the Bill.

RISKY ADVERTISEMENTS.

The recent decision in a case tried before Mr. Justice Darling that advertisements of quack medicines for removing irregularities of all kinds "from whatever cause arising" come within the category of immoral literature, will have a salutary effect in purifying the columns of many of our papers, and removing effectually a condition of affairs which has long been recognised as a grave public scandal. To procure abortion, or to attempt or counsel or assist to procure it, is a criminal offence, and no journal with the slightest pretence to respectability can now afford to insert advertisements intended to facilitate this object. We have before us the analysis of a popular and largely advertised mixture of this class: it contains carbonate of potassium, 40 grains: myrrh (with a large percentage of dirt and sandy matter), 80 grains; and water, flavoured and sweetened with nutmeg and spirit of chloroform, half a pint. A box of "female pills," said to be efficacious in even the most obstinate cases, contained twenty-seven 4-grain coated pills practically identical in composition with the compound rhubarb pills of the *British Pharmacopœia*. These so-called remedies were sold for 15s., and probably cost considerably less than 6d. In a letter received by one of our correspondents, who has taken considerable interest in the matter, the proprietors of a well-known paper say, "We cannot interfere with existing contracts, but as they expire we will see that they are not renewed." This is satisfactory, although, guided by the light of the most recent decision on the subject, they might with perfect safety have said that they would not by the advertisements help anyone to procure abortion if the medicine would have that effect, and that if it would not they would not be parties to defrauding the public. In connection with this subject we note with considerable satisfaction that one of the leading sporting papers has determined to exclude massage advertisements from its columns.

EXPERT MANAGEMENT FOR DISEASED CHILDREN.

The Metropolitan Asylums Board has appointed a Children's Committee to control the institutions which it is about to provide for children placed under its charge. A deputation, headed by Mr. Sidney Webb, waited upon the Board last Saturday to urge that medical men and women and experts should be added to this Committee by co-option. For instance, the large amount of knowledge which has been accumulated by the Departmental Committee on the feeble-minded might be obtained by the co-option of one of its members on the Children's Committee. The Ophthalmic Hospital and the Convalescent Home also would probably be managed in a less official manner if the assistance of local managers was guaranteed, and there can be no doubt that the public would gain confidence, and the children friends, by

the judicious acceptance of volunteer assistance rendered by philanthropic-minded persons. The rearing of children in institutions is to be approved only in such cases as those of abnormal or diseased children, for whom for a time no other method is possible. The Chairman of the Board promised that the suggestion of the deputation should have careful consideration, and we may hope that the result may be favourable, for the presence of kindly local managers would without doubt tend to repress the growth of officialism in these institutions. Among the members of the deputation were Mr. Maddison, M.P., Mr. Ward, L.C.C., Mr. Costelloe, L.C.C., Mr. Chapman, Mr. Milne-Watson, Professor Bruce, Mrs. Rye, Mrs. S. A. Barnett, and Mrs. Western.

EDINBURGH ROYAL MEDICAL SOCIETY.

The annual dinner of the Royal Medical Society was held on March 11th, in the Students' Union. The Senior President, Dr. T. A. Ross, presided; the other Presidents, Drs. Ballantyne, E. L Chiene, and E. E. Porritt, acted as croupiers. The guest of the evening was Mr. Mitchell Banks, of Liverpool, and a company of about eighty sat down to dinner. Among those present were Lord Kingsburgh, the President of the Royal College of Physicians, the President of the Royal College of Surgeons, Sir William Gairdner, K.C.B., Sir William Turner, Professor Annandale, the Rev. Professor Taylor, Professor Crum Brown, Professor Rutherford, Drs. P. H. McLaren, A. G. Miller, P. MacBride, Andrew Smart, Beatson, Allan Jamieson, and Cotterill. After the usual loyal and patriotic toasts, the Senior President gave the toast of "The Guest," a former member of the Society, an Edinburgh graduate, an Edinburgh man. Mr. Mitchell Banks replied, and dealt with some of the changes in medicine within his time. Dr. Ballantyne proposed "The Scotch Universities," and Sir William Gairdner replied. Mr. Mitchell Banks proposed "The Royal Medical Society," and the Senior President replied. The Medical Corporations and the Royal Infirmary were also toasted.

THE EYESIGHT OF RAILWAY SERVANTS.

The necessity for the testing of the sight and hearing of railway employees by experts has been clearly shown by Mr. Bickerton and others in this country. Some facts pointing a similar moral in regard to America may therefore be of interest. Dr. William Thomson, in his chapter on Detection of Colour Blindness, in the second volume of Norris and Oliver's *System of Diseases of the Eye*, states that there are in the United States 180,955 miles of railroads, giving employment to about one million men. By inquiries addressed to railway companies whose system extends over 129,970 miles, he found that thirty-five railways "operating" 54,463 miles used some method to ascertain the ocular and aural condition of its employees; thirty-two, operating 29,428 miles, took no precautions in this direction; while thirty-four, operating 46,077 miles, made no reply, thus leaving themselves open to well-grounded suspicion. Many thousand miles of railroads in the United States are therefore worked under a system which takes no precaution to ascertain the ocular and aural condition of even locomotive engineers. The influence possessed by railroad corporations over the legislatures of the Union is shown by the fact that although frequent attempts have been made to obtain the enactment of restraining laws in this direction, so far only three States—Ohio, Massachusetts, and Alabama—have passed such laws, and these are properly carried out only in Alabama. Dr. Frank Allport, of Chicago, has recently examined 220 motormen, who have never before undergone any kind of official examination. The company only required in old employees normal vision in one eye, with or without glasses. Seven men were found to possess noticeably defective vision, which could be corrected by glasses. Five were found with noticeably poor vision which could not be corrected by glasses. Only one colour-blind man was found, and his hearing was also defective. These figures are given to show the general condition of unexamined men running cars through crowded streets of American cities. Dr. Allport has recently examined 151 locomotive engineers and firemen who have undergone the regular railroad eye and ear examination by an unprofessional man, and who were supposed to be in practically perfect condition. The company asked for leniency to old employees, so nearly the same standard was adopted as in previous examinations—that is to say, perfect vision in one eye and $\frac{20}{40}$ in the other was required. Six men were found with insufficient vision, all of whom could, however, pass a satisfactory test with glasses fitted by Dr. Allport. Four men were found who were distinctly colour-blind, all of whom had good hearing. Dr. Allport contends that railway companies should not only be required to have the sight and hearing of their employees tested, but that the tests should be made by ophthalmic and aural surgeons. He adds that what has been said applies also to street car companies, and companies operating all kinds of boats, bridges, etc.

FOOD AND DRUGS (ADULTERATION) BILL.

A Bill to consolidate and amend the law relating to the sale of food and drugs, prepared and brought in by Mr. Kearley, Sir James Woodhouse, Messrs. Horace Plunkett, Lambert, Nicol, Jeffreys, Channing, Cawley, Lough, and Maurice Healy, has been read and printed. It is substantially the same as the useful Bill brought in by the same gentlemen a year ago; the few alterations introduced are mostly improvements. If passed, it would substitute one for three Acts dealing with the same subject. It would also clear up some ambiguities in the existing Acts. Greater powers are given of dealing with wholesale houses and articles in transit. The dealer is protected by being allowed to summon his own assistant. The warrantor is provided with a sample of the article purchased, and in various other ways an attempt is made to get at the real culprit, and not harass the honest retailer. The shortening of the time within which a summons can be issued is one of these. The essential feature of the Bill, however, is the creation of a Board of Reference. This Board, which would have power to call witnesses and fix rules of procedure, would make regulations as to qualifications of analysts and of inspectors under the Act, and would settle various standards of purity, the wording of labels, and so on. Unfortunately the medical profession is very inadequately represented in its constitution. Of thirteen elected members, five are chemists, and only one a medical man. Considering that the physiological action of impurities, both in food and drugs, is the real ground of legislation in the matter, this seems hardly fair to the public whose constitutions are to be protected from disease. The representation of the analysts is essential, but of the biologists not less so.

BOARDING OUT OF LUNATICS IN IRELAND.

The Dublin daily papers of March 11th mention that the Superintendent of the Asylum for the Metropolitan District, in reporting to his Board of Governors on the points which touched them in the new Local Government Bill, drew attention to the fact that Government proposals contained no provision by virtue of which patients could be boarded out. It is somewhat vaguely stated that "the Board of Governors (of the Richmond Asylum) have from time to time interested themselves in this subject," and it is left to be inferred that the state of the law prevented them from doing anything more. It seemed to be the object of the report to point out that the Bill provides for the payment of a capitation grant of 4s. a week for lunatics treated in county asylums and of 2s. a week for lunatics in auxiliary asylums for the reception of the chronic and harmless insane, but that there is no capitation grant for the insane in private dwellings. Thus it would appear that if a system of boarding out could be adopted the expense would need to be met entirely out of local funds, and unless it were kept below the cost in

auxiliary asylums *minus* the capitation grant for the patients in the latter institutions it is manifest that boarding out would cause an increment of local rates and therefore would not be likely to be adopted by local bodies. Dr. Conolly Norman's report further notes that "in Scotland, where boarding out is largely used, the contribution of the Treasury as rate-in-aid is a fixed sum. Out of this, a contribution is made to all registered pauper patients, whether in asylums or in private dwellings. It comes to a little over 4s. per head per week in cases where the total cost of maintenance amounts to or exceeds 8s. per week, or a proportionately less sum if the cost of maintenance falls below the latter figure." As the Treasury rate-in-aid will be abolished under the new Bill, and the capitation grants above referred to will be met out of the Local Taxation (Ireland) Account, the allocation of which is very carefully defined, the point seems worthy of particular attention, since the adoption of these provisions in their present form would prohibit boarding out. For reasons which we have lately referred to, we should regard such a prohibition as regrettable.

POLYPATHIES IN AMERICA.

A Bill, entitled, An Act Regulating and Legalising the Practice of Osteopathy in the City of New York, has recently been introduced into the New York State Legislature. The osteopaths appear to claim to be above the common law as well as above medicine, as may be gathered from the fact that in the fifth Section of the Bill the following passage occurs: "The system, method, or science of treating disease of the human body, commonly known as osteopathy, is hereby declared not to be the practice of medicine within the meaning of chapter six hundred and sixty-one of the laws of one thousand eight hundred and ninety-three, and is not subject to the provisions of the said chapter, or to the laws amendatory thereof." A similar Bill was not long ago introduced into the Legislature of Illinois, but was withdrawn owing to the determined opposition of the medical profession. A Bill is said to be in preparation amending the New York Health Laws with regard to the practice of the healing art in such a way as to prevent practice by persons who profess to cure by mental process alone. The Bill is doubtless aimed at the faith curers, but if construed according to the natural meaning of its terms it would include the practice of hypnotism also; for hypnotism, as far as it has any scientific basis, is suggestion, and suggestion is a "mental process."

MATTERS IN JAMAICA.

As our readers may have gathered from a recent article, we were not inclined to crow too loudly at the absence of yellow fever from the island at the end of January. We knew that cases had been under treatment during that month, and it is no surprise to learn that a further case of the disease occurred in Kingston in the middle of February. We congratulate the authorities of that city upon the prompt way in which it was dealt with. Dr. Murray, the health officer for the city, at once arranged for the patient's reception at Bumper Hall, where she was sent as soon as Dr. Mosse, the superintending medical officer, had satisfied himself of the actual nature of the illness. During the month of January there were 156 births and 155 deaths in Kingston. The deaths in January, 1897, had been 135. The death-rate for the month was therefore 39.9 annually per 1,000 living. Though the death-rate is high, it is satisfactory to know that Mr. Commissioner Ogilvie is firmly administering the powers conferred upon him by the Governor, but there are considerable arrears to make up. Under these circumstances it is the more unfortunate that the health officer, Dr. Murray, whose action since his appointment can hardly be too highly commended, should have regarded a purely official and formal document sent him as chief of the health department by the Commissioner as a personal matter. Dr. Ogilvie pointed out the weak points of the scavenging of the city, and gave specific directions for its future conduct. As a former mayor of Kingston he is familiar with its organisation, and his detailed directions appear excellent. Naturally he preferred giving these instructions through the health officer rather than directly to the sanitary officer, but unfortunately Dr. Murray took umbrage at the form in which the instructions were given, and formally protested against the document. Unfortunately, also, the document, which should have remained entirely a departmental affair, was published. We hope that these gentlemen, both of Highland ancestry, will, in view of the important work before them, mutually forgive errors of form where no offence is meant, and not repeat Killiecrankie in the West Indies.

THE MEDICAL PROFESSION IN FRANCE.

M. Henry Bérenger, in a recent number of the *Revue des Revues*, gives a melancholy account of the condition of the average medical practitioner in France. There are, it appears, in the whole of France from 12,000 to 13,000 doctors; of these, 2,500 practise their profession in Paris and 10,000 in the provinces. Of those in Paris, 5 or 6 are said to earn a professional income of £8,000 to £12,000; from 10 to 15 earn £4,000 to £6,000 a year; about 100 earn from £1,600 to £2,400; 300 from £600 to £1,200; 800 from £320 to £600; while the remaining 1,200 make less than £300 a year. As it is hardly possible even for an unmarried doctor in Paris to live on less than £500 a year if he wishes to keep up an appearance necessary to make patients accept him as a serious practitioner, it follows that more than half of the doctors in Paris are obliged to have recourse to other means of eking out their incomes. Some of them, it is said, play the part of jackal to certain great lions of medicine or surgery; others act as touts for druggists in pushing the sale of specialities; others, again, pursue shady lines of practice in one way or another. Many live literally from hand to mouth, often within measurable distance of starvation. It came out in evidence in a recent case that the earnings of one particular doctor of medicine averaged no more than £4 a month. Of the 10,000 provincial practitioners, only half, according to M. Bérenger, earn a decent livelihood. The others, however, do not, like their Parisian brethren, take to "pushing" pharmaceutical preparations or to advertising themselves in urinals; they are too much in the public eye, at least in rural districts, to do this with impunity, or even with profit. Their plan of campaign is to look out for "a lass wi' a tocher," and having thus put money in their purse, they embark on some business more lucrative than medicine, becoming manufacturers, owners of house property, or farmers, according to the amount of their wife's dowry. If everything else fails they take to politics. It is estimated that there are on the average some eighty members of the medical profession in the French Legislature at any given time. The chief cause of the distressful state of the medical profession in France at the present time appears to be overcrowding. The universities send forth about 1,200 doctors every year, being just twice the number necessary to fill the vacancies in the ranks of the profession which occur from death and other causes. Yet the number of students in the medical faculties steadily increases. During the last thirty years it has more than doubled; the figures given by a trustworthy statistical authority, M. L. Liard, being 4,000 for 1869 and 8,485 for 1896. The root of the evil, according to M. Bérenger, is the desire of the small shopkeeper and the well-to-do peasant in France to put their sons into a learned profession. The result is the creation of what Prince Bismarck some years ago called a proletariat of university graduates. M. Bérenger affirms, and most of his commentators agree with him, that with the exception of men of special endowments or specially favoured by fortune, the medical practitioner in France who has no private means is doomed to a life of poverty and sordid struggle. In this country things have not yet come to such a pass, as fortunately there are many fields of enterprise at home as well as in the colonies which offer greater

attraction to our adventurous race than the medical profession. But still we are overcrowded to a degree quite sufficient to make the struggle for life extremely severe, and to create a state of things urgently calling for a remedy.

THE INTERNATIONAL CONGRESS OF PHYSIOLOGISTS.

The fourth International Congress of Physiologists will be held at Cambridge from August 23rd to 27th. The Congress, which is held triennially, is designed to contribute to the advancement of physiology by affording to physiologists of various nationalities an opportunity of bringing forward experiments personally, of exchanging and discussing views, and of making personal acquaintances. At the conclusion of the Congress at Berne, in 1895, it was unanimously resolved that the next Congress should be held at Cambridge, and the place of meeting will be the Physiological Laboratory at the University. Professor Michael Foster was at the last Congress elected President of the forthcoming Congress, and he has promised to afford all possible facilities for the exhibition of preparations and of scientific apparatus, as well as for experimental demonstrations. On August 22nd an exhibition of physiological and microscopical apparatus will be held. The exhibits will be contributed by members of the Congress, by directors of physiological laboratories, and by makers recommended by any member or director. The exhibition will remain open during the week of the Congress. The official languages of the Congress will be English, French, and German. The subscription of members is 10s., and in receipt for that subscription a card of membership for the Congress will be issued by the local secretary, Dr. L. E. Shore, Physiological Laboratory, Cambridge.

EBERTH'S BACILLUS IN THE MIDDEN.

In commenting upon the unsuccessful appeal against the decision of the Eccles magistrates, directing the abolition of certain foul middens, we referred[1] to the evidence of Professor Delépine, of the Owens College, who had found the typical typhoid bacillus in earth collected from between the bricks of these "wet ashpits." In *Public Health* for February, Dr. Crocker gives further information about these filth accumulators. He argues that the pits must have been fouled with typhoid excreta thirteen months previous to the occurrence of the more recently notified cases. When these were reported the ashpits were at once emptied, special pails were dedicated to the reception of the patients' motions, and, a little later, "a large quantity of chloride of lime" was placed in the ashpits, and they were afterwards cleansed out regularly. There is, of course, a slight difficulty in accepting the *ergo*. Typhoid is not always notified at once. In one of Dr. Crocker's cases, mentioned as notified on September 2nd, the doctor had been called in on August 28th, and, as we all know, we are seldom consulted for typhoid fever until the patient has been ill several days. There is therefore a possibility that typhoid motions may have been placed in this ashpit even several days before the end of August, and therefore several days before the special scavenging which followed the notification of the case on September 2nd. There is a second possibility, which Dr. Crocker seems to have overlooked, and that is the possible infection of the midden by unrecognised cases of typhoid in other families using the same ashpit, or even of its infection by casual passers-by, possibly affected by typhoid of the ambulant sort. Dr. Crocker, however, seems to feel pretty well satisfied that the infection of the soil must have taken place at least thirteen months previously. On October 22nd he "directed the sanitary inspector to procure some of the filth from between the bricks at the sides and floor of two of the pits." In the one case Professor Delépine found bacilli in every respect corresponding to the typhoid bacilli. In the other the bacilli could not be obtained in a state of purity sufficient to warrant so confident a statement; though morphologically like the true germ, some of the chemical tests failed, probably from the impurity of the culture. In a paper in the same journal, Dr. Delépine describes the method he used to get his cultures from the soil. He fitted a small test tube with a hole in the bottom into a larger one, sterilising both. Removing cotton plug and inner tube he introduced some of the material to be examined into the larger tube. Replacing the inner one he then poured into it a little alkaline peptone bouillon very gently so as not to displace the soil. The tubes were then placed vertically in the incubator at 37° C. A few hours later a loopful of the bouillon was inoculated into nutrient gelatine and plate cultures made in the usual way. The colonies in the first dilutions were too numerous, but in the second and third they were discrete enough to be studied individually by cultivation. Professor Delépine considers the success of this method to be dependent upon the extreme mobility of Eberth's bacillus.

[1] British Medical Journal, February 12th, 1898, p. 454.

AUSTRALIAN FEDERATION AND THE MEDICAL PROFESSION.

A deputation from the Medical Defence Association of Victoria waited on the Premier of the Colony recently, and pointed out that it had been stated by Dr. Roddick in his presidential address to the British Medical Association at Montreal a few months previously, that, owing to the provinces of Canada losing their autonomy, medical graduates of the provincial universities had been debarred from registration in Great Britain, unless they underwent a further examination. The Victorian Association pointed out that if the Australian colonies became federated the students of Melbourne and Sydney Universities might be similarly treated. Sir George Turner replied that the federated colonies would still retain the power of self-government. He thought the fears expressed were groundless, but he suggested that the Association should write to the British Medical Association as to whether Victorian graduates would be disqualified, and have the reply cabled, so that the matter might be dealt with at the sitting of the Federal Convention. The deputation also asked that provision should be made in the federal constitution requiring all medical students to pass a standard examination to enable them to practise in any colony without further examination. Sir George Turner promised to look into the matter, but added that if this was conceded to one profession, others might want similar treatment.

FORECASTING THE SEX.

Dr. Ludwig Cohn, of the Zoological Museum at Königsberg, in Prussia, has lately issued an interesting pamphlet to clear the way for a more scientific study of the question of the determination of sex. In this pamphlet, Dr. Cohn considers the principal theories which have been brought forward to account for the variation of sex. Many observers believe that when the first birth happens to coincide with the period of highest sexual energy in the mother a girl is more likely to be born than a boy; but if the mother is very young, or if she has already passed her time of sexual maturity, the child will probably be a boy. Observers differ as to the time of the sexual maturity in a woman. Bidder maintains that she is in the heyday of her sexual life between the ages of 20 and 21 years. Duesing puts it a little later, between the 22nd and 24th years. Other hold that the sex is dependent upon the age of the ovum at the time it is fertilised, so that an egg fecundated shortly after its escape from the ovary becomes a female, and one which has passed for some distance along the Fallopian tubes before it meets the spermatozoa becomes a male. This theory—known as Thury's—has been put to the test of experiment, and, though it is fairly accurate for cows, it does not hold true for all animals. Many observers believe that the condition of the semen exercises a potent influence upon the sex of the ovum, and this hypothesis has also been put to the test of experiment. In 492 cases in which frogs' eggs

were fertilised with concentrated sperm, males were hatched in 40 per cent.; when diluted sperm was employed, 27 per cent. of the eggs became males; and with a watery extract of the testicles 35 per cent. gave rise to males. Dr. Cohn then proceeds to discuss the question from the point of view of polygamy; of the relative ages of the parents; of the state of their nutrition; and of the time of year at which conception takes place, but he believes that none of these factors are individually of prime importance in the production of sex. In the second part of his treatise he shows that varying conditions influencing the nourishment of the embryo have an effect in regard to the sex. Landois experimented in this direction as early as 1867, using the caterpillar of Vanessa urticæ; in thousands of cases he was able to produce male or female butterflies at will, and the effect of feeding upon the sex of bees has long been known. In conclusion, Dr. Cohn is unable to find any fixed law regulating the production of sex, though three of the factors which determine it seem to be the intimate constitution of the egg and spermatozoon, the fecundation, and the nourishment of the embryo.

THE SMITHSONIAN INSTITUTION.

The Secretary and the Board of Regents of the Smithsonian Institution have issued a memorial of the first half century of that well-known foundation. It derives its name from James Smithson, who at an early period in his life wrote: "The best blood of England flows in my veins; on my father's side I am a Northumberland; on my mother's I am related to kings, but this avails me not. My name shall live in the memory of man when the titles of the Northumberlands and the Percys are extinct and forgotten." With regard to Smithson's claim to be "a Northumberland," it may be explained that his plebeian patronymic took the place of Percy in the Northumberland family early in the eighteenth century, when the female descendant of the hero of "Chevy Chase" married one Smithson—who, by the way, was a doctor—to whom the title was continued by special favour of the Crown. James Smithson bequeathed his estate, with certain limitations, "to the United States of America to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." Next to the pious founder the greatest benefactor of the Institution has been Mr. Thomas George Hodgkins, who in 1891 gave it a sum of £40,000. The Smithsonian Deposit in the Library of the United States Congress now numbers 357,000 books, pamphlets, periodicals, and maps. The magnitude of the work accomplished through the system of international exchange is shown by the fact that in 1895 no fewer than 107,118 packages, weighing in the aggregate about 164 tons, passed through the office. From the date of the establishment of the Institution to 1895 books to the value of over £200,000 have been distributed over the world. In addition to the distribution of scientific literature of the highest character, the work of the Smithsonian Institution covers the whole field of scientific research.

THE ARMY MEDICAL STAFF.

We last week mentioned a rumour that the military authorities were inclined to look with favour on a proposal to convert the Army Medical Staff into a corps on the lines of the Army Service Corps, in which the highest rank would be that of lieutenant-colonel. This reorganisation, it was pointed out, would involve large reductions in the administrative rank, with consequent saving of money that could be applied to increasing the junior grades. Such a strategical manœuvre would be quite in accordance with the ways of the War Office in its dealings with the medical officers, but we cannot believe that Lord Lansdowne would sanction what would in fact be a shabby trick, whereby the word of promise would be kept to the ear and broken to the heart. But in any case it is well that his military advisers should be made clearly to understand that such a scheme will not satisfy the medical profession. Apart from this the scheme, as reported, is self-condemned by its intrinsic absurdity. To anyone who knows anything of the conditions of military service the notion of the Principal Medical Officer of an army corps of 35,000 men, holding command over medical and transport services of over 2,000 men, and the responsible adviser to the general officer commanding on all medical and sanitary matters, being only a "lieutenant-colonel," is simply ridiculous. It is probable, however, that what is intended is to form a corps in which the highest regimental rank will be that of lieutenant-colonel, as in the case of the Royal Artillery, the Army Service Corps, and the Line. Officers in these corps, when promoted to the substantive rank of colonel, major-general, etc., are on the staff of the army, as all principal medical officers are. In a similar way the rank of executive medical officers in the new medical corps would be limited to that of lieutenant-colonel, and on promotion to the higher grades of colonel and major-general they would be on the "staff of the army," and thus cease to belong to the "medical corps," just as an officer of the Royal Artillery, when promoted to be a full colonel, is gazetted to be a "colonel on the staff," and ceases to wear the R. A. uniform. We believe that the prospects of a satisfactory warrant are excellent, and the Director-General is certainly to be congratulated on the vigilance, resolution, and ability with which he is fighting the battle of the important branch of the service of which he is the head.

THE HEALTH OF LORD SALISBURY.

Lord Salisbury's present indisposition is to be attributed to a desire to return to ordinary habits of work too soon after an attack of influenza. This disease, as is well known, often leaves behind it a condition of lowered health, in which the sufferer, although free from any definite disease, is yet unable for some time to face the ordinary wear and tear of life. Every man has the fault of his qualities, and Lord Salisbury is one of those who cannot take things easily. So long as he remained officially responsible for the business of the Foreign Office, he felt bound to deal with the more important public business himself, and whenever this involved an interview of any duration with Ministers, secretaries, or other officials he experienced a rise of temperature. The Cabinet meeting on March 11th was followed by great prostration, and on Saturday he was so seriously ill that more anxiety was felt with regard to his state than at any period of the acute attack. We are glad to be in a position to state that he has steadily improved ever since, and that this improvement was so marked by March 16th that Sir William Broadbent felt justified in allowing Lady Salisbury to leave for Beaulieu. It is fully expected that Lord Salisbury will be able to follow her early next week, when Sir William Broadbent also intends to start for a holiday in Italy. Experience has again and again proved that the only remedy for the depression of health left by influenza is complete rest of body and mind. Sir William Broadbent, therefore, had no alternative but to exercise his authority as a physician to prescribe to his distinguished patient complete abstention from work. It should be added that experience has proved also that real rest is followed by permanent recovery even in men who have reached a far more advanced age than Lord Salisbury. There is therefore every reason to hope that the Prime Minister will return from his holiday completely restored to health.

THE EGYPTIAN PILGRIMAGE TO MECCA AND THE PLAGUE.

The Quarantine Board at Alexandria, of which Dr. Ruffer is chairman, recently urged the Egyptian Government to prevent this year's pilgrimages to Mecca on account of the plague in India. At first there appeared to be every likelihood that this advice would be accepted, for the Ministers were unanimously agreed as to the necessity, and went so far as to forbid provisionally the issue of passports to intending pilgrims. The assent of the Khedive, with whom the final

decision lay, had however to be obtained, and on March 13th the important question was considered at a special meeting of the Council of Ministers, the Khedive presiding. The Khedive unfortunately refused his consent, on the ground that the suppression of the pilgrimage is opposed to the precepts of the Koran. In view of his opposition, the Government has abandoned the measure, but has imposed certain restrictions which it is hoped will reduce the number of pilgrims, and tend to diminish the dangers of infection to Egypt on their return from the Hedjaz. We sincerely trust that these restrictions may prove effectual, but we regret the inability of the Government to prohibit the pilgrimage entirely. It must be recognised that the plague in Bombay is worse this year than in the corresponding period of last year, and that Jedda, in June, 1897, was an infected centre. Though Egypt has been free of plague for nearly half a century, it is not to be forgotten that previous to this the disease was practically endemic there, and had more than once spread to other countries. Should plague be again imported into Egypt, it would probably long persist, and this would be a catastrophe destructive not only to its population but to its increasing commerce, besides being a danger to Europe. There can be no doubt that the measure recommended by the Quarantine Board was a wise one, and ought to have been adopted, for should the plague unfortunately get established among the pilgrims at Mecca, there would be great danger that they would bring it back with them to Egypt, even under the strictest precautions. It has occurred with regard to cholera, and what has happened with cholera can with much greater facility happen with plague.

THE PHARMACY ACT AMENDMENT BILL.

Though this Bill relates only to the internal organisation of the Pharmaceutical Society, and in the main provides only for the admission of persons registered under the Act of 1868 as members of the Society, notice has been given by Mr. Alexander Cross, one of the members for Glasgow, of several amendments which have no direct relation to the object of the Bill. The most remarkable of them is to the effect that the Pharmacy Act of 1868 shall not apply to persons engaged in the sale of insecticides, destroyers of vermin, etc. If it were adopted the result would be an actual repeal of the Pharmacy Act in regard to the sale of many poisonous articles which have been the cause of numerous fatal accidents. Weed killers, for instance, which consist chiefly of arsenic, have recently been conspicuous in that way, and their indiscriminate sale has given rise to several prosecutions which have been attended with results beneficial to the public safety. To defeat the object of the Act by permitting the sale of poisonous articles in the manner proposed by Mr. Cross would be a most objectionable proceeding.

THE DUM-DUM BULLET.

As some questions have recently been asked in Parliament with regard to the alleged "explosive" qualities of the Dum-Dum bullet, it may be well to explain what an explosive bullet really is, and the nature of the action of the Dum-Dum bullet. The Geneva Convention laid down a size, below which no missile which contained any compound which was intended to explode and break it up should be used. Anything above this size came within the definition of a shell, and could be used, but any missile below this size, constructed on a similar principle, was an explosive bullet, and could not be used. The diameter allowed was fixed above that of any rifle. The Dum-Dum bullet does not contain any explosive charge, and therefore does not come within the definition of an explosive bullet as laid down by the Geneva Convention. The evolution of the Dum-Dum bullet is very briefly the following: In the struggle to produce a rifle with the longest and most accurate range, the diameter of a bullet has been gradually reduced. To give it a greater penetrating power and a more accurate flight, its substance or outer coating has been made harder, until in the British army the pencil-like metal-coated Lee-Metford bullet, with a diameter of 0.303 inch, has been evolved. This bullet at short ranges may produce terrible effects if it strikes a hard bone, but passes clean through soft parts without causing any material shock to the system. It thus allows a wounded man to charge home, and has consequently been found to be ineffective in stopping rushes of such determined fighters as we have recently encountered in both India and Egypt. To meet this difficulty the Dum-Dum bullet was introduced; it is precisely similar to the Lee-Metford bullet, except that the cupro-nickel covering is not continued over its pointed end. The consequence is that when it comes into contact with the body the softer lead and antimony core which is exposed "sets up" into a broader mushroom-like end, which inflicts greater damage than the hard metal-coated point of the Lee-Metford bullet. All the older bullets, including the Martini-Henry, which is still exclusively used by native troops in India, "set up" in precisely the same way as the Dum-Dum bullet, and the more severe injuries produced by the latter—if indeed they prove to be more severe—depend solely on their much greater muzzle velocity. The Dum-Dum bullet, therefore, does not contravene the present code of international law.

Dr. S. Holmes Joy, J.P. for the counties of Stafford and Warwick, has been appointed Coroner for the Eastern Division of the county of Stafford.

We understand that Dr. Mitchell Bruce has undertaken to write a short biography of the late Sir Richard Quain for early publication. The Queen has sent a letter of condolence to the relatives of Sir Richard Quain, who was one of the Physicians-Extraordinary to Her Majesty.

Mr. Percy Flemming, F.R.C.S., was on March 15th presented with a piece of plate and an address to which 170 signatures were appended by the past and present medical students of University College, London, on the occasion of his resigning the post of Senior Demonstrator of Anatomy. Mr. Flemming, who has held the post for twelve years, vacates it now on his appointment as Assistant Ophthalmic Surgeon to University College Hospital.

Infant Mortality and Women's Occupations.—In a paper read at the last meeting of the Royal Statistical Society Miss Collet reported, among other matters, the results of an investigation into the alleged connection between high rates of infant mortality in Lancashire and the employment of married women. She contended that statistics did not support this view. Miss Collet proposed that in dealing with the next census returns the occupations of married women should be tabulated.

East London Nursing Society.—The report presented to the annual meeting of this society, held at the Mansion House, showed that the Society had nursed 5,089 cases during the year; it also showed that the financial position had improved. The Lord Mayor expressed great admiration for the work of trained nurses, and Sir Dyce Duckworth, in moving the adoption of the report, pointed out the great need that existed in the East of London for what this Society was doing. He thought it exercised a civilising and humanising influence among the poor of that part of the metropolis.

Belgian Pediatric Association.—A Pediatric Association has just been founded in Belgium. It is to hold a congress every year in the month of October. The first meeting will take place in October of the present year in Brussels, under the presidency of Dr. Charon. The following are the subjects on the programme:—Surgery: Method of Conservation in Tuberculosis, excluding Visceral Tuberculosis and Lupus (to be introduced by Dr. Depage). Medicine: Pulmonary Tuberculosis in Young Children, considered particularly with reference to its Rapid Falls (to be introduced by Drs. Max and Nauwelaers). Orthopædics: Coxa Vara (to be introduced by Dr. Ehndrix).

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE NEW VACCINATION BILL was introduced by Mr. Chaplin on Tuesday afternoon. He first referred to the use of glycerinated calf lymph as the means on which he relied to overcome the prejudice existing in some quarters against vaccination. He said that experiments had convinced his advisers that through it no special or specific disease could be communicated, and that the Local Government Board would undertake to provide a supply for all the country. No one would be compelled to be vaccinated except with calf lymph. Next, all the vaccinations would be domiciliary and at the public expense, and attendance at stations would not any longer be required. The age for vaccination would be extended to 12 months, and the Bill provided further that persons could only be punished twice for non-compliance with the law, and could afterwards obtain relief from a repetition of the penalty by making a statutory declaration of conscientious objections. Sir Walter Foster said that he agreed as to the wisdom of introducing vaccination by glycerinated calf lymph, and hoped that it would diminish to a large extent the objection which existed in some quarters to vaccination. He congratulated the President of the Local Government Board on the other provisions of the Bill, but felt bound to express a doubt as to the effect of the provisions in respect to conscientious objections. He did not think they would be sufficient to put an end to the mischievous agitation against vaccination which had arisen under the existing law. The Bill will be printed at an early day, and then the real value of the measure can be properly estimated as the tardy result of the lengthy labours and most voluminous report of the Royal Commission.

THE LONDON UNIVERSITY BILL passed through its Committee stage on Tuesday, and was ordered to be reported. The main changes made were the insertion of the new Commission. It will consist of Lord Davey, the Bishop of London, Sir William Roberts, M.D., Sir Owen Roberts, D.C.L., Professor Jebb, M.P., Dr. Michael Foster, F.R.S., and Mr. Edward Henry Busk, Chairman of Convocation of the University of London. Dr. Michael Foster replaces Lord Lister, and so keeps up the representation of the Royal Society. The powers of the Commissioners will extend till the end of 1899. A new clause was added, giving to the Agricultural College the same privileges as it would have had if situated within the administrative county of London. This is sure to lead to fresh applications for inclusion, and will raise many difficulties. There are indications that the Bill will come in for a good deal more discussion in the House of Commons than it has received so far, and there is a doubt in many minds if a real teaching university can ever be established under the old name and traditions.

THE PLAGUE AT BOMBAY, apart from the terrible mortality it has occasioned, has caused the practical breakdown of municipal control, and even under the Committee representing the Government serious riots have recently occurred. The employment of British soldiers in the inspecting parties has been the main grievance with the inhabitants, and in answer to a question of Mr. H. Roberts the Indian Secretary announced that their use had been discontinued. The latest news indicates that the search and inspection will be organised in future by the heads of the different communities and racial and religious prejudices in this way respected.

PUBLIC PETITIONS.—The first report of the Select Committee on Public Petitions has just been issued. It appears that not a single petition against the Midwives Registration Bill has been presented. This is a very significant fact, and it is sure to be used as an argument in favour of the Bill on the second reading. Three petitions, with 492 signatures, have been presented to the House against vivisection. Three petitions have also been presented for an alteration of the law respecting Habitual Drunkards, and 31 petitions signed by over 15,00 persons in favour of legislation on Food Adulteration.

DEATH CERTIFICATION would appear from the following question and answer to be a subject in which the Government do not take much interest:—

Sir Walter Foster asked the President of the Local Government Board whether he was aware that a case of supposed sham burial was brought before the Chancellor of the Diocese of London at a Consistory Court on Wednesday last, and whether, seeing that the Select Committee on Death Certification published evidence in their report in 1893 showing that the existing state of the law was very inadequate to prevent the occurrence of such cases, he would bring in a Bill to amend the law as regards death certification in accordance with the recommendations of the Select Committee.—Mr. Chaplin said he was aware that the Chancellor of the Diocese of London had decreed a faculty for opening a vault with a view to ascertaining whether a coffin contained a certain body. He was afraid he could not hold out any hope that the Government would propose during the present session any legislation on the subject.

The importance of the matter has, however, been prominently before the public recently, and as the General Medical Council is also pressing on the Government the necessity for an alteration of the law, some steps should be taken next session, if not this.

Sir Walter Foster also asked the Home Secretary whether his attention has been called to Mr. Justice Grantham's remarks at the Central Criminal Court on March 10th, at the trial of Amelia Hollis, with reference to the present system of putting away stillborn children. And whether, seeing that the Report of the Select Committee on Death Certification in 1893 expressed the opinion that the absence of legal requirements that such births shall be registered prior to the disposal of the bodies is fraught with very serious danger to child life, he will bring in a Bill to amend the law in the direction recommended by the Select Committee.—The Home Secretary, in reply, said: My attention has been called to the remarks of the learned judge, and I may say that one of the recommendations made by the Select Committee—namely, the equalising of the burial fees for stillborn children with those for children not a month old—has long been the rule of the Home Office in its administration of the Burial Acts. The general subject of death certificates is engaging my attention, and I am at the present moment in communication with the Local Government Board about it.

THE INCREASE OF INSANITY.—Mr. W. Corbett on Monday asked the Home Secretary if his attention had been drawn to a special report of the Commissioners in Lunacy to the Lord Chancellor, presented last session, in which they stated that whereas in 1859 the number of lunatics, idiots, and persons of unsound mind in England and Wales was 36,762, the number had increased in 1896 to 96,446, showing a ratio to every 10,000 of the population of 31.18 as compared with 18.67 at the previous period, and also to the last (the fifty-first) report issued by the Lunacy Commissioners, in which they regretted the very large increase of 2,919 in the number of lunatics in England and Wales on January 1st, 1897; and whether he would consider what could be done, by promoting an international commission or by some other means, to arrest the increase of insanity.—The Home Secretary replied: My attention has been called to these reports. It was, in fact, at my request that the Lord Chancellor called for the special report from the Commissioners. The Commissioners, after a very careful investigation, consider that there is no important increase of fresh insanity; and I am not satisfied that an international commission would throw light on the matter. The question will, of course, continue to receive very careful attention.

WEST AFRICAN SETTLEMENTS.—The unhealthy character of these settlements formed the subject of a question to the Secretary for the Colonies, Mr. Loder asking the number of the British civil officials in Sierra Leona and the Gold Coast respectively, and the deaths amongst them in 1896 and 1897.—Mr. Chamberlain, in reply, said the number of civil officials in the Colonies was 30 and 125 respectively, and the number of deaths in 1896 5 and 14, and in 1897 2 and 5. A comparison based on a longer period, however, showed that the Gold Coast was more unhealthy than Sierra Leone.

The Crimean Lesson.—The *Indian Medical Record* of January 16th, publishes the following passage from Kinglake's *Invasion of the Crimea* (vol. vii, page 39) sent to it by a correspondent: "In other ways the parsimony of the State had prepared an evil time for our sick and wounded troops, by not only stinting the remuneration of its medical officers, but keeping their numbers so low as to have to refuse them too often a short leave of absence even when health and life were at stake—by turning a deaf ear to their painful appeals, and finally by resenting, or seeming to resent, their complaints—it brought down these good public servants to a habit of mute soldierly resignation, which, because carrying with it a tendency to endure the most terrible evils, instead of struggling fearlessly against them, was destined to prove but too baneful under the trials of war." History repeats itself. Are the military authorities of the present day waiting for another breakdown such as occurred in the Crimea, to open their eyes to the results of their short-sighted policy in regard to the Army Medical Department?

FOREIGN MILK.

DURING eleven months of 1895 124,915 gallons of fresh milk and cream were imported into England. Of this 109,428 came from Sweden, 14,103 from Holland, half the remainder from Norway, the rest from Belgium, Denmark, and North Russia. At the request of the Commissioners of Sewers of the City of London[1] inquiry was made through the Foreign Office as to measures taken in these various countries to secure the purity of the export. The result is not reassuring. We hear so much about how much better certain things are done abroad that perhaps we hoped too much. In Belgium a royal decree of November, 1896, lays down some admirable precepts: "Milk deprived of a portion of its cream may not be sold, exposed, or transported for sale," except in vessels legibly marked "skimmed milk." "It is absolutely forbidden to sell, exhibit, keep, or convey for sale as human food" milk to which water or preservative substances have been added—colostral milk, milk of cattle that have been physicked, or of cows affected by such contagious diseases as tuberculosis, rabies, aphthous fever, carbuncular fever, symptomatic anthrax, pyæmia, septicæmia, diphtheria, acute mammitis, chronic suppurative mammitis, jaundice, etc. The milkman's address must be legibly displayed on carts and cans. So far so good. The weak point seems to be the means of enforcement of these and similar enactments. In Sweden the rearing and feeding of cattle is "left to the means and judgment of the agriculturist." The export of cream to England is "under no official control whatever." There are admirable clauses in some of the local ordinances of Gothenburg and Malmo. There are also some admirable precepts in the ten commandments.

In Stockholm there is a private society called the "Milk Commission," which exercises a sort of supervision of farmers voluntarily placing themselves under its direction. In this city there are also certain municipal regulations. Amongst these we note No. 5, which requires that "if sickness break out in living rooms situated in close proximity to a cowkeeper's establishment, or occupied by persons employed there, or in a dwelling attached to a shop where milk is sold, and if there is reason to suppose that the illness is of a contagious character, notice, etc." Had the second "if," and the words immediately following it been omitted, the ordinance would have been valuable. Unfortunately, as in our own Legislature, ignorance is a good defence, and there is no penalty against remaining ignorant. Illness of any kind in the neighbourhood of milk for sale ought to be reportable.

The powers of the Board of Health are, however, greater and more promptly enforced than those possessed by our sanitary authorities. Milk and cream may not be kept on sale or at a place of sale "unless it be free from addition of water or other foreign matter."

The regulations of the "Commission," already referred to, are many of them excellent. For instance, there must be adjoining the cowburn a "roomy place" for the cattle, so that stalled cattle may, at least every second day, under ordinary circumstances, get a little fresh air and exercise "for not less than half an hour." Cows which retain the after-birth for twenty-four hours, or with tubercle or any disease affecting the milk, are to be at once separated, and notice given to the veterinary surgeon. If fever breaks out amongst the herds, the doctor's certificate must be at once sent to the medical officer of the Commission.

Shortly before every milking time the manure and dirty litter must be cleared from the gutters and stalls, and the cows' udders washed with clean water. The milkers must dress in clean clothes and wash their hands before they begin their work. The milk after straining through a clean cloth is cooled.

The clerical funds of the Commission are provided by a small registration fee for each cow, and extra expenses are charged to those for whom they are incurred. "If the keeper of a cowhouse under inspection of the Commission violate any of the above regulations—we have not attempted to set forth all—either personally or by an employee, the Commission may, on proof of the fact, exclude him from its control." This reminds one of the penalty of "naming" inflicted by the Speaker on recalcitrant members of the House. The Dutch regulations about milk are almost confined to restrictions where cattle plague, small-pox amongst sheep and goats, splenic fever, and rabies are present.

In Denmark the "instructions for the veterinary police" state (Paragraph 26) that "Vigilant care is to be taken that the dead animals are not disposed of in any way whatever." Unless the translator or the transcriber be at fault there is surely something rotten in the State of Denmark. Here again the regulations seem framed rather to prohibit the use of milk from animals suffering from some epizootic than the protection of milk from filth contamination or humanised contagion. The milk, for instance, of cattle with "udder pneumonia" is not to be sold or used for human food, or "the production of eatables," and only for the food of animals after it has been boiled. The Queen's speech is generally supposed to be composed in blissful disregard of the Queen's English, but if the Danish draftsman responsible for these "laws" were to see himself in his English dress, we fancy he would exclaim like Peter Quince, "Bless thee, Bottom, how thou art translated!"

[1] Correspondence with Secretary of State for Foreign Affairs and the Board of Agriculture on sale of adulterated or infected milk and cream from foreign countries.

THE PLAGUE IN INDIA.

THE riot in Bombay is serious enough in the immediate loss of life which it involves and in the evidence which it affords of the persistently suspicious and inflammable temper of the native mind. The actual cause of the outbreak is a familiar one—the attempt of a plague party to discover whether a Mohammedan woman was actually suffering from the disease. Fierce caste feeling was aroused, with the lamentable result that Mr. Dawes, a plague inspector, was stoned to death; two soldiers of the Shropshire Regiment shared the same fate, and a Parsee magistrate who attempted to control the infuriated mob was amongst the injured. The outbreak was severe while it lasted, but now matters are proceeding more quietly, and the instigators, to the number of 109, are prisoners in the hands of the authorities. This burst of caste prejudice is but a climax to a latent feeling of discontent and ill-will against the methods adopted by the Plague Committee.

Search parties are now doing their work under a strong guard of police and soldiers; but it is doubtful if, without the goodwill and countenance of the native headmen, it is likely to be of much use. So impossible has the situation become that the Governor of Bombay has foregone the system of house-to-house visitation for the time being. On March 15th, at a large meeting of justices held in the Town Hall of Bombay, the Governor delivered a speech on the subject of the proposed new measures for dealing with plague. He stated that search parties were to be abolished experimentally, and all suspicious cases were to be reported by the headmen of the various Committees. There are to be no inspections of corpses or measures entailing delay in the performance of funeral rites. It is naturally asked, What is the cause of the present explosion? It is summed up in the statement that the steps taken by the authorities to eradicate plague have been, in the eyes of the natives, a failure. Plague has recrudesced and raged with even greater intensity than during the original epidemic, and it does not seem that the "stamping out" process has mitigated the evil. As we have often pointed out, plague, when once it has got hold of a large town, cannot be stamped out; its spread may be anticipated and dealt with, but an epidemic in full play can only be ameliorated. We have had occasion time and again to point out that in the city of Canton, in which neither segregation, sanitation, house-to-house visitation, nor medicinal treatment were practised, plague ran its course, and died away in strict consonance with the period of its presence in Hong Kong, where the same steps as are now being tried in Bombay were strictly followed. "Stamping out" is possible where the place attacked is of small dimensions, where the disease has a feeble hold, and where the first cases seized can be treated; but in a city with a huge population, where ingress and egress are permitted, the task is impossible.

The telegrams to hand this week convey no definite information of the actual numbers affected in Bombay, but we gather that there is an abatement in the number of plague cases. During the week ending February 24th there were 1,049 new cases of plague, 1,087 deaths from plague, and 1,974 from all causes. This is a slight improvement on the previous week, when 1,257 persons died of plague, and 2,195 from all causes. This is equivalent to a death-rate of 137.44 per 1,000 per annum, compared with 47.64, the average of the past five years.

In other parts of India the epidemic is in abeyance, with the exception of the outlying districts of the Nizam of Hyderabad's territory. Here the authorities are doing their utmost to isolate the infected districts. The later reports state that plague was present in the villages some 80 miles distant from the cities of Hyderabad and Secunderabad, and no further evidence of its nearer approach is to hand. In Lahore two cases are reported. In the Hoshiarpur and Jullundur districts adjacent to the Hill States of the Punjab, some 14 villages in all have been attacked.

The Government of Bengal have ordered a supply of Dr. Haffkine's prophylactic sufficient for 6,000 inoculations. It is intended to recognise inoculation, as a ground for dispensing with segregation, in regard to railway passengers from infected districts. The demand for lymph has largely increased, so much so that there is difficulty in supplying it, though the preparation of it continues without intermission.

THE LATE MR. ERNEST HART.

The South Indian Branch of the British Medical Association, at its meeting held in Madras on January 14th, unanimously passed the following resolution:

> The members of the Branch have learnt of Mr. Ernest Hart's death with the greatest regret, and feel that they have lost a true friend and well wisher, and a man to whom the success of the British Medical Association and its Branches has been to a great measure due.

The Branch further conveyed to Mrs. Ernest Hart their sincerest sympathy in her bereavement.

THE GOVERNMENT AND THE MAINTENANCE OF THE IRISH ASYLUMS.

From the *Dublin Daily Express* of March 12th we learn that the County Tyrone Grand Jury on March 11th adopted a resolution to the following effect:

> That the Irish lunatic asylums should be taken over and wholly maintained at the cost of the State as an imperial charge, and managed by the Government department in the same way as the prisons.

On the previous evening in the House of Commons the Chief Secretary, in reply to a question from Mr. McAleese in reference to a similar resolution from the County Monaghan Grand Jury, said (according to the report in the *Daily Nation* of March 11th):

> I have received a copy of the resolution passed by the County Monaghan Grand Jury. The proposals of the Government with regard to lunatic asylums are embodied in the Local Government Bill for Ireland, and I can hold out no hope that the entire cost of the maintenance of these institutions will be borne out of imperial funds.

These extracts are of some interest in connection with matters which have been lately discussed in these columns. It is evident that with regard to lunacy affairs Government will not materially depart from its announced intention of applying to Ireland *mutatis mutandis* the general principles of the English Local Government Acts.

LITERARY NOTES.

Dr. Achilles Rose, of New York, has written a book, entitled *Christian Greece and Living Greek*, in which he deals, among other things, with the subject of Greek as an international language of medicine and scholarship. Dr. Rose is known as an ardent advocate of this scheme, which has hitherto found few supporters.

Messrs. Macmillan and Co. will publish early in April the fifth volume of the *System of Medicine*, edited by Professor Clifford Allbutt. It will deal with diseases of the respiratory organs, diseases of the pleura, and partly with diseases of the circulatory system. The sixth volume, which is well advanced, will complete the diseases of the circulatory system, and deal with those of muscles and of the nervous system, including mental diseases. A series of short articles on the diseases of the skin will complete this important work. It seems practically certain that a seventh volume will be required, but this will include a complete index. It is expected that the remaining volumes will be issued before the end of the year.

Medicina Militar is the title of a new fortnightly journal which is now published in Lisbon with the authority of the Portuguese Minister of War. The editor is Dr. Julio Ernesto de Lima Duque.

In the *Memoir of Sir Henry C. Rawlinson*, by Canon Rawlinson, just published, there occurs the following passage:

> Having early in life twice broken his collar-bone whilst pig-sticking, some particle of bone or tissue had been misplaced. This foreign substance had settled on the under part of the left arm, just above the funny bone, and in close proximity to the ulna nerve, one of the most tender spots in the human body. When this locality was attacked by inflammation, consequent on either gout or too good living, the pain became so intense that the patient for a few moments would shout with agony. Mercifully these attacks endured for only a few minutes, and seldom occurred more than once in twenty-four hours.

It is distressing to think that the great Assyriologist should have been so afflicted, but the explanation of the cause of his sufferings given by his biographer, though interesting, is a little puzzling. We present the case, as stated in the extract quoted above, as a problem in the higher pathology.

According to the *Publishers' Weekly* of New York, the number of new books on medical science and hygiene published in the United States in 1897 was 129. The number of new editions which appeared during the same period was 24. The corresponding figures for 1896 were respectively 119 and 48. The number of books on the same subjects by American authors, including new editions manufactured in the United States, published during 1897, was 132; that of books by English and other foreign authors, including new editions manufactured in the United States, 3; that of books by English authors, imported bound or in sheets into the United States, 18.

Dr. A. M. Berger has recently published a manuscript collection of prescriptions for affections of the eye by Michael Angelo, which is in the Vatican Library. It fills the last three pages of a volume of the great artist's poems, which are also written with his own hand. In many passages of his correspondence Michael Angelo alludes to his increasing dimness of sight, and no doubt the formulæ which he collected were for his own use. Dr. Berger compares them with those given in a manuscript treatise on diseases of the eye, by Peter Hispanus, a medical writer of the fourteenth century. This manuscript (*Breviarium magistri petri yspani de egritudinibus oculorum et curis*) is in the Munich Library, and is now being printed under the supervision of Dr. Berger.

Dr. H. T. Whitney, who was recently elected President of the China Medical Missionary Association, is translating *Gray's Anatomy* into Chinese. Dr. Whitney was formerly a citizen of Ohio, and by way of encouraging him in the laborious task which he has undertaken, his friends and former associates of the North Ohio District Medical Society lately passed a resolution expressing their appreciation of the honour reflected upon the Society by one of its members, and adding, "The Secretary is hereby directed to transmit to Dr. Whitney its hearty congratulations, and bid him Godspeed in his great undertaking." The occasion seems fully to justify the society in invoking the aid of a higher power on behalf of their fellow member.

Among the medical works recently issued by Mr. W. B. Saunders, of Philadelphia, are: *An American Textbook of Genito-Urinary and Skin Diseases* (*including Syphilis*), edited by L. Bolton Bangs, M.D., late Professor of Genito-Urinary and Venereal Diseases in the New York Post-Graduate Medical School and Hospital; and Wm. A. Hardaway, Professor of the Diseases of the Skin in the Missouri Medical College; and the new edition (1898) of Dr. George M. Gould's encyclopædic *Yearbook*. Mr. Saunders has also completed arrangements for the publication of Lehmann's *Medicinische Handatlanten*, illustrating Internal Medicine and Clinical Diagnosis, Legal Medicine, Operative Surgery, Laryngology, Diseases of the Eye, etc., each volume of which contains from 50 to 100 coloured plates.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

March 2nd, 1898.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH.—A meeting will be held at the Public Hall Witham, on Thursday, March 24th, at 2.30 P.M. A luncheon (half-a-crown will be provided at the White Hart Hotel, at 1.30 P.M.—E. G. BARNES M.D., Eye, Suffolk; M. BEVERLEY, M.D., Norwich; THOMAS CARR, M.D. Braintree.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—A meeting of the above District will be held at the West Kent Hospital, Maidstone, on Wednesday, March 23rd, at 4 P.M., Mr. Hallowes, in the chair. Agenda: Place, date, and chairman of next meeting. Election of Honorary Secretary. Dr. Travers: Notes of 51 cases of Typhoid Fever. Dr. Ground: On the Position of Antitoxin as a Remedy in Diphtheria. Tea and coffee will be provided at the close of the meeting. All members of the South Eastern Branch are entitled to attend this meeting, and to introduce professional friends.—E. GROUND, M.D., Honorary Secretary, 1, Ashford Road, Maidstone.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Cottage Hospital, Ashford, on March 24th, at 3 P.M., Dr. Wilks in the chair. Agenda: Dr. Kessick Bowes: Inguinal Colotomy. Mr. Raven: A case of Acute Pneumonia and its Significance. The Chairman kindly invites members to luncheon at his residence, 22, North Street, from 1.30 to 2.30. Gentlemen intending to avail themselves of the Chairman's hospitality are requested to send acceptances by Tuesday, the 22nd, or they will not be expected. All members of the South-Eastern Branch are entitled to attend these meetings, and to introduce professional friends.—THOS. F. RAVEN, Honorary District Secretary, Barfield House, Broadstairs.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.—A conjoint meeting will be held at the Grand Hotel, Brighton, on Thursday, March 31st, at 3.30 P.M. Dinner at 5.30. Charge 6s., exclusive of wine. —J. W. BATTERHAM, Honorary Secretary, Bank House, Grand Parade, St. Leonards.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held in Liverpool on April 6th. Members wishing to read papers or make any other communication should write at once to the Secretary. Applications for membership should be addressed to Dr. BARR, Honorary Secretary, 72, Rodney Street, Liverpool.

WEST SOMERSET BRANCH.—The spring meeting will be held at the Railway Hotel, Taunton, on March 25th, at 4.30 P.M. Agenda: To consider Report of Constitution Committee; th Resolution of Annual General Meeting on Inebriates Legislation; and Resolution of Worcestershire and Herefordshire Branch on Venereal Disease in India. Notes of a case of Syphilis, by Dr. Rutherfoord; of a Case of Complete Inversion of Uterus three days after Delivery, by Mr. Routh; of a Case of Head Injury and of a Case of Hysterectomy, by Dr. Pringle. Notice of any other communications should be sent to the Secretary. There will be a dinner at the Railway Hotel at 6.30; price 5s. exclusive of wine.—R. LIDDON MEADE-KING, M.D., Honorary Secretary, Taunton.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting will be held in the Governors' Hall of St. Thomas's Hospital on March 24th, at 3.30 P.M. Cases of clinical interest from the wards of the Hospital will be shown, and demonstrated on by members of the staff.—THEO. B. HYSLOP, District Secretary (*pro tem.*), Bethlem Royal Hospital, S.E.

NORTH WALES BRANCH.—The spring intermediate meeting will be held at the Sportsman Hotel, Carnarvon, on Wednesday, March 30th. Members having papers to read, cases to communicate, specimens to show, or notices of motion to propose are requested to intimate before March 20th. Any medical man desirous of joining the Association and Branch should have his nomination paper (to be had from the Honorary Secretary) duly filled up and returned before March 20th, in order that the names may be inserted on the agenda of the meeting, to W. JONES-MORRIS, Honorary Secretary, Is-y-coed, Portmadoc.

DUNDEE AND DISTRICT BRANCH.—In view of the annual meeting of the Association in Edinburgh and of the meeting of the Forfarshire Medical Association in Dundee, the Branch Council has resolved not to hold a dinner or clinical congress at the annual meeting of the Branch.—R. C. BUIST, Honorary Secretary.

BRITISH GUIANA BRANCH.

THE first quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on February 10th, 1898; Dr. GODFREY, President, in the chair.

The Deaths of Mr. Ernest Hart and Dr. Ramsay Hill.—The PRESIDENT first spoke of the great loss the Association had suffered by the death of Mr. Ernest Hart, saying it was needless for him to dilate on the work he had done for the Association, as it was too well known by all. He also referred to the loss the Branch had sustained by the death of Dr. Ramsay Hill, who, he said, had always taken an active part in the work of the Branch. He then moved that letters of condolence be sent to each of the widows, which, being seconded by Dr. DANIELS, was carried unanimously.

Yellow Fever.—A pamphlet was laid on the table from the Jamaica Branch in *re* yellow fever, for discussion at a future meeting should any of the members consider it necessary.

President's Address.—The PRESIDENT, in his address, said he considered his election one of the highest honours a medical man could wish for. He felt that he was a connecting link between the old practitioners and the junior members of the profession in the colony, having been practising in it for sixteen years. He next referred to the work of the Branch for the past year, and hoped that the members would continue to co-operate with him during his tenure of office, so that he might hand over to his successor a record equal to, and if possibly better than, that which had existed in the past history of the Branch. He appealed to the members to continue their support to the *British Guiana Annual*, not only financially, but by contributing to its pages, urging that it should not be left to a few to do all the work. He then read a paper on the Mortality between the Black and Coolie Races of this Colony, selecting the ages between under 1 year, from 1 to 10 years, and over 10 years, giving most interesting records, showing that in the first period the death-rate was far greater in the blacks than in the coolies; in the second period they were about the same, whereas in the third the coolie death-rate was greater than black. He gave several causes which he considered led to this result, and how he thought it might be mitigated.

Vote of Thanks.—Dr. EDMONDS proposed a vote of thanks to the President for his interesting address, which was seconded by Dr. SHANNON, and carried by acclamation.—Dr. DANIELS proposed, seconded by Dr. FOWLER:

That the address should be published in the local press, being of such interest to the community in general.

Case.—Dr. J. F. S. FOWLER (the Honorary Secretary of the Branch) showed a woman with an Affection of the Breast, giving a short history, but it was only shown to allow members to see the rapid changes that were taking place, as he intended bringing the case up at the next meeting.

Specimens.—Dr. DANIELS exhibited specimens of (1) the Male and Female Parental Filaria of the Blunt-tailed Filarial Embryos found in the Aboriginals. (2) A specimen also from an Aboriginal of what was probably an immature form of a new Bothriocephalus or Ligula, and microphotographs of the same.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

THE sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President: T. G. RODDICK, M.D., Professor of Surgery in McGill University, Montreal.

President-Elect: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by THOMAS RICHARD FRASER, M.D., LL.D., F.R.S.Lond., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by THOMAS ANNANDALE, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir JOHN BATTY TUKE, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. MEDICINE.

President: GEORGE WILLIAM BALFOUR, M.D., LL.D. *Vice-Presidents:* Sir CHRISTOPHER JOHN NIXON, M.D.; JOHN MITCHELL BRUCE, M.D., ALEXANDER JAMES, M.D.; GEORGE ALEX. GIBSON, M.D. *Honorary Secretaries:* J. J. GRAHAM BROWN, M.D., 3, Chester Street, Edinburgh; SAMUEL HERBERT HABERSHON, M.D., 70, Brook Street, Grosvenor Square, W.; GEORGE LOVELL GULLAND, M.D., 6, Alva Street, Edinburgh.

B. SURGERY.

President: JOHN DUNCAN, F.R.C.S., LL.D. *Vice-Presidents:* ALEX. GORDON MILLER, F.R.C.S.; JOHN CHIENE, F.R.C.S; JAMES RUTHERFORD MORISON, F.R.C.S.; JOSEPH MONTAGUE COTTERILL, F.R.C.S. *Honorary Secretaries:* FRANCIS MITCHELL CAIRD, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. BEEMAN HODSDON, F.R.C.S., 52, Melville Street, Edinburgh. THOMAS KENNEDY DALZIEL, F.F.P.S.G., 196, Bath Street, Glasgow.

C. OBSTETRICS AND DISEASES OF WOMEN.

President: ALEX. RUSSELL SIMPSON, M.D. *Vice-Presidents:* CHARLES E. UNDERHILL, M.B.; GEORGE ERNEST HERMAN, M.B.; D. BERRY HART, M.D.; A. H. FREELAND BARBOUR, M.D. *Honorary Secretaries:* R. MILNE MURRAY, M.B., 11, Chester Street, Edinburgh; F. W. N. HAULTAIN, M.D., 17, Rutland Street, Edinburgh; JOHN CAMPBELL, M.D., 21, Great Victoria Street, Belfast.

D. STATE MEDICINE.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

E. PSYCHOLOGY.

President: THOMAS SMITH CLOUSTON, M.D. *Vice-Presidents:* WILLIAM WOTHERSPOON IRELAND, M.D.; H. F. HAYES NEWINGTON, M.R.C.S.; JOSEPH WIGLESWORTH, M.D. *Honorary Secretaries:* JOHN MACPHERSON, M.D., Stirling District Asylum, Larbert, Stirlingshire; GEORGE M. ROBERTSON, M.B., District Asylum, Murthly, Perth.

F. NEUROLOGY.

President: BYROM BRAMWELL, M.D. *Vice-Presidents:* JOSEPH ARDERNE ORMEROD, M.D.; WILLIAM RUSSELL, M.D.; ALEXANDER BRUCE, M.D. *Honorary Secretaries:* ROBERT ALEXANDER FLEMING, M.D., 10, Chester Street, Edinburgh; WILLIAM FORD ROBERTSON, M.D., 12, Bristo Place, Edinburgh.

G. PATHOLOGY.

President: WILLIAM SMITH GREENFIELD, M.D. *Vice-Presidents:* FREDERICK WALKER MOTT, M.D., F.R.S.; JOHN MACFADYEAN, M.B.; ALMROTH EDWARD WRIGHT, M.D. *Honorary Secretaries:* HAROLD JALLAND STILES, M.B., 5, Castle Terrace, Edinburgh; ROBERT MUIR, M.D., 20, Hartington Place, Edinburgh.

H. PHARMACOLOGY AND THERAPEUTICS.

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O. ANATOMY.

President: Sir JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, M.B., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

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PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.
9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

WEDNESDAY, JULY 27TH, 1898.
9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, JULY 28TH, 1898.
9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 29TH, 1898.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine.

SATURDAY, JULY 30TH, 1898.
Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.

JOHN SHAW M'LAREN, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

THE ANNUAL MUSEUM.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 25th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

SPECIAL CORRESPONDENCE.

PARIS.

The Law as to Medical Practice in France.—A Boycotted Professor.—Cheap Baths for Paris.—Red-tapeism in Hospital Administration.—General News.

M. BROUARDEL has chosen Medical Practice as the subject of this year's course of lectures in medical jurisprudence. The opening lecture was delivered before a crowded audience. He proposes to study the law regulating medical practice, and to show the defects of the law of the 19 Ventôse, which created two classes of medical men: doctors of medicine and *officiers de santé*. This law did not sufficiently protect the medical profession, and rendered the repression of illegal medical practice almost impossible by not defining the penalty attending it. In 1892 the law of the 19 Ventôse was modified. But even the new law is not satisfactory. Professor Brouardel declares that it is neither Chevandier's, Brouardel's, nor Cornil's law, and that it was passed in the Senate by a small majority. The lower grade of practitioners has been suppressed, illegal practice of medicine is punished by a fixed penalty and medical syndicates are authorised. Nevertheless Professor Brouardel takes a sombre view of medical practice in the future in the face of the dangerous increase in the number of medical men.

The Natural History lectures at the Paris Medical Faculty have been suspended. The students at the first lecture of the present term, given by Professor Blanchard a few days ago, showed themselves so hostile to the Professor that the Dean of the Faculty was obliged to intervene. Professor Brouardel, who is deservedly popular with the medical students, tried to pacify them, but was unsuccessful. He then warned them that unless they behaved properly the Faculty doors would be closed, and no examinations could take place. This meant a great loss of time for the students, especially for those whose military service was near, on whom it would inflict three years of military service instead of one. Order has not been restored. The Dean, however, has not closed the Faculty doors, but has only suspended the lectures of Professor Blanchard, who is shortly leaving Paris to act as examiner in the provinces. The Dean counts on the influence of time, and believes that Professor Blanchard on his return will have an orderly audience. The reason of the students' disorderly conduct was their disapproval of Professor Blanchard's conduct towards M. Heim, Professeur Agrégé, who has been suspended from his post for two years.

At Bordeaux during the last four years shower baths have been provided for the benefit of the public at the small price of 1½d. The southern city is justly proud of this organisation. Paris shows signs of following the admirable example set it by the Bordelais. A committee of medical men has been formed to establish douche baths for the benefit of the great unwashed at 2d. a bath. The moving spirits in this tardy movement are Professor Brouardel, Dean of the Paris Medical Faculty, who is the chairman of the committee, Dr. Chaslen, secretary, Dr. Dumestril and M. Cheysson. A few days ago the "Comité de l'Œuvre Parisienne des Bains-douches" invited Dr. Cazalet, President of the "Œuvre Bordelaise," to give at the Musée Social a lecture on the organisation and working order of these 1½d. bains-douches. M. Brouardel expressed a wish that all scholastic establishment should be provided with douche baths for the pupils. In France the profession considers that the sanitary arrangements of colleges and lycées are in most instances decidedly primitive. The director answers when asked where the baths are, "Oh, the pupils like myself take a bath once a year, every July." This explains why the inspectors see only one bath, but does not justify the habit of taking only a yearly bath. Dr. Cazalet, the lecturer, told his audience that when the Bordeaux baths were established bath proprietors were anxious and feared dangerous competition, but the results reassured them. Although the "Œuvre" supplied 50,000 baths the other establishments had the pleasure of seeing their customers increase. Jules Simon wittily declared that ordinary baths were not of much account. A coalheaver, he said, plunged into water almost as black as himself, and came out of it nearly as dirty as when he went in; but in a shower bath, after pulling the cord five or six times, he comes out of his bath fresh and rosy. Establishments providing cheap shower baths are already in existence in Rouen and Troyes as well as Bordeaux.

The following is an instance of red-tapeism in hospital administration, which it is to be hoped is not common. A working man with confluent small-pox, sent to a hospital near his commune, was refused admittance because there was not an isolation ward; he was therefore sent to Charix, his birthplace. As he was unmarried and without family, the Mayor of Charix telegraphed that he was to be sent to the Bourg Hospital. The journey was taken, the patient travelling in an ordinary railway carriage. When the station was reached, no one could be found to drive the man. Finally, a tender-hearted commissionaire consented to trundle him in his barrow. When the hospital was reached, the papers were not *en régle*. Admission was refused. After trundling to the Mairie and then to the Prefecture, the patient was admitted as an urgent case. Death occurred the next morning.

The Seine Medical Syndicate has offered a banquet to Dr. Laporte to celebrate his complete acquittal. It will take place on March 21st.

THE American Neurological Association will hold its sixth annual meeting in New York on May 26th, 27th, and 28th.

BERLIN.

The Regulations of the Milk Supply.—University Teachers and their Salaries.—The German Fleet and the possible Importation of Leprosy.

An example of the conscientious and methodical manner in which legislative reforms are prepared in Germany was last week's "milk meeting"—a conference of experts convened by the Prussian Government for the discussion of new sanitary regulations to be enforced in the milk trade. The measure was a wise one, and should go far to prevent unpractical and incomplete legislation. All sorts and conditions of men had been bidden to the Conference—Government medical officials of high standing, delegates from the Ministries of Agriculture, of Trade, and of the Interior, delegates from the medical department of the Berlin police, official veterinary surgeons, large cattle breeders and estate owners, the chief physician of a well-known children's hospital (Professor Baginski), and, finally, several of the principal milk dealers and dairymen. Four groups of questions (34 questions in all) were submitted to the experts for discussion. The first group treated of the regulations at present in force and the necessity for altering them; the second group of the proposed new regulations with regard to the material for milk vessels, the treatment of milk vessels, and on the precautions to be observed by persons engaged in the sale of milk; the third group comprised proposals for new regulations regarding the care of cows, the condition of stables, feeding, and the police supervision of cattle; and the fourth group proposals for new regulations on the methods of milk examination, and for stricter supervision and examination in general. All these questions were fully discussed in the course of a debate that lasted two days. As might have been expected, the requirements of modern medical and hygienic science were declared too far-reaching, and in some cases unpractical, by the commercial representatives, but in the end an understanding on the chief points was arrived at, and as the debates were taken down in shorthand, they now form valuable material that can be studied at leisure by legislators.

In the course of this week's debate on the Budget in the Prussian Diet Professor Virchow took occasion to speak of the proposed detachment of the Department of Public Medicine from the "Cultusministerium," which he warmly advocated. To prove how inadvisable it is to give one person too much to decide, he mentioned that ten years ago he begged the Cultusminister (then Herr v. Gossler) to utilise Pasteur's hydrophobia treatment for Germany. The Minister coolly replied that he saw no necessity for doing so. Now, added Virchow, after ten years our present Minister is beginning to follow the example of other States. In the course of his speech Virchow pleaded for higher salaries for the medical officials. He spoke of the unsalaried "extraordinary" professorships and underpaid professorial assistants, and ended by exhorting the Minister to take steps that the colleagues of whom he had thus spoken might not be obliged to starve. In reply, the Ministerial representative, Dr. Althoff, declined to consider the medical professors and assistants as worthy objects of pity. Speaking of the Berlin University, he said that twenty-one "extraordinary" professorships were held there. Of these extraordinary professors, fifteen or sixteen had a lucrative practice, so that most of them would decline to change places with a Prussian Minister. As regards the assistants, he said that their posts must be regarded as preparatory positions necessary to fit the holder for a future professorship, and that the remuneration they received was more honorary in character than a salary. At a later period of the debate a Liberal member remarked that though Geheimrath Althoff's figures might be correct for the Berlin University, yet they did not apply to the universities in small towns, where the circumstances were such as Professor Virchow had described.

A curious side issue of the German occupation of Kiaou-Chaou was a question put to the Imperial Government by a private member of the Reichstag asking what steps had been taken to prevent the importation of leprosy from China. Herr Tirpitz, the Minister of Marine, who evidently did not quite know what to make of the interpellation, replied that as yet he knew no reason for taking any steps whatever. Herr v. Thielmann, another member of the Government, added that he had seen a good deal of leprosy in Persia, but had never heard that the infection had been carried to Europeans. This gave rise to a short discussion on the subject of leprosy infection, which was clinched by the argument that the well-known cleanliness of the German sailors and their constant medical supervision would be adequate preservatives.

MONTREAL.

Sir Squire Bancroft's Readings.—The Victorian Order of Nurses: its Present Constitution.—The College of Physicians and Surgeons of Quebec.—Canadian Visitors to the Edinburgh Meeting.—The Montreal Medical Chirurgical Society: Epidemic Cerebro-spinal Meningitis: Formaldehyde.

Sir Squire Bancroft during his visit to Canada, drew crowded audiences in the larger cities to his readings on behalf of medical charities. Sir Squire came at the solicitation of the Lord High Commissioner, and his disinterested kindness in this matter cannot be sufficiently appreciated, for the whole of the proceeds of his admirable readings are devoted to charity, he paying all his own expenses.

His visit has had not a little influence in placing the Victorian Order of Nurses (to which a large portion of the proceeds are devoted) on a substantial basis. This Jubilee scheme for supplying district nurses at its development met with a far from enthusiastic response, not because of any lack of loyalty or of enthusiasm for a good cause on the part of the Canadian people, but because very sensibly the bulk of those who are charitably disposed desired to feel assured that their contributions would be economically and wisely employed. The promoters of the scheme presented at the very outset an elaborate organisation, which was to be accepted without due deliberation, and they asked for 1,000,000 dollars to be contributed at the start. There was to be an imposing central organisation, controlling everything, which would of necessity, it was urged, use so large a portion of the income that very little would be left to be employed in the actual payment of nurses. Add to this that the feature brought most prominently forward was the sending out of nurses, not to the poorer quarters of large cities, but into the scattered country districts in the North West. Naturally those charitably disposed were unwilling to give freely towards an object which they could not control.

Now all this is changed, and in Montreal, Quebec, Toronto, and the larger cities local branches of the Order are to direct the local work and to control the main portion of the funds collected. A modest, rather than a pretentious, start is to be made in each city. A few nurses will be appointed and given a home in some central locality, and as the good work done by them in visiting the sick poor at their own homes is realised, there is little doubt that the work will steadily and surely gain in popularity and in the support of the citizens. These larger centres, it is hoped, will be the training grounds for the nurses who will be sent out to the country districts as they are required.

There is proceeding at the present time an active agitation against the present constitution of the College of Physicians and Surgeons of Quebec, the controlling and licensing authority of the province. Under the present constitution the College consists of representatives elected by vote, and that vote may be given by proxy, so that it has been possible to collect blank proxies, simply signed with the name of the member, and by the filling of these blank proxies, to control the elections. To prevent any such possibility in the future, it is now proposed that the Province be divided into electoral districts, each district electing its own member, instead of the whole profession voting upon one common "ticket." It is to be hoped that the agitation will be successful, for it is not to the credit of the profession that there should be any grounds for distrust concerning the position of its governing body.

Judging from news received from Toronto and other portions of the Dominion as well as from information gained here in Montreal, a large contingent of Canadian members of the profession will return last year's compliment and be present at the meeting in Edinburgh this summer.

Of recent contributions to the Montreal Medico-Chirurgical

Society perhaps the most noticeable have been the exhibition of a case of mycosis fungoides upon the face and arm, showing evidences of recovery, presented by Dr. F. J. Shepherd; a very full study, clinical and bacteriological, of a case of epidemic cerebro-spinal meningitis by Drs. James Stewart and C. F. Martin, and a paper detailing experimental observations upon the use of relatively strong solutions of formaldehyde in abdominal surgery by Dr. Clarence Webster.

During the last few years there have been small epidemics of cerebro-spinal meningitis in several districts in the United States, while during the last ten years there have been also sporadic cases in Canada. The infection in the case above reported originated in Boston where Professor Councilman has made an admirable study of more than 100 cases of the disease. In the Montreal case, as in his, the meningococcus of Weichselbaum was isolated. According to the latest news the disease has also appeared on the east coast at Skagway.

In connection with the study of formaldehyde, Dr. Webster points out that formaldehyde can be tolerated in the peritoneum in solutions as strong as 1 part in 200, and even much weaker solutions have a most beneficial effect upon the course of peritoneal infections.

BIRMINGHAM.

The Lying-in Charity.—Proposed Maternity Hospital.—Objections to the Scheme.—Working-class Dwellings.

THE annual meeting of the Birmingham Lying-in Charity was held last week. The report showed a falling off in the number of cases attended at their homes during the year.

A proposal was made at the meeting for the establishment of a lying-in hospital for the city in addition to the out-patient work at present done by the charity; and it was argued that such an institution was needed in order to afford better methods of instruction in midwifery to medical students and midwives than at present exists.

The scheme, if launched, will probably meet with some considerable opposition. There already exists at the Queen's Hospital a midwifery department in connection with the Birmingham Medical School; and experience tends to show that such special departments at one of the larger hospitals—such as the General Hospital or the Queen's Hospital—are of far greater value for purposes of clinical instruction than the multiplication of new special hospitals.

The Birmingham Corporation have had under consideration the question of providing dwelling accommodation in connection with an improvement scheme, and a deputation recently visited Liverpool with a view to making inspection of the buildings erected in that city. The *Birmingham Mail* has been dealing in a series of articles with the experience gained in several cities concerning dwellings constructed on the "flat" system. In a recent issue it brought to the notice of its readers the replies made to certain queries submitted to Dr. J. B. Russell, the medical officer of health of Glasgow. Dr. Russell observes that the flat system is not naturally conducive to the health and cleanliness of a city, but that by studying its weaknesses they may be overcome. After remarking that "it may be taken as an axiom of sanitary administration that wherever any portion of the structure of a dwelling house ceases to be private, and becomes public in the sense of being used by more than one family, and increasingly in proportion to the number of families so using it, the intervention of public authority becomes necessary by way of interference with dimensions and proportions in the original structure and by-laws as to its use, so as to prevent a nuisance." Dr. Russell discusses in illustration of this axiom the particular case of the watercloset, and he then proceeds to point out that, on the other hand, "the unit self-contained house intended to meet the most restricted necessities of the poorer classes must necessarily be smaller and more straitened in dimensions to begin with." He adds that Scotch officials are always astonished "at the limited dimensions of your artisan's houses, even in flats," and he says "they would not be looked at here by our working people, and I suspect the reason is to be sought in the attempt to get a cheap house out of the self-contained system." Dr. Russell further sends a summary of an address given by Mr. Macwhennell, a Glasgow architect, containing some interesting criticisms of certain plans of building. Mr. Macwhennell is reported to have said that "the comfort and health of the tenants could only be secured by seeing that light and air penetrated every corner of the house. Dark recesses meant dirt, and it might safely be assumed that where light did not penetrate air did not circulate. There must be no stagnation of air. Every house should be so planned as to facilitate a change of air." Again he referred to the relative merits of the internal staircase and the balcony, and favoured the internal staircase plan because "the balcony, projecting as it did four feet from the building, interfered with the light," though this was not noticeable if the windows faced the north. Further, it was stated that "Every house, not including the single-apartment house, should have its own watercloset"; and among other questions of detail referred to may be noted the suggestion that the windows should be well glazed, inasmuch as the amount of light was considerably modified by the quality of the glass. The *Birmingham Mail* has been successful in securing some important expressions of opinion upon the questions now before the corporation of the city, and its articles on the "flat system" are well worthy of careful attention.

CORRESPONDENCE.

THE VACCINATION BILL.

SIR,—I deem it my duty to ask the attention of the profession to the fact that one of the recommendations of the Commission is wholly ignored in Mr. Chaplin's Bill. The Commission, with, I believe, general concurrence, advised that State-payment for successful vaccination should no longer be exclusively made to State-appointed officers, but that all registered members of the profession should be entitled to claim fees for their cases. The condition was, of course, annexed that those claiming such fees should vaccinate according to the requirements of the Board, and should, if asked, submit their results to inspection. Fees were to be payable alike for second vaccinations as for primary ones.

Four very important results were hoped for by those who advocated this change:

1. That it would diminish the number of those who escape vaccination, since it would become the interest of private practitioners, especially amongst the poor, to look up their patients.

2. That the reluctance of mothers would be diminished if the vaccination were to be performed by the family surgeon and not by a stranger.

3. That the quality of private vaccination would be improved, or at any rate would become more uniform as regards the number of insertions, etc.

4. And this is the most important—that it would vastly increase the number of second vaccinations.

Now the Bill provides nothing whatever as regards these, and we may expect that things will go on as hitherto, and that practically, amongst the poor, there will be no revaccination excepting in face of an epidemic. If, however, fees were payable, there would be many members of the profession who would do their best to secure the revaccination of those within their influence. The plan recommended would not conflict with the present arrangements, though it might possibly in the future to a large extent supersede them.

That it would encounter some official opposition is only to be expected, and it is the more necessary therefore that the profession should form its own opinion and make it known. It would doubtless much increase the cost to the State, but then the State would get what it wanted, and ought not to grudge the money. That it would lead to inefficient vaccination I wholly deny. All medical men are competent to vaccinate, and at the present time the richer classes, who pay fees, are vaccinated by private practitioners.

Believing that the plan to which I allude would, more than any other, conduce to the end which we all have in view—the more complete protection of the community from the dangers of small-pox—I venture to ask the serious attention of the profession to it.—I am, etc.,

Cavendish Square, W., March 16th. JONATHAN HUTCHINSON.

EFFICIENT VACCINATION.

Sir,—Statistical antivaccinators are very largely helped in their crusade by the fact that children inefficiently vaccinated by one or two marks are classified as "vaccinated." As has been pointed out, a public vaccinator is bound to vaccinate so as to obtain a certain minimum number of marks with a specified total area. This work is liable to inspection by the officials of the Local Government Board, and pecuniary loss follows if he is found not to have carried out the instructions he receives. The certificate signed by a public vaccinator may therefore be taken as showing that the child to whom it refers is as efficiently protected against small-pox as can be.

But there are no regulations, no inspections affecting the vaccination done by a private practitioner. There are in every town scores of children who only show one mark and who, when an epidemic of small-pox breaks out, are in peril.

I suggest that if we have any new legislation on the subject of vaccination it should be made compulsory on every vaccinator to state in his certificate the number of marks shown by the child. The vaccination officer should also have a column in his register in which he should enter that information for future reference.

In this town there are probably 5,000 unvaccinated children and in addition a large number inefficiently vaccinated.—I am, etc.,

March 12th. R. Taylor Manson,
Public Vaccinator Darlington District, Darlington Union.

MIDWIVES REGISTRATION BILL.

Sir,—Mr. F. R. Humphreys's explanations for the inadequacy of this Bill which he addresses to you are really astounding. He states: "*The Midwives Bill will not prevent unregistered women from practising* for the same reasons as were given in respect of the Plumbers Registration Bill, 1897," and he quotes the words of Sir Walter Foster, M.P., who said, "they were bound to recognise the members of the trade or profession it was proposed to register who were *practising at the time the Bill was passed*," and the members of the House are reported to have replied, "hear, hear." To such a statement applied to the Midwives Bill no one, so far as is reported, has raised the slightest objection: indeed, it is provided for in the Bill under discussion by Section IV, "Provisions for Existing Midwives," that a midwife who has *already* been in practice for two years may be registered without an examination, etc., but this is entirely a different point to the one under discussion, and he is evading the issue.

Mr. Humphreys, who is evidently suffering from that "dreadful malady, long-suffering self-effacement of the profession" from which, happily, the profession as a body are fast recovering themselves, would apparently be no party to a Bill that would absolutely weed out the future practice of incompetent women, because he seemingly vaguely imagines that by simply saying to the public that certain registered medical women are provided, just as there have been registered men provided even by the State free of cost, that this great sacrifice of life would cease.

Again, Mr. Humphreys says, in discussing the question of the title of "Licentiate in Midwifery" being a recognised medical title the "Bill in no way interferes with" it, "and, on the other hand, the regulations made under it subject to the approval of the General Medical Council will be directed to prevent any registered midwife from either practising as a medical practitioner or *assuming medical titles*." Mr. Humphreys will perhaps understand now that what an Act of Parliament gives cannot be abrogated by rules and regulations without raising the dangerous doctrine of *ultra vires:* but apart from this doctrine, while it will be observed that Sec. v of the Bill provides that the Midwives Board shall have power *(inter alia)* "*f.* To frame for approval of the General Medical Council rules for regulating, supervising, and restricting within due limits the *practice* of midwives," where in the Bill is the power reserved to the Midwives Board "*to prevent any registered midwife from assuming medical titles*" of which he speaks?

Has Mr. Humphreys ever, I wonder, heard of the expression of driving a coach and four through an Act of Parliament? If not, I would refer him to the words of that profound thinker, Herbert Spencer, who, in denouncing immature, ill-considered, and ill-devised legislation, says in effect, if not in actual words, that no prophecy is more safe than that the results anticipated by such legislation will be vastly exceeded in amount by the results never anticipated.

If Mr. Humphreys will provide a list of results he anticipates from such an invertebrate measure I will venture to provide him with a list of results which he possibly never anticipates.—I am, etc.,

Leeds, March 14th. J. H. Wigham.

Erratum.—In Mr. J. H. Wigham's letter on the Registration of Midwives published last week, p. 724, in line 15 from the bottom on p. 725 of the first column, the word "should" should be "does," the sentence reading, "for which, by the way, the Bill does provide."

Sir,—In answer to Mr. Humphreys I may say, like many other practitioners, I am sincerely desirous of seeing a settlement of the midwives question; at the same time I cannot congratulate the promoters of the Bill on the provisions it contains. Unless we have an Act which will really prevent ignorant women from practising as midwives we shall be no nearer a settlement of the question. If Mr. Humphreys had had as much experience of the working of the Medical Acts as I have had, he would at once see the absolute necessity of preventing unregistered women from acting in the capacity of midwives.

I make bold to assert that our legislators will give their assent to a Bill if it can be proved to their satisfaction: First, that it is necessary; secondly, that it will prove a boon to the poor women of this country; and, thirdly, that it will not act in a harsh or illegitimate way with any particular class of Her Majesty's subjects. If, as Mr. Humphreys asserts, the assumption of the title of licentiate of midwifery by a midwife registered under this Act would render her liable to have her name removed from the *Register*, why did he not recommend his Committee to have a clause inserted in the Bill to this effect?

I object to the constitution of the Midwives Board because I feel that this is a question affecting the general practitioners of the country, and therefore to place the constitution of the Board mainly in the hands of consulting physicians and surgeons, who have really no practical experience of the question at issue, is, to my mind, unreasonable. I have no hesitation whatever in asserting that it would not be difficult to find general practitioners who would be prepared to deal justly and fairly with the whole question.—I am, etc.,

Cardiff, March 14th. T. Garrett Horder.

Sir,—A Subcommittee of the Plymouth Medical Society has been formed to consider the Midwives Bill, with the object of bringing the objections to the Bill now before the House of Commons under the notice of the M.P.'s for this neighbourhood. I would suggest that other medical societies, Branches of the Association, might do likewise.—I am, etc.,

Geo. Jackson, F.R.C.S.Eng.,
Plymouth, March 15th. Chairman of the Committee.

Sir,—I am given to understand that a clear statement of the views of the promoters of the Midwives Bill, in respect to the assumption of medical titles by registered midwives, would be acceptable.

I have not had the opportunity of laying the matter before my Committee, but I am certain that I should be acting in accordance with its views in stating that, when the matter is before the House, no objection would be raised to the insertion of a specific clause to the effect that a midwife, registered under the Bill, must not assume any medical title such as, for example, L.M.

One other point has been raised, namely, with reference to the right of entry into, and supervision over, houses belonging to midwives and utilised for the reception of pregnant women. I am strongly of opinion that the insertion of a clause to this effect would be considered to involve grave interference with the rights of the subject, and, as such, would be in danger of wrecking the Bill. It is surely a question for the Police, not for a clause in a Midwives Bill.—I am, etc.,

Rowland Humphreys.
Honorary Secretary, Midwives Bill Committee.
Buckingham Street, W.C., March 15th.

THE LOCAL GOVERNMENT (IRELAND) BILL.

SIR,—All interested in the progress of sanitary work will, I venture to assert, view with regret the proposed provisions with regard to this subject laid down in the Bill lately introduced into the House of Commons by Her Majesty's Ministers.

So far from any fresh means being proposed to further safeguard the public health, the Government seem to have actually receded from the position a former Conservative Cabinet adopted when passing the original Local Government Act for England. It will be remembered that under this Act power was given to the county councils to appoint a medical officer of health for the whole of their respective districts. This was undoubtedly a step in the right direction, and only erred inasmuch as the appointments were not made compulsory. It seems inconceivable that such powers are not, by the Bill, to be vested in the Irish county councils, and that the Government are apparently willing to leave the whole sanitary administration of the country in the hands of the district councils, which will in the main be formed out of the present elected guardians.

The point is one which may well engage the attention of the Parliamentary Bills Committee with a view of trying to have the Bill altered when it comes up for discussion in the House, and I think they would be doing a public service should they be able to have a clause inserted making it compulsory on the new county councils to appoint a medical officer of health for each entire county.—I am, etc.,

March 12th. M.O.H.

RECONSTRUCTION OF THE GLASGOW ROYAL INFIRMARY.

SIR,—The BRITISH MEDICAL JOURNAL of March 12th contains a paragraph having reference to the project for rebuilding the Glasgow Royal Infirmary, the last sentence of which stands as follows: "It is not expected that it will be considered necessary to make any alterations in the present north surgical house, which is the most modern part of the infirmary." At a meeting of the medical and surgical staff of the infirmary, held more than a fortnight ago, it was unanimously resolved:

That whatever plan be adopted for the rebuilding of the infirmary it is of the utmost importance that the north surgical house should be pulled down and rebuilt further north, to allow of sufficient space being left etween the blocks.

Further, we do not believe that it will be possible to carry out the work for anything like the £100,000 mentioned in your pages.—I am, etc.,

Glasgow, Mar. 15th. HENRY E. CLARK. Senior Surgeon.

THE ADMINISTRATION OF ANÆSTHETICS BY DENTISTS.

SIR,—The reply, printed in the BRITISH MEDICAL JOURNAL of March 5th, to a correspondent who inquires "if a dentist has the right to administer gas to a patient without the presence of a qualified medical man," once more emphasises one of the anomalies of the law relating to medical and dental practice.

Permit me to make three remarks in connection with this question.

First, the administration of gas by qualified dentists is of very common occurrence. Many of these during their hospital curricula have had opportunities of becoming practically familiar with all the phenomena of N_2O narcosis. But the possession of this knowledge does not allow the use of it, or the moral responsibilities attaching thereto. I regret to add—and I speak from personal knowledge—that many unqualified men, people who have never been inside a hospital or dental school, do not scruple to take the lives of patients into their own hands, and "give gas" every day. The law has no power to prevent them.

Again, I hold strongly the view that the qualified dental surgeon, whoever he may be, should in these cases perform only the necessary dental operation, and should leave the administration of gas to a skilled anæsthetist. The two different operations are too serious for one man to look after properly.

And, lastly, a great many of the irregularities of dental practice would be swept away if all medical men throughout the kingdom would absolutely refuse to administer gas for unregistered men.—I am, etc.,

A. HOPEWELL SMITH, L.R.C.P.Lond., M.R.C.S. and L.D.S.Eng.

Berkeley Square, W., March 14th.

ON LIGATURE IN THE TREATMENT OF ANEURYSM.

SIR,—Some remarks by Mr. Heath on the Distal Ligature in the Treatment of Aneurysm in the BRITISH MEDICAL JOURNAL of February 19th are so worded as to give erroneous ideas on the history of that operation. He refers to a case (1865) in which he tied the right carotid and subclavian for, as diagnosed, an innominate aneurysm. When two years afterwards the sac ruptured and the woman died, the tumour was found to be aortic. One of his comments in 1867 on this case was, "when the disease involves the ascending portion of the arch I believe the only hope of success would be in tying both the right carotid and subclavian." A little further he adds, "in 1879 Mr. Barwell had the opportunity of following my suggestion," a phrase which wrongly represents my course of procedure and suppresses my work and investigations on this subject. They are in this wise:

At the latter end of 1876 and onward my attention had been strongly directed to certain circulatory disturbances occurring after deligation of a right and of a left carotid as well as to some independent of such operation. In trying to account for these phenomena I connected them in my mind with the behaviour of concreta washed from the aortic valves, which nearly always find their way into the left carotid, a fact which had always been accounted for by assuming that that vessel lay more nearly than the right in a line with the axis of the left ventricle, which assumption I disproved. Likewise I investigated the manner in which the three great vessels are given off from the aorta and the conformation of its inner surface, showing at the same time that there is within the lumen of that vessel an area in which the blood current is slower and quieter than elsewhere.

All these observations are published in the *Medico-Chirurgical Transactions*, vols. lxi and lxii. It is upon them that I based my practice and not, as Mr. Heath's words would imply, upon his speculation.—I am, etc.,

Wimpole Street, W., March 15th. R. BARWELL.

THE MEDICAL PROFESSION AND ADVERTISING.

SIR,—I have read with much interest the article upon "The Medical Profession and Advertising" in the BRITISH MEDICAL JOURNAL of March 5th. I should like to call attention to two forms of advertising which are not mentioned:

(1) The sending medical books to the lay press for review. Amongst the "books received" it is common to notice the titles of medical books with the names and degrees of the authors. This may be the fault of the publisher, but I take it the writers could easily put an end to the practice if they wished to do so.

(2) Publishing professional or semiprofessional articles in the lay press, especially in the monthly reviews, with the name and professional titles of the author. These two forms of advertisement, especially the latter, seem to present special temptations to the higher ranks of the profession.

I do not see how bulletins can be looked upon as forms of advertisement. They are practically never issued except at the request of the patient's friends.

It has always seemed to me most unfair to suggest because a medical man takes a more or less active part in public life that it is done for the purpose of advertisement. We have to pay rates and taxes, and surely we have an equal right with other citizens to take a part in the administration of public affairs and the spending of public money. In local matters it is obvious that medical men can be of great service to the community. I wish more of them would realise their duties and responsibilities in this matter. The professional classes have been far too long without proper representation upon municipal bodies.—I am, etc.,

Welbeck Street, W., March 8th. ERNEST SNAPE.

INFLUENZA is said to be extremely prevalent in Chicago at the present time. In a statement recently published by the Health Department it was announced that 40,000 persons in the city were then suffering from the disease.

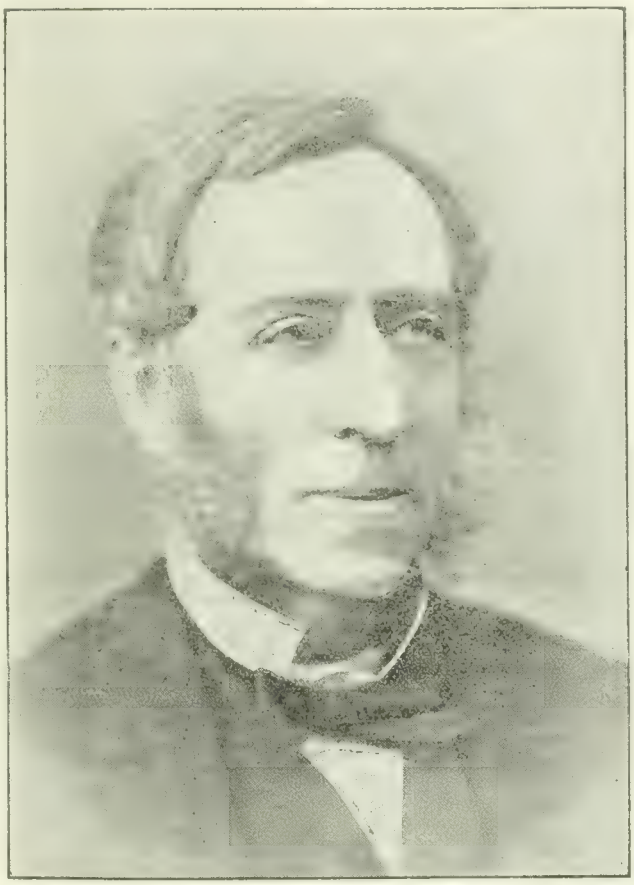
Obituary.

SIR RICHARD QUAIN, BART., M.D., F.R.C.P., F.R.S.,

President of the General Medical Council.

SIR RICHARD QUAIN died at his house in London on Sunday, March 13th, 1898. Though in his 82nd year, he retained all his faculties to the last, and abated nothing of his wonted activity until physically incapacitated by the fatal illness with which he was attacked over a year ago.

Richard Quain was born at Mallow, co. Cork, on the banks of the famous Blackwater River, on October 30th, 1816. He was the eldest of a family of eight children, and received his early education at the Diocesan School at Cloyne. In 1831, at the age of 15, he was apprenticed for five years to Dr. Fraser, a surgeon-apothecary in Limerick, and at once had a serious experience of the profession which he was about to enter during an epidemic of cholera which occurred in the city at that time. He was a youth of great quickness and brightness of intelligence and full of ambition, so that it is not surprising to find that, at the age of 20, he made his way to London, and in January, 1837, entered the medical faculty of University College. In 1840 he took the degree of M.B. in the University of London, gaining the scholarship and gold medal in physiology and comparative anatomy, and honours in surgery and obstetric medicine. Among his competitors on this occasion was the late Sir John Charles Bucknill. After holding the office of House-Surgeon, he was appointed House-Physician to University College Hospital, a post which he held for five years; meanwhile, in 1842, he took the degree of M.D. in the University of London, and obtained the gold medal for special proficiency, the late Professor W. A. Miller, of King's College, London, being the second on the list. He became a Member of the Royal College of Physicians in 1846. In his early days of practice in London he received much help and encouragement from Dr. C. J. B. Williams, Professor of Medicine in University College, and at one time a joint work on diseases of the chest was in contemplation by these two friends, and was actually announced by the publishers. The calls of private practice, however, interfered with the literary labours of both physicians, and the book never saw the light.



Success in practice, in fact, came very early to Richard Quain, and for many years he was one of the leading consulting physicians of London, his clients being found not only among people of fashion, but also among politicians, artists, and men of literature. He attended both Thomas Carlyle and his brilliant wife, and was the personal friend as well as the medical adviser of Sir Edwin Landseer, as well as of his brother Thomas, the engraver. Many fine engravings after Edwin Landseer, the gift of one or other brother, adorned Sir Richard Quain's house in Harley Street, which also contained some fine examples of Maclise, a most intimate friend and patient, as well as his fellow-countryman. Quain was a well-known member both of the Athenæum and the Garrick Clubs, where his geniality, his wide and exceptional acquaintance with men and manners, and his excellent stories, admirably recounted in a rich Irish accent, made him very popular.

He was one of the original members of the Pathological Society of London, contributed to its first volume, acted as Secretary (1852), was President in 1869, and lived to attend the Jubilee meeting of the Society on October 20th, 1896, when in a speech full of humorous reminiscences he moved the vote of thanks to Mr. Butlin for his address as President. He was a Fellow and Vice-President of the Royal Medical and Chirurgical Society and of the Medical Society of London, has served the office of President of the Harveian Society, and was a Fellow of the Statistical Society. In 1871 he was elected a Fellow of the Royal Society, and so recently as last year contributed to it a paper on The Mechanism by which the First Sound of the Heart is Produced. He was a member of the Royal Commission appointed in 1865 under the presidency of Earl Spencer, to report upon the Cattle Plague, and took an active part in its proceedings, and in the preparation of the report which that Commission presented.

His chief literary achievement was the editing of the great *Dictionary of Medicine*, which, after many years of preparation, first saw the light in 1882. In its production he was fortunate and skilful enough to secure the co-operation of most of the leading authorities upon the various subjects comprised within the domain of medicine. The book met the needs of the profession, and at once obtained a position of authority, which was well maintained in the second edition, which he edited in 1894 with the assistance of Dr. Frederick Roberts and Dr. Mitchell Bruce. The circulation of the first edition was enormous considering the size and cost of the book, and probably no more successful medical work has been published in this country within the memory of the present generation. Sir Richard Quain himself contributed several articles to the *Dictionary*, among the most important of which were those on Angina Pectoris, Diseases of the Bronchial Glands, and Fatty Degeneration of the Heart.

In 1848 Richard Quain had received his first independent appointment, that of Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, which had been opened two years previously. In 1855 he became Physician, and in 1875, on his retirement from the active staff after twenty-seven years' service, he was elected Consulting Physician. He was also Consulting Physician to the Seamen's Hospital, and to the Royal Hospital for Consumption, Ventnor.

He was elected Fellow of the Royal College of Physicians in 1857, and in 1862 became a member of the Council of that College, an office which he held altogether at various dates for seven years. In 1867-68 he was Censor, and in 1877 Senior Censor. In 1872 he was Lumleian Lecturer, and devoted the course to the diseases of the muscular walls of the heart, a subject to which he had long given much attention, and

which had been the topic of an important communication to the Royal Medical and Chirurgical Society in 1850. In 1885 he delivered the Harveian Oration, which was published in the BRITISH MEDICAL JOURNAL at the time, and afterwards reprinted in a small volume.

On the retirement of Sir William Jenner from the office of President of the Royal College of Physicians in March, 1888, his name was mentioned in connection with that office, but at the election upon the second ballot the choice of the Fellows fell upon Sir Andrew Clark by a majority of eight votes in a very large meeting. In 1890 he was appointed a Vice-President of the College, in which for so many years he had taken so keen an interest.

Throughout the greater part of his long life Sir Richard Quain took a large part in the public work of the profession. In 1860 he was nominated by the Crown to be a member of the Senate of the University of London, and ever afterwards took a deep interest in the work of the University. For many years he was Chairman of the Committee of the Senate, under the direction of which the "Brown" Animal Sanatory Institution is conducted.

In 1863 he was nominated by the Crown to be a member of the General Medical Council, and was shortly afterwards appointed member of the Pharmacopœia Committee. He acted as its secretary during the first revision, which resulted in the publication of the second edition of the *British Pharmacopœia* in 1867, when it took the form with which we have ever since been familiar. He subsequently became Chairman of that Committee, and was a moving spirit in the production of the editions which were issued in 1874, and in the revised edition published in 1885, as well as in the preparation of the Appendix, which was published in 1890. He was Chairman of the Pharmacopœia Committee during the revision which has just been brought to a conclusion, and one of his last official acts was formally to hand over to the Executive Committee of the Council on February 19th the completed proofs of the new edition of the *British Pharmacopœia*.

In 1891, on the death of Mr. John Marshall, Sir Richard Quain was elected President of the Council. Since this election it may almost be said that the chief work of his life was the business of the Council, to which he devoted a great deal of time and energy, directed by the experience gained during his exceptionally long period of office as a member of the Council. Though in failing health, he was able to preside at the summer session of 1897, but at the November session he was not strong enough to be present, and the chair was occupied by Sir William Turner. Sir Richard Quain, however, continued to take the deepest interest in the work of the Council, and even on his death bed had frequent interviews with the officials of the Council on matters of business.

In 1891 he was created a Baronet in recognition of his long and meritorious public services, and in 1890 he was appointed Physician Extraordinary to the Queen.

In 1887 he received from the Royal University of Ireland the honorary degree of M.D., in 1889 from the University of Edinburgh the honorary degree of LL.D., in 1890 from the University of Dublin the honorary degree of M.D., and in 1887 he was elected an honorary Fellow of the Royal College of Physicians of Ireland.

In 1854 he married Isabella Agnes, the only daughter of the late Captain George Wray, Bengal Army, of Cleasby, Yorkshire. Lady Quain died in October, 1891, leaving four daughters who survive their father. Sir Richard Quain belonged to a family of which several members gained distinction, for among his first cousins were Mr. Richard Quain, formerly President of the Royal College of Surgeons; Dr. Jones Quain, Professor of Anatomy at University College, London; and Mr. Justice J. R. Quain.

During his long illness, which he faced with so much cheerful courage, Sir Richard Quain had the advantage of the surgical advice of his old friend, Sir Henry Thompson, and of Mr. Herring, who performed two operations. At a later period, when a fresh complication arose, Mr. Treves undertook an operation which gave great relief. Mr. Herring continued in attendance to the end, and for many months Dr. John Harold watched by Sir Richard Quain's bedside with almost filial solicitude, while Dr. Mitchell Bruce was frequently in consultation.

We are indebted to Dr. C. J. Hare, who, though a junior to Sir Richard Quain at University College, was an intimate friend during the early as well as the later stages of his career, for the following notes:

Many men change much in manner, and habits, and character as they advance in age; but Quain was in after-years, and indeed up to the time of his last illness, intensely the Quain of his student days; not marvellously brilliant, not conspicuously energetic, but endowed with excellent common sense, good reasoning powers, ready perception combined with a clear insight into things, and steady industry. If not overflowing in *bonhomie* he was genial and good-natured to all, and he was thus a great favourite amongst the students; while his ready powers of conversation, tinged with some dry wit, and a large fund of stories and anecdotes, made his company always agreeable.

In 1837-38 he gained at University College the gold medal in Pathological Anatomy, and a silver medal in Anatomy and Physiology; while in 1839-40 he got the gold medal in Comparative Anatomy; and this was at a time when University College was infinitely the largest medical school in London, and when, therefore, the competition for prizes amongst its students was most difficult. He gained also distinctions at the University of London. In after-life he had his various medals inserted into the sides of a handsome silver centre-piece designed for the purpose; and this, together with two large silver salvers which had been presented to him (one of them for his long Secretaryship to the Pathological Society in its earliest years), he presented as memorials of his affection to the Royal College of Physicians of London.

Almost from the first commencement of the Medical Faculty at University College there was, as there still is, a flourishing medical society, of which the honorary staff for the time being and many of the students have been or are members; but a few—very few—of the members have been, from time to time, elected into the rank of honorary members, and amongst these was Sir Richard Quain; and he had long been the senior of the ten or twelve who had received this distinction at the hands of their fellow students, for he was elected to the honour so far back, I believe, as 1842.

In 1853 Sir Richard was elected President of the Harveian Society, and only two who occupied the presidential chair prior to his doing so still survive. At the time of his death he was also one of the twelve honorary members of this Society.

I believe his keenest disappointment was his not obtaining the Presidentship of the Royal College of Physicians on the occasion when Sir Andrew Clark was elected. No doubt the crucial reason with many of the Fellows in not giving him their support was that he already held what was practically and legally a higher position. But Sir Richard, I know, considered the Presidentship of the College to be the "blue ribbon" of the profession; and certainly no one had deserved better of the College than he. For years he had been a constant attendant at its meetings, and he suggested or materially assisted in carrying out many of the changes in its constitution which have tended to raise it to its present high position. After defeat, however, nothing could have been more gentlemanly or of a higher tone than his bearing, and the few words he said won for him universal sympathy and esteem amongst the Fellows.

We are indebted to one who had good opportunity of appreciating Sir Richard Quain's work on the General Medical Council for the following estimate of his services as member, and afterwards as President, of that body.

Sir Richard Quain was appointed Crown member for England on the General Medical Council in November, 1863, and held his seat continuously until his death on Sunday last, extending over a period of 35 years. Although not one of the original members, for the Council was formed in 1858, he was the oldest member, both in years and length of service. From the very first he showed a keen interest in the work of the Council, not only as regards its internal administration, but in relation to medical education and examination and the profession generally. Immediately after he took his seat he was appointed one of the Treasurers, and remained in that office until his election as President in 1891. He carefully watched the Council's expenditure, and when members were

disposed to be unnecessarily prolix in their remarks, he delighted to remind them that their speech was costing the Council 13s. a minute. In 1864 he was appointed a member of the Executive Committee and of the Pharmacopœia Committee, and in 1874 he was made Chairman of the latter. No member of the Council took a warmer and more complete interest in the preparation and successive editions of the *British Pharmacopœia* than Dr. Quain. The last years of his life were busily occupied in the work connected with the preparation of the edition about to be issued. Notwithstanding his enforced confinement to bed during his long and fatal illness, the proof and revised sheets all passed through his hands, and as late as February 19th he intimated to the Executive Committee that the final proofs had been revised and adopted by the Pharmacopœia Committee for publication.

The General Medical Council, during the early years of its existence, had no proper chamber for its meetings or office accommodation for the transaction of its business, and had to rely upon the Royal College of Physicians and the Royal College of Surgeons for apartments in which to hold its annual meeting. Quain took an active part in the negotiations which enabled the Council to acquire in 1874 from the Government a lease of the premises in Oxford Street, then known as the Royal College of Chemistry. After he had been appointed President he was largely instrumental in the purchase of the lease of these buildings from the Crown, the effect of which has been to give the Council a permanent habitation in a central position, and he took great pleasure in superintending the construction of the new Council Chamber, which is so great an improvement on the one previously occupied. When, on the death of Mr. John Marshall in 1891, the presidential chair became vacant, it was the general opinion of the Council that the length and importance of Quain's services had been such as to give him the first claim to the succession, and in May of that year he was unanimously appointed President.

Until laid aside by the illness under which he finally succumbed, he was never absent from the meetings of the Council and its Executive Committee, and took the keenest practical interest in their affairs. Even after the performance, a year ago, of the serious operation demanded by his condition, he insisted, contrary to the advice and wishes of his friends, on opening the Council's business at its May meeting, and frequently remained in the chair when it was obvious that his strength was failing him. At the November meeting, though unable to be present, he communicated to the Council a letter, in which he gave a summary of the work that had been done since the previous meeting, and of the business which required the attention of the Council. Notwithstanding his state of physical weakness, his mind was as active and his interest in the Council's business was as intense as in his younger and more vigorous days. He took a personal pride in his work, and if there was one thing more than another which he valued as an indication of a long and successful professional life, it was his election by his colleagues on the Council to the Presidency, a position which he owed, not only to his knowledge of, and experience in, the business of the Council, but to his warmth of heart and to the charm of his personal demeanour, which endeared him to all his friends.

We are indebted to one who was well acquainted with Sir Richard Quain's labours on the *Dictionary of Medicine* for the paragraphs which follow:

One ambition of Quain's life long remained unfulfilled—to associate his name with medical literature. It was impossible to write a book of his own. He had neither the time nor the patience for a continuous effort in this direction, and literature was laborious to him—in remarkable contrast to his letters, which were characteristically bright and attractive. For a time, indeed, in the years following his delivery of the Lumleian Lectures at the College of Physicians, he seriously entertained the idea of publishing a small work on the Diseases of the Walls of the Heart, and he collected abundant material for the purpose from his own notebooks and medical literature. But the interest connected with cardiac enlargement, aneurysm of the heart, and even fatty degeneration quickly faded and was finally lost before the attractions presented by the Conjoint Board, the opening of the University of London to Women, the establishment of the Brown Institution, the reform of the Medical Act. With work and fighting of this order to be done, the book on the heart was thrown aside and never touched again.

At last the opportunity offered and was seized unhesitatingly to transmit the name of Quain to later generations on the title page of a treatise on medicine. Messrs. Longmans invited him to undertake the editorship of a *Dictionary of Medicine* by various writers. In a few days he was at work. The scheme of the *Dictionary*, beyond its "conception" in the broadest sense, was his and his lieutenants'. Many weeks were spent in drawing up the plan, allotting the space to each subject, and committing the different articles to the contributors whom his influence and the attractive character of the proposed work enabled him to secure. Those who bore with Quain the burden and heat of the eight years spent on the preparation of the first edition know how earnestly, anxiously, and fully he devoted himself to the gigantic task. The ordinary literary portion of it was not so congenial to him; but the duties of criticism and control were entirely grateful to his disposition, and he did not fail to exercise them. Many of the contributions were returned once, twice, or several times to the writers, and if an article did not satisfy him finally he would rewrite it himself. Even when the book was in stereo he is known to have cut out an article extending to several columns, and replace it with one more to his mind, which necessarily had to run to precisely the same number of words as the original. He was merciless as a proof reader, but as this part of the work was usually undertaken at the end of a hard day, and after a good dinner, the severity of correction rarely extended beyond the first page of the sheet, the weary head dropping in calm sleep after half an hour, not to be raised again until midnight, when a strong cup of tea thoroughly roused him, and his regular spell of night work commenced, to end at 4, or even 5 o'clock, in the morning. Unquestionably, one of the chief merits of the *Dictionary* and one of the chief causes of its success was the carefulness of its preparation. It extended Quain's reputation very widely, and this just at a time when his connection with the discovery of the nature of fatty degeneration was beginning to be forgotten—because it had become classical. The second edition of the work was in some respects a more difficult undertaking than the first. How much was to be altered? what plan was to be followed? These were serious problems, and when they came up for solution practically the editor was disposed to regret the precipitancy with which he had agreed to serve a second time. It meant five more years' incessant work, without anything like the same prospect of reward at the end. But Quain came triumphantly through, and it may be safely said that some 50,000 copies of the *Dictionary* are in the hands of the profession.

The funeral took place at Hampstead Cemetery on March 16th, and was attended by many members of the profession, including, as representing the Royal College of Physicians: Sir Samuel Wilks, Bart., President; Dr. Liveing, Registrar; Sir William Roberts, Dr. Church, Dr. Bastian, and Dr. J. E. Pollock; as representing the General Medical Council: Mr. Bryant, Dr. Glover, Mr. Brudenell Carter, and the Registrar (Mr. Allen), Dr. Tirard, Secretary of the Pharmacopœia Committee, and Professor Attfield; as representing the British Medical Association: Dr. Holman (representing Dr. Saundby, President of Council), Dr. Bridgwater, Mr. George Eastes, and Dr. Dawson Williams; as representing the Brompton Hospital for Consumption: Dr. Theodore Williams, Dr. Fred. Roberts, Dr. H. G. Mackenzie, Dr. Wethered, and the Secretary. Among others who were present were Sir Squire and Lady Bancroft, Sir Henry Thompson, Mr. Treves, Dr. Mitchell Bruce, Dr. C. J. Hare, Mr. Herring, and Dr. Harold.

We regret to have to record the death, at Southsea, of Mr. Edward Kester Knight, M.R.C.S., L.S.A. Sixty years ago he commenced practice in Portsmouth, and at the time of his death he was the senior medical man of the district. He was born at Stedham, near Midhurst, in 1814. After receiving his early education in the neighbourhood, he began the study of medicine at University College Hospital, where he studied under Liston and Quain. After qualifying, he was appointed

House-Surgeon at the Chichester Infirmary. In the year 1837 he was elected on the staff of the Royal Portsmouth Hospital, and on his resignation in 1882 he was appointed Honorary Consulting Surgeon. Mr. Knight was never married. He continued in practice up to the time of his last illness, and throughout his long and active life he enjoyed the uninterrupted confidence and esteem of all his professional brethren.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Staff-Surgeon Gottfried Lenhartz, Editor of the *Deutsche militär-arztlichen Zeitung;* Dr. Max Dahmen, well known by a series of publications on bacteriology, and for many years director of a bacteriological laboratory at Krefeld, where he gave courses of practical instruction on the subject: Dr. Franz Lörinczy, Editor of the *Közégeszegügyi Kalauz*, aged 52; Dr. Carlos de Silóniz y Ortiz, who had been Professor of Anatomy in the Medical Faculty of Barcelona since 1847; Dr. Gayraud, sometime Agrégé Professor of Surgery in the Medical Faculty of Montpellier, a former President of the Montpellier Academy of Science and Letters, and author of several important articles in Dechambre's *Dictionnaire Encyclopédique des Sciences Médicales*; Dr. Du Brueil, Physician to the hospitals of Rouen; Dr. A. D'Ambrosio, Extraordinary Professor of Orthopædic Surgery in the Medical Faculty of Naples; Dr. John G. Truax, a well-known Physician of New York, a recognised authority in pottery, and a great art collector, aged 50; Dr. John Cronyn, of Buffalo, one of the founders of the Medical Department in Niagara University, Professor of the Principles and Practice of Medicine, and afterwards President of the Institution, and for the last twenty years President of the New York State Medical Society, aged 73; and Dr. S. G. Matson, of Iowa, a Member of the Constitutional Convention which formed the first constitution of the State of Iowa, Member of the first General Assembly of the State, Chairman of the Committee on Schools, and a prominent politician, aged 90.

NAVAL AND MILITARY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Army Medical Staff have been officially reported to have taken place during the last month:

		From.		To.
Surg.-Colonel	F. B. Scott, M.D., C.M.G.	Bengal ...	...	Chester.
Brig.-Surg.-Lt.-Col.	O. G. Wood, M.D....	Punjab ...	...	Portsmouth.
Surg.-Lt.-Col.	E. A. Mapleton, M.B. ...	Shorncliffe	...	Punjab.
,,	J. T. Carey, M.B.	Jersey ...	...	Aldershot.
,,	W. T. Johnston, M.D. ...	Dublin ...	...	Birr.
Surg.-Major	S. J. Flood	Holywood	...	West Africa.
,,	G. F. Poynder	Gosport ...	...	Bombay.
,,	C. R. Woods, M.D. ...	Dublin ...	..	Egypt.
,,	A. B. Cottell	Gibraltar ...	...	Colchester.
,,	T. P. Woodhouse	Bombay ...	...	Punjab.
,,	T. J. O'Donnell	Punjab ...	...	Aldershot.
,,	C. W. Thiele, M.B. ' ...	Malta ...	...	Dover.
,,	H. J. Peard	Punjab ...	...	York
,,	S. N. Cardozo	Canterbury	...	Bombay.
,,	S. Hickson, M.B.	C. of Good Hope		Curragh.
,,	W. T. Swan, M.D. ...	Punjab ...	...	Portsmouth.
,,	F. J. Greig	Straits S'ments.		,,
Surg.-Capt.	E. W. Gray, M.B.	Dublin ...	...	Bengal.
,,	R. J. Copeland, M.B. ...	Gosport ...	...	Portsmouth.
,,	A. E. Smithson, M.B. ...	Portsmouth	...	Gosport.
,,	G. A. T. Bray	Colchester	...	Egyptn. Army.
,,	C. W. H. Whitestone, M.B.	Madras ...	...	Dublin.
,,	I. A. O. MacCarthy ...	Bengal ...	...	Woolwich.
,,	C. Dalton	Belfast ...	...	West Africa.
,,	H. A. Hinge	Madras ...	...	Punjab.
,,	C. E. P. Fowler	York ...	...	Bengal.
Surg.-Lieut.	E. T. F. Birrell, M.B. ...	Dover ...	...	Punjab.
,,	E. W. W. Cochrane, M.B.	Woolwich	...	Bombay.
,,	A. H. Morris	Aldershot	...	,,
,,	A. J. MacDougall, M.B....	Maryhill ...	...	,,
,,	G. E. F. Stammers ...	Dublin	...	West Africa.
,,	C. F. Wanhill	Portsmouth	...	Egyptn. Army.
,,	E. W. P. V. Marriott ...	Dover ...	...	Bombay.

The newly-appointed Surgeon-Lieutenants—namely, H. O. B. Browne-Mason, F. S. Penny, B. Watts, H. G. Martin, J. G. Berne, F. F. Carroll, M.B.; J. D. G. Macpherson, M.B.; W. P. Gwynn, S. de C. O'Grady, M.B.; A. H. O. Young, E. A. Bourke, M. M. Lowsley, A. C. Lupton, M.B.; G. B. Carter, M.B.; N. H. Ross, M.B.; P. H. Collingwood, and C. J. O'Gorman, are stationed at Aldershot.

Brigade-Surgeon-Lieutenant-Colonel H. W. A. Mackinnon, D.S.O., retired pay, has been transferred from Reading to London, and Surgeon-Lieutenant-Colonel W. A. Parker, retired pay, has been posted to Reading.

Brigade-Surgeon E. R. O'Brien, M.D., retired pay, has relinquished the medical charge of troops at Christchurch.

THE NAVY.

INSPECTOR-GENERAL ALEXANDER TURNBULL, M.D., has been placed on the retired list, March 9th. He entered the service as Surgeon, August 12th, 1859; became Staff-Surgeon, August 19th, 1870; Fleet-Surgeon, June 2nd, 1880; Deputy-Inspector-General, May 14th, 1888; and Inspector-General, May 20th, 1896.

The following appointments have been made at the Admiralty: CHRISTOPHER PEARSON, Fleet-Surgeon, to the *Wildfire*, additional, for Sheerness Dockard and Naval Barracks, March 24th; HORATIO S. R. SPARROW, Staff-Surgeon, to the *Hermione*, April 7th; HAROLD R. OSBORNE, Staff-Surgeon, to the *Boscawen* (temporary), March 14th; RICHARD W. STANISTREET, Surgeon, to the *Hermione*, April 7th.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT K. V. KUKDAY, in medical charge of the 8th Bombay Infantry, is ordered to Bombay to take charge of Section D, No. 46 Native Field Hospital, under orders for Mombassa; Surgeon-Captain J. H. MACDONALD, at present on sick leave in Bombay, proceeds to Baroda to assume medical charge of the 8th Bombay Infantry.

Surgeon-Lieutenant-Colonel H. MCCALMAN, M.D., Madras Establishment, is placed on temporary half pay from February 13th.

THE VOLUNTEERS.

SURGEON-LIEUTENANTS H. W. LAING, 1st Fifeshire Artillery, and H. G. O. COLLETT, 1st North Riding of Yorkshire Artillery (Western Division Royal Artillery), are promoted to be Surgeon-Captains, March 16th.

Messrs. DONALD G. CAMPBELL, M.B., and JOHN BRUCE, M.B., are appointed Surgeon-Lieutenants in the 3rd (Morayshire) Volunteer Battalion the Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's), March 16th.

BRITISH CASUALTIES – INDIAN FRONTIER.

UP to December 17th, 1897, the following were the numbers in the Tochi, Malakand Mohmund, and Tirah expeditionary and field forces:

	Killed.	Wounded.
Staff and departmental officers	2	7
Regimental officers	34	74
British N.C.O.'s and men	91	341
Native officers	6	36
Native N.C.O.'s and men	291	838
Followers	9	25
Total	433	1,321

Total killed and wounded, 1,754. The percentage of killed to wounded is 32.7, or almost one-third. In addition to those returned above as killed are many, including officers, returned as wounded who have since died of their wounds. In no European war are we likely to have so high a percentage of killed to wounded, for at present we are fighting against an enemy who give no quarter to the wounded who may fall into their hands. In addition to the killed and wounded five British soldiers and one native are reported missing. And when the enormous sick returns come to be counted up they will show a large number of men who have been rendered unfit for further service owing to disease resulting from climate and exposure. The above figures tend to show what an immense strain is being thrown on the officers of the Army Medical Staff and Indian Medical Service, both of which corps are at present working short-handed.

MEDICAL DEPARTMENT ROYAL NAVY NEW REGULATIONS FOR ADMISSION.

THE last issue of regulations (February 1st, 1898) for the entry of candidates for commissions in the Medical Department of the Royal Navy contains some alterations. As before, the appointments announced for competition will be filled up from the list of qualified candidates, arranged in the order of merit as finally determined by the total number of marks each has obtained in both the compulsory and voluntary subjects; but, should it at any time be considered expedient to grant commissions beyond those periodically competed for, the new regulations provide that it shall be competent for the Board of Admiralty to admit annually one candidate proposed by the governing bodies of public schools of medicine in the United Kingdom or attached to such Colonial universities as they may think proper, the candidate so proposed to be approved by the Director-General of the Medical Department of the Navy, and to be certified by the governing body proposing him to be duly qualified according to the regulations in force for the entry of candidates. It is further provided that candidates from schools at home will be required to pass a physical and test examination in London, which will be arranged for by the Medical Director-General. Colonial candidates will pass a physical and test examination before a Board of naval medical officers on the station. The question papers for these examinations will be issued from the Medical Department of the Navy. With regard to the rank of surgeons entered as above without competition, they will take seniority next after the last surgeon entered at the same time by competition.

THE INDIAN FRONTIER FORCES.

THERE are still over 52,000 men on the frontier, mobile and supporting troops, and their health was on the despatch of last mail, about the end of February, excellent. In the week ending February 18th there were only 124 admissions among the British troops, 116 native soldiers, and 87 followers. The base general hospitals sick had fallen to 509 British and 451 natives, and the 1st and 2nd divisions massed for service had only with the divisional troops 4 officers, 164 British and 378 native soldiers on the sick list. All were well cared for, well clothed, well fed, and the medical needs thoroughly provided for. The spirit of the men was excellent. As to statements regarding hospital shortenings they must be taken with reserve. All the spare medical resources of India were thrown

into the Punjab command, nearest to the base of operations, and it is strange if the medical service could not apply them. The principal medical officer in India has done his utmost to make the medical arrangements successful and has been commended for hard work by the Commander-in-Chief. The strain on the Principal Medical Officer's office has been extraordinarily great. In the amendment to Sir Bindon Blood's despatch of October 27th the names of the following officers are mentioned amongst others: Brigade-Surgeon-Lieutenant-Colonel A. S. Reid, I.M.S., Brigade-Surgeon-Lieutenant Colonel J. Ring, A.M.S., Surgeon-Lieutenant-Colonels Z. A. Ahmed, I.M.S., and P. F. O'Connor, A.M.S., Surgeon-Major C. R. Tyrrell, A.M.S., Surgeon-Captains H. J. M. Buist, A.M.S., and T. Fisher, I.M.S., Surgeon-Lieutenant E. L. Perry, I.M.S. The last two officers specially distinguished themselves in action on September 16th, 1897. Brigade-Surgeon-Lieutenant-Colonel W. J. Charlton, A.M.S., of the Punjab command, has been appointed Principal Medical Officer Malakand brigade and movable column *vice* Surgeon-Colonel Carmichael, relieved and posted to the Presidency District. Surgeon-Colonel Calthorp returns to Mian Mir. On Surgeon-Major-General Cleghorn's departure to England on eight months' leave, Surgeon-Major-General Harvey, D.S.O., now Principal Medical Officer Punjab command, will officiate as Director-General I.M.S., and Surgeon-Colonel Spencer will take up the Principal Medical Officership of the Punjab command.

FRONTIER HOSPITAL WORK.

MAJOR-GENERAL MOORSOM, commanding at Pindi, speaks very highly of the work of the officers, both of the Army Medical Staff and the Indian Medical Services. He says that all the officers in his district have worked most satisfactorily and admirably, and on service they have gained golden opinions. The following notes upon the hospital work may be of interest:

No. 1 British General Hospital at Rawal Pindi—the base hospital of the Tirah Expeditionary Force—is situated on West Ridge, a salubrious elevation some three miles from Pindi. The 750 sick for whom the hospital is equipped are accommodated for the most part in pukka brick huts, the remainder being in tents. Each ward, which in times of peace holds 18 soldiers, contains 14 patients, the extra air space thus given being considered advantageous to the progress of sick and wounded men. A remarkable fact about the hospital is that on the ninth day after the arrival of the Principal Medical Officer, Brigade-Surgeon-Lieutenant-Colonel W. J. Charlton, A.M.S., the hospital, which was previously non-existent, was ready for the reception of 250 sick, and this number was soon increased to the full complement.

When it is considered that before a hospital can be opened it must be complete in every particular, must be furnished, equipped with medicine and surgical stores and clothing for the men, and that the large *personnel* of medical officers, warrant officers, ward servants, and followers must be organised, the enormous labour involved will be apparent. The sick and wounded received in the hospital have come from the Tochi Field Force and from the 1st and 2nd Divisions of the Tirah Force, and up to date the number of admissions has been about 2,300 men and 114 officers. Of this large number not one wounded officer or man has died, although it has unfortunately been necessary to perform many amputations—an excellent record. The bullets used by the enemy have evidently been of various kinds, some poor fellows having been struck by Dum-Dum bullets, causing complete shattering of the bone struck, others by native-made Martini bullets, causing serious wounds with splintering of the bones, and others again by Lee-Metford bullets, the most merciful of all. These last have caused very small wounds, which have soon healed, and some marvellous escapes have occurred. Men have been shot right through the lungs, through the leg and the arm, and have made perfect recoveries.

UNITED STATES ARMY MEDICAL SCHOOL.

THE United States Army Medical School occupies well-equipped rooms in the Army Medical Museum building at Washington. The school, which was established in 1893 by Surgeon-General Sternberg, takes up the newly-appointed medical officer, and educates him in the line of work he is to follow. The regular course consists of lectures upon the "Duties of Medical Officers," "Military Surgery, Medicine, and Hygiene," and "Microscopy, Clinical and Sanitary." Weekly surgical clinics are held at the Barnes Hospital, Soldiers' Home.

THE MEDICAL DEPARTMENT OF THE ITALIAN ARMY.

A RECENTLY issued order constitutes the *personnel* of the medical department of the Italian Army on a peace footing as follows: One inspector-general and 12 medical directors of army corps, 26 directors of principal divisional military hospitals, 683 medical officers, 12 health service officers. The medical officers are graded as follows: 3 surgeon-major-generals, 15 surgeon-colonels, 28 surgeon-lieutenant-colonels, 71 surgeon-majors, 280 surgeon-captains, 286 surgeon-lieutenants and sub-lieutenants. Of these officers 245 are assigned to the principal military hospitals, the rest to the sanitary service of corps and institutions.

MEDICO-LEGAL.

DEATH OF AN INFANT FROM THE INCOMPETENCE OF A MIDWIFE

AN inquest is reported at Woking upon the body of a newly-born child, which was born at 8.30 P.M. on February 21st. As reported in the *Woking News and Mail*, the midwife, as soon as she had washed the infant, administered some gruel, because she "had been in the habit of doing it." She said she gave a quarter of a teaspoonful; but at the *post-mortem* examination two teaspoonfuls were found in the child's stomach. The midwife stated that she did not think the child would live long, because it was a queer colour and made a peculiar noise. It was, however, a well-formed child, weighing 8 lbs. At 3 P.M. on February 22nd it died, and the midwife then sent for a doctor. The necropsy showed nothing wrong except that the stomach was distended with gruel and air, and the cord had not been properly tied. The midwife said she had learned how to tie the cord from some other woman, who she said had "walked the hospitals." The coroner made some strong remarks. He said he thought that the poorer classes of the community should not be subjected to such danger. Two or three times a month he got cases like this. This child was simply allowed to die for want of proper attention, through the ignorance of this old woman, of whose class, unfortunately, there were too many about. The jury found that death was due to the ignorance of the midwife, and endorsed the coroner's remarks.

DANGEROUS COUGH MIXTURE.

THE evidence given at a recent inquest held at Derby, as reported in the *Derby Mercury*, is of a nature that suggests a want of due observance of the provisions of the Pharmacy Act, even among registered chemists and druggists. The inquiry had reference to the death of an old woman, who had taken a cough mixture containing morphine supplied by a local chemist, but without being labelled poison, or having any indication of its dangerous nature. The coroner was of opinion that the sale should have been registered in the poison book, since morphine is a poisonous vegetable alkaloid, and he appears to have overlooked the fact that as preparations of morphine are in the second part of the poison schedule, there may be some uncertainty on that point; but in any case the preparation should have been labelled "poison," though the chemist who sold it did not appear to be aware of the necessity, and another local chemist stated in evidence that the cough mixture in question did not come under the schedule which necessitated its being entered in the poison book. It is matter for regret that the persons who are entrusted with the sale of dangerous medicines should appear, as in this case, unacquainted with the provisions of the statute which reserves to them the exclusive dealing in such articles. The coroner announced his intention of taking further steps to make the seller of the cough mixture amenable to the to the law for his neglect.

UNQUALIFIED PRACTICE.

FURTHER illustrations of the danger to the public caused by unqualified practice are found almost daily in the newspapers. Amongst others we note the report in the *Evening Reporter* of Ashton-under-Lyne of an inquest held as to the death of a married woman named Clara Beaumont. The husband is reported to have stated in evidence that his wife had a cough for some years, but was otherwise a healthy woman. She was working at the same mill as himself, and followed her employment up to four days before her death. Feeling tired whilst at work she left, stating that she would call and see "Dr." Spencer on her way home. She was bad that night when he returned home, and he sent the next morning for "Dr." Spencer. Deceased gradually got worse, and in the evening he called in Dr. Bissett-Smith, who stated that she was dying. Dr. Bissett-Smith refused a certificate, and Spencer stated he could not certify.

Charles Spencer was called, and stated that he was an unqualified surgeon, practising at 226, Stamford Street. He remembered the deceased coming to him, and he prescribed for her. He had no hospital training nor was he qualified. Once the registrar had accepted a certificate from him.

One of the jury remarked that an unqualified man should be prohibited from attending anyone.

The medical evidence was to the effect that the deceased had died from natural causes.

A suggestion was made by a juror that as the unqualified attendant evidently knew nothing about the nature of the case he was treating he should be very much censured for his conduct, but the coroner pointed out that if people chose to go to unqualified persons there was nothing to prevent them, and that censure would have no effect. The reporters were present, and it would now go forth to the public that "Dr." Spencer was not qualified. The law was in an unsatisfactory condition, and the medical men in England should be strong enough to move in the matter.

Finally, after further discussion, a verdict of "Death from natural causes" was returned.

FEES TO MEDICAL WITNESSES AT INQUESTS.

A MEDICAL WITNESS.—The Coroners Act, 1887, makes no provision for payment of fees for adjournment. Section XXII only entitles the medical witness to a fee of one guinea "for attending to give evidence at any inquest, etc.," or two guineas if a *post-mortem* examination has been made. A few years ago the opinion of an eminent Q.C. was taken on the interpretation of this section, and he advised "that although the medical witness attends for several days, he is only entitled to a fee of one guinea, and that the Act does not allow a larger fee to be paid to him." The clause may be an example of careless drafting, but it undoubtedly inflicts an injustice on medical men.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

READERSHIP IN SURGERY.—The Grace substituting a Readership in Surgery for the Professorship having passed the Senate, the General Board announce that the election of the new Reader will take place early in May. Candidates are to submit their names to the Vice-Chancellor on or before May 2nd. The stipend is £240 a year, and the appointment is for five years.

DEGREES.—At the Congregation on March 10th, the following medical and surgical degrees were conferred:

M.D.—F. C. Bottomley, B.A., Caius.

M.B. and B.C.—E. R. Delbruck, B.A., King's; A. V. Peatling, B.A., Magdalen; H. W. B. Shewell, B.A., Trinity; J. R. Charles, B.A., Caius; A. I. Petyt, M.A., Christ's; A. R. Paterson, B.A., Emmanuel; W. J. Lindsay, B.A., Sidney Sussex.

B.C. only.—C. R. Skryme, B.A., Christ's.

OWENS COLLEGE, MANCHESTER.

MEETING OF THE COURT OF GOVERNORS.

At the recent meeting of the Court of Governors of Owens College some announcements of importance affecting the interests of the Medical Department were made. It appears that during the past year the total attendance of medical students was 379. Dr. J. W. Renshaw, of Stretford, has made a donation of £500 to found a "Sidney Renshaw Exhibition" in Physiology, in memory of his son, the late Mr. Sidney Renshaw, who was from 1895 to 1897 a student in the Medical Department of the College. The exhibition will be competed for after the close of each winter session. A new Physical Laboratory is being built, in which increased facilities for study of practical physics will be afforded to the medical and other students of the College. Through the generosity of one of the devisees of the late Sir Joseph Whitworth, Mr. Christie, the College will soon be in possession of a large hall, in which all large ceremonies connected with the College or with graduation ceremonies in Victoria University can be held. The Hall will probably cost about £60,000.

SCHOOL OF MEDICINE OF THE ROYAL COLLEGES, EDINBURGH.

At a meeting of the Governing Board of the School of Medicine of the Royal Colleges, Edinburgh, Dr. G. A. Gibson presiding, the Secretary, Mr. R. N. Ramsay, reported that the number of students attending the school during the current winter session was 1,184, an increase of 285 as compared with the corresponding session of the previous year. Mr. Cotterill, Mr. Cathcart, Dr. Gulland, Dr. Fleming, and Dr. Aitchison Robertson have been elected as Lecturers.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,710 births and 4,535 deaths were registered during the week ending Saturday last, March 12th. The annual rate of mortality in these towns, which had been 20.9 and 20.7 per 1,000 in the two preceding weeks, rose again to 21.1 last week. The rates in the several towns ranged from 13.8 in Burnley, 14.5 in Norwich, 14.7 in Plymouth, and 15.7 in Birkenhead, to 24.6 in Sunderland, 25.1 in Liverpool, 26.1 in Gateshead, and 29.1 in Swansea. In the thirty-two provincial towns the mean death-rate was 20.8 per 1,000, and was 0.7 below the rate recorded in London, which was 21.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the rate was equal to 3.0 per 1,000, while it averaged 2.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Oldham, 4.1 in Swansea, 4.8 in Bristol, and 5.5 in Leicester. Measles caused a death-rate of 1.6 in London, 2.0 in Derby, 2.6 in Brighton, 3.6 in Bristol, 4.1 in Swansea, and 5.0 in Leicester; whooping-cough of 1.8 in Oldham; and "fever" of 1.8 in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The 68 deaths from diphtheria in the thirty-three towns included 33 in London, 6 in West Ham, 4 in Bristol, 4 in Cardiff, 4 in Birmingham, and 3 in Liverpool. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, the 12th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,534 at the end of the fifteen preceding weeks, had further fallen to 2,445 on Saturday last; 597 new cases were admitted during the week, against 233, 199, and 175 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, March 12th, 987 births and 753 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.4 to 21.8 per 1,000 in the six preceding weeks, further rose to 25.0 last week, and was 3.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 18.9 in Aberdeen and 21.2 in Dundee to 25.5 in Greenock and 26.9 in Glasgow and in Paisley. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Paisley, Glasgow, and Greenock. The 375 deaths registered in Glasgow included 16 from measles, 3 from scarlet fever, 2 from diphtheria, 19 from whooping-cough, and 4 from "fever." Four fatal cases of diphtheria and 3 of scarlet fever were recorded in Edinburgh, and 3 of whooping-cough in Paisley.

DIPHTHERIA IN LONDON.

The mortality from diphtheria in London last week showed a further decline. The fatal cases of this disease, which had been 33, 46, and 38 in the three preceding weeks, further fell to 33 during the week ending Saturday last, March 12th. Of these 33 deaths no fewer than 20 were of persons belonging to South London, including 5 to Wandsworth, 4 to Camberwell, and 3 to St. George Southwark sanitary areas. The notifications of diphtheria in London, which had been 266, 212, and 215 in the three preceding weeks, declined to 185 during the week ending Saturday last, March 12th. Compared with the preceding week there was a decline in each group of sanitary areas, which was most marked in West London, although the number of new cases in Kensington and in Fulham exceeded those recorded in the preceding week. Among the sanitary areas of North London there was a considerable decline in the prevalence of diphtheria in Islington, 8 new cases being notified, against 27, 9, and 15 in the three preceding weeks. Among the sanitary areas of Central London the disease showed increased prevalence in Clerkenwell, the 6 new cases exceeding the number recorded in any week for some months past. In most of the sanitary areas of East London there was a decline in the prevalence of diphtheria last week, but in Mile End Old Town 9 new cases were notified, against 2, 5, and 4 in the three preceding weeks. In Bethnal Green, however, the 5 new cases were but half the number recorded in previous week. Among the sanitary areas of South London there was a slight decline in the prevalence of diphtheria in Lambeth, Battersea, Camberwell, and Greenwich, while in Wandsworth the 12 new cases corresponded with the number notified in the preceding week. In Newington, Lewisham, and Lee there was a slight increase in the number of new cases. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 122, against 146, 124, and 127 in the three preceding weeks; and 1,024 cases remained under treatment in these hospitals on Saturday last, March 12th.

BACTERIOLOGICAL EXAMINATION IN DIPHTHERIA AND TYPHOID FEVER.

The vestry of St. George the Martyr Southwark, has under consideration at the present time the question of the desirability of giving opportunity for obtaining a bacteriological examination in cases of the above-mentioned diseases. From a report presented to the vestry by the medical officer of health it appears that among London sanitary authorities St. Pancras, St. Olave, Clerkenwell, and Fulham already adopt such a plan for both diseases, while St Marylebone, Holborn, and the Strand make use of a similar method for diphtheria alone, and Camberwell and Poplar contemplate doing so. The aid of bacteriology has already been invoked for some years in certain provincial towns, notably Bristol, Brighton, Manchester, and Liverpool, in connection with diphtheria, and in some of these a typhoid fever examination has also been instituted. Dr. Waldo expresses the opinion that the adoption of both tests would be of distinct value to the sanitary administration of the district of St. George the Martyr.

LONDON WATER SUPPLY.

At the recent sittings of the Royal Commission, Mr. W. H. Dickinson continued his evidence. He explained the nature of the Purchase Bills prepared by the County Council last year, and stated the resolutions adopted by the Council as embodying their opinions. In cross-examination by Lord R. Cecil, he said that the policy of the Council with regard to the outside areas was to hand over to them entirely the distribution, and expressed a decided preference for a policy of purchase rather than one of administrative control. Sir John Lubbock, who was the next witness, said that in his opinion the purchase by the London County Council of the undertakings of the eight water companies would not be expedient in the interests of London, either as regards the purity of the water supply or from a financial point of view. In preference to a policy of purchase, he advocated a control with representatives of the ratepayers on the board of each company.

LONDON DEATH-RATES

Dr. Sidney Davies, medical officer of health for Plumstead, writes: I shall be greatly obliged if you will explain the discrepancy as to the London deaths and death-rates in the two tables given in the British Medical Journal of February 26th and March 5th respectively. The populations and births are identical in the two tables, but there is a difference of about 2,000 in the total deaths, and corresponding differences in the death-rates.

*** The table on page 664 of the British Medical Journal of March 5th relates (as is explained in the heading thereto) to the deaths in London after the distribution of deaths in public institutions. Deaths of extra-metropolitan residents occurring in London institutions are therefore excluded from this table. The table on page 598 of the British Medical Journal of February 26th gives the totals for London as published by the Registrar-General in his weekly and quarterly reports, without correction for deaths in institutions of persons not belonging to London. The difference between the two totals for London is thus accounted for.

INFANTILE MORTALITY IN ENGLAND AND WALES.

The infantile mortality of England and Wales in 1897 was equivalent to 156 per 1,000 births, and not to 15.6, as stated in error in the British Medical Journal, of February 19th, p. 534.

WORKHOUSE MEDICAL OFFICER AND HIS DEPUTY.

D. L. writes to say he is a workhouse medical officer, but that owing to increasing private practice he finds it difficult to attend to his workhouse duties. He proposes taking a partner, and asks whether he can relegate to him the whole or part of this work if appointed as his deputy. He further asks whether this change, if carried out, would facilitate an alteration contemplated by the guardians, who appear to wish for a resident medical officer to be appointed.

*** A Poor-law medical officer can under no circumstances relegate the whole or a major part of his work even to a properly appointed deputy, the latter being only supposed to act in case of absence or illness of the former. We can imagine that if our correspondent were to depute very much of his work to his deputy, this action might accelerate the change which the guardians appear to desire.

DISTRICT MEDICAL APPOINTMENT.

A.L.S. writes: A. is medical officer whose district consists of two parishes B. and C., five miles from A.'s residence. A stranger (D.) has come to reside in parish B., and has applied to be appointed medical officer of the two parishes. A.L.S. asks what can A. do, and whether he can claim compensation if the change is made?

*** A. has no power to prevent the guardians appointing D. if they decide to do so, but of course the consent of the Local Government Board will be necessary. We cannot say whether this is likely to be granted, but, in case it should be, no compensation could be claimed for loss of office.

MEDICAL NEWS.

At the meeting of the Childhood Society to be held at the Parkes Museum on March 23rd at 8 P.M., Mr. Sydney Stephenson will read a paper on How Children's Sight may be Lost.

Dr. W. J. Simpson, D.P.H., late medical officer of health for Calcutta, has been appointed Professor of Hygiene in King's College, London.

After a well-contested match, Guy's has wrested the Hospital Rugby Challenge Cup from St. Thomas's Hospital, which has held the trophy for a long period.

The Belgian Government offers a prize of £2,000 to anyone who shall discover a chemical substance that will take the place of phosphorus in the making of lucifer matches.

The annual Congress of the Royal Institute of Public Health will be held this year in Trinity College, Dublin, from Thursday, August 18th, to Tuesday, August 23rd, both inclusive, under the presidency of Sir Charles Cameron, M.D.

A paper on the desirability of making Watershed Areas and Sanitary Districts Coterminous will be read by Mr. R. E. Middleton, M.Inst.C.E., at the sessional meeting of the Sanitary Institute, on Wednesday, April 6th, at 8 P.M. The chair will be taken by Mr. G. J. Symons, F.R.S.

The annual meeting of the Association of Asylum Workers will be held on Monday, March 28th, at 4 P.M., at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W. The chair will be taken by Sir James Crichton Browne, M.D., LL.D., F.R.S.

Dr. Hall Hains's Defence Fund.—Dr. Carre-Smith asks us to state than since the list was closed he has received the following subscriptions: Mr. J. B. McIlroy, L.R.C.P.I., M.R.C.S., Sydney, N.S.W., £1 1s.; Surgeon-Captain R. Caldwell, F.R.C.S., St. Helena, £1 1s. The amounts will be handed over to Dr. Hall Hains.

The Medical Log of the "Maine."—Among the things recovered by the divers from the ill-fated *Maine*, now lying at the bottom of the harbour of Havana, was the journal of the medical officers. Surgeon Heneberger, the medical officer of the ship, had brought the record up to the last moment before the catastrophe, the last entry being dated February 15th.

In response to the special appeal now being made in aid of the Maintenance Fund of the London Hospital for the next five years the following further donations have been received: £500 from "S. P. Q.;" £105 from the Phœnix Fire Office; £105 from the Imperial Ottoman Bank. The fund has also received subscriptions of £52 10s. each from Messrs. Bryant and May and the Marine Insurance Company.

Action against the Maidstone Water Company.—Several hundred of the sufferers in the recent typhoid epidemic at Maidstone have decided, it is stated, to bring a combined action against the water company to obtain compensation for the losses which they have sustained. The company, it is stated, has expressed willingness to make a grant of £3,000 as compensation. This offer has been made, however, on certain conditions which the consumers do not see their way to accept.

The Jenny Lind Infirmary for Sick Children at Norwich, which owes its foundation some fifty years ago to Madame Otto Goldschmidt, better known as Jenny Lind, has outgrown its present buildings, and it is now proposed to erect a new hospital on a new site. The site has been given by Mr. J. J. Colman, late M.P. for Norwich, and the Lord-Lieutenant of Norfolk (the Earl of Leicester) has promised £1,000 towards an endowment fund. The estimated cost of the new buildings is £8,500.

National Dental Hospital.—The prizes for the last session were presented to the students by Mrs. Victor Horsley on March 14th, at the Queen's Hall, Langham Place. Mr. Victor Horsley, in acknowledging a vote of thanks, congratulated the students on the brighter prospect that now existed for the dental profession. He alluded to the recognition of the necessity for a broader education. There were still a few, even among his colleagues on the General Medical Council, who did not appreciate the necessity of surgical knowledge for a dentist; but this was a retrograde view held only by a limited number.

A New System of Smokeless Coal Firing.—A method of burning coal without the production of smoke was recently the subject of trial at the Grand Junction Waterworks pumping station at Hampton. The method aims at producing complete and instantaneous combustion by surrounding each particle of coal with an adequate supply of oxygen. For this purpose the coal is finely pulverised and carried into the furnace by means of the draught of the chimney. The ordinary arrangements of a furnace are dispensed with, that is, the grate and firebars are removed, and in place of the door is fitted an iron plate through which passes a tube conveying air to the fire. As this current of air enters the furnace it meets a falling stream of pulverised coal and carries it into the furnace, where it is instantly consumed. The system is known as the Carl Wegener system.

Presentation to Dr. Arlidge.—Dr. J. T. Arlidge was last week presented with a service of plate by a small deputation in the name of professional and other friends in various parts of the country. It may be remembered that some time ago, on the initiative of Dr. Charles F. Moore, of Dublin, a committee was formed to arrange for such a testimonial, and the proposal was so well received that the necessary funds were quickly placed at the disposal of Dr. Moore and Mr. W. H. Folker, F.R.C.S., of Hanley, and rendered it possible to make the presentation. The receipt of such a testimonial must be a source of great gratification to Dr. Arlidge, whose health, we regret to learn, gives grounds for serious anxiety. Another subscription raised among past and present members of the General and Medical Committee of the North Staffordshire Infirmary has been devoted to obtaining a portrait of Dr. Arlidge, which now hangs in the Board Room of the Infirmary.

The American Medical Association.—The next meeting of the American Medical Association will be held at Denver, Colorado, on June 7th, 8th, 9th, and 10th. Among the subjects proposed for discussion are: Yellow Fever: its Etiology and Treatment (to be introduced by Dr. George M. Sternberg, Surgeon-General of the United States Army); the Aims of the Modern Treatment of Tuberculosis (to be introduced by Dr. Edwin Klebs, of Chicago); the Serumtherapy of Tuberculosis (to be introduced by Dr. S. O. L. Potter, of San Francisco). Among the communications promised are the following: The Therapeutics of Pulmonary Phthisis, by Dr. Paul Paquin, of St. Louis; Tuberculin as a Diagnostic and Curative Agent, with a report of Two Hundred and Fifty Tuberculous Cases, treated by Dr. C. H. Whitman, of Los Angeles, California; the Practical Value of Artificial Serum in Medical Cases, by Dr. P. C. Remondino, of San Diego, California; the Use of Remedies in Diseases of the Heart and Blood Vessels, by Dr. T. Lauder Brunton, of London; and the Mescal Button, by Dr. D. W. Prentiss, of Washington.

Ladies as Elementary School Teachers.—Miss E. Bonham Carter, acting lady superintendent of the Teachers' Hostel, Salisbury, asks us to state that that institution, which is managed by a Committee of which the Bishop of Salisbury is Chairman, has recently been opened for the purpose of enabling the daughters of professional men of 17 years and upwards to pass the Queen's Scholarship examination. This examination is a step towards qualifying for the profession of elementary school teacher; and the hostel, which is not a commercial undertaking, has been established to enable candidates to prepare for this examination without the delay and the great and mental and physical strain involved in working for it while holding the post of pupil teacher. It is hoped that the hostel may eventually be self-supporting, but at present the guarantors will probably have to be called upon to meet deficiencies, and the office of lady superintendent is honorary. The hostel is in connection with the training college established at Salisbury, and is under the immediate educational supervision of the principal, the Rev. Canon Steward. The summer term will commence on April 16th. The scheme is one with which our readers may be glad to be made acquainted, since it opens up to young girls, daughters of professional men, an honourable and useful career.

THE PRINCE OF WALES'S HOSPITAL FUND.—We have received a copy of the Subscription Book and Stamp Album for the Prince of Wales's Hospital Fund for London, containing a facsimile of an autograph letter from the Princess of Wales, in which she says: "It is very near to my heart that the Prince of Wales's Hospital Fund, in commemoration of the Queen's Diamond Jubilee, should be a perfect and pronounced success." Her Royal Highness appeals to every child in the kingdom to assist by contributing their donations, however small. As already stated, the object of the Book and Stamp Album is to enable subscribers of small amounts of 1s. to 10s. per annum to possess evidence of the fact that they are regular subscribers through the Prince of Wales's Hospital Fund to the metropolitan hospitals.

THE LATE MR. MADDOCK AND EPSOM COLLEGE.—Epsom College is so closely connected with the medical profession that anything which affects it for weal or for woe must be of interest to a large number of our readers. It is therefore with especial regret we announce that the College has recently suffered a great loss by the death of Mr. P. H. Maddock, who had been an Assistant Master for several years. Mr. Maddock's abilities and zeal were conspicuous, and in conjunction with the headmaster and the staff he did much to raise the tone of the school, and to bring it to its present high position in point of scholarship. Mr. Maddock has bequeathed £500 to the College, and has left his pictures and his library, consisting of several hundreds of valuable works, to the school. A valuable entomological collection made by Mr. Maddock has been generously given by his friend and sole executor to the College Museum. Such interest and affection for the institution in which Mr. Maddock lived and laboured is a striking proof of the tie that exists between the teachers and their pupils at Epsom, and goes far to explain the growing reputation of the College.

THE HALIFAX UNION INFIRMARY.—The medical officer of this infirmary, Dr. Dolan, has consistently kept in view the fact that this infirmary is to be modelled on the same lines and worked on the same methods as a voluntary hospital, and by degrees he is reaching his goal. The report now before us presents a record of treatment and nursing of nearly 1,000 patients, suffering according to the returns from all forms of disease, acute and chronic. There is one most satisfactory point to note, and that is that the average period of stay is decreasing; to the ratepayer this means that the cost is diminishing, whilst the actual good done to the individual is on the increase. It is true wisdom to encourage the speedy admission of the sick poor: in the long run it diminishes the rates, for it often prevents an acute illness becoming chronic. We are glad to note that this infirmary is also a training school for nurses; there are too few of these about the country, the increasing demand for nurses for service under the Poor Law should lead to the multiplication of these workhouse infirmary training schools. At present they are few and far between. We would hold up Halifax Union Infirmary as an object lesson to certain Boards of Guardians of which we have knowledge.

MEDICAL SOCIETY OF LONDON.—The 125th anniversary dinner of the Medical Society took place on March 9th at the Hôtel Métropole. Dr. Sansom, the President, was in the chair, and was well supported by some 130 Fellows and their friends. The Society has had an annual dinner since its foundation in the eighteenth century, but that of 1898 was certainly not the least enjoyable of the series. Fashions and manners have changed, however, since the time when dinner began at 4 P.M. and took place in the City. In those early days the oration was always delivered before the dinner at the Ship and Turtle or City Tavern. The dishes with which the diners were regaled have undergone a great change during the last century and a quarter. On one occasion Lettsom, as related by Mr. E. Owen, "came into possession of a turtle, and, instead of regarding it as a subject for comparative anatomy, presented it to the Society, together with an invitation to each member, requesting the favour of his company at the King's Head Tavern in the Poultry on a June afternoon in 1775, where they made merry, feasting on its fat and its fins." The toast of the evening on the 9th was proposed by Dr. Goodhart, and the President replied in felicitous terms. He characterised the Society as a combination of science and practice. He added that it had lately received a donation of £100 from Dr. Robert Barnes. He trusted the Society would remain an example of "plain living and high thinking." Dr. John Anderson, C.I.E., proposed "The Sister Societies," and Dr. Swanzy, of Dublin, replied with much humour. The toast of "The Visitors" was proposed by Mr. Alfred Cooper, to which the Hon. Sidney Holland and the Master of the Society of Apothecaries responded. Mr. H. R. McConnell, Q.C., proposed "The President;" the toast was received with musical honours, and Dr. Sansom replied. Mr. F. C. Wallis proposed "The Officers and Council," and Dr. F. T. Roberts and Dr. R. Maguire acknowledged the toast. An excellent programme of music, which was arranged by Dr. Maguire, was given in the course of the evening.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM ROYAL HOSPITAL.—Two Resident Clinical Assistants. Appointments for six months. Applications before March 28th.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House-Surgeon. Salary, £60 per annum, with board and lodging, but no wine, spirits, or beer. Applications to the Chairman of the Weekly Board by March 21st.

BIRKENHEAD UNION.—Assistant Medical Officer for the Infirmary. Workhouse, and Schools. Salary, £80 per annum, with board, washing, and apartments. Applications by March 21st.

BIRMINGHAM GENERAL HOSPITAL.—Resident Surgical Officer, two Assistant House-Physicians, and two Assistant House-Surgeons. Residence, board, and washing provided in each case, with a salary of £100 per annum for the Resident Surgical Officer. Applications to the House Governor by March 26th.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road.—Assistant Registrar. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

DARENTH ASYLUM FOR ADULT IMBECILES, near Dartford, Kent.—Medical Superintendent. Salary, £600 per annum, with unfurnished house, coals, gas, washing, milk, and vegetables. Must not exceed 45 years of age. Applications to be sent to the offices of the Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., by March 28th.

DENTAL HOSPITAL FOR LONDON, Leicester Square, W.C.—Three Assistant Anæsthetists, must be duly registered medical practitioners. Applications by March 21st.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Resident Medical Officer. Salary, £80 per annum, with board, residence, and laundry. Applications by April 12th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £60 per annum, rising to £100, with board, residence, and washing. Applications by April 11th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to William George Black, Secretary, 88, West Regent Street, Glasgow, by March 21st.

GLASGOW: ST. MUNGO'S COLLEGE.—Professorship of Forensic Medicine and Lectureship on Hygiene. Applications by April 7th.

GREENWICH UNION INFIRMARY.—Assistant Medical Officer of the Infirmary and Workhouse. Salary, £120 per annum, with furnished apartments, rations, washing, and £3 per annum in lieu of beer. Applications before March 22nd.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications by March 30th.

HOXTON HOUSE ASYLUM, London, N.—Clinical Assistant. Board, lodging, and washing provided, and honorarium £40 a year.

KING'S COLLEGE, London.—Sambrook Surgical Registrarship. Applications by April 4th.

LINCOLN LUNATIC HOSPITAL.—Assistant Medical Officer. Applications to the Medical Superintendent.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Mount Vernon, Hampstead, and Fitzroy Square, W.—Physician and Assistant Physician. Applications to the Acting Secretary, 41, Fitzroy Square, W., by March 31st.

NORTHAMPTON GENERAL INFIRMARY.—House-Surgeon. Salary, £125 per annum, with furnished apartments, board, attendance, and washing. The Assistant House-Surgeon is a candidate, and if appointed the Committee will elect Assistant House-Surgeon. Salary, £100, with furnished apartments, board, attendance, and washing. Applications by March 24th.

OLDHAM INFIRMARY.—Junior House-Surgeon. Salary, £50 per annum with board and residence. Applications by March 25th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications by March 26th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £100 per annum, with furnished apartments, board and washing. House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications by March 30th.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon; must be F.R.C.S.Eng. Applications by March 31st.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with board and lodging. Appointment for six months. Applications by March 22nd.

STAFFORD: COTON HILL REGISTERED HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer; doubly qualified. Salary commencing £100 per annum, with two annual increases of £25 each to a maximum of £150, with board, lodging, and washing. Applications to the Medical Superintendent by March 22nd.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Junior Assistant Medical Officer, unmarried, and under 30 years of age. Salary, £100 a year, rising £25 per annum to £150, with furnished apartments, board, etc. Applications to the Medical Superintendent.

STAMFORD AND RUTLAND GENERAL INFIRMARY, Stamford.—House-Surgeon, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications by March 24th.

STRETTON HOUSE ASYLUM, Church Stretton, Salop.—Resident Medical Officer, unmarried. Salary, £100 per annum, with board, rooms, washing, etc. Applications to the Medical Superintendent by March 21st.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, laundress, and attendance. Applications by March 23rd.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon. Salary first year, £120, increasing by £10 a year to £150, with furnished apartments, fire, light, and attendance. Applications before March 31st.

VENTNOR, ISLE OF WIGHT: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Assistant Resident Medical Officer, unmarried. Salary, £80 per annum, with board and lodging. Applications to the Board of Management, 34, Craven Street, Charing Cross, by March 25th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Applications by March 28th.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Third Honorary Physician. Salary, £60 per annum, and Dispenser. Applications by March 28th.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—Honorary Physician and Honorary Surgeon. Applications by March 21st.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM. Powick, near Worcester.—Third Assistant Medical Officer, unmarried. Salary commencing at £100 per annum, with board, lodging, and washing. Applications to the Medical Superintendent by March 23rd.

MEDICAL APPOINTMENTS.

BEATLEY, W. C., M.D.Durh., M.R.C.S., appointed Honorary Physician-Accoucheur to the Newcastle-on-Tyne Lying-in Hospital.

BERRY, F. C., M.D.Dub., B.Ch., reappointed Medical Officer of Health to the Burnham Urban District Council.

BETTS, E. H., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to the Dorset County Hospital, *vice* P. E. Adams, M.R.C.S., L.R.C.P.Lond.

BROWNRIDGE, Dr., appointed Physician to the Paisley Infirmary Dispensary, *vice* J. N. Macarthur, M.B., C.M.Glas.

BURGESS, A., M.D., appointed Medical Officer for the No. 1 District of the Lincoln Union, *vice* A. L. Peacock, M.R.C.S.Eng.

COLE, George, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Sixth District of the Nottingham Union.

DARBY, H. C., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Lye and Wollescote Urban District Council.

DENT, H. C., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the Northrepps District of the Erpingham Union.

FAIRBANKS, William, M.D.Edin., M.B., C.M., appointed Medical Officer to the Workhouse of the Wells Union.

FOSBERY, W. Hubert S., M.A., M.D., B.C.Cantab., appointed Medical Officer to the Reading Dispensary.

FOX, Edward J., B.Sc.Lond., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Salford Royal Hospital, *vice* T. W. Arnison, appointed Senior House-Surgeon.

GILRUTH, J. D., M.B., C.M.Edin., appointed Surgeon to the Arbroath Infirmary, *vice* E. B. Young, M.B., C.M.Edin., resigned.

GOODING, Dr., appointed Medical Officer of Health to the Barnstaple Port Sanitary Authority.

HICKMAN, Dr., appointed Medical Officer for the Coleford District of the Frome Union.

HOPE, Dr., appointed Medical Officer of Health to the Hanwell Urban District Council.

HOUSE, Dr., appointed Medical Officer for the No. 2 District of the Lincoln Union, *vice* A. L. Peacock, M.R.C.S.Eng.

JAFFREY, Francis, F.R.C.S.Eng., appointed Surgeon to out-patients at the Belgrave Hospital for Children.

MACFARLAND, B., M.D., R.U.I., M.Ch., appointed Medical Officer for the Workhouse of the Lincoln Union, *vice* A. L. Peacock, M.R.C.S.Eng.

MACKINTOSH, Angus, M.D.Glas., reappointed Medical Officer of Health to the Chesterfield Rural District Council.

MOLONEY, Dr., appointed Medical Officer for the Murroe Dispensary District.

MUSGRAVE, C. B. T., M.D.Lond., reappointed Medical Officer for the Cromer District of the Erpingham Union.

NEWBOLT, G. P., M.B.Durh., F.R.C.S.Eng., appointed an Honorary Surgeon to the Royal Southern Hospital, Liverpool, *vice* H. G. Rawdon F.R.C.S.E., retired.

PATTERSON, J. H., M.B., C.M.Edin., appointed House-Surgeon to the Bradford Children's Hospital.

PIRIE, W. R., M.A., M.B., C.M.Aberd., appointed Medical Officer to the Aberdeen General Dispensary, *vice* G. Watt, M.D., resigned.

SAUNDERS, Alfred Morison, M.A., M.B., C.M., D.P.H.Aberd., appointed Medical Officer of Health for the Burgh of Burghead, Morayshire, N.B.

SIMPSON, W. J., M.D.Aberd., D.P.H.Camb., appointed Professor of Hygiene at King's College, London.

SMITH, F. G., L.R.C.P., L.R.C.S., appointed Medical Officer for the Workhouse and the Stockton District of the Stockton Union.

WATTS, A. M., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the East Ashford Union.

DIARY FOR NEXT WEEK.

MONDAY.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Mr. Griffith C. Wilkin: Anatomy of the Ear, illustrated with Lantern.

Royal College of Surgeons, 5 P.M.—Professor Henry Morris: On the Surgery of the Kidney. Lecture I.

TUESDAY.

Royal Medical and Chirurgical Society, 8.15 P.M.—Dr. Haig will demonstrate some results to be obtained by the Chloride of Ammonium Process as suggested by Mr. Barker Smith as a means for the Microscopic Detection of Uric Acid in Blood. 8.30 P.M., Surgeon-Captain Leonard Rogers: On the Epidemic Malarial Fever of Assam, or Kala-azar.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Mr. Gunn: Optic Atrophy.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: General Paralysis; Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Erythema.

Royal College of Physicians, 5 P.M.—Dr. J. Rose Bradford: Observations on the Pathology of the Kidneys. Goulstonian Lecture III.

WEDNESDAY.

Royal College of Surgeons, 5 P.M.—Professor Henry Morris: On the Surgery of the Kidney. Lecture II.

Evelina Hospital, S.E., 4.30 P.M.—Dr. Frederick Willcocks: Selected Medical cases. Post-Graduate Lecture.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Cases will be shown by Mr. William T. Freeman, Dr. F. Rufenacht Walters, Dr. J. H. Stowers, Dr. Alfred Eddowes, and others.

Hospital for Consumption and Diseases of the Chest, 4 P.M.—Mr. Godlee: Surgical Lecture.

Hunterian Society, 8.30 P.M.—Dr. Appleford: Medical Practice in the West Indies. Dr. J. F. Woods: Further Observations on the Treatment by Suggestion.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Mr. Swinford Edwards: Lithotrity.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Dr. Thin: Clinical Lecture.

Royal College of Physicians, 5 P.M. Sir R. Douglas Powell: On the Principles which govern Treatment in Diseases and Disorders of the Heart. Lumleian Lecture I.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Garrod: Demonstration of Selected Cases.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick. Clinical and Pathological Demonstration to Senior Students.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Professor Crookshank: Typhoid Fever and Diphtheria, etc.

Royal College of Surgeons, 5 P.M.—Professor Henry Morris: On the Surgery of the Kidney. Lecture III.

Clinical Society of London, 8.30 P.M. Mr. Gilbert Barling: Two cases of Intrascapular-Thoracic Amputation for Sarcoma of the Humerus, with Statistics of the Operation. Dr. Frederick Taylor and Mr. A. D. Fripp: Renal Calculus detected by the Roentgen Rays, and successfully removed. Mr. Leonard A. Bidwell: Stricture of the Splenic Flexure; Transverse Colotomy; Ileo-sigmoidostomy. Dr. Buzzard and Dr. J. Risien Russell: Acute Ascending Paralysis, with Bacteriological Examination.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTH.

O'BRYEN.—On Thursday, March 10th, at Springfield Lodge, Sydenham, S.E., the wife of F. Wheeler O'Bryen, M.D., L.R.C.P., etc., of a son.

MARRIAGES.

BONNER—WHITFIELD.—On the 9th inst., at St. Augustine's Church, Edgbaston, by the Rev. J. C. Blissard, M.A., Thos. Irvine Bonner, M.A., C.M., M.B., of Aberdovey, North Wales, to Gertrude, daughter of the late S. B. Whitfield, of Birmingham.

JOHNSTON—RAWLINSON.—On the 10th inst., at Fulledge Wesleyan Chapel, Burnley, Lancs., by the Rev. Thomas Rodgers, Bolton, George Minto Johnston, M.D., F.R.C.P.E., of 7, Wellington Place, Leith, N.B., to Mary Ingham (Minnie), only child of the late Joshua Rawlinson, J.P., and Mrs. Rawlinson, Oak Bank, Burnley.

DEATHS.

HILL.—On Sunday, March 13th, 1898, at Tregothnan, 138, Cromwell Road, Bristol, Emily Kezia, wife of Thomas Hill, M.D., aged 67 years.

LYLE.—On March 15th, at 178, Amhurst Road, Hackney, Sarah Mary, the beloved wife of Herbert Willoughby Lyle, M.B.Lond., M.R.C.S., L.R.C.P. Interred at Abney Park Cemetery, Friday, 18th inst., at 3 o'clock. No cards.

MOODIE.—At 7, Duncan Street, Edinburgh, on the 7th inst., Robert Moodie, M.D., B.Sc.Edin., D.P.H.Camb., late of the Bengal Medical Service, and of Stirling, son of the late Dr. A. L. Moodie, of Stirling, aged 52.

THIMBLEBY.—On March 7th, at Spilsby, Lincolnshire, John Thimbleby F.R.C.S., L.S.A., aged 80 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and *; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Tu., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30. Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

DR. ETHEL WILLIAMS (19, Ellison Place, Newcastle-on-Tyne) asks if any of our readers can recommend a home where a female patient could be received, under the Inebriates Acts, at from 15s. to £1 a week.

HOUSE HUNTER wishes advice as to the choice of a locality within twenty miles from London suitable as a residence for an adult suffering from chronic phthisis. He also desires to obtain the title of a small pamphlet on "how to choose a house" which was issued some eighteen months or more ago.

BICYCLING AND PREGNANCY.

LEA asks how long a lady, who is an expert bicyclist, might continue to ride her machine after finding herself pregnant. Ought any special precautions to be taken?

FREQUENT MICTURITION.

PRACTITIONER asks for advice in the treatment of a married woman, healthy, about 30, without children, who is greatly annoyed by frequent micturition. There is no albumen or sugar in urine. Buchu, hyoscyamus, sodium benzoate, benzoic acid, liq. santal. flava, sanmetto, and belladonna have been tried. Belladonna alone had any effect and this only slight.

PREPARATION OF LANTERN SLIDES.

M. L. H. asks for information as to the preparation of lantern slides for lecture work on bacteriological subjects, both from photographic and coloured diagrammatic points of view. Is there any varnishing or other process by which smoked glass slides can be permanently fixed?

*** Ordinary photo varnish, if run over warm, will fix everything on a smoked slide. The glass should in the first instance be very carefully cleaned.

POPULAR LECTURES.

LECTURER asks: (1) From what source can one obtain popular information (not medical) on the subject of the bacteriology of soil, air, water, etc.? (2) Do any firms lend magic lantern slides on hire to illustrate a lecture on the above subject?

*** (1) *Bacteria and their Products*, by G. Sims Woodhead, M.D. (London: Walter Scott and Co., 1892, 3s. 6d. (2) Messrs. Baird and Tatlock, Cross Street, Hatton Garden, and Charles Baker, 244, High Holborn, supply lantern slides.

UNDERSELLING.

DR. WM. J. RICHARDSON (Yorkshire) writes: A medical man comes into a district and endeavours to obtain practice by charging lower fees than his neighbours. (1) Is his conduct unprofessional? (2) Should other practitioners meet him in consultation?

*** Assuming that no public appointments are in question, there are no laws or regulations prohibiting a medical man from putting his own value upon his professional services, though his claims may be lower than those of other medical practitioners in the neighbourhood. It would be highly impolitic to refuse consultations, though social relations may be a little strained.

RATIONAL SICK AND BURIAL ASSOCIATION.

A CORRESPONDENT writes that he has been asked to act as medical officer to a branch of the above Society. The members pay the doctor 4s. per annum, and the rules require that each shall be medically examined before admission to the Society, but no fee is paid for this examination. Our correspondent has demanded 2s. for each examination, that being the amount paid by the Hearts of Oak Friendly Society, and he encloses the reply from the general secretary of the association demurring to the charge for examination of members, and asserting that nothing is paid in any of the other branches for this work.

*** Medical examination of members ought in all cases to be paid for, and 2s. is certainly not an excessive fee for such an examination. Our correspondent does well in refusing to do this work gratuitously, and if the general secretary is strictly accurate in his statements, it is sad to think that medical men can be found to accept posts under the conditions related.

CALF VACCINATION.

REV. GEORGE HENSLOW, Professor of Botany at King's College, asks whether it is intended to make it compulsory to secure lymph from calves under one month only, and if such can be procured; for Mr. James Long, in his article on Consumption in Cattle conveyable to Man, in the *Nineteenth Century*, October, 1897, p. 581, says that up to that age "not more than 1 in 10,000 are tuberculous," for "calves born with tubercle are extremely rare." Subsequent to one month, however, if the calves have been suckled by a tuberculous mother, what guarantee is there that the lymph from such calves will not convey consumption to human beings?

*** The arrangements for supplying glycerinated calf lymph have not yet been completed by the Local Government Board, and we are unable to state what their intention is as regards the age of the calves to be used. But the inference that there is any substantial risk of tuberculosis after 1 month of age is not borne out by the experience obtained abroad. The practice on the Continent of Europe is to use calves of from 3 to 6 months old, and to have them slaughtered after they have served the purpose of supplying vaccine lymph. Unless they turn out to be healthy in every respect the lymph derived from them is not used. Tuberculosis in calves of the age named is so rare that the exceptional instances can hardly be reckoned as more than one in many thousands, even though this takes account of the most trivial evidence of tuberculosis. One thing may, we feel certain, be taken for granted, and that is, that no lymph will be distributed by the Government to which there attaches the most remote suspicion of tuberculosis.

THE EDUCATION OF BACKWARD AND DEFECTIVE CHILDREN.

M.D.LOND. asks for information as to a home for an epileptic boy, aged 14, who is suffering from arrested mental development. It is not a case of imbecility, and there has been a slow, steady improvement in the mental condition for some years past. A small sum weekly or monthly could be paid.

*** We may refer our correspondent to the abstract of the *Report* of the Departmental Committee on Defective and Epileptic Children published in the BRITISH MEDICAL JOURNAL of March 5th, p. 651. With regard to the case mentioned, assuming that the boy lives in London, the parents should place him in one of the London School Board special classes for backward and defective children. Mrs. Burgwin is the superintendent of these classes, and her address is 21, Claylands Road, Clapham Park, S.W. If the parents or the doctor will write a letter to her, she will inform them of the school nearest the home where the child resides. If for any reason the child cannot be received into these classes, then the only places where he can be sent are the Darenth Schools for Imbecile Children or the Earlswood Asylum. Particulars respecting the admission of the child to the former institution can be obtained on application to the Clerk to the Board of Guardians or relieving officer of the parish in which the parents live, and with regard to the latter from the secretary or superintendent of the asylum.

ANSWERS.

M.A. AND M.D.—The questions asked by our correspondent seem to us to be too hypothetical to render it possible to give a satisfactory answer.

SOLENT.—We do not think that there could be any objection to the circulation of the proposed notice if confined to our correspondent's own patients.

P. J. D.—We suspect that the certificate is a *facsimile* of that employed in the United States, where possibly it may be necessary to take energetic measures of this nature to prevent improper persons being appointed examiners.

STYLO.—The notice of the General Medical Council requires that a registered practitioner should not allow an unqualified person to attend or treat patients in respect of matters requiring professional skill or discretion. The application of this principle to individual cases must be a matter of individual discretion.

M.D.BRUX.

L.R.C.P.—The M.D.Brussels does not, we believe, give foreign practitioners a legal right to practise medicine in Belgium.

TREATMENT OF INCONTINENCE OF URINE.

DR. F. R. PROCTOR-SIMS (Canonbury, N.) writes: I would suggest to "A. L. S." to try the following mixture, which I have found almost a specific in such cases: R Ext. belladon, gr. ½; aq. camph. ad ʒss; M. ft. mist. Sig. ʒss ter die. I consider the dose of importance, and also the preparation of belladonna. I do not find the tincture so effective. The points which you suggest with regard to diet and the emptying of the bladder should of course at the same time be rigidly enforced.

ERRATUM.—By an error of transcription the prescription given in the BRITISH MEDICAL JOURNAL of March 12th, 1898, p. 739, for the treatment of incontinence of urine was directed to be made up to ʒij of water; it should have been ʒvj.

FEE FOR TWO CASES IN THE SAME HOUSE.

PUZZLED asks if he is entitled to a double fee for attending two fever cases in the same family at the same time.

*** The suggestion contained in *The Medico-Chirurgical Tariffs prepared for the late Shropshire Ethical Branch of the British Medical Association*, by Jukes de Styrap, M.K.Q.C.P., etc. (London: H. K. Lewis, demy 8vo, pp. 28. 2s.), with regard to two or more patients in the same house, is that if members of the same family, and paid for by one person, the full fee should be charged for the first, and a half visit for each of the others. When not of the same family the full charge should be made for each.

A QUESTION OF PRECEDENCE.

A MEMBER B.M.A.—There appears to be no official table of precedence as between the different professions. Sir William Blackstone stated that "the heralds rank all colonels, serjeants-at-law, and doctors in the three learned professions before esquires," but the author of the article on Precedence in the *Encyclopædia Britannica* adds that "the only foundation for this statement seems to be a passage in Guillim, which is obviously without any authority." The official precedence of a husband or brother affords no indication of the personal precedence of his wife or children.

WIRING FRACTURED CLAVICLE.

JUNIOR PRACTITIONER.—The clavicle has frequently been wired, especially in cases of compound and ununited fracture. An instance of this treatment applied by Mr. Bilton Pollard in united fracture will be found in the BRITISH MEDICAL JOURNAL of March 27th, 1887, and Dr. Whitson of Glasgow published a case of compound fracture treated by wiring in the JOURNAL of January 6th, 1883. Wiring in recent cases of simple fracture has been practised with success by German and French surgeons. Février of Nancy and Demons of Bordeaux have lately reported cases of this kind (*Revue de Chirurgie*, 1896). The subject is discussed in Dr. Packard's article on Fractures in the fourth volume of the *International Encyclopædia of Surgery*.

A VACCINATION DIFFICULTY.

DR. CHOWN (Hayle).—It seems to us that our correspondent's letter justifies the position he has taken up. Every medical man in the course of a lifetime's practice is likely to do a large amount of gratuitous work, but he has surely a right to decide for himself what shall be gratuitous and what shall be charged for. We are prepared to be told that many practitioners would not send an account for attendance on a post-vaccinal inflamed arm, but the question is one for the exercise of discretion according to circumstances, and where a parent is in regular employment and earning a good wage, it is surely his duty to pay for medical attendance when no charge of malpraxis is involved, otherwise we do not see that a Board of Guardians has any logical right to interfere in the present case.

NOTES, LETTERS, Etc.

A DISCLAIMER.

MR. E. MUIRHEAD LITTLE (Seymour Street, Portman Square, W.) writes: In *Black and White* of March 12th, there is a paragraph in which I am mentioned by name, and an inaccurate account given of certain circumstances that occurred at the National Orthopædic Hospital. The writer, no doubt with kind intentions, proceeds to puff me most outrageously. I wish to state that this paragraph was written and published entirely without my knowledge or approval, and that it has caused me much annoyance and disgust.

MEDICAL REFORM.

DR. S. STRETTON (Kidderminster) writes: I fail to see the benefit or wisdom of the startling heading, "Battle of the Clubs," so constantly appearing in the medical journals. We maintain the justice of making public the various errors perpetrated by the so-called medical aid and other societies and clubs, and our chief aim now should be how best to elevate the tone of the coming practitioner. Two essential features demand consideration: reform of preliminary examination and the institution of a one-portal system, and I would suggest that these subjects should be set down for discussion as early as possible by every medical society in the land, when a concentration of the results should bring weight of evidence sufficient to move the General Medical Council to prompt and energetic action.

THE NAUHEIM TREATMENT.

DR. LESLIE THORNE THORNE (Inverness Terrace, W.) writes: S.'s patient could probably have the Nauheim treatment carried out more cheaply at Llangammarch Wells, Central Wales, than elsewhere, as living in Llangammarch village is very cheap. The cheapest way, however, is to carry out the treatment in the patient's own home. The medical man who lives at Llangammarch during the season goes there towards the end of March.

ALCOHOL AND THE DEATH-RATE.

Two recently issued reports of life insurance societies afford further evidence as to the prolongation of life by the practice of abstinence. The Sceptre Life Association, in 1897, shows a percentage of actual deaths to the expectancy of 66.41 in the General Section, and of 51.14 in the Abstaining Section. During the preceding thirteen years the former percentage was 80.84, and the latter 58.06. The Scottish Temperance Life Assurance Co. in their General Section, in fifteen years' operations, had a percentage of actual deaths to the expectancy of 69, and in the Abstaining Section of 47. It is to be remembered that all these insured were presumed to be temperate in their habits, the only difference having been the practice of total abstinence in the Abstaining Sections. The last-named society recognises the cash value of abstinence by insuring abstainers at lower rates than non-abstainers, the reductions thus given having already amounted to nearly £25,000. It is also interesting to note that of the abstainers insured in the Sceptre, over 62 per cent. were life abstainers.

A FIREPROOF BUILDING MATERIAL.

THE Asbestos and Asbestic Company, Limited (27, Billiter Buildings, E.C.) have introduced as a material for building a grey white powder composed of a proportion of asbestos fibre together with certain binding materials. This substance can be used in the same way as ordinary plaster, and at, it is stated, very little more cost. It is stated in a report issued by the agents that certain tests recently made at Duisburg appears to show that the material has great fire-resisting properties. The tests in question comprised the lighting of large fires urged by petroleum inside and outside a small building coated with asbestic plaster, together with subsequent douching with cold water from a fire hose. In the opinion of several engineers whose names are appended to the report, the material successfully withstood the tests employed. It seems desirable that further tests should be made with iron buildings, and especially to ascertain the extent to which the plaster peels off under the severe treatment it would receive in a fire, together with the process of extinction. There have been many attempts to produce an efficient fire-testing plaster, but most of them have failed by reason either of their peeling or cracking away from the material they were designed to protect.

ACETYLENE AS AN ILLUMINANT.

DR. J. C. MCWALTER (Dublin) writes: There is, I think, little doubt in the minds of those who have considered the matter that acetylene gas will be the light of the future, especially in country places and towns where there is no public electric current. It will soon, therefore, become a burning question whether it has any drawbacks from the public health point of view. As far as I am aware it has not. The products of combustion are less deleterious than those of coal gas and the dangers of asphyxiation more remote, owing to its characteristic smell. An engineer, named Goodwin, has lately discovered that the presence of a small quantity of carbonic dioxide in the gas has the peculiar property of rendering the flame more brilliant and clear, and promoting the complete oxidation of the carbon. Prepared after this modification the flame is remarkably luminous and steady, giving a

pleasant white light, which is an agreeable change from the quivering yellow flame of the gas burner.

The by-product which results from the preparation of acetylene gas from calcium carbide is of enormous sanitary importance, more especially in inland towns and villages where drainage is defective. For typhoid, scarlatina, and other infectious diseases there are few disinfectants of more utility than hydrated oxide of calcium freely applied, though, on account of its bulk, it has not been very generally used. It is also obvious that it can be used to absorb the carbonic acid resulting from the ignition of the gas, and so render the air fit for respiration.

DERMATOLOGICAL PRIZE.

THE prize offered by Dr. Unna (Hamburg) for 1897 has not been awarded. In consequence the sum of 600 marks (£30) will be given this year for the best essay on the subject of last year, namely, "Whether, and to what extent, the specific stains for elastin are applicable in the case of elacin?" The competition is open to the whole world. The adjudicators are Professors Hayer, Krause, and Stohr. Each essay, which must bear a motto (the name and address to be enclosed in an envelope bearing the same motto) must reach Leopold Voss, Hohe Bleichen 34, Hamburg, by December 1st, 1898.

MIDWINTER "BRIGHT" SUNSHINE.

MR. CHARLES ROBERTS, F.R.C.S. (Eastbourne), writes: As the annual records of bright sunshine do not help us to determine its seasonal prevalence, the following table, drawn up from the weekly records of the Meteorological Office by our borough meteorologist, will show its values at the time of year when it is most required for invalids at our seaside health resorts. It is for the ten weeks ending February 19th.

	Hours.		Hours.
Eastbourne	158.5	Llandudno...	134.6
Hastings	157.2	Scarborough	114.1
Ventnor	146.8	Margate	111.1
Falmouth	146.5	Isle of Man	94.3
Brighton	141.1	Southport	92.3
Torquay	140.3	Blackpool	91.3
Scilly Isles	136.8	London	52.1

Bournemouth, no records available.

ANTIPYRIN ERUPTION (SCARLATINIFORM).

DR. T. O'CONNELL REDMOND (Dublin) writes: On February 28th I was sent for to see A. F., aged 44. I found her in bed and apparently very ill, complaining of great weakness and nausea. Her face was swollen and intensely red, and the eyelids puffed; the redness extended over the whole body. At first sight it looked exactly like the vivid rash of scarlatina. However, the temperature (98°), pulse (100), clean tongue, and absence of sore throat, together with her age, decided against that diagnosis. To be safe, however, I isolated her, ordered a quinine mixture, and waited. Next morning the rash was gone, the patient had slept well, and felt in every way better. On March 3rd she was up and going about, but her arms were desquamating freely in white, branny scales. The history I got was: For some days previously to my seeing her she had felt somewhat ill, as if she had "a cold." She had not taken fish, fruit, nor any medicine recently. Going out on February 28th her headache increased, and she got a draught from a chemist. Almost within ten minutes after taking it she became quite sick and faint, vomited, and had to be sent home. She felt her "face and eyes bursting," and noticed that her skin had become quite red. The patient is positive that she had no rash or vomiting before taking the draught. The chemist told me that he remembered the patient coming and asking for something for a headache. She looked ill, but not particularly red (she is naturally florid). He gave her 10 grains of antipyrin, with a little tincture of cardamoms and water.

*** Several cases resembling this in many respects were published in the BRITISH MEDICAL JOURNAL some years ago.

FOREIGN BODIES SWALLOWED.

DR. H. COOPER ROSE (Maida Hill, W.) writes: During my practice of over forty years in Hampstead of course many cases came before me of foreign bodies having been swallowed, chiefly marbles, buttons, and halfpennies. The usual "stuffing" diet, followed by a dose of castor oil, invariably succeeded in removing them. Two cases however I think worthy of record. One was that of the wife of a publican who lay down on her back on a sofa and fell asleep. She was roused by a sense of suffocation. She then discovered that she had swallowed four front teeth on a gold plate furnished with sharp hooks of gold by which the plate was secured to the adjacent teeth. I feared the hooks would give trouble. A few days afterwards, however, when I paid my visit I was met with a cheerful grin, exhibiting her teeth *in situ* and with the declaration that they fitted as well as ever. The other case was that of a little boy of about 5 years, who, having been put to bed in his crib, unscrewed one of the brass nobs which are to be found at each corner of the crib, put it into his mouth and swallowed it, it having no doubt slipped down his throat. He screamed and told his mother what had happened. Upon examining one of the other nobs I thought it impossible that so large a substance having a large screw attached could have been swallowed by so young a child. An unsuccessful search was made for it, and in a few days the nob, screw and all passed, during which passing the child screamed with pain. No evil effects resulted.

COLD IN THE TREATMENT OF PNEUMONIA.

DR. THOMAS J. MAYS (Philadelphia), who has already published three reports of a collective investigation of the effects of local cold applications in the treatment of acute pneumonia, wishes it to be known that he is still pursuing the investigation, and will be glad if those who have tested this therapeutic measure will give him the result of their experience. Full credit will be given to each correspondent in the report which he hopes to publish shortly. His previous reports gave a record of 299 cases treated by cold, with 10 deaths, a mortality of 3.35 per cent.

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THE LUMLEIAN LECTURES
ON
THE PRINCIPLES WHICH GOVERN TREATMENT IN DISEASES AND DISORDERS OF THE HEART.

Delivered before the Royal College of Physicians of London, March, 1898,

BY SIR R. DOUGLAS POWELL, BART., M.D., F.R.C.P.,
Physician Extraordinary to Her Majesty the Queen; Physician to the Middlesex Hospital.

LECTURE I.

CLASSIFICATION.

THERE is, perhaps, no branch of medicine in which, notwithstanding much knowledge, the confidence of the practitioner is so easily shaken, and in which he is so apt to relinquish the courage of his opinions as in heart diseases; and there is none in which the public, who treat their hearts with too much respect and their nervous system with too little, require such firm and steadfast guidance at the hands of our profession.

In my endeavour to lay down the lines of treatment of heart disorders and diseases, I will first speak of such modifications of the cardiac functions as are the result of disturbed or even organically changed innervation of the heart and vessels, the heart itself being sound. Secondly, I must glance at similar disturbances of extrinsic sources as they affect an unsound heart. Thirdly, I will endeavour to group from a therapeutic point of view the intrinsic disablements and diseases of the heart mainly under the headings:

1. Of heart failure in acute disease.
2. Of cardiac overstrain.
3. Of chronic heart failure.
4. Of acute inflammatory cardiac affections.
5. Of chronic valvular affections of the heart.
6. Of ulcerative diseases of the endocardium.

In order to understand so far as it is at present possible functional diseases of the heart and to arrive at a point from which we may safely take further steps in their apprehension, we must have clearly traced in our minds the paths of direct and indirect cardiac innervation and the vasomotor nerve mechanism. It is impossible to isolate the heart from the vessels when thinking of its functional disturbance; we must look upon the cardio-vascular system as a whole. With considerable accuracy the blood may be said to be held in the grasp of the cardio-vascular tubes; that the blood current is maintained and directed by the rhythmic pumping action of the two ventricles and by the position of the valves. The tendency is for the muscular arterial system to evacuate all the blood into the lax and capacious venous system, but the due proportion of blood distributed to the arteries and veins is secured by the controlling action of the small vessels which regulate the flow through the capillaries.

NEUROSIS.

There are unquestionably a large number, perhaps an increasing number of people, who are morbidly conscious of their heart's action, indeed of the function of their cardio-vascular system generally or in particular parts. They feel disturbances, flutterings at the heart, throbbings, flushings, pallors of the surface or parts of the surface, or of particular organs, noises in the vessels about the head, and apart from, and in the intervals of these more definite sensations, they have a sense of their heart beating and appreciate sometimes a disorder, an intermission, or a faintness in its action. This condition, or group of conditions, and the thousand and one variations to which it is subject, is the result of purely nervous disorder. It occurs in people of both sexes, mostly young people between puberty and thirty, of nervous inheritance, or who have exhausted their nervous system in various ways by dissipation, excess of tobacco, alcohol, venery or over-pressure of brain work.

It is amongst the class of so-called "neurotics" that functional disorders of the heart so largely abound. A neurosis is a functional, as distinguished from an organic, disturbance in a nerve centre, and the disturbance is generally manifested as a hyperæsthesia.

A neurotic person is a person whose whole nervous system, and especially that portion of it known as the organic nervous system, is hypersensitive and abnormally within his cognisance. "Neurotic" is sometimes used as a term of reproach; it is often confounded with hysteria, which is indeed one of its lesser manifestations. It is a condition of nervous system sometimes acquired but more often hereditary, very widely prevalent even in our cold-blooded race, and which is perhaps a national characteristic in some brighter climates.

Although the attentive observer could at sight pick out from a crowd of persons the two or three neurotics present, he would be much puzzled to give his reason for so doing. Perhaps an indefinable alertness of the facial muscles, a quickly-changing expression, a mobile and slightly-contracted pupil, with increased sclerotic exposure, are the characteristic features. These persons have a quick circulation, a somewhat raised and variable arterial tension, their thermic centres are unstable, and temperature charts with them have to be discounted. Neuralgic affections are common, and amongst them and in their families will be found the other functional nervous complaints—migraine, epilepsy, asthma, hysteria, and the visceral neuroses so well described in this place by Professor Clifford Allbutt. From the social side they are delightfully pourtrayed in some of the stories of a Member of our College, under the pseudonym "Philip Lafargue."

FUNCTIONAL DISORDERS.

Functional disorders of the heart are sometimes due to a defect in the organ itself; more commonly they are caused by stimuli reflected from distant organs or parts, generally dependent upon morbid states of the blood, circulating through the heart or disturbing the centres of its nervous mechanism, an acquired or hereditary instability of the nervous system being often recognisable.

In endeavouring to lay down the lines of treatment of functional disturbances of the heart, we must hold in comprehensive review the vast tangle of circumstances which thus influence directly or indirectly the now sufficiently well-defined cardiac innervation.

In the following table I have endeavoured to summarise the causes of that want of stability which marks the function of the neurotic heart:

TABLE I.

Cardio-vascular neurosis. Definition: An increased sensibility and a disordered action of the heart and vessels, not dependent upon structural change.

Want of stability may be located in the cardio-vascular muscle caused by:

1. Malnutrition		Anæmia.
2. Defective metabolism		Fatty infiltration Retention of effete materials.
3. Morbid blood stream		Gout. Renal or liver inadequacy or surcharge. Anæmia.
4. Functional overstrain		Fatigue.

Want of stability may be located in the nervous system, and due to

1. Toxic influence		Specific pyrexias. Nicotine. Alcohol. Digitalis. Uric acid and its allies. Excessive absorption from ductless glands. Deficient absorption from ductless glands.
2. Reflex excitation or depression	Abdominal	Gastric. Renal. Intestinal. Hepatic
	Pelvic	
	Dental	
3. Direct excitation or depression	Emotional	Anxiety. Fear. Anger.
	Brain Disease or injury	Concussion. Compression. Meningitis. Cerebritis, etc.

CARDIO-VASCULAR HYPERÆSTHESIA.

The first degree of this condition, consisting of undue appreciation of the heart's action and the blood circulating through the vessels, is extremely common in nervous introspective people. The heart's action may be quite normal, but it is liable from slight causes to become paroxysmally excited and accelerated. The pulse tension is variable. I

have described instances of this degree of cardiac disturbances in a brother and sister whose father died insane, their mother of spinal paralysis, their grandmother was on the verge of insanity, and the brother highly neurotic; but alcoholic, social, tobacco excesses, and mental overwork will produce the same effect.

The next degree is that in which the heart's action is really oppressed to a point varying from a mere vague anxiety to a positive discomfort and onwards to the third degree, the acute suffering of angina. These persons may not be introspective, their attention is not concentrated upon their circulation, but is compelled thereto by actual discomfort or pain. The vague and ill-defined anxiety concentred about the heart, of which so many of these patients complain, is closely allied in character, and probably in mechanism, but in very mitigated degree, with that cardiac terror so characteristic of angina pectoris. The usual symptoms of increased arterial tension are present, and are to be traced to the usual causes of that affection—namely, mental shock, anxiety, hurry in work, sedentary lives, numerous and overlapping social functions, constipation, the threatening of a gouty storm, etc. There is no cardiac lesion necessarily present, although, as we well know, chronic high arterial pressure will in time lead to, and is often attended by, gradual cardiac changes of a degenerative kind.

It is from amongst the first two classes of cases, not distinct but merging into one another, here referred to that the cases of vasomotor angina come. It is not difficult to see how shock, chill, emotion, dyspeptic distension of nerve endings, and other causes, referred to in Table 1, may so increase arterial resistance as to cause cardiac embarrassment and anginal pains. Paroxysmal attacks of palpitation or tumultuous action of the heart are not uncommon incidents in connection with especially the second degree of cardio-vascular neurosis described, the attacks being attributable to sudden vasomotor relaxation or to vagus irritation from dyspeptic or gouty causes.

The first degree of cardiac hyperæsthesia is most common in young adult life in both sexes, but more common amongst males than females; cases are not infrequently met with in females later on about the menopause and even in later life. Those in the second category are far more common amongst males and prevail most from about 35 to 50.

The perverted physiology of neurotic disturbances of the heart and vessels is well understood, the paths of transmission are anatomically marked out, the causes of disturbances of central origin, those originating in irritation of visceral or peripheral nerve endings, the toxic effects of undue absorption from glands, thyroid, adrenal, ovarian, testicular, as well as those of retained excretory products, from defective elimination or over-production are all recognised as more or less potent factors in cardio-vascular disturbances; and finally the effects, immediate or remote of drugs: digitalis, atropine, tobacco, the whole range of hypnotics and analgesics, cocaine, antipyrin, phenacetin sometimes prescribed by the medical attendant, but sometimes taken without his sanction. It is very difficult precisely to formulate the harm done by amateur drug taking for pain, sleeplessness, and spasmodic suffering. It seems to me that it may be clinically summarised by saying that the controlling centres of the nervous system suffer chiefly, emotional disturbances are more easily excited, reflex agitation is less controlled, the cardio-vascular and thermic centres are diminished in tone. No doubt those innocent and attractive little bottles of tabloids which are so freely scattered on the toilet tables of society have much to do with the increase of the neurotic disturbances of the heart and vessels, which unquestionably is a medical feature of the present generation. A neuralgia which in former days necessitated the called-for nerve rest is now promptly subdued by a dose and the patient is enabled thus to take a further step in nervous fatigue without direct suffering.

Neurotic persons as a class take too little food, are always hurried over the meals and in the details of life; they eat too fast, and have a tendency to exceed in nerve stimulants—tea, tobacco, alcohol, and certain drugs—or they find their excitement in social entertainments.

It is in all cases essential to make a thorough examination of the heart, and to come to an absolute diagnosis, for the treatment rests largely on moral grounds, and must be supported if possible by an assurance of physical soundness. If on careful examination the position and dimensions of the heart be found normal, and the character of the impulse and sounds be such as are not incompatible with textural soundness of the valves, an absolute opinion can be expressed. There is undoubtedly room for anxious consideration and hesitation in regard to the character of the impulse and sounds of the heart in many of these cases, for the impulse is often violently increased and apparently extended by undue locomotion of the organ, and the sounds are perhaps disorderly, reduplicated, and not infrequently attended with murmurs. Still, a careful investigation, selecting a time when the action is more tranquil, will in most cases suffice to convince the experienced observer as to whether such sounds are significant of organic disease or compatible with mere disorder. Functional murmurs do not strictly accord in position and conduction with those due to valve defects. Any such murmurs present are always systolic or post-systolic, often somewhat frictional in character; never, in my experience, diastolic or presystolic, and most generally are heard with undue loudness over the neck vessels or sometimes are very apparent over the lung, even remote from the heart, and especially so during inspiration. There is no history of rheumatic fever or of previous heart disease.

If the patient who suffers from any disturbance of the heart's action, whether it be mere abnormal consciousness of its action or the most severe palpitation or anginoid attacks can be truthfully assured that there is no organic lesion, that his troubles, however painful or distressing, are not mortal, a most important step is taken in the treatment. On the other hand, we have most of us seen patients whose lives have been rendered miserable with the ever present fear of death owing to a hasty and ill considered diagnosis of a weak or a dilated heart, a diagnosis that should never be made without the gravest sense of responsibility, and requiring in some cases more than one careful examination.

Having come to a diagnosis, and reassured the patient with regard to prognosis, the next point is to investigate the patient's mode of life. A sample day's doings, noted down and corrected here and there as the case may demand, is an elementary measure of treatment. The removal of the morning cup of strong tea, or its replacement by a small cup of warm milk diluted with Vichy or other water, the arrangement by rising a little earlier for a leisurely breakfast and time for a proper relief of the bowels before entering upon the day's work, the avoidance of rush at the luncheon hour, and the securing of a quiet hour before dinner will, with a few sensible directions with regard to the dietary, do much to render digestion more complete and quiet the nervous system. Many of these people have really but little to do, but they are always in a hurry about it. Another considerable portion who earn their daily bread and support their familes by hard and exacting toil are yet impelled by their nervous energies to occupy all their leisure evenings, off afternoons, and Sundays with honorary secretarial duties, or teaching, or amateur philanthropy, all duties which with a heavy heart but a determined mind the physician in these particular cases has to prune down in order that they may continue to do that which is essential for themselves and their families.

But there is yet another class of men, chiefly in the forties and fifties, who in earlier years have been physically active, even athletic, but of late with quadrupled professional business, domestic and social affairs on hand, have lost leisure for exercise yet preserve their powers of eating and drinking as regards quantity but of enriched quality. All such tend to venous plethora, retarded circulation in their great organs, heightened blood pressure, fat-laden and infiltrated heart, and from them a large contingent of functional heart disorders are furnished. These are the cases in which a yearly course of the waters of Harrogate, Homburg, Carlsbad, Marienbad, etc., are so valuable, and in which the *terrain cur* of Oertel is to be advocated; but a little wise overhauling of the dietary by the physician, the resolute acceptance of such by the patient, and the adoption of steady daily exercise dovetailed in with the work, will do much to perpetuate cures thus initiated. Their hearts are lazy and hampered, not weak; they require sensible guidance not to have cardiac introspection as an administered neurosis.

Having (1) given an absolute diagnosis, and (2) having in-

vestigated and corrected the habits of life in whatever respect they may be faulty, we have (3) to ascertain and remove, or at least to treat, the exciting causes of cardiac disturbance. These are for the most part reflex, gastric, intestinal, rectal, renal. I have seen very striking instances of floating kidney attended with great functional disturbance of the heart, and sometimes also pulsation of the abdominal aorta. Exostosis, bad teeth, and other sources of distal irritability, are frequent causes of disturbed cardiac innervation. Dr. Clifford Allbutt, in his Goulstonian Lectures, alludes to many cases of cardiac attacks of a functional kind, with very slow, quick, or intermittent action, and in some with distinct anginal symptoms, which he has observed to occur in connection with, often in succession to, or alternately with, some form of visceral neuralgia, especially gastralgia or some uterine disturbance, such as menorrhagia. No doubt in many of these cases the neurosis is really central. Dr. Allbutt points out that pulmonary gastric and cardiac neuroses are often concurrent in families, and I have seen a striking instance in which they have each been present at different times in the same individual. Here it is clear that we have to do with a central neurosis manifesting itself in different viscera at different times. Dr. Allbutt is, moreover, careful to point out that in his cases of cardiac disturbance following gastralgia there was no dyspepsia proper.

The causes of high tension other than those mentioned must be looked for, and if possible treated. The gouty disposition has o be reckoned with. In this department of inquiry and rtectification will come the causes of those conditions of the heart muscle which, rendering the organ especially irritable and inadequate in function, are accountable for breathlessness, palpitations, and spurious anginal seizures. Fatty infiltration of the intermuscular texture and incomplete removal of waste materials from the cardiac muscle briefly constitute the pathology of these cases, and their etiology chiefly consists in indolent, self-indulgent living, including rich and too plentiful food, often alcoholic excess and too little exercise, the other chief cause being the cessation of h æmorrhagic or other fluxes which attend the climacteric p[e]riod of life. Venous plethora is the marked feature in all these cases, and graduated exercises, restrictions in diet, and hepatic depletory medication are the principal measures of treatment. The diet should in these latter cases be carefully looked to. It should be spare, slowly eaten, taken at regular meal times only, and may consist of a good breakfast, a moderate amount of fresh-cooked meat, without fat, for luncheon, and poultry or game for dinner, with fish and a little soup. Starchy and root vegetables and bread should be removed, or only very sparingly allowed with the lunch and dinner meals, crisp toast or biscuits being substituted for bread. The amount of fluid taken with the meals should be restricted in decided cases to a claret glass with luncheon, and two glasses with dinner. This may consist of one or other of the light wines, or diluted spirit in measured quantity. About an hour to two hours after, or half an hour before meals a glass of plain hot water should be slowly sipped to supplement the fluids taken.

In the more pronounced cases the passive exercise and soothing monotony of a well-planned sea voyage is sometimes very advantageous, only, however, for those who are able to eat and sleep well on board ship. The restful *régime* of a spa suits others, the particular spa being selected for its chalybeate or its eliminative effects as the case may require. The more formulated treatment by surface stimulation from aërated saline baths combined with rest and passive resistance exercises prove very beneficial in some cases, more particularly those in which there is a gouty element, the arterial tension ranging high and nervous introspection not being too marked a feature. A definite course of spa treatment is often useful, indeed sometimes essential, in serving the purpose of inculcating the habit of self-discipline.

Drugs are, of course, often required in the treatment of functional disturbances of the heart, purgatives or laxatives, and particularly an occasional mercurial to lower arterial tension and to remove irritating materials. Sometimes nerve sedatives of the bromide order, often hæmatinics, especially arsenic and iron, as tonics to the nervous system and blood restorers. Strychnine is often very badly borne by patients of the neurotic class, except perhaps for short periods, and where a cardiac tonic is required caffeine is more appropriate. In cases of venous plethora a course of salines is sometimes necessary, and in gouty cases suitable remedies.

Functional disturbance, similar in kind to those we have been considering, is as frequently observed in association with diseased as in healthy hearts, and many of the troubles and some of the catastrophes of cardiac disease are attributable to functional derangement. Numberless people die of functional disturbance of a diseased heart; few, or none, die of functional disturbance of a sound heart. Hence the importance of a definite diagnosis in every case as to which category it belongs.

Treatment of Angina Pectoris.

The etiology and morbid mechanism of angina pectoris are difficult enough to formulate with regard to prophylactic and remedial treatment. The difficulties diminish when we recognise that there is a continuity in the phenomena presented to us for treatment from the slighter degrees of introspective recognition of the cardio-vascular mechanism, through the more distinct evidence of cardiac anxiety and distress in connection with the higher and more persistent grades of arterial tension to the paroxysmal attacks of acute breast pang associated with a veritable asthma of the blood vessels which may supervene in any cases of the series; and this continuity is to be observed between so-called false and true angina, although some authors will not admit the term angina except as applicable to the fatal cases of coronary origin.

In a large proportion of cases angina pectoris is an entirely functional disorder, the main feature of which is sudden increase of blood pressure and a correspondingly sudden call upon cardiac effort; it may be on the systemic, it may be on the pulmonary, side of the circulation that the strain arises. The causes of this arterial spasm are almost all within our scope of remedial treatment, and the neurosis that favours its occurrence is subject to considerable modification and control. In all these cases whilst it is the heart that suffers the angina, the conditions which originate that suffering are outside the heart. There is no essential difference save in degree, and not always in degree, between cases of angina in which the heart is sound and those in which it is unsound, but there is every difference in the gravity of prognosis and the urgency for treatment. The cause of distress is contraction of the peripheral or general visceral or pulmonary vessels, giving rise to muscular strain of one or both cardiac ventricles suddenly induced and of a cramp-like character.

The cardiac pain in vasomotor angina is difficult to explain satisfactorily; it is distinctly a result of intraventricular pressure, and from its character and radiation it must be primarily an affection of the sensory nerves of the heart caused by stretching of its tissues, so that the contraction of the tissues is attended with pain. The endocardial surface is more sensitive than the pericardial surface, but comparatively insensitive tissues when stretched become very painful. Dr. Allen Sturge observes that reflected pain is only an ordinary sensation conveyed to a nerve centre in commotion, by which it is intensified to a painful sensation. Thus may the reflected pains be accounted for as emanating from the centres disturbed through the cardiac nerves. On the other hand, we have only to conceive a slight degree of hyperæsthesia of the organic nerve centres to account for that undue perception of the cardio-vascular mechanism which is the first grade of neurotic disturbance, and which can readily become a painful perception of increased pressure within the heart.

The pain, which is to a certain extent the measure of the strain upon the heart, is to be attacked by remedies which relax arterial spasm. Amyl nitrite, nitro-glycerine, and the nitrites generally, but especially nitro-glycerine (1 min. of the 1 per cent. solution), may be given at intervals of five minutes for 2, 3, 5 or more doses, and at the same time that the antispasmodic is given an appropriate cardiac stimulant is required. In the more purely neurotic cases it is most desirable to avoid alcohol. There is no better stimulant than slowly sipped hot water. Dr. Brunton has pointed out that sipping is a physiological stimulant to the heart, and hot drinks tend to relax arterial spasm. A prescription for a carminative draught, including

ammonia, chloric ether, and valerian or cardamoms, is valuable to be taken in several sips. Warmth to the surface, and especially to the extremities, are the further requisites.

The second stage of these cardio-vascular attacks is one of reaction and excitement, to be followed by fatigue. Often by the time the medical observer arrives the cardiac pressure has already been relieved through the depressor nerve of the heart excited by intraventricular pressure bringing about relaxation of arterial spasm, the first violent throbbing or the threatened standstill of the heart has already yielded to quick, perhaps somewhat irregular, beats, the tension of the pulse is no longer apparent, and this fact has no doubt led many observers to question the alleged mechanism of this form of angina. With a few hours' rest in bed the patient may again be fit for the duties of life, although usually a sense of lassitude and fatigue remains for a few days. It is now that the cause of the attacks must be sought out, the conditions of the heart carefully ascertained, and the daily life, diet, and surroundings and functions of the patient must be investigated and corrected where in error.

If there be no heart disease present, the patient must be thoroughly reassured on that point; but if heart lesion be present, much more attention must be given to the after-treatment, and the prognosis depends upon the nature of the lesion present. I would briefly say that the gravest cases are those in which there is enlargement of the heart without, or not accounted for by, valvular defect. I would mention the fibro-fatty heart, the syphilitic heart, the renal heart in this category. Aortic stenosis and aortic regurgitation come next, the regurgitant defect being by far the most common. Mitral stenosis is not infrequently attended with anginal seizures, sometimes of a fatal kind, and the attacks would probably be more frequent were it not for the readiness with which pulmonary hæmorrhages occur. Mitral regurgitation as the primary disease is rarely accompanied with angina, and when it supervenes on cases due to degenerative hypertrophy and dilatation it tends to preserve the patient from future attacks. On all these cardiac conditions anginal attacks may supervene, having precisely the same mechanism as the attack unattended with cardiac disease. It is most important to bear this in mind, for the treatment is precisely on the same lines, only it must be more urgently pursued.

The initial treatment may be started with nitrite of amyl inhalation, and the patient should always have the drug at hand. But the attack is commonly attended with such acute heart failure that the clinical features of high pressure pulse and labouring heart may be immediately lost. Undoubtedly, the subcutaneous injection of pure ether, to which a minim of nitro-glycerine solution may be added, if not already otherwise taken is the best treatment in severe cases if caught at the right moment. The sense of prostration is greater and more defined in these cases. Alcoholic stimulants, so much to be avoided in pure vasomotor cases, are in these imperative. A full dose of brandy should be given in some hot drink. In those cases, and they are many, in which flatulent distension forms a marked feature of the attack, if it be not concerned in producing it, a draught of ether, ammonia, soda, cardamoms, and spirits of chloroform is of much service at the earliest stage.

The heart is left in an exhausted or fatigued condition after the attack, and there is a decided tendency to a series of several attacks. For this a mixture of strychnine or caffeine may be prescribed with digitalis, so that 15 or 20 minims of liquor strychninæ and 20, or 30, or 40 of tincture of digitalis are given in 24 hours, and the strychnine may be given subcutaneously in, of course, equivalent doses, or the caffeine in the form of salicylate. It is probable that digitalis and strychnine influence the heart muscles before that of the vessels, but if the pulse become tightened, as it may be in exceptional cases, the digitalis must be lessened or its effect on the vessels moderated by the addition of ½-minim or 1-minim doses of nitro-glycerine to the prescription. There is another remedy which is a powerful restorative to the fatigued heart, and that is oxygen inhalation, which may be given for five or ten minutes every hour or two or three hours as may be required.

These cases often come to us with a history of a recent attack, and we have to consider what form of angina it has been, how to avert fresh seizures and how to repair, if it may be, the failing heart which renders each attack so dangerous.

The presence or absence of heart disease must be rigorously ascertained:

1. The soundness or otherwise of valve function.
2. The presence or absence of enlargement, dilatation, or hypertrophy of the organ.

It is important not to form too hasty a judgment, and it is often impossible to come to a final diagnosis at or immediately after a seizure. In tumultuous action, whether from excitement or violent work, the locomotion of the heart is greatly increased, and an inexperienced observer is apt to find great enlargement, displaced apex beat, etc., when none exists. On the other hand one hears it sometimes maintained at inquests and the like that considerable organic disease of the heart may exist without any recognisable signs. I would venture to say that a careful investigation of the sounds and dimensions of the heart will always establish in such cases a displaced apex beat, an increase in the dimensions, or a recognisable alteration in the sounds of the heart. The converse is, however, frequently true, namely, that much alteration in the heart is conceived to be present when none exists. It requires great precision and diagnostic courage to prove a negative, and in the presence of functional disturbance and discomfort and anæmic *bruits*, mistakes in diagnosis are very frequent and easily made.

With mitral regurgitation of rheumatic origin, high tension pulses do not often supervene, but mitral insufficiency is frequently a sequel to the dilatation of the heart consequent upon chronic high tension and secondary cardio-vascular changes, and under these circumstances it is undoubtedly a safeguard against over-distension of the ventricle. I have seen cases in which the establishment of mitral incompetence has produced a cessation of anginal attacks which had previously occurred from time to time. In senile hearts mitral regurgitation is common, and is not to be looked upon seriously, but rather as a favourable element in prognosis, a condition normal to the senile heart.

TACHYCARDIA, BRADYCARDIA, EXOPHTHALMIC GOITRE, ETC.

Neither reading nor a considerable experience of cases has brought me to an exact appreciation of the mechanism of that persistent hurry of the heart's action which is known under the term—a term which responds well to our ignorance—tachycardia. The chief features of the cases may be briefly enumerated:

1. A persistent hurry of pulse lasting for periods varying from hours to many weeks, during which the pulse is rapid, from 120 to 200 or more, regular, small, of sustained, I should say, rather than of high tension.
2. Intervals of severe palpitation, attended with precordial pain, notable distress, and more tumultuous irregular action of the heart.
3. Although murmurs may be heard and the cardiac dulness may be broadened during attack, in the intervals the dimensions and sounds of the heart may in the earlier stages be perfectly normal.
4. In the earlier stages and in the most typical cases the heart hurry has been observed to begin and to finish quite abruptly. This was so in Dr. Cotton's case and in Sir T. Watson's, in the latter the pulse suddenly changing from 216 to 72, with subsidence of all symptoms whilst that physician was still in the room.
5. So far as any exciting cause can be stated, it has been for the most part mental shock, mental or physical overstrain.

The above characteristics are sufficient to show, were demonstration needed, that the condition is a pure neurosis, and that the neurosis must be either of the vagus or sympathetic cardiac centre seems fairly certain. It is inconceivable that a paralytic affection of the pneumogastric centre should be so persistent, should be attended with a regularity of rhythm so generally notable, and should be capable of such abrupt termination as is observed in some cases. The view of sympathetic excitement is perhaps better supported by other phenomena of sympathetic irritation, such as sweatings and flushings of the face. No autointoxicant can be recognised in most cases. It is worthy of remark, on the one hand, that many people, especially women, suffer from persistent hurry of heart, coming quite within the range of the lower degree of tachycardia, and, on the other, that there is nothing to distinguish simple tachycardia from that which is the constant symptom of exophthalmic goitre, the rhythm and quality of pulse being precisely the same. It is also to be remarked that there are cases which might be regarded as of a transitional kind, in which, with no enlargement of the thyroid, and with no more than a slight beadiness of the

eyes, there are present the characteristic hurry of circulation, cardiac murmurs, etc., and in other cases again these circulatory phenomena precede the thyroid enlargement.

For the present the exact meaning of tachycardia must remain unsolved, and we may associate it with some other clinical facts, such as persistent elevation of temperature and unexplained continued elevation of arterial tension, the morbid physiology of which is not yet apparent.

The theory of exophthalmic goître maintained by Moebius, Johnston, Greenfield, Murray, and others, that it is due to an excessive formation and absorption of thyroid secretion and its action on the nerve centres in the medulla, is useful if only as a working hypothesis. This hypothesis has been suggestive of certain measures of treatment that have been devised for exophthalmic goître, and more successfully for its opposite myxœdema. It would appear to be at least approximately true, although probably some central medullary change precedes the thyroid phenomena, and is responsible for them. Some regard the thyroid secretion as modified and having toxic effects. It is based upon certain very definite observations, namely :

1. That no definite lesion of nerve centres has been found.
2. That the thyroid is the organ more obviously affected than any other.
3. That its structure is altered in the direction of hypertrophy and over-activity of function, and possibly there may be some alteration in the quality of the secretion (Moebius, Murray, Jeffrey).
4. The symptoms tachycardia, nervous irritability, insomnia, and vibratile contraction of voluntary muscles, are the reverse of the bradycardia, torpidity and impaired reflexes characteristic of myxœdema, consequent upon atrophy or excision of the thyroid.
5. Whilst moderate doses of thyroid extract will cure or keep in abeyance the phenomena of myxœdema, an overdose of the extract will produce symptoms resembling those of exophthalmic goître.

There has as yet been found no direct means of treating simple tachycardia successfully. The digitalis class of drugs are useless in this, as in almost all cardiac neuroses, except, and the exception is important, in the treatment of the heart fatigue which sooner or later ensues as a consequence of the functional strain upon the organ. Tachycardia in its various grades is, however, often but a symptom, a prominent expression, of a neuropathic state which requires to be approached for treatment from many sides.

In exophthalmic goître again, having made the diagnosis, the physician has to deliver himself of the somewhat magisterial sentence "imprisonment for six months and under surveillance for from two to five years." The rest for the first six months should be absolute on bed sofa, or on a couch in the open air, with the utmost avoidance of all excitement and mental fatigue. The patient can then be promoted to bath chair exercise, quiet walking and driving, or more scientifically graduated exercises, and in the course of time recovers. The general well-being of the patient can be maintained, and the more distressing local and general symptoms relieved or removed by cold applications to the throat, sedatives of the bromide and valerian order, arsenical and sometimes iron tonics; digitalis and the like drugs may be given on the appearance of heart fatigue, indicated by the signs of dilatation and a pulse irregular in time and force. In the treatment of the tachycardia, apart from heart strain, digitalis is of little value. The use of thymus extract is, in my experience, of some value in diminishing the rapidity of the pulse; the galvanic current has been found useful in some cases. Theoretically, the Nauheim brine baths should be useful, but practically I have seen no good from them, at least in the more acute stages. The treatment of constipation and proper dietetic support are all matters of great importance under the enforced quietude of the patient.

Operative treatment by partial extirpation of the thyroid gland has been rather extensively tried, as has also section or partial resection of the sympathetic nerve in the neck. Mr. Treves has recently given some instructive illustrations of the fact that any surgical operation will in a certain proportion of instances, in some manner unknown, modify, perhaps even cure, a pure neurosis. The partial removal of the thyroid gland in the acute stage of the disease is attended with very considerable danger and only very inadequate success.

The best cases were those of Paul of Liverpool, but of his six cases recorded in the British Medical Journal for 1897, all except one were of more than two years' standing. Abadie and Faure (*Prog. Médical*, 1897) have had successes from section or ablation of the cervical sympathetic, but, of Faure's three cases, one was of twelve years' standing, and in the others the duration is not stated. Doubtless the section of the sympathetic will slow the heart, but it has not yet been satisfactorily shown to influence the disease, and one would regard with some misgivings the future of a heart deprived of due sympathetic innervation, whilst it is clinically remarkable how well the heart comes out of the long struggle, but little damaged when the patient has been carefully steered through by judicious handling. It sometimes happens that a disfiguring enlargement or a more serious distortion of the thyroid remains after the tachycardial symptoms have subsided, and in one instance I have seen this condition dealt with very successfully by removal.

Bradycardia.

One form of bradycardia is that which sometimes follows upon the rapid heart of exophthalmic goître. It is very commonly associated with well-marked myxœdema, and may continue notwithstanding that the disease has been cured or held in check by thyroid treatment. I have seen it in epileptics, in which case the rhythm is not only slow, but generally irregular. As a temporary condition bradycardia is not infrequently met with as a sequel to influenza, and also in association with the stage of depressed temperature that frequently follows upon other fevers. In the influenzal cases that I have seen it has been associated with a very high density of urine with great surcharge of urea, as though there had been some previous accumulation, the urine becoming solid with crystals on the addition of cold nitric acid. Spurious anginal seizures are sometimes observed under these circumstances, but I have never known them to prove fatal, although of course in the presence of any previous heart disease they might readily prove so.

Chronic high arterial tension is generally associated with a slow, sometimes a very slow, pulse, whereas in acutely raised tension the heart's action is, as I have pointed out, generally quickened.

In chronic bradycardia, a condition that tends to remain permanent, and does not necessarily shorten life, an occasional twenty-four hours' rest in bed should be enjoined, and for mental work the recumbent posture should be preferred. In cases of a more temporary kind the combination of strychnine with an alkali or iodide of potassium (the two drugs being kept in separate bottles, and only mixed at the time of taking) is a very useful one. Caffeine is also very useful, especially where the urine is scanty. A five minutes' whiff of oxygen three or four times in the twenty-four hours is a valuable cardiac stimulant. In cases of myxœdema thyroid extract will be given, but it is not wise to push it to the production of any excitement of circulation.

THE HUNTERIAN LECTURES
ON THE
SURGERY OF THE KIDNEY.

Delivered at the Royal College of Surgeons of England,

By HENRY MORRIS, F.R.C.S.,
Surgeon to the Middlesex Hospital.

LECTURE I.
ON THE ORIGIN AND PROGRESS OF RENAL SURGERY AND THE CONSERVATIVE TENDENCY OF ITS RECENT DEVELOPMENT.

Mr. President and Gentlemen,—In selecting the subject for the lectures, which by the grace of the Council I am about to deliver, I was influenced by the fact that "renal surgery," though it has attracted a good deal of attention amongst surgeons during the last twenty years, has not yet received the general recognition by the profession at large to which it is entitled, nor has it hitherto been the theme of any Hunterian professor.

I propose in this lecture to describe briefly the origin, and then to trace the progress, of this quite modern branch of surgery.

History.

In the sixteenth, seventeenth, and eighteenth centuries the practicability of nephrotomy was repeatedly discussed by Camerarius and Francois Rousset in 1581; by Shenck in 1584; by Jean Duclédat and Cousinot in 1622; by Riolan also in the early part of the seventeenth century; by Von Hilden in 1646; then a century later by de Lafitte in 1753, Borden in

1754, MM. Hévin and Ledran in 1757; and later still, namely, in 1829, it found a very ardent supporter in P. N. Gerdy,[1] the professor of anatomy and surgery in Paris, who, in a footnote to his lectures on anatomy to artists, refers at considerable length to the subject in all its aspects.

Various physiological experiments upon animals to show that life could be well maintained after removing one of the kidneys were undertaken by Zambeccarius[2] about the year 1670, and Roonhuyzen[3] in 1672.

Blancard[4] in 1690 expressed the opinion that extirpation of the kidney would give a fair prospect of success in patients suffering from renal calculi, and who could not obtain relief from any other treatment.

In the first years of the nineteenth century (1803) Comhaire[5] was repeating the experiments of Zambeccarius with the object of proving that nephrectomy was possible.

Renal incisions are said to have been practised by Cossé,[6] by Jean Beverovicius and others, upon kidneys greatly distended with pus. The cases of the archer of Meudon, of the British consul at Venice, and others, which had found their way into surgical literature, may be dismissed in the words of M. Hévin,[7] who wrote in the year 1757, "it is very doubtful, if not absolutely improbable, that cutting into the kidney had ever been practised without the operation having been determined by an abscess swelling; or by a fistula due to renal abscess which had broken and discharged in the lumbar region."

None of these cases had any influence in encouraging surgeons to operate upon the kidney, and no surgical treatment for any kind of renal disease was systematically employed until the second half of the present century had well advanced. As M. Le Dentu has said, it needed more than a century to overcome the interdiction of Hévin against incising the sound kidney, an interdiction which seemed to carry with it the force of the law.

Nor can we regard the cases of unintentional excision of the kidney (that is, diseased kidneys removed on a wrong diagnosis and in ignorance of the nature of the tumour operated upon) as assisting in establishing nephrectomy as a recognised surgical procedure.

At least four of such mistaken operations had been performed before Simon's first nephrectomy; these were by Wolcott in 1861, Spiegelberg in 1867, Schnettelig,[8] and Peaslee in 1868.

All were followed by fatal results, and for this reason would not have been encouraging to Simon, even if he had known of them, which intrinsically it is not probable he did.

NEPHRECTOMY.

The dawn of renal surgery admittedly dates from August 2nd, 1869, when Gustav Simon, of Heidelberg, removed by the lumbar method the kidney of a woman who had a ureteral fistula opening upon the abdominal wall above the pubes, and following on ovariotomy done one year and a-half before. Simon performed his operation in face of the pronouncement long before made by Rayer that it was "madness to dream of extirpating a kidney in the human subject." He no doubt was aware of the experimental results of Prévost and Dumas (1823), of Claude Bernard, Rayer, Meissner, and Shephard, all of whom established the fact that animals could live with only one kidney. For himself, he compared the result of fifteen hysterectomies with fifteen nephrectomies, practised on animals, and was satisfied that there was no more danger from a surgical point of view in the one operation than in the other; and at the same time he convinced himself that the physiological changes effected by the kidneys could be amply performed by one after the ablation of the other organ. The cynic might remark that the same fact had been demonstrated over and over again in the *post mortem* room in the bodies of persons who had lived with one kidney, the other having been absent or long ago atrophied; but that is not the same fact. What was wanted was the assurance that one kidney could do the work of both, after the shock of so severe an operation as nephrectomy.

These experiments on animals led Simon to resort to nephrectomy in the human subject, and the result of his first operation upon women justified his deductions drawn from experiments on animals.

Rather more than a year after Simon's case, Gilmore, in America, followed (December, 1870) with a very successful nephrectomy for a painful, shrunken, fibrous kidney in a woman five months pregnant, and who recovered without a miscarriage. After this came Simon's second operation, performed in August, 1871, for calculous pyelitis, but the patient died of pyæmia on the twenty-first day.

Then came two fatal operations, one for painful kidney by Durham, and the other for calculous pyelitis by Peters, of New York, both in 1872. Next, two successful ones for injuries by Brandt in 1873, and Marvaud in 1875. Next, four operations for malignant disease, two successful, namely, one by Langenbuch in 1875, and one by Jessop of Leeds, in 1877; and two fatal, both by Kocher, in 1876 and 1877. In 1878 Martin followed with four successful nephrectomies for painful floating kidneys, and thus confirmed Simon's first experience and Brandt's result, namely, that a quite healthy kidney might safely be removed.

In England the first nephrectomy was performed by Arthur E. Durham on May 14th, 1872. The next, that just referred to, by Jessop, and the third by Barker.

Barker, who had made himself thoroughly familiar with Simon's work, read two important papers before the Royal Medical and Chirurgical Society; one in March, 1880, the other in April, 1881. He therein tabulated all the nephrectomies done up to those dates, and thus brought the whole subject of extirpation of the kidney before the notice of British surgeons, who till then, for the most part, were quite unfamiliar with it.

In France, where the earliest and most ardent advocates of nephrotomy had lived, nephrectomy was for several years either neglected or opposed. It was not until May 20th, 1880, nearly eleven years after Simon's successful initiative, that M. Léon Le Fort practised the first nephrectomy done in France. This was performed on account of a very rare form of injury—namely, a penetrating wound by a knife, which completely divided the ureter.

NEPHROTOMY.

Nephrotomy is the operation which had received most consideration in past times, especially in its bearing on the treatment of renal calculus disorders; but it was not, in all probability, ever systematically put into practice until 1870. Previous to 1870 fluid swellings, believed to be of the kidney, had been punctured, and opened by the thermo-cautery; and perinephric abscesses had been incised through the loin.

On April 27th, 1869, three months before Gustav Simon's first nephrectomy, a paper was read by Mr. (now Sir) Thomas Smith, describing a method for exposing the kidney through the loin. This he recommended for diagnostic purposes, and for the extraction of a calculus, if of suitable size and shape, and capable of removal through the renal pelvis; but not if fixed in the substance of the kidney, or if its removal entailed cutting into the normal secreting structure. Though the author had no actual case of his own to record, and advocated nothing more than had been recommended on several occasions during the two preceding centuries, there can, I think, be little doubt that his paper, coming when it did, influenced the minds of surgeons to a degree which previous similar suggestions had failed to do. In July of the same year (1869) Annandale, and in January, 1870, Spencer Wells,[9] also wrote advocating nephrotomy in some cases of renal calculus. These articles, together with Simon's success, were all factors leading up to the application of nephrotomy to a class of case for which no one had as yet, so far as our absolute knowledge goes, suggested it—namely, for cases of renal calculus in a kidney otherwise normal.

In 1870 Bryant performed nephrotomy for tuberculous pyonephrosis, but at too late a stage to save his patient, and in the same year Gunn and Durham each cut down upon the kidney; and Lente and Barbour each cut into the kidney with the object of removing calculi, but none were found. All four patients recovered.

During the next ten years, 1870-80, nephrotomy was done in some half-dozen cases—according to Dickinson's tables—in each of which there was a large pyonephrosis, more or less pointing at the loin, and in four of these calculi were extracted.

NEPHROLITHOTOMY.

No further advance, however, was made in the operative

treatment of renal disorders till February 11th, 1880, when I successfully removed a mulberry calculus weighing 31 gr. from the undistended, and to the naked eye quite normal, kidney of a young woman. The kidney was exposed through an oblique lumbar incision, and the stone reached and removed through the renal parenchyma.

At that time I was unfamiliar with the attempts of other surgeons except Durham, whose exploration of the kidney, however, was not a nephrotomy at all. Nor did I then know that the name "nephrolithotomy" which I suggested for the operation I had performed had been used by Hévin more than a hundred and twenty years previously. I was led to undertake the operation in this particular case by the extreme severity and persistency of the symptoms, and by the little fear I felt about hæmorrhage from the cut renal parenchyma, on account of my previous experience of the trivial and easily-controlled bleeding from the cut surface of the liver in operating for hydatid tumours.

This case demonstrated for the first time that a stone could be removed safely by cutting freely upon it through a thick layer of renal tissue. It thus became the starting point of both the development and the conservatism of renal surgery, which I am persuaded will become more and more conservative in the future.

The second nephrolithotomy was performed in August, 1881, by the late Mr. Marcus Beck, who removed a calculus composed of uric acid and phosphates weighing 26 gr. through an incision in the renal substance. Then followed cases by Mr. Butlin, who extracted an oxalate of lime calculus weighing 60 gr. by scratching through the renal pelvis; by Mr. Bennett May; by myself and other surgeons; and in the list of my operations for removal of renal calculus by nephrolithotomy I am able to show 34 operations, with recovery in 33 and death in 1 of the cases. These results disprove the supposed dangers of nephrolithotomy, and show the invalidity of the objections which in all previous times had been urged against the proposal to operate upon a kidney not already converted into a mere abscess sac.

Nephropexy.

Fourteen months after the first nephrolithotomy Hahn of Berlin introduced an operation at first called "nephrorrhaphy" and afterwards by the French writers "nephropexy," for fixing movable kidneys. This consisted in an incision alongside the sacro-lumbalis muscle (such as the old writers advised for nephrotomy and Simon had employed for nephrectomy) from the twelfth rib to the crest of the ilium; the quadratus lumborum was cut, and the fibro-fatty capsule of the kidney opened along the outer border of the kidney; the fibro-fatty capsule was separated to some extent from the kidney and dragged forcibly backwards into the wound along with it. By means of six or eight catgut sutures this capsule was stitched into the wound and the wound itself plugged with carbolic gauze.

In his account, published in July, 1881, Hahn describes two cases thus operated upon by himself in April of that year. The patients were both women, and recovered in four weeks with the kidneys as securely fixed in their attached position as immediately after the operation.

This was an important advance, because it at once had the effect of putting a stop to nephrectomy for movable kidney which had been recommended and practised by Martin of Berlin in 1878. The importance of this step was indeed great, for it not only brought about the substitution of a safe operation for one which, at that time especially, was attended with a very high mortality, but it also saved healthy organs from being needlessly excised, and was applicable to kidneys of the same person when both were movable and required fixing.

But Hahn's method had this drawback, that it was not always or permanently efficacious; whereas, of course, nephrectomy, though only capable of being employed for one kidney, could not be followed by a return of symptoms.

The principle of Hahn's operation was perfect; what was wanted was the improvement of the technique. In my own practice I followed Hahn's method in two or three instances, except that my lumbar incision was an oblique instead of a vertical one, and that I shortened the fibro-fatty capsule by trimming off more or less of it before inserting the sutures. But I never felt confidence in this mode of fixation, and preferred to attach the kidney itself to the cut edges of the transversalis fascia and the aponeurosis of the transversalis muscle by means of three sutures dipped deeply into the posterior surface of the organ and running for from three-quarters of an inch to an inch in its substance. I have used various materials for sutures—stout catgut, kangaroo tendon, and silk, but now always employ silk. The accompanying figure (Fig. 1) will explain my method of inserting the sutures.



Fig. 1.—Mr. Morris's method of fixing the kidney.

The results obtained have in most of the cases been perfectly satisfactory, and I see from time to time patients upon whom I operated nine or ten years ago with their kidneys as firmly fixed as can be desired, and who have been quite free from their former symptoms ever since the operation. Moreover, I have had the opportunity of witnessing in the living bodies of some three or four of my patients the sound and complete holdfast which this method affords. It has a few times happened to me from six to twelve months or longer after fixing a hydronephrotic as well as after fixing the healthy kidney, to have to do a second operation for quite different reasons upon the same organ; and I have then seen my sutures imbedded in a mass of tough fibrous tissue, and have had to pull or cut them out from the renal parenchyma before I could detach the kidney. Here they had for months harmlessly remained without showing the least tendency to become the nuclei of calculi, as some surgeons anticipated would be the case.

M. Tuffier, of Paris, whose admirable experimental work, published in 1889, on this and other branches of renal and urethral surgery is well known, is of opinion that the parenchyma, where the sutures constrict it, becomes sclerosed and atrophied. This condition did not appear to have been caused in the kidneys of the cases just referred to; but even if it had been, the amount of the kidney tissue so affected would be small, and could easily be spared without danger to the individual. Moreover, it would be less extensive than the superficial sclerosis which follows the plan M. Tuffier himself advocates.

Tuffier, believing that the proper capsule of the kidney—smooth, thin, little resisting, avascular, and fibrous as it is—prevents the kidney from forming firm adhesions with the tissues and organs around it, recommends its partial decortication, and the suturing of the tunica propria to the edges of the parietal wound. This done, he thinks the parenchyma does not fail to attach itself firmly to the neighbouring tissue by the whole of the exposed area. Tuffier's illustrations [diagrams were shown] show two different ways by which this can be accomplished. Various modifications of Tuffier's method have been practised by different surgeons, but the principle of them all is to obtain direct adhesion between the bared parenchyma and the deep tissues of the abdominal

wall; whether the capsule is detached in small squares, or in one large piece, or in many triangular slips or is merely scarified.

A fourth method has more recently been suggested by M. Vulliet, of Geneva, and was first tried by his friend Poullet, of Lyons. It consists in making use of a long slender slip of the tendon of the erector spinæ of the patient as the means of fixation of the kidney. After exposing and freeing the kidney in the usual manner, a separate short vertical incision, parallel with the spinous process of the first lumbar vertebra, is made through skin and fascia, and a tape-like slip of the tendon, about ten inches long and a quarter of an inch wide, is detached and pulled out through this little wound, but still left attached by its lower end to the muscle. This tendinous slip is to be the suture and is passed through the muscular tissue, and having been made to underrun the capsule of the kidney, is then passed back again and fixed to the erector spinæ muscle. This is shown in the accompanying figure (Fig. 2).



Fig. 2.—Vulliet's method of fixing kidney.

I have in some cases practised Tuffier's and, in others Vulliet's method, but have found it requisite to modify the latter, because in many cases too short a length of the tendon is torn out. I will not stop to describe the modification I have adopted, and will merely say that I prefer Vulliet's method to Tuffier's, but that neither is so simple, or so rapidly done, or more efficacious than my own.

Partial Excisions.

Another most important advance in the conservatism of the surgery of the kidney is the excision of diseased portions of the organ in place of nephrectomy. This step was a natural result of the establishment of nephrolithotomy as a sound surgical procedure. The fear of uncontrollable bleeding during the operation, and the doubts as to the healing power of a kidney when cut into or otherwise wounded being once removed, the attempt to save the greater part of the organ, when only a small portion was diseased or injured, was bound to be made.

Tuffier's experiments on animals in 1888, and Barth's histological researches, supply ample proofs of the healing power of the kidney, and of the process by which healing is accomplished, even after extirpation of considerable portions. Paoli of Perugia performed extraperitoneal operations for resection of the kidney upon twenty-five dogs, cats, and rabbits, with perfect recovery, and published his results in 1890.

But such experiments were not required to convince us that wounds of the human kidney readily heal. In 1883 and 1884 I collected for my work on diseases of the kidney a number of cases proving the cicatrising capacity of the human kidney after incised, punctured, lacerated, and also gunshot wounds. Such cases, known long before the days of renal operations, might have given surgeons faith in the reparative power of renal wounds of their own making, but it has been only by slow degrees, and quite recently, that they have become convinced that a free incision or a partial excision may be made without fear of dangerous bleeding on the one hand, and of a urinary fistula following the operation on the other hand.

In 1890 I had the opportunity of examining a kidney which I had freely incised for exploratory purposes a month before, and which was removed from the body of a patient who died from hæmorrhage from a gastric ulcer. A linear scar extending through the cortex to the renal pelvis was the only evidence in the organ that an operation had been performed upon it. The kidney otherwise had the appearance of being perfectly healthy.

Up to the present time partial excision or resection has been very rarely performed; and surgeons, whether aware of the results of such experiments as Tuffier's and others or not, seem to hesitate to apply the method to man.

An excellent epitome of the work hitherto done in this direction is contained in a paper read before the British Medical Association at Carlisle in 1896 by Oscar Bloch, of Copenhagen. He therein reports a case in which he removed in September, 1895, half the kidney affected by a new growth, and gives abstracts of 10 cases which he collected from German and French sources. The first partial excision was by Czerny in November, 1887, for an angeio-sarcoma following injury. Tuffier has operated in 3 cases; in his first case, which was done in 1889, he cut out a fistulous canal and sutured the cut surfaces of the kidney together; the wound healed by first intention. Kümmell has operated also in 3 cases, Bardenheuer in 2, and Waitz in 1.

Three out of the 11 operations were for cysts, of which 1 was hydatid, 3 were for calculous pyonephritis, 2 were for new growths, and 1 each for puerperal pyonephritis, renal fistula, and a patch of interstitial nephritis mistaken for malignant growth. Not one of these 11 patients died from the operation; 9 of them made good recoveries therefrom, 1 subsequently required nephrectomy, and in 1 a fistula resulted.

Bloch makes no mention of any English or American cases. My own personal experience of resection commenced in November, 1890, when, in drawing out a kidney of a young man, aged 24, which I was exploring for calculus, several abscesses were seen in the cortex, which I opened, and evacuated, and scraped. The kidney was replaced and the loin wound closed, but a week later I had to remove the whole kidney on account of acute general pyonephritis. The man quite recovered after a long convalescence, and is well and leading an active life to-day.

In April, 1892,[11] I scraped out six tuberculous, breaking-down caseous masses in the kidney of a man aged 28, which I was exploring for calculus. The raw surfaces of the kidney from which these deposits were removed were treated freely with iodoform emulsion; the kidney was then put back into position, and the lumbar wound closed. An excellent recovery followed, but some two years afterwards he returned with tuberculous disease of one of the testes, but no further trouble in the kidney; the testicle also was treated by incision and erasion, and he again recovered.

In a third case, that of a female aged 28, whose left kidney I was exploring for stone, on January 2nd, 1895, I found three areas of grouped miliary tubercles at different points of the kidney. I removed them by excising three wedges of the renal parenchyma, and in so doing opened up the calyces. At one of these wounds I shaved off layer after layer till I reached healthy tissue. The cut surfaces were sutured with catgut, three sutures in each wound. The kidney was then replaced, and the parietal wound closed. After the operation blood was passed with the urine for three days. The patient made a rapid recovery, and left the home without a sinus on January 16th, 1895. In March, 1897, two years and two months afterwards, her husband wrote stating that she had steadily improved in health since the operation, and was then well.

In three other cases I have done similar operations on women. In one of them quite a third of the kidney was removed for tuberculous disease. All recovered from the operations. One is believed to be alive and well now. One from whose right kidney I excised a cyst and a tuberculous

abscess, lived three years afterwards without a fistula or any return of trouble in the kidney (see Table VII, No. 14), and died of an acute attack of broncho-pneumonia in 1897. The third, from whose left kidney I removed quite a considerable portion for tuberculous disease, recovered without a fistula, but seven months afterwards an abscess formed in the iliac fossa of the same side, and opened at the scar. The kidney and a great part of the ureter were subsequently removed, as it was thought they were the cause of the abscess, but it was not so, although the kidney was considerably diseased (see Table VII, Nos. 22 and 28). She subsequently had severe hæmoptysis, and died of tuberculous disease of the lung and peritoneum, and a tuberculous ulcer in the bladder.

[The tables referred to were distributed among the audience. They include 267 cases, arranged according to their nature, operated on by Mr. Morris.]

Partial resections are capable of a wider application than has yet been given to the operation, especially in the case of tumours taking origin from the renal capsule, and those which, though originating in the perinephric tissue, grow into, and partially destroy the kidney itself.

In an operation upon an elderly woman in 1896 I endeavoured to save the kidney when removing a large perinephric fibrolipoma, but in the course of the operation I found it impossible to do so. If in future such tumours are operated upon before they attain so large a size as practically to destroy or surround the kidney, there is no reason why they should not be removed without interfering with the kidney, or at any rate without excising more than a small portion of it.

Besides the cysts which project from the parenchyma and the morbid conditions of the cortex which have been referred to, it is reasonable to anticipate that innocent tumours, such as villous papilloma, will be successfully removed from the renal pelvis without sacrificing the whole organ by nephrectomy. Bardenheuer and, in this country, E. Owen and Keetley, acting on the same conservative principle, have treated cases of accidental injuries of the kidneys by taking away a portion and leaving the bulk of the organ.

Operations on the Ureter.

Operations upon the ureter are an advance of the last few years, but not many have been recorded up to the present time. They are of very considerable importance because of the influence they are having, and are destined to have, upon renal surgery generally.

Ureterotomy has been employed in the treatment of hydronephrosis, calculus, and calculous anuria. Ureterectomy will improve the results of operations for advanced tuberculous disease descending from the kidney, and also of those performed for calculous pyonephrosis complicated with suppurative ureteritis. Ureteral anastomosis and other plastic operations on the ureter will save many kidneys which would formerly have been nephrectomised on account of hydronephrosis, fistulæ, and surgical injuries of the ureter.

It is of interest to note that ureterotomy, like nephrotomy and nephrolithotomy, was suggested many years before it was put into practice. The first allusion to it which I have met with is in Velpeau's *Surgery* (edition 1851, p. 1021). Velpeau mentions it in connection with an account of a case under his own care, in which a calculus the size of a nut and having a pin in its centre, was impacted in the right ureter three inches below the kidney. The posterior wall of the ureter was perforated at the level of the calculus, and there was (periureteral) suppuration in the retroperitoneal tissue, extending from the kidney to the floor of the pelvis. Velpeau satisfied himself upon the dead body that this stone might have been readily extracted by the flank on the same side.

In 1856 a remarkable series of articles was published by Dr. C. Gigon of Angoulême,[12] in which he suggested opening the ureter with the object of establishing an artificial passage for the escape of the obstructed urine in a case of calculous anuria. He called the operation he proposed ureterotomy, investigated the anatomical causes which determine the impaction of calculus in the ureter, gave an excellent description of the normal anatomy, and figured the natural dilatations and contractions in the lumen of the ureter. He pointed out the intimate relation of the ureter with the peritoneum, and that it is the peritoneum which maintains the ureter in contact with the psoas magnus. This led him to explain the rationale of enforced walking exercise upon a calculus impacted in the ureter; the contraction of the fibres of the psoas, he thought, communicated to the ureter a sort of peristaltic action which made the stone descend towards the bladder.

He gave an explanation based on his anatomical knowledge, and upon a *post mortem* examination of a case in which he found a movable right kidney opposite the third and fourth lumbar vertebræ, of the occurrence of hydronephrosis in association with movable kidney. This, be it observed, was forty-two years before the same explanation was credited to Landau, Terrier, and Baudoin respectively. He attributed it to kinking of the ureter, which, fixed by the peritoneum, cannot follow the kidney in its displacements, and thus causes it to form a curve with the convexity upwards, all the more pronounced as the kidney gets lower and lower. The result of this curvature, he thought, was to obstruct the urine, or even to render its flow impossible. Finally, he described the operations of ureterotomy and lumbar ureterostomy precisely as they are now performed. Gigon thought that the obstruction to the free flow of urine due to the kinking of the ureter was a predisposing cause of stone in movable kidneys. In support of this view, I may say that I have seen several instances of very movable kidneys which contained calculi, as well as cases in which the kidneys have been greatly disorganised from stone, and the ureters strictured or of very small size, and thus giving rise to more or less obstruction. Fig. 3 is an illustration of a small ureter and a stone impacted immediately above it.



Fig. 3.—Small ureter, with slight contractions of its lumen. A stone plugs the infundibulum, and the kidney is completely disorganised. (Author's case.

Ureterotomy for Calculus.—In 1879, Thomas Addis Emmet, of New York[13] stated that in three cases he had met with stones obstructing the vesical end of the ureters. In one he removed the stone through the bladder by means of curette forceps after opening the bladder. In the second case he removed a stone weighing 98 gr. by cutting upon it through the vaginal wall without having opened either the

bladder or the peritoneum, and he closed the opening with interrupted sutures. His third case does not seem to have been operated upon.

It was not until the year after Hahn's first nephrorrhaphy that ureteral surgery fairly commenced. In 1882 Bardenheuer performed ureterotomy for calculous anuria, removed four stones, one of which was impacted in the upper end of the ureter, and closed the ureteral incision by sutures. In Bardenheuer's case the urine did not find its way subsequently into the bladder, so he divided the ureter and established a lumbar ureterostomy.

In 1884 I published a paper advocating the extraction of calculi impacted in the intravesical portion of the ureter through the bladder by opening the bladder through the perineum of the male, and by dilating the urethra of the female; and I suggested that this might be found useful in cases of calculous anuria, and might obviate the performance of nephrectomy in certain cases of calculous hydronephrosis. I therein related a case of calculous anuria, in which, by scratching through the margin of the vesical orifice of the ureter with my fingernail, I tried to get a calculus into the bladder and thence remove it through the urethra.

In 1885 Cullingworth removed a calculus from the lower end of the ureter of a woman by abdominal section. In this case stones could be felt *per vaginam* in both ureters. The operation was designed and undertaken for abdominal nephrectomy. The right kidney formed a large tumour, but a stone being found in the right ureter this was removed instead. Death followed from uræmia.

In 1887 Ceci[14] removed seven calculi from the lower end of the ureter by an incision through the rectum. The patient, however, died.

In and since 1887 ureterotomy was performed for the extraction of calculi impacted in different parts of the ureter by means of a retroperitoneal operation in the lumbar or inguinolumbar region, by Godlee in 1887, by Kirkham and Torrey in 1889, by Twynam in 1890, and by several other surgeons since.

Ureterotomy for Stricture and Valvular Obstruction.—Another application of ureterotomy is in cases of ureteral stenoses. Simon in 1876 was the first to give theoretical directions for this operation. I do not know that he ever performed it. Trendelenburg in 1890 was, I believe, the first to make the attempt.

In 1892 Fenger, of Chicago, performed the first successful ureterotomy for a valvular obstruction of the ureter. The patient was a woman aged 28, with intermittent hydronephrosis in a floating kidney. He explored the dilated renal calyces for stone through an incision in the convex border of the kidney. No stone was present. As he could not catheterise the ureter through this incision, he made a small opening in the posterior wall of the infundibulum, and found a valvular obstruction at the top of the ureter where it joined the renal pelvis. The valve was divided, and the ends of the incision were united by a suture. A bougie, now passed through the wound in the parenchyma, was retained in the ureter for two days. The wound in the renal pelvis was closed by sutures. The floating kidney was fixed. The patient recovered without fistula, and subsequently had no return of hydronephrosis.

On November 26th of the same year (1892) Fenger operated upon a man aged 47 for intermittent hydronephrosis of twenty years' duration, due to a stricture of the ureter close to its junction with the infundibulum.

The stricture was produced by an injury when the patient was 13 years old by his jumping from the back of a horse.

The kidney and upper end of the ureter were exposed through the lumbar incision. The upper end of the ureter for half an inch was found imbedded in cicatricial tissue; below this the ureter was normal. A longitudinal incision, a centimetre long, was made into the ureter just below the cicatrix, and the strictured part of the tube was divided from below upwards to the renal pelvis. The ends of the incision in the ureter were stitched together by the Heineke-Mikulicz manner for closing the pylorus after division for stenosis.

The next successful operation of this sort was performed by Herman Mynter of Buffalo, on August 14th, 1893. The patient was a man, aged 25, who for twelve years had suffered from painful intermittent hydronephrosis, due to a valvular obstruction at the upper extremity of the ureter. Calculus was diagnosed as the cause of the obstruction, but no stone was found. On exposing the kidney and upper part of the ureter through the "usual oblique incision" in the loin, a valve formation at the junction of the ureter and renal pelvis, and a hydronephrotic distension of the infundibulum of the size of an orange, were discovered. An incision an inch long was made into the lower part of this swelling, and about half a pint of pale limpid urine evacuated. Through this opening in the infundibulum the kidney and ureter were explored. The incision was then prolonged downwards through the valvular stricture, the lateral margins of the wound were pulled apart, and the ends united by numerous fine silk sutures, avoiding the mucous membrane. After the wound was sutured, the opening into the urethra from the renal pelvis was somewhat funnel shaped. The patient recovered without a fistula, and remained well subsequently.

I have recently done a similar operation on a female patient, aged 29, who for four or five months has had intermittent periods of aching or discomfort in the right kidney, which was very movable, associated with very frequent micturition, sometimes almost amounting to incontinence. At these times the urine became very thick and offensive; and at other times there was pus in small, but distinct, quantity in the urine. There was marked tenderness on bimanual examination, so that renal calculus was suspected.



Fig. 4.—Pelvis of the kidney and upper end of ureter, showing the stricture at their junction. A probe has been passed along the ureter through an opening in the infundibulum (Author's case). (Diagrammatic).

Twelve months before her symptoms began she was thrown from a horse on to a heap of stones and a good deal shaken. Possibly this had some influence in causing the condition found at the operation. After consulting with Sir William Roberts and Dr. Cullingworth it was decided that the kidney should be explored and fixed; and Dr. Cullingworth and Mr. Burghard were present at the operation. Through a lumbar incision the upper end of the kidney was seen to be firmly bound down by tough fibrous adhesions, almost as hard as cartilage. In the contraction of these adhesions the kidney had become slewed round, so that its upper end had been drawn lower than the lower pole of the organ, and the front surface came to look backwards. At least this was the explanation of the abnormal position which suggested itself during the operation. The pelvis of the kidney was distended to the size of a tennis ball, and the ureter, which joined the infundibulum at its lower point as normally, was so constricted as barely to admit the smallest

urethral catheter. The kidney was incised along the convex border and thoroughly explored for stone. None was present, but the calyces were found slightly sacculated. The constricted orifice of the ureter was longitudinally divided upon the catheter, which was passed from a small opening in the infundibulum through the stricture to the bladder, and the ends of the incision were drawn together, by the Heineke-Mikulicz method, by means of two fine silk sutures, passed after the manner of Lembert (see Figs. 4 and 5). The wound

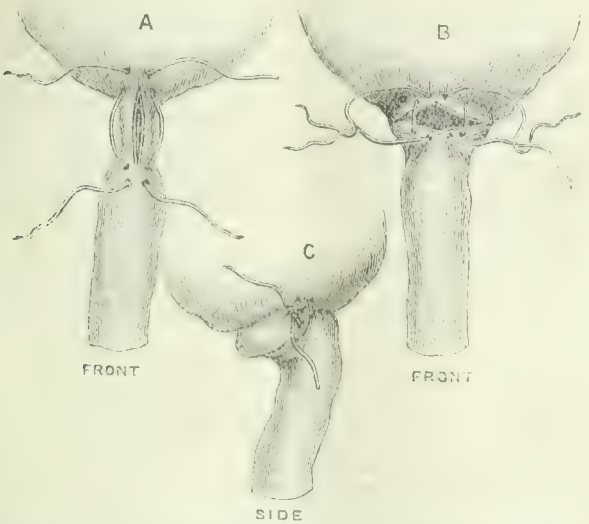


Fig. 5.—Manner of suturing after division of the stricture. The side view shows a great exaggeration of the pucker produced by tightening the sutures. (Diagrammatic).

of the renal parenchyma was sutured with silk. Nephropexy was then performed by Vulliet's plan. The wound healed entirely by first intention, and there has been no return since of the symptoms which led to the operation.

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(*To be continued.*)

NOTES OF A CASE OF PERFORATING GASTRIC ULCER: OPERATION AND RECOVERY.

By RAYMOND SHAW, M.S., M.B.(Dunelm),
Great Yarmouth.

Miss H., aged 20, an assistant in a shop, had been suffering from gastric ulcer since September, 1896, and had at intervals been under medical treatment. On June 24th, 1897, she was in the shop as usual, but was in great pain all day. Nevertheless her food on that day included rhubarb, strawberries, tomatoes, bread and butter, with tea. About 9 P.M., some four hours after tea, she suddenly felt acute pain in the stomach, rapidly spreading over the whole abdomen, but managed to walk home, a distance of two or three hundred yards, preferring that method to the jolting of a cab.

I saw her at 11 P.M., when it was evident that perforation had occurred. The pulse was 120, temperature 100°, liver dulness was still present, and there was no distension. The belly was too tender to elicit the presence of fluid. Consent was only obtained for operation in the morning, so she was put under morphine, and dry heat applied. Next day her condition was much more grave, but at 9 A.M., with the help of Dr. Ryley and Mr. Blake, I operated.

An incision, above the umbilicus, in the middle line was made, 4 inches in extent, and immediately the peritoneum was opened, signs of the lesion were evident. Gas and fluid escaped, and large flakes of lymph were found, especially between the stomach and liver. The stomach was somewhat contracted, but not empty, and when drawn into the wound the ulcer was easily detected on the anterior wall, near the pyloric end. The edges were thin, ragged, and undermined, without evident induration; there was no large aperture, and evidently some slight attempt at repair had taken place, although the gentlest handling caused more of the contents of the stomach to escape. The ulcer was closed by a double row of Lembert's sutures, and, to afford further security, a portion of omentum was also fixed over the weak spot. The lymph was removed by careful sponging, an incision made below the umbilicus, and the abdomen washed out with hot boiled water. It was necessary to repeat the flushing several times, as on passing a glass drainage tube into Douglas's pouch, vent was afforded to nearly a pint of purulent fluid. The abdomen was then closed, several gauze strips being left in the upper wound, taking care that one passed up under the liver, and others proceeding directly to the line of sutures. Just as the dressing was completed, vomiting occurred, so the stomach was immediately thoroughly washed out. The operation lasted an hour and a-half, and was well borne, her condition being rather better than at the beginning.

The after-progress was uneventful. For two days she was very ill, but then commenced to improve. After the first day sips of hot water were given, and at the end of forty-eight hours, small quantities of champagne and milk alternately were administered. Vomiting occurred once on the third day. During this time drainage, especially from the tube in Douglas's pouch, was very free. The gauze strips were removed on the third day, but the lower wound was drained for a week. At the end of a fortnight both wounds were soundly healed. The temperature at no time rose above 102° F., and was normal in ten days. Menstruation, which for some months had been in abeyance, occurred on the third day after operation, and has since been regular. The patient was allowed up in the third week, and solid food gradually given. She has now, February 24th, been at work for some months, and, excepting when indiscreet in diet, there is practically no pain.

The points of interest in this case seem to me to be:

1. The ragged, undermined character of the ulcer, without induration or any large perforation.
2. The time after perforation (twelve hours) that the operation was successfully undertaken.
3. The necessity for thorough flushing and drainage, especially through Douglas's pouch.
4. The fact that such a severe operation could be satisfactorily and successfully performed in a small room of an ordinary lodging house, at very short notice, and without skilled nursing being obtained either at the time of, or subsequent to, the operation.

THE VISION OF RAILWAY OFFICIALS.

By S. JOHNSON TAYLOR, M.B., M.R.C.S.,
Honorary Ophthalmic Surgeon to the Eastern Counties Asylum.

A brief account of the following case will show how unsatisfactory in some instances is the visual test for railway servants, in spite of the exertions of Mr. Bickerton and others.

J. L., aged 25, engine driver, consulted me on December 3rd, 1897, complaining of defective eyesight. Since leaving school he has, with the exception of a period of six months, been in the railway service. Beginning as "cleaner" in the engineering sheds, he was gradually promoted and passed as fireman (stoker) in 1890, whilst in July, 1895, he became an occasional driver, and a regular one some twelve months back, driving a passenger train this last summer, and a goods train since.

His vision for the post of driver was not tested until February, 1896, when it was tried by a chief clerk, who, he

informs me, tests the vision of all those engaged in the locomotive department by making them count dots at a certain distance and match and name coloured wools; but though he failed at this sight test, and could not correctly count the dots, he was allowed to go on driving.

In June, 1896, he passed as a regular driver, being examined about his engine, but his sight was not tested then. His vision I found was $\frac{5}{9}$ (one letter) with the right eye, and one letter of $\frac{5}{18}$ with the left; in other words, this man, engaged in a dangerous occupation demanding perfect visual acuity, had just a fraction more than one-third of normal sight in the right eye, whilst with the other, he had decidedly less than even that.

His colour vision was normal. The ophthalmoscope at once revealed the cause of his defective vision, his refraction being mixed astigmatism in each eye; whilst, in addition, a nebula was discovered in the left cornea. He was told, of course, he must give up railway engine driving, and any occupation on the line requiring good sight.

Fortunately he is a young man, and unmarried, but much disappointment to himself, and risk to the lives of others and to the property of the company, might have been prevented if his sight had been tested by a competent person when he first went into the company's service. I should not call a chief clerk a competent person from this point of view, and the fact that, in this case, the man was allowed in a happy-go-lucky-sort of way to go on driving his engine when his sight had been found very defective seems to me to call either for no comment or a good deal.

Nearly four years ago the guard of a ballast train came to me suffering from failure of vision. Without glasses his vision was R. $\frac{5}{60}$ but with $\frac{-1\text{ D sph.}}{-3\text{ D cyl.}}$ it was improved to $\frac{5}{18}$ (3 letters) L. $\frac{5}{\infty}$ improved to $\frac{5}{18}$ (3 letters) by — 6 D cyl.; in other words, he had myopia with considerable astigmatism in his right eye, and a high degree of myopic astigmatism in his left, and never, of course, should have been allowed to follow any responsible occupation on a railway.

This man had tobacco amblyopia besides his error of refraction, and was, I am glad to say, promptly pensioned off by the company when I told him he must give up his occupation; he was 50 years of age. Had he been 15 or 20 years younger, and not able to claim a pension, the case would have been a good deal harder from his point of view.

Straws show which way the wind is blowing, so these isolated facts may, possibly, do some good by once more drawing attention to two points well known to all ophthalmic surgeons: (1) The necessity for testing the vision and examining efficiently the refraction of all those joining the army of railway employees; and (2) of renewing the test from time to time, so as to detect the onset of disease, tobacco and other amblyopias, etc., where central colour blindness is a prominent symptom.

VILLOUS TUMOUR OF RECTUM.*

By N. E. MACKAY, M.D., M.R.C.S.

MISS E. L., aged 45, consulted me in November, 1884, for what she took to be piles, from which she said she had been suffering for a number of years. She was a pale, thin woman, and had a careworn and anxious countenance. For four or five years she had suffered from a profuse discharge from the bowels of glairy mucus, which resembled the white of an unboiled egg. Lately the discharge ran away from her, and she had no control over its escape. For the last five or six months, when at the closet, a large tumour often came down, which bled freely till returned, when the bleeding ceased. Latterly the tumour protruded occasionally in walking. She was a very modest country maid, and it was hard to get her to talk about herself, or to get any accurate data of her ailment at first. Although she had been suffering for four or five years, she had never consulted a doctor before. Her friends could not persuade her to do so. She had little or no pain about the rectum. What she complained of most was the discomfort arising from the protrusion of the growth and the constant discharge. She had some backache, and strained a good deal at the closet, which caused copious bleeding. The free bleeding and copious discharge of mucus seriously impaired her health, and she was losing strength rapidly.

Examination disclosed an atrophied and greatly relaxed sphincter. Indeed, so wasted was it that it could hardly be detected. A large, soft, and spongy growth was found in the posterior wall of the rectum, about an inch up, occupying half its circumference. The mass had a cauliflower appearance; its surface was studded with hypertrophied villi resembling the growth by the same name found in the bladder. These villi bled very freely on the slightest irritation. The tumour was about the size of a man's fist, and it was soft and spongy throughout its entire substance. It grew from the mucous and submucous tissue. It had no pedicle. By its weight it dragged down the rectal wall which was sagged. Its attachment, which was circular, was from 2 to 2½ inches in diameter. When the growth was well outside, a number of large vessels—the size of a goose quill—were seen traversing its base.

Assisted by Dr. Johnson, sen., Charlottetown, P. E. I., I removed the tumour with silk ligatures. The growth was brought well outside, and a double-threaded needle passed through its base close to the rectal wall. Great care was exercised not to wound the muscular coat, which was sagged by the weight of the growth. On tying the segments the hæmorrhage was tremendous at the point of separation. Perchloride of iron solution or the thermo-cautery had little or no power over it. I had considerable difficulty in arresting the bleeding, and not till I had tied the whole growth off in a series of small sections did I succeed. For a while I felt very anxious about the termination of the case. The tumour was left protruding from the anus. It gave her very little inconvenience. The decomposing mass was kept sweet by frequent irrigations with carbolic acid solution (1 to 50), and was dressed with lint soaked in carbolised oil (1 to 30). The dressing was changed often. In these days very little iodoform was used in surgical dressing. The strangulated mass sloughed away gradually without any bleeding, and it left a large granulating sore, which healed in course of time without any complications. There was no recurrence of the growth. The patient lived in the enjoyment of fairly good health until two years ago, when she had an attack of pneumonia, of which she died. On October 13th 1897, I wrote to Dr. Matheson (who attended her in her last illness) for particulars of her death. I received the following answer:

Harrington, P. E Island,
December 9th, 1897.

Dear Dr.—I may state that your operation was a complete success. I examined her carefully and fully several times, and was unable to make out anything abnormal. She died of pneumonia according to my notes.

Yours sincerely,
C. S. MATHESON.

Messrs. Allingham, in the latest edition of their work on *Diseases of the Rectum*, say that only 30 cases of this disease had been reported up to 1896.

* Read at a meeting of the Halifax, Nova Scotia, Branch.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

IMMUNISATION BY DIPHTHERIA ANTITOXIN.

THE following facts may be of interest in addition to those published by Dr. W. C. Aylward and Dr. Constance Long: In an institution containing 150 children, ranging from 7 to 16 years of age, an outbreak of diphtheria occurred lately. It was certainly mild in its character, but none the less fraught with grave possibilities, as a similar outbreak commenced only a little over a year ago. Some dozen cases were under treatment, most of them having been injected with 1,500 units of antitoxin at the earliest opportunity. I then decided to attempt to immunise 22 of the youngest, from 7 to 10 years old. These were injected with 200 units each, and though a few had some headache and general *malaise* for a day or two, none of them had diphtheria. One child had a definite rash, but very limited, and exactly like the rashes which occurred in two

decided cases injected with 1,500 units; in no instance was there any trouble at the point at which the injection was made. A bacteriological examination of the whole school had not been carried out at that time, but subsequently several cases were found with the diphtheria bacilli, but showing no definite throat lesion; none of the 22 were among them.

Wallington, Surrey. WALTER GRIPPER, M.B.Camb., etc.

INTERMENSTRUAL PAIN (MITTELSCHMERZ).

Apropos of the interesting discussion at the meeting of the Obstetrical Society on this subject, I think the following case is of interest:

J. K., aged 23, married, has never been pregnant. Menstruation began apparently normally at the age of 13, and has continued so, the period being seven days, and the interval twenty-one days. Three years ago she began to have an intermediary period, which occurs exactly between the ordinary monthly periods, and lasts from twenty-four to forty-eight hours, which it never exceeds. The discharge in each case is apparently similar. A little pain, especially in the ovarian regions, is felt at this as well as at the normal menstrual period. The mother of this patient had a similar intermediary menstruation for twelve months, when she was 20 years of age.

Shepshed, Loughborough. G. CARDNO STILL, M.B.

RHEUMATIC HYPERPYREXIA.

I WAS greatly struck on reading Dr. Lindsay's memorandum on the above in the BRITISH MEDICAL JOURNAL of March 5th by the remarkable similarity to a case of my own, which began on February 7th. In my case the patient was a woman of 41 with rheumatic pains in the joints. I treated her with salicylate of sodium every four hours, and Dover's powder night and morning. On the 9th endocarditis with mitral murmur appeared. The temperature kept about 102° for four days, when it suddenly rose to 105°. I then gave antipyrin in frequent doses. The temperature ranged between 105° and 104.2° for twenty-four hours, and then rose rapidly all the afternoon of the 15th, till at 10.15 P.M. it was 110.5°, and at 11.15 she died. The pains in the joints had almost disappeared before the temperature rose to 105°.

These two cases seem to me to support the theory that where one side of a disease such as fever is developed excessively, the other side—namely, the articular pains, diminishes, or is in abeyance.

Farnham. S. G. SLOMAN.

GRANULAR KIDNEY.

DR. SAMUEL WEST'S paper on Granular Kidney in the BRITISH MEDICAL JOURNAL of March 5th, 1898, p. 624, vividly recalls my experience of such cases as he describes, and I do not think they can be very common. I have only seen two which I have recognised, and they both ended fatally and unexpectedly.

The first was that of a young Baptist minister, who called upon me complaining of being bilious. I found that he had traces of effusion of blood into the conjunctivæ and slight dimness of vision, but he did not think seriously of his symptoms, and was at work as usual. I asked him to collect his urine for twenty-four hours, let me know its quantity, and bring me a specimen. He did not call again for about a week, and did not send me his urine. On his second visit he told me he had got blind in the pulpit for a short time, and that his sight had been worse since. I then examined his urine, and found it markedly albuminous, directed him to go to bed, and prescribed skim milk as diet. That same day I was sent for hurriedly, and found him dying of hæmorrhage from the lungs. I confess that although I took a very serious view of his case, on the second visit I was struck with horror at his sudden death, so that it made a deep impression upon my mind.

I had been resident physician in the clinical wards of the Edinburgh Royal Infirmary for nine months, and several years in practice, and had never met with such a case to my knowledge.

The next case I saw in the Edinburgh Royal Infirmary some years afterwards. I was sitting beside a former teacher while he was examining a new case. The patient had come from Newcastle. As the examination proceeded I became aware that it was a case almost identical as to symptoms with that which had made such an impression upon my mind, and I was not a little astonished at the favourable prognosis given. I ventured to relate my experience in such a case to my teacher, and to express the hope that his prognosis might be verified. I felt such anxiety to watch the case that I called upon the resident physician next morning to inquire for the patient. I was informed that he had begun to have hæmorrhage, and he died in a day or two.

I cannot agree with Dr. West that the state of the kidney is "the prime cause of the disease," but am inclined to believe with Dr. Robert Maguire that it is "only a consequence of the disease." What the real cause may be is a puzzle, but to me it looks more like an infective disease somewhat akin to ulcerating endocarditis than anything with which I have met. JOHN HADDON, M.D.

Denholm.

NEPHRECTOMY AND PREGNANCY.

I HAVE read with interest the paper by Mr. G. E. Twynam, on Nephrectomy and its Relation to Pregnancy, which appeared in the BRITISH MEDICAL JOURNAL of February 12th.

I am enabled to add one to the small number of recorded cases.

The patient, aged 27, was confined of her first child on July 10th, 1897. She had had her left kidney successfully removed for pyonephrosis by my colleague, Mr. Bennett May, eighteen months previously. During the pregnancy a cloud of albumen was constantly present in the urine, and she suffered occasionally from headaches. I regret that no quantitative estimation of urea was made. The confinement was uneventful, and both mother and child did well, and are now in good health.

I do not think that the occurrence of pregnancy after nephrectomy is an indication for the induction of abortion.

C. E. PURSLOW, M.D.Lond., M.R.C.P.Lond.

Birmingham.

A CASE ILLUSTRATING THE STRAIN WHICH RECENT FIBROUS UNION OF A FRACTURED PATELLA WILL STAND.

F. B., aged 29, an agricultural labourer, was brought to me last summer, having fallen from his bicycle and alighted on his left knee.

I examined him along with Dr. Fraser, of Hessle, and we found a transverse fracture of the patella. We were fortunate in seeing him before much effusion had taken place, and as we found that the fragments could be got into very good position we put him up in the classical manner on a back splint resting on an inclined plane, the two halves of the patella being approximated by means of elastic tension applied by sticking plaster and rubber tubing.

He was treated at home for three or four days, at the end of which time, on account of the lack of nursing facilities, he was removed to the Hull Royal Infirmary, where the same treatment was carried out. He was discharged at the end of a few weeks and wore a light plaster case for about three months. Union, although fibrous, was excellent, the band joining the fragments being only about one-eighth of an inch in length.

He started work again exactly six months after his accident with a perfectly good knee joint. The day after he restarted work, whilst crossing the floor of a cowshed, he slipped backwards, and on making a strong effort to regain the upright position, he felt something give way in his knee and fell to the ground. He was taken home, and sent for me.

On getting the history of the accident, I was under the impression that the fibrous band had given way, but examination revealed a very different state of things. The patella was intact. The fibrous band, so far as I could judge, had not stretched in the slightest, but the ligamentum patellæ had been torn completely away from its upper attachment to the lower border of the patella.

Many surgeons advise operation in every case of transverse fracture of the patella; but is a case like this not a strong inducement for us (in those cases in which fair apposition of the fragments can be got and maintained) to stick to the old method? Short fibrous union, which at the end of six

months will stand such a strain as this was subjected to, must, I think, be considered as practically useful as any result we should get by operation.

Hessle, East Yorks. W. Murray, M.D.

DISLOCATION OF THE UNGUAL PHALANX.

This occurred in the person of the writer when quite a young man. In attempting to catch a ball at a cricket match hit above his head the ball caught him on the extremity of the little finger of the right hand, dislocating the ungual phalanx backwards. There was comparatively little pain, and he reduced it without difficulty and continued the game.

Tooting Common, S.W. Alfred Coleman, F.R.C.S.

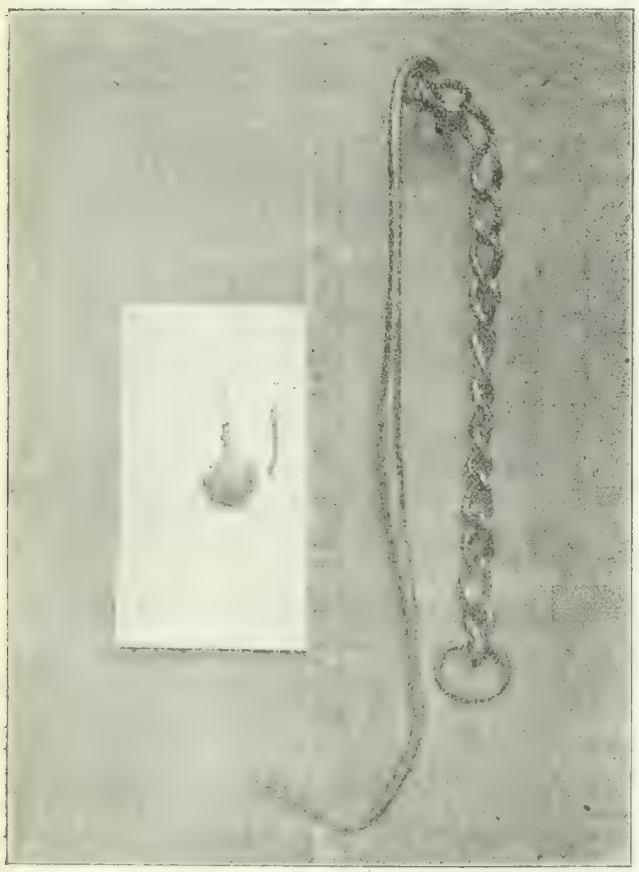
REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LINCOLN COUNTY HOSPITAL.

EVULSION OF EYEBALL BY A BLUNT HOOK.

(By L. B. Todd, F.R.C.S.Edin., House-Surgeon.)

S.C., a groom, aged 24, was admitted here on December 16th. He was stepping out of a dogcart when he slipped and was caught by a blunt hook hanging from the ceiling of the coach-house. The eyeball was completely torn from its socket, unruptured. It lay on the patient's cheek attached by a little connective tissue about a quarter of an inch thick. All the muscles and optic nerve were torn away close to the globe.



The piece of optic nerve shown in the photograph, 1½ inch long, was lying loose between the lids, and was torn out from its sheath, which is seen attached to the globe and remained as a distinct tube.

Except for a slight abrasion of the upper lid, there was no injury to the adjacent parts. The remaining connective tissue was snipped through with scissors, and the orbital cavity washed out. The patient recovered without any further disturbance.

I am indebted to my colleague, Mr. Daman, for the above photograph.

ROYAL INFIRMARY, PERTH.

A CASE OF GASTRIC ULCER WITH PERFORATION IN TWO PLACES.

(Reported by Dr. Lyell, House Doctor.)

A girl, aged 19, dressmaker, was admitted on January 28th. She had been ill for a fortnight, and had had hæmatemesis five days before admission. She had been suffering from symptoms of anæmia for some time, and was found to be the subject of slight dry pleurisy on the right side, with a temperature of 102.8°. She complained of severe pain about one hour after food, with vomiting, and the abdomen was found very tender, without any definitely-localised tender spot.

About five hours after admission, she was heard to give a slight groan, and was found quite dead about three minutes after, death having apparently been quite instantaneous.

Post-mortem Examination.—On the stomach being exposed, a clean-cut round perforation, about ¼ inch in diameter, was disclosed, surrounding which, for about 1 inch, was an adhesion of peritoneum which had been torn off in manipulation. On removal of stomach, another larger perforation was found on the posterior aspect, with no adhesions, and attached to the opening a small tag of tissue, apparently the remains of the outer coat of the stomach, and giving the impression of a recent rupture. The two perforations were exactly opposite one another, and situated towards the lesser curvature and slightly nearer the pylorus. The perforations were funnel-shaped, being of greater diameter on inner wall. There was no evidence of inflammation in the neighbourhood of the ulcers, but the mucous membrane of the stomach was somewhat congested towards the cardiac end. There was a considerable quantity of greenish fæcal fluid in the cavity of the abdomen.

SURBITON COTTAGE HOSPITAL.

A MESENTERIC CYST CAUSING INTESTINAL OBSTRUCTION: ABDOMINAL SECTION.

(By Frank E. A. Colby, F.R.C.S.Eng.)

L. T., aged 7 years, was admitted on February 17th, 1898, with fæcal vomiting. The clinical history of the case (for which I am indebted to my colleague, Dr. A. J. Collis) is as follows:

On February 8th the patient was seized with sudden pain in the abdomen, which was severe and lasted three hours. On February 9th he had a similar attack. On February 11th some calomel was given, but was vomited. On February 12th two olive oil injections were given, with no result. On the evening of the same day a castor-oil and glycerine enema was given, and produced only a few hard lumps. This injection was repeated on February 13th.

On February 16th vomiting set in. The vomiting was fæcal. When admitted into the hospital at 5 P.M. on February 16th he had the facial appearance of abdominal trouble, with a quick pulse and a dirty but moist tongue. The abdomen was flaccid and not distended. Peristaltic intestinal movements were everywhere visible. *Per rectum* a swelling was detected, projecting into the bowel. This swelling so much resembled an intussusception that water was injected by means of a siphon; this injection was followed by the disappearance of the rectal swelling. The patient was seen again at 10 P.M., when the rectal lump had returned, so the boy was taken into the theatre and put under an anæsthetic; it was now more obvious that the swelling felt in the rectum was outside the bowel. Consequently, the abdomen was opened in the middle line below the umbilicus, Dr. Taylor, F.R.C.S., assisting. On inserting the fingers into the pelvis through the opening thus made an elastic swelling of the size of a small cocoa nut was brought out of the wound. This proved to be a cyst in the mesentery of the small gut. The cyst had compressed a loop of small intestine, which was closely united to the cyst wall and flattened out against it. An attempt was made to dissect out the cyst, but for fear of

causing gangrene of the intestinal loop this attempt was given up, and as much as possible of the wall of the cyst was removed. The patient vomited fæces during and after the operation. After this no more vomiting occurred, and his recovery was uneventful.

The cyst wall when distended was mottled on the surface like a crumpet, and microscopically was composed of fibro-cellular tissue, with a large quantity of unstriped muscle. The contents measured 10 ounces of a pale pink fluid, whose specific gravity was 1023, and contained a large quantity of albumin and cholesterin.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. Bryant, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, March 22nd, 1898.

The President referred in fitting terms to the loss the Society had suffered by the deaths of Dr. C. West and Sir R. Quain, Bart. Dr. C. West was a former President of the Society, while Sir R. Quain had brought his well-known observations on fatty degeneration of the heart before the Society.

Chloride of Ammonium Process for the Microscopic Detection of Uric Acid in the Blood.

Dr. Haig demonstrated some results obtained by this process, as suggested by Mr. Barker-Smith in the *Medical Times and Hospital Gazette* of September, 1896. Process: A minute drop of blood placed on a microscope was mixed with a similar quantity of a 10 per cent. solution of carbonate of sodium, and then with a similar quantity of a 20 per cent. solution of chloride of ammonium, and put on a cover glass. It was allowed to stand for thirty minutes, preventing evaporation, and then examined under $\frac{1}{4}$ in. or $\frac{1}{6}$ in. objective. Pale granules, generally spherical and about one-sixth to one-third the size of a red blood cell, were then seen all over the field. Dr. Haig suggested that by counting all the granules in a field, and then all the red cells in the same field, a quantitative relation was obtained which might be of some value. The number of these granules in blood thus treated appeared to correspond in a remarkable way with the amount of uric acid passed in the urine. It corresponded also with the physiological fluctuations in excretion, and the effects of drugs upon these. It also corresponded with what was known about uric acid in the blood of disease, the granules being very numerous in Bright's disease (especially large pale kidney) and chronic gout, and very scanty in early and acute fever. Some results obtained were shown in curves and figures. Under the microscope a normal blood and a pathological blood (Bright's disease) were shown for contrast. Dr. Haig believed that Mr. Barker-Smith's process thus modified would provide a reliable guide to the quantity of uric acid in the blood and urine, and in that case its many advantages over processes at present in use would be obvious.

Dr. Luff said that with reference to the method for the so-called microscopic detection of uric acid in the blood demonstrated by Dr. Haig, there was no proof whatever that the granules consisted of uric acid or urates. The statement should not be made that uric acid was present in the blood unless its presence could be shown by what he considered to be the only infallible test, that was, the murioxide test. V. Jaksch, Klemperer, Sir A. Garrod, and the speaker had shown that the blood of healthy human beings, the blood of ox, sheep, pig, turkey, duck, goose, and fowl was free from uric acid. The observation that the blood of birds contained no uric acid was most important since birds eliminated all their urinary nitrogen as uric acid. Sir A. Garrod and he had both found uric acid constantly absent from blood of birds and urea constantly present in their blood, yet their urine contained no urea but uric acid. The only inference was that uric acid was formed in the kidneys from urea brought in the blood. Dr. Haig raised the objection that the quantity of uric acid present in the blood might be so small as to escape detection by the murioxide test. If uric acid were present in the blood in the quantities stated by him, then 1.5 c.cm. of such blood would contain one hundred times the amount of uric acid that the speaker had shown to be recognisable by the murioxide test. In 1,000 c.cm. of birds and of mammalian blood he had found no trace of uric acid. The strongest reasons for thinking Mr. Barker-Smith's process unreliable were: (1) That the blood of a goose previously shown not to contain uric acid gave an abundant crop of thin granules by this process; (2) that cheese admitted by Dr. Haig to be free from uric acid when dissolved in dilute potash gave an abundant crop of these granules. No process should claim to detect uric acid in the blood unless it could be proved that the body detected was uric acid. He concluded that uric acid was never normally found in the blood, and when found there was due to reabsorption from the kidneys.

Dr. Haig pointed out that he had not said that the granules were either urates or uric acid; he did not know what they were, though some of them might be xanthin. But, whatever they were, their presence in the blood varied regularly with the amount of uric acid in the urine. By giving a patient salicylates, which greatly increased the excretion of uric acid in the urine, the amount of these granules was found to vary directly; for example, if the number was normally 1 in 8, the number during the time that salicylates were being given would rise to 1 in 2. By examination of the granules in the blood, he could, he thought, forecast the amount of uric acid in the urine, and would gladly do so while Dr. Luff estimated the uric acid excreted in the urine. He believed that uric acid was present in the blood.

Epidemic Malarial Fever of Assam, or Kala-azar.

Surgeon-Captain L. Rogers, I.M.S., read this paper, which was a brief abstract of his report on his recent investigation of the epidemic malarial fever of Assam, locally known under the name of "kala-azar," or black fever. This scourge had been steadily spreading up the Assam valley for the past twenty years, carrying off about a fifth of the inhabitants of the affected districts, and depopulating whole tracts of country. It was always thought to be malarial, until its steady spread and apparent infectiousness caused some to doubt this view, and in 1889 Surgeon-Captain Giles was sent up to investigate it, and he reported it to be ankylostomiasis. It was, however, subsequently proved that these worms were just as common in healthy people as in kala-azar, and in 1896 Dr. Rogers was appointed to reinvestigate the subject, and reported on it a year later. He found, in the first place, that the disease was a fever of an intermittent or irregularly remittent type, which produced progressive anæmia, great wasting, very marked enlargement of the spleen and liver, and in some cases dropsy of the feet, and terminated in from three to nine months, in 96 per cent. of the cases, in death from fever, asthenia, diarrhœa, or lung complications. Moreover, the anæmia was of the type found in chronic malaria, and differed so widely from that present in ankylostomiasis that the two affections could be absolutely distinguished by an examination of the blood alone, while the ankylostoma was found, both during life and after death, in slightly smaller numbers in the epidemic disease than in healthy persons. *Post mortem*, the pigmentation of the liver and spleen, so characteristic of malaria, was always well marked, while the ordinary plasmodium malariæ was constantly found in all stages of the fever during life. No other specific organism could be detected by any of the ordinary bacteriological methods. The disease was then from first to last malarial in its nature. The fever was found to attack large numbers of a family (three-quarters of a series of cases having lost half or more of their whole household), while the epidemic spread from one district to another in the form of a wave of greatly increased fever mortality, lasting from six to eight years in any one place, and following the seasonal variations of the ordinary malarial fever of Assam. Further, the disease was found to extend along lines of communication, and was checked by any stretches of uninhabited country. Extensive inquiries in the affected villages established the further fact that the fever was carried by a sufferer moving from an infected to an uninfected village, when other cases first appeared among his household, and it then spread to others in the village. The fever increased during the rainy season, but declined in the cold weather when the ground was dried up, and if the villagers moved their

houses to a new site only a few hundred yards away during the cold weather, then the fever often did not recur during the next rains, the infection apparently having been left behind in the soil. The epidemic also appeared to be limited to an alluvial soil, and never travelled far up into the hills. On tracing back the epidemic it was found to have originated in Rungpur in the early Seventies by an intensification of the ordinary malarial fever of that district by an extraordinary succession of very unhealthy years, caused by a great deficiency of the rains in five out of six successive seasons, until it attained to the power of spreading. The fever got more and more prevalent year by year, except during the year of normal rainfall, and its type became more and more virulent, until it culminated in the spreading epidemic malarial fever which had continued to travel up the Assam valley for the last twenty years along the lines of human intercourse, being limited to an alluvial soil and being checked by any tract of uninhabited country.

Sir W. R. KYNSEY, though prevented from being present, sent some remarks which Dr. NORMAN MOORE, the senior Secretary, read. Ankylostomiasis was a subject in which he was greatly interested, and though he agreed that kala-azar and it were not the same, he thought that the author had underestimated the effect of ankylostomiasis on the natives of Assam. The combined infection was by no means common. The blood tests described by the author were hardly necessary to distinguish ankylostomiasis from kala-azar, since the anæmia of the former enabled one to diagnose it almost at a glance. The author had not proved that it was infectious; it was difficult to prove the infectious nature of diseases that simultaneously affected a number of men. He thought the spread through the soil was probable, and that the moist state of the ground favoured its evolution.

Dr. MANSON pointed out that whereas the corpuscular richness of the blood was slightly higher in kala-azar than in ankylostomiasis, the blood in the combined infection did not show the diminution of corpuscular richness that would be expected, since the presence of one infection should favour blood destruction by another. With regard to the amount of iron in the liver in cases of kala-azar and ankylostomiasis, observers were not in entire agreement. Dr. C. W. Daniels had found the amount of iron in the liver of patients with ankylostomiasis increased just as it was in malaria. It might be that these intestinal parasites produced a hæmolytic ferment which, being absorbed, destroyed the red blood corpuscles in the circulation, and brought about a similar change to that seen in malaria. As an analogous case he referred to the well-known fact that symptoms of pernicious anæmia were sometimes found to be associated with the presence of tape worm in the intestinal tract. He himself had always found crescents in the blood of malarial patients in Assam, and believed that crescents were always present in malaria. The author's failure to find crescents in kala-azar was capable of two interpretations: (1) that his methods had not been sufficiently exact; (2) that he had discovered some entirely new form of parasite. That kala-azar was infectious in the same way as small-pox appeared to him incredible. There was an intermediate stage to be passed through before it was transmitted from one patient to another, just as there was before a man could be infected from a hydatid cyst in another. With regard to the view that the poison had been intensified, there were different strains of malarial parasites, but they did not undergo any fundamental biological change.

Dr. G. THIN said that this admirable paper tended to remove the reproach that had been sometimes thrown at the Indian Medical Service that original work was neglected. The paper was especially valuable from the abundance of facts and avoidance of speculative considerations. He thought the evidence that kala-azar was malarial was good. He would be interested in seeing the specimens. He joined issue with the last speaker with regard to the presence of "crescents" in the blood of patients suffering from the malarial disease. He had examined chronic cases in which they were not to be found; and Grassi and Filetti with their extensive experience had come to the conclusion that there were cases of malaria without "crescents" in the blood. By infection was meant that the parasite passed out of the body of one patient and subsequently obtained entrance into another patient; it might pass through another host, such as a mosquito or gnat, but it could not be said that this was necessarily the case, for it was not proved. The epidemic in Mauritius, referred to by the author, was most interesting. Thirty years ago he had seen a case in China which was entirely different from any of the malarial cases seen in Shanghai. Marshall had shown that the toxicity of the tertian parasite might vary in intensity. That the alluvial soil exerted such an important influence on the disease was interesting, and found a parallel in other instances. He inquired whether there was any proof that the disease called pestis minor had any relation to true bubonic plague; his own belief was that there was none.

Surgeon-Captain ROGERS, in reply, agreed that ankylostomiasis and kala-azar were seldom combined. His view that ankylostomiasis was comparatively innocuous in Assam had raised considerable criticism in India. Dr. Thornhill had gone so far as to believe that kala-azar, though malarial in nature, was spread by the ankylostomum. Though usually ankylostomiasis and kala-azar were easily distinguished there were some cases in which it was not easy and in which the blood test was useful. With regard to the question of iron in the liver in ankylostomiasis, the results of the late Dr. Beavan Rake and Professor Stockman were opposed to Dr. Daniels's view, and showed that there was no increase of iron in the liver. The general experience in India did not agree with Dr. Manson's view that "crescents" were present in the blood of all malarial cases. They were found in a minority of cases in India. With regard to the question of infection, it was impossible to prove this until the parasite could be cultivated. It was, however, undoubtedly communicable from man to man. Either there was something else which spread the disease—and of this there was no evidence—or the malarial poison having become intensified had in this instance become communicable from man to man.

GLASGOW SOUTHERN MEDICAL SOCIETY.

ALEX. RANKINE, M.D., President, in the Chair.

Thursday, March 3rd, 1898.

ADJOURNED DISCUSSION ON THE USE OF FORCEPS IN OBSTETRICAL PRACTICE.

DR. ROBERT POLLOCK (Pollokshields) said that almost all cases of primiparæ demanded the use of forceps. There was no danger in the cautious use of forceps. Straight forceps were all a mistake. He used the double curved forceps, long and strong; and these forceps, which he had been accustomed to have, always served his purpose.

Dr. MALCOLM BLACK dealt only with the high operation, which was practically almost always required in cases of pelvic contraction. With a conjugate of less than 3 inches the operation was not justified. He could not endorse the Rotunda opinion, which placed the limit at 3½ inches. Version might succeed sometimes where forceps would fail. It would be wise if the high forceps operation could be abolished by the substitution of induction of premature labour. The pelvis should be carefully measured beforehand to this end.

Dr. MUNRO KERR said that in contracted pelvis inversion he did not approve of pressure on the after-coming head, but he insisted that forceps were very useful.

Dr. J. COULSON HOWIE said that forceps should be reserved for cases where Nature failed. The following indications guided his practice in respect of instrumental delivery: (1) As regards the fœtus: when the fœtal heart was above 160 or below 100 per minute. (2) As regards the mother: a rapid pulse, high temperature, the skin and mucous membrane dry, persistent vomiting, where from any cause it was necessary to hasten the second stage of labour. In cases of eclampsia and uræmic convulsions or epileptic fits. In cases of generally contracted pelves forceps should be used and a moderate amount of compression exerted; in contraction of the conjugate diameter version should be performed and a foot brought down. The dorsal position was much more favourable for the use of forceps than the lateral. If chloroform was used at all with forceps, the patient should be fully under its influence, but in many cases chloroform was not necessary, as when the head was low down in the pelvis. He had used Neville's axis-traction forceps for some years,

and was well satisfied. The axis traction was easily put on and as easily taken off.

Dr. Wyllie said the amount of malpraxis in connection with the use of forceps was something alarming. He was strongly of opinion that the old school were right in regard to the use of forceps.

Dr. Samuel Sloan did not think that all primiparous women required forceps. Tr. opii in a dose of ♏ xxx *per rectum* relaxed spasm of the os uteri, and sometimes hastened labour very much. Turning should never be used instead of forceps. He seldom gave chloroform in the first stage, and never allowed the element of time to enter his consideration. With a pulse of 120, if the patient was tired out, what was to be done? Chloroform should be given for fifteen minutes; things might much improve, and, if they did not, delivery should be effected. Axis-traction with non-axis-traction forceps was better than non-axis-traction with axis-traction forceps. He had used straight forceps oftener within the last two years in occipito-posterior cases where the long double curved forceps failed, and where craniotomy was almost decided on. By rotating the head with straight forceps delivery was surprisingly easy.

The discussion was again adjourned.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

James Braithwaite, M.D., President, in the Chair.

Friday, March 4th, 1898.

Hernia.

Mr. Lawford Knaggs read a paper on four unusual cases of hernia. In one the contents of an umbilical sac had been strangled by a volvulus.

Blighted Ovum.

Dr. Wear described and showed specimens of two cases of blighted ovum due to hæmorrhage. One patient, aged 19, had amenorrhœa for five months, and the other, a multipara, aged 46, amenorrhœa for seven months. In each case the ovum consisted of an early placenta 2½ inches long, covered in by the unruptured membrane, containing a shrunken and shrivelled embryo measuring ⅝ inch in length. The embryos, which were attached to their cords, had reached about the end of the second and middle of the third month respectively. The fœtal surfaces of the placentæ were studded with numerous bosses or hæmorrhagic elevations, dark purplish in colour and firm in consistency. The maternal surfaces were a dirty drab colour, and offensive in odour, and had evidently been separated some time. Retention within the uterus had been about three or four months; no history of syphilis in either case. The abortion in the first case was attributed to a shock.

Malignant Disease of Kidney.

Mr. E. Solly read notes of a case of malignant disease of the kidney, in which that organ was successfully removed through an abdominal incision. The patient was a woman, aged 68, who had for about forty years been subject to severe neuralgic pains, especially in the abdomen, but not exactly localised. These pains had been so severe that frequently both alcohol and opium had been indulged in, often to great excess, but no objective signs of disease had been discovered until December, 1895, when a floating kidney was diagnosed. The patient was sent to an infirmary in Yorkshire, where nephrorrhaphy was performed, the kidney being stitched up to the last rib. At the operation it was found to be somewhat enlarged, but soft, smooth, and apparently "normal." The operation failed to keep the kidney in position, and about fifteen months later the patient was admitted into the Yorkshire Home for Incurables at Harrogate. Various attempts to relieve the pain attributed to the floating kidney were made by means of belts without success. At last, on account of profuse hæmaturia, not relieved by rest in bed, intense and exhausting pains, and the discovery of minute fragments of cubical-celled tissue in the urine, operation was decided upon, and on August 13th the kidney was removed and found to contain a large, lobulated, and more or less encapsuled new growth in the cortex about the size of a large orange. The microscopic appearances were those of a typical carcinoma. The ureter and numerous vessels were tied separately with silk, and a large silk ligature passed round the whole, a glass drain tube placed in the areolar tissue outside the peritoneum (which was closed first by a silk suture), and left in 23 hours. The patient was kept in a sort of hot-air bath for three days by being packed round with hot-water bottles, and the various symptoms, such as headache, vomiting, etc., treated as they arose with phenacetin, citrate of magnesia, etc. Recovery was uninterrupted, and the patient was up and about within a month; and though it was now six months since the operation there was no sign of any return. The effects of the operation on the urine were interesting; before the operation this was practically almost pure blood, and after the operation it at once became clear, but for the first four days contained a trace of albumen, apparently from a temporary congestion of the remaining kidney. The total quantity of urine passed rose gradually from 16 ounces passed in the first 24 hours, the successive daily totals being 16, 22, 27, 28, 29, 36, 34, 36, and 47 ounces from the second to the tenth day respectively. The total daily quantity of urea did not vary very much from day to day, for the percentage of urea to the ounce of urine gradually diminished as the total quantity of urine increased, the actual quantities of urea in grains from the fourth to the tenth day being 270, 294, 304, 396, 272, 216, and 376 grains respectively. The kidney was exhibited at a pathological meeting of the Society, and it was agreedthat the appearances were such as would be seen in a growth primarily adenomatous, but which had subsequently taken on malignancy.

Cases and Specimens.

Cases and specimens were shown by Dr. Barrs, Dr. Trevelyan, Professor C. J. Wright, Dr. Chadwick, Mr. H. Littlewood, Dr. Wardrop Griffith, Mr. Lawford Knaggs, and Mr. E. Ward.

PATHOLOGICAL SOCIETY OF MANCHESTER.

C. E. Richmond, F.R.C.S., President, in the Chair.

Wednesday, March 9th, 1898.

Pernicious Anæmia.

Professor Dreschfeld read a paper on the Changes met with in the Spinal Cord in cases of Pernicious Anæmia, and showed preparations in illustration.

Perityphlitic Abscess of Cæcal Origin.

Mr. Southam mentioned a case of perityphlitic abscess due to perforation of the cæcum by a foreign body. Upon opening the abscess a concretion containing a pin in its centre came away in the pus. This was followed by the formation of a fæcal fistula, which was subsequently closed by a plastic operation, and it was then found that the fistula communicated with the cæcum, the appendix being quite healthy. Reference was also made to two similar cases, in each of which a perforation was found in the cæcum, the appendix being normal. It was pointed out that though in most instances of suppuration in the neigbourhood of the cæcum the appendix was at fault, yet in a small proportion of cases an abscess in this situation was of cæcal origin.

Malignant Disease of Intestine.

Mr. Harry Irvin showed a preparation of a peculiar double intestinal anastomosis from malignant disease.

Rhabdomyo-Sarcoma of Kidney.

Dr. Eurich described this specimen taken from the left kidney of a child, aged 2 years, with congenital absence of the left suprarenal capsule. The tumour consisted of islets of sarcomatous (round-celled) tissue separated by strands of spindle elements. Within these groups were small ducts, according to some authorities derived from the Wolffian bodies. Striped embryonic muscle was found composing a hard nodule in the middle of the tumour, besides a few isolated fibres scattered throughout the growth; a delicate film of similar embryonic striped muscle covered part of the posterior aspect of the tumour close to the origin of the latter from the kidney.

Card Specimens.

Mr. Collier: Large Gall Stone from the Intestine.—Mr.

Lakin: Extrauterine Pregnancy Ruptured into the Right Broad Ligament.—Mr. Smallman: Old Intracapsular Fracture of Neck of Femur associated with Chronic Rheumatoid Arthritis.

ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of Pathology.

J. M. Purser, M.D., President, in the Chair.

Friday, February 25th, 1898.

Malaria.

Dr. J. B. Coleman exhibited blood slides from a case of tertian ague, showing the different stages of development of the plasmodium malariæ. Although malaria was unknown in Ireland now, it was not uncommon in the vicinity of Dublin in the early part of the present century. Dr. Coleman's patient was a soldier, who had returned from India six months ago, and who was admitted to hospital with well-marked tertian intermittent fever.

Professor O'Sullivan showed specimens of the malarial parasite. The case was that of Dr. H., residing in the Chota Nagpur district in Bengal, who had contracted a simple tertian ague in December, 1896. The examination was confined to a single attack, which Dr. H. allowed to run its course without treatment. Shortly before the next attack was due he took quinine, and, although the attack took place in a mild form, there were very few parasites to be found in the circulating blood, and shortly afterwards they had entirely disappeared. The fit began at 1 P.M. on Saturday, December 18th; blood was taken at 2 P.M., 4.45 P.M., and 11.45 P.M. on Saturday, and at 9.30 A.M. on Sunday. Specimens taken at 2 P.M. (temperature 102°) showed chiefly a delicate ring form, half or less than half the diameter of a normal red corpuscle. The ring was circular or slightly oval, with a thickening at one side extending over one-third of the circumference, and a small, deeply-stained nodule opposite to the centre of the thickening. In a few cases the ring showed no thickening or nodule. In addition there were some segmentation forms, containing 17 to 20 spores in two rows, and pigment, which was in some cases diffused in coarse granules through the body; in others, collected in a ball in the centre. In the next two specimens (4.45 P.M., temperature 103.2°, sweating stage, and 11.45 P.M., temperature 98.5°) nothing but ring forms were to be seen, showing, however, signs of further development—for example, pigment granules in the thickened part, and formation of a small clear body, staining lightly with methylene blue at the side of the thickening. In some cases two rings, and even three, were found in the same corpuscle. These joined at a point in their circumference at the edge of the thickening. In the specimens taken at 9.30 A.M. on Sunday no ring forms were found; the thickening had developed into a pigmented body as large or larger than the original ring, traces of which, with its nodule, could often be made out.

The exhibits were discussed by Dr. McWeeney (the Secretary), Surgeon-General Potter, Dr. Parsons, and Dr. Bennett (the President of the Academy); and Dr. Coleman and Professor O'Sullivan replied.

Fracture of Spine and Sacrum.

Dr. E. H. Bennett exhibited the lumbar spine and sacrum of a man who was killed by the falling of a weight of two tons (a parcel of grain being unloaded from a ship), which crushed him on his face on the deck of the vessel. The second, third, fourth, and part of the fifth lumbar vertebræ, deprived of their transverse process and, in part, of their spine, were displaced forwards. The sacrum, with a part of the body of the fifth lumbar, was detached from the innominates, and displaced forwards into the pelvis. Dr. E. H. Bennett, in reply to Dr. Knott, said that there was no consciousness left on admission. There was no doubt that the whole spinal canal was injected to the utmost with blood.

Complete Osseous Ankylosis of Hip and Sacro-iliac Joints on one Side.

Dr. J. Knott showed a specimen. The pelvic section of it presented the special deformity formerly described by Professor Naegele, of Heidelberg, as the "pelvis oblique ovata," while it offered the additional complication of complete ankylosis of the hip-joint of the corresponding side. Professor Naegele's experience of this variety of pelvic deformity was that of the difficulty to which it gave rise during parturition, which had been the means of drawing his attention to it. He had never found any external cicatrisation, had never been able to obtain a history of caries, had never known the condition to be diagnosed during life, and had found it to be invariably fatal to both mother and child. The existence of this pathological condition was first discovered during life in the Rotunda Hospital, and by the late Professor Sir Edward Sinclair, of the Dublin University. Dr. Knott had been assured by the President of the Academy—the highest authority on the surgical pathology of the skeleton with whom he was acquainted—that the specimen was unique in his experience.

Senile Hypertrophy of the Prostate.

Mr. Tobin read a report of a case of prostatic hypertrophy which he had treated twenty months ago by resection between ligatures of half an inch of the vas deferens on each side. The patient had the usual symptoms, and at the time of operation had not passed water without the help of a catheter for three months. He was a nervous man, who could not be taught to pass a catheter for himself. Two days after the operation a little water began to pass naturally, and he was discharged from hospital fairly well in three weeks. His condition on February 1st, 1898, twenty months after the operation, was as follows: Although he did not lead a temperate life, he had no kind of urinary trouble since he was discharged from hospital, and his sexual functions were quiescent. A digital examination *per rectum* found the prostate very small. A catheter passed after micturition showed the bladder to be empty. The testicles had not diminished in size, and were, as far as one could judge, normal. Testicular feeling was present. On each side below the point of resection the vas deferens was swollen into what might be called a retention cyst the size of a small walnut. Fluid drawn from one of these swellings was found crowded with active spermatozoa. (The patient was shown at the Surgical Section of the Academy.) Mr. Tobin remarked that if the improvement in the man's condition was due to the resection of the vasa deferentia, he saw no way in which the operation could act, since no atrophy of the testicles had occurred, except by inducing a quiescent state of the prostate gland by cutting off the seminal fluid from the regions where its presence had a stimulating effect. In addition to this case, he had in his books quite a number of cases in which patients complained of some condition interfering with the free emission of seminal fluid as existing for some time previous to the development of the urinary symptoms that usually called attention to enlargement of the prostate. He therefore submitted that the following might in some cases be the explanation of the cause of this disease. In late middle life the incidents that predisposed to hæmorrhoids, but especially sedentary habits and the abuse of alcoholic stimulants, and in some cases the after-effects of gonorrhœal inflammation of prostate and bladder, caused a condition which prevented the seminal canals emptying themselves satisfactorily. Consequently there was established a chronic seminal irritation in the vasa deferentia at the point where they were enlarged and sacculated just before entering the prostate, and a vicious cycle of incidents leading to chronic prostatic hypertrophy. It was fair to suppose that if the prostate, whether hypertrophied or normal, withered when the testicles were removed, it would grow when it gathered from the testicle increased vascularity and excitement.

Drs. Knott, Bennett, and McWeeney discussed the communication; and Mr. Tobin replied.

Section of Surgery.

Sir William Thomson, P.R.C.S.I., President, in the Chair.

Friday, March 4th, 1898.

Gunshot Fracture of the Humerus.

Mr. M'Ardle brought forward a case of gunshot fracture of the humerus, in which a perfect result was obtained by free incision over the point of lodgment of shot and wadding. Afterwards free irrigation was carried out after fixation on angular splint. The points Mr. M'Ardle accentuated were—(*a*) The first dressing should be complete, however collapsed

the patient. (*b*) Immediate fixation of limb. (*c*) Circulation in limb should be restored by irrigation; temperature of fluid might reach 106° to 110° F. (*d*) All these procedures should be carried out under chloroform.

The President said that in dealing with recent simple fractures by operative methods, he should certainly be in favour of such proceeding in cases where the deformity was likely to be very great, or where the use of the limb was likely to be interfered with. He thought it would be perfectly justifiable to cut down on such fractures, and suture them in proper position.

Mr. Tobin thought that surgeons would yet be compelled to cut down upon ordinary simple fractures, and unite them by wire suture in a position that would do them credit.

Mr. T. Myles said there was no method yet devised for keeping the broken ends of a bone in position where the deformity was due to muscular action. The wiring produced limitation of movement, but would not bring the fragments well together. When a fracture was cut down upon there was no guarantee that the angular deformity was corrected, and if wiring were carried out, even then there was no guarantee that union would take place.

Mr. G. J. Johnston agreed with Mr. M'Ardle in his preliminary treatment of fractures—that was, very rigorous antiseptic treatment, and also as regards chloroform.

Mr. E. H. Bennett thought that all surgeons who abstained from the use of anæsthetics in the immediate treatment of fractures were well advised. A fracture was reduced with the greatest ease under the anæsthetic; but as the patient came out of the anæsthetic he struggled just as badly as when going under.

Mr. Lentaigne took it for granted that gunshot fractures should be treated the same as other compound fractures. It was his custom to inject the cavity of the wound with a 1 in 20 carbolic lotion. Afterwards he used sterilised water to wash away the strong poisonous antiseptic introduced; then, a thing which he considered most important, he put the patient up in plaster of paris, whether compound or simple. In the case of a compound fracture he cut a fenestra through the plaster immediately, and then cut one through the antiseptic dressings, and got down to the wound; a tampon of gauze was a most essential thing. The use of plaster of paris absolutely prevented any possibility of injury when the patient was recovering from an anæsthetic.

Mr. M'Ardle, in reply, said it was sixteen years since he had screwed bone in a case of ununited fracture of the collar bone. He then utilised two varieties of screw. He now adopted the wire suture always, and had fixed bones with such means even in very strong patients. There was no muscle which could not be temporarily paralysed.

Surgical Treatment of Tuberculous Disease of the Hip.

Mr. Tobin read a paper on this subject, which will be published.

Mr. T. Myles said the conversion of a disease of the hip-joint with tubercle into a compound fracture, without any attempt to eradicate the tuberculous focus, seemed to him to be very bad. When the femur was divided at the trochanter, and the lower segment of the limb brought down to its normal position, great pressure must be exerted on the tissues in front of the upper segment, causing severe pain. He had operated on a case, and had no hesitation in saying that death was caused by the pain subsequent to the operation. If the deformity in the early stage of the disease happened to be rigid, any attempt to produce the position advocated by Mr. Tobin would, he was afraid, produce a result similar to that he had described. He thought that Mr. Tobin was wrong in assuming that when he had divided the neck of the femur and put the rest of the limb straight, he had left the upper segment intact. From his own early experience he was convinced that excision of the hip was hopeless in the late stages. He had opened a good many hips in the early stages, and never found much fluid in the joint, and was convinced that, whatever were the deformity, it was not due to distension of the joint with fluid. He thought that the deformity was caused by the mechanical preponderance of the muscles in front overcoming the muscles behind. He believed that in nine cases out of ten rest and gradual treatment with the pulley, and afterwards with a Thomas's splint, would end with a useful limb. Trephining of the great trochanter might be recommended in more obstinate cases.

Mr. Lentaigne had performed excision of the hip pretty often of late, and, with two exceptions, had had favourable results. He thought Mr. Tobin's method very bold. He had seen two or three of his recent cases, and thought it was a question altogether of how these cases would get on during the next year or so. If the patients were then in good health comparatively, and if the hip disease had disappeared, he said that there was a future for the operation, which was a simple and an easy one.

Mr. M'Ardle thought Mr. Tobin's procedure one which was well worthy of being carried out. In the replacement of the limb he had not observed that there was any difficulty such as that experienced by Mr. Myles.

Mr. T. E. Gordon said that Mr. Tobin's statement that extension of the limb caused stretching of the ligaments of the joint was surely contrary to the general pathological teaching in connection with the surgery of joints. In order to cause stretching of the ligaments, one would have to cause separation of the bones. He had seen experiments made to try what weight was required to effect separation of the bones, and it was something enormous. It was, therefore, impossible that the ordinary extension could cause any stretching of the ligaments of the joint.

Mr. Tobin, replying, said he had not such fear of producing compound fracture as Mr. Myles had. In reply to Mr. Gordon, he said he had noticed that a weight applied for a short time produced no result; but the continual application caused much extension. Also, when the muscles were tired the weight must pull on the ligaments and capsule and diseased tissues around the joint, and by so doing it did not create for the diseased parts a position of ease.

British Gynæcological Society.—At a meeting on March 10th, Dr. Macnaughton Jones, President, in the chair, Mr. Bowreman Jessett showed a Cystic Sarcoma of the Ovary, successfully removed.—Dr. G. Elder (Nottingham) showed a Sarcoma of the Ovary weighing 1¼ lb.; patient recovered.—Dr. H. Jellett (Dublin) showed an early Sarcoma of the Ovary with Papilloma of the tube of the same side, removed by anterior colpotomy from a patient in whose case a previous colpotomy had been done for diagnostic purposes.—In the discussion on these specimens Drs. Purcell and Edge, Mr. J. W. Taylor, and the President spoke favourably of colpotomy, and thought it should have the preference over laparotomy whenever possible.—Dr. C. H. F. Routh deprecated the performance of colpotomy for diagnosis in a case of dysmenorrhœa.—Dr. Bantock took the same view, and further dwelt on the grave prognosis which must always be given in cases of sarcoma of the ovary. He related two instances from his practice. One patient died of recurrence after removal of the growth; the other was at the present time, five months after the operation, still well and free from recurrence, but her life could not be considered a sound one.—Mr. Jessett and Drs. Elder and Jellett briefly replied.—Dr. George Newman, Lecturer on Bacteriology at King's College, London, gave a demonstration on Micro-organisms in relation to the Female Genital Organs, illustrated by lantern slides and twenty microscopic specimens under $\frac{1}{12}$ (oil immersion) lenses. The principal micro-organisms shown (some for the sake of contrast) were the following: Bacillus coli communis, bacillus typhosus, bacillus tuberculosis, bacillus pyocyaneus, bacillus of vagina, bacillus subtilis, staphylococcus pyogenes aureus, streptococcus (puerperal fever), diplococcus of pneumonia, diplococcus of gonorrhœa, diplococcus albicans amplus, diplococcus subflavus, sarcinæ, proteus hominis, lochial discharges, gonorrhœal discharges. The lantern slides included the above, as well as other matters relating to bacteriological diagnosis in gynæcology.—Dr. W. Alexander (Liverpool) read a paper on Enucleation of Uterine Fibroids, illustrated by lantern slides, showing methods of operation and tumours removed. He pointed out that many fibroid tumours produced such an amount of discomfort that patients would be willing to undergo a non-mutilative operation provided the risk was slight. The operations at present performed for fibroids were, however, so severe that they were necessarily reserved for cases where

life was directly endangered; and the other cases had the option either of living an invalid life till the menopause relieved the symptoms or a severe operation became justifiable, or of their discomfort being relieved at once by an operation that certainly destroyed the effective life of their generative organs. There was another alternative, namely, the removal of the fibroids without sexual mutilation, and without interference with sexual life. Dr. Alexander reported eleven cases operated on by him, with one fatality, and where the number of tumours removed in each case varied from one to twenty-five. He described fully the method of operating, and the precautions necessary to be taken against hæmorrhage, septic infection, etc.—The discussions on Dr. Newman's demonstration and Dr. Alexander's paper were adjourned to the next meeting, on Thursday, April 14th.—Card specimens were shown by Mr. JESSETT and Dr. ELDER.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on March 11th, Dr. E. SEATON, President, in the chair, Dr. J. WRIGHT MASON (M.O.H. Hull) read a paper on Secondary and Return Cases of Scarlatina. The conditions which produced return cases were (1) imperfect disinfection of the clothing of the first patient, (2) the retention of the poison in his skin, or throat, or most often in discharges from the throat, nose, and ears, which might not appear till after his return; and (3) infection contracted before leaving hospital by patients admitted for other diseases. Those only occurring within fourteen or at the most twenty-one days after the return of the first patient should be so described. Direct infection usually showed itself within two or three days, but the more severe the attack the longer was the patient infectious, and return cases after home treatment were generally worse than when the first had been in hospital. They appeared to be more frequent in the autumn, perhaps from premature discharge when the wards were most crowded, and they certainly were so when the period of detention did not exceed six weeks, and were very rare when it was extended to eight or ten. Etiologically scarlet fever was independent of sanitary conditions, though the fatality was greatly influenced thereby. Every case kept at home without perfect isolation was a focus of infection, but patients should be transferred to a convalescent ward before being sent home from a hospital. Very mild cases should be moved there as early as possible, for he had known such when kept in the infected air of the hospital contract the disease again in a severer form. Dr. TALBOT (Bow) had frequently known the return of patients after six, eight, and even twelve weeks' detention, to be followed by others five to ten days later, but in nearly all such instances the first had a discharge from the throat, nose, and ears.—Dr. GOODALL (North-Eastern Hospital of the Metropolitan Asylums Board) said that he always kept cases with ear affections for twelve weeks, and gave instructions to the parents, though in many families isolation was impossible. In London return cases occurred in at least 5 per cent. of the houses, but he did not think that they were relatively more numerous in autumn. Direct infection did not always follow immediately on exposure, for cases admitted in error resisted it for some time. Those giving rise to return cases had often no visible symptoms, but he generally found that they had been put to bed with the others. He doubted the value of convalescent hospitals, for many return cases followed the discharge of patients from Winchmore Hill. It was a remarkable fact that one rarely met with return cases of diphtheria, though the bacilli persisted so long in the throat.—Dr. WOODFORDE (M.O.H. Berks Combined Sanitary District) said that the hospitals in his district detained ordinary cases for eight weeks, and those with nose or ear affections for twelve. He knew nothing of return cases, but where isolation was attempted at home there was often a succession of cases at intervals of seven weeks.—Dr. TUBB-THOMAS (M.O.H. Leicester County Council) had on three separate occasions known cases to appear in a family two or three days before that fixed for the return of a patient, which would have been put down as return cases had the dates been reversed.—Dr. BOND (M.O.H. Holborn) denied that overcrowding existed in the hospitals of the Asylums Board, which allowed 2,000 cubic feet per head. He thought 1,600 would be ample, most of the patients being young children, and the accommodation would thus be increased by 20 per cent. Cases treated at home had but a fraction of this.—Dr. R. DUDFIELD (M.O.H, Paddington) thought that the hot bath immediately preceding the going out into the cold air of a child insufficiently clad might often be the exciting cause of the catarrh and discharge from the ears. As to imperfect disinfection being a cause of return cases, these frequently occurred where there was practically nothing to disinfect.—Dr. KENWOOD (M.O.H. Stoke Newington), Dr. GWYNN (M.O.H. Hampstead), Dr. ALLAN (M.O.H. Shoreditch), Dr. ROWLAND (M.O.H. Richmond), Dr. TURNER (South Eastern Fever Hospital), Dr. WILLOUGHBY, and Mr. W. DEFRIES having spoken; Dr. MASON, in reply, expressed his belief that to the treatment of so large a proportion of the cases in hospitals instead of in the homes of the poor was greatly due the general amelioration of the severity of the disease. In 1881 there were 700 deaths in Hull in a population of 200,000, but since the opening of the hospital malignant cases had become almost unknown.

SOUTH-WEST LONDON MEDICAL SOCIETY.—The monthly meeting of this Society was held at the Town Hall, Wandsworth, on March 9th, under the presidency of Mr. T. A. I. HOWELL, when Mr. C. B. LOCKWOOD read a paper on the Surgical Treatment of Acute Septic Peritonitis, Localised and Diffused. His remarks were chiefly directed to a consideration of the results of disease of the appendix, and after a careful review of the symptomatology, the importance of an early recognition of the disease, with a view to prompt surgical interference, was strongly urged. The lecture was listened to with much attention, and was followed by a discussion, in which the PRESIDENT, Dr. CALDWELL SMITH, Surgeon-Major MARK ROBINSON, Drs. HILLSTEAD, GAY, and others took part.—A unanimous vote of thanks to the lecturer was passed.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting on March 11th, Dr. R. S. MARSDEN, President, in the chair, Mr. EDGAR STEVENSON read a short paper on the Eye Complications of Influenza, drawing attention to the chronic nature of any eye affection which might occur during or be precipitated by an attack of the disease, and inviting discussion on the nature of the headache which was so prominent a feature of almost every case. He also read notes of a remarkable case of Optic Neuritis occurring after influenza, and gave his reasons for considering that the lesion in these cases was more likely to be due to a form of cerebritis than to meningitis. An interesting discussion ensued, in which the following gentlemen took part, Drs. HARRIS, PINKERTON, HARRINGTON, CARDEN PEARSON, WILKINSON, DIXON, LAMBERT, and the PRESIDENT; Dr. STEVENSON replied.

FOLKESTONE MEDICAL SOCIETY.—At a meeting on February 2nd, Dr. FITZGERALD (President) read a paper on the Dissemination and Prevention of Tuberculosis. The paper consisted chiefly of facts and figures that had recently been brought forward by various Boards of Health in New York and elsewhere, proving that tubercle was still by far the most fatal as well as the most easily controlled of all diseases, that it was a communicable and infectious disease, and that in by far the greatest majority of cases the disease was acquired from tuberculous meat or milk, and especially from the dried and pulverised sputum of those who were already suffering from tuberculosis, and that the medical profession was in duty bound to impress these facts on the public both by word of mouth and by pamphlets broadcast. It was contended that far more care ought to be taken to prevent consumptive patients infecting others, and especially that all sputum should be disinfected and burnt. Dr. FitzGerald also strongly urged the compulsory notification of phthisis and the union of the whole profession, who should teach in every town and village the more recent and accurate knowledge of the methods by which disease was spread, so that advance in public knowledge might lead to compulsory legislation and the erection of hospitals for the treatment of tuberculosis.—A discussion followed, during which a subcommittee was appointed to consider what the Society could practically do to make known and enforce these views as to the prevention and dissemination of tuberculosis.

REVIEWS.

Researches on Tuberculosis. The Weber-Parkes Prize Essay, 1897. By Arthur Ransome, M.D., M.A., F.R.S. London: Smith, Elder, and Co. 1898. (Demy 8vo, pp. 92. 2s. 6d.)

In the year 1895 a prize was founded at the Royal College of Physicians by Dr. Hermann Weber, with the double object of doing honour to the memory of Dr. E. A. Parkes and of stimulating research in the direction of further knowledge of the etiology, pathology, prevention, and treatment of tuberculosis. The first of the triennial competitions for this prize was held last year, and Dr. Arthur Ransome was declared the victor. The task set before the competitors on this first occasion was to show by what means, prophylactic and curative, tuberculosis might best be controlled, and in the prize essay that object is kept consistently in view. Attacking in turn all the points in the etiology that his own experience has shown to be of value, the author presents a concise review of all that has been fairly well established by the previous work of the principal labourers in the same field. Even if this review stood alone, the essay would command attention; but Dr. Ransome has enriched it by comments and original observations which render the whole work a most valuable contribution to our knowledge of the subject.

He shows at the outset how steady has been the diminution in the mortality from pulmonary tuberculosis during the last thirty years in direct proportion to the improvement in general hygiene; but makes it equally clear that there has been no such diminution in tuberculous disease of other organs. Fully agreeing with former observers as to the evil influence of damp soils, he proves by a series of interesting investigations that even in neighbouring localities the difference of mortality on sandy and clayey soils is fully borne out. Following out more particularly the natural history of the bacillus under different conditions, he is able to demonstrate by actual experiment how the virulence of the microbe is diminished by currents of air and sunlight, and how powerfully fresh air can act as a disinfectant even under conditions of darkness and damp. He also brings forward evidence to prove that stagnant air charged with accumulation of organic particles may favour the further development and maintain the virulence of the bacillus for a long time after it has left the body. If, as he believes, certain kinds of wall paper may serve as a medium on which the bacillus may grow at the ordinary temperature of a dwelling house, one cause of the latency of tuberculous infectiveness in crowded and ill-ventilated houses becomes apparent. The remedies for such latency are to be found in the free admission of currents of air and the liberal use of chlorinated lime, which he finds to be the best of all fluid disinfectants. Passing in review all the various channels by which the body may become infected, he regards the respiratory and alimentary organs as by far the most frequent ports of entry. That the skin may sometimes become infected is clearly shown by isolated cases, but he places the direct infection by the breath of tuberculous persons at the bottom of his list as among the rarest of all the possible dangers. At this point one could wish for some further information as to the occurrence of tonsillar infection, a point which the author has left untouched; nor does he refer to the early manifestations of tuberculous disease in the cervical lymphatic glands in children. The storage of tuberculous material in bronchial and other glands, which so often plays a part in the development of the disease in later life, might also have formed a part of an investigation which is otherwise complete and convincing. In dealing with the subject of treatment some noticeable additions to the ordinary methods may be mentioned, such as the employment of ozone inhalation, which in the author's hands has produced better results than the use of oxygen. Of drugs but little is said, creasote alone being awarded something more than faint praise. The establishment of a system of local notification, whereby the patient may be watched and advised as to the disposal of his sputa, and as to his general hygienic surroundings, is shown to have been effectively practised, and its general adoption is advocated. The whole essay is worthy of a permanent place in the literature of the subject, and establishes a high standard of excellence for the guidance of future aspirants to the Parkes-Weber prize.

Twentieth Century Practice. Edited by Thomas L. Stedman, M.D. Volume XI. Diseases of the Nervous System. London: Sampson Low, Marston, and Co. 1897. (Roy. 8vo, pp. 970. 21s.)

The section of nervous pathology to which this volume is devoted comprises diseases of the cerebro-spinal and sympathetic nerves, trophoneuroses, diseases of the spinal cord, and pain. Dr. J. Hendrie Lloyd deals with the first of these subjects. He commences his very able treatise with a short account of the histology, physiology, and pathology of nerves. He next gives an excellent description of the general symptomatology, in which various essential methods of clinical investigation are also described. A systematic account of the several nerves and their diseases is then given with lucidity and precision. In connection with the external cutaneous nerve of the thigh the fact that Bernhardt and others have recorded cases of long-continued paræsthesia limited to that nerve appears to have escaped the author. Considerably more space is given to diseases of the sacral plexus than is usual, and Dr. Lloyd observes that this subject is too much neglected in books on obstetrics; the old theories which regarded puerperal paralyses as functional or reflex in origin are no longer tenable.

Trophoneuroses are described by Professor Charles K. Mills and Professor F. X. Dercum. The article on hemifacial atrophy by Professor Mills and that on scleroderma by Professor Dercum are especially interesting.

Diseases (excepting tabes and some others to be subsequently indicated) and traumatic lesions of the spinal cord are dealt with by Dr. L. Bruns and Dr. F. Windscheid, needless to say in a manner entirely commensurate with the importance of the subject.

With reference to the pathogenesis of Pott's disease, the authors discard the theory of a compression myelitis for the majority of cases; they maintain that simple compression of the cord, or œdema of the cord from compression of its veins, is the most usual condition, ending, if of long duration, in softening and destruction, but not associated with true myelitis. In discussing spinal caries, they point out that a gentle attempt to move the spinous processes laterally is a better means of locating the disease than the rough procedure of eliciting pain by striking the head. Forcible reduction is not mentioned in the remarks on treatment. Under the heading "Myelitis" are included transverse myelitis, Landry's paralysis, and acute disseminated encephalomyelitis. The masterly argument advanced by the authors in explanation of that restricted use of the term "myelitis" will probably leave few readers, if any, unconvinced. Respecting acute disseminated encephalomyelitis, the authors state that it is less recognised than it should be; even the latest and most complete textbooks mention it only cursorily or not at all: usually from the outset cases of this disease assume a very grave aspect, yet in many of them recovery ensues. Clinical notes of three illustrative cases are given. The article on tabes dorsalis is written by Dr. P. J. Moebius. As his lately-published monograph on the subject was reviewed in a recent number of the British Medical Journal, further remarks here are unnecessary.

Professor A. Strümpell writes on the combined system diseases of the spinal cord. He defines with great clearness what is connoted by the terms "system disease" and "combined system disease," and further shows the etiological considerations that necessitate the division of diseases of the latter category into two groups—endogenous and exogenous. The first group includes Friedreich's disease and hereditary or familial spastic spinal paralysis. The second group is very briefly considered; it contains a postsyphilitic spastic paraplegia and affections of the cord from certain vegetable poisons and pernicious anæmia.

Professor L. Witmer's interesting contribution on pain gives proof of wide study and vigorous critical acumen. The matter is discussed from three standpoints—the psychical, the psycho-physical, and the psycho-physiological. Necessarily, it is from the last of these that the main conclusions are obtained.

This volume is in all respects a fitting continuation of the valuable encyclopædia of which it forms a part.

Cleft Palate: Treatment of Simple Fractures by Operation, etc. By W. Arbuthnot Lane, M.S. London: The Medical Publishing Company. (Crown 8vo, pp. 278. 5s.)

This volume contains eleven clinical lectures on subjects relating to practical surgery, and is intended by the author to meet the wishes and convenience of some of his friends. Mr. Lane, however, may fairly anticipate a much wider circulation of his book, and find that, notwithstanding his modest expectations, it will be of more than some little use to many surgical readers. At the same time he will hardly claim exemption from criticism of certain views which are novel in character, and maintained not only with boldness but also with a somewhat aggressive discussion of the work and opinions of others. Many readers will be perplexed, and perhaps amused, at the frequent onslaughts on a well-known textbook, which is presumably intended to promote a wide and liberal training of medical students, and certainly professes to be neither a guide to physiology nor a handbook of the subordinate branch of surgical anatomy.

All the lectures in Mr. Lane's book deal with subjects of common and practical interest, and cannot fail to effect some modification in the surgical treatment of certain forms of injury and disease. The author, though himself a bold and skilful operator, lays much stress on simple therapeutical means, and on hygienic management in the treatment of many diseases and deformities, and is opposed, many surgeons will think very justly, to indiscriminate operations in chronic affections of the throat. In his lecture on the Treatment of Simple Fractures by Operation he has done good service by pointing out the unsatisfactory results of the present and time-honoured method of dealing with these injuries, especially in the lower extremity. Mr. Lane's views and practice on this subject will, we have no doubt, be fully and fairly considered by other hospital surgeons, and if they stand the test of time and of temperate consideration, cannot fail to make way. At present, however, the operative treatment of simple fractures, so clearly and ably stated in this book, must under existing conditions of surgical practice have a very restricted range. Mr. Lane himself acknowledges that it may be attended with difficulty, and if attempted by those who do not possess exceptional skill as operating surgeons, and have not at command the resources and organised adjuncts of a large hospital, the use of the knife and screw is likely, much more than simpler and older methods, to prove "a disgrace to surgery."

Textbook of Medical and Surgical Gynæcology for the Use of Students and Practitioners. By R. W. Garrett, M.A., M.D., Professor of Obstetrics and Gynæcology in the Medical Faculty, Queen's University, Kingston; Gynæcologist to the Kingston General Hospital. Toronto: J. A. Carveth and Co. 1897. (Roy. 8vo., pp. 428. 2.50 dollars.)

Dr. Garrett teaches his subject well, and if general medicine be taught as satisfactorily in Canada the public in the dominion are fortunate. Pathology is not to the fore in this *Textbook*; anatomy, on the other hand, is ably treated. Thus the position and course of the vagina and the relations of the cervix are correctly represented. To Figs. 6 and 11 we respectfully direct the attention of the editor of certain standard works on general anatomy, trusting that in future they will reject antiquated diagrams of the abdominal and pelvic viscera in which the vagina is represented as a wide rigid curved tube, which in nature would signify that prolapse of the uterus must be the early and inevitable fate of all womankind. A chapter on gynæcological technique is highly commendable, as sensible directions are given on sterilisation and the cleansing of sponges, whilst it is free from the error of extreme innovators who love to glorify, in textbooks, the operating theatre of their own hospital.

The paragraphs on examination are inferior to those which may be found in the pages of many popular British and Continental manuals. Thus, far too little importance is given to bimanual palpation at page 78; it is the best means of learning the anatomy of the pelvic organs in general, and their state of health or disease in any particular patient. Therapeutics, as we have observed already, are well handled by Dr. Garrett, though more might have been said about ergot, which is sometimes prescribed so blended as to be inert or decomposed, or at such times in the catamenial cycle as to do harm instead of good. We are glad to see the warning about the susceptibility of certain patients to iodoform (page 55). Only six pages are devoted to electricity, and most authorities will agree with the author's opinion that amenorrhœa of the functional type is one of the affections in which the greatest amount of good may be expected after electrical treatment. On the other hand, we regret that electricity is recommended for old parametric and perimetric exudation, and further wish that pelvic massage had been condemned entirely. Pelvic inflammation is discussed on a sound clinical and pathological basis; indeed, even more space might have been accorded to that most important question.

Most rightly the author teaches very prominently that "fibromata in most cases run a benign course. They grow slowly, and seldom cause death directly." Unfortunately, the relative merits of the different operations for the relief of fibroid disease of the uterus are not demonstrated, a serious oversight in a textbook. The same criticism applies to the passages on the older and on the flap-splitting operations for repairing the perineum, and to the directions at page 272 on the different methods of closing an abdominal wound. Diseases of the breast are included in this *Textbook*, and not without reason. The author is right in advising the reader not to cut into a cancer and then use the same knife for further incisions. The knife should be sterilised carefully. When advocating the "complete" operation for scirrhus the author had not the advantage of consulting the valuable evidence of British operators tendered during the present winter at three meetings of the Royal Medical and Chirurgical Society. Excision of the pectoralis is recommended by Dr. Garrett only if it be involved in the cancerous process.

A Short Account of the Origin and History of the Glasgow City Parochial Asylum, with Note on the System of Boarding-out the Insane. By Dr. Alexander Robertson. Glasgow: William Hodge and Co. 1867. (Cr. 8vo, pp. 11.)

The Parochial Asylum of the city of Glasgow is no longer to be found in a densely-populated locality. The parish council have acquired an extensive estate and have built an institution worthy of the claims of the insane poor upon their legal guardians. Dr. Robertson, who was for so many years responsible for the direction of the old asylum, presents the public with this very brief summary of his work and experience, now that a new era has begun.

The history of the insane in Glasgow forms an interesting chapter in the records of philanthropic work, and we must express regret that it has as yet received no adequate treatment. Dr. Robertson, for instance, makes no mention of Mr. W. Stark, the Glasgow architect, whose essay on the Construction of Hospitals for the Cure of Mental Derangement, presented to the Committee of the Glasgow Asylum in 1807, exhibited more enlightened views than any previous publications on the subject. The circumstances which led to the building of that institution, the benevolent dispositions of the citizens of Glasgow roused to a sense of the evil doing of the times, the expansion of sympathetic efforts on the part of parochial authorities, might well have been correlated with the changes in the public life of the century now drawing to a close.

Dr. Robertson is more concerned with what has come under his own observation, and records methods and results of treatment in some detail. He specially submits the results of the ten years ending with 1888, and first deals with "Recoveries." He claims a recovery-rate of 47·3 per cent. calculated upon the number of admissions, which exceeds the average rate of the Royal and District Asylums of Scotland so notably that it might have been used as an argument for retaining the institution which did such admirable work. Further, neither suicide nor homicide occurred from 1858 till the closing of the

asylum, a statement which Dr. Robertson believes to be unparalleled in the experience of others. He also reports that accidents have been unimportant, although there was an almost complete absence of objectionable constructive or mechanical arrangements.

Dr. Robertson asks how these exceptional results have been attained, and we are bound to say that his explanations are less satisfactory than his statements. He makes answer that they are owing to individualised treatment of the patients, the careful study of their dispositions, the prevailing atmosphere of kindness and forbearance, the exhibition of cheerful engravings and fairly large mirrors on the walls, etc. By implication these advantages are of course not to be found in the Royal and District Asylums, which record an inferior rate of recoveries. But it would appear that the proportion of attendants was far below the requirements of an institution containing an average number of acute cases—1 to 15.8 on day service, and one male and one female at night. In fact, these explanations are insufficient, for they represent the fundamental principles which have long been accepted and acted upon in every civilised community. Moreover, few will be found to agree that one qualified nurse is sufficient for the individual treatment of a body of patients in such an institution during the anxious hours of night.

Dr. Robertson, however, adds to these observations that special remedial measures have contributed to his successful results. He claims to have introduced original methods of applying heat and cold to the head, of applying electricity through the medulla oblongata by passing one pole of the battery through the nose, of digital percussion of the skull, and of psychic impression, which last "produces a profound effect upon the patient by the manner and voice of the physician." All this produces a profound effect upon the reader, but hardly, perhaps, in the sense Dr. Robertson wished to convey. More wonderful still is the recorded benefit following on the administration of the brains of sheep. No doubt this last must be provisionally accepted, for Scots brains have long been pampered by the fine confused feeding on sheep's head. Strange it is that the Sassenach makes such a poor show on calf's head and trimmings!

Dr. Robertson adds an approving note on boarding-out; but in regard to an essential detail seems to differ from the Commissioners in Lunacy. Their aim has been to avoid forming aggregations of lunatics in particular localities, but rather to dilute the insanity in so far as possible. We gather from Dr. Robertson's note, on the other hand, that he looks with favour upon colonies such as Gartmore. It would be interesting to hear more on this side of the question.

The Principles of Bacteriology: A Practical Manual for Students. By A. C. Abbott, M.D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania. Fourth edition, enlarged and thoroughly revised. London: H. K. Lewis. 1897. (Demy 8vo, pp. 544, with 106 illustrations of which 19 are coloured. 12s. 6d.)

In placing a fourth edition of this work before the student and practitioner, Dr. A. C. Abbott has been well advised to bring it thoroughly up to date. Many parts of the work have been completely rewritten, numerous additions have been made, and a somewhat wider field has been covered, with the result that we have before us an excellent manual and guide to the practical study of bacteriology.

The first part of the book, which is almost entirely devoted to technique, differs little either in arrangement or material from the numerous manuals that have made their appearance in recent years, though a summary of the points to be observed in describing an organism in which sixteen different features and modes of behaviour are pointed out should prove of special value to those who are commencing this interesting study. The chapter on the operative procedure necessary for the study of the effects of micro-organisms on animals and the subsequent observations to be made is also well worthy of careful perusal. The second part of the work is devoted to the application of the methods of bacteriology which are given in considerably fuller detail in this than in any preceding edition. The chapter includes new descriptions of the bacilli of bubonic plague and of influenza and the micrococcus gonorrhœa. These, like the others in this section, are lucid and accurate. The section on infection and immunity, though somewhat sketchy, covers a considerable amount of ground; but the author deals specially with what is now looked upon as active immunity, whilst passive immunity and the experiments on the production and action of antitoxins are passed over in a few words. As we should expect from the activity as regards the examination of water that has recently characterised American bacteriological work, there is a good chapter on the bacteriological study of water. The gist of the importance of such examinations is given in the words: "The object aimed at in such investigations should be to determine if the water approaches constancy in the number and kind of bacteria contained in it." We can cordially recommend this work as a clear and not too lengthy exposition of the principles of bacteriology.

Cairo of To-day. By E. A. Reynolds-Ball, B.A., F.R.G.S. London: A. and C. Black. 1898. (Crown 8vo, pp. 256, Two Maps and a Plan of Cairo. 2s. 6d.).

Cairo is certainly one of the most popular cities for winter residence amongst tourists and those who, without being seriously ill, require a holiday. The expense, however, of living there is considerable, and although the sanitary arrangements of the large hotels are good, the programme of sight-seeing, social entertainments, and the pleasures of a fashionable city are hardly suited to serious invalids. Invalids with pulmonary affections or albuminuria who desire to pass the winter in Egypt, are better placed higher up the Nile, at Assouan or Luxor, which are now reached comfortably by the Nile steamers; or at Helouan. The latter place is about sixteen miles south of Cairo, and can be reached by the railway in thirty to forty minutes. It is somewhat cheaper than Cairo and much quieter; it has pure desert air and the advantage of its thermal muriated springs, analogous to those of Aix-la-Chapelle, but richer in sulphur, which can be used for rheumatoid arthritis, chronic gouty complaints, and late syphilitic affections. The new baths which are in process of construction will greatly increase the utility of the Helouan springs. Helouan may be chosen by visitors who prefer a quieter place than Cairo, but who yet want to be in easy reach of the city. Still nearer to Cairo are the Mena House Hotel, eight miles distant, near the Pyramids, and the Ghezireh Palace Hotel only about three miles distant. Visitors to these places as well as persons staying in the city itself will be able to make good use of Mr. Reynolds-Ball's book. Besides abundant information about Cairo, the guide gives descriptions of the Pyramids, Helouan, etc., in the neighbourhood, and the trips up the Nile to Luxor and to Assouan, near the first Cataract.

La Responsabilité Médicale. [Medical Responsibility.] Par Dr. P. Brouardel. Paris: J. B. Baillière et Fils. 1898. (Roy. 8vo, pp. 468. Fr. 9.)

This important work bears evidence throughout its pages of the profound knowledge, the accuracy, and the industry displayed by Dr. Brouardel in all his writings. Unlike his previously-published works, however, the utility of this book is mainly confined to medical men practising in France, since it consists of a most lucid exposition of the responsibilities of the medical man as defined and recognised by the French law. A lengthy review of it in these columns is, therefore, unnecessary, provided the brevity of the review is not taken as an indication of our want of appreciation of so admirable a work.

The author states that in France the medical man does not make the acquaintance of the delicate and complex laws that regulate his profession until he has actually started in practice, whereas in England the medical student is made acquainted with such laws in the courses of lectures on medical jurisprudence. A prevailing idea which is recognised in France is that a patient when calling in a medical man should be summoning one who will keep inviolate any secrets entrusted to him, and that, apart from the patient specifically naming any statement as being of a confidential nature, it is the duty of the medical man to consider every statement as such. Dr. Brouardel further teaches that the medical man

should see in a person who has committed a crime only a patient, and that he should not denounce whatever knowledge of the crime he may gain during his examination of such a patient. When attempted poisoning is detected by a medical man, Dr. Brouardel considers it the duty of the medical man to reveal the fact, but not necessarily to the police authorities.

The author comments at length on Article 378 of the French penal code, which provides that medical men who reveal professional secrets, unless obliged to do so by the law, shall be punished by imprisonment and fine.

In the discussion of the responsibility of medical men towards society, several interesting cases are described of mistakes in practice and of errors of judgment, together with the decisions of the courts thereon.

The Structure of the Human Body. An Elementary Atlas of Human Anatomy adapted from the German of Dr. P. Ebenhöch. By F. J. Warwick, B.A., M.B.Cantab. London: Allman and Son. (19 coloured plates. 6s.)

This *Atlas* consists of 19 double-page plates, each one printed in colours. No text accompanies the plates, the letterpress consisting simply of explanations of the figures and numbers which are attached to the illustrations. The reason for the omission of text is explained in the preface. It is stated that the plates can be used with any book dealing with human anatomy and physiology.

For the most parts the plates are moderately good, but in several places they can be rather severely criticised. Thus on Plate III, Fig. A would imply that on the lateral aspect of the skull of a Mongolian there are no sutures such as are represented on the skulls of other races. In Plate IV, Fig B, the buccinator muscle is represented as a long superficial muscular slip, extending from the anterior margin of the external auricle to the angle of the mouth. This is obviously quite wrong, but we are at a loss to understand which muscle it is intended to illustrate in this position. The temporal muscle in this figure is badly shown. In Plate VII, Fig. A, the facial artery is illustrated as extending upwards nearly to the vertex of the skull, whilst the supraorbital vessel is omitted. The anatomy of the urinary system is shown as far as the commencement of the ureter, but beyond this point nothing is either mentioned or illustrated.

It would have added to the value of the book if, in the figures of the brain the positions of the fissure of Rolando and the adjacent cortical motor centres had been shown. The sacral plexus is illustrated as consisting of six sacral nerves. This is not in accordance with the usual views of human anatomy.

The volume may be recommended as a "popular atlas of anatomy," from which all reference to the genital system has been omitted. It cannot be recommended either for the use of medical students or for nurses.

Premature Burial: Fact or Fiction. By David Walsh, M.D.Edin. London: Baillière, Tindall, and Cox. 1898. (Cr. 8vo, pp. 49. 1s. 6d.)

The question as to the possibility of the occurrence of premature burial in this country has frequently been dealt with in the columns of the British Medical Journal. After most careful inquiry conducted on behalf of the Journal into alleged cases of recent premature interment in Great Britain, they were found, without a single exception, to be either myths or to be destitute of foundation. Dr. Walsh likewise arrives at the conclusion that the theory of premature burial is unsupported by a single scientifically proved instance, and that the whole of the popular belief in it is nothing more than a legend. His little book is mainly a refutation of Messrs. Tebb and Vollum's recently published work, which put forward the theory that premature burial is a common occurrence. Dr. Walsh very rightly condemns the shameful trick so frequently resorted to by those who have written about the frequency of premature burial, of dragging in on some side issue the names of well known medical men, and causing it to appear by false inference that such men favour their views. Dr. Walsh's little book is clearly written, and ought to hasten the final obsequies of premature burial.

NOTES ON BOOKS.

Technik der histologischen Untersuchung pathologisch-anatomischer Präparate (Technique of the Histological Examination of Pathological Preparations). Von Dr. C. von Kalden. Fifth Edition, enlarged and improved. (Jena: Gustav Fischer. 1898. Royal 8vo, pp. 154. M.2.80)—Appreciation of this very practical work was expressed in these columns at the time of the appearance of the fourth edition, and continued experience confirms the opinion that it is one of the best books of its size for laboratory work. Additions and some curtailments have been made, but there is a net increase of 20 pages. The chief additions have been made in the sections on staining the neuroglia, on the skin, bacteria, blood, etc. The new methods of demonstrating the neuroglia include those of Weigert, Mallory, etc. They are set out with the clear conciseness characteristic of this book. The important position taken in the laboratory by formol of recent years justifies the separate section given to it. The summary given on page 118 of the various methods of proceeding in examining the nervous system is a valuable addition. Under bacteriology, also, some useful additions are made, but Widal's serum reaction has somewhat curiously not yet found a place here. We can very heartily commend this work, which has already been translated into many languages.

Transactions and Reports.

The Transactions of the Glasgow Pathological and Clinical Society for the Sessions 1895-97, edited by Mr. A. E. Maylard (Glasgow: Alexander Macdougall), comprise the papers read before the Society during two sessions, together with the discussion on them. Among the more important are a collection of cases of aortic aneurysm pressing on or rupturing into the vena cava or pulmonary artery by Professor Gairdner, and a number of examples of brain surgery by Messrs. Newman, Finlayson, Love, Maylard, and others. Professors George Buchanan and M'Call Anderson also contribute important notes surgical and medical respectively. There are eight excellent illustrations, and the whole book is well produced and admirably indexed.

The St. Thomas's Hospital Reports, Vol. XXV, edited by Dr. Hector Mackenzie and Mr. G. H. Makins (London: J. and A. Churchill; 1897. Demy 8vo, pp. 516; 8s. 6d.), contains 12 original articles and 10 reports from the various hospital departments. Among the latter, as evidence of the well-directed zeal of the hospital authorities to make the most of every advance in medical science, there is a report from the recently established *x*-ray department, by its superintendent, Dr. Blacker. A clinical laboratory has also been instituted, but there is no detailed or special description of it in this volume of reports. In the first article Dr. Turney gives an exhaustive account of polyneuritis in relation to gestation and the puerperium, which is based on 13 cases of generalised, and 23 cases of localised neuritis. This paper has been published separately, and will be a standard source of reference on the subject. Dr. Acland further identifies himself with vaccination by a paper on compulsory vaccination. Mr. Anderson's paper on the surgical treatment of lupus, and Mr. Makins's account of two cases of abdominal actinomycosis, are well illustrated, and are interesting contributions. Mr. H. Milton records 10 cases of surgical bilharziasis, as seen in Egypt; in one of them there were no fewer than twelve perineal fistulæ, and when operated on the incisions in all measured between 4 and 5 feet; recovery, remarkable as it may seem, was satisfactorily accomplished. The operative treatment of cleft palate is reviewed by Mr. Clutton in the light of 47 cases that have been under his care during the last fifteen years. Mr. Brodie's paper on the chemical nature of antitoxins, is the outcome of work undertaken with the primary object of separating from diphtheria antitoxin the body or bodies giving rise to the rash. It appears probable that the antitoxins are proteid in nature. Dr. Box records some unusual manifestations of uræmia, in which gastric ulcer and disseminated sclerosis were very closely imitated. The various reports of the medical-surgical registrars are well worked up, and contain notes on selected cases of special interest.

Obituary.

Professor ERNST LUDWIG SCHWIMMER, M.D.,

University of Buda-Pesth.

Professor Ernst Ludwig Schwimmer, the distinguished Hungarian dermatologist, whose death was announced in the British Medical Journal of March 5th, was born at Buda-Pesth in 1837. He was the son of a well-known physician of that city, and studied medicine in the University of Buda-Pesth and afterwards at Vienna, taking his doctor's degree in the last-named University in 1861. At Vienna he was Assistant to Hebra, whose influence determined the subsequent direction of his scientific work and of his medical practice. His first contribution to medical literature was a report of the cases of small-pox occurring in the Vienna General Hospital in the years 1861-63. In this report he insisted strongly on the value and necessity of vaccination. In 1864 he travelled in the East, spending a considerable time in Egypt in the study of the skin diseases prevalent in that country. On his return to Hungary he soon took the leading position in dermatology, and owing to his great knowledge of languages, he was for a long time one of the chief scientific interpreters between Hungary and the rest of the world. In 1871 he was appointed Lecturer on Skin Diseases in the University of Buda-Pesth, becoming Professor in 1879. Owing to his energetic representations a large Dermatological Department, with 120 beds, and equipped with all modern appliances for treatment and for research was founded in the new Municipal Hospital of Buda-Pesth; of this clinic Schwimmer was Director till his death. In 1874 he published a textbook on dermatology, which was the first work on the subject written in Hungarian. Among his other contributions to medical literature may be mentioned: *The Treatment of Small-pox* (1880); *Neuropathic Dermatoses* (1883); *The Treatment of Syphilis* (1888); Skin Diseases, contributed to *Ziemmsen's Cyclopædia of Medicine*, vol. xiv, *Treatment of Severe Forms of Lupus* (1884); *A Systematic Treatise on Skin Diseases* (1881); *Glosso-pathology* (1886); *Influenza and Skin Diseases* (1890). He also gave much attention to the history of medicine, and was the author of a monograph on the beginnings of the healing art in Ancient Egypt. Schwimmer was one of the editors of the *Vierteljahresschrift für Dermatologie und Syphilis*, and a member of a large number of scientific societies. On December 12th, 1897, he celebrated the twenty-fifth anniversary of his appointment as Professor. On that occasion the Hungarian Dermatological Society presented him with a portrait of himself, which now adorns the room in which the Society holds its meetings, and expressions of esteem and goodwill came in large numbers from friends and pupils in every part of Europe. Schwimmer was a man of great amiability and uprightness of character, and beloved by all who had the privilege of his intimate acquaintances.

EDWARD CONSTANT SEGUIN, M.D.

Dr. E. C. Seguin, whose death is announced in the American journals, was one of the leading neurologists of the United States. He was born in Paris in 1843, being the son of Dr. Edouard Seguin, well known by his researches on idiocy and his method of training the feeble-minded. The elder Seguin went to America in 1848, and at first settled at Cleveland, Ohio, afterwards removing to New York, where he died in 1880. His widow still carries on his work, directing a school for the feebleminded at Orange, New Jersey. Young Seguin began the study of medicine at the New York College of Physicians in 1861, taking his degree there in 1864. He had previously served for a time as a medical cadet, and afterwards served as a surgeon in the regular army. He was then for a time house-physician at the New York Hospital, but had to resign this position owing to the appearance of pulmonary mischief.

In the winter of 1869-70 Seguin worked in Paris under Brown-Séquard, Cornil, Ranvier, and Charcot; under the influence of these famous teachers he became specially interested in the diseases of the nervous system. Returning to New York, he was appointed Professor in the College of Physicians and Surgeons in 1871; this chair he continued to fill till 1885. In 1873 he founded a clinic for nervous diseases. As a teacher he soon acquired great celebrity, his class room being crowded with students and practitioners, and he speedily came to be recognised as one of the leading authorities on neurology in the United States. He had for many years one of the largest practices in New York. Though cultivating his neurology with particular devotion, he never allowed his intellectual interests or his professional sympathies to be confined within the limits of a speciality. He contributed largely to medical literature, and did much work in his chosen province, more particularly in the localisation of brain lesions. He also did much to introduce and popularise the use of the thermometer in clinical medicine in the United States; indeed, a paper of his entitled *The Use of the Thermometer in Clinical Medicine*, which was published in the *Chicago Medical Journal*, May, 1866, is said to have formed "the starting point of medical thermometry in the United States." The paper is of historical as well as scientific interest, as containing what is probably the first temperature chart published in the United States. In 1873 Seguin joined with Brown-Séquard in founding and editing the *Archives of Scientific and Practical Medicine and Surgery*: this periodical, however, died in early infancy. A further journalistic venture was entitled *Archives of Medicine*, the first volume of which was published in 1879. Although Seguin had the support of the leading members of the profession in New York, and of many of the younger men throughout the country, this periodical, which was worthy of a better fate, also came to an untimely end.

In 1884 Dr. Seguin's life was clouded by a hideous domestic tragedy, from the effects of which he never fully recovered. After residing abroad for two years he returned to New York, and resumed his practice but not his teaching. Many years before his death he lost one of his fingers on which a spindle-cell tumour had developed. Some two years ago a growth appeared in the abdomen, and recently metatastic formations were discovered in other parts. He bore his long and trying illness with characteristic fortitude, and died quietly on February 19th.

Brigade-Surgeon JOSEPH JOHNSTON, M.D.

A wide if rapidly-diminishing circle of army friends will learn learn with much regret the decease of this officer, at the age of 67.

Dr. Johnston, a native of Montrose, studied at Edinburgh University, and was a favourite and distinguished pupil of Sir James Y. Simpson in that famous man's speciality; indeed, his friends believe that, had he chosen to devote his talents to midwifery and the diseases of women, for which he had a special aptitude, he would have risen to the first rank in the profession.

He graduated in 1854, and was the gold medallist for the best thesis of his year. The Crimean war was then beginning, and such was the skill Johnston had attained under Simpson in the administration of the new agent, chloroform, that he was specially selected to proceed to the base hospital at Scutari. There he did good service amid terrible scenes which he graphically described. He accepted a commission in the Army Medical Service, and served on the staff in Ceylon, and in the 26th Cameronians in India, which he accompanied to Abyssinia in 1868, but was soon invalided home. He retired in 1880, and took up the appointment of Charge of the Artillery, St. John's Wood Barracks, which he held for sixteen years, until placed on the non-effective list through age in 1896.

While in London he had a private practice; this, as a man of independent means, he never pushed, although he might easily have done so, for, in addition to a thorough knowledge of his profession, he had a fine presence and a kindly sympathy, which made him an almost ideal practitioner.

He was held in the highest esteem by the many batteries of Royal Horse Artillery of which he had charge; and the battery at present quartered in St. John's Wood, although he had retired, volunteered a partly military funeral. The coffin, covered with the Union Jack, bearing his cocked hat and belt and many wreaths of flowers, was driven on a gun carriage with six horses to Trinity Church, Hampstead, where a memorial service was held; and afterwards to Hampstead Cemetery, where it was carried to the grave by a body of artillerymen. A short burial service was then read, and

the trumpeters of the battery sounded the "Last Post"—the soldier's nightly retreat—over the grave.

This was a fitting termination to the career of one whose watchwords were "Honour and duty."

A. J. T. ALLAN, M.B., C.M.EDIN.

WE regret to record the death on March 3rd of A. J. T. Allan, M.B, C.M., one of the most popular students of recent years at the University of Edinburgh. Struck down in what seemed good health at the very opening of his manhood and career, his death is particularly sad. He died of an acute tuberculous affection.

Dr. Allan, or "Jack," as he was generally called by his friends, was a great figure in the sphere of sport, and last year won the blue ribbon of the amateur golfing world, the amateur golf championship. In other spheres of sport, too, he was much at home, and was extremely popular with everybody. He was quite delighted to have a round at golf with the merest tiro as with the more expert golfer. Nor did he neglect his medical studies thereby, for he was by no means a mediocre student, and in the practice of medicine might, and almost certainly would, have won many laurels. The large funeral, the many wreaths, testified to his exceeding popularity and the great and genuine regret at his early departure.

CHARLES TODD QUINTARD, D.D., LL.D., Bishop of the Episcopal Diocese of Tennessee, U.S.A., who died recently, was originally a member of the medical profession. He was born in 1824, and took the degree of M.D. at the University of the City of New York in 1847. After practising for some time at Athens, Ga., he was appointed in 1851 Professor of Physiology and Pathological Anatomy in the Medical College at Memphis, Tenn. He was for some time co-editor with Dr. Ayres P. Merrill of the *Memphis Medical Recorder*. In 1855 he took Orders, and ten years later was appointed Bishop of Tennessee. He received the degree of Doctor of Divinity from Columbia in 1866, and that of Doctor of Laws from the University of Cambridge (England) in 1867.

WE regret to announce the death of Dr. HENRY ALDRED, which took place at Heaton Moor on March 6th. Dr. Aldred was 63 years of age, and he was a well-known figure and much esteemed personality in the populous district of Ancoats. Dr. Aldred studied at the Royal School of Medicine in Manchester, and took the diploma of M.R.C.S.Eng. in 1857, and that of L.S.A. in 1861. Dr. Aldred took an active interest in all the affairs of the community in which he lived, and for nine years he represented New Cross Ward in the City Council. He was also a Justice of the Peace. Dr. Aldred was an active member of the Medico-Ethical Society, and acted as President of the Ancoats Healthy Homes Society. At his funeral there was a large and representative gathering at the graveside.

THE death is announced of Mr. EDWARD POPE, of Tring. He was the eldest son of Mr. William Pope, of Frome, Somersetshire, and was born in 1811. After qualifying as M.R.C.S.Eng. and L.S.A. in 1834, he started practice in Tring in 1837. Mr. Pope was for more than half a century medical officer for the Tring district of the Berkhamsted Union, and was for a long period medical officer for the Aston Clinton District of the Aylesbury Union. He took a great interest in the Volunteer movement, and was the holder of the silver medal for long services. Mr. Pope was married in 1839, and he leaves issue one son, Dr. Campbell Pope, of Shepherd's Bush. The deceased was well known and highly esteemed in and about Tring.

DEPUTY-SURGEON-GENERAL EDMUND MACGRATH, who died at Upper Norwood on March 5th, passed the greater portion of his service with the 8th Hussars and the Royal Artillery. He was specially thanked for his services during the cholera epidemic in the Punjab in 1862, when the Inspector-General wrote that he desired to express "the high sense of approbation entertained both by His Royal Highness the Duke of Cambridge and his Excellency the Commander-in-Chief in this country of the unwearied attention, skill, and devotion which you exhibited in the performance of your arduous duties during that trying period." During the Egyptian campaign he was principal medical officer at Alexandria, and was again thanked for his services, and received the medal, Khedive star, and the Third Class of Medjidieh. Deputy-Surgeon-General MacGrath leaves a widow, and a son who is in practice at Reigate.

THE death of Mr. MORRES JAMES MOLYNEUX, of Wimbledon, took place on March 8th. He had been failing in health for about eighteen months, but had only been compelled to take to his bed two weeks before his death. The deceased, who was only 47 years of age, obtained the diploma of L.A.H.Dubl. in 1880, and that of L.F.P.S.Glasg. in 1882. He settled at Wimbledon about seventeen years ago, when he was almost immediately appointed Medical Officer for the Lower Wimbledon District of the Kingston Union. Mr. Molyneux leaves a widow and two children. The funeral took place at the local cemetery on March 12th.

FLEET-SURGEON CHRISTOPHER KNOX ORD, M.D., died at Lewisham on March 13th at the age of 72. He was appointed Surgeon, October 27th, 1847; Staff-Surgeon, August 9th, 1856; and Fleet-Surgeon, February 21st, 1869, retiring from the service January 18th, 1873. He was educated at the University of Edinburgh, where he graduated M.D. with honours in 1847, and obtained also the qualification of L.R.C.S.Edin. He served with the Baltic expedition of 1854 on board the *Boscawen*, receiving the Baltic medal. From 1864 to 1866 he was Surgeon of the Royal Marine battalion sent out for service in Japan, and was present at the bombardment of the batteries at the Straits of Shimonoseki and the capture of the batteries, stockade, magazines, etc., from September 5th to September 8th, 1864. He was at different times Senior Medical Officer at Woolwich and Principal Medical Officer of Greenwich Hospital and School. Among his published works are special reports on a fatal epidemic of dysentery among the marines at Yokohama in 1864, and *London Considered as a Source of Boys for the Royal Navy*.

THE death is reported of Mr. JOHN THIMBLEBY, of Spilsby, where he had resided for the last sixty years. He qualified as M.R.C.S.Eng. in 1840, L.S.A. in 1841, L.R.C.P.Edin. in 1859, and took the F.R.C.S.Eng. in 1861. Mr. Thimbleby celebrated his 80th birthday last month. He was one of the oldest and most respected inhabitants of the town of Spilsby. The funeral, which took place on March 10th, was attended by a large number of friends.

WE regret to have to record the death of Dr. ARTHUR JEFFERIES BARLOW, which took place suddenly at his residence, 179, Hither Green, Lewisham, on March 11th. He was the eldest and only surviving son of the late Frederick Archer Barlow, solicitor, of 14, North Great George Street, Dublin. He studied medicine at Trinity College, Dublin, and graduated L.R.C.S.I. and L.R.C.P. in 1883. He was articled pupil to Sir George Porter, Bart., and, after qualifying, held the position of House-Surgeon at Donegal Infirmary. He came to England in 1892, and started a practice at Hither Green, where he was most successful and highly esteemed. He had been ailing for some weeks, but was making rapid progress towards recovery when cerebral hæmorrhage occurred, and he was cut off in the prime of manhood at the age of 37. He leaves a young widow to mourn his loss.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Rudolf Schneider, Professor of Surgery in the University of Königsberg, aged 61, and Dr. John P. Maynard, of Dedham, Mass., said to be the introducer of collodion into the practice of surgery, aged 72.

M. AUDIFFRED, Member of the French Chamber of Deputies for the Loire Department, has asked the French Government to create French medical stations in China, on the ground that this would be an excellent means of increasing French influence.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON-CAPTAIN, Madras Presidency, due home trooping season 1899-1900, wishes to exchange with an officer due home commencement of trooping season 1898-1899.—Address, Madras, c.o. Cook and Sons, Bombay.

THE NAVY.

STAFF-SURGEON ALEX. L. CHRISTIE has been promoted to be Fleet-Surgeon, February 20th. He was appointed Surgeon, March 31st, 1877, and Staff-Surgeon twelve years later. He was Staff-Surgeon of the *Cossack*, and served with the Naval Brigade landed under the command of Vice-Admiral Hon. Sir E. R. Freemantle for the punitive expedition against the Sultan of Vitu in East Africa, in October, 1890 (mentioned in despatches, medal with clasp).

Fleet-Surgeon BERNARD RENSHAW has been placed on the retired list of his rank, March 4th. He entered the Royal Navy as Surgeon, August 17th, 1869, became Staff-Surgeon March 23rd, 1880; and Fleet-Surgeon, April 9th, 1890. He was Fleet-Surgeon of the *St. George*, the flagship of Rear-Admiral Rawson, and was present on the occasion of the bombardment and capture of the Sultan of Zanzibar's palace on August 27th, 1896.

The following appointments have been made at the Admiralty: ROBERT H. MORNEMENT, Surgeon, to the *Blake*, March 16th; ALFRED J. PICKTHORN, Staff-Surgeon, to the *Alexandra*, additional, temporary; JAMES G. FOWLER, Surgeon, to the *Powerful*, March 19th; JOHN C. J. REED, Surgeon, to the *Centurion*, March 18th; PERCY H. BOYDEN, Surgeon, to the *Cambridge*, March 29th; FREDERICK F. MAHON, Surgeon, to the Portsmouth Division Royal Marines, March 24th; CHARLES STRICKLAND, Surgeon, to the *Defiance*, March 13th; FRANCIS BOLSTER, B.A., M.B., DAVID W. HEWITT, M.B., and WILLIAM H. POPE, Surgeons, to the *Victory*, additional, for disposal; WILLIAM J. CODRINGTON, M.B., Surgeon, to the *Excellent*, March 23rd; PERCIVAL K. NIX, Surgeon, to the *Rodney*, March 21st; CHARLES R. SHEWARD, M.D., Surgeon, to the *Sharpshooter*, March 21st; HORATIO W. A. COWAN, M.B., and JAMES H. FERGUSSON, Surgeons, to the *Victory*, additional, for disposal, April 12th; KENNETH H. JONES, M.B., Surgeon, to the *St. Vincent*, additional, for disposal, April 12th; REGINALD WATERFIELD, Surgeon, to the *Vernon*, additional, for disposal, April 12th; HENRY W. W. TOWNSEND, B.A., ERIC D. MACNAMARA, B.A., and GEORGE E. MACLEOD, Surgeon, to the *Vivid*, additional, for disposal, April 12th; JOHN W. BIRD, Surgeon, to the *Alexandra*, for disposal, April 12th; HERBERT NEWSOME, M.B., and SAMUEL H. FACEY, Surgeons, to the *Wildfire*, for disposal, April 12th; GODFREY TAYLOR, Surgeon, to the *Cambridge*, for disposal, April 12th; WILLIAM HACKETT, M.D., Surgeon, to the *Vivid*, additional, for disposal, March 16th; ARCHIBALD W. CAMPBELL, M.B., and ALFRED WOOLLCOMBE, Surgeon, to the *Vivid*, additional, March 23rd.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN JAMES J. O'DONNELL, B.A., M.B., who entered the service as Surgeon, January 30th, 1886, is promoted to be Surgeon-Major from March 23rd.

Surgeon-Captain JAMES P. MYLES retires from the service with a gratuity, March 23rd. His commission dated from February 2nd, 1884. He was with the Nile expedition in 1884-85 (medal with clasp and Khedive's bronze star), and in the operations in the Soudan in 1891, including the capture of Tokar (bronze star with clasp, and 4th class of the order of the Osmanieh).

It is announced that no steps are to be taken to submit a general list of rewards for the recent operations on the Indian frontier pending the arrival of Sir George White in England, when the whole question will be gone into with the view of an early *Gazette* being published, giving the names of those selected for recognition.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR CHARLES KNOTT has resigned his commission, March 23rd.

INDIAN MEDICAL SERVICE.

SURGEON-MAJOR-GENERAL C. E. MCVITTIE, Madras Establishment, is appointed Honorary Physician to the Queen, *vice* Surgeon-General Sir W. J. MOORE, K.C.I.E., retired list, deceased, March 23rd. Surgeon-Major-General McVittie served in the Afghan War in 1879-80 (medal) and with the Burmese Expedition in 1886-88 (mentioned in despatches, medal with two clasps).

Surgeon-Colonel B. FRANKLIN, C.I.E., Bengal Establishment, is also appointed Honorary Physician to the Queen, *vice* Surgeon-General W. R. CORNISH, C.I.E., retired list, deceased, March 23rd. Surgeon-Colonel Franklin has been Surgeon to the Governor-General of India since January, 1894, but has no war record.

Surgeon JAMES DAVENPORT, M.D., late of the Indian Medical Service, died at Norfolk Lodge, Guernsey, on March 16th, at the advanced age of 91.

THE VOLUNTEERS.

MR. CHARLES H. D. MORLAND, M.B., is appointed Surgeon-Lieutenant in the 2nd Glamorganshire Artillery, March 23rd.

Surgeon-Lieutenant R. J. A. BERRY, M.D., Forth Division Submarine Miners, has resigned his commission, March 23rd.

Surgeon-Lieutenant-Colonel A. R. MACKENZIE, M.D., 1st (Ross Highland) Volunteer Battalion Seaforth Highlanders, has resigned his commission, retaining his rank and uniform, March 23rd.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-CAPTAIN V. MATTHEWS, the London Companies, is promoted to be Surgeon-Major, March 23rd.

THE FRONTIER RISING IN INDIA.

A FURTHER despatch has been published from Sir Bindon Blood, commanding the Buner Field Force, reporting the operations of the force and the capture of the Tanga Pass in January last. Sir Bindon, among other officers, selects for special mention the services of Surgeon-Colonel J. C. G. Carmichael, of the Bengal Establishment, Principal Medical Officer, and subsequently adds:—"I have also the honour to bring the following medical officers to his Excellency's notice on account of the very satisfactory manner in which they carried out their duties, namely, Surgeon-Major C. W. Johnson, Army Medical Staff, and Surgeon-Major W. A. Sykes, D.S.O., Indian Medical Service."

THE HEALTH OF CADETS.

THE report for 1897 of the Board of Visitors has been issued. The health of the cadets of the Woolwich Academy is stated to have been very good. The average daily sick had been 1.71 out of an average strength of 178. The sanitary condition of the academy is reported to be satisfactory; but the Board was unable to ascertain whether the thorough testing of the drains by water and smoke is periodically carried out. They recommended that this should be done, and that the water should be tested chemically and bacteriologically during each vacation. At Sandhurst the daily average sick had been 3.59 out of an average strength of 365. The medical officer reports the sanitary state of the buildings as satisfactory, but the Board of Visitors doubt whether the smoke and water tests are applied periodically, and recommend the procedure. The risks of contamination of drinking water from encamping troops at Barossa, near the Whish Stream, is brought to the notice of the authorities. Allusion is made to the inferior physique of some cadets, who will scarcely ever be fit to undergo the severe fatigue of the tropics or warfare in mountainous country; but for this the average physique of the cadets would have been better.

STAFF OF ENGINEER SERVICES.

SPES writes: In reply to your query, the Engineer Staff in the *Army List* in front of the Medical Staff, are not commissioned officers, and never appear in the *London Gazette*.

*** This staff seems to be the only purely civil department in the *Army List*. It is true the persons comprising it are said to rank as lieutenants, captains, etc.; but on turning to Article 320 of the Pay Warrant that status is defined as for "precedence, travelling, and passages only."

AMALGAMATION OF THE HOME AND INDIAN MEDICAL SERVICES.

RETIRED OFFICER advocates this, and says now is a fitting opportunity to effect such an amalgamation. It could be effected in the same way that officers of the Royal Engineers are placed on the Indian Establishment.

*** It is not the first time such a scheme has been mooted. But, apart from any mere desirability of such amalgamation, there are obstacles of a practical kind. For instance, for the Army Medical Service the officers must be of pure European descent; for the Indian they may also be natives of that country.

REGENERATION OF THE ARMY MEDICAL SERVICE.

SURGEON-MAJOR, RETIRED, inquires, Why are the impending reforms delayed? Do they present greater difficulties than is generally supposed?

WE have to thank "Administrative Medical Officer, Retired," for an able summary of this question. But pending the issue of important reforms, which may confidently be expected shortly, we retain his letter for future use and reference if necessary.

WE have received a large number of press notices from every part of the country. Their general tenour is that the time must soon come when the nation will demand that the "prejudices of professed militarism must not be allowed to override the dictates of reason and fair play" in dealing with the Army Medical Service. That a repetition of Crimean disasters must not be permitted in mere deference to military prejudices; nor must reforms be unnecessarily delayed. "During recent years this country has developed quite a genius for being too late." Let that folly be avoided in this instance.

*** It is needless to say that in an organic reform of the Army Medical Services the difficulties in detail must be considerable. We would rather see delay than the hasty issue of a crude scheme. Let the one in hand present some finality; it may even appear sooner than many anticipate.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE classes in the Medical Faculty, as well as those in the Extra-academical School, rose for the spring recess on March 18th. They resume on May 3rd, on which day also begin the examinations in Clinical Medicine for the Finals.

The First Professional Examination began on March 19th, and were continued on the 21st and following days.

The Second Professional began on May 25th, and

The Third Professional Examination will begin on April 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentleman, having previously passed the necessary examinations, and having now attained the legal age of 25 years, has been admitted a Fellow of the College, namely:

F. C. Madden, M.B.Melb., L.R.C.P.Lond., Melbourne University and St. Mary's Hospital.

CONJOINT BOARD IN IRELAND.

PRELIMINARY EXAMINATION.—Candidates have passed this examination as undernoted:

Honours Division (in order of merit).—C. Pelissier, W. J. Mooney, J. J. Ryan.

Pass Division (alphabetically).—G. H. Barr, W. H. Bournes, J. Carr, W. E. Crosbie, K. F. Fleury, J. Gerety, J. Hayes, R. P. Hosford, T. Keogh, J. P. Maher, J. M. Mangan, R. Martin, P. McDermott, W. J. O'Sullivan, J. W. Peatt, D. J. Rankin, J. H. Roberts, E. Walsh, T. J. Young, J. P. Ziervogel.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, March, 1898.—The following candidates passed in:

Surgery.—F. Atthill (Section I), Charing Cross Hospital; A. L. Bartram, Cambridge, and Westminster Hospital; W. A. Clement, Bombay; F. Golding-Bird, Guy's Hospital; S. R. Hallam, St. Thomas's Hospital; H. L. Heath (Section I), Toronto and Cambridge; J. H. Jones, Edinburgh; W. Lloyd, London Hospital; S. H. Longhurst, Guy's Hospital.

Medicine.—T. H. Bailey, King's College Hospital; H. W. Graham, Guy's Hospital; H. L. Heath (Section I), Toronto and Cambridge; B. Hogan, London Hospital; W. J. Schuller (Section I), London Hospital.

Forensic Medicine.—F. G. Aldrich, Charing Cross Hospital; H. W. Graham, Guy's Hospital; H. L. Heath, Toronto and Cambridge; B. Hogan, London Hospital; W. J. Schuller, London Hospital.

Midwifery.—A. L. Bartram, Cambridge, and Westminster Hospital; W. H. I. Bathurst, London Hospital; G. F. M. Clarke, Charing Cross Hospital; H. W. Graham, Guy's Hospital; H. L. Heath, Toronto and Cambridge; A. R. Henchley, Middlesex Hospital; B Lewitt, St. Mary's Hospital; S. H. Longhurst, Guy's Hospital; P. C. Maitland, Middlesex Hospital; E. Morris, St. Bartholomew's Hospital; H. Munro, Guy's Hospital; W. J. Schuller, London Hospital.

The diploma of the Society was granted to the following candidates: Messrs. T. H. Bailey, A. L. Bartram, H. W. Graham, J. H. Jones, W. Lloyd, P. C. Maitland, and H. Munro.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

NORTHALLERTON AND ITS MEDICAL OFFICER.

IN his report for the year 1897, Mr. Charles Tweedy recommends the Northallerton District Council (1) to enforce the construction of disconnecting chambers and the provision of ventilating shafts in every house drain; (2) to abolish privy middens in crowded yards, or where they have to be emptied into the main street; (3) to adopt compulsory notification. He enlarges somewhat upon the disgusting nature of the filth receptacles in which excreta are "hoarded up as if of great value." He adds: "Having put these matters forcibly before you the responsibility is off my shoulders. Should any serious epidemic occur or any deaths result thereby which can be traced to these pestilential centres, the onus will now rest upon this council." The council, however, as we gather from the report of their meeting in the *Darlington and Stockton Times*, do not regard themselves as responsible unless actual specific cases of nuisances are reported to them by the health officer which they refuse to remedy. Certainly there is something in this contention. At the same time, it is clearly the duty of the medical officer to draw the attention of the council to general conditions affecting the health of the community. We do not altogether admire the sentence we have quoted; it is somewhat rhetorical and not absolutely necessary. Unfortunately it caused considerable irritation—more, certainly, than was warranted—and seems to have largely influenced the council in their somewhat hasty determination to discard their active and successful medical officer, and select from those answering their advertisement some prophesiers of smooth things.

Unless a medical officer brings strongly before his council the evils of the cause they are pursuing how are they to profit by his advice? As to the statement that they have remedied every nuisance brought before them, it must be remembered that neither the medical officer nor the sanitary inspector are likely to report individual nuisances of this kind until they have reasonable ground to suppose their recommendations will be carried out. The principle of action should be settled beforehand. Had the council, when this matter was before them in previous reports, instructed their inspector to report all privy-middens in crowded courts, the case of each might have been temperately considered. The efficiency or otherwise of the sewage works is an important factor in the question, and we hope that at another meeting we shall find that the council have taken broader views, and that they and their excellent officer will set themselves diligently to abate the nuisances he has so emphatically brought to their notice. We trust the Council will remember the dictum of the younger Colman that

"When ill indeed
Even dismissing the doctor don't always succeed."

SMALL-POX AT MIDDLESBROUGH.

THIS epidemic, which commenced in Middlesbrough last November, has resulted in no fewer than 672 cases. Since the end of February the daily average number of cases notified has been upwards of 20, so that the aggregate number of attacks has considerably exceeded 800, while the deaths have reached 70. The latest returns are more reassuring, and it is believed that the climax is passed. There are various accounts as to how the disease first gained a footing: one theory is that it was brought from Spain, another that it was introduced with a wild beast show. Dr. Reece has investigated the epidemic on behalf of the Local Government Board, and the post of health officer has been temporarily filled by Dr. Dingle, of Newcastle-on-Tyne.

HEALTH LABORATORIES AND BACTERIOLOGICAL DIAGNOSIS.

THE County Council of Glamorgan have resolved to set up a county health laboratory. For this purpose, as we learn from the *Western Mail*, they are fitting up a house belonging to the College authorities in the Parade, Cardiff. It is expected that the laboratory will be in working order by June. So far, we are not aware that the Borough has any share in the enterprise, but doubtless arrangements will be made for extending its usefulness to the town itself.

The Willesden District Council at a recent meeting referred to their Sanitary Committee the further consideration of a motion by Dr. W. Wordley Stocker that morbid materials from doubtful cases of diphtheria and typhoid should be sent, at the expense of the Council, for examination at the laboratory of the British Institute of Preventive Medicine. The discussion, according to the *Willesden Chronicle*, was, on the whole, not unfriendly to the motion; but one witty member suggested that their medical officer of health (Dr. Skinner) should go by himself into the next century, and leave the Council to follow at their leisure. When provincial counties are establishing laboratories of their own, it will be strange if district councils in the metropolitan area will not avail themselves of the less expensive method provided for them by the British Institute of Preventive Medicine. We hope, however, that following the lead of Esher and the Dittons, they will.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,722 births and 4,693 deaths were registered during the week ending Saturday last, March 19th. The annual rate of mortality in these towns, which had been 20.7 and 21.1 per 1,000 in the two preceding weeks, further rose to 21.8 last week. The rates in the several towns ranged from 13.8 in Croydon, 15.2 in Burnley, 15.6 in Portsmouth and in Gateshead, and 16.3 in Plymouth, to 25.6 in Hull, 25.7 in Liverpool and in Norwich, 27.1 in Swansea, and 30.9 in Oldham. In the thirty-two provincial towns the mean death-rate was 21.0 per 1,000, and slightly exceeded the rate recorded in London, which was 21.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the rate was equal to 3.0 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Sheffield, 4.1 in Huddersfield, 4.5 in Liverpool, and 5.3 in Oldham. Measles caused a death-rate of 1.6 in London, 2.6 in Bristol and in Swansea, 3.1 in Huddersfield, 3.2 in Oldham, 3.4 in Brighton, and 4.0 in Leicester; whooping-cough of 1.2 in Sheffield and in Newcastle-upon-Tyne, 1.3 in Bolton, 1.5 in Birmingham, and 2.1 in Oldham; and "fever" of 1.3 in Preston. The mortality from scarlet fever showed no marked excess in any of the large towns. The 60 deaths from diphtheria in the thirty-three towns included 36 in London, 5 in Birmingham, and 4 in Cardiff. No fatal case of small-pox was recorded last week, either in London or in any of the thirty-two large provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, the 19th inst. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,445 at the end of the sixteen preceding weeks, had further fallen to 2,419 on Saturday last; 255 new cases were admitted during the week, against 199, 175, and 197 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 19th, 926 births and 727 deaths were registered in eight of the principal Scotch towns. The rate of mortality in these towns, which had increased from 17.4 to 25.0 per 1,000 in the seven preceding weeks, declined to 24.1 last week, but exceeded by 2.3 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.6 in Perth and 17.6 in Aberdeen to 26.4 in Glasgow and in Greenock and 26.9 in Paisley. The zymotic death-rate in these towns averaged 2.5 per 1,000, the highest rates being recorded in Greenock and Glasgow. The 368 deaths registered in Glasgow included 16 from measles, 2 from scarlet fever, 3 from diphtheria, 19 from whooping-cough, 3 from "fever," and 9 from diarrhœa. Three fatal cases of scarlet fever were recorded in Edinburgh, 3 in Aberdeen, and 2 in Dundee.

DIPHTHERIA IN LONDON.

THERE was an increase last week in the mortality from diphtheria in London. The deaths referred to this disease, which had been 46, 38, and 33 in the three preceding weeks, rose again to 36 during the week ending Saturday last, March 19th. Of these 36 fatal cases, 5 were of persons belonging to Shoreditch and 5 to Poplar sanitary areas. The notifications of diphtheria in London, which had been 212, 215, and 185 in the three preceding weeks, rose again to 231 during the week ending Saturday last, March 19th. Compared with the preceding week there was a slight further decline in the prevalence of diphtheria in Central London, but an increase in each of the other groups of sanitary areas, which was most marked in West London, where the 40 new cases notified were more than double those recorded in the preceding week. In Kensington, Paddington, Hammersmith, Fulham, and Chelsea the new cases considerably exceeded those recorded in any recent week. Among the sanitary areas of North London the increase in the prevalence of the disease was most marked in St. Pancras and in Islington; in the latter sanitary area 19 new cases were notified, against 8 in the preceding week. The increase in East London last week was mainly due to a fresh outbreak in Poplar sanitary area, where 14 new cases of diphtheria were notified, against 6

and 4 in the two preceding weeks. The new cases in Shoreditch and Limehouse also exceeded those recorded in any recent week, while those in Mile End Old Town showed a marked decline. Among the sanitary areas of South London the increase in the prevalence of diphtheria was most marked in Newington, Greenwich, Lewisham, and Plumstead; while in Battersea and in Camberwell the new cases notified showed a slight further decline from those recorded in recent weeks. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 143, against 124, 127, and 122 in the three preceding weeks; and 1,024 cases remained under treatment in these hospitals on Saturday last, March 19th.

LONDON WATER COMMISSION.

At a sitting on March 22nd, Sir John Lubbock, in further examination, expressed the opinion that the outside areas would not obtain much better representation in the event of the purchase of the water undertakings by the County Council. He would not admit that when transferred to municipalities water was less pure than in the hands of companies. It would not be impossible, he thought, for the companies to go to Wales for water. For this purpose, there would be an advantage in amalgamating some of the companies.

Mr. Whitmore, M.P., who was the next witness, thought there were already too many metropolitan administrative bodies. In his opinion, it was not in the public interest that large industrial undertakings should be owned and managed by the London County Council so long as the Council remained the political body that it was at present.

NOTIFICATION OF A SECOND DISEASE IN THE SAME PATIENT.

J. D. was called to a case of scarlet fever which he reported to the medical officer of health. Four days afterwards he found the child suffering from diphtheria. This he also reported. He asks if he was expected to do so, and if he is entitled to a fee for the second notification.

*** We should say "yes" if the Infectious Disease (Notification) Act, is in force in the district. Some towns have private Acts, passed before the adoption of Act of 1889 became available, and the clauses of these differ. The Act named (Section 111) contains the following: "Where an inmate.....is suffering from an infectious disease to which this Act applies then.....; every medical practitioner attending on or called in to visit the patient shall forthwith, on becoming aware that the patient is suffering from an infectious disease to which this Act applies, send to the medical officer.....a certificate stating..... the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering.....Every person required by this section to give a notice or certificate who fails to give the same shall be liable.....to a fine not exceeding forty shillings....." "J. D." might also refer to answer to "Enquirer," British Medical Journal, January 8th, 1898, p. 124.

ELIGIBILITY OF POOR-LAW MEDICAL OFFICERS' DEPUTY FOR ELECTION AS GUARDIAN.

Bebo writes saying he is a deputy to a Poor-law medical officer without a salary, and that he has been nominated as a guardian in the same union, and asks whether he is disqualified for election or from acting if elected, and if not disqualified, whether he could charge a fee for assisting the medical officer at an operation, or for administering an anæsthetic; also, whether he would be debarred from accepting a fee for certifying a case of lunacy at the request of a magistrate.

*** We should not regard a medical officer's deputy as ineligible for election as a guardian, or debarred from acting as such if elected, but if at any time after election he were to charge and be paid by the guardians any fee for professional or other services rendered, he would cease to be a guardian. We should not, however, be inclined to regard the signing of a lunacy certificate at the request of a magistrate (even if this carried a fee) as a disqualification for guardianship, but there may be a difference of opinion on this point, which we do not recollect to have seen raised before.

HOSPITAL AND DISPENSARY MANAGEMENT.

A NEW LUNATIC ASYLUM FOR THE WEST RIDING OF YORKSHIRE.

The General Asylums Committee of the West Riding County Council appointed a subcommittee to report upon the question of a site for a fourth asylum. Much difficulty had been experienced in finding a suitable plot of land of sufficient area and free from right of way. The subcommittee reported in favour of a site at Ackworth, and this was adopted. The estimated cost of the site is £46,000 odd, and it is estimated that the cost of the asylum itself will be from £400,000 to £500,000. In the course of discussion it was pointed out that in ten years' time, at the rate lunacy was increasing in the West Riding towns, a fifth asylum would be required, and a considerable portion of the ten years would have expired before the Ackworth Asylum could be ready for occupation.

INCREASE OF INSANITY IN PENNSYLVANIA.

According to the *Philadelphia Medical Journal* the increase in the number of the insane in Pennsylvania, to the number of 600 yearly, is causing the Board of Charities much concern. All the State hospitals are crowded. Their fair capacity is 4,500, and they contain at present about 5,600. The new asylum for chronic cases at Warnersville is full, and the local almshouses contain about 2,000 additional patients. As a way out of the difficulty it is proposed by an inspection officer of the Pennsylvania Board to adopt the Wisconsin plan of county asylums, which, during the past sixteen years, has been found the most efficacious method of dealing with the insane. In Wisconsin, according to this officer, "it has rendered possible the true hospital care and treatment of the acute cases of insanity in the hospitals, which are no longer mixed asylums, and are now performing excellent medical service. It has in every respect vastly improved the condition of all classes of the insane, and has accomplished this at a saving to the State of millions of dollars."

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

The annual general meeting of this institution was held on March 8th, in the Bell Library, at the hospital.

Lieutenant-Colonel Thorneycroft, chairman of the Weekly Board, presided, and there were present many of the governors, together with the hospital staff.

The Chairman, in moving the adoption of the annual report, drew attention to the improved financial condition of the hospital, as shown by the clearing off of a debt of £3,000. He congratulated the meeting on the fact that Lord Dartmouth had consented to be their president during the next three years.

Alderman Jones seconded the motion, and spoke of the noble work that had been done during the forty-nine years' existence of the hospital. He also alluded to the great improvement in the Bell Medical Library, which had now become very useful to the medical practitioners of the district.

After the general business of the meeting had been concluded, a vote of thanks was accorded to the honorary medical and surgical staff for their services.

In replying, Dr. Totherick drew attention to the urgent necessity for reform in the out-patient department of the hospital. He pointed out the harm done to the local profession by treating as out-patients those able to pay for medical advice, besides the injury to the recipients of the charity by "sapping their manly independence." He said that "the country from east and west, and from north to south, was crying out for some change of policy," and that he hoped the Wolverhampton Hospital would be "first in the field with a practical and practicable attempt to solve this striking problem of the age." His suggested scheme of reform was that the hospital staff should receive every case as before and admit the urgent ones, but that the great majority—necessarily trivial cases—should only receive "first aid," and then be remitted to their own medical attendant. Cases of medical and surgical importance coming with a subscriber's note should be carefully examined, and then, if able to pay, be relegated to a general practitioner with notes (in medical terms) on the probable nature of the case. Such a practice, he thought, would be likely to make the outside medical men regard the hospital staff more as experts than as rivals.

The Chairman said that the suggestion of Dr. Totherick should be carefully considered with a view to adoption; and it was resolved by the meeting that Dr. Totherick's address should be printed and circulated among the subscribers to the hospital.

INDIA AND THE COLONIES.

INDIA.

The Sanitary Administration of Assam.—Surgeon-Colonel Stephen, M.B., has written an elaborate and interesting account of sanitary events in the Province of Assam for the year 1896, on which the Government has recorded a very appreciative and thoughtful review. The province includes the valleys of the Brahmaputra and Surma, and a range of hills intervening between them. Vital registration is still very imperfect in the valleys, and has been only partially introduced into the hill tracts. Even in places where registration has been made compulsory by law the results are unsatisfactory. The recording agency is inefficient, and the Chief Commissioner considers that more stringent supervision and inspection are necessary. Cholera is endemic in these valleys, and specially prevalent and fatal among the garden coolies. Famine in India caused an increased influx of these in an impoverished state. The mortality in transit was great, and they introduced the disease into the tea gardens, whence it spread into neighbouring villages. The prevention of the disease amongst this class is under serious consideration, and the adoption of M. Haffkine's inoculation is urged by medical advisers. Fevers account for 55 per cent. of deaths in this province. Kala-azar is on the decline; but in the district of Nowgong, where it is worst, the fever mortality amounted to 36.31 per 1,000. There are no towns in Assam requiring large sanitary works; but great attention is being paid to water supply, drainage, and conservancy, and 46 per cent. of municipal incomes was spent on these and allied objects.

Sanitary Administration of the North-West Provinces and Oudh.—The year 1896 was characterised by excessive temperature and deficient rainfall, by high prices of food, general scarcity, and some famine. Relief measures were actively resorted to in many parts of the province. Millions of people were fed, at a large cost, and though the birth-rates were depressed and death-rates raised in the distressed districts, very few deaths took place from sheer starvation. Disease, as usually happens, took advantage of the depressed vitality of the population, and cholera, small-pox, and fever exacted a larger levy of victims than usual. For the province as a whole the birth-rate was 35.40, and death rate 33.32 per 1,000; the former slightly less and the latter slightly more than the mean of the preceding quinquennium. Though famine operations necessarily filled a very large measure of the time and energies of the Government and the sanitary staff, sanitary works and interests were by no means neglected, and there is abundant evidence in the report that sanitary routine and important undertakings for water supply and drainage are receiving full attention. The Sanitary Board is to be reconstituted on a more practical and useful basis, and sanitary agencies to be remodelled throughout the province. The Village Sanitation Act has been extended. The unnecessarily voluminous and too minutely detailed statements appended to the sanitary report are to be curtailed. A well-deserved expression of thanks for meritorious and unflagging work during the famine is accorded to the Sanitary Commissioner (Surgeon-Major S. J. Thomson, D.P.H., C.I.E.), by whom this report has been compiled.

HOSPITALS AND DISPENSARIES OF THE NORTH-WESTERN PROVINCES AND OUDH.—Three hundred and fifty institutions were open during 1896, in which medical and surgical relief was given to about four millions of patients, or about 8.4 per cent. of the population of these provinces; 52 per cent. of patients were men, 21 women, and 27 children. There are 42 hospitals and dispensaries officered by females, which admit women only; and leper, blind, and poor asylums are maintained in 28 districts. The year was a dry one. The amount of malarial disease treated was, therefore, less, but cases of small-pox and cholera more numerous, and diarrhœa and other digestive disorders consequent on deficient and bad food more common. The death-rate among indoor patients was also, from the same cause, higher. The surgical work done in the hospitals of these provinces has always been a strong point, and has suffered no material abatement. The practice of litholapaxy is increasing, and many European and native officers are commended for successful results. Government pays about one-third of the cost of these institutions, and the remainder is obtained from local sources; 83,814 patients were treated in special poorhouses and relief works opened in connection with famine operations.

THE HOSPITALS AND DISPENSARIES OF BURMAH.—The report for 1896 is submitted by Surgeon-Colonel D. Sinclair, M.B. There were 96 institutions open at the close of the year, in which were treated 30,929 indoor and 677,560 outdoor patients. Of these, 70 per cent. were men, 15 women, and 15 children. Malarial fevers, eye diseases, ulcers, and skin diseases were the most common diseases. Goitre is very prevalent in Upper Burmah, but worms and tuberculosis less so than in Lower Burmah. The number of surgical operations performed during the year was 14,737. Cataract and stone operations are far less frequent than in India There were only 24 of the former and 31 of the latter, including 12 litholapaxies. Government contributes 3 per cent. of expenditure in Lower and 44 in Upper Burmah. There were 13 railway dispensaries open, in which 34,148 patients were treated. The military police have 85 hospitals, in which were treated 19,302 patients, or 1,301 per 1,000 of strength (14,834). Malarious and other fevers, bowel complaints, chest diseases, and venereal diseases are the most important causes of admission. One hundred and ninety-six deaths took place, or 13.21 per 1,000 of strength. The chief causes of mortality were fevers (52), chest diseases (41), and bowel complaints (33). No death from enteric fever occurred, and only 2 from hepatitis.

THE POLICE HOSPITALS OF THE MADRAS PRESIDENCY.—The report for 1896-7 includes 42 hospitals and 318 special wards; 9,638 in-patients and 32,916 out-patients were treated, constituting together a ratio per 1,000 of strength of 917 among officers, and 1,980 among men. The deaths in and out of hospital amounted to 213, or about 10 per 1,000 of the force. Malarial fevers were the principal causes of sickness, and rheumatic affections, bowel complaints, and skin diseases contributed considerable numbers. Fevers, cholera, pneumonia, dysentery, phthisis, and beri-beri were the chief causes of mortality.

NEW ZEALAND.

THE LUNATIC ASYLUMS.—Dr. Macgregor's report on the condition of the asylums of this Colony during 1896 is a singularly outspoken document. Practically every institution appears to be overcrowded, the total number of patients being nearly one-fourth greater than the statutory accommodation, while the Wellington Asylum, which was constructed to hold 167 patients, has to receive 250, exclusive of those in single rooms. It is hardly to be wondered that Dr. Macgregor refers to the "terrible condition" of such institutions, and states that "we shall be fortunate indeed if some calamity or scandal does not occur to horrify the whole country." As an immediate result of the terrible strain and responsibility cast upon them, three out of the four medical superintendents in charge of the large public asylums have recently broken down in health, and Dr. Macgregor wisely suggests that some scheme should be devised by which all might have one year in six leave of absence as a right. With regard to the statistics of insanity in the Colony an increase of just over 4 per cent. is recorded in the total number of registered insane persons as compared with 1895. It is noteworthy that insanity is distinctly less prevalent among the Maories than in the remaining population. The death-rate has decreased considerably and the financial reports show very economical management. It is obvious, however, that in some cases, as at Wellington and Porirua, economy has been maintained by the sacrifice of many much needed and indeed essential improvements. The matter is one which should engage the attention of responsible statesmen in New Zealand with a view to removing this reproach to their enlightenment. The most pleasing feature of the report is the evidence it bears of the devotion of the medical officers to their most trying duties.

THE VACCINATION BILL.

THE following is the text of the Vaccination Bill introduced into the House of Common by the Right Hon. H. Chaplin on March 15th:

ARRANGEMENT OF CLAUSES.

Clause.

1. Vaccination within twelve months after birth.
2. Provision against repeated penalties.
3. Regulations of Local Government Board.
4. Repeal.
5. Extent, commencement, and short title.

A BILL TO AMEND THE LAW WITH RESPECT TO VACCINATION.

BE it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Vaccination within Twelve Months after Birth.*—(1) The period within which the parent or other person having the custody of a child shall cause the child to be vaccinated shall be *twelve months* from the birth of the child, instead of the period of three months mentioned in Section XVI of the Vaccination Act of 1867, and so much of that section as requires the child to be taken to a public vaccinator to be vaccinated shall be repealed.

(2) The public vaccinator of the district shall, if the parent or other person having the custody of a child so requires, visit the home of the child for the purpose of vaccinating the child.

(3) If a child is not vaccinated within *nine months* after its birth, the public vaccinator of the district shall visit the home of the child, and shall offer to vaccinate the child with glycerinated calf lymph.

2. *Provision against Repeated Penalties.*—An order under section thirty-one of the Vaccination Act of 1867, directing that a child be vaccinated, shall not be made on any person who has previously been convicted of non-compliance with a similar order relating to the same child.

3. *Regulations of Local Government Board.*—The Local Government Board shall have the same powers of making rules and regulations with respect to public vaccinators (whether under contracts made before or after the *passing of this Act*) as they have with respect to vaccination officers, and any rules or regulations made by the Board with respect to vaccination, whether under this or any other Act, shall, while in force, have effect as if enacted by this Act.

4. *Repeal.*—The enactments mentioned in the schedule to this Act are hereby repealed to the extent specified in the third column of that schedule.

5. *Extent, Commencement, and Short Title.*—(1) This Act shall not extend to Scotland or Ireland.

(2) This Act shall come into operation on January 1st, 1899.

(3) This Act may be cited as the Vaccination Act, 1898, and the Vaccination Act of, 1867, the Vaccination Act, 1871, the Vaccination Act, 1874, and this Act shall be construed together as one Act, and may be cited collectively as the Vaccination Acts, 1867 to 1898.

SCHEDULE.—*Repeals.*

Session and Chapter.	Short Title.	Extent of Repeal.
30 and 31 Vic. c. 84.	The Vaccination Act of 1867.	Section six. Section seven from "and shall provide all stations" to the end of the section. So much of section eight as fixes the amount of payment thereunder. Section twelve. In section fifteen from "according to the provisions" to "performing the operation." Section sixteen, the words "within three months after the birth of such child," and from "within three months after receiving" to "period as aforesaid," and from "and the public vaccinator" to the end of the section. Section seventeen, to "vaccinations and," and in the same section the words "if the vaccinator so direct," and the words "and inspected as on the previous occasion." Section nineteen. In section twenty, the words "brought to him for vaccination." In section twenty-nine the words "to take such child or," the words "to be taken," and the words "according to the provisions of this Act."
34 and 35 Vic. c. 98.	The Vaccination Act, 1871.	Section ten. In section eleven the words "take or" and the words "to be taken."

THE LATE MR. ERNEST HART.

AT the last meeting of the South Australian Branch a resolution was passed tendering the sympathy of the members to Mrs. Ernest Hart on her recent bereavement, and expressing their appreciation of the great services rendered to the British Medical Association by her late husband.

At the annual meeting of the Ottawa Branch, held on March 4th, the following resolution was adopted:

That we, the members of the Ottawa Branch of the British Medical Association, desire to place on record the extreme degree of regret we experienced in learning of the death of Mr. Ernest Hart, late Editor of the BRITISH MEDICAL JOURNAL. In our opinion he was a man possessed of rare scientific attainments, which on all occasions enabled him to guard the best interests of our noble profession.

We now desire to convey to Mrs. Ernest Hart our deepest sympathy in this trying affliction, feeling thoroughly satisfied this feeling is joined in by the entire Canadian medical profession.

That a copy of this resolution be forwarded to Mrs. Ernest Hart

THE LOCAL GOVERNMENT (IRELAND) BILL.

IV.

The Effect on Medical Affairs.

The Government measure, whenever it becomes law, cannot fail to have a far-reaching influence for better or worse on every branch of medical administration in Ireland. The Lunacy Department, the County Infirmary System, the Poor-Law Medical Service, and the Sanitary Organisation of Ireland, will all be profoundly affected by Local Government as proposed to be created.

Lunatic Asylums.

The Bill, as we have shown, provides for the transference to the County Councils of the control and management of lunatic asylums. It is the County Councils, also, which are to provide and maintain sufficient accommodation for the lunatic poor in accordance with the Lunatic Asylum Acts (Clause 9). The same body is empowered (under Clause 50) to provide auxiliary lunatic asylums for the reception of chronic lunatics who, not being dangerous to themselves, are certified by the resident medical superintendent of an asylum of the Council not to require special care and treatment in a fully equipped lunatic asylum. Lastly, the County Council, acting through their committee (appointed as provided in Clause 9, Subclause 2) shall appoint for each lunatic asylum a resident medical superintendent and at least one assistant medical officer, and may appoint such other officers as they consider necessary (Clause 56).

The principle of vesting these powers in the County Council, and not as heretofore in a central bureau, the Board of Control, is to be commended for the reasons already stated on more than one occasion.[1]

There is one point in which Clause 56 might be amended. Subclause (2) provides that: "Every resident medical superintendent shall be a legally qualified medical practitioner of not less than seven years' standing, and shall have had experience in the treatment of the insane, and every assistant medical officer shall be a legally qualified medical practitioner." We presume the words "legally qualified" include registration under the Medical Acts; if not, the phrase should be amended by inserting after "legally qualified" "and duly registered." But, more important still, it is very desirable that the vague expression "experience in the treatment of the insane" should give place to some such amendment as this:

> And who shall have served for a period of not less than five years as assistant medical officer in a lunatic asylum.

The end of the subclause lastly might run:

> And every assistant medical officer shall be a legally qualified and duly registed medical practitioner, who shall have served as clinical clerk in a lunatic asylum for a period of at least six months.

The County Councils as Sanitary Authorities.

There seems to be no valid reason why the Poor-law medical service and the sanitary organisation should not also be made subject to the County Council. As the Bill stands, each urban or rural district council is to take over the duties of the existing urban or rural sanitary districts. The enactment of this provision would tend to perpetuate the prevailing abuses and defects of the Poor-law and sanitary systems in Ireland, which we have been at some pains to indicate in previous articles.

Can anything be more absurd than the spectacle of a County Council ruling a large district of country in matters of finance, compensation for criminal injuries, the levying of poor-rate, the management of cattle disease, technical instruction, the maintenance of public roads, the provision and management of lunatic asylums, the acquisition of land or easements, the alleviation of exceptional distress, the appointment of coroners,[2] the making of by-laws, and the power of opposing Bills in Parliament and instituting legal proceedings, and yet taking no part whatever in the prevention and treatment of disease within its boundaries?

The County Council should be the supreme local authority, the Local Government Board excepted, in all matters relating to Poor-law administration and the prevention of disease. It should be constituted the Poor Law Board and the Sanitary Authority alike. The adoption of the Infectious Disease (Notification) Act, 1889 [52 and 53 Vic. cap. 72], and the Infectious Disease (Prevention) Act, 1890 [53 and 54 Vic. cap. 34) should be made general throughout Ireland and also compulsory.

County Medical Officers of Health.

Each County Council should be required to appoint a medical superintendent officer of health, with a salary sufficient to render him independent of private practice. Such an officer should be specially trained and possessed of a registrable diploma in Public Health or State Medicine. He should be required to devote his whole time to the duties attaching to his office, and to him the various local medical officers of health should report and on him they should depend for guidance, advice, and support in the discharge of their onerous and responsible duties. Such a system would not supersede that which now exists. It would supplement and make it effective, which no one can say it is at present.

Superannuation of Poor-law Medical Officers.

If the Local Government Bill passes while the vexed question of superannuation remains unsettled, a grave injustice will be done to a deserving class of public servants—the Poor-law medical officers of Ireland. The Bill might very well include a clause for the amendment of the superannuation law, so as to give medical officers of workhouses and dispensaries pensions at a fixed rate as a matter of right. The medical officer of a dispensary district in Ireland carries his life in his hand day after day. Badly paid, too often doomed "to suffer the slings and arrows of outrageous fortune," he spends his time in ministering to the sick and infirm, visiting them in all weathers, and at any time by day and by night in their own homes in the crowded tenements of the city, or on the bleak mountain side or dreary bogland. It is an outrage on civilisation and on humanity alike that such a servant of the State should not as a right receive superannuation when he reaches old age. At present he is dependent on his Dispensary Committee or on the Board of Guardians of the union in which his dispensary district lies for the grant of his superannuation allowance, and so he clings to office, fearful lest he should be left penniless through the caprice or thoughtlessness, or worse, of his masters.

The granting of superannuation might be referred to the County Councils on the recommendation of the district councils, but with a right of appeal to the County Council, should the recommendation be withheld in any case.

Again, the workhouse medical officers should hold their appointments independently of the district councils, and subject only to the authority of the Local Government Board.

All the pioneers of State Medicine have recognised that the medical care and treatment of the sick poor should be entrusted to none but skilled hands, and that this means expense goes without saying. In these articles we have endeavoured to show that the Bill now before Parliament affords an opportunity such as may not again present itself for many a day, of readjusting on a satisfactory basis the Poor Law and sanitary services of Ireland. We have claimed for those who join those services adequate remuneration, independent supervision, and compulsory superannuation allowances. We are prepared to urge these just claims by every legitimate means, in the full confidence that our policy is calculated to advance the best interests of the people, and to secure for them the inestimable blessings of health and long life.

[1] See the British Medical Journal for February 5th, p. 385; 26th, p. 573; and March 12th, p. 721.

[2] Under Clause 13 the County Councils would have the appointment of coroners and the settlement of coroners' districts.

Anatomical Study in America.—The time is long past since teachers of anatomy in this country have had any difficulties with the law in regard to the supply of subjects. This is by no means the case in the United States, however, where in several places the "resurrection man" still plies his unhallowed trade. According to a recent enactment medical colleges in the State of Pennsylvania must file a bond of 1,000 dollars in the Court of Common Pleas as a guarantee that they will not dissect any human bodies except those which come to them through the regularly appointed legal channels. This bond is forfeited if they are discovered using any other bodies.

LITERARY NOTES.

IN the *Cornhill Magazine* for March the writer of the entertaining Pages from a Private Diary, after quoting some extracts from a curious old book entitled *The Secretary's Vade Mecum* (1697) goes on to say:

But the gem of the collection is a letter to a lady much grieved for the impairing of her beauty by the small-pox. It should make even an anti-vaccinationist shudder to know that a letter on this topic was considered useful in a *vade mecum*. The consolation for the ravages of the "inexorable distemper" is not very consoling:

"What if some dimples are impressed by the disease? Venus's Beauty consisted, to her Praise, as Poetical Gayness sets it forth, in that particular, though not happening by the same means. Observe the Face of Heaven, when the numerous Hoast of Stars stud it over with Seeds of Light, how beautiful and gay it represents itself to our admiring Eyes? So your Face, adorn'd or studded o'er with little Rounds indenting it, make it lovely and desirable, etc."

In the *Rubayat of Doc Sifers* (The Century Company, New York) Mr. James Whitcomb Riley paints an American country doctor of the old school who may take his place by the side of "Weelum Maclure." The poem is written in quatrains, which, if not so polished as those in which Fitzgerald enshrined the philosophy of Omar, have a music of their own, and in their somewhat uncouth dialect express a meaning which should make them particularly pleasing to medical ears. The following prescription for happiness may be found as useful in certain circumstances as Lettsom's "one guinea to be taken immediately" might prove in others:

And I says, 'Doc, you 'pear so spry, jes write me that receit
You have for bein' *happy* by—fer that 'u'd shorely beat
Your *medicine!*' says I. And quick as s'cat! Doc turned and writ
And handed me: 'Go he'p the sick, and put your heart in it.'

At a recent meeting of the Cercle Médical of Brussels, Dr. Crickz showed a manuscript work of Jean Yperman, a Flemish surgeon of the thirteenth century. Yperman was born at Ypres about 1280, and studied surgery in Paris under Lanfranc of Milan. He then returned to Ypres, and was appointed surgeon to the Belle Hospital, and afterwards to the Ypres militia. The manuscript was illustrated with drawings which, though rudely executed, show that many instruments of comparatively recent invention were known in Yperman's day. There are chapters on the stitching of wounds, on secondary suture after freshening of the edges, on the stoppage of bleeding by ligature and torsion. Trephining of the skull is clearly described. Tracheotomy is recommended in obstruction of the upper air passages, and the extirpation of the scrofulous glands is mentioned. Yperman advises removal of the penis with the cautery in cancer of that organ, and he recommends the use of the seton in hydrocele. The whole work, according to M. Crickz, bears the stamp of a mind trained in the observation of facts and guided by practical sense, and breathes throughout a spirit of enthusiastic devotion to the art of healing for its own sake.

Walt Whitman, the author of *Leaves of Grass*, served as a dresser in the military hospitals during the American civil war. An interesting book has just appeared in Boston, in which the poet relates his experiences during that exciting time. It is entitled *The Wound Dresser*, and consists of a series of letters written by Walt Whitman from the Hospital in Washington, and arranged in chapters with such titles as The Great Army of the Wounded, Life among Fifty Thousand Men, and Hospital Visits. The book is edited by Richard M. Bucke, M.D. The poet, who engaged in the work purely from humanitarian motives, says in one of his letters:

I believe that even the moving about among the men or through the ward of a hearty, healthy, green, strong, generous souled person, man or woman, full of humanity and love, sending out invisible constant currents thereof, does immense good to the sick and wounded.

Dr. H. Laing Gordon, the author of "Sir J. Y. Simpson" in the *Masters of Medicine* series, is writing a book to be entitled *The Romance of Medicine*. Its object is to give a succinct account of some of the great discoveries of medical and surgical science, and of the men who made them, and to show, in a continuous narrative, the steps by which modern medical science has been gradually built up. Dr. Gordon is also preparing a volume dealing with Natural Education, on the lines of the Parents' National Educational Union, and he is collecting into a book some South African stories written during and after his sojourn in Cape Colony in 1894 and 1895.

The following description of a New England physician in the later days of the eighteenth century is from Alice Morse Earle's *Old New England*:—

I like to think of the rich and pompous old doctor riding out to see his patients, in his suit of sober-brown or claret colour, with shining buttons made of silver coins. The full-skirted coat had great buttons and flaps, as had the long waistcoat that reached well over the hips. Knee-breeches dressed his shapely legs, while fine silk stockings and buckled shoes displayed his well-turned calves and ankles. On his head he wore a cocked hat and wig. He owned and wore in turn wigs of different sizes and dignity—ties, periwigs, bags and bobs. His portrait was painted in a full-bottomed wig that rivalled the Lord Chancellor's in size; but his everyday riding wig was a rather commonplace horse-hair affair, with a stiff eelskin cue. One wig he lost by a rather mysterious accident while attending a patient who was lying ill of a fever, of which the crisis seemed at hand. The doctor decided to remain all night, and sat down by the table in the sick man's room. The hours passed slowly away. Physician and nurse and goodwife talked and droned on; the sick man moaned and tossed in his bed, and begged fruitlessly for water. At last the room grew silent, the tired watchers dozed in their chairs, the doctor nodded, bringing his eelskin cue near the flame of the candle that stood on the table. Suddenly there was heard a sharp explosion, a hiss, a sizzle; and when the smoke cleared the terrified occupants of the room collected their senses, the watcher and wife were discovered under the valence of the bed; the doctor stood scorched and bareheaded, looking around for his wig; while the sick man, who had jumped out of bed in the confusion and captured the pitcher of water, drunk one-half of its contents and thrown the remainder over the doctor's head, was lying behind the bed curtains laughing hysterically at the ridiculous appearance of the man of medicine. Instant death was predicted for the invalid, who, strange to say, either from the laughter or the water, began to recover from that moment. The terrified physician was uncertain whether he ought to attribute the conflagration of his wig to a violent demonstration of the devil in his effort to obtain possession of the sick man's soul, or to the powerful influence of some conjunction of the planets, or to the new-fangled power of electricity which Dr. Franklin had just discovered and was making so much talk about in Philadelphia at that time. The doctor had strongly disapproved of Franklin's reprehensible and meddlesome boldness, but he felt it was best nevertheless to write and obtain the philosopher's advice as to the feasibility, advisability, and best convenience of having one of his new lightning rods rigged up his medical back, and running thence up his wig, thus warding off further alarming demonstrations. Ere this was done the mystery of the explosion was solved. When the doctor's new wig arrived from Boston he ordered his newly purchased negro servant to powder it well ere it was worn. He was horrified to see Pompey give the wig a liberal sprinkling of gunpowder from the powder horn instead of starch from the dredging box, and the explosion of the old wig was no longer assigned to diabolical, thaumaturgical, or meteorological influences.

The picture is doubtless that of an individual, but it may well serve as a type of the American analogue of the English physician of the corresponding period with his periwig and his goldheaded cane.

A week or two ago reference was made in the BRITISH MEDICAL JOURNAL to some interesting reminiscences of Syme by a former pupil of that great surgeon, Professor Donald Maclean, of Ann Arbor University, Michigan. Professor Maclean supervised the publication of a complete collection of Syme's monographs (J. B. Lippincott and Co., Philadelphia, 1866), which was described by S. D. Gross as the best edition. In the preface Dr. Maclean quoted from the author of *Rab and his Friends*, Dr. John Brown, the following description of Syme's character:

Everywhere personally, professionally, and publicly, reality is his aim and attainment. He is one of the men—they are all too few—who desire to be on the side of truth rather than to have truth on their side, and whose personal and private worth are always better understood than expressed. It has been happily said of him that he never wastes a word, a drop of ink, or a drop of blood, and he is the strongest, exactest, truest, immediatest, and safest intellect dedicated by its possessor to the surgical cure of mankind I have ever yet met with. He will, I firmly believe, leave an inheritance of good done and mischief destroyed, of truth in theory and practice established, and of error in the same exposed and ended, such as no one since John Hunter has been gifted to bequeath to his fellow men. As an instrument for discovering truth I have never seen his perspicacity equalled. His mental eye is achromatic, and admits into the judging mind a pure white light, and records an undisturbed, uncoloured image, undiminished and unenlarged in its passage, and he has the moral power, courage, and conscience to use and devote such an inestimable instrument aright.

In regard to this quotation Syme, in a private letter to Dr. Maclean, said: "Your preface seems to me to be a little '*loud*,' but I daresay it will do for your side of the Atlantic."

AMONG the 148 newly elected Municipal Councillors of St. Petersburg for the four years 1898-1902, there are six members of the medical profession.

SWISS UNIVERSITIES.—The total number of medical students in the universities of Switzerland in the current winter semester is 1,144, of whom 307 are women. Of the total number 617 are natives of Switzerland, including nineteen women.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 26th, 1898.

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL REFORM.

At the present time, medical reforms urgently required are in course of consideration by Committees of the British Medical Association, which in all cases are taking, or have made arrangements at the proper moment to take, energetic action.

With regard to the amendment of the Medical Acts, it may be observed that at the last quarterly meeting of the Parliamentary Bills Committee, the Subcommittee appointed with instructions to prepare an amended Medical Act was reappointed. The Subcommittee, which comprises Drs. Woodcock, Brown Ritchie, and Bateman, Mr. Victor Horsley, and Mr. George Brown, has elected Dr. Woodcock to be its Chairman. At a prolonged meeting held on March 17th and 18th, a complete set of amendments to the existing Acts was prepared. These proposed amendments embrace the following among the changes which are needed—the reform of the constitution of the General Medical Council, rendering it more representative of the general body of the profession; the reform of the system of registration with a view to defining its value and the rights which it confers; the strengthening of the penal clauses protecting registration; provision for the suppression of unqualified practice; reform of the system of educational tests, and the introduction of the one-portal system for the final examination. The Subcommittee, we are informed, expect to be able to prepare a draft Bill for amending the Medical Acts to be brought up for the consideration of the Parliamentary Bills Committee and of the Council sufficiently early to permit of its being presented to the annual meeting at Edinburgh this year. If precedent be followed the Bill will then be referred to the Branches for their consideration and report.

The midwives question which, as the chances of the ballot have given an early day for the discussion of the Midwives Registration Bill in the House of Commons, has assumed a more pressing character, had already been thoroughly considered by the Subcommittee of the Parliamentary Bills Committee, and a draft Bill prepared by the Subcommittee was last year referred to the Branches of the Association for their consideration. Improvements and alterations suggested by the Branches have, after full consideration of the various views expressed, been embodied in the Bill. As will be seen by the report in another column of the special meeting of the Parliamentary Bills Committee last week, the Bill as amended has been finally approved in order that it may be without loss of time introduced into the House of Commons, so that members of Parliament may have an opportunity of comparing its provisions with those of the Midwives Registration Bill. It will be seen also that active steps are being taken to point out the objectionable character of the Midwives Registration Bill recently introduced by the Right Hon. J. B. Balfour. This measure, while professedly designed to stop the reprehensible practices of existing uneducated midwives, would actually in no way prevent the continuance of evils which are universally recognised to be a grave blot on our civilisation, while it would do nothing to prevent the irregular and unqualified practice of medicine and midwifery as carried on now by midwives. A Memorandum prepared by the Subcommittee, and printed in our report of the special meeting of the Parliamentary Bills Committee, was approved by that Committee, and will be forwarded to all members of Parliament in order to bring under their notice the serious defects of the Midwives Registration Bill. The simultaneous introduction of the Bill of the Association, now called the "Midwifery Nurses Bill," will serve to bring into prominence the provisions which by those who by their experience are most competent to judge, are deemed necessary to protect the public, safeguard the interests of the profession, and avoid contraventions of the existing Medical Acts.

As will also be seen from our report, the Parliamentary Bills Committee has under consideration the provisions of the Local Government Bill for Ireland, introduced recently by Mr. Gerald Balfour, and now under discussion in the House of Commons. Steps will be taken to safeguard the interests of the medical profession in Ireland, which are touched at many points by the provisions of the Bill, and amendments will be drafted and placed in the hands of members who are known to be prepared to give special attention to questions of this order. The Committee has also taken steps to support the Bill introduced by Mr. Alexander Cross to remedy a defect in the Local Government (Scotland) Act which permits parish councils to dismiss medical officers without rendering it possible for the Local Government Board of Scotland to review such decisions. As we pointed out last week, this power has already been used most improperly by certain parish councils in Scotland, and already a considerable number of cases of great hardship has arisen. Every effort will be made to induce the Government to give facilities for the consideration of Mr. Cross's Bill, which proposes to give to medical officers summarily dismissed the right of appeal to the Scottish Local Government Board.

THE GENERAL MEDICAL COUNCIL.

A special session of the General Medical Council has been summoned for next Tuesday week, April 5th. The special business to be brought before the Council will be the election of President and the consideration of the midwives question.

The Midwives Bill Committee of the General Medical Council, which met on February 22nd, held a second meeting on March 22nd, and adjourned until March 25th. We understand that the Committee has formulated a very large number of amendments to the Bill, and that it was considered advisable that a plenary session of the Council should be held for their consideration. The next ordinary session

of the Council will not begin until May 24th, and as the Midwives Registration Bill is down for second reading in the House of Commons on May 11th, it was found necessary to summon a special session at which the whole subject could be considered.

Much interest is being taken in the question of the election of a successor to Sir Richard Quain in the office of President. We gather that there is a very general opinion that Sir William Turner is likely to be elected, if he finds himself to be in a position to give the necessary time and attention to the duties of the office. He has proved himself an excellent chairman, and there seems to be little doubt that his election would be practically certain but for the fact that he resides in Edinburgh. There is a strong opinion that the President of the General Medical Council should be in constant touch with the central office, and to ensure this it is urged that it is essential that he should reside in London. A hope has been expressed in many quarters that Sir William Turner may see his way to reside in future in London. As this, however, would involve his retirement from the Chair of Anatomy in Edinburgh, which he has filled so long and with so much distinction, he may not unnaturally feel some hesitation in reaching a decision, although the knowledge of the general desire among his colleagues on the General Medical Council to see him in the Presidential Chair may suffice to overcome it. Other names have been mentioned in the event of Sir William Turner being unwilling to fix his residence in London, but, pending an announcement of his intentions, it would be premature to pursue the matter further.

ABDOMINAL SECTION—AND AFTER?

THE ultimate results of abdominal operations from which the patient recovers are not always entirely satisfactory. Dr. W. Taylor and Dr. W. Russell, of Edinburgh, reported eight years ago some very evil results following the use of the silk ligature in ovariotomy. In the discussion on Mr. Doran's paper on the Management of True and False Capsules in Ovariotomy at the October meeting of the Obstetrical Society, Dr. Herbert Spencer pointed out that intestinal obstruction from the adhesion of intestine to the stump after ovariotomy was by no means rare, as the experience of general hospitals amply proved. A month later, at the Harveian Society, Mr. Doran showed how frequently hernia of the abdominal cicatrix followed laparotomies, the patient not invariably returning for relief to the original operator.

In the last volume of the *Transactions of the Medical Society of London* there is a highly instructive monograph on after-histories by Mr. J. D. Malcolm. In his table of over a score of cases in which an abdominal section has been performed a second time, will be found some valuable clinical records of obstruction after laparotomy. A very careful watch should be kept on all patients on whom a severe abdominal section has been performed; one of Mr. Malcolm's cases was watched for two, another for three, and a third for eleven years, all ultimately requiring operative interference for intestinal obstruction.

Another question is that which was raised by Pfannenstiel in 1894 as to the condemning and removal of the apparently healthy fellow to an ovary bearing a new growth. He maintained that certain forms of ovarian tumour almost invariably infect both ovaries, one often very long after the other. This matter is grave, for recurrence causes the patient extreme distress, and its possibility places the operator in a dilemma: he cannot feel certain whether it is best to remove a healthy ovary on speculation, or to leave it and distress the patient by reminding her that the disease may recur, or to say nothing and to risk discredit not entirely undeserved. The dread of intestinal obstruction accompanies almost every possible form of laparotomy, so the more we know about it the better. What the surgeon especially desires at present is not so much long series of any particular abdominal operation, showing the percentage of immediate recovery, as similar statistical work on after-histories. The result of labour of this kind is favourably displayed by Dr. Bangs, of New York, in an important article on the remote results after operations for renal tuberculosis.[1] That writer has taken great pains in the classification of 135 cases, grouping separately not only the deaths and recoveries, but also such after-histories as could be placed under the heading "detailed statement," and such as consisted solely of a note that the patient was living so many years after operation.

THE VACCINATION BILL.

IN preparing his Vaccination Bill, Mr. Chaplin has manifestly endeavoured to proceed along the lines of least resistance, and it cannot be said that his endeavour has been unsuccessful. The measure contains little that is really contentious, but it omits a great deal that it ought to have contained.

The proposals as to glycerinated calf lymph are wisely drawn. Section 1 (3) says: "If a child is not vaccinated within nine months after its birth, the public vaccinator of the district shall visit the home of the child, and shall offer to vaccinate the child with glycerinated calf lymph." This is the only specific mention of calf lymph. Its use is not compulsory, and humanised lymph is nowhere excluded. Under Section III, the Local Government Board will have power to make and enforce regulations regarding lymph, so far as public vaccinators are concerned, and independently of such regulations the proved merits of glycerinated calf lymph will be its best recommendation; but the well-founded belief which thousands of medical men have in the value and safety of humanised lymph may still be given effect to in practice, and there is to be no needlessly sudden alteration in existing methods. The same remark applies to the way in which domiciliary vaccination is dealt with in the Bill. Vaccination stations are not to be abolished, but "the public vaccinator shall, if the parent or other person having the custody of a child so requires, visit the home of the child for the purpose of vaccinating the child." The result here may well be that, by the probably gradual introduction of domiciliary vaccination, the Local Government Board and public vaccinators will have some opportunity of grappling successfully with those practical difficulties which we pointed out in a recent article. One difficulty, however, cannot be got over in that way, and that is the financial difficulty. The Bill says nothing regarding the payment of public vaccinators, either for domiciliary vaccinations or domiciliary visits, and the

[1] *Annals of Surgery*, January, 1898.

latter are likely to be more numerous than the former. Obviously these new duties cannot be imposed without providing for remuneration, and we cannot imagine that the Bill will go through Parliament without this point being definitively cleared up. It is not stated whether vaccinated children are in future to be kept under observation by the public vaccinator for any period after the eighth day. Calf lymph being used, the vesicles will not be opened on the eighth day, and there will be even less risk than at present of anything going wrong. There are, however, circumstances under which such visits ought to be made. The point is one which may be left to the Local Government Board for regulation under Section III, but the question cannot be fully considered apart from the cost to local authorities which would be involved.

The line taken with regard to compulsion is again that of least resistance. Repeated penalties are to be abolished, single penalties are to remain, there is to be no conscience clause, and the Act is to be left to the administration of Boards of Guardians as at present. This really amounts to communal option, as distinguished from individual option. In no district can there be more than one penalty, and it will lie with the majority in each district to decide whether there shall be any penalty.

Independently of any question of option a decided blunder will be committed if the administration is not transferred from the hands of the guardians to those of the local sanitary authority. Vaccination is a sanitary measure of the first importance, and should be in charge of the same body that has charge of hospitals, disinfection, nuisance removal, and other sanitary measures. It would then be impossible, as at Gloucester, for guardians who neglected vaccination to blame the sanitary authority for alleged neglect of sanitation. In the face of small-pox epidemics the absurdity of divided control is constantly in evidence. An amendment remedying this defect in the Bill would be excellent in itself, and ought to be insisted on. It would, however, leave local option practically untouched. No doubt the abolition of repeated penalties and the use of glycerinated calf lymph will have a good effect in this direction. No doubt, however, the action of those who take a prominent part in opposition to vaccination will not be in the least affected. Their minds are too hopelessly distorted on the subject ever to come straight again, but they will lose perhaps their most valuable means of rousing popular prejudice, whilst their appeals to ignorance and passion will have less chance of being listened to than before. But in places like Keighley and Leicester it is not in the least likely that the new Act would be enforced any more than the old. Now, this is distinctly not what the Royal Commission contemplated. Their view was, though they did not define the exact method of giving effect to it, that option should be individual, not communal, and that even in Leicester every parent should be required either to have his child vaccinated, or to go before a magistrate and make a declaration of objection, the declaration being accompanied by such procedure as might make it more than a mere form. Under some such system, even in Leicester, many merely indifferent parents would be induced to give their children the much needed protection, while under the Bill, Leicester would be left practically as at present. On the other hand, it is open to argument that Mr. Chaplin's system of single penalties will be a better test of "conscientious" objection than that proposed by the Commission, and that what may be lost in Leicester may be more than atoned for by gains where anti-vaccination has obtained no such hold. Assuming that there must be in this country some option as to vaccination, then, seeing that it is both an individual and a public procedure, there is ample room for academic discussion as to whether the option should be individual or communal.

The important practical question is, By which course will the greatest amount of vaccinal protection be secured for the country as a whole? Looking to the proposals with regard to calf lymph and domiciliary vaccination, Mr. Chaplin is justified in embarking on a scheme of single penalties in preference to the Commission's scheme of declaration of conscientious objections. If, however, he were in one important respect to make his Bill fuller than it is at present, he would not only do a most valuable service to the public health, but at the same time he could incidentally initiate a course of procedure which in a comparatively short time would settle this practical question. This brings us to the great defect of the Bill. It contains not one word about revaccination. Mr. Chaplin does not propose that the State shall offer or undertake any renewal of vaccinal protection after the original infantile protection has diminished by lapse of time. Here the weakness of the Bill reflects the weakness of the Royal Commission, for though that body solemnly recorded its conclusions as to the great value and importance of revaccination, it refrained from making any practical suggestion on the subject. Whether the Commissioners may have been led on to this inconsequential course by some expectation of getting a unanimous signature to the report we do not pretend to know. But Mr. Chaplin has not adhered to the views of the Commission on some other practical points, and why should he do so here? The insertion even yet of a reasonable provision regarding revaccination would at once raise his Bill out of the region of mere expediency into the clear atmosphere of principle, would make it logical and complete, and would confer on the nation an enormously increased protection against the ravages of small-pox. And here it is that individual option should be provided for instead of local option. Let Mr. Chaplin retain his proposals for single penalties with regard to primary vaccination, but for revaccination let him adopt the option favoured by the Royal Commission—the option, namely, of a declaration of conscientious objection. Let the public vaccinator obtain regularly from the School Board clerk lists of children about to reach twelve years of age, let notices be served on the parents of such children, and let them have the choice, either of submitting their children to vaccination, or of going before a magistrate and making, with all due formalities, the stipulated declaration. This is the principle that should be adopted whatever the details may be. We venture to urge that this is the point on which the efforts of the medical profession should be specially concentrated regarding this Bill. It is not to be expected that under our democratic form of Government England can be so thoroughly protected by vaccination against small-pox as Germany is, but it is the bounden duty of the Government towards the public to go this length—that renewal of the protection with which the name of Jenner is so honourably and so indissolubly

connected all over the world, shall, in Jenner's own country, be offered by the State with regard to every individual before he leaves school and enters on the battle of life. Nothing less than this will make a reasonably good Bill; while this of itself if added will ensure that the Bill shall be a statesman-like measure.

THE BRITISH MEDICAL ASSOCIATION AND ITS COLONIAL BRANCHES.

IN the *Indian Medical Gazette* for February there is a leading article in which, with reference to the successful meeting of the British Medical Association held in Montreal last September, it is pointed out that the distinctive feature of the meeting was the enthusiasm displayed by the Colonial members, and the heartiness of their reception of their English brethren. No stronger testimony (says our Indian contemporary) could be afforded of the success achieved by the Association in one of the most important of its functions, that is to say, the promotion of friendliness and co-operation among medical men in all parts of Great Britain and the Colonies. The Association, it is pointed out, has undoubtedly succeeded in strengthening the bonds of union between medical men throughout the British Empire. Sympathetic mention is made of Dr. Roddick's expression of belief that the Association would be "an important factor in bringing to a successful issue that great scheme of Imperial Federation which now exercises the minds of the leading statesmen of the Empire." In the same article the importance of promoting friendly intercourse and free communication, harmony, and good feeling among members of the medical profession in India is strongly dwelt upon. It is urged that for the furtherance of this object the number of Branches of the Association in that counry should be multiplied, and also that the existing Branches should be more widely developed than they are at present. It is pointed out that with one exception, all the Indian Branches, including that of Burmah, consist almost wholly of Europeans. It is added that but little encouragement is needed to induce native medical men to join the Association, as is proved by the case of the South Indian Branch, in which 36 per cent. of the members are natives of India. We join heartily with the *Indian Medical Gazette* in the wish that the example of that Branch were more widely followed in India. The *Canadian Practitioner* for February, in announcing the arrangements for the forthcoming annual meeting at Edinburgh, takes occasion to say that there is every reason to believe that this meeting will be one of the most interesting and successful medical gatherings that the world has ever known. Such expressions of loyalty and goodwill to the Association on the part of its Colonial Branches are particularly gratifying at the present time.

HOW TO OBTAIN SANITARY LEGISLATION.

AT the annual dinner of the Sanitary Institute on March 23rd, Dr. Farquharson, who responded to the toast of "The House of Commons," gave a humorous sketch of the evolution of an M.P. He traced him from his first state of enthusiasm when, fresh from oratorical successes in his constituency, he arrives at Westminster full of zeal, and impressed with the importance of his mission, to command the applause of a listening Senate. He described him next as passing through a period of disillusionment as he begins to realise that the House of Commons is not a chamber in which to make orations, but a place for doing a little business under very peculiar regulations, which render the process extremely tedious. Finally he pictured him as a kind of political philosopher making the best of his forced detention in the best club in London, and resignedly admitting to himself that the real impetus to legislation must come from outside. The average member of the House of Commons, said Dr. Farquharson, is extremely sensitive to representations from his constituents, but singularly indifferent to protests from other quarters. Towards the end of a speech which had kept his audience in a ripple of laughter, he drew the serious moral that if a real interest in legislation on sanitary matters was to be aroused in the breasts of Members of the House of Commons, it was necessary that persons practically acquainted with the need for such legislation should, each in his own district, stimulate local interest. The member for the constituency would be found ready to listen to representations from his constituents, and when this had become sufficiently general throughout the country, indifference in the House of Commons would give way to energetic if not enthusiastic action. Dr. Farquharson warmly commended the work of the Sanitary Institute as making for the better education of public opinion; and Sir Douglas Galton, who replied to the toast of "The Institute," which was given by Sir Edwin Galsworthy, the Chairman of the Metropolitan Asylums Board, said that the house of the Institute in London had been visited during the past year by over 17,000 persons, and had been used for teaching purposes by no fewer than 53 other institutions. At the present day the Institute was practically the only body which examined sanitary inspectors, and as a result of examinations held in London and also in other parts of the country, it had granted altogether 2,400 certificates of competence. He referred to Dr. Farquharson's remarks as to the need for the education of the public mind in order that Parliament might be induced to give greater attention to public health questions, and observed that it was absurd that sanitary administration should still continue to be an appendage of the Poor Law.

THE AERIAL CONVECTION OF SMALL-POX.

AN interesting case in which the question of the aërial dissemination of small-pox was raised, has been heard in the Chancery Division before Mr. Justice Romer, who gave judgment on March 22nd. The plaintiffs, who were the trustees of an estate and also the owners of a shoddy warehouse and factory, claimed an injunction restraining the mayor and corporation of Ossett from using a hospital as a small-pox hospital. The hospital had room for 8 patients, and was some 250 yards from a mansion and 100 yards from the privies of the factory and from the warehouse, and about 170 from a dwelling house occupied by its owner. A 6-foot wall enclosing an open space of 40 feet surrounded the hospital. No objection was raised to the hospital being used for infectious diseases other than small-pox, but it was contended that any small-pox hospital must necessarily be a source of danger to persons in its neighbourhood, because the disease was disseminated *inter alia* by airborne infection, or what was called aërial convection. Mr. Shirley Murphy and Dr. Sinclair White gave evidence that a small-pox hospital, even assuming it to be well conducted, would be a source of danger to persons residing in its neighbourhood, and Dr. Priestley said that his experience at Leicester had converted him to the same opinion. Dr. T. D. Savill and Dr. T. O. Dudfield gave evidence for the defendants, and Dr. Ricketts, Medical Superintendent of the small-pox hospital ships of the Metropolitan Asylums Board stated that in one case in which one of the crew of a Thames Conservancy dredger working at a distance of some 200 yards from the hospital ship was attacked with small-pox, it had turned out that the man had spent two days not long before his attack in an area at Greenwich within which some 40 cases of small-pox had occurred. Mr. Justice Romer, in giving judgment, declined to give any opinion upon the question of the aërial convection of small-pox, but he said that the balance of testimony was to the effect that a small-pox hospital if badly conducted might be a source of danger, and that where a small-pox hospital was established there was a tendency for cases to arise in its immediate neighbourhood, especially when the hospital was large, and its

neighbourhood crowded and ill-ventilated. He was not satified that a well-conducted small-pox hospital was such a substantial source of danger as to constitute it a legal nuisance, and it was certainly not so when the hospital was a small one. Further, he pointed out that all the witnesses agreed that vaccination offered complete protection, and he thought that the court should consider that the plaintiffs and others in the neighbourhood could protect themselves. For these and other reasons (of a legal nature) he gave judgment for the defendants. It is extremely interesting to find the impression produced upon an acute legal mind such as that which Sir Robert Romer possesses to so conspicuous a degree by the evidence as to the aërial convection of small-pox. He, it is true, specifically declined to express an opinion upon the general question, though he considered that the evidence was sufficient to prove that there was a tendency for cases to arise round about a hospital in a crowded neighbourhood. It is interesting also to notice that the judge was brought to the logical conclusion that the protection afforded by vaccination must be taken into consideration in cases of this kind. The inference to be drawn is obvious enough, and if sanitary authorities were also, as they ought to be, vaccination authorities, the decision in this case might have considerable influence in inducing them to take a greater interest in rendering vaccination general and efficient within their district.

THE LIBRARY OF THE UNIVERSITY OF EDINBURGH.

By the will of the late Sir William Fraser, K.C.B., LL.D., the University has been provided with an endowment of £10,000 for the purposes of the library, its librarian, and officers. Few bequests could have been more opportune, for the University Library, owing to lack of funds, has of late been in an unsatisfactory condition. As no proper catalogue exists, the precise contents of the library are not known and not accessible to students and scholars. Far too few of the most important books in the various departments of learning are bought. The library is also deficient in modern publications, whether purely literary, or scientific, or medical, and this is stated to be particularly true of French and German literature. It is believed that the funds now so liberally and so wisely placed at disposal will, when judiciously expended, serve to remedy many of these deficiencies. Sir William Fraser has also directed that one half of the residue of his estate (amounting to probably £9,000 or £10,000) shall be assigned to the University for its general requirements, bursaries, research, publications, etc. Further, £25,000 have been provided for the establishment of a chair to be called "The Sir William Fraser Professorship of Ancient History and Palæography."

BRITISH PRACTITIONERS IN ITALY.

In response to a request made by three British practitioners, Drs. Alex. R. Coldstream, Thomas Henderson, and Stuart Tidey, at present practising in Florence, the Marchese Torrigiani, Syndic of the town, recently received them in audience at the Palazzo Vecchio. An address in Italian was presented by Dr. Coldstream. This address pointed out that the deputation desired to call attention to certain proposals injurious to the rights of foreign physicians practising in Italy, which had been brought before the Italian Parliament. The proposal was that foreign practitioners should be prohibited from practising in Italy, even among their own countrymen, unless they first obtained a diploma in one of the Italian Universities, and it was moreover proposed to make the regulation retrospective, thus depriving physicians already residing in the country of the rights they had hitherto enjoyed. In respect of these they had always paid all taxes, both general and local, which were paid by their Italian colleagues. The address further pointed out that the diplomas held by the applicants were obtainable only after prolonged and laborious studies, and that they had been recognised by the officer of health for Florence, and registered as authorising the holders to practise their profession there. It was further urged that any diminution or withdrawal of the rights now possessed by foreign physicians in Florence would diminish the number of English residents in that city. It was certain that those English visitors, and they were not few in number, who visited Florence in quest of health, would be deterred from doing so if they knew they could no longer find English physicians there. In response, the Syndic expressed his concurrence with the substance and bearings of the address, and said that the matter should have his consideration, and, if desirable, be referred to the Minister of Education. He fully appreciated the advantage of having resident British practitioners in Florence, for he said that not only was it desirable for foreign patients to be treated by their own fellow-countrymen, on account of the language, but also on account of differences in national temperament and constitution. Dr. Thomas Henderson, who is a graduate of the Florence University as well as of Edinburgh, impressed on the Syndic the fact that the British practitioners were speaking for themselves only, and were at one with the Italian authorities in their desire to put a check on unqualified practice. The Syndic expressed his full appreciation of this aspect of the question.

LEPROSY IN NORTH AMERICA.

In a clinical lecture on a case of leprosy recently delivered in the Johns Hopkins Hospital, Baltimore, Professor Osler referred to sensational reports that had appeared in the American press as to the spread of leprosy in the United States. As the result of inquiries that he had instituted he stated that, including the two infected districts in the Dominion of Canada, there are five foci in which the disease at present prevails in North America. In the northern part of New Brunswick leprosy has existed in a couple of counties since the early part of the century. The cases as recognised are segregated in the lazarette at Tracadie. Dr. Smith, the physician in charge, writes, under date of January 17th, 1898: "The number at present in the hospital is 24, 18 males and 6 females. . . . Of the above number 3 are Icelanders whom I brought from Manitoba. Leprosy in Cape Breton has almost died out. With us in New Brunswick segregation is stamping out the disease. The cases have dwindled from about 40 in the early history of the disease to about half that number. One of our inmates is a negro I brought recently from St. John, N.B. He had strayed from Bermuda. Leprosy is not on the increase in Canada." In British Columbia the disease has been introduced by the Chinese, but there are only eight cases at present in the settlement on Darcy Island, and Dr. Hannington, of Victoria, does not think that the disease is spreading. Among the Icelandic immigrants in Manitoba there are a few cases, but the strong probability is that the disease will gradually die out. In the United States there are three important centres. To "New Scandinavia," as parts of Minnesota and Wisconsin have been called, the disease was introduced by immigrant Swedes and Norwegians. Altogether more than 150 cases are known. The disease has not spread, and Dr. Bracken, the Secretary of the State Board of Health, wrote January 19th, 1898, "there are in Minnesota so far as is known only 27 cases, and some of these have probably died since the last return. All of them contracted the disease before coming to America." No instance of leprosy has been known to be contracted from any of these Norwegian settlers. In California leprosy has been introduced by the Chinese, and in a few instances by native Americans returning with the disease from the Sandwich Islands. The total number of cases, however, is not large, certainly not more than a dozen, and the likelihood of the disease progressing in the native American population is very slight. By far the most extensive focus of leprosy is in Louisiana. Dr. Isadore Dyer, who was the delegate from Louisiana to the Leprosy

Conference in Berlin, has reported fully on the history of the disease in that State, where it has been known since 1785. In a letter dated January 12th, 1898, he states that in that paper he has given full tables "of all recorded leprosy in Louisiana since 1785, the existing acknowledged cases being separately tabulated. This last table contains 118 cases, in addition to which I have seen 6 within the past four months, making a total of 124 positive living cases to-day." Dr. Dyer thinks that this does not represent by any means all the cases, but he believes it is quite justifiable to calculate the number of lepers in this State as not less than 300. A few cases are met with in Florida, South Carolina, and in others of the Southern States. Now and again cases occur in the Eastern cities, invariably imported. So far as is known, with the exception of the single case recorded by Dr. I. E. Atkinson of Baltimore, there has not been an instance in which the disease has been transmitted from one of these imported cases to a native American. Professor Osler believes that the fear of the disease spreading in the United States is altogether fanciful.

ENGLISH AS SHE IS ADVERTISED.

IT may be assumed that it is the desire of the various foreigners, German, French, and Swiss, who send pamphlets and circulars to the medical profession in this country, that the documents sent should produce some serious effect upon the minds of the recipients. But, if so, they might be well advised were they to obtain the assistance of some persons acquainted with the idioms of the English language. It is apparently a common delusion, especially prevalent perhaps in Germany, that it is only necessary to arm oneself with a dictionary in order to be able to write English. The result is not infrequently amusing. Thus, it is distinctly odd to be told of the waters of one spring that "It stirs the dermal functions," "is an excellent reconstitutive of animal economy," and has a beneficial effect on the "oculary apparel." Further, we are told, "We must also to point out their salutary action in rickects, specially for children," which seems to suggest that the writer is as far to seek in medicine as he is in English. As to the mode of action of these waters, we are assured: "It is by altering the diathesical hereditary or acquired tendencies of people, or the organopathic state which can keep alive dermal lesions, that it cures these with an unexceptional quickness." This may be very true, but it is a little difficult to know what it means. An inventor who has a curious "fresh-air respirator for the use of indoor patients," in the course of some didactic observations on the advantages of fresh air observes: "Only compare the chub-cheeked country lad (living in fresh open air, who in spite of scanty food is abounding in health) with the pale-cheeked child of towns, better fed, and secured indoors against the brazing open air, and you will immediately perceive the different effects produced by fresh air on both beings." Another advertiser, who has antiseptic capsules to sell, observes of the "creosote of commerce" that "owing to relentless competency" it may be had at a very low price; and the same person, in discussing the specific treatment of tuberculosis, observes that "in this run after a bacillicid medication countless were the failures." After this it is not surprising to be told that the preparation for sale "is a medicament which has not its analagous in trade." Another advertiser has "A new Compound, Eutrophical Martial and Nevrosthenic." Moreover it contains an ingredient which "is an invaluable agent aganist deperdition of the tissues." This preparation is so nicely put up, we are told, that the majority of patients "enjoy it as they would a 'goody.'" Another firm, also a French one, have two preparations "which have enlarged the knowledge of therapeutic those last years, found such a success amidst French Medical men that we thought well to have them brought before the valuable appraising of English Medical men. Most scientifically prepared; they are unknown in the public, according to what, we hope, Doctor, you will do us the favour to ask for samples in order to experiment their numerous qualities through your medical practice." Perhaps the gem of this small collection, which might easily be extended to almost any length, is the following, because it is so nearly right. It tells us that in a southern health resort there is a British cottage hospital "in connection with which there are two or more nurses, one of whose services may be obtained in case of illness."

THE CLERICAL AND MEDICAL BANK.

THE witness examined on March 18th by the Select Committee of the House of Commons, which is inquiring into the money lending system, was Mr. Edward Shuckburgh, who stated, according to the report in the *Times*, that he traded under the name of the Clerical and Medical Bank, Bristol and Exeter, and was the sole proprietor of the bank. Although he traded under the name of a bank, there was no banking business done; it was purely money lending. The witness was taken through the details of a large number of his transactions, which had been the subject of proceedings in the courts of law. The borrowers in several cases were, it was stated, clergymen and medical men. In reply to a member of the Committee, he stated that he expended from £6 to £10 a week in posting circulars and advertisement. He lent money to all classes, though probably the medical profession were his best customers. His ordinary form of security was a note of hand, or a bill of sale, or both. Among the cases mentioned as illustrating the rates of interest charged by the witness was one in which a man applied for a loan of £100 for twelve months, he received £80 for three months, and witness charged him £20; three sums amounting to £75 were repaid, and the man then brought an action to recover £75, alleging that the representation was that the loan was for twelve months. Finally he admitted his liability, but notwithstanding this a verdict was given against the witness, who was ordered to pay all the costs. In another case he granted a loan of £700, and took a bill of exchange for £1,000 at three months. The borrower alleged that he was led to believe that the loan was for twelve months, but according to the witness he perjured himself by so saying. At the end of three months witness claimed the whole amount or a renewal for £300, and as the borrower declined to pay a writ was issued. The official receiver subsequently objected to the proof of the witness, who appealed to the judge, and the judge allowed him at the rate of 15 per cent. in place of £300. Other cases were mentioned which need not here be gone into; but it seems desirable to call our readers' attention to the way in which some money lenders conduct their business, especially as this particular witness stated that, though he lent money to all classes, the medical profession were his best customers.

TAILORS AND INFECTIOUS DISEASE.

AT a Conference of Scottish tailors held in Glasgow recently a resolution was passed and referred to the executive, expressing the opinion of the Conference that local authorities should compensate workmen compelled to abstain from work by infectious illness in their homes. It would seem that the association at present undertakes this function. It was suggested that counsel's opinion should be taken as to whether compensation could not legally be claimed, but the President ruled that unnecessary, as there was, he said, no law compelling compensation in such circumstances as the tailors had to complain of. The law about compensation is somewhat elastic, and compels a council to give it where loss is suffered by the individual from the exercise of the powers vested in a local authority by the Public Health Acts. It might be with advantage even more elastic in those cases where an authority advise a course of action they have no power to compel. Some local Acts contain clauses allowing the authority to give compensation under certain circumstances where loss has been sustained. It is clearly for the benefit of the community that a man with a large family in

a small house and a child or two down with scarlet fever should not go straight from his infected dwelling to a crowded workshop, and it is equally, perhaps more, imperative that he should not take in work at home. But is his family to starve? Clearly if the authority offer to remove the patient, and he refuses to allow them to do so, he would have no moral claim for compensation; but, on the other hand, if they do not provide the means of isolation, what is the poor fellow to do? Probably his master wisely refuses to allow him to continue at his work, but will he pay his wages? Perhaps a *via media* by which half his wages were paid by the authority, half by the association would be fairest, where he must absolutely remain at home; or, where he can find suitable lodgings, the extra cost involved might be shared by the association and the authority. Power to compensate in proper cases ought certainly to be conferred upon district councils.

THE SUPERVISION OF WATER SUPPLIES.

Stockport is taking the lead in a movement to obtain greater powers of sanitary control and supervision of water supplies. Acting, we presume, under the advice of their medical officer of health, Dr. Charles Porter, the council of the borough recently passed a resolution recommending that legislation should be initiated empowering every sanitary authority supplied by a water company to authorise any duly-appointed official "to enter, inspect, inquire, and take samples of any part of any source or works of water supply or water purification at any time, by day or night," and requiring the water company to give reasonable facilities and information. The Stockport Council has transmitted this resolution to one hundred and fourteen corporations and district councils supplied by private water companies, and intends to give notice of a motion in the same terms for consideration at the approaching meeting of the Association of Municipal Corporations. The other corporations and district councils to which the resolution has been sent are requested to pass a similar resolution, and to support it at the meeting mentioned. As we have pointed out on many occasions, there have recently been numerous instances in which the want of the powers now sought has been keenly felt. At present the sanitary authority and its medical officer are only admitted to visit waterworks on sufferance. In face of the well-ascertained fact that disease may be disseminated by water this is an absurd position, and, in fact, the very negation of preventive medicine, for the public health authority is not permitted to go to the root of the matter and remove the causes of the disease by providing for the purity of its water, but is merely authorised to deal with results—to shut the stable door after the horse has been stolen. The present state of things affords a powerful argument for those who are contending for the municipalisation of all water supplies.

MEDICAL OFFICERS IN THE FRENCH ARMY.

The medical officers in the French Army have their grievances, which are very similar in kind and apparently not less in degree than those of our own. A medical member of the Chamber of Deputies, Dr. Chapuis, the representative of Toul, in a recent debate on the army estimates, took the opportunity of asking the Minister of War, General Billot, what he proposed to do for the medical officers to whom he, as well as his predecessors, had promised various reforms of which nothing more had been heard. Dr. Chapuis's speech was warmly applauded and seemed to command the sympathies of the Chamber; at any rate, no member spoke in an opposite sense. Among the reforms asked for by Dr. Chapuis were better pay, the creation of more places in the superior ranks of the service, more considerate treatment by the military authorities and, particularly, definite military rank. Up to the present, said the orator, the military doctors have never been looked upon as forming an integral part of the army. He added that he did not suggest that they should be regarded as combatants. Another deputy, M. de Mahy, hereupon remarked that in England they are regarded as combatants, a piece of information which will probably surprise our War Office. Dr. Chapuis proceeded to point out that the medical officers are exposed to the same dangers as combatants on the battle field, without mentioning the daily risks which they run in hospitals in times of epidemic. In support of his contention, he quoted the opinion of General Dragomiroff as to the position which medical officers should hold in the army. That distinguished Russian officer said that only those who like the soldier are obliged to expose themselves to shot and shell can claim the outward marks of respect from the soldier. The medical officer, he said, belonged to this category whereas the "military functionary" does not, a circumstance which makes an essential difference between them. Hence medical officers should in everything concerning military position and honours be assimilated to combatant officers. General Billot, in reply, professed the greatest appreciation of the army doctors and his warm sympathy for them, and he stated that a scheme had been prepared for increasing the *personnel* of the service by 115 officers. He appeared further to suggest that more would be done if the financial authorities did not block the way. He was invited by Dr. Chapuis to ask for a credit, which would certainly not be refused by the Chamber. The Minister concluded by promising to introduce a Bill in a short time which he thought would satisfy Dr. Chapuis. It remains to be seen whether these good intentions of the Minister will be carried into effect. In this country medical officers have learnt by bitter experience not to put their trust in official declarations, nor even in royal warrants, which are often evaded when they are not ignored.

THE PATHOLOGICAL MUSEUM AT THE ANNUAL MEETING.

The annual pathological museum of the annual meeting will be held in the Practical Anatomy Room of the University of Edinburgh. The Committee, of which Sir John Struthers is chairman, and Mr. Charles Cathcart Secretary, will be glad to receive specimens on loan for exhibition. While they will be pleased to receive preparations, casts, models, photographs, or drawings illustrative of pathology in general or of any of its special branches, they desire to form certain special series—in the first place, to make an educational series to illustrate methods of preparations, mounting, and arrangements, which have been found useful from a teaching point of view in any department of the medical curriculum. Secondly, they desire to form collections of specimens illustrative of certain subjects, which will probably be discussed in some of the sections. These would include: Cirrhosis of the Liver (Section of Medicine); Injuries in the Neighbourhood of the Elbow-joint (Section of Surgery); Septic Diseases of the Urinary Passages (Section of Surgery); Inflammatory Diseases of Female Pelvic Organs (Section of Diseases of Women); Cerebral Tumours (Section of Neurology); Cardiac Disease in Childhood (Section of Diseases of Children); Congenital Syphilis (Section of Diseases of Children); Hydrocephalus (Section of Diseases of Children): Methods of Serum Diagnosis (Section of Pathology). Thirdly, they seek to form a bacteriological series illustrating methods of preparations and cultures of micro-organisms as well as micro-photographs, and specimens illustrating the effects of experimental inoculation. Further, they desire to receive specimens of human anatomy, especially those organs the diseases of which form the subject of special series. Lastly, they will be glad to receive specimens illustrating the following points: Teratology; Spina Bifida; Extrauterine Fœtation; Deciduoma Malignum; Rarer Forms of Skin Disease; Effects of Modern Small-arm Projectiles; Diseases of the Alimentary Canal liable to cause Perforation; Diseases of the Stomach and Intestines amenable to Surgical Treatment; Diseases of the Pancreas; Diseases of the Eye and Orbital Cavity; Tropical Parasites and the Diseases they produce; Comparative

Pathology: Lesions in Animals in Specific Infective Diseases, (1) Communicable; (2) Non-communicable to Man. The Committee will also be glad to have skiagraphs for exhibition, and, so far as space will allow, will be prepared to display various forms of apparatus if sent by their inventors, who must be members of the British Medical Association. A brief description of specimens, drawings, etc., should be sent to the Secretary, Mr. Charles Cathcart, 8, Randolph Crescent, Edinburgh, on or before July 1st, in order that it may be entered in the catalogue. The specimens should be received in Edinburgh between July 11th and July 15th. The specimens should be addressed, carriage paid, to the Secretary of the Annual Pathological Museum, British Medical Association, University New Buildings, Edinburgh, and the label should bear also the name and address of the sender. The Committee propose to give facilities for microscopical demonstrations, but request that exhibitors should communicate with the Secretary of the Committee before July 1st as to the number of microscopes and the powers required.

SANITARY INVESTIGATION IN INDIA.

We referred recently to the appointment of Surgeon-Major A. M. Davis as Special Bacteriological Officer with the Principal Medical Officer in India. His services are being fully utilised by Surgeon-Major-General Gore, and Surgeon-Major Davis has recently, after the completion of some bacteriological investigations at Mhow, gone to Rangoon for work of a similar nature. The Government of India have now sanctioned the employment of three specially qualified sanitary officers, who will be appointed to the stations of Lucknow, Rawal Pindi, and Umballa. Their duty will be to investigate the causes of disease and to give practical advice on sanitary matters. These appointments will take effect from April 1st next, and will be for three years in the first instance. The pay will be that of a civil surgeon in charge of a second-class station, with the addition of the allowance of 100 rupees, rising by annual increments to 300 rupees and deputation allowance of 5 rupees daily when absent from headquarters. We regret to learn that not only are the appointments now made not permanent, but that one of them is to be held in abeyance during the employment of Surgeon-Major Davis on special bacteriological investigations. It had been hoped that though Surgeon-Major Davis's appointment was only for one year the proved usefulness of such an appointment would have led to its being made a permanent office, and that the three special bacteriological offices created would have been in addition to that of bacteriological and sanitary officer with the Principal Medical Officer in India.

PROPHECIES AND ORACLES.

Some time ago a section of the French public was considerably excited by certain prophecies purporting to come from the Archangel Gabriel through the lips of Mdlle. Couédon. After a time the fount of prophetic inspiration appeared to have become dried up, but it has recently begun to flow again. Among the lady's latest deliverances is the prophecy of a fever which is to devastate mankind at no distant date. In these days of influenza this is an event that might be foretold with tolerable safety. Mdlle. Couédon goes on to say that a disease of the eyes will also prevail, and she adds: "I see the hairs fall out." This also is a phenomenon which it does not need any great power of observation to see in these days. It is not suggested by this modern Sybil that there is a causal relation between the eye disease and baldness, and the "hairs" of her prophetic vision are those of the head. Had she included what Parolles calls "valour's excrement," to wit, the beard, in her Cassandra-like utterance, it might have been regarded as a curious instance of the clashing of great minds. Not long ago the announcement of the discovery made by a London optician that blindness is caused by shaving attracted a good deal of attention in the press. This learned Theban propounded a theory, charming in its simplicity if in nothing else, that "the tender facial muscles are irritated by the sharp edge of the razor and communicate their irritation to the eye nerves for sympathy." It may strike the unprejudiced reader that this is a somewhat undesirable form of sympathy, but let us hear the oracle further: "And, as well as this, the eye nerves themselves are unconsciously dragged out of their natural position every time the operation takes place by the very act of following the movement of the razor round the face." According to this authority, half the blindness in the world at the present moment is the direct effect of shaving. He clinches his argument by the statement that our rude forefathers did not shave, and in their days opticians were not. We know of no authentic statistics as to the prevalence of eye diseases among primeval men, but if such affections were rare among them it may be argued with at least as much reason that this was because they had no opticians. We are, indeed, quite prepared to believe that where the optician is accepted by a confiding public as an authority on the treatment of the eyes, the proportion of blindness in the community will largely increase.

PROPOSED MEDICAL SERVICE FOR THE CROWN COLONIES.

The Committee elected at a public meeting held at the Imperial Institute on March 2nd, 1898, to deal with the desirability of establishing a medical service in the Crown Colonies, met for the first time on Monday, March 21st. The Committee consists of Sir Joseph Fayrer, Bart. (Chairman), Sir Wm. des Voeux, Sir Guyer Hunter, Sir Dyce Duckworth, Surgeon-General Reade, C.B., Dr. O. Chadwick, C.M.G., Dr. J. Anderson, C.I.E., Dr. V. Corbould, Dr. W. Felkin, Mr. John Furley, Dr. H. P. Hawkins, Dr. A. P. Hillier, Mr. A. Keith, Dr. H. M. Murray, Dr. H. W. McLeod, Mr. T. H. Richards, Dr. W. J. Simpson, Mr. W. G. Spencer, Dr. G. Thin, Mr. J. G. Turner, and Mr. J. Cantlie (Honorary Secretary). The Committee drew up the following resolution, to be forwarded to the Secretary of State for the Colonies:

That it is desirable to organise the Colonial medical services on lines parallel to the other public medical services.

Mr. Cantlie has printed his paper, read at the meeting at the Imperial Institute,[1] as a pamphlet, with the title, *The Organisation of the Colonial Medical Service*.[2]

CHLOROFORM AND THE HEART.

We have received a communication from Surgeon-Lieutenant-Colonel Lawrie upon this subject, in which, among other things, he says: "The real question at issue is, 'Is one of the two methods now in vogue—the pulse-feeling method—the one to be employed?'" Dr. Lawrie refrains from informing us where this method is pursued; it is certainly not used in Great Britain, and we believe not in India or the Crown Colonies. Dr. Lawrie animadverts upon its danger, and we agree with him. Dr. Lawrie regards the evidence advanced by Professor MacWilliam and Mr. Leonard Hill, as "belated," but does not say why; while that of Professor Gaskell and Dr. Shore he speaks of as discredited. Dr. Lawrie asserts that "certain anæsthetists" have adopted the views of physiologists mentioned above, and have ignored persistently the "physiological truths" made good by the Hyderabad Commissioners. Dr. Lawrie reminds us that the evidence he adduced at the Montreal meeting, and which appeared *in extenso* in our columns, remains unrefuted. This evidence Dr. Lawrie regards as adequate to prove his contention that chloroform never kills by its direct action upon the heart. He considers he is justified, in view of this, in saying that "deaths which result from the fatal method of taking the pulse as a guide amount to homicide." We believe the profession is quite at one with Dr. Lawrie in this, but it may be pointed out that as no one does take the pulse as a guide, the remark savours of platitude. Dr. Lawrie further accused the British Medical Journal of

[1] British Medical Journal, March 5th, p. 655.
[2] London: John Bale, Sons, and Danielsson.

(1) "holding a brief for a few professional anæsthetists;" (2) of "cowardly timidity," because it has used the expression "profoundly powerful character" in reference to chloroform, and apparently because it has in the common interests of its readers allowed both sides in the controversy to advance their evidence in its columns; of (3) partly "suppressing" and partly "glossing over" Dr. Lawrie's views, and therefore of being responsible for "advocating a method of giving chloroform which is homicidal." Dr. Lawrie concludes with the drastic suggestion that "giving chloroform as an anæsthetic ought to be forbidden by law in Great Britain until the British Medical Journal chooses to do its duty." This duty appears to be "to make the facts established at the Montreal meeting intelligible to the entire medical world." Upon this we may say that if Dr. Lawrie has failed to make them intelligible we cannot hope to succeed. It is with regret, for Dr. Lawrie's sake, that we feel ourselves compelled to comply with his request and make his statements public, and it is for the same reason that we have couched them in language other than that employed by Dr. Lawrie.

PUBLIC VACCINATORS AND THE VACCINATION BILL.

A meeting, which was attended by a large number of public vaccinators from all parts of London and the district, was held on March 18th at St. Martin's Town Hall, to consider what action should be taken in view of the introduction by Mr. Chaplin of the Vaccination Bill into Parliament. The chair was taken by Dr. E. C. Greenwood, public vaccinator for Marylebone, who called attention to some of the difficulties which would arise under the Bill, and illustrated his remarks from experience gained during the last outbreak of small-pox in Marylebone. He emphasised the need for public vaccinators to combine to give expressions to their views in the interests of an efficient administration of the Vaccination Acts. After a discussion, in which many of those present took part, an Association of Public Vaccinators was formed, and a council was elected to deal with the various points of importance arising out of the Bill.

THE LANGUAGE OF PRESCRIPTIONS.

Why should medical prescriptions be written in Latin? This question has recently been discussed in an evening paper. To some minds it might seem that the first point to be settled is whether prescriptions *are* written in Latin. It may be admitted that they are written in no other known tongue, and the language, however it may be classed among the families of human speech, is at worst less of a linguistic outrage than law Latin. At any rate, its barbarism is less apparent because it is veiled by the decent obscurity of abbreviations and symbols intelligible only to adepts. Assuming, however, that prescriptions are in Latin, is it well that they should be so written? The oracle of the evening paper helps us but little towards a solution. His chief argument for retaining the language now in use is that it saves time. But this end could still better be attained by the use of shorthand, a reform which would doubtless be welcomed by the Society of Medical Phonographers, but would probably not be hailed with enthusiasm by the profession at large. The argument generally urged for the retention of Latin in prescriptions is that in this way they are universally intelligible. As Dr. Paris puts it, Latin "is written and understood throughout the civilised world, and that cannot be said of any other language." The author of *Pharmacologia* adds: "An invalid travelling through many parts of Europe might die before a prescription written in English could be made up." But would a prescription written in what may, by courtesy, be called Latin, be made up any more easily? An international *Pharmacopœia* is a dream which will hardly be fulfilled till the millennium, and apart from the composition of ingredients, the question of dosage, together with our insular system of weights and measures, would present not only difficulties but possibilities of danger that would make the taking of a mixture compounded in supposed accordance with the *British Pharmacopœia* by a druggist, say in Bohemia or in Greece, an adventure not to be lightly entered upon. Even at home the use of Latin may have unlooked-for and undesirable results. Has not a distinguished judge left it on record that he owed his escape from serious overdosing, if nothing worse, to his knowledge that *quartâ quâque horâ* did not mean "every quarter of an hour," as interpreted for him on the label of the medicine bottle? Directions at least should be written in English—a reform which has already pretty generally been adopted, to the great comfort of junior consultants who meet physicians of the old school. In most Continental countries the use of Latin has been abandoned, although in France there are still some old-fashioned doctors who disdain the use of a language understanded of the people, and pride themselves on writing their prescriptions in a learned tongue, of which the following may serve as a sample:—"R. Onguenti mercurius douplus. Frictionatez super fessis et venter." In Belgium an attempt was lately made to restore Latin as the language of prescriptions, but without success. The fact is we in this conservative country stick to Latin as being almost the only relic of our ancient reputation for classic learning. Now that science has replaced mystery we could well afford to discard this last vestige of pedantry.

RECRUDESCENCES OF PLAGUE.

A correspondent in India asks us for the grounds of the statement made in the British Medical Journal of February 5th that the "recrudescence which has given rise to so much anxiety in Bombay, was, to one acquainted with the nature of plague, inevitable." He admits that to anyone who knows Bombay there would be some justification for the remark, and we may add that it was written with a knowledge of the deplorable state of sanitary matters in Bombay. He admits that if no steps be taken for their suppression most epidemics exhibit seasonal variations, and show sporadic and recrudescent stages, but he argues that if prompt measures are taken and circumstances are not actively antagonistic, such epidemics will as inevitably be suppressed. All this is true enough as a general proposition, but we fail to see how any other interpretation can be put upon the facts which are known with regard to the course of plague than that the three stages "epidemic," "sporadic," and "recrudescence," are, "in a large city," to be expected. We have the same tale from the old plague of London, and from the outbreaks in Hong Kong and Canton in 1894-95-96, and all the experience in the Bombay Presidency is in the same direction. That these stages can be anticipated and dealt with we firmly believe, that they can be ameliorated there is reason to believe, but that they can be "stamped out" during an epidemic "in a large city with free ingress and egress" there is no evidence. That an infection should flourish, die down, and recrudesce is a possibility that is but too probable, unless steps are taken to thwart it. Plague can be dealt with by anticipating it, by keeping ahead of its ravages, but to follow in the wake of plague, treating this case and that case as they arise, will not prevent a recrudescence; under such a condition of things the plague bacillus will live, abate, and revive again for at least two years after the original outbreak in a large city.

PLAGUE AND THE MECCA PILGRIMAGE.

The announcement made by Reuter that suspected plague has been declared at Jeddah is extremely serious. As we pointed out some time ago when discussing dangers attending this year's pilgrimage to Mecca, Jeddah was infected last June, and it is too much in accordance with our knowledge of the usual behaviour of plague to find that a recrudescence has occurred at about this season of the year. The appearance of the epidemic in Jeddah so early as March makes the outlook very serious, for the season is favourable to the

spread of the disease, and the immense gathering of pilgrims from all parts of the Mohammedan world may only too probably supply the conditions favouring a far-reaching outbreak. The declaration that Jeddah is a suspected port will no doubt lead to its being closed against pilgrim traffic, but the fact that it has been necessary to make this announcement renders the recent veto put by the Khedive upon the proposal of his Government to forbid Egyptian subjects to join the Meccan pilgrimage this year all the more regrettable. Plague was introduced into Jeddah last year not by pilgrims, but by smugglers and merchants who deal directly with the pilgrims. This fact illustrates the great risk which must attend the pilgrimage in spite of the stringent precautions which have been taken by the Government of India. Should plague be imported into Egypt this summer by returning pilgrims it will very probably be followed by an outbreak next year in Egypt, and this would not only be a great blow to the rising prosperity of that country, but a serious menace to Europe.

DEATH OF DR. CHARLES WEST.

We regret to announce the death of Dr. Charles West, which took place on March 19th, at the age of 81. Dr. West's name is known to the whole medical world by his writings on children's diseases, a department of medicine in which he was a pioneer, and for a long time the leader, in this country. Dr. West had retired from the active practice of his profession for some time before his death. We hope to publish an account of his career in an early issue.

HONORARY PHYSICIANS TO THE QUEEN.

Surgeon-Major-General Charles Edwin McVittie, I.M.S., and Brigade-Surgeon-Lieutenant-Colonel Benjamin Franklin, C.I.E., I.M.S., have been selected for the appointment of Honorary Physicians to the Queen, in succession to the late Surgeon-General Sir W. J. Moore, and Surgeon-General W. R. Cornish. Surgeon-Major-General McVittie, who entered the service in 1866, belongs to the Madras Command. He served in the Afghan War of 1879-80, and received the medal, and served also with the Burmese expedition in 1886-88, when he was mentioned in despatches and received the medal with two clasps. He is also in receipt of the reward for distinguished services. Brigade-Surgeon-Lieutenant-Colonel Franklin entered the service in 1869, and has served in the Bengal Command. He has held the office of Honorary Surgeon to the Governor-General of India.

TYPHUS FEVER IN LONDON.

A correspondent writes to call attention to the danger which may lie in the common belief as to the improbability of the occurrence of typhus fever in London. The belief, he says, has, owing to long immunity, grown so strong that the consideration of the possibility of typhus fever in the diagnosis of a case is put aside almost as a matter of course by most practitioners. As he observes, the large moving population, which includes many destitute alien immigrants, should be sufficient to put us on our guard against entirely dismissing typhus fever from among the forms of epidemic disease possibly to be met with in London. Our correspondent's observations are pointed by the reference to certain cases of typhus fever which have been recently admitted into the hospitals of the Asylums Board. According to our correspondent, the first recognised case, which occurred in the person of a medical man, was not at first diagnosed, the impression of those who saw the case being that it was one of influenza or of measles. Various other diagnoses were hazarded, including influenza complicated by delirium tremens, and influenza complicated by meningitis, and he adds that the diagnosis of typhus fever was not confidently made for several days. The occurrence of a second case in the same neighbourhood clinched the diagnosis of the first, and other cases have followed since. At the present time there are 6 cases under treatment, 3 in the Western and 3 in the South-Eastern Fever Hospitals. All these cases originated in two tenements in Western Buildings. The diagnosis, we are informed, was made by the medical superintendent of the Western Hospital, where 2 of the cases had been sent as enteric fever. The medical officer of the district was at once informed, with the result that it was found that illness had been prevalent in the same tenement since December last. This illness was presumably typhus fever. In addition to these 6 cases, the weekly returns of the Metropolitan Asylums Board record one case from Wandsworth Road, Lambeth, notified on March 18th. As to this case we have no information.

HOSPITAL REFORM IN BRISTOL.

The half-yearly meeting of the General Board of Governors of the General Hospital, Bristol, was held on March 14th, the Mayor, Sir Robert Symes, presiding. The President, Mr. Procter Baker, in the course of his speech, made reference to the abuse of the out-patient department and the investigations which were being made. It was hoped that a report would be made soon. He also stated that the institution is better off by £106,000 than it was twenty-five years ago, instancing this to show the generosity of the public. The annual report stated that the ordinary receipts and expenditure remain the same as in the previous year, though the latter is still £1,000 in excess of the former. Attention was called to the fact that, though Clifton benefited largely during the recent epidemic of enteric fever, which taxed the resources of the hospital to the utmost, the additional subscriptions from that part of Bristol amounted to only £10. The number of out-patients had increased by 1,672, and in-patients by 110. Mention was made of an anonymous donation of £1,500 towards the enlargement of the laundry.

Dr. Church and Sir Dyce Duckworth have been appointed Consulting Physicians, and Sir Thomas Smith, Bart., Consulting Surgeon to the Royal General Dispensary, Bartholomew Close.

At a meeting of the Royal Commission on Tuberculosis on March 23rd, which was held under the presidency of Sir Herbert Maxwell, M.P., the consideration of the report was concluded.

The Secretary of State for the Home Department, Sir Matthew White Ridley, has appointed Thomas Oliver, M.D., F.R.C.P., of Newcastle-upon-Tyne, to represent the Home Office at the International Congress on Hygiene to be held at Madrid in April.

The late Mr. Augustin Prichard, formerly Surgeon and Consulting Surgeon to the Bristol Royal Infirmary, has left by his will £300 to the treasurer of the infirmary for investment, the yearly interest to go to the infirmary student who, at the end of the first year of his attending surgical practice, shall be found by the surgeons to be most proficient in anatomy.

The Secretary-Superintendent of the West London Hospital gives notice that a meeting which medical practitioners of the western district of London are invited to attend will be held in the Board Room of the hospital on Wednesday next, March 30th, at 4 P.M., for the consideration and discussion of the subject of hospital reform. The meeting has been summoned at the instance of the Board of Management and the medical and surgical staff of the hospital.

The vacancy among the surgeons of St. Bartholomew's Hospital, London, caused by the retirement of Sir Thomas Smith, Bart., under the age regulations, will, it is understood, be filled by the promotion of Mr. Walsham, the Senior Assistant Surgeon. This will create a vacancy for an Assistant Surgeon, and we understand that the candidates are Mr. D'Arcy Power and Mr. James Berry. Both of these gentlemen have for long periods occupied teaching offices at the Medical School of St. Bartholomew's Hospital.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE LOCAL GOVERNMENT (IRELAND) BILL was read a second time after one night's debate on Monday. The position of asylum medical officers was referred to during the discussion, and there seemed to be a general opinion that the vested interests of these and other county officers would be favourably considered in Committee. The Committee stage is likely to be as prolonged as the previous stages have been short. This will influence the chances of several private Bills, as the Committee stage will be continued from day to day. The Mines Eight Hours Bill will be affected, and the Midwives Bill may also be deprived of the favourable chance it has for May 11th.

In reply to a question by Mr. Patrick O'Brien, Mr. Gerald Balfour said that the Irish Local Government Board were most anxious that properly qualified midwives should be appointed to dispensaries, and in a circular addressed to dispensary committees on August 16th the Board suggested that midwives who had not already undertaken a course of instruction in some public lying-in hospital should be afforded facilities for obtaining such instruction. The salaries attaching to the office of dispensary midwife were not sufficient in many instances to attract certificated candidates, and the department could not see their way to withdraw the official query list. He might add that it was by no means certain that a sufficient number of certificated candidates would be forthcoming, even if the query were withdrawn.

THE MEDICAL SUPERINTENDENTS OF LUNATIC ASYLUMS in Ireland would, under the Irish Local Government Bill as at present drafted, be appointed in future by the committees of the county councils. It has been pointed out that the provisions of the clauses in the Bill are not sufficiently precise, inasmuch as it is merely laid down that every resident medical superintendent shall have had experience in the treatment of the insane. During the discussion on the second reading of the Bill Mr. Lecky, the member for Dublin University, called attention to this point. He observed that hitherto when a vacancy occurred in the office of medical superintendent, an assistant medical officer of a lunatic asylum was invariably selected. Under the Bill, he observed, there was absolutely no obligation to appoint them to such places, so that there was no reason why other persons who had not been connected with asylum work should not be placed over their heads. Mr. Gerald Balfour interrupted Mr. Lecky to say that the Bill provided that medical officers of lunatic asylums should not be dismissible by the committee of the council without the sanction of the Lord Lieutenant. This is a very reasonable and satisfactory provision, but it does not, of course, touch the point to which Mr. Lecky was referring—namely, the necessity, in the interests of the public and in justice to assistant medical officers, of making provision that a person appointed to the office of medical superintendent should have had special experience in lunatic asylums. It is intended that this matter shall be brought forward in Committee.

THE VACCINATION BILL has been received so favourably in many quarters that the President of the Local Government Board is sanguine as to its prospects, and after the second reading will move that it be referred to the Standing Committee on Law. This course will give the Bill the best chance of an easy passage; and as a number of members who have special interest in the subject will be added to the Grand Committee there will be ample opportunity for discussion and amendment. The medical profession seems quite awake to the importance of the measure, and some members of Parliament find their correspondence already largely increased. As the Bill does not expressly deal with the general administration of the Vaccination Acts, except as regards the age for vaccination, the character of the lymph to be used, the institution of domiciliary visits, and the abolition of repeated penalties, the necessary changes in the position and emoluments of public vaccinators and officers will rest largely with the local authorities. The second reading debate, which will be taken after Easter, should clear up many of the points now exercising the minds of medical men. There is nothing in the text of the Bill which requires the abolition of vaccination stations, for instance, and in populous places it is most likely that the present system will be continued. There is sure to be controversy as to the wisdom and efficacy of the modified compulsion retained in the proposals of the Government, and also with reference to the omission of any provisions for the relief of the conscientious objector. [The text of the Bill is printed at p. 834.]

THE LONDON UNIVERSITY BILL will meet with opposition in the House of Commons. It is stated that a Welsh member (Mr. Ellis Griffiths) will move its rejection, and that Sir Charles Dilke and others will have a good deal to say respecting the necessity of securing for the examinations that impartiality which is supposed to reside in the exclusion of all teachers from the office of examiner. The opposition to the Bill has not so far developed any great gravity, and it will no doubt pass with some amendment, unless the exigencies of time compel the Government to drop it. The London members who are expected to take an active part in the consideration of the measure will receive deputations from several learned bodies on Monday next at 5.30 P.M., so as to be fully acquainted with the views of those most affected by the proposals of the Government.

THE POOR LAW UNIONS ASSOCIATION BILL is a simple and short measure which provides for the establishment of a Poor Law Unions Association for England and Wales, and enables Boards of Guardians to contribute to the extent of £10 a year to the expenses of the Association, and also to pay the expenses of members up to the number of four to attend the meetings and to purchase the published proceedings of the Association. The Bill was opposed, but the second reading was carried on Wednesday afternoon, and after a second division it was remitted to the Standing Committee. The proposed Society is calculated to be of great value to guardians by enabling them to compare administration in different unions, and to learn from the experience of the better organised districts the best ways of meeting the many difficult problems of poor law work.

THE RIVERS POLLUTION BILL which failed to pass the second reading stage through want of time, is, we hear, by no means dead. Its chief promoter, Sir Francis Powell, is very sanguine as to its prospects, and as the Bill has the support of the Government, and the promoters are willing to accept any amendments to safeguard certain municipalities which might be affected adversely, there is a fair chance of its reaching the Committee stage before Whitsuntide. Once it gets a second reading, it should be sent up to the Standing Committee on Law, and then its enactment would be more than probable.

THE TUBERCULOSIS COMMISSION.—Mr Crombie, who is anxious to know when the report of the Commission on Tuberculosis will be laid upon the table, has been informed by Mr. A. J. Balfour that he understands there is to be a final meeting of the Commission, and that the report will be signed at no long time after that. Of course, he added, he has no control over the Commission.

THE PRISONS BOARD.—The desirability of having a medical expert on the Prisons Board formed the subject of a question by Mr. Pickersgill, who asked the Home Secretary, with reference to the statement of the Prison Commissioners dissenting from a recommendation of the Prisons Committee on the ground that the presence of a medical expert on the Board would not facilitate the work of the other Commissioners and would seriously hinder his own, whether he was aware that the Irish Prisons Board included a medical expert; and, whether the Commissioners had made inquiry as to the effect of this constitution of the Irish Prisons Board.—The Home Secretary in reply, said: Yes, I was aware of the constitution of the Irish Prisons Board. I may say that every aspect of the question was very fully considered by me before I decided against adopting the recommendation of the Committee.

NOTIFICATION OF DISEASE.—Sir J. Brunner asked the President of the Local Government Board how many local authorities had adopted the Notification of Infectious Diseases Act, and what proportion that number was of the whole number empowered to do so.—Mr. Chaplin: The number of districts in which the system of notification is in force is 1,649, with a population of nearly 28,000,000 out of 1,321 districts, with a population of 29,000,000.

ACCOUNTS OF THE GENERAL MEDICAL COUNCIL.—During the week copies have been officially presented to Parliament of the accounts for 1897 of the General Medical Council and Branch Councils, and of the Dental Registration Fund.

THE ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.

Inquiry as to the Administration of the Hospital.

We are indebted to the *Bristol Times and Mirror* for the report from which the following is drawn :

A public and privileged inquiry was opened on Saturday, March 12th, by Mr. G. R. Askwith, to arbitrate between Dr. Christie and the President, Committee, and staff of the hospital when Dr. Christie was house-surgeon.

Dr. Christie was appointed house-surgeon to the hospital in October, 1894, and remained there till November, 1895, and it was during that period that matters arose which are now the subject of the charges he brought. These charges were inquired into (1) by the Committee of the hospital, (2) by a special Committee presided over by Mr. F. J. Fry, and two special cases were investigated and the notes submitted to Dr. Dickinson, the finding on each occasion being in favour of the staff. Dr. Christie, however, published certain pamphlets in support of these charges and challenged the decisions arrived at, so that, at the request of certain subscribers and representatives of societies, Lord Herschell was petitioned to appoint arbitrators.

The inquiry was agreed upon by both parties. The five gentlemen selected were Mr. G. R. Askwith, the Hon. Arthur Elliott, Mr. Victor Williamson, C.M.G., Dr. Church, of St. Bartholomew's Hospital, and Mr. Timothy Holmes, F.R.C.S., of St. George's Hospital.

Mr. Askwith, in opening the proceedings, stated that he and his colleagues had examined Dr. Christie's pamphlets, and it seemed to them that the charges might be stated as follows :

1. That the medical and surgical treatment of children by the staff was conducted with cruelty, neglect, ignorance, and incompetence, as evidenced by certain flagrant cases, some of which in consequence resulted in death.

2. That the nursing of the children in the hospital was characterised by cruelty, neglect, and incompetence.

3. That the management of the hospital was badly and improperly conducted, and that the regulations were defective.

4. That the President and Committee of the hospital acted dishonestly by systematically hoodwinking the public, and burking inquiry as to the state of affairs, and knowing they were making false representations.

5. That notes have been falsified and tampered with by the Committee or persons employed by them.

It was agreed by both sides that the issue of the inquiry should be upon these charges.

Evidence was then given by Dr. Christie in support of his charges as stated above, and rebutting evidence was given by members of the staff of the hospital, including Messrs. John Ewens, Colston Wintle, John Dacre, and T. Chalmers Norton, Dr. Bertram Rogers, Dr. Leonard Lees, and Mr. Mark Whitwell, President of the hospital, and several members of the hospital committee. Dr. Christie, during the course of the inquiry, made an appeal for an adjournment of fourteen days, and the Commissioners refused to comply with his request. Dr. Christie then withdrew from the inquiry.

The President, at the conclusion of the evidence gave a summary of the proceedings. He said that the arbitrators were appointed by Lord Herschell to inquire into certain charges made by Dr. Christie which had been formulated under five heads. He pointed out that a submission was irrevocable except by leave of the High Court or a judge, and that the finding was of the same effect as an order of the Court, and further that the award of the arbitrators was final and binding on both parties. Dr. Christie had been given great latitude in conducting his case, being permitted to bring forward almost any statement he desired. Dr. Christie had in the course of the inquiry given definite examples of alleged falsification of the documents. The President then traced Dr. Christie's connection with the hospital, and referred to his demand to be reinstated or be put in a permanent position on the staff. The President also alluded to the publication of pamphlets by Dr. Christie and to speeches made at public meetings which were also published. In these he made various charges against the staff which were very grave, and which he thought that anyone reading could fairly come to the conclusion that the charges were as grave as any charges could well be against the staff of a hospital. The President, in speaking of Dr. Christie, said he would like if possible to separate the man from his conduct. Dr. Christie had to a certain extent excited his sympathy in standing up and fighting for what he considered his battle, that battle being largely due to Dr. Christie's feeling of dislike, anger, and hatred of two members of the staff, and not as he (the President) thought to any real belief that the patients were neglected or ill-treated. Dr. Christie had not learned to control himself, and his conduct towards the end of the inquiry was such as he (the President) as a man could not approve. He (the President) did not think that Dr. Christie quite realised the gravity of the charges he had made. There would be no doubt, the President said, what report they ought to give after the evidence they had heard. For his part he did not live in Bristol and did not know Dr. Christie, and did not wish to injure him. He hoped he might have a career of usefulness, but he had to express his opinion as a judge, and in his opinion there was no compromise whatever. He considered that the charges were untrue and not justified.

Mr. Holmes dealt individually with the surgical cases, exonerating the surgeons from blame. He recommended that in future house-surgeons should be confined to their proper duties, otherwise it would be impossible for the staff to carry out their work.

Dr. Church suggested various improvements in the management of the hospital.

Mr. Williamson considered that Dr. Christie had been most fully heard, if not at previous inquiries, certainly now; and, after referring to the effects of the friction that existed between the medical staff and the house-surgeons, he expressed the opinion that the Committee should have got rid of the house-surgeon on finding out the friction.

The Hon. A. Elliott expressed his opinion that the hospital authorities had courted investigation, and that the charges of Dr. Christie had been uncorroborated by any evidence.

The President then delivered the formal award, which was to the effect that the first charge was untrue and not justified as fair and proper criticism upon any acts done or performed by any of the persons charged. As to the second charge part was declared to have been withdrawn, and admitted to be a mistake; the other part was untrue and not justified. With regard to the third, that there was no evidence of bad or improper management, except in so far that the hospital authorities did not dismiss or effect the resignation of Dr. Christie at an earlier date; that the fourth charge was untrue and not justified; and that the fifth charge also was untrue and not justified, and the Commissioners specially declared and awarded that the charges made in the course of the inquiry against Dr. Bertram Rogers, Mr. Lawford Jones, and Mr. John S. Griffiths, amounting to charges of forgery, and uttering forged documents, and conspiracy to forge and utter documents, were absolutely and entirely without foundation. The delivery of the formal award was received with applause.

THE PLAGUE IN INDIA.

The Highest Mortality Recorded in Bombay.—Search Parties in Poona.—Hyderabad.

During the past week we have to record the highest mortality yet made known. On March 17th, 265 deaths occurred in the city of Bombay from plague alone. This mortality surpasses anything that has been published, and it would seem that there is but slight evidence of any real abatement. Five Europeans died during the week, and previous experience has shown that Europeans are most liable to suffer during a recrudescence. Meanwhile, the vigilance of the medical authorities all over the infected districts is keenly on the alert, and everything that can be done in the way of dealing with the sick and healthy is being energetically carried out. Not one system of prevention only is being followed, but every expedient measure is employed.

In the Punjab, as an experimental measure, the plan of

turning out the inhabitants of the infected portion only of plague-infected villages is being tried. All other houses in the village are disinfected at the same time. The inhabitants of the villages in which this plan is followed are said to welcome the measures.

The most alarming point to be considered is that the recrudescence of plague has as yet attacked not more than half of the municipal districts into which Bombay is divided, and if plague is to return in all these divisions, as many think it will, it will be some time before the epidemic will end. It is to be hoped that this can be prevented, and we are glad to realise that everything is being done towards that end. Segregation camps are well filled, and there seems not to be the same objection to them as to the removal of the sick from their homes. It is easy to give way too much to so-called sentiment, but to those who are ignorant of what caste means it is difficult to convey what the authorities have to contend with.

It is most desirable to have a lady attached to each search party, more especially when visiting the zenanas. Soldiers have, of course, to obey instructions, but it is hardly fair to them or to the visited that entrance into all dwellings, be what they may, should be insisted upon. As an example, it is the custom for women lately bereaved to seclude themselves for four and a half months. During that period they are condemned to absolute retirement, and are not supposed to look upon the face of a boy, much less that of a man. Purdan ladies, again, are not accustomed to the freedom of intercourse we observe; and they are bound by their religion and strong public feeling to observe these regulations. The publicity entailed by a search party is, therefore, greatly minimised by having ladies to take part in the work; and if it is impossible to get sufficient lady doctors to assist, there are surely other ladies who will readily volunteer to lend their aid in the matter.

From Poona comes the welcome news that on March 1st there were no cases of plague. We would urge upon the authorities that now is the time for carrying out permanent sanitary reforms. Plague can apparently be defied by sanitation, but it is useless to attempt radical reforms when an epidemic has got hold of a large city.

The territories of the Nizam of Hyderabad are not as yet seriously affected. Plague is to be met with scattered throughout a wide belt of country, but at no one place is it known that the mortality is high. Surgeon-Lieutenant-Colonel Lawrie has full charge of the plague operations, and is doing excellent work in the district.

Passive Movement in Nervous Diseases.—In a recent article on the therapeutical value of movement in diseases of the nervous system (*Deut. med. Woch.*) Professor Goldscheider, of Berlin, states that he has usually found that after employing passive movement for a short time every day, the patient is encouraged to move his limbs of his own accord, which he could not have done before passive movement was commenced. The movements become much freer and less painful if the patient is placed in a hot bath. There should be sufficient water in the bath to allow considerable movement. The hot bath treatment is said to be very grateful to sufferers from peripheral neuritis. The tremors of insular sclerosis and athetosis can be improved by a daily exercise in drawing; the cases of ataxy are benefited in a similar manner. The movement is particularly valuable in early cases where the centripetal path is still capable of conveying impulses to the cord.

Immunisation by Antitoxic Serum.—An article on the results of Behring's serum and the immunisation of children at the Charité Hospital, Berlin (*Deut. med. Woch.*), gives the results of an inquiry which has been carried out for the last two years by Dr. Slawyln. All the children attending the hospital have been injected with 200 units every three weeks. Before these experiments were undertaken there were constant outbreaks of diphtheria in the wards, but during the last two years only 4 cases occurred. These 4 children were admitted with diphtheria, and had not previously been injected with serum. The sanitary conditions of the hospital remain the same as formerly. No ill effects have been noticed except in 2 cases in which urticaria occurred.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

March 2nd, 1898.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Lancashire and Cheshire Branch.—A meeting of this Branch will be held in Liverpool on April 6th. Members wishing to read papers or make any other communication should write at once to the Secretary. Applications for membership should be addressed to Dr. Barr, Honorary Secretary, 72, Rodney Street, Liverpool.

South-Eastern Branch: West Surrey District.—The next meeting of the above District will be held at the Angel Hotel, Godalming, on Thursday, March 31st, at 4.15 P.M. Mr. R. W. Winstanley will preside; dinner at the Angel Hotel at 6.15 P.M.; charge 6s., exclusive of wine.—Agenda: Minutes of the Guildford meeting. To decide when the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for representatives on the Council of the Association. The following paper will be read:—Mr. R. J. Godlee: Some Points on the Surgery and Anatomy of the Rectum. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate with the Honorary Secretary at once. All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.—Alex. Hope Walker, Honorary Secretary, Cranleigh.

South-Eastern Branch: East and West Sussex Districts.—A conjoint meeting will be held at the Grand Hotel, Brighton, on Thursday, March 31st, at 3.30 P.M. Dinner at 5.30. Charge 6s., without wine.—The following communications are promised:—Dr. Mackey: A Few Points as to the Rash of Measles; A Case of Hydroa Vacciniforme. Dr. W. W. Griffin: Intraocular Tumour, Microscopic Specimens. Mr. Footner: A Summary of Thirty Cases of Radical Cure of Hernia, with Results and Mode of Operation. Dr. Langdon: A Case of Hæmorrhagic Pancreatitis.—J. W. Batterham, Honorary Secretary, Bank House, Grand Parade, St. Leonards.

North Wales Branch.—The spring intermediate meeting will be held at the Sportsman Hotel, Carnarvon, on Wednesday, March 30th, 1898, at 2 P.M. Luncheon on the table at 1.15 P.M., price 3s. After formal business the following papers, etc., will be read:—Roger Edwards, M.D. (Colwyn Bay): On Feeding in Acute and Chronic Diseases. W. Thelwall Thomas, F.R.C.S.: Enlargement and Tumours of the Thyroid Gland, with Notes and Photographs of Twelve Successful Cases. Robert Jones, F.R.C.S. Edin. (Liverpool): A Form of Weak Knee due to Lengthened Quadriceps. W. Permewan, M.D.: Tumour of Œsophagus removed by Subhyoid Pharyngotomy. J. Hill Abram, M.D.: A Case of Pulmonary Phthisis treated with the New Tuberculin. E. T. Davies, M.D.: Notes of Cases of Abdominal Surgery, with Specimens. Frank H. Barendt, F.R.C.S.: Treatment of Acne. Philip J. White, Professor of Zoology, University College of North Wales, will exhibit: Fœtal Rabbit from Abdominal Cavity. R. H. Mills-Roberts, F.R.C.S.Edin., will demonstrate: The Roentgen X Rays Apparatus.—W. Jones-Morris, Honorary Secretary, Is-y-coed, Portmadoc.

Border Counties Branch.—The next meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, April 22nd. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. Dundas Helm, Carlisle, and W. Hall Calvert, Melrose.

SHROPSHIRE AND MID-WALES BRANCH.

A special general meeting of this Branch was held at the Salop Infirmary on March 11th.

Confirmation of Minutes.—The minutes of the preceding meeting were read and confirmed.

Report of Constitution Committee.—The report of the Constitution Committee, of which each member had previously

received a copy, was read by the Honorary Secretary. The various paragraphs of the report were then discussed *seriatim*.

Mr. HARRIES proposed, and Dr. SANKEY seconded, the following resolution:

That in the opinion of this Branch unattached members should not have the right to vote at the election of representatives upon the Council of the Association.

Carried unanimously.

It was proposed by Dr. CURETON, and seconded by Mr. MACLEOD:

That the representatives upon the Council of the Association should be elected not by the Branch Councils but by the general body of members.

Carried unanimously.

It was proposed by Dr. GARDNER, and seconded by Mr. HARRIES:

That any person belonging to more than one Branch should have the right to exercise electoral privileges in each of the Branches to which he belongs.

Carried unanimously.

Dr. CURETON proposed, and Dr. CUNNINGHAM seconded:

That the report of the Council be presented in the first instance to the Branches not later than the end of the second week in May, and that the annual meetings of the Branches for the consideration of the report of the Council and the election of representatives thereto be held in June or in the latter half of May.

Carried unanimously.

It was proposed by Dr. CHARNLEY, and seconded by Dr. SALT:

That in future all persons proposed for membership of the Association be elected by the Council of any Branch within the area of which he, the candidate, resides, and by a majority of the Council then present, but that such election shall not carry with it the right to vote at the election of representatives upon the Council of the Association, and upon other business of the parent Association submitted to the Branch.

Carried unanimously.

Dr. CURETON proposed, and Mr. MACLEOD seconded:

That it is desirable that every Branch should have the power of expelling members from the Branch in the terms of the Committee's recommendation.

Carried unanimously.

It was proposed by Dr. CURETON, and seconded by Dr. SANKEY:

That the Executive Committee recommended by the Constitution Committee should not be appointed.

This resolution was lost.

It was proposed by Mr. HARRIES and seconded by Dr. GARDNER:

That the said recommendation of the Constitution Committee should be agreed to.

This resolution was carried.

The recommendation as to the payment of the Executive Committee was unanimously agreed to.

YORKSHIRE BRANCH.

A SPECIAL meeting of the Branch was held at the Infirmary, Leeds, on March 16th, Dr. MYRTLE, President, in the chair. Thirty-eight members were present.

The Association and Medical Reform.—The following resolution was proposed by Dr. HIME and seconded by Dr. BLACK:

That in order to enable the British Medical Association to take an effective part in the promotion of reform, the representatives of this Branch on the Council of the Association be instructed to move in the Council the legislation of the special resolution passed at Birmingham, and confirmed at Carlisle in 1896, amending the Memorandum of Association enabling the funds of the Association to be applied in the maintenance of the honour and the interests of the medical profession, and vote a sum of £10,000 for the promotion of medical reform.

—Dr. HIME stated that the Association, according to its Memorandum, was provided partly for the "maintenance of the honour and the interests of the medical profession." He drew attention to the many reforms which were necessary. The great abuse of hospitals was depriving the profession of a large income, quackery was rampant, and the General Medical Council did nothing.—Dr. BLACK also drew attention to the prevalence of quackery.—Mr. COLIN CAMPBELL and Dr. ANDERSON (Trinidad) supported the resolution.—Mr. JESSOP thought it would be quite unreasonable to expect that the Association should be controlled and managed by annual or special meetings. At the special meeting at Birmingham referred to there were forty five members present. Surely these members did not imagine that the rest of the Association would wish or permit themselves to be governed by such a meeting.—Dr. DOLAN drew attention to the statements made by the Corporate and Medical Reform Committee. These were not accurate and were misleading. The JOURNAL was edited for the benefit of the whole of the members of the Association, and it was not reasonable to expect that a small self-elected body of men should be permitted to fill the JOURNAL week by week with their grievances and suggestions.—Dr. MARTIN also spoke against the resolution. He thought it absurd that a small annual meeting should wish to control the working of the Association. If this was the law according to the Articles of Association, then these Articles should be altered.—Dr. HIME replied.—The resolution was then put to the meeting, and 15 members voted for it and 5 against. There were thirty-two members present at the time. At the beginning of the meeting it was decided that no newspaper reporters should be present, and they were asked to retire.

OTTAWA BRANCH.

THE postponed annual meeting of this Branch was held on March 4th, Dr. C. R. CHURCH, President, in the chair.

Annual Reports.—The officers presented their annual reports.

Election of Officers.—The meeting then proceeded to the election of officers for the ensuing year, which resulted as follows:—*President:* Dr. C. R. Church (re-elected). *Vice-President:* Dr. W. R. Bell. *Secretary:* Dr. C. P. Dewar (re-elected). *Treasurer:* Dr. J. W. Shillington. *Council:* Sir James Grant, Drs. H. P. Wright, W. Troy, J. L. Chabot, A. J. Horsey.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee of the British Medical Association was held at the office of the Association, 429, Strand, W.C., on Friday, March 18th, 1898.

Present:

Dr. ROBERT FARQUHARSON, M.P., in the Chair.

Mr. S. H. AGAR (Henley-in-Arden).
Dr. A. G. BATEMAN (London).
Mr. G. BROWN (London).
Sir CHAS. CAMERON, M.P. (London).
Mr. J. CANTLIE (London).
Dr. W. A. CARLINE (Lincoln).
Dr. W. F. CLEVELAND (London).
Dr. W. DOUGLAS (London).
Brig.-Surg.-Lieut.-Col. E. F. DRAKE-BROCKMAN (London).
Mr. GEORGE EASTES (London).
Sir WALTER FOSTER, M.P. (London).
Mr. A. GODSON (Cheadle).
Dr. A. J. HARRISON (Clifton).
Dr. C. HOLMAN (London).
Mr. VICTOR HORSLEY (London).
Dr. W. J. MICKLE (London).
Surg.-Maj.-Gen. T. F. O'DWYER (Aldershot).
Mr A. BROWN RITCHIE (Hulme).
Dr. J. ROLSTON (Stoke, Devonport).
Dr. G. E. SHUTTLEWORTH (Richmond).
Mr. C. R. STRATON (Wilton).
Dr. DAWSON WILLIAMS (London).
Dr. W. L. WINTERBOTHAM (Bridgwater).
Dr. S. WOODCOCK (Old Trafford).

Letters of apology for non-attendance were read from the President of Council, Dr. R. W. Batten, Dr. T. Bridgwater, Dr. Dolan, Dr. R. Esler, Dr. Bruce Goff, Dr. W. Gordon, Mr. J. H. Hemming, Mr. Evan Jones, Dr. Marriott, Dr. McVail, Dr. J. W. Miller, Dr. James Murphy, Dr. James Ritchie, Dr. R. Somerville, Mr. W. D. Spanton, and Dr. J. C. Thresh.

The minutes of the last meeting were taken as read, and confirmed.

THE MIDWIFERY NURSES BILL.

The CHAIRMAN said the business the Committee were summoned specially to consider was the Obstetric Nurses Bill, a Bill of the Association which it was proposed to introduce into Parliament. He called upon Mr. Victor Horsley, who had taken such a deep interest in the matter, to explain why that special meeting had been summoned.

Mr. Victor Horsley said that on his motion Dr. Woodcock had been elected Chairman of the Subcommittee, but he would briefly explain how the present meeting of the Committee came to be summoned. When the Midwives Registration Bill was recently introduced into the House of Commons he communicated with Dr. Saundby, President of Council, who in reply stated that he had directed the Subcommittee to be called together to consider the position. At the meeting of the Subcommittee it was, after considerable discussion, resolved that a special meeting of the Parliamentary Bills Committee should be summoned to consider the Obstetric Nurses Bill of the Association, and to empower the Subcommittee to take action upon it. The Subcommittee were of opinion that Mr. J. B. Balfour's Bill was full of errors and dangerous both to the public and to the profession, and came to the conclusion that the best way to give categorical expression to the objections to Mr. Balfour's Bill was to lay before members of Parliament the Bill of the Association. The Subcommittee therefore now sought from the Parliamentary Bills Committee power to arrange for the introduction of the Bill into the House of Commons. Members of Parliament would thus have the Bill of the Association to compare with Mr. J. B. Balfour's Bill. Certain alterations were desirable in the Bill of the Association, and if power was given to the Subcommittee to arrange for its introduction into the House he hoped that the Committee would give the Subcommittee instructions as to the alterations desirable. Mr. Horsley then drew attention to a Memorandum which had been prepared by the Subcommittee, pointing out the objections to Mr. J. B. Balfour's Bill for the Registration of Midwives. The Subcommittee proposed that if the Memorandum were accepted by the Committee it should be sent to every member of Parliament.

Mr. George Brown suggested that the recommendation as to the draft Memorandum should be taken first, as upon that point there would be no difference of opinion.

It was accordingly proposed by Mr. Victor Horsley, seconded by Mr. George Brown, and resolved that the Memorandum be sent to all members of Parliament. The Memorandum was as follows:

Statement by the British Medical Association in opposition to the Bill for the Registration of Midwives introduced into the House of Commons by the Right Hon. J. B. Balfour, M.P., etc.

The records of coroners' inquests and other properly constituted inquiries show that lying in women of the poorer classes are exposed to injury and death in consequence of the midwives in this country being, in the large majority of cases, without training of any kind and under no medical control or supervision. What is required in the interests of the public is that women undertaking to act as midwives for gain should be obliged to give evidence of competency for the conduct of a natural labour, that they should be prevented from assuming responsibility which they are not qualified to undertake, and that any violation of regulations laid down by a controlling statutory authority should be penalised.

Mr. Balfour's Bill affords no protection to either parturient women or the newly-born infant from the dangerous practices of mercenary untrained women, because it only proposes to protect the title "midwife," and does not in any way punish any uneducated woman who practises as a midwife. In fact, the Bill is so arranged as only to provide a class of persons who alone should call themselves midwives, and whose range of responsibility in their work is practically unlimited in the (proposed) statute's definition of their status. In this respect the Bill seeks to establish a class of persons to practise midwifery independently of the Medical Act of 1886, which requires from such practitioners a competent knowledge of medicine and surgery. The Bill is consequently a direct contravention of that statute.

Consideration of the foregoing circumstances shows, therefore, that Mr. Balfour's Bill fails to meet the obvious need it purports to deal with, and that it is in direct conflict with existing legislation.

The British Medical Association has for many years given a very careful consideration to this subject. Committees of its body have inquired into the whole question of attendance at labour, as carried on at present by persons without medical training, and not on the *Medical Register*, and also have examined into, what is in the opinion of the Association of equal, or greater, importance, namely, midwifery nursing, this including the care of the newly-born infant as well as of the mother. The present death-rate among lying-in poor women which in the view of the Association is to a large extent preventable, depends upon the conditions which arise after the actual labour, and consequently on the care with which the patient is nursed. Mr. Balfour's Bill does not attempt in any way to deal with this all-important branch of the subject, and it only tends to recognise the existence of certain midwives who assume a false status (namely, that of a qualified practitioner of midwifery), who simply attend the patient at the time of the birth, and neglect both her and the infant exposed as they are to the many risks and dangers of the lying-in period.

With respect to this most serious question it should be pointed out that the promoters of the Bill suggest that since the poor are often unable to pay for both the attendance of a registered medical practitioner and for the services of a nurse, the proposed registered midwives would perform the functions of both in cases of natural labour. Unfortunately, inquiry shows that not even the lowest classes of existing midwives fulfil their duty in this respect, and that the sanguine hopes just stated will not be realised.

The next danger to the public to which the Association desires to draw attention is that Mr. Balfour's Bill not only makes no provision for the protection of the lives of the parturient poor and their offspring by preventing untrained persons practising for gain, but also it secures no legal remedy for any injured person, or for those who have lost the services of such a person in case of malpraxis on the part of the midwife. On the question of malpraxis also the Association wishes to draw the attention of the Legislature to the fact that whereas it is illegal for a registered medical practitioner to employ an unqualified assistant, there is nothing in the proposed Bill to prevent a registered midwife from employing untrained and unregistered women as assistants, such employment being known to be a common practice with many midwives in manufacturing towns. Thus the whole object of the Bill to provide the poor with properly educated midwifery nurses would be easily evaded by unscrupulous persons.

The British Medical Association feels that the following particulars must be inserted in any legislation on this subject to remove the evils and dangers to the public which at present exist, and to avoid opposition to existing legislation:

No. 1. The term midwife or midwifery nurse shall be restricted to a person who undertakes the responsibility of attending women in cases of natural labour, and who is responsible for the after-nursing of the mother and the infant during the lying-in period.

No. 2. No one shall fulfil such duties either habitually or for gain unless such person be registered.

No. 3. Such registration shall not be implied as conferring any qualification to practise medicine, surgery, or midwifery as defined in the Medical Act of 1886, nor the privilege of signing any medical certificate or certificate of stillbirth.

No. 4. The registered midwife shall be placed under a regular system of medical supervision.

No. 5. Dangerous and undue assumption of responsibility by the registered midwives shall be prevented, and legal protection provided to the public against malpraxis.

No. 6. The Midwives' Board, which must be constituted to maintain the register, shall consist solely of registered medical practitioners.

No. 7. The regulations of such Midwifery Board shall be approved by the General Medical Council.

No. 8. There shall be statutory control of "Lying-in Homes."

In conclusion, the promoters of the Bill claim for it that it will enable the poor who employ midwives to discriminate between those who are competent and those who are not, and it is suggested that in consequence of this differentiation competent persons would alone be employed by the poor. Such suggestion, of course, can only have reference to towns, because the number of births among the poor in scattered country districts would not produce sufficient work to support

a midwife, and in town districts midwives do not attend the poor, but work among the better-off working and lower middle classes, from whom at the present many midwives ask fees as high or even higher than the medical practitioners working in such districts. It seems to be forgotten that the really poor receive either the attendance of a medical practitioner under the Poor Law, or the necessarily inefficient attentions of a friendly neighbour.

The British Medical Association has prepared a Bill on this subject, which has been submitted to the Branches and Council of the Association, a copy of which is forwarded herewith.

Mr. Victor Horsley then formally proposed:

That the Subcommittee be and are hereby instructed to correct the Obstetric Nurses Bill prepared by the Subcommittee in accordance with the alterations approved by the Committee at this meeting, and to take all steps necessary to introduce it into the House of Commons.

This resolution was seconded by Dr. Woodcock.

Mr. George Brown said that while he agreed that the proposal was a practical way of showing opposition to Mr. Balfour's Bill, yet he thought the Committee would be going beyond its constitutional powers if it adopted the resolution. Resolutions had been adopted at general meetings of the Association which were opposed to the introduction of the Bill for the Registration of Midwives, since such a course would give those who were promoting the measure an opportunity of saying that the British Medical Association had committed itself to the principle of the Bill. After referring to several resolutions on the subject, Mr. Brown said that at the annual general meeting in London last year (1897), it was simply resolved: "That the Council do receive the draft Obstetric Nurses Bill and take it into consideration and report thereon to the Association." The Bill was no doubt an excellent Bill, would mitigate many evils, and would protect the public, as well as the medical profession, but the Subcommittee of the Parliamentary Bills Committee, to which the Bill had been referred since the meeting in London had not recommended, as he thought it ought to have done, that the Bill of the Association should be submitted to a general meeting. The proposal now made meant that it should be introduced into Parliament as coming from the Parliamentary Bills Committee, or the Council of the Association, and not from a general meeting of the Association. He must, therefore, protest against the Committee going contrary to the spirit of the resolution of the general meeting in London, which he understood to limit the action of the Council to drafting a Bill which should then be submitted to a general meeting. He concluded by proposing the following amendment:—

That this Committee ask the Council to convene a special general meeting of the members of the Association to consider the draft Obstetric Nurses Bill, and decide as to whether immediate steps shall be taken to introduce the Bill into the House of Commons or not.

The amendment at first found no seconder, whereupon Dr. Brown Ritchie said that simply as a matter of formality he would second the resolution.

Dr. Woodcock said that he must expose the fallacy of Mr. Brown's arguments. The fact was that Mr. Brown was the person responsible for preventing the Association from dealing with the Bill in the manner desired. Dealing with the subject of resolutions passed at general meetings, Dr. Woodcock said that at the annual meeting at Bristol (1894) a resolution was passed against all registration, as nobody was willing to touch the subject at that time. Later on it was discovered that something must be done, and at the annual meeting in London a resolution was passed which recommended the registration of all nurses on an equal footing. Mr. Brown contended that that resolution had never been rescinded, but he would remind Mr. Brown of the amendment moved by Dr. Bedford Fenwick on the report of the Parliamentary Bills Committee at the annual meeting at Carlisle (1896). This amendment was "that this meeting disapproves of the draft Bill for Midwifery Nurses or any legislation for any one special class of nurses, especially if such legislation would make that class practically independent of medical control." The amendment was lost by a large majority, and that practically amounted to rescinding the resolution passed in London in the previous year. As to subsequent action, Dr. Woodcock said that the action of Mr. Brown had practically prevented the Parliamentary Bills Committee carrying up their Bill to the Council, and having it submitted to the annual meeting in the report of the Council. Dr. Woodcock said that he could not understand why it should be proposed that the matter should again be deferred. At the last meeting of the Council it was resolved "that the draft Obstetric Nurses Bill be received and printed, and copies sent to each member of this Council and to each Branch secretary, and that the Bill be placed upon the agenda of the next meeting of Council for consideration." It was foreseen that some difficulty might arise, and that it might be necessary to take some action before the next meeting of the Council, and the following resolution was therefore adopted: "That the Parliamentary Bills Committee be empowered to take such action as may be required, pending the next meeting of the Council, in view of possible attempts at legislation on this subject."

Dr. Rolston (Devonport) said that the matter had been carefully considered by a special Subcommittee of his Branch, and it was suggested that the better course would be, not to attempt to block Mr. Balfour's Bill, but to propose that the whole question should be referred to a special Parliamentary Committee for inquiry.

Dr. Shuttleworth observed that after the adoption of the resolution of 1896 recommending the registration of all nurses on the same footing, a conference was held with nursing bodies, but so much difference of opinion was disclosed that it was found impracticable to proceed.

Mr. Brown's amendment was put to the meeting and declared to be lost, only one member (Mr. Brown) voting for it.

Mr. Horsley's resolution was then put and carried.

Dr. Brown Ritchie then proposed that a clause to the following effect should be incorporated in the Midwifery Nurses Bill before it was sent to members of Parliament:

That every woman who has been attended during confinement by a midwife shall be visited by a registered medical practitioner within twenty-four hours of the completion of labour.

It was, he said, the outcome of experience gained by one of the deputations from the Lancashire and Cheshire Branch. During a discussion of the subject with members of Parliament Sir Blundell Maple had made the suggestion embodied in this resolution.

The resolution was seconded by Mr George Brown, but after some discussion was put to the meeting and declared to be lost.

On the motion of Mr. Victor Horsley certain clauses of the Bill were amended as follows (the alterations are shown in italics):

6. Constitution and Duties of the Board.—(1) Within six months after the passing of this Act the General Medical Council shall appoint a Board, consisting of *12* registered medical practitioners as members of and to constitute a Board, which shall meet on an appointed day to draft rules, arrange meetings, appoint a chairman, registrar, treasurer, and other officials, and an executive and other committees. The members of the Board shall be elected for a period of three years, and on the death, resignation, or withdrawal of a member the General Medical Council shall elect a successor from the district vacated.

(2) The Board shall be selected as follows, from registered medical practitioners resident in practising in or prepared to do duty in the following districts as defined by the Registrar-General:

London and South Eastern	*4* reps.
South-Western, West Midland, and Welsh ...	*3* ,,
Eastern, North Midland, and South Midland	*2* ,,
York and Northern...	*2* ,,
North Western	*1* ,,

4. Privileges of Registration.—(1) A woman registered under this Act shall be entitled to act as obstetric nurse in England and Wales. From and after the first day of January, one thousand eight hundred and ninety —, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as an obstetric nurse unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as an obstetric nurse in cases of natural labour only in accordance with the terms of this Act, and under the

rules, regulations, and medical control or supervision set forth in this Act, and any amendments of, or additions to, such regulations which may be laid down by the Board in pursuance of the terms of this Act. (2) A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same in respect of such certificate or to assume any name, title, or designation implying that she is by law recognised as qualified to practise medicine or surgery or midwifery, or to act otherwise than as an obstetric nurse as aforesaid, or that she is qualified to grant a certificate of death or of stillbirth or any medical certificate. *Any woman contravening this section shall upon summary conviction pay a sum not exceeding five pounds.* (3) Provided always that no midwifery nurse shall be entitled to recover any fee or charge for attendance as such unless she has either personally or by a substitute (who must be a person registered under this Act) performed the duties specified by the Board.

CONTROL OF LYING-IN HOMES.

Every registered midwifery nurse who shall receive for the purpose of attendance during confinement in her premises, or such premises as she may reside in, rent, or be tenant of, any pregnant or lying-in woman, shall keep a special record of such cases as may be laid down by the Midwifery Nurses Board from time to time, and the Board may have such cases visited, and the sanitary arrangements inspected, by registered medical practitioners and may require a registering fee and report of such cases to the official named.

It was further resolved to change the title of the Bill to The *Midwifery* Nurses Bill.

Some discussion took place as to the substitution of the term "normal labour" for the term "natural labour" used in the Bill. Mr. Horsley pointed out in the schedule to the Bill "natural labour" was defined as equivalent to "normal case of labour."

The Chairman said that he considered the proposal to introduce the Bill of the Association, and to ask Sir Blundell Maple to do this, was a good piece of Parliamentary tactics. He made no doubt that Mr. Horsley would be prepared to carry on the action, in which he had taken so energetic and so disinterested a part up to that point.

Corporate and Medical Reform.

Dr. Woodcock said that he pointed out at the last meeting of the Parliamentary Bills Committee that the whole of the subjects dealt with included in the memorial of the Corporate and Medical Reform Committee were subjects which had been considered, and were being considered, by the Sub committee of the Parliamentary Bills Committee at the present time. He proposed the following resolution, which was seconded by Dr. Godson, and carried:

That the Parliamentary Bills Committee report to the Council that the reforms referred to as desired by the Memorialists were initiated two years ago by the Parliamentary Bills Committee, and the proceedings then ordered to be taken are being actively prosecuted.

Poor-law Medical Officers in Scotland.

The Chairman referred to several cases of hardship to Poor law medical officers in Scotland who had been dismissed by parish councils. In Scotland there was no right of appeal to the Local Government Board. There was a Bill now before Parliament, under the charge of Mr. Alexander Cross, M.P., to remedy this defect in the Scottish law.

Dr. Douglas moved, and Dr. Bateman seconded, the following resolution, which was carried unanimously:

That this Committee is of opinion that Scottish Poor-law medical officers should have the right of appeal to the Local Government Board as in England; and that the Chairman of the Committee be authorised, if he think it desirable after consultation with Mr Cross, to arrange a deputation to wait upon Lord Balfour of Burleigh to urge that the Bill to amend the Local Government (Scotland) Act should be passed into law in the present session of Parliament.

Venereal Disease in the Army.

The following resolution, passed by the East York and and North Lincoln Branch of the Association, was submitted:

That in view of the great increase of venereal diseases, and especially of syphilis, among the British troops in India, and the grave danger to the health of the community at home caused thereby, this Branch of the British Medical Association strongly urges the Government to take such measures as would, in the opinion of the Indian Government, be most likely to check the spread of the disease, and to leave the Indian Government a free hand in dealing with the question.

On the motion of Dr. Douglas, seconded by Dr. Cleveland, it was resolved:

That the Committee sympathises with the views of this Branch, but thinks it undesirable to take any further action, feeling that the Government will do all that is necessary.

Officers of Lunatic Asylums in Ireland.

On the minutes of the Joint Committee of the Parliamentary Bills Committee and of the Medico-Psychological Association, and on the resolution of the Londonderry and North-West of Ireland Branch,[1] Dr Cleveland said that the Joint Committee were of opinion that applicants for the post of medical superintendent of an asylum in Ireland should have had five years' experience in lunatic asylums, and should require to have passed an examination in medico psychology.

Lunacy Certificates.

Dr. Cleveland further reported that the Joint Committee had resolved as follows:

That a clause for introduction into the Lord Chancellor's proposed Bill be drafted on the following basis:—

1. That the medical certificate shall be an expression of opinion of fitness for temporary treatment for incipient mental disorder in form of the Scotch schedule.
2. That there shall be no order or legal power to detain.
3. Agreement to pay for maintenance be signed by a person not related to a person having charge.
4. Notice of admission and discharge to be sent to the Commissioners, who shall have power to visit.
5. The Commissioners to keep lists of persons suitable to take charge of such cases.
6. That the names of persons thus certified be not placed on the lists of certified lunatics.

It was proposed by Dr. Cleveland, seconded by Dr. Douglas, and resolved:

That the minutes of the Joint Committee of the British Medical Association and the Medico-Psychological Association of to-day's date be received and adopted.

It was further resolved:

That the Subcommittee be empowered to present the suggestions and amendments to the Lord Chancellor, and to take any necessary steps to have the proposals introduced into the Lord Chancellor's Bill.

Date of Meeting of the Committee.

Dr. Brown Ritchie proposed, and Dr. Shuttleworth seconded, the following resolution:

That it be a standing order of this Committee that its first meeting in each session shall be held subsequent to the first meeting of the Council of the Association.

The same having been put from the chair was declared to be carried.

The Irish Local Government Bill.

It was proposed by Dr. Douglas, seconded by Mr. Straton, and resolved:

That a Subcommittee be appointed consisting of the Chairman (Dr. Farquharson, M.P.), Sir Charles Cameron, M.P., Sir Walter Foster, M.P., Dr. Fox, M.P., and Dr. Dawson Williams, to watch the medical matters in regard to the Irish Local Government Bill, with power to add to their number.

Reforms in the Army Medical Service.

The following resolution from the South Indian Branch was submitted:

That this meeting heartily sympathises with the reforms advocated by the Parliamentary Bills Committee of the British Medical Association, and with its endeavours to procure such reforms as will place the Army Medical Staff in a satisfactory position.

Dr. Douglas said if the Army Medical Reform Subcommittee was still in existence he should propose:

That the resolution be referred to the Army Medical Reform Subcommittee, with power to take such steps as may be deemed desirable to bring about the reforms required in the Army Medical Service.

This resolution was seconded by Dr. Harrison, and carried.

A vote of thanks to the Chairman brought the proceedings to a close.

[1] British Medical Journal, March 12th, page 726.

PRELIMINARY EDUCATION.

Overcrowding and Under-education.

Nearly all the complaints and hardships of our profession may be referred to two causes: competition among ourselves, and competition between ourselves and the army of quacks. For the first there is no remedy save a diminution in our numbers on the one hand, and on the other, a higher standard of self-respect; for the second, until we can obtain from Parliament a law which shall not, as now, only penalise legal medicine, but shall also in at least equal measure protect both it and the public, we can but rely on showing so wide a difference between the quack and the medical man, as even the silly poor and the equally silly rich shall be able to recognise.

It is for these reasons that we have continuously urged that a higher standard ought to be exacted from those who enter our profession. When recruits are plentiful the War Office and the Admiralty immediately raise the standard of height, and now that our numbers are so great that in towns there is a doctor to every 1,000 people, the General Medical Council should adopt the same tactics.

We recognise that to some extent they have already so done and that they contemplate further action in the same direction; but they act too slowly and they contemplate too long. Our profession is the most difficult of all, and the issues in its hands are those of life and death, yet we take less pains than any other to secure a satisfactory stamp of man.

The Requirements of the Council in General Education.

A candidate for registration as a medical student is required to pass in four subjects—namely, English, Latin, mathematics, and one other language. This corresponds to the usual school course, and it is right that it should, for we do not wish our students to have been a separated class, but good representatives of well-educated boys. We are not prejudiced in favour of one system. For instance, from most English schools the second language offered will be Greek, while in a few it will be French. These few will probably have given a scientific rather than a classical education. We should be quite content with either, and believe that each can produce the desired result. What is this, or in other words, what is meant by a good preliminary or general education? Not alone a knowledge of Latin, Greek, or French, or of two books of Euclid, though these are in themselves of value, but the possession which this knowledge indicates of training and discipline, of a mind which has already been taught to study and to reason, and which is thereby fitted to approach the special subjects required in medicine.

The Standard Desirable.

It may be said that many other things are so needful to us that they ought to be added to the list of compulsory subjects. French and German in language, Physics and Chemistry in science are the most obvious instances to select. But though it is foolish to divorce utility from education, we must not, on the one hand, lay stress on subjects, such as shorthand writing, which, though useful, have little or no value in training the mind, nor, on the other, can we expect boys to start equipped with all that will be useful to them as men. We hope to see the time when the elements of Physics and Chemistry will be so necessary a part of the routine of school teaching that every schoolboy will be required to possess a fair knowledge of them, and we hope then to see them included in the preliminary rather than in the special examinations. But we cannot have this yet, and the utmost we can hope is that they will form a preliminary stage to be passed before Anatomy and Physiology are begun. Nor can we now expect a boy to have learnt more than two foreign languages by the time he comes to us. If he have been taught Latin and Greek well he will not at ordinary schools know French or German well in addition, and to make these compulsory will either bring us boys who have not passed through the usual school routine, by which we shall certainly not be gainers, or will produce a system of "cramming" for our examinations, which again will be disastrous. For any special subject of examination outside the usual course will, we may be sure, be made the subject of special teaching in the last few months of school life, and matter so learnt is neither remembered permanently nor of educational value while it is being learnt. It would be a premium upon that temporary memory which is already too much fostered, and which, in our opinion, is of no value at all in classifying intellectual ability.

Our preliminary examination ought then to be conducted upon the lines of ordinary school teaching, ought to be elastic enough to comprehend the various systems now in vogue at schools, and ought to give us boys who have been well educated, either on the classical or the modern side. But does the General Medical Council at present attain this object? There can be no doubt that it does not. Not alone from our own teachers and examiners do we constantly hear complaints that some of the boys allowed to enter the schools are incapable of ever attaining a respectable standard, but their story is lamentably confirmed by bodies which have no connection with medical education save by judicial examination of its results. Is it not a thing disgraceful to all concerned that out of twenty-eight candidates for commissions in the Medical Department of the Navy, five should be found deficient in general education, and two actually "illiterate" or "generally ignorant"?[1] How can we expect to raise, or even to keep up the standard of the profession when dunces are admitted to be students of medicine? Wherein lies the fault?

The Ninety-one.

The system now adopted by the Council is to accept the passing of certain examinations as a test of general education. These are no fewer than 91 in number,[2] whereof 53 are conducted in the United Kingdom, 45 by universities, 1 by a medical licensing body, 7 by educational bodies other than the universities; and the remaining 38 are held by Indian, Colonial, and foreign universities and colleges. The students who enter by these last are few—66 out of a total of 1,671 in 1894—and for our present purpose these examinations need not be considered. We will discuss only the 53 examinations which are held in Great Britain and Ireland.

Should the General Medical Council Examine?

The first question that arises in the mind is whether the General Medical Council is right in allowing other bodies to judge whether a boy is fit to be a medical student, or whether it should itself conduct the examination in preliminary education. The latter suggestion sounds more plausible than it really is. For the General Medical Council could not itself examine in Latin, Greek, and Euclid, but would have to appoint a body of examiners to perform the task. These could not be medical men, for it is a standing rule that examinations must be conducted by those who are teaching in the subjects examined. The examiners, therefore, would have no necessary knowledge of the standard required for medical students, and would merely be a 92nd examining body similar to the other 91. It would be a large body, since many examinations would be needed, and the subjects included are very numerous; and it would therefore be a body whose standard could not easily be made uniform, and still less easily kept so.

The General Medical Council has for some time taken the view that the best judges of general education are not those who teach medical but those who teach general subjects, and it has in consequence been its policy to withdraw preliminary examination from the medical corporations. The only corporation which has refused, in spite of repeated requests from the Council, to discontinue its preliminary examination, is that of the Royal Colleges of Physicians and Surgeons in Ireland, and a candidate from this body at the last naval examination was pronounced "generally ignorant." If the Council were themselves to conduct such an examination they would be returning on their own tracks, and would be reversing the policy under which the improvement already secured, which is by no means despicable, has been attained. It may then be admitted that the Council were right in rejecting by 19 to 7 Sir Christopher Nixon's motion at the last session. The universities and educational bodies will make better examiners than the Council itself, because they are in constant touch with schools, and are the judges to whose ver-

[1] British Medical Journal, March 12th, p. 719.
[2] *Ibid.*, 1897, vol. ii, p. 512.

dict the schools are constantly adapting their teaching. We were glad to see that the tendency was[3] for more students to enter by university gates, because the universities are not only examining bodies, but also themselves teach the subjects in which they examine.

University Examinations.

But university examinations are not all conducted for the same purpose or at the same standard, and it must not be supposed that because a boy has passed a university examination, he is thereby proved to be fit to learn medicine. Yet this is what the General Medical Council appear to assume, and herein lies the great fault of their present system.

Take, for instance, the University of Oxford. The Council recognises for the purposes of registration: (1) the Junior Local, (2) the Senior Local Examination, (3) Responsions, (4) Moderations, (5) Degree in Arts. The last two are, of course, up to the mark, and need not be further considered. We most of us know the requirements of Responsions, and no one who has been at Oxford would ever willingly employ as his physician anyone who had been unable to pass "Smalls;" the danger to life would be too great. One is not justified in running so great a risk as this, so long as even from bubonic plague some few cases will spontaneously recover. But if we inquire how Responsions stands towards the other two, we find that the Senior Local is accepted by the University in lieu of Responsions only if it be passed with special merit, and that the Junior Local, which is an examination for boys and girls under 16, is not accepted at all. This is not that the examinations are bad in themselves, far less that the University is to blame in them, but simply that they are for a lower standard of education, or for a lower age, than is required of every member of the University. Such a standard cannot be the right standard for us. Every boy in the two upper forms of an ordinary school would pass the Responsions to-morrow; and if we take the Junior Local standard, it means that we take a set of boys who have not been brought up to the ordinary level of school education, and who cannot ever expect to advance our science or our profession.

Yet what was adopted by the Council in November? "That on and after the 1st day of January, 1899, no certificate of lower standard than that of the Matriculation or Entrance and the Junior Local Examinations of the universities of the United Kingdom will be accepted for registration." That is to say, that the highest ideal of the General Medical Council whose special province is to superintend medical education, and whose aim should be to raise, alike for the public interest and in our own, the general level of our profession, is after next New Year's Day not to sink below the level of the third form of an English school.

We shall not be wrong if we take it that the Junior Local Examinations of Cambridge, Edinburgh, Aberdeen, Glasgow, and St. Andrews are at least no higher than those of Oxford. The certificate of proficiency of Durham is of the same level. "Parse fully: *Coit*, *elatam*, *gutture*, etc. Translate into Latin: It is better to die than to act disgracefully."[4] This is the sort of question that one can safely say could be answered by an intelligent person of 12 years of age.

Non-University Examinations.

When we come to bodies other than universities the difficulty is greater, and one can only judge of the examination by looking at the stamp of the paper set. These bodies are the College of Preceptors, the Intermediate Education Board of Ireland, the Educational Institute of Scotland, and the Scotch Education Department. The second class of the College of Preceptors has been practically condemned by a vote of the Council, and the Preliminary Examination for Medical Students, which it conducts, will no doubt fall under that condemnation, so that we need not waste whipcord over these. Of the Intermediate Education Board in Ireland the Council now recognises the Junior Grade Examination. This is of the same juvenile character as the Junior Locals. "Give the gender and genitive plural of: *lis*, *sermo*, *arbor*, etc." "Translate into Latin: So great was the glory of the army that the enemy were not able to gather together (*comparare*) their forces," (June, 1897), and easy passages from Cornelius Nepos, Pliny, and the first two books of the Æneid. The Educational Institute of Scotland conducts a Preliminary Medical Examination of a similar character. On February 4th, 1896, one question was: "Decline *meus pervicax puer*;" on July 2nd: "Decline *quisque pervicax vir*;" on April 2nd, 1896: "Decline *ego*, *hic*, *qui*;" on October 1st: "Decline *ego*, *qui*." The Junior Grade Leaving Certificate of the Scotch Education Department is on about the same level.

It would be wearisome if we were to quote examples from all of these papers, or from every subject. By one it is easy to judge the character of the rest, and Latin is perhaps the best illustration. It is plain that these examinations which we have mentioned are of a class quite suitable to little boys, but wholly below the level which any ordinary school expects of a lad of 16, and therefore below that which the General Medical Council ought to require.

The Low Standard of the Council.

It is of no use for the Council to pretend that the fault lies with the examining bodies. It does not. The Junior Locals are well adapted for their purpose, and are good examinations in their way, but they are not supposed by the Universities to be of the standard of the upper forms of schools, and are not meant for them. If the Council accepts them it accepts lower form boys with its eyes open. So with the Junior Grade Examinations in Scotland and Ireland. They do not pretend to give a certificate of even moderate general knowledge; and to bear out what we say we may note that in the Report for 1897 to the Committee of Council of Education in Scotland Sir Henry Craik regrets that candidates are sent in at the age of 11 or 12. No such examination, however faultlessly passed, can possibly give such a standard as we require, and that such are accepted is in no way the fault of the examining bodies, but entirely that of the General Medical Council. Until they determine not to accept any Junior Examination they will merit all the criticism and will need all the stimulation that can be brought to bear upon them.

[3] British Medical Journal, 1897, vol. i, p. 539.

[4] See the Calendar of the Durham College of Medicine, 1897-98.

THE IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

The annual general meeting of the above Association was held on St. Patrick's Day, March 17th, at the Café Monico, when Professor Alexander Macalister, F.R.S., on the termination of his year of office, resigned the Presidential Chair to Dr. E. D. Mapother.

The twenty-first annual report presented by the Council showed that the Association has continued to prosper during the past year, its members numbering over 700, and its gatherings having been well attended. The year, however, had been marked by serious losses of distinguished members by death, foremost among whom may be mentioned the late Sir Richard Quain, F.R.S. (an ex-President), and Professor Samuel Haughton, F.R.S. The hard-working Metropolitan Honorary Secretary (Dr. James Cagney) had also died during the year. Each, the report stated, had contributed materially by their efforts for the Association in removing the disabilities cast on the *alumni* of Irish medical schools by the governors of a large number of English public hospitals in refusing to admit as candidates for honorary staff appointments those holding Irish diplomas only. During the year closed on St. Patrick's Day, two English hospitals (one in London and the other in Brighton) had removed from the statute books the restrictive rule.

The post of Honorary Metropolitan Secretary, rendered vacant by the lamented death of Dr. Cagney, had been offered to, and accepted by, Mr. P. J. Freyer, M.A., M.Ch.

The Honorary Treasurer's accounts showed a balance of £82 11s. to the credit of the Association at the end of 1897.

Sir William Thomson (President of the Royal College of Surgeons in Ireland) was appointed President-elect, and Professor Alexander Macalister, F.R.S., was elected Vice-President, *vice* Sir James Dick, K.C.B., R.N., whose term of office had expired.

The festival dinner, which was held after the annual meeting, was attended by members and guests to the number of over 200. Dr. Mapother (the President) occupied the chair, and the guest of the evening was Lord Charles Beresford, M.P. After the usual loyal toasts that of "Our Guests" was

proposed by Professor Alex. Macalister. Lord Charles Beresford, on rising to respond, was received with great applause. In the course of his speech he paid a high tribute to the work done by the surgeons of his branch of the service, and especially to those with whom he had come in contact in the Nile column. He described their work as noble, and as messmates naval surgeons were always cheery, genial, and the best of friends. Sir Joseph Fayrer also replied to the toast, and recalled some interesting reminiscences of his friendship with Lord Charles Beresford during the war services in which each had been associated. "The Association" was proposed by the Vice-Chancellor of Cambridge University, and was acknowledged by the President. "The Universities" was proposed by Sir William Mac Cormac, and responded to by Professor Ramsay and the Venerable the Archdeacon of London. The concluding toast was that of "The Ladies," proposed by Mr. P. J. Freyer, and acknowledged by Mr. Butcher, Q.C., M.P. The honorary secretary of the dinner, Mr. Robert O'Callaghan, upon whom the responsible and onerous duties of the organisation of the festival depended, heartily deserves the thanks of the Association for the great success of the evening.

SPECIAL CORRESPONDENCE.

PARIS.

Compulsory Vaccination in the French Colonies.—The Constitution of the Assistance Publique.—Radiography in the Paris Hospitals.—Women in Hospital Administration.—Polichinelle and Popgun.

At a recent meeting of the Academy of Medicine, Dr Hervieux dwelt on the necessity of making vaccination in the French colonies compulsory. The army surgeons entrusted with vaccination service are constantly urging that this salutary step be taken. Small-pox is general in these colonies from time immemorial, and no attempt has been made to repress it. This scourge is a factor in the depopulation of the colonies, and is a great stumbling-block in the way of colonial progress and prosperity. Dr. Hervieux declares that a simple Ministerial circular reminding the colonial civil authorities that they have the right to enforce compulsory vaccination would settle the question satisfactorily. It appears that in France there is no compulsory vaccination law. In place of such a law there are municipal ordinances, passed in 1789, 1790, and 1884, which give local authorities the power and right to intervene to prevent and stamp out epidemics. These are independent of the military law which renders compulsory the vaccination of soldiers of every branch of the service before joining the army. In addition there is the Roussel law for the protection of infant life. These laws have been applied in some of the French colonies without opposition.

By a decree promulgated on March 16th the constitution of the Superior Council of the Assistance Publique is somewhat modified. It will be composed of fourteen members, who sit *ex officio* and forty-six who are nominated by decree. The following are members *ex officio:* The Director of Assistance and of Public Health, the Director of the Administration of Departments and Communes, the Director of Penitentiary Administration, the Director of Civil Affairs at the Ministry of Justice, the Health Directors at the Ministries of War and Marine, the President of the Consulting Committee of the Public Health in France, the Life Secretary of the Academy of Medicine, the Inspectors-General of the Public Assistance, the Director of the Public Assistance, the Director of the Paris Mont de Piété (Pawnshops). The following are named by decree: six senators, twelve deputies, twenty-eight others who are indicated by the administrative or public positions they occupy or by special personal capacity.

The Academy of Medicine has been consulted by the Minister of the Interior concerning the advisability of organising a radiographic service for the benefit of the Paris hospitals. At a recent meeting of the Academy it was decided to inform the Minister that it is absolutely necessary to have such a service. The Academy suggests that this service be organised in the Academy building.

At a recent meeting of the Superior Council of the Public Assistance, a resolution was adopted that female members should be elected to sit in committees entrusted with administrative business of public charities. Dr. Napias eloquently described the part played by women in England and the United States in contributing to the progress and improvement in public charity organisations and hospital administration. A tribute was paid to Miss Nightingale's splendid work in the Crimean and Scutari hospitals, and she was quoted as an example of the wisdom of calling in female co-operation. A leading journal declares that if men are courteous and intelligent, they will do their best to make way for several feminine co-operators in hospital superintendence and direction.

It is reported that the house-surgeon at the Lariboisière Hospital was called upon one morning after the opera fancy dress ball to attend to a *polichinelle* who had apparently committed suicide by shooting down his throat; blood issued from his mouth. The house-surgeon was considerably puzzled to find the general condition of the patient so good. As the bullets had not been found, the patient was placed in a surgical ward to undergo an operation. The pistol used by the *polichinelle* was taken to the Commissary of Police, who discovered that there were cork pellets in the revolver which had never been discharged. He went post-haste to the hospital, just in time to prevent an operation. The patient was surrounded by the surgical staff, who were carefully examining him. On hearing M. Cornette's account of the cork bullets, and being no longer in danger of undergoing an operation, the patient jumped from his bed, and executed a dance worthy of the most skilful *polichinelle*.

BERLIN.

The Kinematograph in Medicine.—Medical Courts of Honour.—Sanatoria for Tuberculous Patients.

The use of the kinematograph in medicine was demonstrated at one of the Berlin photographic societies last week. It is clear that "animated photographs" of the abnormal movements characteristic of certain diseases must be useful to physicians not only as documentary evidence, but also for purposes of study, as by their help any phase of the movement in question can be examined separately and at length. The series shown in Berlin represented the walk of a case of tabes dorsalis, and the negative had been taken in Professor Mendel's clinic.

The Prussian Diet has been much occupied with medical matters again during the past week. Questions were asked regarding the proposed medical "courts of honour" and medical reforms, and the proposed transfer of the ministerial medical department without eliciting any but general answers from the ministerial benches. Professor Virchow made a short but incisive speech, in which he blamed the Prussian Government for its want of initiative in public hygiene, and said that it left too much to the Empire and to the Imperial Board of Health. "For instance," he said, "we have no efficient legislation on epidemics in Prussia; notification of disease works smoothly in the case of animals, but not of human beings." Speaking of the "courts of honour," he said he was decidedly against their introduction. They would be powerless to prevent unlawful competition, as that would always be stronger than any courts of honour or ministerial decrees.

In answer to a request from another member that Government assistance be given to Professor Leyden's Committee for the erection of tuberculosis sanatoria, Dr. Bartsch, the Government representative, replied that, thanks to the initiative and co-operation of the Empress, a lung sanatorium for 100 patients had already been opened near the Grabowsee, and that a second similar institution was planned, and would probably soon take tangible shape.

MELBOURNE.

The late Sir Anthony Brownless.—The Victorian Branch.—Medical Defence Association.—The City Coronership.

At the ripe old age of 81 the Chancellor of the Melbourne University has passed away. Sir Anthony Brownless, besides being an M.D.St.And., and F.R.C.S.Eng., had a great number

of titular distinctions conferred upon him. He was K.C.M.G., LL.D., Knight of St. Gregory the Great and Knight Commander of the Order of Pius. Born in Kent, he was apprenticed in his earlier days to Mr. Charles Wilks. In the latter part of the Thirties he was a student at St. Bartholomew's. In 1852 he sailed for Melbourne, and very soon acquired a very large practice, which he retained for many years, as a consulting physician. Sir Anthony, in 1855, assisted in founding the Melbourne University, and he may be regarded as the father of its medical school. Thousands of graduates of the University will deplore his death, and his familiar figure and kindly heart will both be missed and regretted.

The Victorian Branch of the British Medical Association, which is flourishing, celebrated another annual meeting, at which Dr. Stirling, the retiring President, delivered his valedictory address. He said that he considered that the Government should be urged to establish an Institute of Preventive Medicine in Melbourne. The value of serum therapeutics was being more and more recognised as a most important addition to our means of treating disease, and he saw no reason why we should not be able to manufacture our own supply to serum. Students of medicine now require a specific knowledge of bacteriology, and must be able to differentiate between the various forms of disease producing germs. He thought the time was not so very far distant when the specific germs of syphilis and cancer would be discovered and be treated with their antitoxins. The following members were then appointed as officers for the ensuing year:—*President:* Dr. M'Adam. *Vice President:* Dr. Leo Kenny. *Honorary Secretary:* Dr. Kent Hughes. *Honorary Treasurer:* Dr. Thomson. *Honorary Librarian:* Dr. Felix Meyer. *Editor (local):* Dr. Springthorpe.

We have now in our midst a Medical Defence Association. At one time it was proposed to graft the objects of medical defence on to the local branch; but it was thought advisable to make it a special organisation. The value of such an association was brought home to the profession a few days ago, when a case was tried at the Law Courts in which a medical man was the defendant. The plaintiff's cause for action declared that his medical attendant mistook a sarcoma of the humerus for a fracture of the bone, and as compensation for the pain and misery which he underwent he claimed £5,000 damages. The defendant doctor, although not a member of the Defence Association, obtained skilled advice from them. The existence of the Association was elicited in cross-examination, and its objects were rightly stated to be the protection of medical men from blackmailing and to assist the members of the profession generally in matters that concern their interests. The plaintiff, whose arm had to be amputated in consequence of the growth of the sarcoma, lost his case, and had to pay costs. The medical interest lies in the curious fact that the patient had a fall from his bicycle and broke his arm through the surgical neck, and that the sarcoma showed itself shortly afterwards. Although the Defence Association is young, it has done good work. In the interests of the general public it drafted a Bill to prevent the publication of indecent advertisements in the newspapers, and it succeeded in persuading the Income Tax Commissioner to allow a rebate to be made on certain allowances. To be a member of the Defence Association has, however, its drawbacks. The decree of membership insists that every member who is threatened with an action must submit his case to the Association and put in writing that he will abide by its decision, and then the Association will consider the case, and, "if they think fit," will assist in defending it. "If they think fit" is the dangerous part of the clause. Supposing they do not "think fit," what then? The defendant would be really worse off than if he had not applied for assistance. Plaintiff's counsel would make capital out of the refusal of the Association to take up the case.

One of the blue ribbons of the profession has been lost. On the death of the City Coroner, it was expected that the Government would follow the usual custom of appointing another medical man to the position; but the profession exhibited no particular unity of action in the matter until too late, and so the office went into the hands of a layman.

GLASGOW.

The Outdoor Department of the Western Infirmary.—The University Court: Close of the Winter Session.

The managers of the Western Infirmary have issued an appeal for subscriptions in connection with the proposed new outdoor dispensary buildings. The outdoor department of the infirmary has developed rapidly, and it has for some years been recognised that new quarters were required, preferably in a separate building for the infirmary proper. Other important improvements recently made at the infirmary have taken precedence of this department, but now, after careful consideration, plans have been prepared for a separate building inside the present infirmary ground, in which there will be ample accommodation for the general work and all the special departments. It is proposed to include in this building two small wards for special purposes—probably for skin diseases. The estimated cost of the work is £25 000, to meet which the managers have £5,000 received some years ago from the Bellahouston trustees, and subscriptions already promised to the amount of £10,000. It is hoped that the promise of the additional £10,000 required will soon be given, so that this necessary addition to the infirmary may be gone on with without delay. During the year ending October 31st, 1897, the number of dispensary patients treated was 14,761, each patient making on an average upwards of three separate visits.

At the last meeting the question of opening up bursaries to women was again considered, and it was resolved to appropriate for competition, without restriction as to sex, all the open bursaries tenable in Arts, Science, and Medicine, which have taken effect prior to August 30th, 1864. There was submitted to the Court the draft deed of foundation of a research studentship in connection with the Faculty of Science. This has been founded under a recent Ordinance of the Universities Commission by Mr. William Houldsworth, of Rozelle, Ayr, and will be of the annual value of £150.

The winter session of the Glasgow medical schools was brought to an end on March 18th, and the various class honours were announced. This week the professional examinations begin.

LIVERPOOL.

The New Principal of University College.—Address by Dr. W. H. Gaskell.—The Cremation Society.—Death from Carbonic Oxide.—Appointment of a Gynæcological Surgeon to the Royal Infirmary.

The important office of Principal of University College, which was rendered vacant by the appointment of Dr. G. H. Rendall to the Headmastership of Charterhouse, has been filled by the election of Mr. Richard Tetley Glazebrook, M.A., F.R.S., Fellow and Senior Bursar of Trinity College, Cambridge. Mr. Glazebrook is a son of Mr. N. S. Glazebrook, of West Derby, one of the oldest and most respected members of the medical profession in the neighbourhood of Liverpool, and he is an old Liverpool College boy. He was Fourth Wrangler in 1876, was Demonstrator of Physics under Lord Rayleigh, and was afterwards Superintendent of the Cavendish Laboratories. He is best known by his researches on physical optics. His investigations on double refraction in biaxial crystals, and on the dynamical theory of double refraction, have been highly commended by Lord Kelvin, Sir Gabriel Stokes, and other eminent authorities. He has also made an exact determination of the value of the ohm and of the specific resistance of mercury, and he is the recognised custodian of the British Association units, which are at present the standard for the world. Besides rendering these and other valuable services to science and education, he has served on various important Boards and syndicates of the university in connection with finance, buildings, publishing, etc., and was until lately a member of the Council of Newnham College. University College is happy in having secured as its Principal so distinguished a son of Liverpool; his high scientific attainments will shed lustre upon it as a seat of learning, while his administrative abilities will commend it to the great body of practical business people who are the backbone of this great community. The members of

the medical profession will be ready to give a hearty welcome to the distinguished scientist who is about to come among them.

Dr. W. H. Gaskell, of Cambridge, lately gave an address at the University College Biological Society on the metamorphosis of the lamprey, illustrated by a number of beautiful microscopic preparations, intended to show the contrast between the invertebrate characteristics of the larval ammocœtes and the vertebrate characteristics of the adult petromyzon. Dr. Gaskell expounded his theory that the vertebrates have descended from some form allied to the higher articulata. The address was heard with intense interest by a large audience, and was followed by an animated discussion.

The activity lately displayed by the advocates of cremation indicated in a former letter has led to the formation of a local branch of the Cremation Society.

An inquest was lately held on the body of a Swedish emigrant who was found dead in bed in a registered lodging house. The capacity of the room was 963 cubic feet, there was no fireplace, and, of the two ventilators which existed, the larger was closed, and apparently the window was shut. Four men occupied this room. In the morning it was found that the gas was extinguished, but the tap was turned on full; one of the four men was dead, and the others were unconscious. It is supposed that the deceased, who was the last to retire, blew out the gas. The burner was one which discharged 7½ cubic feet an hour. Mr. F. T. Paul, who made a *post-mortem* examination, said that practically the whole of the body was of a bright pink colour, without blueness or lividity, and he said that death was due to poisoning by carbonic oxide, an opinion which was confirmed by examination of the blood. The medical officer of health, in a report on this case to the Health Committee, stated that it had been admitted that water gas had been supplied to parts of the city in varying proportions, and that as water gas contained between 30 and 40 per cent. of carbonic oxide, while coal gas contained only 4 per cent., the danger of the public was increased in proportion to the amount of water gas sent to the dwellings. He recommended that water gas should not be supplied without ample warning being given to householders. The gas company's engineer stated that on the night when the death took place the supply consisted of ordinary coal gas.

The post of Gynæcological Surgeon to the Royal Infirmary, rendered vacant by the retirement of Dr. John Wallace, has been filled by the election of Dr. Thomas Babington Grimsdale. Dr. Grimsdale, whose father, Dr. T. F. Grimsdale, was for many years a leading authority on the diseases peculiar to women, is a graduate of the University of Cambridge. He is Surgeon to the Hospital for Women, and Medical Officer to the Ladies' Charity, and was formerly Assistant House-Surgeon and Assistant Medical Registrar at St. George's Hospital. He has filled the responsible office of Secretary to the ordinary meetings of the Medical Institution, and is the author of various contributions to the literature of his profession. In the memorable conflict which took place two years ago between the medical staff and the Committee of Management of the Ladies' Charity, he bore a leading part in maintaining the honour and privileges of the staff; and by his bold and honourable conduct on that occasion he gained the gratitude and confidence of his professional brethren.

CORRESPONDENCE.

THE VACCINATION BILL.

SIR,—I see that Mr. Chaplin's Bill *re* above matter has already passed its first reading (amid cheers). As house to house visitations are to be made if this becomes law, I wish to point out that the following changes ought to be made in the appointment of vaccination officers, to avoid the friction that otherwise might occur from this procedure.

1. Every duly qualified and registered medical man shall be a public vaccinator.

2. Vaccination certificates obtained from the Registrars to be of two colours. Light brown (present colour) indicates that the vaccination is to be performed at parents' own expense. Blue indicates that the vaccination occurs at the expense of the Local Government Board—or, more correctly speaking, perhaps, of the union in which it occurs.

3. All medical men to be paid quarterly by the union, according to the number of blue certificates they have sent in.

The fees to be paid might be arranged by each union upon a mileage scale—so much within one mile from doctor's house, and so on according to distance.—I am, etc.,

J. WIGMORE HIGGINSON, M.R.C.S., L.R.C.P.

Wrotham, Kent, March 16th.

SIR,—It is most desirable that the medical profession should lose no time in dealing with the question so ably set forth by Mr. Jonathan Hutchinson in regard to the above Bill. The chief recommendation of the Commission is ignored, namely, that all registered members of the profession should be entitled to claim fees for their cases if vaccinated according to the requirements of the Board. In my opinion the results would amply justify the extra expenses incurred, and would only be bare justice to each member of the profession, who are all competent to vaccinate. In the competition for practice some practitioners will vaccinate the children of the patients in one or two places and free of charge rather than they should go to the public vaccinator. The reasons are obvious. May I suggest that the Parliamentary Bills Committee take steps to influence the Government, also that the Branches do the same? There are nine Branch meetings announced to be held shortly. This is a subject which needs immediate action, and we are for the most part interested in it.—I am, etc.,

Bacup, March 21st. JNO. BROWN, M.D.Vict.

SIR,—I trust the Parliamentary Bills Committee of our Association is keeping a watchful eye on the details of the vaccination Bill now before Parliament, and that it will specially keep in view the safeguarding of the interests of public vaccinators. I would suggest a point or two which I think deserving of careful consideration.

First with regard to the fees. Domiciliary visits for the purpose of vaccination will entail a very large increase of labour, and take up a considerably greater amount of valuable time than the present method of carrying out public vaccination, and should in justice be adequately paid for. The fees should be fixed by the Act, and not left to the cheeseparing tendency of Boards of Guardians. I am of opinion that not less than 3s. 6d. should be the fee for each successful case of vaccination (this to include the visit of inspection, certificate, etc.) of children living within two miles of the public vaccinator's residence, and 6d. a mile extra for any distance beyond this. Many public vaccinators, like myself, will have many miles to travel in order to visit and vaccinate three or four children, and the same distance for inspection, and also many visits without results, and therefore without any compensation, as, for instance, when the mother wishes the vaccination of her child put off for a week or so because it is not quite convenient, or the child is not very well, etc.; or again, when the parents desire the child to be vaccinated by their own medical attendant, or do not wish to have it vaccinated at all; and for many other causes.

A second point which should have special attention, if vaccination is to be as efficacious as possible, is that some means should exist of regulating the vaccination by private medical practitioners with regard to the number of insertions and the efficiency of the operation, for it is quite certain that the lack of this has brought the power and benefit of vaccination into doubtful repute in the minds of a large section of the public. I have personal knowledge of the fact that many private medical practitioners (especially medical aid officers) hold out as an inducement to parents to have their children vaccinated by them the undertaking to make only one or two insertions.

Another point is that there shall be no difficulty in public vaccinators obtaining gratis a sufficient supply of reliable calf lymph. There are doubtless several other details which require very careful attention at the hands of the Committee.—I am, etc.,

March 20th. A MEMBER OF THE B.M.A. AND A P.V.

MIDWIVES REGISTRATION BILL.

Sir,—Several points raised with reference to the Midwives Bill call for notice.

1. *The Restriction of Practice to Registered Midwives only.*—A clause for this special purpose is not inserted in the Bill because it follows the lines laid down by the Select Committee on Midwives' Registration. It advised that a certain term should be protected and restricted. The point was raised at least a dozen times in the course of its various sittings, and is thus referred to in the summary at the end of the 1892 evidence: "It is admitted that unqualified women cannot be prevented by law from practising." The explanation repeatedly given, privately, was that Parliament would not sanction the formation of a monopoly in such a matter. In only protecting certain terms titles, the Bill follows the precedents set it in the Medical, the Dentists, the Veterinary Surgeons, and other similar Acts. Anyone desirous of testing the feeling of Parliament on the matter can easily get an amendment moved to that end. The method adopted in the present Bill has, however, already received the sanction of the House of Lords.

2. *The Statutory Limitation of the Sphere of Practice of Midwives.*—The insertion of a special clause making it obligatory on midwives registered under the Act to send for a medical practitioner in face of any unusual labour, or of any unsatisfactory condition of the mother or child, would not be objected to by my committee, provided it did not not imperil the passage of the Bill, if proposed as an amendment. However, one of the main objects of the regulations of practice to be approved by the General Medical Council would be to this end.

3. *Certificates (a) of Death and (b) of Stillbirth given by Midwives.*—(*a*) The acceptance of certificates of death by registrars from unqualified persons could be put a stop to by the mere stroke of a pen if the Registrar-General could be persuaded to issue the necessary order. So long, however, as coroners (to whom such certificates would, after refusal, be referred) are permitted to issue their certificates without any medical evidence as to the cause of death, it is of little use for him to do so. There is, of course, a legal obligation on all persons present at a death to give notice to the registrar within five days, and to sign the register. (*b*) The Registration of Births and Deaths Act, 1874, permits burials of stillborn children to be carried out on the declaration of a midwife or other person present at the birth. A Select Committee has reported on this matter, and has advised legislation with a view to a better method of certification; doubtless this is under consideration by the Government, and meanwhile it would be impossible to obtain a reform of this magnitude on a side issue.

4. *As to the Suggested Infringement of the Medical Acts by the Registration of Midwives.*—(*a*) The Medical Act of 1886 is said to have so affected the standard of midwifery practice that the registration of midwives under Act of Parliament would, in effect, lower the standard intended to be set by the 1886 Act. This Act, however, only raises the standard of education amongst those who desire to go on the *Medical Register*, making the fact of being on that *Register* proof of education in all three branches of professional work. The 1858 Act permitted registration to a medical man who was only partly qualified, as in surgery. The public was thereby misled. (*b*) The *Medical Register* has been recently said to confer upon those registered the exclusive right to practise. This is untrue, and has been recently disproved before a Metropolitan stipendiary magistrate. (*c*) The Midwives Bill does not permit persons registered under it to use any of the titles protected under the Medical Acts, nor does it admit to the *Medical Register*. Therefore it does not infringe the Medical Acts.

In closing my letter, I have to apologise for an involuntary error made in my lettter published in the British Medical Journal of March 12th. The reply therein given to Mr. Garrett Horder's first objection in his letter in the Journal of March 5th has, of course, nothing to do with the objection, and its being given as such must be attributed to interruptions while writing.—I am, etc.,

Rowland Humphreys,
Honorary Secretary Midwives Bill Committee.

Buckingham Street, Strand, W.C.
March 22nd.

Sir,—With regard to this *soi disant* Midwives Bill Committee, whose honorary secretary writes so often and with such an air of superior authority, may I ask by whom it was appointed, when, and for what purpose? Is it, or is it not, a self-constituted body, formed to promote the condoning of illegal action in the past on the part of certain private associations and institutions that have made a business of issuing diplomas to midwives for gain; to procure a State sanction for such illegal documents already in vogue; to legalise the issue of similar qualifications to practise in the future; to enlist, under the guise of a false philanthropy, the assistance of uninformed sentimentalists, who are for the "Committee's" ends misled by being systematically confronted with only one view of the situation and one way (the "Committee's") of solving a difficult problem, but whose excellent motives I do not for an instant impugn; and all this mainly and finally to secure and increase the pecuniary emoluments of what would thus be made a safe as well as a lucrative business? Is it for this holy end that they do not hesitate to take refuge in what the Honorary Secretary calls the "Parliamentary view of registration," quoting remarks of Sir W. Foster upon the Plumbers Registration Bill of 1897? He forgets altogether that, when the Plumbers Registration Bill was introduced—just as when the first Medical Act was brought in—there existed no plumbers in the one case, as there were no medical men in the other, who were already registered and practising under imprimatur of the State. The plumber's and the doctor's callings had previously been open without restriction to all the world. No apprenticeship or training was a legal prerequisite to practise in either case. The public was expected to make its choice under the motto "*Caveat emptor*." But here and now the whole position is changed. Over 20,000 men and women are already qualified under State guarantee to practise midwifery and obstetrics. Theirs is a State-created vested interest—created not for their benefit, but in protection of the health and lives of the citizens. It springs out of neither assumption, presumption, nor illegality. The profession is not now, as in 1858, or as the plumbers last year, "proposed to be registered." The State's authorised practitioners of midwifery have been registered these forty years. But this "Committee," with one of these registered for its hon. secretary, positively proposes, by one stroke of the parliamentary pen, to introduce within the ranks of our calling a flood of incompetent persons, dangerous in proportion to their ignorant self-confidence, and to issue them with a brand new mint stamp—Government counterfeits for circulation among our working mothers only. Surely we will not thus disgrace our civilisation. As Parliament has already registered for the community men and women to practise midwifery, as to whose fitness it has insisted on and taken full guarantees, I expect Sir W. Foster would tell us here: Parliament is bound to recognise the members of any trade or profession which it has already registered, and such registered members only, and to scout any suggestion to countenance with State recognition any ignorant upstarts undertaking such trade or profession, when the sole ground of the claim is their presumption to engage without proper training in work serious enough to require registration, and its sole result would be to establish and increase their powers for mischief—in this instance to creat undue and avoidable risks and perils for the mothers and offspring of the poor. Bob Sawyer to-day is being shown no mercy. Why, then, Sairey Gamp?—I am, etc.,

Lillington Street, S.W., March 22nd. Thos. M. Watt.

P.S.—It gives one some estimate of the Committee's sense of proportion, if one reflects that the Plumbers Registration Bill proposed to acknowledge only those who had been for five years in the trade, but for such a simple business as midwifery two years are to suffice.

FOREIGN PRACTITIONERS IN THE UNITED KINGDOM.

Sir,—All those who have at heart the maintenance of cordial relations between medical men of different countries owe a debt of gratitude to Mr. Victor Horsley for the leading part he has taken in inducing the General Medical Council to write its second letter to the Privy Council. More than once

during recent years erroneous impressions created abroad by certain speeches made in the General Medical Council have had to be corrected privately, and it was high time that a clear and accurate statement should be made. It is to be hoped that the first letter has now been withdrawn, for the discrepancies between the two official documents would appear still more perplexing and unaccountable abroad than here.

Someone has made—and not for the first time—a serious blunder, the repetition of which should be prevented in future.—I am, etc.,

Harley Street, W., March 14th. J. KESER.

CLUB RATES AND MEDICAL COMBINATION.

SIR,—I beg to enclose a copy of an agreement signed by all the medical men in this town. Hitherto no clubs have been taken on here at less than 5s. per annum, but the "Cirencester Working Men's Conservative Benefit Society" is establishing branches here and in the neighbouring villages, and will not pay more than 4s. 4d. per annum if they can help it, and it is to check this that we have all combined.

The society went so far as to introduce a medical man into one of the villages, but after a stay of two or three months he left.

I am sending this for publication, in hopes that medical men in other towns will take similar action.—I am, etc.,

Evesham, March 23rd. HORACE E. HAYNES.

Evesham, March 16th, 1898.

We, the undersigned, having regard to the "sweating" rates of payment made to medical men by medical aid associations and friendly societies, hereby agree not to undertake after this date, to attend any members of such societies in the borough of Evesham at a less rate than 5s. per head per annum, with 1s. fee for examination on entrance, and members of such societies having their headquarters outside the borough at not less than 6s. per head per annum, with 1s. entrance fee.

ALLEN L. HAYNES, JOHN S. SLATER,
A. H. MARTIN, R. HARRISON GILPIN.
HORACE E. HAYNES, F. LEONARD SESSIONS.

HOSPITAL REFORM.

MR. T. GARRETT HORDER, the Honorary Secretary of the Hospital Reform Association, writes as follows in reference to the remarks made by Mr. William Horrocks, F.R.C.S., in the BRITISH MEDICAL JOURNAL of March 12th:

1. With reference to the casualty department, the recommendation may be taken to apply more to medical than to surgical cases. It is well known that in most of the London hospitals a very large number of trivial medical ailments are treated. I think the Association would not for one moment wish to prevent any cases of accident from receiving "first aid" treatment, but in case of persons who can afford to pay for further treatment the hospital authorities should refer them to their private medical men. What the Association is particularly desirous of preventing, if possible, is the conversion of the casualty department into a free and open dispensary. I quite agree with Mr. Horrocks when he says that there would be some difficulties in referring certain cases of accident to private medical men, and it might be as well in complicated cases to inform the patient that he would be expected to pay the hospital for treatment received. My Association would certainly not think of refusing treatment to those who are "undoubtedly poor and admittedly sick."

2. With respect to the question of recommendations from medical men the Association did in the first instance propose that every patient should bring a note from medical men, but Mr. Horrocks will see that such a restriction does not now appear. I freely admit that there is a considerable amount of evidence of the "abuse" of hospitals by private medical men; this "abuse" occurs more especially in connection with the special departments. I would venture to suggest that in these instances where it is not possible to make inquiries into the circumstances of patients that medical men should be asked to make a definite statement that their patients are not in a position to pay for the advice and treatment that they require. I should like to point out to Mr. Horrocks that nowadays there is a disposition to dispense with subscribers' letters. In many of the large London hospitals, and in several of the provincial ones such letters have been dispensed with, and without any consequent ill effects to the funds of these institutions.

I may say in conclusion that it would be an excellent plan if the hospital authorities in conjunction with members of the medical staff were to determine to meet together and have the whole question of hospital reform thoroughly threshed out. It is admittedly a very difficult and a very complex subject, and therefore requires to be discussed from many points of view. It must be acknowledged that in our large towns there is a great want of co-operation between the various hospitals.

THE MEDICAL PROFESSION AND SANITARY AUTHORITIES.

SIR,—The loss inflicted upon the profession at large by the direct and indirect action of compulsory notification of infectious diseases although very great, does not vitiate the principle of notification. At some time or other its consideration will prove retrospectively interesting to us, and perhaps prospectively profitable. But the domination of the general practitioner by sanitary authorities is very generally familiar, and ought to be jealously watched and strenuously resisted. To stimulate observation and resistance the following incident, quite a common but not a much discussed affair, may prove helpful.

Ceasing attendance upon a home case of scarlatina, the vestry demand from the medical attendant a certificate of freedom from infection, but this enlightened body will not pay for such a certificate. Recently I refused to sign such a certificate, and thereupon the medical officer of health communicated some original interpretation of the law. He implied that he alone could "free from isolation"; that such a certificate must be sent to him; that the patient who went out before the medical officer of health got the certificate was liable to prosecution; and because he did not get it he actually did threaten prosecution. Then the inspector offered to disinfect, but said that the vestry would charge for so doing unless the certificate was sent, and much more of a similar description. My patients were thus worried for ten days, until I put an end to the business by disinfecting at my own expense. That this disinfection quite satisfied me goes without saying, but that it should have satisfied the medical officer of health is matter for reflection and comment. The object, of course, is evident: that is, by causing annoyance to the patients to coerce medical men into working for the sanitary authorities for nothing. It is to be hoped that other medical men will enter upon the discussion of this subject with a determination to end the abuses to which it refers.—I am, etc.,

February 4th. A. D.

CONSULTATION WITH HOMŒOPATHS.

SIR,—In a letter on the above subject in the BRITISH MEDICAL JOURNAL of Jan. 22nd, I stated that the rules of the Bradford and District Medico-Ethical Society forbade its members to meet homœopaths in consultation. I gave the rules in question, adding that I was quite sure that if any ambiguity was thought possible as to the rules, they would be at once altered so as to preclude any doubt.

I am very pleased to be able to state that this has been done. At a special meeting of the Society held last night (March 18th), words were added to the existing rule, whereby homœopaths are specifically stated the persons with whom members of the Society might not hold consultation. One solitary hand was held up in favour of an amendment authorising consultations with any "registered practitioner." Even the seconder of this amendment did not vote for it.—I am, etc., THOS. WHITESIDE HIME.

Bradford, March 19th.

ISOLATION IN INFLUENZA.

SIR,—The article from Dr. White, of the City of London Asylum, in the BRITISH MEDICAL JOURNAL of March 12th, on the above subject gives such prominence to the views of an observer entitled to respect, and lays so much stress on the value of isolation in influenza, that, differing from his opinion, and having had experience of several epidemics of influenza in an asylum the population of which is nearly 1,000, I venture to ask a short space for reply.

In a few words I will say that since 1890 this asylum has suffered severely from many outbreaks, generally of a very rapid epidemic character, of influenza, and the more I have

seen of the disease the more I have been convinced that isolation is practically useless to suppress or control it.

My experience is that on the outbreak of an epidemic, cases transferred from infected parts do not, as a rule, carry infection with them, neither does the removal of such cases abate the outbreak.

During the late severe epidemic of February this year, when we had in about fourteen days 150 cases of the disease, very little attempt at isolation—in some wards none, in the proper sense of the term—was made. Many of the cases were sent to the infirmary wards, and while the disease kept on breaking out in other parts of the building, the patients in these wards showed little susceptibility to contract the disease.

I may say that I have never yet been able to satisfy myself that infection in influenza is conveyed from person to person; were it so, I think the number in our epidemics infected would have been greater. I have also observed that those in actual and constant attendance on influenza cases do not as a rule contract the disease. I am of opinion that influenza when it comes to us is so prevalent in the atmosphere, and that it gets rapidly round and inside the building, so that we need scarcely search further for means of infection. I do not deny the possibility of it being carried by persons from one place to another.—I am, etc.,

Arthur Strange, M.D.,
Medical Superintendent, Salop and Montgomery Counties
Shrewsbury, March 21st. Asylum.

THE MODE OF ACTION OF CHLOROFORM.

Sir,—It is not my intention to interfere in the controversy between Dr. Lauder Brunton and Dr. Leonard Hill regarding the Report of the Hyderabad Commission on the physiological action of chloroform, except to express my regret that two such able physiologists and worthy men should have a temporary misunderstanding. As a member of the Glasgow Committee, however, I desire to make one or two remarks pertinent to the main question. I still hold that chloroform has a very direct influence on the heart, so that by weakening the force of its contractions the blood pressure falls. The fall of blood pressure, however, is not solely due to the action of chloroform on the heart, but also to its action on the vasomotor mechanism leading to dilatation of the arterioles. In these circumstances there is a tendency to sudden cardiac failure, in which, although the heart continues to beat, the beats are not true systolic beats, capable of emptying the ventricles with each stroke, but more or less tremulous movements of the muscular walls. During this period the cavities are not fully emptied, and, as the venous blood pours in, the right cavities tend to become engorged. While the heart is thus struggling the respiratory mechanism may fail, probably from the circulation of chloroformed blood through the respiratory centres, or possibly by some interference with the transmission of those nervous impulses from the lungs and from other parts by which inspiratory impulses are liberated. The man or animal will then stop breathing, but if the chest is opened the heart will still be found in movement. It is still fluttering, but it is now, and no doubt has been for some time, inefficient as a force pump. Hence the fact that in many cases the heart is still found moving after respiration has ceased is no proof that death ensued from failure of respiration, and not from failure of the heart. The converse is much more probable, namely, that respiration failed owing to the inefficient action of the heart and disturbance of the circulation; at all events, this view of the matter agrees with the facts elicited by the vast majority of physiologists who have specially investigated the question. As a matter of practical experience, however, it is not of much importance whether we say that death begins with the heart or with the lungs; it is rather a nice question for the physiologists to decide. The broad truth is, that in every case of chloroform administration a certain risk has to be run. The risk is very small, but undoubtedly it exists. It is so small that a profitable business in chloroform insurance might be initiated. Death may suddenly occur, either from what appears to be primarily cardiac failure or primarily failure of respiration. The two functions are so closely associated and react on each other in such short intervals of time as to make it impossible to affect one for even a few seconds without affecting the other. The practical conclusion, therefore, is to carefully watch both functions during the administration of chloroform, not with a slavish fear, but rather with the watchfulness of the captain who keeps within the purview of his attention both the man at the wheel and the engineer down below.

Of the relative advantages of chloroform and ether, I can only say that without doubt or question the risk of cardiac failure is less with the latter than with the former. On the other hand, for many cases chloroform, even with the slight extra risk, is preferable.—I am, etc.,

University of Glasgow, March 19th. John G. McKendrick.

KALA-AZAR.

Sir,—As I notice in your review on Surgeon-Captain Leonard Rogers's *Report of an Investigation of the Epidemic of Malarial Fever in Assam, or Kala azar*, that my name is mentioned in connection with a previous investigation of the etiology of this disease, I should like to take this opportunity of stating that I remain entirely unconvinced by that gentleman's arguments, which I regard as in the last degree fallacious, and as likely to stand in the way of the adoption of the only measures that can stem this terrible disease. Your reviewer indeed seems to have overlooked the extraordinary position taken up by Dr. Rogers—namely, that "kala-azar" is not only a purely malarial disease, but that it is a malaria which is infectious like small-pox.

To judge from the Indian medical press, Dr. Rogers does not appear to have secured a single adherent to his views in this country, for besides a short refutation which I published simultaneously in the January issues of both the *Indian Medical Gazette* and *Indian Medical Record*, this report has called forth a second most convincing refutation from the able pen of Dr. Hayman Thornhill, of the Ceylon Medical Service, which is published in the *Indian Medical Gazette* for February, 1898, as well as editorial articles in both the abovementioned leading Indian medical journals, which are alike condemnatory of Surgeon-Captain Rogers's views in the last degree.

The *Indian Medical Gazette* at page 25 of the January number of the present year practically adopts my views of this subject in their entirety, while the *Record*, at page 404, December, 1897, while not prepared to do so completely, admits that ankylostomiasis is responsible for much mischief, and sums up its opinion of Dr. Rogers's report in the following words: "To construct a theory, and pick out from each of these headings a certain number of facts to support it, is not scientific: it is neither fish, flesh, nor good red herring; it is simply hodge-podge."

To prevent misunderstanding I should like to state that I have, from the first, regarded "kala-azar" as a mixed anæmia brought about by ankylostomiasis acting on a population worn down by chronic malarial poisoning, but I fail to see any reason for believing that the malarial element in this (generally) mixed condition is any worse now than it was previous to the invasion of ankylostomiasis, which has raised an already high mortality to a pestilential level.—I am, etc.,

G. M. Giles,
Solapur, Feb. 21st. Surgeon-Major, I.M.S.

THE TREATMENT OF SYPHILIS IN THE ARMY BY INTRAMUSCULAR INJECTIONS OF MERCURY.

Sir,—My attention has been drawn to a paper on the above subject which appears in the British Medical Journal for February 19th, by Surgeon-Major F. J. Lambkin, A.M.S. In that paper the advantages of administering mercury in syphilis in the form of a carbolised cream injected into the gluteal muscles are dwelt upon; and it is stated, on the authority of the Surgeon-General with Her Majesty's Forces, not only has that treatment been generally successful in India for the cure of the disease itself, but has also lessened the admissions into hospital for syphilis, so that the State has become a distinct gainer, as the time actually spent in hospital by the syphilitic soldiers is much lessened, whilst the chances of his readmission for the same are reduced to a minimum.

Under these circumstances, I should certainly have expected Mr. Lambkin to give the credit of the introduction

of such a valuable treatment to him who originated it—namely, to myself.

As he has omitted to do so, I shall feel obliged if you will allow me to state that, after an experimental research extending from 1878 to 1890, with a great number of different preparations of mercury, I eventually obtained strikingly beneficial results with a very fine emulsion of metallic mercury with lanolin and carbolised oil. This preparation, which I termed "the carbolised mercurial cream," and in which the metal is completely killed or extinguished, was made for me by Messrs. Savory and Moore, of New Bond Street. In August, 1890, I brought the results obtained with this mode of treating syphilis before the International Medical Congress at Berlin, where my communication was favourably received.[1] In that paper I described the composition and pharmacological properties of this preparation, and claimed for it the following advantages: Perfect homogeneity of the mass, allowing of accurate dosage; great stability (I have kept a supply for five years, after which it required only stirring with a glass rod to make it perfectly serviceable); painless injection; absence of swellings and abscesses; great efficiency in truly specific lesions; absence of the risk of stomatitis and dysentery if a certain dose be not exceeded; and tendency to guard the patient against future attacks of the same malady by keeping the system for a considerable time under the influence of small and non-poisonous doses of the specific.

My paper was afterwards published in book form by Messrs. Longmans and Co. under the title *On the Treatment of Syphilis of the Nervous System* (London, 1890), and this was reviewed in your columns as well as in other medical journals.

Mr. Lambkin speaks of certain drawbacks inherent to the use of the cream, namely, that in cold weather it becomes semi-solid, while in hot the reverse occurs. This is probably owing to his not having quite adhered to my formula, which directs one part of mercury to be incorporated into four parts each of lanoline and 2 per cent. carbolic oil. The sozoiodol of mercury, which he mentions with approval, cannot have the same permanent effects as the cream, because the former is a soluble preparation, and therefore more rapidly eliminated from the system than the insoluble cream, which is very gradually absorbed and very slowly eliminated. Indeed, traces of mercury can be shown in the urine about six months after the last injection of the mercurial cream.—I am, etc.,

Queen Anne Street, W., March 19th. JULIUS ALTHAUS, M.D.

[1] *Vide* Althaus (London), on the Treatment of Syphilis of the Nervous System, *Verhandlungen des X. internationalen medicinischen Congresses, Berlin*, August 4th to 9th, 1890. Band IV, Neunte Abtheilung, p. 127. Berlin, 1891.

THE TEMPERANCE QUESTION.

SIR,—The truth of Dr. Reid's theory on which is based his opposition to the entire temperance movement, cannot be granted. He says that if a nation having acquired a tolerance for and adaptation to alcohol, ceased taking it, this adaptation would be lost—this is granted at once; and that the craving for it will become as intense as in modern savages—this is what is denied. By "intense" he clearly means "irresistible," for he says if, after a lapse of time, alcohol is again taken, the same disastrous results will happen to that nation, say the British, as happen to savage nations now when they can get it freely. Now a desire for anything in the end harmful is not irresistible to a nation with developed powers of restraint. The assumption that these powers of restraint for intellectual and moral reasons will be in the developed race of the future exactly the same as they are now in a savage race, cannot be allowed. The Mohammedan races have avoided alcohol for nearly seven hundred years, and although they have plenty of opportunity to try alcohol, and their unadaptability to it must be as great as it is in savages, yet they still refrain, because they believe it will do them harm, in this case in a future life. This means that their moral powers of restraint are so developed that their unadaptability to alcohol does not result in a craving for it at all. Alcohol has not the demoralising effect on the Chinese and Hindus as on savages, also the majority of the poorer people of the British Isles have not been able to get much alcohol, except in the last 200 years, if that long; yet nothing like so bad effects are produced as in savages. This proves the very different results which occur in a more developed race to that occurring in a less developed one. Therefore as the craving for alcohol depends for its existence on the weakness or absence of the powers of restraint acting for intellectual and moral reasons, the temperance party urge that as many difficulties be placed in the way of acquiring alcohol (say by quadrupling the tax on it and enforcing considerable dilution) till time has been given for these moral and intellectual faculties and powers of restraint to become developed by exercise in other less harmful ways; and while in the meantime the nation will be greatly benefited, in the future we need not have the slightest fear that the developed powers of our descendants will not amply safeguard them from the danger of alcohol; indeed, their very unadaptability will strengthen their reasons against touching it, and feeling no craving they will avoid it with exactly the same fear as that which makes us avoid any disease or injury.

With regard to Dr. Reid's other arguments, if alcohol were beneficial to a race, the Greeks and Italians, Spanish and Portuguese, ought long ago to have spread over even England itself, much more the newer countries. It is in spite of the deteriorating influence of alcohol that we have succeeded as a nation, and the success would be much greater if the nation were more temperate.—I am, etc.,

Southsea, March 17th. HONITON COATES.

SUNSTROKE IN ANIMALS.

SIR,—In the article in the BRITISH MEDICAL JOURNAL of March 19th on The Etiology of Sunstroke (Siriasis), by Dr. L. Westenra Sambon, it leaves the impression that the lower animals enjoy immunity, it being stated "the results derived from them differed greatly from those of siriasis." During 16 years' service I have frequently seen cases in India in the horse, dog, and elephant, and in fact the disease is well known to every veterinary practitioner in that country. In Calcutta and the low-lying plains of Lower Bengal it is at times quite common, so much so that it is dangerous to give horses more than the very lightest of work. My experience is that imported animals, both horses and dogs, are more prone than those born in the country. The difference in sunstroke (siriasis) and heat syncope in animals is well known to every veterinary surgeon who has had any Indian experience.—I am, etc.,

JOSHUA A. NUNN, F.R.C.V.S., C.I.E., D.S.O.,
Veterinary-Major A.V.D., late Principal of the Lahore Veterinary College.

Junior United Service Club,
March 19th.

MEDICO-LEGAL.

DEATH CERTIFICATION.

WE learn from the *Daily Telegraph* that Dr. Patrick Lyons Blewitt, a registered medical practitioner, of Barking Road, was summoned before Mr. Baggallay, sitting at the West Ham Police Court, at the instance of Mr. G. E. Hilleary, coroner for West Ham, for failing, without reasonable excuse, to sign and give to one John Desborough, the elder, a certificate of death as to John Desborough, aged 2 months. Mr. Braxton Hicks, barrister (coroner for the Kingston Division of Surrey, and for South-West London) prosecuted. He stated that Dr. Blewitt had attended Mrs. Desborough, who was the wife of a labourer. The mother was sent to an asylum, and Dr. Blewitt then attended the baby, which died on December 2nd. He had seen the child the night before its death, but when the father called for the certificate of death Dr. Blewitt had said that 12s. was owing him, and that until he got the money he would not give the certificate. The coroner finally held an inquest. Dr. Blewitt, at the inquest, stated the child died from syncope, and that it had been suffering from debility from birth. In reply to the coroner he had stated that the writing of a certificate involved a certain amount of time, which could only be obtained on special appointment, which could only be made on payment of a retaining fee. The amount of his fee for attending Mrs. Desborough was 12s., and in this case he fixed 12s. as his retaining fee. Mr. Braxton Hicks said that under the Births and Deaths Registration Act of 1874 (Sections XX and XXXIX), doctors were bound to give certificates stating the cause of death without fee or reward; and that it would be a serious matter if coroners' courts were turned into a kind of petty county court for the collection by medical men of fees owing to them. Mr. Ernest Baggallay said this prosecution was very properly taken up. It was the duty of a medical practitioner who attended the last illness to give a certificate. The law would be a dead letter if a doctor could withhold the certificate because he happened to be owed a few shillings. Dr. Blewitt would be fined 40s. and cost, £5 9s. 6d. in all.

CLUB DOCTORS AND MIDWIFERY CASES.

A case of some interest to the medical officers of friendly societies was decided recently at the Runcorn County Court. According to the report in the *Guardian* (Altrincham), Dr. Ormsby sued a certain James Jolly, a tinsmith, for the sum of one guinea for attending his wife in her confinement. The defence was that she was entitled to the doctor's attendance because she was a member of the Halton Ladies' Club, of which the plaintiff was the medical officer. The case had already been once adjourned for evidence as to the rules of this society, and now the secretary and another of the medical officers testified that it had always been understood that in such cases the doctor was entitled to charge his usual fee. The plaintiff gave evidence that when he attended defendant's wife he told her his fee would be a guinea, and his honour finally gave judgment against the defendant, and expressed an opinion that he had been unwise to dispute the matter. On the plaintiff asking for costs he intimated that these would follow the verdict.

THE M.D.BRUX.

Dr. Major Greenwood, M.D.Brux., LL.B.Lond., Barrister-at-Law, Honorary Secretary Brussels Medical Graduates' Association, writes: Our Association desires to record its protest against your answer to "Sigma" relative to the M.D.Brux on page 667 of the British Medical Journal. We have taken the best legal opinion on the subject, and we are advised that a registered medical practitioner does not contravene Section xl of the Medical Act of 1858 by placing M.D. alone after his name if he is a medical graduate of a foreign university, and therefore does not render himself liable to any penalty under this section, which was intended for quite other purposes.

*** We are happy to give publicity to Dr. Major Greenwood's letter on this important subject, a subject on which numerous inquiries have been made, and replies to which have been given in the columns of the British Medical Journal. We can, however, only repeat what we stated on the subject in the Journal of August 15th, 1896, that to each inquiry we have given what we were advised was the proper reply, the opinion in each case being grounded on the purely legal view of the question. The question of the legality of the use by a qualified practitioner who is an M.D. of Brussels, but not so registered of the title M.D. alone or M.D.Brux. depends, according to the opinion of counsel obtained in 1896, on a consideration of Section xl of the Medical Act of 1858; and counsel on a careful review of the authorities confirmed the opinion we had previously expressed, that an M.D. of Brussels using the title M.D. without any addition showing that it is a Brussels degree would be liable under Section xl of the Medical Act, 1858, whether or not he stated his registered qualification at the same time. We do not desire to imply that there can be no other opinion, but of course in the replies given in the Journal we must necessarily rely upon the opinion expressed by our own counsel.

F.R.C.S. writes: The answers you gave "Sigma" in the British Medical Journal of March 5th in reference to this degree raise a question which is of some importance to many medical men in this country who hold foreign qualifications. You stated that unless the holder of the degree places after "M.D." the name of the University granting it he might render himself liable to a penalty under the Medical Act of 1858. I am interested in the question, as my own case is somewhat similar. Some years ago I had my name put on the *Medical Register* in virtue of having obtained the ordinary college diplomas. After a while I passed the F.R.C.S. examination, and, so far, have never gone to the trouble of having this extra qualification registered. Immediately after passing the examination I heard from my college that I had been enrolled a Fellow, and since then they have given me this title when addressing me. Now, since my college says I am a Fellow, that authority quite satisfied me, and I have no hesitation in designating myself such. In the same way, another man who obtains the M.D.Lond. some time after registration, and who does not register this degree also, is addressed as doctor of medicine by his university. One would therefore think he had a right to sign himself M.D. without any fear of penalty, although he omits to write "unregistered" after the degree. I venture to say that no court would inflict a penalty in such cases as these, and the same would apply to registered men who, holding foreign degrees, use them without stating whence obtained. Prosecution would be no more likely to follow this than it does in the case of an M.B.Lond., or elsewhere, who assumes to himself the title of "doctor." The fact of being on the *Medical Register* shows that the person is legally qualified to practise, and any qualifications subsequently obtained need not necessarily be registered. It is a real hardship that men who have passed very thorough examinations in London should have to go abroad in order to obtain a title which enables them to compete fairly with others who have obtained degrees on easy terms in other parts of the kingdom, and it shows the need there is of the long-talked-of "one-portal system."

*** It will be observed that there is this distinction, that the diploma of F.R.C.S. and the degree of M.D.Lond. are both capable of registration, while the degree of M.D.Brux., obtained since 1887, is not. At the same time, we consider that in the present state of the law it is eminently desirable that registered medical practitioners should register as additional qualifications any diplomas and degrees which they may obtain after registration. It is in the interest of the medical profession that a strong line of distinction between registrable and unregistrable degrees and diplomas should be drawn.

L.R.C.P., L.R.C.S., L.F.P.S.G. writes: Am I right in inferring from your reply to my question in the British Medical Journal of March 12th that no British qualified practitioner who has also obtained the M.D.Brux. or any other foreign university after 1887 (since which year such degrees are not registrable) has the right to use the prefix "Dr.?"

*** We do not think a holder of the degree of M.D.Brux. (although not registrable) need fear legal consequences for prefixing "Dr." to his name on doorplate or card; and a reply to this effect will be found in the British Medical Journal of July 4th, 1896.

A QUESTION OF RESTRAINT OF PRACTICE.

"Glan" submits the following: A bought a practice from the widow of B. a few years ago. C. acted as *locum tenens*, first for A. and then for B. A. has now sold his practice to D., and C. has opened a practice in the house of the widow of B. Has the widow of B. legal right to bring C. to the district, and is not C. violating the rules of ethics by opposing D.?

*** Assuming that the documents do not disclose any express agreement on the subject by the widow of B., or an express agreement by C. in restraint of practice, we think the parties are acting within their legal rights. The points, however, are complicated, and the documents should be looked through, and we recommend our correspondent to take the opinion of a solicitor with all the facts before him.

WITNESSES' FEES IN A POLICE COURT.

Member attended a man at the police station for cut head and his evidence was required at the police-court and afterwards at the Sessions, where he was subpœnaed to attend. The case did not come on for hearing the first day, but as he was waiting at the court our correspondent was asked to give evidence in another case which he had also attended at the police station and for which he had no subpœna, but after giving evidence was paid a fee of one guinea. The original case was heard on the second day, when he gave evidence and claimed two guineas for the two days' attendance for that case. He was refused and only received payment for the day on the ground that he had been paid for the first day after giving evidence in the other case. Our correspondent inquires if this is legal and the usual course adopted.

*** We think the course adopted in our correspondent's case is usual and we doubt if more can be recovered. The scale in force prescribes for members of the medical profession attending to give professional evidence for each day they shall necessarily attend the court a sum not to exceed one guinea.

A QUESTION OF WITNESSES' FEES.

O. K. submits the following: A., *locum tenens*, attended a police case and made out a report for the fiscal. Four days after leaving our correspondent's employ he was summoned to give evidence before the sheriff. What part of the fees is the employer entitled to, and can he enforce the surrender?

*** That portion of the fees, if any, payable for the attendance in the case and for the report, if made during the currency of the employment, would belong to the employer. The fees for giving evidence after the determination of the employment would belong to the *locum tenens*. Probably on application the *locum tenens* would concur in the fairness of this division, and refund the portion of the fees due to the employer. In default of this an action would probably lie for money had and received in England, but, as our correspondent resides in Scotland, he should consult a Writer to the Signet.

PRINCIPAL AND *LOCUM TENENS*.

Member writes: A *locum tenens* takes charge of a practice during the illness and absence of a general practitioner, to whom a telegram is sent from an insurance company requesting the practitioner to make a *post-mortem* examination on their behalf; the practitioner had not seen or heard of the deceased previously. The *locum tenens* telegraphs to the company that he is willing to make the *post-mortem* examination, which he does, and reports thereon. The company send a cheque value 3 guineas, made payable to the *locum*. Is the *locum* justified in asking for or entitled to a part, say half a guinea, of the fee? The *locum*, of course, subjects himself to the possible inconvenience of being subpœnaed at a future date.

*** We do not think that the *locum tenens* is entitled to any portion of the fee, assuming, of course, that he is paid by salary and not by a share of the profits, and that the work was done during the course of the employment.

PRINCIPAL AND ASSISTANT.

A correspondent inquires whether a principal is entitled to the fees paid to his assistant for making a *post-mortem* examination, and giving evidence by order of the coroner.

*** In the absence of any special agreement to the contrary, we think the principal is entitled to the fees.

QUESTION OF SUBPŒNA.

Non est submits the following question: After two years an action for malpraxis is brought against a practitioner, and a former assistant is subpœnaed in connection with the case. To what expenses, travelling and otherwise, would this assistant be entitled, and would it be advisable for him to be represented by a solicitor; and if so, who would have to bear the expense of this?

*** If the assistant is a qualified medical man and resides at a distance from the place of trial, he would be entitled to the fees prescribed in such cases, namely, two to three guineas per day inclusive of all except travelling expenses. A witness is not entitled to be represented by a solicitor, and if he employs a solicitor he would have to bear the costs. The address of the London and Counties Medical Protection Society is, care of Hugh Woods, M.D., Honorary Secretary, 11, Archway Road, Highgate, N.

MEDICAL NEWS.

THE Skinners Company have given £1,000 towards defraying the cost of opening wards in the City Orthopædic Hospital which are at present closed.

THE Middlesex Hospital has received a further sum of £500 on account of the sixth share of the residuary estate of the late Mr. William Brandon.

DR. CATHARINE VAN TUSSENBROECK, of the Hague, has been appointed by royal decree a member of the Dutch Medical Examining Commission. This is the first time, we believe, that a woman has held such a position on the Continent.

DR. I'ANSON (Whitehaven) and Dr. Thomson (Penrith) have been deputed to represent the Border Counties Branch of the British Medical Association on the Cumberland Nursing Association.

THE Public Health Committee of the Edinburgh Town Council has submitted draft regulations as to the duties of the sanitary inspector, and has recommended that the salary be fixed at £400 per annum.

SIR JOHN HOLDER announced at the annual meeting of the General Hospital, Birmingham, on March 16th, that the Queen had consented to become a patron of the hospital. At the same time Sir John Holder presented a bust of Her Majesty to the hospital.

MEDICAL STUDENTS IN NEW YORK.—The recently issued annual report of the Board of Regents of the State of New York shows that there are 4,025 students of medicine in the State, being an increase of 150 over last year, and of 605 within three years.

PRESENTATION.—Dr. John Cunningham, Chairman of the School Board, Stewarton, was presented on March 17th with a silver tray, together with an afternoon tea service in silver, by the members of the Ladies' Ambulance and Sick Nursing Class, for the manner in which he had discharged the duties as lecturer.

THE London Hospital has received in response to the special appeal in aid of the Maintenance Fund, £1,000 from Edward L. Raphael, £100 from Lord Strathcona and Mount Royal, £100 from Mr. Frederick Flood, £52 10s. from Mr. Lawrence J. Baker, and £50 from Mr. Philip S. Walker; and a subscription of £100 from Mr. John Cross.

ROYAL NATIONAL PENSION FUND FOR NURSES.—The report for the past year of the work of this institution, which was unanimously adopted at the annual meeting held on March 17th, states that not only are the financial affairs in a prosperous condition, but that last year there was an increase of forty-two policies under which annuities were being paid.

THE report presented to the annual meeting of the governors of the Dental Hospital of London, held last week, stated that various unforeseen circumstances had delayed the progress of the new buildings. Among the difficulties mentioned were obstruction by various public bodies, and a somewhat serious falling off in the annual subscriptions.

IT is announced in the Comptes Rendus of the Council of the University of Paris that the proposal for the creation of a special degree of "Doctor of the University" (as distinct from doctor of a particular faculty) has been approved by the Superior Council of Public Instruction and will shortly be carried into effect.

THE OBSTETRICAL SOCIETY OF FRANCE.—The Obstetrical Society of France will hold its sixth annual meeting in Paris on April 14th and two following days. The following are the questions on the programme: (1) Application of Forceps to the Upper Brim in Flattened Pelves with the head in the transverse position; (2) Treatment of Placenta Prævia.

M. NAVARRE, the new President of the Municipal Council of Paris, is a member of the medical profession. He was born in 1845, took his doctor's degree in the Paris Faculty in 1876, and served for some time as a medical officer in the French Army. It is a curious coincidence that Paris and London should almost simultaneously have had a doctor as their chief municipal officer.

PASS AND PLUCK IN PARIS.—During the academic year 1896-97 the average percentage of plucks at all the examinations for the doctor's degree in the Medical Faculty of Paris was 16 per cent. This does not include the thesis on which candidates are hardly ever rejected. At the first examination the proportion of plucks was 40.57 per cent.

BY direction of the Prussian Cultusminister, Professor Kuhnt, Director of the University Ophthalmic Clinic of Königsberg, has gone to Egypt and Palestine for the purpose of studying contagious diseases of the eye in these countries. The mission has reference to the increasing prevalence of such diseases, particularly trachoma, in East Prussia.

MEDICAL PRACTICE AT KLONDYKE.—British doctors who are thinking of Klondyke as presenting a likely opening for medical practice, should take note of the fact, announced in some American papers, that they will not be permitted to practise unless they have passed an examination before the Board of Medical Examiners of the North-West Territory at Calgary, of which Dr. Brett, of Banff, North-West Territory, is Registrar.

ABUSE OF MEDICAL CHARITIES IN NEW YORK.—The Senate Committee on Public Health has reported favourably on the Dispensary Bill for New York City, which is designed to prevent the abuse of charity at such institutions. The Bill, to which reference was made in the BRITISH MEDICAL JOURNAL of February 19th, was introduced into the Legislature on the initiative of the Medical Society of the County of New York, and other medical associations.

THE HUNGARIAN BALNEOLOGICAL CONGRESS.—The Hungarian Balneological Congress will hold its eighth annual meeting on March 27th and 28th, in Buda-Pesth, under the presidency of Dr. Wilhelm Tauffer. Among the papers to be read are: The Treatment of Consumptive Patients in Sanatoria and Climatic Health Resorts, by Professor Adolf Onodi; The Balneotherapy of Heart Disease, by Dr. Franz Tausyk; and Hungarian Health Resorts, from the balneological point of view, by Dr. Josef Sümegi.

SMALL-POX IN EDINBURGH.—It was reported to the Edinburgh Town Council on March 22nd that two cases of small-pox had occurred in the city during last week. The patients were brother and sister, children of a sailor who had come to Edinburgh on February 27th from a supposed infected area, and had stayed at his home till February 29th. All precautionary measures were being taken, and thus far no further case had been notified. Of the two cases, one is extremely mild, while the other is confluent.

THE Parliamentary Bills Committee of the Manchester Medico-Ethical Association have presented a petition to the Lord President of the Council praying that the vacancy among the Crown nominees on the General Medical Council should be filled up by a person who is on the register of duly qualified dentists. The ground given is that the dentists whose registration and course of education are under the control of the General Medical Council are at present without representation on the Council.

THE Bengal Government has expressed by a special notice in the *Calcutta Gazette* its high appreciation of the services of Sir George King, M.B., K.C.I.E., F.R.S., who has just retired from the Indian Medical Service after holding the office of Superintendent of the Royal Botanic Gardens, Calcutta, and Director of the Botanical Survey and Government Quinologist for a long period. The resolution states that the Bengal Government by the retirement of Sir George King loses "one of its most distinguished and valued servants."

INFANTILE SYPHILIS.—The Belgian Royal Society of Public Medicine will discuss at its next annual meeting the subject of infantile syphilis. An interrogatory on the subject has been sent out by the General Secretary, Dr. Maroy, Rue Royale 90, Brussels, including questions as to the frequency with which the affection is met with by practitioners; as to the severity of the lesions, the age of the patient, the result of the disease, the source of it, its prevalence in particular localities; whether offspring of syphilitic women are frequently met with who show no characteristic lesion during

the first years of life; and whether observations have been made on the placenta of women suffering from syphilis, or who have been cured of that disease.

Prevention of Tuberculosis in France.—On March 14th the Chamber of Deputies passed a vote to the following effect: "In case of seizure of meat on account of tuberculosis, indemnities shall be paid to the owners who shall have conformed to the requirements of the law and to the regulations of the sanitary police. The total amount of the indemnity shall be equal to half the value of the meat seized in case of generalised tuberculosis, to three-fourths of that value in cases of localised tuberculosis, and to the total value if it is proved that the animal was not the subject of tuberculosis."

Professor Benham.—Dr. W. B. Benham, who has so long and so ably assisted Professor E. Ray Lankester in the department of Comparative Anatomy at Oxford, was entertained at dinner on March 11th at Magdalen College on the occasion of his leaving this country to undertake the duties of Professor of Biology in the University of Otago, N.Z. Professor Vines occupied the chair, and a numerous company, including the Regius Professor and most of the teachers of science and medicine, were present. There were many expressions of regret at losing so agreeable a colleague, but at the same time it was felt that Dunedin was to be congratulated on having secured the services of so capable a teacher. On March 16th Professor Benham was presented with a handsome piece of plate by his past and present pupils. The good wishes of all Oxford men go with him.

New York Skin and Cancer Hospital.—On March 5th the new building of the New York Skin and Cancer Hospital was opened in the presence of a large number of representative citizens. Dr. L. Duncan Bulkley, in reviewing the work of the hospital during the fifteen years of its existence, said that the old city of New York had grown at the rate of 50,000 inhabitants a year for the past ten years, and hospital accommodation had not kept pace with this increase. Beginning in a small way with no endowment or assured support, the hospital had received 375,000 dollars since its foundation, of which 75,000 dollars had come from the board of in-patients and the sale of drugs to out-patients. The number of patients treated during the fifteen years had been 25,031, of whom 22,159 were out-patients. The new building, which contains sixty beds, has a pathological laboratory and a complete set of baths.

The Psychological Laboratory at University College, London.—The Psychological Laboratory, the history of which has already appeared in the British Medical Journal for 1897 (i, page 1305; ii, p. 73) has been at work since January 17th. The Committee have sent out a notice that Dr. W. H. R. Rivers, of Cambridge, who has undertaken the direction of the work for the present session, is now meeting a class of seven students on Monday and Thursday afternoons. Pecuniarily the laboratory has also made a fair start, the contributions amounting to about £162 in donations, including £70 from a former lady student of the College, while annual subscriptions to the extent of £19 have been promised for three years and more. The continuance of the enterprise will of course require further pecuniary help, and subscriptions for this purpose are invited to be sent to Mr. J. M. Horsburgh, the Secretary of the College.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHLEM ROYAL HOSPITAL.—Two Resident Clinical Assistants. Appointments for six months. Applications before March 28th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with allowance of £30 per annum for cab hire), and unfurnished rooms, fire, lights, and attendance. Applications by April 18th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—A Resident Medical Officer and a Resident Surgical Officer. Salaries, £70 and £50 per annum respectively, with board, washing, and attendance. Applications by April 12th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Dental Surgeon. Applications to H. H. Jennings, Secretary, by March 31st.

DARENTH ASYLUM FOR ADULT IMBECILES, near Dartford, Kent.—Medical Superintendent. Salary, £600 per annum, with unfurnished house, coals, gas, washing, milk, and vegetables. Must not exceed 45 years of age. Applications to be sent to the offices of the Metropolitan Asylums Board, Norfolk House, Norfolk Street, Strand, W.C., by March 28th.

DERBY COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £100 per annum, rising to £120, with board, lodging, and washing. Applications to Mr. B. Scott Currey, St. Michael's Churchyard, Derby, by April 6th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Resident Medical Officer. Salary, £80 per annum, with board, residence, and laundry. Applications by April 12th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £60 per annum, rising to £100, with board, residence, and washing. Applications by April 11th.

GLASGOW: ST. MUNGO'S COLLEGE.—Professorship of Forensic Medicine and Lectureship on Hygiene. Applications by April 7th.

GOSFORTH, NEWCASTLE-ON-TYNE, CITY ASYLUM.—Assistant Medical Officer, unmarried, and under 30 years of age. Salary, £130 a year, with furnished apartments, board, etc., and rising £10 per annum up to £150. Applications before April 6th.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley, N.B.—Senior Assistant Medical Officer. Salary, £150 a year, with board. Applications by April 7th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications by March 30th.

KING'S COLLEGE, London.—Sambrook Surgical Registrarship. Applications by April 4th.

LIVERPOOL STANLEY HOSPITAL.—Honorary Surgeon. Applications by March 31st.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician. Salary, £40 a year, with board and residence. Applications by April 9th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Mount Vernon, Hampstead, and Fitzroy Square, W.—Physician and Assistant Physician. Applications to the Acting Secretary, 41, Fitzroy Square, W., by March 31st.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant. Salary, £70 per annum. Applications by April 5th.

QUEEN CHARLOTTE'S LYING IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications by April 12th.

POPLAR HOSPITAL FOR ACCIDENTS, East India Road, E.—Assistant House-Surgeon. Salary, £65 per annum, with board and attendance. Applications by March 30th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—Resident Medical Officer. Appointment for six months, when re-election is required. Salary at the rate of £100 per annum, with furnished apartments, board and washing. House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications by March 30th.

ST. BARTHOLOMEW'S HOSPITAL.—Surgeon; must be F.R.C.S.Eng. Applications by March 31st.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road.—Honorary Physician. Application to Honorary Secretary, 23, Gordon Street, W.C., by April 2nd.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer. Appointment for six months. Furnished apartments, board, and washing provided, and honorarium of £12. Applications by March 26th.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer. Salary, commencing £100 a year, with board, apartments, washing, and attendance. Under 30 years of age.

TRURO: ROYAL CORNWALL INFIRMARY.—House-Surgeon. Salary first year, £120, increasing by £10 a year to £150 with furnished apartments, fire, light, and attendance. Applications before March 31st.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House-Physician and House-Surgeon. Applications by March 28th.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard Street, Soho, W.—Third Honorary Physician. Salary, £60 per annum, and Dispenser. Applications by March 28th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two Honorary Assistant Physicians. Applications to Chairman of Medical Committee by April 18th.

WORCESTER GENERAL INFIRMARY.—Surgeon. Applications by April 9th.

MEDICAL APPOINTMENTS.

Adams, Edward William, M.B.Lond., appointed Resident House-Physician to the Sheffield Royal Hospital.

Barker, Percy D., M.R.C.S., L.R.C.P., appointed Junior House-Surgeon to the Chesterfield and North Derbyshire Hospital and Dispensary.

Brown, H. R., M.B., C.M.Edin., appointed Medical Officer of Health to the Maldon Urban Sanitary District, *vice* E. P. Gutteridge, M.R.C.S. Eng., resigned.

Burdwood, J. W., L.F.P.S.G., L.M., L.S.A.Lond., F.R.I.P.H., Mem.San. Inst., reappointed Medical Officer of Health for the Bourne Rural District.

Church, Wm. Selby, M.D.Oxon, F.R.C.P.Lond., appointed a Consulting Physician to the Royal General Dispensary, Bartholomew Close.

Clowes, Ernest F., L.R.C.P.Lond., M.R.C.S.Eng., has been appointed House-Physician to the Royal Hants County Hospital, Winchester.

Duckworth, Sir Dyce, M.D.Edin., F.R.C.P.Lond., appointed a Consulting Physician to the Royal General Dispensary, Bartholomew Close.

FAIRWEATHER, W. E., M R.C.S.Eng., L.R.C.P.Lond., appointed Assistant House-Surgeon to the Rotherham Hospital.

GROVES, Dr , appointed Medical Officer for the Chewton Mendip District of the Wells Union.

HAWTHORN, Frank, M B., B.S., M.R.C.S., L.R.C P., appointed Teacher and Examiner of Vaccination at Newcastle-on-Tyne Educational Vaccination Station, *vice* John Hawthorn, M.R.C.S., L.S.A , deceased.

JELLY, G. Aubrey, M R.C.S., L.R.C.P., L S.A , appointed House-Surgeon to the Sunderland and North Durham Eye Infirmary.

JONES, John Arnallt, L.R.C.P.Lond., M.R C.S.Eng., reappointed Medical Officer of Health to the Aberavon Town Council.

LAWSON, T. C., M.R.C.S.Eng., L.S.A., appointed, Medical Officer for the Fourth District of the Devizes Union.

MULOCK-BENTLEY, Thomas, L.&L.M.R.C.P., L.&L.M.R.C.S.I., appointed by His Honour the President of the Free State Government District Surgeon for the District of Vrede, *vice* Dr. F. N. Blood, resigned.

PENNINGTON, E., M.R.C.S., L R.C.P , appointed Medical Officer of Health for the No. 8 (Preston Candover) District of the Basingstoke Union, *vice* J. H. Peet, L.R.C.P., L.R.C S.Edin., resigned.

PORTER, Joseph F., B.A.Dub., M D., M R.C.S., appointed Medical Officer for the combined District of Helmsley and Oswaldkirk of the Helmsley Rural District Council.

RISDON, Geo. Owen, L R.C.P.Lond., M R C S., reappointed Medical Officer for the No. 2 District of the Wells Union.

SHERA, J. E. P., L.R.C.S.I., L.R.C.P.I., L.M.Rotunda, appointed House-Surgeon to the Teignmouth Hospital, South Devon.

SMITH, Sir Thomas, Bart., F.R.C.S.Eng., appointed Consulting Surgeon to the Royal General Dispensary, Bartholomew Close.

SMYTH, E. J., M.D.Lond., B.S., appointed Medical Officer for the No. 4 District of the Buckingham Palace Workhouse of the St. George's Union.

WAY, Montague H., M R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to Guy's Hospital.

WOODS, H. Hunter, M.R.C.S Eng., L.R.C.P.Lond., D.P.H.Cantab., appointed Medical Officer of the Milton District of Lymington Union, *vice* H. W. Hartford, L.R.C.P.I., L.R.C.S.I., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Dr. E. Kingscote: The Vagus Origin of Asthma and its Treatment. Mr. W. H. Battle: Unusual Cases of Renal Calculus.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr Herbert Tilley: Demonstration of Selected Cases (Ear, Throat, and Nose).

TUESDAY.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Puerperal, Lactational, and Climacteric Insanities. Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Eczema.

Royal College of Physicians, 5 P.M. Sir R. Douglas Powell: On the Principles which govern Treatment in Diseases and Disorders of the Heart. Lumleian Lecture II.

WEDNESDAY.

Evelina Hospital, S.E., 4.30 P.M.—Dr. W. Soltau Fenwick: The Causes and Treatment of Diarrhœa in Children. Post-Graduate Lecture.

Hospital for Consumption and Diseases of the Chest, 4 P.M.—Dr. Acland: Bronchiectasis.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Mr. Watson Cheyne: Clinical Lecture.

Royal College of Physicians, 5 P.M. —Sir R. Douglas Powell: On the Principles which govern Treatment in Diseases and Disorders of the Heart. Lumleian Lecture III.

Harveian Society of London, 8.30 P.M —Mr. J. Jackson Clarke: The Treatment of Spinal Caries.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Pathological Demonstration to Senior Students.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Professor Crookshank: Erysipelas and Suppuration, etc.

West London Medico-Chirurgical Society, 8.30 P.M.—Papers will be read by Dr. Symons Eccles, Dr. Bontor, Mr. Tubby.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, 8.15 P.M. —Mr. Ernest Clarke: The Use and Abuse of Mydriatics. Dr. F. S. Toogood: The Use of Morphine in Cardiac Disease. Dr. Morgan Dockrell: The Use of Coley's Fluid in Sarcomata.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

MARRIAGE.

MURRAY—BRAY.—On March 16th, 1898, at St. Paul's Church, Princes Park, Liverpool, by the Rev. J. H. M. Barrow, M.A., J. J. Goodlatte Murray, F.R.C.S.E., of "Eblana," Liscard Road, Egremont, Cheshire, to Isabel, ourth daughter of the late Samuel Bray, Esq., of Alsagar.

DEATHS.

ALGIE.—On the 17th inst., at Carlton House, Portpatrick, Dr. Wm. A. Algie, aged 40 years.

KAY.—On the 15th inst., at Clay Cross, Derbyshire, Thomas V. Kay, Physician and Surgeon, aged 51 years.

WOOD.—On March 22nd, at Ripley, Derby, Frederick John, the only darling child of Frederick and Margaret Wood, aged 9 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M., Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45: Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th. 9; Throat, Tu. F., 3; Skin, M. Tu., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Tu., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Tu., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electrical, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

INDICUS asks what is the composition of "cyona" ointment and tincture, a proprietary medicine largely used in India.

R. H. B. asks whether a liquid preparation of phenacetin is manufactured, and where it may be obtained?

A. W. asks for advice as to diet likely to be of use in habitual constipation. Mild laxatives act satisfactorily, but it is desired to avoid constant recourse to treatment by drugs.

L. C. desires information as to the treatment of exophthalmic goitre by hydrofluoric acid, with particulars as to the dose and mode of administration.

PREMIER MEDICAL AID ASSOCIATION.

A CORRESPONDENT asks for information about the Premier Medical Aid Association, and whether it is a concern best left alone by the medical practitioner.

*** We consider it best to leave all medical aid associations "severely alone."

DEATH EARLY IN DIPHTHERIA.

TEMERE writes: A child is well and running about his residence in full vigour; he is taken suddenly ill on a Sunday afternoon; the doctor visits at 7 P.M.; by 7 o'clock the following morning the child dies; notified as a case of diphtheria. There was no other case in the neighbourhood. Are there cases on record in which diphtheria has caused death so rapidly?

*** The mere fact that the illness proved so suddenly fatal would not contra-indicate diphtheria. Bristowe states that death "may take place within the first twenty-four hours."

SICK PAY AND SICKNESS FROM BAD HABITS.

A CORRESPONDENT writes that he was called in to a club patient some time ago, whom he found suffering from delirium tremens. His diagnosis was confirmed by his partner, and he refused to put the member on the sick funds or to attend him professionally as a club member. Other practitioners were called in, who diagnosed pneumonia and gave it as their opinion that the illness was not due to drink, so that in the result our correspondent lost his club appointment.

*** Delirium tremens may be only indirectly the result of alcoholism, and we are advised that unless the attack were the immediate consequence of excessive drinking the member could not fairly be refused sick pay under the rule referred to.

THE ETIOLOGY AND PREVENTION OF MUMPS.

W. H. B. asks for information regarding (1) the nature of the contagion in "mumps," and how conveyed from one to another—that is, by the breath and salivary secretion, or by personal clothing, etc. (2) The time that should elapse before a child could attend school with safety to the other pupils dating from the outset of the disease, (*a*) if it was the only case in the house, (*b*) if other cases occurred during the convalescence of the first case, perfect isolation being practically impracticable in the case. (3) What disinfection of the outer clothing worn by the patient would be necessary.

*** (1) Judging by analogy "mumps" is probably a microbic disease; infection is said to be mainly conveyed by the breath. (2) (*a*) Four weeks if all swelling has subsided; (*b*) if perfect isolation is impracticable, not until four weeks from date of onset of the last of the cases. (3) Disinfection by moist heat (steam).

VITAL STATISTICS WANTED.

H. B. P. writes: (1) As medical officer of health for a small urban district I asked the local registrar to furnish me with the number of illegitimate births for the years 1891-7; (2) and also asked the local vaccination officer for a return of children duly vaccinated for the same period. Both officers refuse to give me any information. How shall I proceed to obtain the information? What is the law on the subject?

*** (1) The law requires registrars on request of local authority to furnish returns of births and deaths on payment. The labour of preparing a return of illegitimate births for seven years would be considerable, and a registrar would probably be within his rights in refusing to make such a return without remuneration. Our correspondent might possibly obtain the information he requires if he were to apply to the Superintendent of Statistics, Registrar-General's office, Somerset House, W.C. (2) We know of no power to compel a vaccination officer to supply information as to children vaccinated in his district except to his Board of Guardians. Possibly our correspondent might obtain the information he requires through the Superintendent Registrar, who is generally the clerk to the guardians. Probably the difficulty made by the vaccination officer is connected with a claim for remuneration for the clerical work involved in making the return asked for, and could be overcome by an offer of reasonable compensation or so doing. A medical officer of health, as such, has no responsibility under the present law in connection with vaccination; but whether the anomaly will be continued, in view of the proposals for amending the law, remains to be seen.

ANSWERS.

A YOUNG PRACTITIONER.—An M.R.C.S.Eng., L.R.C.P.Lond., is a physician and surgeon, and therefore has the right so to call himself.

TINGLE AND STOR POJKE.—Our correspondents will doubtless before this have received the notice of the General Medical Council which will answer their questions.

MEMBER.—The card is certainly objectionable, but we observe that the person who issues it is not a member of the British Medical Association.

CLIFTON.—There appears to be no objection in principle to medical practitioners furnishing particulars of the kind asked for. Regard must, however, be had to the character of the publication, and the manner in which it is proposed to use the biographical details supplied.

C. H. C.—The French law absolutely forbids medical practice within the territory of the French Republic by anyone not possessing the diploma of Doctor of Medicine, obtained by examination before a French medical faculty. But—*il est avec les dieux des accommodements*, and in the circumstances mentioned by our correspondent we do not think it likely that he would be prosecuted.

F. D.—(1) Compression of the mammæ by suitable packing and bandages is a well recognised part of treatment to ensure an arrest of lactation. (2) It is, of course, desirable that cows should be milked in a clean place; but points of greater importance are that the teats should be washed, and that the hands of the milkers, as well as all the vessels, should be scrupulously clean.

WEED KILLER.—A very good system of weed killing is that practised at Lord's Cricket Ground and other places. It is known as Thompson's weed eradicator. Practically the system is to inject with a hypodermic syringe a minute quantity of Fowler's solution into the root or ground in the neighbourhood of the weed. The actual syringe employed is of course large, and the Fowler's solution an impure alkaline solution of arsenious acid.

ADVERTISING BY FRIENDLY SOCIETIES.

G. H. M.—It is to be regretted that the opinion of our correspondent is not held by a larger number of his professional brethren.

BICYCLING AND PREGNANCY.

WHEEL writes: It is quite common for pregnant women to ride up to five or six months, and I have known of a patient who continued to cycle up to the termination of pregnancy without any bad result. The precautions necessary are that only expert cyclists should ride in these circumstances, in order to minimise the risk of falls, and also that as regards distance, speed, and hill climbing the woman should be careful to keep well below her usual average and so avoid over-fatigue.

A QUESTION OF RESIDENCE.

J.A.—If we understand our correspondent's question, it is whether a young practitioner about to enter into partnership is justified in taking up his residence in the only house available, a house occupied until recently by another practitioner, who has removed some three or four houses away from this one. We feel that a junior may pitch his tent where he chooses. In the present case his choice seems to be limited, and the question does not appear to involve any principle of ethics.

THE HEALTH AND SICKNESS ASSOCIATION, LIMITED.

THIS association has already been commented on in the BRITISH MEDICAL JOURNAL. The endeavour to induce medical men to take shares by offering them in return the paid posts of medical examiners to the society on the alleged ground that in this way the taking of only first-class lives will be the better assured, will hardly commend itself to the profession.

TREATMENT OF INCONTINENCE OF URINE.

DR. G. A. HAWKINS-AMBLER (Liverpool) writes: A rather old-fashioned mode of treatment for this troublesome complaint was the application of a blister to the nape of the neck. Have any of your readers tried the effect of discussing this before the youthful patient? Of course the cases I see are in female children, but I have found it act like a charm, while prescribing any kind of mixture, to discuss before the little patient the possibility of our having to resort to the above painful alternative in case the medicine does not effect a cure. It, at any rate, is likely to cure cases of mere laziness, and where the cause of the trouble is often so difficult to find, it is well to have a reliable method of excluding one great cause without punishment that is generally a useless cruelty.

TREATMENT OF SEA SICKNESS (VERTIGO).

DR. W. D. BETENSON (Caversham Road, N.W.) observes, in reply to "F.B.," that vertigo is only one of the symptoms of sea sickness. The nervous equilibrium of the whole body is disturbed, and the mind is a powerful factor not only in inducing, but in inhibiting, the symptoms commonly complained of. Farewell festivities are a powerful predisposing cause, but I do not advise the taking of drugs for a few days before embarking, as is commonly done. Fresh air is, next to courage, the best thing. A recumbent or semirecumbent position on deck amidships should be chosen, especially if the vessel is pitching. Small quantities of food taken at frequent intervals are beneficial, and porridge, arrowroot, and dry biscuit, with a little champagne, are best. After four years' experience I cannot confidently recommend any drugs. Cocaine in 1-grain doses has worked marvels sometimes, but is more often a complete failure. Bromide, chlorobrom, and creasote are equally uncertain. Tincture of nux vomica, with spirits of chloroform has lately been my stand-by, and I think gives better results than any of the others.

NOTES, LETTERS, Etc.

HAY FEVER AND THE POLLEN OF GRASSES.

DR. CHAS. H. BLACKLEY (Southport) writes: Dr. Brazil does not fully answer Dr. Arnold's letter in the BRITISH MEDICAL JOURNAL of March 5th. If he will refer to Darwin's work on *Insectivorous Plants*, he will find that he distinctly states that each gland on the leaf of drosera

rotundifolia could not have absorbed more than $\frac{1}{3000000}$th of a grain of of phosphate of ammonia; and yet this minute quantity caused distinct physiological action. This surprised Mr. Darwin and rather troubled him, because he feared that nobody would believe his statements. Nevertheless he published them and let them take their chance.

For some years before I commenced study in the profession I had suffered from that curious malady, hay fever. It came on every summer and departed in the autumn. When I had qualified and got fairly established in practice, I commenced to investigate the cause of hay fever. I made slow progress at first; but I eventually satisfied myself by experiment that the pollen of the grasses was the cause of the attacks in England. The investigations were published as the first edition of my work on *Hay Fever* in 1873.

After a little time I set to work to determine the quantity—by weight and by number—of the pollen grains that would set up hay fever. After careful and repeated experiments, I found that so small a quantity as $\frac{1}{3000000}$th of a grain would produce mild but very distinct symptoms of the malady: and it did not usually take more than an hour's exposure to the atmosphere at the commencement of the disease before I was aware from the symptoms of the presence of pollen. Thus, $\frac{1}{3000000}$th of a grain gave me very distinct indications of its presence. But rather less than $\frac{1}{3000000}$th of a grain would suffice, if inhaled in twenty-four hours, to keep up the malady in its severest form, and a quarter of an hour's inhalation of such an atmosphere by a hay fever patient would give repeated and violent attacks of sneezing and other troublesome symptoms. Here it was not the question of curing disease by a small dose, but the question of producing disease by what even your correspondent will admit to be a very small, an infinitesimal, dose.

In addition to the facts given above, I have been for the last fifteen years engaged on a set of experiments on the subcutaneous injection of the active portion of the pollen grain. These have given much the same result, in the matter of dose and the matter of symptoms, as my other experiments. These have not yet been published, but I hope soon to do so.

A QUESTION OF PRECEDENCE.

M.D. writes: It is well "A Member B.M.A." has directed attention to this subject, so commonly ignored, and yet which carries much with it In your annual List of Members, so regularly and well brought out, it is observable that all the graduates in medicine drop the now almost unmeaning term "esquire." But do the general public not ignorantly overlook this and do the reverse? Surely such an error should be rectified, and the status of graduates no longer be ignored. When a young man prepares for the army or studies divinity or medicine, he is written off "Esq." invariably, seeing he enters as a gentleman. When the lieutenant becomes a "captain," and his comrade in his turn is styled "reverend," in each instance the "esquire" is dropped for ever, the title reverend or captain correctly superseding esquire. Yet when the graduate in medicine acquires his "M.D." and becomes a university "Doctor," the ignorant or unthinking continue to esquire him, thus ignoring his rightful status, and treating his university degree with contempt, as if indeed he were still an undergraduate. No person would think of writing "Esq." with reverend or with captain, why then with M.D.? Some smart individual may reply that doctors of law latterly take Esq. from preference, and are written down "Esq., LL.D.," but this will not hold here seeing that these gentlemen of the law voluntarily relinquish the title "doctor," a move no doctor of medicine takes. If these premisses are correct, it goes for the saying that adding "Esq." to the M.D., however intended, is a distinct slight, not to say an insult. In my opinion the general and often very ignorant public hold the profession in so little esteem, that they really think anything, even an "Esq.," ornamental and good enough for the University M.D.

PREHISTORIC DENTISTRY.

IN an article entitled "The Mysterious City of Honduras," published in the January number of the *Century* (*Dental Review*, February, 1898), Mr. George Byron Gordon gives the following account of recent discoveries at Copan: "No regular burying place has yet been found at Copan, but a number of isolated tombs have been explored. The location of these was strange and unexpected—beneath the pavements of courtyards and under the chambers of houses. They consist of small chambers of very excellent masonry, roofed sometimes by means of the horizontal arch and sometimes by means of slabs of stone resting on top of the vertical walls. In these tombs one and sometimes two interments had been made. The bodies had been laid at full length upon the floor. The cerements had long since mouldered away, and the skeletons themselves were in a crumbling condition, and gave little knowledge of the physical characteristics of the people; but one fact of surpassing interest came to light concerning their private lives—namely, the custom of adorning the front teeth with gems inlaid in the enamel and by filling. Although not all the sets of teeth had been treated in this way, there are enough to show that the practice was general, at least among the upper classes, for all the tombs opened, from their associations with prominent houses, seem to have belonged to people of rank and fortune. The stone used in the inlaying was a bright green jadeite. A circular cavity about one-sixteenth of an inch in diameter was drilled in the enamel of each of the two front teeth of the upper row and inlaid with a little disc of jadeite, cut to a perfect fit and secured by means of a bright red cement."

THE NEW VACCINATION BILL.

OLIVER SWITCH writes: When a new Act is passed, or an old one amended, the poor medical man is the last to be thought of, even if he receives any consideration at all. With regard to the change from human to calf lymph there is no cause to complain, but when it comes to vaccinating infants belonging to dissatisfied parents at their own residences it is quite another matter; he will have to hear abuse among other inconveniences until he gives up the vaccination to a class of men who do not mind being sworn at. Again, what about filthy dens, common lodging houses, and other septic premises? The chances of erysipelas supervening must of necessity be more than at a vaccination station, where everything is cleanly. What about calf lymph to be supplied? Will it be on the old septic manner of points, or in tubes? Then comes the matter of fees. At present we receive an extra sixpence per case where calf lymph is used; this I find not sufficient, as this vaccine we have on hand will not keep. Surely, when calf lymph is used, unsuccessful as well as successful should be paid for alike.

FORECASTING THE SEX.

DR. PERCY SHARP, First Class Expert British Beekeepers' Association (Brant Broughton) writes: On page 781 of the BRITISH MEDICAL JOURNAL occurs the sentence, "The effect of feeding upon the sex of bees has long been known." It is now, however, well known among those who have given attention to the subject that feeding has no effect whatever upon the sex of bees; this being determined solely by the kind of egg laid by the queen or mother bee. The queen bee is able to lay two kinds of egg only—those which have been fertilised and those which have not. The latter invariably produce drones or male bees; while the former produce either queens—perfect females—or workers—imperfect females. This last result is dependent not only upon the amount and kind of food given to the larvæ by the nurse bees, but also upon the shape, size, and position of the cell in which its larval existence is passed. Feeding, then—other conditions being suitable—can merely alter the degree of development, and not the sex of the insect.

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THE LUMLEIAN LECTURES
ON
THE PRINCIPLES WHICH GOVERN TREATMENT IN DISEASES AND DISORDERS OF THE HEART.

Delivered before the Royal College of Physicians of London, March, 1898,

By Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P.,
Physician Extraordinary to Her Majesty the Queen; Physician to the Middlesex Hospital.

LECTURE II.

Acute Inflammatory Diseases of the Heart.

The general line of treatment in the vast majority of cases of acute inflammatory diseases of the heart is the same. We might, after recognising the presence of heart disease, so far as treatment is concerned, keep our stethoscope in our pockets. For we have chiefly to consider the fundamental complaint of which the cardiac affection is in most cases a part, and this disease is, in the majority of instances, acute rheumatism. Now, from the heart point of view, and indeed from any point of view, I think all authorities are now agreed that the right treatment of acute rheumatism is absolute rest in bed in woollen wrappings, a free relief of the bowels, and the administration of sodium salicylate in efficient doses, in combination with such alkaline remedies as the condition of the urine may suggest.

It was shown very emphatically by the late Dr. Sibson[1] that the difference between absolute and incomplete rest in the treatment of acute rheumatism was an exemption from heart complication of 71 per cent. as contrasted with 44 per cent. We never see now those cases of acute rheumatism involving three to six weeks' acute suffering so little influenced by treatment as to render possible the warm discussions of not thirty years ago at our clinical societies respecting the relative merits of alkaline drenches, multiple blisters, or mint water drinks and dry cotton wool applications in that disease. But few cases now endure more than five days' suffering under the salicylate treatment, and a treatment of the general disease thus successful can scarcely fail with due care and foresight to prove in some degree preventive of cardiac lesions, which are true manifestations of the rheumatic poison, usually of somewhat later appearance than the joint phenomena.

The earlier statistics, both with regard to the influence of salicylates and other drug treatments in lessening the tendency to heart disease in rheumatism, are for the most part valueless, being based on hospital cases, the previous existence of heart affection not being certified, and the treatment before entering hospital not being given. It can scarcely be doubted, however, that the current view that salicylates do not lessen the liability to cardiac lesions is founded on the fallacy that cases early relieved of pain and fever by salicylates are often allowed to get up too soon. The so-called relapses are rightly described by Dr. Howard as rather "recrudescences of a disease not yet terminated." The average time spent in hospital for acute rheumatism—thirty days—is nearly the same under all treatments, the full alkaline treatment having a slight advantage; and during the greater part of this time the patient must remain in bed under strict treatment by warmth and rest and appropriate drugs. If, therefore, on the relief of pain and reduction of temperature the patient be regarded as convalescent, and be allowed out of bed, he assumes the position of one with acute rheumatism still upon him treated with incomplete rest, and so becomes doubly liable to cardiac manifestations.

I may pass by the local treatment of cardiac disease in rheumatism, with the remark that it varies according to the views of particular physicians. There is no doubt that a certain few cases are wisely treated variously at the physician's discretion by cold or warmth, by blisters or leeches, according to particular indications. It cannot be said that any one plan of treatment is to be recommended as superior in all cases.

Why should rest, absolute recumbency, be so important in acute heart affections? We cannot still the heart, but we can lighten its burdens and lessen its restlessness. The mere difference between lying down and standing up to the healthy heart is 10 beats a minute, or 600 beats an hour. How much greater may it not be to the heart irritated by acute disease?

The pulse naturally quickens as the temperature rises. Hence by mitigating pyrexia we, *cæteris paribus*, rest the heart. It is generally held by pathologists that pyrexia lowers arterial pressure, but the conditions that attend rheumatic pyrexia, multiple joint inflammation, and excessive metabolism, with high density of urine, would favour heightened arterial tension. Our alkaline and salicylate remedies reduce arterial pressure both directly and indirectly by stimulating skin and kidney function. So that the general remedies most applicable to the fundamental diseases are at the same time specially suitable for the requirements of the local malady.

Are there any special remedies to be employed for the heart condition? There are but few. The group of heart medicines is not, as a rule, applicable until the case has fully emerged out from the general disease, and has become a single organ malady. It may be said, generally speaking, that digitalis and its class are useless in acute inflammatory heart affections; that aconite, with certain exceptions, is harmful; mercury has long been abandoned with venesection and other violent measures. There are two forms of cardiac lesion, however, which may frequently be treated by moderate doses of opium with great advantage. They are pericarditis and myocarditis, conditions often conjoined, the especial indications being pain particularly manifested in some (not all) cases of pericarditis and irregularity of rhythm, tending to tumultuous action with failing power, characteristic of myocarditis.

Endocarditis in rheumatic fever affects the mitral valve most commonly, the aortic orifice much less frequently; the more complex mitral flaps stiffened, and with their opposed surfaces thickened by vegetations, permit of regurgitation, whilst the aortic valves, losing their flaccidity, and being roughened by vegetation, are unduly salient during systole, and so cause obstructive murmurs. Neither of these conditions calls for or responds to, at this stage, any treatment additional to that already laid down for the dominant complaint. It is somewhat inadequately argued that sodium salicylate does not influence heart affections in rheumatic fever. This view is founded upon a double misconception. In the first place, the murmur, or pericardial friction, heard in endocarditis, is a result of altered mechanism, rather than an evidence of activity of lesion. Their continued presence does not show unchecked activity of lesion, nor could they be expected to disappear like the fading blush over the rheumatic joint. More than this, cardiac rheumatism affects a part in constant functional activity, to which the term rest is only relatively applicable, and further, the mild degree of daily pyrexia, which is often prolonged in endocarditis, is probably partly due to contamination of the blood stream by sero-fibrinous material exuded from inflamed surfaces, which, although not septic, has yet become foreign through alteration by products of cell proliferation. After the third or fourth week, the salicylates may be replaced by quinine and arsenic as remedies better suited to combat this phase of the malady.

There are various considerations which emphasise the importance of more prolonged rest in cases of acute rheumatism accompanied by cardiac lesions. The difference is a striking one between the ephemeral results of other inflammations in a joint or even in a fascial membrane, and the same affection of a cardiac valve, the pericardial sac, or even the pleura. But this different result is well accounted for by the condition of unrest that in different degrees obtains in each of the three latter parts. This condition depends on automatic mechanism happily beyond our control; but, as pointed out in speaking of the acute phase, we can very materially lighten the labour of the heart and lessen the strain upon the valves by maintaining the body in recumbent repose.

It is true that in the milder cases of endocarditis the inflammation may be mainly seated at, or even limited to, the lines of contact of the valves, the points of greatest strain, as has been pointed out by Moxon, Sibson, and other authors, but in more severe cases the whole valve partakes in the inflam-

matory hyperæmia, and is the more liable to become so involved the more it is subjected to premature functional strain. But for a considerable time after active inflammation has passed, a time varying much in different cases, a smouldering endocarditis goes on attended with a slight daily rise of temperature, so slight sometimes as to be ignored by the attendants, and yet during and beyond all this time absolute rest is necessary. The valves are softened and thickened by nuclear granulation tissue and new fibrous formation. They readily yield and become distorted under any increase of blood pressure, whilst the nuclear tissue further develops into hard and contractile cicatricial tissue, which fixes and further distorts the valves.

The infrequency with which aortic regurgitation and mitral stenosis are met with in primary cases of rheumatic fever cannot fail to have impressed clinical observers, but the lesson to be received from this fact has not been duly learned. Dr. Sibson[2] points out that of 24 cases of acute rheumatism with primary endocarditis, treated by a rigid system of rest, only 1 gave evidence of aortic as well as mitral disease, whereas in 19 instances out of 127, or 1 in 6.7 cases not so rigidly treated in this respect, aortic regurgitation was present. But even Sibson did not point the lesson, for he only insisted upon the importance of maintaining rest for "a period of several days after the complete disappearance of the local inflammation of the joints."

If it be true that aortic regurgitation and mitral stenosis —rarely met with in primary rheumatism—are the results of secondary changes in the valves caused by (1) strain upon the softened valves, (2) by cicatricial deforming changes in them, the first of these can be to a great extent prevented and the second to a great extent lessened and modified by maintaining the patient quiescent for a sufficient length of time.

The exigencies of hospital routine, the pressure of perhaps more urgent cases, and the natural anxiety of the patients themselves to get home, result in the discharge of rheumatic fever cases even with heart complications within a month or five weeks, when perhaps another month's rest would add many years to the life estimate. A very bad lesson is thus taught to students.

In private practice, in dealing with children and young people especially—and they are numerically by far the most important cases—it is not difficult, with sufficient firmness in explaining the position, to secure an adequate period of rest to allow of a complete subsidence of inflammatory change and a restoration of due resisting power in the weakened valve. At least two months after an attack of rheumatism involving the heart, and in some severe cases from four to six months, is necessary for this purpose. A minute attention to the temperature chart and pulse and careful investigation of the cardiac sounds will be the chief guides in regulating the rest treatment of these cases. For a further ill-defined period of months very gradual and careful return to an amount of activity suitable to the case must be permitted.

Under this system of management very striking results, in many instances practically complete cure, will be obtained, especially in children and young people. It was taught in my student times by the greatest of living clinical teachers that children grew into rather than out of heart disease. I have been surprised since to meet with many instances to the contrary, and I venture to think that the opinion was based largely upon the experience of the Children's Hospital dealing with poor children who were not maintained long enough at rest, and who returned later with the results of the deforming endarteritis.

I have pointed out that the cardiac group of drugs is of little value in the early stages of heart disease. Our object is to promote resolution and the healing process. Our primary object is not at this stage to increase heart power, which would indeed only antagonise our views of easing valve function. As the acute rheumatic features fade, general anæmia and cardiac fatigue often present themselves for consideration in treatment and such drugs as arsenic, strychnine, and iron are strongly indicated.

At this stage, particularly in pericardial and in some endocardial cases, the employment of moderate doses of iodide—for example, a 5-grain dose of combined iodides of soda, ammonia, and potash three times a day, have seemed to me of some advantage in helping the resolution of the inflammatory thickenings. A due regard would, however, be paid to the toleration of the iodide, and it would in all cases be combined with some tonic, such as strychnine, arsenic, or iron. It is at this time, at the end of the pyrexial interval, that the question as to the usefulness of digitalis comes in. A quickened and irregular rhythm, one or both arising from want of power to deal with a valve defect, is the particular indication for the employment of digitalis. The drug is of little, if any, use, and may do harm if the quickened action be the result of inflammatory irritation. Hence, where the irregularity is attributable to pericarditis or myocarditis the drug is useless; when the soft, low pitched murmurs with raised temperature indicate active changes going on in the valves, digitalis should be withheld unless positively demanded by a failing ventricle, the special signs of which would be congestion of the lungs, enlarging liver, œdema of the limbs, and very scanty urine. But these symptoms are only present in very grave cases. In the majority of instances during active valve changes, as I have said, digitalis is not needed. In the selection of change of air for convalescent cases of endocarditis, the first consideration is freedom from wetness of subsoil. Seaside towns are generally preferable to country districts on account of the ground being well drained, the walks easy, the sunshine abundant, and facilities in the way of bathchair exercise, sunny balconies, etc., greater. I may here mention a matter of extreme importance, to which I shall allude again in speaking of ulcerative endocarditis, and that is the necessity of perfect sanitation, bearing in mind the susceptibility of the recently inflamed valves to bacterial invasion.

In cases in which the lesions are grave, the progress tedious, the necessity for rest prolonged, general nutrition may be maintained by judicious massage such as to stimulate muscle nutrition and facilitate venous circulation. Thus do they become better prepared for the gentler forms of exercise on first getting up. These exercises may be taken in some definite and prescribed form, as at a spa, or they may be simply directed by the knowledge and common sense of the doctor.

TREATMENT OF VALVULAR DISEASE.

In a case of valvular heart disease, having arrived at a diagnosis the physician's further deliberations mainly turn upon whether

(*a*) The case is a suitable one for the employment of remedies of the digitalis order, and to what extent shall they be pushed.

(*b*) Does the case require complete rest? or

(*c*) What degree and kind of exercise will be beneficial, or may be permitted?

(*d*) The general state of the patient, his nervous system, condition of nutrition, blood state, etc., will have to be considered, as well as those special functions of kidney and liver and the dropsical state, which are a part of the perturbed circulatory condition.

It is, of course, quite unnecessary for me here to discuss any points of physical diagnosis, and I will at once pass on to a brief consideration of the properties of digitalis upon which we have to rely in practical therapeutics.

What are the attributes of digitalis upon which we rely in our daily practice?

1. Digitalis slows the heart's action, concentrating the force expended upon fewer and more efficient contractions.

2. It is stated that digitalis also directly stimulates the heart's action (Williams[3]). The more obvious effect clinically is rather a concentration of force and gathering of small irregular beats into efficient contractions.

3. It is generally agreed that the drug affects the cardio-vascular muscles directly. Although the ultimate plasmic distribution of the vagus in the heart is presumably the special sphere of its influence, it is highly probable that its effects extend also to the nerve centres. It is difficult otherwise to explain the secondary effects of digitalis, especially its vasomotor effects and the peculiar nausea, resembling that of sea-sickness, which often proves so important a result of its continued use.

4. Digitalis contracts the arterioles, and this effect, in combination with the increase in the contractile force of the heart, raises the blood pressure in the arteries.

5. The effect of the contraction of the arterioles is to maintain the blood pressure between the cardiac beats.

This effect of digitalis in contracting the arterioles has been known for 30 years, and as Dr. Lauder Brunton was amongst the first to prove it experimentally, so he has by a series of experiments made with Dr. Tunnicliffe quite recently, maintained the importance of arteriole contraction in sustaining the blood pressure between the beats of the heart.

It must be remembered, as shown in both series of Dr.

Brunton's admirable experiments, that the blood pressure is maintained in the arteries in the intervals of systole, that is to say, that under digitalis influence, after closure of the aortic valves the aortic resilience more gradually effects the emptying of the arteries through the capillaries. Now, this effect is of great clinical importance.

1. It maintains the blood longer in the arteries, and hence favours the more effectual irrigation of organs, particularly of the secreting organs.

2. By the better distribution of the ventricle force venous congestion is avoided, and the venous current more sustained; the heart has less immediately to overcome venous inertia, and the less bulky and stagnant venous stream is more readily respondent to *vis-a fronte* influences.

3. Provided always, however, that corresponding with a longer maintained arterial pressure the digitalis produces a slower heart beat. For it is obvious that if with increased slowness of distribution of cardiac force we have no corresponding diminution in frequency of the cardiac contractions, we may get the resistance mounting up to a dangerous pitch.

From clinical observation I should have said that in medicinal doses digitalis affects the heart before the vessels, and so the proportionate conditions of its effective and beneficial action are in suitable cases secured, although experimentally with the drug introduced directly into the circulation in full physiological doses the vessels have been found to react sooner than the heart.

6. Pushed beyond its therapeutic limits digitalis appears to paralyse the cardiac vagus, the heart's action becomes rapid, peristaltic, and finally stops in systole. The failure in heart power seems to arise from inefficient and finally extinguished diastole, and the arterioles generally maintain their contraction to the end.

In considering the cases of cardiac disease, and for the moment speaking of valvular diseases of the heart, the first thing to remark is that there is to be observed a type of pulse and heart rhythm adapted to and characteristic of each form of valvular disease of the heart, which may regarded as normal to that lesion, and it should be the object of the physician to consider whether the rhythm of heat and the result of estimated cardiac force as registered by the pulse are in full accord with the altered circumstances produced by the valve defect. How far the pulse varies from that of health is a preliminary part of the diagnosis, but the diagnosis made, the question for treatment is whether the character of the pulse is normal to the lesion found, or does it vary from what it ought to be under the circumstances, and to what is the variation due? On thinking the matter over in this light, we perceive that in the therapeutics of cardiac affections, after the acute stage, we do not treat the valve defect, but we treat the heart; whilst it will be remembered that in thinking over the treatment of cardiac affections in the acute stage, we found that our measures were not directed to the heart so much as to the affected valves or pericardium, and incidentally in this latter section of acute cardiac affections we found but little employment for drugs of the digitalis order, and that in many cases their employment was positively to be avoided.

Digitalis in Aortic Disease.

There has been much dispute as to whether digitalis—and in mentioning digitalis I speak for the whole therapeutic group—should be used in the treatment of aortic regurgitation. But in the most typical cases of aortic regurgitation the patients are very well; they may be quite unconscious that they have anything the matter with them, they lead active even athletic lives, and will be shocked on presenting themselves before an insurance society at being refused or very greatly surcharged. Except for accidents in the way of functional disturbances of reflex origin, vasomotor angina, to which they are very liable, and sudden or gradual overstrain to which their unguided energies tend to lead them, these patients, if they follow rationally prescribed lines of conduct, may go on very well until the degeneration period of life. Now the conditions of good compensation are steady, regular, forcible ventricle beats, an increase in the capacity of the left ventricle to accommodate a larger measure of blood in diastole, and a vigorous and truly muscular hypertrophy to enable the ventricle with little supplementary support from the aortic valves to propel the blood through the capillaries and maintain the venous current. Under these conditions, which are faithfully recorded in the steady regular pulse, with a strong abrupt beat, rapid subsidence, and low tension of artery, digitalis is not wanted, and a powerful drug, when there is no indication for it, cannot but be harmful.

In all cases, however, of aortic regurgitation which are not interrupted in mid career by some of the accidents to which I have alluded, the time comes when the employment of digitalis is of the greatest value. What are the indications for its use? In one word, they are the symptoms of commencing failure of the left ventricle fully to respond to the heavy call upon it, provided that failure be under conditions otherwise normal to the disease. It may be, for instance, that the ventricle is temporally overburdened by the results of some nervous, dyspeptic, or gouty storm reflected upon the small vessels, and causing a measure of high tension to supervene upon that relaxed condition of the arterial system which is normal to aortic regurgitation, and which is probably a natural compensatory effect, induced by the relaxing influence of the depressor nerve in response to the increased pressure within the ventricle. Under the conditions of high arterial tension thus induced, it would be very faulty practice to give digitalis; any result it might have in forcing increased work out of the already willing muscle would be necessarily at the expense of later exhaustion, apart from the tendency of the drug itself to increase tension. Obviously, under these conditions, a mercurial and saline, or such other treatment as may specially meet the cause of the increased arterial resistance is the first measure, in combination with a little extra quietude, and to be followed by a tonic calculated to restore the fatigued heart. I have already dealt with the treatment of acute high tension, accompanied by anginal symptoms in aortic disease. It has been said that the heart in aortic regurgitation is sometimes too vigorous, its hypertrophy excessive, and that it is necessary to use drugs of the aconite order to lessen ventricular expenditure. I confess I have never recognised a case of the kind, and that, in my experience, unduly laboured heart's action in this disease is always to be explained by reflected functional disturbance or increased arterial resistance. The one thing we have to look to in aortic regurgitation is the maintenance of heart power, and any sign of over-struggle is rather to be met by measures calculated to diminish peripheral resistance:

1. Irregularity in the heart's action.

2. A want of precision and sharpness in the character of the pulse.

3. Increased displacement of the apex beat to the left, and extended impulse upwards.

4. The occurrence of irregular smaller beats as marked in the pulse, and appreciated at the heart.

5. The supervention of a soft systolic *bruit* over the mitral area.

6. Extension of the cardiac dulness to the right.

7. The almost complete replacement of the normal, regular, strong, slow, collapsing pulse, and simple hypertrophic heart's action, normal to aortic regurgitation by a rapid heart's action, irregular in force and frequency, with a corresponding small pulse having the characters of mitral rather than of aortic disease.

Such are in gradation the ingravescent signs of ventricle failure in aortic regurgitant disease, and the increasingly imperative indications for the employment of digitalis in its treatment. As the above signs develop, we observe important symptoms of the changed arena of struggle from the left to the right heart territories of the circulation. Congestion *rales* appear at the bases of the lungs, fulness to enlargement of the liver, œdema of the extremities, and scantiness of the urine.

Under those conditions the peculiar effects of digitalis are precisely called for to slow the action of the heart, to render its contractions more complete and regular, and thus to check the gathering of residual blood in the ventricle, and restore the efficient application of the mitral flaps by approximating their attachments.

I have before remarked that, clinically, digitalis appears to influence the heart before the vessels. There is, indeed, in all probability proportionate relationship between its effects upon these two sections of the circulation. If, as we believe, the drug acts directly upon the cardio-vascular muscle, we may safely infer that the bulk of the muscle concentred in the heart being more than equal to that of the muscle distributed in the vessels, the predominant effect should remain with the heart. We must not, of course, push this argument too far; it is at least in favour of what I believe to be an observed fact in aortic regurgitant heart failure, namely, that digitalis rarely affects the vessels prematurely or dispropor-

tionately, but on the contrary, by improving arterial tone, it does no more than prevent that rapid emptying of the arteries which, although normal to aortic regurgitant disease, requires a corresponding rapidity or suddenness of ventricle contraction to maintain a sufficient arterial pressure for vital functions which is very exhausting to the enervated and failing hearts under consideration. The maintenance of a strict recumbency is, of course, essential in the grave cases I have described, and, with a suitable dietary, the heart soon begins to respond to a steady daily administration of from 30 to 90 or more minims of tincture of digitalis, or an equivalent preparation with proper adjuncts in the form of an occasional mercurial and saline. With the increasing efficiency of the *vis a tergo*, the blood pressure in the arteries rises, and with the similarly increased efficiency of the *vis a fronte*—for the drug not only indirectly helps, but directly stimulates the right heart as the left—the venous current is hastened, the pulse will begin to steady, and at about the third day the urine will increase in quantity, the signs of venous congestion begin to diminish, the pulse to assume more and more its proper aortic characters, and the patient gradually recovers to a point short, however, of that degree of health and heart power he before enjoyed.

Thus again and even again have we most of us seen patients with heart failure in aortic regurgitation restored, put on their legs by the action of digitalis. Having once passed through this ordeal, they can never be said to be entirely independent of the drug. I have put the extreme case: but it is needless to say that by watchfulness in recognising the earlier phenomena of heart failure, which I enumerated as nearly as possible in chronological order, and by the timely employment of an occasional course of digitalis the most desperate symptoms may be long postponed. One of the greatest difficulties in practical medicine is to decide when to omit treatment, and this difficulty is particularly felt by many in regard to digitalis. I shall allude, perhaps more fittingly, to this point later on, and will content myself now with the remark that the general condition of the patient—his anæmia or otherwise, his general nerve tone, the due activity of his other functions—must be carefully watched and regarded, and the use of other remedies accordingly employed, with a mitigation or suspension as the case requires of the digitalis treatment. The final word with regard to the treatment of aortic regurgitation would seem, then, to be: Await the distinct indication of altered pulse characters, even ascertain whether there are not general conditions of over-fatigue or strain, or impaired general tone from anæmia or other debility, before giving digitalis, and, having commenced with it, pursue the treatment boldly and steadily, and look under its influence, and as a sign of its success, for a return of the characters which are normal in the pulse of this disease.

With regard to aortic stenosis the same argument holds good—that is, that as soon as the normal pulse of this affection—a small, rather slow and regular pulse—becomes replaced by irregularity and frequency, accompanied by the usual signs of failing compensation, digitalis is needed. So long as the heart is beating quietly and regularly nothing but harm can come from the use of digitalis; with irregularity and disorder nothing but good, provided it be carefully watched and mitigated with returning regularity.

DIGITALIS IN MITRAL DISEASE.

In mitral stenosis the strain to effect this equilibrium of the two circulations falls upon the right ventricle, which, assisted by the left auricle, has to supply the left ventricle with sufficient blood notwithstanding the narrowed mitral orifice. In the pure funnel form of mitral stenosis, a disease which is, I am convinced, often of congenital origin, the right ventricle and left auricle undergo corresponding hypertrophy and increase of capacity, and are able without artificial aid to maintain the circulation, sometimes for the first 40 or 45 years of life. The features of mitral stenosis are a high pulmonary and a low systemic blood pressure, a regular slow pulse, a tendency to pulmonary congestion and systemic anæmia. Whilst these conditions are maintained digitalis can do no good; the right ventricle is in full work, the left has got scarcely work enough to do, the intrapulmonary pressure is already near the point of strain, and the prolonged diastolic pause natural to the lesion is precisely adapted to the needs of the slowly filling left ventricle.

Any constriction of the systemic arterioles would be disastrous under such conditions, as was seen in the case I related of mitral stenosis with vasomotor constriction of vessels and pulmonary hæmorrhage. The first indication on cardiac distress arising in mitral stenosis would be to relieve the right heart by unloading the venous system by direct venesection or intestinal and hepatic derivatives, and a restricted diet and treatment of pulmonary complications as the urgency of the symptoms might require; but when, these conditions being satisfied, the pulse still remains quick and irregular, and the right heart embarrassed, the employment of digitalis is certainly indicated on the same principle as before; and in the presence of cardiac need we may as a rule disregard considerations of raised arterial tension, since, as I have urged, the first and predominating influence of the drug is upon the heart. The moment, however, the cardiac action is restored to regularity we must again remember the arterial effects of the drug, and endeavouring to maintain without increasing its effects upon the heart by greatly mitigated doses, to watch for and avoid any undue action on the vessels.

In mitral regurgitation, with commencing or established heart failure, we find all the conditions calling for the beneficent action of digitalis, and the mere presence of a mitral murmur is often regarded as an indication for the use—it may be the very guarded use—of the drug. It must be remembered that I am not speaking of acute cases, nor would digitalis be suggested by the mere presence of a mitral regurgitation in the senile heart, of which it is almost a characteristic and often a very advantageous factor; nor again, in those cases in which the regurgitation occurs as a compensatory safeguard in overstrained ventricle from chronic high arterial tension, is it often desirable, except with much caution, to prescribe digitalis. It is in commencing heart failure in chronic mitral lesion from rheumatic endocarditis that digitalis is so valuable. What are the features of this state? A quick small pulse is normal to mitral regurgitation, and even some irregularity of rhythm or force is of no great moment, although even now short tonic courses of the drug may be useful; but when irregularity is a marked feature, when a few beats are large and turbulent to be followed by several small beats, when the pulse no longer corresponds in number with the cardiac contraction, when the heart itself shows signs of hypertrophy and extending dilatation of both ventricles, with dulness extending upwards over the conus and left auricle, when the neck veins become full, fill from below and pulsate, the liver enlarges, the cellular tissue becomes dropsical, the lungs congested, and the urine scanty. With these symptoms and signs we have, with increasing urgency, the conditions calling for digitalis. These conditions begin, it will be observed, with the pulse and heart characters which replace those which are normal to other forms of cardiac disease when failure is commencing and digitalis is called for. This fact about mitral disease is to be noted in prognosis.

A congestion of the pulmonary and venous system, and an anæmia of the arterial system are the underlying factors in this condition as in mitral stenosis. But the difference is that in mitral regurgitation the congestion is all backward: each blood thrust of the right ventricle is met by a counter-blast from the left, the left auricle is not protected by its valve from invasion backwards, and cannot therefore efficiently co-operate with the right ventricle, the cusps of the pulmonary valve have to take up in part the function of the mitral valve. Of course, there are cases and cases of mitral regurgitation. In some the leakage is so slight as to cause no inconvenience. The skilled practitioner can discriminate to a nicety as to the gravity of the case by the degree with which the first sound is replaced by murmur, and by estimating the relation between expenditure of force by the heart and the result effected in the pulse showing the degree of waste in the mechanism.

The most common mistake that one observes in the use of digitalis is that too large a dose is prescribed at first, which tends to premature arterial contraction and cumulative effects. Then, with the appearance of these physiological symptoms the drug is stopped, and some other medicine substituted, until the pulse again calls for its administration.

In this haphazard way of using digitalis the heart is never held in good control. In exceptional cases, where there is urgent need to push the drug, digitalin is best used subcutaneously. In ordinary cases a dose of 10 minims of the tincture every four, or 15 minims every eight, hours, or 5 minims every waking hour, is sufficient. Thus given, the patient being at rest, it generally takes about three days before the pulse is under control, and the urine begins to increase. When its decided effects are thus gradually developed the drug should be steadily continued in doses calculated to maintain its effect. With ordinary watchfulness there is no risk whatever; timely warning of excess is given by the pulse, which having become slow begins to exhibit small intermediate beats, and especially a tendency to go in couples. This is always a sign to reduce the doses or to omit for a few hours. The sickness that occasionally—too often—supervenes with digitalis, is most troublesome. An occasional mercurial will sometimes prevent it, a change to digitalin in equivalent doses may be tried, or a tumbler of very hot water taken occasionally. In some cases it is not to be overcome except by omitting the drug; the patient is usually well under the influence of the drug before this symptom appears, in which case a small dose of digitalin by the mouth or hypodermically may be sufficient to maintain its effect on the heart.

In speaking of digitalis, I have regarded that drug as representing the whole therapeutic group. Digitalis is, to my mind, so far in front of all the others in efficacy, that in critical cases I should never think of prescribing any other member of the group before it. Strophanthus comes next to it in usefulness, and in physiological experiment is even more powerful. Clinically one is not so well satisfied with it, and this may possibly be prejudiced, but I have had doubts about its stability in prescriptions. It causes the same troublesome nausea. The one reason for its use is that it affects the small vessels less; this gives it an advantage in some cases, particularly, perhaps, in carrying on the effects of digitalis in convalescent aortic regurgitant and mitral stenosis cases. But as I have endeavoured to point out, under most conditions calling for its use this very action upon the arterioles is one of the valuable attributes of digitalis, and explains, possibly, its superiority over strophanthus. I frequently, however, combine the two drugs when I want to secure an increased cardiac effect without using digitalis in doses large enough to contract the vessels too much. Convallaria comes next as a cardiac tonic in mild cases. I have only very occasionally used sparteine. One may observe that the earliest sign of amendment in cardiac failure is an increased flow of urine. A somewhat analogous relief of the stress of symptoms will often be observed with the commencement of dropsical effusion, provided that effusion, of course, be limited to the cellular and peritoneum tissue. The peculiar restlessness and discomfort that precede the onset of dropsy are sometimes very remarkable, and the dropsical effusion should rightly be regarded as one of those compromises of Nature which enable the vital machinery to go on a little longer. Dropsy is due primarily to a leakage from the congested capillaries into the cellular tissue. It is also due to a retarded removal of the fluids by the lymphatic vessels.

From a therapeutic point of view the osmotic circulation in the cellular tissue and serous and mucous cavities is scarcely less important than the vessel circulation discovered by Harvey. The interchange between the two circulations amounts normally to many pints in the twenty-four hours, and cellular tissue and lymphatic vessels conduct a considerable share of it. The current of lymph is of extremely low pressure, and a very slight backward pressure in the veins will embarrass it. In dropsy not only is there venous retardation in the capillaries encouraging excessive exudation, but the retarded current in the great veins is a further obstruction to removal by the lymphatic vessels. Hence a considerable collection of fluid, even many pints, may be removed from circulation. The immediate effect of this removal is often a very decided relief to the patient's distress. The occurrence of dropsy may thus sometimes afford time for the readjustment of the circulatory balance in the heart and vessels. But if with the help of remedies this does not take place and the dropsy advances the question comes, when to interfere? The answer is: Not until it is estimated that the pressure in the cellular tissue becomes great enough to equal or exceed the pressure in the capillaries. At this point interference becomes imperative, and the fluid should be removed by the employment of Southey's tubes, incisions, or simple punctures.

Very striking instances of long-abiding relief are met with from time to time from this treatment. I may quote a very remarkable case in this connection, illustrating a point which I have observed, namely, that dropsy occurs in some cases in the absence of heart phenomena which would appear sufficient to produce it:

A lady, aged about 50, had been under my observation for some years for most intense chronic asthma, with emphysema and recurrent attacks of bronchitis. Her condition at many times seemed almost hopeless, but the one redeeming feature about her was the heart's action, which remained steady and well-sustained through her worst attacks; although there was undoubtedly some dilatation and hypertrophy of the right side of the the heart, there was no sign of heart failure. Towards the end of a bad summer in 1896 her legs began to swell, and as her distress increased with the cold weather they filled up, and by December the thighs and abdominal walls were greatly distended. She was in other respects so ill at this time that I hesitated to tap the legs until they became too prominent a factor in her distress. Even now, although the heart's action was feeble, it was neither irregular nor very quick, and there were no murmurs. She was placed in a chair, and by means of four Southey's tubes 20 pints of fluid were withdrawn in the course of fifty-two hours. Now, it is remarkable that there has never been any return of the dropsy, although she has not been free from bronchitic attacks: the limbs are perfectly slim and natural, without a trace of œdema. The heart's action is as well maintained as before, It only partially failed for a few days after the removal of fluid.

I may say that this lady has never been able to take digitalis nor any drug of that series with advantage, and it has never been prescribed for her except for short times at rare intervals, and in very small doses. I should regard the retarded venous return from the great emphysema obstructing the lungs, in combination with an over-burdened right heart as responsible for the dropsy, but the case is one of a few I have seen of the kind, difficult satisfactorily to explain. It is possible that it may be an unusually prominent example of the effect of a mechanism that has more to do with dropsy than has been generally allowed, namely, obstructed venous return in the chest from great emphysema and dilated right heart, telling upon the lymphatic current in such a manner as to lessen the readiness of its escape into the innominate vein and so to hold in abeyance the share taken by lymphatic absorption in the removal of dropsical fluids.

References.

1 *Collected Works*, vol. iv, p. 347. 2 *Ibid.*, vol. iv, p. 384. 3 Quoted with acceptance by Lauder Brunton, *Journal of Physiology*, vol. xx, 1896, p. 357.

THE HUNTERIAN LECTURES
ON THE
SURGERY OF THE KIDNEY.

Delivered at the Royal College of Surgeons of England,

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Surgeon to the Middlesex Hospital.

LECTURE I.

(Continued from page 815.)

Operations on the Ureters *(Continued).*

Resection of the ureter is the operation whereby an inch or two, or a little more, of the duct is removed, and the ureter is united to the infundibulum, or the divided ends of the ureter to one another, as the case may be, so as to restore the continuity of the conduit.

It was first proposed by Marcel Baudoin in 1891, and first performed by Küster in May, 1891. Küster's case is a most important one, not only as being the pioneer case, but as a serious warning that we ought to practise conservatism in dealing with the kidney; and an indication that in hydronephrosis nephrectomy ought to give place to nephrotomy, or to ureterotomy, in any case in which either of these operations gives promise of success.

Küster reported his case at the Congress of Surgeons held in Berlin in 1892.[13] The patient was a boy, aged 13, with only a single kidney, who for two years had passed all his urine through a fistula, following lumbar nephrotomy, for hydronephrosis. The cause of the hydronephrosis was a very tight stricture near the renal pelvis. The strictured

part of the ureter was excised, and the cut end of the ureter was sutured to the renal pelvis. By the end of four months from the date of this operation all the urine was passed naturally, and the fistula was quite closed.



Fig. 6.—Abnormal relation of ureter to infundibulum before operation (author's case)



Fig. 7.—Relation of ureter to infundibulum after resection (author's case).

In the discussion on Küster's communication at the Berlin Congress Trendelenburg and Alsberg reported that they had each done a similar operation. Trendelenburg added that his patient had died from intestinal obstruction, due to adhesions between the hydronephrotic sac and the colon.

Cramer, of Cologne, followed Küster's lead in a case of hydronephrosis in 1893, and again in operating on a case of pyonephrosis in 1894; in both a non-urinary short fistula was present when the patients were last seen.[16]

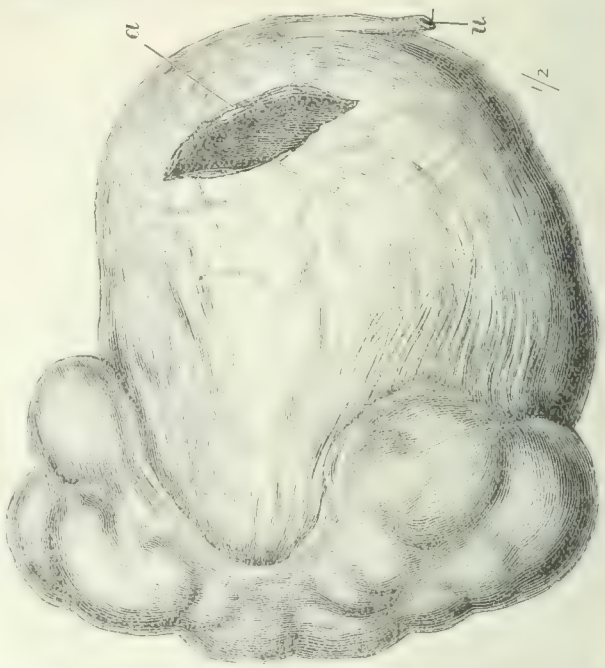


Fig. 8.—Kidney with enlarged pelvis containing plates of lime. It shows an abnormal relation of the renal pelvis to the ureter, which might at an earlier period have been remedied by operation (uretero-pyelo-neostomy), and the hydronephrosis thus prevented (Middlesex Hospital, October 30th, 1895). In author's list of nephrectomies.



Fig. 9.—The same abnormality, but to an even greater degree, is shown in this specimen. The hydronephrosis might have been prevented by a plastic operation (uretero-pyelo-neostomy). In author's list of nephrectomies.

Enderlen, in a paper on the Surgery of the Ureter,[17] relates a case in the practice of Helferich, in which Küster's operation was performed upon a young woman of 25, with hydronephrosis. She died on the ninth day with symptoms of anuria. At the necropsy the kidney of the opposite side was also hydronephrotic from an obliterated ureter.¶ [Nephrec-

tomy in this case would have been even more rapidly fatal. As stenosis seems to have followed the plastic operation in this instance, one is led to ask why a lumbar renal fistula was not established as soon as the signs of anuria set in.



Fig. 10.—Hydronephrosis. Ureter compressed by renal vessel (Guy's, No. 1694 in catalogue). Abnormality remediable by uretero-pyelo-neostomy).

M. Bazy[18] in October, 1896, performed a precisely similar operation, to which he gave the name of *urétéro-pyélo-néostomie*. His patient was a man, aged 40, with a large hydronephrosis, for which relief was given by evacuating the pent-up urine by laparotomy. This gave M. Bazy the opportunity of ascertaining that the hydronephrotic kidney was of very fair secreting capacity.

The cause of the distension was the abnormality of the connection of the ureter with the renal pelvis; it opened into the infundibulum above its equator instead of at its lowest part. The incision into the hydronephrotic pouch was prolonged downwards and backwards; 4 centimetres of the ureter were cut away; the cut end of the ureter was split longitudinally to the length of a centimetre and a-half, so as to enlarge the orifice of communication, and was then fixed to the back of the dilated infundibulum at its most dependent part. On the seventh day after the operation the urine was passed from the kidney operated upon to the bladder. One month later the abdominal wound was completely healed. At the end of five months the patient reported himself as being in excellent health.

Weller Van Hook[19] in 1893 published a case in which he practised Küster's operation, but immediately he had completed it he found an obstruction in the ureter lower down, and therefore removed the kidney.

In 1897 I operated upon a female patient, aged 56, for painful intermittent hydronephrosis, and found the ureter running obliquely in the wall of the distended renal pelvis. In this case I first laid the ureter and renal pelvis freely open into one another, and stitched the divided edges of the ureter to those of the renal pelvis. The result was not satisfactory, so I excised an inch or more of the ureter, closed the greater part of the incision in the renal pelvis, and then sutured the ureter to the lowest part of the infundibulum as Küster had done (Figs. 6 and 7). Again the result did not satisfy me because of the small calibre and extreme tenuity of the ureter; so, to avoid a fistula and a long convalescence on the one hand, or stenosis of the ureter at the site of operation and a subsequent nephrectomy on the other hand, I removed the kidney there and then. Had the patient been younger or more robust I should, even with so small a ureter, have given the plastic operation a chance. The case, however, testifies to the feasibility of both Fenger's and Küster's operations.

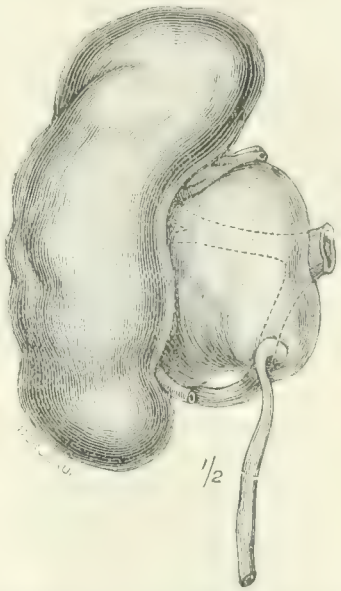


Fig. 11.—Hydronephrosis. Ureter kinked on renal pelvis; described as kinked over renal vein (Guy's, No. 1693 in catalogue). Abnormality remediable by uretero-pyelo-neostomy.

The 9 operations for resection of the ureter for hydronephrosis (or pyonephrosis) above quoted show that the aim in our treatment of hydronephrosis ought to be conservative. Before actually proceeding to resect the ureter for stricture or a valve, the surgeon should not fail to ascertain whether there is a clear channel in the ureter below the stricture or valve to be divided, otherwise he may find that the operation is useless when completed, as it was in Van Hook's case. In some cases it may happen, even if the rest of the ureter is unobstructed and the plastic operation has been completed, that the small calibre or extreme tenuity of the walls of the ureter may make the operator dissatisfied with the result, in view of probable future stenosis. Under these circumstances nephrectomy will be required after all. But the attempt ought to be made, in every instance where the conditions are not actually unfavourable, to preserve the kidney by means of a plastic operation.

Ureterectomy.—By resection of the ureter is meant, as stated above, the cutting out of a short piece of the duct, not exceeding 2 to 2½ ins., with the object of restoring it to its proper capacity as a conduit of the urine to the bladder. It is a truly conservative operation. More extensive excisions of the ureter, and even the removal of the whole length of the duct, have of late years been occasionally practised, and with most beneficial results; but, like nephrectomy, such operations are, of course, not of a conservative nature.

Ureterectomy, partial or complete, has been performed for tuberculosis, suppuration in the dilated ureter, hydrops of the ureter, and for the cure of suppurating lumbar fistula due to the presence of a diseased ureter, after nephrectomy had been done. The operation has been either primary or secondary. It is primary when the ureter is removed simultaneously with the kidney, secondary when the excision of the ureter follows the removal of the kidney of the same side as a distinct subsequent operation.

Secondary total ureterectomy was first performed piecemeal by Regnier in 1892, and since by Gerster, of New York, in 1896 and by myself in 1896[20]; secondary partial ureterectomy by Poncet in 1894, by myself in March, 1896.

Primary total ureterectomy was performed by Kelly, of Baltimore, in 1896, and by McCosh in 1896, and by myself in September, 1897. In my case there had been a partial

excision of the kidney previously, but the greater part of the organ was removed at the same time as the ureter.

Primary partial ureterectomy was performed first by Tuffier in 1891, then by Postnikow in 1892, by Kelly and myself in 1893; and I have recently published a case in which the ureter was extensively calcareous, upon which I operated in August, 1895.[21]

Two different routes have been followed in the complete removal—namely, the transperitoneal and the extraperitoneal; but the latter, when the incision indicated in the accompanying figure is adopted [diagram shown], gives so complete and satisfactory a field for the necessary manipulations, and has other anatomical and surgical advantages, that it is not probable the transperitoneal method will find any followers.

Several different routes have been taken or suggested for partial ureterectomy affecting the lower part of the duct. In the male the inguinal extraperitoneal route (see Lecture III for description of incision)—that is, through an incision the same as the lower part of the incision for complete extraperitoneal ureterectomy, is the best; but in the female, the parasacral, or a combination of the inguinal and vaginal methods as practised by Kelly, has advantages over the others [diagrams shown].

Wounds of the Ureter.

Another way in which great advance has been made in renal surgery, in the conservative direction, is in the management of wounds of the ureter inflicted accidentally during the course of such operations as ovariotomy, abdominal and vaginal hysterectomy, and the removal of suppurating Fallopian tubes and ovaries. The ureter has also been wounded in at least one instance during the course of an operation on the pelvis by the method known as Kraske's.

Spencer Wells,[22] in his paper on the first successful removal of a gravid cancerous uterus, stated that out of 94 published abdominal hysterectomies 1 ureter had been divided in 6, and both ureters in 2 other cases. It has since been computed that in every 100[23] hysterectomies, vaginal and abdominal, one or both ureters are tied or cut across in at least 3.

From time to time unpublished cases are heard of in which the ureter has been divided partly or entirely; or portions have been unintentionally resected.

For these injuries nephrectomy had hitherto been performed, and in many instances of the kind healthy kidneys have been removed.

This is a discomforting reflection; and, not unnaturally, as soon as accidental surgical wounds became of pretty frequent occurrence there were surgeons who set themselves to devise some alternative for nephrectomy.

Numerous experiments on animals were made by Tuffier Boari and Pozzi, in France, Gusserow and Pawlik, Alfonso Poggi of Bologna, Van Hook, Byron Robinson, Bovée and others in America, and a great variety of methods have been devised for remedying the injury without sacrificing the kidney.

They may be grouped into two distinct classes, namely: (1) Those designed to restore the continuity of the ureter; and, failing this, (2) those for anastomosing the cut end of the ureter with the external surface, with the intestine, or with the bladder.

If the ureter should be wounded during an abdominal or vaginal operation, and the injury is detected by the surgeon at the time, one or the other of these operations ought to be, if possible, immediately practised. Such a complication can only be suitably grappled with by one familiar with the varieties and possibilities of surgery which recent experiments and scattered cases have brought to light.

It is very desirable, therefore, that surgeons and gynæcologists who are exposed to the risks of injuring the ureter should have a fair working knowledge of the remedies, short of sacrificing the kidney, which are available.

Uretero-ureteral Anastomosis.—Schopf[24] in 1886, was the first who practised uretero-ureteral anastomosis in the human subject. After having accidentally divided the ureter near the pelvic brim, when removing an ovarian cyst, he used eight fine silk sutures, passing them through the cellular and muscular tissues only, to unite the ureter *end to end*. The patient made an uneventful recovery from the operation, but died seven weeks later of tuberculosis. The inference to be drawn from the account of the necropsy is, that there was cicatricial stenosis about the seat of operation.

E. W. Cushing, of Boston, recorded the second case of the end-to-end method, and speaks of his operation as being original, by saying that it forms "a rare, if not unique, incident in the surgery of the ureter."[25] Pawlik, Tuffier, Hochenegg, and H. Fritsch, are the other surgeons who have employed the end-to-end method.

In 1887 Alfonso Poggi [26] (of Bologna) suggested the plan (based on experiments on dogs) of invaginating the upper into the lower end of the divided ureter. This is the *end-in-end* method.

Six years after Poggi's experiments, and seven years later than Schopf's case, Van Hook,[27] of Chicago, published (in March, 1893) a description of his experiments on dogs, of the *lateral implantation* of the upper portion of the ureter into an opening in the side of the lower portion. Both Poggi and Van Hook were so impressed by their respective experimental results that they considered a trial of their operations upon man justified.

Weller Van Hook's operation by lateral implantation is performed as follows:—

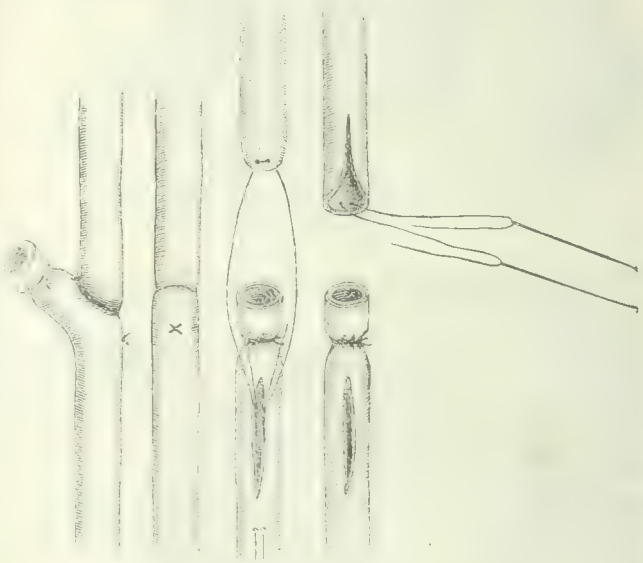


Fig. 12.—Van Hook's method of lateral implantation.
Journal of American Medical Association, vol. xxi, December, 1893.

1. The lower segment is closed by a ligature, one-eighth to a quarter of an inch from its free end. Then, with fine, sharp-pointed scissors, a longitudinal incision is made in the wall of this segment of the duct, a quarter of an inch below the ligature. This incision is twice as long as the diameter of the ureter.

2. A longitudinal incision, a quarter of an inch long, is made in the open end of the upper segment. This incision insures the patency of the duct.

3. Two small cambric sewing needles, armed with one thread of sterilised catgut, are passed through the wall of the upper part of the ureter, opposite the slit at the open end, and one-eighth of an inch from the extremity, from within outwards; the needles transfix the wall one-sixteenth of an inch apart, and equidistant from the cut end.

4. The needles are now carried through the slit in the side of the lower segment of the ureter, and made to transfix the wall, side by side, half an inch lower down the tube.

5. By drawing in the two ends of the suture, the upper portion of the ureter is drawn into the lower, and the ends of the suture are firmly tied together. As the catgut becomes absorbed in a few days, calculi do not form upon this suture and obstruct the passage of urine.

6. The ureter at the seat of union is now enveloped carefully with peritoneum. This may be done by lifting the ureter gently into the cavity of the peritoneum, drawing the

serous membrane carefully behind the ureter, and, after pulling the peritoneum around the ureter, stitching it in position, to permanently enclose and protect the duct. Or, the ureter may be surrounded in a completely detached fold of omentum, which is loosely attached by a stitch to the connective tissue about the duct. The omental method is less secure than the other, since the omentum is deprived of its blood supply.

Van Hook points out an important fact in connection with these ureteral operations, namely, "the lumen of the tube can be enormously increased by stretching, without prejudice to the integrity of its walls." Emmet verified this in his operation, where it was of great moment to stretch the lower segment, owing to the great dilatation of the upper.

Howard Kelly of Baltimore, B. Emmet of New York, and Doherty of Georgia, have successfully applied Van Hook's operation to the ureters of women.

When the upper portion of the divided ureter is very much distended, and has to be puckered to get it into the lower portion, which may be only half its size, or even less, three sutures, instead of one, might be advantageously employed, as was done by Emmet in the case of the left ureter.[28] This may be the condition of things if the ureter happens to be cut

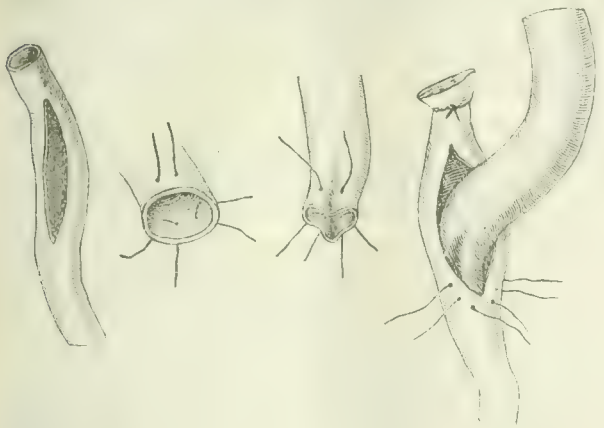


Fig. 13.—Emmet's method of lateral implantation. Bache Emmet, M.D., New York, *American Journal of Obstetrics*, April, 1895, vol. xxxi.

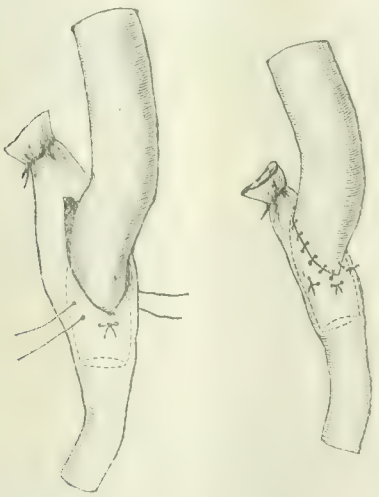


Fig. 14.—Emmet's method of lateral implantation. Bache Emmet, *American Journal of Obstetrics*, April, 1895.

just where the pressure of the tumour or adhesions had been exercised. Emmet's abdominal operation was the removal of an œdematous fibroid, attached over the fifth lumbar vertebra, and which had been at one time attached to the uterus.

In Kelly's case, operated upon in May, 1892,[29] as the result of pressure from a uterine myoma, the ureter was enlarged to four times its normal circumference, forming a well-marked hydro-ureter. The operation, therefore, was much easier than it would have been on a normal ureter. Kelly used two sutures instead of one, as Van Hook did; and passed them with a single needle, commencing the passage of the sutures below the slit in the lateral walls of the lower segment of the ureter. Ten fine silk rectangular sutures, catching only the outer coat, then united the edges of the slit to the intussuscepted portion.

Finally Bovée, in 1895, adopted a plan which consists in *suturing the cut ends together obliquely*. He published an account of it in January, 1897.[30] He performed his operation on a woman of 36, whose right ureter he unintentionally included in a ligature and then divided, when excising the right ovary and tube for an abscess.

He converted the transverse division of the ureter into an oblique one, with some loss of length of the duct. This seemed necessary, as the lower end had been grasped too tightly by strong forceps, and the upper end by the ligature; thus both ends were damaged.

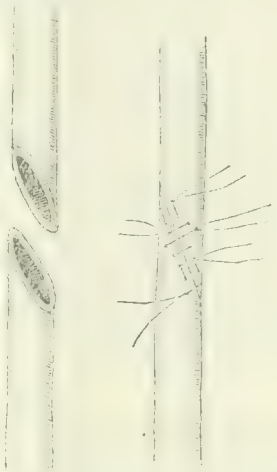


Fig. 15.—Uretero-ureteral anastomosis by the oblique method of Bovée. J. Wesley Bovée, *Annals of Surgery*, Part 49.

The cut ends were then dilated for an inch, and approximated with No. 1 silk, such as is used in intestinal operations; then the ends were joined by rectangular sutures, with two interrupted sutures intervening between each two rectangular sutures. Over these sutures four or five other sutures were inserted, which reached a little further up and down the duct than the rest. The recovery, immediate and remote, was very satisfactory. No sutures penetrated the mucous membrane of the ureter. The peritoneum was carefully sutured over the injured portion of the duct.

Four methods have been employed, as we have now seen, for uniting the cut ends of the ureter:

1. The *lateral implantation* devised by Van Hook has been successfully performed on three women by different operators in each case. It has led to no contraction or stenosis in experimenting on dogs.

2. The *transverse end-to-end* union has been practised seven times on the human ureter. Four of these cases have been described as cured. Three died from causes quite unconnected with the ureteral operation, 1 being from tuberculosis seven weeks afterwards, and the other 2 directly or indirectly from the operation during which the accident to the ureter happened.

3. The *oblique end-to-end* anastomosis devised by Bovée, and performed by him once and with success.

4. The *end-in-end invagination* of the upper into the lower portion of the ureter, or the method of Poggi, has been employed at least once successfully on a woman, and Poggi's experiments on dogs were eminently successful.

Budinger's and Tuffier's experiments on dogs of the end-to-end and end-in-end methods respectively gave deplorable results.

Of the twelve cases of the application of these methods to ureters injured during surgical operations in *eleven* the section of the duct was complete, and in one incomplete (Pawlik's case).

To this case of incomplete section of the ureter I may add one of my own, in which the dilated ureter was three parts divided. In both of them the mode of treatment was practically the same—namely, closing the wound by very fine silk sutures, passed in the fashion of Lembert, and covering the injured ureter with the peritoneum.

Pawlik's case died of shock fourteen hours after the operation. My patient died fifty-one hours after the operation, but the union was found by Mr. S. Hulke, who made the *post-mortem* examination, secure, and able to bear the pressure of a stream of water forcibly injected along the ureter from the infundibulum to the bladder. Had this woman lived there is good reason for thinking that stenosis would not have occurred, because of the dilated condition of the ureter.

My patient was a woman 36 years of age, who for eighteen months had been suffering from continual pain and frequent attacks of vomiting caused by a large uterine myoma which was rapidly growing. Complete abdominal hysterectomy was performed on July 21st, 1897. The operation went quite smoothly except for the accident to the ureter, which was immediately recognised, and the cut ends of the ureter were united after the hysterectomy was completed. During the first twenty-four hours after the operation only 7½ ounces of urine (free of blood) were passed. Vomiting was excessive and continuous. During the second twenty-four hours 27 ounces of urine were passed, and contained no trace of blood. At the *post-mortem* examination both kidneys were excessively hydronephrotic; the right could scarcely be said to exist, its parenchyma was so atrophied. The calyces of the left kidney were greatly dilated, and the cortical substance was very thin. Both ureters and the renal infundibula were considerably dilated. The left ureter, just beyond its entrance into the broad ligament, had been wounded and closed by sutures, and the peritoneum was stitched over the united ends. The tube was quite watertight, as tested by a strong current of water. There was no peritonitis, and the wound was healing.

It would be impossible now to enter into a minute comparison of the four methods above described. As far as results go all seem to be upon the same footing, for they have all been tested in the human living subject, and from reports published some months or years after the operations no subsequent trouble seems to have occurred to the kidneys.

Personally I may say that if the ureter was completely divided, and was also much dilated, I should adopt Bovée's oblique end-to-end method. If the ureter was completely divided but not dilated, I should prefer Van Hook's. Bovée's might be employed where there is a rather greater loss of substance than could be overcome by Van Hook's method, but the latter would be much more rapidly executed.

For transverse wounds which do not completely divide the ureter, but involve one-third or more of its circumference, Van Hook[31] has proposed the following operation: "Make two longitudinal incisions in the ureter with a pair of small scissors, beginning at the middle of the wound to be closed; these incisions should be equal in combined length to twice the transverse diameter of the tube. Round off the sharp angles of tissues with the scissors and suture longitudinally" (that is, in the direction of the long axis of the tube) "with the object of producing a very wide instead of a very contracted lumen." By this method cicatricial contraction cannot obstruct the flow of urine.

When the wound involves the peritoneal aspect of the duct (as it necessarily does in accidents during abdominal operations) he advises that the union should be protected by surrounding it with a fold of peritoneum.

Fenger thinks that even for incomplete transverse wounds, when intraperitoneal, it will be safer to divide the ureter completely, and then to resort to Van Hook's method of lateral implantation, which, he says, is a tried and successful operation. Emmet is of the same opinion.

A mere puncture, or a small wound which merely gapes slightly, may be securely closed by one or more Lembert sutures and a covering of peritoneum. I am of opinion that in many case, where one-third or more of the circumference is involved, the same method will suffice, namely, Lembert sutures and a covering of peritoneum. If it be remembered that in many of the cases in which the ureter is injured during an intraperitoneal operation the tube is more or less dilated, it is not necessary to consider with Van Hook that every incomplete transverse section of the ureter when closed, either by cicatrisation or primary union after direct suture, will have a tendency to result in stenosis.

The case I have alluded to above justifies me in this opinion. If the ureter was divided through half or more of its circumference and dilated, I should do again what I did in this case. If the ureter were not dilated, I should employ one of the methods of Van Hook, being guided by circumstances as to which.

The classes of cases in which uretero-ureteral anastomosis is applicable are the following:

To restore the continuity of the duct (1) after accidental section during abdominal operations.

(2) After unintentional resection of a short length of the duct during abdominal operations. Two or even three inches may be removed, and the ends afterwards brought together without undue tension on the union.

(3) After resection of a portion of the ureter for strictures, ulceration, sloughing around a calculus, or any other condition which, if not removed, would terminate in stenosis.

(4) After rupture and other injuries from external violence—as soon as the case is diagnosed when intraperitoneal; and before suppuration or sloughing occurs when retroperitoneal.

Ureteral Grafting.—An immense amount of labour and ingenuity has been given to devising methods (1) for the cure of ureteral fistula, (2) for the prevention of ureteral fistula, and of nephrectomy in cases in which the ureter has suffered a loss of substance too great to permit of uretero-ureteral anastomosis.

Very numerous have been the experiments to test the feasibility of grafting the cut end of the ureter (1) into the bladder, (2) into the rectum, (3) into other parts of the small and large intestines, and (4) on to the skin in the loin.

Various other ingenious plans have been proposed as substitutes for nephrectomy, whereby the urine is conducted to the bladder even after parts of the ureter, too great to permit of uretero-ureteral anastomosis, or of bladder grafting, have been cut away or otherwise destroyed. But the results of actual operations show that grafting into the bladder—*uretéro-cysto-néostomie*, as Bazy has named it—should always be the operation of choice when it can possibly be done.

All this industry is the result of the comparative frequency of uretero-vaginal and uretero-uterine fistulæ, especially since the vulgarisation of vaginal hysterectomy. A great many ingenious operations, some of great difficulty and requiring attention to very minute operative details, have been practised, or proposed, with the object of avoiding nephrectomy.

How needful this is must be only too well known to surgeons who have experienced the difficulties of identifying to which kidney the fistula belongs: A woman who had undergone vaginal hysterectomy by a distinguished gynæcologist recovered with a uretero-vaginal fistula. The patient was handed over to a distinguished general surgeon to be cured of this fistula. Efforts were made in a most careful manner to ascertain which ureter it was which had been wounded and become entangled in the vaginal cicatrix. These failing to afford definite information, the ureter of the suspected kidney was exposed through a lumbar incision, and was temporarily ligatured. During this experiment, which was of course made under chloroform, no urine escaped by the vagina, but a certain amount was withdrawn by catheter from the bladder at the expiration of a given time.

The inference was that the ureter temporarily ligatured was the one involved in the vaginal fistula; so the corresponding kidney was there and then excised. Imagine the surgeon's chagrin and the patient's distress the next day when it was discovered that though she had lost a healthy kidney the operation had not cured her of the fistula; for the wrong organ had been removed.

It is impossible for me here to describe the work done, or even to name the many workers in this field of experimental and clinical surgery. I can only mention briefly the most

satisfactory plastic operations upon the ureter for vesical grafting. They may be classified as follows:

1. Invaginating the fistulous aperture itself into the bladder after first incising the vesico-vaginal septum.

2. Grafting the ureter to the bladder through the vagina.

3. Grafting the ureter into the bladder by an extraperitoneal route through an incision in the abdominal wall.

4. Grafting the ureter into the bladder by a transperitoneal or intraperitoneal operation.

Since Simon, in 1869, first practised nephrectomy as the remedy for urethral fistula, the operation has frequently been performed for this cause up to the present time. Tuffier, in a recently published communication, refers to twenty-four cases which he had collected. But with our present knowledge of the surgery of the ureter, nephrectomy for fistula has become in most instances, I do not say in all, an unjustifiable procedure. It ought to be reserved for quite exceptional cases, as, for instance, where the state of the kidney itself is prejudicial to health, or when the surgeon, having tried and failed, has given up the attempt to cure a troublesome and loathsome fistula by plastic operation.

Nephrectomy as a primary operation for surgical injuries of the ureter is quite unjustifiable; and as a secondary operation for these injuries it comes under the criticism just made upon it for the treatment of fistula.

As a remedy for movable kidney, nephrectomy has come and gone, never, it is hoped, to return.

In cases of limited suppuration, of circumscribed tuberculous disease, of innocent growths, and in certain injuries of the kidney, partial excisions are now being performed in place of nephrectomy.

In many instances of calculous pyonephrosis irrigation of the renal calyces and infundibulum, followed by suture of the kidney, has taken the place of nephrectomy.

In hydronephrosis a few laudable attempts have been made, and in a good proportion of them with success, to remove the cause of the obstruction, and thus by means of a plastic operation to spare the kidney.

In fact, the tendency of the surgery of to-day is to save as much of the kidney tissue as possibly, consistently with the safety and well-being of the patient.

In this very imperfect survey of the origin and progress of renal surgery, I hope I have succeeded in showing that whilst its origin was nephrectomy, its progress, especially during the last ten years, has been in the direction of rendering nephrectomy more and more an operation to be avoided.

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"ON PRODUCTION OF SUGAR IN THE LIVER, AND ITS UTILISATION IN THE TISSUES": A REPLY.

By F. W. PAVY, M.D., F.R.S.,
Consulting Physician to Guy's Hospital.

In an article contained in the British Medical Journal of February 26th, Dr. Paton has returned to the discussion on the glycogenic theory upon precisely the same lines as in his previous criticisms of my work, which have been fully dealt with by me. May I ask you to accord me space for a reply?

I accede to what is said about the importance of the question of the treatment of diabetes, but I fear that the busy practitioner who may have read the article will nowhere have found in it the proffered help. If I mistake not, indeed, instead of being able to form an "intelligent judgment," his mind will have been left in a mystified state, and yet the object of the article is assistance boldly professed to be rendered by a physiologist upon a matter bearing upon treatment. On the contrary, I, in my position as a practitioner, have to say that no intelligent judgment to render service in treatment can be framed upon the basis of the glycogenic theory. Can anyone say that he knows anything about diabetes looked at through the glycogenic theory? All that acceptance of the doctrine has done is to lead to serious error in treatment by suggesting to the minds of some that in a system already set wrong by the unnatural presence of sugar within it, matters should be made worse by the administration of carbohydrate, upon the plea that sugar is wanted by the tissues.

To the physiologist, the question of whether the glycogenic theory is right or wrong is not of the same paramount importance that it is to the physician. Whatever may be the view held by the physiologist, in his department Nature goes on working in her own way without being influenced. In the physician's department, on the other hand, an erroneous working is at the foundation of what has to be dealt with, and the essence of the physician's calling is to set the working right. How can this be done upon rational principles without a correct physiological knowledge? In our endeavours to set things right, physiology becomes tested in a manner the opportunity for which is not otherwise afforded, and, viewed in relation to what is learnt from diabetes and its treatment, the glycogenic theory stands in a completely irreconcilable position. If Dr. Paton contends otherwise, let him state his case and deal with the phenomena presented, and show that the glycogenic theory can in reality stand in presence of them. I have stated mine, and have shown that it is not only reconcilable with physiological and medical knowledge, but that it gives us a perfectly intelligible working basis, and a reliable guide in treatment. In the position Dr. Paton has taken, it is due to the medical profession that he should point out the light that the glycogenic theory throws upon the treatment of diabetes.

I cannot think that any useful purpose would be served, even if permission were granted for the occupation of the space required, by following Dr. Paton again in detail as I have done before through the further references upon which his article is based. I have gone through them fully, and the expenditure of time in doing so has prevented my replying earlier to the article.

Dr. Paton relies upon the scattered record that is to be found of the multifarious casual work that is performed. What he has brought forward in this third set of references is of a comparable nature to that examined in my *Epicriticism*[1] and *Rejoinder*.[2] As I have before stated, there is, perhaps, no subject in physiology in which the experimentalist is beset with so much danger of fallacy as that bearing on the relations of sugar in the animal system, and much, indeed very much, of the work performed and published fails to stand the test of even quite superficial examination. I will touch upon what seem to be the most important points in the article before me, at the same time stating that I am ready to meet any other point should it be considered necessary to do so.

Reference is made to numerous and diverse conditions leading to the conversion of glycogen into sugar in the liver and to the production of saccharine urine. The list given might be added to. The result is admittedly an abnormal one, and, I should have thought, is more in consonance with standing as the issue of an abnormal process than as the issue of an exaggeration of a normal function. It is also just what occurs, even to the production of saccharine urine, if the circulation is maintained by artificial respiration in the dead animal. Dr. Paton appears to think differently; but, if he regards diabetes as due to an exaggerated glycogenic function, the onus rests upon him, as I have said, of reconciling the teachings of diabetes with the glycogenic theory.

In view of the position in which things stand, I am surprised at the question of zymin action being brought forward in the article. Dr. Paton has himself carried the discussion of this subject to the *Journal of Physiology*, where it lies for him to meet the experimental work standing in opposition to him. It may be remembered that in his paper in the *Philosophical Transactions* on Hepatic Glycogenesis (1894), he contended that the *post-mortem* production of sugar in the liver is due to a continuance of a vital process instead of to ferment

action, as has been hitherto generally supposed. The two experiments which stood as the pivot of his paper consisted in pounding the liver immediately after death with sand to destroy the structural integrity, and thence the vitality of the cells, which had the effect, it was alleged, of preventing the active production of sugar otherwise observed to take place. I repeated the experiments and conducted others, spending much time in order that the matter might be settled. The results were given in my *Epicriticism*, and they entirely controverted the allegation that had been made. Shortly after their publication, Dr. Paton promised that they should receive consideration, and in September last an article appeared in the *Journal of Physiology*, entitled A Further Study on Hepatic Glycogenesis. In this article three new experiments are supplied in place of the two published in the *Philosophical Transactions*, with the results in each standing in diametrically the opposite direction. Quoting Dr. Paton's words concerning them, they run: "In these experiments the results do not correspond to those previously recorded by me. They show no diminution in the amylolysis in the liver pounded with sand, and confirm Dr. Pavy's statement that destruction of the structural integrity of the cells does not diminish the rate of amylolysis." Dr. Paton was not content with simply making this admission, but he attempted to show by experimental work that the error was attributable to contamination of the sand which he had used with iron from the sand bath whence it was taken; and, further, he introduced experimental work in opposition to mine bearing on zymin action in alcohol-coagulated liver.

As I demonstrated at the Physiological Society, this later work of Dr. Paton appears to be as much in error as his former. My communication to the Society has been put into the form of an article for the *Journal of Physiology*, and is contained in the number that has just been issued. I mention these particulars to show my grounds for not touching upon the subject here.

A special significance seems to be given to the work of Morse[3] bearing on the amount of sugar in hepatic venous as compared with arterial blood by the introduction of the table supplied by the author. I will therefore take it and look into its worth. Assuming that everything was free from vitiating circumstances as regards the collection of the blood by catheterism from the hepatic vein and by a cannula in the crural artery, the analytical table looked at in detail shows not only great want of consistency, but many points of want of harmony with what is contended for. There is a striking disparity in the amount of sugar found in the blood in the different experiments. In two of the instances notably less sugar was discovered in the hepatic than in the arterial blood. In several the excess in the hepatic blood was very slight, whilst in a few it stood out so markedly as to be highly suggestive of error. The first experiment is not included in the table on account of the catheter not having passed further than the inferior cava in the neighbourhood of the heart. Two sets of specimens of blood were collected, one a little time after the other, and in both the figures for the arterial blood are higher, and in one considerably higher, than those for the inferior cava blood. This is contrary to what it should be. In giving the average result from the figures in the table a footnote, which Dr. Paton has omitted to quote, is appended containing words acknowledging that the difference between the arterial and venous blood stands very close to the limit of experimental error. In one analysis of duplicate specimens the comment has to be made that a difference occurs amounting to almost double that representing the average difference found between arterial and venous bloods. Altogether it may be safely said that no reliable conclusion can be drawn from the work.

Further on a consideration is given of Fritz Voit's recent observations[4] on the injection of different carbohydrates into the subcutaneous tissue of the human being. The subject of intravenous and subcutaneous injection of sugar into animals is one upon which I have conducted an extensive amount of work. From what was recorded in my *Physiology of the Carbohydrates* (pp. 188 *et seq.* and p. 238), the suggestion arose that one kind of sugar was eliminated by the kidney more freely than another. For instance, after the injection of a given proportion of lævulose to body weight the urine contained a larger quantity of sugar than after the injection of a similar proportion of sugar from honey, which consists of a mixture of lævulose and dextrose. During the last two years, as time has allowed I have prosecuted experiments upon the question, and have given attention to both the blood and the urine. The carbohydrates I have experimented with as yet are dextrose (pure), lævulose (Schering's), maltose, lactose, and glycogen. Up to the present time I have a collection of close upon fifty experiments bearing upon the point, none of which have yet been published, but my design has been, and still is, to put them into a form for communication to the Physiological Society, and subsequent publication when brought to a sufficiently mature state for the purpose.

Dr. Paton has quoted Voit's tabulated results referring to dextrose, lævulose, and galactose. Voit gives the quantities injected and the results of the examination of the urine, but nothing about body weight is mentioned, which is unfortunate, as it deprives the experiments of the precision which, for the sake of comparison with the work of others, it is desirable they should possess. I will examine the results belonging to dextrose, this being the principle upon which special stress appears to be laid. Only three experiments are given. In one, 11.243 g. were injected, and the subject was a man 37 years old. I wonder a more delicate mode of testing was not employed than by Trommer's and the bismuth methods, but by these tests no sugar was discovered. Assuming the weight of the man to have been 65 kilos., or a little over 10 st., the relation of sugar to body weight, is only 0.17 g. per kilo. It is only in accordance with general experimental experience that with this small proportion no effect should be perceptible. In another, 60 g. of dextrose were dissolved in 600 c cm. of water, and half injected at 10 A.M. and half six hours later. With the same assumed body weight, this would give 0.45 g. per kilo. each time. The result is described as a trace, which again, under the circumstances, is what might be expected. In the remaining experiment the quantity injected was 100 g. in 1,000 c.cm. of water, giving to the previously assumed body weight a relation of 1.5 g. per kilo. Saccharine urine was passed for seven and a quarter hours, but the quantity of sugar—estimated by the gravimetric copper process, which is an objectionable one to have employed on account of the solvent influence of generated ammonia—amounted to 2.639 g.

Reference is also made to Leube,[5] who is said to have found no production of saccharine urine in dogs (in reality only a single experiment upon a small dog of about 6 kilos. is given) where 25 g. of dextrose were injected subcutaneously. The ratio here is a little over 4 g. per kilo. Voit, on the contrary, found with 1.5 g. (assumed) per kilo. the production of saccharine urine. Dr. Paton does not appear to have noticed this discrepancy.

We are referred also to Biedl and R. Kraus,[6] and on consulting the reference I find amongst the matter given the following experiments on the intravenous injection of dextrose into a couple of dogs mentioned. Into a dog of 5 kilos. weight 2 g. were injected; this gives a ratio of 0.4 g. per kilo. Urine collected from the catheterised ureters contained 68 per 1,000 of sugar. In the second experiment 5 g. were injected. In one hour, we are told, 35 c.cm. of urine were obtained containing 52 per 1,000 of sugar, and giving a recovery of 1.81 g. of sugar out of the 5 g. employed. Other experiments recorded in the paper tell in the same direction. These results, it must be remembered, are after intravenous injection; but, allowing for this, they may be regarded as standing at variance with those of Voit, and, read by the light that has been thrown upon them, Voit's experiments lose much of the force appearing at first sight to belong to them.

I do not propose entering here into my own work. I see in the month of April, 1897, I was conducting experiments with dextrose. Voit's paper was published in the early part of September, and it came to my knowledge about a couple of months afterwards. It will receive consideration when my own work is dealt with. Thus much I may say in anticipation of the full details to be given hereafter that more or less notable differences are revealed in the extent to which different carbohydrates are eliminated by the kidney after subcutaneous and intravenous injection. After both, even with the employment of small quantities of dextrose, the urine gives unmistakable evidence of influence being exerted.

To rightly see the position, more delicate testing than that resorted to by Voit requires to be adopted. The examination of the blood shows that even two hours after the injection it has not recovered its normal condition. There is a further point that the experiments show in a decided manner, and that will therefore have to be considered by physiologists, namely, that notwithstanding that dextrose has been used, what is found in the urine, and, after the lapse of a little time, likewise in the blood, is a product of much lower cupric oxide reducing power. Baisch's[7] results obtained from normal urine stand in accord.

Towards the conclusion of his article Dr. Paton says: "The evidence may therefore be considered as establishing (1) that glucose is formed in the liver; (2) that glucose is used in the tissues, and is not all excreted by the kidneys." That glucose is susceptible of being formed in the liver is a truism with which everyone is familiar. Under a great variety of abnormal conditions abundant evidence is forthcoming showing that sugar escapes from the liver, and its escape is made manifest by its influence upon the blood and the urine. As regards the second proposition, whilst I contend that the entrance of sugar into the circulation is revealed by its influence upon the urine—that the urine, in fact, stands as an indicator of the state of the blood in relation to sugar—it has not been in my mind that all the sugar that may happen to reach the blood is eliminated by the kidney. At page 236 of my *Physiology of the Carbohydrates*, I say, in connection with the consideration of the subcutaneous injection of glucose: "I have referred to the protoplasmic transmutation of sugar into glycogen in the liver. But the transmutative power by no means exclusively belongs to the liver; indeed, I am disposed to think it exists as a general property of the protoplasmic matter of the body."

What we have broadly to deal with is the application of our food supply of carbohydrate matter within the animal system. Under the glycogenic doctrine, everything is centred in the liver. The liver takes the carbohydrate, stores it as glycogen, and then gives it out to pass as sugar into the circulation, to be conveyed to the tissues for oxidation, and thence heat, or some other form of force-production. Such was the doctrine propounded for the disposal of carbohydrate matter within the animal system; and, further, to meet the want of the tissues, if the tangibly evident supply was not afforded by the food, the liver was alleged to form it out of other material, it not being then realised that with animal food we get a certain amount of supply of carbohydrate matter, sufficient, it appears to me, to account for the glycogen found under the circumstances in the organ. What is the alimentary form of diabetes but this passage of the carbohydrate matter of our food into the general circulation as sugar, and do we not, by cutting down the supply of it, protect the system from the sugar invasion, and thereby bring the urine to a natural state?

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[1] Churchill, 1894. [2] British Medical Journal, i, 1896. [3] *Pflug. Arch.*, lxiii, p. 613. [4] *Deut. Arch. f. klin. Med.*, Bd. lviii, Heft 6. [5] *Verh. d. Cong. f. inn. Med.*, 1895, p. 422. [6] *Wien. klin. Woch.*, 1896, 4. [7] *Zeit. f. phys. Chem.*, xix, xx.

NOTE ON THE ETIOLOGY OF TYPHUS FEVER.

By E. J. McWEENEY, M.A., M.D.,
Professor of Pathology Catholic University Medical School, Dublin.

Of late years opportunities for bacteriological examination of cases of exanthematic typhus have become increasingly rare. Existing observations on this subject appear to be mostly due to foreign observers. Thus Hlava[1] described a diplobacillus, and subsequently fungi, a vibrio which he calls V. proteus ruber, and several other organisms as occurring in the blood of patients examined during life. Lewaschew[2] found cocci which he names micrococcus exanthematicus in the spleen pulp. Calmette[3] found what he looked upon as a fungus belonging to the ascomycetes or ustilagineæ. Dubieff and Bruhl[4] found a diplococcus exanthematicus, which they cultivated and looked upon as the cause of the disease. These researches have failed to obtain confirmation at the hands of other observers. I think it desirable, considering the obscurity of the subject, to publish the following account of an unsuccessful attempt lately made by me to isolate micro-organisms from the blood of a typical case of spotted typhus.

The patient was a young woman, aged 22, who was admitted into the Hardwicke Fever Hospital, Dublin, under the care of my friend Dr. J. B. Coleman, suffering from a typical attack of typhus fever. Course, temperature, and exanthem were in all respects characteristic. Tested by the Gruber-Widal method, the blood serum gave a negative reaction. The skin of the forearm, having been thoroughly disinfected, the sterilised needle of a sterile antitoxin syringe was introduced into one of the large cutaneous veins, and about 20 c.cm. of blood readily obtained. The blood was at once distributed amongst a number of tubes of glycerine agar and faintly alkaline peptone broth. In some of the agar tubes the blood was allowed to flow over the oblique surface of the medium and settle at the bottom. Others of the agar tubes had been previously melted, and cooled to 40° C. These, after addition of the blood, were poured out on sterile Petri dishes. All were put away at 37° C. to incubate. On the following and subsequent days they were carefully examined, but no signs of growth appeared on any of them. In the broth tubes the coagulated blood formed an opaque flocculent mass, partly floating in the surrounding liquid, which was perfectly clear and bright. That the media were capable of supporting bacterial life was proved by subsequently inoculating some of the tubes and plates with staphylococcus aureus and B. typhosus, both of which grew luxuriantly. At the time of the examination—the eighth day of the fever—the patient's temperature was 103°, and her skin abundantly covered with the characteristic "mulberry rash." Crisis ensued on the fourteenth day, and recovery followed.

This negative result, obtained under very favourable circumstances—for example, the amount of hæmoglobin introduced into the media must have rendered them very favourable to the growth of strictly obligate parasites—leads me to the conclusion that micro-organisms capable of growing on our nutrient media are at any rate not always present in the blood of typhus fever; and confirms the reports of Szwajcer and Bujwid,[5] Weinschal,[6] Thoinot and Calmette,[7] and Curtis and Combemale,[8] who found the blood of considerable series of typhus cases absolutely sterile. It would seem probable that our present methods of investigation are not capable of solving the question as to the nature of the *materies morbi* in this disease.

I desire, in conclusion, to express my best thanks to Dr. Coleman for his courtesy in allowing me to examine this case, and for his assistance in obtaining the blood.

[Since writing the above note I have had an opportunity of examining another case, that of a young woman under the care of Dr. Murphy at my own hospital, the Mater Misericordiæ, suffering from typical spotted typhus. The blood was aseptically obtained in a Gruber-Widal collecting pipette and inseminated on broth, agar, and obliquely solidified human blood serum. All the media are still (after forty-eight hours at 37° C.) quite free from growth of any kind. In this case also, the serum gave an absolutely negative result by the Gruber-Widal method.]

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[1] *Proceedings of the Prague Medical Academy* (in Bohemian). [2] *Deutsch. med. Woch.*, 1892, and *Vratch*, 1894. [3] *Ann. de Micrographie*, 1893. [4] *Semaine Médicale*, 1893. [5] *Gazeta lekarska*, 1892 (in Polish). [6] *Protocols of the Imp. Caucasian Medical Soc.*, 1892 (in Russian). [7] *Ann. de l'Institut Pasteur*, 1892. [8] *Comptes Rendus de la Soc. de Biol.*, 1893.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TWO CASES OF LARYNGEAL SPASM FATAL IN THE FIRST ATTACK OCCURRING IN THE SAME FAMILY.

The following cases may be of some general interest from the rarity of a fatal termination to this affection, and also from the strange coincidence of two members of a family being carried off within a couple of days of one another with precisely the same symptoms, both having been perfectly well right up to a few minutes of their death.

One afternoon, in obedience to an urgent call, I went to see a child, living close by, who was said to be suffocating, if not already dead. I arrived at the house within two or three minutes of the receipt of the message, but found the child quite dead, death evidently having occurred only a few minutes before.

The child was a boy, 19 months old, and was one of twins, the other twin having died within a month of its birth. According to the mother's account the child was perfectly well, and had been so for months. Just before his death he

was lying on the bed, and the mother took him up to wash him. The child always had a violent temper, and on this occasion seemed to have a fit of passion, and then suddenly threw his head back and became blue in the face and rigid. He was at once put in a hot bath, but this was of no avail, and he died without uttering a sound.

Two days later we received an urgent summons to the boy's sister, a baby 7 months old, living in the same house, who was said to have just been seized in exactly the same way. My colleague, Dr. Starkie, went immediately, and arrived at the house within two or three minutes, but found the baby dead. In this case also, according to the mother, the baby had been perfectly well since birth, and was lying in her mother's arms at the time of the fatal seizure. Suddenly, without any warning, the baby became rigid and blue in the face, and died without uttering a sound, in exactly the same way as the boy.

In both cases the seizure was accompanied by well-marked "carpo-pedal contractions," the hands being flexed on the wrists and the fingers bent into the hand, and the feet flexed on the legs. There were no general convulsions. In neither case had there been crowing respiration at any time.

Dr. Starkie and I together made a *post-mortem* examination of the bodies. Both bodies were very well nourished, but showed marked signs of rickets, especially in the case of the boy. There was no foreign body or obstruction of any kind in the larynx or trachea of either child. All the organs were perfectly healthy, and we found nothing to account for death. It was clear that death was due to asphyxia from spasm of the glottis. As, in an ordinary non-fatal attack of spasm of the glottis, the crowing noise heard is the sign that the spasm is relaxing and the air entering through the partly closed glottis, one can understand that, in a fatal attack, death may occur without a sound being heard.

Rickets is found in 75 per cent. of the cases of laryngismus stridulus (Frederick Taylor), and evidently was the predisposing cause of the spasm in these two cases, but what the exciting cause was is not so clear.

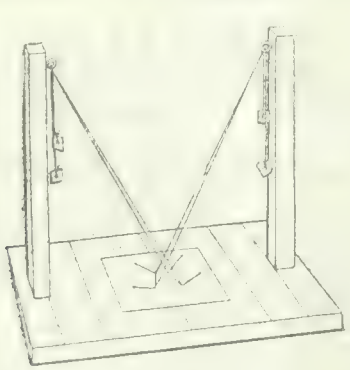
Sussex Street, S.W. CLEMENT H. HUNTER.

ROENTGEN RAYS AND LOCALISATION.

SINCE writing to you on the above subject I have devised an apparatus by which the whole object can be localised—that is, as many points in it as you care to determine.

For subjects about the size of a hand I find the 7 in. square quite sufficient, but for larger subjects the apparatus may be made larger.

A 7 in. square is drawn on a board, and its centre accurately marked; at the ends of a line drawn through the centre, perpendicular to two of the sides, two upright rods are fixed (for convenience of carriage these can be made to take in and out); at a height of 7 in. on each of these pillars a hook or loop is placed.



Take the case of a needle in the hand. A double photograph of the hand and needle is taken with the light alternately right and left. A tracing of this photograph is then taken on the sensitive side, marking distinctly the ends of the needle. This tracing is then placed so that its centre coincides with the centre of the square; pins are then stuck slantingly through the tracing into the board at the ends of the needle. Cross threads are carried from the pins to the loops, and kept stretched by small weights. Where these threads intersect will show the position of the needle relatively to the sensitive plate which is represented by the tracing.

Ealing. GEORGE HARRISON.

TREATMENT OF HÆMATEMESIS.

IN the BRITISH MEDICAL JOURNAL of February 26th, Mr. Reid records the treatment he successfully pursued in two cases of severe hæmatemesis. Mr. Reid appears to have relied chiefly on the administration of pounded ice and a solution of perchloride of iron.

In 1894 I was summoned to a lady, aged 56, who was vomiting blood profusely. She had been a "martyr to her stomach" for a number of years, and always suffered a good deal of pain when she ate food of a "tough, hard, or doughy" nature. The evidence pointed to an ulcer of the stomach, which had apparently eaten its way into a vessel of considerable size. I prescribed a mixture of ergot and opium, and ordered small quantities of liquid food.

The vomiting continuing, Dr. Mackenzie, Edinburgh (formerly of Tain) met me in consultation. The patient was so exsanguine that in attempting to raise her head from the pillow she was immediately seized by a convulsion. I instantly tied towels round her thighs and arms. As a result of our consultation, we agreed to feed the patient entirely by the rectum, and gave her hypodermic injections of ergotin and morphine every three hours, and an ice-bladder was applied to the epigastrium till vomiting was checked.

In a week she was allowed small quantities of liquid food. She made a good recovery, and is now alive and well.

The chief point in the treatment, in my opinion, is to put nothing into the stomach till dangerous symptoms pass away.

I also regard opium, pushed if necessary, as the most reliable drug in internal hæmorrhages.

Glasgow. JOHN T. MACLACHLAN, M.D.

DISLOCATION OF THE UNGUAL PHALANX.

[Communicated by the DIRECTOR GENERAL OF THE MEDICAL DEPARTMENT OF THE NAVY.]

R. E., a stoker, aged 22, was engaged in coaling ship on September 21st, 1896, and while in a bunker, trimming, some of the coal slipped and his right middle finger became jammed between two lumps. He did not make any complaint at the time, but the following morning presented himself at the sick bay, and the distal phalanx was then found to be dislocated completely backwards. The soft parts were also somewhat bruised and lacerated, but the wounds were quite superficial. The dislocation was easily reduced by making traction upon the terminal phalanx at the same time that the base of the bone was pressed forwards.

Dr. Bays quotes (BRITISH MEDICAL JOURNAL, December 4th, 1897) from the eighth edition of Erichsen's *Surgery*, "I do not think that simple dislocation of the ungual phalanx from the second is possible," but in a later edition (ninth) Erichsen has modified that opinion and says, "complete dislocation of the ungual phalanx, though very rare, is possible."

F. DAVIDSON LUMLEY,
H.M.S. *Pigmy*. Surgeon R.N.

ANTERIOR DISLOCATION OF FOOT.

MR. MARTIN'S report on this subject in the BRITISH MEDICAL JOURNAL of December 4th, 1897, recalls to my mind a similar case I was called to in the early part of last year. A boy, aged about 11, had climbed a post and rail fence, and, losing his hold, fell to the ground, one foot having become fixed between the rails. The nature of the accident was at once recognisable, and easily reduced without chloroform by flexing the leg upon the thigh, and then making traction with the heel in the left hand and the anterior part of the foot in the right. Reduction took place with an audible click. The swelling was very slight, and there was no fracture of either malleoli. I am inclined to think that these accidents are not so rare as textbooks would have us believe, for a bystander perceives the injury and makes a little traction, and the dislocation is reduced.

A. TEEVAN, M.R.C.S.Eng., L.R.C.P.Edin.
Ballarat, Victoria, Australia.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GUY'S HOSPITAL.

A CASE OF PERFORATION OF THE ŒSOPHAGUS AND AORTA BY A FRAGMENT OF BONE.

(By William E. Hills, L.R.C.P.Lond., M.R.C.S.Eng., House-Physician.)

F. N., a domestic servant, aged 17, was admitted under the care of Dr. Goodhart, at 11 P.M. on March 20th (Sunday), for severe hæmatemesis.

The history was that, on the previous Sunday (March 13th), she had been partaking of lamb, when she complained of pain in her throat, saying that she had swallowed a bone. On the following day (Monday) she complained of pain between the shoulders. A doctor was sent for, and he prescribed medicine for indigestion. On Tuesday she was better, and continued her work. On Thursday she complained of more pain, but refused to see a doctor. She was better again on Friday, Saturday, and the early part of Sunday. On that day, at 9.15 P.M., she partook of a heavy supper, consisting of pork, chicken, and ginger wine. She cleared away supper and went upstairs. Soon after 10 P.M. her master was passing her room, when he heard a groan. He looked in and saw her lying on a bed in a collapsed condition. He attempted to raise her, when she vomited about half a pint of blood. A medical man was called in, and he advised her removal to a hospital.

On admission she was somewhat blanched, and her face and hands were smeared with blood. Her pulse was 96 and quite good. It was thought that the blood probably came from a gastric ulcer, and she was treated accordingly. She slept most of the night, but at 5 A.M. the following day (Monday, 21st) she awoke and complained of thirst. At 10.30 A.M. her bowels acted, the stool being quite soft and containing no blood. Soon after this she became very restless, and complained of great pain in the back. Morphine was given hypodermically, after which she was quieter till 12.30 P.M., when she suddenly became very restless and vomited about 2 pints of blood, some of which was clotted, after which she became much blanched, and her pulse became almost imperceptible. About half a pint of saline solution (℥j ad Oj) was injected into the loose cellular tissue of the axilla, but as this was not being absorbed sufficiently rapidly, the left median basilic vein was opened and a pint of saline solution injected. Her condition was somewhat improved by this for awhile, but at 1.30 P.M. she again became restless, vomited a large quantity of watery blood, and died.

At the necropsy it was found that there were two fairly clean cut holes in the posterior part of the œsophagus somewhat to the left; behind this was a bed formed of cellular tissue, in which the bone had probably lain for some time. The holes in the œsophagus were 2 inches and 2½ inches respectively below the lower border of the cricoid cartilage. There was a small irregular hole in the first part of the descending aorta communicating, through the bed in the cellular tissue, with the holes in the œsophagus. The stomach contained 7 ounces of blood and a small fragment of bone about half an inch long with sharp notched ends.

I am indebted to Dr. J. F. Goodhart for permission to publish this case, and to Mr. M. H. Thornely, whose notes of the case I have used.

BEDFORD INFIRMARY.

A CASE OF HÆMOPHILIA.

(Under the care of Mr. Nash, Honorary Surgeon.)

[Reported by S. J. Ross, M.B.]

A. B., aged 28 years, was admitted on June 5th, 1897. His mother had died of pleurisy five years earlier, and his six brothers were all dead; but his father and three sisters were alive and well. One of the brothers died from a cut, the result of a fall while in an "epileptic" fit. The hæmorrhage from the wound was uncontrollable. Three other brothers died from hæmorrhage, the result of accidents. The cause of death of the other two brothers was unknown. At the age of 4 years the patient was subject to attacks of epistaxis, which lasted for several days. At the age of 12 years he had a tooth extracted, and the resulting hæmorrhage lasted for seven days. Three years ago he cut his forehead, and bled for four days. He was admitted on account of marked bruising around the great trochanter, and extending to the middle of the thigh on the left side, due to a fall.

On June 19th the patient knocked his right elbow-joint against the bath. On June 22nd fluctuation over the olecranon process was present, and his temperature rose to 102° F. I made a small incision over the site of the swelling, and thick, curdy pus escaped; this was followed by some hæmorrhage. The discharge subsequently increased, and Mr. Nash made a free incision. The patient bled until he became quite blanched. At this time it had not been possible to obtain a history of hæmophilia. It was only after the operation, when he was frightened by the hæmorrhage, that he volunteered the statement that "he had only one skin." Ergot, perchloride of iron, and half-drachm doses of calcium chloride every four hours failed to arrest the hæmorrhage. The final resource was packing the wound with ice; this arrested all hæmorrhage, and the wound rapidly healed.

On November 30th, 1897, the patient was readmitted with hæmarthrosis of the left elbow-joint. The joint was placed at rest on a splint, and lead and opium applied locally. The blood was rapidly absorbed.

On December 3rd hæmorrhage occurred into his left knee-joint, and on December 14th into his right knee-joint, but in both cases the extravasation was absorbed. He has had seven attacks of epistaxis lasting from three to seven days, checked and finally arrested by the application of evaporating lotion over the bridge of the nose. He is at present taking calcium chloride (5 grains) thrice daily. On January 1st he had an attack of hæmorrhage from the bowel which, however, only lasted for two days.

Remarks by Mr. S. J. Ross.—1. The family and personal histories are striking features in the case. 2. That the patient has attained the age of 28 years seems also to be a point of interest 3. The presence of suppuration following an injury in a case of hæmophilia is, I believe, a rare occurrence. 4. The joints which were affected are not stiff. Finally, I would suggest that all hæmophilics should have the term "hæmophilic" or "bleeder" tattooed into their skin. I may add that none of the hæmorrhages were attended by rise in temperature. The suppuration occurred in the olecranon bursa, and was entirely extra-articular. Therefore no impairment in movement of the joint resulted.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

John Langton, F.R.C.S., President, in the Chair.

Friday, March 25th, 1898.

Interscapulo-thoracic Amputation for Sarcoma of Humerus.

Mr. Barling read an account of two cases, both resulting in recovery. The first patient was a man, aged 53, whose history showed that the tumour commenced three and a-half years previously, at which time there was spontaneous fracture of the humerus. When the patient presented himself for treatment the upper two-thirds of the right arm were occupied by a growth which overlapped the shoulder-joint, the outer end of the clavicle and the spine of the scapula, filled the axilla, and stretched under the pectoral muscles. The vertical measurement around the axilla was 27 inches, 10 inches more than on the left side, the girth of the arm being 28 inches. The growth was diagnosed as a myeloid sarcoma, and the entire upper extremity, arm, scapula, and outer two-thirds of the clavicle were removed by a slight modification of Berger's method. The patient made a good recovery, but six months afterwards was the subject of many secondary growths. The second patient was a man aged 37, whose disease was of about seven months' duration. The growth occupied the upper two-thirds of the arm and encroached upon the shoulder-joint. The diagnosis made was periosteal sarcoma of the humerus,

and Berger's amputation was performed, as ablation at the shoulder joint seemed likely to be followed by speedy recurrence. The patient recovered, though he was for some time in jeopardy from a severe attack of pneumonia, and was shown to the Society. He had been at work for some months, was in excellent health, and fifteen months after the operation there was no recurrence. The chief departure from Berger's method was that in each case the axillary vein was ligatured through the anterior flap instead of being tied in the same position as the artery, namely, the third part of the subclavian. A collection of 19 cases recorded since 1890 showed that all the patients recovered, indicating that the mortality of the operation, previously estimated at 21 per cent., was too high. At the Birmingham hospitals during the last ten years this operation had been performed eight times, all the patients recovering.

Mr. STANLEY BOYD said that about five weeks previously a strong man, aged 25, had come under his care in the Charing Cross Hospital for sarcoma of the axilla, which had attained the size of two fists in three months. It was not fixed to bone, but was closely attached to some soft parts. There was no evidence of pressure on great vessels or nerves, of involvement of the supraclavicular glands, or of secondary growths in viscera, etc. Operation proved that the great vessels and nerves were so surrounded by growth that only an interscapulo-thoracic amputation would remove the obvious disease. As consent had not been obtained the growth was left then. Union by first intention and a quick recovery resulted. Four weeks later the mass round the vessels had increased considerably, and amputation on Berger's lines was done. Removal of the middle third of the clavicle was insufficient to permit easy ligature of the vein, which lay beneath the inner third; consequently another inch was removed from the inner end. Mr. Boyd suggested that insufficient removal of the clavicle had been the cause of the difficulty in securing the vein in Mr. Barling's case, in which a good bit of the bone remained. The only other departures from Berger's instructions were that both pectorals were cut short to avoid the subjacent growth, and that most of the brachial plexus was divided before the artery was secured, ligature of the vessel being thus facilitated; for the plexus at once started into relief on division of the clavicle. A gland, the size of a filbert kernel, was found on the highest part of the subclavian vein exposed —a point of evil omen. The great wound was closed by deep and superficial stitches, and the patient left the table with a fair pulse. Very little blood had been lost. Although a full week had not elapsed since the operation, the patient seemed to be quite out of danger, the pulse had never been over 110, no unfavourable symptom had arisen, and the dressing had not "come through." It was very important to estimate the degree of shock resulting from the interscapulo-thoracic amputation as compared with that following amputation at the shoulder-joint, because the former operation should often be performed in cases of sarcoma of the upper end of the humerus instead of the latter, but surgeons were deterred by the fear of shock after this great amputation. The shock, however, was surprisingly slight.

Mr. SPENCER congratulated Mr. Barling on his successful results, and agreed with him that whilst M. Berger had laid down the main lines of the operation modifications were necessary in most cases. Thus, in a case described by him at a meeting of the Society three years ago, it had been necessary to take a large flap from the arm, owing to the involvement of the skin of the subclavian triangle by the disease. He had found the subclavian vein behind the inner third of the clavicle, and considered that most of that bone had to be removed. Hæmorrhage from the scapular region would depend upon whether the suprascapular and posterior scapular arteries were given off from the first part of the subclavian or from the third part on the distal side of the ligature, as in his case. Mr. Stanley Boyd's case confirmed the necessity of wide removal for periosteal sarcoma, for in contradiction to the too general statement that sarcoma did not infect lymphatic glands these malignant sarcomata did so.

Dr. FOWLER remarked that the temperature in the author's case was 104°, whilst the respirations were 44. Had there been any collapse of the corresponding lung?

The PRESIDENT pointed out that Cheselden had performed amputation for a similar condition a century and a-half ago.

Mr. BARLING, in reply, said he had come to the conclusion that one of the difficulties of the operation was to secure the vein without making a hole in it. He thought it was best to secure the artery first, tying the vein later on. He was sorry he had not removed the whole of the pectoralis major, which he would certainly do in future. He thought that most cases of sarcoma of the upper part of the humerus required something more than amputation at the shoulder-joint. There was no sign of collapse of the lung.

ILEO-SIGMOIDOSTOMY.

Mr. BIDWELL read a paper on a case in which he had performed ileo-sigmoidostomy to close an artificial anus at the umbilicus. The patient, a man aged 28, had been admitted into the West London Hospital with obstruction from stricture in the splenic flexure. Considering that the tumour was malignant, and its removal was impossible, the author performed colotomy of the transverse colon, with complete relief of the symptoms. After six months the patient wished to have the colotomy wound closed as the fæces were always semi-liquid and were practically always coming away. As the colotomy had been done by Mr. Bidwell's method of bringing the centre of the skin incision together within a hole made in the mesocolon, no local operation for closing the artificial anus could be done, so the abdomen was opened again, and the ileum united to the sigmoid by lateral anastomosis according to Halsted's method. After the operation about one-half of the fæces passed *per rectum*, and the remainder by the colotomy opening. Two months later, in order to drain the whole of the contents through the anastomotic opening, the abdomen was reopened and the portion of the ileum between the cæcum and the anastomosis was divided transversely, and the two ends were invaginated on themselves. This proceeding was completely successful. The patient seemed now quite well, and as the growth in the splenic flexure had decreased in size, it was suggested that the original mischief was inflammatory and not malignant. Mr. Bidwell suggested that as the comfort of the patient after an ileo-sigmoidostomy was so much greater than after a colotomy, the operation was preferable in cases of irremovable tumour of the ascending or transverse colon. He also recommended the operation in acute obstruction in these regions, and had performed it recently, with a satisfactory result, in the case of a lady, aged 66, with obstruction by irremovable growth at the cæcum.

ACUTE ASCENDING MENINGO-MYELITIS.

Drs. BUZZARD and RISIEN RUSSELL presented this paper. A man, aged 36, came under Dr. Buzzard's care at the National Hospital for the Paralysed and Epileptic with the following history:—His illness began with weakness of the left leg a month before he was seen, the right leg became similarly affected, and difficulty in passing urine was experienced. Ten days before admission he suddenly lost power in both legs and control over the bladder. Numbness spread up the legs to the trunk; he experienced pain between the shoulders, and slight weakness which existed in the arms became much worse the day before he came to the hospital, when he also had slight difficulty in swallowing. A gleet existed six months before he was admitted to the hospital, and he contracted syphilis six months before that. On admission, there was complete flaccid paraplegia without dropping of the feet, and the muscles of the abdomen and thorax were paralysed. Marked weakness of the hands without affection of the other segments of the limbs on the left side, but with weakness and flexion at the wrist on the right side. Respirations diaphragmatic; head turned slightly to right; left pupil small, not dilating in dim light; right pupil large, contracting readily; discs and fundi normal; anæsthesia and analgesia as high as first intercostal space and along inner side of both arms to styloid process of ulna; acute bedsore on buttocks; knee-jerks absent, as were superficial reflexes, except that of dartos, which was preserved; bowels constipated; overflow incontinence of urine. Heart and lungs normal; pulse 102 and respirations 32; pulse seemed normal; temperature, 102° F. The day after admission weakness extended to all movements at the wrists, and anæsthesia spread so as to involve the right hand with the exception of thumb and radial border,

while on the left hand the third and fourth fingers were alone involved. A day later the triceps became weak on both sides; there were hiccough, abdominal distension, and incontinence of fæces. In the afternoon of that day temperature rose to 103.4° F., and by evening both arms were completely paralysed. At 1 A.M. on the third day after admission respiration was much worse, he became cyanosed, and there was œdema of the lungs. Death resulted a quarter of an hour later. Vigorous antisyphilitic treatment was carried out (inunctions of mercury at first, and injections instead on the second day; large doses of iodide of potassium throughout), supplemented by injections of strychnine. At the necropsy marked meningomyelitis was found, most intense in the lumbo-sacral region, but existing throughout the cord, the meningitis extending to the base of the brain and along the lower part of the convexity of both hemispheres. The cord was engorged, softened, and had numerous hæmorrhagic extravasations. The spleen, though enlarged, was firm. The lungs were engorged and œdematous. Under subsequent microscopical examination the changes in the cord were more marked in the cervical region than in the lumbar, this being contrary to what appeared to be the case on macroscopic examination. A diplococcus was found in the meningeal exudation and substance of the cord. Pure cultures of the organism were obtained. It grew well at a temperature of 38° C. on different media, including blood serum, and grew very slowly in gelatine at the temperature of the room. It was markedly aërobic, with very little anaërobic properties, and did not liquefy gelatine. The diplococcus stained by the ordinary aniline colours, and decolorised by Gram's method. It proved pathogenic to mice and guinea-pigs, death resulting within twenty-four hours after inoculation; but a cat survived for a week, at the end of which time it was killed by an overdose of chloroform. The authors regarded the illness as due to the action of some infective agent; the morbid anatomy suggesting this, and the discovery of the diplococcus strengthening the view. They regarded it as probable that the presence of the diplococcus was not accidental, but as intimately associated with the etiology and pathology of the disease; they, however, considered that in the present state of knowledge it was better to record the occurrence of the diplococcus in association with the meningo-encephalitis without speculating too much as to the possible or probable significance of the association. The authors next pointed out that there were many points in common between this diplococcus and that of Weichselbaum, and that found by Still in association with posterior basic meningitis of infants. The differences between these micro-organisms were alluded to, and also the points which distinguished this diplococcus from that of pneumonia. Attention was called to the want of uniformity in the bacteriological findings in cases of acute ascending paralysis, and to the lesions that had been found in the nervous system in these cases, varying from no detectable morbid change to the most profound alterations as in the present case, the former group rapidly becoming smaller with the introduction of improved methods of detecting minuter changes in the nerve elements. From the clinical evidence alone it was clear that the authors' case belonged to the class of cases of acute ascending myelitis rather than to the group of so-called Landry's paralysis. In the latter class of cases sensibility, if affected at all, was but slightly so, while in their case there was complete anæsthesia and analgesia over a wide area. The acute bedsore was of similar diagnostic significance, as was the affection of the sphincters, though to a less degree.

Mr. Spencer said that great interest attached to the description of the diplococcus found in the spinal cord in connection with the existence of a gleet, and he asked whether the urethra had also been examined bacteriologically. In a case at present under his care with many lesions secondary to gonorrhœa, the fluid drawn off from the joints contained the same diplococcus (gonococcus) as could be obtained from the urethra. He also referred to the fact that some cases of hydrophobia had died with acute ascending myelitis.

Dr. Still pointed out that the diplococcus described by the authors differed in several respects from that described by him in association with posterior basic meningitis. The authors' diplococcus grew freely on blood serum, while the posterior meningitis bacillus did not; the latter, moreover, would not grow on gelatine at the ordinary temperature, while the authors' grew freely. Then, too, the basic microbe never proved fatal to mice when inoculated subcutaneously. He asked what was the size of the diplococcus in the authors' case. In a case of syphilitic meningitis under his own care the diplococcus was remarkable for its large size. He asked whether it had been found in the substance of the cord, because, if so, the fact would have an interesting bearing on the pathology of infantile paralysis.

Dr. Buzzard said that it had not been advisable to test the electrical reactions in the case owing to the extreme gravity of the patient's condition on admission. He pointed out that the diplococcus discovered by Dr. Russell differed from that found in the blood in Dr. Mott's case of multiple infective neuritis (Clin. Soc., 1894) as well as from that found by Dr. Still in posterior basic meningitis.

Dr. Russell, in reply, regretted that the urethra had not been examined, the existence of gleet not having come to light until afterwards. The differences between this and other recognised diplococci were gone into in the complete paper. He had not found it in the substance of the cord, possibly because he had only tried the anterior horns, whereas it was subsequently found that the posterior horns were most affected. He had since examined another case in which there was no meningitis, but only acute myelitis, and the same organism was obtained.

MEDICAL SOCIETY OF LONDON.

A. E. Sansom, M.D., President, in the Chair.

Monday, March 28th, 1898.

The Vagus Origin of Asthma and its Treatment.

Dr. Kingscote observed that science had so far shed no light on the causation of the symptoms collectively described as spasmodic asthma. Asthma was just as much a symptom as headache or cough, and not a disease. Asthma was not only comparatively common and superlatively distressing, but was peculiarly and proverbially intractable. He assumed that the origin of asthma was to be found in the irritation of one or several of the many ramifications of the vagi, though there was only known one means of experimentally producing asthma—namely, by stimulating the proximal end of the divided vagus. He admitted that there remained many obscure cases whose origin was unascertainable. In treating chronic heart lesions he had observed that some of the patients suffered from asthma. He had observed moreover that it was precisely those cases in which there was no ascertainable cause for the asthma that the patients got well, and that such patients invariably had a deep-seated dilatation of the heart, and that the improvement in the asthma marched with the reduction of the cardiac dilatation. This suggested to him that the amount of space taken up in the thorax by the enlarged heart might, if properly studied, serve to explain many obscure symptoms as the direct effects of such pressure. He pointed out that dilatation of the heart to the size of a football, a by no means uncommon condition, constituted a heavy tumour which would exert considerable pressure on the structures lying behind it. The vagi passed behind the heart, and lay in close proximity with the bony spine, so that the heavy heart would press heavily on their main trunks and hammer the nerves as though on an anvil. Dr. Kingscote read brief notes of ten cases of asthma of obscure origin in which relief had followed treatment directed to the reduction of the size of the heart. Dr. Groedel, of Nauheim, had related to him similar instances of improvement in cases of asthma and a reduction of the concomitant emphysema with the Nauheim treatment, especially when the asthma was cardiac. He pointed out that ordinary percussion was of little or no value in these cases in making out the actual size of the heart. Moreover, if the dilatation were very great the heart flopped over on either side of the bony spine and thereby assumed a hollow conformation immediately over it, by which means perhaps the vagi escaped pressure. This would explain why these cases were not more frequently met with. By treatment carried out on these lines it became possible to give a favourable prognosis even in the most stubborn cases provided one could make out the seat of vagus irritation. His treatment consisted of a considerable modification of the Schott treatment combined with the inhalation of

free oxygen twice daily in those cases which were due to cardiac dilatation. He insisted on the fact that he was not advocating a panacea for asthma, but only a method of treatment which might relieve when all other methods had failed.

Dr. Theodore Williams said he was not altogether convinced, though he thought it might be worth while in difficult cases of asthma to try the effect of the Schott treatment. He held that asthma was a neurosis of the vagus and posterior pulmonary nerves, which could be set up by a variety of causes. He pointed out that asthma was not so incurable a disease as the author would lead them to suppose, and very great relief, possibly permanent, was often experienced after the administration of iodide of potassium. Another useful method was the compressed air bath.

Sir Felix Semon said the paper was eminently suggestive, and it seemed to show that a great many cases had been cured which were looked upon as incurable. He referred to a case of his quoted by the author, of a clergyman who had been sent on to him by the author because he presented considerable swelling of the nasal membrane. Although very sceptical of the value of nasal treatment in asthma he, in deference to the patient's wish, cauterised the inside of the nose, and then the patient returned to the author to undergo his treatment. The result had been absolutely satisfactory, but he admitted that he was not in a position to say which part of the treatment was entitled to the credit.

Dr. Thorowgood pointed out that the cases of asthma associated with a dilated heart differed altogether from the ordinary spasmodic asthma. He instanced a case of asthma with enlargement of the heart, in which drugs, acting upon the heart, afforded great relief, as did also the inhalation of oxygen, whereas in the case of a lad with typical spasmodic asthma the inhalation of oxygen seemed to do more harm than good, though citrate of caffeine relieved the paroxysms.

Dr. Maguire dissented from the view that any enlargement of the heart could produce pressure symptoms upon the vagi. Were this the case the pressure effects would not be limited to merely one section of its complex fibres. He pointed out that the viscera in the thorax worked under a negative pressure which would tend *pro tanto* to diminish any pressure upon the vagus. Then again, if the asthma were due to pressure on the vagi, physiological considerations would lead them to expect purely expiratory asthma, which he maintained very rarely obtained. He asked whether they were to believe that there was always cardiac enlargement in cases of asthma. He himself had examined many cases in which no evidence of enlarged heart was obtainable. In one case mentioned by the author the asthma had disappeared after treatment had reduced the size of the heart, but this patient was stated to have suffered from asthma ever since 8 years of age. He asked at what age the enlargement of the heart was supposed to have commenced. He criticised the view that asthma was due to spasmodic contraction of the bronchial tubes. That was an assumption based on no tangible evidence. If such spasmodic contraction was excited by pressure he saw no reason why it should last so long. Clinical facts, too, were against that theory. Dyspnœa associated with heart disease was not asthma, but should be called cardiac dyspnœa. He pointed out that the cough in asthma went on until the patient had coughed up something, sometimes frothy but more often viscid. He recalled the case of a patient who had been coughing up casts of the bronchi, and when this ceased he developed typical spasmodic asthma. He suggested that the conditions which obtained in false croup in children, in which only some congestion of the larynx could be found, might explain asthma. He urged that the course of the disease was strongly in favour of such a view, and the action of iodide of potassium, which reduced inflammation and liquefied secretions, also tended in the same direction. They must remember that the muscularis mucosæ might be affected and cause obstruction, as well as the muscular fibres of the bronchioles. He thought, indeed, that asthma had nothing to do with irritation of the vagi, but was simply a rapidly occurring congestion or inflammation of the mucous membrane.

Dr. Morrison could not imagine that a heart enlarged to any size could possibly exert pressure on the vagi. In children at any rate this reflex pulmonary irritation was often set up by intestinal disturbances, of which he quoted a salient instance where asthma of long standing and great severity was promptly and permanently cured by the administration of bismuth and salol. He pointed out that most of the author's cases were examples of cardiac dyspnœa which were not to be compared with spasmodic asthma. He suggested that raised endocardial pressure might of itself explain many of the phenomena. He said he himself had never met with these enormously dilated hearts, though with his experience he might fairly have expected to have seen at any rate a few examples. He read a letter from Dr. Groedel, of Nauheim, who grouped asthmatic patients under two heads—(1) those with a weak right heart, and (2) those with emphysema of the lungs and chronic bronchitis, in whom the heart had secondarily become dilated and weakened. He treated the first class of patients by baths and rest without any measures directed to the lungs or calculated to stimulate the heart. In the second class baths might be advantageously combined with pulmonary gymnastics. He pointed out that drugs had often proved useful during a course of baths when the latter alone had failed to relieve, adding that the beneficial result attained by the bath treatment in combination with exercises lasted longer than when rest and drugs alone were employed.

Dr. Symes Thompson pointed out that many cases of chronic asthma which could not readily be dealt with by drugs yielded to skilled and persevering treatment at spas, and he had in many cases obtained excellent results by sending such patients to Buxton or Malvern, where the details of their daily existence were carefully looked after.

The President suggested that if the heart were greatly dilated, it must of necessity put the pericardium on the stretch, and this might, perhaps, suffice to explain the neurosis.

Dr. Lucas Benham pointed out that in one case the asthma dated from birth, and asked when it was supposed that the heart commenced to dilate.

Dr. Kingscote, in reply, pointed out that he did not hold the view that asthma always started from the heart; but he thought his cases proved that some of them did, and that treatment directed to reduce the size of the heart would relieve the asthma.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

R. M. Simon, M.D., in the Chair.

Friday, February 25th, 1898.

Cases.

Dr. Douglas Stanley showed a boy, aged 14, who exhibited Tabetic Symptoms. When about 4 years old he had diurnal incontinence of urine, which troubled him for several years. He became "tottery" in his walk when about 10. On examination he had no tendon jerks, the pupils were small, and did not react to light, but were reactive for accommodation. The gait was slightly unsteady, and there was slight Romberg's symptom. He complained of pains in the knees.—Dr. Leslie Phillips showed: (1) A young man with large Keratomata on a metacarpo-phalangeal knuckle of each hand, and one on a phalangeal knuckle. There was nothing in his occupation (that of a warehouseman) which could be considered a causative factor. The case was not related to angio keratoma. (2) A youth with Ichthyosis of the whole skin, except that of the abdomen. The thighs presented numerous large comedones. In the discussion several speakers recalled an occasional association of asthma with ichthyosis. (3) A young man with Seborrhœa Papulosa seu Lichenoides with somewhat unusual distribution—namely, avoiding the sternal and interscapular regions, it affected symmetrically the outer part of the thorax, shoulders, and upper part of the arms.—Dr. T. Stacey Wilson showed a man, aged 21, with a Tumour of doubtful nature in the Left Hypochondrium. The history of the case was as follows: The man had been perfectly well until November, 1897, except for a slight gastro-intestinal attack twelve months previously. He had never been abroad. On November 9th, 1897, he was admitted to the General Hospital with acute gastro-intestinal catarrh of two days' duration. The symptoms were

slight and not unusual, except for a considerable amount of blood and mucus in the stools. There was, however, a well-marked swelling with a triangular outline projecting from under the left ribs. Its upper border was in line with the sixth rib, its lower border was a horizontal line about 2 inches above the level of the umbilicus, and its apex did not quite reach the middle line. Posteriorly it extended backwards into the splenic area. Its margins were well defined and quite smooth; its consistence was that of a soft solid. It was dull on percussion, and was slightly movable both by palpation and on respiration. It was not painful or tender, and there was no evidence of any inflammation after the first day or so. The stomach and heart were both displaced upwards by the swelling, the apex being in the fourth interspace, and the gastric resonance occupying a zone only 2 inches wide between the fourth and sixth ribs in the left nipple line. The only other symptom of any importance was a yellowish discoloration of the skin, called "jaundice" by the patient. It was not due to bile, and there was no bile in the urine, which was not of an unusual colour. For the first week of his stay in hospital the tumour steadily increased in size, although all symptoms of illness disappeared (with the exception of the slight yellowish discoloration above mentioned). Mobility, painlessness, absence of notch, etc., persisted as before. There was no fever, and the blood was normal, both as to number and character of the corpuscles. The diagnosis rested between enlarged spleen and a slow hæmorrhage (with coagulation of the blood) into the lesser sac of the peritoneum from some source near the cardiac end of the stomach. The former theory was, in Dr. Stacey Wilson's opinion, rendered unlikely by the rapid growth of the tumour, the absence of constitutional symptoms, the absence of a notch, and the want of mobility, together with the remarkable upward displacement of the stomach and heart. At the date of showing the patient, February 25th, 1898, the tumour had considerably diminished in size and had become more resonant, and the displacement of the viscera was much less. The man was working hard and in good health. The case gave rise to much discussion, but the general opinion seemed to be that the evidence against its being a spleen enlarged in a somewhat unusual way was not at all conclusive.—Mr. Heaton read a note of a case of Quiet Necrosis of the Femur.—Dr. Codd showed a specimen of Cyst of the Spleen. The patient was a man, aged 65, who died of acute pneumonia of the apex of the right lower lobe on the twelfth day of the disease. There was grey hepatisation of the pneumonic area. The spleen was normal in size, and had in its interior a loculated cyst containing serous fluid, and being lined by a well defined smooth-walled membrane. The kidneys were fatty and had some pinhead cysts, and one old hæmorrhage was present. The tricuspid valve had its anterior cusp thickened at the edge, but there was nothing to suggest an embolic origin. It seemed likely that the cyst might be of embryonic nature.

Typhoid Ulceration of Spleen.

Dr. Codd also showed the spleen and larynx from a case of typhoid fever. The patient was a man aged 33, very ill, apathetic, and generally delirious. Symptoms of enteric fever were well marked. Four days after admission he had very profuse hæmorrhage from the bowel, which was with great difficulty arrested, and continued scantily at intervals. Death occurred more than twenty-four hours after its onset. *Post mortem* the ileum showed the greater number of the Peyer's patches ulcerated with the sloughs still partially adherent. One ulcer had much of its floor formed by peritoneum only. There was much hyperæmia in the ulcers above the valve, but no open vessels were made out. The colon was full of blood. The mesenteric glands at the lower part of the ileum were breaking down. The spleen was enlarged, and showed four ulcerated patches on its surface extending somewhat deeply into its substance in wedge-shaped form. They had a slough, partially detached, upon their surface, resembling closely the sloughs of the ulcers of the ileum. There was adhesion of the omentum at these sites. No abscess was found. The larynx showed an ulcer at the posterior part of the left cord. Considering the very analogous structure of the splenic pulp to the lymphoid tissue of the intestinal follicles, it was not surprising that there should be a true specific enteric ulceration of the spleen.

Sarcoma of Spine.

Dr. Foxwell showed two vertebræ removed from the body of a man aged 47. The patient was admitted to the Queen's Hospital supposed to be suffering from calculus of the right kidney. There was evidence of Bright's disease, but the diagnosis of calculus soon had to be abandoned, and that of a growth, external to the spinal column, and pressing on the roots of the right lumbar nerves, adopted in its stead. The chief symptom was agonising pain with both superficial and deep tenderness. The pain occupied most of the right side of the abdomen, but was most acute in the region of the superior iliac spine and the upper half of Poupart's ligament. The most noteworthy sign was the extreme and persistent rigidity of the recti abdominis, and indeed of all the abdominal muscles as well as of the muscles of the loin. The ease with which the patient sat up, got out of bed, and even walked to within a few days of his death was no doubt thus rendered possible. There were no nervous symptoms referable to the legs except an activity of both knee-jerks. The growth was found to be of sarcomatous nature and to have involved the right halves of the bodies of the two vertebræ, but the cord had escaped.

Inflammatory Induration of Salivary Glands.

Mr. Barling showed a specimen of chronic inflammatory induration of the submaxillary and sublingual salivary glands from the presence of salivary calculus which he had removed from a female aged 39. She first had swelling and pain in the submaxillary region six years previously, at which time a small calculus escaped into the mouth, with relief of symptoms. During the last twelve months the patient had suffered repeated attacks of pain and swelling, and a few weeks ago another small calculus escaped, but with very little relief. When she presented herself both the glands were stonily hard, very fixed and adherent to the floor of the mouth, but owing to the density of the tissues no calculus could be felt. With considerable trouble both glands were excised, the floor of the mouth being freely opened. Examination of the specimen showed simply a dense infiltration of the gland tissue without any appearance of new growth, and a calculus, measuring nearly ¾ inch in length, lay in a dilated duct.

Subdural Hæmorrhage.

Mr. Barling also showed a specimen of subdural hæmorrhage from a man, aged 47. In the first week of September, 1896, the patient fell over a piece of wire, but did not strike his head. A few days afterwards he complained of intermittent pain at the top of the head. This increased in intensity and became constant, until on October 5th he was obliged to take to his bed. At that time there was no paralysis, and the pupils responded to light, the temperature was scarcely at all raised, the pulse was not recorded. The patient became dull and apathetic, and these conditions increased until practically coma was established. The patient died on October 25th, and during the last week of life there was paralysis of the left arm and leg, the arm being chiefly affected, and there was incontinence of urine. At the necropsy, the scalp and calvarium were free from marks of injury or disease. On opening the skull, the dura mater bulged over the right frontal convolutions, and it presented a greyish blue appearance. On opening the dura a large quantity of old fluid blood and old blood clot escaped and the convolutions on the right side were deeply depressed. The hæmorrhage was entirely subdural and confined to the right side. The arachnoid on the left side of the brain was opaque and thickened, and there were adhesions between the hemispheres which had to be torn open to expose the corpus callosum. The brain tissue appeared quite healthy and was free from bruising or extravasation of blood. There was no fracture of the base of the skull. The viscera were healthy. Mr. Barling did not see the patient alive, but as the deceased was insured against accidents he attended the necropsy on behalf of the insurance company, who eventually compromised the case.

Malignant Disease of Lung and Liver.

Dr. Powell White showed a specimen of malignant disease of the lung and the liver. The patient, a man aged 43, had influenza nine months ago, since when he had suffered from

cough with occasional hæmoptysis. He first noticed swelling of the abdomen five weeks before admission into the hospital. The liver weighed 21½ lbs., and was studded with carcinomatous nodules of different sizes. Those on the surface were umbilicated. The primary growth was in the right bronchus, from which it extended in a radiating manner into the lung. Microscopically, it was a carcinoma with a very large number of cells and little stroma.

Thursday, March 10th, 1898.

Robert Saundby, M.D., President, in the Chair.

Aneurysm of Internal Maxillary.

Mr. Langley Browne showed a case of ligature of the common carotid for aneurysm of internal maxillary. On March 12th, 1897, S. P., aged 32, was kicked by a horse in the face, and sustained double fracture of the lower jaw and compound fracture of the right malar bone communicating with the mouth. The wounds soon became septic and the man's face and neck very inflamed and swollen. On April 13th distinct pulsation was felt in the swelling on the face, under the zygomatic arch, and behind the soft palate. The pulsating tumour gradually increased in size, until it could be felt in the neck behind the angle of the jaw, and the cheek was displaced upwards, closing the right eye. On April 26th there was copious hæmorrhage from the pharynx, so the common carotid artery was ligatured. The patient had no bad symptoms after the operation, and all traces of the aneurysm disappeared in about two months. The common carotid artery was tied instead of the external, as the incision for ligature of the external carotid must have been made through septic and unhealthy tissues.

Ruptured Tubal Pregnancy.

Mr. Langley Browne also showed a right Fallopian tube, sac, and placenta from a case of ruptured tubal pregnancy. The woman, aged 42, a mother of five children, was admitted into the West Bromwich Hospital on March 5th, 1898. Ten days before admission, being then two months' pregnant, she had sudden and extreme pain in the abdomen. On admission she had peritonitis. Temperature 104°. A very fœtid discharge from the uterus; extreme pallor and collapse. The abdomen was opened, and found to be full of blood. Free bleeding was taking place from the veins of the right broad ligament. The right Fallopian tube was ruptured, and the pelvis full of old blood clot. The tube and ovary were ligatured and removed, and a ligature passed round the right uterine artery. The placenta was attached to the omentum, and had escaped from the sac probably at the time of the rupture. The abdominal cavity was washed out with hot saline solution, and closed. There was no further hæmorrhage, but the temparature kept up, and the patient died forty-eight hours after the operation from septic peritonitis. Although the rupture took place into the peritoneal cavity, the primary hæmorrhage ceased. The secondary hæmorrhage was probably due to the journey prior to admission.

Ovarian Cyst with Twisted Pedicle.

Mr. J. F. Jordan showed a specimen of cyst of the left ovary with a tightly twisted pedicle, which had been removed the same morning from a patient in the Women's Hospital. She had noticed a gradual enlargement of the abdomen for some months, no pain, and no interference with menstruation. Four days previously she was suddenly seized with acute pain in abdomen and collapse, with vomiting, constipation, and small feeble pulse. At the operation the pedicle was found twisted tightly for two and a-half turns; the front of the cyst had passed from left to right, the back passing round by the left side to the front. The contents were five pints of bloody fluid. Although the walls were in a state of commencing gangrene, there were no adhesions. A later note stated that the patient had completely recovered.

Cases.

Dr. Leslie Phillips showed (1) a little girl, aged 7, who had rapidly recovered from General Pemphigus on confinement to bed with appropriate treatment. (2) A woman, aged 34, who presented a pathological dislocation forward of the Carpus due to syphilis. The primary lesion occurred two years and a-half ago, and was followed in a few months by severe and large ulcerative lesions of the skin. At the time the articular trouble appeared the bones of the forearm are asserted to have become soft.

Papers.

Mr. George Heaton read a paper on Suprapubic Cystotomy combined with external urethrotomy for impermeable urethral stricture.—Mr. Christopher Martin read a paper on Retention of the Menses.

GLASGOW SOUTHERN MEDICAL SOCIETY.

Edward McMillan, L.R.C.S.Edin., in the Chair.

Thursday, March 17th, 1898.

The Forceps in Obstetric Practice.

Dr. Jardine resumed the discussion on the use of forceps in obstetric practice. He confined his remarks to the use of axis-traction forceps and personally preferred and used Milne Murray's pattern. Traction could be made in the right direction; flexion and rotation were not interfered with. The handles indicated the direction of the pull and traction should be made by the cross bar alone. It was far superior to the ordinary forceps at the outlet, but still pulled on the cross bar; by its use the perineum could usually be saved, the patient being deeply under chloroform and delivery effected slowly with care. If rupture should occur the wound tear should be stitched at once. Lacerations of the vagina were common even in normal unaided cases. Tear of the cervix was not more common with forceps than ordinary cases. In the Maternity Hospital the rule was to allow in multiparæ two hours, in primiparæ three hours for the second stage. As to frequency of the use of forceps, the author gave the following figures:—Indoor cases 12 per cent., outdoor cases 5 per cent., West End Branch 4½ per cent.; 10 per cent. of the indoor cases had markedly contracted pelves. In primiparæ chloroform should always be used. Milne Murray's forceps were shown and defended against any charge as to favouring sepsis. The parts could easily separate for cleansing, the whole being metal was easily boiled. A new form, almost straight, for occipito-posterior cases, with the adjustable traction rods was exhibited and explained.

Professor John Edgar urged the use of axis-traction forceps for every case at brim, cavity, or outlet. Pajot's manœuvre, with the ordinary double-curve forceps, could be very effectively applied with the patient in the dorsal position. Using the axis-traction forceps, one had more purchase and more certainty of the direction of pull. The traction was more effective. He preferred, with Dr. Jardine, the Milne Murray pattern. The use of forceps ought to be limited to cases where absolutely needed. He quoted statistics showing how frequent were injuries from the use of forceps; 60 per cent. of the cases under his care in the Samaritan Hospital might be so classed.

Dr. James Hamilton had arrived at the stage of using forceps less frequently, and his results had been better. At first a man was afraid to use forceps; this fear passed away, and he used them too frequently; then he came to realise that in some cases his forceps had done harm.

Mr. Stuart Nairne, in closing the discussion, said each case must be judged on its merits. No value was to be placed on statistics; no dozen cases were the same. The forceps was frequently used. If it was used in 10 per cent. of cases, and that after due consideration, why should it not be used more frequently? The long, straight forceps was not the favourite instrument; but many men in Glasgow used it, and found it sufficient for their needs. It mattered little what instrument was used, if the person using it was master of it.

Society of Anæsthetists.—At a meeting on March 17th, Dr. Dudley Buxton (President) in the chair, Mr. MacCardie read notes of three deaths which had recently occurred under anæsthetics in Birmingham. In the first case, a child aged 5 died while the operation for removal of adenoid growths was about to be performed after tonsillotomy. The child was feeble and had lost the usual quantity of blood. A.C.E. mixture had been given before the chloroform. The death was due to syncope and shock. In the second and third cases chloroform was used, as it was thought ether or A.C.E. mixture might cause bronchitis, renal trouble, or undue

arterial tension. The President pointed out that there was no conclusive evidence that ether, when properly given, caused any of these results. He believed delicate children were commonly kept too long without food before an anæsthetic, especially when the operation to be performed involved the loss of blood. Mr. Chapman had met with a case of a man who had an attack of pre-existing bronchitis greatly benefited by inhaling ether for an operation. Mr. Tyrrell drew attention to the benefit following inhalation of ether by asthmatics. Mr. Carter Braine had constantly given ether to persons whose kidneys were diseased without any untoward result.—Mr. Alfred Coleman read a paper on a Method of Administering Nitrous Oxide through the Nose. A loosely-fitting cap was placed over the nose, which fitted accurately at the base, and was attached to a bag supplied in the usual way from a gas cylinder. A two-way tube was placed between the bag and the nose cap. Over the mouth and nose cap was placed an ordinary gas face-mask. The patient drew the gas through the nostrils, and when anæsthesia was complete the face mask was withdrawn, and anæsthesia maintained as long as needful by the continuous flow of gas through the nose piece. An anæsthesia of five minutes had thus been maintained, and even a longer time could, if necessary, be obtained. Mr. Coleman had adapted the principle to the giving of ether and of chloroform.—Mr. Harvey Hilliard read a communication on a Method of Prolonged Nitrous Oxide Anæsthesia in Dental Practice. He gave the patient gas in the ordinary way, and, withdrawing the face-piece at the end of an inspiration, introduced through the nostril a soft gum elastic silk tube 6 inches in length, and shaped at the distal end like a male *à boule* catheter. The proximal end was connected with the gas supply. Nitrous oxide was allowed to traverse this, and so anæsthesia was maintained after the face-piece was removed. Mr. Coxon had employed yet another plan for obtained prolonged anæsthesia under nitrous oxide in mouth operations. After the usual method had induced anæsthesia, it was extended by introducing into the mouth a metal tube (the injector), which was connected with the gas-supply tube. Experience having shown that the gas thus introduced produced undue cooling of the mouth, he allowed the gas to traverse a metal coil itself placed in water of a requisite temperature to warm the anæsthetic. The President had employed Mr. Coleman's and Mr. Coxon's method, in the former case with marked success. Mr. Paterson, who had employed Mr. Coleman's apparatus, had found the principle of value, although he believed further improvements were required in the apparatus. He thought a nasal tube was open to several objections—the difficulty of passing it and the impossibility of keeping it clean. Messrs. Coleman, Hilliard, and Coxon replied.

Dermatological Society of Great Britain and Ireland.—At a meeting on March 23rd, Dr. F. Payne, President, in the chair, the President showed a case of Leprosy in a woman of about 50 years, a native of Riga. There was no history of heredity. It was stated that fish was but little eaten in Riga, and that this small quantity was nearly all taken from the river. She was being treated at St. Thomas's Hospital by Dr. Payne with chaulmoogra oil. Dr. Abraham stated that he knew of 19 cases in or about Riga.—The President showed a man, aged 45, suffering from Persistent Erythema. The disease had existed for 14 months. The face and hands were free from the disease, but the covered parts of the body were very conspicuously attacked. The lymph glands were enlarged wherever they could be felt. There was no specific history.—Mr. W. Anderson showed a case of Chronic Eruption of the Legs in a girl, aged 24 years. She was a delicate-looking girl, with a phthisical history. The tubercle bacillus had not been found locally. He thought possibly the case was one of erythema induratum (Bazin's disease), modified by scar tissue, or perhaps that it might be called lichen planus hypertrophicus. Dr. Pye-Smith thought it might be a tuberculous eruption, and instanced the colour, the cicatrisation, and the occasional pustulation. — Dr. Abraham showed: (1) Extensive Herpes Zoster in a man; (2) Eczema in a man; (3) Annular Impetigo Contagiosa in an infant; (4) Lupus Erythematosus in a woman.—Dr. A. Eddowes showed Arsenical Pigmentation in a man.—Dr. T. Savill showed a case of Purpura in a young man.—Dr. Seymour Taylor showed a case of Bromide Eruption in an infant. Bromide of ammonium had been given to relieve the irritation of teething.—Dr. F. Rufenacht Walters showed: (1) A woman, aged about 40, suffering from Myxœdema. She had been treated with thyroid tabloids with varying benefit. Mr. Pernet suggested that there might be some connection between the involution of the genital organs and atrophy of the thyroid. (2) A case of Lichen Planus.

Hunterian Society.—At a meeting held on March 23rd, Dr. Cotman, President, in the chair, Dr. Appleford read a paper on Medical Practice in the West Indies. After describing the various medical appointments in the islands, he mentioned that the diseases most commonly met with were anæmia, ground-itch, jiggers, and yaws. Dirt-eating amounted to a disease, and the habit was chiefly practised by the children of the Coolie population. The favourite dirt was a light-coloured clay, but, failing that, any clay or soil was consumed. Yellow fever was very prevalent, but rarely attacked those who had not resided in the islands for more than a year. The value of Trinidad and Barbadoes as health-resorts was pointed out.—Dr. Woods read a paper on the Treatment of Drink Craving and Cardiac Affections by Suggestion. He considered that the morbid craving for alcohol was not thirst, but a gastric sensation like hunger. The results of thirty-eight cases treated by suggestion were detailed. In the treatment of cardiac affections by suggestion much success had also been obtained. The method adopted and its *rationale* were fully discussed.

Glasgow Pathological and Clinical Society.—At a meeting on March 14th, Dr. Donald Fraser (Paisley) in the chair, Dr. Alexander Napier showed numerous Photographs and Skiagraphs from a woman, aged about 40, suffering from Acromegaly. Her illness was supposed to have commenced rather suddenly 15 years ago in connection with some sore throat. A prominent symptom from the onset was complete cessation of menstruation. There were characteristic alterations in the face, hands, and feet. Exophthalmos was a marked symptom, and there was external squint of the right eye, which was quite blind, and in an advanced condition of optic atrophy. There was hemianopia of the left eye, the nasal half of the visual field being lost, and the left optic disc was slightly atrophied. There was much enlargement of the thyroid gland, but no tachycardia. The mental condition was very good. Recently the patient had an epileptic fit, followed by albuminuria, but there had been no glycosuria or polyuria. Treatment had included the administration of preparations of ovarian tissue, of thyroid gland, and of pituitary body, but no benefit had ensued. A discussion followed, in which Drs. Fraser, Middleton, Fleming, and Sutherland took part. —Dr. T. Kennedy Dalziel showed a man who had been operated on successfully for Rupture of the Bladder. The patient had fallen a distance of 20 feet on his right side, fracturing the neck of the right femur. The rupture was found to be in the base of the bladder, involving the peritoneum, so that urine and blood had escaped into the general abdominal cavity, but also involving the prostate gland. The great difficulty at operation was hæmorrhage from the prostate, and this had to be overcome by stuffing the bladder with sponges. No fracture of the pelvis was found. Drs. Maylard and Rutherfurd made remarks.—Dr. Dalziel also showed (1) a large Gall Stone and two small Gall Stones removed by operation from the common bile duct of a lady who had a long history of attacks of biliary colic. (2) Some Papillomatous Tumours from the lower bowel of a child, supposed to exist in all the length of the great intestine, and also in the lower part of the ileum; some were supposed to have led to acute intussusception at the ileo-cæcal valve, for which abdominal section was performed with good result. (3) A Retroperitoneal Lipoma from a child aged 7. The tumour was noticed at 18 months, and gradually increased, and by pressure interfered with circulation, digestion, etc., the child being very emaciated. The tumour was in the middle line (prevertebral), and simulated an ovarian tumour, or a cystic kidney. It weighed 12 lbs. after being some time in spirit. The child died under chloroform before the operation was completed.

REVIEWS.

Memories of Seven Campaigns: A Record of Thirty-Five Years' Service in the Indian Medical Department in India, China, Egypt, and the Sudan. By James Howard Thornton, C.B., M.B., B.A., Deputy-Surgeon-General, Indian Medical Service (Retired). With an Introduction by A. Egmont Hake. Illustrated by Edward Thornton, A.R.I.B.A., and Katherine Margaret Thornton. London: Archibald Constable and Co. (Demy 8vo, pp. 360. 17s. 6d.)

This handsome volume, dedicated by permission to H.R.H. the Duke of Connaught, contains the autobiography of a distinguished medical officer of the Indian Army between the years 1856 and 1891, a period which Mr. Egmont Hake characterises in his introduction as perhaps the most interesting in the modern history of our Empire. Nothing could better illustrate the vast issues involved in the maintenance of that Empire than the fact that of the seven campaigns in which the author took part, no fewer than three were wholly outside India. These reminiscences also well show the exceedingly varied experiences which fall to military officers of our Imperial forces.

Surgeon-General Thornton had not long arrived in India when the Mutiny broke out. He was then at Benares doing duty with a British battery of artillery. They were the sole Europeans to hold in check three native regiments, and to shield from outrage a crowd of European women and children in the station; there was no fort or defensible place on which to rally, so that the anxiety consequent on so perilous a situation may be more easily imagined than described. Fortunately, before the native regiment actually mutinied, 200 men of the 10th Foot arrived and thus averted a general massacre. The author bears testimony to the fact, often previously commented on, that very few native domestics in European establishments proved unfaithful when the Sepoys were in revolt.

His experiences in the Mutiny were very varied, including the relief of Arrah, Dinapore, etc., and final entry into the Alum Bagh, as part of the Lucknow relieving force. He witnessed the scene of the massacre at Cawnpore, while the sickening evidences of that diabolical treachery were still all too apparent. At the Alum Bagh he did duty with the 90th Regiment, and accompanied it when, with the 93rd Highlanders, the Dil Khusha and Secundra Bagh were carried with an irresistible rush. Afterwards, with the 1st Bengal Europeans and the 1st Sikh Irregular Cavalry, he took part in many engagements in the final suppression of the revolt.

The Mutiny was scarcely over when he embarked with the 15th Sikhs for China in 1860. In this campaign he took part in the capture of the Taku Forts, march on Tienstin, and occupation of Pekin.

Next, in 1862, he served with the 28th Native Infantry in the Khasia campaign in Eastern Bengal. This led him to Cherra Poonjee, notorious as the rainiest place in the world; 30 inches have been measured there within twenty-four hours, part of the 500 inches which falls between April and September.

His next campaign, in 1864, is known as the Bhootan, in Assam Country. This campaign was remarkable for a frightful amount of sickness from malarial diseases; one native regiment lost 250 men from these causes. The author records his conviction, now thoroughly accepted, that a specific agent is the cause of malarial disease.

The author's next campaign was that in Egypt, 1882, connected with the expulsion of Arabi Pasha, in which he held administrative duties at the base in Suez. In 1885 he was nominated Principal Medical Officer of the Suakin Expedition from India; and he has a number of remarkable experiences to recount. In 1886 he was promoted to be Principal Medical Officer of the Punjab Frontier Force, and as such took part in the Black Mountain, otherwise Hazara Field Force, campaign.

Seven campaigns is a brave allowance for one man, and seldom falls to the lot of any soldier save the ubiquitous soldier-doctor; yet he is the very man to whom certain unjust and ungenerous combatants would deny any military status.

It has been said of many Indian medical officers that they are apt to lose military touch through continuous civil employ; but there can be no such charge in the case of Surgeon-General Thornton.

The book is written in a clear, easy style, with a minimum of the *Ego*, which is so apt to intrude, unduly, in autobiography. It contains a great many hints and experiences useful to young men about to adopt an Indian career, and is a book they should have in their hands. There are excellent illustrations by the author's gifted son and daughter.

Cutaneous Medicine: a Systematic Treatise on the Diseases of the Skin. By Louis A. Duhring, M.D., Professor of Diseases of the Skin in the University of Pennsylvania. Part II. Classification, Anæmias, Hyperæmias, Inflammations. Illustrated. London and Philadelphia: J. B. Lippincott and Co. (Roy. 8vo, pp. 223-494. 12s. 6d.)

We welcome the appearance of the second part of Dr. Duhring's masterly treatise on diseases of the skin. It amply fulfils the high expectations warranted by a consideration of the long clinical experience, the grasp of the principles of pathology, and the industry of the distinguished author. This volume illustrates in a striking manner the high position that dermatology has attained in the United States, and is equally creditable to the author and to his country.

After dealing shortly and very briefly with the class of anæmias and hyperæmias, the author discusses the various forms of erythema, which are illustrated by eight plates of the naked-eye appearances, and two plates of the microscopical appearances of erythema multiforme. Urticaria, including urticaria pigmentosa, is illustrated by four plates of the clinical appearances, and three plates showing the microscopical changes. Of the latter one is a section from common urticaria, and two illustrate microscopical appearances in urticaria pigmentosa from a case described by Dr. T. Caspar Gilchrist. They show, in a very instructive way, the peculiar cell accumulations around the vessels; in this case the cells were of the variety usually described as "mast" cells.

Dr. Duhring tells us that since the first case was recorded by Nettleship probably about 60 have been described, but all of these, he remarks, may not represent precisely the same disease. In some cases the urticarial element predominates, while in others there is a prominent soft nodular new growth in the skin accompanied by urticarial symptoms. It was this latter form which was originally designated by Tilbury Fox as "xanthelasmoidea." The author suggests that a more appropriate name would be "xanthomoidea" to which "urticans might be added, and he considers that the term "urticaria" is a misnomer for typical forms of the disease. He has met with both forms. Œdema cutis is briefly described and illustrated by an excellent plate of the microscopical appearances.

A large part of the volume, occupying 110 pages and illustrated by no fewer than 40 plates, is devoted to eczema. The microscopical appearances of eczema are shown in five plates. This important disease of the skin is thoroughly discussed in all its bearings, and in the text will be found a reference to the recent important work that has been done in connection with it. For the mycotic and contagious nature of eczema, which has been advanced by Unna and others, there is not yet, in the opinion of the author, sufficient proof to warrant its discussion in the book. The micro-organisms which are found in the products of exudation on the surface of the skin are, he considers, very probably only adventitious and secondary. The possible invasion of the body by cocci from an eczematous surface is suggested, and cases are given and referred to in which this result seems to have occurred. Dr. Duhring is one of those authorities who consider that gout and rheumatism may be associated with eczema. He believes that cases are sometimes met with in which persons have experienced violent attacks of gout in the form of general constitutional disorder, who are relieved immediately by an eruption of eczema, and who remain free from the constitutional gout until the cutaneous disease disappears. This is such a serious statement, and involves such practical consequences of an important kind, that we take the liberty of inviting Dr.

Duhring's special attention to the subject, and would suggest the advisability of the publication of a series of cases which seem to him to bear out his view. Nervous exhaustion or neurasthenia, shock, and a lowered or depressed state of the nervous system, are capable of causing and exerting a direct influence upon eczema. He refers to a remarkable case recorded by Dr. Taylor, of New York. A lady, aged 36, of fine physique, never before sick, mother of one child, was suddenly informed of the death of her husband. She fainted, and when restored to consciousness noticed a burning sensation of the whole face and neck. No local application had been made while she was in the faint. Within a few days erythematous eczema set in, and ran a severe course, leaving her with a tendency to scaly eczema of the ears ever afterwards.

Impetigo and ecthyma are treated as separate diseases. The former is illustrated by five plates and the latter by two, and a drawing of a microscopic section of impetigo contagiosa is given. A brief but excellent description is given of the remarkable but rare disease, impetigo herpetiformis, described by Hebra as occurring in puerperal women, in whom it is generally fatal. Of the 17 authentic cases hitherto reported, most have been observed and described in Vienna. Its leading features are given in the definition: "A pustular disease, composed of miliary or small pustules arranged usually in clusters or in annular groups on an inflamed base tending to become confluent, crusted, accompanied by constitutional symptoms, occurring usually in puerperal women, and generally fatal."

The clinical appearances of dermatitis herpetiformis, a disease for the knowledge of which we are indebted to Dr. Duhring, are shown in no fewer than eight plates, and there are two illustrations showing the microscopical appearances. Dermatologists will welcome this authoritative description of a disease which still excites considerable interest. Pemphigus is illustrated by three plates and its microscopical anatomy by four. Pompholyx—the dysidrosis of Tilbury Fox, the cheiro-pompholyx of Hutchinson—is described and illustrated by two plates, one showing the disease on a hand and the other on a foot, and the drawing and description of Dr. Robinson's section are reproduced. Herpes is illustrated by three plates and two microscopical illustrations.

The plates, which form such a striking feature of this book, are of great artistic excellence. They are distributed through the volume in illustration of the text, and give as perfect a representation of diseases of the skin as it is possible to do without the use of colours. They add much to the value of the volume.

District Nursing on a Provident Basis. By Jamieson B. Hurry, M.A., M.D. London: The Scientific Press. 1898. (Cr. 8vo, pp. 114. 2s.)

This book has appeared at an opportune moment, for many schemes are being initiated to bring the benefits of skilled nursing to the homes of the poor. The author's observation that some of these schemes are open to improvement is well founded, and the lines indicated by him are judicious. We would cordially commend the careful perusal of his book to all those who are called upon to direct nursing organisations, both in town and country districts.

As Dr. Hurry himself states, the title does not cover the entire scope of the book. The author seeks to show how, on the one hand, charity can be administered, and on the other how the fully-paid services of a nurse are to be obtained in association with a nursing institution organised mainly on a provident basis. The keynote of the work is contained in the following sentence: "There is no more reason why skilled service should be given in the form of free nursing than in the form of free medical attendance; and, especially when organised on a large scale and applied indiscriminately, the effect is to pauperise and to injure the moral fibre of the people."

The history of district nursing, and the rapid growth of the movement since 1887, when the Queen Victoria Jubilee Institute for Nursing was founded, are dealt with in the opening chapter. One of the most useful features of the book is to be found in the suggestions for starting a nursing centre on a provident basis. A perusal of the working rules and regulations of nursing associations in different districts will enable promoters of a scheme to grasp the details suitable to each locality. The suggested rules and circular of information concerning an institute conducted on the lines laid down show that Dr. Hurry has thoroughly mastered the subject.

The only point which seems to call for criticism is as to the difficulty of adapting any system of purely district nursing to scattered rural districts. This is a very real difficulty, and might have been more fully discussed. But for those who cannot afford the services of a resident nurse in town and urban districts, and even in the country districts where villages can be grouped together and the means of intercommunication are easy, there can be no doubt that district nursing offers manifest advantages. We venture to hope that in the future the provident element will receive greater prominence than in the past.

The Normal and Pathological Circulation in the Central Nervous System (Myel-Encephalon). By William Browning, Ph.B., M.D. Philadelphia and London: J. B. Lippincott Co. 1897. (Demy 8vo, pp. 171. 7s. 6d.)

The title of this book is somewhat misleading, as it implies a wider treatment of the subject of cerebro-spinal circulation than the author probably intended, whereas he deals perhaps too briefly with only a few points relating to the normal circulation.

Dr. Browning is already known in this country by his work on the vascular system of the brain and spinal cord, and several of his earlier papers in connection with the subject are included in this book.

In the first section the author gives the results of investigations on the spinal efferents for the cerebro-spinal fluid. Quincke and others have already worked out the outlets in the dog, and the author has employed similar injection methods for the human subject, both fœtal and adult. He finds that, except in the case of the human fœtus and the lower animals, no exits exist along the sheaths of the lumbar nerves, and that the obliteration of these exits in man probably occurs about the end of the second or third month of extrauterine life. The evidence, however, is hardly sufficient to establish his view that this closure is largely brought about by the dorsal position generally assumed by infants during rest and sleep, as contrasted with the ventral position of the lower animals, young and old.

It is interesting to note, in his discussion of the arrangement of the supracerebral veins in man, that he considers the course of these veins strongly supports Dr. Alex Hill's view as to a developmental rotation of the brain. The evidence of Dr. Browning is the more interesting as it apparently furnishes quite independent support to the theory.

Several chapters are devoted to hydrocephalus, and the best of these is the one on obstructive hydrocephalus and the mechanical principles upon which its development depends. In this the author gives a very complete summary of the various ways in which this condition may be produced, and illustrates the different forms by cases.

Dr. Browning has paid considerable attention to double cerebral hæmorrhages, and he gives many instances of this condition which he has collected from various sources. He records a remarkable case of bilateral hæmorrhages into the lenticular nuclei giving rise to symptoms of bulbar paralysis. Labio-glosso-pharyngeal paralysis resulted, and polyuria was present.

There are certain points in the pathology of cerebral hæmorrhage which are still obscure. Some of these the author discusses very briefly, such as the onset of hæmorrhage during sleep, the occurrence of prodromata, association with intestinal disorder, etc. As an explanation of symmetrical hæmorrhages he suggests the existence of a bilateral co-ordination in the innervation of the cerebral arteries. He evidently entirely disagrees with Dr. L. Hill's views that there is no evidence of a vasomotor supply to the brain. Some of the cases illustrating the rarer forms of cerebral hæmorrhage are of very considerable interest, and constitute one of the best features of the book. The matter of treatment is briefly discussed, and we notice that the author advocates the use of gelsemium as a cardio-vascular depressant in cases of cerebral hæmorrhage.

Although some of the subjects are dealt with too briefly, the book deserves attention both from its clinical and its pathological aspect.

TRAITÉ DE DIAGNOSTIC MÉDICAL ET DE SÉMÉIOLOGIE. Par Le Dr. MAYET [Treatise on Medical Diagnosis and Symptomatology]. Part. I. Paris; J. B. Baillière et Fils. 1897. (Royal 8vo, pp. 448, 73 illustrations. Fr. 24 the two vols.)

THIS is a treatise describing the methods employed in clinical diagnosis. With this is combined an account of the symptoms of disease, and their various causes and significance. The first part consists of three sections, each of which is further divided into chapters. Valuable features are the selected bibliographies which are appended at the ends of the chapters. The work begins with directions for taking the history of a case. The points on which systematic inquiry should be made are pointed out, and brief explanations of their bearing are indicated. The methods of physical examination, such as auscultation, percussion, and exploratory puncture, are concisely outlined. An elementary outline of bacteriology is given, and descriptions and illustrations of the important pathogenic microbes bring the first part to a conclusion.

In the second part general factors, such as age, sex, temperament, the state of nutrition, and so forth, are first dealt with from the point of view of diagnosis. After reference to the regulation of the normal temperature, the significance of pyrexia and other thermometric variations are discussed and illustrated by numerous charts. The methods of blood examination are then detailed, and the variations that occur in its constituents in disease are fully dealt with. English writers are quoted, but in some cases their names have undergone more or less modification: thus "Lloyd" represents Lloyd Jones, and "Copmann" stands for Copeman.

The remaining part of this volume is devoted to the nervous system. The interesting topic of heredity and the part it plays in the development of nervous affections is touched upon, and a clear outline of the essentials of the anatomy of the brain and spinal cord is supplied. After a full account of the various forms of delirium, the disorders of speech and language are clearly classified. Asymbolia, or disturbance of the faculties presiding over the expression or reception of ideas by signs or symbols, is divided into aphasia and amusia, each of which are divided into two categories: (*a*) In which the reception and (*b*) in which the expression of ideas are interfered with. Thus under receptive aphasia word deafness and word blindness are described, while aphasia properly so-called and agraphia fall under the heading of aphasia from interference with expression. Insomnia is next dealt with, and a reference is made to pathological dreams and to the allied conditions—somnambulism, lethargy, and hypnotism.

In the account of the varieties and causes of coma there is an interesting speculation as to the possible action of poisons and other agencies on the centre for sleep, localised by Mauthner in the grey matter around the Sylvian aqueduct. Chapters on apoplexy and vertigo bring this interesting volume to a close. The work is full of suggestive thought, and will prove a valuable source of reference on the problems of medicine, and cannot fail to be appreciated by the advanced student and thoughtful practitioner.

DIE KRANKHEITEN DES OHRES UND DEREN BEHANDLUNG. [The Diseases of the Ear and their Treatment.] Von Dr. ARTHUR HARTMANN, in Berlin. Sixth improved and enlarged edition. Berlin: H. Kornfeld. 1897. (Roy. 8vo, pp. 316, 65 illustrations. M. 6.)

THE first edition of this concise handbook was published in 1881. The demand indicated by the appearance of a sixth edition shows that the work has met the requirements of a large circle of students of otology. This is not surprising to those who have read it in the original, or in the excellent translation made by Dr. Erskine about twelve years ago. It is to be hoped that he will do the same service in regard to the edition now before us, which has been brought so well up to date that it would be regrettable if English readers were to lose the opportunity of studying it. Among instances of advance with the times illustrated by a comparison of the present edition with the third, published in 1885, we may note the references to the continuous tone range (p. 37) the association of paracusis Willisii with sclerosis of the middle ear (p. 68), the etiological influence of post-nasal adenoids (p. 74), acoustic exercises in nerve deafness (p. 90), the bacteriology of inflammations of the external (p. 105) and middle ear (p. 149, etc.), absence of changes in the middle ear after Krause's extirpation of the Gasserian ganglion (p. 145), tuberculous otitis (p. 157), disinfection of the meatus before paracentesis (pp. 161 and 186), mastoid operations in acute median otitis (p. 164), acute otitis in infants (p. 168), the pathology of the "attic" (p. 190), cholesteatoma (p. 197), otitic cerebral abscess (p. 206), acute serous meningitis (p. 212), sinus-phlebitis (p. 213), pyemia and septicæmia (p. 215), precautions in the use of boric acid insufflations (p. 219), the "radical" operation (p. 225), the preservation of the lining of a cholesteatomatous cavity (p. 230), the thyroid and pepsin treatments of chronic dry catarrh of the middle ear (p. 248), the disturbances of hearing due to tabes dorsalis and disease of the central auditory tract (p. 281), and the malformations of the organs of hearing (p. 287).

The author is firmly convinced of the uselessness of intratympanic operations in cases of dry catarrh, and makes no reference to their value in the residua of suppurative inflammation in which other otologists find them useful. The anatomical sections have been considerably amplified and more fully illustrated, their value being thereby materially enhanced.

The work as a whole well sustains the credit of its author; it will be found a trustworthy guide to the aural surgeon, more especially as regards the conservative measures which are at the present time too readily dismissed from practice in favour of so-called radical operation.

A CRITICAL PERIOD IN THE DEVELOPMENT OF THE HORSE. By J. C. EWART, M.D., F.R.S., Regius Professor of Natural History, Edinburgh. London: A. and C. Black. 1897. (Demy 8vo, pp. 28, 7 illustrations. 1s.)

PROFESSOR EWART'S recent researches into the development of the horse have covered much ground and are widely known. The pamphlet under review is evidently published with the idea of bringing to the notice of horse breeders a physiological explanation of an occurrence which, it is alleged, has been commonly observed in horse breeding establishments, and proved a serious drawback to their success. It is assumed that "slipping" of the foal or "breaking service" most commonly occurs in mares at about the end of the seventh week of gestation. On account of the small size of the embryo at this stage, its discharge must usually pass unobserved, and probably it is a circumstance not so generally recognised as it should be. In this connection it is a remarkable fact that the evidence obtained by the Royal Commission on Horse Breeding appeared to show that about 40 per cent. of mares selected for breeding fail to produce offspring during any given year, and, taken in conjunction with the small proportion of abortion of advanced and easily-appreciable fœtuses, it appears to lend support to the assumption.

Professor Ewart endeavours first by a description of the fœtal membranes of the chick, which are so easily demonstrated, to convey an idea to the lay mind of the manner in which an embryo is nourished and connected by the yolk sac, etc. A short account of the fœtal appendages of the opossum is introduced to represent the feeble adhesions between the marsupial embryo and the uterus, and its early detachment, and to illustrate the fact that "at the outset the horse embryo has the same simple apparatus as the majority of marsupials, whose young appear on the scene in an immature and helpless condition, but that a stage is soon reached when a new apparatus is being substituted for the old, and that when the more permanent appliances are barely in working order, the horse embryo may readily drag its anchors and escape." It is shown very lucidly how this critical period obtains at about the seventh week of gestation when the yolk sac ceases to provide a sufficient supply of nutriment, and the villi of the allantois are beginning to develop. Attention is directed to the fact that "if from any

constitutional weakness the allantois is insufficiently developed, or because it lacks energy to throw out the all-important villi, the more permanent relations may never be established, with the result that the embryo is sooner or later discharged."

In a brief summary, Professor Ewart concisely indicates some of the means by which the most desirable conditions may be secured. His suggestions appear practicable, and if the assumption that the horse embryo is very commonly discharged at abont seven or eight weeks be correct and these suggestions are acted on, horse breeding is laid under great obligation to biological science and its able exponent, the writer of this pamphlet, which should not escape the attention of any horse breeder.

NOTES ON BOOKS.

Two Lectures to the Nurses of the London Hospital. By the Hon. Sydney Holland. (London: Whitehead, Morris, and Co. Demy 8vo, pp. 40.)—The newly-appointed Chairman, the Hon. Sydney Holland, has taken the somewhat novel course of assembling the nursing staff of the London Hospital and introducing himself to them, addressing them, in fact, on their duties as probationers, nurses, and private nurses. We fancy that some of the heads of the legislative departments of other hospitals must be feeling nervous lest they should be called on to follow this modern example. To turn from the lecturer to the lecture, or rather lectures, as this is really two lectures printed as one, it is no doubt useful that familiar teachings, the A B C if we may so say, should be spoken by an unfamiliar voice in unaccustomed surroundings: it emphasises the subject matter, and thus may fix it more firmly in the minds of the hearers; also it sets before one large and important part of the staff the mind and intention of the Committee towards the patients, the public, and its own servants. Mr. Holland ranges over a wide variety of subjects, and enters into the details of the work in, we had almost said, a paternal style. Any nurse therefore reading these lectures should be able to recall to herself forgotten duties years after she had left her training school.

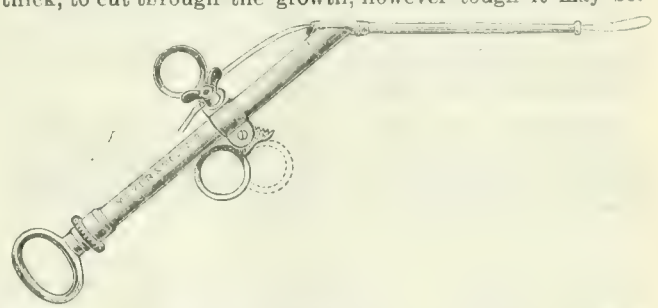
Physiologie du Foie [Physiology of the Liver]. By Dr. Frederic Martz. (Paris: J. B. Baillière et Fils. 1898. Roy. 8vo, pp. 174. Fr.4.)—This volume is the result of experimental work in which the circulation has been artificially maintained through the liver, or through the liver and pancreas by means of a Jacoby apparatus. The results are naturally correct only if under such altered circumstances the tissues not only remain living, but carry on the functions in the same way as in the living organism. It is impossible to discuss Dr. Martz's book without criticising the results obtained, which would lead us too far. Those interested in the subject of the glycolytic functions of the liver and pancreas will read the book; otherwise as far as the physiology of the liver is concerned it is of little value, since the bile is practically disregarded, and the great function of the liver—urea formation—is mentioned only in a few lines.

Die Hauptthatsachen der Chemie für das Bedürfnis des Mediziners [The Leading Facts of Chemistry for the use of the Practitioner]. Von Erich Harnack, Professor of Pharmacology and Medicinal Chemistry in the University of Halle. (Hamburg and Leipzig: Leopold Voss. Second Edition. 1897. Cr. 8vo, pp. 164. M.2.50.)—The second edition of this useful little book is nearly double the size of the first, and its scope is correspondingly extended. It is divided into three parts: the first, devoted to a conspectus in simple language of the principal theoretical outlines on which modern chemistry is based. Then follows a practical account of the inorganic elements and their compounds, treated mainly from the analytical point of view, and comprising a syllabus of the chief reactions of the principal acids and bases which are likely to be met with or employed by a medical man. In the third part, which comprises more than half the book, organic chemistry is similarly treated. This part also commences with a clear and concise description of the main laws of organic combination. Lastly, there is a systematic survey of the principal groups of organic compounds arranged under twenty-four heads, and comprising all that are of importance from the point of view of the practitioner. The value of the book is much diminished by the absence of an index.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A NEW SNARE FOR NOSE, THROAT, AND EAR WORK.

H. Lambert Lack, M.D. Lond., F.R.C.S. (London, W.), writes:—For many operations in the nose and throat a snare is needed which can be tightened up either rapidly or slowly. In many cases, as for the removal of certain forms of enlarged tonsils, inferior turbinate hypertrophies, fibrous growths, etc., it is of great importance to be able to draw the wire loop rapidly tight so as to grasp the growth firmly in position and then to cut through it slowly. At the same time, the snare must be strong enough, and must carry a wire sufficiently thick, to cut through the growth, however tough it may be.



I believe the snare here illustrated will be found to answer most of the above requirements. Its mechanism will be easily understood from the accompanying illustration. The wire loop is tightened at first by drawing on the finger loops, and then when a slow action or more force is required a screw action can be brought into play by releasing the lower finger loop. The instrument is very simple and strong in all parts; it is made entirely of metal, and can be taken to pieces for cleaning, etc. The wire loop can be quickly and easily attached and is very firmly fixed. The snare works noiselessly.

To increase the general usefulness of the instrument I have had it made with three ends, a strong barrel for very tough growths, a very fine end for aural use, for nasal polypi, and other soft growths, and a curved end for use in the larynx and post-nasal space.

I am greatly indebted to an engineering friend, Mr. Bingham, for much help and for designing the method by which the screw is brought into action, and to Messrs. Mayer and Meltzer, who have made the instrument for me.

MANNITOL HEXANITRATE TABLETS.

In a note upon erythrol tetranitrate by Dr. C. R. Marshall, in the British Medical Journal of February 19th, 1898, page 528, a suggestion is made that as erythrol tetranitrate is so expensive mannitol hexanitrate, which is very much cheaper, might be used instead. Mannitol hexanitrate has not, so far as we are aware, yet been tried therapeutically. It contains OH less than is contained in erythrol tetranitrate in combination with the same quantity of NO_3, therefore physiologically it may prove not to be so active, and as it has a higher melting point than the erythrol compound, its therapeutic action will probably be more prolonged.

Mr. William Martindale, 10, New Cavendish Street, London, W., has prepared this proposed new remedy in the form of chocolate tablets, each containing 1 grain, which is assumed to be the ordinary dose. Mannitol hexanitrate possesses explosive properties resembling those of erythrol tetranitrate; it can, however, be safely worked into tablets by using the fat of chocolate as a solvent.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

March 2nd, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on April 20th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 31st, June 16th, and September 29th.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—ISAMBARD OWEN, M.D., 40, Curzon Street, W., and H. B. ROBINSON, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A clinical meeting of the above District will be held at the Fulham Union Infirmary, St. Dunstan's Road, Hammersmith, on Wednesday, April 6th, at 4.30 (nearest station, Hammersmith Broadway). Dr. G. Crawford Thomson, V.P., in the chair. Mr. Steer, the Medical Superintendent, will show some interesting cases, after which a discussion as to treatment will follow.—THOMAS DUTTON, M.D., Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting of this Branch will be held on May 5th, and not on May 4th as recently notified by postcard.

LANCASHIRE AND CHESHIRE BRANCH.—A general meeting of this Branch will be held in the Medical Institution, Mount Pleasant, Liverpool, on Wednesday, April 6th, at 3 P.M. The Secretary will feel obliged if members taking part in the discussion will furnish him, before the end of the meeting, with abstract reports of their speeches. Agenda:—Minutes of last meeting. Dr. James Holmes will move: "That as the principle involved in the appeals of Mr. R. B. Anderson to the Higher Courts is of the utmost importance to medical men, a grant be made from the funds of this Branch towards the cost of these appeals." Dr. A. Brown Ritchie will move: "That a deputation of members of this Branch of the British Medical Association be appointed to meet the Members of Parliament for Lancashire and Cheshire, in order to discuss the Midwives Bill now before Parliament, and show reasons for opposing the same." Dr. Martland will call attention to memorials of members of the Association to the Council, dated October 20th, 1897, and January 15th, 1898, and to resolutions of signatories and other members of the Association thereon, submitting the matters to the Branches and will move, seconded by Dr. Fort: (1) That visitors being members of the Association be permitted to take part in the discussion. (2) That this Branch concurs in the memorials of members of the Association, dated October 20th, 1897, and January 15th, 1898, addressed to the Council of the Association, urging the Council to legalise the special resolution of 1896, amending the Memorandum of Association, enabling the funds of the Association to be applied in maintaining the honour and the interests of the profession, and inviting the Council to take the lead in organising concerted action in favour of reform; and supports the claim of the memorialists under Article IX to the publication of the memorial and proceedings relating thereto in the JOURNAL as the medium of communication between members, on the grounds that the questions raised and rights involved are of the first importance to members of the Association. (3) That this Branch calls upon the Council to legalise without further delay the amended Memorandum of Association; to take what steps may be necessary to enable a sum of £ to be voted for the purpose of medical reform from the funds of the Association, and to take part in organising concerted action throughout the profession to secure long desired reforms necessary alike for the honour and interests of the profession and for the safety and welfare of the public. Medical and Surgical Communications:—Mr. W. Thelwall Thomas: An Operation for Hæmorrhoids. Dr. W. Bain: The Action of certain Drugs in the Composition and Flow of Bile: an Experimental Research. Dr. Charles A. Hill and Dr. J. Hill Abram: An Experimental Investigation in the Disinfection of Excreta. Dr. James A. Rigby: An Inquiry into the present Unsatisfactory State of the Medical Profession, with the Remedies, if any, for the same. Mr. W. Thelwall Thomas will exhibit, in one of the rooms, a large Collection of Recent Photographs of Surgical Diseases. Mr. Rushton Parker: (1) Partial Excision of Stomach for Carcinoma. (2) Compound Communited portion of Skull with Lacerated Brain. There will probably also be an Exhibition of Cases and specimens by other members. Tea and coffee will be served during an adjournment, about 4.30. Dinner:—Arrangements have been made for a dinner to be held at University Club, Sandon Terrace, close to the Medical Institution, at 6 P.M. Tickets (wine not included) 3s. 6d. each. The number will be strictly limited to thirty, and the Secretary will feel much obliged if those gentlemen who purpose being present will kindly send him an early notice to that effect. A Council meeting will be held on the same day, at 2 P.M. Applicants for membership should at once communicate with the Secretary.—JAMES BARR, M.D., Honorary Secretary, 72, Rodney Street, Liverpool.

SOUTH-EASTERN BRANCH: NORTH KENT DISTRICT.—A meeting of the above District will be held in the Council Chamber of the Urban District Council, Beckenham, on April 14th, Mr. A. Primrose Wells in the chair. All members of the Branch are entitled to attend and to introduce professional friends. Papers will be read by Dr. W. Ewart and by Dr. J. Taylor.—A. TENNYSON SMITH, Orpington, Honorary Secretary.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, April 22nd. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. DUNDAS HELM, Carlisle, and W. HALL CALVERT, Melrose.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING of this District was held at St. Thomas's Hospital on March 24th, 1898, Dr. PERCY SMITH, District Vice-President, in the chair. Sixteen members and two visitors were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Cases.—The following interesting cases were shown and demonstrated on by members of the staff: Dr. PAYNE: Case of Leprosy.—Dr. MACKENZIE: Transposition of Viscera.—Dr. TURNEY: (1) Morvan's Disease with Spontaneous Amputation of the Anterior Parts of both Feet; (2) Double *Main en Griffe* of Doubtful Origin; (3) Functional Spasm of Left Hand.—Mr. BATTLE: (1) Fibrosarcoma of Chest treated by Coley's Fluid with Resulting Disappearance of the Tumours; (2) Chronic Middle Ear Disease treated by Operation; (3) Rodent Ulcer of Face; (4) Epithelioma of Cheek and Tongue; (5) Onychogryphosis.—Mr. C. S. WALLACE: (1) Papilloma of Scalp; (2) Tuberculous Skin; (3) Lymphatic Nævus of Face; (4) Fibrous Goître.—Mr. CROUCH: Coxa Vara.

Votes of Thanks.—The meeting concluded with votes of thanks to the Governors of the hospital for affording facilities for the meeting, and to the members of the staff who had demonstrated cases.

Next Meeting.—The next meeting will, if possible, be held at the Evelina Hospital towards the end of April.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

A SPECIAL meeting of this Branch was held on March 24th, Dr. R. SAUNDBY, President, in the chair, to consider the Midwifery Nurses Registration Bill. It was resolved:

That this Branch approves of the Midwifery Nurses Registration Bill as amended by the Parliamentary Bills Committee, and urges the Council to promote it in Parliament subject to the consideration of the following recommendation: That some adequate provision should be made for the local control of midwifery nurses.

EAST ANGLIAN BRANCH.

THE spring meeting of the East Anglian Branch was held at Witham on March 24th, Mrs. GARRETT ANDERSON, M.D., President, in the chair.

Luncheon.—The members present lunched at the White Hart Hotel previous to the meeting.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Papers.—Dr. W. GIMSON read a short paper on Witham.—Dr. THOMAS CARR read a paper on Some Proposed Amendments of the Infectious Disease (Notification) Act. The PRESIDENT and Dr. BARNES took part in the discussion.—Miss JANE H. WALKER, M.D., read a paper on a case of Cystic Disease (not Hydatid) of the Kidneys and Liver in an adult, and showed specimens and microphotographs.

Midwives Registration Bill.—The PRESIDENT made a few remarks on the Midwives Registration Bill, and after discussion it was decided that a deputation should wait on the East Anglian members of Parliament and place before them the views of the Branch.

Delegates to the International Congress of Hygiene.—Dr.

Beverley and Dr. Thresh were nominated to attend the International Congress of Hygiene at Madrid as delegates of the Branch.

Vote of Condolence with Mrs. Ernest Hart.—Dr. Beverley proposed, and it was seconded by Dr. Barnes, and unanimously resolved:

That the members of the East Anglian Branch desire to express their sympathy with Mrs. Ernest Hart in the loss she has sustained, and their sense of the great service which the late Mr Ernest Hart rendered to the British Medical Association and to the medical profession during the period which he acted as Editor to the British Medical Journal.

Corporate and Medical Reform Committee.—The President communicated to the Branch a resolution passed on February 20th, 1898, by a Select Committee of the Corporate and Medical Reform Committee, and a statement of facts with reference to the resolutions drawn up by the Council of the Association.

New Members.—At a meeting of the Council, the following gentlemen were elected members of the Association and Branch:—L. P. Black, M.B., Braintree; Walter Mawer, Tollesbury; H. B. Rygate, M.B., Halstead; Wilson Tyson, Lowestoft; Augustine A. Cradock, Colchester. The following members of the Association were elected members of the East Anglian Branch:—J. E. Molson, M.B., Chelmsford; E. A. T. Steele, Southend-on-Sea.

Afternoon Tea.—Dr. Gimson kindly provided afternoon tea.

WEST SOMERSET BRANCH.

The spring meeting of this Branch was held at Taunton on March 25th. Mr. Hayes (President) was in the chair, and sixteen members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Report of the Constitution Committee.—The following resolutions were agreed to:

1. This Branch considers that the proposal in the first paragraph (election of representatives) would tend to diminish the value of membership of Branches, and, therefore, does not approve of it.
2. This Branch endorses the proposal concerning report of the Council.
3. This Branch approves of the paragraph concerning election of members as far as word "present" in line 7.
4. This Branch endorses proposal concerning expulsion of members.
5. This Branch considers that the question of an executive committee should be left to the Council to decide.

Letters from General Secretary.—Letters from the General Secretary on Legislation for Inebriates, and from the Worcestershire and Herefordshire Branch on Venereal Disease in India, were read and considered.

Communications.—Mr. Routh read notes of a case of Complete Inversion of Uterus three days after Delivery.—Dr. Rutherford: A case of Syphilis.—Dr. Pringle: A case of Head Injury, and a case of Hysterectomy, with specimen.—Dr. Hensman: A case of Typhoid Fever, with specimen.—Mr. Rigden: A case of Cellulitis in an Infant.

Dinner.—A dinner followed at the Railway Hotel, at which sixteen members were present.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

A deputation of representatives of the British Medical Association and of representatives of the chief Friendly Societies appointed by the National Conference of Friendly Societies, held a conference at the office of the Registrar of Friendly Societies, Westminster, on March 17th. Mr. E. W. Brabrook, the Chief Registrar, presided.

The British Medical Association was represented by Dr. Robert Saundby (President of Council), Dr. Parsons (Treasurer), Dr. Ward Cousins, Mr. George Eastes, Dr. Oswald, and Mr. Francis Fowke (General Secretary). The Friendly Societies were represented by Mr. J. E. Cleveland (Secretary, National Conference), Mr. T. W. Boyd (Chairman of the Conference), Mr. A. Chapman (Ancient Order of Foresters), and Mr. J. J. Stockall (Manchester Unity Independent Order of Oddfellows).

The Chief Registrar said that the meeting was held as the outcome of certain conversations with Sir William Turner and Mr. Fowke while crossing the Atlantic last autumn. A conference had already been held at the invitation of Sir William Turner with a Committee on Medical Aid Associations of the General Medical Council. The present Conference was held with the British Medical Association as representing the general practitioners of the country. It was hoped that the Conference would indicate what were the practical steps which could be taken by the Friendly Societies to remove the matters of which complaint was made.

Dr. Saundby said that he did not believe that any serious difficulty would have arisen with the older friendly societies, but great feeling had been aroused with regard to medical aid associations. The great difficulty in certain cases, even in the case of very respectable friendly societies, was the absence of a wage limit. In many, perhaps in the majority of localities this might do no harm, but in particular places where the society had a very energetic agent, he would endeavour to get the mayor, publicans, grocers, and other persons of the same sort to join. Much trouble was caused because there was no rule to keep such well-to-do persons out. If it were possible to have a more stringent rule controlling the independent action of local secretaries, the difficulties which arose in some districts would, he thought, be avoided. It was contended by the medical profession that the contracts with the friendly societies were intended to bring medical attendance within the reach of a certain class at a certain rate. It was felt to be unfair that the contract should be extended so as to apply to a class of people who could afford to pay ordinary medical fees. There was no question that in some towns such persons had been admitted into friendly societies. Difficulties then arose with the local medical profession, and in some cases the local societies combined to introduce a salaried officer, and this, of course, intensified the ill feeling. The other points to which he might refer were subsidiary to that of the wage limit. One was touting and canvassing among the patients of medical men who could afford to pay ordinary fees. It might be assumed, however, that this would cease if a wage limit were enforced. Another point was the allegation that money earned by the medical officer was not paid to him, but was used for the benefit of the society generally. He thought, however, that the evidence given to the General Medical Council showed that the sums put aside from the medical receipts were not as a rule greater than might fairly be required to meet contingencies and bad years, and that, as a rule, the money obtained on payments for medical attendance was fairly enough paid to the medical man in one form or another either as salary, drug bill, cab fares, or other expenses.

Dr. Parsons concurred with what had fallen from Dr. Saundby; the main point was the absence of a wage limit, so that a class of persons were put on to the lists of the friendly societies for whom their benefits were never intended. Further, the societies had in some places engaged the services of a young medical man recently qualified at a stated salary, but when it came to doing the work, he found it impossible to do it satisfactorily, so that the patients suffered and became dissatisfied.

Dr. Oswald also concurred as to the importance of the wage limit. Its absence was an inducement to agents to go, as in his own neighbourhood in South London, to people occupying houses rented at £40, £50, and even £60 a year. The agent asked these persons to join and presented cards bearing the names of medical men strongly recommended by the society. If a wage limit were arranged, he hoped that the rules would be so strictly drawn that no agent would be allowed to go to any private house, knowing that the family were the patients of another medical man.

Dr. Ward Cousins said that the large friendly societies established under the Act were not those of which complaint was most made. He agreed with Dr. Saundby that the point they desired to advocate was especially a wage limit. No doubt the mayors and other persons in leading positions who joined friendly societies were usually admitted as honorary members, but he felt it to be possible that in some localities the line might not be drawn sufficiently between an honorary and an ordinary member. It was most desirable that the line should be distinctly drawn, and a wage limit introduced for medical benefits. He thought also that the agents of

friendly societies should be checked from touting, and from asking persons in good circumstances to join.

Mr. Stockall asked Dr. Cousins if he knew of any case in which an honorary member had had the benefit of a surgeon as a member of a society.

Dr. Ward Cousins said that he was not a surgeon to a friendly society, and as a consultant had not had experience on the point.

Dr. Saundby said that in nine cases out of ten there was no abuse when a mayor was elected; he was appointed as an honorary member and was not allowed to share in the benefits, but in other places persons in good positions, were allowed to do so, and he knew of towns where most of the shopkeepers were subscribers, and were being treated through the medical societies.

Mr. Stockall thought that Dr. Saundby was mistaken as to tradesmen joining the societies for the purpose of the medical benefits. In the majority of instances those who joined did so at about the age of 18, and in most cases they were then working men. Gradually the best working men rose in their position and became tradesmen. These men would continue their connection with the friendly society, and he did not see how they were to be limited from deriving the benefits of that which they had been subscribing for from the time they joined the society.

Dr. Saundby said the medical profession thought that whenever a man reached a certain position he should come out of benefit of the society. He had heard of men admitted members of friendly societies who were hay and straw dealers or grocers, not men who were admitted as mechanics and afterwards grew up into a different position.

Mr. Stockall said there were doubtless men of that class who did join, but they would probably maintain they did not do so for the benefit. He should like to get some positive facts upon which to discuss the question.

Mr. Boyd thought that in many cases the members joined a society and paid for the medical aid, but although he paid for it he did not accept it. He had his own medical man, and retained him, so that in that case the medical man connected with the branch was receiving money for which he never had to render service, because the person entitled to the benefit never intended to receive it, and did not demand it.

Dr. Saundby believed if friendly societies would alter their system and pay for work done and not pay so much per head, whether people were sick or well, it would be far better.

Mr. Boyd said that was a matter of administration, and would mean an alteration of the system in universal use throughout the friendly societies.

Mr. Chapman said that the medical man in many of the societies, while he had a troublesome case or two, on the whole was not troubled by the majority of the members, and the fees he received were in most cases fair. Referring to the case of touting in South London mentioned by Dr. Oswald, he asked that gentleman if he could give the name of the friendly society in question. [Dr. Oswald thereupon handed to Mr. Chapman a printed prospectus]. Mr. Chapman remarked that the prospectus was that of a Manchester assurance company "limited" and not a friendly society at all.

Dr. Ward Cousins asked if there was any properly constituted friendly society in England that had a wage limit.

Mr. Boyd replied in the negative. The difficulty would be that they would require not only to make inquiry at the time of entry, but constantly throughout the membership of the member, because the wage limit of a member was always altering. In the case of some societies where high benefits could be obtained, no one was taken into the higher classes unless he had a salary of £2 a week. Even in these cases they permitted them to pay for the medical aid portion of the society, and they were paid for in the ordinary way to the medical officer of the branch. In many cases those particular men never troubled the medical officers of the branch, or made any demands upon them.

Dr. Saundby said that if the society had a rule the doctor might be trusted to complain whenever he found it abused.

Dr. Ward Cousins asked if payment was made by contract.

Mr. Boyd said that so much per annum was paid—it might be 5s., 4s., or 3s.—and in one instance, in the county of Lancashire, it was only 2 . 6d.

Dr. Ward Cousins asked if any friendly society paid "by the job."

Mr. Boyd said there were some branches who did that, particularly with regard to the passing of candidates where their medical attendant was also the works doctor. This was especially so in the colliery districts of South Wales.

Dr. Ward Cousins asked if it would be possible, after a person had entered as a young man, and had been for many years connected with a friendly society, to put him out of the medical benefit when he got into a better position in any way.

Mr. Boyd said it could be done, but it seemed a hardship to put him out of the benefit for which he had been paying for a number of years if he should happen to require it simply because he became rather prosperous.

Mr. Stockall asked if the doctors would be prepared to return the fees of those who had not had any advice.

Dr. Ward Cousins said it was a contract throughout, and the fees were very small. He did not think they had any right to complain of the rate of payments of the large friendly societies in England to their medical men; that was not the question. It was rather a question of the wage limit, and the suppression of the entrance of persons who were improper members in consequence of their position.

Mr. Cleveland said that those who were particularly acquainted with the conditions of entrance to friendly societies knew there was considerable difficulty about settling a wage limit, for he supposed that 99 per cent. of the members would be strictly working men, and that the average wages of those men would not be of a very extraordinary character—probably, on entering, not more than in many cases 14s. or £1 a week. As a man grew older his liabilities would increase, and, even should his wages rise to 35s. a week, or even beyond, he did not see in what way the wage limit could be applied to him, or how it was possible to discriminate in such matters with equal satisfaction.

Dr. Saundby said it was only when incomes were over £2 that any question would arise in that way.

Mr. Chapman was not sure that the medical profession would not be losers by any such arrangement. When men began to earn over £2 a week they had still to pay to the surgeon of the court or lodge.

Dr. Saundby thought there might be a rule about entrance which would meet most serious cases. When a man's income came to be beyond a certain sum he might cease to be a member of the society.

Mr. Chapman said there could be no cases of that description. In the vast majority of cases it would be found that the men who got on continued to pay their subscriptions but did not go to the surgeon.

Dr. Parsons said that the grievance was not that the men who came earned low wages and gradually worked their way in the world, and had sufficient good feeling in them to continue their subscriptions, but the fact that men who were already well paid and who were well able to pay for a doctor yet availed themselves of the benefits of the societies by paying a small sum.

Mr. Stockall thought such cases were very few, and Mr. Cleveland said that the admission of honorary members was regulated by rules. They were admitted on the payment of a fee but were not permitted to take office in the society without paying a still higher fee, and then only that of a particular position. The honorary member received no benefit whatever.

Mr. Eastes asked if there was any sharp means of differentiating between the ordinary friendly societies represented at that meeting and medical aid associations.

Mr. Stockall said that he did not see how a discrimination could be made in certain cases, but there were medical aid associations which were outside altogether, and, as he understood, it was against these bodies that the medical profession had a complaint to make. He had never known of cases where an advantage could come to a *bonâ-fide* friendly society touting for a member.

The Chief Registrar said that when he suggested the interview he felt he was only asking the members of the Association to meet the representatives of the best societies. He thought the practical conclusion which might be arrived at was that if a definition could be hit upon what a *bonâ fide* friendly

society was, that would be a definition of a society to which medical men would not be entitled to make any reasonable objection. With regard to the wage limit, that difficulty appeared to be entirely got over, so far as regarded those societies, because it was not suggested that a wage limit should be applied after a member had become a member. He thought it would be impossible to do so. With regard to the admission of members, it was a matter of perfect notoriety that no person was admitted as a paying member of friendly societies unless he was a working man. In the societies represented at that conference there was practically existing all the wage limit possible, because as a matter of fact people were not admitted who had a higher income than those to whom the medical profession would be quite willing to render their invaluable services to under the circumstances of a club. With regard to touting, he thought the point had been arrived at that the societies represented did not tout at all. He cited the regulations of the Act under which friendly societies were established, and pointed out that in a medical society only those persons were admitted who were already insured in their own private friendly society for a considerable number of other benefits, so that he did not join the medical society for the express purpose of getting medical benefit cheap. When, therefore, the medical profession asked that friendly societies should be restrained from touting for persons to join the medical society who had more than a small income, they were asking really for what was provided for in the nature of things. With regard to the people who prospered in life, he was glad to say they were very numerous in friendly societies, because it was a law of Nature that where a man was thrifty and careful he did prosper. He was very much inclined to think that a practical solution of the difficulty was that, where a medical society was a *bonâ fide* one, constituted under the Friendly Societies Act, and consisted only of persons who contributed to their own particular friendly societies for the benefit of that society, and not as honorary members and persons of that kind, and not of persons who had no connection with friendly societies, medical men generally might very fairly say that that society was one which did not create any grievance which required remedying, and that, so long as a society was so registered, they might safely encourage the local men to render it such assistance as they could by consultation and otherwise, and not look upon it as going outside the boundaries of proper medical etiquette. The societies were well enough off to pay for good services, and, if circumstances arose which would necessitate the medical men raising their fees, that was a matter which might be discussed between the medical men and the societies, and would be discussed perfectly frankly. If it was shown that circumstances had altered and that the fee ought to be raised, there could be no difficulty in arriving at a solution.

Dr. Ward Cousins mentioned that some medical men occupying positions as medical officers to friendly societies had sent cases to be treated at the hospitals, and he asked whether any of the societies in England made an arrangement for the admission of those patients and paid so much per head where they were treated in public institutions.

Mr. Cleveland said that they did so providing that they had taken advantage of Section 37 of the Act.

The Chief Registrar said that was largely done.

Mr. Stockall thought that if sufficient care were taken to discriminate between institutions which belonged to *bonâ fide* friendly societies and those called medical associations established by other people, the grievance spoken of would not be found. It was against the latter that the grievance of the medical profession lay. The *bonâ fide* friendly societies neither touted nor canvassed.

Dr. Saundby said the profession would be delighted if it could be accepted that they could recognise all those societies which were registered under the Friendly Societies Act as satisfactory societies.

Dr. Ward Cousins asked whether, supposing the medical officers of the various friendly societies were not quite satisfied with their terms, the friendly societies would take into consideration the important question of increase.

Mr. Stockall said they would.

Mr. Cleveland said it would assist them very much if the Chief Registrar could arrange some particulars with regard to the matters upon which the profession had a particular grievance, in order that they might be placed before the friendly societies and before the Conference. Although it had not been spoken of, he and the gentlemen representing the friendly societies at that meeting were aware that some of the fees paid to the medical men were not what they should be, and would no doubt, as the Chief Registrar had mentioned, be fairly and frankly considered in their various localities by those directly interested.

In reply to the Chief Registrar, Dr. Saundby said that assuming medical men to be properly paid there was no objection to the appointment of a salaried medical officer to a society.

A vote of thanks having been accorded to the Chief Registrar for presiding, the proceedings closed.

THE LOCAL GOVERNMENT (IRELAND) BILL.

V.

The County Infirmaries of Ireland.

In order to show how acutely the interests of these institutions are touched by the Bill, we have only to state that they are largely indebted for support to periodical grand jury presentments. The grand jury system is abolished under the provisions of the Bill, and its place is taken by the several county councils.

The present county infirmaries had their origin in an Act of the Irish Parliament 5 George III, chap. 20, passed in 1765. By the first section a corporation was constituted for the purpose of erecting and establishing public infirmaries or hospitals in the several counties at large, in the several county towns, or at a distance not exceeding one mile from the county court house; except in the cases of Meath, Antrim, Donegal, Cork, Mayo, and Tipperary, in which counties other localities were specified. By the second section of the same statute, every donor of not less than twenty guineas was made a member of the body corporate for life, and every person who should subscribe not less than three guineas became a member of the body corporate for one year from June 24th next following such subscription and payment.

This body corporate was to have perpetual succession and a common seal, and might, without licence in mortmain, take and receive any lands not exceeding £200 annual value. It was also to be capable of taking gifts, contributions, and benefactions to any amount in personal property in trust for the infirmary.

The fifth section enacted that the surgeon should be paid a sum not exceeding £100 per year by the Vice Treasurer of the Kingdom of Ireland; and the grand jury was to present a sum not exceeding £100, nor less than £50, to provide medicines, food, and other necessaries for the patients.

Acts were passed in 1767, 1773, and 1775, relative to specific infirmaries.

Subsequent legislation increased the power of grand juries, so that they may now levy a presentment at each assize, of not more than £700. Only three infirmaries—those of Derry, Sligo, and Tyrone—receive this maximum; the average is about £425 half-yearly.

For several years back the county infirmaries have been on their trial. It has been contended:

1. That they are unnecessary, having regard to the existence of the workhouse hospitals.

2. That their main support by means of grand jury presentment is anomalous.

3. That the system of government by a self-constituted Board is objectionable.

We admit that there is considerable force in the second and third of these objections, but we will presently point out how they may be remedied without imperilling the county infirmary system.

With regard to the first objection that the county infirmaries are unnecessary, this cannot be admitted. It is an acknowledged fact that the majority of Poor-law union hospitals have neither the staff, appliances, nor space available for the proper treatment of such cases as seek admission to the infirmaries. Relief in the county infirmaries does not carry any disqualification as regards the franchise. The class of patients treated in them is drawn from the small farmers, their families and labourers, the artisan and small shopkeeper in the towns, and domestic servants. The relief afforded is the same as that given in the metropolitan hospitals; and there are few infirmaries not amply equipped with instruments, appliances, staffs of fully trained nurses, and all the material for carrying out in a successful manner the surgical and medical treatment of patients applying for relief. The vast majority of the patients treated in the infirmaries would not enter a poor-house hospital. To quote the words of a former Chief Secretary, when introducing the Compensation for Disturbance Bill in the House of Commons:

For the workhouse, distasteful indeed to an English labourer, is simply unbearable to an Irish peasant; that this is no mere sentiment is often impressed upon the visitor who enters the cabins of the people, etc. Who would wish to lessen this kindly feeling, or break down the almost unsurmountable repugnance to the workhouse?

The necessity for these infirmaries is further evidenced by the large number (11,000) annually admitted; and their popularity is proved by the fact that more than one-half of this number reside at a greater distance than five miles. If further proof were needed of the estimation in which these institutions are held, we may point to the sanction given by the Roman Catholic Primate a few years ago to have special collections made in the chapels situate in the County Armagh on a given Sunday, on behalf of the infirmary in that county.

In 1891, Dr. Hercules MacDonnell, of Dundalk, Honorary Secretary to the Association of County Infirmary Surgeons, drew up a very useful table, showing the work done by the county infirmaries, and at what cost it was done. In that table the hospitals partly supported by county grants in Cork, Galway, Limerick, and Dublin (the last commonly called the Meath Hospital and County Dublin Infirmary) are not included. Also, there is no county infirmary in Waterford, and that in Kildare was closed a few years ago. The table, then, contains information relating to 25 institutions. In 1890 the available number of beds in them was 1,310, of which 802 were on an average daily occupied. The gross income of the 25 county infirmaries was £28,934 6s. 4d., including £22,566 16s. 10d. derived from county presentments. The gross expenditure was £27,790 14s. 3d. The amount levied on each county as presentment was 0.71 of a penny per £1 sterling valuation, and 0·43 of a penny per acre—no very extravagant sums. During the year to which the table refers (1890), the number of intern patients treated in the 25 infirmaries was 10,561, of whom 5,379 resided at a distance of 5 miles or upwards from the hospital. The average cost per bed occupied was £33 16s. 5d., each patient costing £2 12s. 7d. The corresponding figures for certain Dublin hospitals named by Dr. MacDonnell were £60 19s. 4d. and £4 4s. 1d. respectively. The conclusion is obvious, that the county infirmaries of Ireland are doing efficient work at a reasonable, even a moderate, cost.

The Association of County Infirmary Surgeons have formulated suggestions which are briefly as follow:

1. There should be a Board of Management, a certain number of the members of which should be chosen from the "Pay Governors"—that is, annual subscribers of a specified sum; and a certain number to be nominated by the County Council—say, a number equal to one-third of the members chosen from the governors.

2. All cost and expenses of management, salaries, etc., shall be provided by the County Council.

3. It is further suggested that, with the approval of the Local Government Board, one-fourth of the cost may be levied off the particular "district" in which the infirmary is situated, the remaining three-fourths to be levied from the county at large. The special "district" so taxed should have a representative on the Board of Management—that is, that one of the County Council governors shall be from the "district" so taxed.

4. The right to grant orders of admission to the infirmary should be extended to all county councillors and district councillors, as well as to the clergy of all denominations.

5. The Local Government Board shall make regulations for the effective inspection of the several county infirmaries, and for the periodic and systematic audit of the accounts.

6. County infirmary surgeons shall not be dismissed without the consent of the Local Government Board.

7. The surgeons shall be elected by the whole body of the governors of the county infirmaries, including those representing the County Council on the Board of Management in each instance.

It will be observed from the foregoing that the Association of County Infirmary Surgeons are willing and ready to admit, and even recommend, that reasonable powers and adequate representation should be conceded to those who provide the funds for the upkeep of the infirmaries. For our own part we consider that the county infirmaries should be kept up, and that the scheme proposed by the surgeons is feasible and just.

We are glad to notice that the Chief Secretary to the Lord Lieutenant, when interrogated by Mr. Jordan, M.P. (South Fermanagh) on March 24th, gave a sympathetic and encouraging answer. The hon. member asked the Chief Secretary whether, seeing there was no reference to county infirmaries in the Local Government (Ireland) Bill, he would state his intentions in regard to the future position and administration of these useful institutions. Mr. Gerald Balfour replied to the effect that, if the Bill passed with reasonable speed through Committee, the Government will probably bring forward a clause dealing with county infirmaries. He admitted, however, that he was not in a position at this stage to state what form the Government proposals, if made, would take.

If effect is given to the proposals or suggestions of the Association of County Infirmary Surgeons, there can be no further objection to the continuance of the infirmaries. The presentment will be made by a body—the county council—which will be adequately represented on the Board of Management, and this latter body will cease to be self-constituted. We trust that, in the interests of the public, the Chief Secretary will adopt the suggestions of the infirmary surgeons, and incorporate them in the half promised new clause in the Local Government Bill.

THE EDUCATION OF EPILEPTIC CHILDREN.

The Evidence Given to the Departmental Committee.

We drew attention in the British Medical Journal of March 5th to the report of the Departmental Committee on Defective and Epileptic Children. We propose now to refer to certain recommendations with regard to epileptic children which merit a little more notice than we were then able to give. Evidence as to the best treatment of this class was received from Drs. Ferrier, Fletcher Beach and Colman (of the medical staff of the Chalfont Colony) and from Mr. Penn Gaskell, the Secretary of the National Association for the Employment of Epileptics; a memorandum was also received from Dr. Alexander, Medical Officer to the Home for Epileptics at Maghull, near Liverpool. Information was moreover incidentally obtained from inspectors and managers of schools, and from teachers of the special classes.

The Frequency of Epilepsy at School Ages.

It appeared from Dr. Warner's inquiry that out of 86,378 children attending school not more than 101 were known to be epileptic, and a similar proportion in certain rural schools was ascertained by Mr. Colvill and other inspectors, who reported that out of 29,446 children in attendance, 27 children only were known to be epileptic. On these statistics the Committee felt justified in stating the percentage of epileptics amongst children in school attendance—excluding, of course, epileptic idiots—at about 1 per 1,000, of whom it was estimated that not more than one sixth suffered from severe forms of the malady.

There would seem to be two sources of possible error in this estimate of the frequency of epilepsy among children of the elementary school class: the one that some parents try to conceal their epileptic children, and the other that children who have fits at home are sometimes free from them at school. This last fact, which came out in the evidence of Dr. Ferrier and others, is instructive as showing that education, under proper conditions, may be a useful factor in the ameliorative treatment of juvenile epilepsy.

Classification of Epileptic Children.

The proposed classification of epileptics for educational purposes seems to be practical. Two main divisions are recognised: (1) cases of slight epilepsy in which the fits are mild or infrequent, and (2) cases of severe epilepsy. Each of these is further subdivided into those cases in which (*a*) the mental condition is normal, (*b*) the mental condition is deteriorated, and (*c*) the epilepsy is complicated with blindness or deafness. Cases falling under the first division are considered educable under the same conditions as non-epileptic children of the corresponding subdivision, though it is recommended that elementary teachers should have special instructions with regard to epileptic scholars, whom they must be careful not to overstrain. It is recommended that guides and conveyance should, when necessary, be provided for epileptics attending ordinary schools.

With regard to severe epilepsy, the case is different, and for children so afflicted the need of resident homes is recognised by all the medical witnesses. In these cases judicious care and feeding, as well as special training under medical supervision, are essential. Mr. Penn Gaskell, referring to the experience with adults at the Chalfont Colony, spoke of the moral and mental deterioration arising from neglected education and unfavourable surroundings during childhood. There was a general consensus of opinion that suitable education and occupation tended to diminish the manifestations of an epileptic tendency, even of a severe type, during school age. The beneficial effect of outdoor occupation was especially emphasised. Idleness seems, indeed, to be in some respects more detrimental to epileptic than to normal children, as in the former there is the risk of irregular discharges if nervous energy be not properly utilised.

Homes for Epileptic Children.

Somewhat elaborate rules for the construction and arrangement of homes for epileptic children are formulated by the committee. We are glad to see that they insist that the premises should be in the country and the buildings one-storeyed, so as to avoid accident in going up and downstairs. It is recommended that power of a discretionary kind should be given to school authorities as regards sending epileptic children compulsorily to certified homes. These authorities should have the option of contributing to existing voluntary homes, or of establishing homes for themselves. In practice it will probably be found that voluntary agencies which have attained special experience in dealing with the class may be of great assistance to the school authorities in the training of epileptic children.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

The annual general meeting of this Society was held at the Offices of the Society, New Court, Carey Street, Lincoln's Inn, on March 29th, Dr. J. W. J. Oswald being in the chair.

In the fifth annual report the Council stated that a large number of highly important cases had been dealt with successfully during the year, and a considerable amount of work had been done by the Society in suppressing unqualified practice, the mere threat of legal proceedings being often sufficient to put the offender to flight. The Society had also taken action to stop medical practitioners from assuming titles which were not theirs. The Council stated that the financial affairs of the Society continued in a satisfactory condition. On January 1st, 1897, the Reserve Fund amounted to £164 16s., the cash in hand and at the bank to £217 4s., and there were no outstanding liabilities of any kind, the surplus at the commencement of the year being £382. On January 1st, 1898, the Reserve Fund amounted to £433 12s., the cash in hand and at the bankers to £320 5s., whilst there was an outstanding liability of £39 8s. The surplus on January 1st, 1898, had thus increased to £714 9s. As showing the progress the Society had made, figures were given in the report from which it would appear that in 1893 the balance sheet showed a deficiency of £78, the income at that date being £394, as compared with £746 in past year. The Council reported that they hoped in the coming year, with the help of the Parliamentary Committee, to promote useful and much needed amendments in the Acts which regulate, or "profess to regulate," medical practice.

In reply to Dr. Thompson, of Croydon, Mr. Foulerton (the Financial Secretary) said that the Council had no intention of spending any money in regard to the Medical Acts, but simply intended to consider certain questions and advise upon them.

Dr. G. A. Heron (Treasurer and Chairman of Council) stated that since the report was printed the Reserve Fund had been increased to £575.

The report and accounts were adopted.

Mr. Jonathan Hutchinson was re-elected President, the Chairman expressing his belief that it would be difficult to find anyone better fitted to fulfil the duties of the office.

The whole of the Vice-Presidents were unanimously re-elected, Sir Thomas Smith and Dr. Clifford Allbutt being added to their number. The Council were also re-elected unanimously.

With regard to the election of the Treasurer and Chairman of Council, the Chairman pointed out that Dr. Heron had held that position from the commencement of the Society, and had been of very great assistance in raising the Society to the position it now occupied. He felt sure it would meet with the approval of the members if Dr. Heron was re-elected to the same position.

The motion for Dr. Heron's re-election was carried unanimously. Dr. Hugh Woods was re-elected General Secretary, and Mr. A. G. R. Foulerton Financial Secretary, the Chairman also paying tribute to the great services rendered by those gentlemen in the work of the Society. Messrs. J. H. Duncan and Co. were reappointed Auditors.

Dr. Heron in a brief speech, pointed out how greatly the members were indebted to the officers, from the President downwards, for the efficiency which the Society had now attained. It would be impossible, he said, to put down the details of all the cases considered by the Society, as well as highly improper, but it was very gratifying to see how much good work had been done without any resort being had to litigation. The work was done quietly and without any blowing of trumpets, but it was very hard work, and its being done so well was largely owing to the energy and ability of Dr. Woods and Mr. Foulerton. The legal expenses in the past year had been very low, but he warned the members that it would not do to count on that always being the case, and therefore it was necessary to have a very substantial reserve fund to fall back upon in case of need.

Dr. W. F. Cleveland drew attention to the fact that, as the report stated, the principle upon which protection and defence were properly based was the thorough investigation of every case before any action was taken, and the avoidance if possible of litigation. The work of the Society was carried on, and would be carried on in the future, as economically as possible, due regard being paid to its being done effectively.

A Member asked if there was any prospect of amalgamation with the Medical Defence Union.

Dr. Heron said it did not rest with the Society. The Council had done the best they could for amalgamation, and were now in the position of being unable to take any further steps in the matter. So far as he knew, the Council had no intention of taking any steps unless asked to do so by the members. The subject had been dropped, and through no fault of their own. He thought it was a very great pity that more than one society should do work which, as he held, could be done better in every way by one society. It was absolutely impossible that the Society could give way in one iota from the position it had taken up. He had spoken to many members of the Medical Defence Union, as well as members of the Society, and none of them who knew the facts held any other view than that the blame did not rest with the Society for the failure of the negotiations for the amalgamation.

A vote of thanks to the officers of the Society for the services they had rendered during the past year, and also to the Chairman for presiding, having been cordially passed the meeting terminated.

PRIVATE PRACTITIONERS AND PUBLIC PAYMENTS FOR VACCINATION.

The Royal Commission on Vaccination advised that State payment for successful vaccination should no longer be made exclusively to public vaccinators, but that all registered members of the profession should be entitled to claim fees for their cases if the vaccinations were performed in accordance with the Local Government Board's requirements, provided that private practitioners claiming payment for successful vaccination should, if asked submit their results to inspection.

Mr. Chaplin's Bill contains no provision for giving this right of State payment for vaccination to private practitioners.

The chief advantages claimed for the proposal are that:

1. It would tend to diminish the objections of parents, inasmuch as the vaccination would be performed by any medical man they might prefer.

II. It would diminish the difficulty likely to arise, not only in country districts but in the poorer quarters of large towns, in making the offer of domiciliary vaccination which the public vaccinator will be required under Mr. Chaplin's Bill to make.

III. It would put the pecuniary interests of those general practitioners who, it is now alleged, are careless about vaccination (for example, undertake to make one insertion) on the side of efficient vaccination.

On the other hand, its general adoption would diminish the emoluments which the public vaccinators now enjoy, and also, it is said, diminish the general efficiency of vaccination. This last assertion is made on the ground that public vaccinators are, from their greater experience, more skilful in the performance of vaccination—that is, get a larger percentage of "insertion successes"—than private practitioners.

Admitting the necessity for some safeguard of the nature of inspection from the point of view of the State, if an amendment to the Bill were to be introduced giving to private practitioners the right to claim State payments for successful vaccination, how is the condition of inspection of their results to be fulfilled?

Could the inspection be entrusted:

(1) To the medical officer of health?

or (2) To a special county inspector of vaccination?

or (3) Left to the present Local Government Board staff—which is not large enough for systematic inspection all over the country, and could therefore only make surprise visits—but with a special provision for a severe penalty against any medical man making a false statement in reporting cases for the purpose of receiving fees?

We would direct the attention of readers to the letter by Mr. Jonathan Hutchinson, published in the BRITISH MEDICAL JOURNAL of March 19th, p. 790, and to those by Drs. John Brown and J. W. Higginson, published in our issue of March 26th, p. 858. The Committee stage of Mr. Chaplin's Bill will not be reached before Easter, and we would therefore invite the particular attention of correspondents who may be disposed to favour us with communications on the subject to the questions:

(*a*) Whether either of the alternatives (1) or (2) mentioned above is feasible.

(*b*) Whether any other alternative can be suggested.

LITERARY NOTES.

THE first number of the *Archives de Parasitologie*, which has recently appeared in Paris under the editorship of Professor Blanchard of Paris, contains some excellent papers, and if the succeeding numbers maintain the same high standard the periodical will soon have an established place in medical literature. Professor Brault discourses suggestively on the study of tropical diseases. A. Laveran raises the question of a special variety of hæmatozoon peculiar to intertropical malaria, and concludes that the organism met with in such cases is identical with that characteristic of the malaria of temperate regions. The slight differences that have been observed between the two organisms in question Laveran considers to be the result of the more favourable conditions of growth which occur in hot climates. There are many other contributions, all of a high standard of work, but the above will serve to show the scope of the new issue.

The Peking correspondence of the *Times* has, during the recent troublous times, been remarkable for the extent and accuracy of the information conveyed. It may therefore interest our readers to know that the correspondent who has thus distinguished himself in the journalistic world is a member of the medical profession, Dr. G. E. Morrison. He is the eldest son of the late Dr. George Morrison, Principal of Geelong College, Victoria. Dr. G. E. Morrison is a graduate of Edinburgh University, and is the author of an entertaining and instructive book entitled *An Australian in China*, which was published two or three years ago, and achieved a decided success. The book is dedicated to Professor John Chiene, who, in the words of the author, gave him back the power of locomotion. It is a narrative of a "quiet journey across China to British Burma." "Quiet" as it was, the journey was sufficiently diversified to make the record of it most amusing reading. Dr. Morrison, though a Colonial by birth, is of Scottish extraction.

Vaccination does not at first sight appear to lend itself to poetic treatment. It is a curious fact, however, that several bards have been inspired to wake to ecstacy the living lyre, as others were in the last century by the equally unpromising subject of inoculation. Of effusions on the latter theme, the famous ode beginning, "Inoculation, heavenly maid descend!" is still cited in textbooks of English literature as an example of bathos, though it may well be doubted whether anyone has read it. As regards vaccination, we quoted in our Jenner Centenary number a letter from Coleridge, showing that he had at one time planned a poem on this theme which, he says, "after long deliberation I have convinced myself is capable of being poetically treated." An Italian poet, Gioachino Ponta, actually composed an epic in six cantos, entitled *Il Trionfo della Vaccinia*, which was published in Parma in 1810. A French doctor, whose name no longer *volitat per ora virom*, also delivered himself of a poem in three cantos, entitled *La Découverte de la Vaccine*, which saw the light at Narbonne in 1816. Then there was an English clergyman, the Rev. J. B. Fosbroke, who perpetrated an ode to Hygeia on the Vaccine Inoculation. We now learn from a note in *La Chronique Médicale*, that Gustave Flaubert and Maxime du Camp, both sons of surgeons, in their mad youth projected a burlesque on the same subject. The story is told by the latter in his *Souvenirs Littéraires*. The scene was to be laid in the palace of "Gonnor, Prince of the Angles," which was to be decorated with "the spoils of the Caledonians." Small-pox, personified as a monster, was to appear in a dream to a young princess, the daughter of the virtuous Gonnor. Jenner, of course, was to be the *deus ex machinâ*. The friends, however, got tired of their enterprise, and the work came to an untimely end. Another French poet of a more serious kind, Casimir Delavigne, was moved to song by vaccination. The French Academy, which offers prizes for all kinds of subjects in heaven and earth, and the waters under the earth, proposed one year as a subject for poetic competition the Discovery of Vaccination. Delavigne entered the lists, having previously got up the subject with the help of Dr. Pariset. The poem was duly sent in, but only obtained the second place, being adjudged too technical for the prize. The following lines may serve as a sample:

Par le fer délicat dont il [Jenner] arme ses doigts,
Le bras d'un jeune enfant est effleuré trois fois.
Des utiles poisons d'une mamelle impure
Il infecte avec art cette triple piqûre.
Autour d'elle s'allume un cercle fugitif.
Le remède nouveau dort longtemps inactif,
Le quatrième jour a commencé d'éclore,
Et la chair par degrés se gonfle et se colore.
La tumeur en croissant de pourpre se revêt,
S'arrondit à la base et se creuse au sommet.
Un cercle plus vermeil de ses feux l'environne,
D'une écaille d'argent l'épaisseur la couronne;
Plus mûre, elle est dorée: elle s'ouvre et soudain
Délivre la liqueur captive dans son sein.
Puisez le germe heureux dans sa fraîcheur première,
Quand le soleil cinq fois a fourni sa carrière;
Si la douzième nuit a commencé son cours,
Souvent il offrira d'infidèles secours.
A peine les accès d'une fièvre légère
Accompagnent les pas de ce mal volontaire.
Et l'ennemi secret par lui seul combattu,
Chassé de veine en veine expire sans vertu.

Messrs. Longmans have just published a work on *The Diseases of the Lungs*, of which Dr. J. Kingston Fowler and Mr. Rickman J. Godlee are the joint authors. At the present time, when the surgical treatment of affections of internal organs occupies so prominent a position, it is a distinct advantage that a physician and a surgeon should collaborate in the production of a work in which the subject of lung diseases is completely presented from a surgical as well as a medical point of view. The opening chapter is devoted to a careful description of the anatomy of the thorax, and is illustrated by a large number of original drawings, many of which are coloured. The book contains 700 pages, with 160 illustrations.

Dr. Hermann Weber and Dr. F. Parkes Weber have revised their work on *The Spas of Europe* and in the new edition to be issued by Messrs. Smith, Elder more space will be given than heretofore to methods of treatment and the question of climate, with a map of the health resorts of Europe will be included.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 2ND, 1898.

AN "ARMY MEDICAL CORPS."

We congratulate Lord Lansdowne personally as well as the medical profession and the army on the important decision of the War Office which was announced by Mr. Powell Williams on the medical vote in the Committee of Supply on March 25th. He then stated that it is decided to form a consolidated army medical corps, in which medical officers will have rank and titles the same as officers in other corps.

This is a reform for which we have strenuously contended, because it will confer on medical officers that equality of army status which has, in deference to the prejudices of the military advisers of successive Secretaries of State for War, so long been withheld.

Lord Lansdowne, with statesman-like breadth of view and firmness of grasp, has succeeded in carrying out a reform which his predecessors in office failed to effect. He is about to make the medical service an unmistakable integral part of the army, which, of course, from the very nature of its duties, it has always really been, although its title has been ignored or denied by a few combatant officers.

This will confer on medical officers military rank and titles which cannot be ignored or questioned, and remove the ambiguity and anomaly in their army status, which, more than anything else, has deterred the best stamp of young medical men from entering the service.

The denial to medical officers of defined and understood army rank has puzzled outsiders, because it is well known that these officers are the only men who share with combatants the difficulties and dangers of peace and war; and that, without their indispensable assistance, neither the maintenance of discipline nor the ordinary details of military duty could be carried on.

It was in view of this unreasoning attitude towards the status of medical officers that Sir William Priestley gave the warning that the smooth working of the new arrangements must depend in great measure on the wisdom and tact of commanding officers; but we have confidence in their high sense of duty.

We have, indeed, noticed foolish letters from military correspondents in the press, declaring that if army rank and titles are conferred on medical officers, they will be sulkily accepted officially, but deliberately ignored in private and social life. We trust that no one will be so blinded by class feeling or so lost to self respect as to attempt to carry out such a threat; but if such unworthy conduct should be tried, it will be for the responsible military authorities to discountenance and to check it.

On one matter in Mr. Powell Williams's conciliatory speech we are constrained to express dissent; it is fortunately on a point not yet settled, and which, we trust, will receive due consideration—namely, the expediency of retaining the rank of major-general in the medical corps. The Financial Secretary spoke of that rank hitherto enjoyed by medical officers as "honorary;" that is a mistake; medical officers have only held two ranks—the abolished "relative," and the present so-called "substantive" departmental rank.

Moreover he is reported to have stated that the rank of major-general implies "a general command;" that too is an error, because the military status which involves general command is exactly the same in kind as that of a major or colonel, and only differs in degree from that of a general officer. Moreover, the same rules which limit the command of medical officers as majors or colonels would limit that of major-generals. The highest executive rank in an army medical corps would, we presume, be that of lieutenant-colonel, as in other corps; and all promoted to be colonels or major-generals would, as in other branches, be removed and placed on the staff of the army.

There are a number of major-generals in military employment who have no general command; for instance, the Inspector-General of Education, and the Inspector-General of Fortifications and the governors of Woolwich and Sandhurst; these officers only exercise command within their specific spheres, and would not think of claiming it outside, say, in the absence of a general officer commanding a garrison or district. The existing surgeon-major-generals have strictly limited command.

The issues involved in the abolition of the rank are very considerable. Both Captains Norton and Sinclair, in discussing the vote, declared that the pecuniary prizes in the army medical service are already not too great, or, in fact, sufficient; how much less would they be so by the abolition of the highest rank? The effect of such abolition on the medical duties of an army in the field must also be fully considered. The principal medical officer of an army corps on active service may, between establishments and sick and wounded, have at any time under his command a strength equal to a brigade or more. Is it desirable that an officer with such responsibilities should have no higher rank than that of colonel? Is the Director-General of the Army Medical Service to have no higher rank than a colonel? Is the Principal Medical Officer in India, who is largely responsible for the well-being of 250,000 men, to be of lower rank than the heads of the Commissariat and Ordnance Departments in that country?

An important point which seems to have been overlooked by the framers of the scheme, is that the consequence of the proposed abolition of the rank of surgeon-major-general in the British army would be to place the higher administrative ranks in a position of relative inferiority to the corresponding ranks of the Indian Medical Service and the Navy. It is impossible to believe that this is intended by the military authorities. Such an arrangement would be not only unjust and impolitic in the highest degree, but in India would certainly lead to administrative difficulties of a serious nature.

The various points to which we have here called attention will, we trust, be carefully weighed before being finally decided.

Meanwhile, we assure Lord Lansdowne that his expressed desire for "a complete understanding between the War Office and the medical profession" is fully reciprocated, and that every support will be given to his attempt to make the Army Medical a contented and popular service, as it should be.

OLD-AGE PENSIONS AND INVALIDITY.

MR. W. BIRKMYRE has drawn attention afresh[1] to the importance of introducing a State system of old-age pensions. He points out that the information obtained by several Parliamentary Committees shows the alarming extent of the poverty that exists amongst the aged members of the working classes, and shows, at the same time, that those poverty-stricken old people for whom it is proposed to provide by a State pension scheme, do not to any appreciable extent include the vicious or what is called the "residuum"; for this class almost invariably die before they reach even the earliest age at which it is proposed to grant a pension.

Mr. Chamberlain and others agree in their Report to the Royal Commission on the Aged Poor (1895) "that the imputation that old-age pauperism is mainly due to drink, idleness, improvidence, and the like causes, applies to but a very small proportion of the working-class population." Five-sixths of those who may be classed as aged paupers have lived till past 64 years of age entirely by their own work, without outside help, and are in poverty simply because such work as they are capable of is no longer attainable.[2] Nearly one in every two of the wage earners of the working classes when past the age of 65 become paupers at some time or other. Three in 10 of the total population above 65 are compelled to apply for parish relief during the year. In London 9 per cent. of the whole population die in the workhouse according to Canon Blackley's evidence. Mr. Birkmyre thinks, therefore, that it is a fact that the ratio of pauperism is higher in this country than in any other.

Seeking for a scheme to provide old-age pensions, he rejects all plans similar to the system actually carried out in Germany, and gives the following grounds to justify this rejection: (1) He believes that the mass of the poor wage earners would be unable to pay the required contributions; (2) he thinks that the necessary State control "would be liable to degenerate into mischievous interference and unfair competition with the already well-managed and successful work of many friendly societies." He suggests schemes for providing an old-age pension to every citizen who has need of it on attaining a certain age. According to his first plan for universal pensions in the United Kingdom, every person over the age of 65, of either sex, could claim a sum of 5s. a week, or 10s. every two weeks, payable on personal application. The age of 65 has been selected because pauperism due to old age increases so rapidly after that period.

According to Mr. Booth's statement, given in Mr. Chamberlain's report, the average is 8 per cent. before 65, and 25 per cent. in the years after. Mr. Birkmyre also gives schemes for universal pensions to commence at the ages of 70 and 60. In all his schemes unclaimed pensions are of course taken into account; the money is to be obtained from the surplus of Imperial taxation, as originally suggested by Mr. Chamberlain, and by the cancelling of doles from the Imperial Exchequer to sectional interests (with the exception of educational grants).

If 70 years were selected as the age when the pension should fall due, the reduction of the National Debt would not have to be suspended, as it would have to be, according to Mr. Birkmyre's scheme, were 65 the age selected. If 60 years were selected, there would in addition to the other proposed means have to be additional Imperial taxation, which might be accomplished, it is suggested, by a slight increase on the beer duty.

In dealing with this question, however, it is necessary to consider whether any plan could be wholly satisfactory which did not provide for invalidity and chronic illness—say illness lasting beyond one year—as well as for old age. The friendly societies and philanthropic institutions might give important aid in this direction; and the establishment of numerous sanatoria in the country for the infirm and debilitated poor, and of institutions under medical control for the treatment of consumptives on a sufficiently extensive scale, would likewise be intimately connected with the efficient working of any such scheme. Gebhardt, of Lübeck,[3] has recently shown how much the invalidity and old-age assurance institutions in Germany are making use of the sanatoria for consumptives. Some of these institutions, moreover, have already determined to erect special sanatoria of their own. Considerations of this order no doubt complicate the question very seriously; but they must be faced, and we think it will be well that those who are doing so good a work in educating public opinion in the desired direction should keep them constantly in view.

SCIENCE AND SONG.

M. JOURDAIN was surprised to learn that he had been talking prose all his life, and doubtless many singers will be almost equally surprised to learn of the wonderful feats which they perform with their vocal organs without being conscious of them. Carlyle strongly insisted that consciousness in an artist was in itself a proof of inferiority. This teaching, however, does not commend itself to some modern teachers of song. In the old days singing used to be taught as an art; now it has been transformed into a science, with questionable results as far as artistic beauty is concerned. Some teachers bewilder their pupils with anatomy; others perplex them with physics; others, again, mystify them with metaphysics. This, perhaps, does not matter very much, because it is probable that in most cases the half knowledge which it is attempted to impart makes not the slightest impression on the pupil's mind. It is otherwise, however, when bad science is made the basis not only of instruction in vocalisation, but of rules of the hygiene of the vocal organs. As an example of such undesirable teaching we take a little work entitled *The Science and Art of Adjustment Between the Producing and Reflecting Vocal Apparatus*, by Paul Mahlendorff (London: Marriott and Williams), which has been sent to us in the ordinary course for review. From this treatise, as we gather, the would-be Mario can, like Gil Blas in another field, learn the whole art at once. The whole

[1] *Old-Age Pensions*, by William Birkmyre. Glasgow: Aird and Coghill.
[2] Mentioned in Mr. Chamberlain's article, *National Review*, January, 1895.
[3] See *Heilstätten-Korrespondenz, Organ des deutschen Central Komites zur Errichtung von Heilstätten für Lungenkranke*, Berlin, January 1st, 1898.

secret lies in "adjustment"—a word which may, for all we know, be as comforting to singers as "Mesopotamia" was to the old lady of the story. If we ask what "adjustment" is, we must make what we can of the following explanation: "If you experience any difficulties with your voice, fold your hands, and whilst singing, press on several parts of your head, and in 90 per cent. of cases a beneficial alteration in the voice will esult; but if a pressure be withdrawn the former difficulty reappears, perhaps not quite as strong. . . . On such simple exercise as this the science and art of 'adjustment' are based." We learn with some concern that "in many important cases the physical point is in conflict with the theory and course of treatment of the medical profession, yet does the science and art of 'adjustment' stand on its defence." Truth compels us to say that we think the said science and art as expounded by Mr. Paul Mahlendorff have grave need to stand on their defence. We take a few illustrations of his doctrines almost at random. The inquiring pupil is told that "singing signifies the spiritual reproduction of one's self, due to the use of the muscular outflow from the vocal apparatus on the base of an open central canal." If, thirsting for further knowledge, he asks what the said central canal is, he is informed that it is "a sinus of the flow of vitality from brain to body, and although it lies hidden away in the spine, one is able to observe sometimes a little of the action that is going on in it." The author, however, would appear to be able to observe more than a little of this action, for he tells us that "the central canal from its start in the brain down to the end of the lower spine is the abiding place of our inmost nature, and in a normal human being it stands open and is nowhere pressed together or contorted. The means whereby this open condition is regulated are a nervous rigidity, caused in certain parts of the brain with will power and imparts life to the human vocal apparatus for spiritual reproduction. This rigidity is regulated on the one hand by a certain working of certain parts lying on the line which indicates the angle of the face, and, on the other hand, by the medulla oblongata and related parts." Again, we are told that "the will power and fructifying element for singing seems to have its seat under the crown of the head." Mr. Mahlendorff's advice to singers seems to be to keep their brains rigid, their central canal open, and their frontal cavity in suitable condition for the fructification of the vocal apparatus. Thus will they escape the manifold evils caused by "the closing of the central canal, not allowing ventilation of body and soul." The treatment for non-adjustment is "pressure with a view to let the opening of the spine fit well to the skull, so that the condyles find the right place on the atlas. The older the persons are the stronger the pressure is to be applied." We are warned, however, that "if the pressure be strongly applied, it may happen that we perceive black spots dancing before the eyes, accompanied by a bewildering kind of feeling." These sensations are, we think, likely enough to be felt by the professor as well as the pupil if the latter happens to be a muscular man.

Mr. Mahlendorff holds that every teacher of voice production should undergo an examination regarding the anatomy of the human body. Had Mr. Mahlendorff been subjected to the process which he wishes to make compulsory on his professional brethren he would certainly not have written the book of which we here have given only a few samples.

PROPOSED METROPOLITAN MIDDLE-CLASS HOSPITAL.

We have received a circular letter from the "Secretary, Middle-Class Hospital Committee, 44, Southampton Buildings, W.C.," stating that a movement has been set on foot for the establishment in London of a hospital for middle class patients able and willing to pay a moderate residential fee. The circular states that there is at present no alternative between paying from five to ten guineas a week for private accommodation, or "having recourse to the common ward so repugnant to people of independent spirit." The appeal now made "to the wealthy and middle classes" is for charitable help to the extent of providing the initial funds for founding the institution which it is believed would be entirely self-supporting, if not even financially prosperous. Provisional guarantees and promises of support are invited. It is added that subscriptions have already been promised, and that several eminent physicians have expressed their fullest sympathy with the project, which, however, is yet only in the "theoretical stage." We readily respond to the request to bring the project to the notice of the medical profession, but the information before us is not sufficient to warrant any expression of opinion as to its merits. These will depend upon the nature of the regulations for admission, and about this vital matter nothing is said. The idea seems worthy, at any rate, of public discussion, if it is understood that admission to the hospital is to be limited to cases in which the emergency is grave, and the relative poverty of the patient adequately vouched for. But if these essential points are not secured, this proposed middle-class hospital would only add another to the sham charities with which London is infested.

GENERAL MEDICAL COUNCIL.

In consequence of the death of Sir Richard Quain there is now a vacancy among the Crown nominees in the General Medical Council. The nomination is made by the Queen on the advice of the Privy Council, and will probably not be announced until Her Majesty's return from Cimiez. The applicants for this vacancy are three. Mason University College, Birmingham, soon it is hoped to become a University, seeks recognition on the Council by the appointment of one of its medical staff. There is a widespread feeling that the vacancy should be filled by the nomination of a general practitioner of such standing in the profession as would make him be accepted as representative of his order, and of such knowledge and experience of affairs as would enable him effectually to promote its interests and its dignity. It is understood that the Privy Council on at least one former occasion had the intention of making the selection of a Crown nominee on the principle here formulated, but owing to some misconception the intention was not fulfilled. The composition of the Council at present is as follows: Representatives of Universities, Corporations, etc., 24; Crown Representatives, 5; Direct Representatives, 5. On the other hand the dentists, who are now under the jurisdiction of the General Medical Council, have advanced a claim to be represented by a member of their profession. The claims on all sides will doubtless receive the fullest consideration from the Duke of Devonshire, who is the Minister responsible for advising the Queen on the subject.

THE NEW LUNACY BILL.

The new Lunacy Bill has just come to hand, and at a brief glance we find it differs from the Bill of last year by processes both of inclusion and of exclusion. To these we shall now briefly refer. An additional provision is that an order made under Section xxi of the Act of 1890 may be made in any case where the inquiries a justice thinks advisable with respect to a pauper alleged to be a lunatic, or with respect to an alleged lunatic wandering at large, cannot be completed forthwith, but an order thus made shall not authorise the detention of the lunatic in the workhouse for more than

three days. There are new provisions also with regard to reception contracts entered into by visiting committees of asylums, and with regard to plans and contracts for new buildings or land, or for alterations. A new section provides that the Commissioners may by order direct that until further order any licensed house, whether licensed by them or by justices, and not authorised by the licence to receive more than ten patients, may be visited by one Commissioner. This is a departure from the provision of the Act of 1890, which requires visitation by two Commissioners in such case. The provisions of the last Bill with regard to branch establishments in connection with lunatic hospitals and asylums are somewhat altered in the new Bill, and partly by the subsection that a branch establishment need not be visited in any one year by more than one of the Commissioners. The pension clause of the new Bill differs by the omission of the provision that within a period of three months from the commencement of the Act any existing officer could signify to the visiting committee of the asylum his intention not to avail himself of the provisions of the section, and thus have the option of being dealt with under the provisions of the older Act. The new Bill provides for pensions in very simple terms: "It shall be the duty of the visiting committee of every asylum to grant superannuation allowances to their officers and servants under Section CCLXXX of the principal Act, and the allowance to be granted to an officer or servant under that section shall not be less than would be granted if he were an officer or servant to whom the Poor-law Officers Superannuation Act, 1896, applies." This change is not altogether on the lines desired by the majority of the medical officers of asylums, for many would have preferred the old arrangement, but the old arrangement and statutory provisions made compulsory. As to omissions, we miss provisions relating to jurisdiction in cases of persons of unsound mind possessed of little property, and providing that a judge of county courts may, in relation to that person, exercise all the powers relating to the management and administration of property, which, in the principal Act, are conferred upon the judge and masters in lunacy. We miss also the provision that the Commissioners shall have power, subject to the conditions on which licences may be granted under the principal Act, to grant a licence to any house not previously licensed intended to be used solely for the reception of idiots and imbeciles, and intended to be registered under the Idiots Act, 1886, and to renew the licence from time to time, or to decline to renew, or to revoke it. There are several other omissions which are not of any great public interest or importance. We may congratulate the profession upon the disappearance from the new Bill of an extremely harsh and unnecessary provision contained in the former Bill on its introduction into Parliament, namely, that if any person wilfully or through negligence makes a mis-statement of any material fact in any statement accompanying an urgency order, or in any petition, statement of particulars or reception order under the Lunacy Acts, or makes a mis-statement in any medical or other certificate, or in any statement or report of bodily or mental condition under the Lunacy Acts, or under any rules under the principal Act, he shall be liable on summary conviction to a fine not exceeding £50, or to imprisonment for a term not exceeding six months, or on conviction on indictment to a fine not exceeding £200, or to imprisonment with or without hard labour for a term not exceeding two years, or to both. On the whole the new Bill is an improvement upon the measure introduced last year, which failed to pass; and, when further modified on lines advocated by the British Medical Association, will be of some usefulness.

MEDICAL HISTORY AND ITS VALUE.

DR. GEITZ calls attention, in a recent number of the *New York Medical Journal*,[1] to the value of medical history. He says very properly that history is a record of past experiences. It shows the progress made by the profession, and it is valuable because it is full of mistaken observation, judgment, and deduction. It is even more valuable because of the encouragement and inspiration which it affords by example of clear insight, persistent and careful observation and devotion to the healing art. History is valuable, too, because it stimulates in us a love of our profession. The study of history will cultivate fairmindedness as a habit, and a suppression of intellectual partisanship with respect to all subjects. The historical spirit is the judicial spirit involving the mental attitude not of an attorney standing for one side of the question, but of a judge standing for what is true on both sides. History gratifies our curiosity as to the manner in which our ancestors accomplished their object, and the progress made in treatment. It is said that when Boerhaave, the most accomplished and celebrated physician of the eighteenth century, died, he left behind him an elegant volume, the title-page of which declared that it contained all the secrets of medicine. On opening the book, every page was found blank but one, on which was written, "Keep the head cool, the feet warm, and the bowels open." This legacy of Boerhaave's to suffering humanity typified not inaptly or unjustly the acquirements, not of medical science, but of the medical art at the close of the eighteenth century. It is not the least merit of a study of the history of medicine that it enables us to modify our views of the present by the failures and mistakes of the past. With our advances we can read history critically, and by its study we are often able to explain satisfactorily why these failures and mistakes occurred. We are now able to see the many follies of bleeding, yet by the light of our present knowledge of physiology we can see some truth in its practice. Future activities will be guided by past experience in the various divisions of our science. History suggests to us the fields of medical science that are the best grounds for prospecting. It shows what is as yet undeveloped and indefinite. It also saves us from wasting our time by going over what others have exhausted. Historical study, by making the student investigate and reason within the realm, not of the exact and absolute, but of the approximate and possible, gives the very training required for real life, for it deals with mixed deeds and motives, and with the traits of character and the experiences of human beings. History, therefore, is the study of human nature on a broad field. It is the great teacher of human nature by means of object lessons drawn from the whole recorded life of human nature.

[1] March 19th, 1898, p. 393.

A RESUSCITATION.

IN this week's EPITOME, No. 280, will be found an account of a case recorded by Dr. Gimbert, of Cannes, which is noteworthy in several respects. The patient had had disastrous *post-partum* hæmorrhage, and to all outward appearance died therefrom. No circumstance is more likely to unnerve the obstetrician than a death from such a cause; but Dr. Gimbert, with a courage and perseverance that do him infinite credit, refused to fold his hands and stand idly by. Having employed without effect the usual means of stimulation, such as rhythmical traction of the tongue, direct insufflation of air from mouth to mouth, and hot applications to the precordium, he made a 1 per cent. saline solution, and injected a syringeful (20 cubic centimetres) into the thigh. This was repeated. After the third dose the patient uttered a little sound, but there were no heart signs; after the fourth, signs of reviving were noted, such as a faint fluttering in the radial arteries, some facial movement, and a conjunctival reflex. He remained five hours still with his patient, and had the satisfaction of seeing her make an ultimately complete recovery. It is very noteworthy that only 80 c.cm. in all were injected, equivalent to 2.8 fluid ounces. If intravenous transfusion were employed, it would be considered necessary to inject at least a quart, and the first question raised is whether 3 fluid ounces in-

jected under the skin are as effective as 2 pints introduced into the veins. Dr. Gimbert holds the view that hypodermic injection is better in two respects: First, the salt solution, in its passage through the capillaries into the veins, becomes mixed with blood before reaching the heart, instead of arriving there merely as salt solution; secondly, there is a danger, when a large quantity of saline fluid is suddenly thrown into the veins, of disabling the heart altogether by inducing a too sudden reaction. These points, if true, are of the highest importance. Transfusion can boast of many triumphs, but most practitioners have had instances of its failure under parallel circumstances; and its failure, as a last resource, means the most tragic experience that can befall the family and the practitioner. A woman enters on her confinement in good health; her husband leaves her to go to his business in a spirit of cheerful anticipation, and it may be that in a few hours she is lying dead. Happily this calamity is rare; but one such case in a lifetime is one too many, so that any additional means of warding it off that is offered demands the most careful consideration. It is a question that could probably be settled in large measure by experimental research. In the case under notice there is doubt whether transfusion would have succeeded even had circumstances allowed of its performance. Did the hypodermic injection of 3 ounces of salt solution effect what a quart in the veins would have failed to achieve? That is the point to be answered. In any case, Dr. Gimbert is to be highly complimented on his energy and patience and congratulated on his success.

THE ILLNESS OF MR. GLADSTONE.

We regret to learn that the condition of Mr. Gladstone's health is undoubtedly grave, and we have authority to state that though there is no immediate cause for anxiety, the future is looked forward to with great apprehension. Sir Thomas Smith was unable, having regard to Mr. Gladstone's advanced age, to advise any operation for the local condition, which is, unfortunately, of such a nature that the resources of medical art cannot do more than afford relief. Happily it is possible to do a great deal to mitigate the neuralgia by which the nerves of the face have been affected for some time past, and we are glad to learn that during the last few days he has been comparatively free from pain. His strength is still maintained, appetite is good, and he is happy to be once more amid the familiar surroundings of his home. Though cut off from many of the sources of intellectual enjoyment to which he has been habituated, he is able to derive much pleasure from music, and to enjoy conversation, in which on occasion he takes part with something of his wonted fire.

THE MEDICAL PROFESSION IN CORK.

The past two years have been a great test of the unity of the medical profession in Cork. This unity has been thoroughly maintained, with the result that the position of the profession is in every way better to-day than it was under the old *régime*, in spite of the boasted success of the clubs which fought with and discarded their old medical attendants. After due deliberation the profession in Cork has formed the Cork Medical Benefit Association, which is registered under the Friendly Societies Act. The Association has been formed to provide medical attendance and medicine for members and their families, in accordance with the rules laid down by the Cork medical profession for the regulation of club and society practice in the city. There is also a benefit department to provide sick pay for members, to allow a certain sum towards funeral expenses, and, after making due provision for a reserve fund, to pay a dividend to the members. The conditions of membership are that the annual income of a member must be under £100, and that he must reside within two miles of the general post-office. An applicant for admission must be between 18 and 50 years of age, and must be certified healthy by the medical officer appointed to examine him. The payments are: for the medical department 3½d. a week, a like sum for the benefit department, and 1d. a week for the management fund. Members whose age at entrance is 40 years or more pay 4½d. a week to the benefit fund. Members are entitled to medical attendance and medicine for themselves and those of their families living with them and entirely dependent on them. Any member of the medical profession practising in Cork in conformity with the rules laid down by the profession for the regulation of club and society practice may become an honorary member of the Association. The first medical officers will be those medical men who resigned their societies at the time when the rules drawn up in 1894-5 were enforced, but after January 1st, 1899, any honorary member shall on application be appointed as an additional medical officer, and any subsequent applicant for appointment as an additional medical officer must have been in actual practice in Cork (including house-physicians and house-surgeons of a City or of the Union Hospital or of the District Lunatic Asylum) for at least one year previously. It is provided that no professor of the Queen's College, Cork, shall be a medical officer of the Association, and that any medical man appointed intern physician or surgeon to a recognised general hospital shall after a year cease to be an additional medical officer of the Association. Subject to certain provisions with regard to members of the old societies who may join the new Association, members will have the right of selecting their own medical officer from the list of medical officers of the Association. After the payment of the chemists the surplus remaining to the credit of the medical department will be divided among the medical officers in proportion to the amount of the subscription paid into the medical department by the members on their lists during the quarter. Any member who ceases to comply with the conditions of membership in regard especially to the wage and distance limits, may be removed from the list of membership; he will receive a share of the reserve fund, but will cease to have any claim on the Association and its funds. Should he again become eligible he may be re-admitted without enforcement of the age limit or payment of entrance fee, provided that he can pass the medical examination. The entrance and registration fee varies from 2s. 6d. for persons entering at ages from 18 to 30 years, to 10s. for persons entering from between the ages of 45 and 50. The Committee of Management of the Association consists of an equal number of medical and lay members. The medical members are elected by the honorary members, and four of those elected must be medical officers of the Association; the other four must be honorary members. The lay members of the Committee, also eight in number, are elected annually by the members of the Association from amongst themselves. This organisation is a very great advance upon the deplorable state of things which existed in Cork when the movement for reform commenced, and the medical profession are to be warmly congratulated upon their unity, and upon the success which has already attended the Cork Medical Benefit Association, and which is certain to attend it in an even greater measure in the future.

ASYLUM WORKERS' ASSOCIATION.

The annual meeting of this Association was held on March 28th at the rooms of the Medical Society of London. Sir James Crichton Browne, M.D., F.R.S., presided, and there was a large attendance. The annual report, which was presented by the Honorary Secretary, Dr. Shuttleworth, stated that the Association was founded in July, 1895, under the presidency of the late Sir B. W. Richardson, for the purpose of improving the status of asylum nurses and attendants, of providing a home or homes of rest for those requiring such help, and of enlisting public sympathy with a class of workers whose services, being performed in the seclusion of asylum

life, were apt to be overlooked. Up to the close of 1897, 2,534 asylum workers had joined the Association; a journal, called the *Asylum News*, had been published monthly: and although this had been gratuitously sent to each member, a fair balance had been maintained at the bank. Three cases had been beneficially aided by the "Home of Rest" Fund. Representations had been made to the Lord Chancellor and to the Lunacy Commissioners as to the pension provisions of the Lunacy Bill of 1897; and a petition, setting forth the views of attendants and nurses as well as of the principal officers (with upwards of 4,000 signatures from 40 asylums), had recently been presented to his lordship in view of contemplated legislation. The provisions of the Local Government Bill for Ireland, as affecting asylum interest, were under consideration. The adoption of the report was moved by Sir James Crichton Browne, who pointed out the utility of an Association including all ranks of asylum workers, proper *esprit de corps* being promoted by intercommunication between scattered groups of members, and the asylum service being welded into a compact whole. He deprecated trade-unionism, but showed how useful the Association might be in voicing the views of its members. Referring to certain disparaging remarks which had been made as to mental nurses, the Chairman urged the importance of their steadily maintaining their claim to be regarded "as a branch—aye, as the highest branch—of the great nursing profession," and spoke of the advisability of their having a period of training in corporeal nursing in addition to that in ordinary asylum duty. He mentioned with approval the high degree of attainment shown by many of the candidates in the examinations of the Medico-Psychological Association. In conclusion, Sir James paid a high tribute to the qualities of heart, as well as head, which he had found amongst the ranks of asylum nurses and attendants. Mrs. Creighton (wife of the Bishop of London) seconded the adoption of the report; and that of the financial statement (which showed a balance in hand of £95 18s. 4d.) was moved by Dr. Savage and seconded by Dr. Nicolson, C.B. A resolution in favour of the establishment of homes of rest for asylum workers was moved by Mr. F. D. Mocatta, and seconded by the Rev. H. Hawkins, and various formal resolutions and votes of thanks brought a very successful meeting to a close.

RATIONAL ETHERISATION.

It has long been recognised that ether, when used as an anæsthetic, has certain drawbacks. Too frequently these have been assumed to be inherent in the compound itself, and the stereotyped methods of giving the ether have undergone no modification. Ether, as given before the days of Clover, was regarded as inconveniently slow in action, and although more modern methods have removed this ground of complaint, ether too often comes in for severe blame as the cause of such serious after-effects as sickness, bronchitis, renal catarrh, albuminuria, and even of suppression of urine. Dr. Brouner, of New York, writing in the *Medical Record* of January 29th, 1898, asserts that all the so-called complications following the use of ether are the direct result of faulty administration, and certainly the statistics which he publishes go far to substantiate his statements. He condemns the use of any complicated paraphernalia. His plan is to employ a cone, in the apex of which is a piece of gauze. The prime essential in the method is a graduated ether bottle, with a proper dropper inserted. The ether must be absolutely pure and fresh for each case, and be dropped into the cone as is necessary. The average quantity used was 2.4 ounces in an average time of forty-eight and three-quarter minutes. The average quantity to produce anæsthesia was 2.2 ounces. No cyanosis appeared, no vomiting during the operation. The induction of anæsthesia averaged eight and a-half minutes. No renal, bronchial, or other after-effects appear to have arisen. Dr. Brouner refers with approval to the suggestion of Dr. Diaz de Leaño, of Barcelona, that the inspired ether should be warmed. His conclusions are worthy of note. They are that etherisation should be entrusted only to experienced hands; and that any method of "forcing ether" is cruel and injurious. The sequelæ are produced by excess of ether, and are directly proportional to the quantity used, a drop method eliminating them altogether. We are not told, however, whether this plan lessens or increases the stage of excitement, for it is certain that the struggling which so often is a feature of slow etherisation makes the patient liable to injury of one kind or another, to say nothing of the severe strain it imposes upon the heart. The cases which are tabulated include such severe procedures as excision of the rectum, gastro-enterostomy, laparotomy, intestinal anastomosis, etc., lasting in some cases for over two hours. The longest period of induction—in the case of "a big fellow, a heavy drinker"—was twenty minutes, the shortest two minutes; the largest quantity used was 8 ounces in 100 minutes.

CALF VACCINE LYMPH.

Our attention has been called to a resolution of the Darlington Board of Guardians requiring public vaccinators to purchase calf vaccine lymph from one establishment only, the full name and address of which are given in the resolution. This selection of a particular establishment would appear to have been founded upon an opinion attributed to Dr. Reece, who visited Middlesbrough as an inspector of the Local Government Board. It would be contrary to the principles followed by the officers of the Local Government Board to recommend officially the lymph prepared at any particular vaccine institution, and we make no doubt that the impression to the contrary that appears to prevail, or to have recently prevailed, in Darlington and Middlesbrough is founded upon some misapprehension. It is now possible to obtain glycerinated calf vaccine lymph of good quality from several trustworthy sources in this country, and it is within the discretion of the public vaccinator to select that particular kind, or those particular kinds, with the good qualities of which he may happen to be best acquainted.

THE MAKING OF MIDWIVES.

The Plaistow Maternity Charity and District Nurses' Home is an institution which does a great amount of work—work which will be looked upon as good or bad, according to the point of view from which it is regarded. For one thing, and the main thing, a large number of midwives are trained there every year, so that to those who object to midwives the Plaistow Maternity is evidently the root of much evil. On the other hand, a considerable number of "cottage nurses" are trained at Plaistow, receiving there a training of four months or more; and as a large number of nurses consider it the height of impertinence to speak of anyone as a "nurse" who has not had a three years' training, it is easy to understand that in the "nursing profession" Plaistow is rather a sore spot. It is, therefore, as well to recognise the extent of the work which is being done under the superintendence of Sister Katherine, and the magnitude of the work all over the country which is being carried out by aid of those who have been trained under her guidance. During the year 1897 the number of pupils who passed the examination of the London Obstetrical Society was 74, besides many who were trained as cottage and rural nurses, and these are quickly absorbed by the Affiliated Benefit Nursing Association and other bodies. In connection with this training school at Plaistow during the year 1896 (the last of which we have the report) the number of midwifery cases attended was 1,399, and of monthly cases 214, and the number of ordinary visits paid in connection with the Maternity was 27,710. In the "district work" of ordinary nursing more than 60,000 visits were paid, so that altogether 91,652 visits were paid in connection with the year's work. We have felt impelled to draw attention to these facts because it is too apparent that many people think that a few resolutions or an Act of Parliament or two will decide the fate of the midwife. But the

midwife is there, and the question is no longer—Ought we to have midwives? What has really to be decided is—What shall we do with them?

THE SENATE OF THE UNIVERSITY OF LONDON.

By the death of Sir Richard Quain a vacancy has been caused in the Senate of the University. The election thereto cannot take place at the ordinary meeting of Convocation to be held in May, as the intervening time is not sufficiently long. But a special meeting of that body for the purpose will be summoned in June or July. The present vacancy will be filled by the election of a graduate in arts or law. It is, of course, far too early to state who the candidates will be, though one of our contemporaries has so far anticipated events as to announce the name of the member of Convocation who, in its opinion, will probably be elected. Under present circumstances, with the University of London Bill safely through the House of Lords and about to be introduced into the House of Commons, this coming election to the Senate of the University is certain to awaken wide interest.

LONDON AND ITS UNIVERSITY.

A deputation representing various institutions interested in the University of London Commission Bill had an interview with the Committee of Metropolitan Unionist Members at the House of Commons on March 28th. The deputation consisted of Dr. Allchin (Royal Colleges of Physicians and Surgeons), Mr. Rotton, Q.C. (University College), the Rev. Principal Robertson (King's College), Dr. Frederick Taylor (the Medical Schools), Rev. Vaughan Price (the Theological Colleges), and Dr. Crosby (the Corporation of the City of London). The deputation was received by twenty Unionist members for metropolitan constituencies. The chair was taken by Mr. W. F. D. Smith, M.P. The members of the deputation stated that the main object of the deputation, which was to urge upon the Metropolitan Members of Parliament the importance in its bearing on the general interests of higher education in London of the proposal for the reconstitution of the University of London embodied in the Bill. The representations of the deputation were listened to with much attention by the Members of Parliament present, who showed sympathetic interest in the question. It is hoped that the second reading debate in the House of Commons will take place soon after Easter.

THE ASSOCIATION OF PUBLIC VACCINATORS.

The Association of Public Vaccinators has been constituted with Dr. E. C. Greenwood as President, Dr. G. A. Miskin, Slade House, 173, Kennington Road, S.E., as Treasurer, and Dr. V. A. Jaynes, 157, Jamaica Road, S.E., and Dr. A. E. Cope, 26, Bessborough Gardens, Westminster, S.W., by whom subscriptions (5s.) will be received, as Secretaries. We understand that steps are being taken to lay the views of the public vaccinators with regard to Mr. Chaplin's Vaccination Bill before the Local Government Board at an early date, probably by way of deputation. The points to which attention will particularly be called, will be the retention of vaccination stations, as places to which parents may resort at their own option to obtain free vaccination, and the propriety of reducing the age within which a child should be vaccinated from 12 to 6 months. Should this last proposal be found to meet with insuperable objection, it will probably be suggested as an alternative measure that revaccination should be required on leaving school, as it is feared that the number of removals under the twelve months' rule would be so large that a very considerable portion of the population would escape vaccination altogether unless some machinery existed for getting in contact with children at a later age when they are about to leave school.

MEDICAL DUTY WITH THE ARMY.

The Director-General of the Army Medical Staff has addressed a letter to the governing bodies of the medical schools, stating that the Secretary of State for War has approved of the employment of a certain number of young civil surgeons for duty with Her Majesty's troops in the United Kingdom, and asking for nominations. The terms of appointment are that the engagement will be for six months, subject to good behaviour, that the remuneration will be at an inclusive rate of £270 per annum, that the gentlemen selected may be detailed for duty in any part of the United Kingdom, and that their services shall be wholly devoted to such duties in connection with the medical charge of troops as may be required of them. The reasons assigned for this step are the large demand made on the strength of the Army Medical Staff at home, due to the additional troops employed in Egypt and South and West Africa, and the impossibility of obtaining the entire services of ordinary general practitioners. The need to make such applications indicates the serious strain which has been placed upon the Medical Department.

THE OVERCROWDING OF THE MEDICAL PROFESSION IN FRANCE.

Dr. Hameau, President of the Medical Society of La Gironde, has just published in the *Journal de Médecine de Bordeaux* an article in which he states that the number of medical men practising in France has remained at the same figure for the last fifty years, while the population had slightly increased. In 1896 there was for the whole of France only one doctor to every 2,564 inhabitants. From this he draws the conclusion that there is no overcrowding of the profession. This optimistic view is not shared by Professor Brouardel, Dean of the Medical Faculty of Paris, who has recently stated that the number of medical students is increasing at such a rate that the number of doctors will be increased threefold within fifteen years. It is clear, therefore, that even granting that Dr. Hameau is right in his contention that there is no overcrowding at present, there will be overcrowding of the acutest kind in a few years. But, as need hardly be pointed out, the crude statement that taking the whole of France, the proportion of medical practitioners to the population is only 1 in 2,500, gives no measure of the state of things in particular districts. The distribution of doctors is very unequal in France, as in other countries. Thus, according to Dr. Hameau himself, 60 departments show a higher proportion and 27 a lower than that which he gives for the whole country. Among the former, 9 (Morbihan, Finistère, Haute-Loire, Ardèche, Haute-Savoie, Côtes-du-Nord, Hautes-Alpes, Savoie, Loire) have 1 doctor to 7,000 inhabitants, while 37 have 1 to 3,000 or 5,000. Of the departments where the proportion of doctors is under the average, 18 have 1 in 1,138 to 1,954. These are the Alpes-Maritimes, Seine, le Gers, Haute-Garonne, L'Hérault, la Gironde, Bouches-du-Rhône, Haute-Pyrénées and l'Aude. Thus, 9 departments had in 1896 a large excess of doctors, 18 had a considerable excess, while about 30 had just the right proportion. On the other hand, 9 had considerably too few, and in some others an increase would have been desirable. But the overcrowding affects just those districts where the proportion of doctors is highest already; and if Professor Brouardel's estimate of the increase of the profession is correct, and if the general population remains stationary, as it has done, or shows only a slow rate of increase, it is not difficult to see that in a very few years the struggle for life among medical men in France will be of the severest possible kind.

EXPERT TESTIMONY.

The Committee (of the New York Academy of Medicine) on Medical Expert Testimony, has stated, in reporting progress, that it had been determined that improvement in the system of expert medical testimony must proceed along three lines, namely: (1) The establishment of some standard of excellence

for experts; (2) the appointment of the experts for given cases by the presiding judge; and (3) the fixing of the fees by the Court, and the deposit of a certain portion of the sum in advance. It was recommended that a person registering as an expert before the Board of Regents should be required to specify the particular branch of medicine in which he claimed to be an expert; and to show that he had been in practice ten years, and in the practice of his speciality for five years. The evidence of special study should be accompanied by a certificate of good moral character, and endorsements by the local county medical organisation, and a judge of a court of record.

ANTITYPHOID VACCINATION.

In an interesting paper in the current number of *Public Health*, Dr. J. S. Tew, Medical Officer of Health for West Kent, summarises the results of the vaccinations against typhoid fever which were carried out at the Barming Asylum during the time of the recent epidemic at Maidstone. It certainly is a significant fact that the vaccinated cases, which numbered 84, all escaped, while of 120 nurses and attendants living under similar conditions but not vaccinated, 16 contracted the fever. It will be remembered that the injections were made by Professor Wright and Surgeon-Major Semple, and that a paper entitled "Remarks on Vaccination against Typhoid Fever," describing the principles upon which the method is based, appeared in the British Medical Journal of January 30th, 1897. Dr. Tew's paper, in addition to giving the promising results that have been mentioned, deals very fully with the occurrence of the agglutinative reaction in the blood of the patients vaccinated as contrasted with its occurrence in the blood of patients who had taken the disease, together with a proportion of control experiments on the blood of patients who had not been vaccinated and who had not, as far as could be ascertained, suffered from typhoid fever.

BICYCLE HEART.

Several well-known French cyclists have lately, it is said, been rejected as unfit for military service by reason of hypertrophy and other diseases of the heart. A contemporary, representing no doubt lay opinion, professes astonishment at this result. But medical men will be rather surprised that the numbers are so small. There must be few of us who have not seen the ill effects of over-exertion on a bicycle. The commonest is palpitation and temporary dilatation; but even this is sometimes very difficult to cure. In a case which occurred recently, a lady, ordered for a fortnight's change of air after influenza, chose to spend it in bicycling about fifty miles a day. As a result, she has ever since that time—now nine months ago—had a pulse which on the least exertion rises to 120, though she has not ridden again. That temporary dilatation occurs is enough to show the great strain put upon the heart, and it is an added danger that the sense of fatigue in the limbs is so slight. The rider is thus robbed of the warning to which he is accustomed to attend, and repeats or continues the strain upon the heart. As in other similar cases, the effect is to render that dilatation permanent which was at first but temporary, and to cause an increase in the muscle of the heart by repeated exertion. The heart produced is of large dimensions and of thick walls—a condition which may, perhaps, give little uneasiness to its owner, but which a medical man will view with considerable distrust and apprehension. Weakly and elderly people cannot be too often told that no exercise is more easily abused, though, if taken in sensible measure, few are more healthful or enjoyable.

INRCEASED FACILITIES FOR CLINICAL STUDY IN LONDON.

An arrangement has been entered into between nine of the London hospitals, whereby after May 1st joint cards of admission will be issued to the clinical instruction of the following metropolitan schools of medicine: Charing Cross, Guy's, King's College, Middlesex, St. George's, St. Mary's, St. Thomas's, University College, and Westminster. These cards, which will be available for qualified medical men only, will admit the holder to any part of the clinical instruction that is open to ordinary pupils, including operations and *post-mortem* examinations. It has often been said that London possesses the finest clinical material in the world for the purposes of study. Hitherto, access to this valuable store has been seriously hampered by the individualism of the various hospitals and schools. The present arrangement is the first step towards breaking down the barriers which use and custom have erected. Full details as to the scheme can be obtained on application to the Honorary Secretary, West Wing, Examination Hall, Victoria Embankment, London, W.C.

ACETYLENE LAMPS FOR BICYCLES AND THEIR DANGERS.

At the present time acetylene gas is being used in bicycle lamps, and as explosions have occurred it may be well to inquire whether these can be prevented. Hitherto the gas has been generated by the person riding the bicycle regulating by a screw-like movement the valve of the generator, which is fixed to the machine, and thereby allowing water to pass through in drops upon the calcium carbide. One of the drawbacks to the generation of acetylene is the rapidity with which the gas is evolved. Immediately water comes into contact with calcium carbide gas is given off. Until, therefore, something else is found that will disengage the gas more slowly than water it would be well that this liquid should reach the carbide through a valve acting automatically and thus allowing the minimum of water to enter. There is a considerable degree of heat created when decomposition of the calcium is effected, and in this heat of reaction and in the compression of the gas in the generator, which, by the way, in every instance ought to have a safety valve, there are possible dangers. It is questionable whether the heat of reaction is of itself sufficient to ignite the acetylene gas. Probably not, but if to it there is added the influence of accidental concussion an explosion is quite possible.

Deputy-Surgeon-General Henry Cayley, F.R.C.S., formerly Professor of Military Medicine in the Army Medical School, Netley, has been appointed to deliver a course of lectures on Tropical Medicine at the Middlesex Hospital Medical School during the coming summer session.

The Right Hon. the Lord Mayor of London has issued invitations to a dinner on May 4th, to meet the Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England and members of the medical profession. We understand that about 350 guests are expected to be present. This act of courtesy to the medical profession is somewhat of a new departure in the annals of the Mansion House. The only previous occasion which we can recall upon which the medical profession was entertained by a Lord Mayor of London was during the International Medical Congress, when Sir William MacArthur, M.P., then Lord Mayor, entertained a large gathering of the profession on August 4th, 1881.

Presentations.—On March 25th, at the Town Hall, Haverhill, on the occasion of the public presentation of the St. John Ambulance Association's certificates, Mr. Thomas Herbert Goodman, M.R.C.S., Honorary Lecturer, was presented by the members of the senior and junior classes with a marble clock bearing an inscribed plate.—Dr. A. G. Newell, of Cymmer, Glamorganshire, has been presented with Quain's *Dictionary of Medicine*, handsomely bound and suitably inscribed, by the members of his ambulance class, conducted under the auspices of the St. John Ambulance Association and the Glamorgan County Council.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE ARMY MEDICAL SERVICE was discussed on the Estimates on Friday night, and some very satisfactory announcements were elicited. The debate came on much earlier than was expected, but nevertheless Dr. Farquharson, who was happily present, made good use of the opportunity, and, as an old army medical officer, laid down clearly the minimum of reform which would induce men to join the service. The Financial Secretary to the War Office, in replying, stated that the Secretary of State was willing to institute an army medical corps, and give the medical officers substantive rank in the corps from that of lieutenant up to that of colonel. It was not quite clear what will become of the higher title of surgeon-major-general. Sir William Priestley also pressed the claims of the medical officers, and especially dwelt upon the hostile attitude of many combatant officers in high position. Mr. Brodrick afterwards confirmed the announcement about the army medical corps, and, moreover, promised consideration for the suggestion made by Captain Norton that the Director-General's tenure of office should be limited to five instead of seven years as at present, and so be brought into line with other similar appointments. The effects of this discussion will no doubt be satisfactory, but a great deal of care and watchfulness will have to be exercised over the details of the scheme. There is no doubt a very strong prejudice in military circles against the use of purely military titles by medical officers. This feeling will only die down slowly, but we hope the proposed plan will deprive it of any reasonable excuse for continued expression.

THE ROYAL COMMISSION ON SEWAGE TREATMENT is likely to be announced shortly. The terms of the reference will be awaited with much interest, for when seven or eight eminent men have been gathered under the presidency of Lord Iddesleigh it is important that they should have wide powers of inquiry. Not only England and Wales, but Scotland, should be included, and the latter country should have a representative. With a good representation of the Local Government Board of England, the presence of some members connected with great municipalities, assisted by authorities in bacteriology, chemistry, and engineering, a searching and productive inquiry would be likely to result. The Commission should include all these elements, as well as some medical officers of health specially conversant with sewage treatment.

THE PRISONS BILL, 1898, is exciting a good deal of interest in the House. It is very natural, as a good many members on the Irish benches have had under the Coercion Acts personal experience of prison discipline, and are consequently able to give the House very useful and startling information. The Bill, which is the result of a report of a Departmental Committee, of which Mr. Herbert Gladstone was chairman, gives the Home Secretary power to make prison rules for the regulation of local and convict prisons. These rules will be laid before Parliament before becoming valid. It will also enable a Board of visitors to be appointed for any convict prison, and it further proposes to regulate by rules imprisonment with or without hard labour, and to take into consideration the sex, age, industry, and conduct of the prisoners. The classification of misdemeanants is also provided for, and it makes the provision of punishment cells for prison offences unnecessary if special cells for refractory or violent prisoners are provided. As a reward for special industry and good conduct, a portion of a sentence exceeding nine months may be remitted, and a prisoner may be released on payment of a portion of a fine proportionate to the remainder of his sentence. The Bill, it will be thus seen, is framed on humane lines, but there is a good deal of doubt expressed as to whether it goes far enough. The tendency of the discussion has been on the two past evenings to show that the prison system in this country is cruel and barbarous to a degree unknown in our Colonies or in many Continental countries. It was generally felt that the diet scale is decidedly too low, and that a system which adds to confinement and hard labour the punishment of a constant hunger and the consequent insomnia is barbarous in the extreme. The most remarkable and powerful speech in the debate was that of Mr. Michael Davitt, who spoke from personal experience, and made the House shudder by the terrible experiences his memory supplied. The debate is likely to occupy another night, and the second reading may be postponed till after Easter.

THE IRISH LOCAL GOVERNMENT BILL promises to have a long Committee stage. Some eighteen pages of amendments are already in print, and after Easter it is quite possible that the number may be doubled. When the clause which deals with lunacy appointments is reached Sir Walter Foster will propose the substitution of the words, "registered" medical practitioners for "legally qualified," and he will also seek to amend the qualifications of asylum superintendents by requiring five years' previous service in the position of medical officer or assistant medical officer. There are other amendments on the paper suggesting that assistant medical officers should undergo a special examination before appointment.

TWO OLD AGE PENSION BILLS are before the House, but only one has, so far, gained the chance of discussion, and that only for an hour somewhat unexpectedly last week. The Bill in question, which is fathered by Mr. Bartley, was not very favourably received, but it gave an opportunity for pressing the Government on the matter. Both Mr. Bartley and Sir Walter Foster, who is the author of another Old Age Pensions Bill, emphatically pointed out that this Government is peculiarly pledged on this question, and urged an early declaration of policy. As usual a Commission has to report, and until these experts, who are considering the question from a financial and actuarial point of view, can agree upon a report, the Government will make no positive statement.

OYSTER-BORNE TYPHOID has again been the subject of questions in the House and of an important deputation to the President of the Local Government Board. There has been a recent report to the Board by Dr. Buchanan on cases of enteric fever caused by eating Brightlingsea oysters, and the conditions under which the oysters are laid in that particular locality are amply sufficient to justify early legislation. In 1895 Dr. Bulstrode made a report in somewhat similar terms, and since then the same deadly contamination of oyster beds by sewage specifically infected has gone on in more places than one. It is sickening to read in the report referred to of sewer outfalls in close proximity to oyster layings, and under such conditions the delicate mollusc seems likely to become one of the readiest vehicles of the typhoid germ. No town in the kingdom can consider itself safe from the importation of typhoid by oysters while such conditions exist, and it is satisfactory to see some of the great provincial corporations joining in the memorial for power to prevent the sale within their areas of shellfish from contaminated sources. The lessons of the last cholera invasion were very conclusive in the same direction. The connection between Grimsby shellfish and the occurrence of cases of cholera at that time was most distinctly to be traced. This should not be forgotten, and there is a general hope that the President of the Local Government Board will see his way to introduce very soon a Bill to deal with shellfish on much the same lines that milk can be dealt with under the Infectious Disease Prevention Act of 1890. He promised early legislation on the subject to the deputation which waited upon him on Wednesday.

In response to Mr. Engledow, Mr. Gerald Balfour said he hoped to be able to introduce a Bill to enable Boards of Guardians in Ireland to subscribe to nursing institutions for the benefit of the sick poor in their districts.

PETITIONS.

Petitions have been presented in the Commons against State regulation concerning certain contagious diseases from Glasgow, Birmingham (two), Westbourne Park, Holbeck, Ryton, Armley, and Bristol; for alteration in the law as to food adulteration from Cambridgeshire, Warwickshire, and Marcham, Maidlaw, and Essex; and for prohibition of vivisection from Bristol, West Hampstead, and Kingswood.

THE MEDICAL ARMY CORPS:

DEBATE IN THE HOUSE OF COMMONS.

IN the House of Commons on Friday, March 25th, in Committee of Supply upon the army estimates, on the vote of £295,800 for the medical establishment, etc.,

Dr. FARQUHARSON said: I do not think it is necessary for me at this stage to enter upon any detailed criticism of this vote, because my hon. friend who is in charge of this vote is prepared to make a declaration of the policy of the Government with regard to the future of the Army Medical Department. I understand that a Departmental Committee has been lately sitting at the War Office to consider this question, and I hope my hon. friend will be able to give such assurances to the Committee to-night as will enable the flow of candidates to be re-established. We all admit that the state of things in the Army Medical Department is extremely unsatisfactory from the view of candidates. The competition has entirely ceased, the quantity has been poor and the quality bad, and we may almost be said to have reached a crisis in regard to the Medical Services of the army. It will be obvious that the very best men should be invited to join the Army Medical Department when we consider the responsibitity placed upon them. The more complicated we make our engines of war the more difficult is the task thrown upon the men who have to operate under great difficulties in the field. Moreover, not only has a medical man to cope with surgical difficulties in this connection, but he has in all parts of the world to fight against pestilence and fevers and all kinds of difficulties which make unusual demands upon his skill. The service is unpopular, and few men are coming into it. This boycott has not been arranged, as far as I can make out, by the teachers and professors of the great medical schools. It is a purely spontaneous movement of the young men themselves who do not like the present condition of the Army Medical Department, and are determined until they get better conditions that they will stand aloof and not join the Department. I am not going to trouble the Committee with reasons for the unpopularity of the Army Medical Department. I think that the army doctor was happier in the old regimental days, when he had a social home and advantages which compensated him for poor pay; but I understand there is no chance of returning to the old regimental system. There is, however, one ultimatum which the medical students put forward, and without which they will not enter the service. In other words, to use a common phrase, they won't be happy till they get it. I introduced a deputation to Lord Lansdowne, consisting of some of our most eminent teachers in the Scottish, Irish, and English centres of learning, and the demand we made was—and I am bound to say that it was very courteously and sympathetically met by the Minister of War—that we should have here, as they have in foreign countries, a Royal Corps in which medical officers should have distinctive rank. The late Mr. Stanhope—of whose memory I wish to speak with the greatest respect, for he was a great friend of the Department—invented the compound title; and when they once got that, I always said that they would ultimately get the full fruition of their hopes. I hope my hon. friend will be able to make a statement that such is now the case, and give us an assurance to that effect. If so, I think I may give him, and I think my hon. friend representing the great University of Edinburgh will also be able to give him, an assurance that he will get once more a good flow of candidates, and prosperity and peace will once more be displayed in the Army Medical Department.

Mr. POWELL WILLIAMS: I receive with the greatest possible pleasure the assurance with which my hon. friend closed his speech. Nothing is more desirable, and the Secretary of State desires nothing more than there should be a good understanding between the medical profession and the War Office, and that the flow into the medical branch of the war administration should cease to be interrupted as it has been; and the Secretary of State, in order to bring that happy condition of things to pass, will not be stinting in meeting the demands or the requests which the medical profession have placed before him in one or two deputations. The complaints of the medical men connected with the army have extended over a considerable number of items, some of them of less importance, some of them of considerable importance; but I think I do not misrepresent the profession when I say that the two claims upon which they lay the greatest stress are that the compound titles should be exchanged for simple titles representing rank in the army or in a corps, and that the medical branch of the service should be united into one corps. My hon. friend has prefixed to the word "corps" the word "Royal," but I do not suppose that he attaches the greatest importance to that, and I may inform him that the title is only given by the special act of Her Majesty, and therefore the Secretary of State can make no promise on that point. But with regard to the desire of the medical branch of the service to be united into a corps, I am happy to be able to state that the Secretary of State is perfectly willing to give effect to that request, and hereafter, and as soon as the necessary arrangements can be made, the medical branch of the army will be united into what will be called the Medical Army Corps. Then, sir, in regard to the title. Of course, the present titles were conferred upon medical men by the late Secretary of State, in the hope and desire that these titles would meet the wishes of the medical profession, but I am bound to say, when you come to look into it, they do not appear to be founded upon any particular basis or to have any particular meaning, and the Secretary of State, I may say, sees no more reason why you should call a surgeon a surgeon-major than he sees any reason why you should call a chaplain a chaplain-major. The consequence is that he is perfectly willing to abolish the compound title, and to allow the medical branch of the service to call themselves by the same title as that which is applicable to other branches of the service, so that in the future, according to the rank of the medical officer, he will be called lieutenant, captain, or colonel in the Army Medical Corps. In regard to higher ranks some little difficulty presents itself. There is greater difficulty in conferring the honorary rank of major-general, because when you get the rank of major-general by army discipline and rule general command is implied. Medical men, however, do not ask for general command; they only ask for command within their corps. If you give them command beyond that you would be rather refusing their demands. This is a matter upon which the Secretary of State has not given his decision, but up to the title of colonel the army medical men will bear the titles and will stand in the *Army List* in accordance with the rank and seniority which titles confer. Under these circumstances I sincerely trust that these concessions will be deemed satisfactory, and I am extremely glad to receive an assurance to that effect from my hon. friend, and the Secretary of State will see with great satisfaction and pleasure a return of those cordial relations between the medical profession and the army which formerly existed.

Sir W. PRIESTLEY: I congratulate my hon. friend, the Financial Secretary of War, on his message to the medical officers of the army, which I trust may prove a message of peace. There has been very grave dissatisfaction in the Army Medical Department for many years past, and as so many medical men in the army have been constituents of mine as members of the University of Edinburgh, I feel compelled to say a few words. The proof of the dissatisfaction to which I have referred is that while the profession is overcrowded, there have been so few applications for commissions in the Army Medical Department that they may be said to be absolutely inadequate. In the department in August, 1896, there were 35 vacancies and only 28 candidates, and in August, 1897, there were 36 vacancies and only 22 candidates. Now it may be taken for granted that all these men who presented themselves were not competent to pass the examination, and consequently there must have been a very small number of men who entered the army. This is not only detrimental to the army but it throws a great strain upon the medical officers in the army; great difficulty is experienced in getting leave, and there has been great difficulty in getting that kind of leave which enables men to pursue their studies and keep up with the discoveries of science. The dissatisfaction of the army medical officers with the War Office has been of long standing, but the causes of the discontent have been greatly accentuated since the medical officers were divorced from the regiments. The Duke of

Cambridge assured me more than once that this was one of the most important causes of discontent, and if it were due to an economic cause, as I believe it was, I can only characterise this as being an extremely unwise economy. If they were only associated more particularly with the regiment I am quite sure it would give great satisfaction. In olden times I am assured by friends who have served in the army the senior medical officer was the friend of all the officers in the regiment, and he was appealed to on all occasions of difficulty, trial, and distress, not only of a medical but of a social nature. I am sure we shall all agree in the necessity for a high standard on the part of medical officers. The practice of surgery, not only in the army, but in civil life, has been revolutionised in our time. During the last twenty or thirty years, since the introduction of the antiseptic system by my friend, Lord Lister, the whole system has been changed, not only in the treatment of wounds, but in reference to the general management of soldiers who are under medical care, and that is not only the case with reference to the simple duties of dressing wounds, but applies to the progress of sanitary science generally. This is a most important consideration in dealing with what has been going on in the army. The very fate of a campaign may sometimes depend on the good management of the medical officer and the hygienic conditions he may impose not only on the officers but also on the men. There is another aspect of this question, and that is, that all relatives and friends of men in the army—parents or children, or brothers and sisters of military men—must be extremely solicitous that the very best men should be got for medical officers. This is a matter which concerns not only the army itself, but an enormous number of people outside it.

At this point Mr. E. McHugh called attention to the fact that there were not forty members present.

The Chairman counted, but found that there was the necessary quorum in attendance. The Chairman then retired for the customary half-hour for refreshment.

On the return of the Chairman,

Sir W. Priestley said: I was about to remark that the best men the medical profession can offer will not enter the army, though in former times the very best men did join. Small wonder at it; for they are tabooed, as it were, by the combatant officers, they are not received by them in the same social circle, and they are bound to associate with people below them in social position. That has been complained of in more than one case. What is it that they are complaining of? They do not complain of their pay and they are not ashamed of their profession. They disclaim all wish to command outside their own department; but what they have been complaining about is their want of status in the army—their want of substantive rank. They wish to be regarded as an integral part of the army, and not merely as camp followers, as they have been regarded by those antagonistic to them. They have been constantly exposed to certain humiliations; they have had to suffer social disadvantages. Although they are part of the army they had been left out of social functions; when lists had been asked for of the officers of a regiment the medical officers had been left out; and the result is they had felt themselves excluded from that caste which I believe is so exclusive among combatant officers. This exclusion has not been due to individual objection, but because of the difference of status, because they were not part of the regiment. They claim to be received by gentlemen as gentlemen, and not to be treated less respectfully than the officers of other scientific corps, such as the Engineers and the Artillery, and certainly not less respectfully than the Commissariat and the Army Service Corps. They complain of other things besides their social disadvantages. Let me give an illustration, to which I will call the attention of my right hon. friend the Under-Secretary for War. A surgeon-captain of a few months' standing being invalided home and having exhausted his resources, sought a free passage, but was refused, as lieutenants only were entitled. Then he sought an advance for passage money, to be repaid later on, as captains are entitled to on medical certificate, but was refused on the ground that the regulation applied to captains and not to surgeon-captains. I trust that the proposals of to-night will remedy such a grievance, which is a substantial one. Medical officers have told me again and again that they have been treated with contumely by the combatant officers. I believe that a combatant officer in high command once said that a medical officer had no more right to be called a captain or a colonel, or to be included among the officers of the army, than he had to be called the Archbishop of Canterbury. I know that from frequent repetition that the language used by a speaker before Lord Camperdown's Committee rankles in their minds—language so strong that I believe the Chairman of the Committee objected to it, language copiously adorned with expletives, that might have been suitable to the days of Peregrine Pickle, but scarcely permissible in polite society nowadays. I may point out that medical officers are quite as well educated as combatant officers. They have a more extended curriculum of study; they have to undergo a more stringent examination; many of the men are university graduates; and I have known again and again two brothers going into the army, one into the combatant service and the other into the medical service, and the latter being refused admission to the officers' club and kept outside their social circle. This is very much to be regretted, because, I may point out, the medical officer claims an equality with the combatant officer for one especial reason—he is equally exposed to danger in the field, and the mortality among medical officers is greater in proportion than that among combatant officers, and certainly a great deal more so than among the Commissariat and the Army Service Corps. I have no doubt my right hon. friend knows perfectly well that at this moment there are forty medical officers, either in service now or retired, who have won the Victoria Cross. It is not quite a new grievance that there is a disparity of feeling between the combatant and the medical officers. I will point this out to the Committee by reading an extract from the statement of the Marquis of Dalhousie before Lord Herbert of Lea's Commission in 1857:—"I respectfully submit that such inequalities are founded on no sound grounds of justice, expediency, or policy; no valid reason has been or can be alleged for maintaining them. Their effect is to depress the spirit of the medical officer, to depreciate a profession and class of service which ought to be held in the utmost respect, and supported equally for motives of prudence and gratitude. The absurdity of regarding a medical officer as a non-combatant is, I believe, abandoned. The medical officer comes constantly under fire like other men. Every campaign which is fought exhibits the names of medical officers in the lists of killed and wounded, and the returns invariably show that they still more often fall victims to their own exertions on behalf of their suffering comrades." Then, in the body of the report I find this: "Our attention has been called to other and minor points in which the Army medical officers consider themselves aggrieved as regards rank and precedence. We are aware that these matters may appear trivial to many who consider that the respect in which the medical profession is held places it above the necessity of seeking or accepting the adventitious aid which mere patents of precedence can afford. But in the military service rank is everything; there exists no authority without it; and a civil department which, by its connection with the army, has acquired a semi-military character, cannot maintain its position while debarred from the rights and privileges appertaining to it. Small, therefore, as these matters may appear, still they are taken as indications of the degree of respect with which the Government regards the Medical Department, and of the estimation in which it is intended by them that its officers should be regarded by others. We recommend that the relative rank of the army medical officers be revised, and that such rank carry with it the same advantages as to quarters, allowances, precedence, etc., as substantive rank; and that, except in the case of the presidency of a court-martial, medical officers shall sit on courts and mixed Boards, according to their relative rank and the dates of their commissions." Now, Sir, these recommendations have never been carried out up till now. It has been said again and again that this is a sentimental grievance. Well, in the army sentiment is everything, particularly where danger arises. I suppose it was sentiment that made the Gordon Highlanders face that hail of bullets at the Pass of Dargai. It was sentiment that made Surgeon-Captain Beyts on the same occasion carry his wounded brother officer

in his arms out of danger. The extract I have read is that of the late General Yeatman Biggs. The *Medical Press* of November 13th, 1897, says: "Major-General Yeatman Biggs has brought to the notice of the military authorities in India the gallantry of several medical officers in the action of Uhlan Pass on August 27th last. Among them Surgeon-Captain Beyts was singled out for special mention for his heroic conduct. After attending to the wounded under a heavy fire, Beyts, regardless of consequences to himself, carried Lieutenant North, who had been wounded, down a hill track too steep for a dhoolie, thus saving the life of the young officer, who had become faint and powerless from loss of blood. He kept at the same time thumb pressure on the wounded artery, which entailed great fatigue to himself." Well, Sir, in conclusion, let me hope that the present proposals which the Government have made to the House to-night will settle this controversy. These concessions are of their own choosing by the medical officers, and I trust that they will in a great measure smooth the difficulties. But perhaps I may be allowed to say that the smooth working of this new arrangement must depend in a great measure upon the wisdom and tact of superior officers or those in command. Unless we have this tact and wisdom exercised, the mere concessions that have been made to the medical officers at their own request will simply cause greater friction, and make things worse than they were before. I feel, in conclusion, that the House will go with me when I say that no prejudice, no unwise economy, should prevent the army being supplied with competent medical officers.

Dr. FARQUHARSON: After the very exhaustive speech of my hon. friend, it would ill become me to say anything more than one cordial word of congratulation to my hon. friend who made the statement a short time ago, not only for the clear and conciliatory way in which he put his case, but also for the large and substantial concession he has made, and through him to thank the Minister for War for having had the pluck to withstand what I may call the obstructive tactics of his military advisers at the War Office, who had prevented this concession being made earlier. If for nothing else, the administration of my right hon. friend will be made memorable by the fact that he has succeeded, I hope, in bringing back peace and contentment to the Army Medical Department. The only feeling that I now have is that our side of the House had not the pluck to do what he has done now, and which I am sure he will get credit for. I wish to bear out emphatically what has already been said, that army medical officers only want to have command in the ranks of their own department. Considering that the army doctor is now almost more a military man than a medical man, I am bound to say I look forward very hopefully to the future now that these concessions have been made.

Captain NORTON: I am glad to find from the speech made by the Financial Secretary to the War Office that there is an evident desire upon the part of the War Office to do something at last for the Medical Department. The discontent which exists in the Medical Department has been put before the Committee by one who is well competent to judge of it, but I think I am justified in saying that this is not the only question which affects the Army Medical Department. The question of leave has been discussed. I brought to the notice of this House sometime ago the fact of a medical officer who, owing to the dearth of men joining the service, was placed in this position (and his was not a singular case) that he was constantly moved about from station to station, that he was denied his privilege leave to which he was entitled under the regulations unless he was able to provide a substitute and pay that substitute, thereby incurring very heavy expenditure. I gratefully acknowledge that the Secretary of State for War put the matter right, but I understand that there are still great complaints in connection with the Medical Department, but the main question to which I wish to call attention is the length of the tenure of office of the Director-General of the Department. It was stated, when I last asked the question, that the tenure of office was seven years as against five in all other staff appointments because it had been recommended by Lord Herbert's Commission, and that the authorities saw no reason for altering the term. Now, at the time, Sir, I was altogether ignorant of this Commission, but upon informing myself I found this Commission sat in the year 1858, some forty years ago, and that almost every recommendation of that Commission had been set aside by the War Office with, perhaps, this one exception. Now, I maintain that if five years is sufficiently long for the Commander-in-Chief, sufficiently long for the adjutant-general and quartermaster-general, generals commanding divisions and districts, it surely ought to be long enough for the chief medical officer. Moreover, I find by Article 69 of the Royal Warrant of 1896 that it is distinctly laid down that the term of a staff appointment shall not exceed five years unless extended under special circumstances. Now, the Army Medical Department at large complain of this, because their promotion is slow. There are few prizes. Perhaps the only really valuable prize throughout the whole Department is that of the director-general, and a large number of senior officers are shut out from ever obtaining that post. Furthermore, why should the head of the Army Medical Department be placed on a superior footing, so to speak, to all the other staff officers throughout the service? All the Department officers are in favour of this change, because at the present moment few of them can hope to arrive at the position of director-general. Every man who has arrived at that position has not been in perfect health and not vigorous both mentally and physically. It is well known that even the present holder of the office was nearly 60 years of age when he obtained that appointment, and that his two predecessors were men who were constantly obliged to leave their post owing to ill-health. Take what has occurred recently in connection with the Veterinary Department. There by good fortune the late Colonel Lambert arrived at the position when he was in the prime of health, and he raised the Department to a position it never reached before. I venture to say as to the supply of veterinary officers, we have never been in such an excellent position as we are at present, and that is mainly due to the fact that we had a first-rate man in the position at the head of the Veterinary Department when he was in a position to do justice to his office. I venture to suggest that it would give the greatest satisfaction throughout the Army Medical Department if, by reducing this term from seven years to five, the senior officers might have some hope of rising to the best position in their department. I therefore appeal to the right hon. gentleman to make this change, which I think ought to be made when we take into consideration what is laid down in the Royal Warrant.

Mr. W. JOHNSTON: I have to thank the Secretary of State for War and his very able representative in the House of Commons for the concessions they have made to the request of the Medical Department. Some time ago I had the honour of receiving a deputation from medical men in Queen's College, Belfast, to lay a memorial before the Secretary of State for War, and the noble lord promised to take it into consideration. Although unable at the time to give a definite answer, I am glad that the Under-Secretary of State for War has declared the intention of the Government to make considerable concessions to the medical officers, and I am sure that every reasonable request that is made will be carefully entertained on behalf of the medical men of the army connected with Ireland, and I sincerely thank the noble lord the head of the War Office, and the able Irishman who represents him in this House.

Mr. HEMPHILL: I wish to endorse every word that has fallen from the hon. member for the University of Edinburgh. Unquestionably I cannot speak, of course, with the same authority as he can speak, for he is a member, and a most eminent member, of that most noble profession; but I am aware of this, from mixing largely with the great medical profession in Dublin where I reside, that for years past there has been the greatest possible discontent at the position of the medical men in the army under existing regulations. I myself had the honour about two years ago of introducing a deputation, consisting of the most eminent surgeons and physicians of Dublin, to the noble lord the Secretary of State for the War Department. On that occasion the President of the College of Surgeons laid before his lordship the grievances they had, not only with regard to rank and position of medical men in the various battalions and corps, but also with regard to their position with reference to the Board of Examiners for the army. On that occasion the

noble lord did not, of course, hold out any promise, or did not make it in distinct terms; but I understood from the position which he took that he entertained favourably the representations of that deputation. Now I confess there has been lately a great reluctance on the part of that most clever body of young men, the young surgeons of Ireland, to enter into the military service; and, from what has come to my knowledge, I believe that there is now a great difficulty in getting competent men for the Army Medical Service, and that has arisen —I speak on the authority of some of the most eminent physicians and surgeons in Dublin—from the manner in which medical men feel themselves more or less in an inferior position to the ordinary combatant officers. There is no reason that they should be so. By birth and education they are fully their equals, and, as has been so eloquently and clearly pointed out by the hon. member for Edinburgh University, they are always at the front in the time of danger, and in every respect, so far from being inferior they reflect credit upon any corps to which they are attached. I am very glad indeed that the Ministry have seen their way to ameliorate this condition of things. I believe they have been driven to it, in some respects, by the circumstances, as far as I can learn—I can only speak from what I have heard—which they met. I believe that they have a very great difficulty now in getting that class of able and eminent medical gentlemen to join the ranks of the service in their profession, but henceforward I hope they will not have that difficulty, and that Ireland again, as it always has been in great actions which throw lustre on the history of this country—Waterloo and Sebastopol—will, in the persons of its medical men, be in the foremost rank, and receive that meed of approbation which they have always done when their services have been required.

Colonel Blundell: My impression is that the Medical Department will not work smoothly until the medical officer is attached to the regiment instead of the depôt. It would give him a regimental hold which is much to be desired. I first went into the army at the time when the medical officer was part of the regiment. I went out to Egypt in 1885, and I noticed then there was a strong prejudice between these two departments, because they did not come into contact. I strongly urged that the medical officer should be attached to the regiment.

Captain Sinclair: I confess to some misgivings as to whether the proposals of the Government will solve the difficulty. There is no doubt that an adequate supply of medical officers for the army has practically ceased, and we have now got to see that in getting that supply we are not impeded in the same way in the future. The heads of the medical profession are doing what they consider the best, not only for the profession, but for the army, and one cannot be surprised that the Secretary for War has done everything in his power to take the advice of those who are responsible for so important a profession, and who express the wishes and aspirations of its members. But I cannot help feeling, even through this debate, that we have some grounds for considering with some doubt whether the course taken is likely to be successful. Reference has been made to the old days in which medical officers were practically regimental officers, not of combatant rank. This consideration tends to show that relief from our difficulties is to be found, not by expedients to make medical officers look mere combatant officers, but rather by returning to the old days, when the medical officer was looked upon *par excellence* as medical officer, when the position implied great honour in the medical profession, when there was no attempt to detract from it, and when there were no complaints as there are at the present time of the medical profession not being given its true rank and precedence. I cannot help thinking that, after all, we may have to go a step further. As a matter of fact the total of the inducements to the medical profession to enter the Army Medical Service is in some way or other insufficient—whether the cause is rank or precedence, or whatever it may be. It seems to me that is the real difficulty we have to face, and while joining most heartily in wishing that the step the Government have taken will solve the difficulty, I cannot help feeling a certain amount of misgiving

Mr. Brodrick: I am glad to acknowledge the cordial manner in which the proposals of the Government have been received by the Committee, and more especially by hon. gentlemen opposite. It is natural that when one concession is made, others should be asked for. I am not in the least surprised to hear the suggestion that we should follow up the step we have taken by restoring medical officers to the regiment. In order to carry out one of the suggestions that has been made it would be necessary to add sixty officers to the medical department. If we were to set up an addition to the establishment, not needed in order to preserve the army in health, we should have to come to this House. One suggestion is that the Director-General should no longer be appointed for seven years, but I would point out that staff officers appointed for five years have the term of their service sometimes increased. But it seems to me there is something to be said for uniformity in this respect. I do now ask the Committee to agree to the vote.

The vote was then agreed to.

On a subsequent vote for capitation grants and miscellaneous requirements of the Volunteer corps,

Sir H. Vincent urged the Government not to withhold equipment allowances from volunteer medical officers. He declared that it was by no means easy to get medical officers for the corps, and it was necessary to have them, as they had to do a great deal of work in inspecting recruits in some localities. He earnestly hoped that the Government would give consideration to this matter.

THE PLAGUE IN THE EAST.

Outbreak at Jeddah, the Port of Mecca.

The news that cases of plague have occurred at Jeddah, the port of Mecca on the Red Sea, is disquieting. It would appear that plague has seized some of the inhabitants of the place, by which statement we presume that it is not the visitors alone that have suffered, but that actually the residents in the town are suffering. Plague has been in Jeddah before within the memory of the present generation, and it would seem that in this neighbourhood the plague bacillus can live and thrive. The Turkish Government has officially notified the Egyptian authorities that 3 deaths from plague have occurred at Jeddah. The International Council in Constantinople has unanimously decided that, in view of the prevalence of plague at Bombay, pilgrims to Mecca coming from India shall not be allowed to enter Turkey. As however the Caliph cannot prohibit pilgrimages, and the decision of the Sanitary Council has not received the Imperial sanction, the matter remains at present in abeyance. In Egypt the Quarantine Council decided on March 26th to apply the plague regulations against arrivals from Jeddah. By the latest reports 11 cases of plague have occurred at Jeddah, of which 7 proved fatal. As we have already pointed out, this news is of vital consequence not only to Turkey and to Egypt but also to Europe, and it is well nigh impossible to exaggerate the feeling of alarm with which it has been received. The Mohammedan pilgrimage constituted a similar danger last year, and the obstructions put in the way of pilgrims then render the present situation more difficult to enforce, owing to the accumulated religious fervour. The Khedive refused lately to sanction prohibition of pilgrimage from Egypt to Mecca, but consented to impose restrictions upon those returning from Mecca. As the greatest of the Mohammedan Powers Great Britain has a difficult part to play. The religious sentiment of her subjects has to be taken into account and carefully handled to prevent rebellion, and at the same time she has to do her best to prevent the disease spreading to civilised nations. It would seem that the power to check, or at any rate to stop, the Mecca pilgrimage lies neither with the Sultan of Turkey nor with the Khedive, but with the supreme head of the Mohammedan Church, to whom the Mecca pilgrimage means not only a religious function, but its stoppage a direct loss to the Church revenue. If plague assumes proportions of an epidemic at Jeddah, nothing short of stringent rules and military power to enforce them will avail.

Bombay.

From Bombay the news gives but little encouragement; neither has plague materially diminished, nor has the native

opposition to sanitary laws shown any sign of abatement. A record mortality from plague was reached with the week ending March 23rd, when the total number of deaths from plague was recorded as 1,800 for the week, or a daily average death roll from plague alone of 257. Feeling regarding the plague operations runs very high. It is contended by Mohammedans that the enforcement of the newly-issued rules concerning the registration of the cause of death will be inimical to the due observance of the law regarding deceased persons laid down by the Prophet. Even a husband is not allowed to look upon the face of his wife after her decease, and much less should a stranger, probably a non-Moslem, do so. Defilement is caused by touching the dead bodies. For these reasons posthumous examination is strongly resented by Moslems, and on similar grounds great objections are raised by even the Parsees as well as many other sects.

In the north-west district of the Punjab the increase of plague has decided the Government to place the whole of the infected area under close observation. This area consists of the Nawashahr tahail in Jullundur district, and Garhshankar tahail in the Hoshiarpur district. The united population is about 400,000, so that the strain on the medical and financial resources is likely to be considerable.

In the Nizam's territory the plague is being well held in check, and the utmost vigilance is being observed.

Surgeon-Captain J. Lloyd Jones, M.B., D.P.H., in charge of the General Plague Hospital and a member of the Poona City Plague Committee, writes: I think I ought to correct you on two points respecting the death of Miss Florence Eva Morgan. Miss Morgan was acting Lady Superintendent of Nurses in Poona, and not in Bombay, and it was at Poona that she died. At noon, on February 11th, she was apparently quite well, but developed fever towards evening. It was hoped then that she had only caught a chill, as she herself imagined she had on the previous day. On the morning of February 12th a small patch of pneumonia was discovered on the right side, and in the evening of the same date marked diaphragmatic pleurisy of the same side was discovered; these in themselves were very slight, but the prostration and general condition were extreme. On the morning of February 13th plague bacilli were discovered in the sputum, and by the evening of the same date were also found in the blood. She died of heart failure at 4.30 A.M. on February 14th. Her case was very similar to that of the late Dr. Manser, and a most difficult case to diagnose without experience of previous cases and the microscope.

THE WEST LONDON HOSPITAL AND HOSPITAL REFORM.

A MEETING of the Board of Management and medical staff of the West London Hospital and of medical practitioners resident in the western districts of London was held in the Board Room of the hospital on Wednesday, March 30th. The number present exceeded fifty. The chair was taken by the Senior Surgeon to the institution, Mr. C. B. KEETLEY, who in an opening speech explained that the meeting had been summoned to discuss the question of hospital reform. He pointed out that two lists of recommendations for effecting this purpose had been handed to him, one promulgated by the Hospital Reform Association,[1] and the other by the Committee appointed by the conference of general hospitals last year.

These lists were respectively read to the meeting by Mr. GILBERT (Hospital Secretary), and it was unanimously resolved that the discussion should be confined to the latter one, and that its clauses should be taken *seriatim*.

CLAUSE 1.—That each general hospital should have an inquiry officer or out-patient clerk to inquire into the means of the persons applying for free treatment. The duties of such officer to include (*a*) the prevention of abuse of the charity by persons able to pay for medical treatment; (*b*) the referring of patients already in receipt of parish relief, and such as are destitute, to the Poor-law authorities, a large proportion of those patients really needing proper food rather than medicine.

A prolonged discussion ensued, and on the motion of Mr. BRINDLEY JAMES the recommendation was carried. Subsequently Dr. ROBERT LEE proposed:

That in the opinion of this meeting some system of inquiry is necessary to prevent abuse of hospital charities and injury to the medical profession, and that each hospital committee should be called upon to arrange this.

This was carried by a small majority as an amendment to a proposition of Dr. CHARLES BENNETT to the effect that the medical officers of the out-patient departments should be provided with a printed form of questions to be filled up and sent to the medical practitioner of every patient coming under their notice whom they deemed to be unsuitable for hospital relief.

CLAUSE 2.—That it is desirable to restrict the number of new cases to be seen each day by the out-patient physicians and surgeons to something like 15 patients for each medical officer; and that the out-patients should be distributed more evenly over the week, and not allowed to crowd in such large numbers on the first days of the week.

In the discussion that followed, Mr. BRINDLEY JAMES, Dr. SEYMOUR TAYLOR and others joined, but ultimately it was agreed to pass on to the next clause without a decision being taken.

CLAUSE 3.—That although it is not practicable to strictly limit the number of patients to be treated each day by the casualty officers, it is felt that steps should be taken by each hospital to limit such cases, as far as possible, to accidents and cases of sudden illness.

This was agreed to unanimously.

CLAUSE 4.—That the general hospitals should, as far as practicable, co-operate with the local provident dispensaries, particulars of which might be placed in the out-patients' waiting-rooms. The inquiry officer should be instructed to recommend patients who appear able to do so to join such dispensaries.

It was resolved that as the time at the disposal of the meeting was limited, the discussion upon this clause be deferred.

CLAUSE 5.—That patients bringing a recommendation from a local medical practitioner or provident dispensary should have priority of other patients, and when desirable the prescription should be forwarded direct to the medical practitioner recommending the patient.

This was unanimously agreed to.

CLAUSE 6.—That the issue of governors' letters for recommending out-patients should be discontinued, provided there be a general agreement among those general hospitals now issuing them to their subscribers.

This was also carried unanimously without any discussion.

The last clause referring to the introduction of reforms into special hospitals was not considered, and with the usual vote of thanks to the Chairman for presiding the meeting came to an end.

[1] BRITISH MEDICAL JOURNAL, February 26th, 1898.

SPECIAL CORRESPONDENCE.

PARIS.

The Society for the Protection of Infant Life.—Laboratories for the University of Paris.—The Study of Anatomy in Elementary Schools.—General News.

THE Society for the Protection of Infant Life held its general meeting a few days ago. In 1897, 3,947 children were succoured and protected, representing an outlay of £1,360. Seven thousand articles of baby linen were distributed by the society. At the Brussels Exhibition last year this society was accorded the *Diplôme d'Honneur*. Before the meeting broke up medals and diplomas were distributed to the deserving. Dr. Derecq, Senior Physician to the Dispensary of l'Œuvre des Enfants Tuberculeux, read the list of money grants awarded to the most deserving of the nursing mothers.

A recent decree authorises the University of Paris to borrow £68,000 for the purpose of building laboratories where physical science, chemistry, and natural history will be taught for the benefit of students who are preparing for the examination for Science Certificate. Part of the money is to be applied to the completion of the Laboratory of Vegetable Biology belonging to the University of Paris at Fontainebleau.

The Central Democratic Committee at Rouen has presented to the Legislature a petition asking for the suppression of elementary anatomical studies in the scholastic programme. The Parliamentary Committee, though it has its opinion

concerning the dangerous influence exercised on the imagination of the young by the elementary study of anatomy, and believes that other reasons must be invoked to explain the development of bad instincts existing in certain scholastic establishments, has nevertheless taken note of the petition, and forwarded it to the Minister of Instruction.

The Chamber of Deputies has ratified M. Rivet's proposition of using £16,000 from the funds of the *pari mutuel* for the maintenance of charitable institutions. M. Méline, Président du Conseil, was opposed to the proposition.

A committee of distinguished scientific men, with the Mayor of Boulogne as Chairman, has been formed for the purpose of erecting a monument to the memory of "Duchenne de Boulogne."

CORRESPONDENCE.

THE MIDWIVES REGISTRATION BILL.

Sir,—To assist in preventing any of your readers being misled by Mr. Humphreys's statement respecting the Midwives Registration Bill at present introduced by the Right Honourable J. B. Balfour, I shall be glad if you will allow me to add to what Drs. Wigham, Horder, Weir, and Watt have already said in displaying the character of the arguments used to promote the Bill in question.

The Bill has been professedly put forward as a measure to stop the present disgraceful state of things, which is characteristic, according to Dr. Cullingworth (and he quotes examples thereof) of the way in which many midwives at the present time notoriously carry on their work. As Dr. Cullingworth truly says: "They may be grossly incompetent, they may spread puerperal fever broadcast, they may be drunken, they may take upon themselves to give medicines, perform operations, and undertake duties which can only be safely undertaken by a fully and properly qualified doctor." Dr. Cullingworth says, however, that "if the Midwives Registration Bill became law, the practice and conduct of midwives would for the first time be placed under efficient supervision and control." These words are written in a popular journal, *The Contemporary Review*, and are doubtless intended to catch the eyes of members of the House of Commons, before whom Mr. Balfour's Bill is thus asserted by a leading gynæcologist to be an efficient check upon the abominable practices of midwives to which attention has just been drawn. But, as a matter of fact, the Bill does not contain a single clause imposing any check of the kind implied, and, indeed, Mr. Humphreys in your last issue said as much, but not in plain English for obvious reasons. It is difficult to understand how any medical man could commit himself to such an absolutely untrue statement, for the Bill in question will not and cannot alter in the least the present condition of affairs, or in any way stop the women who are daily pursuing their nefarious practices. The members of the House of Commons have no expert knowledge on this subject, and if they give any support to the second reading of the Bill, will do so under the delusion that it is a philanthropic, hygienic measure calculated to save suffering and human life by punishing the ignorant evildoer. This delusion is being fostered by the godfathers of the Bill, and they must be held directly responsible for it by the profession. In the total absence of any protecting clause, the Bill as it now stands is a sham as far as the public is concerned, especially its poorer members. To further emphasise the real character of the present Bill, allow me to draw the attention of your readers to one or two salient points in which it differs from that introduced by Lord Balfour of Burleigh in 1895. I will only trouble you with two matters, but as they involve definitions, they are of fundamental importance. The first is the definition of the term "midwife." In the Bill of 1895 it was provided that she could attend cases of natural labour only. In the present Bill the word "natural" has been left out in order that the term "midwife" should be a "statutory" title of a class of practitioners in midwifery, whose "statutory" definition being practically unrestricted,[1] would emancipate them from any charge that might be brought against them for having assumed without qualification the position of a registered practitioner of midwifery. In this respect the present Bill directly contravenes the Medical Act of 1886.

Another suggestive difference is contained in the definition of the Midwives Board. In the Bill of 1895 the powers of the Board were defined as being all exercised subject to the approval of the General Medical Council. This safeguard is omitted from the present Bill.

In regard to what Mr. Humphreys says about the infringement of the Medical Acts by Mr. Balfour's Bill, I trust that none of your readers will believe that what he says in Paragraph 4 are the actual facts concerning existing medical legislation. The Medical Act of 1886 does a great deal more than simply raise the standard of the registered medical practitioner; it defines him as alone entitled to practise midwifery, and it is the only Act which registers practitioners in midwifery. Any new Bill, therefore, like Mr. Balfour's, which proposes to construct a new statutory class of practitioners in midwifery, unquestionably infringes the Medical Act, 1886.

As regards the *Medical Register* and the right to practise medicine, surgery, and midwifery, which is alone conferred on those whose names are registered, it is Mr. Humphreys's statement concerning it which is incorrect, and the confusion of mind which a metropolitan magistrate recently exhibited on the subject to which he refers, has been abundantly and repeatedly corrected by the successful prosecution of quacks under the same Act.

The Bill approved by the Parliamentary Bills Committee of the Association, by preventing the ignorant and untrained woman from working for gain, alone offers any solution of the problem how the poor are to be protected from the iniquities of midwives which Dr. Cullingworth has so eloquently described, and if this really serious question of checking existing evils is to be approached with sincerity by medical men who know the facts, it can only be by their supporting the Bill of the Association and opposing that of Mr. J. B. Balfour.—I am, etc.,

25, Cavendish Square, W., March 28th. Victor Horsley.

Sir,—The Midwives Bill (1898) has now been sufficiently long before the profession to give opportunity for criticism, and it may be useful to make a few remarks on some of the principal objections that have already been formulated. As a member of the Committee responsible for the drafting of the measure I am enabled to speak with full knowledge of the Committee's views.

It is matter for sincere congratulation that the need for legislation has now come to be almost universally admitted, and that the object of the Bill, as expressed in the preliminary Memorandum, has met with general approval and sympathy.

Objection has been raised to the title of the Bill, and it has been suggested that a better title would be The Obstetric Nurses Bill, or The Midwifery Nurses Bill. These titles were originally proposed by those who were strongly of opinion that no woman (not being a registered medical practitioner) should attend a case of confinement except under the personal supervision of a medical practitioner. It has since been acknowledged that this arrangement, however desirable, is impracticable. The reason for the introduction of the word "nurse" into the title (which, as signifying a limitation of responsibility would have been perfectly appropriate) has therefore disappeared.

It is necessary to remember that a midwife and a nurse exercise different functions, receive a different training, and hold a different relation to the medical practitioner. A nurse always means one who is subordinate to the doctor, who acts under his orders, and has no independent responsibility. A midwife is one who does not necessarily act under the personal supervision of a doctor (so long as the labour remains uncomplicated). She is individually responsible for the case under her charge. To call her a nurse—with whatever qualifying adjective—is to confound one who has independent

[1] The definition in the present Bill includes the words "In accordance with the regulations to be laid down under this Act," that is, by the Midwives Board; but in any court such regulations would be entirely overridden by the greater power of the defining clause. Moreover, as Dr. Cullingworth has said that in his opinion midwives should not be restricted, the state of affairs which might be created by a perfectly irresponsible Board may be easily imagined.

charge with one who has not, but who receives her orders from a superior.

"Midwife" is the name already in use, and is perfectly well understood by those for whose benefit the Bill is intended. Whatever her title may be, the woman who exercises her calling under this Bill will be exercising the functions of a midwife, and a midwife only.[1] It is better, therefore, to give her her appropriate title, and call her what she is.

A further objection to the title of "obstetric" or "midwifery nurse" is that it suggests the monthly nurse rather than the midwife, and would lead to endless confusion in consequence.

Lastly, it is not uncommon to hear the complaint that the tendency of modern nurses is to take too much upon themselves. Any measure which confers upon a class of nurses the legal right to exercise independent functions must necessarily aggravate this tendency.

On all these grounds it is evident that the midwife and the nurse should in legislative matters be kept absolutely distinct.

It has been stated, as a still more important objection to the Bill that it does not preclude unregistered women from practising midwifery, even for gain, provided they do not call themselves midwives and so lead people to believe that they are trained and certificated women when they are not. In answer to this objection, it may be said that the promoters of the Bill would willingly and of their own accord have inserted a clause prohibiting unregistered women from practising for gain, but that all their advisers who had had any experience of Parliamentary procedure assured them that the House of Commons as at present constituted would not listen for a moment to any such suggestion. It was therefore thought impolitic and unwise to include a "practice" clause of any kind. It would have been dishonest to put it in for mere appearance sake, with the knowledge that it had not any chance of being agreed to. And it would have been foolish, in the light of past experience, to put it in with a genuine hope that it would become law.

We can never persuade Parliament to make it illegal for women to practise as midwives for gain or otherwise, any more than we can persuade it to render it illegal for the village blacksmith, for gain or otherwise, to set the broken bone or reduce the dislocation of a passing sportsman. What this Bill does is what the Medical Act does, namely, enable the public to distinguish between the qualified and the unqualified. As this is, generally speaking, equivalent to distinguishing between the competent and the incompetent, it is by no means an unimportant matter. It would prevent the poor from being made to believe that they are engaging the services of a person who knows how to help them in their need when they are not.

A strong but much less widely spread objection has been raised to the present Bill on the ground that women already in *bonâ fide* practice as midwives will be allowed to be registered. This, it is said, is to grant legal status and to give thereby undue importance to a large number of incompetent persons. The promoters of the Bill feel this difficulty as acutely as the objectors. But it is a difficulty that the practice of the Houses of Parliament has rendered inseparable from the introduction of all fresh systems of registration of this kind. It had to be faced and accepted in the case of the registration of medical practitioners, of dentists, and of veterinary surgeons. Fortunately it is a difficulty that will be temporary only. And even as it is, there will be some convenience to the community in the proposed arrangement, for, seeing that it is impossible, the moment the Bill becomes law, to replace all the untrained women now in practice by properly trained midwives, and that the gap must be filled, it is well that the untrained women already in practice and who are to be allowed on that account to continue in practice should be placed upon the register, in order that their conduct and methods of practice may (for the first time) be under efficient control.

The mode of appointment of the Midwives' Board has been the subject of much criticism. It was the object of the promoters to place the appointment in the hands of influential and responsible bodies, and to ensure that whilst the various interests concerned should all be duly represented, preponderance should be given to the representatives of the medical profession. With this view the Royal College of Physicians, the Royal College of Surgeons, and the Apothecaries' Company are each entrusted with the selection of three registered medical practitioners to serve on the Board. To insure the interests of the midwives themselves being fairly represented, the incorporated Midwives' Institute is also empowered to select three members; but it will be noted that these members are not to be selected from their own body, but must be registered medical practitioners. There will thus be twelve registered medical practitioners on the Board. The representation of the general public is provided for by giving the Lord President of the Council power to appoint the additional six members which make up the full complement of the Board. These six members need not be members of the medical profession. It was hoped that this constitution would be generally acceptable, but the promoters are quite prepared to consider any proposals to alter it, provided they do not interfere with the representative character of the Board or tend to lessen its influence and efficiency.

A counter proposal has been made, according to which the appointments are all vested in the General Medical Council, and the members are all to be registered medical practitioners. The various divisions of the kingdom are to be represented by providing that a given number shall be selected from the registered medical practitioners resident in each division. This scheme is open to the objection that it makes no provision for the representation on the Board of two of the interests concerned, namely, the midwives and the general public. The distribution of the members in definite and fixed proportions over the several divisions of the entire kingdom is also open to objection on two grounds. In the first place, it would unduly limit the choice in making the appointments. And, in the second place, it would make it difficult, if not impracticable, to bring the members so widely scattered over the country as frequently together as will be necessary, especially at first when the Board will be busily occupied in drawing up rules and regulations and making the necessary arrangements for carrying out the provisions of the Act. The promoters of the Midwives Bill quite recognise the danger of centralisation, but they are of opinion that a still greater danger to the success of the scheme would be encountered if the members of the Board were prevented by distance from regular attendance at its meetings.

The proposal in the draft Bill of the Parliamentary Bills Committee of the British Medical Association to the effect that "no member of the Board shall act as teacher, instructor, or examiner of" midwives, would exclude from the Board a number of those who have already, under the voluntary system, had a share in the training and examination of midwives, and have thereby gained an experience of similar undertakings, which would be very valuable in the deliberations of the newly-constituted body.

This proposal would have the further very undesirable effect of hampering the Board in its selection of examiners, for it would prevent the appointment of a member of the Board, however suitable he might be. The object of the clause is, presumably, to prevent the evils that might arise if teachers were allowed to examine their own pupils. These evils could, however, be entirely obviated without the insertion of any such clause by following the example of the Conjoint Board for England and of the Obstetrical Society of London, each of which bodies so arranges its examinations that no candidate is examined by his or her own teacher, or by anyone on the staff of the hospital or institution at which the candidate was trained.

With regard to the alleged danger of midwives who have been registered under this Act calling themselves Licentiates in Midwifery, and writing the letters L.M. after their name, any proposal so to strengthen the wording of the Bill as to render this impossible would be willingly acceded to. It has been objected to the Bill that no details are given as to the rules regarding training and examination, the limits within which the midwife is to be allowed to practise, the circumstances under which she shall insist on medical aid being summoned, or the precise nature and extent of the supervision to which she shall be subjected. These details are omitted from the Bill simply because they were thought unsuitable for discussion in Parliament. They are matters

[1] The functions of a midwife, of course, include a certain amount of attendance upon both mother and child during the lying-in period.

for the Midwives' Board to determine. If it be asked what guarantee have we then that these important questions will be settled in a manner that will commend itself to the best judgment of the profession, the answer is (1) that the Bill arranges for the appointment of a Board that may be trusted, and (2) that all the rules and regulations drawn up by the Board must, according to the provisions of the Bill, be submitted to the General Medical Council for approval.

It is impossible within reasonable limits to reply to all the criticisms that have been offered. I have endeavoured to deal with the most important of them. The promoters of this measure desire to approach its discussion in a conciliatory spirit. They are not so foolish as to suppose that, because they have spent much time and thought upon the Bill, therefore it is perfect; and they are quite prepared to recommend those in Parliamentary charge of the measure to give the most careful consideration to any amendments that may be suggested, with a view to their acceptance wherever it is feasible.—I am, etc.,

Manchester Square, W., March 26th. CHAS. J. CULLINGWORTH.

P.S.—As I happen to hold office for the time being as President of the Obstetrical Society of London, I think it proper to add that I do not write the above in my official capacity. The Obstetrical Society of London is in no way responsible for this Bill, and has had no opportunity as yet of expressing an opinion upon it.

SIR,—I am directed by the Obstetrical Council of the Royal Academy of Medicine to draw your attention to the following resolutions passed at a special meeting held in the Royal College of Physicians on March 25th:

Proposed by Dr. More Madden and seconded by Dr. Alfred Smith:

That this Committee entirely dissents from the principle of the proposed Bill for the Registration of Midwives, etc., as tending to create a new and inferior order of practitioners, hurtful to the interests of the profession, and dangerous to the welfare of the public.

Proposed by Dr. Home and seconded by Dr. Smith:

That the Council would approve of any well-considered Bill framed with a view of improving the education of women as midwifery nurses.

—I am, etc.,

JOHN H. GLENN,
Dublin, March 26th. Sectional Secretary.

SIR,—The letter of Dr. Watt is admirable, but, alas! too late. If the profession had spoken out in similar tones at once, or even supported those who did speak out, the great "betrayal" need not have occurred. Of course, the "Rowland Humphreys" Committee is a "self-constituted" body, but it has by its fussy pertinacity so forced the question that nothing now remains but the choice between the "bad" Bill of the Midwives Registration Committee and the "less bad" one of the Association. In both the "medical supervision" is almost certain to be a "farce."

In the Bill which will come before the House of Commons on May 11th, I notice that the possession of a certificate from the Obstetrical Society of London will *ipso facto* entitle to registration. I wonder if the "diplomates" of this Society use the title L.O.S.? I am curious about this, because someone has sent me a photographic copy of the following certificate:

187, Wellington St.,
Mch. 7th, 1898.

I hereby certify that I delivered C....., wife of G....., W....., at 20, ... St., on Sunday, 6th March, 1898, of a *premature* female child, who survived birth only six hours.

JEAN HERRIOTT, L.O.S.,
Certified Midwife.

It would be interesting to know if "Jean Herriott" is a Licentiate of the Obstetrical Society, and if so, a list of its "professors and lecturers" would deepen the interest. The above certificate was produced at an inquest lately held in this city by the city coroner. The lady in attendance said "she had previously given certificates, and they had been accepted by different registrars." Fortunately this certificate was "declined." The divisional police-surgeon is reported to have said "he was positive the child had never cried. If artificial respiration had been resorted to no doubt the child would have lived." The nurse said, as reported, "Everything was straightforward, and the services of a doctor were not necessary." The coroner's remarks (Mr. Sidney Smelt) are worth quoting: "There was a good deal said about the registration of midwives, and giving them more powers, but instead of that they ought, in his opinion, to take away the power they already possessed. They were not intended to take the position of doctors at all, but were only nurses. If they desired to act beyond the duties of a nurse they should be compelled to go through a course of medical training and qualify as doctors."—I am, etc.,

Salford, March 28th. R. HANSON WOLSTENHOLME.

THE GENERAL MEDICAL COUNCIL AND THE MIDWIVES BILL.

SIR,—Mr. J. B. Balfour's Bill proposes to empower midwives to practise "without the intervention of a duly-qualified medical practitioner." The General Medical Council has decreed that medical practitioners may not employ a midwife save under their "immediate personal supervision." It will be interesting to see what action they take when discussing the matter. On April 5th should they tell the Privy Council they approve the Bill, what will be the effect upon their recent pronouncement upon unqualified male assistants? The Council must either decline to entertain the "Bill" or rescind their own resolution.

I see the Parliamentary Subcommittee of the British Medical Association has thrown out Sir Blundell Maple's "medical control" clause. I fail, therefore, to see how the Association can consistently oppose Mr. Humphreys's Bill. It is for this the profession has fought for years, and now when proposed by a layman, accepted by the promoters of the Bill, approved by all, our medical representatives throw us over. The Council is ignominiously thrashed by an opponent leader of no moment, and backed only by a few professionally-interested persons and a handful of members of Parliament, not of first rank.—I am, etc.,

Old Trafford, March 29th. JAS. BRASSEY BRIERLEY.

THE VACCINATION BILL.

SIR,—In addition to the important points raised by Mr. Hutchinson and other correspondents in the columns of the BRITISH MEDICAL JOURNAL and in your leading article of to-day, concerning the above-named measure now before Parliament, may I be permitted to call attention to the "twelve months" clause? Amongst the working classes and the poorer classes there is a certain amount of migration from place to place, or from one part of a town to another, within the three months after birth, and thus a certain number of children escape vaccination altogether. But would there not be a very much greater risk of escape if the period be extended to twelve months. Surely six months is sufficient. Within twelve months a considerable amount of migration goes on. How is that to be coped with?

May I also express the fervent hope that everything will be done to secure adequate revaccination clauses, and the much-needed transference of the working of the Vaccination Acts from the Boards of Guardians to the sanitary authorities. Surely another Vaccination Act is not going to become law without effecting this most important and in every way most desirable change.—I am, etc.,

York, March 26th. EDMUND M. SMITH, M.D., D.P.H.

SIR,—It is most essential that the voice of the medical profession should be heard before this Act passes into law. The points for examination and consideration are briefly as follow:

1. Will the Act ensure a larger number of children being efficiently vaccinated?
2. Will the Act tend to reduce the number and seriousness of epidemics of small-pox?
3. Will the Act deal fairly with public vaccinators?
4. Will the Act have any influence in making vaccination more popular?

Those only who have had practical experience of the working of the present Acts know the difficulties that exist, more especially in populous districts, of tracing children born in

these districts. According to the last published report of the Local Government Board, there were no fewer than 156,135 children remaining on the registers of the vaccination officers as "removed," "not to be traced," or otherwise unaccounted for, whose births were registered in the year 1894.

Looking at the question from a common-sense point of view, is it not reasonable to conclude that, when the age for vaccination is altered from 3 to 12 months, the number of children who will escape the vigilance of the vaccination officers will be more than doubled? And then taking the question of efficient vaccination: It is well known that at the present time a considerable number of medical practitioners, in order to curry favour with their patients, vaccinate children in only one or two places. If public vaccinators are to be debarred from "offering" their services until children are more than 9 months old, it is apparent, I think, that many thousands of parents will take their children to private practitioners and have them vaccinated in one or two places.

Then with respect to my second question. It is evident that under any circumstances we shall have in our midst many thousands of children totally unprotected from small-pox; it follows that when epidemics occur they will have an immense amount of fuel to feed on, and consequently will become much more grave in their character and duration. It must not be forgotten also that the difficulties of coping with an epidemic of small-pox will be greater in proportion to the number of unvaccinated children in a district.

With regard to the remuneration of public vaccinators in the future, it would only be fair that the Government should indicate the terms they are prepared to offer or to recommend for the increased amount of labour that will result from the operations of the new Act.

It is already patent that the people opposed to vaccination do not view with any favour the proposals of the Act. Personally I feel convinced that the majority of parents would much prefer to have their children vaccinated at the age now in force. In fact a very large proportion of mothers do have their infants vaccinated before they attain the age of 3 months; and it does seem a pity that they (the mothers) shall not in the future have opportunities of getting them done at that age free of cost.

I have only to add, Sir, that I have had considerable experience of the working of the present Acts, having vaccinated a thousand children every year for a period of twenty years, and have taken moreover a humble part in endeavouring to limit the range of several epidemics of small-pox.—I am, etc.,

March 22nd. A PUBLIC VACCINATOR.

SIR,—The present is, I think, a very opportune moment for raising the all-important question, What constitutes efficient vaccination? If four insertions are necessary, as we public vaccinators are told they are, presumably on the highest medical authority in the United Kingdom, and as I personally believe they are, and have therefore vaccinated my own children in four places, then I maintain this constitutes efficient vaccination, and this alone. But what do we see in practice? The following case, by no means an isolated one, speaks for itself.

A woman in this district, living quite close to my vaccination station, asked me not long ago if I would vaccinate her child in one place only. I of course refused to do so, so she took her child to a town about four miles distant, where the child was vaccinated as she desired, the paltry fee being no doubt the only inducement offered to the practitioner for thus acting, as the patient in question was in a club.

If, however, it can be proved that one insertion is sufficient irrespective of its size, of course this doctor was perfectly right, and we public vaccinators are guilty of needlessly inflicting four wounds, each a possible source of infection, where only one is required. I know very well that many, perhaps all, of those practitioners who are in the habit of vaccinating in only one place, will say they do so because they think one insertion suffices; but though no doubt there may be some who really believe this, I am quite sure that in the majority of these cases this is not the true reason. Our profession is truly an honourable one—would that its members were all equally honourable. We should then hear less of antivaccination, and many of our grievances, notably the club one, would vanish.—I am, etc.,

March 27th. M.D. PUBLIC VACCINATOR.

SIR,—In common with all public vaccinators I am much interested in the Bill now before Parliament, especially in its omissions. I am public vaccinator for three parishes, the stations of which are all five miles distant from my house. The population is extremely scattered and the district mountainous. Many of the houses are from seven to eight miles away. It would be a good day's work to visit and vaccinate at six or seven houses, so long does it take to travel the distances on the hilly roads and across fields, etc. Up to the present I have been paid 3s. for each successful case. This has just been raised to 3s. 6d., in consideration of calf lymph being used. Is it likely that Boards of Guardians will pay such fees that it would be worth while for any medical man taking the office of public vaccinator in such districts? The ordinary visiting fee at such distances would be at least 7s. 6d., or 15s. for two visits.

I sincerely trust that the fees will be fixed by statute, and not left to the Boards of Guardians; otherwise I should expect a considerable number of public vaccinators would find it advisable to resign their appointment.—I am, etc.,

March 27th. RURAL PUBLIC VACCINATOR.

VACCINATION AND PURULENT INFECTIONS.

SIR,—As a former medical superintendent of the Fulham Small-pox Hospital I am not likely to forget the striking lessons as to the efficacy of vaccination which I learnt day by day. It is therefore as a keen supporter of vaccination that I urge the desirability of a modification in the present mode of carrying out the operation.

By the consent of all unprejudiced persons it is allowed that the inoculation of other diseases with vaccinia is an event of great rarity in this country. If reasonable precautions are taken the danger is infinitesimal.

It is impossible, however, to shut our eyes to the fact that subsequent to the dismissal of the child on the eighth day secondary inoculations of a grave character do take place, and constitute a powerful weapon in the hands of the opponents of vaccination. I allude to the inoculation of pyogenic and other organisms setting up local sloughing and gangrene, erysipelas, septicæmia, pyæmia, tetanus, etc. The very common auto-inoculation of pus organisms from these contaminated vaccination wounds, known as impetigo contagiosa, probably causes more prejudice than anything. These disasters are only indirectly connected with vaccination and are preventable. It is not just to ascribe these accidents to parental neglect and carelessness, but in any case the proper course is to prevent them as far as possible. I hold that as the State considers it desirable to ordain the operation of vaccination, it is bound by all the teachings of modern science to see that the wounds heal under the best possible conditions.

In your leading article of March 26th on the Vaccination Bill you say, "it is not stated whether vaccinated children are in future to be kept under observation by the public vaccinator for any period after the eighth day." I contend that they should be, at any rate in the towns, or that some steps should be taken to prevent the secondary contamination of the wounds. You state that as the vesicles will not in future be opened on the eighth day there will be even less risk than at present of anything going wrong. I fear this is illusory, as the wounds are mostly contaminated by rubbing and scratching and foul dressings.

I am fully alive to the great practical difficulties in carrying out my recommendation. It is largely a question of expense. If it is found impracticable to keep the child under observation, clear printed instructions as to the treatment of the wounds would be better than nothing.—I am, etc.,

Harley Street, W., March 26th. T. COLCOTT FOX.

RATES OF CLUB PAYMENT.

SIR,—From conversation with my medical neighbours and correspondence with men at a distance, I believe there is a very strong feeling that the present rate of club members'

payment (4s. per annum) is entirely inadequate, and the condition of membership, etc., unsatisfactory.

I shall be glad if medical men, whether club surgeons or not, in Herefordshire and district who share my views would write me that a meeting may be called perhaps under the auspices of the Herefordshire Medical Society to discuss the matter, and if the unanimity exist that I believe, to select a committee to arrange details, etc.—I am, etc.,

Kington, Herefordshire. HENRY BROUGHAM POPE.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

SIR,—The medical profession of Colorado are desirous of making the coming meeting of the American Medical Association, which will be held in Denver, June 7th to 10th next, an unqualified success. The great interest taken in this meeting throughout the United States promises that this will be one of unusual interest. Special trains are being arranged from many of the eastern cities to Denver, to carry the delegates to the meeting, and the Western railroads are heartily taking up the matter, and promise enthusiastic support and co-operation. This meeting will give an unusual opportunity to those of the profession desirous of seeing the great health resorts of the Rocky Mountains, and the Western States. The local Committee of Arrangements have instructed me to write to you and invite your co-operation in extending a general invitation to all members of the British Medical Association, and of the other recognised medical societies in the British empire, to participate in this meeting. Members of recognised medical associations outside of the United States visiting us at that time may feel assured of a hearty welcome from the profession in Colorado, and every effort will be made to have them not only thoroughly enjoy the scientific features of the meeting, but also to give them every opportunity of seeing this Western country under the most advantageous conditions. Visitors from foreign societies coming in this way, will be invited to register (without fee), and to participate in the meetings on the same footing as members, excepting, of course, the privilege of voting.

It is the sincere hope of our local Committee that a large representation of the British Medical Association will at that time honour us by their presence, and give us their assistance in making this an eminently successful meeting.—I am, etc.,

EDMUND J. A. ROGERS,
Chairman, Committee on Foreign Invitations.

Denver, Colo., March 12th.

THE TREATMENT OF SYPHILIS IN THE ARMY BY INTRAMUSCULAR INJECTIONS OF MERCURY.

SIR,—I notice in the BRITISH MEDICAL JOURNAL of March 26th a letter from Dr. Althaus of London, in which he takes exception to my not having mentioned his name as the originator of the mercurial cream referred to by me in my paper on the above subject published in the JOURNAL of February 19th. I would draw Dr. Althaus's attention to the *Army Medical Report* for 1891, where he will find a paper by me on the intramuscular treatment. In it he will see that I gave him the fullest credit as being the originator of the mercurial cream. Having done so then I did not consider it necessary to repeat it.

As to the success of the intramuscular treatment in India, Dr. Althaus appears to be under a misapprehension, as I never stated that his mercurial cream was the sole preparation of mercury which was used in carrying out this treatment. On the contrary I have reason to believe that, in the majority of the cases treated, other preparations of mercury were used as injections in preference to the cream.

In the paper referred to I stated that although I personally had had great success with the mercurial cream, it possessed drawbacks which were sure to militate against its being generally adopted; for instance in the tropics it becomes so thin and liquid from the heat that the mercury is no longer suspended but falls to the bottom. To obviate this requires a great deal of time and trouble. Hence the cream has been discarded in favour of other preparations in a great many cases. The proportions in the cream were those given by Dr. Althaus.

Looking about for a suitable substitute for the mercurial cream in the hope of bringing the intramuscular treatment of syphilis more into favour, after a full trial I had no hesitation in recommending a solution of sozoiodol of mercury (this solution I believe was introduced by Mr. E. Cotterell of London) as an efficient substitute for the mercurial cream.

As to Dr. Althaus's remarks about the efficacy of the insoluble over the soluble preparations of mercury in the treatment of syphilis, I would say that this is a subject which is at least debatable, *vide* discussion on the Treatment of Syphilis, sixty-fifth annual meeting, Montreal, Shoemaker, BRITISH MEDICAL JOURNAL, November 6th, 1897, page 1314.—I am, etc.,

F. J. LAMBKIN,
Surgeon-Major A.M.S.

Hilsea, March 28th.

ANÆSTHETICS.

SIR,—From the point of view of a practitioner engaged in the daily use of anæsthetics, may I beg that the columns of our JOURNAL be no more wasted on this endless and useless wrangle about the action of various anæsthetics on animals. They differ *toto cælo* in their actions respectively on different animals, and those actions are in no way comparable to the results seen in mankind. Both Dr. Lauder Brunton and Mr. Hill may be right on their respective points, but I am certain they are both wrong if they believe that their conclusions about ether or chloroform can be applied to human patients. Let us have the results of the clinical research on human patients as promised by the Committee appointed by the Council of the Association some years ago, and from whose work I obtained, by special vote, complete exclusion of any more useless and misleading experiments on animals.—I am, etc.,

Birmingham, March 23rd. LAWSON TAIT.

MEDICAL EDUCATION IN LONDON.

SIR,—In the BRITISH MEDICAL JOURNAL of March 26th appears, I believe for the first time, an advertisement relating to "Facilities for Clinical Study offered to Qualified Medical Men by Metropolitan Schools."

Might I be permitted to express the earnest hope that this announcement foreshadows the introduction of many much-needed reforms in medical education in London?

So long as London was the only, or nearly the only, town in England in which the complete curriculum could be carried out, the competition among the several schools was salutary; now that the facilities offered by the numerous provincial schools are so excellent, the competition alluded to tends to ruin the reputation of London as the chief centre of medical education in the kingdom. No one school in London can be expected to compete with the wealth and resources of the whole of Manchester, Birmingham, or other large city.

To obtain the best results from the unrivalled opportunities of the metropolis, combination and not competition of the cut-throat order is necessary.

When a medical student comes to London, why in the name of common sense should he be expected to take out all his classes at one school? Why could not a central bureau or clearing house be established at which tickets for attendance upon any hospital for any subject could be obtained? I cannot think that any insurmountable difficulty would be experienced, while, on the other hand, some such plan would be of great advantage to both teachers and taught. Even if this suggestion be not adopted by the whole of the London schools, I feel convinced that the time is not far distant when some of them will have to face the alternatives of total extinction or partial combination.

I trust that this brief communication may elicit some further expressions of opinion, and that the question may be thoroughly threshed out.—I am, etc.,

March 29th. REFORM.

THE MEDICAL PROFESSION AND SANITARY AUTHORITIES.

SIR,—Whilst not sharing the views of your correspondent "A. D." as to sanitary authorities endeavouring to get work out of medical practitioners for nothing, I think that he has done well in calling attention to a serious defect in the legislation dealing with infectious disease.

Where notification is in force, the local authority is in-

formed of the existence of infectious disease, and has, in consequence, certain powers, restrictive of individual liberty, for the purpose of limiting the spread of such disease. On *a priori* grounds it seems fair to argue that those powers continue in force until such time as the authority shall be officially informed of the freedom of the patient from infection. Unfortunately no provision has been made for securing such information. It is the practice of many medical officers of health to forward to the patient, when treated at home, a blank certificate of recovery, and, on receipt of such certificate, duly signed by the medical attendant, the authority does the necessary disinfection free of charge. It should be noted that by such arrangement the patient is expected to obtain the certificate of recovery, and that no demand is addressed by the authority to the medical practitioner. In my experience it has been an exceedingly rare occurrence for the medical attendant to refuse to give his patient such certificate, whereby alone, as it seems to me, the patient can be relieved from his liabilities under legislation for exposure of infected persons, etc.

What is required to remedy the friction created by the position taken by your correspondent is that the local authority shall be empowered to demand from the medical attendant a certificate of recovery, for which a fee might be prescribed of (say) half a crown as for notification. A further provision is required that disinfection done by any person other than the officer of the authority, shall be carried out to the satisfaction of the medical officer of health. This was enacted in the last Scotch Public Health Act.—I am, etc.,

March 28th. S. O.

SIR,—The question raised by your correspondent "A. D." on the subject of certifying "freedom from infection" calls for prompt action on the part of sanitary authorities. The notification of infectious diseases enables the medical officer of health to adopt measures which but imperfectly provide against the spread of infection. There is no provision, by Act of Parliament, enabling him to ascertain, on reliable authority, that a patient has recovered from an infectious disease completely, or that persons who have been in contact with an infected patient have been subjected to quarantine. Take such a case as the occurrence of scarlet fever in a family. Notification of the disease is received by the medical officer of health. He or the sanitary inspector calls at the house, ascertains the source of infection, investigates the sanitary condition of the house and the measures which are adopted for isolation, probably gives printed instructions on the subject of disinfection, isolation, and quarantine; in fact, makes every necessary inquiry and adopts every precaution, so far as this can be done without interference with the patient personally or with the treatment by the medical practitioner in attendance. Let us suppose that so far every precaution has been observed on the part of the doctor and the medical officer of health, without improper action in any way. Who is to say when the patient is free from infection, and when the persons who have been in contact with the patient have been subjected to adequate quarantine?

It appears fair to assume that, if a medical man is rightly compelled to notify the occurrence of certain infectious diseases in his practice, and is paid for such notification, he should also be requested to certify as to the complete recovery of the patient—that is, freedom from infection—and as to the quarantine of those who belong to the household, also that he should be paid for such certifying. If he should decline to take this responsibility, then the medical officer of health should be free to make any examination necessary for this object himself. The payment for this certificate of freedom and quarantine lies, I consider, with those who require such information—namely, the sanitary authority.

There can be no doubt that registered medical practitioners in England are, to a certain ill-defined extent, State officers. Compulsory duties on the part of medical men enter frequently into legislative enactments, and our responsibilities are proportionately increased. It is only right that we should be proportionately paid for these special demands upon our citizenship.

I submit these observations on a most important question in the hope that they may lead to further suggestions, and, if they are somewhat dogmatically stated, it is so only for the purpose of brevity.—I am, etc.,

S. HOLGATE OWEN, M.D., M.R.C.P.,
March 28th. Medical Officer of Health, Moss Side, Manchester.

SUNSTROKE OR SIRIASIS.

SIR,—In the article on siriasis by Dr. Sambon in the BRITISH MEDICAL JOURNAL of March 19th, he says: "Although stokers in large steam vessels may be brought up unconscious from syncope or stoker's collapse, they never show symptoms of siriasis." And again, "Siriasis is unknown in Europe." I venture to think that the following case tends to disprove these rather sweeping statements:

During the mobilisation of the fleet in 1888, the ship on board which I was serving had just finished her preliminary steam trial, and was at anchor in Plymouth Sound, when an artificer was brought up from the engine room unconscious, delirious, and with severe cramps in legs and arms. His temperature was 107°. He quickly passed into a state of coma, with occasional violent general convulsions, and in spite of all treatment died in about three hours.

The symptoms in this case were exactly similar to those of siriasis so fully described by Dr. Sambon, and I do not think there can be the least doubt that it was a case of heat stroke or siriasis, due solely to excessive heat, occurring in an engine room hand, and in England.

I must add that the heat of the engine room and stokeholds was at the time very great—I forget the exact temperature—and that several other men suffered from syncope or "stoker's collapse" both then and during the subsequent cruise.—I am, etc.,

S. T. O'GRADY,
H.M.S. *Cambridge*, Devonport, March 26th. Fleet-Surgeon, R.N.

PRESENTATION.—Dr. A. Ehrmann has, on the occasion of his leaving Bitterne to practise in London, been presented with a purse of money and an address by his friends at Bitterne.

THE COCAINE HABIT IN CHICAGO.—It is stated by an American journal that over forty victims of the cocaine habit appeared in the police courts of Chicago within a period of two or three months in 1897. The habit was said to have been induced, in a large proportion of the cases, by the use of popular preparations as cures for colds, etc. The evil was considered so serious that an ordinance was passed prohibiting the sale of these dangerous remedies.

BEQUESTS TO EDINBURGH CHARITIES, ETC.—The late Hon. Bouverie Francis Primrose, C.B. (uncle of the Earl of Rosebery), has bequeathed the following legacies to public institutions in Edinburgh: To the Royal Infirmary, £1,000; to the Victoria Hospital for Consumption, £250; to the Royal Society, £200; to the fund of the University of Edinburgh for the encouragement of original research, £100; to the University Library Fund, £100. The Norfolk and Norwich Hospital also receives £100, and the Nurses' Sick Fund of Glasgow Training Home for Nurses, £50.

STATE MEDICAL EDUCATION.—According to the *Philadelphia Medical Journal* a Bill has been introduced into the Kentucky Legislature providing for the establishment of a free medical school in connection with the State Agricultural and Mechanical College at Lexington. The author of the Bill, the Hon. J. H. Lackey, is of opinion that many worthy young men are deterred from studying medicine because of the exorbitant fees of the various schools, and, as there are free schools for nearly all trades and professions except medicine, it is contended there should be one in that department also.

DEFECTIVE VISION AMONG AMERICAN CHILDREN.—The annual report of the New York State Board of Health recently issued deals, among other things, with the subject of defective vision among children. It states that it has been deemed expedient by the Board to provide a method of testing the eyes of school children. Defective eyesight is said in the report to be largely on the increase in the United States. This, it is suggested, may be due in a large degree to the failure of parents to discover such defects when they might be easily corrected. The plan adopted by the Board provides for a test by the principals of schools, who are to report all defects to parents, and recommend consultation with a physician.

Obituary.

CHARLES WEST, M.D., F.R.C.P.,

Founder of and some time Physician to the Hospital for Sick Children, Great Ormond Street, London.

One of the men who have helped to make the reign of Queen Victoria a memorable period in the history of medical progress has passed away in the person of Dr. Charles West, who, as already announced in the British Medical Journal, died in Paris on March 19th, at the age of 81. The following account of his career is mainly founded on autobiographical notes, for the use of which we are indebted to the kindness of Dr. R. L. Bowles, who, with the permission of Dr. West's widow, has placed them at our disposal.

Charles West was born in London on August 8th, 1816. His father was a Baptist lay preacher; his mother a daughter of Major Johnson, of the Durham Fencibles. In 1821 his father accepted a "call" to become the minister of a Baptist congregation at Chenies, in Buckinghamshire. There the elder West combined with his pastoral duties the keeping of a school for young boys, which prospered and expanded till it had to be removed to Amersham. In his father's school young West received his early education. He afterwards went to a school at Totteridge, kept by Mr. Wood, the father of Dr. Wood who was afterwards Chairman of Convocation of the University of London. In 1831 Charles West was apprenticed to Mr. Gray, a general practitioner of Amersham, who had been Apothecary to St. George's Hospital. In this position he remained for two years. He has left it on record that the two things which he learnt while with Mr. Gray were to compound medicines—a knowledge which he afterwards found of great service when prescribing for children—and a familiar acquaintance with Shakespeare, which doubtless fostered, if it did not create, the literary taste afterwards so conspicuous in his writings. In his later years he often said that the dying out of country surgeries and the enormous increase of the *Pharmacopœia* were the cause of serious ignorance among practitioners as to the nature of their prescriptions. In 1833 he entered as a medical student at St. Bartholomew's Hospital, where he worked diligently, gaining prizes at the annual examinations during the two years of his stay there.



His father's theological opinions made him object to his son going to Oxford, so young West went to Germany. In the summer of 1835 he entered the University of Bonn, where he remained a year, gaining the University prize for a Latin essay on The Female Pelvis and its Influence on Parturition; this essay, with lithographic plates of pelves by a German artist, served afterwards for his inaugural dissertation. In November, 1836, he went to Paris, and in the following April to Berlin, where he took his Doctor's degree in September, 1837.

Dr. West then returned to London and bought a partnership in the City, which proved unprofitable except as a means of giving him experience in the ways of the world as well as in his profession. He used the large amount of leisure which his want of private patients left him in working under Dr. Latham in the medical wards of St. Bartholomew's. To such good purpose did he put his clinical opportunities there that his account of the epidemic of typhus fever, which raged in London in the winter 1837-38, and of which many cases were admitted into St. Bartholomew's Hospital, was deemed worthy of publication in the *Edinburgh Medical and Surgical Journal* for April, 1838. In the summer of that year West went to Dublin, where he became an indoor pupil at the Rotunda Lying-in Hospital, of which the late Dr. Evory Kennedy was at that time Master. He divided his time between the Rotunda and the Meath Hospital, which was then, clinically speaking, *in splendoribus sanctorum*, owing to the teaching of Graves and Stokes. In 1839 he returned to London, where he worked for a time in St. Bartholomew's as Clinical Clerk to Dr. (afterwards Sir George) Burrows. He published a translation of the younger Naegele's work on Obstetric Auscultation, and contributed an article on the History of Typhus Epidemics to the *Edinburgh Medical Journal*. In that year, also, he first turned his attention to what was afterwards to become the chief work of his life, the study of the diseases of children, at the Infirmary for Children in Waterloo Road. To this institution he was appointed Physician in 1842.

West's literary activity was very great throughout his career. In 1840 he published a translation of Müller's work on the *Structure of Cancer and other Morbid Growths*. About the same time he became a contributor to the *Penny Cyclopædia*, and he afterwards wrote for the *Biographical Dictionary* of the Society for the Promotion of Useful Knowledge, which came to a premature end with the letter A. He also became a regular contributor to the *Medico-Chirurgical Journal*, reviewing foreign books, and compiling the digests of medical progress in the departments of midwifery and the diseases of women and children for several years. In 1843 there appeared in the same journal a report from his pen on Pneumonia in Children, founded on the observation of 118 cases and 37 *post-mortem* examinations. In the same year he sent to the *Medical Gazette* papers on Endocarditis, on Croup complicating measles, and on Infantile Paralysis.

About this time West began to devote special attention to midwifery, and in the hope of some day having the opportunity of lecturing, he prepared a complete course of lectures on the subject, a remarkable proof of his energy and forethought, not less than of his ambition. In 1845 he was appointed Lecturer on Midwifery at the Middlesex Hospital, and in 1846 he succeeded Dr. Ashburner as Physician Accoucheur to the same hospital. In 1847 he gave a course of lectures on the diseases of children at the Middlesex Hospital, which were published in the *Medical Gazette* and afterwards in a volume which appeared in 1848. This book, with subsequent additions and alterations, passed through seven editions, and was translated into almost every European language and into Arabic. In 1848 he was appointed Lecturer on

Midwifery at St. Bartholomew's Hospital, a post which he held for 12 years. His lectures at St. Bartholomew's were the foundation of his celebrity. They were remarkable, not only for the keen observation and sound practical sense which they displayed, but for the graceful style in which the teaching was conveyed.

It was during his connection with St. Bartholomew's Hospital that West published his book on *Diseases of Women*. This work went through four editions, in preparing the last of which he had the advantage of the co-operation of Dr. Matthews Duncan. This work was translated into French, German, Italian, Spanish, Dutch, and Danish.

In 1849 West made an effort to convert the Children's Infirmary in the Waterloo Road from a dispensary to a hospital, which failed owing to the jealousy of local medical men. From that time forward, however, he never ceased in his efforts to bring about the establishment of a children's hospital in London. In this endeavour, after much opposition and many disappointments, he succeeded. The Children's Hospital in Great Ormond Street was opened in February, 1852, in a house, which had once been the residence of Dr. Mead This house had a splendid staircase, and a drawing-room painted with little shepherds and shepherdesses which became the girl's ward; while behind there was a good garden, and a very large room, originally Dr. Mead's museum, and afterwards a ballroom, which was admirably suited for the out-patient department. West wrote the early reports, and delivered lectures on children's diseases; he also wrote a little book, *How to Nurse Sick Children*, which excited much interest in the treatment of children, not only in the profession but among the public. For twenty-three years Dr. West was the Senior Physician to the Children's Hospital.

Dr. West's own account of his connection with the Children's Hospital is as follows:

"In 1849, with the view to the establishment of a children's hospital, I visited all the hospitals in London to ascertain their number of beds, and the accommodation afforded by them for children, and wrote with the same object to all the children's hospitals on the Continent.

"The answers are still in my possession. The information thus obtained I embodied in what was afterwards the first printed appeal, with which, in manuscript, I called at the end of 1849 on all the leading London physicians, and most of their answers were addressed to me personally.

"When I called on Dr. Bright, he said to me: 'Dr. Bence Jones was saying to me something about a children's hospital; the sister of his wife, Lady Millicent Bence Jones, wishes for some such employment; go and talk to him' I saw Dr. Bence Jones, who told me that he had done nothing, but would be happy to co-operate in the work. Accordingly he kindly lent his house for the meetings of a Provisional Committee, and his social influence was so much greater than mine that the majority gave their names and their money at his request, and some gave also their active co-operation. The name of Mr. Beresford Hope was on the Provisional Committee, but he never attended its meetings, and visited the hospital only once before he presided at the dinner. Lord Shaftesbury visited the hospital twice during his presidency. Lord Kinnaird joined the Committee after the hospital was opened.

"The appeal, with another special one to medical men, both as well as everything else written exclusively by me, were now printed and circulated with a list of the Provisional Committee, Treasurer, etc.

"In December, 1850, a house (now pulled down), was found in Upper Gloucester Street, Marylebone Road, which it was thought might serve for a hospital, and I have in my possession the plans sent to me by the surveyors, Messrs. Wegg and Pownall, of the requisite alterations. I forget how it was that we did not proceed with this, but my impression is that in the meantime the house in Great Ormond Street came into the market.

"In May, 1851, a meeting was held at the Hanover Square Rooms to bring the project of the hospital before the public. Lord Ashley, as he then was, took the chair for about an hour, and it was afterwards occupied by Mr. F. H. Dickinson.

"In July and August, 1851, I travelled through France and Germany visiting hospitals, in order to learn all that I could about their construction, furniture, and organisation, and fit myself to supervise and direct the alterations in Great Ormond Street, where the house had now come into our possession.

"Mrs. West and I did the whole of the furnishing, and the minute book contains the entry, 'Dr. West attended the Committee and his accounts were passed.' I drew up the plan according to which the accounts were kept till recently. I drew up the rules and the diet table, having previously studied the diet tables of orphanages and other institutions for children, and practically tested every receipt.

"For many years I kept the garden in order. At my expense I commenced the museum of morbid anatomy and drew up the catalogue, and in spite of the jeers of some of the members of the Committee started the Samaritan Fund, which now amounts to a considerable sum. Dr. Bence Jones left the Committee in March, 1854, in consequence of the difference of opinion with reference to the admission of contagious diseases. I started the boarding out our convalescent children with cottagers in the suburbs whom I visited from time to time, defraying the cost from the Samaritan Fund, until Lady Harding, widow of Sir John Harding, established a home at Mitcham, of which I took medical charge.

"Previous to the opening of the Mitcham Home, however, Miss Freeman, a lady then unknown to me, opened a home at Brighton for convalescents from the hospital, led thereto, as she stated in print, by a little book, *How to Nurse Sick Children*, published anonymously, but of which I was the author. For some time after the purchase of No. 48 we had no use for the ground floor of the building.

"It was accordingly determined to fit up an infant nursery there, and I went to Paris to see the arrangement of the *crèches* there before I fitted up the one in Ormond Street.

"Mr. Timothy Holmes, at that time surgeon to the Children's Hospital, was very earnest in advocating the establishment of a Convalescent Branch of our own. In consequence we acquired Cromwell House, the repairs and furnishing of which were executed entirely under my direction.

"I did not seek for reappointment as physician in 1875, under the mistaken impression that, when it was evident that I could have no personal interest in the prosperity of the hospital, my influence would be greater and my hands would be freer to help in its proper management and in the control of its extravagant expenditure.

"When no longer attached to the medical staff, I still did all in my power to promote the interests of the hospital. I watched every day the construction of the new buildings, the outline plans of which were drawn by me, though I had no pretence to the architectural knowledge with which my eminent friend, the late Edward Barry, interpreted and improved them. I furnished the building throughout, and my last acts in connection with it were to present to it my collection of books on children's diseases, and of drawings of morbid specimens, and to have some thousands of quantities in the Paris Réglement sur le Régime alimentaire des Hôpitaux et des Hospices reduced to their English equivalents, in the hopes of the suggestions therein contained being of service for a revision of our dietary."

To this account, which is dated May 4th, 1888, Dr. West at some later date not specified, added the following note:

"I do not care to go into details with reference to the meeting of 1877 further than to say that I called it because the Chairman of the Committee, Mr. Walter, declined to work with me when he heard that I was a Roman Catholic. He admitted my perfect loyalty in the past, but a large majority agreed with him that I could not be trusted for the future; but of this, or perhaps leading to it, whispered accusations have been made. The falsehood none knew better than they who made them; and the last version I have heard is that I left the hospital of my own accord because I had become a Roman Catholic and did not care to remain. I trust that I need not say to you that neither in deed, word, nor thought has my conduct been swayed by my religious opinions. But I will further add that I have always thought and often said that I do not know the meaning of our Saviour's mission if every child under 12 years old, Christian, Jew, Mohammedan, or Pagan is not at once received on dying into the presence of Him who said 'Suffer little children to come unto me.'"

Dr. West was admitted a Member of the Royal College of Physicians in 1842, and a Fellow in 1848. In 1863 he became Censor, and in 1870 Senior Censor of the College. About the same time he was elected a Corresponding Member of the Paris Académie de Médecine. He was President of the Royal Medical and Chirurgical and Obstetrical Societies in 1877-78, and Examiner to the Universities of London and Cambridge, and to the College of Physicians. In 1852 he delivered before the College of Physicians the Croonian Lectures on Ulceration of the Os Uteri, which were afterwards published, and exercised a useful influence in correcting the exaggerated importance then attached to the use of the speculum in the diagnosis of the disease, and the abuse of caustics in its treatment. West also delivered the Lumleian Lectures in 1871, and the Harveian Oration in 1874. In addition to the works already mentioned he was the author of the following: *Some Disorders of the Nervous System in Childhood*, 1871; *Harvey and His Times*, 1874; *Hospital Organisation*, 1877; *Medical Women*, 1878; *The Mother's Manual of Children's Diseases*, second edition, 1887; *Nice and its Climate* (from the French of Dr. Baréty) 1882.

In 1880, unable to stand the London fogs (which had just killed his friend, E. M. Barry, the architect for the New Children's Hospital), he decided to leave London and practise in Nice during the winters. For about ten years more he continued in active practice. He never really recovered from a bad attack of neuralgia in 1891. But though with gradually failing strength he never gave up his interest in his profession, and only last year published what was in many respects an enlargement of his address at the opening of the St. Bartholomew's Medical Session in 1850: *The Profession of Medicine: its Study and Practice, Duties and Rewards.* This was a subject which he ever had very close to his heart. Nothing made him more indignant than the merest suspicion of an unworthy motive or dishonourable action on the part of those whom he rightly considered as exercising an office hardly less sacred than that of the priest.

As a practitioner West was at his best in dealing with children. The little ones came to him at once. He would walk down a street behind a woman carrying a crying baby over her shoulder, and at almost the first glance the baby would stop crying and begin to laugh and hold out his little arms to go to him. He had wonderful resourcefulness in making remedies palatable, and never wrote a prescription which he had not previously tasted. The two bottom drawers of his consulting room table were a treasure house of marvellous toys which furnished the means of his wonderfully accurate diagnosis, and that skilful sympathy which children felt without recognising drew older patients, and especially women in sorrow or distress, back to him year after year, not only for medical advice, but for help and counsel in the troubles of their lives. One old lady, to whom he had been a great help in sorrow, the widow of a very well known artist, used to come to him regularly, and putting his fee on the table say, "I have nothing the matter with me, but I want a talk, but I am not going to have it for nothing. You always send me home better and happier."

Charles West was undoubtedly one of the best public speakers in the profession. He handed down to this generation the traditions of the great orators of the past, and his finished orations belong to a class now seldom heard either in public meetings or in the House of Commons, which sets the fashion in this matter. Even in private conversation he was deliberate in utterance, fastidious in the choice of words, and careful in the construction of his sentences. A public speech by him—especially one for which he had been able to make some preparation—was an artistic production which might be enjoyed even by those who dissented from his arguments. It was logically arranged, illustrated by simile and historical reference, every sentence well balanced and every word well weighed. He had, in fact, many of the qualities of an orator—a good presence, variety of gesture, a voice capable of much modulation, considerable dramatic power, a mind well stocked with miscellaneous reading, and a happy imperturbability which enabled him to turn interruptions to account and to face a hostile audience without a trace of nervousnees.

He was twice married, first to the daughter of Mr. N. B. Cartwright, of Stroud, Gloucester, by whom he had two children, the Rev. Dr. G. H. West, of Ascham School, Bournemouth, and Sister Margaret, of the Community of the Resurrection, Grahamstown; secondly, to the daughter of M. Flon, by whom he had no children.

From information kindly supplied by Mrs. West we are able to state that Dr. West always had a lingering hope that some day he might be allowed to return to his life's work, and that had much to do with his leaving Nice, especially as his health had very much improved. He returned to London, and settled in Harley Street in 1885, and many of his old patients came back to him; but he never really cared or sought very much for practice. He endeavoured to find work in one or other of the London children's hospitals; but, every door seemed to be shut against him. He seemed after the first year to see all this, but he hoped against hope. He travelled a great deal, and with all the interest which was to be expected of so intellectual a man. Being able to read in six languages, he had a vast field for literary work, and his principal occupation in his later years, as a pastime, was illustrating Motley's *History of the Dutch Republic.* He seemed to know the book by heart. In 1894 he translated *Leutherick's Provence Maritime*, and all his time was employed in studying history and literature. Each winter the fogs tried him more and more, and he was forced to winter on the Riviera. Naturally, as he grew older and feebler, the journey became more trying, but he pined for the blue skies and wished to go, though last winter it was pointed out that the journey might be too much. On December 20th he developed a very acute attack of herpes, and that seemed to be the beginning of the end. He still longed to come back to his home, and on Tuesday, March 1st, he left Cannes with the intention of proceeding to England. On reaching Paris he complained of feeling worse. After three weeks of increasing weakness, he sank peacefully.

For the following notes of Dr. West's later years we are indebted to Dr. R. L. Bowles:

"During the last few years Dr. West complained much of a sense of muscular weakness and exhaustion, for the relief of which he sought constant change of air and scene, but with only partial success. During the whole of this time his intellectual and mental powers, he assured me, were as quick and active as they ever were, and he was never so happy as when busily engaged writing or reading, or in dealing with matters of business. He could sit up the greater part of the night working in these ways without any sense of fatigue whatever. This winter he went to Nice as usual and enjoyed the early part of his stay, but later, not feeling well, he made his way homewards. In Paris he lost power in his lower extremities, and finally fell down when attempting to stand. After this he kept to his bed, but in a few days became gradually unconscious, and he died with continuous mucous stertor. He was buried at Chislehurst by his own request. The last few years of his life he suffered much from depression and from anxiety for the welfare of the Children's Hospital, a subject with which his mind was entirely occupied."

EDMUND HOOPER GALTON, F.R.C.S.,

Brixton.

The death of Mr. Edmund Hooper Galton, F.R.C.S., of Brixton, at the age of 61, is a great loss to the public, the profession, and the British Medical Association. He was a student at Guy's Hospital, and joined his father in practice at Brixton in 1857. His energy and ability were shown by his taking the F.R.C.S. by examination in 1868 while in full practice. Of genial and most hospitable nature, the very soul of professional honour and an admirable speaker on public occasions, he secured a large circle of private friends and attached patients. Nor did his activity find full scope in his profession. He was largely instrumental in promoting the success of the Conservative cause in his district by a series of addresses to working men, and his influence in political circles was great as chairman for many years of the Streatham and Herne Hill Constitutional Association. He will be missed at the Branch meetings of the British Medical Association, at which he was a constant and ever-welcome attendant, and he was also an active member of the Parliamentary Bills Committee, where his political knowledge gave him much influence.

For thirty years he held the office of Surgeon to the City of

London School, where he was highly esteemed. No man has probably enjoyed a greater measure of love and respect among his professional neighbours, and all who have heard him have joyed in the lucid and eloquent addresses from the now silent tongue which touched nothing that it did not adorn. So eager and active a life, with a disregard of self in the discharge of duties, professional and public, left little reserve energy to fall back upon.

In July, 1897, he was taken severely ill with thrombosis in the leg; attacks recurred in various parts of the body, and for sixteen weeks he lay between life and death, but by the kindly tendance of his friends, Dr. Burgess, Dr. Mutch, and Dr. Brock, and his brother Dr. John Galton, assisted by Dr. Pye-Smith and Dr. Goodhart, and aided by devoted nursing, he recovered and went to Dover, where Dr. Parsons kindly looked after him. He came back to work on January 15th this year, but soon contracted influenza in his duty, recovered, and got to work again, only to encounter a fresh attack of influenza from which he never recovered. Hope of recovery was not abandoned till four days before the end, and on March 25th a forlorn hope of relieving the cause of his condition was dispelled by an exploratory incision over the liver by Mr. Symonds, and he died on March 26th. The necropsy revealed a softened friable heart muscle and a large spleen, with a general absence of blood in the tissues; so that looking back upon his long illness, and feeling that he never could have carried on active life, his friends cannot altogether regret that he was taken from the struggle, and was spared the sorrow of finding that he was incapable of his old activity. The many who are left to mourn him may find a consolation which the writer, who suffers the irreparable loss of a life-long friend, finds in the words of William Morris:

Come—pain ye shall have and be blind to the ending!
Come—fear ye shall have mid the sky's overcasting!
Come—change ye shall have for far are ye wending!
Come—no crown ye shall have for your thirst or your fasting,
But the kist lips of Love and fair Life everlasting!
Cry out, for one heedeth, who leadeth you home!
Is he gone? Was he with us?—Ho ye who seek saving
Go no further, come hither, for have we not found it?
Here is the House of Fulfilment of craving;
Here is the cup with the roses around it;
The world's wound well healed, and the balm that hath bound it
Cry out! for he heedeth, fair Love that led home.

Mr. Galton was buried on March 30th, the first part of the funeral service took place at Brixton Church and the interment at Norwood Cemetery. The funeral was attended by numerous friends, including Dr. Pye-Smith, Dr. C. Holman, Dr. Rand, of Dulwich, Dr. C. Browne, Dr. Soper, of Clapham, and Mr. Frederick Durham.

Surgeon-General Samuel Currie, C.B., M.D., Q.H.P. The death of this officer at the age of 82 removes the oldest officer (except one) of the Army Medical Department. He studied at Edinburgh University, where he graduated M.D. in 1835. He entered the army October, 1836, retiring in 1876 after forty years' service. He served with the 16th Lancers at the battle of Maharajpore in 1843, and afterwards in the Sutlej campaign of 1846, including Aliwal and Sobraon, and other actions (bronze star, medal, and clasp). He was Field Inspector in the China campaign of 1860, for which he was made C.B. (medal with clasps). He was Principal Medical Officer of the Abyssinian Expedition of 1868, for which he was promoted to the rank of Inspector-General of Hospitals, mentioned in dispatches, etc. (medal and clasps). His final rewards were the title of Queen's Honorary Physician, a good service pension, and lately the Jubilee Medal.

We regret to have to announce the death from typhus fever of Mr. Albert E. Davis, L.R.C.P., M.R.C.S., at the early age of 32. Mr. Davis was practising with Dr. Ensor, of Ladbroke Grove, in whose estimation he occupied a high place. About a month ago he visited certain cases in the neighbourhood, which were at that time considered to be influenza; later, however, they were ascertained to be typhus fever. Mr. Davis, after being out of health for four or five days, took to his bed on March 11th. He was eventually removed to the Western Fever Hospital on March 15th, and rapidly developed the symptoms characteristic of the second week of typhus fever in great severity. Some little improvement took place on March 22nd and 23rd, but bronchitis set in, and he remained unconscious and delirious up to his death on March 25th. As was mentioned in a paragraph published in the British Medical Journal of March 26th, much hesitation was at first felt as to the diagnosis; by some it was thought to be influenza complicated by measles, by others that it was influenza with delirium tremens, a supposition at once negatived by the well-known temperate habits of Mr. Davis, and by others it was looked upon merely as a severe case of influenza. His brother, Dr. Robert Davis, of Orpington, who saw the patient on several occasions, was from an early stage strongly inclined to the diagnosis of typhus fever, and this, as we have said, was subsequently fully confirmed by the admission of a second case to the Western Fever Hospital. The late Mr. Davis came of a family of medical men. He was the youngest son of the late Mr. Robert Davis, surgeon, of Wreckenton House, Gateshead, where his grandfather, Robert Davis, also practised. It is a sad coincidence that this Mr. Robert Davis also fell a victim to typhus fever while in the prime of life, a little over fifty years ago.

Brigade-Surgeon H. C. Gillespie, M.D., Army Medical Department, who died at Richmond on March 22nd, was a graduate of the Royal University of Ireland. He entered the army in 1864 and retired in 1884. He served in the 70th Regiment, and in the Afghan campaign of 1878-80 (medal).

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Inspector-General Sir Henry Frederick Norbury, K.C.B., M.D., has been appointed Director-General of the Medical Department of the Navy, *vice* Sir James N. Dick, April 1st. Sir Henry Norbury's commissions are thus dated: Surgeon, June 16th, 1860; Staff-Surgeon, December 16th, 1872; Fleet-Surgeon, July 3rd, 1879; Deputy Inspector-General, April 1st, 1887; and Inspector-General, November 7th, 1894. From the *Royal Navy List* we learn that he served as Staff-Surgeon of the *Active*, and was landed in medical charge of her Naval Brigade during the Kaffir war, 1877-78 (mentioned in despatches and strongly recommended for promotion). In the Transkei as Senior Medical Officer of six different columns of troops, he was present in numerous skirmishes; in the action at the Quorra River and at the battle of Quintana he was in medical charge of the Naval Brigade of the *Active* during the Zulu war, 1879; and as Principal Medical Officer of Colonel Pearson's Column was present at the battle of Inyezane, January 22nd, 1879, and at the relief of the garrison of Ekowe (several times mentioned in despatches). He afterwards joined General Crealock's Column as Principal Medical Officer of the entire Naval Brigade, and advanced to Port Durnford (twice mentioned in despatches, promoted, medal with three clasps, C.B.); Sir G. Blane's Gold Medal, 1879; M.D., M.R.C.S., L.S.A.; author of *The Naval Brigade in South Africa*: nominated K.C.B., June 22nd, 1897, on the occasion of Her Majesty's Diamond Jubilee.

Deputy-Inspector-General James W. Fisher, M.D., is promoted to be Inspector-General, March 9th. He entered the service as Surgeon, January 14th, 1868, and became Staff-Surgeon, March 31st, 1874; Fleet-Surgeon, September 2nd, 1882; and Deputy Inspector-General, May 30th, 1892. As Surgeon of the *Decoy* he was present in the engagement with the Ashantis on October 14th, 1873, and being attached to the Naval Brigade, was in every engagement of the brigade. He was specially mentioned for his services under fire at Amoaful, and was also mentioned in military despatches, and received the medal with clasp.

Staff-Surgeon James Porter, M.A., M.B., has been promoted to be Fleet-Surgeon, March 4th. Entering as Surgeon, September 20th, 1877, he became Staff-Surgeon twelve years thereafter. He was Surgeon of the *Orontes* during the Egyptian War of 1882 (medal and Khedive's bronze star). He served on shore with the Royal Marine Battalion defending Suakin from May, 1884, till the battalion was recalled in May, 1885, and was engaged in the operations in the Eastern Soudan in 1884-85; present at the actions at Hasheen, March 20th, 1885; attack on Sir J. McNeil's zareba, Tulufik, March 22nd; the attack on the square of Guards and Marines, March 24th; and at the taking and burning of Tamaai, April 3rd (two clasps).

The following appointments have been made at the Admiralty: William E. Breton, M.D., Fleet-Surgeon, to the *Victory*, additional, for Portsmouth Dockyard, March 24th; Herbert E. Marsh, Staff-Surgeon, to the *Prince George*, March 24th; Robert Hickson, Staff-Surgeon, to the *Wildfire*, additional, for the *Sans Pareil*, March 24th; William Hackett, M.D., Surgeon, to the *Cambridge*, lent, March 23rd; David W. Hewitt, M.B., Surgeon, to the *Triton*, lent, March 23rd; Montague H. Knapp, Surgeon, to the *Assaye*, undated.

ARMY MEDICAL STAFF.

An exchange has been sanctioned between Surgeon-Lieutenant-Colonel E. H. Fenn, C.I.E., Scots Guards, and Surgeon-Major W. R. Crooke-Lawless, Coldstream Guards.

Surgeon-Captain Edward C. Corcoran died on February 23rd at Okuta, in the Hinterland of Lagos, of malarial fever contracted while on field service. He was appointed Surgeon-Captain, February 5th, 1887, and went to West Africa in the spring of last year, where, however, he had previously served for a time in 1895.

INDIAN MEDICAL SERVICE.

Surgeon-Lieutenant-Colonel J. Moorhead, M.A., M.D., Bengal Establishment, is permitted to retire from the service from May 29th. His first commission dates from September 30th, 1876; that of Surgeon-Lieutenant-Colonel from September 30th, 1896. He has no war record.

Brigade-Surgeon-Lieutenant-Colonel Sir Alfred S. Lethbridge, K.C.S.I., M.D., Bengal Establishment, retires from the service from April 1st. He dates as Assistant-Surgeon from September 30th, 1867; as Brigade-Surgeon-Lieutenant-Colonel from April 9th, 1892. He also has no war record.

Surgeon-Captain G. C. Hall, Madras Establishment, who was transferred to the half-pay list, March 12th, 1896, is permitted to retire from the service from March 12th. His first commission dates from September 30th, 1886.

The undermentioned promotions, which have been already announced in the British Medical Journal, have received the approval of the Queen: Surgeon-Lieutenant-Colonels, Bengal Establishment, to be Brigade-Surgeon-Lieutenant-Colonels, October, 1897; G. C. Hall, J. T. B Bookey, October 24th, 1897; and James Young, October 24th, 1897; Surgeon-Lieutenants to be Surgeon-Captains, dated January 29th: *Bengal*—Charles J. Milne, Algernon F. Stevens, Clement H. Bensley, Francis H. Watling, Arthur Gwyther, Edgar J. Morgan, William Carr, John A. Hamilton; *Madras*—Frank Wall, Charles M. Mathew; *Bombay*—Samuel Evans, James H. M'Donald.

THE NORTH-WEST FRONTIER RISING IN INDIA.

The despatch of Sir William Lockhart describing the operations of the Tirah Expeditionary Force under his command has been published. All ranks, officers and men alike have, says Sir William, "been subjected to great hardship, harassed at night by assaults at close quarters or by distant rifle fire, and engaged in long and trying rearguard actions. Their duties on picket and in guarding foraging parties have been specially onerous. Hardly a day or night has passed without casualties, and whether we advanced or retired, every soldier had to be constantly on the alert against enemies who made no stand in the open, but were unrivalled as skirmishers and marksmen." Then comes a reference to the natural advantages which favoured the tribesmen and imposed on the troops the necessity for individual initiative, unremitting watchfulness and personal activity; and the remarks are fittingly closed in the following words:—"I am glad to say that the troops responded nobly to the call made upon them. Cheerful and soldierlike under exceptionally trying conditions officers and men upheld to the utmost the traditions of their corps and the honour of Her Majesty's army."

Amongst those selected for special mention are the following: Surgeon-Major-General A. A. Gore, M.D., Principal Medical Officer of Her Majesty's Forces in India; Surgeon-Major-General G. Thomson, M.B., C.B., Principal Medical Officer to the force, and his Secretary, Surgeon-Major W. A. Morris. The following are mentioned as having come under Sir William's personal observation: Surgeon-Captain J. C. Morgan Staff-Surgeon; Surgeon-Colonel E. Townsend, Principal Medical Officer First Division; Surgeon-Colonel G. M. B. Davis, M.B., D.S.O., Principal Medical Officer Second Division; Surgeon-Majors H. R. Whitehead, W. C. Beevor, M.B., J. J. Gerrard, M.B., and J. Shearer, M.B., of the Second Division; Surgeon-Colonel W. E. Saunders, Principal Medical Officer on the Line of Communications.

The following are mentioned by the several Divisional Generals: Brigade-Surgeon-Lieutenant-Colonels C. H. Swayne and J. Ring, M.D., Surgeon-Majors H. B. Briggs, M.B., and T. M. Corker, M.D.; Surgeon-Lieutenant-Colonel G. D. Bourke, Surgeon-Major T. Grainger, M.D., Surgeon-Captain C. H. Burtchaell, M.B., and Surgeon-Captain W. Selby, of the Fourth Brigade; Surgeon-Lieutenant-Colonel H. Hamilton, M.D., and Surgeon-Major S. F. Bigger, M.B., on the Line of Communications; Brigade-Surgeon-Lieutenant-Colonel W. R. Murphy, D.S.O., and Surgeon-Major C. F. Willis, M.D., of the Kurram Movable Column.

THE RANK OF SURGEON-MAJOR-GENERAL.

A correspondent writes: It is difficult to understand upon what grounds, other than jealousy, the rank of surgeon-major-general is objected to. It is to be hoped Lord Lansdowne will be firm, and insist upon the medical having a full footing of equality with other branches of the service.

Deputy-Inspector-General Lennard Lucas, R.N., who met his death on March 25th by a fall from a sleeping saloon of the London and North-Western Railway, entered the naval medical service on September 22nd, 1857. He served against the Ashantis in 1873, and received the medal, and was Staff-Surgeon of the Tamar during the war against the Zulus in 1877-79. He received also the medal for this campaign, and retired in 1881, with the rank of Honorary Deputy-Inspector-General of Hospitals and Fleets.

MEDICO-LEGAL.

CHARGE OF COMMITTING AN ILLEGAL OPERATION.

We learn from a report published in the *Times* of March 30th that on the previous day at Westminster, on a warrant granted by Mr. Marsham, and executed by Chief Inspector Moore, of Scotland Yard, William Maunsell Collins, M.D., Master of Surgery, etc., at one time holding a commission in the Horse Guards Blue, now unregistered as a medical practitioner, was placed in the dock charged with committing an unlawful operation on Emily Edith Uzielli, a married woman, who died from peritonitis at her husband's residence, Buckingham Gate, on March 25th. Mr. and Mrs. Uzielli went to reside at Buckingham Gate, a house taken for the season on March 12th, and about this time Mrs. Uzielli had occasion to believe that she was *enceinte*. She complained to her husband of feeling unwell, and subsequently called the accused to attend her, which he did for several days. The lady died on March 25th. A *post mortem* examination was made by Mr. Bond, surgeon to Westminster Hospital, who had arrived at the opinion that there had been an operation with an instrument for an unlawful purpose. In reply to Mr. Arthur Newton, who appeared for the accused, Chief Inspector Moore, who had made the above statement, said that he did not understand that it was the defendant who had suggested to Mr. Uzielli the desirability of calling in a second doctor. The husband, immediately his suspicions were aroused, insisted on doing so, and the defendant acquiesced. Mr Newton said that there was no concealment from beginning to end; the accused had sent for an independent nurse, and when the lady was in a serious condition told the husband what was the matter, and suggested that another doctor should be called in. When the lady died, and before the *post-mortem* examination, the second doctor called in accused the defendant of having done something illegal. Though the charge was made and the certificate of death refused, Dr. Collins made no attempt to go away, but at once wrote a letter saying that he was most anxious to give information. Mr. Newton said the arrest was a harsh proceeding, and expressed the hope that the accused would not be kept in prison during a long inquiry. The magistrate refused bail, and remanded the prisoner for a week, certifying for the legal aid of the Public Prosecutor.

VACCINATION INQUIRY AT BATTERSEA.

At Battersea Mr. Braxton Hicks has held a protracted inquiry into the death of three children who were alleged to have died from the effects of vaccination. In lucidly and exhaustively summing up the evidence, Mr Braxton Hicks, the coroner, said he thought that the lancet should be held in the flame of a spirit lamp after each operation, and that the public vaccinator had acted wrongly in placing the lymph on his thumb-nail. The jury found that the children had died from erysipelas; that neither they nor the vaccinifer had been properly examined before the operation; and that the lancet had not been properly cleansed. They recommended that Parliament should be urged to pass the Vaccination Bill. They condemned as absolutely unjustifiable attacks that had been made on the coroner by opponents of vaccination. The public vaccinator was deeply affected. He stated that he had been thirty years in practice and had always tried to do his duty, and that these were the first mishaps he had had.

THE M.D.BRUX.: A SIMPLE SOLUTION.

L.R.C.P.E. writes: On page 863 of the British Medical Journal you state, in answer to Dr. Greenwood's protest, that you were advised by counsel that a duly registered and qualified practitioner would be liable to a penalty under Section xl of the Medical Act, 1858, if he placed a foreign unregistrable degree after his name without any indication of its origin. Section xl of the Medical Act, 1858, says: "Any person who shall wilfully and falsely pretend to be, or take or use the name or title of a physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, surgeon, general practitioner or apothecary; or any name, title, addition, or description implying that he is registered under this Act, or that he is by law recognised as a physician or surgeon, or licentiate in medicine and surgery, or a practitioner in medicine, or an apothecary, shall, upon summary conviction for any such offence pay a sum not exceeding twenty pounds."

(*a*) I am registered under the Medical Act, 1858, although I was not born till long after.

(*b*) I am by law recognised as a physician and surgeon.

(*c*) A licentiate in medicine and surgery; (*d*) and a practitioner in medicine, therefore, according to your answer to Dr. Greenwood's protest, if I obtained the M.D.Brux. to morrow, and if I placed M.D. alone after my name, I imply that I am registered under the Medical Act. Dr. Greenwood can settle this question once for all by getting a registered medical practitioner who has obtained the M.D.Brux. within the last ten years to put M.D. on his door plate, and if he is fined £20, which I doubt, I will contribute my mite.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

First Professional Examination.—The following candidates have passed in the subject of Botany for this examination:

W. Alston, A. W. Atkinson, Nuimg Ba, Nina H. Beath, M. N. Rose, R. D. Brown, D. G. Carmichael, P. D. Cremona, C. W. C. Crooke, W. J. Crow, N. S. Cuthbertson, W. H. Elder, S. Garvin, E. C. Grimson, W. Goodchild, A. Grant, H. W. Gush, P. J. Hay, J. H. Jones, J. N. Karma, P. G. M'Caughey, R. J. M'Clelland, F. D. S. Mackenzie, R. Morrison, R. S. Munro, E. G. O. Nixon, J. L. Palmer, H. St. J. Randall, A. Rose, F. E. Ross, F. L. Rigby, W. A. Robinson, J. M. Taylor, E. Wells, H. Whittaker, and D. Young.

UNIVERSITY OF GLASGOW.

The following have passed the First Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B. Botany; Z., Zoology; P., Physics; C., Chemistry):

W. K. Anderson (Z., C.), W. Armitage (C.), T. Ballantyne (C.), A. G. Banks (Z., C.), A. Baxter (B., P.), A. F. Bell (Z., C.), W. K. Blackwood (Z.), G. T. Bogle (C.), T. F. Bowie (B., Z.), R. Bruce (Z., P.), R. Bryson (B., Z., P., C.), E. C. Burnett (B., C.), J. M. H. Caldwell (B.), A. Campbell (Z., P.), J. J. Y. Campbell (B., P., C.), R. D. Campbell (C.), D. L. Carmichael (B., P.), E. S. Chapman (C.), W. B. Chapman (Z., C.), G. H. Clark (C.), S. G. Cowan (Z., C.), J. S. Dale (B., C.), D. W. Davidson (B., P.), A. Dick (Z., C.), M. I. Dick (B., Z.), H. M'M. Donaldson (B., Z.), W. Dow (Z., P.), W. Elder (B.), G. Ferguson (B., C.), J. Ferguson (Z., P.), W. W. George (B.), J. P. Gilmour (Z., C.), J. M. Gordon (Z., P.), J. Guthrie (Z., C.), J. A. Hagerty (B., C.), D. Haig (B., Z.), S. H. Harris (Z., C.), R. D. Hodge (Z., C.), J. M. Huey (Z., C.), J. B. D. Hunter (Z., C.), M. Hunter (B., P.), W. J. Isbister (C.), G. R. Jeffrey (Z., C.), W. F. Kay (Z.), A. D. Kennedy (Z.), A. M. Kerr (Z., C.), D. R. Kilpatrick (B., Z.), A. King (C.), J. Lambie (C.), A. Leggat (Z., C.),

S. E. Lewis (B., Z., P.), W. J. Logie (Z., P.), T. W. Love (C.), T. Lovett (P., C.), R. H. Manson (B., Z.), R. Menzies (Z., C.), A. J. Mitchell (C.), A. D. Mitchell (B., P., C.), S. J. Moore (B., P.), C. Macdonald (P.), A. A. Macfarlane (Z., C.), A. Macintyre (Z., C.) A. Maclean (B., Z.), H. A. M'Lean (C.), J. Maclean (B.), A. M'G. M'Millan (B., Z.), G. W. M'Millan (B., Z., P., C.), D. H. Macphail (Z., C.), A. A. M'Whan (Z.), J. S. Nicolson (Z., C.), J. D. Nisbet (B.), R. Orr (B. P.), J. Paton (B.), A. M'M. Pollock (B., Z., C.), J. N. Prentice (C.), T. Rankine (Z.), A. R. Reid (C.), J. M. Reid (Z., C.), J. W. Renton (P., C.), T. R. Rodger (P., C.), N. C. Rogers (P., C.), E. H. Ross (P., C.), J. Russell (Z.), J. Samson (Z., C.), D. Sandler (Z.), R. C. J. Schlomka (Z. C.), F. D. Scott (B., P.), M. B. G. Sinnette (P.), R. C. Smith (B., C.), D. Steel (C.), J. Stewart (Z. C.), J. Stewart, M.A. (Z.), J. B. Stewart (Z., C.), J. A. Thom (Z., C.), W. W. Turner (Z., C.), R. Wallace (Z., C.), T. I. Wallace (Z., C.), A. B. Watt (B., P.), P. M. Waugh (P., C.), J. F. Weston (P.), A. S. Wilson (B., C.), D. A. Wilson (B.), J. Wilson (B., C.), J. Wyper (C.), W. Young (Z., C.).

Women.—J. Campbell (P., C.), M. Edgar (P., C.), J. B. Higgins (B., Z.), E. MacL. Lochhead (P., C.), A. Moorhouse (P., C.), E. A. E. M'Cosh (P., C.), E. J. M. Pryce (P.), M. H. Scott (P., C.), E. M. Waldock (B., Z., P.), E. C. Wallace (P. C.).

The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):

G. Arthur (A., P.), G. Barbour (A.), J. C. Barclay (A., P.), T. T. Bathgate (A., P.), A. Binning (A., P.), H. E. Brown (A., P.), W. H. Brown (A., P.), J. D. Brownlie (A., P.), W. A. Burns (P.), T. Carruthers, M.A. (M.), E. P. Cathcart (A., P.), J. T. Clark (A.), R. Clark (A., P.), D. M. Cowan (M.), G. M. Crawford (M.), C. C. Cuthbert, M.A. (A., P.), A. W. W. Davidson (M.), J. Davidson, M.A. (A., P.), J. A. Dickie (A., M.), F. L. Dickson (P.), J. P. Duncan (A., P.), L. Findlay (A., P.), C. MacG. Finlay (M.), D. J. Fletcher (M.), J. Forrest (A., P.), A. Fraser, M.A. (A., P.), M. W. Fraser (A.), G. Gardner (M.), J. Gardner (M.), G. Garrey (A.), J. Gemmell (M.), E. Gillespie (A., P.), H. Goodman, M.A. (P.), J. Gracie (A.), J. M. Henry (A., P.), I. M. Huey (A., P.), T. H. Jack (A., P.), P. Jones (M.), J. Kennedy (P.), N. M. Leys (A.), J. D. Lickley (A., P.), D. M'F. Livingston (A., P.), A. Logan (A., P.), D. D. Logan (M.), R. Lunan (P.), J. Mains (A., P.), A. Mair (A., P.), R. MacN. Marshall (A., P.), A. Martin, M.A. (A., P.), W. A. Mills (P.), E. Mitchell, M.A. (M.), A. R. Moir (M.), P. Moir (A., P.), D. Morrison (M.), J. W. M'Dougall (M.), A. G. M'Kendrick (M.), G. S. M'Kinnon (P.), J. Mackinnon (A., P.), G. T. Maclean, M.A. (P., M.), W. J. Maclure (M.), A. R. Maclurkin (M.), B. M'Phee (M.), T. Neill (M.), D. S. Paterson (A., P.), R. Paterson (A., P.), T. S. Picken (M.), W. B. I. Pollock (A., P., M.), P. M. Reid (A.), K. Rennie (P., M.), J. D. Richmond (A., P.), D. Russell (A., P.), D. Shannon (A.), E. W. Sharp (A., P., M.), J. S. Smith (A., P., M.), W. S. Stalker (A.), A. Stewart (P.), F. R. Stewart, M.A. (P.), R. Taylor (M.), R. B. Thom (M.), J. S. Townley (M.), J. C. Turnbull (A., P.), A. E. Wainwright (A., P.), G. H. Wildish (M.), M. W. Williams (P., M.), A. Wilson (M.), T. W. Wilson (A., P.), W. W. W. Wilson (P.), H. P. Wright (A.), J. Young (A., P.).

Women.—G. J. Campbell (A., P.), L. T. Fraser (A., P., M.), H. M. Gordon (M.), L. S. Greig (A., P.), M. F. Liston (A., P., M.), J. M. F. Marshall (A., P., M.), K. M. Myhre (M.), M. M. Ritchie (A. P.), M. A. T. Ritchings (M.), C. C. W. Smith (A., P., M.), M. Talbot (A., P.), E. M. S. Walker (M.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):

J. N. Baxter (P., M.), J. F. Bennett (P.), W. Broad (P., M.), T. B. Calland, (M.), A. H. Cassells (P., M.), J. R. Chalmers (P.), W. Crerar (P.), J. Cullen (P., M.), C. C. Cumming (P., M.), J. L. Davie (P., M.), D. C. Douglas (P.), J. Drummond (P.), B. Dunlop (P., M.), H. C. Ferguson, (P.), W. Gibson (P.), J. G. Green (P.), T. Inglis (P., M.), A. Kerr (P.), A. S. Lang, (M.), J. W. Leitch, M.A. (M.), R. Millar (P.), H. Miller (P.), E. W. milne (P.), J. H. Macdonald (P.), P. M'Fadyen (P.), J. M'Gilchrist (P.), C. F. Maclean (P.), N. F. Macleod (P.), J. M'Millan (P., M.), J. Patton (P., M.), J. Reid, Lanark (P., M.), W. A. Riddell (P.), A. Robin (P.), J. Scott, M.A. (P.), D. J. Smith (P.), J. J. Smith (P., M.), W. H. Steel, B.A. (M.), P. A. Steven (P.), F. Stevenson (M.), A. G. Stewart (P.), C. P. Thomson (P.), W. B. Thomson (P.), A. Vost (P., M.), A. L. Watson, M.A. (P.), A. S. Wells, M.A. (P.), R. O. Whyte, M.A. (P.), W. Wright (P.), J. D. Young (P., M.).

Women.—J. D. Granger (P., M.), J. Grant (P., M.), M. Hardie (P.), J. S. B. Hunter (P., M.), M. Longmire (P., M.), I. L. M'Neill (P., M.), J. E. Prowse (M.), S. M. Robertson (P., M.), C. L. Smith (P., M.), G. F. F. Taylor (P., M.), S. Whiteford (M.), G. L. Young (P., M.).

UNIVERSITY OF ABERDEEN.

DEGREE OF M.B., C.M. (OLD REGULATIONS).—The following candidates have satisfied the examiners:

J. S. Purdie, R. S. Trotter, W. Cartwright, E. St Clair Henriques, W. Cromer, W. K. Glover.

Mr. Henriques has passed both Second and Third Professional Examinations.

DEGREE OF M.B., CH.B. (NEW REGULATIONS).—The following have satisfied the examiners:

A. W. C. Young, G. Mowat, J. Mackay, W. Tuach, C. C. Storach, E. B. Wilson, D. Sievwright, T. F. Ritchie, J. M. Cowie, E. A. Thomson, A. Urquhart, G. F. Petrie, J. M. Petrie, D. R. Moir, J. E. Esslemont, D. J. Kelly, W. S. Clark.

UNIVERSITY OF VICTORIA.

FACULTY OF MEDICINE: FINAL EXAMINATION.—The following candidates have satisfied the examiners:

Part I.—J. W. Aldred, Owens; F. H. Allen, Owens; G. Carter, Yorks.; W. Cunliffe, Owens; C. A. Dixon, Yorks; H. Dunk, Yorks.; J. T. Grierson, Univ.; I. W. Hall, Owens; W. S. Henderson, Univ.; J. E. W. McFall, Univ.; R. A. Needham, Owens; W. F. Oyston, Yorks.; J. A. Reed, Yorks.; C. R. Schofield, Owens; W. A. Stott, Yorks.; W. H. Tattersall, Owens; W. Thompson, Owens.

Part II.—W. Bradley, Owens; W. J. S. Bythell, Owens; †H. J. Crompton, Owens; H. Davies, Owens; *R. Kelsall, Owens; H. A. Mawdsley, Univ.; W. T. Melling, Owens; J. Milne, Owens; S. C. Moore, Univ.; *D. S. Wylie, Owens.

* First class honours. † Second class honours.

FACULTY OF MEDICINE: SECOND EXAMINATION.—The following candidates have satisfied the examiners:

A.—Anatomy and Physiology.—G. Ainsworth, Owens; A. Anderson, Owens; E. W. Anderton, Yorks.; J. T. Bailey, Owens; A. D. Beckett, Owens; P. Benington, Univ.; A. T. Blease, Owens; J. E. Bolton, Yorks.; H. Brown, Yorks.; P. I. Caddow, Univ.; A. C. Clarke, Owens; R. Cook, Univ.; E. R. Cooper, Owens; J. L. Dimond, Univ.; T. H. B. Dobson, Owens; W. F. Ellis, Yorks; D. J. Ferris, Owens; M. Gamble, Owens; J. P. Good, Owens; R. Gordon, Owens; F. G. Hack, Owens; C. R. Hall, Owens; F. W. Harrowell, Yorks.; A. R. Jackson, Univ.; L. C. Johnson, Univ.; R. E. Kelly, Univ.; R. Lawrence, Owens; C. H. Lee, Owens; J. McIlraith, Owens; ‡J. C. Mann, Univ.; A. F. Martin, Yorks.; P. A. H. Radcliffe, Yorks.; H. W. Russell, Owens; J. H. Sutcliffe, Yorks.; T. Tierney, Owens; C. R. Willans, Yorks.; T. B. Williams, Owens; W. J. Woodyatt, Owens; W. A. B. Young, Owens.

‡ University Scholar in Medicine.

B.—Materia Medica and Pharmacy.—J. L. Beddoes, Univ.; W. H. Broad, Univ.; P. I. Caddow, Univ.; B. H. Hirst, Yorks.; A. S. Hopper, Univ.; W. C. Johnson, Owens; R. S. Nichol, Owens; C. A. Ricketts, Owens; N. M. Rodgers, Owens; C. W. S. Saberton, Owens; E. Swales, Univ.; G. Taylor, Owens; R. N. West, Owens; H. M. Williamson, Owens; P. G. Williamson, Owens.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,974 births and 4,342 deaths were registered during the week ending Saturday last, March 26th. The annual rate of mortality in these towns, which had increased from 20.7 to 21.8 per 1,000 in the three preceding weeks, declined to 20.2 last week. The rates in the several towns ranged from 12.9 in Derby, 14.5 in Blackburn, 15.5 in Croydon, and 15.9 in Norwich to 25.0 in Oldham, 25.1 in Preston, 25.4 in Bradford, and 31.2 in Swansea. In the thirty-two provincial towns the mean death-rate was 20.3 per 1,000, and was slightly above the rate recorded in London, which was 20.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the death-rate was equal to 3.3 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic rates were 3.1 in Bradford, 4.0 in Leicester, 4.8 in Bristol, and 5.3 in Oldham. Measles caused a death-rate of 2.0 in Swansea, 2.2 in Halifax, 2.8 in Oldham, 3.8 in Bristol, and 4.0 in Leicester; whooping-cough of 1.0 in Leeds, 1.1 in Oldham and in Hull, and 1.5 in Gateshead; and "fever" of 1.1 in Oldham. The mortality from scarlet fever showed no marked excess in any of the large towns. The 82 deaths from diphtheria in the thirty-three towns included 53 in London, 5 in West Ham, 5 in Cardiff, and 3 in Birkenhead. One fatal case of small-pox was registered in Leeds and 1 in Sunderland, but not one in London or in any other of the thirty-three large towns; and 1 small-pox patient was under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 26th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,419 in the seventeen preceding weeks, had further fallen to 2,371 on Saturday last, March 26th; 189 new cases were admitted during the week, against 175, 197, and 255 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 26th, 1,033 births and 692 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had 25.0 and 24.1 per 1,000 in the two preceding weeks, further declined to 22.9 last week, but exceeded by 2.9 per 1,000 the mean death-rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.3 in Greenock and 17.8 in Aberdeen to 23.4 in Edinburgh and 25.1 in Glasgow. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Perth and Glasgow. The 349 deaths registered in Glasgow included 21 from measles, 19 from whooping-cough, 2 from "fever," and 2 from scarlet fever. Three fatal cases of scarlet fever and 2 of diphtheria were recorded in Edinburgh.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a marked further increase last week. The fatal cases of this disease, which had been 33 and 36 in the two preceding weeks, further rose to 53 during the week ending Saturday last, March 26th; this number was higher than in any previous week during this year, and was 17 above the corrected average. Of these 53 fatal cases, 7 were of persons belonging to Hackney, 5 to St. Pancras, 5 to Battersea, and 4 to Bethnal Green sanitary areas. The notifications of diphtheria in London, which had been 215, 185, and 231 in the three preceding weeks, were 226 during the week ending Saturday last, March 26th. Compared with the previous week there was an increase in the prevalence of the disease in North and Central London, while in West, East, and South London there was a decline. Among the sanitary areas of West London, there was a slight further increase in the number of new cases notified in Fulham; but in Kensington and in Paddington, there was a marked decline in the number of new cases.

The increase in North London was due to greater prevalence of the disease in Marylebone and in Hackney; in the latter sanitary area 24 new cases were notified, against 10 and 18 in the two preceding weeks. In nearly all the sanitary areas of Central London there was an increase in the prevalence of diphtheria, which was most marked in Strand, Holborn, and St. Luke. Among the sanitary areas of East London the number of new cases showed a considerable decline in Shoreditch and in Poplar; in the latter sanitary area 9 new cases were notified, against 14 in the preceding week. In Whitechapel, Bethnal Green, and Mile End Old Town, however, there was a slight increase in the number of new cases. In most of the sanitary areas of South London there was a decline in the prevalence of diphtheria last week, especially in Camberwell, where only 2 new cases were notified, against 14 and 12 in the two preceding weeks. On the other hand, in Lambeth there was a marked further increase in the prevalence of the disease, 14 new cases being notified, against 8 and 9 in the two preceding weeks; and in Greenwich the 14 new cases also showed a further increase upon recent weekly numbers. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 133, against 127, 122, and 143 in the three preceding weeks; and 1,022 cases remained under treatment in these hospitals on Saturday last, March 26th.

LONDON WATER COMMISSION.

At the resumed meeting of the Royal Commission on March 28th, Mr. Whitmore was recalled and further examined. He expressed the opinion that the London County Council should not be entrusted with the management of any very large body of labour, such as the employees of the water companies, because of the liability to raise wages with political motives. Mr. G. Prior Goldney, the City Remembrancer, was the next witness. He pointed out in the course of his evidence that, as the City paid one-eighth of the rates of the whole metropolis, it would, in the event of the purchase, have to find one-eighth of the purchase money, and pay one-eighth of the increase, if any, in the water charges.

RATES OF MORTALITY IN DIFFERENT PARTS OF THE PARISH OF LAMBETH.

In an important report presented to the Lambeth Vestry on March 17th, Dr. Priestley, the Medical Officer of Health of Lambeth, discusses the cause of the high death-rates recorded during 1897 in certain parts of the parish. While the total (corrected) death-rate for the whole parish compares favourably with that for the whole of London, it appears that there are certain parts of the parish in which very high rates of mortality prevail. The satisfactory general death-rate results from the inclusion with the areas in which the death-rate is abnormally high of other outlying areas much more favourably circumstanced. Thus, while in four outer districts the mean average death-rate is 15.1 per 1,000, and the infantile mortality 132.5 per 1,000 births, in the four inner districts the death-rate is 32.9 per 1,000, and the infantile mortality 216.3 per 1 000 births. Again, "taking the chief zymotic diseases as a whole, the inner districts suffered twice as much as the outer, while in the case of measles and whooping-cough together, the proportion per 1,000 of the inhabitants to succumb was three and a half times as great, and in the case of diarrhœal diseases twice as great, in the inner as compared with the outer districts." Further, Dr. Priestley finds undue prevalence in the inner districts of the diseases attributable to "want of light, ventilation, and sufficient air space, overcrowding, sewer or drain gas, want of personal cleanliness, dampness, low-lying sites, etc., coupled with general poverty, intemperance, and ignorance."

The existence of evils in these inner districts which urgently call for action is conclusively demonstrated by facts enunciated in the report and the tables which it contains. As regards remedies, Dr. Priestley makes several recommendations: scavenging should be more efficiently carried out, open spaces secured in the densest portions of the inner districts, houses unfit for habitation closed, by-laws as to houses let in lodgings systematically enforced, periodic inspection with examination of drains undertaken.

He suggests that much benefit would be derived from employing (*a*) a female sanitary inspector who should make systematic house-to-house visitations in the poorer districts, and (*b*) a special inspector to devote his whole time to the carrying out of the by-laws as to houses let in lodgings. It appears that when the last addition was made to the inspectorial staff the appointments were "confirmed by the Local Government Board, with a proviso that a further report should be presented after twelve months to the Board by the Medical Officer of Health for Lambeth as to the necessity for a still further increase of the Lambeth inspectorial staff."

In the light of the present report the necessity for such further increase is abundantly apparent.

PUERPERAL FEVER AND NOTIFICATION.

The Bethnal Green Vestry, acting doubtless on the advice of Dr. Bate, their medical officer of health, have passed the following resolutions:

"That considerable uncertainty exists as to what diseases should be reported to the medical officer of health under Section LV of the Public Health (London) Act as 'the fever known as puerperal'; they have also ascertained that, owing to its indefinite meaning, the term 'puerperal fever' has been expunged from the official nomenclature of diseases, and therefore recommend that the London County Council be requested to take the necessary steps under Section LVI (6) of the Public Health (London) Act, to add to Section LV (8) of the same Act the names of the diseases included under the heading of 'puerperal fever' by the Registrar-General, namely, 'Both peritonitis and metritis, when occurring in connection with parturition, as well as puerperal pyæmia, puerperal septicæmia, and puerperal sapræmia.'" Many persons think that the inclusion of puerperal fever among those diseases, notice of which must be given by the practitioner to the medical officer of health, was a mistake. They argue that epidemics of the zymotic diseases can be controlled and often prevented by means which the medical officer of health, by virtue of the powers entrusted to him, can employ, but that no such thing as an epidemic of puerperal fever has ever been known to occur. (A sequence of cases in the practice of a dirty-fingered midwife, it is argued, is not an "epidemic" in the true sense of the word, which denotes a disease affecting a people or community). On the other hand, the reasons assigned for requiring the notification of puerperal fever are, first and foremost, that it affords some opportunity of obtaining control over "dirty persons," midwives, or others; and secondly, that it gives an opportunity for examining the dwelling and obtaining an order for the correction of gross sanitary defects and overcrowding. But accepting the legal obligation to report such cases, the addition suggested by the Bethnal Green Vestry seems to us a good one. We would suggest that after "peritonitis" "cellulitis" might be inserted, and after "puerperal" where the word first occurs, the words "or childbed." It should be understood that the new words are explanatory and not to be regarded as a complete definition of everything included under the head of "the puerperal fevers."

Pilula had recently occasion to notify three cases of puerperal fever in the practice of one midwife. The medical officer of health suspended the latter, who goes about saying that our correspondent is the cause of her suspension. He feels that the medical officer of health has given him away, that he should have taken the entire responsibility for his action. "Pilula" has been told—he does not say by whom—that the medical officer of health asked the midwife if she was friendly with him.

*** We certainly regard notifications under the Act as, generally speaking, confidential communications and largely covered by the Hippocratic oath. Is it quite clear, however, that it was the medical officer of health who gave the information to the midwife? Would she not know that "Pilula" had attended each of her unfortunate patients, and, being a woman, would she not jump at the conclusion that he had reported them to the medical officer of health? The quotation from the medical officer of health is clearly not at first hand and is quite open to some such interpretation. We can assure our correspondent that the woman's abuse will do him no lasting harm, and that he has probably done an important service to the poorer lying-in women of his district by his prompt notification. We quite agree with him that the medical officer of health should take the entire responsibility of dealing with the woman, and that it is no part of his duty to throw any share of it, that can be helped, upon the practitioner.

VERIFICATION OF DIAGNOSIS.

Practitioner.—It is not under ordinary circumstances incumbent on a M.O.H. to assure himself of the accuracy of a brother practitioner's diagnosis in a case, say, of scarlet fever. Occasionally it may be done as an act of pure friendliness to a junior practitioner. It is no uncommon thing for relatives to resent, somewhat indignantly, the notion that scarlet fever exists in their house, and even to abuse the doctor who has so certified. A word from an older practitioner will sometimes allay this feeling. As a rule, however, unless the patient has to be removed to hospital, the M.O.H. is wiser not to enter the sick room. Our correspondent might refer to the British Medical Journal of March 12th, p. 734.

MEDICAL ORDERS WITHOUT NON-MEDICAL RELIEF.

T. W. S. asks if persons who have been refused relief by the guardians or who have had relief pay stopped are entitled to a note from the relieving officer for free medical attendance by the district medical officer.

*** The fact of non-medical relief having been refused by the guardians or having been stopped does not prevent the relieving officer issuing an order for free medical attendance in the same cases if he thinks proper to do so.

HOSPITAL AND DISPENSARY MANAGEMENT.

NEW POOR-LAW INFIRMARY FOR ISLINGTON.

Of recent years there has been a rapid growth in the number of poor in the parish of Islington, and at the present time the guardians have no fewer than 7 600 in their charge. This increase is most probably due to the neighbouring parishes of Holborn and Shoreditch being more and more given over to warehouses, and the consequent crowding out of the inhabitants of the replaced tenements. Under these circumstances increased infirmary accommodation has become imperative. On March 23rd Mr. G. S. Elliott laid the foundation stone of the new infirmary at Highgate Hill, which is to provide accommodation for 800 patients in 28 wards.

INDIA AND THE COLONIES.

INDIA.

Vaccination in Burmah.—In the report for 1896-97 submitted by Surgeon-Colonel D. Sinclair, M.B., the work done in Lower Burmah is shown separately from that done in Upper Burmah. Under the orders of the Local Government the results for the whole province are to be presented in one series of tables—a more rational and convenient plan. Vaccination is making rapid advances in Burmah. The figures for the year under report are the highest yet attained. In 1887-88 vaccinations in Lower Burmah numbered 68,159, and in 1896-97, 269,684. In Upper Burmah the total has risen from 33,080 in 1889-90 to 127,634 in 1896-97. The percentage of successful vaccinations in the former amounted to 55.44, and in the latter to 33.60, against 31.56 and 21.11 in the preceding quinquennium. The cost

of vaccination is mainly defrayed by municipalities and local funds in Lower Burmah; but in Upper Burmah Government provides most of the money. Inspection is pronounced insufficient and unsatisfactory by the administration, and various shortcomings are pointed out in the amount and character of the work. A diagram is given showing the proportion of population protected in the several districts during the seven years ending 1896-97, and the mortality from small-pox in 1897. No definite conclusion can be drawn from such a comparison, but it is shown that for the whole province, while the vaccination-rate has increased, the small-pox-rate has declined.

The Sanitary Administration of Burmah.—The report for 1896 has been prepared by Surgeon-Colonel D. Sinclair, M.B. The province is still very backward in sanitary matters and the registration of vital statistics very imperfect; in Upper Burmah it is limited to a few towns. The figures collected in 1896 give a birth-rate of 32.27 and a death-rate of 23.63 per 1,000. Great variations are manifest in comparing different areas, and, apart from doubtful returns, free immigration still further detracts from the accuracy of the ratios. Cholera was severe in some districts of Lower Burmah, and, curiously, caused a higher mortality in rural than urban circles. Small-pox caused considerable mortality, and, as usual, was most fatal among infants and children. Fevers accounted for very nearly one-half of the total deaths, and bowel complaints were rife and fatal. The dry months (February, March, and April) are the healthiest in Burmah, and the wet (July, August, and September) the least healthy. The urban and rural authorities spent about 35 per cent. of their income on sanitary work, but, except in the large municipalities, it has been of a primitive kind, no important schemes of water supply or drainage having been carried out. It is hoped that the appointment of a sanitary engineer, which was to take place in November, 1897, will expedite such measures. Meantime surveys were being made in anticipation.

Sanitary Administration of Madras.—The Sanitary Board in this Presidency has been reconstituted, and is composed of the chief engineer to the Government (who is president), the surgeon general, and a member of the Civil Service. The sanitary commissioner and sanitary engineer work under the Board in concert or separately according to circumstances, and on certain subjects continue to communicate directly with Government. The Sanitary Report for 1896 contains reports submitted by all these authorities and a review of the whole by the Government. The year was on the whole a healthy one. There was a deficient rainfall in some districts, and the prices of food stuffs rose in consequence of exportation to the famine tracts. The birth-rate of the year was 26.7 and death-rate 20.6 per 1,000 of estimated population. Registration is still imperfect in many parts, but arrangements are being made for its improvement. Cholera prevailed throughout the Presidency, in some places rather severely, and small-pox was also bad in some districts. In the year 1896 the amount of fever was moderate, and bowel complaints were about the average. Sanitary works are being executed in several towns, and the sanitary condition of villages is under close attention. "Village sanitary inspection books," which are to constitute a permanent record of their sanitary state, have been started. "The scheme for replacing the unqualified sanitary inspectors of municipal towns by certified and trained officers was also brought into force."

Medical Institutions of the City of Bombay.—The report for 1896 is written by Brigade-Surgeon Lieutenant-Colonel G. W. R. Hay, M.D., Acting-Surgeon-General. The number of institutions, namely, eleven, underwent no change, and 16,233 indoor and 85,148 outdoor patients were treated, the mortality among the former being 10·6 per cent. The attendance was somewhat smaller than in the preceding year, owing to the exodus of inhabitants and the panic caused by the plague. The number of deaths in the city attributed to this cause, from September 22nd to the close of the year was 1,803; but as the excess of deaths from all causes during this period was 6,158, it is thought that most of it was due to plague, though registered under other names. Of the number treated, 56.9 per cent. were men, 24.5 women, and 18.6 children. Two of the hospitals are restricted to the two latter classes. In the Leper Asylum 300 patients were under treatment throughout the year, the deaths amounting to 19.2 per cent. "The thyroid-gland treatment was extensively tried, but without any benefit to the patients." Surgical, general, and obstetrical operations to the number of 40,704 were performed. Many of them were of course of a trivial description. Government contributed 71.6 per cent. of the expenditure Rs.29,602 were received from paying patients for diet. The whole of this was recovered in the St. George's Hospital, the patients in the remaining institutions being too poor to pay for either diet or treatment.

Vaccination in the North-Western Provinces and Oudh.—The results for the year 1896-97 were good, showing a substantial advance on the preceding year, notwithstanding that the famine interfered greatly with vaccine work. More children were found to be unfit for vaccination, and the vaccinators were employed largely on famine and plague duty. The successful vaccinations bore a ratio of 28.87 per 1,000 to the population of the province. In municipalities the ratio was 38.55, and that of the preceding five years for the whole province 23.92. These figures fall considerably short of the birth-rate, and the successful vaccination of infants under 1 year constitutes only 35 per cent. of the year's births. The ratio of success, number vaccinated by each vaccinator, and cost of each successful case are satisfactory, and vaccination in these provinces is undoubtedly progressive. Small-pox, which has since the year 1892 been inconsiderable and diminishing, prevailed extensively in 1896, the mortality amounting to 0.1 per 10,000 of population. The best protected districts show on the whole smaller rates and *vice versâ*, but the rule is by no means universal. The Sanitary Commissioner, Surgeon-Major S. J. Thomson, who submits the report, remarks that the disease did not particularly affect the districts in which scarcity was most prevalent.

The Punjab Nursing Association.—This institution will commence work on April 15th. The home for the nurses will be located at Kussowlie (a hill sanitarium). Miss Macpherson (well known in the Punjab) has accepted the post of Lady Superintendent, and will receive all applications for the services of nurses.

Sanitation at Barrackpore.—Malaria being largely on the increase at this station, not far from Calcutta, an extensive drainage scheme is now being carried out. Several of the existing tanks are being filled up, and every effort is being made to improve the subsoil of the station.

MEDICAL NEWS.

Mr. Edward Thew Turnbull, of Roos, Yorkshire, has been awarded for the fourth time in succession the Government grant for efficient vaccination.

Professor W. J. Simpson will read a paper dealing with Observations on the Rinderpest of Calcutta at the meeting of the Epidemiological Society on April 15th.

The Royal Institution.—The Friday evening meetings of the Royal Institution will be resumed after Easter on April 22nd, when the Astronomer Royal, Mr. W. H. M. Christie, will give an address on the recent eclipse.

Academy of Medicine in Toronto.—The *Canadian Journal of Medicine and Surgery* for March announces that the various medical societies of Toronto are likely to be amalgamated into an Academy of Medicine.

Good eyesight is not decreasing among Germans in the army. On the contrary, according to statistics furnished by Surgeon-General Seggel, the proportion of recruits endowed with more than the normal power of vision is now 92 per cent., whereas in 1873 it was not more than 56.

We are asked to state that the Hospital Reform Association propose to hold a meeting at Edinburgh, during the week in which the British Medical Association meets there, in order to discuss the hospital system in Scotland and dispensaries both provident and free. Those who may be disposed to take part in the proposed meeting should communicate with Dr. T. Garrett Horder, 10, Windsor Place, Cardiff.

The annual mess of the Volunteer Medical Staff will take place at Limmer's Hotel, Hanover Square, W., on Wednesday, May 4th, when Sir Joseph Fayrer, Bart., K.C.S.I., M.D., F.R.S., Hon. Surgeon to the Queen, will preside. Volunteer medical officers wishing to be present should communicate with Surgeon-Captain Rory Fletcher, Croome, Streatham Park, S.W., the Honorary Secretary.

Typhus Fever in London.—The notification returns issued by the Metropolitan Asylums Board show that 5 cases of typhus fever were certified from Western Dwellings, North Kensington, on March 21st and 22nd, ; 2 of the cases had been under treatment since March 14th and 16th respectively. The ages of the patients varied from 18 to 24 years, with the exception of one, which occurred in a child aged 2.

The will of Mr. Ernest Hart has been proved, and shows personal estate of the gross value of £15,966, and of the net value of £12,114. The executors of the will are his widow, Mr. Stephen Hyam, solicitor, and Sir Ernest Clarke. Mr. Hart bequeathed to the trustees of the British Museum the signet ring of Anemophet, King of Thebes, and he appointed the trust fund of the settlement made on his first marriage to his sisters. After a few legacies to his relatives and servants he left his residuary estate to Mrs. Hart.

The International Hygienic Congress at Madrid.—We are requested to state that Messrs. T. Cook and Son, Ludgate Circus, have made arrangements with the French railway companies by which they can issue first-class tickets to Irun and back *viâ* Calais and Paris for £6 15s. each. The "identification cards" required to obtain the reduction on the Spanish railways can be procured by members from the Honorary Treasurer, Professor Corfield, 19, Savile Row, from whom all information with regard to tickets, etc., can be obtained.

The Medical Profession in Germany.—During the academic year 1896-97 the number of persons admitted to the medical profession in Germany was 1,284, showing a slight decrease as compared with 1895 96, when the number was 1,374, and with 1894-95, when it was 1,357. The largest number of admissions on record was in 1890-91, when the output of new doctors in the Fatherland was 1,570. Taking the States forming the German Empire severally, the number of new admissions during the last year was in Prussia 556, in Bavaria 388, in Saxony 115, in Baden 88, in Alsace-Lorraine 43, in the Thuringian States 28, in Würtemburg 19, and in Hesse 16.

Antivivisection in India.—The Committee of the Indian Antivivisection Society has addressed a circular letter to the Native Princes of India asking them to desist from giving their patronage and support to the Indian Princes' Victoria Health Institution on the ground that they should not support an institute where animal life may be tortured and sacrificed with the best intentions imaginable.

Male Nurses.—We are informed that the fourth year of working of the Male Nurses (Temperance) Co-operation, 10, Thayer Street, Manchester Square, W., has been most successful. The average earnings, after paying all expenses, of each man have been at the rate of £102 3s. This result, we are informed, has been attained by making moderate charges, and by careful management in maintaining an adequate but not too large staff. The staff has been considerably increased during the year. A sick fund was established at the beginning of the year, but has been drawn upon only to the extent of 5½d. a member.

Oldham Vigilance Committee and Medical Reform.—At a special meeting of the medical profession of Oldham and the neighbourhood convened by this Committee on March 22nd, under the chairmanship of Dr. James Corns, an address on medical reform was given by Mr. R. B. Anderson, and a resolution was adopted pledging the meeting to support the course taken by the Corporate and Medical Reform Committee. The Chairman gave a short account of the work done by the Vigilance Committee, including a resolution accepted by all the practitioners in and around Oldham pledging them not to accept office in any medical aid society. He believed that by this means the profession of Oldham had been saved trouble and loss.

The Medical Service of the United States Navy.—The United States Navy is suffering from a dearth of candidates for its medical service to an extent relatively almost as great as our own army, and from a like cause. The Surgeon-General has therefore recommended that authority be granted immediately for enlisting acting assistant surgeons for ships to be placed in service and on auxiliary cruisers that may be impressed by the Government. There are already eighteen vacancies in the lower grade of the medical corps, and in the event of war the medical department would be seriously crippled. Even now there are not sufficient medical officers of the lower grades to meet the requirements of the navy, and the Surgeon-General recommends that the obnoxious regulations which have rendered the service so unpopular be removed, and at the same time that he be authorised to enlist any number of acting assistant surgeons deemed necessary.

Proposed Increase of Direct Representatives.—The President and other members of the Corporate and Medical Reform Committee have addressed a letter to the direct representatives on the General Medical Council for England, Scotland, and Ireland respectively, requesting them to take steps to procure that the General Medical Council at its approaching meeting should consider a petition setting forth the expediency of conferring on the registered practitioners of England, Scotland, and Ireland respectively the power of returning an additional member to the Council. The letter also requests the representatives to adopt an attitude of uncompromising opposition to the registration of midwives, which, it is stated, by "creating an imaginary and non-existent boundary line between natural and other cases, removes from timely medical attendance a great number of cases in which it is essential to the health and lives of the people, and is a retrogression from the progress of civilisation, and would be a blot upon civil government." The letter further requests the direct representatives "to meet the demand for an alternative by the sound policy of enforcing and strengthening existing laws against fraud, injury, and manslaughter by ignorant and incompetent practitioners of every class, including midwives."

Fire at Dundee Royal Infirmary.—On March 25th a somewhat alarming outbreak of fire occurred in the roof over one of the female medical wards. The alarm was given from outside, and Dr. Fraser, the Medical Superintendent, took prompt measures for the removal of the patients and for checking the fire. The house is fortunately well supplied with water, but the fire had got a good hold, and the ward ceiling was scorched before the last of the patients were removed, and it shortly afterwards fell in. This gave much better access to the burning part, and the ready service of the large staff of workmen engaged at the new Maternity Hospital, as well as of the medical staff and some of the directors, enabled the ward to be cleared of patients and furniture in an incredibly short time, and by the arrival of the Fire Brigade the fire was well within control. The volume of water used soon began to find its way to the wards below, so that these had also to be cleared of patients; and though the use of a vacant ward for the female medical patients made things easier, it speaks well for the organisation of the house that three wards, each of some two dozen beds, were cleared of patients and furniture within half an hour of the alarm being given. The origin of the fire is not definitely known. The damage to property is considerable, as the whole block will probably have to be reroofed.

Presentation.—At a crowded meeting on March 24th, at St. Bartholomew's Hospital, a presentation of a testimonial and a picture was made to Mr. James Berry, F.R.C.S., on his resigning the Surgical Registrarship. Sir Thomas Smith, Dr. Church, Mr. Langton, Mr. Marsh, and many others officially associated with the hospital, were present. The presentation was a spontaneous expression of the feeling of the house-surgeons and dressers who have worked under Mr. Berry. Mr. H. W. Lance, as Senior House-Surgeon, took the chair, and Dr. H. B. Meakin made the presentation. The wording of the address was as follows: "This testimonial, together with a painting of St. Bartholomew's the Great, was presented to James Berry, Esq., F.R.C.S., by the undersigned, on the occasion of his resigning the Surgical Registrarship of the Hospital, in token of the esteem in which he is held by those who have had the privilege of working under him, their admiration for the excellence of his work, and their sincere wishes for the success of his future career." The picture was painted by Miss Sprague, and has since been exhibited at the Ridley Art Club. Mr. Berry acknowledged the presentation in a suitable speech.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with allowance of £30 per annum for cab hire), and unfurnished rooms, fire, lights, and attendance. Applications by April 18th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—A Resident Medical Officer and a Resident Surgical Officer. Salaries, £70 and £50 per annum respectively, with board, washing, and attendance. Applications by April 12th.

BURNLEY: VICTORIA HOSPITAL.—Resident Medical Officer. Salary, £80, increasing by £10 per annum up to £100, with board, etc. Applications, endorsed "Resident Medical Officer," to be received by April 8th.

BURY INFIRMARY, Knowsley Street, Bury, Lancs.—Junior House-Surgeon. Salary, £60 per annum, with board, residence, and attendance. Applications to the Hon. Secretary.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Workhouse, Gordon Road. Salary, £120 per annum, with furnished apartments and £1 1s. in lieu of board and washing. Applications, on forms provided, to be sent to the Clerk, 29, Peckham Road, S.E.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road.—Assistant Registrar. Applications to the Secretary.

CRONSTADT SEAMEN'S HOSPITAL.—Resident Medical Officer. Salary, £180 per annum, with free lodgings, lights, fuel, and attendance. Applications to Chairman of Hospital Committee, British Consulate, St Petersburg.

DARENTH SCHOOL FOR IMBECILE CHILDREN, near Dartford, Kent.—Assistant Medical Officer. Salary, £160, rising £20 annually to £200, with board, lodging, attendance, and washing. Must be unmarried, and not exceeding 35 years of age. Applications, on forms provided, to be received by April 12th.

DERBY COUNTY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £100 per annum, rising to £120, with board, lodging, and washing. Applications to Mr. B. Scott Currey, St. Michael's Churchyard, Derby, by April 6th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Resident Medical Officer. Salary, £80 per annum, with board, residence, and laundry. Applications by April 12th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for Casualty Department. Salary at the rate of £100 per annum. Applications by April 16th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum, rising to £100, with board, residence, and washing. Applications by April 11th.

GLASGOW: ST. MUNGO'S COLLEGE.—Professorship of Forensic Medicine and Lectureship on Hygiene. Applications by April 7th.

GOSFORTH, NEWCASTLE-ON-TYNE, CITY ASYLUM.—Assistant Medical Officer, unmarried, and under 30 years of age. Salary, £130 a year, with furnished apartments, board, etc., and rising £10 per annum up to £150. Applications before April 6th.

GOVAN DISTRICT ASYLUM, Crookston, near Paisley, N.B.—Senior Assistant Medical Officer. Salary, £150 a year, with board. Applications by April 7th.

KING'S COLLEGE, London.—Sambrook Surgical Registrarship. Applications by April 4th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Resident Medical Officer. Salary, 100 guineas per annum, with board, lodging, and washing. Applications by April 15th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—House-Physician. Salary, £40 a year, with board and residence. Also Assistant Physician. Applications by April 6th.

NORTH INDIA SCHOOL OF MEDICINE.—Three Fully Qualified Medical Women. Applications to the Hon. Sec., Miss M. W. Brown, 23, Cameron Road, West Croydon.

NORWICH: HEIGHAM HALL.—Assistant Medical Officer. Applications to the Medical Superintendent.

PLYMOUTH PUBLIC DISPENSARY.—Physician's Assistant. Salary, £70 per annum. Applications by April 5th.

QUEEN CHARLOTTE'S LYING IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications by April 12th.

RAINHILL (NEAR LIVERPOOL) COUNTY ASYLUM.—Assistant Medical Officer; unmarried, and not more that 30 years. Salary commences at £100 per annum, with prospect of increase to £250, with furnished apartments, board, attendance, and washing. Applications to the Medical Superintendent.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Surgeon. Must be F.R.C.S.Eng. Applications to W. H. Cross, Clerk, by April 11th.

STAFFORDSHIRE COUNTY ASYLUM, Stafford.—Junior Assistant Medical Officer; unmarried, and under 30 years of age. Salary, £100 per annum, rising £25 yearly to £150, with furnished apartments, board, etc. Applications to the Medical Superintendent.

STRATHERRICK PORTION OF THE PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer. Salaries from various sources over £100 per annum. Applications to Andrew Urquhart, Inspector of Poor, Gorthick, by April 20th.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon; unmarried. Salary, £80 per annum, with board, residence, and washing. Applications by April 12th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two Honorary Assistant Physicians. Applications to Chairman of Medical Committee by April 18th.

WORCESTER GENERAL INFIRMARY.—Surgeon. Applications by April 9th.

MEDICAL APPOINTMENTS.

ATTFIELD, D. Harvey, M.A., M.B.Camb., appointed Medical Officer of Health to the Watford Urban District Council, *vice* R. A. St. Leger, M.B., C.M., resigned.

BENNETT, Robert A., M.B.Lond., M.R.C.S., L.R.C.P., appointed Resident Medical Officer of the Manchester Hospital for Consumption and Diseases of the Chest, *vice* Dr. Hodge, resigned.

BISHOP, Dr. appointed Medical Officer for the Barham District of the Bridge Union.

BOND, Eleanor C., M.D.Brux., L.S.A., appointed House-Surgeon to the Belgrave Hospital for Children.

BROWN, Dr., appointed Medical Officer for the No. 1 District of the Hackney Union.

CHATER, J. S., M.B.Lond., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Royal Surrey County Hospital, Guildford.

COATES, Matthew, M.D., F.R.C.S.Eng., L.S.A., Retired Deputy Inspector-General, R.N., appointed House-Surgeon to the Philanthropic Society.

DYBALL, Brennan, M.B., B.S.Lond., F.R.C.S., L.R.C.P., appointed Resident Surgical Officer to the General Infirmary, Leeds.

EWART, Mr. R. W. J., appointed Medical Officer to the Masham Urban District Council.

FORBES, Arthur D., M.B.Aberd., appointed Medical Officer for the seventh District (Horsmonder) of the Tonbridge Union.

GAIRDNER, J. Francis, M.B., C.M.Glasg., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Casualty Officer to the General Infirmary, Leeds.

GREATBACH, Herbert W., M.B. and C.M.Edin., appointed Medical Officer of Health for the Burgh of Montrose, *vice* Samuel Lawrence, M.D., resigned.

HOBLING, J. H., L.S.A., appointed Medical Officer of Health to the Bideford Rural District Council.

JAFFREY, Francis, F.R.C.S.Eng., appointed Assistant Surgeon to the St. George's Hospital.

JOYCE, J. H., M.B., appointed Medical Officer for the No. 2 District of the Ashby-de-la-Zouch Union.

LAWTON, Mr., appointed Assistant Medical Officer to the Workhouse of the Edmonton Union.

LOGAN, R. B. W., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the No. 3 District of the Ashby-de-la-Zouch Union.

MUIR, J. C., B.A., M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., appointed Junior Resident Medical Officer of the Manchester Children's Hospital.

MYERS, Charles J., M.R.C.S. and L.S.A., appointed Medical Officer of Health to the Louth Rural Sanitary Authority, *vice* Dr. Domenichetti, resigned.

PETERKIN, George, M.B., C.M.Edin., appointed Medical Officer of Health and Police Surgeon for Forfar, *vice* W. F. Murray, M.D.St.And.

SUCKLING, C. W., M.D.Lond., appointed Consulting Physician to the Queen's Hospital, Birmingham.

TRANT, James, L.R.C.P.I., L.R.C.S.I., J.P., appointed Medical Attendant to Commercial Cable Company's Staff, Waterville, and Medical Officer, Darrynane Dispensary District.

WOOD, Miles A., F.R.C.S., L.R.C.P., reappointed Medical Officer of Health to the Ledbury Urban District Council.

WOODCOCK, H. B., M.B., Ch.B.Vict., appointed Assistant Medical Officer to the Salford Union Infirmary.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Clinical evening. Mr. J. H. Morgan: Case of Fracture of Condyle of Femur. Mr. G. R. Turner: Case of Neuralgia Successfully Treated by Injection of Osmic Acid. Dr. F. J. Smith: Case of Multiple Angioma. Dr. Robert Maguire: (1) Case of Congenital Heart Disease; (2) Case of Tremors. ? Disseminated Sclerosis. Mr. W. H. Battle: (1) Case of Intracapsular Fracture of the Femur in a Boy; (2) Case Illustrating the Advantage of Treatment by Coley's Fluid in Inoperable Tumours.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr. Whistler: Tuberculosis of Larynx.

Odontological Society, 8 P.M.—Paper by Mr. Wm. Rushton. Casual communications by Mr. S. K. Apthorpe and Mr. Charles West.

TUESDAY.

Pathological Society of London, 8.30 P.M.—Professor Kanthack: The Distribution of Leprosy Bacilli in the Tissues, and the Origin of Giant Cells in Leprosy. Mr. S. G. Shattock: Molluscum Contagiosum in two (Mated) Bunting Sparrows. Mr. H. J. Curtis: Adenochondroma of the Right Submaxillary Gland. Dr. Percy Kidd and Dr. Habershon: Primary Lymphosarcoma of the Pleura. Dr. Habershon: Primary Sarcoma of the Lungs. Mr. Cecil F. Beadles: Two Cases of Myxœdema, one of which was associated with Trichinæ in the Muscles. Mr. G. Bertram Hunt: Extreme Contraction of the Stomach, with some remarks on the Pathology of the condition. Dr. Lee Dickinson: Aneurysm of the Thoracic Aorta, which Ruptured externally. Dr. Parkes Weber: (1) Liver showing an Early Interlobular Type of Cirrhosis from a case of Suppurative Pylephlebitis; (2) Cirrhosis of the Liver in a Child. Card Specimens will be shown by Mr. Percy Furnivall and Dr. H. D. Rolleston.

London Post-Graduate Course, Bethlem Royal Hospital for Lunatics, 2 P.M.—Dr. Craig: Moral and Impulsive Insanities and Lunacy Law. Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Impetigo.

Roentgen Society, 11, Chandos Street, Cavendish Square, W., 8 P.M.—Mr. James Wimshurst: The Influence Machine and its Advantages for Lighting X-ray Tubes.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Drs. Handfield-Jones, Macnaughton-Jones, Ernest Dawson, John Phillips, and others. Papers:—Mr. Walter Heape (introduced by Dr. W. S. A. Griffith): The Menstruation and Ovulation of Monkeys and the Human Female. Dr. H. R. Spencer: Two Cases of Fibromyoma of Uterus removed by Operation from Women under 25 years of Age.

Evelina Hospital, S.E., 4.30 P.M.—Mr. R. Denson Pedley: Dental Diseases in Children.

Sanitary Institute, 8 P.M.—Discussion on the Desirability of Making Watershed Areas and Sanitary Districts Coterminous, to be opened by Mr. R. E. Middleton.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Mr. Jonathan Hutchinson, F.R.S.: Clinical Lecture.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Pathological Demonstration to Senior Students.

FRIDAY.

London Post-Graduate Course.—Good Friday.—No Lecture.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

DAGGETT.—On March 25th, at Boroughbridge, York, the wife of Henry Ingledew Daggett, M.A., M.B., of a daughter.

MALCOLM.—On March 26th, at 421, Holloway Road, N., the wife of W. A. Malcolm, M.B., C.M., of a son.

MARRIAGES.

ANDERSON—JONES.—On March 24th, at St. Bride's Church, Stretford, Manchester, by the Rev. K. L. Jones, Charles Arthur Anderson, M.B., C.M.Edin., of 89, Rectory Road, Burnley, Lancashire, fourth son of John Anderson, Hillswick, Shetland, to Florence, eldest daughter of the late Augustine Jones, Manchester. No cards.

HARRIS—FAWCKNER.—On March 24th, at Dock Street Church, Newport, Mon., by Rev. Arthur Murrell, of London, uncle of the bridegroom, assisted by Rev. E. Walrond Skinner, of Newport, Frank Drew Harris, M.B.Lond., of Cowley Hill, St. Helens, Lancs., to Isabel Mary, elder daughter of J. Follett Fawckner, Esq., of Newport, Mon. No cards.

DEATHS.

DAVIS.—On March 25th, at the Western Hospital, London, Albert E. Davis, L.R.C.P., M.R.C.S.Eng., youngest son of the late Robert Davis, of Wreckenton House, of typhus fever, aged 32 years.

GALTON.—On March 26th, 1898, at 128, Brixton Hill, S.W., Edmund Hooper Galton, F.R.C.S., aged 61 years.

HOARE.—On March 23rd, at Clifton House, Aston Manor, Birmingham, Reginald Ratcliff Hoare, F.R.C.S., aged 54.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 9.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Tu., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Tu. 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th. 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 3.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W. 2. W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Tu., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

W. B. B. asks where he could obtain a good, steady, labour bed, which could be wheeled from the labour room to the lying-in ward.

S. desires to hear of suitable places for a patient with phthisis and slight pyrexia to reside during the summer months. Dryness and absence of wind, with warm sunshine, and of course country life, would be the chief considerations. He has heard the Malvern district well spoken of.

H. V. M. desires to know what facilities there are for the treatment of cases of neurasthenia, requiring forced feeding, etc., for patients who are unable to afford more than 20s. to 40s. a week. Are there institutions where such cases could be taken in on such terms?

M.R.C.S. asks for suggestions for the treatment of an old lady, aged 80, who for the last twelve months has been suffering from acute pain in the toes due to sluggish circulation. At times the toes are purple, and look as if gangrene was setting in. This condition disappears and reappears at intervals, but the pain remains. Hot applications and belladonna liniment with tincture of opium internally give most relief, but are losing their effect.

A HARD CASE.

JUNIOR, who practises in a well-known provincial town, writes to us that he was called up at midnight by a woman claiming a certificate to obtain brandy from a publichouse, which at that hour was of course shut up. She stated that she had been sent by the police from the nearest police-station. The brandy was required for a woman who was ill, but not under medical treatment. On inquiry at the police station in question the officer in charge stated that it was their custom to send applicants of this kind to the nearest doctor. "Junior" desires to know the experience of others of his colleagues, and whether the Licensing Acts permit such use of medical certificates, and, if so, who pays?

*** It is manifestly unjust that such a service should be rendered by a medical practitioner without remuneration, especially as it usually involves getting out of bed at untimely hours and paying a visit to the alleged sick person, in addition to writing a certificate, as we cannot imagine that any practitioner would give such a certificate without verifying the necessity. If the patient does not pay, the police must give a certificate for payment for a night visit and attendance.

ANSWERS.

ETHICUS.—The question is one for the practitioner's own decision.

G. N.—We may call our correspondent's attention to the disclaimer which was published in the BRITISH MEDICAL JOURNAL of January 15th, 1898, p. 196.

S. WILL find particulars as to the subjects required for the examination for the D.P.H. in the Educational Number of the BRITISH MEDICAL JOURNAL for August 28th, 1897. A list of books is there given, and a revised list was published in the JOURNAL of February 5th, p. 415.

TREATMENT OF EXOPHTHALMIC GOITRE BY HYDROFLUORIC ACID.

DR. HORACE MANDERS (Gloucester Terrace, W.) writes: In answer to the question of "L. C.," I have found most excellent results from the following. Take half an ounce of distilled water, and drop into it five drops of pure hydrofluoric acid, then make up the mixture to an ounce and a-half with distilled water. This mixture will keep well for a considerable time in a glass bottle. Of this solution, place 2 drachms in an ounce and a-half bottle, and fill it up with distilled water. The dose of this is one teaspoonful twice or three times a day, after food and well diluted. It is often a little time before the good effects begin to appear, but the remedy should be persevered with. After some weeks or months of administration, a curious splitting of the finger nails with a brown discoloration of the skin around may be observed.

NOTES, LETTERS, Etc.

A QUESTION OF PRECEDENCE.

A. W. writes: "M.D.," writing in the BRITISH MEDICAL JOURNAL of March 25th, appears to have an idea that graduates in medicine form a class by themselves and are quite superior to the rest of the profession. He quite ignores the fact that the examinations for the F.R.C.S.Eng. require more hard work than those for any M.D. Besides, "M.D." may mean anything in the matter of efficiency. There is a very wide gap between the standard required for the M.D.London and that for the degree of any other university. As regards the question of title I always address a letter to a medical man "——— ———, Esq.," and then I add his qualifications. Colloquially I always address him as "Doctor" unless he is F.R.C.S. or practises as an operating surgeon, in which case he would naturally prefer to be called Mr. ——. I think that is the usual custom and the most generally satisfactory. That "M.D." or any other man below the rank of knight should consider the title of Esquire "a distinct slight, not to say insult," is a little curious.

DR. ARTHUR J. CARY (Weston-super-Mare) writes: With all due deference I must submit that "M.D." has not quite grasped the subject of the title of "Esquire" in its strictly technical sense. In the annual list of members it is just those who are entitled to the "Esquire" who drop it. Probably not 0.5 per cent. of the non-doctorate members can claim it, excluding, of course, those of and above the rank of Captain in Her Majesty's Services. "Esquire" is a distinct rank recognised by heralds, and is allowed to the following: Eldest sons of Baronets and Knights, Masters of Arts; Doctors of Divinity, Laws, and Medicine; Barristers

at-law (I think); Officers in Her Majesty's forces of and above the rank of Captain. "Gentlemen" are not "Esquires," and an "M.B." degree does not, *per se*, carry the "Esq." with it, while "M.D." does. I cannot see that it is any insult to an "M.D." to be addressed as "Esquire;" it is a social rank title which, in 99 cases out of 100, he was not privileged to use when a mere "M.B." A Captain on retirement under fifteen years' service does not retain his rank, but whereas he was a "gentleman" on joining the army, on leaving he is an "Esquire." If of over fifteen years' service he remains "Captain" and "Esq." also, though not addressed by the latter title. It would be quite correct to address an ordained clergyman who was also an "M.D." as, "J. Smith, Esq., M.D., Clerk (in Holy Orders)." The College of Heralds would furnish decisive information on this interesting subject.

DR. FREDERIC VICARS, M.D. Brux., M.R.C.S., L.R.C.P., writes:—I have always looked upon the "title of Doctor" as merely a matter of convenience in general practice. It is a sign in the mind of the public that "So-and-so" is a medical practitioner. This is, of course, what the possessor of an "M.D.," any "M.D." wants, and for that reason alone uses the "title of Doctor." Surely no general practitioner seeks practice on the strength of the *value* of his qualifications. Would he with any confidence boast of being an M.D., M.R.C.S., L.R.C.P., or even L.S.A.? Surely not. If he wanted to flaunt a "qualification" I should imagine he would seek that of F.R.C.S. or M.R.C.P., which are supposed to possess a superior flavour about the first initial. It would be interesting to learn if anyone has ever heard of a layman asking after the value of a medical man's registered qualifications before seeking his advice. The only reasons, I believe, for employing a particular doctor are an emergency, proximity, or recommendation. The public appraise a medical man by their experience of him. This experience covers many things—including his fees. What the public think of the value of the "M.D. Brux." I do not know, but the fact that a medical man has not limited his studies and his qualifications to the institutions of his own country can hardly be said to tell against him. As regards the objection against putting "M.D." after one's name, if that degree has not been registered, why should that be more objectionable than in putting "M.A." or "LL.D.", or any other degree obtained, which would equally not be on the *Medical Register* as a qualification? A man who uses the letters "M.D.", or "M.A.", or "LL.D.", merely shows he has obtained such degree at some university. If anyone is curious to know further particulars there is no difficulty in the matter; in the case of a doctor, the *Medical Directory* will satisfy his curiosity.

Personally, I think that every practitioner of medicine, whether an M.D. or not, has a right to the "title of Doctor" if he chooses to use it, and I am in the habit of so addressing my professional brethren who have not taken the trouble to get an "M.D.", unless, indeed, I know they object to being so styled.

*** This correspondence must now close.

GLYCERINATED CALF LYMPH.

DR. R. CHEYNE (West Norwood) writes: In his speech introducing the new Vaccination Bill, Mr. Chaplin, referring to the use of glycerine in the preservation of vaccine lymph, seems to imply that the method is of comparatively recent date and of foreign origin. That this is not so I wish to be allowed to point out. As far back as 1849 the idea had occurred to my father, Mr. R. R. Cheyne, F.R.C.S. (of 43, Berners Street and afterwards of 27, Nottingham Place) who after having experimentally proved its value for several months, laid it before the profession in a letter to the *Medical Times*, dated March 15th, 1850. Some correspondence ensued at the time, and in June, 1853, I find my father writing to the same journal saying that he had had the pleasure of showing to the Presidents of the London Colleges of Physicians and Surgeons (Dr. Paris and Mr. Cæsar Hawkins) a case successfully vaccinated with lymph preserved for upwards of six months in this way. "What we wanted," my father says in a letter to the *Medical Times* dated March 30th, 1850, "was some liquid natural to the animal body; having the power of remaining liquid at common temperature; neither crystallisable nor disposed to ferment; antiseptic in a marked degree; and lastly, having the power of easily mixing with the lymph to be preserved."

The discovery does not seem to have been taken advantage of by the profession to any great extent, although several public vaccinators availed themselves of the convenience and advantage of the method, until in 1880—sixteen years after my father had first made it known—Dr. Müller of Berlin appeared as discoverer and inventor of the use of glycerine to store vaccine lymph by admixture. There was some further correspondence (including a letter to the *Lancet* dated March 13th, 1897, from Mr. A. C. MacLaren, who is still living at 60, Harley Street) but the matter once more dropped, until now I see it revived again as a novelty of foreign origin. My father is not now with us to have the gratification of seeing the method he introduced sanctioned by authority and adopted by the Government, but I think it only fair to his memory that it should be generally known to whom the merit of the discovery is really due.

ORGANIC MEDICINES AND OUR METHOD OF PRESCRIBING THEM.

DR. K. J. DOUGALL (Stroud Green, N.) writes: In this age of progress therapeutics has not advanced with the other sciences; the same old tinctures, extracts, and infusions are being prescribed as were prescribed a hundred years ago, although for a long time it has been known that plants are not simple but compound remedies, varying in composition with the seasons, climate, and soil they are grown on. Since I retired from practice I have given a good deal of time to this study, and I have failed to find a uniformity in any two samples of any of the medicinal plants mentioned in the *British Pharmacopœia*. The *Pharmacopœia* prescribes preparations are made according to hard-and-fast lines, and independent of whether the plant contains 6 or 10 per cent. of the active principle, and we have been blindly prescribing those preparations to the regulation doses the same last year as this, as if they were always of the uniform standard. Our knowledge of the *modus operandi* of drugs is, because of the uncertainty of the drugs, very imperfect, and must remain so until we have the active principles of each plant separated; then, in course of time, we shall no doubt be able to determine the therapeutic value of each if we work with the pure alkaloids alone. Another great advantage that plan would have would be more certain detection of adulterations, and they are more multitudinous than I could name. I should like to see all the present inorganic preparations expunged from the *Pharmacopœia* and a standard solution, made official, of all the alkaloids. I hope some time to give the results of my experiments with the pure alkaloids.

THE EXAMINATIONS AT THE APOTHECARIES' HALL.

PASSED IN SURGERY writes: It would be a great convenience to some unqualified assistants if they were allowed to take up midwifery and medicine separately at the final examination of the Apothecaries' Hall under the four years' regulations. At present these subjects have to be taken together, although under the five years' regulations they can be taken separately. At the Colleges they can be taken at different times under the four years' course; then why not at the Hall, where the examinations are not supposed to be more difficult?

LETTERS, COMMUNICATIONS, ETC., have been received from

A Dr. R. Anderson, Seaton Delaval; Dr. W. Alexander, Liverpool; J. W. S. Attygalle, M.B., Colombo: A. W.; Messrs. Arnold and Sons, London; Dr. J. H. Abram, Liverpool; Alpha. **B** Messrs. Bowen and McKechnie, London; Messrs. Brand and Co., London: Mr. E. Brice, Chase Terrace; Dr. J. Barr, Liverpool; T. A. Buck, M.B., Ryde; Messrs. Burroughs, Wellcome, and Co., London: Mr. R. Barwell, London; Mr. C. J. Bond, Leicester; C. Blue, M.B., Bramley; Mr. G. H. Broadbent, Manchester; Dr. T. W. Blake, Bournemouth; Mr. W. B. Bale, Stockport; Dr. J. B. Brierley, Manchester. **C** Mr. L. O. Crosswell, Turk's Island, W.I.; Dr. J. M. Clarke, Clifton; C. G. S.; Dr. J. Corns, Oldham; C. W. Cathcart, M.B., Edinburgh; Correspondent; Mr. L. Cooper, Chatham; Mr. A. J. Cary, Weston-super-Mare; Mr. E. F. Clowes, Winchester; Dr. A. Cook, Cardiff; C. J. T. **D** Mr. R. Davis, Orpington; Mrs. G. Davis, Oxton; Dr. A. Duke, Cheltenham; Mr. J. Davison, Ballinakill; Dr. T. Dutton, London; J. Dunbar-Brunton, M.B., Leatherhead. **E** Enquirer; Mr. E. East, London; Mr. A. Ehrmann, London. **F** R. M. Fraser, M.B., Belfast; Mr. W. T. Freeman, Reading; T. Colcott Fox, M.B., London; H. Fox, M.B., Carlisle; Dr. W. S. Fenwick, London; Mr. E. H. Freeland, London. **G** G. C. P.; Dr. J. H. R. Glenn, Dublin. **H** Dr. R. D. Helm, Carlisle; H. V. M.; H. D.; Dr. G. H. R. Holden, Reading; Mr. H. E. Haynes, Evesham; Dr. J. Hinshelwood, Glasgow; Mr. H. Hilliard, London; Historicus; Dr. J. Haddon, Denholm; F. G. Haworth, M.B., Darwen; Mr. W. E. Hills, London. **I** Inquirer. **J** Mr. T. R. Judson, Liverpool; J. **K** Mr. H. Kimpton, London; E. Kingscote, M.B., London; Dr. A. A. Kanthack, Cambridge. **L** Dr. H. L. G. Leask, Glasgow; Dr. H. L. Lack, London; J. R. Lord, M.B., Southport; L.R.C.P.E. **M** Mr. T. C. Maxwell, London; A. E. Moore, M.B., Cork; M.A. and M.D.; Miles; Member; Dr. R. L. Meade-King, Taunton; M.D., Public Vaccinator; Mr. H. Manders, London; M. H.; Dr. A. T. Morgan, Bristol; M.R.C.S., L.R.C.P.; Mr. A. L. Matthews, London; M.R.C.S.; M.O.H.; Dr. R. B. McCausland, Dublin; M.D. **N** A. G. Newell, M.B., Greenock; Mr. G. Newman, Glasgow. **O** Dr. S. H. Owen, Manchester; Mr. E. A. Onyon, Eye; Mr. F. Okell, New Brighton. **P** Mr. H. W. Pooler, Birmingham; C. F. Ponder, M.B., Kalimpong; Dr. H. B. Pope, Kington; Mr. M. Pittard, Cardiff; Mr. R. H. Potter, Haverhill; Practitioner; Mr. J. F. Palmer, London; H. Peck, M.B., Aughton; Passed in Surgery. **Q** Querist. **R** Dr. E. J. A. Rogers, Denver, Col.; Rural Public Vaccinator; Dr. J. O. Roe, Rochester, N.Y.; Revolution Cycle Company, Dublin; Reform. **S** C. J. Smith, M.B., Great Harwood; Dr. E. M. Smith, York; Dr. R. P. Smith, London; S. Stevenson, M.B., London; Dr. F. H. Sinclair, Belfast; S.; S. O.; Messrs. Street Brothers, London; Dr. A. Sheen, Cardiff; Surgeon-Major Retired Half Pay; Sheffield Medico-Chirurgical Society, Secretary of, Sheffield; Surgeon-Major Retired. **T** Mr. A. J. Thomson, Kingswinford; Mr. L. Tait, Birmingham; H. Thornhill, M.B., Jaffna; A. Tuthill, M.B., Upper Parkstone; T. W. S.; Mr. E. T. Turnbull, Roos. **V** Dr. F. G. Vicars, London; Mr. V. C. Vanderstraaten, Colombo. **W** Dr. O. Withers, Sale; C. P. White, M.B., Birmingham; Professor J. A. Wanklyn, New Malden; Mr. E. C. Warren, New Brompton; Dr. R. T. Williamson, Manchester; Mr. R. C. Worsley, Ramsgate; Mr. A. Wheeler, Darlington; Dr. W. White, Hadfield; Mr. J. H. Wigham, Leeds; Mr. M. Windus, Colombo; Mr. R. H. Wolstenholme, Salford; Mr. S. W. Wilson, Blackrock; Mr. C. E. Waddington, Bradford; Mr. K. H. B. Williams, Llandudno; etc.

BOOKS, ETC., RECEIVED.

Radiography and the X Rays. By S. R. Bottone. London: Whittaker and Co. 1898. 3s.

Transactions of the Nineteenth Annual Meeting of the American Laryngological Association, held in Washington, D.C., May 4th, 5th, and 6th, 1897. New York: D. Appleton and Co. 1898.

Gebrauchsdurchschnitte zur Erläuterung der Faserverläufes. Von Dr. E. Nebelthau. Wiesbaden: J. F. Bergmann. 1898. M.3·4

The Diseases of the Lungs. By J. K. Fowler, M.A., M.D., F.R.C.P., and R. J. Godlee, M.S., F.R.C.S. London: Longmans, Green and Co. 1898. 25s.

*** In forwarding books the publishers are requested to state the selling prices.

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THE LUMLEIAN LECTURES
ON
THE PRINCIPLES WHICH GOVERN TREATMENT IN DISEASES AND DISORDERS OF THE HEART.

Delivered before the Royal College of Physicians of London, March, 1898,

By Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P.,
Physician Extraordinary to Her Majesty the Queen; Physician to the Middlesex Hospital.

LECTURE III.

Exercises in the Treatment of Heart Disease.

Exercises have been reduced to a system in three grades: massage, the resistance exercises, or their equivalent in the mechanical methods introduced by Zander of Stockholm in 1872,[1] and others, and the graduated walking exercises of Oertel.

Massage.

The principal object of massage is to stimulate the arterial circulation in the muscle, to hasten the venous currents, and to promote also the passage of lymph through the lymphatic vessels. The metabolism of the body is thus maintained, and secondary and therefore primary digestion improved in those who from any cause are unable to take active exercise. We have here a means of helping on the convalescent stage of acute heart affections and of combating the tendency to stagnant circulation in those who are disabled by chronic heart disease. Still more useful is the treatment in maintaining the circulation, and mildly but sufficiently stimulating the coronary circulation in those who, bed-ridden or sofa-ridden from any other cause, tend on that account to impairment of heart nutrition, and suffer from chilly extremities, feeble pulse, torpid digestion, and passive congestion of the lungs. In regard to acute heart affections, it will be gathered from what has been already said that the treatment is not to be advised. Most cases of acute endocarditis occur in young people whose hearts are not disposed to degeneration, and whose muscles, although they become weak, recover with a rapidity and develop an energy that has to be restrained rather than encouraged. The heart is always in exercise, the coronaries are in full function, and whilst there is any activity or softness about the valve lesions, our object is in no way to excite the heart to increased action. The thermometer is our guide, and, so long as there is any daily rise of temperature, all such treatment, unless for some very special reason, should be discouraged.

Resistance Exercises.

Resistance exercises, now so well known by the name of Schott or Nauheim exercises as to require no description, are governed by more complex considerations. By being brought to act successively against regulated resistance every set of muscles in the body can be exercised, and by graduating the degree of resistance and securing a short rest after each set of movements, every gradation in the severity of the exercises can be obtained.

Certain special effects are claimed by Dr. Schott and his disciples to be produced upon the heart under almost all forms of disablement and disease by the graduated exercises, in combination with aërated brine baths; but although the effects of these two treatments are a little confused, it seems clear that in Dr. Schott's opinion the benefit of the exercises in these cases arises from:

1. The periodical and regulated stimulation of the heart leads to increased action, the muscles of that organ obeying the natural law of the relation between exercise on the one hand and nutrition or growth on the other, as surely as do other muscles in which the changes are more apparent to the eye.

2. It is further maintained by Dr. Schott and his coadjutors that contraction of the dilated heart and distinct gain in the force of the pulse, as well as relief of dyspnœa, etc., are clearly observed to be rapidly induced by both baths and gymnastic exercises.

3. Schott, apparently as a later observation, finds that the gymnastic course is capable of inducing the same results as the baths, the heart being stimulated to more complete contraction by reflex stimulation of the cardiac centres through the influence of exercise upon the motor nerves (that is, similar in effect to the influence of aërated brine water upon the sensory nerves reflecting upon the same centres), and in this opinion Dr. Bezly Thorne agrees.

Whilst I think no one could for a moment dispute the accuracy of the first proposition—which is, indeed, a matter of every-day knowledge—there do not seem to me to be any sufficiently trustworthy data in support of either of the other two. The occurrence of shrinking of the cardiac area as an immediate effect of the bath or resistance exercises has been denied by very competent observers—Groedel, Guntz, Leyden—and the question of baths and exercises producing their alleged effects by reflex influence upon nerve centres is still undecided.

4. Dr. Oliver has thrown some scientific light upon the effect of exercise in showing by a very simple experiment that the mass of blood in the muscles is thereby increased—so that, for example, an arm after exercise would displace a larger volume of water than before.

5. Dr. Oliver[2] has further shown that as a result of muscular exercises the blood thickens, the proportion of corpuscles in a given measure being increased, and he attributes this to the transfer of fluid ingredients from the blood into the substance of the muscles and lymphatic spaces.

6. Dr. Oliver quotes Brunton's and Tunnicliffe's experiments in confirmation of the previously-recognised effect of muscular exercises in (1) raising and (2) lowering the blood pressure.

7. It is probably true that the circulation through muscles in action is more rapid and easy—after the first pressure effect of the muscle upon the vessels has passed off—and that the determination of blood to them may relieve congestion of other organs.

It is difficult to see how such replacement of blood should have any special effect in depleting the chambers of the heart except by facilitating the general circulation.

8. The effect of resistance exercises in slowing the pulse is not constant, and would naturally vary with the degree of exercise and the condition of the circulation beforehand. Walking smartly across a room once or twice will often diminish the rapidity and increase the force for the time of a quickly and weakly-acting heart.

The effect of the Nauheim exercises may then be said to be a stimulation of the heart's action, with some steadying effect and increased completion of systole, an improved circulation through the coronary vessels, and an increased mobility of the blood by its readier passage in greater bulk through the muscles, thus relieving stagnation in the great internal organs, especially on their venous side.

In what cases are these exercises to be advised? It seems to me that the carefully graduated and observed exercises of Schott and Oertel may be regarded as a counsel of perfection to be advised for those who can afford them as a preliminary to the return to that measure of active life of which their heart condition admits, and as a guide indicative of what that measure will be, and by what degrees of ordinary exercise it may be arrived at.

Resistance exercises are especially adapted for the initial treatment of those flabby, irritable, "stuffy" hearts, if I may use the term, as applied to cases of fatty infiltration and impaired metabolism which are met with in people of venous plethora.

In cases of chlorosis with dilated heart after a preliminary week or two of complete rest, the Schott treatment is valuable if combined with a dry bracing climate and some chalybeate.

In the first, commencing failure of heart in chronic valve lesions, the treatment may be employed combined with a more or less complete cessation from all other exercises, and similarly after such cases have been restored up to a certain point by digitalis treatment. Further, certain cases in which from the symptoms and signs we recognise the presence of atheromatous change in the coronary vessels, the treatment may be cautiously tried in combination with much rest. These cases are characterised by a certain degree of plethora and by breathlessness, attended with cardiac pain on arriving at a certain stage of walking or inclined walking exercise. If the treatment be mainly confined to these lines, it is undoubtedly an aid to our therapeutics. There are other cases, again, in which it should not be employed. All cases of acute endocarditis, whilst there is any trace of activity of lesion remaining, are still more unsuitable for this than for the massage treatment. Cases of advanced cardio-vascular changes of the nature of sclerosis, and particularly when associated with granular kidneys, are absolutely unsuited. In cases of introspective people with neurotic hearts, the treatment is best avoided. The numberless cases of imaginary weak hearts that would naturally flock to specified "cures" require a diagnosis and a better occupation than that of indoor gymnastics. The exercises have in my experience not proved suc-

cessful in tachycardial cases. For exophthalmic goître in the early stages they seem eminently unfitted.

OERTEL'S TREATMENT:

A still more pronounced treatment is the Oertel method of graduated walking exercises with a dietary restricted in fluids, a dry, highly-nitrogenous diet, with avoidance of fats and a very sparing allowance of starch, with fluids restricted to 36 ounces a day all told, and steady walking exercises for distances and steepness of ascents adapted to the condition of the patient. The gentlest incline walks can be arranged with frequent rests, or the exercise can be pushed to the point at which deep gasping respirations are excited, and a profuse action of the skin is produced. This treatment is fully described in *Ziemssen's Cyclopædia*. It has been replaced very much by the Schott exercises, to which, however, it may be regarded as a sequel. The guiding principles and restrictions of its use are sufficiently obvious. Its chief advantage is that it is undertaken in the open air. There is no doubt that some of the discomfort that ensues from massage and passive exercises, the unexpected sense of fatigue and langour, may often be attributed to want of good air in abundance adapted to the increased oxidation produced. And this leads me to mention another point of great importance in the treatment of impaired hearts, and that is the desirability of taking full inspirations, especially during the limited open air exercise allowed to them. The constant aspiration of the elastic lung as an aid to the circulation is scarcely yet appreciated in practical medicine. I endeavoured to emphasise its importance many years ago as a force of constant action even through the whole period of expiration, and as increasing with the inspiratory expansion of the lungs.[3] I have been in the habit often of advising bed-ridden people to take an occasional series of deep inspirations with the view of lessening venous stagnation. Dr. Oliver in his Croonian Lectures, and quite recently in his remarks at the Balneological Society, has drawn attention to the effects of deep, slow inspirations with firm, contraction of the abdominal parietes in emptying the hepatic and other abdominal veins, and in increasing splanchnic vasomotor tone.

EXERCISE IN GENERAL.

All the points that have been noted with respect to formulated exercises are common to other less regulated kinds of exertion of similar degree and severity. The wielding of a salmon rod is a resistance exercise equal to and more amusing than any of those of Nauheim. My friend, Dr. Oliver, would find the muscles swell, the blood thicken, the blood pressure at first rise and then fall, the venous currents quicken, and internal congestion relieved after a similar manner. We have many of us seen for years past, perhaps since the teachings of Stokes sank into the professional mind, the beneficial effects of well-advised and guarded exercises in cases of heart disease; it is nevertheless certain that we have learned from the advocacy of elaborate exercises by Beneke, Oertel, and Schott, and Dr. Thorne in this country, a greater confidence in their use from a more precise knowledge of their effects. Exercises of most varied kinds can be devised suitable to all degrees of cases in which any exercise at all is desirable. Level walks with frequent pauses, similarly taken inclined walks combined with a numbered succession of deep inspirations, golf, croquet, cricket, fishing, shooting, tennis, cycling, and such-like sports taken in the open air can be graduated with considerable nicety, and are certainly, as a rule, to be preferred to mere gymnastics indoors.

Formerly weak-hearted people were not allowed to move, now they are made to walk. The swing of the pendulum is tending perhaps too much towards exercise. Schott,[4] with the exception of aggravated cases beyond the reach of any treatment, allows only two conditions of heart to contraindicate the treatment by baths and resistance exercises, namely, aneurysm and progressive arterio-sclerosis, and not all cases of the latter. One has witnessed many an apparent triumph of quickly restored strength and apparent well being in young people with acute endocarditis, who have been too soon allowed to resume their exercises. It is only in the later months that the effects of the chronic deforming arteritis of the strained softened valves are manifested.

BATHS.

The strong brine and aërated baths of Nauheim and other places are unquestionably of much service in some circulatory disorders. They are, perhaps, most suitable for cases of chronic rheumatism and gout associated with high arterial tension and secondary cardiac disturbances. In cases of functional excitement of the heart's action in connection with quiescent or only imperfectly-compensated valvular affections they may be used—in the latter cases at first in combination with more or less complete rest, then with graduated exercises. In the high tension and less quiescent cases the higher temperatures, calculated to lower tension and stimulate surface circulation, are the more useful. In the more neurotic cases with sound hearts, the more tonic and comparatively lower temperatures may be employed of shortened duration. It is well pointed out by Dr. Groedel that the baths and exercises are two separate therapeutic agents, and that in perhaps only 20 per cent. of the cases are they usefully employed in combination, although massage may be more frequently employed. Beneke, who originated the bath treatment at Nauheim, was very sound in his doctrine to avoid all gymnastic exercises until after the lapse of six months from any acute endocarditis.

ACUTE HEART FAILURE.

The treatment of acute heart failure may perhaps be best referred to in connection with that acute disease in which it is frequently met, and of which it too often forms the fatal turning point, namely, pneumonia, in which disease the invalidating conditions affecting the heart are:

1. Stress of labour.
2. Blood supply and nutrition impoverished and vitiated.
3. Innervation, excited and debilitated by the effects of shock and pyrexia.

All rational treatment of the early stages of pneumonia tends to lessen the blood pressure in the lungs. It is in the latter stages, towards the crisis, when the lungs are most extensively consolidated, when the nervous excitement of early pyrexia is yielding to exhaustion, and when the blood aëration is most defective, that acute heart failure is apt to supervene. A running pulse, irregular from loss of vagus control, is the first symptom, soon to be followed by œdema of the unconsolidated portions of the lungs frothing up through the bronchial tract to produce that ominous tracheal rattle with which we are too familiar—these are the signs of heart failure threatening life. There can be little doubt that an exhausted nerve centre is at the root of most of the cases of cardiac failure rather than mere overstrain from impeded pulmonary circulation, and there are two symptoms which especially tend to heart failure, and are largely instrumental in causing the nerve exhaustion which brings it about—namely, a temperature above 104° and sleeplessness. It will be generally noted that the failure comes on suddenly; there may have been one or two preliminary warnings of partial collapse, with running pulse and cold extremities, from which the patient may rally, but which are generally followed by more severe and often fatal attacks. At the very commencement of such signs, ammonia, which my experience would lead me to infer, after a few days of usefulness, tends rather to produce cardiac depression, should be changed for a mineral acid, of which dilute phosphoric acid is the best. Some digitalis or strophanthus should be added to the mixture, and strychnine should be given separately, either in an extra quantity of stimulant or subcutaneously, if the absorbing powers of the patient are at all doubtful. But the most powerful remedial agent is oxygen, since it attacks one of the chief causes of cardiac failure by securing a supply of oxygenated blood to the coronary vessels, and the pulse will be observed to become slower and fuller under its influence. It should be at hand in all severe cases, and should be given in good time as an occasional inhalation. Whilst, as a rule, we need not in pneumonia attach much importance to a high temperature, in any case where heart failure threatens it must be reduced to a safer level, that is, by a degree or two by hot or cold sponging or if necessary by the dripping cold pack. Another question presses at about this time: it is that of sleep. Most cases of pneumonia get frequent short snatches of "dog sleep," which is all that we can expect, and serves to tide them on to the crisis, but who has not witnessed that wide-eyed delirious vigil in pneumonia, and especially in influenzal pneumonia, in which the mind is painfully alert and the senses preternaturally acute, sleep being entirely absent? I am in the

habit of suggesting help for wakefulness in pneumonia in the form of a small dose of 10 grs. or 20 grs. of sulphonal taken in hot fluid at 8 or 9 P.M., and with this preliminary a 20 gr. dose of bromide taken at 10.30 P.M. is often sufficient to secure some restful sleep. When the temperature is high a single dose of 7 to 10 grs. of phenacetin may be added to the bromide. When delirium is a marked feature hyoscin in doses of $\frac{1}{200}$ gr. subcutaneously, and repeated once or twice, may be used sometimes with great advantage. Cases of persistent sleeplessness almost invariably prove fatal with heart failure, a running pulse, the cardiac action becoming at last merely peristaltic as the blood clot accumulates in the auricles. Bromides, chloral, and sulphonal are almost useless and with the gathering serum in the tubes one hesitates to give opiates. And yet I believe that in these severe cases morphine should be given to secure a few hours' sleep, and to give the nervous system time to recuperate, and to allow of some restoration of heart power before it is too late. I have seen some cases in which death has appeared to be averted by (1) a strong dose of food and stimulant, and (2) $\frac{1}{4}$ gr. morphine with atropine; (3) aëration being maintained by the oxygen current being frequently played over the mouth and nostrils for a few minutes at a time. The oxygen may be warmed as it enters the bag by passing it through a coil of tubing immersed in hot water, or a modification of the little warming apparatus known as the "instal" may be used. It has seemed to me that strychnine has rather favoured this peculiar sleeplessness of patients when utterly exhausted, but its power as a cardiac stimulant is unrivalled, and its use in cases severe enough to lead up to this condition is quite essential, and it may be renewed on the effects of morphine passing.

The remarks I have just made are applicable to heart failure in pneumonia, and I have endeavoured to indicate the measures that tend to avert it, and to combat it when present. I have not dealt with the treatment of pneumonia in any other sense, for to treat the vast majority of cases of pneumonia with alcohol, strychnine, oxygen, morphine, and the like, would be at best like storming a mud hut with Armstrong guns; to use dangerous remedies in cases which require only the gentlest treatment and careful nursing is a great blunder.

The fatigue of heart that follows such tempestuous periods is sometimes very great. It is partly nerve fatigue, and is associated with an often greatly depressed temperature lasting for many days. It is in part also muscular fatigue. The pulse either remains quick and very soft, or it may become very slow and vacillating. Patients should always remain in bed until the temperature, which after the crisis frequently descends considerably below the normal, has had at least a sufficient interval to return to or near the normal range, and cardiac and nerve tonics, such as strychnine, caffeine, and the hypophosphites will prove valuable on convalescence. Exercise in these cases must be cautiously resumed, keeping well within the limits of fatigue until heart power is quite restored. Acute heart failure in other diseases and from other causes requires a similar handling, varied to meet varieties in the case. Time will not permit me to allude to them further. I should like, however, to draw attention to the great value of oxygen inhalations in the treatment of heart failure due to fatty degeneration of the organ in old people. These cases are characterised by the usual signs of a rather large and feebly acting heart, together with irregularity of rhythm, there being, perhaps, twenty or thirty beats fairly reaching the wrist, whilst amongst them are twice as many beats which only very imperfectly do so. Cheyne-Stokes breathing is another remarkable symptom in these cases, which is especially apt to supervene after any fatigue and to come on during sleep. This form of breathing bears no direct relationship to the pulse, and is probably an associated degenerative neurosis. The employment of oxygen inhalations several times in the twenty-four hours has a decidedly strengthening influence upon the heart, no doubt by sending some extra-oxygenated blood through the coronary arteries, and it also lessens the Cheyne-Stokes breathing and refreshes the patient. Strychnine is the most useful cardiac stimulant in these cases.

Subacute or Chronic Heart Failure.

That large class of subacute or chronic heart failure, dependent upon degeneration or other changes in the heart wall, may be classified for the purposes of treatment into those in which the impairment is temporary and remediable, as from (1) anæmia, (2) fatty infiltration, (3) overstrain, and into those in which it is permanent, as in (1) fatty or fibro-fatty change from coronary disease; (2) chronic fibroid change from other causes—syphilis, alcoholism, or associated with chronic high arterial pressure in gout, renal disease, etc.; (3) senile changes.

In anæmia the atonic and badly-nourished heart frequently yields before the blood pressure, is slightly enlarged, irritable in function, and, besides the usual hæmic *bruits*, presents a murmur at the mitral area. Such cases are frequent in hospital practice, and it may be said that the routine treatment of cases of chlorosis bad enough to come into hospital is a fortnight's rest in bed, with the necessary laxatives and ferruginous tonics, and further treatment at a convalescent hospital.

Overstrain.

The heart is capable of being severely taxed provided it be a healthy organ in a fairly young subject without being overstrained, the difference being that between functional fatigue and actual damage to valve or muscular wall. Of course, too frequently-repeated overtaxation will cause permanent enlargement with some change in the muscular texture, not only of the heart but also of the vessels.

It is, however, prolonged taxation of the heart extending over the period of fatigue that is very apt to cause changes of a more or less permanent kind which constitute overstrain. The irritable heart of soldiers described by Da Costa, the forms of heart disease found so frequently in lightermen and professional athletes, are of this source. It is extremely important that in young people undergoing active growth and development sports should be so arranged as not habitually to tax the heart and circulation beyond the period of fatigue, the point to be remembered being that young people can do almost anything in short spells or spurts, with rest between, but their hearts will not bear with advantage prolonged and fatiguing exertion, the reason being that nutritious changes of waste and restoration are quick, and cardiac innervation excitable. In full grown adult life great exertion can be more prolonged, and as life advances the heart is much more liable to damage from quick spurts of effort than from prolonged and steady exertion.

In my belief, with perhaps the single exception that in some cases long runs and paper chases are not sufficiently supervised with regard to the various ages and physique of the boys, the usual public school sports are admirably adapted for them. I would here make an observation which is probably in accord with the experience of others, although I have not seen it alluded to, namely, that in young people, especially boys between 7 and 12 years of age, it is common to find the heart relatively large, the apex beat slightly outside the normal, the impulse of the left ventricle relatively strong. I believe this condition to be by no means abnormal, and that it is attributable to the restless activity of early youth, and to the cardiac development being somewhat ahead of the pulmonary. It would be an error to regard it as morbid.

My own limited experience of those who have overdone it in training is that they become anæmic, that their cardiac innervation suffers, and that the ventricles yield from impairment of muscular nutrition. An anæmic condition of such patients and an occasional hesitation in the cardiac rhythm are the earliest phenomena.

The treatment of an overtaxed heart and the lighter degrees of overstrain is simply a short period of complete rest, followed by steady but carefully-graduated exercise, calculated to maintain cardiac and general muscular circulation and nutrition without exciting the heart's action or increasing the blood pressure. I think special heart exercises are better avoided; we do not want to make heart "crocks" of our young people. Children have great powers for complete recovery in their rapid renewal of tissue.

Overstrain of unsound hearts is, of course, a matter of daily experience, and is the immediate cause which brings such cases under observation. Its treatment is involved in that of the heart disease upon which it supervenes, and the same remark applies to the more severe effects of strain, such as rupture of valves, aneurysms, and the like.

INFECTIVE ENDOCARDITIS.

The pathology of infective endocarditis will be broadly covered for our present purpose by saying that it is a disease most commonly—61 cases out of 69 (Coupland)—supervening upon valve changes, the result of former endocarditis, that it is produced by the lodgment and local cultivation of microbes, and that its secondary results are occasioned by the toxins yielded to the blood by such organisms and by the detachment of microbe-bearing fibrinous emboli, occluding vessels in various organs and parts. That the organisms regarded as capable of setting up infective endocarditis are of more than one kind—Dr. Dreschfeld[5] enumerates twelve kinds of organisms as having been found—but that streptococci and staphylococci pyogenes are the most frequently found, pneumococci next in frequency, gonococci and others occasionally met with. It is stated that in same cases organisms have been found peculiar to the lesions.

The salient facts with regard to infective endocarditis are the frequent concomitance of previous valve defect and exposure to sewer gas emanations or septic absorption, and these factors will be found to underlie and initiate the whole pathology of the disease in the vast majority of instances. They are in my belief the objectives of our prophylactic and therapeutic treatment. A due recognition of these facts will add to the care with which, on sending a patient convalescent from rheumatic fever with endocarditis to a seaside or country resort, we should satisfy ourselves as to the sanitary condition of the house to be occupied. Obviously the first inquiry in any case presenting symptoms suggesting infective endocarditis is into his sanitary surroundings, and into every possible source of autogenetic infection, such as otitis, chronic gleet, pelvic abscess, and the like, and to at once deal with any such defect.

The next point which strikes the clinical observer is the fact that with a mild remittent fever there are associated more or less periodical outbreaks of high temperature with great fluctuations of from a few hours to two or three days duration. We can often prevent this appalling malady, we may sometimes nip in the bud by prophylactic measures its dire development. What can we do in its treatment? Of drugs, arsenic is the only one under a course of which I have seen this disease get well. I do not remember to have seen any appreciable result from quinine, sulpho-carbolates, guaiacol, mercury, or other remedies of the antiperiodic or antiseptic class. But in the face of the dreadful mortality of at least 80 per cent. of the cases that prevails, arsenical treatment must promptly be abandoned for any more promising remedy. And looking to the pathology of the disease, it would seem that in the modern development of serumtherapeutics there is most to be hoped for in its future treatment.

It is hazardous to trust the reports of any new method of treatment until a sufficient time has elapsed for the favourable cases which have brought it into vogue to be duly apportioned to those in which it has failed.

There have been recently reported four cases treated by the antistreptococcus serum with the very encouraging result of three recoveries. It must not be concluded, however, that this represents anything like a just account of the results of the treatment. A considerable, and as yet unpublished, experience at the various large hospitals and in private has already gone far to moderate enthusiasm for this method of treatment. I have here a table of all the cases that have come within my personal knowledge through inquiry amongst my friends and at some of the principal London hospitals. They are 12 in number, which include the 3 successful cases already published, 7 deaths, and 2 in which no favourable result has ensued. Allowing for the fact that in some of these cases the antistreptococcus treatment has, from a natural hesitancy with regard to its efficiency and some timidity of possible risks in its employment, been employed only in later and almost hopeless stages of the disease when already large embolic detachments have set up centres of cultivation in many positions, the table may not be regarded as so discouraging as would at first appear. It may be laid down as a principle governing treatment by this particular serum that the more distinct the history of a previous endocardial lesion, and a subsequent exposure to infection through a suppurative medium or a sewer gas sepsis, the more appropriate the case for the treatment. This rule would discourage its employment in cases in which the pneumococcus, gonococcus, or some other microbes divergent in character from the streptococci and staphylococci were concerned; and if with the recognition of this principle and its earlier and bolder carrying out more encouraging results are obtained, it will certainly follow that analogous measures will be found for the circumvention of the other forms of microbic action. There is a further point in the natural history of infective endocarditis which is well illustrated in this chart—namely, that towards the close of the case, when the vital powers are at a low ebb, the temperature tends to fall apart from any treatment, and the reactions to embolic incidents are much less marked or do not occur at all. It is possible that thus if the serum be used late in the case, it may have effects attributed to it which should be otherwise accounted for.

I will venture now to allude to a case treated by the subcutaneous use of another material—namely, yeast. Although it occurred four years ago, and struck me very much at the time, it did not seem then advisable to publish it, for as it stood it might equally well illustrate the value of a treatment or the fallacy of drawing any deduction from a single case.

I had some months previously seen a case of infective endocarditis of long standing with Sir W. Broadbent, in which he had for a time employed yeast given by the mouth with the apparent effect that during the several weeks of the treatment the temperature had preserved a lower, although not a normal, range; the patient, however, became nauseated, and would not continue the remedy, and finally died of the disease.

CASE OF INFECTIVE ENDOCARDITIS TREATED BY YEAST.

A young gentleman, aged 21, with slight defect at the aortic valve, lived in a room over an archway which covered a former inlet of the Thames, and presented a surface of stagnant Thames mud, sometimes dry, often wetted with surface water from the extended basement of an ancient building. He was given to violent exercises, bicycling, gymnastics, and engineering work, and the presumption is that he overstrained an old-standing valve lesion. On May 15th, 1895, he was taken ill with vomiting and faintness. He was seen by Dr. Davis, of Dorset Square, on the 16th, when he had a temperature of 102°, general *malaise*, and a cardiac murmur of aortic regurgitant character. I saw him in consultation with Dr. Davis on the fourth day. The temperature continued raised. There were no rheumatic symptoms, nor were there any special symptoms of enteric fever. On about the eighth day he had a severe rigor, and at intervals of four or five days afterwards he would have rigors, with the temperature running up to 105° with deep fluctuations. With the rigors there was sometimes sharp pain over the splenic region, and the spleen was distinctly enlarged. On June 1st he was removed to a perfectly sanitary nursing home, but the symptoms remained unaltered. Salicylate of soda was at first administered, and quinine was then given in 5-grain doses without result, and moderate doses of arsenic were tried, but these drugs did not influence the symptoms. The aortic regurgitant murmur became very marked, and a curious rough, somewhat churning, but mainly systolic murmur was heard over the left auricular region.

On July 1st injections of yeast culture (a fairly concentrated cultivation of yeast in saccharine water prepared by Messrs. Burroughs and Wellcome) was employed, 20 to 30 minims of the yeast being injected into the cellular tissue each second day, and these were steadily continued until September 1st. Soon after the commencement of the yeast treatment he had acute right pleurisy with some effusion. With this interruption, the intervals of four days between the rigors, which had pretty steadily been observed, appeared broken by the yeast injection and prolonged to six or seven days. The temperature became normal, or nearly so, in the intervals, and altogether normal about August 14th, three months from the commencement of the illness. The patient went to Brighton on September 1st, and rapidly convalesced, and has remained active and well since. In this case the yeast culture was obtained from Messrs. Burroughs and Wellcome. It was an inconvenient and unstable preparation, although it seemed to serve a very good purpose.

Dr. de Backer, of Paris, seems to have originated the yeast ferment treatment of microbic diseases, and it was from a reference (after my observation of Sir W. Broadbent's case) to his experiments[6] with "backerin," an aseptic preparation of fermentable material containing the yeast fungus, that I was induced to use the yeast preparation subcutaneously. de Backer[7] explained the efficiency of the yeast fungus in microbic diseases by the cells attracting into their interior and finally killing various microbes, and thus helping the germicidal function of the white corpuscles.

I have used yeast subcutaneously in four other cases, in one of the four using it also in the form of dry yeast in 30-grain doses by the stomach, but I cannot say that any marked result followed. The cases were, it is true, all rather advanced with splenic and other embolisms. One case was a sequel to gonorrhœa, one to suppurative otitis, and the other two of less defined source.

Dr. Vaughan,[8] Professor of Hygiene and Physiological Chemistry at Michigan in 1894, advocated the use of solutions of

nuclein and nucleinic acid in the treatment of microbic diseases; but I am not aware that it has been tried except in the treatment of tuberculosis, although it has been advocated both in the form of the original preparations of de Backer and as nuclein solutions in the treatment of all microbic affections. It occurred to me that nuclein derived from the young yeast cells may have been the material responsible for the apparent usefulness of yeast in Sir W. Broadbent's and my cases, and that it was worthy of trial in cases at all events in which antistreptococcus serum would not be applicable.

The only case of infective endocarditis in which I have used nuclein is one seen by me in consultation with Dr. Christopherson of Hastings. The effect appears to be very striking, the temperature coming down to normal for twenty-two days, after which, however, another rise occurred.

Conclusion.

I regret that time has not allowed me to allude more fully to some forms of cardiac disease, more especially to the subject of senile and prematurely degenerative diseases of the heart. A reference to them must have been somewhat discursive, for whilst they admit of much management, they necessarily allow of little direct treatment. And, indeed, in trying to seek out points for treatment which are scattered here and there amidst groups of symptoms, I fear I have already been too discursive. My endeavour has been to illustrate the principles of treatment rather than to touch upon details, the recognition of a neuropathic state, the principle of rest, of exercise, of drug administration, of restrictions in diet, upon which we formulate our more precise management of individual cases. Finally, we must accept in cardiac therapeutics the principle of submission, so that we may better help patients to recognise the necessity of a restricted life caged within the narrowed limits of those conditions under which alone life can be maintained.

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THE HUNTERIAN LECTURES
ON THE
SURGERY OF THE KIDNEY.

Delivered at the Royal College of Surgeons of England,

By HENRY MORRIS, F.R.C.S.,
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LECTURE II.

RENAL CALCULUS: THE DIFFICULTIES AND ERRORS IN DIAGNOSIS IN THEIR RELATION TO EXPLORATION OF THE KIDNEY: UNSUSPECTED, QUIESCENT, AND MIGRATORY CALCULI.

Mr. President and Gentlemen,—To-day I wish to draw attention to some renal calculous disorders. If I put them in the very forefront of surgical affections of the kidney, I do so for the following reasons:

1. They are the most frequent and most painful of the surgical diseases of the kidney. Probably no disease, except acute tetanus, is capable of causing worse suffering.

2. Renal calculus, whilst slowly destroying the kidney, often physically disables its victim by its unrelenting irritation, and its unyielding resistance to every form of medical and dietetic treatment.

3. No disease gives rise to such a variety of morbid changes in the kidney as calculus; and none is more certainly fatal when allowed to progress without surgical interference.

4. Few operations in surgery are so successful as nephrolithotomy, by which a calculus is removed from a kidney not disorganised by the calculus or otherwise. No great operation is followed by a smaller mortality. Nephrolithotomy gives absolute cure, saving the kidney from progressive destruction, and the patient from what at any moment may prove to be an imminent danger to life.

5. Renal surgery will grow in confidence and in favour with the profession and the public as nephrolithotomy anticipates and displaces nephrotomy and nephrectomy.

I attempted to show, in the latter part of the first lecture, that nephrectomy is being rapidly restricted in its application as advances are made in ureteral operations. It may also be safely asserted that nephrotomy—at present the most frequent operation resorted to for calculous affections—will be required but rarely if nephrolithotomy is earlier and oftener performed. Calculous pyonephrosis is the result of long-standing irritation and progressive destruction of the kidney, and there is no reason why it should ever occur if physicians would recommend and surgeons would practise early operations for stone in the kidney. That this is a consummation much to be desired is seen by comparing the mortality of nephrolithotomy with that of nephrotomy and nephrectomy for calculous conditions. The figures are as follow:

	Cases.	Recoveries.	Deaths.	Percentage.
Nephrolithotomy	34	33	1	= 2·9
Nephrotomy	43	23	10	= 23·25
Nephrectomies	17	12	5	= 29·4

[Case 21 amongst the nephrotomies and Case 16 amongst the nephrectomies are excluded for reasons which are obvious on a glance at the tables.]

6. Another reason why calculous disorders take so prominent a lead amongst the surgical affections of the kidney is because of the difficulties and errors attending their diagnosis.

These difficulties arise from four chief causes:

1. Several other renal and ureteral affections give rise to the same symptoms as stone.

2. Several diseased conditions of other organs cause symptoms which simulate those of renal calculus.

3. Symptoms caused by renal calculus may be transferred to other organs; or may be of a psychical order, with or without high temperature, and not referred at all to the kidney itself.

4. Calculi may be for an indefinite time masked, giving rise to no symptoms whatever, yet causing the while progressive destruction of the kidney.

When calculi have been previously passed, when well-marked attacks of renal colic occur, when crystals of uric acid or calcium oxalate are frequently found in the urine, and when the urine is intermittently mixed with a good deal of blood, or persistently contains a microscopic quantity, there are the strongest *a priori* grounds for thinking that a stone is present. This evidence is strengthened if attacks of colic and hæmaturia are readily induced by exercise or jolting, and readily subside with rest; and if a sharp pain or distinct tenderness is always caused by bimanual examination of the renal region. In many cases, however, mistakes in diagnosis are bound to arise. Morbid conditions other than stone will be found, from time to time, in cases in which the character of the pain and the state of the urine point to calculus as the probable cause. These mistakes are apt to excite a prejudice against renal exploration; but the results obtained by those who have had large practice in renal surgery ought to correct this. The experience gained by operations has taught us much as to what the conditions are which cause symptoms typical of stone when no stone exists.

In 1892 I published some lectures[1] on the conditions simulating renal calculus as verified by surgical exploration in 28 cases. To these I now add 16 cases, making 44 in all. In a few instances a calculus was possibly in the ureter at the time of the exploration, because one was passed some little time subsequently. But in the greater number of the 44 cases some other morbid state of the kidney was found and remedied. It is certain that the diagnosis of calculus, though incorrect, was advantageous to these patients, for the very reason that it led to the exploration, and in this way to the discovery of the true cause of the disease. The expression "negative exploration" is often applied to every operation in search of renal calculus, but which does not result in the discovery of a stone. This expression is very misleading. It is not a "negative" result to find and excise commencing

foci of tuberculous disease; to fixed a misplaced or freely-shifting kidney; to open and scrape away half a dozen small abscesses or suppurating cysts; to excise a solid or renal perirenal tumour, or a tense cyst; to discover and give exit to blood extravasated beneath the fibrous capsule, or pent up within the cavity of the kidney; to liberate a kidney hampered by tough adhesions (which in one of my cases were as dense and hard as cartilage); or to detect and divide a ureteral stricture or obstructing valve. Yet these are some of the conditions which have been met with in the search for stone in the kidney, and which, in many instances, have been most most successfully cured.

I have explored several cases in which the diagnosis was very doubtful, but the severity of the sufferings were so intense that the patients have willingly submitted to an operation. The exploration has proved the absence of a calculus, but has revealed a degree of mobility behind the peritoneum, in what I have designated a cinder-sifting manner, altogether out of proportion to any mobility detectable by clinical examination; in some of them no mobility whatever could be made out by bimanual abdominal palpation. In these cases complete relief has been obtained by nephropexy. In other cases I have found, instead of calculus, the kidney more or less displaced, and though little, if it all, movable, yet greatly engorged with venous blood, owing to distortion of the veins at the hilum. In other cases, again, the kidney has been swollen and congested with venous blood, obstructed by the pressure of tough and condensed perinephric cellular tissue. The relief which is given by the so-called "negative exploration," in cases such as I have referred to, is to my mind a striking illustration of the indirect benefits which nephrolithotomy has conferred on suffering humanity.

Another important class of cases in which the symptoms simulate renal calculus is ureteritis, a disease to which more attention seems to have been given in France and Germany than elsewhere. As long as nephrotomy was limited to cases in which the kidney is converted into a great abscess swelling, the ureter was never seen in the living human body; but since nephrolithotomy took its place as a recognised operation, and an exploratory incision, with a view to nephrolithotomy, has been considered justifiable, because proved to be safe, the morbid states of the ureter have, by degrees, come to be better known, and operative measures have been adopted for their improvement or cure. An illustrative case of this sort was published by Israel in 1893.[2]

A young man, aged 28, had for eight years suffered from a urinary affection, which commenced with frequency of micturition. Soon to this symptom were added acute attacks of pain in the bladder, and left renal colic of extraordinary violence. He became in consequence almost a morphinomaniac. After long futile treatment elsewhere he came under Israel—thin, miserable, tormented by atrocious pains, which recurred many times a day. The clinical examination, in corroboration of the patient's account, left no doubt as to the presence of renal calculus; there were frequently blood and mucus, but no tubercle bacilli, present in the urine; there was, too, tenderness in the left flank, and pain was caused by pressure upon the ureter throughout its abdominal course. Thus Israel felt called upon to explore for calculus, and did not doubt that he would find one in the kidney. To his astonishment there was none. He found the kidney small and soft; he incised its convex boder, and explored the renal cavity, which was dilated. The kidney was then sutured, the wound closed and rapidly healed, but without any amelioration of the symptoms. It therefore seemed clear that the ureter was in some way at fault, and Israel determined to explore it. Cystoscopic examination showed the orifice of the left ureter to be patent and the bladder free of growth, but afforded no other information. Two months and a week after the first operation he again explored the kidney, with negative result, and then through a curvilinear incision, prolonged towards the middle of Poupart's ligament, he discovered that the ureter throughout its entire length was extraordinarily hard, of nearly three times its normal diameter, and presented at intervals enlargements of quite cartilaginous consistence, adherent to the surrounding tissues, especially in the region of the small pelvis. It was permeable from kidney to bladder, but there were at three places slight obstructions, due to thickened folds of mucous membrane, the result of ureteritis. The kidney, small and hydronephrotic, was removed. After the nephrectomy the colic disappeared immediately, and, although a certain amount of pain persisted for eight days along the course of the ureter, and pus was detected in urine for many months, the patient quite recovered.

Israel makes the following comment upon the case: "I hope if in such cases this plan of procedure is followed the number of instances will more and more diminish, to explain which—in the event of no satisfactory cause for the painful symptoms being ascertained—the unmeaning diagnosis 'nephralgia' is made."

I join with Israel in hoping that fewer cases will in the future be set down to nephralgia. I feel sure that cases of so-called nephralgia will become rarer and rarer—(1) if due care is used in the clinical observation of patients supposed to be suffering from renal calculus; (2) if proper care is taken in the selection of cases for operation; and (3) if a more thorough and methodical exploration is made of the kidney and ureter than is, I believe, customary at present.

I am not, however, prepared to go so far as some who assert that all the "algias" are a cloak for ignorance: that nephralgia or renal neuralgia is a term without significance, "an expression to hide our inability to explain the cause of paroxysmal attacks of pain in the renal region." I would certainly, with others, urge the necessity, in every case in which one is tempted to adopt this diagnosis, of being very watchful not to overlook anything which might lead to a more satisfactory explanation.

There are many conditions outside the kidney, as well as those connected with that organ, which give rise to symptoms suggestive of renal calculus; and, if overlooked, are likely to be set down to nephralgia. I have known instances of each of the following diseases being the subject of mistake: (*a*) Gastric ulcer; (*b*) malignant and tuberculous growths in the intestines; (*c*) intestinal adhesions, whether involving the renal pedicle or not; (*d*) aortic or cœliac aneurysm stretching the ureter or renal vessels; (*e*) spinal disease; (*f*) vesical calculus; (*g*) abscess, and calculus in the prostate; (*h*) growths in the bladder; (*i*) ovaritis; (*j*) tuberculous disease of the Fallopian tube; (*k*) a gall stone in the cystic duct. Still, there certainly are cases in which, neither within nor without the urinary organs, has anything been discovered to explain continuous discomfort, or attacks of paroxysmal pain in the renal region; and yet complete relief has followed an exploratory operation. These are the cases which we are apt to call nephralgia: and these the only operations which we can properly speak of as "negative explorations." Nor do I think we must quite rely upon a statement, which has been put forward with some authority, to the effect that paroxysmal renal pain, or so-called nephralgia, is never associated with neuralgia in other situations, and has never been relieved or cured by antineuralgic remedies. We do not get well-marked cases of the kind in this country, nor do I suggest that all the cases of renal pain which are cured by renal exploration are of malarial origin; but nephralgia of malarial origin would seem to be known in other countries, and there is reason, therefore, for thinking it may from time to time be met with in our own, in persons who have lived much abroad.

I recall a short but suggestive contribution to the *Medical Times* on Nephralgia due to Malarial Poisoning, by an old pupil, Mr. F. W. Kirkham, formerly surgeon to the Royal West India Mail, and whose name is associated with a most successful case of ureterotomy for impacted calculus.[3] Mr. Kirkham therein reports the case of an engineer whom he was called to see when at Colon, in the Isthmus of Panama, who had twice suffered from intermittent fever. This young man (aged 25) was seized suddenly with severe dull aching pain in the right loin, varied at intervals by paroxysms of severe shooting pains extending down the corresponding thigh. After lasting about four hours they passed off, attended by profuse perspiration. Similar attacks occurred on the two following days, and again on the fourth day, when he was first seen professionally. Mr. Kirkham found the temperature 102.4°, pulse 108, skin dry, and tongue clean. There was no enlargement of liver, spleen, or kidney, but there was tenderness in the right loin. The urine, though alkaline, was free from any abnormal sediment.

Morphine relieved pain and promoted sleep, and 20 gr. of

quinine prevented the recurrence of the attack on the following day, and 15 gr. of the drug had the same effect on the day day after. As soon as the quinine was discontinued the attacks recurred, but a return to the quinine, and subsequently a change of climate, enabled him to enjoy perfect health. Mr. Kirkham adds: "During the past two years I have had four patients under my care who, after recovering, or during their recovery, from malarial fevers have been seized with daily recurring attacks of pain in the region of the kidney, presenting symptoms very like those due to the passage of a renal calculus."

Tiffany,[4] of Maryland, speaks of having seen a number of cases of malarial hæmaturia, in which it would seem a history of intermittent or remittent fever was often wanting, but the patients had a sallow complexion, which might, however, have been wrongly attributed to the affection for which surgical relief was sought. His remarks lead one to suppose, though he does not actually say so, that he has proved the malarial origin of the hæmaturia and pigmented urine in some of these cases by finding the plasmodium malariæ in the blood. If renal pain be associated with the hæmaturia, and the microbe of malaria be not looked for, or not found, the diagnosis of renal calculus would be almost sure to be made.

An ingenious suggestion to explain certain cases which simulate renal calculus has been advanced by Mr. Howard Marsh,[5] who in 1892 reported the case of a woman of 25, who from the age of 13 suffered pain in the left loin, and, when under observation, had paroxysmal attacks of pain, pyuria, and hæmaturia. Nephrectomy was followed by relief of these symptoms; the kidney excised was small, movable, and contained three stones about three times the size of a grain of wheat. Within two months after the operation she began to suffer severe pain in the right kidney, with hæmaturia and scanty secretion of urine, and frequent and painful micturition—all symptoms which are suggestive of renal calculus. The case further simulated stone, because she passed a small calculus on one occasion, and two small pieces of calculous material on another. This affection of the right kidney continued for over four years, during which time the kidney and ureter were twice explored for stone, but with negative result. She died after the second exploratory operation, and at the *post-mortem* examination no calculous or other renal condition was found to explain the symptoms.

Mr. Marsh suggests that the case is one of the nature of Raynaud's disease—and that the symptoms were due to a profound disturbance of the vasomotor system of the kidney, just as symmetrical gangrene is to exaggerated vasomotor disturbance in the fingers and toes, and other peripheral parts. If this view of the occasional causation of symptoms, usually regarded as pathognomonic of stone in the kidney be correct, it may enable us to explain certain cases of mistaken diagnosis which otherwise are inexplicable.

Hopes were entertained that the Roentgen rays would be of service in determining the presence or absence of renal calculi, but hitherto they have afforded but little help in this direction. In time, possibly, they will be able to render more assistance than they have yet done; but if they demonstrate with certainty the presence of a calculus without being also able to reveal the other morbid conditions remediable by operation which mimic calculus, they will, I fear, be the means of putting back renal surgery by deterring many patients from submitting to surgical operations, who can be cured by no other treatment than an operation.

"Unsuspected Renal Calculus."

I have pointed out that there are numerous morbid conditions other than renal calculus which cause typical renal colic. Conversely, there are many cases in which the symptoms due to renal or ureteral calculus are not referred to the kidney or ureter at all, but to some other organ. It is also well known that a calculus for a long time may cause no symptoms whatever. If such silent, lurking calculi could be discovered and removed, many deaths from calculous anuria, much illness and suffering from perinephric abscesses and renal fistulæ, and many kidneys gradually undergoing atrophy or disorganisation might be saved by well-timed operation. Unsuspected calculi group themselves into two classes—those which do not excite symptoms; and those which cause symptoms which are not referred to the kidney or ureter.

A. *Calculi which do not Cause Symptoms.*—I might quote several cases in which a calculus, after existing for years, has set up perinephric abscess without having previously caused any definite renal symptoms. A calculus may grow silently to such a size as to be felt on palpating the abdomen without causing any subjective symptoms. I have met with three or four cases. I will epitomise one of them.

In May, 1894, I saw a lady, aged 27 (with Dr. Ford Anderson), who for two or three years had suffered from pain and sense of weakness in her back, more especially in the left side. About four weeks before I saw her she began to pass mucopus in alkaline urine; and five days before she was seized with violent pain in the left lumbar region, which lasted many hours, in spite of morphine injections. Following upon this attack were several rigors, a temperature of 105°, more or less continuous pain in the left side, and some fulness in the left flank. When I saw her she was extremely ill with a hectic flush on her cheeks, widely dilated pupils, a small, rapid, weak pulse, a furred tongue, and very marked nervous depression and anxiety. She complained of pain over the left kidney, but had never felt pain, and was quite unaware of anything wrong in the right kidney. There was no pain elsewhere, though she replied in answer to questions on this point that "she felt as though she might have pain anywhere." There was no tenderness about the right kidney, and little if any about the left; but the left could easily be made out by bimanual examination, and was felt to be rather larger than normal. On the right side there was a hard, irregular swelling plainly to be felt in the loin and through the anterior abdominal parietes.

The temperature on the morning of my first visit (May 16th) was 101° F.; overnight it had been 105° F. Through an incision in the right semilunar line the left kidney was made out to be larger and more globular in form than normal. It was quite impossible to be sure that the enlargement was due to anything other than simple hypertrophy. Had it had the feeling of a hydronephrotic kidney or of a calculus I should at once have opened it through the left loin. At the inner and lower border of the right kidney was felt a lump, which was obviously a large calculus, filling the infundibulum and projecting into the upper part of the ureter. Through an oblique incision in the right loin a calculus weighing 830 grains was removed.

It was, I believe, little more than a coincidence that after this operation on her right kidney the patient lost all her pain on her left side; and on the second day felt so much better that she described herself as being "quite a different person." I think the relief she felt was owing to the stone, which was irritating the left ureter, slipping back into the renal pelvis during the movements requisite for the operation, or under the relaxing influence of the anæsthetic.

It was plain, for the following reasons, that the pus in the urine, both before and after the nephrolithotomy, must have come from the left kidney: (1) the urine remained unchanged by the operation; (2) the right ureter was completely blocked before the operation by the large stone removed, and to which the whole infundibulum was tenaciously adherent, (3) after the operation all the urine secreted by the right kidney escaped through the lumbar wound; (4) there was no pus found about the stone in the right kidney. It is also equally certain that the calculi which were later on passed naturally and removed by operation from the left kidney had been the cause of the feverish and nervous, as well as of the urinary, symptoms; and that I had, so to speak, operated upon the wrong organ. This arose through my following the teaching, to which a good deal of importance was attached by the distinguished operator who originated it—namely, that a stone in one kidney may cause pain to be referred to the opposite kidney, without itself being the seat of pain; and that if the abdominal route is taken, we shall be able to avoid operating upon the wrong kidney, by finding out by direct palpation in which organ the stone is really situated.

In this particular case, cœliotomy was not needed to discover the stone in the right kidney; this was done at the bedside. On the other hand, it did not enable me to ascertain that the left kidney contained one large branched calculus,

and two others of smaller size which I removed at a subsequent operation, nine months after the first, as well as a calculus which was passed naturally from the left kidney, during convalescence from the nephrolithotomy on the right kidney. The left kidney, with the hand in the abdominal cavity, was felt to be enlarged, more or less globular, and of uniform firmness. It was very carefully palpated for stone, but nothing was felt beyond what was consistent with simple hypertrophy.

Fifteen years ago, in a paper published in the *Medico-Chirurgical Transactions*, vol. lxviii, p. 75, *et seq.*, I called attention to the uncertainty of ascertaining the presence of a calculus by direct palpation of the kidney, either with the hand in the abdominal cavity, or after the kidney had been removed from the body. In the Clinical Society's *Transactions* of 1887, vol. x, p. 109, I again referred to the same probability of error. Further experience has convinced me of the fallacy of this mode of examination, and I would lay it down as an axiom, that the kidney which ought to be first explored is the one on the painful side.

I shall refer in my next lecture to a case of calculous anuria, in which calculi could be felt through the abdominal wall in the right kidney, but the attacks of pain associated with the anuria were referred to the left kidney. I operated upon the painful side, found a small stone in a large, hypertrophied kidney, and the paroxysms of pain and anuria ceased entirely.

I have been once or twice tempted to follow the teaching of the gentleman I refer to, but, excepting on this one occasion, I have resisted. In Case 9, Table I, the inducement was very strong. The nature of this case was, in many respects, similar to the one I have just related. I was able to feel a stone in the right kidney through the abdominal walls. I removed it through the right loin: it weighed 1,303 grs. The young woman recovered, with a urinary fistula. Nearly twelve months afterwards she returned, complaining of terrible pain in the left kidney, but none in the right. At a consultation with several of my colleagues, the opinion held was that the left-sided pain was reflected from the right kidney, and that right nephrectomy should be done, more especially as this operation would get rid of the fistula in the right loin. Not believing in so-called reflected pain, I ventured to act contrarily to this opinion. I explored the painful kidney, and extracted therefrom a stone weighing 513 gr. The girl rapidly recovered from the operation. Fifteen months later I removed the right kidney because it became distended and suppurated. The patient recovered well, and was cured of the sinus in the right loin. Sixteen months after this last operation (the nephrectomy) she was known to be in good health, her left kidney, from which the stone of 513 gr. had been extracted, discharging its functions well. One is tempted to ask, "What would have happened had I nephrectomised the right kidney before freeing her left kidney of the calculus? My own experience of nephrectomy in other cases where there was a stone in the opposite kidney, compels me to answer, 'Probably death.'"

There is not, so far as I know, any case on record in which there is completely satisfactory evidence of symptoms on one side only being caused by a stone in the kidney of the opposite side. The presence of a stone on one side is not proof that the opposite and painful side is not also affected. That the attacks referred to one side have ceased after operating upon the opposite and painless side is not conclusive. This may be a coincidence, and due to the accidental shifting of a calculus in the painful kidney, or to some other cause.

Of course it may happen that, with a great deal of disease on the painful side, there may be silent or quiescent disease on the opposite side, as in the cases I have just quoted, and this quiet disease may be so advanced as to cause a fatal issue after operating on the painful side; but this is an entirely different question. In several of the fatal cases in my lists of nephrotomy and nephrectomy for stone, the opposite kidney has been proved, by *post-mortem* examination, to be disorganised by unsuspected calculus. This was so in cases Nos. 11 and 22, Table II; in No. 4, Table III; and was, I have no doubt, so, though not verified by *post-mortem* examination, in No. 15, Table III.

It may be asked, "Is it consistent to reject the theory of transferred or reflected pain, as applied to the opposite kidney, and yet to accept it when applied to the bladder or to the ovary?" Well, I believe it is. I have verified the one and have not seen any proof of the other. I do not attempt a full explanation of this; but I would point out that there are instances of a more direct nerve connection between parts on the same side of the median line than between similar organs or parts on the opposite sides of the body.

Take, for example, hip disease—how often does it give rise to reflected or transferred pain in the opposite hip-joint? yet it is not rare for it to cause pain in the knee of the same side. How often does a decayed molar tooth cause pain in the sound molars of the opposite side? or an obstinate ulcer on one edge of the tongue cause pain in the healthy tissue of the opposite edge? Yet the decayed tooth will keep up eczema in the ear hole of the same side, and the lingual ulcer racking pain there, so long as the tooth is not extracted and the ulcer not healed. The eye is often quoted as a parallel with the kidney in this respect, but the relations of nerves and vessels respectively on the two sides in the case of the eyes are quite different to those in the case of the kidneys.

The anatomical communications between the kidney and the bladder, and between the kidney and uterus, as well as between the kidney and ovary and Fallopian tube of the same side, are much more important from the point of view of transferred impressions than those between the two kidneys. The half of the bladder may be regarded as an expansion of the lower end of the renal duct of the same side; and any irritation from a cause seated in the kidney may be conveyed to it by continuity of structures. The blood vessels to the ovary and tube, as well as the uterine vessels, are in close relation with the ureter of the same side. Moreover, the ureter has a considerable course within the folds of the broad ligament, and not far removed from the neck of the uterus, and any drag or tension on the cellular tissue within the ligamentous folds is calculated to irritate the ureter, or *vice-versâ*.

I have no doubt that *movable* kidney causes certain uterine and ovarian symptoms; and in some cases of very great mobility of kidney I have felt a considerably thickened tender ureter through the vaginal roof. In one case it was so thickened and indurated that it felt like an elongated stone. It is acknowledged that some movable kidneys, and I believe also some kidneys not movable, will swell and ache during the catamenial period; and in a case within my knowledge a movable kidney did so to the extent of being mistaken for a malignant renal tumour by a very noted obstetric physician. The kidney also occasionally undergoes grave and even alarming inflammatory changes during the early months of pregnancy, even where there is no periuterine inflammation; and did time permit I would quote cases of the kind.

In parametric and perimetric inflammations albuminuria and pyuria are far from rare, and may assume alarming proportions. They occur in non-puerperal as well as puerperal cases, though much more frequently in the puerperal. These urinary changes are not due to vesical but to renal conditions, occur during the parametric and perimetric affections, and subside with them. And as showing the influence of the periuterine cellular tissue upon the ureter and through the ureter to the kidney, I may point to the fact that in the late Matthews Duncan's experience albuminuria is much more frequently associated with parametritis, that is, inflammation in the pelvic cellular, than with perimetritis, that is, inflammation of the peritoneum of the broad ligaments and uterus. It is also well known that in parametritis the inflammatory process has a strong preference for spreading along the ureter to the kidney; and having done so, occasionally gives rise to perinephric abscess.

B. *Unsuspected Calculi with Symptoms transferred to other Organs.*—If the reasons above stated are correct, there is no cause for surprise that with renal calculus, as with vesical calculus, hip joint and spinal diseases, pain may be referred to a distant part instead of to the organ affected. In renal calculus the symptoms may be referred to the bladder, ovary, or uterus instead of to the kidney. I am constantly seeing cases of renal calculus and other renal diseases which have been under prolonged and repeated treatment for cystitis. Bladders are frequently sounded, irrigated, injected with solutions of silver nitrate, and otherwise actively treated,

without apparently the least suspicion that the trouble is due to stone in the kidney. I will mention one very striking instance, in which for nearly ten years all symptoms pointed to the bladder, none to the kidney; but at length a renal calculus was removed, and the patient regained perfect health.

A married woman (see Table I, No. 19), aged 35, leading an active life, and of a physically and mentally healthy constitution, had suffered from very painful micturition, cystitis, and frequent phosphatic concretions in the bladder for two years. All the tried remedies having failed to give relief, a vesico-vaginal fistula was established by operation, and the urine was allowed to flow away continually into a urinal. This state of things went on for some years, and then the vesico-vaginal fistula was closed. No sooner had this been successfully accomplished than all the old symptoms returned, so that in two or three months the fistula had to be re-established. In this condition the patient passed over nine of the best years of her womanhood. Then some pain and some extra resistance were experienced in the right renal region, and after four or five months' duration I was asked to see her by Dr. Fenton, who had diagnosed right renal calculus. I endorsed this opinion, and on May 14th, 1893, I removed a small lozenge-shaped uric acid calculus, weighing only 4 gr., through an incision in the convex border of the kidney. The patient made an uninterrupted recovery, and, when quite convalescent from the nephrolithotomy, Dr. Fenton closed the vesico-vaginal fistula. The patient remains well to this day, has perfect control over her urine, and, as she expresses it, "finds her life quite a different thing, and is now well worth living."

It is sometimes the same with the ovary as with the bladder; it receives all the attention and treatment, whilst the cause of the trouble is in the kidney. I altogether exclude in these remarks cases in which there is some morbid, organic, or functional state of the ovary as well as of the kidney. I refer exclusively to instances in which pain, either paroxysmal or constant, is referred to the healthy ovary, not to the kidney, and may be associated with tenderness in the hypogastrium or *per vaginam*, and yet is caused by renal calculus or gravel.

C. *Unsuspected Calculi with High Temperature and Great Psychical Disturbance.*—This third group of cases is well illustrated by the following, the patient being desperately ill for two or three months with symptoms of a typhoid type, attended with acute but vague pains over the whole body, and with great mental prostration, the illness terminating after the discharge of a few ounces of pus and some renal calculi, presumably from the left kidney.

On June 16th, 1893, I saw, with Dr. Ewart, of Eastbourne, a male patient from Alexandria, where he occupied a position requiring great mental and bodily activity. For a few days before sailing for Europe he was not feeling well, and on his arrival at Brindisi he was so ill and in such pain when moved that he was screaming the while he was carried ashore. With great difficulty and several halts he reached Aix, when he became too ill to go further. His symptoms whilst at Aix were high fever, frequent rigors, and, as he himself described them, excruciating pains all over him. Sometimes the pains were worse at one part, sometimes at another, but there was a slightly marked predominance on the left side of his trunk and left lower limb. His urine was offensive, and contained pus. It was suggested that he might have a renal calculus, but there was no indication in which kidney it was. Accompanied by Dr. Ewart he at length reached London, though once or twice during the journey it seemed impossible he could do so alive. Frequent doses of morphine had to be given to relieve pain.

When I saw him on his arrival in London he was emaciated to a marked degree, hectic, and had a high temperature with extreme general hyperæsthesia. He was tender, and complained of pains all over him; cried out or groaned when touched; but at one time he would complain most bitterly of a part which at another time seemed free of pain, and could be handled without hurting him. He was shockingly depressed, would take no food willingly, and lay always in a lethargic state, except when touched or moved, which he often tearfully resented. By his relatives he was seen to be quite changed, his temperament altered, his nerve and moral courage lost. The specific gravity of the urine was 1015. There were neither blood corpuscles, sugar, tube casts, nor tubercle bacilli in the urine. On the following day I examined him under an anæsthetic. Nothing abnormal was detected about his bladder, prostate, or urethra, nor in any part of the abdomen or pelvis. There was no undue fulness or hardness of either kidney to be felt. Drs. Cayley and Ringer saw him on three or four occasions, but we were unable to come to any definite diagnosis except that there was some focus of suppuration somewhere within range of the genito-urinary organs, but precisely where we could not say. On the whole, it seemed most likely to be in the left kidney; but with this uncertainty, and in the serious febrile and exhausted state of the patient, I was unwilling to urge an operation which the physicians by no means encouraged me to do. He improved but little during his stay in London, and on July 15th he was removed to his house at Eastbourne.

On August 28th his temperature rose to 103° F. and he had a severe rigor. The next day he passed about 2 ounces of thick pus and a renal calculus with his urine, and at once began to improve. On October 6th he passed a good deal more pus, and the next day four little stones came away. From that time he rapidly convalesced.

He returned to his duties in Alexandria on October 20th, 1893. He was quite recovered, and was seen by Dr. Ewart in August last (1897) in excellent health and quite his natural self.

In a few cases I have witnessed marked nervous symptoms without high fever. W. C. (see Table II, No. 21) was quite melancholic, and, according to his sister's account, had become so depressed mentally, and so inert physically, that his relatives thought his nature had entirely changed. The night before his operation he spoke to strangers in the surgical home in which he was of the certainty he felt that he would not recover. The operation went uneventfully, but when he came out of the anæsthetic he was hemiplegic and aphasic. He died on the second day after the operation, and at the *post-mortem* examination thrombi were found in his cerebral vessels.

In my only fatal nephrolithotomy (see Table I, No. 14) there was for many hours before the patient's death great restlessness with mental depression and agitation. And in a case in which I removed a kidney atrophied by obstruction from a stone impacted in the lower end of the ureter, the man's nervous anxiety and alarm were prominent features throughout, at any rate, after his admission to the hospital (see Table III, No. 3).

It is a question whether the nervous and mental phenomena without fever are a peculiar form of uræmic brain symptoms; or whether the renal disease, like any other serious disease, is a direct cause of the psychical disturbance. The character of the disturbance is especially one of depression, melancholia, stupor, and nervous apprehension of danger being the most frequent forms. Psychical disturbance has been often noted in Bright's and other renal diseases. I have seen it in advanced lardaceous disease, without any other affection, of the kidney. But in these disorders other unmistakable uræmic symptoms existed which have not been present in the calculous cases to which I am now alluding. Another question is, Why are these psychical disturbances in some cases associated with fever and in others not? Is it the result of some molecular transformation—excited by the local irritation—upon which the evolution of heat depends, or is it due to some special form of bacterial toxins?

I do not think this disturbance can be referred to uræmic poisoning. It occurs when there is no suppression of urine, and is absent in calculous anuria when no urine is secreted for six or eight days or more in succession. The temperature is low, not high, in uræmia.

Perhaps light may be thrown on these questions by culture experiments with the urine, and especially with that removed direct from the affected organ.

Quiescent Calculus

is little less dangerous to its possessor than the unsuspected stone. It is often said, "the stone may settle down and become embedded in the kidney; or it may pass naturally, and then there will be no further trouble." But often this is

not so. One of my objects in this lecture is to show that neither the one nor the other of these events can be looked forward to with perfect equanimity; and that in every case in which a stone is believed, or known, to be present the best course is to explore the kidney and remove the stone.

We ought not to close our eyes to the possibility of sudden danger arising from a hitherto quiescent calculus, or from one giving only slight and occasional reminders of its existence. If I am rightly informed, the insurance offices are wise enough not to do so; nor should the surgeon.

Several cases might be quoted of calculi quiescent for years giving trouble at intervals, and ultimately causing serious or fatal illness. I will refer briefly to two cases:

I. A man, aged 48, had hæmaturia as a boy of 12. For sixteen years, though following a very arduous life as a sailor, he had no return. Subsequently he had attacks of lumbar pain and hæmaturia lasting a day or two at a time—at very long intervals. Finally he became dangerously ill, and was thought to have a large malignant tumour—possibly hepatic. This proved to be the right kidney enormously enlarged from intrarenal hæmorrhage, and a calculus which weighed 10 ounces. The kidney had to be removed and the man died of shock.

II. The second case was much less severe, but was in many points essentially like the first; the blood clot and the calculus were removed from the kidney, nephrectomy was avoided, and the patient made a good recovery without a fistula. Subsequently during torpedo destroying practice a fresh hæmorrhage into the renal cavity occurred, and opened spontaneously through the scar. Recovery followed, but with a short superficial sinus which persists.

Migratory Calculi.

Lastly, I want to show the possible and actual dangers of leaving a calculus to make its own way out of the urinary passages; and in this connection let me ask what would be thought of a surgeon who advised a patient with stone in his bladder to wait a few months and see if it would pass through the urethra naturally; on the ground that it was only a little stone, and therefore would be able to make its way perhaps without, perhaps by dint of, stretching; that the process might be a painful one, or might not; that when once the calculus got into the passage the force of the pressure of urine behind would be almost sure to drive it onwards, but that if it did not do so, or alarming symptoms due either to the over-distension of the organs behind or to the sloughing of the part of the tube in which the calculus was impacted, then and then only resort should be had to an operation?

But this is precisely the line of argument daily acted upon in the case of renal calculus. And why? Not because less damage to the kidney will result from the obstruction in the ureter; on the contrary, the serious effect of a blocked ureter is much earlier and much more rapid in its progress; not because the suffering from renal calculus is less than from vesical calculus; not because extravasation of urine never occurs from obstructed ureter or renal pelvis, for witness the perinephric and periureteral abscesses and fistulæ; but because of the supposed risks to life of operation on the kidney. But this reason is really no longer tenable. No operation practised for vesical calculus has a lower mortality than nephrolithotomy. Nephrolithotomy is, when properly performed, no less free from after ill-effects than lithotrity.

It is difficult to shake oneself free of the influence of tradition, and thus for years I made it a practice, in cases in which the symptoms were slight or of only recent occurrence, to treat the patients for a time on the expectant plan. I possess several calculi which have been passed naturally; but I now regard them as the emblems of what ought to be very largely an obsolete treatment, and from which I have had one or two rude awakenings.

A patient, 33 years of age, had very slight symptoms of renal calculus, namely, occasional slight pain about the upper part of the left ureter rather than the kidney, and the passing of urine which, as often as I examined it, was neutral, phosphatic, and microscopically showed blood and pus cells and small crystals of calcium oxalate. His custom was to come to England for the summer months and play cricket for his native county, and to pass the rest of the year in Queensland, where he had a large farm. During the summers of 1894 and 1895—when he was consulting me—he played cricket and tennis regularly, in spite of occasional mild attacks of urethral pain, and was quite unwilling to submit to any operation. Towards the end of the season of 1895 he married, and on the third day of his honeymoon, and a week or two before sailing for Queensland, he came to me one morning in great agony and unable to pass urine, owing to the calculus having become impacted in the prostatic urethra.

It was, of course, quite easy to push the stone back at once into the bladder, draw off the urine, and later in the day perform lithotrity. In two or three days he was just as if nothing of the kind had happened, and was relieved of his calculus into the bargain. But what would have become of this man had the same accident happened a few weeks later when, instead of being within a mile of a hundred able surgeons, he had been out in the bush without a doctor of any kind within two or three hundred miles of him; or if instead of the calculus lodging near the vesical orifice of the urethra, it had blocked the ureter where it crosses the brim of the pelvis, and this had occurred just after leaving port for a three or four weeks' sail? Either of these contingencies might have happened in his case.

This leads me to mention what did happen in another case from a stone blocking a ureter at this spot.

A man, aged 32, about two months after feeling pain in the right loin, had an attack of renal colic. The pain was very severe, lasted four hours, and was accompanied with retraction of the right testis and hæmaturia. This occurred three weeks before I saw him. After the attack, carriage or horse exercise and any extra exertion brought on severe pain in his right loin, accompanied by hæmaturia. The specific gravity of his urine was 1010, and it contained albumen. I advised him to go home and rest for a month, and if the pain continued, or the colic recurred, to have an operation. He did not rest long; but a week afterwards rode on horseback and carried a heavy bag along a station platform. Then he was seized with the most violent pain in the course of the ureter, where it crosses the pelvic brim, and a hard body, like a stone, could be felt there through the abdominal walls. After ten days of the most frightful suffering, during all which time the calculus could be felt in the same position, the patient declared he could bear his sufferings no longer. He made a long railway journey to London, and was operated upon by a London hospital surgeon. Cœliotomy in the median line was performed, and through this a small rough stone in the ureter was steadied between the finger and thumb of an assistant, whilst the surgeon performed retroperitoneal ureterotomy through a slightly oblique wound in the right ilio-costal space. What occurred afterwards was, I believe, this: both parietal wounds healed well, and a urinary fistula in the right loin showed signs of closing, when urine was extravasated into the pelvic tissues through the ureteral wound. No doubt the wall of the ureter where the stone had lodged was thinned and contused by the ten days' impaction of the rough surfaced calculus, and so repair did not proceed in it after the calculus was removed.

This extravasation, it appears, was followed by suppuration and discharge of a little pus *per rectum* and by symptoms of obstruction of the left kidney, owing to pressure upon the left ureter by the inflamed pelvic cellular tissue. The left kidney was explored and found much congested. No stone, but a few particles of gritty material, were found in it. A month or so later, when all seemed going well, a repetition of the symptoms in the left kidney took place, and a great extravasation of urine, requiring a large incision in the right iliac region, occurred.

A week later I was asked to see him. He had then undergone three operations and had four long scars, two on the front of the belly, and one in each loin, with a fistulous track, from the injured ureter, opening in the right loin; and there was, I understood, another abdominal operation contemplated, but this, it is to be hoped, was not done. Here was a case of a professional career checked, if not permanently ruined, by a little calculus weighing not more than two or three grains. A long convalescence certainly was before him; possibly, later on, nephrectomy for an intractable fistula, or, if not, then gradual destruction of the kidney from stenosis of the ureter at the seat of impaction and operation.

Such a case, even if but one in a thousand, teaches a grave lesson; and my reflections upon it, and upon that of the colonist above quoted as well as upon some few others, convince me that the expectant treatment—excusable because inevitable before nephrolithotomy was proved to be the safe operation it is—is no longer justifiable.

Summary.

The conclusions at which I have arrived are the following:

(1) That the aim of the surgical treatment of renal calculus should be to extend the application of nephrolithotomy, and thereby restrict the necessity of nephrotomy and nephrectomy.

(2) That more frequently than not the failure to find a stone is not in reality a failure of treatment, because there are so many curable morbid conditions which mimic renal calculus, and which are discoverable only by exploration.

(3) That the theory that a stone in one kidney, whether that kidney is itself painful or not, reflects or transmits pain to the opposite kidney is quite unproven; that it is a dangerous theory, calculated to lead to very erroneous practice; and that the surgical principle with regard to exploratory operations should be that with pain, paroxysmal or continuous, on one side only, the kidney on the painful side should be explored.

(4) That nephrectomy for calculous conditions is not often called for, and should be done only in exceptional cases. Nephrotomy for calculous pyonephrosis is the proper operation, at any rate as a primary operation, because of the frequency of double calculous disease. Experience has shown that kidneys from which stones weighing 830 gr. and 1,300 gr. have been removed are functionally sufficient to maintain life during the blocking of the ureter or suspended action of the kidney of the opposite side.

(5) That nephrectomy whilst the opposite organ is occupied by calculus is fraught with the greatest danger to life; whereas nephrectomy, after the opposite kidney has been freed of stone, will probably be followed by recovery from the operation and possibly by very good health for many years afterwards.

(6) That when renal calculus causes reflected or transferred vesical or ovarian pain, the removal of the calculus will be followed by complete cure of the bladder or ovarian symptoms.

(7) That in some cases renal calculous conditions are attended by very remarkable nervous symptoms, sometimes with, sometimes without, high temperature, and that information as to the cause of these symptoms is needed.

(8) That unsuspected renal calculi are a source of very real danger to their possessors; and when, whether by accident or by the systematic examination of the urine, we have cause to suspect the presence of a calculus, we should recommend its immediate removal, regardless of the fact that it is not causing renal or transferred pain.

(9) That quiescent calculus is as dangerous to the individual as unsuspected calculus, and ought to be removed by operation.

(10) That the hitherto accepted teaching, that a renal calculus, if causing only mild symptoms, or attacks of severe colic of only recent occurrence, should be treated on the expectant plan, ought to be discarded as unsound in theory and dangerous in practice.

(11) That the same principle should be applied to renal calculus which has long been the rule in regard to vesical calculus—namely, when suspected it should be searched for, when known to exist removed, without waiting in the hope that it may become encysted or spontaneously expelled.

(12) That the very low mortality of nephrolithotomy puts this operation upon the same footing for renal calculus as lithotrity in the most experienced hands for vesical calculus.

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[1] British Medical Journal, vol. i. [2] *Berl. klin. Woch.*, No. 27, 1893. [3] *Medical Times*, April 4th, 1885. [4] *Trans. Amer. Med. Assoc.*, vol. xii, p. 113, 1894. [5] *Clin. Soc. Trans.*, vol. xxv, p. 195. [6] *Med.-Chir. Trans.*, vol. xlvii, p. 274.

A Hospital for Cancer is about to be erected in Moscow. Funds to the amount of 200,000 roubles have already been subscribed for the purpose.

LOCOMOTOR ATAXIA IN HUSBAND AND WIFE.

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The following instance of locomotor ataxia in a married couple presents certain features of interest. I am indebted to Messrs. Phillips and Robinson, Resident Medical Officers at the Dispensary, for some of the notes of the cases.

1. A.L., aged 55, married thirty-six years, began to suffer from pains in the legs some twenty-seven years ago. A year later she had difficulty in walking, and a sensation of loss of feeling in the feet and legs. Twenty years ago she was in the Leeds General Infirmary under Dr. Eddison, and five years ago she was again admitted under Dr Barrs with an arthropathy of the left knee. She has been confined to her bed for more than two years and a half. Nearly a year ago she sustained a spontaneous fracture of the right leg.

Present Condition.—The patient is a rather stout woman with marked myosis. The pupils do not react to light. She can no longer walk or even stand. She suffers from occasional attacks of pains in the legs, but they are not as severe now as formerly. There have been attacks of gastric pain and vomiting, but not during the past few months. There is no girdle pain. There is no very definite loss of tactile sensation as tested by the brush except perhaps over the outer side of the thighs. Here also the skin and subcutaneous tissue can be strongly pinched without causing pain. At times she is unable to hold her water, and at other times she has to strain to pass it. Both knees are swollen and the left is considerably deformed, but there is little evidence of fluid in them. There is some slight creaking on passive movement, but there has never been much pain, if any, in the knees apart from the legs. At the site of the fracture of the tibia there is a considerable amount of callus present, but the union appears firm. The arms are unaffected with the exception of occasional pains, and she can sew with ease.

2. J. L., aged 58, first had lightning pains some twenty-six years ago. Difficulty in walking soon followed, and the inco-ordination ultimately became so marked that he could only follow his occupation on his knees. He was also in the Leeds General Infirmary some twenty-three years ago under Dr. Eddison. He has been confined to his bed for the past fourteen months. Less than a year ago he was seized with a left hemiplegia, which soon, however, began to improve.

Present Condition.—The pupils are small and unequal, the right being the larger; they do not react to light. There is marked inco-ordination in the legs. The keee-jerks are absent. The patient has more severe pains than his wife, but has no gastric symptoms. There is no certain loss of tactile sensation. He has occasional difficulty in passing his urine. There is some degree of inco ordination in the arms. The left arm and leg are distinctly weaker than the right, but there is no trace of rigidity.

There have been twelve children, of whom only three (Nos. 1, 3, and 4) are now living. No. 2 died of rheumatism and cardiac disease, aged 15. Nos. 4, 6, 7, and 9 died in infancy. No. 5 died at birth, and No. 10 was a miscarriage. There is now marked loss of sexual power in both patients, and in the man it is nearly abolished.

The diagnosis in these cases requires no discussion, for it is obvious, but there are two points that may be referred to here, namely, the hemiplegia in the man and the occurrence of the double arthropathy and spontaneous fracture in the woman. Both temporary and permanent hemiplegias have been noted in the course of locomotor ataxia. Minor has specially dealt with this subject. They have been looked upon as syphilitic manifestations, and to some extent as confirmatory of the part played by syphilis in the causation of locomotor ataxia. In this case the weakness still persists, but it is not marked. As far as is known, there has been no return of the knee-jerk here, as has been noted by some observers. An interesting case of arthropathy with spontaneous fracture was reported by Pitres and Carrière,[1] with special reference to the morbid changes in the nerves to the parts affected.

The onset of the locomotor ataxia was apparently within ten years of marriage. It is interesting to note the interval between the commencement of the disease in the two partners, so far as it is possible to fix the onset of so insidious an affection as locomotor ataxia is. In the above instance this interval appeared to be one year and a half; in other recorded cases, as far as can be ascertained from the notes, it has generally been from two to five years, but occasionally it is stated that the disease has existed in one partner for many years. Apparently the longest interval precisely stated (twenty years) is in Pearce's case, but there is admittedly some doubt here as to the nature of the disease in the husband.

The number of cases in which locomotor ataxia has been noted in married couples is comparatively few. Such cases have been recorded by Erb,[2] Strümpell,[3] Goldflamm,[4] Dawson Turner,[5] Moebius [6] (3 instances), Mendel[7] (2 instances), and Pearce and Weir Mitchell [8] (4 instances). There have been other cases in which one of the partners has suffered from

locomotor ataxia and the other from combined locomotor ataxia and general paralysis, or from general paralysis alone (Lührmann,[9] Redlich,[10] Mendel[7]). Finally, to complete the series it may also be mentioned that general paralysis has been known to occur in husband and wife (Siemerling, Westphal, Mendel, and others). Of combined general paralysis and locomotor ataxia in both parties I have found no record.

The occurrence of locomotor ataxia in married couples has been looked upon as confirming the current view of the relationship of this disease to syphilis. Erb,[11] writing in 1892, goes so far as to say that tabes dorsalis occurring in husband and wife without previous syphilis does not appear to exist. This view is perhaps rather an extreme one. In the case recorded here the history of the offspring gave the clearest possible indication of past syphilis in the parents, but an exhaustive inquiry into the personal history was precluded for obvious reasons in this bedridden couple. A more special interest is perhaps attached to the cases in which an undoubted syphilitic manifestation has been observed in one partner during the course of the locomotor ataxia, such, for instance, as the syphilide seen in Strümpell's case or the gumma of bone in Lührmann's patient. During the past 20 years and more the evidence in favour of a close relationship between syphilis and tabes dorsalis has been accumulated to an almost overwhelming degree by Fournier, Erb, Grasset, Gowers, Moebius, Oppenheim, and others. It is true that the statistical method has been chiefly relied upon in these researches, but very large numbers have been dealt with, and it seems almost impossible to resist the direct conclusion which these figures naturally lead to. It is certainly a striking fact how rare it is not to obtain a distinct and unmistakable history of syphilis in the very large majority of tabetics presenting themselves in an ordinary out-patient room. Yet obviously only very large figures can be of service in the statistical method, and the percentage of syphilis obtained is then compared with that found in other patients. There are, however, still one or two distinguished authorities, such as Leyden, etc., who deny to syphilis almost any part whatever in the causation of locomotor ataxia. The doctrine is once again attacked by Leyden and Goldscheider[12] in their recent and interesting volume in Nothnagel's *Handbook*, where it is stated that cold is the most important and frequent cause of tabes. Still others are disposed to think that the part attributed to syphilis has been overdone (Carderelli,[13] Redlich[10]). Few, if any, observers believe that syphilis is the sole and only cause of locomotor ataxia, although the renewed statistics published by nearly every author have shown a steadily advancing increase in the percentage of past syphilis among tabetics; thus, for instance, Erb[2] has reached the formidable figure of over 90 per cent.

It is not proposed here to touch upon other evidence adduced for or against the above-mentioned view—such, for instance, as the nature of the pathological lesions sometimes found, the inefficiency or otherwise of other causes, etc. The relation of syphilis to tabes dorsalis is not of theoretical interest alone, because the question arises as to whether the disease may be benefited in its earlier stages by antisyphilitic treatment. Very divergent views are held upon this subject; but it, may, perhaps, safely be stated with Moebius[14] that an antisyphilitic course judiciously carried out will not harm the individual, and may do good, and this is especially true if there is a comparatively recent history of syphilis, and the more so if some syphilitic manifestation is still present.

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According to *Hinrich's Catalogue*, recently issued at Leipzig, the number of works dealing with medical science which appeared in Germany during 1897 was 1,521. In 1896 the number was 1,515.

A CASE OF ŒSOPHAGEAL POUCH.

BY

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MR. W., aged 45, stated that when he was 7 years old he swallowed a toy metal disc, but does not remember that he had any serious trouble with his throat till about ten years ago. Since that time he has had difficulty in getting his food down, and after he has finished eating some food lodges in his throat and is regurgitated.

He has for many years observed that he cannot swallow as quickly as other people. He has no pain, and has never brought up any blood. If he holds his head down after eating some of the food returns, and if it has lodged for an hour or two the regurgitated matter is frothy, but it never tastes sour. He can usually take ordinary solids, but sometimes at the beginning of a meal cannot swallow at all. He has had more difficulty since he had influenza in May or June, 1897.

After a meal overnight he can always bring up some of his food the next morning. By pressure on the right side of the neck above the sternoclavicular joint he can force the food up into the mouth, and such pressure causes air to escape with a squeaking noise. At times air escapes with a clicking sound without any pressure. Certain twisting movements of the head cause pain and a feeling of wanting to swallow. After drinking, which he does with an effort, pressure on the side of the neck causes escape of fluid and gas into the mouth. There is no history of any injury or of abscess in the neck. He believes that his mother suffers from the same condition. Mr. W. is a great oboe player, and has been in the habit of holding air in the throat to keep up a continuous blast.

The above notes were taken by one of us on December 9th, 1897. There seemed no doubt that the case was one of œsophageal pouch, and he was advised to empty the pouch by pressure after each meal and to try the effect of wearing a sort of truss to press upon and obliterate the sac.

Shortly after this patient was seen Mr. Butlin's interesting paper was published.[1] In our case we did not think any operation was required, and by later accounts, though he is unable to bear the pressure of the truss, he is quite comfortable now that he empties the pouch each time after he eats or drinks anything.

ACUTE RHEUMATISM: HYPERPYREXIA: TREATMENT BY COLD BATHS: RECOVERY.

BY

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THE following case seems to us to be worth recording, as it shows very clearly the value of the cold-water treatment in the hyperpyrexial state, when, as in private practice, the patient cannot be under constant supervision, and may not be seen until he is in almost a moribund condition.

At the end of May and early in June, A. A., aged 28 years, was suffering from apparently an ordinary attack of acute rheumatism, without cardiac complication, but his condition had latterly given rise to some uneasiness, as his temperature was rather erratic, and showed little disposition to fall even when the swelling and pain had disappeared from the joints under the influence of large doses of sodium salicylate. On the evening of June 5th the patient was quite comfortable; joints free from pain; temperature 103°.

On the morning of June 6th we were summoned hurriedly as the patient had been unconscious for some time, and his appearance had much alarmed his friends. He was found to be very deeply comatose, with reddish-purple countenance, convulsive twitchings of the limbs and face, and he had a petechial rash scattered over the body. The fæces were passed involuntarily. As hyperpyrexia was expected to account for the condition the temperature was taken, and in a few moments the thermometer had reached 110° in the

[1] BRITISH MEDICAL JOURNAL, January 1st, 1898.

axilla. The patient was quickly placed in a large bath of cold water, which was kept reinforced by buckets of cold water from the cellar as the warmed water was allowed to escape. The temperature gradually fell, and after being in the bath for nearly a quarter of an hour he was carried to bed, and wrapped in blankets, with hot bottles to the sides and feet, and ether was injected subcutaneously. He gradually recovered consciousness, and took a little warm milk and chicken broth.

One of us remained with him during the night, as it seemed very probable that the temperature would rise again when the effect of the bath had passed away. About 1 A.M. on the following morning it had already reached 105°. The patient was carried on a blanket to the bath and immersed again. He was quite conscious, free from shivering, and much enjoyed the coldness of the water. When the temperature fell he was removed to bed again, and was extremely comfortable for several hours.

On June 7th he became very delirious, though he answered quite rationally when spoken to. During the night the temperature reached 103°, but was kept under control by frequently-applied wet packs to the trunk. As the delirium increased and coma vigil came on, his head was shaved and a blister applied to the scalp.

On June 8th, as he was still somewhat delirious, an icebag was applied to the head, and he became quiet, and slept at intervals. In the evening the temperature was 102°. Food was taken well.

On June 9th his right ankle was red and swollen; he was quite free from delirium and the skin was moist.

On June 11th he was aphasic though quite rational, and had a free and constant action of the skin.

On June 16th it was noted that for some days he had been quite comfortable, though the temperature had occasionally reached 103°, and required frequent application of the pack. He gradually from this time recovered strength and vigour. The speech difficulty and defect of memory, of which he much complained, were, as one might expect, the last effects of the hot blood on the cerebral centres to disappear.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF PLACENTA PRÆVIA.

Mrs. A. B., a married woman 28 years old, had had two children, with both of whom she had trouble with "false pains" at six months. She was suddenly seized with flooding, and I found that she had lost much blood. The external os was slightly open, admitting the point of the forefinger, but the cervix and the internal os were firmly closed and could only be very slightly dilated with force. A mixture containing iron and ergot was given and the hæmorrhage stopped.

Next day the bleeding recurred slightly, but on the succeeding day she had none. On the fourth day from the onset it came on again, but stopped in a short time. No recurrence took place for two days, but then it came on more severely than ever.

It was evident, in order to save the mother's life, that the child must be delivered as speedily as possible; but with the os in the condition stated and the whole organ high up above the brim the case was an awkward and difficult one. By means of bimanual manipulation I was able to reach the os, and could insinuate one finger into the cavity, where it touched what I took to be placental tissue on the left side and extending over the os. I was able to separate the attachment as far as the finger could reach. The cervix and internal os gradually dilated with the movement of the finger, so that I was able to pass two fingers, but was unable to reach the further edge of the placenta. I therefore kept up a steady and increasing pressure from the cervix outwards. This process is slow and severe, but as the pressure is kept up the parts are felt to dilate. I felt sure that if I had taken away my hand the hæmorrhage would have come on again, and most likely have proved fatal. All the time this pressure was kept on I was doing what I could to get more fingers past the internal os, and in the course of an hour I got four in, but the thumb was the greatest difficulty; ultimately it was got in, and shortly after the knuckles followed, with the whole hand, I was then able to separate the placental attachment in the whole of its extent. The membranes were punctured, and the placenta had to be taken away, the amniotic fluid escaping, and the membranes remaining *in utero*. The child was in transverse position, dorso-posterior. The uterus at this time began contracting periodically; I tried to turn and deliver either as a facial or cranial, but found it impossible to get the head through the os. The uterine contractions seemed to be stronger than ever, and my hand was rendered almost useless by the pressure against the head of the child. I then made a search for the feet, and with difficulty in partially turning again brought them down, but the head struck firmly in the cervix, and had to be relieved with ordinary forceps. The membranes were expelled immediately thereafter. The mother was very weak and almost pulseless, and during the progress of the manipulations was given small quantities of water frequently repeated. She made an excellent recovery, with a slight elevation of the temperature for a few days.

The following points seem to me to be of importance: 1. The dilating power of the fingers if pressure be kept up in a steady manner with increasing force. 2. The turning of the child after the escape of the amniotic fluid. 3. The influence of small quantities of cold water often repeated in averting collapse. 4. The influence of iron and ergot in stopping unavoidable hæmorrhage, although only temporarily, but thus giving time. 5. The fact that the uterus did not contract until after the amniotic fluid and placenta were away. 6. The fact that no hæmorrhage took place from beginning to end of the operation.

Johnstone, N.B. W. Westwood Fyfe, M.B., C.M.

A CASE OF ATRESIA ANI VAGINALIS.

B. A., who will be 3 years of age in May, came under my notice a few weeks ago. Her mother gave the following history. Until the child was two months old nothing abnormal was observed. A slight relaxation of the bowels then necessitated more careful attention to the parts, and the mother then discovered that there was no anus. The child, who is well nourished and in good health, suffered very little inconvenience. On examining the parts the normal anal depression was found to be absent, and nothing to indicate the normal situation of the anus was observed. Situated just within the entrance to the vagina could easily be seen the fistulous opening, and except that the vulva was slightly swollen and excoriated, the surrounding parts were normal. As the little patient objected to much manipulation I did not feel justified in making a closer examination, if, indeed, anything further could be made out.

I find from Starr's *Diseases of Children*, 1895, that congenital malformation of the rectum and anus occur in the proportion of 1 in 10,000 births. Bodenhamer classifies these under eight headings, the above case coming under No. 6. Treves, in his *System of Surgery*, gives no proportion, but states they are of extreme rarity, and divides them into three classes, according to developmental errors; this one comes under his heading No. 2.

I have advised the mother of the child to wait until she is older before submitting her to any operative treatment and hope for a very successful result. Rizzoli's suggests itself as being a very suitable operation.

Dublin. F. Charles FitzGerald, L.R.C.S.I.

PUERPERAL VOMITING.

Dr. Buxton's case of puerperal vomiting recorded in the British Medical Journal of February 5th recalls to me a somewhat similar case.

On February 21st, 1897, Dr. S. Bridger, who was then assisting me, was called to see Mrs. S., a 3-para, at full term. Her former confinements were normal. She had no labour pains, but complained of great sickness, being unable to retain anything. The temperature was normal. She was ordered sinapisms and a bismuth mixture.

On February 22nd I received an urgent message at 1 P.M.

I found that the sickness had not abated, but rather aggravated. The vomit was watery and straw coloured. There had been slight labour pains, and the os was found to admit the tip of the finger. The head was low down in the pelvis, pressing on the anterior lip of the cervix. I gave a hypodermic injection of morphine, and visited her again at 10 P.M. The vomiting still continued. The labour pains were still slight, and occurred at long intervals. Another injection of morphine was given. At the next visit, 2 A.M. (February 23rd), I found matters much in the same condition. The vomiting continued every few minutes; the pulse 148, the respirations 30, and the temperature normal. Assuming that the condition was reflex and due to the pressure of the head on the anterior lip of the cervix, I resolved to dilate manually with a view to apply the forceps and deliver as speedily as possible. With Dr. Bridger's assistance I delivered the patient about 5 A.M. of a living female child. The patient was much collapsed, but slowly recovered. Contrary to expectation the vomiting continued in spite of sinapisms, bismuth, morphine, etc. On the evening of the same day all nourishment by the mouth was stopped and nutrient enemata given, the only thing administered by the mouth being tincture of iodine m i every hour. The vomiting continued for three days, during which time the pulse and temperature were normal. On the tenth day the patient developed a slight pleurisy at the base of the right lung. Otherwise she made a good recovery.

ALEXANDER GREGOR, M.B., C.M.
Sutton-on-Trent, Notts.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE COUNTY ASYLUM, LANCASTER.

NOTES ON THREE CASES OF CEREBRAL TUMOUR OCCURRING IN THE INSANE.

(By J. H. GOODLIFFE, M.D.Aberd., Pathologist.)

THE following three cases of cerebral tumour are interesting from the diversity of their symptoms, and from the fact that no lesion was suspected up to a short time before death. This is accounted for in a great measure, no doubt, by their occurrence in insane patients, who gave no evidence of the usual subjective symptoms accompanying the development of the disease:

CASE I.—W. G., a male idiot, aged 19, was suddenly seized on March 31st, 1895, with convulsions, which were general, and lasted from 2.30 to 4 o'clock in the afternoon; they ceased on the application of cold to the head, but returned again at 4.30. In the interval the patient was noted to be cyanosed and his breathing laboured. The convulsions lasted only a few minutes the second time, and left the patient comatose. His breathing was stertorous, and his pulse could not be felt at the wrist; he failed to rally in spite of stimulants, and died the following morning at 6 A.M. Three tumours were found *post mortem* in the brain: one in the left gyrus fornicatus, another in the vermes cerebelli, and a third in the left inferior frontal convolution. The tumours were spherical, and about the size of a small horse bean; microscopically they were sarcomata of the round and spindle-celled variety, and were evidently secondary to a larger tumour of a similar nature found in the anterior mediastinal glands.

CASE II.—J. V., a male, aged 35, who had been subject to epilepsy for 14 years, and was much demented, was apparently in good bodily health up to April 1st, 1895. On the morning of that day he was suddenly seized with bilious vomiting, which continued at intervals throughout the day, and resisted all treatment. The vomiting ceased early in the evening, and left the patient collapsed and comatose; his pulse was thready, temperature subnormal, and respiration laboured. He died early the following morning. A tumour was found *post mortem* in the cortex of the brain, involving the superior and middle frontal convolutions on the left side. The tumour was about the size of a half-crown piece, round and flat, and presented the usual characters of a gumma. The membranes were adherent over the tumour.

CASE III.—E. H., admitted on February, 1895, as a melancholic of three months' duration. Her symptoms in many ways suggested general paralysis of the insane, and this was borne out by the *post-mortem* appearances, both macroscopic and microscopic, presented by the brain. In March the patient was observed to be losing flesh, and to become feeble in gait and general condition. She rapidly grew worse, and was soon confined to bed. On April 19th she was noted to have lost 19 lbs. within the last month. She now passed fæces and urine involuntarily in bed, and lay with her legs drawn up; her breath was foul, and the tongue thickly coated and bowels constipated. On May 11th she had some twitchings of both arms and legs, which left her semi-conscious for some time; her speech was noted to be slurred afterwards, and her right pupil persistently larger than the left one; she still passed fæces and urine in bed. On June 16th she was again seized with twitchings in the left arm and leg, which quickly passed into general convulsions, closely resembling those so often seen in general paralysis. They lasted for a few minutes, and recurred at frequent intervals during the next four days, during which time she was fed by nutrient enemata. The fits finally ceased on June 20th and left her comatose. Examination of the chest showed considerable congestion of the lungs; she died early on June 21st. *Post mortem*, two tumours were found in the cortex of the brain, one situated in the first and second frontal convolutions on the right side, the other involving the superior and part of the middle temporo-sphenoidal convolutions on the left side. Both were gummatous in nature, about 1½ inch in diameter and ¾ inch thick in the thickest part, and presented appearances like those described in connection with Case II.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

F. J. PAYNE, M.D., President, in the Chair.

Tuesday, April 5th, 1898.

THE ACTION OF TISSUE EXTRACTS ON COBRA POISON.

MR. WALTER MYERS, before recounting his observations on this subject, stated the various theories advanced in regard to the action of antitoxins and toxins, the author holding Ehrlich's to be the one most probably true. According to Ehrlich each toxin is specific, in that it enters into a special chemical combination or selects for its action certain tissues: thus tetanus toxin selected in this way the tissues of the brain and spinal cord, as could be proved by the fact that an emulsion of brain and cord would neutralise the toxin *in vitro*, in consequence of its chemical combination with it. The author's experiments were made with the organs of guinea-pigs, and with the result that the suprarenal body was alone found capable of neutralising the cobra poison. Cobra poison containing a specific toxin, which on repeated graduated injection leads to a formation of antitoxin, a search for antitoxic properties in the tissues of a susceptible animal was undertaken. For this purpose guinea-pigs were used, on which animals also the inoculations were performed. The animal was decapitated, the organs were then quickly removed with aseptic precautions, and ground up by hand with sterilised saline solution (5 per cent.). In each case a 10 per cent. emulsion was made. A dose of venom was then added, and the mixture at once injected subcutaneously. The test animals weighed between 250 and 350 grammes, the dose of poison was 0.15 milligramme, the minimal certain lethal dose for guinea-pigs of this weight being 0.1 milligramme. The control animals generally died in two to four hours. With the exception of one experiment where the cerebral cortex was used, and in which the animal lived two days—a result that was not obtained in the other cases—the only organ which prevented death was the suprarenal capsule. Out of seven experiments with these organs, the result was negative in 3 cases. In one of these, however, the symptoms after seven hours were trivial, though the control died in two and a-half hours. In the other cases there were no symptoms in six and three hours respectively, by which time the control was found dead, so that these experiments cannot be regarded as altogether negative; with bone marrow, cerebral

cortex (excepting one case), kidney, liver, medulla, muscle substance, ovary, spinal cord, spleen, testicle and thyroid, uniformly negative results were obtained; the animals died in approximately the same time as the controls. Positive results were also obtained with the suprarenal of the sheep, the only other animal tried. Three experiments only were made, the medulla was found to be inactive, the cortex and the entire gland active. Below is a summary of the suprarenal experiments:

1.—0.5 c.cm. cobra poison (=0.15 mg.)+0.17 g. suprarenal of guinea-pig. Result: No symptoms; lived.
2.—0.5 c.cm. cobra poison (=0.15 mg.)+0.13 g. suprarenal of guinea-pig. Result: Slight symptoms in 6 hours; lived.
3.—0.5 c.cm. cobra poison (=0.15 mg)+0.025 g. suprarenal of guinea-pig. Result: Found + in 18 hours.
0.5 c.cm. cobra poison (=0.15 mg.)+0.05 g. suprarenal of guinea-pig. Result: Found + in 18 hours.
0.5 c.cm. cobra poison (=0.15 mg)+0.1 g. suprarenal of guinea pig. Result: Lived 36 hours.
0.5 c.cm. cobra poison (=0.15 mg.)+0.2 g. suprarenal of guinea-pig. Result: + after 3 days from sepsis.
4.—0.5 c.cm. cobra poison (=0.15 mg.)+0.7 g. suprarenal of guinea-pig. Result: Slight symptoms in 7 hours; found + after 18 hours.
5.—0.5 c.cm. cobra poison (= 0.15 mg.)+0.58 g. suprarenal of guinea-pig. Result: No symptoms in 6 hours; found + after 20 hours.
6.—0.5 c.cm. cobra poison (= 0.15 mg.)+0.34 g. suprarenal of guinea-pig. Result: No symptoms; lived.
7.—0.5 c.cm. cobra poison (= 0.15 mg)+0.56 g. suprarenal of guinea-pig. Result: Found + after 14 hours.
8.—0.5 c.cm. cobra poison (= 0.15 mg.)+0.7 g. suprarenal of sheep. Result: No symptoms; lived.
9.—0.5 c.cm. cobra poison (= 0.15 mg)+1.43 g. suprarenal of sheep (cortex). Result: No symptoms; lived.
10.—0.5 c.cm. cobra poison (= 0.15 mg.)+0.55 g. suprarenal of sheep (medulla). Result: Found + in 14 hours.

Molluscum Contagiosum in Two Mated Bunting Sparrows.

Mr. S. G. Shattock exhibited these specimens. In November, 1897, a bunting sparrow was sent to the Royal College of Surgeons with a spherical tumour under the mandible; the growth was 1 c.cm. in diameter, and hollowed out centrally so as to present a somewhat coarse pseudo-papillary interior. Histological examination proved it to be in all details a molluscum contagiosum as this was met with in the human subject, typical molluscous bodies occurring in the epithelium, which was arranged in the well-known acinoid clusters. The molluscous material did not retain the violet when treated by Gram's method, showing (as in the human disease also) that it was not chemically identical with the eleidin of the stratum granulosum. About a month later the mate of this bird was sent to the College with the note that a similar swelling had developed after the death of the first. The growth in this second case lay in front of the left eye, and likewise presented the histological appearances diagnostic of molluscum. Circumstances rendered it as probable here that the disease had been contracted in the second bird by inoculation, as did the clinical evidence that the disease was contagious in the human subject; it was, indeed, extremely difficult to understand how the contagiousness of the lesion was still doubted in spite of the clinical evidence, and moreover of successful experimental inoculation. The author had examined molluscum in the sparrow, but it was especially in fowls, turkeys, and pigeons that the disease occurred, the lesions being commonly about the head, owing to the fact that this was the least protected part and that most exposed to inoculation by reason of the well-known habits of birds, whether amorous or vindictive. He had been unable to discover if the disease was present amongst those to whom the birds belonged; its intercommunicability between poultry and the human subject was well worthy of the attention of dermatologists. Mr. Hutchinson had recorded a unique instance in which molluscum was present in a dog (as proved by microscopic examination) and in its owner, and in which the latter appeared to have contracted the disease from the former. The author had been unable to find in the most recent German works on comparative pathology any reference to the disease except in birds. As to the nature of the molluscous bodies, this was still *sub judice*, and until Koch's second postulate was carried out no statement in this regard could be held as anything else than an opinion. He referred to the comparatively simple attempts in this direction made by Mr. Ballance and himself, which gave a negative result. As damp sand and pond water were the natural habitats of the common amœba, and as psorosperms flourished so abundantly in the fresh water of ponds and rivers, wet sand was the medium selected. After complete sterilisation, the sand was placed in capsules and heaped up to one side, so that when the sterilised water was added, part of the sand remained above the water level, the object of which was to obtain a littoral for the better aëration of any protozoa that might develop. Freshly-incised mollusca were divided and pushed into the wet sand, the latter being subsequently examined from time to time by withdrawing portions from the neighbourhood of the fragments. No evidences of protozoic life were ever encountered.

Dr. Colcott Fox observed that molluscum contagiosum was comparatively common in fowls, in which it was at times very fatal, death being often preceded by a tracheal affection of undetermined nature. He had had occasion to examine the lesions, which had been named "yaws," in fowls coming from the West Indies, and he had found that the disease so named, in some cases at least, was nothing other than molluscum contagiosum.

The President remarked that it was almost certain that the disease was carried on amongst the lower animals, as it was not met with sufficiently frequently in the human subject to be continued except from some such intervention.

Adenochondroma of the Submaxillary Gland.

Mr. H. J. Curtis recorded an example of the above, which had a history of eight or nine years, and was, like the corresponding growths of the parotid, encapsuled, and of similar histological structure.

Primary Sarcoma of the Pleura.

Dr. Percy Kidd and Dr. Habershon exhibited this specimen, which was obtained from a girl 18 years of age, suffering from dyspnœa and pain in the side. As disclosed after death, the dulness present during life was due to the growth of an extensive hæmorrhagic sarcoma which filled the left pleural cavity and compressed the lung. It was clinically noteworthy also that the heart was much displaced, a result extremely rare except in connection with pleural effusion.

Primary Sarcoma of the Lung.

Dr. Habershon, who showed this, stated that the patient, a man aged 78, presented the signs of dyspnœa and difficulty in swallowing; in consequence of the thoracic dulness the presence of fluid in the thorax was diagnosed. The growth involved the lower lobe of the left lung; there was no metastasis either lymphatic or other.

Myxœdema.

Mr. Cecil F. Beadles, after commenting on the large number of cases of this disease at present in the Colney Hatch Asylum, gave the morbid anatomy of three cases observed by himself; in all, there had been a history of insanity of some years' duration. They were closely alike; the fat was pale and gelatinous-looking, the tongue much enlarged (in two of the cases), the kidneys granular in two, fatty in the third. In all, the thyroid was in varying degrees atrophied and pale. In one case there was marked enlargement of the pituitary gland, the gland cells being of unnatural size; colloid was encountered in spots. In the other two cases the pituitary was slightly above the average size, and contained typical colloid in normal vesicles; in one of these two cases the colloid was in excess. These points the author showed in a lantern demonstration, as well as others relating to the well-known changes of the skin. He drew attention to a noteworthy vacuolation of the nuclei of the fat cells which was particularly marked in, though not absolutely peculiar to, this disease. In the lungs he had observed foci of a dense hyaline material, the nature of which he was unable to determine; in one of the three the lung was strewn with minute chondromata. Trichinosis was discovered accidentally as a complication of one of the three cases examined after death.

Card Specimens.

Mr. Percy Furnivall: Fœtus with a Hernia.—Dr. H. D. Rolleston: Acute Pancreatitis.—Mr. G. T. James: Subdural Hæmorrhage; Pyosalpinx.—Dr. R. Hebb: Pericesophageal Cyst.

MEDICAL SOCIETY OF LONDON.

CLINICAL EVENING.

J. H. MORGAN, F.R.C.S., Vice-President, in the Chair.

Monday, April 4th, 1898.

NEURALGIA TREATED BY INJECTION OF OSMIC ACID.

MR. G. R. TURNER showed a woman, aged 33, who had been the subject of neuralgia for two years, which had resisted all treatment. The pain originally involved the infraorbital nerve, but had extended to other divisions of the fifth, and had been accompanied by a discharge from the right nostril. Nothing abnormal could be detected in connection with the nasal fossæ or antrum. Before exploring the antrum as a preliminary, if necessary, to the removal of the Gasserian ganglion, he injected a 1 per cent. aqueous solution of osmic acid into the infraorbital nerve, this being done by means of an ordinary hypodermic syringe into the infraorbital canal. Considerable pain and tenderness resulted, and when in the course of ten days this passed away the patient had lost the pain, which had not since returned. He suggested that the nerve fibres were destroyed by the acid, an aqueous solution to one in glycerine being preferable for this purpose.

The CHAIRMAN observed that it was the first recorded case in this country, and added that it was a less formidable procedure than any surgical procedure.

Dr. RICHARDS doubted whether the acid penetrated the neurilemma, and was disposed to attribute the relief to the effects of a transitory traumatism.

MULTIPLE VENOUS ANGEIOMATA.

Dr. F. L. SMITH showed a woman, aged 50, who exhibited a number of venous varicosities chiefly on the face and upper part of the trunk. Most of these had a firm consistency when pinched up with the skin and did not disappear entirely on pressure. They varied in size from a pea to a small bean. There was a vascular pulsating tumour on the right side of the bridge of the nose, which was entirely obliterated by pressure, but promptly refilled. The varicose tendency was also well marked in the lower limbs and labia majora.

Dr. MAGUIRE pointed out that these tumours showed considerable resemblance to recurrent fibromata which microscopically did not show the characteristic sarcomatous structure.

Mr. BATTLE thought it was difficult to imagine any connection between the varicose enlargements in the lower extremities and these multiple tumours on the face, and he thought they might be independent of each other. The face tumours, he suggested, might possibly be sarcomatous, some of them appearing to contain a good deal of solid material. He suggested that one of the growths should be examined microscopically.

The CHAIRMAN admitted that at first sight he was also disposed to think they might be sarcomatous and possibly the venous dilatation in the lower limbs might be caused by some internal pressure. He hoped they would see this patient again or have the further history of the case.

IMPERFECT CLOSURE OF THE SEPTUM VENTRICULORUM.

Dr. R. MAGUIRE showed a man, aged 27, who had applied on account of acne of the face. In the course of examination he was found to have a systolic murmur audible over almost all parts of the chest, but most along the line of the interventricular septum, especially about an inch above the level of the apex beat. It diminished in intensity very rapidly when the stethoscope left the line of the septum, though at certain times it was heard with undiminished intensity over the whole of the right ventricle. The murmur presented the features which he had on a former occasion described as characteristic of a deficiency of the ventricular septum. He pointed out that this condition might be the result of intrauterine endocarditis, causing stenosis of the pulmonary orifice, which would raise the pressure in the right ventricle at the time when the septum was forming, and so prevent due closure; or it might be due to a failure of developmental power during the formation of the septum. He thought that the patient's condition was of the latter class. The patient had often been "blue" when a child, but this had passed off, which he explained on the assumption that the pressure in the left ventricle was now so much greater than in the right, that any admixture of blood took place in the right ventricle. He insisted on the importance of diagnosing this condition, the more so as it did not necessarily interfere greatly with the future life of the patient.

Dr. F. L. SMITH questioned the author's diagnosis. He thought that congenital morbus cordis to the extent of a deficient septum would give rise to more serious circulatory disturbance than this patient exhibited. He observed that the murmur was as loud, if not louder, over the apex than over the right ventricle. He mentioned that he had recently had an opportunity of making the *post-mortem* examination of a patient whom he had long had under observation with congenital morbus cordis, in which no heart murmur had been heard. The lad died with slight hæmoptysis. He had been liable to "blue fits." The pulmonary artery would only admit a sound 3 mm. in diameter, and there was an imperfect septum. If imperfect septum caused a noise, as in the author's case, he asked why one was not audible in his own. The author's patient did not exhibit any of the usual signs of congenital morbus cordis, being well-built, fairly muscular, and with no signs of cyanosis. He inclined to the view that the murmur was due to a lesion of the mitral valve.

Dr. CHAPMAN pointed out that the patient's mother had suffered from rheumatism. He said he had seen a case of pulmonary stenosis with very little cyanosis, the only symptom being ephemeral bronchitis. He had seen two instances of the kind.

The CHAIRMAN insisted on the frequency with which congenital malformations were associated with cardiac malformations, and pointed out that this patient exhibited no other indication of developmental malformation.

Dr. R. MAGUIRE, in reply, admitted that although the murmur was usually most marked along the line of the septum, it sometimes, under the influence of excitement, became equally intense over the right ventricle. He ascribed this to the heightened pressure forcing blood into the right ventricle. He pointed out that when the pressure in the two ventricles was about equal there might be no passage of blood from one ventricle to the other, and consequently no murmur. He admitted that the absence of other symptoms in this patient was odd, but he had met with several cases subsequently examined *post mortem* in which no other signs had been present; and he mentioned one case in particular in which there were no symptoms for eight years, when the lad suddenly turned blue and died. In that case the opening was so large that there was practically only one ventricle, with considerable stenosis of the pulmonary artery. There was a *bruit* in this case.

COLEY'S FLUID IN INOPERABLE TUMOUR.

Mr. W. H. BATTLE showed a man, aged 30, who had had syphilis six years previously. Four months before admission he noticed a lump under his right arm accompanied by pain, and soon followed by other swellings. Movement of the arm was difficult and it became swollen. Just before admission a lump formed above the right clavicle and another over the right side of the sternum. The swelling above the clavicle was caused by the pushing forwards of the pectoralis major by an elastic tumour of considerable size and irregular shape, which was fixed to the deeper parts but did not involve the pectoralis. In the axilla were numerous enlarged glands of various sizes. Iodide of potassium in increasing doses was given, but did not effect any improvement, so on January 5th portions were removed from the sternal and subclavicular growths, which proved on examination to be fibro-sarcomata containing giant cells. Thereupon he gave half-minim doses of Coley's fluid every other day from January 21st to March 21st, the iodide mixture being continued until March 6th. The dose was then raised to one minim every other day. The man had greatly improved in general health, and now presented only two swellings, one over the site of the sternal tumour and the other under the clavicle, both being comparatively small. He commented on the absence of any reaction, the temperature having been normal throughout.

The CHAIRMAN said the result in this case would encourage him to try the treatment, but it would be necessary to await the future progress of the case.

Intrascapular Fracture of the Neck of the Femur in a Boy.

Mr. Battle also showed a lad who, after three falls, experienced great pain on every attempted movement of the hip. The foot was everted, and the shortening amounted to about three-quarters of an inch. The thigh was kept partly flexed and rigid. Movement was accompanied by a very marked crunching sound. He showed a skiagraph taken by Dr. Blacker, which showed the effects of the injury, the head of the bone being seen lying below and to the inner side of the neck.

HARVEIAN SOCIETY OF LONDON.

Jas. F. Goodhart, M.D., F.R.C.P., President, in the Chair.

Thursday, March 17th, 1898.

Gastric Dilatation.

Mr. William Armstrong (Buxton) read a paper upon gastric dilatation. He described the acute form, drew attention to its onset during typhoid, acute rheumatism, etc., and advocated investigation of this factor in cases of tardy convalescence from acute disease. Chronic dilatation was divided into two groups: (1) Obstructive, (2) idiopathic, the etiology and symptoms of which were discussed. The connection of gastric dilatation with phthisis and chlorosis was mentioned, as was also the fact that a very considerable number of cases of so-called latent or suppressed gout were caused by gastric toxins. The frequent occurrence of movable kidney in connection with dilatation was also touched upon. The various methods of diagnosis were described, and special stress was laid upon "splashing" as a reliable symptom. The indications for treatment were: (1) To distend the stomach as little and as seldom as possible, (2) to promote evacuation of the lagging contents of that organ, (3) to keep down fermentation, (4) to regulate the dietary, (5) to improve the tone of the general nervous system. With regard to the methods of treatment, the performance of gastro-enterostomy in very bad cases where all other methods had failed was spoken of, as was also the value of a weak solution of Carlsbad salt as a gastric evacuant. The great importance of antiseptics was dwelt upon, Mr. Armstrong's own preference being for fuming hydrochloric acid, 6 to 12 drops in 6 ounces of water, and for small doses of calomel. Arsenic, strychnine, and kola were recommended as the best nerve tonics. The great value of lavage was recognised, but it was pointed out that it was only a palliative, not a curative, method of treatment. Massage was very valuable as a means of improving the general tone of the nervous system, but its local effects were disappointing; the modification known by the name of "electro-massage" was highly spoken of. Central galvanisation of the higher nerve centres was in certain cases most valuable, but its internal application by means of the gastric electrode was deprecated. The use of the needle bath and of packs of mustard bran over the sympathetic ganglia in the neck and the solar plexus was advocated. The advantages to be gained from mountain or high moorland air were noted. Bread, farinaceous foods, bulky vegetables, and milk were spoken of as being harmful in cases of dilatation. What little bread was taken should be twice baked or cut very thin and thoroughly torrified. As little fluid as possible should be taken with meals, such fluid as was required for the purposes of the system being taken one hour before food.

Dr. Hare remarked that under the head of "evacuants" the author made no mention of the best and most efficient remedies of that class, namely, emetics. He was quite aware that emetics were nowadays rarely given, but thus a most potent remedy for good was neglected. Lavage merely rinsed out the stomach, whereas the strong contractions of the stomach walls produced by an emetic not only emptied the viscus of its contents, but squeezed out from the cells the morbid secretions which they produced. A single emetic containing 20 to 25 grains of powdered ipecacuanha would often stop vomiting which had recurred for weeks. And although emetics were not pleasant remedies, Dr. Hare said he would infinitely prefer taking one to having a pipe passed down his œsophagus. He objected to the view that dilatation of the stomach was a cause of movable kidney. He pointed out how, anatomically, it was almost impossible for a distended stomach to displace a kidney; then that movable kidneys were confined almost entirely to women—the reverse of what was the case as regards stomach dilatation, and that the right kidney and not the one behind the stomach was the one far most commonly mobile.

Dr. A. Morison questioned the propriety of too curious an investigation of the dimensions of a dilated stomach, and would hesitate to recommend gastro-enterostomy for any case not assumed to be dependent upon pyloric obstruction of an organic character. He considered that dilatation of the stomach should be treated as a rule upon the principles on which dilatation of the heart was treated—namely, by functional and postural rest, a limitation of its contents, and the use of tonics found to affect favourably, that is, increase the power of visceral muscles. Modern gastric instrumentation and all heroic measures should be avoided as far as possible in the interests of the patient.

Dr. Ewart referred to the group of cases of confirmed dilatation, which should be distinguished both from the temporary dilatations due to atony, which were usually amenable to relatively simple treatment, and from the advanced cases of gastrectasia with atrophy of muscular fibre and partial replacement by fibrous tissue, for which no medicinal or mechanical treatment availed and for which the aid of the surgeon should be called in. For the intermediate group mechanical treatment was available. Dr. Fenton Turck, of Chicago, had given much attention to the intragastric treatment, and claimed for his revolving "stomach swab" or "gyromele" that it brought the agents of treatment, whether medicinal, faradic, or merely mechanical, to bear upon every part of the internal surface. Dr. Ewart laid stress upon the indication of posture. Continued recumbency relieved the dilated fundus of any further downward stretching from the weight of its contents. More, however, could be effected by keeping the patient for long periods on an inclined plane, by planking the bottom of the bed and raising the foot end of it. This tended to raise the level of the depressed greater curvature and to lessen its distance from the pylorus. Where no contra-indications existed skilful local kneading applied in a suitable direction at the proper interval after meals undoubtedly assisted the stomach in emptying itself through the pyloric outlet. After a time the patient should be allowed to get up; but not before an efficient abdominal belt had been applied. This was another mechanical measure of great importance, but one requiring much care, an ill-fitting belt being often worse than useless. Dr. Ewart also dwelt upon the invariable presence of atony of the bowel and of associated inactivity of the liver, and upon the primary importance of treatment to be applied in that direction.

Dr. John Broadbent considered that dilatation of the stomach was a relative term, for abnormal size or capacity of the organ did not necessarily constitute dilatation. It was only when an atonic condition of its muscular walls supervened, so that it could not completely empty its contents, that symptoms of dilatation set in (excluding, of course, cases of pyloric obstruction). The condition of atony was amenable to treatment, but if neglected might pass into one of real dilatation due to overstretching of the muscular coat, recovery from which would be tedious and often incomplete. Among the causes of dilatation were chronic alcoholism, a neurotic disposition, and a life of worry or excitement. It was often difficult to differentiate between symptoms of gastric dilatation and those of neurotic dyspepsia, more especially in cases where pseudo-anginoid pain and cardiac disturbances were the prominent features. He had known a case of dilatation of stomach in which attack of severe anginoid pains and irregularity of the heart were the most marked symptoms, and were very alarming; these, however, had yielded after a short time to treatment, and had not since recurred. Local treatment by drugs or lavage and dieting was often of little avail, unless attention was also paid to the general health, improvement in which should be secured by change of air and scene, and by removal from business and domestic worries, and by regular meals and exercise.

Dr. Herschell entirely disagreed with Dr. Hare as to the fact that lavage of the stomach might with advantage be replaced by emetics, as in these conditions of dilatation the stomach had lost its muscular tonus, and would not respond to such an agent. He pointed out that in the majority

of cases where splashing could be obtained below the limit of the normal stomach, the condition present was one of atony only, and not true dilatation, and that the only absolute test of the latter was the finding of food residues by lavage in the morning before breakfast. One of the most valuable agents in the treatment of atonic and dilated stomachs was Einhorn's intragastric spray, another was mechanical vibration, which would often contract up a dilated stomach when galvanism had failed.

Dr. Horace Manders said it was a great point in treatment to prevent the atonic stomach from degenerating into the true dilated variety. This was best done by preventing the ptomaines derived from the food from remaining in the stomach, and thereby poisoning the system, and the best means of accomplishing this object was by lavage and electricity combined. He had found a safe and effectual means of applying the constant current to the walls of the stomach by a specially-prepared silk tube, in the circumference of which was woven a thin covered wire which terminated in a bare end about half an inch from the eyelet holes; hence, at one sitting the stomach could first be washed out, and whilst retaining the tube *in situ* with a requisite amount of water, the electricity could be turned on; the external rheophore should not only be applied over the gastric region, but also over the vagus on each side of the neck. The local treatment was completed by electro-massage in the direction of the longitudinal and oblique muscles of the stomach. In one case a cure had finally been effected by giving the last meal of the day at 6 P.M., and by washing the stomach out the last thing at night; by this plan the viscus was enabled to obtain the longest possible period of rest. As regards methods of diagnosis, he had found the filling of the stomach with fluid to be much less unpleasant to the patient than the filling by air, which he thought was due to the fact that fluids were much more natural to that viscus; indeed it seemed to be the one object of many to fill their stomachs with either food or fluids, whereas people who suffered from wind therein were not comfortable until they had got rid of it.

Mr. Jackson Clarke advocated gastro-enterostomy in cases unrelieved by other methods of treatment.

The President agreed with Dr. Morison that acute dilatations of the heart following long-standing hypertrophy were parallel to those of the stomach. He considered that dilatation of the stomach as the direct result of pyloric stricture, even when cancerous, was extremely rare. The dilatation occurred in consequence of muscular weakness and not on account of the stricture. Atony in many cases preceded dilatation. In the worst cases of dilatation gastro-enterostomy might produce good results. He was doubtful as to the beneficial attacks of posture, but could speak highly of the relief afforded by well-applied Martin's bandages. He did not think that movable kidney was ever produced by the pressure of a dilated stomach, but that both conditions when coincident were part of a general neurosis.

Mr. Armstrong, in reply, pointed out that an emetic could only be useful in very recent and temporary cases. He had tried the postural method recommended by Dr. Ewart without good result, as the retained fluid, instead of passing through the pylorus, seemed to bag out the stomach in the most dependent part. He had found the use of the belt much more effective in gastroptosis than in ordinary dilatation. He agreed with Dr. Broadbent as to only temporary relief being got by washing out the stomach, and also as to the advantages to be gained by change of scene and air, and by avoidance of worry. Mr. Jackson Clarke's new india-rubber button seemed to him likely to be very useful in cases where operation was necessary. He agreed with the remarks of the President concerning the desirability of distinction between atony of the stomach and real dilatation; but his difficulty had always been to find where the one ended and the other began.

MIDLAND MEDICAL SOCIETY.

J. W. Taylor, F.R.C.S., President, in the Chair.

Wednesday, February 23rd, 1898.

Osteotomy for Dislocation of Hip.

Mr. Gilbert Barling showed a boy, aged 17, upon whom he had performed osteotomy of the neck of the femur for pathological dislocation of the hip. Five months before the patient came under treatment he suffered from an acute illness said to be rheumatic fever, and was ill for three months. At this time he had extreme pain in the right thigh from the knee to the hip. No apparatus was applied, and to relieve his pain the patient nursed his leg in a very flexed position. When examined the thigh was flexed to an angle—rather less than a right angle—to the body, and was so abducted that it lay on its outer side. The hip-joint appeared to be fixed until it was examined under an anæsthetic, when it was thought that there was very slight movement. The head of the bone lay partly on the ascending ramus of the pubes and partly on the thyroid foramen. On October 4th, 1897, osteotomy of the neck of the femur was performed with a chisel, and at the same time numerous tight muscular and fascial bands were divided on the front and outer side of the joint with a tenotome. Most of the flexion and abduction was thus overcome, but the limb could not be brought anything like straight; it was therefore placed on pillows, and extension by weight and pulley applied. Five days later, under an anæsthetic, powerful extension was used, and the limb brought perfectly straight. A Liston's splint and extension by weight and pulley applied, and the patient was kept at rest for six weeks with resulting bony ankylosis. At the present time there was about two inches of shortening, but the patient had a good strong straight limb, on which he got about freely.

Perforating Ulcer of Sigmoid Flexure.

Mr. Leonard Gamgee showed a man, aged 28, who had suffered from a perforating ulcer of the sigmoid flexure. In August, 1897, the patient suffered from ulcerative colitis. On November 1st he was seized with sudden severe pain in the lower abdomen. For some days after this his temperature varied from 100° to 101°, and gradually a circumscribed swelling formed in the left iliac fossa. This was cut down upon, and about 3 drachms of pus were let out from a localised intraperitoneal abscess. Twelve days after the operation flatus and the contents of an enema came through the wound. The fistula closed, and the patient made a good recovery.

Acromegaly.

Dr. Kauffmann showed a case of acromegaly in a man aged 23. His symptoms had commenced insidiously two years before, the cause of onset being unknown. His family history presented no similar case, nor had he himself or his own near relatives suffered from gout or rheumatism. At the present time he showed well marked enlargement of the face (exclusive of the ears), hands, and feet. Kyphosis was most pronounced. His internal organs were not enlarged, nor did the thymus or thyroid give evidence of enlargement. The tongue was of normal size. The hair was copious. The patient's skin was pale, and he was distinctly anæmic. In conjunction with this fact it must be observed that four years and a half ago he suffered from lead colic, but for the last four years he had ceased to work in lead. His urine reacted normally to the ordinary clinical tests.

Photochromography for Pathological Illustrations.

Mr. Christopher Martin read a note on the use of photochromography (or trichromatic printing) for the production of coloured illustrations of pathological specimens, etc. Three photographs of the object were taken (on specially prepared films) through red, green, and violet glass screens. From the positives three process blocks were prepared. The block made from the photograph taken through the red screen was used to print the blue tints, that through the green screen the red tints, and that through the violet screen the yellow tints. The yellow picture was printed first. In twenty-four hours' time the red picture was printed over it, and after another interval the blue was superimposed. By the combination of the three-colour pictures a perfect reproduction of all the tints and shades of the original object was obtained. Mr. Martin showed numerous photochromographs made by this process, and pointed out how useful it should prove to medical authors. By means of it we could now obtain pictures, true in tint and shade to Nature, of pathological specimens and morbid appearances. (The February number of the *Birmingham Medical Review* is illustrated by two photochromographs).

Paper.

Mr. Hall-Edwards read a paper on the Practical Application of the Roentgen Rays to Medicine and Surgery.

Wednesday, March 2nd, 1898.

J. W. Taylor, F.R.C.S., President, in the Chair.

Subclavian Aneurysm.

Mr. Jordan Lloyd exhibited a man, aged 55, with aneurysm of the first part of the right subclavian artery, involving probably also the terminal portion of the innominate artery. He had complained only of pain along the outer side of the upper forearm for a few weeks, and knew nothing of the swelling above the clavicle until his attention was called to it. The aneurysm was as large as half a lemon. The right common carotid and the first part of the right axillary arteries were tied at the same time with ordinary catgut ligatures five weeks ago. Pulsation diminished, and the swelling lessened from the hour of the operation, and at the present time a small, hard, flat tumour, no larger than half a walnut, was all that remained. No cerebral or other untoward symptoms followed the operation, and both wounds healed firmly within a few days. The patient looked alcoholic, although he denied excess. He gave no history of syphilis or injury.

Ovarian Cyst.

Dr. Purslow showed an ovarian cyst which he had removed y abdominal section at the Queen's Hospital seventeen days previously from a girl aged 14 years. Enlargement of the domen had been noticed for six months and occasional shooting pains for two months. The girl had never menstruated, and there were no signs of puberty. The tumour, hich was of the multilocular variety, was free from adhesions, nd was easily removed. Its fluid contents weighed 127 ozs., and the solid matter 33 ozs. The patient made an uninterrupted recovery.

Amputation through the Thigh.

Mr. Jordan Lloyd showed the lower end of a femur removed by amputation through the thigh of a man, aged 21 years. The bone contained a large sequestrum of six or seven years' standing, which had transfixed the lower epiphysis of the femur, perforating the knee-joint between the condyles and disorganising the articulation. The patient was very feeble, and his urine nearly solid with albumen. He had previously always refused to submit to operation of any kind. His vessels were so soft that the femoral artery was cut completely across in applying a medium-sized catgut literature. He made a rapid recovery, his wound healed primarily, and he was able to sit up on the tenth day. The albumen had diminished, but two months after the operation had not altogether disappeared.

Paper.

Mr. Jordan Lloyd read a paper on Tuberculous Disease of the Male Genito-Urinary Organs.

Wednesday, March 16th, 1898.

J. W. Taylor, F.R.C.S., President, in the Chair.

Nominations.

Nominations were received for the offices of President, Treasurer, Secretaries, and members of Council.

Hysterectomy.

The President showed three specimens of diseased uteri removed by the combined method of vaginal and abdominal hysterectomy. Two were cases of uterine myomata, and in both of these the patients were virginal. The other was a case of cancer of the body of the uterus. The President drew attention to the necessity of aseptic preparation of the vagina in all cases of complete hysterectomy, and maintained that the separation of the cervix from its vaginal attachments with ligature of the lower branches of the uterine artery proved a valuable preliminary to the abdominal removal of the tumour when vaginal extraction was exceptionally difficult or impossible.

Uterine Myoma.

Mr. Furneaux Jordan showed a specimen of large multinodular myoma of the uterus removed that morning from a patient, aged 39. Her symptoms were entirely those of pressure on the rectum and bladder, and had lasted some months. The operation performed was complete hysterectomy by the combined method, but, owing to the way in which the tumour blocked the pelvis, it was found impossible to tie the uterine arteries from the vagina. At the time of report the condition of the patient was satisfactory.

Ulceration of Aortic Valves.

Dr. Foxwell showed a heart with much ulceration of the aortic valves, and also vegetations over a wide area of the aortic surface of the aortic cusp of the mitral valve. The case was of interest because there had been in addition to the usual double aortic murmur a rough murmur, presystolic in rhythm, and typical of mitral stenosis in its area of audibility. From other signs and symptoms, however, Dr. Foxwell decided that there was no mitral stenosis, but that it was one of those presystolic murmurs which occasionally accompany aortic regurgitation, and whose explanation was as yet obscure. This diagnosis proved, *post mortem*, to be correct.

Typhoid Ulceration of Great Intestine.

Mr. F. W. S. Mann showed a specimen of extensive typhoid ulceration of the great intestine. The patient, a woman, aged 56, previous to admission to the infirmary, had been nursing her son at home with typhoid fever. During the time she was under observation she showed none of the usual symptoms of the disease. The patient died from cardiac failure three weeks after admission, subsequent to sudden and profuse hæmorrhage from the bowel, which set in twenty-four hours before death.

Papers.

Mr. Frank Marsh read a Note on the Treatment of Cancer by Chelidonium.—Dr. Stanley read a paper on the Cerebellum.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, March 31st, 1898.

W. Macfie Campbell, M.D., President, in the Chair.

Removal of Lens in Myopia.

Mr. Edgar Stevenson showed a case of conversion of high myopia into hypermetropia by removal of the crystalline lenses.

Coin in Œsophagus.

Mr. C. Thurstan Holland read notes of a case in which a penny had lodged in the œsophagus of a boy, aged 12, for three months, producing no symptoms. A radiograph showed the penny behind the upper border of the sternum. The coin was easily removed by a coin catcher. A series of radiographs was also shown taken by very short exposures, a 6 or 10 inch coil being used and the exposures through various portions of the body varied from 15 to 60 seconds.

Yaws.

Mr. G. G. Hamilton gave an account of recent observations on yaws. His facts were derived from the literature and from a surgeon who had been for some years in Africa, and who exhibited the typical raspberry appearance on his own foot. The relation to syphilis was discussed, and it was considered that the two diseases were almost certainly separable. This opinion was held by most surgeons practising in Africa.

Dr. F. H. Barendt thought some cases wrongly called yaws were tertiary syphilis. He looked upon yaws as an infective granuloma. The contagiousness of the disease was confirmed by the history of the case exhibited.

Dr. S. G. Moore referred to a case he had seen in West Africa some years ago, where the raspberry-like character of the eruption appeared more marked than in the case shown, probably by the contrast between the tubercle and the skin of the negro in whom he saw it. He was of opinion that the disease was not syphilitic. The patient was at work, free from pain and fever, and quite easy in his own mind assured of a complete recovery. These points gave corroboration to his denial of its being syphilis.

Dr. Barr mentioned a case he had seen many years ago in South America.

Laryngeal Cases.

Dr. Permewan showed (1) A patient from whom he had

removed a small Pedunculated Tumour of the Left Vocal Cord. There had been complete aphonia for three years; the voice returned immediately the growth was removed. The growth was cystic, contained blood, and collapsed when seized by the forceps. (2) A case of Transverse Web in the Trachea, resulting from cicatrisation of an old syphilitic ulcer. About a half of the lumen of the trachea seemed to be occluded. There was dyspnœa and aphonia, due no doubt to the interruption of the blast of air, as the cords moved perfectly.

Operation for Imperforate Anus.

Mr. W. T. Clegg mentioned a case on whom an operation for imperforate anus had been performed nine years previously. There was perfect control over the sphincter.

Fixation of Jaw.

Dr. Nathan Raw read notes of and exhibited a patient suffering from fixation of the lower jaw, which came on a week after an injury to the right side, nine weeks ago. He had placed the patient under an anæsthetic, but was unable to force the jaws apart.

Mr. Damer Harrisson, and Drs. Ross, Alexander and Newbolt discussed the treatment.

Cases.

Mr. Rushton Parker showed (1) A patient from whom he removed a Large Portion of the Stomach for Carcinoma; and (2) Compound Comminuted Fracture of the Skull, in which he had replaced the bones.

Shortening in Hip Disease.

Mr. Robert Jones read a paper, illustrated by lantern slides, upon the prevention and treatment of the short leg in hip disease, and demonstrated a new abduction splint. He advocated that abduction of the diseased limb should be maintained, that the apparatus to attain this should also govern flexion and adverse pelvic tilting, that where arrest of growth threatened pelvic obliquity should be made to favour the diseased limb, that where displacement of the head occurred immediate reduction should be attempted, and that tuberculous activity should be no bar to the reduction of the deformity. When bony ankylosis occurred, he performed oblique transverse trans-trochanteric osteotomy, divided the adductors subcutaneously, and at once placed the limb in the abducted position in the new splint, until bony union occurred; after union occurred the splint should be removed and the limb allowed to leave the abducted position; in doing so the pelvis became tilted on the opposite side, and exercises were ordered to depress the pelvis on the affected side. That treatment should be mainly conducted in the open air. By this means all shortening not due to arrested growth could be avoided, and in old cases 3 or 4 inches of practical or apparent shortening could be remedied.

Mr. R. W. Murray thought the adducted position due to the child lying on the sound side, the diseased limb naturally falling into this deformity. He had frequently straightened deformed tuberculous joints, and had not known general tuberculosis to result.

Mr. Thelwall Thomas mentioned a case of double hip disease where adduction of both limbs occurred, with cross-leg. He performed subtrochanteric osteotomy three years ago, and kept the limbs abducted with marked improvement.

Mr. Rushton Parker spoke.

NORTH OF ENGLAND GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY.

J. W. Martin, M.D., President, in the Chair.

Friday, March 18th, 1898.

Specimens.

The President showed a large Ovarian Cystoma which had been complicated with Ascites, and in many respects simulated malignant disease.—Dr. Arthur Wallace (Liverpool) showed the model of a Pelvis and Fœtal Skull for use in teaching.—Dr. Briggs (Liverpool) showed a Thick-walled Ovarian Cyst in which the pedicle had a half twist, giving rise to a partial necrosis of the cyst wall, but without any organic adhesions, although seven weeks had elapsed since the twist took place.

Vaginal Hysterectomy for Cancer of the Uterus.

Dr. Walter (Manchester) reported two cases and showed the specimens: (1) Mrs. L., aged 52 (married twenty-two years, four children, the eldest 21 years of age and the youngest 17) consulted him on February 2nd on account of a hæmorrhagic discharge commencing three or four weeks previously. The menopause occurred eight years before, and until the end of last year her general health had been good. In December, 1897, the patient noticed a watery vaginal discharge, not accompanied by any fœtor, and the following month was followed by a bright hæmorrhagic discharge recurring on several occasions. On examination the posterior lip of the cervix was found slightly enlarged; it contained a roughened surface which bled freely when touched. The anterior lip was healthy, there was no well-marked cervical laceration, and the size of the uterus was not increased. On February 11th vaginal hysterectomy was performed. Some difficulty was experienced in drawing down the uterus, notwithstanding the absence of any extension of disease into the utero-sacral ligaments on the surrounding tissues, and splitting the uterus was found helpful in bringing the broad ligaments better into reach. These were secured on each side by ligatures, and the wound was packed with gauze. After forty-eight hours the gauze was removed, and the central portion of the wound was closed with two sutures inserted at the time of operation, but the angles of the wound were left open and drained with a small piece of gauze for two days longer. All the ligatures came away towards the end of the second week, and on the twenty-second day the patient was able to return to her home in the country. (2) Mrs. P., aged 43, was first seen on February 25th, 1898. Her husband had died a year previously from cancer of the bladder. The patient married at 20, and had had five children and one miscarriage, the youngest child being 9 years of age. For five months a continual hæmorrhagic discharge had been present, occasionally it was fœtid. The patient had lost flesh and was very anæmic. The uterus was a little enlarged and freely movable. The cervix felt and looked healthy. Cancer beyond the cervical canal was suspected. On March 1st the uterus was dilated with Hegar's dilators, and an ulcer was found just within the internal os extending upwards of half an inch, with hard edges, friable surface, and bleeding freely. The extirpation of the uterus was proceeded with, all the necrotic tissue possible being first removed with a curette, and the external os being then carefully closed with a wide Museux forceps. The uterus was removed entire without difficulty, and the broad ligaments ligated with silk. The vaginal wound was closed in the centre with one suture, and at each angle a little gauze was loosely inserted. The after-progress of the case was very satisfactory. The microscopic examination of both specimens confirmed the diagnosis.

Ectopic Pregnancy.

Mr. Stanmore Bishop (Manchester) brought forward three cases of ectopic pregnancy. (1) Married at 30, three years sterile, sudden continuous pain with vomiting; when first seen attributed to indigestible food. Pain persisted for a week, but was controlled by morphine; mass formed in left broad ligament; slowly absorbed; recovery. (2) Married eleven years at 28: four confinements, one miscarriage; last was labour at full time four years ago; normal pregnancy, protracted labour; had never been well since; had pain in left side on getting up, and this had persisted with intermissions ever since. Periods regular since until July, 1897, when eight weeks elapsed without flow. Bleeding began at end of August, and never entirely ceased up to date of admission September 14th, 1897. Gnawing pain, which came on suddenly, lasted five or six hours, and went off gradually. Temperature, 100·2° F. Mass found in Douglas's pouch. Diagnosis doubtful; pyosalpinx or ectopic pregnancy. Cœliotomy on October 24th: On right side swollen tube, closed at abdominal end. Ovary multicystic, but small. Several ounces of blood clot and fibrin in Douglas's pouch, covered in by adherent omentum and intestines, *plus* the left tube enlarged and flattened out. This tube contained adherent blood clot, and had a rent in its side about the junction of the inner and middle third; recovery. (3) Married sixteen months, but had one child eighteen months before marriage, October 20th. Admitted March 3rd, 1898.

Periods, except during pregnancy, regular and normal until two months ago, when she went fourteen days over the proper time; discharge then came on and continued until admission. On February 26th, whilst kneeling down cleaning the floor, she was seized with sudden pain in the left iliac fossa, which had returned paroxysmally ever since, and the returns were becoming more frequent. Bimanual examination revealed an unusually boggy mass in the left fornix, distinguishable from uterus. Diagnosis of ectopic pregnancy made. Cœliotomy on March 4th: On opening abdomen, greatly swollen and engorged left tube presented, the abdominal ostium of which was closed and curled round a normal ovary. There was a large rent in this plugged by a large clot, which also filled the tube. Some clots and dark blood in Douglas's pouch, with some free blood, also dark, floating freely amongst the intestines. The right tube was reddened and enlarged, the right ovary cystic; the latter was removed. The abdomen was sponged out, the ruptured tube and ovary removed, the abdomen closed. Recovery. Mr. Stanmore Bishop drew attention first to the various classifications given by Tait, Helme, Bland Sutton, and Webster, and brought forward a case of Dr. Fothergill's, as yet unpublished, which illustrated the fact that an early tubal abortion might be entirely absorbed by the peritoneum. He suggested that more attention might with advantage be directed to the symptoms before rupture, and proposed as a basis for discussion that the association of such symptoms as pain in one iliac region with dragging pain on movement of the corresponding leg, with some loss of blood *per vaginam*, should justify an immediate bimanual examination; and if a swelling in the corresponding fornix of unequal consistence, or a boggy swelling in Douglas's pouch was found, a diagnosis of ectopic pregnancy might be made. The true symptoms of rupture of the tube into the peritoneal cavity were next discussed. Sudden pain with collapse had been so far considered as indicating this. Cases were addueed, in conjunction with the two last described, to show that collapse was not always present at the time of rupture; and it was suggested that the conjunction of these two symptoms pointed rather to commencing peritonitis *plus* the loss of blood than to the rupture itself. Assuming that in the interest of the patient it was advisable to remove a gravid tube as soon as diagnosed, if that could be done before rupture, since it was impossible to predict in that direction, a tube would give way, the two routes, vaginal and abdominal, were compared and a preference expressed for the latter.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Sir George F. Duffey, M.D., P.R.C.P.I., President, in the Chair.

Friday, March 11th, 1898.

Pneumothorax.

Dr. Finny communicated a case of idiopathic pneumothorax. The patient was a stableman, aged 18, who had not been ill previously, and had had no cough or pulmonary trouble. The first attack came on in the morning of November 3rd, 1897, as he was going to his work, and he left Sir Patrick Dun's Hospital on December 17th quite well, and having gained half a stone in weight. The second occurred a fortnight after he was at work, also in the morning, on rising, and on March 3rd, 1898, the left side was practically well. The onset in both attacks was sufficient to keep him from work, and physical examination readily discovered air in the left chest, stretching the pleura to its fullest limits, and displacing the heart to the right mammary region, and yet the patient did not consider himself ill enough to go to hospital. All through the attacks there was absence of all fever, quick pulse, or constitutional disturbance, and the respiration was easy after one or two days. No special treatment was called for, and gradually the air was absorbed—on the second occasion at a slower rate than on the first, and the left side remained an inch less than the right, but it moved freely on respiration. Particular attention was drawn to (1) the occurrence of pneumothorax in a previously healthy man; (2) the extreme distension of the left pleura by air, and dislocation of the heart to the right without commensurate distress or cyanosis or constitutional disturbance; (3) the complete absence of effusion of liquid in the pleural cavity in either the original attack or the second; (4) the anomalous clinical physical signs "metallic tinkling," "amorphic respiration," and "a friction sound outside the heart" during the progress of the case where the opening was closed, and in the absence of fluid; (5) the gravity of such cases was not as great as where air and fluid were both effused, or where, by the occurrence of pneumothorax, the original disease (phthisis) made more rapid strides towards a fatal termination; (6) the gradual and complete recovery without special medical or any surgical treatment.

In reply to Drs. A. R. Parsons, Knott, and R. Travers Smith, and Professor E. H. Bennett, Dr. Finny said that he did not know that he was obliged to give an explanation of what had occurred in his case, because he did not believe that the explanation of the metallic tinkling was due to a drop of water falling down or a bubble breaking on the surface; but it was quite possible that it might have been a mucous bubble in the tube, and not one blown out through a hole in the lung; in some of the bronchial tubes there might have been a little draught of air, and some bubble might have been present there and given rise to the metallic tinkling. In the neighbourhood of a large chamber any sound would get a metallic ring; therefore it was possible that there might have been some slight bubbles in the deeper tubes giving rise to the metallic tinkling. As to the production of the friction sound when there was no fluid or pleurisy, he did not say there was no pleurisy, but it was quite possible to have a little slight lymphy exudation on the surface without a quantity of fluid in the lower part of the chest; and although Dr. Smith had referred to the possibility of not finding fluid in the lower part of the chest on account of the shape of the diaphragm, he thought there was hardly enough fluid even there to explain the occurrence of the metallic tinkling. No succussion could be detected on careful examination.

Cystinuria.

Dr. Walter Smith drew attention to three curious perversions of metabolism: (*a*) Alkaptonuria, due either to presence of pyrocatechin, urolencic acid, or homogentisic acid; (*b*) diaminuria, that is, the occurrence of diamines (cadaverin, putrescin) in fæces and urine; (*c*) cystinuria. Few cases of cystinuria were upon record, probably not more than 75 in all, since the first recognition of cystin by Wollaston, nearly 90 years ago. Two cases had come under Dr. Smith's observation, namely, in 1890 and 1897. The first case (already published) occurred in a boy, aged 8 years, in good health. The odour of the urine was fragrant; reaction faintly alkaline; sediment slate coloured. Cystin crystals were found rather sparingly in this deposit, associated with phosphatic crystals and $CaCO_3$. The second case was that of a lady, aged about 50 years, who consulted Dr. Smith for rheumatic pains. The urine was faintly acid, and the white sediment consisted almost wholly of cystin, in elegant hexagonal crystals, insoluble in acetic acid, and soluble in ammonia. The true formula of cystin was $(C_3H_6NSO_2)_2$. It had no relation to uric acid. The probable antecedent of cystin in the body was cystein, a soluble base. Cystinuria was frequently associated with diaminuria, and both were possibly due to a common cause, namely, an intestinal mycosis. Hence the therapeutical indication was to disinfect the intestine.

Mr. M'Causland asked if it was not possible that cystinuria was more common than supposed, on account of the possibility of its being overlooked?

Dr. J. W. Moore said he possessed records of about 2,500 analyses of urine by his father, who recorded two cases of cystinuria. Since his father's death Dr. Moore had seen one case himself. About a year ago Dr. Craig had a very interesting case, in which the hexagonal crystals were beautifully seen; so that altogther out of about 3,500 examinations of urine there were about 4 cases.

Dr. E. H. Bennett said that he had many years ago determined a deposit of crystals in a specimen of urine to be cystin, on account of his having obtained the same results on chemical treatment as had obtained in the case of a calculus which he knew to be composed of cystin.

Dr. W. G. Smith, in reply to Mr. M'Causland, said diaminuria was only a particular case of ptomaine, and, therefore,

cystinuria could not always be expected to be associated with diaminuria, inasmuch as it was only proved to be associated with diamines, of which the names were cadaverin and putrescin. Cystinuria was, therefore, associated with particular species of ptomaines, but not ptomaines in the general sense. Many years ago Golding-Bird expressed the conviction that in the urine, in many cases of depressed health, it was not a very uncommon thing to meet with crystals of cystin. He would lay no stress on the occurrence of rheumatism and cystinuria together with the case of his second patient (an old lady), as rheumatism in old ladies was very common and cystinuria very rare.

ACROMEGALY.

Dr. W. J. THOMPSON read notes of a case of this disease, and exhibited the patient. He said that since Marie in 1886 first described acromegaly little advance had been made as to its cause. The pathology was still obscure. The enlargement of the bones was simply hypertrophy. What was the hypertrophy due to—a toxin or a neurosis? The thyroid gland was often hypertrophied, rarely the thymus. The pituitary was constantly found affected—in about 90 per cent. of all cases enlarged and diseased, and in about 10 per cent. diseased but atrophied. The diseases embraced almost every form of tumour, namely, sarcoma, adenoma, glioma, etc.; hence, from the lesions of this body very little light was thrown on this disease. Similar changes were found in pituitary bodies not clinically associated with acromegaly. The diseases it was likely to be confounded with were (1) myxœdema; (2) osteitis deformans of Paget; and (3) hypertrophic pulmonary osteo-arthropathy. It ran a course of from 2 or 3 to 30 years, and was divided into the acute, the chronic, and the intermediate. Treatment by arsenic, iron, pituitary and thyroid extracts, etc., was unsatisfactory.

Mr. M'CAUSLAND said that not long previously he had under his care a patient with a large cystic tumour under the jaw, which was removed. The patient presented certain conditions, apparently very like those of acromegaly. There was great enlargement of the hands, feet, head, and bones of face, hoarseness of voice, but no headaches or pains. Eyes, thyroid, and urine were normal. Dr. Thompson's case did not at all come up to his ideas of what acromegaly should be. For himself, he did not offer any suggestion, except that the girl might be suffering from some form of tuberculosis or rheumatism.

Dr. THOMPSON replied; and

Dr. H. T. BEWLEY, with reference to a case of his own, said it was really very hard to say what were the typical signs of acromegaly. The symptoms in his case fitted in with the usually described symptoms. Marie, however, mentioned that such cases were not acromegaly unless there were eye symptoms, which were absent in his case.

EPIDEMIOLOGICAL SOCIETY.—At a meeting on March 18th, Professor J. LANE NOTTER, President, in the chair, Dr. D. S. DAVIES (Medical Officer of Health for Bristol) read a paper on the recent Outbreak of Enteric Fever in Clifton caused by an Infected Milk Supply, in which he considered not only the distribution of the cases on which he had reported already (see BRITISH MEDICAL JOURNAL, December 4th, 1897, p. 1669), but the incidence of the disease and other facts since observed. The males of al ages were 80, the females 164, of the former 65 and of the latter 75 were under 20 years. There were 9 males and 63 females, mostly domestic servants, between 20 and 35 years. As to occupations, 3 males and 62 females were in service, their deaths being 2 and 12 respectively. Boys at school numbered 58 with 1 death, and girls 52 with 4. Four schoolmasters and 4 mistresses were attacked, 1 of each dying, while the 1 medical student and 1 of the 3 nurses attacked died. There were secondary cases contracted directly in attendance on the sick. The age groups were too small for any trustworthy generalisation, but the contrast between the fatality of 6.4 under 20 years of age and that of 21 per cent. above, and still more that of 6.0 between the ages of 15 and 20, and 29 per cent. among the 66 cases between 20 and 25 was very striking. Widal's test was applied in 192 cases with positive indications in 138, all but 2 of which were clinically confirmed; doubtful in 15, but 6 of these proved to be enteric, and negative in 39; 4 of these subsequently developed the fever, 2 having given a positive reaction on a later trial. Setting aside doubtful reactions, the indications of the test were confirmed by the progress of the disease in 136, or 98.5 of the positive and 35, or 81 per cent., of the 39 negative results, and most of these at too early a stage for clinical diagnosis alone.—Dr. WASHBOURN looked on Widal's test as a valuable aid rather than an indication by itself, though the alleged reaction with scarlatinal blood was easily distinguished, and scarlatiniform rashes were frequent in all fevers. He thought that infection generally preceded notification by three weeks.—After several questions and remarks from Drs. CHILDS, EULSTRODE, and SWEETING, the PRESIDENT expressed his dissatisfaction with the water analyses shown, which were the work of a mere chemist, and useless for the purpose in hand; such examination should, he maintained, always be entrusted to the medical officer of health. He had more confidence in Ehrlich's urine test than in Widal's.—Dr. DAVIES, in reply, stated that a bacteriological examination of the water of the well had been made by Professor McFadyen after October 26th, when large numbers of B. coli were found. There were a few secondary cases besides the student and the nurses who certainly had not drunk the infected milk. The autumnal wave of diarrhœa was lower than usual, showing that the epidemic had not developed from small beginnings, but, like milk outbreaks generally, was sudden and simultaneous in its appearance, though, as a rule, of a mild type.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this Society, on April 1st, Dr. H. P. POTTER, President, in the chair, Dr. MANSELL MOULLIN showed a specimen of Double Pyosalpinx, removed by laparotomy.—Dr. SYMONS ECCLES read a paper on the Diagnosis of Gastroptosis. Cases of general enteroptosis were excluded. While many such cases had come under observation, the condition of simple gastroptosis uncomplicated by marked displacement of other abdominal viscera was comparatively rare. Only 27 out of 468 cases characterised by dyspeptic symptoms had occurred in his practice since 1888. Gastroptosis was present, he considered, when the upper border of the fundus of the stomach fell below the level of the left seventh costal cartilage. In gastroptosis inspection revealed a peculiarity in the contour of the abdomen in profile in the erect and in the recumbent position. Palpation often enabled the observer to map out fairly accurately the limits of the stomach when the patient was resting against a slanting board. Ausculto-palpation and percussion had been found more useful than some others appeared to have found them. Phonometry was a great aid in confirming any physical signs. The symptoms of gastroptosis were somewhat similar to those of gastrectasia, but the vomiting if present was more frequent, and not fountain-like. Eructations were common in gastroptosis, as also pain after food. The physical signs were, however, the best means of diagnosis. Dr. Symons Eccles alluded to several cases, and exhibited diagrams illustrating them. Dr. A. CLEMOW thought the paper well-timed, for many of the cases of influenza in the present epidemic had shown marked gastric symptoms, and it was possible that gastric catarrh, together with weakness of both voluntary and involuntary muscular fibres, might lead to gastroptosis. Dr. GEORGE OGILVIE and Mr. MENZIES alluded to cases; and Dr. SYMONS ECCLES replied.—Dr. S. A. BONTOR read a paper on a Case of Acute Leukæmia. A youth, aged 18, had always had good health until suddenly attacked with the symptoms of biliousness when at school. During the next fortnight he rapidly lost flesh and strength, and was sent home from school. He then had marked pallor, stomatitis, and some enlargement of the lymphatic glands, but none of the spleen. Owing to change of locality, etc., he seemed to improve, but in a very short time he relapsed. There was increased swelling of the gums, of the lymphatic glands, and later the spleen enlarged. His temperature rose and he became exhausted, and died six weeks after the onset of his illness. Dr. Bontor alluded to the condition of the blood in the case which had been examined by Dr. Rose Bradford. He also referred to the question of diagnosis of such conditions. Dr. ROSE BRADFORD said he believed that no similar case to Dr. Bontor's had as yet been recorded in England. Fraenkel and Ebstein had drawn

attention to them on the Continent. He had seen four other cases besides the one under review. The most marked symptoms in all these were: rapid emaciation, extreme pallor, intense stomatitis, not very great enlargement of the lympathic glands, only a slight enlargement of the spleen, some purpura and some fever. They all ended fatally within eight weeks, and after death the thymus was found persistent, and the bone marrow diseased. Dr. Whitfield asked whether malaria had any part in the causation of the affection. Dr. C. Creighton alluded to a case; and Dr. Bonton replied.

North London Medical and Chirurgical Society.—At a meeting on March 10th, Dr. David Fairweather (President) in the chair, Dr. Ludwig Freyberger demonstrated a series of about 20 specimens of Morbid Organs, prepared by Kaiserling's formalin method. The results obtained showed most beautifully the special morbid feature of each specimen. Dr. Freyberger described the method, and pointed out the salient features of each preparation, indicating in each case the advantage of Kaiserling's method over the older ones. Dr. Bailey added some remarks at the end of the demonstration.—Mr. Mower White showed a patient, aged 19, who on January 17th, 1898, while cleaning a toy pistol not knowing that it was loaded, accidentally fired it off and wounded his left hand. The pellet, which was spherical and 0.5 cm. in diameter, entered the palm at a point midway between the lower of the two creases across the front of the wrist and the crease at the base of the ring finger in a line prolonging upwards the axis of the ring finger. The patient was first seen ten days after the accident. The wound on the palm was then healed and covered by a scab; the skin around it was quite uninjured. The pellet was found just beneath the skin at a point a little behind and below the pisiform bone; it had thus travelled in a direction upwards, backwards, and inwards through the tissues of the palm. There was no evidence that the bones had been injured, or that the deep division of the ulnar artery had been wounded, since there was no blood staining of the skin of the hand on either aspect. The deep division of the ulnar nerve had however suffered injury, for, with the exception of the muscles of the hypothenar eminence, all those supplied by this nerve were wasted and paretic, and the hand presented the deformity typical for this condition. The tactile sensation of the skin was perfect. The pellet was removed a fortnight after the accident, and since the operation wound had healed the paretic muscles had been systematically galvanised. They had, however, continued to waste; they gave the reaction of degeneration, and up to the present (seven weeks and a half from the date of injury) showed no signs of recovery. The anatomy of the part injured was discussed, and reference was made to a communication by Mr. W. Anderson to the Anatomical Society of Great Britain and Ireland under the date of February, 1894 (*Proceedings* N.S., vol. viii). Finally an attempt was made to arrive at a correct estimation of the amount of injury that the nerve had suffered, whether bruising only or actual division, and it was suggested that the time had now come when it would be unwise to delay operative interference any longer.—The case was commented upon by Mr. Elworthy, and by Drs. Freyberger, Bailey, and Day, and the majority of the opinions expressed appeared to be in favour of an operation.

British Orthopædic Society.—At a meeting on February 25th, Mr. H. A. Reeves in the chair, Mr. Tubby showed cases of Coxa Vara, one of which was complicated by Genu Valgum of one side, and Genu Varum of the other. Mr. Luke Freer, Mr. Thomas, Mr. Openshaw, Mr. Reeves, and Mr. Baker took part in the discussion.—Mr. Tubby also showed a Foot and Leg amputated by him for extreme Talipes Equino-Varus complicated by inflammation and suppuration in the foot. The patient, aged 43, could not submit to any prolonged treatment, and he reluctantly amputated. Mr. Baker, Mr. Thomas, and Mr. Reeves spoke.—Mr. E. Luke Freer showed a skiagraph of a case of Congenital Dislocation of the Hip. A Committee was then appointed to investigate cases of Congenital Dislocation of the Hip.—Mr. Muirhead Little showed a case of Paralytic Talipes Calcaneo-Valgus, in which he had divided the tendons of the peronei longus and brevis, which being unopposed were aggravating the valgoid position, and had inserted them into the lower end of the divided tendo Achillis. The boy had now, three months after operation, considerable power of extension of the ankle-joint.—Mr. Thomas showed skiagraphs of a case of Congenital Absence of the Radius and Thumb. He did not propose to operate. Such cases learnt to make very good use of the imperfect member.—Mr. Muirhead Little opened a discussion on some points of interest in Acquired Flat Foot. The arch of the foot was no arch in an architectural sense; its functions were those of a spring buffer and a lever. Golbiewski, Meyer, and Dane thought that under the weight of the body the base of the fifth metatarsal bone descended more than the scaphoid did. In the over-pronated foot, on the other hand, the inner arch descended more while the fifth metatarsal ascended under weight. According to them, over-pronation was the initial change in flat foot, yet this condition was found accompanying too high an arch. Inefficiency of the long muscles on the inner side of the ankle was an important factor in causation. Bone deformities were secondary. The treatment was palliative or curative. He had never trusted to gymnastic exercises alone, and could not say to what extent patients benefited by them. Reduction must always be first effected by rest in the adducted position, manipulation under anæsthetics, or, if needed, tenotomy of peronei and extensors. Wedge soles were most useful; they corrected overpronation. Whitman's brace - a metal support fitted to the arch of the corrected foot—was often of service. For other cases a concealed spring, convex outwards on the outer side of the foot, or the familiar outside upright, pad, and T-strap were necessary. Mr. Jackson Clarke said that the importance of exercise was perhaps exaggerated. He treated his cases with an iron and T-strap. Mr. Openshaw pointed out that it was a mistake to suppose that the inferior calcaneo-scaphoid ligament was stretched and thinned; it was the internal ligament that was so affected. He thought the arch itself was not diseased until the astragalus almost touched the ground. He thought no operation equalled Ogston's for severe cases. Mr. Luke Freer preferred a raised sole with steel spring arch inside the boot. Mr. Tubby thought the peroneus longus caused in-ankle. In certain cases excision of half an inch of the tendon effected a cure. Mr. Little, in reply, agreed with Mr. Openshaw as to the projection and sinking of the astragalus. He had not seen any signs of overaction of the peroneus in his in-ankle cases. He could not understand how removing a portion of tendon cured spasm, unless non-union was aimed at.

Sheffield Medico-Chirurgical Society.—At a meeting on March 17th, Dr. Sinclair White (President) in the chair, Dr. Porter showed a patient suffering from Progressive Muscular Atrophy of the Aran-Duchenne type, beginning in the extensors of the forearms, subsequently involving the muscles of the thenar and hypothenar eminences of both hands, and, lastly, the left deltoid muscle. The patient was a dressmaker, aged only 22, who had been much overworked in the struggle for a livelihood.—Dr. Arthur Hall showed a case of Acquired Syphilis in a little girl, aged 3 years. The child had been nursing a baby suffering from congenital syphilis, from which the infection had been received three months before, probably in the mouth.—Dr. Burgess showed a piece of Bone with yellow tubercles on the periosteum and other specimens from a case of xanthoma multiplex.—The President related particulars of a case of Choledocho-duodenostomy in a woman, aged 44, who had had more or less continuous pain and jaundice for eighteen months. The gall bladder was adherent to the stomach, and empty. At the end of the common bile duct a calculus of the size and shape of a filbert could be felt. It could not be crushed nor pushed into the duodenum, and was removed through a transverse wound in the second part of the duodenum. The patient rapidly lost her pains and jaundice, and left the hospital, three weeks after the operation, quite well.—Dr. Crockley Clapham read a paper on Incipient Insanity. After calling attention to the fact that the most curable stage of insanity was that coming under the ken of the general practitioner, Dr. Clapham proceeded to give directions for

the management of its early manifestations, and pointed out when mistakes were likely to be made. He insisted on the necessity of early treatment, bewailed the delay in seeking advice on the part of the relatives, and distinguished between cases needing asylum care and those which might be safely treated at home. In conclusion he recommended the introduction of an "incipient insanity" clause in the Lunacy Acts Amendment Bill on the lines of the measure already obtaining in Scotland. The PRESIDENT, Dr. PORTER, Dr. WADDY, Dr. KEELING, and Mr. SNELL made remarks.

KIDDERMINSTER MEDICAL SOCIETY.—At a meeting on March 18th, Mr. S. STRETTON, President, in the chair.—Mr. J. L. STRETTON showed a youth, aged 18, with a Congenital Fistula of both Lachrymal Sacs. Both canaliculi were slit up and the nasal ducts dilated, styles being left in. A fortnight later the edges of the slit on the right side were pared and brought together with sutures. The wound healed all but a small point at the lower angle which was touched with a redhot needle and it was now quite firmly closed. The small opening on the left side would later be closed with cautery point. Mr. J. L. Stretton also showed a man, aged 56, on whom herniotomy had been performed. The sac contained a large piece of omentum which was ligatured in two pieces and removed. The pillars of the ring were sutured together and a radical cure completed. He went on well, the wound was dressed, healed, and the stitches removed. After this he suffered from symptoms of indigestion, flatulence and occasional diarrhœa about a month after the operation. A hard globular mass, outline distinct, surface smooth and regular, not attached to the liver, fairly movable and dull on percussion, was found in the right lumbar region. The urine was normal and there was no rise of temperature or pulse On one or two occasions a small quantity of blood was noticed in the stools. An incision was made 4 inches long over the swelling, the abdominal wall was inflamed and very much thickened and adherent. On opening the peritoneum a number of adhesions were found, in the midst of which was a small pocket of foul pus (about 1 drachm) communicating with the intestine, and close to the perforation was the adherent omentum and one of the silk ligatures placed on it at the former operation. Owing to the inflammatory exudation and adhesions it was impossible to close the perforation or locate its exact position. For the next two months there was a continual discharge of fæces from the opening, and only on one or two occasions a natural evacuation. Then the artificial anus was dissected out and the gap in the intestine, which proved to be the ascending colon, closed with Lembert sutures, the bowel dropped back into the abdomen and the wound closed. The man was now quite well and able to walk about without a truss. Mr. Stretton thought the passage of blood in the stools an important diagnostic sign and that if careful search had been made probably the second ligature would have been found.—Dr. EVANS showed two Biliary Calculi removed by Cholecystotomy from a married woman, aged 56. The patient was discharged well in 26 days. Dr. Evans pointed out the desirability of early operation and the advantage of immediately closing the gall bladder.—Mr. W. HODGSON MOORE showed a Stomach with a Perforated Ulcer from a man, aged 35, who had been in the army and had suffered from dysentery. Thirty-six hours before death he was seized with severe pain in the epigastric region; there was no sickness. The following day his pain was slightly relieved by treatment and he determined to drive home, about 20 miles, and when he had gone about halfway he expired suddenly. *Post mortem*, the stomach was found dilated and on the anterior surface near the pyloric extremity there was a round ulcer about ½ inch in diameter with clean cut thickened edge opened into the peritoneal cavity. Considerable thickening of pyloric end, cardiac end adherent to spleen. The peritoneal cavity contained the partly digested contents of the stomach.—Mr. F. OLIPHANT showed (1) a woman, aged 54, who was admitted with a supposed Rodent Ulcer affecting the upper lip and nose. There was no specific history. A portion of the growth was sent to the Clinical Research Association, and they reported that "the tissue is inflammatory in structure, and is infiltrated with giant cells and grey tubercles. The lesion is evidently tuberculous in nature." She was treated with ℥j doses of iodide of potassium after free scraping of the surface and was perfectly healed within a month. (2) Two Radiographs demonstrating the presence of portions of needle in the palms of the hand, in both of which cases it had been impossible to locate them or to be certain they were there. Also a Radiograph of Ununited Fracture of the Fibula.—Mr. J. POLE KITSOW read a paper on the Treatment of Menorrhagia by Infusion of Digitalis.

CAMBRIDGE MEDICAL SOCIETY.—At a meeting on Friday, March 4th, Professor ALLBUTT read a paper on the Pathogeny of Angina Pectoris.—Dr. L. HUMPHRY related a case of Rupture of Coronary Artery, Hæmopericardium, Failure of Pulse in the Right Carotid Radial Arteries. The patient was a lady, aged 58, who died seventeen hours after the onset of an attack of faintness and collapse.—Dr. CHRISTIAN SIMPSON read notes of a case of Scurvy in a child, aged 7 years. All the symptoms were well marked. Chloride of calcium was administered, and in ten days the patient was practically well. The salivation in such cases was considered to be partly due to the setting free of an excess of toxin in the blood, as had been found to be present in the blood, liver, and muscles by Bouchard. Notes of a case of Cyst of the Posterior Vaginal Wall and a Polypus of the Cervix Uteri were also read. The patient had a child twelve years before noticing the local condition, which evidenced itself by the protrusion of a body from the vagina on stooping or lifting anything heavy. The cyst was about the size of a large chestnut, was easily removed, and contained brown grumous matter. Seven days later severe hæmorrhage took place from the vagina, and its origin was found to be small polypus at one side of a lacerated cervix. As the bleeding recurred, the base of the polypus was transfixed and ligatured. It was very friable, and consisted of a very vascular fragment of mucous membrane. No further trouble had occurred.—Dr. BOXALL showed a Two-headed Monster.

FOLKESTONE MEDICAL SOCIETY.—At a meeting on March 2nd, Dr. THOMAS EASTES in the chair, Dr. HOGGAN-EWART read a paper on Healthy Metabolism and Indications with Reference to Preventive Medicine and Therapeutics. Starting with a description of the physiology of tissue change, an attempt was made to define health by a diagram in which health was represented from impregnation to the age of 25, as a gradually rising line (anabolism + katabolism −) from 25 to 55, as a horizontal line (perfect metabolic equilibrium), and from 55 to death as a gradually falling line (katabolism + anabolism −). As long as equilibrium was maintained between katabolism and anabolism, health was present. The question of when chemical change altered so as to constitute disease was then gone into, and especial points were made of the systematic examination of healthy individuals and of the personal equation in disease. The best methods of retarding chemical alterations were by attention to hygienic conditions and to systematic exercises. With regard to the latter, special reference was made to exercises with light running corks, so as to produce healthy tonicity of muscle as being preferable to exercises with heavy dumb-bells. The normal equilibrium, after the alteration had occurred, could best be restored by attention to the earliest signs of disease on the part of the physician, and by early operation on the part of the surgeon. It was necessary also for medical men to educate the public to have regard to the earliest symptoms of departure from health, and not to delay in seeking advice. Finally a reference was made to serumtherapeutics, which was preeminently a study of normal metabolism, and its reactions under the influence of organisms and their toxins. A discussion followed, which was mainly devoted to the cause and treatment of obesity.

HOMŒOPATHY IN BAVARIA.—At a recent meeting of the Financial Committee of the Bavarian Parliament Herr Landmann proposed that a University Chair of Homœopathy should be established in the University of Munich. The Minister replied that the University, to which the question had been referred, had replied that the need of such a chair was not felt, inasmuch as homœopathy was not a science. A similar incident, which ended in like manner, occurred not long ago in the Würtemberg Landtag.

REVIEWS.

Diseases of Women: A Textbook for Students and Practitioners. By J. C. Webster, B.A., M.D. Edin., F.R.C.P.Edin., Demonstrator of Gynæcology, M'Gill University, Assistant Gynæcologist Royal Victoria Hospital, Montreal, etc. Edinburgh and London: Young J. Pentland. 1898. (Crown 8vo, pp. 712, 241 illustrations. 14s.)

The author of this work is already distinguished for his valuable pathological researches. He has taken a share in the work on the anatomy and histology of the gravid uterus, conducted for many years with so much skill and precision under the auspices of living teachers in Scottish schools. He has also worked at the pathology of distressing minor ailments due to disease of the vulva. More especially, however, his name is associated with views on extrauterine pregnancy. His theory on the abnormal development of decidua under the tubal mucosa as the chief cause of ectopic implantation of the impregnated ovum surprised older workers in the same field, but it bids fair to become established.

Such being the author's previous career, it is not surprising to find that his textbook is a treatise of greater originality than similar publications with which we are familiar. Dr. Webster is an experienced teacher, hence the text is made as readable as possible, and not burdened with references. The illustrations are well selected, but as many of them are taken from well-known monographs, written by older authors, their merit is unequal. Thus Fig. 16, representing a vertical mesial section of the pelvis is admirable. It teaches the student the true relations of the bladder and vagina, and should be shown as a hint to the editors of more than one textbook on anatomy who persist in retaining antiquated diagrams where these parts are represented very inaccurately. Dr. Webster rightly introduces Dr. Henry Savage's fine dissections of the vulva and perineum. The author as a rule exercises a power of judicious selection, but the critic must blame him for admitting an exceedingly bad woodcut of the Fallopian tube at page 348, in which the fimbriæ are sketched as they never appear in Nature. For a future issue, a fresh normal tube should be drawn before it is immersed in spirit.

The general text needs little special comment; the chapters on pelvic inflammation are exceedingly good, for the author has studied this class of disease, and demonstrates its pathology admirably. Needless to say, the anatomical chapters are of a high degree of excellence. The pathology of pruritus and allied affections, often overlooked, is treated with due appreciation of its importance, nor is the author above giving a few prescriptions. We regret that Dr. Webster has not included tubal gestation as a primary subject in his textbook. Scientifically it is obstetrical, but clinically and surgically it comes within the scope of what is termed gynæcology as distinguished from obstetrics, and hence should not have been almost ignored except as the chief cause of hæmatocele. The general surgeon who refers to a manual of this class expects to find mention of this subject. Lastly, Dr. Webster is an authority on its pathology, and his opinion would be valuable. A short sketch of early tubal pregnancy would have been at least as much in place as the paragraphs on deciduoma and the note on actinomycosis of the tube, at page 365. The true significance of papilloma, noted on the same page, seems to be misunderstood.

The surgical department plays quite a subsidiary part, and this is a commendable arrangement, as the student must learn the nature of disease before he operates. The general directions for abdominal sections are well prepared, and the udent is not perplexed by a multiplicity of details of different operations for the repair of ruptured perineum. As usual, the course of fibroid disease of the uterus is described in such a way as to appear more serious than it really is. The grave complications which are noted certainly may occur, but they are spoken of as though the rule rather than the exception. The first principle in treatment is to leave the fibroid alone, unless the patient be suffering from distinct evil symptoms caused by the tumour, or in evident danger of the early development of such symptoms. Unfortunately, the author has not made this principle prominent. We are glad to find that he warns the student against the perils hysterectomy.

Dr. Webster has written a notable and original book, and from what we have said it will be seen that it is of high value for teaching the morbid anatomy and clinical features of women's diseases to the student. It will be of equal value to the practitioner who wishes to refresh his memory and to learn more about such matters.

A Textbook of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart A. Hare, M.D., B.Sc. Sixth edition, enlarged, thoroughly revised and largely rewritten. London: Henry Kimpton. 1897. (Royal 8vo, pp. 758. 21s.)

Dr. Hare's name is widely known as that of an industrious investigator and as a writer on subjects of therapeutical interest. As editor of the *Therapeutic Gazette* he has for years past had exceptional opportunities of keeping his knowledge abreast of the times in all matters relating to the action of remedies and the practical treatment of disease. The outcome of this has been the present volume, now in its sixth edition.

Like many other physicians he has found difficulty in acquiring a satisfactory clinical acquaintance with all the new drugs and remedial measures which at present clamour for wider professional recognition; hence he was induced to write the present volume from the consideration that "many of the works upon this subject contain a vast amount of information so compiled as to be almost useless, because the reader is forced to discover for himself what is worthy of his confidence." Instead therefore of preparing a systematic treatise on remedial measures which would include the consideration of rare diseases and little known drugs, he has confined his attention to an exposition of what may be accomplished by well-tried remedies in the commoner forms of disease. The book is divided essentially into two parts, the first consisting of a short description of individual drugs and their uses, while the second is devoted to the consideration of commonly occurring diseases and the most appropriate methods of treating them. Theoretical discussions are entirely avoided, the whole tenour being clinical, and also it may be added somewhat elementary and simple in character. This gives to the whole work rather the character of a book of instructions than of a well thought out treatise on the principles of therapeutic treatment, but such, to some extent at least, has evidently been the author's intention. The arrangement, however, is original and has proved both popular and useful.

Like many works which have passed through several editions in a short space of time, it shows evidences of want of care in revision. For instance, the "Classification of Drugs" on p. 36 is unsatisfactory, such important classes as purgatives and anhidrotics, besides others, being wholly omitted. Under an enumeration of "Antipyretics" quinine is omitted, under "Antacids" there is no mention of magnesia, while antipyrin is classed under "Anæsthetics." These are only samples of many inaccuracies in the list. Kairin and thallin and some other substances still remain in this list, while they have been very properly omitted from the body of the work as being of doubtful practical utility. Such omissions might with advantage have been extended to other drugs, as lipanin, hypnal, somnal, iodol, cobaltonitrite of potassium, etc., which remain apparently only as survivals from former editions, and which have now passed into obscurity. The list of "Incompatibilities" might also be revised with advantage: for instance, in paragraphs 17 and 18 the amount of hydrocyanic acid produced could not be of any practical consequence, while in paragraph 22 the statement, "pepsin and pancreatin should not be used together, since one destroys the other," is a crude way of giving the advice, and is not correct in fact. The account of the mode of action of "Astringents" is also apt to mislead ("they act not by coagulation of albumin, but by their influence over the vital processes of the tissues"), and is certainly not in accordance with the results of clinical observation or experimental research. The work, good as it is on the whole, would be

greatly improved by a careful and comprehensive revision of every part of it.

The American Yearbook of Medicine and Surgery. By a large staff of contributors. Under the general editorial charge of Dr. George M. Gould. (Illustrated.) London: The Rebman Publishing Company (Limited). Philadelphia: W. B. Saunders. 1898. (Royal 8vo. Pp. 1,077. Price 38s.)

The American Yearbook of Medicine and Surgery is now in its third year, and may be considered to have passed successfully through the perils of infancy and taken its place among the recognised annual records of medical progress. The present issue fully maintains the high standard of excellence established by its predecessors. Dr. Gould is to be congratulated on the staff of writers whose co-operation he has been able to secure; the list includes the names of some of the foremost men in American medicine. It is a striking testimony to the prominence of Philadelphia as a medical centre in the United States that more than half the number of Dr. Gould's collaborators belong, like the distinguished editor himself, to the City of Brotherly Love. We note with special satisfaction among the contributors the name of Dr. Wyatt Johnston of Montreal, to whom the article on legal medicine has been entrusted. The work is by no means a mere abstract and chronicle of the achievements in the various fields of medical science during the period which it covers; the wheat is winnowed from the chaff and the value of the results of the work recorded is critically estimated by men who can speak with authority.

A book of this kind, which is itself essentially of the nature of a "review of reviews," does not call for a detailed analysis. The names of the contributors are a sufficient guarantee of the quality of their work, and the editor has performed his part with the skill to which he has accustomed us. If the English reader occasionally stumbles over certain idiosyncrasies of spelling, that is a sentimental grievance for which the amount of valuable information supplied more than compensates him. It is probably inevitable that in a work covering so vast a field some of the articles should not be altogether up to date, but in the references throughout the volume 1896 is perhaps unduly prominent. The "printer's devil" has here and there moved the clock of Time still further back: thus on two consecutive pages (255 and 256) references are given to papers by Dr. F. W. Hewitt and Mr. Treves in the *Practitioner* of "1866."

The only serious objection, however, to the book is its bulk, and that we fear it would be impossible to avoid except by limiting its scope. A yearbook which takes all medical science for its province cannot be compressed into a volume that can be carried in the pocket. It may of course be said, not altogether unjustly, that if the record of medical progress were to be severely restricted to the gold that "pans out" after thorough washing, it might go into an even smaller compass. This, however, is impossible in a yearbook, where only the results of a first rough sifting can be given.

A word of acknowledgment is due to the publisher. The volume is remarkable among yearbooks for the excellence of its get up, for the variety and clearness of its type, and for its freedom from printer's errors. In form, therefore, except for the tendency to "gigantism" at which we have hinted, the *American Yearbook of Medicine and Surgery* is all that could be desired; while in respect of its contents it is unrivalled among similar publications in the English language.

The Diagnosis of Disease. By J. Porter Parkinson, M.D., M.R.C.P., F.R.C.S. London: Baillière, Tindall and Cox. 1898, (Crown 8vo, pp. 178. 4s.)

This work by Dr. Parkinson follows the general plan of discussing the methods of examination usually employed, and then of pointing out the deductions to be drawn from them; it is, however, not infrequently found necessary to give symptoms first and the physical signs afterwards. After a chapter on the preliminary examination, the author deals with the specific fevers, and then in order with the diseases of the various systems, beginning with the respiratory and ending with the cutaneous. We must confess to a certain sense of disappointment. Under diphtheria itself (p. 23) no mention is made of the bacteriological examination, but under acute tonsillitis the author states that in a doubtful case a bacteriological examination may be useful.

The few lines given to appendicitis (typhlitis) are inadequate. The terms used by the author are at times open to criticism. Thus on page 11 "nourishment" is used for "nutrition," on page 30 "aphonia" and "dysphonia" are confused together, and on page 43 the term "aspiration" is employed obviously in place of "exploratory puncture." Locomotor ataxia (p. 143) is placed among paraplegias of slow onset, and no mention is made of any bladder symptoms. The student would certainly be at a loss to understand some things occurring on page 125 in the table of differential diagnosis between the lesions causing hemiplegia. Thus it is stated that aphasia is uncommon in cerebral hæmorrhage, but is frequent in cerebral softening due to thrombosis or embolism. Even if this were admitted (which it is not), surely the side of the lesion should be mentioned. Borrowed illustrations, however well known, such as that from v. Jaksch on the vomit, and one or two others, should be acknowledged.

The above criticisms are not made in any captious spirit, but are meant to point out that accuracy is the first essential of a book intended for a student. The author appears to have been not only cramped for space, but limited as regards time. Some parts of the book are much better done than others, and after a rigid revision it will no doubt prove a useful handbook.

A Clinical Textbook of Surgical Diagnosis and Treatment for Practitioners and Students of Surgery. By J. W. Macdonald, M.D., Professor of the Practice of Surgery and of Clinical Surgery in Hamline University, Minneapolis; etc. London: The Rebman Publishing Company; and Philadelphia: W. B. Saunders. 1898. (Roy. 8vo, pp. 798, 328 illustrations. 28s.)

This book, which is really a compendious treatise of practical surgery, is intended to supply in surgical literature what is well represented in the literature of strictly medical diseases by many excellent manuals on diagnosis. Matter relating to the principles of surgery, to surgical pathology, and to bacteriology is here as a rule excluded, and attention is mainly directed to that part of the surgeon's work which consists in solving the two practical questions, What is the nature of the disease or injury? and, What is the proper treatment? Care has been taken to lay down rules for a systematic and comprehensive examination of each case as it presents itself, and the most advanced and approved methods of clinical investigation in surgical practice are fully described.

The author, who is a medical graduate of the University of Edinburgh, has spared no pains to render this book a thoroughly useful one to both student and practitioner. Moreover, Dr. Macdonald is certainly well fitted to undertake a task of this kind, as he is evidently acquainted with the most recent developments of surgical work, and also fully experienced in all branches of practical surgery. The diagnostic signs of the different forms of injury and surgical disease are in most instances clearly described, and where obscurity occurs—as must necessarily be the case here and there in a mass of closely compressed matter—the reader will often be assisted by the excellent illustrations that are profusely scattered throughout the volume. The style is clear and concise, and, to the advantage of English readers, will be found more familiar than that met with in much professional literature derived from the States.

The arrangement of subjects in this book is rather puzzling. The author, after an introductory chapter on the General Examination of Patients, starts with the Vascular System, and then deals in order with the Organs of Locomotion and the Digestive System. Interposed between the chapters on Injuries and Diseases of the Head and on those of the Neck we find the portion of the work devoted to lesions of the Respiratory System, and to Syphilis and Tumours. Although the surgery of the eye, ear, and skin have been excluded, much space is given to subjects which may be fairly regarded as under the care of the specialist in gynæcology.

As an indication that the author has endeavoured to adapt this work to all modern needs, a complete and lucid description is given of the application of the Roentgen rays to surgical diagnosis.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY, MADRID, 1898.

The International Congress of Hygiene and Demography will open on Sunday next, in Madrid, and will continue its sittings from April 10th to 17th, under the presidency of His Excellency the Minister of the Interior. At the close of the last Congress, held at Buda-Pesth, in 1894, the City of Madrid was chosen as the next place of meeting, and April was fixed upon as the best month of the year from a climatic point of view, and Easter week on account of the fact that at that period social life is particularly active in the Spanish capital. The young King Alphonso XIII and the Queen Regent have graciously extended their patronage to the Congress.

At previous meetings in other European cities the attendance has averaged between 2,000 and 2,800, and with the warm welcome which has already been extended from Madrid almost as large a gathering of members is expected. But for the war cloud which at present hangs over Spain, the attendance would probably be larger.

The Spanish newspapers have already announced that a fairly large attendance of English and French is anticipated —150 and 200 respectively—but at present this can only be a matter of surmise. What would certainly have tended to make the attendance larger would have been an earlier announcement of the facilities for travelling and reductions made by the Continental railway companies. Their offers come a little late in view of the customary delay there is in obtaining these reductions. It is hoped that these have already been secured by many members.

An International Exhibition will be held in connection with the Congress. There is every prospect that the social functions of the Congress will not be overlooked. The local Committee, under the presidency of Dr. Julian Calleja and the able administratorship of the Secretary-General, Dr. Amalio Gimeno, have announced that there will be a reception of the members at the Royal Palace and another in the Town Hall, a special performance in the theatre, a reception by the Faculty of Medicine, and a banquet given by the College of Medicine.

The Congress is to be divided into ten Sections for Hygiene and three for Demography. In the Sections of Hygiene are to be discussed the application of micro-biology to hygiene, prophylaxis of transmissible diseases, climatology, the hygiene of town life, of food, infancy, and of industrial occupations; military, naval, and veterinary hygiene, and the application of sanitary science to architecture.

A large number of papers has already been promised, but at the time of writing no preliminary list of papers promised has been published. Although the Congress is to conclude its labours within a week, the International Exhibition of Hygiene will remain open for three months. At the close of the Congress excursions have been arranged for members to the South of Spain.

Among the sums recently received by the London Hospital in response to the special appeal now being made in aid of the Maintenance Fund are £250 from Messrs. J. F. Morgan and Co. and £105 from Messrs. Barclay and Co., Limited, and a subscription of £52 10s. from Messrs. Dennistoun, Cross and Co.

The State and the Prevention of Hereditary Disease.—The prevention of the propagation of hereditary disease by drastic measures appears to be coming within the sphere of practical politics in America. We stated recently that the Ohio Legislature has before it a Bill making it compulsory on those wishing to marry to produce medical certificates of freedom from tuberculosis, insanity, and dipsomania. Now it is announced that a Bill has been introduced into the Michigan Legislature providing for the castration of all inmates of asylums for the feeble-minded before their discharge, of all persons convicted of felony for the third time, and of those convicted of rape. The emasculation of habitual criminals has, we believe, been proposed in some other States of the Union.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

March 2nd, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on April 20th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 49, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

South of Ireland Branch.—A meeting of the Cork and South of Ireland Branch will be held on Saturday, April 16th, at the Medical Society Rooms, 118, Patrick Street, Cork, at 4.15 P.M., to consider the Local Government (Ireland) Bill.—Philip G. Lee, Honorary Secretary, 26, Patrick Hill, Cork.

South Wales and Monmouthshire Branch.—The next meeting of this Branch will be held on May 5th, and not on May 4th as recently notified by postcard.

South-Eastern Branch: North Kent District.—A meeting of the above District will be held in the Council Chamber of the Urban District Council, Beckenham, on April 14th, Mr. A. Primrose Wells in the chair. All members of the Branch are entitled to attend and to introduce professional friends. Papers will be read by Dr. W. Ewart and by Dr. J. Taylor.—A. Tennyson Smith, Orpington, Honorary Secretary.

Border Counties Branch.—The next meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, April 22nd. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. Dundas Helm, Carlisle, and W. Hall Calvert, Melrose.

BATH AND BRISTOL BRANCH.

A meeting of this Branch was held on March 30th, at the Medical Library, University College, Bristol, Mr. F. Richardson Cross, President, in the chair. Fifty-two members and two visitors were present.

New Member.—W. S. Melsome, M.D.Cantab., F.R.C.S., was elected.

Midwifery Nurses Bill.—Dr. A. J. Harrison gave the Branch some information as to the Midwifery Nurses Bill as amended by the Parliamentary Bills Committee at their last meeting.

Corporate and Medical Reform Committee.—With regard to a communication received from the General Secretary *re* the Corporate and Medical Reform Committee, Dr. Markham Skerritt moved and Dr. J. Stewart seconded:

That in the opinion of this Branch the contention of the Corporate and Medical Reform Committee is untenable, and its recognition would render the conduct of the Journal impracticable.

This was carried unanimously.

Removal of Lens for Myopia.—The President showed by means of diagrams how the removal of the lens in certain cases of myopia may cause the principal focus to fall on the retina. This operation was tried in England some years ago, but fell into disuse because it was thought to involve danger of detached retina. Mr. Cross thought detached retina was a disease of old age, and not so essentially one of high degrees of myopia as was generally held, so that detached retina was a danger not in young but in old myopes. He had operated on 25 cases of high grades of myopia, with good result in 23 cases. He believed that the operative treatment of high myopia had gone beyond the experimental stage and now rested on a firm basis.—Mr. W. M. Beaumont pointed out how medical opinion had veered round in favour of operation in these cases, and that a much lower glass was required than after extraction of the lens for cataract.—Mr. C. H. Walker congratulated Mr. Cross on the success of his cases. He did not agree with him that detached retina was a disease of old age, and thought that this view might have arisen from the duration of such cases and their frequent re-entrance to hospital. Myopic eyes were not so liable to inflammatory conditions as other eyes, and therefore needling might be resorted to in them at a later age.—Dr. C. Hailes reported a case of destruction of the lens by an accident in a myopic eye; and Mr. Cross, in his reply, stated that after removal of the lens in these cases the eyeball shrank in size.

Puerperal Eclampsia.—Dr. Walter Swayne read notes of two cases of puerperal eclampsia; the patients were admitted comatose and suffering from convulsions. The cases by contrast illustrated the importance of early treatment; in the one in which treatment was begun early recovery took place. He emphasised the importance of bleeding, of rectal irrigation of large quantities of saline fluid to promote the action of the skin and kidneys, and of keeping in check uterine contractions, and epileptiform convulsions in order to diminish so far as possible the extractives entering the blood.—Dr. Aust Lawrence said that the urine should be examined as a matter of routine in pregnant women, for in the treatment of puerperal eclampsia the first thing was to get the patient under chloroform. He also advised hypodermic injections of veratrum viride, careful use of morphine when chloroform failed, and delivery by turning rather than by forceps.—Mr. W. M. Beaumont remarked on the value of the information to be gained from ophthalmoscopic examination of such cases.—Dr. Michell Clarke pointed out the importance of making an accurate diagnosis between the many different conditions which might be present in a woman supposed to be suffering from puerperal eclampsia.—Dr. Fisher remarked on the slight degree of the renal changes often found in such cases; and after some observations by Dr. Waldo, Dr. Swayne replied.

Perforating Gastric Ulcer.—Mr. P. Bush reported the case of a patient admitted with obscure signs of perforation from a gastric ulcer. He operated, and found the ulcer on the posterior wall of the stomach, near the lesser curvature. The operation was completely successful, and the patient did well, but died suddenly on the fifteenth day when well advanced towards convalescence. No adequate cause of death was found *post mortem.*—Dr. J. Swain advocated the plan of irrigating rather than sponging out the peritoneal cavity in such operations, and insisted on the importance of thorough drainage.—Dr. Waldo thought that the frequent concurrence of chlorosis with gastric ulcer might explain the cause of death as rendering fatal syncope more likely; he also alluded to occurrence of intestinal obstruction after laparotomy.—Drs. Ewens and Steele also took part in the discussion, and Mr. Bush replied.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 146th meeting of this District was held on March 24th, at the Cottage Hospital, Ashford, Dr. Wilks, in the chair. Sixteen members were present.

Confirmation of Minutes.—The minutes of the last meeting, at Canterbury, were read and confirmed.

Chairman of Annual Meeting of District.—Dr. Parsons (Dover), Treasurer of the British Medical Association, was appointed Chairman of the next meeting (annual) to be held at Canterbury in May.

Representatives of the South-Eastern Branch on the Council of the Association.—Drs. Verrall, Galton, and Tyson were nominated representatives of the South-Eastern Branch on the Council of the Association.

Advertising and Unregistered Dentists.—A communication from the British Dental Association was read, and it was resolved:

That the members of this District agree that they will not assist professionally members of the dental profession who advertise or who are unregistered.

Inguinal Colotomy.—Dr. Kessick Bowes (Herne Bay) read a paper on this subject. After a narration of the history of the operation, he said it was performed (1) for stricture, malignant or simple, of the rectum; (2) for cancer of the lower portion of the sigmoid flexure or upper part of the rectum as preliminary to a future enterectomy; (3) in cases of imperforate anus; (4) as a preliminary to excision of the rectum; (5) in cases of rceto-vaginal or recto-vesical fistula, or ulceration of the rectum; and (6) it was done on the right side, sometimes, in ulcerative colitis. Rose's method of operating was described, and the various modifications introduced by other surgeons. Early removal of the fixation suture was recommended; the bowel should be opened on the fourth day, and, if earlier, a glass tube should be tied into the bowel. Various complications and the methods of treating them were discussed. On the general question of colotomy in cancer of the rectum, he recommended that inguinal colotomy should always be done whether subsequent incision of the rectum was decided upon or not. He preferred inguinal to lumbar colotomy, first, because it was simpler and less dangerous; secondly, because of the difficulty of forming a spur in the lumbar operation; and, thirdly, because of the greater convenience of an artificial anus in the inguinal than in the lumbar region.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

The first meeting of the forty-first session of this District was held at the West Kent General Hospital, Maidstone, on March 22nd, Mr. Hallowes in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—The place, date, and chairman were left to the Honorary Secretary to arrange, no member from Gravesend or Rochester being present.

Election of Honorary Secretary.—The Honorary Secretary having resigned, it was proposed by Dr. Ground that Mr. Ludford Cooper, of St. Bartholomew's Hospital, Rochester, be elected Honorary Secretary for the ensuing year. This was seconded by Mr. Hallowes, and carried unanimously.

The Maidstone Epidemic.—Dr. Travers read a paper on Fifty-one Cases of Typhoid Fever, which were treated at the West Kent Hospital during the recent epidemic. He remarked that the earlier cases were more severe than the later, and presented many features of interest. In the sudden onset and in the character of the symptoms the disease in some respects resembled typhus fever. Prostration and delirium were very marked, and the rash frequently resembled that of the latter disease. Prominent characters were the acute onset, with severe headache and pains in the back and limbs, rapidly rising and long sustained high temperature, with rigors, marked insomnia, and early delirium. Epistaxis was frequent and severe, with the addition of other hæmorrhagic symptoms. In most cases the gastro-intestinal symptoms were slight, and constipation common. The rash was well marked, and associated with it were other forms, urticarial and morbiliform. Respiratory complications were often present and of severe type, pneumonia being of frequent occurrence. Great cardiac depression was often observed. The character of the disease suggested some mixed

infection of a septic nature in addition to that of enteric fever.—In the discussion which followed, Mr. M. A. Adams stated that, from his investigations, he had reason to believe that the water supply had become infected with septic matter as well as typhoid infection at the outbreak of the epidemic.

Antitoxin in Diphtheria.—Dr. Ground read a paper on the Position of Antitoxin as a Remedy in Diphtheria. He gave statistics from the report of the Metropolitan Asylums Board which demonstrated that the great benefit derived from its use was principally in the laryngeal cases, the reduction of the mortality in the non-laryngeal being about 4 per cent. as compared with a reduction of 32 per cent. in the former. One interesting point had been noticed by Dr. Sidney Phillips, of the London Fever Hospital, that the death-rate in those cases treated with antitoxin, but which subsequently proved to be non-diphtheritic, was 36.1 per cent, a higher mortality than the diphtheria cases themselves, and suggesting that antitoxin in other than diphtheria cases might be harmful. This being so, it introduced the question as to whether it might not be wise to resort to it only in laryngeal cases and very young children to whom it was difficult to apply the ordinary remedies; if antitoxin were used it was of the utmost importance that it should be resorted to as early as possible; the mortality mounting up with alarming rapidity with each day delayed, namely, from 2 to 4 per cent. on the first day, 15 on the second, 21.9 on the third, and beyond the fourth and fifth day to over 40 per cent. The favourable results obtained by the use of tinct. ferri perchlor. in the non-laryngeal cases was referred to, and the doubtful value of immunisation with prophylactic doses, the number of fatal cases reported from America after prophylactic injection rendering it extremely doubtful if they were justifiable.—In the discussion which followed Mr. Jones (of Loose) said he had treated an outbreak of diphtheria at the Coxheath schools with antitoxin. He was strongly in favour of the treatment. Sixty-one cases were treated and all recovered, but none appear to have been laryngeal. He also immunised 41 boys with full doses of antitoxin, and 10 of them afterwards developed diphtheria.

Tea.—The members partook of tea and coffee with the Chairman at the close of the meeting.

THE MIDDLESBROUGH EPIDEMIC OF SMALL-POX AND ITS LESSONS.

Magnitude of the Epidemic.

The time has arrived when it is possible to obtain a trustworthy idea of the Middlesbrough epidemic, and when it is also desirable to set forth what are the lessons which it teaches. The epidemic commenced in the latter part of November last, the first case having been notified on the 22nd of that month. Up to March 31st, a period of eighteen weeks, 1,200 cases of the disease had been notified. The total mortality up to this date was 153, being a case-fatality of only 12.7 per cent. This will not represent the fatality of the whole number of cases thus available for examination, as some of those notified towards the end of the above period may die. With the view of giving an idea of the magnitude of the Middlesbrough epidemic it will be instructive to compare it with that of Gloucester. It happens that that epidemic also may be taken to have practically commenced in the last week of November, 1895, as only 12 cases occurred between June 15th and November 23rd, with never more than two in any one week, and with a good many weeks in which there were no cases at all. But from that date there was no week in which there was not at least one case, and only one week with so small a number. In the eighteen weeks from November 23rd to March 31st the total number of cases notified in Gloucester was 850, with 212 deaths, or a fatality of 24.9 per cent. From a comparison of these numbers two facts are obvious: that while the Middlesbrough epidemic has considerably distanced that of Gloucester in magnitude, its fatality has been considerably less.

Death-rate of Vaccinated and Unvaccinated.

The opponents of vaccination have been very assiduous of late in impressing upon the public that the Middlesbrough epidemic is a proof of the uselessness of vaccination because, as they allege, Middlesbrough is "a thoroughly well vaccinated town." Now, so far as concerns the children who have been born in Middlesbrough for the last ten years and are still alive there, the statement is sufficiently correct. The last report of the Medical Officer of the Local Government Board shows that in 1894, the last year for which the statistics are given, the vaccination default of Middlesbrough was only about 3 per cent., and there is no reason to think that it has materially increased since that period. But the population of Middlesbrough is very fluctuating; there is a continual immigration into it, and no doubt a good many unvaccinated children have been imported into it from towns in the neighbourhood, like Darlington, in which the practice of vaccination has been less well maintained. As a matter of fact, the vaccination census of the Board of Guardians, taken in February last, showed that there were in the town 653 children between the ages of 3 months and 14 years who were then unvaccinated. The total population of the town at the present time is estimated at about 90,000, of whom only 69,525 were enumerated in the census, so that the actual number of unvaccinated children in the town at the time the census was taken must have been considerably more than 653. If we make a fair allowance on this account, and if we allow also for those who were less than 3 months old, and for those who had been vaccinated since the epidemic commenced, probably a considerable number, it is clear that, even so far as infant vaccination is concerned, Middlesbrough, though when compared with most other towns of the same size, and especially with Gloucester in 1895, a "well vaccinated" town, cannot be considered to have been "thoroughly" vaccinated. So far as revaccination is concerned, there is no reason to believe that Middlesbrough was any better protected than any other town. The bulk of its adolescent and adult population was, as elsewhere, more or less imperfectly protected when the first cases occurred last November.

We have been able to obtain the figures for Middlesbrough, so far as the vaccinal condition of the cases is concerned, only down to the end of February; but they are sufficiently copious to allow trustworthy conclusions to be drawn, the time which has now elapsed being long enough to clear up any outstanding deaths which might be expected from cases notified up to that date. The figures are given in the following table, set by the side of the first 686 cases of the Gloucester epidemic, for the purpose of allowing the points of difference and of agreement between the two epidemics to be clearly perceived:—

Ages.	Unvaccinated.						Vaccinated.					
	Gloucester.			Middlesbrough.			Gloucester.			Middlesbrough.		
	Total Cases.	Total Deaths.	Fatality per Cent.	Total Cases.	Total Deaths.	Fatality per Cent.	Total Cases.	Total Deaths.	Fatality per Cent.	Total Cases.	Total Deaths	Fatality per Cent
0 to 5 years	127	70	55.1	13	6	46.1	0	0	0.0	5	1	20.00
5 to 10 ,,	161	58	36.0	23	9	39.1	6	0	0.0	24	0	0.00
10 to 15 ,,	16	4	25.0	11	2	18.1	41	1	2.4	58	2	3.40
15 to 20 ,,	8	6	75.0	11	4	36 3	40	1	2.5	97	2	2.06
20 to 60 ,,	6	2	33.3	44	27	61.3	270	27	10.0	394	42	10.60
Over 60 ,,	0	0	0.0	3	1	33.3	11	3	27.2	3	1	33.30
Totals	318	140	44.0	105	49	46.6	368	32	8.7	581	48	8.20

The figures for the Gloucester epidemic are taken from Dr. Coupland's report, the cases tabulated in it under the head of "alleged vaccination" being included under "vaccinated," and those tabulated under "undergoing vaccination" being grouped, as they undoubtedly should be, with the "unvaccinated." The Middlesbrough figures are derived from official sources.

The inferences to be drawn from these figures are obvious. In the first place, the general agreement between the two epidemics in regard to the results in the vaccinated and the unvaccinated respectively is very apparent. There are only two instances in which they materially differ; the fatality in

Gloucester of the unvaccinated cases over 60 years of age, and that of the vaccinated cases in Middlesbrough under 5 years of age. But in both cases the numbers are so small that the margin for error is proportionately large. A few additional cases might have considerably altered the percentage. That this is probable is shown by the other figures, in which the larger the numbers the greater, generally, is the coincidence. From this comparison, therefore, it appears that whilst the fatality amongst the unvaccinated varied from 40.8 in Gloucester to 46.6 in Middlesbrough, that amongst the vaccinated was no higher than 9.5 in Gloucester and 8.2 in Middlesbrough. When, also, we compare the age ratios of the vaccinated and the unvaccinated in the two towns the way in which they "agree to differ" is also remarkable. Leaving out the vaccinated children under 5 in Middlesbrough, in regard to whom the percentage is certainly misleading, we observe in each case a tendency to an increase in the fatality of the vaccinated class as their age increases. Up to ten years the fatality is so trifling that it may, for practical purposes, be disregarded. Indeed, up to 20 years the fatality is very small; whilst even beyond that age it does not in any case reach the mean fatality of the unvaccinated class as a whole. Now this is just what should occur if, as is maintained by the advocates of vaccination, it protects almost certainly against death up to 10 years of age and continues to exercise a high, though decreasing, protection in more advanced years. On the other hand, amongst the unvaccinated there is no such gradation of fatality.

Vaccinal Position of Persons Attacked.

This point is illustrated by the following table, which shows the proportions between the total number of persons attacked in the Gloucester epidemic and in Middlesbrough up to the end of February, in regard to their age and vaccinal condition:

	Under 10 Years.				Over 10 Years.			
	Unvaccinated.		Vaccinated.		Unvaccinated.		Vaccinated.	
	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.	Total.	Per cent.
Gloucester	680	34.4	26	1.3	88	4.5	1,182	59.7
Middlesbrough ..	36	5.2	29	4.2	69	10.0	552	80.4

From this table it appears that whilst in the Gloucester epidemic 34.4 per cent. of those attacked were unvaccinated children under 10, and 59.7 vaccinated persons over 10, at Middlesbrough up to the date above mentioned there were only 5.2 per cent. of unvaccinated children, while 80.4 per cent. were adolescents or adults who had been vaccinated in infancy. Thus, whilst the Gloucester epidemic was largely one of unvaccinated children, so largely, indeed, that it greatly transcends in this respect any epidemic of modern times, the Middlesbrough epidemic has been mainly one of adolescents or adults who had lost more or less of the protection they had acquired in infancy.

Fatality of Small-Pox in Middlesbrough and Gloucester.

The two epidemics differ also in their fatality. This difference is exhibited in the first of the tables given above, from which it is evident that whilst the Middlesbrough epidemic has considerably exceeded that of Gloucester in its magnitude, as estimated by the number of persons attacked in a given period, its severity, estimated by its fatality, has only been half as great. It is equally clear that this difference arises from the fact of the number of the unvaccinated cases having been so much greater in the one epidemic than in the other, the greater number of them being children.

A consideration of all these facts can leave no doubt in the mind of any unprejudiced person of what is the first lesson of the latest epidemic of small-pox. It is that whilst Gloucester taught us the price we may be called on to pay for the, as yet exceptional, condition of an almost total disregard of infant vaccination, Middlesbrough is teaching us the price which every place will inevitably have to pay, whether it maintains infant vaccination or not, when it has once lost control of an outbreak, and when its population has not renewed or acquired protection in early youth. It is, of course, a lesson which, unlike that of Gloucester, has been taught us over and over again by preceding epidemics, notably by that which occurred in Warrington in 1892-93; but it is writ unusually large in the figures from Middlesbrough, even so far as they carry us at present. The fact lends support to the contention that it is needful to make revaccination at the end of the school age an integral element of our national system of preventing small-pox.

Deficient Means of Isolation.

The opponents of vaccination, when asked what they propose to substitute for it, have only one answer—"sanitation." We have no doubt that as strenuous efforts will be made to prove that Middlesbrough is an insanitary place and that the epidemic has been due to want of "sanitation," as have been essayed in the case of Gloucester, and with as little grounds. It is needless here to labour this point; but it cannot be denied that prompt and efficient isolation of the sick is as powerful an adjuvant in the arrest of outbreaks of small-pox as it is in those of other infectious diseases. It may, therefore, be asked, What light does the Middlesbrough epidemic throw upon this aspect of the vaccination question? The infant portion of the population of that town was largely protected by vaccination, and it has almost entirely escaped. The adolescent and adult portions were much less effectually protected. The population of Middlesbrough is estimated to be 90,000, and at the commencement of the epidemic it had hospital accommodation to the extent of twenty beds. In this respect it was much worse off than Gloucester, which, with its much smaller population of 40,000, yet had 48 beds available. Yet Middlesbrough, like the rest of the kingdom, had had the experience of Gloucester before it for two years. In face of such facts as these, is it not idle to talk of relying upon "isolation" as a means of checking small-pox, at any rate until local authorities are prepared to incur an enormously greater expenditure in providing hospital accommodation than they have hitherto cared to face?

UNQUALIFIED ASSISTANTS:

Proposed Memorial to the General Medical Council.

It is proposed to petition the General Medical Council to authorise the examining bodies to hold, if they please, one or more special examinations during the present year only for the benefit of unqualified assistants over 40 years of age who have completed the medical curriculum and are of satisfactory moral character.

The promoters of this movement hold the opinion that by so doing the Council will remove a grievance and mitigate the severity of the new rule, which, while wise and necessary, presses with some harshness upon a very helpless class of men. It is thought that many of these, if unable to get upon the *Medical Register*, will be driven into the ranks of those unqualified and unregistered practitioners whose existence in such numbers is already a grave public scandal and a serious injury to the profession and should be a subject of deep concern to the Council. If the Council take this step there are grounds for believing that such examinations would be held by some at least of the examining bodies.

Gentlemen who may wish to help by taking charge of copies of the petition for signature are requested to communicate with Dr. G. P. Hadley, Wadham House, Lozells, Birmingham, who is willing to act as secretary to the movement.

An Over-sensitive Lady Doctor.—Miss Elcueff, at one time an extern of the Paris hospitals, and who afterwards received the degree of Doctor of Medicine at Moscow, has recently died at the age of 26 in the following distressful circumstances. She had been appointed Physician to the Asylum for Poor Children at Nijni-Novgorod. Recently a prematurely born child admitted to that institution died, and its death was attributed to burns caused by the hot flannels in which it was wrapped to keep it warm. Believing the child's death to be due to her own carelessness, Miss Elcueff put an end to her life. The *post-mortem* examination showed that the child had died, not in consequence of the burns, but from malnutrition.

THE REVISION OF *THE BRITISH PHARMACOPŒIA.*

THE BRITISH PHARMACOPŒIA, 1898.

By a resolution of the Executive Committee of the General Medical Council at its meeting on February 21st, it was determined that the British Pharmacopœia, 1898, *pending the decision of the Treasury as to price, should be made accessible to the public by placing copies of the book in the Registrar's offices in London, Edinburgh, and Dublin, and by sending copies to the medical and pharmaceutical journals in advance of official publication by advertisement in the* Gazettes. *In compliance with this resolution a copy of the* British Pharmacopœia, 1898, *was made accessible to us on Wednesday, April 6th, and we give below a preliminary account of the volume and of the additions to it and omissions from it.*

The volume will not be available for purchase until after the decision of the Treasury as to the price is known, and this is not likely to be announced for some weeks.

[First Notice.]

When it was announced that a new *Pharmacopœia* was in course of preparation, the Therapeutic Committee of the British Medical Association, which is largely composed of those actively engaged in teaching materia medica or prominent by their researches on matters connected with drugs, carefully took into consideration the changes which it might be desirable to make to improve the new volume. Three modifications were then thought to be necessary to improve the *Pharmacopœia* and to increase its utility, and these modifications naturally consisted of suggestions for omissions, for alterations, and for additions. Much trouble was taken to render the suggestions of the Therapeutic Committee indicative of the present practice of the medical profession, as well as of the views of a comparatively small Committee, and it will be remembered that an extended inquiry was made as to the frequency of the employment of numerous drugs, many of which, it was thought, might with advantage be omitted from the *Pharmacopœia*. Now that the volume is before us, it is interesting to trace the influence of this inquiry, and to see how largely the recommendations of the Therapeutic Committee have been followed by those entrusted with the compilation of the *Pharmacopœia*.

It was then recommended that space might be saved by the omission of drugs but little used, and of superfluous preparations, and in the *Pharmacopœia* the columns of omissions show that the desirability of deleting antiquated material has at length been recognised. A cursory inspection, however, shows that the process of elimination has scarcely been as drastic as had been hoped, and it would be easy to make a list of drugs which still lag superfluous upon the stage.

The second recommendation was that space might be gained by the exclusion of methods of preparation of medicinal substances found in commerce. This appears to have been acted upon very thoroughly indeed. The preface states that "the paragraphs in the former editions, which were more or less descriptive of the sources or modes of preparation of official chemical substances, have been abbreviated as far as the requirements of the Medical Act of 1858 will permit."

The third recommendation of the Committee was that certain lists of salts, preparations, etc., appended to the paragraphs, such as acetates and chlorides, might well be omitted, and the volume before us shows that this principle has been adopted and extended. Lists of official preparations which were formerly included in the body of the book are now to be found only in the Index, which has further been enlarged by the inclusion of columns indicating the dose and strength of the various pharmacopœial preparations.

The suggestions for the alterations necessarily affected points of construction, such as the desirability of bringing up to date details relating to the origin and source of drugs, to pharmaceutical methods of preparation, to tests for purity, to dosage, and to weights and measures. In the main these alterations must always be made whenever a new edition of the work is prepared. Speaking in general terms, however, the course followed in the present volume appears to be that suggested by the Therapeutic Committee. It is already well known that the recommendation to introduce the metric system of weights and measures has been accepted. A few years ago much was said about the desirability of converting the *British Pharmacopœia* into an *Imperial Pharmacopœia* by the introduction of alternatives for employment in the Colonies and dependencies, and from time to time there have been indications that careful inquiries were being made as to the possibility of effecting this change. The Therapeutic Committee in 1895 considered that such alteration, however desirable, would be likely to delay the publication of the new *Pharmacopœia*, and suggested that alternatives to be employed might be issued at a later date as an appendix. This forecast has been fully justified in the present volume, only a small number of alternative substances having been sanctioned for local use; and we are told that the Council has in contemplation the early preparation of an Addendum in which medicinal plants and other substances suggested for inclusion by Indian and Colonial authorities will be dealt with more fully.

We propose dealing with the details of omissions and additions and alterations in the course of the next few weeks, but meanwhile we feel sure that all members of the Association will be gratified to realise the extent to which the Pharmacopœia Committee has been able to give effect to the recommendations of the Therapeutic Committee. Although the Therapeutic Committee necessarily dealt largely with matters of simple criticism suggested by their individual experience, yet with regard to the omissions recommended they took the trouble to ascertain the views of the medical profession in a way that had not hitherto been attempted, and it is satisfactory, therefore, to find that this inquiry, which entailed some considerable expense and much actual labour, has led to such large improvements in the *Pharmacopœia*. Former editions of the *Pharmacopœia* have in many respects been so far behind the times, both in appreciation of therapeutic advances and in the good-natured desire to retain antiquated drugs and preparations, that there was some danger of the book losing its position as a scientific work of reference. Even at the present time there appear to be a number of survivals from former editions whose removal would materially improve the appearance of the work.

A large number of authorities have been engaged upon the work of revision. A Committee appointed by the Pharmaceutical Society, consisting of Mr. Walter Hills, Mr. Newsholme, Mr. Carteighe, Dr. Inglis Clark, Mr. W. G. Cross, Mr. C. Ekin, Mr. Joseph Ince, Mr. N. H. Martin, Mr. W. Martindale, Mr. Charles Umney, and Mr. H. G. Greenish carefully supervised all questions connected with pharmacy, and the Council further acknowledges the labours of the following, who have given most valuable assistance as Referees—in Chemistry: Dr. T. E. Thorpe, F.R.S., Dr. W. A. Tilden, F.R.S., Dr. J. Emerson Reynolds, F.R.S.; in Botany: Dr. W. T. Thiselton Dyer, F.R.S., Mr. E. M. Holmes; in Pharmacology and Therapeutics: Dr. T. Lauder Brunton, F.R.S.; Dr. Walter G. Smith, and Dr. Ralph Stockman.

Dr. John Attfield, who was concerned in the production of some of the former editions, has acted as Editor, and the general supervision of the preparation of the work has been performed by a Committee consisting of the following members of the General Medical Council: Sir Richard Quain, Dr. Atthill, Mr. Brudenell Carter, Sir Dyce Duckworth, Dr. Leech, Dr. MacAlister, Dr. McVail, Mr. Tichborne, and Sir J. Batty Tuke; to this Committee Dr. Nestor Tirard has acted as Secretary, and his work is said to have greatly facilitated the labours of the Pharmacopœia Committee. A

consideration of the above list explains the influence of the Therapeutic Committee of the British Medical Association, inasmuch as Dr. Leech, the Chairman of that Committee, Dr. Tirard, the Secretary, and Dr. MacAlister have been actively engaged upon the Committee appointed by the General Medical Council, while the three Referees in Pharmacology and Therapeutics are also active members of that Committee.

The following is a list of additions to the present *Pharmacopœia*, and we append a list of articles and preparations included in the *Pharmacopœia* of 1885 or in the Additions of 1890, but omitted from the present volume:

List of Additions.

- Acid quinine hydrochloride
- Araroba
- Aromatic syrup
- Aromatic syrup of cascara
- Belladonna suppositories
- Benzol
- Bismuth salicylate
- Carbon bisulphide
- Cocaine
- Codeine phosphate
- Concentrated compound solution of sarsaparilla
- Concentrated solution of calumba
- Concentrated solution of chiretta
- Concentrated solution of cusparia
- Concentrated solution of krameria
- Concentrated solution of quassia
- Concentrated solution of rhubarb
- Concentrated solution of senega
- Concentrated solution of senna
- Concentrated solution of serpentary
- Discs of homatropine
- Dry thyroid
- Effervescent caffeine citrate
- Effervescent lithium citrate
- Eucalyptus gum lozenge
- Extract of strophanthus
- Fresh bitter orange peel
- Glycerin of boric acid
- Glycerin of pepsin
- Hyoscine hydrobromide
- Hyoscyamine sulphate
- India-rubber
- Infusion of broom
- Kaolin
- Liquid extract of belladonna
- Liquid extract of ipecacuanha
- Liquid extract of jaborandi
- Liquid extract of nux vomica
- Liquid paraffin
- Lozenges:
  - Guaiacum resin lozenge
  - Krameria lozenge
  - Krameria and cocaine lozenge
  - Phenol lozenge
- Mercuric oleate
- Morphine tartrate
- Naphthol
- Oil of pine
- Oil of rose
- Ointments:
  - Capsicum ointment
  - Cocaine ointment
  - Mercuric oleate ointment
  - Paraffin ointment
  - Rosewater ointment
  - Yellow mercuric oxide ointment
- Pancreatic solution
- Phenol suppositories
- Physostigmine sulphate
- Pill of quinine sulphate
- Prepared coal tar
- Quillaia bark
- Salol
- Solution of coal tar
- Solution of ethyl nitrite
- Solution of hamamelis
- Solution of hydrogen peroxide
- Solution of india-rubber
- Solution of morphine tartrate
- Spirit of anise
- Strychnine hydrochloride
- Syrup of calcium lactophosphate
- Syrup of codeine
- Syrup of glucose
- Syrup of phosphate of iron with quinine and strychnine
- Syrup of Virginian prune
- Terebene
- Thyroid solution
- Tincture of quillaia
- Tincture of Virginian prune
- Tincture (ammoniated) of ergot
- Virginian prune bark

List of Omissions.

- Acetic extract of colchicum
- Aconite leaves
- Alcoholic extract of gelsemium
- Amylic alcohol
- Animal charcoal
- Aromatic mixture of iron
- Bael fruit
- Bebeeru bark
- Beer yeast
- Bismuth
- Bitter orange
- Blistering paper
- Bone ash
- Bromine
- Brown soap plaster
- Cabbage rose petals
- Canella bark
- Carbolic acid suppositories (with soap)
- Chalk
- Chalybeate plaster
- Charcoal poultice
- Chlorine poultice
- Cinchona bark
- Citrate of bismuth
- Citrate of bismuth and ammonium
- Compound decoction of sarsaparilla
- Compound pill of hemlock
- Compound tincture of chloroform
- Confection of hips
- Confection of opium
- Confection of scammony
- Confection of turpentine
- Crumb of bread
- Cyanide of potassium
- Decoction of barley
- Decoction of broom
- Decoction of cinchona
- Decoction of dandelion
- Decoction of Iceland moss
- Decoction of oak bark
- Decoction of pareira
- Decoction of poppy
- Decoction of sarsaparilla
- Diluted lactic acid
- Effervescing solution of lithia
- Effervescing solution of potash
- Effervescing solution of soda
- Elemi
- Enema of aloes
- Enema of asafœtida
- Enema of opium
- Enema of sulphate of magnesium
- Enema of turpentine
- Essence of anise
- Essence of peppermint
- Expressed oil of nutmeg
- Extract of aconite
- Extract of calumba
- Extract of conium
- Extract of hop
- Extract of jaborandi
- Extract of lettuce
- Extract of logwood
- Ethereal extract of mezereon
- Extract of pareira
- Extract of poppy
- Extract of quassia
- Extract of rhamnus frangula
- Extract of socotrine aloes
- Ferrocyanide of potassium
- Fir wool oil
- Fruit of the dog rose
- Galbanum plaster
- Glycerine of gallic acid
- Granulated sulphate of iron
- Green hellebore rhizome
- Gutta percha
- Hemlock poultice
- Honey
- Iceland moss
- Infusion of catechu
- Infusion of chamomile
- Infusion of jaborandi
- Infusion of kousso
- Infusion of linseed
- Infusion of matico
- Infusion of valerian
- Inhalation of chlorine
- Inhalation of conine
- Inhalation of creasote
- Inhalation of fir wool oil
- Inhalation of hydrocyanic acid
- Inhalation of iodine
- Kamala
- Lactic acid
- Larch bark
- Leaf tobacco
- Lettuce
- Linseed poultice
- Liquid extract of bael
- Liquid extract of rhamnus frangula
- Manna
- Mastiche
- Matico leaves
- Meconic acid
- Mercurial suppositories
- Milk
- Morphine suppositories (with soap)
- Mucilage of starch
- Mulberry juice
- Mustard poultice
- Nitrate of ammonium
- Nitrate of copper
- Nitrate of lead
- Nitrate of sodium
- Oak bark
- Oil of rue
- Oil of savin
- Ointment of calumba
- Ointment of elemi
- Ointment of savin
- Ointment of sulphurated potash
- Ointment of tartarated antimony
- Ointment of turpentine
- Oleate of mercury
- Oleate of zinc
- Oleo-resin of cubebs
- Opium lozenges
- Pearl barley
- Peroxide of iron
- Persulphate of mercury
- Physostigmine
- Pill of carbonate of iron
- Pill of iodide of iron
- Prepared calamine
- Proof spirit
- Purified animal charcoa
- Purified bismuth
- Raisins
- Refined silver
- Rhamnus frangula bark
- Sabadilla
- Savin tops
- Santonica
- Scammony mixture
- Simple ointment
- Solution of bimeconate of morphine
- Solution of chloride of antimony
- Solution of chloride of calcium
- Solution of citrate of magnesium
- Solution of dialysed iron
- Solution of gutta percha
- Solution of iodine
- Solution of sulphate of morphine
- Solution of soda
- Squirting cucumber fruit
- Star-anise fruit
- Strong solution of acetate of ammonium
- Strong solution of acetate of iron
- Strong solution of citrate of ammonium
- Strong tincture of ginger
- Sulphate of beberine
- Sulphate of cinchonidine
- Sulphate of cinchonine
- Sulphate of morphine
- Syrup of mulberries
- Syrup of poppies
- Syrup of subchloride of iron
- Tannic acid suppositories (with soap)
- Tincture of acetate of iron
- Tincture of ergot
- Tincture of galls
- Tincture of green hellebore
- Tincture of larch
- Tincture of lobelia
- Tincture of orange peel (dried)
- Tincture of savin
- Tincture of valerian
- Treacle
- Valerianate of sodium
- Vinegar
- Wheaten flour
- White marble
- Wine of aloes
- Wine of rhubarb
- Wine of opium
- Yeast poultice

While the above lists nominally represent the additions and the omissions, it is perhaps necessary to point out that the names of many of the preparations and articles in the *Pharmacopœia* of 1885, or in the additions of 1890, have been altered in the present edition, and accordingly the equivalents of certain articles given as omitted may appear under other titles. The alterations generally are not likely to give rise to any confusion. In some cases the alteration is merely a slight change of spelling, and frequently only affects a single letter; for example, asafœtida is now written asafetida, and creasotum is now changed to creosotum. Such changes, although they are probably the outcome of considerable research, may not attract much attention. Many of the other names, however, have been altered on chemical grounds, as, for example, with the hydrochloric compounds of alkaloids, which were formerly termed hydrochlorates, and now become hydrochlorides. In some cases the change indicates the mode of employment; thus the liquor cocainæ hydrochloratis is now termed injectio cocainæ hypodermica. Two changes only are likely to attract much attention: the one is the alteration of the name tabellæ nitroglycerini to tabellæ trinitrini; the other is the reversion to an old term, the compound asafetida pill being now termed officially Pilula Galbani Composita.

In the last *Pharmacopœia* some preparations which contained two or more active ingredients did not show their compound nature by their name: such misleading titles have now been amended.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 9TH, 1898.

WOMEN'S LABOUR AND INFANT MORTALITY.

In dealing with the question of infant mortality as affected by factory labour, Miss Collet, in an interesting paper read at a recent meeting of the Royal Statistical Society, pointed out that the census volumes do not contain any figures upon which trustworthy conclusions can be based, the returns of the employment of married women not being given. Miss Collet endeavours, however, to arrive approximately at this information by the use of extraneous data, and her conclusions are worthy of careful study.

One of the tables given shows the infant mortality-rate for the five years 1889-93 in twenty-seven urban districts, grouped according to the percentage of the female population above 10 years of age returned as "occupied" in 1891. The towns are classified into nine groups according to the percentage of women workers—from 60 per cent. and upwards to 25 per cent. and under—and it is pointed out that there is "a kind of correspondence between employment of women and girls and infant mortality."

In considering the value of the figures as used for such a purpose it must, however, be remembered that it is necessary to take account of the important bearing which the constitution of the population, as regards prosperity and health conditions, has as a factor in determining the causes of infant death-rates. The fact that, apart from the question of women labour, the infant mortality in artisan as compared with residential towns may differ to the extent of over 100 per cent., indicates how important it is in all such inquiries to select districts the general characteristics of which admit as nearly as possible of comparison. This has not been done in the case of the table in question. Brighton, for example, is classed with Manchester, Huddersfield, Birmingham, etc., simply because the percentage of occupied females corresponds in these towns. Although there are between 40 to 45 per cent. of occupied females over ten years old in Brighton, it is more than doubtful whether the nature of their employment is of such a nature as appreciably to influence the infant mortality. The fact is that women's labour, as such, in all probability has little influence upon the infant mortality. It is the employment of young married women in occupations necessitating their leaving their homes during the day which must operate fatally on child life. For this reason, also, it does not follow that even artisan towns in which women are largely engaged in factory labour should be classified, for this purpose, among towns in which married women are employed. There are towns in which, although large numbers of single women are employed in factories, practically no married women are so employed.

Miss Collet gives another table in which towns are grouped on the basis of the proportion of females above 10 years returned as indoor servants. It shows that the infant mortality is in inverse ratio to the percentage of females so employed. This table is, of course, of value only as showing the infant mortality in well-to-do as compared with poor towns.

In another table an attempt is made to arrive at a classification on the basis of the number of married women workers by a process, adopted in the Labour Department Report, of comparing the excess of occupied women over married women. This is an ingenious method, but again, unfortunately, in its application regard has not been paid to the important consideration of the constitution of the populations selected for comparison. Residential districts are grouped with artisan districts, and the preponderating influence of unequal social condition which is thus introduced must largely obliterate the lesser influence of married women's employment.

Miss Collet, while admitting that the employment of married women in factories must contribute towards infant mortality, does not seem to attribute to that influence such material consequences in that direction as some others who have specially studied the subject. Some years ago Dr. Reid called attention to the excessive mortality in the pottery towns of North Staffordshire compared with the artisan towns in the south of that county where iron working is the chief industry. In both cases large artisan populations are grouped together in a series of towns which are practically identical as regards sanitary surroundings.

Although the infant mortality is high in both groups of towns, those in the north of the county, where many married women are engaged in the potting industry, have an infant mortality which exceeds that of the southern towns, where there are practically no married women workers, to the extent of no less than 30 per cent. In this case the groups of towns compared are practically identical as regards prosperity and other conditions which influence the infant death-rate, and the only explanation of the extraordinary difference between the rate in the northern and southern towns appears to be the factor of married women's employment away from home.

The suggestions that in the next census the occupation of married women should be tabulated, as also that the classification of the larger industries of women should be divided, are valuable, and we may hope that it will be found possible to carry them out.

IS SYPHILIS EFFICIENTLY TREATED IN THE ARMY?

The terrible amount of venereal disease in the army has attracted a good deal of attention lately, and efforts are being made, especially in India, to lessen the evil. The efficient treatment of these diseases, and especially of syphilis, is of the utmost importance, for if this be thorough and long continued the number of relapses and the amount of invaliding and discharges due to this largely preventable disease will be reduced to a minimum. It will be generally admitted that for the adequate treatment of syphilis mercury must be given for long periods, from one to three years, with inter

vals, being considered necessary by different authorities, and the drug must be continued for several months at least after all active signs of the disease have completely disappeared. If this be done, then in the majority of cases the disease will never reappear, although it cannot be said to be certainly cured in the sense that in no case will tertiary manifestations occur in later years.

The very large percentage of men who have recently been found to be unfit for active service in India on account of venereal diseases, the large proportion of invaliding and discharges from this cause, and the very severe type which the disease is said so often to present naturally raise the question, Is syphilis efficiently treated in the army? The following extract from the Report of the Army Medical Department for 1891, page 393, graphically describes the line of treatment adopted:—"Formerly, and indeed at the present time, when a soldier contracts syphilis he is admitted to hospital, and there treated until all the primary signs or symptoms of the disease have disappeared. He is discharged to duty, when all treatment is of course suspended; the disease breaks out afresh, he remains on duty as long as he can, he eventually comes to hospital, is readmitted, and under treatment the symptoms again disappear; he is again discharged to duty and treatment stopped, and again the disease breaks out, and again he is admitted to hospital; and this series of events goes on. As he never gets a lengthened treatment he never gets rid of the disease; he goes abroad to the tropics, and is then an easy prey to the diseases common in those regions, or to the further ravages of syphilis; eventually he either is invalided and is no further use as a soldier, or he dies." Was ever a more serious confession made in an official report? Is it any cause for wonder that the unfitness for active service and invaliding on account of syphilis is so great? May not the increased virulence of the disease in the army reasonably be attributed to inadequate treatment? When we also take into account the fact that in 1894, out of 70,642 British soldiers serving in India no fewer than 31,953, or 45 per cent., had suffered from either primary or secondary syphilis since enlistment, and that thousands of them are every year returning to the civil population of Great Britain on the expiration of their short period of service, with their disease still in a virulent form, then the very serious state of affairs will be evident.

Praiseworthy efforts to remedy this state of affairs have recently been made by the introduction of systematic and continuous treatment by injections of insoluble preparations of mercury. Surgeon-Major Lambkin, whose paper on the subject was published in the BRITISH MEDICAL JOURNAL so recently as February 19th, and Surgeon-Major Love, have urged the general adoption of this method, and favourable reports on it have been received from other officers who have tried it. Yet it may safely be asserted that the vast majority of cases of syphilis in the army are still treated only in the manner described above. The main difficulty in the way of the adoption of the intramuscular method lies in the regulations, which only permit of treatment being carried out while a man is in hospital, and make no provision for his attendance for treatment while he is on duty, so that when his symptoms disappear temporarily he must be discharged to duty and treatment stopped. That this difficulty is not insuperable is shown by the fact that in some cases arrangements have been made for his attendance for the injections of mercury once a week. Hearty co-operation between commanding and medical officers may accomplish much in this way, but nevertheless we contend that definite and uniform regulations should be laid down which will ensure the systematic and long-continued treatment of syphilis from its earliest stage.

Another great difficulty is that of making a certain diagnosis of the "infecting" or hard chancre from the "non-infecting" or soft chancre. This is often impossible at first, and a correct diagnosis may be possible only when secondary symptoms appear. These may be so slight that the man never presents himself at hospital until the disease has passed into a virulent form, and the best time for treatment has passed. This risk could be averted by systematically inspecting at given intervals all soldiers who had suffered from any form of venereal sore. Since the treatment must be continued for long periods after all symptoms have vanished, the method adopted must be one which necessitates only occasional visits to hospital and yet one which cannot be evaded. For this purpose the intramuscular method is undoubtedly the most suitable. Either one of the preparations known under the name of "grey oil," recommended by Lang, of Vienna, in 1888, or a solution of mercury perchloride injected deeply into the gluteus maximus muscle once a week, as used by Mr. Astley Bloxam, are methods of treatment at once efficient and easily applied. The injection of calomel is also successful but is painful. Intravenous injections are invaluable in virulent cases, especially of cerebral syphilis, but are not so applicable as a routine treatment. The administration of grey oil once a week by intramuscular injection is perhaps the most convenient method of all, and in many thousands of injections Lang never saw an abscess produced by this treatment.

A very serious condition of affairs exists; it calls imperatively for a remedy. If the present regulations stand in the way of efficient and long-continued treatment of syphilis in the army being systematically carried out, the sooner they are altered the better.

MEDICAL WITNESSES AND THEIR FEES.

A VERY instructive incident occurred recently at Devizes with reference to the payment of fees to a medical witness. An inquest was held on a child who had died in the Cottage Hospital from the effects of severe scalds, and one of the honorary medical officers, Dr. Raby, gave his evidence under protest. The Coroner (Mr. G. S. A. Waylen) explained the reason of this to the jury, and pointed out that under the Coroners Act, in the case of persons dying in a hospital, the medical officer had to give evidence, but could not claim a fee. The coroner stated that hitherto he, in common with all the coroners in the county and most of the coroners in England, had allowed the fee. This had been done because it was generally considered that the provisions of an Act passed when cottage hospitals with only an honorary medical staff were non-existent were meant to apply only to the large hospitals with a paid resident staff. The coroners had, however, been informed that the Government auditor had intimated to the county councils that these fees would not be allowed in future. The coroner further pointed out that it

was very anomalous that he should now be obliged to refuse the fees to the honorary medical officer of a cottage hospital, while in case of an inquest held at the prison or at the barracks the medical witness, although a paid officer, would be entitled to a fee. The jury agreed with the views expressed by the coroner, and unanimously added the following rider to their verdict: "The jury desire to call public attention to the very inequitable provisions of the Coroners Acts, by which honorary and unpaid medical officers of hospitals like the Devizes Hospital are debarred by law from claiming a fee for their attendance, when summoned to give evidence concerning the deaths of patients who die within the hospital, and they request the coroner to forward this protest to the proper authorities."

We congratulate Mr. Waylen and his jury on having made a very reasonable and opportune statement of a serious grievance. It is now about sixty years since Mr. Wakley moved an amendment to a Coroners Bill then before the House of Commons, claiming that medical witnesses, who had up to that time received no fees, should be treated as experts and paid a fee for their evidence. The particular Bill to which this addition was sought was lost, but the principle was embodied in a Bill in the succeeding year by Mr. Wakley, and he carried it into law with the support of Sir John Campbell, who was afterwards Lord Chancellor. It was pointed out at the time that the payment of the fee would not only remove a just grievance, but give the coroner more power over the witnesses, as up to that time, although he could summon them to attend, he could not compel them to give evidence. The law as it stands inflicts a serious injustice on many members of the profession, and needs amendment. The guinea that is paid in ordinary cases is often a very poor remuneration, especially when it entails the loss of many valuable hours of the working day. We have known busy practitioners lose the best part of a day over a troublesome case in the coroner's court. While the profession willingly makes this sacrifice in the public interest for what is after all a small and often an inadequate fee, it is unjust that in a case like that at Devizes the technical plea should be enforced to deprive an honorary officer of any recompense for the time and trouble given by him in the interests of justice.

It is time the Coroners Acts were amended and made more consonant with the state of things that now exists. Since these Acts were passed hundreds of cottage hospitals and other institutions which have no paid resident staff have been established all over the kingdom. They do excellent work through the unselfish devotion of their committees and medical staff, and, in the interests of the poor for whom these institutions are maintained, we think that an amendment of the law to remove a grievance which presses hardly on unpaid public workers is urgently needed. Mr. Waylen's action will, no doubt, be brought under the notice of the Government, and should, if followed up, bear fruit in an early session of Parliament.

OUR PENAL SYSTEM.

The *Daily Chronicle* has opened its columns very freely to all sorts of irresponsible critics, who denounce our prison administration as barbarous and brutalising. It will be remembered that a similar outburst took place about four years ago, and that Mr. Asquith appointed a Departmental Committee in consequence, with Mr. Herbert Gladstone as its Chairman. This Committee sat for some months, and took evidence from all sources impartially—ex-prisoners as well as officials—on most of the subjects which the *Daily Chronicle* is now ventilating so freely. It will be well to suspend judgment and not give implicit credit to these picturesque horrors which have frequently been paraded before and found not to bear strict investigation. It is obvious that our prisons are not exempt from imperfections any more than other institutions, but when we read of brutality pervading all ranks of officials, from commissioners to warders, and of these officials being brutal to each other as well as to prisoners, some incredulity is justifiable *a priori*. Further, it must be observed that no such charges were substantiated before the Committee. Even Mr. Davitt, who has had practical experience of penal servitude, and whose speech in the recent debate has commanded so much attention, did not paint it in such lurid colours as the *Daily Chronicle*. The Home Secretary himself is universally credited with good intentions and humane views, but most of the charges imply that he either shuts his eyes to grievances or that he is hoodwinked by a host of officials, including commissioners, governors, medical officers, and chaplains, who conspire to keep him in the dark, and lend themselves to promote a brutalising system of prison treatment. Medical officers of prisons are probably as humane as other men, and they would surely have much to answer for if, with their practical experience of the system, they tolerated such wholesale torture as it is said to involve. Mr. Herbert Gladstone, the Chairman of the Committee, spoke at some length in the recent debate, and stated that the Committee, after an impartial inquiry, "had unanimously come to the conclusion that there was no reason for general condemnation of the prison system"; and further, "that he intended to give a clear and decided support to the present Bill." The public, therefore, would do well to wait for a little more light before deciding that their prison system, which has produced such results in reducing crime as few, if any, countries can boast, is both rotten and barbarous. Whatever may be the merits of the proposal made by Mr. Davitt that prisons should be converted into moral "asylums," it is doubtful if public opinion is yet ripe for discarding punishment as an effective element in the reclamation of criminals.

TYPHUS FEVER IN LONDON.

Dr. T. Orme Dudfield, in his monthly report presented to Kensington Vestry on April 6th, deals at length with the limited outbreak of typhus fever which occurred recently in North Kensington. The cases all occurred in two adjoining flats, and it has been established that communication had taken place on several occasions between the inmates of these two flats during the time when the family first attacked were suffering from the disease. So far as has been ascertained, the first patient was a man who with his wife and six of his seven children lived in one of these flats. This man was in public employment in another parish, and the mode in which he contracted the infection has not been ascertained; indeed, if the hypothesis that typhus fever can originate *de novo* is to be accepted, then it would seem not improbable that this man's illness was an example of such an occurrence, for the conditions under which the family lived appear to have been most insanitary. The flat consisted of two rooms and a scullery; a grown-up son slept in the living room, but the parents and five children slept in the one bed room. It is calculated that the air space, without deduction for the bodies of the sleepers, two bedsteads, etc., and other furniture, was at the rate of 135 cubic feet for each person. It will be remembered that the minimum required under by-laws for registered and common lodging houses, is 300 cubic feet. More than this, the bed, clothing, etc., are reported to have been in bad condition, and a considerable accumulation of underclothing was found, which, like some of the bedding, was soiled by excreta. It is not surprising

to read that vermin abounded, nor that the state of the atmosphere of the rooms was so offensive that the rent collector would never go beyond the door. There can be no doubt that the existence of such conditions would favour the outbreak of typhus fever and conduce to the dissemination of the infection. The infection appears to have been conveyed to only three persons, not actually living in one of these two flats referred to. One of them was a daughter of the family who was in a situation as a servant in another part of London, but had attended her mother's funeral and had visited her brother and sister after their removal to the infirmary. Another was Dr. Albert Davis, to whose death we referred last week; he had attended the mother of the family; and the third was the undertaker who had assisted in coffining the body of this woman. The other flat was occupied by a man and his wife and their child, all three appear to have suffered from the disease, which was doubtless contracted through friendly assistance given to their neighbours. Dr. Dudfield points out that the diagnosis was, under all the circumstances of the cases, extremely difficult in the earlier cases, and he adds that once the true nature of the disease in the recent outbreak had been established the doctors generally, with praiseworthy candour, recognised the mistaken and accepted without hesitation the corrected diagnosis. Altogether there would seem to have been 14 cases, and having regard to the very infectious nature of typhus fever, and to the long-continued prevalence of the disease in the flat in which it first appeared, it is remarkable that there should have been no greater spread of the malady. This comparative immunity Dr. Dudfield attributes, no doubt with justice, to the improved conditions of the life of the people as compared with those which existed half a century ago, when typhus fever was a relatively common disease. We are informed that further observation has shown that the case of illness at Wandsworth Road, Lambeth, notified as typhus fever on March 18th is in reality typhoid fever.

THE TWO DROMIOS IN MEDICAL LIFE.

"Such is fame," said Byron on one occasion when he had seen the name of a friend who was severely wounded in a great battle misspelt almost beyond recognition in the *Gazette* in which his heroism was chronicled. A curious illustration of the local limitation of medical fame is afforded by the notice of the death of Sir Richard Quain which appears in one of the leading medical journals of Germany. The *Deutsche medicinische Wochenschrift* of March 24th announced that "The well-known surgeon, formerly Professor of Clinical Surgery in University College, and Surgeon-Extraordinary to the Queen, Richard Quain, author of numerous valuable writings on anatomical and surgical subjects, died in London on March 13th, at the age of 82." The confusion between the two Dromios, or rather "Dickies" which is here apparent was frequent in the lifetime of the two men, and gave rise to not a few curious incidents. Thus it is related that after the death of Mr. Richard Quain was announced a lady called at Harley Street to present her condolences to the family of Dr. Richard Quain on their supposed bereavement, and meeting on the doorstep the distinguished physician whom she believed to have departed this life, was so overcome by the shock that she fainted. But our German friends so justly pride themselves on their accuracy that it is surprising to find this confusion perpetuated in the columns of our esteemed contemporary.

HOSPITAL STATISTICS.

Among the difficulties of hospital administration, not the least is that of compiling irreproachably accurate statistical returns. This is especially the case in lying-in hospitals and in fever hospitals. In these instances fatal sequelæ of the original condition for which the patient was admitted to the hospital may occur after the patient's discharge from the hospital, and the question arises as to how far, if at all, the official hospital statistics should take cognisance of such deaths. On the one hand is the not unnatural wish to make the hospital statistics "come out" as favourably as possible, and the authorities may further urge that it is not their duty to inquire as to the subsequent well-being of the patient. On the other hand, the chief object of hospital statistics is to give the true and full result of hospital treatment, if necessary contrasted with that of home treatment, and this can only be done if the returns are complete and accurate. Perhaps the difficulty may be best elucidated by three examples. A patient having had an attack of diphtheria is discharged at the end of a month, and a week later dies suddenly of cardiac failure, the result of diphtherial paralysis. Or a patient is discharged with albuminuria following on acute nephritis occurring during an attack of scarlet fever, and dies ten days later from uræmia. Or a patient dies after leaving a lying-in hospital from some disease which has arisen during the puerperium. We will assume that in each of the preceding instances the hospital statistician is informed of the fatal result, and has not of his own initiative to institute an inquiry into the subsequent history of all discharged patients. Under such circumstances there can be no hesitation in arriving at the conclusion that it is the duty of the statistician to include the above cases among the deaths occurring in the practice of the hospital; or, if not, then in a special note, to publish the fact that the above death or deaths had occurred, in addition to those occurring within the hospital walls. Any other course implies that statistics (like words, as some say) conceal the truth.

THE RELATION OF FRIENDLY SOCIETIES TO THEIR MEDICAL OFFICERS.

Dr. Baddeley, of Newport, Salop, in a paper published recently in the *Friendly Societies' Recorder*, points out that even the meagre fees paid by clubs can by no means be reckoned as all profit for the medical officer, but that "considerable expenses have to be met in all cases before there is any profit at all." He then enumerates various items of expense which are requisite before the medical officer is in a position to undertake the demands of the smallest friendly society. Against the contention that these expenses must necessarily be incurred by every practitioner, whether medical officer to a friendly society or not, he argues that even if this be the case a proportion of such expenses ought to be defrayed by the friendly society. In estimating the average work of a friendly society medical officer, Dr. Baddeley computes that 3 per cent. of the members will constantly be ill, that is, will claim the doctor's services, even if they do not declare on the sick funds. Taking this basis, and assuming that each sick member requires the doctor's attendance every third day, an average attendance of 1 per cent. per diem is obtained. This, he considers, is considerably understating the case, but on this basis, with 500 members, 5 will require daily attendance, and assuming the individual contribution of members to be 4s. per annum, the society will pay rather less than 5s. 6d. daily to meet its share of working expenses of the practice, so that the margin here for the medical officer's profit is small enough. To those who contend that the law of supply and demand is the basis on which the friendly society acts, and that plenty of practitioners are willing to do the work for this money, the writer justly replies that "work may be well or badly done," that black sheep exist in all professions, and that it is necessary for friendly societies to consider "the element of quality in estimating the commercial value of a medical officer." With regard to what is the lowest payment that can yield a margin of profit the writer is of opinion that nothing less than 5s. a member per annum can do so, and he is driven to the conviction that at the present time "in the vast majority of cases the payments of friendly societies do not yield any margin of profit to the medical officer." Why then should practitioners be so ready to accept these unremunerative appointments? The writer adduces the following

reasons: (1) Ignorance of the young practitioner, who imagines that the unremunerative club will be an introduction to private practice. (2) In order to fill up gaps between his private patients; this, the most common, is, Dr. Baddeley urges, commercially unsound. (3) To obtain introduction to the families of members of clubs. (4) To keep another practitioner out of the neighbourhood. This last reason, whatever may be its advantages or disadvantages commercially, is distinctly contrary to professional morality.

THE PRESIDENCY OF THE GENERAL MEDICAL COUNCIL.

Sir William Turner, F.R.S., was on Tuesday elected President of the General Medical Council, as was anticipated would be the case. His eminent fitness for the position had been acknowledged on all hands, and that the Council shared in this opinion is shown by the fact that his election was not opposed. Sir William Turner, who was born at Lancaster in 1832, received his medical education at St. Bartholomew's Hospital, and graduated M.B. in the University of London in 1857. He was demonstrator of anatomy in the University of Edinburgh from 1854 until his appointment, in 1867, to be Professor of Anatomy in the same University. His eminence as an anatomist is too well known to need description, and he has also had long experience of public work. He has been a member of the General Medical Council as representative of the University of Edinburgh since 1873, and has taken a great interest in the administrative work of the Council. He has been a member of the Executive Committee for eleven years, and of the Business Committee for six, and has therefore all the threads of the business in his hands. The election of Sir William Turner will be accepted as a graceful compliment to Scotland, for he is not only a Scottish Professor, but also on his mother's side of Scottish parentage.

THE LONDON UNIVERSITY BILL.

The London University Commission Bill, which has now passed through the House of Lords and which was read a first time in the House of Commons on March 21st, is in charge of Sir John Gorst, Vice-President of the Committee of Council. We understand that most of the opposition to the Bill is likely to be directed against Clause 12 of the schedule, which requires that separate examinations shall be held for internal and external students, and that each certificate and diploma given as the result of an examination shall state whether the candidate has passed as an internal or as an external student. It is further provided that in either case the degree conferred shall, as far as possible, represent the same standard of knowledge and attainment, and that internal students shall be admissible to the examinations for external students if they prefer to graduate on those terms. This provision is guarded by words giving to the Senate power either generally by regulation, or as to a particular subject by order, to determine otherwise. This clause of the schedule does not directly affect the medical faculty in which there are no private students. Since all candidates — whether metropolitan or provincial—for medical degrees have been similarly trained, the same examinations will be suitable for all. Forgetting that the conditions are different in all other faculties, medical graduates are apt to regard Clause 12 as of little moment, or even to view it unfavourably. The arts and science colleges, however, attach great importance to it, and have, indeed, made its acceptance a condition of their continued support. As the success of the Bill in the House of Commons must depend upon the united action of its friends, it is to be hoped that all interested in its promotion will act in unison to support the Bill and its schedule as a whole. It is possible, though by no means certain, that the debate on the second reading will take place on Tuesday, April 19th. Mr. Ellis Griffith has given notice of his intention to move the rejection of the Bill on the ground that under the scheme the same degree would be obtained after two different sets of examinations. It will also be objected that the arrangements connected with the award of scholarships and medals are unsatisfactory. It is, however, believed that the prospect of the Bill are on the whole satisfactory, especially in view of the interest which has now been aroused among the metropolitan members of Parliament.

THE ADULTERATOR ABROAD.

A French analyst some time ago amused himself by constructing a *menu* of the dinner of one who greatly daring would dine at a cheap restaurant in Paris. The exact items do not matter, but the general idea was that the diner after swallowing soup made from a meat extract preserved by the addition of boric acid, was regaled with fish preserved from putrefaction by the same means; that his vegetables had been preserved in a bottle and given, by the addition of copper, a bright green colour which produced a delusive appearance of freshness; that his sweet was made from fruit preserved in a solution of salicylic acid; that he ate with his cheese, which itself was loaded with mutton fat or cotton oil, margarine spread on bread whitened with alum and made from flour to which plaster of paris had been added to give it weight in the scales. These delectable viands were washed down with a plastered wine coloured with fuchsin, while the liqueur with which he hoped to correct the evil effects of the rest was made of crude spirit sweetened with beetroot sugar and flavoured with a coal tar product. His coffee—but the analyst refused to discuss the coffee: the subject, he said, was too complex. M. de Nansouty has recently been withdrawing the veil which conceals the composition of coffee in France. He tells us that even the careful man who buys his coffee in the green berry is not altogether safe; very inferior berries are dyed to match the better sorts, or some of the berries are made of clay moulded and dyed to look like the genuine berries with which they are mixed. If he buys his berries roasted he is more easily deceived. The artificial berries in this case are made of coffee grounds mixed with baked flour. The berries, false and true, are then roasted with a little fat, white of egg, sugar, or molasses, and acquire a beautiful brown varnish "pleasing to the eye." The weight of both green and roasted berries is increased by exposing them to steam so that they imbibe moisture. But the man who buys his "coffee" ground is indeed rash. The list of constituent parts is long: chicory (which itself is sometimes adulterated!), beetroot, turnips, parsnips, carrots, dandelion, acorns, horse-chestnuts, hazel nuts, figs, prunes, couch-grass, pistachios, almonds, walnuts, pea-nuts, dates, apples, pears—all these substances, generally in "damaged" condition, are mixed together, ground and roasted, and mixed with a little real coffee. In a recent instance ground stone was found to have been added, but this was considered to be carrying business enterprise too far even for a Belgian, and the parties are thought likely to be punished. Some manufacturers add the sweepings of the warehouse, so that the powder which is then put up in tins and labelled *café de luxe* must have a fine confused flavour. As to the milk, a certain improvement has taken place in many Continental cities. The Dutch official analyst, for instance, when he began his examinations in Rotterdam in 1893 found that 70 per cent. of the milks he tested had been tampered with; the percentage had fallen in 1897 to 3.3. In Brussels lately a batch of twenty milk sellers were summoned and fined. One man admitted that his milk had been "baptised," but he argued that it was good enough for *les Bruxellois*. A woman had put a notice that her milk was skimmed on the handles of her jugs. What more reasonable for a milk seller than to hold a jug by its handle? If the buyer did not then see the announcement on the handle, what of that? the ingenious lady argued—it was there. Finally, and not to prolong unduly this list, it may be said that the mayor of a small commune in France is now "wanted" on a charge of mixing plaster-of-paris with his flour. He did not deny the fact,

but said that he merely sold the flour, and had no idea that anybody would be so indiscreet as to use it as food. When, however, it was proved that most of his customers were bakers, or bakers' brokers, the mayor thought it well to leave home in order to "collect some debts." Butter is, of course, largely adulterated in Belgium. At Liége nearly one-fourth of the samples taken contained margarine in proportions varying from 30 to 75 per cent. Bearing in mind the easy-going way in which we admit milk, butter, and other food products into this country, it is worth while to call attention to these official records of the extent to which the practice of adulteration prevails in neighbouring countries ambitious to supply our markets.

SOUTH AFRICAN DENTISTS.

A recent number of the *Dentist* contains an amusing account of South African dentists, furnished by "a Birmingham gentleman connected with dentistry," who has practised his profession in various parts of the Dark Continent. The South African dentist, we learn, has no drawing-room practice, and the cost of appliances is very high. It is cheaper to import them, but the cost of getting them "up country" is great. Yet it is "up country" that the dentist finds not only profit but amusement. The gentleman referred to and his partner made close on £200 in three weeks—not a bad haul (to use his own expression), considering that their work lay chiefly among a class made up largely of a race noted for the fine quality and condition of their dental apparatus. In such practices as these the dentist covers a very large area. Owing to the distance, the appointments have to be made two or three months ahead. Thus, if a native goes up with a racking toothache (say) in December, he may, if he is lucky, have an appointment for some time in March. So victims to toothache have to exercise more patience there than civilised man exhibits under the same trying circumstances. The dentist gets an accumulation of practically three months, and makes money and disperses teeth at a rapid rate. He is held in great regard, and, unlike his brethren in Europe, he is looked upon as a kind man. The natives think that to have a tooth drawn in the approved style is almost a pleasure. They have been used to less refined methods.

MEDICAL AND LEGAL CORONERS.

We have received a letter from a correspondent, signing himself "Reform," who takes exception to the remarks made in the British Medical Journal of March 12th on medical and legal coroners, as the result of his experience under a medical coroner. We are glad to note that he describes this gentleman as extremely courteous; but "Reform" complains that he dispenses with medical assistance both in deciding that an inquest is unnecessary and at inquests. With regard to the former, we may remind our correspondent that a coroner has no power to remunerate any medical practitioner unless he has been regularly summoned to attend an inquest, and after he has given evidence on oath. But so long as coroners possess discretionary power it is manifest that this can be much more safely exercised by an experienced medical practitioner, by one who has had a medical training, than a solicitor who has had no previous training whatever in the duties which devolve upon him as coroner. To decide whether a death be natural or unnatural—the result or not of violence—these are two distinct and separate questions, purely medical, of the nicest character, both in a medical aspect and for the purposes of an inquest. To the legal coroner it is mere guess work, to the medical coroner it comes naturally. He is, *mutatis mutandis*, in the same position as a stipendiary magistrate who decides that there is no case to go before a jury. The medical coroner acting as an expert after a medical training, after witnessing many deaths, assisting in and performing many necropsies, decides that the case referred to him is one of natural causes and that there is no necessity to hold an inquest. He is also in a position to express a more correct opinion as to the probable cause of death than a solicitor whose opinion is practically worthless. "Reform" gives details of six cases, in two of which the medical coroner of his district dispensed with inquests, and in four with medical evidence. In one of the latter the deceased was killed by a passing train, in the others the coroner may have had cogent reasons for dispensing with medical evidence. That there may be good legal coroners and bad medical coroners is a truism which can be accepted with many others. But that the object of the inquest or the informal inquiry of the coroner is to ascertain the cause of death and to prevent unnecessary inquests is plain, and our correspondent must see that reason and common sense are on the side of those who advocate the cause of medical coroners.

A BELGIAN LEAGUE AGAINST TUBERCULOSIS.

In 1891 Dr. Armaingaud, of Bordeaux, with the assistance of Professor Verneuil, founded the French League against Tuberculosis, which has since done good work. Steps are now being taken by the Société Royale de Médecine Publique et de Topographie de Belgique to establish a similar organisation in Belgium. Tuberculosis causes from 13,000 to 14,000 deaths in Belgium every year, this being about one-tenth of the general mortality. In 1894 the Service Central de Santé, acting on a report of Dr. Janssens, sent a circular to the different sanitary authorities of the country, inviting them to diffuse as widely as possible a knowledge of the means of preventing the spread of tuberculosis, and suggesting that a league against it should be formed. On the initiative of the Société Royale de Médecine Publique et de Topographie de Belgique, the Congress of Hygiene and Medical Climatology, held in Brussels in August, 1897, passed a unanimous resolution that such a league should be founded. At its meeting on February 12th the general committee of the Society referred to the Central Bureau the duty of drawing up a code of prophylactic measures. The Congress also passed a resolution urging the foundation in Belgium of sanatoria for the benefit of patients belonging to families of straitened means. The Society was asked to draw up a report on the subject. This report, which was presented on March 6th, states among other things that there is a good prospect of establishments of the kind required being founded. Funds will probably be forthcoming, and there is no lack of suitable sites. Seaside sanatoria already exist in Belgium at Middel Kerke, Wenduyne, and Ostend. At low altitudes there are similar establishments at Bockryck-Genck-lez-Hasselt, and at Bon-Secours, while another is about to be built at Crainhem-Tervueren. There is one at a moderate altitude for convalescent children at Esneux, while a hydrotherapeutic institute is about to be erected at Venaimont in the Belgian Ardennes on the model of that at Divonne at the foot of the Jura in France. The Society has instituted a systematic inquiry as to the possibility of establishing a sufficient number of sanatoria in Belgium for the treatment of sufferers from tuberculosis.

A PROPOSED COMMISSION OF PUBLIC HEALTH IN THE UNITED STATES.

A Bill was introduced in the House of Representatives on February 17th by Mr. Otjen, a representative from Milwaukee, Wis., providing for the establishment of a Commission of Public Health, to be under the supervision of a Commissioner of Public Health, who shall have the aid of an Advisory Council, consisting of a representative from each State and Territorial Board of Health, from the Department of Justice and from the Medical Corps of the United States Army and Navy. The duties of the Council will be to collect and diffuse information upon matters affecting the public health, including statistics of sickness and mortality, the investigation by experimental and other methods of the causes and means of prevention of disease, the collection of information with regard to the prevalence of infectious, contagious, and epidemic diseases in the United States

and other countries; the preparation of rules for preventing the introduction of such diseases into the United States, and their spread from one State to another, and the advising and informing the several departments of Government on such questions as may be submitted by them to it, or whenever, in the opinion of the Commission, such advice and information may tend to the preservation and improvement of the public health. The Commissioner of Public Health—who is to be appointed by the President of the United States on the advice of the Senate, and is to hold office for six years—must be a regularly-educated physician, holding a diploma legally conferred upon him by a legally-incorporated medical college in the United States. The Commission of Public Health is to be provided with proper offices in Washington, equipped with laboratories and all needful apparatus. The Commission is to co-operate with State, municipal and local Boards of Health, in establishing and maintaining an efficient and accurate system of notification of the existence and progress of contagious or infectious diseases, and of vital statistics in the United States.

THE ROYAL HANTS HOSPITAL, WINCHESTER.

The announcement is made through the ordinary channels that it is proposed shortly to fill a vacancy in the honorary medical staff of the Royal Hants County Hospital at Winchester by the appointment of an honorary physician. Intending candidates ought, however, to be made aware that there is at the present time a serious difficulty between the honorary medical staff of the hospital and the managing Committee, and that the remonstrances of the medical staff as to the course which it has been thought fit to adopt have been met in such a manner that all the members of the honorary medical staff have felt compelled to tender their resignations. We do not propose at present to enter into the details of the conflict, but we may say that the action of the honorary medical staff has the approval of the other members of the profession practising in Winchester, and that a letter to this effect has been addressed to the governors of the hospital by the majority of the profession practising in the city. Under these circumstances it can hardly be necessary to represent at any length to any of our readers who may contemplate making applications for the vacant appointment the propriety of ascertaining for themselves the nature of the circumstances which have led to the present difficulty.

THE MEDICAL EXPERIENCES OF BENVENUTO CELLINI

The current issue of the *Quarterly Medical Journal*, published at Sheffield, contains a paper by Mr. D'Arcy Power, F.S.A., on the Medical Experiences of Benvenuto Cellini, the great Italian art metal worker of the Renaissance. Cellini was born at Florence in 1500 and died in 1571. His autobiography gives an excellent account of contemporary medical practice, for Cellini was both a libertine and a bravo. Attempts were twice made to poison him, once with powdered diamond, and once, Cellini thinks, with corrosive sublimate, a supposition with which Mr. Power disagrees, thinking that arsenic was administered. Cellini's narrative shows that plague, malarial fever, and syphilis were the great epidemic diseases of the time, and that in due course he suffered from each. He had but a slight attack of the plague during the great Italian outbreak of 1522-23, but it left him with a bubo which was treated by plugging with lint. His attacks of ague were numerous and severe, and he was treated by Francesco da Norcia, the greatest physician of the time. Syphilis he acquired during the comparatively mild period which followed the malignant outbreak by which it signalised its first appearance in Europe. He describes the source of his infection, and though he does not mention the primary sore Mr. Power is able to show that he had iritis and a tertiary syphilide. He declined to be treated with mercury, and preferred to dose himself with guaiac. Mr. Power held that the lax sexual morality of the time is shown by the apparent fact that no moral turpitude whatever attached itself to syphilis in its early epidemics, and Cellini says, with perhaps a touch of malignity, "In Rome this kind of illness is very partial to the priests, and especially to the richest of them." On one occasion, a piece of steel accidentally lodged itself in Cellini's eye, and was removed by a remarkable piece of folk medicine. At another time he broke his leg in escaping from the prison of Sant' Angelo in Rome, an escape which was considered marvellous, though, as Cellini says, the Pope did the same thing when, as a young man, he was imprisoned there for forgery. Cellini was soon recaptured, and was committed to the rigorous confinement of a dungeon swimming with water and full of big spiders and many venomous worms. A wretched mattress of coarse hemp was flung to him, which in less than three days soaked up water like a sponge. Here he remained for four months, yet at the end of this time his broken leg was as sound as a roach. The second imprisonment was a terrible one, for Cellini was at the mercy of a Castellan who was so mad that at one time he fancied himself a bat, at another time a frog, and at another time an oil jar. The Pope, according to Cellini's version of the matter, handed him over to the Castellan to be put to death in any way he liked. Fortunately for art his gaoler took compassion upon him, and in a lucid moment took measures to set him free. But during his imprisonment Cellini's reason almost gave way, for he tried to commit suicide; he saw visions and he heard voices. In estimating the historical value of Cellini's statements it must be remembered that he was on his own showing one of the greatest scoundrels that ever lived; and he added to his other gifts and graces a very pretty talent for lying.

BARBER-SURGEONS IN SWEDEN.

It is generally believed that the barber-surgeon is as extinct in Europe as the dodo. It is true that the species died out in most countries in the latter half of the present century, but in the South of Europe not a few specimens were to be found within the last quarter of a century even in cities. We know of Britons not yet declined into the vale of years who have been treated by worthy practitioners who wielded the razor and the instrument made classical by Molière with equal skill and equal readiness. During the Peninsular war shaving was included among the regular duties of the Portuguese army surgeons. Millingen, in his *Curiosities of Medical Experience*, published in 1837, states that in 1801 some English assistant surgeons who joined the Swedish Navy, found that they were expected, as part of their professional work, to shave the ship's company. On their refusing to submit to this indignity, they were summarily dismissed the service. The barber-surgeon still survives in Sweden. The Swedish landscape painter, Gustave Albert (Andersen), we understand, spent five of his earlier years as a barber-surgeon in his native country. Speaking recently to a brother artist in France, he is reported to have said: "We still have in Sweden a few of these men who disappeared among you more than a century ago, who are privileged by law to shave the chins of their fellow men, and to remove the peccant humours from their veins by bleeding. These honourable and relatively remunerative functions can be discharged only by men comparatively well educated. In addition to a preliminary apprenticeship of several years, they have to go through a period of six months' practice in a hospital in a large town; this is followed by a very serious examination in botany, anatomy, and surgery. Armed with this diploma the barber-surgeon has the right, not only to bleed, but to stitch up cut lips and ears that have been torn off, to dress contused and incised wounds, to reduce dislocated limbs, to set fractures, and in serious emergencies, when a doctor surgeon cannot be found, even to

amputate legs and arms *secundum artem*. The only province of the healing art from which the barber-surgeon is excluded is the practice of physic." The stitching up of cut lips may, perhaps, be held to fall within the province of the tonsorial surgeon; at any rate, it may be a comfort to Englishmen travelling in Sweden to know that there are barbers in that country qualified to repair with the surgical needle the injuries which they inflict with the razor. But is the refixing of torn-off ears so common in Sweden as would seem to be implied by the fact of its being particularly mentioned by the artist whom we have quoted as an ordinary incident in minor surgery? This also may convey a warning to wandering Britons with prominent ears to keep out of quarrels with the natives.

THE ILLNESS OF THE DUKE OF COBURG.

We are glad to have authority to state that H.R.H. the Duke of Coburg is making satisfactory progress. After his visit to Egypt the Duke suffered from an attack of acute pustular eczema which was complicated by a palpebral abscess. He derived much benefit from his cruise in the Mediterranean, and reached Villefranche on March 23rd considerably improved in health. Unfortunately, immediately after his arrival there another abscess of a somewhat severe character developed, and an operation became necessary. This was successfully performed under an anæsthetic on March 26th, to the great relief of the patient, who has since made steady improvement. There is every reason to believe that he will shortly be restored to his former health.

DEATH OF PROFESSOR STRICKER.

We regret to announce the death on April 2nd of Professor Salomon Stricker, the distinguished Professor of Experimental and General Pathology in the University of Vienna. Professor Stricker's name has been a household word among students of medical literature for so many years that most readers will probably be surprised to hear that he was only 65 years of age. Only a week or two ago he celebrated the twenty-fifth anniversary of his appointment as ordinary professor. The *Festschrift* presented to him on that occasion was entitled *Thirty Years of Experimental Pathology*; the list of contributors includes the names of E. Albert, A. Spina, G. Gaertner, E. Klein (of London), and many other pathologists and histologists of note. We hope to give an account of Professor Stricker's career and scientific work in an early issue.

INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS.

The next meeting of the International Association of Railway Surgeons will be held in Toronto on July 6th, 7th, 8th. It is anticipated that the meeting will be a large one, some five or six hundred members being expected. It is said that every railroad in North America will be represented at the meeting either by its official surgeon or by proxy. The Association has a very large membership composed of railway surgeons in the United States, Canada, and Mexico. During the past four years the annual meetings were held in Chicago, St. Louis, Denver, and Galveston. Preparations are being made by the public bodies of Toronto and by private residents for the entertainment of the visitors.

EXAMINATIONS AND EXAMINERS IN PARIS.

M. de Lavarenne has recently made a curious calculation as to the number of hours which the teaching staff of the Paris Medical Faculty spends in examining candidates. Taking the official statistics of the number of students examined during the academic year 1896-97, namely, 8,971, he finds that professors devoted 2,160 and *agrégés* 3,480 hours to the task; this would give for each of the latter a total of 100 to 102 hours of examining in the year. *Agrégés* have to do this work for nine years, during which period they are supposed to be training themselves for the work of the higher teaching. It is estimated, however, that the amount of time which they actually give to teaching during the year amounts, according to the department to which they belong, to 64, 48, or 22 hours. During the nine years the future professor is in training, therefore, he teaches 198, 432, or 576 hours, as the case may be, while he has to spend 918 hours in examining. No wonder many *agrégés* become soured and lose ambition and energy after a few years of this kind.

A FRENCH VIEW OF RECIPROCITY.

The French Chamber of Deputies recently passed a *projet de loi* relative to the practice of pharmacy, one clause of which is to the following effect: "No foreigner, even if holding the French diploma of pharmacy, shall practise pharmacy in France unless, by reciprocity, a Frenchman holding a diploma of pharmacy granted by the country to which the foreigner belongs can practise pharmacy in that country."

THE STUDY OF THE HISTORY OF MEDICINE.

In connection with the remarks on the usefulness of studying the history of medicine, which appeared in the British Medical Journal of April 2nd, it is interesting to note that at the forthcoming meeting of German Scientists and Medical Practitioners, at Dusseldorf, there is to be a Section of History of Medicine and Science and of the Geographical Distribution of Diseases. Dr. Sudhoff, well known as the greatest living authority on Paracelsus, has taken the initiative in the restoration of this Section, which had been discontinued for several years, and he has received cordial support from the three Professors of the History of Medicine in Germany, Drs. Helfreich, Pagel, and Puschmann. In connection with the Section it is proposed to have a medico-historical exhibition.

TREATMENT OF INEBRIETY IN ENGLAND.

From the fourteenth annual report of the Dalrymple Home at Rickmansworth, it appears that 475 patients have been under treatment. Of these 225 went in under the Inebriates Acts, and 250 as private patients, though during the last year more entered under the Acts; 126 entered for the full period of twelve months; 369 were between 30 and 50 years of age at entrance; 446 had a good education, 111 having passed through college; 270 were either married or widowers, contrasted with only 205 single men; 5 per cent. had been solicitors, 8 per cent. medical men, and 2½ per cent. clergymen. There had been a family history of either insanity or inebriety in more than one-half of the cases, nearly three-fourths of the patients were regular, as against about one-fourth of periodic inebriates. The great bulk were social drunkards. The after-history of the patients who had been discharged showed the satisfactory result of 33⅓ per cent. cured, with 5 per cent. additional who had been improved.

At the invitation of the President and General Secretary of the Organising Committee of the International Medical Congress to be held in Paris in 1900, the President of the French Republic has consented to preside at the opening meeting of the Congress.

Professor Charles Richet has been elected a member of the French Academy of Medicine. M. Richet's address to the annual meeting of the British Medical Association in Montreal on the Work of Pasteur and the Modern Conception of Medicine will be fresh in the recollection of our readers.

Dr. Patrick Manson will commence a course of lectures on Diseases of Tropical Climates at St. George's Hospital Medical School on May 17th. The course is intended for medical men who purpose practising in the tropics or in Eastern Asia. It will be illustrated as far as possible by clinical cases and by demonstrations of parasitic organisms. The lectures will be given at 5 p.m. each Tuesday and Friday down to July 22nd. Further particulars can be obtained from the Dean.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE VACCINATION BILL will be taken as the first business at the morning sitting of the House on Tuesday, April 19th. The London University Bill was mentioned also for this date, but the latest arrangement is to take the second reading debate of the Vaccination Bill. This will probably occupy the whole sitting, as many points in the Bill will require explanation, and the motion for the rejection of the Bill, to be moved by Mr. Bayley, will most probably lead to a division. The provision of the Bill which excites most opposition is the retention of two prosecutions for non-vaccination, one under Clause 29, and a second under Clause 31, of the Act of 1867.

THE MUZZLING ORDERS of the Board of Agriculture came in for some sharp criticism last week, the non-exemption of sheep dogs being the main grievance. It seems at first sight hard that while sporting dogs are allowed to be unmuzzled the useful and necessary collie should be muzzled, to his own discomfort and to the detriment of his work. Mr. Long, however, pointed out that these dogs were under less constant supervision than sporting dogs, and were so numerous that in some counties, especially in Scotland, they numbered thousands. In giving the figures for rabies for the last five quarters the President of the Board of Agriculture made the best defence of his policy. For the quarter ending March, 1896, the cases were 200; they fell in the succeeding quarters to 123, 63, and 48, while in the last quarter they were only 6.

THE PLUMBERS REGISTRATION BILL.—The amendments in the measure now introduced are designed to remove the objections raised last session to the method of election of the members of the General Council, and to the Council exercising educational functions. The Council in the present Bill is composed of master and operative plumbers elected directly by their National Associations, and sanitary authorities elected under regulations approved by the Local Government Boards of England, Scotland, and Ireland respectively. The Council may co-opt members from various sanitary, architectural, and other bodies. Powers are given to the Council to accept the examinations of approved bodies as qualifying for registration, provided such examination shall include practical tests of workmanship in addition to those of technical knowledge.

SANITARY INSPECTORS' EXAMINATIONS were made the subject of a question by Lord Edmund Fitzmaurice on Tuesday, and the President of the Local Government Board admitted that his Board wished to institute a conjoint examining Board for the purposes set out in the Public Health Act, 1891. He stated that difficulties had prevented this being done, and that consequently the Sanitary Institute still enjoyed a monopoly of holding the examinations. The feeling is pretty general that it is time the difficulties were overcome, or the scheme for a conjoint Board abandoned, and other bodies allowed to hold qualifying examinations. It will be a serious matter, however, if the scheme for a single examining body is not carried into effect as recommended by the Committee appointed in 1892.

THE PRISONS BILL passed its second reading on Monday night without a division, and was afterwards referred to the Standing Committee on Law. The debate all through has been of exceptional interest, and must result in some mitigation of the unreasonable harshness and rigidity of the present system of prison treatment. A sadly opportune example of these characteristics of prison discipline was brought before the House on Tuesday by Mr. Davitt. A soldier who had fought at Tel-el-Kebir was sentenced to seven days' imprisonment at Aston in default of payment of a fine, and became ill on the third day of his confinement. He was found to have double pneumonia, and his wife was telegraphed for. She arrived after the usual hours for visiting at night, and because the doctor thought the man would live some days longer, she was refused admission. The man died the next morning before she could see him. The Home Secretary, in admitting the facts, spoke strongly of the error of judgment committed in this case, and promised further investigation. The House watched the question and answer with much interest, and showed that it had no sympathy with a rigid enforcement of rules which could lead to so tragic an incident.

FOREIGN FRESH MILK.—Mr. T. W. Russell, in reply to Mr. Jeffreys, said that foreign fresh milk imported into this country was not inspected for analysis at the port of entry, but he was informed that some samples of milk imported from France were taken for analysis in the months of December and January last at the request of the Board of Agriculture. He had not received information as to illness arising from the use of this milk. He was not in a position to state what the arrangements were for the sanitary inspection of dairies in the different countries from which the milk was received in this country, but he believed that information bearing on this question had been collected by the Royal Commission on Tuberculosis, and this would, no doubt, be published in connection with their report.

OMAGH LUNATIC ASYLUM.—Mr. Doogan (for Mr. Murnaghan) asked the Chief Secretary a question in reference to the condition of the Omagh Lunatic Asylum, and whether he was aware that out of fewer than 700 inmates, 96 had died within one year.—The Chief Secretary said his attention had been directed to the unsatisfactory condition of the asylum. He was aware of the fact that 96 inmates had died within one year. A considerable proportion of these deaths were due to consumption or other diseases of the respiratory organs. The Omagh Asylum had been in a very insanitary condition, owing to serious defects in the drainage and sanitary appliances. After inquiry and consultation with the Board of Governors, a contract was entered into in 1895 for large additions in the buildings, and for the thorough remodelling of the drainage and sanitary arrangements. These works, he was informed, were now far advanced towards completion. In consequence of an epidemic during 1897, the Board of Control, at the suggestion of the Inspectors of Lunatics, sent down in October last a sanitary expert of high repute to make minute inspection of the works. He reported that they were being carried out in a satisfactory and approved manner. The inspectors made full inquiry into the condition of the asylum, and the results of their investigations had been communicated to the governors of the institution. The inspectors had also made from time to time suggestions for the improvement of the asylum, most of which had been adopted by the governors.

THE VACCINATION BILL.—On the subject of glycerinated calf lymph the Lord Advocate said, in reply to Mr. Crombie, that he was informed by the Local Government Board for Scotland that they had no means of ascertaining exactly the amount of that lymph used by public vaccinators in Scotland. The provision of a supply of the lymph to Scotland would be considered in connection with the arrangements which were now being considered by the English Local Government Board.—On the general subject of vaccination Mr. M'Kenna asked the President of the Local Government Board, in view of the proposal in the Vaccination Bill that domiciliary visits shall be made by the public vaccinators, whether it was proposed to make additional provisions for the payment of public vaccinators, and more particularly in the case of those acting in country districts, on account of the long distances which must necessarily be traversed.—Mr. Chaplin, in reply, said, "I have no doubt that some revision in respect of the fees now payable for stational vaccination will be required when the system of domiciliary vaccination has been adopted."

THE COMMISSION ON SEWAGE DISPOSAL was referred to at question time, and Mr. Chaplin, in reply to Mr. John Wilson (Falkirk)' expressed a hope that both Scotland and Ireland as well as England will be represented on the Commission.

THE EQUIPMENT ALLOWANCE to Volunteer medical officers, which Sir Howard Vincent took occasion to refer to on Friday week last on the Army Estimates, has since been dealt with at question time by the hon. member. He asked the War Department whether it could see its way to grant the initial equipment allowance to those officers, having regard to their increased duties under new regulations, and Mr. Brodrick replied, "I am glad to say that an Army Order is about to be issued giving the allowance to medical officers of the Volunteers on the establishment."

HABITUAL INEBRIATES.—The Government measure dealing with habitual inebriates—according to a reply given to Mr. Knowles by the Home Secretary—will be introduced on an early day after the Easter holidays. In introducing the Bill he would, he said, make a statement on the question of the extension of the Bill to non-criminals.

THE SANITARY DIFFICULTIES OF BOMBAY.

THE TOPOGRAPHY OF BOMBAY "ISLAND"

THE Presidency town of Bombay, the chief seaport and capital of Western India, was ceded to the British Crown by the marriage treaty between Charles II and the Infanta Catherine of Portugal on June 23rd, 1661, for the purpose of enabling England and Portugal to maintain their positions in the East against the aggressions of Holland.

The map on page 975 (Map 1) gives a good idea of the topography in those days. It was merely a cluster of swampy islands, the principal being Colaba (old woman's island) and Bombay Island, Malabar Hill, Girgaum, and Dongree. Surveys of the swamps were made in 1675, and in 1684 authority was received from home to commence the work of draining them. The tidal movements round the islands at that time must have helped to purify the soil to a certain extent, and carry noxious matter out to sea by several channels and openings. The closing of these has aggravated the dampness and foulness of subsoil, which poisons the inhabitants at the present day. The population at that period did not exceed 10,000, and Portuguese society is said to have been depraved and corrupt.

The Dutch historian Baldeus considered the possession worthless on account of its notorious character for unhealthiness, as it was commonly called the "burying ground of the English." To relieve himself of such an encumbrance the King therefore conferred, by letters patent dated March 27th, 1668, the port and the island on the East India Company "in payment of the annual rent of £10 in gold on September 30th in each year." The Abbé Raynal, writing about this "Indian Golgotha," as it was significantly called, stated that no man chose to settle upon a territory so unhealthy as to give rise to the proverb "that at Bombay a man's life did not exceed two monsoons," "Ce pays si malsain où l'on fumait les cocotiers avec du poisson pourri, et où deux saisons étaient la vie d'un homme."

Ralph Fitch was the first Englishman who, in 1583, visited Bombay harbour. He entered it from the east by way of Callian, having sailed in a Persian vessel from the Gulf of Cambay round by the Bassein Creek. The islands on which the city is now built, connected by causeways and breakwaters to shut out the sea, have been converted into a promontory of land, about 22 miles in area. This peninsula (see Map 2) is of an irregular trapezoid shape, with its short side about 6 miles in length towards the sea, and its larger side about 11 miles parallel to the mainland. It may be compared to a saucer filled with impure soil and sullage, and protected against the encroachments of the sea by a rocky rim and embankments.

There is a level plain called the "Flats," about two miles wide, between the two basaltic ridges which form these sides; the highest point, Malabar Hill, reaches an elevation of about 180 feet. If the sea were not artificially shut out much of the flats would be submerged at high tides, and at present during the monsoon the ground is largely flooded between the two lines of railway, the embankments of which greatly obstruct the natural drainage grooves, and consequently conduce to the waterlogging of the soil in the immediate vicinity.

BOMBAY TWO CENTURIES AGO.

A very enterprising, highly intelligent, and observant medical traveller, Dr. John Fryer, visited the island in 1675, and published an account of his voyage and journeys in 1682. The general accuracy and minuteness of his descriptions have furnished the best materials for all the accounts that have since been written of Bombay at that period. His remarks are therefore well worth perusal. He says:

> The population numbers 60,000, more by 50,000 than the Portuguese ever had, a mixture of most of the neighbouring countries, most of them fugitives and vagabonds. At a distance enough from the Fort lies the town, in which confusedly live the English, Portuguese, Topazes (Indo-Portuguese), Gentoos, Moors, Cooly and Christians, most fishermen. It is a full mile in length, the houses are low and thatched with oleas of the cocoa trees, all but a few the Portuguese left, and some few the Company have built. The custom house and warehouses are tiled or plastered, and instead of glass use panes of oyster shells for their windows. There is also a reasonable handsome bazaar at the end of the town, looking into the field where cows and buffaloes graze. The Portuguese have a pretty house and church, with orchards of Indian fruit adjoining. The English have only a burying-place called Mendam's Point, from the first man's name therein interred, where are some few tombs that make a pretty show at entering the haven, but neither church nor hospital, both of which are mightily desired. On the back side of the towns of Bombaim and Mahim, are woods of cocoas under which inhabit the bundaries (those that prune and cultivate them) these hortoes (parts) being the greater purchase and estates in the island for several miles together, till the sea breaks in between them, over against which, up the bay a mile, lies Mazagon, a great fishing town, peculiarly notable for a fish called bumbalo, the sustenance of the poorer sort, who live on them and batty field etc. The ground between this and the great breach is well ploughed and bears good batty. Here the Portuguese have another church and religious house belonging to the Franciscans. Beyond it is Parell, where they have another church and demesnes belonging to the Jesuits, to which appertains Sion, manured by combies (husbandmen), where live the trasses, or porters, also. Under these uplands the washes of the sea produce a lunary tribute of salt left in pans or pits made on purpose at spring tides for the overflowing, and when they are full are incrustated by the heat of the sun. In the middle, between Parell, Mahim, Sion, and Bombay, is a hollow wherein is received a breach running at three different places, which drains 40,000 acres of good land, yielding nothing else but samphire, athwart which from Parell to Mahim are the ruins of a stone causeway made by Pennances. At Mahim, the Portuguese have another complete church and house, the English a pretty custom house and guard house, the Moors also a tomb in great veneration for a seer or prophet. At Salvesong the Franciscans enjoy another church and convent; this side is all covered with trees of cocoas, jawkes, and mangoes; in the middle lies Verulee (Worlee), where the English have a watch. On the other side of the great inlet to the sea is a great point abutting against Old Woman's Island (Colaba), and is called Malabar Hill, or rocky woody mountain, yet sends forth long grass. At the top of all is a Parsee tomb lately reared. On its declivity towards the sea is the remains of a stupendous pagoda near a tank of fresh water (Walkeshuun), which the Malabars visited it mostly for; thus have we completed our rounds, being in circumference 20 miles, the length 8 miles, taking in Old Woman's Island, which is a little low barren island of no other profit but to keep the Company's antelopes and beasts of delight.

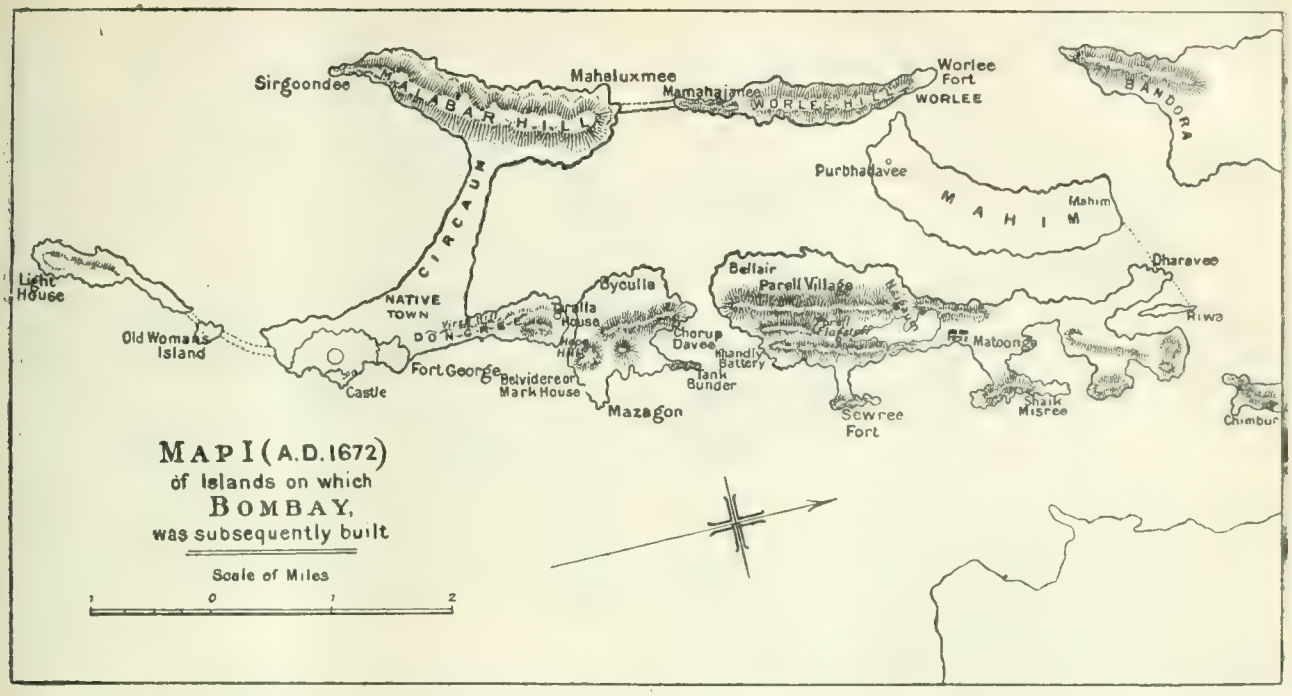
Fryer gives it as his opinion that of every 500 Europeans who came to live on the island not 100 left it, and mentions the prevalent diseases. These were fluxes, dropsy, scurvy, barbiers, or loss of the use of hands and feet, gout, stone, malignant and putrid fevers. But "the disease which was especially fatal in Bombay was called by the Portuguese practitioners of medicine 'the Chinese death' or cholic, and its symptoms were precisely those of cholera morbus." The chief causes of the enormous mortality among Europeans were no doubt, however, malaria, intemperance, impure drinking water, and want of proper care and attendance on the sick. Such is a brief outline of the state of affairs and conditions of life in Bombay more than two centuries ago.

THE POPULATION OF BOMBAY.

By the last census the population of Bombay exceeded 800,000 persons, which in point of numbers entitles it to the rank of the second city in the British Empire. When the island came into our possession in 1662, as above mentioned, the population was about 10,000. In 1716 it was estimated at only 16,000, and as the result of a Government census taken in 1816, the number was 161,550. The population has trebled itself during the last half century, and in no city in the world probably are so many varieties of nationality, race, and religion to be met with. The census returns show an extraordinary disproportion of the sexes, males being largely in excess, but this disparity is partly explained by the great influx of men who come from the outlying villages in search of employment, but leave their wives and families at home. Hindus of all castes constitute about 63 per cent. of the population; Mohammedans about 22 per cent., Parsees about 7 per cent., native Christians and Goanese about 4 per cent., and Europeans a little over 1 per cent., the remainder being made up of Buddhists or Jains, Jews and Chinese. The vegetarians form about 8 per cent., comprising the castes which religiously abstain from eating meat; these consist of Jains, Brahmins, Lingaets and Bhattias. The Jains will not destroy animal life in any form, as they are believers in the transmigration of souls. They form more than 2 per cent. of the population, and are considered the wealthiest sect, having many rich temples in Guzerat and Kattywar. Pinjrapoles, or asylums for old and diseased animals, are chiefly supported by Jains and Banians.

MODERN BOMBAY.

Bombay is no longer a settlement of jungle, rock and swamps, but in many respects the most advanced and Anglicised city in the East. It has a spacious and beautiful harbour, six miles across, splendid docks, palatial public and private buildings, and is the terminus of the two most important Indian railways. Public improvements may be



said to have commenced after the mutiny, but more especially in 1861, when the Vehar Waterworks were opened, after which the population rapidly increased, and an impetus was given to trade which demanded foreshore space, and led to the Elphinstone Reclamation scheme, the clearing away of the ramparts, and filling in of the Fort ditch. Before these improvements were carried out, the whole of the foreshore round the island was a foul cesspool. It was the latrine of the inhabitants of the native town. Indeed, some part of the population still use it for this purpose in several places.

Defective Drainage and Sewerage.

The improvements have cost several millions sterling, and the outlay, though in some cases extravagant, has resulted in converting a filthy and ugly town into a handsome city. It is matter for deep regret, however, that the municipal expenditure on general conservancy and sanitation cannot be said to have been successful in rendering the city healthy. Undoubtedly the difficulties have been great—low-lying flat ground, with an insufficient fall, which scarcely admits of the drains being self-cleansing; a heavy rainfall of an average of 80 inches, and the habits and prejudices of the natives, so incompatible with the principles of sanitary science, have been the most prominent difficulties with which it has been necessary to contend.

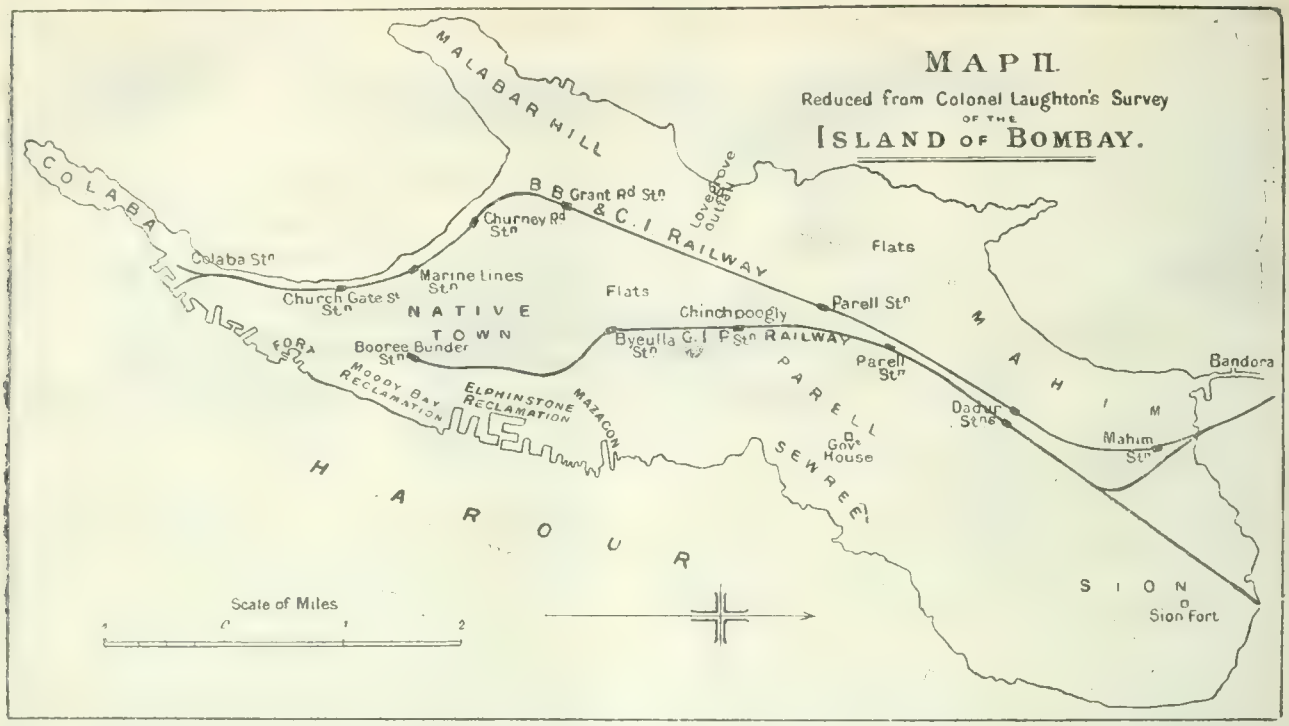
Nearly one-half of Bombay, including Malabar Hill, where European officials and rich natives live and pay enormous house rents, is without any drainage, and the other and lower half of the city is very imperfectly drained. Pipe drains have been laid even in the waterlogged portions of the island without any support or foundation. It is therefore impossible for proper levels to be maintained, to ensure that the pipe drains should act efficiently. Not long ago the main drain at the outfall was half choked with silt, and sewage was found high in the manholes as far back as the Marine lines; the sewers were blocked by roots of trees which entered the imperfectly closed joints, clearly proving pollution of the subsoil by escape of sewage, for where tree roots could insinuate themselves sewage could leak out.

The Health Officer, Dr. Weir,[1] in his report, dated September, 1897, says:

> Owing to a heavy flood, the low-lying portions of Bombay were under water, sewage was thrown up through the manholes, subsoil water welled up where it has never been seen before, the grain stored in the go-downs was soaked with water and then allowed to rot in dark and damp granaries. Trees died, seeming to rot in the ground in consequence of the sewage that soaked their roots. It appears that the Tansa water supply was cut off between July 29th and August 18th, and that the people were obliged to use well water, which caused "a considerable increase in the number of cases of diarrhœa."

The above extracts indicate the vital importance of removing all obstructions to the free flow of storm water to the nearest shore. Under the special circumstances of Bombay, it should not be allowed to enter the sewers, but should be carefully guided, with its surface detritus and impurities, through the natural surface grooves to the sea. Any temporary interruption of traffic by flooding in a few places would be of minor consequence compared to the objectionable nature of separate underground channels for rain water, the haunts of vermin, and in which noxious material accumulates, ferments, and decomposes. From old square-bottomed channels to costly glazed pipes the ground is intersected with drains for the sole purpose of confining storm water that would scour the surface if properly directed. If it were possible to reconstruct Bombay, the sewage should be discharged at Colaba Point, but this being out of the question now, there is no reason why the whole island should remain sewage-sodden until a portion of it is discharged at Lovegrove by means of one pump, which is inadequate to deal with such a vast volume of sewage and sullage. Sewage from Colaba and Mazagon in a temperature like that of Bombay must be in a dangerous state of decomposition before it arrives at Lovegrove. Additional outfalls would be the means of getting rid of it comparatively fresh and inoffensive. The level of the subsoil water might be reduced if a system of agricultural pipes were laid and connected with pumps wherever necessary. Two subsidiary outfalls, one at Colaba and another at Mazagon, are urgently needed, and would chiefly by gravitation rapidly drain the island of much of its filth. Tank reservoirs on the shore at these localities might, it is thought, be made to discharge automatically at the commencement of each ebb tide, which would carry the contents out to sea. The contention that this would produce pollution of the harbour is not well grounded. It is true that the harbour is fouled by the shipping and foreshore population, but the discharge from drains at Colaba and Mazagon would be into the wide arm of the sea. Drainage and purification of the subsoil is a *sine quâ non* if Bombay is to be rendered healthy. Other improvements are vain if this fundamental desideratum be not supplied.

The unsatisfactory state of the drainage of Bombay is the



lamentable result of the bungling of amateurs. A man may be a very useful public works servant without knowing much of modern sanitary engineering, which requires long training and special experience to grapple successfully with difficult localities and conditions. Bombay enjoys two inestimable blessings so far as the purity of its air and potable water is concerned; the sea breeze is pure and refreshing, and the Tansa water is of good quality and plentiful; there are no meters, however, to control the quantity, the supply is abused and wasted, and the subsoil is consequently rendered damp and unhealthy. It is essential to lower the level of the subsoil water, more especially in the north, where many mills have of late years been built on ground reclaimed by heaping up earth and sweepings, which take many years to decay, even if aërated by cultivation and drainage. What prospect has such a soil of ever becoming tolerably pure so long as it remains waterlogged? Sewage stagnating in black pools and ditches can be seen to the north of Byculla and Parell, and passengers arriving and departing by both railways, whilst going through the unsavoury flats, have frequently to hold their noses on account of the nauseous exhalations from mounds of garbage and rubbish.

Overcrowded Chawls.

The cotton mill industry has increased considerably of late years, causing great demand for house accommodation, and jerry building of "chawls" on foul undrained soil has been permitted without proper regulations in regard to light and ventilation. In Kalbadavic Road people live in rooms so low in the ceiling that they cannot stand up in them; yet exorbitant rents are charged for such kennels, and incredibly dense overcrowding, with its accompanying filth and squalor, aggravates the conditions under which these poor people struggle for existence. It is not, therefore, surprising to find plague clinging so closely to such a favourable breeding ground. The hand system of night-soil removal is barbarous and repulsive in the extreme, especially in a large and populous centre, but in Bombay this objectionable practice is unavoidable, because house connections have not generally been established. Sweepers remove the solid excreta in baskets on their heads from the gullies into carts, which, when full to overflowing, are driven to depôts, such as, for instance, that of Carnac Bridge, and emptied direct into the sewer, a loathsome and hideous occupation from beginning to end. When house connections are completed this disgusting and primitive method will cease, and it is hoped the dust and refuse will also be removed in a less offensive manner than is the case in some parts of London at present.

The Government improvement scheme is excellent so far as it goes. It comprises the opening of new and broader streets in the native town, the erection of a superior class of residences for the poorer classes, and the reclaiming of additional land from the sea. But there are many other causes of disease besides overcrowding and defective ventilation. Not the least is concerned with the drainage of the soil and the level of the subsoil water. It is stated that, while eleven years ago the subsoil water was 12 feet below the surface, it has since gradually risen, so that in the northern parts of the city, if not elsewhere, it now lies only 4 feet below the surface. If this be true, the population may be said to be living on a marsh of stagnant water covered by a sun-dried crust. Bombay in the early morning is shrouded in mist—a physical feature suggestive of a very high level of subsoil water.

The Municipal Administration of Bombay.

The progress of Bombay was for many years checked by quarrels about trade between the old and new East India Companies, but in 1708 the two companies were united into one; Bombay was created an independent Presidency, ruled by a Governor in Council, and remained independent until 1773, when a Governor-General for all India was appointed. On the abolition of the East India Company in 1858, Bombay, like all the territories of the Company, was transferred to the Crown. The municipal administration of Bombay previous to 1872 was carried on by a commissioner and a bench of justices. A municipal Bill, passed by the Legislative Council, received the sanction of the Government of India in 1872, and the first municipal elections were held in Bombay in July, 1873. This was the first experiment in municipal government in India, and from a sanitary point of view the trial after nearly a quarter of a century cannot be pronounced altogether a success. During the present prevailing plague epidemic the municipality unaided were for various reasons found unable to cope with the emergency, and were therefore superseded by the appointment of a Special Plague Com-

mittee. If a body like the Bombay Municipality are found wanting in intelligence, tact, and resources in dealing with Public Health questions, what can be expected of small up-country towns, entrusted with local self-government, in the presence of epidemic disease?

The Municipal Commissioner is a highly paid officer appointed by Government, his principal qualification for the post being that he is a member of the Civil Service. The Health Officer, on the other hand, is appointed by the Corporation, subject to the confirmation of Government, and is under the immediate orders of the Municipal Commissioner. He is elected for three years, and can be removed by a vote of not less than two-thirds of the members present at a special general meeting of the Corporation. This arrangement is a mistake. The Health Officer, a specially qualified sanitary expert, should be appointed and serve directly under Government and not under the Municipal Commissioner, who may be merely a young civilian without special knowledge or experience. He should also be independent of the Corporation and not at the mercy of the votes of the members, many of whom are influential owners of house property which comes under the direct surveillance of the Health Officer in his official capacity. The public inquiry that must follow this disastrous outbreak of preventable disease will elicit information as to the steps which the two last Municipal Commissioners have taken to improve the sanitary condition of Bombay, and the results of their exertions in this respect as compared with what was accomplished before the establishment of local self-government by the energy and arduous labours of two such men as Crawford and Hewlett, who did more for Bombay than all the officials of the Presidency during this century.

THE PLAGUE IN THE EAST.

Jeddah.

The information from Constantinople that the plague is rapidly spreading at Jeddah is of most serious import, and requires the anxious consideration of the Continental and Egyptian Governments. Jeddah is 2,000 miles nearer to Europe than Bombay. There is, moreover, tenfold more danger to Europe in plague prevailing at Jeddah or Mecca, than in any part of India, for Mecca is the meeting place of the Mohammedans from every part of the world, and in the pilgrim season forms a centre in which epidemic disease acquires a new vigour, and from which, on the dispersion of the pilgrims, there is the greatest danger of the disease being spread in every direction, even under the most stringent regulations. It is therefore extremely disquieting to learn by a *Times* telegram from Constantinople that the Sultan of Turkey has countermanded the instructions for the isolation of Jeddah.

The proposal that pilgrims should only be landed at Ras-el-Asward or Lith shows a want of appreciation of the gravity of the situation. It is well known that these places were not altogether free last year, and it is a moot point whether the pilgrims from Lith infected Jeddah, or the pilgrims from Jeddah, Lith. The two places are so short a distance from one another that the disease which prevails at the one place is certain to appear at the other. We have never been able to take the sanguine view that it is an impossibility for Europe to be ever attacked again by plague. And with an epidemic which has shown a decided tendency to advance westwards, it seems extremely unwise to permit without hindrance those conditions of overcrowding and movement of large numbers which are the best known factors for the spread of the disease. The prohibition of pilgrims to Mecca from Europe and Egypt is of far greater international interest than the prevalence of plague at Bombay, which formed the subject of an international conference.

India.

Bombay.—The mortality from plague is rapidly declining. The report for the week ending March 31st shows 978 deaths from plague, a decrease by several hundreds from the week before, and the lowest since the last week in January. Dr. Galeotti, of the University of Florence, has arrived in Bombay at the present time with the curative serum plague, produced by Professor Lustig and himself. Patients at the Arthur Road Hospital have been placed at his disposal, and some of the few cases which have undergone the treatment have recovered. A summary of the mortality from plague from the commencement of the recrudescence to the present time is here appended:

1897-1898.

Week Ending	Plague Mortality.	Total Mortality, All Causes.	Average Five Years' Total Mortality.
December 14th	95	785	575
December 21st	158	835	629
December 28th	200	975	652
January 4th	302	1,061	724
January 11th	450	1,307	712
January 18th	651	1,540	754
January 25th	834	1,726	748
February 1st	927	1,871	743
February 8th	1,113	2,067	836
February 15th	1,257	2,195	775
February 22nd	1,082	1,974	758
March 1st	1,097	2,080	716
March 8th	1,283	2,184	688
Total	9,449	20,600	9,310

Throughout the epidemic the sect of "Jains" has suffered more severely than any other. The excessive liability of the Jains to plague remains an enigma. Possessed of great wealth, endowed with keen business capacity, and with no starving or even indigent poor in their community, their power of resistance is less than that of the poorest Hindus and the lowest outcasts. It must be remembered, however, that the Jains are essentially a town-dwelling race, and are not bred to hardships nor to the more robust occupations of the labourer. Their general physique is therefore of a lower standard.

Jullundur District.—The news from this region of the Punjab is not reassuring. The plague seems to be increasing in an ever-widening circle, entailing an immense amount of work on the art of the sanitary authorities owing to the scattered nature of the infected dwellings. As many as twenty-six villages are at present infected, and the number increases almost daily.

Karachi.—A Dalziel telegram states that plague has reappeared at Karachi, at the mouth of the Indus. The date of the outbreak is given as April 2nd, but the disease must have been present some days before, as on the day mentioned the natives were already leaving the town in numbers, and urgent steps had been taken to deal with the threatened recrudescence.

Poona.—The mortality from plague ceased during the past week. We would warn the Poona Municipality to keep a strict watch on their city, however; it is by no means certain that the last outbreak was a true recrudescence of the disease; many regard it but as a relapse of the original outbreak, which was merely scotched for the time being by the energetic measures which were taken at first, and relaxed all too soon in deference to native prejudice.

Bengal.—The care with which Bengal is being guarded against plague may be learned from the following circumstance: A Sikh from the infected district of Jullundur in the Punjab was stopped on the frontier of Bengal at the Chausa plague camp. Three days after admission, or six days in all since he left his home, he was attacked and died of an illness which was proved to be plague. The Sikh the moment he was taken ill was removed from the camp, and placed in a hospital. All persons with whom he had come in contact were isolated and carefully watched. Such is the *régime* carried out in Bengal at the present time, and it testifies to the care and vigilance which prevail at the outposts of the Presidency.

Hong Kong.

The lay press in Hong Kong report a few cases of plague in the colony. We have no official confirmation of the news. Small-pox is very prevalent in Hong Kong at present.

Swatow.—Plague is said to be raging at Chan-choo-foo, a few miles up the river from Swatow, in the Quang-tong province, China.

ROYAL COLLEGE OF PHYSICIANS.

A MEETING of the Fellows was held on April 4th in accordance with the statute, Sir S. WILKS, Bart., F.R.S., in the chair.

The PRESIDENT delivered his annual address, in the course of which he said that the most memorable event of the past year had been the election of His Royal Highness the Prince of Wales to the Honorary Fellowship, which had been an honour to the College, and a real source of gratification to his Royal Highness, as well as to the whole profession. The College had during the year maintained its watchfulness with regard to the medical curriculum, and the work at the Laboratories sufficiently demonstrated its interest in the progress of science. The various lectures delivered had been well worthy of the College. As regarded the interests of the profession the College had not been unmindful of its duties, and he instanced in proof the steps they had taken in regard to the reconstitution of the London University and also the Army Medical Department. The visit of some of the Fellows to Netley, and the memorial of the College to Government on the subject of venereal diseases in the Army had had considerable weight. The President concluded this portion of his address by indicating what in his opinion ought to be the attitude of the College with regard to certain public questions; for example, unqualified practice, the Midwives Bill, and hospital reform. He then gave short obituary notices of the following sixteen deceased fellows, namely, Dr. James Andrew, Sir J. C. Bucknill, Drs. J. Braxton Hicks, Frank Chance, Owen Daly, T. Bell Fletcher, R. M. Gover, Alfred Hall, C. A. Lockhart-Robertson, W. H. Robertson, W. Roxburgh, James Turnbull, Henry Thompson, W. Wadham, Sir R. Quain, and Dr. C. West.

On the motion of Sir ALFRED GARROD a cordial vote of thanks was passed to the President for his address.

The ballot was then taken for President, when Sir Samuel Wilks was re-elected by a practically unanimous vote, only three stray votes being given to three other Fellows. He was then formally installed by Dr. Gee, the Senior Censor, and gave his faith in the usual way, and in a few words thanked the Fellows for their confidence in him.

Sir W. PRIESTLEY said that there was a rumour with regard to the concessions the War Office were about to make in the matter of the Army Medical Department that promotion would be stopped at the rank of Colonel. This he thought was most undesirable; it would deprive the concessions of much of their grace and efficiency, and he moved a resolution to the effect that the College should make a representation to the Government in this sense.

This was seconded by Sir J. FAYRER, who said that it was absolutely essential for the satisfactory working of the new corps in relation with other branches of the service that medical officers should be able to attain the rank of general officers.

The resolution was supported by Dr. PLAYFAIR, and carried.

The PRESIDENT announced that he and several of the officers and Fellows had attended the funeral of the late Sir R. Quain, and a vote of sympathy with his relatives was passed on the proposal of Dr. POLLOCK, who spoke of the very strong affection which Sir R. Quain had felt for the College.

The PRESIDENT mentioned that the interviews of the delegates with the metropolitan members of Parliament about the University of London Bill had been of a satisfactory character.

The PRESIDENT announced that the late Sir R. Quain had on February 17th made the College a present of plate, consisting of a bowl into which all his medals won at the University of London had been inserted; a large salver, given him in recognition of his services as Secretary of the Pathological Society for the long period of six years; another salver of the same size, the gift of a private patient; and a silver candelabrum, fitted for the electric light, also the gift of a private patient; and it was resolved, on the motion of Sir JOSEPH FAYRER, that a letter be written to his relatives expressive of the gratification the College had in accepting the gift.

A microscope, formerly belonging to the late Dr. Edward Palmer and presented by his son, was also accepted.

Communications from the Secretary of the Royal College of Surgeons were received, and also a letter inviting the College to send a representative to the Madrid Congress on Hygiene and Demography. Dr. Odling was nominated.

A memorial from Dr. Charles and other practitioners in Italy was received asking the College to assist them in protecting the interests of British practitioners in Italy in view of proposed legislation, and it was left to the President to do what he thought best.

The resignation of his diploma by a Member was accepted.

Reports from the Committee of Management and the Laboratories Committee were received and adopted.

LITERARY NOTES.

SIR GEORGE ROBERTSON, K.C.S.I., the "brave civilian" of Chitral, has written a history of the famous siege from the point of view of one who was actually besieged in the fort. The work will be published by Messrs. Methuen in the autumn. Sir George Robertson, it is well known, is an officer of the Indian Medical Service. He was educated for the profession at Westminster Hospital, and has had a very distinguished career in India.

The *United Temperance Gazette* for March contains among other papers of interest an appreciative account of the temperance work of the late Miss Frances E. Willard, with a portrait. The number is, as usual, copiously illustrated with portraits of persons who in one way or another have deserved, or are deserving, well of the temperance cause. We have also received the bound volume of the same periodical for 1897. The contents are interesting to all who have the welfare of their fellow men at heart, and the publication is altogether well calculated to advance the cause which it is intended to promote.

Dr. John Beddoe, F.R.S., late President of the Anthropological Institute, who is now in his 72nd year, continues his work in the field of anthropology, which he has cultivated to such good purpose. He is collecting and arranging material bearing on the modes and effects of selection in man. Dr. Beddoe, who lives at Bradford-on-Avon, in Wiltshire, took his M.D. degree at Edinburgh University in 1853.

In an inaugural dissertation published in Berlin last year and noticed in the *Centralblatt für Anthropologie*, for January, 1898, Dr. Paul Bartels submitted the question whether sex can be distinguished in skulls to a new and searching examination. After a careful study of 1,090 skulls—685 male, and 405 female—he was unable to discover any positive characteristic of sex. The fossa tympanico-stylo-mastoidea, of which much has been made by some osteologists, he shows to be inconclusive, and the same is true of every other trait which has been advanced as a distinctive mark of sex.

The first part of a *Handbuch der Krankenversorgung und Krankenpflege* has recently been published by August Hirschwald, of Berlin. This publication, which it is proposed to complete before the end of the year, promises to be a valuable and exhaustive work on all matters relating to hospitals and the care and nursing of the sick. The editors, Dr. G. Liebe, P. Jacobsohn, and G. Meyer have secured the help of many authorities, who will deal systematically with general and special hospitals, with convalescent institutions, and with the management of sick people of different ages and stations in life. The first portion of the work consists of an interesting historical review of the subject, in which a list of past and present associations established in Germany for the relief of the sick and injured is given.

It is announced that Messrs. Hutchinson and Co. will shortly publish a posthumous work by the late Sir Benjamin Ward Richardson, which is to contain about fifty full-paged illustrations.

The Index of the *Psychological Review* just issued (Macmillan Company, New York and London) contains a full bibliography of the literature of psychology and cognate subjects for 1897, compiled by Livingston Farrand, of Columbia University, and Howard C. Warren, of Princetown University, with the co-operation of N. Vaschide, of Paris, and B. Borchardt, of Berlin. The Index extends to 146 pages, of which a considerable proportion is occupied by references to publications of interest to anatomists, physiologists, neurologists and pathologists.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SPECIAL SESSION, 1898.

Tuesday, April 5th.

Sir Dyce Duckworth, M.D., in the Chair.

Members.

Dr. James Little was introduced to the Council, on his appointment as Crown Representative, by Dr. Atthill.

Official notification was made by the Secretary of the appointment of the following members of Council: Sir Wm. Roberts, as representative of the University of London, for one year from April 22nd, 1898; and Dr. Hector Clare Cameron, as representative of the Faculty of Physicians and Surgeons of Glasgow.

Business of the Special Session.

The Chairman said that the Council met under the shadow of the loss of their President and friend, Sir Richard Quain, who had been more intimately bound up with the work and interest of the Council than any other member of it. As the senior executive officer of the Council, he felt it was his duty to summon the special meeting in order to fill the vacant Presidential chair. But even had the late President been alive, it would have been imperative to summon a special meeting to consider the provisions of the Midwives Bill in obedience to a request from the Privy Council that the General Medical Council should furnish it forthwith with its opinion on the Bill.

Election of President.

Mr. Teale moved:

That Sir William Turner be elected President of the General Medical Council.

Sir William Turner, he said, had very strong qualifications for the post. He had seen a length of service on the Council which alone would almost justify his being made the President, but those who remembered his work upon the Council would all feel that he had been a very strong and helpful member as well. He had been on the Executive Committee since the year 1887, and on the Business Committee since 1892. He had recently acted as temporary Chairman in a manner which had commended him to every member of the Council, and he had acquired a great deal of knowledge of the work that had to be done by the President, for he had been brought into close contact with the late President, and had thus no doubt added to his enormous experience of the work of the Council. In addition, Sir William Turner had had great experience in public work, apart from the Council, from his position as Professor in Edinburgh and one of the most prominent members of the Executive of the University. Moreover Sir William was a member of the Royal Commission on the Medical Acts which led to the Medical Act of 1886, under which the Council now worked. Therefore in the matter of experience as well as knowledge the Council had in Sir William Turner one exceptionally qualified to be President. Apart from all such considerations the Council would agree with him that Sir William was a fit person to represent it as President. There was also an accidental advantage in finding a man like Sir William Turner, namely, that he was a member of the Scottish Branch. The Council was not an English Council, but a Council of Great Britain and Ireland, and it was a desirable thing that now and then the more imperial character of the Council should be emphasised by going outside England for its President.

Dr. Bennett seconded the motion.

Mr. George Brown asked whether a definite period of office was fixed. He cordially agreed that a better selection than Sir William Turner could not be made, although it was to be regretted that he resided so far away from London. He thought it would be desirable to elect a president for two or three years, for when a long period was chosen the form of government tended to become autocratic.

Mr. Carter pointed out that the Council had no power to elect a president for a longer period than he sat as a member of the Council, and Sir William Turner would sit as a member until December 18th, 1901.

The resolution was carried *nem. con.*

Sir Wm. Turner then entered the Council Chamber, and was inducted to the chair by Sir Dyce Duckworth, amid the cheers of the Council.

The President said he need scarcely assure the members how greatly he felt such a mark of their confidence as was implied by his election to the presidency of the supreme administrative body of the profession. It was the highest position which any member of the medical profession could hope to reach, and he would be profoundly ungrateful to the members if he did not feel fully the sense of their graciousness, and also the sense of responsibility which had been imposed upon him, because the office of President was becoming more and more as years went by a position of greater responsibility. The Council was consulted by the Government; it was brought into closer relation with all the great educational bodies in the country, and its duties were of an arduous and onerous description. When he looked back to the year 1873, the year in which he entered the Council, the Council had for its President the late Sir George Paget, representing on the Council the University of Cambridge. He was succeeded by Sir Henry Acland, and under his presidency, with the exception of three years, he (Sir William Turner) sat for fifteen years. Then followed Mr. John Marshall, and lastly the President who had just left them. When he looked back on those distinguished men he felt that he had had a training in the work. He had been associated with men who made it one of the great objects of their lives, one of their great duties, that they should do their work as Presidents of the Council fully and faithfully. He hoped to follow in their steps, and he could assure the members that in assuming the responsibility which had been imposed on him he did so with the full intention of discharging his duty to the best of his ability.

At the request of the President, Sir Dyce Duckworth, Mr. Carter, and himself were appointed a Committee to draw up a minute expressing the sympathy of the Council with the family of the late President at the bereavement which they had sustained.

Midwives Registration Bill.

The Report of the Midwives Bill Committee then came before the Council for consideration.

In moving that the report should be received and entered on the minutes, Dr. Glover, who, in the absence of Sir Richard Thorne through illness, acted as Chairman of the Committee, briefly described the purposes for which the Bill was framed. The Bill, he said, was to enable the poor to distinguish between trained and untrained midwives. It provided that a woman should not call herself a midwife who was not registered. Her registration was to be on one of two grounds—first, that she had some amount of training and personal examination, and secondly, that she had been at the time of the passing of the Bill some year or two in practice as a midwife. The Bill also provided a system of examination under an Examination Board. There was a provision for giving the Board power to lay down rules and regulations to guide the conduct of the midwives. Some of those rules were to be subject to the approval of the General Medical Council, and some of them not.

Dr. Atthill seconded the motion, which was agreed to.

The Committee reported that they were of opinion that the answer to be sent by the Council to the Lord President might be conveniently based on the lines of the following report:

GENERAL DESCRIPTION OF MR. BALFOUR'S BILL.

In a prefatory memorandum to the Bill, it is stated that its chief object is "to enable the public, and especially such of the poor as are in the habit of employing midwives, to distinguish between those midwives who have been trained and have given evidence of being competent for their duties, and those who have not."

The Bill, however, does not contain any provision forbidding the practice of the latter class, and thus entirely fails to give that protection to the poorer classes from the risks which they incur at the hands of ignorant women professing to act as midwives, to which protection the Council have always contended they are entitled.

The only justification of such legislation as is contemplated in the Bill is that it will tend to protect lying-in women from the hands of the incompetent. Unless the failure of the Bill to do this can be corrected by such amendments as are suggested below, the passage of it would in the opinion of the Committee be a retrograde measure tending to the degradation of midwifery as an art, and to a continuance of the present preventable mortality of lying-in women.

Under Clause 2 the term "midwife" is defined to mean "a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under the Act." Persons of the male sex are excluded by this definition; it also excludes the prefix "natural" before the word "labour," the insertion of which was considered necessary by the Council in 1895.

By reason of this omission from the definition the Bill proposes to give a legal status to a new order of practitioners in midwifery, who are women not properly qualified to take sole charge of midwifery cases, and thus directly contravenes the Medical Act (1886), 49 and 50 Vict. cap. 48, by which no person can be registered to practise midwifery unless also qualified to practise medicine and surgery. The Act in question was enacted for the prime purpose of preventing the injury to the public resulting from persons practising one of the three divisions of the triple qualification without any assured knowledge of either of the other two subjects. The Bill, by its Clause 2, proposes to re-establish the old and dangerous position.

Further, the clause makes it no part of the duty of the midwife to do more than attend at the time of the labour, and provides in no wise for the nursing and after-care of either the mother or the newly-born infant during the lying-in period.

The Bill proposes to establish a "Midwives' Register," and also a "Midwives' Board," for the "purpose of carrying out the provisions of the Bill."[1]

Clause 3 limits the use of the title "midwife" to women who are on the register, attaches to the employment of that title by others a penalty not exceeding five pounds, directs that no woman shall be registered until she has complied with the rules and regulations to be laid down under the Act, and provides by subsection (4) that the certificate of her registration shall not confer any right or title to be registered under the Medical Acts, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate, or any certificate of the cause of death.

Certificates of still-birth are not mentioned, neither is any fine nor penalty specified for breaches of subsection (4).

This clause does not provide any means for preventing wholly ignorant and untrained women from practising midwifery, nor does it prevent such persons from recovering charges for their services.

Further, there is no provision in the clause to prevent a registered midwife from employing uneducated assistants and substitutes.

Clause 4 provides for the registration, on application made within two years from the passing of the Act, of any woman who at the time of its passing has been in *bonâ-fide* practice as a midwife for a period of two years, or who at that time holds a certificate in midwifery from the Royal College of Physicians of Ireland, or the Obstetrical Society of London, or such other certificate as may be approved by the Board. By this clause existing midwives of any kind may, without any evidence of character, claim registration as a right at any time during two years after the passing of the Bill. The unprecedented position of authority proposed to be conferred by this clause upon the unincorporated "Obstetrical Society" must also be noted. There is no provision in the Act for re-registration, whether after change of address, change of name, or restoration to the Register after erasure.

Clause 5 provides that the Midwives' Board shall be "constituted by the General Medical Council," and that it shall consist of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, three by the Incorporated Midwives' Institute; and of "six persons (not necessarily medical) to be appointed for terms of three years by the Lord President of the Council."

It is not easy to understand in what sense a Board so appointed can be said to be "constituted" by the General Medical Council, which is not given any voice in the selection of any of the members of the Board in question. The Council, in 1895, recommended a Board of thirteen registered medical practitioners, twelve to be appointed by the four bodies mentioned above, with a chairman to be appointed by the Lord President. It will be observed that the Board proposed by the Bill would be more numerous, and therefore more costly, than that proposed by the Council; and that one-third of its members need not be registered medical practitioners, and are constantly eligible for reappointment, whereas the medical members are not.

The same clause provides that the Corporation members of the Midwives' Board shall be "appointed" by the respective bodies, and that the Crown members shall also be "appointed," but "for terms of three years;" and it afterwards provides that one third of the "elected" members, no election having been mentioned, shall retire annually, but shall be eligible for re-election after the lapse of a year. The clause is not very intelligible, but it may, perhaps, be assumed that the word "elected" is intended to apply to the Corporation members, and that the Crown members, unlike the "elected" ones, will be eligible for immediate reappointment on the expiration of their three years of office. It would further appear that the Crown members would all go out of office at the same time. However this may be, it is evident that the Board would be a body of fluctuating and uncertain composition; and it may be questioned whether the discretion to be reposed in it is not too large.

This clause of the Bill casts upon the proposed Midwives' Board the onus of arriving at decisions on nearly all the more difficult questions of principle which are likely to arise in connection with its subject matter, and places it under the control of the General Medical Council with regard to some of these, but not with regard to others. Thus, the Board is to be sole authority for—

(1) Making rules for regulating the conditions of admission to the Register of midwives other than those in *bonâ-fide* practice at the time of the passing of the Act, and for the mode of conducting the qualifying examinations.

(2) Appointing examiners.

(3) Deciding upon the places where, and the times when, examinations shall be held.

(4) Preparing and publishing annually a Register of Midwives.

(5) Deciding upon the conditions under which a midwife may be suspended from practice.

(6) Deciding upon the removal from the Register of the name of any midwife for disobeying the rules and regulations from time to time laid down by the Board, or for some other misconduct, and for deciding upon the restoration to the Register of any name so removed.

On the other hand, in framing rules for regulating the admission to the Register of women already in *bonâ-fide* practice as midwives at the passing of the Act, in framing rules for regulating, supervising, and restricting within due limits the practice of midwives, and generally in doing any other duty which may be necessary for the due and proper carrying out of the provisions of the Act, the resolutions of the Board are to be subject to the approval of the General Medical Council. While expressing its willingness to act in the supervisory manner thus proposed by the Bill, the Council should again, as in 1895 (*vide* minutes of the General Medical Council, Vol. XXXII, p. 86), point out that proposals which seek to impose upon it fresh statutory duties calculated to increase the number, duration, or expense of its sittings, unless provision for the necessary payment is made from some other source than the funds derived from the registration of medical and dental practitioners, are inequitable and contrary to the Acts under which the Council is appointed.

Clauses 6, 7, and 8 deal with questions of fees and expenses of the appointment of a Registrar, and of the provisions, etc., of a Midwives' Register.

Clause 9 requires that any local sanitary authority in England and Wales shall appoint its medical officer of health or other medical practitioner or practitioners, to be a local supervising body over the midwives in the district. The duties of this officer or officers would be numerous, and some of them would be very onerous. They include the general supervision of a number—often large—of midwives, the investigation of any charges as to malpractice, negligence, or misconduct on their part than anyone may choose to make; the keeping of a copy of the Midwives' Register for public inspection; the determination as to the validity of the claim of any midwife to be placed on the Register; and, under Clause 10, the reporting of the death of any midwife in the district.

No fee or remuneration is proposed for the performance of all these duties, the intention probably being that they should, as a rule, be thrown upon existing officers—namely, the Medical Officers of Health, some 1,600 in number, whether they assent or not. The duties are, however, almost without exception entirely foreign to those of a medical officer of health; they largely concern the well-being and comfort of individual women, whether parturient or midwives; and they tend to turn the health officer at one time into a detective, at another into a judge. Apart from the question of controlling the occurrence and spread of puerperal fever, these duties should not, in the opinion of the Committee, devolve on the health officer, who, in nine cases out of ten is a busy practitioner.

A survey of the clauses thus summarised shows, as mentioned above, that whilst the Bill seeks to protect the title of "midwife" by the aid of a penalty, it does not render illegal the attendance on natural labour for gain by women who are not registered, and consequently does not seriously afford any reasonable check to the evils which at present are causing much injury and suffering to lying-in women and children, and to remedy which the Bill has been brought forward.

GENERAL CONSIDERATIONS AND RECOMMENDATIONS.

In considering the Bill referred to them, your Committee have held in view the previous conclusions of the Council, to the effect that it is most desirable that measures should be adopted to protect parturient women of the poorer classes from the grave risk which they now incur owing to the practices of midwives, many of whom are most ignorant, and nearly all of whom carry on their work without any medical supervision. In this view they thoroughly concur; and having regard both to the provisions of the Bill as submitted to Parliament and to the serious omissions from it, they submit that no measure should be considered as satisfactorily meeting the requirements of the case unless it contains provisions to the following effect:

(1) That the title of the Bill shall be: A Bill to Promote the better Training of Midwives and Midwifery Nurses, and for the Compulsory Registration of them as such. (See Minutes, Vol. XXXII, p. 82.)

(2) That the term "midwife" shall be defined as meaning a woman who undertakes to attend cases of natural labour (see Minutes of Council, Vol. XXXII, 1895, p. 84), and to tend as a nurse the mother and newly-born infant during the lying-in period.

The term "Midwives' Board" should be defined in the same words as in the Bill of 1895.

(3) That it shall be the duty of the local sanitary authority of every district to appoint such registered medical practitioners as are willing to be so appointed, to whom midwives shall be required to apply for assistance and advice in all cases other than cases of natural labour, and under all circumstances which may be laid down by the Midwives' Board as calling for medical intervention. The Local Authority shall pay to every registered medical practitioner so consulted a sum of not less than one guinea, and not more than two guineas; provided always that when the patient is able to pay for such medical services the Local Sanitary Authority shall recover the fees for the same from the patient or other responsible person by ordinary process of law.

(4) That no woman, or any association of persons formed for the purpose, shall either habitually or for gain attend, or undertake to attend, on a lying-in woman, unless the person attending, and all the members of

[1] In the Bill of 1895 the term "Midwives' Board" was defined as "constituted for the purpose of carrying out the provisions of the Bill subject to the approval of the General Medical Council."

any association providing such attendance, be registered according to the provisions of the Act.

(5) That the certificate of registration shall not confer on any woman the right to sign a certificate of stillbirth, or any medical certificate, and that a penalty be imposed under Clause 3 for the granting of certificates referred to in that clause.

(6) That every woman registered under the Act shall annually register her name and address on the payment of a nominal fee on or before a day to be named by the Midwives' Board, and that provision for re-registration shall be made.

(7) That no registered midwife shall employ as assistant or substitute any person who is not also herself registered.

(8) That the privilege accorded to existing midwives to register under Clause 4 of the Bill be limited to one year from the passing of the Act; that by the same clause no evidence of *bonâ fide* practice or certificate in midwifery be accepted for the purposes of registration except as approved by the Midwifery Board; and that no woman be allowed to register without evidence being furnished to the Board that her character is satisfactory.

(9) That the term "constituted," as applied to the Midwives' Board in Clause 5, be defined in the Bill.

(10) That the Midwives' Board should consist of registered medical practitioners, four to be elected by the Royal College of Physicians of London, four by the Royal College of Surgeons of England, and four by the Apothecaries' Society of London, and of one Chairman to be appointed by the Lord President of the Council; that a quorum be defined (see Minutes of Council, Vol. XXXII, 1895, page 82); and that all regulations framed by such Board shall be subject to the approval of the General Medical Council.

(11) That since the duties proposed to be cast under the Bill on the General Medical Council could not be carried out unless a considerable portion of each sitting of the Council were devoted to that purpose, which would involve a large increase of expense, and since the funds of the Council consist solely of fees paid by medical practitioners for admission to the *Medical Register* in Scotland and Ireland, as well as in England and Wales, such additional duties ought not to be imposed upon the Council unless a grant be made by the Treasury to meet the expenses involved. (See Minutes of Council, Vol. XXXII, 1895, p. 86.)

(12) That undue assumption of responsibility by registered midwives shall be specially provided against, and legal protection afforded to the public against malpraxis.

(13) That provision should be made in the Bill to make it penal for any person or body of persons in the United Kingdom to grant, or to profess to grant, any certificate in midwifery, for the purposes of this Act, to any woman other than that provided for in any Act that may be passed.

(14) That there should be statutory control and inspection of private lying-in homes.

(15) That all penalties recovered under the Act be paid to the Treasurer of the Midwives' Board.

(16) That this Act should be made to apply to Scotland and Ireland, as well as to England and Wales, in which case the constitution of the Midwifery Board should be altered accordingly.

JAMES GREY GLOVER,
Acting Chairman
(in the absence of Sir Richard T. Thorne from illness).

March 25th, 1898.

NOTE BY MR. CARTER.

I desire to place on record my dissent from many of the opinions expressed in the foregoing report, whether they are introduced into the portion said to be a "description" of the Bill, or into the subsequent "considerations and recommendations."

R. BRUDENELL CARTER.

NOTE BY MR. BROWN.

Whilst agreeing generally with the report signed by the Acting Chairman of the Committee, I desire to suggest further that the Privy Council be informed that in any Act of Parliament regulating midwifery practice by women, it is desirable that the title or titles which a person registered under the Act may take or use, shall be strictly defined, and that the title or titles should clearly indicate that the holder is to be regarded rather as a nurse than as an independent practitioner of midwifery. I would suggest the titles "midwifery nurse" and "obstetric nurse" as sufficiently distinctive of the calling of those women whose names are permitted to be placed on the Register, and no other title or description should be used by them. The use of such titles as licentiate or diplomate in midwifery or obstetrics should be strictly prohibited.

GEORGE BROWN.

Dr. MacAlister moved:

That the Council now go into Committee of the whole Council for the purpose of considering the recommendations contained in the report of the Midwives Bill Committee.

Dr. Bruce seconded the motion.

Dr. McVail moved as an amendment:

That instead of proceeding to consider the Midwives Bill in Committee, the General Medical Council do agree to inform his Grace the Lord President of the Privy Council that the General Medical Council is of opinion the Bill should not be passed by Parliament, as the public safety requires that any person who is to be recognised by law as a practitioner in midwifery should have a knowledge of midwifery and medicine and surgery not less than is at present required for admission to the *Medical Register*, which is open equally to men and women.

To go into Committee, he declared, meant that the Council generally approved of the leading principles of the Bill, which was that of creating a new order of medical practitioners, practitioners who were to act quite independently of the medical profession as a whole. The Bill threw on the Council the onus of saying what class of cases the women were to attend to. He laid great stress on the difficulty of defining what was and what was not natural labour, and asked how an ignorant woman was to do what some of the most distinguished obstetricians who ever lived found difficulty in doing. It was impossible for a woman, he contended, to distinguish at the beginning whether the case was going to be one of natural labour or not. Should the scheme succeed, the bulk of midwifery cases would fall into the hands of midwives, and medical men would only be called in to the more dangerous cases; but it was utterly absurd to imagine that there could be a class of skilled men to do the dangerous work, if the ordinary work was taken out of their hands. Another thing was that the doctor would often be called in when the child's life was gone and the mother's life in danger, and he would be placed in a most difficult position. What was to be the province of the women in the week or two before the birth as regards the mother, and in the week or two after birth with regard to mother and child? Where the skilled physician would know that the case required the very greatest care on his part, the woman might consider it simply as a case for putting the feet of the patient in hot water. The whole object of the legislation was to assist poor women, but if a doctor had to be called in at all very little saving would be effected. The whole Bill bristled with difficulties, inconsistencies, and impossibilities. He believed that the only people who desired the Bill were the "anti-common-sense" people, and people who had retained so much of their crustacean ancestors that they thought advance meant progress backward. It was the duty of the Council to give the President of the Privy Council its honest opinion. It was a bad Bill, and utterly to be condemned. Whatever England might do, Scotland would have none of it.

Sir Christopher Nixon seconded the amendment, and, speaking for Ireland, said that that country would follow Scotland in rejecting any attempt to extend the Bill to that country. He regarded the Bill as a very great source of danger. It went distinctly against the Act of 1886, which required all persons who practised midwifery to have a special knowledge of medicine and surgery. If the principle of the Bill was adopted the Council would be simply reversing its policy with regard to unqualified assistants, and would be creating a body of practitioners which would be used as assistants, in fact he was not sure that the women would not be used as assistants by the general practitioner.

Mr. Carter suggested that the Council, even if it approved of the general provisions of the Bill, might fairly inform the Privy Council that the question was not an urgent one. He did not think for a moment that the Bill would pass, because the provision in it which threw large and indefinite expenditure on the rates would excite such hostility in the House of Commons as would never be excited by any question of mortality. He supported the amendment.

Mr. George Brown approved of the amendment, and considered that the report was a most sweeping condemnation of the Bill.

Sir Wm. Gairdner said the great difficulty he had in supporting Dr. McVail's amendment was a doubt as to whether it would not act on the Privy Council in a different manner from that intended. The Bill was sent to the Council to be considered, and Dr. McVail began by saying that the Council would not do so because it considered that no one who was not trained in medicine and surgery should have anything to do with midwifery. The midwife was as old as the Book of Exodus, and she sprang from a primal need of human nature. But there was a difference between a midwife springing up as a social institution and a midwife taken up by the State and coddled into a false position, sat upon by an army of examiners, legislated for by men taken from all the Colleges in the country, and inflated into the position of considering herself a member of a great profession. He advocated the middle course, and thought that a midwife should take out a licence from year to year, to be forfeited if she did anything wrong.

Dr. Atthill was entirely opposed to the Bill as it stood, but he thought something should be done to improve the

education of the persons with whom the Bill dealt. To reject the Bill *in toto* might be a grave mistake.

Dr. MACALISTER said the Council had been called together to consider the Bill, and to refuse to consider it, as Dr. McVail proposed, was to stultify the Council, and act discourteously towards the Privy Council.

Dr. MCVAIL declared he had not the slightest intention of acting discourteously towards the Privy Council. He assumed that every member of the General Medical Council had studied the Bill and the report, and his motion was simply equivalent to throwing out the Bill on its second reading.

Subsequently Dr. MCVAIL, with the consent of his seconder and the permission of the Council, withdrew his amendment, reserving to himself the power of bringing it on at a later stage.

Dr. MACALISTER'S motion was then put and carried, and the Council went into Committee on the Bill.

Dr. GLOVER moved paragraph 1 of the recommendations of the Committee:

That the title of the Bill shall be: A Bill to promote the better training of midwives and midwifery nurses, and for the compulsory registration of them as such.

Dr. ATTHILL seconded.

Mr. CARTER asked if the terms "midwife" and "midwifery nurse" were to be taken as synonymous.

Dr. CAMERON approved of the object which the Committee had in altering the title, but considered that the use of the conjunction gave the impression that it referred to two different classes of persons. He therefore moved as an amendment:

That the title of the Bill should be: A Bill to promote the better training of midwives (otherwise midwifery nurses) and for the compulsory registration of them as such.

Sir JOHN TUKE seconded the amendment.

After some discussion this amendment was withdrawn in favour of the following amendment, moved by Dr. MACALISTER and seconded by Mr. TEALE:

That the title of the Bill be: A Bill to promote the training of women as midwives and to provide for the regulation of their practice.

At the request of the PRESIDENT, Dr. GLOVER withdrew his motion in favour of the amendment of Dr. MacAlister.

Dr. GLOVER then moved:

That the term midwife shall be defined as meaning a woman who undertakes to attend cases of natural labour.

Dr. ATTHILL seconded the motion.

At the suggestion of Mr. HORSLEY the word "only" was inserted between the words "attend" and "cases."

Dr. MACALISTER moved and Mr. CARTER seconded an amendment:

That midwife should be defined as meaning a woman who undertakes for gain to attend women in labour.

but on being put it was lost.

A further amendment was moved by Dr. MCVAIL and and seconded by Sir CHRISTOPHER NIXON:

That the term midwife should be defined as meaning a woman who undertakes to attend cases of natural labour under the supervision of a registered medical practitioner.

Mr. HORSLEY asked Dr. MCVAIL if he intended to suggest that every case of labour in England and Wales was to be seen by a registered medical practitioner.

Dr. MCVAIL said he meant that every woman registered under the Act should during the progress of the case send for the medical practitioner with whom she had made the arrangement.

On being put the amendment was lost, 4 voting for and 20 against, and at the request of Mr. GEORGE BROWN the names were taken down.

On the motion of Dr. MACALISTER the debate was adjourned.

The Council then adjourned.

Wednesday, April 6th.

Sir WM. TURNER, M.D., President, in the Chair.

THE LATE SIR RICHARD QUAIN.

On the Council assembling, on the motion of the PRESIDENT, seconded by Dr. PETTIGREW, the following vote of condolence with the family of the late Sir Richard Quain was unanimously carried:

"That the Council convey to the family of their late President an expression of sincere sympathy and personal sorrow at the great loss which they have sustained by his decease. Appointed for five years as a Crown representative on November 17th, 1863, Sir Richard Quain was reappointed by successive Governments for the same period of time on six successive occasions. In 1864 he was elected by the General Medical Council as one of its Treasurers, and held that office uninterruptedly for twenty-seven years, or until his election as President in 1891. Throughout his long and unbroken membership of the Council he was conspicuous for the zeal and devotion with which he applied himself to its affairs, no less than for the sagacity and moderation with which he took part in, and ultimately guided, its debates. As Treasurer he was a watchful guardian of its financial position and interests, and as member or chairman of successive committees he was largely concerned in the preparation of all the issues of the *British Pharmacopœia*, and in securing for that work the position which it has deservedly attained. In every capacity he has endeared himself to his colleagues by a courtesy and geniality which never failed, by an equanimity which no differences of opinion could disturb, by a dignity and graciousness befitting the holder of a representative office in a great and learned profession, and by a warmth and kindliness of heart which was never for a moment obscured. The Council has not only to offer to his family an expression of the sorrow of the entire body, but also of its sense of the personal loss which each member has individually sustained by the death of so worthy and so beloved a colleague, and so able and so excellent a President."

It was agreed that a copy of the resolution should be forwarded to Miss Quain.

The report of the adjourned debate on the Midwives Bill will be published in our next issue.

A CURIOUS INSTINCT.—Dr. Edmund Andrews, writing in a recent number of the *Journal of the American Medical Association*, says that a number of grey squirrels lived protected in the trees. A female raised a litter of young, and one day, when they were almost a quarter grown, the male squirrel tried repeatedly to enter the nest, but the female, which in that species is the larger of the two, fought him off, and drove him away. This assault was repeated several times, until finally the male desisted. Some time later the female went away, apparently to gather food. Before she returned the male reappeared, entered the nest, and created so great a disturbance that the tree was climbed and the nest examined. It was found to contain four young quarter-grown males, and one or two females. Three of the young males had been freshly castrated, the old male squirrel having in each case bitten off the scrotum and testes with his sharp incisors. It is said to be a matter of no uncommon occurrence to find castrated adult wild squirrels, but in no case has a recent castration wound been found in an adult. Dr. Andrews thinks, therefore, that it is probable that all castrated squirrels taken by hunters are mutilated in infancy by the old males. The instinct is a curious one, and it is difficult to account for it by natural selection, since it would not seem to result in the escape of the strongest or fittest from mutilation, and consequently would hardly tend to benefit or perpetuate the species. The castrated squirrels appear to grow larger, and are apt to be fatter than the perfect males.

SPECIAL CORRESPONDENCE.

BERLIN.

Medical Congresses.—Leprosy in Berlin.—Professor Koch's Report on the Surra Disease.—General News.

There will be no dearth of medical congresses in Germany this year. During Easter week the Surgical Congress will meet in Berlin under the presidency of Professor Trendelenburg (Leipzig); the Congress for Internal Medicine in Wiesbaden, under the guidance of Professor Moritz Schmidt (Frankfort-on-Maine). Then on April 30th the alienists and neurologists of Central Germany will assemble in Jena; on May 1st the alienists and neurologists of West Germany in Baden-Baden. The German Otological Society will hold its annual congress in Würzburg on May 27th and 28th, and the German Dermatological Society its annual meeting in Strassburg from May 31st to June 2nd. Finally, the congress of German Naturalists and Physicians will be held in Düsseldorf from September 19th to the 24th.

There are two cases of leprosy in Charlottenburg (a suburb of Berlin) at present—a married couple, both Germans by birth, but who appear to have contracted the disease during a protracted residence in Brazil. They are under medical care and official supervision. Curiously enough, it seems that their little daughter is allowed to attend school, and mix freely with other children.

Professor Robert Koch has sent from Dar-es-Salam a report of his research on the surra disease of cattle, which he was able to study during an expedition to West Usambara. A series of inoculation experiments have convinced him that though mules are subject to the disease donkeys enjoy immunity from it. This is important, as donkeys are the animals most useful for purposes of transport in the Usambara district.

A new medical club has been founded in Berlin. Professor Lassar, the dermatologist, is its president, and the committee consists of distinguished medical men of the younger generation.

Geihemrath Spinola's "jubilee" as managing director of the Charité Hospital has been celebrated with an abundance of the usual German ceremonies. Congratulatory deputations from the Government, from the chief medical bodies and medical charitable institutions, presentations, a banquet, flowers and bouquets in quantity, letters and telegrams, all testified to the universal esteem and veneration felt for the *Jubilar*, and for the patient and unceasing work with which his name is connected.

MELBOURNE.

Effects of the Unusually Hot Season on Health.—The Death of Mr. Ernest Hart.—Drinking Water and Typhoid Fever.—The Medical Defence Association.

We are having an unprecedented stretch of very hot weather. The temperature is severe and intolerable. The intensity and extent of the bush fires all over the country seriously threaten to interfere with our meat and wheat supply. The number of deaths due to heat apoplexy is increasing every day, and the mortality among infants is really alarming. Our milk supply is badly regulated, and legislative enactments have only contributed by meddlesome and ignorant interference to help to confuse conditions and to swell the death-rate. In the shade (that is, observations made under the double wooden roof) we are having days, even weeks, of 99° F. to 107° F., and last month the temperature went up as high as 109.1° F. In the sun it ranges invariably about 50° higher. In January, 1860, the temperature recorded as the highest is 111° F. in the shade, but so persistent a condition of intense heat as we are going through now has never been recorded before.

We are all grieved to hear of the death of Mr. Ernest Hart. The spread of the British Medical Association to the Australian Colonies, with the formation of Branches in every large centre, originated with Mr. Hart. The Branches have grown and flourished and now form an important link in the great federation of English medical men.

The analysis of the drinking water in connection with the Maidstone epidemic is strikingly similar to that made of the water in Perth, West Australia. Here typhoid is rampant, and Dr. Arthur Nyulasy, of that city, sent samples of the drinking water to Melbourne for bacteriological examination. The results showed abundance of colon bacilli and typhoid bacilli. Dr. Nyulasy, it may be added, visited the catchment area of the water supply, and found 200 men living thereon under most insanitary conditions.

The third annual report of the Medical Defence Association discloses a most favourable state of finances and of good work done. At present the Association numbers 200 members, and the advantage of being on its roll is now well recognised by the profession. As the work in which the Association is interested is accumulating, it is proposed to employ the services of a paid secretary. The important problem of knowing how to deal with the prescribing chemists is one which the Association may be fairly expected to endeavour to solve. Why should chemists enjoy privileges to which their training in no way entitles them?

MANCHESTER.

Literary and Philosophical Society Medals and Lecture.—National Union of Women Workers and Seats in Shops.—Oysters and Typhoid.—Sewage Problem and Bacteria Beds.—Milk and Tuberculosis.—Arsenical Fly Papers.

A most interesting special meeting of the Manchester Literary and Philosophical Society was held last week for the presentation of the Wilde Medal for 1898 to Sir Joseph Dalton Hooker, F.R.S., and the Dalton Medal to Dr. Edward Schunck, F.R.S. This is the first time the Dalton medal has been presented. Sir Joseph Hooker, in acknowledging the honour, recalled the fact that Manchester held a place amongst his earliest botanical reminiscences, for Manchester was famous as a School of Muscologists in the first half of the century. Hobson, Nowell, and Buxton formed a celebrated trio, distinguished for their critical knowledge of British mosses. Afterwards, Professor Michael Foster, Secretary of the Royal Society, delivered the Wilde lecture, on The Physical Basis of Psychical Events.

At the annual meeting of the National Union of Women Workers (Manchester and Salford District Branch) held in Manchester last week, the subject of seats in shops was considered. A statement on behalf of the National Union was circulated at the meeting, and Professor W. J. Sinclair moved:

> That, considering the evils arising from the long and continuous hours during which women shop assistants are compelled to stand, t is meeting strongly supports the Bill to amend the law relating to shops, and especially Clause 9, which is before the House of Commons this year, and trusts that it may become law.

The resolution was adopted.

From a statement made at a deputation to Mr. Chaplin at the Local Government Board, by Dr. Niven, Medical Officer for Manchester, it appears that according to Dr. Niven's own experience, something like one-tenth of the cases of typhoid fever in Manchester had been found to be closely associated with a previous consumption of oysters and mussels.

The sewage problem in Manchester is one of seemingly increasing difficulty. Its magnitude may be gathered from the following facts. The Rivers Committee have to deal with a population of nearly 540,000. Besides domestic refuse the waste liquors of innumerable manufactories and dye and chemical works have to be dealt with, yielding a daily sewage flow of over twenty million gallons. All has to be purified and rendered harmless before being turned into the Ship Canal. Various schemes have been propounded by the Rivers Committee, but not one has been carried out completely. The last scheme proposed—known as the Culvert scheme—was rejected by the votes of the ratepayers. The new Committee are in favour of the bacterial treatment of the sewage, but the Corporation is in a difficult position between the Mersey and Irwell Watershed Joint Committee and the Local Government Board. It has been proposed that filter beds should be constructed sufficient to put the bacterial system to a practical test on thirty-five acres of land which the Corporation already possess near Davyhulme. The bacterial system is very simple in principle. Given the presence of bac-

teria which exist on the putrescible matter it contains, the question is to find the best condition for such bacterial life. The "coke-breeze" filter of Mr. Dibdin affords such conditions. Much oxygen is necessary, so that the coke-breeze must have intervals for aëration. This system is in operation in several large towns.

Professor Delépine addressing a conference at Keswick on Tuberculosis and the Milk Supply, stated that recently Mr. King, the chief veterinary inspector, found on inspection of cattle slaughtered in the Manchester abattoir—and taken as they came—41 per cent. of the cows were affected with tuberculosis. Taking all the animals together, about 28 per cent. were affected by tuberculosis. It seems that in Manchester about 6 out of every 36 cows in a state of advanced tuberculosis have tuberculosis of the udders. Other interesting results were reported, and suggestions made as to the control of the milk supply and the efficient protection of animals and man from tuberculosis.

At the Manchester County Court a case of some importance relative to arsenical wall papers was tried recently. The Council of the Pharmaceutical Society of Great Britain sued an individual for a penalty of £5 incurred by the defendant for having retailed and sold arsenic contained in an article called "new chemical fly papers" contrary to the provisions of the Pharmacy Act, 1868. The defendant did not possess the qualification of a chemist and druggist. It was contended that the defendant brought himself within the meaning of the statute by keeping open a shop for the retailing of poison. Judgment was given for the plaintiff Society for £5, with costs.

CORRESPONDENCE.

THE MIDWIVES REGISTRATION BILL.

SIR,—I very reluctantly take any part in the discussion on the Midwives Registration Bill, which has been going on in the columns of the BRITISH MEDICAL JOURNAL for some weeks past, but there are statements made by Dr. Cullingworth in his recent letter which I cannot allow to pass in silence.

Dr. Cullingworth says that the title "Midwifery Nurses Bill" was proposed by those who were of opinion that the women to be legislated for should not attend a confinement "except under the personal supervision of a practitioner." I was one of the first to advocate the use of the words "midwifery nurse," but I never objected to properly trained women attending labour cases alone, and that this was so is obvious from the fact that for the greater part of my professional life I have been engaged in training these women, and at the present moment there are some hundreds of them practising as "midwives" who have been specially trained by me to do so, but I have in no way altered my opinion that the word "nurse" should be introduced into the Bill. I deny that "the reason for the introduction of the word 'nurse' has disappeared," and I think Dr. Cullingworth's own letter shows that the reasons why it should be are in full force. He says the introduction signified "a limitation of responsibility," and, further on, that "to call her a nurse—with whatever qualifying adjective—is to confound one who has independent charge with one who has not."

I was under the impression that everyone was of opinion that these women should not be "independent," and that their "responsibility" also should be strictly defined and limited, and if the introduction of the word "nurse" into the Bill tends in this direction, that, in my opinion, is a strong argument in its favour.

Even if the Bill were to pass in its present form, these registered midwives would be "independent" only so far as that they will be permitted to stand by and see the woman delivered by her own unaided efforts; if the word "independent" has any meaning at all in reference to these women, it implies that they may deliver a woman when and how they like. Does Dr. Cullingworth desire this?

Dr. Cullingworth tells us that he is "responsible for the drafting of the Bill." Is it possible that he intends it really to create an "independent" order of midwifery practitioners who will be wholly unfitted, by reason of their limited training, for such a position?

I have never laid much stress on the argument which is embodied in the resolution of the Council of the Obstetric Section of the Royal Academy of Medicine which appears in the BRITISH MEDICAL JOURNAL of April 2nd, that the Bill "would tend to create a new and inferior order of practitioners, hurtful to the interest of the profession and dangerous to the public;" but I am bound to say that Dr. Cullingworth's letter, as officially explaining the objects of the promoters of the Bill, has materially altered my opinion in this respect; and if the insertion of the word "nurse" tends to lessen the risk of such a misfortune as expressed in that resolution from occurring, it would be another reason in its favour.

Dr. Cullingworth states that "a midwife and nurse exercise different functions and receive a different training," and yet in a footnote adds "that her functions include a certain amount of attendance on both mother and child during the lying-in period." Will Dr. Cullingworth explain in what capacity? It must be either as a practitioner or as a nurse; if as a nurse, she certainly should be trained and registered as such. As she is not to be trained or registered as such, it seems the Bill is intended to make her a practitioner.

But I contend that every one of these women should be trained as nurses and as midwives. If they are not, it is the fault of those who undertake to teach them. The Rotunda Hospital was, amongst other things, specially founded to train women, and for 150 years has continuously done so, but they have been invariably trained as midwives and as midwifery nurses, and in the certificates given to them they are expressly described as "midwives and nurse tenders," "nurse tender" being the term synonymous with "monthly nurse." These women receive a training which certainly is not inferior, most probably much superior, to that attainable elsewhere, yet during my long professional life I never met one capable of acting "independently." They are fully competent to act as midwives in natural cases, generally capable of detecting abnormal presentations, etc., and are trained to, and invariably do, send for aid when that is needed. But they are moreover good nurses, and tend their patients as such for some days subsequent to labour. Why then is this impracticable in England? Are the women more stupid, or the teachers less efficient? But be the cause what it may, the lying-in women must suffer. The dangers of parturition do not end with delivery. Many, very many, lives, both those of mothers and infants, are lost from causes arising subsequently—from mere want of cleanliness, from septic poison, from the use of septic clothes applied to the vulva, specially where laceration has occurred, etc., from the failure of the attendant to recognise at an early state symptoms which, had it been otherwise, might have led to treatment ere it was too late, not to speak of minor ills so numerous and so distressing to the mother and to the child. I hold that no woman should be registered as a "midwife" who has not also been trained as a "midwifery nurse." It is on this point mainly I am at variance with the promoters of the Bill. If they really desire to benefit lying-in women they will accept that as a cardinal principle. What benefit will accrue to poor lying-in women if this Bill becomes law? The midwife would walk away with her fee as soon as the child is born and placenta removed. She is no nurse, will be taught to despise that calling; she is not a trained practitioner, so would be useless if any bad symptoms were to occur. The poor patient would be left to her fate, managed or mismanaged by some old crone, or ignorant though kind neighbour. Of what use, then, will this midwife be? I presume, though independent, she will not be legally, and certainly not by her training, qualified to apply the forceps, turn, or perforate, etc. She is supposed "to deliver" the patient; in point of fact, she merely sees the woman deliver herself. Any other woman could do that quite as well as "the registered midwife."

The profession in London has so much to be proud of in their splendid hospitals and in the reputation of the medical men attached to them, that they might without loss of dignity learn something from neighbouring countries. In France the midwife has a training infinitely superior to any given in this country. If she is to be "independent" here, let the example of France be copied; if not, and that it be really intended to benefit the poor lying-in woman, let the example set in Ireland be carefully considered. There is not a town there, and

but few country districts, in which women trained as "midwives and nurses" are not to be found following their calling with success. The medical practitioners raise no complaint because these women very rarely presume to go beyond the limits they are trained not to exceed.

If the promoters of the Bill desire to benefit the poor they will adopt the suggestion that these women are trained and registered as "midwives and midwifery nurses." If they do so opposition to the Bill will be materially lessened. If they refuse it is difficult to believe that the good of the poor is the sole object in view.—I am, etc.,

Monkstown, co. Dublin, April 4th. LOMBE ATTHILL.

SIR,—It is very desirable that members of the House of Commons should have before them statements of the feelings of the medical profession in various parts of the country as to the Midwives Registration Bill promoted by the Midwives Institute. The Bill as introduced into the House of Commons this year by the Right Hon. J. B. Balfour is identical with that introduced by Mr. Tatton Egerton last year. Many of the Branches of the British Medical Association have passed resolutions with regard to the Bill, and I shall be glad to receive from the Secretaries of Branches copies of any such resolutions in order that they may be printed together, with the view of calling the attention of the House of Commons to the extent and unanimity of the opinion which exists with regard to the unsatisfactory character of the Bill. I shall also be glad to receive copies of similar resolutions passed by other medical societies.

I would suggest also that it would be desirable that the course which the East Anglian Branch have decided to adopt should be imitated, and that special representation should be made to members of Parliament for the districts comprised within each Branch.

At present no petition against the Bill appears to have been sent in, although the presentation of several in its favour has been announced. Petitions, of course, have not very much weight with the House of Commons, except as evidence of public interest in a measure before the House. The absence of any official evidence of such interest in the present case would not improbably be relied upon by the supporters of the Bill as a proof of indifference, if not of approval. It is therefore desirable to show that the profession all over the country has taken a very lively interest in the matter, and probably no more effectual way of doing this could be devised than that of submitting to members of the House of Commons the resolutions which have, during last year and this, been adopted by so many Branches and medical societies.—I am, etc.,

SAM. WOODCOCK,
Chairman of the Subcommittee of the Parliamentary Bills Committee.

Old Trafford, Manchester, April 4th.

P.S.—May I suggest to the honorary secretaries of any of the Branches which may as yet not have adopted resolutions with regard to the Bill, to take an early opportunity of bringing the matter before a meeting of the Branch.

SIR,—I have such a great respect for Mr. Victor Horsley's scientific position, and my personal relations with him have hitherto been so pleasant, that I cannot but deeply regret the tone of his last letter on the Midwives Registration Bill. Medical politics seem to have the same demoralising influence that ordinary politics are said to have. I do not quarrel with him for differing from me in opinion, or for fighting as hard as he pleases for the opinion he believes to be right, provided that in doing so he preserves the rules of civilised literary warfare. No man of the intellectual calibre of Mr. Victor Horsley ought, even in the heat of controversy, to permit himself to throw doubts on the good faith or sincerity of his opponents. Such tactics have a flavour of what is termed in theatrical language "playing to the gallery," and should be left to those who have no better weapons to fight with. If a disputant knows himself to be truthful, and to be actuated by a pure motive, what excuse can he have for suggesting untruthfulness and dishonesty of purpose in his adversary?

With regard to the particular matter in debate, would it not conduce to the attainment of the object in view if a little less personal feeling were shown, and if a little more stress were laid on the fact that, although there are some points upon which the two Committees differ, there are many more on which they agree?—I am, etc.,

CHARLES J. CULLINGWORTH.

Manchester Square, W., April 4th.

SIR,—There are three Bills before the profession, two of which would constitute midwives (new and old) *quasi*-independent practitioners, and the third, by myself, proposes to create trained nurses for the "sick and parturient poor" under medical supervision and control. Our course is clear, namely, to have all three referred to a Select Committee and a new and comprehensive measure introduced by the Government next session. If our opponents are sincere in their professions they will agree to this and so end the controversy. I have reason to believe that several of the promoters of midwives' registration are dissatisfied with the present Bill, which all admit does not meet the case of "the poor," and it would be intolerable to arm the ignorant "Gamp" with powers of "attendance upon both mother and child during the lying-in period," as advocated by Dr. Cullingworth in the March number of the *Contemporary Review* and on page 916 of the BRITISH MEDICAL JOURNAL. No question of expediency or Parliamentary practice could justify such a proposal, and one is struck with consternation that it should be made by one who professes to have the interests of "the poor" at heart and who regards the untrained midwife as the *fons et origo* of puerperal fever and the other maladies of childbirth.—I am, etc.,

East Sheen, April 4th. ALEX. MCCOOK WEIR.

SIR,—The title or term of "nurse" as used by medical men necessarily implies that she acts according to the instructions and under the more or less direct supervision of a registered practitioner. Our district nurses are not allowed to visit cases unless a medical man is in attendance. The proposal of the Parliamentary Bills Committee of the British Medical Association that a clause should be inserted in the above Bill that a doctor should see an obstetric case within twenty-four hours after delivery, appears to me simply futile, as the simplest ostler would consider it useless to lock the door twenty-four hours after the steed had been stolen.

The Deputy Coroner of the City of Manchester, a few months ago, investigated a case of "stillbirth" where the fœtus was living on the arrival of the midwife, as she herself admitted, but on the arrival of the doctor two hours afterwards it was dead, and was not born until another two hours, as it was a case of crossbirth, and everyone will see that to have preserved the child's life, the case ought to have been examined by a doctor immediately after the arrival of the "midwife." How ridiculous, then, is the proposal that a doctor should see the case within twenty-four hours after the birth, as if there were no risks to mother and child before birth! Therefore, what is required is that a doctor, where practicable, ought to see and examine a case as soon as possible after the commencement of labour, and certain cases amongst the poor, perhaps a large percentage, could be handed over to the "nurse;" then she would be a nurse indeed acting under the doctor's immediate supervision and direction.

The above case had not occurred long before Mr. Horsley visited Manchester during his campaign, and he was asked "what he understood by medical supervision of a midwife," and in the course of his reply he mentioned about this visit within twenty-four hours after delivery, when the further question was put to him whether this would take place if death has occurred in the meantime. He innocently replied that would be a case for an inquest. He does not seem to have advanced any further than this, and now this remarkable clause is proposed by the Committee of which he is a prominent member. How many further cases for inquests we shall have it is awful to contemplate.

That the Committee of the above Association should, especially after inserting such a clause as the one indicated, "take power and authority upon itself," to take steps to have the Bill introduced into Parliament without consulting the members of the Association certainly seems to indicate

[1] BRITISH MEDICAL JOURNAL, April 2nd, p 894

that it considers itself an independent power in that body. Surely it will not be introduced in the name of the Association, but in that of the Committee.—I am, etc.,

Manchester, March 28th. G. H. Broadbent.

Sir,—"Everything that is, is for the best in this best of all possible worlds," and I cannot help thinking that the proposals of the Midwives Registration Society, so ably placed before your readers by Professor Cullingworth, will afford a new example of the truth of the famous proposition of Leibnitz. How many men are there who do not regard attending a confinement as a duty which they would gladly transfer to another? In the future this irksome task will become unnecessary.

The recent rule of the General Medical Council against the employment of unqualified assistants is already causing inconvenience to many practitioners who cannot afford a qualified man. It will be remarkable if he may not in the future secure the services of a registered L.O.S. to look after his midwifery.

Finally, I would point out that much teaching work will be required. An immediate demand will be created for 20,000 or 30,000 registered midwives, and all will require educating. The fees for lectures, examinations, and diplomas (at even £1 1s.) should amply repay the profession for any trifling pecuniary loss which the loss of midwifery may entail.

There are many other points in Professor Cullingworth's letter which consideration for your space forbids my discussing.—I am, etc.,

Saddleworth, April 4th. Colin Campbell.

Sir,—The letter you publish from Mr. Victor Horsley in the British Medical Journal of April 2nd obliges me to make a further demand on your space, as I cannot allow some of his fallacies to pass unexposed. The method adopted by Mr. Horsley is to make an assumption based on a mere opinion, to treat this as an unassailable fact, and on this "fact" to base his argument.

He says that it is "absolutely untrue" that the Bill will be an efficient check upon the practice of midwives. He forgets (1) that the method has been successful in other cases, and (2) that a mere statement of his opinion cannot be of sufficient value to entitle him to characterise the opposite view of the question as an "absolute untruth." The House of Commons is by no means without "expert knowledge on this subject:" it has before it the evidence given before its own Select Committee.

Mr. Victor Horsley once more declares that the promoters of the Midwives Bill deliberately intend to place registered midwives in the position of medical practitioners, and that this will be successfully carried out if the Bill passes into law. Both these statements are preposterous in the extreme, and have been repeatedly shown to be absolutely without foundation. He bases his opinion as to the "real character" of the Bill on the slender "salient points" he quotes: (1) That the term "natural" labour has been left out of the definition of the midwife; and (2) that the Midwives Board is no longer defined as exercising its powers subject to the approval of the General Medical Council. In regard to the omission of the word "natural" from the definition of the midwife, this was done because a great outcry had been made by Dr. Rentoul and others, who urged that it was impossible accurately to define natural labour, and that the words ought, therefore, not to be included in the Bill. It was felt by the Bill Committee that the term could be much more accurately defined by the Midwives Board under its regulations for practice, and that the retention of the phrase was, therefore, immaterial. Mr. Horsley has, therefore, to thank his friends for the omission.

With regard to the second point, Mr. Horsley must surely be aware that the General Medical Council has repeatedly stated by resolution that it "would not be able to discharge, and would therefore not be prepared to undertake any duties of detail as to the registration of midwives." The arguments based on these omissions fall therefore to the ground. Mr. Horsley makes the extraordinary statement (in a footnote) that one part of a definition will override another, and that, therefore, the definition in accordance with which persons calling themselves midwives are expressly placed under regulations, will be interpreted to free such persons from all regulations. Really, argument can go no further.

Mr. Horsley challenges my statement that the *Medical Register* does not confer the exclusive right to practise, and he has the audacity to state in this connection that quacks have been repeatedly successfully prosecuted. He knows as well as I do that no quack has ever been successfully prosecuted for practising. Illegal assumption of title has invariably been the charge in such cases, and not non-registration. This reputed right is a point upon which Mr. Horsley is misleading the profession, and misdirecting and wasting its energies.

Finally, Mr. Horsley's letter must be regarded as one more red herring trailed across our path. It affords a very excellent example of the truth of my remarks (*Medical Magazine*, February), that "the rank and file of the opponents of the Bill have been misled, both as to the effects of the Bill and as to possible solutions."—I am, etc.,

Rowland Humphreys,
Hon. Sec., Midwives Bill Committee.

Fellowes Road, N.W., April 4th.

Sir,—Few persons who have the slightest insight into the conditions of practice among the working class can have any doubt of the dangerous character of this legislation. The Bill, if passed, will prove a snare to the general public, will increase the competition among the midwives, and will certainly have a detrimental effect on the interests of medical men who take confinements under 30s. or £2.

It is assumed in the measure that certificated midwives are superior to the ordinary class. I find in my experience that the former, who have never grasped with the understanding and the heart the divine principles of antisepsis, yield to the dirty surroundings of their practice when the hospital restraint is withdrawn. One class is trained in maternity hospitals, the other by the practitioners with whom it comes in contact. In both classes the qualification depends on their capacity to receive and put in practice the instruction. The certificated midwife is more inclined to play the doctor, more skilled and energetic in the art of touting, and less amenable to medical opinion than her humbler professional sister.

Another assumption in the Bill is that untrained midwives cause more septic mischief than trained would in similar surroundings. Whatever may be the cause, whether they do not so readily carry streptococci about with them, or whether vaginal examinations are infrequent, one of the revelations of actual practice certainly is that the ordinary midwives are remarkably free from septic cases, though I grant that when one occurs a series is likely to follow. The existence of so much puerperal septicæmia is a question of national importance, but the remedy is not found in giving the legal state of registered practitioners to women with six months' training. It seems to me that the Association should appoint a Committee, to consist for the most part of general practitioners and bacteriologists, to determine the causes of the evil, and to formulate an authoritative remedy.

In this city there is happening what I assume is occurring elsewhere: the drunken "howdies" are being replaced by sober, respectable, and tidy women, and the increasing sense of decency among the poorer classes will enable them to make a proper choice without the finger post of registration. It is evident that every argument for this Bill is equally valid for conferring a status of registration on opticians, chemists, instrument makers, and other callings at present ancillary to the medical profession.—I am, etc.,

Belfast, March 24th. R. M. Fraser.

THE NEW VACCINATION BILL.

Sir,—The letters that have appeared in the British Medical Journal upon the subject show that the feeling among practical men and public vaccinators is unanimous that the new Bill is even worse than the old. Allow me to suggest that every public vaccinator should at once write to the member of Parliament representing his district, pointing out to him shortly and clearly the weak points of the Bill, especially the twelve months' clause and the domiciliary vaccination, and asking him to do his best to have the Bill amended. It might be shown that as it stands it is an injustice:

1. To the infant, who ought to be protected early, and vaccinated in a wholesome room.

2. To the poor father, who cannot afford a fine and therefore cannot purchase freedom from the Act as his richer neighbour can.

3. To the public, as making the Act practically powerless.

4. To the public vaccinator as making his work unnecessarily harassing.

To me personally it has always been a mystery why any Act should ever be optional. If it be a good one, enforce it strictly. If it be a bad one, repeal it. I have already done as I have suggested above, written to the M.P. for this district, and received his promise to give the discussion his most careful attention.

In regard to letters in the Journal upon the subject, it is a pity that men who have excellent and just ideas should weaken the effect of their expression by writing over *noms de plume*. An anonymous letter can never carry the same influence as one signed by its writer, but always to some extent implies that its author is doubtful himself of its justice.—I am, etc.,

April 4th. MARK WARDLE, Public Vaccinator, Bishop Auckland District.

THE TREATMENT OF SYPHILIS IN THE ARMY BY INTRAMUSCULAR INJECTIONS OF MERCURY.

Sir,—Having read Dr. Althaus's letter in No. 1,943 of the British Medical Journal, in which he claims to have been the first who introduced the mercurial cream for intramuscular injections, I think it only fair to point out that this treatment was known and described several years before Dr. Althaus's paper was read before the International Medical Congress of 1890. The important and new feature of this method was the introduction of a "fine emulsion of metallic mercury with lanolin and carbolised olive oil."

In No. 9 of the *Wiener klinische Wochenschrift*, 1888, Lang, the real inventor of the method, published his experiments, which had extended over many years, and spoke very favourably of the results obtained by intramuscular injections with "oleum cinereum." He used a cream of equal parts of mercury and lanolin, mixed with olive oil, in the relative proportion of 4 to 6. Neisser modified this formula by adding some benzoic acid.

In No. 18 of the *Wiener medicinische Wochenschrift*, 1888, T. Frost reported on a series of 1,100 injections with "oleum cinereum," and referred in his paper to Schachter, who had previously given a record of 1,078 injections. The injections were always made into the gluteal muscles, and were painless and not accompanied by swellings or abscesses.

Dr. Althaus can therefore hardly claim priority, as he only slightly modified Lang's formula by using carbolised instead of pure olive oil, an innovation which seems rather superfluous if the cream, the syringe, and the skin of the patient, as well as the hands of the operator, have been rendered sterile before the injection.—I am, etc.,

Finsbury Square, E.C., March 27th. J. P. ZUM BUSCH.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

Sir,—In their recent conference with the friendly societies, the representatives of the British Medical Association unfortunately dwelt only on one point—that of the absence of a wage limit. I venture to suggest that this is not a real grievance. If the subscription per member were a sufficient remuneration in itself, the friendly societies might admit whomsoever they pleased, and there would be no hardship to the medical profession. The real grievance is this, that under present conditions the work is unremunerative. This has been conclusively proved by Dr. Baddeley in a recent number of the *Friendly Societies' Recorder*, and in the March number of the *Charity Organisation Review* I have, by a different calculation, come to the same conclusion.

When medical men first undertook the work of the friendly societies there was a natural wage limit, that is, the members were recruited only from a poorly-paid class of society. Since then the conditions have entirely changed. But whilst it is impossible to expect friendly societies to retrace their steps and to alter their constitutions, the medical profession have a right to ask of them that their remuneration should be adapted to the altered circumstances. The suggestion of a wage limit is merely an answer to the friendly societies' *non possumus*. It is only if they say, as they have done, that their poorer brethren cannot afford more than 4s. a year that the medical profession can reply, "In that case we must go back to the conditions under which we first attended to your requirements."

It is really of the utmost importance that this point should be clearly kept in view, because it would be a great mistake to give the friendly societies the impression that we wished in any way to interfere in the management of their marvellous institutions. We should, moreover, be raising a side issue unnecessarily. Our contention is perfectly clear and unanswerable; the remuneration is inadequate, and in any conference this could be maintained and proven up to the hilt. It is only when friendly societies come to us with a plea *ad misericordiam* for the poorest of their members that we are entitled to say, "Granted, but on condition only of a wage limit."—I am, etc.,

Thames Ditton, April 2nd. OTTO WUNDERLICH, M.D.Brux.

THE LATE DR. WEST.

Sir,—In your interesting notice of this distinguished physician there is an important omission which I am sure you will be glad to rectify.

You describe Dr. West as a corresponding member of the Paris Académie de Médecine. After being a corresponding member for a quarter of a century, in 1890 Dr. West was elected an Associé Etranger or Foreign Fellow of this illustrious Academy. This is the most coveted medical honour in Europe, a distinction very rarely conferred, and which Dr. West shared with only four others in this country—namely, Sir James Paget, Sir Joseph Hooker, and Sir Joseph Fayrer, of London; and Sir Frederic Bateman, of Norwich.—I am, etc.,

April 3rd. PARISIENSIS.

THE DISMISSAL OF PAROCHIAL MEDICAL OFFICERS IN SCOTLAND.

Sir,—The case headed "Parochial Gratitude," in the British Medical Journal of March 12th is not exceptional. I am the medical officer of a parish in the Highlands, and without mentioning any complaint or cause of dismissal the Council told me they would not require me after May 15th. I found out afterwards that the complaints against me at their meeting were false, and without testing the truth of these statements the Council dismissed me. When I wanted a hearing—for I thought my reputation as a professional man was attacked—the reply I got from the Council was that a month's notice on either side was sufficient to terminate the engagement. It is surely a bad law that allows a man after furnishing a house to be cast adrift at a month's notice without cause. In my opinion the cause of dismissal in my case was spite on the part of a Councillor or two for my not submitting to them on a professional matter. It is scandalous how parish councils sometimes treat the medical officer. Let us get the Bill now before Parliament passed. I would recommend all those who contemplate applying for vacancies in the Highlands these times to find out the cause of the vacancy, and to consider that they may be similarly treated.—I am, etc.,

March 18th. M. B. A.

PRIVATE PRACTITIONERS AND PUBLIC PAYMENTS FOR VACCINATION.

Sir,—Responding to your appeal I purpose to deal with the questions you propounded in your last issue. Before I answer the queries I should like to say that I believe with the majority of parents it is not so much the question of the operator as of the operation that is objected to. That there are a considerable number of mothers who prefer to have their children vaccinated by the public vaccinator can hardly be doubted. They have, I venture to say, been led to make this preferment because they have been able to see the children from whom the lymph has been taken, and because they have found, as a rule, that no untoward symptoms have been developed after vaccination. It is gratifying to find in these days that a considerable proportion of parents bring their children to be vaccinated before the statutory age of

three months. In my own district I find that out of a total number of children vaccinated last year (1,097) no fewer than 377 are under the age of three months. I cannot agree with the recommendation of the Royal Commissioners that all private practitioners should be paid for vaccination by the State, and for the following reasons:

1. Because there is no probability of making the operation more popular with the parents by so doing.

2. Because of the difficulties of ensuring that the operation would be done according to the regulations of the Local Government Board.

3. Because the difficulties of inspection are to my mind insuperable.

It is evident that the Inspectors of the Local Government Board cannot undertake such onerous duties; and I think that the medical officers of health would neither have the time nor the inclination for the performance of such delicate work.

It would be far better, in my humble opinion, to make public vaccinators devote their whole time to the work and to place them entirely under the orders of the Local Government Board, rather than to allow all practitioners to receive payment for vaccination by the State. Such a regulation would at once remove the grievance that is said to exist under the present system, namely, that public vaccinators interfere with the patients of other medical men.—I am, etc.,

Cardiff, April 4th. T. GARRETT HORDER.

THE RESPONSIBILITIES OF NOTIFICATION.

SIR,—From time to time suggestions are made for amendments in reference to the notification of dangerous infectious diseases, and differences of opinion then appear as to the onus of the initial responsibilities in carrying out the system. I would therefore beg a little of your space for the purpose of stating some points as they appear to me—points that require some consensus of opinion.

Amongst most civilised nations it is now fully recognised by statutory enactments that it is a duty of local governing bodies to make themselves acquainted with the prevalence of dangerous infectious disease, and that it is a duty of citizenship to acquaint the local governing body of the presence of such disease, for the purpose of enabling proper precautions to be taken to prevent the spread of the disease amongst the community.

The Infectious Diseases Notification Act requires in this country the person in charge to send notice "that the patient is suffering from an infectious disease." The medical attendant is required to send a certificate stating "the infectious disease from which, in the opinion of such medical practitioner, the patient is suffering."

There is a sharp distinction here between notice and certificate, between the citizen's duty and the expert's opinion, between the general and the particular. It would not be sufficient for the medical attendant to certify "*an* infectious disease;" he must certify "*the* infectious disease," that is, not only his diagnosis of a febrile or infectious disease, but also his diagnosis of the particular infectious disease.

The sanitary authority does not pay a fee to the medical attendant for his visit; any visit made at public expense is made by the Poor-law medical officer and paid for by the guardians, and the sanitary authority does not pay the medical attendant for his treatment, as it has no power to provide medical treatment at the home of the patient or to pay for it.

A practitioner certifying as the medical officer of any public body or institution receives 1s. fee for his certificate, his diagnosis being already paid for or claimed in his public capacity, in which may also be included his visit and treatment. A practitioner certifying as a private medical man is not only paid 1s. fee for his certificate, but also an additional fee of 1s. 6d., not for the visit, not for the treatment, but apparently as a contributory payment towards the cost of diagnosis or differentiation of the disease.

The subsequent action of the sanitary authority under the Infectious Disease Notification Act and the Infectious Disease Prevention Act is based upon the certificate of the medical attendant, and any procedure or prosecution must be based upon this expert opinion. The authority and the court rely upon the medical attendant to support his certificate, and consequently the diagnosis to which he certifies.

A sanitary authority therefore claims a signed record in writing of the diagnosis of the medical attendant, and it is impossible to conceive that a sanitary authority merely pays the private medical attendant a fee for writing upon a piece of paper without partly paying for the opinion expressed upon this paper.

These reasons also justify the sanitary authority in providing bacteriological examination for the purpose of carrying out the Infectious Disease Notification Act and Infectious Disease Prevention Act by enabling a correct diagnosis to be made by the medical practitioner when in doubt in order to discover dangerous infectious disease and to enable it to be notified and certified, or notified and certified sooner than it otherwise would be, and so that proper precautions may be taken at the very earliest moment to prevent the spread of the particular disease and to protect the community.

It may be added that, as before stated, it now being the recognised duty of a citizen to notify the presence of dangerous infectious disease in his family or household, it therefore follows that it must be the duty of a citizen to take proper and reasonable means to ascertain the cause of sickness of any member of his family or household. Not only is this so from a humane point of view, but because in this country gratuitous medical service is provided, so that poverty cannot be urged as a plea of ignorance of the cause of sickness, and the means taken to obtain the diagnosis of disease need not necessarily embrace the acceptance of any particular kind of treatment of disease. The law should therefore not allow it to be possible for a citizen purposely to neglect to ascertain the cause of sickness with the object or the result of pleading ignorance.

If the above views be correct, in any proposed amendment of the Infectious Notification Act these important points will have to be primarily borne in mind by the profession.—I am, etc.,

JOHN F. SYKES,
Medical Officer of Health for St. Pancras.

Camden Square, N.W., March 22nd.

Obituary.

HENRY BINGHAM, M.D. R.U.I., L.R.C.S.EDIN.

WE regret to announce the somewhat sudden demise of Dr. Henry Bingham, which took place early on the morning of March 29th. The deceased gentleman received his medical training at the Queen's College, Belfast, and the London Hospital, and after graduating as M.D. of the late Queen's University in Ireland in the year 1878, he settled in the Mountpottinger district of Belfast, and speedily acquired an extensive practice. His sound professional knowledge and practical good sense, his unfailing geniality and *bonhomie* made him deservedly a favourite both with the public and his medical brethren. He was a member of the Councils of the Ulster Medical Society and of the North of Ireland Branch of the British Medical Association, and frequently attended the meetings of these Societies, where his racy wit made him always an acceptable speaker. Some years ago certain symptoms drew attention to the condition of his heart, and on examination it was found that aortic regurgitation existed. In spite of this serious lesion, Dr. Bingham continued to bear the burden of a large and laborious practice with apparent impunity, but during the past winter it was observed that dyspnœa on slight exertion was gradually supervening. Early in March he had several severe attacks of cardiac asthma, in which he was attended by his friend and neighbour Dr. R. M. Fraser. These attacks yielded to treatment, and the deceased seemed to have rallied satisfactorily, but on the night of March 28th severe dyspnœa again arose, and he died quietly shortly afterwards. The funeral took place upon March 31st, and was very largely attended, a numerous contingent of the medical profession testifying to the popularity and worth of the deceased gentleman. He leaves a widow and one son. Dr. Bingham was a kind and open-hearted friend, generous and straightforward, and overflowing with natural wit and genuine geniality. He will be long and sincerely regretted, and most of all by those who knew him best.

L. A. APPIA, M.D.,
Geneva.

Louis Amédée Appia, one of the oldest practitioners in Geneva, who died recently in his 80th year, was born at Frankfurt-on-the-Main in 1818, where his father was pastor of the French Reformed Church. After receiving his preliminary education in his native town, he studied medicine at Bonn and afterwards at Heidelberg, where he took his Doctor's degree in 1842. After pursuing his studies for some time in Paris, he settled at Frankfurt, but in 1849 he went to Switzerland, the home of his family, and practised for some years at Jussy. In 1853 he moved to Geneva, where he acquired a large practice, especially in diseases of the eye.

During the Italian campaign of 1859 he was struck by the horrors of war which he saw on the battlefields of Magenta and Solferino, and he took a considerable part in the organisation of the Red Cross Society and in the conclusion of the Geneva Convention. In 1864 he served as Surgeon in the Dano-Prussian war. From 1867 to 1871 he was Secretary of the International Committee for the Succour of Wounded Soldiers, and attended Congresses on the subject as delegate at Berlin. Vienna, Brussels, and Rome.

In 1867 he issued in collaboration with M. Gustav Moynier a philanthrophic treatise, entitled *War and Charity*, based on what he had seen not only in the Italian campaign, but as surgeon in the Schleswig-Holstein campaign. In 1866 he saw still more of war and embodied his experiences in letters which were afterwards republished under the title of *Visit to the Camp of Garibaldi, or the Wounded of the Battle of Bezzecca.* In recognition of his work in connection with the Red Cross he was decorated by several Governments. He was also a corresponding member of a large number of academies and medical societies, and received from the Academy of Naples the prize for military surgery. As a proof of his energy at a age when such ordeals are particularly repellent to most persons, it may be mentioned that Appia passed all the examinations for the doctor's degree of Paris when he was nearly 60 years of age. He was a man devoted to his work and full of the enthusiasm of humanity.

We regret to announce the death of Dr. Giuseppe Bebi, the Director of the Antirabic Department of the Hospital of Faenza, who was assassinated in his study a few days ago. Dr. Bebi was one of the pioneers of serumtherapy in Italy, and was the author, in collaboration with Professor Testi, of a valuable treatise on scurvy. He also contributed a number of papers to the *Gazzetta degli Ospedali* and other medical journals.

Dr. Reginald Ratcliff Hoare, F.R.C.S.Edin., of Aston Road North, Birmingham, whose death on March 23rd is announced, was highly esteemed in the neighbourhood in which he practised. He had been in failing health for a year, and had been confined to bed for four months before his death. Last Christmas his patients and friends presented to him a testimonial of the value of over £200. Dr. Hoare, who obtained the diplomas of L.S.A. in 1866, of L.F.P.S.G. in 1878, and of F.R.C.S.Edin. in 1879, was, on first going to Birmingham, appointed Resident Medical Officer to the Birmingham Lying-in Hospital. He was subsequently appointed Honorary Surgeon to the Industrial School, Gem Street, and also Honorary Medical Officer to the Aston Fire Brigade. His funeral was attended by a large number of friends, and among those who sent tokens of their respect was Dr. Conan Doyle.

Cremation in Germany.—Cremation appears to be making headway in Germany. In addition to the crematoria at Gotha, Heidelberg, and Hamburg, one has recently been established at Jena. The last has been erected by private subscription, and is reserved for private use. There is a likelihood of another being erected before long at Mannheim. Germany now stands third among the nations in respect of the number of its crematoria. Italy comes first with 24, America next with 22, Germany is a bad third with 4; then come England with 3, France with 2, Sweden with 2, Denmark with 1, and Switzerland with 1.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Inspector-General Thomas S. Burnett has been placed on the retired list, March 11th. He entered the service as Surgeon, January 15th, 1859; became Staff-Surgeon, December 16th, 1870; Fleet-Surgeon, October 29th, 1880; Deputy-Inspector-General, May 3rd, 1889; and Inspector-General, September 2nd, 1896.

The following appointments have been made at the Admiralty:—Gerald T. S. Sichel, Surgeon, to Malta Hospital, March 31st; Thomas E. Honey, Surgeon, to the *St. Vincent*, March 31st; Thomas S. Hartley, Surgeon, to the *Gibraltar*, March 31st; James W. Fisher, M.D., Inspector-General, to Plymouth Hospital, April 1st; Charles G Matthew, M.B., Surgeon, to the *Renown*, March 31st; Robert D. Jameson, Surgeon, to Chatham Hospital, undated.

ARMY MEDICAL STAFF.

Surgeon-Major W. R. Crooke-Lawless, M.D., from the Army Medical Staff, is appointed Surgeon-Major, Scots Guards, *vice* Surgeon-Lieutenant-Colonel E. H. Fenn, C.I.E., who exchanges, April 2nd.

Surgeon-Lieutenant-Colonel E. H. Fenn, C.I.E., from the Scots Guards, is appointed Surgeon-Lieutenant-Colonel, Army Medical Staff, *vice* Surgeon-Major W. R. Crooke Lawless, M.D., who exchanges, April 2nd.

Surgeon-Major Edward D. Farmar Bringhurst retires from the service, receiving a gratuity, April 2nd. His commissions are dated Surgeon, July 30th, 1881; Surgeon-Major, January 16th, 1895. He was in the Egyptian War of 1882, receiving a medal and the Khedive's bronze star, and in the operations in Zululand in 1888.

Surgeon-Lieutenant-Colonel Robert William Troup died at Down Place, Dover, on March 28th, at the age of 56. He was appointed Assistant Surgeon, September 30th, 1863; Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; and Honorary Surgeon-Lieutenant-Colonel on retirement, September 26th, 1888. He served with the Royal Artillery in the left column Dooar Field Force of the Bhootan expedition of 1864-65, and was present at the capture of Fort Dalimkote and stockades of Nagoo and Chamoorchie (medal with clasp); in the Ashanti war in 1874, when he was present with the 42nd Highlanders at the battle of Amoaful, capture of Becquah, battle of Ordahsu and capture of Coomassie (medal with clasp); and in the Egyptian war of 1882, including the action at Kassasin on August 28th and the battle of Tel el-Kebir (medal with clasp and Khedive's star).

ARMY MEDICAL RESERVE.

Surgeon-Captain Thomas Holt, M.B., 2nd Volunteer Battalion the East Lancashire Regiment, is appointed Surgeon-Captain, April 2nd.

Surgeon-Lieutenant G. R. J. Fletcher resigns his commission, April 2nd.

Surgeon-Lieutenant George Melville, M.B, 6th Volunteer Battalion the Royal Scots (Lothian Regiment), is appointed Surgeon-Lieutenant, April 2nd.

THE YEOMANRY AND VOLUNTEER RIFLES.

Surgeon-Major W. J. Naismith, M.D., Ayrshire (Earl of Carrick's Own) Yeomanry, is promoted to be Surgeon-Lieutenant-Colonel, April 2nd.

Surgeon-Captains W. Fergusson, M.D., 1st Banff Artillery, and J. W. Hinings, 1st Herefordshire Rifles, are promoted to be Surgeon-Majors, April 2nd.

Surgeon-Major H. Wright, 1st Volunteer Battalion the Lincolnshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, April 2nd.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps specified, April 2nd: Samuel H. Peray, 2nd Volunteer Battalion the Lincolnshire Regiment; Edmund F. Bindloss, 1st (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment; Josiah Oldfield, 1st Volunteer Battalion the Essex Regiment; Peter Mitchell, M.D., 5th (Deeside Highland) Volunteer Battalion the Gordon Highlanders.

Surgeon-Lieutenant C. E Lister, 4th Volunteer Battalion the Hampshire Regiment, has resigned his commission, April 2nd

Surgeon Lieutenant-Colonel William George Shepherd, M.D., F.R.C.S., late 1st Middlesex Volunteer Rifles, died at 30, Myddelton Square, London, on the 30th ult., aged 83 years.

THE NOMINATIONS FOR MEDICAL DUTY WITH THE ARMY.

The request which the Director-General of the Army Medical Department has addressed to various medical schools asking for the nomination of civil surgeons to serve with the troops at home has led to some differences of opinion. The Royal College of Surgeons in Ireland, after a long discussion, has approved of its President nominating two civil surgeons on the conditions laid down. It was felt that the statement in the House of Commons ought to be accepted as a concession of the principal claims of the Army Medical Staff, and that it would be wrong to refuse the help which is needed in the interval which must elapse before a new warrant can be issued. The Council, however, expressed the hope that the warrant would be issued without delay. The Provost of Trinity College has also agreed to nominate two gentlemen. On the other hand, the Royal College of Physicians in Ireland has passed the following resolution: "Pending the issue of a warrant in accordance with the statements recently made in the House of Commons by Mr. Powell Williams, M.P., Financial Secretary to the War Office, as to prospective arrangements for improvements in the Army Medical Department, which arrangements, if carried out as indicated, would, it is believed, at once secure a competition by a sufficient number of high-class candidates to fill the vacancies that now exist in the service by competitive examination in the ordinary manner, the College is of opinion that in the interests of its licentiates and of the Army Medical Staff it is not advisable that any recommendations for the temporary employment of civil surgeons for duty with Her Majesty's troops in the United Kingdom should be made by the President in accordance with the request made to him by the Director General."

THE ROYAL VICTORIA HOSPITAL, NETLEY.

A CONSIDERABLE strain is being put on the resources of this hospital by the number of invalids arriving from India. Some 300 arrived on March 23rd. By the end of April about 2,000 more invalids are expected, and the arrangements for accommodating so large a number is at present occupying the attention of the authorities. The question of putting some convalescents and the garrison under canvas is under consideration. Then comes the resource of drafting a number of convalescents on to other hospitals—for example, Portsmouth and Aldershot—and sending others on sick furlough. Such cases as are not to be discharged the service will probably be drafted to their corps or regimental depôts. A large staff of both officers and men of the Army Medical Corps at Netley is needed if the heavy work in the hospital is to be done smoothly. The men of the Medical Staff Corps have been under establishment, but a draft from the depôt (some twenty-four non-commissioned officers and men) is expected.

THE FINAL DISPATCHES AND THE MEDICAL SERVICES.

THE Adjutant-General in India, in forwarding, by the direction of the Commander-in-Chief, General Lockhart's dispatch to the Government of India, says:

"The administration of the Military Medical Service has been successfully and satisfactorily carried out by Surgeon-Major-General A. A. Gore, Principal Medical Officer H.M.'s Forces in India, through whose efforts, and the ready co-operation of officers and subordinates, the Department has, at a time of pressing emergency, been able to comply with the heavy demands made upon it. The extent of these demands may be best realised from the statement that it was considered necessary to provide hospital accommodation for 12 per cent. of troops and followers. On this basis 6,526 beds were made available, including 36½ field hospitals. The accuracy of this forecast may be gauged from the fact that on December 20th, 1897, the number of sick in hospital, then at its highest, was 11·16 per cent. of the force. The results obtained in the treatment of the sick, and especially in surgical cases, of wounds, have been most satisfactory."

General Sir William Lockhart says:

"The officers of the Army Medical Staff and of the Indian Medical Service have fully maintained their high reputation by their attention to the sick and wounded, both under fire and in hospital. The hospital arrangements were generally excellent."

MENTIONED IN DISPATCHES.

Surgeon-Major-General G. Thomson, C.B., I.M.S., P.M.O., to whom General Sir William Lockhart expresses his indebtedness, and to other officers of the Department of which the P.M.O. had been in charge, for the high state of efficiency in which it has been maintained, often under very unfavourable conditions.

The Secretary to the P.M.O. of the Force, Surgeon-Major W. A. Morris, A.M.S., is spoken of in highest terms by the Principal Medical Officer.

Army and Personal Staff.—Sir William Lockhart's acknowledgements are due to the following officer: Surgeon-Captain J. C. Morgan, A.M.S., Surgeon at headquarters.

1st Division—Staff.—Surgeon-Colonel E. Townsend, A.M.S., P.M.O.

2nd Division—Staff.—Surgeon-Colonel G. McB. Davis, D.S.O., I.M.S., A.M.O.

Line of Communications.—Surgeon-Colonel W. E. Saunders, A.M.S., A.M.O.; Surgeon-Lieutenant-Colonel H. Hamilton, I.M.S.; Surgeon-Major F. F. Bigger, I.M.S.

1st Division—Regimental.—Brigade-Surgeon-Lieutenant-Colonels C. H. Wayne and James Ring, A.M.S., Surgeon-Majors H. B. Briggs and T. M. Corker.

2nd Division—Regimental.—Surgeon-Majors H. R. Whitehead and W. C. Beevor, A.M.S.; Surgeon-Captains J. J. Gerrard, A.M.S.; and Surgeon-Major J. Shearer, I.M.S.

4th Brigade—Regimental.—Surgeon-Lieutenant-Colonel G. D. Bourke, A.M.S., and Surgeon-Captain C. H. Burtchaell, A.M.S.; also Surgeon-Major T. Grainger and Surgeon-Captain W. Selby, I.M.S.

The following officers' names have been brought to the notice of His Excellency the Commander-in-Chief as being favourably mentioned by general officers and by the officer commanding Kurram movable column: Brigade Surgeon-Lieutenant Colonel W. R. Murphy, I.M.S., P.M.O.; Surgeon-Major C. F. Willis, I.M.S.

The following honorary, commissioned, warrant, and non-commissioned officers have been specially recommended by general officers and heads of departments: 1st Class Assistant Surgeon D. F. O'Connor; 2nd Class Assistant Surgeon W. C. M. Charters; 3rd Class Assistant Surgeon W. G. St. J. Hussey.

THE DISASTER TO THE 4TH BRIGADE, TIRAH EXPEDITION.

IN connection with this the services of the medical officer are referred to in the following gratifying terms: "The enemy, as our troops retired, pressed, and at times got to close quarters, where many were laid low by volleys from the Yorkshires. The retirement became hampered with wounded, to whom Surgeon-Lieutenant Dick, I.M.S., rendered all the aid he could under a galling fire, and remained till the last, helping the wounded Yorkshiremen, for which he was afterwards thanked by the Yorkshires for his pluck and gallantry. It soon became evident that trying to carry off the dead was hopeless, and the wounded were with difficulty removed, many a gallant fellow in so doing losing his life."

Surgeon-Lieutenant Dick was wounded by a bullet that struck Lieutenant Brown and himself; both these officers belong to the 36th Sikhs.

THE ARMY MEDICAL CORPS.

M.D. writes: Now that it is decided to give medical officers plain military titles, is there any chance of their being extended to retired medical officers, whether liable to recall or not? Or, are they to continue to be saddled with compound titles, allowed by the Secretary of State for War to be absurd?

A CORRESPONDENT writes: It would be ungenerous to distrust the absolute good intentions of the Secretary of State for War in the forthcoming reorganisation of the army medical service, but we do distrust these old opponents of the "doctors," his military advisers. It is felt an attempt will be made to give with one hand and take away with the other; why should then he delay in promulgating a warrant?

HALF-PAY writes: The Financial Secretary was clearly in error in describing the rank of surgeon-major-general as honorary, and that the title of major-general implied "a general command." If difficulty there be, could not the present surgeon-colonels be called "colonels on the staff," and the present surgeon-major-generals "colonels on the staff with honorary rank of major-general"?

MILES writes: Will the new titles be extended to the medical officers of Militia, Yeomanry, and Volunteers?

*** Several of these questions are of the nature of conundrums. The new titles would undoubtedly have to be extended to retired medical officers liable to recall, but we doubt if there is a precedent to extend them to non-effective officers; their extension to medical officers of the Indian and Auxiliary forces is a matter for full deliberation; and there should be no undue impatience over a reasonable delay in the issue of the new warrant. The changes in the army medical department undoubtedly involve changes in the other medical services. It is natural to distrust old and obstinate opponents, but we have little doubt that on this occasion they will have less to say in the matter than heretofore. It is remarkable how quietly the announcement of the Secretary of State for War's intentions has been received in military circles.

MEDICO-LEGAL.

WHAT DOES A CONFINEMENT FEE INCLUDE?

THE question of the length of attendance after a confinement which an obstetric fee covers was raised recently in the Shoreditch County Court. The county court judge said that he could not lay down any hard and fast rule in the matter. He found at first for the defendant, but subsequently reconsidered his decision, and gave judgment for the plaintiff with costs.

The answer to the question appears to be one rather of custom than legal right, and hinges in many cases on the specific arrangements made by the contracting parties. An obstetric fee *per se* is an equivalent for the performance of a specific act, the attendance during the stages of parturition, and is most frequently paid as soon as labour is accomplished. It has become the custom, however, in some cases to include a visit or two during the week after delivery, and in some practices the privilege is extended to the tenth day. When any indisposition arises in the mother or child subsequent to these dates, or when any serious ailment occurs to either within these periods, a charge should be made for each visit as in ordinary cases of disease.

CHARGE OF COMMITTING AN ILLEGAL OPERATION.

THE charge against William Maunsell Collins, M.D., now unregistered as a medical practitioner, to which we referred last week, was proceeded with in the Westminster Police Court on April 5th, and after further evidence had been heard the accused was remanded, bail being refused. An inquest with regard to the death of the lady was opened by Mr. Troutbeck, the coroner, on March 29th, and was continued on April 1st and 2nd, and it was adjourned until April 19th.

PRACTICE BY UNREGISTERED PERSONS.

IN the Queen's Bench Division on March 31st, Mr. Muir Mackenzie, on behalf of the General Medical Council, applied to the Lord Chief Justice and Mr. Justice Matthew for a rule in the nature of a mandamus calling upon Mr. Sheil, the magistrate at the Westminster Police Court, and William Maunsell Collins to show cause why the magistrate should not hear and determine a complaint under the 40th Section of the Medical Act, 1858. The circumstances were stated in the BRITISH MEDICAL JOURNAL of March 5th, page 643. The magistrate, it will be remembered, refused to issue a summons on the ground that there was no obligation under the Medical Act for a medical practitioner to be registered. The Court granted the rule *nisi*.

THE M.D.BRUX.: A SIMPLE SOLUTION.

DR. MAJOR GREENWOOD, Honorary Secretary of the Brussels Medical Graduates' Association, Barrister-at-Law, writes: In answer to the letter of "L.R.C.P.E." in the BRITISH MEDICAL JOURNAL of April 2nd, p. 925, will you allow me to thank him for his suggestion, and to inform him that both I myself and many other brother graduates have for many years past used the affix "M.D." without any qualifying word. We have long waited for a prosecution, and are quite prepared to meet it, and to prove that our reading of Section XL of the Medical Act is the correct one. I am also obliged for the offer of contribution, but I am happy to say that I believe our own funds would be amply sufficient to fight the case should any of the writers of the captious letters on this subject, that from time to time appear in the medical papers, wish to test our position at law.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

FIRST PROFESSIONAL EXAMINATION.—The following candidates have passed in Chemistry:

May Agnew, G. C. Anderson, L. Anderson, R. G. Archibald, J. Arthur, Maung Ba, A. K. Bazher, L. H. J. Bell, G. Bennett, W. Bennett, J. Bentley, A. W. Beveridge, H. Beveridge, W. Black, B. B. Blacklock, C. H. Bosenberg, J. R. Bosman, J. C. Boyd, E. A. Braine, G. B. Brand, F. H. Bridgeman, J. E. M. Brown, A. Brownlie, G. M. Brunton, G. G. Buchanan, H. H. Bullmore, C. M. Campbell, E. E.

Cassidy, J. N. Cathles, A. M. Carvelill, A. Clark, L. M. S. Clark, C. E. Clay, D. M. Crooks, S. Cunliffe, D. M. Cuthbert, N. S. Cuthbertson, F. J. Dawson, J. Dommisse, J. Dunlop, P. Elkarez, J. S. Elliot, J. Fairbairn, S. E. Ellison, S. A. Ellerbeck, N. C. Fischer, A. J. Gardner, B. P. Ghose, S. Gilford, Jeannie Gordon, R. G. Gordon, A. Grant, E. J. Hall, P. Hallam, T. B. Hamilton, D. J. Hanman, H. Harding, F. M. Harper, A. W. M. Harvey, H. Herd, R. Hole, C. H. Houghton, W. Hume, A. Hurley, R. C. Irvine, I. Ivey, A. A. Jardine, Bertha Jex-Blake, E. Johnstone, J. M. Johnston, J. P. Kennedy, H. Kerr, S. Khan, R. D. Kidd, J. Kirkwood, W. G. Knight, H. Kramer, W. S. Laidlaw, P. V. Langmore, A. Leach, A. B. Leakey, G. J. Lecesne, Norah Lenwood, W. Lillico, A. W. B. Loudon, J. C. Loudon, R. C. Low, T. S. M. Lumsden, W. F. Macdonald, G. M'Farland, J. N. M'Keand, D. Mackinnon, T. H. Mackinnon, J. J. McMillan, R. J. M'Neill, G. M'Neill, A. H. M'Shrine, W. E. Marshall, J. B. Mason, J. K. Matheson, P. Matthews, R. J. Mayberry, C. E. F. N. Mengerhausen, E. L. Mcynell, W. S. Milne, A. M. Moll, J. H. Montgomery, G. J. Moriarty, A. E. Morton, E. J. Morton, D. N. W. Murray, R. Murray, C. Nelson, C. O'Flaherty, T. H. Osler, A. C. Owen, F. Pawlett, J. J. N. Pierre, J. Politachi, H. Porter, E. C. Pritchard, A. M. Pringle, J. A. Raubenheimer, J. J. Redhead, C. Reece, E. M. Reece, W. R. Reid, A. B. dos Remedios, H. H. Robarts, W. J. D. Robertson, A. Rose, F. E. Ross, T. W. E. Ross, A. J. Rowan, R. E. Russell, J. S. Sewell, J. J. Shannon, E. S. Sharpe, C. J. Shaw, F. W. S. Shepherd, M. Sinclair, J. A. Small, W. T. Smeall, J. M. Smith, E. W. Smyth, J. P. Steven, A. W. K. Straton, H. M. Stumbles, W. H. Swaffield, A. B. M. Thomson, P. Vickers, J. F. Van de S. De Villiers, B. P. Watson, G. Wells, J. Weir, G. Wight, S. A. K. Wilson, and W. Young.

First Science Examination for the Degree of B.Sc.—The following candidates have passed in the subjects named:—

Chemistry.—T. P. W. Barty, W. Bruce, J. C. Cameron, J. L. S. Clark, D. W. Durie, J. J. Geikie, Grace H. Jacob, J. W. S. Macfie, T. R. de F. Magalhaes, J. A. Raubenheimer, M. Ritchie, C. R. Sprague, A. Waddell, F. J. Wilson.

Botany.—W. Bruce.

Zoology.—D. Lorimer and J. A. Raubenheimer.

First B.Sc. Examination in the Department of Public Health.—The following candidates have passed this Examination:—

O. M. R. Crichton, J. McNaughton, and A. H. Pirie.

Final Examination for the Degree of B.Sc.—The following candidates have passed this Examination:—

H. Lathom, M. McLarty, R. E. Selby, and A. P. Zule.

UNIVERSITY OF ABERDEEN.

Graduation in Medicine.

Degree of Doctor of Medicine (M.D.).—W. G. Grant, M.B., C.M. Thesis: (1) On the Histology of the Parovarium; (2) Ventrifixatio Uteri and Pregnancy. W. C. Hossack, M.B., C.M. Thesis: Hypertrophy of the Cervix Uteri, its Varieties and Causes; also an account of a new form of Infusion Cannula. R. G. McKerron, M.A., M.B., C.M. Thesis: The Complication of Pregnancy, Labour, and Childbed with Ovarian Tumour. J. M. H. Macleod, M.A., M.B., C.M. Thesis: On the Development of the Human Epidermis and its Appendages. P. Mitchell, M.B., C.M. Thesis: Notes on 260 cases of Enteric Fever, more especially in reference to Complications, Sequelæ, and Treatment. J. R. Reid, M.B., C.M. Thesis: The Treatment of Typhoid Fever. C. Robertson, M.B., C.M. Thesis: A case of Tumour of the Falx treated by Operation, with some remarks on the Operative Treatment of Cerebral Tumours. G. Taylor, M.B., C.M. Thesis: The Bacteriology of Typhoid Fever, especially in its Relation to the Bacillus Coli Communis of Diarrhœa and the points thereby raised regarding Etiology. C. T. D. Urquhart, M.B., C.M. Thesis: Urticaria. J. S. Warrack, M.A., M.B., C.M. Thesis: Pain in Relation to Visceral Disease.

The theses of Messrs. R. G. McKerron, J. M. H. Macleod, and J. S. Warrack were considered worthy of "commendation."

Degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) (Old Ordinances).—W. Cartwright, W. Cromar, E. St.C. Henriques, W. M. Ogilvie, J. S. Purdy, R. S. Trotter, E. W. Wood-Mason.

Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) (New Ordinances).—H. Adams, M.A.; A. Chalmers, J. S. Chapman, W. S. Clark, J. McR. Cowie, W. D. M. Donald, †J. E. Esslemont, *T. Fraser, M.A., W. K. Glover, W. E. Henderson, D. J. Kelly, J. McKay, D. R. Moir, *† W. I. Moir, G. Mowat, G. F. Petrie, J. M. Petrie, *†F. Philip, T. F. Ritchie, G. J. Saunders, D. Sivewright, M.A., C. C. Slorach, †J. A. Thomson, B.Sc.; A. Urquhart, M.A.; E. B. Wilson, A. W. C. Young.

* Passed Final Examination "with credit."
† Passed with "honourable distinction."

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At a meeting of the President and Fellows held on April 1st, 1898, the following Members of the College, who had been duly nominated in January, 1898, were elected Fellows:

J. Campbell, M.B., Univ. Dubl., L.R.C.P.I., M.R.C.P.I.; J. H. R. Glenn, M.D., Univ. Dubl., L.R.C.P.I., M.R.C.P.I.; W. H. Symes, L.R.C.S.I., L.R.C.P.I., M.R.C.P.I.; T. H. Wilson, L.R.C.S.I., L.R.C.P.I., M.R.C.P.I.

Quack Pamphlets.—A measure which forbids the general distribution of pamphlets, circulars, and other advertisements, in which symptoms of disease are described, is now pending before the Ohio legislature.

The Prince of Wales's Hospital Fund has received £500 as the current year's instalment of the £5,000 voted by the Corporation of London.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,998 births and 4,635 deaths were registered during the week ending Saturday last, April 2nd. The annual rate of mortality in these towns, which had been 21.8 and 20.2 per 1,000 in the two preceding weeks, rose again to 21.5 last week. The rates in the several towns ranged from 14.7 in West Ham, 15.3 in Huddersfield, 15.5 in Croydon, and 15.6 in Gateshead to 24.4 in Leeds, 24.9 in Birkenhead, 25.6 in Swansea, and 30.7 in Liverpool. In the thirty-two provincial towns the death-rate averaged 21.4 per 1,000, and was slightly below the rate recorded in London, which was 21.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.5 per 1,000; in London the rate was equal to 3.0 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.3 in Newcastle-upon-Tyne, 3.6 in Bristol, 4.5 in Leicester, and 6.0 in Brighton. Measles caused a death-rate of 2.6 in Swansea, 2.7 in Halifax, 3.0 in Leicester, 3.3 in Bristol, and 5.5 in Brighton; scarlet fever of 1.4 in Birkenhead; and whooping-cough of 1.1 in Plymouth and 1.9 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 64 deaths from diphtheria in the thirty-three towns included 45 in London, 4 in Birmingham, 3 in Leicester, and 3 in Sheffield. No fatal case of small-pox was registered last week, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, April 2nd. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,818 to 2,371 in the eighteen preceding weeks, had risen to 2,377 on Saturday last; 239 new cases were admitted during the week, against 197, 255, and 191 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 997 births and 729 deaths were registered during the week ending Saturday last, April 2nd. The annual rate of mortality in these towns, which had declined from 25.0 to 22.0 per 1,000 in the three preceding weeks, rose again to 24.2 last week, and exceeded by 2.7 per 1,000 the mean death-rate during the same period in the thirty-three large English towns. Among these Scotch towns the rates ranged from 15.3 in Greenock and 20.0 in Aberdeen, to 26.2 in Paisley and 30.6 in Perth. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Dundee and Glasgow. The 363 deaths registered in Glasgow included 20 from measles, 14 from whooping-cough, 8 from scarlet fever, 2 from diphtheria, and 4 from "fever." Three fatal cases of measles were recorded in Edinburgh.

SINGULAR MEAT CASE.

The Bradford Stipendiary lately gave his decision in a meat case in which he had about a week earlier heard evidence. The defendant, according to the report in the *Bradford Observer*, was a draper in Bradford with forty employees boarding wholly or partially on the premises. He lived himself not at the shop but at Elden Lodge, and had also a farm at Baildon. It was shown that meat killed at the farm had occasionally been sent to customers in Bradford direct, and in some cases, though not recently, had been sent to the shop and sold over the counter. The particular meat, that of a sheep with scab, was seized by the inspector at the defendant's residence. The magistrate stated that he had three questions to determine—two of fact, one of law. In the first place he decided that it had been found that the meat was intended for the food of man, that it was unfit for that purpose, that it was on the defendant's premises, and that it was legally seized. On this first question he therefore decided for the Corporation. On the second point he decided for the defendant that the sheep was not exposed for sale, or deposited for sale as for preparation for sale. He further found that no meat had been sold for about twelve months from defendant's shop and none from the house, but that the sheep were slaughtered at and supplied from the farm at Baildon. There was evidence of sale to employees. The sheep in question had been sent to the meat house or larder at Eldon Lodge, probably for the consumption of the family, and possibly some portions might have gone to the "trimming shop" for the assistants. The question of law was an involved one. The case of Mallinson *v.* Carr, which Mr. Justice Stephen decided that exposure for sale was not a necessary ingredient in the offence seemed to cover the present case, and though it involved the somewhat startling position that an inspector might enter anyone's private larder and seize his high mutton or game, still as it was the ruling case of a superior court he felt bound to follow it. A case has been stated for the higher court.

As we read the judgment in Mallinson *v.* Carr the point decided was that exposure for sale was not necessary to contribute an offence. But in that case intention to sell was clearly enough proved. The Selby butcher had bought the carcass on the understanding that it was unfit for food, the vendor hearing he had expressed his intention of pickling it, tried to get it back, and failing, notified the authority, whose inspector seized and proved that it was deposited "for the purpose of sale or of preparation for sale." These words are in Section cxvi of the Public Health Act, 1875, empowering the seizure. Section cxvii, enabling a justice to destroy, and afterwards the same or another justice to inflict a penalty, does not repeat the words "preparation for sale," but uses the words "the person to whom the same belongs or did belong at the time of exposure for sale, or in whose possession or on whose premises the same was found, shall be liable to a penalty, etc." "The same" would seem to refer to the meat seized or brought before the justice under the conditions named in Section cxvi, amongst which are depositing for sale or for preparation for sale. According to the account of his judgment given in the *Bradford Observer*, Mr. Skidmore seems to have decided that there

was neither exposure for sale, nor depositing for the purpose of sale or of preparation for sale. The reporter may not perhaps have caught the exact words, but if preparation for sale was excluded, how does the case come under Mallinson v. Carr? The learned magistrate seems to have given much careful consideration to his judgment, and to have studied all the leading cases referred to by both advocates. We shall not be sorry if his decision is supported on appeal. The slaughtering of sheep on private uninspected premises is greatly to be deprecated and the smuggling of such meat into large towns with well-appointed slaughterhouses ought, if possible, to be rigorously put down.

INCREASE OF SALARY TO MEDICAL OFFICER OF PLYMPTON (DEVON) WORKHOUSE.

WE learn from the *Plympton Gazette* that the guardians of that Union have decided to increase the stipend of Dr. Ellery, who for thirty years past has held the appointment of Medical Officer of the Plympton Workhouse. This is highly satisfactory, and the more so as it appears to have been a spontaneous act on the part of the Board and to have been brought about by a general desire to do justice to an old and hitherto underpaid official. The resolution by which this change is to be effected was proposed in most suitable terms by Mr. Crossing, who considered that £40 per annum to be paid in the future as salary to Dr. Ellery for his services as medical officer of the workhouse would be but fair remuneration. This proposition, after being seconded by Mr. Holman, was at once carried unanimously. We sincerely hope that the Local Government Board will take the same view of this question as the guardians and that this authority will without hesitation confirm the guardians' decision.

DIPHTHERIA IN LONDON.

ALTHOUGH the mortality from diphtheria in London showed a decline last week, it considerably exceeded the average. The deaths referred to this disease in the metropolis, which had been 32, 36, and 55 in the three preceding weeks, fell to 45 during the week ending April 2nd. Of these 45 fatal cases, 5 were of persons belonging to St. Pancras, 5 to Wandsworth, 4 to Lambeth, 4 to Plumstead, and 3 to Hackney sanitary areas. The notifications of diphtheria in London, which had been 185, 231, and 226 in the three preceding weeks, further declined to 100 during the week ending Saturday last, April 2nd. Compared with the preceding week, there was a decline in the prevalence of the disease in North, Central, and East London, while in South London there was an increase. Among the sanitary areas of West London, there was a marked decline in the prevalence of diphtheria in Fulham, only 3 new cases being notified, against numbers increasing from 4 to 10 in the four preceding weeks. The decline in North London was mainly due to the further decrease in the prevalence of the disease in Islington, the new cases being 8, against 19 and 16 in the two preceding weeks. In Hackney diphtheria still continues very prevalent, the 24 new cases corresponding with the number recorded in the preceding week. There was a general decline in the prevalence of diphtheria in Central London, especially in Strand and Clerkenwell sanitary areas. In each of the sanitary areas of East London, except Shoreditch, the new cases showed a decline from those recorded in the preceding week; this decline was most marked in Poplar, where only 4 new cases were notified, against 14 and 9 in the two preceding weeks. The increase of the prevalence of the disease in South London was principally due to the spread of the disease in St. Saviour Southwark, Newington, Plumstead, and Camberwell; in the last-mentioned sanitary area the new cases, which had declined from 15 to 2 in the four preceding weeks, rose to 17 last week. The 16 new cases notified in Lambeth showed a slight further increase upon those recorded in recent weeks. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 121, against 122, 143, and 133 in the three preceding weeks; and 1,009 cases remained under treatment in these hospitals on Saturday last, April 2nd.

DISTRICT MEDICAL APPOINTMENT.

A. L. S., to whose previous inquiry we replied in the BRITISH MEDICAL JOURNAL of March 12th 1898, p. 708, writes again to say he cannot think this ruling is correct, having regard to a somewhat similar question answered by us in the JOURNAL of October 9th, 1897, p. 1035.

*** If "A. L. S" in writing to us, will state his own case carefully and fully, we will endeavour to give him any information he may require. He informed us in his first communication that his district consisted of two parishes five miles from his residence; we therefore assumed (but as it now appears wrongly) that he did not reside in his district. He now states for the first time that he is a resident within it. We are quite unable to understand how it is that our correspondent, if fully qualified and a resident in his district, will be subject to re-election by guardians to the office he now holds in June next, as he informs us is the case.

THE HOLIDAY OF AN M.O.H.

M.O.H. writes: My Committee allow me a month's holiday. Hitherto I have paid [illegible] medical officer to do the work in my absence, and pay him. Should not the Committee appoint a deputy

*** Certainly, if they went it done. Much, of course, of an M.O.H.'s work cannot well be done by deputy, and must await his return.

PUBLIC HEALTH LEGISLATION IN THE UNITED STATES.—A Bill has been presented to the New York Legislature requiring the State to do away with hospitals for contagious diseases and to replace them by floating hospitals. It is proposed to utilise old warships for this purpose, and to keep them where they can do no harm by spreading contagion. A Bill authorising the Board of Health of New York City to pay for cattle destroyed because of tuberculosis has been passed by both branches of the Legislature.

INDIA AND THE COLONIES.

CIVIL HOSPITALS AND DISPENSARIES OF THE MADRAS PRESIDENCY.—The Madras Presidency has been called benighted, but in matters sanitary and medical it is assuredly not so. It has, on the contrary, taken and maintains a foremost place among Indian administrations. This report for the year 1896, with its voluminous, perhaps too voluminous, returns, drawn up by Surgeon-Major-General C. Sibthorpe, F.R.C.P.I., indicates that in matters of medical education and relief the same careful and progressive administration and admirable executive work continue. The institutions reported on number 475, and in these relief was given to over four millions of patients, at a cost of some 10 lakhs of rupees. The number of surgical operations performed was 143,770, many of them very important, and a large proportion trivial but useful; 19,624 cases of labour were attended by 280 midwives employed in the districts; 3,609 labour cases were treated in the hospital, of which 360 required operative interference of some kind. The arrangements for special aid to women are a conspicuous feature of Madras medical administration; 312,582 packets of quinine were sold through the agency of the post office, realising 3,256 rupees. Cholera prevailed severely in the presidency during the year, and 10,776 cases were treated in these hospitals. Small-pox was also very prevalent.

CHARITABLE DISPENSARIES IN BENGAL.—The number of dispensaries increased during the year 1896 from 426 to 455, 1 to every 333 square miles of the area and 155,305 of the population of the province. In these were treated 47,109 indoor and 637,501 outdoor patients, nearly 4 per cent. of the population: 122,187 principal and 1,880 secondary operations were performed. These figures indicate a very large amount of charitable medical and surgical relief, and they also show a satisfactory increase as compared with previous years. The quality of the work, as indicated by the record of surgical operations, which is the best available test, is excellent: 2,367 extractions of lens, with 2,091 successes; 44 operations for radical cure of hernia, with 1 death; 68 litholapaxies, with no death; 77 operations for elephantiasis of the scrotum, with 2 deaths; 15 ovariotomies, with 1 death; and 544 amputations, with 32 deaths—these results are most creditable to civil surgeons and their subordinates. The expenditure amounted to Rs. 787,544, of which Government gave a little over one-tenth, and the rest was obtained from local sources. The report for the year is drawn up by Surgeon-Colonel J. H. Newman, M.D.

CHARITABLE DISPENSARIES IN BOMBAY.—The report for 1896 is drawn up by Surgeon-Colonel G. W. R Hay, who took charge after the death of Surgeon-Major-General H. Cook, M.D. There is no review of the report by the local Government. Eight new dispensaries were opened during the year, making a total of 314, in which were treated 30,857 indoor and 2,288,489 outdoor patients. The death-rate among the former was 7·2 per cent. Malarial fevers constituted 16.7 per cent. of total treated. Fewer cases were treated than in the previous year. There was an increase of small-pox and cholera cases. Bowel complaints, venereal diseases, worms, rheumatism and skin diseases were as usual very numerous; 111,639 surgical operations were performed, but a large proportion of them were very trivial, and hardly entitled to the name, such as removing ear wax, passing the catheter, speculum, and enema tube, subcutaneous injections, probing, vaccinating, blistering, and so forth. A long list is given showing how many operations each medical officer and subordinate performed. This seems hardly necessary. Only 206 lens extractions were done, 6 radical cures of hernia, and 3 ovariotomies, of which 2 were fatal; 38 operations were done for restoration of nose, 355 lithotomies with 41 deaths, and 525 litholapaxies with 8 deaths. The number of obstetric operations was considerable. The income of these dispensaries amounted to Rs. 755,648, of which Government contributed nearly one half; Rs. 11,503 were obtained from paying patients, and Rs. 333 by the sale of medicines not supplied by Government.

THE MEDICAL INSTITUTIONS OF THE TOWN OF MADRAS.—These are fourteen in number, and include general and special hospitals for Europeans and natives. The special hospitals are for women and children, eye diseases, lepers, and venereal diseases; 17,605 in-patients and 186,249 out-patients were treated during the year, the death-rate among the former being 4.92 per cent. The proportion of men, women, and children treated were 50, 33, and 17 per cent. The transactions of these hospitals, administrative and professional, are recorded in great detail by Surgeon-Major-General Sibthorpe and the medical officers in charge. The work done is evidently large in amount and excellent in quality. Brigade-Surgeon-Lieutenant-Colonel Branfoot's report of the Maternity Hospital is, as usual, very able, exhaustive, and interesting. The year 1896 was a healthy one, and free from epidemic visitations. Nevertheless, the attendance of patients was not diminished, and medical, surgical, and obstetric relief sought without abatement. Venereal diseases constituted 2·05 per cent. of the total treated. The voluntary general hospital is eagerly resorted to by diseased females, but they seldom come until disease is well advanced, and often leave before a cure is completed. The preventive value of the institution is, therefore, inconsiderable. These hospitals are worked at a cost of about 4½ lakhs of rupees, of which Government contributes over three-quarters.

VACCINATION IN THE MADRAS PRESIDENCY.—The number of persons vaccinated in 1896-7 amounted to 34·8 per 1,000 of population, against 33·5 in the preceding year. The number of children successfully vaccinated was 33.6 per cent. of registered births, against 32·1. These figures indicate progress. The percentage of success in primary vaccination was 92.6 and in revaccination 80.2. The highest rate of success was obtained with lymph taken direct from the calf. Lanoline paste lymph gave better results than lymph mixed with glycerine. Very little arm-to-arm vaccination is now practised in the Madras Presidency. The average cost of each successful vaccination was 3 annas 6 pies. The cost of vaccination is almost entirely borne by local funds. About half of the operations were verified by the inspectorial staff, and district medical and sanitary officers also inspected a large number. Government very properly attaches great importance to inspection, as the returns of vaccination are not always reliable as regards either quantity or quality. Diagrams are given to exhibit the relation between protection and prevalence of small-pox, but they do not convey any striking contrasts. The report is compiled by Surgeon-Major W. B. Bannerman, M.D., and is very exhaustive.

MEDICAL NEWS.

The seventh meeting of the German Otological Society will be held at Würzburg on May 27th and 28th.

Dr. H. W. Marett Tims has been appointed Professor of Zoology in Bedford College, London, in succession to Professor W. B. Benham.

Gresham Lectures.—Dr. E. Symes Thompson, Gresham Professor of Medicine, will give four lectures on Sleep and Pain, commencing on April 19th and terminating on April 22nd, at Gresham College, Basinghall Street, E.C.

Epidemiological Society of London.—We are asked to state that the paper which was announced as to be read by Dr. W. J. Simpson on April 15th has been unavoidably postponed. There will therefore be no April meeting of the Society.

Arrangements are being made for two additional wards to be added to the Longmore Hospital for Incurables at Edinburgh. These are to be in a new wing of two storeys, the ground flat giving accommodation to twenty consumptive patients and the first flat to the same number of patients suffering from cancer.

Presentation.—On March 22nd Dr. A. J. Rice-Oxley was presented with a gold chronometer by the members of the Norwood and Streatham Literature, Science, and Art Society, on the occasion of his retiring from the post of secretary to the society. Mrs. Rice-Oxley was at the same time presented with a gold bracelet.

The sixth congress of the German Dermatological Society will be held at Strassburg from May 31st to June 2nd. The chief subject proposed for discussion is Acne, its Pathology and Treatment, to be introduced by Drs. Touton of Wiesbaden, and Veiel of Cannstatt. A large number of communications and demonstrations have been promised.

At the meeting of the Blackburn Infirmary Board on April 4th, Mr. Henry Harrison, the Chairman, announced that he had received from a gentleman, who did not wish his name to be disclosed, railway stock of the value of £11,000 for the endowment fund of the institution, while he had also received £2,000 from the same donor towards the Victoria wing of the infirmary.

Small-pox at Goole.—For some time past the Local Government Board have been urging the Goole Urban Council to provide a small-pox isolation hospital, but without success. Last week a case of small-pox was discovered in the town, and the best suggestion which could be made by the Hospital Committee was that an arrangement might be made with the Hull and Goole Port Sanitary Authority. This meeting was held on the First of April.

The Duke and Duchess of Marlborough will on May 12th visit the colony established by the National Society for Employment of Epileptics, at Chalfont St. Peter, when the Duke will lay the memorial stone of a home for epileptic boys, and her Grace will open the Victoria House, one of the homes for epileptic men. On the same occasion Mrs. Passmore Edwards will lay the foundation stone of a new home for epileptic girls.

The Clapham Free Home for the Dying.—The sixth annual report of this charity states that during the year 1897, 48 patients were admitted to the Home, being an increase of 13 over the previous year. The institution is managed by the Sisters of St. Margaret's, East Grinstead. Dr. Mackintosh in his medical report draws attention to the unremitting care of the Sisters in carrying out the treatment necessary to prolong and render bearable the lives of the inmates. No fees of any kind are received from patients or asked from those recommending them.

Edinburgh Nurses' "At Home."—On the invitation of the Lord Provost, Convener, and the Committee on Public Health, the nurses in the Edinburgh City Hospital for Infectious Diseases had an "At Home" on Wednesday, March 30th. Nurses from all the hospitals in the city and neighbourhood were present. The company, to the number of over 400 was received by Lord Provost Mitchell Thomson and Mrs. Mitchell Thomson, and by Bailie Pollard, the Convener of the Public Health Committee. They were announced by Mr. James Russell, the principal city officer. Dancing began at 8 and went on till about midnight. The evening's entertainment also included songs and exhibitions of dancing.

Medical Legislators in Canada.—At the recent elections for the Ontario Legislature there were 19 members of the medical profession in the field. Of these, 12 were Conservatives and 7 Liberals. Of the whole number, 7 were elected—5 Conservatives and 2 Liberals. In the last Parliament there were also 7 medical members. Of these, only one, Dr. McKay, of Oxford, will sit in the new House. Of the others, 2 did not offer themselves for re-election, and 4 were defeated. Of the 7 doctors in the last Parliament, 4 were Conservatives and 3 Liberals.

Habitual Drunkards.—Among the public bodies which have responded to the circular signed by the Chairman of the Inebriates Legislation Committee are the justices of Bolton, who have not only sent a copy of the following resolution to the Premier and other members of the Ministry, but are also going to consider further the subject of legislation for inebriates: "The justices of the County Borough of Bolton in special sessions assembled express regret that the Government have not been able to find time for the introduction of the promised measure for amended legislation for inebriates. They are of opinion it is of urgent importance that further provision be made by law for the restraint of habitual drunkards (with due regard to the liberty of the subject) with a view to their reformation in special curative institutions. The justices hope that the Government will at an early date introduce a Bill having for its purpose the accomplishment of the above object."

Hospital Abuse.—The *Bradford Observer* of April 4th publishes some paragraphs on this subject. Our contemporary draws attention to a recent protest of the Bradford and District Medico-Ethical Society against the abuse of medical charities; it remarks that while there is a unanimity of opinion in the ranks of the profession as to the evil, there is great diversity as to the best means to be adopted to bring about reform. In one point, however, it agrees, the profession are unanimous, namely, in urging "that the idea that a workman who pays a penny a week to a hospital thereby establishes an absolute right to treatment there, irrespective of his financial circumstances, ought to be completely stamped out."

Theories of Healing.—Professor Behring, in a recent address (*Deut. med. Woch.*, No. 5, 1898), at the Marburg University, gave an interesting account of the history and development of the etiological and isopathic theories, and of their influence on the thought of the time. Broadly speaking, the etiological theory is concerned with the causes of disease existing outside the body only, whilst the isopathic theory is chiefly concerned with the means employed for protecting the body from external causes of disease. Professor Behring gave a short history of the earlier theories of healing with the appropriate motto for each. The Hippocratic principle was contained in the words "aliena alienis," whilst the opinions of Galen were embodied in the words "contraria contrariis." The motto of homœopathy is "similia similibus," whilst "æqualia æqualibus" belongs to isopathy, the most modern development. Professor Behring described the difference between "old" and "new" theories by criticising the explanations given by each concerning the action of quinine in malaria. This drug was used by Sydenham, who was the first to observe the remarkable effect it had on the disease. At one time quinine was said to "brace up" the nervous system and thus render the body less "impressionable" to the action of the malaria poison. In modern times attention has been solely directed to the hæmatozoon in the blood corpuscle, whose vitality is more or less affected by quinine. Lister is called the pioneer of the etiological theory. The fact that wounds will heal of their own accord if allowed rest and cleanliness was one of the most startling revelations of modern times. The action of antitoxin and serumtherapeutics in general formed the chief part of the address, which contained a summary of the work done by authorities such as Pasteur, Koch, Ehrlich, Wernicke, Pfeiffer, and others.

ROYAL GIFTS TO NETLEY HOSPITAL.—As a memento of their recent visit to Netley Hospital Her Majesty the Queen and Princess Henry of Battenberg have forwarded a number of gifts to that institution. For each of nineteen wards visited by the Queen she has sent her latest photograph bearing Her Majesty's signature in her own handwriting: "Victoria R. I. 1837-97, June 22nd, 1897." These are framed in oak, with gold and brass plates, and bear the inscription: "Presented by Her Majesty the Queen." A portrait of the late Prince Consort is also forwarded. The other gifts are engravings of the Queen in her pony carriage; the Jubilee procession passing Trafalgar Square and leaving Buckingham Palace; a group of the Royal Family, and three coloured prints, with appropriate inscriptions. Her Majesty ordered to be provided for those suffering from loss of arm or leg the very finest artificial limbs which modern invention has produced. Invalid chairs of the latest pattern have also been provided. The Princess Henry has presented a steel portrait of the late Prince Henry of Battenberg framed in oak and gold with suitable inscription.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Board, lodging, and washing provided, but no salary. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with allowance of £30 per annum for cab hire), and unfurnished rooms, fire, lights, and attendance. Applications by April 18th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon, appointment for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House-Governor, by April 30th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—A Resident Medical Officer and a Resident Surgical Officer. Salaries, £70 and £50 per annum respectively, with board, washing, and attendance. Applications by April 12th.

CAMBERWELL HOUSE, Peckham Road, S.E.—Junior Assistant Medical Officer; single and under 28 years of age. Salary commencing at £120 per annum, with board, lodging, and laundry. Applications to the Medical Superintendent.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum, with board, etc. Applications by April 18th.

DARENTH SCHOOL FOR IMBECILE CHILDREN, near Dartford, Kent.—Assistant Medical Officer. Salary, £160, rising £20 annually to £200, with board, lodging, attendance, and washing. Most be unmarried, and not exceeding 35 years of age. Applications, on forms provided, to be received by April 12th.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis Road, Shadwell, E.—Resident Medical Officer. Salary, £80 per annum, with board, residence, and laundry. Applications by April 12th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Medical Officer for Casualty Department. Salary at the rate of £100 per annum. Applications by April 16th.

FAREHAM: HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried, and not to exceed 30 years of age. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors by April 26th.

FOLKESTONE: VICTORIA HOSPITAL.—House-Surgeon. Salary, £80 per annum, rising to £100, with board, residence, and washing. Applications by April 11th.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £120 per annum, increasing £10 annually to £150, without board or lodging. Applications to W. Swinsburne, Hon. Secretary, Town Hall, Gateshead, by April 20th.

KING'S COLLEGE, LONDON.—Sambrook Medical Registrarship. Applications by April 25th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Resident Medical Officer. Salary, 100 guineas per annum, with board, lodging, and washing. Applications by April 15th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Fountain Fever Hospital, Lower Tooting.—Salary, £160 first year, £180 second year, and £200 during third and subsequent years, with board, lodging, attendance, and washing. Applications, on forms provided, to be sent to Norfolk House, Norfolk Street, Strand, W.C., by May 20th.

NOTTINGHAM GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, rising £10 a year to £120. Applications by April 26th.

PLYMOUTH ROYAL EAR INFIRMARY.—Honorary Physician. Applications by April 20th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications by April 12th.

ROYAL FREE HOSPITAL, Gray's Inn Road. W.C.—House-Physician. Appointment for six months. No salary, but board, etc., provided. Applications by April 25th.

ROYAL ORTHOPEDIC HOSPITAL, 207, Oxford Street, and 15, Hanover Square, W.—House-Surgeon and Anæsthetist, unmarried. Salary, £100 per annum, with board and residence. Applications by April 20th.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Surgeon. Must be F.R.C.S.Eng. Applications to W. H. Cross, Clerk, by April 11th.

SALFORD UNION.—Dental Surgeon. Applications to F. Townson, Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by April 14th.

SMETHWICK, BIRMINGHAM: CORNWALL WORKS MEDICAL ASSOCIATION AND DISPENSARY.—Medical Officer. Salary, £400 per annum. Applications by April 12th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £30 per annum, with board, lodging, and washing. Applications to the House-Surgeon by April 21st.

STRATHERRICK PORTION OF THE PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer. Salaries from various sources over £100 per annum. Applications to Andrew Urquhart, Inspector of Poor, Gorthick, by April 20th.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon; unmarried. Salary, £80 per annum, with board, residence, and washing. Applications by April 12th.

WINCHESTER: ROYAL HANTS COUNTY ASYLUM.—Honorary Physician. Applications by April 15th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two Honorary Assistant Physicians. Applications to Chairman of Medical Committee by April 18th.

YORK DISPENSARY.—Resident Medical Officer. Salary, £150 a year, with furnished apartments, coals, and gas. Applications to Mr. W. Draper, De Grey House, York, by April 12th.

MEDICAL APPOINTMENTS.

CUNARD-CUMMINS, Miss Lillian, L.R.C.S. and L.R.C.P.I., appointed Assistant Medical Officer of the Lincoln Lunatic Hospital.

COATES, Matthew, M.D., F.R.C.S.Eng., L.S.A., retired Deputy Inspector-General R.N., appointed Honorary Surgeon to the Philanthropic Society.

GANGE, F. A., M.D.St.And., M.R.C.S., reappointed Medical Officer of Health to the Faversham Rural District Council.

HARE, A. W., M.B., B.Ch.Aberd., appointed Junior House-Surgeon to the Borough Hospital, Birkenhead.

KENNINGTON, E., M.R.C.S., L.R.C.P., appointed Medical Officer for the No. 8 District of the Basingstoke Union.

TURNER, G. R., F.R.C.S.Eng., appointed Surgeon to St. George's Hospital.

WASHBOURN, William, L.R.C.P.Lond., M.R.C.S.Eng., appointed Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

WIGGINS, William Denson, M.R.C.S., M.R.C.P.Lond., appointed Assistant Medical Officer to the Greenwich Union Infirmary.

WILLIAMS, C. R., M.B., C.M.Edin., reappointed Medical Officer of Health to the Ashby-de-la Zouch Urban District Council.

WYNNE, W., M.B., appointed Medical Officer for the No. 2 District of the Rye Union.

DIARY FOR NEXT WEEK.

WEDNESDAY.

Hunterian Society, 8.30 P.M.—Clinical evening. Sir Hugh Beevor: General Alopecia. Dr. F. J. Smith: Two Cases of Myopathy in Adult Males. Dr. Arthur Davies: Congenital Heart Disease. Mr. John Adams: Case of Raynaud's Disease. Dr. J. H. Sequeira: (1) Pseudo-hypertrophic Paralysis. (2) Cerebellar Tumour. Other cases will be shown by Fellows.

Evelina Hospital, S.E., 4.30 P.M.—Mr. A. H. Tubby: Swellings in the Groin: their Diagnosis and Treatment.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Professor Crookshank: Tetanus, Rabies, and Cholera, etc.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

FLEMING.—On Monday, April 4th, at 10, Chester Street, Edinburgh, the wife of Robert A. Fleming, M.D., F.R.C.P.E., of a son.

SHAND.—On March 31st, at St. Aubin's, Augerstein Road, North End, Portsmouth, the wife of Surgeon J. Shand, Royal Navy, of a son.

MARRIAGES.

MCELWAINE—YOUNG.—On March 23rd, by licence, Patrick McElwaine, L.R.C.S., L.R.C.P.Edin., L.F.P.S.G., 21, Great St. Andrew Street, Shaftesbury Avenue, W.C., sixth son of John McElwaine, Esq., Lisgar, Ballieborough, co. Cavan, to Charlotte (Chattie), fourth surviving daughter of the late Samuel Young, Esq., Lisburn, co. Antrim.

TORNEY—DODD.—On March 23rd, at Christ Church, Surbiton Hill, by the Rev. Ralph H. Sneyd, M.A., cousin of the bridegroom, assisted by the Rev. H. J. Watney, George Parsons Torney, Medical Superintendent, Bracebridge Asylum, Lincoln, eldest son of the late Thomas Torney, Esq., M.D., of Dublin, to Mildred Florence Ethersey, fourth daughter of the late Captain A. I. Dodd, of Ditton Hill, Surbiton, and Moulmein, Burma.

DEATHS.

BINGHAM.—On March 29th, at The Lodge, Mountpottinger, Belfast, Henry Bingham, M.D., L.R.C.S.E.

GRIFFITH.—On March 21st, Caroline, beloved wife of Samuel Clewin Griffith, Esq., M.D., Master of the Society of Apothecaries of London.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30 Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations,*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 3; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 3 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9, Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

S. B. C. asks where he could hire or purchase secondhand a full-sized spinal carriage.

C. B. wishes to know of a children's hospital by the sea, preferably on the south coast, where a child, aged 3, suffering from strumous ostitis, can be taken in. Parents could pay about 10s. weekly.

D. O. C. writes to ask what are the boundaries of "Greater London," and what is the population. He understands that it includes such districts as Richmond and Greenwich, and that the population is two or three times as much as that of London proper.

HOME FOR INEBRIATE.

WE are asked by a medical correspondent if any of our readers know of any home or establishment where a man in reduced circumstances, whose friends could afford only 21s. to 25s a week, could be treated for inebriety. At times he is stated to be violent.

ANSWERS.

J. O.—We are informed that eucasin cannot be got in London at present; it may, however, be procurable in a week or two. It is on the list of G. and R. Fritz of Vienna.

DR. F. W. BYWATER.—*Medicine and Kindred Arts in the Plays of Shakspeare,* by the late Dr. John Moyes (Glasgow: James MacLehose and Sons, 1896), deals fully with the medicine of Shakespeare.

ASSISTANTS' HOLIDAYS.

SOUTH COAST.—It is considered politic to give an assistant a fortnight's absolute break from his work during the year, and this in addition to and independently of an occasional day now and again.

THE EXAMINATIONS AT THE APOTHECARIES' HALL.

DR. FRANK HAYDON, Secretary, Society of Apothecaries of London, writes: If "Passed in Surgery" will apply for the present regulations, he will see that candidates can take midwifery separately whether under the four or five years' regulations.

TINCTURE OF NUX VOMICA AND DILUTE ACIDS.

QUERIST.—Tincture of nux vomica made according to the *British Pharmacopœia,* by dissolving the extract in a mixture of spirit and water, forms cloudy mixtures with dilute acids. These mixtures after standing some time deposit a sediment at the bottom of the bottle. Extract of nux vomica contains, in addition to alkaloids, fatty and other matters. The amount of these varies in different samples of extract, so that the tincture varies also in this respect. The appearance of a mixture containing tincture of nux vomica and a dilute acid may vary according to the extract used for making the tincture.

NOTES, LETTERS, Etc.

ASSISTANTS AND CYCLES.

An assistant, states that it is now becoming the custom to require an assistant to use a cycle, thereby saving the principal in many cases the cost of a horse and trap. He complains that he has found a tendency growing to require the assistant to provide his own cycle. Under the circumstances of the economy to the principal he considers this to be very unfair, and urges that the custom should become general of providing the assistant with a cycle at the cost of the principal.

AN ANTIVACCINATION LETTER WRITING RING.

MR. ALEX. WHEELER (Darlington) writes: I have for the first time just seen the BRITISH MEDICAL JOURNAL of March 5th, and your mention of my name.

You say that there is in the Antivaccination Society "an inner circle, or letter-writing ring, which has special functions delegated to it in the way of propaganda. Mr. Alex. Wheeler of Darlington, himself a well-known letter writer, took it upon him flatly to deny the existence of any such circle, but we had no difficulty in proving from the evidence of Mr. J. T. Biggs, of Leicester, the truth of our statement, and since that time, so far as we are aware, no denial has been attempted. It is the duty of every member of this ring to send to the public press at least one letter a month, making an attack on vaccination."

Vaccination must indeed be in a bad strait when it has to resort to personalities like this. I have before told you that I know of no ring. Why not say exactly what you mean? Do you mean that we receive payment for writing against vaccination, and that that payment depends upon one letter a month being sent to the press? If so, I say again, it is absolutely false, so far as I am concerned, and so far as I know. Not only have I never received anything for letter writing against vaccination, but, on the contrary, I have lost in this present decade no less a sum than £89 in out-of-pocket expenses alone on opposition to vaccination. From my first prosecution to the present time, although I am not a man of means, it has personally cost me more than £250 in money alone in the same opposition to vaccination.

Is it impossible for you to believe that opponents of vaccination spend time, energy, money (yes, and some have much shortened their lives) in honest unrewarded labours to obtain freedom to choose or to refuse the rite? If you cannot believe this, I leave you to your shame.

Once for all, I positively deny that I am under any obligation to any one to write a line, or to say a word, or to do a thing, against vaccination. I do it because vaccination is an abominable tyranny imposed on an unwilling people, doing not one particle of good, and serving no

useful purpose; while it is by State records proved to kill at the least one English child per week. While life lasts, I hope that I may be able to continue my opposition; and if before I die I see an end of State enforcement of vaccination, I shall have my reward.

I claim the same publicity for this that you gave to the charge implied against me.

*** Mr. Wheeler's letter is an excellent example of antivaccination newspaper correspondence. He refrains from touching the question he professes to write about, and instead he works off a violent denunciation of charges which have never been made nor suggested by us, but which he himself has introduced partly for rhetorical purposes, and partly apparently in order to evade the plain question of fact. In 1893, in the course of a paragraph regarding the Antivaccination Society, we said that: "As part of the organisation of the Society, there is an inner circle to which members are admitted only on agreeing to write to the public prints at least one letter per month on the subject of vaccination." Mr. Wheeler flatly denied that there was any such ring, not however, in our columns, as he now seems to assert, but in a communication to a Derbyshire newspaper which had quoted from our paragraph. On a copy of the newspaper being sent to us, we at once proved our statement to be correct, and we proved it out of the mouth of Mr. J. T. Biggs of Leicester, he being one vice-president of the Antivaccination Society, and Mr. Wheeler another. Mr. Wheeler told the *Derbyshire Courier*, however, not that he knew of no such ring, but that there was no such ring. Is Mr. Wheeler incompetent to distinguish between what he does not know of, and what has no existence? Then he asks if we mean that he is paid for his letters, for "if so," he says, "it is absolutely false." Later on, he "positively denies" that he is "under obligation to anyone to write a line" against vaccination. His indignation is wasted on us. We have never mentioned his name in connection with the ring, excepting to point out that he denied its existence, and that his denial was directly contrary to the statement of another vice-president of the Society. Nor have we ever hinted that he, or any member of the ring, has received payment for all the mischief that he and the ring have wrought. He knows this quite well, but, by writing as if he did not know it, he is able to get, and we have no objection to give him, the opportunity of advertising his financial sacrifices to the fetish of antivaccination. The £250 which he says he has spent in this way would have been far better thrown into the sea. In that case it would only have been wasted for himself and those dependent on him, but, as it is, almost certainly it has done evil to many an English household. It is a common thing for the medical profession to be charged with mercenary motives by antivaccinationists—even Mr. Wheeler's powers of denial will hardly challenge this statement—but we make no such charge with regard to the members of the letter-writing ring. Their action seems to us to have a different mainspring. As regards antivaccination, they have, in a manner, been given over to the power of a strong delusion, to the belief in a lie, and they have to suffer the consequences of such bondage in being unable in this matter to perceive truth to be truth, and falsehood to be falsehood.

"SCIENCE AND SONG."

MR. PAUL MAHLENDORFF, whose pamphlet entitled *The Science and Art of Adjustment between the Producing and Reflecting Vocal Apparatus* was noticed in the BRITISH MEDICAL JOURNAL of April 2nd, has called our attention to "two instances" in which he is "made to talk hopeless nonsense." One of the instances is the passage which we quoted as follows (page 903, left hand column, line 12): "In many important cases the physical point is in conflict with the theory and course of treatment of the medical profession, etc.;" the word "physical" here should be "final." The other is the passage (page 903, left hand column, line 19) quoted as follows: "Singing signifies the spiritual reproduction of one's self due to the use of the muscular outflow from the vocal apparatus on the base of an open central canal," where the word "muscular" should be "musical." For these accidents of the typewriter we apologise without hesitation, but we cannot see that they make much difference to the sense—or nonsense—of the passages quoted. Mr. Mahlendorff says: "I feel that it would be unreasonable in me to ask for space in your JOURNAL to reply at length to your criticism of my theory and method as set forth in my book." We are pleased to be able to agree with him on this point; and we have no doubt that, having regard to the other passages quoted in our article, as to which no complaint of inaccuracy is made, our readers will applaud the discretion of Mr. Mahlendorff.

HÆMORRHAGE FROM THE STUMP OF THE FUNIS.

DR. S. KIRKPATRICK (Flint) writes: Reference is made by one of your correspondents to death from hæmorrhage from the stump of the funis. I attended at the birth of a female child on the night of March 10th. The next day I was shown a napkin which contained fæces and was blood-stained, very little changed; this had the appearance of having been freshly shed. One, of course, thought that it was a case of bleeding from the cord not having been tied sufficiently; but it was right, not in any way oozing. This was noticed also the next day, but less in quantity, and now the motion is perfectly normal. This was undoubtedly a case where the blood had been swallowed and then it was passed perfectly unchanged owing to the stomach having no action, and so the coffee-ground appearance was not shown. The child is well and is now taking its nourishment well. The quantity was several ounces; there was some darkening of the colour at the edges, but still it had a florid hue. It was a female child.

THE TREATMENT OF DYSENTERY.

DR. S. HARRIS, (Las Palmas, Grand Canary) writes: Perhaps I may be allowed to add my testimony to those who find magnesium sulphate a cure for dysentery. Cases invalided here from the tropics rapidly recover under treatment by that salt, which I may remind your correspondents is described in Taylor's *Handbook of the Practice of Medicine*.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Mr. R. B. Anderson, London; Alpha; Atropos; A. J. Anderson, M.B., Blackpool; **B** Dr. J. Barr, Liverpool; Mr. H. H. Beale, Reading; Dr. J. P. zum Busch, London; J. Berry, M.B., London; Mr. R. J. Boustead, Hexham; S. Boyd, M.B., London; T. W. Bayne, M.B., Tarbert. **C** Mr. W. R. E. Coles, London; C. B.; Dr. A. E. Cope, London; Mr. H. J. Clark, Swanage; Mr. C. Campbell, Saddleworth; Dr. T. Churton, Leeds; Dr. Dr. W. C. S. Clapham, Sheffield. **D** H. C. Donald, M.B., Paisley; F. Deighton, M.B., Cambridge; Dr. A. T. Davies, London; Dr. A. Duke, Cheltenham; Dr. J. Dulberg, Manchester; Mr. J. J. Davey, London. **E** Experentia; Dr. G. F. A. England, Winchester; W. McA. Eccles, M.B., London. **F** Dr. J. L. Firth, Clifton. **G** Mr. G. P. Gaskell, London; Dr. M. Greenwood, London. **H** Mr. R. H. A. Hunter, Carlton Colville; Mr. F. Haydon, London; Mr. T. G. Horder, Cardiff; Mr. F. R. Humphreys, London. **J** F. J. Jordan, M.B., Birmingham; J. O. B.; Dr. C. M. Jessop, Redhill. **K** Kidderminster Medical Society, The Secretary of the, Kidderminster; Dr. R. Kennedy, Glasgow. **L** Dr. H. L. Lack, London; Messrs. Lepard and Smith, London. **M** Mr. P. Michelli, London; Military Surgeon; C. Martin, M.B., Birmingham; Modestinus; M.D.; Mr. P. Mahlendorff, London. **N** Dr. E. R. Nicholson, Hastings; N. de C.; North of England Obstetrical and Gynæcological Society, The Secretary of the, Liverpool. **P** Sir R. D. Powell, London; Mr. R. Pollock, London; Mr. J. H. Peck, Linstead, W. I.; Parisiensis; Dr. J. Priestley, London. **R** Mr. T. F. Raven, Broadstairs; D. Richmond, M.B., Rochdale; Radius; Mr. W. K. Rix, Bickley. **S** Dr. T. W. Smith, Bath; S. B. C.; South Coast; S. Stephenson, M.B., London; Mr. H. W. M. Sims, London. **T** Mr. W. T. Thomas, Liverpool; Dr. H. Tilley, London; Mr. L. Tait, Birmingham. **W** Mr. C. G. Wheelhouse, Filey; Mr. R. H. Wolstenholme, Salford; G. B. M. White, M.B., London; Mr. J. Wallace, Milton, U.S.A.; Dr. A. McWeir, East Sheen; Dr. O. F. Wunterlich, Thames Ditton; Mr. A. J. G. Waters, March; Mr. M. A. Wardie, Bishop Auckland. **Y** Mr. E. S. Yonge, Manchester; etc.

BOOKS, ETC., RECEIVED.

A Manual of General Pathology. By W. S. Lazarus-Barlow, B.A., B.C., M.D., M.R.C.P., London: J. and A. Churchill. 1898. 21s.

Handbuch der Therapie innerer Krankheiten. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. Zweite Auflage. Neunte und Zehnte Lieferungen. Jena: Gustav Fischer. 1898.

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Yellow Fever in the West Indies. By Izett Anderson, M.D. London: H. K. Lewis. 1898. 3s. 6d.

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*** In forwarding books the publishers are requested to state the selling prices.

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THE HUNTERIAN LECTURES
ON THE
SURGERY OF THE KIDNEY.

Delivered at the Royal College of Surgeons of England,

By HENRY MORRIS, F.R.C.S.,
Surgeon to the Middlesex Hospital.

LECTURE III.
FISTULA CAUSED BY RENAL CALCULUS; OBSTRUCTIVE ANURIA DUE TO RENAL CALCULUS; THE TECHNIQUE OF THE EXPLORATION OF THE KIDNEY AND URETER FOR CALCULUS.

Mr. President and Gentlemen,—In the second lecture I endeavoured to show (1) that the errors and uncertainties in the diagnosis of renal calculus had in many instances been of distinct advantage, because they had led to the exploration of the kidney, and this in turn to the discovery and cure of various morbid conditions other than those due to stone. (2) That unsuspected, quiescent, and migratory renal calculi cause very destructive and even fatal consequences, and that we ought to revise our practice with regard to the early treatment of stone in the kidney. (3) That the low mortality of nephrolithotomy (that is, the operation for renal calculus in its early stages); and the high mortality of nephrotomy, and the still higher mortality of nephrectomy (that is, of the operations performed for the advanced disorders due to renal calculus), show the advisability of operating at as early a stage as possible.

In further support of this conclusion, I may point to Table IV, the exploratory operations, and Table V, the operations for movable kidney. There are 42 of the former, and 57 of the latter, without a death due in any way to the operation.

It will be seen in Table IV that three cases are recorded as deaths (Nos. 15, 22, and 25), but a glance at the abstracts shows that the deaths were due entirely to other causes. Two of the patients lived long enough to recover absolutely from the operations, and ought to be counted therefore as recoveries; the third (No. 25) died from obstinate vomiting and hæmatemesis from a gastric ulcer on the second day after the operation, and therefore ought to be excluded.

In Table V there is not a death from any cause whatever in the whole number (57) of operations for movable kidney.

If I add that in nearly every instance the kidneys operated upon were brought out on to the surface of the loin, and in a very large number of them the convex border of the kidney was incised and sutured, it will be understood that these operations from the point of view of risk are essentially the same as nephrolithotomy.

When the cases in these three tables are added together, excluding the one referred to above, we get the following result:

Table I.—34 operations, 33 recoveries, 1 death.
,, IV.—42 − 1 = 41 operations, 41 recoveries.
,, V.—57 operations, 57 recoveries.
Total—132 operations, 131 recoveries, 1 death.

Thus, out of a total of 132 operations, the essential characters of which are much the same, there were 131 recoveries and 1 death.

At the Middlesex Hospital, where renal operations are freely undertaken by the members of the surgical staff, a good many persons nevertheless die from the effects of renal calculus who are too ill to be operated upon when admitted. During the years 1885 to 1895 inclusive calculi were found in the kidneys in 45 out of 3,331 *post-mortem* examinations, and hydronephrosis due to calculus impacted in the ureter was found in 4 others. That is, in 1½ per cent. of persons dying from all conceivable causes, calculi were found in one or both kidneys or ureters.

Many of these 45 bodies found their way to the *post-mortem* room entirely because of calculous disease, and in the rest renal calculi contributed more or less to the fatal result. Amongst the 45 cases there were 10 instances of suppuration in one or both kidneys; 11 cases of perinephric abscess; 4 cases in which calculi were present in both kidneys, and 4 others in which only one kidney could be said to exist, the other having undergone complete atrophy due to obliterated ureters in 3 of them, and cystic degeneration from obstruction in the fourth.

Besides these 45 cases, there were 63 instances of suppurative nephritis in most of which both kidneys were affected, and in many of them renal calculus had played a conspicuous part.

Fistulæ.

In considering the harmful effects of renal calculi, it is impossible to leave out of account renal and ureteral fistulæ. It is after nephrotomy for calculous pyonephrosis, especially, that a fistula due to operation is most likely to occur. It is exceptional for a permanent or long-standing fistula to result from nephrolithotomy, or an operation for movable kidney, or a simple exploration. This is rather surprising if we consider the nature of the tissue surrounding the kidney, its proximity to the colon, the fact that there is often an escape of a little urine when the kidney is incised, and that the action of the lower ribs and abdominal muscles in the immediate neighbourhood of the wound is almost incessant, and sometimes violent, as in coughing, retching, and straining at stool.

Fistula is also exceptionally rare after nephrectomy, except when perinephritis or perinephric abscess has previously existed. In cases of nephrectomy for calculous disease perinephritis, however, has usually preceded the operation, but in spite of this a fistula followed in only one out of twelve of my surviving nephrectomies for stone—that is, at the rate of a little more than 8 per cent.—and in that case the fistula was superficial, and probably healed shortly after the patient left the hospital, though I have no certain knowledge that it did so.

Out of my 33 nephrolithotomies which survived a superficial sinus occurred in two (Table I., Nos. 1 and 9), and a urinary sinus in two (Table I, Nos. 6 and 22). In the two latter very large incisions involving the pelvis of the kidney had to be made for the extraction of stones of great size.

After nephrotomy for advanced calculous conditions, for example, calculous pyonephrosis, fistulæ, either temporary or permanent, occurred in 37.5 per cent. of the cases operated upon. Though in many of these the fistulæ subsequently healed, still the fact that even a temporary fistula followed in so large a proportion of cases affords a further argument in favour of early operation for stone in the kidney.

But the fistulæ which occur independently of any operation, which are due in other words to long-retained renal calculi, should appeal even more strongly to surgeons as an argument against delaying operative treatment for stone.

The persistency of these fistulæ, the recurrence of deep suppuration if the external orifice of the fistula is allowed to close, together with the abiding troubles caused by the continued presence of the stone in the kidney or ureter, will sooner or later induce the patient to demand surgical assistance.

Then the patient has to undergo risks and the surgeon to face difficulties which occur only when the perinephric structures are matted and hardened by long standing inflammation or suppuration; and have become so densely adherent to the kidney capsule that it is often no easy matter to find the kidney.

In a stout person with a deep loin it may be quite impossible to distinguish the kidney at all by touch; whilst the resisting nature of the tissues, and the depth of the wound, make it impossible, except through a very extensive incision, and perhaps only after the excision of the last rib, to bring the kidney within sight.

Another and very important fact is that these condensed contracted tissues fill the hilum and surround the whole of the kidney with a fibro-lipomatous mass, which shortens and stiffens the pedicle; and compresses and destroys the elasticity of the renal vessels and of the ureter. The result of this is that the kidney gets tucked close up against the spinal column, and as firmly set in its surroundings as if it were imbedded in plaster of paris. (Specimen shown.) If nephrotomy is done under these conditions the renal artery cannot be controlled when the renal parenchyma is incised and the kidney cavity explored; and thus bleeding is apt to be very

free. If nephrectomy is performed the risks and difficulties in dealing with the pedicle are enormously increased.

When a fistula is in course of formation the perinephric abscess should be opened as soon as possible, lest the matter should burrow and discharge in some dangerous direction. It is true the abscess will often make for the loin, or groin, and open spontaneously on the surface, if it be not incised; but it should not be suffered to do so.

If on opening a perinephric abscess a calculus presents, or is readily detected on the introduction of the finger into the cavity, it should of course be removed. Several cases of this sort are on record.

It is, however, as a rule, unsafe to search for and explore the kidney when the tissues surrounding it are in an acutely suppurating condition. The safer course is to defer the exploration of the kidney till after the abscess is healed. This necessitates a lengthy convalescence, followed by a fistula; and a second operation, before the cause of the abscess can be removed. After this second operation, whether it be nephrotomy or nephrectomy, it is not infrequent for the healing of the wound to be delayed by profuse and prolonged suppuration.

The same drawbacks attend operations for calculous affections of long standing if perinephritis without abscess or fistula has existed. There may be the same matting of the tissues, the same fixation of the kidney, the same inelasticity of the pedicle, the same ingrowth of fibro-lipomatous tissue at the hilum, and the same incompressibility of the renal vessels.

If perinephritis has commenced before nephrotomy is performed, neither the extraction of a calculus nor the evacuation of pus from the renal cavity may prevent the spreading of the inflammatory process in the surrounding cellular tissue and the formation of a fistula at a long distance from the kidney. A case was narrated in which it was necessary to excise portions of the 9th, 10th, and 11th ribs (the 12th had been removed at a previous operation) before the fistula would heal.

In a collection which I have made of unselected cases of fistula due to renal calculi, some of the fistulæ followed the bursting of pyonephrotic kidneys; and others were the result of perinephritic suppuration and the bursting of the perirenal abscess. Some opened spontaneously into the lung; others into the stomach, or duodenum, or colon; one into the colon and the lung, and as both of these organs communicated with the renal pelvis, it thus happened that the lung communicated with the colon.[1] Of those which opened on the external surface, one did so below the trochanter, one between the 8th and 9th ribs, one or two in the groin, but the majority in the loin.

When a perinephric abscess burrows beneath the ribs and points posteriorly in an intercostal space, the course taken by the pus is through the costo-diaphragmatic hiatus (shown in diagrams from Testut's *Anatomy*). This hiatus, formed by the absence of the muscular fibres of the diaphragm, exists on both sides of the trunk, and gives facility for the ascent of pus between the liver and peritoneum, or spleen and peritoneum in front, and the ribs and intercostal muscles behind. Judging from the cases I have seen, the lung is pushed upwards, and the pleura upwards and forwards. Thus the resulting fistula can be dealt with without opening either pleural or peritoneal cavity.

A fistula of calculous origin may either be in communication with the kidney or ureter; or may be limited to the perinephric tissue. In one case (described in my book on the *Surgery of the Kidney*) the fistulous track went straight through from the surface to the kidney, there being no burrowing or abscess space in the perinephric tissue (specimen shown).

After an operation in which the kidney has been incised, a fistula may end in a smooth-lined space, containing more or less pus, and surrounding one or other pole of the kidney; but without any communication whatever with the kidney or ureter. A fistula may have a communication with the renal cavity or ureter without there being any escape of urine through it; this can in some cases be demonstrated by the injection into the fistula of an aqueous solution of fuchsin. If the communication is free and direct, evidence of the coloured solution having reached the bladder will be obtainable in a few minutes, as in Nos. 1 and 2, Table VIII; if the communication is small and indirect, an hour or two may be required before proof is obtained.

The closure of the fistula by surgical treatment is tedious, and sometimes impossible; and in some cases, after having been successfully treated and remaining closed for many months or a year or two, it will reopen.

Those which do not communicate with the kidney or ureter should be treated on the ordinary principles applicable to all fistulæ; those which do so communicate must be dealt with differently in different cases. If there is a calculus in the kidney it must be removed; if the kidney is quite disorganised, nephrectomy is requisite; if the kidney is not disorganised, the fistulous tract should be cut out and the cut surfaces united by sutures. This I did in the case of No. 14, Table VII, with success. When no stone is found in the kidney, the ureter will probably be the seat of some kind of obstruction. There may be an impacted calculus; a stricture following inflammation or ulceration caused by a calculus which has escaped; or a stricture as the result of contraction after periureteritis; or the duct may be distended in one part and contracted in another by suppurative ureteritis. In most cases a renal or ureteral fistula of calculous origin will, I believe, close permanently after nephrectomy, even if a stone be left impacted in the ureter, or the ureter be in a state of suppuration at the time of the operation. But should it not do so, it may be necessary, as in the case of fistula kept up by tuberculous ureteritis, to perform partial or complete ureterectomy.

A urinary fistula, due to obstruction in the ureter, may in time cease to discharge urine, owing to complete atrophy of the kidney. The length of time required for this to be accomplished depends on the degree of obstruction which the fistula on the one hand, and the ureteral block on the other hand, offer to the escape of urine. The more complete the obstruction, the more rapid the atrophy, and *vice versâ*. In a case of my own the process took seven years.[2] Even after a fistula ceases to be urinous, it may persist as a suppurating sinus.

Two objections to early operations for renal calculus are: (1) that calculi will be missed if sought for very early, because of their small size; (2) that very small calculi, if they once enter the ureter, pass through the urinary passages without risk to life. Both these objections are unsound, and lead to dangerous delay.

In the lists of my operations for calculus, it will be found that stones of all sizes, from two grains to ten ounces, have been removed by nephrolithotomy or nephrotomy; and I do not think one, however small, will be missed because of its small size with the present mode of exploring the kidney and ureter.

The second objection is even more invalid than the first; for there is ample proof that a very minute calculus may provoke the complete destruction of the kidney, or become the immediate cause of death from suppression of urine.

The accompanying figure (Fig. 16) of a pyonephrotic kidney shows the closure of the ureter at its renal end by the impaction of two tiny stones, and the entire destruction of the kidney in consequence. (*Vide* No. 14, Table III.)

In some of my cases the most continuous and profuse hæmaturia has been caused by small stones. But—worse than hæmaturia or the destruction of a kidney—calculi weighing less than two grains have caused death.

Sir William Roberts, in his admirable chapter on Obstructive Suppression of Urine, records a case where three little oxalate of lime calculi about the size of hemp seeds, and weighing altogether one grain and a-half, were found in the lower part of the ureter. One of these was tightly impacted in the terminal part of the ureter, where it passed through the coats of the bladder; this was the cause of the obstruction which resulted in the death of the patient from anuria.

In another case he tells how the secretion of urine was suddenly and permanently arrested by a uric acid calculus about the size and shape of a hemp seed, which weighed only one grain and a-third, and which, becoming impacted in the ureter just above its entrance into the bladder, destroyed the patient in less than ten days.

In a third case a similar course of events was brought about

by a round uric acid stone the size of a small pea, which weighed only one grain and a-half.

In all these cases the opposite kidney had previously been destroyed or obstructed, and the little calculi caused death from anuria by obstructing the ureter of the hypertrophied and only kidney which was acting.



Fig. 16.—Kidney (showing minute calculi blocking ureter) removed by operation. Recovery. Author's case.

Calculous Anuria.

Calculous anuria is the gravest and most fatal of the many serious complications of renal lithiasis. Special attention was given to it in 1872 by Sir William Roberts in the second edition of his classical work on *Urinary and Renal Diseases*, p. 23, *et seq.*; and in 1881 an exhaustive thesis on anuria by Pierre Merklen was published in Paris; but neither in this nor in Roberts's book is the subject of the surgical treatment of calculous anuria considered.

In his 1885 edition, Sir William Roberts, it is true, says in a footnote: "Lately it has been recommended to open the ureter or pelvis of the kidney above the obstruction, and so establish a permanent urinary fistula." But, though antispasmodics and a variety of mechanical means are recommended, and diuretics are rightly condemned, still surgical aid was not seriously discussed by either Roberts or Merklen.

Even at the present time the principle of the operative treatment of calculous suppression of urine is either imperfectly known or improperly appreciated by the profession in this country, because operations are certainly neither sufficiently early nor sufficiently often performed; and, worse still, patients are sometimes told by physicians that no surgeon in his senses would dream of an operation in their condition.

Since 1885 two or three excellent theses on this subject have appeared in France by Legueu, Donnadieu, Glantenay, and Vailhen; and in England, though nothing bearing generally on the surgical treatment of calculous anuria has been published, some brilliantly successful operations by the lumbar route have been reported, notably by Clement Lucas, Ralfe and Godlee, and Kirkham, who were amongst the first English surgeons to operate in these cases.

Etiology.—Calculous anuria occurs when the ureter or renal pelvis of one kidney is occluded by a calculus, the other kidney being absent, or atrophied, or diseased. It often affects persons in robust health, and may be sudden and complete in its onset. It is then due to the cessation of function of a kidney which has undergone compensatory hypertrophy, and which up to the moment of obstruction had been secreting the whole or the chief part of the urine. Occlusion of one ureter never gives rise to fatal anuria if the opposite kidney and ureter are normal.



Fig. 17.—Horseshoe kidney with a calculus in each ureter. *Post mortem* specimen. Middlesex Hospital.

In the most typical pathological condition of calculous anuria there is occlusion of both ureters by calculi (see Figs. 17, 18, and 19). The following description and statements are based on two sets of cases collected by the author—namely, 48 cases not operated upon and 49 operated upon. The last table (XI) consists of the collected cases operated upon.

In 55 cases the situations of the calculi were noted to be as follows:

1. In the renal pelvis and blocking the upper orifice of the ureter, 7 cases. In 4 of these both ureters were blocked, one stone being in each upper ureteral orifice.

2. In the upper end of the ureter, 30 cases. Both ureters were blocked in 5 of these cases. In 3 there was another stone impacted lower down—2 in the midpart and 1 near the bladder.

3. In the middle portion of the ureter in 7 cases. In

1 case both ureters were blocked, and in 2 others there was a second blockage by calculus higher up.

4. In the lower end of the ureter in 10 cases. In 1 of these there was an impacted stone also higher up, in 3 of them both ureters were obstructed.

5. In 2 cases complete suppression was caused by obstruction of both kidneys by a large vesical calculus.

There are two classes of calculous anurics, the gouty, fat, and apparently robust adult past middle age; and the thin, nervous, and dyspeptic person.

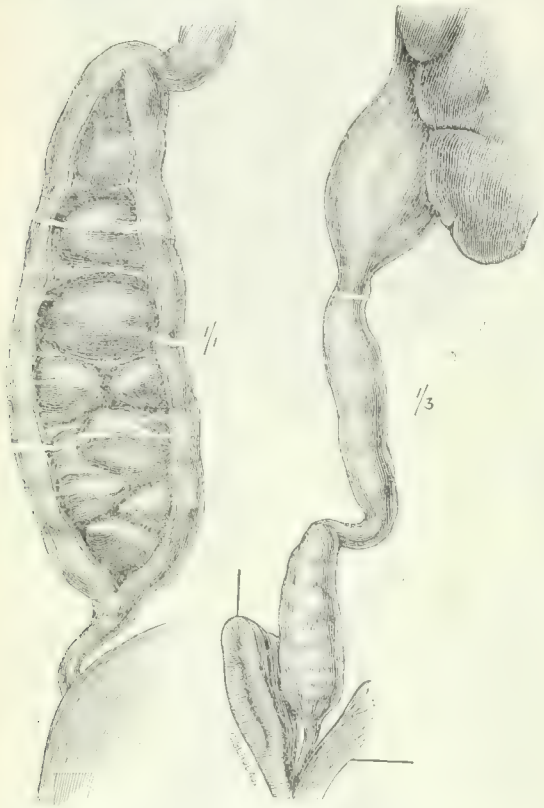


Fig. 18.—Ureters packed with calculi. The calculi in the ureter laid open are represented in the drawing arranged precisely as they were found after death. Middlesex Hospital Museum.

Anuria may occur at any age and in either sex; it is more frequent in males of 35 years and upwards, and more especially in elderly men. Instances of children, and even infants at the breast, dying of convulsions from calculous suppression have been recorded (Rayer). Out of 81 cases collected, in which the sex and age are stated, there were 54 males and 27 females. Forty-three out of the 81 occurred in persons between 40 and 60; 15 over 60 years; 19 between 20 and 40; one before 10 years of age; and 3 between 10 and 20. The youngest was aged 6, and the eldest 80.

Much importance ought to be attached to the antecedent history of patients who become the subjects of suppression of urine from ureteral obstruction. Commonly they have had several previous attacks of renal colic or of lumbar pains, followed by the discharge of gravel or small stones, months, or even years, before the attack in which the anuria begins. But cases have occurred of sudden suppression of urine from obstruction by calculus without a previous attack of any kind. In such cases both kidneys have been simultaneously obstructed, or one kidney has been destroyed by disease of another kind, or has been congenitally absent or abnormal.

Calculous anuria is often determined, or immediately induced, by fatigue: a drive or some other shaking movement, such as jumping from an omnibus, violent coughing, rapidly running from the garden to the house on hearing a peal of thunder, are some of the causes in my own cases which started the descent of the calculi from the kidney into the ureter.

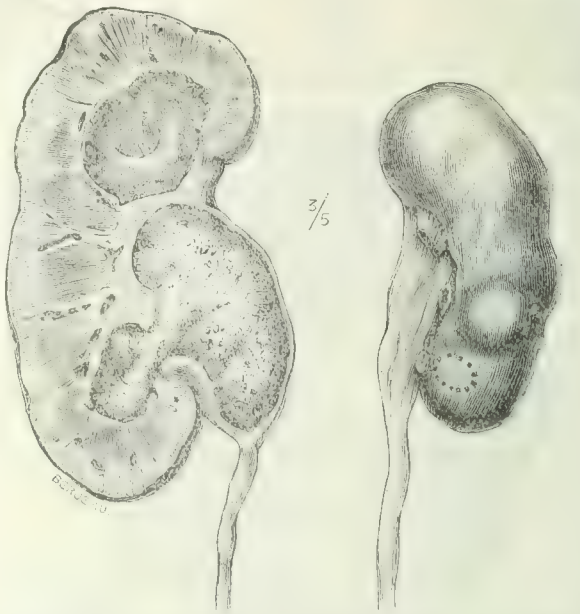


Fig. 19.—The two kidneys of the same person, each blocked with a calculus. The one first affected is atrophied, the other has been hypertrophied, and is becoming sacculated and granular.

Symptoms.—The symptoms of calculous anuria are not simply those of uræmia. They also differ in their mode of onset, and in their character, from some other forms of obstructive anuria, such as anuria from cancer of the uterus; from the pressure of abdominal tumours; and from torsion, curves, or stricture of the ureter; as well as from toxic, reflex, and hysterical and other non-obstructive forms of anuria.

When the uræmic symptoms set in they exhibit marked differences from the uræmia of lardaceous disease, of Bright's disease, and of other forms of nephritis.

Though in rare instances the onset is insidious, acute pain is almost invariably experienced in the region of the kidney involved last, at the outset of the suppression. The pain so started may continue throughout the anuria, but more commonly it is temporary, lasting only a day or two, or less, and then subsiding. Less frequently the first symptom is a dull and continuous aching in the lumbar region, with or without pains radiating along the course of the ureter. In very exceptional cases the anuria has come on without pain on either side, and without the history of previous attacks of renal colic; or the patient has quite forgotten on which side the previous attacks of colic were. These, fortunately rare, are the cases in which the surgeon may have no guide as to which kidney to operate upon.

With the pain there may be troubles of micturition, such as continual desire to pass water, though not a drop of urine may be in the bladder; or the urine is passed with difficulty, and sometimes only in drops or teaspoonfuls. Or, on the contrary, there may be polyuria, the urine being pale and of low density, and showing evidence of imperfect renal function. In other cases the anuria is intermittent, ceasing, after some hours or a few days, to reappear, and become definitely established.

Calculous anuria may be complete or incomplete. In the complete suppression the bladder is quite empty, or, if not, contains but a few teaspoonfuls of bloody urine. In the incomplete form the anuria is intermittent, but progressive, and interrupted by discharges of urine, insufficient to satisfy the requirements of the system, but sufficient to retard the fatal termination of the disease. When the working kidney is hydronephrotic the uræmic condition may be deferred for a longer time than otherwise, even if there are no polyuric intermissions.

Calculous anuria, once established, may last many days without causing any symptoms of uræmia. This is perhaps its most striking feature, which it shares with other forms of obstructive anuria, and with anuria which follows ligation of the ureters, as distinct from the non-obtructive forms. Even when the suppression is complete, seven, eight, or ten days may elapse before the symptoms of uræmia appear, and sometimes death occurs without any of the characteristic symptoms of uræmic poisoning arising at all. When the uræmic phenomena supervene after a longer or shorter time, death follows rapidly, or, at any rate, within a day or two. Thus it happens that authors have come to distinguish two cases in the progress of calculous anuria; namely, (1) the silent or tolerant period; and (2) the uræmic period. But it is important to remember that death may occur as just mentioned without the supervention of the second or uræmic period occurring.

In the period of tolerance the patient, though he may not pass a single drop of urine for several days, may yet walk about, eat, and do mental work in all the appearance of good health. This fact must never be forgotten if a serious mistake in diagnosis and prognosis is to be avoided; it is, however, all the more likely to escape notice, because it is so opposed to the course of suppression due to non-obstructive causes.

In certain cases, as in those recorded by Paget and Weber, polyuria occurs, and retards the appearance of uræmic phenomena as well as the fatal termination, which, however, at length arrives just the same.

In Paget's case polyuria occurred on the thirteenth day, and death was deferred till the twenty-second day. In Weber's case a succession of remissions of polyuria took place, and the fatal result was not reached till the thirtieth day from the onset of the anuria.

In one of Roberts's cases the patient lived fifteen days. Tenneson[3] reported a fatal case in which the suppression lasted fifteen days. Dr. Ernst Bischoff reported the case of a man aged 58, who for fourteen years had suffered from gout and lithiasis; he had had repeated temporary suppression for several days together; then twenty-three days of anuria, with two very slight intermissions on the fifth and fourteenth days, attended by œdema, fever, and aphthous stomatitis and very high temperature. The *post-mortem* examination showed a very small left kidney, but in a state tending towards compensatory hypertrophy, with calculi in both ureters and in the left renal pelvis.

Symptoms when Hydronephrosis is Associated with Anuria.—When the working kidney is hydronephrotic, patients with calculous anuria may escape uræmic accidents for a much longer time than others, without having polyuric remissions. Thus in a fatal case of a man aged 64 recorded by Rayer,[4] with an enormous hydronephosis, the anuria lasted twenty-five days, with only a slight remission on the tenth day. James Russell published a case of anuria lasting twenty days, which terminated by the discharge of 10 litres of urine in twenty-four hours; but a year later the patient died, and at the *post-mortem* examination there was discovered double hydronephrosis with calculi in the pelvis of each kidney.

Roberts cites a case of calculous anuria of ten days' duration, with an increasing tumour in the left iliac fossa; recovery followed a veritable urinary crisis coincident with the disappearance of the tumour.

But whilst hydronephrosis is exceptional in calculous anuria, and such marked polyuric remissions are uncommon, it is, on the other hand, much more frequent for the secretion of urine to cease definitely shortly after the establishment of the obstruction.

Hydronephrosis occurs only when anuria is repeated on many occasions, for a brief period only, or in an incomplete manner; that is to say, when the obstruction is intermittent, or imperfect and progressive.

Uræmic Stage.—At a variable period the second or uræmic stage sets in. When the anuria is complete this period arrives mostly about the seventh or eighth day.

The symptoms of the uræmic stage may be summarised under three groups: (*a*) the circulatory; (*b*) those connected with elimination; and (*c*) those of poisoning.

(*a*) The pulse is slow and full, and later becomes irregular. Epistaxis in one case was very abundant; œdema about the malleoli and even a true anasarca—the result of venous stasis not of albuminuria—have been observed in a few cases by Sir William Roberts, Russell, Ernst Bischoff, Tenneson, and Merklen. The temperature is low, as in all forms of uræmia, namely, from 97° to 97.6°.

(*b*) Profuse perspirations may occur, but if so, are suppressed in the last day or two of life. The older writers state that the sweat has the odour of urine; but modern writers following Roberts dispute this. Roberts, indeed, goes further, for he says (4th edition, p. 34) "there is never any ammoniacal or urinous odour from the breath or skin, nor from the body after death." In one of my cases, in which there had been suppression for nine days, twelve hours before death the patient's "extremities became cold and clammy, her face swollen, and the breath strongly ammoniacal. The body began to be offensive a few hours after death."

In the absence of sweats, cases of itching of the skin, pruriginous eruptions, and erysipelatous swelling of the whole body are quoted by Rayer; profuse salivation is noted by Weber; blood-stained expectoration by Foissac and Paget.

But more important than the foregoing symptoms is vomiting. This is copious, and due to gastric irritability rather than to supplementary elimination. It is a symptom of bad omen, which precedes and accompanies the uræmic nervous phenomena. Obstinate constipation and meteorism are common intestinal symptoms. Meteorism may be particularly troublesome. Sometimes there is a veritable intestinal paralysis. Diarrhœa, a common and marked symptom in some cases of uræmia from lardaceous disease, is very exceptional in calculous anuria.

(*c*) Contraction of the pupils and muscular tremors are the two most marked symptoms of the poisoning stage. The intelligence may be perfect to the last moment, but more often it becomes, after a while, impaired, the patient being in a state of semi-sleep, from which, however, he is easily aroused. Occasionally delirium or hallucinations occur. Incessant restlessness and an overpowering feeling of heaviness and general fatigue are, when they exist, the immediate precursors of death. The limbs, instead of being affected by muscular twitchings and agitations, may be benumbed or as if paralysed. The temperature falls lower with the progress of the disease. The respiration becomes slow and sighing and irregular, and the patient dies from paralysis or powerlessness of his respiratory muscles. Or the patient may die of heart failure, without a convulsion, without coma; occasionally death is caused by coma, or a convulsive crisis; and sometimes by an attack of suffocation, two or three days after the commencement of the uræmia.

Prognosis.—The usual termination of calculous anuria when left to itself is death about the tenth or eleventh day. If, however, the suppression is interrupted by intermittent polyuria, whether hydronephrosis exists or not, life may be prolonged by many days. Spontaneous cure sometimes occurs. Legueu states that out of 56 cases of calculous anuria, which neither followed nor were treated by operations, recovery took place in 16, that is, in 28.5 per cent. In one the secretion recommenced on the third day; in 10 between the fifth and tenth days; and in the rest on the thirteenth, fourteenth, fifteenth, twentieth, and in two instances on even a still later day. Of the 40 deaths 23 occurred between the fifth and fifteenth days, 1 on the fourth day, and the rest on and after the sixteenth day.

Of the 48 cases in my table of cases not operated upon, 38 died and 10 recovered; of the 49 cases operated upon, 24 died and 25 recovered. Thus there is a percentage of recoveries in cases operated upon of 51, as against 20.8 in cases not operated upon. These figures speak loudly in favour of operation for calculous anuria.

Merklen says that while it is uncertain up to what date we may hope for spontaneous recovery, the chances of recovery diminish with the prolongation of the anuria. According to Sir William Roberts, the fatal termination is at hand when contraction of the pupils and convulsive tremors of the limbs occur. Recovery, he thinks, may be hoped for as long as these phenomena have not been observed.

The pathological anatomy of calculous anuria may be summed up in the statement that the ureter or renal pelvis of one side has recently become occluded, while the kidney of the other side is either congenitally absent or functionally suppressed, or structurally destroyed by calculus, or some other

orm of renal disease. Rarely does simultaneous obstruction f both ureters by calculi occur, although this has been known o happen.

Diagnosis.—The occurrence of former attacks of renal colic n a gouty person, followed by the sudden onset of pain on one ide, and this accompanied or immediately followed by anuria, oints at once to obstruction of a calculous nature. The iagnosis will be further strengthened if a swelling, or dis- inct tenderness on pressure, is present in the renal region, or n the course of the ureter, of the side recently become the eat of pain.

But in some cases there is not a distinct history of previous ttacks of renal colic, and yet one kidney may have become ilently but entirely obstructed, or destroyed by calculi, as hown in Lecture II. In other cases there have been previous ttacks of renal colic or pain, but the patient has forgotten on hich side the pain was felt.

If under these circumstances anuria sets in it may be diffi- ult, or impossible, to diagnose on which side the recent ob- truction exists. The surgeon thus in doubt must seek in- ormation by the examination of the patient in the following manner:

1. The course of the ureter should be palpated, if possible, hrough the abdominal parietes. This is often an impossi- ility owing to the stoutness of the patient. The ureter in hich a calculus is impacted is likely to be inflamed and ainful, as well as tender; even when a calculus has passed long the ureter it is likely to be followed by pain lasting everal days after its escape.

2. Rectal and vaginal examination should be made. In the male digital examination *per rectum* has led to the discovery f a calculus impacted in the lower part of the ureter, as in awdon's and Ceci's cases; in the female the same discovery as been made by vaginal examination by Emmet and by myself, and I have also detected the presence of a stone by esical examination after dilating the female urethra.

3. Catherisation of the ureters, though easy of application n the female, does not afford satisfactory assistance in hese cases, whether done across the bladder through the ilated ureter, or by vaginal cystotomy as practised by Boze- mann and Emmet, or by the aid of suprapubic cystotomy. he cystoscope in the cases of anuria is quite unnecessary, nd can give no information which is not more fully ascer- ained by rectal or vaginal examination and a sound in the ladder.

If there be a calculus in the terminal part of the ureter it ill almost certainly, if of any size, be detected by either ectal or vaginal examination, and can be extracted by one f the operations to be mentioned later on; but if by these nodes of examination nothing is detected in the inferior ex- remity of the ureter, we ought without delay to explore one r both of the kidneys through the loin, and to select first he side on which pain, or tenderness or swelling, or a hard ontracted condition of the abdominal walls exists, or has ecently existed. Through such an incision the kidney and djacent part of the ureter can be seen and felt, and the rest f the ureter catheterised, and if a stone be found it will be ossible to remove it, and if no stone be found then by estab- ishing a renal fistula relief will be given to the congested tate of the kidney, and a condition will thereby be brought bout favourable to the resumption of the secretion of the rine.

Calculous anuria and uræmia have to be diagnosed from on-obstructive forms of anuria, and from other forms of bstructive disease.

From Polycystic Disease.—A case of anuria from double poly- ystic disease, in which the symptoms and history were those of alculous obstruction, has lately been under my care. The atient, a rather stout but well-made, muscular man, aged 50, irst had pain in his right loin in 1884. Subsequently he fre- uently passed gravel, and in 1894 after attacks of pain in the ight kidney, a small stone. He has been in very indifferent ealth since then, suffering pain in the right loin. On Wed- esday, March 16th, he had another attack of pain like the ormer ones, but in the left side as well as the right, and assed very little urine after then. Both his kidneys were cut own upon, first the left, then, two days later, the right. oth kidneys were found in the same state. Several cysts ere opened in each, and the lessened tension resulting therefore gave him some relief. He died on March 24th, on the ninth day of the attack, and after five days of complete suppression. Muscular twitchings, meteorism, sleeplessness, restlesssness, a small, rapid pulse, pallor of face, blueness, and coldness of extremities, and at last sub- normal temperature and dyspnœa were the chief symptoms. The kidneys and liver are before you; each of these organs is in a state of cystic degeneration. There was no stone or other gross obstruction present throughout the urinary organs.

From Uterine Cancer and Pelvic Tumours.—Cancer of the uterus is after calculus the most frequent cause of ob- structive anuria. I have seen many cases of anuria from uterine cancer in the cancer wards of the Mid- dlesex Hospital; but I do not remember ever to have seen uræmia from this cause arise before any of the ordinary symptoms of carcinoma of the uterus have declared them- selves. Such cases, however, have been recorded, and have given rise to difficulty in diagnosis, as the suddenness of the attack suggested calculous anuria. Avan reported a fatal case of uræmia attended by eclampsia and prolonged coma in a woman who had never complained of any of the symptoms of uterine cancer, and who was suddenly seized with eclampsia in the street and died. Cancer of the uterus was found on *post-mortem* examination to have caused double hydro- nephrosis by pressure on the ureters.

Complete and prolonged suppression of urine at an early period of the cancer, or in uterine cancer which has been latent up to the onset of the anuria, is also recorded. Merklen quotes cases of total suppression for seventeen and twenty- one days due to uterine carcinoma, which had not previously caused any of the classical symptoms of the disease. Roberts also cites a case of the same kind, in which anuria lasted fifteen days, and presented the clinical symptoms and fol- lowed the course of calculous anuria. Such cases are very prone to be mistaken for anuria from impacted calculus.

Primary cancer of the bladder may obstruct the ureters, like uterine cancer when it has invaded the trigone. Roberts records a case in which the symptoms were those of calculous anuria; but at the *post-mortem* examination scirrhous car- cinoma at the base of the bladder was found, involving the prostate gland, and both ureters passed for the length of an inch through the growth. Double hydronephrosis—old on one side, recent on the other—was the result.

Suppression has been known to occur suddenly, and to be followed by uræmia, vomiting, and fever, as the result of secondary carcinoma in the renal pelves and ureters. Volu- minous tumours of the uterus or its appendages may obliterate the ureters and give rise to suppression.

Many cases after operations for myoma of the uterus succumb to anuria with dilatation of the ureters and renal pelves.

The diagnosis between calculous anuria and cases of anuria from uterine cancer, and the other causes of ureteral obstruc- tion, will be assisted by digital examination of the vagina and rectum, and by palpation of the abdomen.

From Traumatic Anuria.—Calculous anuria will be dia- gnosed from traumatic anuria, in which the vessels of both kidneys are thrombosed, by the symptoms following an injury; and from the anuria following catheterisation and other operations on the lower urinary passages, by the absence of the general *malaise* at the onset, and of the rigors, high temperature, and intense prostration which accompany urinary fever. After extensive thrombosis of the vessels (arteries or veins) of both kidneys polyuria has been observed, as in a case recorded by Moxon in vol. xiv of the *Guy's Hospital Reports*.

Treatment.—The treatment of anuria, up to fifteen years ago, was entirely medical. Death was the common result. No wonder; for what else could be expected from purgatives and diuretics, from diaphoretics and antispasmodics, from baths, forced exercise, and massage? Drugs, such as digitalis and pilocarpin, and others, which induce the elimination of a considerable quantity of water from the system, remove only a small quantity of urea with the water, and thus leave the blood proportionately more highly charged with urea. For this reason, such supposed remedies ought to be ordered with extreme precaution in obstructive anuria.

The surgical treatment of calculous anuria is a question of the day, and one of the greatest importance.

Nephrotomy should be performed in the gravest cases to prevent death from uræmia; in the slighter and intermittent cases, to extract a stone which may at any time produce complete persistent anuria.

Opinions have hitherto differed as to the precise time when the surgeon should interfere. To be successful it is certain that the operation should be done early and before the uræmic stage is reached. But since this stage is generally delayed till after the sixth day, some authors have advocated the fifth or sixth day as the period of surgical operation.

My opinion is that an operation ought to be performed as soon as the anuria is established and the diagnosis is satisfactorily made.

The operation is serious only on account of the condition for which it is performed, namely (1) the urinary suppression produced by the obstruction, (2) the poisoned condition of the blood produced by the suppression, and (3) the structural changes in the kidney, the consequences of the obstruction. We should operate on the side last affected when the indication on this point is clear. It is not the kidney which has longest suffered, or which has yielded most calculi, which ought to be incised. The contrary ought to be the rule, because the more the kidney is affected the more extreme its degeneration, the less the secretion which it will yield, and, consequently, the less the benefit from nephrotomy.

In the absence of exact history, drawn from the patient himself, it is necessary to try and ascertain by careful examination of the abdomen which kidney to explore. When there is no enlargement of the kidney, and no pain or tenderness, there may yet be a considerable degree of hardening from contraction of the abdominal muscles over the part of the kidney which is last involved.

In most cases it will be best to explore the kidney first, but in certain exceptional instances, as when the stone can be felt *per rectum* or *per vaginam*, or evidence clearly points to the side and precise spot at which it is impacted, ureterotomy should be done. For this nothing less than actually feeling the stone through the abdominal parietes (a most unlikely thing in persons suffering from calculous anuria) ought to satisfy. The localisation of stone, as to whether it be in the kidney or ureter, is very uncertain; most frequently, when impacted in the ureter, the symptoms it causes are referred to the corresponding kidney; but occasionally the reverse obtains, and a stone in the renal pelvis gives rise to fixed abiding pain and acute tenderness at one particular spot in the course of the ureter.

The nature of the operation performed in the 49 collected cases was as follows:

1. Operation stated as nephrotomy (in a few cases as exploration of kidney) in 36 cases. In 1 of them the operation was performed by the thermo-cautery.

2. Incision of the renal pelvis, 5 cases; 1 was done by thermo-cautery.

3. Incision of the ureter, 7 cases; 1 was performed through the rectum; in 1 additional case an attempt was made to remove an obstruction from the lower end of the ureter by means of the finger in the bladder.

References.

[1] Specimen in St. Bartholomew's Hospital. [2] Injuries of the Ureter, *Edinburgh Medical Journal*, January, 1898. [3] *Gaz. Hebdom.*, 1879. [4] *Mal. des Reins*, T. iii, p. 490.

(*To be continued.*)

A Medical Politician.—Sir Charles Nicholson, Bart., M.D., D.C.L., LL.D., who lately entered on his 90th year, is one of the grand old men of Australia. He took the degree of M.D. at Edinburgh in 1833; in 1834 he emigrated to Australia and established himself in practice in Sydney, then the only town of any size in the great southern continent. Interesting himself in public affairs, he was returned in 1843 to the first rudimentary Australian Parliament, where he had as a colleague Mr. Lowe (afterwards Lord Sherbrooke). Sir Charles presided as Speaker over three of the early Australian Parliaments, and he was also largely instrumental in founding the University of Sydney, of which he was elected first Chancellor. On the separation of Queensland from New South Wales, he became the first President of the Queensland Legislative Council. He has for some years past been living in England.

THE PATHOLOGY AND TREATMENT OF GENU VALGUM.

By CHARLES A. MORTON, F.R.C.S.,

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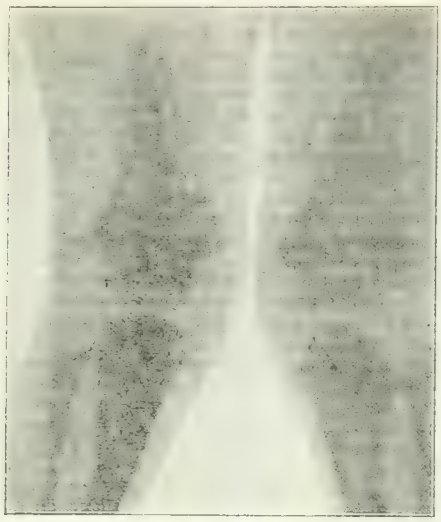
It was not my intention to publish the results of my investigations into the pathology of genu valgum at the present time, but the publication of a skiagraph of the bones in this deformity in the British Medical Journal of December 4th, 1897, has induced me to do so. Mr. Tyack, Lecturer on Physics in University College, Bristol, has now taken for me skiagraphs of six cases of genu valgum, and they all show that there is no rickety curve in the lower end of femur and no elongation of the internal condyle, but that the deformity is due to curvature outwards of the tibia just below the head, associated with a corresponding curve in the shaft of the fibula, which is most marked about the middle of that bone, so that the tibia and fibula at that level are much nearer together than in the normal limb. That this is the essential change in the bones in genu valgum, and not an exceptional one, is shown by the fact that it is present in every one of the six consecutive skiagraphs. The generally received view that the deformity is due to a change in the lower end of the femur is thus shown to be erroneous, at any rate with regard to young children.



Photograph No. 1.

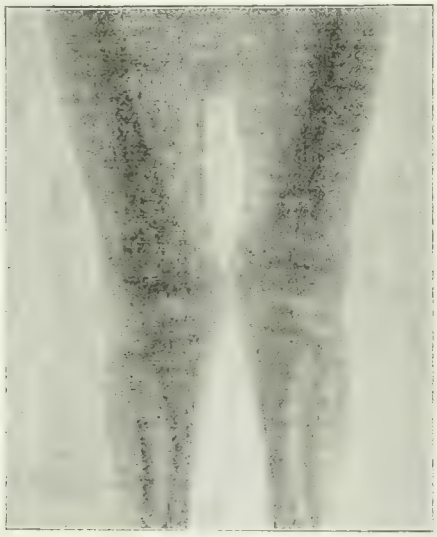
Skiagraph No. 1 is the first taken and the one I wrote to the British Medical Journal about on May 29th, 1897. It was taken to show the supposed changes in the lower end of the femur, and hence but little of the leg bones is seen, but there is enough visible to show where the deformity was situated. Photograph No. 1 is of the same case. Skiagraph No. 2 is also from the same case, taken after Macewen's osteotomy on both sides, and as more of the leg bones is seen it is really a better one of the deformity. Photograph No. 2 is from the same case after operation, and shows that although the curvature in the leg bones remains unaltered, the limbs are quite straight. Rectification of deformity of the limbs has been obtained by the production of slight

deformity at the lower end of the femur and obliquity of the knee-joints.



Skiagraph No. 1.

Now, although in the cases I have operated on by Macewen's method the limbs have been satisfactorily straightened, yet it seems to me that it would be better surgery to divide the bones which are curved, rather than to correct the deformity of the limbs by dividing a healthy bone and causing a certain amount of deformity at the seat of division, together with some distortion in the position of the joints, and hence I have treated one case by division of the curved tibiæ and fibulæ rather than by Macewen's osteotomy.



Skiagraph No. 2.

Photograph No. 3 and skiagraph No. 3 represent the case before operation, and photograph No. 4 after operation on both legs. Unfortunately no skiagraph was taken after operation. I intended to get this done, but the child was sent back to a country workhouse before I remembered to arrange for it. In all cases great care has been observed that the patellæ look directly forwards, and hence that there is no masking of the deformity by rotation of the limb. The genu valgum is as satisfactorily corrected as if Macewen's osteotomy had been performed, and there has been no division of a normal bone, or production of joint obliquity. It is true that the legs are not quite so straight as after Macewen's osteotomy, because the bending of the curved tibia inwards leaves a very slight angularity in its outline just below the head of the bone, but this corresponds to the deformity produced in the lower end of the femur in Macewen's operation, and is produced in the curved bone and not in a normal one. I may mention that in this case the outgrowth of bone at the



Photograph No. 2.



Photograph No 3.

attachment of the internal lateral ligament to the tibia present in some cases of genu valgum was very marked. There is only a slight trace of this in the skiagraph, probably because it was cartilaginous. Had it been ossified it would have appeared as if there were two symmetrical exostoses on



Skiagraph No. 3.

the tibia. The operation I performed consisted in a transverse division of the tibia, just below the junction of the head and shaft, with a narrow saw after fully exposing the bone by a transverse incision over its inner aspect. On the left side I removed a very narrow wedge of bone, with the base inwards; on the right side I simply made a transverse division. On the left side (the first side operated on) I divided the fibula about the



Photograph No. 4.

middle of the bone, but it was deeply situated, and was so closely approximated to the tibia that it was quite difficult to do so without wounding the anterior tibial vessels and nerve. On the right side I divided the fibula lower down where it was near the skin, and this was, of course, quite easy, and the result was as good as on the other side. Esmarch's bandage was not used, and no vessels required ligation. There seems to be no risk of wounding any important vessel if the tibia is carefully divided with a small Adams's saw from the inner side, after free exposure of the bone, and if the division of the fibula is made at the lower end. In many cases no doubt the fibula could be easily broken across after division of the tibia. It is essential that it should be divided. We must remember that in Macewen's operation there is always a risk of damage to the popliteal vessels. I put the limbs up (as I do all cases after Macewen's operation) with a wedge placed between the leg and the outside splint, with the base of the wedge about an inch thick, placed between the outer malleolus and the splint. It is made of jaconet stuffed with wool. Its insertion tends to push the ankle inwards, and thus helps to maintain the correction of the deformity after osteotomy. The wounds were all sutured, and healed by primary union.

There is no difficulty in keeping the upper fragment of the tibia in a good position, as Mr. Footner suggests there might be, but we have to adopt special precautions in putting up the limb to overcome the rotation outwards which is always present under anæsthesia, and is, in fact, the position of rest of the limb. In any case in which the bones of the limb are divided, it is impossible to correct this rotation in the portion of the limb above the section of the bone by a slight twisting of the foot to the middle line. In Macewen's osteotomy, for instance, the foot, leg, and knee-joint are put up without external rotation, but there is no doubt the shaft of the femur is left slightly rotated outwards. When the limb is put up on the splint, after the division of the bones below the knee-joint, rotation outwards is noticed by the position of the femoral condyles. It cannot be corrected by twisting the foot, and we must overcome it by the way in which we bandage the thigh. The bandage must first be carried several times around the thigh from without inwards, and then in the same direction round the limb and splint. This rotation of the femur outwards would not matter if the leg and foot were allowed to remain also rotated out, but it would be inconvenient to apply the splint in this position. In putting up the limb after Macewen's osteotomy the rotation outwards of the leg and foot is corrected, but the shaft of the femur must remain rotated out, and hence, after this operation, when the patient, gets about again, and this rotation outwards which is the position of rest, is corrected, a corresponding abnormal rotation inwards of the bones below the level of section will be produced.

It is often stated that the deformity in genu valgum disappears when the knee-joint is flexed, because the tibia then passes on to the back of the elongated internal condyle. For many years before we began to take skiagraphs of these cases, I have again and again demonstrated to students that this is incorrect. When the knee-joint is flexed in genu valgum there is an unconscious rotation outwards of the femur, slight, but enough to mask the deformity. If the surgeon is careful not to rotate the femur outwards in the slightest degree, he will not correct the deformity by flexion of the knee-joint.

The slight obliquity in the head of the tibia present in Mr. Footner's skiagraph is also present in some of mine, but it is evidently not the essential condition, for with a genu valgum of equal degree on the two sides it is seen on one side and not on the other, and the curvature of leg bones is marked in both. Moreover, it would be easy to produce this obliquity in the skiagraph by the position in which the limb was placed on the plate. If the limb was adducted or abducted from the middle line, the knee-joint would appear as if oblique instead of horizontal. It is not an elongation of the inner tuberosity of the tibia, but a general obliquity of the upper surface of the diaphysis (as is clearly seen in skiagraph No. 3), and is probably corrected by the shape of the epiphysis, otherwise there would be a compensating obliquity in the lower end of the femur, and the line of the joint would be oblique, and such obliquity would tend to correct the deformity, as t does after Macewen's osteotomy. Now the

lower end of the femur, in skiagraph No. 3 is quite straight, and the obliquity of the upper end of the diaphysis of the tibia must be compensated for by the shape of the cartilaginous part of the epiphysis, for otherwise a wedge-shaped space would be present in the knee-joint. This obliquity is evidently due to the curvature of the shaft, as is clearly seen to be the case in skiagraph No. 3, and it is probably of no importance. In Mr. Footner's skiagraph of the bones after osteotomy this obliquity (though present before operation) is not apparent, but then the whole outline of the upper end of the tibia is blurred.

[Since this paper was sent for publication I have operated on another case in this way. The deformity was easily and satisfactorily corrected, but the limb is still on the splint.]

SOME OF THE MEDICAL USES OF THE ROENTGEN RAYS.*

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It gives me great pleasure to have the honour of being present at the meeting of this Association and of reading a paper before this Section.

During the past year I have spoken several times on the subject of the Roentgen rays and their uses in medicine[1]; in the few minutes at my disposal to day I shall only attempt to review briefly some of the clinical questions the *x* rays assist us to look at from a new standpoint (thus lending confirmatory evidence to our older methods of examination), and also to some of the few ways in which the *x* ray examinations can place new evidence at our disposal. To consider the surgical uses would be out of place here, and to touch upon all the medical ones would take too long, therefore, by way of example, I will speak briefly of certain uses of the fluoroscope in diseases of the chest. But first let me remind you that the differentiation which the rays make between different tissues in the body depends upon differences in bulk and in chemical composition. This point is illustrated by these radiographs, which explain themselves.

The chest offers an excellent field for examination with the fluoroscope because it contains so much air that the contrast between the normal lungs, which are light, as seen in the fluoroscope, and some pathological conditions, which make them darker, renders many abnormal conditions readily visible, and, further, the motions of the organs in the chest may be studied with this instrument; this cannot be done with the radiograph. The physician can make an examination in his office by means of a suitable apparatus with such readiness that it is far more practicable than any method involving photography. I have been using the fluoroscope regularly as a means of examining the chest as I do the stethoscope, and find that the two instruments supplement each other.

To illustrate the uses of the fluoroscope let us consider certain outlines of the organs in health as seen in the fluoroscope, and then take up the ways in which they may be changed in disease. In health the diaphragm lines move as follows: Quiet breathing, half an inch; full inspiration, two and one-half to three inches, a little more on the right than on the left side.

In health the outlines seen on the left of the sternum are as follows: A part of the aorta in some patients may be observed in the first intercostal space; in the second intercostal space a portion of the pulmonary artery; the left border of the ventricle is chiefly seen in full inspiration when the apex and a portion of the lower border are also visible; the maximum pulsation is at the point corresponding to the cavity of the ventricle about where its outline crosses the fourth rib; during full inspiration the heart moves downward and toward the median line about an inch.

To the right of the sternum the outline of the large vessels is seen, and, less distinctly, the right auricle between the second and fourth ribs.

Let me enumerate some of the diseases in which the changes that have taken place in the diaphragm lines may be seen in the fluoroscope: such are tuberculosis, pneumonia, pneumothorax, carcinoma, etc.



Fig. 1.—Tracing from a man, aged 23, showing position and movements of heart and diaphragm during expiration and in full inspiration. Line B the position of the ventricle during full inspiration. Line C the position of the ventricle during expiration. The dotted line, S, indicates the border of the ventricle in systole during full inspiration. The curved line A the right auricle. Lines D, D, indicate the position of the diaphragm in full inspiration. Lines E, E, indicate the position of the diaphragm in expiration. Line F indicates the position of the diaphragm on the right side in inspiration during quiet breathing at which time the heart was as in expiration (C). I, II, III, IV, V, VI, VII, indicate parts of the ribs seen in the fluoroscope during inspiration; during expiration only those parts above lines E, E, and outside of C are visible.

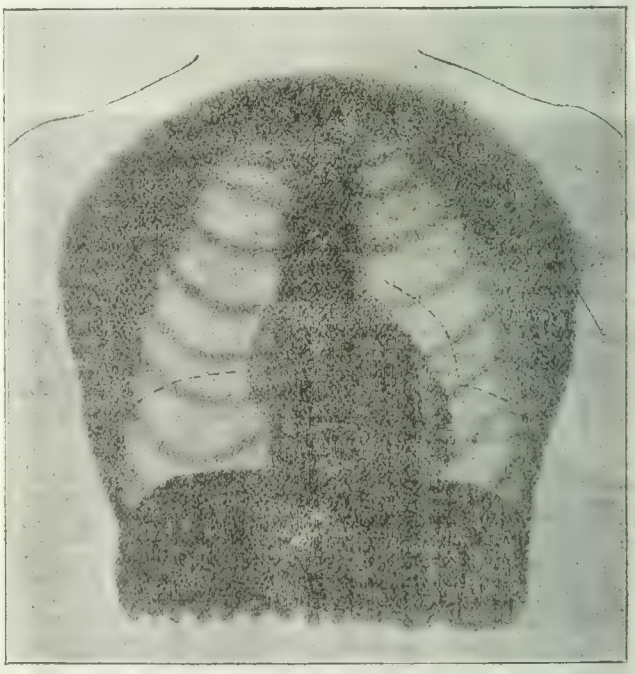


Fig. 2.—Normal thorax. Diagram showing the heart and the outline of the diaphragm of normal chest, as seen in the fluoroscope during full inspiration. The broken lines show position of heart and diaphragm during expiration.

In many cases of pulmonary tuberculosis (see Fig. 3) the range of movement of the diaphragm is shorter than in health; it does not descend as far as it should, and this shortening of the excursion precedes in some cases the increase in density of the lungs (which makes these organs appear dark in the fluoroscope), and sometimes is one of the

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association held at Montreal in September, 1897.

earliest signs of pulmonary disease. These variations from the normal are at times recognised earlier by the fluoroscope than by auscultation and percussion.



Fig. 3.—Tuberculosis. Diagram illustrating appearances seen in the fluoroscope in a case of tuberculosis of the lung. The apex of the right lung is seen to be darker than normal, and the range of movement of the diaphragm on the right side to be less than normal. The position of the diaphragm in full inspiration is shown; the broken lines give its position in expiration.

In pneumonia the lungs are not only darker than normal, but the excursion of the diaphragm is also seen to be shortened, as in tuberculosis, and it does not, in some cases at least, resume its normal range of movement until after one ceases to recognise in the fluoroscope the abnormal density of the lungs. In other words, the diaphragm line may be a more delicate test than the diminished brightness of the lungs. In both tuberculosis and pneumonia the amount of lung involved is better estimated in some cases by means of the fluoroscope than by auscultation and percussion. A central pneumonia may be readily noted in the fluoroscope which has not been recognised by auscultation and percussion.

In emphysema (see Fig. 4) the position and movement of the diaphragm are very characteristic. During full inspiration it goes lower down towards the abdomen than in health, and does not rise to so high a point in the thorax as it should. The lung area is brighter than in health, and the heart in the later stages is seen to be enlarged, to be in a more vertical direction, and to lie lower down in the chest than normal. The fluoroscope enables us in some cases to make a diagnosis of emphysema or to exclude it.

In pneumothorax the curve of the diaphragm is characteristic; this muscle is very low down on the affected side, and is motionless except at its median end, where the movement of the healthy side imparts some motion to it; the heart and blood vessels may be seen to be displaced towards the normal side.

In certain conditions in the abdominal cavity—as in ascites—the diaphragm may be pushed up into the chest, and thus its excursion may be very much restricted. In carcinoma below and near the diaphragm, for example, the movement of this muscle may be much restricted on the median end, while on the outer ends it may move nearly as much as in health.

In pleuritic adhesions we have still another cause for a limited movement of the diaphragm and also of the heart. The heart is seen to be displaced in pleurisy with much effusion, especially when the effusion is on the left side, and this displacement is sometimes not recognised by percussion. The increased density due to the presence of fluid is of course recognised by the fluoroscope.

In cardiac disease the size and position of the heart may be more exactly obtained by the fluoroscope than by percussion, except the right border of the ventricle, the outline of which is not usually seen in the fluoroscope. This instrument shows that in some cases the position of the apex is not at the point where the impulse is felt in the chest wall, but much below it. We may by the fluoroscope determine the position of the heart and whether it is smaller or larger than normal, and gain more definite information about it in these respects than has hitherto been possible. We may see aneurysms of the aorta, pulsations in the venæ cavæ, a dilated right auricle and pulmonary artery, displacements caused by abscess, or growths in the mediastinum.

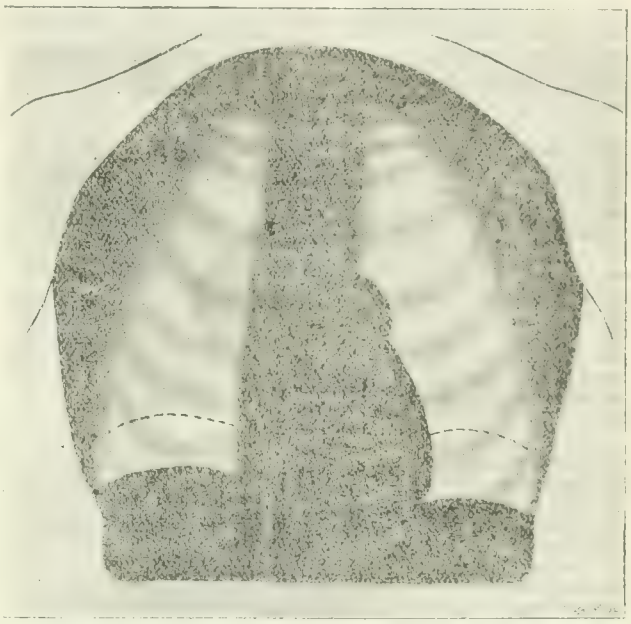


Fig. 4.—Emphysema: diagram from a tracing made during full inspiration. The dotted lines indicate the position of the diaphragm during expiration. While the diaphragm descends quite as far as in health, it rises much less during expiration, in this case only about half as far as in health. The ventricles are lower and nearer the median line than in health, and the right auricle is larger. The patient was a man, aged 57, in whom the signs of emphysema by auscultation and percussion were not well marked.

Some cases of harmful effects from *x*-ray examinations have been reported, but there is no danger to be apprehended from the proper use of the *x* rays; in the more than 500 patients which I have examined at the Boston City Hospital and at my office during the past eighteen months not the slightest harm or inconvenience has resulted. The tube should not be too near.

In closing allow me to direct your attention especially to the fact that in some instances we get our earliest evidence of disease in the chest from the fluoroscope, while in others this instrument strengthens and supplements the observations obtained by auscultation and percussion. I have had patients brought to me in whose chests auscultation and percussion showed only slight signs of tuberculosis at the apex of one lung, whereas the fluoroscope showed that one-half of this lung was involved, and that the other, in which no physical signs were present, was also diseased; and still other cases where the first indication of an abnormal condition of either lung was detected by the fluoroscope. In some patients with obscure thoracic disease brought to me in consultation I have been able to make a certain diagnosis by means of the fluoroscope only.

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A PRELIMINARY COMMUNICATION ON BACILLUS DIPHTHERIÆ AND ITS VARIANTS IN A SCHOOL IN WHICH DIPHTHERIA WAS ENDEMIC.

(FROM THE BACTERIOLOGICAL LABORATORY OF THE MINNESOTA STATE BOARD OF HEALTH, MINNEAPOLIS, U.S.A.)*

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Endemic Diphtheria in a School.

In presenting observations on what has become almost the commonest of routine bacteriological diagnosis, a word of explanation and perhaps of apology seems due. An opportunity has, however, been recently afforded of studying the morphological, cultural, and pathogenic characteristics of this bacillus, under circumstances which have borne out well their early promise of developing great variation.

About fourteen months ago, bacteriological examinations were begun to determine the reason for the frequent occurrence of cases of diphtheria and sore throats in a State institution, in which from 230 to 275 children are constantly housed and educated. An idea of the local conditions and treatment may be obtained from the following sketch by Dr. Adair:

The Character of the Institution.

The institution in question is situated upon a commanding eminence, the buildings comprising it being arranged in the form of an irregular semicircle. The elevation allows of free, natural drainage, and the character of the soil (loam overlying sand) is such as to prohibit unusual moisture.

The water supply is received from a driven well on the grounds, pumped into tanks and delivered by direct pressure to the various buildings. A careful oversight of both water and tanks is maintained, and examinations made at intervals to test the purity and potability of the supply. Investigations in this direction have been practically negative in character, so far as demonstrating the presence of organic matter in objectionable quantities. The plumbing is of the latest sanitary pattern, installed under rigid specifications, and maintained free from defect or leakage. The entire plant is heated by steam and lighted by electricity. A herd of Holstein cows is kept on the farm of the institution, and the barns and yards are exceptionally neat and clean.

The form of institutional life adopted is the so-called "cottage" plan; the children being grouped according to age and sex into cottages, of which there are at present five, each under the care of a competent matron who has charge of and is responsible for the children committed to her care. Each cottage has a sleeping capacity of about forty, the dormitories being located on the second floor and ample provision made for ventilation in all rooms.

The children from the different cottages receive their meals in one common dining room, situated in the main or administration building, and also come freely in contact with each other daily in the schoolrooms of the institution, in the Assembly Hall where they meet for worship, and on the playgrounds of the campus.

The beneficiaries of the institution have in general come from homes where poverty and filth reign supreme, but fortunately do not, as a rule, bear the imprint of the cachexias of childhood. Whether this is due to the fact that they are recruited mainly from the rural communities of the State, where at least they have been assured of healthy, if coarse, food and some kind of shelter, or not, the fact remains that they seem no more subject to strumous, rachitic, or specific troubles than the children of people in the better walks of life.

The Prevalence of Diphtheria.

Notwithstanding this, diphtheria has practically been endemic in the institution since its first year of operation (1887). At times latent and apparently under control by the ordinary measures used for the eradication of contagious diseases, the peculiarly elusive character of the poison has been manifested again and again by its reappearance at intervals, usually when least expected. Quarantine, maintained for the customary period, that is, till such time as the patient was fully convalescent, and for some weeks afterwards, was adopted as a routine measure, and, so far as practicable, rigidly enforced. A building, small and ill-arranged, used for the first few years as a hospital for the reception of all sick, was, upon the erection of the larger and more commodious house two years ago, set apart as a detention ward for the reception of new arrivals, in accordance with a plan to be described presently.

A particularly severe outburst in the summer of 1896, comprising more than forty cases of undoubted diphtheria, confirmed by bacteriological findings, gave rise to an investigation of the possible sources of the disease, including the plumbing, water and milk supply, and in short everything connected with the institution capable of acting as a medium for its production and transmission. The absolutely negative results obtained led to the careful consideration of the question as to how far the trouble could be attributed to a throat-to-throat transmission through the medium of children themselves immune.

Methods Attempted for Checking the Prevalence.

In order to understand intelligently the conditions, a brief description of the plan adopted for checking the spread of the disease may be given. Each child upon his arrival at the school receives a complete change of clothing, a warm bath, and a culture is taken from his throat. After remaining in the detention ward for two weeks, a second culture is taken, and, if pronounced negative, he is assigned to a cottage, provided that the first examination was also negative. The necessity of obtaining at least two reports of the freedom of the throat from even suspicious-looking bacilli seemed imperative from the results of the early examinations, and this procedure has been in operation about three months.

The somewhat cramped condition of the quarantine building, caused by its occupancy by all children whose throats show suspicious bacilli, whether apparently healthy or with clinical evidence of infection, often necessitates the placing of several children in the same room.

Children whose throats have been once reported clear are placed together in a freshly disinfected room, where they are detained until all give two successive negative examinations. This frequently necessitates the re-examination of throats which have already been pronounced clear on several occasions.

Upon the occurrence of symptoms of sore throat among the inmates of any cottage, cultures from the throats are at once made, and, if suspicious-looking bacilli are found, the children are at once removed to the hospital, isolated and subjected to treatment which is maintained until such time as two successive cultures prove to be negative. In this connection it was found that children in perfect health, who had shown no departure from a normal condition for months, and some with absolutely no history of any illness, however slight, during their residence in the school, extending over a period of one to two years, gave typical cultures of B. diphtheriæ. It was found, in addition to this, that the usual length of time supposed to be requisite for quarantine was occasionally entirely too brief, the bacilli persisting for months in the throats of children recovering from acute attacks, on whom local treatment, faithfully carried out, seemed incapable of ridding the tissues of bacilli.

"Typical" and "Atypical" Bacilli.

The matter of the differentiation of B. diphtheriæ and its variants from allied forms, seems to be, in spite of the huge amount of investigation done and being done, in a very unsettled condition. It is necessary, then, to state what is meant in this paper by "typical" and "atypical" diphtheria bacilli. The examinations have been made by the usual methods of growing the bacteria from throats upon ordinary "Loeffler's" serum, or more usually that modified by the addition of 1.25 per cent. glycerine. Cover-glass preparations

* Presented to the Section of Public Medicine of the British Medical Association, at Montreal.

from cultures of 12 to 18 hours' growth are stained with Loeffler's methylene blue. Specimens thus prepared show what have been designated "typical diphtheria" bacilli, namely, short and long forms with polar granules, large club, dumbbell, and irregular forms, and, rarely, except in cultures somewhat older, "ghost" forms. It may be mentioned that cultures of that age grown on the glycerine serum, and stained with Loeffler's methylene blue (Grübler's), always show polar granules in abundance. When pure, all of these forms, whether from healthy persons or cases of clinical diphtheria, show the same general cultural and pathogenic characteristics. In view of this it will be seen that the term "typical" employed throughout is practically based on morphological and cultural appearances.

Description of an "Atypical" Form.

Early in the examination of cases from this institution the occurrence of a bacillus was noted, which then and since has been (with one exception in 2,400 examinations) limited strictly to the said institution. This is the more striking since it was not found to occur anywhere else in the State, not even in the town on the edge of which the school is located. From glycerine serum cultures, pure or mixed, twelve to eighteen hours old, specimens stained with Loeffler's methylene blue show bacilli uniformly, and usually darkly, stained. They have never, at any stage of development on any of the ordinary media, shown polar granules. In size the variation is within narrower limits than is the case with "typical" forms, the minimum being about the same, while the maximum is not so large. These bacilli are usually somewhat thicker in the middle and with rounded ends, rarely club-shaped, or very frequently arranged in pairs whose proximal extremities are always thicker than the distal, the exact opposite of paired arrangement in "typical" forms. The so-called "Chinese character" arrangement is always present, and is, with the similarity in size, the only morphological resemblance to the "typical" forms above mentioned.

On glycerine serum the colonies develop somewhat more rapidly than is the case with the "typical" forms, are usually more elevated, and when old are of a darker colour and more easily detached from the surface of the medium. They retain their vitality on this medium longer than do the "typical" forms under precisely similar conditions.

In agar cultures the colonies grow somewhat more luxuriantly, have a greater tendency to become confluent, more rarely show the "daisy" form, and are of a lighter colour than colonies of the "typical" forms. Though broth cultures are more luxuriant, the changes in reaction and other peculiarities are identical with the "typical" forms. Cultures in litmus media, gelatine, etc., closely resemble B. diphtheriæ.

This bacillus was found alone, mixed and alternating with "typical" forms of B. diphtheriæ, both in cases of clinical diphtheria and in healthy individuals. Its virulence, when isolated from the above sources and tested on guinea-pigs, is about equal to that of the "typical" forms, from similar or other sources.

In determining whether or not this is an "atypical" form of B. diphtheriæ, the following experiments were undertaken and are now in progress. Pure cultures of both "atypical" and "typical" forms from such sources as given above, the virulence of which had been determined, were given to guinea-pigs immediately before inoculated, each with 60 units (Behring's standard) of No. 3 antitoxin (New York Health Department). Control animals of the same size and breed were inoculated without previous protection. The antitoxin was found to protect, not only against "typical" forms, but against the "atypical," while the controls died in varying times.

A somewhat similar method of procedure has been begun recently and on a limited scale. Serums obtained from blisters on individuals, both with clinical diphtheria and without symptoms, who had in their throats "atypical" forms unmixed at any time with "typical," and on healthy individuals in whose throats was B. diphtheriæ ("typical" forms unmixed with "atypical"), were used for the protection of guinea-pigs against both the form of the bacillus present in the throat of the individuals from whom they came and against the other form.

Too few experiments have been completed to justify the drawing of conclusions therefrom.

The results of animal experiments seem to fix this classification of "typical" and "atypical" forms of B. diphtheriæ, which without them, and dependent wholly upon morphological and cultural peculiarities, would have been only a matter of conjecture.[1]

This apparently arbitrary grouping of forms met with, though later confirmed by the animal experiments already noted, grew out of the study of the tabulated results of a somewhat extended series of bacteriological examinations in each of a large number of individuals.

In all, cultures have been examined from 478 persons in the school. Of these, 301 presented no symptoms of diphtheria, and gave negative bacteriological findings; 5 had some clinical symptoms which resembled those of diphtheria, but not even suspicious-looking bacilli were found on culture. The remaining 172, or 36 per cent. of the whole number of throats examined, showed either "typical" or "atypical" diphtheria bacilli; 50 of these had clinical diphtheria, and "typical" germs unmixed at any time with "atypical" were present; 11 had clinical diphtheria and "atypical" bacilli; no "typical" bacilli were present any time in these; 7 had clinical symptoms of diphtheria, with mixture or alternation of the two forms; 59 presented no symptoms, but yielded on examination "typical" forms unmixed at any time with "atypical;" 17 were never ill, but the "atypical" forms were present without the "typical;" 28, at no time diphtheritic, were found to have mixed or alternating forms in their throats.

Results of the Bacteriological Examinations.

In bringing forward these examinations, it appeared best to select and group certain cases which presented points of special interest.

[The paper as presented to the Section of Public Medicine was illustrated by a series of tables giving in detail every examination. These tables, owing to their form and length, it has been found impossible to reproduce here, and the Editor is indebted to the authors for having been at the pains to prepare the following analysis.]

Group I consists of 13 cases showing no clinical symptoms of diphtheria, but from all of which the "typical" forms of B. diphtheriæ were obtained and in which no "atypical" forms were ever observed. Of each of these 13 cases from four to twelve examinations were made, and the bacilli were found present for periods varying from 20 to 115 days. Bacilli were studied in pure culture from 11 specimens; 9 of these were used for animal experiment. Inoculations of 40-hour broth cultures into guinea-pigs, killed usually in from 3 to 7 days. In 2 death was delayed until the 20th day, but the "typical" forms were recovered from the seat of inoculation.

An illustrative case in this group is the following: Two weeks after the boy's admission to the school the routine examinations disclosed the presence of "typical" forms of B. diphtheriæ alone. They were still found present on examinations made 7, 18, 30, 94, 107, and 115 days afterwards. On the 43rd day no suspicious-looking bacilli were detected, this being the only time when they were not obtained between February 16th and June 11th. Cultures taken 11, 17, and 26 days after the latter date gave negative results, upon the report of which he was released from quarantine.

Group II consists of 6 cases exhibiting no clinical symptoms and in which "atypical" but no "typical" bacilli were present during the observations. In each of the cases the "atypical" bacilli were found present one to five times in a series of examinations lasting from 20 to 64 days, and during which 2 to 4 negative diagnoses were given in each case. Pure cultures were studied in two instances.

One case of this group deserves a passing remark. The patient was received on May 27th, and 10 days later "atypical" bacilli were found. On the 9th, 17th, 35th, and 64th days thereafter they were still to be obtained. On the 26th, 45th, 52nd, and 57th days examinations gave negative results. Three consecutive examinations, embracing a period of 14 days between the findings of the 35th and 64th days, failed to show the presence of these or other suspicious-looking bacilli.

Group III contains only cases (8 in all) of clinical diphtheria with the "atypical" forms as the only suspicious-looking bacilli present. These cases were examined from three to twelve times each during a period of from 30 to 81 days, and the germs were found present from one to six times in each case, accompanied with two to seven negative findings. Examinations of 5 of the cases some time before the

onset of the disease gave negative results, followed by prompt positive findings after illness began. This is very unlike mere coincidence, and a causative relation between the presence of the "atypical" bacilli and the synchronous symptoms would appear to be well established. Pure cultures were studied from 2 specimens and a series of 7 animal experiments made with these cultures. Guinea-pigs were killed in 3 to 10 days, and the bacilli, unchanged in morphology and biology, recovered from the seat of inoculation in all but 3 animals.

The following case of this group is interesting from the fact that she had been received in December, 1896, and two examinations made during that month gave negative results. She then returned to her home, and was readmitted May 14th, 1897, and nine days later had a rise in temperature and sore throat, with the presence in her throat of "atypical" bacilli, which were still to be found on the last examination made, which was on August 11th. Any possible immunity conferred by residence in the school during the first sojourn was seemingly lost during the stay at home.

GROUP IV comprises 4 cases in which "atypical" forms were present at the beginning of clinical diphtheria, with typical or associated forms appearing later. For each 6 to 13 examinations, during periods of from 3 to 6 months, were made, with from 3 to 9 positive and from 3 to 4 negative findings. The "atypical" forms were studied in pure culture from three different sources amongst these cases.

One case of this group was admitted to the school May 24th, 1897. Two weeks later he developed symptoms of diphtheria in a mild form, and his throat was shown to contain "atypical" forms of the bacilli alone. These were still present, unmixed, after 35 days, when they were obtained in pure culture. Eight and 17 days after this, or 43 and 62 days respectively after the inception of the disease, "typical" forms unmixed with "atypical" were found. On the sixty-ninth day a negative examination was made, but eleven days after this the "atypical" forms again appeared. The case is still under observation.

GROUP V includes 6 cases of diphtheria in which "typical," "atypical," or associated forms, were present some time before clinical symptoms arose. Pure cultures of the "atypical" bacilli were obtained before the beginning of the disease in one case, and guinea-pigs inoculated with these were killed in 6 to 8 days, and the bacilli recovered—morphologically and culturally unchanged—from the seat of inoculation. Pure cultures of the "typical forms" were obtained in three instances. One of these was before the beginning of symptoms, and inoculations of this killed guinea-pigs in 15 to 21 days. In the latter instance bacilli were obtained in pure culture, and showed short but granular forms. In all the cases these conditions obtained from 2 to 62 days before clinical symptoms of diphtheria appeared. Typical forms were present previous to illness in four cases. In one of these the examination at time of illness showed the same bacilli. In 2, the two forms together or alternating appeared only during convalescence. In a fourth case a child apparently healthy developed typical diphtheria two days after taking the specimen, the examination of which showed the presence of "typical" bacilli. "Typical" forms ushered in the illness of one case, which had previously exhibited only the "atypical" forms. In one case both forms were present together two months before the inception of the disease, which was apparently due to "typical" forms alone. It is evident here that no immunity had been established by the previous throat infection.

One of these cases was admitted on April 7th, 1897, and ten days later showed "typical" diphtheria bacilli of the short granular variety, associated with the ordinary "atypical" variety. Two negative examinations followed 13 and 18 days after the first, but 12 days after the last negative, or 30 days after the the first positive, an acute attack of diphtheria began, and "typical" bacilli of the large long form were present. These were found in four later examinations unmixed, but on a fifth examination, 80 days after the inception of the disease, the "atypical" forms again appeared, though the "typical" were still present. Eleven days after this the "atypical" forms alone were found.

Here we have a case which presented three different varieties of the bacilli, the presence of two of which failed to confer an immunity from the third.

GROUP VI contains 4 cases which showed no symptoms, but in which one form of the bacillus was followed by the other form. The observations covered periods of from one and a-half to three and a-half months. Each case was examined 5 to 9 times, with from 2 to 6 positive and 1 to 4 negative results. The "typical" forms were isolated and studied in pure culture from two sources in this series of cases.

One case of this group was admitted on April 26th. Eight days later "atypical" bacilli were found, while on the 25th and 28th "typical" diphtheria bacilli alone were present. Examinations on the 46th, 77th, and 85th days gave negative results. "Typical" diphtheria bacilli again were present on the 94th and 101st days, and followed on the 112th day by "atypical" forms.

GROUP VII consists of 18 cases, which at no time while the examinations were in progress, periods of from two to six months, showed symptoms of diphtheria, but which had frequently or continuously present an irregular succession or mixture of the two forms. Five to 17 examinations in each case were made, with from 4 to 15 positive and from 2 to 6 negative findings. Pure culture inoculations of the "atypical" forms, which were isolated from five sources, killed guinea-pigs in from 8 to 21 days, with recovery of the bacilli in all but 2 instances. The "typical" forms were obtained in purity from 16 sources, sometimes when the 2 forms were associated, and a series of 7 animal experiments showed them to be capable of killing guinea-pigs in from 4 to 17 days, with the recovery of the bacilli in all but 1 animal, which died in 14 days, the media inoculated from the seat of injection remaining sterile.

The first case of this group is perhaps the most interesting of any here reported. The boy is 3 years of age, and was admitted on February 4th, 1897. Twelve days later a culture from his throat showed both "typical" and "atypical" bacilli. Three successive examinations 9, 18, and 25 days thereafter, showed "typical" bacilli. The patient was described as croupy on the day of the last-mentioned examination, and antitoxin was given twice on the same day by way of experiment. In the evening the temperature, which had been 103° F. at 11 A.M., subsided to 99 8° F., and was on the following morning normal, and so remained; 41, 70, 80, 94, 126, 139, 146, 154, 170, and 181 days from the beginning of the examinations, "typical" bacilli were found, alone in every instance except on the 146th and 181st days, when they were mixed with the "atypical" forms. On the 41st and 56th days, the "typical" bacilli were isolated in pure culture, and in doses of 1 c.cm. of forty-hour cultures, killed guinea-pigs in 14 and 17 days respectively. In the latter experiment the "typical" bacilli were recovered in pure culture from the seat of inoculation in the animal; in the other instance no growth was obtained.

Here then is a case in which the "typical" bacilli were found fifteen times out of seventeen examinations, covering a period of over six months, and are possibly even yet present, as the last examination was made on August 16th, 1897.

On one of the two occasions on which no diphtheria bacilli were found, a very scant growth on the first culture at an extremely busy time, prevented a satisfactory diagnosis, and another specimen was asked for. The occurrence of a croupy cough may appear to render questionable the classification of this case amongst those who never at any time exhibited clinical symptoms of diphtheria. The rapid subsidence of the temperature and absence of mention in the hospital record, may, however, be looked upon as indicating that this was a simple croupy condition, which unless the patient had been under particular surveillance would have escaped notice. The persistent spraying or swabbing of the patient's throat with corrosive sublimate, in strengths from 1 in 1,000 to 1 in 250, as well as the use of diphtheria antitoxin, failed to rid the throat of this patient of the bacilli during six months.

THE "ATYPICAL" A VARIETY OF THE "TYPICAL" BACILLUS.

It is very evident that the term "atypical," throughout employed, indicates that the bacillus, though exhibiting well-marked morphological and a few cultural characteristics (see previous description), which are very unlike those usually described by others, and classed in this paper as "typical" forms of B. diphtheriæ—is merely a variety of B. diphtheriæ. From the comparatively few cases of illness accompanied by throat symptoms, from which these "atypical" forms, unmixed with "typical" diphtheria bacilli, were found, it would appear that these "atypical" bacilli—allowing that they are causative—produced a milder infection than some of the cases in which "typical" forms were found. The comparatively rare occurrence of this form alone, and the relative frequency of the occurrence of the "typical" form alone in cases of sore throat in this institution, may render any comparisons of the severity of the symptoms produced by the two forms misleading, hence too much stress must not be placed upon them. The results of all observations—clinical, bacteriological, and experimental (animal)—would lead to the conclusions that:

1. This "atypical" bacillus may remain in the human throat for months without producing any symptoms, or, on the other hand, may produce clinical symptoms not to be differentiated from diphtheria, which, so far as can be seen from these investigations, is apparently frequently of a milder type than when "typical" forms are present in the throat, either alone or mixed with the "atypical" variety.

2. It is a variety of B. diphtheriæ, notwithstanding the frequent persistence of the type unchanged and unmixed with "typical" forms for months (*a*) in the throats of patients, (*b*) in all of the ordinary media, and (*c*) on passage through guinea-pigs.

3. It must be distinguished both from the ordinary so-

called "short forms" of B. diphtheriæ by the constant absence of polar granules and the intensity and evenness of staining with methylene blue, and from any non-pathogenic, pseudo-diphtheria bacillus before described.[1]

The fact that ordinary diphtheria antitoxin protects animals against an otherwise fatal dose of this bacillus would seem to confirm these conclusions. The experiments with the blister serum, taken from cases in which the "atypical" forms were alone present, and by means of which guinea-pigs are protected against lethal doses of both "typical" and "atypical" forms, may add additional proof.

It might here be mentioned that so far as experiments thus far made are concerned, the pathogenic and cultural characteristics of both "atypical" and "typical" forms do not vary with the time in the series of observations at which they were isolated. Thus cultures of both forms have shown bacilli not to be distinguished in morphology or pathogenesis from cultures isolated from the same cases some months either previously or later.

A study of these cases shows, in addition to the long persistence of both "atypical" and "typical" forms of B. diphtheriæ, a recurrence of both, either alone or mixed, after a disappearance, evidenced by several successive negative examinations.

A negative break in a long line of positive examinations may be explained by

(1) Improper technique in taking the smear.

(2) Improper technique in making cultures from the smear.

(3) Overlooking bacilli in the culture when few are present amongst a large number of other bacteria.

(4) Their entire temporary disappearance.

If (4) be the cause the recurrence may be perhaps attributed to the placing of several children in the same room, some of the children being free from the bacilli and becoming reinfected from others in whose throats the bacilli are still present.

General Conclusions.

From these examinations, if general conclusions may be permitted from such exceptional conditions as obtain in the school, some such suggestions as the following might be made, if such be deemed desirable, and if desirable practicable:[2]

1. That the throats of people brought in contact with diphtheria patients be examined, and if B. diphtheriæ be found, that they be quarantined until free of the bacilli.

2. That freedom of the throats of diphtheria patients, or those brought in contact with them, from B. diphtheriæ or its variants, be determined by at least two successive negative examinations.

3. That diphtheria patients, particularly while convalescent, be quarantined by placing, when possible, one patient in one room.

Notes.

[1] These "atypical" forms may perhaps be included, so far as can be ascertained from the written descriptions and plates, under the pseudo-diphtheria bacilli of Loeffler (*Berl. klin. Woch.*, 1890, No. 39), von Hoffman (*Wien. med. Woch.*, 1888. No. 3), Koplik (*New York Med. Journal*, 1892, August 27th), Escherich (*Berl. klin. Woch.*, 1893, Nos. 21, 23), Beck (*Zeits. f. Hyg.*, 1890, Bd. viii), Biggs, Park, and Beebe (*Scientific Bulletin*, No. 1, New York Health Department, 1895), Cobbett and Phillips (*Journal of Path. and Bact.*, 1896, vol. iv), Peters (*Journal of Path. and Bact.*, 1896, vol. iv), or the so-designated attenuated forms of Roux and Yersin (*Ann. de l'Inst. Pasteur*, 1890, Martin (*Ann. de l'Inst. Pasteur*, 1890), Biggs, Park and Beebe (*Scientific Bulletin*, No. 1, New York Health Department, 1895), Peters (*Journal of Path. and Bact.*, 1896, vol. iv), and other observers. It will be noted, however, that in the present communication shortness alone does not constitute the diagnostic feature. Uniformity in size and shape, intensity and evenness of staining, entire absence of polar granules, preserved in all stages of development in various media and in various cultures obtained from the same throats, and when passed through animals serve to distinguish this "atypical" form from the long, short, or medium-sized bacilli designated as "typical." The variability in these particulars is the most characteristic feature of the "typical" forms of B. diphtheriæ isolated in the same manner. The varying degrees of virulence of this "atypical" form—not greater however than of the "typical" form—serve to differentiate it from similar non-virulent forms of previous observers. In testing the virulence in every case 1 c.cm. per kilo. of body weight (guinea-pig) of a 40-hour broth culture of the micro-organism to be tested was given subcutaneously. [2] The results of the investigations of the New York Health Department led them to consider the adoption of rules similar in certain respects to these suggestions. See *Scientific Bulletin*, No. 1, Health Department, City of New York, 1895.

The Græco-Turkish War.—The Greek Minister of War has stated in the Chamber that 32 officers and 662 non-commissioned officers and men were killed in the late war with Turkey. The total number of wounded was 3,365.

DISCOVERY OF THE PARENTAL FORM OF A BRITISH GUIANA BLOOD WORM.

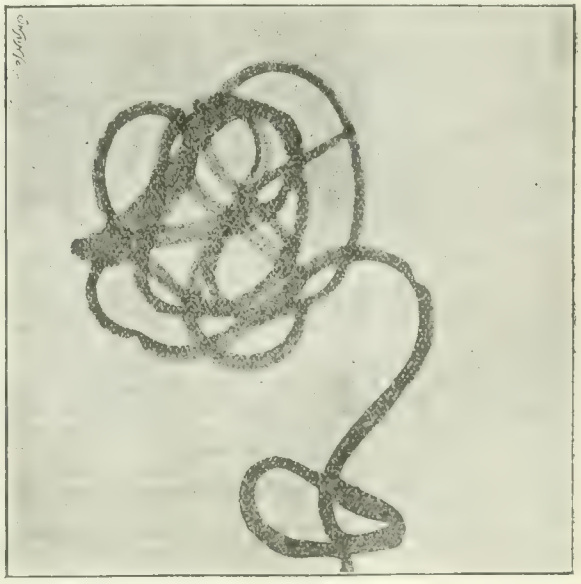
By C. W. DANIELS, M.B., M.R.C.S.,
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Early in 1897 Dr. Manson[1] demonstrated the presence in the blood of aboriginal Indians of British Guiana of one, or perhaps of two, forms of filarial embryos whose characteristics, as compared with the ordinary filaria of the blood (filaria nocturna), were minuteness, absence of sheath, absence of periodicity, power of locomotion, and, in the case of one of them, the possession of a rounded, truncated tail, in the case of the other of a very finely pointed tail. Since their discovery Dr. Ozzard and the writer have shown that these embryos are found all over the colony except in the coast belt, and that they are found in persons of both sexes and of other races who happen to have lived under similar circumstances in the same regions. Almost invariably the blunt tailed and the sharp-tailed embryos concur in the same subject. Out of 231 aborigina's and others from the interior whom we have examined, these embryos have been found in no fewer than 134 individuals, or in 58 per cent.

In December, 1897, I examined *post mortem* two aboriginal Indians. In the blood of the first of these both types of embryo had been found during life, the sharp-tailed preponderating; in the second Indian the blunt-tailed embryos were very numerous, the sharp-tailed, which at first were moderately abundant, having become very scarce for some weeks before death.

In both subjects mature filariæ were found in the upper part of the mesentery, in the fat at the base of this structure, and around the pancreas. In the second subject the worms were found in the same situations, and also in the subpericardial fat. The parasites occurred in small groups, and were chiefly females. No adult filariæ were found in the heart, blood vessels, thoracic duct, lungs, or other organs. although a careful search was made.

The worms were distinguishable from filaria Bancrofti (adult form of F. nocturna), and from the filariæ found by Magalhaes in the left ventricle of a Brazilian, both by the details of their structure, as will be evident from the description, and also by their smaller size and proportionately greater tenuity, as is shown in the accompanying photograph



and in the subjoined table of their respective measurements made in millimetres:

	F. Magalhaes.	F. Bancrofti.	British Guiana Filaria.
	mm.	m.m.	mm.
Length of female	155	95	70 to 8
Thickness of fema	0.6	0.2	0.12
Length of male	8	44	45
Thickness of male	0.25	0.10	0.06

Although this is undoubtedly a new species of filaria I do not propose at present to give it a name, seeing that it may turn out to be the parental form of one of the already known and named species of nematode embryos described by Manson. Very probably it may be the parental form of filaria perstans. It seems to me to be a mistake to give the embryonic and parental forms of the same parasite separate designations, and thereby to multiply names unnecessarily, and add to the difficulties of a subject already sufficiently omplicated.

The female parasite has a rounded, unarmed head which, in living specimens, is in active movement, altering its shape and rapidly elongating and retracting. As seen under a low power these movements recall the cephalic movements of the embryo in the blood, except that in the adult nothing corresponding to the beak of the embryo is protruded. Compared to F. Bancrofti the neck is longer, the taper of the cephalic end of the worm being more gradual. The mouth is very minute; no differentiation of the alimentary canal into œsophagus and intestine could be made out. In the female the intestine terminates in a small papilla 0.145 mm. from the tip of the tail which, for the last 0.3 or 0.4 mm., is curved in every specimen, the tip being prolonged by two triangular cuticular processes which give it a bifid or mitred appearance. There are two ovarian tubes which contain ova and embryos in various stages of development. The embryos examined were all blunt-tailed, and appeared to be destitute of sheaths, even whilst still in the ovarian tubules. In only one parasite could the arrangement of the vagina be clearly made out. In this instance the ovarian tubules were seen to open into a common vagina which, at first convoluted, became less so, and at the same time narrowed as it was traced towards the vulva, terminating in a straight portion which opened externally about 0.6 mm. from the head.

The head and neck of the male are similar to those of the female. As stated, the males were much fewer than the females; in consequence of this I have obtained only two perfect male caudal ends. Both of these are much coiled, and in one of them, examined during life, the terminal portion remained persistently so. From this specimen there protruded a long single spicule, and on each side of the point of its emergence two small papillæ (a pair ?) were indistinctly remarked. The coiled-up arrangement of the tail interfered with exact measurements, as well as with the determination of certain important points of structure, especially as to the presence or absence of a second spicule. The long spicule, plainly visible, protruded at a point about 0.09 mm. from the tip of the tail. The protruded portion was nearly 0.16 mm. in length. The portion of the spicule within the body of the worm could be readily traced up the body for about 0 6 mm. It terminated in a trumpet-shaped expansion with which a seminal tubule seemed to be continuous. The basal portion of the spicule is not so distinctly marked off from the posterior or filiform portion as in F. Bancrofti, and is devoid of the markings apparent in that worm. The tip of the tail is sharply incurvated, a triangular cuticular prolongation being also apparent. Whether this cuticular appendage is, as in the female, double or not could not be ascertained. During life the spicule was at times partially retracted.

The other male tail was still more closely coiled up, and consequently the details could not be made out; the spicule was not protruded.

No other species of filaria was found at either of the *post-mortem* examinations; but in the posterior mediastinum of the first case a worm, probably an immature, unsegmented bothriocephalus, nearly a foot in length, was found. In the intestine of both patients lumbrici, ankylostomes and trichocephali were present. In the second case embryo anguillulæ had been discovered in the fæces during life.

REFERENCE.
1 BRITISH MEDICAL JOURNAL, December 25th, 1.

THE DISINFECTION OF THE EXCRETA.*

BY
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THE methods used for ascertaining the value of any disinfectant are mainly two—namely, the addition of definite quantities of the substance to an active broth culture, with subsequent inoculation upon various media after the lapse of varying intervals, and the action of solutions of known strength upon test organisms inoculated upon threads.

These methods are valuable in that they determine the absolute working power of the disinfectant in definite conditions, but we have felt that direct experiment is necessary before conclusions derived from them can be adopted. This is more especially to be borne in mind in connection with the subject of our communication.

We have limited our inquiry to the disinfection of the fæces, as naturally they are the most resistant. In our earlier experiments the disinfectant solution was added in excess to the solid fæcal mass, but we speedily found that in not a single instance did we get any sterilisation of the central portions. Therefore we would insist upon the necessity for thoroughly mixing up the fæcal matter with the disinfectant selected.

We have chosen half an hour as the time during which the mixture must be allowed to stand, as being a convenient one in practice, though we admit that it is a severe test, and no doubt explains some of our results. After exposure for half an hour plate cultivations were made in the usual manner with gelatine and agar-agar.

The accompanying tables give our results at a glance. The second table gives the minimum strength of those disinfectants which seem to act most satisfactorily. The price list is only approximately correct:—

TABLE I.

Disinfectant.	Strength.	Action on Fæces.	
		When Mixed.	When Unmixed.
Perchloride of mercury	1 in 1,000	Spore-bearing forms	Copious growth.
Formol	1 in 20	Sterile	Copious.
Carbolic acid	1 in 20	Sterile	Copious.
Iodic hydrarg.	1 in 4,000	Spore-bearing forms	Copious.
Chloros	Undiluted	Limited	Limited.
Chinosol	1 in 600	Sterile	Copious.
Izal	1 in 200	Spore-bearing forms	—
Creolin	1 in 10	Sterile	
Carbolic acid (crude) ...	Undiluted	Sterile	—
Zinc chloride	1 in 10	Copious growth	—
Copper sulphate	1 in 20	Copious	—
Boiling water	—	Copious	—
Sodium chloride	1 in 10	Copious	—
Chloride of lime, 15% Cl.	1 in 10	Copious	—
" " 35% Cl.	1 in 10	Considerable	—

TABLE II.—*Minimum Strength of Six Solutions with Appro mate Cost per Gallon.*

Carbolic acid	1 in 20	...	1s.
Crude carbolic	1 in 40	...	6d.
Formol	1 in 40	...	1s. 6d.
Chinosol	1 in 600	...	1s
Creolin	1 in 40	...	1s. 6d
Mercuric chloride ...	1 in 500	...	9d

The above six solutions were tested with a typhoid stool, and all gave complete sterilisation.

The literature on the subject is small, at any rate from our special standpoint. Uffelmann[1] states that the mineral acids are the most active of all disinfectants, then corrosive sub-

* Read at a meeting of the Lancashire and Cheshire Branch.

limate, carbolic acid, etc. He points out the importance of the duration of the influence of the disinfectant upon the motions. He recommends sulphuric or hydrochloric acid diluted with double the quantity of water, mixed in equal bulk with the fæces, and allowed to stand in the case of the former acid two hours, of the latter twelve hours. Foote[2] comes to the following conclusions: that the best disinfectants to use are corrosive sublimate with hydrochloric acid, corrosive sublimate with potassium permanganate and the chloride of lime. He further states that solutions of chloride of lime should be kept tightly corked, and should not be used after they are a week old. Gilman Thompson[3] recommends 1 in 500 perchloride, 1 in 10 crude carbolic and chlorinated lime. He states that the mass must be thoroughly mixed and allowed to stand two hours. These workers recommend mineral acids, corrosive sublimate, crude carbolic, and chlorinated lime. It will be seen from the table that we have found corrosive sublimate and crude carbolic good disinfectants. The mineral acids we have not tested, as there are many and obvious objections to their use. Chlorinated lime we find with our time limit of half an hour to be useless. It may be said the preparations were old, but we submit that such an objection necessarily puts the substance out of court. Any of the six disinfectants on our select list may be regarded as absolutely certain in their results when thoroughly mixed with the stool and allowed to stand for half an hour. There are, however, objections to the use of some of them.

Corrosive sublimate is a scheduled poison, acts upon the metal work of the drainage system, and, moreover, gives a red coloration with stercobilin. This latter point is of importance, inasmuch as it may mask the presence of blood in a typhoid stool; again, albumen is coagulated by mercuric chloride, and thereby protects organisms enclosed in the centre of the coagulum. Crude carbolic acid is cheap and efficient, but does not mix over well with the fæces; it stains linen, and is poisonous. Formol and creolin are good, but are rather costly. The remaining substance, chinosol, is, in our opinion, the best. It is reliable, an excellent deodorant, and mixes well with the fæces. It is dearer than crude carbolic, but its cost is more than counterbalanced by its portability. It is put on the market in tablet form. The tablets are readily soluble, and may be obtained in such strength that one of them in a pint of water makes a solution of effective strength.

We may sum up our paper with the following conclusions:—

1. It is absolutely necessary to mix the fæces thoroughly with the disinfectant.
2. The mixture should stand at least half an hour.
3. Carboiic acid, crude carbolic acid, formol, creolin, chinosol, and corrosive sublimate in the strengths given in the short list are all effective, but chinosol seems the most convenient.

References.

[1] Uffelmann: Die Desinfection infectiöser Darmentleerungen, *Berl. klin. Woch.*, 1889, No. 25. [2] Foote: The Sterilisation of Fæces. *Intern. Jour. Med. Sciences*, Oct., 1889. [3] Gilman Thompson; *Albany Med. Annals*, March and April, 1897.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CASE OF PLUMBIC EPILEPSY: PROLONGED STATUS EPILEPTICUS: RECOVERY.

I received a police call on the evening of February 10th to see a lad, aged 14, who had been brought to the station in a fit. I found him sitting supported in a chair in a state of unconsciousness. The history given by the father, who was present, was that about half an hour previously the lad, while returning home from work, complained of feeling giddy, suddenly screamed out and fell, and was brought to the station by his father with the help of a constable. I found the muscles rigid, the teeth firmly clenched, the eyelids closed, the left more firmly than the right; the eyeballs were turned up, the pupils equal and of medium size. The pulse was regular and of fair tension. There was pallor of the cheeks and lips, and along the edge of the gums in both jaws a well-marked blue line. The lad's clothing smelt strongly of paint. He had been assisting his father, a painter, for the past six months; he had been very energetic at the work, and had once or twice suffered from colic, for which his mother had given him salts. He had never suffered from "tremblings" or paralysis. I directed the patient to be laid down, and noticing him turn on his side and curl himself up, I concluded that the fit was passing off, and ordered him to be taken home in a cab. Later on in the evening I saw him at his home. He had passed urine and fæces under him in the interval; he was still unconscious and rigid, but seemed inclined to sleep, curling himself up in the bed. Temperature 99.4°; pulse 88.

Next morning the patient was quiet, but still comatose and rigid. He had passed a restless night, screaming, grinding his teeth, and throwing himself about, so that he was with difficulty kept in the bed. The temperature was 100°, the pulse 92. I prescribed potassium bromide gr. xv in water every four hours, but administration by the mouth was extremely difficult, owing to the rigidity. In the afternoon, as the coma and rigidity continued, and the temperature was going up, I called Dr. Price in consultation. We were agreed as to the serious nature of the case, and gave a guarded prognosis to the parents. Potassium bromide ℥ss with syrup of chloral ℥ij in water ℥j was injected *per rectum*. Chloroform was administered until the muscular spasm was relieved. The patient was ordered to be fed by nutrient suppositories, and the services of the district nurse were secured. At 10 P.M. I repeated the bromide and chloral injection, and again administered chloroform until the muscles were completely relaxed. I placed calomel gr. ij on the back of the tongue. A specimen of the urine drawn off by the catheter was found to be free from albumen. The temperature was 101.4°, the pulse 100.

Next morning (February 12th) the patient was still comatose, but the muscles were less rigid. He had again passed a restless night. The nurse succeeded in giving 2 ounces of milk and a dose of the bromide mixture by the mouth. The temperature was 101°, and the pulse 112.

About 8 A.M. on February 13th he opened his eyes for the first time. Thus he had been in the status epilepticus close upon sixty hours. All day long he lay quiet and dozed, taking no notice of anything, but took his nourishment and medicine when offered to him. In the evening the temperature had fallen to 99.6°. He spoke for the first time on the morning of February 14th. Convalescence was now established, and he made an uninterrupted recovery.

He went out for the first time on February 21st, having been on a course of potassium iodide four days previously. An examination of the fundus oculi showed no optic neuritis, and there was no impairment of vision.

The above symptoms were undoubtedly due to lead poisoning. There was no family history of epilepsy. The mother said that the boy had been a great help to his father in the painting, and had done as much work as a man, keeping long hours, and had been careless in the matter of keeping his person and clothes free from the paint. He will not return to the painting business.

The case is of some interest on account of the complete recovery. It is well recognised that cases of acute saturnine encephalopathy are of extremely grave prognosis.

Bromley. Walter J. Rowland, M.B.

MAGNESIUM SULPHATE IN TROPICAL DYSENTERY.

With reference to the article on this subject by Dr. Wyatt-Smith in the British Medical Journal of January 29th, I should like to point out my experience in the treatment of dysentery with magnesium sulphate for the last six years. Since 1891 I came to the same conclusion as Dr. Wyatt-Smith, that the treatment of tropical dysentery (or acute dysentery of any kind) with ipecacuanha is not the radix dysenterica that it is said to be, so I tried at first Glauber's salt in small doses; this I shortly rejected as the results were not encouraging, and at the end of 1891 I began treatment with magnesium sulphate in small doses, since which time I have had excellent results. Patients may come in passing fifteen stools a day containing blood and slime, but with the follow-

ing treatment the average duration of the dysentery is about two or three days, and this includes treatment of dysentery on field service, a disease formerly the scourge of armies in the field.

Treatment.—The patient is at once put on purely milk diet, and is given ʒij of magnesium sulphate every four hours combined with aromatic sulphuric acid ♏v (to counteract any severe griping the magnesium sulphate may produce) till the flow of bile is well established, as seen in the stools; then the mixture is stopped, and a quarter to a half of a pure gall nut triturated well with water is given every four hours. By the second or third day the dysentery has gone, and the patient starts his duties again on soft food for a day or so.

About three or four years ago I recollect seeing an article in the British Medical Journal on a very similar line of treatment by a medical officer of the Army Medical Service, I think, and concluded this treatment was more used now than it appears to be. The magnesium sulphate in this form appears to me from its physiological action to be the drug *par excellence* for counteracting the pathology of dysentery, given even that the *origo mali* be the amœba of dysentery, as the free flow of bile is the best intestinal disinfectant, and this, aided by the other mild purgative and depletive action on the intestines and portal system (which these small doses have), gives the necessary antiseptic and antiputrefactive flushing for the polluted track. If necessary, local applications in the form of counter-irritants or fomentations over the large bowel can be also given, but I have never yet had cause to use this plan. This treatment does not apply to cases of chronic dysentery.

Chas. A. Johnston, M.B., D.P.H.,
Surgeon-Captain, I.M.S.

THE CAUSATION OF INFANTILE UMBILICAL HERNIA.

A very interesting note on this point was contributed by Mr. Robert Turner in the British Medical Journal of March 12th, in which he suggested that a short umbilical cord, and traction thereon within the uterus, might be a condition which predisposes to infantile umbilical hernia. In order, however, to establish this as a direct predisposing cause of such a form of hernia, the following facts must be made certain of:

1. That there is a pull on the umbilical cord during intra-uterine life.
2. That such traction does tend to produce a pouch of peritoneum.
3. That other undoubted causes of infantile hernia are not in strong evidence.

With regard to the first point, it is by no means allowed by authorities on the subject that there is any traction whatever on the cord while the fœtus is *in utero*; in fact, it is difficult to see how such could come about, and if it was in truth a fact, how it could occur without very grave results upon the child. A comparatively short cord, such as Mr. Turner alludes to, is not a very uncommon circumstance, but any untoward effect attributable to it must be equally rare.

Again, traction upon the cord, or rather the stump of the cord, after birth in the dead subject does not tend to cause a finger-like pouch of peritoneum. In fact, peritoneum will not stretch or become displaced at all easily by an outward pull, nor to any extent by a single internal push; for to produce a hernial pouch it is necessary that a long series of repeated acts of straining should occur.

Now this is exactly what takes place in an infant from crying, etc., and in addition the intra-abdominal pressure is usually greatly increased by the distension of the intestines with gas, the outcome of improper food in the majority of cases.

It may be argued that in by far the larger number of instances of infantile umbilical hernia the causes are not far to seek, and that they are: (1) A weak spot—the umbilical cicatrix. (2) Repeated straining efforts. (3) Continued increased intra-abdominal pressure.

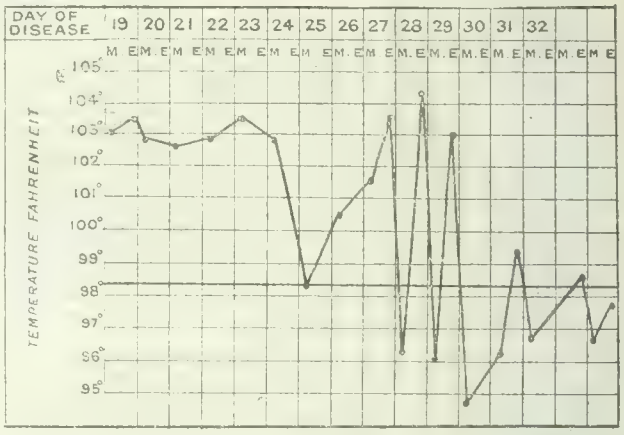
It is well worth while to remember in the treatment of such cases in the early months of life that attention to the proper feeding of the patient, particularly in hand-fed infants, is of the utmost importance, and will often lead to a cure when such has been much delayed.

It is very rare to see in an adult an instance of umbilical hernia which has persisted from early life, so that in most cases infantile umbilical hernia become cured, either spontaneously or with treatment.

W. McAdam Eccles, M.S.Lond., F.R.C.S.Eng.
Harley Street, W.

REMARKABLE FLUCTUATIONS OF TEMPERATURE IN TYPHOID FEVER.

I think the accompanying chart of a case of typhoid fever is one of sufficient interest to record:



E. A. G., a girl aged 16, a millworker, residing with her parents in rather an unhealthy neighbourhood, suffered from typhoid fever of a severe type, though everything went well till the end of the third week, when the temperature suddenly dropped from 103° to normal. There were no signs of a hæmorrhage nor of a perforation.

Next morning the temperature had risen again to 100.4°, and on the following morning to 101.4°, and on the evening of that day it was 103 4°. There were a few fine crepitations at both bases, but no dulness was discovered, and the breathing was not rapid. A soft systolic murmur was heard at the apex, but it was only temporary. On the twenty-eighth day there was again a drop in the temperature to 96.4°, followed by a rise in the evening to 104.2°.

The following morning the temperature had again fallen to 96°, only to rise in the evening to 103°. She went on in this state for some days, and, except that the pulse was very rapid, nothing unusual was observed to account for such variations in the temperature.

The case is of interest because of the apparent crisis at the end of three weeks, but more especially because of the extraordinary variations between the morning and evening temperatures subsequently, there being a difference of 7 degrees one day and 8 degrees on two subsequent days, with no apparent complication to explain them. It could scarcely have been a true relapse, as the case was convalescent so soon afterwards. There were no abdominal symptoms during these remissions, except some tenderness in the right iliac fossa. During the seventh week of illness there was another rise of temperature to 103°, with a return of pain in the right iliac fossa. But this subsided in a few days, and she went on to an uninterrupted recovery, and is now in very good health.

On finding such variations between morning and evening temperatures, I naturally verified them by repeated trials, and the nurse in attendance corroborated these observations of the temperature.

Arthur Dickson, M.B., C.M.Edin.
Visiting Surgeon to Stockport Infirmary.

VILLOUS TUMOUR OF RECTUM.

Quite recently I removed from an elderly lady a villous tumour of rectum answering in almost every particular to the description given by Dr. Mackay in the British Medical Journal for March 26th, p. 816. My patient assured me she had suffered for sixteen years. She was very anæmic, having lost a considerable amount of blood each time the

bowels acted, so I was compelled to operate without anæsthesia.

The bowels acted two days afterwards, naturally, without pain, and she is now up and about, having only kept her bed one week.

As I see by a footnote to Dr. Mackay's description that only thirty cases of this disease have been reported by the Messrs. Allingham up to 1896, I thought it well to record an additional one.

Cheltenham. ALEXANDER DUKE, M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

DERBYSHIRE ROYAL INFIRMARY.

HYDATID OF LIVER AND PELVIS: OBSTRUCTION OF URETERS: CARDIAC HYPERTROPHY: URÆMIA: NECROPSY.

(Under the care of Dr. VAUDREY.)

[By H. M. TICKELL, M.A., M.D.Cantab., House-Physician.]

W. T., aged 36, a painter, was admitted on February 20th. He stated that he began to feel weak and ill twelve months earlier, and had frequent "bilious attacks." For the last two weeks he had vomited several times a day. Some swelling of the feet had been noticed for about the same period, and swelling round the eyes for ten days. The quantity of urine passed during the last week had been less than usual.

Condition on Admission.—The patient was in a heavy lethargic condition. A considerable amount of puffy swelling was observed round both eyes with injection of eyelids and conjunctivæ. The odour of the breath was strongly urinous; the gums were soft, spongy, and bleeding; the lungs appeared to be normal; the apex beat of the heart was in the fifth space in the nipple line; the impulse was heaving and visible. A soft systolic murmur was heard at the second left space, and was conducted down the left side of the sternum. The abdominal walls were thick; the edges of the liver and spleen could not be felt. Rising up above the pubes distinctly to the left of the middle line was felt a rounded tumour, which extended to about half way between the level of the pubes and umbilicus, and felt firm to the touch. Its limits were well defined, and it was not tender on palpation. On percussion there was some resonance over the tumour due to the presence of intestines. Almost constant bleeding from the rectum had been noticed for the last two weeks. On rectal examination no piles were found. A firm tense swelling was felt above the sphincter anteriorly, and pressure here was communicated to the tumour above the pubes. The mucous membrane of the rectum appeared normal. On drawing off the urine no alteration was observed in the abdominal tumour. Urine contained one sixth albumen but no pus or blood.

After-History.—The condition of the patient underwent no improvement from treatment, and he died on the sixth day with twitchings of limbs and well marked uræmic symptoms; the temperature was subnormal throughout. At times he was able to pass urine naturally but occasionally it had to be drawn off, and on the last occasion it was found to contain both pus and blood, but the total quantity excreted was little below the normal.

The Question of Diagnosis.—From this brief description of the case as observed during life, it will be seen that there were considerable difficulties in arriving at an accurate diagnosis of the pathological conditions and the primary cause of death. The following queries arose for solution, and could not all be answered with certainty: (1) Was the cause of death simple chronic nephritis? (2) Was the tumour capable of producing all the symptoms observed? (3) What connections had the tumour with abdominal organs? (4) What was the nature and origin of the tumour—innocent or malignant? It was suggested that all the symptoms were due to the pressure of the tumour on both the ureters, but the nature and connections of the former seemed obscure, for no connection could be made out with either the bladder or the bowel. Difficult as these problems appeared to be during life, the solution of them, as shown by the *post-mortem* examination, was comparatively simple, and satisfactory answers were attainable.

Post-mortem Examination.—Lungs: Nothing abnormal found. Heart: Considerable hypertrophy, chiefly of left ventricle; no valvular disease; atheroma of aorta, not advanced. Abdomen: Projecting from the pelvis was a large rounded tumour, tense and apparently containing fluid. It arose from near the middle of the pelvis, and inclined towards the left. It was adherent by fibrous tissue to the bladder, rectum, and surrounding tissues, and pushed the bladder towards the right. On removal the tumour was found to be an egg-shaped body measuring 7 inches in length by 4 in breadth. The sigmoid flexure of the colon was considerably dilated, the rectum having been subjected to pressure. On the right side of the bladder was another similar cyst-like body, the size of a chestnut, and connected only by fibrous tissue to the bladder. Both ureters were greatly dilated in their whole length, evidently compressed in the pelvis by the cyst. Both kidneys, soft to the touch and reduced in size, were in a condition of advanced hydronephrosis, and the kidney structure was considerably disorganised. Liver: Slightly enlarged: on section of posterior aspect of the left lobe, the liver substance was seen to be excavated, and the cavity filled by hydatid cysts with cheesy contents. The tumours removed from the pelvis, when opened, were seen to be crowded with numerous daughter cysts, and hooklets were found on examining their contents.

The problems suggested above are thus completely solved, and we learn from this case that obstruction to both ureters may cause not only uræmic symptoms, which we should expect, but also hypertrophy of the heart and œdema round the eyes. With regard to the heart, the point must be emphasised that the valves were healthy, and the slight degree of atheroma of the aorta was incapable of causing any obstruction to the blood current.

ROYAL INFIRMARY, BRADFORD.

CASES OF HERNIA.

(Under the care of Mr. HORROCKS.)

THE following cases of hernia seem worthy of record from their unusual nature:

CASE I. *Inguinal Hernia Complicated by Mesenteric Tumour.*—T. C., a waggoner, aged 22, was admitted on August 21st, 1895, in a very collapsed condition, suffering from an irreducible hernia. He had had a rupture for some years, but until the day of admission had always been able to reduce it readily. He had never worn a truss. At noon the rupture became much larger than usual, causing him to feel faint and sick. He was then quite unable to reduce the hernia. When seen at 2 P.M. he was covered with cold sweat, much collapsed, and the pulse was feeble and rapid (140). He had not vomited since the onset of the symptoms. The right side of the scrotum was distended by a resonant swelling, the continuity of which could be traced along the right inguinal canal. There was a distinct impulse on coughing.

He was given some brandy and hot water by the mouth; morphine ¼ grain was injected hypodermically, and the trunk surrounded with hot bottles. After a short time taxis was attempted without success. Ether was administered, and the reduction of the hernia again attempted. The bowel was apparently reduced with a slip and a gurgle, but the size of the tumour was not diminished. After continuing the attempt for several minutes ineffectually the sac was opened, and the coils of intestine turned out to examine the neck of the sac. The communication with the abdomen was wide, admitting the finger easily. The bowel was in good condition. In the mesentery was an oval tumour about the size of a bantam's egg, which acted like a plug in the inguinal canal. This allowed the intestine to escape into the scrotum, but prevented its complete reduction. It was impossible to reduce this tumour without considerably enlarging the opening into the abdomen. The tumour was apparently glandular in nature, and placed in the mesentery, near the intestinal attachment. The sac was dissected up, transfixed, and drawn inside the inguinal canal to act as a plug. The pillars of the ring were sutured with silkworm gut.

On the following day the patient was flushed and restless, with a hard, rapid pulse. As this condition of the bowel was sound, calomel gr. ij was given every four hours. In the afternoon, as the condition did not improve, he was bled 10 ounces. From this time he made an uneventful recovery.

A tumour in the mesentery finding its way into the sac of a hernia is a very unusual occurrence. By tension on the nerves it apparently caused a profound shock. The impulse felt on coughing showed the ready communication with the abdomen; the slip and gurgle which were felt on taxis showed that the bowel returned on manipulation, but other loops of intestine slipped into the sac, so that the hernia became no less. No attempt was made to remove the tumour as the patient's condition was not good and the growth extended close to the bowel over a considerable piece of mesentery. In the after-treatment he was given calomel, and later bled, the usual treatment of herniotomy cases in the days of Sir Astley Cooper. This was done as he was a powerful man suffering from a sthenic inflammation and the condition of the bowel was sound. In this case it had a very soothing effect.

Case II. *Cæcal Hernia.*—E. J., a child aged 3 years, admitted with a swelling in the right groin. This had been noticed since birth, and was always more marked towards night. When the swelling was reduced the patient frequently vomited. There was some fulness along the right inguinal canal, but no considerable hernia. Both rings were patent, and an impulse was felt on coughing. On standing the hernia came down readily, but apparently disappeared when he lay down.

On November 5th, 1896, under an anæsthetic, the hernial sac was exposed and opened. Lying at the back of the sac was the end of the cæcum, which was without mesentery and adherent to the tissues behind the sac, its wall forming the posterior wall of the sac. The apparent reduction was due to the escape of its contents into the abdomen. The sac was divided below the end of the cæcum, and returned with the cæcum into the abdomen. A thick band of muscular tissue extended from the back of the cæcum to the upper part of the testicle, which was somewhat higher in the scrotum than natural. The pillars of the ring were brought together with catgut sutures, and the wound healed up without suppuration.

The case was very puzzling when the sac was opened, as the intestinal wall was thickened, and had not the characteristic appearance of bowel. This variety of cæcal hernia was described by Scarpa as less common than those cases in which the cæcum has a more or less perfectly-formed mesentery. In a much less common variety the ileum descends into the sac without mesentery, deriving its vascular supply from the arteries to the testicle. The fibrous and muscular tissue extending from the intestine to the testicle point probably to the cause of its descent.

REPORTS OF SOCIETIES.

HARVEIAN SOCIETY OF LONDON.

J. H. Drew, M.R.C.S., in the Chair.

Thursday, March 31st, 1898.

The Treatment of Caries of the Spine.

Mr. Jackson Clarke said that in its main features tuberculosis of the spine might be compared with a similar condition in a large joint. Radical treatment in the form of complete excision of the diseased parts had been practised even in the spine, but the usual means adopted were (1) rest on a firm mattress in the supine position with or without weight extension; (2) Phelps's box; (3) the double Thomas's splint; (4) Sayre's plaster jacket; (5) the felt corset; (6) steel splints alone or combined with rest on a prone couch. Whenever symptoms pointed to rapid progress of the disease, rest with weight extension was indicated. In less rapid conditions Mr. Clarke preferred a good steel splint to any form of corset; Chance's (1852) and Taylor's (1871) were the best known of the steel supports. In principle they were closely allied. Mr. Clarke used the older of these instruments and found it very satisfactory, as it admitted of readily-effected modifications in cases of cervical and high dorsal caries. Combined with rest on a prone couch, Chance's splint could be used successfully even in unpromising cases. The chief complications were (1) abscess, (2) sinus, and (3) paraplegia. Mr. Clarke related a case in which a psoas abscess had ruptured, causing a diffuse suppuration in the thigh. Since antiseptics had removed the objections to early opening of these abscesses, there was no need of long delay when once the condition had been recognised. Sinuses need only be feared when abscesses opened spontaneously, and even when of old standing they could often be made to close by injecting daily 1 or 2 drachms of 1 to 40 carbolic lotion. When profuse suppuration persisted or lardaceous disease threatened sinuses might demand operative measures. With regard to paraplegia he had seen even hopeless-looking cases recover without operation, and in every case he would give rest a prolonged trial before contemplating surgical interference. Laminectomy was indicated in many cases of fracture of the spine, but fracture was of rare occurrence in caries, and on *a priori* grounds it would appear to be undesirable to remove the remaining sound parts of the spinal column opposite the seat of disease. Immediate reduction of the angular deformity had in several cases of paraplegia appeared to do good, and it might certainly be tried as an alternative to laminectomy.

Dr. James Taylor said that on *post-mortem* examination paraplegia had been found to be associated with myelitis. He agreed that with prolonged rest most cases would do better than with operation.

The Chairman was glad to find that the spinal support shown at the meeting could be successfully substituted in suitable cases for the unyielding plaster of paris and felt jackets; also that there was an absence in this support of iron crutches in the axillæ and the adoption of a padded strap, which was equally effective and far preferable. Mr. Clarke was to be congratulated on the good results of the cases he had brought before the Society.

Mr. Hubert C. Phillips had excellent results from the application of Sayre's jacket, always however in mild cases. He had invariably used extension in order to relieve pressure on the diseased portion of spine, and also to obtain good support from the armpits. The Sayre's jackets were however at best uncomfortable appliances to wear, owing to the length of time patients were obliged to keep them on. Chance's splints certainly had many palpable advantages. He asked Mr. Clarke at what period of the disease Chance's splints should be applied and what was the earliest age at which it was advisable to start them.

Dr. Winslow Hall urged the value of prolonged rest in the dorsal position, and was surprised that in many cases Mr. Clarke allowed the patient to walk about.

Mr. Jackson Clarke replied that the plaster jacket gave relief for a time, but it failed to check the progress of the disease and of the deformity. Prolonged recumbency was necessary in many cases, but the benefit derived from it was sometimes lost by its being persisted in too long.

OBSTETRICAL SOCIETY OF LONDON.

C. J. Cullingworth, M.D., President, in the Chair.

Wednesday, April 6th, 1898.

The Menstruation and Ovulation of Monkeys and of the Human Female.

Mr. Walter Heape read a paper on this subject. (1) Menstruation: The author described the histological process of menstruation in Macacus rhesus as identical with that already described in the Society's *Transactions* for Semnopithecus entellus—namely, a growth of stroma and increase of vessels, a breaking down of congested vessels and consequent formation of lacunæ, a degeneration of the superficial mucosa and rupture of lacunæ, and a denudation of the superficial portion of the mucosa with consequent formation of a menstrual clot, the only difference of moment being that in M. rhesus the mucosa was thicker, the protoplasmic network denser, and the glands more numerous and more branched than in S. entellus. Sections of human and monkey's uteri were shown demonstrating these points, and the author was led to infer that in all probability the menstrual process was practically identical in man and monkeys. The author pointed out that

although monkeys menstruated all the year round they (at least some of them) only bred at certain times of the year, and thus occupied an intermediate position between the lower mammals and the higher primates. He expressed the opinion that the histological homology of "heat" and menstruation would be established. II. Ovulation: With regard to the relation between ovulation and menstruation two divergent views were quoted. the one that ovulation occurred at each menstrual period, and that the two processes were due to the same active cause; the other that ovulation and menstruation were independent of each other, that they were due to independent stimuli, and were coincident only by accident. Out of 59 adult menstruating female monkeys only one was found with a recently discharged Graafian follicle. The author summarised his observations by stating that in man and monkeys (1) ovulation and menstruation were not necessarily coincident, (2) menstruation might take place without ovulation, and in man (3) ovulation might occur without menstruation. The author combated the views that in the lower animals "heat" was brought about by ovulation, or that the ovary was the seat of the stimulus which induced heat; he urged that both menstruation and ovulation were closely connected with and largely influenced by congestion, and that in the primitive condition they were both due to the same cause.

Dr. Peter Horrocks said that in women there was incontestable evidence that ovulation occurred without menstruation, for it was a well-known fact that a woman might conceive without menstruating. Girls in India not infrequently conceived before menstruation began, and a woman during the amenorrhœa associated with lactation occasionally conceived again without menstruating. He did not, however, know any facts which proved that menstruation could take place without ovulation. It was well-known that when the ovaries were removed, or if they became wholly degenerated, or if they ceased their function then menstruation ceased. He could not help feeling that menstruation in women and rut in animals were not the same thing.

Dr. Herman thought that Mr. Heape's valuable paper went to show how very imperfect our knowledge was of the physiological changes that went on in the ovary. He still thought that menstruation depended, if not upon ovulation, yet upon some ovarian function; he based this opinion upon some ovarian clinical facts that when the ovaries were absent or ill-developed menstruation was never present, and when both ovaries were removed menstruation always stopped.

Mr. Heape replied.

Specimens.

The following specimens were exhibited: A Uterus with Ruptured Tubal Gestation Sac, in which the pregnancy had not advanced beyond the fifteenth day, and which terminated fatally from hæmorrhage, by Mr. Dawson; a Uterine Fibroid with anomalous solid Ovarian Tumour, by Dr. Macnaughton Jones; a Fibromyoma of the Uterus removed by Abdominal Hysterectomy by Dr. Walter Tate.

Deaths of Members.

The President made reference to the recent death of Dr. Remfry, Assistant Obstetric Physician to St. George's Hospital, and of Dr. Charles West, a past president and an honorary Fellow of the Society, and it was agreed that a suitable letter of regret and condolence should be forwarded in the name of the Society to Mrs. Remfry and to Mrs. West.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

F. W. Kidd, M.D., President, in the Chair.

Friday, March 18th, 1898.

Specimens.

Dr. Smyly showed (1) a Uterus, weighing 9½ lbs., which he had removed for myoma by panhysterectomy. The patient, who had been operated upon three weeks previously, was making an excellent recovery. (2) A Uterus removed from a widow aged 49, who supported her family by farming, but had latterly been unable to work, owing chiefly to pain in her back. The uterus was found retroflexed and adherent. The posterior *cul-de-sac* was opened, and the adhesions partly broken down with the finger, partly divided with scissors. An anterior colpotomy was then performed with a view to vaginal fixation of the uterus, but the hæmorrhage from the divided adhesions was so considerable that it was deemed safer to remove the uterus. After removal the organ was found in a state of retroflexion, owing to a hard inflammatory band on its posterior surface, so that had the uterus been fixed in anteversion the constant strain upon this band would doubtless have caused such suffering that her symptoms would have been greatly aggravated. She was now perfectly well and free from pain.—The following were also shown: Dr. J. H. Glenn: Myomatous Uterus removed by intraperitoneal hysterectomy.—Dr. R. D. Purefoy: Double Ovarian Cysts.—Dr. Jellett: Early specimen of Sarcomatous Ovary removed by anterior colpotomy.

Clinical Report of the Rotunda Hospital for 1893 6.

Dr. W. J. Smyly read this report.

The President said the thanks of the Section were due to Dr. Smyly and his collaborators, Drs. Wilson and Jellett, for the report. He thought that such results were not likely to be eclipsed for a considerable time. He expressed surprise at the number of cases under the heading of accidental hæmorrhage. In 134 cases of abortion, 50 were curetted, which seemed to be a very large proportion. He congratulated Dr. Smyly on there being no death from placenta prævia. He thought that severe *post-partum* hæmorrhage, not arising from the situation of the placenta at all, often occurred, and that its origin was often overlooked. He thought that the case in which there was found a double uterus after removal of the uterus, and the subsequent recovery of this patient, was very remarkable.

Dr. Knott asked how Dr. Smyly had prepared the saline solution used for transfusing.

Dr. Tweedy observed that a great many of the deaths were in women brought into the hospital with death symptoms already marked. Three of the five septic cases had evidently become septic outside, and nothing could have saved them. The cases of eclampsia seemed to have been very severe. The giving of morphine in eclampsia was an interesting point. Some observers said that its administration killed the child, but in case No. 7 of Dr. Smyly's the child was alive, although the mother got more morphine than any other case. Dr. Tweedy said that morphine could not kill the child, but killed by acting on the respiratory centre. He noticed that laminaria tents had been used in one of the cases of death after abortion. Did thorough plugging of the vagina not dilate the cervix properly in this case?

Dr. Lane could not quite agree with the President in saying that the deaths from accidental hæmorrhage were above the average.

Dr. Glenn said, in reference to curetting in abortions, that he regarded that as distinctly an evolution. He thought that the use of the sharp curette in the treatment of abortions was in skilled hands quite safe, while for those not so self-confident the use of the blunt instrument was good practice. He thought that a serious omission in reference to forceps cases had been made in the report—namely, that there was no record of mortality in regard to the children.

Dr. Doyle considered eclampsia a form of uræmic convulsions. He had not had experience in the treatment of eclampsia with morphine, but had found chloral very useful. He thought that the condition of the kidneys should be found out at the time of ths eclamptic convulsions.

Dr. Smyly, in reply, thanked the members for their kindly criticisms. He believed that if the suggestions made by Dr. Glenn were adopted by future reporters they would add to the value of future reports. He would himself suggest that in addition to noting the total number of cases in which the temperature rose above 100.8°, it would be important to record the number of cases in which the patients were really ill, and those in which it rose on one occasion only. He agreed with Dr. Tweedy that one could not judge of the results of treatment from a small number of cases, and that even large numbers would give an erroneous view, as owing to the rule of the hospital admitting all cases when in labour, a large number were admitted in a condition in which treatment came too late. This was especially evident in the cases of eclampsia and septicæmia. Of the three deaths noted under the former heading one was in a dying condition when admitted, and he did not believe that the other two could possibly have been saved, certainly not by chloroform.

ULSTER MEDICAL SOCIETY.

J. A. Lindsay, M.D., President, in the Chair.

Thursday, April 7th, 1898.

Cases, etc.

Mr. T. Sinclair Kirk showed two cases of Fractured Olecranon treated by Immediate Suture.—Mr. Robert Campbell showed a skiagraph of a case of Clubhand with Absence of Radius.—Dr. Calwell showed a patient, aged 30, in whom Aortic Reflux seemed to have been Developed in consequence of a Fall of about 30 feet.

The late Dr. Bingham.

On the motion of the President, seconded by Professor Byers, a vote of condolence to the family of the late Dr. Henry Bingham was unanimously passed.

The Management of the Third Stage of Labour.

Professor Byers read a paper on this subject. He discussed the various theories put forward to account for the separation of the placenta—retroplacental hæmatoma, detrusion, and alteration in the relationship of the placental site and placental area—and pointed out that in settling this question they must be guided by clinical experience and the evidence afforded by sectional anatomy. Their knowledge of the anatomy of this stage was largely due to Dr. Barbour, whose conclusions had been confirmed by Pestalozza of Milan, Pinard and Varnier of Paris, and Stratz of Berlin. Professor Byers then considered the various methods of managing the third stage, discussing (*a*) the expectant method, (*b*) Credé's, and (*c*) the Dublin plan. There were two elements in the third stage—the separation of the placenta and its expulsion. It was best to allow Nature to accomplish the first act, and to wait until the upper, active, thick, contractile part of the uterus had expressed the placenta, and then at the height of a pain to express the placenta from the lower expansile uterine segment or vagina. He advised (*a*) the following down the birth of the child in the second stage; (*b*) the constant control of the uterus during the third stage; (*c*) the turning of the patient on her back; (*d*) the careful watching for the separation of the placenta, aided in certain cases by gentle massage of the uterus; (*e*) the expulsion of the placenta when it was clear it had separated, and (*f*) the continuous control of the uterus by the hand of the accoucheur until the binder was firmly applied.

Medical Examination for Life Insurance.

Dr. Calwell read a paper upon Moot Points in the Medical Examination of Life Insurance Cases. He advised a good general physical examination of applicants, but thought some of the schedules in use quite too minute. The use of the ophthalmoscope, laryngoscope, and clinical thermometer might be reserved for cases with special indications. In cases where cardiac mischief was suspected it was important to examine both in the standing and the recumbent positions. As regards the influence of past diseases—(*a*) syphilis—an applicant was insurable under the same circumstances as marriage was permissible, that is, three years after the initial sore, with one year's freedom from symptoms. (*b*) Hæmoptysis: Apart from obvious disease in other organs, nearly all these cases were tuberculous and the risk must be adjudged accordingly; (*c*) Alcoholism: Permanent reform was rare, and these cases were rarely insurable; the teetotal section in various companies showed a decidedly better expectation of longevity than the general section; (*d*) Pleurisy: It should be borne in mind that a certain considerable proportion of these cases ultimately became tuberculous. As regards heredity, a family history of longevity was very important, but no material help could be derived from such considerations as prepotency, different ages of parents, etc. Of the points arising in the physical examination of applicants the following was important: (*a*) Pulse, or the whole cases with low tension of pulse had less vital resistance than those with higher tension, but regard must be had to pathological increase of tension. Intermittency must be interpreted in the light of its cause. Epigastric pulsation was not of much significance. As regards valvular disease, cases with aortic reflux or mitral stenosis were not insurable, but mitral regurgitation was not a complete bar. In such cases, provided there were no cardiac symptoms, no evidence of changes in the myocardium or chambers, general nutrition and habits favourable, the risk might be taken with a heavy addition. The importance of hoarseness depended on the result of laryngoscopic examination. As regarded albuminuria, permanent albuminuria was a complete bar, but cases of the so-called "cyclic albuminuria" required much consideration and repeated examination. In the absence of a history of nephritis or evidence of renal change, the insurability of these cases might be entertained. As regarded glycosuria, if temporary, under control by dieting, and if the family history was good, it did not preclude insurance.

Professor Byers protested against the schedules in use by some insurance companies, and thought many of the questions put frivolous and ridiculously minute.

After some observations from Dr. Kevin, Surgeon-Major Pike, and Dr. A. P. Moore,

The President said that in determining longevity nothing was nearly so important as heredity. They would recall Heine's sarcastic remark that "we cannot be too careful in the choice of our parents." A small point of some importance in the physical examination of cases was to pass the finger over the tibia to test for the presence of œdema. Apart from heart disease, and such constitutional states as hæmophilia, scurvy, etc., hæmoptysis was nearly always tuberculous, and the history of an attack was a serious element in prognosis. The cases so often heard of where hæmoptysis was attributed to a throat lesion were usually illusory. The insurance of cases where organic cardiac lesions existed should be made by special schedule, and in the light of the most recent knowledge regarding the prognosis in such cases. He would advise great caution in the acceptance of cases with the so-called "cyclic" or "intermittent" albuminuria. If this symptom appeared after severe strain, physical or mental, it was less grave than when occurring apart from such conditions, but the future of these cases was always problematical.

Dr. Calwell briefly replied.

Laryngological Society of London.—At an ordinary meeting held on March 9th, Mr. H. T. Butlin, President, in the chair, Professor Kanthack demonstrated, for Dr. Paul Bergengrün (Riga), a complete series of photographs and coloured drawings illustrating the macroscopic appearances of Leprous Lesion of the Larynx, Tongue, Fauces, and Nose, and a number of coloured sketches of the laryngoscopic images obtained in Lepra Tuberosa Laryngis. Dr. Bergengrün had once for all settled the old controversy regarding the distribution of the leprosy bacilli by showing that the intracellular distribution was almost insignificant when compared with their endolymphatic distribution. This had recently also been confirmed by Dehio and Herrmann. —Mr. Stewart showed a case of Ozæna following removal of the inferior turbinate in a woman. Dr. Spicer thought the history of the case scarcely proved the *post et propter* aspect of the operation. The patient had a distinct history of nasal suppuration since a child, and it was possible that the operation only accentuated the intranasal drying of the discharge. The shape of the nose was also that seen in atrophic rhinitis, a condition which could scarcely have developed since the operation.—Mr. Edward Roughton showed (1) a case of Laryngeal Swelling for diagnosis. (2) A young woman suffering from Lupus of Face, Nose, Palate, Tongue, and Epiglottis.—Dr. Herbert Tilley showed (1) a man aged 43, who two years ago applied to hospital for hoarseness and pain on swallowing of three weeks' duration. Examination of the larynx showed marked œdema over the arytenoids and sluggish action of the cords. There were no physical signs in the chest, nor evidence of nerve lesion of any kind. The stridor increased so rapidly that tracheotomy was performed, and the man had worn the tube ever since. He was in perfect health, and could produce a fairly good voice with expiration. Inspiration was impossible without the tube. The history of sudden onset with a cold, pain on swallowing, and œdema over the arytenoid region suggested implication of the crico-arytenoid joints, with subsequent fixation of the cords in their present adducted position. (2) A man, aged 49, the subject of Double Abductor Paralysis without apparent cause. (3) A boy, aged

10, with a Fluctuating Swelling over the Left Ala of Thyroid Cartilage.—Dr. StClair Thomson showed for Dr. Walker (Peterborough) an original drawing and description by Sir Robert Christison of a Method for Removal of a Double Fish-hook from the Gullet (date 1810).—Mr. Symonds reported that the patient, aged 55, with Epithelioma of the Larynx, whom he exhibited at the January meeting, improved so much in general health, owing to local treatment, that he was able to remove the larynx on January 24th. The œsophagus and pharynx were closed anteriorly, and the muscle and skin united. The severed trachea was attached to the skin just above the sternum. Primary union took place in the greater part of the wound, and the man was able to swallow after twenty-four hours, and made an excellent recovery. Mr. Symonds exhibited the patient, who showed great improvement in general health. The microscopic characters were those of a squamous-celled epithelioma.—Dr. David Newman showed (1) the Larynx removed *post mortem* from a man who had thyrotomy performed twice for epithelioma. The patient was first operated on for epithelioma on the anterior third of the left vocal cord in 1890 by thyrotomy, and no recurrence took place till 1893, when a small growth the size of a barleycorn was discovered close to the anterior commissure, and on removal proved to be an epithelioma. From 1893 till 1897 no appearance of recurrence, although the patient was examined regularly every two months. In March, 1897, symptoms of slight laryngeal obstruction and evidence of œdematous swelling in larynx, which prevented a complete view of the larynx being obtained. Laryngeal symptoms were accompanied by symptoms and physical signs of chronic parenchymatous nephritis. Patient died suddenly from laryngeal œdema, and *post mortem* the larynx was found to be occupied by an epitheliomatous ulcer. (2) A very large Papilloma removed from the nasopharynx of a young man. The growth was the size of a hen's egg.—Dr. Willcocks showed a woman, aged 43, with Adhesion of Soft Palate to Posterior Pharyngeal Wall.—Mr. Walsham showed a case of Syphilitic Pharyngeal Stenosis in a middle-aged man, in whom the soft palate was drawn into contact with the posterior wall of the pharynx as the result of cicatrisation following tertiary syphilitic ulceration. There was also destruction of the septum and falling in of the bridge of the nose.—Sir Felix Semon showed (1) a case of Rhinitis, Pharyngitis, and Laryngitis Sicca in a man. The patient was a gentleman aged 48. The case was shown, first, on account of the one-sidedness of the atrophic rhinitis, which in the observer's experience was comparatively rare unless due to a distinctly local process, such as impaction of a foreign body, or disease of the accessory cavities, or again to a syphilitic process, of none of which contingencies was there the least evidence in the present case. The second feature consisted in the persistence of the process, for it was remarkable that in a man of 48 like the patient it should still have been so active. The third remarkable fact was the extension of the process into the larynx, which in this country at least was very rare. (2) A case of Uncommon Laryngeal Tumour.—Dr. Bronner (Bradford) showed a microscopic specimen of Hypertrophy of the Mucous Membrane of the Interarytenoid Fold of eleven years' duration in a woman aged 34.—Mr. De Santi showed (1) a woman on whom he had operated for extensive Syphilitic Adhesions of the Soft Palate to the posterior wall of the pharynx. The whole of the nasopharynx was cut off from the oropharynx by the dense adhesions, and recently the patient had had intense pain in the right mastoid and ear. There were old perforations of both drums, and the patient was deaf to both air and bone conduction. The case did very well; readhesion did not take place, and the patient became entirely free from the mastoid and ear pain, was able to speak better and to blow her nose and breathe with her mouth shut. (2) A man suffering from an Ivory Exostosis involving the Right Frontal Sinus, and which had by pressure caused a suppurating mucocele. The man had had the exostosis for over five years, but beyond the disfigurement had not troubled about it until within the last ten days, when the whole of the parts at the inner canthus of the eye began to swell and cause pain. The exostosis was a very hard, large, and sessile one, and Mr. De Santi dealt with the abscess only by incision and scraping, and proposed to operate on the exostosis a little later. If left alone it would probably destroy the right eye. (3) A man with a Syphilitic Periosteal Swelling in the Mid-frontal Region of the Head, just above the articulation of the frontal bone with the nasal bones.—Mr. Lawrence showed (1) a case of Tumour of the Middle Line of Lower Lip in a man aged 61. The disease was of a warty character, and hard and ulcerated; no history of previous disease and no loss of flesh. There was little doubt but that it was malignant. (2) A woman aged 22, who had been "troubled with her throat" for twelve years. The tonsils were removed last November. Since then they had grown considerably, and there were masses of large glands behind and below the angles of the jaw. Mr. Butlin and Sir Felix Semon thought the case was one of syphilis occurring in a tuberculous subject, an opinion generally concurred in by other members. Mr. Spencer thought it was possibly a slow diphtheritic growth, and suggested that a bacteriological investigation should be made.—Mr. R. Lake showed a pair of Punch Forceps for use in double curetting of the larynx in tuberculous laryngitis.—Mr. Atwood Thorne showed (1) a case of Gumma and Perichondritis of Nose. (2) A case of Bilateral Abductor Paresis of Vocal Cords for diagnosis.—Dr. Lambert Lack showed a case of Phthisis and Healed Laryngeal Tuberculosis in a girl aged 19.

West Kent Medico-Chirurgical Society.—At a meeting on April 1st at the Royal Kent Dispensary, Greenwich Road, Dr. Morgan Dockrell and afterwards Mr. W. Arbuthnot Lane, President, in the chair, Mr. Ernest Clarke read a paper on the Use and Abuse of Mydriatics. After describing the physiological action and individual peculiarities of the mydriatics in common use, he specially drew attention to the great value of homatropine and cocaine as a paralyser of the ciliary muscle when used sufficiently strong. By experiments on himself and others he had produced complete loss of accommodation in 35 minutes with a tabloid of homatropine and cocaine gr. $\frac{1}{20}$, and the great advantage of this drug was that all effects had passed off in 24 to 26 hours. An important result of the use of mydriatics was "putting the eye into splints." He further showed why they were so dangerous in acute glaucoma, and finally very strongly recommended the use of ophthalmic discs or tabloids, which, on account of their accuracy, non-liability to decomposition, and the fact that toxic effects rarely if ever followed their careful use, rendered them far preferable to drops and lotions.—Dr. F. S. Toogood, Medical Superintendent of Lewisham Infirmary, read a paper on the Use of Morphine in Cardiac Disease, and after describing the physiological effects of the drug upon the cardio-vascular system and upon the kidneys, recounted a series of cases in which perfect compensation of the heart and entire cessation of all symptoms had been obtained after the failure of all other drugs, including digitalis and its allies, which had only excited persistent and uncontrollable vomiting. Special attention was drawn to the fact that scanty urine containing albumen was an indication for the administration of morphine, and gave many instances where its use had been accompanied by the secretion of the normal amount of urine and by the total clearing up of the albumen.—Dr. Morgan Dockrell read a short paper on the Use of Coley's Fluid in Sarcomata, and described the results in a case under his care.—The several papers were discussed by the President, Drs. Tayler, Scholefield, and Dockrell.

Cremation in Austria.—The Vienna Medical Society at a recent meeting considered two reports presented by Professors v. Hoffman and Gruber on the advantages and drawbacks of cremation in regard to public health. The Society passed the following resolution: "Cremation by means of modern combustion ovens is unexceptionable from the hygienic point of view; but earth burial does not involve such drawbacks and dangers that cremation should be considered as a necessary sanitary reform. Compulsory cremation presents insurmountable difficulties and is open to objections of great importance from a medico-legal point of view. Optional cremation, on the other hand, is not open to the slightest objection provided that the burning of bodies is carried out only after careful *post-mortem* examination."

REVIEWS.

DISEASES OF THE NERVOUS SYSTEM. By C. E. BEEVOR, M.D., F.R.C.P. London: H. K. Lewis. 1898. (Cr. 8vo, pp. 432; with illustrations. 10s. 6d.)

THIS new volume of "Lewis's Practical Series" is intended, the author says, to serve as "a handbook for students and practitioners," and also as an introduction to the study of the larger standard works on neurology. These objects are kept well in view throughout the book, and the author is to be congratulated on having produced a treatise on nervous diseases which is likely to be as interesting to the general reader of medicine as to the specialist.

The first four chapters are devoted to the general anatomy and physiology, and to the modes of examination of the nervous system, and are admirable in their clearness and simplicity. The description of the paralyses of ocular muscles, in particular, will be a boon to the student, for whom this subject is too often wrapt in obscurity. The advisability of substituting "excitable cortex" for the more familiar term "motor area" is perhaps open to question.

The account of the various diseases is characterised by the same conciseness and lucidity, and it is greatly to the author's credit that in spite of the narrow space to which he is limited he has omitted so little that is of practical importance. There are many references to recent work on the subject, the name of the authority being mentioned in most cases. The author wisely abstains from any reference to certain points which are still *sub judice*. For instance, we find no reference to lumbar puncture as a method of diagnosis, an omission which we think will be approved by most English physicians. The forcible reduction of the deformity of the spine in Pott's disease as a method of treatment for paraplegia is also passed over in silence.

In his method of describing diseases the author has followed the beaten track, and we confess to some disappointment in finding that the old irrational division of meningitis into cerebral and spinal is repeated; as a result of this no mention is made, under the head of inflammation of the cerebral pia mater, of the associated affection of the spinal meninges in almost all forms of meningitis. The student is left with the impression that spinal meningitis and cerebral meningitis are two distinct diseases, the former being very rare, the latter common; whereas pathological evidence shows that the separation is artificial, the cerebro-spinal meninges being affected as a whole, and the spinal meninges being affected in a much larger number of cases than was formerly supposed. A curious omission in the pathology of meningitis is the absence of any mention of the pneumococcus, probably the commonest cause of suppurative meningitis. Chronic infantile meningitis receives but scant notice, and it is to be regretted that the author draws no distinction between the very rare syphilitic cases and the much commoner non-tuberculous basal meningitis of infants which is certainly not syphilitic.

Modern pathology will hardly be satisfied with "cold, wet, and traumatism," as the final causes of acute anterior poliomyelitis. One would have expected, in view of the accumulating evidence of epidemics of that disease, that the possibility of its being a specific disease might at least have been suggested.

The chapters on abscess of the brain and intracranial tumour are excellent. Several references are made to the works of Horsley and Ballance, but we could wish that the diagnosis of such an important and obscure condition as cerebellar abscess were a little more fully discussed. No mention is made of any alteration of the knee-jerk nor of any paresis of limbs.

The remarks on treatment are practical and excellent throughout. In the chapters on intracranial tumour, epilepsy, and hysteria, this excellence is particularly noticeable. *Apropos* of epilepsy, we note the absence of any mention of Bechterew's treatment. Exception we think might be taken to the treatment suggested for diphtherial paralysis, at any rate in the case of children, the value of electric treatment being doubtful; the crying and disturbance of almost all children when treated with galvanism may be dangerous in such a disease as diphtherial paralysis.

Such small points as these, however, are only noticeable owing to the excellence of the rest of the volume, and we feel sure that Dr. BEEVOR's book will be of the greatest value, both to the student and to the practitioner.

A TEXTBOOK OF MATERIA MEDICA, THERAPEUTICS, AND PHARMACOLOGY. By GEORGE FRANK BUTLER, Ph.G., M.D., Professor of Materia Medica in the College of Physicians and Surgeons, Chicago; etc. London: Rebman Publishing Company. Philadelphia: W. B. Saunders. 1897. (Roy. 8vo, pp. 858. 22s. 6d.)

THIS is a large book of nearly nine hundred pages, professing to give a practically useful account of the therapeutical applications of drugs, along with such materia medica and pharmacy as is specially adapted to the needs of the medical student and practitioner. At the outset we may express the opinion that the pharmaceutical portion is much too elaborate for the class of readers to whom the volume is addressed. Throughout it is somewhat monotonous and dreary reading, and, although carefully and accurately compiled, tends from its elaborateness and detail to leave very little impression on the mind. A shorter account touched off with a lighter hand would have been more in keeping with the requirements of the practising physician, who, after all, cannot be supposed to have time to master all the details of pharmacy and materia medica. The article on weights and measures is also more suitable for reference than for self-instruction, as it would be quite impossible to carry it all in one's memory, while it is much too detailed to leave any distinct impression after merely reading it through. There is, however, a very clear exposition of the principles and practice of prescription writing.

Even in the therapeutical portion of the work the same evidences of elaborate compilation are for the most part manifest, although every now and again the author shows that he is capable of expressing opinions in a very lucid and interesting way if he would only let himself get away from the trammels of a systematic method which he has followed throughout. This method consists in having headings, such as "temperature," "uterus," "respiration," "synergists," etc., under each of which the action of the drug is stated, the heading frequently enough being followed by the sole information that there is no special action. Although this may make for accuracy, it also produces a somewhat wearisome monotony of style and description, and gives the impression that the work is the outcome of compilations from other books rather than a readable digest of the author's own knowledge and experience.

There is a very distinct tendency to continue the older teaching regarding many drugs and classes of drugs, apparently because many of our standard works on therapeutics are somewhat old-fashioned and have not been brought up to our present knowledge, and the author evidently is very strongly under the influence of their teaching. This want of originality mars the value of what is a carefully-prepared and elaborate treatise on the actions and uses of remedial agents.

RINGWORM AND ALOPECIA AREATA: THEIR PATHOLOGY, DIAGNOSIS, AND TREATMENT. By H. ALDERSMITH, M.B.Lond., F.R.C.S. Fourth edition. Enlarged and rewritten, with new illustrations. London: H. K. Lewis. 1897. (Demy 8vo, pp. 344. 10s. 6d.)

SINCE Mr. ALDERSMITH's last edition of his work on *Ringworm* Sabouraud has established that trichophytosis, as affecting the human skin, has several distinct varieties, and the author prefaces this edition by six plates showing the microscopical appearances of the different kind of spores as observed in the hairs extracted from ringworm patches. The seventh plate shows the ordinary appearances presented by hairs from a patch of alopecia areata. Readers who have not acquainted themselves with the results of Sabouraud's observations from other sources, will find them described in this volume. Apart from the description and drawings of the several forms of ringworm spores there is not much that is new in the book, as compared either with the previous

volume or with the chapters on ringworm in the various works on dermatology.

Mr. Aldersmith gives some interesting statistics regarding the frequency of ringworm. In a total number of 3,135 boys examined for Christ's Hospital in twenty years 204 of them were found to be affected with ringworm, giving an average percentage of 6.4 per cent.; in curious contrast to this is the fact that in a very large number of dirty children who were examined in order to find the percentage of ringworm, only 2 per cent. had tinea tonsurans, while 98 per cent. suffered from nits or pediculi. The author suggests that possibly dirt may prevent the spread of ringworm.

The author, as is well known, has had much experience in the treatment of ringworm, and gives the results of his practical observations at some length, trichophytosis of the body, beard, and nails being of course considered, as well as the more common forms in the scalp.

The various applications generally used in the treatment of ringworm are considered, and the author quotes with approval Dr. Crocker's remarks that the road to success is to be sought, not in this or that formula, but in perseverance with the remedies used coupled with the employment of parasiticides, which are not to be hastily changed if there is any progress at all, such progress being looked for month by month rather than week by week. Formalin is one of the recent remedies introduced for ringworm, but it does not meet with much approval from Mr. Aldersmith, who prefers croton oil, and who devotes a whole chapter to a consideration of the croton oil treatment.

In regard to the question of the suggested association of alopecia with ringworm or its contagiousness the author asks the following question: "May children with true alopecia areata attend schools?" "This," he remarks, "is a very practical and most important question, especially when it is remembered that Crocker says parasitic alopecia areata 'forms at least 95 per cent. of all cases of alopecia.' Obviously, if this opinion be correct, or if alopecia be ringworm in disguise, no case ought to be admitted to schools. I have always allowed boys with alopecia to mix with the other boys in Christ's Hospital, and have never refused to admit children into the junior school who have had this affection, but I have never heard of nor seen any spread of the disease, nor have such cases ever given ringworm to other boys in the school. These facts appear to me to disprove Crocker's theory."

The last chapter in the book has for its subject alopecia areata, in which a summary of the views of various authors is given.

The manner in which the volume is arranged has led to some repetition, and all that is essential in the book might have been advantageously given in smaller compass. Subsequent editions would perhaps be improved if the size were diminished. In a work designed to be frequently consulted by busy men the great advantages of brevity and conciseness should always be kept in view.

On Cardiac Failure and its Treatment: with especial reference to the use of Baths and Exercises. By Alexander Morison, M.D., F.R.C.P.Edin. London: Rebman Publishing Company. 1897. (Demy 8vo, pp. 276. 110 Illustrations. 10s.)

During the last two years a very large number of well-to-do persons have discovered that they possess "weak hearts." An easy method of treatment by means of agreeable effervescing baths, and certain mysterious "exercises," etc., provided for them at a pleasant little German town has rendered the discovery still more interesting, and thus much mutual benefit has accrued not only to the real or supposed sufferers, but also to those who have been successful in providing a "cure." Cure, however, has not come to all, and many have returned home disappointed.

In the work before us we have the results of a steady and careful investigation undertaken by Dr. Morison both at home and at Nauheim to separate the wheat of scientific fact from the chaff of fashionable fancy. He prefaces his book by a few chapters embodying his own views on cardiac physiology and pathology, and then deals with the symptoms of cardiac failure and their detection, followed by a short essay on the neuro-muscular and hæmic factors in cardiac disease. On subjects where many have speculated without coming to a common agreement, much may be said although little can be learnt. Dr. Morison has evidently studied his subject closely and states his views modestly, but his train of thought would be more easily followed if simpler language were employed to convey it.

The main interest of his work lies in the chapters descriptive of the Nauheim baths and exercises. Their employment, their mode of action, and their results are set forth in an eminently judicial manner, and deserve careful study by those who propose to make use of them in cases of real cardiac failure. The details of several cases are given which may serve as types of what may be expected during the course of treatment by baths and exercises. The latter are carefully described in association with a useful series of photographs showing the relative positions of "gymnast" and patient during the manipulations. Passing results in review, Dr. Morison makes it quite clear that, in his opinion, the new treatment alone cannot do for the patient what has been done for many years past by the judicious use of the drugs of the digitalis group and others. As an adjunct to them, and as a means of aiding an enfeebled heart, baths and exercises have a definite value, but are still more useful as an aid during convalescence. He has not been able to convince himself as to the physical changes in the heart's shape which have been recorded by some other observers.

The work, which is well illustrated and indexed, is concluded by an appendix written by Dr. Groedel, of Nauheim.

Les Troupes Coloniales: II. Maladies du Soldat aux Pays Chauds [Diseases of Soldiers in Hot Climates.] Par MM. Burot et Legrand, de la Marine, etc. Paris: J. B. Baillière et Fils. 1897. (Demy 8vo, pp. 184. Fr. 2.50).

This is Part II of the book we reviewed on October 9th, 1897, treating of the vital statistics of the French colonial white troops. It displays the accuracy and care which we commended in the first part relating to death statistics, and treats of the diseases causing the mortality.

The high death-rate of 42·95 per 1,000 is mainly caused by diseases generally called malarial, which account for 60 per cent. of the total mortality. These malarial diseases are of two classes—acute fevers, and chronic or cachectic conditions—and account for 76.45 out of 107 deaths per 1,000 in the Soudan, 75.9 in 103.7 in Madagascar, and 25 in 45 in Benin and Tonquin. Well might the native Radama in Madagascar say: "I leave, without fear, the 'white men to le General Tazo' (fever) just as the old Czar declared the best general in Russia was 'General January!'"

Diarrhœa and dysentery are most prevalent in Cochin China, and account for a third of the total deaths there; the morbific cause is considered to be entirely waterborne. Diseases of the liver, which we would regard as intimately connected with the former, are also worst in Cochin China. The authors describe two forms—acute hepatitis, often with softening and abscess; and chronic, with induration or cirrhosis.

Sunstroke is most frequent in Annam and Tonquin, for which the writers partly blame a faulty equipment of the soldier. They do not state what his headdress is.

Cholera, which is almost unknown in Senegal and Madagascar, is frequent in Cochin China and Tonquin, and is ascribed to proximity to India. Yellow fever, they declare, has three acclimatised foci — the Antilles, Guiana, and Senegal—but the latter is not believed to have been an original centre. Typhoid fever is relatively not serious, is rare in the Soudan, but more frequent in the Antilles and Cochin. Influenza proved very fatal among natives in Cochin, but not among the white troops.

Tuberculosis is not common among Frenchmen born, but is more frequent among creoles or colonial whites. Venereal disease, as in India, is a wide cause of inefficiency and invaliding, as is also what is described under traumatic lesions, which include wounds, leech bites, tropical ulcers, etc.

The writers, in conclusion, somewhat obviously remark that if the direct and indirect effects of a hot sun on a moist earth could be eliminated in these tropical regions, they would probably be more healthy than temperate climes. That is a

safe but important generalisation, because the two factors cannot be suppressed: but they can be very largely overcome by drainage, good housing and clothing, wholesome food, and pure water. Just in proportion as these hygienic elements are disregarded in the tropics, so will the European pioneers and colonists suffer from malarial diseases.

A PRACTICAL TEXTBOOK OF THE DISEASES OF WOMEN. By ARTHUR H. N. LEWERS, M.D.Lond., Obstetric Physician to the London Hospital, etc. Fifth Edition. London: H. K. Lewis. 1897. (Cr. 8vo, pp. 526. 174 illustrations; 4 coloured plates; and 71 illustrative cases. 10s. 6d.)

THE chief features of the new edition of this popular manual are certain fresh paragraphs on operations for uterine fibroids and some information on deciduoma malignum. The author has had some experience in this malady, and rightly insists that the exact nature of the disease is at present a matter of some uncertainty. Some observers, he notes, regard it as having an essentially casual relation with pregnancy, whilst others consider that the relation is accidental, and believe the growth to be essentially a sarcoma. The photo-micrographs are good, but the author might well have made the anatomy and pathology of the chorion and placenta a little clear to the learner by diagrams. The terms employed by German authorities are extremely confusing, and as many practitioners are on the look out for this disease, which has been so much talked about, it is all important that they should conduct their observations free from confusion or prejudice.

Dr. LEWERS is not over-zealous about any one method of treatment for uterine fibroids, and is careful to teach that in all but a very small proportion of cases fibroid tumours left to themselves do not end fatally. He relates an exceptional instance in which the patient died of hæmorrhage. The electrical treatment receives but weak support from him. The newer and older varieties of hysterectomy are well demonstrated by diagrams and descriptions; a little more should have been said on their relative dangers and advantages. In relation to removal of the appendages the author dwells on legal protection for the operator, and publishes a copy of a written permit, signed by the patient and her husband, of which he recently availed himself before operating.

In form the *Textbook* has undergone no change, and has not grown bulky, and in conclusion we may say that as a new edition this fifth issue leaves little to be desired.

E HISTORY AND TECHNIQUE OF THE VAGINAL RADICAL OPERATION. By Professor LEOPOLD LANDAU and Dr. THEODOR LANDAU. English Translation by B. L. EASTMAN, M.D., Assistant in the Landau Frauen-Klinik and ARTHUR GILES, M.D., Assistant-Surgeon, Chelsea Hospital for Women. London: Baillière, Tindall, and Cox. 1897. (Roy. 8vo, pp. 174. 7s. 6d.)

THIS work and the operation which it describes must be well-known to all interested in a very grave surgical procedure, and the translation will be welcome to many. The book itself, in its British form, is well printed, and the plates teach as much of the surgery of the subject as can possibly be taught by illustrations. The entire question of total extirpation of the uterus, cancerous or otherwise diseased, is very far from settled; hence a clear history, prepared by such eminent authorities as the LANDAUS, cannot fail to be of value. They describe what used to be done, what is done now, and how they in particular do it. Of course they support their own views and their own practice, but they are just to others. They condemn removal of the appendages alone for chronic inflammatory disorders, saying that the women recover from the operation, but not from the disease, because only one portion of the diseased structures is removed, while the real source and origin of the affection—the diseased uterus—is left behind to light up the old trouble again at any time. To this many experienced gynæcologists will demur; the real source and origin of the affection frequently lie in nerve centres far from the pelvis, and it is not certain that neurosis and pain do not frequently worry patients after total extirpation of the uterus with the tubes. The operation is hardly old enough to allow its advocates to speak triumphantly of permanent results in cases where disease of the appendages existed. Again, Ségond and others advocate abdominal pan-hysterectomy for the cure of this malady.

But there are diseases for which Landau's operation is eminently adapted. Hence the authors' minute description of every step, and their caution against every danger are of the highest utility to the gynæcologist. It must be admitted that the armamentarium is indeed a "bloated armament," and we only feel relief when we know that further experience in this, as in any other surgical proceeding, will involve simplification. Drs. EASTMAN and GILES are to be congratulated, for their translation of this standard book is readable as well as instructive.

INTRODUCTION TO CHEMICAL METHODS OF CLINICAL DIAGNOSIS. By Dr. H. TAPPEINER. Translated from the Sixth German Edition, with an Appendix on Micro-biological Methods of Diagnosis, by EDMOND J. MCWEENEY, M.A., M.D., Royal University, Ireland. London: Longmans, Green, and Co. 1898. (Crown 8vo, pp. 168, 22 figures. 3s. 6d.)

The preface states that the object of this little book is to provide the student with an inexpensive and trustworthy pocket guide to the simpler chemical and micro-biological manipulations required in modern diagnosis. We consider that Dr. MCWEENEY has succeeded in his endeavour, both as regards the material which he has adapted from Professor TAPPEINER'S book, and in his own contribution which appears as an appendix. The methods described are those which experience has shown to be the best, and the subjects, considering the small size of the work, are treated in a very thorough and up-to-date manner. The illustrations are scanty, and as a rule too small to be of much use, but otherwise both student and practitioner will find all they need for carrying out the manipulations necessary for a systematic, scientific, and accurate examination of the urine, secretions, pathological fluids, and blood in cases of disease.

NOTES ON BOOKS.

Lehrbuch der klinischen Untersuchungsmethoden inneren Krankheiten. [Textbook of the Clinical Investigation of Medical Diseases.] By Dr. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the Medical Clinic in the University of Zurich. Fourth revised edition. (Berlin: F. Wreden. London: Williams and Norgate. 1896. Pp. 842, with 281 woodcuts. M. 20.)—The popularity of Professor Eichhorst's book is the best testimony to its value, and the fourth edition possesses all those qualities which distinguished its predecessors. Among these we would place first an accuracy which is almost beyond criticism, and next a practical eclecticism as rare as it is wise. In choosing methods the author always considers what is best for the busy practitioner, and wastes no time in discussing counsels of perfection in respect of recondite and elaborate tests. Professor Eichhorst rightly holds that a textbook such as his should deal only with accepted diagnostic aids, and should not be filled with descriptions of novelties of uncertain value. The present edition is much extended by the introduction of clinical material in addition to the physical methods of which alone the book has hitherto treated. The illustrations are both artistic and accurate; those of the anatomical relations of the various organs merit special commendation. The coloured representations of pathogenic bacteria are also good. It only remains to note that in the preface to the present edition the author states that, if it is objected that the book is of no use for "cramming" purposes, he will regard such an objection "not without satisfaction."

Ergebnisse der allgemeinen Pathologie und pathologische Anatomie des Menschen und der Tiere. [Advances in General Pathology and Pathological Anatomy of Man and Animals.] Herausgegeben von O. LUBARSCH and R. OSTERTAG. (Wies-

baden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1897. Imp. 8vo, pp. 770. 22s. 9d.)—The third yearly issue of this work, to which there are many contributors, deals with general pathology, and includes two of the four sections into which the whole work is divided. The plan followed is to give a list of quite recent writings with the references, and then a critical review. The section on general etiology is devoted to bacteriology, with the exception of the chapters on animal parasites by Professor Peiper, and on trauma as the cause of disease by Dr. R. Stern. The advances in bacteriological technique are dealt with by Dr. Lubarsch, and immunity by Dr. Georg Frank. The diseases due to the gonococcus are reviewed by Dr. J. Schäffer, those due to the streptococcus by Dr. Lubarsch, those to the typhoid and plague bacilli and cholera spirillum by Dr. W. P. Dunbar, that to the tetanus bacillus by Dr. Wellner, and those to the cladothrix group by Dr. Eppinger. The literature upon syphilis of bones, joints, muscles, etc., is treated by Dr. E. Lang. Under general pathological anatomy, the pathology of metabolism is dealt with by Drs. Krehl, Krauss, and Chvostek, the pathology of the cell by Drs. Schmaus and Albrecht, and the pathology of the circulation by Drs. M. B. Schmidt, Eberth, Cohnstein, and Lubarsch. Finally, the pathology of nutrition is considered under regressive disturbances by Drs. Lubarsch and G. Ricker, and under progressive disturbances by Drs. Paltauf, Casper, and Stoss. Animal pathology occupies naturally quite a subordinate place in this volume. In every part of this book will be found most useful critical reviews of recent contributions to the various subjects. It is a most valuable work of reference.

Practical Toxicology for Physicians and Students. By Dr. RUDOLF KOBERT. Translated and edited by L. H. FRIEDBURG, Ph.D. (New York: W. R. Jenkins. 1897. Roy. 8vo, pp. 201. 2.50dols.)—Professor Dr. Rudolf Kobert, who, it appears, is "medical director of Dr. Brehmer's Sanitarium for Pulmonary Diseases at Goerbersdorf in Silesia," states that this work "is not offered as a great scientific achievement"—which statement may be accepted as both modest and true—and then goes on to say that "the aim of the book shall be reached if it can be used to advantage by such physicians and students of medicine who are not able to spend either much time or much money upon the study of toxicology." We entirely fail to see of what advantage the book—for it does not appear to be specially intended for examinations—can be to those who are not able to give much time to the study of toxicology, since the conscientious practice of that branch of science requires the expenditure of a great deal of time on the part of those who undertake such responsible work. The notice prefixed to this edition—to the effect that the book is "to aid the practising physician who wants practical knowledge at a glance, not having the time to peruse the larger handbooks in each particular case of poisoning"—is most dangerous. Fortunately in this country it is extremely rare for the general practitioner to attempt the performance of such a difficult and delicate investigation as the detection of poison in the viscera. As regards the matter of the book it is fairly well up to date, but we notice that charcoal is still recommended as an antidote for poisonous alkaloids. The book contains a large number of tables, the information contained in which is generally correct, but which are most confusing to peruse on account of their condensation and the closeness and smallness of the print.

Practical Diagnosis: The Use of Symptoms in the Diagnosis of Disease. By HOBART AMORY HARE, M.D., B.Sc. Second Edition, revised and enlarged. (London: Henry Kimpton. 1897. Roy 8vo, pp. 606; 201 engravings and 13 coloured plates. 21s.)—A second edition of this book has been called for in little more than a year after its first appearance. As was then pointed out in the BRITISH MEDICAL JOURNAL, the method adopted by Professor Hare is a novel one. Thus the manifestations of disease are discussed under (1) the face and head, (2) the hands and arms, (3) the feet and legs, (4) hemiplegia, (5) the tongue, mouth and pharynx, (6) the eye, (7) the skin, (8) the thorax and its viscera, (9) the abdomen and the abdominal viscera, (10) the blood vessels, (11) the blood, and (12) the bowels and fæces. In Part 2 certain prominent symptoms in the manifestations of disease are described. It is true that with the ordinary books on diagnosis, the student has to make a tentative diagnosis, and then turn to his reference book. This plan, however, is not open to so great objections as might at first sight appear. It is usually easy to refer a disease to its particular system, and then the general remarks there should enable the student to turn to the disease in question. The method followed by Dr. Hare has this disadvantage, that the diagnosis of nervous diseases has to be sought for under various chapters. On the whole, however, it must be admitted that Professor Hare's method is the more reasonable one.

Physiologische Electricität. Versuch einer Erklärung physiologische Vorgänge auf Grund der heutigen electro-klinischen Lehren. [Physiological Electricity. An attempt to explain Physiological Phenomena on the Basis of Modern Electro-Chemical Teaching.] By RUDOLF KOHN. (Leipzig: B. Konegen. 1897. Demy 8vo, pp. 23. 60 pfg.)—Without questioning the importance of electrical phenomena in the field of physiology, we feel that a brief pamphlet is hardly sufficient to convince us that practically every vital process is in the main the expression of electro-chemical change. Electricity has its due place in Nature, and a very importance position it occupies. But the more physiologists work in their attempts to unravel the so-called mysteries of life, the more numerous do they find the factors to be which must be called in to explain physiological problems. The present pamphlet may be useful as suggesting that that there is an electric factor in some of these problems where it was previously unsuspected or its importance minimised, but beyond this it helps us but little in attempting to find the physical basis of life.

Lehrbuch der gynäkologischen Diagnostik. Von Dr. GEORG WINTER, unter Mitarbeit von Professor Dr. CARL RUGE. [Textbook of Gynæcological Diagnosis.] Second edition. (Leipzig: S. Hirzel, 1897. Royal 8vo. Pp. 472. 190 illustrations. M. 14.)—A criticism of this remarkable work was published in the BRITISH MEDICAL JOURNAL of October 10th, 1896, and perhaps the only observation in that review which in the least tended towards depreciation was that "the *Lehrbuch* was in parts rather bulky." The second edition is nine pages shorter. The *Lehrbuch* has been unusually popular in its native land, and, notwithstanding its size, the first edition was out of print within a year and a half of its publication. One element in its success has been the relatively large size of the page. Every teacher must feel that the larger the drawing or diagram the better it is for purposes of instruction. The large illustrations of this volume are in this respect superior to the smaller drawings in most English works. British publishers would do well to try quarto size or royal octavo for medical works that include drawings made essentially for demonstration and instruction. A large page is desirable not only for diagrams and semi-diagrammatic drawings, but for photomicrographs. Each microscopic photograph in this volume is over 2½ inches in diameter, and as their execution is perfect, it may be judged how instructive they are. Let the reader examine some scrapings or fragments discharged from the uterine cavity and make use of Plate 6 in order to identify what he sees under the microscope. He will find such work far less tedious than if the microscopic photographs were much smaller and scattered through the pages of a smaller volume.

Annuaire des Eaux Minérales, Stations Climatiques et Sanatoria de la France et de l'Etranger. [Annual of the Mineral Waters, Climatic Stations, and Sanatoria of France and Foreign Countries.] (Paris: Librarie Maloine et Bureau de la *Gazette des Eaux*. 1898. Fcap. 8vo, pp. 271. Fr. 1.50.)—The *Gazette des Eaux* does good work in bringing out a yearly guide to mineral waters and health resorts. This is already in its fortieth year of publication. The alterations for the present year are not very great, but we observe that the altitudes of a number of French spas have been added. In describing health resorts the altitude should be mentioned just as invariably as its position on the map, and other details describing its situation, appearance, etc., should be given. This is often neglected, and the altitude is usually mentioned only when it

is desired to draw attention to it as a special attraction. To mention that an inland health resort has an altitude only a little above sea level is often supposed to prejudice people against it. In some cases, indeed, a very low level may be a disadvantage, but this is no reason for hiding it, and no description of a spa can pretend to completeness unless the approximate altitude is stated. The volume will be very useful for looking up the names of medical men practising at the various French health resorts. There are several alterations in the present list.

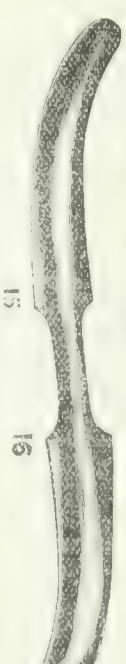
The Cyclist's Pocketbook of Useful Information and Memoranda, comprising also the Cyclist's Almanack, Telegraph Code, and an Abstract of the Law relating to Horseless Carriages. (London: Archibald Constable and Co. 1897. Fcap. 8vo, long form, pp. 216, 4 illustrations.)—This book contains a good deal of information useful to the cyclist, but we hardly think that the 14 pages devoted to medical notes and first aid will be of any practical service. The notes are too general and incomplete, and in one case, at least, if the advice given be followed, the result would probably be disastrous. So far as we understand, it is recommended in the case of arterial hæmorrhage from the arm or leg, not arrested by local pressure, that a band should be drawn tightly round the limb at a point higher up. The effect of this would be to compress the superficial veins and impede the return of the blood; but arterial bleeding would still continue, and it would only be a matter of time—and if the wounded artery were the femoral or the brachial, a very short time—before the patient would bleed to death. In the paragraph headed Fractures, it is stated that a broken bone may be diagnosed by loss of power, pain on attempted movement, evident deformity, rapid swelling, and at the moment of the receipt of the injury a distinct snap may have been experienced. It is recommended when there is good reason to suspect a broken leg that the assistance of someone should be obtained who will bind the limb and fetch the nearest doctor to supervise the patient's removal. This is good advice if the doctor is near at hand, but in out-of-the-way places hours may elapse before medical aid can be got, and the object of teaching the laity first aid is to enable them to get the patient safely home or to the doctor. We are told that a punctured wound of the eye is serious, and in many instances results in destruction of the eye, and medical advice should be obtained as soon as possible, but no hint whatever is given as to the first aid that should be rendered. There are three diagrams showing bandages applied, but there is not a word of explanation as to how they are to be put on. The concluding paragraph gives a "list of drugs which will be found useful." The first mentioned is laudanum, a most dangerous drug in the hands of non-medical men, and the only advice as to its use is to be found a few pages earlier under the heading "Diarrhœa and Colic," where it is stated that if pain is very severe fifteen drops of laudanum in water gives relief. In the treatment of eczema a lotion containing sugar of lead is advised. This, again, is not a safe drug in the hands of the inexperienced, and how much to use, or how often to use it, is in no way indicated. Following the request in the preface, we would suggest that these notes be either omitted or amended in future editions.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P.Ed., vol. II. (Edinburgh and London: Young J. Pentland. 1897. Roy. 8vo, pp. 638.)—The second volume of the new series of this *Journal* fully maintains its traditional reputation in respect of the value of its contents, and more than maintains it as regards its get up and general appearance. Under the editorship of Dr. G. A. Gibson, the famous old journal has renewed its youth, and is now one of the best of the medical monthlies. It does not limit its matter to contributions by Scotchmen, but draws contributions from both sides of the Border, and even from the other side of the Atlantic. For instance, among the contributors to this volume are Mr. H. E. Durham, Dr. Archibald Garrod, Dr. A. Haig, Mr. H. Nelson Hardy, Mr. F. W. Lowndes, Professor Kanthack, Mr. Bevan Lewis, Professor Osler, of Baltimore, Mr. H. J. Waring, and other representatives of British medicine in the widest sense.

The Scottish Medical and Surgical Journal. Edited by William Russell, M.D., F.R.C.P.Edin. Vol. I. (Edinburgh: W. F. Clay. 1897. Demy 8vo, pp. 1172.)—The first volume of the *Scottish Medical and Surgical Journal* is a literary product on which the editor, Dr. William Russell and his collaborators may well look with satisfaction. It is claimed for this periodical that it is the first journal Scotland has possessed which professes to be national and to represent medical work done all over Scotland. This claim appears to be sustained by the contents, and it may be added that it not only represents work done all over Scotland, but as far as we can see, the contributors are confined to dwellers in the Land o'Cakes. It is therefore in the strictest sense national. It will not, we hope, be taken as an empty compliment from the "fause Southron" if we say that Scotland has no reason to be ashamed of its work in the sphere of medical science as represented in this journal. The volume is somewhat bulky, but a good index makes reference easy. It contains six well executed coloured plates and seventy-four other illustrations.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

UTERINE DILATORS.



Mr. R. Rauschke, surgical instrument maker, Leeds, has submitted to us dilators for the cervix uteri, designed by Mr. Alfred Parkin, Hull. These are solid metal bougies. Two are mounted together, so that each one serves as a handle by which to introduce the other. Each bougie is conical, so that the tip is three millimetres smaller than the base. Thus it is claimed that each pair of bougies dilates as much as six sizes of Hegar's dilators, so that six instruments only are required to dilate the cervix up to the size of No. 20 Hegar. It seems to us, however, that as the base of each dilator can hardly be got as high as the os internum, unless the uterus is considerably enlarged, this claim does not hold good in all cases. The idea of making each dilator double-ended is good, and metal is the best material for such an instrument.

A PINCE-NEZ FRAME.

We have received from Messrs. F. Bateman and Co., 404, Strand, W.C., a modification in the ordinary astigmatic pince-nez. It is termed the "Usebius" frame.

The special feature about it is an adjustment screw to the triple bar eyeglasses. By simply turning the nut on the centre bar the space between the placquets is so regulated as to avoid all undue pressure on the nose, and consequently the frame can be adjusted so as to fit a wide or a narrow nose.

The arrangement has the advantage of simplicity, and is well suited to the purpose for which it is intended. We feel sure that to many this adjustable arrangement will be advantageous as the pressure exercised can be regulated to a nicety, according to the desire of the wearer.

University of Vienna.—The number of students in the Medical Faculty of Vienna in the winter semester 1897-98 was 2,580, which is about 37 per cent. of the total number of students registered in the University. The number shows a falling off of about 1 per cent. as compared with the previous year. As usual, the largest number of foreign students came from America and from Russia. The prospectus for the coming summer semester shows a total of 280 courses of lectures and practical instruction to be given by 30 ordinary, 34 extraordinary professors, and 97 *Privat-docenten* and assistants.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A meeting of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 20th day of April next, at 2 o'clock in the afternoon.

The following Committees also will meet:

Tuesday, April 19th, 1898.—2.0 P.M. Premises and Library Committee.—3.0 P.M. Committee on Business of Annual Meetings—4.0 P.M. Joint Committee of British Medical and Medico-Psychological Associations.—4.30 P.M. Subcommittee of Parliamentary Bills Committee on Vaccination.—5.0 P.M. Parliamentary Bills Committee. *Wednesday, April 20th, 1898.*—10 A.M. Journal and Finance Committee.

Francis Fowke, *General Secretary.*

April, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on April 20th, July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held, by kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, April 21st, at 8.30 P.M. The chair will be taken by Dr. St. Clair Shadwell, Vice-President of the District. Dr. Beevor will give a demonstration of Diseases of the Nervous System. Visitors will be cordially welcomed.—Herbert E. Powell, Honorary Secretary, Glenarm House, Upper Clapton.

Oxford and District Branch.—The next meeting of this Branch will be held at the Radcliffe Infirmary on Friday, April 29th, at 3 P.M. Agenda:—Confirmation of minutes. Short Papers: Dr. Elsmore: Hepatic Intermittent Fever. Mr. T. B. Yelf: A case of Addison's Disease. Mr. Cheatle: Notes of cases of Tetanus. Dr. Turrell will open a discussion On the Use of Ergot in Obstetric Practice before Delivery. Communications. Propositions. Members willing to contribute papers are requested to communicate at once with Wm. Collier, Honorary Secretary, St. Mary's Entry, Oxford.

Border Counties Branch.—The next meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, April 22nd. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. Dundas Helm, Carlisle, and W. Hall Calvert, Melrose.

North of Ireland Branch.—The spring meeting of this Branch will be held in the Museum, College Square North, Belfast, on Thursday, April 28th, 1898, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with John Campbell, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

South Wales and Monmouthshire Branch.—The next meeting of this Branch will be held on May 5th, and not on May 4th as recently notified by postcard.

LANCASHIRE AND CHESHIRE BRANCH.

A meeting of this Branch was held at Liverpool on April 6th. Dr. Samuel Woodcock, President, was in the chair, and there were over eighty members present.

Confirmation of Minutes.—The minutes of last meeting were confirmed.

Apologies for Non-attendance.—Apologies for non-attendance were received from Dr. Martland, Dr. Neech, Dr. Glascott, Dr. Hannah, Dr. Flitcroft, and Dr. Hayward.

Mr. R. B. Anderson's Appeal.—Dr. James Holmes had given notice of the following motion:

That as the principle involved in the appeals of Mr. R. B. Anderson to the higher courts is of the utmost importance to medical men, a grant be made from the funds of this Branch towards the cost of these appeals.

In deference to Mr. R. B. Anderson, who was present, Dr. Holmes withdrew this motion, and said he would give his support to the more general motion (see p. 1026) of which Dr. Maitland had given notice.

The Midwives Bill.—On the motion of Dr. A. Brown Ritchie, seconded by Dr. W. Armstrong, the following resolution was adopted:

That a deputation of members of this Branch of the British Medical Association be appointed to meet the members of Parliament for Lancashire and Cheshire in order to discuss the Midwives Bill now before Parliament, and show reasons for opposing the same.

On the motion of Dr. Westly, seconded by Dr. Ritchie, the deputation was constituted as follows: The President, Mr. Victor Horsley, Dr. W. Armstrong, Dr. Gledhill, and Dr. Ritchie.

Medical and Surgical Communications.—Mr. Thelwall Thomas read a paper on an Operation for Hæmorrhoids. After paralysing the sphincters the piles were clamped and treated by a special double suture, reef-knotted at points of intersection, which effectively prevented any hæmorrhage. The operation caused so little pain that in 33 cases none had been complained of. In none of the cases had there been any hæmorrhage or failure in prompt healing. The average time in house or hospital was 10.3 days. He advocated Whitehead's operation for the worst class of piles, but emphasised that the operation ought to be properly performed *à la* Whitehead.—Dr. W. Bain read an interesting paper on the Action of certain Drugs on the Composition and Flow of Bile—an Experimental Research. Dr. Barr and Dr. Gordon took part in the discussion.—Dr. Charles A. Hill and Dr. J. Hill Abram gave an account of an Experimental Investigation in the Disinfection of Excreta, which is published at p. 1012.—Dr. Imlach exhibited a Model of the mutual relations of the spinal cord, medulla oblongata, middle brain, corpora striata and optic thalami, cerebellum and cerebral hemispheres. By the use of different colours the sensory was distinguished from the motor portion, and the rise from the most simple reflex act to the sensori-motor, automatic, and inhibitory act was made evident. He said that the intricate anatomy and physiology of the nervous system both in health and disease was a considerable tax upon the memory. In the study of progressive degenerations of certain nerve tracts, aphasia, labyrinthine vertigo, and other complex problems of neuro-pathology, a model was a far more effective help than any diagram. The model which he was exhibiting showed the path by which compensation occurred in a case of cross paralysis. It was home-made, and he strongly recommended this extension of the method of the kindergarten to those who were engaged in the treatment of nervous diseases. He thought that teachers in this department of medicine might with advantage open a modelling class for their students. He had two duplicates of his model, which he would willingly

present to any practitioner who was interested in the subject.

The State of the Medical Profession.—Dr. James A. Rigby read a very long paper, entitled, an Inquiry into the Present Unsatisfactory State of the Medical Profession, with the Remedies, if any, for the same. This gave rise to an animated discussion, in which the following members took part: Dr. Charles Trimble, Dr. Broadbent, Dr. James Holmes, Dr. O'Sullivan, Dr. Brierley, Dr. W. Berry, and Dr. Rees.

Memorials of Members of Association to Council.—Dr. Fort proposed the following motions, of which he and Dr. Martland had given notice; Dr. Broadbent seconding, in the absence of Dr. Martland:

To call attention to memorials of members of the Association to the Council, dated October 20th, 1897, and January 15th, 1898, and to resolutions of signatories and other members of the Association thereon, submitting the matters to the Branches, and to move:

1. That visitors being members of the Association be permitted to take part in the discussion.

2. That this Branch concurs in the memorials of members of the Association, dated October 20th, 1897, and January 15th, 1898, addressed to the Council of the Association, urging the Council to legalise the special resolution of 1896 amending the Memorandum of Association, enabling the funds of the Association to be applied in maintaining the honour and the interests of the profession, and inviting the Council to take the lead in organising concerted action in favour of reform; and supports the claim of the memorialists under Article IX to the publication of the memorial and proceedings relating thereto in the Journal as the medium of communication between members, on the grounds that the questions raised and rights involved are of the first importance to members of the Association.

3. That this Branch calls upon the Council to legalise without further delay the amended Memorandum of Association; to take what steps may be necessary to enable a sum of £ [1] to be voted for the purpose of medical reform from the funds of the Association, and to take part in organising concerted action throughout the profession to secure long-desired reforms necessary alike for the honour and interests of the profession and for the safety and welfare of the public.

The President ruled the first motion out of order, and after some discussion the others were withdrawn.

Exhibits.—Mr. W. Thelwall Thomas exhibited a large collection of Recent Photographs of Surgical Diseases.—Mr. R. Parker and Mr. Thomas exhibited several patients.—Messrs. Parke, Davis and Co. had an Exhibition of Drugs.

Dinner.—A few members dined at the University Club in the evening.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A meeting of the Branch was held in Aberdeen on March 16th, Professor Finlay, President, in the chair.

New Members.—Dr. J. Crombie, Golden Square, Aberdeen; Dr. W. Alexander, Old Deer; Dr. J. McNaughton, Turreff, and Dr. G. Stephen, West Auckland, Durham, were admitted members of the Branch.

Communications.—Dr. Rose gave a summary of the results of the Antitoxin Treatment of Diphtheria for the past three years in the Royal Aberdeen Hospital for Sick Children. He stated that the mortality in operation cases in the hospital, after the use of antitoxin had been reduced to 23.7, compared with a mortality of 65 per cent. in preantitoxin days. As this reduction corresponded with the experience of other observers who had used antitoxin in sufficient doses and early, Dr. Rose claimed that the serum was the most potent factor we possessed in the treatment of diphtheria, and urged its early use in every case. An interesting discussion followed.—Professor Ogston read notes of a case of Absence of the Peritoneum in a patient on whom he had operated in the Aberdeen Royal Infirmary.

HONG KONG AND CHINA BRANCH.

A meeting of the Hong Kong and China Branch was held in Hong Kong on February 25th; Dr. G. P. Jordan, President, occupied the chair. Thirteen members and four visitors were present.

New Member.—James J. Walsh, M.B., Staff-Surgeon, R.N., already a member of the Association, was elected a member of this Branch.

[1] £10,000 is required.

Communications.—Staff-Surgeon Wm. E. Home, M.D., R.N., read a paper on Chloroform Anæsthesia, which was followed by a discussion of the general subject of anæsthetics, taken part in by Dr. Atkinson, P.C.M.O., Dr. Beede, Dr. Jordan, Dr. Lowson, and Dr. Stedman.—Dr. Jordan gave a demonstration of the Roentgen X Ray Apparatus, and illustrated the method of using it.

YORKSHIRE BRANCH.

The spring meeting of the Yorkshire Branch was held at the Medical School, Sheffield, on March 30th, Dr. Myrtle, President, in the chair, and thirty-two members were present.

New Members.—Messrs. Knowles, Lister, Wright, Beatten, and Gray were elected members of the Association and Branch, and Dr. Roper a member of the Branch.

Obstetric Nurses Bill.—The Obstetric Nurses Bill was discussed. Dr. Eddison proposed:

That this Branch is of opinion that the Bill now before Parliament is unsatisfactory, and desires the Parliamentary Bills Committee of the Association to oppose the Bill, and, if possible, to obtain the appointment of a Select Committee of the House of Commons to consider the whole subject.

The Special Meeting at Leeds.—The Secretary drew attention to the fact that at the special meeting of the Branch held at Leeds on March 16th, the meeting had decided by vote that no reporters should be admitted. The following day, however, a report of the meeting appeared in the local press. The following resolution was adopted:

That this meeting of the Yorkshire Branch regrets to learn that in spite of a resolution passed at the special meeting on March 10th not to admit reporters, a report of the proceedings was communicated to certain daily papers.

Papers and Cases.—The following papers were read and cases shown:—Dr. Wardrop Griffith (Leeds): Remarks on a Fatal Case of Disease of the Aorta.—Dr. E. Trevelyan (Leeds): Some Remarks based on Twelve Cases of Locomotor Ataxia, recently under observation.—Dr. A. J. Hall (Sheffield): Notes on a case of Xerostomia. — Mr. Sinclair White (Sheffield): (*a*) Case of Pulmonary Abscess Drained; (*b*) Case of Nephrolithotomy for the Relief of Suppression of Urine of Six Days' Duration; (*c*) Case of Internal Choledochoduodenostomy.—Mr. Simeon Snell (Sheffield): (*a*) Case in which a fragment of Steel was diagnosed as fixed in the Retina and was removed by the Electro-magnet, with recovery of excellent vision; (*b*) Stereoscopic Photographs of Fibroma of Eyelid, and other cases.

Dinner.—Twenty members dined together at the Victoria Hotel.

Miss Louisa Da Costa, of Brighton, has by her will bequeathed £1,000 each to the Cancer Hospital, Brompton, and to the Hospital for Consumption, Brompton. After other bequests, the testatrix has left all the residue of her personal estate in trust in equal shares for St. George's Hospital, St. Mary's Hospital, and the Convalescent Hospital at Walton-on Thames.

Medical Education in the United States.—The last Report of the United States Bureau of Education (1895-1896) contains much valuable information relative to the medical schools of the United States. The number of schools included in the statistics is 155; of these, 9 are graduate schools, 2 are physio-medical, 20 are homœopathic, 8 are electric, and 116 are regular. The total number of medical students at the period to which the report refers was 24,437, of whom 4,947, or 22 per cent., graduated during the year. The regular schools of medicine enrolled 19,999 students, and graduated 4,261. The endowments of the medical schools have risen to 542,820 dollars—419,150 dollars for regular and 120,000 for homœopathic schools; while the value of buildings, grounds, and equipment is 9,530,995 dollars—7,483,795 dollars for regular colleges, 1,625,200 dollars for homœopathic colleges. The report shows a great increase in the number of volumes in the libraries of the medical colleges. The regular colleges report 94,912 bound volumes in the libraries of forty-seven Colleges. One library—that of the Medical School of the University of Michigan—reports 10,000 volumes. The homœopathic colleges report 41,350 volumes in their libraries.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 16TH, 1898.

THE GENERAL MEDICAL COUNCIL AND THE MIDWIVES QUESTION.

The net result of the deliberations of the General Medical Council on the Midwives Registration Bill during the special session last week, has been the adoption of a reply to the Lord President of the Privy Council, which takes the form of a statement of the conditions which any legislation should fulfil if it is to deal in a satisfactory manner with the midwives question.

The full text of the report embodying the reply is printed in another column, and will be found to be well worthy of careful perusal. It was adopted unanimously, and may, therefore, it is to be hoped, afford a solid basis for future action. It reaffirms the need for measures to regulate the practice of midwives, lays down in a series of propositions the general nature of the regulations which ought to be enforced, and states in a concluding paragraph that as the Midwives Registration Bill introduced this year by Mr. J. B. Balfour is not in accordance with the general principles, it does not offer a solution of the question. The Council, therefore, earnestly deprecate its passing into law in its present form.

The two most important propositions contained in the reply appear to be those which lay down the principle that the unlicensed practice of midwifery for gain ought to be made illegal and penal, and that the right of women not registered as medical practitioners to practise midwifery should be conferred by a licence renewable annually.

The first of these two propositions is of far-reaching importance, and must be felt to involve the recognition of a principle which is new to legislation in this country as it affects medical matters. We have here on record an expression of the deliberate opinion of the General Medical Council that the unlicensed practice of midwifery for gain should be made illegal and penal, and that any measure which proposes merely to protect the title of "midwife," however defined, cannot be regarded as offering a sufficient safeguard in the interests of the public health. In this connection it will not be forgotten that it has not hitherto been accepted that the Medical Acts afford this measure of protection to the public with regard to the practice of medicine, surgery, and midwifery. The question has again been raised recently by the General Medical Council, and arguments upon the point will shortly be heard by the Court of Queen's Bench. Should the Court take the view that registration is not a necessary preliminary to the practice of medicine, surgery, and midwifery, then it seems reasonable to assume that the General Medical Council is committed to the policy of seeking from the Legislature an amendment of the Medical Acts in this direction.

The introduction of the words "for gain" in relation with suggested penal provisions with regard to the practice of midwifery practically affords a definition, or a basis for a definition, of the term "midwife," and it will be noticed that in the second paragraph of the report itself the Council suggests that the term should be defined as meaning a woman who undertakes for gain to attend cases of natural labour, and who is not registered under the Medical Acts. Among the advantages which would accrue from the adoption of such a definition would be the comparative ease with which it would be possible to prove in a court of law the fact of the practice of midwifery by an unlicensed person. The definition also would go a long way to meet those objections to the use of the term "midwife" which have led to the recommendation of the term "midwifery nurse" or "obstetric nurse." The objections would be further obviated by the proposition (9) which would require the applicant for a licence as a midwife to produce satisfactory evidence of training and experience not only in the conduct of natural labour, but "in the after-care of lying-in women and newborn infants."

Further, it is laid down that a licensed midwife should be required immediately to seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn infant. In the opinion of the General Medical Council, therefore, the midwife of the future should be a nurse with special training, and not an inferior kind of medical practitioner.

The propositions adopted by the General Medical Council do not contain any proposal for the formation of a Midwives' Register. It is suggested that the duty of licensing a woman to practise as a midwife in any district should be delegated to the local sanitary authority of that district, that the woman licensed should be required to renew her licence annually, and that it should be in the power of the authority to revoke a licence at any time if the holder be proved to have infringed any prescribed regulation. The local sanitary authority, however, would not have power to license any woman unless she had complied with the conditions laid down by a "central body" to be established by Parliament. This central body, which would be analogous to the Midwives Board contemplated both by Mr. Balfour's Bill and the Midwifery Nurses Bill of the Association, would frame the conditions under which midwives might be licensed, and under which they would be allowed to practise subject to the approval of the General Medical Council. No indication is given as to how the functions of the Midwives Board with regard to the recognition of persons as competent to be licensed as midwives should be carried out in practice. It would be contrary to precedent in such matters for the Board itself to conduct examinations, and it may, therefore, be assumed that it is intended that the Board should recognise certificates of competence granted by various bodies incorporated for the purpose. If this is what is contemplated, it would be follow-

ing what it has been proposed should be done with regard to sanitary inspectors.

The distinct condemnation of the Midwives Registration Bill by a unanimous vote of the General Medical Council must undoubtedly have great weight with the Government, which, it may be presumed, will not now feel called upon to give any special facilities for its second reading. The position taken up by the General Medical Council is, as to matters of principle, practically identical with that reached by the Parliamentary Bills Committee of the British Medical Association.

THE SERUM TREATMENT OF YELLOW FEVER.

In a lecture delivered before the Society of Medicine and Surgery of Sao Paolo, Brazil, on March 8th, Dr. Sanarelli gave an account of his experiments in the serumtherapy of yellow fever. He gave no details as to the preparation of the serum beyond the statement that it is based on the methods and general principles of immunisation, and is distinguished from that of better known serums only by the exceptional difficulty with which animals tolerate strong doses of the virus, and can be made capable of supplying a serum possessing trustworthy curative and preventive properties. Such a serum can generally be obtained from horses after intensive treatment carried out continuously from twelve to fourteen months. The serum can act effectively only when the quantity of poison already formed in the organism has not reached the amount required to kill the patient. It acts only against the microbes, and not against their toxins; hence, in the treatment of yellow fever in the human subject, it is efficacious only when it is used in an early stage of the disease. When the toxin has profoundly affected the renal apparatus or the central nervous system, the serum can have no beneficial effect.

At the beginning of the present year Dr. Sanarelli had obtained a supply of good serum from two horses, one of which had been under treatment for eighteen months, the other for a year. This serum was tried at his request by Drs. Seidl, Fajardo, Couto, and Da Rocha in the Hospital of S. Sebastiano, Rio de Janeiro, in 8 cases of well-marked yellow fever; 5 of the patients were in the fourth day of the disease, and anuria and in some cases delirium was present. Only 1 of these recovered. It is noteworthy that this patient, who received 80 c.cm. of serum, although in an extremely grave condition, had not either anuria or delirium. Of the other 3, 1 was in the second, the others in the third day, and they presented all the principal symptoms of yellow fever, including albuminuria, but the urinary excretion was regular and the nervous system was intact. All these 3 recovered after "energetic serumtherapeutic treatment," the thermometric records showing that each injection was followed by a lowering of the febrile temperature. In the case in which the treatment was begun on the second day of the disease a single injection sufficed to cause an immediate fall of temperature, with abatement of the symptoms, followed by rapid convalescence. These results appeared to Dr. Sanarelli to warrant the hope that by early treatment it would be possible in many cases to control the infectious process.

In February he had an opportunity of further testing his method in the city of S. Carlos do Pinhal, where yellow fever was so prevalent that the place was almost deserted. When he arrived at S. Carlos there were only two children in the isolation hospital, which owing to foolish prejudice was avoided by the people. One child was in the second, the other in the third, day of illness. The results of the treatment were almost immediate; the fever disappeared, the general symptoms abated, albumen was no longer present in the urine, and the two little patients were speedily convalescent, one having received 20, the other 65 c.cm. of the serum. Of six other patients treated two died, one on the tenth day from the unexpected development of cerebral lesions; the other was already suffering from suppression of urine when admitted to the hospital. In this series of cases it was noted that if the first injection did not cut short the infective process almost at once, the disease ran its course without being influenced by further administration of the serum. The effect of the serum on the urinary function was most markedly beneficial, even in the cases which proved fatal.

The striking effects of large doses injected into the superficial veins of the forearm led Sanarelli later to employ an intensive treatment from the beginning. This method gave much more satisfactory results. He tried it in 14 cases, all selected as well-marked examples of the disease, in which spontaneous crisis was very unlikely. Of the 14 cases 10 were cured, the influence of the treatment being abundantly manifest in the immediate relief of symptoms and amelioration of the general state. In all the 4 cases which proved fatal exceptional conditions (malnutrition, malarial cachexia, etc.) are stated to have been present, and made it impossible fully to carry out the treatment.

Thus of 22 cases in all treated by the serum 5 died. Sanarelli is careful to guard himself against basing general conclusions on so slight a statistical foundation, but having regard to the facts that the epidemic was of a very severe type, that in the first series he was, as it were, groping his way to the proper dosage, and that some of the cases treated were hopeless from the beginning, he thinks an average mortality of only 27 per cent. of good augury for the future. The official statistics of the capital of Brazil show that in epidemics of moderate intensity the mean mortality is about 50 per cent. When abundant supplies of serum more active than the present stock, which is now almost exhausted, are available, and a more extended practical experience has made it possible to determine the indications and contraindications of the treatment more accurately, still better results may, he believes, be looked for.

The prophylactic power of the serum has as yet been tested only on a relatively small scale, but the success of the method was very encouraging. An outbreak of yellow fever occurred in a prison in S. Carlos do Pinhal, and in spite of isolation and disinfection was making steady progress. The "antiamarillic" serum was injected into all the prisoners and warders, with the result that not a single case occurred afterwards.

Dr. Sanarelli has already made mankind his debtors by his persevering efforts to combat one of the worst diseases of warm climates, and it is to be hoped that he will be able to carry his labours to a successful conclusion, The Brazilian Government and the authorities of the State of S. Paolo are also to be congratulated on the enlightened spirit in which

they have encouraged and helped the distinguished investigator in what is in the fullest sense of the words a work of mercy.

PAYMENT BY HOSPITAL PATIENTS.

Perhaps one of the most important and most difficult questions connected with the present hospital system is that of the advisability of enforcing or taking payments from the patients. This is a question which has only arisen of late years, and has only become urgent within a very short period. Now, however, its urgency is undeniable. It affects both the in-patients and the out-patients. We had occasion recently[1] to call attention to the grave danger of rendering a hospital dependent for its stability on the contributions of working men's clubs, who will insist on the governors adopting their decision as to the suitability of applicants, under the threat of withdrawing their subscriptions. The letter signed "Hospital Surgeon," which appears in another column is a striking instance in point. This, of course, applies equally to both in-patients and out-patients. And lately some hospitals, even in London, have claimed or accepted payment from some of their in-patients. But the plan prevails much more in the out-patient departments, and it is to them that our remarks apply in the first instance.

It is obvious, to begin with, that the system is a complete revolution in the essential character of hospitals. We do not urge this as in itself a fatal objection; we are ready to admit that any scheme should be used which can be proved to be good, or even supported by valid arguments; but the consideration should at any rate give us pause. Our hospitals were founded as pure charities. Their conversion into what look very like shops, where medical relief is given in exchange for subscriptions, may possibly be supported by argument, but that argument ought to be a very strong one.

The strongest argument would be, if possible, to point to the success of the experiment as far as it has been tried hitherto. Now, the system has been adopted pretty extensively in the special hospitals of London, and last year the Hospital Reform Association sent Dr. Knowsley Sibley and Dr. Snape, as their Commissioners, to visit personally and report into the working of these hospitals. They visited 41 institutions and published the results in a report which we do not hesitate to describe as a model of fairness and courtesy, and the substantial accuracy of which was not, so far as we are aware, seriously called in question by the hospitals reported on. That report was published and commented on in the British Medical Journal of April 10th, 1897.[2] We will extract the paragraph relating to "payment by patients," and a portion of that on the cognate subject of inquiry into their means:

"Thirty-two hospitals receive payment from their patients, collecting a large sum annually (£24,085 in 1895). We would point out that this amount is earned entirely by the work of the medical staff, who receive no portion in return. More than half (18) of these institutions obtain more money from their patients than from their annual subscribers; in some cases as many as from 10 to 25 times as much (No. 5). On comparing the patients' payments and annual subscriptions for these 32 hospitals we find that these received £7,000 more in patients' payments than in annual subscriptions in 1895. We cannot refrain from drawing attention to the fact that at No. 3 the acknowledged averaged sum received for treatment from each paying out-patient is 11s. 9d. The payments are often made to subordinate officials, and no register or check is kept."

"At fifteen of these institutions there is practically no inquiry at all, patients being admitted unquestioned, so that anybody may apply for, and will, as a matter of course, receive treatment. Where an inquiry exists it is for the most part inefficient and wrongly directed. It partakes, as a rule, of one or two characters: either (*a*) How much can the patient pay the hospital? or (*b*) Can the patient pay a specialist's fee of one or two guineas? In neither instance is the patient asked if he or she could afford to pay the fees of a general practitioner. The inquiry is usually of a most cursory nature; the word of the patient is accepted, and no steps are taken to verify the statements."

The statement of details shows that "at the Central London Ophthalmic Hospital out-patients are charged 2d. a visit, while the system of inquiry into their circumstances is stated in the report to be merely nominal. At St. Peter's Hospital, with £2,186 derived from patients' payments and £250 from annual subscriptions, the authorities appear by the report to be accommodating in their charges to out-patients, who may be called upon to pay on a sliding scale from 6d. to 1s., or even 10s."

Well may our contemporary add that "at these institutions charges are made which would bring any private practitioners into discredit, and that medical and surgical practice is carried on in unfair competition with the general practitioner. What would be thought of any private practitioner who pretended to supply skill and medicines for 6d. or even 2d. a visit?"

Miserable, however, as such a system is, it is not in little "special" hospitals alone that it is defended and pursued. We believe that Guy's Hospital continues to admit anyone without any preliminary inquiry (for indeed no such inquiry is possible, at least no satisfactory or trustworthy inquiry) for 3d.; and we have seen a statement that at the London Hospital the same baneful system is to be introduced. How does this differ from the case of a struggling practitioner who sees patients for 3d.? The cases differ in the fact that the one is done for the pecuniary benefit of an individual, and the other for that of an institution. Both are pecuniary speculations—pretending to sell medical relief for a price at which skilled advice cannot be had. The euphemism of calling the threepenny out-patient fee "a registration fee" or "payment for medicine" cannot be accepted. The payment is intended to relieve the patient from the self-reproach of not providing for his own medical needs; and how can it do that unless he believes that it is the worth of what he gets? So far as experience allows of our judging the results of the system, those results are bad. It does not promote the real interests either of the poor or of the profession.

As to *a priori* arguments for the pay system, we never heard of any except the one already hinted at—namely, that patients ought to make provision for their ordinary medical needs. We grant this fully, and it can be done in an honest manner by a proper system of medical providence. The threepenny out-patient system does nothing of the kind; it masses together persons who really need hospital treatment,

[1] British Medical Journal, February 12th, 1898.

[2] The report was accompanied by a tabular statement of details from each hospital, for which we were unable to find room, but which was published *in extenso* in the *Lancet* for the same day.

and could really be cured by such treatment, with those who want food and not physic, and those who ought not to be treated at all at hospitals (for example, prostitutes and their victims), and sends them, after sweltering in a crowded out-patient room for hours, to get their hasty interview and their bottle of physic, which they may take or leave as they choose.

The worst feature of the case is that we have no security that the system will not in time become even worse. There is no tribunal before which the question can be openly discussed. The Colleges (perhaps rightly) say that it is not a question for them. The great hospitals have set their faces against the proposal of a Central Board, and if the general practitioners try to move in the matter, they are denounced as "trade unionists," though in fact their weakness consists in the absence of union. We can only hope that the recent action of the Prince of Wales's and the Sunday Hospital Funds may convince the hospitals of the necessity of some central advising Board, a hope, we allow, that we can only "faintly trust."

EDUCATION IN TROPICAL DISEASES.

We hear that the Secretary of State for the Colonies has addressed a circular letter to the General Medical Council and the leading schools urging the necessity of arrangements being made for giving instruction in tropical diseases in a special course of lectures. The circular states that Mr. Chamberlain is endeavouring to make arrangements for giving to Colonial medical officers some such clinical instruction in tropical diseases as is given at Netley and Haslar to officers of the Navy, Army, and Indian Service. He further endeavours to promote such instruction by offering to give preference for colonial appointments to candidates who can show that they have studied this branch of medicine, especially if a certificate be forthcoming. We welcome this action on the part of Mr. Chamberlain, and sincerely trust he may succeed in making the arrangements for clinical instruction. We understand that the matter has been taken into consideration by the Committee of the Seamen's Hospital Society, and that it is not improbable that arrangements may be made for giving clinical instruction in tropical diseases, for which the hospitals of that society afford an opportunity unrivalled in this country, and probably not equalled in any other part of Europe. It would no doubt be within the power of most medical schools to arrange for courses of lectures on tropical diseases such as are already given at some medical schools; but for lack of material it would be impossible to give adequate clinical instruction in these diseases in ordinary general hospitals in this country.

THE DIETETICS OF THE TENEMENT: A STATE INQUIRY.

The Americans are an ingenious people and when they turn their ingenuity to the study of themselves, as indeed they are rather apt to do, the results tend to be somewhat interesting. A bulletin, or as we should call it a report, has recently been issued by the Department of Agriculture on dietary studies in New York City which throws a certain light on that very occult subject—how the money goes in housekeeping, at any rate so far as the eating department is concerned. The report was drawn up by Professors W. O. Atwater and C. D. Woods. The work in New York was done partly by some of the district visitors of the Association for the Improvement of the Condition of the Poor, but mostly by Dr. Isabelle Delaney, whose relations with the people among whom she practised were such that she was admitted with the greatest freedom into the households and was afforded every facility for making the desired observations. Apparently one family was studied at a time, and the plan adopted was to obtain an account of the amount and composition of all food materials in the house at the beginning, purchased during, and remaining at the end of the period of investigation; and when practicable of all kitchen and table wastes. The data so collected were then tabulated, being reduced to their proper equivalents of protein, fat, and carbohydrates; their fuel value in calories and their cost are also given. The percentage of each class of food stuff in each article of diet, together with the percentage of its cost to the total expenditure on food, was then worked out, so that it became possible to make a very accurate comparison between the different households studied. In the record of each "study" a table is also given showing the actual materials bought, and, for the sake of comparison, the amount of each substance which could be bought for 10 cents at the prices paid by the family in question. It is at once apparent, from a consideration of the multitudinous figures given, that many people who are so poor that every cent is of importance to them, spend their money wastefully so far as food is concerned. It is clear that the same amount of money spent with more judgment would, in many cases, give a better return, while a comparison of the prices paid by different families for the same sorts of food shows that poor people either exercise but little care in making their purchases, or perhaps, by stress of work or other circumstances, are driven to frequent very bad markets. One cause of much loss is buying in small quantities. Another arises when the mother's time is so occupied that she cannot attend to the duties of home, and the marketing has to be done by children. It seemed that in most cases very little comprehension was shown of the real nutritive value of the food purchased, the selection being made according to some whim of taste, or the presence of certain sorts of food in the market, or because the housekeeper, having become accustomed to certain purchases, went on in the same groove. How to obtain more nourishment at less cost is an anxious question. It is suggested, first of all, that a little judgment in the purchase of meat would go a long way, for in many cases the cheaper cuts of meats for stews and "pot roasts" might have replaced almost entirely the more expensive steaks and roasts without impairing the nutritive quality of the meals. Then eggs and butter might have been reduced, and more might have been spent on flour, bread, rice, beans, and potatoes. After all, however, we have to consider the taste of food, and to think of what is relished as well as what is required for sustenance; and it seems clear that much hard money is spent merely for the sake of providing tempting food, which might quite well be saved if cheaper kinds of food were cooked and served in a more tidy and tasty manner.

A DRASTIC WAY WITH THE SMALL-POX.

The *Public Health Reports* published in Washington, U.S.A., chronicle a curious coincidence. Small-pox is epidemic in Middlesbrough, Ky. The report states that C. P. Wertenbaker, Passed Assistant Surgeon U.S.M.H.S. on Special Duty, visited Middlesbrough, Ky., on March 13th and found 49 cases of variola and 23 suspects, and that there were 400 suspects quarantined at their homes. The population numbers about 4,200, of which about half are negroes. The town has been quarantined since February 28th, no one being allowed either to enter or leave it. Sixteen guards, one day and one night, guard each of the eight roads leading to the town, and no tickets are allowed to be sold either to or from the town, and practically there is no travel. Since the Board of Health took charge 1,960 persons have been vaccinated and forcible vaccination is still progressing. Middlesbrough was a "boom town" started some ten years ago, and several million dollars were invested in various enterprises. In two or three years the "boom" collapsed and left the town stranded with a heavy debt. When this epidemic came it found the town without a dollar in the treasury. The county, which is also heavily in debt, has been haggling with the city in regard to an appropriation,

but none has been made. The city script is worthless, and the grocer who has been furnishing the supplies refuses longer to accept it. The physicians and guards are practically getting no pay. Under these circumstances the State Board of Health threatened to withdraw all guards and physicians and quarantine the entire county unless the county provided funds to care for the epidemic. Numerous little towns and villages within a radius of twenty miles have instituted "shot gun" quarantine, and will allow no one to enter or leave them though they have no small-pox in them. The points which particularly interest us are the "forcible vaccination" and the "shot-gun quarantine."

MEDICAL INSPECTION OF DEFECTIVE CHILDREN.

At a recent meeting of the London School Board it was resolved, after considerable discussion, to authorise the provisional appointment for one year of two medical practitioners to take charge of the examination of children alleged to be defective, one of the practitioners to be a woman. It is understood that the work is to be carried on under the general direction of the medical officer to the Board (Dr. W. R. Smith). The report of the Departmental Committee on Defective Children, recently issued, recommends that school authorities should have competent medical advice in the discrimination of children unfitted by mental or physical weakness, or by epilepsy, for the ordinary school curriculum. In London the number of children under special instruction is assuming considerable proportions, and fresh centres are constantly being formed. In order that the medical examination of candidates for admission to the special classes should be systematically performed, it seems a wise provision that fresh appointments should be made for this purpose, as the multifarious duties of the medical officer in so large a district as that under the control of the London School Board can leave him little time to devote to it. We notice that the appointments are provisional for one year, but we trust that the skilled handling of a difficult subject which may be expected to result will be held to justify their being made permanent.

PROGRESS IN HELMINTHOLOGY.

Many years ago the late Dr. Spencer Cobbold remarked that it was probable, as our acquaintance with savage tribes extended, that many new and unknown species of animal parasites affecting man would be discovered. Cobbold's sagacity in making this forecast is yearly being attested. We publish in another column an interesting paper by Dr. C. W. Daniels, of the Colonial Medical Service, British Guiana, on a new nematode parasite occurring in the mesentery of man, which is probably the parental form of at least one of the embryo blood worms described by Manson in a recent number of the British Medical Journal. It may be that it is the parental form of filaria perstans, a parasite hitherto supposed to be peculiar to West Africa, where it is so common that in many parts it occurs in quite half of the population. As yet it is impossible to pronounce on the importance, from a pathological point of view, of this discovery. It may be that it is of biological interest only; on the other hand, it is quite possible that, like the filaria nocturna (Lewis), it may turn out to be the key to some of the many unsettled problems that still confront the pathologist in the tropics. Dr. Daniels deserves great credit for the zeal and sagacity with which, ever since he learned of the existence of a peculiar blood worm in British Guiana, he has pursued the problems connected with this discovery; he is now to be congratulated on the successful culmination of the biological side of his labours. In this department of medical science, notwithstanding the many discoveries of recent years, it is evident that there is still much to be done. Dr. George Kolb,[1] after alluding to the great frequency with which nematode worms, apparently of undetermined species, occur in connection with the peritoneal cavity of several of the large game animals of German East Africa, tells us that man there seems to be at times similarly affected. He mentions that on one occasion he witnessed a fight between a Massai warrior and a Mrasangasi, which resulted in the death of the latter. The abdominal cavity had been opened by a spear thrust. Connected with a loop of prolapsed intestine Kolb found several large nematode worms, which Professor Spengel subsequently pronounced to be females and to be allied to filaria medinensis. Dr. Kolb evidently wishes, and with some show of reason, to associate this parasite with a form of fever from which the Massai suffer every year about the month of October, and from which he himself also suffered on several occasions both in Africa and subsequently in Europe. He describes the attacks as lasting about three days. Besides the fever they were accompanied by loss of appetite, tenderness of the abdomen and vomiting, but there was no diarrhœa. He calls it the "Massai disease." He mentions the case of a missionary in East Africa who suffered from apparently the same disease, and also that of a medical man who died of it. Judging from what he had seen in the lower animals similarly affected, Dr. Kolb believes that in these cases of Massai disease filariæ which have become encysted about the under surface of the liver annually, in the month of October, and as a normal event in their life-history, burst their cysts, the contents escaping into the peritoneal cavity, thereby giving rise to the acute symptoms he describes. Whatever be the value of Dr. Kolb's views there is no reason to doubt his facts; and from them it is evident that our colleagues in East and Central Africa have an interesting problem to work at. Further and more accurate information about these African and South American parasites is highly desirable in view of the large number of Europeans now resident or travelling in these parts, who, of course, like the natives, are liable to become the hosts of those unpleasant and perhaps dangerous guests.

[1] *Archiv für Schiffs-und Tropen-Hygiene*, February, 1898.

THE EFFECTS OF VACCINATION AND REVACCINATION.

Dr. Meredith Young, of Crewe, has contributed to the *Sanitary Record* a somewhat complete analysis of the figures he collected when at Brighouse as to the effects of vaccination on the mortality of those attacked by small-pox. Of the 150 cases under his treatment in the district hospital 34 had never been vaccinated, 101 had been once vaccinated, 9 had been so more than once, and 4 were doubtful. The deaths in these several groups were 11, 5, 0, and 2. The percentage mortality of the unvaccinated was 30.55, of the once vaccinated 4.95, of the revaccinated *nil*, and of the small doubtful group 50. Even if the 4 doubtful cases be added to the vaccinated group the contrast is still remarkable enough. Amongst all—vaccinated, revaccinated, or even doubtfully vaccinated—together 114, there were 7 deaths, or 6.14 per cent., against 30.55 where there had clearly been no vaccination. This is giving the antivaccinators all the benefit of the doubt. If, however, these 4 uncertainties be ignored, the percentage mortality is 4.55. Dr. Young gives the mortality at several age groups amongst the unvaccinated and the once vaccinated. Amongst the latter the cases in persons under 20 were few, and no deaths occurred under 30. In the never-vaccinated class the largest number of attacks were in those under 10, and 9 out of the 11 deaths were those of children below that age. Tables are also given showing the relationship of severity of attack to the number and size of vaccination marks. Not the least interesting portion of the paper is that relating to persons quarantined on account of small-pox in their houses. Some 277 persons of various ages exposed to infection were quarantined and their vaccination marks examined; 78 were under 10 years of age, 199 were older. Of the former 13, 54, 11 were respectively unvaccinated, once vaccinated, or had been revaccinated. Eleven of the 13 unvaccinated children were attacked, and 3 died; 5 of the 54 once vaccinated developed small-pox, but none died; the 11 revaccinated all escaped attack. Of the 199 above 10, 3 had never been vaccinated; all were attacked, 1

died; 24 had been vaccinated once, 12 were attacked, 2 died. The ages in the two fatal cases were 43 and 59; it is not said that their vaccination dated back to infancy, but it may almost be assumed it was so. The wise 172 who had been vaccinated more than once did not altogether escape; 6 of them had discrete attacks, and all recovered. Grouped at all ages 16 had not been vaccinated, 14 took small-pox, 4 of them died—that is to say, of the unvaccinated amongst this group of exposed persons 87½ per cent. developed small-pox, 25 per cent. of them fatally. Of the 261 vaccinated persons similarly exposed, 23, or 8.81 per cent., contracted the disease, 2, or 0.77 per cent., fatally.

THE HOUSING OF THE WORKING CLASSES IN RURAL DISTRICTS.

A Bill to amend the Housing of the Working Classes Act, 1890, has been introduced into the House of Commons by Sir Walter Foster with the object of giving rural authorities the powers of urban districts, and to make the provision of labourers' cottages a duty of the local authority. Compulsory powers to acquire land for the purpose by purchase or lease for long periods, the increase of the cottage plot from half to one acre, and power to borrow money with sanction of the Local Government Board for fifty years, are among the provisions of the Bill, The lack of cottages, if not remedied by the rural district council, can be made the subject of complaint by the parish council, by the medical officer of health, or by four neighbouring householders, and the machinery of the Bill thus set in motion. When land has been acquired, the cottages may be erected by and placed under the management of a parochial committee. The Bill is the outcome of a conference held last year in London on the question of rural housing, at which a mass of evidence was submitted showing the deplorable state of cottage accommodation in many parts of rural England, and the absolute neglect of sanitary conditions and water supply in hundreds of villages. The resolutions passed at the conference are embodied in the provisions of the measure now before Parliament, which really seeks to give to the English agricultural labourer the advantages enjoyed in Ireland under the Labourers Acts, by which some 15,000 cottages have been erected.

THE DISCOVERY OF AMERICA.

Professor de Lollis, who is well known by his researches on Christopher Columbus published under the auspices of the Italian Minister of Public Instruction, has, it appears, satisfied himself, from his close study of the original documents, that while to Columbus belongs the honour of having actually discovered America, the existence of the great Western Continent, and the way of reaching it, were first definitely suggested to him by a Florentine named Paolo Toscanelli dal Pozzo, who had taken the degree of Doctor of Medicine at Padua. Toscanelli's name has indeed been mentioned as having confirmed Columbus in his ideas as to the existence of a great undiscovered continent, and when the four hundredth anniversary of the discovery of America was celebrated in 1892 he came in incidentally for a small share of glory; neither on this, or on the other side of the Atlantic, however, did his name appear in the programme of the official demonstrations. This omission is now to be rectified to some extent. On April 17th, the fourth centenary of Toscanelli and Amerigo Vespucci is to be celebrated with much pomp and circumstance at Florence. Toscanelli deserves to be remembered, for it is clear from the evidence produced by de Lollis that without Toscanelli's instructions Columbus would never have gone to seek the East by way of the West, and consequently would not have stumbled on the discovery of America. Columbus went in 1476 to Portugal, where at that time the scheme of transatlantic route had already attracted the attention of the King and his geographers. The moving spirit was Fernan Martins, Canon of Lisbon—himself also a doctor of physic, who had lived some time in Italy, where he had made the acquaintance of Toscanelli. At the suggestion of Martins, Toscanelli wrote to the King of Portugal a letter dated June 25th, 1474, in which he refers to the scheme discussed between them at a previous time for reaching the "land of spices" by a shorter road along the coast of Guinea. In this letter he enclosed a planisphere illustrating his conception of the world as a sphere, and showing how it could be circumnavigated. Columbus placed himself in communication with Toscanelli, some time between September, 1479, and August, 1481. He asked the Florentine physician for information, and Toscanelli, in his reply, after referring with approbation to his wish to reach the land where spices are produced, refers him for an answer to his question to the letter and the map which he had sent in 1474 to Fernan Martins. Columbus wrote to him a second time, and in his reply Toscanelli used the following expression: "I perceive your great and magnificent wish to reach the East by the West in the manner shown by the map which I sent you;" and he expressed his satisfaction that the map had been understood, and that the project referred to was looked upon as not only possible, but certain. Columbus copied with his own hand Toscanelli's letter, and he quotes it in the log of his first voyage, and again in that of his fourth and last. He admits that from this passage he had drawn the arguments which decided the King of Spain to fit out the expedition. Columbus also took Toscanelli's map with him on his voyage. Toscanelli died in 1482, and thus had not the gratification of seeing how the inspiration which he gave bore fruit, though in a way which he had not foreseen. It is an interesting fact that two doctors of medicine should be so closely associated with the discovery which has made the name of Columbus immortal.

THE NEW EDITIONS OF THE "REGISTERS."

The *Medical Register* for 1898 and the *Dentists' Register*, 1898, have now been issued, and we are indebted to the Registrar of the General Medical Council, Mr. Henry E. Allen, LL.B., B.A., for early copies of these valuable volumes. From a table prefixed to the *Register* itself it appears that the number of persons whose names were added to the *Medical Register* during 1897 was 1,230. This is less than the average for the last twenty-two years, which was 1,271, and very remarkably less than the average for the last five years, which was 1,413. This reduction in the number of persons registered is to be observed in all three divisions of the United Kingdom when compared with the average of the last five years, but when compared with the average for the last twenty-two years the number registered last year in Scotland is seen to be greater than the average. The number of persons removed from the *Register* during 1897 was unusually large; the number removed on evidence of death was 582, which is in excess of the average both for the last five and twenty-two years. The number removed under the penal sections of the Medical Act was 5, which agrees with the average for the last five years, but is greater than the average for the last twenty-two years, which was 3. The excessive number of removals from the *Register* this year is due to the large number (504) removed under Section 14 of the Medical Act, 1858, which provides that if no answer is returned within six months to a letter of inquiry addressed to a registered practitioner at his registered address by the Registrar, the Registrar must remove such name from the *Register*. It is improbable that any large proportion of these 504 registered persons whose names have in this way been removed from the *Register* during the past year have really ceased to practise, and it is astounding that so large a number of medical practitioners should have been so careless of their own interests as not to have notified their change of address. Names thus erased can be restored to the *Register*, but this involves a certain amount of trouble to the persons concerned. Nobody, however, can feel very much sympathy with them under the circumstances. The total number of persons now remaining on the *Register* whose names are con-

tained in the present *Medical Register* for 1898 is 34,642. This shows an increase of only 164, as compared with the *Register* for 1897. The increase, however, has doubtless been greater than this, for we cannot regard the reduction due to the large number of names removed under Section 14 for the reasons mentioned above as being a real reduction in the number of persons practising in the United Kingdom. The actual number of new registrations is, however, less by 155 than in 1896, so that so far as the *Register* can give evidence on this point it would appear that the rush into the medical profession which has characterised the returns of the last ten years is tending to diminish. The statistics contained in the *Medical Register* do not afford information as to the number of persons practising in the three kingdoms, or abroad, or engaged in the naval, military, or Indian medical services, but the total agrees very nearly with the number of names contained in Churchill's *Medical Directory* for 1898—34,903. According to the numerical summary prefixed to the *Directory*, the distribution of members of the medical profession is as follows: England and Wales, 22,576; Scotland, 3,417; Ireland, 2,616; foreign, 3,773; naval, military, and Indian medical services, 2,521. As the number of persons now on the *Medical Register* who originally registered in Scotland was 9,542 and in Ireland was 4,930, it is obvious that Scottish and Irish medical schools provide no small proportion of the medical men who eventually practise either in England or abroad or who enter the public services. The *Dentists' Register* for 1898 contains 4,937 names. Of this number, 3,265 are registered without additional qualifications as persons in *bonâ-fide* practice of dentistry at the time of the passing of the Dentists Act. This is a proportion of 66.13 per cent. This shows a steady decline, as was to be expected, of the number of persons registered as in practice before 1878. In 1892 the proportion was exactly three-quarters; it is now not quite two-thirds.

POOR-LAW OFFICERS' SUPERANNUATION IN SCOTLAND.

Under the Act of 1864 English Poor-law officers were given a statutory claim to a superannuation allowance at the discretion of Boards of Guardians. In 1896 this discretion was taken away, and the right to superannuation made absolute. Mr. Renshaw has introduced the Poor-law Officers' Superannuation (Scotland) Bill for the purpose of giving parish councils in Scotland the power to grant superannuation allowances with the consent of the Local Government Board of Scotland. The Bill thus proposes to give what English and Irish Poor-law officers have enjoyed since 1864. The superannuation would not in any case exceed two-thirds of the salary or wages. As the Poor-law inspectors in Scotland now hold office for life, and cannot be dismissed by parish councils, these officers continue to hold office for longer periods in some cases than is desirable in the public interest. This evil would be remedied by the Bill, and the service made more attractive than at present. The second reading is fixed for April 27th.

THE PLAGUE AND THE MECCA PILGRIMAGE.

The International Sanitary Council in Constantinople has addressed an identical note to the Ambassadors pointing out the dangers which attach to the occurrence of plague in Jeddah, and to its existence in all probability outside that locality. It is pointed out that should the Mecca pilgrimage become infected, the public health of the Hedjaz, of Turkey, and of Europe will be endangered, and that this danger will not come to an end with the present year. The Council recommends that direct and energetic diplomatic pressure should be brought to bear on the Porte, in order that it may render fully operative the decisions of the Council, and adhere strictly to the prescriptions of the International Sanitary Conferences of Paris and Venice. It further recommends the early convocation of a special International Sanitary Commission to carry out the above recommendations. The Council further implores the diplomatic representatives to urge the Ottoman Government to adopt without delay a sound system of sanitation in all towns of the empire, or at least (for the moment) in all the principal centres. The Council despairingly adds that the chances of effectually protecting the pilgrimage against infection are slender, for the execution of some of the measures necessary is wholly prevented, and others are rendered abortive, by the powerlessness of the Porte to enforce their application. England has a peculiar obligation in this matter, owing to its position in Egypt. It is, as we conceive it, the bounden duty of the Government of this country, in the interests of our commerce and of the health of Europe, to bring the strongest pressure to bear upon the Khedive to check, if he cannot wholly prevent, the movement of pilgrims from Egypt to Mecca. The experience of the Indian Government and of Russia has shown that it is quite possible to take effectual steps with this object in view. Time presses, and if some public announcement of the intentions of the British Government is not made earlier, we trust that the matter may be brought to the notice of Parliament immediately after the recess.

ETHER DRINKING IN EAST PRUSSIA.

Ether drinking, which was so prevalent in certain parts of Ireland a few years ago, was attributed by some to the success of Father Mathew's crusade against alcohol. The propounders of this theory appeared to hold with Byron that "man being reasonable must get drunk," and that if he could not fulfil this hypothetical law of his being by means of the stimulants in common use, he was pretty sure to find some other agent for the purpose. According to Dr. Sohn, a medical official of East Prussia, men, women, and children in that province indulge so freely in ether drinking, that the roads and markets reek with the mawkish fumes of the drug, just as the railway carriages on the lines of some market towns in the North of Ireland used to do on fair days. The schoolmaster's teaching is powerless against the pernicious habit; and it may be gathered, though the fact is not expressly stated, that the pastor's homilies are equally ineffective. Lithuanian peasants, says Dr. Sohn, are the chief victims, and the favourite tipple, known as "Schwefeläther," and consisting of ether and spirits of wine, can be bought without the least difficulty in grocers' shops. Dr. Sohn attributes the spread of the practice to the imposition in 1887 of a duty on corn brandy which costs about eightpence a quart, whereas ether, being untaxed, can be purchased for sixpence. The local authorities have prohibited the sale of the noxious stuff, save by apothecaries, and under medical authority; but it is anticipated that strong measures will have to be taken by the Government to stamp out the evil.

THE INDUSTRIAL TRAINING OF IMBECILES.

The utility of industrial training for imbeciles has been so well established that the announcement of a gift of £4,000 by the Lord-Lieutenant of Cambridgeshire, Mr. Alexander Peckover, for providing the Eastern Counties Asylum at Colchester with suitable workshops and schools, is a matter for general satisfaction. This is one of the oldest training institutions for imbeciles in the country, having been established nearly forty years. Its directors are to be congratulated on the increased facilities they will now possess for fitting their more promising pupils to earn a livelihood, wholly or in part, or at any rate to employ their time in a useful and interesting manner. The Superintendent and Secretary (Mr. Turner) laid stress in his last annual report upon the necessity of additional accommodation for the technical instruction of the inmates, much progress having of recent years been made in wood carving, carpentry, basket making, tailoring, shoe making, mat making, and even painting and plumbing. In connection with the new workshop block, we understand that additional school accommodation will be provided for the smaller boys, who have hitherto, owing to want of room,

not been brought under the beneficial influence of school discipline. A small farm was acquired by the institution a year or two ago, and is reported to have been of the greatest service as a healthy and useful form of occupation for the older lads, and as securing genuine new milk and fresh eggs for sick patients. By the generosity of Sir Savile Crossley a marine branch at Clacton-on-Sea was provided in 1895 for scrofulous and other patients requiring change and bracing air. The Eastern Counties Asylum is fortunate in its friends.

"X" RAYS AND LUPUS.

It is reported from Vienna that Dr. Schiff has successfully treated cases of lupus vulgaris by means of the *x*-rays. His process is to set up an independent inflammation in the lupoid area by exposing the part to a very intense radiation. So far, investigations into the germicidal effects of the *x*-rays have gone to show that their activity in this respect is not greater than that of ordinary light. But Dr. Schiff's result is not a germicidal one, and we know that inflammation, and even necrosis, may result from exposure in certain cases, although we do not know the determining factor which leads to injury in some cases but not in others under apparently similar conditions. It is not, however, altogether improbable that Dr. Schiff's results may be due to a direct germicidal action of the *x*-rays on the tubercle bacillus. Light, we know, is deleterious to this organism, and Dr. Finsen, of Copenhagen, has reported cases of cure in lupus by protracted exposure to concentrated light, so arranged that the ultra violet rays predominated.

THE NEW PLAGUE BLUE BOOK.

The further instalment of papers relating to the outbreak of plague in India, which was presented to Parliament just before the Easter recess, contains documents extending in time from March, 1897, to the end of February, 1898. It forms somewhat melancholy reading, for it must be confessed that the measures taken with so much energy have not been attended with all the success that was hoped. Among the documents is an extract from a characteristic letter from the Amir of Afghanistan to the Viceroy of India written last April. His Highness, in replying to a letter from the Viceroy asking to be informed with the least possible delay should the plague appear in Afghanistan, so that, with the aid of doctors, measures might be taken to stamp out the disease. Upon this suggestion the Amir writes: "My kind friend, the proper measures are those which have been undertaken both by the illustrious British Government and myself, under which travellers are detained for a certain fixed number of days at each post and kept under observation, so that any person affected with this disease may not go from one country to another. But as everything lies in the hands of the Supreme Creator, I am offering prayers to Him that His Exalted Majesty may remove this life-destroying calamity from all countries of the world, so that all the creatures of God may remain safe from it. By the grace of God up to the present no sign of the disease has appeared in this country. But if it is predestined to appear hereafter, the best thing would be to seek the grace and kindness of the Supreme Doctor. It has not been heard as yet that, under the treatment of the existing doctors, even 5 per cent. of the persons afflicted by such a disease have recovered. On the contrary, I have heard that, with the exception of their burning the clothes and houses of the afflicted persons, they have not been able to administer any other remedy. Consequently, under these circumstances, it is better to invoke the aid of God by praying for His grace and kindness." The Amir, perhaps, was not sorry to have a slap at Western methods, but it is a matter for universal congratulation that the Indian Government did not adopt this fatalistic attitude. To set off against a tragic failure in Bombay, the Blue Book affords ample evidence of the success of measures taken to prevent the dissemination of disease into districts not yet infected, though the anxiety of the Government to accomplish its duties towards India and towards Europe with the least possible injury to commerce and the greatest possible consideration for the religious principles and caste prejudices of its subjects is apparent. The last document in the volume is a despatch from the Government of India to the Secretary of State for India enclosing a set of instructions regarding plague administration "for the general guidance of district and other officers." These instructions deal with means for discovering the earliest cases in a locality, the appointment of European officials in the various quarters of any town infected, regulations for search parties, the disposal of patients and persons who have been in contact with patients, the disinfection of houses, and the destruction of clothes together with provision for compensation, the daily inspection of the adjacent villages, the provision of hospitals or huts for plague patients and for the segregation of individuals from infected houses, the establishment of separate hospitals and segregation camps for the reception of members of special castes and religions, the provision of a camp for the healthy, the medical inspection of travellers by rail and road, and the formation of camps at selected stations suitable for detention of passengers and for the disinfection of clothing and baggage. The various despatches from the Government of India give a brief history of the plague during the period covered by the volume. It also contains M. Haffkine's report on preventive inoculations made in Lower Damaun, Portuguese India, of which an account has already been given in these pages. The report, which is signed also by Surgeon-Major Lyons, points out that the variation of the results of inoculation, answering faithfully to the variations in the strength of the lymph and in the dosage given, shows the direct connection of cause and effect, and makes it probable that it will be possible to obtain even better results in the future.

OBESITY UNDER PRISON RESTRAINT.

The sudden death of Arthur Orton, the notorious Tichborne "claimant," has removed one who was doubly remarkable. He was the author of one of the strangest impostures ever attempted; and he varied in bulk at different periods of his life in a most astonishing manner. In 1866, when, being about 31 years of age, and living at Wagga Wagga, New South Wales, he started on his career of imposture, he was slim, and weighed only 10 stone 8 lbs. During his stay of a few months at Sydney, he rapidly increased to 18 stone; and when, in January, 1867, Lady Tichborne "recognised" him in Paris as the missing Sir Roger, he weighed 21 stone. During the stormy years of his two trials he grew, but at a slower rate, and at the time of his conviction on February 28th, 1874, he scaled no less than 25 stone. At the end of 1884, after ten years and eight months' imprisonment, his weight had been reduced to 10 stone 6 lbs., or 2 lbs. less than his weight at Wagga Wagga in 1866. When he was liberated, his size again increased, and at the time of his death he is said to have weighed 18 stone. If these data are correct, the removable fat in his system must have weighed nearly three-fifths of his whole weight at the time of his conviction in February, 1874; whereas all the fat of the body in an average male adult constitutes about one-twentieth of the total weight. The reduction in Orton's bulk during the years of his life in prison was enormous, and was apparently effected without any loss of health. At any rate, immediately after his release from prison he commenced an active campaign of lecturing throughout the country, which was incompatible with any serious amount of ill-health. It would be interesting if the prison records could be searched, to discover whether the diminution of over 14 stone which then occurred was gradual and regular, or, as is more probable, at first sudden and afterwards slow. Mr. Banting, who tried Dr. Harvey's plan of dietary for a year strictly, lost in that time 44 pounds, or a little over 3 stone; and Dr. Cheyne, in the early part of this century, who weighed 32 stone, reduced

himself a third in weight, and lived afterwards in good health to the age of 72. The reduction in Orton's weight during his career in prison, where his food, exercise, and time allotted to rest were all under careful regulation as to amount, affords a striking example of the diminution in bulk that stout people can achieve for themselves if they have sufficient determination to enable them to tread the path of daily self-denial in respect of certain fat-producing foods and of other conditions, such as muscular inactivity, tending to the production of obesity. Possibly, however, most of such sufferers already know this well enough, but prefer the way of physiological unrighteousness.

OUR LITTLE WARS.

The official telegrams relating to the capture of the Dervish camp agree with those from the special correspondents of the *Times* and other newspapers in stating that the work of the medical staff attached to the force was well and smartly done. All the wounded were promptly attended to and quickly brought to the base at Atbara, where they were placed in hut hospitals on the banks of the Nile. Arrangements have been made for taking the wounded down to the first communication hospital at Genenitti, and they will subsequently be conveyed down the Nile in boats and steamers. The public despatches and our private advices from India agree in showing that the medical work on the Indian Frontier also was well done. Certain difficulties which arose with regard to the field hospitals were entirely due to defective transport, but the whole of the arrangements which were under the direct control of the medical department were satisfactory.

SANITARY INVESTIGATION IN INDIA.

We have already stated that the Government of India has sanctioned the employment as an experiment of three specially qualified sanitary officers whose sole duty will be to investigate the causes of disease and give practical advice in sanitary matters. These appointments, which will be made for three years in the first instance, took effect on April 1st. Surgeon-Major R. H. Firth is appointed to Rawal Pindi, Surgeon-Major J. R. Forrest to Lucknow, and Surgeon-Major A. M. Davies will proceed to take up the appointment at Umballa so soon as the term of his employment with the Principal Medical Officer in India on special bacteriological investigations has been completed. Surgeon-Majors Davies and Firth have both held the appointment of Instructor in Hygiene at Netley, and Surgeon-Major Forrest has also shown special qualification for his new post. Very much will depend upon the way in which the duties of these posts are interpreted by their first occupants and by the Government. There is every reason to feel confident that the officers themselves will take a keen interest in their duties, and will know how to turn their opportunities to the best advantage. We can only hope that the Government, having seen the necessity for making these appointments, will see also the need of placing at the disposal of the officers suitable laboratories and adequate facilities for dealing with the matters which will be referred to them.

THE PHYSICAL DEFECTS OF SCHOOL CHILDREN[1]

Nothing can be of more importance to those having charge of the education of children than that thorough and reliable information should be obtained as to the physical defects from which the pupils may be suffering, so that those children who are unable to keep pace with the others may be able to have special classes and special instruction for themselves. At Bradford this seems to be thoroughly done. The staff for the deaf, for instance, consists of a head teacher and two assistants, while that for the blind consists of a head mistress, who herself is blind, and one seeing assistant, in addition to the special instructors for the manual training of the blind and deaf. The vision of the children is estimated by means of test types which are sent to the teachers, together with rules for their practical application. Such tests applied by anyone but an expert must of necessity be liable to be very inaccurate. The teachers are told that "long-sighted children see objects easily at a distance, but with effort when near. This is a congenital defect which is very noticeable—in writing, reading, etc. If neglected it leads to nothing worse than squint and headache." But "squint and headache" are quite bad enough even supposing nothing worse did happen. Such a condition would certainly merit a far more thorough examination than could possibly be made by a school assistant. The routine tests for defective hearing have been given up on account of the difficulty of applying them so as to get accurate results. Of the cases reported upon, the large number of girls of 11 and 12 who suffered from deafness and slight ailments is noteworthy. Taking the standard of carbonic acid in air in the playground as 100, it was found that in the mechanically ventilated rooms throughout the afternoon a constant amount of carbonic acid—about 200—was present, while in the naturally ventilated rooms the amount increased rapidly from the commencement of school at 2 P.M., when it stood at about 200, until it reached 700 by 4 P.M.; the worst record in one room was 972. A most useful provision, first made at Bradford, for the formation of special classes for defective and epileptic children similar to those for the blind and deaf, has been the subject of a Government inquiry; and in July, 1885, it was agreed to establish five other special classes at different schools. The importance of such a step is very great.

[1] The *Ninth Triennial Report of Proceedings of the School Board of the City of Bradford* for the three years ending November 30th, 1897.

Sir William Turner has been elected a corresponding member of the Berlin Royal Academy of Sciences in the Physico-Mathematical Section.

The freedom of the city of Edinburgh will be conferred on Lord Lister on June 15th. Viscount Wolseley will receive the same honour on this occasion.

Sir Richard Thorne, who has been absent from his official duties for the past month, owing to illness, has now left home. He is not expected to return to work at the Local Government Board for several weeks.

We regret to learn that Dr. Roberts Thomson, who was President of the British Medical Association in the year in which the annual meeting was held in Bournemouth, last week sustained a compound dislocation of the left ankle with fracture of both bones of the leg. When the accident occurred, Dr. Thomson was riding a bicycle on his way to visit a patient, and it was due to a passing van going on the wrong side of the road. The patient is going on favourably, but has suffered much pain.

The rule *nisi* in the matter of the application of the General Medical Council for a mandamus to Mr. Sheil, the magistrate of the Westminster Police Court, and William Maunsell Collins to show cause why the magistrate should not hear and determine a complaint under Section XL of the Medical Act, 1858, is returnable on Tuesday next, April 19th. The point involves the question whether a person who possesses a degree or diploma in medicine and surgery, but whose name does not appear on the *Register*, is liable to the penalty prescribed by the Section mentioned above.

A Bill now before the New York State Legislature provides that no patent medicine shall be sold or exposed for sale in the State unless the formula is printed on the label of the bottle or package containing such medicine, and also on the outside wrapper.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SPECIAL SESSION, 1898.

Wednesday, April 6th.

Sir Wm. Turner, President, in the Chair.

The Midwives Bill.

The Council went into Committee for the further consideration of the report of the Midwives Bill Committee, proceeding with the adjourned debate on the motion by Dr. Glover and Dr. Atthill:

That the term "midwife" shall be defined as meaning a woman who is registered under this Act, and undertakes to attend only cases of natural labour.

Dr. MacAlister moved as an amendment:

That the term "midwife" should be defined as meaning a woman who undertakes for gain to attend cases of natural labour, and who is not registered under the Medical Acts.

Dr. Leech seconded the amendment.

Dr. Glover accepted the amendment, and by the permission of the Council and with the consent of his seconder he withdrew his motion in favour of Dr. MacAlister's amendment.

The amendment was then put as a substantive motion, and agreed to.

At the request of Dr. MacAlister, permission was given to him to bring forward a series of resolutions in substitution of the recommendations of the Committee, with the view of declaring the general principles of the Council rather than going into minute details.

Dr. MacAlister therefore moved:

That the answer of the Council to the Lord President of the Privy Council be to the following effect: That the Council adheres to its previous resolutions affirming that it is desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risk which they now incur from the unregulated practice of midwives, many of whom are ignorant and unskilful and most of whom pursue their calling without due medical supervision.

He considered it very desirable that some general statement should be put forward declaring the general principles of the Council with regard to the subject.

Dr. Leech seconded the motion, which was agreed to.

Dr. MacAlister also moved, and Dr. Leech seconded:

That to this end it is desirable that every woman who, not being a registered medical practitioner, engages for gain in the practice of midwifery should be subject to legal regulation and control.

The motion was carried.

Also, on the motion of Dr. MacAlister, seconded by Dr. Leech, it was agreed:

That any measure which proposes merely to protect the title of midwife, however defined, and does not make illegal and penal the unlicensed practice of midwifery for gain, cannot be regarded as offering an adequate safeguard in the interests of the public health.

A further resolution, moved by Dr. MacAlister, and seconded by Dr. Leech, was agreed to, as follows:

That some central body should be established by Parliament, whose functions should include the framing of the conditions under which midwives may be licensed, and of the regulations under which alone they shall be allowed to practise.

Dr. MacAlister's next resolution, seconded by Dr. Leech, was as follows:

That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved, should be issued under the authority of the State Department which is concerned with the public health.

The resolution was carried.

On the motion of Dr. Glover, seconded by Mr. Horsley, it was resolved that the following words should be added as a rider:

That provision should be made by Parliament for reimbursing the General Medical Council for any expenditure which it may have to incur in performing the duty hereinbefore referred to.

Dr. MacAlister then moved further:

That every woman before beginning to practise as a midwife in any district should be required to take out a licence to be granted by the local sanitary authority of the district under conditions and regulations that such licence should be subject to annual renewal, and should be revocable at any time in case the holder is proved to have infringed any of the prescribed regulations.

Dr. Leech seconded the motion, which, with the addition of the words "the prescribed" before "conditions and regulations," as suggested by Mr. Geo. Brown, was agreed to.

On the motion of Dr. MacAlister the following further resolutions were agreed to.

That any unlicensed woman, whether calling herself a midwife or not, who, not being registered under the Medical Acts, practises as a midwife for gain in any district, should be made liable to a substantial penalty.

That the conditions under which licences are granted should include the production of satisfactory evidence of character, and of training and experience in the conduct of natural labour and the after-care of lying-in women and newborn infants.

That the regulations under which licensed midwives are required to practise should include provisions securing that the midwives should immediately seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn infant.

Dr. Glover moved:

That it shall be the duty of the local sanitary authority of every district to appoint such registered medical practitioners as are willing to be so appointed to whom midwives shall be required to apply for assistance.

He thought it was a most important provision. It was necessary in assenting to any legislation to make it clear that sooner or later, in all irregular circumstances, a woman had the security of being helped by a medical practitioner.

Mr. Horsley seconded the motion.

Dr. Leech moved as an amendment:

That it shall be the duty of the local sanitary authority of every district to appoint one or more registered medical practitioners, who shall undertake to give assistance and advice in such cases of labour as may necessitate by the regulations of the Medical Board such medical assistance.

Dr. Atthill seconded.

Mr. Horsley objected. The local authorities might appoint one man who would get all the extra midwifery practice, and a great injustice would be done to other practitioners.

Mr. Brown considered that the nearest practitioner should be called in, and that every practitioner should look upon it as a duty to attend when required.

Dr. MacAlister thought it was a provision which should come in the Bill, and not in the principles which the Council had under consideration.

Dr. Leech modified his amendment to read as follows:

That it shall be the duty of the local sanitary authorities of every district to appoint such registered practitioners as are willing to be appointed to give assistance in those cases of labour as may necessitate by the regulations of the Central Board the attendance of a registered practitioner.

Mr. Horsley pointed out that the modification was not an amendment, but had precisely the same effect as the motion of Dr. Glover and himself.

The President was of the same opinion, and asked Dr. Leech to withdraw his amendment.

Dr. Leech assented, and the original motion was then put and lost, only two voting for it.

On the motion of Dr. MacAlister, seconded by Dr. Leech, it was agreed:

That in so far as the Bill submitted to the Council is not in accordance with the general principles above laid down, the Council do not regard it as offering an adequate solution of the question under consideration, and would earnestly deprecate its passing into law in its present form.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, the Council then went out of Committee, and

Dr. MacAlister presented the report of the Committee of the whole Council, and moved its adoption.

Mr. George Brown seconded the resolution. He thought the Council owed a debt of gratitude to Dr. MacAlister for the able way in which he had drawn up the recommendations.

Dr. McVail referred to the resolution which he had withdrawn when the Council were in Committee. It was perfectly clear, he said, from the manner in which the Council had received the resolutions, that it had decided to send up Dr. MacAlister's views as the Council's views to the Lord President of the Privy Council. So far as he was personally concerned, the new thing brought forward by Dr. MacAlister did not meet his views. It sanctioned the creation of a new order of practitioners. It was true it asked that they should be licensed annually, but it was quite open to the Government to take one-half of the thing and leave out the other. The Government might say: "The General Medical Council does not disprove of a special class of practitioners, but we are not going to ask these women to seek an annual licence, any more than we are going to ask a member of the regular profession to seek an annual licence." He was satisfied that when the document reached the House of Commons the promoters of the Bill would strenuously object to the annual licensing. The Bill was no longer a Bill for the Registration of Midwives, but one for the licensing of midwives. He believed that the effect of the resolutions being sent to the Privy Council would be that the Bill would not pass this year, and that the Council would have an opportunity again of considering whether a new order of practitioners was wanted. Therefore, with the consent of his seconder, Sir Christopher Nixon, he would not at present propose his resolution.

Sir Christopher Nixon explained that the strong objection he had to the Bill—namely, that it created a fourth order of practitioners—was completely got rid of by the licensing of midwives.

At the suggestion of Mr. Horsley, and Dr. MacAlister agreeing, it was resolved to alter the clause regarding the conditions and regulations so that it should read as follows: "That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued to the local sanitary authorities by the State Department, which is concerned with the public health." Mr. Horsley thought it would be a great mistake if the Council put itself in any way under the Local Government Board.

Mr. Horsley also suggested that as the Council had decided upon the principle that no unlicensed person should practise for gain, the possibility of persons combining as an association should be guarded against by inserting in the clause dealing with that part of the subject the words "or any association of persons formed for the purpose of practising midwifery."

Dr. MacAlister did not see his way to accepting the suggestion, and it was not pressed.

The following is the text of the report as finally adopted by the Council:

"REPORT.

"(i) That the title of the Bill should be: 'A Bill to promote the training of women as midwives, and to provide for the regulation of their practice.'

"(ii) That the term 'midwife' should be defined as meaning a woman who undertakes for gain to attend cases of natural labour, and who is not registered under the Medical Acts.

"(iii) That the answer of the Council to the Lord President of the Privy Council should be as follows:

"'(1) That the Council adheres to its previous resolutions affirming that it is desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risk which they now incur from the unregulated practice of midwives, many of whom are ignorant and unskilful, and most of whom pursue their calling without due medical supervision.

"'(2) That to this end it is desirable that every woman who, not being a registered medical practitioner, engages for gain in practice as a midwife, should be subjected to legal regulation and control.

"'(3) That any measure which proposes merely to protect the title of "midwife," however defined, and does not make illegal and penal the unlicensed practice of midwifery for gain, cannot be regarded as offering a sufficient safeguard in the interest of the public health.

"'(4) That some central body should be established by Parliament whose function should include the framing of the conditions under which midwives may be licensed, and of the regulations under which alone they shall be allowed to practise.

"'(5) That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued to the local sanitary authorities by the State department which is concerned with the public health.

"'(6) That provision should be made by Parliament for reimbursing the Council for any expenditure which it may have to incur in performing the duty hereinbefore referred to.

"'(7) That every woman, before beginning to practise as a midwife in any district, should be required to take out a licence, to be granted by the local sanitary authority of the district under the prescribed conditions and regulations. That such licence should be subject to annual renewal, and should be revocable at any time in case the holder is proved to have infringed any of the prescribed regulations.

"'(8) That any unlicensed woman, whether calling herself a midwife or not, who, not being registered under the Medical Acts, practises as a midwife for gain in any district, should be made liable to a substantial penalty.

"'(9) That the conditions under which licences are granted should include the production of satisfactory evidence of character, and of training and experience in the conduct of natural labour, and in the after-care of lying-in women and newborn infants.

"'(10) That the regulations under which licensed midwives are required to practise should include provisions securing that the midwife shall immediately seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn infant.

"'(11) That in so far as the Bill submitted to the Council is not in accordance with the general principles above laid down, the Council do not regard it as offering a solution of the question under consideration, and would earnestly deprecate its passing into law in its present form.'"

It was moved by Dr. MacAlister, seconded by Mr. Brown, and agreed to:

That the portion of the Report of the Committee proposing the form of an answer to the Privy Council, as now read and amended be adopted as the answer of the General Medical Council to the Lord President of the Privy Counc

On the requisition of Dr. MacAlister, the names and numbers of those who voted for and against the motion, and of those who did not vote, were taken down, and found to be as follows:

For, 26.

Dr. MacAlister	Sir C. Nixon	Mr. Brown
Mr. Bryant	Sir Wm. Thomson	Dr. Reid
SirDyce Duckworth	Mr. Teale	Dr. Cameron
Dr. Pettigrew	Dr. Glover	Dr. Leech
Dr. Church	Mr. Tichborne	Dr. Bruce
SirWilliam Roberts	Sir Philip C. Smyly	Dr. Little
Dr. Atthill	Dr. Bennett	Mr. Carter
Dr. McVail	Mr. Horsley	Sir J. Batty Tuke.
Sir Wm. Gairdner	Dr. Philipson	

Against, 0.

Did not vote, 1.

The President.

Absent, 2.

Sir Richard Thorne. Dr. Heron Watson.

It was also resolved that the President be requested to transmit the resolutions of the Council to the Lord President of the Privy Council, with a covering letter stating that the Council had arrived at the conclusions after careful consideration at a special session lasting two days.

Report by Mr. Victor Horsley to the Registered Practitioners of England and Wales.

We are requested by Mr. Victor Horsley to publish the following (third) report to the registered practitioners of England and Wales:

"Ladies and Gentlemen,—The brief session of the General

Medical Council which has just closed has been to a very gratifying extent productive of much good to the profession at large, not only in regard to the subject laid before the Council for its discussion, viz., the midwives' registration question, but also in establishing more firmly the principles of defensive medical legislation.

"In the session of November last year the Council appointed a Committee composed as follows: Sir Richard Thorne Thorne, Chairman; Drs. Atthill, Glover, Cameron, Mr. Carter, Mr. Brown, and myself to report upon any Bill bearing on this subject that might be brought before Parliament, and referred for criticism to the Council by the Government (Privy Council).

"When Mr. J. B. Balfour's Bill was introduced and immediately obtained an early place in the ballot, I wrote to the Chairman and urged that the Council's Committee should be called together. After considerable opposition my request was acceded to.

"The Committee met on three occasions and drew up a report which has just been published *in extenso* in the medical journals. This report was practically based upon the general principles formulated two years ago by the Midwives Bill Subcommittee of the Parliamentary Bills Committee of the British Medical Association.

"Of these principles the first and most fundamental is that the only possible method of arresting the notorious evils committed by midwives at the present time is to provide that an ignorant person who practises as a midwife for gain shall be punished.

"The second principle is that the trained midwife shall be limited to the attendance of cases of natural labour only, and shall tend as a nurse the mother and child during the lying-in period.

"The third principle is that there shall be instituted a proper system of supervision and teaching of midwives or midwifery nurses by the medical profession. The Report of the Committee to the Council naturally met with obstruction in the Committee from those members who are opposed to medical reforms, but who did not venture in the Council itself to give expression to their antagonism.

"All the principles of the Committee's report were unanimously adopted by the Council, and cast in the form of a memorandum (with wording adopted from the Committee's report). This memorandum was directed to be sent to the President of the Privy Council as the Council's answer to a letter which had been received from him, requesting the observations and opinions of the Council upon Mr. J. B. Balfour's Bill.

"Inasmuch as this memorandum of the opinions of the Council is, like the Committee's report, a categorical condemnation of Mr. J. B. Balfour's Bill, nothing can be more satisfactory to the profession than the obtaining from the Council a unanimous denunciation of a Bill which not only afforded no protection to the public, but seriously threatened the lawful rights of the registered medical practitioner. At the same time I wish to particularly draw the attention of the profession to a very important point involved in this decision—namely, that now the General Medical Council has officially accepted in full the principle laid down by the Committee, that no unqualified person should practise with impunity for gain, it necessarily follows as a logical sequence that this step in advance involves the support of the Council to future legislation which may be brought forward for the strengthening of the Medical Acts in this direction; and the earnestness of the feeling of the Council upon the matter was displayed in so unmistakeable a manner that the opposite view to which such strong expression has recently been given in the medical press found upon this occasion absolutely no exponent.

"April 12th. "VICTOR HORSLEY."

THE OPHTHALMIC SCHOOL AT HANWELL.—Mr. Sydney Stephenson's report on the ophthalmia cases in the isolation school at Hanwell, states that on March 14th there were 269 children in the school—113 boys, 94 girls, and 62 infants. It is added that during the year no fewer than 144 children had been admitted to the Ophthalmic School direct from the various institutions controlled by the St. Saviour's Union. During the same period 6 children had been received from the main school.

THE REVISION OF *THE BRITISH PHARMACOPŒIA.*

THE BRITISH PHARMACOPŒIA, 1898.

SECOND NOTICE.

ADDITIONS.

THERE have been many indications during the past few years that the General Medical Council had wisely determined to make the present revision of the *Pharmacopœia* as complete and satisfactory as possible. We find, now that the completed book is before us, that its size and shape are practically the same as those of the edition of 1885. It is interesting to study closely the nature of the changes that have been made. The absolute number of pages in the edition of 1885 and in the present edition is practically identical. This curious coincidence serves to conceal very valuable changes in the construction of the volume, and the space devoted solely to the *Pharmacopœia* in the present edition is some eighty pages less than in 1885. The number of appendices has been increased and they occupy over fifty pages, in place of twenty-seven, while the most noticeable change in the construction will be found in the index, the scope and intention of which have been greatly enlarged. In 1885 the additions vastly exceeded the number of omissions; in fact the omissions in 1885 only numbered twenty-two, while in the present edition the list extends to over two pages of names of drugs and preparations arranged in double column. On the other hand, the additions are certainly less numerous than those of 1885, the account standing as follows:

	1885.	1898.
Additions	110	80
Omissions	22	188

The list of preparations of which the composition or strength has been altered further indicates that every substance which has been allowed to remain from previous editions has been very closely criticised, and that in many cases the criticism has led to change. No one will deny that the *Pharmacopœia* of 1885 was far from perfect, although it was a great improvement on former editions: but when we come to consider such very radical changes as are above indicated, it must be apparent that the introduction and the adoption of the new standard will probably meet with some opposition, and at first may even give rise to considerable confusion. We say advisedly "at first" only, as so far as we have been able to follow the general principles underlying the alterations we feel that they are improvements which will tend to simplify the work of those using the *Pharmacopœia*. Thus, to give one instance out of many, it will be found that nearly all the tinctures have been modified in some way so as to allow of greater uniformity in dosage, an advantage that is at once apparent to all those who are engaged in prescribing. Such an alteration, long desired both by practitioners and students, must necessarily have involved considerable work, and evidences of the great care that has been bestowed are not wanting.

Another radical change that has been made consists in the removal from the body of the book of the long lists of official preparations which so often followed at the end of each paragraph. Some of these lists have entirely disappeared: thus we seek in vain for lists of acetates, sulphates, and the like, and we recognise their absence with a certain gratitude, since they served to group remedies with no link beyond some similarity of chemical composition. On the other hand, the list of derivatives from different drugs is to be found in the index under the English name of the drug.

Even a cursory glance shows that the information relating to each particular drug has been greatly altered. The definition of the drug in most cases has been shortened, while the details concerning the manufacture of drugs which are pre-

pared on a large scale are either omitted, or reduced to the shortest formula consistent with the terms of the Medical Act. Great pains have also obviously been taken in connection with the characters and the tests.

Although of comparatively minor interest to many practitioners, yet the botanical information supplied by Dr. Thiselton Dyer and Mr. E. M. Holmes presents great advances upon that contained in the last *Pharmacopœia*. This advance applies not only to the correct recognition of the sources from which medicinal plants are obtained, but also to the descriptions of the characters by which these plants may be recognised, and specimens of poor quality may be rejected. The chemistry of the *Pharmacopœia* also presents many improvements. It has been brought into accord with modern work, and having been submitted to the approval of such well-known authorities as Dr. Thorpe, Dr. Tilden, and Dr. Emerson Reynolds, implicit reliance may be placed on the modes of detecting impurities, and on the descriptions of the chemical characters of drugs. It is somewhat more difficult, in a work like the *Pharmacopœia*, which intentionally avoids references to pharmacology and therapeutics, to trace the influence of the advice given by the referees in these subjects, though they have doubtless been consulted respecting either the addition of new remedies, the omission of old, or the relative possession of active properties in different official preparations.

In the present article it will perhaps be convenient to confine attention to the additions, leaving the omissions and other remedies for future consideration. A large number of the additions consist of new pharmaceutical preparations. Many of these appear to have been added with a view of facilitating the labour or consulting the convenience of the dispenser: thus there are some ten preparations, called concentrated liquors, which on dilution are almost equivalent to freshly-prepared decoctions or infusions. Several new syrups have been introduced, some of them, as Virginian prune, serving as flavouring agents. Five new lozenges and six new ointments are also in the list, but of actually new drugs the number is extremely small, comprising only the following: Araroba, benzol, bismuth salicylate, cocaine, codeine phosphate, hyoscine hydrobromide, hyoscyamine sulphate, kaolin, liquor thyroidei, morphine tartrate, naphthol, physostigmine sulphate, quillaia bark, acid quinine hydrochloride, salol, cerebene, and dry thyroid. To these preparations should be added caoutchouc, carbon bisulphide, oil of pine, and oil of rose. The remaining additions are, in many cases, new preparations of drugs which formerly occupied a place in the *Pharmacopœia*; thus there are four new liquid extracts—those of belladonna, ipecacuanha, jaborandi, and nux vomica, two new glycerines of boric acid and pepsin, and one pill, that of quinine sulphate. Among the syrups is one which, by its ponderous title (syrupus ferri phosphatis cum quinina et strychnina), suggests, if it does not call for, the common employment of some shorter synonym. It is, perhaps, needless to say that this syrup is an imitation of a proprietary remedy.

The most cursory examination of these additions shows that they have been dictated by a desire to facilitate pharmacy rather than to add to the list of therapeutic resources. Comparatively few of the drugs mentioned above as being newly recognised possess any very strongly marked action, while, on the other hand, the additions are distinct gains in so far as they facilitate the employment of remedies of definite composition and of shorter pharmaceutical processes. The introduction of morphine tartrate appears to necessitate the addition of a new liquor; and there are distinct advantages in employing this salt, not only on account of its stability, but also because of its relative solubility. For these purposes it has been introduced with advantage in the preparation of the hypodermic injection of morphine, which formerly contained the acetate, a compound which was prone to lose its acetic acid and to deposit in granular or crystalline form. This hypodermic injection has further been altered by being reduced to nearly one-half of the previous strength. A radical change like this has not, we may assume, been undertaken without due consideration, and though it may lead to some confusion at first, yet the solution will probably be employed with greater satisfaction and use, since the amount to be injected safely is necessarily larger than before.

NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY, MADRID.

[From our Special Representative.]

Madrid, April 10th.

The Opening Ceremonies.

Under most favourable circumstances as regards weather this Congress opened to-day. The ceremony in the Palais de la Bibliothèque et des Musées Nationaux was a brilliant one. The handsome building is approached by a wide flight of stairs, and is admirably adapted for such a meeting. Herein, too, the several sections will meet to-morrow and following days. The spacious room in which the inaugural ceremony took place was much admired by all the visitors, its old tapestried walls and its roof bearing the coats of arms of the various provinces being specially remarkable. Behind the central chair on the daïs hung a painting of the Queen Regent of Spain. It was expected that both she and Alphonso XIII would be present. When just at the last moment the royal chairs were removed, there was a slight expression of disappointment; but in the present state of political excitement in Spain the Queen Regent probably found a sufficient excuse for her absence. As the Congressionists gathered, it became evident that the ceremony was to be of that brilliant character foreigners so much admire. The English were comparatively few in number, probably not more than fifty being present. The London School Board was represented by the Hon. Mr. E. Lyulph Stanley and Mr. Bridgeman; the University of Cambridge by Dr. Donald MacAlister; the Home Office by Dr. Thomas Oliver, of Newcastle-upon-Tyne; the Army Medical Department by Surgeon-Major-General Macpherson; the Sanitary Institute by Mr. T. W. Cutler, F.R.I.B.A. The Germans were present in considerable numbers, and were either in evening dress or in army uniform; so, too, were the French. As a nation we English are inclined to look with amusement at the fondness of foreigners for dress on such occasions. We look upon their decorations, the insignia of the various orders they belong to, as baubles; but certainly in an inaugural meeting, such as witnessed in Madrid, their dress and decorations lend colour and imparted interest to the scene. Other nationalities were also represented. It is to be regretted that at these international gatherings there should be such a thorough absence of unity on the part of Englishmen as there was to-day. We are frequently twitted as a nation on account of our rather isolated position in foreign affairs, and to-day this was only too painfully apparent at the Congress. Here was a large gathering of Germans and French, each so thoroughly welded together and organised that they at once took their places beside and on the platform, upon which no seat was reserved for the English members of the Congress. England has herself largely to blame for the treatment that is meted out to her on these occasions, and she would do well to take a leaf out of the book of other nationalities and be more regardful of her own interests in the future.

Shortly after 2 o'clock the various dignitaries took their appointed places, the presidential chair being taken by His Excellency Señor Ruiz y Capdepon, Minister of the Interior, who was supported on the right by the Governor of Madrid, the technical President of the Congress, Dr. Julian Calleja, and by the Secretary-General of the Congress, Dr. Amalio Gimeno; on the left by Dr. Brouardel of Paris and the Mayor of Madrid.

Inaugural Address.

The inaugural address was delivered by Dr. Calleja, the Dean of the Faculty of Medicine, Madrid, who in a few well-chosen words extended a warm welcome to the members of the Congress. The meeting of the Congress in Madrid, he said, had given cause for great satisfaction and pleasure throughout Spain, but he wisely reminded the large audience that the science of public health was confined to no nation in particular and to no one science specially. In front of him he saw distinguished ladies, prelates, soldiers, engineers, architects, statisticians, and medical men all working with one aim and paying homage to sanitary science. Hygiène could no longer be regarded as simply one of the studies of medicine and the least important of it. It had an individuality and an independence now all its own, although

originally a branch of the science of medicine. Its object was the prevention of disease not its cure, the investigation of the causes of disease, in order, if possible, to destroy them or minimise their effects. Hygiene was a science whose character was foresight and prudence. Just as moral science secured purity of the soul so did hygiene seek to secure the conservation of the health of the body. It was morality of the body. The precepts of hygiene were daily becoming more and more recognised, but it was still necessary to labour with patience, constancy, and self-denial, for nothing like perfection had yet been arrived at. After paying a tribute of respect to the immortal Pasteur, the President alluded gracefully to the meritorious work now being carried on by medical men on the banks of the Ganges and the Nile in order to discover and subsequently destroy, if possible, the harmful germs of pestilential diseases. Statistics and demographic science were powerful aids to hygiene. Sanitary science was hampered by all sorts of obstacles. Municipal bodies objected to it on the ground of expense; individuals in the belief that their liberty was being interfered with; but it was clear, he said, that while a citizen had rights, he also had duties imposed upon him by society, and which he must respect. The individual was less than society, of which he was simply a part, and should not be at liberty to infect his neighbour. This fact, while a moral, ought to be a legal, truth. England, so liberal in most matters, had broken her traditional respect for the sacredness of the home when during epidemics she brought her preventive measures into action. Dr. Calleja showed how necessary it was for all to co-operate, and with energy, in order to advance hygiene, and the need there was for procuring Government help in the matter of research. Spain, he said, would lend all the influence of her authority to help forward the cause of sanitary science. The address was listened to with great attention, and was extremely well received.

Addresses by Foreign Delegates.

Professor Brouardel followed the President, and after him the German, Austrian, Belgian, Japanese, and French delegates, all of whom alluded in laudatory terms to the part Spain was playing in sanitary science. Dr. Donald MacAlister, who represented Cambridge, and who was habited in red gown, spoke for England. In a few appropriate sentences he alluded to the work done at former Congresses, and to the fact of Spain and England having worked together in other fields than science as allies, and that, while in these they had been victorious, they would in sanitary science still march together. After Dr. MacAlister came the representatives of Greece, the United States, Holland, Italy, and Mexico. The Mexican representative received a grand ovation; again and again the audience cheered. Here was the representative of a country which had only recently freed itself from Spanish rule exactly as Cuba wishes to do to-day, and against that fact must be placed the warm reception of its representative who, alluding to Spain as the mother of his fatherland, said that the daughter had inherited all the virtues of the mother, and that Mexico had on recent occasions given considerable evidence of her filial affection. Strange irony it seemed to us. Following Mexico came Norway, Switzerland, and Turkey. Russia was not spoken for.

Addresses of Welcome.

Subsequently the Mayor of Madrid as the local magnate extended a warm welcome to the Congress, as did also the Governor of Madrid (Military), who was Minister of the Interior at the time at which the Congress was invited to Spain. The Secretary-General, Dr. Amalio Gimeno, then spoke, and subsequently reproduced his remarks in French; and immediately afterwards the President, the Minister of the Interior, in a short speech of a congratulatory nature and expressive of hope for a successful meeting, brought the inaugural ceremony to a conclusion.

The late Mr. Hyam Leopold Beddington has by his will left, among other legacies for charitable purposes, £500 to the London Hospital, and £100 each to University College Hospital, St. Mary's Hospital, the Cancer Hospital, the City of London Hospital for Diseases of the Chest, the Hospital for Diseases of the Throat, and the Queen Charlotte's Lying-in Hospital.

THE PLAGUE IN THE EAST.

[From Our Correspondent.]

Opposition to Preventive Measures in Bombay.

The opposition to the removal of a plague patient to hospital by a search party spread rapidly into a more or less organised attack by the Mohammedans on all Europeans. Many were killed and wounded, and it was found necessary to fire on the mob. The whole city is now guarded and patrolled by troops. The efforts of the Plague Committee were not relaxed, and large search parties have since examined some of the worst quarters. No further general disturbance has occurred, but there is great danger to single individuals moving about unprotected. Many of the medical officers and nurses have had narrow escapes. An attempt to fire one of the plague hospitals was partially successful.

A Change of Policy.

Matters were in this condition when a change of policy with regard to plague measures in Bombay was announced. The general searching for plague cases is to be given up. There will be no inspection of corpses and no delay of funerals. No patient is to be removed except on the certificate of a fully-qualified medical officer. No case pronounced hopeless shall be removed without the relative's consent. No inmates of a house shall be removed without intimation to the head of the family, and compensation is to be paid on the spot in the case of the poor when property is destroyed. The natives are to report cases themselves, and little or no provision is made for the separation of "contacts." This change of policy is for all practical purposes giving over the work of the Plague Committee into the hands of the so-called headmen of the various communities. Even systematic organised and determined measures against the plague, if they do not succeed in killing the pestilence, must yet hold it to a certain extent in check. The measures adopted in Bombay may not have been so successful as those in the smaller towns and villages up country, but that is probably because it is impossible in a large city to carry them out so thoroughly.

For some weeks past hundreds of cases of plague have occurred without being known to the staff of the Plague Committee. It is hardly to be expected that the cases will be fully reported now. The poor prefer to die in their own homes, and will not take their cases to the hospitals. Practically all compulsion is done away with. Additional centres of infection must of necessity arise. Moreover, those exposed to contagion will never be discovered. It is true that it has never been possible to segregate the "contacts" effectively. It cannot be expected that many reports of infected houses will be received, and consequently only a few houses will be disinfected subsequently.

The daily total mortality returns fluctuate closely round the highest figures yet reached. There are no other epidemics of any extent to swell the mortality, so that the excess of deaths of about 250 a day over the average must be entirely due to plague. The type is still very severe, and the rough estimate of mortality about 80 per cent. The native population seems appeased by the new rules, and the strikers are returning to work. The streets are quiet, the shops are busy, and there is no probability at present of any further rioting.

The modification of preventive measures was followed by a mortality in excess of any former period. It is now fourfold the normal rate, and the exodus of people to the surrounding country has considerably diminished the population. The change in the policy with regard to plague measures, which practically leaves all notification of cases to the natives themselves, is regarded with much apprehension. The Corporation ask that the management of measures for controlling the plague should be restored to the municipality. The arguments urged on behalf of the Corporation are stated to be, in part, that the city may thus be saved from the financial ruin threatened by the present enormous plague expenditure, and partly to abolish the existing dual control and divided responsibility. The results, so far, of the experiments with Professor Lustig's curative serum for plague have been discouraging. Of 24 patients treated 16 have died, and this notwithstanding that cases hopelessly ill on admission have not been selected for experiment. A considerable number of plague patients die within 24 hours of admission, and these

cases go to swell very considerably the death-rate in the hospitals compared with the general mortality outside.

The Mortality of Races and Castes.

About 10,000 persons have been moved into camps, and perhaps 15,000 have been inoculated. These figures are, of course, very small compared with the estimated population (700,000). The greater mortality during the present epidemic may be accounted for by the greater severity of the present visitation and by the presence in the city this year of a much larger population. The plague mortality in races and castes in thirteen weeks past is very interesting.

	Number.	Ratio.
Jains	668	105.9
Brahmins	516	54.3
Bhattias	146	74 0
Caste Hindus	6096	54 8
Low caste Hindus	569	51.4
Mohammedans	917	23.6
Parsees	340	28.6
Native Christians	209	28.1
Eurasians	23	21.2
Europeans	4	1.4

The report of the special drainage engineer dealing with subsoil drainage seems to confirm the previous evidence regarding the extent to which the waste of pipe water has contributed towards the loading of the soil with foul solutions. It is said that Bombay is water-logged and sewage-logged. Metering the water supply is recommended. There seems strong evidence that the subsoil water has risen during the past few years, and it is a well-known fact that a rise in subsoil water has unhealthy consequences in a city. It may be taken as an axiom that water can only be safely near the surface when the ground is unpolluted with decaying organic matter. In Bombay the ground at the surface and for a considerable distance down in many places is fouled by refuse of many kinds. There is danger, consequently, that the Government scheme for improving the city by wider streets and better dwellings for the poorer classes may withdraw attention from measures of sanitary reform which are much more urgently needed, and as far as the immediate future is concerned are of infinitely greater importance to the salvation of Bombay. The present water-logged condition of the soil must be remedied, the sewerage system must be completed, and conservancy must be improved.

Measures adopted to check an Outbreak in a small Town or Village.

When the opportunity occurs for measures to be undertaken at the outbreak of an epidemic—that is to say, when the cases can be readily circumscribed in a comparatively small area, the first step taken is to place a cordon of troops or police around this area in order to prevent egress or ingress. A complete census of the people within the cordon is, if possible, taken before moving them away, as it enables a daily inspection to be carried out. The people are moved out of the infected houses. This can be done in favourable weather without a moment's delay by letting them live for a short time under temporary shelter; otherwise camps must be erected. Very good quarters of bamboo matting huts can be very rapidly constructed. The people in the most infected houses must first be removed, but every house within the cordon must be completely emptied. Disinfecting apparatus must also be provided, so that the people with all their effects can be disinfected on their transfer from the infected area to the camp. The tenements and houses, as they are evacuated, must be immediately locked or screwed up to prevent healthy persons remaining temporarily behind from entering the houses. After being closed up the houses must be unroofed, and houses or tenements of very poor description burnt or razed to the ground. If rats be discovered they should be cremated. The camp first constructed must, at the earliest possible opportunity, be broken up, so that it is necessary to provide at once for building two or more adjacent camps, not only to separate different classes and castes of people, but also to have a distinct boundary between the sick and the healthy. If many cases break out in the first camp after all work in the infected houses is finished, a certain amount of local infection may be presumed to be developed, so that for this reason and also on general sanitary principles it is advisable to evacuate it and burn it to the ground. Meantime disinfection of houses must be carried out. The interior of the houses having been in as many cases as possible burnt out, the whole inner surfaces must be thoroughly treated with perchloride of mercury solution (1 in 1,000), drains, rat-holes, and cracks being particularly attended to. Then the interior can be thoroughly lime-washed. Scavenging requires attention. All rubbish must be collected and burnt, and the drains and gutters properly cleansed. All this time the cordon continues not only round the camp, but round the infected houses, to prevent people from the rest of the town or from outside occupying them. In the camps after the first disinfection it may be necessary to disinfect dirty linen and bedding repeatedly.

With regard to the period of detention it is generally recognised that ten days at least must be enforced; afterwards those who remain free from all symptoms can be permitted to go to work. Daily medical inspection should, however, be continued for several days longer. Outsiders must be carefully prevented from coming in, and great vigilance must be exercised that infected people or those under observation do not escape into the town. The town itself must be frequently inspected to discover the outbreak of any cases, as the entrance of infected people, of clothing, or of infected rats, is a constant source of danger. Regular house-to-house visitation and by inspection of the inhabitants is necessary. No dead body should be permitted to be disposed of without the knowledge of the plague authority. Quarantine is also frequently adopted—new arrivals being kept under observation in an outside camp for a period of ten or twelve days. Should cases break out in the town the same measures are adopted as regards the houses as at the first onset. The inhabitants must be removed to the camps.

The best arrangement for the camps is found to be to place the segregation huts for the healthy people at one end, next to that a disinfecting station, in the middle of the camp a police post as well as all the administrative offices. The other half contains, first, another disinfecting station, followed by observation wards, convalescent wards, and plague wards successively, until at the extreme further end may be erected a mortuary. The object of these arrangements is that not only are the healthy entirely separated from the sick, but the dangerous zones may be said to increase from one end to the other. The arrangement of plague hospital and segregation camp in one unit is convenient, on account of the frequent transfers which become inevitable, and also because one medical and police staff suffices. Further details can be elaborated to suit the different castes.

If railway passenger traffic exists, detention camps will be required to detain for ten days all passengers alighting at the station, and all the necessary disinfecting apparatus for disinfecting not only the passengers but all their belongings.

During the existence of plague, every town or village should provide its health camp. There is always a moving population round or through a village, and these people, whether traders or merely travellers, should be compelled to go to this camp. In this way a village can protect itself to a certain extent against many chances of infection.

Decline in Bombay, Increase in Punjab.

The epidemic of plague which in a recrudescent form has prevailed in Bombay for six months is rapidly declining. The absence of all special telegrams during the past week is the best evidence of the abatement.

The plague statistics as regards the number of Europeans attacked during the recrudescence in Bombay is interesting:

Number of Cases Treated at St. George's Hospital, Bombay, from December 12th, 1897, to March 5th, 1898.

—	Cases.	Recovered.	Died.	Remaining under Treatment.
Europeans born in Europe ...	5	2	1	2
Europeans domiciled in India	6	3	2	1
Eurasians	21	6	9	6

All were males with the exception of 7 females in the class Eurasian.

The number of plague patients in Karachi is slightly on the increase.

The Jullundur and Hoshiarpur districts of the Punjab are seriously affected; as many as 26 villages are plague stricken, and the disease shows signs of spreading.

The Nizam of Hyderabad's territory is infected all along its north-western frontier, but the capital of the province is free from plague.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Friendly Society was held at 429, Strand, London, on March 25th. In the absence of the Chairman, Dr. de Havilland Hall, the chair was taken by Dr. G. E. Herman, one of the treasurers of the society, and there were also present Dr. J. B. Ball, Mr. J. Brindley James, Dr. F. J. Allan, Dr. Walter Smith, Mr. F. S. Edwards, Dr. M. Greenwood, and Mr. Edward Bartlett.

The usual accounts were presented, and showed that influenza has been, as on former occasions, very prevalent among the members of the medical profession. During the three months of December, 1897, and January and February, 1898, the sickness benefit account of the Medical Sickness and Accident Society has been nearly doubled by claims arising from this malady. These claims have been, on the average, of much shorter duration than in previous epidemics of the disease, but in one or two cases members of the society who have suffered from influenza on previous occasions have broken down entirely, and seem likely to be incapacitated for many months.

The accounts for the year 1897 have been closed, and the results will be given to the members at the general meeting to be held in May next. It will be found that during the year the society has largely increased its reserves, and that, although the amount paid away in sickness benefit during the year is considerably greater than in any previous twelve months of the society's working, it is well under the amount expected and provided for in the table of premiums charged, and can be accounted for by the growth of the number of members and the increase in their average age. The society is now doing much good work, and the Committee receive many letters containing gratifying evidence of the value of its aid to members of the profession who have been unable through illness or accident to continue their work.

Prospectuses and all information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

LITERARY NOTES.

THE work on the determination of sex, by Dr. Leopold Schenck, Director of the Embryological Institute of Vienna, as to which there had been so much preliminary "booming," is announced for immediate publication in Vienna, Magdeburg, and Leipzig by Messrs. Schallayin and Wollbrück. The title of the book is *Einfluss auf das Geschleckverhältniss*, and the price will be 3 marks.

Messrs. J. and A. Churchill will publish in a few days a new work on *The Blood: How to Examine and Diagnose its Diseases*, by Dr. Alfred C. Coles, of Bournemouth, with 6 coloured plates. Also a fifth edition of Mr. Charles Tomes's well-known *Manual of Dental Anatomy*, with 30 new illustrations. The part treating of comparative odontology has been expanded to meet the requirements of the student of biology.

Professor Donald Maclean, of Detroit, writes under date March 28th:—

On p. 710 of the JOURNAL, March 12th, you have very kindly given a highly complimentary notice of my little paper entitled *Reminiscences of Syme*. Letters which have come to me from Lord Lister and a good many other readers call my attention to a stupid and unexplainable blunder in regard to the date of my last visit to Syme. It should read *1869*, and not 1872 (he died in 1870). So many people have detected it that I have felt impelled to ask you to make the correction and express my regret for being so careless in a case in which I had really no excuse.

Genius would seem to be a more fatal gift even than beauty. Gradually every one who has shown the smallest trace of the quality is being added to the list of degenerates. Now that the criminal anthropologist is abroad, it will soon be necessary for the unhappy possessors of genius to repress or at any rate conceal it as carefully as the French peasant of whom Rousseau speaks hid his piece of meat lest it should be seized by the minions of the law. Dr. Kiernan, in a paper recently read before the Chicago Academy of Medicine, pronounces Charles Lamb to be a degenerate. Poor Elia was a weakly child, who suffered from night terrors, learned to speak with difficulty, and stammered throughout life. At the age of twenty, he had what Comte, speaking of his own case, euphemistically called a *crise cérébrale*, necessitating his confinement for some weeks. It is admitted, however, that his career illustrates "how, even under the burden of inherited degeneracy and the no less terrible strain of an environment entailing a fierce struggle for existence, a large amount of soundness and morality may survive." With this concession we must be content. After all, there be many who would probably prefer to be "degenerate" with Charles Lamb than to be "normal" according to the standard of decorous dulness which, in the eyes of Lombroso and his disciples, seems to constitute perfect sanity.

In the first number of the *Wide World Magazine*, the new periodical just issued by the Geo. Newnes Company, Limited, Dr. W. H. Neale tells the story of the Arctic expedition in which he accompanied Mr. E. Leigh Smith on the *Eira* in 1881. In August of that year the ship was caught by a huge mass of ice and went to the bottom before the eyes of the party, leaving them castaways amid the seas and mountains of ice. They had provisions only for eight weeks, while on the other hand there was the certainty that at least twelve months must elapse before they could be rescued or escape from their terrible position. The only thing that came up from the wreck was a cask containing a young bear; the cask was broken up for firewood, and poor Bruin went to replenish their scantily-stocked larder. They remained in Franz Josef Land in the cold and darkness "with bear and walrus for breakfast, walrus and bear for dinner, and bear and walrus again for supper" till the following summer. Inside the hut in which they lived the thermometer often recorded 20 degrees of frost; outside it was often 90 degrees. To appreciate their sufferings from the cold it must be remembered that they had only such clothes as are worn in England in the autumn. Their escape from their ice prison in the summer was difficult and adventurous. It took them forty-three days to reach Novaya Zembla, where they found the whaler-carrying expedition sent out under Sir Allan Young to their relief and several other ships of various nationalities. It speaks well for Dr. Neale's care of the crew that they returned to England without the loss of a single member of the party except a canary which died of cold and a poor little kitten which wandered out of the hut into the frozen wilderness and was seen no more.

In *Notes from a Diary, 1873-1881*, by the Right Hon. Sir Mountstuart E. Grant Duff, recently published, it is related that when the late Sir William Gull was informed that a very eminent statesman, long since gathered to his fathers, went to a quack for medical advice, he remarked, *Similia similibus curantur*. Of all the many bitter things said about the statesman in question, we remember none more biting or more neatly expressed than this.

The first number of the new magazine, *St. Peter's*, which has recently appeared, contains some unpublished advice on literary composition by that great master of style, Cardinal Newman, which should be taken to heart by everyone who writes. The advice was given to a theological student of Maynooth, who asked for some hints on the subject of preaching, but it is as just as useful to scientific writers. We quote three of the Cardinal's maxims, which we earnestly commend to the attention of all members of the profession who have any information which they may wish to communicate to their brethren:

1. A man should be in earnest—by which I mean he should write, not for the sake of writing, but to bring out his thoughts.
2. He should never aim at being eloquent.
3. He should keep his idea in view, and should write sentences over and over again till he has expressed his meaning accurately, forcibly, and in a few words.

What waste of paper and time—to say nothing of temper—might be saved by attention to these simple but invaluable rules!

SPECIAL CORRESPONDENCE.

PARIS.

The University of Paris and Foreign Students.—The French Army Medical Service.—The New Law as to the Practice of Pharmacy.—General News.

The City of Paris and the Paris University have come to a friendly understanding concerning the proposed exodus of foreign medical students into the provinces. The University Superior Council was in despair how to provide for the constantly-increasing influx of students. The Commission appointed by the Municipal Council has, in concert with the Superior Council of the University, decided that the following points must first be attended to: A sufficient supply of subjects for dissecting must be guaranteed. Laboratories must be organised and adequately equipped. The curriculum must be completed by the creation of a chair of Gynæcology and of one of Diseases of Children. The clinics at the Pitié and Charité Hospitals, which were long ago declared to be insufficient, must be remodelled.

A law just passed concerning the Army Medical Service makes the following changes: Two medical inspectorships will be added, making the total 11. At present there are 45 second class médecins principaux; in future there will be 60. There are to be 340 first class médecins-majors instead of 320; 500 second class médecins-majors instead of 480; 400 first class aides-majors instead of 300. On the one hand, the 100 second class medical aides-majors are to be reduced to 50; on the other hand 50 second class medical aides-majors pupils are to be added. The total number of medical officers is to be increased from 1,300 to 1,457.

According to the new pharmacy law only one diploma will be maintained as a test of pharmaceutical knowledge, namely, the first class diploma created by the decree July 1st, 1878. Foreign dispensing chemists can practise in France if they obtain the French diploma, but only in those cases where French students of pharmacy are allowed to study for the diploma and to practise in the countries of the foreign candidates. Foreign students will be subjected to the same rules and regulations as French students. A special diploma can be granted which requires as high a standard of knowledge, but the preliminary *baccalauréat* examination is not required; a certificate of equivalence is granted recognising the examinations passed by the students in their own countries. This diploma does not give the candidate the right to practise on French territory. For two years after the promulgation of this law students are allowed to register for the second class pharmaceutical examination.

Professor Tarnier has bequeathed to the city of Dijon several articles for the museum and £4,000 to be utilised as the town may decide. A hope is expressed that the money will be devoted to the benefit of women about to become mothers or to that of lying-in women or new-born children. The Municipal Council of Dijon has decided to name the fund the Tarnier legacy and Tarnier's name is to be given to a street at Dijon.

A statue of Charcot is to be erected on the public space in front of the Salpêtrière Hospital.

MANCHESTER.

The Sewage Question once More.—Salford and its Sewage.—Site of Epileptic Colony.—New Hospital Wards for Infectious Diseases.—Instructing the Public in Sanitary Matters.—Water Gas and its Supply in Town.

The Rivers Committee on April 6th presented to the City Council a voluminous report on the treatment of the sewage effluent. The council have asked powers from the Local Government Board to borrow £170,000 for the purposes of their scheme of sewerage and sewage disposal. The Board, in its reply to the Council, said: "The Town Council, however, must bear in mind that before any further loans for purposes of sewage disposal are sanctioned by the Board, they must be satisfied that an adequate area of land will be brought into use for the treatment of the effluent prior to its discharge into the Manchester Ship Canal or any stream; and that such treatment will be adopted as a process distinct from and supplemental to the operation of all other processes, whether involving the use of chemicals or artificial filtration, or any other expedient." The Local Government Board, it seems, would sanction a loan provided the Corporation would propose a scheme for the acquisition of from 200 to 300 acres of land to be connected by a conduit with Davyhulme Sewage Works, and would engage to pass over or through such land the effluent after it leaves the proposed bacteria beds, and before it reaches the Ship Canal. The Rivers Committee sent the following report to the City Council:

> That in view of the refusal of the Local Government Board to sanction a loan for the purpose of converting the land at Davyhulme into bacteria beds for the better purification of the tank effluent at the Davyhulme Sewage Works, and the imperative necessity of complying with the requirements of the Mersey and Irwell Joint Rivers Committee, the Council be recommended to authorise this committee to proceed forthwith with the construction of the whole of the bacteria beds contemplated upon the thirty-seven acres of land referred to in the report of the committee dated March 18th, 1898, by means of money to be borrowed under Section CCXXXV of the Public Health Act, 1875, such money to be redeemable within thirty years.

Sir John Harwood moved an amendment, and the Chairman of the Committee said that he had no objection to merging the resolution and Sir John Harwood's proposition into one. Feeling that they might still further try to work pleasantly with the Local Government Board, he was prepared to move the altered resolution, which was to the effect that the two reports of the Rivers Committee, dated March 18th and 31st, be approved so far as they related to the constructing of the bacteria beds, and that the Committee be recommended to conform to the requirements of the Local Government Board by purchasing the necessary land for the aëration of the effluent after it passed through the bacteria beds. After discussion, the meeting was adjourned for a fortnight.

Salford also is in difficulties in connection with its sewage. At a recent meeting of the Mersey and Irwell Joint Committee, it was agreed by resolution that the Salford Corporation had not taken the necessary steps towards carrying out a filtration scheme to ensure the efficient treatment of the sewage of the borough, and they decided to bring the Corporation again before his honour, Judge Parry.

The Board of Guardians of Manchester and Chorlton, acting together under the authority of the Local Government Board, have purchased an estate—costing £19,000—in the neighbourhood of Chorley, just under the shadow of Rivington Pike, with the object of erecting thereon cottage homes for the treatment of imbeciles and epileptics. Provision will be made for 1,000 patients. The scheme owes its inception chiefly to the enterprise of Dr. Rhodes, who holds that the workhouse is not a proper place for the treatment of these cases. There can be no question that in cottage homes erected in an open country the patients will do better than under the barrack system which is inseparable from workhouse treatment.

The Salford Town Council have arranged to provide two additional pavilions at the Ladywell Sanatorium, one for scarlet fever convalescent patients, to contain provision for forty-eight beds, and the other for typhoid convalescent patients to accommodate thirty-two beds. Experience has proved that considerable risks attach to patients convalescent from scarlet fever remaining in contact with fresh cases, while in typhoid patients convalescence is much retarded owing to their being in contact with acute cases.

Another departure of importance was sanctioned by the Salford Council, namely, to make provision in the estimates this year for a sum not exceeding £100, "to be expended in promoting in the borough a knowledge of public health and sanitation and the principles governing the preservation of health."

A Departmental Committee appointed by the Home Office is now inquiring into the alleged dangers of supplying "water gas" in towns. The State of Massachusetts has issued a report for 1897 on this subject. The supply of water gas in the State was prohibited up till 1888, but in 1890 the law was altered so as to remove all restrictions upon the supply of water gas. Since then the use of water gas has greatly extended in the State, while in Boston none but water gas is supplied. Last year the accidents arising from gas escapes numbered 135, resulting in 60 deaths, and of these 18 were suicidal.

CORRESPONDENCE.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

SIR,—In your report of the conference which took place between representatives of the friendly societies and of the British Medical Association there were several startling and partially correct statements advanced by the gentlemen representing the friendly societies, which would certainly not have passed unchallenged had a general practitioner with actual club experience been present at the conference. In the first place, no man with real knowledge of the matters in dispute would have raised the question about honorary members receiving medical benefits; they are not entitled to them, nor do they ever claim them; but that mayors, aldermen, and people of good social and financial position make use of such societies to obtain medical attendance on the cheap is surely too well established to need contradiction, as witness your own columns and those of the *Lancet* during the past two years. Then, again, the argument that working men who have risen to a good position by remaining in clubs do the medical profession no harm is contrary to actual experience; such men frequently not only use the club doctor's services, but put their wives and families into the club also, and not only by example, but by canvassing endeavour to get their equals to join these societies.

This raises a very important question, namely, the admission of women and children into these societies; the omission to inquire into the rates of payment made for these additional patients would never have occurred had the club practitioner been really represented. The statement that only working men joined such societies is absolutely astounding. In Great Yarmouth the leaders of the Foresters and Oddfellows societies publicly and very offensively stated their determination to allow no restriction of any kind to be put upon those who wished to join them, and in consequence amalgamated and formed a medical institute, and engaged medical men from a distance to do the work. Touting previous to the formation of this institute did not exist in this town (to the best of my belief), but quite recently several of my patients have informed me that they have been requested to "join the enemy" by the present medical officer. Mr. Cleveland's statement that members of the societies would frankly discuss the question of raising the fees is again contrary to local experience; the mere mention of such a course was truly the waving of a red rag before a bull.

Many more points could be raised, but sufficient has been said, I think, to show that so far as the medical practitioner in general practice is concerned, the meeting was far from being a representative one. This club question is a very important one, both to the public and to the profession; and personally I feel convinced that unless the friendly societies can institute some check upon those who are in good circumstances getting their medical attendance at club rates, the better men in the profession will decline all such appointments, thus creating a distinct class of club doctors, who will be inferior in professional and social standing to their more fortunate brethren. If my prophecy prove correct, it will be a real hardship to the genuine working man, who has to his credit raised the friendly societies to the high position they hold at the present time.—I am, etc.,

ALBAN H. MOXON, M.R.C.S., L.S.A.
Late Medical Officer to Oddfellows and Foresters.
Great Yarmouth, April 5th.

SIR,—I shall be obliged if you will afford me a little space in the BRITISH MEDICAL JOURNAL to comment upon your report of the conference between the representatives of the British Medical Association and those of the chief friendly societies reported in the JOURNAL of April 2nd.

I see that in the JOURNAL of April 9th Dr. Wunderlich has to some extent anticipated what I was going to say, and I wish to endorse his view, namely, that the wage limit is not the real crux of the question, but rather the unremunerative rate of pay for the work done. I also agree with him and with the representatives of the friendly societies in thinking that in practice the application of a wage limit would be unworkable.

The representatives of the Association confessedly do not seem to have been conversant with the working of friendly societies, and indeed it is only those who are in daily contact with them who can be so. The representatives of the societies, too, show no more intimate knowledge.

That some reform is needed no one, I think, who knows anything of the subject will deny, even in the case of the older friendly societies. "Mr. Stockall thought that Dr. Saundby was mistaken as to tradesmen joining the societies for the purpose of medical benefits." Now it is within my knowledge that not only tradesmen, but two solicitors, a bank manager, one of H.M. school inspectors, and other professional men, have become financial members of a lodge of his unity, and have been treated as such.

Nor is the average age of joining 18, except for members who come in from the juvenile branches. Members are admitted at all ages. I am not now referring to honorary members, to whom, from the medical officer's point of view, there can be no possible objection.

Mr. Chapman said "that in the vast majority of cases it would be found that men who got on continued to pay their contributions to the surgeon but did not go to him." That is not my experience, and I know of cases of men who have prospered and become large owners of property who have claimed the services of the lodge surgeon, and not only so, but have become more exacting as their prosperity increased. That this is the rule I do not say. But much more to the point is the fact that the young friendly society member demands to be treated as an ordinary patient in every way, not only as to the care with which his case is treated—which I think he may reasonably demand—but in other ways, so much so that objection has been raised if his medicine is not wrapped up in paper and delivered as that of an ordinary patient. This is not an individual complaint, but has actually been raised in lodge.

One other point: Dr. Ward Cousins asked "if any friendly society paid by the job." Mr. Boyd said "that there were some branches who did that." Now, there is one registered friendly society that does pay by scale for work done, and I am at present studying their system. Mr. Boyd says "that payment for work done would mean an alteration of the system in universal use throughout the friendly societies." But if by this means the evils of which I speak could be remedied, I do not think that that should be an insuperable objection. But I venture to think that there is an easier and more direct remedy. I do not believe that the members of friendly societies desire to "sweat" the medical profession any more than they desire to submit to that process themselves.

The medical contributions of club members were originally set upon a false charitable basis, such as the members themselves now repudiate. But so long as members of the profession are ready to accept the post of medical officers to a club for a round sum regardless of what the work may be, so long will the clubs continue to make the best bargain they can for their members.

If we can succeed in convincing the members of friendly societies that if they want their work well done they must pay a price which will leave the medical officer some margin of profit, and that as a rule the present rates do not do so, and if we can convince the younger members of our profession that it is unwise to take any contract work until they have assured themselves as to the amount of work they will have to do under their contract, then I think that friendly societies will soon in their own interests begin to set their houses in order, and we shall be within measurable distance of a better state of things.

There are a number of practicable minor reforms which may facilitate this, but I have already trespassed too much on your space.—I am, etc.,

Newport, Salop, April 13th. C. E. BADDELEY, M.D.Lond.

SIR,—That a conference should take place between representatives of friendly societies and the medical profession is a very big step in the right direction, and while giving all credit for the ventilation of this subject to those who have combined to battle against the clubs, I think, now, that a

general rectification of grievances is more likely to be brought about by central efforts than by the action of groups of doctors in isolated districts. Let the opinion of the profession be obtained in the ordinary way by Branch meetings; let the resolutions be sent to a Central Committee in London, the Central Committee to report the result in the medical journals and be authorised to hold another conference with a representative Committee of the friendly societies. The grievances are two: first, that there is no wage limit; and, secondly, that the fees paid are utterly inadequate.

With regard to a wage limit I have no hesitation in saying that it is absolutely necessary. It is simply preposterous that men with incomes varying from £110 to several hundreds should receive medical attendance for 4s. a year. I agree with the representative of the friendly society that very few candidates earning more than 30s. a week are admitted members, and that those members who are now earning more than £110 per annum are doing so through their own thrift and industry. (I say £110 per annum because I think it a fair wage limit.) Not long ago two Foresters became my private patients because, as they said, "we are well enough off to pay ordinary medical fees, and do not think it fair to expect to be medically treated for 4s. a year."

There are, however, many others who might follow this example. There ought to be none. I do not think the friendly societies like the idea of a wage limit, and say that there are great difficulties in the way of such an arrangement. Personally, I can see no difficulty. Let us suppose a member has increased his income up to or above the wage limit. He simply then ceases to pay the medical fee of 3s., 4s., or 5s. a year, but can continue a member of his club. I fancy the difficulty lies in this, that the friendly societies are afraid of losing valuable members.

With regard to fees, the friendly societies are quite ready to discuss the advisability of raising them, and I would suggest that members pay 6s. a year, and not more than 6d. for each supply of medicine.

The Hearts of Oak friendly society pays a fee of 2s. to their surgeons for every candidate they examine for admission, whether passed or rejected. Now I think that every club ought to pay 2s. 6d. for such examinations, and no candidate should be examined unless he brings a letter from the local secretary authorising the surgeon to do so, and the secretary should be responsible for the fee, not the candidate.

I think it was Mark Twain who said of the "chamois" in a certain Swiss chalet that had they been unanimous they might have pulled him out of bed. We only want unanimity to pull this off too.—I am, etc.,

April 13th. F.R.C.S.Eng.

THE MIDWIVES REGISTRATION BILL.

Sir,—I had hoped that time would have removed the friction existing on the midwives question, and that harmony would have replaced discord; but the points of difference seem as pronounced now as when the subject was first mooted, and there is a degree of acrimony introduced into the controversy which is to be deplored.

Why cannot the matter in dispute be settled by arbitration? This endless reiteration of threadbare arguments brings us no nearer unanimity. I should like to suggest that Dr. Cullingworth and Mr. Victor Horsley, as representing the opposing camps, meet and discuss this question in a spirit of conciliation. They might ask an impartial friend, such as the President of the Royal College of Physicians, to advise them in their deliberations. If this were done, I believe they would find a way to close the split in our ranks, and, when the House of Commons recognises that we are united, our wishes will not be disregarded.—I am, etc.,

Harrogate, April 9th. William Bain.

Sir,—I am very sorry to find that my friend Dr. Cullingworth has regarded my criticisms on his article on the midwives' registration question as a personal matter, whereas they constituted nothing but the most objective political statement that anyone could write. As we see in general politics private friendships have really nothing to do with political opinion, and I should feel it a very great loss to myself if any of my friends at any time took the step of confusing the two things. In quoting the published statements of a personal friend of mine I imputed no "dishonesty of purpose;" all I did was to quote from Dr. Cullingworth's paper in the *Contemporary Review* passages which certainly conveyed to the ordinary reader the idea that Mr. Balfour's Bill would form an efficient check upon the horrible evils committed by midwives at the present time; and I then pointed out that this proposition could not be true because the Bill in question contained no clause which would interfere with the evil-doers. My remarks were those of ordinary criticism, for it is plain that a proposition can only be true or untrue. If Mr. Balfour's, like the Association's, Bill had contained any provision at all which would stop the ignorant and dangerous woman from practising for gain, I would have been the first to recognise it, but as it included no safeguard either to the public or the profession, Dr. Cullingworth's statement was, as a matter of fact, untrue, and therefore seriously, though of course, unintentionally, misleading. I am sure those who are accustomed to public matters will recognise that no personal feeling could find any place in such a simple relation of fact.

As for Mr. Humphreys, it is waste of time to continue the systematic exposure of his reiterated misstatements, especially after the resolutions recently passed by the General Medical Council on this important question, and which of themselves negative every proposition in Mr. Humphreys's letter. I will, however, draw the attention of your readers to one point which relates to safeguards for the profession. Mr. Humphreys states that the General Medical Council has repeatedly declared itself unable to supervise in any way the regulations of the Midwives Board, and that that was why his Committee struck out such necessary supervision from the present Bill. He professes to support this allegation by a quotation in inverted commas from the minutes of the General Medical Council. Why has Mr. Humphreys omitted the three preceding lines from the paragraph in the minutes of the Council dealing with this subject? The paragraph he omits is to be found in vol. xxvi, p. 166, of the minutes of the General Medical Council, and runs as follows, after a brief introduction: "The General Medical Council, if the Government department so wished, are willing to advise as to the general rules of education, examination, and discipline which ought to be established in the matter."

For his own purposes Mr. Humphreys has also omitted all reference to the following passages. When the matter came up again before the Council in 1895,[1] the Council recommended that "the Midwives Board should frame rules subject to the approval of the General Medical Council," and on the next page the Council pointed out that inasmuch as the funds of the Council which would be expended in this work consisted solely of the "fees paid by medical practitioners for admission to the *Medical Register*," it was not equitable that such funds should be expended in the interests of midwives, and, therefore, that "a grant should be made from the Treasury to meet the additional charges thus imposed on the General Medical Council." Finally, the Council has just (1898) reaffirmed this position.

I trust your readers will now see that the General Medical Council, far from having refused to supervise, as alleged by Mr. Humphreys, is not only willing to do the work, but has pointed out how it should be done, and done without injustice to our long-suffering profession. This example of Mr. Humphreys's tactics in controversial matters relieves me from taking any notice of his other assertions.—I am, etc.,

Cavendish Square, W., April 12th. Victor Horsley.

Sir,—As one of the rank and file of the opponents of the above Bill, and a practitioner amongst the working classes whom the Bill is introduced to help, I forcibly denounce the statements of Mr. Rowland Humphreys, and consider them insulting to the common sense of the general practitioners—namely, that we have been misled both as to its effects and possible solutions. The result of a recent election to a vacancy in the General Medical Council has conclusively proven that the rank and file of the medical profession are not to be led or misled by any one party when its interests are at stake; and I question if the members of the

[1] *Minutes of the General Medical Council*, vol. xxxi, p. 85.

House of Commons will be misled by a certain party, when they fully understand the hidden dangers of the Bill, and the terrible eventualities that may arise if the measure becomes law.

Has Mr. Humphreys ever practised where women (holding a licence in midwifery alone) have carried on their trade? If so, he might give us his experience. My experience is that these women commence with the poor, and then drift into the class that can afford to pay a medical man and a nurse, and leave the poorer class to the old-fashioned untrained midwife or a friendly neighbour. What the poor lying-in woman requires are properly trained nurses, such as the East London Nursing Association provides, and not an inferior, half-educated midwife, who will not condescend to attempt to keep the patient clean. Why? She is a midwife and not a nurse. This is not speculation; it is the result of experience. The correspondence of the supporters of the Bill and their arguments are usually known as arm-chair philosophy.

The only conclusion to be arrived at, after careful study of the Bill and correspondence on it, is, that if it become law, it will be very injurious to the poorer classes, a great loss of income to the general practitioner, a return to the old days when medicine and surgery were dissociated from midwifery, and finally help to swell the income of the examiners and licensees of this new order of legalised quacks.—I am, etc.,

Bruce Road, Bow, April 11th. SAMUEL ALEXANDER.

SIR,—Sir Wm. Gairdner in his remarks at the General Medical Council meeting last week with respect to midwives seems to have overlooked the fact that our legislature enacted long ago that to be legally registered they must of necessity be also registered in medicine and surgery. To register another class is to create an inferior order of midwives legally, and to take a retrograde step.—I am, etc.,

Ardwick, Manchester, April 11th. H. F. WYLDE, M.R.C.S.

PRIVATE PRACTITIONERS AND PUBLIC PAYMENTS FOR VACCINATION.

SIR,—I am strongly in favour of all vaccinations being performed by public vaccinators, and I am of opinion that if private practitioners obtain State payment for vaccinations it will bring the whole question into public contempt, and certainly lower the status of the profession. The public vaccinators have been the sole support of the Local Government Board in the past in obtaining a large percentage of efficiently vaccinated children; and their most determined opponents have been those private practitioners who have pandered to the ignorant, and vaccinated inefficiently to their own profit.

The Infectious Diseases (Notification) Act put an end to a similar scandal with regard to infectious diseases, and the public have realised the necessity and approved the thoroughness of that Act.

Why cannot a public vaccinating staff be entrusted with all vaccinations? Why should the State not pay for and assume responsibility for vaccination in its entirety? If public vaccinator appointments were made for large districts, and were freed from the necessity of private practice, they would be valuable enough to encourage a good class of men to take them up. The work of inspection could be carried out exactly as it is now, and the staff of the Local Government Board would not need to be increased.

Public men and politicians are much too sensitive to noisy agitation, and they seem to forget that the great mass of the people are now educated sufficiently to obey and appreciate what is done for their benefit. I have been a public vaccinator for 15 years, and I believe that nine-tenths of the outcry against vaccination has been caused by the weak and pusillanimous manner in which it has been carried out.—I am, etc.,

April 4th. MEMBER.

SIR,—My experience among a mining population is that mothers prefer the child to be vaccinated by the doctor who attends themselves. I vaccinate privately about forty miners' children each year. Fee, 5s.

An objection to public vaccination is the bringing a large number of children together; if there is infectious disease in any of the families it tends to spread by keeping a number of children together for an hour or more. The public vaccinations in this district are held in April and October, and I have had cases of bronchitis and pneumonia which I consider were caused by bringing out young babies in unsuitable weather to the vaccination station. I am of opinion that if the parent could choose the doctor and have the operation done at home, or in the doctor's residence, there would be less objection to vaccination.—I am, etc.,

Clown, near Chesterfield. J. A. MAGEE, L.R.C.S.I., etc.

SIR,—In response to your invitation in the BRITISH MEDICAL JOURNAL of April 2nd, p. 900, for comments upon the proposals there made, or other suggestions for the performance of adequate inspections of vaccination, I venture to say that the alternatives (1) and (2) are feasible, and that by a combination of the two the best provision would be made for the efficient inspection required. Or, to put it otherwise, that the medical officer of health of county position is the proper official to carry out vaccination inspection. Medical officers of health of boroughs and such-like areas of 100,000 population come under this denomination.

Vaccination as a protective against small-pox is so much a public health matter—as much so as the isolation and disinfection of a case of small-pox—that it is an anomaly that it is not included in the details of public health administration by sanitary authorities. Whilst thus vaccination inspection should naturally fall to the duties of the medical officer of health, it is almost too much to ask those officers who act for small areas and receive pittances by way of salaries to undertake such supervision, which might bring them into collision with their lay and professional neighbours. On the other hand, as to alternative (2), the appointment of special county inspector of vaccination, it must be admitted that there is much in the argument that a general practitioner who has experience in vaccination would be a better judge of efficiency than the specially trained health officer who has seen no general practice.

To appoint a county inspector for this one purpose is but to multiply offices and to add to local taxations. Many counties have already, and all counties by this time ought to have, medical officers of health appointed under the Local Government (County Councils) Act. By adding vaccination inspection under the Bill under consideration to the duties of the county officer of health, opportunity would be taken to secure appointments being made in those counties which have not yet made such appointments. General good and uniformity in public health administration would result therefrom.

Upon alternative (3) may I say that if county medical officers—or medical inspectors of all departments which pertain to the public health in such area—were brought more into immediate contact with the Local Government Board, or as it were invested with the Local Government Board's inspector's position, there would be no more complaining of an overworked Local Government Board staff. Work in vaccination and all other inspection could be carried out punctually and "up-to-date" if entrusted to county officers, and, as the tendency of the day is to local rather than to central government, probably with less friction.

Whatever form the Bill may ultimately take as an Act, it is to be hoped that the vicious "permissive" principle will not appear in it, whether of adoption or of escape from vaccination by payment of a fine. It is in the history of all recent and other epidemics of small-pox, whether at Leicester, Gloucester, or Middlesbrough, that vaccination had become much neglected, and that inspection as carried on had either not discovered this or had taken no cognisance of the fact remedially. And many other and parallel experiences have shown that where the "local veto" has come in in health administration the consequences have at some time become disastrous to that community. The past quarter of a century of public health administration has shown up the good and the bad; and all interested in such work must feel that the time has come for a further consolidation of Acts for the protection of the public health (all to be compulsory), and for a concentration of all the forces for their administration. An edict for county vaccination inspection would initiate this concentration, and certainly provide for most efficient inspection.—I am, etc.,

Denbigh, April 11th. J. LLOYD ROBERTS.

Sir,—If private practitioners are to receive public payments for vaccination, I do not think the State (certainly in the country districts) would require any longer the services of a public vaccinator. Each man would vaccinate the children of his own patients, receiving his own fee for those whose certificate is on the light brown paper, and his fees from the public funds for those on the blue certificates. All vaccinations should be liable to inspection. On each certificate it should be stated how many insertions were made and how many stood. The inspectors should, I think, belong to the Local Government Board staff. An objection to the medical officer of health being an inspector is that he is frequently a general practitioner himself, and this might be a cause of friction with his colleagues. Also the question of who was to inspect his own vaccinations would arise. If private practitioners receive State payments, they are likely to try to get parents to consent to vaccination; and now that so much of the compulsion is to be withdrawn, surely this would be an advantage.—I am, etc.,

Wrotham, Kent, April 6th. J. Wigmore Higginson.

Sir,—As I have to vaccinate between 800 and 1,000 children annually I may claim some experience on the subject. Now when asked to vaccinate a child as an ordinary private practitioner some such conversation as follows invariably takes place: "Oh, doctor, are you going to make more than two marks? I object to have more than two." In a practice like this, mainly composed of the working class, I believe one of the chief reasons parents have for not coming to the public station but being willing to pay the fee for private vaccination is that they may have some control over the number of insertions.

That private practitioners are less skilled than public vaccinators in this art I do not think anyone would wish to maintain, but I contend that as private practitioners we are more concerned to please our patients than to keep up the requisite area of a successful vaccination. Hence, from my experience I have no hesitation in saying that vaccination carried out privately is not such a success (speaking broadly) as when performed by a public vaccinator.

There is another factor which I have not seen alluded to touching the public vaccinator: he is in England and Wales, almost without exception, the Poor-law medical officer for the same area, and for this latter post it is only too well known his fees are wretchedly inadequate, and that he is given the additional appointment of public vaccinator to recoup himself—a kind of set-off to make it worth his while accepting the former post. Deprive him of the vaccination, where is he?—I am, etc.,

Morriston, R.S.O., April 6th. E. Rice Morgan.

THE ETIOLOGY OF TYPHUS FEVER.

Sir,—I trust Dr. McWeeney and his fellow bacteriologists will have patience with me when I make a suggestion concerning their methods of investigation which may be a blunder, but which has at any rate as its support the work of many years on the methods of reproduction in the algæ, conducted in the early days of a $\frac{1}{12}$ water immersion, and following the guidance of Sachs.

In the fresh water algæ the two methods of reproduction are clearly governed by the conditions of the seasons, the resting spore securing continuity of life during the winter, the swarm-spore spreading the plant profusely during those seasons of the year when rapid growth is possible.

I need not give to biological readers the details of the life-history of the zoospore and the zygospore, they are so familiar; but what may not have struck them is the *a priori* resemblance in the clinical history of some of the zymotic diseases with the life-history of the two spores, and the changes effected in typhus fever bring with them almost an analogy. Talking on this subject one Sunday afternoon with Mr. Darwin and telling him of my recollections, then recent and vivid, of typhus and its history in Edinburgh, he made the fertile suggestion that the living contagion was probably some very ordinary zoophyte which had in it a capacity for sportive development, when it met with the conditions of human overcrowding, on which alone typhus depends. Thus it seems capable of being created anew, a fact only explicable on Darwin's hypothesis, and it certainly seems to have both resting and swarm spores. It is therefore likely that, in looking for some special organism as a result of their cultures, the bacteriologists are looking for too much, more than is needful. That this organism must have resting spores is clear from the renewed outbreaks after intervals which were constantly met with in Edinburgh; that it has swarm spores goes without saying, when we know how persistently it is spread from one sick patient during the later days of the attack and for some time after. The mathematical certainty of its events suggest the possibility that the crisis (fourteenth day) is the day of the manufacture of the resting spores, and the preceding days—at least six—are the days of riot of the swarming spores. If we assume—and I think that there is every reason that we may—that the specific pabulum of this living contagion is the albuminoid substances condensed on the walls and windows of every inhabited room, the clinical history of the disease and Darwin's suggestion of a sport fall at once into biological order, and an explanation is obtained of the horrible hæmorrhagic cases which inevitably ushered in a fresh outbreak. In small-pox and scarlet fever we see exactly the same thing occurring.

As in the reasoning of Euclid, let us suppose all this to be true, an indication is at once obtained that in such diseases it is useless to look for cultures in the blood. Swarm spores may be got, but would they react? It is from resting spores that true cultures alone could be expected, and these are to be expected in the epithelial structures, and probably there alone. As a further *a priori* suggestion for this sort of inquiry there is the cutaneous suppuration of small-pox and the deadly influence of inoculation from the pus or even the dried scab, the complete desquamation of scarlet fever, and the marked influence of the process of peeling in spreading the disease, and the less complete shedding of epithelium in measles and typhus, with the same marked and potent results of this process in conveying infection; here also we may include the fact of the conveyance by water of the secretions from the epithelial glands of Peyer in typhoid. My suggestion is that in regarding these exanthemata as blood diseases we may be all wrong, they may be epithelial diseases; and I suggest that bacteriological research should turn in that direction. Again I ask pardon of the bacteriologists for venturing to trespass on their domain.—I am, etc.,

Birmingham, April 3rd. Lawson Tait.

HOSPITAL ABUSE AND WORKMEN'S SUBSCRIPTIONS.

Sir,—I am honorary surgeon to a small provincial hospital, which follows the system of governors' recommendations for the admission of patients. An out-patient order was recently brought up on the day of my attendance at the hospital, with the space for filling in the "Earnings of Family" left blank. On learning from the mother of the patient (an infant) that her husband was in regular work, earning thirty shillings a week, and that the patient was their only child, I told her that I did not consider the case a fit one for treatment at the hospital, on the ground that her husband was able to pay for medical attendance. I did not attend to the case then (it was a case of slight rickety curvature of the legs, which would not suffer at all by waiting a week or two), telling the mother I would bring the matter before the next meeting of the hospital committee. This I did, and the case was rejected on the ground above mentioned. In accordance with a rule of the hospital, this decision of the committee was communicated to the governor who had granted the order, which was returned to him.

Now the governor in question is the proprietor of a local factory, which levies a (voluntary) contribution of 1d. a week from each hand employed in the works (deducted from the wages paid) for the infirmary, the money raised in this way amounting to £50 a year; and the father of the patient is one of the factory hands. The governor wrote to the secretary of the infirmary, intimating that if treatment was refused in this case the father of the child would make the matter known throughout the works, with the probable result that the men's contributions to the funds of the institution would be much diminished or discontinued. He further said that the men made this contribution, not in a spirit of philan-

thropy, but with the definite object of "getting their doctoring done cheaply," and he therefore referred his order back for further consideration by the committee. The secretary, on receipt of this letter, after consulting privately with one or two members of the committee, directed the house-surgeon to write and inform the parents of the child that the committee considered the case a suitable one for treatment at the infirmary, and to direct them to bring the child up again on the proper day.

Accordingly, on my next day for seeing out-patients, the mother brought up the child again, with the note from the house-surgeon. I attended to the case at the time, but brought the matter again before the committee on the evening of the same day. The committee unanimously decided that the case should be admitted as a matter of expediency, although they recognised that it was not right in the abstract that such cases should be attended at the infirmary.

As the case appears to me to be an example of a serious form of hospital abuse, I thought it right to lay the facts before you, and, if possible, to elicit an expression of opinion on the case, and advice as to what is the proper course for me to take as matters stand at present.—I am, etc.,

March 15th. HOSPITAL SURGEON.

POLITICS OR PRACTICE.

SIR,—There has appeared quite recently in several local papers this advertisement:

> WANTED, a RESIDENT MEDICAL PRACTITIONER for eight large villages. A splendid opening for an energetic man who would attend to his profession.—Address for particulars, Mr. ———, of ———.

I applied and received a letter, which purported to come from Mr. ——, making an appointment for me to meet a Mr. X. I wired to Mr. —— suggesting a more convenient day, and received a letter from Mr. X. agreeing to my plan. I was rather puzzled to account for both letters being apparently written by one hand. On my arrival yesterday, I was met by Mr. ——, who had been deputed by Mr. X. to take me to the latter's house, and, as we journeyed thither, I learnt that Mr. —— was acting only as advertising agent, and had otherwise nothing to do with the matter; that Mr. X. had just been defeated in the county council election by the resident doctor, of whose existence I had not heard when I set out on my voyage of discovery; that said doctor was a red-hot politician; that of course he could not attend to politics and his practice; and —when I pressed Mr. X.'s deputy—that some people did complain of the doctor neglecting them (!). When we arrived at a road branching off to Mr. X.'s house, I became curious to know where the doctor lived. "Straight on that way, near the bottom of the village." "Thank you. Good day. I'll go on and see him," and I left Mr. —— agape in mute amazement. I meantime to the doctor's, who informed me that one man had been already, did not come near him, but didn't think it good enough; that both the letters to me were in Mr. X.'s hand, that Mr. —— had voluntarily assured him of his acting only as an agent in the business, of his regret over it and disapproval, and of his personal intention to retain him for their family doctor as he had always been (so that Mr. —— at least was not one of the people who complained of neglect. Where is the medico that satisfies everyone?) I hope that my plain narrative of the facts will prevent all others, as they did me, from proposing to supply the alleged want in this case.

I was assured by the doctor that the existing provision for the medical requirements of the neighbourhood was ample.—I am, etc.,

Lillington Street, W., March 29th. THOS. M. WATT.

PAROCHIAL MEDICAL VACANCY IN SOUTH HARRIS.

SIR,—As the present medical officer I consider it my duty to make known to my medical brethren the existing conditions of the above appointment. Within two years there have been exactly seven medical men coming and going to Harris, South Uist, and Barra. This is easily explained in my own case. The parish council of Harris consists of seven crofters, who interfere between me and my work, and have done so since my coming here. This parish council met at their quarterly meeting, and on a sudden thought dismissed their medical officer. I have asked the clerk for cause or reason, and am informed there is none. They simply want a new doctor.

The advertisement reads, "£90 for parochial, £60 for private practice; other emoluments."

The above was the information I received from Mr. Thomas Wilson at the time of my appointment, and I am sorry to say that it is false and misguiding. Private practice ought to read "coercive practice." The £60 for so-called private practice is collected as follows: The parish council have formed themselves into a Medical Scheme Committee. They collect from each crofter family 5s. per annum, from each cottar family 3s. per annum, for medical attendance. The families are widely scattered, many of them being fifty miles from my house, and the majority being over twenty miles. In South Harris Estate there are about 500 families. Out of that number for 1897, 293 families paid their subscription, producing the sum of £65 12s. 6d. I received £60. For 1898 only 180 families have paid, producing about £40.

As to the terms of this scheme. The parish councillors are 5s. members. I as parochial medical officer (1) am coerced by the councillors to accept this scheme. (2) Am coerced to attend all families on the estate, whether they be members of the scheme or not, and not allowed to charge a fee; if I do the councillors state I will be dismissed. (3) If more than £60 be collected I receive £60, if less I only receive the smaller sum. (4) The councillors will give no guarantee, and will make no agreement. (5) The medical officer is not permitted to examine members; all and sundry are admitted, whether they have chronic illness or not, and must be attended to, otherwise the council will inform you you will be dismissed. This is private practice £60 per annum. The parochial salary, £90, has to include all expenses, attendance on paupers and lunacy, and also the vaccination of about 60 children per annum, providing your own lymph, and walking to the stations, varying at distances of 4, 8, and 13 miles from my house. Other emoluments in the plural means exactly one emolument of £10 per annum as M.O.H.

These coercive schemes, and the love of dismissing medical men in the Highlands, is becoming contagious, and it is not for the love of the place, but for the sake of my profession that I would ask the support of my medical brethren in teaching the West Coast crofter that a medical man is not a plaything. At the present moment no medical officer is sure of his appointment, as he may be dismissed by a whim of the councillors for mere amusement, and the innate love of having the power to do it.—I am, etc.,

JAMES ROBERTSON, Medical Officer.

Obbe, South Harris, April 12th.

Obituary.

SALOMON STRICKER, M.D.,

Professor of Experimental and General Pathology in the University of Vienna.

THE news of the death of Professor Stricker must have come as a surprise to many in this country. Perhaps few knew that for some time he had been laid aside from the duties of his chair. The year of his death was for Stricker a noteworthy one, for it marked the so-called jubilee of three great events in his life—forty years since he graduated, thirty since he became Extraordinary Professor, and twenty-five as full Professor.

Born in 1834 in Waag-Neustadtl, in Hungary, he studied in Pressburg and Ofen Pest; afterwards he went to Vienna, where he "inscribed" as a student of law, but soon turned to medicine. In his second year of medical study he began to work under Brücke (1855-58). In 1858 he graduated as M.D., in 1859 he became Assistant in the General Hospital, in 1862 a *Privat-docent* for "Entwicklungsgeschichte," and in 1863 he again became Assistant to Brücke. In 1865 he published his discovery of the diapedesis of the red blood corpuscles and the contractility of the capillary wall. At the end of the war of 1866 Cohnheim was in Vienna, where began a friendship between these two. In 1866 Oppolzer selected Stricker to develop the experimental method as applied to physiology and pathology in his clinic. Through the strong friendship which sprang up between Stricker and Rokitansky, Stricker

in 1868 was nominated Professor (Extraordinarius) of Experimental Pathology with a very modest and limited laboratory. In 1869 appeared his *Studien a. d. Institute f. exp. Pathologie.* In 1870 he visited England, and in 1871 his then assistant, Dr. Klein, came to London.

In 1871-73 appeared his *Handbuch d. Lehre v. d. Geweben d. Menschen v. d. Thiere* (translated in 3 vols., New Sydenham Society, *Human and Comparative Anatomy*). Chiefly through the influence of Rokitansky, Stricker was nominated Professor of General and Experimental Pathology. The chief results of the work done by his pupils in his laboratory were edited by Stricker, and published in the well-known *Med. Jahrbücher* (1871-80). In 1877-83 appeared his *Vorlesungen über allgem. u. exp. Pathologie.*

Stricker recognised the importance of experimentation for the advancement of medicine, and although in his course in 1883 he confined himself to histological demonstrations, he soon developed an auditorium replete with apparatus for all kinds of experimentation, and so arranged that everyone in the audience could profit thereby. He laid great stress on this subject in his lectures, which were often attended by over 400 students.

Stricker regarded the study of tissues not as an end, but as the means of ascertaining the course of events in living tissues; he studied not so much tissue morphology as tissue physiology, and to this end he invented his "hot stage." Stricker through his pupils also contributed much to our knowledge of vasomotor nerves, efferent fibres in the posterior roots of spinal nerves, the action of diuretics, the anæsthetic action of cocaine, etc.

Besides strictly medical papers, Stricker published several philosophical works: *Studien über Bewusstsein* (1879); *Sprachvorstellung* (1880); *Bewegungsvorstellung* (1882); *Association d. Vorstellungen* (1883); and *Physiologie d. Rechts* (1884).

In all he published 134 papers from his own pen, and under his direction over 400 were published by the pupils—numbering 123—who worked in his laboratory under his direction. Of these pupils 45 are already professors and 17 *Privatdocenten.*

Stricker lived very much apart, and went little into society. What interested him he fought for regardless of consequences. Perhaps his position in Vienna in later years may be summed up in the words of one of his assistants—Georg Kapsammer—from whose short biographical notice of Stricker most of the above facts are taken: "Stricker's life was one rich in work, rich in results, rich in disputes; rich in luck and honours it was not."

EDWARD COTTERELL, F.R.C.S.

London.

We regret to announce the death of Mr. Edward Cotterell of West Halkin Street, who succumbed to an attack of pneumonia on April 5th at the early age of 41. Mr. Cotterell received his professional education at University College, London, where he had a distinguished career, being Atkinson-Morley Scholar, House Surgeon (to Mr. Christopher Heath), and Assistant Demonstrator of Anatomy. He was admitted a Member of the Royal College of Surgeons of England, and a Licentiate of the Royal College of Physicians of London in 1880, and he practised for some years at Bicester, where he made for himself a considerable local reputation, chiefly by his boldness and skill in dealing with surgical emergencies. Removing to London he obtained the Fellowship of the College of Surgeons by examination in 1891, and was appointed Surgeon to out-patients at the Lock Hospital.

At the time of his death he was also Surgeon to the West End Hospital for Diseases of the Nervous System and to the Cancer Hospital. Mr. Cotterell was a Fellow of the Royal Medical and Chirurgical and several other professional societies. He was the author of the *Pocket Gray, or Anatomists' Vade Mecum*, which reached a fourth edition; *Some Common Injuries to Limbs, their Treatment and After-treatment, including Bone-setting, so-called*; and *Syphilis, its Treatment by Intramuscular Injections of Soluble Mercurial Salts.* He was also the editor of the second edition of Mr. Alfred Cooper's work on Syphilis. Mr. Cotterell contributed several papers to the journals, of which the following may be mentioned: Successful Case of Removal of Entire Uterus for Cancer affecting Cervix; Two Cases of Uretero-lithotomy, Stone Impacted in the Ureter, its Consequences, Symptoms, Diagnosis, and Treatment; On the Frequent Occurrence of Epithelioma of the Tongue after Syphilitic Lesions of that Organ, and its Treatment; Case of Microcephalus Treated by Linear Craniectomy. Mr. Cotterell was a man of great ability, energy, and ambition, and had he lived would, there can be little doubt, have taken a prominent place among British surgeons.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty:—John B. B. Triggs, Staff-Surgeon, to the *Rayleigh*, undated; William Spry, Staff-Surgeon, to the *Cleopatra*, undated; Edward J. Biden, Staff-Surgeon, to the *Boscawen*, additional, for the *Minotaur*, undated; Charles J. E. Cock, Surgeon, to the *Cleopatra*, undated; William R. M. Young, Staff-Surgeon, to the *Medea*, temporary, April 7th; William H. Thomson, Surgeon, to the *Hawke*, April 1st.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel Lewis A. Irving, M.R.C.P.I., retires on retired pay, April 6th. He entered the service as Assistant Surgeon, April 1st, 1871; became Surgeon, March 1st, 1873 Surgeon-Major, April 1st, 1883; was granted the rank of Lieutenant-Colonel, April 1st, 1891; and made Brigade-Surgeon-Lieutenant-Colonel, December 16th, 1894. He has no war record in the Army List.

INDIAN MEDICAL SERVICE.

Surgeon-Colonel L. D. Spencer, M.D., C.B., Bengal Establishment, is granted the temporary rank of Surgeon-Major-General from February 28th, while officiating as Principal Medical Officer, Punjab Command.

The undermentioned probationers for Indian Medical Service are appointed Surgeon-Lieutenants from January 28th: T. H. Delany, Bengal; J. W. F. Kait, Bengal; S. R. Douglas, Punjab; E. J. O'Meara, Punjab; G. Tate, Punjab; R. F. Baird, Punjab; A. T. Gage, Punjab; G. C. Laing, Bombay; G. McPherson, Bombay; S. Hunt, Bombay; A. G. Sargent, Bombay; W. H. Cox, Bombay; De Vere Condon, Bombay; H. A. J. Gidney, Bombay; H. Kirkpatrick, Madras; F. D. S. Fayrer, Madras; P. K. Chitale, Madras; and W. Lethbridge, Madras.

THE YEOMANRY AND VOLUNTEER RIFLES.

Surgeon-Captain F. Morgan, Royal 1st Devon Yeomanry, has resigned his commission, April 6th.

Mr. John Andrew Turner, M.B., is appointed Surgeon-Lieutenant in the Herts Yeomany, April 6th.

Surgeon-Captain A. T. Wear, M.D., 1st Newcastle-on-Tyne Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Major, April 6th.

Surgeon-Lieutenant J. Wreford, 1st Northumberland Artillery (Western Division Royal Artillery), is promoted to be Surgeon-Captain, April 6th.

Surgeon-Captain R. Greene, 1st Volunteer Battalion the Northamptonshire Regiment, has resigned his commission, April 6th.

THE OPERATIONS IN MATABELELAND.

The *London Gazette* of April 5th publishes despatches from Sir Alfred Milner, G.C.M.G., Governor and High Commissioner of the Cape of Good Hope, containing lists of casualties in Matabeleland and Mashonaland, which occurred in 1896 and 1897. Among these we find the following: Absolom Froud, Corporal Medical Staff Corps, November, Belingwe, buried near Belingwe Laager (cause of death not stated). Dr. J. Levy, Medical Officer, April 10th, Gwana patrol, wounded in action. Dr. and Mrs. Langford, Insiza, end March, among those reported murdered or missing. Henry H. Gray, Surgeon Natal Troop, June 20th, 1896, 1st Hartley Patrol, very severely wounded in action. Robert Tennant, Hospital Sergeant British South Africa Police, fell off a rock and killed at Hartley, July 26th, 1897. John Beaty, Private Medical Staff Corps, October 29th, 1896, Marandella's Hospital, died from rheumatic fever and heart disease.

THE NORTH-WEST FRONTIER RISING IN INDIA.

The *London Gazette* of April 5th contains the despatches from Sir William Lockhart, describing the operations of the Tirah expeditionary force under his command from November 1st, 1897, to January 26th, 1898. The despatch was briefly noticed in the British Medical Journal of April 2nd, and the names of the medical officers with the expedition who were selected for special mention were then given. The following additional items are quoted as being of special interest to our readers:

The Commander-in-Chief in India in transmitting the information to the Government of India, says: "The administration of the military medical service has been successfully and satisfactorily carried on during the same period by Surgeon-Major-General A. A. Gore, Principal Medical Officer Her Majesty's Forces in India, through whose efforts and the ready co-operation of officers and subordinates, the department has, at a time of pressing emergency, been able to comply with the heavy demands made upon it. The extent of these demands may be best realised from the statement that it was considered necessary to provide hospital accommodation for 12 per cent of troops and followers. On this basis 6,526 beds were made available, including 36⅔ field hospitals. The accuracy of this forecast may be gauged from the fact that on December 20th, 1897, the number of sick in hospital, then at its highest, was 11.16 per cent. of the force. The results obtained in the treatment of the sick, and especially in surgical cases of wounds, have been most satisfactory."

Sir William Lockhart thus sums up in respect of the new arrangements: "The officers of the Army Medical Staff and of the Indian Medical Service have fully maintained their high reputation by their attention to the

sick and wounded both under fire and in hospital. The hospital arrangements were generally excellent, but I consider that the field equipment is too heavy and elaborate for mountain warfare, and that it might be materially reduced without hardship to the patients. The conspicuous colour of the canvas with which the doolies are covered is very objectionable, as it attracts the enemy's fire."

Further on Sir William writes: "Surgeon-Major-General G. Thomson, C.B., Indian Medical Service, has been my Principal Medical Officer in the field, and I desire to express my indebtedness to him and to the other officers of the department, of which he has been in charge, for the high state of efficiency in which it has been maintained, often under very unfavourable conditions. The Principal Medical Officer of the Force speaks in high terms of his secretary, Surgeon-Major W. A. Morris, Army Medical Staff."

Among the honorary commissioned officers mentioned are: First Class Assistant-Surgeon D. F. O'Connor, Second Class Assistant-Surgeon W. C. M. Charters, and Third Class Assistant-Surgeon W. G. St. John Hussey.

A list of the casualties sustained by the force is appended, but this does not contain the name of any medical officer.

THE CHARGE OF A GENERAL HOSPITAL.

THE Government of India have accepted the Commander-in-Chief's recommendation that when, from the exigencies of the service a surgeon-lieutenant-colonel is appointed the principal medical officer of a general hospital of 500 beds, he shall be granted the temporary rank of brigade-surgeon-lieutenant-colonel.

SECONDING I.M.S OFFICERS.

THE Government of India have sanctioned the seconding of officers of the Indian Medical Service who hold appointments outside cadre of service for more than one year. This means the strengthening of the department by recruitment of one or more officers.

INDIAN ARMY REGULATIONS.

AN addition has been made to the Indian army regulations ruling that an officer entitled to gratuitous medical attendance is also entitled to gratuitous advice from a medical officer in the employment of Government called into consultation by the medical officer who is, in accordance with regulation, in charge of the case. Should the officer, however, decline the attendance of the medical officer provided by Government, and call in another medical officer to attend him in illness, the usual fees can be claimed by the latter.

ACTING ARMY SURGEONS.

LIABLE TO RECALL writes: The offer of acting appointments for six months in the army to young medical men nominated by the schools is a move which affects those especially who retired on a gratuity and are liable to recall. Has not an "emergency" arisen, and should we not be recalled? Some of us who are unable to find employment would be only too glad to assist the War Office if we got the chance.

*** The offer of these "acting" appointments reminds us of Crimean days. It is of course pure nomination; but that right has never been foregone by the Secretary of State for War, and still exists in the regulations. Of course opinions may differ as to the expediency of the schools making nominations. Why, indeed, should not the War Office recall those of the retired officers as are willing to do duty temporarily? The answer is to be found, no doubt, in the extra cost.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

THE VANS DUNLOP SCHOLARSHIP.—Mr. Campbell Brown, M.A., Edinburgh, has been awarded the Vans Dunlop Scholarship (£300) in the subjects of botany, zoology, and geology co-equal at Edinburgh University. He has also been awarded a grant from the William Dickson Travelling Fund for research, and receives the B.Sc. degree with distinction in two subjects. Mr. Campbell Brown is a former pupil of Daniel Stewart's College.

THIRD PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B., CH.B. —The following candidates have passed this examination:—

I. Aird, J. Anderson, H. Baird, W. J. Baird, C. A. J. A. Balck, W. J. Barclay (with distinction), E. F. Bashford, J. G. Bell, F. P. Bester, O. J. Bodington, G. A. Brogden, W. J. D Bromley, A. O. L. Brown, G. H. J. Brown, J. C. Caldwell, D. A Callender, H. G. Carlisle, J. C. Carr, L. M. Chesney, B. J. Cowilney, W. Darling H. B. Dodds, C. H. Durrant, D Ewart, W. Ewart, W. R. W. Eyton, R. R. Fasson, H. Faulkner, D. Fenton, D. Ferrier, E. G. Ford, A. S. Frank, J. Fullerton, J. J. Galbraith, H. A. H. Gilmer, J. H. Gordon, I. B. Gornall, F. J. Gray, A. H. Griffith, P. W. Hampton, F. J. Hathaway, G. G. Hay, A. C. Heath, J. K. M. Hermon, H. T. Holland, A. M. Holmes, J. Hustand, J. G. Jack (with distinction), W. T. James, R. F. Jardin, J. W. Kerr, D. B. King, M.A., G. D. Laing, L. S. Lessing, T. Livingstone, E. O. Loch, J. L. Louis, J. Luckhoff, B. G. Macdonald, M.A., O. H. Macdonald, P. N. M. Macdonald, W. R Macdonald, H. Macfarlane W. M. Mackay, M. Mackelvie, H. M. Mackenzie, T. C. Mackenzie, G. Mackie, R. C. M'Lachlan, P. A. W. Maclagan, G. C. M'Leavy, R. A. Macneill, W. Macniven, L. W. Macpherson, A. G. Martin, J. Masson, M.A., B.Sc.; D. B. Merry, F. N. Menzies, G. H. Menzie, M.A.; J. Miller, B.Sc. (with distinction); J. G. Mitchell, R. N. Mitchell, J. R. Munro, W. A. Murray, A. W. Nankervis, T. P. Oates, J. Orr, T. S A. Orr, W. Park, A. S. Parker, A. S. M. Peebles, E. J. Peill, A. Preston (with distinction), R. N. Pringle, S. C. Pritchard, W. Purves, H. J. O. Raeburn, F. G. Ralston, W. Reid, M.A.; A. C. Renwick, R. Ritchie, T. R. Robertson, T. Rogerson, R. M. Rowe, S. Simpson, B.Sc.; C. E. Smith, A. K. S Shand, V. E. Sorapure, S. Southall, W. J. Stuart, M.A.; W. W. Thom, G. N. W. Thomas; J. A. Thompson, R. G. Thomson, R. B. Turnbull, N. D. Walker, C. H. Watson, C. H. J. Watson (with distinction), A. White, A. S. Whytock, H. D. Wilson, A. H. Wood, and G. M. Young.

SECOND PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B. AND C.M.—The following candidates have passed this Examination:—H. O. Hobson, P. W. Shepherd, W. B. Winstanley, C. H. Wotherspoon, M.A.

THIRD PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B., CH.B. —The following candidates have passed this Examination in the subject indicated:

Pathology.—C. S. Clark, J. D. Comrie, M.A., B.Sc.; Y. A. Djorjizim.

UNIVERSITY OF GLASGOW.

DR. JOHN GLAISTER was on April 4th duly admitted to the office of Professor of Forensic Medicine in the University of Glasgow.

Among those who received the honorary degree of LL D. at the graduation ceremony on April 12th were Mr. Alexander Duncan, B.A., Secretary and Librarian to the Faculty of Physicians and Surgeons, Glasgow, and Mr. John Millar Thompson, F.R.S., Professor of Chemistry in King's College, London.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the second Examination of the Board in the subjects indicated:

Anatomy and Physiology.—C. J. Brierley, Yorkshire College, Leeds; T. B. Fawley, Yorkshire College, Leeds, and Mr. Cooke's School of Anatomy and Physiology; F. A. W. Drinkwater and W. T. Shields, Victoria University College, Liverpool; G R. Roberts, St. Thomas's Hospital; J. F. Morrison, Queen's College, Belfast; E. G. Wales, Cambridge University; S. L. Prall and S. Hodgson, Guy's Hospital; B. J Ward, C. Birch, and A J. Arch, Mason College, Birmingham; E. F. Fisher, R. H. N. Smith, London Hospital; J. N. H. Munro, University College, Bristol; W. R. Read, St. Bartholomew's Hospital; G. E. Waugh, Cambridge University and University College, London; C. S. Parker, University College, London; C. H. D. Robbs, B. S. O. Maunsell and H. R. Humby, St. Bartholomew's Hospital; W. T. Haydon and W. Fawssett, St. Thomas's Hospital; C. E. Blackstone and J. S. Goodall, Middlesex Hospital; L. E Stamm, J. Evans, and L Pern, Guy's Hospital; A. McCabe-Dallas, Bombay University and Guy's Hospital; J. E. Collins, London and Guy's Hospitals; L. L. Shoosmith and S. Donaldson, St. Mary's Hospital; W. Payne and H D. Brice, Westminster Hospital; W. R. Kirkness, King's College, London; L. D. Saunders and R. T. Harrison, St. George's Hospital; H. E. Ridewood and A. B. Waller, London Hospital; P. N. Gleig, Charing Cross Hospital; H. G. Rashleigh, A. C. Osbairn, E. F. Reeve, A. D. E. Kennard, and K. W. Goadby, Guy's Hospital; G. J. Humphreys, J. C. Sale, and A. H. John, St. Bartholomew's Hospital; L. F. Hanbury, R. L. Beane, and O. B. Gauntlett, St. Thomas's Hospital; A. R. Wellington, St. Mary's Hospital; H E. Crawley, Oxford University and St. Mary's Hospital; E. F. Ackery, Charing Cross Hospital; C. H. F. Bailey and E. R. Carling, Westminster Hospital; E. W. F. Dolman, King's College, London; R. J. L. Sladen, C. E. Ham, and G. Sowden, London Hospital; B. Yule, University College, London; A. Caddy, St. George's Hospital; T. Sanders, Cambridge University; W. S. Lewis, Owens College, Manchester, and Mason College, Birmingham; A. T. Marshall, King's College, London; J. P. Jones, University College of South Wales, Cardiff; C. M. N. May and O. J. S. Damian, St. George's Hospital; D. S. Skelton, T. W. Morcom, London Hospital; S. J. Ormond, T. A. Matthews, C. Tessier, A. C. H. Gray, M. A. Collins, B. Muir, H. K. Lacey, Guy's Hospital; C. de Z Marshall, A. F. Miskin, C. A. Palmer, H. Upcott, and H. H. Kiddle. St. Thomas's Hospital; W. J Morrish and C. W. Bond, St. Mary's Hospital; A. E. Thomas, A. H. Bostock, and C. S. Hawes, St. Bartholomew's Hospital; G. V. H. Fairhall, Westminster Hospital; W. S. Rooke, University College, London; P. P. Tobit, King's College, London; R. S. Roper, G. T Willan, J E. L Bates, G. S. C. Hayes, Guy's Hospital; F. E Wilson, Guy's Hospital and University College, London; D. W. Bishop and G. M. Soper, St. Mary's Hospital; H. G. Clitherow, H. R. Jeremy, and E. S. Scott, London Hospital; T. E. C. Cole, St. Bartholomew's Hospital; P. A. Hayne, St. George's Hospital; F. E. Anley, Charing Cross Hospital.

Anatomy only.—A. N. Leathem, Charing Cross Hospital; and W. R. Elliott, Cambridge University and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—D. T. Jones, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology; A. A. Vernon, Long Island College, New York, and Mr. Cooke's School of Anatomy and Physiology; and E. Green, Cambridge University and King's College, London.

Seventy-one gentlemen were referred in both subjects; 4 in Anatomy and 7 in Physiology for three months.

CONJOINT BOARD IN IRELAND.

THE DIPLOMA IN STATE MEDICINE.—A correspondent informs us that he has received a letter from the Secretary of the Conjoint Board in Ireland (Royal Colleges of Physicians and Surgeons) pointing out that the colleges have stated that they see no objection to their Diplomates in State Medicine signing themselves D.P.H.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART II.—The following candidates passed in:

Anatomy.—W. Alcock, Sheffield; H. F. Bellamy, Charing Cross Hospital; R. P. N. Blewett, Glasgow and St. Mary's Hospital; E. Courtauld, Royal Free Hospital; C. L. Driscoll, Charing Cross Hospital; D. R. T. Griffiths, Guy's Hospital; W. T. Harris, St. Thomas's Hospital; E. H. Kenny, Manchester; A. M. Marval, Royal Free Hospital; D. W. Purkis, St. Bartholomew's Hospital; H. Richardson,

Leeds; C. S. Scott, St. Bartholomew's Hospital; F. A. Segreda, Guy's Hospital; F. E. Shean, London Hospital; H. H. Sloane, St. Bartholomew's Hospital; W. S. Snell, Edinburgh and St Mary's Hospital; W. Sykes, Manchester; J. A. West, St. Bartholomew's Hospital.

Physiology.—J. C. M. Bailey, St. Bartholomew's Hospital; H. F. Bellamy, Charing Cross Hospital; R. P. N. Bluett, Glasgow and St. Mary's Hospital; R. V. Cowley, Edinburgh; A. W. H. Grant, Charing Cross Hospital; W. T. Harris, St. Thomas's Hospital; E. H. Kenny, Manchester; A. M. Marval, Royal Free Hospital; D. W. Purkis, St. Bartholomew's Hospital; H. Richardson, Leeds; C. S. Scott, St. Bartholomew's Hospital; F. A. Segreda, Guy's Hospital; H. H. Sloane, St. Bartholomew's Hospital; W. S. Snell, Edinburgh and St. Mary's Hospital; A. C. Stark, Westminster Hospital; W. Sykes, Manchester; J. A. West St. Bartholomew's Hospital.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

Biology.—T. J. M. Clapperton, King's College Hospital; A. J. Simmons, Birmingham.

Chemistry.—R. P. N. Bluett, Glasgow and St. Mary's Hospital; W. E. Cuthbertson, Bristol and Glasgow; T. D. Hemans, St. Thomas's Hospital; S. F. Hickman, Royal Free Hospital; J. E. Howroyd, Leeds; A. Kellgren, Royal Free Hospital; H. O. Sutcliffe, Cambridge.

Materia Medica and Pharmacy.—W. P. Allen, Birmingham; R. P. N. Bluett, Glasgow and St. Mary's Hospital; E. Coulthard, Royal Free Hospital; W. E. Cuthbertson, Bristol and Glasgow; A. G. C. Davies, Guy's Hospital; S. R. Dudley, St. Bartholomew's Hospital; A. J. Kennedy, Edinburgh; P. W. Robinson, Edinburgh; L. L. G. Thorpe, University College Hospital; A. Wolpe, Würzburg.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,197 births and 4,352 deaths were registered during the week ending Saturday last, April 9th. The annual rate of mortality in these towns, which had been 20.2 and 21.5 per 1,000 in the two preceding weeks, declined again to 20.2 last week. The rates in the several towns ranged from 12.6 in Portsmouth, 14.1 in Oldham, 14.7 in West Ham, and 15.3 in Cardiff to 23.5 in Leeds, 23.7 in Plymouth, 25.6 in Salford, and 27.7 in Liverpool. In the thirty-two provincial towns the mean death-rate was 20.7 per 1,000, and was 1.1 above the rate recorded in London, which was 19.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London the rate was equal to 2.8 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.2 in Sheffield, 3.4 in Brighton, 4.1 in Swansea, and 5.5 in Leicester. Measles caused a death-rate of 2.2 in Halifax, 2.6 in Brighton, 3.1 in Swansea, and 4.2 in Leicester; whooping-cough of 1.3 in West Ham and in Bolton, and 1.7 in Salford; and "fever" of 1.4 in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 57 deaths from diphtheria in the thirty-three towns included 29 in London, 3 in Cardiff, 3 in Bristol, 3 in Birmingham, and 3 in Leicester. One fatal case of small-pox was registered in Leeds and 1 in Gateshead, but not one in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,419, 2,371, and 2,377 at the end of the three preceding weeks, had further increased to 2,421 on Saturday last, April 9th; 234 new cases were admitted during the week, against 255, 191, and 239 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 970 births and 728 deaths were registered during the week ending Saturday last, April 9th. The annual rate of mortality in these towns, which had been 22.9 and 24.2 per 1,000 in the two preceding weeks, was 24.1 last week, and exceeded by 3.9 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the rates ranged from 17.0 in Perth and 17.6 in Edinburgh, to 26.3 in Glasgow and 31.9 in Dundee. The zymotic death-rate in these towns averaged 3.5 per 1,000, the highest rates being recorded in Paisley and Glasgow. The 367 deaths registered in Glasgow included 31 from whooping-cough, 21 from measles, 3 from scarlet fever, 2 from diphtheria, and 2 from "fever." Three fatal cases of whooping-cough, 2 of measles, and 2 of "fever" were recorded in Edinburgh; 2 deaths from diphtheria occurred in Aberdeen, and 2 in Greenock.

THE WORKSHOPS IN LAMBETH PARISH.

In a special report presented to the Lambeth Vestry on March 17th, Dr. Priestley, the medical officer of health, detailed the work which has recently been done in the parish in connection with workshops. It appears that up to the present time there have been inspected in Lambeth 500 workshops, containing 863 workrooms, in which were working, at the time of inspection, 3,020 persons, 1,331 males and 1,689 females (females alone being employed in 187 workshops). From a list given, setting forth the nature of the trade or business carried on in the 500 workshops, it may be seen that "dressmaking" has the pride of place with 92 workshops; tailors and clothiers and laundries with 40 and 38 respectively, stand next in order, and milliners and bootmakers are fourth and fifth on the list. In the miscellaneous assortment of trades which follows surgical instrument makers, sculptors, sign writers, organ builders, clogmakers, scenic artists, and many others find a place.

As regards the insanitary conditions met with at the time of inspection, it is noted that in 22 per cent. of the workshops the ventilation was unsatisfactory; in 25.2 per cent. the rooms needed cleansing; in 20.8 per cent. drains were found defective; in 25 per cent. sanitary fittings and appliances were faulty; in 6.2 per cent. separate closet accommodation for the sexes was wanting; in 3.8 per cent. conditions of dampness obtained; and in 4.2 per cent. overcrowding existed.

Dr. Priestley suggests the desirability of employing a female sanitary inspector in connection with workshop inspection. He points out that 55 per cent. of the workers employed are women, and states that it was chiefly in the 187 workshops in which females alone are employed that overcrowding was found to exist. The experience of other metropolitan districts, and of several of the largest provincial towns, leaves, says Dr. Priestley, little doubt that the appointment of a female inspector would prove of advantage to Lambeth.

FEES FOR EXAMINING ALLEGED LUNATIC.

ATROPOS writes: A medical officer to an union district is requested by the relieving officer to see a man in his district (6 miles from home) said to be insane. He visits the man with a J.P. (the man is not a pauper), and pronounces him to be a sane man, and not insane. Can the medical officer claim a fee, under the circumstances, from the guardians by order of the magistrate in attendance or otherwise?

*** In this case, if the provisions of Section XIII, Subsection 2, of the Lunacy Act of 1890 have been complied with, the magistrate acting in the case has power to order the guardians to pay a suitable fee for the medical report made to him after the examination of the patient by the doctor. "Atropos" does not appear to have had an order in writing to visit and report on the case; we question, therefore, whether he has a legal claim on anyone for a fee.

MEDICO-LEGAL.

A FREE ELECTRICAL HOSPITAL.

MR. LUXMOORE DREW, coroner for West London, held an inquiry on March 12th, touching the death of John Salter, aged 71. According to the report in the *Daily Telegraph*, the evidence of a brother showed that the deceased had left his home in the Midlands to undergo treatment by electricity. The landlady of the house in which he died stated that the deceased complained of shortness of breath and lameness, and attended the Notting Hill Gate Free Hospital at 30, Silver Street, Kensington. On Good Friday, she found him sitting in his chair dead. She sent to the professor at the hospital, who replied that he did not attend patients outside. The coroner's officer stated that he saw "the Professor" at the hospital, who said that he had treated the deceased for rheumatism, and that he had a weak heart. Annie Bridge, who said that she was engaged at the "Electrical Hospital," but had had no previous training, gave evidence. She said that there was a staff of six nurses; that Dr. Walton, of Swanage, the consulting physician, never saw patients, but that Professor D'Odiardi did. Deceased was given electricity by direction of the professor. The institution was kept going by the professor, and not by voluntary contributions. There was a Board of Management, and witness was paid by the Committee. Mr. Edmund Savaly D'Odiardi, who is reported to have laboured under great excitement, described himself as a medical electrician. He had not a medical training or qualification. His advice and instruments had been accepted by the Dean of the Medical Faculty of Belgium. He used them to affect the physical forces of the human body, and had benefited the voices of clergy, barristers, and singers. He founded the hospital with Judge Pennington and Lady Forsyth, and there was a loss of £2,000. General MacLaughlin was chairman of the Board. Witness was the main mover, and received no salary. He always acted under a person's physician, but did not follow that rule in the case of the deceased. After Mr. Salter had paid £3 he said he could not afford more, and was then treated for nothing. Witness's opinion was that he had catarrh of the stomach. After some further evidence Dr. Barratt said that the *post-mortem* examination showed that there was no catarrh in the stomach, and that death was due to syncope from heart disease. The application of a battery would be a serious thing to a person in that condition. The coroner said that the professor was absolutely unqualified to diagnose a disease. In this case he had not diagnosed the disease, and the catarrh he suggested was absent. Had the deceased died while the battery was being applied a charge of manslaughter would have followed. The jury returned a verdict in accordance with the medical evidence, and added a rider that the professor should not apply electricity except under a doctor's order and advice, and that only trained nurses should be engaged. The Coroner agreed, and said he could not understand why people would go to such a place instead of to a proper hospital where they would be sure to get the best advice. Addressing "Professor" D'Odiardi, the Coroner cautioned him that the proceedings had placed him in a serious position. Should a person die after the application of electricity without the supervision of a doctor and without a diagnosis that he was a fit subject he (Mr. D'Odiardi) would be held responsible. He advised him for his own sake never to attempt to diagnose an internal complaint.

MEDICAL TITLES.

PROCEEDINGS were taken at the instance of the General Medical Council before the Caxton Petty Sessions, Cambridgeshire, on April 6th, against Mr. Herbert Kingsley Hunter, a medical man practising at Gamlingay, a licentiate of the Society of Apothecaries duly qualified to practise medicine, surgery, and midwifery, for styling himself "physician and surgeon."

Mr. Muir Mackenzie, instructed by the Solicitor of the General Medical Council, appeared for the prosecution, and Mr. Horace Condy for the defence.

The facts were not disputed. It appeared that the defendant has an American degree (M.D. Philadelphia), which he discontinued to use after

being warned by the General Medical Council. He inquired of the Council if he could not style himself "physician and surgeon," but the Council replied that they could not advise him.

For the prosecution Mr. Muir Mackenzie quoted the case decided by the justices of Aston, Birmingham, in 1891, which was confirmed on appeal, but Mr. Condy contended that the points were dissimilar, and submitted that the diploma of the Society of Apothecaries which he put in entitled the defendant to practise medicine, surgery, and midwifery, and to use such titles as "physician and surgeon," so long as he did not assume the titles conferred by any other licensing body or university.

The Bench decided to convict the defendant of using the title of physician, and imposed a fine of £5 and costs, and Mr. Mackenzie stated that he did not wish to proceed with the second information, namely, as to the use of the title of surgeon. Counsel for the defendant consented to state a case for the decision of the High Court.

We understand that the Society of Apothecaries are taking active steps to get the question decided by the High Court, it having been arranged before the case was heard before the magistrates that in the event of a conviction they should be required to state a case.

As the questions involved in this case are of great importance, we shall await the decision of the High Court before making any comment on the subject.

ADVERTISING BY CIRCULARS OR CARDS.

Modestinus.—It is difficult to give specific replies to the questions raised by our correspondent without being misleading. The General Medical Council have from time to time expressed opinions on the subject of advertising which leave no doubt as to their views, and advertising by means of circulars or cards stating hours of consultation and fees would be clearly contrary to such views, and might, if persisted in, lead to serious results if the matter were brought before the General Medical Council for inquiry.

THE TITLE OF "DR."

L. A. W.—We do not think that we can usefully add anything to what has already appeared in the British Medical Journal on many occasions with reference to the prefix of the title of "Dr.," and we would refer our correspondent to the reply in the Medico-Legal Column of the Journal of November 14th, 1896, in which some general views are expressed. The medical practitioner referred to would certainly have no greater right than our correspondent himself to prefix the title of "Dr."

A QUESTION OF COVERING.

T. R. J.—The question raised by our correspondent is of too general a character to enable us to express any definite opinion. All we can say is, that every case brought before the General Medical Council would be strictly investigated, and decided on its merits.

MEDICAL NEWS.

A Pocket Synopsis of the *British Pharmacopœia* (1898) with concise notes on the changes, particulars of new preparations, tables of doses, strengths, etc., compiled by Mr. H. Wippell Gadd, Associate of the Pharmaceutical Society, will shortly be published by Messrs. Evans, Gadd, and Co., of Bristol and Exeter.

National Vaccine Establishment.—We are asked to state that the National Vaccine Establishment, which is now located at the Local Government Board offices at Whitehall, will on April 27th be removed to Room 140, St. Stephen's House, Cannon Row, Westminster. Supplies of lymph will be furnished to medical practitioners on personal application at the new premises between the hours of 12 and 2, or by letter addressed to the Secretary, Local Government Board (National Vaccine Establishment), St. Stephen's House, Cannon Row, Westminster, London, S.W.

The Poisoning at Hilsea Barracks.—Respecting the poisoning by arsenic of a number of Royal Artillery men, women, and children at Hilsea Barracks through some vinegar issued at the canteen, alluded to in the British Medical Journal of March 12th, we are informed that a reward of £100 is now offered to any person giving information concerning the placing of arsenic, or any preparation of that poison, into a cask of vinegar at the canteen early in February. The reward is being offered through a firm of solicitors, who, we understand, represent the firm which supplied the canteen with the vinegar alleged to have caused the symptoms of poisoning.

The Prevention of Tuberculosis in Paris.—The Paris Assistance Publique is taking steps to check the spread of tuberculosis among the population. It has already scattered broadcast a leaflet pointing out that the disease is preventable and also curable, and that it is propagated mostly by the sputa of consumptive persons. Stress is therefore laid upon the importance of minimising as far as possible this source of infection. It is urged that tuberculous patients at home should expectorate only into a special receptacle containing fluid, and when out of doors only into a handkerchief. The disgusting habit of spitting on pavements, in omnibuses, and railway carriages, is properly pronounced to be dangerous as well as disgusting. The spittoon should be cleansed every day by steeping in cold water which has been boiled for five minutes, and handkerchiefs and other things which have been used to spit in should be steeped for five minutes in boiling water, or handed over to the sanitary authorities for disinfection.

Iron in Organic Bodies.—Dastre and Floresco have recently published some valuable observations on the iron-secreting properties of the liver of crustacea and molluscs. The iron is distinctly eliminated for purposes of oxidation. The proportion of iron in the liver of the lobster, cuttlefish, oyster, and snail is independent of the richness in iron of the animal's surroundings. It is also independent of fasting or healthy diet and of terrestrial, marine, or freshwater life, but certainly plays a part in the maintenance of the shell. More important is the fact that the hepatic secretion of land molluscs during hibernation is rich in iron. The metal is here needed for oxidation; it keeps the snail or slug going during the winter. The common cuttlefish and other cephalopods possess a liver rich in iron. In their monograph, "La Fonction Martiale du Foie," in the January number of the *Archives de Physiologie* they note that the cuttlefish's liver is better specialised as a worker in iron salts than is the same organ in the higher vertebrata. For in the former no other gland or structure and no fluid exists charged with iron. The metal in its blood is copper.

Debt and Hygiene in Madagascar.—Major Legrand-Girarole has published some remarkable notes on the primitive municipal government of Antananarivo before the French conquest. The most elementary principles of sanitation were ignored. Neither sewers nor cesspools existed. After the occupation of the capital great trouble was experienced in attempting the removal of sewage. This was imperative, as the garrison began to suffer from fever. At length the authorities enforced the duty on native prisoners, in durance not for rebellion or treason but for civil and criminal offences against their own countrymen. This regulation had the desired effect. Formerly the meanest labourer could not be made to carry sewage, whilst debtors bore imprisonment in irons for months in a Madagascar Fleet prison. These debtors, when forced to perform sanitary duties, at once found the means to pay their creditors. Now, the gallant Major informs us, the natives are far more careful not to contract debts, and at the same time Antananarivo is becoming a healthy city.

Proposed National Society for the Study of Epilepsy in America.—The Medical Superintendent of the Craig Colony, Dr. William P. Spratling, proposes to form a national society for the study of epilepsy and the care and treatment of epileptics. He indicates the scope of his work as follows: (1) The scientific study of epilepsy; (2) the rational treatment of the disease; the best methods of caring for dependent epileptics, including (*a*) the construction of proper homes based upon a study of the epileptic's needs as to classification and environment; (*b*) the study of the utilisation of the epileptic's labour for economic, scientific, and ethical reasons; (*c*) the study of the best educational methods to be employed, including manual, industrial, intellectual, and moral forms and forces. With a view to ascertaining in a measure the desirability of the organisation of such a society, thirty-five circular letters have been sent to physicians and others who might be interested in the matter. To these thirty replies have been received as follows—for, twenty-three; against, four; neutral, three.

The Folk Lore of the Nose.—Dr. Noland Mackenzie contributes a paper to the January number of the *Johns Hopkins Hospital Bulletin*, upon the Physiological and Pathological Relations between the Nose and the Sexual Apparatus of Man, which might well be a chapter from the Anatomy of Melancholy by Democritus Junior. Dr. Mackenzie says that

Aristotle clearly defines the changes in the voice at puberty, and the effect of castration on its qualities. Its harsh, irregular, and discordant character during the maturation of the sexual functions was furthermore affirmed to be more conspicuous in those who attempted the early gratification of the sexual appetite. The supposed influence of sexual excitement upon the external throat is apparent from the ancient nuptial ceremonial. Before the virgin retired on the wedding night it was customary to measure her neck with a tape, and again on the following morning. If the neck showed an increase in size it was taken as a certain indication of defloration, whilst if the two measurements were equal she was supposed to have retained her virginity. Catullus, too, has pointed out that this curious test was used to establish the fact of adultery. The nose has long played a notable part in sexual folk lore. Passing by the *nasuti* who formed the Court of the Emperor Heliogabalus and of Johanna Queen of Naples, it is well known that amputation of the nose was a common punishment for adulterers and for adultresses detected in the act. The astrologers believed that there was an intimate relationship between the genital organs and the nose. Dr. Mackenzie thinks that the relationship, like most popular superstitions, has a slight basis of truth. The inferior turbinate bone, the under surface of the middle turbinate, and the posterior ends of the middle and superior turbinates, together with a portion of the septum nasi, is covered with a structure which is essentially the anatomical analogue of the erectile tissue of the penis. It is believed to be especially concerned in the evolution of the many curious "reflex" phenomena which are thought to occur in connection with nasal affections.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRKENHEAD UNION.—Assistant Medical Officer. Salary, £80 per annum, with board, washing, and apartments. Applications, endorsed "Assistant Medical Officer," to the Clerk by April 21st.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary, £150 per annum (with allowance of £30 per annum for cab hire), and unfurnished rooms, fire, lights, and attendance. Applications by April 18th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon and Assistant House-Physician. Appointments for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House-Governor, by April 30th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CHESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £40 per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management by April 23rd.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary, £100 per annum, with board, etc. Applications by April 18th.

CLEVELAND, YORKSHIRE: MIDDLESBROUGH COUNTY BOROUGH ASYLUM.—Assistant Medical Officer, age not to exceed 30, single. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent by April 26th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer, under 30 years of age, unmarried. Appointment for two years. Salary, £100 per annum, with board and lodgings. Applications, on forms provided, to the Chairman of the Selection Committee by April 25th.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by April 29th.

FAREHAM: HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried, and not to exceed 30 years of age. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors by April 26th.

FLINTSHIRE DISPENSARY.—Resident House-Surgeon. Salary, £120 per annum, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof £20 per annum. Knowledge of Welsh desirable. Applications by April 20th.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £120 per annum, increasing £10 annually to £150, without board or lodging. Applications to W. Swinsburne, Hon. Secretary, Town Hall, Gateshead, by April 20th.

GLOUCESTER: THE GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTER EYE INSTITUTION.—Assistant Surgeon. Applications by May 11th.

GROCERS' COMPANY.—Three Medical Research Scholarships, value £250. Applications to the Clerk of the Company, Grocers' Hall, Princes Street, E.C., before the end of April.

HARTSHILL, STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—Assistant House-Surgeon. Board, apartments, and washing provided. Applications by April 25th.

KING'S COLLEGE, LONDON.—Sambrook Medical Registrarship. Applications by April 25th.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—Non-resident House-Surgeon. Salary, £90 per annum. Applications by April 22nd.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Fountain Fever Hospital, Lower Tooting.—Salary, £160 first year, £180 second year, and £200 during third and subsequent years, with board, lodging, attendance, and washing. Applications, on forms provided, to be sent to Norfolk House, Norfolk Street, Strand, W.C., by May 20th.

NOTTINGHAM GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, rising £10 a year to £120. Applications by April 26th.

PLYMOUTH ROYAL EYE INFIRMARY.—Honorary Physician. Applications by April 20th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—House-Physician. Appointment for six months. No salary, but board, etc., provided. Applications by April 25th.

ROYAL ORTHOPEDIC HOSPITAL, 297, Oxford Street, and 15, Hanover Square, W.—House-Surgeon and Anæsthetist, unmarried. Salary, £100 per annum, with board and residence. Applications by April 20th.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, London.—Honorary Surgeon and Honorary Assistant-Surgeon. Applications to the Honorary Solicitor, 60, Moorgate Street, E.C., by April 23rd.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House-Surgeon. Salary, £30 per annum, with board, lodging, and washing. Applications to the House-Surgeon by April 21st.

STRATHERRICK PORTION OF THE PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer. Salaries from various sources over £100 per annum. Applications to Andrew Urquhart, Inspector of Poor, Gorthick, by April 20th.

TRURO: ROYAL CORNWALL INFIRMARY.—Ophthalmic Surgeon. Applications before April 30th.

WEST HAM HOSPITAL, Stratford, E.—Junior House-Surgeon. Salary, £50 per annum, with board, residence, etc. Applications by April 21st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Surgeon, to take over duties of House-Surgeon who is ill, for about two months. Salary, 3 guineas a week, with board, lodging, washing, and travelling expenses. Applications to the Honorary Secretary. Also Two Honorary Assistant Physicians. Applications to Chairman of Medical Committee by April 18th. Also House-Surgeon and House-Physician. Salaries, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by May 6th.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary, £150 a year, with furnished apartments, coals, and gas. Applications to W. Draper, Esq., De Grey House, York, by April 21st.

MEDICAL APPOINTMENTS.

ALEXANDER, J. W., M.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Armley District and the Workhouse of the Bramley Union.

BAYLEY, Perceval, L.R.C.P., L.R.C.S., L.M.Edin., appointed Second Assistant Medical Officer of the City of London Asylum, near Dartford.

BOYEY, Thos. W. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Norfolk and Norwich Hospital, Norwich.

BOWIE, J. C., M.B., C.M.Aberd., appointed Medical Officer and Public Vaccinator to the Parishes of Sandsting and Aithsting, Shetland.

BURTON, H., L.R.C.P.I., M.R.C.S.Eng., appointed Medical Officer of Health to the Marple Urban District Council.

DIXSON, Charles, M.D.Dunelm, M.R.C.S.Eng., appointed Honorary Anæsthetist to Brentford Cottage Hospital and Dispensary.

DU CANE, Edgar, B.A., M.B., B.Ch., appointed Resident Medical Officer, Christ College, Brecon.

FAIRBANKS, William, M.D.Edin., appointed Medical Officer of the Workhouse of the Wells Union.

FORBES, A. D., M.B Aberd., appointed Medical Officer for the No. 7 (Horsmonden) District of the Tonbridge Union.

HATFIELD, J. R., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Worthen District of the Forder Union.

HERBERT, B. H., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Uttoxeter Urban District Council.

HICKMAN, J. E., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Coleford District of the Frome Union.

MASON, F. W., L.R.C.P., L.R.C.S., appointed Medical Officer for the No. 4 District of the Flaxton Union.

MORRIS, S. G., M.D., appointed Medical Officer for the Western District of the Llandilofawr Union.

NELL, R. F., M.R.C.S Eng., L.S.A., reappointed Medical Officer of Health to the Penarth District Council.

RENSHAW, C. J., M.D.St. And., M.R.C.S.Eng., reappointed Medical Officer of Health to the Ashton-upon-Mersey Urban District Council.

ROBERTS, G. W., M.D. St. And., L.R.C.P.Edin., reappointed Medical Officer of Health for the Borough of Denbigh.

ROBINSON, A. S., B.A., M.B., B.C.Cantab., L.S.A.Lond., appointed Medical Officer and Public Vaccinator to the Kirkleatham District of the Guisborough Union.

SCOTT, F. G., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Gillingham District of the Medway Union.

SMITH, J. W., M.D., appointed Medical Officer of Health to the Ryton Urban District Council.

SOUTHEY, A. J., M.R.C.S., L.S.A., reappointed Medical Officer of Health to the Eton District Council.

STABB, Arthur F., M.B., B.C.Cantab., M.R.C.P., appointed Assistant Obstetric Physician to St George's Hospital.

WARD, James Philip Stephens, M.R.C.S., L.R.C.P., appointed Physician's Assistant to the Plymouth Public Dispensary.

DIARY FOR NEXT WEEK.

TUESDAY.

Pathological Society of London, 8.30 P.M.—Dr. C. P. White: (1) Intestinal Obstruction due to Cicatricial Stricture of the Small Intestine: (2) Columnar-celled Carcinoma of the Œsophagus. Mr. d'Este Emery: Secondary Growths from a case of Carcinoma of the Breast. Mr. G. Bertram Hunt: Extreme Contraction of the Stomach, with some remarks on the Pathology of the condition. Dr. Lee Dickinson: An Aneurysm of the Thoracic Aorta which ruptured externally. Dr. Parkes Weber: Liver showing an early interlobular type of Cirrhosis from a case of pylephlebitis. Dr. Rose Bradford: Hæmatoma in a hydronephrotic kidney. Dr. Garrod: A case of Carcinoma of the Œsophagus perforating the aorta. Dr. L. Freyberger: (1) A Brain with three subsequent hæmorrhages, and a Heart from the same case showing a well-developed Musculus Papillaris on the mitral valve; (2) the Minute Structure of an Anæmic Infarct of the Lung. Dr. C. D. Green: (1) A Stomach with two Perforating Ulcers and a fistulous communication with the colon; (2) a Lobulated Fibroma of the Nipple (card specimen).

WEDNESDAY.

Evelina Hospital, S.E., 4.30 P.M.—Mr. Sydney Stephenson: Ophthalmia in newly-born Children.

North-West London Clinical Society, North-West London Hospital, Kentish Town Road, N.W., 8.30 P.M.

Royal Meteorological Society, 25, Great George Street, Westminster, 7.30 P.M.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

THURSDAY.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Clinical Cases: Mr. Horace T. Pechell: On the Use of Ormsby's Ether Inhaler in General and Dental Surgery, with remarks on Etherisation and on Dilute Solutions of Chloroform.

FRIDAY.

Clinical Society of London, 8.30 P.M.—Dr. Frederick Taylor and Mr. A. D. Fripp: A case in which a Renal Calculus was detected by the Roentgen Rays and successfully removed. Dr. J. Rose Bradford: A case of Thrombosis of the Superior Mesenteric Vein causing intestinal obstruction. Mr. Raymond Johnson: A case of Tuberculous Peritonitis in which symptoms of intestinal obstruction resulted probably from thrombosis of the superior mesenteric vein. Dr. Lee Dickinson and Mr. W. A. Hubert: Raynaud's Gangrene in connection with Parturition.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

JERVIS-PEREIRA.—On Sunday, March 27th, 1898, at Lisbon (Portugal), the wife of Dr. A. A. Jervis-Pereira, Surgeon-in-Chief to the Delagoa Bay Railway (Lourenço Marques), of a son.

TAYLOR.—On April 9th, at 163, Cemetery Road, Sheffield, the wife of E. Edmund Taylor, M.D., M.R.C.S., of a son.

MARRIAGES.

BIGGS—WILSON.—At St. Andrew's Church, Cardiff, on the 9th instant, by the Rev. Dr. Horatio Langerslie Nicholson, John James Egerton Biggs, M.R.C.S., L.R.C.P., of 147, Newport Road, Cardiff, eldest son of John Biggs, Esq., Oldwell, Penylan, Cardiff, to Louisa Frances Maude, second daughter of the late John Heron Wilson, Esq., of 37, Park Place, Cardiff.

LINTON—RITCHIE.—At the Roxburghe Hotel, Edinburgh, on the 7th inst., by the Rev. John Sanderson, B.A., Dundas U.P. Church, Grangemouth, and the Rev. S. W. Riddick, M.A., West Free Church, Grangemouth, Simon Linton, M.B. (Edin. Univ.), Grangemouth, third son of the late James Linton, Coruanan, Fort William, to Maggie Simpson, only daughter of the late Robert Ritchie, Grangemouth. At home first and third Wednesdays after May 15th.

MACVICAR—SAMUEL.—At the Church, Blantyre, British Central Africa, on the 19th February, by the Rev. Henry E. Scott, Domasi, Neil Macvicar, M.B., C.M., Medical Officer to the Blantyre Mission of the Church of Scotland, to Jessie Samuel, Matron of the Mission Hospital.

PARRY—LORIMER.—At Queen's Park U.P. Church, Glasgow, on the 24th ult., by the Rev. Fergus Ferguson, D.D., assisted by the Rev. J. H. Oswald, M.A., of Morton Parish Church, Thornhill, Robert Henry Parry, Surgeon, Victoria Hospital, Glasgow, to Margaret Whigham, second daughter of William Lorimer, Kirklinton, Langside.

PORTER—DEWAR.—At Allan Park Church, Stirling, on the 13th instant, by Rev. J. T. Gowanlock, Charles Allen Porter, M.D., etc., Boston, U.S.A., to Margaret Cochran, M.B., C.M., etc., eldest daughter of Mr. and Mrs. J. Lewthwaite Dewar, Kandy, Ceylon.

DEATHS.

GROSVENOR.—On Tuesday, March 29th, 1898, at his residence, Greville Lodge, Churchdown, Gloucestershire, rather suddenly, William Grosvenor, L.R.C.P., L.R.C.S., late of 9, Greville Place, Maida Vale, London, third son of the late William Grosvenor, of Alsager, Cheshire, aged 66 years.

MURTAGH.—On March 29th, at West Brighton, Thomas Murtagh, Surgeon-Lieutenant-Colonel (retired).

RAWLINS.—On March 28th, at 189, Sutherland Avenue, W., Henry Armstrong Rawlins, M.R.C.S., etc., aged 81.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Tu., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W. 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, i.-p., 1; o.-p., 12; Obstetric, i.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Tu., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Tu., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are directed will be found under their respective headings.*

QUERIES.

Dr. H. Rainsford (Kensal Rise, W.) desires to hear of a home where an aged woman could be received for a payment of anything up to £1 per week? She suffers from nothing except old age.

Treatment of Acromegaly.

Dr. E. B. Garland (Bristol) writes: I should be much obliged to anyone for hints or suggestions on the treatment of a case of acromegaly in a woman of 35. The case is not advanced, but sufficiently marked to leave no doubt as to diagnosis. I am trying pituitary tabloids, but the benefit is slight, if any, as yet. The patient cannot afford a consultation, having already spent much in that way before coming into my hands.

M.B.'s and the Title of Dr.

Member B.M.A. asks whether a Bachelor of Medicine and Master in Surgery of Edinburgh University is entitled to be styled "Dr."

*** It is the custom to address Bachelors of Medicine of the University of Cambridge, and we believe of Oxford also, as Doctor, except within the precincts of the University. In Scotland we are informed that, as a matter of habit and of courtesy, Bachelors are usually spoken of and addressed as Doctors. This has arisen mainly from two causes; first, to avoid confusion with surgeons who have come to be addressed as Mr. and secondly, because the Bachelor's degree is looked on as an intermediate state—a stepping-stone; and that if a man is not, he soon will be, a full-fledged Doctor of Medicine. But in all legal affairs, for example, lunacy certificates, power of attorney, Scotch soul and conscience declaration, etc., the statement must run: "I, John Smith, Bachelor of Medicine, of the University of , etc." "I, Dr. John Smith," would render the document null and void, and expose the writer to the censure of the Courts of Supervision.

Hypnotism Applied to Practical Surgery.

M. H. asks to be recommended the best works on hypnotism as applied to practical surgery.

*** Dr. Milne Bramwell has kindly supplied the following references, which may be of use to our correspondent: Une Application Chirurgicale, à l'Hôtel Dieu, de l'Anesthésie Somnambulique, par M. le Dr. Tillaux, *Revue de l'Hypnotisme*, vol. iv, p. 26. Anesthésie Chirurgicale par Suggestion, par le Dr. Bourdon, de Méru, *Revue de l'Hypnotisme*, vol. viii, p. 59. Opérations Chirurgicales faites pendant le Sommeil Hypnotique, par le Dr. Schmeltz, de Nice, *Revue de l'Hypnotisme*, vol. ix, p. 47. Opération Chirurgicale Pratiquée dans l'État d'Hypnotisme, par le Dr. Edward Wood, de Minnéapolis, *Revue de l'Hypnotisme*, vol. iv, p. 246. Applications de l'Hypnotisme à l'Art Dentaire, par M. Gomer Sandberg (Suède), *Revue de l'Hypnotisme*, vol. vi, p. 331. Quelques Faits d'Anesthésie Chirurgicale sous l'Influence de la Suggestion, par M. le Dr. Auard Martinez Diaz, Cuba, *Revue de l'Hypnotisme*, vol. vi, p. 309 Accouchement pendant le Sommeil Hypnotique, par G. O. Kingsbury, M.A., M.D., Blackpool, *Revue de l'Hypnotisme*, vol. v, p. 298. Accouchement d'une Primipare pendant l'Hypnotisme, par le Dr. Pritzl, *Revue de l'Hypnotisme*, vol. i, p. 157. Un Accouchement dans le Somnambulisme Provoqué: Déductions Médico-légales, par M. le Dr. Mesnet, *Revue de l'Hypnotisme*, vol. ii, p. 33 Accouchement dans l'Hypnotisme, par. M. le Dr. Fraipont et W. J. Delboeuf, *Revue de l'Hypnotisme*, vol. v, p. 289. Un Accouchement sans Douleur sous l'Influence de l'Hypnotisation, par le Dr. Fanton, de Marseille, *Revue de l'Hypnotisme*, vol. v, p. 150. Huit Observations d'Accouchement sans Douleur sous l'Influence de l'Hypnotisme, par Mme. le Dr. Marie Dobrowsky, *Revue de l'Hypnotisme*, vol. v, pp. 274 and 310. Applications Variées de la Suggestion chez une Hystéro-épileptique, par M. le Dr. Bourdon, de Méru, *Revue de l'Hypnotisme*, vol. vi, p. 358. Eine Geburt in der Hypnose, von Dr. Freiherrn von Schrenck-Notzing, München, *Zeitschrift für Hypnotismus*, 1892-93 p. 49. *Der Hypnotismus und seine Anwendung in der praktischen Medicin*, von Dr. Med. Otto G. Wetterstrand, Wien und Leipzig, 1891, p. 116. *Psycho-Thérapie*, par les Docteurs A. W. van Renterghem et F. van Eeden, Paris, 1894, p. 286. Die Hypnotische Suggestion bei der Reposition und Nachbehandlung von Knochenbrüchen und Verrenkungen, von Dr. J. Grossmann, Berlin, *Zeitschrift für Hypnotismus*, vol. ii, 1893-94, p, 198. (Iridectomy) *Hypnotismus und seine psycho-psysiologische, medicinische, strarechtliche Bedeutung und seine Hand abung*, von Dr. August Forel, Stüttgart, 1891, p. 125. Extractions under Hypnotism, *Journ. Brit. Dent. Assoc.*, March, 1890. A Series of Operations performed during Hypnotic Anæsthesia, *Lancet*, April 5th, 1890. The applications of hypnotism to surgery are fully discussed by Dr. Milne Bramwell in a paper entitled Hypnotic Anæsthesia, which appeared in the *Practitioner* for October, 1896

ANSWERS.

Dr. C. N. L. writes: In answer to a query in the British Medical Journal of April 9th, p. 993, if "C. B." will communicate with the Secretary of the Dawlish Infirmary he probably could arrange for the child to be admitted into that institution, which although not specially a children's hospital, has all the advantages for such a case which he mentions.

Atkinson.—We cannot hold out any prospect of permanent cure by the secret "cure" referred to. Friends of chronic sufferers often do believe in the alleged efficacy of quack "cures" of all kinds. We cannot recommend any person or institution.

Treatment of Inebriety.

J. R.—We know of no home or retreat where male inebriates can be received at the rate stated; but inquiries might be made to advertisers in our columns.

Incontinence of Urine.

Dr. Walter G. Walford (Finchley Road, N.W.) writes in reply to "A. L. S.," who in the British Medical Journal for March 12th asks for suggestions for the treatment of an obstinate case of incontinence of urine in a young boy, which occurs by day as well as by night, and is occasionally accompanied by involuntary action of the bowels: I had a case somewhat similar, in which the cause was discovered to be enormous accumulation of fæcal matter in the sigmoid flexure, which prevented the proper distension of the bladder.

Dislocation of the Ungual Phalanx.

Dr. G. E. Mould (Finsbury Park, N.) writes: Seeing that dislocation of the ungual phalanx still continues to excite interest, I may mention that last summer the ungual phalanx of my second right finger was dislocated backwards by a cricket ball passing overhead. I had no difficulty in at once reducing it with my left hand and continuing to play.

Dr. J. Watson Burwood (Bourney) writes: When playing in a cricket match a season or two ago, in taking a high catch, another player, while attempting to do the same, collided with me, and the ball struck me on the tip of the third finger of the right hand, dislocating the ungual phalanx. I reduced the dislocation and went on with the game. A certain amount of stiffness in the joint still remains.

Dr. J. H. Joyce (Woodville, near Burton-on-Trent) writes: As instances of dislocation of the ungual phalanx still appear to you worthy of record, possibly the fact that I have met with at least three such accidents on the cricket field may be of interest. All were occasioned by players slightly misjudging high catches, all were in a dorsal direction, and all were immediately reduced without the least difficulty, and I believe all were of the second finger. One of the patients informed me that the same accident had happened to him several times previously. Without being familiar with the accepted views, I had from my own experience and the antecedent probability of such a result following a hard ball striking the tips of the fingers as held for catching, come to regard the injury as by no means an unusual one. Surely a similar experience must be common among medical men who have ever played much cricket.

Dr. D. Richmond (Drake Street, Rochdale) writes: Since Dr. Bays reported his case of dislocation of the ungual phalanx, on December 4th, 1897, there have been quite a number of similar cases reported, showing that, as I then remarked, the injury may not be so uncommon as one would believe from the standard textbooks. Some days ago a middle-aged gentleman presented himself at my surgery, complaining of having injured his thumb in a fall the night before. On examination I found the ungual phalanx completely dislocated, the base of the ungual phalanx resting on the dorsal surface of the head of the proximal phalanx. Reduction by traction and pressure between the finger and thumb of the other hand was comparatively easy, after which there were no more symptoms or any further trouble.

T. W. Bayne, M.B., C.M. (Tarbert, Loch Fyne) writes: Some years ago I saw two cases of this dislocation. Both were the result of accident while playing football—the one from a blow, the other from being twisted while tackling a man. In the second case, there was rotation as well as dislocation. Professional advice was sought in neither case, as reduction was performed at the time of the accident. A week ago I had a personal experience. While running at football I was tripped from behind. Falling forward, with hands outstretched, I alighted on the tips of the fingers of my left hand, dislocating the ungual phalanx of the middle finger forwards. Reduction was easy and painless, as the finger was quite benumbed, and remained so for some hours. I am inclined to think that many similar cases occur, but on account of the easy reduction at the time of the accident they seldom come up for professional treatment.

Summer Residence for Phthisical Patients.

In reply to the question from "S." published in the British Medical Journal of April 2nd, as to a climate suitable for a phthisical patient with slight pyrexia, Dr. J. Morgan Evans, of Llandrindod Wells, writes to suggest that place, which is situated at an elevation of 800 feet, and is sheltered from the east wind. "W. K. R." recommends Stourwood, a suburb of Southbourne-on-Sea. It is open to the sea on the south, but on other sides is sheltered by pine woods. The soil is gravel, and the elevation about 100 feet.

Reporter's Errors.

H. C. M.—The imperfection of reporting in coroners' courts was curiously illustrated by certain of the London morning papers in their account of a recent inquest. Those who were anxious to know what the medical expert would assign as the cause of the death must have been puzzled to read that it was "subjugated peritonitis." Was this some new medico-legal term coined to fit some new and peculiar variety of peritonitis? If so, it did not seem very appropriate to a disease which carried off its unhappy victim in a few days. In another newspaper we find a report of the medical evidence which winds up with the statement that death was due to "suppurated peritonitis." Now if these great papers reporting a *cause célèbre* in the heart of London can make such hash of medical terms, what inaccuracies may we not expect from local

newspapers reporting cases of no general interest in obscure hamlets throughout the country. The reporters, in fact, well-meaning though they be, are very often responsible for unfounded charges of ignorance or worse against witnesses and coroners.

THE TREATMENT OF ACUTE PAIN AND THREATENING VENOUS STASIS.

DR. D. FRANKLIN WILLIAMS (Liverpool) writes: In the BRITISH MEDICAL JOURNAL of April 2nd, "M.R.C.S." asks for suggestions for the treatment of a female patient, aged 80, suffering from acute pain in toes and threatening venous stasis. This case, like one of many, points to a gradually-failing circulation; hence the indication is to avoid the use of drugs which depress the vital centres and thus the heart and circulation, and to administer cardiac stimulants and tonics, namely, ammonia and strychnine, and digitalis, in repeated small or moderate doses. In addition, massage and exercises should be tried, so as to brace up and improve the peripheral circulation. The *primæ viæ* and kidneys should be watched, and everything done by dieting and tonics to improve the vital powers. I cannot conceive of anything more dangerous and futile than the exhibition of sedatives and narcotics, which, though they may serve temporarily to annul pain and improve the sense of comfort and happiness of the patient, serve only ultimately to lower still further the vitality of those centres, of the lowered vitality of which pain and threatening venous stasis are but the manifestations. The rule which has been laid down, founded on experience, that opium and other narcotics should not be given to patients over 60 or 65, should ever be kept in mind, since after that age is passed a more or less gradual dissolution of the vital powers sets in. If, therefore, on account of severity of pain opium be considered necessary, it should be given along with a stimulant such as ammonia, so that its depressive effects on the vital centres shall be counteracted.

DR. G. D. MCREDDIE (Greenhithe, Kent) writes: In reply to "M.R.C.S.," who asks in the BRITISH MEDICAL JOURNAL of April 2nd, p. 931, for suggestions as to the treatment of a patient suffering acute pain in the toes due to sluggish circulation, I would suggest the application of tincture of iodine night and morning. I find this best for chilblains

NOTES, LETTERS, Etc.

ERRATUM.—In the article on the Middlesbrough Epidemic and its Lessons published in the BRITISH MEDICAL JOURNAL of April 9th, p. 961, it should have been stated that the last Local Government Board returns showed that the vaccination default of Middlesbrough was 7.2 per cent., and not 3 per cent. as printed.

MIDWINTER "BRIGHT" SUNSHINE.

DR. H. F. B. WILLIAMS (Llandudno) writes: There appeared in the BRITISH MEDICAL JOURNAL of March 19th a letter from Mr. Charles Roberts of Eastbourne with a table of sunshine records at various seaside resorts. Eastbourne stands at the head of that table, while Llandudno occupies the eighth place. If, however, the sunshine records are tabulated for the winter quarter instead of for Mr. Roberts's arbitrary period of ten weeks we obtain the following table:

Winter Quarter ending March 19th.

	Hours.		Hours.
Falmouth ...	274.3	Southport ...	225.0
Llandudno ...	269.2	Ventnor ...	224.2
Eastbourne ...	251.1	Brighton ...	218.4
Scilly Islands ...	250.8	Blackpool ...	215.3
Torquay ...	240.6	Douglas ...	212.6
Hastings ...	246.0	Margate ...	199.0

DR. A. R. F. EVERSHED (Shian, Penzance) sends us the following figures for Penzance furnished to him by the borough metereologist, Mr. C. H. Benn, F.R.Met S., for the ten weeks ending February 19th: Bright sunshine, 130.55 hours; mean maximum temperature, 52.53° F.; mean minimum temperature, 45 68° F.; mean daily range = 6.85° F. For the fourteen weeks ending March 19th: Bright sunshine, 256.20 hours; mean maximum temperature, 51.6° F.; mean minimum temperature, 42.99° F.; mean daily range = 8.61° F.

DR. ROBERT BRUCE (Milford-on-Sea) writes: During the ten weeks ending February 19th I registered 137 hours 30 minutes. In January the amount was 35 hours 30 minutes; in February 83 hours 5 minutes. From October 1st, 1897, to March 1st, 1898, the amount was 377 hours 25 minutes.

THE TEMPERANCE QUESTION.

DR. J. FOSTER PALMER (Chelsea, S.W.) writes: As one of those who have the misfortune, like Dr. Reid, to look upon the entire temperance movement as illogical, delusive, and misleading, I am much struck with the artless manner in which Dr. Coates gives away the cause for which he appears to be pleading. In the first place he tells us—and I, for one, entirely agree with him—that the craving for alcohol depends on the weakness or absence of the powers of restraint due to intellectual or moral defect. There is only one way in which the power of restraint, or any other power of the body or mind, can be strengthened, and that is by constant exercise. It is only by constant, daily exertion in the face of difficulties that the powers of restraint can be cultivated. Remove the temptation and these powers of restraint will die away for want of use. The mind cannot be trained to fight against evil by keeping the evil constantly out of reach. Secondly, Dr. Coates mentions, as instances of abstinent races, the Chinese, the Hindus, and the Mohammedans. He could not have chosen three more striking examples of the lack of progress among abstaining nations. In 3,000 years, during which most of the European nations have risen from barbarism to civilisation, China has hardly advanced at all, while the progress of the Hindus and of the Mohammedan countries in the present day is distinctly limited. On the other hand there are four races which are referred to as having been very much addicted to alcohol. These four races, the Greek, the Italian, the Spanish, and the Portuguese have been the leaders of the world in civilisation and progress. The two first both gained by conquest the mastery of the known world. The two last were the pioneers of modern colonisation, and virtually opened up the New World by the conquest of Peru, Mexico, and Brazil. The world's greatest men, whether in literature, or art, or philosophy, or legislation, or discovery, or war, have nearly all belonged to one or other of these four races. Indeed, the struggle against alcohol is only a phase of the general struggle for existence leading to the survival of the fittest. When the struggle for food is rendered unnecessary by the establishment of Socialism, and the struggle against drink by strict temperance legislation, we shall inevitably degenerate into a race of savages.

IPECACUANHA IN DYSENTERY.

DR. OWEN F. PAGET (Honolulu, Sandwich Islands) writes: It would appear that at least some members of our profession are unaware that ipecacuanha from which the emetine has been removed, as prepared by Messrs. Burroughs and Wellcome, is an easily administered and perfect specific for acute and, so far as my experience goes, chronic dysentery. Only the other day, a patient applying to me was cured of all blood and discharge (from which he had suffered for over a year) in 24 hours; 10 grains of the drug were given every four hours.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Asylum Resident; Mr. R. B. Anderson, London; Dr. T. R. Atkinson, Sherborne; Mr. H. E. Allen, London; Mr. S. Alexander, London; A. D.; A. A. **B** Dr. A. Bronner, Bradford; Dr. J. F. Butler-Hogan, Leyton; Mr. J. W. Burdwood, Bourne; Mr. R. Barwell, London; Mr. W. Brown, Carlisle; Dr. W. Bain, Harrogate; Mr. L. J. Barlow, London; Dr. R. Bell, Glasgow; Dr. J. Barr, Liverpool. **C** Dr. W. L. Christie, Clifton; Cyona Company, London; C. S.; Mr. J. Collinson, London; Dr. W. Collier, Oxford; Mr. T. R. Collins, Bath; W. R. Chew, M.B., Grahamstown, S.A.; Dr. J. Campbell, Belfast; Messrs. J. and A. Churchill, London; Dr. C. H. Cattle, Nottingham; Dr. W. M. Campbell, Liverpool. **D** Mr. C. T. Dent, London; Dr. A. Duke, Cheltenham; Dr. E. T. Davies, Liverpool; Dr. B. Duke, London; Dr. C. Dukes, Rugby. **E** Mr. J. M. Evans, Llandrindod Wells; Enquirer; Dr. G. F. England, Winchester. **F** Messrs. Fletcher, Fletcher and Co., London. **G** Dr. A. E. Giles, London; E. B. Garland, M.B., Bristol Mr. J. O. W. Gadd, Exeter; Dr. L. G. Guthrie, London; Dr. E. Goodall, Carmarthen Mr. J. B. Gabe, Morriston. **H** Dr. J. B. Haycraft, Cardiff; Mr. J. W. Higginson Wrotham; Dr. J. P. Henry, London; Dr. R. G. Hebb, London; Mr. V. Horsley, London. **I** Inquirer. **J** J. R.; Mr. W. H. Jamieson, Montreal; J. H. Joyce, M.B., Burton-on-Trent. **K** Dr. G. D. Knight, London; Messrs. Krohne and Sesemann, London; R. L. Knaggs, M.B., Leeds. **L** Mr. J. Lanyon, Belfast; Dr. C. N. Lovely, Dawlish. **M** Dr. W. R. Miller, Penzance; Mr. G. E. Mould, London; Member B.M.A.; Mr. A. H. Moxon, Great Yarmouth; Member; Mr. E. R. Morgan, Morriston; Dr. D. Maclean, Detroit; Dr. E. D. Mapother, London; M.O.H.; Dr. J. F. Macgregor, Morvern; G. V. Miller, M.B., Stockton-on-Tees; Mr. M. G. McElligott, Belper; Mr. J. A. Magee, Clown; M.D., F.R.C.S.I.; M.B., C.M.; Dr. G. D. McReddie, Greenhithe. **N** Mr. G. Newman, London. **O** Observer; Onlooker; Omega. **P** Public Vaccinator; Dr. S. W. Plummer, Durham; Mr. H. E. Powell, London; Dr. H. S. Purdon, Belfast; Puzzled M.B., M.A.; Practitioner; Dr. F. J. Poynton, London; Dr. T. H. S. Pullin, Sidmouth. **R** G. A. Reid, M.B., M.B., Southsea; Retired; Mr. H. M. Rainsford, London; Dr. C. E. Reinhardt, South Stoke; J. L. Roberts, M.B., Denbigh. **S** Dr. J. W. Springthorpe, Melbourne; Mr. E. A. T. Steele, Southend-on-Sea; S. Stephenson, M.B., London; Mr. J. J. Smith, London Mr. A. W. Stocks, Salford; Scrutator; Subscriber. **T** Dr. J. C. Thresh, Chelmsford; Mr. D. E. Thomas, Newport, Mon.; Mr. W. T. Thomas, Liverpool. **V** Vox. **W** Mr. D. F. Williams, Liverpool; Dr. W. G. Walford, London; W. D. J.; Mr. K. H. B. Williams, Llandudno; Mr. H. F. Wylde, Manchester; Mr. J. H. Wigham, Leeds. **Z** Z.; etc.

BOOKS, ETC., RECEIVED.

Nightshade and Poppies. Verses of a Country Doctor. By Dugald Moore, M.B. London: John Long. 1898. 3s. 6d.

Chirurgie du Cou. Par F. Terrier, A. G. Guillemain et A. Malherbe. Paris: Félix Alcan. 1898. Fr.4.

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Les Hydrocéphalies. Par Dr. L. d'Astros. Paris: G. Steinheil. 1898. Fr.8.

Traité Médico-Chirurgical de Gynécologie. Par P. Labadie-Lagrave et P. Legueu. Paris: Félix Alcan. 1898. Fr.25.

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The Report of the Royal Commission on Vaccination. A Review of the Dissentients' Statement. By J. C. McVail, M.D. London: P. S. King and Son. 2s.

Leprosy in Hawaii: A Critical Inquiry. By J. A. Thompson, M.D., D.P.H. Sydney: W. A. Gullick. 1898.

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REMARKS
ON
THE DOSAGE OF CHLOROFORM.

Being the Substance of a Communication to the Society of Anæsthetists.

By AUGUSTUS D. WALLER, M.D., F.R.S.,
Lecturer on Physiology, St. Mary's Hospital Medical School.

The considerations upon which I am about to enter form part of those which were exposed at considerable length at Montreal a few months ago, and published in the British Medical Journal for November 20th, 1897. But whereas on that occasion I very deliberately laid principal stress upon the great power of chloroform and upon the absolute certainty of a considerable percentage of avoidable and therefore unjustifiable deaths if chloroform is administered without adequate recognition of this fact—and by adequate recognition I mean recognition in numerical values—on the present occasion, in presence of an expert audience, I am about to urge the importance of a complementary principle in the practice of anæsthesia by chloroform—namely, upon the paramount necessity for dosage in its administration. Many practical anæsthetists, I know, admit this principle; others, I believe, do not, or at least hold it to be, if theoretically desirable, practically impossible. My argument to-day is that the evidence in point shows that it is necessary and within reasonable limits of error practicable, and I should like at once to characterise and earmark that argument by the statement that successful chloroform anæsthesia requires the regular respiration of air in which the chloroform vapour is maintained between the limits of 1 and 2 per 100.

This conclusion, the arithmetical data of which I am about to submit to you, is indeed the second and final step in an argument to which I have been impelled, primarily by laboratory measurements, secondarily by the published records of anæsthetists, among whom I may name as having most influenced my mind, Snow, Clover, Bert, and Dubois.

Before actually embarking on details bearing upon the question of chloroform dosage, allow me to say that that question was fully present to my mind at Montreal when I formulated the two alternatives of the "chloroform dilemma," and seemed thereby to the heedless reader to be proscribing its right and proper administration. Lest now, in addressing myself to the dosage of chloroform, I should give rise to an opposite misreading, and be hastily put down as pleading for chloroform, let me reaffirm and further define the issue under consideration, which is the natural conclusion of my argument at Montreal, and the natural commencement of my argument here.

The dangers of chloroform are universally admitted. Whether chloroform be (1) dangerous under all circumstances, or (2) dangerous only when carelessly or unskilfully administered, death by chloroform employed for purposes of minor surgery is *primâ facie* an unjustifiable event, which should be subject to judicial investigation.

As regards this elementary matter there is, I think, little room for doubt. Death by chloroform, employed for extraction of a tooth or evulsion of a toenail, can hardly be regarded as a justifiable accident. But as regards the further question, whether death by chloroform employed for the purposes of major surgery is a risk that must be simply accepted, or a risk that may be greatly reduced by a proper method of administration, it is of the utmost importance to consider what are the best possible methods, and what are the probabilities of overdose by methods other than the best possible.

Anticipating somewhat upon the main conclusion of the present communication, to the effect that the best possible method requires a uniform administration of chloroform vapour at between 1 and 2 per cent. of the inspired air, let me at once state my belief that it is possible to administer chloroform with far less danger than is at present customary. Whether the attainable decrease of risk may be of such extent as some day to justify the employment of chloroform for minor purposes, I do not venture even to think of. For the moment it is better to limit oneself to the simple fact that, as matters stand, chloroform is a powerful and dangerous anæsthetic, not to be employed as a routine drug in all kinds of cases merely by reason of its superior convenience. With that principle distinctly stated, we may, without risk of confusion, proceed to consider the problem of "least danger" as regards chloroform administered justifiably, that is, on serious grounds.

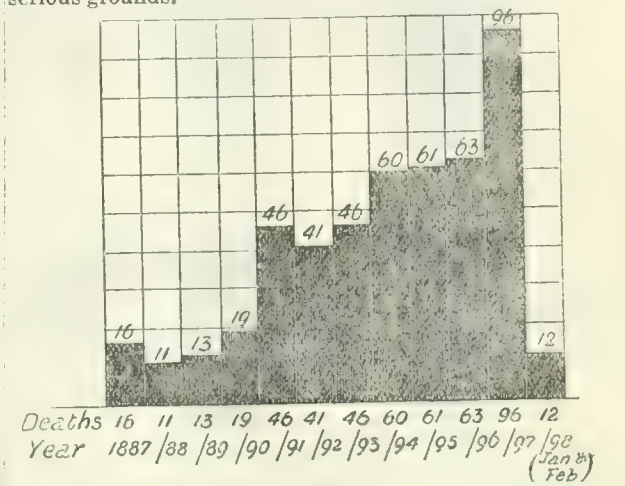


Fig. 1.—Number of published deaths from anæsthetics in England (not Scotland or Ireland) during each year from 1887 to 1897, and for January and February of 1898.

The uniform result of the experiments upon which I have been occupied for the last few years has been to drive into my mind the conviction that quantity is the all-important factor in anæsthesia by chloroform and in death by chloroform.

Anæsthetise a nerve by mixtures of chloroform vapour and air at strengths of 1, 2, 3, 4, etc., per 100, and you find that the effect increases with the cause (Fig. 3). Consider chloroform at 1 per cent., chloroform at 2 per cent., chloroform at 3 per cent., chloroform at 4 per cent. applied to the nerve by means of the very simple apparatus shown in Fig. 2.

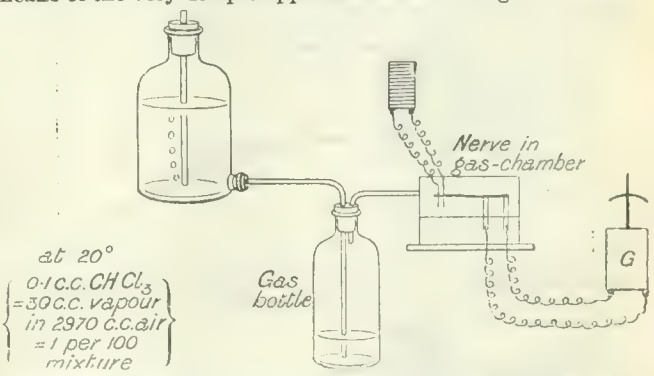


Fig. 2.—Plan of apparatus to test the effect upon a nerve of chloroform mixtures at different percentages.

In Fig. 4 we have another group of records showing the effects on nerve of chloroform at 5 per cent, of chloroform at 5.6 per cent., of chloroform at over 10 per cent. And then finally (Fig. 5) is a series of four successive experiments with chloroform at 5 per cent., to anticipate a possible criticism as regards comparison between two successive experiments, showing you as it does that there is not any very marked

difference in the effects of four successive experiments on the same nerve.

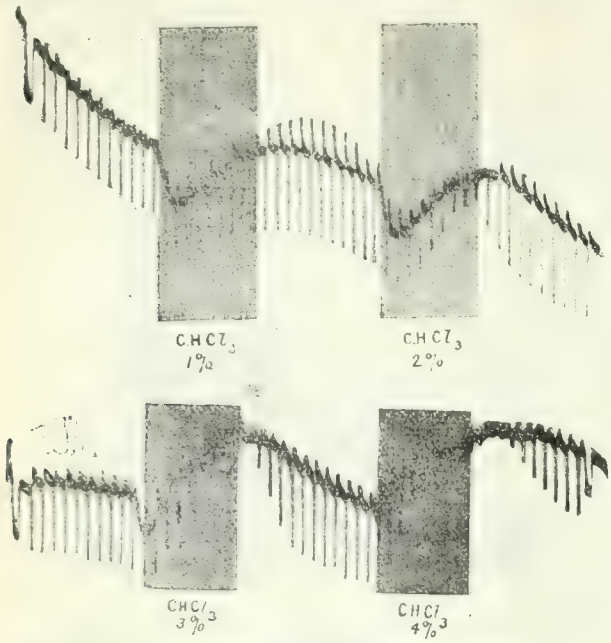
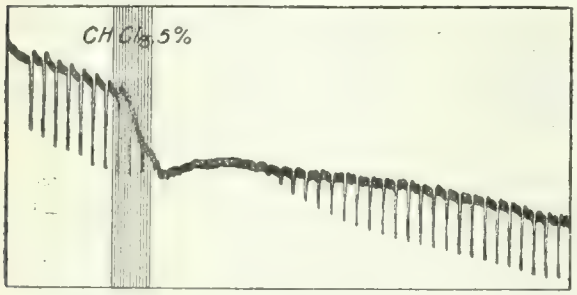
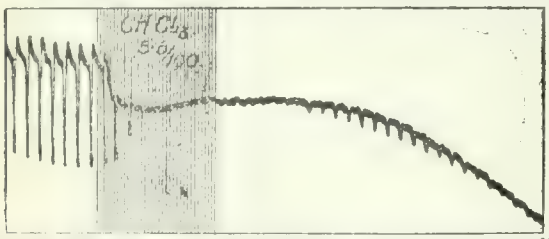


Fig. 3.—Effect upon a nerve of chloroform vapour and air at 1, 2, 3, and 4 per 100. The shaded bar indicates in each case the time during which the anæsthetic was passed. The successive responses occur at intervals of one minute. The effect of chloroform at 1 per cent. is excitant; at 2, 3, and 4 per cent. the anæsthetic effect is more and more pronounced.



Effect upon a nerve of chloroform vapour and air at 5 per cent. Well-marked anæsthetic effect and not quite perfect recovery.



Effect of chloroform vapour and air at 5.6 per cent. Very slight and imperfect recovery.



Fig. 4.—Effect of chloroform vapour and air at about 10 per cent. No recovery.

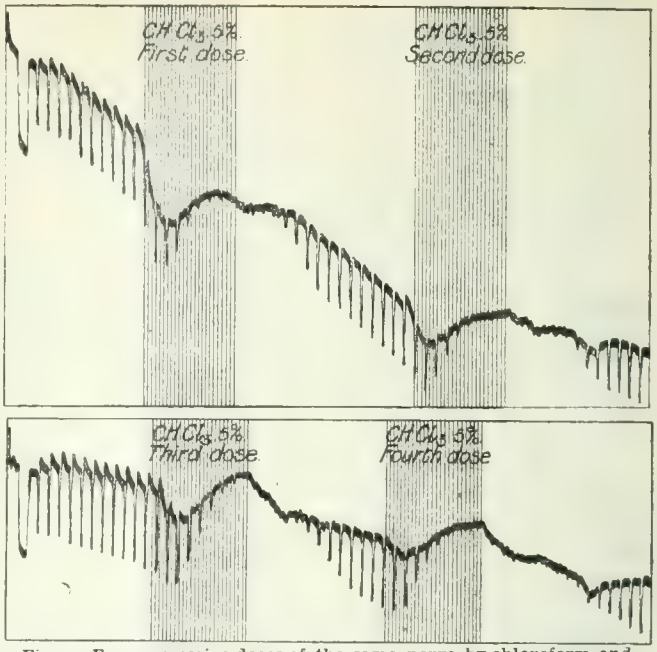


Fig. 5.—Four successive doses of the same nerve by chloroform and air at 5 per cent. to show the approximately uniform and regular anæsthetic effects of a given dose repeated more than once.

The method and its measured results are, as will be seen, unexceptionable—so much so, indeed, that a critic, who finds they do not fit with his theories, is obliged to criticise, not the experiments themselves, which are tacitly admitted, but the inferences which I am said to draw—and which I expressly refused to draw—concerning doctrinal points *re* the chloroformisation of man.

Now, I need hardly say that I infer nothing about the important debate as to whether a man's death by chloroform is by syncope or by asphyxia. When I witnessed and demonstrated my first experiments three years ago,[1] I said: "One is rather inclined to diminish the stress that such documents must produce on the mind by saying: 'But this is only a frog's nerve; its current of action is a recondite phenomenon, not necessarily coextensive with physiological action; a nerve fibre is not a nerve cell. But, all possible discount made, the fact remains that here in the nutshell of a laboratory experiment lies sharp and concentrated evidence, similar in character to the diffuse and therefore less pointed evidence, of clinical experience.'"

From the point of view we are now at, in consideration of the question of quantity, I wish to comment further upon Fig. 4. At 5 per cent., the nerve is properly anæsthetised; at 5.6 per cent., it is all but killed. And from a considerable mass of experiments I was led to adopt 5 per cent. as the usual limit of strength beyond which a nerve could not be safely anæsthetised. I came to look upon 4 per 100 as "safe," 6 per 100 as "dangerous." Now it so happens that 5 per 100 is the limit that was named by Snow forty years ago as regards anæsthesia of the human subject by chloroform vapour and air. The coincidence struck me as being remarkable, but I did not regard it as other than a coincidence. I did not regard living matter in the shape of a frog's nerve as being identical with living matter in the shape of a man's brain; all that I assumed was that the scale of action of various anæsthetics on a man's brain might be indicated by the scale of action on frog's nerve. However, the coincidence was there, and it led me to the closer examination of Snow's data concerning the percentages of chloroform vapour required in the air and in the fluids of the body for anæsthesia of various degrees.

Snow's Chloroform Dicta.

1. To produce narcotism of the second degree 12 minims of chloroform are required in the blood.

2. To induce narcotism of the third degree (surgical anæsthesia) requires about 18 minims.

3. To induce the deep state of insensibility which I have termed the fourth degree of narcotism would require 24 minims.

4. To arrest the function of respiration would require that about 36 minims should be absorbed.

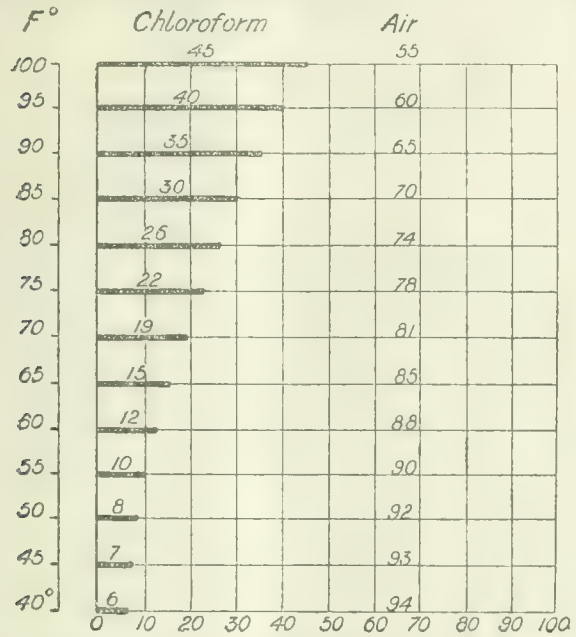


Fig. 6.—Snow's table, giving the percentages of chloroform vapour in air (saturated) at different temperatures.

These are Snow's main conclusions. I do not think that the amounts must be regarded as being absolutely correct, but I think that they are wonderfully near the mark, and undoubtedly based on correct principles of determination. And I think further that if only anæsthetists had been more universally alive to the quantitative principle underlying Snow's practice—I do not say to the absolute quantities that he laid down—the waste of life that has been the price paid for chloroform in the past forty years (and yet to be paid, it is to be feared, for many years to come) might have been, if not altogether avoided, at least largely curtailed.

It is not the discussion whether or no chloroform promotes primary syncope, and whether chloroform kills by the heart or by the respiratory centre, that has as yet fulfilled the declared object of the Hyderabad Commission—to save human life. This end is, in my view, more likely to be attained by attending to the arithmetic of chloroform vapour.

The reflections aroused by these and other of Snow's data are as follows: 18 minims of chloroform = a little over 1 c.cm. of chloroform (1.06 c.cm.). 1 c.cm. of fluid chloroform gives at ordinary temperature (15° to 20°) 294 to 300 c.cm. of chloroform vapour.

Taking the fluids of the body as 30 pounds, or 15 litres, Snow's anæsthetic dose of 18 minims gives the proportion of chloroform vapour in the lymph and blood as 300 in 15,000, or 2 per 100; Snow's lethal dose of 36 minims gives the proportion as 600 in 15,000, or 4 per 100. Water at body temperature will absorb its own volume of chloroform vapour, namely, 100 per 100. The degree of saturation S of blood holding 2 and 4 per 100 is therefore between S 0.02 and S 0.04.

Air at body temperature will hold 40 per cent., or nearly half its own volume of chloroform vapour; the degree of saturation S of pulmonary air holding 1 and 2 per 100 will therefore be S 0.025 to S 0.05, and will produce an equal degree of saturation of the blood, namely, S 0.025 to S 0.05. At body temperature the vapour tension of 1 per cent. $CHCl_3$ in air, and of 2.5 per cent. $CHCl_3$ in blood will be equal. There are no doubt elements of uncertainty in these calculations; nevertheless, all possible discount made, they remain valuable as affording a quantitative image of what should be the percentage and saturation of the lymph bath surrounding the cerebro-spinal tissues, and of the air in contact with the pulmonary sheet of blood. And towards a recognition of the important point that the degree of saturation and vapour tension must be equalised very promptly in pulmonary air and pulmonary blood, it is worth while calling to mind that the blood in the lungs is an immense thin sheet 150 metres in area, and only $\frac{1}{10}$th of a millimetre thick.

We may, then, draw up the following summary estimate exhibiting the quantities and percentages at which chloroform vapour is to be maintained in the surgical anæsthesia of a normal subject:—

Chloroform (1 c.cm. of Fluid = 300 c.cm. of Vapour).

	Anæsthesia.	Death.
Absolute volume of vapour in the blood and lymph	300 c.cm.	600 c.cm.
Percentage of vapour in the blood and lymph	2.00 per cent.	4.00 per cent.
Degree of saturation of vapour in the blood and lymph	0.02 ,,	0.04 ,,
Degree of saturation of vapour necessary in inspired air	0.02 ,,	0.04 ,,
Percentage of vapour in inspired air corresponding with these degrees of saturation	0.80 ,,	1.60 ,,
Quantity of vapour per respiration at 375 c.cm. required to produce these percentages	3 c.cm	6 c.cm.
Quantity of vapour per minute at 20 respirations, that is, in 7,500 c.cm	60 ,,	120 ,,
Quantity of fluid per minute at 20 respirations, that is, in 7,500 c.cm.	0.2 c.cm. = 3.4 minims	0.4 c.cm. = 6.8 minims

In commenting upon this estimate, I may remark that:

1. The percentages are more important than the absolute volumes.

2. The important fact that the lethal quantity and percentage are double the anæsthetic quantity and percentage is fully confirmed by the independent measurements of Paul Bert.

3. The equality of saturation degree of chloroform vapour in air and blood implies the *continuous* respiration of the corresponding atmosphere.

With regard to this last remark several further reflections are aroused. I think Snow's limit of 5 per cent. is dangerously high, and altogether excessive for prolonged continuous respiration. Continuously applied to the pulmonary sheet of blood, such an atmosphere would necessarily effect a corresponding degree of saturation of the blood—namely, 0.125, implying 12.5 per cent. by volume of chloroform vapour in the blood; and as a matter of fact Snow names 5 per cent. as a high limit, and did not aim at its continuous exhibition. Moreover, in the numerous experiments on animals by which he very properly prefaced his trial of chloroform upon the human subject (beginning with himself), the percentage of chloroform and air, by continuous respiration of which anæsthesia was produced, comes out of its disguise of x grains to y cubic inches at the following percentages of chloroform vapour in air:

0.38, 0.59, 0.76, 0.76, 0.77, =not enough
0.96, 1.18, 1.35, 1.5, 1.5, 1.5, 1.5 = enough
1.7, 1.9, 2.1, 2.3, 2.8, 2.9 =too much.

And in conclusion he expressly says that quantities of chloroform exceeding 2 grains to 100 cubic inches of air have a tendency to embarrass and arrest the function of respiration if the inhalation is continued.[c] Now 2 grains of chloroform per 100 cubic inches of air is a proportion of chloroform vapour by volume of 1.5 per 100. Could a more definite statement be desired? Is it not better worth while to try to make out whether it is anywhere near the mark than to pass by the glaring probability of death by overdose, and waste time and life in the quarrel as to how chloroform kills?

Paul Bert's experiments of 1881-3, on the same principle as those of Snow, but evidently conducted in ignorance of Snow's work, are confirmatory of Snow's results in a remarkable way when the scale in which Bert's statements are expressed is realised. He gives the lethal quantity of chloroform (and of several other anæsthetics) as being twice the anæsthetic quantity. He and his pupil Dubois state as regards chloroform that the continuous inhalation of chloroform "*à 10 pour 100*" produces anæsthesia in a few minutes,

and is fatal (to dogs) in two to three hours, while with chloroform "*à 8 pour 100*" insensibility is slowly produced, and death occurs after four hours. Bert finds that the continuous inhalation of chloroform "*à 4 pour 100*," and even "*à 6 pour 100*," will not anæsthetise dogs, and he quotes in one of his papers Clover's experiences with a mixture of 4.5 per 100, apparently under the impression that the two scales are identical. They are not identical. Bert's mixture "*à 10 pour 100*" signifies 10 grammes of fluid chloroform volatilised in 100 litres of air, and since 10 grammes of fluid chloroform give 2 litres of chloroform vapour, is in reality a 2 per 100 mixture. Percentages as given by Bert and Dubois have, therefore, to be divided by 5 to be expressed on our scale of percentages.

This point being clear, we are in a position to appreciate properly the statements of Dubois that the continuous inhalation of the chloroform-and-air mixture "*à 10 pour cent.*," produces anæsthesia in 7 to 8 minutes, and that the anæsthesia once produced can be maintained by a mixture "*à 6 pour cent.*" Dubois's 10 per 100 is our 2 per 100. Dubois's 6 per 100 is our 1.2 per 100, and the correspondence thus recognised between careful dosage experiments in England and in France is complete.

Such are the desiderata—the indications to be as far as possible fulfilled. If we are sufficiently convinced of this, the next step is to discover and adopt the best means of doing so.

I should like to preface this portion of my remarks by briefly quoting one most authoritative opinion behind which I am anxious to take shelter. For whereas at Montreal, in stating the chloroform dilemma I had not ventured to form any opinion as to whether deaths by chloroform are the result (1) of an agent dangerous under all circumstances, or (2) of an agent dangerous only when unskilfully administered, to-day I am prepared to limit the dilemma almost wholly to the second alternative, and to say that deaths by chloroform are in the overwhelming majority of cases the result of an agent potent under all circumstances, and most dangerous when unskilfully administered. I am in fact convinced that death is nearly always due to unskilful administration, and that unskilful administration is the administration of an overdose. Lord Lister, writing in Holmes's *System of Surgery*, says: "Death from chloroform is almost invariably due to faulty administration." Yes indeed, that is also my own independent and unreserved opinion, but inasmuch as I am not an administrator of anæsthetics, and am not therefore professionally entitled to any opinion in so weighty a matter, I prefer to be covered in this matter by the opinion of Lord Lister.

Let me, however, justify the further statement that faulty administration is the administration of an overdose. Referring to the table given above in estimate of quantity and percentage of chloroform in the body that may be considered as "anæsthetic" or as "lethal," you at once recognise the extreme danger of overdose by irregular administration, whether by what is usually termed the "open method," or by what is usually termed the "Junker method," and the extreme necessity of a regular administration of dilute vapour.

The administrator is, let us say, convinced that the open method is most efficacious and safe; he begins rather cautiously, but in all probability not uniformly, with, say, about a drachm (= 3.5 c.cm. fluid = 1050 c.cm. vapour). The patient goes under properly, and all is well. But perhaps he chokes, or holds his breath; perhaps the surgeon says, "push the chloroform," and in spite of choking or gasping the chloroform is pushed. What may that mean as to quantity? There is already some unknown quantity of chloroform in the body and in the lungs—say ½ c.cm. or 150 c.cm. vapour. To this comes one inspiratory gasp of say 1,000 c.cm., taking from the towel or lint held close to the mouth and nose no less than 100 c.cm. of chloroform vapour. Then a second deep inspiration, and another 100 c.cm.; then a third, and a third 100 c.cm. How soon is the reservoir, which is the patient, likely to be overfilled, and to contain more than 600 c.cm. of the vapour?

No doubt some chloroform escapes; no doubt some chloroform is exhaled; but how much or how little no one can tell. It is rather the recovery than the death of that patient that is surprising, if 600 c.cm. of vapour is anything like the lethal dose, and I do not think that we need go to the length of such expressions as "drenched with chloroform" or "sodden with chloroform." Why, "drenched with chloroform" would mean saturated fluids and tissues, or, taking only 15 litres of fluid in the body, no less than 15,000 c.cm. of chloroform vapour. Or, taking percentages, "drenched with chloroform" would mean 100 per 100, the lethal percentage being 4 per 100. This point needs no further insistance, it is too fearfully obvious.

But a subsidiary point, which is sometimes urged in defence, is not so obvious. It is claimed (or rather admitted) that by an open method an unknown (smaller) quantity of chloroform gets into the patient, while an unknown (larger) quantity of chloroform is dissipated. It is further urged that the fact of the occurrence of accidents nearly as frequently with small quantities as with large is a token of the uncertainty of the agent and of the variability of patients. It is quite true that patients vary, and it is the business of the administrator to adjust his dose to his patient. But it is not true that chloroform is an uncertain agent, nor is the uncertainty of its effects to be laid to the charge of indeterminate impurities; the uncertainty is mainly if not wholly an uncertainty of quantity, and the so-called small quantities, "not more than 1 drachm," "not more than ½ ounce," are at least as liable to overfill the patient as large quantities—2 ounces or more. In fact I am inclined to the opinion from published accounts of accidents (in so far as any opinion is possible from such accounts) that taking into account time of administration and quantity of chloroform used, overdosing has been at least as probable by "small" as by "large" quantities administered on the "open" method.

The open method is more or less open. The administrator by the drachm, who closely surrounds his patient's mouth and nose, may easily get more chloroform vapour into the blood than does the administrator by the ounce, who keeps his evaporative fabric at a greater distance from the face, or who merely drenches the patient's pillow. I think that "drachms" in a report may often signify a closer method of "open" administration than "ounces" in a report, and, if so, I should stand in even greater dread of the drachm-chloroformist than of the ounce-chloroformist. This impression may be right or wrong; in any case it is only an impression, for the data justify no more. But what is certainly not wrong, for it is a definite conclusion from definite data, is that drachms of chloroform, if they get into a patient's body quickly enough, will with certainty kill him—one drachm in one minute would more than suffice. (1 drachm = 3.5 c.cm. fluid = 1050 c.cm. chloroform vapour.)

By what means, then, may we best fulfil the indications set forth in the tabular estimate given above? My own precise experiments upon one particular animal tissue; the consideration of the experiments and of the clinical experience of Snow, of Paul Bert, and of Dubois, have convinced me:

1. That chloroform vapour is in itself a certain and uncapricious agent, producing effects more and less pronounced in gravity according as it acts in greater and smaller quantity.

2. That anæsthesia requires the continuous administration of a mixture of chloroform and air, at an average percentage of 1.5—not below 1 per cent. and not above 2 per cent.

This second indication has been more or less perfectly effected:

(1) By Clover's gas-bag.
(2) By Paul Bert's gasometer.
(3) By Dubois's anæsthetic machine.
(4) By Junker's inhaler.
(5) By an "open method."

As regards the first two of these, they must, I fear, be regarded as inadmissible for general use. Clover's bag is cumbersome, the percentage is not susceptible of convenient and known alteration during administration, and the figure he adopted, 4.5 per cent., seems to have been too high for continuous administration. Bert's gasometers are still more cumbersome, and their use has, I believe, been completely abandoned; moreover, there would appear to be a danger that in a large volume of chloroform vapour (specific gravity 4.5) and air, even as diluted as 2 per cent., the percentage should not be uniform throughout, but below 2 per cent. in the upper strata, and above 2 per cent. in the lower strata.

And that this is no imaginary fault, but one that is brought to light by the method of investigation I have pursued—testing anæsthetics by means of nerves—may be incidentally illustrated by Fig. 7, where a nerve was anæsthetised from a so-called 5 per cent. chloroform-and-air mixture in a bottle that was allowed to stand so that the mixture was at less than

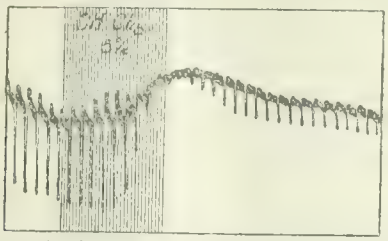


Fig. 7.—Anæsthesia of a nerve by chloroform nominally at 5 per cent., but really at considerably less than 5 per cent. for the first few minutes, and subsequently at considerably more than 5 per cent.

5 per cent. in the upper atmosphere which the nerve underwent first, and at more than 5 per cent. in the lower atmosphere which the nerve received last.

Dubois's machine, in which by means of a plunger dipping more or less deeply into a flask of chloroform more or less fluid is volatilised at each stroke of a piston which delivers a given volume of air, appears theoretically excellent, but I have no experience of it, nor any information as to the results of its regular use.

Our choice remains limited to the last two methods—Junker's method, or the open method—which last has been the main field of contention as regards right or wrong administration.

I think that in point of fact both these methods may, as regards quantity and percentage, be rightly or wrongly carried out.

In my view, the desideratum to aim at is a continuous proportion of chloroform vapour in pulmonary air of 1 per 100. This percentage will be got if with each 100 c.cm. of inspired air the patient inspires 1 c.cm. of chloroform vapour. Taking the inspiratory volume per minute at 6,000 c.cm. more or less, the requisite volume of chloroform vapour per minute is 60 c.cm. more or less.

Now this supply of chloroform vapour may be either secured or grossly exceeded by either method. If, as is done in the ordinary routine of laboratory anæsthesia, and in some hospitals, air is pumped into the lungs through a wash-bottle of chloroform without regard paid to rhythm of respiration, volume of stroke, and therefore volume of volatilised chloroform, then, unless the animal or patient is closely watched for signs of danger, and the pumping accelerated or retarded as seems at the moment desirable, the necessary supply of vapour will be grossly exceeded, and trial will then have to be made of one or other of the long list of remedial measures.

But ordinary skill and care may surely be expected of an administrator. If he takes, for instance, a particular Junker apparatus, learns upon it what volume of air carries off what volume of chloroform, learns to time his stroke so as to coincide with the act of inspiration; above all, if he *just once* follows by the watch the gradual development of anæsthesia on his own person, and measures the actual volumes of chloroform used, then assuredly he will never misuse the Junker on other people, and run the risk of grossly exceeding the margin between "enough" and "too much." "Enough" is something like 0.2 c.cm. of chloroform per minute. "Too much" anything above twice that amount per minute. And in making trial on himself of the Junker method he will not run the slightest risk of overfilling himself. He will necessarily stop pumping long before he gets "too much," more probably before he gets "enough," somewhere in the lighter stage of anæsthesia, such as is customarily safely used to dull the pains of parturition.

But whereas the Junker method is not likely to be wrongly applied, apart from gross ignorance, the open method is very likely to be wrongly applied in the absence of very considerable skill and experience. The problem is to hold an evaporative surface at such a distance from the patient's face that from the invisible cloud of chloroform vapour falling and diffusing in the air he shall inspire 1 part of chloroform vapour in 100 parts of air. That is the form in which I express what Lawrie expressed when he says that "the essential factors in safe administration of chloroform are diluted chloroform and regular breathing."

The numerical ideal, by the open method, cannot possibly be knowingly maintained; nevertheless by extraordinary skill and by acting upon the full persuasion that the uniform inhalation of highly-diluted chloroform is the condition of safety, it is possible to avoid dangers that must be incurred on the common slap-dash plan.

I have already alluded to the drachm-chloroformist and the ounce-chloroformist proceeding on the open method. It is clear that in different hands the open method is more or less open and more or less safe. The whole of the discussion as to the relative safety of different methods of administration seems to me to have turned upon this one point; even the drop-chloroformist who tries to give one drop of chloroform at the beginning of each inspiration (one drop of chloroform weighs 0·066 g., measures 0.044 c.cm., and gives 13·3 c.cm. of vapour) follows an open method in so far as the safety of his patient demands that the greater part of this chloroform shall not be absorbed nor even inhaled. But leaving on one side the drop method, which is rather a lame compromise between dosage and no dosage, it seems very clear that by the open method the fluctuations of intake between "too little" and "too much" must be considerable in the most skilful hands, excessive and dangerous in the hands of an administrator who uses the drug as if it were rather more powerful than ether. The chloroformisation of his patient will assuredly not be uniform, but merely lucky or unlucky.

The difficulty of regularity by the open method has presented itself to me very forcibly in my own experiments on nerve. I can anæsthetise a nerve by the open method, but I cannot do so with absolute certainty as I can by a mixture of known percentage. I may altogether fail to affect it, or I may affect it too much; and although not very likely to fall into either of these two extremes, I am altogether unable to anæsthetise it with that gradation of intensity which, as you have seen, is possible by mixtures of known percentage (Fig. 3). Nerves vary and exhibit peculiarities as do patients. I cannot, however, attribute the varieties of effect produced on the open method to peculiar qualities of the nerves or of the chloroform; they are assuredly due to variations of the vapour tension of the chloroform cloud by which the nerve is surrounded.

One more point as regards the open method as compared with Junker's. The latter is well in one's hands, and may be safely tried on oneself. The former is not and may not be safely tried on oneself. I should not dream of advising a student to try what chloroform anæsthesia is like by the open method; for whereas with the Junker the powerlessness which early supervenes in the experiment is certain to cut short the supply of poison at an early stage, with the lint or towel it is altogether different; the powerlessness, when it did come, would have the diametrically opposite result, and cause, it may be, a sudden and dangerous flooding of the system by chloroform vapour.

The Junker method, as known to me through the apparatus of Messrs. Krohne and Sesemann, seems to me that best adapted practically to fulfil the indications as to quantity previously stated. It is adjusted to deliver 1 minim of fluid chloroform at each stroke of the piston. The large opening of the facepiece allows of almost perfect freedom of respiration, and is provided with a light feather which serves to indicate the commencement of inspiration which is the instant at which a given stroke or half-stroke or quarter-stroke of the piston is to be made driving into the facepiece and in-rushing air the vapour of 1 minim or ½ minim or ¼ minim of chloroform.

From preliminary trial of this apparatus with respect to the quantity of chloroform volatilised by a given volume of air, I found that at 18° (=65° F.) very nearly 1 c.cm. of chloroform, =300 c.cm. vapour, was carried off by 1,000 c.cm. of air (16 strokes of the pump). This was a percentage of chloroform and air of 300 in 1,300, or 23 per cent., rather higher than the saturation percentage as stated by Snow, which at the same temperature of 65° F. is only 19 (see Fig. 6). But with the pump the chloroform was agitated; Snow's 19 per 100 refers to still chloroform, so that the discrepancy is not serious.

I then went on to see whether by this apparatus I could deliver anything like a known percentage of chloroform vapour to the nerve, selecting for the purpose percentages that were known to me as ineffective and fully effective—namely, ½ and 2 per 100; and as a matter of curiosity I tested upon myself the effects of these same two percentages. For the latter purpose I assumed my inspiratory quantum of air per minute to be 6,000 c.cm., and delivered to myself 30 c.cm. and 120 c.cm. of chloroform vapour per minute by, namely, 20 one-eighth strokes and 20 half-strokes respectively, keeping up the shorter strokes for five minutes, and the longer strokes for a minute and a quarter.

By the first dosage I was not perceptibly affected; by the second I was very markedly affected, almost to the point of unconsciousness. By the first dosage, using per minute 30 c.cm. of vapour—that is, in five minutes 150 c.cm. vapour or 0.5 c.cm. fluid, I felt nothing remarkable; by the second dosage, using per minute 120 c.cm. vapour—that is, in one minute and a quarter the same total amount—namely, 150 c.cm. vapour or 0.5 c.cm. fluid, I felt myself rapidly going under.

Now I have no doubt from even this slight experience that 2 per cent. is an inconveniently high percentage with which to begin the production of anæsthesia. I should prefer, when the necessity arose, to be started at about 0.5, and then sent up to 1, 1.5, 2, and if need be higher until the production of anæsthesia, and then let down again to between 1 and 1.5 for its maintenance.

To test the same apparatus upon nerve at the same percentages was a little more troublesome, since it was necessary to have an air bellows of known capacity to imitate the action of the lungs, and to deliver simultaneously with the discharge of air a discharge from the chloroform flask of a given volume of chloroform vapour. This was effected as shown by the diagram (Fig. 8). The stroke of the bellows was

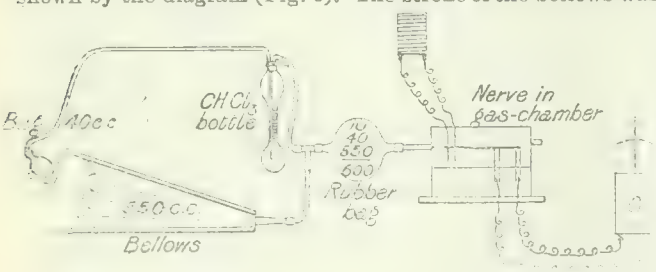


Fig. 8.—Plan of apparatus to test by means of a nerve the efficacy of the Junker method of chloroform dilution. At each stroke of the bellows 40 c.cm. of air driven through the chloroform bottle carries with it 12 c.cm. of vapour which, mixed with 560 c.cm.—or more exactly 548 c.cm.—of ordinary air driven on by the same stroke of the bellows, gives a 12 per 600, or 2 per 100, mixture.

adjusted by a stop to deliver 560 to 590 c.cm., and to its handle, as shown in the diagram, a bag was fixed of 40 c.cm. and of 10 c.cm. capacity. At the commencement of each stroke of the bellows, first the small bag was compressed, driving 10 or 40 c.cm. of chloroform-charged air into the reservoir ball; then by the continued stroke a further 590 or 560 c.cm. of air was sent on, giving thus an atmosphere of approximately 0.5 and 2.0 per 100. Fig. 9 gives the result of an experiment of this nature.

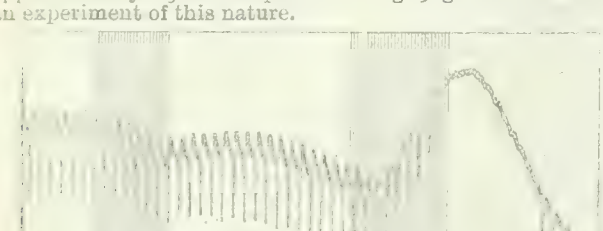


Fig. 9.—$CHCl_3$ and air at about 0·5 per cent. $CHCl_3$ and air at about 2.0 per cent

It would be quite out of my province to pursue this matter into further details; these properly concern the practical administrator. The principles that I have desired to urge in the present communication may be summarised in a very few words:

1. Chloroform is not an uncertain drug.[3]
2. The notorious uncertainty and danger in chloroform administration is an uncertainty in the quantity administered.
3. The uncertainty of quantity administered can be most easily avoided by following the principle of Junker's method.
4. The great danger of the open method is an overdose.

Unless a man is fully and really (that is, numerically) cognisant of these four principles, then of necessity he is a dangerous administrator.

One last word with regard to the obvious objection that any practical man will feel and raise, and the unfortunately less obvious fallacy of that objection. He says, "I have given chloroform by the open method in 500 cases without special apparatus and without a death, and I do not feel inclined to encumber myself with apparatus." To this the answer is, "Well, perhaps you had better not change from a simple method with which you are familar and that you have hitherto applied so successfully. An inferior method in skilful hands may give far better results than a superior method in unaccustomed hands." If, however, you consider not only your own experience, but the general sum of experience, you must recognise that chloroform anæsthesia by the open method is very appreciably risky—the chance of death is, I believe, 1 in 1,250; last year in England alone there were 96 published deaths, and no one can tell how many unpublished deaths. I do not ask you to change your plans, any more than you would ask a clever dispenser not to guess his powders with the point of a spatula; I only want you to admit that the guesswork or slapdash plan is not the best possible, and that the power of chloroform is such that on any large number of administrations, good, bad, and indifferent, there must be several unnecessary deaths by overdosing, just as there would be if many dispensers, good, bad, and indifferent, made up medicines without a balance. You may get on without dosing your chloroform, but your son will not, and even you yourself may some day come to grief. If so, and if a coroner's inquiry is necessary, your case will add one more to the series of customary verdicts, "Death by misadventure, and we find that all possible care was exercised by Dr. ——, who has had an exceptionally large experience of anæsthetics, and has not previously met with a case of death under an anæsthetic."

No, indeed, and it is to be hoped not. The probability in the case of any one average administrator is 1 against 1,250, or, if you prefer other statistics, 1 against 1,500; in other words, the probability in one average man's practice is 2 to 1 against a death in his first 625 (or 750) cases, 1 to 1 against a death in his first 1,250 (or 1,500), 2 to 1 for a death in his first 2,500 (or 3,000), 4 to 1 for a death in his first 3,750 (or 4,500), etc.

I need lay no further stress upon this statistical probability question; it is clearly not the few hundred successful cases of one administrator of average, or of more than average, skill, that will settle the safety or danger of a method, but only the collective results of large numbers of administrators that are of any value; and in this particular I submit that the open method as practised on the average in England stands condemned, by its mortality statistics, by the existence of numerous chloroform commissions to inquire into the mode of death by chloroform, and by the private and individual knowledge that every medical man possesses of cases of death by chloroform that are never published.

And the remedy to this state of things is to be sought, not indeed by the wholesale rejection of chloroform as an anæsthetic, but in the right and proper valuation of its power and in its quantitative administration; not in the sudden adoption of any new-fangled modification by the old style and in such style experienced and skilful administrator, but in the rational education of our future administrators concerning the physiological arithmetic of chloroform, ether, and other anæsthetics.

NOTE AND REFERENCES.

[1] *Brain*, 1896, p. 64. [2] *Chloroform*, p. 60. [3] This statement does not apply, of course, to obviously decomposed chloroform. Chlorine is intolerably irritant, so is carbonyl chloride.

THE HUNTERIAN LECTURES
ON THE
SURGERY OF THE KIDNEY.

Delivered at the Royal College of Surgeons of England,

By HENRY MORRIS, F.R.C.S.,
Surgeon to the Middlesex Hospital.

LECTURE III (*continued*).

The Technique of the Operation for Exploring the Kidney and Ureter.

The method I adopt for exploring the kidney and ureter for stone is the following :

In the first place, if there is the least reason for thinking a stone has descended along the ureter, I make a digital examination of the rectum, and sound the bladder under an anæsthetic. With the finger of the left hand in the rectum, well pressed against the base of the bladder, I pass the beak of the sound across the vesical orifices of the ureters. In the female a similar examination is made of the vagina and bladder; and, if necessary, the urethra is dilated and the interior of the bladder is digitally examined and inspected by means of Kelly's tubes and the electric light, and the ureters are catheterised from the bladder. But this is rarely needful or helpful, and as a rule causes an unnecessary waste of time. The kidney to be first explored should be that on the side of the pain. This should be a rule of practice. Though it is true, as I have shown in the second lecture, that relief of symptoms (pain, fever, nervous disturbance, etc.) may coincidentally follow the extraction of a calculus from the opposite organ, still this is no proof that the kidney or ureter on the side complained of is not the one in which the exciting cause of the symptoms is present.

The incision I have from the first always employed is a very oblique lumbar one, commencing an inch above and in front of the anterior superior iliac spine, and continued outwards and backwards to the outer edge of the erector spinæ muscle, about a finger's breadth below the last rib. The length of the incision varies with the figure and degree of stoutness of the individual. More frequently than not it is unnecessary to begin so far forward ; and sometimes it is advantageous to continue the skin incision backwards a little over the erector spinæ muscle. The direction of the lumbar incision is, however, always in the line between the points mentioned. When more room is required, a short vertical or slightly curved incision is made upwards from the oblique wound, extending over the back of the twelfth rib. This greatly facilitates deep manipulation, and is a step towards clearing the last rib in the event of the excision of that bone being requisite. Manipulation is also sometimes facilitated by snicking the outer edge of the quadratus lumborum, and even that of the erector spinæ. The latter very rarely needs to be interfered with, and if divided should be sutured at the end of the operation.

When more room in front is required either for freeing or inspecting the kidney, controlling bleeding in the deep part of the wound, or for tracing the ureter, the incision should be carried in a curvilinear way towards Poupart's ligament, and then forward parallel to and an inch above that ligament, as far as the internal abdominal ring, or further. Bleeding points should be controlled as they occur by torsipressure forceps, and if the last dorsal or the ilio-hypogastric nerve is in the way, it is best to excise an inch or more of it. After the division of the transversalis fascia, a look-out should be kept for the colon, which frequently bulges into the wound and requires to be held aside by a broad retractor. With the forefinger the back of the kidney should now be felt, covered by its loose fibro-cellular investment. By means of two pairs of long forceps this investment is seized and dragged up into the wound and divided with scissors between the forceps. Then at once bulges out, through the little opening, the fine canary-yellow fat which immediately invests the kidney. Into this opening in the thin fibro-cellular investment the tip of first one, then of the other, index fingers should be inserted, and it and the included fat should be torn open and carefully detached from the kidney. The renal pelvis and upper end of the ureter should be palpated before the kidney has been much disturbed from its position, in order to search for any small calculus, and, if one be present, to prevent it from dropping into the ureter during the act of drawing the kidney on to the surface of the loin. When freed of its connections anteriorly, posteriorly, and at both its ends, the kidney should be brought bodily on to the surface of the loin. This in a large number of persons can be done without difficulty and without causing tension of the renal pedicle ; but in others, with thick-set trunks and very fat parietes, it is not possible to bring the kidney quite out of the body, even when great traction is made upon the pedicle. Forcible pulling upon the pedicle, however, must be avoided. When, owing to these conditions, the kidney cannot be brought out of the wound, the wound should be made amply large enough to allow the surgeon to see clearly the kidney which he is about to incise. Unless this is done, there is always the risk of wounding the branch of the renal artery or vein which run over the back of the renal pelvis before entering the parenchyma on the posterior surface of the organ. Moreover, small branches of the renal artery anastomosing with the lumbar vessels may be wounded, and should be seen to be ligature. If no calculus is felt, an incision is next made into the kidney along its convex border, whilst the finger and thumb of the left hand steady the kidney and compress the pedicle. This compression of the pedicle serves a double purpose: (1) it limits hæmorrhage, and (2) it prevents a small calculus, which might drop out of one of the calyces, from falling into the ureter. Through the wound in the kidney the right index finger is introduced, and a careful detailed manipulation is made of every part of the interior of the organ. Needling the kidney for diagnostic purposes is most unreliable and should be abandoned.

Whether or not a calculus be found in the kidney, the ureter should always be catheterised from end to end, to test if its lumen is quite free. If this is not done, a small calculus—say, of one and a-half or two grains or more in weight—may be missed.

If the ureteral catheter can be passed readily through the renal cavity by way of the incision in the convex border of the kidney, this should be done; but it is often impossible or troublesome to hit off the orifice of the ureter in this way. If so, the back of the infundibulum should be cleared, and a minute longitudinal incision should be made into it with the point of a narrow sharp scalpel or sharp-pointed scissors, and through this incision the catheter should be conducted (see figures in Lecture I). In doing this, care must be used not to mistake the renal vein, or a branch of the vein, for the renal pelvis. Should such an error be made, bleeding will readily be controlled by pinching up the edges of the tiny wound, and applying a circular ligature. When any doubt arises, the vein will be distinguished by watching for the return of blood after compressing the tube supposed to be the ureter.

There is often quite a plexus of fine blood vessels on the surface of the infundibulum and ureteral wall which must be avoided if possible.

If there be a stone in the ureter, the catheter will be obstructed at the point of impaction. In the male, whether this point be in the abdominal or the pelvic course of the ureter, the calculus can be reached and removed retroperitoneally, by prolonging the anterior or lower end of the incision in the direction mentioned before.

In the female the same procedure answers for the abdominal and first portion of the pelvic course of the ureter; but for the removal of a calculus from the ureter within the broad ligament, especially near the uterus or vagina, the vaginal or sacral route is the best. If situated quite at the vesical orifice of the ureter, it can be extracted through the bladder after dilating the urethra, and, if needful, slightly incising the ureteral orifice. No attempt should be made to extract a calculus through the bladder unless it be situated quite at the internal opening. A calculus, if it is of fair size, may be felt through the bladder, when it is in the ureter just above the point where the duct enters the vesical wall (see Figure 21). When here, it cannot be so removed without exposing the patient to the danger of an intraperitoneal urinary fistula.

In one of the recorded cases of uretero-lithotomy this accident happened, and the patient died.

In the male the sacral method might also be employed for a stone situated just above the bladder; but the retro-

peritoneal inguinal route through which it is possible to trace the ureter quite up to the point where it enters the vesical wall is to be preferred.

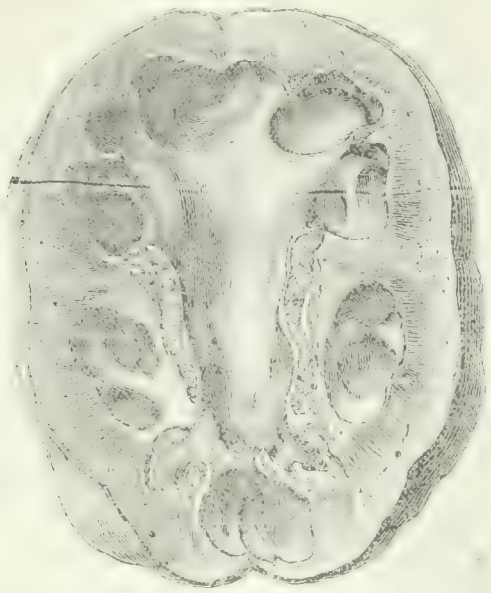


Fig. 20.—Sacculated kidney caused by obstruction in the ureter (Westminster Hospital Museum).



Fig. 21.—Base of bladder with stone impacted in ureter immediately above it; from the same patient as the kidney illustrated in Fig. 20 (Westminster Hospital Museum).

When the part of the ureter in which the calculus is situated has been reached, the wall of the ureter should be divided by a short longitudinal incision made either upon the calculus or immediately above it. The calculus should then be extruded through this opening. If the stone is impacted below the brim of the pelvis, it should, if possible, be made to retrace its steps by gentle pressure till it is brought up into the duct above the pelvic brim. If the ureter is dilated above the stone, and the stone can be readily pushed back into the dilated portion, this should be done, whether the point of impaction is above or below the brim of the pelvis. The incision in the dilated tube may then be closed by one or two Lembert sutures passed across the line of the incision. Otherwise the stone must be directly cut upon where it is impacted, and as the tissues of the ureter are likely to be much contused, perhaps ulcerated, owing to the pressure of the calculus, they may not be in a favourable state for immediate repair, and therefore sutures for the ureteral wound may be of very doubtful utility, or even harmful. Care should be taken to provide drainage for any urine which may extravasate through the ureteral wound, otherwise serious mischief in the pelvic cellular tissue may occur after the too early closure of the external wound, as happened in a case referred to in Lecture II.

In the greater number of cases, when the calculus is not in the kidney it is in the ureter, within an inch or two of the infundibulum. In several cases I have pressed a stone upwards out of the ureter, and removed it through an incision in the wall of the renal pelvis.

It is, I think, quite immaterial whether a calculus is removed through the parenchyma or infundibulum of the kidney. I formerly was of opinion that there was less chance of urine escaping, and quicker healing of the wound, when the incision involved the parenchyma only. But since employing sutures, which I began to do several years ago, I do not find that the wounds in the renal pelvis or ureter heal any the less readily.

In operating upon the sound kidney I do not hesitate to cut directly down upon a calculus, wherever it may present; still less need one do so in a kidney the cavity of which is pouched and the parenchyma atrophied. When so made the incision should preferably radiate from the hilum; but when the parenchyma is very thin, and a large branched calculus or several calculi are present, the incision may be made in any direction which gives the greatest facility for extracting the stones. In calculous pyonephrosis I have removed seven stones through as many separate incisions in the thin parenchyma. After the removal of the calculus the rest of the kidney can be explored through this incision, or, if not, a second incision should be made in the convex border of the organ.

As long ago as 1829 Gerdy[1] had advised that the convex border of the kidney should be selected for incision in nephrotomy. The advantages, depending on the anatomical arrangement of the blood vessels within the kidney, of an incision along this border are considerable. Moreover, through no other single incision can a complete examination of the cavity and substance of the kidney be so conveniently made.

It is the opinion of Barth[2] and Tuffier that the extent of parenchymal degeneration about nephrotomy wounds depends chiefly on the size of the vessels divided; and if this be so, it is a further reason for making the incision, as Gerdy advised, along the convex margin.

After removing a calculus from the renal pelvis, if the convex border has not been incised, the interior of the kidney should be palpated either through the opening, or, if this be too small to admit the finger, then by invaginating the infundibulum.

I have taken out some very large stones, weighing between 800 and 900 gr., through incisions in the dilated infundibulum large enough to admit readily the tips of two fingers. In such cases an incision in the convexity of the organ for examination purposes is quite unnecessary. In some cases, indeed, the calculus is so bound down into the renal cavity by thick fibrous bands between the calyces that its extraction would be most difficult through an incision in the renal substance, whereas it is readily removed through the infundibulum. (See Figs. 22 and 23.)

I have repeatedly extracted calculi through the anterior as well as through the posterior wall of the renal pelvis without a drop of urine subsequently escaping through the loin wound. This result may safely be expected provided the renal opening has been closed by Lembert sutures passed transversely.

If sutures are not used, it is better, if convenient, to open the anterior rather than the posterior surface, because the urine, as it courses along upon the posterior wall of the duct, when the patient is recumbent, is less likely to escape through an incision in the anterior—that is, the upper—wall of the passage.

In advanced pyonephrosis I have not always used sutures after nephrotomy, and it has often been a matter of surprise how readily some of these cases recover without having even a temporary urinary fistula. Suppuration in the renal cavity is by no means always a sufficient reason for not using sutures and for not making an attempt to obtain immediate union.

Fenger, whose opinion in renal surgery commands attention, does not believe that a kidney with a stone in its pelvis is in any case really aseptic, and he warns against the employment of sutures or making an attempt to secure primary union. He relates a case in support of this contention; but neither the case nor the arguments are convincing.



Fig. 22. Kidney with uric acid calculus impacted in pelvis (Westminster Hospital Museum).



Fig. 23. The same kidney seen from within with uric acid calculus impacted in pelvis and bound down by fibrous bands (Westminster Hospital Museum).

When the renal cavity is sacculated and suppurating, it should be freely irrigated with a hot, weak solution of Condy's fluid, perchloride, or carbolic acid. In a few instances the calyces have been found packed with a putty-like mass of muco-pus, which was thoroughly cleared out with the finger and little swabs of cotton wool.

In every case a drainage tube is inserted into the wound around the kidney, but not into the kidney cavity itself. I prefer a tube to iodoform gauze; the latter, by sucking up and retaining the serum and blood, keeps the surfaces of the wound apart, and prevents immediate healing.

In closing the parietal wound I transfix the whole of the layers, skin, muscles, and fasciæ, with the same sutures carried by means of Hagedorn's large curved needles. I have for some considerable time abandoned the use of buried sutures for the separate layers of muscles and fasciæ.

The length of time required for convalescence of course varies. In cases of simple nephrolithotomy patients are often able to sit up on the eleventh or twelfth day, with their wounds healed; and many have returned to their houses between the second and third weeks after the operation. Nephrectomy is frequently as rapidly followed by complete recovery. When the kidney and the perinephric tissues are much disorganised, healing is apt to take place for the most part by granulations, and then four or five weeks are required.

It now only remains for me to express the hope that the scope of these lectures has not seemed to those who have listened to them to be altogether inadequate to the title under which they have been announced.

I had, in the first place, intended to give my personal experience of the several different renal affections which it has been my lot to treat surgically; but when I came face to face with my materials, I found that to do so would necessitate a very cursory survey of a considerable number of subjects.

I therefore preferred to lay before you in tabular form a brief abstract of 267 operations which I have performed upon the kidney, and to limit the lectures themselves to calculous disorders.

References.

[1] *Anatomie des Formes Extérieures du Corps Humain*, Paris, 1829. [2] *Arch. f. klin. Chir.*, Von Langenbeck, 1893, xlvi, 418.

MECHANICAL IMPEDIMENT TO RESPIRATION DURING ANÆSTHESIA, ETC.

By JAMES FOULIS, M.D.,
Edinburgh.

That the alæ nasi and flaccid lips often obstruct the entrance of air into the lungs during anæsthesia is a fact well known to those who have frequently given anæsthetics; but the obstruction thus offered is nothing in comparison with the obstruction caused by the tongue and the epiglottis valving against the posterior pharyngeal wall during the inspiratory efforts of the unconscious individual.

In deep anæsthesia, a condition bordering on death, all the muscles which pass between the lower jaw and the hyoid bone gradually lose their tone, and become relaxed to such an extent that the hyoid bone, with the tongue and epiglottis, fall backwards, moving on the thyro-hyoid membrane as a hinge, until they actually come in contact with the posterior pharyngeal wall, and may remain fixed there at the end of an expiratory effort, thus entirely preventing the ingress of air at the next inspiratory effort (see Fig. 1).



Fig. 1.—From a photograph of a dead body, showing the curved line (*a*) that exists between the chin and the upper border of the thyroid cartilage in the middle line. In this case examination showed that the tongue was lying in contact with the pharyngeal wall.

The simplest and most reliable way of removing all such obstructions at one and the same time is as follows:

Allow the head of the insensible patient to fall back over the end of the operating table, or place a pillow or two under his shoulders, and thus allow the head to fall back as far as possible. Then insert the handle of an ordinary tablespoon, or of a fork (instruments generally at hand) between the teeth, and push it downwards and backwards on

the dorsum of the tongue until it comes in contact with the pharyngeal wall. Then, by a simple leverage action of the wrist, the whole tongue with the epiglottis and hyoid bone may be made to move upwards and away from the pharyngeal wall as far as the thyro-hyoid membrane will allow such a movement; and in a moment all obstruction to the entrance of air in and out of the lungs is thus removed. As long as the spoon handle thus supports the tongue, hyoid bone, and epiglottis, none of these structures can possibly interfere with the entrance of air into the lungs during the movements of artificial respiration (see Fig 2).



Fig. 2.—A photograph of the same body, showing the appearance of the neck below the chin in the middle line (*a*) when the spoon handle is held in proper position during artificial respiration. In this case examination showed that the whole tongue was well removed from the pharyngeal wall, and that the epiglottis was raised, and the aryteno-epiglottic folds were quite tense.

In all cases of deep insensibility, as in anæsthesia, and in the apparently drowned, this method of removing all possible obstructions to the entrance of air into the lungs during artificial respiration is at once both safe and reliable, and in combination with Howard's method of pumping air in and out of the chest gives the most satisfactory results. The sword swallower has no difficulty in passing the sword down his gullet when his head is thrown well back; and there is even less difficulty in lifting up the tongue, epiglottis, and hyoid bone in the way I have described.

MENTAL PECULIARITIES IN HÆMOPHILIA.

By CLINTON T. DENT, F.R.C.S.,
Surgeon to St. George's Hospital, London.

In the interesting case of hæmophilia described in the BRITISH MEDICAL JOURNAL of April 2nd (p. 883), passing allusion is made to a point which, though, according to my experience, very common in these patients, has hitherto been little noticed. In the hope of eliciting information on the point, corroborative or other, I venture to trespass on your columns.

Patients subject to hæmophilia—bleeders in short, for that term is surely better than "hæmophilics"—constantly exhibit mental peculiarities of definite form. The most important and the most common mental peculiarity is an inability (it is more than an unwillingness) to tell the truth about their condition even when they have had repeated and alarming experience of their defect. Frequently they will persist in obstinate denial of their liability to bleed, even when the hæmorrhage is going on, and resisting all efforts to check it. I well recall a strongly-marked instance of this unfortunate and misleading propensity that occurred some years ago in hospital practice. A youth, about 16 years of age, was admitted for persistent hæmorrhage following the extraction of a carious lower molar tooth. Every kind of remedy was tried, but the bleeding, though often checked for the time, broke out again and again. Eventually the inferior dental canal was plugged, but after a while the hæmorrhage recommenced and the boy died. From first to last he denied stoutly that he had ever suffered from bleeding, though the condition of hæmophilia was obvious enough to all. Though sane in all other respects, and aware of his serious condition, he maintained this attitude throughout. We were anxious to communicate with his friends, but he flatly refused to give the address of his relations. Ultimately and by chance the address of his mother was discovered, and she was sent for. There was no need to break the news gently to the woman, for the moment she arrived she said, "I know what has happened; my son has had his tooth taken out, and he is bleeding to death. The same thing almost happened two years ago, and on many occasions his condition has been most serious from slight scratches or wounds." The youth furiously resented his mother's appearance at his bedside, and died actually cursing her, and all who had to do with him, while asserting almost with his last breath the *idée fixe* that he did not bleed more than others.

This distressing case, though exceptional in its circumstances, is no isolated experience, and I doubt not many others have met with patients subject to similar delusions. Hæmarthrosis may easily simulate tuberculous disease in appearance, and most surgeons would probably admit—if only to themselves—that once in a way they have at first been deceived by such cases.

In these days of early and free operative measures the precaution of ascertaining whether there is any history of hæmophilia should, in the case of joint disorders, be a matter of routine. It is not, as I have shown and always taught, sufficient to rely on the patient's word alone, however categorical and clear his statements may seem to be.

The suggestion that bleeders should be tattooed does not seem to be a happy one. Apart from the obvious practical difficulty of gaining consent, the tattoo punctures would be likely to give rise to trouble. If bleeders and epileptic patients could be induced to wear round their necks a small label setting forth their infirmity, they would probably derive advantage. But epileptic patients are far more likely to adopt any such device than bleeders.

THE ALKALINITY OF THE BLOOD IN GOUT.

By ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P.,
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It is well known that an attack of gout may be accelerated by the ingestion of certain foods or beverages harmful either as regards their quality or quantity. One view, which has been commonly held for some time, is that such substances when they accelerate an attack of gout reduce the alkalinity of the blood, and so hasten the precipitation of sodium biurate from that medium, or, as is so frequently stated, they cause "an acidity of the system." It is assumed by those who hold this view that a nitrogenous animal diet diminishes the alkalinity of the blood and so causes deposition of sodium biurate, and that a similar result is caused by the acids contained in wines and beers; whilst, on the other hand, it is assumed that a subsequent rise in alkalinity causes solution of the previously-formed deposits. In the Goulstonian Lectures of last year I showed by a series of experiments that a diminution of the alkalinity of blood serum neither diminished the solubility of sodium biurate in that serum, nor did it produce any effect on the rate of decomposition of sodium quadriurate by such serum, and that, therefore, it was extremely improbable that a diminution of the alkalinity of the blood could in any way affect the gouty process.

Although so many writers have inclined to the view that a diminished alkalinity of the blood is associated with gout, it is remarkable that such a view has no basis of positive experimental evidence whatever. As a matter of fact the proof is in the opposite direction. The experiments of Klemperer[1] show (1) that the alkalinity of the blood of gout is but very little, if at all, diminished; (2) that corresponding variations in the alkalinity may frequently be met with in healthy individuals; and (3) that a diminution of the alkalinity of the blood is a common pathological condition in diseases that are in no way associated with uratic precipitation, such as acute rheumatism, leukæmia, diabetes, carcinoma, and pyrexia. I therefore thought it advisable to make systematic determinations of the alkalinity of the blood throughout the duration of an undoubted attack of gout, and to compare such alkalinity with the average alkalinity of specimens of blood drawn from a number of healthy individuals.

The process that I employed for these determinations of the

alkalinity of the blood was the one recently devised and described by Dr. A. E. Wright.[2] This process is an extremely ingenious and reliable one, and possesses the great advantage of not requiring more than two or three drops of blood in order to make an accurate determination of its alkalinity.

I first estimated the percentages of alkalinity of specimens of blood drawn from twenty-five healthy male adults, which I found to vary from 0.161 to 0.185 per cent. of anhydrous sodium carbonate, the average being 0.167. This average I have taken as representing the normal alkalinity of the blood. In the following table (Table I) are shown the results of the determinations that I made of the alkalinity of the blood of a patient suffering from subacute gout; the estimations were made throughout the duration of the attack, mostly on alternate days. The normal alkalinity of healthy blood is shown for comparison at the foot of the table:

Table I.—*Showing the Results of the Determinations of the Alkalinity of the Blood of an Adult Man during an Attack of Subacute Gout.*

Dates of Determinations, and Relations to Treatment.		Alkalinity represented as Percentage of Anhydrous Sodium Carbonate present in the blood.
February 4	(Commencement of attack and before treatment was begun) ...	0.167
,, 6	(Treated with colchicum only)	0.167
,, 8		0.167
,, 10		0.156
,, 12		0.167
,, 15		0.158
,, 17		0.158
,, 19	(Treated with citrate of potassium and iodide of potassium only)	0.167
,, 22		0.180
,, 24		0.173
,, 26		0.161
,, 28		0.179
March 2	... ...	0.167
Average alkalinity throughout the attack ...		0.166
Average alkalinity of healthy blood		0.167

These results show that throughout this attack of subacute gout the alkalinity of the blood was practically the same as the average alkalinity of healthy blood.

Another erroneous assumption that has been made by some writers is that variations in the acidity of the urine can be taken as a gauge of corresponding variations in the alkalinity of the blood, and that, therefore, a fall of acidity in the urine means an increased alkalinity of the blood, and *vice versâ*. That this assumption is wrong is shown by reference to the following table (Table II), in which are arranged side by side the determinations that I made on the same days of the alkalinity of the blood and of the total acidity of the urine for each twenty-four hours. The case was the one of subacute gout referred to in the previous table.

Table II.—*Showing the Absence of any Constant Relationship between the Alkalinity of the Blood and the Acidity of the Urine of a Patient during an Attack of Subacute Gout.*

Dates of Determinations.	Alkalinity of the Blood represented as Percentage of Anhydrous Sodium Carbonate present.	Acidity of Total Urine for 24 Hours reckoned as Grammes of Hydrochloric Acid.
February 4	0.167	1.392
,, 6	0.167	0.953
,, 8	0.167	1.096
,, 10	0.156	1.374
,, 12	0.167	1.583
,, 15	0.158	1.529
,, 17	0.158	1.629
,, 19	0.167	1.581
,, 22	0.180	1.602
,, 24	0.173	Alkaline
,, 26	0.161	Alkaline
,, 28	0.17	0.608
March 2	0.1	0.622

This table shows that no constant relationship existed in this case of gout between the alkalinity of the blood and the acidity of the urine; and, moreover, that on those days when, owing to treatment with citrate of potassium, the urine remained alkaline, there was no corresponding rise in alkalinity of the blood.

The determinations of the alkalinity of the blood and of the acidity of the urine of this case of subacute gout are shown in curves in the following figure, a glance at which demonstrates at once that no constant relationship existed between the alkalinity of the blood and the acidity of the urine:

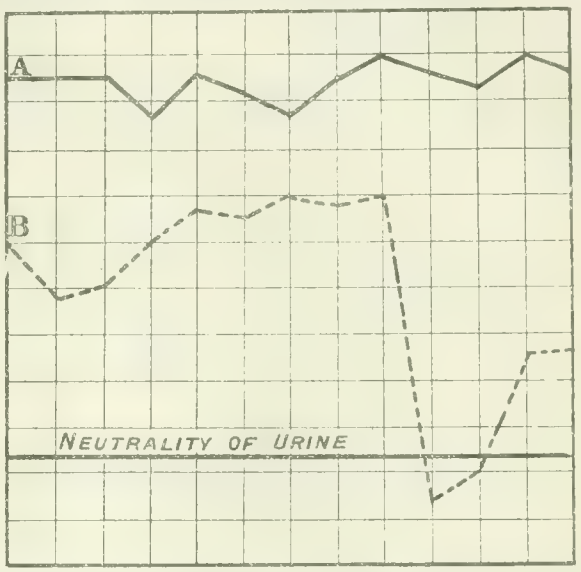


Fig. 1.—Showing the absence of any constant relationship between the alkalinity of the blood and the acidity of the urine of a patient during an attack of subacute goat. A alkalinity of blood, B acidity of urine.

Conclusions.

The facts dealt with in this paper lead to the following conclusions: (1) The alkalinity of the blood of gout is not necessarily diminished during an attack; (2) no constant relationship exists between the alkalinity of the blood and the acidity of the urine during an attack of gout.

References.

1 *Deut. med. Woch.*, 1895, Band xxi, p. 655. 2 *Lancet*, September 18th, 1897.

THE OUT-PATIENT TREATMENT OF INSANITY IN GENERAL HOSPITALS.*

By CROCHLEY CLAPHAM, M.D.,

Physician Superintendent, the Grange, Rotherham; Physician to the Royal Hospital, Sheffield.

A certain amount of provision for the out-patient treatment of mental disease amongst paupers has been made at our large county asylums, and good work has been done, but there remains a large number of patients of the class slightly above paupers who decline to present themselves for treatment at an asylum and whom it is advisable to provide for elsewhere.

Dr. Henry Rayner (late Superintendent of Hanwell), Lecturer on Mental Diseases at St. Thomas's Hospital, London, has endeavoured to fill this gap by instituting an out-patient department for mental diseases at that hospital, and has advocated the establishment of similar departments at other public hospitals. Dr. Rayner commenced his work at St. Thomas's early in 1893, and I was induced, by his representations and by a paper which he read at the British Medical Association meeting held at Newcastle in that year, to set up a corresponding department at the Royal Hospital,

* Read at a meeting of the Yorkshire Branch of the British Medical Association.

Sheffield, with which I am connected as Honorary Physician.

The weekly Board of the hospital having sanctioned the proceeding, I started in the autumn of 1893 by putting up a notice in the out-patient waiting room to the effect that patients suffering from mental disorder would be seen at 1.30 P.M. every Tuesday, and that it was advisable that patients of this class should be accompanied by a near relation. The response to my notice was immediate and continuous, and for the last four years and a half cases of mental disease have never failed to present themselves on the day set apart by me for their treatment. During this period every form of insanity has passed under my notice at the hospital, and with very gratifying results.

The great object aimed at in the establishment of this department has been to get at the insane of the lower classes in the early stages of their malady, which are so much more amenable to treatment than the more advanced ones. To this end I spoke in my notice of mental disorder and not of insanity, as the latter term is singularly abhorrent to these people.

The first thing to determine, on a case presenting itself, is whether or no it is a suitable one for out-patient treatment, or whether it would be more properly dealt with inside an asylum, thus providing the poor with expert advice gratuitously on a most important point.

Where I have thought it advisable to recommend asylum care, I have always found the relatives ready to fall in with my suggestion, though previously, perhaps, averse to taking action in the matter. However, the great proportion of patients presenting themselves have proved suitable for out-patient treatment and home management.

In the absence of such a department as I am describing, these patients would too frequently be put through a routine narcotic treatment, which might or might not be suited to the case; or, on the other hand, would receive no treatment whatever. Such as these are the cases which would be specially benefited by the advice and treatment of an expert mental physician attached to the staff of a general hospital; and I am anxious to support Dr. Rayner's contention that such a physician should, wherever practicable, be attached to at least one hospital in each large town.

My own experience is that patients of this order readily avail themselves of the facilities afforded, and are brought at an early stage of their disease to the hospital consulting room, with, in many cases, eminently favourable results. Dr. Rayner, in a letter to me on this subject, says: "What strikes me with wonder is the ease with which arrest can be effected in these early stages." I can quite bear out this statement.

Another function of this department is to render aid in the supervision and after-care of patients discharged as convalescent from county asylums with their mental equilibrium still somewhat unstable.

A CONTRIBUTION TO THE PHARMACOLOGY OF THE MAMMALIAN HEART.

BY ARTHUR CUSHNY, A.M., M.D.ABERD.,
Professor of Materia Medica and Therapeutics in the University of Michigan, U.S.A.

THE effects of drugs on the mammalian heart have hitherto been experimentally studied chiefly by an indirect method, the graphic registration of the arterial blood pressure by means of the manometer, the results thus obtained being interpreted by the aid of the changes observed in the frog's heart. Although the value of this procedure is undoubted, it seems high time that some of the direct methods which have given such valuable results in the hands of the physiologist should be introduced into the pharmacological laboratory. The numerous factors on which the tension of the arteries depends render deductions as to the condition of the heart very insecure, while the reaction of the frog's heart to poisons is often very different from that of the mammalian. A systematic examination of the effects of some of the more important drugs has therefore been carried on by direct methods in the pharmacological laboratory of this University during the last three years.

METHODS.

The rabbit's heart was observed directly by dividing the sternum and opening the pericardium, while the cardiometer of Roy and Adami was employed to register the movements of the cat's heart, and a somewhat modified form of their myocardiograph[1] was used in experiments on dogs. The rabbits were anæsthetised with urethane, the cats and dogs with morphine and chloroform acetone.

1. DIGITALIS SERIES.[2]

A number of drugs of this series (digitalin, digitoxin, strophanthin, antiarin, erythrophlœin, convallamarin, oleandrin, etc.) were examined, and all gave very similar results. After therapeutic doses, the rhythm of the heart was slowed, the relaxation of the ventricles was considerably increased, and their contraction rendered more complete. The auricular systole was generally weaker, while its relaxation appeared unaltered, although the last could not be measured accurately. The contraction volume, or amount of blood rejected at each ventricular contraction, was increased, the total output per minute augmented to a less extent.

When the vagi were paralysed by the injection of atropine previously, digitalis produced a very different result. The rhythm was then unchanged, while the ventricular systole became much more perfect than before, and its dilatation during diastole was either unchanged or was less than that before the injection. The changes in the auricle were identical with those in the ventricle. The contraction volume and the output per unit of time were augmented in equal proportion, and often to a much greater extent than when the vagi were intact.

The changes seen in hearts in which the inhibitory mechanism is uninjured are, therefore, due to two distinct and separate factors—the stimulation of the regulating apparatus (chiefly in the medulla oblongata) and the direct action on the cardiac muscle, which is observed in the heart after the former has been paralysed by atropine. The slow rhythm and increased dilatation of the ventricle are due to the inhibitory stimulation, which would also lead to a less perfect systole were this effect not opposed by the direct muscular action. In the auricle the inhibitory action overbalances the muscular, so that the latter at first appears to be wanting, but is shown to be present by the atropine experiments and also by more careful examination of the other tracings. The vagus effect would also lead to a lessened contraction volume and output were it not for the compensatory increase in the ventricular systole. It is to be remarked that the muscular action does not prolong the systole in the mammalian as it does in the frog's heart. The blood pressure rises in this stage, partly from the increased output of the heart and partly from contraction of the vessels.

Poisonous quantities of these drugs may cause two entirely different results, according to which of these two factors is thrown into the greater prominence. If the inhibitory stimulation is the more pronounced, the rhythm becomes extremely slow and somewhat irregular, the ventricular relaxation is more marked than after therapeutic doses, and the systole is often reduced in strength. The auricle generally ceases in diastole, and the output falls to a very low point. These symptoms are often accompanied by cyanosis and dyspnœic and convulsive movements. The heart then gives a few rapid contractions and the ventricle passes into delirium. On the other hand, if the muscular action is the more highly developed, the ventricle assumes an independent rhythm, which undergoes rapid acceleration. If the auricle continues to beat at a different rate, there results a periodic variation in the extent of contraction and relaxation both in the auricle and ventricle, which gives a characteristic appearance to this part of the tracing. With advancing intoxication these periods become shorter and less regular, and, after a stage of extreme irregularity, the ventricle ceases its contractions and goes into delirium cordis, while the blood pressure, which has been slowly falling as the heart becomes more irregular, descends to zero.

2. ACONITINE[3] AND VERATRINE.

In therapeutic doses these produce slowing of the rhythm, increased relaxation and less complete contraction of the

ventricles and auricles, owing to their stimulating the inhibitory centres in the medulla oblongata. They have no direct action on the heart except in very large quantities, when they produce an independent ventricular or auricular rhythm and consequent irregularities, which sometimes resemble those following poisonous doses of digitalis. Aconitine is more apt to cause these than veratrine, which, on the other hand, we found to stimulate the inhibitory centre more strongly.

3. Caffeine.

Intravenous injections of small quantities of caffeine (0.03 to 0.05 g.) had often little effect on the dog's heart, although distinct acceleration occurred in some experiments after 0.05 g. Larger doses were followed by marked acceleration, for example, from 90 to 117 beats per minute after 0.2 g. This acceleration was not accompanied by any distinct alteration in the strength of contraction or in the extent of relaxation, and only lasted from 10 to 20 minutes. In very large quantities caffeine sometimes elicits an independent ventricular rhythm, which again leads to the rhythmical variations mentioned under digitalis.

4. Strychnine,

even in large quantities, has no direct action on the heart, but often causes some slowing from inhibitory stimulation, which, however, is not nearly so marked as that observed after aconitine and veratrine. The blood pressure is increased by doses which are too small to increase the reflex irritability to any very marked extent.

5. Nitroglycerine

does not increase in any way the contraction or efficiency of the heart. In fact it has no effect on that organ save in large doses, which weaken the systole, especially that of the auricle. This effect seems to be due to a direct action on the heart muscle, perhaps aided by the changes in the blood.

6. Alcohol

injected intravenously does not in any way increase the efficiency of the heart. The smallest quantity from which any result was observed was equivalent to $\frac{1}{2}$ c.cm. of absolute alcohol, and produced a transient weakness of the auricular systoles. Very much larger quantities (equivalent to $7\frac{1}{2}$ c cm. absolute alcohol) were required to produce any permanent injury, and even these did not materially affect the rhythm, but only the strength of the contractions. Even 20 c.cm. of 50 per cent. alcohol injected into the vein of a small dog only produced a slight and transient weakness of the ventricle, which recovered itself entirely within three minutes. The strength of the auricular contraction was at first profoundly affected by this quantity, but this rapidly passed off, although no such complete recovery followed as in the ventricle.

Of all the drugs examined, then, the digitalis series and caffeine alone were found to increase the efficiency of the heart, and would be entitled to rank as cardiac stimulants. Caffeine differs from digitalis, however, in its increasing the number and not the strength of the contractions, and would therefore seem to stimulate the rhythm-giving mechanism rather than the auricle and ventricle proper. Digitalis, on the other hand acts primarily on the strength of the contractions, and only produces noticeable acceleration when administered in poisonous doses. It would therefore seem to act chiefly on those parts of the heart which are endowed more largely with contractile power than with automatic. Caffeine can in no sense be considered a substitute for digitalis, but may have a special sphere of usefulness in cases in which acceleration alone is desired. To induce any increase in the rhythm considerable quantities of the drug would seem to be necessary from our experiments. The essential feature of the digitalis action in therapeutics does not seem to be the inhibitory stimulation and the slowing of the heart, for if this were the case veratrine and aconitine would give equally good results. Its beneficial effects are rather due to the changes which it produces in the heart muscle, and it is to be desired that some drug possessed of this property and devoid of its action on the inhibitory centre were available. The different members of the series vary somewhat in this respect, digitoxin and erythrophlœin acting more strongly on the vagus centre and relatively less on the heart muscle than strophanthin.

From our experiments with the digitalis series, the further deduction may be made that the therapeutic effects of these drugs cannot be estimated by the slowness of the pulse. The muscular action may be induced without any marked alteration of the rate of the heart, if from any cause the inhibitory apparatus is weakened, or if one of the series which has but little action on that apparatus has been administered. Much less weight should therefore be laid on the rate of the pulse than on its other characters and on the general symptoms in digitalis treatment. In cases where slowing of the pulse is desired without further alteration, aconite and veratrine would seem to be indicated rather than digitalis. Strychnine and nitroglycerine owe their use in disorders of the circulation not to any changes produced by them directly in the heart, but to their vascular effects. Strychnine increases the resistance to the contraction of the heart by narrowing the calibre of the arterioles through the vasoconstrictor centre; while nitroglycerine dilates the vessels through acting on their coats, and therefore lessens the resistance against which the heart has to work. Both of these may therefore be of value in certain conditions of the circulation; and nitroglycerine would seem to be indicated where the contraction of the vessels induced by digitalis has to be avoided.[4]

Any beneficial effects produced in the heart by alcohol or ether must be attributed to their local irritating properties which may increase the activity of the medullary centres reflexly, or to their general action on the central nervous system and the tissues.

References.

[1] *Journ. of Phys.*, xxi, No. 3. [2] For details see *Journ. of Exp. Med.*, ii, pp. 233-299. [3] See Matthews, *Journ. of Exp. Med.*, ii, p. 594. [4] *Cf.* Marshall, *Journ. of Phys.*, xxii, No. 1.

ACETYLENE, THE NEW ILLUMINANT, AND THE DANGERS ARISING FROM ITS INHALATION.

By THOMAS OLIVER, M.A., M.D., F.R.C.P.,

Physician to the Royal Infirmary, and Professor of Physiology, College of Medicine, Newcastle-upon-Tyne.

In the British Medical Journal of March 12th, p. 713, attention was drawn to this new illuminant. As the subject is at present attracting public attention owing to the ease with which the gas can be generated and the likelihood of its being used pretty widely throughout the country, it may be well to point out to your readers certain facts connected with the medical side of the question. In the article referred to allusion is made to the greater explosibility of acetylene compared to ordinary coal gas. A mixture of air and acetylene commences to be explosive when it contains 5 per cent. of acetylene, whereas it requires the presence of 8 per cent. of coal gas to make a similar mixture explosible. This, therefore, is one of the dangers attending the use of the new illuminant, and its excessively pungent and disagreeable odour, though a warning to the individual of its presence, is one of its disadvantages. Experimenting with calcium carbide from which the gas is obtained on the addition of water, my colleague, Dr. R. A. Bolam, and myself had ample evidence in the Physiological Laboratory of the unpleasant and penetrating odour of acetylene, the rapidity with which the gas is evolved immediately, and of the great heat which is generated. This latter circumstance would point to the absolute necessity of having acetylene, if being made for private mansions, generated in the open air or in a covered shed open at the sides.

Our experiments were directed rather towards an investigation of the poisonous properties of the illuminant when inhaled compared with coal gas. In the case of coal and water gas, death supervenes by asphyxia owing to the carbon monoxide, so largely present in these gases, entering into extremely stable combinations with the hæmoglobin of the blood, from which it is with difficulty dissociated. It is the absence of odour in water gas that renders it so dangerous; its influence is so subtle because of its presence being unperceived. Under ordinary circumstances a short period is sufficient to asphyxiate an animal by coal gas. With the assistance of Dr. Bolam I have tested the effects of acetylene. If a rabbit, for example, is placed in a bell jar into which ordinary air and acetylene are pumped, the animal seems for a very

long period to experience very little inconvenience. It is not until ordinary atmospheric air is excluded and only acetylene admitted that symptoms gradually and slowly develop. This circumstance shows that so long as there is any oxygen in the aërial medium by which the animal is surrounded, it is the oxygen which is absorbed into the blood and very little acetylene. After a more lengthened exposure to acetylene than that which is necessary for coal gas the animal becomes intoxicated, it falls over on its side apparently profoundly asleep, and while all through the experiment its breathing has been somewhat short and rapid, stupor steals over the animal apparently painlessly, for there is not exhibited anything of the excitement, nervous or respiratory, which is seen in the narcosis produced by such poisonous vapours as bisulphide of carbon or benzole, or even in ordinary asphyxia. Where somnolence has been induced and asphyxia not pushed too far the rabbit, when removed from the bell jar and placed in ordinary atmospheric air, begins to move about in a few seconds in as lively a manner as if it had not been interfered with, there being neither weakness nor paralysis of its limbs. In a word, a few inhalations of atmospheric air are sufficient to restore to the animal all its faculties.

Should the inhalation have been pushed further and the animal have been very deeply asphyxiated, death may ensue, the cyanosis hitherto observed being rapidly replaced by extreme pallor. In the minor and easily recoverable stages of asphyxia the vascular tension is still maintained, and there is no difficulty in obtaining a drop of blood for examination; but when the deeper stages are reached so extremely contracted are all the vessels that it is almost impossible to obtain even a trace of blood. When this stage has been reached recovery is difficult. It is interesting at this point to mention that when we examined the blood of a rabbit at different stages of intoxication from acetylene, and especially in the deepest asphyxia, this fluid on spectroscopic examination always exhibited two well-marked bands of oxyhæmoglobin; also that unlike the blood in coal-gas poisoning, although resembling it in the cherry-red colour which it presented, it was readily reduced on the application of ammonium sulphide and gentle heat. To that extent, therefore, if the asphyxia caused by acetylene is not too profound—and under ordinary domestic circumstances it would not be a pure acetylene atmosphere that would be inhaled by an individual, but one mixed with a large proportion of ordinary air—the danger to life seems to be less than it would be in coal-gas poisoning, and the prospect of recovery by removal to atmospheric air greater. Death may supervene, however, if the inhalation has been lengthened and atmospheric air excluded.

A rabbit which was profoundly asphyxiated by acetylene, whose lips were extremely pale, its arteries, comparatively speaking, empty, pupils widely dilated, breathing short and irregular, and muscles completely paretic, died after removal from the bell jar, death being preceded as in anæmia of the brain by opisthotonos and convulsions first of the fore limbs, then of the hind, and subsequently the tremors became general. At the necropsy the heart felt hard to the touch, and was firmly contracted, both auricles and ventricles were filled with dark clot; the lungs were pale; the liver not unduly filled with blood; the kidneys showed a dark venous coloration at the junction of cortex and medulla, while the vessels on the surface of the brain were pale and empty, and on section the brain tissue was extremely pale. The bladder was distended; the urine was quite free from albumen and sugar. The general pallor throughout was striking.

The rabbit died long after its removal from the acetylene atmosphere, after it had been breathing for twenty minutes ordinary air superficially and irregularly. The condition of the heart found at the necropsy is scarcely that observed in asphyxia; some other factor, therefore, contributed to the death of the animal, a point to which I may allude in a subsequent communication.

A CASE OF CONGENITAL HYPERTROPHY OF THE PYLORUS.

BY

H. D. ROLLESTON, M.D., F.R.C.P., Senior Assistant Physician to St. George's Hospital and to the Victoria Hospital for Sick Children.

and

LOUIS B. HAYNE, M.D., B.C.Cantab., Late House Physician to the Victoria Hospital for Sick Children.

THE rarity of congenital hypertrophy of the pylorus serves as a sufficient excuse for placing the following case on record:

A male child, between 7 and 8 weeks old was recentl brought for treatment to the Victoria Hospital for Children in a state of extreme emaciation. The previous history elicited was as follows: At birth the child was apparently healthy; from the first, however, he vomited the breast milk. After a fortnight, owing to the inability of the mother (who had to go out to work) to nurse him any longer, he was fed by hand on condensed milk, and later on cow's milk; the vomiting, which occurred about half an hour after meals, however continued. Accompanying this there was progressive wasting and constipation of the bowels.

When the child first came under observation there was emaciation to an extreme degree, and kerato-malacia, most marked in the left eye. No tumour was felt in the region of the pylorus. Death ensued four days later, the vomiting being rather less during the last week of life. The age of the child at death was 8 weeks. A *post-mortem* examination was made five days after death. The weight of the child was 4lbs. 13ozs., the average weight according to Galton's life-history album being 15 lbs. Nothing abnormal was noted in any of the organs excepting the stomach. The pyloric end of the viscus was at once seen to be markedly thickened; it was about three quarters of an inch long, and the lumen was about the capacity of a No. 4 male catheter. The stomach was a little dilated, and its walls were distinctly thickened in the neighbourhood of the pylorus. The duodenum was normal. The intestines generally were collapsed and empty. No dilatation of the œsophagus was noticed.

Microscopically the mucous membrane was thrown into folds and showed some catarrh. The submucosa was much condensed. Both th muscular coats, but more especially the circular, were hypertrophied. There was no small-cell infiltration or fibrosis of the muscular coats, and there seemed to be no change beyond hypertrophy.

REMARKS.

This case is one of the group of cases of congenital hypertrophy of the pylorus, of which at least 17 have been recorded with *post-mortem* examination. Thomson[1] has done much to establish the recognition of this disease, and Finkelstein[2] has collected 10 cases, including 2 recorded by Herschsprung, 4 by Henschel,[3] and 3 by Gran,[4]; other cases have been described by Thomson (3), Schwyzer (2)[5] Pedden,[6] Pitt,[7] and De Bruyn Kops,[8] while Soltau Fenwick[9] briefly refers to two cases that he has seen. Thomson recognises as belonging to this class cases recorded by Williamson in 1841 and Dawosky in 1842.

Age.—The average age in 17 cases was 5 months, but this was largely due to the inclusion of 2 cases of Henschel's, aged 16 and 24 months; excluding these 2, the average age for the 15 cases was 3 months, the extremes being 7 months and 3 weeks. These cases, therefore, form a distinct group, and are evidently very different from R. Maier's[10] 31 cases of congenital stenosis of the pylorus, 21 of which were collected by himself and 10 by Landerer. The ages in this series varied between 12 and 80 years; the youngest were in girls aged 12 and 16 years respectively, the cases being equally distributed over the subsequent decades. These cases, which are often referred to as cases of congenital origin, are, it would seem, of a different nature from those we are now discussing and are rather allied to chronic pyloric fibrosis.

Sex.—In 15 of the cases in which the sex is recorded, 8 were females and 7 males, so that including our own case the incidence of the disease appears to fall equally on the two sexes.

Influence of Heredity.—Henschel met with 3 cases in the same family, thus showing that, like some other congenital conditions, especially congenital obliteration of the bile ducts, the lesions may repeat itself in the offspring of the same mother. There is no evidence that congenital syphilis plays a part, and though, on the view that it is a disturbance of nerve co-ordination, it might naturally be thought that the parents would be found to be nervously unstable, this is only definitely stated to be so in a small minority of cases. (Thomson,[11] Schwyzer.[12]) This, among other points, requires further investigation.

The cause of this muscular hypertrophy has been ably discussed by Thomson, who has proposed the name of "congenital gastric spasm"[13] for this condition. He believes it to be due to nervous inco-ordination, which leads to simultaneous contraction of the stomach and the pyloric sphincter, and so to overwork of both. There is no evidence of any gross cause such as ulceration, and he dismisses the suggestion, which he himself raises, of the pyloric spasm being due to any irritating property of the liquor amnii swallowed in the later months of intrauterine life by the fœtus, on the ground that there is no evidence of irritation on the mucosa. However, the mucous membrane is described in some of the recorded cases (Thomson, Pedden, Schwyzer, Finkelstein) as being inflamed, and, though this may quite conceivably be a secondary result of the spasm, it prevents this ingenious suggestion being put entirely aside, though whether the fœtus swallows the liquor

amnii, and how much nutrition it would get out of a fluid containing only 1.9 proteid matter in 1,000 parts,[14] is another question.

In adults a form of acid dyspepsia, chronic gastritis with hypersecretion of gastric juice and spasm of the pylorus, has been described, and is often called Reichmann's disease. Opinions, however, differ as to whether the pyloric obstruction is spasmodic and nervous in origin, or whether after all it is not purely mechanical. But even if the first alternative be true, the congenital condition with which we are now concerned does not appear to be exactly analogous to it, for Fenwick, in one of his cases, found the amount of HCl in the gastric juice normal, and Gran, in one of his cases, found that it was diminished.

References.

[1] *Edinburgh Hospital Reports*, vol. iv (two cases); *Scottish Medical and Surgical Journal*, June, 1897 (one case). [2] *Jahrb. f. Kinderheilk.*, Bd. xliii, s. 105, 1896. [3] *Archiv f. Kinderheilk.*, Bd. xiii, s. 32, 1891. [4] *Jahr. f. Kinderheilk.*, Bd. xliii, s. 118. [5] *New York Medical Journal*, vol. lxiv, p. 674; vol. lxvi, p. 726. [6] *Glasgow Medical Journal*, June, 1889, p. 416. [7] *Trans. Path. Soc. London*, vol. xliii, p. 63, 1892. [8] Quoted in Epitome, British Medical Journal, 1897, vol. i. par. 103. [9] *Disorders of Digestion in Infancy and Children*, 1897, p. 315. [10] *Virchow's Archiv*, Bd. 102, s. 413. [11] *Edinburgh Hospital Reports*, vol. iv. [12] *New York Medical Journal*, vol. lxvi, p. 726. [13] *Scottish Medical and Surgical Journal*, June, 1897. [14] Halliburton, *Textbook of Chemical Physiology and Pathology*, 1891, p. 355.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

URÆMIC ECLAMPSIA: COMA: RECOVERY.

On March 8th I was called to see a primipara, aged 24, and arrived about 3 P.M. The patient was cold and collapsed, pulse weak and rapid (about 140 per minute); she had a death-like pallor, as though she had suffered from severe hæmorrhage; her face and legs were very œdematous, and she was quite unconscious. The mother stated that the patient had, about an hour before my arrival, been delivered of a stillborn child, and had been attended by a midwife. She did not expect to be confined for about another two months, and the appearance of the child bore out this statement. About 10.30 A.M. she had a violent "fit," which lasted for about ten minutes, and this was followed in an hour by a second one. She was confined at 2 P.M., had a third convulsion about two hours later, and continued to have them at intervals of from one to two hours until 2 A.M. (that is, twelve hours after confinement). Since then she had been free from an attack. She had ten fits in all, two before confinement and eight after.

The patient then lapsed into a state of coma, and was totally unconscious for about thirty-six hours, after which she rallied sufficiently to take some milk and brandy.

She then remained in a state of semi-consciousness until March 13th (four days after confinement), taking no notice of anyone, but took medicine and nourishment when put to her lips.

On my arrival I injected pilocarpin gr.¼, after which she perspired freely. On the third day, the following powder was given: Calomel gr.iij, jalapine gr.iij, and her bowels were well opened. After this I gave her a diuretic mixture. Since then all the œdema has disappeared, and her legs have assumed their normal shape. The urine had been very scanty for thirteen weeks, and was found on examination to be highly albuminous.

Now (March 23rd) there is only a slight trace of albumen. She is passing about a normal quantity of urine, and is convalescent.

Arnold J. Thomson.

Kingswinford. M.R.C.S.Eng., L.R.C.P.Lond.

A CASE OF STRAMONIUM POISONING.

On January 9th at noon Mrs. H., aged 53, took a teaspoonful of an antiasthmatical powder in mistake for liquorice powder. At 12.45 P.M., when sitting down to dinner, she could not understand a dry feeling in her mouth, which sipping water did not affect in the least; at the same time her sight became blurred, and she experienced a peculiar sensation of swelling in her eyes; lifting the glass to moisten her lips she exclaimed at the weight of it, and feeling herself getting worse she told her husband to go for the doctor, and from this time remembered nothing till about 6 or 7 P.M. When I saw her at 2 P.M. her condition bore a remarkable resemblance to a case of delirium tremens; her face, however, which was markedly pale, was not expressive of suspicion or anxiety, nor was there any clammy perspiration, the skin being perfectly dry. Her eyes were bright and staring, the pupils dilated but not excessively, and absolutely insensible to light. The flow of ideas was very rapid, and her speech so fast that only at times could any sense be made of what she said. Mirthful delirium and hallucinations were very prominent, but illusions and delusions were markedly absent. Although she often attempted to rise she seemed unable to do so from inco-ordination of the lower extremities. Sensation, however, was perfect. The power of swallowing at first seemed absent, but if she was prevented from returning what was placed in her mouth she swallowed it. Breathing was quiet, but the pulse was very rapid, thready, and compressible. After using the stomach pump freely nitrite of amyl and digitalin (hypodermic) was administered, and shortly afterwards pilocarpin (⅓ gr.). Recovery after the use of the latter was remarkably rapid.

B. Henry Shaw, M.B., B.Ch., B.A.O.(R.U.I.).

Cradley Heath, Staffordshire.

DISLOCATION OF UNGUAL PHALANX.

A case of this form of dislocation came under my care a few weeks ago. A negro female was struck with a stick, and in trying to ward off the blow her left hand came in contact with the stick, the ungual phalanx of the middle finger being dislocated forwards. I saw the case a few minutes after the occurrence; reduction was easily effected.

J. Huntly-Peck, L.R.C.P.E., etc.

Linstead, Jamaica, W.I.

ULCERATIVE ENDOCARDITIS TREATED WITH ANTISTREPTOCOCCUS SERUM.

On December 28th, 1896, I was asked to see Mrs. B., aged 42, who had been invalided some time, with the following history. She had suffered from rheumatic fever the previous May, when she was laid up for eleven weeks. She had influenza previously with frequent relapses. After rheumatic fever she went to Ramsgate for three months, when she improved, but relapsed again on returning home. She was well nourished but flabby. The temperature was 98°, the pulse 112, and the respirations 20. Catamenia were irregular. The urine was normal. She was quite sensible, and intelligently described her own feelings. Her temperature varied almost each hour, and generally went up to over 101° at night, dropped towards morning, becoming normal about midday. There was a loud systolic murmur at the apex, and the pulse ranged from 100 to 120.

She had frequent attacks, beginning with chills, followed by a hot and sweating stage. There was diarrhœa at times, and vomiting was frequent. A few days later her legs were covered with a rash resembling purpura. There was a tendency to syncope if she sat upright for any time, and thirst was constant. I inclined to the diagnosis of ulcerative endocarditis.

On January 4th, 1897, Dr. Seymour Taylor kindly saw the patient with me, and confirmed this diagnosis, suggesting at the same time the injection of antistreptococcus serum. The following day 10 c.cm. were injected into the subcutaneous tissue of the right thigh at 3 P.M.; the temperature went up to 102° at 8 P.M., but dropped steadily to subnormal during the night, and reached 97° at 2 P.M. On January 8th 10 c.cm. were further injected into the right loin; the temperature did not rise beyond 101° the same night, the pulse still keeping 120.

Previous to this the patient had for some days assumed a heavy lethargic appearance. She was more helpless, and only answered when pressed for a reply. The injections did not seem to influence this condition one way or the other. Her pulse kept up to 120. She continued in this drowsy semicomatose state, doubtless due to septic trouble, with suffused heavy look, and now took her nourishment badly.

On January 15th I was called to see her at 6 A.M., and found her in an unconscious state dying, death being due to cerebral

embolism as far as could be judged. No necropsy was allowed.

Remarks.—The case came into my hands as one of intermittent fever, for which large doses of quinine had been given. She had been ailing for months since her rheumatic attack. Her symptoms pointed strongly to ague, and Bristowe says of ulcerative endocarditis that "its resemblance to ague is occasionally very remarkable." He gives the best account of it that I have been able to find.

Mill Hill Park, W. R. Pollock, L.R.C.P.I.

PASSAGE OF APPARENT CASTS OF THE GALL BLADDER.

I am indebted to the courtesy of Dr. Brittin, whom I met in consultation, for permission to publish this case.

A. B., aged 29, has had nine attacks of biliary colic in the last fourteen months, accompanied by more or less severe jaundice. During the first two attacks he passed on each occasion a fairly large facetted gall stone. The fæces had not been examined during the later illnesses, but from his severe pain and symptoms exactly resembling his earlier attacks he feels sure that he has passed a stone on each occasion.

Fourteen days ago he had a severe colic, necessitating the use of morphine, and next day passed a large "piece of flesh," which was examined by his doctor, who describes it as an oblong sac with moderately thick walls, stained green, about 2 inches long and 1 inch broad, resembling the gall bladder in shape. Ten days later he was again seized with severe pain, similar to that experienced in all the former illnesses, and after some hours of agony he was relieved, and next day passed another cast, which I examined. It is 2 inches long, 1½ inch in breadth, its walls are $\frac{1}{10}$ inch thick, it is a closed sac with a distinct neck, and is stained bright green in parts, especially towards the neck. When laid out it appears to resemble a gall bladder. The accompanying fæces were clay coloured, and had been so for a long period of time. There was no microscopic appearance of hydatid structure, and I do not think that it was an intestinal cast. We came to the conclusion that both these casts were derived from the gall bladder, as the patient had suffered from typical biliary colic many times before, and described the pain experienced before the passage of the casts as exactly similar to that he had felt before he passed the gall stones.

It does not seem improbable that the presence of the stones has set up a chronic inflammation in the bladder, which has resulted in the formation of a false membrane, which has itself been expelled after the last stone had been passed.

P. Clennell Fenwick, M.B.Lond.

Christchurch, New Zealand.

SUPRAPUBIC CYSTOTOMY WITHOUT THE RECTAL BAG.

As most textbooks insist on the necessity of the rectal bag in operating by the suprapubic method in well-nourished adults, the following case may be of interest to surgeons who are called upon to operate without the luxuries of the well-appointed hospitals to which one is accustomed at home.

The patient, a rifleman of the 4th Goorkhas, aged 36, had suffered from symptoms of stone for a year. On December 2nd last I crushed one stone with the lithotrite; but, although a second calculus could be detected at the time, I thought it better to postpone further surgical treatment on account of the irregularity of the patient's breathing after he had been under chloroform for an hour. Accordingly the fragments were washed out in the usual way, and the patient was kept in hospital for a week. At the end of that time he still complained of bladder discomfort, but was able to do duty until the beginning of February, when he was again placed on the sick list. On February 14th, kindly assisted by Surgeon-Captain Orr, I decided to open the bladder above the pubes. As the man was inclined to be stout, we anticipated some difficulty in the absence of the rectal bag, but, in spite of the presence of a considerable thickness of adipose tissue, the fluid injected into the bladder brought the organ well up to the parietes, and the stone was removed without difficulty. The patient has progressed satisfactorily, and the operation wound is all but closed (February 27th).

V. E. H. Lindesay, M.B.(Vict.),
Chitral. Surgeon-Lieutenant I.M.S.

A CASE OF OPIUM POISONING TREATED BY PERMANGANATE OF POTASSIUM.

I was recently called to Mrs. S., aged 64 years. She had swallowed by mistake half an ounce of laudanum 50 minutes previous to my seeing her. On my arrival at 8.45 A.M. she had just vomited from the effects of a mustard and water draught. I found her collapsed, and very drowsy; her skin was cold; pulse very weak and thready; and both pupils contracted to the size of pin heads. I gave her at once a hypodermic injection of one-twentieth of a grain of hydrochlorate of strychnine, this had the immediate effect of strengthening the pulse. I then made a solution of potassium permanganate by breaking up three 2-gr. pills in three pints of water. From my previous knowledge of the patient I knew it would be useless to try to pass a tube into the stomach unless she was unconscious, a stage I did not wish her to arrive at. Accordingly I had to employ this method of lavage of the stomach. I made her swallow half a pint of the solution (1 gr. in 10 ounces) every five minutes, and between the doses induced vomiting by irritating the fauces. At the end of 20 minutes I made her swallow a pint of the solution and retain it in the stomach. She then felt better, and the drowsiness was not so great. Two hours after the accident the pupils were normal and the pulse strong, but great sleepiness still remained. At 12 noon she took 4 grains of permanganate of potassium dissolved in half a pint of water, and the same again at 2 P.M. I gave instructions that she was to be kept awake till 6 P.M., and milk and water in equal parts to be given at frequent intervals. Next day the patient fell quite well, but complained of dryness of the throat and mouth from the parching effect of the permanganate solution; she ate well, and felt no other inconvenience from her unfortunate mistake.

Edgware Road, W. Wm. Walton Don, M.D.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GENERAL HOSPITAL, BIRMINGHAM.

A CASE OF THROMBOSIS OF THE INFERIOR VENA CAVA.

(Under the care of Dr. Saundby.)

[Reported by J. Ganner, M.B.Lond., House-Physician, and C. Powell White, M.B.Cantab., F.R.C.S., Pathologist.]

Mrs. C., aged 47, was admitted on March 29th, 1897, complaining of swelling of the legs and shortness of breath; duration three months.

History.

With the exception of scarlatina and measles, which she had when a child, she has never had any serious illness, and had always been strong until about 13 years ago, when she began to have epileptic fits, which have continued at irregular intervals until five months before admission. Just before Christmas, 1894, she began to suffer from shortness of breath and cough, and in a few weeks her legs began to swell; these symptoms becoming more marked she came to this hospital, and was admitted on May 10th, 1895.

She was found to have a serous effusion into the left pleural cavity, which was siphoned, and ℥50 of clear, highly albuminous fluid were removed. It was noted at this time that she had enlarged and varicose veins over the front of the chest and abdomen, and on both legs. She was much benefited by the removal of the fluid, and went out of hospital on June 7th, and remained fairly well until February, 1896, when she began to suffer in the same way again, and was again admitted as an in-patient on March 25th. She showed similar signs and symptoms to those she did nine months before, but the pleural effusion, which was again present on the left side, disappeared without tapping, and at the end of a month she

went out very much better. After this she kept fairly well, and was able to do her ordinary house work for about nine months, when she again had shortness of breath and swelling of both legs. As out-patient treatment did not appear to relieve her she was admitted on March 29th, 1897.

There was no history of syphilis or gonorrhœa obtainable; she had been a fairly temperate woman, had been married 22 years, had never been pregnant, and had not menstruated since the epileptic fits came on 13 years ago. There was nothing in the family history which had a bearing on the case.

Condition on Admission.

The patient looked much distressed; she had to be propped up in bed, and on the slightest exertion became breathless. There was well-marked cyanosis of the lips, nose, and ears; the venules of the cheek were much injected; there was considerable œdema of both lower extremities of a rather solid character, which was better marked in the thighs than in the legs. There were varicose veins in both legs and several scars about the ankles, where she had varicose ulcers some years ago. Pulse 94, respiration 30, temperature 98°.

The following are the symptoms and physical signs more in detail:

Alimentary System.—Lips blue, tongue coated with thick white fur; had occasional attacks of pain in stomach and under shoulders after food; bowels constipated.

Abdomen enlarged, bulged out a good deal in both flanks, flattened in front; over each side of the abdomen were enlarged and tortuous veins, the principal one being about the size of an ordinary lead pencil, the others about half this size; they were better marked on the left side, and were continuous with enlarged veins over the front of the chest wall; they could not, however, be seen to be continuous with the veins of the lower extremities, as the anasarca of the abdominal wall and the upper part of the thighs made the tracing of the superficial veins very difficult. The flow of blood in them was from below upwards. The patient did not remember when these veins first became prominent, but they were noticed on each of the previous occasions when she was an in-patient, but were not so marked as on the last admission. The abdominal walls were soft and yielding; there was some tenderness in the epigastrium; there was no tumour to be felt. The liver was felt extending 2 inches below the costal margin in the nipple line; its surface was smooth and its consistence hard. The liver dulness commenced above at the sixth rib in the nipple line; there was moderate ascites. The spleen was not palpable below the costal margin, nor did its area appear enlarged to percussion.

Circulatory System.—She had attacks of palpitation, especially at night; she had dyspnœa on the slightest exertion. The cardiac impulse was in the fifth space, 4 inches from the middle line; it was only feebly marked. The limits of the cardiac dulness were: Above, upper border of the fourth rib; right, left edge of the sternum; left, a line 4¼ inches from the middle line.

The heart sounds were irregular; there was a soft systolic murmur localised to the apex, and accentuation of the pulmonary second sound; elsewhere the sounds were fairly clear. Pulse 90, irregular, and of rather low tension and small volume.

Respiratory System.—She had slight cough with frothy expectoration; there was evidence of effusion at both bases, especially the left.

The Urine was small in quantity, high-coloured, high specific gravity; there was a dense cloud of albumen, and a few granular and hyaline casts were seen.

Diagnosis.

Clinically the case appeared to be one of heart failure with its associated symptoms and signs; the presence of the enlarged veins over the abdomen and chest, together with the consideration of the direction of the flow of blood in them, suggested that there was some obstruction in the inferior vena cava or in both common iliac veins.

After-History.

The patient while under observation had very bad attacks of dyspnœa, and did not improve under treatment except for a short time after the left chest was siphoned, and 54 ounces of blood-stained highly-albuminous fluid withdrawn. The breathing soon became worse again, and the heart's action more and more irregular and feeble; the œdema of the lower extremities and abdominal wall became more marked, and the patient died on April 30th, about one month after admission.

Necropsy.

External Appearances.—Anasarca of lower extremities and abdomen. *Rigor mortis* slight.

Thorax.—Heart: weight 19 oz., much hypertrophied, especially the left ventricle; no valvular disease. Lungs: some excess of fluid in both pleural cavities; both lungs carnified.

Abdomen.—A large amount of ascitic fluid. Stomach and intestines normal. Liver in a state of chronic venous engorgement. Pancreas normal. Kidneys: right, small with diminished cortex, capsule adherent; left, natural size, capsule adherent. Spleen: weight 12 oz., large and firm.

Pelvis.—There were adhesions between the right Fallopian tube and the broad ligament. The fimbriated extremity was open. The right uterine and ovarian veins were very large and tortuous. The left Fallopian tube was much bound down by adhesions and tortuous. The fimbriated extremity was closely adherent to the ovary and occluded; there was no distension of the tube. External os nulliparous. There were no signs of recent pelvic peritonitis.

Brain.—The frontal lobes were small and ill-developed, otherwise normal.

Thrombosis.—The inferior vena cava was completely occluded from the lower end as far up as the entrance of the hepatic veins. In the lower third there was a minute channel filled with *post-mortem* clot, but above this there was no trace of a lumen, the whole vein being filled with firm fibrous tissue. The right renal vein was completely occluded as far as the pelvis. The left renal vein was occluded between the vena cava and the entrance of the ovarian vein.

Collateral Circulation.—Lower limbs: The blood from the lower limbs found its way to the heart by the veins of the abdominal and thoracic walls, which were much enlarged. Some of the blood in the abdominal walls passed by means of the parumbilical vein, which was enormously distended, to the liver, and so to the hepatic veins; some of it also entered the portal system by means of numerous communications around the spleen, pancreas, duodenum, and rectum. Pelvic viscera: The blood apparently ascended the internal iliac vein, and then descended the external iliac vein to join the blood coming from the lower limbs. Right kidney: There was a communication between the renal vein in the hilum of the kidney and the vena azygos, and there was also an abnormal vein running from the hilum to join the ovarian vein, which evidently conveyed some of the blood from the kidney to the ovarian and so to the pelvic veins. There were also numerous minute veins passing through the capsule of the kidney to the abdominal wall. Left kidney: The ovarian vein was enormously enlarged, and evidently conveyed the greater part of the blood from the kidney. There was a fairly large vein which passed upwards from the renal vein and received the blood from the suprarenal body; it communicated with the portal system near the cardiac orifice of the stomach, and then passed into the thorax to end in the vena azygos minor. There were also numerous small veins passing through the capsule to the abdominal wall.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

F. J. Payne, M.D., President, in the Chair.

Tuesday, April 19th, 1898.

Intestinal Obstruction due to Stricture.

Dr. C. P. White recorded a case (a man, aged 52) of chronic intestinal obstruction, which terminated in collapse and death, and in which the necropsy revealed a series of tuberculous ulcers and four dense cicatricial structures of the small intestine. One of the ulcers had perforated, and led to fatal peritonitis. There was no tuberculosis elsewhere.

Columnar-celled Carcinoma of the Œsophagus.

The same author also exhibited this lesion, a somewhat

rare one. The neoplasm was seated close above the cardia. The adjoining lymphatic glands were infected. He had found only one other similar example, and that was recorded by Dr. Newman.

Mr. D'ARCY POWER observed that the death of Louis XIII of France was obviously, from the record, due to a similar perforation of the intestine affected with tuberculous ulceration; in this case, however, the lungs were also diseased.

SECONDARY GROWTHS FROM A CASE OF CARCINOMA OF THE BREAST.

Mr. D'ESTE EMERY and Dr. KELLY recounted the history of a married woman, whose breast was removed for what appeared to be a duct carcinoma. Recurrence took place in the remains of the breast, but without lymphatic involvement. Microscopic examination of the recurrence revealed that the disease was a spheroidal-celled carcinoma in process of colloid degeneration. A further local recurrence ensued, and proved to be of the same structure. Bronchitis, accompanied with a mucoid expectoration and nodosity of the liver, was later on observed, together with headache and a remarkable depression, increasing in area and depth, in the frontal bone, the pulsation of the brain becoming perceptible. Two months before death a secondary growth appeared in the sternum. The necropsy showed growths in the lungs undergoing colloid change, growths in the liver free of this change, and a very fibrous growth of essentially the same carcinomatous structure replacing part of the frontal bone.

Mr. RAYMOND JOHNSON had examined the first tumour removed in this case, and held it to be a simple duct papilloma, as there was no surrounding infiltration. He regarded the colloidal and other tumours subsequently appearing as having no genetic relation with that projecting into the duct; structurally the evidence pointed to this; moreover, the first interval amounted to as much as six years.

Mr. H. B. ROBINSON had recorded a case of duct carcinoma disseminated through the breast, in which the stroma had undergone a mucous change; hence he threw some doubt upon the histological diagnosis of the recurrent growths, and thought that possibly they were related to that first removed in connection with one of the ducts.

XTREME (CARCINOMATOUS) CONTRACTION OF THE STOMACH.

Mr. G. BERTRAM HUNT exhibited an extreme example of this condition, the whole organ being reduced to the size of small intestine, and so rigid as to cause a high degree of obstruction; no solid food could pass through it; the submucous and muscular coats were particularly thickened. There were a few secondary erosions, resulting from the contracted condition. Two similar specimens had been shown at the Society. The author was led to believe from observation and written records that most, if not all, cases of rigid, contracted stomach ("leather bottle") were due to an extremely fibrous form of infiltrating carcinoma, and that a pure fibrosis was very rare, if indeed it existed at all. Dr. Sidney Martin had come to the same conclusion. The average duration of the disease in ten cases was ten months—a course too rapid for a simple fibrosis. There was, moreover, in many cases, an association with metastatic growths in the liver, abdominal glands, ovary, peritoneum, or umbilicus. The microscopic examination of the stomach needed to be very complete, as the small widely separated groups of epithelial cells might be overlooked or wanting in a particular section.

ANEURYSM OF THORACIC AORTA.

Dr. LEE DICKINSON, after describing the clinical signs of this disease, which perforated the chest wall and led to death by hæmorrhage, drew particular attention to the absence of atheroma; the vessel beyond the aneurysm was abnormally small. He had previously recorded two examples of aneurysm associated with a similar hypoplasia of vessel. Virchow had more particularly described arterial hypoplasia, and had noticed that it was often associated with fatty change of the middle coat, and tended to the formation of dissecting aneurysm. Hypoplasia of arteries was particularly common in women. It might be associated with hæmophilia the author had observed one such case.

INTERLOBULAR CIRRHOSIS IN PYLEPHLEBITIS.

Dr. PARKES WEBER described a liver in which the portal veins were the seats of suppuration. No macroscopic evidence of cirrhosis was present, but histologically an interlobular form was in an early stage of progress. There were no gall stones. The patient, a young woman, suffered from intense jaundice and exhaustion; there was swelling and tenderness of the hepatic region. Laparotomy was performed, but nothing definite was discovered. The jaundice had possibly been due to compression of the bile duct by the abscess in the hilum, and the biliary obstruction, again, might explain the early cirrhosis. The etiology of the pylephlebitis was not determined.

CARCINOMA OF THE ŒSOPHAGUS PERFORATING THE AORTA.

Dr. ARCHIBALD GARROD exhibited this specimen. The perforation lay about the level of the bifurcation of the trachea. The growth was squamous-celled. Hæmatemesis was observed during life, and this was followed by collapse and death. The stomach was found distended with blood at the necropsy, though there was none in the intestine. The actual operation in the descending aorta admitted a probe, and presented a slit-like or torn character.

Dr. VOELCKER remarked that there was an exact counterpart of the specimen in the Middlesex Hospital museum. Why the arteries so commonly escaped when surrounded with malignant growth he could not explain.

A BRAIN SHOWING THREE SUBSEQUENT HÆMORRHAGES.

Dr. L. FREYBERGER cited the case of a woman seized with headache, loss of consciousness, and convulsions, who after recovery (without paralysis) was subsequently the subject of a second similar fit. From the second fit she recovered, though with impaired vision. On a later occasion she fell out of bed, and was found afterwards affected with left hemiplegia, death shortly ensuing. After death the three hæmorrhages corresponding with the three seizures were discovered. The first of these dated ninety-one days before death; the blood was yellow and dry; at the second site, thirty-eight days before death, the clot was gelatinous-looking, and lay in the left occipital lobe. The third clot was a massive one, and involved the basal ganglia. The heart in the same case presented a musculus papillaris inserted directly into the mitral valve. During fœtal life a sponge-work of muscle reached the segments of the valve, but later on the portions attached to the valve underwent fibrous transformation; in the present instance the fœtal condition had persisted.

The PRESIDENT remarked that this condition of heart was first drawn attention to at the Society by Dr. Ogle. At times the muscular bundle was attached to the valve by either end, and was obviously a persistent relic of what at one time obtained in fœtal life.

CARD SPECIMENS.

Mr. C. D. GREEN: (1) A Stomach with two Perforating Ulcers and a Fistulous Communication with the Colon. (2) A Lobulated Fibroma removed from the Nipple.

HARVEIAN SOCIETY OF LONDON.

JAS. F. GOODHART, M.D., President, in the Chair.

Thursday, April 14th, 1898.

EPILEPTIC COLONIES.

Dr. ALDREN TURNER read a short paper upon the treatment of epilepsy in epileptic colonies. He referred to the success which had followed the establishment of these institutions in Germany, and pointed to the development of this system in America and in England. The epileptic colony at Chalfont St. Peters, Bucks, to which attention was specially drawn, was founded for the purpose of giving employment to those epileptics, both male and female, who by reason of their disease were unable to obtain work, or who were discharged from remunerative posts on account of epilepsy. The experience of the colony during the four years of its existence pointed to the fact that the younger the epileptic and the sooner he was admitted after the onset of the seizures, the more satisfactory was the result of the general management and *régime* adopted. The principles which directed the management were simple: (*a*) Removal of the epileptic from town to country; (*b*) regular employment under direction; (*c*) the maintenance of a well

ordered and regular mode of life, with avoidance of excitement and abstinence from alcoholic liquors; (*d*) abundance of good nourishment of a simple nature. The general result was that the fits in the majority of cases diminished both in number and severity, in some cases to quite an extraordinary extent; the physical health materially improved, while the mental condition in all but a few cases showed obvious improvement.

The President alluded to the beneficial effects which followed admission of epileptics to ordinary hospitals. Some were sent in as suffering from Jacksonian epilepsy, and as being in urgent need of operation, but the fits would cease or subside in frequency and severity so long as the patient remained in hospital, although medicines were almost entirely withheld. He mentioned the difficulty of treating epilepsy occurring in those past middle age, and instanced the case of a gentleman who, after being a great sportsman all his life, had become epileptic. He would often be seized by a fit whilst out shooting, and would lie down until the attack passed off, and then resume his sport. He (Dr. Goodhart) had taken the responsibility of allowing the patient to continue his favourite pursuits in spite of the obvious danger entailed, thinking that the risk to general health would be still greater were the patient to forego the mode of life to which he was accustomed.

Dr. Leonard Guthrie thought that provision should be made in colonies for the treatment of epileptic children. Systematic moral training—which epileptic children rarely got at home—was of the highest importance to the children themselves and to the community.

Dr. Knowsley Sibley remarked that after hearing the paper it had very forcibly struck him that the improvement both as to the frequency and strength of the fits noticed in so many patients shortly after admission to the epileptic colony might be the result of the removal of alcohol. His hospital experience had taught him that a large number of epileptics drank more alcohol than was good for them, and in many cases were easily influenced by comparatively small quantities. Undoubtedly the exciting cause of the fits was alcohol. The fact that on admission to the colony all alcohol was withdrawn from the daily *régime* suggested a probable explanation of the improvement noticed. Dr. Sibley also spoke on the question of drugs and the doses employed.

Dr. Turner, in reply, agreed as to the importance of depriving epileptics of alcoholic drinks. The question of receiving children at the colony had already engaged the attention of the governors, but there was difficulty in deciding how long they should be kept and what should be done with them afterwards.

Oöphorectomy for Inoperable Cancer of the Breast.

Professor Watson Cheyne read a paper on this subject, which will be published.

Mr. Alban Doran remarked that Dr. Beatson laid down certain principles as guides to his treatment. Cancer of the breast, he insisted, should be removed early and thoroughly after Mitchell Banks's method. If it recurred, and the patient were young, oöphorectomy ought to be performed, recurrence in an elderly patient requiring not only that operation, but also the administration of thyroid extract. Beatson admitted that further treatment was of no avail if secondary deposits had developed. Mr. Doran knew from experience that it was not always easy to remove a normal ovary entire, even when the uterus was also normal. The ovarian ligament was sometimes very short, and sometimes contained ovarian tissue close to its uterine insertion. He described the method which he adopted to remove the appendages as close to the uterus as possible with the least risk of slipping of the ligature. Certainly if removal of the ovaries did some good to cancer elsewhere, they must be thoroughly extirpated. In Mr. Stanley Boyd's fourth case, where the patient was over 60, the ovaries were found in a condition of complete atrophy, and the operation had not the slightest effect on the progress of the cancer. Lastly, Mr. Doran admitted that he had little belief in oöphorectomy in the treatment of cancer, and was not surprised to hear Mr. Watson Cheyne's conclusions. He thought that possibly it was the abdominal section rather than the removal of ovaries that had some influence on the cancer. Everybody knew that parotitis sometimes followed abdominal operations, nor was it clear that the complication could always be reckoned as a form of sepsis.

Mr. Malcolm said there seemed to be little doubt that a simple exploratory incision into the peritoneal cavity was occasionally followed by a temporary diminution in size of a malignant abdominal tumour. The improvement of cancerous mammary growths after oöphorectomy appeared to be also temporary, and did not always follow this operation. It had occurred to him that the cause of the improvement in these two cases might be similar, although as yet unexplained.

Mr. Harold Stiles said that pathologists were now agreed that in the mamma, as elsewhere, the cancerous process was characterised by uncontrolled epithelial proliferation, and that along with the excessive cell birth-rate there was also a large death-rate. Those who had an opportunity of seeing Dr. Beatson's first very remarkable case felt that his treatment, which was based on a well-established physiological fact, claimed the attention of the scientific surgeon, and they were glad to learn that Professor Cheyne, among others, had given it a trial. His first case certainly confirmed the experience of Dr. Beatson and of Mr. Stanley Boyd. Unfortunately, in no instance had the patient been completely and permanently rid of the disease by removal of the ovaries. Only a few days back Dr. Beatson gave him (Mr. Stiles) an opportunity of again seeing his first patient, in whom for several months all trace of the disease had disappeared. Recently, however, the disease had again become manifest, and Dr. Beatson intended to publish a further note of the case at an early date. In the Edinburgh Royal Infirmary, Dr. Beatson's treatment had been carried out by more than one surgeon, with the result that in some cases the disease had been temporarily arrested, while in others it had been uninfluenced. In the face of the experience now accumulated, was the treatment to be abandoned, or should it still be resorted to in special cases? He left this to be answered by Dr. Beatson, who might at any rate claim that removal of the ovaries in some instances arrested the progress of the disease in a way hitherto deemed impossible.

Mr. Watson Cheyne, in reply, said that he had no doubt that the removal of the ovaries was complete in his cases. He thought that the disappearance of lumps in the abdomen was due to the fact that they were inflammatory and not malignant at all.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

J. M. Purser, M.D., President, in the Chair.

Friday, March 25th, 1898.

Traumatic Rupture of Duodenum.

Dr. E. H. Bennett exhibited an example of rupture of the duodenum caused by the kick of a horse. An exploratory laparotomy was performed without any lesion being discovered. At the *post-mortem* examination it was found that the portion of the duodenum which lay against the spine and outside the peritoneum had been ruptured, and that the intestinal contents had escaped along the spine downwards as far as the pelvis. He commented on the vagueness of the clinical signs of this injury, and its great fatality.

Dr. E. J. McWeeney remembered seeing in the *post-mortem* room a case of traumatic rupture of duodenum, following a chronic, round, clean punched-out duodenal ulcer. In that case the patient had succumbed to an injury—the kick of a horse in the stomach. Immediate collapse followed the injury. The patient was too far gone to allow of operation. The rupture was into the peritoneal cavity, and was attended by acute, diffuse, purulent peritonitis.

Dr. E. H. Bennett replied.

Cancer of Œsophagus: Perforation of Right Subclavian Artery by a Secondary Growth.

Dr. J. W. Moore showed a specimen from a man, aged 56, who died of torrential hæmorrhage on December 23rd, 1897. He had suffered from dysphagia for seven or eight months, and subsequently from laryngeal paralysis from pressure on the left recurrent laryngeal nerve, from fœtid sputum and breath, and from other pressure symptoms caused by an

intrathoracic tumour. These pressure symptoms led to a diagnosis of thoracic aneurysm, although the physical signs were absent. The new growth, a squamous cancer, involved the œsophagus at the level of 1 inch above the diaphragm, and the immediate cause of death was hæmorrhage, due to perforation of right subclavian artery by a secondary cancerous tumour.

Professor O'Sullivan read an account of the pathology of the case.

Dr. Craig said a somewhat similar case had come recently under his care, where the primary cancer occurred in the œsophagus just below the bifurcation of the trachea, the secondary growths occurring in many places.

In reply to Dr. M'Causland, Dr. E. J. McWeeney, and Dr. Knott, Dr. Moore said that the bougie had been passed only once before the case came under his observation, and the passage of the bougie produced a remarkable amelioration in the symptom of dysphagia. He forbade further attempts to pass it, however, as he came to the conclusion that a thoracic aneurysm was present. With regard to the expectoration, he concluded that that was another evidence of intrathoracic aneurysm, that the pressure was exercised on the nutrient vessels of the left lung in which there were distinct physical signs. There was no evidence of involvement of lung in the cancerous growth at all. He added that the mode of death seemed to him to confirm the diagnosis of aneurysm, which was first called in question by the *x*-rays examination, which revealed no aneurysmal tumour.

Bones Removed in Case of Fracture of Skull.

Mr. Wheeler exhibited a patient and the bones removed in trephining for depressed fracture of the skull. A coachman, aged 29, was admitted into the City of Dublin Hospital on March 21st, 1897, having sustained a severe injury to his head caused by a fall from the top of an electric tramcar while in motion. On admission there was profound coma; the patient was completely paralysed, respirations stertorous, his pulse laboured and slow (50 per minute); the surface of his body was warm and perspiring, both his pupils were dilated, his reflexes were lost, his fæces and urine were retained; there was no hæmorrhage from his ear, mouth, or nose. An extensive depression could easily be detected upon the left side of his head, in front of the parietal eminence. A large V-shaped flap was raised, which exposed the depressed area of bone at the junction of the coronal and sagittal sutures, and there was now brought into view an extensive comminuted fracture invading both frontal and parietal bones. A large triangular piece of bone was removed and two smaller pieces with several spiculæ. From the superior portion of this large triangular piece of bone the superior longitudinal sinus had to be separated. There was considerable hæmorrhage from a large cerebral vessel as well as from wounds in the dura mater. Ten minutes after the operation the patient conversed with his master. Recovery was perfect except for the loss of sight in the left eye.

Traumatic Rupture of Liver and Kidney.

Mr. Wheeler related the history of a child, aged 6 years, who was run over by a cart, causing rupture of the liver and right kidney—both shown. The child was admitted to the City of Dublin Hospital on March 10th at 3.30 P.M., apparently with little the matter, as it ran about the accident ward. There was no external mark. At 4.15 the child, lying in its bed, was observed to get weak, and shortly after exhibited all the signs of collapse; three hours after it died. The liver presented a contused appearance. On the upper surface and posterior portion of the right lobe, towards the anterior right margin, was a linear rupture, with the capsule torn about three-quarters of an inch. Between this and the right border, near the right lateral ligament, there was an angular gaping rupture, 2½ to 3 inches long, communicating about the centre with the posterior surface and extending round the right margin. Upon the under surface of the right lobe, corresponding to the depression for the kidney, was a long irregular rupture, gaping slightly and extending at one portion into the rupture on the superior surface. The right kidney presented upon the anterior surface three long gaping ruptures, two of which passed round its inner border and extended into posterior, the third extended to the outer border and deeply into the kidney substance. Upon the posterior surface, as well as the two ruptures mentioned, there were about its centre several minute ruptures, which were covered by the unbroken capsule. The child passed urine on admission; there was no blood passed with the urine. Although the *post-mortem* examination revealed a large blood clot in the urinary bladder, there was a large quantity of blood in the peritoneum. The vessels of the kidney were not injured.

Remarks were made by Mr. T. Myles and Dr. E. J. McWeeney; and Mr. Wheeler replied.

Sarcoma of the Sphenoid.

Mr. Wheeler showed a large sarcomatous tumour—originating in the sphenoid bone—removed from a man, aged 25, admitted into the City of Dublin Hospital on October 18th, 1897. He had suffered from inflammation of the right middle ear, consequent upon which he had perforation of his tympanum, and some discharge; he had slight facial paralysis, accompanied by a "scalding" pain in the right side of the face; he had tenderness and pain over his right mastoid region—some rigidity of his masseter muscles; there was no vomiting, no unsteadiness of his gait; there was no eye trouble, nor did the examination reveal anything abnormal in his eyes. Mr. Wheeler trephined this patient by his own operation in December, 1897, opening the mastoid cells, the tympanum, and exposing the dura mater at the upper arc of the trephine circle, which allowed the temporal lobe to be explored. The patient recovered rapidly and progressed to convalescence, feeling much relieved from the pain. The discharge ceased, and there was less contraction of his masseter muscles, the scalding pains in his right face were very much lessened, but the facial paralysis remained unaltered. In February, 1898, the scalding feeling and pain again troubled him. His masseter muscles again became rigid and contracted, and he now complained of pain in the temporal region anterior and on a level with the superior margin of his ear. The history of his case told that he had received an injury in this situation by a brick falling upon his head while he was following his occupation as a carpenter in an unfinished house. The possibility of a cerebellar abscess was thought of, but there was not sufficient evidence to verify such a conclusion. There was nothing that could be found by ophthalmic examination to indicate tumour of the brain; his eyes were normal. He was trephined by Mr. Wheeler over the seat of his pain upon March 3rd, 1898. A careful examination was followed by a negative result; the man expressed himself much relieved from his pain, which had been acute; he lived until March 8th, and apparently died of pressure on the region of the medulla. An examination was made, and a rounded nodular tumour was seen bulging into the middle fossa on the right side, extending into the sphenoidal fissure, and posteriorly to the petrous portion of the temporal bone for about 1½ inch, its superior surface being on a level with the anterior clinoid process; continuing inwards it occupied the space between the anterior and the posterior clinoid process of the right side, extending beyond the middle line; posteriorly a nodule could be seen lying under the fifth nerve, and internally to this a large nodule encircling the sixth nerve as it passed the dura mater; the carotid arteries were surrounded by this growth, and the third nerve passed into it. The tumour was of vast extent, pressing into the ethmoid bone in front, and into the pterygoid regions on the right side; behind it involved the basilar process of the occipital bone and the occipito-atlantoid joints. The specimen was interesting, taking into consideration the absence of all eye trouble, notwithstanding that the third, fourth, fifth, and sixth nerves passed through the tumour. Two days before the operation of March 3rd this patient walked about the ward and sat in a chair for two hours. Dr. McWeeney, who examined the tumour, reported as follows: "This tumour is a large round-celled sarcoma. In places there are trabeculæ of very dense, almost structureless, and more or less hyaline tissue, which give the structure a resemblance to cylindroma. This tough structureless material was probably the dura mater."

Remarks were made by Dr. E. J. McWeeney and Mr. T. Myles.

Complete Osseous Union of Transverse Fracture of Patella.

Dr. John Knott read notes of a case on this subject, and showed a specimen.

Dr. E. H. Bennett said that the specimen was as complete as any he had seen.

Mr. Myles questioned whether the line of fracture along the cartilages represented a complete cleft through the entire thickness of the bone, and whether it was not only a chip out of part of the bone.

Sir William Stokes thought that there was a distinct mark of the fracture in front of the specimen.

Mr. Wheeler also made remarks; and Dr. Knott replied.

LIVERPOOL MEDICAL INSTITUTION.

Thursday, April 14th, 1898.

W. Macfie Campbell, M.D., President, in the Chair.

Urticaria following Measles.

Dr. G. Stopford Taylor showed a fair-complexioned girl, aged 6 years, suffering from an attack of urticaria of one month's duration commencing shortly after an attack of measles. White wheals the size of a bean appeared upon the cheeks, buttocks, arms, and legs; those on the cheeks and arms became pigmented—urticaria pigmentosa; those on the buttocks, hæmorrhagic—urticaria hæmorrhagica. The eruption was rapidly subsiding under an antiscorbutic diet and lime juice. He also brought forward a case of purpura as a contrast.

Transposition of Viscera.

Dr. C. Macalister exhibited lantern slides of a *post-mortem* examination on a case of complete transposition of the viscera.

Dr. Gordon Gullan alluded to a similar case some years ago in the Royal Infirmary under the care of Dr. Caton. The transposition there was complete, and the patient left-handed. At the *post-mortem* examination no distinct difference was noticeable in the convolutions.

Osteoarthritis.

Dr. C. Macalister read a note on osteoarthritis, illustrated by a series of lantern slides of the different forms. He had obtained good results from the administration of dried ox blood, given in tabloid form.

Dr. Bradshaw alluded to the views of Bannatyne and Wohlmann that osteoarthritis was due to a specific micro-organism, which they found in synovial membrane and fluid from affected joints. Acting on this, he had administered creosote internally with benefit. He thought the good results from dried blood quite consistent with the microbic theory, as the blood might contain some antidote to the toxins secreted by the micro-organism.

Drs. Carter, Grünbaum, Raw, and Warrington spoke.

Surgical Treatment of Pyloric Obstruction.

Mr. Paul read a paper on the surgical treatment of pyloric obstruction, with an account of 20 cases, and of a new method of performing gastro-enterostomy. The cases consisted of 3 of Loreta's operation, 5 of pyloroplasty, 2 of pylorectomy, and 10 of gastro-enterostomy. The heaviest mortality occurred in the last class. He thought that Loreta's operation was now superseded by the much better pyloroplasty. Pylorectomy had only a limited application; the cases did not come under surgical treatment sufficiently early. For gastro-enterostomy he considered that no thoroughly satisfactory operation had yet been devised, and suggested the following: An incision was made through the musculo-peritoneal coats of the bowel, which were reflected with a blunt dissector, and the denuded submucosa rubbed with a stick of zinc chloride. The stomach was next treated in the same way, except that the outer coats were excised, and not simply reflected. A continuous suture was now run around the areas operated upon, connecting the stomach and bowel, and a few Halsted sutures added when necessary. The results of experiments on dogs by this method of anastomosis were given. Anastomosis occurred in twenty-four hours, and a good opening was produced.

Mr. Rushton Parker would not attempt to go into more than a few points raised, having at a recent meeting expressed his own views in relation to several cases in which he had himself performed pyloroplasty not only in cicatricial stenosis but in cases of malignant disease. It was clear that this operation must be of limited application in malignant disease, and that gastro-enterostomy was the operation most likely concerned. At the same time Mr. Parker's view was that the scope for ingenuity, and consequently interest, offered by malignant disease fell far short of that deserved of other cases, and he had frequently refrained from extensive operation of quite possible success on that account.

Drs. Carter and Ross made remarks.

Sheffield Medico-Chirurgical Society.—At a meeting on March 31st, Dr. Sinclair White (President) in the chair, Dr. Arthur Hall showed a case of Xerostomia in a woman aged 49. The condition had lasted for a year, and had been quite unrelieved by any treatment.—Dr. Archibald Cuff showed: (1) A case of Resection of the Astragalus; (2) a patient who had been rapidly cured of a Psoas Abscess.—Mr. Priestley showed a specimen of Aneurysm of the Abdominal Aorta.—Dr. Robertson read a paper on Some Points in the Etiology of Typhoid Fever. He pointed out that direct infection accounted for a much larger number of cases than was generally supposed, probably about as many as 10 per cent. of the total number of cases being due to this cause. A great deal of attention had very properly been given to the prevention of waterborne typhoid. The more difficult subject of endemic typhoid had not received the attention that its importance seemed to merit. Probably as much as 80 to 85 per cent. of the cases of typhoid fever which occurred in this country were not waterborne, and were not due to direct infection. Dr. Robertson related his experiments, which went to show that the typhoid organisms could live for very long periods in the soil; it appeared to be essential for their growth that they should be fed with fresh supplies of organic matter at intervals. These conditions were just those found in the insanitary conditions which were most often claimed to have produced the disease—namely, gross soil pollution. From such areas the organism was easily spread by wind into the food supplies of persons living in houses near. Statistical evidence went to show that persons living in areas where soil pollution occurred were more frequently attacked than persons in clean areas. In large public institutions endemic typhoid was practically unknown.—The President, Dr. James Martin, Dr. Waddy, Dr. Wilkinson, Dr. Leonard Giles, Dr. Arthur Hall, and Dr. Meredith Richards made remarks.

Forfarshire Medical Association.—At a meeting held in the University College, Dundee, on April 1st, Dr. A. Campbell (President) in the chair, Dr. MacEwan showed a case of Reproduction of the Humerus after operation for Acute Necrosis, and also a case after Estlander's operation.—Mr. Greig showed a case of Congenital Malformation of the Anus rectified by operation; the rectum opened in front of the posterior fourchette. Mr. Greig also showed four abdominal cases: (1) Case of recovery after operation for Volvulus; (2) Case after operation for Appendicitis with Retrocæcal Abscess; (3) Case after Cœliotomy for Abdominal Pain; (4) Case of incurable malignant Tumour in Abdomen, in which the tumour had diminished somewhat and the patient had put on weight after an exploratory operation.—Dr. Buist showed a series of specimens by Tores's method.—The President read notes of a case of Tropical Abscess of the Liver. The patient, aged 51, had spent 18 years in Calcutta, enjoying good health till she had a severe attack of malarial fever. Her condition showing no improvement after three months she was ordered home. On August 17th, 1897, she was found much exhausted; temperature 103°, liver enlarged upwards, no pain, no diarrhœa, no jaundice; sweats and chilliness. Towards the end of August the patient had a sharp attack of perihepatitis. Aspiration was done at first without success, but on September 18th three pints of purulent fluid were withdrawn. The dulness, which had after this diminished, again increased. On September 25th a portion of the seventh rib was excised in the right nipple line, the liver was incised and the abscess cavity evacuated. A drain was inserted into the most dependent part between the eighth and ninth ribs in the posterior axillary line. The drain was removed in December,

and the patient was now as well as ever. Dr. MacEwan referred to a case he had had under his care. Dr. Mackie Whyte referred to the absence of fluctuation and also to the absence of dysentery in the case read.—Dr. Pirie read notes on a simple method of Clinical Bacteriology, and showed several microphotographs and also tubes of cultivations.—Dr. Foggie read notes of the case of a man who had received an Injury to the Lower Lumbar Vertebræ by a fall from a scaffolding. Paraplegia from the hips downwards had existed at first, but the various movements at the hip and knee-joints were soon restored, while the initial retention of urine and the constipation after passing through a stage of incontinence now showed a modified control. Muscular movements below the knees and reaction to the faradic current were still absent. Neither the knee-jerks nor plantar reflexes had as yet returned. There was well-defined total anæsthesia over the anus and in front, and also lower down over both heels. Partial anæsthesia existed over all the skin below the knees except on the inner sides, and was connected by a narrow band running up the back of the thighs, with the upper totally anæsthetic area. Thermo-anæsthesia was practically coextensive. Vasomotor and trophic changes were present. The primary lesion had affected the lumbar region of the cord or its roots as high as the third segment or root, but the permanent lesion had been almost limited to the sacral or its roots. Possibly the injury was one of the cauda equina.

Nottingham Medico-Chirurgical Society.—At a meeting on April 6th, Dr. Cattle (President) in the Chair, Dr. Cattle reported the result of the deputation to the Watch Committee concerning the question of the delivery of lectures on sexual subjects in public.—Dr. Handford brought forward a petition in favour of Dr. Saundby being appointed to the General Medical Council as Crown nominee in place of the late Sir Richard Quain; he did not ask for it to be signed in the name of the Society, but by members individually.—Dr. Heelis read a paper on Adherent Placenta. He ascribed as causes of it previous endometritis, and in primiparæ the condition producing membranous dysmenorrhœa. Cases in point were cited. The natural removal of the retained adherent placenta was carried out by decidual cells playing the part of osteoclasts or phagocytes. The dangers of retained placenta were hæmorrhage and sepsis either occurring after abortion or at full term. Small portions of adherent placenta after an abortion might set up severe hæmorahage, but large portions would not necessarily cause septic mischief. The treatment recommended was complete evacuation of uterine contents, curetting if necessary, and subsequent injection of iodoform emulsion and plugging with iodoform gauze. Any operation for retained uterine contents should be done, however, under the strictest antiseptic precautions so as to prevent consequent septic troubles, and the same in the conduct of the labour. A mixture of quinine, ergot, and digitalis administered after the operation was of some value to secure continual contraction of the uterus. A discussion followed, in which Drs. Cattle, Handford, Wood, and Bolton took part; and Dr. Heelis replied.—Dr. Handford showed a microscopical specimen of Urine containing the Bilharzia Hæmatobia.

Bristol Medico-Chirurgical Society.—At a meeting on April 13th, Mr. C. A. Morton showed a patient from whom the upper end of the Tibia was removed for sarcoma, and who was shown at a meeting of the Society a year ago.—Mr. F. Lace showed a specimen (with microscopic slides) of Duct Papilloma of the Breast. Dr. Aust Lawrence spoke on the subject.—Mr. Paul Bush showed a large Tumour of the Vertebræ which had all the appearances of carcinoma under microscopic examination; it occurred in a young girl, and at the *post-mortem* examination no other primary growth could be found. Mr. Munro Smith discussed the pathology of the specimen, which he considered to be a true carcinoma.—Mr. Paul Bush showed a Tumour of the Ovary weighing 4½ lbs., which he had successfully removed during an acute attack of peritonitis due to twisting of the pedicle. The tumour had been noticed for about ten years. The microscopic slides showed it to be a fibromyoma undergoing well-marked myxomatous degeneration. Mr. Munro Smith, Dr. P. W. Williams, Dr. Stack, and Dr. Aust Lawrence discussed the case.—Dr. J. O. Symes showed numerous Surface Plate Cultures from Vaccine Lymphs. Mr. H. Wathen and Mr. Ewens remarked on the subject of human and vaccine lymph.—Dr. T. Fisher showed a series of Pathological Specimens recently added to the Bristol Royal Infirmary Museum.—Dr. B. Rogers read a paper on Isolation after Diphtheria, in which he advocated a more frequent and regular bacteriological investigation of the discharges of those recovering. A long discussion on the period of isolation required after this disease followed, in which Dr. Michell Clarke, Dr. P. Watson Williams, Mr. H. Wathen, Dr. Symes, Dr. Elliott, Dr. Skerritt, Dr. Parker, and Dr. Shingleton Smith took part.—Mr. J. Taylor read a paper on an Epidemic of Influenza in a School. This was illustrated by lantern slides. Dr. Skerritt and Mr. H. Wathen discussed the paper.—Mr. Munro Smith gave a demonstration of the Development of the Embryo, illustrated by numerous beautiful micro-photographs, which were thrown on the screen by the oxy-hydrogen light.

Folkestone Medical Society.—At a meeting on April 6th, Dr. FitzGerald (President), in the chair, Dr. Eastes read a paper on the Advantages of Early Treatment in Disease. He thought that no factor in prognosis was so important as the length of time the disease had acted before the patient was seen. In considering the etiology of disease, he pointed out that some causes acted once for all, instancing burns and injuries, while others acted continuously during the development of the disease, such as the zymotic series. In the former, early treatment could counteract the injurious results or limit the consequences; in the latter, the patient could only be placed in the most favourable circumstances. To this rule, however, he made an important exception—namely, diphtheria, which was the example *par excellence* of the advantage of early treatment, and in which he advocated early in the disease a strong antiseptic spray and antitoxin. The advantage of early treatment was also well illustrated in sepsis, in the puerperal variety of which he strongly urged an early intrauterine douche of hyd. perchlor. 1 in 1,000 to 2,000. Illustrations were also taken from other classes of disease—alcoholism, bronchitis, syphilis, ovarian tumour, perforated gastric ulcer, and others—in all of which he showed that early treatment was a great gain. He concluded by saying that it was necessary to impress the fact on patients that the earlier they were treated, the quicker they would recover.

Bradford Medico-Chirurgical Society.—At a special meeting on April 1st, Dr. Arnold Evans (President) in the chair, Dr. Pye-Smith, F.R.S., gave an address on Diagnosis. He pointed out that the importance of diagnosis in the practice of medicine had only comparatively recently been recognised, and that the older physicians were content to regard symptoms such as dropsy and apoplexy as diseases. The introduction of physical examination, combined with the study of morbid anatomy, at the beginning of the present century led to the comparison of the physical conditions as determined at the bedside with those found in the body after death, and thus a firm basis was established on which the relations between physical signs and diseased conditions could be determined. The physician should not be satisfied till a diagnosis in any case had been made and written down, the diagnosis to be made deliberately after due examination, and not on mere superficial considerations. In complicated cases it was sometimes necessary to neglect some details while grasping the salient points, and this could be done only by practice and insight. It was often necessary to fix on some important objective symptoms, and not to be too much influenced by history and subjective symptoms, which were often very misleading. It might be necessary to make a diagnosis gradually. Assuming a diagnosis to have been made, it might be that the treatment proved ineffective or the prognosis was shown to be inaccurate. It was then best to go over the whole case afresh, when some symptom or sign, not existing or not detected at the previous examination, might become evident, thus throwing a new light on the whole case. Judgment in coming to a diagnosis depended

largely on a knowledge of pathology, and it must be assumed broadly that the common things commonly occurred. The use of surgical interference to make a diagnosis was deprecated until other methods had been exhausted.—A vote of thanks, moved by Dr. Evans, seconded by Mr. Mayo Robson, and supported by Dr. Alexander, was carried.—After the address a dinner was held, at which Dr. Pye-Smith and about fifty members of the Society were present.—At the ordinary monthly meeting on March 30th, Dr. Arnold Evans in the chair, Dr. Eurich gave a Microscopical Demonstration.—Dr. Gladstone showed: (1) A case of Myxœdema treated with thyroid gland; (2) a specimen of Meckel's Diverticulum.—Dr. Campbell exhibited the Kidneys from a case of Cerebral Hæmorrhage in a boy aged 14. The illness commenced suddenly with an attack of nausea followed by vomiting. The patient then had a fit, and three hours from the commencement was comatose, with Cheyne-Stokes respiration. The reflexes were brisk and the optic discs blurred. There was no paralysis. The patient died from respiratory failure after six hours' illness. On *post-mortem* examination extensive hæmorrhage into the brain cavities, but not into the cerebral substance, was found. The pericardium was adherent and the heart hypertrophied. The kidneys were much enlarged, and showed the changes of congenital cystic disease, together with those of chronic parenchymatous nephritis. Professor Trevelyan and Dr. Wood discussed the case, and Dr. Campbell replied.—Dr. Bronner read notes on Peritonsillitis. He pointed out that the tonsil might or might not be enlarged, and that there was often present disease of the surrounding cavities—for example, carious teeth. Œdema of the tissues about the tonsil indicated the presence of pus, which usually pointed above. The pus should be evacuated by puncture about the middle of a line drawn from the base of the uvula to the upper wisdom tooth. Pain in the ear was often a prominent symptom, and there was often tenderness over the tip of the mastoid process. In the after-treatment enlarged tonsils should be removed or diseased lacunæ slit up. Any disease of the accessory cavities should be treated. Mr. Hall drew attention to hæmorrhage and to septicæmia as complications of tonsillitis. The hæmorrhage might occur independently of any incision. Drs. Major, Wood, and Beresford offered further remarks, and Dr. Bronner replied.—Mr. Basil Hall read notes of a case of Cephalic Tetanus. The symptoms appeared on the fifth day after a wound in the malar region. The patient was treated from the beginning with chloral hydrate, and on the fourteenth and subsequent days injections of antitoxic serum were given. He was discharged cured on the thirty-fourth day. Professor Trevelyan drew attention to the presence of paralytic symptoms as the distinction between cephalic and ordinary tetanus. He thought that if the antitoxin treatment were to be successful the serum used must be of high potency. Dr. Wood made further remarks; and Mr. Hall, in replying, doubted if the antitoxin had much to do with the patient's recovery.

REVIEWS.

The Principles of Chemistry. By D. Mendeléeff. Translated from the Russian (sixth edition) by George Kamensky, A.R.S.M., and edited by T. A. Lawson, B.Sc., Ph.D. Two vols. London: Longmans, Green and Co. 1897. (Roy.8vo, pp. 1162. 36s.)

The Russian original of these two volumes is one of the classics of chemistry. In its first form the book appeared nearly thirty years ago, and it has since that time gone through six editions. It has also been translated into French and German. The first English translation was not published until 1891. It will be remembered that it was during the preparation of the original draft of this book that the author first saw in its entirety the striking advantage of the application of the periodic law with which his name has become identified—and, indeed, it was here that the law was first enunciated in its complete form. Quite apart from the value and far-reaching influence of this generalisation on the subsequent study of chemistry, the work was then, and remains to this day, one of exceptional interest and merit. For a textbook on chemistry the arrangement of the subject matter is quite novel; it is, in fact, rather a philosophic statement of the science than an ordinary systematic treatise. The facts of chemistry found in all the more advanced textbooks are, of course, duly recorded, but they are quite subordinate in Mendeléeff's scheme. He gives a brilliant exposition of principles, the ordinary data only coming in by way of illustration.

Even if we do not agree with all the conclusions of the author, we are forced to admire the masterly way in which he has marshalled his arguments. After a short sketch by way of introduction of the scope and methods of chemical science, and its relations to other departments of physical investigation, the author proceeds to the consideration of water and air. Particularly noticeable in the chapter on water are the remarks on the various theories of solution. From air the transition to the discussion of molecules and atoms is a natural one. The halogens, the sodium-potassium group of metals, and questions of specific heat and valency occupy the remainder of the first volume. The second volume begins by a complete statement and exposition of the periodic law, and continues with an explanatory study of the elements not treated in the first.

There are three appendices: the first two are reprints of lectures by the author. In the third he considers some of the difficulties which have arisen in connection with the periodic law as the result of the discovery of argon and helium.

Apart from the inherent difficulties of the subject, and the demands made upon the reader, who finds himself compelled to handle far-reaching generalisations based upon the enormous mass of data collected by chemical and physical research in the present century, there are not a few stumbling blocks in the book, for one at least of which the author is responsible. The most irritating of these is the mass of footnotes, which, in spite of the author's disclaimer, are often quite as important as the text. More serious are the difficulties resulting from the defects of the translation. In the preface the translators remark on the difficulties of rendering the Russian language into good English, and express their consciousness that "these have not been entirely overcome;" but this apology can scarcely be held to excuse such a statement as the following: "Alum, out of the 45.5 per cent. of water which it contains, gives up 18·9 per cent. at 100°, 17.7 per cent. at 120°, 7.7 per cent. at 180°, and 1 per cent. at 280°; it only loses the last quantity (1 per cent.) at its temperature of decomposition." The above percentages may be made to sum up to either 45·3 or 46.3; if we take the former figure, we must conclude that 280° is the temperature of decomposition of alum; if the latter, that the temperature is above 280°. A large number of similar ambiguities might be quoted, but this one must suffice.

Oral Surgery: A Textbook of Diseases of the Mouth Intended Chiefly for the Use of Students in Dentistry. By E. W. Roughton, B.S., M.D.Lond., F.R.C.S. Eng. London: J. P. Segg and Co. (Demy 8vo, pp. 236, 68 illustrations.)

The dental student who is satisfied with a dental diploma does not wish to read the whole of surgery, and a book of this character dealing with the surgery of the mouth will be received by him with much satisfaction. As far as it goes it is possible to recommend the work to those interested in mouth surgery; but the pathology is not minute enough nor is it sufficiently thoroughly explained. The author who writes for dental students must bear in mind that their knowledge is generally very small (if they have any at all) in such subjects as surgical pathology. The book would have been materially improved had Mr. Roughton been more elementary in his teaching. As an example may be given the chapter on fracture of the mandible, in which there is not a word about the methods by which such an injury heals. The dental student wants his manual on oral surgery to contain all the surgery he will be expected to know by the Examination Boards.

The book consists of twenty-six chapters dealing with the following subjects: Fractures of mandible and maxilla, dislocation, periostitis, alveolar abscess, necrosis of jaws, empyema of antrum, odontomes, tumours of gum, palate, maxilla, and mandible, leontiasis, acromegaly, osteitis deformans,

actinomycosis, diseases of the joint, fixity of mandible, stomatitis, syphilitic and tuberculous and parasitic affections of the mouth, diseases of tongue, diseases of the gum, the floor of the mouth, the lips of neck, the salivary glands, deformities of the mouth, foreign bodies in air and food passages, operations on the upper air and food passages.

Reference Book of Practical Therapeutics. By Various Authors. Edited by Frank P. Foster, M.D. In 2 vols. London: Smith, Elder, and Co. 1897. (Roy 8vo, pp. 1,270. 50s.)

This book is entirely the product of American authors. It forms a bulky work, arranged after the manner of an encyclopædia, and deals with all subjects nearly or remotely connected with drugs, pharmacy, and general therapeutics. The writing of the more important articles has been distributed among a considerable number of authors, each of whom seems to have been allowed by the editor to follow the dictates of his own fancy as regards the length and the style of his contribution. On the whole the result can scarcely be regarded as an unqualified success, and there is no doubt that this is mainly attributable to the want of a fixed plan in editing, and to the absence of the firm exercise of the editorial function of pruning. Some of the articles are extremely good—for example, those on compressed air, anæsthetics, serums, and others—and many of them are not unduly long, but others, on comparatively unimportant and easily-understood subjects, are often detailed in a manner which is tedious and unnecessary.

The paragraphs dealing with articles of the materia medica especially exhibit these faults, and tend also to be rather pedantic in their style. To take concrete examples, the description of aloes occupies three pages, the preparations official in France, Germany, Great Britain, and the United States being all given in detail along with much other matter; under aconite, the whole *B. P.* process for the extraction of aconitine has been included, as if such knowledge were of therapeutic importance for the practitioner. Some of the articles have been written as if the reader were expected to know nothing, as when we are informed that "oxygen is a chemical element," while others presuppose a very considerable amount of knowledge, and plunge at once *in medias res*. For a work of the kind, too much scope has been allowed to contributors to expound their own views and fads, to the exclusion of the often more useful and strictly unbiassed information which the reader has a right to expect in a reference book. There are several glaring examples of this, but perhaps the worst is to be found in the article on coca. Speaking of the discovery of the anæsthetic properties of cocaine, the author says: "This early notification was fortunate for the physicians of this country (the United States), for it enabled them to evolve the best means of employing the local anæsthetic long before their European colleagues had begun to make much use of the new acquisition. Thus it has come to pass that the credit for the solution of this part of the problem belongs to America." One would imagine that solution in water and hypodermic or direct application scarcely required to be "evolved," but when we read the author's directions as to subcutaneous injection of cocaine we are enlightened; they are these:

> After the proper antiseptic precautions have been observed the part is sprayed with rhigolene, or—what is at present more convenient—with ethyl chloride. As soon as the insensibility induced by the refrigeration is sufficient, the point of the hypodermic needle is introduced just below the epidermis and a drop or two injected into the tissues. On withdrawing the needle and testing the condition of sensibility at the point of injection it will be found that there is complete anæsthesia. Now, by again inserting the needle into this small area of insensibility, and as it is forced forward, injecting the solution gradually in front of the point, it is possible to inject a wide area without causing the slightest pain. Hence the ethyl chloride can be dispensed with after the first injection.

There are no fewer than ten pages of this sort of thing, most of which should have been suppressed by the editor. It is also a distinct shock to a sensitive reader to come across such a sentence as this: "As Milton suggestively puts it, gonorrhœa has been successfully treated," etc., which we think might have been expressed otherwise out of respect for the associations hitherto clustering round the name.

A large number of small inaccuracies occur throughout, and are sometimes rather irritating. In the article on tobacco nicotine is described as a "crystalloid body," and a line or two further on it is stated that "caustic alkalies and iodide of potassium are chemical incompatibilities which may be used in poisoning with tobacco shortly after its ingestion." We should be very sorry for any unfortunate person so treated. In poisoning by colchicum and conium gallic acid is stated to be an antidote, which is surely a mistake. It may be said that such inaccuracies are inevitable in so large a book, but the number is far from creditable. There is much useful information scattered throughout these two volumes, and there are many good articles on special subjects; hence its too numerous blemishes are all the more to be regretted.

Some Points in the Anatomy, Pathology, and Surgery of Intussusception. By D'Arcy Power, M.A., M.B.Oxon., F.R.C.S.Eng., Surgeon to the Victoria Hospital for Children, Hunterian Professor of Pathology and Surgery at the Royal College of Surgeons of England, and Surgical Secretary of the Pathological Society of London. London: The Rebman Publishing Company. 1898. (Demy 8vo, pp. 88, 27 illustrations. 4s.)

This little volume contains the series of lectures given by the author as Hunterian Professor of Pathology and Surgery at the Royal College of Surgeons in February, 1897. Reports of these lectures were published in the British Medical Journal at the time of their delivery. In their new and distinct form these lectures are likely to prove very useful to practical surgeons, and also, as Mr. D'Arcy Power thinks, of service to those who are investigating the wider subject of hernia.

In the first chapter, which deals with the minute anatomy of intussusception, the author has added to our knowledge of the pathological changes which take place in intussusception by giving the results of a careful study of the abundant material contained in the museums of the Royal College of Surgeons and of the large medical schools. The second chapter, dealing with the pathology of intussusception, based on anatomical, physiological, and clinical data, affords many indications of the laborious and, we may add, successful efforts of Mr. D'Arcy Power to render this course of lectures worthy of his office as Hunterian Professor. Much valuable instruction will be found in the concluding chapter on the treatment of intussusception, the teaching of which is in harmony with the views and practice of recent authorities on abdominal surgery. The chief points of this teaching are a cautious and yet full trial of irrigation, a prompt recourse to laparotomy when such treatment has failed, and a serious endeavour in cases of operation to reduce or remove the intussusception before the abdominal cavity has been closed.

Workhouses and Pauperism, and Women's Work in the Administration of the Poor Law. By Louisa Twining. London: Methuen and Co. 1898. (Crown 8vo, pp. 276. 2s. 6d.)

This volume is one of a series on the social questions of the day; and, in selecting Miss Louisa Twining as the author, the editor showed his discrimination. Miss Twining is a veteran reformer, and has been engaged in the fight since 1850, nor has she yet laid down her weapons. The book takes the form of a personal narrative, and thus deals with much that is past history, and perhaps of but little interest except to those whose memories can carry them back to the early stages of reform; but in this narrative there is much to encourage the worker of the present day whose ardent spirit chafes at official delays and the prejudice and indifference of the public. Miss Twining tells of how each step was gained only after the most prolonged and pertinacious effort, and how reforms urged at the outset have not yet been accepted by the authorities, thus teaching the lesson of patience and steadiness of purpose without which no great work is ever accomplished.

The last four chapters are most important, and will repay the time spent on a careful study of them. The first is a

retrospect of work and experience in a country workhouse; it brings out in vivid colour the special work in connection with a workhouse which is best done by a woman. Miss Twining, as the first lady guardian on the Tonbridge Board, found out with her woman's eyes many holes and corners which were the better for being well swept out, especially in the departments of the women and children, and the lady guardian had the gratification of seeing many of her suggestions cordially adopted by the Board.

In the following chapters the reader is taken back to the first principles which underlie all Poor-law administration, a branch of the subject which is too often overlooked, but of great importance in forming a just judgment on the question. On page 159 Miss Twining says: "Now that more than sixty years have elapsed since the alteration of the law concerning the poor, the facts and abuses which it sought to remedy are gradually being forgotten, and an inevitable reaction has set in against what are said to be harsh and over-strict regulations. In this age of easy general philanthropy charitable and kind impulses are beginning to take the place of just and sound views of poor relief, and the public purse is more and more looked upon as a bottomless one, into which all the needy may and have a right to dip." We would willingly have commented on the chapter on outdoor relief, but instead it may be better to refer the reader to the work itself, where he will find much to inform and instruct on the important questions connected with the Poor Law.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections in Photo-Lithochromes from Models in the Museum of the Saint Louis Hospital, Paris; with Explanatory Woodcuts and Text. By Ernest Besnier, A. Fournier, Tenneson, Hallopeau, Du Castel. Edited and Annotated by J. J. Pringle, M.B., F.R.C.P. Parts X, XI, and XII. London: The Rebman Publishing Company, Limited. Philadelphia: W. B. Saunders. 1897. (10s. 6d. each part.)

We have before us three further parts of this valuable pictorial atlas of skin diseases. Part X gives illustrations of miliary syphilides; an unusually good illustration of Paget's disease of the nipple; a plate of the extensor surface of a forearm and hand, showing rounded ulcers described as trophic ulcers; a plate showing a syphilitic chancre of the face, a common type of chancre of the breast, and an ulcerating syphilitic chancre of the breast. In the text reference is made to the case of a woman who had 23 chancres distributed as follows: Seven on the areola of the left breast and 16 on the right breast, forming a most extraordinary exception to the law of the unicity of syphilitic chancre.

Part XI shows hydroic erythema of the back of the hand and of the lips; and a beautiful representation of a pigmentary syphilide. The diagnostic importance of the dappled pigmentary syphilide is, according to Dr. Pringle, not generally recognised in Great Britain. There is further a very curious plate showing molluscum contagiosum existing on and around the vulva in a syphilitic subject. Plates showing nævi on the leg and pediculosis with pigmentation complete the part. Part XII shows chancre of the nostril and chancre of the tonsil, a striking example of the fortunately rare affection xeroderma pigmentosum, impetigo contagiosa, a very graphic picture of urticaria pigmentosa, and another plate showing three more examples of extragenital chancres, namely, two on the lip, and one on the tongue.

This part contains an index of the subjects illustrated in the work. It is almost needless to repeat what we have had occasion previously to remark regarding the high artistic excellence of these plates, their vivid and lifelike representations. Their educational value is great, and they bring home to practitioners living in parts remote from the great centres a kind of instruction in diseases of the skin which is the best attainable substitute for clinical study in large hospitals.

A word of praise is due to Dr. Pringle as editor of the English edition of the work. The notes which he has contributed to some of the more difficult subjects of dermatology will not only be useful to English readers, but will be studied and appreciated by dermatologists on the Continent and will, no doubt, be interesting to the authors of the text.

Optique Physiologique. [Physiological Optics.] Par Le Dr. Tscherning. Paris: G. Carré et C. Naud. 1898. (Roy. 8vo, pp. 338, 201 illustrations. F.12.)

We welcome the publication of M. Tscherning's book not only on account of its great intrinsic value, but because it supplies a gap in literature which has long been felt. There are other books on the same subject certainly, such as that of Helmholtz, but it so frequently happens that in a work of this sort so profound a mathematical knowledge is required that unless a man has had special training in the subject the book is really of very little use to him, although of course its thoroughness leaves nothing to be desired.

M. Tscherning, however, has produced a book of 336 pages containing 201 illustrations, in which will be found a very thorough treatment of the subject which he has undertaken, and a marked feature of the book is that the numerous complicated mathematical problems which so frequently puzzle the average reader are conspicuous by their absence. We do not, however, for a moment wish it to be understood that the book is without such; it would of course be impossible thus to treat of a subject which owes so much to mathematics; but M. Tscherning's publication gives a very clear exposition of the principles of physiological optics without the use of extremely elaborate calculations.

The author has an ingenious theory of accommodation which is very different from the unsatisfactory one which has been taught for years, and which has also by many been disbelieved. Many years ago Thomas Young observed that during the act of accommodation the increased refractive power of the lens was greater at the centre than at the periphery of the pupillary area. Tscherning confirms these conclusions and asserts not only that the increase of convexity gets less as the edge of the lens is reached, but goes so far as to say that during accommodation the peripheral zones become actually less convex than they were when the ciliary muscle was at rest. In other words, the increased curve of the anterior surface of the lens is not due to passive bulging by its own elasticity when the suspensory ligament is loosened, but is really caused by the ciliary muscle acting so as to compress the periphery of the lens, and consequently by this means the surface is made to bulge and its refractive power is increased.

He describes the ciliary muscle as consisting of two portions—a superficial part with longitudinal fibres and a deeper portion composed of fibres which are at first longitudinal and then become circular. The question of colour, light, and form sense is thoroughly gone into, and the theories of colour vision explicitly stated.

The book is a clearly written statement of a most interesting subject which is treated in a practical way by an able writer. It can be thoroughly recommended to all who are interested in the study of physiological optics.

The Roentgen Rays in Medical Work. By David Walsh, M.D.Edin., Physician, Western Skin Hospital, London; Honorary Secretary, Roentgen Society, London. With an Introductory Section by J. E. Greenhill. London: Baillière, Tindall, and Cox. 1897. (Demy 8vo, pp. 146. 6s.)

This book is divided into two parts. In the first part, written by Mr. Greenhill, the electrical apparatus and methods employed in working with the Roentgen rays are briefly described, and in the second part Dr. Walsh gives a summary of most of the practical applications the ray has found in medicine and surgery. The first part might have been much fuller with advantage. Mr. Greenhill is a well-known and successful worker, and a full description from him of the methods which he has found most useful would have been valuable.

The same objection cannot be raised to the bulk of the book written by Dr. Walsh. Very few of the published cases of any importance have been omitted, and the collected material brought together will be very useful to practical men desiring to know if a skiagraph would be of any use in the diagnosis of any particular case. In Section ix the action of the focus tube upon the skin and deeper structures is considered.

Dr. Walsh, on the whole, concludes that it seems not im-

probable that some common agent exists in the rays of the sun, of the focus tube, and of the electric light, capable of stimulating the skin.

The book is a useful one, not only from the systematic way in which the subject is treated, but perhaps more so from the fact that the limitations and possibilities of the *x* ray are defined.

Handbuch der Gynäkologie. [Handbook of Gynæcology.] Von J. Veit, Leiden. Band III, Hälfte I. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1898. (Roy. 8vo, pp. 518, 81 plates, 115 woodcuts. 12s. 9d.)

This instalment of a great, almost encyclopædic, work includes a paper by Gebhard on Menstruation, which contains interesting information about membranous dysmenorrhœa; but, as might be expected, no satisfactory treatment is indicated. The author reminds us that Löhlein has already pointed out how in 27 cases under his own care 6 did not continue sterile; nor is this troublesome malady dangerous to life. Professor Veit's article on Diseases of the Vulva is exceedingly good; the captious critic is apt to condemn the paragraphs on this subject in many similar works as meagre in details, curtailed in fact to make room for brilliant records of ovariotomy and hysterectomy. That reproach would be out of place here, where the subject is thoroughly discussed; whilst the references reach almost alarming proportions. Pfannenstiel contributes a very complete and, what is more remarkable, highly original monograph on Diseases of the Ovary and Parovarium. The details and triumphs of ovariotomy, of which most of us know something, are put more in the background than is usual, though the operation is well described. The author is already known for his views on recurrence, and we find that he still advocates the removal of the fellow ovary, however healthy it may seem, in every case of ovariotomy for the extirpation of any true new growth, when the patient has passed the age of 40.

Le Torticolis et son Traitement. [Torticollis and its Treatment.] Par le Docteur P. Redard, Ancien Chef de Clinique Chirurgicale, Paris, etc. Paris: Georges Carré et C. Naud. 1898. (Royal 8vo, pp. 252, figs. 66. Fr. 6.)

This volume is a comprehensive treatise on the subject of torticollis, for not only does the author discuss the subject in the somewhat limited English acceptations of the term (fixed and spasmodic wry-neck), but he also describes articular, osteopathic, ocular, and hysterical forms. With reference to the cause of congenital or fixed torticollis, M. Redard does not admit that hæmatoma of the sterno-mastoid invariably accompanies it, nor that it is due to traction at birth followed by fibroid induration. He inclines to the opinion that it is due to malpositions *in utero*. As to the asymmetry of the cranium and face in these cases, "these should be considered as congenital affections produced *in utero* by the same influences as induce the wry-neck." On the question of the treatment of the fixed form, a preference is expressed for the open operation over subcutaneous tenotomy, while partial extirpation of the sterno-mastoid does not give better results than the first-mentioned method, and entire extirpation—a somewhat difficult operation—is followed by considerable flattening and scarring of the affected side of the neck.

The interesting subject of the treatment of the spasmodic form is fully dealt with, and M. Redard advises a resection of the spinal accessory nerve in those cases in which the sterno-mastoid and trapezius muscles are affected. He admits that when the affection has diffused itself over the deeper cervical muscles palliative or operative treatment is of little avail. Of eight cases of excision of the posterior cervical nerve roots, he records two as cured, two improved, two in which the result was doubtful, and two failures.

This volume is of value as a complete summary of the literature of the subject, and as a record of the author's personal experience. So complete has the author attempted to make it that there is a good deal of reiteration in many places. The wisdom of including under the term "torticollis" conditions such as rheumatic affections of the neck and cicatricial contraction of the skin may be questioned. Two defects in the book are readily apparent—the absence of complete references and of an index.

NOTES ON BOOKS.

Die Pathologie und Therapie der Sterilität beim Manne [Pathology and Treatment of Sterility in the Male]. Von Dr. E. Finger, ao. Professor an der Universität Wien. (Leipzig: Arthur Georgi. 1898. Demy 8vo, pp. 96, 8 woodcuts. M. 3.)—This volume is the first part of a work by Drs. Finger and Saenger, which, when completed, will deal with the pathology and treatment of sterility in both sexes. The first-named author, who alone has written the portion now under notice, supports the recent views of both French and German specialists as to the share frequently taken by the male in cases of sterility, and the dependence of such failure in many instances on the secondary affections resulting in the male organs of generation from the action of the gonococcus.

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Meter Distance with the Plane Mirror. By James Thorington, M.D. Second Edition. (Philadelphia: P. Blakiston, Son, and Co. 1898. Demy 8vo, pp. 78, 28 illustrations, of which 12 are coloured. 1 dol.)—This small book is entirely devoted to a description of retinoscopy for the purpose of determining and correcting errors of refraction. It comprises six chapters, in which the subject is treated systematically. The first consists of definitions and suggestions to the beginner; the second deals with the apparatus required; the third describes the things to be looked for and seen; while the other three deal with the correction of the various forms of errors which are to be recognised and treated. The author is firmly convinced that for practical purposes nothing comes up to the plane mirror, but, unlike most British observers, he prefers a small mirror 2 cm. in diameter, with a 2 mm. opening. The book is essentially a practical one, which students will doubtless find of assistance in mastering the principles of retinoscopy, although it contains nothing which cannot be found in the chapters dealing with subject in standard works on ophthalmology.

La Legislazione Sanitaria in Italia e la sua Riforma secondo il Progetto del Dr. C. Ruata [Sanitary Legislation in Italy and its Reform according to Dr. Ruata's Scheme]. By Dr. A. Veronesi. (Perugia: Unione Tipografica Co-operativa. 1897. Demy 8vo, pp. 38.)—This pamphlet, which is a reprint of a speech made by Dr. Veronesi at the Sanitary Congress, consists of a critical examination of certain schemes put forward by Dr. Ruata for the improvement of sanitary legislation in Italy. We see that many of the questions which affect public health here in England are equally burning in that country. The advantages of public medical officers of health being free from private practice and solely responsible to the State are clearly shown. The time, it is said, is perhaps not yet ripe for the appointment of a public minister of health, but when appointed he should be permanent, or at least independent of political party changes. The author makes full use of the good due to sanitary laws in the past, even under a crippled condition, as an inducement for further and fuller legislation in the future.

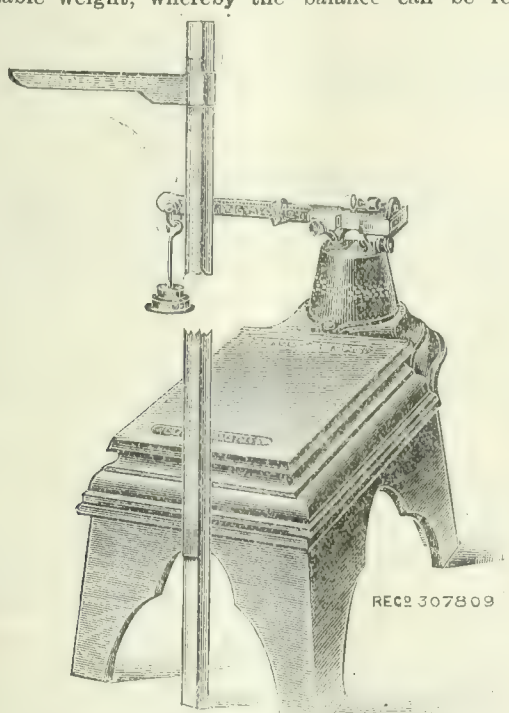
The Pocket Formulary for the Treatment of Disease in Children. By L. Freyberger, M.D., M.R.C.P., M.R.C.S. (London: The Rebman Publishing Company. 1898. Fcap. 8vo, pp. 208. 6s. 6d.)—Dr. Freyberger has added a well-arranged and reliable pharmacopœia for the treatment of children to the existing volumes of this class. The book contains a considerable amount of information. The drugs are dealt with in alphabetical order, those which are officinal being clearly indicated. A brief account of the action of each is given, with its dose both by the English and the metric system at different ages. One or more useful formulæ are given with each drug. Suggestions are also made for the correction or concealment of the taste of the active drug, a point of great importance in prescribing for child-

ren. Dr. Freyberger is to be congratulated on the accuracy of this book, in which we have detected no errors of importance. In a future edition we would suggest the insertion in the appendix of the various forms of baths for children and some revision of the confused nomenclature employed in the therapeutic index.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

IMPROVED FORM OF WEIGHING MACHINE.

This machine has been constructed with a view to economy both of space and first cost. As the height of the pillar measures only 9 inches, it can be easily stowed away when not in use. A feature of the machine is the provision of an adjustable weight, whereby the balance can be rectified



should it at any time become faulty through wear. It may be obtained from Messrs. Arnold, of West Smithfield, who inform us that the price is 25s. A useful accessory is the measuring staff shown in the woodcut.

LIST OF AUTHORS AND OTHERS WHO HAVE PRESENTED BOOKS TO THE LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

THIRTY-SIXTH LIST.

Presented by the Authors.

ECCLES (A. S.). The Practice of Massage. 2nd ed. 1897.
HOLTHOUSE (Edwin). Convergent Strabismus and its Treatment. 1897.
HURRY (J. B.). District Nursing on a Provident Basis. 1897.
RENTOUL (R. R.). A volume of Papers on the Midwives' Question. 1890-97.
VACHER (Francis). Report on the State and Condition of Rivers and Streams in the Administrative Count of Chester. 1897.

Presented by ROBERT ARGLES, Esq., M.R.C.S.

THE PHARMACEUTICAL JOURNAL AND TRANSACTIONS, 1841-1869 to complete series

Presented by the late ERNEST HART, Esq., D.C.L., (Honorary Librarian).

ALLBUTT. System of Medicine. Vol. 4. 1897.
BOURNEVILLE. Recherches sur l'Épilepsie, etc. 1896.
BROUARDEL (A.). Death and Sudden Death. Translation. 1897.
——————— L'Infanticide. 1897.
BROUARDEL ET GILBERT. Traité de Médecine. Tome iv. 1897.
BUROT ET LEGRAND. Les Troupes Coloniales. 1897.
CANNEY, R. Meteorology of Egypt. 1897
CHANCE, W. Children under the Poor Law. 1897.
DUHRSSEN. Manual of Gynæcological Practice. New edition. 1897.
FAYRER, Sir J. Life of Sir Ranald Martin. 1897.
FOSTER'S PHYSIOLOGY. Part 3. 7th ed. 1897.
GLAISTER, John. Manual of Hygiene for Students and Nurses. 1897
HART AND BARBOUR. Manual of Gynæcology. 5th ed. 1897.
LEYDEN, E. von. Handbuch der Ernährungstherapie und Diätetik. Bd. 1. 1897.
LONDON COUNTY COUNCIL. Medical Officer's Report. 1896.
LOOMIS AND THOMPSON. System of Practical Medicine. Vol. 1, Vol. 2. 1897.
MENDINI. Hygienic Guide to Rome. 1897.
OSLER, WM. Lectures on Angina Pectoris. 1897.
PARKES, L. C. Hygiene and Public Health. 5th ed. 1897.
PHILLIPS, J. Diseases of Women. 2nd ed. 1897.
POORE, G. V. The Dwelling House. 1897.
PRINGLE. Pictorial Atlas of Skin Diseases. Fasc. 8, 9. 1897.
SCHWEINITZ, G. E. DE. The Toxic Amblyopias. 1896.
SWANZY, H. R. Diseases of the Eye. 6th ed. 1897.
TWENTIETH CENTURY PRACTICE OF MEDICINE. Vol. 10. Nervous System. 1897.
WALLER, A. D. Lectures on Physiology (I). 1897.
WHITE, Hale. Croonian Lectures: On the Means by which Temperatur is Maintained in Health and Disease. 1897.
And other volumes.

Presented by the JOHNS HOPKINS HOSPITAL.

VOL. 6 OF THE REPORTS. 1897.

Presented by N. C. MACNAMARA, Esq., F.R.C.S.

ARMY MEDICAL DEPARTMENT REPORT. 1864-65.
BRITISH MEDICAL JOURNAL. 1866-67.
JONES and SIEVEKING. Pathological Anatomy. 1875.

Presented by the NEW SYDENHAM SOCIETY.

SELECTED ESSAYS ON SYRINGOMYELIA, PEMPHIGUS, SYPHILIS, YAWS, etc. 1897.

Presented by SIDNEY ROWLAND, Esq., M.R.C.S.

CLELAND and MACKAY. Human Anatomy. 1896.
STARR. Atlas of Nerve Cells. 1896.

Presented by Professor Dr. RUMPF, Hamburg.

JAHRBÜCHER DER HAMBURGISCHEN STAATSKRANKENANSTALTEN. Bd. v. 1897.

Presented by E. H. SNELL, M.D., Coventry.

JAMINET (A.). Physical Effects of Compressed Air and the Causes of the Pathological Symptoms. 1871.

TRANSACTIONS of the following Bodies have also been received.

AMERICAN CLIMATOLOGICAL ASSOCIATION.
——————— GYNECOLOGICAL SOCIETY.
——————— OTOLOGICAL SOCIETY.
——————— PEDIATRIC SOCIETY.
——————— SURGICAL ASSOCIATION.
ASSOCIATION OF AMERICAN PHYSICIANS.
——————— OF MILITARY SURGEONS OF U.S.A. Several vols. to complete.
BRITISH PHARMACEUTICAL CONFERENCE.
CHICAGO PATHOLOGICAL SOCIETY.
CLINICAL SOCIETY OF LONDON.
DERMATOLOGICAL SOCIETY OF GREAT BRITAIN.
EDINBURGH MEDICO-CHIRURGICAL SOCIETY.
HUNTERIAN SOCIETY.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.
PATHOLOGICAL SOCIETY OF LONDON.
PHILADELPHIA COUNTY MEDICAL SOCIETY.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

BOOKS NEEDED TO COMPLETE SERIES.

The Librarian will be glad to receive any of the following volumes, which are needed to complete series in the Library:

AMERICAN CLIMATOLOGICAL TRANSACTIONS. Vols. 1 to 7.
AMERICAN DERMATOLOGICAL ASSOCIATION TRANSACTIONS. Vols. 5, 7, 8, 9, and 11.
AMERICAN JOURNAL OF THE MEDICAL SCIENCES. New series, vols. 4, 5. 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vols. 59; vols. 89, 90, 1892-93; or any parts of these vols.
AMERICAN JOURNAL OF OPHTHALMOLOGY. Vols. 1-9.
AMERICAN LARYNGOLOGICAL ASSOCIATION. Vols. 1-6, 8, 9.
AMERICAN OTOLOGICAL SOCIETY. Vol. 3, part 2, 1883.
ANNALS OF SURGERY. Vols. 1 to 11; 13 to 16.
ARCHIVES GÉNÉRALES DE MÉDECINE. 1831-1839 inclusive; 1846-1855 inclusive; 1857-1864 inclusive; 1871.
ARCHIVES OF OPHTHALMOLOGY. Vols. 1-7 and since vol. 13.
ARCHIVES OF OTOLOGY. Vols. 1-7, and 20, 21, 22.
ARMY MEDICAL DEPARTMENT REPORT 1870.
ASYLUM JOURNAL OF MENTAL SCIENCE. Vol. 1, 1854, and Title vol. 2
BENTLEY AND TRIMEN. Atlas of Medicinal Plants.
BRITISH JOURNAL OF DERMATOLOGY. Vol. 2, part 3; vol. 3, parts 4 and 5.
CALEDONIAN MEDICAL JOURNAL. Vol. 1 prior to 1894.

CENTRALBLATT FÜR AUGENHEILKUNDE. Hirschberg. 1891, January-July; 1892, January and September.
——— FÜR KLINISCHE MEDICIN. 1880-1883; all 1888 1891, No. 26; 1892, No. 17.
——— FÜR MEDICINISCHEN WISSENSCHAFTEN. Vols. 1-22.
CONGRÈS FRANÇAIS DE CHIRURGIE. Transactions 1, 2, 3, 6.
EDINBURGH OBSTETRICAL SOCIETY. Transactions. Vol. 5.
GLASGOW MEDICAL JOURNAL. All before 1853. Nos. 2, 5, 9, 10, 12, 13. 1856-1858. And No. 4, vol. 2, 1870.
——— PATHOLOGICAL SOCIETY. Transactions. Vols. 1 and 2.
HAMILTON. Legal Medicine. Vol. 2, 1894.
HARE, System of Therapeutics. Vols. 3, 4.
HYGIENE. Vols. 2 and 5.
INTERNATIONAL CLINICS. 5th Series. 1895.
INTERNATIONAL CONGRESS OF HYGIENE. Congresses 1 to 6.
INTERNATIONAL OPHTHALMOLOGICAL CONGRESS. Transactions of 1st, 2nd, 3rd, 5th, 6th, and 7th Congresses.
JOURNAL OF LARYNGOLOGY. Vols. 1-9.
LARREY (J.). Mémoires de Chirurgie Militaire et Campagnes. Tomes 3, 4, 5. 1812-17.
LONDON HOSPITAL. Clinical Lectures and Reports by the Medical and Surgical Staff. Vol. 4. And the Medical Reports. 1875-77.
LONDON JOURNAL OF MEDICINE. Vols. 1 to 4. 1849-52.
LONDON MEDICAL RECORDER. January, 1891.
MIDDLESEX HOSPITAL. Registrar's Reports. 1872-74, 1877, 1882.
NEW YORK MEDICAL JOURNAL. October 7th, 1893.
OPHTHALMIC REVIEW (quarterly). Parts 10, 11, 12, 1867.
——— January, 1882.
PHARMACEUTICAL JOURNAL, 1869-1893.
PROVINCIAL MEDICAL AND SURGICAL JOURNAL. 1840. Being the first 52 numbers before October 2nd, 1841.
RECUEIL D'OPHTALMOLOGIE. 1891, Jan.-June; 1892, Dec.
REGISTRAR-GENERAL'S ANNUAL SUMMARY OF WEEKLY RETURNS. 1866-73, 1876, 1880, 1887.
REVUE GÉNÉRALE D'OPHTALMOLOGIE. Prior to 1888, and 1891-92.
SEMAINE MÉDICALE. Prior to 1890, and title and index to year 1892.
SOCIETY FOR STUDY OF INEBRIETY. Transactions. No. 53, 1897
SOUTH AFRICAN MEDICAL JOURNAL. February, March, April, 1895. And Titles for vols. 3 and 4.
UNIVERSITY COLLEGE HOSPITAL REPORTS. Before 1877 and since 1800.
VIRCHOW'S ARCHIVS. Any vols.
WIENER KLINISCHE WOCHENSCHRIFT. Nos. 5 and 6. 1889. Titles 1892 and 1888.
YEARBOOK OF PHARMACY. 1888.

Applications for duplicates from medical societies forming libraries may be addressed to the Sub-librarian, 429, Strand.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on July 6th, and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The sixth ordinary meeting of the session will be held at Bath on Wednesday evening, April 27th, at 7.30 P.M.. F. Richardson Cross, M.B., President. The following communications are expected: J. Michell Clarke, M.D.: Two cases of Tumour of Præfrontal Region of Brain. J. G. Douglas Kerr, M.B.: The Treatment of certain forms of Heart Diseases by Baths, Exercises, etc. Preston King, M.D.: Limitations of the Nauheim Treatment.—W. M. BEAUMONT, Bath, and J. MICHELL CLARKE, Clifton, Honorary Secretaries.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next half-yearly meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, May 3rd, at 4 P.M. Members desiring to present papers, patients, or specimens are requested to communicate at once with the Honorary Secretary, C. C. CLAREMONT, M.D., 57, Elm Grove, Southsea.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at the White Hart, Lewes, on Thursday, May 26th, at 3.30 P.M., Dr. Crosskey in the chair. Members are requested to send notice of any communications before May 14th to the Honorary District Secretary, J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

METROPOLITAN COUNTIES BRANCH.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—ISAMBARD OWEN, M.D., 40, Curzon Street, W., and H. B. ROBINSON, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the Highgate Infirmary, Dartmouth Park Hill, on Wednesday, May 4th, at 4.30 P.M. Dr. Morton will preside. Dr. Washbourn will read a paper. Dr. Chilcott will show cases of interest in the wards of the infirmary. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Honorary Secretary, Brondesbury, N.W.

OXFORD AND DISTRICT BRANCH.—The next meeting of this Branch will be held at the Radcliffe Infirmary on Friday, April 29th, at 3 P.M. Agenda:—Confirmation of minutes. Short Papers: Dr. Elsmore: Hepatic Intermittent Fever. Mr. T. B. Yelf: A case of Addison's Disease. Mr. Cheatle: Notes of cases of Tetanus. Dr. Turrell will open a discussion On the Use of Ergot in Obstetric Practice before Delivery. Communications. Propositions. Members willing to contribute papers are requested to communicate at once with WM. COLLIER, Honorary Secretary, St. Mary's Entry, Oxford.

NORTH OF IRELAND BRANCH.—The spring meeting of this Branch will be held in the Museum, College Square North, Belfast, on Thursday, April 28th, at 12 noon. Gentlemen who wish to read papers, show patients, or bring any other business before the meeting, will kindly communicate, as early as convenient, with JOHN CAMPBELL, M.D., F.R.C.S., Honorary Secretary, 21, Great Victoria Street, Belfast.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next meeting of this Branch will be held on May 5th, and not on May 4th as recently notified by postcard.

SOUTH-EASTERN BRANCH: EAST AND WEST SUSSEX DISTRICTS.

A MEETING of these Districts was held at Brighton on March 31st, Mr. T. J. VERRALL in the chair.

Communications.—Dr. W. WATSON GRIFFIN read a paper on Intraocular Tumours; and exhibited (1) a series of beautifully mounted Sections of Eyeballs affected by New Growths; (2) Microscopical Preparations of these Growths.—Dr. LANGDON read notes of a case of Hæmorrhagic Pancreatitis, which will be published.—Dr. MACKEY read notes of (1) A Few Points as to the Rash of Measles; (2) a case of Hydroa Vacciniforme.

Communication from the British Dental Association.—A communication received from the Southern Counties Branch of the British Dental Association was left for consideration by the Branch Council.

ABSTRACT OF PROCEEDINGS OF COUNCIL.

Dr. ROBERT SAUNDBY, President of the Council, in the Chair.

AT a numerously attended meeting of the Council, held in the Council Room at the offices of the Association, 429, Strand, W.C., on Wednesday, April 20th, 1898, it was

Resolved: That the financial statement for the year ending December 31st, 1897, as certified by the auditors, be approved and published in the BRITISH MEDICAL JOURNAL in accordance with By-law 26.

[The remainder of the Proceedings of the Council will be published in a future number of the BRITISH MEDICAL JOURNAL.*]*

BRITISH MEDICAL ASSOCIATION.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31st, 1897.

Balance Sheet.

Liabilities.

Dr.	£ s. d.
To Subscriptions paid in advance	857 8 11
,, Advertisements ditto	836 17 2
,, Publishing ditto	7 12 6
,, Library	31 13 0
,, Contributions	642 0 6
,, Reporting	83 14 6
,, Engraving	152 1 3
,, Printing of Journal	410 16 3
,, Paper for Journal	805 3 0
,, Miscellaneous Printing	59 14 4
,, Stationery	41 14 6
,, Coal and Coke	3 9 0
,, Repairs	33 7 6
,, Legal Charges	118 15 0
,, Rates and Taxes, Insurance, and Electricity Supply	236 19 2
,, Plant and Type	18 9 5
,, Sundries	74 18 7
,, Reference Committee	69 3 0
,, Wood Fund	25 0 0
,, Journal and Editor Sundries	57 16 9
Total Liabilities	4,542 14 4

	£ s. d.	£ s. d.
,, Depreciation—as at 31st Dec., 1896: Leases, £5,118 19s. 2d.; Alterations, £2,299 9s. 6d.; Furniture, £1,442 9s. 11d.; Redemption Fund of Premiums on Redeemable Stocks £82 19s. 2d.	8,943 17 9	
,, Ditto added for 1897	1,238 17 2	
		10,182 14 11
,, Surplus Account, namely:—		
Balance on January 1st, 1897	65,736 7 11	
Profit for 1897 brought from Revenue Account	3,460 4 11	
,, Balance, being total of excess of assets over liabilities		69,196 12 10
		£83,922 2 1

Assets.

Cr.	£ s. d.	£ s. d.
By Subscriptions—Amount due	1,444 16 11	
,, Advertisements—Amount due	3,729 1 9	
,, Sundry Sales—Amount due	156 3 6	
,, Lease, 429, Strand	9,178 2 6	
,, ,, 2 and 3, Agar Street	3,200 0 0	
,, ,, 4 and 5, Agar Street	750 0 0	
,, Alterations of Premises at cost	4,278 17 2	
,, Furniture, and Fixtures at cost	2,430 15 5	
,, Library	2,049 9 4	
,, Plant and Type	1,508 5 10	
,, Interest accrued on Investments and Rents due	583 7 3	
,, Investments (English Railway Debenture, Corporation, Bank Stock, and Freehold Property) at cost	48,434 12 0	
,, Cash, namely:—		
London and Westminster Bank on current account	6,124 2 4	
At Office	54 8 1	
		6,178 10 5
		£83,922 2 1

Revenue or Profit and Loss Account for Year ending December 31st, 1897.

	£ s. d.	£ s. d.
Editorial Expenses (Salaries, Contributions, Engraving, Reporting)	6,308 2 11	
Expenses of Journal (Printing, Postage, and Paper)	19,809 11 7	
Office Expenses (Rent, Taxes, Office Postage, etc.)	2,281 16 0	
Office Salaries and Wages	2,713 16 6	
Association Expenses (Scientific Grants, Scholarships, Expenses of Committees, etc.)	3,678 3 4	
Plant written off towards Depreciation	350 0 0	
Provision towards redemption of expenditure on Leases, Alteration of Premises, and Furniture and Fittings, and Premium on Redeemable Stocks	1,238 17 2	
	36,380 7 6	
Subscription Losses from death, resignations, etc.	593 3 9	
	36,973 11 3	
Profit for Year carried to Balance Sheet	3,460 4 11	
	£40,433 16 2	
Subscriptions		18,600 8 1
do. former years		134 1 11
Advertisements (less discounts and allowances)		17,354 1 7
Sundry Sales of Journal		1,722 0 5
Sundries—Reading and Binding Covers, etc.		89 10 7
Reprints		108 1 5
Interest on Investments and Rents		1,568 2 6
Scientific Grants unused and returned		85 11 5
Sale of Waste, etc.		23 17 9
Discount on Printing, Paper, etc.		728 0 6
		£40,433 16 2

Middlemore Fund.

£666 13s. 4d. invested in 3 per cent. North British Railway Debenture Stock, in the name of the British Medical Association.

1897.	£ s. d.	1897.	£ s. d.
Jan. 1. To Balance brought down	75 15 6	July 26. By Award, Dr. Hill Griffith	50 0 0
Dec. 31. ,, Interest one year on £666 13s. 4d.	19 6 8	Oct. 7. ,, Engrossing Certificate	1 17 6
		Dec. 31. ,, Balance carried down	43 4 8
	£95 2 2		£95 2 2

Stewart Fund.

£579 invested in 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1897.	£ s. d.	1897	£ s. d.
Jan. 1. To Balance brought down	65 12 0	July 26. By Award Dr. Sims Woodhead	50 0 0
Dec. 31. ,, Interest one year on £579	22 7 10	Oct. 7. ,, Engrossing Certificate	1 17 6
		Dec. 31. ,, Balance carried down	35 12 4
	£87 9 10		£87 9 10

We have examined the foregoing Accounts, with the Books and Vouchers of the Association, and find the same to be correct.

PRICE, WATERHOUSE, & CO.,
44, Gresham Street, E.C.

March 31st, 1898.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on April 14th, when the chair was taken by Sir WILLIAM MACCORMAC, Bart., President. The minutes of the preceding meeting were read and confirmed.

Prize Essays.—The Jacksonian Prize for the year 1897 on The Pathology, Diagnosis, and Treatment of the Various Neoplasms met with in the Stomach, Small Intestine, Cæcum, and Colon, was awarded to Mr. Percy Furnivall. The College Triennial Prize was not awarded. The following subject was selected for the Jacksonian Prize Essay for the year 1899: The Pathology, Diagnosis, and Treatment of Inflammatory Affections of the Nasal Fossæ and the associated Sinuses and Air Cells. The following subject was selected for the next College Triennial Prize: The Thyroid Gland; its Structure, Comparative Anatomy and Physiology.

The Five Years' Curriculum.—A report from the Committee of Management to the following effect was adopted:

That (1) Winchester College be added to the list of institutions recognised by the Board as a place of instruction in Chemistry, Physics, and Practical Chemistry. That (2) the opinions of the various medical schools in England had been asked on the subject of a report dated March 9th, recommending that time spent at recognised teaching institutions after registration as a medical student be counted as part of the curriculum of professional study, with the result that 12 schools unconditionally approved of the recommendation, 2 gave their approval conditionally, whilst 2 disapproved of the proposal.

The Committee moreover reported upon the question of recognising attendance in Biology at non-medical schools in the following terms:

The reason for the recognition of institutions other than medical schools as places of instruction in Chemistry, Physics, Practical Chemistry, and Biology was to encourage the student as far as possible to complete these subjects before entrance on the professional course proper. It is found, however, that the regulation has not the desired effect, probably owing to the fact that the student has still to complete five years at a medical school, whatever his previous study may have been. At the present time candidates may receive their instruction in these subjects at recognised institutions either before or after registration, but the time so spent does not count as part of the curriculum of professional study. The General Medical Council register students who have passed the required Preliminary Examination, and who have commenced the study of these subjects at one of the recognised teaching institutions, and yet, although such students are registered, they have still five years' professional study to complete after entrance at a recognised medical school. In the case of students who enter at a recognised medical school immediately after passing their Preliminary Examination the five years of study commences to count at once, although the first of those years may be spent solely in receiving instruction in Chemistry, Physics, Practical Chemistry, and Biology.

This arrangement appears to be unsatisfactory, for if the instruction at the institutions recognised by the Board be considered sufficient for the training of the candidate, there seems no reason why the mere fact of such instruction being received outside a medical school should render it of less value, so far as the curriculum is concerned, than that which is received at a medical school. The time spent in receiving instruction in these subjects, after registration, at recognised institutions is counted as part of the curriculum of professional study by most of the qualifying bodies.

In suggesting a modification of the regulation the Committee desire to express their view that the period of time devoted to the study of Anatomy, Physiology, Medicine, Surgery, and Midwifery should not be in any way shortened, and they cannot but feel that if the candidate is required to spend four winter and four summer sessions after passing Parts I and III of the First Professional Examination in the study of Anatomy, Physiology, Medicine, Surgery, and Midwifery at a recognised medical school and hospital, there will be more certainty of those subjects receiving adequate attention than under the present conditions, which admit of a student extending his Chemistry and Biology over the first two or three years of his course, thereby overlapping the time which should be given to instruction in Anatomy and Physiology.

The Committee suggest that the regulation should be altered so that the first of the five years of the curriculum may be spent in obtaining instruction in Chemistry, Physics, Practical Chemistry, and Biology, either at a recognised institution or at a recognised medical school, and that the candidate be required to spend four winter and four summer sessions from the date of passing Parts I and III of the First Examination at a recognised medical school and hospital before entrance to the examinations in Medicine and Surgery.

In relation to this suggestion the Committee would remind the Royal Colleges that great care has been taken in selecting the institutions placed on the recognised list, some being recognised for Chemistry, Physics, and Practical Chemistry only, and others for Biology as well. In the case of students attending the former class of institution the Committee propose that not more than six months of the curriculum shall be allowed to count, but in those cases where Biology is also taught the full period of a year should be recognised.

Midwives Registration Bill.—The Committee on the Midwives Registration Bill reported that after careful consideration they were of the opinion that it did not provide sufficient protection to lying-in women and adequate safeguards in the interests of public health, and they accordingly recommended that the Council should not give it their support. This recommendation was adopted, and it was resolved that Mr. F. Rowland Humphreys, Honorary Secretary of the Midwives Bill Committee, be informed of the decision. The Bill was introduced into the House of Commons by Mr. J. B. Balfour on February 11th, 1898, and is put down for second reading on May 11th next. It was resolved that a special meeting of the Council be held on May 4th at 3 o'clock to consider the report of the General Medical Council on the Midwives Bill.

British Practitioners in Italy.—The PRESIDENT reported on behalf of himself and the Vice-Presidents that they had considered the petition from Members of the College resident in Italy on the subject of the proposed legislation of the Italian Government respecting the practice of medicine and surgery by foreigners, and submitted a letter on this subject, which they recommended should be addressed to the Secretary of State for Foreign Affairs. It was decided that a copy of the letter in question should be sent to the petitioners. The petition drew attention to a proposal of the Italian Legislature to make it compulsory not only upon foreign medical men who may desire to practise in Italy in the future, but also upon those who are actually practising there, to pass through all the stages of the usual student's curriculum of study, and obtain the necessary diploma for practice in one of the Italian Universities, before they can exercise their profession even amongst their own countrymen.

Disciplinary.—Different recommendations of the Discipline Committee relating to the professional misconduct of certain Members and a Fellow were adopted by the Council.

Right of Members to Elect Direct Representatives.—The Council proceeded to the further consideration of the petition from certain Fellows and Members of the College claiming that the right of electing the representative of the College to the General Medical Council is, by Section VI of the Medical Act, 1886, vested in the Fellows and Members of the College, calling upon the Council to make arrangements to hold an election, and enable the Fellows and Members to choose a representative, and asking to be received and heard in support of their position. It was resolved that the petitioners be informed that the Council see no reason to alter the mode of election which has been in force for the last forty years, and consider that no useful purpose would be served by receiving such a deputation.

Finance.—The SECRETARY stated that the appeal against the assessment of the College for Corporation duty would probably be heard on April 25th or 26th.

Election of Fellows.—The two following Members of twenty years' standing were elected to the Fellowship: Charles Sissmore Tomes, F.R.S.; William Dunnett Spanton.

THE LOCAL GOVERNMENT (IRELAND) BILL.

VI.

PROPOSED AMENDMENTS.

THE time is now ripe—on the eve of the Committee stage of this Bill—for the publication of the amendments proposed by various bodies in order to give effect to the views expressed in the series of articles on the Bill which have appeared in the BRITISH MEDICAL JOURNAL.[1]

The amendments have been drafted either by public medical bodies representing the interests at stake, or with the object of embodying the views of such bodies on the points at issue.

1. POOR-LAW MEDICAL OFFICERS AND SUPERANNUATION.

The Council of the Irish Medical Association, having taken the opinion of eminent counsel, have drafted the following amendments. The proposed amendments are printed in italics:

CLAUSE 6.—There shall be transferred to the Council of each County—

(*a*) The business of the Guardians with respect to making, levying, collecting, and recovering the poor-rate in so much of the County as is not comprised in an urban district; *and the appointment and superannuation of the Chaplains, the Medical Officers of the several dispensary districts and Workhouses situate in the County subject to the approval of the Local Government Board*, and

(*b*)

CLAUSE 58.—Whereby or in pursuance of this Act or any Order or Rules

[1] See the numbers of the BRITISH MEDICAL JOURNAL for March 5th, p. 652; 12th, p. 705; 19th, p. 769; 26th, p. 835; and April 2nd, 1898, p. 897.

made thereunder by the Lord-Lieutenant in Council or the Local Government Board, any Officer paid out the Poor-rate or any other local rate or cess, *other than the Chaplain or Medical Officer*, is required, etc.

Clause 61.—(1) Nothing in this Act shall affect any powers of the Local Government Board with respect to Guardians or the Officers of Guardians; *and, notwithstanding anything in 28th Vic., cap. 26, and 32 and 33 Vic., cap. 50, from and after the passing of this Act, the Boards of Guardians of every Union in Ireland shall, with the sanction of the Local Government Board for Ireland, grant to every Medical Officer belonging to that Union who shall become incapable of discharging the duties of his office with efficiency, by reason of permanent infirmity of mind or body, or of old age, upon his resigning his office, or in the event of the abolition of the said office, a superannuation allowance, not exceeding two thirds of his salary and emoluments,* and the Local Government Board may, on the application of any Council, exercise in relation to the Council and the Officers of the Council, all such powers of holding inquiries on oath, and deputing any Officer of the Board to attend at the meetings of the Council, as they are by law empowered to exercise in the case of Guardians and their Officers.

It is to be observed that if the appointment and superannuation of medical officers be transferred from the guardians, as proposed in the amendment to Clause 6, then the amendment to Clause 61, relative to superannuation, should be added to Clause 6, with the necessary alteration—"Council of every County" in place of "Board of Guardians."

2. The Sanitary Organisation of the Country.

It is proposed to leave existing sanitary officers as they are, but to enlarge the organisation and make it effective by granting powers to the county councils similar to those conferred on county councils in England by Sections xvii, xviii, and xix of the Local Government (England and Wales) Act, 1888, 51 and 52 Vic., cap. 41. The proposed new clauses would run as follows:

New Clause 17.—(1) The council of any county may, if they see fit, appoint and pay a medical superintendent officer of health, by themselves or in conjunction with councils of other counties, for such county or a combination of such counties who shall not hold any other appointment or engage in private practice without express written consent of the council.

(2) The county council and any district council may from time to time make and carry into effect arrangements for rendering the services of such officer regularly available in the district of the district council, on such terms as to the contribution by the district council to the salary of the medical officer, or otherwise, as may be agreed, and the medical officer shall have within such district all the powers and duties of a medical officer appointed by a district council.

(3) So long as such an arrangement is in force, the power granted to the district council under Section xi of the Public Health (Ireland) Act, 1878, to appoint a medical officer of health shall be deemed to be satisfied without the appointment of a separate medical officer.

New Clause 18.—(1) Except where the Local Government Board, for reasons brought to their notice, may see fit in particular cases specially to allow, no person shall hereafter be appointed the medical officer of health of any county or county district, or combination of county districts, or the deputy of any such officer, unless he be legally qualified for the practice of medicine, surgery, and midwifery, and unless he be duly registered under the Medical Acts.

(2) No person shall after the first day of January, one thousand eight hundred and ninety-nine, be appointed the medical officer of health of any county or of any such district or combination of districts, as contained, according to the last published census for the time being, a population of fifty thousand or more inhabitants, unless he is qualified as above-mentioned, and also either is registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section twenty-one of the Medical Act, 1886, or has been during three consecutive years preceding the year one thousand eight hundred and ninety-nine a medical officer of a district or combination of districts, with a population according to the last published census of not less than twenty thousand, or has before the passing of this Act been for not less than three years a medical officer or inspector of the Local Government Board for Ireland.

New Clause 19.—(1) Every medical officer of health for a district in any county shall send to the county council a copy of every periodical report of which a copy is for the time being required by the regulations of the Local Government Board for Ireland to be sent to the Board, and if a medical officer fails to send such copy the county council may refuse to pay any contribution, which otherwise the council would in pursuance of the Act pay towards the salary of such medical officer.

(2) If it appears to the county council from any such report that the Public Health (Ireland) Act, 1878, has not been properly put in force within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied, the council may cause a representation to be made to the Local Government Board for Ireland on the matter.

Besides the foregoing new clauses, another clause will be desirable, having for its object to secure a superannuation allowance for a medical officer of health not exceeding two-thirds of his salary and emoluments as such medical officer of health. As the law exists at present, the position of the medical superintendent officers of health is quite anomalous. They are excluded from the provisions of the Local Officers Superannuation (Ireland) Act, 1869, because it requires that the officer's whole time shall have been devoted to the service of the public body granting the allowance, and they are excluded from the provisions of the Public Health Amendment Act (1896), Section vii, because they hold their office only under the Public Health Acts.

The grievance can be remedied by introducing a short clause into the Local Government Bill to this effect:

The powers conferred upon a local authority under Section vii of the Public Health (Ireland) Act, 1896, in respect of superannuation, shall apply to any officer of such authority employed by them in discharge of sanitary duties, although such officer may hold no other office under said local authorities.

3. Medical Officers of Lunatic Asylums.

Sir Walter Foster has given notice of the following amendment to Clause 56 of the Bill, page 31, line 43: Leave out, "had experience in the treatment of the insane," and insert "served for not less than five years as a medical officer or assistant medical officer in an asylum for the treatment of the insane."

Mr. Carew has further tabled an amendment to Clause 56, page 32, line 2; at end insert "and the Lord Lieutenant may, if he thinks fit, direct that such assistant medical officer shall be examined, and his qualifications certified by such persons as His Excellency may direct."

Mr. Lough has tabled an amendment identical in terms with Mr. Carew's, save that the "Local Government Board" is substituted for the "Lord Lieutenant" and for "His Excellency," with the incidental grammatical changes.

4. The County Infirmaries.

Since the introduction of the Local Government (Ireland Bill, the Association of County Infirmary Surgeons have submitted to the Chief Secretary to the Lord Lieutenant for his consideration a scheme for safeguarding the interests of the county infirmaries under the Bill. The Chief Secretary, on his part, has undertaken to introduce a clause into the Bill on the subject of the county infirmaries, provided that the passage of the Bill through committee in the House of Commons is reasonably expeditious. What the proposals of the Chief Secretary may be is, of course, not yet known. As the scheme submitted by the County Infirmary Surgeons is still under the Chief Secretary's consideration, we are not in a position to publish it *in extenso*. Suffice it to say that it will be necessary that the county council shall in each case be directly represented on the board of management of the county infirmary by the co-option of a substantial number of their body. In the vast majority of cases 75 per cent. of the infirmary funds are granted by presentment. On the other hand the buildings and funded property have been provided by private munificence, and local sources of benevolence would be dried up unless subscribers should retain a liberal representation, and unless considerable administrative power and certain vested privileges should remain in their hands. There has never been any sectarian or party feeling heretofore in the working of the infirmaries, and there is no reason why such should now arise.

It is proposed that all expenses of the board of management shall be provided by the county council by means of a rate levied off the whole country equal to not less than three-fourths of the required amount, the remaining one-fourth being levied off the smaller area in which the infirmary stands, regard being had in this way to proximity and sphere of usefulness.

The Local Government Board shall make regulations for the efficient inspection of the infirmaries and for auditing the accounts. The officers are to hold their appointments on like terms and conditions as before the passing of the Local

Government Bill, the surgeons being appointed by the annual and life governors together with the representatives of the county council on the board of management.

Such are the salient features of the scheme which has been placed in the Chief Secretary's hands. We feel confident that Mr. Gerald Balfour will recognise the reasonableness of the proposals, and embody them in his promised new county infirmary clause.

It remains but to express an earnest hope that effect will be given to the views of the medical profession in relation to the Bill.

WORKMEN'S COMPENSATION ACT, 1897.

APPOINTMENT OF MEDICAL REFEREES.

The Secretary of State proposes shortly to proceed to appoint medical referees under the Workmen's Compensation Act, 1897. The following will be the conditions and terms of the appointments:

Duties.—The principal duty of the medical referees will be to act as the advisers in medical matters of the committees, arbitrators, and county court judges, who are empowered to decide all questions arising in proceedings under the Act. For this duty they will be paid by the Treasury.

The ordinary procedure will be as follows: If, after hearing the evidence brought by both sides, doubt remains upon some medical point material to the case, the committee, arbitrator, or judge may, at their discretion, make a reference to the referee directing him to examine the injured workman, and to make a written report on a specified question or questions. As a rule, the applicant will be required to attend the referee for examination at a time and place to be fixed by the referee; but in some instances, where the workman is unfit to travel, it will be necessary for the referee to visit him. In all cases the referee will make, in the first instance, a written report answering the question or questions propounded by the committee, judge, or arbitrator. Only in cases of special difficulty, before a county court judge or county court arbitrator, will the referee, after his written report has been considered, be asked to attend at a subsequent hearing to be held at a day and hour fixed by arrangement with him.

There will further be some cases in which applications will be made to the medical referees directly by the workmen. In certain circumstances a workman who is in receipt of an allowance under the Act is entitled to submit himself for examination to a referee for the purpose of obtaining a certificate as to his condition, which will be conclusive evidence in an arbitration under the Act.

Distribution of Appointments.—The appointments will be made according to the county court circuits, referees being appointed for each of the 55 circuits into which England and Wales are divided. According to the circumstances of each circuit, it will either be subdivided and one or more of the referees assigned to each district, or arrangements will be made by which the referees will take the cases arising in the circuit according to a fixed rota. This arrangement will not, however, be binding on the county court judge or county court arbitrator, who is left free in each case to select such of the referees for the circuit as he sees fit, though he will probably in many cases be guided by the general arrangement.

Similar arrangements will be made for Scotland and Ireland, but the details are not yet settled.

In the first instance it is probable that only one or two referees will be appointed for some of the circuits, the ultimate arrangement being left to be determined when experience shows what is the number and distribution of the cases arising under the Act. For the same reason all appointments made will, in the first instance, be provisional and subject to revision if experience of the working of the Act should show that any rearrangement of duties or of the mode of payment is required.

Qualifications.—The Secretary of State, accepting and fully concurring in the recommendations of a committee appointed by him, which has examined the whole subject with great care, and has had the advice both of county court judges and of high medical authorities, deems it essential that the referees should be men of independent position and high standing in their profession, so as to command the confidence of all parties in disputes under the Act; and should, moreover, have such experience of the class of questions arising as will enable them to decide with authority points in which there may be divergence of medical evidence.

Other things being equal, preference would therefore be given to those holding important hospital appointments, or having had other special opportunities of gaining wide experience of accidents and their consequences; and to those who are not closely identified, by the nature of their practice or otherwise, with the classes affected by the Act.

Most of the cases arising under the Act will be of a surgical character, and the majority of the referees must therefore be selected with special regard to this circumstance; but the Secretary of State will, where necessary, make provision also for cases of other kinds, whether purely medical or involving questions in the ophthalmic or other special branches of practice.

Fees.—The following scale of fees has been approved by the Treasury:

For a first reference, to include examination and written report	2 guineas.
For a further written statement on the same reference	1 guinea.
For a second or subsequent reference in the same case	1 ,,
For attendance at the proceedings on the request of a county court judge or county court arbitrator at a time and place to be arranged	3 guineas.

Where the medical referee has to travel to a place distant more than two miles from his residence, there will be a further fee calculated at the rate of 5s. for each mile of distance. The Secretary of State may in some cases fix a "centre," other than the referee's residence, from which distances are to be measured.

The fee for the examination of a workman in receipt of an allowance, who submits himself voluntarily, is payable, not by the Treasury, but by the workman, who may be required to pay a reasonable fee before the examination is made.

Applications for the appointments should be addressed to the Home Secretary, and should be sent under cover to the Private Secretary to the Secretary of State, Home Office, London, bearing on the envelope the words "Medical Referee," and should state the applicant's qualifications, age, etc., his residence, and the county court circuit to which he wishes to be attached.

LITERARY NOTES.

It is estimated that the 275 medical journals in the United States have a combined annual circulation of over 16,000,000 copies.

Messrs. Charles Griffin and Company, Limited, announce that they will issue immediately a new edition, revised and enlarged, of Professor Dixon Mann's *Forensic Medicine and Toxicology*, and a translation of *Technical Mycology for Bacteriologists and Analysts*, by Professor Franz Lafar, of Vienna, from the pen of Mr. Charles T. C. Salter. The same firm has in the press a new edition, revised and enlarged, of Dr. Bevan Lewis's *Mental Diseases, with Special Reference to the Pathological Aspects of Insanity*, and an English edition of the new *Atlas of Urinary Sediments*, by Dr. Hermann Rieder, of Munich, with a translation of the accompanying letterpress by Dr. Craven Moore, edited and annotated by Professor Sheridan Delépine.

M. Landouzy presented to the Académie de Médecine at its meeting on April 12th the first volume of his lectures on serumtherapy, delivered at the Faculty of Medicine in 1895 and 1896. The first part of the book is devoted to immunising methods, the second to artificial serumtherapy, which M. Landouzy claims as a French discovery made by MM. Richet and Héricourt. A second volume, which will shortly be published, will deal with opotherapy, or treatment by means of animal juices and extracts.

Mr. Herbert Vivian, in his recent lively book on *Servia*, which is, he asserts, the "poor man's paradise," states that the sanitary service is very well organised. There are medical officers for departments and districts, and they have power to impose the minutest sanitary regulations, and even to prescribe the food of the people, which, he adds, they do not hesitate to do whenever occasion requires. This is the more strange in a country where the only university has no medical faculty. There would appear to be only one free hospital in the country; it is situated in the capital, Belgrade. As there are no paupers in the country the condition of the medical profession ought to be happy.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 23RD, 1898.

THE VACCINATION BILL.

The debate on the second reading of the Vaccination Bill was not concluded on Tuesday afternoon, and stands adjourned. A second reading affords opportunity for discussion of the general principles of a measure, but so far no one in the House has made any serious attempt to disprove the power of vaccination as a preventive of small-pox; and the questions which have been raised in opposition relate rather to details of payment and of compulsion. A good deal that is of interest and importance may, however, be gleaned even from the incompletei debate. The medical profession was excellently represented by Sir Walter Foster and Sir William Priestley, and the graceful compliment which the former paid to the researches of Dr. Monckton Copeman on asepticism of calf lymph was well deserved. The views which the honourable member expressed as to revaccination and the recognition by the State of the work of private practitioners, were in general accordance with those contained in the report of the Parliamentary Bills Committee of the British Medical Association adopted by the Council at its meeting this week. Even on the much debated question of compulsion he is not out of accord with the findings of that report.

But it is to Mr. Chaplin's speech that we turn with greatest interest as indicating what line the Government is likely to take on some important points. The only objection which has been raised to handing over the administration of the Vaccination Acts to sanitary authorities is that elections *ad hoc*, which are undesirable for Boards of Guardians, would be even more undesirable in the case of bodies with functions so important as those which belong to authorities under the Public Health Acts. As regards prosecutions, Mr. Chaplin now says that under the powers which the Local Government Board already possess they purpose in future to make it the duty of the vaccination officer to institute any necessary proceedings. This means that prosecutions would go on automatically and independently of whatever local authority might have charge of vaccination. This proposal raises political considerations as to central control of locally paid officials on which we need not enter. From our point of view, the important fact is that under such an arrangement elections could hardly be fought on the question of prosecution or non-prosecution. But Mr. Chaplin does not take advantage of his own proposal. Even with a public prosecutor he says nothing about the transference of local vaccination administration to the public health authorities, and this is a very grave defect to which his attention should be specially directed.

As to payment of public vaccinators and vaccination officers, the general principle of his scheme strikes us as being reasonable. He said that the Government proposed that both classes of officers should be remunerated in future by two methods: first, by a payment based on the numbers of births to cover all their general duties; and secondly, by a payment in each case for successful vaccination. The result would be that part of the public vaccinator's income would be independent of local opposition to vaccination, and that at the same time the income would in some degree correspond with the number of vaccinations performed. If reasonable effect were given to this view the justifiable complaints of officials who are unfortunate enough to hold appointments in places where vaccination is neglected would be satisfactorily met.

Still more important were Mr. Chaplin's declarations regarding the inspection of the vaccinal condition of children about to enter on school life, and regarding revaccination. As to the former he said that he was quite alive to the importance of the proposal that children should be inspected when they entered school, so that they might be vaccinated if they had escaped vaccination in their earlier years, and with the support of Sir Walter Foster it might be found possible to introduce nto the Bill an amendment on this point. As to revaccination he said that "while wishful to include provisions for revaccination in the Bill, he was still more anxious to get the measure passed into law this session." This is no doubt the usual wish of a Minister in charge of a Bill, but in the present instance legislation for revaccination is of such essential importance that it would be cheaply purchased at the cost of a year's delay. It is to be hoped, however, that so reasonable a requirement will not involve even this sacrifice. The medical members of the House must be ready, when the report stage comes, with amendments covering the whole ground here, both as to revaccination before leaving school, and inspection of children before entering school.

We regret that Mr. Chaplin does not see his way to adopt the proposal with respect to State payment and State inspection of the vaccinal work of private practitioners. The obstacles do not seem to us to be at all insuperable. Take places like Leicester. Vaccination there has fallen into such complete desuetude that we doubt whether even domiciliary visits by a public vaccinator, combined with legal proceedings by a public prosecutor, will effect the desired result, and we should be quite prepared to find antivaccination societies doing their best, or their worst, by rousing local prejudice and passion, to make systematic domiciliary vaccination a practical impossibility. But, under a system by which every medical practitioner would have his services recognised by the State there would be nearly a hundred vaccinators in Leicester, all taking occasion, in the course of their daily duties, to advise and carry out the vaccination of the infant population of the town. The result would be that a very great part of the work would be already overtaken before the public vaccinator would begin his domiciliary visits. As to

the infliction of penalties for neglect of vaccination, we think that Mr. Chaplin might well reconsider his position in the light of the concessions which he indicated. With inspection of children on entering school, with provision for systematic revaccination before leaving school, and, if possible, with the aid of the private practitioners, it might be possible to limit prosecutions by the public prosecutor to the case of persons neglecting not only to procure vaccination for those for whom they are responsible, but also to make and to register a statutory declaration of their conscientious objections to vaccination or revaccination. The object of legislation must be, not to prosecute but to vaccinate, and it is quite conceivable that more vaccinations would be effected by such a scheme as is here suggested, and as is adumbrated in the report of the Parliamentary Bills Committee, than by the proposals of the Bill, even with the alterations which Mr. Chaplin now seems willing to make.

THE THERAPEUTICS OF CRIME.

The debate on the Prisons Bill, which passed its second reading without a division—a fact which has a significance of its own—and the discussion to which it has given rise in the House of Commons as well as in the press, reveal a strange diversity of opinion as to our methods of dealing with crime and criminals. The Bill itself, which is based on the recommendations of Mr. Herbert Gladstone's Committee, is obviously intended to mitigate what Mr. Asquith in his speech called "the cast-iron" provisions of former Prison Acts, and its general tendency is to greater leniency of prison treatment. The Home Secretary and the Prisons Board will welcome any increased powers which will give them a freer hand in their management, and render them less liable to such charges of inhumanity as they have recently had to encounter. These charges, of course, had but little foundation in fact. They had already been refuted by the findings of the Departmental Committee, who in their report stated: "We do not consider that there is reason for general condemnation of a prison system which resulted originally from careful inquiry and much deliberation; or that it is right to lay the burden of all the shortcomings of the prison system on the central prison authorities, who have carried into effect, under successive Secretaries of State, the Acts approved by Parliament, who have loyally and substantially carried out the various recommendations made from time to time by Commissions and Committees, and who, as administrators, have achieved in point of organisation, discipline, order, and economy, a striking administrative success." Similar testimony was given in reference to improved sanitation, and to the kindness and forbearance exercised by the staff in their dealings with prisoners. Probably no class of officials have more difficult and trying duties to perform than those who have to discipline and keep in check these most unruly members of society.

But, putting aside this authoritative pronouncement of the Committee, made after hearing evidence from all sides, and, as they tell us in their report, after reading "in magazines and newspapers a sweeping indictment against the whole of the prison administration," let us glance at the system itself and the results we have got from it. The system is based on the Act of 1865. This Act undoubtedly aimed primarily at punishment and deterrence. Reformatory influences were provided for, but they were put within reach of the prisoner rather than forced upon him, with a view to encourage self-help, and awaken his own faculties for improvement. The chaplain, in fact, was supposed to instruct and advise him in prison, and the Discharged Prisoners' Aid Society to lend him a helping hand on discharge. The penal portion of the system involving, as it did, strict cellular separation and a prolonged employment at hard labour of the first class, which the Act defined as "crank, treadwheel, capstan," etc., and which are no new invention of the present Prisons Board, was found in practice too severe, and was considerably mitigated in the Act of 1877, which handed over all local prisons to the State. Since then further changes have taken place, such as the abolition of dark cells, all in the direction of a more lenient treatment, and for the benefit of the prisoner. Under this system the results have undeniably been of the most satisfactory kind. When the Departmental Committee reported in 1895 they recorded an actual as well as a relative decrease in crime. The prison population, which in 1877 numbered 30,000, had in 1893 gone down to 18,000, though the general population had increased in the same period from 24 to 29 millions. The prison death-rate in the same time had gone down from 9 per 1,000 to 7 per 1,000, pointing to improved sanitary conditions, and, as the Committee said, "to good administration;" while the number of punishments had largely decreased and discipline was good.

Further, the Committee gave statistics to show that "out of every 100 who go to prison for the first time 70 do not return again," though the remaining 30 per cent. renew their visits repeatedly. Prison is, in fact, fairly deterrent for all except habitual criminals for whom it seems to have no terrors.

Now, these results, whether they are due to our present system, or to other causes combined with it, are, as Sir Matthew White Ridley said in the debate, much better than other countries can produce. We may take hints from them on matters of detail, but it is very doubtful if the adoption of any Continental or American system would better suit the national temperament of the British criminal.

Enough has been said to show that our prison system is not the failure which advanced reformers make it out to be; but it has, on the other hand, certain defects to which, from a medical point of view, we would call attention, and which, in the present state of public opinion, the Prisons Board will have no difficulty in remedying under the new Bill. We allude specially to the crank and treadwheel as instruments for enforcing hard labour. We have shown that these are not inventions of the present administration. The Board has already taken in hand the abolition of unproductive labour. Cranks and treadwheels should also disappear; they are penal anachronisms which irritate and demoralise, and act with unequal harshness on different individuals, without any compensating advantages either to the prisoner or to his keepers. We are aware of the difficulty of providing labour for the unskilled, but at all hazards these out-of-date contrivances should be replaced by some more rational industry. Work in itself, if it be of the right sort, is one of the very best reformatory agencies in a prison system. We have read lately many complaints about the scanty supply of books as civilising aids in prison, but people are apt to forget that prisoners as a class are not generally of a literary turn. One

book a week would seem to be about as much as the average prisoner can digest in the intervals of his work. Employment, however, in which prisoners can take an intelligent interest, if it can be devised, will go far towards relieving the monotony of a sentence, and producing beneficial effects on the mind as well as the body.

The plank bed is another feature of our system which needs modification. As a matter of fact, we believe that insomnia is not a common complaint amongst prisoners. A night's rest, however, is a necessary preparation for the next day's work, and we should be disposed to make "deprivation of mattress" a penal measure for certain prison offences for which dietary punishment is now the sole method of treatment. Prison diet was, as a matter of course, one of the burning questions in recent discussions. The Home Secretary has promised further inquiry on this subject, but it has already been pointed out in the British Medical Journal that nothing very serious can be wrong with dietary scales which have been in use since 1878 with such favourable sickness and mortality returns as prison statistics show. Further, we know that medical officers are given ample discretion in modifying the scale to suit individual cases.

It is no part of the mild despotism of our prison administrators to inflict any kind of "torture," and if it can be shown that any alteration or modification of the present scale is desirable, they will no doubt readily accept medical advice on the subject. It would be idle to expect that all penal elements should be eliminated from our system. Society expects some penalties to be inflicted on evil doers. Mr. Asquith warned his hearers of the social dangers of converting our prisons into "comfortable places," and he laid it down as a result of his responsible experience at the Home Office, that we must take care lest in making our prisons "too reformatory we cease to render them deterrent"—a well-marked tendency of the present time which he did well to emphasise, and caution us against, with the weight of his authority.

THE SANITARY OATH.

Most popular expressions owe their origin to comparatively trivial incidents. The expression "sanitary oath," which would appear to be rapidly becoming popular in the daily press, is another practical illustration of this fact. It was first used by Mr. Justice Day when he presided at the assizes in Lancaster some time ago. Four medical witnesses had availed themselves of their right to be sworn with uplifted hand, a right permitted to everybody by the Oaths Act, 51 and 52 Vict., cap. 46, Section v. Another medical witness, who did not claim this privilege, was sworn in the usual manner by kissing the book. The learned judge, in a tone partly jocular and partly serious, commended the action of this witness, and deprecated the action of his brethren who had taken the "sanitary oath." His lordship gave the most scornful emphasis to this expression. He overlooked or ignored the fact that if the oath with uplifted hand was the sanitary oath, the oath which involved kissing the book must be the insanitary oath. And surely those who preferred the sanitary to the insanitary oath hardly deserved to be held up to scorn. Some time later the same learned judge was presiding in the Crown Court, Liverpool, trying one of the most painful cases which learned judges have to try or in which medical witnesses have to depose. The first witness, a girl, was suffering from a loathsome disease, as was palpable to everyone in court, through no fault of her own, but as the result of a criminal assault. She kissed the Testament, and all the other witnesses did the same. When the last witness had been sworn it was discovered that by an error all the previous witnesses had been sworn on the Old instead of the New Testament. The judge ordered all to kiss the right book. Another learned judge, Mr. Justice Collins (now Lord Justice Collins), when trying a precisely similar case at the Central Criminal Court, ordered the Testament to be destroyed after it had been kissed by the first witness.

That a book may be the medium of contagion when used indiscriminately by witnesses belonging to every station of life is so manifest that no further argument is necessary. That kissing the book is an uncleanly practice no one denies. Why does it continue when all who are required to be sworn may be sworn in a perfectly cleanly and safe manner by raising the right hand and repeating the form of oath? Why do medical witnesses continue to take the insanitary oath in preference to the sanitary one? We can hardly believe that it is because of their attachment to an ancient custom, especially since Mr. F. A. Stringer, the highest authority on the subject, has shown conclusively that kissing the book, so far from being ancient, is comparatively modern, dating only from the middle of the eighteenth century. Nor can we believe, as a lay contemporary suggests, that the splendid isolation of our oath-taking, England being the only country where it exists, is the surest guarantee that it will continue. The reasons are ignorance of the alternative and of the risk of infection, indifference, a dislike to be singular, to give trouble, or to make a fuss. It is so easy to go into the box, take the book, pretend to kiss it, and to let things slide, as our American friends would say.

The sanitary oath involves first asking to be sworn in the Scotch form, then repeating after the judge's clerk the following form: "I swear by Almighty God, and as I shall answer to God at the Great Day of Judgment, that the evidence I shall give to the Court and jury sworn between our Sovereign Lady the Queen and the prisoner at the bar shall be the truth, the whole truth, and nothing but the truth." It requires some courage to go through such an ordeal. The form of oath, moreover, which we have given in full is a burlesque upon the Scotch oath, which is much shorter: "I swear by Almighty God (and as I shall answer to God at the Great Day of Judgment) that I will tell the truth, the whole truth, and nothing but the truth," the words in parentheses being omitted in all but the Circuit Courts. The Oaths Act, so far as its fifth section is concerned, is practically a dead letter, though it was passed more than nine years ago. Is it to remain so? The insanitary oath ought to be made illegal. The prevention of disease is the sacred duty of the medical profession; every witness who kisses the book is the subject of experiment. We have already hinted at one disease which may be conveyed in this manner, and should any case occur in which it was capable of proof—a matter of great difficulty—it will be too late for an indignant public to exclaim, What were you doctors about not to prevent this? Again, in times of epidemics, when witnesses come from homes wherein small-pox, scarlatina, or typhus patients are, the book may be a veritable means of spreading

the disease. Meanwhile, there is a faint possibility that kissing the book may be killed by ridicule, though we fear that the spirit of routine and adherence to precedent which appear to be indigenous in all law courts will be proof even against this.

THE GENERAL MEDICAL COUNCIL.

THE vacancy among the Crown nominees on the General Medical Council will probably be filled up shortly after the return of the Queen from Cimiez next week, and the decision of the Crown, which is taken upon the advice of the Privy Council, is awaited with much interest. The vacancy having been created by the death of Sir Richard Quain, precedent dictates that it should be filled up by the appointment of a representative from England. We understand that three names have been brought specially under the notice of the Lord President of the Privy Council—namely, those of Dr. Holman, as representing the general practitioners; of Dr. Saundby, of Birmingham; and of Mr. C. S. Tomes, as representing the dentists.

VEGETARIANISM.

SIR HENRY THOMPSON is right in stating (in the *Nineteenth Century*) that the name vegetarian is given to persons who include in their food both milk and eggs, and Mr. Salt is equally right in saying (in the *Vegetarian*) that everybody knows it, and that he cannot help it. That which we call a rose is so commonly something else that the exact use of such a word as this is of small importance. We sympathise with a person of an educated palate like Sir Henry, who finds himself classed with a sect to whom the higher pleasures of the table are a sealed book, but we fear that he applies too late for relief, and that though he may clear his own character by offering up the fowls of the air and the fish of the sea to the god of cookery, yet he cannot strip Mr. Salt of his borrowed title, nor even prevail upon Dr. Murray to bar him in the future pages of his *Dictionary*. The question of vegetarianism is one of little interest to most people, although from time to time some such article as this recalls it to the public mind, yet it is capable of rousing in a few breasts feelings as culpable as those which spring from bimetallism. The vegetarian Ghazi is fortunately not dangerous to life, but his withering scorn and his bitter irony will blanch the stoutest cheek, and betoken a lamentable amount of original sin. Possibly these are due to the eggs he eats, or is it the milk that he steals from the simple trusting little calf? It is a mistake to waste time upon trifles, and we have, in consequence, no intention of taking vegetarianism too seriously. It is allowed by all of us that the average man eats a great deal too much, and lives on a diet much too "high" for his needs; that he in consequence of his greediness suffers from a great many unpleasant diseases is equally a commonplace. But we do not concur in the conclusion that because of these excesses all flesh and fish should be banished from the human dietary, for there is no evidence that the ordinary man suffers from eating them in moderation, nor that the average health is improved by a vegetarian diet. This latter is, on the other hand, not often well supported. Strong persons can bear it, the weakly cannot: and it would be folly in us to advise it as generally conducive to health when the great majority of people cannot use it. We entirely agree with Sir Henry Thompson that most persons require a certain amount of their food to be presented to them in the form of flesh or of fish, although the quantity of these substances that is necessary is less than that usually taken. The argument from history is unimportant. Man has at any rate lived on a mixed diet for such a vast length of time that it is immaterial what he lived on before. Again, the inference from the form or function of his organs is much better stated as a conclusion from experience, for if a man can ever live upon a purely vegetarian diet, which some men undoubtedly can, it does not much matter how big his cæcum is, nor whether he has one stomach or two. Some vegetarians are actuated by motives of humanity, and those who think it wrong to take animal life are undoubtedly right not to countenance the practice. It is not a feeling which we ourselves share, but there have always been a few persons in the West by whom it has been felt, and it is part of the religion of some Easterns. And, lastly, some have declared that vegetarianism elevates the moral tone. "They say so and they ought to know," but our own observation would not bear this out. No positive proof can be offered on either side, since it is impossible to assess moral worth with accuracy, but we beg those interested in the subject not to accept without question the assertion of any given vegetarian that his own moral life has been improved by his diet. Men commonly deceive each other on such topics, and constantly deceive themselves. On the whole we incline to conclude first that a vegetarian is not really a vegetarian, but is only called by that name; secondly, that the practice is usually the consequence and not the cause of health; thirdly, that we do not remember what we ate when we were our first ancestors, nor have ever been told on good authority what we were meant to eat: fourthly, that though there does not seem to be any great danger that vegetarianism would raise us too high in the moral scale, still it is just as well to be careful; and, fifthly, that though vegetarian cookery may on some grounds be recommended for prisons, it should not thoughtlessly be inflicted upon the innocent.

THE OPENING OF THE SUMMER SESSION.

THE summer session of the metropolitan medical schools will commence on Monday, May 2nd; that of the Scottish medical schools has commenced this week. At Glasgow, where the session commenced on Tuesday, Dr. Glaister, the new Professor of Forensic Medicine, is at once undertaking the duties of his new office, and we are pleased to learn that Professor Coats has returned from his furlough in good health and ready for work in the Pathological Institute. The summer term of the London Post-Graduate Course will commence on May 2nd. Courses will be given on Skin Diseases at the Blackfriars Hospital, on Diseases of the Throat, Ear, and Nose at the Hospital in Great Portland Street, on Bacteriology at King's College, on Hygiene and Public Health at the Parkes Museum, and on General Medicine and Surgery at the Infirmary in Cleveland Street. Further particulars can be obtained from Dr. Fletcher Little, 32, Harley Street, London, W.

WHY NOT VENTILATE?

THE habits of different nations in the matter of the warming of their houses would afford a curious subject of investigation for some sociologist of leisure. Civilised people who inhabit countries which have a really cold winter—the Canadians, for example—arrange to warm their houses throughout by hot air or hot water, and keep rooms and staircases and corridors more or less at an even temperature, which can be regulated to within a few degrees, whatever the cold outside. In many countries with a hot summer—in Italy, for instance—the means of warming rooms in cold weather are very inadequate, almost non-existent, and the inhabitants and their travelling guests shiver round a brazier, or boldly sit out the cold wrapped up in their warmest garments, which seem designed rather for use indoors than out. The Russian builds himself a flat brick stove in the middle of his room, and most of his time indoors he spends on the top of it. In Great Britain we have no system in particular, but after the manner of the noble savage when wild in woods he ran, we build a great fire round which we sit roasting our shins while the back freezes. The despairing suggestion is now made that we should keep "the air inside the house nearly the same as the air outside, and dress accordingly." If this means that we should take pains to keep our rooms

well ventilated and free from what Dr. Ransome has picturesquely called "air sewage," no better advice could be given. But to attain this end there is no need to let the temperature of the house sink to the level of the exterior, nor indeed to do away with the open fireplace, the "sea-coal fire" which Lord Byron loved, "when not too dear." The mischief of the fireless room, and of the stove-heated room, is that when the external air is very cold there is a natural tendency to close all doors and windows, so that the rooms become both stuffy and hot. The salvation of British rooms is the open fireplace. It is a very ineffectual warmer of the room, and, as usually constructed, does little or nothing to warm the air. When burning brightly it acts as a powerful extractor of air. As we do not as a rule provide inlets for the air at suitable places, it is drawn from doors and windows and floors, for bricks are pervious, whence draughts and cold feet. This is very stupid, for it is easy to get an open grate which will admit into the room a sufficient quantity of warmed air. Such grates are to be seen in many hospitals; why they have not yet found their way into most houses is a mystery which architects and builders may be asked to explain.

THE ASSOCIATION OF PUBLIC VACCINATORS.

We are informed that the President of the Local Government Board has promised to receive a deputation from the Association of Public Vaccinators before the Committee stage of the Vaccination Bill is taken. A series of suggestions and recommendations has been drawn up, setting forth the views of the Association of Public Vaccinators. This document urges that the age of compulsory primary vaccination should not exceed six months, and that the Local Government Board should have power to issue orders for the immediate vaccination of all unprotected children in the infected districts during an epidemic, and that provision should be made that every child on admission to school should produce evidence of having been efficiently vaccinated. General approval is expressed of domiciliary vaccination, provided that vaccination stations be retained for the benefit of those who may be willing to attend at such stations. An opinion is also expressed in favour of measures to secure adequate revaccination before leaving school. It is urged that the public vaccinator should be an officer under the Local Government Board, and not, as at present, merely under contract with a Board of Guardians. Other matters are touched upon in the memorandum, copies of which may be obtained from the Honorary Secretaries, Dr. V. A. Jaynes, 157, Jamaica Road, S.E., and Dr. A. E. Cope, 26, Bessborough Gardens, S.W., who will also be glad to receive statements of personal experience or extracts of reports in the press containing matter likely to be of use to the deputation in presenting their case to Mr. Chaplin. The Association of Public Vaccinators are naturally desirous to obtain the adhesion of as many public vaccinators as possible, and the Honorary Secretaries will be glad to hear from gentlemen willing to join the Association, the subscription to which is 5s. a year.

THE FUTURE OF ASYLUM TREATMENT.

The City of London Lunatic Asylum, near Dartford, is situated upon one of the healthiest sites procurable near London, and the work of the institution is characterised by energy, skill, and enlightenment. The report of 1897 shows that the year was commenced with 485 patients, and that 83 males and 48 females were admitted during the year, so that in all 616 patients were under treatment. Of these, 42 were discharged recovered, 65 relieved or removed, and 37 died, while the average number daily resident was 487. The number of admissions, amounting to 131, is the largest number admitted in one year since the asylum was opened in 1886. With regard to causation, previous attacks, heredity, and intemperance in drink head the list, but as Professor Ernest White, the physician-superintendent, points out, great care must be exercised in separating the case in which intemperance in drink is given as the cause from those in which it is a symptom of mental disease. In answer to the question, What is the cause of the steady accumulation of chronic mania? (not increase of insanity), he thinks that where hereditary influence, the liability to recurrence when exposed to the struggle for existence, and the vices of civilisation play so important a part, a large proportion of chronic cases must ensue. Yet we have satisfaction in turning to Chart No. 2 in the report, for it shows a hopeful upward tendency in the recovery rate, and this, Dr. White considers, is in a great measure due to the great progress made during the last twenty years in the treatment of mental diseases, and he adds that in order to improve this rate of recovery the public must recognise that true economy does not consist in boarding and lodging for life a large number of lunatics in huge unwieldy institutions at a low cost a head, but in advancing scientific and rational treatment so as to obtain the best recovery-rate, even at a greater *per-caput* outlay. The recovery-rate in this asylum for the year 1897 is 37 per cent., calculated upon the number admitted. This is a lower rate by nearly 10 per cent. than the previous year, but it is fully accounted for by the reception of many chronic private paying patients, 28 of whom were admitted during the year, bringing the number of this class up to 79 at the end of the year. The admission of paying patients at the moderate rate of 21s. per week into this asylum has been a conspicuous success, both financially and as supplying an urgent public want. The high standard of systematic training for nurses of both sexes, maintained here for so many years, continues, and several, in addition to the silver medal for merit of their own asylum, have taken the certificate of the Medico-Psychological Association. Plans for large and important additions and improvements, estimated to cost upwards of £70,000, have been approved by the Committee, and only await the consent of the City authorities for their immediate execution.

THE FAUNA OF THE GRAVE.

M. Mégnin's gruesome studies on the fauna of cadavers at various periods after death are beginning to prove of value in actual practice. In a recent number of the *Bulletin de l'Académie de Médecine* (p. 313) are given the results of the examinations of two infant bodies recently found in Paris. It may be remembered that M. Mégnin (*La Faune des Cadavres*) maintains that by an examination of the parasitic insects which successively invade a decomposing cadaver it is possible to ascertain with some degree of accuracy the date at which death took place. He has shown that there is a succession of insects which inhabit the cadaver in regular order, and asserts that the sequence of these squads is so systematic that not only is it possible to determine the time that has elapsed since interment took place, but also to state the season of the year at which this took place. In one of the cases in question the following was the condition of the cadaveric fauna. In the first place, an entire absence of members of the first two squads—that is, dipterous insects. From this absence of diptera Mégnin argues that death took place in winter. In the second place there was found a large number of active dermestes larvæ, together with many empty chrysalis cases of the same form. The presence of dermestes indicates the lapse of six months, and as the metamorphosis of this former occupies four months, this gives ten months as the time elapsed since death. In the other case the date of death was fixed by similar means. But while experience in France is leading to definite results, from America comes a protest against the accuracy of Mégnin's deductions. In a paper entitled Underground Zoology and Legal Medicine, read at the annual meeting of the British Medical Association at Montreal, Dr. Motter, of Washington, from a study of 150 interments insisted that no absolutely certain data were to be had from the condition of the cadaver alone. He drew attention to the numerous circumstances which influence and determine the process and

progress of the decomposition of the cadaver. It is certainly significant that the entomologists have entered a protest against the unquestioning acceptance of Mégnin's views; and Dominique has insisted that the science of entomologic chronology of cadaveric history must of necessity be of slow growth. In his paper read at Montreal Dr. Motter puts forward the following argument: It must be remembered, he says, that Mégnin's work has been very largely with cadavers exposed in the open air. The essential point upon which his whole theory turns is that the various insects appear in distinct "squads" at definite and specified periods of cadaveric decomposition, and that they succeed each other in regular order. That this proposition does not in any particular apply to the observations noted by Dr. Motter is evident from the summary of his work given in his paper. Thus he finds that considering only the more important mites, beetles, and flies, a large number occur at very varying periods after death. Thus, of acarinæ eight species were found in thirty cases interred for periods varying from 3 years 2 months to no less than 71 years, while of diptera, phoridæ, puparia were found in 43 cases interred at periods varying from 3 years to 38 years, and so on. This writer is thus fully convinced that he cannot as yet make any broad universally applicable generalisation. The field, he says, is far too broad, and our knowledge of it far too limited for any one concise, comprehensive, and unqualified formula to be laid down.

TOBACCO AND INFANCY.

THE evil effects of tobacco in boyhood are well known, the clinical symptoms being universally familiar. Hence, when the Briton visits a tobacco factory abroad he naturally suspects that what proves very disagreeable in unseasoned adolescence must be disastrous to girls and infants. Large numbers of young married women are employed in many Continental factories, and as a rule they do not look unhealthy, though they handle damp strong-smelling tobacco, and not rarely smoke themselves. The observations of M. Etienne, of Nancy, are of much interest, as they relate to the offspring of these young women. He made notes of their infants deposited at the Nôtre Dame *crèche*, selecting 17 married work girls where there was a clear history of absence of syphilis and alcoholism; 93 of their children came to the *crèche*. Etienne found that they required classification into five groups. First came infants entirely breast-fed by the mother who kept away from the tobacco factory, and secondly, infants similarly reared whilst the mothers continued to work there. The third class included infants exclusively breast-fed at first, and afterwards reared exclusively by the bottle; the fourth consisting of infants more irregularly reared by the mother, the bottle, and the wet nurse. Lastly came the fifth class, infants brought up exclusively and from the first on the bottle. Etienne found that pregnancy did not seem to be influenced prejudicially by work at the factory. It would have been interesting to know how many of the mothers smoked during pregnancy. The total infantile mortality was, however, absolutely high, being double the average registered as that of the total working class in Nancy. Infants of the second class above noted are almost certain to die. On the other hand, as might be expected, the first class comes out best of all. Of course in any working population, especially in factories, the child does best if the mother is allowed a holiday when she nurses it, but the extreme contrast between the mortality in the first two classes, in both of which the child was exclusively fed by the mother, plainly shows that tobacco is specially prejudicial to the infant. The remaining classes show a rather high mortality, but fall far below the second class. The third, fourth, and fifth classes include all the infants of tobacco-factory women which were fed artificially or by wet nurses whilst the mothers returned to work, but the mortality was higher than what might be expected in artificially-reared babies in factory towns, and that mortality, we know, is very high even in districts far from tobacco works. In the interests of the population, a serious question in France, M. Etienne recommends that workwomen should be forbidden to suckle their children when actively employed, but should be allowed a holiday of at least one month after delivery in order to nurse their infants, since at the end of that time the latter can be reared artificially with comparative safety. He recommends also that the local authorities should distribute sterilised milk of the best quality amongst the mothers.

MIDDLESBROUGH AS A CENTRE OF INFECTION.

It would scarcely have been possible for the epidemic of small-pox at Middlesbrough to have assumed its present dimensions without infection having found its way from it to neighbouring localities. Amongst these, Ormesby, in the Middlesbrough Union, has been as yet most affected, there having been 33 cases there. At Haverton Hill, near Stockton, there have been 13 cases, Thornaby has had 9 cases, and Redcar, Guisborough, Loftus, Sunderland, and other places in the vicinity have had a sprinkling. Amongst these is Stockton, which is now, however, more seriously threatened. A few isolated cases had occurred in the town up to April 3rd, when 6 cases suddenly made their appearance. Some of these patients seem—judging from the report made to the Stockton District Council by Dr. Horne, the medical officer of health—to have been moving about freely amongst their neighbours whilst in an infectious condition, before their existence was known to the authorities, and considerable anxiety is naturally felt as to possible developments from them. In these circumstances it is satisfactory to learn that the district council are doing all that they can to promote vaccination and revaccination. Alderman Hind, at a recent meeting of the council, referred especially to Haverton Hill as a proof of vaccination being the only safeguard. "Here," he said, "there were a good many cases of small-pox, but it was hardly possible to get a case there now, simply because Dr. Blandford had seen to it that nearly everyone had been vaccinated." It is a noteworthy illustration of the obscure routes by which small-pox infection travels that whilst this outbreak at Stockton is suspected to have been due to infection introduced by caravans, the origin of the Middlesbrough epidemic has been attributed to infection brought by ships from Bilbao, in Spain, with which the port has extensive relations, and where small-pox is reported to be very prevalent at present. Since our last notice of the epidemic there has been some recrudescence of the infection, as many as 10 new cases having been notified on April 15th, when the total number of cases had reached 1,281.

ELECTRIC TRACTION AND LIGHTING ON THE UNDERGROUND RAILWAY.

THERE is some hope that the notoriety for foulness of atmosphere which has since its opening in the Sixties attached to the Metropolitan Railway is about to end. A Bill, promoted by the railway company, as a result of pressure from the public authorities, who were moved thereto by complaints by the public respecting the bad atmosphere in the tunnels of the railway, has recently been before a Select Committee of the House of Commons. Its principal object is the making of provision for working the railway by electricity instead of by steam, in accordance with a departmental report drawn up in 1897 by a committee of experts, who recommended that electric traction should be employed. Evidence was taken by the Select Committee for and against the project, which will involve great expense to the company, though it is not proposed that the electric traffic shall extend further into the country than Swiss Cottage Station on the Aylesbury line. The Chairman of the Select Committee, Mr. S. Hoare, announced at its last meeting that there was every prospect of electric traction being shortly adopted on the railway, and that meanwhile additional blow-hole

ventilators at some of the worst parts of the line should be sanctioned. The vestries and County Council have hitherto opposed the making of more blow holes along the Euston Road, partly on account of the annoyance they might cause above ground, and partly because they would not be a sufficient remedy for the bad ventilation. The Departmental Committee, after careful investigation, reported that the ventilation would be improved, but not rendered satisfactory by the proposed blow holes, and recommended that they should only be sanctioned by Parliament on condition that unless electric traction or satisfactory artificial ventilation by fans be introduced within three years the company shall be liable to be called upon to close them again. It is to be hoped that the company will lose no time in carrying out the scheme of electric traction; but meanwhile, if the present Bill passes we may look for some immediate improvement at such stations as Portland Road and Gower Street. Another subject of long-standing complaint has been the insufficient lighting of the carriages, whereby reading has been rendered difficult, if not impossible. This grievance is also being attacked by the railway authorities, who have experimentally fitted a few trains with electric lights, and others with improved gas lights. The illumination in either case is fairly good, and reading can be pursued in these trains with some comfort. The competition to be shortly expected from the Central London Electric Railway, now approaching completion, has perhaps forced the hands of the directors of the Metropolitan to grant the above concessions, but passengers will welcome them however obtained.

THE AERIAL TRANSMISSION OF ENTERIC FEVER.

In recent years there has been a tendency on the part of those engaged in the study of the transmission of infective diseases, and especially in the case of cholera and typhoid, not only to exaggerate the importance of water as a vehicle for the specific bacteria associated with these diseases, but to minimise or even leave out of account methods of transmission other than those which come under the heading of "waterborne." Although such methods must necessarily take a secondary position, it is well that we should now and again be reminded that they nevertheless play a by no means unimportant part in determining the spread of disease, especially under certain well-defined conditions. Most people will be ready to concede that the typhoid bacillus is not, as a rule, spread broadcast in the air, especially in damp climates, but it must equally be borne in mind that it is quite possible to imagine conditions specially favourable to the diffusion of partially dried dust, and that typhoid fever may thus be disseminated through the carriage of the typhoid bacillus along with the blown about dust. Dr. John Brownlee, of the Belvidere Fever Hospital, Glasgow, recently contributed a paper to the proceedings of the Glasgow Philosophical Society, in which he discussed the question, and gave a record of an outbreak presumably caused by this means of infection. The association of outbreaks of both typhoid and cholera with the opening up of drains and the breaking of sewage-soaked soil has so frequently been insisted upon that most people will be prepared to accept the main facts of Dr. Brownlee's case as being beyond cavil; but perhaps the most interesting point brought forward in this paper was that an experiment had actually been carried out which proved that the typhoid bacillus could live in ordinary dust, which it was found always contained a small amount of moisture. Dr. Brownlee brought forward in support of his contention the recent observations of those who maintain that the bacillus of enteric fever may live for considerable periods in ordinary arable and other soils, in privies and cesspits, and cited the outbreak of typhoid amongst the soldiers taking part in the Egyptian campaign of 1885, where the disease was supposed, after eliminating all other suggested causes, to be spread amongst the men through the agency of dust. In Egypt the necessary conditions would of course be more likely to arise than in our own relatively damp climate; but, as Dr. Brownlee points out, sewage-saturated ground, unclean back courts, foul surface drains or gutters, wet ashpits, and the like, may all under certain atmospheric conditions contribute their quota of partially dried and germ-laden dust, which may be carried by strong winds on to the surface of water, milk, potted meat, bread, cheese, or other article of food not usually subjected to any further process of cooking, or on to the hands or clothes of people in the neighbourhood or even at a distance, in which latter case the difficulty of tracing the disease would of course be materially increased. Indeed, as Dr. Brownlee says, "the difficulty would be further increased by the fact that before these sporadic cases could come under observation the actual source of infection would have been long obliterated."

UNDESIRABLE LECTURES ON MEDICAL SUBJECTS.

From a report in the *Nottingham Daily Guardian* it appears that a deputation consisting of the President and several influential members of the Nottingham Medico-Chirurgical Society had an interview with the Watch Committee on Wednesday, March 16th. The deputation is reported to have stated that they came as representatives of a society consisting of over 100 practitioners, and their object was to state their opinion that lectures on medical subjects, such as had recently been given in the city in places of public resort to promiscuous audiences, were most undesirable, and calculated to do a great deal of harm. A great many facts were adduced in support of this view, to which the Committee gave respectful attention. The deputation explained that their action was taken on purely public grounds, and not out of selfish regard for professional interests. They did not consider that any injury was done to regular practitioners by the visits of itinerant lecturers, but thought that these public lectures tended to excite morbid curiosity, and to excite the minds of susceptible persons. The Watch Committee undertook to use such powers as they possessed to prevent a recurrence of the practices objected to by the deputation, who then thanked the Committee and withdrew. In our opinion the Nottingham Medico-Chirurgical Society have taken a step in the right direction, and we would commend the course adopted at Nottingham to the attention of medical societies in other towns where lectures of the kind referred to are likely to be delivered.

MEDICAL REFEREES UNDER THE COMPENSATION ACT.

We publish in another column a memorandum issued by the Home Secretary defining the duties and obligations of the medical referees shortly to be appointed under the Workmen's Compensation Act, 1897, which comes into force on July 1st next. The duties will be of an extremely responsible kind. The first and most important are those which will fall upon the medical referee in advising the county court judge in cases of doubt or difficulty. The advice of the medical referee will be obtained after the evidence in the case, including the medical evidence, has been heard. His report will be made in writing, although circumstances may arise under which he may be called upon to attend personally to advise, but in any case his position will be that of an adviser or an assessor and not that of a witness. In instances in which a workman's claim for compensation may come before an arbitrator or a committee appointed under the Act the functions of the medical referee will be similar, that is to say, he will be called in to advise after the evidence on both sides has been heard. It is in contemplation that the persons appointed as medical referees should be of standing and experience in the profession, and the Secretary of State has been well advised in determining that the fees offered shall be of such an amount as will afford proper remuneration for services of the nature required. Most of the questions which are likely to arise will be of a surgical kind, and it is probable therefore that most of the medical referees will be persons who have given

special attention to surgery. The main duties of the medical referee will be those above mentioned, but certain other duties may fall upon him under a clause introduced into the Act during its passage through the House of Commons. It is proposed that any workman seeking to obtain compensation under the Act may, before going into court, apply to one of the medical referees recognised by the Home Office, who would then be required to examine the applicant and give a certificate, which would be accepted as final evidence as to his condition at that time. No provision was made under the Act for the payment of remuneration out of public funds to the medical referees for such services. It would appear therefore that the fees would have to be paid by the applicant, and that their amount would be a matter of arrangement in individual cases. It is, however, not probable that workmen will often avail themselves of this provision. It is most probable they will prefer in nearly all instances to proceed by an action in the county court, or to go before an arbitrator or a committee appointed under the Bill, and in all these cases the opinion of the medical referee, when it may be considered necessary to obtain it, will be paid for by the public funds. It is understood that the Home Secretary will make one or more appointments in each county court circuit in England, in similar areas in Ireland, and within the jurisdiction of each sheriff in Scotland. As the Act comes into force at so early a date, it is expected that the appointments will be made very shortly.

AN EXPEDITION WITHOUT MEDICAL AID.

IT is not a matter for surprise that strong comments should have been made on the disastrous consequences attending the despatch of military expeditions in Uganda without any medical aid. Relating the circumstances in which Captain Dunning, D.S.O., Royal Fusiliers, lost his life in Uganda, the *Army and Navy Gazette* says: "Here was an expedition actually sent on active service without a doctor to look after the sick and wounded; Captain Dunning was seriously wounded and lived for some days in great agony, but his life would have been spared, there is every reason to believe, if he had received even ordinary medical care." Our contemporary condemns the Foreign Office for "the cruel neglect of those who have entered its service. There seems to have been no attempt made to protect life." The story is almost incredible. Even though the Army Medical Department has been allowed by the ineptitude of the War Office to dwindle far below its proper strength, yet it is certain that the Foreign Office could have at once obtained medical volunteers in this country by holding up its hand. The public, we imagine, are becoming heartily sick of these recurring scandals.

THE STATE CHILDREN'S AID ASSOCIATION.

THE first annual report of the State Children's Aid Association has been issued, and deals with the proceedings of the Association since its formation in November, 1896, under the chairmanship of Lord Peel. The object of the Association is, as is well known, to obtain individual treatment for children under the guardianship of the State, and with this object in view it has sought to stimulate public interest in various ways. In particular, about a year ago, it succeeded in inducing the President of the Local Government Board to take steps for the formation of a standing committee of the Metropolitan Asylums Board, to be called the Children's Committee, for the purpose of carrying out the necessary measures connected with the establishment, control, and management of the various institutions for children that may be provided by the managers. The Association made representations with regard to the proposal of the Metropolitan Asylums Board as to the treatment of ophthalmic cases, and these, doubtless, contributed to the final decision of the Board to build the Ophthalmic Hospital School at Brentwood in small cottages, each cottage not to contain more than 10 children, and the whole institution to be limited to 270 inmates. The Association was also instrumental in the introduction into Parliament of a Bill to give Boards of Guardians control over the children of paupers whose character or mental deficiency may render them unfit to have the control of their offspring, and also over children of habitual tramps, and of the "in-and-out" class. The Association has also by public meetings and in other ways contributed to keep the objects which it was formed to promote before the notice of the public. It must be a source of satisfaction to all members of the British Medical Association to see this active body taking up work the foundations for which were in a large measure laid by action taken by the Council and Branches of this Association through special committees, and by the publication of facts which showed the necessity for a complete alteration of the conditions under which pauper children have in the past been brought up as a class apart, too often imperfectly educated, inadequately fed, and incompletely prepared to make their way in life as self-supporting members of the community. During the year the first Chairman of the Association, Viscount Peel, while retaining a warm interest in its objects, has found it necessary to resign, but his place has been fittingly filled by the election of Lord Herschell. The Honorary Secretary of the Association is Mrs. Francis Rye, and its offices are at 61, Old Broad Street, London, E.C.

ANALYTIC USE OF LIQUID AIR AND THE GASES OF THE BATH SPRINGS.

PROFESSOR DEWAR, in the course of a recent lecture at the Royal Institution, demonstrated some of the properties of liquid air. He handed a specimen to the audience in a bowl, and even poured some of it into a red hot vessel. Its condition is analogous to the spheroidal condition of a drop of water on a red-hot plate, the temperature of the liquid air itself being 210° C. When liquid air is poured upon water it causes the water to freeze immediately. By surrounding a vessel containing common coal gas with liquid air it is possible to condense the marsh gas of the coal gas without condensing the carbonic oxide and hydrogen. Thus liquid air can be used for separating gases. Professor Dewar has experimented on the gas given off from the water of the King's Well at Bath, which Lord Rayleigh showed to contain 1.2 parts of helium in 1,000 volumes. The gas from the King's Well could not be entirely condensed, and the portion remaining unliquefied was found to consist chiefly of helium. If therefore helium were wanted for any purpose, a good supply could be obtained from the Bath spring. The argon, which is present to about 14 parts in 1,000, condenses with the nitrogen, but if the resulting liquid be allowed to boil slowly away, a residuum is left containing about 7 per cent. argon.

THE PURITY OF DRUGS.

A SERIES of prosecutions of chemists by the Mayor and Corporation of Sunderland heard recently in the police court terminated in somewhat unsatisfactory decisions by the Bench. It appears that in certain of the cases the prosecution was instituted on the ground that a powder sold as "Gregory's powder" was prepared with carbonate of magnesia instead of oxide of magnesia. In another case a substance sold as "Gregory's powder" contained a considerable proportion of carbonate of lime. Other cases had relation to the sale of a powder sold as precipitated sulphur; in two cases the powder contained hydrated sulphate of lime, in one instance in very large proportion. In all the cases in which a conviction was obtained the Bench imposed a fine of 1s. without costs, no distinction being made in the demerits of the various defendants. The amount of the fines imposed appear calculated to bring the Sale of Food and Drugs Act into derision. "Gregory's powder," containing magnesium carbonate and calcium carbonate, cannot be held to be an article composed of ingredients in accordance with the de-

mand of the purchaser. The preparation of the *British Pharmacopœia*, as well as the original formula of Dr. Gregory, contained neither one nor the other. The substitution of sublimed sulphur, or the old milk of sulphur containing calcium sulphate, as a substitute for precipitated sulphur is also clearly a breach of the law. According to the new *British Pharmacopœia* even milk of sulphur must be free from calcium sulphate, which it might contain as made by the old process. The fines inflicted by the Bench may possibly have met the substantial justice of the cases, inasmuch as it is not improbable that the persons actually convicted were themselves innocent of any intention to sell a substance not of the nature and quality demanded, but it is clear that the net result is highly unsatisfactory.

THE STUDENT AND HIS WORK.

In his opening lecture delivered to the Melbourne Hospital Clinical School not long ago, Dr. Springthorpe had much to say that is both of interest and of value to the medical student of to-day. The modern student of medicine, he observed, was but the present phase of a series of educational types, the most important of which had previously been known under the names of medicine man, alchemist, leech, and apprentice. Compared with these prototypes even there was still much that was imperfect and unsatisfactory. The class, for example, had become so prolific that the finer personal influence and discipline to which it was subject of old had become little better than a tradition. The system, too, by which the student was tested in regard to fitness for independent practice was far from perfect. If the class lists were the mark of the lucky or even the more deserving few, the learning was equally open to all; and if hospital as well as university prizes went with class success, the larger prizes in the larger world were by no means so distributed. But, with imperfections both in material and in system, much could be gained by working in the right way. The principal rules for successful work might be summarised as follows: In the first place came regularity in attendance, without which effort was fitful. Next came a systematic training of the senses, the channels by which knowledge entered; and almost equally important was a practical mastering of the more valuable remedial aids. Thus equipped, the student was ready for the mastery of special cases, aided by the study of a good clinical manual. But far more important was a knowledge of human nature. Somewhat to his amazement, perhaps, the student would early see that therapeutic success did not necessarily follow the dicta of scientific precision, and that broadness of view, common sense, sympathy, and personality were of unsuspected and paramount importance, and might more than compensate even for comparative absence of erudition or manipulative dexterity. But after all his work, what was the student's outlook? A poor trade—as had so often been remarked—but an unsurpassed profession. For those who had higher aims in life, the profession offered the best that was in man's nature, and a satisfaction that was as unique and as complex as human life itself.

FEMALE MEDICAL PRACTITIONERS IN AMERICA.

The United States are the happy hunting ground of the medical woman. The increase in the number of female practitioners of the healing art during the last twenty years has been, according to the New York *Medical Record*, "phenomenal." It is estimated that there are now 4,500 women doctors in America, as against 527 in 1870. The majority of them are general practitioners, but among the number there are also hospital physicians and surgeons, specialists for diseases of women, alienists, orthopædists, oculists, aurists, electrotherapeutists, professors in schools, orthodox and unorthodox, homœopaths, and representatives of all the multitudinous varieties of sects and systems that flourish with such rank luxuriance in the great Republic of the West. It is said that most of them do fairly well, and one or two of the most prominent among them are said to earn a professional income of 25,000 dollars (£5,000) a year. Our contemporary adds that the "rush by women to enter the medical profession has in recent years been most marked, and it may be taken for granted that the increase of women doctors with the present facilities for gaining a degree will continue." The situation, in fact, is somewhat serious for the male doctors, as it is obvious that with the added stress of increasing female competition the chance of earning a tolerable livelihood by the practice of the healing art in the United States must, for the larger number of members of the profession, tend more and more to become a vanishing quantity.

THE UNIVERSITY OF LONDON.

The vacancy on the Senate caused by the death of Sir Richard Quain will be filled after a special meeting of Convocation, to be held on May 24th, when a list of three persons is to be nominated in order that it may be submitted to Her Majesty for selection therefrom of a Fellow of the University. All nominations of candidates must be made to the Clerk of Convocation on or before Tuesday, May 3rd. The vacancy should be filled by a graduate in Arts or Laws. At present the two candidates before the constituency are Mr. J. F. Moulton, M.A., Q.C., F.R.S., who is hostile to the modification of the existing University proposed by the Government Bill now before the House of Commons, and Dr. J. B. Benson, LL.D., who supports that scheme. In the expectation that the University of London Commission Bill would have been taken on Tuesday last, the friends and opponents of the measure issued memoranda setting forth their views. The University of London Defence Association urged that the scheme would destroy the essential characteristics of the existing University by giving the same degree after separate examinations not representing the same educational test, that the proposed university would be a "teachers'" and not a teaching university, and that Convocation ought not to be deprived of its power of veto. It was urged further that the true method of adding teaching functions to the present work of the University would be by a supplemental charter framed so as to confer the necessary powers. The memorandum issued by the friends of the Bill meets these objections, and points out that separate examinations are suggested with the view of giving the University the power of a supreme authority to include, organise, and correlate the highest education of London in all its branches, and to give this with the minimum disturbance of its existing functions. The curriculum of a teaching university should be a course of study under teaching of a university type, and the examinations must be planned from first to last on lines calculated to test both the type and the efficiency of teaching. This is regarded as the vital point, and renders it necessary to leave the examinations for external students undisturbed.

THE LAST ILLNESS AND DEATH OF LOUIS XIII.

The fate of kingdoms may so often depend upon the physical condition of an individual that it is interesting to have details of the last illnesses of princes. The April number of the *Archives Générales de Médecine* contains an abstract of Dr. Paul Guillon's recent thesis on the death of Louis XIII of France. Dr. Guillon has collected his materials from many sources, and he has been lucky enough to find an unpublished manuscript by the Sieur de Sanctot—Master of the Ceremonies of France—which contains a detailed account of the last illness and death of that monarch, with the protocol of the necropsy. Dr. Guillon believes that the king suffered from chronic tuberculosis, which was primary in the intestines, though the kidney contained an abscess, whilst the left lung was attached in its whole length to the ribs, and the right lung was partly attached in the same manner. The left lung, too, contained a large cavity in its upper part. The actual cause

of death was acute peritonitis, due to perforation of the intestine at one of the chronic ulcers. The king seems to have been a most intractable patient, for he never willingly followed the advice of his doctors, nor did he ever lose an opportunity of vilifying them. Louis died at a quarter to three in the afternoon of Ascension Day, Thursday, May 14th, 1643, after he had reigned thirty-three years almost to an hour. The physical condition of the king, as revealed by *post-mortem* examination, explains the verdict of history that he was perhaps the weakest and most helpless man who ever had a brilliant and successful reign. It accounts for the ascendency gained by Cardinal de Richelieu. It gives a clue to the delay in the appearance of a direct heir to the Crown, a delay which led in fact to the rebellion of Gaston of Orleans, for Gaston was heir to France until 1639, when the Dauphin was born, who afterwards became Louis XIV.

"THE LADIES' COLUMN."

OUR attention has been called by more than one correspondent to the dangerous nature of the advice which appears in the ladies' column of a paper called the *British Weekly*. In the issue of April 14th "An Old Reader," who is apparently a sufferer from asthma, is informed that when the difficulty of breathing and the sense of tightness in the chest are the chief symptoms, "much benefit will be derived from taking from five to ten drops of hydrocyanic acid in a tablespoonful of water every two hours for three or four times." We may point out, to begin with, that hydrocyanic acid itself is so powerful a toxic agent that it is never employed as a remedy and is prepared only as a laboratory curiosity. It is recorded that Dr. Letheby was twice rendered insensible by merely smelling a bottle containing a small quantity of this powerful substance. The preparation used in medicine is the diluted hydrocyanic acid, which contains only 2 per cent. by weight of hydrogen cyanide. Of this the maximum dose, according to the new *British Pharmacopœia*, is six minims, and it is certainly not intended for administration every two hours. Moreover a drop of diluted hydrocyanic acid is not the same as a minim, and we have it, on the authority of Woodman and Tidy, that ten drops of this acid measure from nineteen to twenty-one minims. Even supposing that the diluted acid were intended, any person who recommends that this enormous dose should be taken every two hours assumes a very serious responsibility. Prussic acid is a most powerful protoplasmic poison, and is fatal to all forms of animal and vegetable life. It acts with almost lightning-like rapidity, and has been known to cause death in less than two minutes.

MEASLES AND GIPSIES.

THE holiday makers of Lancashire who spent Easter at Blackpool have to thank the firmness of Dr. Jasper Anderson, backed up as it was by the resoluteness of the magistracy, for protecting them from a danger which they would hardly have suspected in the gipsy camp upon the South Shore. It was only after exhausting his persuasive eloquence that Dr. Anderson was compelled to get a magistrate's order for the removal to hospital of two children suffering from measles from one of the tents. Even this was insufficient, and the father had to appear before the magistrates a second time on a charge of obstructing the officials. Wiser counsels at last prevailed, and the children went to the sanatorium. One gipsy dame declaimed loudly against the wicked person who had said there was an infectious disease in their camp when it was nothing but measles. Measles and palmistry are not a pleasing mixture, and if one wanted one's children's fortune told by some dark-eyed Egyptian one would at least prefer the prophecy in an atmosphere not charged with measles germs.

MODERN COWARDICE.

WE are not always able to agree entirely with Lord Grimthorpe, but there is no doubt that he has a refreshing way of calling a spade a spade. He has just asked a question to which there can be but one answer if we do not wish to be mealy mouthed. His question is: "Is not this new system of granting permanent permits for a few shillings (therefore wrongly called a fine), or allowing an ignorant set of people on a council to grant them gratis in the lump, for parents to small-pox their own children first and thence a whole town a brilliant specimen of modern cowardice and yielding to a small minority making a great noise?" Lord Grimthorpe wants to know also why the principle is not at once extended to the keeping of mad dogs, as a still greater number of crazy sentimentalists want, who think all dogs must be mad already to take muzzles so contentedly as they do? Indeed, why should not all "preservers of ancient rights" of making stinks and all other sacred and profane nuisances, and breaking all kinds of laws, be allowed to take out a licence once for all, or, as an "assessed tax," renewable annually, by which the public might at least make a little money? His suggestion is rather on a par with the poetic justice of the scheme at which Sir William Priestley hinted—namely, that the persons who refuse to be vaccinated or decline to let their children be vaccinated should pay a special rate for the support of small-pox isolation hospitals.

QUACKERY IN GERMANY.

THERE is a general opinion, which we must confess to have shared, that the laws in force in the German Empire with regard to the practice of quacks and the sale of quack remedies were very far in advance of those which exist in this country. It appears, however, from a pamphlet recently published by Dr. J. Schuh [1] that this belief is not well founded, for according to this authority some of the German quacks do a large business. He gives an amusing account of the air and light cure. The patients, he says, have to live an Adam and Eve existence, but the arrangement differs in one respect, for each patient has a separate garden to walk about in; no cooked food is allowed. Dr. Schuh is anxious that the Government should legislate to protect medical practitioners. He advises legislation to provide that medical aid should be given only by persons who have passed a recognised examination, and have received a diploma authorised by the State; and that all persons practising without such a diploma should be punished. He proposes also that all patent medicines should be analysed, and the results should be published. The annihilation of quackery by legislation is an old war cry. It is not, however, likely to be successful, unless at the same time public opinion can be educated upon the subject.

WE are glad to be able to state that the difference between the honorary medical staff of the Royal Hants County Asylum, Winchester, and the Managing Committee, to which we made reference lately, has been satisfactorily adjusted.

THE annual dinner of the Army Medical Department will take place on Monday, June 13th, 1898, at the Whitehall Rooms, Hôtel Métropole, London. The Secretary of the dinner is Surgeon-Lieutenant-Colonel J. Hector, 135, Brigstock Road, Thornton Heath, Surrey.

WE are informed that it is not Sir William Turner's intention to resign the Chair of Anatomy in Edinburgh University, and that the rumour that he would take this step in consequence of his election to the Presidency of the General Medical Council is unfounded.

MAJOR-GENERAL H. TROTTER, commanding the Home District, has consented to become a Vice-President of the Volunteer Medical Association, and will dine with the Volunteer Medical Staff at Limmer's Hotel on May 4th. Colonel Mackinnon, A.A.G., and Surgeon-Colonel T. O'Farrell, P.M.O., have also accepted invitations.

[1] *Wissenschaft, Naturheilkunde und Kurpfuscherei.* Von Dr. J. Schuh. Leipzig: B. Konegan. 1898. (Demy 8vo, pp. 36. M o 98.)

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE VACCINATION BILL, as we anticipated a fortnight ago, came on for second reading on Tuesday afternoon. The listlessness which marked Monday's sitting had hardly cleared off, and as the President of the Local Government Board made no speech but merely lifted his hat to move the second reading, the debate looked at first as if it would be a tame affair. Sir Walter Foster at once entered on the discussion of the merits and demerits of the Bill, and while welcoming the introduction of glycerinated lymph, the extension of age limit, and the domiciliary vaccination, strongly urged the uselessness, and even hurtfulness, of the retention of penalties to honest objectors to vaccination. He urged that a statutory declaration, formally made, of conscientious objection should be allowed, and contended that, inasmuch as repeated penalties had failed to promote vaccination, the retention of two penalties could only serve to make martyrs, and keep up the agitation of the Antivaccination League. Sir William Priestley followed in a very exhaustive and interesting speech, in which he covered the whole field of controversy, and was succeeded by Mr. Bayley, who moved the rejection of the Bill. This was seconded by Mr. Steadman, who spoke as a Mile End guardian. The President of the Local Government Board replied, and while defending his attitude as regards penalties, intimated that the Central Authority would authorise the vaccination officers to institute prosecutions. The Board appears to have discovered recently that it has this power, and is determined to use it. This announcement at once changed the whole temper of the opposition to the Bill, and it became evident that the debate could not be finished. The adjournment was accepted on the motion of Mr. Logan, and the Bill will probably now be hung up for some little time. Its prospects of passing are not imperilled as yet, but it may not reach the Committee stage for some time, as the Irish Local Government Bill will next week occupy the whole of the time after Monday, and on that day, although the Vaccination Bill is put down, it is not likely to come on, as the Criminal Evidence Bill is likely to occupy the whole sitting.

THE LONDON UNIVERSITY BILL has no luck. The hopes of its friends have been fostered all through the Easter recess by the prospect of a second reading on Tuesday. The day came, and found the Vaccination Bill in the way, and now the University Bill, although it is down for Monday, has no chance of a debate till the Irish Local Government Bill is out of Committee. This means a delay of some few weeks, but there will still be time even then to pass the Bill if the Government really press it. The cheers which broke out last Tuesday when its postponement was announced do not, however, augur a very easy passage for the measure.

THE IRISH LOCAL GOVERNMENT BILL is to be taken next Tuesday, and continued daily. This is necessary, as there are eighteen pages of amendments, and the Bill must be passed through Committee before Whitsuntide. The general calculation is that the Committee stage will take three weeks, more or less. Private members' rights are therefore likely to be sacrificed for the next few weeks.

THE MIDWIVES REGISTRATION BILL being down for second reading on May 11th will most probably fall within the time required for the Committee stage of the Irish Local Government Bill, and not come on, as the day will be taken by the Government. This will practically destroy the prospects of the Bill for this session. It will probably be still kept upon the order book, but as a measure likely to require debate it will have no chance of passing.

THE DEBATE ON VACCINATION.

The discussion in the House of Commons on the second reading of the Vaccination Bill lasted from about 3.30 to close upon 7 P.M. on Tuesday, but during that period not more than seven speeches were delivered, and a division had not been taken when the hour for adjournment arrived.

Sir W. Foster (Derbyshire, Ilkeston) said that the Bill was an exceedingly small product for the long labours of the Royal Commission on Vaccination. He thought, however, the President of the Local Government Board had acted wisely in making the measure so small as it was, because he had thus, possibly, avoided some difficulties and criticisms which might have interfered with the easy passing of the Bill. This was really an attempt on the part of the right hon. gentleman to introduce a new means of applying vaccine matter to children for their protection against a serious disease; it was a State experiment to be made on a large scale with a new form of lymph. It was known as calf lymph, but it had been found to be more efficacious than the old form. It had as great a power of protection as the old form, and it had the advantage over the old form that it was not likely to convey any infection of erysipelas or tubercle. The discovery which had been made by Dr. Monckton Copeman was that by mixing the lymph taken from the calf with glycerine they were able to obtain from a single calf vaccine sufficient to vaccinate from 4,000 to 6,000 children. Abroad it had been found possible to obtain sufficient to vaccinate as many as 15,000 children. And this vaccine matter, mixed with glycerine, was not only efficacious for the purpose of vaccination, but it contained no possibility of contamination by syphilis. One advantage it had in addition to those he had described was that it could be preserved for a considerable time without losing any of its efficacy. The new lymph was to be used under different conditions from those under which vaccination had hitherto been performed. The Royal Commission recommended that the age up to which children should be vaccinated should be extended; their recommendation mainly was that the age should be extended to 6 months. The Commission found that in Scotland deaths from vaccination were much more rare than in England. Deaths from vaccination were very uncommon in England; but the figures showed that, while in England and Wales 1 death occurred in 14,159 vaccinations, in Scotland there was only 1 death in 38,872 vaccinations. The probable cause, or at all events one of the causes, of that was that the age in Scotland was 6 months, whereas in England it was 3 months. The Commissioners thought that an extension of age to 6 months would be advisable in the interest of vaccination and of the children. They also found that the extension of age was no serious deterrent as regarded the number of children vaccinated. The general feeling in this country was that early vaccination was useful because so many children did not escape vaccination as would if a longer time were allowed. In Birmingham, where vaccination was very well attended to, it was found that about 10 per cent. of the children were lost by removals during the first 3 months, and the opinion of some people was that if the age were extended, as proposed in the Bill, to 12 months, they would probably lose nearly 50 per cent. by removals. From the point of view of the efficiency and universality of vaccination that was a strong objection to the extension of the age, but at the same time he thought the advantages of vaccinating children at a later age were so great that they ought not to be deterred from extending the age to 6 if not to 12 months. There was no doubt that if they could make vaccination less perilous to the children they would find less objection to the operation on the part of the parents. The institution of domiciliary vaccination by the Bill had also attracted a great deal of public attention. The present system of requiring children to attend at vaccination stations for vaccination by public vaccinators was in many ways objectionable. It brought a crowd of children into one locality which often occasioned the spread of contagious diseases; and kept the mothers waiting for a long time under unfavourable conditions. But, on the other hand, he did not think that the vaccinators would be quite pleased at having to visit the children at their homes. In some towns, like Leicester and Birmingham, where a strong feeling against vaccination existed, the domiciliary visits of the vaccinators would not be altogether free from difficulty and discomfort. He, therefore, hoped that the vaccination stations would not be entirely dispensed with. If the stations were maintained, the system of domiciliary visits would become a very useful adjunct, and might induce a large number of parents to allow their children to be vaccinated at a later age. He could not speak with the same amount of pleasure and satisfaction of the provision fixing the penalties for non-compliance with the vaccination law. The clause was no doubt introduced in order to enable the right hon. gentleman to meet, to some extent, the recommendations of the Royal Commission in reference to repeated penalties. It might not be the opinion of many members of the House, but anyone who had given a careful study to the report of the Royal Commission must come to the conclusion that that report practically killed compulsion. The Commissioners were of opinion—and, he thought, rightly of opinion—that the repetition of penalties for the non-compliance with the law was irritating, and was probably the cause of much of the agitation against vaccination. The administration of the law was in the hands of the Boards of Guardians—popularly elected authorities—and as one-fifth of the Boards were opposed to the compulsory clause of the present Act, and refused to carry it out, the law probably did more harm than good. The sincere and honest objector was not likely to be compelled by fines and imprisonments to accede to the vaccination of his children: and the report of the Royal Commission suggested as an alternative to the system of repeated fines that a person who refused to comply with the law might make before a magistrate a declaration that he had a conscientious objection to vaccination. He was sorry the right hon. gentleman had not accepted that alternative. The agitation against vaccination had undoubtedly been fostered by injudicious compulsion. Twenty per cent. of the children in England and Wales were not vaccinated; and in a large proportion of the 80 per cent. of vaccination cases recorded the vaccination was inefficient, and practically useless for the protection of the children; for there was a certain class of medical practitioners, he was ashamed to say, who were willing to carry out a sham and ineffective vaccination at the request of parents and to give a certificate. That was the reason why a large number of people, who had been inefficiently vaccinated, got small-pox, and thereby brought the whole system of vaccination into discredit and disrepute. He therefore hoped that the Local Government Board would take powers under the Bill to secure that vaccination, whether carried out by public vaccinators or by private practitioners, should be done in such a way as to be an effective protection against the disease it was intended to prevent. He believed that

more children would at once be vaccinated if a conscientious declaration on the part of an honest objector were accepted. Was it not an extremely illogical position for the Government to take up, that a man might, by paying two penalties, escape the duty which he owed to the law? That was an absurd position, and it was worse than that, for it would bear more hardly on the poor man who might have a conscientious objection than on the rich man. Compulsion was shown to be ineffective, and the method under which children were vaccinated did not do credit to the law nor give satisfaction throughout the country. It would be better that they should give to those persons who had honest objections the opportunity and the trouble—for he would give them some trouble in the matter—of making a declaration that they thought vaccination would be prejudicial to their children; in that way, moreover, no more "martyrs" would be made by the enforcement of the law. He did not propose to vote against the second reading of the Bill, because he thought that even as it stood it was an improvement on the existing law, but he hoped that in Committee they would have an opportunity of moving the omission of the section, or a portion of it, which dealt with the penalties so as to bring about the alternative he had suggested. If they could repeal the penalties altogether he should be glad, because he believed that that would make vaccination more popular. He thought that those sections which enforced penalties, and went on to imprisonment, had done a great deal of harm to the cause of vaccination. He commented on the fact that there was nothing said in the Bill about revaccination. He did not want to make this compulsory, but he did want to see some system introduced into this country by which revaccination would be offered to all at a suitable time. In Germany this had been done with great effect. There had been a most remarkable diminution in the prevalence of small-pox in Germany since the law of 1874, which went in for infant vaccination, and the revaccination of children when they left school at the age of 14, had been introduced. The death-rate from small pox in Germany, which under the old law was 309 per million, fell to 15 per million for the period from 1874 to 1892, and for the last ten years it had only been 7 per million. Those were most wonderful results, which ought to make the President of the Local Government Board anxious to introduce so beneficent a system into this country. In 1895 there were only 27 deaths from small-pox in Germany among 50 million people, and more than half of that small number of deaths occurred on the frontiers of Germany. In Italy the death-rate used to be about 355 per million from this cause, but after vaccination and revaccination were introduced the death-rate fell to as little as 65 per million. They had on all hands the most striking records of the benefits of vaccinating children a second time, and he hoped the right hon. gentleman in Committee would allow some clause to be introduced by which revaccination might be offered to children at the age of 12 or 14, when leaving or entering school. The Bill gave large powers to the Local Government Board of modifying the regulations of the vaccination officers; he should like that power extended in respect to all persons who vaccinated, so that they might bring under the same rules all private practitioners, and he hoped that in Committee the right hon. gentleman would be willing to give even larger powers to the Board than were proposed. He hoped that before this Bill was placed on the Statute book the right hon. gentleman would not only have the credit of having done something to improve vaccination by the introducing of this new lymph, but of having made the law more popular and efficient, and so adding to the general well-being and health of the country.

Sir William O. Priestley (Edinburgh and St. Andrews Universities) agreed with almost all that Sir Walter Foster had said. It was high time that something was done to improve the law of vaccination. It was computed that one-third of the children in England and Wales, or about 300,000, were unvaccinated at the present time. As regards glycerinated lymph, he thought it was most likely, when once adopted, to remove many of the objections of the parents. Experiments made by Dr. Monckton Copeman had shown that the germs of such diseases as syphilis, erysipelas, and tubercle were destroyed by glycerinated calf lymph. Passing to the subject of domiciliary vaccination, Sir W. Priestley said it killed the great objection people had to vaccination. At the same time he hoped that the President of the Local Government Board would not do away with the vaccination stations on certain days, but the atmosphere should be purified, and great care taken that no children suffering from any infectious disease were allowed to mix with the rest. No doubt this measure would give a great deal more work to those who vaccinated, and consequently these officers should have increased pay. He believed that if some arrangement were made by which, if certain results were obtained, the parents would be recompensed as well as the vaccination officers, vaccination would be very much promoted and so many children would not escape vaccination. When done by the family medical man it would diminish the reluctance of the mother and it would also diminish the number of those who escape vaccination. But they must all be vaccinated in one way and not allowed to escape a perfect vaccination. The number of insertions should also be uniform and the results submitted for inspection. He saw no objection, as far as the child was concerned, to extending the age limit to twelve months. But on the whole he would be disposed to adopt the suggestion which had been made that the period should be limited to six months. They might be less rigorous about infantile vaccination because children under two years of age were less liable to small-pox. If a child were offered vaccination at the time of entering the school and again upon leaving, the object in view would be attained. There ought to be some provision for revaccination as well as for primary vaccination. It was around the question of the remission of penalties after two prosecutions that the largest number of discussions must centre. The measure was certainly very illogical. He would be disposed not to remit penalties absolutely, but when the parent had a conscientious objection to vaccination not to give it up altogether, but to suspend it for a time—say, till the school days came. He would further suggest that all parents who insisted that their children should not be vaccinated should, even after being fined once or twice, be compelled to subscribe to isolation hospitals. It had been calculated that to equip a hospital for small-pox patients efficiently for all the purposes required would take about £3000 a bed. Now, taking into consideration the number of patients who were stricken with small-pox Gloucester, and accepting the estimate at £300 per bed, the sum required would amount to £24,000, and in Middlesbrough to £54,000 for patients affected with small-pox. It was only fair that those people who produced this danger should pay for the safety of the others. He thought also that the administration of the law should be transferred to the sanitary authority. Boards of guardians had been constantly shirking their duties. He felt sure that if vaccination were entrusted to the sanitary authority it would be much more efficiently carried out. He thought the Government ought to put something in the hands of every antivaccinator in the way of a statement showing what was in favour of vaccination and what evils it averted. He could not understand anyone who had studied the history of small-pox and vaccination doubting its efficacy. The hon. member for the Chesterfield Division proposed that this Bill should be read a second time that day six months. His contention was that the Gloucester epidemic was due, not so much to a lack of vaccination as to insanitary conditions, to polluted water, and sewer malaria; and he asked, if that were so, whether small-pox might not be prevented by improved sanitary conditions without vaccination? But more than a thousand medical officers of health had expressed an opinion to the contrary. The hon. member proposed another Commission to inquire into this, but such a proposal was merely beating the air. There was no doubt that sanitary conditions would prevent the spread of some diseases, notably typhoid fever, but sanitary conditions would not prevent unvaccinated children taking small-pox if there was infection about. After seven years' investigation, the recent Commission had confirmed in every important particular the great advantage of vaccination to the community. He expressed a hope that the measure proposed by the President of the Local Government Board might in some degree have the good results expected from it, and might further the practice of vaccination, which most scientific men considered one of the most beneficial of discoveries.

The rejection of the Bill was moved by Mr. T. Bayley, one of the Liberal representatives of Derbyshire, who declared that, although he had at one time believed in the efficacy of vaccination, fuller consideration of the subject had convinced him that better protection was afforded by attention to improved sanitation, and a bettering of the habits of the people than by inoculating children with cow-pox. Referring to the recent outbreak at Gloucester, on which he dwelt somewhat strongly, the hon. member declared that it was caused by the drinking water of the town becoming contaminated by sewage.

Mr. Steadman, the newly-elected representative of Stepney, in a maiden speech, seconded the motion for rejection, and in the course of a speech strongly antagonistic to vaccination, declared that, in 1896, out of 25,131 children born in the ten Parliamentary divisions in the East End, only 7,980 had been vaccinated. The decrease of small-pox he attributed more to the Public Health Act of 1891 than to vaccination.

Mr. Chaplin, answering for the Government, said the Bill would cost little to carry out, but the expense would be borne by the ratepayers, that a notification of cases would be necessary, and that, as their duties would be increased, some extra remuneration would have to be paid to the public vaccinators. Under the powers already possessed by the Local Government Board, it was proposed to give those officers power to institute proceedings without the authority of the guardians. While not desirous to overload the Bill, in Committee some amendment might be introduced providing for an inspection of children on their first going to school. Stational vaccination would be left at the option of the guardians, and he said he would be glad to consider any amendment for the remuneration of practitioners for every successful operation. If further legislation were necessary the Government would not hesitate to ask for it, but he expressed confidence in the present proposals.

Mr. Pickersgill, in the course of an indignant protest against the Bill, said the proposal to transfer the initiative in prosecutions from the guardians to the vaccination officers would be regarded throughout the country with amazement.

Mr. Monk refuted the statements made by a previous speaker as to the contamination of the drinking water of Gloucester.

The further consideration of the measure was adjourned.

THE REPORT OF THE TUBERCULOSIS COMMISSION was presented on Tuesday. The general effect of the report is to show that, while tuberculosis in cattle is very widespread, its communicability to human beings is limited, the bacillus of the disease being, generally, only communicable in cases in which the milk vessels of the coware infected. The chief recommendations of the Commission are in favour of providing that cattle shall be killed in duly licensed slaughter houses; that power shall be given to the municipalities in England, Ireland, and Wales to set up abattoirs, the present slaughter houses being suppressed after three years' notice has been given. It is also recommended that meat inspectors shall qualify for this work by examination under the Local Government Board; that diseases in the udders of cows shall be reported under penalty, and that bacteriological examination of milk shall take place at the ports of entry. The Local Government Board shall also require local authorities to make stringent regulations in regard to dairies, etc., where it is not already done. It is likewise suggested that the local authorities shall have power to slaughter diseased cows, similar to that conferred by the Glasgow Local Act. These are the unanimous recommendations of the Commission, but some division of opinion occurred in regard to the question of compensation for slaughtered animals, and it is believed that there was a majority of members against compensation. The report is signed by all the Commissioners, but there is also a supplementary memorandum signed by Sir Herbert Maxwell, Mr. Clare, and Mr. Trench.

THE DOGS REGULATION BILL is threatened with serious opposition. As the outcome of the debate which took place in the Commons before the Easter holidays notice of intention to move the rejection of the measure has been severally given by Mr. Ascroft, Mr. Duncombe, Sir John Maclure, Sir Joseph Leese, and Mr. Gibson Bowles.

HABITUAL INEBRIATES.—The Home Secretary will move for leave to introduce his promised Bill for the treatment of habitual inebriates on Monday, the 25th inst.

THE REVISION OF *THE BRITISH PHARMACOPŒIA.*

THE BRITISH PHARMACOPŒIA, 1898.

THIRD NOTICE.

OMISSIONS.

THE omissions from the last edition of the *British Pharmacopœia* form a very curious collection. It is evident at a glance that they have been selected upon different principles. The majority have been deleted because they are no longer employed, and the Committee must have been materially aided in this work by sundry investigations which have been undertaken independently. One of our contemporaries having made numerous inquiries, in several large centres, about the frequency of the prescription of various drugs, the information obtained was tabulated and published; yet although the results were interesting they failed to be convincing, since it was obvious that they did not afford any indication of the practice of practitioners who dispense. Another inquiry was made by Mr. Martindale, who, commencing with tabulation of drugs dispensed at his own establishment in recent years, extended his inquiry to certain large dispensaries in Aberdeen, Bournemouth, Carlisle, Cork, and Oxford; to these were added results from Australia, New Zealand, India, and Canada. These figures, however, like the last, dealt only with prescriptions, and therefore could not be taken to indicate the frequency of employment by general practitioners. A further inquiry was conducted by the Therapeutic Committee of the Association, and this applied mainly to drugs which, in the opinion of the Committee, might well be deleted. It would appear that these researches have been utilised by the Committee since it is stated in the preface that in respect of the omission of articles contained in the edition of 1885 the Council has been aided by several independent inquiries.

Inasmuch as many of the drugs which are omitted on this account are drugs which, from the neglect into which they have fallen, it is useless to recall, no good purpose would be served by their further enumeration. Several large groups appear to have been deleted on other grounds—for example, nearly all the decoctions have gone, all the inhalations, both the essences, all the enemas, and several of the infusions. The decoctions and infusions are to some extent replaced by the concentrated solutions, but many in both of these classes are surely seldom used by practitioners. The removal of the inhalations, poultices, and enemas will perhaps be received with mixed feelings, since although in all probability they were never dispensed according to the directions of the *Pharmacopœia*, they yet afforded some guide as to the methods of administering drugs in these ways. In the list of omissions there will also be found certain alkaloids—for example, sulphate of beberine, sulphate of cinchonidine, and sulphate of cinchonine, the last two, perhaps, being balanced by the introduction of the acid quinine hydrochloride.

In some instances the leading principle appears to have been the desire to omit preparations having similar names, and in this connection the action of the Committee is perhaps again open to criticism. From the inquiry conducted by the Therapeutic Committee, it appeared that the strong and the dilute solutions of acetate of ammonium were respectively employed by an almost equal number of medical men, and there is therefore every probability that one half of the profession may feel hurt at the deletion of one of these preparations—namely, the strong solution. Many of the omissions fall under the head of common domestic remedies, which are employed in haphazard fashion by the laity, and therefore do not require precision of dose or any special care with regard to purity. Some of the omissions even go a stage further, and attack simple articles of diet such as crumb of bread, milk, honey, treacle, wheaten flour, pearl barley, raisins, lettuce, vinegar, and mulberry juice, while on the border line, perhaps, stand manna and mucilage of starch.

Yet another group could be made of substances for whose introduction into the *Pharmacopœia* it is more difficult to account, as, for example, white marble, chalk, bromine, bone ash, animal charcoal, larch bark, nitrate of copper, and refined silver. It will be noted that three of the green extracts have been omitted, namely, that of aconite, of conium, and of lettuce, and although the two former will perhaps be regretted by some practitioners, students will rejoice at their removal. Official recognition has been withdrawn from all three preparations of poppy, namely, the decoction, the extract, and the syrup, and few can regret them, since they always contained an uncertain amount of active material. Poppy capsules, however, remain in the *Pharmacopœia* with no preparations, and with no indications of the mode in which they are to be employed.

Egg albumen and yolk of egg have dropped out, but yolk of egg is still employed in the mistura spiritus vini gallici, and it is there printed with all the dignity of capital letters, ordinarily reserved for official substances, instead of appearing in Pharmacopœial phraseology as the "yolk of eggs of commerce." It is interesting to find that although definitions of brandy and of sherry are included in the *Pharmacopœia*, the authorities decline to take the responsibility of defining yolk of egg. Surely the quality of eggs differs as widely as the composition of sherry or of brandy.

The name of one substance in the detailed list of omissions—spiritus tenuior, proof spirit—may cause some surprise, since it has hitherto been so largely employed in the preparation of tinctures. Under the heading of spiritus rectificatus—which is somewhat curiously Anglicised as alcohol (90 per cent.)—the explanation of the omission of proof spirit will be found, since diluted alcohol is now recognised as official in four special degrees of dilution, the liquids containing respectively 70, 60, 45, and 20 per cent. of ethyl hydroxide by volume. The introduction of alcohol in these varying degrees of dilution appears to have been necessitated by the alteration in the mode of preparing the various tinctures, an alteration calculated to allow of greater uniformity of dosage. The omission of proof spirit, therefore, is really to be regarded as a technical fallacy, since it has only been withdrawn to give place to four other preparations. Under the heading of the various tinctures the strength of the alcohol employed is indicated according to the percentage of ethyl hydroxide present, and it is earnestly to be hoped that in the future the memory of the student will not be taxed by examination questions on the strength of the alcoholic solutions employed in preparing tinctures.

Many of the omissions will be found to consist of articles employed commercially in the preparation of official chemical substances, and, although these articles may contain impurities, the absence of these impurities seems to be sufficiently indicated in the descriptions of the characters and in the tests for the product.

The suppositories prepared with soap are removed from the *Pharmacopœia*, and all suppositories—with the exception of the glycerine suppositories—are now prepared with a basis of oil of theobroma. The omission of savin tops, of oil of savin, and of all the preparations derived from these, will probably be regarded with satisfaction by most practitioners, since these substances are rarely used by professional men, and it appears to be distinctly undesirable to facilitate their unauthorised employment by the public. Of the four confections which have been removed, probably the one which will be most regretted is the one devoid of active properties—namely, the confectio rosæ caninæ. This is very often employed as a pill basis, and possibly some inconvenience to prescribers may result from its deletion. The others, the confection of opium, of scammony, and of turpentine, are probably very little used, and are certainly not convenient modes of administration. Opinion is likely also to be divided concerning the omission of emplastrum ferri, since, although it would be difficult to defend its employment on any pharmacological grounds, there can be no doubt that it is frequently ordered.

From the above it will be gathered that while the action of the Committee in removing official recognition from such a large number of preparations may perhaps arouse some hostile criticism, yet those practitioners who feel aggrieved are still at liberty to obtain any of these substances by indi-

cating that they are prescribing in accordance with the *Pharmacopœia* of 1885; and it is perfectly obvious that chemists will be as ready to dispense such prescriptions as they are at present to dispense new and unofficial substances. There is really, therefore, no hardship in discarding a vast amount of material which has for many years acted as an incubus and retarded progress. Even if some few substances are regretted by many practitioners, we feel sure that a general consensus of opinion will confirm the wisdom of the selection of the Committee.

NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY, MADRID.

[From our Special Representative.]

General Arrangements.

At the close of the inaugural ceremony on Sunday notices were posted and journals distributed among the members in which it was stated that every evening there would be published the announcements for the following day. This looked like business, and seemed to give satisfaction to all, but when the morning newspapers were published on Monday, and no announcement appeared therein as to the hour of meeting, we made our way along with others to the Palacio de Bibliotecas, and took our chance. Here, although members were gathering in considerable numbers, no one knew when the various Sections were likely to begin work. We were told they might begin any time in the forenoon. Whatever sense of admiration we gave expression to in our former letter as regards the general character of the building in which the Congress met, it was much increased by the beauty of the rooms in which the various Sections are holding their meetings. The rooms, lofty and spacious, are well furnished, the walls are lined with modern oil paintings, many of which are extremely attractive. It was clear, however, that the Committee had sacrificed utility and comfort to appearances, for since all the rooms opened into each other, and could only be reached by passing through the chambers *seriatim*, there was a constant stream of congressionists passing to and fro, which made it difficult for the remarks of certain speakers to be heard. In the case of one of the Sections in which I was particularly interested, there was no attempt made to begin in good time nor to maintain quietude. As early as 9.30 to 10 A.M. members came into the room, sat down, waited for several minutes, and then went away; and although work had already begun and was being briskly carried on in several of the Sections shortly after 10 o'clock, it was nearly 11 when the President took the chair in this particular Section. Spanish unpunctuality seemed rather to try the patience and temper of the English members of the Congress, and gave occasion for many remarks expressive of dissatisfaction with the arrangements made and the way they were being carried out.

The Work of the Sections.

It is impossible to do more than briefly enumerate the titles of the papers that were read. In many of the Sections abstracts only were read. English and foreign delegates alike complained of the want of order. In the various Sections the papers for the first day dealt with such subjects as avian and human diphtheria, antitoxic serums, the preparation of toxins and antitoxins, and the means for differentiating the cholera bacillus. In the Section of Preventive Medicine the questions of vaccination and revaccination were discussed; and in that of Demography the geography and climatology of tuberculosis. There was no lack of papers and no want of interest in those that were read taking them as a whole. The health of towns; the filtration of water supplied to the public; the sanitation of cemeteries; alcoholism, as seen in various parts of Spain—for example, Madrid and Seville—and also as affecting Roumania, the causes which contribute to the mortality of infants and the means of remedying them: such are the titles of several of the papers, and they show by the wide range they cover the opportunities offered for interesting debates. In the Section which was devoted to Diseases of Occupation the first paper read was by a Spaniard on the best classification of industries from a medical point of view. This was followed by the first English paper for the day, from Dr. Oliver, of Newcastle-upon-Tyne, On the Past and Present Position of Women's and Children's Labour in Britain. Subsequently a paper and plans were presented by a Spanish member for the construction of houses for the working classes on hygienic lines. In another Section considerable interest was taken in papers dealing with the methods for preventing the propagation of tuberculosis among domestic animals, and how to avoid the transmission of this disease to the human subject.

Social Functions.

At all congresses not the least important features to many members are the entertainments that are provided and the excursions that are arranged for. It was announced in the Congress Journal of that day that at 4 P.M. the members were invited to witness the game of *pelote* (a kind of baseball) which is peculiar to the Peninsula, and subsequently that a conference would be held at the Faculty of Medicine, and an address given by the well-known histologist, Ramon y Cajal. After considerable difficulty I made my way to the Calle de Alfonso XII, wishful to see *pelote* played, but on arriving at the building I was told that the game had been put off until to-morrow. Along with many others we were naturally disappointed at the extremely light manner in which Spaniards consider arrangements made as binding. It is announced one day that at a certain hour on the following afternoon something is to be done, but there are ten chances to one in Spain that this is not done. This is evidently one of the weaknesses of the Madrileños. I say this not unkindly of the Spaniards, but because I feel that I am voicing the opinions of all classes of foreigners who are attending the Congress.

Address by Dr. Ramon y Cajal.

Professor Ramon y Cajal's address on the structure of brain, and particularly of the limb centres in the Rolandic areas, was one of the treats of the Congress. Without any great oratorical display he dealt with his subject in a manner that appealed to all. His opinions are now well known in England, and no specially new views were expressed.

The Hospital.

I visited the Hospital of St. John and the Infant Jesus, a large building in pavilion style, but although it had only been occupied a few months, already it seemed to be very much out of repair. The cement floors of the wards, whatever may be said favourably of them from a sanitary view, did not commend themselves to us in a city which knows such extremes of temperature as Madrid. There was no means either of adequately ventilating the wards. Each pavilion is devoted to a separate class of diseases, and is connected with others by covered but still pretty open corridors. We were particularly pleased with the museum attached to the hospital. This is one of the best things that we saw. It was an admirable collection of casts and drawings of nearly all forms of disease, but in which specific affections of skin and genitalia predominated.

Musical Entertainment.

In the evening a musical entertainment was given to members of the Congress in the Athenæum, which was well attended, the instrumental and vocal part being extremely well rendered and as well received.

The Multiplicity of Sections.

Favoured by the weather the work of the Congress has varied but little from day to day, although it was evident that not only was the actual number of members increasing, but the interest in the work of the Sections went on growing simultaneously. Where the work of a Congress is distributed among so many Sections as it has been in Madrid it is not only difficult to follow it, but its influence for good is weakened. There is a limit to which specialisation can be carried. Divided up into too many Sections the energy of a Congress becomes dissipated, and much of its good work is frequently lost. This is painfully present in the meeting in Madrid. It is to be hoped that Committees of future Congresses will bear this fact in mind.

The Sanitary History of Houses.

An interesting question was discussed in one of the Sections relating to the health of towns and the registration of the houses. There is no reason why the sanitary history of each house in a town should not be made a matter of registration. It is known that certain parts of a city are more the dens of fever than others; that consumption and cancer, for example, are more frequently met with in some places than in others. There was an almost unanimous feeling in the Congress in favour of the sanitary records of town houses being kept by the proper municipal authority, so that at any time comparisons could be instituted as regards the frequency of fevers, tuberculous disease, etc. Apart from the statistical interest attaching to a pigeon-holeing of such facts, the value of the knowledge gained would be great.

Malta Fever.

A paper read on Wednesday morning by Mr. H. E. Durham, of Cambridge University, created a good deal of interest, and gave considerable pleasure to those who were fortunate enough to hear it, but as the time at which it was to be read was not announced many were deprived of that pleasure. An abstract of the paper which bore the title, Some Observations on the Micrococcus of Malta Fever, is at this stage worthy of being referred to until the full text is published. Mr. Durham described some morphological and cultural characteristics which had not been determined by other observers, for example, the streptococcal form in broth cultures wherein chains of ten or more individuals may be developed; the bacillary form obtained in cultures grown on solid media; the formation of alkali in presence both of glucose and of lactose; the invisible growth on potato, the absence of gas and indol production and of flagella. By intracerebral inoculation the coccus was found to have pathogenic influences upon rabbits and guinea-pigs: with virulent cultures death occurred about the fourth day. The author insisted upon the special value of intracerebral inoculation as a means of studying the pathogenic action of bacteria, and referred to similar researches bearing upon pseudo-diphtheria and tubercle bacilli. The results of the intraperitoneal injection of the Malta fever coccus (micrococcus melitensis of Bruce) in guinea-pigs are not constant. If a fatal result follows it is generally weeks after the inoculation. The most important fact connected with the inoculation is the discovery of cocci in the urine, not only a long time after the inoculation, but during apparent recovery. In the urine and in the kidney of an animal killed four months after the injection and apparently when it had been in good health, the cocci were readily found, while the other secretions and tissues of the body appeared not to contain them. Mr. Durham drew attention to the desirability of determining whether a similar persistence of the cocci in the urine obtains in the case of man, and whether they are present long after apparent recovery. It would be well to know whether the same fact is true of typhoid fever, in which, while we know that bacilli may be present in the urine, we do not know how long they may persist therein, and thus continue to be distributed thereby. If they are, it is clear that present precautions in both these diseases are not sufficient to check their extension. It is highly desirable that the dejecta of patients suffering from Malta fever should be disinfected. The author exhibited a number of charts showing the association of agglutinating power of the coccus with the antibacterial qualities of the blood. According to Mr. Durham, a sufficient quantity of specific antibacterial substances may be present in the blood to determine the absence of cocci in that fluid, although cocci may still be present in such organs as the kidneys, spleen, and bone marrow, and, as he has proved experimentally, death may follow even when there is evidence of considerable protective powers in the blood. Charts were also shown to demonstrate the comparative development of the sedimenting power of the serum of animals inoculated in different ways and with varying doses. The more severe the injection, the less is the sedimenting power acquired; with infection of moderate severity, a considerable power is acquired; with weak infection, for example, mixed infective material and protective serum, very few agglutinations are developed. Photographs of the streptococcal and other forms of the micrococcus and of the lesions of ascending paralysis found in guinea-pigs after intracerebral inoculation, were also shown.

The Tuberculosis Antitoxin.

A communication of particular importance was that of Dr. Behring on the toxin of tuberculosis. He began by saying that the vaccine of tuberculosis had not yet been found. The discovery of the tubercle bacillus was indeed epoch-making, but it was still uncertain what would come of it. For his part he had hoped to find an active antitoxin with a corresponding toxin; but so far he had been unsuccessful. He would even be sceptical as regards such a result had he not found that birds were much more suitable for this kind of research than mammals. With sodium and other reagents mucin as well as other chemical substances could be extracted from tubercle bacilli. These bodies had nothing to do with the toxin of tuberculosis. If the bacilli were subjected to a temperature of 150° C., freed from fat, and treated with glycerinated water, insoluble albuminous bodies were obtained which had a virulence twenty times greater. The toxin of tuberculosis was therefore not identical with the primitive substance. The chemical constitution of the toxin was not modified by the operations to which it was subjected. Behring stated that the substance which he had isolated was eighty or even a hundred times more virulent than Koch's tuberculin. He had also obtained an antitoxin by passing the virus through the horse, in the same way as was done in the case of diphtheria and tetanus. There was, however, this difference, that in a phthisical patient more than 0.5 c.cm. to 1 c.cm. could be injected without producing injurious effects, general as well as local. Behring lays it down as a principle that the harmlessness of an antitoxin is an indispensable condition of its practical application; but there are many other difficulties which must be overcome before an antitoxin of tuberculosis can come into use in the treatment of human beings. In bovine animals it is already possible by its means to cure a declared tuberculosis; but even in them one gathers that the remedy at present is somewhat dangerous to life. This, however, it is pointed out by Behring, is important only from the economic point of view. If of 100 animals treated with the serum 90 are cured and 10 are killed, the treatment should still be adopted. Experiments on an extensive scale are to be made in the Berlin Veterinary School in order to determine the value of the treatment.

A Uniform Standard of Therapeutic Serums.

Behring took occasion to insist once more on the necessity of the degree of virulence of the toxin being accurately known. For this purpose the manufacture of serums must be under the control of a competent person. He suggested that an international system of control should be organised. The accurate regulation of the potency of antidiphtheria serum formed the subject of a communication by Dr. Janowsky, of Warsaw, who urged that a uniform standard should be adopted by all countries. He proposed that the Congress should pass a resolution to the effect that a normal type of serum should be fixed in order that the therapeutic effects reported by observers in different countries might be fairly comparable. The proposal was warmly endorsed by Loeffler, who suggested that it would be well to enlarge the scope of the resolution so as to include all therapeutic serums. Chantemesse said he did not see the necessity of fixing an international standard of serum. Spronck, of Utrecht, proposed that a serum of minimum intensity—for example, 10,000 units—should be established for universal use. Calmette, Nocard, and Chantemesse expressed the opinion that a competent committee should be appointed to prepare proposals to be submitted at the next Congress. It was decided that a committee of experts should be appointed to consider whether there would be any advantage in having a uniform international standard of strength in the case of antitoxic serums.

Reception by the Queen Regent.

In the afternoon of Wednesday, April 13th, the Queen Regent and King Alfonso XIII held a reception in the Royal Palace. The palace of Madrid is one of the finest in Europe. There was a large muster of members of the Congress and their wives. Considering the very anxious and worrying

time the Queen of Spain has recently had it was a pleasure to see her pass down the path made for her between the members looking well and with a smile for all. Here and there she exchanged a kindly word with some of her own subjects, mostly army officers in uniform, whom she recognised. In a room adjoining the throne room she entered into conversation with members of other nationalities, but of presentations to Her Majesty such as take place at our own Court, and which it was stated would take place in Madrid, there were none. In this matter there was a total absence of order and a want of attention to details for which in regard to proceedings at Court we would scarcely have given the Spaniards credit. There was no unseemly crushing, all was done in decorum, yet not quite in the way that appeals to British sentiment. As the procession wended its way through the suites of reception rooms to the ballroom, where refreshments of the most *recherché* character were provided, there were many expressions of admiration at the beauty of the rooms. Here all tastes were catered for and members left with pleasant memories of a sovereign who in a most gracious and sumptuous manner had exhibited her patronage of the Congress.

THE PRESIDENT'S BANQUET.

It should be stated as another indication of the Spanish character for hospitality that on the evening of April 12th, the Minister of the Government, who is also President of the Congress, invited the male members of the Congress to a banquet in the Theatre Royal. From 400 to 500 members accepted the invitation. The floor of the pit of the theatre had been boarded over, thus making an admirable banqueting hall from the stage of which, where the head table was placed, a magnificent spectacle met the eyes as they gazed upon the gilded tiers of boxes lit up by the electric light. The President was supported on his immediate right by the Burgomaster of Hamburg and on the left by the Mayor of Madrid. Congressionists wore evening dress or uniform. As a banquet nothing could have been finer; everything, so far as the viands and wines were concerned, was excellent; so, too, was the musical performance by the bands. The toast of "The Queen" was very briefly but touchingly given by the Chairman and warmly taken up by the whole assembly. Other toasts followed such as "Prosperity to Spain" and "The Congress." These were given by Professor Brouardel, the Burgomaster of Hamburg, Dr. Navarre of the Paris Municipality, and by the Hon. Mr. Lyulph Stanley as, on this particular occasion, representing England.

VISITS TO PLACES OF INTEREST.

Through the kindness of the local authorities all the places of interest in Madrid were thrown open free to the Congressionists. One that was much visited and heartily appreciated was the National Gallery of paintings, with its large collection of pictures by Murillo, Velasquez, Rubens, Raphael, etc. The Military Hospital, too, made an excellent impression; it is well laid out, and was regarded as an excellent institution.

BRITISH WANT OF ORGANISATION.

I have alluded to the great absence of organisation of the English members as compared with the German and French. So dissatisfied were we in this matter that a meeting of the English members was held one evening at the Hotel de la Paix, under the presidency of Dr. Donald MacAlister. Expressions of dissatisfaction were universal. It is quite apparent that before future Congresses some steps will have to be taken by the British Secretary to bring intending members into unison. London was not represented as it ought to have been. Paris has been chosen as the place of next meeting of the Congress in 1900—the year of the Great Exhibition—and with our knowledge of the French genius for order and discipline, it is to be hoped that things in general will be better conducted so far as the technical part of the Congress is concerned than they have been in Madrid. The number of Sections, for example, should be less, and there should be more general meetings at which the united voice of the Congress could express itself upon large questions bearing upon international hygiene. In Paris it is proposed to hold the International Congress of Medicine and the International Congress of Hygiene in consecutive weeks, and to subordinate some of the work of the Congress of Hygiene to that of Medicine.

EXCURSIONS.

A correspondent writes: The excursions were numerously attended and fairly organised. It was very cold on both days, and most of the Congressionists took chills, which ended in bronchial catarrh. The reception of the Mayor of Madrid was too crowded to be comfortable. On the whole, notwithstanding the want of organisation which is almost the rule at these gatherings, the Madrid Congress was a great success considering the disturbed state of the political atmosphere. The courtesy and attention shown by the Spaniards to the guests were simply admirable.

THE ATTENDANCE AT THE CONGRESS.

Some 2,000 members attended the Congress, of whom 1,350 were Spaniards, 110 French, 50 British, 48 Germans. Portugal is said to have been represented by only one member. Of the Germans, no fewer than 22 were official representatives of one kind or another. They included such men as Behring, Loeffler, Rubner, and Liebreich. Most of the members of the British Committee were conspicuous by their absence.

A PRACTICAL ATTEMPT AT HOSPITAL REFORM.

WE have received from a member of the medical staff of the Belgrave Hospital for Children a set of papers containing a scheme for the removal of the Belgrave Hospital for Children from Pimlico to a site which has been secured at Kennington, and for a reconstitution of the hospital. The proposed changes have been agreed to at general meetings of the governors, and the motive of the removal to the south of London is thus set forth: "The accommodation in special hospitals for children is represented by one cot per 12,560 head of population on the south side, as compared with one cot per 3,523 head of population on the north side." It is well known, in fact, that the hospital accommodation in South London has been recognised by the Committee of the House of Lords to be deficient, and on this account we welcome the removal of this hospital to the south of the Thames.

But the proposed scheme of reconstitution offers features of much greater interest, since it seems to prove that the persistent attempt to fix public attention on the reforms required in hospital management is beginning to bear some fruit. We may express a hope that its "general principles and objects" will not be altered. These general objects are nine in number, of which the first, "the treatment of the children of the really poor" need not detain us, since it is contained in the fifth; nor the second, "the promotion of the study of children's diseases;" nor the last, some "special privileges for patients from the Pimlico district," in which the hospital is now situated. We pass over also the third, "the training of nurses in the management of sick children." The fourth is an interesting and we think useful addition to the functions of a children's hospital—namely, "the teaching of nursemaids the elementary methods of rearing infants." A ward is to be set apart for infants, and it is to be part of the Sister's duty to train nursemaids (say for three months) and give them a certificate, if found competent, for which the employer would have to pay a fee. Considering the dense ignorance of the girls to whom infants are now entrusted, this seems to be the commencement of a useful system. It is, however, the other four objects that will chiefly interest hospital reformers.

No. 5 runs thus: "Special precautions will be taken in order to prevent the abuse of the charity (*a*) by the establishment of a wage limit; (*b*) by the appointment of an inquiry officer; (*c*) by a system of registration; (*d*) by co-operation with the local doctors and clergy, and the charitable institutions in the neighbourhood." And it is stated in another place that the hospital will adopt chiefly the recommendations of the medical practitioners in the neighbourhood in selecting patients. This is as it should be. Poverty, absolute or relative, is no doubt the first condition qualifying for medical relief; but a mere inquiry into the patient's pecuniary circumstances may lead to most unsatisfactory results, unless his medical condition be also ascertained; and this cannot be better done than from his medical attendant's report.

The sixth object is "the limitation of the number of out-patients," it being explained that only 15 fresh cases will be seen by each medical officer, and these are to be selected by giving preference (1) to these most seriously ill, (2) to those referred by medical practitioners, and (3) to those bringing certificates from governors. The last clause corresponds to a previous statement with regard to in-patients, that everyone who brings a note from a medical practitioner, or a certificate from a governor, that the parents are not in a position to pay, shall be deemed eligible for admission (but, of course, not entitled to it) without further inquiry.

The seventh object is, again, an innovation in our hospital system, and one which we regard as in itself good, though we are aware that some caution will be required in carrying it out. It is "the establishment of a system whereby a consultation may be placed within the reach of out-patients of the class just above those eligible for hospital treatment. This will only be carried on in co-operation with the local doctors." In the more detailed scheme the conditions are set forth, on which these consultations with be given and abuses prevented. No consultation is to be allowed to persons whose income exceeds £3 per week, or £120 (*sic*) per annum. A small fee—5s., 7s. 6d., or 10s. 6d.—is to be paid to the hospital according to the amount of the family income. No consultation is to be given except on the application of a medical practitioner, who forfeits the privilege by recommending an improper case, and no treatment is to be given. Curiously enough, the personal presence of the medical practitioner is not required.

This part of the scheme seems to us the only one which is at all dubious. We have always advocated consultations in the out-patient department for the regular out-patients, and believe that such a scheme would do much to put our hospitals on their right footing as the heads and centres of all the medical institutions of the district; but such consultations would of course be gratuitous. We regard with suspicion all plans by which hospitals seek to make money out of the gratuitous services of their medical officers; and we cannot think that a "consultation" can be satisfactory without a consultant. Country practitioners, owing to the loss of time which would be involved, must, it is true, sometimes send a patient to a consultant, but a full statement of the symptoms and treatment is always sent with him; and, after all, such consultations are not the most satisfactory. Here the doctor lives in the neighbourhood, and could attend with less trouble than it would cost him to furnish the details of the case, so that we confess to some hesitation on this part of the Committee's proposals. But the whole scheme is so liberal and so evidently dictated by a genuine desire to make the hospital as useful as it can be made, that we should bow to the opinion of the governors and of the local practitioners, confident that any modifications would be introduced which experience may show to be necessary.

The remaining object is the prevention of infection, a most important one in a children's hospital. And here we are glad to see that, besides the usual precautions, a new departure has been taken by "the appointment of a properly qualified sanitary officer as a member of the honorary medical staff," a most useful and liberal appointment.

We are glad also to note that all the physicians and surgeons are (as in all well-regulated hospitals they ought to be) members of the managing Committee. And we are also happy to see that the hospital gives a distinct pledge that it "will endeavour to work with the medical practitioners in the neighbourhood, and not to undersell them by treating gratuitously patients who might be suitably treated in their own homes." *O, si sic omnes!*

In conclusion, we heartily wish success to the Committee in carrying out their arduous undertaking; arduous indeed, for it involves raising £50,000, and that at a time when many larger and older hospitals are demanding even larger sums. But the object is a good one, and ought to be attained; and the spirit in which the Committee are setting about it is admirable.

The Sussex County Hospital.—It has been resolved to build a new operating room for the Sussex County Hospital at Brighton, and also to erect further accommodation for nurses.

ARMY MEDICAL REFORMS: THE RANK OF MAJOR-GENERAL.

It would be nothing short of a calamity if the reform which Lord Lansdowne has succeeded in carrying out for the Army Medical Service were to be deprived of much of its value at the very moment of its inauguration. Yet such can scarcely fail to be the case if the unhappy suggestion of abolishing the rank of major-general for medical officers is carried into effect.

At the present moment this is only a suggestion, and the only reason urged in its favour is the fallacious one that the rank entails general command. This "general command" fallacy has been exposed over and over again. Only the other day we pointed out, "the military status which involves general command is exactly the same in kind as that of a major or colonel, and only differs in degree from that of a general officer. Moreover, the same rules which limit the command of medical officers as majors or colonels would limit that of major-generals. The highest executive rank in an army medical corps would, we presume, be that of lieutenant-colonel, as in other corps; and all promoted to be colonels or major-generals would, as in other branches, be removed and placed on the staff of the army."

"There are a number of major-generals in military employment who have no general command; for instance, the Inspector-General of Education, and the Inspector-General of Fortifications and the governors of Woolwich and Sandhurst; these officers only exercise command within their specific spheres, and would not think of claiming it outside, say, in the absence of a general officer commanding a garrison or district. The existing surgeon-major-generals have strictly limited command."

In view, however, of the very serious results which would attend the adoption of this suggestion, it has been thought desirable to address the Secretary of State for War, and the following letters have been forwarded to Lord Lansdowne:

[Copy.]
University of Edinburgh,
16th April, 1898.

To the Most Hon. The Marquess of Lansdowne, K.G., P.C., Her Majesty's Secretary of State for War.

My Lord Marquess,—May I venture, as having had the honour of addressing you some time ago on the subject of Army Medical Reform, to express my personal gratitude to your lordship, and that of the British Medical Association and that of the Senatus Academicus of this University, in whose name I spoke, for the generous recognition of our views which you have made. The concessions to medical opinion are, I assure your lordship, highly valued in the profession. But may I request your lordship not to undo the good effect of your recent decisions by limiting their application, and giving army rank to none higher than the rank of Colonel. Such a limitation would, we fear, greatly (perhaps fatally) mar the good effects which we confidently anticipate from the steps already taken.

I have the honour to be, my lord,
Your obedient Servant,
T. Grainger Stewart.

[Copy.]
British Medical Association,
429, Strand, W.C., April 16th, 1898.

To the Most Noble the Marquess of Lansdowne, K.G., Secretary of State for War.

My Lord Marquess,—I venture to write to your lordship upon the subject of the proposed changes in the Army Medical Department, in which this Association has taken a very active interest, in order to assure your lordship that grave fears are entertained that the happy issue out of all its troubles, which was hoped from your lordship's speech to the deputation organised by this Association, is endangered by the proposals made to grant in future no higher grade than the rank of Colonel to officers of the Department. Permit me respectfully to impress upon your lordship the opinion that such a conclusion would be most unacceptable to the medical profession and would in their eyes be regarded as an official stamp of social and

ilitary inferiority upon the Department, so that it would render much less valuable those concessions which your lordship has been good enough to promise.

I am, my Lord Marquess,
Your most obedient servant,
Robert Saundby, M.D., LL.D., F.R.C.P.,
President of Council.

At a meeting of the Council of the British Medical Association it was resolved:

That a copy of the following resolution of the Parliamentary Bills Committee relating to the Army Medical Service, approved and adopted by the Council, be forwarded to Lord Lansdowne.

"That in the opinion of this Committee the abolition of the rank of Major-General in the Army Medical Service would seriously impair the value of the promised concessions."

It was resolved further:

That a copy of this resolution be sent to every medical man who is a member of either House of Parliament, with a letter for his private information.

We can scarcely believe that a step of so retrograde a nature will be allowed to undo the good which must otherwise be effected by the formation of an Army Medical Corps with army rank and simple military title for its officers. The present deplorable state of the Army Medical Service is still drifting steadily from bad to worse, and cannot but continue to do so until a satisfactory Warrant appears. As matters stand it seems impossible that a Warrant can be long delayed. Should nothing be inserted to mar the reform which Lord Lansdowne has secured, time only will be required to demonstrate the immense debt which the army will owe to his wise administration.

PARLIAMENTARY BILLS COMMITTEE.

A meeting of the Parliamentary Bills Committee of the British Medical Association was held at the office of the Association, 429, Strand, W.C., on Tuesday, April 19th, 1898.

Present:

Dr. Robert Saundby, President of Council, in the Chair.

Dr. R. Batten (Gloucester).
Mr. Geo. Brown (London).
Mr. J. Cantlie (London).
Dr. W. A. Carline (Lincoln).
Dr. W. F. Cleveland (London).
Dr. J. Ward Cousins (Southsea).
Dr. W. Douglas (Great Malvern).
Mr. George Eastes (London).
Dr. R. Esler (London).
Mr. A. Godson (Cheadle).
Dr. Bruce Goff (Bothwell).
Dr. W. Gordon (Exeter).
Dr. Ogilvie Grant (Inverness).
Dr. A. J. Harrison (Clifton).
Mr. J. H. Hemming (Kimbolton).
Mr. Victor Horsley (London).
Mr. Evan Jones (Aberdare).
Dr. J. C. McVail (Glasgow).
Dr. C. H. Milburn (Hull).
Dr. J. W. Miller (Dundee).
Dr. J. W. Moore (Dublin).
Mr. C. H. W. Parkinson (Wimborne Minster).
Dr. J. Rolston (Stoke, Devonport).
Dr. G. E. Shuttleworth (Richmond).
Mr. C. R. Straton (Wilton).
Dr. J. C. Thresh (Chelmsford).
Dr. Martindale Ward (Twickenham).
Dr. Dawson Williams (London).
Dr. S. Woodcock (Old Trafford).

It was moved by Mr. Douglas, seconded by Mr. Eastes, and resolved:

That in the absence of the Chairman the President of Council be requested to take the chair.

The minutes of the last meeting having been printed and circulated were taken as read, and signed as correct.

Letters of apology for non-attendance were read from Dr. D. B. Balding, Dr. T. Bridgwater, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Dr. C. W. Marriott, Mr. W. Jones Morris, Dr. James Murphy, Dr. Isambard Owen, Dr. C. Parsons, Dr. James Ritchie, Dr. W. D. Spanton, Mr. T. J. Verrall, and Mr. F. Wallace.

Temporary Care of Insane Persons.

Dr. Cleveland reported upon the work of the Joint Committee of the British Medical Association and Medico-Psychological Association, on the preparation of a draft clause for providing temporary care for persons suffering from incipient mental disease, and moved the following resolution, which was seconded by Dr. Douglas, and carried:

That the minutes of the Joint Committee of the British Medical Association and Medico-Psychological Association of to-day's date be received, approved, and the recommendations contained therein carried into effect.

The Vaccination Bill.

Dr. J. C. McVail submitted a report of the Subcommittee on the Vaccination Bill, with a few trifling alterations, which he explained, and moved the following resolution, which was seconded by Mr. Geo. Brown:

That the report as amended be accepted by the Parliamentary Bills Committee, and that a copy of it be sent to the President of the Local Government Board and to all members of Parliament.

After a lengthy discussion as to the limit of the age for the compulsory vaccination of children, the resolution was carried.

The following are the recommendations of the report:

(*a*) Revaccination should be provided for at the age of twelve years, subject to whatever relief as regards limitation or abolition of penalties and allowance for conscientious objection may be granted with regard to primary vaccination.

(*b*) Children entering on school life, who have not previously been vaccinated, should then be brought under the operation of the law, subject to relief as above.

(*c*) If (*a*) and (*b*) are granted, even single penalties might be done away with, excepting in the case of neglect by a parent to register conscientious objection in such elaborate fashion as might be prescribed by an order of the Local Government Board.

(*d*) Prosecutions for every neglect of vaccination, or for neglect to register conscientious objection, should be undertaken by some public officer acting independently of the local authority.

(*e*) The administration of the Vaccination Act, exclusive of (*d*) should be placed in the hands of the sanitary authorities.

(*f*) With reference to Clause 1, Subclause 3 of the Vaccination Bill, vaccination should not be done when the existing conditions are such as would, in the opinion of the vaccinator, militate against the success or asepticism of the operation.

(*g*) Inspection of the arm by the vaccinator should be made, not necessarily so early as on the eighth day, but some time during the second week, and reinspection should be provided for when it might be required.

(*h*) A scale of fees should be fixed in the Act, and, in the case of domiciliary visits and vaccinations, the scale should take cognisance of distance and means of conveyance.

(*i*) Private practitioners should be paid for reports of vaccinations done in accordance with the requirements of the Local Government Board, the reporter being liable to a penalty for overstatement of the number or area of the vesicles produced.

(*j*) The number and area of the vesicles should be recorded in every certificate of successful vaccination.

(*k*) The age limit for infantile vaccinations should be six months.

Reform of the Companies Acts.

The following communication from the Pharmaceutical Society of Ireland was read:

The Pharmaceutical Society of Ireland,
67, Lower Mount Street, Dublin,
April 12th, 1898.

Sir,—I am directed by the President to forward you a copy of the prayer to a petition to be presented to the Houses of Parliament in the name of this society, and to solicit your support.

We applied to give evidence before the House of Lords Committee to which the Companies Act Amendment Bill is referred, and enclose you a copy of the correspondence on the subject as more fully explaining the position in which the matter stands.

You may not be aware that already not only are limited companies registered to transact the business of pharmaceutical chemists and chemists and druggists, but also as apothecaries and in one case, if not more, to "carry on the business of physicians and surgeons."

Although our Society, as a licensing body, at present appears to afford most scope for the hunger of unqualified capitalists, it is quite certain, unless the present opportunity is availed of, all the professions are bound in time to suffer.

Whether a Company is promoted for a "lawful purpose" is not investigated by the Registrar of Joint Stock Companies, or considered by him to be part of "the requirements of the Act," nor is there means of cancelling registration when it is effected.

I am, Sir, your obedient servant,

The Secretary, British Medical Association. ARTHUR T. FERRALL, Registrar.

COPY OF PRAYER.

"And we pray your Right Honourable House to give us a remedy for this state of things, and that in the Bill now before your Lordships' House to amend the Companies Acts a clause may be inserted in effect, that:

"No Company may be registered to do acts for which a course of education and examination are required to qualify, unless each member of the Company is qualified."

Mr. HORSLEY said that any quack pharmacist, quack dentist, or quack medical man now found that it was to his advantage not to practise as an individual as he formerly did, because that would bring him within the Pharmacy, Dentists, or Medical Acts. The House of Lords had decided that a company was not a person, therefore all these offenders against the law had to do was to turn themselves into a company, after which the business went on just the same. There were two possible means of remedying this evil: one was to obtain amendments to the Medical Acts, to the Dentists Acts, and to the Pharmacy Act; the other was to obtain the insertion in the Companies Act of such a clause as that now suggested by the Pharmaceutical Society of Ireland, which was similar to a proposal which had been made by the Pharmaceutical Society of England. Of the two means of procedure the latter appeared to be the more likely to attain success. The clause would prevent a company being formed for specific purposes requiring practical knowledge.

It was proposed by Mr. VICTOR HORSLEY, seconded by Dr. J. W. MOORE, and resolved:

That the Parliamentary Bills Committee recommend to the Council that the support of the British Medical Association should be accorded to the petition presented by the Pharmaceutical Society of Ireland to the Houses of Parliament.

SUPERANNUATION OF IRISH POOR-LAW MEDICAL OFFICERS.

A letter and resolutions passed at a meeting of Poor-law medical officers at Castlerea desiring the insertion of a clause in the Local Government (Ireland) Bill, entitling Poor-law union officers to a pension on the Civil Service scale, was read.

Dr. J. W. MOORE said that he hoped the Parliamentary Bills Committee would support the resolutions of the Poor-law medical officers of Castlerea. He would therefore propose:

That this Committee strongly support the claims of the Poor-law medical officers for insertion of a clause in the Local Government (Ireland) Bill entitling them to superannuation on the Civil Service scale.

The resolution was seconded by Dr. MILBURN, and carried.

THE LOCAL GOVERNMENT (IRELAND) BILL.

Dr. J. W. MOORE said that this measure touched many matters of vital importance to the profession in Ireland, and any expression of opinion in favour of the views that the profession had put forward coming from the Parliamentary Bills Committee would be very valuable at the present time, which the profession in Ireland looked upon as rather critical.

A great deal of discussion took part on a proposed amendment that assistant medical officers should undergo a special examination before being appointed to such a position. The Committee were adverse to any such proposal.

Finally the following resolution, proposed by Mr. C. H. W. PARKINSON, seconded by Dr. DAWSON WILLIAMS, was adopted:

That owing to the urgency of the subject the Council be requested to take the necessary steps to generally forward the views embodied in the article on the Local Government (Ireland) Bill now submitted with the exception of the amendments proposed by Mr. Carew and Mr. Lough and approve the resolutions forwarded herewith. [The nature o these amendments is stated in the article on this Bill published at page 1086.]

REFORMS IN THE ARMY MEDICAL SERVICE.

Dr. GORDON, in reporting on the progress of this matter, said the Committee were of course aware of the announcement recently made in the House of Commons by Mr. Powell Williams to the effect that an army medical corps was to be formed with military rank and title for its officers. That was what the Committee had asked for. But at the same time the Under-Secretary for State said a proposal to abolish the rank of major-general was under consideration. That was a very serious statement. If the rank of major-general was taken away much of the value of the concessions would be lost. The aim of the Committee had been to place the department in the position of authority necessary for its efficiency. If no higher rank than colonel was to exist in the medical service, it was idle to suppose that it could possess the necessary authority. The prizes of the service were, to say the least, far from excessive. If the twelve highest prizes were thus removed the effect could not but be bad. There was no reasonable excuse for demurring to the rank of major-general. The title major-general no more carried with it general command than the rank of colonel. And precedent was dead against the proposal. When the Italian army medical service was formed into a corps the rank of major-general was retained. The President of Council and the President-elect of the British Medical Association had written strongly to the Secretary of State for War urging that the rank of major-general should be retained, and pointing out how very serious would be the result of its abolition. Until the warrant appeared, which could scarcely be long delayed considering the great straits to which the War Office was now put for want of medical officers, it would be premature to say more. If the issue of the warrant were unduly delayed, it would no doubt become desirable for the Association to take the necessary steps to hasten its appearance. Dr. Gordon concluded by moving the following resolution, which was seconded by Mr. GEORGE BROWN and carried:

That in the opinion o this Committee the abolition of the rank of Major-General in the Army Medical Service would seriously impair the value of the promised concessions.

THE MIDWIVES REGISTRATION BILL.

Dr. WOODCOCK suggested that a deputation from the Parliamentary Bills Committee should wait upon the medical members of Parliament to lay before them the reasons why the Midwives Registration Bill should be opposed. It would appear from some correspondence which had taken place that the attitude of the medical members of Parliament with regard to the Bill was not altogether satisfactory, and it was very evident that they needed some further information on the matter. He moved the following resolution, which was seconded by Dr. SHUTTLEWORTH, and carried:

That the medical members of Parliament be requested to receive a deputation from this Committee upon the subject of the Midwives Registration Bill, and that the Subcommittee appointed to draft an amending Bill should form the deputation.

POOR-LAW MEDICAL OFFICERS IN SCOTLAND.

A letter from Dr. JAMES ROBERTSON of South Harris with reference to the circumstances detailed in his letter published in the BRITISH MEDICAL JOURNAL of April 16th, p. 1048, of his dismissal from the post of Poor-law Medical Officer for South Harris was submitted, and on the motion of Dr. BRUCE GOFF, seconded by Dr. WOODCOCK, it was resolved:

That the Committee request the Council to petition Parliament in favour of the Local Government (Scotland) Bill which confer upon Scotch Poor-law medical officers the same right of appeal against dismissal as those enjoyed by Poor-law medical officers in England.

THE PLAGUE IN THE EAST.

INDIA.

Bombay.—The plague mortality in Bombay is steadily decreasing, but the newspapers from the same city, despatched some three weeks ago when the epidemic was at its height, convey a vivid picture of the dislocation of authority, trade, and public feeling. With the disappearance of the scourge, however, better feeling prevails, and the whole outbreak seems to have been merely the native method of demonstrating dissatisfaction with the existing regulations, and their disappointment that the epidemic showed no signs of abatement. Under the new plague regulations the following procedure will be followed:

House visitation will be carried on by the people themselves by committees appointed from among them. Plague officials will search only those houses where plague cases or deaths have recently occurred, or where there is reasonable suspicion of a plague case. No patient will

be removed to a plague hospital unless a fully qualified medical officer certifies it to be a plague case. If such medical officer pronounces the case hopeless, and the patient is only expected to live a few hours, such patient will not be removed to hospital without the consent of the relatives. In the event of a case of plague occurring in the family of well-known and well-to-do respectable persons, the patient will be allowed to remain in the house, and be attended there by his own doctor, and by one or two members of the family, provided the house is a detached one, and the patient can be isolated, and the family agree to remove themselves to one of the Plague Committee's health camps, or to dwell at a detached place where they can be placed under supervision. Compensation will be given for destruction of infected materials. Owners will be given the option of disinfecting their houses themselves to the satisfaction of the district plague officer.

These regulations assume a high standard of sanitary morality, higher perhaps than most people were willing to believe, that any except a few of even the better educated natives were endowed with. However, it is fortunate they are only to be tested during a declining epidemic, when any *régime* of expediency may expect to meet with success.

Karachi.—The recrudescence at this port began on March 25th, in the person of a man who was undergoing his ten days' quarantine at the Kimari camp outside Karachi. The man had recently arrived from Bombay. On the same day a case of plague occurred in a resident Hindu in the town. Dr. Kaka, Health Officer of Karachi, had a deep trench dug round the infected house and filled it with water. The idea of the water and the trench was to prevent rats escaping and so spreading plague. Whether strictly scientific or not, the proceeding has a practical ring about it which will commend itself to many. On March 27th a third case of plague occurred in the town, and since then some eleven cases are reported.

Punjab.—The plague seems to be closing in on Lahore. Spreading southward from Ghurwal and the Jullundur districts the disease is travelling from the valley of the Sutlej and its tributaries. No effort is being spared to stamp out the plague in the Punjab. At the present time 3 district superintendents of police, 6 assistant superintendents, 4 inspectors, 24 deputy inspectors, 171 sergeants, and 1,838 constables are actively engaged on plague work. Besides these, 965 more men are under orders to reinforce; thus bringing up the total strength to 3,000 men. In all some 63 villages in this district of the Punjab are suffering from plague.

Madras.—The Government of Madras has issued an order prohibiting pilgrimage to the great Hampi Festival in Bellary, owing to the dread of the importation of plague.

Hyderabad.—Although plague still threatens the Nizam's capital, it is satisfactory to report that the chances of its being attacked are rather less than they were. Plague does not seem to be virulent in the Dominions, and the approach of the hot weather is welcomed as likely to improve the chances of escape.

Inoculation.—The Government of Bombay have at last done what public opinion called upon them to do as regards the recognition of the value of inoculation. The Government have conceded that persons who have been satisfactorily inoculated within four months of inspection shall be exempt from segregation or detention. The evidence in favour of inoculation has been gradually growing, and the concession made to the public by the Government will enormously increase the numbers willing to submit to the treatment.

JEDDAH.

On March 31st there had been as many as 15 deaths from plague at Jeddah. Reuter's correspondent, writing at that date, adds that the disease was gradually disappearing. We are yet in ignorance as to the exact nature of the outbreak, but if 15 deaths have occurred amongst the residents of Jeddah and it is already on the wane, then the course of the disease in that port will present an anomaly in the history of plague which will be interesting. Infection of Jeddah means a spread to Mecca, and although it is fifty years since Egypt has been attacked, it is doubtful whether the sanitation of Egypt has improved so much during that period as to defy the disease at so close quarters.

CHINA.

At the present moment three places in China are known to be afflicted with plague—Hong Kong, the town of Chan-choo-foo, near Swatow, and the island of Formosa. The three nations interested are respectively Great Britain, China, and Japan. The first and the last-named are taking all precautions possible, but the people by whose dirt and neglect all others suffer allow matters to proceed at will.

BATTLE OF THE CLUBS.

WEDNESBURY AND DISTRICT MEDICAL ASSOCIATION.

THE *Midland Advertiser* of March 26th reports the annual meeting of the Wednesbury and District Medical (why not medical aid?) Association which has recently been held at Wednesbury. According to the report of the managing committee the Society is flourishing, and is very well satisfied with its medical officer, Dr. Matheson, but the committee apologise for having purchased the latter a bicycle in order to save the expense of cab fare. As the doctor does not seem to be able to use the bicycle he is compelled to pay cab fares out of his own pocket, so that his remuneration ought to be liberal, especially as he undertakes not only minor but also major operations.

Our contemporary remarks that "the closing item of interest was the presentation of prizes to brothers making the most members during the past year." These prizes were given by the doctor, and were presented by him personally to the winners. In making the presentation he said that he hoped to give similar prizes next year, not to gain popularity, but to give interest in the work of the association.

It is certainly a surprise to see a medical practitioner giving prizes to members of his club to get him more patients, presumably in the best way they can, regardless of his brother practitioners. It is difficult to see any real difference between this and the payment to touts of medical aid societies of a premium on the number of members they enrol for a particular doctor.

SPECIAL CORRESPONDENCE.

PARIS.

Vaccination and the Koran.—Dangers of the Premature Liberation of Lunatics.—Delegates of the Paris Municipal Council at the Madrid Congress.—The Battle of the Clubs at Tarbes.—Thyroid Treatment in Goitre.—The M.D. Degree of the Paris University.

M. LOIR, Director of the Tunis Pasteur Institute, has informed the Academy of Medicine of the prevalence of small-pox in the Algerian Protectorate. He states that in order to get vaccination accepted by the Mohammedans it is absolutely necessary to obtain from the Tunisian religious authorities a declaration affirming that the procedure is not forbidden by the Koran. It might under these conditions be possible to inflict a certain penalty on those who infringed the law, and to make the tribe or village responsible for the fines incurred by recalcitrant or careless Tunisians. Dr. Laveran referred to a thesis by Dr. Bechir-Dinguizle, in which he states that by inquiry among the superior Mohammedan clergy of Tunis he ascertained that vaccination does not clash with any religious belief of the country.

The murder of a police inspector by a madman is another painful proof of the urgent necessity of a more perfect system of legislation dealing with this dangerous class of patients. A police commissary was informed that a M. Besnard had been seized during the morning with a fit of madness. The wife stated that her husband had previously been confined in a mad asylum; he was recently discharged as cured. Three policemen were sent to remove the madman. In order not to frighten him only one entered his room, and succeeded in persuading him to get up and dress himself. Whilst stooping to button his boots the madman suddenly produced a knife, rushed on the policeman, and stabbed him in the stomach. The unfortunate man fell dead without uttering a cry. One of the other policemen who accompanied the inspector was so painfully affected by the murder that he has since shown signs of insanity, and has had to be placed under treatment.

The sum of £200 was voted by the Municipal Council to defray the expenses of sending five delegates to represent the Council at the recent International Congress held at Madrid. M. Martin, Inspector-General of Sanitation, Dr. Bertillon, Chief of the Statistical Society, M. Bechmann and M. Launay, Chief Engineers of Sanitation, and M. Masson, Inspector of Sanitary Improvements, accompanied the deputation.

News comes from Tarbes that at a special meeting of the Federation of the Sociétés de Secours Mutuels, the President stated that the medical men of the town of Tarbes and of the environs refused to attend the members of the society unless the subscription were fixed at 10 francs a year for each mem-

ber, the sum originally agreed upon, and not 5 francs, the present one. The medical men also ask that extra fees should be paid for all operations whether they be important or unimportant; likewise for medical attendance during the night. The members will only pay a subscription of 8 francs a year.

Dr. Mossé, of Toulouse, has communicated to the Academy of Medicine notes of a case of goître cured in a newborn infant by submitting its wet nurse, who also had a goître, to the thyroid treatment. Every day during five days a tablet containing 1.50 gr. of the thyroid gland was taken by the nurse; after an interval of five days the treatment was resumed, and so on until the treatment was discontinued. The infant's goître disappeared after six weeks' treatment, that of the nurse became considerably smaller.

The diploma of M.D. of the Paris University will henceforth be given to foreign students who go through the medical curriculum without previously passing their "*baccalauréat*" examination. This diploma, in accordance with Article 15 of the Decree of July 21st, 1897, does not give any of the privileges attached to the real degree.

BERLIN.

German Surgical Congress.—Berlin Ambulance Service.—Auto-suggestion.

The twenty-seventh Congress of German Surgeons was opened on April 13th in the hall of the Langenbeckhaus in Berlin by the President, Professor Trendelenburg of Leipzig. About 300 members were present. The President gratefully acknowledged a donation of 50,000 marks (£2,500) from the Langenbeck family, the interest of which sum is to be devoted to studies in military surgery. Asepsis and wound infection formed the subject of the first day's papers and debate. Professor Mikulicz (Breslau) gave an account of his latest attempts to improve the treatment of wounds. The operator wears an aseptic muslin mask, aseptic cotton gloves, and the wound, when dressed, is covered with an antiseptic paste. An animated debate followed, in which the advantages and disadvantages of gloves were discussed, some of the speakers advocating the use of non-porous gloves, such as the india-rubber gloves worn by analytical chemists, while others advised the abandonment of gloves, and a return to careful disinfection of the hands. Dr. Hackenbruch (Wiesbaden) opened the afternoon sitting by a report of his results with a method for producing local anæsthesia (analgesia) based on Schleich's method. Hackenbruch uses a ½ per cent. solution of cocaine-eucaine, making injections all round the field of operation, which is further rendered bloodless by help of an india-rubber bandage. A debate followed, in which the efficacy of the method was almost unanimously recognised, but which disclosed great divergencies of opinion as to the solution to be used. Braun (Leipzig) was against an addition of morphine, Mankiewicz (Berlin) in favour of it; Rubinstein (Berlin) recommended a solution of iodoform-guaiacol. The subject of debate on the second day was Operations of the Stomach and the Intestinal Canal. The discussion was opened by Professor Kroenlein (Zurich), who reported twenty-two cases of excision and extirpation of the stomach with varying results. Mikulicz (Breslau), Schuchartt (Stettin), and von Hacker (Innsbruck) gave an account of various interesting cases of partial and total extirpation of the stomach, in which the alimentary canal had been connected with the small intestine, thus enabling the patient to retain and digest food; Steudel (Heidelberg) recommended gastro-enterostomy as practised in the Heidelberg clinic for cases of contraction of the pylorus; Mikulicz (Breslau), and Doyen (Paris) both read papers on the technique of operations on the stomach and the intestine. The afternoon sitting was devoted to a debate on tuberculous spondylitis and its sequel, the so-called Pott's hump, which turned chiefly on Calot's method of forcible straightening. Though some speakers were in favour of this method, the majority came to the decided conclusion that it was extremely risky. On the third day of the Congress Jordan (Heidelberg) reported on results obtained by Schede's thoracoplastic operations, which were extremely interesting, and in many cases most successful. Two patients, both operated on several years ago, were shown. One was a boy of 11, and in his case the ribs removed had formed themselves anew. In the second case the distended heart lies close against the cutaneous flap that has replaced the thoracic wall. Perthes (Leipzig) read a paper on his new method for the treatment of empyema, which consists in using a Bunsen air pump for partially exhausting the air between the lung and the thoracic wall, so that the shrunken or shrivelled lung is drawn close up to the thoracic wall. Some patients treated by this method were shown. An animated, but chiefly technical, discussion followed. In the course of the day papers on various subjects were read, including one on the serum treatment of diphtheria, and one by von Bramann on primary and secondary excision of the intestine in gangrenous intestinal hernia. The last day of the Congress began by the exhibition of instruments, anatomical preparations, etc., after which the subject of the day, namely, surgery of the liver and gall bladder, was entered upon. Papers were read by Petersen (Heidelberg), Poppert (Giessen), Haasler (Halle), and Holländer (Berlin), and a discussion followed. Professor Bruns (Tübingen) then read a paper on Inhuman Rifle Bullets, and said that in the late Indian frontier war the outside covering ("mantle") at the sharp end of the projectile had been removed (the Dum-Dum bullet) causing the bullet to splinter, and thus produce terrible and complicated wounds. He added the hope that steps would be taken by the European Powers to extend the International St. Petersburg Convention, so that in future small-calibre bullets not furnished with "mantles" should be forbidden. Professor Koehler (Berlin) agreed with Bruns that the Dum-Dum bullet was inhuman, and that international convention should forbid its use. Papers on various subjects followed, and Professor Hahn (Berlin) having been elected President of next year's congress, the meeting was closed on Saturday evening, April 16th.

During the month of March the Berlin ambulances (*Unfallstationen*) were requisitioned in 2,251 cases—of which 1,943 were accidents, and 308 sudden seizures. A large percentage of the patients were transported either to the hospitals or to their own homes in the ambulance carriages free of any charge.

A curious case of auto-suggestion has just occurred in Berlin. A domestic servant, a strong and healthy girl, aged 25, came into hospital complaining of agonising pain in the chest and dyspnœa. She thought she must have swallowed her artificial teeth in her sleep, as she had not been able to find them on awaking, and had had terrible pain ever since. A careful examination was made, but failed to reveal any trace of the tooth-plate. As, however, the girl's sufferings showed no signs of abatement, she was kept in the hospital and put to bed. Next morning a fellow servant of the girl presented herself to the matron, bringing the supposed *corpus delicti*—a plate with nine teeth—in her hand. It had been found under the mattress. The sufferer saw her teeth, and in the same moment all her pain was gone, her asthma disappeared instantaneously, and she left the hospital and returned to work as well and strong as ever.

CORRESPONDENCE.

THE GENERAL MEDICAL COUNCIL AND THE MIDWIVES REGISTRATION BILL.

Sir,—The resolutions passed by the General Medical Council on this subject are so entirely in accord with all that has been urged by the great majority of members of our Association as to the mischievous nature of Mr. Balfour's Bill, that they ought, I think, to be taken as the basis of action—which, to be of any use, should be immediate—by every Branch Council of our Association. Already the Lancashire and Cheshire Branch has taken action by appointing a deputation of its members to meet the M.P.'s of Lancashire and Cheshire to discuss the Bill and show reasons for opposing the same. I hope the Metropolitan Counties Branch will do likewise, and that the Councils of other Branches will take steps before May 11th to inform their Parliamentary representatives of the evils likely to result if the Bill is passed. As a matter of tactics, this would be, I think, much better than promoting an alternative Bill, on the

merits of which those who oppose Mr. Balfour's Bill are not quite agreed.—I am, etc.,

Dulwich, April 19th. H. NELSON HARDY.

SIR,—Dr. Cullingworth's very lengthy and no less able letter on behalf of the registrationists, which appeared in the BRITISH MEDICAL JOURNAL of April 2nd, is remarkable for the inconsistency of its opening and closing paragraphs, for the first words of the former are: "The Midwives Bill (1898) has now been sufficiently long before the profession to give opportunity for criticism." In the last paragraph—no less emphatic because it is a postscript, even as that of ladies is the most important part of the letter—appear these words: "The Obstetrical Society of London is in no way responsible for this Bill, and has had no opportunity as yet of expressing an opinion upon it."

When these two paragraphs are placed side by side, certainly the author of them appears in a strange light, especially to those of us who know well how far the Obstetrical Society of London is responsible for the Bill, and when we are able to read between the lines.

To begin with, how is it that if the Bill has been "sufficiently long before the profession," the Obstetrical Society has not taken the opportunity of making some pronouncement upon the measure? To say the least of it, it seems curious that immediately following Dr. Cullingworth's letter is the denouncement of the Bill by the Obstetrical Council of the Royal Academy of Medicine in Dublin, so that it would appear that they had made the opportunity to consider the Bill. The question arises: How is it that the Society over which Dr. Cullingworth presides has not made the opportunity, if they wished it, of stating their views upon the Bill? Are we not entitled to infer that they approve of it?

Those of us in and about this city are well aware of what the Obstetrical Society of London has done in hastening this Bill by their granting of highly-embellished diplomas for years and years, and that their holders have been so proud of them that they have displayed them in their house windows for the public gaze, and to advertise or convey the impression that they are duly qualified to practise midwifery.

It is very curious that the very next letter to the announcement of the Dublin resolution on p. 917 should contain a copy of a "certificate of death" from one of the London diplomates, and that she appends "L.O.S." to her name. This is how the thirst for legal registration has been fostered amongst midwives. Years ago they were told that it was important that as many of them as possible ought to obtain this qualification. And why? So that if the Bill became law this "L.O.S." would be a distinctive mark for them over and above those who had no "diploma." What we say is, let the Obstetrical Society of London at once pronounce upon this Bill, and also tell us if their "diplomates" will be allowed to use this title of "L.O.S." even if debarred from using that of "L.M."

I know that it will be said that the General Medical Council has, through the vigorous action of the Lancashire and Cheshire Branch of the British Medical Association, put its veto upon the further issue of these "diplomas," but this does not do away with the fact that there are hundreds, perhaps thousands, of these "diplomas" still in existence throughout the country, and we find from Dr. Wolstenholme's letter in the BRITISH MEDICAL JOURNAL of April 2nd, p. 917, one of the "diplomates" using the title of "L.O.S." so recently as March 7th. On Sunday last, in cycling through Cheadle Heath, near Stockport, I observed a brass doorplate of another midwife with the same "title" after her name. Can the General Medical Council do nothing with this assumption of a title which is calculated to deceive the public? Are these women "licentiates," or are they not, of the Obstetrical Society of London? If not, what does "L.O.S." mean?—I am, etc.,

Manchester, April 16th. G. H. BROADBENT.

PAYMENTS BY HOSPITAL PATIENTS.

SIR,—The question of charging out-patients is a very important one, and I hope your article will be the means of eliciting the opinion generally of the profession on it. As I dare say you are aware some correspondence has appeared in your contemporary, the *Medical Press and Circular*, between myself and the Chairman of the London Hospital (the Hon. Sydney Holland). With his usual forensic skill, Mr. Holland has argued that because payments are made by the out-patients at Guy's and the Poplar Hospitals, and because it is the custom to charge in-patients in cottage hospitals so much a week towards their maintenence, therefore the system he proposes to adopt at the London Hospital is perfectly right and fair. It is interesting to learn that the whole of the medical staff of the hospital were averse to such a new departure. The Hospital Reform Association have contended that it is not right to mix up business with charity, and that hospitals as long as they appeal to the public for support should be entirely free.

Moreover, as you point out, it is unfair to the general body of practitioners for hospitals to charge fees of any kind to their out-patients. I also think that such a system is likely to act harshly with the respectable poor, who would hardly like to deny that they could not pay two or three pence for medicines. It may also be argued that it is not right for the medical staff to countenance any charges when their own services are given gratuitously.

With reference to special hospitals: as the Hospital Reform Association has pointed out, it is not an easy matter to say what ought to be done with that particular class of persons who, whilst well able to pay the ordinary fees of a general practitioner, are not in a position to pay those of a consultant. Until a better scheme is formulated it appears that the only solution of the difficulty is to establish institutions (not hospitals) where people of the class referred to could be seen and treated at a reduced fee. I believe myself that such an institution would not only meet a general want, but would prove financially successful. The Central London Throat Hospital Committee have in their last report referred to the recommendations of the Association, and have come to the conclusion "that the subscribers will be quite satisfied that there is no necessity for any Reform Association to make recommendations with a view of improving the method of the administration of relief within its walls." Might I say that the Committee should have addressed the foregoing to their patients as well as to their subscribers? From the last balance sheet I gather that only £300 was received from subscribers, whilst the patients contributed no less than £1,407. Although the Committee and Sir Henry Burdett are so well pleased with their *modus operandi* I cannot help thinking that it is not quite as perfect as it might be. This is how it is described in the report by Sir Henry Burdett: "There is the system I was trying to explain. Practically the patient goes first of all to the dispensary window, and is there seen by the dispenser; the dispenser cross-examines him, questions him a little, and asks him whether he is prepared to pay anything, and if so what; and then, after talking it over, they decide what sum the patient can pay, and that sum he does pay; or they say they cannot pay anything."—I am, etc.,

Cardiff, April 18th. T. GARRETT HORDER.

THE MEDICAL PROFESSION AND SANITARY AUTHORITIES.

SIR,—Dr. Owen and "S. O." accept the principle—stated in the BRITISH MEDICAL JOURNAL of March 26th—that medical men ought not to grant gratuitous certificates of "freedom from infection," and admit that sanitary authorities have no legal claim to such certificates, although for some years they have called for their production. Dr. Owen clearly states the question from the public health side, but "S. O." labours under a very general misapprehension, to which some reference is necessary.

Penal obligations—more especially such as press more heavily upon the poorest than upon the richest citizens—cannot be enforced for any lengthened period unless arrangements are made for their gratuitous discharge. Thus, registration, education, and vaccination inevitably became free soon after they had been made compulsory. The case for free disinfection becomes even more powerful when it is found that sanitary authorities make of its legal permissiveness a weapon whereby they enforce the production of a certificate which they cannot legally demand. "S. O.," as a health officer, very evidently connives at this most objectionable proceeding.

But may we not urge with perfect propriety that our professional policy should fall into line with the policy of all other classes when public necessities afford them an opportunity of conserving their interests? May we not go still further and suggest that sanitary difficulties may be made to yield some measure of recoupment for the enormous losses which compulsory notification and its logical sequentiæ have inflicted upon the profession? Conduct thus influenced is quite compatible with the heartiest concurrence in sanitary reform, and the course of that conduct becomes a question of grave importance.

"S. O.," in common with many others, seems to think that the whole question can be satisfactorily ended if a fee of 2s. 6d. becomes payable by sanitary authorities for "notification of freedom from infection," but it may be affirmed that no medical man gives any consideration to the more frequent fee which the present notification yields. Naturally, then, we come to the question, How can the profession obtain reasonably adequate compensation for the disadvantages which legislation must inflict upon it?

The direct profit which any system of fees can yield may be at once dismissed as hopelessly inadequate, and on such an hypothesis the 2s. 6d. fee now claimable seems a grave misfortune.

But the direction in which we may seek this compensation is clearly enough seen in hospital control and prohibition of counter prescribing and other forms of quackery. There are many workers in these fields, and it does not seem that the results are very palpable as yet; but such results are the natural outcome of that *laissez faire* which, as in the case now discussed, makes sanitary extra-legal insistence successful. Is it not possible to get medical men to help in the good work in the fashion I have formerly suggested—that is, by refusing to grant such certificates?—I am, etc.,

April 10th. A. D.

UNQUALIFIED ASSISTANTS.

Sir,—In the British Medical Journal for April 9th it was stated that a petition was likely to be presented to the General Medical Council on behalf of those unqualified assistants who had completed the medical curriculum, and were over 40 years of age and of good moral character, that they might be allowed to pass an examination which would enable them to practise. I fear that those conditions would not go far to mitigate the severity of the new rule forbidding the employment of unqualified assistants, and I think the General Medical Council can have no conception of the amount of mental suffering caused by their recent decision to men who, like myself, being already beyond 50 years of age, are suddenly deprived of their accustomed mode of obtaining a living, and who in spite of good characters and long service, find it almost impossible to obtain any other post on account of their age, younger men being invariably appointed. It is well known that no one beyond 45 years of age can obtain any public appointment, whether of the Poor Law or Local Government. Could not the General Medical Council lessen the severity of their rule by appointing a small committee of themselves to judge each case on its own merits, and allow those who are beyond 40 or 45 years of age and of good moral character, and can give evidence of having satisfied their employers of their fitness to continue to hold their situations till either infirmity or other causes made them wish to retire. I am myself over 50 years of age, and the fact of my having held my present situation more than twenty years should be sufficient to prove my character to be satisfactory, and if the General Medical Council would permit me to go on as I did before their recent notice was sent out I could remain till I can no longer work. I have attended in their own homes nearly 1,000 cases of midwifery, having previously had six months' training at a maternity hospital, and after twenty-six years' experience of midwifery I ought to be able to manage such cases. I do not ask for any permission to practise on my own responsibility, or to manage a branch practice (a thing I have never undertaken) but only to be allowed, under my employer's supervision, to continue to provide a living for my family and myself in the way I have done for many years. Men under 40 years of age have not the same difficulties in obtaining situations, but those much beyond that age find it almost impossible to obtain a situation of any kind, and if those over 40 or 45 were allowed to be registered as assistants only, on furnishing proofs of age, good character, and long service, and paying a fee sufficient to cover the costs of registration and the examiners for their time, in a few years their lives would come to a natural termination and the medical profession left free from unqualified assistants. The General Medical Council would thus confer a tremendous boon on a class of men, and save them from the terrible mental anxiety of not knowing which way to turn to obtain a living. Unfortunately, there are not enough situations for men to attend to surgery work only, many being kept as stopgaps for midwifery and other cases more than for dispensing.—I am, etc.,

April 19th. Unqualified.

THE LATE DR. WEST.

Sir,—In your interesting notice of Dr. West there was one omission which perhaps I may be allowed to supply. He it was who, in 1862, introduced the trained and educated gentlewoman into the wards of the Children's Hospital, and from that year may be dated the immense advance that took place in the nursing of children's diseases. Dr. West from the first superintended the new arrangements himself, and he gave the most unremitting attention to all the details of the nursing; nothing escaped his notice; he knew each nurse; and he constantly inquired as to their progress and aptitude for the work. A nurse was not only to be proficient in her work, but she was to succeed in making her patients happy and in winning their confidence, or she was not worthy to be on the staff. Having had the privilege of working with Dr. West, and of being trained under his eye, I can speak from my own experience of the earnest devotion that he threw into the art of nursing, and the enthusiasm with which he inspired all engaged in the work. There was no more touching sight than to see Dr. West make his round; the little patients welcomed him as their friend, and the fractious or frightened child could not long resist the magic of his smile or the winning gentleness of his manner.—I am, etc.,

The Nurses' Hostel, April 11th. C. J. Wood.

AN APPEAL ON BEHALF OF THE FAMILY OF THE LATE MR. J. P. HENTSCH.

Sir,—I desire to draw the attention of charitable members of the profession to the case of the widow and family (five in number) of the late John Page Hentsch, M.R.C.S., L.S.A., of Coldharbour Lane, Brixton, S.W. Mr. Hentsch died in January last after an illness of nearly a year's duration, leaving those dependent on him totally unprovided for. By the aid of friends it is hoped to provide for three of the children, but pecuniary help is wanted to tide the family over the present period of distress.

Dr. Samuel Hague, 325, Southampton Street, Camberwell, has consented to act as Treasurer, and Mr. W. C. Jarvis, Percy House, 62, Peckham Road, as Secretary. I shall be glad to receive and acknowledge on behalf of the widow and family any contributions which may be sent to me.—I am, etc., G. David Knight.

410, Brixton Road, S.W., April 11th.

THE M.D. DEGREE R.U.I.

Sir,—I would ask your support in the redress of a wrong that has been done to certain graduates in medicine of the Royal University by the Senate of that body.

When the Royal University was founded on the ruins of the Queen's University, it was laid down that ordinarily the M.D. degree should be conferred after a clinical and written examination, but that

Candidates who have been settled for a period of two years in the Colonies or foreign countries may, on satisfying the Senate to that effect, and in lieu of the examination above required to be passed by persons residing in this country, upon furnishing papers on medical subjects written by them or official reports dealing with subjects of medical science, with evidence of the papers or reports being their own original composition, have the degree conferred on them in absence.

Many of us matriculated on these terms, but when the time came to go in for the M.D. we found that regulations of the University had been altered, and this paragraph left out. I have communicated directly with the Secretaries of the University, but have failed to induce the Senate to allow me the benefit of the old rule.

Apart altogether from any considerations as to the advisability of granting an M.D. degree on the submission of a satisfactory thesis, I would point out that there has been a distinct breach of faith towards those graduates who matriculated under the old rule, and I maintain that no alteration should have been made retrospective. This would have been in accordance with custom. On the dissolution of the Queen's University its matriculated students were transferred to the Royal University, and retained all the privileges they enjoyed in the former. As a result the Royal University conferred the degree of M.D. on men who passed the same examination as I did, and for which I only received the M.B. I know, too, of one case where a student of the Queen's University, who had matriculated in the engineering school—a less difficult matriculation than the medical—and who had gone for some years to business, returned to college, became a medical student, and graduated the same year as I did. He claimed and received the M.D. degree.

The new rule of the University practically debars those of us who are in the Indian service from getting the M.D. degree altogether. I am now eight years in India, during the course of which I have had only three months' privilege leave, and have had no opportunity of getting furlough so far. It is almost needless to say there is small prospect of getting any furlough, except as the result of sickness, for years to come. It is therefore impossible for me to present myself in Dublin for examination; it is equally impossible for me to get the M.D.R.U.I. in any other way.

I state my own case simply to show by a concrete example the injustice involved. It must apply to others besides myself, and I would ask them through your columns to join with me in making a representation to the Senate of the Royal University on the subject. I believe the older British universities—universities with traditions behind them—do not find that it lowers the dignity of their M.D. to grant it in absence to those of their graduates whose work takes them to India or to the colonies. The regulations against which I protest might do for a university in a country which had no colonies, but is altogether out of place in the calendar of a British university which counts its graduates in all parts of a world-wide empire.—I am, etc.,

J. B. SMITH, B.A., M.B.R.U.I.,
Surgeon-Captain I.M.S.

Poona, March 9th.

Obituary.

JAMES PAUL, M.D.

DR. JAMES PAUL, whose death at an advanced age is announced, must have been among the oldest of British practitioners. He commenced his professional education at the University and Infirmary of Aberdeen in 1821. In 1823, attracted by the fame of Sir Charles Bell, he entered the Middlesex Hospital, and attended also at the school of Mr. Joshua Brooks in Blenheim Street, Great Marlborough Street. He also attended the lectures of Sir Astley Cooper and Sir James Macgrigor. He obtained the diplomas of M.R.C.S.Eng. and L.S.A. in 1824, and immediately afterwards entered the naval service of the Honourable East India Company. He was appointed Assistant Surgeon to the *Vansittart*, proceeding to Canton, a voyage which occupied eight months and nineteen days. In 1826 he was appointed Visiting Assistant in the Company's service at Gravesend, but in 1829 he returned to Aberdeen, and for two years attended the medical school there. In 1830 he commenced practice in Bermondsey, and two years later was appointed Poor-law Medical Officer. It is said that Dr. Paul reported the first fatal case in the cholera outbreak of that year, the patient being a seaman whom he found in a moribund condition in the coal bunker of an Irish schooner. In spite of his arduous duties during the cholera outbreak, he succeeded in obtaining the degree of M.D. in the University of Glasgow in 1833. During the cholera visitation in 1849, and again in 1854, Dr. Paul worked night and day, and his health gave way, so that in 1856 he was compelled to retire from practice, and went to reside at Teddington, but removed after a few years to Barnes. He had already become known as a practical authority on preventive medicine, and had been instrumental in bringing about sanitary reforms in South London. He was a commissioner of the International Exhibition of 1851, a life governor of the Royal Medical Benevolent College, a member of the Board of Management of the West London Hospital, a member of the British Medical Association, and on two occasions received the thanks of the Royal Humane Society. In 1881 he became totally blind, but bore his misfortune with great patience. His death, which was due to the increasing feebleness of old age, took place at his residence at Barnes on March 25th.

GEORGE FREDERICK HELM, M.D., F.R.C.S.

BY the death of Dr. George Frederick Helm, Ophthalmic Surgeon to the Royal Cornwall Infirmary, Truro, which took place suddenly near his residence, the Greenfields, Marazion, on March 31st, the profession and public in West Cornwall have suffered a severe loss. Dr. Helm, who was the youngest son of the late Rev. Joseph Helm, Vicar of Worthing, was born in 1838, and was educated at Marlborough College. He matriculated in 1854 at St. Catherine's College, Cambridge, and in the same year became a pupil of Professor, afterwards Sir George, Humphry, at that time Surgeon to Addenbrooke's Hospital. At the close of his apprenticeship he won an open scholarship at St. Bartholomew's Hospital. His student career was a brilliant one; he stood high in the estimation of Sir James Paget, and was appointed House-Surgeon to the Hospital before he had completed his twenty-first year. After three years' stay at Cambridge, where he held the post of Demonstrator of Anatomy, he became in 1863 a Fellow by examination of the Royal College of Surgeons, and in the same year was appointed Physician to Rugby School, at that time under the head mastership of Dr. Temple, now Archbishop of Canterbury. During his residence of four years at Rugby, and while actively engaged in practice, he took the degree of M.D. in the University of Dublin. Symptoms of nephritis, aggravated by threatened lung mischief, compelled him, in 1867, to relinquish his Rugby appointment, and for two years he travelled in Australia in search of health. In 1869 he returned to England, and ultimately settled at Marazion, where the mildness of the climate offered him the best chance of recovery from the complication of disorders, which had by this time made considerable inroads on his constitution. By his residence here he was so far restored to health that he was able to take part in various schemes of public utility, and some ten years ago was appointed ophthalmic surgeon to the Royal Cornwall Infirmary, Truro. He had retained a keen interest in professional work, and down to the time of his death was unremitting in his attention to the poor at that institution, while his skill as an operator, combined with his thoroughness in all the details of this branch of ophthalmic practice, soon won for him a busy consulting practice. For some years he was a prominent member of the Penzance Board of Guardians, and it was largely through his exertions that Marazion obtained an efficient water supply.

Dr. Helm's genial and kind-hearted disposition made for him a wide circle of friends. He was in his time a well-known cricketer, and some thirty or forty years ago was famous as a bowler. He twice played in the Cambridge eleven against Oxford, and was a member of the Sussex county team and of the first representative English eleven which visited Australia. Dr. Helm was twice married, first in 1863 to Mary Elizabeth, daughter of the late Rev. F. Thomas, Parkham Rectory, Devon, and secondly to Catherine Emma, daughter of the late Mr. Edward Shearme, of Stratton, North Cornwall, who, with a son and two daughters, is left to mourn his loss. For the last few years Dr. Helm had been suffering from an affection of the heart, but increasing infirmity did not diminish his love of hard work, and he practically died in harness. Of the crowd who stood by his grave there were few who could not remember him by some kind word or deed.

WILLIAM GEO. SHEPHERD, M.D., F.R.C.S.ENG.,

Surgeon-Lieutenant-Colonel, Victoria Rifles.

IN Dr. Shepherd, who died on March 30th last, at the age of 83 years, an interesting character has passed away. Educated at the Aldersgate Street School of Medicine, where for a time he was a Demonstrator of Anatomy, he became a successful

general practitioner in Claremont Square and afterwards in Myddelton Square, Clerkenwell, and had an aptitude for operative surgery. Being the son of an officer in the army he had inherited a taste for military service, and joined the Victoria Rifles, with which he was connected for thirty-one years, first as a private and afterwards as surgeon. His genial manners and remarkable spirit of comradeship made him one of the most popular members of that ancient corps. His surgical aptitude brought him to the front in the very beginning of the movement for improving the means of aid to the wounded. His lectures and the drill of his bearer companies were typical of a happy combination of military and surgical ability. The example which he practically set to the Volunteers has been followed all over the kingdom, and the system which he was one of the first to illustrate has taken shape in the education of lay people in first aid to the wounded in many directions. His only pupil was the present eminent Surgeon-General Bradshaw.

Dr. Shepherd was a fine type of the general practitioner of the last generation; somewhat rugged, but honest and thorough, and a sterling friend. He kept his friends, and his patients loved him. Almost to the last year of his life he moved among those of longest standing, valued for what he had been in all the years gone by as well as for the energy and devotion which he still exhibited.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty: Robert W. Anderson, Staff-Surgeon, to the *Anson*, April 15th; Alfred J. Pickthorn, Staff-Surgeon, to the *Galatea*, temporary, April 15th; James M. Rogers, Staff-Surgeon, to the *Terror*, for Bermuda Dockyard, May 1st; John Jenkins, Staff-Surgeon, to the *Indefatigable*, May 1st; Reginald T. A. Levinge, Surgeon, to the *Humber*, undated; Henry N. Stephens, Surgeon, to the *President*, April 30th.

ARMY MEDICAL STAFF.

Brigade-Surgeon-Lieutenant-Colonel A. A. Macrobin, M.B., retires on retired pay, April 13th. He was appointed Assistant-Surgeon, March 31st, 1868; Surgeon, March 1st, 1873; Surgeon-Major, March 31st, 1880; granted the rank of Lieutenant-Colonel, March 31st, 1888; and made Brigade-Surgeon-Lieutenant-Colonel, August 23rd, 1894. He served with the British Ambulance in the Franco-German war from the time of its arrival in France in October, 1870, until its return to England in March, 1871, after the conclusion of peace, and has received the German war steel medal. He was with the 2nd Battalion Rifle Brigade in the Ashanti war in 1874, and was at the battles of Amoaful and Ordahsu and at the capture of Coomassie (medal with clasp).

Surgeon-Major H. Rayner, M.B., Royal Horse Guards, has been placed at the disposal of the Foreign Office for duty with the Commission for the delimitation of the Anglo-Portuguese frontier in South-East Africa. During his absence Surgeon-Lieutenant R. E. G. Phillips will be attached to the regiment.

Surgeon-Major A. A. Sutton, Surgeon-Captain J. W. Cockerill, and Surgeon-Captain G. Raymond embarked on board the steamer *Niger* for Sierra Leone on the 14th instant.

Deputy-Surgeon-General William Hemphill, M.D., died at Southend-on-Sea on February 20th last. He was appointed Assistant Surgeon, July 14th, 1854; Surgeon, February 1st, 1867; Surgeon-Major, undated; and Honorary Departmental-Surgeon-General on retirement, July 22nd, 1879. He was with the 48th Regiment in the Crimea from April 21st, 1855, including the siege and fall of Sebastopol, and detached duty in the dockyard from January 14th to March 14th, 1856 (medal with clasp, and Turkish medal).

INDIAN MEDICAL SERVICE.

The Government of India has accepted the Commander-in-Chief's recommendation that when, from the exigencies of the service, a surgeon-lieutenant-colonel is appointed principal medical officer of a general hospital of 500 beds, he shall be granted the temporary rank of brigade-surgeon-lieutenant-colonel.

Surgeon-Lieutenant-Colonel H. Hamilton, M.D., has received in the report of his commanding officer honourable mention for his services in connection with the flying column of the Kohat Field Force on the North-West Frontier of India.

THE YEOMANRY AND VOLUNTEER RIFLES.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps specified, dated April 16th: Henry Goodwyn, Royal 1st Devon Yeomanry; Frank A. Wagstaff, 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment; Richard A. Fegan, 2nd Volunteer Battalion the Queen's Own Royal West Kent Regiment.

Surgeon-Captain W. L. Stewart, M.D., 1st Banff Artillery, is promoted to be Surgeon-Major, April 16th.

Surgeon-Lieutenant G. O. M. Lunt, M.B., 1st Flintshire (Buckley) Engineers, is promoted to be Surgeon-Captain, April 16th.

CHANGES OF STATION.

The following changes of station amongst the officers of the Army Medical Staff have been officially reported to have taken place during the last month:

		From.	To.
Brig.-Surg.-Lt.-Col.	W. A. May	Punjab	Bengal.
Surg.-Lt.-Col.	G. D. Bourke	Bengal	Punjab.
Surg.-Major	O. E. P. Lloyd, V.C.	Madras	Scot. District.
,,	M. D. O'Connell	Punjab	Netley.
,,	J. J. Falve	—	Colchester.
,,	A. O. Geoghegan, M.D.	Aldershot	Egypt.
,,	J. E. Nicholson	Bengal	Malta.
,,	G. T. Goggin	Bombay	Dublin.
,,	A. Asbury	York	Strensall.
,,	G. H. Sylvester	Aldershot	Netley.
,,	E. Butt	Dundalk	Egypt.
,,	S. Townsend, M.D.	Punjab	Ballincollig.
,,	J. Batterby, M.B.	Mullingar	Dublin.
,,	J. R. Yourdi, B.A., M.B.	Bombay	Portsmouth.
,,	E. M. Wilson, C.M.G.	Sierra Leone	Home District.
,,	W. G. Birrell, M.B.	Madras	Shorncliffe
,,	C. W. Thiele, M.B.	Dover	,,
,,	H. E. R. James	Home District	Aldershot.
,,	G. Wilson, M.B.	Chatham	West Africa.
,,	W. Turner	—	Devonport.
,,	F. W. C. Jones, M.B.	Bombay	Dover.
,,	W. T. Swan, M.B.	Portsmouth	Gosport.
,,	H. D. Rowan, M.B.	Malta	Bengal.
,,	J. J. O'Donnell, B.A., M.B.	Punjab	Dover.
Surg.-Capt.	A. R. Aldridge, M.B.	Malta	Punjab.
,,	W. T. Mould	Shorncliffe	Lydd.
,,	J. C. Connor, M.B.	Madras	Buttevant.
,,	J. T. Clapham	Colchester	Egypt.
,,	W. Ap. S. A. Graham	West. District	,,
,,	C. W. H. Whitestone, M.B.	Dublin	Holywood.
,,	O. L. Robinson	Ballincollig	Cork.
,,	P. Evans, M.B.	Punjab	Malta.
Surg.-Lieut.	J. G. Berne	Aldershot	West Africa.
Quar.-Master	T. Connor	Dublin	York.
,,	R. Adams	Hong Kong	Dublin.

Brigade-Surgeon-Lieutenant-Colonel J. R. Greenhill (retired pay), has been transferred from Guernsey to Christchurch.

Deputy-Surgeon-General H. C. Herbert, M.D. (retired pay), has relinquished the charge of the troops at Norfield, Bristol, and has been succeeded by Brigade-Surgeon-Lieutenant-Colonel W. H. Steele, M.D., from Devonport (retired pay).

PENSIONS TO I.M.S. OFFICERS.

Brigade Surgeon-Lieutenant-Colonels Sir A. S Lethbridge, K.C.S.I., and D. D. Cunningham, C.I.E., have been granted the two extra pensions of £100 each available for the Bengal Establishment for the year 1898-99; and Brigade-Surgeon-Lieutenant-Colonels F. H. Blenkinsop and J. Arnott have been granted the pensions due to the Madras and Bombay Establishments respectively.

GALLANTRY OF A MEDICAL OFFICER.

A correspondent of the *Times*, writing from West Africa regarding the recent troubles in Sierra Leone in connection with the hut-tax collection, says:

"The medical man accompanying the expedition, Surgeon-Captain Scott, had his leg broken in two places by a shot, besides having a narrow escape when a shot passed across his chest, grazing it. Surgeon-Captain Scott behaved with great gallantry, for notwithstanding his own injuries he continued to attend on the other wounded who were brought to him for that purpose."

The officer here alluded to is doubtless Surgeon-Captain B. H. Scott of the Army Medical Staff, who is shown in the monthly *Army List* of February as serving on the West African Coast.

THE FIELD HOSPITALS IN THE FRONTIER WAR.

Sir Edwin Collen's Memorandum issued as a supplement to the Budget contains the following note: In the medical store depôts satisfactory progress has been made towards improved mobilisation arrangements, while at the same time the increased requirements of the depôts have been met to a greater extent than ever by local manufactures. The department met the severe strain occasioned by the frontier expeditions with satisfactory promptitude. The Bengal depôt alone provided all the stores to complete the equipment of 19 field hospitals, and on receipt of orders for mobilisation the first hospital, fully equipped, was put on board the train within twenty-four hours, and 3 more hospitals in eight days, besides the despatch of large supplies of drugs, etc. Altogether 36½ field hospitals and 2 medical store depots were equipped for service from the several depôts, together with general hospitals, aggregating 1,400 beds for British and 1,900 beds for native troops.

FOREIGN TOURS.

A correspondent writes: Lord Lansdowne has stated that he had shortened the term of Indian service, but this concession has been handicapped by adding an extra year to Colonial tours.[1] These tours were three years up to 1890, then a year was added, and now there is a further addition of a year, making five in all. Not only so, but these rules were made retrospective, so that those who had come out under old rules were put under the new ones without appeal.

In such stations as the Straits Settlements, Hong Kong, and the West Indies, these new rules press with heavy effect, the more so as no leave is given to medical officers to recruit should their health become affected. In these stations the Royal Engineers serve for three years, the Army Service Corps and Army Pay Department for four years, but

[1] *Vide* Army Order 85 of June, 1897.

the Medical for five years. What justice or sense is there in these distinctions? Then these corps have long tours at home, the Medical very little, and it is yearly becoming less.

*** It seems absurd that different rules should exist for different branches of the service in these foreign tours. If any distinction is to be drawn, surely it should be in favour of the Medical, whose duties are far more risky and trying than those of the other corps named.

SURGEON-MAJOR-GENERALS.

OUR contemporary the *Morning Post* recently declared that "there is no more reason to fear that a medical Major-General should attempt to exercise a genuine military command over a combatant force than there is reason to fear that a medical Colonel should make the same attempt on finding himself in the presence of two line regiments in each case under the command of a Lieutenant-Colonel. And if there is any occasion for such a fear under existing regulations, it is the easiest thing in the world to draft a new regulation which shall meet the case."

*** That is common sense, and effectually disposes of the command objection in giving the rank of Major-General in a new medical corps.

UNIVERSITIES AND COLLEGES.

ST. ANDREWS UNIVERSITY AND UNIVERSITY COLLEGE, DUNDEE.

AT a meeting of the University College, Dundee, last week gratification was expressed at the prospect of harmonious co-operation with St Andrews University. Arrangements for the completion of the School of Medicine at Dundee were under consideration, and the principal reported that the University Court had now expressed its willingness to take all the necessary steps to give effect to the ordinances as soon as the funds became available. He submitted a scheme of apportionment which had been adopted by the University Court. The scheme provided for the annual expenditure of £3,000 on the Medical School at Dundee. The Court had further agreed to erect out of the accumulated arrears of the Government grant an adequate building suitably equipped for the purposes of the school. The chairs in the medical faculty at present established in Dundee University College are those of Physics, Chemistry, Botany, Zoology, Anatomy, and Physiology. The new chairs contemplated are those of Pathology, Materia Medica and Therapeutics, Obstetrics. Surgery, and Medicine, together with a lectureship in Medical Jurisprudence and Public Health. The appointments are vested in the University Court, and arrangements are in progress with the Dundee Royal Infirmary for practical instruction.

UNIVERSITY OF EDINBURGH.

SECOND PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B., CH B.—The following candidates have passed this examination in the subjects indicated:

Anatomy and Physiology.—B. H. S. Aylward, A. J. Baird, J. C. Gilchrist, N. Gleeg, R. Hamilton, F. Hardie, C. G. Hey, J. G. S. Jamieson, M.A., F. K. Kerr, J. G. Mackenna, R. A. M. M'Leod, E. Macrory, J. B. Primmer, and P. C. Rayner.

SECOND PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B., C.M. (OLD REGULATIONS).—The following candidates have passed this examination:

A. L. Bennett, C. A. Bentley, J. B. Boyd, P. C. Campariole, J. T. Hurst, J. G. Forsyth, H. O. Hobson, P. W. Shepherd, W. H. Winstanley, and C. G. Wotherspoon, M.A.

SECOND PROFESSIONAL EXAMINATION (OLD REGULATIONS).—The following candidates have passed this examination in the subjects indicated:

Anatomy and Physiology.—A. J. Hughes, J. B. Milne, J. T. Rentoul, S. R. Sibbald, C. P. Strong, G. Wright, G. A. Davidson, E. Ewart, C. B. Paul, and D. J. Roberts.

SECOND PROFESSIONAL EXAMINATION FOR THE DEGREES OF M.B., CH.B. (NEW REGULATIONS).—The following candidates have passed this examination:

J. M. Beanson, M. Campbell, M.A., G. S. Carmichael (with distinction), H. E. Coghlan, W. P. Cormack, J. A. Davies, S. L. H. Gribben, P. S. Haldane, G. H. Hanna, N. E. J. Harding, H. Harris, W. E. Herbert, D. Heron, H. J. Hoile, E. B. Jamieson, L. Laurie, R. G. Leach, A. C. N. M'Hattie, A. J. Mackenzie, D. S. Macknight, H. J. M'Lean, J. M'C. A. Macmillan, M.A., A. M'Nab, G. W. P. Maitland, A. A. Martin, H. Mason, F. C. Matthew, M.A., M. M'F. Meikle, E. I. Melhuish, E. G. D. Menzies, S. H. Morris, J. Munro, H. C. Nixon, N. Patterson, J. Pender (with distinction), L. C. P. Ritchie, D. Robertson, J. K. A. Robertson, G. A. P. Ross, R. A. Ross (with distinction), W. C. Ross, R. A. Savage, W. S. Scott, J. F. Selkirk, H. D. Shepherd, I. S. Shepherd, F. D. Simpson, G. W. Smith, J. A. Smith, C. B. Snow, C. E. Southor, G. B. A. Spiers, C. S. Steavenson, T. G. Stewart, M. A. Swan, J. H. Thornley, A. Trotter, A. G. Watson, N. S. Wells, G. D. Whyte, F. M. Wigg, A. W. Wilson, M.R. Wilson, T. J. G. Wilson, F. Young, M.A. (with distinction), J. C. Zundweer, J. A. Black, C. S. Clark, V. A. P. Coghill, S. L. Dawkins, D. J. Fergusson, D. C. L. Fitzwilliams, K. W. Hogg, E. A. Loch, S. J. M'Elderry, A. G. Martin, J. A. S. Monro, T. B. H. Scott, E. T. Selkirk, E. R. Sproull, F. T. Thomson, A. Tweedie, C. S. Varton, A. Whyte, W. G. Williams, T. H. W. Alexander, J. D. Anderson, H. E. Arbuckle, S. A. Ballantyne, J. W. Berrack, M. C. Beatty, H. Bishop, A. B. Black, J. S. Bostock, O. C. Bradley, L. P. Brassey, J. M. L. Brown, M.A., Adam Brydon, G. F. Buss (Kirkcaldy Chapel), J. Craig, W. J. Dunn, W. Eadie, J. S. Euslin, A. Fleming, A. Frew, W. E. Frost (with distinction), J. S. Geikie, W. Girdwood, T. Graham, and A. M. Wood (with distinction).

UNIVERSITY OF DURHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE (OLD REGULATIONS).—The following candidates have satisfied the Examiners in the subjects indicated:

Chemistry with Chemical Physics, and Botany with Medical Botany.—W. P. A. Hardwicke, College of Medicine, Newcastle-upon-Tyne.

Chemistry with Chemical Physics.—F. B. H. Caudwell, M.R.C.S., L.R.C.P., Charing Cross Hospital; H. W. Dudgeon, M.R.C.S., L.R.C.P., Guy's Hospital; R. D. Fisher, M.R.C.S., L.R.C.P., London Hospital.

Elementary Anatomy.—W. E. N. Smith, College of Medicine, Newcastle-upon-Tyne.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE (NEW REGULATIONS).—The following candidates have satisfied the Examiners in the subjects indicated:

Elementary Anatomy and Biology, Chemistry and Physics.—*H. Jessop, Mason College, Birmingham; Katharine Mary Helen Hawkins, London School of Medicine for Women; K. Manson, College of Medicine, Newcastle-upon-Tyne; L. M. Markham, College of Medicine, Newcastle-upon-Tyne; L. C. Newton, College of Medicine, Newcastle-upon-Tyne; R. W. Nevin, College of Medicine, Newcastle-upon-Tyne; F. C. Ramsbottom, College of Medicine, Newcastle-upon-Tyne.

Chemistry and Physics.—Alice Maud Dodd, London School of Medicine for Women; Ida Emilie Fox, London School of Medicine for Women; H. W. Furnivall, University College Hospital, London; J. A. Giles, College of Medicine, Newcastle-upon-Tyne; I. H. S. Hawes, St. George's Hospital; Florence Dyer Durrell Ledgard, London School of Medicine for Women; E. H. Milner-Moore, St. Mary's Hospital.

Elementary Anatomy and Biology.—T. E. Amyot, College of Medicine, Newcastle-upon-Tyne; A. B. Bradford, St. Thomas's Hospital; C. H. Cox, Mason College, Birmingham; M. Haver, College of Medicine, Newcastle-upon-Tyne; E. E. Norman, College of Medicine, Newcastle-upon-Tyne; E. Osborne, Mason College, Birmingham; T. E. Pemberton, Mason College, Birmingham; R. S. Renton, College of Medicine, Newcastle upon-Tyne; G. W. Smith, Guy's Hospital; B. E. Spurgin, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy, Chemistry, and Physics.—G. E. Froggatt, Middlesex Hospital; A. E. Gisborn, College of Medicine Newcastle-upon-Tyne; P. A. Hendley, King's College, London; V. B. Nesfield, St. Mary's Hospital; G. De B. Turtle, King's College, London.

Elementary Anatomy.—C. R. Stewart, St. George's Hospital.

SECOND EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the Examiners:

Anatomy, Physiology, Materia Medica.—*L. H. Walsh, M.R.C.S., L.R.C.P., King's College Hospital; *E. T. Born, College of Medicine, Newcastle-upon-Tyne; R. S. Brown, College of Medicine, Newcastle-upon-Tyne; G. B. Brown, College of Medicine, Newcastle-upon-Tyne; J. J. French, College of Medicine, Newcastle-upon-Tyne; R. D. Fisher, M.R.C.S., L.R.C.P., London Hospital; H. P. Fox, Cooke's School of Anatomy; C. H. Gibson, College of Medicine, Newcastle-upon-Tyne; H. W. Horan, College of Medicine, Newcastle-upon-Tyne; J. W. Heslop, College of Medicine, Newcastle-upon-Tyne; D. H. J. Kirton, Mason College, Birmingham; J. R. Mitchell, College of Medicine, Newcastle-upon-Tyne; R. T. Vaux, College of Medicine, Newcastle-upon-Tyne; F. P. Wigfield, College of Medicine, Newcastle-upon-Tyne.

* Second Class Honours.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

AT a stated meeting of the College held on Friday, April 15th, the following gentlemen were admitted:

Fellows.—J. Campbell, J. H. R. Glenn, W. L. Symes, T. H. Wilson.

Member.—W. R. Dawson.

CONJOINT BOARD IN IRELAND.

FIRST PROFESSIONAL EXAMINATION.—The following candidates have passed this examination:

Completed the Examination.—Honours—C. Foley. Pass (alphabetically)—H. L. Becker, F. W. Brunker, F. J. Cahill, F. H. Cooke, P. Donnellon, Miss H. A. Diver, H. B. Evans, W. N. Eustace, T. E. Johnstone, G. Levis, M. E. Lynch, J. Nash, R. C. Nicholl, R. H. G. Oulton, C. R. Richardson, M. C. Sage, T. J. Wright.

In Anatomy.—C. D. Downing, J. F. Farrell, W. J. Greehy, T. A. M'Dougal, J. Stuart.

In Biology.—B. D. Gibson, W. J. Greehy, D. Kennedy, J. O. Doherty, E. O'Grady.

In Chemistry.—C. D. Downing, W. J. Greehy (and in Physics), T. A. M'Dougal.

In Pharmacy.—M. J. Dowling, J. Stuart.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1898.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending March last 87,536 births were registered in these thirty-three towns, equal to an annual rate of 31.3 per 1,000 of their aggrogate population, estimated at 11,218,378 persons in the middle of this year. In the corresponding periods of the three preceding years the birth rates in these towns were 33.5, 30.4, and 31.7 per 1,000 respectively. In London the birth-rate last quarter was 30.8 per 1,000, while it averaged 31.6 in the thirty-two provincial towns, among which it ranged from 23.4 in Huddersfield, 23.9 in Oldham, 24.8 in Bradford, and 24.9 in Brighton and in Halifax to 35.4 in Birmingham and in Salford, 36.5 in Liverpool, 36.8 in Gateshead, and 38.7 in Wolverhampton.

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the First Quarter of 1898.

Towns.	Estimated Population middle of 1898.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	11,218,378	87,536	57,643	31.3	20.6	2.38	6,663	2	2,749	469	919	1,596	452	476	145	1.3
32 Provincial Towns	6,713,612	52,970	33,216	31.6	19.8	2.04	3,399	2	1,255	287	385	780	345	345	148	1.8
London	4,504,766	34,566	24,427	30.8	21.7	2.92	3,264	—	1,494	182	534	816	107	131	141	0.6
West Ham	286,654	2,313	1,168	32.4	16.3	1.76	126	—	30	6	42	31	10	7	134	3.7
Croydon	124,421	808	488	26.0	15.7	1.37	43	—	20	4	6	11	2	—	109	—
Brighton	122,310	758	605	24.9	19.8	2.89	88	—	66	3	2	9	4	4	153	0.5
Portsmouth	186,618	1,243	835	26.7	17.9	1.04	48	—	—	8	4	27	4	5	152	1.2
Plymouth	99,136	760	530	30.7	21.4	0.60	15	—	1	—	4	7	2	1	149	0.8
Bristol	316,900	2,324	1,665	29.4	21.1	3.54	280	—	212	5	17	23	8	15	147	0.4
Cardiff	177,770	1,418	774	32.0	17.5	2.21	98	—	27	2	52	8	4	5	140	1.3
Swansea	102,001	744	570	29.3	22.4	2.88	73	—	63	1	3	2	1	3	195	1.2
Wolverhampton	88,051	850	494	38.7	22.5	1.68	37	—	4	8	18	2	4	1	158	1.0
Birmingham	510,343	4,507	2,792	35.4	21.9	2.57	327	—	82	16	39	112	41	37	160	3.7
Norwich	111,699	880	568	31.6	20.4	1.25	35	—	—	2	1	21	7	4	155	0.7
Leicester	208,662	1,576	924	30.3	17.8	3.51	182	—	141	14	11	6	5	5	162	2.1
Nottingham	236,137	1,809	1,164	30.7	19.8	1.13	67	—	6	5	5	18	22	11	157	1.0
Derby	104,834	684	466	26.2	17.8	2.37	62	—	30	5	3	10	7	7	149	—
Birkenhead	113,189	863	485	30.6	17.2	2.34	66	—	22	16	10	2	8	2	127	0.8
Liverpool	633,045	5,764	3,716	36.5	23.5	1.79	284	—	37	46	33	100	25	43	143	3.8
Bolton	122,495	976	592	32.0	19.4	1.58	48	—	—	6	4	17	7	14	130	—
Manchester	539,079	4,480	2,854	33.3	21.2	1.60	215	—	42	26	9	52	34	52	140	1.1
Salford	215,702	1,905	1,104	35.4	20.5	2.26	121	—	21	15	8	36	17	24	150	1.8
Oldham	148,288	884	696	23.9	18.8	2.92	108	—	57	4	2	31	7	7	178	—
Burnley	109,546	796	468	29.1	17.1	1.28	35	—	5	—	12	4	9	5	155	0.6
Blackburn	133,228	903	609	27.2	18.3	1.92	64	—	36	4	4	—	9	11	175	3.4
Preston	116,356	962	530	33.2	18.3	1.27	37	—	2	2	3	—	16	14	159	3.8
Huddersfield	102,454	598	443	23.4	17.3	1.60	41	—	20	6	7	3	2	3	144	2.3
Halifax	96,729	600	482	24.9	20.0	1.79	43	—	28	1	4	—	5	5	140	2.5
Bradford	233,737	1,446	1,089	24.8	18.7	1.23	72	—	24	—	3	25	10	10	144	1.2
Leeds	416,618	3,165	2,009	30.5	19.3	2.28	237	1	60	35	38	76	16	11	144	0.3
Sheffield	356,478	3,007	1,764	33.8	19.8	2.63	234	—	90	20	10	74	22	18	147	2.8
Hull	229,887	1,965	1,082	34.3	18.9	1.72	99	—	46	10	5	24	10	4	140	1.8
Sunderland	143,849	1,214	710	33.9	19.8	2.08	74	1	39	7	6	6	10	5	158	0.7
Gateshead	103,775	953	514	36.8	19.9	2.25	58	—	21	3	3	21	7	3	168	0.2
Newcastle-on-Tyne	223,021	1,815	1,026	32.6	18.5	1.48	82	—	23	7	11	22	10	9	131	1.2

During the quarter under notice 57,643 deaths were registered in the thirty-three towns, corresponding to an annual rate of 20.6 per 1,000, against 25.2, 19.5, and 19.2 in the first quarters of the three preceding years. In London the rate of mortality was 21.7 per 1,000, while it averaged 19.8 in the thirty-two large provincial towns, among which it ranged from 15.7 in Croydon, 16.3 in West Ham, 17.1 in Burnley, 17.2 in Birkenhead, and 17.3 in Huddersfield to 21.4 in Plymouth, 21.9 in Birmingham, 22.4 in Swansea, 22.5 in Wolverhampton, and 23.5 in Liverpool. The 57,643 deaths registered in the thirty-three towns last quarter included 6,663 which were referred to the principal zymotic diseases, equal to an annual rate of 2.38 per 1,000, against 1.62, 2.69, and 1.69 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 2.92 per 1,000, while it averaged 2.04 in the thirty-two provincial towns, among which it ranged from 0.60 in Plymouth, 1.04 in Portsmouth, 1.13 in Nottingham, and 1.23 in Bradford, to 2.63 in Sheffield, 2.88 in Swansea, 2.89 in Brighton, 2.92 in Oldham, 3.51 in Leicester, and 3.54 in Bristol. The 6,663 deaths referred to the principal zymotic diseases in the thirty-three large towns during the quarter under notice included 2,749 which resulted from measles, 1,596 from whooping-cough, 919 from diphtheria, 476 from diarrhœa, 469 from scarlet fever, 452 from "fever" (principally enteric), and 2 from small-pox. The fatal cases of measles, which had been 1,507, 1,452, and 2,196 in the three preceding quarters, further rose to 2,749 during the three months ending March last, and were equal to an annual rate of 0.98 per 1,000; in London the measles death-rate was 1.33 per 1,000, while it averaged 0.75 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Brighton, Bristol, Swansea, Leicester, Derby, Oldham, and Halifax. The deaths referred to whooping-cough, which had been 646, 720, and 1,097 in the three preceding quarters, further rose to 1,596 during the three months under notice, and were equal to an annual rate of 0.57 per 1,000; in London the death-rate from this disease was equal to 0.73, while it averaged 0.47 in the thirty-two provincial towns, among which whooping-cough was proportionally most fatal in Birmingham, Norwich, Oldham, Leeds, Sheffield, and Gateshead. The fatal cases of diphtheria, which had been 646, 720, and 1,097 in the three preceding quarters, declined to 919 during the quarter under notice, and were equal to an annual rate of 0.33 per 1,000; in London the diphtheria death-rate was equal to 0.48 per 1,000, while it averaged 0.23 in the thirty-two provincial towns, among which this disease caused the highest proportional fatality in West Ham, Cardiff, Wolverhampton, Birkenhead, Burnley, and Leeds. The 476 deaths from diarrhœa registered during last quarter were below the average number in the corresponding quarters of recent years, and were equal to an annual rate of 0.17 per 1,000; in London the death-rate from this disease was 0.12 per 1,000, while it averaged 0.21 in the thirty-two provincial towns, and was highest in Bolton, Manchester, Salford, and Preston. The fatal cases of scarlet fever, which had been 410, 490, and 599 in the three preceding quarters, declined to 469 during the three months ending March last, and were equal to an annual rate of 0.17 per 1,000; in London the scarlet fever death-rate was 0.16 per 1,000, and almost corresponded with the average rate in the thirty-two provincial towns, among which this disease was proportionally most fatal in Wolverhampton, Leicester, Birkenhead, Liverpool, Salford, and Leeds. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had been 280, 499, and 772 in the three preceding quarters, declined to 452 during the quarter ending March last, and were equal to an annual rate of 0.16 per 1,000; in London the "fever" death-rate did not exceed 0.10 per 1,000, while it averaged 0.21 in the thirty-two provincial towns, among which the highest rates were recorded in Birmingham, Nottingham, Birkenhead, Salford, Burnley, Preston, and Sunderland. Of the two fatal cases of small-pox registered last quarter in the thirty-three towns 1 was recorded in Leeds and 1 in Sunderland; no death from this disease occurred in London during the three months ending March last.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under 1 year of age to registered births, was equal to 145 per 1,000 during the quarter under notice, against 161, 150, and 139 in the corresponding periods of the three preceding years. In London the rate of infant mortality was equal to 141 per 1,000, while it averaged 148 in the thirty-two provincial towns, among which it ranged from 109 in Croydon, 127 in Birkenhead, 130 in Bolton, 131 in Newcastle-upon-Tyne, and 134 in West Ham, to 160 in Birmingham, 162 in Leicester, 168 in Gateshead, 175 in Blackburn, 178 in Oldham, and 195 in Swansea.

The causes of 752, or 1.3 per cent., of the deaths in the thirty-three towns during the three months ending March last were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.6 per cent., while it averaged 1.8 in the thirty-two provincial towns. The causes of all the deaths during the quarter were duly certified in Croydon, Derby, Bolton, and Oldham, and only one death was uncertified in Gateshead; while the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Blackburn, and Preston.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,629 births and 4,201 deaths were registered during the week ending Saturday last, April 16th. The annual rate of mortality in these towns, which had been 21.5 and 20.2 per 1,000 in the two preceding weeks, further declined to 19.5 last week. The rates in the several towns ranged from 12.5 in Preston, 12.6 in Portsmouth, 13.6 in West Ham, and 14.8 in Swansea to 24.6 in Oldham, 25.6 in Gateshead, 26.0 in Newcastle-on-Tyne, and 27.5 in Liverpool. In the thirty-two provincial towns the mean death-rate was 19.8 per 1,000, and was 0.7 above the rate recorded in London, which was 19.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged

1.9 per 1,000; in London the rate was equal to 2.8, while it averaged 2.3 per 1,000 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.0 in Wolverhampton, in Leeds, and in Gateshead, 3.1 in Halifax, 3.5 in Cardiff, and 4.2 in Leicester. Measles caused a death-rate of 1.7 in Brighton, 1.8 in Wolverhampton, 2.0 in Bristol, 2.7 in Halifax, and 3.0 in Leicester; scarlet fever of 1.0 in Derby; and whooping-cough of 1.0 in Gateshead and 1.2 in Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 70 deaths from diphtheria in the thirty-three towns included 34 in London, 7 in Cardiff, 4 in West Ham, 3 in Croydon, and 3 in Birmingham. One fatal case of small-pox was registered in Newcastle-upon-Tyne, but not one in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,371, 2,377, and 2,421 at the end of the three preceding weeks, had declined to 2,384 on Saturday last, April 16th; 217 new cases were admitted during the week, against 191, 239, and 234 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, April 16th, 1,011 births and 680 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 24.2 and 24.1 per 1,000 in the two preceding weeks, further declined to 22.5 last week, but was 3.0 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.0 in Leith and 19.6 in Greenock to 23.8 in Perth and 30.3 in Dundee. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Dundee and Paisley. The 306 deaths registered in Glasgow included 13 from measles, 7 from scarlet fever, 13 from whooping-cough, and 7 from diarrhœa. Five fatal cases of whooping-cough and 2 of diphtheria were recorded in Edinburgh, and 3 of "fever" in Dundee.

DIPHTHERIA IN LONDON.

The mortality from diphtheria in London showed an increase last week. The fatal cases of this disease, which had been 53, 45, and 29 in the three preceding weeks, rose again to 34 during the week ending Saturday last, April 16th. Of these 34 deaths, 5 were of persons belonging to Hackney and 4 to Islington sanitary areas. The notifications of diphtheria in London, which had declined from 231 to 180 in the four preceding weeks, rose again to 205 during the week ending Saturday last, the 16th inst. Compared with the preceding week, there was a slight decline in the prevalence of the disease in East London, but in each of the other groups of sanitary areas there was an increase, which was most marked in North London. The increase in the number of new cases in West London was confined to Chelsea, Paddington, and St. George Hanover Square sanitary areas. Among the various sanitary areas of North London there was a considerable further increase in the prevalence of diphtheria in Islington, 20 new cases being notified, against 8 and 11 in the two preceding weeks; and in Hackney 16 new cases were reported, against 7 in the preceding week. In the sanitary areas of East London there was little change in the prevalence of the disease, except in Mile End Old Town, where 7 new cases were notified, against 3 and 2 in the two preceding weeks; while in Poplar the new cases, which had been 10 in the previous week, declined to 2 last week. Although in South London the prevalence of diphtheria showed a slight decline last week in several of the sanitary areas, there was a marked increase, notably in Newington, where the new cases rose to 11, against but 2 in the preceding week; and in Camberwell, where 17 new cases were notified, against 10 in the previous week. On the other hand, in Battersea, Greenwich, and Lee there was a marked decline in the prevalence of the disease. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 108, against 133, 121, and 120 in the three preceding weeks; and 960 cases remained under treatment in these hospitals on Saturday last, April 16th.

THE M.O.H. ON DEPUTATION.

A Correspondent, M.O.H. in small urban district, is requested to go with surveyor, clerk, and two members of his Board to discuss new by-laws at Whitehall. The clerk informs him that he is not entitled to a fee.

*** As his whole time is not given to his Board our correspondent is at least entitled to out-of-pocket expenses, which if he is in private practice might include the payment of a *locum tenens*. We advise him to represent this view to the chairman of his district council. Visits to London are presumably not part of the work he undertakes to do for a small salary by accepting his appointment.

MEDICO-LEGAL.

PROSECUTION UNDER THE MEDICAL ACT.

At Worship Street Police-court on April 14th Leopold Liebster was, according to a report in the *Morning Advertiser*, summoned for having wilfully and falsely taken and used the name and title of doctor of medicine, he not being a registered practitioner within the meaning of the Act of 1858, and for having, not being a registered medical practitioner, taken and used the name, title, and description as medical officer to the National Medical Aid Society. The informations were laid by the Medical Defence Union, and the case arose out of an inquest briefly reported in the British Medical Journal of March 5th, page 667. The defence on the first summons was based on the fact that the defendant was duly qualified in Vienna, and the case was adjourned.

MEDICAL TITLES.

We have received several letters with reference to the case briefly reported under the above heading in the British Medical Journal of April 16th, page 1051. Our correspondents protest against the action of the General Medical Council and the interpretation of the law which found favour with the bench. As, however, the case will be appealed, and as the appeal may possibly be heard before many weeks are over, we are disposed to think that it is undesirable to discuss the matter in this preliminary stage.

FEES TO MEDICAL WITNESSES IN CRIMINAL CASES.

C. B. B.—In all cases of felony and in most cases of misdemeanour the justices are empowered to grant a certificate for the payment to a medical witness for the prosecution, for attending to give evidence, of a fee not exceeding 10s. 6d. when the witness resides at the place, and in addition a sum of 3d. per mile each way when he resides at a distance. We do not know the nature of the charge for which our correspondent was required by the police to attend, and accordingly attended to give evidence before the magistrate. The clerk to the magistrates might be asked to define the grounds on which payment of the fee was refused; that is, whether in consequence of not having been formally subpœnaed, or not having actually obtained the certificate of the magistrate, or by reason of the case not coming within the meaning of a statutory misdemeanour, or on what other ground.

MEDICAL NEWS.

Mr. T. Vincent Jackson has been appointed Consulting Surgeon to the Orphan Asylum, Wolverhampton.

The annual dinner of the old students of King's College, London, will be held at the Holborn Restaurant on June 13th. The chair will be taken by the Bishop of London.

The Princess of Wales has consented to open the new laboratories of the London School of Medicine for Women in Handel Street, Brunswick Square, next July. The Princess will be accompanied by the Prince of Wales.

We are authorised to state that the report which found circulation recently to the effect that the United States Government had invited the medical staffs of the London hospitals "to assist them in securing the services of competent surgeons" to proceed to America in the event of their being required to attend the wounded in war is entirely unfounded.

A Sanitarium in the Khyber Pass.—General Sir William Lockhart's recent visit to Lundi Kotal was, it is understood, made with a view to inspect a site for a sanitarium suitable for quarters for British troops. An officer of the Political Service, Colonel Warburton, has pointed out an extremely suitable spot. Surgeon-Colonel Thomson accompanied Sir William Lockhart to Lundi Kotal. There is a probability that if the site inspected be finally approved, the Khyber will be permanently occupied by the British.

M. Felix Faure, President of the French Republic, recently paid an unofficial visit to the Paris Ecole de Médecine. This is said to be the first time that the head of the State in France has done such a thing. It may be remembered that the late Emperor of Brazil was fond of such informal visits, and used to take his place among the audience at a lecture, asking innumerable questions afterwards. In the same spirit the President attended a lecture on Medicine by M. Hutinel; afterwards he was present at a lecture on Hygiene.

Society for the Study of Inebriety.—The annual meeting was held at 11, Chandos Street, on the 14th inst., the President, Dr. Norman Kerr, in the chair. Lady Elizabeth Biddulph, who had just returned from Egypt, stated that the battle of Atbara had been fought without alcohol. Dr. R. W. Branthwaite read a paper on Some Points in the Treatment of Inebriety, commending the combined use of potassium bromide and chloral hydrate to prevent delirium tremens. Surgeon-Lieutenant-Colonel Pringle, Surgeon-Major Poole, Drs. Longhurst, Hazell, James Stewart, A. Smith, and Mr. Riley took part in the discussion.

Government Dairies.—In view of the prevalence of enteric fever at Mhow, the Government of India have placed the necessary funds at the disposal of the Bombay military authorities for the establishment of a cantonment dairy at that station, to be managed by a dairyman trained at Umbala. This, however, is merely a temporary arrangement, as the whole question of the supply of pure milk and butter to British troops is under the consideration of Government; and in the event of the model dairy started as an experiment at Umbala, under Veterinary-Major Kemp, proving a success, Government dairies worked on similar lines will be opened

at other principal military stations. Much interesting information on dairy farms is to be found in *Blackwood's Magazine* for February.

Mr. D. M. Forbes was on April 18th entertained at dinner at the Inns of Court Hotel by the Infirmary Medical Superintendents' Society on the occasion of his retirement from the office of medical superintendent of the Shoreditch Infirmary, an office which he has held for thirty years. The chairman, Mr. W. S. Burney, in proposing the health of the guest as well as Messrs. Hopkins, Lunn, Gordon, and Dr. Toogood, who also spoke, paid a high tribute to the good work which Mr. Forbes had done in the interests of the sick poor, and pointed out that he was a pioneer in the establishment of separated infirmaries under medical control. Mr. Hopkins added that Mr. Forbes had been one of the first to draw attention to the great mortality among lead workers in London, and that his advocacy of preventive measures had contributed materially to legislation which had been the means of saving many hundreds of lives. Mr. Forbes returned thanks in appropriate terms.

Society for the Relief of Widows and Orphans of Medical Men.—A quarterly court of the directors of the Society was held on April 13th, at 11, Chandos Street, Dr. Pollock, Vice-President, in the chair. Four new members were elected and the deaths of two reported. Applications for grants were received from 50 widows, 12 orphans, and 6 recipients from the Copeland fund, and it was resolved that £1,241 should be distributed among them at the next court. The expenses of the quarter were £50 15s. 6d. The Treasurer was empowered to purchase stock to the amount of £500. The Secretary was instructed to forward to Miss Quain a letter of sympathy and condolence on the great loss she had sustained through the death of Sir Richard Quain. The following gentlemen were nominated for election at the annual general meeting to fill the vacancies in the list of officers: Mr. Warrington Haward as Treasurer in place of the late Sir R. Quain, Mr. C. F. Keele, Dr. Bate, Sir A. Garrod, Mr. Hazel, Mr. Lynch, and Dr. Cullingworth as directors in the place of the six senior who retire. The annual general meeting of the Society will be held on Friday, May 20th, at 5 P.M., at 11, Chandos Street, W.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon and Assistant House-Physician. Appointments for six months. No salary, but residence, board, and washing provided. Applications to Howard J. Collins, House-Governor, by April 30th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CITY OF LONDON FREEMEN'S ORPHAN SCHOOL AND THE LONDON AND ROGERS'S ALMSHOUSES, Ferndale Road, Brixton.—Medical Officer. Salary, £125 per annum. Applications, on forms provided, to the Town Clerk, Guildhall, E.C., by April 30th.

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by May 3rd.

CLEVELAND, YORKSHIRE: MIDDLESBROUGH COUNTY BOROUGH ASYLUM.—Assistant Medical Officer, age not to exceed 30, single. Salary, £100 per annum, with furnished quarters, board, washing, and attendance. Applications to the Medical Superintendent by April 26th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Resident Medical Officer, under 30 years of age, unmarried. Appointment for two years. Salary, £100 per annum, with board and lodgings. Applications, on forms provided, to the Chairman of the Selection Committee by April 25th.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £20 per annum, with board, lodging, and washing. Applications by May 12th.

DURHAM COUNTY HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications by April 29th.

FAREHAM: HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried, and not to exceed 30 years of age. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors by April 26th.

GLOUCESTER: THE GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTER EYE INSTITUTION.—Assistant Surgeon. Applications by May 11th.

GROCERS' COMPANY.—Three Medical Research Scholarships, value £250. Applications to the Clerk of the Company, Grocers' Hall, Princes Street, E.C., before the end of April.

HARTSHILL, STOKE-UPON-TRENT: NORTH STAFFORDSHIRE INFIRMARY.—Assistant House-Surgeon. Board, apartments, and washing provided. Applications by April 25th.

HOSPITAL OF ST. FRANCIS, New Kent Road, S.E.—Honorary Assistant Surgeon, Two Honorary Assistant Physicians, and Anæsthetist. Applications to the Secretary by May 1st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Physician; unmarried. Appointment for six months. Salary, £20, with board and residence. Also House-Surgeon to Out-patients; non-resident. Appointment for six months. Salary, 25 guineas. Applications, on forms provided, to be sent to the Secretary.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Two vacancies on the Honorary Medical Staff. Applications to the Secretary, 13, Kilburn Park Road, N.W., by May 7th.

KING'S COLLEGE, LONDON.—Sambrook Medical Registrarship. Applications by April 25th.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—House-Surgeon; non resident. Appointment for six months. Salary, £25. Applications to the Honorary Secretary of the Medical Committee.

MIDDLESBROUGH: BOROUGH OF.—Medical Officer of Health. Salary, £350 per annum. Applications to George Bainbridge, Town Clerk, by May 2nd.

NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY.—House-Surgeon; unmarried. Salary, £80 per annum, with board and lodging. Will be required to do the dispensing for the Hospital and Free and Provident Dispensaries, for which a further salary of £40 is paid. Applications, on forms provided, by May 2nd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £50 is attached to the senior post. Applications to the Secretary by May 2nd.

NOTTINGHAM GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, rising £10 a year to £120. Applications by April 26th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—House-Physician. Appointment for six months. No salary, but board, etc., provided. Applications by April 25th.

ST. ALBANS RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £100 per annum. Applications to the Clerk by May 2nd.

ST. MARY'S HOSPITAL, Paddington, W.—Radiographer. Applications to the Secretary by April 29th.

SEAMEN'S HOSPITAL (DREADNOUGHT), Greenwich, S.E.—House-Surgeon for the Dreadnought Hospital, Greenwich. Junior House-Surgeon for Branch Hospital, Royal Albert Dock. Salaries, £50 per annum, with board and residence. Applications to the Secretary by May 3rd.

SUFFOLK COUNTY ASYLUM, Melton.—Second Assistant Medical Officer; under 30 years of age. Salary, £100 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, County Asylum, Melton, Suffolk, by May 10th.

TRURO: ROYAL CORNWALL INFIRMARY.—Ophthalmic Surgeon. Applications before April 30th.

VENTNOR, ISLE OF WIGHT: ROYAL HOSPITAL FOR CONSUMPTION.—Resident Medical Officer. Salary, £100 per annum, with board and lodging in the Hospital: unmarried. Applications to the Board of Management, 34, Craven Street, Charing Cross, London, by May 6th.

WEST DERBY UNION.—Resident Assistant Medical Officer at Mill Road Infirmary. Salary, £100 per annum, with rations. Applications to H. P. Cleaver, Clerk to the Guardians, Brougham Terrace, Liverpool, by May 3rd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon and House-Physician. Salaries, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by May 6th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £150 per annum, with furnished apartments, coals, and gas. Applications to W. Draper, De Grey House, York.

MEDICAL APPOINTMENTS.

Armstrong, W. G., M.B., Ch.M.Sydney, D.P.H.Camb., appointed Medical Officer of Health for the Combined Metropolitan Districts of Sydney.

Carruthers, Dr., appointed Medical Officer and Public Vaccinator for the Fourth District of the Bath Union.

Crawford, Douglas, M.B., F.R.C.S., appointed Honorary Surgeon to the Stanley Hospital, Liverpool, *vice* G. P. Newbolt, F.R.C.S.

Davis, W. J. E., L.R.C.P.Lond., M.R.C.S.Eng., appointed Resident Medical Officer at the Chelsea Infirmary.

Johnstone, Thomas, M.D.Edin., M.R.C.P.Lond., reappointed Medical Officer of Health to the Ilkley Urban District Council.

Mackay, Dr. H., appointed Medical Officer for the South-East District of the Sheffield Union

Milward, F. V., M.B., B.C.Cantab., M.R.C.S Eng., L.R.C.P.Lond., appointed Resident Surgical Officer to the General Hospital, Birmingham.

Morrison, A. Thomson, M.B., B.Ch.R.U.I., reappointed Medical Officer of Health to the Aylesbury Rural District Council.

Paxton, John, M.B., C.M.Glasg., appointed Medical Officer and Public Vaccinator for the Hamsterley District of the Auckland Union, *vice* Maurice Kœttlitz, L.R.C.P., L.S.A., resigned.

Robinson, E. Stanley, M.R.C.S., L.R.C.P., reappointed Medical Officer of Health to the Stourport Urban District Council.

Rodgers, R. C., M.R.C.S., L.R.C.P., appointed District Medical Officer to the Burnley Union, *vice* Dr. Sutcliffe, resigned.

Rowland, David R., M.B., C.M.Edin., D.P.H.Lond., appointed House-Physician to the Swansea Hospital.

Williams, Howell, M.D.St.And., reappointed Medical Officer of Health to the Richmond Rural District Council.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 6.30 P.M.—Mr. Battle: Unusual Cases of Renal Calculus. Mr. W. Armstrong (Buxton): The Therapeutic Value of Central Galvanisation in Cardiac and other Neuroses.

TUESDAY.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. T. R. Bradshaw: A case of Albumosuria in which the Albumose was spontaneously precipitated. (Communicated by Dr. Lauder Brunton.) Dr. Samuel West: Intrapleural Tension.

WEDNESDAY.

Hunterian Society, 8.30 P.M.—Dr. Fortescue Fox: Observations on Crisis. Mr. A. H. Tubby: Coxa Vara.

British Balneological and Climatological Society, 20, Hanover Square, W., 8.30 P.M.—Dr. Wm. Bain (Harrogate): The Action of certain Drugs and Mineral Waters on the Secretion and Composition of Human Bile—an experimental investigation. Dr. Edmund Hobhouse (Brighton): Gout and Rheumatism in relation to the Seashore and Salt-water Baths.

THURSDAY.

Harveian Society of London, 8.30 P.M.—Mr. P. J. Freyer: My latest series of 100 Operations for Stone in the Bladder, with practical remarks thereon.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Lantern Demonstration to Senior Students: Heart Disease.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Exhibition of Cases.

FRIDAY.

Clinical Society of London, 8.30 P.M. Clinical evening. The following cases will be shown. The patients will be in attendance at 8 P.M. Mr. F. Eve: Cases of Transplantation of Tendon for Infantile Paralysis. Dr. W. Pasteur: Case of Graves's Disease in which Bradycardia has supervened. Dr. A. E. Garrod: Cases illustrating the association of Congenital Heart Disease with the Mongol type of Idiocy. Mr. Walter Spencer: Case of Acute Gangrenous Appendicitis in a boy; removal of appendix twenty-six hours after the onset; with specimen. Dr. C. E. Beevor: Case of Amyotrophic Lateral Sclerosis with Jaw Clonus. Dr. H. D. Rolleston: (1) Hemiplegia after Typhoid Fever; (2) Osteitis Deformans in a woman. And other cases.

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, Cavendish Square, 3 P.M.—Laryngological Section.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTH.

JONES.—On March 29th, at Poona, India, the wife of Surgeon-Major J. M. Jones, A.M.S., of a son.

MARRIAGES.

BLACKER—HARVEY.—On April 13th, at St. Paul's Church, Clifton, by the Rev. W. H. P. Harvey, M.A., Vicar of St. John's Church, Chipping Sudbury, brother of the bride, assisted by the Ven. A. C. Ainslie, LL.D., Archdeacon of Taunton, and the Rev. Canon Mather, M.A., Vicar of St. Paul's, Ernest Blacker, M.D., M.R.C.S., L.R.C.P., of Southampton, son of the late Dr. Blacker, of Midsomer Norton, to Edith Emilie, youngest daughter of the late Rev. George Ludford Harvey, M.A., Rector of Yate, Gloucestershire, and granddaughter of the late Sir Ludford Harvey, many years Senior Surgeon of St. Bartholomew's Hospital, London.

BROWN—WOOD.—On April 13th, at St. Mary Abbott's, Kensington, London, by the Rev. S. de Messoner, Arthur L. Brown, of 4, Hillfield Parade, Gloucester, to Edith Isabel, elder daughter of Horatio Wood, M.R.C.S. Eng., of the Priory, Balsall Heath, Birmingham. Australian papers please copy.

COTTON—ILES.—On Thursday, April 14th, at the Parish Church, Watford, Herts, by the Rev. R. Lee Thomas, Vicar, Henry Hugh Powell Cotton, Esq., of Westerham, Kent, son of the late C. C. Cotton, Esq., of Clevelands, Hampton Wick, and York House, Chertsey, to Isobel Wilson, eldest daughter of the late F. H. Wilson Iles, Esq., M.D., of Watford.

DUKE—RAE.—On April 14th, at All Saints Church, Cheltenham, by the Rev. George Gardner, assisted by the Rev. Slade Penoyne, Allen Forrester Duke, M.R.C.S., L.R.C.P., eldest son of Allen A. Duke, M.D., of Worthing, and grandson of the late Allen Duke, M.D. of Chichester, to Helen Edith, fourth daughter of the late Henry Maples Rae, of Cheltenham.

GRIFFITH—TALBOT.—On Tuesday, April 12th, at Mill Hill Chapel, Leeds, by the Rev. Charles Hargrave, M.A., and the Rev. J. E. Carpenter, M.A., Thomas Wardrop Griffith, M.D., Park Square, Leeds, to Louisa Talbot, younger daughter of Grosvenor Talbot, Burley, Leeds.

LIGHTBODY—MEYLER.—On April 14th, at Shepperton Church, by the Rev. C. F. Chorley, Vicar of Moseley, assisted by the Rev. C. E. Littledale, Rector of Shepperton, John Henry Lightbody, M.D., of Wybunbury, Cheshire, eldest son of the late John Lightbody, of Liverpool, to Constance Helen, second daughter of the late T. H. Meyler, of Taunton, Somerset.

SAVORY—LEIGH-BENNETT.—On April 13th, at Thrybergh, by the Rev. Gray Granville, Rector of Ilam, uncle of the bride, assisted by the Rev. Canon Bartlet, Horace Savory, M.A., M.B., of Haileybury College, to Mary Ellinor Leigh, second daughter of the Rev. Canon Leigh-Bennett.

SHEEN—INGLEDEW.—On April 14th, at St. John's Church, Cardiff, by the Rev. Canon Thompson, D.D., Vicar, assisted by the Rev. F. J. Beck, M.A., Vicar of St. Margaret's, Cardiff, Alfred William Sheen, M.D., M.S.Lond., F.R.C.S.Eng., to Christine, second daughter of John P. Ingledew, Esq., Angleham, Cardiff.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 2.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Tu., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30 Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Tu., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 3.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are directed will be found under their respective headings.*

QUERIES.

L. desires to learn the composition of a proprietary substance named trilene, advertised largely for obesity.

H. D. asks if a girl of 14 years, suffering from enuresis since childhood, ought to be allowed to cycle.

E. McG. asks for particulars of apparatus whereby a consulting room may be lighted by electricity, or any battery by which a doctor could have the electric light for occasional use.

T. T. C. N. desires to hear of a home for a poor woman incurably blind, with rapidly advancing optic atrophy. She is without means, but charitable friends would no doubt subscribe a few pounds per annum.

Expenses of Entering the A.M.S.

Nix asks for a few particulars as to the preliminary expenses entailed on entering the Army Medical Service: (1) as to cost of outfit; (2) as to the expenses of living at Netley during the probation period in an averagely economical manner. Also whether these latter are covered by the allowance made to surgeons on probation.

*** (1) The uniform costs about £70. (2) The pay of a surgeon on probation (8s. a day) is sufficient to cover all messing and other expenses at Netley.

Works on Inebriety.

Inquirer asks to be referred to recent works on alcohol, more especially with regard to its etiology and treatment, in addition to books by Dr. Kerr and Dr. Ridge.

*** The following books and articles might be consulted: Sajous's *Annual of the Universal Medical Sciences* for the last five or ten years. A. Baer, *Der Alcoholismus*, Berlin, 1878. N. Kerr, Alcoholism and Drug Habits, *Twentieth Century Practice of Medicine*, vol. iii. J. D. Crothers's *Quarterly Journal of Inebriety*, Hartford, Connecticut. Various papers in the *Medical Pioneer* and the *Proc. Soc. Study of Inebriety*.

Works on Hydrotherapeutics.

Subscriber asks to be referred to a trustworthy work on hydrotherapy in English, of moderate size.

*** Our correspondent might consult the article on Hydrotherapeutics, by Dr. W. Winternitz, translated by F. W. Elsner, in von Ziemssen's *Handbook*, vol. v (London: Smith, Elder and Co. 1886). Also the article in Professor Clifford Allbutt's *System of Medicine*, vol. i, 1896. The subject of hydrotherapeutics is considered in the *Mineral Waters and Health Resorts of Europe*, by Drs. H. and F. P. Weber (Smith, Elder and Co.), a second edition of which is now in the press.

The Treatment of Labyrinthine Vertigo.

Puzzled writes: A healthy, gouty, but abstemious lady, aged 77, suffers badly from labyrinthine vertigo. It comes and goes without apparent reason, and lasts from an hour or two to the whole day; sometimes it comes on day after day for days, and sometimes she is weeks without it. There is tinnitus and nerve deafness on the right side. She has suffered about two years, and is worse in spring; she has taken bromides and hydrobromic acid and pil. hydrarg. with no permanent benefit. Bromides make her sleepy and good-for-nothing. Wanted a remedy to cut short the attacks, and preventive treatment.

ANSWERS.

The Larymore Boiler.

M.D., F.R.C.S.I.—The Larymore boiler is, we believe, made at the Alipore Gaol, near Calcutta, and our correspondent could no doubt obtain information by addressing a letter to the superintendent of the gaol.

The Alleged Outbreak of Plague in Calcutta.

Brigade-Surgeon.—The reputed cases of plague which occurred in Calcutta during the winter of 1896-97 were closely investigated at the time by Professor Cunningham and others. The conclusions come to were printed and widely circulated, so that all interested in the matter are fully aware of the circumstances connected with the reputed outbreak of plague in Calcutta.

Treatment of Acromegaly.

Dr. F. R. B. Atkinson (Lordship Lane, S.E.), writes, in answer to Dr. E. B. Garland's query *re* treatment of acromegaly: I am afraid no treatment has so far been found universally successful. The treatment is symptomatic. For the headache which usually accompanies the disease, and is frequently intolerable, antipyrin (Luzet, *Archives Générales de Médecine*, February, 1891) has been strongly recommended. Others (Dr. Ruttle, British Medical Journal, 1891, vol. i, p. 697) have found exalgine in 3 grain doses every eighth hour the only remedy for this troublesome symptom. Arsenic, iodides, and salicylates have all been tried, but not with much success. Arsenic seems to be the best of these. As Dr. Garland has found pituitary extract of little or no value, I would recommend sheep's thyroid to his notice, which in many cases (Putnam, *American Journal of Medical Sciences*, vol. cvi. No. 2, 1893; and Byrom Bramwell, Journal, 1894, vol. i, p. 21; and *Edinburgh Hospital Reports*, 1893, vol. i) has been found efficacious. Ovarian tissue has also been tried (Journal, 1898, vol. i, p. 889), but with no good results. If Dr. Garland is interested in the complaint, and cares to communicate with me, I shall be glad to give him any further references relating to treatment he may desire.

NOTES, LETTERS, Etc.

Antistreptococcic Serum.

Mr. S. J. Ross (House-Surgeon, Bedford General Infirmary) writes: At present there appears to be great disinclination to use antistreptococcal serum because (1) it is useless, or (2) it is a source of danger. Taking one class of case in which antistreptococcal serum has been used—namely, puerperal septicæmia—I think that Dr. Nathan Raw, in reading a case, before the Liverpool Medical Institution, and Dr. J. Hill Abram in commenting on the case, explained the reason for (1), namely, that all cases in which it is used should be proved bacteriologically to be of streptococcal origin, otherwise the cases are not likely to benefit. With regard to (2) it is perhaps a pity that we have not a "standard serum" as at the Pasteur Institution, whereby we might feel assured of the serum being absolutely pure, and filtration perfect. I may add I have used antistreptococcal serum (B. W. and Co.) in 4 cases of erysipelas with a most satisfactory result. In all cases the temperature fell to normal within 72 hours; vomiting, a troublesome feature in 2 cases, disappeared, and recession of a previously advancing erythematous line was observed. No other drugs were used in conjunction with this serum. No complications arose after the injections. To only one more point should I like to draw attention. Sufficient care is not taken in keeping the serum in a cool place, and, more important still, keeping the bottle containing the serum securely corked.

Foreign Bodies Swallowed.

Dr. P. Sheehan (Carlisle) writes: The communication from Dr. Cooper Rose in the British Medical Journal of March 19th on foreign bodies swallowed made me think that the following case may be of interest. On December 26th, 1897, I was asked to see a boy of 3 years who was supposed to have swallowed a halfpenny. The child and another were playing in bed with the coin, when suddenly the mother's attention was arrested by the efforts of vomiting and the cyanosis of the child. She plunged her finger into the throat, and found nothing. Soon the child became easy and swallowed any food given him. Both children assured us that the coin was swallowed, and a fruitless search was made for it everywhere. I gave the usual directions about the food and the examination of the stools. A week passed with daily evacuations, but without any appearance of a halfpenny, and as I could not allay the mother's alarm I put the child under chloroform, palpated, and made a minute examination, and as a result I gave it as my firm conviction that no halfpenny was swallowed. It is now a week since the mother, a trustworthy woman, came jubilant with a halfpenny, which was quite dark, and which she had found in the fæces that day, eleven weeks after the child had swallowed it. To my further astonishment she had during this time strictly adhered to my directions on diet, and had examined every evacuation.

Forecasting the Sex.

Dr. Thos. Wm. Blake (Hurstbourne, Bournemouth, formerly Lecturer on Bee Culture to the Royal Hants and Isle of Wight Beekeepers' Association) writes: I take exception to Dr. Percy Sharp's view as set forth in the British Medical Journal of March 26th, and his statement that "feeding has no effect whatever upon the sex of bees, this being determined solely by the kind of egg laid by the queen or mother bee, and that the queen bee is able to lay two kinds of eggs only—those which have been fertilised and those which have not—the latter invariably producing drones."

Now, I do not believe that the queen bee is able to lay two kinds of productive eggs, as such a theory would imply. It may be true that some of her eggs may not be fertilised, owing to insufficiency of ancestral drones (the old drones are turned out of the hives to die after they have served their purpose); but these unfertilised eggs could not, as Dr. Sharp asserts, produce drones, or any other living bee. The drones themselves are the fertilising bees that cohabit with the queen to produce her brood, and they are not likely to be produced from unfertilised eggs.

The result of liberal feeding is that the bees build, in consequence, much additional cell-combs. First, that for the working honey-gathering bee (theirs are the smallest cells), in proportion three-fourths to that of drone-comb—the drone cells being larger, and adapted to the size their bodies have to attain in the pupa state, the male or drone being larger than the female worker-bee. Now, if the working bees fail to procure sufficient food, and are not fed artificially, this important and usually last constructed part, the drone-comb, is imperfectly completed, with a result that there are not a sufficient number of cells built to produce enough sires to fertilise the excessive fecundity of the queen bee. Only one queen is allowed in each colony of bees, and her cell, the largest and longest, is built by the workers in the richest part of the hive suspended to the other comb, and is generally the last constructed. So that feeding, so far as cell-building goes, indirectly determines the sex, as in event of short supplies of food, the drone structure is often omitted, and the queen's many thousands of eggs cannot all be fertilised for want of sufficient sires. "This I have observed among my own stocks of bees, by alternately feeding and omitting to do so."

The old queen of the stock lays her eggs in these three differently constructed cells, her elongated, thin, tapering trunk enabling her to insert the same to deposit her eggs (as she travels over the comb), into all the reserved cells for brood, and the sex depends upon the size and shape of the mould or cell only.

I have a long time believed that, as with the bees, so it is, physiologically, with the progeny of human beings, and all animal life—namely: the sex depends on the (sometimes alternating) size and shape of the mould in which the fertile ovum is cast, the model being adapted to the same.

The Sanitary Diploma, R.U.I.

Mr. Charles Leo Birmingham, M.B., B.Ch. (R.U.I.), (Highgreen, near Sheffield) writes: The Royal University of Ireland is prepared to confer on Graduates in Medicine of that University who have passed the necessary examination a special diploma in Public Health, which is styled "Diploma in Sanitary

Science." If you refer to the *Calendar* you will see that bacteriology and practical work in Public Health are the most important of the many subjects for the examination, as is the case where diplomas in Public Health are obtainable from other licensing bodies. Might I venture to suggest, through the BRITISH MEDICAL JOURNAL, to the senators of the University that the present title of the diploma they award be changed from "Diploma in Sanitary Science" to the better-known and now generally adopted form of "Diploma in Public Health?" It is now several years since the University first offered to grant this diploma, and so far as I can learn (I have consulted the 1897 *Calendar*) there is no record of any graduate having sought for it up to the present. The name of the diploma does not read any better than that given to sanitary inspectors by the Sanitary Institute, and I think it would not be of much avail in seeking Public Health appointments in England. The D.P.H. (Royal University of Ireland) should be the name of the diploma, and then I—and I am sure many others—would be glad to seek for and possess it.

Strophanthus in Cardiac Failure.

DR. R. G. PRICE (Carmarthen) writes:—I find in talking to my professional friends that the value of strophanthus is only very inadequately appreciated. The only way by which I can account for this is that a large number of the preparations in the market are nearly inert. I am also strongly of opinion that a good tincture when mixed with water becomes in a short time of little or no use. The cases in which I find strophanthus to be of invaluable service are heart failure such as occurs in pneumonia, and other chest affections. I believe that during the last ten years I have seen a large number of cases of acute pneumonia following influenza which would have succumbed had it not been for the aid of this drug. I invariably employ in these cases tabloids of the tincture made by Burroughs and Wellcome, of which I give equal to two minims of tincture every two hours or oftener as the case may indicate. Since using this drug, I have found very few cases of pneumonia terminating fatally through heart failure. Of course, hypodermic injections of strychnine are also of the greatest service. Before resorting to strophanthus I had for years been using tincture of digitalis under the same conditions, but was never satisfied with its power of relieving heart failure in acute disease. But in cases of valvular disease of the heart, with failure of compensation, I think digitalis by far the best drug.

Bright Sunshine at Eastbourne and at Llandudno.

MR CHARLES ROBERTS, F.R.C.S. (Eastbourne), writes: I have shown Dr. Williams's letter on this subject to Mr. Sheward, who was good enough to compile for me the table I published in the BRITISH MEDICAL JOURNAL on March 19th, and which was intended for an article on Eastbourne as a Health Resort in the current number of the *Quarterly Medical Journal* (and which article was in the printer's hands on March 1st, and could not possibly contain any records for March), and he (Mr. Sheward) thinks that in the matter of sunshine thirteen weeks is quite as arbitrary a period as ten weeks. He has furnished me with the following figures extending over many years, which show the relative positions of Eastbourne and Llandudno as to sunshine better than the shorter periods referred to. The figures are taken from the official publications of the Meteorological Office:

	Llandudno.—Mean of 15 years. Hours.	Eastbourne.—Mean of 10 years. Hours.
October	79.4	117.8
November	47.1	59.1
December	30.7	55.8
Total	157.2	232.7
January	44.0	55.2
February	69.9	72.3
March	105.6	141.6
Total	219.5	269.1
Total for 6 months	376.7	501.8

Lichen Urticatus.

DR. H. S. PURDON (Belfast) writes: Having read Dr. Colcott Fox's remarks on lichen urticatus in the April number of the *Journal of Dermatology*, I am led to ask the question, Is this cutaneous affection on the increase? Judging from my own observations, I think it has become much more prevalent amongst infants and children of late, and this may be accounted for by taking into consideration the number of infants now brought up on "the bottle," as well as the large demand for artificial infant's food, usually sweetened to an abnormal degree with cane sugar. Of late I have, in the treatment of the disease, insisted on "sugar of milk," and that to a small extent, being substituted for cane sugar, and with good results. A short time since I prescribed for a little patient suffering from this eruption. The child had recently returned from India, and its mother informed me that there was a doubt about the disease: one physician said it was urticaria, whilst another also consulted said the cutaneous trouble was lichen. I informed her that both were right, the eruption being lichen urticatus, and which rapidly got well by careful dieting, cutting off sugar, and taking iron and arsenic. I cannot resist adding Bateman's description of this eruption, which is still true, also superior to that contained in any modern work on skin diseases (edition 1829):

"The first appearance of this species is in irregular inflamed wheals so closely resembling the spots excited by the bites of bugs or gnats as almost to deceive the observer. The inflammation, however, subsides in a day or two, leaving small, elevated itching papulæ, which are spread over the upper part of the trunk of the body and the extremities. While the first wheals are thus terminating, new ones continue to appear in succession, until the whole body and limbs are spotted with papulæ, which become here and there confluent in small patches, and increase both in elevation and irritation the moment any stimulant food or exercise is taken. It often subsides for a few days and then reappears more violent than ever. This eruption is peculiar to children. It commences, in some cases, soon after birth, and sometimes later, and continues with great obstinacy for many months. It occurs during dentition also. Both wheals and the papulæ are accompanied with intense itching, pricking, and tingling, which are severe at night, occasioning an almost total interruption of sleep and considerable loss of flesh."

I may say a menthol lotion or liniment gives great relief to the itching.

Dislocation of Ungual Phalanx.

SURGEON-CAPTAIN S. F. CLARK, M.B., A.M.S. (Hong Kong) writes: Dislocation of the ungual phalanx of a finger seems to be peculiarly a cricket accident, for in the collision between a swiftly moving hard ball going in one direction, and the tip of the outstretched finger of an unskilful fieldsman going (probably) in the opposite direction, we have everything favourable for the occurrence of this accident. I saw two such cases within six months of each other in matches I was engaged in. In December, 1894, in India, an officer fielding at mid-on was struck by the ball on the tips of his fingers, and the ungual phalanx of the first finger was completely dislocated backwards. In the following summer, at Canterbury, the wicket-keeper of the opposing team was struck by an off-ball and the ungual phalanx of the middle finger completely dislocated backwards. Each of these players had used his right hand only to stop the ball. In both cases the diagnosis was extremely easy, and traction by the finger and thumb readily reduced the dislocation. I agree with your correspondent who says that the accident is probably a common one, but too trifling to be brought to notice.

LETTERS, COMMUNICATIONS, Etc., have been received from

A Mr. R. B. Anderson, London; Dr. F. R. B. Atkinson, London; J. W. S. Attygalle, M.B., Colombo; Dr. J. Adams, Eastbourne. **B** C. E. Baddeley, M.B., Newport, Salop; Mr. H. H. Beale, Reading; Mr. J. P. Bush, Clifton; J. W. Batterham, M.B., St. Leonards-on-Sea; A. H. Burgess, M.B., Manchester; S. Boyd, M.B., London; Dr. R. Bell, Glasgow; M. M. Bowlan, M.B., London; Miss R. E. Bale, Plymouth; J. Boyes, M.B., Jersey; Mr. G. H. Broadbent, Manchester. **C** Mr. H. J. Clark, Swanage; Messrs. T. Christy and Co., London; J. J. Clarke, M.B., London; Dr. J. M. Clarke, Clifton; Convinced; Mr. R. M. Conolly, London; Mr. F. W. Collingwood, Cheltenham; Dr. C. C. Claremont, Southsea. **D** Daphne; Dr. W. W. Don, London; Disgusted; Dunrawan. **E** Dr. G. F. A. England, Winchester. **F** F.R.C.S.; Mr. J. T. Fox, Strathpeffer Spa; Dr. J. L. Firth, Clifton; P. C. Fenwick, M.B., Christchurch, N.Z. **G** Dr. C. B. Gunn, Peebles; Dr. E. Goddard, London; P. N. Gerrard, M.B.. Kuolu Kuhu; Mr. A. E. Griffin, London; Dr. M. Greenwood, London; G. F. W.; Gamma; Messrs. C. Griffin and Co., London. **H** Mr. V. Horsley, London; S. H. Hawley, M.B., Walsall; Dr. T. W. Hime, Bradford; Dr. T. Harris, Manchester; G. Halley, M.B., Dundee; Mr. J. Harrold, London; Dr. J. A. Harris, Chorley; J. Hudson, M.B., Nelson, N.Z.; Mr. T. G. Horder, Cardiff; G. Heaton, M.B., Birmingham; Mr. H. N. Hardy, London; Mr. N. G. Hudson, Leominster. **K** Dr. G. D. Knight, London; Mr. B. Kuhn, London. **L** Dr. F. W. Lyle, Ealing; Mr. A. D. H. Leadman, Pocklington; H. E. Littledale, M.B., Dublin; L.S.A.Lond., 1889; C. R. Leader, M.B., London; Dr. W. T. Law, London; Dr. J. F. Little, London. **M** Mr. R. O. Moon, Winchester; M. O. H.; C. R. Marshall, M.B., Cambridge; Member; T. Massie, M.B., London; Mr. E. McGennis, Lurgan; M.A., M.B.; M.P.; J. B. McLean, M.B., Worcester; Dr. H. J. Macevoy, London. **N** Neurotic; Mr. R. T. Nariman, Bombay. **O** Dr. J. Oliver, London; Only an L.S.A. **P** Mr. F. T. Paul, Liverpool; Dr. T. D. Poole, Wolverhampton. **R** J. L. Roberts, M.B., Denbigh; Mrs. Francis Rye, London; Dr. A. J. Rodocanachi, Ashton-under-Lyne; Mr. C. Roberts, Eastbourne; Retired Surgeon-General; Mr. G. Q. Roberts, London. **S** B. H. Shaw, M.B., Cradley Heath; T. Streatfield, M.B., Folkestone; Dr. H. Scurfield, Sunderland; Dr. Shirtliff, Ryde; Dr. F. H. Spooner, London; Mr. W. P. Stocks, Salford; Dr. K. T. Stewart, London. **T** Mr. W. T. Thomas, Liverpool; W. E. Tresidder, M.B., Nottingham; H. Thornhill, M.B., Jaffna; Mr. A. J. Thomson, Kingswinford; Dr. J. S. Thomson, Lincoln. **U** Unqualified. **W** W. L. H.; Dr. S. Woodcock, Manchester; Messrs. Widenmann, Broicher, and Co., London; Dr. O. F. Wunderlich, Stony Stratford; Dr. T. J. Wood, Bradford; Mr. C. H. Whiteford, Plymouth. **Y** Mr. P. M. Yearsley, London; etc.

BOOKS, Etc., RECEIVED.

Handbuch der Ernährungstherapie und Diätetik. Herausgegeben von. E. von Leyden. Erster Band. Zweite Abtheilung. Leipzig: Georg Thieme. 1898.

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An Atlas of Histology. By A. Clarkson, M.B., C.M. Bristol: John Wright and Co. 1898. 9s.

Surgical Technics in Hospital Practice. By K. W. Monsarrat, M.B., F.R.C.S.E. Bristol: John Wright and Co. 1898. 3s.

Orthopædic Surgery. By J. E. Moore, M.D. London: Rebman Publishing Co. 1898. 14s.

Pathological Technique. By F. B. Mallory, A.M., M.D., and J. H. Wright, A.M., M.D. London: Rebman Publishing Co. 1898. 14s.

Tuberculosis of the Genito-urinary Organs, Male and Female. By N. Senn, M.D., Ph.D., LL.D. London: Rebman Publishing Co. 1898. 17s.

Diagnostic et Séméiologie des Maladies de l'Enfance. Par A. N. Filatow. Traduit sur la 4e édition Russe sous la direction du Dr. E. Périer. Paris: Rueff et Cie. 18 S. Fr.14.

Lehrbuch der speciellen Chirurgie. Dr. F. Koenig. Siebente Auflage. 1 Band. Berlin: August Hirschwald. 1898. M.14.

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CLINICAL LECTURE

ON

A CASE OF LOCALISED MYELITIS,

AFFECTING THE FIFTH LUMBAR AND THE SACRAL SEGMENTS OF THE SPINAL CORD, THE RESULT OF A SLIGHT TRAUMATIC INJURY;

AND

A CASE OF PARALYSIS OF ALL FOUR LIMBS,

DUE TO A SPINAL INJURY.

Delivered at the Edinburgh Royal Infirmary

By BYROM BRAMWELL, M.D., F.R.C.P.Ed., F.R.S.Ed.,

Physician to the Royal Infirmary, Edinburgh; Lecturer on the Principles and Practice of Medicine and on Clinical Medicine in the School of Medicine, Edinburgh.

The first case to which I propose to direct your attention to-day is one of great interest and rarity; it presents a number of important diagnostic problems and raises several questions of great physiological interest; it is, therefore, well fitted for the consideration of those of you who are senior students and who are already acquainted with the symptoms which characterise the ordinary forms of disease of the spinal cord. But since it also very clearly demonstrates the manner in which the clinical examination of the spinal cord should be conducted and the methods by which we endeavour to arrive at an exact diagnosis in cases in which the spinal cord is diseased, it will also prove instructive to those of you who are beginners. The notes of the case are as follows:

Case 1. *Complete Motor and Sensory Paralysis of the Parts (Muscular and Skin Areas) supplied by the Fifth Lumbar and the Sacral Segments of the Spinal Cord, of very slow Development, together with Bed Sores, Total Loss of Sexual Power, and Partial Paralysis of the Bladder and Rectum, the result of a Slight Traumatic Injury, and probably due to Sclerosis (Chronic Myelitis) the result of a Minute (Capillary) Hæmorrhage into the Grey Matter of the Cord: Partial Recovery under Treatment.*—G. A., aged 39, a hotel keeper and bookmaker, was admitted to the Edinburgh Royal Infirmary on May 26th, 1897, suffering from paraplegia.

Previous History of Present Illness.—The patient states that on June 17th, 1895, he jumped off the box of a waggonette on to the hard road, alighting on his feet. His legs gave way and he fell on his back. He immediately got up, feeling as if he had got a severe shake, and walked into the house, a distance of twenty yards. After sitting down for five or ten minutes he felt all right, except for a slight pain and what he terms a "twittering" sensation in the right ankle. There was no pain in the back; in fact, he felt nothing wrong with his back. He then got into another "machine" and drove to the railway station. The next day the right ankle still felt weak and painful, but it was neither swollen nor discoloured. For the month following the accident he continued to go about his ordinary duties, feeling the right ankle weak and painful. He states that during this period he experienced a feeling of numbness and coldness in the right foot and leg below the knee, but that when he took hold of the foot and leg they were warm and natural. At the end of a month, as the weakness and numbness in the right ankle were increasing, he consulted his ordinary medical attendant, who advised him to give the ankle as much ease as possible. Notwithstanding this advice, he continued to walk about and do his ordinary work. Soon after this (about five weeks after the injury) the pain in the ankle disappeared, while the weakness increased. Four months after the accident the left ankle also became weak. Seven months after the accident he noticed that he was unable to move the toes of the right foot, and that the right ankle was so "wobbly" that it appeared to be out of joint. The calves had now, he states, become considerably smaller (wasted). In February, 1896 (nine months after the accident), he went to an auction sale, and was exposed to cold and wet. On returning home at night the left leg and foot felt cold and numb, and he noticed that he was unable to move the toes of the left foot. He again consulted his medical attendant, who sent him to bed and prescribed for him. He remained in bed for about three weeks. He then, contrary to the doctor's advice, got up and went about his usual work. After this date (March, 1896) the difficulty in walking and loss of power in the legs slowly but gradually increased. For the past ten months (since August, 1896) he has not been able to walk without assistance (the help of a friend, or holding on to furniture, etc., with his arms); nevertheless, he continued to get up every day and sit about the house. In February, 1897, he again took to bed, and has been in bed ever since. During the second week of March, 1897, he burned his right heel with a hot water bottle; although the burn was very severe it caused him no pain. As the ulcer did not heal, he was admitted, by the advice of his doctor, to the Carlisle Infirmary on March 24th. He remained in the Carlisle Infirmary for six weeks, until the ulcer was healed. During his stay in the Carlisle Infirmary the paralysis continued to increase. A week after his admission to the Carlisle Infirmary, he experienced, for the first time, pain in the small of the back. The pain was of a shooting character, and extended round the sides of the abdomen. These back and girdle pains still occasionally occur. About the same time he also experienced for the first time some difficulty in making water: he states that he had to exert greater force to get the water away, and that there was some dribbling at the end of micturition. For the past year he has completely lost all sexual appetite and power. For the first year after the accident he noticed no difference in his sexual power.

Previous History, Prior to the Present Illness.—Up to the date of the accident the patient was a very muscular and robust man, his weight being 15 st. 8 lbs., and his height 5 ft. 10½ in. He has never had any venereal disease. He had an attack of rheumatic fever at the age of 12, and congestion of the lungs at the age of 21. He has been a very heavy drinker. He states that for the past eight or ten years he has, during the racing season, which lasted six or seven months, drunk on an average over a bottle of whisky a day, besides large quantities of wine and malt liquors.

The Family History is unimportant. The patient does not appear to inherit a tendency to any special form of disease. He has had five healthy children; the youngest is 4 years of age.

State on Admission.—The patient, who is, you will observe, a strongly built and very broad-shouldered, though somewhat flabby looking man, weighs 14 st. 2 lbs., his height being 5 ft. 10¾ in. The temperature is subnormal; the general health is good; and the viscera are all healthy. There is in short no evidence of disease except in the parts supplied by the fourth and fifth lumbar, and the sacral segments of the spinal cord. The other parts of the nervous system appear to be absolutely healthy. The description of the patient's condition on admission, in fact, resolves itself into a description of the motor, reflex, sensory, vasomotor, and trophic conditions of the parts supplied by the fourth and fifth lumbar and the sacral segments of the spinal cord. The spinal column is perfectly normal, straight, and well formed; there is no tenderness on percussion, no hyperæsthesia—nothing, in short, to suggest that the patient has ever received any spinal injury.

The Condition of the Motor Nerve Apparatus.—The patient is unable either to stand or walk, though he states that he thinks he could do so if he were supported on each side. There is complete paralysis of all the muscles of both lower extremities below the knee. Footdrop is very marked in each leg, more particularly in the right. The patient is absolutely unable to move the toes, or the feet on the ankle-joints. The patient can flex and extend the leg on the thigh, but these movements are performed much less forcibly than one would expect in a man of his powerful muscular physique. Flexion, adduction, and abduction of the thigh on the abdomen (hip joint) are normal and vigorously performed; extension of the thigh at the hip joint (gluteus maximus) is feeble.

The Condition of the Paralysed Muscles.—The muscles on both the front and back of the legs are markedly atrophied and flabby. The muscles of the thighs are large and fairly firm. The buttocks (glutei muscles) are soft and very markedly atrophied. The right calf at its thickest measures 12½ and the left 12⅜ inches; while the right thigh at its middle (7½ inches above the patella) measures 10¾ and the left 10¾ inches. The muscles both on the front and back of the legs do not respond to the strongest faradic currents; while the muscles of the thighs react normally to faradism. Fibrillary twitchings occasionally occur in the vastus externus and quadriceps extensor femoris on both sides. The calves and paralysed muscles are not, and never have been, tender to pressure (pinching, etc.).

The Condition of the Reflexes.—The plantar reflex is absent on both sides. The cremasteric reflex is very active on both sides. The knee-jerks are present, but markedly diminished in degree, more especially on the left side.

The Vesical Reflex.—The patient knows when he wants to make water, but does not feel the water passing. In order to empty the bladder voluntarily, much forcing and straining (of the abdominal muscles) is required. The water dribbles away; laughing and coughing cause the involuntary expulsion of urine. In short, both the sphincter and the detrusor muscles of the bladder appear to be partially paralysed.

I may take this opportunity of stating that at the date of the patient's admission to hospital the urine was slightly alkaline, but free from any abnormal constituents (mucus, pus, albumen, etc.)

The Rectal Reflex.—The patient is more constipated than he used to be, but, as a rule, the contents of the bowels are evacuated without medicine. He knows when he needs to defæcate, but he has no sensation as the stool passes. When the motions are loose (that is, after a dose of laxative medicine), the fæces come away without his knowledge. The contents of the rectum are often expelled involuntarily and without his knowledge during the straining efforts which are required for micturition. The sphincter, as well as the expulsor muscles of the rectum, appear therefore to be partially paralysed.

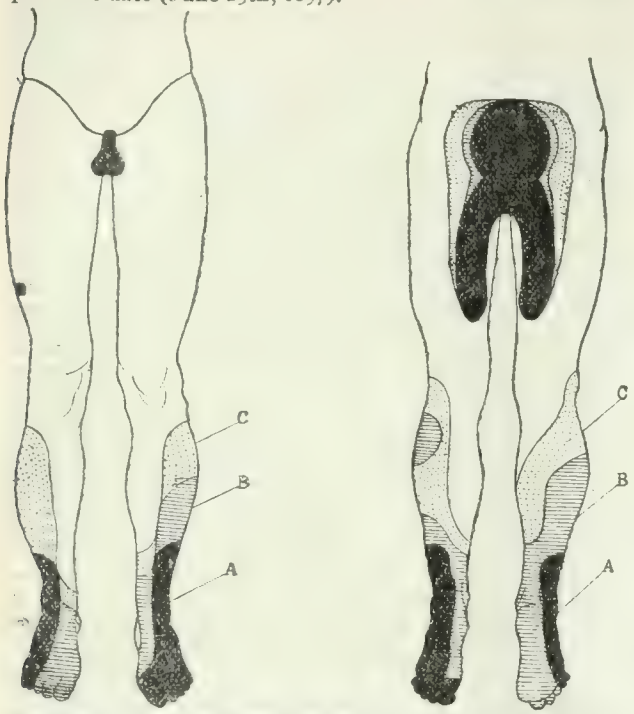
The Condition of the Sensory Nerve Apparatus: Tactile Sensibility.—There is complete loss of the tactile sensibility over the toes, the adjacent parts of the feet, both the soles and dorsa, more particularly the outer sides; a small area on the lower and outer sides of the legs, the penis and scrotum, the perineum, and the middle of the back of each thigh. The exact distribution of the anæsthesia which was present at the date of admission is shown in Figs. 1 and 2.

Sensibility to Pain.—This is lost over the same areas as the tactile sensibility, but the area of the analgesia is somewhat more extensive than the area of the anæsthesia, involving as it does the whole of the plantar and dorsal surfaces of the feet, and a larger area of both legs. On the right side of the scrotum the painful sensations are retained in a small area in which tactile sensations cannot be perceived.

Sensibility to Heat and Cold.—This is lost over the same areas as the sensibility to touch and pain, but the area of the thermal anæsthesia is more extensive than the area of the analgesia, and still more extensive than the area of anæsthesia, involving a larger surface both on the front and back of the legs.

Vasomotor and Trophic Condition.—Over the right tendo Achillis there is a purplish cicatrix, measuring 2 inches by 1½ inch, the result of the burn previously described. Over the head of the right metatarsal bone there is a brown discoloration about the size of a sixpenny piece, due to an injury (a horse trod upon the foot) received about some six or seven months after the original accident. On the left buttock there is a superficial ulcer of considerable size (2⅜ by 2 inches), and on the right buttock a smaller ulcer about the size of a shilling. When the feet are exposed (hung down over the bed for a short time), they become blue, cold, and swollen.

I have now described the condition of the patient when he came under our observation. Before commenting on the case, let me say a word or two as to the treatment which has been employed and the alterations which have taken place up to this date (June 29th, 1897).



Figs. 1 and 2.—Front and back views, showing the area of anæsthesia at the date of the patient's admission, in the case of G. A. described in the text. The solid black areas to which the letter A points shows the area of distribution of the tactile anæsthesia. The shaded area to which the letter B points indicates the extent of the loss of sensibility to pain (analgesia). The dotted area to which the letter C points indicates the area of thermal anæsthesia.

Treatment and Progress of the Case.—The patient was placed on a water bed; special instructions were given to the nurses to see that he was kept scrupulously dry and clean, and a mixture containing boracic acid and strychnine was prescribed. On June 2nd the sole of the right foot was burned by a hot-water bottle. The blister was opened and the wound was washed with carbolic lotion (1 in 40), and dressed with zinc ointment. On June 7th it is noted that the urine is now acid in reaction, and deposits crystals of oxalate of lime. The patient states that he has more control over his urine; he knows when the bladder is full; he can pass urine with a more forcible stream; the dribbling has ceased. June 11th. Says he feels a tingling sensation in the left foot and toes. The burn on the right sole is healing very slowly; there is no change in the ulcers on the buttocks. June 30th. There is little change since the last note. The urine continues to be acid. The patient has more control over both the bladder and rectum. The area of tactile anæsthesia is slightly smaller in the feet and legs, unchanged over the buttocks, penis, scrotum, and thighs. The ulcers on the buttocks show no signs of healing. The paralysis, the condition of the paralysed muscles, and the superficial and deep reflexes are unchanged.

Such are the facts of the case. Let us now consider the diagnosis.

DIAGNOSIS.

In all cases of disease in which there is an organic lesion of the nervous system, the object of the physician is not merely to give a name to the disease, but to make an exact anatomical and pathological diagnosis. Both the anatomical and pathological diagnoses are of importance, not merely from a scientific point of view, but for the practical purposes of prognosis and treatment.

The object of the anatomical diagnosis is to determine the exact part of the nervous apparatus which is directly implicated by the lesion. The first point which has to be decided (and this is usually arrived at without difficulty) is, Does the lesion involve the peripheral nerves, the spinal cord, or the brain?

Now, in the particular case which we are studying to-day the symptoms are paraplegic in distribution; they consist in very marked and localised paralysis of motion, of reflex action and of sensation, together with trophic and vasomotor disturbances in those areas of the body which are supplied by certain nerves coming off from the lower end of the spinal cord. The paraplegic distribution of the symptoms and the complete absence of cerebral symptoms enable us to exclude a cerebral lesion, and show that the lesion is situated either in the spinal cord or the peripheral nerves. A lesion in either of these situations (spinal cord or peripheral nerves) may produce paralysis of motion, loss of reflex action, loss of sensation, trophic and vasomotor disturbances, and in both cases the symptoms may be distributed in a paraplegic manner; nevertheless, careful examination usually shows that the symptoms are grouped and arranged in a different manner in those cases in which the lesion is situated in the spinal cord and peripheral nerves respectively.

Paraplegically-distributed symptoms (such as are present in this case—paralysis of motion, sensation, reflex action, with trophic and vasomotor disturbances) due to a lesion in the peripheral nerves may be the result either of (1) a peripheral neuritis caused by a poison circulating in the blood which affects a large number of the peripheral nerves throughout the body—a polyneuritis; or (2) to the fact that a gross lesion, such as a tumour, is so placed that it involves the nerve roots or the peripheral nerve trunks, which are distributed to both lower extremities.

In this particular case it is obvious that the symptoms are not due to a peripheral neuritis of toxic origin, a polyneuritis, or widespread inflammation of the nerves resulting from the action of a poison circulating in the blood. The symptoms are clearly indicative either of a lesion of the spinal cord or of the cauda equina, though some of you may perhaps have come to the conclusion that the case is one of alcoholic neuritis. This diagnosis was, in fact, suggested by the patient's medical attendant, who sent the case to me.

The points which at first sight appear to be suggestive of alcoholic neuritis are:

That the patient has for many years been very alcoholic; that the muscles below the knee are paralysed, and that there is double foot-drop; that the paralysed muscles are markedly atrophied, and that they present the reaction of degeneration; that the sensory functions of the skin in the paralysed parts of the limbs (legs below the knees) are markedly involved; and that there are vasomotor and trophic derangements in the same parts.

But the following facts are entirely opposed to this view:

(*a*) *The Gradual Mode of Onset and the somewhat Progressive Course of the Symptoms.*—A paralysis due to alcoholic neuritis is much more rapidly developed, it much more quickly reaches its height; and, after the maximum degree of paralysis has been reached, it tends, almost without exception (provided that the cause—alcohol—is removed, that suitable treatment is adopted, and that there are no visceral complications preventing recovery), to improve, at all events in some, and usually in a very marked, degree. In uncomplicated cases of alcoholic paralysis the progress is in fact (always provided that the conditions for treatment are satisfactory) eminently favourable.

(*b*) *The Remarkable Limitation of the Paralysis.*—An alcoholic neuritis, sufficiently severe to have produced such complete paralysis and such extreme atrophy as are present in this case in the muscles below the knees and in the glutei muscles, would have been much more widely spread. It would not have been confined merely to the muscles below the knee and the glutei muscles; it would almost certainly have involved other muscles, particularly the extensor muscles of the forearm, producing wrist-drop, the small muscles of the hand, and in some, and probably in a marked degree, the muscles of the thighs, and probably also the muscles of the upper arm. In particular, if the case had been one of alcoholic paralysis, the glutei muscles would not have been picked out, paralysed and atrophied in the extreme degree in which they are in this case.

(*c*) *The Absence of Pain and Muscular Tenderness.*—In this case there has been absolutely no pain in the paralysed parts, and there is no muscular tenderness. Now, tenderness of the paralysed muscles, particularly on pinching the calf muscles, is one of the most important diagnostic signs of alcoholic peripheral neuritis. It is so constantly present as to constitute a most important diagnostic feature of the disease.

(*d*) *The Complete Absence of Cerebral Symptoms.*—An alcoholic neuritis sufficiently severe to produce the extreme degree of paralysis and atrophy which are present in the muscles of the leg in this case would have probably been attended at its onset with some disturbance of the cerebral functions. But such was not the case.

(*e*) *The Presence of Symptoms Indicative of Derangement of the Vesical, Rectal, and Sexual Reflexes.*—In cases of alcoholic neuritis, these important reflexes are not impaired unless the spinal cord should at the same time happen to be implicated. This is an important point of differential diagnosis between a paraplegia due to disease of the peripheral nerves and a paraplegia due to disease of the spinal cord.

(*f*) *The Peculiar Distribution of the Sensory Paralysis.*—This is a very important point. In this case the loss of sensibility to touch, pain, and temperature is very definitely limited to the areas of distribution of the nerves coming off from the fourth and fifth lumbar and the sacral segments of the spinal cord. In particular, I would beg you to note the presence of the saddle-shaped area of the anæsthesia on the buttocks, and the very localised area of anæsthesia over the penis and scrotum. Now in a case of alcoholic polyneuritis the anæsthesia would not be localised in this way.

(*g*) *The "Disassociated" Anæsthesia.*—The fact that the area of anæsthesia is less extensive than the area of analgesia, and that the area of thermal anæsthesia is still more extensive than the area of analgesia. This is not what one would expect, though I am not prepared to say it might not occur, in a case of alcoholic neuritis.

These facts clearly show that the case is not one of alcoholic neuritis, nor, I may add, of neuritis due to any other toxic cause such as diphtheria, lead poisoning, beri-beri, etc.

The next question which has to be determined is, Does the paralysis depend upon a lesion of the spinal cord, or upon a gross lesion, situated in the pelvis or in the lower part of the spinal canal, which involves the nerve roots or the peripheral nerve trunks passing to both extremities at a point at which they lie in close contact, in close anatomical juxtaposition?

A lesion in the pelvis may be at once excluded because of the following facts:

(*a*) The motor paralysis is practically limited to the glutei muscles and the muscles below the knee. Now, a lesion in the pelvis, such as a tumour, which produces paraplegia by pressing upon or causing inflammation of the great nerve trunks passing to both lower extremities, would be very unlikely to produce the extreme degree of paralysis in the glutei muscles and in the muscles below the knees which is present in this case, and the marked muscular atrophy and the reaction of degeneration, etc., which are present in these muscles, without at the same time producing a very marked degree of paralysis of the muscles of the thighs.

(*b*) The absence of neuralgic or shooting pains in the paralysed parts. A tumour in the pelvis which involves the great nerve trunks, and so produces paralysis of both lower extremities, is almost invariably (? always) attended with more or less pain in the areas of distribution of the nerves, which are irritated and pressed upon. The same statement applies, as we shall presently see, to lesions of the cauda equina. In both of these cases the pain is usually such a marked and striking symptom that they are termed cases of "painful paraplegia." The term "painful paraplegia" may, in fact, in most cases be regarded as practically synonymous with a paraplegia due to the pressure of a gross ("coarse") lesion, such as a tumour, a displaced vertebra, or a mass of inflammatory products, upon the peripheral nerve trunks, or upon the motor and sensory nerve roots within the spinal canal.[1]

(*c*) A pelvic lesion involving the nerve trunks would not be likely to produce the very sharply localised derangements of sensation which are present in this case. The anæsthesia or painful anæsthesia (for in many cases of paraplegia due to pressure on the nerve trunks painful sensations are experienced by the patient in those areas of skin which are completely devoid of sensation when touched, pinched, etc., hence the term "painful anæsthesia" or "anæsthesia dolorosa") would be much more widely distributed; it would involve the thighs as well as the legs, and it would not (or would be most unlikely to) pick out the saddle-shaped area over the buttocks, the scrotum and penis as the anæsthesia in this case does.

(*d*) There would probably be no derangement of the bladder and rectal reflexes.

But, further, (*e*) in this case there is absolutely no evidence of any lesion in the pelvis, and (*f*) there are no symptoms indicative of pressure on the blood vessels (arteries or veins). A pelvic tumour which produces paraplegia in the lower extremities by pressing upon the large nerve trunks very usually at the same time produces engorgement or obstruction of the veins and swelling of the feet and legs.

We may exclude, then, a lesion of the peripheral nerves outside the spinal canal, and narrow the diagnosis down to a lesion of either (*a*) the spinal cord, or (*b*) the cauda equina.

It is sometimes extremely difficult to determine whether a paraplegia depends upon a lesion involving the spinal cord or the nerve roots composing the cauda equina; but in this case the nature and distribution of the symptoms, the manner in which they have been developed, and the whole progress and course of the case, seem to me to show that the lesion is probably situated within the spinal cord, and that the symptoms are not due to a lesion of the cauda equina.

But in order that you may clearly understand this point, it will be necessary to discuss the question in more detail:

(*a*) The first point which I would wish you to note is that the *symptoms* (paralysis, anæsthesia, disturbances of reflex action, vasomotor and trophic derangements) *are distributed in a physiological rather than an anatomical manner.* The motor, sensory, reflex, vasomotor and trophic disturbances are *sharply limited*, or almost entirely limited, to the areas of distribution of the nerve roots coming off from the sacral and perhaps the lowest segment of the lumbar enlargement of the spinal cord (the fifth lumbar, first, second, third and fourth sacral segments). The only symptoms indicative of derangement of the fourth, third, second, or first lumbar segments, or of the nerve roots connected with those segments of the spinal cord, are some slight weakness in the muscles of the thighs and some diminution of the knee-jerks (third and fourth lumbar segments).

Hence, if the motor paralysis and the other symptoms were due to a lesion, such as a tumour or inflammatory mass, involving the cauda equina, it is necessary to suppose that the special nerve roots connected with these segments (fifth lumbar, first, second, third, and fourth sacral segments) of the spinal cord have been picked out and damaged, while the other nerve roots connected with the lumbar enlargement have been spared, or at all events damaged in very slight degree.

The motor paralysis is, practically speaking, limited to the muscles below the knee, to the glutei, and to the muscles of the bladder and rectum. The sensory paralysis is limited to the areas of distribution of the first, second, third and fourth sacral nerves, and perhaps of the fifth lumbar nerve. The vasomotor and trophic derangements are localised in the same parts. The disturbance of reflex action chiefly involves the reflexes passing through the sacral segments of the cord. The plantar and sexual reflexes, which are connected with the first, second and third sacral segments, are completely lost. The vesical and rectal reflexes connected with the fourth and fifth sacral segments are markedly impaired. The knee-jerks, which are chiefly connected with the third lumbar segment, though markedly diminished in degree, are preserved; and the cremasteric reflex, which passes through the second lumbar segment, is not only preserved but is usually active.

This physiological distribution of the symptoms is suggestive of a lesion of the spinal cord, though it might of course be produced by a lesion of the sacral plexus.

(*b*) *The "Disassociated" Character, or rather Distribution, of the Sensory Disturbances.*—The anæsthesia is less extensive than the analgesia, and the analgesia than the thermal anæsthesia. This is a strong argument in favour of the view that the lesion involves the cord itself rather than the nerve strands of the cauda equina.

(*c*) *The Absence of Pain.*—Lesions involving the cauda equina are usually due to disease of the bones of the spinal column, new growths such as syphilitic gummata or other forms of tumour involving the vertebral column, or situated within the lower part of the spinal canal, and inflammatory collections in the lower part of the spinal canal. In all of these cases pain in the back and shooting pains in the lower extremities and pelvis are usually marked symptoms. Now

in this case there was a complete absence of pain until a few months ago, and the pain which has occasionally been experienced since that date has never been severe, and has been more of a "girdle sensation" than the severe neuralgic pains which are characteristic of painful paraplegia. The pain which the patient has experienced may quite well be explained by irritation of sensory nerve fibres within the spinal cord at the junction of the diseased with the healthy cord tissues.

(*d*) *The absence of spasms and muscular contractions* is, for the same reasons, opposed to a lesion of the cauda equina.

(*e*) *The Symmetrical Manner in which the Symptoms* (motor and sensory paralysis, etc.) *are Distributed.*—We have seen that, if the paralysis, etc , were due to a lesion of the cauda equina, in order that the symptoms should be distributed in the exact manner in which they are in this case, the damage would (practically speaking) have to be limited to the roots of the cauda equina connected with the fifth lumbar and the first, second, third and fourth sacral segments of the spinal cord. But further, from the very symmetrical manner in which the symptoms are distributed on the two sides of the body, it would be necessary that each pair of these nerve roots would have to be involved in exactly the same degree. Practically speaking, this seems to me to be very unlikely. Coarse lesions such as tumours or inflammatory collections which involve the nerve strands of the cauda equina, usually involve some of the nerve strands (roots) more than others. Hence the symptoms (paralysis, anæsthesia, etc.) are rarely distributed in the highly symmetrical manner in which they are in this case.

(*f*) *The Mode of Development (very Slow and Gradual) and the Progressive Course of the Case.*—The history of the case and the mode of development of the symptoms (when taken in conjunction with the nature of the symptoms) are hardly such as one would expect if the paralysis were due to a lesion of the cauda equina.

From the account which I have given you it seems clear that the slight traumatic injury which the patient sustained on June 17th, 1895, was the starting point of the lesion. Immediately after the accident he felt that the right ankle was weak and that the right foot and leg were cold; and he states that these symptoms were not, so far as he can judge, the result of any direct injury to the ankle or foot. Four months after the accident the opposite (left) ankle became weak. After this the paralysis slowly but gradually increased until in the course of some months it reached its present degree of development.

Now, hæmorrhage on the surface of the cord, involving the strands of the cauda equina and sufficiently extensive to produce the symptoms which are present in this case, would in all probability have been attended with more marked symptoms at its commencement; and it is difficult to conceive that if a "coarse" extramedullary lesion (a meningitis, a tumour, or bone disease) had resulted from the injury and had implicated the nerve strands of the cauda equina, it would have developed in the slow and gradual way in which the lesion developed in this case without producing other and more marked symptoms (pain, spasm, etc.). For these reasons we may, I think, exclude a lesion of the cauda equina, and arrive at the conclusion that the lesion is probably situated within the spinal cord itself.

The diagnostic discussion has occupied some time, and has been a somewhat complicated one, but I have done my best to make the argument clear. It would have been very easy for me to have given you my opinion in a few words, and to have arrived at the diagnosis by making a few dogmatic statements, but such a method of procedure would not have taught you anything. I am always anxious to carry conviction to your minds, to let you see the process of thought and reasoning by which I arrive at the conclusions I form, to explain to you the "whys" and "wherefores" of things, to teach you principles, and not merely to enumerate bare facts. Clinical medicine cannot be crammed up. True clinical knowledge can only be gained slowly and gradually. The student should not attempt to overburden his memory with mere facts. A knowledge of facts will come gradually, and can only come gradually. Take time, be patient, make a careful study of individual cases; train your powers of observation and of reasoning; but above all try to intelligently understand everything that comes before you. Never be content with merely knowing that such-and-such symptoms characterise such-and-such a disease, or are associated with such-and-such a lesion; but try to intelligently comprehend why they are present in that disease, and the manner in which they are produced by the lesion.

(*To be concluded.*)

THE BENEFICIAL EFFECTS OF ONE DISEASE AS REGARDS ANOTHER.*

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ONE disease may act beneficially as regards another by preventing or curing it.

I. THE PROPHYLACTIC EFFECTS.

These can be dismissed in a few words, since our knowledge of them is limited. Passive pulmonary congestion and hypertrophous emphysema would appear to diminish the tendency to pulmonary tuberculosis. Certain germ diseases, again, are preventive of others. Thus the bacillus pyocyaneus counteracts the activity of the B. pneumoniæ and the micrococcus erysipelatis. The various exanthems, on the other hand, do not confer immunity against one another, numerous instances having been recorded, from Murchison downwards, of two or more of them coexisting. One other instance of prophylaxis: Sir Dyce Duckworth[1] refers to the fact (observed by Diday and J. Hutchinson) that typhoid fever and pneumonia cause the postponement of the secondary symptoms of syphilis for from three to five months.

II. THE CURATIVE EFFECTS.

These are much more marked and well defined, and will be considered under five headings:

1. *Metastasis.*—This may be defined as the disappearance of disease from one part concurrently with its appearance in another. Thus, a urethral discharge may suddenly disappear—temporarily, at least—upon the supervention of orchitis, coryza upon the occurrence of pneumonia, quinsy upon the development of gouty arthritis. Dr. Mutch, of Brixton, saw an instance of the latter: Husband and wife were stricken with quinsy; when the former was in the height of the distress caused by the swelling, he developed acute gout in the toe, and forthwith, as if by magic, the throat trouble subsided; in the wife it ran the ordinary course. Now, the important question we have to ask regarding these cases is whether the occurrence of the new disorder acts curatively towards the one which it replaces. Perhaps the best examples of metastasis are afforded by functional nervous disorders, which shift their site or alter their expression from moment to moment, day to day, or even from year to year. Thus, in the course of an hour or two headache may give way to backache, backache to a fit of palpitation, and this again to an attack of gastralgia; and similarly, in the lapse of years, we may find migraine, spasmodic asthma, and angina pectoris successively displacing one another. Here again the question arises whether the supervention of the new disorder does not tend to keep its predecessor at bay, thus acting beneficially towards it. The probability is that it does. The alternation of morbid phenomena may be regarded as a variety of metastasis. As instances, we may mention the alternation of glycosuria and eczema, deafness and vertigo—both of which have been observed by Dr. James Taylor—eczema and asthma. Dr. Denne, of West Kensington, has told me of a woman who is a great sufferer from dyspepsia. A short time ago she developed eczema upon the back of the neck. Since then the dyspepsia has much improved, and each shows a tendency to alternate in intensity with the other. I have recently had under observation a patient of Dr. Chittenden's, who has twice had a severe attack of urticaria, which on each occasion has terminated in a copious

* Read before the Brixton Medical Society, January 19th. The writer has supplemented his paper by information gained at the discussion which it called forth, and also at the discussion on the same subject held at the meeting of the North-West London Clinical Society on February 17th. He is under great obligation to Dr. J. R. T. Conner, who has generously placed a mass of valuable literary material at his disposal.

hæmatemesis. Whether we regard these cases as alternations of symptoms merely or of actual diseases is of small import. This is a purely academic question. What is important for us to note is that the latest morbid development appears to hold its predecessor in check. Nay, who can doubt that in Dr. Chittenden's case the hæmorrhage had something to do with the disappearance of the eruption? The phenomena of counter-irritation are probably related to those of metastasis. Just as an attack of orchitis arrests a urethral discharge, or an eczematous eruption relieves an asthmatic seizure, so a violent stimulation of the skin may help to subdue a deep-seated inflammation. Dr. Dickinson[2] has attempted to show on physiological grounds that counter-irritation is valueless; but, when we reflect upon the phenomena of metastasis, we shall be more inclined to believe in the efficacy of that traditional method of treatment. In this connection I would refer the reader to a pamphlet written more than sixty years ago, for an opportunity of reading which I am indebted to the kindness of Dr. Shaw Mackenzie.[3]

2. *Mechanical Effects.*—The good effect of one disease upon another may be largely due to mechanical causes, as in the cure of ringworm by the induction of suppuration or of lupus by syphilitic ulceration, an instance of which was recently recorded by J. Ross MacMahon.[4] A remarkable example of this kind of cure is related by Dr. Green, of Brixton. A man had for some time suffered from a troublesome loose cartilage in the knee-joint. One day he injured the affected joint, and arthritis ensued, with the result that the loose cartilage became fixed by adhesions, and he ceased to be troubled with it any further.

3. *The Beneficial Effects of Trauma.*—It is by no means rare for an accident to act beneficially upon the health. The following are cases in point:

Case of Chronic Rheumatism Cured by a Severe Accident.—A lady who had been a constant sufferer from rheumatism, some fifteen years ago met with an accident necessitating the amputation of both legs. Since then she has been wholly free from the rheumatism. This good result is doubtless in part due to her being no longer subject to great modifications of temperature (since she is compelled to keep in one suite of rooms), and in part to her having almost entirely abandoned a meat diet; but it does not seem improbable that the accident or the operation had some direct effect.

Case of Syphilitic (?) Periostitis Cured by Fracture of the Humerus (communicated by Mr. Kennard).—A man with a history of syphilis which had not been adequately treated complained of deep-seated pain above the external condyle of the humerus. After three months of this pain, which only yielded to opiates, the patient sustained a comminuted fracture of the lower part of the humerus. He was treated in the ordinary way, and made a good recovery. Since the accident the old pain has completely disappeared.

Case of Psoriasis Disappearing after an Operation (related by Dr. W. Knowsley Sibley).—A woman with scirrhus of the breast had widespread and inveterate psoriasis. After removal of the diseased breast the psoriasis rapidly subsided.

Case of Nervousness and Irritability greatly Improved by an Accident.—The following is extracted from a private letter: "Mr. A. met with a severe accident to his foot whilst riding. Strange to say, ever since this he is wonderfully changed; so much less irritable and domineering, and if he does get put out it is over and done with quickly, whereas before he would make the whole house uncomfortable for two or three days. He still limps, and could not shoot at all this summer, nor ride this winter, and, for one of his active habits, his lameness is a constant trial, and yet he is generally cheerful over it; so it is doubly wonderful. I get on very well with him now, and we talk politics, and often have a joke, whereas before I was often snuffed out if I ventured to address him, and made to understand that he considered me a rather unnecessary encumbrance in his house."

4. *The Beneficial Effects of Febrile Disorders.*—It will be convenient to treat this important branch of the subject under several subheadings.

a. Certain general but only temporary effects of fever may be first considered. Though doubtless the curative influence of febrile disorders is often largely due to the development of toxins, the direct effect of the fever itself must not be neglected. Febrile reaction would appear indeed to be a defensive mechanism. Lowey and Richer[5] have shown that the resistance of rabbits to the virus of pneumonia, diphtheria, and hog cholera is increased, if before inoculating the virus the temperature be raised by injuring the corpus striatum. Some of the curative effects of high temperature will now be mentioned. If a diabetic is attacked with fever—for example, typhoid—sugar may temporarily disappear from the urine, the excess of sugar in the system being presumably burnt off. Fever may likewise dry up a purulent discharge, as from the vagina or urethra, or from a wound. It may also, especially if acute, cause the absorption of callus, and even of new growths. Chronic tonsillar hypertrophy may subside temporarily or permanently under an acute fever like scarlet fever or pneumonia[6]. Fever may also exercise a beneficial effect upon leucocythæmia. Thorsch[7] records a case of this disease in which a rapid diminution in the size of the liver, spleen, and lymphatic glands occurred during the active fever of pneumonia, the leucocytes falling to one-third their previous number. Other cases of this kind have been recorded, but in all instances the effect has been temporary only.

b. We may next consider those cases in which the general health has been improved, or some specific disorder cured, by the occurrence of an exanthem. Most physicians have seen instances of improved health following upon a specific fever—typhoid, for instance. Surgeon-Major G. H. Younge, A.M.S., writes me that he used to suffer greatly during the hot weather in India. "The very sight of food would excite nausea, the liver never acted properly, and there was a constant tendency to diarrhœa with putty-coloured stools. I lost weight, became markedly anæmic, and suffered from frequent febrile attacks." All this was, however, removed by an attack of malignant typhoid, since which he has enjoyed perfect health, the appetite and digestion being now always good, and the hot weather not affecting him the least. Dr. Younge has likewise kindly furnished me with the account of the first of the subjoined cases:

Case of Improved Health following Cholera.—A very delicate strumous-looking man was a martyr to dyspepsia, and never felt well. After a severe attack of cholera, which nearly carried him off, he greatly improved in health, declaring that "he felt in better health than he ever remembered to have done before."

Case of "Rheumatism" Cured by Typhoid Fever. (Communicated by Dr. C. C. Vigurs, of Newquay, Cornwall.)—A man of about 50 years of age had suffered for many years from rheumatism. In 1880 he had an attack of typhoid fever, and since then he has been quite free from his old enemy.

Case of Anæmia, etc., Cured by Scarlet Fever. (Communicated by Dr. St. John Kemm, Worle, Weston-super-Mare.)—The patient had been suffering greatly from anæmia and leucorrhœa, had only twice menstruated, and then very scantily. At the age of 17 she contracted scarlet fever, and in the last week of that illness she menstruated freely, and has continued to do so quite regularly since. Her leucorrhœa and anæmia have disappeared, and she has become quite strong.

Case of Dyspepsia Cured by Typhus Fever.—A medical man writes to me: "For the first two years of my career as a medical student I had very indifferent health, being troubled with dyspepsia, gastric and intestinal. An attack of typhus fever contracted in hospital had a very beneficial effect in banishing all my troubles, and it was a matter of universal comment among my friends that I was a great deal stronger looking after than before my attack of typhus."

Case of Rhinoscleroma Cured by Typhus.—Lubiner[8] records a case of "rhinoscleroma in a man, aged 35, in whom the swelling and infiltration were so considerable that his nostrils were almost entirely blocked." The patient developed typhus, "on recovery from which all nasal obstruction had vanished, nothing but slight thickening of the mucous membrane being visible."

Case of Impaired Eyesight Improved by Small-pox (Mauthner[9]).—A boy, aged 3 years, developed basal meningitis in consequence of a fall upon his head. Sometime afterwards the sight failed, and was finally lost in the right eye. The patient, however, completely recovered his sight after an attack of small-pox, a result Mauthner attributes to the influence of the small-pox virus in causing absorption of the exudation at the base of the brain.

Case of Pulmonary Tuberculosis greatly Improved by an Attack of Scarlatina (Lemoine[10]).—Directly the scarlatinal eruption appeared "the lung symptoms rapidly subsided, the *rales* almost disappearing, and the cough and expectoration ceasing, and after the disappearance of the eruption the improvement continued."

Finally, reference may be made to the influence of measles in arresting whooping-cough.

c. Febrile disorders may exercise a beneficial effect upon mental disease,[11] a fact which has engaged the attention of alienists for some years past. Among the fevers which have acted in this way are typhoid, erysipelas, cholera, and intermittent fever, and Wagner has recommended the injection in mental affections of the erysipelas virus as being the least dangerous of the four. As we should expect, the cases which are most benefited are the milder and more recent ones. The good effects have in several instances been permanent. Dr. James Taylor referred, in the discussion on the subject of this paper, to the beneficial effects which fever sometimes exerts on epilepsy, and Lannois[12] has recorded a case of this disease which was improved by erysipelas but made worse by typhoid fever.

d. The beneficial effect of erysipelas on other diseases must now briefly engage our attention. As Mansell Moullin[13] observes, "It has been known for many years that not only malignant growths, but chronic ulcers of the skin, lupus nodules, syphilitic sores, and other affections occasionally disappear with great rapidity after an attack of erysipelas. I

have already pointed out that the virus of this disorder may do good in epilepsy and mental affections, and it has been known to act similarly in other disorders. Féré[14] refers to its good effect in affections of the eye, including leprosy, trachoma, irido-choroiditis, and orbital tumours. Jonathan Hutchinson[15] has seen nasal polypus, Schwimmer[16] cicatricial keloid, and Terret[17] callus rapidly absorbed under its influence, while Solles[18] and Chelmouski[19] bring forward evidence to show that it is serviceable in tuberculosis. The curative effect of erysipelas on lupus appears to be a matter of common observation. Lastly, I would refer to its remarkable influence on acute yellow atrophy of the liver, a striking instance of which was cited by Dr. Joseph Dulberg, of Manchester, in answer to a letter of mine published in the BRITISH MEDICAL JOURNAL,[20] as occurring in the practice of Professor Leube, of Würzburg. It strongly suggests the advisability of trying Coley's fluid in cases of this kind.

(*e*) The poison of influenza appears to have potent curative effects. It has apparently cured a case of gonorrhœal cystitis;[21] and Dr. Shirtliff,[22] of Malvern, has recorded the similar cure of a lady, aged about 60, who for some time had been under his treatment for chronic catarrh of the upper respiratory tract. "On the very day influenza came on the catarrh suddenly and completely ceased," and had not returned when the patient was seen five weeks afterwards. Mr. W. M. Scott,[23] M.R.C.V.S. has seen an opacity in the cornea of a horse disappear under the influence of influenza; but perhaps the most remarkable instance of the curative influence of this disease is that related to the Brixton Medical Society by Dr. Knight:

A lady, aged 45, suffering from malignant disease of the liver, contracted influenza, and was so ill that she made her will, and Dr. Knight thought she would die. But from that time onward the liver shrank, and the patient seemed to get quite well. The tumour, however, returned in eighteen months, and the patient eventually died.

(*f*) The influence of vaccination in curing disease requires some mention here. It has been thought to protect against influenza,[24] and has been used in the treatment of pulmonary tuberculosis.[25] There is no doubt that it acts beneficially in whooping-cough,[26] and certain chronic affections of the skin, a fact pointed out by Sir James Grant[27] as early as 1863, as well as by other observers. Dr. Milson, of Hampstead, regards the presence of eczema as an argument for, rather than against, vaccination; and Dr. Mutch, of Brixton, has seen obstinate eczema clear up after it.

5. I now propose to record a few miscellaneous cases showing the same beneficial action of disease.

Case of Chronic Rheumatism Disappearing upon the Supervention of Cancer.—A woman in early life had two attacks of rheumatic fever, which left her a martyr to "chronic rheumatism." When 58 she manifested unmistakable signs of malignant disease of the liver, and ever after all signs of joint trouble completely disappeared.

Case of Paralysis Agitans removed by Hemiplegia (communicated by Mr. C. H. Fowler, Potter's Bar).—A farm labourer, aged 73, had, until two years ago, suffered from paralysis agitans for a period of twenty years. It was of a very severe type, affecting the head, arms, and lower extremities, and quite diagnosable a considerable distance away. Two years ago he had an attack of right hemiplegia (probably embolic), and it was immediately noticed that the tremor had quite ceased, not only on the affected side, but bilaterally. From this attack he made a good recovery, and his tremor has not returned.

Case of Migraine removed by an Acute Auditory Affection.—The patient—Dr. T. Reuel Atkinson, of Sherborne—himself published the case in the *Lancet*, August 27th, 1892, and the following facts have been kindly communicated to me by him. "In 1891 I lost the partial hearing in my right ear, and in April, 1892, this was followed by an almost total loss of hearing in my left ear. Before that I had for as long as I can remember suffered from attacks of periodic sick headache, and constipation more or less. Since losing my hearing I have had no constipation and no migraine." In a second letter Dr. Atkinson writes: "I am unable to tell you much about the nature of my deafness; the mischief is in the internal ear, and that is almost all I know about it. As to the cause I am quite in the dark. I can but surmise that it may have followed upon an unrecognised influenza. I am absolutely free from headache now. Formerly I never went a month without one, and rarely a fortnight, and when I had a headache it usually lasted all day till the evening. The headaches were usually accompanied with vomiting, but now I am never sick nor sorry."

Two Cases of Diabetes apparently Cured by the Occurrence of Cancer. (Communicated by Mr. W. A. Easte, Hanslope, Bucks.)—A man was thrown out of a cart, and diabetes set in and lasted from four to five years, when the symptoms of diabetes abated, the sugar almost entirely disappearing from the urine. Shortly after this he died, the *post-mortem* examination revealing cancer of the stomach. The other case was that of a woman, about 45 years of age, whom Mr. Easte had been attending during some years for diabetes. The patient developed malignant disease of the rectum, and since the discovery of this all the symptoms of diabetes have been absent.

Here I must end a very inadequate paper on a very important subject. It has, however, one merit—that of being the first attempt (so far as I know) to deal with this subject in anything like a systematic and comprehensive manner. I earnestly hope my remarks will do something to stimulate inquiry in the direction indicated. The inducements are great. Already observation of the curative action of erysipelas has given a clue to treatment, with brilliant results; and who knows but that we may discover other clues which shall help us to still greater achievements? I am sanguine enough to believe we shall.

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SPASMODIC STRICTURE OF THE CARDIAC ORIFICE OF THE STOMACH.*

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THIS disease, which is also known by the name of cardiospasm, may be defined as a spasmodic contraction of the cardiac orifice of the stomach and of the lower end of the œsophagus occurring independently of any organic lesion.

Etiology.—(1) A mild form of the complaint is frequently encountered in emotional and anæmic women between the ages of 18 and 30. In some cases it makes its appearance coincidently with the establishment of the catamenial functions and reappears at each menstrual epoch for several months. Occasionally the disorder commences at the climacteric, and may then persist with periodic intermissions for a considerable time. Anger, fright, or any other sudden and severe emotion occurring in a neurasthenic or hysterical individual is also apt to provoke a temporary attack. (2) Irritation of one of the abdominal viscera sometimes appears to be responsible for the development of the disease. Thus, spasmodic dysphagia occasionally accompanies or even replaces the vomiting of early pregnancy, and is by no means an uncommon symptom in painful affections of the uterus or its appendages. In children of an excitable disposition the presence of thread worms may likewise induce an attack. (3) Catarrhal and other affections of the œsophagus, associated with hyperæsthesia of the mucous membrane, are often accompanied by spasm of its muscular coat. Thus, in a case of chronic dysphagia which recently came under my notice a necropsy revealed the existence of a simple chronic ulcer at the lower extremity of the œsophagus, which, although it involved the cardiac orifice of the stomach, had not occasioned any perceptible degree of stenosis. Nevertheless it was obvious from the contracted state of the stomach and the marked dilatation of the lower 5 inches of the œsophagus that almost complete occlusion of the cardia must have existed during life. Slight injuries to the œsophagus, such as those inflicted by swallowing a pin or a fish bone, may induce a severe attack of spasmodic dysphagia in a nervous or debilitated subject. In such cases, however, the seat of the obstruction is more often in the upper or middle third of the tube than at its lower end. (4) Habitual drunkards are very liable to the complaint, especially after

* Abstract of a Lecture delivered at the London Temperance Hospital on February 10th, 1898.

indulgence in an unusually deep debauch. In many of these cases a bougie is only arrested in the immediate neighbourhood of the stomach, but in others the obstruction is encountered just below the pharynx. (5) Organic diseases of the stomach and other organs are occasionally accompanied by spasmodic occlusion of the upper orifice of the stomach. Thus Poncet[1] observed a case where gastrostomy was performed for stricture of the œsophagus. After death, however, that tube was found to be perfectly healthy, while the pylorus was the seat of a cancerous growth. Somewhat similar cases have been recorded by Ewald[2] and Osgood.[3] One of the best examples of cardiospasm I have ever seen occurred in a highly neurotic youth, who was the subject of acute phthisis, and Bouveret[4] also records an example of the association of these two diseases. (6) Lastly, an insidious and chronic type of the complaint occasionally develops either without obvious cause, or appears to follow some slight injury to the head or spine, or an acute febrile disease.

Symptoms.

Spasmodic stricture of the cardiac orifice may present itself either as an acute or as a chronic disease. The former variety is chiefly encountered in young and neurotic individuals, and is especially common in women. In typical cases four distinct symptoms may be observed to follow each other in fairly regular sequence, namely, dysphagia, pain at the chest, regurgitation of the food, and flatulent distension of the stomach.

1. *Dysphagia.*—Difficulty of swallowing constitutes the most characteristic feature of the complaint. In mild cases each mouthful of food appears to be temporarily arrested behind the lower end of the sternum, and a second effort at deglutition is required to overcome the obstruction. In other instances the patient is obliged to drink a little water before each mouthful of food, while in the most severe cases the diet has to be composed entirely of liquids. In rare cases every attempt to swallow gives rise to intense spasm of the œsophagus and pharynx, which renders the administration of food by the mouth impossible, and may even simulate hydrophobia.[5] One of the chief characteristics of this form of dysphagia is its tendency to vary in severity from day to day, and even from meal to meal. The symptom is always most marked after midday, and may appear only at supper time. Excitement, fatigue, or any slight indisposition invariably increases the difficulty of swallowing, but if the patient's attention is distracted from her complaint, the ingestion of the food is often accomplished without discomfort.

2. *Pain.*—The temporary arrest of the food in the œsophagus is always accompanied by a sense of fulness or oppression behind the lower end of the sternum, which disappears as soon as the bolus has entered the stomach. In some cases, however, the process of deglutition is accompanied by genuine pain, which is probably due to a hyperæsthetic condition of the mucous membrane of the œsophagus. In these cases a feeling of intense soreness is experienced on swallowing, which extends down the chest behind the sternum, and upwards along the throat to the ear. Occasionally the pain is chiefly felt in the neck and between the shoulders. The suffering is always most intense after the ingestion of solid food, but it also follows the use of hot or cold drinks, and may persist for some time after a meal. As a rule, the pain ensues at the commencement of each meal, and the knowledge of the suffering which will be experienced may deter the patient from eating, and thereby induce serious loss of flesh. In other instances the symptom develops quite suddenly in the intervals between the meals, the swallowing of a little saliva being sufficient to excite intense pain in the throat and ear.

3. *Regurgitation* of food, or œsophageal vomiting, only occurs in a comparatively small proportion of the cases. It is extremely capricious in its onset, and is quite as often excited by liquid as by solid food. The emesis usually takes place during the progress of the meal, and tends to relieve the sense of oppression at the chest which results from the temporary arrest of the food in the œsophagus. It is worthy of notice that certain articles of diet are habitually rejected, while others of a less digestible nature are often retained. The attack occurs quite suddenly, either immediately after the food has been swallowed or as soon as the patient rises from table at the end of the repast, and is neither preceded by nausea nor accompanied by straining. After the patient has been sick she will often partake of more food without any discomfort. The vomited material presents no signs of digestion, is neutral or alkaline in reaction, and is largely mixed with saliva and mucus.

4. *Gaseous distension* of the stomach arises from the accumulation of atmospheric air, which has been swallowed during the meal, and is unable to escape from the organ owing to the closure of the cardiac orifice. This ballooning of the stomach pushes up the left side of the diaphragm, and induces a series of secondary phenomena of some importance. The first symptom of this condition is a sense of intense fulness and oppression at the chest, which often culminates in an attack of severe pain in the vicinity of the xiphoid cartilage. Occasionally the left side of the chest is the chief seat of the suffering, or a stabbing pain is experienced through the dorsal spine. In most cases these abnormal sensations are accompanied by dyspnœa, palpitation, and a quick, feeble, or irregular pulse. In severe cases the face becomes cyanosed, and the patient experiences the fear of impending dissolution. On examination the epigastrium is found to be distended and tympanitic on percussion, while the upper border of the stomach may reach as high as the fourth rib on the left side. These several phenomena seldom last more than half an hour, and disappear quite suddenly after the eructation of a large quantity of inodorous gas.

Notwithstanding the obstacles which exist to the maintenance of nutrition, loss of flesh is seldom a noticeable feature of the complaint; indeed fatal exhaustion from this cause has rarely occurred. As a rule the appetite continues good, but when the spasmodic affection is associated with hyperæsthesia of the mucous membrane of the œsophagus the patient may be deterred from eating on account of the pain. Anæmia is almost always present, and a permanent cure can seldom be effected until the condition of the blood has been improved. Among the minor symptoms of the complaint headache, amenorrhœa, constipation, and emotional disturbances are frequently encountered.

Chronic spasm of the cardiac orifice occurring independently of any organic lesion is a rare but extremely interesting disease. In most of the recorded cases (Meltzer,[6] Einhorn,[7] Maybaum,[8] Leichtenstern[9]) the first symptoms appeared in early life, and were referred by the patient to a slight blow on the back, or to some trifling indisposition. When once the complaint has become established it endures throughout life. The symptoms which attend this variety of cardiospasm are very similar to those already described, namely, dysphagia, with pain and oppression at the chest. In addition to these the patient gradually loses flesh and energy, and becomes greatly despondent about his condition.

One of the chief points of interest in these cases lies in the fact that instead of vomiting the food the patient acquires the knack of forcing it into his stomach by muscular effort. Thus, after swallowing several mouthfuls of food in rapid succession, the patient may be observed to take a deep inspiration and then to make a forcible expiratory effort with the glottis closed and the elbows firmly pressed against the sides of the chest. This manœuvre is repeated at short intervals during the meal until most of the food has been squeezed into the stomach.

The explanation of this curious phenomenon is to be found in the dilatation of the thoracic portion of the œsophagus which invariably results from chronic obstruction of the cardiac orifice, and which consequently forms a kind of first stomach or thoracic reservoir for the food. As soon as this sac has been partially filled a sudden rise of the intrathoracic pressure brought about in the manner described is sufficient to force a portion of its contents through the cardiac orifice. This dilatation of the œsophagus occurring independently of an organic stricture has not only been observed on the *post-mortem* table, but can be readily demonstrated during life in the following manner: In the early morning the patient is given a cup of tea, and prohibited from indulging in any forced efforts of deglutition. About half an hour later a soft tube is passed down the œsophagus until its point becomes arrested (about 40 to 48 cm. from the front teeth), when the greater part of the tea can be evacuated. After a little manipulation it is usually

possible to pass the tube into the stomach and to extract the remainder. The first portion removed is neutral in reaction and turbid from admixture with mucus and food *débris*, while the rest is usually acid. If a test breakfast is employed and the tube passed one hour afterwards, the material extracted from the œsophagus is found to vary in amount from 20 to 60 c.cm., and presents no signs of digestion, while that removed from the stomach exhibits the ordinary characters of semi-digested food, and contains free hydrochloric acid. It is also possible to wash out the dilated œsophagus without any of the fluid passing into the stomach, and a rough estimate may be made of the capacity of the tube by measuring the quantity of fluid it will accommodate. In some of the recorded cases from 150 to 300 c.cm. of water were easily retained in the dilated œsophagus.

Meltzer has drawn attention to the fact that if air is pumped into the stomach, the organ can be completely distended without any escape of gas through the cardiac orifice. This fact seems to favour the assumption that the circular muscle whose function it is to close the aperture is affected with a tonic spasm. On the other hand it has already been observed that however great may be the difficulty of deglutition, there seldom exists much difficulty in passing a tube through the suppositious stenosis. It is, therefore, quite as reasonable to suppose that the dysphagia and subsequent dilatation of the œsophagus may be dependent upon paralysis of the longitudinal fibres of the œsophagus which dilate the cardiac orifice as to imagine a long continued spasm of their antagonists. It is also worthy of notice that it is impossible in these cases to produce reflex vomiting by irritation of the pharynx.

Diagnosis.

The recognition of the acute variety of the disease is seldom attended by any difficulty. The sudden onset of dysphagia, which varies in severity from day to day, and its intimate association with other symptoms of a hysterical nature indicate at once its nervous origin; while the early age of the patient and the absence of a permanent local obstruction to the passage of a bougie are sufficient to eliminate the possibility of an organic stricture of the œsophagus. Chronic cardiospasm in its early stages may easily be confounded with cancerous stenosis or compression of the œsophagus by a diverticulum. It is to be observed, however, that cancer is more common in men than in women, and is rarely encountered before the age of 45. The symptoms commence insidiously, but the dysphagia steadily increases until the patient can only swallow liquids with difficulty, while most of the food is regurgitated. He also rapidly loses flesh and strength, and soon presents the characteristic cachexia. Exploration with a tube reveals an obstruction at one spot in the œsophagus, which can only be surmounted by the use of an instrument of suitable calibre. Hæmorrhage from ulceration of the malignant growth is not infrequently observed, especially after direct exploration. The œsophagus seldom exhibits any marked evidence of dilatation above the stricture, and at most a few drachms of turbid saliva can be evacuated. Cardiospasm, on the other hand, occurs at an early period of life, and seems to be as common in women as in men. The dysphagia develops gradually and never becomes complete, since the patient acquires the habit of forcing the food into the stomach in the manner described. Vomiting seldom occurs, and rapid emaciation, hæmatemesis, and cachexia are never observed. Exploration with a tube demonstrates that the apparent stricture can be traversed without difficulty, while the œsophagus itself is greatly dilated, and capable of containing a considerable quantity of food. The disease lasts for many years; and, if the patient is properly fed, does not directly curtail the period of life.

The symptoms which arise from the presence of a pressure pouch of the œsophagus usually develop about middle age, and consist of dysphagia and regurgitation of food. As the diverticulum increases in size a swelling of the neck may be observed after eating or drinking, and the application of external pressure will force some of its contents into the mouth. If a tube is inserted into the throat, its tip is apt to enter the pouch and to become arrested at a distance of 6 or 7 inches from the incisor teeth. With a little manipulation the absence of a stricture or dilatation of the œsophagus can easily be determined.

Treatment.

In every case measures should be adopted with a view of improving the general health. Daily exercise in the open air, with some healthy mental occupation, are indispensable to the successful treatment of hysterical and neurasthenic cases. The food should be moderate in quantity and plain in quality, and in severe cases a milk diet, with rest in bed, should be enforced for a few days. If anæmia is a marked symptom, iron, quinine, valerianate of zinc, or phosphate of manganese should be employed, care being taken to secure an efficient daily action of the bowels. Subcutaneous injections of atropine have been recommended for cases of general spasm of the muscles of deglutition, combined with hyperæsthesia of the mucous membrane of the œsophagus. The measure which meets with the greatest amount of success is the introduction of a full-sized bougie into the stomach each day, the instrument being allowed to remain in the œsophagus for five minutes on each occasion. Occasionally this procedure is accompanied by a considerable amount of pain, so that it is advisable either to allow the patient to suck a few cocaine lozenges prior to the operation, or to smear the lower part of the instrument with cacao butter containing about 5 per cent. of the hydrochlorate of cocaine. In cases of chronic cardiospasm the nutrition should be maintained by teaching the patient to feed himself through a tube. The dilated œsophagus should be washed out each day or after each meal if the patient swallows his food, and internal faradisation of the cardiac sphincter may be practised with a suitable electrode. In severe cases it may be necessary to perform gastrostomy.

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CASES OF CEREBRAL ABSCESS IN CONNECTION WITH CHRONIC SUPPURATIVE MIDDLE-EAR DISEASE.

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During the last ten years great progress has been made in the surgical treatment of brain abscess caused by purulent inflammation of the middle ear. At least 60 cases of cerebral and 12 of cerebellar abscess have been successfully operated upon and recorded, and many unsuccessful, but none the less instructive, cases have been published.

There is no doubt that deaths still occur undiagnosed, both because the attention of the medical attendant is not drawn to the aural condition from its supposed trivial importance, by either the patient or his friends, and because the symptoms are often indefinite and often latent for long periods. Large encapsuled abscesses have been found during *post-mortem* examinations which must have existed for months, if not years, and which during life gave rise to no serious symptoms, and were therefore never suspected. An interesting case is recorded by Dr. Barr of a young man who, during his holiday, was climbing hills in the West of Scotland at the time of the first onset of acute symptoms. He died in a fortnight, and Professor Coats believed from examination of the lining membrane that the abscess had existed many months. Even when attention is especially directed to the possibility of an abscess, the difficulty of diagnosing an uncomplicated case in the early stages is often great, and is forcibly shown in a valuable paper by Godlee on Two Cases of Middle-ear Disease in vol. ii of *International Clinics*. He has compiled tables showing the most characteristic symptoms which may be feared or expected as consequences of chronic purulent inflammation of the middle ear, namely, mastoid suppuration, lateral sinus thrombosis, septic meningitis, and cerebral abscess. These symptoms are over sixty in number, and it is evidently difficult to reduce them to more reasonable bounds without impairing their accuracy.

In complicated cases—by far the majority—the difficulty of diagnosis is increased tenfold, and is at times impossible without an exploratory operation. This difficulty can only be diminished by a further record of cases, especially of those which have been under observation in the early stages. In the notes of the following cases prominence is given to the salient points, and detail, as far as possible, is omitted.

Case I. *Chronic Suppurative Otitis Media: Abscess of Temporo-sphenoidal Lobe: Operation: Recovery.*—M. H., aged 30, came into the out-patient room at the Queen's Hospital on January 16th, 1895, complaining of severe pain in the head, chiefly on the vertex and left side. For twenty-five years he had had a yellow discharge from the left ear but never any pain, nor had he ever been away from work on account of illness. Fourteen days ago, January 2nd, when working down a well, he experienced a sudden and severe pain in the left side and vertex of his head. He went home but the pain gradually got worse, and two or three days later left facial paralysis came on. He had no rigors nor vomiting, and the discharge from the ear was more copious during this time. No local tenderness was found either over or below the mastoid. He was in a drowsy, stupid condition, with dry tongue covered with sordes, pulse slow, temperature 100.2°, a condition best described as a "typhoid" one. During the next few days he remained in much the same condition but slightly more comatose—temperature 100.6° to 102° F., pulse slow, about 60, discharge from ear thin and purulent. Mr. Priestley Smith kindly examined his eyes and reported "no decided neuritis, doubtful blurring of discs." In the absence of symptoms indicating mastoid or sinus trouble the case was looked upon as one of temporo-sphenoidal abscess. A trephining was therefore performed on January 19th, and an abscess was found deep in the temporo-sphenoidal lobe, containing about an ounce of thick yellow fœtid pus. The cavity was gently irrigated with boric acid solution and drained with rubber tube. He made a steady recovery, the wound being healed on February 6th. The pain in the head went after the third day. The facial paralysis was completely gone on February 25th and the discharge from the ear ceased on March 6th—after careful antiseptic treatment. He was seen again in May, and was then in robust health and at his usual employment.

Case II. *Chronic Suppurative Otitis Media: Temporo-sphenoidal Abscess: Operation: Recovery.*—Mr. B. S., aged 25, was first seen in consultation with Mr. Loxton in 1890, for an offensive purulent discharge from the left middle ear, with polypoid granulations surrounding the perforation in the membrane. Eight years previously—in 1882—he had an attack of acute left otitis from cold, followed by purulent discharge, which had persisted ever since. He had been under treatment part of the time. He was placed on an antiseptic and spirit treatment. Marked improvement followed, and he was seen at long intervals as the discharge recurred. There was never any mastoid pain or tenderness. The question of possible intracranial complication was more than once discussed.

On March 26th, 1896, he saw Mr. Loxton for pain in the affected ear shooting alongside of head, and in the occipital region slightly, which he had had for a day or two. His temperature was normal, pulse 74, no headache, no ineptitude, nor any sign of intracranial complication, which was especially looked for. There had been no discharge from the ear for some months. There was an inflammatory swelling on the posterior wall of the bony meatus, partly occluding it and possibly the cause of the pain. As the symptoms persisted in spite of treatment, a puncture was on March 28th made into the swelling; no pus escaped, but relief was afforded for 24 hours. On March 30th, the swelling had subsided and granulations bathed in fœtid pus were seen beyond it, and he was again placed on the antiseptic and spirit treatment. The neuralgia was as bad as ever, and no relief was obtained from drugs. On April 4th, a dentist was consulted, and although no dental cause could be ascertained, a left wisdom tooth was extracted under gas in the hope of possible relief. On recovering from the gas, he felt no pain, and for four days he remained well and decidedly improved in health.

The pain returned on the night of April 8th worse than ever, and was localised along the course of the great occipital nerves; no pain in ear or mastoid. The following day I was asked to see him *re* the possibility of any intracranial trouble, but there was no symptom beyond the occipital pain. His cerebration was quick, temperature and pulse normal. He was given remedies which eased the pain but did not cure it, and he kept in much the same condition until April 16th; temperature normal, pulse 70. He then became drowsy, but was rational and intelligent. As the drowsiness might have been caused by drugs all medicinal treatment was stopped, but by mistake a very large dose of antikamnia was given that evening, and it was felt that this might have increased the drowsiness, which was more marked the following morning. He was intelligent, and said the pain was better, but not well; pulse 64. A brisk purge was given and other remedies discontinued. As the drowsiness increased he was seen the next afternoon by me in consultation with Dr. Holloway, in the temporary absence of Mr. Loxton, and also later by Dr. Suckling. Optic neuritis was now present, pulse-rate had fallen to 40, temperature normal, respiration slow, marked drowsiness, and slow cerebration. It was agreed that there was either a temporo-sphenoidal or cerebellar abscess. Early the following morning a trephining was performed over the temporo-sphenoidal lobe, and a large abscess was found containing some ounces of pus, which spurted out along the track of the exploring probe. The cavity was gently irrigated with warm boracic solution, and a rubber drainage tube used. Immediate improvement resulted, and in a fortnight he was practically well. There was a little rise of temperature once owing to a slough obstructing free drainage, and for a time there was double vision when the eyes were looking to the left, probably the result of some implication of the left centre for conjugate movement. This symptom disappeared when the tube was finally withdrawn. On June 22nd, as the discharge from the ear was still present, the mastoid antrum was opened, and a series of small cells in dense bone filled with pus were scraped out and drained. He made a good recovery, and although he has headache rather frequently at the present time, he is in good health, and following his profession as an art student.

Case III. *Chronic Suppurative Otitis Media: Mastoid Abscess: Temporo-sphenoidal Abscess: Operation: Recovery.*—Mr. P. H., aged 17, was first seen in consultation with Mr. Hallwright June 26th, 1894, for an offensive purulent discharge from both ears, a sequel of scarlet fever in 1887. The left ear was then the worst and there were small perforations in the posterior superior segment of each membrane with granulation tissue around. No adenoid hypertrophy nor nasal abnormality. Chromic acid was applied to granulations, and he was placed on the antiseptic and spirit treatment. He improved with this and the discharge on the left side ceased for long intervals, but there was always a trace on the right. No pain nor mastoid tenderness. The propriety of opening the mastoid antrum was more than once discussed.

On September 25th, 1896, I again saw him with Mr. Hallwright. For some ten days he had suffered from neuralgia in his right upper teeth and along the temporo-auricular nerve, and had been taking remedies for it. On the night of the 19th he had been to the theatre and afterwards waited about in the cold for an omnibus. After he reached home he felt unwell all night and had a shivering fit lasting about an hour, and the next morning some headache in the right temple. Temperature 103°; pulse 84. His ears were much in their usual state, but there was marked tenderness over the right mastoid antrum. As this seemed sufficient to account for the rigor and headache, opening of the antrum was advised. A further opinion was desired by the parents, so he was seen that evening by Mr. Barling, who agreed with the view taken and who was present next morning when the antrum was opened. Pus welled up from a series of small spaces in hard bone, which were gouged out and packed with iodoform gauze. For ten days he was much better. Temperature and pulse practically normal. He then had some vomiting after food and a feeling of sickness and a second rigor on the 30th, the temperature rising to 103.2°. He was now seen in further consultation by Mr. Jordan Lloyd, who regularly saw him with Mr. Hallwright and myself. The sickness passed away on withholding food, but the pain in the right temple and in the right molar teeth got worse; so much so that the teeth were examined by a dental surgeon, who however could find no dental cause for the pain. He kept in much the same condition *re* the pain, but got weaker and emaciated. Temperature generally normal and pulse 80. On October 8th he was decidedly drowsy, and in the evening this was more marked and the pulse-rate varied from 40 to 120. The pain was still felt acutely. He was trephined by me the next morning and an abscess opened, containing about 2 ounces of pus, a rubber tube was put in, and steady improvement took place. There was still some pain in the right upper molars when the wound was dressed. A fortnight later he was practically well. He has had a good deal of headache at times, but is now in good health. He sailed for the Cape a short time ago.

Case IV. *Chronic Suppurative Otitis Media: Mastoid Abscess: Meningitis: Temporo-sphenoidal Abscess: Operations: Death.*—H. H., aged 9, admitted into the Ear and Throat Hospital, May 10th, 1898. There was a history of discharge from both ears for three or four years, and he had been attending as an out-patient for three months, and had been treated by one of my colleagues with antiseptic lotions and drops, and removal of polypoid granulation tissue. The right side was the worst and there were still granulations around perforation. He had been quite well and at school until a week before admission. He was then kept at home as he complained of headache and had very restless nights, frequently crying out when asleep.

The night before admission, at 10 P.M., he was suddenly seized with what was described as an "epileptiform" fit, which continued without intermission until he was brought to the hospital at 2 P.M. He was then only partly conscious, and there was slight rigidity of both body and limbs, most marked on the left side. There was no retraction of head, no optic neuritis, the pupils were dilated, and there was at times conjugate deviation of the eyes to the left. Temperature was 100°, and pulse 130. He was constantly picking at the right upper molar teeth with left fingers. There was distinct tenderness over the right mastoid antrum, so at 4.30 P.M. this was opened and a teaspoonful of pus evacuated. Fluid syringed through mastoid opening came freely through the meatus. He was given frequent small doses of calomel, and bromide when necessary. He lay quiet all night and the next morning his temperature was normal, pulse 100, rigidity and conjugate deviation much less marked, and he was able to answer some questions rationally. His condition did not alter much during the next twelve days. He was restless, slept little, cried out occasionally, was conscious at times, difficult to feed, constantly picked either at bandages over dressings, or the right upper teeth, his temperature was generally normal and pulse 100. His right upper teeth seemed to trouble him so much that two carious ones were extracted and the gum lanced over a partly cut incisor. No relief ensued.

On June 3rd he vomited several times, screamed out frequently, and became less conscious. The next day (June 4th) he was more comatose, temperature 98.2°, pulse 108 at 9 A.M., 80 in the afternoon. An exploratory trephining was performed, and a large temporo-sphenoidal abscess, containing about 6 ounces of fœtid pus was found and opened. His pulse at once rose from 80 to 100, and his temperature to 100°, and some improvement gradually followed, and two days afterwards he was again able to answer some questions coherently. He maintained this improvement, temperature generally 99° and pulse 100 until June 10th, when he again became more comatose and weaker, and as the abscess cavity was fœtid and sloughy, gentle syringing with warm izal solution was ordered twice daily. Some temporary improvement followed.

On the 13th there was marked hernia cerebri, and during the syringing, which was very carefully performed, the boy became somewhat collapsed. Two hours later there was a transient but marked rigor, temperature 103.6°, pulse 88. He subsequently improved somewhat, but grew worse the following day, and died on the 15th, the temperature rapidly rising before death to 106.6° and the pulse to 160. *Post mortem:* Meningitis of base of brain, most marked about pons, and extending some distance down the spinal canal, along both Sylvian fissures, and under surface of cerebellum. Whole of right temporo sphenoidal lobe very soft and breaking down, the lateral ventricle being filled with a watery fœtid pus. The lateral ventricle of left side also filled with this pus and brain matter around, especially anteriorly, soft and breaking down. Cerebellum normal. No secondary abscesses.

Case V. *Chronic Suppurative Otitis Media: Septic Lateral Sinus Thrombosis: Suppuration along Course of Internal Jugular Vein: Secondary Brain Abscesses: Operations: Death.*—W. W., aged 19, was admitted into the

Queen's Hospital on September 21st, 1896, under the care of Dr. Foxwell (by whom he was subsequently transferred to my care), having been sent in as a case of typhoid fever. About ten years ago he fell down and hurt his head, and subsequently had a discharge from the right ear, which, with short periods of intermission, had continued to the present time. He was able to work until a month ago; then the discharge became more profuse, and he suffered from pain in the frontal region at night. He remained in bed, but became worse. There had not been any vomiting, but there was a history from the friends of several fits and two rigors. Ten days ago a painful swelling was noticed below the right ear, which increased and became more painful. There was a foul discharge from the right ear. The temperature was 103°, pulse 84; tongue very foul, and covered with thick white fur; knee-jerks absent, no paralysis; double optic neuritis.

On the 24th fluctuations were detected in the swelling in the neck, and he was seen by me on the 25th. An incision was at once made, and some ounces of very foul pus evacuated. For two days after this he was more comfortable, but his temperature kept high, and on the 27th he had a rigor, his temperature rising to 105·2°. Although there was no recurrence of the rigors he kept in an unsatisfactory condition, temperature varying from 98·2 to 105°, pulse from 70 to 100.

On October 2nd the abscess cavity was explored with a view of ligaturing and removing, if necessary, the right internal jugular vein, but no trace of it could be found, and I concluded that it had been destroyed by the suppuration. His subsequent condition became more unsatisfactory, and it was deemed advisable to explore further. He was therefore trephined on October 14th, over the right temporo-sphenoidal lobe, and both this and the cerebellum carefully explored with a needle. No abscess cavity was found. A crown of bone was then removed to open both the mastoid antrum and lateral sinus; the former contained a small quantity of caseous pus, the latter a blood clot. The opening was packed with iodoform gauze. There was little change in the patient's condition after the operation; if anything he was more irritable and restless, and he refused food. There was no further vomiting. He gradually sank, and died on the night of the 15th.

Post-mortem no trace of the right internal jugular vein could be found. The lateral sinus was thrombosed with blood clot, which had not become organised. In the white matter of the brain there were eight small abscesses found, evidently secondary; none elsewhere.

Looking at these cases, it is evident that the first three practically form a group of uncomplicated abscess of the temporo-sphenoidal lobe, and that a fairly accurate diagnosis was possible.

The symptoms in favour of the diagnosis were:

1. A long history in each case of the chronic purulent ear trouble—twenty-five years, fourteen years, and nine years respectively.
2. No mastoid tenderness (except in Case III) and no tenderness on percussion over the sigmoid sinus.
3. No thrombosis of the internal jugular vein.
4. No high or greatly-varying temperatures, and pulse not rapid.
5. Absence of pyæmic symptoms other than the two rigors in Case III.
6. Cerebration little affected in the early stages, but becoming slow later.
7. Marked emaciation.
8. A chronic course terminating in coma.

In favour of the abscess being temporo-sphenoidal rather than cerebellar there were the facts that there was no occipital headache, no marked vomiting nor disturbance of equilibrium, no sensory aphasia, and no implication of the sixth nerve.

Apart from the non-implication of this latter nerve, the neuritis present in the several cases did not much assist the diagnosis, but it is noteworthy that in three of the cases the fifth nerve was early involved, and that the aid of a dental surgeon was sought to eliminate a possible dental cause of the pain.

In Case IV the diagnosis was septic basal meningitis, and this was probably correct, though from the sudden onset it is just possible that a latent abscess may have burst into the lateral ventricle. There was no sudden change in the symptoms during the subsequent progress of the case to indicate that this had taken place.

Case V was primarily a septic thrombosis rapidly extending down the jugular vein, and destroying it by suppuration. The brain abscesses were secondary and pyæmic, and could not have been discovered by operation.

With regard to the time at which trephining is generally performed, commencing coma still seems to be the signal for surgical action, and that it is not a too-late one is shown by the complete and rapid recovery of these and other similar cases.

The question is, Can we anticipate this time with a reasonable hope of success? The experience of the first three cases leads me to hope that an exploratory operation might with advantage be undertaken without waiting for coma in all cases presenting a series of symptoms similar to those here recorded.

If there is much doubt as to the location of the abscess—temporo-sphenoidal or cerebellar, or possible implication of the sigmoid sinus—the method suggested by Mr. Percy Dean should be followed, and a crown of bone removed, 1¼ inch behind and ¼ inch above the centre of the external meatus, through which all these regions can be explored. I need hardly say that if there is any mastoid tenderness the antrum should always be opened first, and the surrounding parts carefully examined for any evidence of extension from this cavity.

It is interesting to note that two of the cases had been under careful treatment for the aural condition for years, and that the possibility of intracranial complications had been discussed, as also the advisability of a mastoid operation as a preventive measure, which unfortunately had not been accepted by the patients.

The cases very forcibly show the importance, or rather the necessity, for a mastoid operation in all cases of suppurative middle-ear disease which do not yield to careful treatment by ordinary methods.

CLINICAL LECTURE
ON
CASES OF PERITYPHLITIC ABSCESS OF CÆCAL ORIGIN.

Delivered at the Manchester Royal Infirmary.

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[ABSTRACT.]

IT has now become a well-recognised fact that most cases of abscess in the neighbourhood of the cæcum or vermiform appendix are dependent upon morbid changes, not in the cæcum as was formerly believed, but in the appendix itself; hence the old names "perityphlitis" and "perityphlitic abscess" are becoming very generally replaced by the terms "appendicitis" and "appendicular abscess." We do, however, occasionally meet with instances of suppuration in this situation, where the primary lesion is in the cæcum, the appendix being perfectly healthy, as was illustrated in the following case, where a perityphlitic abscess was due to perforation of the cæcum by a foreign body:

CASE I. *Perityphlitic Abscess due to Perforation of the Cæcum by a Pin: Fæcal Fistula: Plastic Operation: Recovery.*—A man, aged 29 years, was admitted on September 23rd, 1897, into the Manchester Royal Infirmary, presenting all the symptoms of acute appendicitis. Four days previously he was suddenly seized with severe pain in the right iliac fossa, followed by vomiting. On admission, a distinct fulness was perceptible above the outer part of Poupart's ligament; it was tender upon pressure, and slightly dull on percussion; there was rigidity of the abdominal muscles on the same side, and the abdomen generally was somewhat tympanitic. Temperature 99.4°, pulse 82. For some days there was little change in the patient's condition; there was no sickness, and the bowels acted with an enema, the motions afterwards becoming loose and diarrhœa-like. At the end of a week the attack appeared to be subsiding, for the local symptoms were all less marked; the temperature had remained normal, the pulse never rising above 96.

On the ninth day the patient vomited for the first time since admission. As the sickness continued the following day, and at the end of 48 hours became distinctly fæcal, it was resolved to explore the neighbourhood of the appendix, though no evidence of suppuration could be detected. There was no increase in the swelling, or other local signs pointing to the presence of pus; the temperature remained normal, but the pulse was somewhat accelerated.

On the eleventh day an exploratory incision was made over the region of the appendix. On opening the peritoneal cavity there was an escape of less than 1 ounce of thick pus with a very offensive odour. A fæcal concretion came away with the discharge, ovoid in shape, and three-quarters of an inch in length. Embedded in the centre of the concretion was a pin, its head and point protruding slightly at either end. The abscess cavity, which on exploration with the finger was found to be shut off from the general peritoneal cavity by adhesions, was washed out with boric lotion, and a drainage tube was inserted.

As regards the after-course, though the patient's condition for some days was very unsatisfactory he made a good recovery, and left the hospital for the convalescent home at Cheadle on November 6th, a fæcal fistula remaining at the seat of operation. He was readmitted at the end of December, as there was a very copious discharge of fæcal matter, and also a protrusion of mucous membrane from the fistula, which showed no tendency to close.

On December 30th the wound was enlarged, and it was then found that the communication was with the cæcum, which was closely adherent to the abdominal wall, the opening, which was about the size of a shilling, being situated on the anterior part of the bowel, about 3 inches from the

origin of the appendix. The latter was perfectly healthy; there was no thickening of its wall, and it was quite free from any adhesions. The protruding mucous membrane having been reduced, the opening in the cæcum was closed by a single row of silk (Lembert) sutures, its margins having been liberated and refreshed. The opening in the abdominal wall was then closed, except at its centre, in which a small plug of iodoform gauze was left. There was no further escape of fæcal matter from the wound, which was healed at the end of three weeks, when the patient left the hospital and returned home.

The case is a good illustration of a perityphlitic abscess due to perforation of the cæcum, a condition the existence of which has been denied by some writers. Others admit the possibility of its occurrence, the frequency with which the suppuration is of cæcal origin being variously given as 0.5, 1, 4, 9 per cent. of the cases of abscess met with in this situation.

In one of the most recent works[1] on this subject it is interesting to note the following statement: "In fact, it will be generally allowed that a perforating ulceration of the cæcum, though it does certainly occur, is of so rare occurrence that it may be disregarded."

Treves[2] says: "A perforation may be found in the cæcum. In a few rare instances this may be primary and due to mischief starting in the wall of the cæcum, the appendix itself being sound. In the great majority of examples, however, the perforation is secondary and is due to the abscess—which has originated in the appendix—making its way into the cæcum. The perforation under such circumstances takes place from without." That this result is not uncommon is shown by Bull, for in an analysis of 57 cases of appendicular abscess, where the pus was not evacuated by the surgeon, he found that in 15 instances (26 per cent.) it burst into the cæcum.

In the following case a condition very similar to that met with in Case 1 was found at the time of operation, and in the absence of any other assignable cause it is not improbable that the perityphlitic abscess was produced in the same way.

Case II. *Perityphlitic Abscess due to Perforation of the Cæcum: Fæcal Fistula: Ileo-colostomy: Recovery.*—A male, aged 19 years, was admitted on April 9th, 1892, suffering from a fæcal fistula, the orifice of which was situated in the right groin about one inch above the centre of Poupart's ligament. About six months previously an abscess had formed in this situation with the usual symptoms of perityphlitis, and after the evacuation of its contents a fistulous opening remained, through which there had since been a constant discharge of pus and fæcal matter. On May 9th (an attempt to close the fistula by scraping with a Volkmann's spoon having failed) the external opening was enlarged, and the fistula was followed to its communication with the bowel. This was found to be situated on the anterior surface of the cæcum close to its junction with the ileum. The appendix was quite healthy. The margins of the opening, which was about the size of a shilling, were thickened and indurated, and the adjacent bowel was so firmly bound down by adhesions that it was impossible to free the opening sufficiently to allow of its closure by a plastic operation. Ileo-colostomy was therefore performed, a loop of ileum a few inches from its termination being united by means of Senn's bone plates to the transverse colon. The external wound was then closed except at its centre, in which a drainage tube was left. As regards the after-course of the case, there was a free fæcal discharge from the wound for the first ten days; it then began to diminish, and at the end of a month it had entirely ceased, the fistulous opening being soundly healed. It has since remained so, and at the present time—nearly six years after the operation—the patient is in the enjoyment of good health and quite free from any intestinal trouble.

A perityphlitic abscess may also be due to perforation of the cæcum by a stercoral ulcer—that is, that form of ulceration which is not uncommonly met with in the large intestine, and especially in the cæcum, from the irritation and pressure of hard masses of impacted fæcal matter. Though it is somewhat unusual for stercoral ulceration to run on to perforation, unless the fæcal impaction is secondary to obstruction of the bowel lower down—for example, from a stricture—yet this result may occur in cases of simple long-continued constipation, where the accumulation of fæces is apparently due to loss of tone in the walls of the bowel, as was illustrated in the following case:

Case III. *Perityphlitic Abscess due to Stercoral Ulceration and Perforation of the Cæcum: Extravasation of Fæces into Peritoneal Cavity: Death.*—A man, aged 67 years, was admitted on December 3rd, 1894, presenting symptoms of incomplete intestinal obstruction. He had enjoyed good health until seven weeks previously, when he began to suffer from obstinate constipation, accompanied by occasional vomiting and colicky abdominal pains.

When admitted there was considerable distension of the abdomen, so that nothing could be felt on palpation. On digital examination the rectum was found to be empty and free from growth or any evidence of stricture. The obstruction was not complete, for there were several slight actions of the bowels after admission as the result of enemata, the motions being small and hard.

On the fourth day after admission the patient was suddenly seized with a severe rigor, and the temperature, which had hitherto been normal, rose to 103°. He recovered from the rigor, but the same evening he all at once complained of acute pain in the right iliac fossa, became extremely collapsed, and died in the course of two hours.

Necropsy.—On opening the abdomen the peritoneal cavity was found to contain pus and fluid fæces, most abundant in the neighbourhood of the right iliac fossa. There was no evidence of recent peritonitis. The upper part of the rectum, colon, cæcum, and small intestine for some distance were distended with masses of hardened fæces. Behind the cæcum were a number of old adhesions bounding an irregular abscess cavity, which contained pus mixed with fæcal matter and communicated with the general peritoneal cavity. On opening the cæcum, a superficial ulcer the size of a penny, involving only the mucous membrane, was found on its posterior wall, and at the centre of the ulcer there was a small perforation about the size of a pea. The appendix and other parts of the intestine, large and small, were healthy and free from any evidence of ulceration or other form of disease.

In this case the perityphlitic abscess appeared to have existed for some time, and its situation at the posterior part of the pelvis behind the cæcum accounted for the absence of any local symptoms pointing to its presence. The rigor a few hours before death followed by the sudden collapse were no doubt due to the contents of the abscess bursting into the peritoneal cavity, and the absence of any signs of general peritonitis was owing to the fact that death took place before there had been time for it to develop.

References.

[1] Hawkins. *On Diseases of the Vermiform Appendix*, p. 11. [2] *Perityphlitis and its Varieties*, p. 18.

REMOVAL OF ONE FREE CALCIFIED, AND TWO SUBSEROUS, PEDICULATED FIBROMYOMATA DURING PREGNANCY.

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It is a good and generally accepted rule that uterine fibromyomata should not be interfered with during pregnancy unless urgent symptoms demand treatment. Conditions occasionally arise which justify operative measures, and the unusual condition in the case I am about to relate seemed most certainly to call for operative relief.

On November 9th, 1897, Dr. J. J. Tisdall, of this city, asked me to see with him a woman, aged 38, who had been married for two years.

History.—For some twenty months a tumour was known to have existed in the abdomen, and she had not menstruated since a scanty period of short duration at the end of September, whilst she was also greatly troubled with nausea and vomiting, most marked in the mornings. She had become pregnant for the first time a few months after marriage, but a miscarriage at the third month, accompanied by a very profuse hæmorrhage, nearly cost the patient her life. With these two exceptions menstruation had always been regular and normal. There was no history of leucorrhœa, nor indeed of pelvic trouble of any kind beyond that mentioned above.

Present State.—Lying in the central part of the abdomen, immediately above the pubes was a regularly rounded tumour of fairly smooth surface, not tender at all, but of hard consistence; in fact, it felt like a stone. Its mobility was very limited, it could be moved slightly from side to side and slightly upwards, but downwards it would not budge a millimetre. The percussion note over it was dull, and auscultation gave negative results. *Per vaginam* the pregnant uterus was felt lying retroverted below and behind the tumour. The latter could easily be felt; it was about the size of a fœtal head, and its stony hardness again impressed one. In the angle between uterus and tumour was a small mass about the size of a pigeon's egg. Movement of the uterus did not affect the tumour, nor was the former affected by putting the latter through its limited range of mobility. Dr. Tisdall informed me that when he attended the patient during her first pregnancy and miscarriage the tumour lay *behind* the uterus. However, it was very evident that now it lay in front of it, partly in the true pelvis and partly in the abdomen; that it was practically absolutely fixed, and that underneath it the two months' pregnant uterus was wedged and prevented from increasing in size and rising into the abdomen—a state of matters which called for interference. Dr. Tisdall agreed with me in thinking that we probably had to deal with a fibroid of the uterus, although both the history and the physical signs lacked the clearness necessary for a definite diagnosis.

Operation.—When the state of matters had been explained to the patient she decided to undergo operation, and accordingly I opened the abdomen on November 29th. The tumour presented at once as a whitish-yellow mass with a hard finely uneven surface, the hardness evidently being due to the deposit of calcareous material immediately beneath the peritoneal covering. Exploration revealed the presence of very numerous bands of adhesions connecting the tumour to the pelvis, chiefly to its brim. These arranged themselves practically into three sets, uniting the tumour (1) to the brim of the left anterior pelvic quadrant, (2) to the left side of the promontory of the sacrum, (3) to the right side of the pelvic brim and to the vermiform appendix. There were also odd adhesions

passing to the intestines and great omentum. The tumour was thus slung across the upper part of the true pelvis, and the tightness of the suspensory bands accounted for the limited mobility of the growth. After it was freed from all adhesions and lifted up, no attachment to the uterus could be found, and the tumour simply required to be drawn out of the abdomen. The two months' pregnant uterus now came into view, lying retroverted in Douglas's pouch. Two subperitoneal myofibromata were attached to its anterior wall by a common pedicle two inches wide by half an inch in thickness. The larger of the two, rather larger in size than a pigeon's egg, felt suspiciously soft and boggy, so the removal of both was decided upon. The pedicle was tightly clamped, ligatured in three sections between clamp and tumours, and the latter cut off. Further examination of the uterus showed that two more (interstitial) myofibromata were growing in its wall. There was not the slightest trace even of a very fine pedicle, which might have been torn through when the calcified fibroid had been lifted up, gently as this had been done. Practically no blood was lost. The abdomen was closed, a glass drainage tube being left in. This was removed on the third day.

After-History.—The patient did well, except for some temporary intestinal paralysis, which soon passed off, and she is now, at the time of writing (April 15th) in pretty good health. The pregnancy continues, the uterus being felt now well above the pubes. The morning sickness has never recurred since the operation.

Description of Tumour.—The calcified tumour weighed 1 lb. 2 oz. It was irregularly oval in shape, measuring 12 c.cm. in length, and 9½ c.cm. in greatest width. On section the cut surface presented the appearances offered by fibromyomata of the uterus, except at the periphery, where a narrow calcified zone extended more or less completely around the tumour. After pieces of tissue had been removed for microscopic examination, the two halves of the mass were carefully needled, but no trace of deep calcareous deposit could be discovered. The calcareous shell—the *calcification en coque* of older writers—varied in thickness, but this nowhere exceeded 1 c.cm. It is noteworthy that the shell was thickest over areas to which adhesions were attached. At one point just beneath the shell was a cleft-like cyst, containing turbid fluid. Microscopically the usual structure of uterine fibromyomata was distinctly recognisable, but scattered about in the substance of the tumour, more numerous towards the centre, were many small rounded cavities and elongated clefts and fissures, the latter of which pursued often an irregularly tortuous course between the fibrous bundles. The tissues bounding these spaces in some cases appeared structureless and homogeneous. There was no trace of any lining epithelium, and the contents, when any were present, were merely granular *débris*. Thorn[1] found similar spaces in his specimen of calcified submucous fibroid, but he regarded them apparently as extensions of uterine glands, the epithelium of which had been lost or destroyed. Fatty degeneration was specially searched for but not found. Of the two pediculated tumours the smaller was quite solid; the larger, measuring 7 by 4½ cm., contained one large and several smaller cystic cavities, a condition which confirmed the suspicion aroused at the time of operation by the boggy sensation obtained on palpation. These cavities contained a turbid, greyish fluid without trace of blood.

It is uncommon during life to find fibromyomata lying free (that is, separated from the uterus) in the peritoneal cavity, and very rarely are such tumours calcified. Two cases have been reported lately where such tumours were removed by operation.

Dr. Amand Routh[2] removed by laparotomy from a woman, aged 50, a calcified fibromyoma which was attached only by vascular adhesions to the small intestines. A scar on the fundus uteri marked the site of its former attachment to that viscus. The tumour lay behind the uterus, and, in the absence of uterine symptoms, was diagnosed as a dermoid. It was "almost non-vascular, even when cut into, and was in an advanced state of calcareous degeneration."

Dr. Gill Wylie[3] reported a case where the patient suffered from melancholia, subinvolution of the uterus, and a tumour which lay between the symphysis pubis and the retroposed uterus. On opening the abdomen he found the tumour to be a calcified fibromyoma. It was lying entirely free, without adhesions, and was of the size and form of a kidney. There were no traces of other myomata in the uterus.

The deposit of calcareous material in fibromyomata seems to depend to a great extent on interference with their vascular supply (Meadows,[4] Matthews Duncan,[5] Gusserow[6]), such as may occur when a pedicle becomes attenuated, as in the case of a "free" (as distinct from an "encapsulated") subserous myoma; or when a myoma having contracted adhesions elsewhere loses its connection with the uterus, or when the menopause arrives. It is generally about the latter period, according to Gusserow,[6] that calcification occurs, and all writers are agreed that the internal irregular deposit is commoner than the external shell-like form. There are three specimens of the latter and two of the former in the Pathological Museum of University College, Liverpool. As a fibromyoma increases in size by proliferation of tissues at its periphery (Haultain[7]), calcification occurring here will arrest growth, if the latter has not already ceased, in consequent of deficient nutrition.

In the case I have related there would seem to be some imilarity between the condition of the tumour and lithopædion (as distinguished from lithokelyphos) formation, which, according to Albers,[8] is associated with the presence of adhesions between the fœtus and its surrounding sac. The fact that the deposit was thickest where adhesions were attached seems to point to a definite relationship between them.

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HEREDITARY KERATOSIS OR TYLOSIS PALMÆ.

By VAUGHAN PENDRED, M.B.DURH., F.R.C.S.ENG.,
Hammersmith.

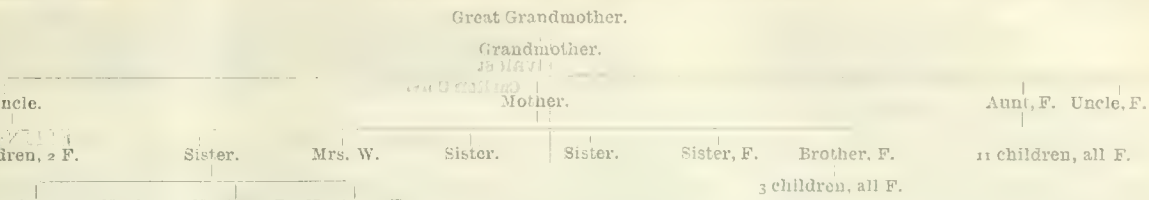
THE following is so complete and remarkable a history of the handing down of this rare disease in unbroken succession for at least one hundred and fifty years that I have considered it worthy of being placed on record.

My attention was called to the palms of the hands and soles of the feet of a woman, aged 36, of a phlegmatic Teutonic type. The palms and palmar surface of all the digits presented a hard, horny epidermis, cracked in many directions, and blackened with dirt on account, as the patient explained, of the impossibility of keeping them clean. The whole of the affected area was seen, as the hands were held extended palms upwards and the fingers approximated. The margin strictly outlining the hand was marked with a thin red line, except in the case of the digits, where the thickened skin joined the normal skin with an abrupt edge. The whole thickness of the skin could be pinched up, or, more correctly, the margin could be raised as though it were a sheet of millboard attached to the normal skin of the dorsum of the hand. Where deep cracks occurred, a pinkish soft line, tender to the touch, was seen at the bottom of these fissures. The plantar surfaces presented a like appearance, except that the fissures were not so numerous, and the whole thickening was even more marked. The lesion was exactly symmetrical.

My patient gave the following account of herself, and said that it equally applied to all the affected members of her family, varying only in the degree of suffering caused by the disease.

At birth her palms and soles were noticed to be redder than is normally the case, and a week later, when her mother was "churched," the surfaces were becoming scaly. There has been no change in their condition throughout her life, nor have the lesions spread beyond the original limitation. From time to time the horny layer is shed in flakes, and leaves a raw bleeding surface very tender to the touch. A two hours' "washing" always causes her trouble, owing to subsequent scaling and soreness. Her state of health directly affects the condition of her hands and feet. Her maternal aunt concurred with her in the statement that the disease always attacked the same areas in all the cases, and that there was no record of any individaal having infected another. My patient anoints her hands with vaseline, but no other remedy has been used, as she says that it is well known that "no doctor can cure the disease." I had an opportunity of examining the hands of her sister and one of her nephews; they would not show me their feet, as they were very sensitive about their "affliction," and they presented precisely the same appearances as above described.

The appended family tree was obtained without much difficulty from my patient and her aunt, as their memory is kept green by the constant recurrence of the condition in each generation. There is a family tradition that it was introduced by the marriage of an ancestor with a German woman. In this connection it is worthy of note that the three members affected whom I saw were of German type, and the aunt unaffected of a spare, wiry, English type. I give the genealogy as it stands in relation to my patient:



F. = Free from the disease.

The table shows that the disease has been transmitted mainly, but not entirely, through the female line, and that the offspring of those who escaped have never been affected. The family is a long-lived one.

In the second volume of Hebra's *Atlas* will be found an admirable representation of the condition of the hands; it is named "keratosis or tylosis palmæ." Crocker's *Atlas*, vol. i, also figures the condition. Unna (edition 1896) calls the disease "keratoma palmare et plantare hereditarium," and gives the following histological account from Thist: Elongation of papillæ, granular layer thickened; the main thickening found in the middle layer of epidermis. The cutis and fatty tissue with the blood vessels enlarged. The coil sweat glands much hypertrophied with very large mouths.

Unna concludes that the thickening of the cutis and fatty tissue, as well as the very marked acanthosis and hypertrophy of the coil glands stamp this congenital tumour formation as a nævoid hypertrophy of the whole palms and soles. He notes especially the "reddish margin" so well observed in my case. It would be interesting to know whether Professor Weismann would consider this transmitted disease as evidence in favour of his pangenesis theory of heredity.

THE USE OF NITROUS OXIDE GAS AND OXYGEN DURING SURGICAL OPERATIONS.

By H. BELLAMY GARDNER, M.R.C.S.Eng., L.R.C.P.Lond.,
Assistant Anæsthetist to Charing Cross Hospital; Anæsthetist to the National Orthopædic and Male Lock Hospitals.

So many advantages might be claimed for the introduction of an anæsthetic agent which would combine the four attributes of safety, a rapid unconsciousness, muscular relaxation, and freedom from after-effects, that a few further remarks on the results which are at present attainable with nitrous oxide gas when mixed with suitable proportions of oxygen may prove of interest as offering the addition to our list of an inhalation less incapacitating than chloroform and ether, but scarcely inferior in value for many surgical procedures of moderate gravity.

The question at once arises, Under what conditions will such an anæsthetic be of special value?

1. A complete examination of the pelvis and abdomen is often needed before a diagnosis can be arrived at in cases which may require ether for an operation shortly afterwards; on these occasions, without any special preparation, gas and oxygen will prove a most convenient help.

2. As ether is very safe, in modern days it is no exception to find patients who have inhaled it several times, but suffer considerably from after-effects; to these the substitution of a tasteless gas during a surgical operation is a great relief.

3. Many operations require some further painful procedure during convalescence, the removal of drainage tubes, the moving of stiffened joints, the reopening of a wound for hæmorrhage or redressing; in these it is particularly desirable not to upset the patient's digestion by a second dose of ether if nitrous oxide can be made to rise to the occasion.

The apparatus invented by Dr. Frederic Hewitt for use in dental practice is adaptable to surgical cases after a slight enlargement of the oxygen apertures in the mixing chamber, from 10 to 20 per cent. of oxygen being required when the face-piece is kept continuously applied. About 50 gallons of nitrous oxide and 7 or 8 gallons of oxygen are inhaled on the average during each quarter of an hour's narcosis. Beginning with 2 or 3 per cent. of oxygen the patient inspires the gases for five or six breaths, and by means of a dial plate the oxygen is then increased in amount, according to the depth and rate of breathing and the colour of the ears and face.

We know exactly the symptoms of asphyxia which nitrous oxide given alone produces—namely, cyanosis, jerky, rapid breathing, twitching of the limbs, and dilated pupils. These objectionable results are avoided by the presence of oxygen, and by means of experience in the use of gas alone the amount of oxygen required in each case is discernible the moment respiration tends to vary at all from that of normal softly snoring sleep. Clinically, if the breathing grows faster and deeper and colour a trifle dusky, more oxygen is wanted; if quieter and slower, the oxygen must be reduced.

Let us now inquire what type of anæsthesia is produced, and the symptoms observable during the narcosis. The colour is normal, the breathing of a softly snoring type, not so stertorous as with ether, not so quiet as under chloroform; the pulse is strong, full, and regular; the abdomen is generally quite flaccid, but the limbs may show a slight tendency to rigidity; though the legs will offer no resistance to being placed in the lithotomy position, they may show slight reflexes from time to time. The blood from an incision during this anæsthesia may appear somewhat venous at intervals; this is not, however, due to congestion, but to the fact that nitrous oxide to some extent replaces oxygen in the hæmoglobin and the purple colour of the new product becomes evident in the flowing blood, even while the facial colour is healthy in appearance.

Alcoholic patients are not good subjects, nor are very powerful athletic men; but most women and well-nourished persons generally can be regarded as suitable cases, while those who are weakened by illness often take the gases remarkably well.

In my first article on this subject, in the *Lancet* for June 12th, 1897, I gave an account of the uses to which I had applied this anæsthetic during the previous two years. In the August number of the *British Gynæcological Journal*, 1897, I gave a further account of its suitability for certain cases in that branch of practice, citing, in each paper, several instances of its prolonged inhalation.

Since that time I have notes of a number of successful administrations lasting from 15 to 20 minutes, and in these I have not observed any symptoms which would indicate that the anæsthesia has any more definite limits with regard to time than that of chloroform or ether.

The recovery to consciousness after removal of the face-piece has been very rapid, often complete in 2 to 3 minutes, and sickness has been conspicuous by its absence.

Such operations as the removal of a cystic adenoma from the breast, dilatation of the cervix uteri, removal of an inflamed hymen, reopening of a lumbar renal incision, opening and curetting of a large mammary abscess, and several cures for varicocele among the number, will illustrate the usefulness to which these gases may attain.

I think the safety of nitrous oxide and oxygen is greater than that of the former gas alone—the safest of all known anæsthetics—for during the past eight years its adoption in dental practice has been rapidly becoming general, and no fatality has ever been recorded under its influence.

Bacteriological Institute for Ceylon.—Dr. H. M. Fernando will probably be the Director of the Bacteriological Institute to be opened in Colombo shortly, and is leaving for Europe in connection with the institution. The final plans of the building have been completed, and the work will be taken in hand at once. It is expected that it will be opened early next year. The apparatus and laboratory fittings have been ordered out.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF CLONIC SPASM OF THE DIAPHRAGM.

M. B., aged 16, a servant girl, was brought on January 24th, 1898, by her mother. The patient had been troubled with headache, shortness of breath, and pain in the left side for two or three years, but her health up to the commencement of her present illness had always been good, and the family history was satisfactory.

She was a fairly nourished girl, somewhat anæmic, dull and heavy-looking, and appearing much younger than her age. She had convergent strabismus dating from birth, and a dental cyst the size of a hen's egg on the right side of the lower jaw, which had steadily increased in size, since it was first noticed three years ago. She had never menstruated. The heart sounds were normal, but the pulse was 124, small and weak. The lungs were normal, and the respiration 20 per minute. She suffered from constipation and flatulence, and, at times, abdominal pain. The abdominal organs appeared healthy, but there was a rapid expansion and contraction of the abdominal wall, giving, at first, the impression that a pulsating abdominal tumour might be present. On closer inspection, it was found that this expansion and contraction which was not quite, though very nearly, rhythmical, was due to a contraction of the diaphragm, similar to that which takes place in hiccough, but without any interference with respiration, unless the patient attempted a deep inspiration. The contractions, which were at first at the rate of 70 a minute, became much more frequent and violent during examination. Her mother stated that she had noticed these spasms for over a year, and that they occasionally stopped for a day or two at a time, during which the patient complained more than usual of abdominal pain. The spasms stopped during sleep. She was treated with 15 gr. of potassium bromide, three times a day, and ordered to take a saline aperient when necessary. On her return, in a week, the mother stated that there had been no recurrence of the spasms, but on my examining the tumour in the jaw they again commenced, but not so violently as on the previous occasion.

She has been seen since at intervals of about a week, and during this time the spasms have not occurred more than twice, and then only for an hour or two at a time.

I am indebted to Mr. William Brown, under whose care the patient came first as an out-patient, for permission to publish these notes.

Herbert Fox, M.B.Lond.,
Resident Medical Officer, Carlisle Dispensary.

HYPERPYREXIA IN A CASE OF MEASLES TREATED WITH COLD PACK: RECOVERY.

On March 7th, 1898, I was called to see R. B., aged 16 months, whom I found in bed with the premonitory symptoms of measles and a temperature of 107° F. After a tepid bath he was enveloped in warm blankets and put to bed, and a febrifuge mixture with aconite prescribed. Two hours later his temperature was 103° F., and the rash appearing on the face and chest. During the following forty-eight hours he remained in much the same condition. The eruption was scanty and he was very restless.

On the afternoon of March 11th I was hurriedly summoned, as the child was thought to be dying. I found him unconscious, pupils contracted, temperature 110°, rash gone, feeble pulse, and extreme congestion of lungs. After stripping and exposing him on a blanket in bed, I administered an enema of beef tea and brandy, and applied cold water cloths from his head to his feet, frequently renewing them. With the thermometer in the axilla this treatment was continued for three-quarters of an hour, when the temperature had fallen to 97° F. He was then again rolled up in warm blankets and hot water bottles applied. As convulsions now came on I gave an enema of chloral hydrate 10 gr. and potassium bromide 15 gr., and ordered quinine sulphate 2 gr. and a mixture containing small doses of potassium bromide every two hours. During the night he had several seizures, but slept in the intervals. For two days the rash, which had reappeared after the cold pack, remained out and his temperature varied between 102° and 104° F. From this time he gradually convalesced, and but for the very free desquamation is now well.

Carlton Colville. R. H. A. Hunter, L.R.C.P., etc.

PLACENTA PRÆVIA AND THE VOMITING OF PREGNANCY.

Some time ago I was called to see a pregnant woman, Mrs. M., who was suddenly taken with a severe flooding and slight labour pains. I found a placenta prævia. She had gone six months, and had been nervous about herself on account of the absence of any morning sickness, from which she suffered greatly during her previous six pregnancies. At the time I was interested in the causation of this vomiting, and noted the fact.

I have now under notice another case of placenta prævia in a 9-para, to which I am hourly expecting to be called. This woman, Mrs. P., on the nine previous occasions suffered severely from sickness during the whole time she was pregnant, and I find that although she has now gone five months she has only been sick twice in the whole period.

These two cases, if corroborated by other observers, tend to prove (1) that the origin of the reflex sickness is to be found in or about the cervix uteri, as is generally thought; (2) that it is probably due to the stretching of the cervical fibres and consequent irritation of the nerve endings; (3) negative the flexion theory.

I regard this absence of vomiting as having three important aspects:

1. As a symptom, hitherto unrecorded, of placenta prævia. It certainly cannot be said to have happened accidentally that two women, 6-para and 9-para respectively, who suffered severely from sickness during all the previous pregnancies, without exception, should, when the placenta was prævia be exempt from it.

2. As a further proof that the vomiting of pregnancy is due to stretching of the cervical muscular fibres, cases are cited by Smellie[1] in which, when induction of premature labour was performed for excessive vomiting, the sickness stopped immediately on puncture of the membranes, thus relieving the pressure and showing that stretching of the uterine fibres was the causative agent.

3. As an indication for treatment. Evidently anything that will tend to bring about the cervical condition which obtains in placenta prævia will also alleviate the vomiting. For this I would suggest vaginal poultices.

B. Henry Shaw, M.B., B.Ch., B.A.O.
Cradley Heath, Staffs.

A CASE OF TYPHUS FEVER.

A married woman, aged 30, without children, living in St. George's Southwark, sent for me late in the evening of April 8th. She complained of severe pain in the head, back, and limbs, and of frequent attacks of shivering; her temperature was 104° F., pulse rapid, skin dry, but no rash was present. As far as I could gather she appeared to have been taken ill the previous day, but was very reticent about her immediate antecedents. Sodium salicylate was administered. Next morning I was asked not to call, as an improvement seemed to have taken place. However, during the afternoon of April 11th, on being sent for, I paid a second visit. The woman's condition meanwhile had not improved, her temperature was 103.5° F., rigors were frequent; she looked apathetic, but there was no delirium; slight bronchial trouble had developed but no rash.

I was now informed that some days previously this woman had returned from a three weeks' stay in Western Buildings, Kensington, the scene of the outbreak described in the British Medical Journal of April 2nd and 9th. The history and symptoms seemed so conclusive that I had no hesitation in notifying the case as one of typhus fever. With great celerity the vestry authorities had the case removed to New Cross. The medical superintendent there informs me that a well-marked typhus rash was present on April 12th, followed by pneumonia on April 15th. Dr. Dudfield, of Kensington, in a note, says that the woman was seen by one of his staff on April 6th, when she appeared to be well.

[1] *Midwifery*, vol. i, p. 138.

Three families living in the same dwelling were at once placed in the St. George's Reception House lately opened, and the husband was isolated. Disinfection of the whole dwelling was, without loss of time, carried out in a drastic manner by the vestry. So far no other case has appeared in the district.

Southwark. THOMAS MASSIE, M.B.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

VICTORIA HOSPITAL FOR SICK CHILDREN, CHELSEA, S.W.

THREE CASES OF HÆMARTHROSIS DUE TO HÆMOPHILIA.

(By A. CHANING PEARCE, M.B., B.S.Lond., House-Surgeon).

CASE I.—H F., aged 7 years, fell down and injured the left knee on August 29th, 1895. Admitted a week later with joint tense and freely fluctuating: hot, but not very tender. He was a feeble-looking boy, very anæmic, but with his cheeks covered with a network of dilated capillaries. Pulse rapid and small; hæmic *bruits* heard over precordium and in neck; temperature 102°. He frequently started in his sleep. An attempt at aspirating the joint was made under the impression that the condition was one of subacute synovitis, but was given up when it was found that nothing but dark, treackly-looking blood oozed out. A considerably quantity oozed away subsequently into the antiseptic dressing, but it ceased in a few hours and gave no further trouble. The high temperature persisted for ten days, and the swelling of the knee gradually diminished. Six weeks later the joint was nearly normal in size, and movement was only slightly limited.

The patient's mother says that he has been liable to attacks of "rheumatism" ever since he was 2 years old. These attacks are preceded by restlessness at night and aching of the limbs; it has been observed that the network of capillaries on his cheeks becomes greatly engorged before an attack. When he cuts himself, he is said to go on bleeding for a week.

His brother, 18 months old, has been noticed to bruise his elbows and knees in crawling, and lately has had three severe attacks of epistaxis, which have left him very anæmic. There are no other brothers or sisters. No history of hæmophilia can be obtained on the mother's or father's side. The mother's father died of influenza, aged 76.

The boy again came up on October 16th with troublesome oozing from the gum following removal of two fragments of his temporary incisors. His left elbow was said to have been knocked; the joint was distended and the skin over it discoloured; there was very slight tenderness. A week later the other elbow-joint was found to be in the same condition; this was not ascribed to any injury.

A month after this he was again admitted for an enormous hæmorrhage into the tissues about the popliteal space and the calf, extending down to the ankle. There was a clear history of injury as a cause. The boy was again feverish and weak, but rapidly improved under treatment, while the hæmorrhage became absorbed. When last seen, in January, 1896, he was fairly well in general health, but had a hæmarthrosis of the right elbow associated with a large cutaneous bruise over the inner condyle. This, added to the patient's account of a fall, made the traumatic origin a certainty. The patient was treated throughout on general principles, and no calcium chloride was given.

CASE II.—P. M., aged 2 years, had been admitted and treated for what was thought to be a "pulpy swelling" of the right knee when 10 months old. The notes record that the swelling extended half way up thigh. About this time it was noticed that the slightest pressure, such as that of the fingers in lifting or that of the rail of his chair, caused bruising of the skin. There is no family history of hæmophilia. Mother's father was gouty: her mother had had rheumatic fever when young. The family was composed as follows:

1. Male, now aged 23, epileptic.
2 and 3. Twins; died young of "water on the brain."
4. Mrs. M.; no history of flooding, menorrhagia, etc.
5. Female; no history of hæmorrhage.
6. Female; died young of measles.
7. Female; died young of bronchitis.
8. Female; died young of blood poisoning.
9. Male, aged 12; has had scarlatina severely, which left him with mitral regurgitation; he has adenoids which were once scraped without abnormal bleeding; often cuts himself but never bleeds to any great extent.

The patient has no brothers or sisters.

In May, 1895, the patient was admitted with a lacerated wound of mucous membrane at angle between upper lip and gum. It had bled continuously for twenty-four hours and was considerably blanched. The knee was perfectly well. In spite of plugging with gauze, local application, and internal administration of stypties (calcium chloride was not given) the bleeding continued to recur for a week, and child became seriously blanched. Wound was then very thoroughly cleansed and charred all over with Paquelin's cautery till all oozing was stopped. A scrap of gauze, well powdered with iodoform, was firmly fixed down with collodion. Under this scab dressing the wound healed without further trouble.

In September, four months later, the patient was again brought up with a slight effusion into the left knee (which had been previously sound). He was put on calcium chloride gr. iij ter die. A month later, while still taking the calcium chloride, a large hæmatoma appeared on the right knee. About January 8th, 1896, he was found to have an immense hæmatoma occupying the whole of right side of abdominal wall, and extending from the umbilicus in front well into flank behind. He seemed to be in a very serious condition, for he had retention of urine with constipation; and it was not surprising that a practitioner who saw him advised his parents to take him out of my hands and get him operated on at some hospital with as little delay as possible. In a day or two, however, all cause for anxiety was gone, and he made a rapid recovery.

One other item of interest remains to be mentioned. A fortnight after this (during which time he had been taking calcium chloride gr. v ter die) the child cut two fingers slightly. There was a little bleeding, but not in the least abnormal. The child appears to be in excellent health, and has quite lost the anæmia from which he suffered so long.

CASE III.—W. G., aged 2 years and 3 months had been treated when 1 year and 9 months old for a large hæmatoma on the buttock. He has always bruised readily. His mother gives no history of menorrhagia, etc. A brother of hers has epistaxis "whenever he washes," a fact which speaks for itself.

In May, 1895, the patient was seen several times for a recurring hæmatoma on the forehead. He was treated for fully a month with calcium chloride, gr. iij ter die, but still continued to bruise easily in spite of it.

In August he is said to have had a swollen knee. In September, after some slight injury, the left ankle-joint became distended with fluid: it was hot to the touch, and the skin over it was much stained with yellow blood pigment. This completely cleared up within six or eight weeks, and the patient has not again been seen.

REMARKS.—The error of diagnosis at first made in each of these cases points to the importance of remembering the existence of hæmarthrosis in children, whilst it is interesting to notice that in each case the movement of the affected joint remains good, though the recurrent attacks of inflammation seem likely to produce those destructive changes in the cartilage which have been found *post mortem* in many cases. The treatment by calcium chloride as recommended by Professor A. E. Wright was carried out for considerable periods of time upon three separate occasions. It was once followed by a remarkable suspension of the tendency to bleed, but Dr. Wickham Legg has pointed out that a similar abeyance of the hæmophilic tendency is sometimes met with even in patients who are not undergoing any treatment. On the other two occasions hæmatomata and ecchymoses still continued to appear, in spite of the administration of calcium chloride.

The rapid disappearance of the three large and really formidable extravasations of blood into the connective tissue was very remarkable, but it is in accordance with the general experience that such extravasations rarely suppurate. Lastly, the condition of capillary dilatation on the cheeks of the first

patient is suggestive of some organic changes in the walls of the blood vessels, but no telangiectases could be found elsewhere on his body, nor were there any in his brother or in either of the other two cases.

[I am indebted to Mr. D'Arcy Power for his kind permission to publish Cases I and II, which were admitted into the hospital under his care.]

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. Bryant, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, April 26th, 1898.

A Case of Albumosuria, in which the Albumose was Spontaneously Precipitated.

This paper was communicated by Dr. T. R. Bradshaw. The patient was a man aged 70; no history of previous illness. For nearly a year he had passed, two or three times a week, turbid milky urine, which deposited a copious white sediment, amorphous, giving reactions of a proteid. The clear urine passed at other times contained in solution a proteid which gave reactions of an albumose, and appeared to be the same body as was precipitated in the turbid specimens. It coagulated at a temperature of 56° to 60° C., and was partially dissolved again on boiling. Coagulation took place at lower temperature when the urine was made more acid. Coagulation took place with nitric acid, and the coagulum dissolved on heating, and came back on cooling. Coagulation was also brought about by hydrochloric acid and sulphuric acid. The urine in which spontaneous precipitation took place was as a rule of higher acidity than were the clear specimens. Coupling this with the fact that the latter, when acidulated, often began to precipitate at a temperature below that of the body, the author inferred that the precipitation was probably of the same nature as that brought about by heat, and that it was determined by the high acidity of the urine. The body appeared to be that form of albumose which was first described by Bence Jones in 1848, and had been recognised by Continental observers as a constituent of the urine in about five cases since. The present case appeared to be unique as regards the occurrence of spontaneous precipitation. As regards the clinical significance of the condition, some affection of the bones had been found in the six previous cases, generally multiple myeloid sarcoma; and in the present case unmistakable signs of bone disease had lately appeared.

The President, in thanking the author for his valuable paper, said that the photographs of the case reminded him of osteitis deformans.

Dr. S. Martin had examined urine containing a similar body or bodies from a patient under Dr. H. Spencer, a woman in whom ovariotomy had been performed. The urine to the naked eye resembled that in chyluria, and retained this character as long as the patient remained under observation. She had a hypertrophied heart and a high tension pulse, and therefore probably had chronic Bright's disease. He agreed as to the distinction to be drawn between the small amount of albumosuria seen in febrile conditions and in dilated stomach, and that now described. The tests did not decide whether the body was deutero-albumose or proto-albumose. As to the question whether the body should be described as hetero-albumose or deutero-albumose, they were different stages produced in digestion, and no great importance need be laid on this point. The body did not possess one of the most important reactions of hetero-albumose—that is, precipitation by dialysis. It was important to determine whether proto-albumose was present or bodies more closely related to peptone. It had been suggested by Hoffmeister that these bodies were formed by the action of pepsin in the urine on albumen in that fluid, but he thought there was not sufficient time for this process to occur. It had also been suggested by Virchow in connection with the late Dr. Bence Jones's case that the bodies resulted from degenerative changes in proteids occurring in sarcomata. A very closely allied body to that described in the urine in the author's case could be manufactured by boiling various proteid substances such as splenic extract in NaHO for a short time.

Dr. Rolleston inquired whether the blood serum was lactescent. This condition had been described by Castaigne, and associated with changes in the renal epithelium. He referred to Dr. P. Weber's case of lymphadenoma of bone, in which microscopic sections of some of the organs showed a homogeneous hyaline substance which might possibly be this albuminous body.

Dr. Lee Dickinson had described cases of febrile albumosuria; in some of them the amount was far from trivial, and reached 1 per cent., which was much the same percentage as in the author's case. Albumosuria in these cases was associated with very severe symptoms, partly no doubt due to the primary disease, pleuro-pneumonia, or empyema; but the low blood pressure, the hæmorrhagic tendency, and the coma were very like the train of events seen when albumose was injected experimentally into animals. In the author's case there was much hetero-albumose and few associated symptoms; this was remarkable, inasmuch as hetero-albumose was very poisonous. The body in question had been shown by Virchow to occur in the marrow of bones.

Dr. Bradshaw, in reply, said there was no bony enlargement suggesting osteitis deformans. He had shown the case to Mr. Robert Jones, who thought it like senile caries, of which he had seen 80 cases; one of these patients had passed milky urine on three occasions. The condition might be commoner than at present appeared. Neumeister had shown that the body was not hetero-albumose; he did not think there was any relation between digestion and the presence of this albumose in the urine. Dr. Martin had said that when albumen was coagulated by heat it was insoluble in caustic soda, but he had found that a certain proportion of the coagulated albumen could be dissolved by caustic soda (2 in 1,000). When the albumose had been precipitated very little proteid was left in the urine. He thought it improbable that the presence of this albumose in the blood serum would render it lactescent, since it readily dissolved in a weak alkaline solution. He regarded 1 per cent. of albumose in febrile urines as decidedly rare. In past times cases of multiple myelomata had probably been confounded with other bone diseases.

CLINICAL SOCIETY OF LONDON.

John Langton, F.R.C.S., President, in the Chair.

Friday, April 22nd, 1898.

Renal Calculus detected by X-Rays and Successfully Removed.

Dr. Frederick Taylor and Mr. A. D. Fripp communicated this case, the points of interest in which were: (1) The indication given by a skiagraph of the position of a renal calculus that had previously escaped detection by the lumbar exploratory operation; (2) the abnormally high position of the stone—above the twelfth rib, though on the right side; (3) the fact that the twelfth rib had its deep surface covered to a large extent by pleura, even on the right side; (4) the completely atrophied condition of the kidney. The patient was a man, aged 26. He was admitted into Guy's Hospital on September 8th, 1897, under Dr. Taylor. There was a history of attacks of mild colic for nine years, and the symptoms and signs while in hospital pointed clearly to the diagnosis of a right renal calculus, but Mr. Fripp was unable on October 18th to detect the kidney through the usual lumbar incision. A week later, guided by a skiagraph, he was able by reopening the wound and removing part of the twelfth rib to reach and remove the stone from its abnormally high position. It weighed exactly half an ounce, and was the size and shape of the distal segment of a small thumb. It was surrounded by a cyst consisting partly of pelvis of kidney and partly of atrophied kidney substance. This was removed as well. The patient made an uninterrupted recovery, and had since resumed the active life from which he had been debarred for nine years by the colic.

The President observed that the symptoms were classical, except for the absence of hæmaturia. He saw a few months ago in St. Bartholomew's hospital a skiagraph of a renal calculus *in situ*; but the stone in that case was larger, with processes extending into the calyces, while the kidney itself was atrophied. The fact that the stone was high up behind the twelfth rib and on the right side doubtless rendered it

more difficult of detection by *x* rays. He remarked that frequent micturition was a common symptom of calculus, even when the stone was in the kidney, and not in either ureter or bladder. The density of the skiagraph varied with the different kinds of stone (as Mr. Fripp's photographs showed), being densest with oxalate of lime, slightly less dense with uric acid, less still with phosphatic stones, and least of all with intestinal concretions, such as biliary calculi. He had tried to skiagraph cases of renal calculi, but had failed.

Mr. Makins said that was the experience of most surgeons. In one case, where there were sixteen calculi in the kidney, no indication of them was shown on the plate. The existence of a renal calculus could not be excluded because the plate gave no indications.

Dr. Barry Blacker had examined many dozens of cases of supposed renal calculi, and in 3 only did the plate show that possibly a stone was present. It was impossible to say what was the condition of a tube requisite to ensure the obtaining of a skiagraph of a stone in the kidney.

Mr. Fripp, in reply, said that earlier attempts to skiagraph this calculus were not successful, whereas the last attempt succeeded, whereupon the stone was at once removed.

Thrombosis of Superior Mesenteric Vein Causing Intestinal Obstruction.

Dr. Rose Bradford read notes of this case. T. N., aged 20, was admitted into University College Hospital on August 26th, 1897, complaining of pain in the abdomen and slight diarrhœa. Illness began on August 20th with vomiting and abdominal pain, and the diarrhœa did not appear until August 23rd. On admission the diarrhœa had ceased, but there was considerable pain referred to the umbilicus, and repeated vomiting of coagulated milk. The bowels were opened with an enema; the stools contained no blood or mucus. The abdomen was resonant all over, and nothing abnormal was detected on examination. The respiration was rapid and jerky, the pulse 96, the temperature was 101°, and the lips were covered with sordes. The patient remained in much the same condition until September 1st, when the abdominal pain became more severe and vomiting more frequent. The bowels were opened with an enema. On September 2nd the vomit became distinctly stercoraceous, and an indefinite mass could be felt in the left iliac region. A few faecal masses were passed as a result of enemata, but flatus was passed freely. On September 3rd the abdomen was opened in the middle line by Mr. Pollard, and a distended coil of small intestine was brought out of the wound; this was purple in colour, and greatly swollen and thickened. There was no volvulus, and no constricting band was found. The wound was rapidly closed, and the patient succumbed shortly after the operation. On *post-mortem* examination no band nor other cause of strangulation was found. The mesentery was thickened, and the veins in it were thrombosed; a portion of the jejunum some 18 inches long was greatly swollen and thickened. The superior mesenteric artery and all its branches were normal. The splenic vein was normal. The trunk of the superior mesenteric vein was greatly thickened, and the lumen of the main vessel was filled with reddish puriform material. The upper part of the vein was blocked by firm decolorised clot. The disease of this vein extended into the main tributaries of the vessel, but most of the terminal branches had their walls of a normal thickness and appearance, and some of these were free from clot, although the trunk into which they opened was thrombosed. The upper part of the portal vein was healthy. The mesenteric glands were enlarged and congested, and one of them lying on the lowest branch of the vein was enlarged and suppurating, and the abscess cavity communicated with the interior of one of the thrombosed veins.

Mr. Raymond Johnson reported a case of tuberculous peritonitis in which intestinal obstruction resulted probably from thrombosis of the superior mesenteric vein. The patient, a woman, aged 33, who had been ailing for a month, was attacked with sudden abdominal pain four days before admission to University College Hospital. Vomiting occurred repeatedly, and the bowels failed to act in spite of aperient medicines. On admission the patient presented in a marked degree he abdominal aspect; the tongue was dry, the pulse rapid, the abdomen was slightly distended and uniformly slightly tender; there was impaired resonance in the left flank, but no tumour could be detected, and the pelvic viscera appeared to be normal. The diagnosis of intestinal obstruction was made, but no evidence was forthcoming to indicate its exact nature. On opening the abdomen several ounces of clear fluid escaped, and yellow tubercles were seen to be scattered sparsely over the intestines. No kinking or twisting of the bowel could be detected, but a solid mass was felt which proved to be a fan-shaped portion of the mesentery much thickened and deeply congested. The corresponding part of the intestine was much more congested and swollen than the rest, and the tuberculous nodules were more abundant over it than elsewhere. The whole length of the small intestine having been examined without discovery of any further cause for the symptoms the abdomen was closed. The patient was at first fed entirely by the rectum, but after a slight action of the bowels on the day following the operation liquid food was given in small quantities by the mouth without any return of the sickness. At the end of three weeks the patient was able to leave the hospital. The explanation was offered that the condition of the mesentery and bowel resulted from thrombosis of some of the branches of the mesenteric vein caused by the deposit of tubercle around them, and that the symptoms of intestinal obstruction resulted from a temporary paralysis of that part of the intestine the circulation of which was interfered with. The case was reported as possibly affording an explanation of the occurrence of acute symptoms during the course of tuberculous peritonitis, independently of the ordinary conditions occasioning intestinal obstruction.

Dr. F. Taylor said that he had brought before the Pathological Society some years since a case similar to that of Dr. Bradford, except that the artery, not the vein, was thrombosed. The child was 8 years old, and died of obscure abdominal trouble three or four days after eating some strawberries. The abdomen was enormously distended, and at the *post-mortem* examination the peritoneum contained a large quantity of blood; a portion of the small intestine, about a foot in length, was intensely congested, and the intestine itself contained a quantity of blood. The mesenteric artery was thrombosed at one spot, where it was pressed by a relic of what was probably a calcareous deposit in a gland. The anastomosis in the omentum was said to be so free that blockage of the stream of blood could not occur; but these cases showed that the statement was incorrect.

Dr. Lucas Benham asked what was Dr. Bradford's medical treatment of his case.

Dr. Toogood had had under his care at Lewisham Infirmary a case exactly similar to that of Dr. Bradford, with symptoms resembling those of intestinal obstruction, for which he had performed laparotomy. After death blood was found in the peritoneal cavity and the mesentery.

Mr. Makins had also seen a case of thrombosed superior mesenteric artery. He said that the symptoms were slow where the vein was affected, more rapid in the case of the artery, and the patient died quickly with symptoms closely resembling those of dissecting aneurysm of the aorta. It had been questioned whether blockage of the mesenteric artery could cause gangrene, as its branches anastomosed freely. Mr. Lockwood's case (read before that Society), in which a stab of an arterial branch, half an inch from the bowel, caused gangrene of the gut, was an instance to the contrary.

Mr. Fripp asked if there was any reason to suppose that the trouble might have originated in the pancreas, and thence spread to the vein. Recently there had been 3 cases of acute pancreatitis at Guy's; all were operated upon, and all had died with symptoms resembling those of intestinal obstruction.

Dr. Alfred Hillier asked if it was not possible that the condition of the vein might have been the effect rather than the cause of the trouble in the bowel.

Dr. Bradford said that the medical treatment had been expectant, the remedies given being those calculated to relieve the pain, but without success. He had seen one case of blockage of the artery, which occurred during ulcerative endocarditis, and the symptoms were very acute; with affection of the vein the onset was slower, as Mr. Makins had

pointed out. The pancreas, in his case, was normal. The mischief in the vein was old, and the final illness had lasted only a few days, so that he thought the blockage of the bowel was due to the affection of the vein, not that of the vein to the bowel trouble. Only two mesenteric glands were slightly, not extensively, diseased.

Raynaud's Gangrene in Connection with Parturition.

Dr. Lee Dickinson and Mr. W. A. Hubert presented this case, which was that of a woman, aged 42, in whom Raynaud's disease set in severely on the second day after parturition, although she had had slight attacks during her pregnancy. The fingers and toes were the parts chiefly affected, and almost the whole of the ungual phalanges of both hands became gangrenous. There was intense pain in the affected parts. No ergot had been taken. The attack came on without any general or local exposure to cold, and was evidently determined by the final strain of parturition after a pregnancy which had been attended by circumstances of privation and ill-health. The patient was suffering from chronic nephritis with hæmaturia, and was very anæmic. A second case in which Raynaud's gangrene followed parturition was briefly described, and reference was made to two others, one described by Raynaud, and the other by Southey, in the *Lancet*, 1870. In the four cases, although ergot was given, it was in small quantities. The influence of conditions of debility, such as that from malaria, anæmia, and hardship was discussed.

Dr. Lucas Benham asked what produced the spasm of the arteries; and whether any septic condition followed the confinement in either of the cases.

Dr. Dickinson, in reply, said that there was no history of any septic trouble, and that very little or no ergot had been taken.

MEDICAL SOCIETY OF LONDON.

C. Holman, M.D., Vice-President, in the Chair.

Three Unusual Cases of Renal Calculus.

Mr. W. H. Battle read notes of three unusual cases of renal calculus selected on account of their special interest. In Case I there was constant hæmaturia even when the patient was kept lying in bed; the condition had persisted some time unaccompanied by pain of a kind to admit of any diagnosis in respect of the site of the calculus. The patient, a nurse, aged 44, was admitted on January 4th, 1894. The uterine appendages had been removed five years previously, but her general health had been good until six weeks before, when she had a severe attack of pain in the region of the heart; a fortnight later she noticed blood in the urine with a little pain on micturition. This had continued up to admission. On admission she presented evidence of mitral disease; the urine was of a dark red colour, and contained blood and a few pus cells. There was tenderness over both kidneys but they could not be felt. Her condition continued practically unchanged until July, although for a time the blood almost disappeared from the urine. An incision was then made through the old scar in the middle line and the kidneys explored. The right was the larger and contained a hard substance in the pelvis. Another incision was then made through the loin and a stone removed. This was of irregular outline and was extracted with some difficulty. It measured about 2½ inches in circumference; it was mainly oxalate of lime. Recovery was slow, and for a fortnight, though the blood was no longer present in the urine, some pus cells could be seen. Early in August she passed some fragments of calculus. It was not easy in this case to account for the hæmaturia nor for its continuance while the patient was in bed. There was a complete absence of localising signs, the pain not being more marked on the right side than on the left. Case II, a girl, aged 21, was admitted April 10th, 1897, with a history of having had pain in the side and hæmaturia ten years before. She had never had severe pain, this being limited to a dull constant ache. She had also suffered from jaundice and dysmenorrhœa. Nothing abnormal could be felt in the abdomen. The urine was acid, specific gravity 1020, and contained a small amount of albumen. With the *x* rays an indistinct opacity was seen in the right upper half of the abdomen, but nothing very definite. Oxalate of lime crystals were found in the urine, with a few pus cells. On May 5th a calculus was removed from the kidney through a lumbar incision; it was very rough, and had to be dug out of the renal tissue, the kidney itself being apparently normal. There was blood in the urine for some days after the operation, but she made a good recovery. This case was interesting by reason of the peculiar arrangement of the oxalate crystals, which caused the stone to assume a very uncommon appearance. The comparative absence of pain was accounted for by the peculiar way in which the stone was held up in the kidney; it seemed to have formed in the renal tissue and not in a calyx. Case III, a girl, aged 17, was admitted on December 15th, 1894, suffering from severe pain in the right side of the abdomen, a repetition of an attack two years previously. The father had undergone nephrectomy. There was much tenderness on palpation, and a large swelling was made out on the right lumbar region. Urine scanty, 1030, neutral, and contained urates. The swelling was thought to be due to pyonephrosis from obstruction of the ureter by a calculus. Temperature 102.4° F. A large quantity of pus was evacuated through a loin incision, and a stone was extracted from the abscess cavity. No other stone could be felt in the kidney or ureter. She was much relieved by the operation, and urine mixed with pus escaped from the wound until February 5th, but later it became almost normal. On February 5th a further exploration was made through the right linea semilunaris, but the only thing that could be made out was a not very well defined thickening where the ureter crossed the pelvic brim. The drainage tube was then removed from the lumbar wound, and the wound rapidly closed, and the quantity of urine passed was normal and contained no pus. It appeared that the continued obstruction must have been due to some softer substance than a stone, though the exploration yielded no information on this point. The rapidity with which the kidney recovered from so extensive a pyonephrosis was remarkable.

The Chairman recalled a case of myxœdema in a woman who, on beginning the thyroid treatment, had passed blood and pus in the urine. There was tenderness, more marked over the right kidney, with gradually-increasing but not very severe pain, until after an acute attack it was noticed that the blood and pus had disappeared from the urine. This he had attributed to the dropping down of the calculus into the ureter, a diagnosis which was subsequently confirmed by the formation of a large kidney abscess. This was opened by Mr. Walsham, and the patient made a good and rapid recovery, though urine continued to flow from the wound. Careful search was made for the calculus, but without success. It had since been detected in the ureter, but not occluding the canal. Operation for the removal of the stone was under consideration.

Mr. Bruce Clarke insisted on the importance in every operation for the removal of renal stone of passing an instrument, preferably a rubber No. 6 bougie, in order to make sure that there was no stone in the ureter. In this way he had on several occasions detected and removed a stone in the ureter. He had never met with a stone in the ureter which could not be removed. He suggested that the severity of the hæmaturia depended partly on the shape and partly on the position of the stone.

Mr. Marmaduke Sheild raised the question of the utility of the *x*-rays in the detection of renal calculus, and asked the author whether he had had any experience with the animal inoculation method of distinguishing between renal calculus and tubercle. He himself had tried it in one instance, and multiple tuberculous growths had resulted. If trustworthy, he thought this method might prove of great assistance.

Dr. Hedley mentioned that he had recently seen an excellent radiograph of a renal stone.

Mr. Battle, in reply, said he had never had trouble with the hæmorrhage in myxœdematous patients. He had tried to pass an instrument down the ureter in his case, but could not find the opening on account of the matted condition of the parts. Their experiences at St. Thomas's with the *x*-rays in these cases had not been satisfactory. Of the inoculation method he knew nothing.

The Therapeutic Value of Central Galvanisation in Cardiac and other Neuroses.

Mr. W. Armstrong (Buxton) spoke highly of the curative powers of galvanisation of the central nervous system, the

therapeutical effects, though limited to a few cases, being very definite in their nature, and, within certain limits, fairly constant. He denied that the benefit thus obtained could always be ascribed to "suggestion." He described the physiological effects of the constant current as stimulating, sedative, and tonic. Their influence was manifested by changes in nutrition, secretion, and excretion. He described the apparatus used and the means of employing it, together with the most suitable strengths of current and the duration of the sittings. Among the cases suitable for this treatment were cardiac and gastric neuroses, neurasthenia and hypochondriasis, cerebral and nervous exhaustion, migraine, exophthalmic goître, Raynaud's disease, and spasmodic asthma. He concluded by reading brief notes of a number of successful cases of each kind.

Dr. Herschell had used central galvanisation mainly to combat the symptoms resulting from autointoxications from the gastro-intestinal tract. He usually placed the negative pole on the epigastrium, and the other at the back of the neck, using a current of 15 milliampères for about ten minutes. After that he applied it to the upper and middle cervical ganglia. Giddiness, he thought, was caused by using a dial collector, which caused shocks. He now used a special form of rheostat which obviated this objection.

Dr. Lewis Jones insisted on the beneficial effects of general electrisation in conditions of malnutrition, such as rickets and chilblains. He had often seen cases of rickets recover without any alteration in diet as rapidly and as effectually as under the ordinary treatment. He preferred the electric bath, taking the current from the main. He had not seen any permanent benefit accrue from the treatment in cases of exophthalmic goître, and while it succeeded in some cases of migraine it failed in others.

Dr. Abrahams observed that there was as much difference between the local and the general application of galvanism as between wet packing and a Turkish bath. General galvanisation as such had been almost abandoned abroad. He thought it required very careful study before one could form an opinion as to its value. He contrasted this crude treatment with the elaborate methods employed by d'Arsonval and others.

Dr. Hedley spoke highly of the use of electricity to the nervous centres.

Mr. Armstrong, in reply, said that whether the current was applied directly to the brain, through the sympathetics, or from the periphery, the general result would be the same. He confirmed the good results to be obtained in rickets and chilblains.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

E. Seaton, M.D., President, in the Chair.

Friday, April 15th, 1898.

Sanitary Supervision of Elementary Schools.

Dr. Reginald Dudfield read a paper on this subject, with special reference to the spread of infectious diseases. There was no denying the general overcrowding of these schools, which was favoured by the regulations of the Education Department. While 350 cubic feet was the lowest allowance in factories, 120 was fixed by the Department for schools, which to maintain a purity of 0.2 per 1,000 of CO_2 would demand a renewal of the air 25 times in the hour. But even this scanty allowance might be curtailed under certain conditions. This was dependent on the interpretation of the expression "habitual" in Clause 73 of the Code, which stipulated that the average attendance should not habitually exceed the legal accommodation by more than 15 per cent. The intention was to avoid the exclusion of a child from the appropriate class pending redistribution and the drafting of the number in excess to other classes. Memoranda and instructions had been issued interpreting the expression so as to discourage overcrowding, but it was evident that the teachers took it as permitting serious overcrowding during certain months to compensate the scanty attendance in others, so long as the average for the whole year did not exceed the accommodation by more than 15 per cent., a practice to which the payment to the head teachers of a proportion of the grant, still retained in many voluntary schools, was a strong inducement. It was, however, clear from Mr. Acland's explanation that the permission extended only to the temporary and unavoidable overcrowding of particular class rooms, which it was the duty of the teacher to relieve as soon as possible by drafting the scholars, or redistributing the classes, and to occasional aggregation of the children in the principal hall or otherwise. Inadequate, however, as was the cubic space in the schools, the conditions of many of the homes were no better, and the gravity of the matter lay rather in the influence of overcrowding on the spread of diseases. Among these, measles, not notified, widespread, highly infectious, and causing on the whole more deaths than scarlatina and several other fevers put together, was that which had the greatest influence on the attendance, and led most often to the extreme resource of closure. It was useless to impose the duty of notification on the medical attendant in a disease for which he was rarely called in until alarming complications arose, and parents might plead ignorance, but school teachers and visitors should notify to the sanitary authority, and prompt notification might be made one of the conditions affecting the grant (Section 85), the teacher inquiring into or reporting to the visitor the unexplained absence of any child. He recommended internotification between adjacent districts, disinfection of rooms, etc., that exposure of persons suffering from measles should be penal, and that to insure uniformity the Local Government Board or Education Department should publish a schedule of quarantine periods. Absences under Section 101* might be specially marked in the attendance book. He read letters from Dr. Herbert Peck, M.O.H. Ormskirk, who found a system of notification, imposed on the School Board visitors and requested of the teachers, to work admirably, the latter having brought to his knowledge during the past year 247 cases, including several of scarlatina of which he had no other intimation. For these notifications forms with counterfoils had been drawn up, copies of which were shown.

Dr. Parkes doubted the need for disinfection in measles, and thought that infant schools might be closed on the approach of major epidemics.

Dr. Newsholme feared that these could not be foreseen with such certainty as to justify anticipatory closure; but since 75 per cent. of the deaths were of children under 6 years, the closure of infant schools would effect a great saving of child life. He would not, however, have infants under 5 admitted, though their exclusion might lead to the retention of the older girls at home unless day nurseries were provided everywhere.

Dr. Willoughby was inclined to agree with Dr. Parkes as to the impracticability of official disinfection after every case of measles, and would rather inculcate thorough house cleaning and a general wash. He wondered that the London School Board had not introduced the electric light in place of gas, which added to the deterioration of the air. In Holy Trinity Schools, Eastbourne, the head master testified to the great improvement in the air, and in the work done in winter afternoons since the change.

Drs. Tew and Carr and Mr. Stott spoke of the difficulties encountered in rural districts through the extent of their areas, and the paucity of sanitary inspectors and school board visitors. Dr. Tew said that a request for closure, the attendance having fallen off to half, was frequently the first intimation he had of an epidemic of measles, while the others, though they found notification by the teachers to work very well, felt the signing of certificates on the evidence of teachers or correspondents was not altogether satisfactory.

Dr. Groves referred to a further difficulty incident to the closure of schools in rural districts bordering on urban, which resulted in the permanent loss of the children who migrated to schools in the town that remained open.

Dr. Davies (Plumstead) and others having continued the discussion,

Dr. Dudfield replied, and the resolutions he had submitted to the meeting were referred to the consideration of the Council.

Professor R. Koch, who is now at Dar-es-Salam, hopes to be able to complete his labours there before the end of the present month. He will then leave German East Africa, and will probably arrive in Berlin before the end of May.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Sir George F. Duffey, M.D., P.R.C.P.I., President, in the Chair.

Friday, April 15th, 1898.

Cerebral Abscess.

Dr. J. J. Burgess read a paper on this subject, and showed the specimen.

Dr. E. H. Bennett thought the specimen a very remarkable and very rare one of chronic abscess of the brain, existing and giving sufficient characteristic symptoms for over two years. Probably a blood clot in the arachnoid was the primary lesion, and suppuration took place in it. He thought that operative interference would have had a bad result in the case.

Remarks were made by Dr. Falkiner, Dr. Knott, and Dr. Finny; and Dr. Burgess replied.

Laryngeal Ulceration in the Advanced Stage of Typhoid Fever.

Dr. Finny read notes on a case of this disease.

Typhoid Fever.

Dr. H. C. Drury read a paper entitled Some Remarks on Typhoid Fever. He discussed the present position of Widal's reaction, which he considered had not yet been exhaustively enough investigated for decided conclusions to be formed about it. After mentioning the possibly brilliant future awaiting the serum treatment of this and other forms of fever, he spoke of the protective treatment introduced by Professor A. E. Wright. He then went into the question of the use of mild purgatives. Supported by Murchison's teaching on this subject, he pointed out that their occasional use at any stage of the disease, where indicated, was not only harmless but beneficial. He insisted, however, on the danger of routine in any such course, but desired simply to point out that the fear of using them when they appeared to be called for was grounded on theory rather than supported by practice. He also discussed the question of the time to begin solid food, and said that in average cases a small quantity of fine farinaceous food might be given on the fourth day. He thought that too much routine was followed by insisting on the use of the bed-pan in all cases. So many patients found its use difficult or intolerable that it was more likely to do harm than by allowing them to use a night-chair, the use of which was always easier, and he had never seen it followed by any bad result. He quoted statistics from Cork Street Fever Hospital, where all these practices were followed, to show that he was justified in stating that they were in no case harmful but rather beneficial.

Dr. Littledale had some experience with the Widal reaction, having tested 51 cases of fever more or less in routine in Sir P. Dun's Hospital. He thought that the reaction sometimes left one in doubt. In ordinary cases he was disposed to think they diluted too much.

Dr. Burgess had tried purgatives for many years, and never found any bad results. Cases of constipation, with moderate fever, he treated with purgatives, which he thought was better treatment than administering enemas of soap and water.

Dr. J. W. Moore said constipation was sometimes the most troublesome thing to treat in typhoid. He agreed entirely with the treatment by purgatives. He thought it good, particularly in children, to add a teaspoonful of glycerine to one of castor oil in a small wineglassful of milk. By so doing, one combined a certain amount of nourishment, and he was satisfied that the glycerine had a certain antiseptic effect, but no aperient effect. Calomel was the best aperient in the early stages, from 2 to 5 grains in the first week of the fever.

After remarks by Dr. N. Falkiner, Dr. Knott, and Dr. Finny,

Dr. W. G. Smith said that, speaking generally, in typhoid fever the less interference the better. Matters calling for interference were diet, bowels, and nervous symptoms. He was not in favour of early resort to solid diet soon after apyrexia was established. Dietetics of a typhoid patient ought to be managed on the same general physiological principles that diet was given on. A typhoid patient required a proper proportion not only of proteids, but also of carbohydrates and fats. Carbohydrates could easily be added. Cream, as a rule, was well borne by typhoid patients. He remarked that fish was not the innocuous thing it was generally supposed to be, as it seemed to act as an irritant, and was, he thought, more dangerous than a tender mutton chop. The question of the bed-pan was one of common sense. He was in favour of aperients in constipation, as the latter tended to precipitate perforation. He gave castor oil and calomel by the mouth, and enemata when necessary. With regard to the action of calomel, he thought it probable that it made some sort of an albuminous compound with the gastro-intestinal contents of the intestine.

Dr. Drury replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.

H. A. G. Brooke, M.B., Vice-President, in the Chair.

Wednesday, April 13th, 1898.

Pathological Changes in Nerve Cells.

Dr. Warrington (Liverpool) gave an account of some investigations he had been conducting on the physiology of the nerve cells. He showed that marked changes occurred in the anterior cornual cells of the spinal cord after cutting off the afferent impulses which normally impinge upon them. The affected cells were chiefly found in the postero-external group, and in that segment of the cord whose afferent and efferent roots were specially concerned with innervation of the foot. He also mentioned and illustrated the recent changes which occurred in a nerve cell after division of the axon belonging to it, and showed in the case of the spinal cord that after section of an anterior root almost every cell on the side of the lesion of the affected segment gave evidence of distinct change in its structure. It was intimated that a complete report would be published in the *Journal of Physiology*. The paper was illustrated by a large number of drawings, microscopic sections, and lantern slides.

The Diagnosis of Pathological Conditions of the Endometrium.

Dr. Arnold Lea read a paper, illustrated by microscopic sections and lantern slides, with special reference to the value of the microscope in the diagnosis and treatment of these affections, and pointed out the limits of its usefulness. The diagnosis of previously existing intrauterine pregnancy could generally be made with certainty from the examination of curetted fragments; chorionic villi might be recognised many months after the death of the ovum; decidual cells were not absolutely diagnostic, as similar cells were found in some forms of chronic endometritis, membranous dysmenorrhœa, and in the casts of extrauterine gestation; the large glandular spaces, remains of the decidua vera, were of great value if present. In chronic glandular endometritis the mucous membrane was swollen, smooth, and softened; the glands were multiplied, enlarged, and very tortuous, the proliferated epithelium might fill the lumen, and in the deeper parts solid epithelial buds might be recognised, an important fact, as this was held by some to be evidence of malignancy; the stroma showed round-cell infiltration. In old cases atrophy of all the constituents of the mucous membrane occurred. The so-called "villous, polypoid, or hæmorrhagic" endometritis was rather a diffuse benign adenoma, inflammatory changes being often absent; the growths were simply glandular, very vascular, and occasionally single and pedunculated. Sections of fibroadenoma were also shown. The use of the microscope in differentiating simple inflammatory, benign, and malignant growths was of great value; carcinoma was easily recognised, but malignant adenoma might closely simulate benign growths, the chief points of distinction being as follows: (1) Many alveoli may be seen to be completely filled with epithelial cells, which also markedly invade the stroma; (2) the glandular spaces are very numerous, much branched, and are often arranged in parallel columns; (3) the stroma contains numerous large cells, (4) the growth infiltrates the muscular wall, so that curetted fragments may often show presence of unstriped muscular fibre; (5) the growth is usually most abundant, though this is by no means always

the case. In some few doubtful cases microscopic evidence alone might need to be supplemented by clinical signs before a diagnosis could be made.

Pathology of Fissure and Ulcer of the Anus.

Mr. J. E. Platt made a communication on this subject. After referring to a few points in the anatomy of the lower end of the rectum, more particularly the form of the anal valves and the free distribution of branches of the inferior hæmorrhoidal nerves to the muco-cutaneous junction, he stated that two distinct affections, having a different pathology, were described together in textbooks as fissure and ulcer of the anus. He gave the following account of these conditions: (1) In a large proportion of the cases the lesion was situated at the junction of skin and mucous membrane, and generally took the form of a vertical fissure, most frequently situated at the dorsal part of the anus. It was produced by undue stretching or excoriation of the part, and amongst its causes were the passage of hard fæces, severe diarrhœa, want of cleanliness, eczema, syphilis, laceration during childbirth, and congenital stenosis of the anal outlet. The affection was extremely painful, owing to the very free nerve supply of the muco-cutaneous junction. Not infrequently one or more nerve filaments were exposed in the base of the fissure. The pathology of the affection was that which was usually described as applicable to all cases of fissure and ulcer of the anus. From constant irritation reflex spasm of the sphincter muscles was set up, and thus healing was prevented. (2) The second affection was situated, or at all events began, at the upper part of the anal canal, and was due to a tearing down of one of the anal valves. As a result of this a raw surface was produced, healing was prevented by the frequent opening of the wound during the passage of fæces, and an ulcer of round, triangular, or V-shape resulted. The torn-down valve became œdematous and indurated, thus giving rise to the "sentinel pile" so often met with in these cases. This view of the pathology of fissure was first advanced by Mr. Ball, of Dublin. It undoubtedly held good for one class of cases, but it was by no means applicable to all. Reference was also made to certain differences in the symptoms and the treatment of the two conditions.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, March 18th, 1898.

Clinical Evening.

Cases, etc.

Dr. Churton showed a woman, aged 35, who while under treatment for chronic rheumatism and mitral disease contracted syphilis. A secondary rash had appeared three weeks previously. After ordinary treatment for a fortnight all medicine by the mouth was stopped, and m iv of grey oil was injected into a gluteal muscle. The rash, which had been spreading over the back and face, although fading on the chest, was now rapidly fading everywhere. In several cases of visceral syphilis the method had been found convenient; in none had there been any marked brain or other undesirable result.—Dr. Trevelyan showed: (1) Six cases of Locomotor Ataxia, two complicated with aortic disease, one with optic atrophy, one of possible traumatic origin, and two undergoing exercise treatment. A photograph of two cases occurring in husband and wife was also shown. (2) A case of Infantile Hemiplegia with fits and disordered movements; and (3) a case of Infantile Spastic Paraplegia, with fundus changes suggesting a possible syphilitic origin for the nervous disease.—Mr. Littlewood showed the following cases: (1) Intraperitoneal Rupture of the Bladder, seen with Mr. W. A. Stott. J. W., aged 28, operated upon thirty-six hours after the injury. Abdomen opened, 3 or 4 pints of urine evacuated; there was some peritonitis. Rupture in bladder about 1½ inch long, in middle line, terminating about the peritoneal reflection. This was stitched up with eight or ten interrupted catgut sutures, including all the coats with the exception of the mucosa. Peritoneum drained for forty-eight hours by means of a Bantock tube. Urine passed six hours after the operation. No catheter passed. Patient up at the end of three weeks; wound soundly healed. (2) Bullet Wound of Sigmoid Flexure. R. R., aged 20, operated on six hours after the accident. Incision made through the abdominal wall through the track of the bullet. The bullet was found to have entered the peritoneal cavity, perforated the sigmoid flexure, and lodged in the subperitoneal tissues over the iliacus muscle. The bullet was extracted, and the two wounds in the sigmoid flexure were stitched up by Lembert's sutures. Peritoneum drained for forty-eight hours. Bowels opened six days after the operation. Patient left the infirmary on March 14th with the wounds healed. (3) Ununited Fracture of the Femur Wired. J. C., aged 65, had a spiral fracture through the middle of his right femur, eleven weeks before the operation. Femur wired on March 30th, 1897. The cause of non-union was a large piece of muscle between the fragments. He has now firm union, and gets about with a stick. (4) Excision of Head of Humerus for old-standing Dislocation. D. K., aged 48, dislocated the left shoulder on September, 1897. Five attempts at reduction were made. Head of humerus excised on November 15th, 1897. It was then found that the neck of the scapula had been fractured, and the glenoid cavity was obliterated. The patient has now a useful limb. (5) Two cases of Thyroid Cysts removed by Symonds's Method. (6) Several cases of Joint Tuberculosis treated by Iodoform Injections.—Mr. Ward showed: (1) Boy, aged 13, with Ununited Fracture of Left Tibia and Fibula, with skiagraph. The original fracture occurred in 1889, and since then he has had the bones resected six times and wired on four occasions with a negative result. (2) Man, aged 41, who had had Rodent Ulcer of Orbit and Face excised, followed by two plastic operations. A series of photographs showed the various stages of the disease. (3) Three men, aged 34, 47, and 55 years respectively, who had had proctectomy performed for malignant disease of rectum. Intraperitoneal lumbar colotomy had been done prior to the major operation. There has been no return of disease, and the patients were gaining weight and following their employment.—Mr. Mayo Robson showed: (1) Needle in Knee-joint, removed by operation. (2) Pyonephrosis: Renal Calculus: Nephrolitotomy. (3) Two cases of Ascites apparently cured by Laparotomy. (4) Gluteal Aneurysm: Ligature of Common Iliac Artery. (5) Ovarian Cyst with Tuberculous Peritonitis: Ovariotomy. (6) Gall Stone Impacted at Papilla of Common Duct. Duodeno-choledochotomy.—Dr. Barrs showed a case of Diphtheria treated by Antitoxin and Tracheotomy in which Membranous Casts of the Trachea were coughed up. A series of Clinical Photographs shown by the lantern.—Dr. Hellier showed: (1) Case of Spastic Paraplegia. (2) Case of Extreme Hydrocephalus.—Mr. W. H. Brown showed: (1) Carcinoma of Sacrum in a child. (2) Fracture of Acromial End of Clavicle. (3) Abdominal Swellings in an Infant. (4) Two cases of Compound Depressed Fracture of Skull not operated upon.

LIVERPOOL MEDICAL INSTITUTION.

Pathological and Microscopical Section.

Robert S. Archer, M.D., in the Chair.

Thursday, April 21st, 1898.

Water-gas Poisoning.

Dr. Grünbaum gave a demonstration of the spectra of hæmoglobin and its derivatives, with special reference to the properties of CO-hæmoglobin.

The Relation existing between the Structure and Functions of Nerve Cells.

Dr. Warrington read a communication on this subject. He showed that certain cells of the anterior cornua underwent a distinct structural change after the withdrawal of the afferent impulses which normally impinged upon them through the posterior roots. He also illustrated the changes that occurred in nerve cells after division of their axis cylinders. He discussed the possibility of a *restitutio ad integrum* in certain cases, pointing out that whereas, if examined soon after a lesion, most of the corresponding cells showed distinct changes, if a long interval was allowed to elapse, the group of cells was found normal, or at any rate only a few cells were atrophied. The communication was well illustrated by numerous specimens and by excellent drawings and micro-photographic lantern transparencies.

[An account of this investigation will be published in the forthcoming number of the *Journal of Physiology*.]

Dr. A. W. CAMPBELL said that notwithstanding all the work that had been done on the subject by the very best workers, never, in his opinion, had the connection between the posterior root fibres and the anterior cornual cells been so beautifully demonstrated as in the specimens exhibited that evening. He thought the method employed should be extended to tracing out other connections between the spinal tracts.

The paper was also discussed by Dr. ARCHER, Mr. DAMER HARRISSON, and Dr. IMLACH.

PURE AND MIXED INFECTION IN PULMONARY TUBERCULOSIS.

The SECRETARY (Mr. Larkin) presented on behalf of Dr. BUCHANAN, who was absent on account of illness, a paper entitled Observations on Pure and Mixed Infections in Pulmonary Tuberculosis, in Relation to Prognosis. The paper was accompanied by a careful analysis of 21 cases, and was profusely illustrated by microscopic specimens.

The communication was accepted and ordered to be published in the *Transactions*, and a vote of sympathy with Dr. Buchanan was unanimously passed.

SPECIMENS.

In addition to the numerous specimens mentioned above, the following were shown:—Dr. BARENDT for Dr. PERMEWAN: (1) A Pedunculated Fibromyxoma, removed by sub-hyoid pharyngotomy from the upper end of the œsophagus of a woman aged 46; (2) large portions of greatly enlarged Inferior Turbinate Bones, which had produced complete nasal obstruction, and for the relief of which they had been removed.—Dr. BRADSHAW and Mr. THELWALL THOMAS: A piece of Small Intestine, which, two days before death, had been the seat of a suture for perforation. The patient was suffering from typhoid fever, which had run a severe course of seven to eight weeks, but had almost defervesced. The operation was performed thirty-six hours after the symptoms of perforation appeared. Death took place apparently from exhaustion; no leakage had occurred. The CHAIRMAN said that in his experience four days was about the limit of time patients lived after the occurrence of perforation in enteric fever. As this died on the fourth day, the operation did not seem to have either shortened or prolonged life. He understood that some 19 cases of this operation had been placed on record. Of these, 4 had recovered, but 3 of these were probably not enteric at all.—Mr. C. THURSTAN HOLLAND showed Radiographs of, and the Bones from, a foot amputated by Mr. Robert Jones for an ulcer occupying the whole sole in a man aged 24. There were no signs of nervous disease. The ulcer had existed five years, and no dead bone had ever come away, yet while the tarsus was complete the metatarsals and phalanges were only represented by small misshapen fragments of bone.—Mr. R. W. MURRAY: (1) A Hydrocephalic Brain, in which he had attempted to establish a communication between the ventricles and the subdural space; (2) A case of Imperforate Anus and Congenital Stricture of the Left Ureter. The ureter above the stricture was so much dilated that it was mistaken for the bowel and opened.—Mr. LARKIN: (1) An Intra-articular Tumour of the Left Knee, which he had recently removed from a man aged 35. It commenced after an injury, and gave rise to symptoms resembling those of a loose body. It was attached in front to the internal alar ligament, and projected thence backwards between the bones. It measured 2½ inches long, 1½ broad, and ¾ thick. (2) A water-colour sketch of a peculiar variety of Imperforate Anus, in which a canal passed forward from the anal dimple along the perineum and scrotum to the penis, where it by a pinhole aperture discharged meconium. The urethra was normal. (3) A Persistent Vitello-Intestinal Duct opening at the Umbilicus, through which an intussusception had occurred.—Mr. NEWBOLT: (1) Adeno-sarcoma of the Breast. (2) Carcinoma of the Penis. (3) Cystic Tumour of the Jaw. (4) A Varicose Vein 24 inches long.—Dr. IMLACH exhibited some Models he had constructed of the Spinal Cord, showing the various ascending and descending tracts and their relation to the cerebral arteries. He thought that the use of such models instead of diagrams would materially simplify the study of nervous cases, and would enable the practitioner to compare the facts of degeneration, which had been ascertained by Waller and his school, with the tracts of sclerosis due to disease.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

PATHOLOGICAL AND CLINICAL SECTION.

J. W. TAYLOR, F.R.C.S., in the Chair.

Friday, March 25th, 1898.

DISEASES OF FOURTH VENTRICLE.

A REPORT was presented by the Subcommittee appointed on January 28th to investigate Dr. Codd's specimen of disease of the fourth ventricle. The changes found were (1) a condition of gliomatosis of the ependyma, described by various authors under the name of diffuse ependymal sclerosis, and (2) cystic degeneration of the choroid plexus. The former had apparently caused obstruction of the foramen of Majendie and the central canal, with subsequent dilatation from fluid accumulation. As a secondary condition, the cerebral ventricles had undergone some corresponding dilatation. There was also marked atrophy of the superior cerebellar peduncles, as the result of the dilatation of the fourth ventricle, to which was attributed the ataxic symptoms from which the patient suffered.

CHRONIC RHEUMATIC ARTHRITIS TREATED BY HOT AIR BATHS.

Dr. SHORT showed a case of chronic rheumatic arthritis treated for a period of six months with hot-air baths. The patient, a man of 27 years, had a severe attack of rheumatism three years before coming under notice, which lasted five months. He was left crippled and bedridden with crooked spine, stiff arms and hips, and tucked-up knees. For three years he was practically bedridden. Six months' treatment with gentle massage, iron and arsenic, improved him a little, but he was still unable to walk or even feed himself. At the present time he can walk well, dress and feed himself, and has increased 4 inches in stature. The baths given were the ordinary blanket baths heated by means of spirit lamps under a cradle in bed.

QUANTITATIVE ESTIMATE OF SUGAR.

Professor ALLEN exhibited a "handy apparatus" which he had designed for use in the quantitative estimation of sugar and phosphates, also for general use in the laboratory and consulting room. It combined a retort stand, a Bunsen burner, and a new form of burette holder (the "spiral"); and was so arranged that the burner and the burette could be instantly turned aside after use, the burner always moving to the right, the burette always to the left, so that the burette could not be accidentally injured by the flame. The burner or other parts could be used alone, so that the apparatus was available for all the ordinary tests used in the consulting room or the urine testing room of a hospital. The apparatus was manufactured by Messrs. Baird and Tatlock, of London.

PYONEPHROSIS.

Mr. CHRISTOPHER MARTIN showed a specimen of large pyonephrosis of the left kidney removed by him in December, 1897. The history pointed to the fact that the patient had a very movable left kidney for many years. She then began to suffer from intermittent hydronephrosis, and latterly from pyonephrosis. At the time of operation the kidney was distended into a lobulated sac holding over a quart of pus. It reached from the loin to the middle line, and from the diaphragm into the left iliac fossa. It contained no stone, nor was there any cause of obstruction to the ureter to be detected in the pelvis. The kidney was removed by a transverse (or horizontal) incision, the peritoneum not being opened, but turned inwards and forwards from the front of the kidney. The patient made an excellent recovery, and returned home three weeks after the operation.

KIDNEY WITH STONE IN URETER REMOVED BY NEPHRECTOMY.

Mr. JOHN W. TAYLOR showed a kidney which he had recently removed from a woman, aged 23. The upper part of the ureter was completely blocked by a calculus, which was securely fixed in this position and could not be dislodged. The kidney was enlarged and cystic, but no prominent

tumour had formed, nor was there any large collection of fluid above the calculus. The history was one of lifelong pain in the left side on any exertion, walking, lifting, and riding in an omnibus being specially painful. At 5 years of age the patient was said to have passed some blood with her urine. Since this date there had been no active urinary symptoms, no dysuria, no frequency of micturition, and no hæmaturia. There was, however, a slight amount of albuminuria. Mr. Taylor considered that the obstruction had probably occurred in early childhood, and that the kidney since then had been functionless.

Extrauterine Pregnancy.

Dr. Malins showed two specimens of tubal gestation. One was from a patient, aged 39, who had borne one child 18 years previously; no miscarriages, history of three months suppression of menstruation, expulsion of clot from uterus with pain, leading to examination and diagnosis of right tubal gestation. Operation showed tube much distended, containing fœtus of three months and placenta; adhesions posteriorly and to side of uterus. Whole removed, with uninterrupted recovery. The second specimen was taken from a patient of Mr. Chavasse's, who was admitted to the hospital in a collapsed condition with distended abdomen and intense pain. The tube had ruptured causing several pints of blood to escape; this was all carefully sponged out, and among it was found an ovum. The patient had four children, the youngest 14 months old, no miscarriages, did not suckle child, menstruated regularly. She did well subsequently.

Disease of Aortic Valves, with Congenital Absence of one Cusp.

Dr. Foxwell showed a heart with only two cusps to the aortic valve. The two coronary arteries arose close together from the anterior point of junction of the cusps, which junction was situated to the left of the posterior junction as the heart lay in the body. One of the cusps was extensively diseased as well as an area, the size of a two-shilling piece, on the adjoining surface of the septum ventriculorum.

Heart with Four Pulmonary Valves.

Dr. C. P. White showed (by permission of Dr. Saundby) the heart of an adult man showing four curtains to the pulmonary valve. The extra curtain lay between the anterior and the left posterior curtains; it was small but perfectly well formed, and measured a quarter of an inch across at its attachment. The other three curtains were of equal size. The valve was quite competent, and led to no signs of cardiac disease during life. The patient died of chronic nephritis.

Neurological Society of London.—The Neurological Society of London held its first meeting out of London on Saturday, the 23rd inst., when, at the invitation of Dr. Alex Hill, Vice-Chancellor of the University, a meeting was held in the Physiological Laboratory at Cambridge. The following communications were made:—Dr. Alex Hill: Some specimens of Granules (demonstration).—Professor Macalister: The Race-characters of Australian Brains (demonstration).—Dr. Langley: Some Points relating to the Sympathetic System (demonstration).—Dr. Gaskell (for Miss Alcock); The Distribution of the Facial Nerve in Ammocœtes.—Dr. F. E. Batten: (1) Nerve Terminations in Muscle Spindles (demonstration).; (2) (for Dr. Sihler, of Ohio): Motor Nerve Termination *within* the Muscle Spindle (demonstration).—Dr. Mott: Degeneration of the Neuron (demonstration). At the conclusion of the meeting members and visitors were entertained at dinner by the Vice-Chancellor in Downing Hall.

Hunterian Society.—At a meeting held on April 13th, Dr. Cotman (President) in the chair, Mr. John Adams showed: (1) A child with an extensive scar on the face and loss of the digits of both hands except the left thumb. There was no history of the case, and the exhibitor attributed the lesions to Raynaud's Disease. (2) A girl, aged 18, with Congenital Heart Disease; there had been no hæmoptysis, and the area of cardiac dulness was very wide on the right of the median line.—Sir Hugh Beevor showed two cases of General Alopecia which had been treated with thyroid extract in both instances marked improvement had occurred.—Dr. F. J. Smith showed two cases of Primary Myopathy affecting the legs of young men; there were no sensory disturbances, and the electrical reactions were normal in quality though diminished in quantity; no reaction of degeneration; no family history of any similar disease.—Dr. Sequeira showed (1) a case of well-marked Pseudo-hypertrophic Paralysis in a child, and (2) a boy, aged 7 years, with symptoms of Cerebellar Tumour.

Association of Registered Medical Women.—At a special meeting held on April 19th, Mrs. Garrett-Anderson read a paper on the Midwives' Registration Bill. She thought the Bill would not protect the poor from inefficient midwives, and that it would create a class of practitioners of midwifery who would practically be as independent in their work as qualified medical practitioners. She admitted that midwives were necessary, and that they ought to be obliged to show a certain knowledge of the processes of normal labour, and of the methods to be adopted for preventing septic infection, but she considered that it was undesirable to give them a diploma, as this would imply to ignorant people that they were competent to meet difficulties and emergencies, which they would not be. She thought they should be put under the direct supervision of the medical practitioners of the locality in which they worked, and required to report all their cases to some one of these. Miss Blackwell, Mrs. Scharlieb, Miss McCall, Miss Porter, and several others joined in the discussion. On a division the present Bill was not accepted as a satisfactory proposal, but a majority voted in support of the registration of midwives, if this could be so guarded as to prevent them from attending any but the simplest cases.

South-West London Medical Society.—At a meeting on April 13th, under the presidency of Mr. T. A. I. Howell, the President read notes of cases of Pneumonia, Pleurisy, and Rheumatic Fever.—Specimens of Uteri removed for Fibromyoma, Carcinoma, and Epithelioma were shown for Mr. Charles Ryall.—Dr. Barkwell showed a Penis removed for Malignant Disease.—Mr. T. J. Bokenham gave a demonstration of Widal's Test for Enteric Fever, followed by a discussion, in which Dr. B. L. Abrahams, Dr. Gay, and others took part; and Dr. Mackintosh showed a series of Lantern Slides of the commoner Micro-organisms.—The usual vote of thanks brought the meeting to a close.

REVIEWS.

Diseases of Women; A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B.Lond., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; Examiner in Midwifery to the Universities of London and Oxford, etc. London: Cassell and Co. Limited. 1898. (Roy. 8vo, pp. 902, 252 illustrations. 25s.)

In character this work is somewhat original. It is a kind of hybrid between the familiar textbook on gynæcology, of which several samples come out every year, and the late Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women*. Some of the very best chapters are of the latter type, but the treatise is more synoptic and less dogmatic than the published lectures of the great Scottish obstetrician to whose memory and to that of Dr. H. Gawen Sutton the treatise is dedicated.

Amongst the opening chapters that which is devoted to neurasthenia is of great interest. In a similar chapter on hysteria Dr. Herman observes: "Without the confidence of the patient you can do nothing for her; but you abuse that confidence if you try to establish a personal influence over a foolish woman. You should use it to make her live a healthy and if possible a useful life, independent of doctors." The fourth and fifth chapters on headaches and pains in the back

deserve the attentive consideration of the physician and general practitioner, and the same observation applies to many chapters further on relating to leucorrhœa, dysmenorrhœa, and sexual questions. The paragraphs devoted to chronic ovarian and uterine pain show both of Dr. Herman's methods of instruction, for they are full of valuable information of a clinical nature and at the same time include anatomical and pathological diagrams of high scientific interest, whilst a more purely demonstrative chapter in the same part of the work dwells on methods of investigation.

Dr. Herman commends the use of the bimanual method rather than the uterine sound. "The sound hurts the patient," the author observes, "and is seldom required by one skilled in bimanual examination." For general gynæcology this advice is quite right, but the use of the instrument must be learnt, as it is much required for the diagnosis of tumours. The directions for bimanual palpation are especially sound. Undoubtedly "the preferable position is on the back," indeed it is best to place the patient in that attitude at first in all cases, and to direct her to turn on her side before completing the examination. The recommendation "if there are any symptoms referred to the rectum make a digital examination of the bowel" might have been extended, for it is the right course whenever the patient is a virgin. He admits that "you can reach rather higher than by vaginal examination, and you can better ascertain the boundaries and relations of swellings behind and at the side of the uterus," and on that account Dr. Herman might well have placed the paragraph on rectal bimanual examination immediately after his directions for the ordinary vagino-abdominal method, as a means of diagnosis of equal importance. Uterine fibroids are discussed in a chapter of the clinical lecture type on bleeding fibroids, and in another on the treatment of subperitoneal fibroids, operative treatment being almost limited to the latter chapter. The author finds that fibroids were diagnosed in about 3 per cent. of the cases in his out-patient records. These records include 40 per cent. of patients over 35, and therefore mostly of an age when the disease in question is frequent. This would make the proportion of women over 35 seeking advice for fibroids at about 7.5 per cent., only a fraction of the frequency of fibroids in women over 35, as ascertained at necropsies. This fact, Dr. Herman adds, is important, because lately some have urged that every fibroid should be removed, whether it be causing trouble or not; for that if it be not causing trouble when discovered, it will do so in the future. Basing himself on these figures, the author does not advise interference with a fibroid merely because it exists. He advocates operation when the tumour is so big that it causes discomfort, and makes the patient short of breath, unwieldy, and unable to take exercise. Like the late Mr. Greig Smith, Dr. Herman is by no means certain that intraperitoneal hysterectomy is superior to the older method with the *serrenœud*.

Dr. Herman justly writes of ovariotomy that it is "the parent and type of abdominal sections." His directions are clear and his diagrams satisfactory. He condemns the practice of keeping the patient in bed for three or four days before the operation as "needless." In any case, with one of the familiar complications, however mild, it is highly advisable, and many believe, not without reason, that it is a good rule in all cases. The author's advice not to drain when in doubt is questionable, though his general observations on the principle and practice of drainage leave nothing to be desired. For removal of the stitches the seventh day "as a rule" is too early, whilst "if the wound is painful take them out on the sixth" is dangerous advice. A stitch-hole abscess from a suture left in for a fortnight is a less serious matter than hernia of the cicatrix from its too early removal. Taken as a whole, however, Dr. Herman's chapter on ovariotomy will prove a safe guide.

Sufficient has been said to demonstrate the nature of Dr. Herman's admirable textbook, which promises and deserves to become a standard work on diseases of women. It is, therefore, not necessary for us to dwell on other chapters, which, like those above mentioned, deserve careful study. Dr. Herman's work will prove of value and of interest alike to the student, the practitioner, the surgeon, and the specialist.

APHASIA AND THE CEREBRAL SPEECH MECHANISM. By W. ELDER, M.D., F.R.C.P.Edin., Physician to the Leith Hospital. London: H. K. Lewis. 1897. (Demy 8vo, pp. 260, 30 illustrations. 10s. 6d.)

THIS book is mainly a reproduction and expansion of the author's thesis for the M.D.Edin. Following a brief historical introduction, the author discusses fully the reception, retention, and production of speech, and the routes by which they are subserved. He then proceeds to investigate the mechanism of speech, as shown by its disorganisation. His views on this subject, which differ unimportantly from those of Lichtheim, are amply illustrated by rather complex though serviceable diagrams. Like Lichtheim, he assumes the existence of an ideational centre, but he does not refer to the important objections to its acceptance which have been put forward by many of those who have studied the subject most closely.

With regard to diagnosis, the author details twelve questions which he urges should be inquired into in every case of aphasia. By their aid he states that it is possible to verify the existence of fourteen varieties of aphasic speech affection, although he admits that several of these are hypothetical. Still it is no doubt of value to have a complete theoretical scheme, for further clinical and pathological research will no doubt enable us to fill up some of the gaps. For clinical purposes Dr. ELDER groups his fourteen varieties under five well known heads, describing aphasia as auditory, motor (aphemia), visual, graphic, and conduction. Each of these five types is separately discussed and illustrated by cases under the author's own observation. He is strongly of opinion that there is a naming centre associated with the utterance of nouns, and situated in the posterior parts of the second and third temporo-sphenoidal convolutions of the left side. With regard to conduction aphasia, the author's case cannot, in the absence of a *post-mortem* examination, be regarded as entirely conclusive. The history and symptoms are not incompatible with the idea that this patient was suffering from the senile form of general paralysis. On the whole, however, the exact clinical record of the author's cases constitutes the most valuable portion of the book. Dr. Elder's style is unfortunately somewhat deficient in lucidity, and his arrangement lacks conciseness. We cannot but think that his facts would have been more presentable if the book had been compressed to half its present size. We feel bound to remark, also, that insufficient note seems to have been taken of Dr. Bastian's extremely valuable contributions to the study of aphasia. Still, these defects apart, Dr. Elder is to be congratulated on the production of a useful addition to our knowledge of the subject. The last two chapters, treating respectively of affections of the musical faculty and the surgical aspects of aphasia, are particularly interesting.

STEWART CLARK, ONE OF NATURE'S NOBLEMEN. By S.E.S.C. London: Baillière, Tindall, and Cox. 1898. (Crown 8vo, pp. 188, 4 engravings. 7s. 6d.)

THE subject of this memoir, which is written by his widow, was a distinguished officer of the Indian Medical Service. The sketch is an interesting one, drawn by a loving and sorrowing hand, but its study leaves a sense of regret that there is so little of Stewart Clark in it. Nine-tenths of the little volume consist of rambling narratives of persons and events that have at one time or another engaged the interest of the writer, or concerned the life of its subject; of quotations and small stories more or less relevant, rather less than more; and of weak moralisings on life and its motives and destinies. Through this mist of verbiage and sentiment one can discern a man of strong physique, of Scottish stock, of kindly nature and great vigour and tenacity of purpose, who in times of trouble and peril acquitted himself well, and strove according to his capacity, which was good, and opportunities, which were many, to leave the world better than he found it.

The story of Stewart Clark's life, in so far as it can be gathered from this memoir, is simple. He was born at Crathie, in Aberdeenshire, in the year 1814. He was educated, through the efforts of a wise and self-denying mother,

at Marischal College, Aberdeen, and after obtaining a medical qualification, engaged for a time in country practice. Dissatisfied with this life, he repaired to London, where through a fortunate chance he made the acquaintance of Mr. Richard Green, proprietor of the celebrated Indian liners, in which he served for several years as surgeon. In 1850, at the age of 36, he obtained a commission in the Bengal Medical Service. When the Mutiny broke out in 1857, he was civil surgeon and Postmaster of Alighur, in the North-Western provinces. He rendered conspicuous and valuable assistance as a volunteer and organiser of the postal and transport services in these troublous and disturbed times. On the repression of the Mutiny and restoration of order, he was appointed Inspector-General of Prisons and Dispensaries in these provinces. In this important office he laboured hard and with memorable success in the cause of sanitation and medical relief. The public documents appended to the book testify to the excellent services which he performed during the Mutiny: but there is no record of the good work which he afterwards did as administrator of prisons and hospitals. This is to be regretted, because he was at that time foremost in the ranks of sanitary reformers and promoters of the grand scheme of medical aid to the masses of India, which has since his time attained such large and beneficent dimensions. He retired in the year 1871 and died in March, 1897. He was a good physician, an able administrator, a clever mechanician, a successful photographer, and devoted to music and the fine arts. His life is an excellent example of the practical success which a good Scotchman is capable of achieving, and of the type of man which the opportunities afforded by the Indian Medical Service are so well adapted to produce, and have so often produced.

This loving tribute to his character and work by one who shared his anxieties and watched his career is a warm reflection of vivid impressions gained from intimate association with an ardent and benevolent nature.

Ueber das Wachstum des menschlichen Auges und ueber die Veränderung der Muskelinsertionen am wachsenden Auge. [On the Growth of the Human Eye and the Changes in the Insertion of the Muscles in the Growing Eye.] Von Dr. Leopold Weiss, Professor an der Universität Heidelberg. (Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1897. Roy. 8vo, pp. 56. 3s.)

These investigations cover old ground, and the findings only differ in slight respect from those of previous workers. The average weight of the eye at birth, as determined from 14 cases, is given as 2,290 mg., the average weight of the adult emmetropic eye (5 cases) as 7,448 mg., the greatest growth being in the first year. At birth the eye is slightly rounder; the vertical diameter increases the quickest; its average measurement at birth is 15.4 mm., in an adult emmetrope 23 7. In the adult the equatorial circumference is put at 77.62 mm.; Weiss thinks Meckel's measure of 72.2 decidedly too small. As regards the tendons of insertion of the extrinsic muscles, their width, shape, and position, the author's results agree fairly closely with those of Fuchs. The distance of the points of insertion (*a*) from the limbus, (*b*) from the optic nerve entrance in the newborn and the emmetropic adult are carefully compared; the insertion of the oblique muscles relatively to the recti and to each other is dwelt on. In all his measurements the author prefixes a statement of the results obtained by previous investigators.

Traitement de Certaines Maladies de l'Estomac par la Cure de Repos Absolut et Prolongé de l'Estomac avec Alimentation Rectale Exclusive. [Treatment of Certain Diseases of the Stomach by Absolute and Prolonged Rest of the Stomach, with Exclusive Rectal Feeding.] Par Dr. A. P. Gros. Paris: Baillière et Fils. 1898. (Roy. 8vo, pp. 243. 3 Charts. Fr. 5.)

Rest of a diseased part has always been recognised as an important element in cure. With some organs, for instance the heart, the rest can only be partial, but with others absolute rest can be obtained for a considerable time without any serious loss to the general economy. It has not yet been generally recognised how far this is applicable to the stomach. Of necessity all feeding by the mouth is stopped when hæmorrhage has occurred from a gastric ulcer, and nutrition is maintained by rectal feeding, but the same method can be used in other disorders of the stomach, and the essay before us is of value in drawing attention to this.

Dr. Gros has collected in his work all the facts relating to the history of rectal feeding, and its application to disorders of the stomach. He quotes in detail observations from various authors, and adds the reports of 19 cases which he himself has observed in the clinics of Tournier and Lépine at Lyons. These comprise cases of ulcer of the stomach and duodenum, dilatation of the stomach and hyper-secretion, catarrh and cancer of the stomach, and perigastritis. In all these cases nutrition was perfectly maintained for a prolonged period by nutrient enemata. The composition of the enemata will vary in the practice of different physicians. Tournier uses a mixture of beef-tea and yolk of egg, with wine and salt, each injection not exceeding in volume more than 250 to 300 c.cm. (about 8 to 9 ounces). Contrary to the usual practice, in only one case was peptone added to the injection. In all the cases the body weight was well maintained, and the patients suffered little from the effects of the treatment. After the treatment was finished, ordinary feeding by the mouth was resumed gradually and with care. The effects in all cases were good, and one case is quoted as showing that cicatrisation of a gastric ulcer occurred during the patient's stay in hospital. The author believes that the injection is carried by reversed peristalsis to the small intestine and there absorbed, though of this he gives no convincing proof, but only the opinions of other authors. This, however, is only a small matter clinically; the fact remains that rectal feeding is quite sufficient for the body if the patient be kept at rest in bed, and the absolute inaction of the stomach so obtained cannot fail to be of use in the treatment of ailments which have resisted other methods.

NOTES ON BOOKS.

Reports and Lectures on Plague.

Report on the Bubonic Plague in Bombay. By Brigadier-General W. F. Gatacre, C.B., D.S.O.—This is the first of a series of reports by laymen on plague in India. Out of 234 pages nearly 200 appear to consist of the reports of medical men in charge of plague hospitals or plague districts. It is curious that these reports should not go for compilation to a medical officer. It is often said that east of Suez the traveller finds most notions topsy-turvy to European ideas, and we can only suppose that this is a striking illustration. In England a report on plague by a General instead of by the Medical Officer of the Local Government Board would seem preposterous. The Indian policy of giving the direction and control of plague into the hands of laymen has not succeeded, and it has proved a costly blunder. In the second year of plague matters are as bad, if not worse, than at the beginning, so that the subjects dealt with in this report belong to history and have had little influence in checking plague or the recrudescence of the disease. The plague was actually declining when General Gatacre's Committee commenced operations. It is due, however, to General Gatacre and his Committee to acknowledge that their organisation of hospitals, ambulances, segregation camps, and removal of the sick to hospital was most complete, and that their tact in dealing with the different races and castes of natives and keeping them under control was worthy of the highest praise.

Report on Bubonic Plague. By Khan Bahadur N. H. Choksy, Extra-Assistant Health Officer, Bombay. (Bombay: *Times of India* Steam Press. 1898. Imp. 8vo, pp. 60.)—This is a report based upon observations on 939 cases of bubonic plague treated at the Municipal Hospital for infectious diseases at Arthur Road, Bombay, from September 24th, 1896, to February 28th, 1897, and it is one which reflects much credit on the author. The difficulties which had to be surmounted in the matter of securing and retaining servants and attendants for the hospital were very great. As Dr. Choksy remarks, "the sights and sounds of a plague ward in the dead

of night, with the groans and moanings of the delirious patients, were enough to appal the stoutest heart. During these trying months the strain on Dr. Choksy and his three hospital assistants was terrible. Nearly one-third of the total admissions during the six months died within twenty-four hours of admission, by far the greater number dying within a few hours, and some even within a few minutes. At times patients were found dead when brought to the hospital in ambulances. Added to this heavy mortality the means used to resuscitate and support the strength of the patients, especially subcutaneous injections, were misconstrued, and it was openly said that the doctors were killing the patients in order to stop the further ravages of the epidemic. Among an extraordinarily imaginative people given to credit the wildest rumours it was stated that the patients were purposely killed and their hearts taken out in order to send them to Her Majesty the Queen-Empress to appease her wrath on account of the disfigurement of her statue which occurred in the beginning of the epidemic. Early in February the nursing was placed under the charge of the sisters of All Saints, whose devotion and zeal laid Bombay under a deep debt of obligation to them. The Assistant Medical Officer, Dr. P. N. Davda, who had been three weeks earlier injected with 10 c.cm. of Yersin's serum, and three ward boys were attacked with plague. Dr. Davda died, but the boys, of whom two suffered from a mild and one from a moderately severe form of the disease, recovered. The mortality was progressive, being 52.23 per cent. in September and October, 66.67 in November, 74.12 in December, 69.0 in January, and 81.64 in February. After this it declined, being 67.35 in March, 56.66 in April, and 38.46 in May. Hindus constituted more than two-thirds of the total admissions (693), while the Mohammedans were 119, and native Christians 116. The highest mortality was among the Hindus, reaching 75.46 per cent. Among Mussulmans and native Christians, mostly Goanese, the mortality was 66.38 and 67.24 per cent. respectively. The highest mortality occurred among the Purdeshees, who are, as a rule, men of good physique, and come to Bombay from Upper India. They are as a rule, however, underfed. The syces died at the rate of 89.47 per cent., the milkmen at the rate of 86.66 per cent., dhobees, mill hands, and coachmen at about the rate of 78.0 per cent. The lowest mortality was among domestic servants—65.47 per cent. Dr. Choksy divides his cases into pestis minor, pestis ambulans, pestis simplex bubonica, pestis septica, pestis pulmonalis, and non-typical forms of plague. He discusses the mode of infection, and states that in not more than 5 per cent. was there evidence of infection through the skin; he supports the theory that infection takes place through the lungs, and discards the idea of grain being an infecting medium. The chances are against it, not only on account of the prolonged boiling and heat requisite to cook the grain, but also from the fact that the epidemic spread amongst all classes of people, attacking those consuming and those not consuming the millet grain. Dr. Choksy gives a valuable and detailed account of the several symptoms which present themselves in plague. It displays careful observation of the cases that were under his care. Of treatment little can be said. All kinds of methods were tried, but none were very effectual; sponging to reduce the temperature, bromide and morphine to control the delirium, alcohol, ammonia, ether, strychnine, digitalis, and strophanthus to sustain and support the action of the heart, icebags to the buboes, were found to be the most beneficial. The serums of Haffkine, Yersin, and Lustig were tried in a few cases. With Haffkine's, of 15 cases 9 were cured and 6 died. With Yersin's in 3 very early cases the mildest recovered, the other 2 died. With Lustig's, of 6 very serious cases all recovered.

Plague. By B. L. Dhingra, M.D., M.R.C.S., L.R.C.P. (Lahore: Mufid-I.-Am Press. 1898. Demy 8vo, pp. 20.)—This is a small pamphlet of 19 pages, giving a description of plague and the methods of prevention. It is written in homely and popular language, and, though intended primarily for the use of native practitioners, it can be read with advantage by others. With this object, an Urdu translation is in course of publication. It gives a good deal of useful information concerning the history, causes, infection, clinical features, and treatment of plague, and the sanitary measures necessary to be taken against it, and bears evidence of a desire on the part of Dr. Dhingra to arouse in India more public interest in sanitary topics.

A Lecture on Plague. By Brigade-Surgeon-Lieutenant-Colonel Fawcett, A.M.S. (Poona: *Daily Telegraph* and *Deccan Herald* Press, 1898. Demy 8vo, pp. 16. 8 annas.) This popular lecture on plague was delivered at Poona in January last. After a brief description of the life-history of the plague bacillus, and a reference to the history of plague epidemics in various parts of the world, the lecturer explained the measures adopted in Poona cantonments, and showed from statistics that immediately following the adoption of more vigorous measures the plague began to decrease. From the results obtained at Poona he concluded that it was possible to stamp out the plague anywhere, and it was only a question of expense and organisation.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

ELECTRODES FOR UTERINE APPLICATION.

Dr. R. Cuffe (Lincoln) sends us the following description of an intrauterine electrode and of an abdominal electrode devised by him:

Fig. 1 shows the abdominal electrode, a sheet of copper measuring 10 inches by 7½ inches, in the centre and at the back of which is a screw, to which is attached the connecting wire, whilst on the opposite side is a pad composed of chamois leather filled with animal charcoal, divided into longitudinal compartments in order to distribute its contents equally. This indifferent carbo-copper electrode is cleanly, portable, readily adapted to the surface of the body, and is both effective and reliable. It makes a much better electrode than the large clay pad of Apostoli, and avoids the mess and inconvenience of this method.

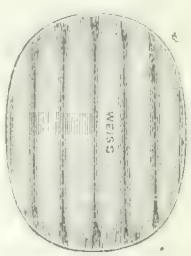


Fig. 1.

Fig. 2 shows the intrauterine electrode, a stout, pliable metal sound, covered to within half an inch of the point with gum elastic. The point itself consists of platinum, which is screwed on to the body of the instrument, and enables it to be replaced by a platinum trocar in case it should be necessary to puncture the fibroid. To the handle end of the instrument is fitted a copper loop for the wire connection. This instrument allows of the application of sufficient force in its introduction without bending, but at the same time is pliant enough to be bent at any suitable angle that may be necessary in cases of flexion. This electrode overcomes the difficulties met with in the use of Apostoli's sound, which is too pliant in flexions.



Fig. 2.

The instruments are made by Messrs. J. Weiss and Son, Oxford Street, London.

Serumtherapy in Russia.—During the year 1897 the number of tubes of antidiphtheria serum sent out by the Bacteriological Institute of the University of Moscow was 17,180. Of other kinds of serum 1,520 tubes were supplied. The receipts of the Institute for the year amounted to 35,051 roubles, 69 kopecks; the expenditure to 34,464 roubles, 78 kopecks.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: East Surrey District.—The next meeting will be held at the Greyhound Hotel, Croydon, on Thursday, May 12th, at 4 P.M., H. G. Thompson, M.D., of Croydon, in the chair. Dinner at 6 P.M.; charge 7s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. Agenda: Minutes of Norwood meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Dr. P. J. Duncan will propose, and Dr. F. Nicholls second, a resolution against members supporting unqualified dentists and those who advertise. A vote of condolence with the friends of the late Mr. E. H. Galton will be moved by Mr. J. Sidney Turner and seconded by the Honorary Secretary. The following papers, etc., will be read:—Dr. F. J. Smith: Pleurisy and Pleuritic Effusion; their Diagnosis and Clinical Significance. Mr. A. H. Tubby: The Diagnosis and Treatment of Infantile Hernia. Dr. P. Horrocks: Hysterectomy *versus* Oöphorectomy. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. N.B. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner.—Henry J. Prangley, Honorary Secretary, Tudor House, Anerley, S.E.

South-Eastern Branch: East Sussex District.—The next meeting will be held at the White Hart, Lewes, on Thursday, May 26th, at 3.30 P.M., Dr. Crosskey in the chair. Members are requested to send notice of any communications before May 14th to the Honorary District Secretary, J. W. Batterham, M.B., Bank House, Grand Parade, St. Leonards.

Midland Branch.—The annual meeting will be held at Lincoln on Thursday, June 2nd. Any members proposing to read papers or make other communications will please communicate with Frank M. Pope, M.B., 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

Southern Branch: South-East Hants District.—The next half-yearly meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Tuesday, May 3rd, at 4 P.M. Members desiring to present papers, patients, or specimens are requested to communicate at once with the Honorary Secretary, C. C. Claremont, M.D., 57, Elm Grove, Southsea.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Metropolitan Counties Branch: North London District.—A meeting of this District will be held at the Highgate Infirmary, Dartmouth Park Hill, on Wednesday, May 4th, at 4.30 P.M. Dr. Morton will preside. Dr. Washbourn will read a paper on Points of Interest in Scarlet Fever. Dr. Chilcott will show cases of interest in the wards of the infirmary. The District Committee will meet at 4.15 P.M.—H. J. Macevoy, Honorary Secretary, Brondesbury, N.W.

South Wales and Monmouthshire Branch.—The next meeting of this Branch will be held on May 5th, and not on May 4th as recently notified by postcard.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

A meeting of this District was held on April 14th, at Newport, I.W., Dr. H. Harland, President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Member.—Dr. Cowper, of Shanklin, was elected member of the District.

Audit of Accounts.—The annual accounts were audited and passed.

Installation of New President.—The President, after having reviewed the doings of the District during the past year, introduced Dr. Groves, of Carisbrooke, as President for the coming year.—The President, having taken the chair and proposed a vote of thanks to his predecessor, which was unanimously carried, delivered the annual address.

President's Address.—Dr. Groves referred to several subjects suitable to such an address as he was expected to give. Dealing first with the British Medical Association, he said that on all sides there would appear to be an indefinite sense of something wanting which would, if present, render the Association a more potent agent for good to its members and to the community at large. The ultra-conservatism of the Council was complained of, and as a consequence of that complaint a Committee of the Council had considered the question of its reform. All they could suggest was the appointment of a Committee of Council to which its executive functions should be delegated, and the election of representatives to the Council by unattached members. But obviously the establishment of an oligarchy did not on the face of it promise to make for progress; and the representation of men uninterested in the important work of the Association in the Branches and Districts was not likely to add much to the strength of the Council. Having regard to the work which devolved upon it, the more frequent meeting of the Council than once a quarter would appear to be a desirable reform. But, whatever changes might come in the future of the British Medical Association, they must come gradually, and they must be in accord with the highest traditions of the profession, or the Association might be wrecked, and there would be lost to society what was potentially the greatest organisation for good in the profession which the world had known. Dr. Groves, deprecating the antagonism so often shown to those who had the most perfect right to voice according to their views that sense of something wanting to which he had referred, said he could conceive of no more powerful factor in the legitimate evolution of the British Medical Association than the personal interest in its affairs of each one of its members. Passing to the consideration of the Vaccination and Midwifery Nurses Bills, Dr. Groves said he thought the great object should be to get the population protected by vaccination, and to this end objections should be met as far as possible. The use of glycerinated calf lymph and the extension of the time limit would help to this. He thought the practitioners of medicine throughout this country should be officers of State for vaccination purposes, under proper inspection. The great defect of the Bill was that it contained no provision for revaccination. In his opinion no unvaccinated child should be admitted to any primary or secondary school, and at 12 years of age, or on leaving school, every child should be revaccinated. It was difficult to be tolerant in face of the ignorant faddism which would hinder compulsory vaccination when one considered that the mortality from small-pox at all ages in the years 1838-42 was 576 per million living, and in 1891-95 it was only 20 per million, a reduction of 96 per cent. No Midwifery Nurses Registration Bill could be wholly satisfactory to those who believed that the registration of nurses of every denomination should be in the hands of the medical profession. It was intolerable that while there was no guarantee the nurses one employed were efficient, a word of reproof might convert a nurse into an active tout among their *clientèle* on behalf of their competitors in practice. There would be a quasi-medical control over this new class of medical practitioners. The medical officers of health would have important functions to perform

respecting them; and, speaking generally, there was no body of men more high principled, or to whom their interests might be more safely confided. Touching next on the relationships of medical practitioners to one another and disciplinary measures, Dr. Groves said the British Medical Association had its Ethical Committees, but he had long since come to the conclusion that both in ordinary and professional life the proper treatment of others was only possible when men were considerate of others in their hearts, and no amount of discipline would practically make any difference if this essential to good feeling be absent. They had no protection against a liar, and they had to accept this fact. Dr. Groves then referred to the results of original investigation as shown in the advance of knowledge, and reviewed in an interesting and instructive manner the progress which had been achieved in the thirteen or fourteen years since he was last their President. He concluded by pointing out that the responsibilities of medical men to the community, both in their individual and in their corporate capacity, were very great; and while as individuals they were bound in honour to make their influence felt in local government for the sanitary protection of the community against ignorance and selfishness, they should see to it, both as private members and in their Districts and Branches, that their great Association should be used not merely for the maintenance of their professional interests, but as a powerful body speaking with an authority which was not to be gainsaid in the State on behalf of the health and well-being of the people. The address was highly appreciated, and a cordial vote of thanks was passed unanimously.

Election of Officers.—The following were elected officers for the year:—*President-Elect:* Dr. Williamson, Ventnor. *Hon. Secretary and Treasurer:* Dr. Shirtliff, Ryde (re-elected).

Revision of Rules.—These, as adopted at last meeting, were unanimously confirmed; the rescinding of Rule 8, as then proposed, being negatived.

Unregistered Dentists.—Dr. GREEN proposed the following:

That this meeting considers it unprofessional for medical men to assist professionally, meet in consultation, or administer anæsthetics to unregistered or advertising dentists.

This was seconded by the HONORARY SECRETARY, and carried *nem. con.*

Next Meeting.—The next meeting of the District was appointed for the third Friday in July at Sandown.

Dinner.—After the meeting the President, visitors, and members dined together.

NORTH WALES BRANCH.

THE spring intermediate meeting of this Branch was held at Carnarvon on March 30th; Mr. H. J. LLOYD, J.P., in the chair. Thirty members attended. Professor Joseph Griffiths, of Cambridge, was present as a visitor.

New Members.—Dr. John Evans (Carnarvon) was admitted a member of the Branch; and Messrs. E. D. Rees, M.R.C.S. Eng. (Machynlleth), Thos. Roberts, M.B., C.M. (Carnarvon), and W. R. Williams, L.R.C.S.Ed., L.R.C.P.Ed. (Machynlleth) as members of the Association and Branch.

Treasurer's Report.—Dr. S. Griffith submitted the financial statement of the Branch for the year 1897, from which it appeared that there was a substantial balance at the bank in its favour.

Report of Branch Council.—The Council recommended that the autumn intermediate meeting be a joint one with the Lancashire and Cheshire Branch at Chester; that a letter from a member with complaint of a circular by a medical man to the residents of the neighbourhood be referred to the General Practitioners and Ethical Committee; that the Council gives its cordial support to the Local Government (Scotland) Bill; that the consideration of the report of the Constitution Committee be postponed; that the support of this Branch be heartily given to the Inebriates Amendment Bill; that the principle of the Vaccination Bill be approved, and that the details—more especially those affecting the interests of the medical profession—be left to the Subcommittee of the Parliamentary Bills Committee; that the action of the Parliamentary Bills Committee with regard to the Obstetric Nurses Bill be approved and confirmed; that the efforts of the Jenner Society are deserving of support, and that the Hon. Secretary be requested to communicate with the Secretary with regard to its publications.

The Vaccination Bill.—The report was adopted after considerable discussion on the Vaccination Bill, when it was resolved to appoint a small subcommittee to consider any amendments and report to the Subcommittee of the Parliamentary Bills Committee. It was further resolved, on the motion of Dr. ROBERT PARRY (Mayor of Carnarvon), seconded by Dr. E. O. PRICE:

That in the opinion of this Branch every medical man who vaccinates to the satisfaction of the Local Government Board authorities should be remunerated out of public funds for those services.

The Treatment of Thyroid Enlargements.—Mr. THELWALL THOMAS (Liverpool) read a note on this subject. He deprecated any interference with trocar and cannula, and advocated operation by removal of the localised swellings, which were always adenomata, cystic or solid, as soon as the patient was willing to submit. He read notes of 9 cases of adenomata, which varied in size and the symptoms produced; of 3 cases of general goitre, in which 6, 14, and 21 ounces respectively were removed, in two of them a large piece had descended into the thorax; one case of partial removal of malignant disease to alleviate distressing dyspnœa, and one case of accessory thyroids in the anterior deltoid of the neck, at the level of the angle of the lower jaw. All the cases were successful, and illustrated by photographs before and after operation, and Mr. Thomas strongly advocated the curved transverse or "collar" incision in preference to the vertical, central, or oblique incision down the anterior border of the sterno-mastoid. Most of the cases were operated on by the collar incision, some by the old-fashioned incisions, and the resulting scar in the former was so slight that it hardly showed in the photographs, whereas the central and oblique scars stretched and widened into an ugly depressed area, occasionally keloid for six months, and thus producing a deformity as noticeable, or even more so, than the original swelling. This was well illustrated by photographs.

Other Communications.—Mr. ROBERT JONES (Liverpool) read a note on a Form of Weak Knee due to Lengthened Quadriceps.—Dr. J. HILL ABRAM (Liverpool) gave an abstract of Koch's last paper on Tuberculin Preparations, and related a case of Pulmonary Tuberculosis treated with T R. Tuberculin. The case was an early one, and followed the course Koch said it should take, namely, increase in weight, disappearance of tubercle bacilli from sputum, and finally cessation of spitting with removal of all physical signs. He had some eighteen further cases under observation, which would be reported upon towards the end of the year.—Dr. R. T. DAVIES read notes of cases of Abdominal Surgery.—Mr. FRANK H. BARENDT read a practical paper on the Treatment of Acne.—Professor PHILLIP J. WHITE (University College of North Wales) exhibited a Fœtus from a Rabbit with a decided and undoubted Attachment to the Stomach, and made some remarks on this almost unique case, quoting Bland Sutton and other authorities on the question.—Mr. R. H. MILLS ROBERTS (Llanberis) demonstrated with Roentgen *x* rays apparatus some surgical cases such as Fractures, Excision of the Knee, etc., that had been under his treatment and the demonstration was highly appreciated, all the salient points of each case coming out successfully.—Dr. FRASER, M.O.H. for Carnarvonshire, presented each member with a little pamphlet on the *Care and Feeding of Infants*, which is to be distributed by the registrars of births in the county by order of the sanitary authority.

Luncheon.—Prior to the meeting the members lunched together, having as guests Lieutenant-Colonel E. H. Rees, V.D., and Captain Were.

CORK AND SOUTH OF IRELAND BRANCH.

AT a special general meeting of this Branch to consider the new Local Government (Ireland) Bill, held on Saturday, April 16th, Dr. J. GIUSANI, President-elect, in the chair, the following amendments were unanimously adopted:

Sec. 56.—We recommend that every medical man appointed as superintendent of an asylum shall have had at least five years' experience as assistant medical officer in a public or district lunatic asylum; and that every medical man appointed as assistant medical officer should either have a qualification in mental diseases or pass such examination as the Lord Lieutenant may direct.

We recommend the resolutions adopted by the Irish Medical Association with regard to the Poor-law medical pensions, as follows:

Sec. 6.—There shall be transferred to the Council of each County—

The business of the guardians with respect to making, levying, collecting, and recovering the poor-rate in so much of the county as is not comprised in an urban district; and the appointment and superannuation of the chaplains, the medical officers of the several dispensary districts and workhouses situate in the county, subject to the approval of the Local Government Board.[1]

Sec. 58.—Whereby or in pursuance of this Act or any Order or Rules made thereunder by the Lord Lieutenant in Council or the Local Government Board, any officer paid out of the poor-rate or any other local rate or cess, other than the chaplain or medical officer, is required, etc.

Sec. 61.—Nothing in this Act shall affect any powers of the Local Government Board with respect to guardians or the officers of guardians; and notwithstanding anything in 28 Vict., cap. 26, and 32 and 33 Vict., cap. 50, from and after the passing of this Act the Boards of Guardians of every union in Ireland shall, with the sanction of the Local Government Board for Ireland, grant to every medical officer belonging to that union who shall become incapable of discharging the duties of his office with efficiency, by reason of permanent infirmity of mind or body, or of old age, upon his resigning or otherwise ceasing to hold his office, a superannuation allowance not exceeding two-thirds of his salary and emoluments, and the Local Government Board may, on the application of any Council, exercise in relation to the Council and the officers of the Council all such powers of holding inquiries on oath, and deputing any officer of the Board to attend at the meetings of the Council, as they are by law empowered to exercise in the case of guardians and their officers.

Sec. 42.—That the provisions for union hospitals of one trained nurse is insufficient. We recommend that one trained nurse be appointed for every 50 patients.

BORDER COUNTIES BRANCH.

A meeting of this Branch was held at Carlisle on April 22nd. The President (Dr. Menzies, Galashiels) occupied the chair.

Confirmation of Minutes of Previous Meeting.—The minutes of the meeting held at St. Boswells on January 28th were read. Dr. Hamilton (Hawick) moved the disapproval of the minute which stated that an intimation was made by the Council that a local section, consisting of members resident in the counties of Roxburgh, Berwick, Selkirk, and Peebles, had been formed, this matter had not come before the Branch in a proper and constitutional way, and the statement, which was a matter of private business, had been interjected in the public business, and he had protested against it then. Dr. Maxwell Ross (Dumfries) seconded the motion for disapproval, and after some conversation it was unanimously agreed to disapprove of this minute, the remainder being passed and the President instructed to sign them.

New Member.—Dr. John Burnett (Keswick) was admitted a member.

Obstetric Nurses Bill.—The meeting then proceeded to consider the Obstetric Nurses Bill. Dr. Somerville (Galashiels) explained the objects of the Bill, and moved:

That this Branch petition against the Bill now before Parliament for the Registration of Midwives, and recommend instead the Bill prepared by the British Medical Association.

Dr. Barnes seconded.—Dr. Bell (Lockerbie) considered the movement for the registration of a new class of midwifery practitioners was extremely unfair to lady doctors. He sympathised with the view that women might prefer to be attended by members of their own sex, but they should be attended by properly-trained practitioners, and not by women who without any preliminary training, and after a three or six months' course in a midwifery hospital or lying-in institution, could be put upon a register. After some further conversation Dr. Somerville's resolution was unanimously agreed to, and on the suggestion of Dr. Barnes the Secretary was requested to forward it to the Parliamentary representatives of constituencies within the limits of the Branch.

Constitution Committee.—The Secretary read a letter from the General Secretary of the Association enclosing a copy of the report of the Constitution Committee. After an explanation by Dr. Somerville the report was remitted to the Council for consideration.

Royal Medical Benevolent College.—The President intimated in reference to the elections to the Royal Benevolent College, Epsom, that the Council had no nomination to make, and that they considered the matter should be left in the hands of the Secretary to use the votes of the Branch as he might see fit. This was approved.

[1] If the appointment and superannuation of medical officers be transferred from the guardians, as proposed in the amendment to Section 6, then the amendment to Section 61, relative to superannuation, should be added to Section 6, with the necessary alteration—"Council of every County" in place of "Boards of Guardians."

Local Section and Election of Direct Representatives.—The President stated, in reference to two resolutions passed by the Council meeting at St. Boswells on January 28th regarding the formation of a local section and the election of representatives on the General Medical Council, that at a meeting of Council that day Drs. Campbell and Somerville had formally protested against the Council having proceeded to constitute a Scottish section, as well as to form rules for the election of representatives of the Branch, both these matters being beyond the jurisdiction of the Council, and that after discussion it was unanimously agreed that these resolutions were unconstitutional, and must be rescinded. It was explained that according to the rules when any ten members intimated their desire to form a local section such section must be recognised by the Branch, but that no such intimation had as yet been received. The action of the Council in rescinding the resolutions protested against was unanimously approved.

The late Dr. Dowie.—Dr. Lockie referred in appropriate terms to the recent death of a former member of the Branch, Dr. Dowie, and moved that a letter of condolence be sent to Mrs. Dowie and family. This was seconded by Dr. Barnes, and unanimously agreed to, Dr. Lockie being requested to draft the letter for signature by the President in the name of the Board.

Annual Meetings.—Dr. Hamilton (Hawick) gave notice that he would move at next meeting that in future the annual meetings should be held in Carlisle.

Communications.—Dr. Bird (Carlisle) read a paper on the Prevention of Tuberculosis, which was followed by an interesting discussion taken part in by Dr. Lockie, who referred to the very advanced position on the infectious nature of tuberculosis taken up by the late Dr. Budd (Clifton); by Dr. Barnes, who gave some interesting information of the sanatoria for phthisical cases he had seen in America; and by Drs. Campbell, Hamilton, and Maxwell Ross. Dr. Bird replied.—Dr. Fox (Carlisle) read notes of a Case of Clonic Spasm of the Diaphragm, which was commented on by the President and Dr. Somerville.

The meeting then terminated, it being understood that the annual meeting would be held in Whitehaven in June.

HONG KONG AND CHINA BRANCH.

A meeting of this Branch was held in Hong Kong on Friday, March 18th, Dr. G. P. Jordan, President, in the chair. Eleven members and twenty-three visitors—including naval medical officers from American, German, Russian, and Italian warships lying in the harbour—were present.

New Member.—Hugh S. Burniston, M.B., Surgeon R.N., already a member of the British Medical Association, was elected a member of this Branch.

Bubonic Plague.—Dr. James A. Lowson, recently Special Plague Commissioner in India, gave a macroscopic and microscopic demonstration of the pathology and bacteriology of bubonic plague, and introduced a discussion on the subject of plague, which was taken part in by Drs. Atkinson, Clark, Hartigan, Jordan, Paulun, Stedman, and Thomson.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A meeting of this Branch was held in Aberdeen on April 20th; Dr. Reith in the chair.

New Members.—Dr. T. Bryden Law, Kirkhill House, Turriff, and Dr. Jas. S. Laing, City Hospital, Aberdeen, were after ballot admitted members of the Branch.

Communications.—Dr. W. H. Williamson showed models of a case of Persistent Temporary Teeth in a healthy girl aged 15. In the upper jaw the permanent central incisors, canines, and first molars were present, while in the lower the first molars were the only representatives of the second dentition, all the others belonging to the first. As several of these were loosening, it was of some importance to ascertain the presence or absence of their permanent successors. Two skiagraphs were taken by Dr. Galloway for this purpose: one of them, taking in the whole face, showed the absence of teeth behind the first molars; and a smaller one, a film placed inside the mouth, demonstrated very clearly that no bicuspids existed under the temporary molars.—Dr. Ashley Macintosh read, for Dr. McHardy (Cullen), notes of a case of

Chronic Gastric Ulcer treated by Bichromate of Potassium. The patient was a woman, aged 41, who had suffered severely from gastric ulcer for twenty years. Bichromate of potassium, in $\frac{1}{16}$ grain dose, increased after four days to $\frac{1}{12}$ grain, every six hours, was administered for about a month, when the entire group of gastric symptoms had subsided, and the patient rapidly gained in weight. The drug did not seem to have any effect on the anæmia, or directly on the hæmatemesis. Vomiting, previously a most distressing symptom, ceased after the first dose of the bichromate. The drug was thought to owe its effect to a local action on the stomach, and to be of benefit only in chronic gastric cases.

SOUTH EASTERN BRANCH: EAST SURREY DISTRICT.

The spring meeting of this District was held at the Queen's Hotel, Upper Norwood, on March 10th, Mr. J. Sidney Turner, of Anerley, in the chair.

Confirmation of Minutes.—The minutes of the Reigate meeting were read and confirmed.

Next Meeting.—It was resolved that the next meeting should be held at Croydon, on May 12th, and that Dr. H. G. Thompson be invited to take the chair.

Election of Officers.—The Chairman proposed the re-election of Mr. Henry J. Prangley as Honorary Secretary, and this was unanimously carried. The following were nominated for representatives on the Council of the Association: Dr. J. H. Galton for Surrey, Dr. Tyson for Kent, and Mr. T. J. Verrall for Sussex.

Southern Counties Branch of British Dental Association.—A communication from the Southern Counties Branch of the British Dental Association was ordered to be placed on the agenda for the Croydon meeting.

Communications.—Dr. Robert Wilkinson read notes upon a case of Acute Intestinal Obstruction from a Large Impacted Gall Stone.—Professor A. E. Wright, M.D., gave a demonstration of the Technique of Serum Diagnosis; and also a demonstration of Method of Determining the Coagulability of the Blood.

Dinner.—After the meeting, sixteen members and visitors dined together.

DOMICILIARY VACCINATION AND PUBLIC VACCINATORS.

[From a Correspondent.]

In the face of the general approbation with which the provision of the Vaccination Bill dealing with domiciliary vaccination has been received it may seem a bold thing to criticise it. And it must be premised that it is only of domiciliary vaccination as proposed in the Bill that criticism can well be suggested. But the proposal in the form in which it is presented in the Bill is so novel and the practice it would introduce so unprecedented that it is expedient to discuss it in all its aspects before accepting it as so effective a solvent of the difficulties of the vaccination problem as many persons appear to think it to be.

To take vaccination to the home of the child instead of requiring the child to be brought to a public station, especially where this is done at the request of the parent of the child, is a proposal against which in its unconditional form there is nothing to be said, provided the home is free from grave sanitary objections. It is, however, easy to conceive of homes in which the chances of septic infection of the vaccinal wound would be so great as to make such a course very inexpedient. But it is with domiciliary vaccination as a means of overcoming objection to vaccination, and when offered by a public vaccinator, that we propose here to deal, for that is the object with which it was recommended by the Royal Commissioners and has been adopted by Mr. Chaplin. This recommendation appears to have been founded on the evidence of two witnesses, the late Sir John Skelton, then chairman of the Board of Supervision of Scotland, and Dr. Husband, the Superintendent of the Edinburgh Vaccine Institution. It is interesting to note that this evidence was given exactly five years ago and that, to use a classic phrase, a "good deal has happened since then." Both these gentlemen agree that there was then practically no opposition to vaccination in Scotland, Dr. Husband stating, in reply to questions by Mr. Meadows White, that the antivaccinators were only a small body in Edinburgh who had no following and never got a public meeting, and that in regard to other parts of Scotland "there is very little effective opposition to vaccination." Sir John Skelton stated that he never heard of a case of imprisonment for default under the Scotch Vaccination Act. That the position of things has somewhat altered since then is indicated by the fact that we have before us as we write a recent Aberdeen newspaper of large circulation, in which three columns are devoted to a meeting held in a suburb of Aberdeen to express sympathy with two vaccination defaulters who had just emerged from five and seven days' imprisonment respectively on that account. It is stated that there was a large attendance of the general public at the meeting. This sympathy is no doubt largely due to the efforts which the Antivaccination League have been making in Aberdeen and some other Scotch towns to influence public opinion. But it is only within the last year or two that any organised effort in this direction has been attempted.

It is sufficient for our present purpose to take the conditions which will certainly have to be dealt with in any English town in which the agitation against vaccination has been at all active. It is assumed that the personal visit of the public vaccinator to the home of the child will in such places conciliate opposition and effect the child's vaccination, in cases where it would not be attainable in any other way. For it is only on this assumption that the unavoidable cost of vaccination carried on in this way can be justified. But it may be asked, who are the people who will be conciliated by this concession? Certainly not those who are opposed to vaccination because they believe that it is under any circumstances a dangerous practice or a "filthy rite." If these persons even receive the doctor civilly and treat his offer without contumely he will be fortunate. The Bill says nothing as to how often the public vaccinator is to repeat his visit in case he should fail to find the child or the parent at home. This will be one of the points for which the Local Government Board will have to make provision in any form of contract which it may draft, but it obviously involves considerable difficulty, for it would be impossible to convict of default without clear proof not only of vaccination having been offered, but of its having been refused.

Let us, however, assume that the public vaccinator finds both parent and child at home, and that the former is not one of those wholly impracticable objectors with whom persuasion and argument are equally useless, but that he or she, as the case may be, yields a more or less ready assent to the doctor's proposal. Is it to be also assumed that this assent would be more readily given to a public official, with whom the parent is possibly quite unacquainted, than it would be to the ordinary medical attendant of the family? Such a contention is, on the face of it, unreasonable, and we are, therefore, driven to the further assumption that the only ground on which the public vaccinator will have any chance of securing vaccination where the regular medical attendant fails to do so is from his being able to offer it gratuitously.

This view of the matter opens up an entirely new set of considerations. The public vaccinator does not claim to be a philanthropist. He is paid by the State to do a certain work, and he has hitherto been so paid because vaccination at stations was the only practicable way in which arm-to-arm vaccination could be continuously and efficiently carried on. The official adoption of glycerinated calf lymph renders the maintenance of vaccination stations no longer indispensable. It becomes necessary, therefore, to ask on what grounds and to what extent the public vaccinator will need to be retained. There are two grounds on which the maintenance of the public vaccinator under the new *régime* can be defended. One is because it may be assumed that by so doing the standard of efficient vaccination can be better maintained than in any other way. The standard of official vaccination has hitherto been distinctly superior to that of some private practitioners for two reasons: first, because the public vaccinator is compelled by the terms of his contract to maintain a high standard of insertion of lymph, and, secondly, because the private practitioner has been free, if he cared to do so, to pander to the weakness of mothers by vaccinating insuffi-

ciently, from a protective point of view, though sufficiently to satisfy the requirements of the law. If every practitioner were required to adopt the standard hitherto enforced on public vaccinators by being precluded from giving a certificate of "sufficient" vaccination except on that condition, there is no reason why the standard of private vaccination should not rise to the level which public vaccination has hitherto maintained. It could not be contended that the rest of the general practitioners of the kingdom cannot vaccinate as efficiently as the small body of public vaccinators who are appointed from amongst them, if every inducement to insufficient vaccination be removed. All that would be necessary to ensure this result would be that no medical practitioner should be entitled to give a certificate of vaccination at all unless he could produce satisfactory evidence that he was able to vaccinate properly, and that his work should always be liable to inspection. With these three conditions, namely, a legal definition of "sufficient" vaccination, a statutory form of certificate which shall carry on its face evidence as to the precise character of the operation performed, and with liability to inspection, there is no reason why the work of the private vaccinator should not in the future be as efficient as that of the public vaccinator has hitherto been. Inspection with the first two of these conditions would be comparatively easy and might readily be entrusted to medical officers of health not engaged in private practice.

If this be so all the difficulties connected with domiciliary vaccination disappear. So also does the chief need for the public vaccinator, and with it all the difficulties growing out of the possibilities of friction between him and the ordinary family attendant, as well as out of the settlement on a satisfactory basis of remuneration for work that cannot be precisely defined. If the State, or the ratepayer, is to pay for vaccination at so much per head, the payment might with more advantage be made to the family attendant than to the public vaccinator, provided an equally good result is guaranteed, for the family attendant is more likely than the public vaccinator is to persuade the parent to have the child vaccinated. The Royal Commissioners recommended the adoption of the Scotch system because "it sought out defaulters at their own homes," but the evidence before alluded to shows that there are no public stations in Scotland, that the bulk of the vaccination is done by private practitioners, and that the office of the public vaccinator there is solely to offer vaccination to defaulters, who were then admittedly few, and to those who must be presumed to have no regular medical attendant, and who, therefore, are practically paupers. For the wants of this class in England the district medical officer would provide, and to that extent a public vaccinator would still be necessary. But a large number of those who have hitherto attended at vaccination stations, if they are not to be compelled to have their children vaccinated at a station, would doubtless prefer that they should be done by their own medical attendant.

It therefore comes simply to this, that if the State were, as the Royal Commissioners have recommended, to offer a fee to every duly qualified medical practitioner who would vaccinate a child "sufficiently," in accordance with conditions to be prescribed for that purpose, it would be a matter of arrangement between the practitioner and the parent as to whether, for that fee, the mother should be required to bring the child to the doctor's surgery, or the doctor should vaccinate the child in its own home. If this were done, and if every mother could thus have her child vaccinated gratuitously by taking it either to her own medical attendant or to some other practitioner, the work of the public vaccinator would be much restricted.

From these considerations it will appear that so far as domiciliary vaccination is concerned it is a matter that may be safely left to be settled between the medical profession and the public, provided only that every parent who wishes to have his child vaccinated gratuitously by his own medical attendant may have this done by taking it to his surgery at a time which suits the convenience of both parties, the State undertaking to pay the doctor the same fee as it would pay to a public vaccinator for the same work. If in any case a private practitioner declined to vaccinate a child at his own surgery for this fee, it should be open to the parent to apply to the public vaccinator to do so. Under this arrangement the present public vaccination station would be replaced by the surgery of the private or the public vaccinator, as the case might be. All that would be further necessary would be that it should be the duty of some public official to examine the vaccination registers, which should be counterparts of the vaccination certificates, to see that they were worded as the law requires, and, in case they were not, to direct special attention to the vaccinations of the practitioner who might thus give evidence of failing to comply with the requirements of the law. The Bill, as it at present stands, is not only open to the grave objection of altogether ignoring the private vaccinator, but of imposing on the public vaccinator an impracticable duty. It proposes to transplant the Scotch procedure to English soil, but without providing the conditions which are necessary to guarantee that it shall take root and flourish there.

THE ROYAL COMMISSION ON TUBERCULOSIS.

Scope of the Inquiry.

The report of the Royal Commission on Tuberculosis which was presented to Parliament last week will, it is to be hoped, lead in the immediate future to some very much needed legislation on the subject. The report is a strong one, and is signed by all the seven Commissioners. On one point only—that of compensation to owners of condemned carcasses—is there a separate memorandum signed by three of the Commissioners, including the Chairman, Sir Herbert Maxwell.

As Royal Commissions go, the present one must be considered to have conducted its business with despatch, the report having been presented in less than two years since its appointment. The terms of the inquiry—namely, What administrative measures are available and would be desirable for checking the danger to man through the use as food of the meat and milk of tuberculous animals; and, what are the considerations which should govern the action of the responsible authorities in condemning for the purpose of food supplies animals, carcasses, or meat exhibiting any stage of tuberculosis?—have wisely been interpreted by the Commissioners in a liberal spirit, and the recommendations they make can be easily made applicable to the whole question of meat and milk inspection throughout Great Britain.

Public Slaughterhouses.

For instance, the Commissioners express the strongest opinion in favour of public over private slaughterhouses, and, in order to encourage their erection, recommend that local authorities should have power, when once a public slaughterhouse has been established, to declare that no other place shall be used for slaughtering purposes. This is a point which medical officers of health have urged for years. No doubt the visit paid by some of the Commissioners to the abattoirs in Brussels, Cologne, Leipzig, Berlin, and elsewhere, impressed them greatly with the advantages of centralising in the same place not only the slaughtering of animals, but also the many trade processes incidental to it such as gut scraping, bone boiling, fat melting, etc., which, unless carefully supervised, give rise to grave nuisance. "The use of public slaughterhouses in populous places to the exclusion of all private ones," they say, "is a necessary preliminary to a uniform and equitable system of meat inspection." The butchers, who have been loud in their demands for greater uniformity of inspection, will, it is hoped, accept the inevitable with a good grace. Nothing shows their contrariness more than that in England they should demand uniformity of inspection but should resolutely oppose the only efficient means of obtaining it. We say "in England" advisedly, because in Scotland burgh authorities have for over thirty years had powers for compelling all animals to be slaughtered in a public slaughterhouse as soon as one has been erected, and the butchers there are quite satisfied with the arrangement.

Qualifications of Meat Inspectors.

On the subject, however, of the qualifications of meat inspectors the views expressed by the Commissioners are very definite, and on this point the meat traders will be satisfied. It would seem that in this country the professions of a schoolmaster and of a meat inspector have this in common

—that no previous training is required for their exercise. Abroad the view has long been held that meat inspection is no insignificant branch of science, but that for its complete mastery and proper exercise a varied knowledge and a thorough practical training are requisite. Veterinary surgeons, therefore, have been charged with the duty, and to this fact must be attributed the greater advances that have been made there in knowledge of the diseases affecting animals used for food than has been the case in this country. The Commissioners deplore the fact that in the reports of medical officers of health such scanty returns are made on the subject of the number of each of the different classes of animals affected with tuberculosis, so that it has been difficult for them to arrive at definite knowledge of its prevalence in this country. But while they consider that some pathological training is the proper basis upon which to build the knowledge required by a meat inspector they do not recommend that veterinary surgeons alone should be charged with the duty. They consider that, wherever practicable, veterinary inspectors should be employed, and that all meat inspectors should pass an examination in the subject, and receive a qualifying certificate from a central authority before appointment.

Condemnation of Meat of Tuberculous Cattle.

On the much discussed question of the extent of tuberculosis in a carcass which should lead to seizure, the report contains very useful suggestions which we have no doubt will be promptly acted upon. That they are needed is evident from the Commissioners stating that "chaos" is the only word to describe the existing practices with regard to condemnation of meat. Broadly speaking, the recommendations are that when the tuberculous process is localised the carcass should be passed, and, when generalised, that it should be condemned.

The Commissioners are emphatic on the point that the danger from tuberculous meat has been exaggerated, and such statistical evidence as was laid before them by Dr. Tatham failed to support the view that there was any connection between the consumption of tuberculous meat and tuberculous disease in man.

Milk of Tuberculous Cows.

While they say this, however, with regard to meat, they speak very differently on the subject of milk. The danger from this is infinitely the greater of the two, and the statistics placed before them by Dr. Tatham show that, ill-defined as the term "tabes mesenterica" is, it represents more nearly than any other term can tuberculosis in infancy, and there has been no diminution in this cause of death at all comparable to that which has taken place in phthisis during the last thirty years.

The Commissioners have been impressed with the absolute lack of any powers possessed by local authorities to control the danger to man from the sale of milk of tuberculous animals, even when the udder is diseased. The Dairies, Cowsheds, and Milkshops Order, it is well known, is in many places a dead letter, and even where regulations have been made under it they cannot be stretched so as to enable local authorities to deal with tuberculous cows, since tuberculosis was not included in the Contagious Diseases (Animals) Act, 1888, under which the order was instituted. Nor is the Infectious Disease Prevention Act applicable to bovine tuberculosis. In one or two local Acts, however, of which the Glasgow Police (Amendment) Act is perhaps the best known, steps have been taken directly with the view of preventing the sale of tuberculous milk, and the Commissioners recommend a further extension of its main provisions.

The Diagnosis and Notification of Tuberculosis.

The medical profession and general public will thoroughly endorse the recommendation that all diseases of the udder, and all cows which exhibit outward symptoms of tuberculosis, should be notified. The mere notification of tuberculous disease of the udder would fail of its purpose, seeing that for its recognition expert knowledge is required. But the Commissioners, it is evident, do not mean to imply that an animal which reacts to tuberculin is to be regarded as exhibiting outward symptoms of the disease. They recognise to the full the value of this substance as a diagnostic agent, and in the portion of their report dealing with the elimination of the disease they show (drawing their conclusions from what they saw of its employment in Denmark) that by an intelligent use of the tuberculin test a sound herd may, by the isolation of the reacting from the healthy animals, in a few years replace one that has been markedly affected with the disease. But inasmuch as the test, in the majority of reacting animals, reveals only latent tuberculosis, it has very definite limitations. They urge the Board of Agriculture to assist farmers in thus eliminating the disease by manufacturing tuberculin and by offering a supply, together with the services of a veterinary surgeon, gratuitously to stockowners.

Cowsheds.

A point on which the report will be scrutinised closely is the view held by the Commissioners as to the amount of cubic space required per animal in a cowshed. Recent legal decisions have given additional interest to this point, and have made no little stir among the agricultural community. Medical officers of health have long held that 800 cubic feet should be a minimum. Farmers, on the other hand, consider that a large amount of cubic space causes the byres to be cold, and that, in consequence, disorders of the udder are set up at times in recently calved cows. Landowners, too, are reluctant to go to expense in enlarging existing cowsheds, although, were there a genuine demand (which there is not) on the part of their tenants for it, they would no doubt endeavour to meet the case. This recommendation, therefore, that 600 to 800 cubic feet should be a minimum in populous places, and that in strictly rural districts such cubic space shall be provided as will secure reasonable ventilation without draught, must be regarded as a satisfactory compromise.

Conclusions.

The medical profession and general public will, we are convinced, be satisfied with the report. The butchers, despite the recommendations as to the qualifications to be required of meat inspectors, and the conditions laid down as to the extent of the disease which should lead to the seizure of tuberculous carcasses, will, we fear, be dissatisfied because their claim for compensation has been disregarded in the majority report. The grounds for this refusal to give compensation are that the risk run by a butcher of purchasing a tuberculous animal is a trade risk which is considered in the price paid for the beast; and, further, that it is one against which the purchaser can protect himself by some system of insurance. The minority report on this point recommend payment of compensation up to the full value of the animal, the whole to be charged against and paid by the council of the administrative county, which should be entitled to repayment of one-half the amount from Imperial funds. The objection to the use of Imperial funds is obvious, as we believe that in all cases where such funds are used special officers are appointed to superintend the slaughter and to prevent misappropriation of the funds. Insurance systems are in force at the present time in a few places in the United Kingdom, with the special object of compensating butchers against loss by reason of the seizure of tuberculous carcasses, but they cannot be said to have passed much beyond the experimental stage. The National Federation of Butchers is opposed to the principle of insurance, largely, we think, because its adoption would cut the ground from under their feet with regard to the claim for compensation. In Germany it is otherwise. Insurance against loss from seizure is general, and the hardships inflicted upon cattle owners by rigorous inspection have been to a great extent removed by the formation of such insurance societies.

One other course is open to butchers—namely, to demand a warranty from the farmer that the animals should pass the inspector, and this is the course that the butchers have threatened to take should compensation be refused. By the farmers we may be sure such a course would be strongly resented as an additional burden on agriculture. But as the grazier is so largely responsible for the production of bovine tuberculosis by keeping his animals under insanitary conditions, he must not expect to escape scot-free. We wish very much that farmers and butchers would be content to unite their interests on this question, and agree to amalgamate in a common insurance fund.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

Subscriptions to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 30TH, 1898.

TUBERCULOSIS AND FOOD.

The conclusions advanced in the recent report of the Royal Commission on Tuberculosis, of which an abstract is published in another column, will be read with interest. They do not, however, touch on the question of clearing a large district of tuberculous cattle by administrative action—a consummation for which we are, perhaps, scarcely prepared at present.

The main recommendations of the Commissioners are these: They propose to facilitate the closing by sanitary authorities of private slaughterhouses and the centralisation of the offensive trade processes incidental to the slaughter of animals. They would require a meat inspector to pass an examination in the subject of meat inspection, but they would not insist that he should be a veterinary surgeon. As regards the meat of tuberculous animals, they propose in general terms that the carcass should be condemned only when the disease is generalised.

It will generally be considered that the most important question before the Commission was the subject of the milk supply. They recommend that facilities such as those given in the Glasgow Police (Amendment) Act with the view of preventing the sale of tuberculous milk, shall be provided in an extended form. Further, they advise that all diseases of the udder and all cows which exhibit outward symptoms of tuberculosis shall be notified; and they urge the Board of Agriculture to assist farmers in eliminating the disease by manufacturing tuberculin, and by offering a supply, together with the services of a veterinary surgeon, gratuitously.

As regards cowsheds, they recommend that in strictly rural districts such cubic space shall be provided as will secure reasonable ventilation without draught, a conclusion highly satisfactory if properly interpreted. As regards compensation to butchers, the majority report would leave butchers and farmers to insure against risk.

Unquestionably these proposals mark a great advance in opinion, and it may be hoped that they will result in legislation at an early date. As specially valuable we would single out the recommendations in regard to tuberculous milk, the notification of tuberculosis, and the provision for testing milch cows by tuberculin. The establishment of public, with exclusion of private, slaughterhouses is greatly needed, and we trust that permissive legislation will suffice.

We must confess, however, to a sense of disappointment in regard to the amount of knowledge which it is proposed to require from a meat inspector; and we trust that the position taken up by the Local Government Board in respect of the cubic space required in rural cowsheds is not about to be abandoned.

The gathering of representative Cumberland and Westmorland men, recently convened at Keswick by Canon Rawnsley, to hear an address by Professor Delépine on the relation of tuberculosis in cows, is a sign—and not an isolated one—of the interest taken by agricultural districts in this important question. The excellent work done by Canon Rawnsley in connection with dairy teaching peculiarly entitles him to take this initiative, and, it may be hoped, will enable him to lead the way in introducing some of the reforms which Professor Delépine recommends. It is certainly from agricultural districts that improvement as regards tuberculosis in cows must come, and it is in such districts that it is most needed. The inquiries made in Liverpool and Manchester, as well as the results of the bacteriological examination of samples of milk brought from the country, go to show that there is more tuberculosis in country cowsheds than in the cowsheds of these towns. We have already indicated that this is due partly to better supervision in the town, partly, however, to the fact that milch cows are, to a large extent, not used for breeding purposes, but are fatted and killed after being milked for one season. With reasonably careful selection of cows, it will at once be seen that there is not likely to be, under these circumstances, anything like the proportion in these cases of cows affected with tuberculosis of the udder that is found in rural districts, where the cows are kept for breeding, are exposed for years to infection, and have ample time to develop the disease.

The distinction is important inasmuch as there has been shown a tendency to minimise the sanitary requirements of country cowsheds as compared with those applicable to cowsheds in towns, mainly on the ground that in the country the cows are outside much more than in town. As we have seen, however, Professor Delépine's examinations of milk samples supply a conclusion the reverse of this. It is, in fact, necessary to be fully as exacting of space, light, and cleanliness for the country cow as for the town cow, or more so.

With that part of the address which was concerned with showing that in so far as tuberculosis is hereditary it is, for the most part, a tendency and not the infective germ which is inherited, and with proving the influence of milk in conveying the disease to children we do not propose to deal.

Accepting his data, we may go on to ask with the lecturer what preventive steps may be taken. We agree with him that we cannot stop at the boiling of milk, since this measure, even if carried out, will not protect cream, cheese, and butter, while the great loss entailed by the spread of the disease amongst cattle will go on. What is needed, in fact, is a resolute effort to exclude the disease from our cowsheds. For this purpose it will be requisite to have systematic examination of milch cows by veterinary surgeons competent to make the tuberculin test. Cows found to be affected will require to be isolated and fatted for slaughter. The test will need to be applied twice a year. No tuberculous persons must be allowed to tend cows in any way. These measures, associated with good sanitary conditions, should suffice to get rid of the disease. They will require, however, a central administration.

Considering the generally tainted condition of our stock, it is no easy matter to see how a beginning is to be made. Professor Delépine's view is that these measures should at first be carried out in defined areas, such as a county, the county sharing the loss with the farmer. It will subsequently be necessary to test, mark, and register all cows imported into the protected district.

It is manifest that we require as starting points herds which we can rely upon as being free from tuberculosis, and county councils could most usefully aid this important movement by themselves erecting and maintaining sanitary cowsheds, and breeding from herds carefully kept free from the disease.

In purifying a herd, and in maintaining its freedom from tuberculosis, an absolute necessity will be the provision of isolation sheds, which should be as remote as possible from the sheds for sound cows, if, indeed, it would not be preferable at once to slaughter tuberculous animals on account of the danger arising from the use of their manure in pastures. Such isolation sheds need not be so expensively constructed as the milk sheds.

Turning to the gathering at Keswick we observe that Professor Delépine calls attention to the importation of foreign dairy process as being liable to defeat home efforts to improve. We agree with him that such importation should be stopped unless a strict control is to be carried out from this country over the sources of supply. If it is to be stopped the only suitable time is now when the trade is commencing. That the danger is a real one is shown by a recent report of the Dairy Products Committee of the Central and Associated Chamber of Agriculture, in which it is stated that during the three months ending December 31st, 76,383 gallons of milk were received from Cherbourg alone.

But, while the importation of dairy produce and of stock should be allowed only under the security of a strict control, it may be doubted whether foreign competition is not necessary to incite the home producer to make himself acquainted with the best methods of production. On county councils, again, may well devolve the duty of collecting and diffusing information as to the best means of breeding, rearing, housing, feeding, and managing livestock, such as that given in his last report by Mr. Gurney, British Consul at Cherbourg, in regard to poultry.

LEGISLATION FOR INEBRIATES.

The exceedingly cautious and deliberate progress of legislation in this country in all matters affecting personal liberty has been well exemplified by the history of the movement in favour of legislation for habitual drunkards. Forty-one years ago reference was made to this subject in the report of the Scottish Lunacy Commission, and in the following year (1858) important and valuable papers were read by Sir Robert Christison and Dr. Alexander Peddie. In 1870 Dr. Dalrymple, M.P. for Bath, framed and introduced a Bill providing for both criminal and non-criminal habitual drunkards. This Bill did not reach a second reading, and Dr. Dalrymple reintroduced it in the next parliamentary session, but withdrew it on the promise of a Select Committee to take evidence and report on the whole subject. This Committee, of which Dr. Dalrymple was elected chairman, strongly recommended the restraint and detention with a curative object, of inebriates voluntarily applying for detention, and also of inebriates too bereft of will power to request it of their own accord. It was recommended that the latter's reception and residence might be secured on the request of a guardian of his person appointed under the provisions of the Bill, or on transference from a police court as a habitual offender. In the same year Dr. Dalrymple brought forward a Bill based on the recommendations of the Select Committee. This did not go beyond a first reading, and in 1873 the House was counted out on the second reading.

Dr. Dalrymple soon after died, but four years later Sir Charles Cameron made another legislative effort to provide for retreats where both voluntary and involuntary patients could be taken, and reformatories where habitual drunkards convicted of drunkenness three times within three months could be sent. This Bill was introduced again without the compulsory clauses, the opposition to which was too powerful to be overcome. This Bill was amended in Committee by providing for retreats into which inebriates could be admitted at their own request only. In 1879 this Bill, with a limited tenure of ten years, was enacted. In 1888 the Inebriates Act was passed, making permanent the former Act, and embodying one or two practical amendments in administration.

Since that time various Departmental Committees have reported favourably on amending legislation in the directions already indicated. That presided over by Mr. Wharton, M.P., recommended legislation which would have satisfied the aspirations of the strongest advocate of remedial measures.

The Bill of the late Government boldly essayed to embody all the requirements of the very strong case which had been made out, and it was hoped that, possibly with some alterations, it would have been reintroduced by the present Government. However, probably in view of an avowed opposition to compulsory procedure in certain quarters, the Cabinet has deemed it prudent to deal for the present only with habitual drunkards who have already forfeited their liberty by judicial convictions.

This is the embodiment of a recommendation which has occupied a leading place in the annual reports of the Inebriates Legislation Committee, and which was again advanced as the first suggestion in the amendment of the law, in the recently issued appeal from the Chairman of that Committee to justices, Boards of Guardians, and other supporters of amended legislation. At present, though magistrates have no power to order treatment in a reformatory or other special institution for the curative care of criminal habitual drunkards, they are frequently desirous to do so, alike in the interests of the offender and of the community.

The Habitual Inebriates Bill, introduced by Sir Matthew White Ridley last Monday, proposes that the State or local authority shall provide inebriate reformatories for criminal inebriates convicted of grave crime, and that certified inebriate reformatories shall be provided by voluntary enterprise, aided by a Treasury grant, for habitual inebriates guilty of minor offences, such as police-court repeaters. Some amendment of the practical working of the Inebriates Acts is proposed, but we regret to see no provision for the attestation of a non-criminal habitual inebriate's request for admission and detention, by one justice instead of by two justices as at present. Disappointment will be felt by many at the absence of any expression

of an intention to provide for the compulsory therapeutic restraint of non-criminal habitual drunkards, so loudly called for and urgently needed; but we appeal with confidence to every member of the Association to do his utmost in supporting the Government in their amended legislation for the substitution of sound medical and reformatory treatment, in lieu of the existing inefficient penal system of fine and imprisonment, which neither reforms nor deters.

THE SUMMER SESSION.

In former times a medical student rarely entered the schools in May, but of late years the regulations of the Conjoint Board have led the schools rather to urge this course upon their students. At present a man who enters in October is examined in biology in the following March, and in chemistry and physics at the end of his first summer session. This means that during the winter he is attending three sets of lectures—upon elementary anatomy, elementary biology, and elementary chemistry—and is also working at practical anatomy, practical biology, and practical chemistry; while in the summer months he has lectures on chemistry, lectures on physics, and lectures on physiology with practical chemistry and practical physiology.

We have often argued that anatomy and physiology are at once so difficult and so important that other subjects should not be allowed to interfere with them, and we have ascribed the large proportion of rejections at the examination in no small degree to the fact that the student's attention is distracted and his time taken up with chemistry, physics, and biology during his first year. The authorities of the schools have taken the same view, and many of them in consequence urge intending students to enter in May and to devote the summer session entirely to chemistry and physics, or to these subjects with the addition of materia medica. With hard work, an ordinary student ought to be able to pass in chemistry and physics in July, and thus get them out of the way, or at any rate finish them by Christmas; and he is then able not only to work in comfort at anatomy and biology during the winter session, but to have his second summer free for physiology, which is a still greater advantage. An increasing number of students are adopting this plan, which is certainly the best under present circumstances.

We do not pretend to be satisfied with the present state of the regulations. We have no wish to minimise the importance of chemistry and physics, which are the great ground sciences on which all scientific education must be based. Biology cannot be considered to be of anything like equal importance, but it is much easier to introduce a fresh subject into the curriculum than to get rid of it when once inserted. It is not, however, a necessary part of medical education. Its addition to the course was a mistake, but it at any rate is akin to anatomy, and interferes less with the study of this than do chemistry and physics. These should not be studied at the same time as anatomy and physiology, but should be relegated to a previous stage, and we should welcome any regulation by which this end may be attained, while looking forward to their being ultimately included in the entrance examination.

The evil is not only that they interfere with the medical sciences, but that the whole course of a student's education may be dislocated by rejection in chemistry and physics at the end of his first summer. If this misfortune occurs, his second winter, the time when all the teaching of his school is arranged to perfect him in anatomy, has to be devoted to the chemistry examination at Christmas, and it is impossible that his anatomy should not suffer. This has caused considerable inconvenience to the schools, since they are now obliged to continue anatomical teaching for these belated students through the summer, but this is of less public interest than the fact that in spite of their best efforts they cannot give students the same opportunities in summer as in winter. Do what they will, rejection in chemistry is, to a student who enters in October, a serious delay and a serious disadvantage. This is best obviated by joining in May, and therefore to a student who will work, and who will not idle away his summer months, this is the most advantageous course to adopt.

THE ARMY MEDICAL CORPS.

The issue of the new Warrant, which, according to the promise given in the House of Commons by the Financial Secretary to the War Office, will transform the Army Medical Department into a corps, is awaited with "animated expectancy," not only by the medical officers of the army, but by the whole profession. We understand that one reason for the delay in the appearance of the Warrant is a technical difficulty in regard to the titles to be given to the officers promoted to a rank which involves their passing from the corps to the general staff of the army. It will be remembered that this difficulty was hinted at by Mr. Powell Williams when he said that the title of "major-general" could not properly be used to designate a medical officer, as it implies general command. This, as we showed at the time, is not strictly accurate, but we recognise that there may be valid objections to calling a medical officer simply "major-general" without a qualifying term to indicate the branch of the service to which he belongs. It may possibly be considered that the title "surgeon-general" (with the rank of major-general) might be used to denote medical officers above the rank of colonel, and from inquiries which we have made we have reason to believe that this solution of the difficulty would be accepted by the Department and by the profession. The compound title which we have indicated makes a break in the continuity of the ascending scale of purely military titles in the corps, but it is, perhaps, the best way of escape from a difficulty which is represented as being otherwise insuperable. The Secretary of State for War has shown himself so earnest in his desire and so strenuous in his efforts—in the face of great opposition—to meet the legitimate demands of the profession in regard to the medical service of the army, that we are sure he will not allow his statesman-like scheme to be wrecked on a point of detail which can without doubt be settled in a satisfactory manner. The profession has the fullest confidence in Lord Lansdowne, and will be glad to co-operate with him in finding a lasting remedy for a state of things which is at once a scandal and a danger.

THE MEDICAL CARE OF THE ARMY.

The consequences of the undermanned condition of the Army Medical Department are making themselves more and more acutely felt. Notwithstanding official denials, the public service is suffering severely from the deficiency of medical officers. As an instance of the state of things which prevails in nearly all the military districts of the kingdom, it may be mentioned that in one large garrison town two civilian practitioners are in charge of a whole regiment and two companies of the Royal Artillery, who, besides what may be called the ordinary routine of disease, are exposed to the

additional risks incident to frequent gun practice and constant rifle range work. Principal medical officers, in fact, find it difficult to get anything like a sufficient supply of doctors, whether military or civilian, to do the work. In reply to Colonel Welby in the House of Commons the other night, Mr. Brodrick stated that a number of civilian practitioners were in charge of troops in the United Kingdom, and always had been. That is the truth, but it is not the whole truth. In regard to a suggestion that instead of civilian practitioners retired army medical officers should be employed, the Under Secretary of State for War said that ninety-four medical officers retired on pension were employed, and more would be employed if they were willing to accept appointments. But even this will not meet the difficulty at home, and it does nothing to ease the terrible pressure on the officers of the Medical Department serving abroad. The only means of escape from a situation which must inevitably lead to a breakdown before long, if the present state of things is allowed to continue, lies in the prompt issue of a Warrant placing the medical service of the army on a satisfactory footing.

IMPURE CHLOROFORM.

Professor Ramsay has, in the pages of the *Nineteenth Century*, taken the public into his confidence concerning the importance of the use of pure anæsthetics. It is not very long ago that a similar stir arose when the Pictet method of preparing chloroform was brought prominently before the profession. It was hoped that with purer anæsthetics the era of safer anæsthesia would be with us, but the millennium of chloroform appears to be even yet deferred. There is no doubt, however, that the purity of the anæsthetic is a matter of no passing concern to the patient, and therefore requires heedful attention. The coughing, headache, and vomiting which follow the use of rough or impure anæsthetics can be prevented in some measure by employing drugs free from obnoxious impurities, and so we welcome Professor Ramsay's hints upon the subject. Impurities are classifiable as (1) those of manufacture and (2) those due to decomposition after the drug has passed from the hands of the manufacturer. The first category do not interest us, as there are now so many trustworthy makers that chloroform pure, save for a small percentage of alcohol added to prevent spontaneous decomposition, is easily to be obtained. When, however, the bottle containing chloroform is once opened, oxidation readily takes place, with the formation of hydrochloric acid and carbonyl chloride. Such bodies cause coughing and painful respiration. Small rooms illuminated by gaslight in which chloroform is evaporated rapidly become filled with irrespirable gases due to the chloroform being burnt, and grave inconvenience is caused to all who are in the room. Ether, according to Professor Ramsay, also decomposes after prolonged exposure to air. As a result a "sharp-smelling compound" is formed, which probably is ethyl peroxide. Cough and an obnoxious flavour are the signs of the presence of this body. Professor Ramsay suggests simple means to maintain the purity of the anæsthetic. A little slaked lime in the chloroform bottle and a little metallic mercury in the other bottle will get rid of all impurities. The slaked lime removes the hydrochloric acid, and destroys the carbonyl chloride, while the mercury oxidises and so precipitates the peroxide of ethyl, which subsides as a dirty black precipitate. Professor Ramsay's suggestions were called forth by an article published in a previous number of the same periodical by a lady who, having taken chloroform both in England and in India, found that she did so with greater comfort in the East. This observation, interesting enough in itself, was followed by an expression of opinion that if the report of the Hyderabad Chloroform Commission were studied by English anæsthetists they would administer the anæsthetic with greater comfort and safety to their patients. The President of the Society of Anæsthetists, Dr. Dudley Buxton, replied in the following number of the *Nineteenth Century*, and pointed out that the value of the Hyderabad Commission's work lies in the fact that it emphasised the importance of watching the respiration, and so confirmed the teaching of Snow. He contends that the open method of giving chloroform is neither novel nor safe, and he concludes that the pronouncement that chloroform only kills by arresting respiration is not consonant with the present state of knowledge. He takes the opportunity also of urging the importance of thorough instruction in the administration of anæsthetics, and maintains that a certificate of efficiency should be required by the medical examining bodies.

THE LORD-LIEUTENANT OF IRELAND AND THE IRISH COLLEGE OF PHYSICIANS.

On Saturday last, April 23rd, Sir George Duffey, President of the Royal College of Physicians, Ireland, entertained His Excellency Earl Cadogan, K.G., Lord-Lieutenant, at dinner in the hall of the College. On the President's right were the Lord-Lieutenant, K.G.; Lord Monck (the A.D.C. to the Lord-Lieutenant); Sir William Thomson, President R.C.S.I.; Sir William Kaye, LL.D., C.B.; Sir William Stokes, Sir William Kynsey, Dr. Grimshaw, Registrar-General; Surgeon-Major-General Preston, Dr. Ball, Dr. Beatty. On his left were the Lord Chancellor (Lord Ashbourne), Sir David Harrel, K.C.B., C.B.; Sir Charles Cameron, Sir F. X. MacCabe, Sir Philip Smyly, Sir C. Nixon, the President of the Royal Academy of Medicine, Dr. Atthill, Mr. Swanzy, Dr. J. W. Moore. There were also present: Dr. Joynt, Dr. Quinlan, Dr. Lane, Dr. Macan, Dr. Purser, Dr. Fitzgerald, Dr. Smith, Dr. Little, Mr. J. H. Campbell, Q.C., M.P.; Dr. Finny, Dr. Fitzgibbon, Dr. J. H. Benson, Surgeon H. G. Croly, Dr. Chapman, Dr. Redmond, Dr. Horne, Dr. Pollock, Mr. A. Benson, Dr. Cosgrave, Dr. Bewley, Dr. O'Carroll, Dr. Earl, Mr. Johnston, Dr. Falkiner, Dr. Lennon, Dr. Parsons, Dr. Cox, Dr. Murphy, Dr. M'Cutcheon, Dr. Montgomery, Dr. Glenn, Dr. Wilson, Dr. Flynn, Dr. Campbell, Dr. Gray, Dr. E. H. Tweedy, Dr. Symes, Dr. Duffey, Dr. Meldon, D.L.; Dr. MacDowell, Dr. W. Smyly, Dr. Molony, Dr. Lapper, Dr. Norman, Dr. Craig, Mr. Pim, Dr. Drury, Dr. Boyd.

THE FEEDING OF ELEMENTARY SCHOOL CHILDREN.

It is satisfactory to note the growing recognition by the public of the interdependence of physical and mental conditions as affecting education. An illustration of this statement is afforded by the interest now taken in the subject of underfed children in London schools. In years not very distant the sluggish, because ill-nourished, brain would merely have received secondary stimulation through mechanical irritation of the cutaneous surface: chastisement rather than charity would have been regarded as the remedy. But nowadays the fact is recognised by school authorities that the starveling cannot be made a satisfactory scholar, inasmuch as cerebral activity demands a sufficient supply of well-constituted blood. The poor child who arrives breakfastless at school, through the pitiable poverty or the culpable neglect of his parents, requires to be fed before he can be taught. Then comes the problem how to relieve the sufferer in such a way as not to relieve the parents of their natural responsibility for the nurture and nutrition of their child. Since compulsory education has been enforced, it must be remembered that in the poorest districts there are parents so necessitous as to be unable to supply their children with proper nourishment, though legally obliged to send them to school. In such cases relief may surely be given without sinning against the principles of political and social economy. It is otherwise, however, when paternal intemperance or maternal laziness is accountable for the starved condition of the child. The child must indeed be fed, but it seems to us it should be at the cost of the defaulting parents; and in this connection the Society for the Prevention of Cruelty to Children may render useful service. We

are not of those who think that free education must needs carry in its train free food and free clothing, not to mention free nursing and medical aid; but we trust that in the rising generation the care of the home and of the family may be regarded as proper matters for school instruction, and the inherent responsibilities of parentage duly inculcated. Meantime poor underfed children will have to be helped to free breakfasts or free dinners, or both. This seems best done through the administration of charitable funds by committees composed largely of school managers and teachers, who are likely to be familiar with the home circumstances as well as the apparent needs of the pupils. Much good has been effected by the London Schools Dinner Association in the past, and its organisation of central and local committees ensures uniformity of method with such adaptations to local circumstances as may be required. It seems undesirable that other charitable agencies should intervene unnecessarily, so as to risk overlapping; and in London the stronger the central organisation can be made—and it is suggested that the School Board and voluntary educational authorities might with advantage be officially represented on the executive—the less the liability to the abuse of the funds contributed by the benevolent. From the medical standpoint we cordially recognise the utility of all efforts to improve the physical condition of school children, and we think that the marked diminution of signs of over-pressure in our elementary school children of to-day, as compared with those of ten years ago, is due not only to improved methods of instruction and classification consequent on the abolition of age standards and of payment of results, but also to their better average nutrition, for, as has been well remarked, "over-pressure" is in many cases only another term for "under-feeding."

NEWCASTLE-ON-TYNE ROYAL INFIRMARY.

A meeting of the owners and ratepayers of Newcastle was held on April 22nd, to authorise the promotion in Parliament of the Bill granting a site for the new infirmary on the Leazes. After a rather animated discussion the vote was taken, and it was announced that 124 voted for the resolution and 114 against. A recount was demanded, the result being that the resolution was declared to be lost. A poll of the ratepayers was then claimed, and it will be taken in about a month. It is unfortunate that those interested in the infirmary attended in such small numbers, as, although in any case a poll would have been demanded, the position of the infirmary authorities would be stronger if the resolution had been carried. The poll will, it is expected, show a large majority in favour of the Bill, but the minority is energetic and active, and it seems probable the Leazes site will only be gained if those who are in favour of it set to work to organise their forces.

SMALL-POX IN THE NORTH.

The reports from Middlesbrough are weekly more favourable. A disquieting suggestion, however, comes from the British Consul at Bilbao to the effect that the Spanish authorities there refuse to recognise the existence of this disease on their coasts, though last year some 418 deaths were due to it. Dr. Dingle, of Middlesbrough, lately drew the attention of the town council to a statement that 400 cases of small-pox had occurred the previous month at San Nicolas, a Spanish port from which large quantities of iron ore are exported to this country. There is some danger of the actual importation by these vessels of infected persons, either actually themselves incubating small-pox or carrying in their garments the poison of the disease. Newcastle and Gateshead have had occasional cases of small-pox since the Middlesbrough outbreak, as have several other towns and villages in Durham and the north of Yorkshire. Nor has the West Riding escaped. At the close of last month a man appeared at the Rochdale workhouse with small-pox upon him, and it was found he had been tramping with his wife and child from Pontefract, through Wakefield, Stanley, Leeds, Dewsbury, Huddersfield, to the Lancashire town. He probably received the infection in some casual ward or common lodging house in some of these Yorkshire towns. In Leeds a small outbreak, apparently limited by the prompt attention it received from the authorities, was clearly traced to importation from Middlesbrough. In Huddersfield a single case early in March was less easily traced, but as the patient travelled daily by rail there were abundant possibilities of infection. The method in which the Leeds cases were dealt with is interesting. It was detailed at the time in one of the local papers. Late on a Saturday night a case was notified as small-pox, and at once taken into hospital. On Sunday morning all the members of the affected family were induced to go to a quarantine cottage—of which the Corporation possess sixteen on their Manston Hall estate—for isolation. All their clothes were disinfected at once, and they were persuaded to be vaccinated. It appeared that the patient washed and did many neighbourly acts for a woman recently confined, and that, some seventeen days before her own eruption appeared, a niece of this woman's, who came from Middlesbrough to nurse her, had developed a papular eruption upon the face, neck, and hands, the real nature of which had not been recognised. The house in Middlesbrough from which this girl had come was one door away on the right, and one door away on the left, from houses in which small-pox had recently occurred. On the Monday, Dr. Spottiswoode Cameron persuaded the family where this girl was staying to go to another of the cottages and along with them, but only for one day, he sent the midwife who had been in attendance and she was also revaccinated. The Middlesbrough girl was separated from the rest, revaccinated, and later sent into hospital, it being pretty clear she had really had a slight attack of variola. Every house in the neighbourhood of these two families was visited, and inquiries made for illnesses not medically attended, and frequent visits have been paid by the inspectors since. A fortnight later two other cases were admitted to hospital, and the two families and several friends sent to the cottages. No new case has now been heard of for upwards of three weeks from that time, but the sanitary patrol continues.

MEDICAL WITNESSES AND THEIR FEES.

The hardship to which we called attention some little time back in connection with the obligations of honorary medical officers of cottage hospitals to give evidence at inquests without the grant of the customary fees, has at last been the subject of appeal in the Queen's Bench Division. The action was a friendly one, raised by Dr. C. J. Horner against the Coroner for East Essex, to recover two guineas for making a *post-mortem* examination, and attending an inquest on a child aged 7 months, who had died in the Cottage Hospital at Walthamstow. The county court judge had, in the first instance, decided against the claim, and the appeal against this decision brought the question before Mr. Justice Wills and Mr. Justice Kennedy last week, as will be seen from the report published in another column. The two questions put before the Court were: (1) Was the Leyton, Walthamstow, and Wanstead Children's and General Hospital at Walthamstow a public hospital or medical institution within the meaning of Section xxii of the Coroners' Act, 1887, and (2) was the plaintiff a medical officer of the institution within the meaning of the section, he being a purely honorary officer? Both learned judges concurred in the decision, which was against the appeal. They held that the institution was a public hospital, and that the plaintiff was a medical officer of such institution, whose duty it was to attend on the deceased. Mr. Justice Wills expressed his regret that a medical man should be obliged to perform duties without receiving payment for them, but said the question was not whether one liked the effects of the Act or not. From the wording of the Act there was no room for any other decision, and the point must now be regarded as authoritatively settled for the present. When the Act was passed in

1887 words ought to have been inserted to relieve purely honorary officers of these obligations, which fall heavily oftentimes on a medical man who devotes much time and labour to the gratuitous work of a cottage hospital. These institutions cannot afford to have paid resident officers, and so the country surgeon attached to such institutions, whose practice may be a very wide and exacting one, is exposed to the risk of losing half a day or more over an inquest on one of his hospital cases, while the more fortunate hospital surgeon in the town has this work performed for him by the paid house-surgeon of his charity. The law badly needs amendment, and we hope the case which Dr. Horner has brought into the courts with such public spirit will help in this direction.

QUARANTINE AND COMMERCE.

ON April 21st, under the auspices of the Shipmasters' Society, Captain W. G. Romeril, sanitary inspector for the Port of London, read an important paper at the Fishmongers' Hall on Sanitation from a Shipmaster's Point of View. The greater part of the paper was devoted to the subject of quarantine, which Captain Romeril believes is entirely unnecessary, and ought to be universally abolished. He bases this opinion on its failure to check the course of different pestilences, the hardships which it entails on the merchant service, and the commercial loss which it causes. Everyone will agree with Captain Romeril, if he refers to the old form of quarantine, but if he includes the new, based on the period of incubation, then we think he is partly right and partly wrong. Sufficient allowance has, we fear, not been made for different conditions in different countries, which may and do alter the point of view.

DEFECTIVE VISION IN SOLDIERS.

IT is not encouraging to read in the annual report of the Army Medical Department for 1896 that the total ratio of men found unfit, either on inspection or after the three months' enlistment, shows an increase on the previous year. With regard to this question, two alternatives present themselves: either the medical examination is more exacting than formerly, or else the average recruit is deteriorating in physical fitness. The commonest form of disability is a deficiency in the chest measurement, next to this is defective vision. It is a serious matter to reject over 2,000 recruits on account of defect of vision, which undoubtedly in many instances might be corrected by "wearing glasses." The British public have a peculiar prejudice against seeing a spectacled "Tommy Atkins," but the same error of refraction would be corrected in Germany; and if he is healthy in other respects, he would be as fit a man to serve his country as any of his more fortunate normal-eyed brethren. It cannot be asserted that the German soldier is rendered physically unfit by "wearing glasses."

"DOCTOR'S ORDERS."

A CORRESPONDENT has sent to us an injudicious but doubtless well-meaning appeal to the medical profession, issued by the Manchester and Salford Women's Christian Temperance Association. The appeal sets forth that the work of the Association "in its various details (especially the experience gained for the last eight years in our Retreat for Inebriate Women at Fallowfield) discloses so much suffering from inebriety, of which 'doctor's orders' are either the commencing or recommencing cause, that we long to approach you with the entreaty to consider your responsibility in this direction." The longing has been transformed into action, for, as we have said, the appeal has actually been issued. The excellent ladies who have issued it, however, show a singular ignorance of human nature, especially of inebriate human nature. There is probably no liar so inveterate as the inebriate, unless it be the victim of the morphine habit. The excuse so often made that the habit of taking alcohol to excess has been due to the prescription of alcohol by medical men is a falsehood so transparent that it is difficult to believe that even the most sympathetic could be taken in by it. The fact is that people take alcohol either because they like its taste, or because they like the effects which it produces. The former class seldom become drunkards, the latter are inebriates from the beginning. The medical profession by its teachings is the greatest temperance agency in existence, and ill-considered circulars of this kind can only do harm since they arouse a sense of injustice. Another clause in the appeal appears to make the truly ridiculous suggestion that the prescription of tinctures, for this is what we understand by the phrase "alcoholic medicine," may be the foundation of inebriety. The ordinary medicinal mixture containing a tincture holds so small a proportion of alcohol that probably the same quantity of ordinary ginger beer, a beverage, we believe, not yet banned by total abstinence associations, contains more. If these good ladies would devote their energies to removing the causes which contribute to produce the craving for alcohol and the means by which it is now so easily gratified, they would in our opinion be more usefully employed than in issuing circulars which are useless when they are not mischievous.

THE INSANE AS OUT-PATIENTS.

FOR five years Dr. Rayner has treated slight and incipient cases of insanity as out-patients at St. Thomas's Hospital, and we published last week a summary of a paper by Dr. Crochley Clapham, who has adopted a similar course at the Royal Hospital, Sheffield. In both cases the departure has been markedly successful in the sense that the clinic has been well attended by the class of persons for whom it was established, and that it has been found practicable to treat them satisfactorily under these novel circumstances. The success of these experiments is a matter of very great importance, both to the public and to the profession. To the public it is important, because it enables the poorer classes to receive attention in the early stages of a mental malady, when as is well known the disorder is very much more amenable to treatment than when it is fully established. Even more important than this result is the formal assimilation of mental disorder to bodily malady by the treatment of the two in the same institution. The bane of alienism in the past has been its isolation from general medicine. So long as the treatment of mental disorder is restricted to separate institutions set apart for the purpose, so long will endure the foolish prejudice that a stigma of disgrace and of horror attaches to it; a prejudice which is the vestigial survival of the belief in demoniacal possession, and which, more than anything else, militates against successful treatment. From this prejudice results concealment, mystery, and denial; delay in recognition of facts; deception, partly wilful and partly involuntary, of the physician. So long as the study and treatment of insanity is excluded from general hospitals, so long will the proper comparison and co-ordination of the phenomena of mental disorder with the phenomena of bodily disease be obstructed and hindered; and so long will the recognition that the study and treatment of mental disorder is the highest province of the physician be delayed. To the student the value of an out-patient clinic of mental disorder will be very great. In the asylums to which he now resorts for demonstrations in this subject of his curriculum, he sees those fully developed cases only which he will so rarely be called upon to deal with in general practice. In the out-patient department he will see the malady in the same early stages in which it will often present itself to him in his actual work, in which recognition is often very difficult, and in which recognition is always of the utmost importance. If we regard the matter from the point of view, not of usefulness in after-life but of advantage for the mere passing of examination, the advantage is equally striking. Instead of being restricted to a few formal demonstrations in the distractingly novel surroundings of a lunatic asylum, the student will have

the advantage of being able to sit down quietly in his familiar out-patient department, and examine his patients at his leisure. On every ground—for the welfare of the patients themselves, for the education of public opinion, for the progress of alienism, and for the benefit of the student—we welcome the departure, and trust soon to see a department of mental disorder as invariable and necessary an adjunct to out-patient practice in every general hospital as is now the department of dermatology or ophthalmology.

DR. ROCKWOOD, OF CEYLON

Great regret is expressed in Ceylon at the retirement from the Civil Medical Service of Dr. W. G. Rockwood, who has been for the past twenty years Surgeon to the General Hospital at Colombo. Dr. Rockwood, who is a pure Tamil, received his education at the University of Madras, and obtained the diploma in medicine and surgery in 1866, and entered the Ceylon Medical Service in the same year. In 1872 he took the degree of M.D. in the Madras University, and in 1878 he was appointed Surgeon to the Colombo Hospital owing to the special skill and aptitude which he had exhibited in out-station hospitals. In 1884 he visited England, attended practice in various London hospitals, and took the diplomas of M.R.C.S. and M.R.C.P.Lond. in 1885. He has since continued to act as Surgeon to the General Hospital, Colombo, and Lecturer on Surgery in the Ceylon Medical College. His appointment in that capacity, we are told, inaugurated a new era in the surgical practice of the island, and his retirement is greatly regretted by the students of the Medical College. He has been appointed consulting surgeon to the hospital—an office newly created—as a recognition of his long and distinguished services, and has been appointed also an unofficial member of the Legislative Council of Ceylon as a representative of the Tamils. Dr. Rockwood, who is a member of the British Medical Association and a Fellow of the Royal Medical and Chirurgical Society of London, affords a striking example of the readiness and success with which our Eastern fellow subjects can acquire and apply the best features of Western scientific surgery.

MEDICAL STUDENTS AND MIDWIFERY PRACTICE.

Mr. Langham, the coroner for the City and Southwark, recently said at an inquest that "he must protest against the system prevailing at large hospitals"; that "externs," who were not qualified men, were sent to confinement cases. If the children died, these externs were not able to give certificates of death, hence inquests had to be held upon these children, and these inquests entailed expense, which would be avoided if qualified doctors visited these confinement cases. It was pointed out to the coroner that at the large hospitals there are qualified doctors in residence, who are called in by the "externs" whenever either mother or child appears not to be doing well; and that the only cases which die without the attendance of the qualified doctor are those who die suddenly, or after illness so brief that there is not time for the qualified man to be fetched. Infants with such acute illness would often die without a medical man being able to state the cause of death, even had he attended the mother. Some who sympathise with the unfortunate lot of the unqualified assistant (brought about by the action of the General Medical Council) have asked what is the difference between an unqualified assistant attending a midwifery case for a medical man, and a student attending one for the hospital. There is this difference—a patient who sees a brass plate bearing the name of a qualified medical man, and who goes into the house to get medical attendance, either for a present or future occasion, expects to be treated by a qualified medical man; and it is a fraud upon the patient if the qualified man allows an unqualified man to represent him and act for him, and leads his patients to think that the unqualified man's attendance is as good as that of the qualified man. A woman who engages a midwife for her expected confinement does so knowing that the midwife has not the same knowledge and skill as a qualified medical man; she accepts the inferior attendance generally because it is cheaper, sometimes for other reasons, and she is not defrauded: she does not have an unqualified man passed upon her as a qualified man, nor is she told that his attendance is as good as that of a qualified man. A woman who applies at one of the great medical schools for attendance in her confinement at her own home is in the same position as one who goes to a midwife. She knows quite well that she will be attended by an unqualified student, and she welcomes this inferior attendance because it costs nothing, and because she knows that should her case prove serious, all that the hospital can do will be done. She is not defrauded; the student is not passed off as a qualified man. There are those who think that the system of practical midwifery instruction in our medical schools is very defective, and that the students ought to receive much more practical instruction than they do. This is a subject beset with so much difficulty that we cannot do more here than point out the existence of the problem.

THE DEPENDENT CHILDREN OF LONDON.

At the last meeting of the Metropolitan Asylums Board, a report was brought up by Mr. G. S. Elliott from the Children's Committee, with regard to the representations made by the State Children's Aid Association asking the Board to co-opt on the Children's Committee men and women experienced with children and interested in educational questions, and further, that local committees should be appointed to assist in the management. The report was to the effect that it would be undesirable to co-opt members as suggested, or to form local committees. Dr. W. R. Smith moved an amendment to the effect that the services of persons living in the immediate proximity of the different institutions should be utilised. The amendment was seconded by Colonel R. Bruce, and after some discussion was lost by 31 votes to 16, and the report of the committee was adopted. The Board evidently had a very amusing afternoon, and enjoyed themselves thoroughly. One member said he hoped that the managers "would not saddle themselves with a lot of irresponsible meddlers;" another said that unless visitors were surrounded with "very stringent regulations" they became "exceedingly aggressive." Visitors, however good their intentions, "were essentially faddists;" the State Children's Aid Association was composed of "nothing but a lot of theorists who really knew nothing of the subject they professed to be expert in;" and the managers were appealed to not to allow their work to be interfered with "by faddists of the most dangerous description." After this impassioned appeal we can hardly wonder that the London children have once more been saved from the meddlers, and that officialism, which is so well known to be a word synonymous with perfection, has again come out triumphant. We naturally derive additional satisfaction in the event from the assurances given by members in the course of the debate that "they could do very well without such assistance," and that the managers with their officers were "quite competent to manage the institutions under their control." Of course, being managers, they ought to know, so that it may be presumed that after this assurance the public will be expected to be satisfied.

FEES TO SURGEONS FOR ATTENDANCE ON HOSPITAL PATIENTS.

We have received some cuttings from Dublin newspapers bearing on an action brought by Dr. Cranny, of Dublin, against a gentleman who had been taken to the Jervis Street Hospital suffering from compound fracture of the leg—the result of a street accident. Dr. Cranny thought (and very naturally thought) that as the gentleman was able to pay, and as he did pay to the hospital three guineas a week for his accommodation, he ought to pay him for his surgical attendance. The patient, on the contrary, thought (and honestly as far as we see) that the sum paid to the hospital

included the medical fee. He sent twice for Dr. Cranny after his return home, and offered Dr. Cranny the proper fees for his attendance there, which, however, were declined, as the gentleman would not admit his liability for the larger sum. The jury found a verdict for the defendant (the patient), and, as far as we are competent to judge, they had no alternative, since Dr. Cranny was not called in by the patient but by the hospital, and any charge which was made by the hospital on the patient ought to have included as its first and principal item the fees for his surgical treatment. It is a different matter when rich men are attended gratuitously for street casualties, as so frequently occurs at London hospitals. In such cases the patient after his recovery, or his friends after his death, make any voluntary offering they please to the hospital, but neither the institution nor its officers have, or think they have, any claim. This case, however, shows well the danger and the unfairness of mixing up paid practice with our present hospital system. Neither party in the case before us can, we think, be justly blamed. To "pay hospitals" there can be no objection, but the first person paid ought to be the medical officer, whose services are the most important and the most essential thing which the patient receives. In gratuitous hospitals a wealthy person accidentally admitted should be left to his own conscience as to the remuneration he may think himself bound to give whether to the institution or to its honorary officers, for the paid officers, house-surgeons, and students are, of course, part of the institution. This is quite a different question from one raised in another column by a correspondent, in which a house-surgeon charges a former patient a fee for a certificate furnished to him as the ground for an action for damages. Such certificates have nothing whatever to do with the medical treatment, and need not, in fact ought not, to be given without a fee.

THE PILGRIMAGE AND THE PLAGUE.

The reply to Sir Walter Foster in regard to the Jeddah plague and the pilgrimage to Mecca from British possessions and from Egypt does not indicate that the Government are seriously impressed with the importance of keeping Mecca free from plague, and preventing any outbreak among the pilgrims. Indeed, the principles on which the Government are acting are not very clear unless it be to let things take their own course, and trust to good fortune for the rest. In the case of the Indian pilgrims it appears they were permitted to leave India in spite of the fact, which was well known in India at the time, that Jeddah had been an infected centre last year, and was likely to be so again this year. In the case of the Malay pilgrims the same permission seems to have been accorded, and even when the plague at Jeddah was notified, the circumstance was not considered of sufficient importance to justify the pilgrims being stopped from proceeding on their way. With regard to Egypt, the onus lies with the Egyptian Government, who are also satisfied to allow the pilgrimage, with some restrictions on the return voyage. This laxity is disappointing, for no other construction can be placed on it than that plague at Jeddah or Mecca, which is a meeting place for the Mohammedan world, and therefore a likely centre for the dissemination of the disease to every quarter, is at present a matter of no importance or concern to the Government. We do not hesitate to say that this attitude of indifference is a most dangerous one, and not calculated to inspire confidence in the measures said to be taken to prevent plague from invading Europe. We hope the Government are not guided by the view that plague is a disease more easily—or at all events just as easily—dealt with as cholera. The Indian Government entertained that opinion two years ago, and the mistake is now patent to all in the result, which has been neither satisfactory to themselves nor to the Indian people. Instead of plague causing no trouble to the Indian Government, it is now acknowledged to be the most serious problem which they have had to face since the Indian Mutiny. It is to be hoped that a similar mistake will not be made as regards Egypt and Europe. The position which the Porte is taking with regard to the possibility of the introduction of plague into Europe in consequence of the Mecca pilgrimage this year is extremely unsatisfactory. The Constantinople Sanitary Council has pointed out in despairing tones the necessity for the Porte to adhere generally to the prescriptions of the International Sanitary Conferences, and the recommendations of the Council have been accepted by the ambassadors, who have presented a collective note to the Porte. This note urges the Porte to carry out the prophylactic measures recommended by the Sanitary Council to which we have already called attention, and in particular recommends the complete isolation of Jeddah and the provisioning of Mecca by Ras el Aswad. So far, however, there is no indication that the Porte intends to accede.

"THE BRITISH PHARMACOPŒIA, 1898."

As will be seen by the official notice in our advertisement columns, the statutory notice of the publication of the new issue of the *British Pharmacopœia* is inserted in the London, Edinburgh, and Dublin *Gazettes* of Friday, April 29th. The price of the new volume has been fixed at 10s. 6d. It will be on sale after the publication of the notice in the *Gazettes*, but the exact number of copies which will then be available for sale is uncertain. We publish this week in another column the fourth part of our extended notice of the character and contents of the volume which will be for years to come one of the most important books of reference for every member of the medical profession and for all pharmacists. It will, we believe, be generally felt to be a distinct improvement in many respects on its predecessors. The elaborate index will be found a particularly useful feature, and the simplification of the doses of many of the preparations of the most active drugs will be a welcome relief to the overburdened memories of medical students. The additions are neither numerous nor very important, and among the longer list of preparations which have been omitted there are few or none which will be regretted by any large section of the profession.

PREVENTIVE MEDICINE IN IRELAND.

A correspondent draws our attention to the fact that the new Local Government Bill for Ireland, while it will greatly alter sanitary administration in that country, makes no provision for bacteriological inquiries, although the importance of chemical analysis is recognised. "The English Local Government Board," he continues, "has an annual grant of from £1,500 to £2,000 for auxiliary scientific investigation. The results of these, which are mainly bacteriological, are published in the Supplement to the Report of the Medical Officer. The Irish Board is not allowed one shilling for similar work, and when some time ago it wished to investigate the relation between 'creameries' and enteric fever in Ireland the Treasury refused to sanction the specialist's fee. This is a grave disparity between the two countries, and one which ought to be remedied under the new Bill." We concur with our correspondent in thinking that this is a defect in the Bill to which the attention of the House of Commons ought to be called. In the present state of science no department charged with public health administration can efficiently discharge its highest functions to the country unless it has the means of directing scientific investigations to be made into the nature and mode of spread of epidemic disorders. These inquiries necessarily involve, in a large proportion of cases, bacteriological investigation. The opportunity should be taken to render the Irish Act somewhat stronger than the English in this direction by giving power to sanitary authorities to appoint bacteriologists, a course which the Corporation of Liverpool has found it desirable to adopt, though the

difficulties in the way have rendered it necessary to take a rather roundabout method of obtaining the desired result. The valuable work which has been done for the Medical Department of the Local Government Board with the modest sum placed at its disposal by Parliament affords good ground for believing that a similar expenditure of public funds would be attended by like satisfactory results in the sister island.

FIELD HOSPITAL EQUIPMENT.

The recent frontier operations in India have revealed grave defects in arrangements for the transport of the sick and wounded. The dhoolie has proved too heavy and awkward a conveyance for mountain passes and rugged paths, and the bearers have broken down from lack of physique and training. A light stretcher or dandy of some sort is evidently needed for hill warfare to replace the dhoolie, and more careful selection and drilling of the bearers is obviously necessary. The whole question ought to be submitted to searching practical investigation and trial by experts in view of recent experience. We called attention to this matter nearly a year ago, and commented on the extraordinary course adopted by the War Office in withdrawing litters from the equipment of the Medical Staff Corps, without adopting anything to replace them. At the same time we published the opinion of an experienced medical officer with regard to the Lushai dandy, which he stated was excellent for all purposes, inclusive of hill warfare. The dandy was found to work well in thick jungle, along footpaths among the hills, on steep hill sides without a road, and along the bed of swollen streams; further, it makes a comfortable bed, its cover can be spread out into a little tent, and yet it can be packed into a comparatively small space. It appears, therefore, that there is in existence a method of transport for the wounded which, if not perfect in itself, is at least much better than the litters and dhoolies, which have been condemned in the past, and have once more turned out to be unsuitable.

A ROENTGEN RAY DEPARTMENT AT CHARING CROSS HOSPITAL.

At the last meeting of the Council of the Charing Cross Hospital it was decided, upon the proposal of the Medical Committee, to create a new department devoted to the investigation of injuries and diseases by the aid of the Roentgen rays, and to invite Dr. Mackenzie Davidson, sometime Professor of Ophthalmology in the University of Aberdeen, to accept the post of medical officer to the department, with a seat on the Medical Committee. It must not be inferred that hitherto no work has been done at the hospital with the Roentgen rays, as from the first announcement of the discovery Dr. Montague Murray, one of the out-patient physicians, has devoted one afternoon a week to the investigation of cases referred to him by his colleagues, and it is because the work of the department has increased so much, and upon his initiative, that the present arrangements have been agreed upon. A room close to the operating theatre has been set apart for the new department, and is provided with suitable apparatus under the superintendence of Dr. Mackenzie Davidson.

THE TITLE OF DOCTOR IN PRUSSIA.

Hitherto the degree of Doctor of Medicine has been conferred by all German Universities except Giessen, Leipzig, and Rostock, independently of the Staats-Examen, which alone gives the right to practise medicine. Thus, a man might be a doctor of medicine without being a legally qualified medical practitioner. In many places, doctors practised on the strength of their academic title without taking the trouble to pass the examination required by the State. A recent decree of the Minister of Public Instruction, which forbids the granting of the degree of Doctor of Medicine by any universtty of Prussia to anyone who has not passed the Staats-Examen, is intended to remedy this abuse. The ordinance comes into force on October 1st.

The Milroy Lectures at the Royal College of Physicians of London will be given by Dr. Monckton Copeman on May 3rd, 5th, and 10th. The subject of the course is the Natural History of Vaccinia.

The next meeting of the Intercolonial Medical Congress is to be held at Brisbane in June, 1899. The Committee appointed after the last Congress, which was held in Dunedin in January, 1896, has divided the Colony into a number of subdistricts, with the object of making the Congress a success.

Dr. C. Theodore Williams will give a lecture on the Open-air Treatment of Consumption as practised in German sanatoria at the Hospital for Consumption, Brompton, on Wednesday, May 11th, at 4 P.M. Members of the profession will be admitted on presentation of visiting card.

At a meeting of the Court of Governors of St. Bartholomew's Hospital held on Thursday, April 28th, the vacancy on the surgical staff caused by the promotion of Mr. W. J. Walsham to be full Surgeon on the retirement of Sir Thomas Smith, Bart., was filled up by the appointment of Mr. D'Arcy Power, F.R.C.S.Eng., M.B.Oxon., as Assistant Surgeon.

The annual dinner of the Indian Medical Service will be held, under the presidency of Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., at the Café Monico on Thursday, June 9th, at 7.45 P.M. We are asked to state that officers intending to be present should intimate their intention at the earliest possible date to the Honorary Secretary, Mr. P. J. Freyer, 46, Harley Street, W.

We learn with deep regret of the serious illness of Dr. Samuel Gordon, of Dublin. He was attacked by influenza a couple of weeks ago, and pneumonia developed, but for the past few days his condition was such that his friends hoped for his recovery. We now learn that he has become rapidly weaker, and at his advanced age—over 80 years—it is hardly to be expected that he can withstand the atttack. His friends everywhere will grieve to hear that no hope of his recovery is entertained.

The dinner which the Right Honourable the Lord Mayor of London will give on Wednesday, May 4th, to meet the President of the Royal College of Physicians, and the President of the Royal College of Surgeons of England will be attended, in addition to a large number of members of the medical profession in this country, by Professor Lannelongue of Paris, and by the following distinguished persons: The Marquess of Lansdowne (Secretary of State for War), the Lord Chief Justice of England, Sir Edward Poynter (President of the Royal Academy), Sir G. Gabriel Stokes, Bart., F.R.S., Mr. McKinnon Wood (Chairman of the London County Council), the Right Hon. J. G. Talbot, M.P.; Professor Jebb, M.P.; Lord Shand (Astronomer Royal), Sir E. Maunde Thompson, K.C.B. (Principal Librarian of the British Museum), Sir Norman Lockyer, Sir Charles Hall, M.P. (Recorder of the City of London), the Bishop of Marlborough, Mr. G. E. Buckle, Sir Henry Burdett, K.C.B.; and Professor Roberts Austen, C.B.

Mr. Hugh Galt, M.B., C.M.Glas., D.P.H.Camb., has been appointed Professor of Forensic Medicine and Lecturer on Hygiene in St. Mungo's College, Glasgow.

From the returns issued by the Metropolitan Asylums Board it appears that a case of typhus fever was admitted into the Kensington Infirmary on April 16th from Portland Road, Notting Hill.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE BUDGET OF 1898-99 was disclosed to the House last week by the Chancellor of the Exchequer in a speech of much interest. It was on the whole regarded as a disappointing Budget, and the remissions of taxation will not benefit the medical profession to any great extent. The tobacco duty remission will help smokers of pipes a little, but with an eightpenny income tax in peace times the hard-worked general practitioner wants more lessening of direct taxation. The extension of the limit of abatement from £500 to £700 per annum will be some help to a number of practitioners, and will really reduce the income tax as follows: Incomes just under £400 will pay at the rate of 4.8d. in the £, under £500 at the rate of 5 6d., under £600 at the rate of 6.4d., and under £700 at the rate of 7.2d. The abatement is good so far as it goes, but there is a feeling, which is growing stronger, that precarious incomes which depend on a single life like those earned by the medical profession should receive more consideration than they do at the hands of the Treasury.

THE HABITUAL INEBRIATES BILL was introduced and read a first time on Monday. The Home Secretary said that the principal object of the measure was to substitute for penal treatment in prisons of habitual drunkards reformatory treatment in inebriate reformatories. Such institutions might be established by the State, or by local authorities, or by private individuals. The establishment of such institutions had been accomplished abroad, and to some extent in this country, and had been recommended by three departmental Committees. The criminal habitual inebriate had hitherto been practically untouched by existing Acts. The Bill recognised two classes of criminal inebriates: first, those who were guilty of serious crime caused by habitual drunkenness; and, secondly, petty offenders who continually appeared before the courts. Both classes would under the Act be liable to committal to an inebriate reformatory for a period not exceeding three years. The more serious offenders of the first class would be treated in State reformatories, or certified reformatories under suitable regulations; and the offenders of the second class in certified reformatories. The regulations made by the Secretary of State for these institutions would be subject to the control of Parliament. The Bill will affect Scotland, but is not drawn to affect Ireland. It is an elaborate measure of twenty-eight clauses and three schedules, and will require careful consideration in Committee.

THE VICTORIA EMBANKMENT EXTENSION BILL was the title under which the Westminster Improvement Scheme came before the House on Tuesday. Before the debate opinion was very evenly divided as to its chances of success, but the discussion disclosed a strong feeling against the Bill. The case as regards the overcrowding and slums in the scheduled area proved to be comparatively weak. There was also much opposition to the line of the new avenue, and to the proposal to erect a long and lofty block of buildings near the river at the end of the Victoria Tower Gardens. The large majority of 4 to 1 by which the second reading of the Bill was rejected was, however, mostly due to the wholesome instinct which the House of Commons has against any financial scheme proposed by a private body, especially when it includes members of the House. The scheme of improvement has for the present been decisively rejected, but the division and the debate ought to stimulate the County Council to undertake a better scheme at no distant date.

THE BELFAST CORPORATION (HOSPITALS) BILL was the second private Bill which came on for second reading on Tuesday. The day was, indeed, a remarkable one, as private business lasted till the dinner hour. In the Belfast case a religious difficulty was raised, but the majority of the House refused to consider it. Whatever the grievance may be in Belfast, the English and Scotch members mostly felt that medical institutions ought not to be connected with questions of creed, and so did not favour the opposition to the Bill.

FOOD ADULTERATION.—A Bill to amend the Food and Drugs Act, according to a statement by Mr. Chaplin in reply to Mr. Channing, will be introduced in the House of Commons when the Government sees any prospect of making progress with the measure. Mr. Brodrick has informed Major Rasch, in regard to the alleged poisoning of soldiers at Hilsea by vinegar supposed to be adulterated with arsenic, that an inquiry had taken place, but that further investigation was desirable. Mr. Chaplin, in reply also to Major Rasch, said his attention had been called to a resolution passed by the Central Chamber of Commerce on April 5th with reference to the importation of chemically treated French milk. The Local Government Board had, however, no power to prohibit such importation, and he was not at present in possession of information which would justify him in taking prohibitory action, even if there were any power. He should be glad of any information the hon. member could give him.

VACCINATION OFFICERS AND PROSECUTIONS.—Mr. Broadhurst asked the President of the Local Government Board whether, in the case of relieving officers who were also vaccination officers he intended that they should act in vaccination cases without the authority of the Poor-law guardians, or even against their authority; and, if so, whether legislation would be necessary to provide this new power, and, if not, under what Act the power was given. Mr. Chaplin, in reply, said he contemplated that the relieving officers who were vaccination officers should be in the same position in this matter as any other vaccination officers, and that vaccination officers should undertake prosecutions independently of any directions from the guardians themselves. No new legislation would be required. The vaccination officers would exercise these powers under the Vaccination Acts of 1867 and 1871, and under regulations issued by the Local Government Board in accordance with the provisions of the Act of 1874. In reply to Mr. Labouchere, Mr. Chaplin said it had been the practice of the vaccination officers to institute proceedings under the Vaccination Acts, either under the general or special directions of the guardians, but he was not prepared to say that it had invariably been the case. It was not proposed that the proceedings should be instituted by the medical officers of health, but by the vaccination officers, who were, under the statute, appointed for the express purpose of prosecuting persons charged with offences against the Vaccination Acts. The cost of prosecutions would be charged on the rates, as at present.

THE ROYAL COMMISSION ON SEWAGE has been completed, and the names of the Commissioners and the terms of the reference under which they will act will be published in a few days. The delay in the formation of the Commission has been due to the necessity of appointing Scotch and Irish members. Its composition will, we believe, be found to correspond closely to the forecast already given in this column, with the addition of members officially connected with the Local Government Boards of Scotland and Ireland. With these additions, Lord Iddesleigh, as Chairman, will have as colleagues engineering experts, one from the Local Government Board, a distinguished chemist, Sir Richard Thorne Thorne, a physiologist whose name will carry authority with all, and we hope some representative of the medical officers of health.

GUY'S HOSPITAL BILL.—A special report was brought up in the House of Lords as follows: Mr. James William Lowther reported from the Committee on the Guy's Hospital Bill, that they had agreed to the following special report: "That the Bill seeks to alter the genera law by enacting that the death of the grantor of any lan to the Corporation of Guy's Hospital within twelve months from the date of the execution of the deed of gift of such land shall not invalidate the said deed, but it appearing that Mr. Attorney-General was satisfied with the provisions of the Bill as submitted to the Committee, they were of opinion that the said provisions should be allowed. Under these circumstances the Committee had passed the Bill without amendment, but had determined to report the same specially to the House." The Guy's Hospital Bill has passed the report stage in the Commons, and now stands for third reading.

PETITIONS.

Petitions in favour of the Bill dealing with the adulteration of food products were presented from the County of Somerset, against State regulation in regard to certain contagious diseases in East India, and against the Midwives' Registration Bill from the British Medical Association.

THE REVISION OF *THE BRITISH PHARMACOPŒIA.*

THE BRITISH PHARMACOPŒIA, 1898.

FOURTH NOTICE.

ALTERATIONS.

In former articles on the *British Pharmacopœia* we have dealt with the broad changes which have been made; we have criticised the additions in the list of officially-recognised preparations, and have also dealt with the omission of what many would consider to be waste material. It remains in this article to give some account of the many alterations that have been made in the mode of preparing the official preparations which have been retained from the former *Pharmacopœia*, for although it is of interest to know what new substances are ready to hand in an authorised state of purity, and of still greater interest to know what articles are to be considered as old friends who have passed away, yet for the practical work of life it is of far greater interest to know to what extent and in what way our old friends have changed. Some old friends have gone; their successors have been indicated, but we all desire to know what kind of welcome to accord to friends of more than ten years' standing who reappear under altered circumstances. It is perhaps no exaggeration to say that not a single paragraph appears to have been carried over from the last *Pharmacopœia* without any alterations. The substances appear frequently under the same name, but the directions as to their mode of preparation and the details of their physical and chemical properties, as well as all the other information which is vouchsafed to us in this book, seem to have been submitted to the closest criticism, with the result that all who employ the *Pharmacopœia* will have to study its pages afresh to ascertain how far their daily practice is likely to be affected by the changes now introduced.

In the new *Pharmacopœia* we find two lists of alterations. In the first are included the principal changes effected in the composition of official preparations, while the second list comprises preparations the strength of which has been altered, and it will be readily gathered that some few preparations are necessarily included in both lists. Avoiding pharmacopœial phraseology, it may be explained that the first list of preparations includes those of which the actual components are changed, either by the omission of some ingredient which was formerly recommended, or by the addition of some new ingredient. In the second table, on the other hand, the actual ingredients may or may not remain the same as before, but the proportion of the more important substances has been in some way altered. Practically it will be readily understood that the first table, which deals with components, becomes of greater interest and importance to the pharmacist, while the second table, affecting strengths, more immediately concerns the prescriber. Although this classification into pharmaceutical and medical alterations is to a great extent true, the border line separating the two classes is not perhaps very easy to be defined.

The pharmaceutical changes appear to have been introduced for various reasons, and though the leading principle of improvement seems naturally to have been steadily kept in view, this improvement sometimes deals with such purely technical matters that it is almost to be regretted that the alterations were deemed of sufficient importance to call for their inclusion in the table. To deal with one group only, it will be found that twelve pills, including perhaps those most commonly employed, are included in the list of preparations with altered composition. The pill of aloes and iron, the pill of aloes and myrrh, the iron pill, the compound calomel pill, the pill of lead with opium, the compound rhubarb pill, and the compound soap pill are all to be found in this list, but in some cases the alteration is merely one affecting the excipient, while the active ingredients remain unchanged. In many of the instances above mentioned the alteration consists in the employment of syrup of glucose instead of glycerine, treacle, or confection of roses; while in the compound calomel pill a small amount of alcohol, 90 per cent., is now directed to be employed in preparing the pill mass. These alterations are doubtless due to the advice of the Committee of the Pharmaceutical Society, and will probably be found to be improvements dictated by experience; it is therefore probable that the newer method will be either more convenient in practice, or that it will affect the solubility or the durability of the pill mass.

The three hypodermic injections in the last *Pharmacopœia* also find a place in this list. Camphor water is no longer employed in the hypodermic injections of apomorphine and ergotin, which are now made with distilled water, with the addition of a small proportion of phenol in the hypodermic injection of ergot. Distilled water is also used in the hypodermic injection of morphine, but here a greater change has been made in the employment of morphine tartrate, which has been found to produce a solution less liable to subsequent alterations. The liniments of ammonia, of soap, and of mustard have also been modified, the first by the substitution of almond oil in place of olive oil previously enjoined; the second by the use of soft soap instead of hard soap; the third by the omission of ethereal extract of mezereon, an alteration which naturally results from the omission of this extract from the new *Pharmacopœia*.

The changes in the composition of the plasters do not fall under any general rule. In some they consist in the substitution of hard soap for curd soap; in others the change is merely the omission of the expressed oil of nutmeg, which is no longer official. The most important change is in the composition of the belladonna plaster. This was formerly prepared with an alcoholic extract of belladonna, and in the present *Pharmacopœia* the new liquid extract—a standardised preparation—is employed. Of the extracts, that of ergot, previously official under the name of ergotin, is now prepared directly from ergot, instead of being derived from liquid extract of ergot. The dry extract of euonymus contains one-fourth of its weight of calcium phosphate instead of sugar of milk. Extract of nux vomica, instead of being derived directly from the seeds, is now prepared from the liquid extract, with the addition of milk sugar in such proportion that the extract may contain 5 per cent. of strychnine. Milk sugar is also directed to be added in the preparation of the extract of calabar bean, and the result is to produce a firm, instead of a soft extract. The alteration in the composition of the liquid extract of sarsaparilla consists in the use of alcohol, 20 per cent., and of glycerine, in place of proof spirit, sugar, and distilled water. The solution of atropine sulphate now contains a small proportion of salicylic acid, and is prepared with distilled water, instead of with camphor water; it will therefore, in all probability, be better adapted for use in ophthalmic work. The time-honoured solution of perchloride of mercury has been changed by the omission of chloride of ammonium, the presence of which has been found wholly unnecessary on pharmaceutical grounds, while in the proportion previously employed it could have no therapeutic action. Black wash, the black mercurial lotion, has been improved by the addition of glycerine and mucilage of tragacanth, so that it will not so readily deposit. Glacial acetic acid has been omitted from the creosote mixture. Tragacanth and refined sugar are directed to be used in the chalk mixture in place of gum acacia and syrup, and similar alterations have been introduced into the guaiacum mixture. With regard to the castor-oil mixture, the composition has been totally changed, although it still contains the same proportion of castor oil; mucilage of gum acacia is used in place of the solution of potash, and cinnamon water has been introduced, while oil of lemons, oil of cloves, and syrup have been omitted. One of the most radical changes consists in the alteration of the composition of compound mixture of senna. It will be remembered that this repulsive preparation formerly contained both the tincture and the infusion of senna; the tincture is now omitted, the amount of sulphate of magnesium has been increased to an extent which will probably compensate for this omission, and a fairly large proportion of aromatic spirit of ammonia has been added. It is to be hoped, therefore, that this preparation will be less nauseous than the former, while equally efficacious.

Aromatic powder of chalk and the powder with opium are

only changed by the omission of saffron. The compound tincture of chloroform and morphine has been very materially altered by the omission of four ingredients and by the addition of two new ingredients. The more important changes consist in the removal of ether and the introduction of tincture of capsicum and tincture of Indian hemp. It will be found, also, that the new preparation contains less chloroform and much more morphine than the corresponding preparation of the *British Pharmacopœia* of 1885.

Five of the ointments have been altered, the chief change in composition being the omission of simple ointment and the substitution of paraffin ointment. In the preparation of ipecacuanha wine liquid extract of ipecacuanha is now used; while in the quinine wine quinine hydrochloride takes the place of sulphate of quinine.

The above form the chief alterations in the components of official preparations, but it by no means exhausts the numerous changes which have been made to improve the pharmacy of the *Pharmacopœia*.

Turning now to the list of those whose strength has been changed without any necessary alteration in the ingredients, the list is somewhat alarming in length; but it is satisfactory to note that by far the greater number consist of tinctures and ointments. We have previously referred to the change in the dose of the tinctures, so that they are intended to be used in doses of either from 5 to 15 minims or from half a fluid drachm to one fluid drachm. Such change could only be effected by alterations in the strength, and, so far as we have been able to test these changes, it does not appear that any diminution in therapeutic value will result from the alteration in strength, and it therefore becomes unnecessary to indicate in detail the actual changes that have been made.

With the desire apparently to obtain greater uniformity of dose, the alcoholic extract of belladonna has been diluted with milk sugar, so that it now contains one-third the previous proportion of alkaloids. The extract of nux vomica has similarly had its alkaloidal strength reduced to two-thirds. The liquid extract of opium is now prepared so that it shall contain 0·7 to 0·8 g. in 100 c.cm. instead of yielding about 1 per cent. of morphine. The hypodermic injection of apomorphine has had its strength reduced by one-half, and the same alteration has been effected in the strength of the hypodermic injection of morphine. The alkaloidal strength of morphine suppositories is also reduced to one-half of the former amount, a fact which is likely materially to affect the employment of morphine in this way.

Medical men so rarely burden their memories with the strength of infusions, of liniments, and of ointments that it scarcely seems necessary to indicate that some of these have been modified; but with regard to the spirits of cajuput, of cinnamon, of juniper, of lavender, of peppermint, of nutmeg, and of rosemary, the proportion of the oils has been largely increased; the dose, therefore, when employed internally, may be correspondingly reduced. Most of these spirits now contain five times the previous proportion of volatile oil, and the average dose is from 5 to 20 minims instead of from half to one fluid drachm.

From the foregoing account of the alterations that have been made in the pharmacopœial substances it must be obvious that the amount of labour expended in producing the new volume is by no means to be measured by a short list of additions. Those responsible for the new *Pharmacopœia* would seem to have been actuated by a desire to improve and to simplify the work wherever improvement and simplification were possible. Considering the eminence of the pharmacists engaged on the Committee of the Pharmaceutical Society of Great Britain, we may trust that the pharmaceutical changes are improvements suggested by experience, and that they will not be found in any way to reduce the efficiency of the official preparations. On the other hand, if it be agreed that the activity of these official preparations is in no way affected, we feel sure that the sweeping alterations that have led to such great simplification of dosage will be readily welcomed by medical men who desire to increase the range of their therapeutic resources, for although the number of official substances is considerably reduced, it may be confidently anticipated that those which remain will be more generally employed. The introduction of a new standard is always associated with some inconvenience, but where the new standard so largely tends towards simplification of practical employment it is probable that it will not be long before the *Pharmacopœia* is cordially welcomed. Perhaps the greatest risk incurred in the alterations of standard is in the reduction of some doses with corresponding great increase in strength, but it will be found that, as a rule, changes of this nature have been made only with preparations comparatively devoid of toxic properties. The improvements in the present volume are so important that we feel sure that pharmacists and medical men will agree in congratulating those who have been engaged upon the work both upon the conclusion of their labours, and upon the boldness with which they have approached their task.

A REPORT ON THE OPEN-AIR TREATMENT OF PHTHISIS IN SANATORIA.

I.

It is intended in the following report to give a brief summary of the chief climatic and hygienic characteristics which are to be found in some of the Continental sanatoria for consumption, and at the same time to point out the general lines of treatment adopted at these institutions. This subject has been receiving more attention of late, particularly in some parts of England where an open-air treatment has been adopted very similar to the Continental sanatoria. There is a great similarity between the reports of the various sanatoria, a similarity not only in the results obtained, but also in the methods adopted. All appear almost unconsciously to emphasise the same points. Broadly speaking, there appear to be two classes of sanatoria: first, those in which a fierce battle is waged between science and the tubercle bacillus; to this class belong Adirondack in America and Nordrach in Germany; and, secondly, those in which the patient has more freedom from rules and regulations, and is encouraged by the provision of entertainment and general good living to forget his disease. Two clinical results attributed to the open-air treatment are in accordance with the experience of all the sanatoria authorities. These are: (1) The reduction of pyrexia, and (2) increase of appetite.

The hygienic arrangements carried out in German and American sanatoria appear to be more scientific than others, where the patients and their friends live in the same building, and acute are not separated from incipient cases.

Adirondack Cottage Sanatorium.

The best plan yet adopted for obviating the evils of aggregation would seem to be that adopted in the Adirondack Cottage Sanatorium on the Saranac Lake, New York. The sanatorium is situated on a protected hillside several hundred feet above the valley of the Saranac River, and 2,000 feet above sea level. It is one mile and a-half distant from the Saranac Lake village. The journey from New York takes thirteen hours; the patient is not required to change cars, and can have all his meals brought to him; in this way the fatigue is much lessened. The route taken is *viâ* Hudson River and Adirondack railways direct to Saranac Lake village. The climate is somewhat variable; it is very cold in the winter and storms are not infrequent, but the sanatorium is effectually sheltered from north and north-east winds. A beautiful park is situated in the immediate neighbourhood, where the patients take exercise. The soil is dry, and patients can walk out shortly after rain. The sanatorium accommodates 90 patients; it consists of a main building, around which are grouped eighteen small cottages and an open-air pavilion for patients in stormy weather. The cottages are one-storey buildings, which accommodate from 2 to 10 persons, but they usually have four or five inmates only. Each person has his own room, which opens into a central sitting-room, in direct communication with the verandah, where the open-air treatment is carried out. The partitions between the sleeping and general sitting-rooms are 7 feet high, an arrangement which gives the patient the benefit of the entire air-space of the cottage, and allows of its being heated by a single fireplace in the sitting-room. The main building contains the

general dining-room, where all the patients have their meals; this plan necessitates a walk in the fresh air both before and after meals. The library, recreation pavilion, doctors' apartments, chapel, and infirmary are all separate buildings. Should any patient in one of the cottages become rapidly worse, he is at once removed to the infirmary. Rigid measures for the care of the expectoration are carried out, and we are told that an examination of the dust of all the buildings failed to detect tubercle bacilli or septic organisms, though the buildings had been inhabited for years.

An objection brought against the cottage plan is that it makes it impossible for the patient to be under the constant supervision of the physician. This objection, it is claimed, has little weight, because most of the cases do not require constant supervision. The patient is told to remain most of the day in the open air, well wrapped up. glass screens are provided to shelter him from wind. Cases of pneumonia and high temperature are carried out of doors in all weathers, and kept in a recumbent position either in bed or on a sofa; whilst those who have less fever and are improving are allowed to sit up in chairs, but are not allowed to walk to the main building for their meals until the temperature is almost normal and their general condition much improved. Some of the cases in the cottages have no fever, whilst others have an afternoon rise to 100° F.; the latter are allowed to walk to the main building but no other exercise is allowed: those who have no fever are allowed as much exercise as their condition permits. Patients are encouraged to take as much nourishment as possible; the diet is regulated to suit each individual case. No alcohol is allowed in early cases; a small amount is given in acute cases. Cod-liver oil and creosote are given to increase appetites. The walls, floors, and furniture of the cottages are washed daily with antiseptic fluid.

Hohenhonnef Sanatorium.

Hohenhonnef Sanatorium, on the Rhine, is situated among the Seven Mountains in Rhenish Prussia. Through tickets as far as Bonn can be obtained in London. At Bonn further tickets must be taken to Königswinter, which is close to Hohenhonnef. The sanatorium consists of one large building five storeys high, and can accommodate 85 people. It is situated 236 metres above the sea level and 158 metres above the Rhine. The sanatorium is completely isolated, and lies in a park of about 40 acres. Protection from north and north-east winds is ensured by the neighbouring mountains. The bedrooms and sitting-rooms face south and south-west. A large terrace for open-air treatment is exposed to the south-west and east. The climate is mild; the winter is short and the summer long. The air, it is claimed, is never oppressive even in the hottest summer days. The sanatorium is open all the year round for consumptive patients. The surrounding country is extremely rich in vegetation; one of the usual walks is in a large pine forest. Patients are advised to take as little exercise as possible, particularly those who have fever, but everyone sits in the open air all day till 10 P.M. The ground is dry, the rainfall is slight, there are no mists. In the open-air treatment care is taken to shelter the patient from rain, wind, and sun.

There are five meals a day, and people are encouraged to eat as much as possible. In addition to the ordinary food, 1 litre of milk is given at breakfast, another litre in the middle of the day between meals, and another in the evening; if the milk causes dyspepsia it is discontinued. A small bottle of Rhine wine is provided at lunch and also at dinner; no spirits are allowed. A rest of one hour and a-half is allowed after each meal. Books are the chief source of entertainment; exciting games are strictly prohibited. The whole sanatorium is kept very clean; all the windows are open day and night, and the necessary heat is generated by hot-water pipes.

Nordrach.

We are indebted to Dr. R. M. Smyth, who is in charge of one of the homes, for the following notes on Nordrach: Nordrach Colonie, 4½ miles from the larger village of Nordrach (marked in *Times Atlas*) 9 and 10 miles respectively from the stations of Biberach-Zell and Gleugenbach on the Schwarzwald Railway, and about 30 miles from Strassburg, is a small cluster of farmhouses situated at the bifurcating end of a narrow valley, on the single highway that runs up into the mountains from the main Rhine valley near Offenburg. The village is about 1,500 feet above sea level, surrounded on all sides, except on the south-west, by a complete wall of pine-covered mountain, gradually sloping up to about 3,000 feet on north and east.

Besides the 80 acres of grounds belonging to the sanatorium, the magnificent forests of the Grand Duchy, extending for miles all round, and traversed by a perfect network of timber paths, afford immunity from dust and shelter from wind. The rainfall of the district is copious at all seasons, so that there is little dust in summer, and the lower open slopes of the valley, chiefly grass land, are irrigated by many springs and rivulets.

The soil rests on a coarse red sandstone, which absorbs rain like a sponge, so that the paths are usually clean for walking. The "climate" much resembles that of our own South Coast, but is colder, with two months snow in winter, and slightly hotter in summer. It is decidedly variable, severe frosts, snow, gales of wind occasionally, mists and dull weather in winter, and almost tropical showers and thunderstorms in summer, but there is a large proportion of bright sunny days throughout the year, and the air is usually still, of course exceedingly pure and fresh, and decidedly humid.

The sanatorium, which started ten years ago, has no connection with any of the other well-known institutions; it was an entirely private enterprise due to Dr. Otto Walther, formerly of Frankfort, who started with one house of ten rooms, and has gradually enlarged it to four houses with accommodation for 41 patients, and present extensions will soon increase the number to 45, with a house for former patients who sometimes pay holiday visits in the summer. The spot was chosen after eighteen months' careful search through the Schwarzwald, and is an admirable one, securing the essentials—isolation from the outer world, pure air, and shelter from the wind, necessary for the cure. There is a large separate dining hall about 40 feet by 20 feet, continuous with a smaller ante-room containing piano and library, and adjoining the old Gasthaus Zum Anker, which contains offices, kitchens, and rooms for the staff, and has telephone to the patients' houses some distance away, and to the station at Biberach. All the houses are carefully constructed to avoid formation of dust, to cause patients while indoors to be practically in the open air, and to give the minimum exertion to those confined to their rooms. To these ends walls and ceilings are of wood, floors covered with linoleum and swabbed with water every morning; there is ample window space, electric bells and light throughout, hot-air heating apparatus, hot and cold water and douche bath in each room, except in the house soon to be given up to visitors, where the bath-room is in common. The other furniture is all of the simplest type. The sanatorium has also its own farm with ten cows (which are fed on barley and hay only), a steam laundry, ice machine, and refrigerator for meat, etc. The waterclosets are built out and well fitted. The water supply is of the purest, from springs in the sandstone rock.

The paths on the sanatorium grounds have been specially laid out on easy gradients with seats at intervals, giving beautiful views of the valley, and are connected with the extremely numerous and delightful walks through the pine woods. There are no regular "Liegehalle," as in most other sanatoria, only three small huts or shelters, partly because it is usually better for patients who must rest to do so in their own rooms by the open window, and partly because the object of the treatment is to strengthen patients and fit them for taking up ordinary life and work again. That this can be done without interfering with the processes of repair in the lungs is a distinct feature of Nordrach methods. There are practically no "amusements" in the sense usually understood except occasional music; reading is the most suitable resource for all; no "caretakers" are permitted, and the visits of friends are discouraged at first, irregular exertion and excitement of all kinds hindering that absolute mental, as well as physical, tranquillity which is so necessary for the cure.

The main principles of treatment are based on those which Brehmer laid down forty years ago, which Dettweiler

extended, and which have been developed and perfected by Dr. Walther. They are as follows:

1. An absolutely open-air life for every class of case, acute and chronic, pyrexial and otherwise, in all weathers and seasons, by night as by day.

2. A regular course of adequate feeding (often over-feeding from a patient's point of view) with rich and varied diet, including much meat and milk and more fatty and carbohydrate food, and little alcohol, given in large meals with long intervals.

3. A judicious combination of exercise on the hillsides, carefully regulated and carried out, so as always to fall short of dyspnœa and fatigue, and so never to interfere with the healing of the lungs, along with the maximum amount of mental and physical rest, forming together a gentle training for the lungs and heart.

4. Most important. The co-ordination of all these details, so as to induce regular habits of life in each case by the constant personal supervision of the physician, and, if necessary, the tactful but firm enforcement of the same.

(1) Every arrangement tends to force patients into the open air, and to overcome their natural timidity of draughts and damp clothes, to which no importance whatever is attached. All attention is concentrated on avoiding over-exertion. Cold and wet may be uncomfortable, but it is found by experience (which I have tested very fully) that no amount of exposure to the weather or variation of temperature causes the most delicate patient to take cold or chills or any harm, and that without any "hydrotherapy" or initial "hardening."

There is no common sitting room, except the small ante-room mentioned above, and patients must perforce be either out of doors or in their own rooms. Every house is furnished with large casement windows, amounting to a great part of one side of each room. They are kept open practically all the year round, though it is permissible to close them in winter to warm the rooms when unoccupied, and the windows of the dining hall are unhinged and taken away during a large part of the year. Those who are able must be out every morning of the year, in whatever weather, for the daily walk whether short or long. (It may be 100 yards to 10 or 15 miles, according to the patient's condition.) Moreover, though patients may wrap up as much as they like when resting, they are encouraged to discard heavy overcoats, macintoshes, and such like when walking, and they very commonly go about bareheaded.

(2) Three meals are given in the day. Breakfast, at 8.30 A.M., consists of coffee, bread and butter, and cold meat, such as ham, tongue, sausage, etc. Dinner, at 1 P.M., consists of two hot courses of meat, or fish and meat served by the doctor to each patient, according to his individual wants, with an abundance of potatoes and green vegetables, and sauces in which butter is a main ingredient. The third course may be pastry, farinaceous pudding, fruit or ice cream, with coffee. Supper, at 7 P.M., is usually one hot course as at dinner, and one cold as at breakfast, with tea. At each meal the patient has ½ litre of milk, as soon as possible reduced to ¼ litre or stopped altogether, according to his capacity and need for putting on flesh. The two latter meals present no option in the matter of diet; all are taken under the doctor's supervision, and servants may not take away the plates until everything has been eaten, or the doctor has given permission. Fever cases in bed have the same diet, with if anything slightly larger portions. Patients always rest on their couches from 12 midday to 1 P.M., and from 6 to 7 P.M. before meals. On this plan everyone gains weight, often 2, 3, and even 4 lbs. a week for the first few weeks, afterwards gaining by smaller increments. (The German lb. = 1⅒ English.)

It sometimes happens that patients are sick during or shortly after a meal; if this happens they come back and finish, finding usually no difficulty with the remainder. The rest before meals and the long intervals between aid complete assimilation very much; and dyspepsia is on the whole by no means common, disappearing as nutrition and strength improve.

Cases of active disease with high fever are treated by absolute rest in bed, adequate feeding as above mentioned, and isolation, any exertion, even talking, being spared as much as possible. Drugs are very sparingly used, merely as adjuvants in treating symptoms, and in no case are the "specifics," cod-liver oil, creosote, etc., used. Alcohol as a drug or a beverage is strictly limited. Patients take their own temperatures four times daily in the rectum, on waking about 7 A.M., at 12 A.M. or immediately after the walk, at 5.30 P.M., and before going to bed; and exercise is prescribed with the temperature as a guide. In most cases the morning temperature should be subnormal, and the evening temperature below 100·4° F., for some days before walking is permitted, and then if it tends to rise in the morning rest is resorted to again. Walking must be at a very slow uniform pace, especially going uphill, and the slightest fatigue avoided. Special cases are sometimes sent to walk by themselves, and in each case the extent of disease, the strength or vitality, and the temperament are taken into consideration.

The first part of the walk is usually an ascent, then a horizontal portion, and a descent home, so that fatigue shall be avoided. As energy revives the distances are cautiously increased until several miles can be accomplished, involving a climb of several hundred feet during the morning, but a slow, steady gait must always be observed. The afternoon is usually spent in resting or in doing another prescribed short walk, and patients go to bed about 9 to 9 30 P.M. The doctor visits each patient three times daily, before each meal, and prescribes exercise or rest, and if necessary, even attends the meals of special cases.

Every patient has one of Dettweiler's pocket flasks and a cup in his bedroom to receive sputum, and spitting elsewhere is not allowed. The washing is disinfected by boiling.

Monthly examinations are made of the lungs, and at the same time the expectoration is carefully examined. When after repeated examinations bacilli are not found in the sputum, or when after the injection of 1 c.cm. of expectoration under the skin of a guinea-pig, tuberculosis does not appear in the animal in three to six weeks, the patient is considered fit to return home, often to do moderate work at once in order to secure a regular habit of life, which is the best condition for maintaining the cure.

(To be continued.)

THE PLAGUE IN THE EAST

Bombay.—A marked improvement has taken place in the plague returns. During the first week of April, by which time, indeed, a substantial improvement was recorded, the plague returns are as follows:

	April, 1898.							Total for the Week.
	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	
Cases	161	122	107	144	99	93	87	813
Deaths	102	86	96	92	100	84	90	648

During the week ending April 5th there had been a falling off from plague deaths alone of 300 as compared with the previous week. Bombay is rapidly recovering from the scare, trade is reviving, and the prospects of a large export business, owing to the stoppage of cotton and wheat from the United States of America, has diverted the minds of the community from plague to more healthy themes. There seems ground to hope that the anticipation expressed in these columns that plague will disappear from Bombay in May will be fulfilled.

Karachi—It would really seem as if a recrudescence of plague has set in in earnest: April 1st, 4 cases reported; April 4th, 3 cases; April 5th, 2 cases; April 7th, 3 cases and 3 deaths. The disease seems to be widely spread, for, from the Civil Lines, the Market, and the Napier quarters cases are reported. The disease has visited the old town quarter, where it was so rife last year. The natives seem to report the cases with surprising readiness, and all appear anxious to help the Government to eradicate the disease. The city has been portioned off into separate divisions, each being under the charge of a superintendent, whose duty it is to report cases of plague, and to issue passes to people

residing in uninfected areas. Two cases of plague have occurred in the compound of Government House, the patients being tent Lascars. The Sind Arts College has been closed and utilised, together with the civil hospital, as a plague hospital. Small-pox is threatening Karachi just now seriously.

Lahore.—No cases of plague have been reported in the city of Lahore up to the present, but the country to the north is seriously affected. As stated in the British Medical Journal of April 23rd, vigorous measures, on a gigantic scale, are being taken in the Jullundur district, and, as far as can be gathered, with success.

The Nizam's Dominions.—Surgeon-Colonel Lawrie's reports on plague and inoculation have been issued. His conclusions, based on personal researches, are that the infection is widespread in the Hyderabad province, but that the area round Anjoti and Umerghi constitutes by far the most important focus. In this district 550 deaths from plague have been reported since the epidemic first began, but this number is, perhaps, 400 short of the actual number. Surgeon-Colonel Lawrie found the bacillus in dust and in scrapings from floors. His opinion is that plague bacilli find their way into the body by inoculation. This conclusion agrees with that arrived at by several observers, and the belief is gradually growing that plague is neither spread by air nor water, but by the discharges from buboes infecting clothes, beds, bedding, and floors of houses.

Calcutta.—The *Bombay Gazette* of April 26th states that cultures of bacilli from suspicious cases of illness in Calcutta sent to Professor Haffkine at Bombay have been pronounced by him to be those of true bubonic plague. It will be remembered that during the winter of 1896 Dr. Simpson found the bacilli of plague in a number of cases of illness in Calcutta. Since that time we have been accustomed to hear his researches traduced. In the light of the present announcement we cannot but think that our warning at the time was justified. We have yet to investigate how widely spread from the seat of virulent plague or pestis major the more feeble form of the bacillus is to be met with.

Jeddah.

The Turkish authorities, whilst not actually forbidding pilgrims to proceed to Mecca, *viâ* Jeddah, have issued an edict whereby the return of pilgrims is wholly stopped. This is an Oriental method of restriction, which may possibly be as effectual as the more straightforward plan of preventing the pilgrimage altogether. To be shut up indefinitely in Mecca is a contingency which even the most devout Mohammedan may well consider a deterrent circumstance.

China.

Hong Kong is again placed in quarantine by all the neighbouring ports, and an appeal to the Singapore authorities to limit or remove the restrictions was met with a refusal. Although plague has never been known to have visited the equatorial belt, we are not in a position, seeing how limited is our knowledge of plague, to say they are over-cautious. The cases in Hong Kong amount to only one or two daily.

In *Formosa* plague is serious, and it is giving the Japanese a great deal of trouble.

Segregation and Isolation.

Fresh orders have been issued by the Government in regard to the measures to be adopted by the Plague Committee in the matters of segregating contacts and isolating the sick. These instructions take the following form:

1. Persons are only to be compulsorily removed by order of a plague authority to a health or segregation camp when their house is known to be infected with plague, and when they are unable to satisfy the plague authority that they will remain under observation in a sufficiently isolated and convenient place.

2. Voluntary removal to a health camp or other place of safety should be encouraged by all means possible.

3. If a plague case can be suitably treated and isolated in a house of sanitary situation free from the danger of spreading infection, the patient may be allowed to remain, provided that the other occupants (save the immediate attendants) remove themselves elsewhere as above stated.

4. In the case of all removals sufficient time should be allowed under proper observation for the making of the necessary arrangements.

THE POSSIBILITY OF ACCLIMATISATION OF EUROPEANS IN TROPICAL COUNTRIES.

An interesting discussion on this subject took place in the Map Room of the Royal Geographical Society on April 27th. Sir John Kirk, G.C.M.G., K.C.B., M.D., F.R.S., was in the chair, and among those present were Sir Harry Johnston, K.C.B., Sir Henry Norman, G.C.B., G.C.M.G., C.S.I., Miss Mary Kingsley, the well-known traveller, author of *Travels in West Africa* and *West African Studies*, Dr. Patrick Manson, Dr. R. W. Felkin, Dr. Crosse, Mr. Baines, and others interested in colonisation.

The discussion was introduced by Dr. L. Sambon, who, after referring to the almost universal opinion that the white man cannot colonise the tropics, but must inevitably fall sooner or later a victim to the deadly climate, said he would endeavour to prove that this statement was absolutely wrong, and that there was no reason why the white man should not conquer the tropical world. The pessimistic opinion alluded to arose when scientific knowledge was in its infancy, and when the enormous death-rate of whites in the tropics seemed decidedly unfavourable to acclimatisation. Within the last few decades sanitation had wrought wonderful changes in the healthiness of all tropical colonies, and the changes had been so great that places which were considered the deadliest were now recommended as health resorts. The old theories were now completely at variance with facts. Tropical countries had been considered unfit for the permanent settlement of white men on account of their climate, or, to be more correct, on account of their heat, because authors, when speaking of tropical acclimatisation, had used the word climate as a synonym of heat. Heat was supposed to induce disease (anæmia, liver abscess, sunstroke) and deterioration. But anæmia was not due to heat. It was known that the composition of the blood underwent no change in the tropics under the influence of meteorological conditions. Anæmia in the tropics was a condition induced by several pathogenic parasites (malaria, dysentery, ankylostomiasis, etc.). Liver abscess was likewise of parasitic origin; its peculiar geographical distribution, independent of climatic conditions, was decidedly against the meteorological theory. Sunstroke was also a microbic disease, however paradoxical this statement might appear, on account of the mistaken etiology which has been perpetuated by an erroneous nomenclature. As for tropical deterioration, it was a phantom that was rapidly vanishing in the light of modern science. All forms of deterioration, in tropical as well as temperate regions, could now be traced to definite microbic processes. Deterioration was that condition of organic failure which was symptomatic of slowly progressing diseases, such as tuberculosis and leprosy. Deterioration was far more alarming in the overcrowded centres of the old world than in tropical colonies. The introduction of new diseases had caused the deterioration of whole populations in their own climatic homes. Workmen exposed to very high temperatures within the temperate zone did not suffer from the diseases most prevalent in the tropics; they usually died of rheumatism and tuberculosis. Tropical diseases were characteristically land affections. Crews of ships sailing in tropical latitudes were strikingly exempt from them. The geographical distribution of tropical diseases was of the greatest importance in the study of acclimatisation. Diseases were due to living organisms, which had their peculiar dissemination like all other forms of life, and this distribution was likewise determined by a variety of circumstances, amongst which meteorological conditions certainly occupied an important place, but association and competition were the greatest. While some diseases had diminished, others had increased, quite irrespective of climatic conditions. The introduction of new diseases had spoilt regions that were previously healthy; and, on the other hand, sanitation had rendered salubrious districts which at one time were deadly.

[1] British Medical Journal, March 19th, 1898.

It was not true that European children could not thrive in tropical colonies. Under proper management they did very well. Infant mortality varied greatly in different colonies; in the most unhealthy it was lower than that of some districts in Europe. It was always lower than that of native children. The belief that white men could not labour in the tropics arose perhaps from the assertions of the advocates of coloured labour; it was certainly disproved by facts. Farm labour was carried on by white men in Central and South America, in tropical Australia, in South Africa, in the West Indies and in India, with no worse consequences than in temperate regions. The malarious districts of the tropics were no worse than those of the temperate zone. In India the farmer might become deformed from leprosy, in England he was crippled by rheumatism. That man was capable of adaptation to a new climate was proved by the fact that he had constantly moved from one region to another. The several races and varieties of mankind were a proof of this. No plant and no animal originated in all the regions of the globe in which it was now found, and man, anatomically and physiologically a mammal, must have had likewise a restricted primitive area. Several evidences of successful acclimatisation had been supplied in comparatively recent periods. A great deal had been written about racial immunity, and that of the coloured races from malaria was once considered indisputable. More recent observations proved that differences were usually small and mostly unfavourable to natives. There were no facts to prove that immunity could be transmitted by heredity, but many against it; and of the diseases which conferred immunity it would be difficult to name one in which a second attack might not occur. The immunity of the native was not a natural, but an acquired immunity, and there was no reason why the coloniser should not acquire it as well. To acquire it, it was not necessary to suffer the disease in its full natural intensity. If attempts at colonisation in the past had often been unsuccessful, if they had always cost immense sacrifices in lives and money, it was because they had been made in complete ignorance of the conditions essential to success. What was needed above all was a complete knowledge of tropical diseases. Acclimatisation was a mere question of hygiene.

Dr. Manson said that in former years, under the influence of early teaching, he shared in the pessimistic opinions then current about tropical colonisation by the white races. In recent years, however, his views on this subject had undergone a complete revolution. That revolution began with the establishment of the germ theory of disease; it gathered force as, one after another, the great disease scourges of mankind, of beasts, and of plants were proved to be caused by living organisms; and it was complete when he had personally convinced himself that Laveran's immortal discovery of the protozoal germ of malaria was indeed a fact. He now firmly believed in the possibility of tropical colonisation by the white races. Its practicability had already been proved for many countries. He believed the time would come when this would be proved for all countries. To state fully the grounds of his belief in this matter would only be to recapitulate the facts and arguments so ably advanced by Dr. L. Sambon. The gist of the situation was simply this: Heat and moisture were not in themselves the direct cause of any important tropical disease. The direct causes of 99 per cent. of these diseases were germs—that is, plants and animals with tropical requirements. Men now began to know something about their tropical pathological enemies. When they and their habits were known fully, victory was within man's grasp. Most diseases were caused by parasites. Most parasites, when they had got below the surface of the body, were fairly safe. But these same parasites, in order that their respective species might keep in existence by spreading from one host to another, must at some time or another leave the human body. During this necessary extra-corporeal state they were eminently vulnerable. To kill them then was simply a matter of knowledge and the application of this knowledge—sanitary science and sanitation in fact. As an illustration, Dr. Manson cited the case of the bloodworm which caused elephantiasis. It was known that every evening these worms were carried by the blood stream to the surface of the body, and that certain species of mosquito, when they imbibed the blood, swallowed with it the floating worms which it contained. When the mosquito died, which it did soon after laying its eggs, it fell into the water on which these eggs were deposited, and the bloodworms it contained escaped from the dead body and swam about in water as free animals. When man drank this water he swallowed the bloodworms, which then passed from his stomach to his tissues, and so started a new colony of bloodworms, and very possibly grave disease. Now from that piece of knowledge it was easy to prescribe a dozen simple ways of preventing bloodworm diseases—elephantiasis, for example. One had but to keep the mosquito down—not a very difficult matter if it were set about in the right way—or mosquitos must be prevented by simple means from preying on already infected individuals; or the mosquitos must be prevented from getting access to drinking water; or the larval blood worms which the drinking water might contain must be killed by boiling or filtering. There was a weak and unprotected point in the life-history of every parasite, on which, did he but know where it lies, man could place his finger and stay disease. He wished he could indicate with precision this weak point for the malaria parasite—that germ which was in fact the main obstacle of the successful colonisation of the tropics by white races. There were signs, however, that the day of deliverance from this worst curse of mankind was at hand. The Royal Geographical Society could not fail to sympathise with and encourage any project having for its object the betterment of the health of the traveller and the colonist in tropical lands. This reflection encouraged him to mention that at the present moment an endeavour was being made to establish in connection with that neglected field for the investigation and study of tropical disease—the hospitals and dispensaries of the Seamen's Hospital Society—a school for the practical training of medical men proposing to practise their profession in the tropical colonies of Great Britain. Yet such was the indifference of the public to this public duty that the scheme hung fire merely for the want of a few thousand pounds. And yet the country, whose sons died yearly by thousands from tropical parasites, are so rich that the Chancellor of the Exchequer did not know what to do with his surplus millions. Worthy objects of benevolence were so scarce, apparently, that the rich had to fall back on starving cats, homeless dogs, and broken-down horses. He wished some of these rich men, conscious of the responsibility of wealth, would recognise that the attempt to obtain a scientific knowledge of the many unsolved tropical disease problems is a far worthier object for their beneficence than any number of cats, or dogs, or horses. A few of their surplus thousands would go a long way towards solving the problems of the colonisation of the tropics by the white races.

Sir Harry Johnston expressed a general agreement with Dr. Sambon's conclusions. There were, however, he said, many parts of the tropics where the climate did cause deterioration of European races. As an example of this he cited the offspring of British parents in India, who, if brought up in that country, did not reach the standard of stamina seen in the home-bred Briton. The governing races were not indigenous to the tropics. All that could be hoped for in the way of colonisation was the establishment of a sufficient number of whites to govern the blacks, who worked well under guidance, but when left to themselves made little or no progress. Even this could not be accomplished without great loss of life. In Central Africa the loss was so great that it was hardly balanced by the gains from fresh comers. In India, Ceylon, tropical America, and Australia, the problem of colonisation might be regarded as solved. In other regions three diseases still stood in the way—namely, malaria, dysentery and yellow fever in the West Indies, and blackwater or hæmoglobinuria in Central Africa. Even for malaria quinine was not a sure prophylactic; and for the other two diseases there was none. The real question of colonisation of the tropics lay in the finding of means of protecting Europeans against the three diseases which he had named.

Dr. Felkin thought Dr. Sambon's paper somewhat dangerous, unless his doctrine of acclimatisation were qualified by a time limit. In three or four hundred years the tropics might be occupied by Europeans; at present, although acclimatisation was possible theoretically, it was still outside the sphere of practical politics.

After some desultory remarks from one or two other speakers, Sir John Kirk moved a vote of thanks to Dr. Sambon, which was passed by acclamation.

THE LATE MR. ERNEST HART.

The *South African Medical Journal* for March contains the following resolution relative to the late Mr. Ernest Hart:

The Council of the South African Medical Association believes that the medical profession in this country feels a great loss in the death of Ernest Hart, Editor of the British Medical Journal, whose work has been a strong power for good with medical practitioners throughout all the British empire and beyond.

This motion was put to the Council of the Association by the Provisional Executive Committee, and was voted on through the post, being carried *nem. con.*

The South Midland Branch of the British Medical Association has passed the following resolution:

That the South Midland Branch desires to place on record its deep sense and appreciation of the important and valuable services to the medical profession in general, and to the British Medical Association in particular, of the late Mr. Ernest Hart, Editor of the Journal, and of the great loss sustained by his death; and, further, to convey its sincere sympathy to his widow and her family in their bereavement.

LITERARY NOTES.

The latest volume in the "Famous Scots" series is devoted to Mungo Park, one of the earliest of that brilliant band of medical explorers who have done so much for the lightening of the Dark Continent. The book brings down the story of the Niger to the present day. Mr. Chamberlain, in a letter to the author, says he "hopes that the book may have the effect of directing public attention to the subject of our West African Empire." We hope also that it may have the effect of directing the attention of the medical profession to one of its most interesting worthies.

The Rebman Publishing Company announce the following new books as just ready: *Tuberculosis of the Genito-Urinary Organs, Male and Female*, by Professor N. Senn; *Orthopædic Surgery*, by Dr. James E. Moore; and *Pathological Technique*, a practical manual for the pathological laboratory, by Drs. F. B. Mallory and J. H. Wright. Arrangements have also been made for the publication by the same Company, conjointly with Mr. W. B. Saunders of Philadelphia, of an edition in English of *Lehmann's Medicinische Handatlanten* (Medical Reference Atlases); each volume will contain from fifty to one hundred coloured plates, besides numerous other illustrations in the text. The first volume, which will appear almost immediately, will be an *Atlas of Internal Medicine and Clinical Diagnosis*, by Dr. Chr. Jakob of Erlangen, edited by Professor A. A. Eshner of Philadelphia. Others in active preparation are atlases of *Legal Medicine*, *Operative Surgery*, *Laryngology*, and *External Diseases of the Eye*.

An action was recently brought against an American newspaper by an advertiser of a patent medicine for damages alleged to have been caused by a slight error, which looks like a practical joke of the printer's devil. Among the testimonials to the marvellous efficacy of the remedy, one grateful sufferer was made to testify to the following effect: "I am now completely cured, after having been at the gates of death merely through taking half a dozen bottles of your medicine." The omission of a comma after the word "death" converted this declaration of simple faith into a statement not likely to increase the sale of the nostrum. The case is a warning to those persons—too numerous among doctors as among other people—who have a soul above punctuation.

The Royal Ophthalmologist.—Archduke Theodore of Bavaria, who is at present taking a holiday at Biskra, in Algeria, has acquired great popularity among the natives by his skill in ophthalmic surgery. Patients come to him even from remote parts of the desert. A sheik on whom he recently operated successfully for a cataract, finding that the royal ophthalmologist would not accept a fee, insisted on presenting his daughter, Princess Sophia, who acted as his assistant, with a honorarium in the shape of a magnificent thoroughbred Arab. The Princess has sent the horse to her aunt, the Empress of Austria.

SPECIAL CORRESPONDENCE.

PARIS.

The Hour of Death.—Sanatoria for Tuberculous Patients.—Radiography in the Medical Examination of Conscripts.—General News.

The belief that death claims more victims at midnight than at any other hour is one that is widespread among the general public. M. Féré, in a communication to the Biological Society, 1888, stated that he had carefully gathered statistics at the Bicêtre and Salpêtrière hospitals concerning the hours of the deaths which had occurred in these hospitals from 1878 to 1887, and all that he concluded from them was that from 7 to 11 P.M. there were fewer deaths than at other times. The statistics of different countries seem to differ. According to Signor Raseri, deaths in Italy reach their maximum from 2 to 7 P.M. Finlayson, of Glasgow, states that from 5 to 6 A.M. is the most fatal hour. Dr. Beadles affirms that most men die between 5 and 7 A.M., and most women between 6 and 7 P.M.

There are now in France three sanatoria for tuberculous patients. Two of them are situated in the neighbourhood of the Pyrenees, at Trespoey and Canigou; the third is at Durtol, at the foot of the Puy-de-Dôme, near Clermont-Ferrand. The Trespoey sanatorium is near Pau; it was inaugurated in October, 1897. Dr. Crouzet is the director. The Canigou sanatorium is a delightful winter resort. The Durtol sanatorium is established in a chateau of the Louis XIV period. Dr. Sabourin has considerably added to the original building. Facing the sanatorium is a large park.

At a recent Army medical examination the examining council hesitated about passing a conscript who had been wounded in the leg. There were bony lesions that escaped recognition on superficial examination. The man asked to be allowed to show radiographs taken of his leg. His condition was no longer doubtful, and he was exempted from military service. This is a new application of Roentgen rays, and the medical press hope to see it generally used in these medical examinations. Thus, young conscripts suffering from lesions or deformities which escape diagnosis on these hasty examinations would not be compelled to serve as soldiers.

M. André Lefèvre at a recent meeting of the Municipal Council called upon the police Prefect to oblige all omnibus companies to comply with the directions laid down by the Health Council, and to inform them that from October 1st of the present year all carriages and omnibuses which are not warmed in accordance with the said directions will be forbidden to run. Fresh stringent directions have also been issued concerning antiseptic measures to be adopted by hairdressers.

The following question was discussed at a meeting of the barristers of the Court of Appeal: Can the Court of Assize judge a charge of libel brought against a medical man for notifying cases of epidemic illnesses, the law exacting a notification of these cases? The conclusion was that the Court is not competent to deliver judgment.

LIVERPOOL.

Proposed Additional Infectious Disease Hospital.—The Effects of Hospital Treatment.

An inquiry was lately held by Mr. W. E. Fletcher, M.B., Inspector under the Local Government Board, into the circumstances attendant on the application of the Liverpool City Council for authority to borrow £38,000 for the purchase of a site for a hospital for infectious diseases at Fazakerley. At present there are three Corporation hospitals in Liverpool, providing a total of 540 beds for infectious cases. As the population is probably close upon 700,000, this is considerably below the proportion recommended by the Local Government Board, which holds that the minimum provision should be 1 bed per 1,000 of the population. Some further provision—say 150 beds—probably ought to be available in case of an outbreak of small-pox.

It was not until 1884 that the Corporation undertook to provide accommodation for infectious diseases, previous to which date the workhouses were the only places where such cases

could be treated at the public expense. An immense diminution in the death-rate from zymotic diseases has taken place during the last twenty-five years in Liverpool; and although other causes have doubtless contributed, the provision of good hospital accommodation, admitting of efficient isolation and treatment, has certainly been one of the principal factors in bringing about this satisfactory result. As an illustration of this improvement, the following figures were quoted at the inquiry. The deaths from typhus fever for the decade ending 1875 per 100,000 of the population were 132; for the decade ending 1885 they were 43, and for that ending 1895 only 7. The corresponding figures for scarlet fever were 159, 76, and 49; and for small-pox 48, 16.3, and 1.5. A comparison of the death-rate among the cases treated in the hospitals with the death-rate among those treated at their own homes showed, it was stated, a difference in favour of the former. The mortality in 1895 among typhoid cases treated in hospital was 14.1 per cent., and among those treated at home 16.7 per cent. The corresponding percentages for 1896 were 11.1 and 19.1, and for 1897 12.2 and 16.2. The Corporation desires to purchase the site at Fazakerley in order to be prepared for any sudden emergency which may arise. The locality seems to be a most suitable one for the erection of a fever hospital. It is easily accessible by rail and is already largely devoted to institutions of a public character, and there are very few private residences in the neighbourhood; while the estate which it is proposed to purchase is sufficiently large to enable a hospital to be placed at sufficient distance from other buildings to obviate any risk of infection. The scheme of the Corporation includes the erection of a convalescent home, and is conceived on broad and liberal lines.

CORRESPONDENCE.

ARMY MEDICAL SERVICE.

Sir,—I am directed to inform you that the enclosed letter has been sent by the President of the Royal College of Surgeons in Ireland to the Secretary of State for War.—I am, etc.,

Robert H. Woods, F.R.C.S.,
Secretary of Council, Royal College of Surgeons in Ireland.
Dublin, April 26th.

[Copy.]

"Royal College of Surgeons in Ireland,
"Dublin, April 19th, 1898.

"My Lord Marquess,—In reference to the Army Medical Department, and the reforms in it which are about to be carried out, a rumour is current that it is intended to give no higher rank and title than that of colonel. I am unable, of course, to say what justification there may be for such a report, but as President of the Royal College of Surgeons in Ireland it is my duty to state that such a decision would create much disappointment. My College has loyally acceded to your lordship's request that I should nominate two civil surgeons to do duty in the emergency. It was led to this by the sympathy which your lordship has expressed, and by your manifest desire to remove causes of discontent; but I am bound to say that I fear the dead lock will continue if the ordinary accepted titles are not conferred upon the higher ranks of the service. It is almost unnecessary to repeat that the medical officers have never thought of command in the field, and that any suggestion of that sort is quite groundless.

"I beg your lordship to believe that in thus addressing you I only wish to help in speedily removing the difficulties which exist, and which prevent the filling of vacancies in the Army Medical Department.

"I have the honour to be,
"Your Lordship's obedient Servant,
"W. Thomson,
"President R.C.S.I.

"To the Right Hon the Marquess of Lansdowne, K.G.,
"Secretary of State for War."

PAYMENTS BY HOSPITAL PATIENTS.

Sir, Allow me to point out, with reference to a letter from Mr. T. Garrett Horder in the British Medical Journal of April 23rd, that the description attributed to myself of the *modus operandi* of seeing out-patients at the Central London Throat and Ear Hospital is a description of the system as it was in force nearly twenty years ago, and that it was taken from a book of mine which was published in 1879, entitled *Pay Hospitals of the World*, page 24, *et seq.* The description is none the worse for this fact, but in the process of the working of the system Mr. Horder refers to during these twenty years by the same gentleman, and under his immediate personal direction, it has necessarily tended to improve. It now possesses the merit of experience also.

This system which Mr. Garrett Horder thinks it well to sneer at has answered its purpose admirably; and had it been similarly enforced at every other metropolitan hospital, there can be no doubt that we should have heard little or nothing of hospital abuse. At any rate, my investigations of the patients twenty years ago and my investigations within the last few weeks show that the same class of people are in attendance at this particular hospital; that they belong to the wage-earning class at the most active period of their working lives; that this system prevents those who can afford to pay from receiving hospital relief; and that it is so effective as to have impressed the people seeking hospital treatment with the feeling that to apply at this institution for hospital relief, if they are unworthy, is worse than useless, seeing that this latter class do not resort to it.

May I venture to point out to the Hospital Reform Association and to Mr. Horder that a system must be judged by results, and that no association is worthy of leadership that lacks experience and fails to exhibit statesmanlike qualities.—I am, etc.,

Henry C. Burdett.
Porchester Square, W., April 23rd.

Sir,—If Mr. Garrett Horder had been quite fair to this hospital in his remarks published in your last issue he would have mentioned that the quotation from the report of my Committee, "that the subscribers will be quite satisfied that there is no necessity for any Reform Association to make recommendations with a view of improving the method of the administration of relief within its walls" referred, not to the question of payment by patients, but to the fact that every recommendation of the Hospital Reform Association had been anticipated by the rules of the hospital laid down at its foundation close upon twenty-five years ago. In confirmation of my statement I beg to enclose for your perusal another copy of the report, and also of the proceedings at the recent twenty-fifth anniversary of our establishment. The question of payment is another story into which I will not enter, as it is hopeless to endeavour to convince Mr. Horder, however trenchant the arguments would strike impartial persons.—I am, etc.,

Richard Kershaw,
Secretary.
Central London Throat and Ear Hospital,
Gray's Inn Road, April 26th.

HOSPITAL ADVERTISEMENTS.

Sir,—As some reference has been made to an advertisement and paragraph in the local papers concerning the recently instituted ophthalmic department of the Royal Halifax Infirmary, I have been requested by a meeting of the medical staff to say that neither individually nor collectively had they any previous knowledge of, nor do they approve of, the form of the advertisement referred to. The advertisement was drawn up by one of the honorary secretaries to the infirmary, and he made an attempt on Good Friday (the day the advertisement had to be in) to submit it to some member of the staff, but was unable to do so as three members of the staff were out of town, and two were not at home when he telephoned to them.—I am, etc.,

Priestley Leech,
Secretary to the Medical Staff.
Royal Halifax Infirmary,
April 26th.

*** In response to an inquiry, we have received a letter from Dr. Lodge, who informs us that he had not been consulted about the notice published by the infirmary, and that he was unaware of its appearance until we called his attention to it.

THE MAIDSTONE EPIDEMIC.

Sir,—In your issue of March 12th, in treating of the Maidstone epidemic, you say: "The chemical examination of this particular source of supply again shows that certain springs

were polluted by organic matters of animal origin, and the bacteriological examination of these particular springs shows that probably that pollution had been to a considerable extent fæcal in character." I hope you will allow me to point out that you are misinformed on this subject.

I have in my possession the report of the analysis of the Farleigh water supply by Mr. Adams and Dr. Washbourn, and likewise an almost *verbatim* report of the evidence given before the Local Government Commissioners in Maidstone, and I have also the records of the analysis by Mr. Gregory, the chemist employed by the Maidstone Water Company. The analytical data of the chemical examination establish beyond all doubt that not one single spring in the Farleigh branch of the Maidstone water supply was in the smallest degree contaminated with sewage. The alarming report that one of the springs was shown to be sewage-polluted appears to have originated in an eccentric interpretation of the data of the ammonia method. The author of that method regards with some degree of satisfaction the general acceptance of the method of water analysis which he brought out thirty years ago, but that gratification is not unalloyed. There are those who use the forms of the ammonia method but deny the spirit of the method; and the medical officer of Maidstone is one of them. In his hands the ammonia method leads to very different results from that which was aimed at by the author.

There is much misapprehension as to the real drift of Dr. Washbourn's evidence. That in no instance did that gentleman identify the typhoid bacillus in any sample of water is indeed well known; but it is stated that he reports the identification of the coli bacillus in the Tutsham-in-Field spring, and there appears to be an irrational tendency to make the coli bacillus do duty for the typhoid bacillus.

The Tutsham-in-Field spring is the only spring in which any noteworthy amounts of coli bacilli were registered by Dr. Washbourn; and in reference to the identification of the bacillus, Dr. Sims Woodhead gave evidence in opposition to Dr. Washbourn. "I do not think that he has given us sufficient data to arrive at his conclusions," said Dr. Sims Woodhead in reply to cross-examining counsel.

The Tutsham-in-Field spring, which on September 19th had yielded water which chemical analysis showed to be entirely unpolluted, was cut off at 10.30 A.M. on September 20th, and the next day, after it had been injured by being cut off, and then (when it no longer formed any portion of the Maidstone water supply) it fell into Dr. Washbourn's hands.

The spring is small, forming only one-seventieth of the Farleigh supply. Since it ceased to supply Maidstone it has been investigated bacteriology on four occasions, twice by Dr. Washbourn and twice by Dr. Sims Woodhead, who was so little disturbed by the result of his examinations that he said, in evidence before the Local Board Commission, "I should drink it myself."

I have very carefully investigated the circumstances of the Maidstone epidemic, and I repeat my conclusion, "Between the outbreak of typhoid fever in the year 1897 and the water supply of Maidstone there was no connection whatever."—I am, etc.,

New Malden, Surrey, March. 23rd. J. Alfred Wanklyn.

*** The Tutsham-in-Field spring was twice examined chemically in Dr. Adams's laboratory. The specimens were collected on September 19th and October 19th, and are numbered 2 and 17 in his table of analyses. In the former sample the nitrates, etc., were 50 per cent. in excess of the local standard, the total solids 20 per cent., and while the albuminoid ammonia was nearly ten times that usually found in the ragstone waters, "the chlorine was a shade too high." There was no free ammonia, the albuminoid was 0.13 per million. The water therefore falls under Mr. Wanklyn's own Class III of "dirty waters.....characterised by yielding more than 0.10 parts of albuminoid ammonia per million." We have in a recent number drawn attention to the absence of any large excess of chlorine in most of the Maidstone sources examined last autumn. So far, therefore, it is quite open to Mr. Wanklyn to claim that most if not all of this organic pollution may have been of vegetable origin. Can we refuse to acknowledge the animal origin of the coli bacilli found by Dr. Washbourn in the sample collected on September 21st? One cubic centimetre of this water furnished 560 colonies of bacilli, and 60 of these colonies resembled the colonies of B. coli or B. typhosus. They turned out not to be the latter. While we may admit the fairness of Mr. Wanklyn's criticism so far as the inferences from the chemical analyses go, we cannot for a moment admit that any quantity of merely negative evidence, either chemical or bacteriological, as to the conditions of the water at the end of September can have force enough to justify the conclusion that an outbreak which had its origin a month earlier was not due to a polluted water supply. Negative evidence of this sort unfortunately proves nothing; but neither the chemical nor the bacteriological evidence is entirely negative, and so far as it goes it tends rather to confirm the position taken up from the first by Mr. Percy Adams—a position which led to action followed in natural sequence by the steady disappearance of the epidemic.

THE ALKALINITY OF THE BLOOD IN GOUT.

Sir,—I am much interested to see in Dr. Luff's paper on the above subject in the British Medical Journal of April 23rd, p. 1066, that a process has been devised for estimating the alkalinity of the blood which he considers reliable.

I have myself made some researches on the alkalinity of the blood, but did not publish them, because they merely seemed to confirm the results of others which I had already quoted in showing a general correspondence between the reactions of the blood and urine in their more important fluctuations.

With regard to Dr. Luff's conclusion that "the alkalinity of the blood of gout is not necessarily diminished during an attack," his own figures show that it is slightly below normal during the attack, and this in spite of the administration of colchicum and citrate of potassium, which would tend to raise it.

Again, the whole point of a gout attack, as I understand it, is that when a patient has his blood relatively saturated with uric acid, with and as the result of increased alkalinity, anything that diminishes that alkalinity will throw some of that urate out of solution, and this occurs equally whether the alkalinity falls to normal or beyond it, or fails to reach that point; the result depends on the relative saturation with uric acid, and the relative fall in the alkalinity of the blood that supervenes.

But Dr. Luff does not tell us what was the condition of the blood before the attack, so that it is impossible to say whether there was a fall of alkalinity at its commencement, and reference to a normal or supposed normal standard is obviously of no use.

The case is said to be one of subacute gout, but as no temperatures are given no judgment can be formed as to whether fluctuations of alkalinity were likely to be well marked.

With regard to his conclusion that "No constant relationship exists between the alkalinity of the blood and the acidity of the urine during an attack of gout," I should like to ask Dr. Luff how often and at what hour or hours of the day the alkalinity of the blood was examined; for as the hourly excretion of acid in the urine is nearly four times as great in some hours of the day as in others, it follows that, if there are corresponding fluctuations in the alkalinity of the blood, its alkalinity can only be compared with the total acid in the day's urine by examining it very often.

Take the parallel case of uric acid, as I showed in reference to my recent demonstration at the Royal Medical and Chirurgical Society,[1] if the blood is examined only once in twenty-four hours, and the result is compared with the uric acid excreted in the urine of twenty-four hours, no very close correspondence is found, but if the blood and the urine are examined hour by hour a most marked correspondence between the blood granules and the uric acid excretion comes out, as I showed in my curves.

But even Dr. Luff's own figure (p. 1067) shows some general correspondence between the urine and blood, as from February 6th to 17th we see a rise in the excretion of acid in the urine and a fall in the alkalinity of the blood, and later on the alkalinity of the blood rises and the acidity of the urine falls, and with observations at intervals of two days no closer correspondence can reasonably be expected.

In working at the urine I should regard such disjointed records as valueless, as it is frequently impossible to tell the

[1] British Medical Journal, March 26th p. 812.

meaning of a given fluctuation till you see what happens next day, and I believe that much more useful results could be obtained by examining the blood and urine for a series of consecutive hours at the beginning of an attack, especially if they had been previously examined at similar hours between attacks.—I am, etc.,

Brook Street, W., April 25th. ALEXANDER HAIG.

THE DARENTH ASYLUM SCANDAL: A DISCLAIMER.

SIR,—The victim in the above case was Mr. Alfred Thomas Oliver White, for sixteen years assistant medical officer (nine months Acting Superintendent) of the Adult Asylum at Darenth, near Dartford, under the Metropolitan Asylums Board. During the past two months I have received by mistake many expressions of sympathy, which culminated last week in the unanimous resolution of a District Branch of the British Medical Association "expressing great sympathy at the disgraceful way in which I had been treated by the London Asylums Board at Dartford." I desire to state that the Visiting Committee of this Asylum is a statutory one appointed by and from the Corporation of London, with the present Lord Mayor for its Chairman, and I feel that it is due to them as much as to myself to enter this disclaimer, for during the past eleven years that I have been their chief officer I have ever received at their hands liberal and sympathetic consideration, energetic support, and the most impartial justice.—I am, etc.,

ERNEST W. WHITE,
Resident Physician and Superintendent City of London Asylum,
April 25th. near Dartford.

THE ACTION OF CHLOROFORM.

SIR,—The question as to the cause of death during the administration of chloroform is one of the greatest possible interest not only to the profession, but also to the public. I have followed the controversy between Drs. Lawrie and Brunton on the one side, and Dr. Leonard Hill, etc., on the other, and I cannot say that I am satisfied with the result. Like Drs. Lawrie and Brunton, I had the good fortune to be a pupil of Mr. Syme, but, much as I admired him as a man and as a surgeon, I do not think his dictum as to the action of chloroform should be pressed too far. There must be many who have had far more practical experience in the administration of chloroform in the human subject than Mr. Syme had, whose opinion cannot be set aside, more especially if it agrees with the results of carefully performed experiments on the lower animals. All that I remember Mr. Syme telling us with regard to chloroform was to give plenty, and get the patient properly under its influence; and there can be no doubt that his advice was good. I have seen chloroform administered with such timidity and stupidity in some theatres as to bring discredit upon it as an anæsthetic agent.

As to the question whether the respiration or heart fails first, I have only seen one case in which death nearly took place. It was in the theatre of the Edinburgh Infirmary, when Professor Spence was performing Syme's operation. I stood by the table as a dresser, and was the first to notice that respiration had ceased. I called the attention of the chloroformist to the fact, and he informed the Professor, who, engaged in tying the vessels, had not observed anything to alarm him. Artificial respiration, after much excitement and some suspense, restored animation.

I was in the habit of giving chloroform in midwifery practice, and only on two occasions had I any cause for alarm, in both cases from the state of the pulse, for I was accustomed to watch the pulse most attentively, and he must have studied the pulse to little purpose who dare give chloroform without watching it. The respiration is easily watched, and may vary little, but the pulse always changes, not only in tension, but in rate, and gives the first indication to the educated touch of the approach of danger. I speak merely as a practitioner, and from what I know from personal experience, but to me the mode of administration seems a question as worthy of discussion as the cause of death.

Ever since I heard Professor Simpson's lecture on chloroform to his midwifery class, and saw him give it to his janitor, I have followed his plan, and strange to say I have never seen anyone else use it. He took a plain white towel, laid one end of it over the man's face as he sat in a chair, and let the chloroform fall, drop by drop, about the tip of the nose. Without a struggle, and in a remarkably short time, the man was fully under its influence. In that way, I believe, sufficient air enters the lungs, along with the chloroform, to prevent any feeling of suffocation or cause any struggling. The towel can always be got, a proper dropping bottle should be used, and if Simpson's plan were universally adopted, we would hear less of the superiority of ether over chloroform, and I cannot help thinking that fewer deaths would occur either from lung or heart failure —I am, etc.,

Denholm, N.B., March 27th. JOHN HADDON, M.D.

SIR,—I am at one with my friend Mr. Lawson Tait that nothing more can be learned from experiments on animals than Snow had learnt and taught fifty years ago. I am fully convinced from clinical observation that had Snow's teaching been universally adopted from the first, neither ether nor chloroform would have been accountable for a single death. If a middle-aged man of average size is supplied with air mixed with vapour of ether, in the proportion of 45 per cent. of vapour to 55 per cent. of air, he will as a rule consume about 2 drachms of ether a minute, if a properly constructed inhaler is employed. It is not all absorbed, however, for a part is expired after passing no further than the trachea. At the end of the first minute he is usually in the first degree of etherisation, of the second minute in the second degree, of the third minute in the third degree, and at the end of four minutes (after an ounce of ether has been used) in the fourth degree, or that of complete anæsthesia.

Snow ascertained, after much careful observation, that the proportion of ether in the blood is 2 drachms in the second degree, a little over 4 drachms in the third degree, and 8 drachms in the fourth degree. Snow further ascertained that whilst chloroform requires 288 parts of serum to dissolve it, 100 parts of serum will dissolve 5 parts of ether at 110° F.

By means of a regulating inhaler Snow usually rendered adult patients insensible in four or five minutes and children in two or three minutes. He had notes of 152 cases in which he administered ether before chloroform was introduced, and 12 in which he exhibited it afterwards to patients of all ages and conditions and in most varied operations, and the patients recovered without any ill effects. In two cases of alleged death from ether Snow expressed it as his opinion that the patients died rather from the want of sufficient air to the lungs than from the effects of ether, and this error I am afraid is too liable to be perpetrated when ether is employed. Chloroform, from my point of view, is a much more trustworthy agent; it is prompt and uniform in its action when inhaled slowly and gradually from a suitable inhaler, where the amount inhaled can be accurately ganged. By this means 12 minims of chloroform will produce the second degree of narcotism against 120 minims of ether; 18 minims the third degree against 240 minims of ether; 24 minims the fourth against 480 minims of ether.

No one who gives these results a little attention will be surprised to learn that Snow, like Simpson, considered chloroform a more trustworthy and a safer agent than ether, but I am convinced that the safety of the patient does not depend on the agent employed, but upon the method and manner in which it is administered in a given length of time. Absolutely safe anæsthesia is more readily ensured, as Snow has shown, with pure chloroform than with pure ether. Commencing its administration with about $\frac{1}{20}$, $\frac{1}{15}$, $\frac{1}{10}$ measured minim doses, gradually rising to $\frac{1}{2}$, and never exceeding $\frac{3}{4}$ minim doses, nothing but perfectly safe anæsthesia can result, with entire absence of any symptoms which might create alarm.

Waiting for the results of clinical research on human patients is, I fear, relying on a rotten reed. Clinical observation on man always has shown, and again will show, that death under or from chloroform always was and always will be the result of giving a lethal dose, due to the invariable, uncertain, or unsafe, or as it is now called the "open" or usual way in which the chloroform is taught to be administered, trusting to the patient to eliminate the enormous excess of vapour, and watching for a change of colour in the patient's face, a symptom which can only present itself after the heart is completely, or nearly completely, paralysed.—I am, etc.,

Glasgow, April 18th. ROBERT BELL.

*** **This correspondence must now cease.**

VACCINATION *VERSUS* SMALL-POX

Sir,—In view of the very well-known enormous mortality caused by small-pox no later than the seventeenth century, when millions of people fell victims to this fearfully destructive malady, it is wondrous strange, notwithstanding the vast amount of evidence of the very small mortality from this extremely loathsome zymotic disease since the great boon, vaccination, was conferred upon the human race, as a powerful protection against the recurrence of the ravages of small-pox in Europe, Asia, and America, by Dr. Jenner, of imperishable renown, that vaccination under such circumstances is so little valued by the lower classes of the community.

I need scarcely remind your readers that in 1858 "people of all countries" came forward to testify their gratitude to the great English physician, Dr. Edward Jenner, for his grand discovery by subscribing for the erection of a statue to his memory in Trafalgar Square, where in 1858 Prince Albert presided at the inauguration ceremony.

Historical Memoranda.—Small-pox is said to have been known in China 1,122 years B.C. It was described by Rhazes, an Arabian physician, A.D. 900. In the eighteenth century several European sovereigns died of small-pox, namely: In 1712 the Emperor of Germany; in 1730 the Emperor of Russia; in 1741 the Queen of Sweden and Louis XV of France; in 1712 the Dauphin and Dauphiness of France and their son; and in 1694 Mary Queen of England, the consort of King William III.

Having while a public vaccinator for forty-four years, and a medical officer of health for twenty years, taken great interest in the subject of vaccination, I now confidently express my opinion that honestly and perfectly performed vaccination almost invariably confers protection against small-pox for about ten years, and I am of opinion that after that interval of time from primary vaccination all residents in very populous and crowded locality should, to ensure life-long protection from the disease, submit to revaccination, preferably with glycerinated calf vaccine lymph.

The theories and objections adverse to vaccination are, I believe, mainly founded on notable fallacies strangely countenanced by a few eccentric physicians and some half-educated crotchety people. No proof of any organic disease or malady permanently injurious to health as the result of vaccination has ever come under my notice, but I have seen cases of simple erysipelas caused by mismanagement of the vaccinated arm, the infant's nurse having allowed a tight sleeve to rub the arm and rupture the vesicles, so causing great irritation, sometimes increased by a noxious dye in the sleeve of the child's dress. The rashes sometimes said to be due to vaccination are often the effects of dietetic errors of nursing mothers, "wet nurses," or foster mothers, especially when there is an insufficient supply of woman's milk, the deficiency being supplied by cow's milk with farinaceous food—neither the natural nor proper food for infants only a few months old.

Since bacteria, bacilli, micrococci erysipelatosus, and other microscopic animalculæ have been in vogue, some of them have been credited by some theorists with causing a great variety of zymotic diseases by the agency of vaccination; but erysipelas, and syphilis if possible present, excepted, I regard cutaneous eruptions in children while "breeding" or cutting teeth simultaneously with vaccination as unimportant ailments.

In reference to the allegation that a considerable number of infants die annually from vaccination, I must observe that the death-rate of infants under the age of 3 months is always very high, and that many of them die unvaccinated before that age. Being subject to many morbific influences during the first year of life, I ask why the mortality should be less if they remain unvaccinated?

It was shown about forty years ago by Dr. Stark, a Scottish physician, that in Scotland, where vaccination had been very much neglected, "that more than 80 per cent. of all the deaths from small-pox in that country had happened in children under 5 years of age."

In the first part of this century nothing was more common than to meet daily in any town many adults with their faces dreadfully disfigured, being speckled with "pock holes" and scars, some of the people being deaf, or partially or quite blind from small-pox.

Cases of small-pox are now unknown in the following classes of persons, namely: Teachers in elementary and other schools, post-office clerks and postmen, police constables, soldiers, sailors, etc.; all of them, though vaccinated in childhood, are always revaccinated as soon as they are first employed to serve under the English Government.

A large proportion of the 1,300 recent small-pox cases in the very populous borough of Middlesbrough have, doubtless, been merely modified cases of young persons over the age of 10 years, very many of them previously, probably, only slightly vaccinated, as proved by having only one or two cicatrices, or perhaps three very small and indistinct ones, affording very scant protection to such persons when exposed to the virulent effluvia from small-pox cases issuing from the water-closets and house drains conveying sewage away from the infected houses and hospital to the street sewers in badly sewered towns, such as Gloucester, Leicester, and Middlesbrough.

The two dissentient Royal Commissioners, whether or not supported by their chairman, an ex-Lord Chancellor, must be bold men indeed to set up theories and opinions on small-pox and vaccination in disparagement of the vital statistics on this subject in the published works of so talented and justly celebrated an epidemiologist as Sir John Simon, whose very important evidence in reference to the great value of vaccination as a protection against the disease in question has, from time to time, been very abundantly corroborated by such eminent experts in medical science as Dr. Seaton, formerly medical officer to Her Majesty's Privy Council, Dr. Sir Thomas Watson, Mr. Marson, Dr. Aitken, and other very celebrated physicians.—I am, etc.,

F. J. Sandford, M.D., V.D.

Market Drayton, Salop, April 19th.

THE TEMPERANCE QUESTION.

Sir,—I think it would have been well had Dr. Coates explained some of the phrases he uses. He speaks, for instance, of a race "with developed powers of restraint." I know what evolution of the race means, and I know what development of the individual means, but what development of the race means I do not quite know. Does he use the word "development" as synonymous with evolution? Then this evolution must proceed by the transmission from parent to child of inborn or of acquired characters. If by the transmission of inborn characters, how would he provide for or expect the elimination of those who had the least powers of restraint? If by the transmission of acquired characters (that is, cultivated powers of restraint), then I have only to say that no instance of the transmission of an acquired character has ever yet been proved. It is doubtful, however, whether he uses the word in this sense, for he says: "The Mohammedan races have avoided alcohol for nearly seven hundred (*sic* twelve hundred?) years, and although they have had plenty of opportunity (*sic*) to try alcohol ..... yet they still refrain, because they believe it would do them harm, in this case in a future life. This means that their moral powers of restraint are so developed ....." It appears, therefore, that Mohammedans are restrained by *fear*. Is, then, the criminal who refrains from murder through fear actuated by *moral* motives? I am reminded that Artemus Ward once administered moral 'suasion to his opossum with a tent peg till the little cuss squealed. It may interest Dr. Coates to learn that besides by threats of Gehenna, the moral natures of Mohammedans have occasionally been "developed" by the pouring of molten lead down the throats of the intemperate among them. Moreover, Mohammedans as well as the natives of China and India, whom he also instance use opium, and all experience proves that the prevalent use of one powerful narcotic is usually a bar to the extensive use of any other.

It appears that Dr. Coates expects that by the use of coercive means a race will be "developed," so "moral" as to be highly "resistant" to intemperance, and presumably to other forms of naughtiness as well, a beautiful Utopian idea, which strikes me as—Utopian. Morals are affairs of time and place; our moral system, which condemns among other things the excessive use of intoxicants, may be, and I devoutly hope is, *the* correct moral system, but there is no proof that it will for ever persist. Moreover, moral systems in the long run are powerless against innate cravings. The

sexual craving is not stronger than the alcoholic among savages and in many of us, but for how long has our moral system fulminated against illicit sexual intercourse, and with what results? Dr. Coates pins his faith to repressive measures and dilute solutions of alcohol. Is he aware that we have evidence of constant repressive measures since the time of the Ancient Egyptians, and in England since the sixth century. I fear I am becoming a little weary of pointing out that savages, who have used dilute solutions from time immemorial, when they have the opportunity, are among the most intemperate races on earth.—I am, etc.,

Southsea, April 5th. G. ARCHDALL REID, M.B.

VEGETARIANISM AND INDIAN EXPERIENCE.

SIR,—I desire to refer very briefly to the letter of Dr. Haddon in the BRITISH MEDICAL JOURNAL of February 19th, page 528, in which he asserts that "it has long been known that vegetarians . . . . are free from those digestive derangements," etc., so common amongst our patients. I am sure he will excuse me when I state simply that a year's practice in India would suffice to convince him that no class—vegetarian, chiefly vegetarian, or regular meat eater—is free from digestive derangements. I have at the present time, in my wards at the General Hospital here, two or three very severe cases of dyspepsia in pure vegetarians, and the worst case I ever saw in India—an adult man weighing 52 lbs. on admission—was a pure vegetarian! Space precludes further details. I merely wish to draw attention to an error of fact.

I agree most heartily with his closing statement that it is "surely time that the profession in this country paid more attention" to dietetics, but would add, in order to prevent possible misunderstanding, that I do not believe salvation lies in universal vegetarianism. The case alluded to above was saved from death, in the first instance, by the "ephemeral fad" of peptonised milk and essence of chicken, and left the hospital weighing 104 lbs. Further, I have heard and read far wilder statements by professed vegetarians than by their opponents, the ordinary medical writers and practitioners of the day. The vegetarian in Britain, as such, is a faddist, and hence, in the sense in which the word is ordinarily used, the average and the best medical men alike, I take it, do "desire to be exonerated from the onus of declaring themselves" to be of that persuasion.—I am, etc.,

A. E. GRANT,
Madras, March 10th. Surgeon-Captain, I.M.S.

THE PATHOLOGY AND TREATMENT OF GENU VALGUM.

SIR,—May I beg space for a few lines suggested by Professor C. A. Morton's article under the above heading in the BRITISH MEDICAL JOURNAL of April 16th? The variety observed in the explanations given by different surgeons as to the origin of knock knee is very puzzling to students and more or less misleading to practitioners. Experience has brought me to recognise various factors, which may be classified as follows:

1. Changes in soft parts—for example, ligaments and softened and thickened epiphysial cartilages.
2. Deformity in the lower end of the femur.
3. Deformity in the upper end of the tibia.

These three factors are usually all present, but in some cases the deformity is the expression of only one of them; for instance, in a certain number of fairly pronounced cases I have found that by supporting the internal condyle of the femur with one hand whilst the other presses the foot inwards towards the middle line of the body, the deformity can be made to disappear completely. In such cases the change of form is due to stretching of ligaments on the inner aspect of the joints, and to rachitic changes in the softened and thickened epiphysial cartilages. Such cases never demand operative measures.

I feel sure that the constant mention of operation in connection with genu valgum has a bad educational effect. Students come to regard operative treatment as a routine measure instead of one that is only exceptionally called for as a result of the neglect of sufficiently early instrumental treatment. Professor Morton gives neither the ages of his two patients nor the duration of the deformity, but, judging from the amount of cartilage seen in the skiagrams, I should take them to be cases which might have been completely cured without recourse to any operation.—I am, etc.,

Old Cavendish Street, W., April 18th. J. JACKSON CLARKE.

Obituary.

HENRY MARSHALL, M.D., F.R.C.S.EDIN., F.R.S.E.

IT is with great regret that we have to record the death of Dr. Henry Marshall, which took place at 28, Caledonia Place, Clifton, early on Sunday morning, April 24th, from pneumonia, after an illness of ten days' duration.

Dr. Marshall, who was 65 years of age, was the youngest son of the Rev. James Marshall, a former vicar of Christchurch, Clifton, and a grandson of the Rev. Leigh Richmond. His eldest brother survives him; the second, Sir James Marshall, died a few years ago.

A graduate of Edinburgh University, Dr. Marshall had as fellow students Lord Lister and Dr. John Beddoe, and was much attached to the teachings and traditions of his old University. He was a Fellow of the Royal College of Surgeons and of the Royal Society of Edinburgh.

Dr. Marshall began practice in Clifton about forty years ago in partnership with Dr. Colthurst. He was soon afterwards elected Surgeon to the Bristol General Hospital, a post which he held for ten years, and on his retirement from this was appointed Consulting Surgeon.

Dr. Marshall was a skilful and rapid operator well abreast of the surgery of that day, and an enthusiastic follower of the teachings and practice of his old master Syme. Had Dr. Marshall chosen he would no doubt have become a prominent surgeon, but at this period of his career he determined to devote himself to strictly medical work, and in this field occupied a somewhat unique position, doing but little consultation work, but having a very extensive practice among the well-to-do classes, though his generous nature prompted him to do a large amount of gratuitous work among the less fortunate; it was one of these gratuitous patients who some years ago brought an action against him for signing a certificate in lunacy. Dr. Marshall successfully defended this action, and he was much gratified by the handsome way in which his medical friends rallied round him, and subscribed a sum which relieved him of the heavy pecuniary liabilities the trial involved.

For some years he was Surgeon to the General Hospital, resigning that post in 1873, and from 1862 to 1872 he lectured on medical jurisprudence at the Bristol Medical School. In addition he was formerly Secretary of the Bath and Bristol Branch of the British Medical Association, and in due course occupied the Presidential chair. At the meeting in Bristol in 1894 he was the Chairman of the Dinner and Luncheon Committee.

Dr. Marshall was a strong supporter of the High Church party in Clifton, and for a long period actively assisted the Vicar of St. Raphael's. The proposal to build All Saints, Clifton, found an energetic friend in him, and for some time he assisted in the choir, and though recently he had retired from that post, his interest in that church as well as in St. Raphael's never failed. He was President of the local branch of the English Church Union.

Among his professional brethren Dr. Marshall was much esteemed and respected, and his death from pneumonia on Sunday, April 24th, has caused a gap in the profession. He was an extremely active man, of great physical strength, an excellent gymnast, and an enthusiastic cyclist.

He leaves a widow and three children. The funeral took place on Wednesday, April 27th, at All Saints' Church and Redland Green Cemetery.

ROBERT HENRY SCANES SPICER, M.D.ST.AND.

THE death is announced, at the age of 70, of Dr. R. H. Scanes Spicer, of North Molton, Devon. He was the son of the late Mr. Robert Spicer, of Exeter, and received his professional education at the Middlesex Hospital. After taking the diploma of M.R.C.S.Eng. in 1855, he returned to his native

county and commenced practice at North Molton, where he remained for forty-three years. He became L.R.C.P.Edin. in 1862, and took the degree of M.D.St.And. in 1862. He was at work till the last, and only the day before his death was engaged in setting a fractured leg. He passed away after only a few hours' illness from cardiac failure, of which, however, he had had previous warnings. Dr. Spicer always took the keenest interest in the welfare of the parish and its inhabitants, and many a young man in both hemispheres owes a start in life to his recommendations, advice, and assistance. He was a man of wide general information and culture, and an enthusiastic sportsman of the old school, to which belonged his friends the late Parson Jack Russell, Mr. Froude Bellew, and Rev. John Matthews. Popular and respected by persons of all ranks and opinions in North Devon, he has gone to his rest amidst tokens of widespread regret, leaving five children to lament his loss and cherish his memory.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently passed away are Dr. Worms, of Paris, member of the Académie de Médecine, physician to the Rothschild Hospital, and author of numerous writings on medical and sanitary subjects, aged 69; Dr. Georg Dragendorff, formerly Professor of Pharmacy and Toxicology in the University of Dorpat, and author of works on medicinal plants, poisons, etc., aged 62; Dr. C. Barzilai, sometime Professor in the University of Padua, and physician to the Military Hospital, Venice; Dr. G. Guelpa, who introduced hydrotherapy into Italy, aged 81; Dr. L. G. Hill, of Dover, New Hampshire, a former President of the New Hampshire Medical Society, and Vice-President of the American Medical Association, a descendant of Robert Leighton, Archbishop of Glasgow, aged 85; Dr. Lopez Alonso, Professor in the Medical Faculty of the University of Salamanca, and a well-known writer on medical subjects, aged 44; and Dr. Zancarol, physician to the Greek Hospital, Alexandria.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Deputy-Inspector-General Thomas H. Knott is promoted to be Inspector-General, April 4th. His previous commissions are dated as follows: Surgeon, November 12th, 1867; Staff-Surgeon, December 31st, 1872; Fleet-Surgeon, February 19th, 1883; and Deputy-Inspector-General, May 30th, 1892.

Deputy-Inspector-General George Maclean, M.A., M.B., is also promoted to be Inspector-General from April 5th. He was appointed Surgeon, August 4th, 1862; Staff-Surgeon, February 19th, 1876; Fleet-Surgeon, March 2nd, 1883; and Deputy-Inspector-General, May 8th, 1893.

Staff-Surgeons Charles James and George R. D. Charlton are promoted to be Fleet-Surgeons from March 12th and 19th respectively. Their commissions as Assistant-Surgeons date from September 29th, 1877; as Staff-Surgeons from September 29th, 1889. Fleet-Surgeon James was Surgeon of the *Tenedos* during the Zulu war in 1879 (medal); received the expression of their lordships' great satisfaction at the display of zeal and devotion to duty manifested during the epidemic of yellow fever at Jamaica, when attached to the hospital in 1882. Fleet-Surgeon Charlton was Surgeon of the *Triumph* (Flagship *Pacific*) during the Chili and Peruvian war, 1879-80-81; was detailed for duty at the hospitals at Lima to aid the sick and wounded during the course of hostilities; received the thanks of the Admiralty and a medal and thanks from the Peruvian Government for services rendered.

The following appointments have been made at the Admiralty: Howard Todd, Fleet Surgeon; Arthur R. H. Skey, Surgeon, to the *Illustrious*, May 10th; Sidney Roach, Surgeon, to the *Renown*, for the *Columbine*, April 21st; William Hackett, M.D., Surgeon, to the *Cambridge*, April 23rd; Percival M. May, Surgeon, to the *Victory*, additional, February 8th.

Captain F. W. Fisher presided at a court-martial on board the *Victory*, flagship at Portsmouth, on April 21st, when Staff-Surgeon G. F. Dean, M.B., of the *Alexandra* coastguard ship at Portland, was charged with drinking to excess, and therefore becoming ill and unfit for duty. A circumstantial letter alleged that the accused was absent from duty on several occasions, and was eventually sent to the Royal Naval Hospital, Haslar, and treated for alcoholism. The prisoner pleaded guilty, and threw himself on the mercy of the Court. He stated that he was invalided with shattered health after service on the Zambesi, and consequently alcohol had more effect on him than on others. His service record described his character as very good. He was sentenced to lose one year's seniority, and to be dismissed his ship.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel W. B. Miller, M.D., is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* L. A. Irving, retired from April 6th. Brigade-Surgeon-Lieutenant-Colonel Miller entered the service as Surgeon, March 31st, 1874; became Surgeon-Major March 31st, 1886; and Surgeon-Lieutenant-Colonel, March 31st, 1894. He was in the Egyptian war in 1882, being present at the action at Kassasin on August 28th. He was mentioned in dispatches, and has a medal and the Khedive's bronze star for the campaign.

Surgeon-Lieutenant-Colonel G. D. Bourke is also promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* A. A. Macrobin, retired from April 13th. Brigade-Surgeon-Lieutenant-Colonel Bourke's previous commissions are thus dated: Surgeon, September 30th, 1874; Surgeon-Major, September 30th, 1876; and Surgeon-Lieutenant-Colonel, September 30th, 1894. He served with the Nile Expedition in 1884-85 (medal with clasp, and Khedive's star); with the Egyptian Frontier Field Force in 1885-86, including the engagement at Giniss; with the Chin-Lushai Expeditionary Force in 1889-90 (mentioned in dispatches, medal with clasp); and with the Burmese Expedition in 1887-89 (medal with clasp).

INDIAN MEDICAL SERVICE.

Brigade-Surgeon-Lieutenant-Colonel Sir A. S. Lethbridge, M.D., K.C.S.I., Bengal Establishment, has retired from the service from April 1st. He was appointed Assistant-Surgeon, September 30th, 1867; and became Brigade-Surgeon-Lieutenant-Colonel, April 9th, 1892.

Surgeon-Lieutenant-Colonel D. N. Parakh, Bombay Establishment, also retires from March 14th. He ranked as Assistant-Surgeon from September 30th, 1874; as Surgeon Lieutenant-Colonel from September 30th, 1894.

Surgeon-Lieutenant-Colonel O. Baker, Bengal Establishment, is permitted to retire from the service from July 6th next. He was appointed Assistant-Surgeon, April 1st, 1873, and became Surgeon-Lieutenant-Colonel twenty years thereafter.

Brigade-Surgeon-Lieuenant-Colonel A. Crombie, M.D., Bengal Establishment, also retires from the service from April 7th. His first commission dates from March 30th, 1872; that of Brigade-Surgeon-Lieutenant-Colonel from August 11th, 1896.

Surgeon-Lieutenant-Colonel J. F. Fitzpatrick, M.D., Madras Establishment, likewise retires from July 9th next. His commission as Assistant Surgeon bears date April 1st, 1868; as Surgeon-Lieutenant-Colonel, April 1st, 1888.

Brigade-Surgeon George Moncrieff Govan, M.D., Bengal Establishment, retired, died at Almora, N.W.P., India, April 1st, aged 69 years. He was in the Burmese war in 1852-53, being present at the capture of Rangoon (medal with clasp), and with the Bhootan expedition in 1864-66, including the taking of the Bala stockades (clasp).

The following promotions have been made: *Bengal:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels from March 30th: J. ffrench-Mullen, M.D.; E. Cretin, M.B., F.R.C.S.; A. Duncan, M.D., B.S., F.R.C.S.; G. F. Nicholson, M.D., F.R.C.S.I.; S. F. Bigger, M.B.; Sir G. S. Bobertson, K.C.S.I. Surgeon-Captains to be Surgeon-Majors from April 1st: W. G. Thorold; P. Hehir, M.D.; L. J. Pisani, F.R.C.S.; W. R. Edwards, M.D.; C. Mactaggart, M.B.; J. F. Evans, M.B.; G. J. H. Bell, M.B.; J. T. Daly, M.B.; H. Fooks; E. Hudson, F.R.C.S.; A. W. Dawson, M.D.; W. H. B. Robinson. *Madras:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels from March 30th: V. H. Pope, M.D.; R. Pemberton: J. J. Moran, M.D.; W. A. Quayle, M.D.; H. Armstrong. *Bombay:* Surgeon-Majors to be Surgeon-Lieutenant-Colonels from March 30th: C. Monks; G. H. Bull, M.D.; F. F. MacCartie, M.B., B.Ch., C.I.E.

It has been decided that when officers of the Indian Medical Service hold appointments outside the cadre of the service, they shall be seconded if such employment is to last more than a year, on the understanding that an officer recruited to complete the establishment in the place of one seconded shall be absorbed on the first occasion of recruitment after the reversion of the seconded officer to his regular appointment within the cadre of the service.

THE VOLUNTEERS.

Captain H. M. Brownfield, 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, April 20th.

Surgeon-Major D Cowie, M.B., 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry, is promoted to be Surgeon-Lieutenant-Colonel, April 20th.

Surgeon-Lieutenant J. Dewar, M.B, 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders, has resigned his commission, April 20th.

Surgeon-Lieutenant-Colonel W. J. Fleetwood, M.D., 4th Volunteer Battalion the King's Liverpool Regiment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Mersey Brigade Volunteer Infantry, April 20th.

THE FRONTIER RISING IN INDIA.

Surgeon-Captain H. F. Whitchurch, V.C., in medical charge of the 24th Bengal Infantry, is specially mentioned by the officer in command of the Mekran Field Force on the North-West Frontier of India, for the readiness of his arrangements. "He was" (it is added) "in the firing line attending to the wounded from the time the action commenced, and was from the beginning of the expedition in medical charge of the force, and looked after us well."

The *London Gazette* of the 22nd instant contains the despatch of Sir Bindon Blood reporting the operations of the Buner Field Force in January last. This despatch has been already noticed in the British Medical Journal of March 26th, where the particulars of special interest to medical readers are cited.

DEMOBILIZATION OF THE TIRAH FIELD FORCE.

On the preliminary reduction of the Tirah Force, the following field hospitals and sections will be demobilised: British field hospital No. 11, Sections A and B; No. 8, C and D; No. 9, A and B; No 13, A and C; No. 14, A and B; Nos. 23 and 24. Native field hospital No. 43, 44, 45, 48, and Sections A and B, 54 and 63.

The Base General Hospitals at Rawal Pindi have been closed, those at Nowshera receiving the sick and wounded until further orders. No. 2 Medical Store Depôt has been demobilized.

Only 3 officers were on the sick list in the week ending April 1st, 2 the result of accidents. The general health of the troops was excellent.

MEDICO-LEGAL.

THE CORONERS ACT, 1887: FEES OF MEDICAL OFFICER OF HOSPITAL IN *POST-MORTEM* EXAMINATIONS.

HORNER *v.* LEWIS.

A MOST important question came before the Queen's Bench Division on April 21st, on appeal from the decision of the judge of the Brentwood County Court as to the right of a honorary medical officer of a cottage hospital to a fee for a *post-mortem* examination of a patient made by order of the coroner.

Mr. F. Marshall, Q.C., Mr. Samuel Fleming, and Mr. Naldrett appeared for the plaintiff (the appellant); Mr. Macnamara, Q.C. (Mr. Braxton Hicks with him) for the defendant.

The plaintiff claimed the prescribed fee of £2 2s. for making a *post-mortem* examination by order of the Coroner for East Essex (the defendant in the action), and for attending the inquest under subpœna to give evidence as a medical witness.

We gather from the *Times* report that the facts were these. On August 25th the defendant held an inquest at the Leyton, Walthamstow, and Wanstead Children's and General Hospital, at Walthamstow, on the body of a child, aged 7 months, who had died in the hospital on August 22nd, of which hospital the plaintiff, Dr. Charles Julian Horner, is honorary medical officer, receiving no remuneration either by way of fees or honorarium or otherwise. He attended the deceased while a patient in the hospital, and by order of the coroner made the *post-mortem* examination, and attended at the inquest under subpœna and gave evidence. He applied for his fees to the coroner, but none had been paid to him, the coroner basing his refusal on Section XXII (2) of the Coroners Act, 1887. The case was brought to obtain a decision in order that if the money were payable the coroner might obtain payment from the county council. The action was a friendly one, and it was agreed that each party should pay his own costs.

The hospital was founded in 1878, and was for the free admission and relief of patients irrespective of creed and party from all parts of Leyton, Walthamstow, and Wanstead, and in accordance with the deed of gift of the freehold house and grounds known as Holmcroft for the purpose of a hospital at least two-thirds of the number of beds were to be reserved for children under 16. By one of the rules persons from Leyton, Walthamstow, and Wanstead were to be admitted by a governor's letter free of charge, and persons from the neighbouring parishes might be admitted by governors' letters and the payment of not less than 5s. per week.

Mr. Marshall, for the plaintiff, stated there were two questions: 1. Was the cottage hospital a public institution within Section XXII (Subsection 11) of the Coroners Act? 2. Was the plaintiff a medical officer of the institution within the Section, he being a purely honorary officer? The Act of 1887 was a reproduction in substance of the Act 6 and 7 William IV, c. 80, and at that day cottage hospitals were not in existence. He argued that the hospital in question could not be called a public institution, and the plaintiff was not a medical officer within the Section. The Court (Mr. Justice Wills and Mr. Justice Kennedy), however, dismissed the appeal, holding that the institution was a public hospital and the plaintiff was a medical officer of such institution, whose duty it was to attend on the deceased.

*** The material parts of Section XXII of the Coroners Act, 1867, are as follows: A legally qualified medical practitioner who has attended at a coroner's inquest in obedience to a summons of the coroner under the Act shall be entitled to receive such remuneration as follows, that is to say: *(b)* For making a *post-mortem* examination of the body of deceased .....and for attending to give evidence thereon, £2 2s. Provided that—(2) Where an inquest is held on the body of a person who has died in a county or other lunatic asylum or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto or used for the reception of the patients thereof, whether the same be supported by endowments or by voluntary subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid shall not be entitled to such fee or remuneration.

ILLEGAL ASSUMPTION OF MEDICAL TITLES.

PROSECUTION UNDER THE MEDICAL ACTS.

CALEB CHARLES WHITEFOORD, of 31, Foley Street, Great Portland Street, was summoned at Marlborough Street on April 20th for wilfully and falsely taking and using titles and descriptions implying that he was registered under the Medical Act, 21 and 22, Vict., c. 90, and Acts amending the same, and for pretending to be, and taking and using the titles Doctor of Medicine and Apothecary contrary to the said Act

Mr Muir Mackenzie prosecuted, and Mr. Schultess Young appeared for the defence.

The evidence for the prosecution showed that in 1868 defendant was entered on the *Medical Register*, he having duly passed the examinations of the Society of Apothecaries and the Royal College of Surgeons. In 1891 he was convicted of performing an illegal operation upon a woman, and was sentenced to five years' penal servitude. In consequence, his name was erased from the *Medical Register* and struck off the lists of Members of the Royal College of Surgeons and Licentiates of the Society of Apothecaries.

Mr. Thomas Tyrrell, a clerk in the employ of the solicitors to the Medical Defence Union, stated that he attended at 31, Foley Street, Great Portland Street, on February 8th, 1898. The premises consisted of a shop, on the fascia of which was painted the words "Portland Provident Dispensary." There was also a brass plate affixed to the door containing the name "Dr. Whitefoord, accoucheur;" also painted under the brass plate the words "For massage and electricity ring the bell." There was a notice in the window as to hours for consultation with the words "value given for money."

He saw the defendant, who examined him, and said that he was suffering from influenza. The defendant went into the shop and returned in a few minutes with a draught, which he handed to witness to drink. Witness remarked that it had a very nice taste, and defendant replied "Yes; French people had taught them how to make medicines palatable." The defendant wrote out a certificate, signing the letters "M.D." after his name; he also gave witness a bottle of medicine and some pills, with directions how to take them. Defendant stated he had a very large practice, and on a second visit of the witness explained that he was a specialist for women.

Mr. Schultess Young (for the defendant) urged that the latter had no intention to deceive, and had been getting an honest living.

Mr. De Rutzen, however, held that an offence had clearly been proved, and the only question for him was the amount of the penalty.

The defendant was fined £5 and £3 3s. costs. The money was paid.

UNQUALIFIED ASSUMPTION OF MEDICAL TITLES.

J. D. B. inquires if the fact of a quack having his medicines put up in wrappers inscribed Dr. ——'s so-and-so may be regarded as an actionable offence.

*** We are unaware of any proceedings having been taken in such a case, but it is not altogether improbable that (if using his own name on the wrappers) an action would lie against the unqualified person under Section XL of the Medical Act, 1858.

CHARGE FOR COMMITTING AN ILLEGAL OPERATION.

THE charge against William Maunsell Collins, M.D., now unregistered as a medical practitioner, to which we have referred in the BRITISH MEDICAL JOURNAL of April 2nd and 9th, was not concluded at the Westminster Police Court at the time we go to press.

The coroner's inquiry into the cause of the death of Mrs. Uzielli has resulted in a verdict that Mrs. Uzielli met her death by an abortion feloniously procured by her medical attendant, Dr. Collins. The coroner stated that that was a verdict of murder, and Dr. Collins would be committed to take his trial on that charge.

At the Central Criminal Court on April 26th, before the Recorder, Mr. Bodkin applied in this case that inasmuch as the magisterial proceedings were still unfinished, the trial should stand over till next session. The Recorder acceded to the application.

FEES TO HOSPITAL OFFICERS FOR CERTIFICATES IN ACTIONS AT LAW.

H. X. C. writes: Reading your leaderette in BRITISH MEDICAL JOURNAL of March 5th, 1898, *re* fees of medical witnesses, reminded me of an incident which happened whilst I was house-surgeon to a London hospital. The plaintiff, whom I had been treating as a hospital patient for some time (I forget exactly how long) called on me and said that he intended prosecuting because of the injuries, and would I put on paper the exact condition he was in when I first saw him. I told him at once that for doing so I should require a fee because it did not come under my duties as house-surgeon. The fee was paid and the certificate given. In due course the trial came on before the present Chief Justice (Lord Russell), and the counsel for the defendant, in commenting upon the amount claimed by the plaintiff for damages, etc., said there was one item which he felt he was called upon to most seriously object to, namely, a fee which had been paid to the doctor, who he understood was a house-surgeon at a public hospital, and, therefore, he was not entitled to ask any fee from any patient who applied at the hospital for treatment. When placed in the box I was immediately tackled by the judge concerning the fee, who, when I had explained that the fee had nothing whatsoever to do with the treatment of the case but was for the certificate mentioned, remarked that he saw no reason why a house-surgeon or house-physician when asked for information which was not within the sphere of his hospital duties should not be paid for such, the amount, perhaps, depending on the status of the individual concerned.

I relate this because, if the Chief Justice allowed such a fee to pass, there ought to be little difficulty in getting any law prohibiting such fees (if there be any) easily altered. I may add that it is only right when a house-surgeon is summoned to attend the law courts, which generally means wasting many days in pacing those passages, during which time his colleague or some friend does his hospital duties—which have to be carried on, although some people, judging by their actions, appear to think otherwise—that for such time, etc., he should receive sufficient compensation.

*** Our correspondent is mistaken in supposing that there is any law prohibiting such fees as those to which he refers; and he was, of course, within his right in charging a moderate fee. House-surgeons also when summoned to attend at courts of justice always receive a fee; but they are not entitled to fees for giving evidence at coroners' inquests. These, however, are usually held within the precincts of the hospital.

AS TO ALLEGED NECESSITY FOR INQUEST.

W. D. J.—From the statement submitted by our correspondent it is quite probable that the coroner was justified in considering an inquest unnecessary; and unless our correspondent has grave reason to assume that an inquest ought to have been held, it would be undesirable for him to take any steps in the matter. It is only by or under the authority of the Attorney-General that the Court can be set in motion in the case of a coroner refusing or neglecting to hold an inquest which ought to be held.

A QUESTION OF CONTRACT.

PRACTITIONER.—The general rule is that, if a man by false affirmance of a thing within his knowledge procures a fact to be done which otherwise would not have been done, and damage has resulted to the plaintiff therefrom, an action would lie. There are, however, many points which would have to be carefully considered in the case quoted by our correspondent, and the practice itself may be as valuable as it was represented to be, notwithstanding the circumstances to which our correspondent alludes, and no damage may have been sustained. Actions

of this kind should not be lightly undertaken, and, should our correspondent contemplate legal proceedings of any kind, we would recommend him first to consult his solicitor and lay all the facts before him.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We are requested to publish the following "Protest and Claim of Right" with preliminary list of signatures:—

Whereas the Council of the said College has, on the 14th instant, refused to hold an election to enable the Members and Fellows thereof to exercise the right claimed in the above petition, on the *ex-cathedra* and irrelevant statements (*a*) "That the Council sees no reason to alter the mode of election" (*b*) "which has been in force for the last forty years," which last-named circumstance, if that mode be illegal, does not make it legal (since rights cannot be waived to the public detriment), but is the strongest reason for its immediate discontinuance:

We, the undersigned Fellows and Members and Members of the College, respectfully protest against the attitude and action of the Council as a violation of our undoubted right, and publicly claim our right as Fellows and Members and Members of the College to our franchise in the election of the representative of the College on the General Medical Council, and invite all Members and Fellows of the College to unite in this protest and claim, and in further, and more effectually, by all the means at their command, pressing the same upon the consideration of the Council.

Victor Horsley.
George Brown, M.R.C.S Eng.
George Jackson, F.R C.S.Eng.
T. Granville Hockridge, M.D., M.R.C.S.
J. Rees Gabe, M.D., M.R.C.S.
Joseph Smith, M.R.C.S.
Boyd Joll, M.B.Lond., M R.C.S.Eng.
W. G. Dickenson, M.R C.S.Eng.
A. S. Morton, M.R.C.S.Eng.
Tom R. Taylor, M.D.Lond., F.R.C.S.Eng.
R. B. Anderson, F.R.C.S.Eng.
Chas. E. Bean, M.R C.S. (Plymouth).
Colin Campbell, M.R C.SEng. (Uppermill).
George Fardons, M.R.C.S. (Plymouth).
T. A. I. Howell, M.R C.S. (Wandsworth).
E. Solly, M.D.Lond., F.R C.S.Eng. (Harrogate).
Neville Williams, M.D., M.R C.S. (Harrogate).
Walter L. Woolcombe, M.R.C.S.Eng., F.R.C.S Edin. (Plymouth).

THE UNIVERSITY OF EDINBURGH.

UNIVERSITY COURT.—At the meeting of the University Court on April 18th the Right Hon. Lord Balfour of Burleigh was in the chair, and Principal Sir William Muir, Drs. Heron Watson and Joseph Bell, Mr. A. Taylor Innes, and Professors Butcher and Laurie were present.

Intimation was made of bequests to the University by the late Honourable Bouverie Francis Primrose, C.B., of £1,000 for the encouragement of original research and £1,000 for the Library.

There was submitted to a committee for consideration and report copy of the trust disposition and deed of directions by the late Sir William Fraser, K.C.B., LL.D., bequeathing to the University (1) £25,000 for the formation of a chair to be called "The Sir William Fraser Professorship of Ancient History and Palæography"; (2) £10,000 for library purposes; and (3) half of the residue of his estate for general purposes, but especially for foundation of bursaries, etc., in connection with history, or for promoting historical research.

Applications for the use of the music class room were granted for meetings of the British Medical Association (Life Assurance Section) in July next.

GENERAL COUNCIL.—The statutory half-yearly general meeting of the General Council of the University of Edinburgh was held in the Examination Hall on April 19th; Sir William Muir, Vice-Chancellor, in the chair. The Business Committee reported that in February last they received a communication from the University Court, informing them that a Committee of the Court had been appointed to consider the best mode of laying before the public the more urgent requirements of the University, and of raising funds to provide for them, and inviting the co-operation of the Council by appointing four of their number to act in conjunction with the Committee of the Court. Having convened a joint meeting of the Committees of the Council, the following members were provisionally appointed to join the Committee of the Court—Dr John Duncan, Mr. D. D. Buchan, LL.B., D.Sc., and Messrs. Thomas McKie and J. C. Lorimer, advocates. These gentlemen had attended several meetings of the Committee, whose work was not yet completed. As the powers of the Universities Commission had now expired, it did not now seem necessary to reappoint the Ordinances Committee; and it was recommended that a cordial vote of thanks be accorded to the members of that Committee for their services. Mr. Campbell Lorimer, in submitting the report, said an urgent appeal had been framed, and was about to be issued, with the view of securing funds for the more immediate requirements of the University.

THE FINANCIAL POSITION OF THE UNIVERSITY.—The Finance Committee, in their report—now that the work of the University Commission was over—directed the attention of the Council to the position as regarded finance in which the University now stood, when the new ordinances had come into operation, and the new administration might be considered as fairly under weigh. When the Act of 1889 transferred the property and financial management from the Senatus to the University Court, enlarged and strengthened, the capital funds were as follows: General University fund, £28,543 11s. 5d.; funds partly or wholly unappropriated to particular purposes, £70,187 3s. 5d.; funds appropriated other than bursary, etc., funds, £82,342 3s. 2d.; bursary, scholarship, and fellowship funds, £234,315 5s. 5d.; Eskbank feu duties, £128 6s. 3d. £415,516 9s. 8d. The only unfettered capital fund with which the University Court can deal is the General University Fund, which in 1889 amounted as above to rather more than £28,500. All the other funds are ear-marked and devoted to educational purposes which cannot be said to be productive of revenue to the University as a whole. The University Court had, therefore, in 1889, to commence its work in the re-ordering of the University, having at its disposal as capital only this sum of £28,500. Prior to the Act of 1889 the revenues of the University were, exclusive of the bursary, etc., funds, broadly these: Emoluments of Principal and Professors—Parliament grant, £5,550; special endowments of Chairs, £6,825; class fees, £32,365—£44,750. General funds—Matriculation, £3,500; graduation, £8,000; interest of capital, £1,000; surplus from income of special endowments, £2,000; Parliamentary grant, £800; miscellaneous, £700—say £16,000. Out of this annual sum of about £16,000 had to be met the whole general working charges of the University, which may be roughly stated at £16,000. After pointing to changes made in the system for fixing the emoluments of the professoriate, the report went on: A very substantial increase to the general fund is the most clamant necessity of the University at the present time, and that notwithstanding the capital of that fund has increased from £28,500 in 1889 to £69,000 in 1897 by the accumulations of Parliamentary grant unexpended before the new ordinances took effect. Until the general fund is put upon a satisfactory footing the University Court will be almost powerless in its efforts to keep Alma Mater in the front rank among Universities. Touching on the plan adopted by the Commissioners in regard to the emoluments of the chairs, the report proceeded: It is impossible to pass from this subject without some anxiety for the future in regard to the charge upon the General University Fund, and that because of the serious shrinkage of the class fees since the Act of 1889. That the University of Edinburgh may progress and expand under the new order of things devised by Parliament and by the Commissioners will be the earnest wish of every alumnus, past and present, and we take it also of the citizens of Edinburgh, who are bound by many ties, parental and filial, to the University, which they have cherished since 1583. How these aspirations are to be carried to fulfilment is a practical question not perhaps easy of solution. The University of Edinburgh has received, and continues to receive, many generous gifts. The magnificent buildings of the Medical School, and the more than magnificent M'Ewan Hall, proclaim the warm heart and princely benefaction. The special endowment funds of the University have, moreover, risen from £387,000 in 1889 to £606,000 in 1897. Yet, with every feeling of gratitude, the truth must be told that the University is in great need of money. In conclusion, the Committee submitted comparative abstracts of last year's accounts. The capital funds for 1896–97 were £675,081, as against £652,205 in 1895–96. The revenue for 1895–96 showed a total of £83,460, as against £84,927 for 1896–97; while the expenditure in 1895–96 was £78,533, compared with £81,439 in 1896–97, showing a surplus revenue in 1895–96 of £4,926, as against £3,488 in 1896–97. The total revenue of the General University Fund in 1895–96 was £44,038; and in 1896–97, £44,979. The total expenditure in 1895–96 was £43,743; and in 1896–97, £46,271, including £3,526 for property purchased.

THE NUMBER OF MEDICAL STUDENTS.

The total number of matriculated medical students was:

Year.	No.	Year.	No.
1890–91	1,951	1894–95	1,512
1891–92	1,852	1895–96	1,455
1892–93	1,736	1896–97	1,419
1893–94	1,560		

Giving an average of 1,641 medical students during the last 7 years.

UNIVERSITY OF DURHAM.

CONVOCATION.—Convocation of the University of Durham was held at the College of Medicine, Newcastle, on Saturday, April 23rd. There was a large attendance, including the Mayor and Corporation. The Warden of the University presided and conferred the degrees. Convocation is now held in Newcastle once in the year at the College of Medicine and at the College of Science alternately.

CONJOINT BOARD IN IRELAND.

SECOND PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

Completed the Examination.—Honours.—C. R. Royce.—*Pass.*—G. F. Alderdice, M. Ballesty, S. Browne, W. R. L. Cherry, W. H. Dodd, F. G. Fitzgerald, M. Gavin, Mrs. Hennessy, C. W. Holden, G. Lacy, J. S. Lane, J. Roberts, H. H. Swanzy, J. Verdon.

In Anatomy.—W. E. Adrian, R. Allison, A. J. Connolly, C. H. Cormac, A. S. Cosgrave, A. D. C. Cummins, W. Davis, J. Dundon, J. F. Fitzgerald, J. J. Givney, R. W. Hillis, R. A. Johnston, M. J. Loughrey, C. R. Millar, J. J. M'Inerney, L. R. M. O'Ferrall, T. F. M. Ormsby, J. F. Peart, J. M. Reynolds, T. Tailon, F. R. Thorn, S. Tucker.

In Physiology.—A. J. Connolly, C. H. Cormac, W. C. Croly, W. Davis, J. Dundon, L. Graham, R. M. O'Ferrall, J. M. Reynolds, G. J. Sexton, T. Tailon.

In Histology.—R. Allison, H. M. Clarke, P. N. Creagh, D. A. Faris, R. A. Johnston, C. R. Millar, L. R. M. O'Ferrall, J. F. Peart, L. G. de Rosario, G. J. Sexton, F. R. Thorn.

In Materia Medica.—C. Cormac, J. Cuffe, G. H. Enright, J. F. Fitzgerald, G. J. Sexton, F. R. Thorn.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, April, 1898.—The following candidates passed in:

Surgery.—J. Buckley (Section II), Manchester; F. W. Chesnaye (Section 1), St. George's Hospital; A. E. Freer, St. Mary's Hospital; F. Hasler (Section I), London Hospital; T. C. Last, St. George's Hospital; F. A. Leete (Section 1), Royal Free Hospital; G. M. F. Pereira, Calcutta and Royal Free Hospital; J. M. Sanderson, Cambridge and London Hospital; T. B. Sellors, Middlesex Hospital.

Medicine.—J. Buckley (Section II), Manchester; E. R. R. Cheesman, Charing Cross Hospital; W. A. Clement, Bombay; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; F. Hasler (Section I), London Hospital; H. W. Hues, Birmingham; E. J. T. Jones, St. Thomas's Hospital; F. A. Leete (Section I), Royal Free Hospital;

Miss Pantin (Section II), Royal Free Hospital; O. T. A. Phillips, Cardiff and London Hospital; J. M. Sanderson, London Hospital.

Forensic Medicine.—E. R. R. Cheesman, Charing Cross Hospital; W. A. Clement, Bombay; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; F. Hasler, London Hospital; H. W. Hues, Birmingham; M. Jenkins, Guy's Hospital; J. Jones, Edinburgh and London Hospital; F. A. Leete, Royal Free Hospital; O. T. A. Phillips, Cardiff and London Hospital; W. R. Wilson, Dublin and Belfast.

Midwifery.—J. Brown, Manchester; J. Buckley, Manchester; P. Cator, St. Bartholomew's Hospital; H. E. Dalby, Charing Cross Hospital; J. L. Elliott, Leeds; S. R. Hallam, St. Thomas's Hospital; W. St. G. G. Hill, St. Mary's Hospital; B. Hogan, London Hospital; H. W. Hues, Birmingham; O. T. A. Phillips, Cardiff and London Hospital; R. C. Robertson, Charing Cross Hospital; J. M. Sanderson, London Hospital; T. B. Sellors, Middlesex Hospital; O. C. Sibley, Middlesex Hospital; N. Walmisley, St. Bartholomew's Hospital; A. J. Watson, St. Mary's Hospital; W. R. Wilson, Dublin and Belfast.

The diploma of the Society was granted to the following candidates: Messrs. J. Buckley, W. A. Clement, S. R. Hallam, B. Hogan, M. Jenkins, T. C. Last, T. B. Sellors, E. J. T. Jones, and Miss Pereira.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

DIPHTHERIA IN LONDON.

THERE was a slight decline last week in the mortality from diphtheria in London. The deaths referred to this disease, which had been 29 and 34 in the two preceding weeks, fell to 31 during the week ending Saturday last, April 23rd. Of these 31 fatal cases, 6 were of persons belonging to Wandsworth, 3 to Camberwell, and 3 to Hackney sanitary areas. The notifications of diphtheria in London, which had been 190, 180, and 205 in the three preceding weeks, declined to 181 during the week ending Saturday last, the 23rd inst. Compared with the preceding week, the prevalence of the disease remained almost stationary in West, North, and Central London, while in East London there was an increase, and in South London a very marked decline in the number of new cases. Among the sanitary areas of West London there was a considerable increase in the prevalence of diphtheria in Westminster, 9 new cases being notified, against 3 in each of the two preceding weeks. In all the sanitary areas of North London there was a decline in the number of new cases, except in Hackney, where there was a very marked further increase, 24 new cases being notified, against 7 and 16 in the two preceding weeks The increase in the prevalence of diphtheria in East London was due to the rise in the number of new cases in Bethnal Green, St. George-in-the-East, and Poplar, in each of which sanitary areas the notifications last week considerably exceeded those recorded in recent weeks. In South London there was a very marked decline in the prevalence of diphtheria, the new cases being considerably fewer than in any week for several months past. This decline was most marked in Newington, Lambeth, Battersea, Woolwich, Lee, and Camberwell; in the last-mentioned sanitary area the new cases declined to 4 last week, against 17, 10, and 17 in the three preceding weeks. On the other hand, there was a fresh outbreak at Lewisham, 7 new cases being recorded, against 2 and 1 in the two preceding weeks. The admissions of diphtheria patients into the Metropolitan Asylums Hospitals during last week were 105, against 121, 120, and 108 in the three preceding weeks; and 950 cases remained under treatment in these hospitals on Saturday last, April 23rd.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,202 births and 3,905 deaths were registered during the week ending Saturday last, April 23rd. The annual rate of mortality in these towns, which had declined from 21.5 to 19.5 per 1,000 in the three preceding weeks, further fell to 18.1 last week. The rates in the several towns ranged from 8.4 in Croydon, 10.9 in Portsmouth, 13.6 in Brighton, and 13.8 in Swansea to 20.5 in Bradford and in Leeds, 21.0 in Salford, 23.8 in Newcastle-upon-Tyne, and 24.6 in Sunderland. In the thirty-two provincial towns the mean death-rate was 18.3 per 1,000, and slightly exceeded the rate recorded in London, which was 17.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the rate was equal to 2.8, while it averaged 1.8 per 1,000 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.6 in Newcastle-upon-Tyne, 2.9 in Salford, 3.0 in Leicester, and 3.7 in Sheffield. Measles caused a death-rate of 1.5 in London, in Leeds, and in Bristol, 1.6 in Halifax and in Sheffield, and 2.7 in Leicester; and whooping-cough of 1.0 in Sheffield and in Gateshead, 1.1 in Oldham, and 1.9 in Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 48 deaths from diphtheria in the thirty-three towns included 31 in London, 3 in Cardiff, and 3 in Liverpool. One fatal case of small-pox was registered in Sunderland, but not one in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,377, 2,421, and 2,384 at the end of the three preceding weeks, had further declined to 2,334 on Saturday last, April 23rd; 241 new cases were admitted during the week, against 239, 234, and 217 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 23rd, 1,053 births and 663 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.2 to 22.5 per 1,000 in the three preceding weeks, further fell to 22.0 last week, but was 3.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.6 in Leith and 19.7 in Edinburgh to 24.8 in Paisley and 28.9 in Perth. The zymotic death-rate in these towns averaged 2.9 per 1,000, the highest rates being recorded in Paisley and Glasgow. The 315 deaths registered in Glasgow included 22 from measles, 16 from whooping-cough, 3 from scarlet fever, 3 from diphtheria, and 3 from "fever." Four fatal cases of measles were recorded in Edinburgh, and 2 of diphtheria in Aberdeen.

LUNATICS "NOT EXACTLY" PAUPERS.

DAPHNE writes to ask various questions in reference to lunatics who are not "exactly paupers," and what the usual procedure is in reference to such cases. He refers specially to one patient (presumably a lunatic) who wishes to conduct his own case.

*** We would recommend our correspondent to procure a copy of the Lunacy Act, 1890, which regulates the management of all lunatics, paupers and others. If, having studied this, he should then require further information, we will endeavour to give it. We hope, however, that he will state his own difficulty clearly should he have occasion to write again.

HOUSES UNFIT FOR HABITATION.

M.O.H. (Wales) asks if there are any lines laid down by any authority to guide medical officers in deciding whether a house is fit or unfit for habitation, and inquires as to practice adopted.

*** We know of no attempt on the part of the Local Government Board or other similar authority to dictate to the medical officer of health as to what class of houses he shall certify as unfit for habitation. On the other hand the Model By-laws issued under the Board's authority show pretty clearly what are regarded as the conditions of a healthy house, and it is a matter for the judgment of the medical officer of health to what extent departures from these conditions may render any house unfit for habitation. It is the practice of most officers to regard the amount of light, the freedom of the circulation of air in and around the house as important. The absence of damp, or of any distinct nuisance from drainage in the house itself, or from accumulation in the immediate neighbourhood would be amongst the conditions of fitness. It would be for the judgment of the sanitary officials to determine whether any particular nuisance would be better dealt with by closing or threatening to close the house, or by direct action under the Public Health Act, 1875, Section XCI.

MEMBERS OF DISTRICT COUNCILS AND NOTIFICATION FEES.

MEMBER writes to ask whether he, being a member of a district council, can legally receive fees for notifying cases of infectious disease to the medical officer of his own district council.

*** We believe it is generally held that these fees can be legally claimed, as the duty of notification is a statutory one, and the amount is defined by law. We are not aware that the question has ever been raised before any court of law.

CHARGE FOR ATTENDANCE ON PRIVATE PATIENT.

M.O.H. attends A., daughter of business man. District hospital specially opened for A., who is there attended by M.O.H. Guardians charge A.'s father with expenses. Can M.O.H. charge for his attendance?

*** "M.O.H." *qua* M.O.H. has no duties in attending patients. If he is engaged by the district council (guardians can only come in as rural district councillors) or by the Hospital Board to attend their patients, and act as their paid officer, he cannot charge. Any infectious Hospital Board can charge and recover. If, however, "M.O.H." only attends as a private practitioner, he can charge. Some hospitals allow attendance of private practitioners, who charge their own clients. If "M.O.H." is retained and paid to attend all not so provided for, he must do so, even though the Board charge expenses.

CERTIFICATES AS TO INABILITY TO ATTEND SCHOOL.

DISTRICT M.O. writes to ask whether he is obliged to certify to inability to attend school—(1) for pauper children, (2) for non-paupers.

*** (1) If the guardians *for their own use* require any information in reference to any pauper patients actually under the care of a District Medical Officer the latter is bound to give this, by certification or otherwise; but we do not consider that a medical officer is called upon to visit a pauper child simply for the purpose of certifying in reference to school attendance. (2) Under no circumstances can a District Medical Officer be called on in his official capacity to give such school certificates.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE FIRST QUARTER OF 1898.

[SPECIALLY PREPARED FOR THE BRITISH MEDICAL JOURNAL.]

IN the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the first or winter quarter of this year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the various sanitary areas in which the patients had previously resided.

The 34,566 births registered in London during the three months ending March last were equal to an annual rate of 30.8 per 1,000 of the population, estimated at 4,504,766 persons in the middle of this year; this rate was 1.7 per 1,000 below the mean rate in the corresponding quarters of the ten preceding years 1888-97. The birth-rates during the period under notice in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the population. In Kensington, St. George Hanover Square, Westminster, Hampstead, St. Martin-in-the-Fields, and the City of London, the birth-rates were considerably below the average; whilst they showed the largest excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, and St. Olave Southwark.

The 23,973 deaths of persons belonging to London registered during the quarter under notice were equal to an annual rate of 21.3 per 1,000, against 25.6, 19.3, and 18.0 in the corresponding periods of the three preceding years; in the first quarters of the ten years 1888-97 the death-rate in the metropolis averaged 22.4 per 1,000. The lowest death-rates in the various sanitary areas were 14.3 in Hampstead, 15.0 in Stoke Newington, 15.4 in St. George Hanover Square, 15.8 in Lewisham, 16.0 in Wandsworth, 16.6 in Lee, and 17.1 in St. Martin-in-the-Fields; the highest rates were 27.3 in Bethnal Green, 27.4 in Limehouse, 27.6 in Shoreditch, 28.4 in St. Margaret Westminster, 28.8 in St. Luke, 29.6 in St. George-in-the-East, and 30.3 in Holborn. During the quarter under notice 3,256 deaths resulted from the principal zymotic diseases in London; of these, 1,493 were referred to measles, 815 to whooping-cough, 531 to diphtheria, 181 to scarlet fever, 131 to diarrhœa, 101 to enteric fever, 2 to typhus, and 2 to ill-defined forms of continued fever. These 3,256 deaths were equal to an annual rate of 2.90 per 1,000, against an average rate of 2.34 in the corresponding periods of the ten preceding years, 1888-97. In the first quarters of the three preceding years the zymotic death-rate was 1.53, 3.25, and 1.64 per 1,000 respectively. The lowest zymotic death-rates last quarter in the various sanitary areas were 1.25 in City of London, 1.40 in Lee, 1.44 in St. James Westminster, 1.60 in Whitechapel, 1.61 in St. Martin-in-the-Fields, and 1.68 in Lewisham; while the rates ranged upwards in the other sanitary areas to 4.07 in Hammersmith, 4.52 in Poplar, 4.89 in Shoreditch, 4.96 in St. Margaret Westminster, 5.07 in Bethnal Green, and 5.42 in Woolwich.

No fatal case of small-pox was registered in London during the three months ending March last. Measles showed the highest proportional fatality in Hammersmith, Chelsea, St. Margaret Westminster, Islington, Holborn, Shoreditch, Poplar, St. George Southwark, Battersea, and Woolwich; scarlet fever in Fulham, St. Martin-in-the-Fields, Rotherhithe, Battersea, Lee, and Plumstead; diphtheria in Fulham, St. Margaret Westminster, Hackney, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, Battersea, and Plumstead; whooping-cough in Clerkenwell, St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar; "fever" in Paddington, St. Martin-in-the-Fields, Strand, Bermondsey, Greenwich, and Lee; and diarrhœa in Holborn, St. George-in-the-East, and Lewisham.

During the quarter ending March last 2,223 deaths from phthisis were registered in London, equal to an annual rate of 1.98 per 1,000, against 1.82 in the corresponding period of the preceding year. Among the various sanitary areas the lowest phthisis death-rates were recorded in Hampstead, Stoke Newington, Wandsworth, Lee, Lewisham, and Plumstead; and the highest rates in St. Margaret Westminster, St. Giles, Strand, Holborn, St. Luke, St. George-in-the-East, and St. Saviour Southwark.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 140 per 1,000 last quarter, and was slightly below the mean-rate in the corresponding periods of the ten preceding years, 1888-97, which was 143 per 1,000. Among the various sanitary areas the rates of infant mortality were lowest in Hampstead, Stoke Newington, St. Martin-in-the-Fields, St. George Southwark, Bermondsey, Lewisham, and Plumstead; while they showed the largest excess in St. Margaret Westminster, St. James Westminster, Holborn, Bethnal Green, St. George-in-the-East, and St. Saviour Southwark.

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions, during the First Quarter of 1898.

SANITARY AREAS.	Estimated Population middle of 1898.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 births.
				Births.	Deaths.	Principal Zymotic Diseases.												
LONDON	4,504,766	34,566	23,973	30.8	21.3	2.90	3,256	—	1,493	181	531	815	2	101	2	131	2,223	140
West Districts.																		
Paddington	127,480	786	601	24.7	18.9	2.42	77	—	32	5	14	17	—	6	—	3	44	121
Kensington	172,174	945	877	22.0	20.4	2.34	101	—	59	9	13	13	2	1	—	4	67	162
Hammersmith	107,370	771	613	28.8	22.9	4.07	109	—	88	3	6	7	—	1	—	4	37	153
Fulham	125,275	1,091	602	34.9	19.3	3.00	94	—	46	11	22	10	—	1	—	4	55	139
Chelsea	96,713	658	549	27.3	22.8	3.19	77	—	51	2	10	7	—	3	—	4	59	137
St. George Hanover Sq.	80,608	368	310	18.3	15.4	1.89	38	—	24	3	2	7	—	2	—	—	29	120
Westminster	52,574	287	372	21.9	28.4	4.96	65	—	35	3	11	14	—	—	—	2	40	230
St. James Westminster	22,200	126	136	22.8	24.6	1.44	8	—	7	—	1	—	—	—	—	—	12	175
North Districts.																		
Marylebone	140,483	1,073	764	30.6	21.8	2.38	83	—	33	3	16	17	—	5	—	9	77	118
Hampstead	78,755	403	281	20.5	14.3	2.55	50	—	23	—	6	20	—	—	—	1	15	117
St. Pancras	243,416	1,814	1,326	29.9	21.9	2.04	124	—	53	11	28	19	—	9	—	4	142	132
Islington	344,616	2,391	1,748	27.8	20.3	3.64	312	—	183	10	40	64	—	4	—	11	124	152
Stoke Newington ...	34,660	210	130	24.3	15.0	2.32	20	—	10	—	3	5	—	—	—	2	9	95
Hackney	219,630	1,617	1,080	29.5	19.7	3.24	177	—	54	8	52	52	—	8	—	3	83	136
Central Districts.																		
St. Giles	37,519	248	228	5	24.4	2.04	19	—	14	—	2	1	—	1	—	1	46	133
St. Martin-in-the-Fields	12,424	50	53	0.1	17.1	1.61	5	—	1	1	2	—	—	1	—	—	6	80
Strand	23,284	126	155	21.7	26.7	1.89	11	—	9	—	1		—	1	—	—	19	135
Holborn	30,056	236	227	31.5	30.3	3.86	29	—	13	—	9	2	—	1	—	4	25	199
Clerkenwell	66,120	522	384	31.7	23.3	2.85	47	—	12	2	11	18	—	2	—	2	43	153
St. Luke	41,076	469	295	45.8	28.8	2.64	27	—	8	3	2	11	—	1	—	2	37	141
London City	29,088	108	181	14.9	25.0	1.25	9	—	4	—	2		—	1	—	—	22	120
East Districts.																		
Shoreditch	121,485	1,158	837	38.2	27.6	4.89	148	—	53	4	15	68	—		—	5	71	168
Bethnal Green	129,027	1,301	879	40.4	27.3	5.07	163	—	46	5	20	85	—	1	—	6	73	176
Whitechapel	80,559	857	456	42.7	22.7	1.60	32	—	10	3	8	9	—	1	—	1	61	116
St. George-in-the-East	48,241	533	356	44.3	29.6	3.48	42	—	13	3	1	20	—	1	—	4	37	191
Limehouse	58,661	521	400	35.6	27.4	3.63	53	—	20	2	4	27	—	—	—	—	42	207
Mile End Old Town ...	112,528	1,130	607	40.3	21.6	3.57	100	—	33	5	12	45	—	3	—	2	49	122
Poplar	170,220	1,575	1,068	37.1	25.2	4.52	192	—	74	8	28	7	—	5	1	3	106	145
South Districts.																		
St. Saviour Southwark	24,562	189	166	30.9	27.1	2.29	14	—	5	—	7	2	—	—	—	—	25	196
St. George Southwark	60,461	576	389	38.2	25.8	2.99	45	—	27	1	12	2	—	2	—	1	46	115
Newington	123,183	1,109	702	36.1	22.9	2.12	65	—	29	8	16	4	—	2	—	6	87	137
St. Olave Southwark	11,288	119	73	42.3	25.9	2.49	7	—	3	—	2	2	—	—	—	—	7	126
Bermondsey	85,738	832	590	38.9	23.4	2.75	59	—	30	5	5	14	—	4	—	1	56	117
Rotherhithe	40,849	342	203	33.6	19.9	2.66	27	—	7	5	6	8	—	—	—	1	18	132
Lambeth	304,073	2,393	1,577	31.6	20.8	2.14	162	—	85	8	19	35	—	8	—	7	159	121
Battersea	171,921	1,412	860	32.9	20.1	3.62	156	—	79	16	31	22	—	3	1	4	64	147
Wandsworth	202,526	1,260	808	25.0	16.0	2.02	102	—	40	10	34	13	—	2	—	3	59	124
Camberwell	261,189	1,939	1,251	29.8	19.2	2.17	141	—	66	5	21	35	—	5	—	9	128	130
Greenwich	180,441	1,426	882	31.7	19.6	2.50	112	—	43	5	16	34	—	8	—	6	65	135
Lee	39,717	220	164	22.2	16.6	1.40	14	—	—	3	3	3	—	3	—	2	10	145
Lewisham	88,562	579	349	26.2	15.8	1.68	37	—	10	2	3	13	—	1	—	8	23	116
Woolwich	41,478	335	251	32.4	24.3	5.42	56	—	46	3	4	1	—	—	—	2	25	137
Plumstead	62,531	461	283	29.6	18.2	3.01	47	—	15	6	11	14	—	1	—	—	21	115

MEDICAL NEWS.

The first annual *conversazione* of the Royal Society will be held on Wednesday, May 11th.

The address of the British Institute of Preventive Medicine will, after May 1st, be Grosvenor Road, London, S.W.

The Matrons' Council, a society composed of matrons of hospitals, will hold a conference in London on June 15th and 16th next.

The trustees of the late Mr. Richard Gibbs have contributed to St. Thomas's Hospital the sum of £1,000 for the purpose of endowing a bed in his memory.

A new wing to the Scarborough Cottage Hospital has been formally opened by the Mayor. The addition provides a spacious dining hall, 45 feet by 19 feet, on the ground floor, and on the next floor two new wards with twenty beds.

The discussion at the Society of Engineers on Dr. Thresh's paper on the Protection of Underground Water Supplies will be resumed on Monday next at the Royal United Service Institution, Whitehall, at 7.30 P.M.

On March 29th the University of Halle conferred the degree of Doctor of Medicine on Fräulein Hildegard Ziegler, the daughter of a pastor of Liegnitz, who passed her final examination *magná cum laude*.

Dr. Masson, Public Vaccinator, Cottingham, East Yorks, has been awarded the Government grant for successful vaccination in the Cottingham and Willerby Districts of the Sculcoates Union.

Presentation.—Dr. C. R. Leader has, on the occasion of his leaving Worthen, been presented with a silver revolving dish, ladle, and tray as a mark of appreciation of his professional services to the inhabitants of the district.

Among the other congresses to be held in Paris in 1900 it is proposed that one should be arranged for the discussion of questions of medical ethics and matters relating to the interests of the profession.

Among the papers to be read at the third annual Congress of the South-Eastern Union of Scientific Societies, which is to be held at Croydon on June 2nd, 3rd, and 4th, is one by Dr. H. Franklin Parsons on the nature of the soil in connection with the distribution of plants and animals.

The Cost of Typhoid.—It is estimated that the recent epidemic of typhoid fever at Camborne has cost £150. This is not a large sum in itself, but its expenditure is no guarantee against recurrence of the trouble. When will it be recognised that money invested in assuring public health pays good interest?

Professor Vaughan Harley will commence a practical course of Pathological Chemistry at University College, London, in May. The course will include lecture demonstrations on stomach contents, fæces, blood, urine, and pathological fluids, as well as practical laboratory work. Further information can be obtained from the Secretary of the College.

On April 22nd, for the first time since February 1st, no case of small-pox was reported in Middlesbrough, and it was hoped that the epidemic was at an end. Cases have occurred, however, since then; on April 26th there were as many as 3. The total number of cases since the outbreak commenced is 1331, and the number of deaths 188.

The Recent Epidemic at Maidstone.—It will be remembered that a number of sufferers from typhoid fever in Maidstone decided to bring a combined action against the water company for damages sustained. It is now stated that these claimants have accepted an offer of compensation to the extent of £3,000 from the company.

Epileptic Colonies.—The memorial stone of a home for boys at the Colony of the National Society for Employment of Epileptics at Chalfont St. Peters, Bucks, will be laid on Thursday, May 12th, at 2.45 P.M., by the Duke of Marlborough. On the same day the Duchess of Marlborough will open the Victoria House, one of the new homes for men; and Mrs. Passmore Edwardes will lay the foundation stone of a home for girls. All these buildings are the gift of Mr. Passmore Edwards, and the elevations show picturesque houses in the modified English farmhouse style now so popular.

Dogs for Wounded in War.—The German Society for training dogs to be used for finding wounded men in action, of which the Duke of Coburg is patron, and which now numbers over three hundred members, has resolved to train collies for military service in the tropics, as an experience of more than ten years has shown that they are the best fitted for it, and are especially able to stand the climate.

The *Journal d'Accouchements*, of Liége, announces the death of Madame Henriette Rubbers, *née* Bay, which took place recently at Constantinople. Madame Rubbers, who had reached a very advanced age, for many years taught midwifery in the Imperial School of Medicine, Constantinople, and was midwife-in-ordinary to the Sultan's harem.

The Red Cross Society.—The National Society for Aid to the Sick and Wounded in War have not yet decided upon any action in relation to the war just declared between the United States and Spain. It is reported, however, that the Canadian Branch of the same Society is prepared to send an expedition to render aid to both parties, without distinction of nationality. No confirmation of this statement has been received at the headquarters of the Society in London.

The annual meeting of the Medical Mission Auxiliary of the Church Missionary Society will be held at Exeter Hall on Thursday, May 5th, at 7.30 P.M. The chair will be taken by Sir William Broadbent, and among the speakers will be Mr. A. Neve, F.R.C.S.Edin., Medical Missionary in Kashmir, and Dr. Herbert Lankester, Physician to the Society. Those desiring to attend should communicate with the Secretary, Medical Committee, C.M. House, Salisbury Square, E.C.

Medical Senators.—The following members of the medical profession have recently been elected members of the Spanish Senate: Dr. Cortezarena, representing the Royal Academy of Medicine of Madrid; Dr. Alejandro Martin, representing the Central University; Dr. Fernandez Caro, for Alicante; Dr. Rodolfo Castillo, for Cadiz; Dr. Justo Martinez, for Pontevedra; Dr. Martinez Pacheco, for Santander; Dr. Magaz, representing the University of Barcelona; Dr. Gimeno, representing the University of Valencia; Dr. Calleja, representing the University of Zaragoza; and Dr. Guzman Andres for Seville.

The United States appear to possess an excellent hospital ship in the *Solace*, a well-chosen name, which is at present at Key West. According to the correspondent of the *Daily Telegraph* she is of 3,800 tons burden, with a speed of 17 knots. She is fitted up with bunks for the wounded, operating rooms with suitable antiseptic surgical appliances, convalescing rooms, a room for dying cases, and a mortuary. She has a laundry and disinfecting machines, and carries an adequate staff of nurses. She will sail under the flag of the Red Cross, and carries steam launches to be used at the time of or after action to collect the wounded.

Factory Girls' Country Holiday Fund.—The Lord Mayor, who presided at the meeting of the fund at the Mansion House, said that during the past year 1,250 women and girls had been sent into the country for 2,120 weeks at the cost of £1,230, of which £246 was paid by themselves. Mrs. Garrett Anderson urged the immense importance of the country holiday to the girls, and Mr. Arnold White said the movement was of national importance. The factory girls penned up in great cities were shut out from all the health-giving delights of Nature, and yet they were to be the mothers of the future. This crowding into the great cities was really deteriorating the fibre of the nation. The Hon. Secretary is Miss Canney, St. Peter's Rectory, Saffron Hill, London, E.C.

Dengue Fever at Sydney.—The fears that an epidemic of dengue fever might become established at Sydney have happily proved unfounded. Dr. Thompson has found that no further cases have followed the cases brought into the colony. So far the question of communicability of dengue has not been settled, and most conflicting statements are

made as to the question of the protection afforded by a previous attack. A large number of cases occurred at Kempsey during the later part of February. The disease was imported into New South Wales in 1886, when there there was a very severe epidemic in New Caledonia.

Royal Institution of Great Britain.—Amongst the lectures to be delivered before the close of the present session will be three by Lord Rayleigh, F.R.S. on Natural Philosophy on Thursdays, May 12th, 19th, and 26th; two by Dr. E. E. Klein, F.R.S., on Modern Methods and their Achievements in Bacteriology, on Thursdays, June 2nd and 9th; and two by Mr. J. A. Thomson, M.A., on the Biology of Spring, on Saturdays, May 21st and 28th. The first of the Friday evening lectures was given on April 22nd, on the Recent Eclipse by the Astronomer Royal, Mr. W. H. M. Christie, C.B., F.R.S. Other lectures will be given on Friday evenings up to and including June 10th.

St. Mark's Hospital.—A festival dinner to celebrate the 63rd anniversary of this hospital was given in the Whitehall Rooms at the Hôtel Métropole on April 25th. In the absence of the Duke of Connaught the Lord Mayor took the chair. In 1896 a new building was erected to provide additional accommodation. The cost of this was defrayed out of invested funds, and it is hoped that it will be possible, by means of subscriptions, to replace the capital thus withdrawn. In proposing the toast of the hospital, the Chairman spoke very directly on the abuse of charitable institutions by persons well able to afford medical treatment, and in reply to the toast of "The Medical Staff," given by the Earl of Cork, Mr. Alfred Cooper paid a tribute to Listerism by drawing attention to the increased facilities for operation that now existed owing to the introduction of antiseptics.

Decomposing Bodies in a Church.—The Medical Officer of Health for St. George Southwark is at present in an unenviable position. It appears that for some time complaints have been made as to the presence of a highly objectionable smell in the parish church. This has been traced to some decomposing bodies interred in the crypt, which for obvious sanitary reasons Dr. Waldo is anxious to remove. But, on the one hand, the sanitary authority are indisposed to authorise the removal of the bodies on account of the cost, £1,000, which would add 1d. in the £ to the rates; and, on the other, the Rector and the worshippers of the church strongly protest against their remaining. The matter could probably be dealt with in one of two ways. Either the Home Office, through its inspector of burial grounds, could interfere, and by an Order in Council effect the necessary removal; or the local authority could treat the matter as a nuisance dangerous to the public health. The real question is, of course, who is to pay.

A League of Surgeons of the Mercantile Marine.—An International Leage of Surgeons of the Merchant Marine has been formed in America. The objects of the League are stated to be: (1) To increase the efficiency of the medical service on the ocean liners. (2) To encourage the surgeons to respect their position, and to prevent unworthy applicants from receiving employment. (3) To provide information on professional subjects relating to sea service with a view to lessen the difficulties of recently appointed medical officers. (4) To collect a history of the members for publications. (5) To publish a volume of records which shall be of value to those interested. (6) To furnish a list of the medical officers of the Merchant Marine, serving at sea, throughout the world. Further information may be obtained from the Secretary of the League, Dr. W. Thornton Parker, Groveland, Mass., U.S.A.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Board, lodging, and washing, but no salary. Applications to the Medical Superintendent.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Steelhouse Lane, Birmingham. Resident Surgical Officer. Salary, £50 per annum, with board, washing, and attendance. Applications to the Secretary by May 10th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CARDIFF INFIRMARY.—Assistant Resident Medical Officer. Appointment for six months without salary, but with board, washing, and apartments. Applications to the Secretary by May 9th.

CLAYTON HOSPITAL AND WAKEFIELD DISPENSARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by May 3rd.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon; unmarried, or widower, without family. Salary, £100 per annum, with board, residence, and washing. Applications to the Committee before noon on May 20th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant. No salary, but board, lodging, and washing provided. Applications to the Honorary Secretary by May 18th.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £20 per annum, with board, lodging, and washing. Applications by May 12th.

GLOUCESTER: THE GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTER EYE INSTITUTION.—Assistant Surgeon. Applications by May 11th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; not to exceed 30 years of age, and unmarried. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Hants County Asylum, Fareham, by May 17th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. No salary, but residence, board, and washing provided. Applications to the Secretary by May 20th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications to the Secretary by May 18th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Honorary Physicians and Honorary Surgeons. Applications to the Secretary-Superintendent by May 21st.

HOSPITAL OF ST. FRANCIS, New Kent Road, S.E.—Honorary Assistant Surgeon, Two Honorary Assistant Physicians, and Anæsthetist. Applications to the Secretary by May 1st.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Also Clinical Assistant. Applications to the Secretary before May 14th.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Senior House-Surgeon; unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by May 3rd.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Two vacancies on the Honorary Medical Staff. Applications to the Secretary, 13, Kilburn Park Road, N.W., by May 7th.

LONDON COUNTY ASYLUM, Claybury, Woodford Bridge, Essex.—Junior Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to be delivered at Asylums Committee Office, 21, Whitehall Place, S.W., by May 4th.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital, Harrow Road. Salary, £50 per annum, with board, lodging, and washing. Surgeon to Out-patients at the Dean Street Hospital; must be F.R.C.S.Eng. Applications to the Secretary at Harrow Road by May 18th.

MIDDLESBROUGH: BOROUGH OF.—Medical Officer of Health. Salary, £350 per annum. Applications to George Bainbridge, Town Clerk, by May 2nd.

NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY.—House-Surgeon; unmarried. Salary, £80 per annum, with board and lodging. Will be required to do the dispensing for the Hospital and Free and Provident Dispensaries, for which a further salary of £40 is paid. Applications, on forms provided, by May 2nd.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months. Salary at the rate of £50 is attached to the senior post. Applications to the Secretary by May 2nd.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Physician. Applications to the Secretary by May 7th.

ST. ALBANS RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £100 per annum. Applications to the Clerk by May 2nd.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer. Salary, £105 per annum, with residence and attendance. Applications to the Honorary Secretary, H. Peter Bodkin, 23, Gordon Street, Gordon Square, W.C., before May 2nd.

SEAMEN'S HOSPITAL (DREADNOUGHT), Greenwich, S.E.—House-Surgeon for the Dreadnought Hospital, Greenwich. Junior House-Surgeon for Branch Hospital, Royal Albert Dock. Salaries, £50 per annum, with board and residence. Applications to the Secretary by May 3rd.

SUFFOLK COUNTY ASYLUM, Melton.—Second Assistant Medical Officer; under 30 years of age. Salary, £100 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, County Asylum, Melton, Suffolk, by May 10th.

VENTNOR, ISLE OF WIGHT: ROYAL HOSPITAL FOR CONSUMPTION.—Resident Medical Officer. Salary, £100 per annum, with board and lodging in the Hospital; unmarried. Applications to the Board of Management, 34, Craven Street, Charing Cross, London, by May 6th.

WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Appointment for six months but may be renewed. Applications to the Secretary before May 12th.

WEST DERBY UNION.—Resident Assistant Medical Officer at Mill Road Infirmary. Salary, £100 per annum, with rations. Applications to H. P. Cleaver, Clerk to the Guardians, Brougham Terrace, Liverpool, by May 3rd.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck Street, W.—Honorary Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by May 16th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon and House-Physician. Salaries, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by May 6th.

MEDICAL APPOINTMENTS.

ALLAN, A. Smith, M.B., Ch.B.Glasg., appointed Medical Inspector of Seamen for the port of Calcutta, India.

ASTON, R. H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Twelfth District of the North Bierley Union.

CHAWNER, Alfred, L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Lane District of the Chesterfield Union.

CODD, J. Alfred, M.D., B.Sc.Lond., appointed Honorary Assistant Physician to the Wolverhampton and Staffordshire General Hospital.

CROOKS, Lewis A., M.B., C.M., appointed Assistant House-Surgeon (non-resident) to the Leith Hospital.

DENSHAM, W. Arnold, M.R.C.S., L.R.C.P., appointed Second Assistant Medical Officer to the Lewisham Infirmary.

DEVEREUX, W. C., M.A., M.B., B.C.Camb., appointed Medical Officer for the Tewkesbury District of the Tewkesbury Union.

FULTON, George C. S., M.B., C.M.Glasg., appointed Medical Officer of Health for the Eston Urban District Council, *vice* Dr. Malcolmson, deceased.

GALT, Hugh, M.B., C.M., D.P.H.Camb., appointed Professor of Forensic Medicine and Lecturer on Hygiene in St. Mungo's College, Glasgow.

GOSTLING, Thomas Preston, M.R.C.S., L.R.C.P., appointed Honorary Surgeon to the Worcester General Infirmary, *vice* G. E. Hyde, resigned.

GRANT, Cosmo, M.B., C.M.Aberd., appointed Medical Officer for the Hadleigh District of the Rochford Union.

GROOM, Dr. W., appointed Medical Officer for the First, Second, and Eighth Districts of the Wisbech Union.

HITCHINS, F. C., M.R.C.S.Eng., L.R.C.P., appointed House-Surgeon to the Stamford and Rutland Infirmary, Stamford.

HOPEWELL-SMITH, A., L.R.C.P.Lond., M.R.C.S.Eng., L.D.S.Eng., appointed Dental Surgeon to the Chelsea Hospital for Women, Fulham Road, S.W.

JOHNSTON, J. Somerville, L.R.C.S., L.K.Q.C.P.Irel., appointed Visiting Surgeon to St. Nicholas Industrial Schools, Manor Park, *vice* Dr. Boyd, resigned.

JOHNSTONE, J. E. St. Geo., M.B., B.Ch., B.A.Dub., appointed Medical Officer for the Tirley District of the Tewkesbury Union.

JONES, Hugh, M.B., C.M.Glasg., D.P.H., appointed Medical Officer of Health to the Dolgelly Rural District Council.

MACGREGOR, Alexander, M.D.Aberd., M.R.C.P.Lond., appointed Physician to the Westminster General Dispensary.

OLVER, T., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Third District of the Plympton St. Mary Union.

PARKHURST, Rodie, M.B., C.M.Edin., reappointed Medical Officer of Health to the Long Sutton Urban District Council.

PERRY, E. V., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Great Witchingham District of the St. Faith's Union.

PORTER, Charles, M.B., C.M., appointed Surgeon for the Out-door Department to the Leith Hospital.

SHAW, B. Henry M.B., B.Ch., B.A.O.Univ. Irel., appointed Second Assistant Medical Officer to the Stafford County Asylum, Stafford.

SIMPSON, Francis Odell, L.R.C.P.Lond., M.R.C.S.Eng., appointed Senior Assistant Medical Officer to the Govan District Asylum, Crookston, N.B.

STRUTHERS, John Wm., M.B., Ch.B., appointed House-Surgeon to the Leith Hospital.

TURNER, A. C., M.B., C.M.Edin., appointed Assistant Medical Officer, Fisherton Asylum, Salisbury.

TURNER, A. F., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of the Workhouse of the Tewkesbury Union.

WALKER, J. R. Hall, M.B., C.M., appointed House-Physician to the Leith Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

ANDERSON.—On April 23rd, at Limehurst, Moor Park, Preston, Lancashire, the wife of Joseph Anderson, M.B., of a son.

GOODMAN.—On April 22nd, at Elmside, Kingston-on-Thames, the wife of Roger N. Goodman, M.D.Cantab., of a son.

D'ERF WHEELER.—On April 15th, at 17, St. George's Terrace, South Kensington, the wife of Percy D'Erf Wheeler, M.D., F.R.C.S.E., F.R.G.S., Medical Superintendent, L. J. S. Mission Hospital, Jerusalem, of a son.

GRUMMITT.—At Kingsbridge, S. Devon, on April 20th, the wife of Charles C. Grummitt, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

COWAN—HAMILTON.—At Ss. Michael and All Angels Church, Helensburgh, on April 20th, by the Rev. J. Stuart Syme, John M. Cowan, B.A., M.B., B.C., youngest son of the late John B. Cowan, M.D., LL.D., Professor of Materia Medica in the University of Glasgow, to Maud Mary, eldest daughter of George W. Hamilton (formerly of Calcutta), View Park, Row, Dumbartonshire. (Indian papers please copy.)

DEVANE—STEVENS.—On April 27th, at the Church of St. Anthony of Padua, Anerley, Thomas Francis Devane, L.R.C.P.&S.Ed., Ashville, Maple Road, son of the late Thomas Devane, of West View House, Cork, and Mrs. Devane, 14, Selby Road, Anerley, to Ethel Mary, daughter of Warwick A. Stevens, A.M.I.C.E., of Silverton, Weighton Road, Anerley.

GALLOWAY—SAWERS.—On April 21st, at St. John's Church, Blackheath, by the Rev. J. W. Marshall, B.A., Vicar, James Galloway, M.D., eldest son of the late James Galloway, of Calcutta, to Jessie Hermina, elder daughter of the late Robert Orr Sawers, of Calcutta and Blackheath.

HILL—MCDOUGALL.—On April 21st, at the Windsor Hotel, Glasgow, by the Rev. Robert Hill, M.A., Renfrew Free Church, assisted by the Rev. Dr. Stewart, Dennistoun Free Church, and the Rev. John Hill, M.A., Coatdyke U. P. Church, James Hill, M.D., Renfrew, to Isa, youngest daughter of the late Dr. John McDougall, of Old Kilpatrick. At home, 3, Houston Terrace, Renfrew, second and fourth Tuesdays after May.

MIDDLEMASS—ELKINS.—At All Saints, Leavesden, Herts, on April 23rd, by the Rev. A. Wilson, Vicar, James Middlemass, M.B., F.R.C.P.E., Medical Superintendent of Sunderland Borough Asylum, to Loui, elder daughter of Joseph Elkins, of Stanford, near Rugby.

MURRELL—WILLIAMSON.—On April 26th, at St. John's Church, Putney, by the Rev. A. K. Hurley, George Frederick Murrell, M.B.Lond., of Craven Road, Reading, to Rose Annie, second daughter of John Williamson, of Beechhurst, Putney Common, Surrey.

PENTLAND-SMITH—AITKEN.—At the Cathedral, Inverness, on April 21st, by the Right Reverend the Lord Bishop of Moray, D.D., Archibald Lumsdane Pentland-Smith, M.A., B.Sc.St. And., M.B., C.M.Edin., Elie, Fifeshire, to Anne Margaret, eldest daughter of the late Thomas Aitken, M.D., Medical Superintendent, District Asylum, Inverness, and granddaughter of the late Very Rev. John Forry, Dean of St. Andrews.

DEATH.

SPICER.—On April 16th, at North Molton, Devon, Robert Henry Scanes Spicer, M.D.St.And., M.R.C.S.Eng., L.R.C.P.Ed., in his 71st year.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 8 P.M.—Papers by Mr. Alfred Coleman and Mr. W. R. Ackland, and a casual communication by Mr. George Thomson.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr. Edward Law: Examination of Ear, Throat, and Nose.

TUESDAY.

Pathological Society of London, 8.30 P.M.—Dr. Payne: Sections of Liver from a case of Acute Yellow Atrophy of the Liver. Professor Kanthack: The Distribution of Leprosy Bacilli in the Tissues and the Origin of Giant Cells in Leprosy. Dr. Rose Bradford: Hæmatoma in a Hydronephrotic Kidney. Dr. Hugh Walsham: Latent Tuberculosis of the Tonsils. Dr. Parkes Weber: Chronic Endophlebitis Proliferans; microscopic specimens illustrating a condition not rarely felt in middle-sized superficial veins. Drs. Andrewes, Garrod, Drysdale, Still, and Batten: Hæmorrhage into the Suprarenal capsules in Infants. Dr. L. Freyberger: (1) External Rupture of an Aneurysm of the Ascending Part of the Arch of the Aorta. (2) The Minute Structure of an Anæmic Infarct of the Lung. Dr. Rolleston: (1) Pin in the Vermiform Appendix; (2) Round Pellets in a Dermoid Cyst. Card Specimens.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Keratoses.

Royal College of Physicians, 5 P.M.—Dr. S. Monckton Copeman: On the Natural History o Vaccinia. Milroy Lecture I.

City Orthopædic Hospital, 5.3 P.M.—Mr. Chisholm Williams: Angular Curvature of Spine.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Dr. Buzzard.

WEDNESDAY.

London Post-Graduate Course, Hygiene at Parkes Museum, 4.30 P.M.—Professor A. Wynter Blyth: Refuse Removal and Disposal, etc.

South-West London Medical Society, Town Hall, Wandsworth, 8 P.M.—A discussion on the Midwives Bill (1898), to be opened by the President (Mr. T. A. I. Howell).

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Mr. Targett, Dr. Horrocks, Mr. Doran, and others. Papers:—Dr. C. Hubert Roberts: Case of Primary Carcinoma of the Fallopian Tube. Dr. Arnold W. W. Lea: The Sagittal Fontanelle in the Heads of Infants at Birth.

THURSDAY.

Ophthalmological Society of the United Kingdom, 8 P.M.—Clinical evening. Cases and specimens will be shown by Mr. W. C. Rockliffe (Hull), Mr. Ridley (Leicester), Mr. Devereux Marshall, Surgeon-Captain H. Herbert, and Dr. G. H. Hogg.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Professor Kenneth McLeod, LL.D.: Physical Requirements of the Public Services.

Royal College of Physicians, 5 P.M.—Dr. S. Monckton Copeman: On the Natural History of Vaccinia. Milroy Lecture II.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Green: Clinical Demonstration of Cases in the Wards.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Dr. Wilkinson: The Microscope and Methods of Cultivation, etc.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, 8.15 P.M.—Address by the President: A Few Remarks on the Principles that should guide us in Operations for Cancer.

West London Medico-Chirurgical Society, 8.30 P.M.—Papers will be read by Mr. McAdam Eccles and Mr. Tubby.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

Cancer, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

Central London Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily.

Central London Throat, Nose, and Ear.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

Charing Cross. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

Chelsea Hospital for Women. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

City Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

East London Hospital for Children. *Operations.*—M. W. Th. F., 2.

Great Northern Central. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

Guy's. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

Hospital for Women, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

King's College. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

London. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

London Temperance. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

Metropolitan. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

Middlesex. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

National Orthopædic. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

New Hospital for Women. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

North-West London. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

Royal Eye, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

Royal Free. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

Royal London Ophthalmic. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

Royal Orthopædic. *Attendances.*—Daily, 2. *Operations.*—M., 2.

Royal Westminster Ophthalmic. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

St. Bartholomew's. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

St. George's. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

St. Mark's. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

St. Mary's. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

St. Peter's. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

St. Thomas's. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

Samaritan Free for Women and Children. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

Throat, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

University College. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

West London. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

Westminster. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F. 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

Communications for the Current Week's Journal should reach the Office not later than Midday Post on Wednesday. Telegrams can be Received on Thursday Morning.

Communications respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the Journal etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate beforehand with the Manager, 429, Strand, W.C.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Correspondents not answered are requested to look to the Notices to Correspondents of the following week.

Manuscripts forwarded to the Office of this Journal cannot under any circumstances be returned.

In order to avoid delay, it is particularly requested that all letters on the editorial business of the Journal be addressed to the Editor at the Office of the Journal, and not to his private house.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, London.* The telegraphic address of the MANAGER of the British Medical Journal is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are directed will be found under their respective headings.*

QUERIES.

Naturalist desires to learn the best fluid in which to keep dead mice and such small animals with a view to their ultimate dissection. Methylated spirit hardens them too much.

Bolus asks for information as to the winter and summer climate of Jersey. Would the vicinity of St. Heliers be suitable for a case of recurring bronchitis in a patient aged 14 years?

Xerostomia.

M. B. asks for advice in the treatment of the following case: A farmer, aged 56, suffers from chronic dryness of mouth, lips, and fauces. He has no exceptional thirst, but the whole buccal cavity feels, as he describes, dry as a stick. There is no sugar or albumen in his urine, and he seems in fair health. "M B." has tried to stimulate the salivary glands, but so far without benefit.

*** Dry mouth, or xerostomia, was first demonstrated in this country in the case of a woman, by Mr. Jonathan Hutchinson, at the Neurological Society, in 1887. Since that time many cases have come under observation, most of them being women at about middle life. As a rule, the symptoms supervene rather suddenly. It is probably a nervous disorder. In many cases jaborandi has done good, but in as many more it has failed. Dr. Hadden in 1883 brought a case before the Clinical Society. In this case pilocarpin was pushed apparently with benefit. The disease is also known as aptyalism. It is an intractable condition, and, being to all appearances a nervous disease, alleviation will probably be found rather in treatment directed to the nervous system than in direct stimulation of the gland itself, which in all recorded cases has been found quite healthy.

Treatment of Fibrous Ankylosis.

N. E. T. would be glad of suggestions for the treatment of this case—long-standing partial fibrous ankylosis of knee-joint. Cycling has brought about slight increase of mobility and range of motion, and the patient is anxious to increase this by gradual daily stretching of the joint. What kind of splint or instrument can be recommended for this purpose? Considerable force is required to make any impression. The joint is entirely free from inflammation, and the patella is movable. A radical operation is objected to.

ANSWERS.

N.G.H.—The inquiry might be addressed to the secretaries of the various colleges.

NOTES, LETTERS, Etc.

The Temperature of Liquid Air.

In a paragraph on the analytic use of liquid air published in the British Medical Journal of April 23rd, p. 1096, it was stated that the temperature of the liquid air is 210° C.; it should have been "– 210° C."

An Appeal on Behalf of the Family of the late Mr. John Page Hentsch.

Dr. D. G. Knight (410, Brixton Road, S.W.) writes: I beg to submit a list of subscriptions received up to date.

	£	s.	d.		£	s.	d.
Dr. W. Domett Stone ...	1	1	0	A. X.	0	10	6
Dr. Chas. Terry	5	0	0	A Friend	1	1	0
Dr. C. W. Chapman ...	1	1	0	A Friend, per W. H.... ...	5	0	0
One who Knew Him as a Boy	1	0	0		£15	4	0
Dr. John Durno	0	10	6				

An Injudicious Advertisement.

A good many comments have been made lately on the subject of medical advertising, and though in some cases the doctor himself has been to blame, in by far the greater number it is the well-meaning but injudicious friend. Our attention has been called to an advertisement of the St. John Ambulance Brigade in the *Herne Bay Press*, and we cannot but think that the hon. surgeon himself will be the first to alter its wording, so that no one can imagine that he is the only doctor in Herne Bay or its neighbourhood who could be sent for.

Forecasting the Sex.

Dr. Percy Sharp (Brant Broughton, Newark-on-Trent) writes: Dr. Blake asserts that "unfertilised eggs could not produce drones or any other living bee;" on the contrary, a virgin queen is able to lay eggs which will produce drones; besides this, what are known as fertile workers are not uncommon; these insects are physically incapable of mating with a drone, yet their eggs are known to produce drones, but never worker bees. Further, Dr Blake says: "The drones themselves are the fertilising bees that cohabit with the queen to produce her brood," etc; he here overlooks the fact that a queen bee mates only once in the course of her life with one drone, the latter is unable to withdraw his penis, which is twisted off in the act and he immediately dies, leaving the organ *in situ*: the store of spermatozoa being retained in the spermatheca of the queen, and used as required. Though there may be many drones in a hive, they take no notice whatever of a queen once fertilised, nor even of a virgin while in the hive, as mating always takes place on the wing, the drone being unable to express the penis except while on the wing; that is, when the air sacs in the abdomen

are distended. Dr. Blake then speaks of the "result of liberal feeding" of the bees: I only spoke of the result of liberal feeding of the larvæ; and later he falls into the error of supposing that the queen requires constant fecundation. This is not so; as I have pointed out above, she can only mate while flying, and a queen once mated never leaves her hive again except when accompanying a swarm. I grant that where bees are short of food, no drones will be produced; but the reason for this is that the bees under such circumstances will not think of swarming. Food being plentiful, drones will be produced, then queen cells will be raised, and when their occupants are nearing maturity, the old queen and a large portion of the colony will leave the hive and found a new colony. About nine days later the first of the young queens will hatch, and unless prevented by the bees will destroy the occupants of all other queen cells; when about five days old this virgin queen will leave the hive and mate with a drone, and in a day or two will commence her maternal duties. I must traverse one other statement of Dr. Blake's. He says: "The sex depends upon the size and shape of the mould or cell only;" surely had he been a practical beekeeper of any observation, he must have seen many cases where drones were reared in worker cells; this is very common under certain circumstances, but the result is undersized drones, and not workers. His last paragraph is too extraordinary to need comment. I regret that, being from home, I cannot give him exact references in confirmation of my statements; but if he will read the admirable work of the late Mr. Frank Cheshire, which confirms the observations on the subject made by Huber nearly 100 years ago, he cannot fail to accept the truth of the facts I have pointed out.

J. B. L. writes: Dr. Blake would do well to study some standard books dealing with the anatomy, physiology, and habits of bees, such as the works of F. Huber, T. W. Cowan, and F. R. Cheshire, from which he would find that some of his ideas are distinctly original, and quite contrary to recognised facts which have been arrived at after careful research and painstaking experiments. He would learn: (*a*) that a fertile queen bee can lay two kinds of eggs—namely, fertilised and unfertilised, and, moreover, that she can lay either kind at will; (*b*) that unfertilised eggs can, and always do, produce drones, (*c*) that worker bees can sometimes, though they very rarely, lay eggs, which, not having been fertilised, develop into drones; and (*d*) that a queen bee is fertilised but once in her life (invariably within a week after being hatched), with the result that if a prolific one she can lay about 1,000,000 fertilised eggs. F. R. Cheshire estimates the number of eggs laid by a very prolific queen to be sometimes as high as 1,500,000, of which only a few thousands (those producing drones) would be unfertilised.

The mistake made by the writer of the annotation in the BRITISH MEDICAL JOURNAL in which occurred the passage, "The effect of feeding upon the sex of bees has long been known," was the use of the word "sex" for "development"; but this was a very natural slip, since it is not generally known that the difference between a worker bee and a queen is merely in the degree of development. That worker bees are imperfectly developed females can be proved by the following simple experiment: Remove a queen from a hive in which there are worker bees' eggs, or larvæ from them not more than three days old, and with a pointed piece of wood gently enlarge four or five of the cells. These will in due course be selected by the bees for enlargement into queen cells, and the inmates will be fed with an abundance of special food, with the result that queens will be hatched out instead of workers, and in six days less than the period required for the production of the latter. As a matter of fact, the four or five queens will not be hatched unless protected by wire cages, because the first queen will, if vigorous and approved of by the workers, tear down the other queen cells and destroy the inmates.

DR. W. A. CARLINE (Lincoln) writes: Any practical bee-keeper knows that a queen bee is only fertilised once in her lifetime, and then on the wing; that the male fluid or semen is stored in a special sac, spermatheca; and that each egg as laid is fertilised with this fluid or not according to whether it is to result in a worker bee or drone. Old queens, having used up all their store of male fluid, become drone breeders. Dr. Blake can easily prove for himself that unfertilised eggs produce drones, as by removing the wings of a young queen, he will effectually prevent her fertilisation and she will become a drone breeder; or, better still, by destroying the queen in the early spring when there are no drones about; then, after several futile flights, she will settle down to lay unfertilised eggs which will produce living drones. I have several times had hives in this condition, and the bees in despair have enlarged the cells of the drone grubs and fed them on royal jelly in the hope of raising fresh queens; but the final result has invariably been a dead drone.

DISLOCATION OF THE UNGUAL PHALANX.

MR. J. MARSH, M.B. (Atherton, near Manchester), writes: When playing football some years ago I have had the terminal phalanx of the fourth finger of my right hand dislocated several times (at one period almost every Saturday), and have reduced it easily with the other hand, without leaving the field of play.

THE SANITARY DIPLOMA R.U.I.

DR. E. MAGENNIS (Lurgan) writes: I am not surprised that graduates of the Royal have not availed themselves of its Diploma in Sanitary Science, seeing that "the Senate requires a certificate of having attended a course of lectures on geology to be produced before being admitted," etc. This regulation imposes an almost impossible penalty on medical men who are in actual practice, and I pointed this out to the Standing Committee of the University, but they refused to dispense with it, otherwise I would have endeavoured to obtain it, even though the title is styled a "Diploma in Sanitary Science."

CATS AND CHLOROFORM.

DR. J. STITT THOMSON (Lincoln) writes: The *Birmingham Daily Post* of April 15th is reported to have had a discussion with Mr. Lawson Tait on the subject of chloroform, and whether or not we agree with the idea of the lay press publishing interviews with members of our profession upon medical subjects we cannot help being interested in Mr. Tait's views and opinions. His remarks upon the use of chloroform are most instructive. There is one statement, however, to which I take exception. Mr. Tait is reported to have said: "There is hardly a cat in the country you could put under chloroform without killing it." My experience is very different. I have many times put cats under chloroform and have never seen the slightest bad effect. In fact, I consider cats take chloroform exceedingly well, and that it can be safely given to those animals I have proved over and over again.

A COMPLEX SYSTEM.

A GENERAL PRACTITIONER writes: Dr. Purdon's letter in the BRITISH MEDICAL JOURNAL of April 23rd is interesting from a point of view which may not be thought of by the consultant. His patient informed him that one doctor had said the disease was lichen, while another said it was urticaria. She wanted a correct diagnosis. That is what many patients want from the general practitioner, to whom they expect to pay half-a-crown or less. Then they go to a chemist and ask for medicine for that disease, and remain under the chemist's treatment for months.

BRIGHT SUNSHINE AT EASTBOURNE AND LLANDUDNO.

DR. H. S. BOLD WILLIAMS (Llandudno) writes: In reply to Mr. Charles Roberts's letter in the BRITISH MEDICAL JOURNAL of April 23rd I wish to state that, previous to last October, the sunshine records at Llandudno were taken very fitfully and irregularly, and that during a considerable portion of that period the recorder stood in a bay window facing nearly due east. Again, the period of thirteen weeks for which I quoted the records is the quarter as recognised by the Meteorological Office; so that Mr. Roberts can hardly blame me if that period is arbitrary.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Mr. R. B. Anderson, London; Mr. A. Atkinson, London; A. M. C. **B** Bolus; Messrs. C. A. G. Browne, Limited, London; Sir H. C. Burdett, London; Dr. J. M. Bright, London; Messrs. J. Bell and Co., London; Dr. J. Barr, Liverpool; Dr. R. H. Blaikie, Edinburgh. **C** Mr. H. J. Clark, Swanage; Miss M. Canney, London; Cymro; Dr. W. A. Carline, Lincoln. **D** D. M. O.; Delusions. **E** Dr M. Eustace, Quetta E. F. **F** Mr. P. J. Freyer, London; S. Fleming, M.B., London. **G** Dr. Major Greenwood, London; General Practitioner; T. E. Gordon, M.B., Dublin. **H** A. Holt, M.B., Heywood; Dr. S. Harris, Las Palmas; H. X. C.; Dr. W. J. Hadley, London; Dr. A. Haig, London; Dr. R. D. Helm, Carlisle. **I** S. C. Ironside, Fochabers; Ignorant. **K** Knitted Corset and Clothing Company, Nottingham; Dr. W. Knott, North Ormesby; Dr. G. D. Knight, London; Mr. R. Kershaw, London. **L** D. Love, M.B., Cumbernauld; Mr. C. Lamplough, London; Dr. W. T. Law, London; Mr. F. C. Larkin, Liverpool; Mr. J. B. Lamb, London; W. Livingstone, M.B., Paisley; Dr. P. Leech, Halifax. **M** W. Masson, M.B., Cottingham; M.D., B.S.; J. Marsh, M.B., Atherton; Dr. L. G. S. Molloy, Blackpool; M.B.; Dr. E. J. McWeeney, Dublin; Dr. E. Magennis, Lurgan; M.O.H. Wales; Mr. J. P. Malleson, Oxford; Mr. J. Macready, London; J. R. MacMahon, M.B., London; Mr. W. J. Morris, Portmadoc. **N** Naturalist. **O** Observer. **P** Mr. J. Plummer, Sydney; Mr. L. Peirson, London; Mr. F. R. Proctor-Sims, London; Mr. D. E. S. Park, Edinburgh; C. F. Ponder, M.B., Kalimpong; Mr. H. J. Prangley, London; Mr. F. T. Paul, Liverpool. **R** Mr. H. M. Rainsford, London; Messrs. R. W. Richards and Son, London; S. J. Ross, M.B., Bedford; Dr. J. C. Russel, Southport. **S** Sapere Aude; Dr. F. J. Sandford, Market Drayton; Dr. J. O. Symes, Clifton; Dr. P. Sharp, Devonport; Surgeon-Major; R. H. Shaw, M.B., Brighton; Surgeon-General Retired; J. B. Shaw, M.B., Selkirk; Sceptic; Mr. C. H. Senn, London. **T** Dr. H. Tilley, London. **W** Messrs. J. Weiss and Son, London; W. H. N.; Mr. R. C. Worsley, Ramsgate; Miss K. I. Williams, Clifton; R. H. Woods, M.B., Dublin; F. C. Wallis, M.B., London; Mr. K. H. B. Williams, Llandudno; etc.

BOOKS, ETC., RECEIVED.

La Fièvre Jaune. Par Dr. J. Sanarelli. Paris: Masson et Cie. 1898. Fr. 1·25.

L'Eczéma. Par Dr. Leredde. Paris: Masson et Cie. 1898. Fr. 1·25.

Fractures de la Colonne Vertébrale. Par G. R. de Brignoles. Paris: Masson et Cie. 1898.

Technical Mycology. By Dr. F. Lafar. Translated by C. T. C. Salter. Vol. i. London: C. Griffin and Co. 1898. 15s.

Electro-Physiology. By W. Biedermann. Translated by F. A. Welby. Vol. ii. London and New York: Macmillan and Co. 1898. 17s.

Diabetes Mellitus and its Treatment. By R. T. Williamson, M.D., M.R.C.P. Edinburgh and London: Young J. Pentland. 1898.

A Complete System of Nursing. Edited by Honnor Morten. London: Sampson Low, Marston and Co. 1898.

Hypnotism and its Application to Practical Medicine. By O. G. Wetterstrand, M.D. Translated from the German edition by H. G. Petersen, M.D. London and New York: G. P. Putnam's Sons. 1897. 10s.

Ringworm in the Light of Recent Research. By Malcolm Morris. London: Cassell and Co. 1898.

Les Sérothérapies. Par L. Landouzy. Paris: G. Carré et C. Naud. 1898. Fr. 20.

De la Paralysie Générale Progressive dans le Jeune Age (avant 20 ans). Par Dr. O. Thiry. Paris: G. Carré et C. Naud. 1898.

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THE MILROY LECTURES

ON

THE NATURAL HISTORY OF VACCINIA.

Delivered at the Royal College of Physicians

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LECTURE I.

[AFTER expressing his acknowledgments for the honour done him by his selection for the office of Milroy Lecturer, Dr. Copeman observed that it was just a hundred years since the publication of Edward Jenner's epoch-making work, entitled *An Enquiry into the Causes and Effects of the Variolæ Vaccinæ: a Disease Discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of the Cow-pox.* He then sketched the ravages produced by the disease in the past among populations unprotected by previous attacks of small-pox, and gave a short account of the introduction and use of inoculation. Passing on to the introduction of vaccination, he referred to Jenner's early labours, and next proceeded to consider the relationship between variola and vaccinia in the following terms:]

THE RELATIONSHIP OF VARIOLA AND VACCINIA.

Although it is clear from Jenner's writings that he believed vaccinia to be nothing more nor less than "small-pox" of the cow, his theory appears not to have received general support even in his own day; and from that time onwards the value of the practice of vaccination has by some been impugned on the plea that inoculation of one disease—"cow-pox"—could not be expected to exert any really protective influence against the ravages of small-pox, a disease supposed by them to be of totally different origin. And if the thesis of essential difference between these maladies were capable of demonstration, no doubt the objection would be of considerable weight. For there exists but little well-authenticated evidence that the living virus of one disease is capable, when inoculated into an animal, of affording protection against the effects of inoculation of the virus of another and totally different disease; although, no doubt, when two different viruses are inoculated at nearly one and the same time the incubation period of one or other of them may be modified as to duration.

In his first paper Jenner, as has been said, advanced the thesis that small-pox and cow-pox are identical; but even at the present day controversy wages hotly around this question, and it still awaits a definite solution.

During the long period which has now elapsed since the introduction of vaccination, many observers have set themselves the task of attempting, by experimental methods, to solve the problem of the true relationship of variola to vaccinia.

These attempts have all been directed to the possibility of giving rise to cow-pox by the introduction in one or another manner of the virus of small-pox into the system of the bovine animal. In the great majority of such attempts, which are vastly more numerous than is generally supposed, the results have been entirely negative, although so numerous have been the experimenters who from time to time have attacked the problem, that the total number of instances in which an apparently successful result has been obtained is now considerable.

As far as I am aware, the first recorded experiments are those of Gassner, of Günzburg, in 1801, who succeeded, after no fewer than ten fruitless attempts, in directly inoculating a cow with small-pox virus. The lymph thus obtained was employed for the vaccination of four children from whom other seventeen were subsequently vaccinated. None of these exhibited any signs of small-pox.

Viborg, of Copenhagen, in 1807 is stated to have also been successful in variolating the cow.

Basil Thiele, of Kasan, twice, in 1836 and 1838 respectively, succeeding in inoculating the cow with small-pox matter, and in vaccinating children with the lymph thus obtained. In the light of recent work on this subject, his conclusions are of much interest. As stated by himself, they are: "(1) The so-called vaccine disease is not an eruptive disease peculiar to the cow, but it is produced in it by the transmission of human small-pox to it; and the man, and not the cow, as has hitherto been thought, is the source of the disease; (2) the mild disease thus caused in the cow can, by direct transmission from the cow to man, produce in him as mild a disease, which gives protection against the natural small-pox."

Thiele also described a method by which he claimed to have brought about such modification of small-pox virus as to render benign its action on the human subject without the intermediate stage of implantation on the tissues of the cow. This altered potency of the material was brought about, according to his statement, by first keeping the small-pox lymph for a period of ten days between two slips of glass, after which milk was added to it, and the resulting mixture employed for the vaccination of children.

The same process was carried through with the lymph obtained from the first and following series of children vaccinated, until after ten generations addition of milk was found to be no longer necessary. Seeing that at this date (1836-38) true cow-pox was so much more widespread than at present, that at the commencement of the century Jenner confidently looked forward to its occurrence every year, and that in consequence the majority of milch cows were liable to become infected at one or another period of their existence, this empirical method of Thiele's bears a curious and noteworthy resemblance to one of the methods, proposed by Koch, for the treatment of rinderpest. This consists in the injection into susceptible animals of a mixture composed of a small proportion of virulent blood diluted with a much larger quantity of serum obtained from an immune animal. Milk, of course, is merely an emulsion due to suspension of fatty particles in a fluid which may be regarded as blood serum, so that it is conceivable that milk obtained from a cow which had suffered not long before from cow-pox, and so become, for the time at any rate, immune, might so far modify small-pox lymph added to it, as to produce some such effect as noted by Thiele when the milk was used for purposes of inoculation.

I have been unable to find any records dealing with a repetition of these experiments, but it would be interesting to make investigation of the possibility of producing a similar lessening in virulence of small-pox lymph, by admixture with the blood serum of a calf which had been vaccinated some few weeks beforehand.

Ceely, in February, 1839, inoculated three "sturks" with variolous lymph, with the result that in two of the three he obtained in due course what he considered to be vaccine vesicles. From these lymph stocks were established, which at once came into such extensive use that in the course of a few months at least a couple of thousand children had been vaccinated therefrom. In his paper recording these experiments he states that on former occasions, even though working purposely at different times of the year, he had altogether failed in attempts to variolate the cow.

In order to test the measure of protection afforded these children by his variola-descended lymph Ceely tried on a number of them the effect of subsequent variolous inoculation at varying intervals of time from their vaccination. In no case did he obtain any greater result locally than, on the authority of Willan, is known to have attended the test inoculations employed by Jenner and Woodville.

Unfortunately, owing to the particular methods used by Ceely in his variolous inoculations of cows, some doubt is thrown on the value of the results obtained by him. He was, according to his own account, working simultaneously with both variolous and vaccine lymph, so that it is difficult to exclude the possibility that his instruments may have unintentionally served to convey the infection of both diseases at one and the same time.

Several years before the commencement of his inoculation experiments Ceely had made trial of a method originally employed by Sonderland, of Barmen (1830), who claimed to have infected cows with the contagion of variola by way, presumably, of the respiratory tract. This he did by enveloping them in blankets taken from the bed in which a patient had

died of small-pox, and by hanging other blankets similarly infected around the head of each cow in order that the animal might breathe in the "effluvium" arising therefrom. It is stated that these cows subsequently manifested symptoms of cow-pox, and that from this source lymph was obtained and used on the human subject with the result that typical vaccine vesicles were produced. Ceely failed, however, in his attempt to bring about infection in similar fashion, as, indeed, have numerous observers in various parts of the world. Yet Ceely has himself recorded an occurrence observed by him in 1840, which, although apparently but little known, is of interest in this connection. He relates an instance in which five out of eight milch cows sickened with cow-pox within twelve to fourteen days of their having been seen to be licking over a quantity of flock from the mattress on which a patient had died of confluent small-pox, and which had been spread out in the field for purification. Careful inquiry at the time appears to leave no doubt that the animals, which had been on the same farm for a considerable period, were in good health at the time of their admission to the meadow in which the bedding was exposed, and also that there had not been any other case of cow-pox in the neighbourhood. The fact that all the animals became affected simultaneously, and after a period corresponding to the usual incubation period of variola, certainly affords some reason for the assumption that the outbreak owed its origin to the animals being exposed to the "effluvium" from the infected bedding. It is, of course, possible that infection by way of the digestive tract may have been a factor also in this case, since Chauveau and other observers have shown experimentally that such result may be possible, a number of cases having now been recorded in which vaccinia has been communicated both to the human subject and also to the lower animals by the ingestion of vaccine lymph or powdered vaccine crusts.

There surely has seldom been so indefatigable a repeater of experiments as Badcock, the Brighton chemist, who during a period of about twenty-five years performed more than 500 variolous inoculations. In December, 1840, Badcock, who had commenced his work without knowledge of Ceely's slightly earlier work, first succeeded in variolating a cow, from which he carried on a stock of what was indistinguishable from genuine vaccine lymph. Although he subsequently met with similar success on no fewer than thirty-seven separate occasions, the difficulty and uncertainty of the work will be appreciated on consideration of the fact that those experiments which eventuated in success represent but 7 per cent. of the total number. The lymph obtained by Badcock as the result of his variolation experiments has been largely employed; he supplied it to hundreds of medical practitioners, and many thousands of children are said to have been successfully vaccinated with it.

About twelve years (1852) after Badcock had obtained his first successful results, two American physicians (Drs. Adams and Putnam) were equally fortunate, and were able in consequence, as reported at the time in a Boston daily paper, to furnish all the vaccine matter requisite for use in the city and neighbourhood.

In 1865 a Commission appointed by the Society of Medical Sciences at Lyons, having Chauveau at its head, reported the results of a comprehensive series of experiments carried out by it during the two preceding years, the results of which were completely at variance with those obtained by previous investigators. These results have been admirably summarised in the report of the English Royal Commission on Vaccination.

"Inoculation of the cow or heifer with small-pox matter in any one of the thirty animals used did not give rise to a vaccine vesicle; nevertheless, a definite result was obtained, in the form however, not of a vesicle, but of a thickening and inflammation of the wound; when a puncture had been made this became a papule; lymph squeezed from such a papule, and inserted into a second animal, gave rise to a like papule; and this again might be used for a third animal, but often failed: and the effect could in no case be carried on through more than three or four removes. When the inoculation was repeated on an animal on which a previous inoculation had produced such a papule, no distinct papule was formed; and moreover, lymph squeezed from the seat of the latter inoculation produced no effect at all when used for the subsequent inoculation of another animal.

"There is evidence that the development of the papule was the result of the specific action of the virus. This inference is strengthened by the fact that no such papule was produced by the Lyons Commission when the small-pox matter was inserted into an animal which had previously had cow-pox naturally or artificially; as well as by the fact that when an attempt was made to vaccinate, with vaccine lymph of proved efficacy, an animal on which a papule had been so developed by inoculation with small-pox matter, the vaccination failed, though the animal had never had natural cow-pox nor been vaccinated.

"The specific nature of the lymph of the 'Lyons' papule is held to be shown by the fact that such lymph, when used on the human subject, gave rise to small-pox. On the other hand, it has been urged that in this case the virus producing the effect was simply the original small-pox matter used in the inoculation producing the papule and still clinging to the wound. This, however, is considered to be disproved by the experience that lymph from a 'Lyons' papule of the second remove also gave rise in the human subject to small-pox. Thus, Chauveau and his Commission found that small-pox implanted in the bovine animal gave rise to a specific effect which was not cow-pox but was of the nature of small-pox, though its manifestations in the cow were different from those of small-pox in man."

A few years earlier—in 1860—Martin, of Boston, U.S.A., appears to have had a somewhat similar experience, as about 50 persons vaccinated by him from vesicles raised on a cow's udder by inoculation of variolous matter taken from a pock on the body of a man who had died of the disorder were nearly all attacked with small-pox, and 3 died.

Voigt, the Director of the Hamburg Vaccine Establishment, in 1881, brought into extensive use not only in Hamburg, but also in other parts of Germany, a strain of lymph of variolous origin. In the early summer of that year he inoculated three calves with lymph obtained from a case of small-pox. In two of these the operation was apparently unsuccessful, in view of which it is of interest to note the fact that all three calves were afterwards found to be insusceptible to vaccination. In the third calf a single vesicle appeared on the site of one out of five incisions made on the left side of the perineum. Voigt adds, however, that this same animal had been vaccinated in one small place in the right hypochondrium (for what reason is not obvious), and that at this point a normal vesicle developed. Voigt does not consider that this fact invalidates the apparent success of his experiment, for the reason that, as he says, the lymph derived from, as he considers, the variolous source, proved to be more potent as regards its observed effects on children and calves than the Beaugency vaccine lymph which he had in current use at the time his experiment was carried out. Both Chauveau and Berthel have, on the other hand, expressed the opinion that Voigt's variolo-vaccine is merely a continuation of the strain of animal vaccine previously employed in Hamburg.

In 1885 Dr. Simpson succeeded in an attempt to inoculate a cow with small-pox lymph obtained from a young vaccinated girl; but, as far as I am aware, he did not publish the details of this experiment at the time. Dr. Cory, to whom Simpson sent points charged from the cow on the sixth day after inoculation, has given the following record of their use in his recent volume on *Vaccination:*

Three days after receiving the points, Dr. Cory employed them at the Animal Vaccine Establishment, Lamb's Conduit Street, for the vaccination of a young male calf. Three out of five insertions made with the lymph resulted in vesicles indistinguishable from those produced by the current lymph of the establishment. A second calf and also a child were therefore vaccinated from the first calf, with successful results in each instance, although in the calf only six vesicles resulted from seventeen insertions of the lymph. From this calf a continuous series of calf vaccinations were carried on during a period of six months. With the lymph obtained from these animals, 79 in number, no fewer than 1,247 children were vaccinated, 1,174 of whom afforded an insertion success of 98.4 per cent.

Some years later (in 1892) Dr. Simpson, then resident in Calcutta, was again successful in raising a stock of vaccine

lymph of variolous origin. Lymph was taken from a small-pox patient on the fifth, sixth, seventh, and eighth day of eruption, and each day a young calf was inoculated, the animal having been taken into the small-pox ward for the purpose.

The inoculations with the three later lymphs were unsuccessful, but the first calf showed on the sixth day of inoculation three papules on the abdomen and in the groin at points where no punctures or incisions had been made. These on the following day had developed into vesicles. Two of the incisions and one puncture also contained lymph. On the sixth day lymph was taken (whether from vesicles, incisions, or puncture, or all three is not clear from Dr. Simpson's paper) for the inoculation of another calf, from which again on the sixth day a child was vaccinated, the two insertions giving rise in due course to vesicles. From this child the strain of lymph was carried on successfully through nine generations; and Dr. Simpson remarks that each child showed splendid vaccine vesicles, much more typical in every respect than those obtained from the lymph which had been previously in use.

In 1886 and 1890 Fischer, the Director of the Institute for Vaccination at Carlsruhe, obtained two strains of variolo-vaccine as the result of inoculation of calves with human small-pox lymph. In the first series Fischer inoculated a young female calf which he took into the small-pox ward of the Pforzheim Hospital for this purpose. Typical vaccine vesicles had developed on the sixth day, the lymph from which was carried on through twelve generations in the calf, after which it was successfully employed for the vaccination of children. Fischer states that the initial experiment of his second series was carried out in the Carlsruhe Institute, but that the animal was placed in a separate stable, and that every precaution was adopted to secure freedom from vaccine contamination. In this calf directly inoculated with small-pox lymph he again obtained, as in his experiments of four years previously, a vesicular eruption having the characteristic appearance of ordinary vaccinia. With lymph taken at the third remove from this calf he vaccinated his own grandson with complete success, and the strain, which has now been continued through a very large number of animals, has been brought by Fischer into general use.

Surgeon-Major King, in 1889, being then stationed at Madras, inoculated a young bull calf with fifth-day small-pox lymph obtained from a child suffering from the disease. On the eighth day after the inoculation a crop of vesicles made their appearance, not at points of insertion but some little distance away, from the lymph obtained from which another calf was then inoculated. In this calf again secondary vesicles appeared, but in addition vesicles also formed at each point of insertion of the lymph.

The lymph stock was carried on through three more generations in calves, the vesicular eruption being now in each instance strictly localised to the points of insertion. With lymph obtained from the fifth calf of the series a number of children were vaccinated successfully. Dr. Simpson reports that from the stock thus established by King 4,240 British and native soldiers have subsequently been vaccinated, and also a very large number of the native civil population, with most gratifying results, the percentages of success being much above that obtained from the lymph previously in use.

For reasons which are unknown to me, Surgeon-Major King's investigation appears to have been regarded with disfavour by the Government of Madras, by whom he was ordered back to his regiment and deprived of his special emoluments. Subsequently, however, this injustice was repaired by the reinstatement of Surgeon-Major King in his former position as Director of Vaccination in the Presidency.

In May, 1892, Dr. Hime published the results obtained by him in a single experiment on variolation. The lymph employed for inoculation of the first calf was collected from a semi-confluent case of small-pox in a previously vaccinated woman aged 37 years. No details are given as to where the experiment was conducted, but presumably it was in the private establishment from which Dr. Hime supplies vaccine lymph, as he makes the statement that "the calf was placed on the ordinary vaccination table used for these animals." A number of skin incisions were made, into which the variolous lymph was inserted. Of these incisions, all subsequently healed, being on the sixth day only "detectable to the touch by a slight roughness." Several "pocks," however, developed at points for the most part distinct from any of the incisions; and material taken from these on the ninth day of inoculation was employed for the direct inoculation of another calf. All the incisions made on this second calf had "taken" on the fifth day, when lymph was collected in tubes, and pulp removed by scraping. Some of the latter made into "conserve" with glycerine was sent to Fischer, of Carlsruhe, who obtained excellent results with it on a calf, from which children were in turn successfully vaccinated. Dr. Hime also himself vaccinated a child with a capillary tube of the lymph, in two insertions, at each of which points a typical vesicle presented itself on the eighth day.

The largest amount of research work in this direction during recent years is that of Haccius and Eternod (1892), of whom the former is the Director of the Swiss Vaccinal Institute at Lancy, Geneva, where the work was carried out.

Haccius gives an account of no fewer than seven successful series of experiments, in each of which a strain of variolous lymph, obtained in the first instance from the human being, was carried on from calf to calf through, in some instances, as many as six or seven removes. The general result was that by the second or at the most the third remove, the effect produced was altogether indistinguishable from that which we are accustomed to see in a calf that has been successfully vaccinated. With the lymph of the fifth or sixth remove, a number of previously-unprotected children were vaccinated with unfailing success. The resulting vesicles could in no way be distinguished from ordinary vaccination vesicles of equal age. The total number of animals employed in these experiments is not mentioned, but from certain statements in M. Haccius's publication, one gathers that it was very considerable. It is obvious, therefore, that the Lancy experience as to the small proportion of success to failures is similar to that of other observers. It is worthy of note also that in those animals in which inoculation of variolous matter appears to have been attended with success, no definite vesiculation was ever observed at the site of any of the punctures or incisions that were made. The usual result in the first remove from the human being was either a single vesicle or group of vesicular points on the site of a scarification or denudation of the skin.

It is particularly stated that every precaution was taken, as, for instance, by the sterilisation of the lancet before each operation, to prevent the accidental transmission of vaccinia.

Dr. Klein, who in 1879 had obtained in 31 trials what then appeared mere negative results, renewed his investigations in 1892, employing now calves for inoculation experiments instead of milch cows as in his earlier attempts. Having procured, at the hospital ships off Dartford, lymph from the vesicles of two cases of confluent small-pox, one at the sixth, the other at the seventh day after the appearance of the rash, this lymph was, on the same day, inoculated by linear cutaneous incisions on two calves at the Brown Institution. The inoculation of one of these calves afforded no indication of success, but on the other calf he obtained a local result in the groin, which, however, consisted not of a distinct vesicle, but merely a thickening and redness, together with a linear crust, at the site of certain of the incisions into which small-pox lymph had been introduced.

Lymph pressed from the thickened wounds, when inoculated into a second calf, produced also by the fifth day a like but rather more marked result, while the thickening and redness still further increased as the process was repeated in a third and fourth calf. In none of these animals was there any appearance of vesiculation.

At this stage the fourth calf of the series was removed to Lamb's Conduit Street, where Dr. Cory, with material obtained by clamping and scraping the thickened incisions on the seventh day, vaccinated an infant in five separate insertions with complete success. Each of these presented on the eighth day appearances characteristic of vaccinia. Moreover, Dr. Cory, who kept the child under observation from first to last, was unable to detect in the course of the disorder any deviation from the condition of affairs normal to vaccinia.

"Crusts" from the arm of this child were preserved and

utilised after being mashed up in sterile salt solution for the retrovaccination of another calf. In due course there resulted in about half of the total number of incisions vesiculation of a character not to be distinguished from that current in the calves vaccinated in the ordinary course at the Lamb's Conduit Street station.

Finally, after a lapse of six weeks, Klein submitted this retrovaccinated calf and other calves vaccinated from it to the test of a further and thorough vaccination with current calf lymph, with the result that all these animals entirely resisted vaccinia. I have learnt privately from Dr. Klein that in his former (1879) experiments on cows he in more than one instance obtained results somewhat similar to those witnessed in the calf on which his more recent successful inoculation was performed. He suggested at the time the advisability of attempting a transference to a second animal, but Ceely, who was superintending the experiments, insisted on the necessity of obtaining a vesicle in the first animal inoculated as the only criterion of success, and the suggestion was therefore overruled. For his own satisfaction, however, Klein endeavoured to vaccinate one of the cows which had shown some local reaction but entirely without result, the animal apparently being immune.

Of my own experiments, the most successful series may briefly be described as follows:

With variolous lymph (contained in two capillary tubes) taken on July 30th, 1892, from a vaccinated girl, aged 16, at the fifth to the sixth day of the eruption of discrete small-pox, I on August 11th inoculated a cow-calf A, about 6 weeks old, by thirty-two linear incisions and two superficial scarified patches made on the abdomen.

On August 13th (the third day) this calf presented nothing but a slight scab over the scarified patch.

On August 15th (the fifth day) some of the incisions were somewhat red and elevated, more particularly at several definite points which tended to be vesicular. At this date, on the inner aspect of each thigh, and distant in each instance from incisions or scarifications, was a crop of shotty and incipiently vesicular pimples.

On August 17th (the seventh day), having clamped three of the incisions, including those with the quasi-vesicular appearance, I removed the lymph with the crusts by scraping, and used the material for the inoculation on this date of Calf B. The accessory incipient vesicles I left untouched.

From first to last Calf A never exhibited any appreciable rise of temperature or indisposition of any sort.

On the ninth day the linear incisions, the cross scarifications, and the accessory vesicles of Calf A were in their decadence, and in a few days more the whole process was at an end.

More than a month later, namely, on September 22nd, I vaccinated this Calf A in 23 linear incisions with calf lymph obtained from the Government Animal Vaccine Establishment. The result was absolutely negative.

On August 17th, with the scrapings obtained the same day from Calf A, I inoculated a cow calf (B) 2 months old in 56 linear incisions on the abdomen. On the third day every one of these incisions was distinctly raised and bordered by a delicate pink flush.

On the fourth day (August 20th) all incisions had evidently taken, the areola about each being now well marked, and about one-eighth of an inch in width, but there was no definite vesiculation. At this date, after clamping, scrapings were taken from certain of the incisions for further experiment. No accessory vesicles appeared in this calf, which, along with Calf A, was vaccinated on September 22nd in 17 linear incisions with calf lymph obtained from the Animal Vaccine Establishment. The result, as in Calf A, was absolutely negative.

On August 20th, with scraping taken the same day from Calf B, I inoculated a small cow calf, C (seven weeks old) in twenty-seven linear incisions on the abdomen. On the fourth day (August 23rd) every incision had "taken," and in most of them there was evidence of commencing vesiculation. Two days later (August 25th) vesiculation was distinct in several of the incisions. At no time were there any accessory vesicles. This calf also was vaccinated (September 22nd) with calf lymph from the Animal Vaccine Establishment. Again the result was altogether negative.

Thus far I have obtained an undoubtedly successful result in one series only out of four attempts, but I have at any rate been able to satisfy myself that it is possible to variolate the calf, and further that the result obtained in the first instance may become greatly modified in the course of successive removes; and, again, that animals which have been thus treated are no longer susceptible to vaccination.

I may perhaps mention here that all my experiments were conducted at the Brown Institution, to avoid any possibility of contamination with vaccinia; that as a further precaution new scalpels were used, which were invariably first carefully sterilised in a flame; that before and after use the table was thoroughly washed with carbolic acid and hot water, and during the intervals of use kept exposed to the open air.

The Royal Commission on Vaccination, in the section of their report dealing with the question of the relationship of variola and vaccinia, show that the various series of inoculation experiments of which I have given a brief account fall into one or other of three categories.

The first category includes the experiments of Thiele, Ceely, Badcock, Voigt, Haccius and Éternod, King, Simpson, Hime, and others. In these experiments "inoculation of small-pox matter into the udder or adjoining parts of the bovine animal gave rise, at or near the site of inoculation, to a vesicle, either identical in visible characters with the ordinary vaccine vesicles produced by inoculation with the matter of cow-pox, or to a vesicle the features of which, while not corresponding wholly with those of a perfect vaccine vesicle, so closely resembles it as to justify the recognition of the vesicle as a vaccine vesicle."

"Also it includes experiments in which, though the local result had not the characters of a perfect vaccine vesicle, yet lymph from it, when carried through a second or third remove in the cow or calf, presented results fully manifesting those characters, and when again transferred to man gave results indistinguishable from the ordinary vaccine vesicles."

In the second category are placed the experiments of Klein and myself. In no instance did either of us obtain any appearance of vesiculation in the animals directly inoculated with small-pox virus, although the appearance of the eruption tended to resemble more and more that typical of vaccinia, the further the remove, through a series of calves, from the original strain.

In the third category are included the practically negative result of the Lyons Commission, obtained by Chauveau and his fellow-workers. A brief account of these has already been set out.

With the exception, then, of Martin and of Chauveau and his colleagues of the Lyons Commission, all the observers mentioned claim to have obtained positive results—in a certain number of their experiments at any rate—as regards the production of typical vaccinia, after one or more removes, as the result of variolation of the cow or calf.

By no one, apparently, has success been attained invariably, but it is among the experiments of the earlier observers especially, who made use for the most part of heifers and milch cows, that the largest proportion of abortive attempts are to be met with. Subsequent experience has shown that success is much more likely to be attained if calves be used instead of heifers or cows. In this way, perhaps, Chauveau's somewhat anomalous results may be in part explained.

With reference to recent experiments on variolation of the calf, it is worthy of note that, as previously mentioned, different observers have obtained local effects in that animal, which in different calves of a series have varied considerably. The final result has, however, after a greater or less number of removes from calf to calf, been invariably the same—namely, a local vesicle is produced, which by no means at our command, such as the appearance and course thereof, or the protective power of the lymph derived therefrom, is distinguishable from true vaccinia.

Although practically there is unanimity of opinion among those who have worked at this subject, it must be confessed that, seeing the conditions under which they were carried out, many, particularly of the earlier experiments, are of little worth.

Some of the main objections are based on the fact that experiments on this subject have almost without exception been performed in establishments devoted to the continuous

cultivation of vaccinia; on the use concomitantly of vaccine and of variolous lymph on the same animal; and on the want of care as to the cleanliness and freedom from vaccine contamination of lancets and "points" used in the experiments.

Objection of similar sort against the variolations of the calf which have been achieved in recent years is hardly valid. In some of the more recent cases, at least, special precautions have been taken to ensure that the instruments and table were sterilised, and to render the environment of the animal such as to afford no likelihood of the communication of vaccinia. Most especially was this so as regards Klein's investigations and my own.

The number of successful cases which have been recorded is now so large that it is difficult to believe that sources of fallacy of the above sort should have been present in every instance, and it is therefore well-nigh impossible to resist the conclusion that a change of small-pox into vaccinia must really have come about. Nevertheless, there are found even at the present day those who, like Juhel and Dupuy (1894) and Layet (1895), maintain the essential duality of variola and vaccinia. It is, however, difficult to understand how the results obtained by the last-mentioned especially can bear the interpretation he would place upon them, seeing that he obtained, as the result of inoculating heifers with small-pox lymph, a vesicular eruption, the lymph derived from which reproduced the disease on other heifers. Moreover, subsequent vaccination of all his series of animals was either abortive or wholly without result.

Hervieux (1895), the Director of the Vaccine Institute attached to the Académie de Médecine, takes up a similar position to that of Layet and his collaborators, Le Dantec and Benech. He asserts that the only point of similarity between variola and vaccinia which has been brought forward by those who believe in the relationship of these disorders is the likeness between the vesicles which are found in either case, and denies that this point forms any argument in favour of their identity. He also considers that the use of lymph of variolous origin is fraught with danger; and so, doubtless, it may be when that employed is derived—as in Chauveau's and Martin's cases, for instance—directly from the animal first inoculated.

If, as I believe, it can be conclusively proved that small-pox lymph, by passing through the system of the calf, can be so altered in character as to become deprived of its power of causing a generalised eruption, while inducing at the site of inoculation a vesicle indistinguishable from a typical vaccine vesicle; and more important still, if it be shown that when transferred again to man, it has by such treatment completely lost its former power to produce an infectious disease, it may fairly be asserted that cow-pox—or rather, that artificially-inoculated form of the disease which we term vaccinia—is nothing more or less than variola modified by transmission through the bovine animal. Perhaps the most reasonable interpretation of such results may be that small-pox and vaccinia are both of them descended from a common stock—from an ancestor, for instance—which resembled vaccinia far more than it resembled small-pox. It is conceivable, indeed, that the seeming vaccinia, obtained in the calf by inoculation of small-pox matter into that animal, may after all be but a reversion to an antecedent type; and in this connection we may call to mind a fact of universal experience, namely, that vaccinia, however it may have arisen in the past, or is made to appear in the present, exhibits little tendency to "sport" (as, for instance, by manifesting a "generalised eruption") in the direction of small-pox.

Mr. Picton and Dr. Collins, in their addendum to the report of the Royal Commission on Vaccination, lay much stress on the want of "evidence to show that inoculation of the pox of the cow on the human skin has ever produced small-pox."

Variola and vaccinia may, nevertheless, have a common ancestry, since it is not unlikely that variola may have departed widely from the original type, and have gained an exalted virulence by repeated passage through man under conditions favourable to its propagation and activity. If this evolution of the disease has in fact taken place, variola may have suddenly reverted, under greatly changed conditions—as, for instance, implantation on the bovine animal—to an ancestral type. But the reverse process—that is, sudden "sport" of vaccinia in the direction of small-pox—is not to be expected. It is most unlikely that a less differentiated form (cow-pox), also emanating from the common ancestral stock, should attain to the most exalted virulence in a single individual, and, *per saltum*, declare itself as small-pox, as the dissentient Commissioners insist that it ought to do.

CLINICAL LECTURE
ON
A CASE OF LOCALISED MYELITIS,
AFFECTING THE FIFTH LUMBAR AND THE SACRAL SEGMENTS OF THE SPINAL CORD, THE RESULT OF A SLIGHT TRAUMATIC INJURY;
AND
A CASE OF PARALYSIS OF ALL FOUR LIMBS,
DUE TO A SPINAL INJURY.

Delivered at the Edinburgh Royal Infirmary

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(Concluded from page 1138.)

ALTHOUGH we have arrived at the conclusion that the lesion is situated within the spinal cord, we have by no means exhausted the anatomical diagnosis. We have next to endeavour to determine the exact part of the spinal cord (in its vertical and transverse diameters) which is involved. This point of diagnosis is decided by observing the exact distribution of the symptoms (the motor paralysis, sensory derangements, disturbances of reflex action, the vasomotor and trophic derangements).

The spinal cord consists of a series of segments placed one above the other; each segment consists of two symmetrical lateral halves to which a pair of spinal nerve roots is attached, and each segment of the spinal cord may be regarded as a separate spinal cord for the portions or areas of the body to which the spinal nerves connected with it are distributed. Now, as I pointed out in the first edition of my book on the spinal cord, published now a good many years ago, the essence of the clinical examination of the spinal cord consists in the examination of the motor, sensory, reflex, vasomotor, and trophic functions of each of the individual segments in detail.

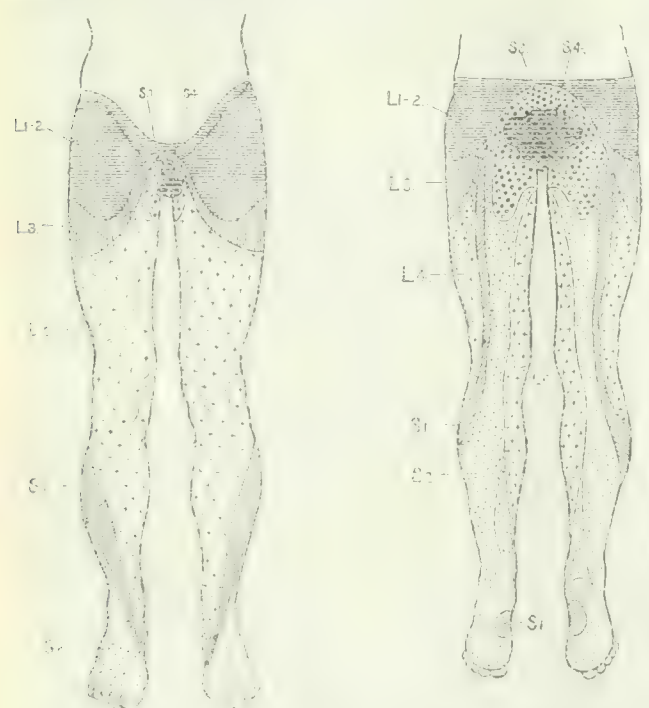
In this case there is no difficulty in coming to a conclusion as to the exact part of the spinal cord which is affected, for the symptoms are very remarkably localised to the areas of distribution of certain spinal segments. This case may in fact be regarded as a physiological experiment made by disease in the animal man. It is rare to meet with cases of cord disease. I refer, of course, to indiscriminate lesions in which the symptoms are so accurately localised and limited in their distribution, and it is for this reason that cases such as this are of so much scientific interest and importance.

It is by the careful observation of cases such as this that we are enabled to increase and advance our knowledge of the functions of the spinal cord. The case is an excellent illustration of the importance of clinical observation, and confirms the view that I am never weary of expressing—that the observation of the effects of disease in man is, for the purposes of human physiology (and that, be it remembered, is the physiology which chiefly concerns the practical physician and the practical surgeon), quite as important—in fact when we are fortunate enough to meet with cases in which the lesion is so localised and the symptoms are so sharply defined as they are in this case I would say much more important than experimental observations on the lower animals. But I must not allow myself to be diverted into a discussion on this point—the value of accurate clinical observations as a means of elucidating the physiology of the nervous system of man.

In dealing with such a case as this, the first point is to get the facts accurately. This necessitates care, time, much patient clinical observation, and above all the most scrupulous exactness and truthfulness. Dr. Colman and I have given

much time to the investigation of this case. As the result of our observations, we have determined that the motor paralysis is practically limited to the muscles below the knee. There is, as I have already told you, complete paralysis of all of the muscles below the knee, and of the glutei maximi muscles, some paralysis of the bladder and rectum, and some, though very slight, paralysis of the muscles of the thighs. The paralysis of sensation involves the feet, the lower part of the legs, the scrotum and penis, the perineum, a saddle-shaped area on the buttocks, and a narrow strip on the adjacent part of the back of the thighs (see the areas marked black in Figs. 1 and 2). The disturbance of reflex action involves the plantar and sexual reflexes (which are completely obliterated), the vesical and rectal reflexes (which are impaired but not completely destroyed), and in a slight degree the knee-jerks (which are diminished in intensity). The cremasteric reflex on both sides is, you will remember, quite unaffected. The vasomotor and trophic disturbances are limited to the parts in which the sensory paralysis is present.

Now, it is obvious, from this distribution of the symptoms, that the lesion involves the lower end of the spinal cord (the last lumbar and the sacral segments); the cervical, dorsal, and the greater part of the lumbar enlargements are quite unaffected. There is no disturbance of function in parts supplied by nerves coming off from the cervical and dorsal regions of the cord. The lumbar enlargement may require a little further consideration. The nerves coming off from the lumbar and sacral segments of the spinal cord are distributed to the lower extremities and to the pelvis. The exact motor and sensory distribution of the different nerve roots connected with the lumbar and sacral segments of the cord is (approximately) shown in Figs. 3, 4, and 5.



Figs. 3 and 4.—Outline chart of sensitive areas of the skin (after Theodor Kocher). L 1 and 2, area of distribution of the first and second lumbar nerves; L 3, area of distribution of the third lumbar nerve; L 4, area of distribution of the fourth lumbar nerve; S 1, 2, 3, 4, areas of distribution of the first, second, third, and fourth sacral nerves respectively.

From the detailed description of the symptoms present, which I have already given you, there is no difficulty in concluding that the lesion involves the first, second, third and fourth sacral segments of the spinal cord, and, to a slight extent, the fourth and fifth lumbar segments, the first, second and third sacral segments being more particularly involved.

The next question which has to be determined is what part of the transverse section of the spinal cord is involved. Each segment of the spinal cord consists of two symmetrical lateral halves; each half segment consists partly of grey and partly of white matter. The grey matter of the anterior horn contains the multipolar nerve cells, which are the trophic centres for the muscles and the centres for reflex action. The grey matter surrounding the central canal has important functions, as we shall presently see in connection with the transmission of pain and heat and cold. The grey matter of the posterior horn, perhaps, exerts a trophic influence upon the skin.

The white matter consists of various tracts which have a definite physiological function. Now, in this case there is not only paralysis, but there is extreme atrophy and absence of the faradic contractility in the muscles which are completely paralysed—the muscles supplied by nerves coming off from the first and second sacral segments. This seems to show that the lesion involves, and has extensively destroyed, the grey matter of the anterior horn—at all events, in the first, second and third sacral segments, the segments which supply the calf muscles, the glutei muscles, the peronei muscles, the flexor muscles of the ankle, the intrinsic muscles of the foot, and, perhaps, the muscles of the penis.

The paralysis of the bladder and rectum appears to be incomplete; the muscles concerned in the production of these important reflexes receive their motor supply from the fourth and fifth sacral segments. It is reasonable therefore to conclude that the grey matter of the anterior horn in the fourth and fifth sacral segments is not completely destroyed.

With regard to sensation, tactile sensations are conducted up the white matter in the lateral columns, whereas painful sensations and sensations of heat and cold appear to be conducted up through the central grey matter.

Now, it is important to observe that in this case the tactile sensibility is less impaired than the sensibility to pain, and the sensibility to pain less impaired than the sensibility to heat and cold. It is reasonable therefore to conclude that the lesion affects the central grey matter more than the white columns; but it is probable that the lateral white columns in the sacral segments are, to some extent, affected. There is complete anæsthesia of the skin, of the perineum, external genitals, and of a saddle-shaped area on the buttocks and adjacent parts of the back of the thighs—these parts are supplied by the third and fourth sacral segments (Kocher)—and of the outer parts of the feet and lower parts of the leg (these parts are supplied by the second sacral segments, according to Kocher, by the fifth lumbar according to Thorburn, by the fifth lumbar and first sacral segments according to Head).

We may therefore conclude: First, because of the manner in which the paralysis of motion, sensation, and reflex action is distributed, that, as regards the vertical extent of the lesion, the first, second, third and fourth sacral segments are very markedly involved, and the fifth and fourth lumbar and the fifth sacral segments are in a less degree involved.

Secondly, because of the extreme muscular atrophy and the presence of the reaction of degeneration in the muscles supplied by the first, second, and third sacral segments (the muscles of the legs and feet and the glutei maximi muscles) that the grey matter in the anterior horn in these segments is markedly affected.

Thirdly, because of the complete anæsthesia of the skin of the penis and scrotum, of the saddle-shaped area on the buttocks and on the outer parts of the feet and legs, that the white matter in the lateral columns of these segments is perhaps also implicated, though it may quite well be that the anæsthesia is due to a lesion of the grey matter (the nerve fibres which conduct tactile impressions into the cord being involved as they pass through the grey matter in order to reach the lateral columns on the opposite side of the cord).

Fourthly, because of the disassociated character of the anæsthesia (the fact that the thermal anæsthesia is more extensively distributed than the analgesia, and the analgesia more extensively distributed than the tactile anæsthesia), that the central grey matter in these segments is more involved than the white lateral columns.

It would be difficult to imagine a case of spinal cord disease (in which the lesion was an "indiscriminate" and not a

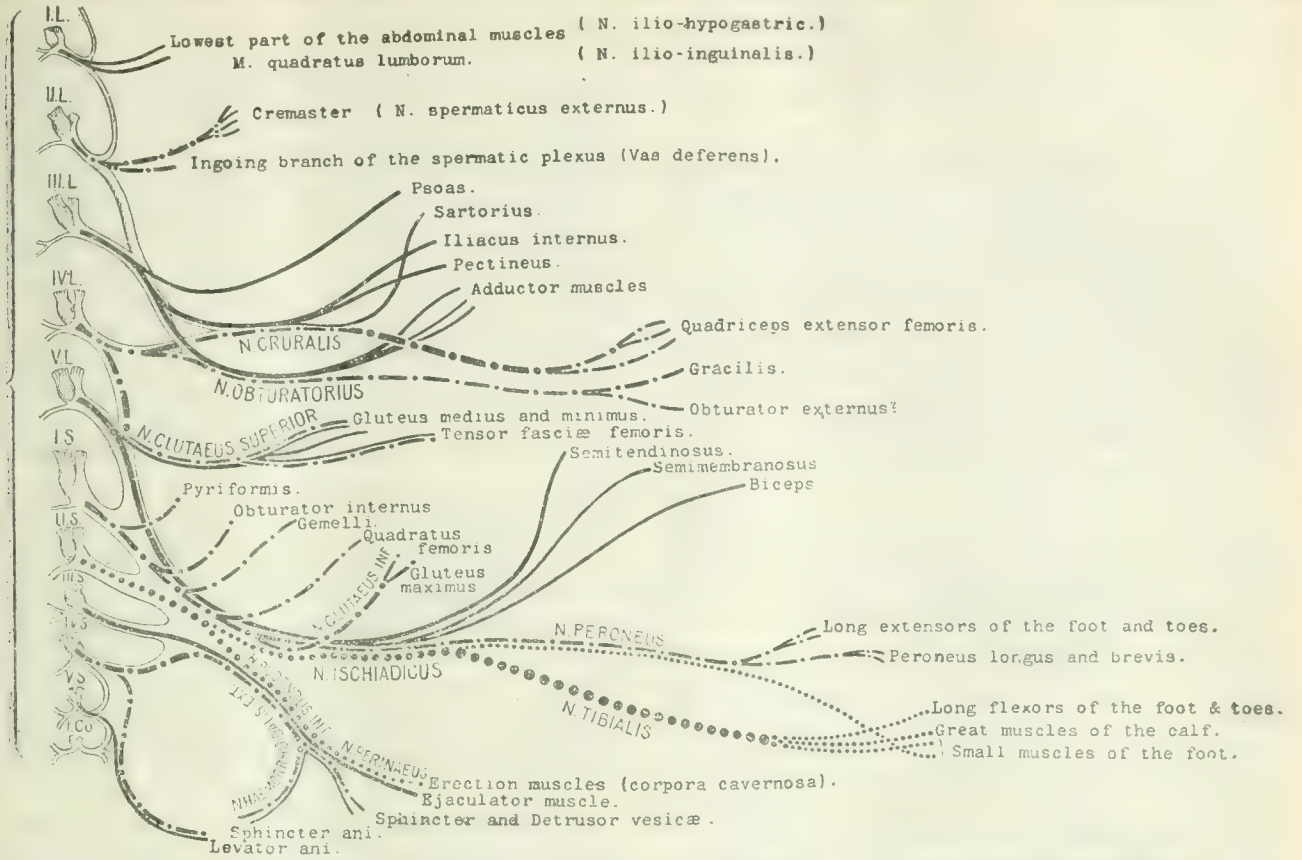


Fig 5.—Diagram illustrative of the muscular distribution of the lumbar and sacral nerve roots (after Theodor Kocher).

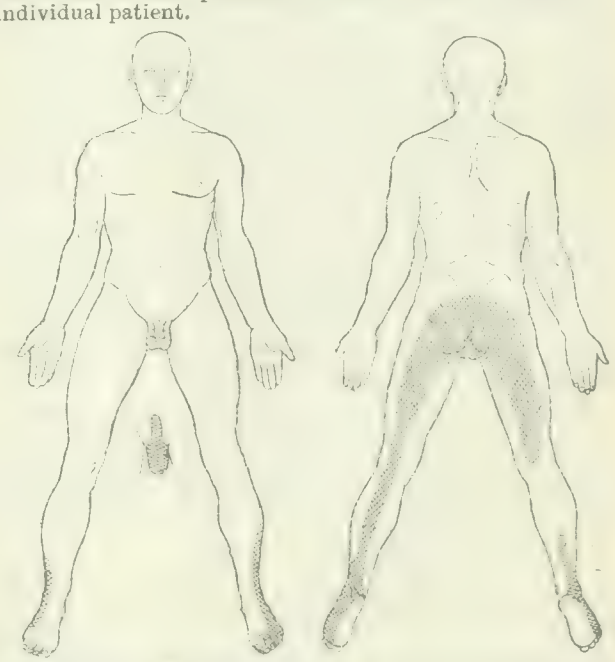
"system" lesion) presenting more satisfactory data for an exact anatomical diagnosis than this one.

Further, the distribution of the tactile anæsthesia, which is present in cases such as this, is (more especially of course if the case should prove fatal, and the exact position of the lesion should be verified by *post-mortem* examination) of importance from a physiological and scientific point of view.

We are largely indebted for our knowledge of the functional distribution of the nerve roots in man to the observations of Thorburn, Head, Sherrington, Theodor Kocher, and other observers. These authorities differ as to the exact distribution of the sensory nerves to the skin of the thighs and legs; and it is only by the careful observation of a large number of different cases (of disease in man) that we can hope to ultimately reconcile these differences.

It is impossible to argue from one case alone, for it must be remembered that the exact sensory distribution of the individual nerve roots probably varies somewhat in different individuals. The data for an exact average statement have not yet been obtained, but observations such as those of Kocher, in man, are steadily accumulating, and will in the course of time enable us to settle all the disputed points. And it is interesting to note in this case the tactile anæsthesia (see Figs. 6 and 7) is now (November 1st, 1897) almost identical in its distribution with that in a case recorded by Professor Theodor Kocher, in which a lesion of the sacral plexus (first sacral segment) resulted from an operation for spina bifida.[3]

Let us now turn to the pathological diagnosis and consider the nature of the lesion. And in trying to determine the exact pathological character of the lesion of the spinal cord, we have to take into account the following points: The rapidity of the onset; the nature of the apparent cause; the progress of the case; the character of the symptoms; the exact distribution of the symptoms; the part of the transverse section of the cord which appears to be affected (whether the lesion is a "system" or an "indiscriminate" lesion); and the constitutional peculiarities and tissue tendencies of th individual patient.



Figs. 6 and 7.—Area of distribution of the tactile anæsthesia at the date of the patient's discharge, in the case of G. A. described in the text.

By the observation of these points an experienced observer who is acquainted with the different forms of lesion which occur in the spinal cord, with the symptoms to which they give rise, and with the course which such lesions and such symptoms pursue, has usually no difficulty in making a pathological diagnosis.

Pathological Diagnosis.—Up to the time of the accident the patient was healthy but alcoholic. He then received the injury which I have described. This injury was slight, nevertheless it was attended by the production of immediate symptoms, namely, weakness and some pain in the right ankle, a "twittering" sensation in the right ankle, and a sensation of numbness and coldness in the right foot and lower part of the right leg. There was, you will observe, no evidence of local injury to the ankle-joint, although the pain is suggestive of this, and there was no evidence of any direct lesion to the back. The fact that immediately after the accident the patient complained of numbness and coldness in the right foot and lower part of the right leg seems to show that the weakness in the ankle was not merely the result of a local injury to the ankle and leg, but that it was due to a lesion of the spinal cord. The progressive course of the weakness (paralysis) and the gradual invasion of the opposite (left) leg are corroborative of this view. At the end of four months the left ankle became affected. In the course of a year the paralysis had become more extensive and very marked—almost as complete as it is at the present time—affecting the muscles of both legs below the knees and the glutei muscles. How far the alcoholic condition predisposed to the occurrence of the lesion it is impossible to say; it is not unlikely that it may in some degree have done so.

We may take it for granted, then, that the injury produced some alteration in the sacral portion of the spinal cord, which was the starting point of the lesion which is now present.

The lesion seems to involve both the grey and the white matter, but especially the grey matter; it is very localised in its vertical extent; it is, in short, an indiscriminate and not a system lesion. It developed very slowly and gradually; in fact, it is essentially chronic in character. There are no symptoms suggestive of a new growth (tumour) within the cord: and there are no symptoms, as I have already pointed out, indicative of a "coarse" lesion on the surface of the cord or of disease of the spinal bones.

Taking all of these facts into account, the most likely supposition seems to me to be that at the time of the accident a minute capillary hæmorrhage took place into the grey matter of the right side of the cord in the segment corresponding to the right ankle, probably the first and second sacral segment; and that this minute capillary hæmorrhage was the starting-point of a sclerosis, or a chronic myelitis if you like, which gradually extended, first invading the opposite (left) side of the same (first or second sacral) segment, and then invading the adjacent segments immediately above and below the segment first affected.

Two days ago I had the opportunity of showing the patient to two distinguished American neurologists—Dr. Sachs and Dr. Joseph Collins of New York—and of discussing the case with them. Dr. Collins suggested that the lesion was perhaps a dissecting hæmorrhage which had extended down the cord and given rise to the formation of a cavity in the grey matter, and that a second hæmorrhage had probably occurred when the symptoms became aggravated as the result perhaps of a process of acute myelitis.

This may of course have been the case, but a sclerosis or very chronic myelitis seems to me much more probable. The slow and gradually progressive course is, I think, opposed to the view of hæmorrhage. There is nothing to show that an acute myelitis developed, or a renewal of the original hæmorrhage, which I am disposed to think was very minute (quite capillary in extent), ever took place.

Let us now briefly consider the prognosis.

Prognosis.—Speaking generally, the prognosis in cases of myelitis due to traumatic injury in absolutely healthy persons is more favourable than in cases of myelitis originating spontaneously as the result of disease. But you must observe that this patient was not absolutely healthy; his alcoholic habits must be taken into account. Further, in this case the course has been progressively from bad to worse. It is chiefly in the traumatic cases in which the height of the lesion is rapidly reached, in which the symptoms are the result of a spinal hæmorrhage or of an acute meningitis or myelitis resulting from, or associated with, that hæmorrhage, that the prognosis is favourable. The extreme muscular atrophy, the reaction of degeneration, the trophic and vasomotor disturbances, and the marked and lasting paralysis of sensation are in this case all unfavourable points. I fear that in all probability the paralysis below the legs will persist as a permanent condition. If I am correct in thinking that the paralysis below the knees and of the glutei muscles is due to a sclerosis which has involved and destroyed the grey matter of the anterior horns of the first, second and third sacral segments, the paralysis in these parts (glutei muscles and muscles below the knees) will probably be permanent.

But I see no reason to suppose that the lesion will continue to extend and involve other segments; it may, of course, do so, but it is just as likely, perhaps more likely, to be arrested; and, provided that the bladder and rectum continue to improve (as they appear to be doing), that septic cystitis is not developed, and that the bedsores heal (as they probably will do) the prognosis as regards the duration of life is favourable.

Further, it is not improbable that in the course of time and under appropriate treatment the patient may completely regain the muscular power in the muscles of the thighs, for these muscles are only slightly paralysed; they are not markedly atrophied, and they react normally to the faradic current. Now, if this should be the case (if the patient should regain complete power over the muscles of the thighs which act on the knee-joints), we may reasonably hope that in the course of time he may be able to walk with, and perhaps even without, the help of sticks; for, provided that there is no paralysis of the muscles acting on the knee-joints, a patient who is completely paralysed below the knees can walk with the help of sticks and with the aid of thick boots which prevent the toes catching the ground, and give a rigid support to the "wobbly" ankle-joints.

TREATMENT.

With regard to treatment, this must be directed to getting the bedsores healed, paying attention to the bladder and rectum, and to endeavouring, if possible, to limit the further spread of the lesion.

In many cases of traumatic paraplegia in which the lesion is situated on the surface of the cord and is due to hæmorrhage and thickening and inflammation of the membranes, marked benefit results from the free application under chloroform of the actual cautery; in this case, in which the lesion appears to be situated within the spinal cord, I hardly think that counter-irritation over the spinal column is likely to be of much avail.

Rest in bed, iodide of potassium, arsenic, nitrate of silver, strychnine, and massage to the muscles of the thighs (for I have very little hope that any marked improvement will take place in the condition of the legs), appear to me to be the most appropriate remedies. Further, let me point out that great care must be taken to avoid irritation of the anæsthetic areas. In detailing the notes of the case, I have stated that on more than one occasion the skin was severely burned by the application of a hot bottle. The resistance of the skin in the anæsthetic areas is very markedly impaired. Ulcers and bedsores are very easily produced, and after they have been produced show little tendency to heal. This tendency to the production of bedsores is a point which should always be kept in view in the management of cases of spinal myelitis. I have already told you that the patient has been placed on a water bed, and that the nurses have been instructed to see that he is kept scrupulously clean and dry.

Before leaving the case, let me emphasise the fact that in this case, in which the lesion had its starting point in an injury—a jar—to the spinal cord and spinal column, there have been no symptoms suggestive of "railway spine." This is a very important point, for until recently it was very generally, but quite erroneously, supposed that the nervous symptoms which so frequently follow railway accidents and injuries were the result of concussion of the spinal cord. This mistaken idea is now completely exploded. Further, this case seems to show conclusively that a slight injury may be the starting point of serious organic disease of the spinal

cord, and that in such cases the disease is not attended with any of the nervous symptoms which follow railway accidents and injuries.

Note as to the Subsequent Progress of the Case.—The progress of the case has been very much what was predicted. The lesion has not extended; in fact the patient has slowly but steadily improved in several respects. The condition of the patient on November 1st, 1897, was as follows: The bedsores have been healed for several weeks; the paralysis of the bladder and rectum has almost entirely disappeared; the glutei muscles and the muscles below the knees remain absolutely paralysed; the paralysis of the thighs has entirely disappeared: the areas of anæsthesia, analgesia, and thermal anæsthesia are slightly smaller (see Figs. 6 and 7); the muscles of the thighs feel firm; the calves also feel distinctly firmer; the measurements are as follows: Right calf, thickest part = 12 in.; left calf, thickest part = 12¼ in; right thigh, 7½ in. above the patella = 19 in., left thigh, 7½ in. above the patella = 19¼ in. On comparing these measurements with those which were taken at the date of the patient's admission to hospital (May 26th, 1897), it will be seen that both the calves and thighs are slightly smaller, though the muscles of the thighs (and in some degree those of the calves) are distinctly firmer: the diminution is probably, I think, due to the disappearance of vasomotor œdema; the legs get less blue on exposure and less swollen when hung down than they did at the time of the patient's admission to hospital. The general health is very good, and the patient can now not only stand but walk. He is able to walk a few steps unsupported and without sticks, and he can walk fairly well in his boots with the help of two sticks. He can walk barefooted with the aid of sticks, but with much greater difficulty, owing to the marked foot-drop and the "wobbly" condition of the ankles.

Before concluding this lecture I wish to show you another case of paralysis due to spinal injury which, curiously enough, happens to be in the ward at the present time, for it presents some remarkable contrasts with the case which we have just considered, and it illustrates some of the general statements which I have made in commenting on the first case.

The following is a brief abstract of the more important points of the clinical history:

Case II. *Complete Motor and Sensory Paralysis of the Upper Extremities and Temporary Motor Paralysis of the Lower Extremities due to Dislocation or Fracture of the Fifth Cervical Vertebra: Gradual Recovery from the Paralysis: permanent Stiffness of the Neck remaining.*—F. B., aged 48, a carter, was admitted to Ward 30, Edinburgh Royal Infirmary, on June 14th, 1897, suffering from paralysis of the arms. The patient, who is a robust, healthy-looking man, states that he was quite well until eight months ago, when, on October 7th, 1896, he sustained a fall which was the cause of the present trouble. He was getting into his cart, having one foot on the wheel, when he fell on to his back on the hard macadamised road. He was not rendered insensible by the fall, but immediately became paralysed. Immediately after the accident he experienced pain in the back of the neck and between the shoulder blades. He lay helpless on his back, unable to move either his arms or his legs, but was able to call out for assistance. A gentleman who was passing raised his arms above his head, but he did not know that they were being moved. He was then placed on a stretcher and carried home. There was a small superficial cut on the back of the head, and some swelling of the lower part of the neck, but, so far as he knows, no other appearance of injury. For a day or two after the accident he felt little or nothing wrong with the neck; it then became painful. For several weeks the pain in the neck was agonising. He states that for three weeks he "was fevered with the pain." He was confined to bed for three months after the accident. He states that for three weeks after the accident he was unable to feel when the arms were touched, moved, pinched, etc.; the sensation then gradually returned. There was never any loss of feeling in the legs. The paralysis of the arms remained absolute for two months, and involved the upper arms, forearms, and hands. At the end of two months he began to move the fingers, wrists, and elbows. He was totally unable to move the shoulder-joints for three months. The paralysed muscles were, he states, more or less rigid, and frequently affected with twitchings and spasms. The paralysis of the legs seems to have been incomplete and of short duration. He states that during the three months that he was confined to bed he could push himself up by putting his feet against the foot of the bed. There was never any affection of the bladder or rectum. During the three months that he remained at home in bed he had to be fed. On December 30th, 1896, he was admitted to the Edinburgh Royal Infirmary under the care of Professor Annandale. He remained in the infirmary for six weeks. During this period he improved considerably (under iodide of potassium, strychnine, blisters to the back of the neck, and electricity), and since his discharge he has continued to improve steadily.

Condition on Admission (*June 14th, 1897*).—The patient is a robust, healthy-looking man. His head is slightly bent forwards. A well-marked projection is present in the lower cervical region; it corresponds to the position of the fifth cervical vertebra. The head is stiff, the movements being impaired in all directions—forwards, backwards, to the right and to the left. There is no pain or tenderness in the neck, and forcible rotation does not produce any complaint of suffering. There is no paralysis of the lower extremities; the patient walks well and firmly; the knee-jerks are, however, markedly exaggerated. He states that when he attempts to run he feels a "throbbing sensation in the spine." There are no "objective" disturbances of sensation, either to touch, pain, heat, or cold, but he states that the arms and hands are very sensitive to cold. The functions of the bladder and rectum are perfectly normal and have always been so. There is marked paralysis and atrophy of the muscles of both upper extremities. The paralysis and atrophy chiefly affect the deltoid, the biceps, the brachialis anticus, the triceps and the supinator longus in each arm, and the supraspinati and infraspinati muscles; the deltoids, supraspinati and infraspinati, and the supinator longus are in particular wasted. The muscles of the right arm are more affected than those of the left. Fibrillary twitchings can occasionally be seen in the biceps and triceps. The deep reflexes in the upper extremities are exaggerated. The muscles of the forearms are slightly affected, weak, and small, but not markedly flabby or wasted; the small muscles of the hands are normal; the grasping power of the right hand as measured by the dynamometer = 40, and that of the left = 70. The pupils are equal and of small size; their contractility both to light and accommodation is normal.

Diagnosis.

Time does not permit me to discuss the diagnosis in this case in the detailed way in which we have considered it in the first case. Nor is much discussion necessary, for the nature of the case is self-evident.

The cervical spinal column at the level of the fifth cervical vertebra was severely injured (fractured or dislocated) at the time of the accident. The evidence of this is still present in the form of a projection at the level of the fifth cervical spine and in the stiffness and impaired mobility of the neck.

The injury was followed by immediate paralysis in all four limbs, loss of sensation in the arms, no paralysis of the bladder and rectum. The paralysis of the legs seems to have quickly passed off; the anæsthesia of the upper extremities disappeared in the course of three weeks; the paralysis of the arms remained absolute for two months, and was then slowly and gradually recovered from; the muscles of the upper arms and shoulder girdles became extremely atrophied, and were at the same time the seat of rigidity and spasms.

The lesion was evidently on the surface and not in the substance of the cord; the rapid and complete recovery of the legs, and the marked improvement which has taken place in the arms, and the absence of any paralysis of the bladder and rectum, are proofs of this. The exaggeration of the knee-jerks (the only evidence of any nervous derangement in the legs which still remains) is easily explained by the pressure of inflammatory thickening or of the displaced bone upon the cord.

The lesion evidently affected the nerve roots connected with the fifth and sixth cervical segments rather than the cord itself. This is shown by the rapid and complete recovery which has taken place in the legs, the absence of any paralysis of the bladder and rectum, and the very marked improvement which has taken place and is still taking place in the arms.

The anæsthesia, which was at the commencement of the case complete in the upper extremities, has entirely disappeared. The paralysis of the forearms and hands has almost entirely passed away, and the muscles of the upper arm and shoulder girdle are steadily improving. This improvement will, I believe, continue; in fact, I venture to predict that the patient will in the course of time get quite well, and that the only permanent effect of the lesion will be the stiffness and rigidity of the neck; that, depending as it does upon injury and displacement of the bones, will of course always remain.

The second case is thus in striking contrast to the first. Both were the result of a comparatively trifling fall. In the first case, there was no direct injury to the back, though there was, I believe, a minute hæmorrhage into the grey matter of the cord. In the second case, the vertebral column was severely injured and the nerve roots at the point of injury very severely contused—perhaps some of them lacerated. There may have been some slight crushing (contusion) of the cord, but it is obvious, I think, that the cord itself was not severely damaged; and considering the very marked character of the bone injury, this is a remarkable and very fortunate result for the patient.

In the first case the injury was not attended or followed by any local pain in the back; in the second case the patient suffered for several weeks from severe (agonising) pain in the neck at the seat of the local injury.

In the first case the initial symptoms were slight, the paralysis was of very gradual development, but it slowly and steadily increased, and its maximum degree of intensity was only reached after several months had elapsed. In the second case the maximum degree of paralysis was instantaneously produced, and after the first effects of the injury passed off the course has been one of steady and progressive improvement.

In the first case, the injury was at the bottom (sacral region), in the second case near the top (cervical region) of the spinal cord.

In both cases paralysis and marked muscular atrophy have resulted from the injury; but in the first case these condi-

tions were (probably) due to a lesion of the grey matter; in the second to a lesion of the motor nerve roots. Consequently in the first case the prognosis as regards recovery from the paralysis is very bad, in the second case very good.

In the first case the paralysis, which was, I believe, due to a lesion of the grey matter, has been throughout its course a "flaccid" paralysis; in the second case, in which the paralysis was, I believe, due to an injury of the motor nerve roots, there had been marked symptoms of motor irritation (rigidity, twitchings, and spasms).

In the first case the sensory disturbances which have gradually developed have persisted; in the second case they were completely recovered from in the course of a short time (three weeks).

In the first case there has been some affection (paralysis) of the bladder and rectum and marked trophic disturbances; in the second case these symptoms have been entirely absent.

The first patient had for years been a hard drinker; the second patient has always been a steady man, never given to alcoholic excess.

Note as to the Treatment and Subsequent Progress of the Case.—The patient was treated with electricity, massage, and hypodermic injections of strychnine. He rapidly improved, and was discharged on July 31st. The grasping power of the hands at this date was as follows:—Right = 75, left = 95. The movements at the shoulder-joint were much more freely performed than at the date of his admission, and the paralysed muscles had gained considerably in bulk. When last seen (November 13th, 1897) he stated that he had been working for a week; the movements of the shoulder are much more free, and the muscular power and nutrition much improved; the neck is still stiff, but the immobility is rather less than it was.

NOTES AND REFERENCES.

[1] It must be remembered that in some cases of alcoholic peripheral neuritis with paraplegia, shooting pains are complained of, and hyperæsthesia of the sole and muscular tenderness (on pinching the calf muscles) are very marked. [2] As I will presently point out, different observers are not agreed as to the exact sensory distribution of the spinal nerves connected with the lumbar and sacral segments of the cord. [3] Die Läsionen des Rückenmarks bei Verletzungen der Wirbelsäule, Figs. 86 and 87, *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, erster Band, viertes Heft, p. 655.

TWO CASES OF OÖPHORECTOMY FOR INOPERABLE BREAST CANCER.*

By W. WATSON CHEYNE, F.R.C.S., F.R.S.,
Professor of Surgery, King's College.

The very remarkable success which attended Dr. Beatson's first case of oöphorectomy for inoperable cancer of the breast has led me to perform the operation in two cases, and, as it is of importance that any cases in which this operation has been done should be reported, with the view of ascertaining what value, if any, attaches to it, I need not apologise for reporting the two cases in which I have performed it.

CASE I.—Mrs. S., aged 34, admitted to King's College Hospital on October 23rd, 1896. The history of the case was that the patient was well until about three years previously, when she noticed a swelling in her right breast, which rapidly increased in size. The breast was removed at a country hospital, and she was told that it was a cancerous tumour. A year later she went back to the same hospital and some enlarged glands were removed from the axilla. Three weeks before admission she felt pain along the old scar, noticed some discharge, and found that there was an ulcer in the mid-axillary line

On admission, the patient seemed in fairly good condition, but complained of pain in the region of the right breast and between the axillary folds. On examination, a scar was seen running in the space between the fifth and sixth ribs, and curving upwards towards the base of the axilla and a little to the inner side of the angle of the fifth rib, there was a red and slightly ulcerated and thickened part in the scar. Between the axillary folds in the scar itself were two small nodules, and on the left side of the scar towards the axilla was an ulcer about the size of a shilling, with considerable induration of the skin around and redness of the skin; in the axilla there was a hard tender mass, occupying the greater part of the space, somewhat flattened and firmly adherent to the side of the chest, so that it could not be moved in any direction; it filled up practically the whole of the axilla. There were numerous glands in the posterior triangle of the neck some of which were large, especially one towards the outer border of the edge of the sternomastoid muscle. There was no evidence of internal deposits.

The case was clearly one where no good could result from an attempt to remove the disease; not only was it very extensive but it was also very adherent, and, judging from the the large size of the glands in the lower part of the posterior triangle of the neck, it was almost certain that other enlarged glands would be found further in which could not be taken away. The question of oöphorectomy as an alternative procedure was therefore put before her, and, having been thoroughly explained to her, she consented and desired to have the operation performed. Accordingly, on October 28th, both ovaries and tubes were removed, and at the same time a small portion of the ulcerated patch was cut away for microscopical examination.

There is nothing whatever to note about the progress of the oöphorectomy; the patient went on perfectly well. She was discharged from the hospital on December 23rd; at that time there seemed to be distinct improvement in the cancerous growths; the ulcer had undoubtedly cicatrised to a considerable extent; the mass in the axilla felt softer and not quite so adherent; the glands in the neck were noticeably smaller and the patient was in excellent health.

On March 16th, about four months and a half after the operation, she showed herself, and the following is the note taken:—A great deal of the skin infiltration has disappeared, but there still remains a small patch of ulceration about the size of a threepenny bit at the posterior part of the original mass, and there is a small scab on it; the mass in the axilla is distinctly smaller and softer, and is now freely movable; the glands in the neck are very much fewer; they are only about the size of split peas, and, indeed, the large ones at the lower part have entirely disappeared. The patient is very well with the exception that there is a little friction to be heard at the lower part of the left pleura, which she herself can feel on exertion, but there is no pain or other symptom associated with it. It should have been said that thyroid tabloids were also given while she was in the hospital, and were continued nearly up to the middle of March, but the administration was irregular once she left the hospital.

Improvement still continued for a considerable time, but towards the end of May she did not feel so well, and when seen on June 4th the following is the note:—The growth has now again distinctly increased; the ulceration has extended, and is nearly as large as it was originally; the mass in the axilla is larger than on the last occasion and becoming more adherent, but still it is not quite so extensive nor so adherent as at the time of the operation. As regards the neck increased growth is very apparent; the glands are quite noticeable and the large glands have again reappeared; indeed, the condition in the neck seems worse than it was before the operation; the pleuritic friction still continues and the patient feels weakly, but there are no special signs of internal deposit.

She had to give up her situation shortly after this on account of increasing weakness and pain, and I have not seen her since, but Dr. Bennett, of Staplehurst, sent me an account of her condition at the beginning of March. At that time the ulcer below the axilla had increased greatly in extent, reaching from the anterior to the posterior fold of the axilla; it was about an inch and a half broad. A nodule in the pectoral muscle had appeared and increased in size. There was a large mass in the axilla and glands in the neck, one of them the size of a walnut. The patient suffered great pain, and had to have frequent doses of morphine.

CASE II.—Mrs. F., aged 33, admitted to King's College Hospital on May 23rd, 1897. The patient said that about nine months ago she found the outer side of the left breast tender, and about five months ago she noticed a swelling there; from that time this swelling has steadily increased in size, and for the last two months she has had shooting pains down the arm and in the side. About two months ago she noticed a small swelling on the right side, and also swellings under her arm. On examination a large nodular tumour was found in the left breast, chiefly towards the outer side, and also extending inwards beyond the nipple; the tumour was hard, adherent to the skin; the skin at one part was red and about to give way; there were a number of nodules in the skin round about the breast, and a nodule on the right side towards the upper edge of the breast and apparently superficial to it; the axilla was full of glands, which were matted together and of considerable size, and evidently adherent to the tissues around; there was also a mass of glands above the clavicle; small, hard glands could also be felt in the right axilla; there was distinct enlargement of the second costal cartilage on the left side; slight discharge from both nipples. The patient was extremely weak; she had never been subjected to an operation. This was clearly a case in which no radical operation could be performed with any chance of success. The question of oöphorectomy was therefore explained to her, and she consented to undergo the operation. Accordingly, on May 26th, both ovaries and tubes were removed. The wound healed well, and the patient was discharged on June 19th. At that time it was thought that there was a slight improvement, but not to any marked extent; the tumours seemed to feel softer and flatter, and not to have progressed at all; in fact, some of them seemed rather smaller. She was seen from time to time during the course of the next few months, but was found to be gradually getting weaker and thinner, and no real improvement could be made out. Thyroid tabloids were given in the first instance. Her condition steadily got

* Read before the Harveian Society, April 14th, 1898.

worse, internal deposits in the liver, and probably in the pleura, also appeared, and ultimately the patient died towards the end of October.

In this case one could not say that there was the slightest beneficial result from the oöphorectomy. In the first case, however, the oöphorectomy had undoubtedly a very marked effect on the growth of the cancer, and led to very distinct breaking down or absorption of portions of the growth. The interesting point, however, is that the effect of the oöphorectomy gradually passed off, so that at the end of about six months the disease began to grow again, and has since made marked strides. The result of these two cases, which were typical cases in young women where the ovaries were still active, and where therefore their removal, if of advantage, should have produced the most marked results, is extremely discouraging, and I doubt if it is worth while going on with the procedure. Nevertheless, as a scientific fact it is clear, especially taken in conjunction with Dr. Beatson's first case and one reported by Mr. Boyd,[1] that there is a distinct connection not only between the normal epithelium of the breast and the ovaries, but also between cancerous epithelium of the breast and the ovaries. But unfortunately in all the cases it appears that the effect of the removal of the ovarian influence is only more or less transitory, while in many cases no effect is produced at all.

If one were to perform the operation again I think it would be well, either at the same time, or possibly better later, to remove as much of the noticeable disease as possible. This has already been suggested by Dr. Beatson, and Mr. Boyd in one of his cases removed the ovaries, breast, and glands at the same time; sufficient time has not yet elapsed in his case to form any opinion of the result. If the result of removal of the ovarian influence is to lead to atrophy of epithelium originating from the mamma, it would clearly be of advantage to have as little epithelium present as possible. It is quite probable that if too much epithelium is present the removal of the ovarian influence might not produce sufficient alteration in the body to overcome all the disease.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, October 2nd, 1897.

GASTRO-JEJUNOSTOMY FOR PYLORIC CARCINOMA.

BY F. C. WALLIS, F.R.C.S.,
Assistant Surgeon to Charing Cross Hospital and Surgeon to the Metropolitan Hospital.

S.B., aged 59, was admitted into the Metropolitan Hospital on March 24th, 1898, with carcinoma of the pylorus.

Previous History.—For four or five years she had had pain about two hours after food, and emaciation and occasional vomiting for the last twelve months. Vomiting had been more frequent lately, but she had no pain except after food. A swelling was first noticed by a doctor on November 22nd, 1897.

Condition on Admission.—She was a small, sallow-complexioned woman, considerably wasted. A freely-movable, hard, nodular, irregular mass, about the size of a small fist, could be felt superficially, just above and a little to the right of the umbilicus. There was a second hard, rather fixed swelling, situated below the ensiform cartilage. On the night of admission she vomited about O iij of brownish fluid. On March 26th the stomach was washed out with boracic lotion. She was much relieved by this, but on March 30th the stomach was greatly distended. It was again washed out.

Operation.—On April 1st the stomach was washed out at about 12 midday, and at 2.30 P.M. a 4 per cent. solution of eucaine was injected under the skin along a line running from the ensiform cartilage to the umbilicus. An incision 5 inches long was at once made along the line of injection, and the peritoneum was reached and divided. The stomach, with the large growth at the pylorus, was found and pulled forward. The gastro-hepatic omentum was found to be extensively infiltrated with the growth. The transverse colon was now drawn to the right, and the jejunum found and pulled forwards. Up to this period the patient had felt no pain, and spoke cheerfully to those around her. She now began to feel a little faint, so ether was administered, but the steps of the operation were not discontinued. The jejunum was brought up to the stomach, until about 5 inches lay along the viscus quite loosely. Intestinal clamps were passed through the mesentery 2 inches beyond this limit on either side. The intestine was now anchored to the stomach at either end by two Halsted sutures. Two curved rows of Halsted sutures were next made to unite the intestine to the stomach. The stitches were placed one-sixth of an inch from each other. The lower row was first put in and tied, then the top row was placed in position, but not tied and kept wide apart. The stomach was now pulled well up and incised for 1½ inch; the same was done with the jejunum. No contents escaped. The top row of sutures was now tied up, particular care being taken about the angles of union, and a few additional sutures were placed at these situations. The whole of the mass was well washed with warm boracic lotion, then everything was returned to the abdomen after removal of the intestinal clamps. The wound was sewn up by two rows of sutures. Fine silk was used for the anastomosis. The operation lasted two and a-half hours. The condition of the patient at the end of the operation was excellent.

After-treatment.—A teaspoonful of hot water was given by mouth every hour for the first twenty-four hours. Nutrient rectal enemata (4 ounces) were given every four hours, and were well retained. Small quantities of milk and tea were given by the mouth on third day. The patient sat up on the eighth day, and began solid food; she got up on the eighteenth day, and has been about ever since. Flatus was passed on the second day. The bowels were opened on the fourth day after an enema, and acted most copiously after enemata. The temperature never rose to 100°, and the pulse ranged between 85 and 95. The patient has been most comfortable since the operation, and has not vomited at all.

Remarks.—The eucaine injection in this case was quite a success as far as it went, and shortened the general anæsthesia by twenty minutes. About ℥jv of the 4 per cent. solution were injected, and the knife was used immediately. It was my original intention to use some sort of button here, but this was not possible owing to the great thickness of the stomach wall. The Halsted stitches answered admirably, the one drawback being the time that is necessarily taken in placing them. The immediate and complete relief that the operation afforded to the patient was delightful to see, and gave one a great opinion of the value of the operation. My best thanks are due to my colleague, Mr. Percy Furnivall, for his able assistance; in fact, the success of the operation is mainly due to him.

RECORD OF ONE HUNDRED CONSECUTIVE CASES OF APPENDICITIS TREATED AT PRINCE ALFRED HOSPITAL, SYDNEY.

BY J. C. HALLIDAY, M.B., CH.M.,
Late Resident Surgeon to the Hospital.

THE following record is taken from 100 consecutive cases treated during the last five years. The cases are divided into three classes:

	Cases.
A. Simple appendicitis without suppuration	64
B. Appendicitis with abscess formation	22
C. Acute perforative appendicitis, with general purulent peritonitis	14
Total	100

Taking all the cases together we have the following percentages: Males, 74; under 10 years, 4; between 10 years and 40 years, 80; operated upon, 55; mortality, 20.

Of the 64 cases in Class A the appendix was removed during an interval in 25, and 1 case was fatal, giving a mortality of 1.6 per cent.

Of the 22 cases in Class B, 17 recovered and 5 died, giving a mortality of 23 per cent.; 15 cases were between the ages of 10 and 30 years, and in 10 cases the attack was the first. In 1 case the abscess recurred after some months, and in 2 the appendix had to be removed subsequently for recurrent simple attacks.

The 14 cases in Class C were all fatal. The most noticeable features about this class are that out of the 14 cases 10

occurred between the ages of 10 and 20 years, and in 10 cases the attack was the first. These patients were generally admitted *in extremis*, with a history of from three to eight days' illness. The abdomen was opened in 8 cases, and in the others the diagnosis was verified or made at the necropsy.

In conclusion, taking all the cases together, the usual symptoms were fairly constant. In 3 cases pain and swelling were more marked on the left side, and in 8 cases pain was complained of during micturition. Concretions were recorded in 12 instances (5 in Class c), and in 1 case the appendix came away as a slough three days after an abscess was opened. A fæcal fistula resulted in 3 cases, and a ventral hernia in 2.

CASE OF GALL STONES: CHOLECYSTOTOMY.

HOUR-GLASS CONTRACTION OF THE GALL BLADDER.

By HUGH COLLIGAN DONALD, M.B., C.M., F.R.C.S.Edin.,
Surgeon to the Paisley General Infirmary.

My reason for reporting the following case is that I believe many cases of hour-glass contraction of the gall bladder have not been recorded, although on reading Mr. Mayo Robson's recent and most instructive work on *Diseases of the Gall Bladder and Bile Ducts* I find that under the heading of Hour-Glass Contraction of the Gall Bladder he remarks: "Hour-glass-shaped gall bladder is probably not uncommon, for though I have found only one specimen in the museums, and that at Middlesex, I have myself operated on two cases in which the distal part of the gall bladder contained calculi, and was connected with the gall bladder proper by a narrow neck. While in one case I thought this deformity might be due to the contraction of an ulcer, in the other, the mucous membrane being smooth, the deformity was apparently congenital."

Mrs. H., aged 40, housewife, was admitted to hospital under my care on November 8th, 1897, with the following history: Two nights previously she was seized with a sharp spasm of pain in the right hypochondrium, radiating towards the umbilicus, and passing round to the right shoulder. It lasted two hours, increased in severity, and ultimately subsided with an attack of vomiting. She stated that nine years ago she had a similar attack to that described, which was followed by a second three weeks or a month later, but for the following five years she was free from pain or sickness of any kind, and up to the onset of the present illness only remembered having had one similar attack of spasm. On admission, the patient was slightly jaundiced, emaciated, and weak; the urine contained bile, and the motions were pale in character. Beyond tenderness on palpation over the region of the gall bladder, no other physical sign was elicited. The patient was under observation in the ward for ten days before operation, and during that time she had from two to three spasms of pain per day, followed by vomiting, some of these slight, others very severe, but with each successive attack the symptoms tended to become worse than its predecessor. I should have preferred to have delayed operation till these attacks of pain had subsided for a few days, but as there was no evidence of this occurring, and the patient was rapidly losing ground, I operated on November 12th, assisted by my colleague Dr. Gibb. The details of the operation were carried out on the lines described in the book already mentioned, by Mr. Mayo Robson, whom I had the great privilege of assisting in many of his gall-bladder operations during the period I acted as his private assistant. The gall bladder was found to be thickened and contracted, being firmly adherent to and tucked up to the under surface of the liver. It was distinctly hour-glass in character, and contained a thick, clear, and glairy mucus. Two calculi were removed from the proximal part of the gall bladder, which was separated from the distal by a narrow neck, the calibre of which would admit a long probe such as used in exploring the ducts. The distal portion and neck were excised, and the proximal part brought and anchored to the aponeurosis. The wound healed by first intention, and the gall bladder was drained by means of a rubber tube, which was removed three weeks after operation. During the first three or four days after operation mucus was freely discharged, followed for two days by an admixture of mucus and pus, and latterly by pure bile. The opening into the gall bladder was completely healed six weeks after operation, and the patient was dismissed on the 8th, free from pain, improved in colour, and gaining weight and strength.

I cannot advance an opinion as to whether this condition of gall bladder was congenital or due to ulceration.

For notes on the history of this case I am indebted to Dr. Mackay, House-Surgeon.

TWO UNUSUAL CASES OF FOREIGN BODIES REMOVED BY THE AID OF THE ROENTGEN RAYS.

By R. BOLTON McCAUSLAND, Sen.Mod., M.D.T.C.D., F.R.C.S.I.,
Surgeon to Steevens's Hospital, etc.

Since the introduction of radiography into surgery many advances have been made in its application, but a great deal still remains to be worked out and perfected. I have not as yet been able to try any of the methods put forward by various authors, such as that of Dr. Davidson[1] or Dr. Harrison,[2] for localising and defining exactly the size of a foreign body, and at what depth it lies from the surface. From reports in the journals of a few successful cases, some of these methods seem to fulfil two conditions absolutely essential:

(*a*) To be able to plan the incision, so that with the least damage to the parts the object may be removed.

(*b*) To be able to say at what distance from the surface a substance lies—for example, whether in a joint or outside of it.

(*c*) A third essential would be to my mind rapidity in the method employed.

As I was the first surgeon in Ireland (on March 23rd, 1896, at Steevens's Hospital) to remove from a patient a foreign body, the presence of which was clearly shown in a radiograph taken for me at that time by Professor Barrett, Royal College of Science, Dublin, the subject of radiography has always had an attraction for me, and I have used it very extensively for many purposes.

Two cases have lately been under my care in hospital, and as they presented some points of special interest, I may be pardoned for briefly relating them.

Case I.—E. W., an epileptic from a convent in the south-west of Ireland, was admitted to Steevens's Hospital on January 27th, 1898. She stated she had a fall (a fit?) a month previous to admission, with sewing in her hand, and that a needle had entered near the wrist of the right arm. On admittance the hand and forearm were swelled, the latter reddened and eczematous; and it presented five marks of incisions, previous attempts to find the needle, three of which were not closed and suppurating. Looked at with the barium platino-cyanide screen the needle was plainly seen in its entire length above the inflamed part of the forearm, about an inch below the elbow-joint, lying in front obliquely on the radius, but also a little over the interosseous membrane and ulna. It could be indistinctly felt in one spot deep on the outside of the forearm, and could have been removed, but the girl would not allow it then.

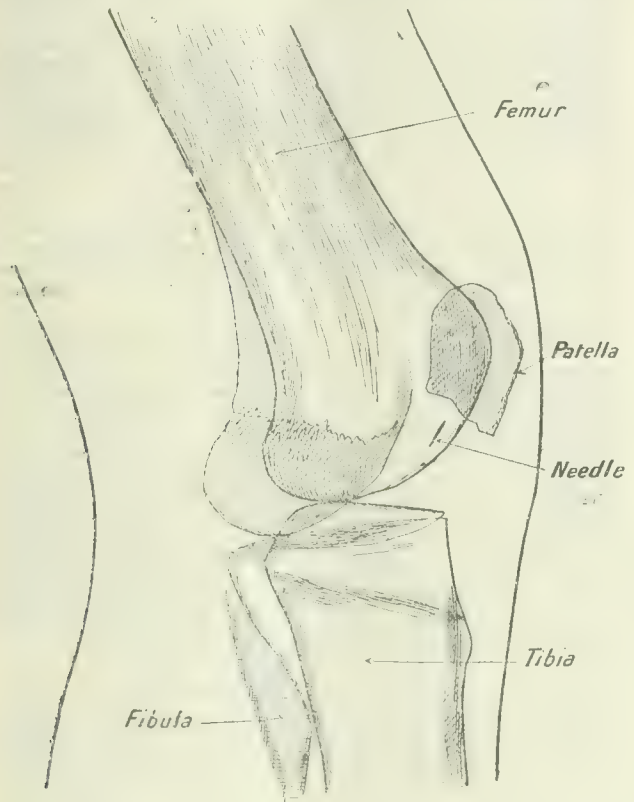
She was prepared for operation next day (January 28th); but when the dressings were removed no needle could be felt with the most careful manipulation, so she was allowed back to the ward to recover from the anæsthetic. She was put on potassium iodide and ammonium bromide, but had some fits that day and the next, and on January 30th she was brought to the room to be radiographed. Unfortunately, owing to excitement, she had a fit before the radiograph was finished. She was removed to the ward again, and the plate when developed showed plainly that the needle had shifted from its original position and was now lying at the junction of the lower and middle thirds of the forearm.

By February 4th the fits had been got under control and the forearm was in a healthy condition; it was disinfected, and the girl was carried in a chair and the arm examined as before with the screen, the needle being now seen occupying an intermediate position to the two former ones. With a blue pencil, while the screen was being used, the line of the needle was easily drawn on the skin of the forearm, on back and front. She was at once anæsthetised, and the needle was without much difficulty removed by an incision 2 inches long from the outside of the forearm from underneath the supinator longus and extensors carpi radialis longior and brevior. Esmarch's bandage was not applied, fearing that it might move the needle; one vessel was twisted and the wound put up dry. The girl left hospital in ten days' time. The wound was soundly healed; the forearm was free from eczema and she had full use of the hand and arm. The needle was complete and measured $2\frac{1}{2}$ inches long. It was blackened, as is always the case.

The special points of interest in this case seem to be: (1) The large size of the needle entire in length, which on

three different occasions, at intervals of a few days, distinctly shifted its position, once evidently from the washing and preparation of the arm for operation. (2) The number of operations prior to coming under my care. (3) The ease with which the needle was seen with the screen and accurately localised with a coloured pencil. (4) The satisfactory result of the operation as to use of hand and arm.

CASE II.—M. W., a servant, was admitted to Steevens's Hospital on Feb. 9th. She had fallen down stairs and hurt her knee some weeks previously. The knee was somewhat swollen, and a distinct irregularity was felt to the inner side of the patella which I was so sure was a needle or pin that I did not radiograph her. Under an anæsthetic I easily removed the pointed end of a needle, $1\frac{1}{16}$ inch long, and put the leg on a splint. The girl was surprised when she saw the needle, being unaware that anything had run into her knee. The wound healed at once, and when she was allowed up and had been walking about a few days, she still complained of pain and "a pricking feel," but more to the lower and outer part of the patella (same, left leg). I then radiographed the knee (15 minutes' exposure), and a foreign substance immediately showed when the plate was developed. Of course I thought the needle broke on penetration, and that I had left the eye end behind in the joint, though the radiograph did not give the appearance of a blunt end. Again, under an anæsthetic, with some difficulty, I removed a small portion of needle (see Fig.)—another pointed end. I treated the leg as before. The wound healed in a week; no fever, and the girl left hospital March 7th, with full use and movement of her leg, surprised at having had two parts of separate needles in her knee without knowing of the existence of either, and without any sign externally of the penetration of either.



CASE II.—Rough sketch of original radiograph.

REMARKS.

In the first operation I did not open the capsule of the joint, but the needle, from its position and length, must have been partly in the joint. In the second operation, which was much more difficult, I did open the capsule, but closed it under a constant stream of sterilised water, one stitch (silkworm gut, removed the sixth day) having taken up the capsule. The wound was put up perfectly dry, a most important point I try to obtain in all operations, great and small.

REFERENCES.
BRITISH MEDICAL JOURNAL, January 1st, 1898, p. 10. [2] *Ibid.*, February 12th, 1898, p. 431.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

MEASLES IN AN INFANT: POSSIBLE INFECTION AT BIRTH.

ON January 29th I attended Mrs. K., a healthy primipara, and delivered her of a well-nourished healthy female child. The puerperium was uneventful, and the mother nursed the child. The baby remained well till February 7th, the tenth day from birth, when it began to be indisposed and to sneeze; on February 10th, the thirteenth day after delivery, a well-developed eruption of measles covered all the body, the eyes were congested, the eyelids swollen, and the tongue covered with a thick fur; there was little cough. The eruption faded on the fifth or sixth day, and the infant made a good recovery, being kept in a warm atmosphere impregnated with steam.

There are two points of interest in connection with the case: first the extreme youth of the patient, and secondly, the fact that a case like this determines the incubation and invasion periods of measles with some exactness. The child sickened on the tenth day of its extrauterine existence, and had premonitory symptoms for three days longer before the eruption appeared. Henoch in his latest edition (*Vorlesungen u. Kinderkrankheiten*, 1897) gives ten days for incubation, and three to four for invasion; Osler (1897) practically agrees with this, while Ashby and Wright point out that if inoculated the disease may need only seven to eight days for incubation.

The only apparent explanation of the attack is that I conveyed the infection; inoculation through the severed umbilical cord could hardly have taken place, as my hands were washed repeatedly in corrosive sublimate lotion during the delivery.

Glasgow. CARSTAIRS DOUGLAS, M.D., B.Sc.

AMMONIUM CHLORIDE IN THE TREATMENT OF TROPICAL DYSENTERY.

I HAVE had a goodly number of cases of acute tropical dysentery at the Police Hospital, Colombo, and also in private practice, which yielded very satisfactory results by the administration of ammonium chloride. I remember the first case I treated with this drug; I was surprised at the rapid disappearance of blood from the stools, and the freedom from abdominal pain. Since then I have always adopted this method of treatment with very good results. The salt was given in drachm doses every four hours, and the patient placed on milk and arrowroot diet. In the majority of cases blood was absent from the stools on the third or fourth day. In two cases, however, I had to resort to other remedies, which consisted in small doses of the extracts of opium and cannabis indica dissolved in about a wine glass of bee's honey and mixed with about a quarter of a fresh bael fruit, which is eaten at a time. The result is a rapid disappearance of blood from the stools. One case, a boy aged 92 years, was given his ordinary diet of rice and plantain curry on the third day after this treatment.

I agree with Dr. Wyatt Smith that ipecacuanha is "useless" in the treatment of tropical dysentery, but I differ from his opinion that opium is "positively poisonous." In my opinion opium should never be given in the early stages of tropical dysentery; its beneficial effects are only seen in the last stages when combined with cannabis indica, and when other drugs have failed.

While Dr. Wyatt Smith claims to place sulphate of magnesia as "practically a specific" in tropical dysentery, I must offer to place chloride of ammonium on the same list.

JOHN W. S. ATTYGALLE, M.B., C.M.Aberdeen.

Colombo, Ceylon.

THE next meeting of the Congress für innere Medicin will be held at Carlsbad. A proposal, brought forward at the recent meeting at Wiesbaden, that the meetings should be held at Wiesbaden and Carlsbad in alternate years, was negatived.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LEEDS GENERAL INFIRMARY.

A CASE OF EXCISION OF THE SCAPULA FOR SARCOMA.

(Under the care of Berkeley G. A. Moynihan, M.S. Lond., F.R.C.S.Eng., Assistant Surgeon to the Infirmary.)

A. S., a single woman, aged 23, was sent to me by Mr. George Greenwood, of Ossett, suffering from a swelling over the scapula.

History.—Two months before she had noticed pain in and around the shoulder, which she attributed to rheumatism, from which she had previously suffered. As the pain continued, she had the shoulder rubbed, and it was then that the swelling was originally discovered. The lump increased very rapidly in size, and on September 13th she was admitted to the infirmary. There was no history of injury.

Condition on Admission.—The patient made complaint of a dull aching over the shoulder-blade, with radiating pains into the arm and over the front of the shoulder-joint. On examination a well-defined, rounded, smooth, rather elastic tumour was found over the left scapula, to which it was attached, with which it was closely incorporated, and along with which it was carried in all the movements, necessarily limited, of that bone. It extended from the outer end of the clavicle as far as the vertebral border, rendering definite recognition of the acromion and the spine impossible. Its greatest prominence was over the middle of the suprascapular fossa. The clavicle and the lower angle of the scapula seemed quite free from invasion; their outlines were distinct and natural. The skin was slightly hotter than normal, but was freely movable in all directions over the growth. On manipulation and for some time afterwards complaint was made of tenderness and of a feeling of "soreness." There were two or three small but perceptibly enlarged glands in the posterior triangle of the neck; the axilla was free from any encroachment or inroad of the growth. The patient was a thin, anæmic, wasted girl. A diagnosis of sarcoma, rapidly growing, was made.

First Operation.—On September 16th I removed the whole scapula. Ether was given, and the patient was turned over almost on to her face, a pillow being placed beneath the left side of the chest. Kocher's incisions—a curved one along the vertebral border of the bone, but extending both higher and lower than the edge, and a second from about the middle of this along the lower border of the spine—were made, and the flaps thus marked out were turned back. The trapezius was then divided, and the muscles attached to the vertebral border, the posterior scapular artery being caught in clips as soon as it was divided. The scapula was a little pulled forwards and the serratus magnus was divided close to its insertion. The upper margin of the bone was now cleaned of its muscles, and the suprascapular artery exposed and caught in forceps before its division. The deltoid was next cut through, and the muscles attached to the axillary border with the tendons of the supraspinatus and infraspinatus muscles and of the subscapularis, and the capsule of the joint were divided close to their humeral insertions. This procedure was done deliberately, so as to expose and ligature the subscapular artery before it was wounded. The circumflex nerve and the posterior circumflex artery were not interfered with. The scapula was then seized in the left hand and dragged backwards, and the coracoid process cleared of muscles and ligaments, and the bone was free. By keeping the knife close to the bone no difficulty was experienced in doing this. Throughout the operation, which lasted 40 minutes, little blood was lost. Hæmorrhage, which causes the greatest risk in the operation, was readily prevented by securing the largest vessels before their division. A suggestion of Kocher's, that in dividing the muscles the finger should first be thrust under them and the scalpel then carried down to the finger, I found of advantage. The operation, which differs in some particulars from any published account, I discovered to be a much more easy, simple, and rapid procedure than I had anticipated. As the patient was anæmic and in poor condition before the operation, and as she had suffered in some degree from shock, she was infused with 3 pints of normal saline solution, rather as an aid than as a necessity.

After-History.—After this she rallied well. The vertical incision healed soundly and quickly, as did the inner end of the horizontal one. At the outer end of the latter a small sinus formed, which subsequently increased in size, and from which pus and later fragments of growth were discharged. It was not long, however, before signs of rapid enlargement of the glands in the posterior triangle, and some swiftly increasing fulness near the outer end of the clavicle, and along the inner side of the vertical wound made it manifest that recurrence was taking place.

Second Operation and Result.—I therefore attempted on October 8th to remove all the new growth. I removed the outer two-thirds of the clavicle, cleared the posterior triangle, and removed a large portion of the stump of the trapezius. It became obvious then that the growth had extended too widely, with offshoots into the axilla and elsewhere, and that anything short of removal of the upper limb would be inadequate. To do this would assuredly have meant death before the operation was completed, and I therefore was compelled to abandon any further attempts at eradication. On October 23rd the patient, after gradually sinking more and more day by day, died. From October 16th to her death she was kept continuously under morphine administered hypodermically.

Morbid Anatomy.—The two growths were examined by Mr. W. A. Stott, Pathologist to the infirmary. Microscopically, the growth was a round-celled sarcoma, with a profusion of cells, and a paucity of immature, flimsy, fibrous tissue. At the *post-mortem* examination recurrences were found in both lungs and in both pleuræ.

Remarks.—This case is interesting as being one in which complete excision of the scapula was necessary. In the majority of cases of operation upon the scapula the excision is only a partial one. Chalot describes two operations—a subspino-glenoid excision and a retrocoraco-glenoid excision. The advantages of leaving the glenoid cavity are obvious, though the amount of utility in an arm after complete removal of the scapula is surprising. I well remember seeing such a case in Berlin, and the freedom of movement and the power of lifting in the arm seemed extraordinary.

SHEFFIELD ROYAL HOSPITAAL.

A CASE OF SUCCESSFUL REMOVAL OF A GALL STONE FROM THE COMMON BILE DUCT THROUGH A WOUND IN THE DUODENUM.

[Under the care of Sinclair White, M.Ch., F.R.C.S., Hon. Surgeon to the Hospital.]

E. B., aged 44 years, was sent to me by Dr. Blythman, of Swinton, for repeated attacks of biliary colic and more or less persistent jaundice of eighteen months' duration. She had lost much flesh, and was hardly ever free from acute pain. Seven months earlier she had vomited a number of gall stones, and a few were likewise found in her fæces.

She was admitted, and I opened the abdomen on February 15th, 1898. The gall bladder was empty and adherent to the stomach over an area of the size of a sixpence at the fundus. Palpation showed the cystic duct to be free from calculi. Quite at the termination of the common bile duct in the duodenum a calculus of the size and shape of a filbert could be felt. It was very firmly fixed, and resisted vigorous attempts to crush it *in situ*, or to push it on into the duodenum. Two fingers of the left hand were passed through the foramen of Winslow and the second part of the duodenum, drawn towards the abdominal wound. After carefully adjusting sponges, the duodenum was incised transversely, and the calculus extracted with large dressing forceps. The duodenal wound was closed by two superimposed rows of fine silk sutures, after the method of Dupuytren. The abdominal wound was closed in the usual way, a small tag of gauze being inserted into it over the wound in the duodenum. The patient made an uninterrupted recovery, and was sent home at the end of three weeks entirely free from pain and jaundice.

Remarks by Mr. Sinclair White.—Kocher and McBurney have each recorded a case of this nature. Kocher, who gives

to the operation the somewhat lengthy name of "internal choledocho-duodenostomy." found it necessary to incise the opening of the common bile duct before he could extract the calculus. I followed his method of incising the duodenum transversely, selecting this direction in order to avoid wounding the intestinal vessels which have a transverse course, but if called on again to perform this operation I should open the bowel in the line of its longitudinal axis. The peritoneal covering of the second part of the duodenum is limited to its anterior surface, and in closing the duodenal wound I was painfully conscious that the ends of my suture line were very near the points where the peritoneum quits the duodenum. I was greatly impressed by the advantages to be gained by inserting two fingers into the foramen of Winslow. The calculus was in this way securely fixed between the fingers, and the second part of the duodenum could be drawn almost into the parietal wound, while the pressure of the fingers efficiently clamped the bowel above and below the wound, so that not a trace of intestinal contents escaped into the peritoneal cavity. The left hand being thus occupied, I had of course to call in the aid of a colleague to tie the intestinal sutures.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

F. J. PAYNE, M.D., President, in the Chair.

Tuesday, May 3rd, 1898.

DISTRIBUTION IN THE TISSUES OF THE LEPROSY BACILLUS AND THE HISTOGENESIS OF GIANT CELLS IN LEPROUS LESIONS OF THE LARYNX.

PROFESSOR KANTHACK presented an abstract of a paper by Dr. P. BERGENGRUEN. Unna was the first to maintain that the leprosy bacillus inhabited the lymphatics and not the cells. This was denied by all observers except Leloir. In 1895, Bergengruen, together with Gerich, proved the correctness of Unna's view in the most unequivocal manner. Last year Herman and Dohl also confirmed Unna's view at the Leprosy Conference in Berlin, but those observers had entirely overlooked Bergengruen's work. The specimens prepared by the latter showed clearly that the so-called globi and lepra cells were merely cross sections of bacillary thrombi in the lymphatics. In impression specimens prepared from leprous intralaryngeal ulcers, the bacilli were found in irregular, branched clusters, and not in the cells. These masses were cylindrical, and evidently represented casts of tubular structures. In sections the bacillary masses were arranged in delicate chains or bands, often running as parallel lines through the tissue. The bacillary masses generally lay in spaces, which in good specimens showed a distinct endothelium; they possessed no nuclei or cell outline. They often occurred as cylindrical conglomerations, strung together one after the other, or diverging from a common centre in all directions. There could be no doubt that the globi and lepra cells represented bacillary thrombi, filling the lumen of the lymphatic vessels, although of course Bergengruen did not doubt that leprosy bacilli were occasionally found in the cells, and it was his merit to have been the first to establish Unna's view in a manner which must convince everybody, which Unna himself failed in doing. Further, Bergengruen's specimens distinctly showed that the giant cells in the leprous larynx were due to endothelial proliferation around the bacillary thrombi. The latter appeared to be engulfed by the giant cells, but as a matter of fact they remained in the lumen of the lymphatic vessel, the endothelium of which grew around and into the thrombus, destroying it in this manner. The thrombus acted like a foreign body, and irritated the contiguous endothelium at some parts. Here the cells proliferated and formed a plasmodial mass. All his specimens showed clearly the continuity between endothelium and giant cell. His remarks, he insisted, applied merely to the lesions which he had investigated, but in them the endothelial origin of the giant cells was established by him in the most convincing manner.

The PRESIDENT remarked that, although he at one time thought the evidence in favour of the intracellular location of the bacilli, he had now doubts on this point, especially since in sections of the cutaneous lesions (from a case at present under him in St. Thomas's Hospital) the micro-organisms were diffusely scattered through the tissue, the globes or clumps being practically absent.

Dr. R. HEBB had in longitudinal sections of leprous nerves been struck by the distribution of the bacilli in long irregular lines corresponding with the clefts in the tissue; he did not regard the location as corresponding with cells.

Dr. ANDREWES considered it possible that in internal organs the location might be intracellular, whilst in external lesions of skin or mucosæ it might be within lymphatics. In the spleen he had seen the bacilli, so far as could be judged, within tissue cells.

Professor KANTHACK thought that the determination of this question in the spleen presented great difficulty, and that a zoogloea adhering to a cell would simulate a location within it; serial sections of the individual cells would alone suffice to settle the question.

HÆMATOMA IN A HYDRONEPHROTIC KIDNEY.

Dr. ROSE BRADFORD recounted the case of a man, aged 44, admitted into University College Hospital suffering from delirium tremens and hæmaturia; the latter was followed by retention of urine from the presence of blood clot in the bladder. There had been no history of renal colic. Death took place three days later. At the necropsy the only disease found concerned the left kidney, which was hydronephrotic and filled with blood clot; the left ureter was dilated. A large calculus lay in the middle of the clot, the hæmorrhage having originated from a finely villous condition of the mucosa of the renal pelvis and calyces, due to the presence of the calculus. Clinically, the case closely simulated one of malignant disease.

Professor GREENFIELD inquired whether the renal vein had been examined for thrombosis as a possible explanation of the hæmorrhage.

Dr. ROSE BRADFORD stated that this examination had been made, and that the vein was normal; the blood was confined to the renal pelvis and did not extend into the tissue of the kidney.

LATENT TUBERCULOSIS OF THE TONSILS.

Dr. HUGH WALSHAM was led to inquire into this subject in consequence of Dr. Sims Woodhead's suggestion that the tonsil was probably a frequent site of tuberculous infection, especially in children affected with tuberculosis of the cervical lymphatic glands, etc. Tuberculosis had been produced in guinea-pigs by certain French observers by the inoculation with portions of enlarged tonsils, as also with adenoid vegetations from the naso-pharynx. It had been objected to such results that they were possibly due to the accidental presence of tubercle bacilli in structures not really diseased. The author, therefore, conducted a histological examination of a series of cases of "enlarged tonsils" with the result that in 21 out of 34 he had observed the histological signs of tuberculosis. Careful examinations of the tonsils were greatly needed, as appeared from the scanty references to tonsillar lesions in textbooks of pathology. In many of the cases there had been nothing during life to direct attention to the tonsils, and for this reason he used the term "latent." It was, however, by no means always easy to determine whether the tuberculous disease so discovered was primary or secondary; most were probably secondary, that is, due to auto-inoculation in patients expectorating tuberculous sputum. Tuberculosis of adenoid vegetations was in some cases at least also secondary, and arose in the same manner. In acute miliary tuberculosis the tonsils, like other parts, might be infected through the blood stream.

HÆMORRHAGE INTO THE SUPRARENAL CAPSULES IN AN INFANT.

Dr. F. M. ANDREWES recorded in detail the case of a female infant, aged 15 months, who died after thirty-six hours illness. A hæmorrhagic rash was present on the surface of the body, and the diagnosis of hæmorrhagic small-pox had been made. From the negative bacteriological results of examination the author thought this the least unlikely cause of the symptoms. Examination after death revealed no disease except the hæmorrhage into the suprarenals. Bacteriological examination of the organs, both culturally

and by sections, gave an equally negative result. The hæmorrhage and rapid course of the disease pointed to some toxic process. In guinea-pigs, after death from the subcutaneous injection of diphtheria cultures, the suprarenals might be found hæmorrhagic; this was a suggestive likeness.

Dr. Archibald Garrod recorded a case almost identical with the preceding in its history and other ways. The child (as in the other case) was unvaccinated, and hæmorrhagic small-pox was diagnosed as probable; there was no diphtheria or other recognisable disease. Bacteriological investigations were negative in result. Apoplexy of the suprarenals might arise in infants from traumatism, as it might also in adults. Tuberculosis was another well-recognised cause.

Dr. Still added another case, that of an infant suffering from acute tuberculosis, and in whom after death the suprarenals were the seats of miliary tuberculosis. In guinea-pigs congestion and hæmorrhage was producible by the injection of the pneumococcus, and even by essence of cloves.

Dr. Batten cited a further instance in a boy, aged 2½ years, who died with a high temperature. Besides the hæmorrhage into the right suprarenal, there were some slight extravasations in the lateral ventricles.

Dr. Colman had seen a case very like that noticed by Dr. Andrewes, in which there were purpura and high temperature, the course of the disease being very rapid. Cultures made from the suprarenal, heart's blood, and bullæ, gave negative results, nor did microscopical examination of the different organs show anything of a positive kind.

Dr. A. F. Voelcker had recorded a similar case, where the hæmorrhage was two-sided, and where examination of the different viscera revealed no recognisable disease. In a child of seven years, who died with symptoms like those of strychnine poisoning, he had found tuberculosis of the suprarenals, but without hæmorrhage; there was an associated bronzing of skin.

The President remarked on the general likeness of the condition to that arising in phosphorus poisoning.

Card Specimens.

Dr. L. Freyberger: External Rupture of an Aneurysm of the Ascending Part of the Arch of the Aorta.—Dr. H. D. Rolleston: (1) Pin in the Vermiform Appendix; (2) Pellets in a Dermoid Cyst.—Mr. G. B. Jones: Primary Sarcoma of the Œsophagus, with Secondary Growth at the Base of the Tongue.—Dr. R. Hebb: (1) Perigastric Cysts; (2) Cancerous Infiltration of the Pericardium secondary to Cancer of the Œsophagus.

CLINICAL SOCIETY OF LONDON.

Clinical Evening.

John Langton, F.R.C.S., President, in the Chair.

Friday, April 29th, 1898.

Transplantation of Tendon for Infantile Paralysis.

Mr. F. S. Eve showed three cases in which he had performed the operation to correct deformities due to paralysis. He followed the method of Goldthwaite, which consisted in making a longitudinal incision into the tendon of a paralysed muscle, and inserting and fixing into the incision the cut end of the tendon of a normal muscle. In many cases this latter merely acted as a support to a lax tendon, as unless the muscle whose tendon was used came from the same group it could hardly be expected that the patient would be able to call it into action except in connection with the muscles with which it was accustomed to act. One patient was a boy, aged 9, who had paralysis of the external peronei and extensor muscles of the leg as a result of division of the external popliteal nerve, in which recovery had not followed the suture of the divided ends. Mr. Eve, therefore, divided the posterior tibial muscle near its insertion, and inserted it into the tendon of the extensor longus digitorum. He then exposed the tendo Achillis and separated a band from it, and carried it above the external malleolus, and inserted it into the tendon of the peroneus longus. In another case of ordinary infantile paralysis there was extreme talipes equinovarus and pes cavus, with complete paralysis of the peroneus longus, and nearly complete loss of power in the extensor longus digitorum. Mr. Eve performed an operation for lengthening the tendo Achillis, and also carried the tendon of the tibialis round and inserted its cut end into the tendon of the extensor longus digitorum. There was now hardly any talipes equinus remaining.

Mr. Jackson Clarke thought that the term "tendon reimplantation" was better than those usually employed to describe the operation.

Graves's Disease with Bradycardia.

Dr. Pasteur showed a woman who had been suffering from Graves's disease, and who presented marked atrophy of the thyroid gland with certain symptoms suggesting myxœdema. There was marked proptosis, slowness of speech, and sensitiveness to cold. The hands were tremulous. The skin was at present moist. The pulse-rate had fallen to between 40 and 50 per minute.

Dr. Morison pointed out that the pulse of this patient was variable, and, while she was being examined that evening, it had risen to between 70 and 90.

Dr. L. Guthrie recalled a case in which there had been marked signs of Graves's disease, apparently supervening on a fright. The heart was now, however, comparatively quiescent, and the thyroid enlargement had practically disappeared together with the tremor.

Dr. F. de Havilland Hall mentioned the case of a patient who came to him with a history of having suffered from Graves's disease twelve years before. She now presented symptoms pointing to myxœdema, and she had been given thyroid extract, under which obesity had greatly diminished. It was proposed to continue the treatment until she had lost another stone in weight, and then to desist. If the symptoms recurred, he thought this would confirm the diagnosis of myxœdema.

Dr. Pasteur, in reply, pointed out that it was extremely rare for a myxœdematous patient to give a history of having suffered from Graves's disease. His patient had distinctly lost weight since her illness. She had been given aconite, bromide, and then thyroid extract. This remedy, however, seemed to aggravate her symptoms. He was still in doubt as to the true nature of this case.

Congenital Heart Disease and the Mongol Type of Idiocy.

Dr. Garrod showed a child who displayed the typical Mongol caste of features in association with a considerable degree of cyanosis and a loud systolic murmur best heard to the left of the sternum, about the middle of the cardiac area. She had been under observation for eight months. At the seat of maximum murmur there was a perceptible thrill. It did not appear to be an ordinary case of pulmonary stenosis. He had remarked this association of congenital heart disease with idiocy and the Mongolian type of features in seven cases. He referred to an article contributed by Dr. J. Thomson to the March number of the *Scottish Medical and Chirurgical Journal* with notes of three cases.

Dr. Sutherland had seen three cases in five years presenting this association.

Dr. Benham asked whether any *post-mortem* examination had been made in any such cases.

Dr. Sutherland added that he had been enabled to examine one of his cases after death, and he found a patent foramen ovale.

Dr. Garrod, in reply, said a considerable proportion of these patients died early. Heart disease was not a necessary accompaniment of idiocy or *vice versâ*, but where the association existed, it was remarkable how frequently one found this Mongolian type of face.

Acute Gangrenous Appendicitis.

Mr. W. G. Spencer showed a boy, aged 12, who had developed acute pain and tenderness in the spot to which attention had been called by McBurney. Twenty-six hours after the onset of symptoms, he cut down and found a kinked and gangrenous appendix, containing a fæcal concretion which evidently antedated the kink. It was so near perforation that pus could be squeezed out before it was opened. Tenderness and tumefaction at this spot were a characteristic feature in acute appendicitis occurring in young people. In these young subjects appendicitis rarely resulted in a perityphlitic abscess, but tended to perforation and peritonitis. There

were certain advantages attending operation during the acute stage, because in relapsing appendicitis one might meet with many adhesions.

AMYOTROPHIC LATERAL SCLEROSIS.

Dr. BEEVOR showed a woman, aged 47, whose illness had come on gradually two years ago, with difficulty of speaking and then of swallowing. During the last six months some atrophy of the muscles of the left hand had made its appearance. At present speech was difficult, and nasal in character. There was complete paralysis of the soft palate on phonation, though it responded slowly to direct stimulation. The uvula moved but slightly on phonation. The tongue was wasted, and was the seat of fibrillary tremors. There was lower jaw-jerk and clonus, which he observed was a very characteristic feature in these cases. The lower limbs were slightly rigid, the knee-jerks were increased with ankle clonus. The lesion was probably located in the upper motor part of the pyramidal tract. He had only met with this jaw clonus in one other association—namely, in one case of hemiplegia.

Dr. ORMEROD had seen a very similar case, which began, as in this one, with bulbar symptoms, and in that case, too, the jaw clonus was well marked.

HÆMIPLEGIA DURING TYPHOID FEVER.

Dr. ROLLESTON showed a man, aged 30, without any history of syphilis, who on the twenty-fourth day of an attack of typhoid fever, had suddenly become hemiplegic on the left side, and as he was a left-handed man he also became aphasic. The onset was not accompanied by convulsions, a fact which he thought assisted in determining its causation. The fever ran a normal course, and the patient was gradually recovering from the hemiplegia. He mentioned that Dr. F. Hawkins had collected 17 cases of the kind, and, judging from the *post-mortem* results where obtained, the hemiplegia was due to embolism or thrombosis. The absence of convulsions, he thought, militated against there having been venous thrombosis, and he suggested that the lesion was probably in the middle cerebral artery The patient had no sign of syphilis about him.

Dr. HERRINGHAM recalled a case in a girl 9 years old, who had had paralysis supervening in the third week of typhoid fever. When seen two years later there was still weakness of the right arm and leg, and some disorderliness of movement of the arm and other parts. There was no heart lesion nor alteration of vision. Small clots in various parts in minute veins were not rare in typhoid fever.

Dr. F. HAWKINS (Reading) said that only 8 other cases similar to that of Dr. Rolleston were recorded in English literature; though there were other cases by Continental physicians, and Dr. Osler had lately recorded a case. Children were the chief sufferers. Nearly all the cases recovered. Only two necropsies had been made, in both of which a clot had been found in the middle cerebral artery. In Dr. Donkin's case the heart was dilated, otherwise normal; in his own case there was a clot in the left auricle.

Dr. ROLLESTON, in reply, recognised the difficulty there was in distinguishing between thrombosis of cerebral veins or arteries.

OSTEITIS DEFORMANS.

Dr. ROLLESTON showed for himself and Mr. C. T. DENT a widow woman, aged 52, who twelve years ago began to suffer from pain and swelling in certain joints, and in the course of three years all four extremities had been invaded. The condition had since steadily progressed. In the forearm there was also considerable bending of the bone; the chief pain was in the right leg. He handed round a skiagraph of the appearances. He had been under the impression that this affection was more common in men than in women, but in 45 cases the proportion appeared to be about equal.

Dr. DE HAVILLAND HALL mentioned that in a similar case the patient had derived great relief from the pain by taking 15-grain doses of iodide of potassium with 2-grain doses of quinine. The relief had persisted so long as he took this medicine.

Dr. PARKES WEBER mentioned a similar case in which after an accidental fracture of the thigh the painful symptoms had subsided.

Dr. GUTHRIE referred to a case which he had exhibited in 1893, in which the lower extremities were almost exclusively affected, and no medication had afforded the patient any relief except pil. saponis comp.

ACUTE EPIPHYSITIS IN AN INFANT WITH DETACHMENT OF HEAD OF BONE AND THE FORMATION OF AN ABDOMINAL ABSCESS.

Mr. WALLIS showed a child, aged 16 months, who had had a fall in January, 1898, causing acute epiphysitis of the head of the femur. Later a large extraperitoneal abscess formed in the pelvis and abdomen, which he opened and found therein, after evacuating a large quantity of pus, a mass attached to the acetabulum by a long string which proved to be the head of the femur, which had broken through the acetabulum. The child had made a good recovery, and now had very fair movement with only three-quarters of an inch of shortening.

ESTLANDER'S OPERATION.

Dr. DE HAVILLAND HALL showed a young woman who had undergone Estlander's operation, done by Mr. W. G. Spencer, portions of five ribs having been removed. The cavity had filled up, and the site of the operation was now marked by a deeply depressed cicatrix. Before the chest was incised the pulsation in it almost resembled that of an aneurysm.

GASTRO-DUODENOSTOMY.

Mr. WALLIS also showed a woman on whom he had performed gastro-duodenostomy. A full report of the case is published at page 1195.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

HENRY GRAY CROLY, F.R.C.S.I., in the Chair.

Friday, April 1st, 1898.

INTESTINAL OBSTRUCTION FROM MALIGNANT DISEASE OF LARGE INTESTINE.

MR. JOHN LENTAIGNE related three cases of acute intestinal obstruction from malignant disease which he had treated systematically as follows: First, a careful exploration of the abdomen was made, followed by the formation of an intestinal fistula at a point above the obstruction, and so placed as to be least likely to interfere with a subsequent operation for radical cure of the disease. As the seat of disease in each of the three cases was the sigmoid flexure, the fistula was made in the cæcum. In the first case the relief was so great that the patient unfortunately refused to allow any operation for radical cure, probably because the bowels resumed their normal function eleven days after the completion of the intestinal fistula; the latter then gradually closed of itself. Nine months later the patient came back to hospital. The fistula had then reopened, and the bowels were acting freely through it. Large masses of cancer could be felt through the abdominal wall. This patient died thirteen months after the operation. In the second case an operation for radical cure by resection of the cancerous mass, with end-to-end anastomosis after the method recommended by Professor Kocher, was performed three months after the fistula had been completed. The result was most satisfactory. The patient had enjoyed excellent health ever since, and as two years had elapsed since the resection it was not unlikely that a complete cure had been effected. Although the result had proved so satisfactory, Mr. Lentaigne considered that this patient had remained away much too long before undergoing the operation for radical cure, which should be performed not later than six weeks at most after the formation of the fistula. In the third case the patient had delayed very much longer, not returning until eight months later. She was the most anxious to have something done, and accordingly an exploratory laparotomy was performed. It was found that the disease had spread far and wide, and was absolutely inoperable; the abdomen was closed, and the patient left hospital shortly after, the bowels acting freely through the fistula. She was no better for the last operation but neither was she any the worse. Mr. Lentaigne had intended to perform temporary enterotomy with immediate closure of incision at the primary exploration, but had not found this measure necessary, the incision in the intestine only being made after adhesions had formed. As it was most

likely from the symptoms that a cæcal fistula would be required, he had made the primary incision over that viscus. In case of doubt, however, he would make a median incision, and subsequently by cutting down on his hand, introduced into the abdomen, he would make the opening for the fistula at the opposite side to the seat of disease, and as far from it as possible, so as to allow room for an aseptic operation for radical cure later on. Where a separate opening in the abdominal wall was made for exploration, or for the radical cure, the use of celloidin as a dressing was found to be of great use in effectually preventing contamination by discharges from the fistula. These wounds were closed by three tiers of sutures —the deepest of fine silk for the peritoneum, the middle of strong silk for muscles and fasciæ, and, lastly, catgut sutures for the skin. Over these last a strong coat of celloidin was painted, which was renewed once or twice after two or three days. No other dressing was needed, except a soft pad to prevent friction with bedclothes. At the end of nine or ten days the celloidin peeled off, with the superficial half of the catgut suture closely adherent, the deeper half being absorbed and the wound quite healed. The cæcal fistula was found to be quite as efficient as an artificial anus, and much more satisfactory, inasmuch as it closed of itself when the obstruction below it was removed. It left the bowel in the most favourable condition for resection, as no obstruction could result from paralysis of the bowel while it was open. The strain and tension of the newly-sutured bowel were avoided, and the bowel itself was free from the extreme contraction so likely to follow after the formation of an artificial anus. Lastly, an artificial anus would require quite a formidable operation for its own cure, in case of a possible radical cure of the original disease, while the cæcal fistula had not required any surgical procedure at all. In each case it had closed of itself when the bowels acted normally. In all three cases the condition of the patients at the first operation was such as to make it most unlikely that a radical cure could then safely be attempted. The procedure adopted would be quite inadmissible. When gangrene or perforation existed in such a case, immediate resection or some such procedure would be required.

A Case of Enterectomy for Intestinal Infarct.

Mr. T. E. Gordon read a paper on a case of hæmorrhagic infarction of the small intestine treated by resection, which will be published.

Mr. Wheeler agreed with Mr. Lentaigne in advocating a fistula before performing the operation for cancer of the rectum or excision of the bowel for malignant disease. Such a proceeding allowed a patient already run down in health to regain strength before excision of the bowel. The best result of excision of the large intestine he had ever seen was obtained by the late Dr. Kidd, and he, having excised the bowel for about 6 inches, sutured the bowel over a scoop cut out of a piece of carrot.

Dr. Harrison Scott said he had reduced an acute strangulated hernia in the case to which Dr. Gordon referred. On hearing of the subsequent obstruction, he suspected that there were some bands from the former condition, but none were afterwards found. He thought the infarct was due to tertiary syphilis. He had performed only three resections of the intestine, and had used direct suturing. He had an objection to the use of any bobbin. He found that with two continuous sutures—first, a perforating one, and then a peritoneal one—a good junction could be obtained, and there was less risk of subsequent trouble.

Mr. R. Glasgow Patteson said deaths with Murphy's button, or other form of button, were recorded as due to secondary shock, but in these cases no *post-mortem* examination had been made. Such deaths, he thought, were due to septic peritonitis. He considered artificial means utterly unsurgical, and as simply devices to save the operator from his want of surgical technique.

The Chairman said he had had eighteen successful consecutive cases of colotomy, and had never regretted doing the operation. He never understood what secondary shock was.

Mr. Lentaigne and Mr. Gordon replied.

The new military hospital in the Marlborough Lines, Aldershot, is to be known as the Connaught Hospital.

SHROPSHIRE AND MID-WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Clinical and Pathological Section.

Tuesday, April 5th, 1898.

T. Law Webb, L.R.C.P., M.R.C.S., in the Chair.

The Work of the Section.

The Chairman, in opening the meeting, alluded to the work of the Section during the past year. He expressed gratification that a museum had been formed in connection with the Section, and was pleased to be able to announce the establishment of a Pathological Laboratory at the Salop Infirmary. He felt sure that such museum and laboratory would prove an important help in the future to the pathological work of the Section.

Cases.

Mr. Salt showed (on behalf of Dr. Lycett Bond) a case of Pseudo-Hypertrophic Paralysis, in which the peculiar characteristics of the disease were well seen.—Mr. Jackson showed a case of Fæcal Fistula cured by operation. The fistula occurred in a girl, aged 17, as the result of perityphlitic abscess, and had resisted repeated attempts at closure, the whole of the fæces being eventually passed by the fistula. At the operation the ileum beyond the ileo-cæcal valve was joined to the ascending colon by means of a Murphy's button, the cæcum being shut off. The patient made an uninterrupted recovery.—Dr. Gardner showed (1) a case of Lichen Marginatus in a man, aged 21, associated with Seborrhœa Capitis. (2) A girl, aged 17, who had suffered from symptoms of Cerebral Tumour, Severe Headache, Vomiting, Giddiness, and Diplopia, accompanied by Intense Optic Neuritis with considerable Loss of Vision. A sister had suffered in a similar way, and had died in a fit at the age of 21. The patient had rapidly recovered under treatment. The condition was thought to have been due to congenital syphilis. When exhibited she displayed well-marked "blurred discs," but her sight had almost completely recovered.

Detection of Tubercle Bacilli in Urine.

The Chairman read a short paper on this subject. He said tuberculosis of the urinary tract might exist in the cortex or pelvis of the kidney, in the ureters, bladder, seminal vesicles, or prostate gland. The disease might commence by a deposit of tubercle bacilli in these organs from blood already contaminated with the bacilli, or as an extension of the disease in neighbouring parts, or as an ascending tuberculosis such as occurred when tuberculous ulceration crept up the ureters from an infected bladder. In the early stages of a tuberculosis of these parts there might be no ulceration, and therefore no bacilli in the secretion, but ulceration or abscess was an early event in most cases, so that bacilli might very frequently be found when the general symptoms had drawn attention to the local condition. Practically, therefore, the pathologist had to deal with urine suspected to contain tubercle bacilli which might be: (1) Apparently clear, and without visible sediment; (2) slightly coloured or opalescent; (3) heavily charged with pus; and (4) or with blood. These characters might alternate, pus and blood appearing for a time, and then disappearing, leaving the urine nearly free. These intervals, when the urine was comparatively clear, afforded the best time for searching for the bacilli. The urine should be allowed to settle for some hours, all but the last 3 or 4 ounces should be poured off, and a small sediment should be obtained with the centrifuge. Cover-glass preparations stained with carbol fuchsin should be examined. The bacilli were almost always in masses (crescent-shaped) or occupying the whole of a pus cell or leucocyte. When thick pus had to be examined the difficulties were greatly increased. He had found that in this case Van Ketel's method was a good one. In this 1 part carbolic acid was added to 20 parts purulent urine, which must then be shaken vigorously for at least five minutes and allowed to settle in a conical glass. Cover-glass preparations should be made by heat in the usual way, the cover glass being dipped several times in choloroform (or a mixture of equal parts of alcohol and ether), which rendered it transparent. Staining should be effected with carbol-fuchsin. This method seemed to him to help by rendering the outlines of the pus cells soft and indistinct, so that they

allowed the bacilli to be more easily seen. When blood was present in considerable quantity it was almost useless to search for bacilli, and the examination should be deferred until the urine became clearer. In doubtful but important cases where blood was present in acid urine and there were symptoms pointing to tuberculosis, a great number of cover glasses must be made from the sediment. These should be stained with anilin water fuchsin for twenty-four hours in an incubator. If the bacilli were present they would not easily escape detection.

Leg Pain in Cases of Insanity.

Dr. Sankey read a paper on this subject. In dealing with insanity he had been struck by the frequent occurrence of leg pain. By "leg pain" he meant anything between the dull ache of some cases of general paralysis which was spoken of as a sense of weight, and the acute lancinating pain which was the leg pain to which he especially referred. This lancinating pain was frequent in general paralysis, and he had more than once seen cases of it, but he did not in his practice see many cases of general paralysis, and he was therefore merely mentioning that this acute severe pain seemed to be an accident dependent on intercurrent disease of the cord. The particular leg pain to which he especially referred was an acute lancinating pain commonly described by the sufferers as electric shocks or wiring or some equivalent term. From the descriptions of patients, when sufficiently intelligent to give one, this pain appeared commonly to commence in the feet and extended to the knees. It was frequently the precursor of contractions of the feet and malnutrition of the muscles, and was, in his opinion, of grave importance—meaning that mental recovery was very unlikely, and bodily degeneration commencing. The knee-jerks disappeared late in the course of the disease. There was not, as a rule, want of co-ordination in the muscles, or any evidence of locomotor ataxy. He had under his care two cases which showed the symptom well. The first was an advanced one, a gentleman, aged 57, insane for between twenty and twenty-four years. His bodily health up to 1893 was good, except for the leg pains, which were not then very severe, and certainly did not prevent his taking long walks. In 1893 he was found to be suffering from glycosuria, and he had had returns of this each winter during the coldest weather, with absence of the symptoms in the summer. The pains, which he described as "wiring" and as "traps," and which were sufficiently severe to cause him to cry out occasionally, had progressed steadily, and had been followed by contraction of his feet. This had taken place gradually within the last seven or eight years, and he was now almost unable to walk. Knee-jerks were now absent, but had only recently disappeared. The second case was that of a lady, aged 45, and who had recently been admitted and had a history of four years' insanity. There was some insanity and some alcohol in the family history. She complained of torture in her legs and feet, describing it as "electric shocks" or as being hit with a stick, etc. She had been allowed to wear shoes one or two sizes too small for her; the consequence was many corns, one of which inflamed and was now an ulcer (? perforating), which had so far resisted attempts to heal it—indeed, the lady would not continue any line of treatment recommended long enough to have the desired effect, and occasionally treated it herself with scissors. The pain was definitely stated by the patient never to reach above the knee. Knee-jerks were over-active. His prognosis was bad as regards her mental recovery, although there might be some alleviation of the more prominent delusions at the menopause; but he did not think the improvement would be very great. She might, however, live many years, and it was likely that her feet would contract as in the first case. The affection was probably a degeneration slowly involving the cord, probably secondary to the brain disease which caused the insanity; the form of this degeneration he believed to be sclerosis or chronic spinal meningitis, but it might differ in different cases. Practically he had found no treatment to be of much use, but in lunacy practice there was always the difficulty that very often the patients refused to take the medicine ordered, and sometimes threw it at the head of the medical man. But if some means of alleviation could be found, more than the mere relief of the pain would be gained, for the patients attributed the pain to enemies or outside agencies, and there was not much chance of giving rest and quiet to the brain of a person who was being continually persecuted by enemies.

Gastric Ulcer: Perforation: Peritonitis: Recovery.

Dr. Gore read notes of a case. A domestic servant, aged 19, had suffered from pain after food off and on for a period of three or four weeks. She had also had symptoms of chlorosis; on the day of attack she went about her usual duties, but got up late as she was suffering from dental abscess, for which reason she had had no breakfast, no supper the previous night, and very little food the previous day. At noon she was seized with an agonising pain in the epigastrium, and was found in a collapsed condition and carried to bed, believed to be dying. When seen shortly afterwards the face and lips were white, great pain in abdomen; pulse 48, irregular and fluttering; temperature 96.8°. Liver dulness absent; she had vomited once a small quantity of blood-stained fluid. He administered an injection of morphine and strychnine hypodermically, and gave an enema of brandy. The parents declined to entertain any operative interference. Next day symptoms of peritonitis had developed; temperature 103°, pulse 160. These symptoms lasted nine days. The bowels were not moved for ten days after the perforation, when she had an enema, but they were moved every second day afterwards. They had acted well the day before the attack. The treatment consisted in opium and rectal feeding, with beef and milk peptone for three weeks. An interesting point, which might support the theory that chlorosis was due to dyspeptic trouble, was that during the time she was having rectal feeding alone she improved in colour in a very marked degree, the anæmia almost disappearing.

Abdominal Section for Hernia.

Dr. Gore also read notes of a case of hernia in which abdominal section was performed, with recovery. The patient, a labourer, aged 56, felt something give in his groin when jumping a ditch, and noticed a swelling in the left groin and scrotum. This swelling increased rapidly for four days, when vomiting began; the bowels had moved two days after hernia was noticed. On admission the hernia measured from the external abdominal ring to the base of scrotum 15 inches, and reached to just above the internal condyle of the femur, the circumference being 24 inches. It was quite irreducible. Temperature 102°, pulse 120. A large mass of omentum was found presenting; this was ligatured piecemeal, and removed; it weighed 15½ ounces; the rest of the hernia consisted of small intestines, the cæcum, and vermiform appendix. The small gut was reduced, but it was found impossible to reduce the cæcum. He therefore enlarged the incision upwards and inwards, and effected the reduction of the cæcum. The muscles and inguinal canal were then brought together by means of buried wire sutures. The patient made an uninterrupted recovery, and had had no return of the hernia nor any bulging of the large cicatrix. The points of interest in this case were the large size of the recent hernia and the presence of the cæcum and appendix in a hernia of the left side.

Radical Cure of Hernia.

Mr. MacLeod read a note on a recent development in the radical operation for hernia. After reviewing the results of the various operations for the radical cure of hernia in children and adults, and giving the statistics of cases operated on in the Salop Infirmary between 1883 and 1894, in which it was shown that the result as concerned children was most satisfactory, only one death having occurred in eighty-one operations (and this from pneumonia after the wound had healed), he said that as regarded adults the results had not been by any means so good. This fact had led him to adopt the operation described by Professor Kocher, which he demonstrated by means of plates. Mr. MacLeod read notes of two cases recently operated on by this method—one of inguinal and one of femoral hernia—in both of which a satisfactory result seemed likely to follow.

Specimens, etc.

The Chairman showed some beautiful sections of a Hard Carcinoma of the Stomach.—Mr. Rope showed an Unusual

Fracture of the Spine with Rupture of several Viscera resulting fatally. The specimen revealed nine spinous processes completely separated from the bodies of the vertebræ.—Dr. Charnley showed a new and most convenient form of Medical Bag.

LIVERPOOL MEDICAL INSTITUTION.

W. Macfie Campbell, M.D., President, in the Chair.

Thursday, April 28th, 1898.

Radiographs.

A collection of recent radiographs by Dr. Thurstan Holland, and of photographs of surgical disease by Mr. Thelwall Thomas were exhibited.

The Acidity of the Urine.

Dr. T. R. Bradshaw read a note on this subject. He showed that litmus could not be employed as the indicator in the estimation of acidity in the urine, because solutions containing salts of phosphoric acid were never neutral to litmus; if they were not distinctly acid, or alkaline, they were amphoteric. He advocated the employment of phenol-phthalein as an indicator, and maintained that the objections which had been urged against its employment were not valid. His observations led him to differ from the teaching of Bence Jones and Sir William Roberts, who held that the acidity of the urine was diminished after a meal. He found from the averages drawn from 160 estimations of the acidity of the urine of a healthy man that the acidity followed a fairly regular curve; high during sleep, it fell rapidly after "getting up," and remained at a minimum until about noon, after which it rose steadily, and reached a maximum about 9 P.M. He found that the absolute amount of acid excreted varied nearly on the same lines as the relative acidity; and, further, that it varied inversely as to the amount of water. The latter was a remarkable circumstance, which was unconsciously acted upon by the physician when he gave alkalies to promote diuresis.

Amputation for Tumour of Neck of Femur.

Mr. Rushton Parker showed a man, aged 38, in whom he had performed amputation at the hip-joint for a recurrent tumour of the neck of the femur. In June, 1895, the patient was admitted into the Royal Infirmary for constant pain in the right hip of some nine months' duration. The diagnosis lay between ostitis and tumour of bone, but, in the absence of definite swelling at first, that of ostitis was made. A small soft swelling eventually appeared, and an incision over the hip-joint was made, and a myeloid sarcoma removed from the head and neck of the femur. The wound healed, all pain disappeared, and for a time a useful limb resulted. Towards the end of 1896 he fell in the street, and was taken to the Royal Southern Hospital, under the care of Dr. Alexander, who attempted to remove the growth. This not being practicable, amputation was suggested. For this purpose the patient placed himself again under the care of Mr. Parker, who amputated at the hip-joint. The patient was now in good health, and apparently free from disease.

Cases, etc.

Mr. Banks showed a woman from whom he had removed a portion of a Parenchymatous Goitre, and gave a lantern demonstration of Illustrations of Ancient and Modern Surgery. —Mr. S. Kellett Smith read a note on the Dum-Dum Bullet. Mr. Banks, and Drs. Westby and Permewan spoke.

Non-diphtheritic Membranous Sore Throat.

Dr. J. R. Thompson read notes of a case. The illness began with hoarseness, with redness of the left posterior pillar of the fauces. On the third day a thin white membranous exudation appeared. It covered the left tonsil and left side of the pharynx, and was accompanied by marked *malaise* and pain in the throat, without swelling of the tonsils or lymphadenitis. On the fourth day the membrane was thicker, greyish, and on removing a portion for examination the mucous membrane bled slightly, but was not eroded. The membrane reformed to some extent. There was a syncopal attack on the fifth day. The temperature ranged between 99° and 102° F. for three days, and then became normal. There was no albuminuria and no paralysis. Convalescence was tedious. Two bacteriological examinations were made; that on the fifth day showed a rod-like bacillus shorter and thicker than the Loeffler bacillus and no cocci, while that of the seventh showed a bacillus longer than the Loeffler bacillus and a rich culture of streptococci.

Dr. C. A. Hill thought the case one of streptococcal infection, and pointed out that all cases of membranous sore throat were not necessarily due to the diphtheria bacillus.

The President, and Drs. Warrington, Logan, and Peter Davidson spoke.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, April 22nd, 1898.

J. Braithwaite, M.D., President, in the Chair.

Detail in Surgery Illustrated by Operations for Piles.

Mr. Pridgin Teale, after a short review of his experience of the various methods in use during the early years of his practice—nitric acid, Henry Smith's clamp and cautery, transfixion and firm ligature, combined with cutting off the strangled pile—described the method, based in part on the operations of Coates and Whitehead, which he had employed with but little variation of detail during the last fifteen years. The chief points of the operation were: (1) Dilatation of the sphincter; (2) seizure of each pile at its extreme border by special volsella forceps, a pair at each end; (3) excision of the hæmorrhoidal mass by scissors; (4) union of the mucous with the cutaneous edge by continuous firm catgut suture not fastened at either end; (5) in removal of a second or third pile care to leave at least half an inch of mucous membrane between each wound. The advantages claimed were rapid healing chiefly by first intention, greatly reduced liability to retention of urine, lessened pain, freedom from subsequent hæmorrhage, and greater freedom from risk of septic infection.

A Method of Exploring the Kidney without Division of Muscles, Vessels, or Nerves.

Mr. Mayo Robson read a paper on a method of exploring and operating on the kidney by splitting the muscles, thus avoiding the division of any muscles, vessels, or nerves. He gave a brief account of a number of cases on which he had operated in this manner. The advantages claimed for the method were: (1) There is no division of muscle, and therefore no weakening of the abdominal wall, immediate or remote. (2) No vessels are divided, thus not only saving time, but rendering healing *per primam* more likely. (3) No nerves are severed, and therefore paralysis of the rectus and other muscles is avoided. (4) The operation is done with the patient lying on the back to the great convenience of the anæsthetist, the operator, and his assistants, and to the manifest advantage of the patient, who is saved much unnecessary disturbance. (5) The great saving of time as well as the diminution of hæmorrhage means lessening of shock, thus rendering operation feasible when it otherwise might be questionable. (6) It is an important fact that diagnosis in kidney cases, especially in renal calculus, is by no means perfect, and if it can be proved that an exploration of the kidney can be done quickly, with little or no danger, and without any subsequent weakness being left, the physician will be less loth to permit, and the surgeon to perform, an exploratory operation after all other means have been fruitlessly tried. (7) After such an operation convalescence is materially shortened, as the patient may safely be allowed to be up at the end of the second week, or even earlier, since there is no fear of the wound giving way.

Recurrent Hæmorrhage from the Ear.

Mr. W. H. Brown read notes of a case. The patient, a child aged 5 years, had follicular tonsillitis followed by otitis media and otorrhœa. There was little pain and only slight rise of temperature. Two weeks later, without any obvious cause, free arterial hæmorrhage took place from the right ear, about a pint of blood being lost. The ear was packed with gauze and a compress for four days, and a few hours after the removal of the tight dressing a second violent hæmorrhage occurred. A swelling bulging into the soft palate and pushing inwards the tonsil was now noticed, and believing that

the source of the hæmorrhage was the internal carotid artery, Mr. Brown ligatured this vessel. No further bleeding occurred, and the child ultimately quite recovered.

DECIDUOMA MALIGNUM.

Dr. HELLIER showed the uterus and appendages from a case presenting the symptoms and appearances characteristic of the condition called deciduoma malignum; also drawings of the recent specimen and microscopic section of the primary and secondary growths. He also showed by the lantern photographic reproductions of drawings published by Sänger in his original paper, and by Nové Josserand and Lacroix and others. The patient, aged 39, died twenty weeks after an apparently normal confinement. Her main symptom was continuous hæmorrhage and fœtid discharge. Death resulted from septic pneumonia. There was malignant growth in the fundus uteri, broad ligament, and ovaries; perforation of uterus and rectum and secondary growths in peritoneum and lungs. It was intimated that a detailed report of the case would be published in the *Transactions* of the Obstetrical Society of London.

XEROSTOMIA (MOUTH DRYNESS).

Dr. A. J. SHARP read notes of a case of complete absence of moisture from the mouth, with partial dryness of the nose. Lachrymation was not affected. The patient was a single woman, aged 41, and the dryness came on somewhat suddenly eighteen months ago. The only "neurotic" history obtainable was that of coccygodynia of many years' duration, which was completely cured by a single bottle of tonic medicine bought at a druggist's. Smell and taste were not affected, but there was a musty odour about the nose, such as often occurred with dry crusts. None could, however, be detected. The teeth were not specially bad. She had worn a few artificial ones lately, and found that the dryness increased if they were disused. The whole interior of the buccal cavity was dry and glazed, and pale, with the exception of the tip of the tongue, which was red. The papillæ on the tongue were prominent, and there were no signs of inflammation about it. The fauces and pharynx were granular. No secretion could be expressed from the salivary glands or ducts. A faintly alkaline reaction was obtained after moistening the tongue with water. The lips were dry. The skin was not dry, and she could sweat freely. There was no urinary disorder, nor any signs of parotitis or pressure on the salivary apparatus. She cooled her tongue with a solution of sodium carbonate, and had taken mercuric iodide with quassia in medium doses with slight benefit. Reference was made to a table of 19 recorded cases given by Professor Fraser in the *Edinburgh Hospital Reports* for 1893.

CASES, PATHOLOGICAL SPECIMENS, ETC.

Cases and specimens were shown by Dr. CHURTON, Dr. TREVELYAN, Mr. LITTLEWOOD, Dr. MANTLE (Halifax), Dr. CHADWICK, and Mr. W. H. BROWN.

SOCIETY OF ANÆSTHETICS.—At a meeting on April 21st, Dr. DUDLEY BUXTON (President) in the chair, Mr. GRANT MORRIS read notes of the case of a woman, aged 30, who suffered from Pain in the Region of the Left Kidney. At the time of admission she looked cachetic, and had a trace of albumen which disappeared before the day of operation. An exploratory abdominal section was performed; ether was given from a Clover's inhaler, but was never pushed. The induction was normal. Towards the end of the operation some cyanosis and a good deal of secretion of frothy mucus appeared; neither was alarming in amount. After 65 minutes the patient was removed from the operating table; she was then cyanosed, the breathing unimpeded but shallow and sighing. Her condition was thought to betoken the onset of vomiting. Conjunctival reflex was present; the pupils were equal and contracted. After 15 minutes the face assumed a ghastly, ashen hue, respiration ceased, and no pulse could be felt. About 1 pint of frothy secretion came from the lungs, and the *post-mortem* examination showed the lungs to be full of a similar fluid. Death had been caused by acute œdema of the lungs, preventing the entrance of oxygen. Dr. SILK had met with a similar case in a stout patient who had inhaled, he thought, an excessive quantity of ether. Her lungs became completely waterlogged, owing to œdema. Artificial respiration was liable in these cases to do more harm than good. Dr. STARLING believed the condition of the kidneys might be a factor in producing the acute œdema. A case in his practice bore out this belief. Mr. DAVIS, on the other hand, had in a case of Bright's disease given ether, and the death of the patient, which occurred in 24 hours, was, he thought, in part due to the anæsthetic. In such cases he now preferred chloroform. After remarks by Miss ALDRICH BLAKE and Mr. MACCARDIE, the PRESIDENT referred to the large number of cases of biliary catarrh following chloroform, which, although seldom amounting to jaundice, were yet on the high road to it. Albuminuria appeared most commonly after chloroform in persons whose kidneys were sound, although statistics showed that pre-existing albuminuria was intensified more by ether than chloroform.—Mr. PECHELL described his method of giving ether. He employed a specially contrived Ormsby's inhaler, and after removing the sponge poured 2 ozs. of ether into the bag, and then replaced the sponge. The valve was left open and the patient allowed to breathe through the inhaler; the valve being closed, the inhaler was gradually tilted until the sponge became wetted by the ether, and acted as a distributor. When he employed gas he gave it for about thirty seconds, and then applied the Ormsby's inhaler in the manner described. Mr. CARTER BRAINE had tried Mr. Pechell's plan, and found that the ether damaged the bag. He described an apparatus he had had constructed which enabled him, by slightly altering its component arrangements, to give ether or the A.C.E. mixture or chloroform, and which was capable of being rendered sterile. Dr. SILK thought Mr. Pechell's views with regard to the ordinary method of giving ether were open to correction. Cyanosis and lividity were not only not to be expected, but ought not to occur if ether were properly given. Mr. BELLAMY GARDNER had found that when ether was poured in such quantities into the bag of an Ormsby's inhaler, even the greatest care could not prevent its flowing over the patient's face. The PRESIDENT, while congratulating Mr. Pechell upon his laudable endeavour to introduce ether into country practice, felt surprised that he had not dwelt upon Clover's method, which was, in his opinion, the best, and gave the best results. When its principles were once mastered neither cyanosis, lividity, or sensations of suffocation were necessary results of ether inhalation.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting on April 15th, Dr. R. SYDNEY MARSDEN (President) in the chair, Dr. ANDERSON read Clinical Notes and showed a specimen of Perforating Gastric Ulcer.—Professor MITCHELL BANKS (Liverpool) read a paper on Practical Experiences in Rectal Disease. With regard to the operation to be employed for the destruction or removal of hæmorrhoids, he thought that there were three or four means which might each be employed with advantage by a surgeon who had familiarised himself with one particular method and had acquired dexterity in its use. For himself he had been a consistent advocate of the clamp-and-cautery operation introduced by Mr. Henry Smith, and had certainly done it some two or three hundred times at the lowest estimate. What greatly induced him to adhere to it was the remarkably satisfactory results that followed; for never once had a patient come back with a return of his piles. Whatever drawbacks might be urged against the operation, he was absolutely certain of its permanently curative effect if properly done. After the operation he was in the habit of tying into the bowel a short flanged glass tube. This allowed the passage of flatus, which was one of the things that greatly worried patients for the first twenty-four hours. It, moreover, enabled the blood to escape if any secondary hæmorrhages occurred, and so warning was given. He had heard surgeons state that they never had such a thing as secondary bleeding. He could only say that if they went on operating long enough such a case would turn up. To minimise the danger of this, after clamping the pile he rarely cut it off, but slowly frizzled it up into a leathery state by repeated applications of the cautery at not too great a heat. His experience of Kraske's operation made him think that it was one of the valuable operations for cancerous disease of recent origin, because the sacral glands did not seem to be so early affected as in many other parts of the body, and so a

chance was given for immunity to follow free local extirpation. What was so remarkable in the modern rectal operations was that one might pull down even the sigmoid flexure into the wound, while the opening of the peritoneum seemed to be productive of very little danger. His own view was against a preliminary colotomy. As a rule, a patient required every particle of strength to stand up against an extensive removal of the rectum, for the bleeding alone at the time of operation was often most alarming. Of course some time must yet elapse before the full value of the operation was known, but he could mention the case of a lady who was well and managing the affairs of a considerable household eight years after the operation, and that of a gentleman who was actively doing the work of surveyor to a marine insurance company after three years. Both were quite free from return. Professor Banks drew attention to certain severe cases of pruritus ani which defied all ordinary remedies, and which reduced the patients to the most miserable condition. He instanced three patients, of whom one was a merchant in a large way of business, who at length was quite unable to attend to it; and another that of a gentleman who came from South Africa in search of relief from his complaint. They were all permanently cured by a smart application of the actual cautery around the anus and for a short distance within it.

Nottingham Medico-Chirurgical Society.—At a meeting on April 20th, Dr. Cattle (President) in the chair, Mr. Mackie read a paper on Diseases of the Accessory Sinuses of the Nose. After alluding to their anatomical features, attention was more particularly directed to suppuration occurring in the maxillary sinus, which he believed to be more common than was generally supposed, 14 cases having come under his observation in the last fifteen months. Catarrh of the mucous membrane with stenosis of the ostium accounted for the majority, and, though cases of dental origin were not infrequent, they were less important, and quickly recovered after the extraction of a tooth. The distinguishing signs of the disease were pointed out, and the value of transillumination as an aid to diagnosis was demonstrated on a patient. In the treatment of recent cases frequent irrigation by a catheter passed through the ostium sufficed to effect a cure; but when the disease was of long duration it was necessary to drill a hole through the canine fossa, subsequently enlarging it with a chisel, and at the same time making a counter-opening into the lower meatus of the nose, the cavity being afterwards packed with iodoform gauze and treated with an astringent douche. In suppuration of the ethmoid sinuses surgical interference was both difficult and dangerous, but when the employment of a warm nasal douche failed to give relief it was necessary to puncture the bulging ethmoid bone. The paper was discussed by Drs. Cattle, Willis, Tresidder, and Cox.

Dermatological Society of Great Britain and Ireland.—At a meeting on April 26th, Dr. Bowles in the chair, Dr. T. D. Savill brought a case for diagnosis—a Vesiculo-Neurotic Eruption of probably angio-neurotic origin—in a woman, aged 52 years. The eruption was practically localised on the lower third of the left forearm, back and front (mainly on the extensor surface), and on the back of the hand. Mr. Hutchinson had seen the case, and had been unable to give a name to it. After six weeks' treatment in a nursing home the patient had very much improved. A series of photographs of the case were shown. Mr. Pernet inquired whether the question of malingering had been considered. The Chairman and Dr. Travers-Smith also joined in the discussion.—Dr. Savill also showed a case of Telangiectasis of the Face, of recent origin, in a man of about 30.—Mr. W. T. Freeman showed a case of obstinate Lupus Erythematosus of the Face, in a man, aged 28 years. Dr. Savill suggested that it should be treated by the application of pure carbolic acid. Mr. Pernet suggested soothing local applications.—Dr. Thompson showed (for Dr. Abraham) a man about 50 years of age, whose body and limbs were almost smothered with eruption. Dr. Abraham called it lichen ruber acuminatus, as contrasted with pityriasis ruber pilaris. There was intense itching. It had existed for some weeks. The Chairman suggested ol. deelinæ (a petroleum oil) locally, and a skim milk diet. Mr. Pernet also made remarks.

REVIEWS.

Epidemic Diphtheria: A Research on the Origin and Spread of the Disease from an International Standpoint. By Arthur Newsholme, M.D.Lond., M.R.C.P., etc., Medical Officer of Health of Brighton. London: Swan Sonnenschein and Co. 1898. (Demy 8vo, pp. 200; 60 figures. 7s. 6d.)

This, as might have been expected from Dr. Newsholme, is an admirably worked-out study of diphtheria statistics. The value of such material as that here dealt with is, of course, differently estimated by different authorities, and Dr. Newsholme takes care in his introduction to reply in advance to possible criticisms both of his data and of his methods. There can be little doubt that those best qualified to judge will agree with him that perfectly valid conclusions may be drawn even from imperfect statistics, when these are skilfully and honestly employed. It is easy to raise the cry that "anything can be proved by statistics;" but it is at least equally true, as Dr. Longstaff pointed out some time since, and as Dr. Newsholme repeats, that "without statistics nothing can be proved." It would, we think, be difficult to state the case for the value of statistical methods, when used with intelligence and fairness, in better terms than those employed by Professor Milnes Marshall with reference to the study of embryology. "This," he says, "is not to be regarded as a master-key that is to open the gates of knowledge, and remove all obstacles from our path without further trouble on our part; it is rather to be viewed and treated as a delicate and complicated instrument, the proper handling of which requires the utmost nicety of balance and adjustment; and which, unless employed with the greatest skill and judgment, may yield false instead of true results." Substituting "statistics" for "embryology" we have here an exact statement of the truth of the case.

There can be no doubt of the skill and candour with which Dr. Newsholme marshalls his facts, and he appears to us to strike the just mean between too great boldness in accepting and too great caution in rejecting the conclusions suggested by his figures.

The labour involved in the preparation of the numerous diagrams must have been extreme, and can probably be duly appreciated only by those who have themselves engaged in similar work. Dr. Newsholme is no doubt well advised in making it his rule to omit tabular statements. These, however attractive to the professed statistician, are unnecessary in the case of a work like the present, though their insertion would have helped the general reader to a better realisation of the enormous number of facts embodied in this volume. The diagrams which take the place of numerical statements are, as a rule, clear and easily read; we observe, however, that in some instances, as on pages 17, 30, and 46, it is not always possible to disentangle those which from exigencies of space are partly superimposed. We think, too, that the curves on pages 27, 57, and 59, suffer from the absence of a zero.

There will, we imagine, be little dispute that the author makes out a very complete case for his contention that "in diphtheria we have to deal with a disease which creeps slowly from place to place, in which months or even several years may elapse before it takes firm root and begins actively to propagate itself." Nor will it be questioned that some other factor besides personal infection must be concerned in its spread. This other factor is believed by Dr. Newsholme to consist essentially in protracted drought, and it must be allowed that he has a great array of facts to bring forward in support of this somewhat unexpected conclusion. He argues the question with a full sense of all that may be urged on the other side, and indeed is quite ready to confirm the ordinarily received view of a close association between wet weather and diphtheria outbreaks. For the solution of this apparent paradox, which space will not allow us to give here, the reader must be referred to Chapter xviii.

Dr. Newsholme's views on the vexed question of diphtheria and school attendance are characterised by good sense and moderation. His incidental remarks on the effect of the antitoxin treatment will also be read with interest.

We have noted a few misprints; but the book is, as a whole, remarkably free from mistakes of the kind. There is a wrong reference on page 85, where "Fig. 48, p. 106," should be read instead of "Fig. 47, p. 104." On page 68 the last "Rotterdam" should be "Amsterdam."

Medical Education and Registration: United States and Canada. By William T. Slayton, M.D. (Harvard). Hyde Park, Vermont: Lamoille Publishing Company. 1897. (Cr. 8vo, pp. 105. 0.57 dol.)

This little work is divided into four parts. Part I comprises the requirements for licence to practise medicine in the United States; Part II the requirements for admission to the medical schools of the United States; Part III statistics of the medical schools of the United States; and Part IV requirements for licence to practise medicine in the Canadian provinces and requirements for admission to, and statistics of, the Canadian medical schools. Each part contains valuable information in tabular form. It is interesting to note the enormous number of Licensing Boards in the United States. Twenty-nine States and the District of Columbia require an examination for licence to practise medicine, of which number eighteen require both a diploma from a recognised college and a further examination. Fifteen States require a diploma from a college recognised by them, or, as an alternative, a special examination. Five States—namely, Vermont, Michigan, Kansas, Wyoming, Nevada—have practically no laws governing the practice of medicine; Alaska is in the same case. The licensing powers in the several States which possess them are vested in a Board made up of representatives from the schools, which comprise Regular, Homœopathic (or Eclectic in some cases), or a State or Territorial Board of Health. In some instances, as at Washington, the Board is appointed by the Governor, and the different schools are not mentioned. Certain States have two or more Boards, California has three—one Regular, one Homœopathic, and one Eclectic. In Arkansas there is a Board for each county appointed, strangely enough, by the county court. In Vermont the Boards are composed of the censors of the three State medical societies.

Of course the standards of the various Examining Boards vary considerably, and this is brought out very clearly in the statistics showing the results of the examinations and comparative standing of the graduates of the institutions represented, the percentage of passes being variously from 93.8 in North Dakota to 71 in North Carolina. As might be expected, the preliminary education required from the medical student varies considerably in different States, but in the larger number the entrance examination is that prescribed by the Association of American Medical Colleges. In Alabama the entrance examination prescribed by the Southern Medical College Association is required, and certificates are in addition to be presented by the student, showing that he possesses at least the educational attainments required from "first grade" teachers of public schools.

The preliminary examination includes English composition, and it is noted that this would be criticised in relation to thought, construction, punctuation, spelling, and handwriting; arithmetic, common and decimal fractions, etc; algebra, simple and quadratic equations; elements of mechanics, hydrostatics, hydraulics, optics, and acoustics; and Latin, very elementary apparently. Greek seems to be required only in Pennsylvania, and only as alternative to Latin, French, and German. The names of the Regular Colleges and Medical Schools are legion, and the numbers of graduates passed in 1897 vary considerably: for instance, the highest number is 260 at Rush Medical College, Chicago, and the figure 0 is seen opposite the name of the Medical Department, Knoxville College, in Tennessee, a college founded for coloured students only three years since. The majority of the schools require four years before the curriculum is complete; the few which require less than four annual courses of lectures are lessening in numbers and some already have announced their intention of complying with the regulations of the majority on and after a certain date. The State Boards, by setting up standards of their own, are doing excellent work, and the various schools of medicine which have not seen fit to increase their years of study and to raise the tone of their examinations are already feeling the pressure which is being put upon them. The State Legislatures have made laws which have advanced medical education in the States, and the schools have in many cases been compelled to "level up" to the standard required by the governing body of the district. There are many other interesting matters in Dr. Slayton's work, which we can recommend as an excellent guide to the subject with which it deals.

A Textbook of Zoology. By T. Jeffery Parker, D.Sc., F.R.S., and W. A. Haswell, M.A., D.Sc., F.R.S. In two volumes. London: Macmillan and Co. 1897. (Demy 8vo, pp. 1522. 36s.)

It is with a feeling of melancholy that we take up this work, for it was only the other day that the sad tidings came from the Antipodes that T. Jeffery Parker was no more. This was his last great effort, and had occupied most of his available leisure for five years. When we consider that the work consists of more than 1,500 pages, and is illustrated by more than 1,100 figures, many of them original drawings; and when we further remember that the two collaborators were separated by 1,200 miles from each other, and by a still greater distance from their printers and engravers and publishers, we are forced to admire the indomitable perseverance and unwearied patience which have brought the work to a satisfactory conclusion.

Criticism is almost disarmed by the recollection of such obstacles; nevertheless the book is intrinsically so important that it must be considered on its merits. First, then, a few words as to its general scope. In its compilation the authors have unreservedly adopted the "type system," which Parker had been instrumental in assisting Huxley to introduce into the laboratories of this country as the best means of instruction in elementary biology. A "type," or, as they prefer to call it, an "example," is selected of each of the great divisions of the animal kingdom and its structure described in some detail; for instance, the common sea urchin is taken as an example of the echinodermata, the frog of the amphibia, and the rabbit of the mammalia. The dangers of this mode of treatment are obvious owing to the faculty for rapid generalisation inherent in the youthful mind, and affecting even the student of more advanced years. How often, for instance, have we seen it stated that certain phenomena occurred in the development of teleostei, when it was only meant that they occurred in that of the common trout.

Our authors have fully appreciated these drawbacks, and follow up the description of every example by a statement of the characters of the group to which it belongs, and of the classification of its various members. The relation of the individual to the group is further emphasised by a paragraph which, as it were, shows cause for its being placed in that particular systematic position. Then follows a general account of the group, in which its more important modifications are described *seriatim* according to the comparative method.

The scheme of classification adopted is set out in full at the end of the introductory matter, and though it is on the whole extremely judicious, there are one or two matters to which we feel bound to take exception. The position of the chætognatha in close relation with the nematodes and the acanthocephala appears extremely doubtful, whilst the retention of the old and well-nigh disused term "molluscoida," in a sense, too, absolutely different from its original one, is quite inexcusable; for the association of organisms to which this name has been given the term "podaxonia" (Lankester) has, we believe, priority. The use of "adelochorda" for "hemichorda" is another instance of wanton and needless interference with the law of priority. We are glad to see that the morphological "no man's land" which went by the name of "vermes" has been broken up into allotments in something like a reasonable fashion. The classification of the vertebrata strikes us as particularly good and in advance of that used in any general textbook published up to the present time. One or two slight errors we may note in passing. The plural of "octopus" is not "octopi;" we do not remember ever before to have seen "byandby" written as one word; Vaughan Thompson spelt his name with a "p;" and there are also a few mistakes in the naming of some of the figures.

Reference should also have been made to the fact that the restorations of certain fossil fishes are really the work of Traquair, although the blocks may have been borrowed from Nicholson and Lydekker.

The medical practitioner will naturally wish to know how the work treats certain classes of animals with which he is more particularly concerned, such as the flatworms and threadworms. We may therefore state that accurate though not very detailed descriptions are given of the liverfluke as the type of the trematoda, of the common tapeworm (tænia solium), as an example of the cestoda, and of the roundworm (ascaris lumbricoides) as an example of the nematoda; so that for full discussion of these forms recourse must still be had to other more special treatises, such as those of Leuckart and Küchenmeister. It is, however, right to remark that they receive fair treatment, considering that this is a general text-book of zoology and is not specially designed for the medical profession.

With the exception of a very brief introductory sketch of the structure and functions of the animal body the authors have wisely deferred all philosophical discussions and speculative matter to the end of the work, where we have chapters on the mutual relations of the chordata, and on the relations of the different phyla of the animal kingdom which for careful reasoning and theorising with a due regard to probability are truly admirable. We particularly commend to all whom it may concern the sentence: "On the whole it may safely be said that the ancestry of the vertebrates is still an unsolved problem."

In the section on geographical distribution the regions established by Wallace and Sclater are still retained, though it is mentioned that many authorities unite the nearctic and palæarctic into a single holarctic region.

Section xv gives a very clear, though necessarily concise, account of the philosophy of zoology, while Section xvi gives a correspondingly brief history of the science, which, however, takes note of all the various phases of zoological work, mentioning the labours of Cope and Marsh in palæontology, of Weismann on heredity, and Pasteur and Lister on putrefaction.

There is a well selected list of books likely to be found serviceable by the student. This it would, of course, be easy to extend, but we cannot help thinking that, short as it is, the *Vertebrate Embryology* of the late Professor Milnes Marshall should have found a place in it.

In conclusion, we offer to Professor Haswell our sincere congratulations on the completion of so gigantic a task, and are specially glad to have the privilege of welcoming a sound and scientific zoological treatise not "made in Germany."

Beitrag zur Chirurgie des Pankreas. [Report on the Surgery of the Pancreas.] Von Michishige Takayasu, M.R.C.S.Eng., L.R.C.P.Lond. (Osaka, Japan). Jena: Gustav Fischer. 1898. (Roy. 8vo, pp. 76.)

In this inaugural dissertation we have an excellent sketch of the diseases of the pancreas and their treatment in a very readable form.

The first chapter deals with the cysts of the organ, and is illustrated by cases occurring in the practice of Professor Mikulicz, of Breslau, under whose guidance the thesis was undertaken. Numerous other cases are also alluded to in illustration of the pathology, etiology, and treatment of the condition. The surgical treatment is described pretty fully, and is illustrated by tables of cases arranged according to the methods employed, that is, total extirpation (13 cases), partial extirpation (10 cases), incision and drainage in two stages (17 cases), incision and drainage in one stage (64 cases). Chapter 11 deals with carcinoma of the pancreas, primary and secondary, and is followed by a table of 20 cases in which cholecystotomy was performed for the resulting retention of bile. Then is added another table of the cholecystenterostomies (13) performed for the same condition. Finally, the various inflammatory diseases of the organs and their surgical treatment are discussed very fully.

The thesis is well worth reading, and were it not that it follows very closely upon a larger work on the same subject by Dr. W. Körte (reviewed in a recent issue) it would furnish the most recent and the fullest information we possess on this branch of surgery. But Dr. Körte's work leaves very little material bearing upon the subject untouched and is planned in a far more comprehensive manner, so that this writer's efforts necessarily suffer somewhat by contrast.

Raid and Reform, by a Prætoria Prisoner. By A. P. Hillier, M.D., etc., with two Essays on the Antiquity of Man in South Africa. London: Macmillan and Co. 1898. (Demy 8vo, pp. 168. 6s.)

This little book contains more solid matter than many volumes of greater bulk and closer print. The main subject is one of which we have heard a great deal during the last two years, but almost always deeply coloured by partisan feeling of one kind or another; and it is well to get a plain unvarnished account like this from a man who is neither a financier, a journalist, nor a professional politician, and who, while he has the intimate knowledge of the whole business which only an actor and a sufferer in it could have, is so fair and broad-minded that one feels he is really to be trusted.

The story told is by no means a continuous one; and throughout a certain amount of knowledge on the part of the reader is presupposed.

Those of our readers, however, who are more interested in anthropology than in politics, may turn to the last two chapters of the book. Of these the penultimate is the more interesting. It contains some evidence, gathered at first hand, with the assistance of Mr. Mackey, of East London, from the high level gravels near the mouth of the Buffalo River, as to the presence there of a race of men palæolithic in time as well as in culture. "Cores" and fragments have been discovered, as well as finished implements of the St. Acheul types, the material being a subcrystalline (metamorphic) rock found close at hand. The evidence is very clearly put.

Aneurysms of the Aorta. By Oswald A. Browne, M.A., M.D. London: H. K. Lewis. 1897. (Demy 4to, pp. 38. 2s. 6d.)

This thesis for the Cambridge M.D. degree is based upon an elaborate analysis of 173 cases of aortic aneurysm dying in St. Bartholomew's Hospital during the past thirty years. During this period there were in all 631 cases of aneurysm under treatment, and 468 involved the aorta. Of the remaining 163 the popliteal artery was affected in 80 cases.

Dr. Browne limits his remarks to the cases of aortic aneurysm in which a necropsy was made; 153 of the 173 cases occurred in men, and only 20 in women. The most common age was between 35 and 55 (113 cases). 1. There were 58 cases of aneurysm of the first part of the arch, and of these 24 were placed immediately above the valves, and the remaining 34 at a distance of one inch or more above them. The general direction was markedly to the right. The disease ended by rupture in 18 cases. 2. There were 35 cases of aneurysm of the transverse arch. The author takes as the lower limit of the transverse arch a line drawn at right angles to the vessel through the place of origin of the left subclavian artery on its distal side. Death was here most often brought about by asphyxiation due to pressure. Rupture occurred in 12 cases. 3. In 19 cases the aneurysm involved both the ascending and transverse portions. 4. There were 21 cases of aneurysm of the third part of the arch, and death took place by rupture in 16 cases. 5. In 17 cases of aneurysm of the descending thoracic aorta, death occurred by rupture in 14. 6. In 14 of 23 cases of abdominal aneurysm, the aneurysm sprang from the aorta immediately beneath the diaphragm, and 20 terminated by rupture.

Some useful tables are appended, by which the pathological details, etc., of the various cases can be seen at a glance. The deductions drawn from the consideration of these cases mostly confirm present views, but they also bring to light many other interesting facts. Investigations like the above into the records of our large hospitals are perhaps hardly as frequent as might be desired, since they are certain to extend our knowledge. This thesis provides some very interesting and useful reading.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

A WRENCH FOR TALIPES EQUINUS.

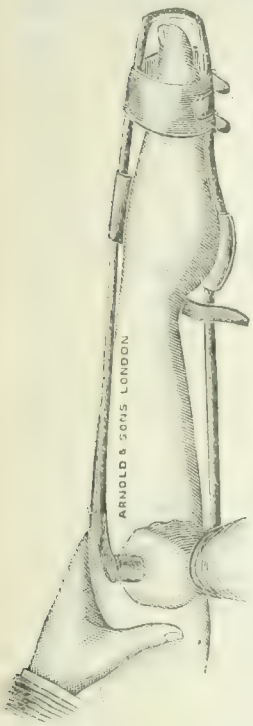
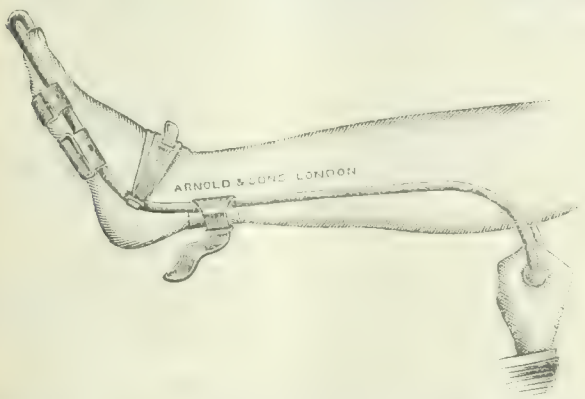


Fig. 1.

Mr. Henry F. Baker, F.R.C.S.Edin. (London, W.) writes: The accompanying illustration (Fig. 1) shows a form of wrench for the treatment of obstinate talipes equinus, which I have found to be of considerable service in suitable cases. The foot having been covered with cotton wool and bandaged, the instrument is applied as in the figure. The patient having been placed under the influence of an anæsthetic, lies on the same side as the deformed foot. The knee is then steadied by an assistant, and the surgeon stands behind the patient, and, holding the extremity of the foot-piece in his left hand, proceeds to overcome the equinus by drawing the handle of the wrench towards himself with his right.

Fig. 2 is a wrench, on the same principle as that already described, for the treatment of talipes varus, and is applied to the patient while lying on his back. The foot is bandaged as before, and the knee is to be held firmly by an assistant. The surgeon stands facing the inner aspect of the leg, and pulls the handle towards him with his right hand, holding the foot-piece of the instrument with his left. It is necessary that the ankle and other straps should be kept as tight as possible. It will be seen that although a great amount of leverage is brought to bear on the deformed foot, the force used can be



ig. 2.

regulated with great nicety. These wrenches are made by Messrs. Arnold and Sons, of West Smithfield.

—Berlin Roentgen Ray Society.—At the first meeting of the Roentgen Ray Society, recently established in Berlin, held recently, Professor Walther Wolff was elected president. After the despatch of a telegram to Professor Roentgen, the Society proceeded to business. A paper was read by Herr Overbeck, of Tübingen, on the effectiveness of the induction apparatus, and radiographs of tuberculous disease of the hip, aneurysm of the aorta, etc., were shown by Drs. Immelmann, Schütz, and others.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

Francis Fowke, *General Secretary.*

429, Strand, London, April 29th, 1898.

PROCEEDINGS OF THE COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429, Strand, London, W.C., on Wednesday, April 20th, 1898.

Present:

Dr. Robert Saundby, President of Council, in the chair.

Sir Thomas Grainger Stewart, M.D., F.R.S.E., President-elect, Edinburgh.

Dr. James Barr, Liverpool.
Dr. Rayner W. Batten, Gloucester.
Dr. M. Beverley, Norwich.
Mr. H. Langley Browne, West Bromwich.
Mr. Henry T. Butlin, London.
Dr. John A. Campbell, Carlisle.
Mr. James Cantlie, London.
Dr. Alfred H. Carter, Birmingham.
Dr. W. F. Cleveland, London.
Dr. J. Ward Cousins, Portsmouth.
Dr. H. Radcliffe Crocker, London.
Dr. G. W. Crowe, Worcester.
Dr. E. H. Dickinson, Liverpool.
Mr. George Eastes, London.
Dr. William A. Elliston, Ipswich.
Dr. A. Freeland Fergus, Glasgow.
Dr. David W. Finlay, Aberdeen.
Mr. R. S. Fowler, Bath.
Dr. J. H. Galton, Upper Norwood.
Dr. A. Godson, Cheadle.
Dr. Bruce Goff, Bothwell.
Dr. W. Gordon, Exeter.
Dr. Ogilvie Grant, Inverness.
Dr. Joseph Groves, Carisbrooke, Isle of Wight.
Dr. H. Handford, Nottingham.
Mr. John D. Harries, Shrewsbury.
Mr. J. Hughes Hemming, Kimbolton.
Dr. Holman, London.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. Evan Jones, Aberdare.
Dr. J. C. McVail, Glasgow.
Mr. H. J. Manning, Salisbury.
Dr. J. W. Miller, Dundee.
Dr. John William Moore, Dublin.
Mr. R. H. B. Nicholson, Hull.
Dr. J. W. J. Oswald, London.
Mr. C. H. Watts Parkinson, Wimborne Minster.
Dr. Robert W. Philip, Edinburgh.
Dr. Frank M. Pope, Leicester.
Dr. Edwin Rayner, Tiviot Dale.
Dr. J. Rolston, Devonport.
Dr. William Russell, Edinburgh.
Dr. L. W. Sedgwick, London.
Dr. E. Markham Skerritt, Clifton, Bristol.
Mr. Henry Stear, Saffron Walden.
Dr. W. J. Tyson, Folkestone.
Dr. A. R. Urquhart, Perth.
Mr. T. Jenner Verrall, Brighton.
Mr. Joseph White, London.
Dr. S. Woodcock, Old Trafford.

Read letters of apology for non-attendance from the Treasurer, Sir W. T. Gairdner, Dr. Henry Barnes, Dr. T. Bridgwater, Mr. Andrew Clark, Dr. W. Dyson, Dr. C. E. Glascott, Mr. T. R. Jessop, Mr. J. H. Lindsay, Mr. Jordan

Lloyd, Mr. N. C. Macnamara, Mr. Jones Morris, Surgeon-Major-General T. F. O'Dwyer, Dr. G. H. Philipson, Dr. H. H. Phillips-Conn, Dr. Sandford, Dr. A. Sheen, Dr. G. E. Shuttleworth, Dr. R. Somerville, Dr. J. Roberts Thomson, and Mr. G. E. Williamson.

The minutes of the last meeting having been printed and circulated, were taken as read and signed as correct.

Dr. Freeland Fergus, the second representative of the Glasgow and West of Scotland Branch, attended for the first time, and was introduced to the Council.

Resolved: That the Council begs to express its sympathy with Dr. Roberts Thomson in his accident, and hopes that he will have a speedy recovery.

Resolved: That the Council begs to express its sympathy with Dr. Bridgwater in his accident and hopes that he will have a speedy recovery.

Read correspondence between the President of Council and Mrs. Hart concerning the proposed memorial to the late Mr. Ernest Hart.

Resolved: That the question whether any memorial can be founded to the late Mr. Ernest Hart, and the form it should take, be referred to the Journal and Finance Committee to report to the next meeting of the Council.

It was moved and seconded: That a petition be presented to the General Medical Council to authorise the Examining Bodies to hold one or more special examinations for the benefit of men of good moral character who are over 40 years of age, and have completed the medical curriculum, and are engaged in practice as unqualified assistants to registered medical practitioners.

The motion having been put from the Chair, the same was declared to be lost.

In reference to resolution of Council 4082, viz.:

Resolved: That the Draft Obstetric Nurses Bill be received and printed, and copies sent to each member of this Council and to each Branch Secretary, and the Bill be placed upon the agenda of the next meeting of Council for consideration.

Resolved: That a petition be presented to both Houses of Parliament against the Midwives Registration Bill, on the ground that it will intensify the evils it proposes to remedy.

Read petition from the Beckenham and Penge Medical Society.

Resolved: That a reply be sent to the Beckenham and Penge Medical Society regretting the inability of the Council to appoint a Committee to take evidence, as they do not possess the necessary statutory power to do so.

Read letter from the Sanitary Institute asking the Council to appoint delegates to the meeting of the Congress at Birmingham.

Resolved: That Dr. McVail and Mr. Langley Browne be appointed delegates to attend the autumn Congress of the Sanitary Institute held at Birmingham.

Read letter from the American Medical Association, reporting that the annual meeting of the Association would be held in Denver, Colorado, on June 7th to 10th next, and giving a cordial invitation to appoint delegates to attend the meeting.

Resolved: That the Council regret they are unable to appoint delegates to attend the Congress of the American Medical Association.

The President of Council reported the return of the post cards *re* Medical Defence, namely:

Despatched	... ...	12,990 country.
,,	... ...	2,641 town.
,,	... ...	3,544 foreign.
Total despatched	...	17,175

UNITED KINGDOM RETURNS:

4,955 say "yes" to both questions.
1,834 say "no" to both questions.
234 say "yes" to 1st, "no" to number 2.
133 say "yes" to 1, and "yes" to 2 not to exceed 5s.
133 say "no" to 1, and "yes" to 2.
76 say "yes" to 1, "blank" to 2.
1 says "no" unless amalgamated with the Medical Defence Union.
1 says "no" to 1, "blank" to 2.
1 says "yes" to 1, not in favour of extra subscription whilst in the army.
1 says "yes" to 1, if Medical Defence is to apply to Colonies.
165 say they are "neutral, indifferent, or indefinite."

Total ... 7,534

COLONIAL BRANCHES AND FOREIGN RETURNS:

709 say "yes" to both questions.
276 say "no" to both questions.
4 say "no" to 1, "blank" to 2.
13 say "yes" to 1, "blank" to 2.
44 say "yes" to 1, "no" to 2.
24 say "yes" to 1, 5s. to be subscription.
22 say "no" to 1, "yes" to 2.
38 say "yes" to 1, and "yes" to 2 if it applies to Colonies
2 say "yes" to 1 for United Kingdom only, "no" to 2.
1 says "no" to 1, "yes" to 2 if for the Colonies.
1 says "yes" to 1, "no" to 2 unless applied to Indian and other Government services.
1 says "yes" to 1 if scheme be adopted suggested by British Guiana Branch which appeared in JOURNAL of March 26th, 1897, p. 751.
24 are indifferent, some say they subscribe to a local medical defence society.

Total ... 1,159

UNITED KINGDOM—Despatched		...	13,631
	Received	...	7,534
	Outstanding	...	6,097
COLONIAL BRANCHES.—Despatched		...	3,544
	Received	...	1,159
	Outstanding	...	2,385
Total replies...			7,534 1,159
			8,693
Remaining unanswered...			8,482
Total sent out			17,175
Total "yes"			5,664
Total "no"			2,110
Total various			919
			8,693

TOTAL REPLIES	50,556	PER CENT.
Unqualified affirmative ...	35.078	per cent.
,, negative	12.228	,,
Qualified affirmative	4.250	,,
Indifferent	1.100	,,
	50.556	

IN THE UNITED KINGDOM—		
Affirmative	36.35	per cent.
Negative	13.45	,,
Qualified or indifferent ...	5.40	,,
	55.2	

It was moved and seconded:

That application be made to a Judge in Chancery to confirm the alteration in the Memorandum of Association.

Whereupon an amendment was moved and seconded:

That the replies received from the Association, relative to the question of medical defence, be submitted to the next annual meeting before any further steps are taken in the matter.

The amendment having been put from the Chair, the same was declared to be carried.

The amendment having been then put from the Chair as a substantive motion, the same was declared to be carried.

Read letter from Mr. Upton, of which the following is a copy:

14, Austin Friars, London, E.C.
March 15th, 1898.

MY DEAR SIR,—Referring to our conversation, I now send you the mortgage for the seal to be affixed in the presence of those who usually attest its affixing.

You understand that the money is not to be repaid for ten years (1908), but the Association can, if they please, pay it off by instalments, at any time and without notice, of not less than £3,800.

Of course if the Association make default in paying the interest, the Sutton Trustees have the right to sell the property. Otherwise, under the condition above mentioned, they would be powerless to enforce the payment of the interest.

It is the most favourable mortgage, in the interest of the mortgagors, I ever drew.

Yours, faithfully,

F. Fowke, Esq. JAMES R. UPTON.

Read acknowledgment from Solicitor respecting the purchase of freehold property:

14, Austin Friars, London, E.C.
March 18th, 1898.

MY DEAR SIR,—I beg to acknowledge the safe receipt of the Association's cheque for £41,000, and also the mortgage for £38,000, duly sealed.

Yours faithfully,

F. Fowke, Esq. JAMES R. UPTON.

Read letter from Dr. Philip, Honorary Secretary to the annual meeting at Edinburgh, asking the Council to invite prominent officials of assurance offices not members of the Association to take part in the proceedings of the Section of Medicine in relation to Life Assurance.

Resolved: That the Council grant authority to Section M., a new section of Medicine in relation to life assurance, to invite prominent officials of life insurances not members of the British Medical Association, to take part in the proceedings of the section, also members of the Society of Actuaries not members of the British Medical Association.

Read letter from Dr George Hamill complaining of the action of the Irish Local Government Board.

The President of Council reported that the General Secretary had written to Dr. Hamill to send the Council documentary evidence of his case, and when received the Council would render him any assistance they could.

Read letter and revised by-laws from the Hong Kong Branch.

Resolved: That the revised by-laws of the Hong Kong Branch be approved and entered on the minutes.

Read revised by-laws of the South Western Branch.

Resolved: That the revised by-laws of the South-Western Branch be approved and entered on the minutes.

Read revised by-laws of the Glasgow and West of Scotland Branch.

Resolved: That the revised by-laws of the Glasgow and West of Scotland Branch be approved.

Read communications from the Corporate and Medical Reform Committee, together with Memorials, etc.

Resolved: That this Council declines to co-operate with the Corporate and Medical Reform Committee, and that a copy of this resolution be sent to Mr. Anderson.

Resolved: That the memorialists be informed that the Council has given and continues to give its serious attention to the subjects referred to in those memorials.

Read resolution of Yorkshire Branch respecting Corporate and Medical Reform Committee.

A special meeting of the Branch was held at the Infirmary, Leeds, on March 16th, Dr. Myrtle, President, in the chair. Thirty-eight members were present.

The Association and Medical Reform.—The following resolution was proposed by Dr. Hime, and seconded by Dr. Black:

"That in order to enable the British Medical Association to take an effective part in the promotion of reform, the representatives of this Branch on the Council of the Association be instructed to move in the Council the legislation of the special resolution passed at Birmingham, and confirmed at Carlisle in 1896, amending the Memorandum of Association enabling the funds of the Association to be applied in the maintenance of the honour and interests of the medical profession, and vote a sum of £10,000 for the promotion of medical reform.

The resolution was put to the meeting; 15 voted for it, and 5 against, 32 members being present

Read resolution of Bath and Bristol Branch respecting corporate and medical reform:

At a meeting of the Branch, held March 30th, 1898, it was resolved unanimously: That in the opinion of this Branch the contention of the Corporate and Medical Reform Committee is untenable, and its recognition would render the conduct of the JOURNAL impracticable.

Read resolution of thanks to the President of Council from Poor-law Medical Officers' Association:

At a meeting of the Council, held at their rooms, 9, Copthall Avenue, E.C., on the 1st day of March, 1898, D. B Balding, Esq., F.R.C.S., in the chair, it was resolved unanimously: That the best thanks of this Council be given to Dr. Saundby, President of the Council of the British Medical Association, for the assistance he has rendered the Poor-law service generally, by directing the attention of the Local Government Board to the action of the Pershore Guardians in their attempt to evade the provisions of the Superannuation Act of 1896.

ARTHUR GREENWOOD, Honorary Secretary.

Read reply from Lord Herschell to letter of President of Council:

46, Grosvenor Gardens, S.W.,
February 11th, 1898.

DEAR SIR,—I am communicating with the Local Government Board as to your inquiry relating to an index to the minutes of evidence in the report of the Commission on Vaccination.

Yours truly,
HERSCHELL.

Robert Saundby, Esq., M.D., LL.D.

Resolved: That 187 of the 189 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

The President of Council reported that a deputation from the Council had conferred with the Registrar of Friendly Societies in accordance with the resolution of the last meeting.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a recommendation that Mr. F. Stuart be appointed Assistant Secretary with a salary of £200 per annum and that in future Mr. W. L. Burr be styled Financial Secretary instead of Assistant Secretary; a resolution to the effect that the Committee do not consider it desirable to make any change in the tint of the paper at the present time: opinion of counsel on Article 9 respecting the rights of the members of the Association; a resolution recommending the appointment of a small Committee to consider the question of fees to medical witnesses; a grant of £50 to the Hospital Reform Association: a grant of £75 to the Anæsthetics Committee: the accounts for the quarter amounting to £8,193 9s. 8d., and report of auditors.

Resolved: That Mr. Stuart be hereby appointed Assistant Secretary with a salary of £200 per annum for six months on probation, from May 1st next.

Resolved: That the financial statement for the year ending December 31st, 1897, as certified by the auditors as correct, be received and approved and published in the BRITISH MEDICAL JOURNAL in accordance with By-law 26 (see JOURNAL, April 23rd, page 1085).

Resolved: That the minutes of the Premises and Library Committee of April 19th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain a report on the completion of the purchase of the freehold site, 429, Strand, 2, 3, 4, and 5, Agar Street, at a sum of £79,000, and the report of Librarian.

Resolved unanimously: That the purchase of these premises for the sum of £79,000 be approved.

Resolved: That the minutes of the Parliamentary Bills Committee of March 18th last and April 19th be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Constitution Committee of April 14th last be received.

The minutes of the Constitution Committee contain the replies of fifteen of the Branches upon the report of the Committee which had been circulated to the Branches for comment.

Read communications from the President of Council and the President-elect to the Marquis of Lansdowne on the question of Army Medical Service Reform.

Resolved: That a copy of the resolution of the Parliamentary Bills Committee on the subject of the Army Medical Department should be forwarded to Lord Lansdowne.

Resolved: That a copy should also be sent to the medical members of Parliament in both Houses of Parliament.

Resolved: That the minutes of the Annual Meeting Committee be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Annual Meeting Committee contain a recommendation to the effect that stricter supervision be maintained over the notices of motion.

Resolved: That the minutes of the General Practitioners and Ethical Committee of to-day's date (with the exception of the resolution referring to the payment of railway fares in the case of urgent meetings) be received and approved, and the recommendations contained therein carried into effect.

The minutes of the General Practitioners and Ethical Committee contain a resolution on the subject of medical aid associations passed upon the consideration of a communication from the Oxford Branch, decisions upon several medico-ethical matters and professional disputes, and communication from the Coventry Provident Dispensary.

Resolved: That the resolution of the General Practitioners and Ethical Committee referring to the payment of the railway fares in the case of urgent meetings be referred to the Journal and Finance Committee.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting will be held at the Greyhound Hotel, Croydon, on Thursday, May 12th, at 4 P.M., H. G. Thompson, M.D., of Croydon, in the chair. Dinner at 6 P.M.; charge 7s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. Agenda: Minutes of Norwood meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Dr. P. J. Duncan will propose, and Dr. F. Nicholls second, a resolution against members supporting unqualified

dentists and those who advertise. A vote of condolence with the friends of the late Mr. E. H. Galton will be moved by Mr. J. Sidney Turner and seconded by the Honorary Secretary. The following papers, etc., will be read:—Dr. F. J. Smith: Pleurisy and Pleuritic Effusion; their Diagnosis and Clinical Significance. Mr. A. H. Tubby: The Diagnosis and Treatment of Infantile Hernia. Dr. P. Horrocks: Hysterectomy *versus* Oöphorectomy. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. N.B. The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner.—Henry J. Prangley, Honorary Secretary, Tudor House, Anerley, S.E.

South-Eastern Branch: East Sussex District.—The next meeting will be held at the White Hart, Lewes, on Thursday, May 26th, at 3.30 P.M., Dr. Crosskey in the chair. Members are requested to send notice of any communications before May 14th to the Honorary District Secretary, J. W. Batterham, M.B., Bank House, Grand Parade, St. Leonards.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Midland Branch.—The annual meeting will be held at Lincoln on Thursday, June 2nd. Any members proposing to read papers or make other communications will please communicate with Frank M. Pope, M.B., 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

Cork and South of Ireland Branch.—A general meeting of this Branch will be held on Saturday, May 14th, at 118, Patrick Street, Cork, at 4.15 P.M., "To consider the question of Hospital Abuse;" and as this question affects the county as well as the city of Cork, city and county practitioners are invited to attend the meeting, in order that remedial measures may be suggested (or by letter, if unable to be present).—Philip G. Lee, 25, Patrick's Hill, Cork, Honorary Secretary.

Shropshire and Mid-Wales Branch.—The spring meeting of this Branch will be held at the Salop Infirmary on Tuesday, May 24th, at 3 P.M. Members who wish to read papers, or show patients, or bring any business before the meeting are requested to communicate with the Honorary Secretary not later than Saturday, May 14th.—H. Willoughby Gardner, M.D., Honorary Secretary, Swan Hill, Shrewsbury.

Dorset and West Hants Branch.—The next meeting of this Branch will be held at Dorchester, on Wednesday, May 11th. Mr. Emson, 40, High West Street, and Mr. Good, 48, High West Street, will be pleased to see members and friends to luncheon at their residences before the meeting. The business meeting will be held at the County Hospital at 2 P.M. Agenda: Secretaries' accounts for 1897. Report of election of Branch Council. Election of a representative of the Branch on the Council of the Association. Election of a representative of the Branch on the Parliamentary Bills Committee. Election of new members of the Branch. Place of the summer meeting. Communication from the East Anglian Branch. Communication from the Worcestershire and Herefordshire Branch. Communications from the Council of the Association: (1) Inebriates Legislation; (2) Corporate and Medical Reform Committee; (3) Obstetric Nurses' Registration Bill; (4) Report of the Constitution Committee respecting which the opinion of the Branch is requested. Discussion to be opened by the President: The Working of the St. John Ambulance Association in the County of Dorset. Communications: Dr. Lawrie: A case of Chronic Membranous Colitis of over ten years' duration cured by Right Inguinal Colotomy, and subsequent closure of the artificial anus. Dr. Leach and Mr. Ramsay: A case of Abdominal Hysterectomy. Dr. Lys and Mr. Ramsay: A case of Abdominal Hysterectomy. Mr. Ramsay: Notes and Specimens of three other cases of Abdominal Hysterectomy. Mr. Du Boulay: A case of Eye Worm—Filaria Loa—with specimen. No paper, except on the subject for discussion, must exceed ten minutes in length, and no subsequent speaker must exceed five minutes. Dinner at the King's Arms Hotel at 5 P.M. Charge 6s. each, without wine. Members intending to be present are requested to notify their intention to Mr. Good by Monday, May 9th. William Vawdrey Lush, M.D., Weymouth, C. H. Watts Parkinson, Wimborne, Honorary Secretaries.

East Anglian Branch.—The annual general meeting of the East Anglian Branch will take place at Norwich, on Thursday, June 16th, under the presidency of Mr. Haynes S. Robinson. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Beverley, Norwich. Members desirous of nominating candidates for election as officers of the Branch under By-law 9, must send their nominations to Dr. Barnes, Eye, so as to reach him not later than May 25th. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries.—Edgar G. Barnes, M.D., Eye; Michael Beverley, M.D., Norwich; Thomas Carr, M.D., Braintree, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A meeting of this District was held at the Evelina Hospital on April 28th, Dr. Percy Smith, Vice-President of the District, in the chair.

Confirmation of Minutes.—The minutes of previous meeting were confirmed.

Cases.—The following interesting medical and surgical cases were shown and demonstrated on by members of the staff: Dr. G. A. Carpenter: Cranio-tabes, Scurvy Rickets, Lichen Urticatus, Spastic Paraplegia, with Congenital Mental Defect, Congenital Heart Disease, Congenital Absence of Clavicles, Tuberculous Peritonitis, Sclerema Neonatorum.—Mr. Eve: A series of cases in which Talipes had been treated with good results by Grafting the Tendons of the Paralysed Muscles on to those of Healthy Muscles; Cleft Palate, Trephining for Ear Disease, Radical Cure of Umbilical Hernia.—Mr. Makins: Perforating Wound of Skull treated by Bone-grafting; Tuberculous Meningitis treated by Operation; cases of Hip Disease.

Vote of Thanks.—The meeting concluded with a vote of thanks to the governing body of the Evelina Hospital, and to the members of the staff for their interesting demonstrations.

SOUTH-WESTERN BRANCH.

An intermediate meeting of this Branch was held at Torquay on March 29th, Dr. Davy, President, in the chair. Thirty-five members were present.

Confirmation of Minutes.—The minutes of the previous special meeting were read and confirmed.

Report of Constitution Committee.—The Honorary Secretary read the report of the Constitution Committee, which had previously been sent to every member of the Branch, and the following resolutions were carried:

1. That this meeting of the South-Western Branch strongly protests against unattached members of the Association taking part in the election of Branch representatives on Council, inasmuch as such unattached members are a serious hindrance to the thorough organisation of the Association, and being necessarily imperfectly acquainted both with the policy of the Branch and that of its individual members, are in no way qualified to take part in the election of a representative.

2. That this meeting of the South-Western Branch protests most strongly against the proposal to hand over the complete control of the Association to an Executive Committee of the Council, and regards it as a dangerous and retrograde step

3. In the opinion of members of this Branch all the members of the Council should be paid £3 3s. in addition to first-class return railway are, and that this should not be restricted to members of the Executive Committee.

Midwives Bill.—It was moved by Dr. Jackson, and resolved:

That in the opinion of this meeting of the South-Western Branch of the British Medical Association the Bill now before the House of Commons is defective in many particulars, but that the Bill prepared by the Parliamentary Bills Committee is worthy of support.

It was also moved and resolved:

That the Honorary Secretary arrange that copies of the resolution be forwarded to all members of Parliament for Devon and Cornwall.

Papers.—Dr. Eales (Torquay) read a paper on Early Phthisis, and Dr. Elliott (Brixham) a paper on General Methods of dealing with Infectious Diseases: Provision of Isolation Hospitals.

Cases.—Dr. Margrave showed a case of Pseudo-hypertrophic Paralysis, and a case of Disseminated Sclerosis.—Dr. Montgomerie (Penzance) read short notes of some cases of Tetanus, a case of Addison's Disease, and showed photographs of a case of Graves's Disease.

Specimens.—Mr. Harris (Exeter) showed *x*-ray photographs of Normal and Diseased Structures.—Dr. Mackenzie (Torquay) showed a gruesome Specimen illustrating the Ferocity of the Ferret.—Dr. Watson (Torquay) showed Foreign Bodies (? nature) found in Small Intestine, causing ulceration, perforation, and death; a photograph of a patient with a large Molluscum Fibrosum; part of Skull and Bullet from a Case of Suicide; a Bullet found Imbedded and Grooved by the Upper Border of the Sixth Rib from a Case of Attempted Suicide.

New Members.—The following were elected members of the Branch: Rosa Bale, L.R.C.P., L.R.C.S., Plymouth; J. C. Burton, M.R.C.S., L.R.C.P., Exmouth; G. A. Leon, M.D., Sidmouth; A. Macindoe, M.D., Sidmouth; T. T. Macklin, M.D., St. Mary's, Isle of Scilly; F. M. Reynolds, M.B., Ottery St. Mary,

THE LORD MAYOR AND THE MEDICAL PROFESSION.

Banquet at the Mansion House.

On Wednesday, May 4th, the Lord Mayor gave a banquet to the medical profession. This is the first time that the profession as a body has been so honoured by the First Magistrate of the City of London, the great dinner given at the Mansion House in 1881 having been given to the members of the International Medical Congress, or, as was hinted by one of the speakers on Wednesday night, to the distinguished foreign visitors, with a few native celebrities to keep them in countenance. The gathering was fully representative of the profession, and included the Presidents of the Colleges and Corporations, the heads of the Medical Services of the Army and Navy, and most of the leaders in medicine and surgery throughout the United Kingdom. Among those present were Sir Samuel Wilks, F.R.S. (President of the Royal College of Physicians), Sir William Mac Cormac (President of the Royal College of Surgeons), the Marquis of Lansdowne (Secretary of State for War), Lord Russell of Killowen (Lord Chief Justice of England), Lord Shand, Sir William Turner, F.R S. (President of the General Medical Council), Lord Lister, F.R.S., Mr. J. G. Talbot, M.P., Alderman Sir Whittaker Ellis, Professor Chiene (President of the Royal College of Surgeons, Edinburgh), Sir George Duffey (President of the Royal College of Physicians, Ireland), Mr. T. McKinnon Wood (Chairman of the London County Council), Professor Burdon Sanderson, F.R.S., Sir T. Grainger Stewart (President-elect of the British Medical Association), Dr. Saundby (President of Council of the British Medical Association), Sir T. Smith, Sir H. F. Norbury (Director-General of the Medical Department of the Navy), the Master of the Society of Apothecaries (Dr. Griffith), Sir Alfred Garrod, F.R.S., Mr. Jonathan Hutchinson, F.R.S., Sir Charles Cameron, M.P., Dr. Hermann Weber, Dr. Little (President of the Royal Academy of Medicine, Ireland), Mr. Thomas Bryant, Professor Michael Foster, F.R.S., Professor T. R. Fraser, F.R.S. (Dean of the Faculty of Medicine of the University of Edinburgh), Dr. Hill (Vice-Chancellor of the University of Cambridge), Sir Walter Foster, M.P., Sir Dyce Duckworth, Sir J. R. Andrew Clark, Dr. H. C. Cameron (President of the Faculty of Physicians and Surgeons of Glasgow), the Rev. Sir Borrodaile Savory, Mr. Christopher Heath, Sir Benjamin Brodie, Surgeon-General Jameson (Director-General of the Army Medical Department), Surgeon-Major General Hooper (President of the India Medical Board), Sir W. Roberts, F.R S., Sir W. Priestley, M.P., Sir Cameron Gull, M.P., Professor Annandale, Sir James Dick, Sir R. Douglas Powell, Sir Philip Smyly, Mr. Buckle, Sir Norman Lockyer, F.R.S., Dr. Farquharson, M.P., Sir William Broadbent, F R.S., Sir Henry Thompson, Sir Francis Cruise, Dr. Pavy, F.R S., Sir Paget Bowman, Dr. Playfair, Dr. Stevenson, Mr. Power, Dr. J. E. Pollock, Dr. Whipham, Mr. T. Holmes, Sir W. Porter, Sir Halliday Macartney, Mr. Malcolm Morris, Sir J. Crichton Browne, F.R.S., Dr. J. G. Glover, Mr. Wakley, Professor McCall Anderson, Mr. Sprigge, Sir G. S. Robertson, Sir Felix Semon, Sir Thornley Stoker, Professor Bradbury, Sir Peter Eade, Mr. Tomes, F.R.S., Dr. Cayley, Sir R. M. Craven, Sir James Sawyer, Dr. Pye Smith, F.R.S., Dr. Clark, M.P., Mr. W. Cheyne, F.R.S., Sir W. Dalby, Dr. Ringer, F.R S., Mr. Teale, F.R.S., Mr. Howse, Dr. Charlton Bastian, F.R.S., Sir W. Gowers, Dr. Isambard Owen, Dr. Burney Yeo, Dr. Lauder Brunton, F.R S., Professor Halliburton, F.R S., Dr. Ferrier, F.R.S., Mr. Victor Horsley, F.R.S., Professor Macewen, F.R.S., Dr. Ward Cousins, Professor Greenfield, Mr. Mitchell Banks, Dr. Sedgwick Saunders, with a number of members of the Corporation, mayors of provincial towns, and others.

The Lord Mayor having proposed the usual loyal toasts,

Lord Russell of Killowen proposed that of "The Navy, Army, and Reserve Forces," coupling with it the names of Sir Henry Norbury (Director-General of the Medical Department of the Navy) and the Marquis of Lansdowne (Secretary of State for War).

Sir Henry Norbury briefly responded for the navy.

Lord Lansdowne responded in the name of the army. He said that in this country we were apt to disparage our own institutions, and that tendency was frequently exhibited when the British army was discussed. Its recent performances showed that, whatever its imperfections, it contained soldiers who were able to uphold its great traditions under the most trying circumstances. He thought while the British army contained such soldiers as Sir William Lockhart and Sir Herbert Kitchener the country need not despair. He then referred to the army boot, which had been disclosed by the Egyptian campaign to be a weak point. It had, however, been severely tried, for the British brigade had marched no less than 142 miles in five days, an average of 28½ miles a day. Lord Lansdowne then said: There is no department in the public service which owes more to, and depends more upon, the members of your profession than the army. In time of peace it is you who teach us how to maintain the health of our troops and to combat the diseases which they have to encounter in the various and often trying climates which prevail in different parts of our ever-increasing Empire. In time of war you do something to correct the barbarity of our methods and to mitigate the nameless sufferings which follow in the wake of great battles. With every year that passes the engines of destruction are brought to a greater pitch of perfection. The wounds which could now be inflicted in a few seconds are more numerous and more serious than could have been inflicted in the same number of hours not many years ago. Your skill and devotion are the correctives of our modern ruthlessness, and I think most of us will say that, if we had to choose between the credit belonging to the artillerist who has, let us say, invented a new form of dum-dum bullet and the credit belonging to the surgeon who has contrived the means of extracting it painlessly and saving the shattered limbs, we should not hesitate in deciding whose part we should prefer. I am using no idle phrase when I say that the army is proud that it contains a number of officers who belong to the medical profession, but who are none the less soldiers in the fullest sense of the word, wearing the Queen's uniform, holding her commission, ready to take their share, aye and more than their share, of the risk and hardship of warfare. We are determined that there shall be no failure, either in theory or in practice, to treat them with the respect to which they are entitled. I insist upon this point, because I have observed with very keen regret that there has existed for some time past a certain estrangement between the army and the profession. This want of confidence has had for its result that we have been unable to attract to the service the number of candidates, and I am afraid I must add the class of candidates, whom we should like to see serving in the Medical Staff. I will not attempt to diagnose the case. Some of the symptoms are puzzling and obscure. It is possible that in this case, as in many others in which reasonable people have agreed to differ, mistakes have been made on both sides. We on our side are determined that you shall have no cause of complaint of us. We have already shown by our action in dealing with several points to which you have called our attention that we were prepared to redress any injustice where you were able to satisfy us that injustice had been done. We are now about to deal, and to deal thoroughly, with a question in regard to which not only the medical staff of the army, but the medical profession generally, feels most strongly—I mean the rank and status of the Army Medical Staff. I sometimes hear it said, "What does rank matter? Is not the title of 'Doctor' or 'Surgeon' by itself to be regarded as a title which anyone should be proud to wear without further adjuncts?" I think the answer to that is that in the army rank is the outward and visible sign of consideration and authority, and that although "a man may be a man for all that," it is necessary, if he adopts the military profession, that he should have a proper military stamp to distinguish him and to secure him his proper place amongst his comrades. We have attempted several times to deal with this question of rank as it affects the army doctors, and we have not been particularly successful: we have invented ingenious compromises which satisfied nobody, and titles some of which would for cumbrousness and cacophony be hard to beat. We propose to make a fresh start and to form—out of the Army Medical Staff and the Medical Staff Corps—a corps the officers of which will bear the same military titles as other officers of the army, always, of course, upon the clear understanding

that those titles do not confer upon them any right of command outside it. We propose to give them these titles up to the rank of colonel. I have been pressed not to stop there, but to go on to the rank of general officer, but there are reasons which seem to me conclusive against doing this. Our present policy is to restrict as closely as we can the number of officers bearing the title of "general," and to insist that no one shall rise to that rank unless he is required to fill one of a limited number of appointments, all of which will involve general command in the army and fitness, on occasion arising, to command troops in the field. We cannot make any exception in the case of members of the Medical Staff. Above the rank of colonel we propose to retain that of surgeon-general, with the rank and precedence of a general officer in the army. I have one thing to add. Her Majesty—upon whose good will towards your profession I need not dwell—has been pleased to signify her intention of bestowing upon the newly-formed corps the title of the Royal Army Medical Corps, a title which I am sure it will wear worthily. I trust that the members of the profession will recognise the sincerity with which we have endeavoured to meet them, and that they on their side will help us, to the utmost of their ability, to secure the services of the best of their students. I am sure they desire as keenly as we do that wherever the British army shall be found, whether in peace or war, there shall be found serving on its Medical Staff men who, from their ability and character, and from their standing in their profession, shall be in every sense worthy representatives of a great and noble profession.

The Lord Mayor, in proposing the toast of "The Medical Profession," said that was the first occasion on which that toast had been proposed within those walls, and he little thought that that banquet would have been the means of bringing forth such a satisfactory statement as that made by the noble marquis, the Secretary of State for War. Every man present that night was a distinguished guest. They welcomed all of them in the city. They trusted they might see them again—not medically but hospitably. He welcomed them as Lord Mayor of the chief city in the world, the healthiest city in the world.

Sir Samuel Wilks, in acknowledging the toast, said he thought if they had only come there that evening and heard the speech of the Marquis of Lansdowne they would have been satisfied, because it might be called a good solution of the question which had so long been before them. He gave an interesting account of the connection between the medical Colleges and the City of London; and finally in graceful terms he returned the thanks of the profession to the Lord Mayor for the hospitality which he had extended to them.

Sir William Mac Cormac (on behalf of the Royal College of Surgeons) responded. He said he would like to say on behalf of his surgical brethren how greatly they appreciated what had fallen from the Secretary of State for War that night. He thought the Medical Department of the army and the medical profession outside of it—for they were one and the same—owed a debt of gratitude to the noble marquis which they would never forget. He had shown a large-minded spirit in that matter. He had shown great firmness and courage in spite of the most strenuous opposition. He believed, in spite of great difficulties, he had conceded all that the Medical Department of the army and all that its friends in civil life had desired for it. They ought to be deeply grateful for what had been offered to them. Sir William went on to speak of the bond of connection between the medical profession and the Corporation, particularly in regard to the administration of charities.

Sir William Turner proposed the toast of "The Houses of Lords and Commons." While admitting the eminence of the Upper Chamber, he declared emphatically that by the conferment of a peerage on Lord Lister a great honour had been done to the House of Lords as well as to the medical profession. In the House of Commons the profession was well and worthily represented.

Lord Lister, in responding for the House of Lords, expressed his great satisfaction at the near prospect of a settlement of the difficulties which had made the medical service of the army unpopular, and congratulated Lord Lansdowne on having so fairly met the legitimate demands of the medical profession in regard to the position of medical officers in the army.

Sir Charles Cameron briefly responded for the House of Commons.

The toast of "The Health of the Lord Mayor," proposed by Sir George Duffey, brought the proceedings to a close.

LONDON WATER SUPPLY.

The Royal Commission appointed to inquire into the circumstances of the London water supply continues its sittings under the presidency of Viscount Llandaff. Mr. Goldney, the City Remembrancer, stated that a price might be perfectly fair so far as the companies were concerned, and yet be unacceptable to the City, as leading to an increase in the present water charges. He said that at a fair and reasonable price, and subject to sufficient representation upon the purchasing and managing authority, the Corporation would prefer purchase to public control, but if the price was in their view extravagant, and the representation which they were to have was not sufficient, they would prefer control.

At the sitting on Monday, May 2nd, Sir Arthur Arnold, ex-chairman of the London County Council, continued his evidence. He denied Mr. Whitmore's allegation that the County Council was unfit to take charge of the water supply of the metropolis because it was overworked, and his suggestion that the Council wasted time in political discussions.

Dr. Shirley Murphy, medical officer of health for the Administrative County of London, held that the water-owning authority and the disease-preventing authority ought to be the same. He considered the present system of water examination inadequate, and that the powers possessed by the Local Government Board were insufficient. The fact that the average enteric death-rate was low in London might be as well explained by the feeble virulence of the specific germ as by the great purity of the water; at any rate, such virulence might at any time become higher. The fact of having different reservoirs made it easier to trace the sources from which any illness might arise, and throwing all the companies together would make it rather more difficult to trace and cut off the causes of illness. He did not think an amalgamation of the sources of supply would make any examination futile and misleading. The Select Committee appointed by the House of Commons to inquire into the merits of the Bill of the Southwark and Vauxhall Water Company for power to construct new storage reservoirs and to take additional water from the Thames has sat under the presidency of Mr. Johnson-Ferguson. It was stated on behalf of the water company that this Bill would only authorise the company to continue to take the same amount of water as it had been taking for some time past; but on cross-examination it was admitted that, as the Bill authorised the raising of £650,000, the company were dealing with the matter on a large scale and on a permanent basis. Mr. Pope pointed out that the recommendations of the various Committees and Commissions that had sat on the subject of purchase of the various water undertakings by a central authority were under the consideration of the present Commission.

Mr. James Restler, C.E., Engineer to the Southwark and Vauxhall Company, explained that the object of the Bill was to meet the requirements of the Thames Conservancy, whereby the company was bound not to take water from the river unless the flow past Molesey Lock was above a certain minimum. By the construction of the new reservoirs, the company would be able to draw from a reserve supply on those occasions when the flow in the river was below the minimum.

At a special meeting of the Glamorgan County Council, held on Thursday, April 21st, the joint report of Sir Benjamin Baker and Mr. Deacon, presented to the London County Council in April, 1897, was referred to the Water Committee for consideration and report. It will be remembered that this report deals with the advisability of obtaining a supply of water for London by drawing 400 million gallons per day from the Usk and Llangorse and the Wye sources.

The Prince of Wales, vice-patron of University College Hospital, has graciously consented to lay the foundation stone of the new building now in course of erection through the generosity of Sir J. Blundell Maple, Bart., M.P., on Tuesday, June 21st.

Presentation.—Dr. and Mrs. Pratt, of Wiveliscombe, have on the occasion of their silver wedding been presented with a silver tray, silver tea and coffee service, silver-mounted flower vase, and an illuminated address and album as a token of respect and esteem in which they are held in the town and neighbourhood.

French Medical Congress.—The next meeting of the French Medical Congress will be held at Lille in August, 1899, under the presidency of Professor Grasset, of Montpellier. The subjects proposed for discussion are: (1) Myocarditis; (2) Adenitis and Leukæmia; (3) Acquired Tolerance of Drugs.

Serum Treatment in Austria-Hungary.—During the past year 33,490 tubes of antidiphtheria serum were prepared at the State Serum Establishment in Vienna. Of these, 30,434 were sent out, 3,215 were exchanged, and 284 were destroyed as having become unfit for use. A recent report by the Bohemian National Committee states the serum was in the course of the year used in 493 cases of diphtheria in 31 public hospitals. Of that number 401 were cured, a mortality of 18.6 per cent.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 7TH, 1898.

THE ROYAL ARMY MEDICAL CORPS.

THE banquet which the Lord Mayor of London (the Right Honourable Horatio David Davies, M.P.) gave on May 4th will be memorable not only for the brilliant manner in which he extended the traditional hospitality of the City to the medical profession for the first time, but also because the frank and friendly speech of Lord Lansdowne will mark the end of the long controversy into which the medical profession was forced on behalf of those of its members who entered the military service of the State.

Lord Lansdowne paid handsome compliments to army medical officers, declaring that there is no department in the public service which owes more to, or depends more upon, the medical profession than the army; and that medical officers are soldiers in the fullest sense of the word, taking their share—and more than their share—of the risk and hardship of warfare. On that account, he said, the Government were prepared to treat them with the respect to which they are entitled. By such sympathetic and liberal-minded expressions as these his lordship's audience were prepared for the very important and satisfactory announcements which followed. He declared that the first necessity in a man who adopts the military profession is to have the military stamp which distinguishes him and secures him a proper place among his comrades. This, indeed, admirably expresses that for which we have so strenuously and long contended—intelligible status and title. To secure that, Her Majesty has been pleased to signify her intention of bestowing the title "Royal" upon the new Army Medical Corps; it is needless to remark that this gracious announcement was received with great enthusiasm. In that corps medical officers will bear the same military titles as other army officers up to that of Colonel.

Above that rank the title will be Surgeon-General, with the rank and precedence of a general officer in the army. This way of meeting the difficulty was suggested in the BRITISH MEDICAL JOURNAL last week, and appears to have been received with practically unanimous approval. Lord Lansdowne gave as the reason for this decision that it is intended to reduce the number of general officers in all corps, and that no man is to bear the title who is not fit to take command in the field.

That this solution of the difficulty connected with the highest rank in the Army Medical Service may be regarded as satisfactory to the profession was clearly indicated by the general applause with which the announcement was greeted. The feeling of the assembly, which was in the fullest sense representative, was further evidenced by the approbation with which it received Sir William Mac Cormac's remarks on the subject, and Lord Lister's statement that Lord Lansdowne had removed a terrible cloud from the medical profession, and a terrible evil from the nation.

We congratulate the nation as well as the Army Medical Department and the profession on this happy termination of a difficulty which ought never to have arisen. We think also that the British Medical Association has reason to be proud of a victory in which it may justly claim for itself a considerable share. It is earnestly to be hoped that the olive branch so gracefully offered by Lord Lansdowne will be as gracefully and loyally accepted by the profession and by the army.

LEPROSY AS A TELLURIC DISEASE.

LEPROSY is one of the most interesting of endemic diseases, especially as, notwithstanding the fact that it was recognised in ancient days, there is still much that is obscure as to its pathogenesis and endemicity. Is it ever conveyed by direct or indirect communication between the sick and the healthy, or does the disease inhere in localities rather than in persons? The two suppositions are not necessarily mutually exclusive, but it is clear that suspicion must attach to any apparent evidence of personal infection in an endemic area; and we are not aware that, apart from intentional inoculation, any cases of infection in non-endemic areas have been placed upon record. If the disease is endemic, attaching to locality rather than to the individual, what circumstances have led to its extinction as an endemic disease in England and some other countries? Some light is thrown on the first of these questions by an interesting pamphlet on *Leprosy in Hawaii: A Critical Study*, by Dr. Ashburton Thompson, the Chief Medical Officer of the Government of New South Wales.

The Hawaiian group consists of eight islands, the native population of which has dwindled down from 71,019 in 1853 to 40,622 in 1893; while during the same period the foreign population has increased from 2,119 to 49,278. Of the foreigners, Chinese, Japanese and Portuguese form the largest proportion. The present prevalence of leprosy in the Hawaiian group is usually ascribed to the importation of Chinese lepers about 1855 or 1860. Dr. Thompson, however, shows that there is strong reason for believing that the disease was prevalent among the aboriginals as early as 1822, ofttimes mistaken for syphilis. The origin of the disease in the Hawaiian group must therefore be regarded as unsettled. The attempts at isolation in the settlement on the island of Molokai have been only partially successful; and are chiefly of importance, because in connection with them Dr. Thompson is able to give some valuable evidence as to the case of the Kokuas and of the Kamaainas. The Kokuas are wives, husbands, or parents of leprous patients who have elected to be ostracised with them; while the Kamaainas are the old inhabitants of the district in which the leprous settlement was established. A large number of these remained after the starting of the settlement, and were thus exposed to the risk—if such risk exists—implied in the importation to them of an extraordinary number of lepers in a stream constantly renewed

during thirty years. With regard to the Kokuas, all that can be said, on the strength of the somewhat imperfect evidence available, is that they probably did not acquire leprosy in any remarkable proportion as compared with the general population. As to the Kamaainas not only is it clear that they were not affected in remarkably large proportion, but "it is even tolerably certain that the number which ever suffered was very small."

The facts detailed in Dr. Thompson's investigation into leprosy in the Hawaiian group support his views as to the telluric origin of the disease, communicated to the Public Health Section of the Australasian Association for the Advancement of Science (Brisbane, 1895). In this paper it is shown that long-continued intimate contact with lepers is often suffered with impunity, while leprosy is often contracted when there has been no conscious contact with any leper. Evidently the discovery of the bacillus lepræ does not necessarily imply that leprosy is spread by personal communication. Tetanus is an infective disease, but it is seldom if ever maintained by communication between those suffering from it and the healthy. The vast majority of instances of apparent spread of leprosy by infection are spoilt by having been observed on areas of recognised endemicity, so that the influence of locality cannot be excluded. Having regard to this consideration, it appears clear that leprosy is only communicable by the sick, if at all, with great difficulty. The same conclusion is supported by the fact that imported lepers do not always (if they ever do so) create a new area of endemicity, as they ought to do on the hypothesis of direct or indirect communicability. Boeck and Hansen traced 160 lepers from Norway to the United States, where they lived under no restrictions at all, and yet not a single secondary case of leprosy arose. The arguments which we have briefly sketched have an important bearing on Public Health administration in the countries in which leprosy is still endemic.

The considerations adduced above still leave unanswered our second question, as to why leprosy has become extinct in England. It ought to be practicable by comparison between England of the present day and of the fifteenth century, and by comparison between England and Hawaii and other endemic centres of leprosy, to discover the *differentia*, to detect the factor or factors, the removal of which has caused the disappearance of leprosy in England, and the retention of which preserves the endemicity of leprosy in some other countries. It is still doubtful whether we are to look to dietetic changes or to more obscure telluric changes for the differences here indicated.

THE BRITISH PHARMACOPŒIA, 1898.

In previous articles[1] we have set out at length the various changes in the new volume which call for detailed notice. We may add a word or two upon what may be called the general lines of policy pursued by the General Medical Council in the matter.

First, they have shown a very liberal spirit in the alterations which they have made in the drugs. They have sought to act for the convenience both of medical men and of dispensing chemists in the introduction of greater uniformity of dose, especially in the tinctures, in the recognition of some convenient substances in common use, such as the concentrated solutions, and in the omission of a considerable number of drugs which experience has shown to be useless. For their readiness to take advice, and for the practical spirit in which they have approached the subject, the Council deserve very high praise.

They have been equally sensible in the textual alterations. These have not been dwelt upon so fully as other changes, but they are quite as important. The paragraphs in the *Pharmacopœia* itself have been much altered. Of ten vegetable substances which we picked at random there was not one the description of which had not been rewritten and improved. In the case of official chemical substances the nomenclature has been made more exact: the method of preparation, which is a matter of common chemical knowledge, has been omitted; but the tests for purity have been much amplified and explained. Thus sulphate of iron is now called ferrous sulphate, its preparation only takes two lines instead of seven, but its tests occupy more than fourteen lines instead of eleven, and the impurities which occur are plainly mentioned, which in the former edition was not the case. The appendices on tests have been rewritten, and a fourth—now No. III—has been added, which collects together the tests for the substances mentioned in the text—for example, ferrous salts and sulphates, instead of leaving them to be repeated in various places. Ferrous sulphate is now said to give the tests for ferrous salts and sulphates, cupric sulphate those of copper and sulphates, and these are found by referring to Appendix No. III. In the former edition sulphate of iron was described as giving a white precipitate with chloride of barium, and the same is repeated for sulphate of copper, but with no indication that the reaction shows the presence of sulphates. Formerly the paragraphs describing each substance were followed by a list of the preparations containing it, but these are now all relegated to the Index and much space is saved. The Index itself is the greatest improvement of all. It is no mere index but an epitome. Besides giving the reference, thus, pilula plumbi cum opio, page 252, it adds the dose (2 to 4 gr.), and the proportion of the chief constituents (1 gr. of opium in 8 gr.) in consecutive columns. Similar information is given under pill of lead and opium, again under lead and opium pill, where the last column reads ½ gr. of opium and 3 gr. of lead acetate in 4 gr., and again under opium, pill of with lead, where the last column reads 12½ per cent. of opium. This example shows how thoughtfully the Index has been constructed, the information under each heading being given in the form which the reader would probably require in that connection. It has involved great labour, but, though it is dismissed with only one line in the Preface, it is one of the most conspicuous improvements in the volume.

The Council have done their best to hasten the adoption of the metric system, but they confess themselves unable to do more than give both measurements in each instance, since English chemists use both systems indiscriminately.

Lastly, the Council which formed the *British Pharmacopœia* from the local pharmacopœias of London, Edinburgh, and Dublin is anxious to continue this process, and to form not only a British, but an Imperial *Pharmacopœia*, which shall be useful and authoritative throughout Her Majesty's dominions. This requires the inclusion of a number of sub-

[1] British Medical Journal. April 9th, 1898, p. 963; April 16th, p. 1038; April 23rd, p. 1101; April 30th, p. 1163.

stances the employment of which is required by the special conditions, whether of temperature or moisture prevalent in India and the Colonies, and although the Council have decided not to delay the issue of the present volume, they intend to publish an *Addendum* as soon as the necessary information is collected. This will be the most impressive and striking alteration of all, and it will be a fitting sequel to the Jubilee *Pharmacopœia*. But the whole of the book is well worthy of its authors, and we can heartily congratulate the Council upon the care and sagacity displayed throughout it.

THE CARE OF THE WOUNDED IN NAVAL WARFARE.

The experience gained in the Chino-Japanese war, slight as it was, made it clear that new methods of treating wounded men in naval warfare must be initiated. In the days of wooden ships those needing surgical treatment were brought to the surgeon; in the modern man-of-war, divided into numerous compartments by steel decks and water-tight doors, this is out of the question. The surgeon will have to deal with the wounded in whatever sheltered spot he can find. His position will thus be one of much greater personal danger than it has hitherto been. The New York *Medical Record* points out that a battleship of the modern type is sadly lacking in the necessary facilities for the care of the sick and wounded. The treatment of the wounded after battle is a problem presenting grave difficulties. It will be impossible to give them the care which they require on the ship itself, and the distance from land will often be too great to allow of their being transported to a hospital. Dr. J. Rufus Tryon, formerly Surgeon-General of the U.S. Navy, suggested that an ambulance ship should accompany every fleet on active service. The present Surgeon-General, Dr. Van Reypen, submitted plans of such a ship at the International Medical Congress held at Moscow in August last. The following is his description of it: "The vessel as designed will be 3,550 tons displacement; 270 ft. on the load line and 300 ft. over all, with twin screws and a speed of 14 knots; 50 ft. beam and drawing 18 ft.; a coal capacity of 450 tons, giving 18 days' steaming at 10 knots. The water tanks will hold 9,000 gallons. The ship will carry 4 steam launches and 4 barges, each barge arranged with a flying floor between the thwarts, so as conveniently to carry twelve cots on the floor. There will be beds for 274 and hammock space for 86, state rooms for 8 disabled officers and cot space for 12. The forward ward of the upper deck has been left with only one tier of berths for a ward of isolation, or to accommodate more serious cases. The vessel can comfortably accommodate 330 sick or wounded men, with sufficient berthing space for the crew of the vessel. There are quarters for 4 medical men, 2 apothecaries, and 12 nurses . . . . Near the centre of the ship on the berth deck is the operating room, 18 by 21 ft. It is well lighted by a large skylight and by air ports above the deck. . . . . As soon as the action is over the launch should tow its barge alongside a vessel that has been in action, the wounded should be hoisted out and into the barge, and should then steam away with all despatch to the ambulance ship, unload its human freight, and speed away again on its mission of humanity." With the object of carrying out this suggestion the United States naval authorities have purchased the Cromwell liner *Creole*, which has been fitted out as a floating hospital.

THE PREVENTION OF MEASLES.

Dr. Louis Parkes has presented to the Vestry of Chelsea a a report on the recent epidemic of measles which has caused some 70 deaths in Chelsea chiefly among young children under the age of five years. He comments on the recklessness with which children suffering from the disease are sent to school, even with the rash fully developed upon them, and observes that free use is made of the public streets, cabs, omnibuses, and tramcars to convey patients suffering from measles to the houses of medical men or to hospitals and dispensaries. With regard to the possibility of checking epidemics in the future, he observed that in the very early stage notification would be helpful as giving warning of an approaching epidemic, and leading to the exclusion from the school of children attacked and of children residing in infected houses, but he adds that notification by the parent or householder would have to be insisted upon. He advises the Vestry to concur in the action suggested by the School Board for London to the London County Council, recommending that the latter body should by order schedule measles in the list of dangerous infectious diseases under Section LVIII of the Public Health (London) Act to which the "prevention" sections of the Act apply. He recommends also that if this be done a leaflet should be prepared notifying to the public that the provisions of the Public Health Act will henceforth apply to measles, and containing suggestions as to the isolation and care of measles patients and the avoidance of any steps likely to spread infection. With regard to school closure he observes that the closing of the infant departments when the epidemic is already widely spread is not of much value, but that the prevention of the aggregation of children at the most susceptible ages at the commencement of an epidemic would probably tend to limit materially the diffusion of infection and the scope and progress of the epidemic at its critical period. The fact that measles epidemics tend to recur with great regularity would make it a comparatively easy matter to forewarn the school authorities, and the infants' department could then be closed as soon as the school attendance officer reported that children were being kept away from school on account of the disease. This appears to be an eminently practical suggestion, and it is no doubt true that the loss of time would, from an educational point of view, be of little consequence in children under 5 years of age. At the same time it must be remembered that the closure of the infants' departments would not be sufficient to ensure success unless children under 5 years of age were excluded from Sunday schools also. To close the infants' departments of the Board schools while leaving the young children to go to the Sunday school would probably only have the effect of spreading the epidemic over a longer period.

BOTANIC GARDEN FOR ABERDEEN.

A generous donation has been made to Aberdeen by Miss Cruickshank of a sum of £15,000 for the formation of a botanic garden. This sum is to be handed over on Whit Sunday to trustees who will also form the Board of Management. These trustees are the Principal and the Professors of Botany and Mathematics in the University. The money is to be employed by them in the laying out and maintaining of a botanic garden, with all the necessary appurtenances, including provision for the teaching and study of botany as a pure science, and as applied to arts and industries, and, in their discretion, the provision of a house as a residence for the keeper of the garden. The keeper may, if the trustees think proper, be the Professor of Botany in the University. It is especially provided that this bequest is to be in addition to the sum already spent by the University and other bodies on the teaching of botany. The garden is to be known as the Cruickshank Botanical Garden, in memory of the donor's late brother, Dr. Alexander Cruickshank, and it is to be held by the trustees in all time for the use, enjoyment, and behoof of the University of Aberdeen and of the general public, without any preferable right on either, except as it may be thought right by the trustees to set apart class-rooms and laboratories for the use of either body. Professor Trail, the Professor of Botany, in his opening address to his class at the beginning of the summer session, on April 25th, alluded

to this munificent gift, and to the great advantage which it would be to the Botanical Department at the University. He also touched on the changes which the last few years had worked in this department, and on the great facilities which were now offered to botanical students, especially since the opening of the handsome new laboratories and class-rooms last year.

THE FELLOWSHIP OF THE ROYAL COLLEGE OF PHYSICIANS.

The list of Fellows of the Royal College of Physicians elected last week is remarkable for the fact that it contains the names of three physicians who have won distinction by their labours in the cause of public health. This recognition of eminent services rendered to the public in the true professional spirit is very satisfactory. The list of new Fellows is remarkable also from the fact that of the remaining nine, five are physicians who practise in the provinces or abroad. The selection of so many provincial physicians is a just tribute to the immense progress which has taken place in our provincial centres.

COTTAGE HOSPITALS AND FEES AT INQUESTS.

We publish in another column a letter from an experienced correspondent, who suggests an ingenious way of getting over the difficulty which the recent decision in the case Horner *v.* Lewis, reported in the British Medical Journal of April 30th, page 1176, has served to emphasise. The Court held that a cottage hospital was a public hospital, and that the honorary medical officer of such a hospital was not entitled to a fee for giving evidence at a coroner's inquiry with regard to a person who had died in the cottage hospital. The coroner for East Staffordshire suggests that the fees might be granted, even under the present state of the law; in the case of cottage hospitals open to the patients of any registered practitioner resident in the place, such practitioners should no longer be described as "medical officers" to the institution, but merely as enjoying the privilege of treating their own patients when admitted to the cottage hospital. In order that the proposal should effectually meet the difficulty a general consent would be necessary on the part of the medical officers of these cottage hospitals to forego their titles as honorary officers, and it is open to doubt whether they would generally follow this course. We shall be glad to gather their opinions on the point.

THE PREVENTION OF PREMATURE BURIAL.

The dread of live burial which haunts not a few persons seems at present to be more acute than usual in the United States. For this the gruesome and highly imaginative literature recently published on the subject is doubtless mainly responsible. According to the *Philadelphia Medical Journal* a Bill has been introduced into the New York State Legislature with the object of preventing premature burial. It provides that certain mortuaries shall be established in cities and towns of a certain population, and prescribes how they shall be constructed, regulating their temperature and requiring supervision and inspection by a medical man and other attendants. The practitioner who last attended the deceased, or the coroner, is required to furnish a certificate to the proper officials stating that he has made the following tests: 1. That he has made one or more incisions in one or more of the arteries of the deceased, and that no blood has flowed therefrom. 2. That he has held the hand of the deceased and the fingers thereof entirely open, and the fingers closed together not more than 5 inches from the flame of a lighted candle, gas lamp, or electric jet, and that no transparent appearance has been visible. 3. That he has held a mirror, glass, or crystal before the lips and nostrils of the deceased at a distance therefrom of not more than half an inch, and that no moisture or sign of moisture has appeared on the said mirror, glass, or crystal. 4. That he has twice or oftener applied to the skin of the deceased a piece of iron or steel heated red hot for at least the space of ten seconds, and that no blister charged with water has formed at the place where the said iron or steel was placed. 5. That he has examined the eyes of the deceased, and has found mucus covering them. The proper officials shall thereafter issue a permit for the removal of the body to the proper place, enjoining that it shall be kept for 72 hours from the time of death, and shall not be buried until a certificate has been granted by the parties in charge, and a permit thereupon issued from the Board of Health or other proper officials. The certificates and permits are to be free, and the Act shall not apply when the death has occurred from small-pox, scarlet fever, diphtheria, Asiatic cholera, or personal injuries, or when decomposition shall be plainly apparent. Penalties are provided for the punishment of violations of the Act. We do not propose to criticise the signs of death above set forth further than to suggest that the Bill might be made more complete by the inclusion of the procedure adopted in the case of a Pope lying under suspicion of being dead. The Camerlengo strikes the forehead of the defunct Pontiff thrice with a silver hammer, calling him each time by his name in a loud voice. We note that no provision is made in the Bill for a fee to the medical practitioner for applying the tests required by the proposed law. The afflicted relatives are not likely to be willing to pay for what many of them will look upon as a profanation of the dead. And what if the supposed corpse revives under the treatment? Would an action for damages lie against the doctor for the stabs and burns inflicted by him?

HEALTH CONDITIONS IN THE POST OFFICES.

It has for long been a maxim that the health of the people should be the principal concern of a nation. It does not follow from this, however, that those who are employed in the offices or factories of a particular Government are better cared for than those engaged in private works. In many instances it can be shown that the workshops and offices of private owners are, in respect to comfort, ventilation, and attention to sanitary details, immensely superior to those belonging to the State. So far as many Government buildings are concerned excuse is to be found for the deficiency of air space, the want of light in the rooms, and their inaptitude for present requirements in the enormous increase of work which has been thrown upon the various departments. It would be no difficult task to pick out in London, Paris, Madrid, or any capital in Europe Government offices which on account of proximity to unhealthy surroundings, imperfect ventilation, and want of adaptation to present uses would be condemned were they in the hands of other occupiers. At the present time it appears there is considerable dissatisfaction among a large number of the persons employed in post offices owing to inattention to details of a sanitary nature. To men and women shut up for eight hours a day in the rather stifling atmosphere of some of the rooms of a post office it can scarcely tend to the lessening of the occasional headache engendered thereby, or to the promotion of appetite for food, when the meals have to be eaten in dining rooms that are stuffy and reeking with the odours from the adjoining kitchens and storerooms. Nor has due consideration been shown for the health of the employees; the workrooms are placed in too close proximity to waterclosets and lavatories. It is complained that in the case of at least one of the telegraph offices in the City of London the passages which provide for ingress and exit are too narrow. No one expects that a Government building, in which hundreds of men and women find their daily employment, should be a palace, but it should certainly not be worse than a similar building held by private owners. If the complaints which have reached us are real, and have as their foundation those defects to which we have alluded, there clearly rests a great responsibility upon the Postmaster-General. The medical officers of the Post Office,

to whom has been entrusted the health of those employed have doubtless directed the attention of the proper authorities to structural defects the retention of which is likely to be prejudicial to health; and we make no doubt that the Duke of Norfolk will take care that the sanitary improvements which may be required by law are provided, and that overcrowding is prevented. There is a limit to the expenditure of a nation upon its buildings, and it is not always easy to make structural alterations even when needed; yet these facts do not remove the duty of persistently trying to obtain for those who spend their working days in this department of the State the healthiest conditions possible.

THE CARE AND FEEDING OF INFANTS.

The Medical Officer of Health for Carnarvonshire, Dr. P. Fraser, has drawn up a brief statement of the elementary principles which should govern the care and feeding of infants. This has been neatly printed in pamphlet form at the cost of the Carnarvonshire Combined Sanitary Authority for distribution by the registrars of births, the intention being that each person registering the birth of an infant should receive a copy. The advantages of breast milk are insisted upon, and carefully considered directions are given as to the use of cow's milk where the natural food is unattainable. Some might perhaps demur to the statement that boiling not only destroys the germs of "consumption and the various infectious disorders," but that it also "renders the cow's milk more digestible, while at the same time the nourishing value is not lessened." No doubt boiling the milk is a desirable process, and is capable of destroying many of the dangerous germs it may contain, and we entirely endorse the words following those we have just quoted: "It is important always to carry out this simple precaution, more especially in summer, when germs are more numerous and multiply rapidly." The "sketch of stomach of infant (natural size)," copied from Dr. Keating's *Cyclopædia of Diseases of Children*, is a graphic way of enforcing the maxim not to over-feed the newly-born baby. The advice in the concluding paragraph that drugs and alcoholic drinks should be given only under direct instructions from the medical attendant is a very necessary one, as is the caution against soothing syrups and teething powders.

INCURABLE LUNATICS.

The New Zealand Medical Conference has been urging upon the Government of that Colony certain reforms in dealing with lunatics. It recommends, in the first place, the separation of curable from incurable patients in lunatic asylums. We do not understand from the report whether what is demanded is a separate institution for the curable patients or whether the separation is to be effected within the limits of a single institution. If the latter is the desideratum, it is difficult to understand that it is not within the competence of the managers of asylums without the need of further legislation. If the former, it would appear that our New Zealand brethren wish to add to their public institutions asylums like those of the Metropolitan Asylums Board, in which the wrecks of humanity can be collected and stored until they cease to exist. We are by no means satisfied that the policy advocated is sound. While there are many cases of insanity which can be classed with certainty as hopeless, and many cases that can be classed with a near approach to certainty as curable, there is a very large number of cases that must for long remain doubtful, and even cases that have been for years classed as hopeless do occasionally recover. Apart from this consideration it must be remembered that a complete cure is not the sole object of treatment. In a very large number of cases in which recovery is not to be hoped for, great improvement is possible, and the classification of patients as incurable is usually understood to mean unimprovable also. Warehouses for the storage of human wrecks are not favourable places for even ameliorative treatment. The attitude is apt to be one of resigned hopelessness. It is reported that the Premier of New Zealand retorted upon his interviewers that they sent to asylums many people who were suffering from old age only, and it is an undoubted fact that the tendency, in this country at any rate, is increasing which leads people to shirk the trouble and responsibility of the burdens of family relationship, and that to this tendency a large part of the "increase of lunacy" in this country is due. The callousness with which children endeavour to throw off the burden of maintaining and caring for their aged and infirm parents is the correlative of the indifference with which parents shirk the burden of providing education for their children. "We are all Socialists now," and we are beginning to experience the effects upon the national character which the new order of things must inevitably produce. The more of the functions of life that are assumed by the State, the more imperious is the demand upon it to assume more still. Our own profession has taken the lead in demanding this transfer of duties. It is continually reiterating and increasing its demands. It is well that we should now and then consider the results of our success, and ask if success is always wholly advantageous.

LEICESTER ANTIVACCINATORS AT MIDDLESBROUGH.

Danton is credited with a *mot* which describes the essential qualification of a politician as being *de l'audace, encore de l'audace, toujours de l'audace.* Mr. Councillor Biggs, of Leicester, should certainly emblazon this motto on his escutcheon, for if ever audacity was needed for heading a forlorn hope it is in endeavouring to discredit vaccination at Middlesbrough. Yet this is what Mr. Biggs, aided by the ex-chairman of the Leicester Board of Guardians and the equally congenial services of Mr. Wheeler, of Darlington, has lately been attempting. These enthusiasts convened a meeting at the Temperance Hall in that long-suffering town, where they indulged in a variety of statements, including the usual attacks upon the doctors, which were certainly not distinguished by their moderation. The Middlesbrough *Evening Telegraph* devotes a column and a half to a record of this demonstration, but comments upon it in a way which must give Mr. Biggs small comfort. Some forcible editorial remarks thus conclude: "The antivaccinators have had their say. We claim to be quite as capable of judging the evidence, and we say the weight of evidence is dead against the antivaccinators." But, however untruthful and absurd the greater part of Mr. Biggs's statements may appear to those who are acquainted even with the elements of the subject, it would be a mistake to suppose that they can be left unrefuted with impunity. There are always people who are ready to accept a plausible assertion unless its fallacy is promptly exposed. The editor of the paper just quoted observes of the meeting that it "showed that there are more antivaccinators in our midst than one would have thought, and that they are a very-much-in-earnest people." Mr. Chaplin would do well to take note of this fact, and of the equally suggestive one contained in the statement of the ex-chairman of the Leicester Board of Guardians, that "he had been three times fined under the Vaccination Acts, and he told the magistrates that if he had as many children as Jacob took down into Egypt he would not have one of them vaccinated." We cannot say that we are very hopeful as to the result of the remedy which the editor of the *Telegraph* suggests. "What is wanted in Middlesbrough," he says, "is a discussion of both sides of the vaccination question upon a public platform." To believe that a question which has taken a Royal Commission seven years to thresh out can be adequately debated on a public platform is to be too sanguine. Our own experience of such debates is that they too often degenerate into a mere logomachy of bold assertion which it is impossible to controvert within the time limits necessarily imposed on the speakers. But, whether this be so or not, it is certain that the intelligent inhabitants of Middles-

brough owe it to the public at large, as well as to themselves to make some effort—such as has been made at Gloucester—not to allow the lesson which has cost them so dear to be thrown away or perverted. They must meet the assertions of the antivaccinators by an exposition of the facts which are so numerous on the other side; for if they do not they may be sure that the tares which the enemy is taking such trouble to sow amongst them will in time choke the good seed, and their last state is then likely to be worse than their first.

A PATHOLOGICAL DIAGNOSIS SOCIETY.

THE first annual report of the Pathological Diagnosis Society of Liverpool, which was founded last May in connection with the Pathological Laboratories of University College, has just been issued. The work of the Society, which is carried on by Professor Boyce and Dr. W. B. Warrington, has been considerable, and has been much appreciated by the medical profession in the neighbourhood, of whom 179 have become members. The part of the report which deals with the serum diagnosis of typhoid fever is from the pen of Dr. C. R. Christophers, and is of considerable interest at the present time. It emphasises the fact that a positive result is not to be expected before the end of the first week of the disease, but that, if it is found, it is conclusive as to the diagnosis. On the other hand, a negative result is of great value if the patient is in the second or third week of his illness. All the cases which are known from other circumstances to have been typhoid fever gave positive results, but in two cases the result was negative at the first examination, which was made during the first week. A dilution of 1 in 30 was found to be the most reliable. The test was employed in about 140 cases. The fee for membership is 10s. 6d. per annum, which includes the supply of a box containing a small tin case for tumours, a diphtherial tube, and capillary tubes for blood. There can be no doubt that this Society supplies a want which is largely felt at a time when microscopical, chemical, and bacteriological methods enter so largely into diagnosis, and its existence only needs to be more widely known in order that it should be more fully appreciated by the practitioners in the neighbourhood of Liverpool.

STATE-AIDED SCIENCE.

THE industrial predominance of Germany, that bugbear of the commercial world, is in no manufactures more marked than in those which have progressed concomitantly with the advance of science. A recent writer in the *Revue des Deux Mondes*, M. Raphaël-Georges Lévy, draws a comparison between the chemical industries of Germany and France which is greatly to the disadvantage of the latter; and we fear that our own country would suffer even more when judged by the same standard. Thus it is stated that the total annual European production of coal-tar derivatives reaches the value of 125 million francs. This is divided up in the following proportions:—Germany, 90 millions; Switzerland, 16 millions; France, 10 millions, and England, 9 millions. A single factory at Ludwigshafen employs more technical chemists than are working at the same branch in the whole of England, while the attempts at organised teaching of technical chemistry here have hitherto been ludicrously inadequate. This is wherein our defect mainly lies. The industrious Teuton fastens upon the discoveries of chemists and physicists, and extracts from them the maximum of practical utility. Thus the secret of the aniline dyes was discovered in England; France took up the investigations; but it was in Germany that particular attention was first paid to their mercantile perfection as regards brilliancy, permanence, and cheapness. As a natural result, Germany now almost monopolises their production. The same is true in respect of electricity; the monetary benefit of the researches of Lord Kelvin and the late Professor Clark Maxwell is mainly reaped by the Allgemeine Elektrische Gesellschaft, and the great firms of Siemens, Loewe, and Schuckert, which have a combined capital of over 15 million pounds. Almost the only chemical industry which holds its own in England is the manufacture of alkali, and this owes its success to a distinguished pupil of Bunsen's, Mr. Ludwig Mond. M. Lévy, in the article to which reference has already been made, points out that Bunsen and Liebig were the founders of German chemical industry. It was Liebig who devoted his energy and influence to obtaining State aid for laboratories of technical science. From these laboratories issue annually some 800 doctors of science to undertake the direction of factories or the investigation of new products of commercial value. Their education has been assisted by the State, and the knowledge they have acquired will be devoted to increasing by the surest of all means the wealth of the nation.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.

THE Organising Committee of the Thirteenth International Medical Congress, which is to be held in Paris in 1900, held its first meeting on April 23rd. The following are the officers of the Committee: President, Professor Brouardel; Vice-Presidents, Professors Bouchard and Marey; General Secretary, Professor Chauffard; Treasurer, M. Duflocq. The Executive Committee is composed of Professor Lannelongue, Chairman; M. Chauffard, General Secretary; and MM. Bouchard, Bouilly, Brouardel, Dieu, Gariel, Le Dentu, Malassez, Nocard, Reymond, Rendu, and Roux. The formal opening of the Congress has been provisionally fixed for August 2nd, 1900. The arrangement of the sections is now under consideration.

ADULTERATION OF DAIRY PRODUCTS.

A DEPUTATION representing 70 agricultural societies in the United Kingdom had an interview on May 3rd with the President of the Local Government Board, who was accompanied by Mr. T. W. Russell, M.P., and Mr. E. A. Goulding, M.P. Lord Wenlock, in introducing the deputation, stated that they desired that the production of margarine should be absolutely controlled so as to prevent its being coloured to represent butter. The deputation also desired that the Government should give careful consideration to the recommendations of the Select Committee on the Food and Drugs Act with reference particularly to the importation of milk into this country and the use of preservatives. After several members of the deputation had addressed the President, Mr. Chaplin replied. He said that the promise in the Queen's Speech referring to the Adulteration Bill was conditional upon time being found. He said that the annual consumption of milk in this country had been estimated at 600,000,000 gallons, and the milk imported at 110,000 gallons. The question would not be lost sight of, but the figures showed that the foreign milk trade was not as yet of great magnitude. He had, however, made arrangements for the examination of samples of foreign milk to be carried out by Dr. Klein. Whether the difficulty could be met by prohibiting the importation of fresh milk, or what professed to be fresh milk; or by a method of inspection, or by other means, was a question for consideration. As to a proposal to appoint a Court of Reference, he observed that any Minister could appoint such a body for his own guidance or information, but Mr. Chaplin questioned the wisdom of the policy of the State attempting to fix standards of quality for all kinds of food. He thought, however, that the question was one which ought to be investigated by a competent body of experienced men, and the appointment of such a body was under consideration. With regard to margarine he questioned the wisdom of forbidding the colorisation. The Local Government Board believed that there were other means which could be used to cope with the frauds, and it was proposed to apply these means. With regard to inspection of dairy products at the ports, he hoped to be able to make proposals which would effectually check adulteration at the ports of entry, but that in itself was not sufficient; there must also

be more efficient inspection and administration of the law at home, and to this likewise he thought he saw his way. It would appear therefore that it is Mr. Chaplin's intention to take early action upon the report of the Royal Commission on Tuberculosis, an abstract of which was published last week in these columns, and presumably in the direction indicated in the directions of the Commission. One of these is that local authorities should have power to take from time to time samples of the milk produced or sold in their districts, and that milk vendors should be required to supply sufficient information as to the sources from which their milk is derived. Such a provision would appear to meet the danger arising from the importation of milk from countries where no efficient supervision is enforced. The cost of such examination, it is suggested, should fall upon the importers, and while we should deprecate any attack upon the principle of free trade under the cover of solicitude for the public health, the suggestion appears to be perfectly just.

ASSOCIATION GOLF.

IT is proposed that a golf match shall be held on the afternoon of Friday, July 29th, that is to say, at the close of the annual meeting at Edinburgh, between resident Scottish and other members of the Association. Residents in the South of England and Wales wishing to play in the match are requested to communicate before June 1st with Dr. Colcott Fox, 14, Harley Street, London, W.; members in the North of England and Ireland with Dr. Richardson, 19, Savile Row, Newcastle-on-Tyne; and members in Scotland with Dr. R. H. Blaikie, Secretary of the Golf Subcommittee, 42, Minto Street, Edinburgh.

MISTRESSES AND SERVANTS.

MR. JUSTICE PHILLIMORE, in summing up to the jury in the case of Mrs. Camilla Nicholls, who was convicted last Monday at the Central Criminal Court of the manslaughter of a servant girl in her employment, made some remarks upon the duties of employers of servants with regard to their medical care and treatment which are worthy of consideration. He observed that a mistress and a master owed a duty to her or his domestic servants to board and lodge them, to keep them with food sufficient to support life and health, to refrain from ill-usage, and to procure medical aid. "He did not wish," he said, "to carry that statement too far, as it was an important question of law. It was not the duty of a master or mistress to pay for a doctor for a servant. It was in the case of an apprentice, not a servant; but it was the duty of the parish to provide a doctor for a servant who had not the means. It was not the duty of a mistress to provide a doctor in the sense of hiring a doctor and paying for him at her own expense, but it was her duty if she saw that the girl was seriously ill—if she knew, or ought to have known, that the girl was seriously ill—to send for some one, because it was her duty to see that the girl had medical aid, which the law of the country provided for everyone."

THE MIDWIVES REGISTRATION BILL.

WE publish in another column a report of an interview which the supporters of the Midwives Registration Bill had with the Lord President of the Council on May 2nd. The Duke of Devonshire's reply was a very destructive piece of criticism. He assumed that the Bill was dead for this year, but added that, in the extremely improbable contingency of its coming on for second reading on May 11th, it would not be supported by the Government unless an undertaking were given that the Bill would be amended in Committee to meet the suggestions of the General Medical Council. With regard to the future, he gave the deputation the advice that any Bill should be so drawn as to obtain the support of the General Medical Council and the approval of the Local Government Board. This advice, it would appear, the promoters of the Bill are now prepared to accept. Mrs. Garrett Anderson, who is President of the East Anglian Branch, has addressed a long and weighty letter to the *Times*, which has formed the text for a leading article in that journal pointing out some of the defects of the Bill. Mrs. Anderson observes that "a midwife holding a diploma in midwifery and forming her own private practice would be as independent in her work as a medical practitioner;" and that the Bill would in fact create a body of practitioners in midwifery only. This she shows would be disadvantageous to the public, since if a certain number of medical practitioners are needed for the difficulties of midwifery, they must not as a preliminary be deprived of the great majority of ordinary cases. Further, she observes that it would be absolutely impossible to prevent a midwife, who had a perfectly independent position and a diploma, from practising medicine as well as midwifery. "No self-respecting, ignorant, clever woman," she continues, "would refuse to administer all she thought likely to be of use to both mother and child while under her care; she would feel herself quite equal to ordering grey powder, castor oil, eye lotions, belladonna plasters, etc., and she would assuredly do so. Then when in course of time the child had measles or whooping-cough, what so natural and easy as to send for her again?" Again, speaking as the representative of medical women, she observes that they would suffer more from a class of independent midwives armed with a diploma than medical men, for a medical woman would more readily be confounded with a midwife in the minds of ignorant people, and many patients would expect her to take the fees of a midwife rather than those of her medical colleagues. With regard to the lines upon which a Midwives Bill ought, in Mrs. Anderson's opinion, to be drafted, they will be found embodied in the amendments suggested by the East Anglian Branch, which are printed in another column.

INOPERABLE CANCER AND OOPHORECTOMY.

THE paper by Mr. Watson Cheyne which is published in another column deals with a subject of much interest. The suggestion made by Dr. George Beatson at a meeting of the Edinburgh Medico-Chirurgical Society two years ago[1] was that some pathological condition of the ovaries was the exciting cause of cancer of the breast. Denying the parasitic theory, he held that cancer cells would ultimately be shown to be germinal epithelial cells. Epithelial cells in the ovary and the testicle became germinal cells by some influence in these organs, and removal of the ovaries or testicles would have an inhibitory influence on this proliferation of epithelial cells. It is undoubted that there is some connection between the mammary glands and the reproductive organs, and the breast is one of the commonest seats of cancer. Impregnation and gestation set up a normal evolution in the breast, and it seems not unreasonable to assume that an abnormal stimulus may explain cancer. Dr. Beatson's experience and that of Stanley Boyd, Watson Cheyne, and others has certainly proved that removal of the ovaries does influence the growth of the cancer. Two important observations are valuable as negative evidence. First, Dr. Beatson found, after experience of four cases, that oöphorectomy for uterine cancer only resulted in temporary diminution of the bleeding. Secondly, Mr. Stanley Boyd, in an article on his experience which appeared in our columns last autumn,[2] published valuable evidence about his fourth case. The patient was 64, and he removed the ovaries eleven months after amputation of a cancerous breast, as a nodule had developed on the sternum and second intercostal space. The ovaries were so excessively atrophied that, as Mr. Boyd remarked, it would be difficult to conceive that they discharged any function or exercised any influence at all upon the rest of the tissues. The operation did not arrest the

[1] BRITISH MEDICAL JOURNAL, 1896, vol i, p. 1386

[2] On Oöphorectomy in the Treatment of Cancer, BRITISH MEDICAL JOURNAL, vol ii, 1897, p. 890.

growth on the sternum. But though the influence of the ovaries on the mammary gland appears manifest, it is equally certain that it is transitory. Experience thus appears to prove that the operation influences cancer of the breast favourably but not permanently. Even when improvement is long maintained allowance must be made, as Mr. Marmaduke Sheild has remarked, for the vagaries of recurrent cancer, the recent discussion at the Royal Medical and Chirurgical Society throwing much light on this important fact. We suspect, therefore, that oöphorectomy for the relief of inoperable cancer of the breast is a practice which will fall into disuse.

HOSPITAL ARRANGEMENTS IN EGYPT.

The questions on May 2nd in the House of Commons by Sir A. Hickman and Sir J. Ferguson on the hospital arrangements in Egypt were founded on certain statements made by the Special Correspondent of the *Times*, who, writing from Atbara early in April, drew attention to litters without covering for the heads of sick and wounded, who had to be conveyed long distances exposed to a burning sun: and the absence of Roentgen rays for diagnostic purposes. Mr. Brodrick's replies to both questioners give hope of urgent deficiencies being supplied before any further engagements take place in the Soudan. It is to be hoped that some member of Parliament will soon put a question on the notice paper regarding the uselessness of "dhoolies" in mountain warfare in India, and why, in the face of numberless reports since the Afghan war, 1878-79-80, against this method of conveyance of sick and wounded, these lumbering and heavy articles are still employed on frontier expeditions.

QUACKERY IN GERMANY.

The Kingdom of Saxony is described by a German medical journal as an Eldorado for quacks. The annual report of the Saxon National Medical College for 1896 states that in that year no fewer than 745 quacks, naked and not ashamed, flourished in that happy land. This number was greater by 42 than that given for the previous year. The total number of legally qualified medical practitioners in Saxony for the corresponding period was 1,761, so that approximately there was one quack to every two regular doctors. In certain districts, however, such as Zittau, Kamenz, Rochlitz, Annaberg, and Glachau, the quacks outnumbered the doctors. Of the 745 quacks, 163 were women. Of the special "lines" of quackery the most numerously represented was "nature healing," which was professed by 220 persons; then came "sympathy," with 106 exponents, homœopathy with 97, massage with 72, "magnetism" with 46, and tapeworm-curing with 19. One enterprising gentleman makes a speciality of illumination of the cavities of the body with the electric light.

ECHOES OF THE WAR IN THE AMERICAN MEDICAL PRESS.

The American medical journals received this week still speak of the war as impending, and some time must elapse before news of a kind specially interesting to the medical profession can come from the scene of conflict. The Medical Department of the United States Navy was, owing to the unpopularity of the service, somewhat undermanned, but the patriotism of the doctors has remedied the deficiency. Senior students in several of the medical schools are clamouring to be examined in order that they may offer their services. The Medical Women's Club of Chicago has appointed a corps of female doctors and nurses. Captain Sampson, the Commander-in-Chief of the Gulf Squadron, before he sailed for Havana, accepted an offer made by the Mother Superior of the Convent of Mary Immaculate, Key West, to place the convent and two school buildings at his disposal to be used as a hospital, and tendering the services of the sisters and nurses. Dr. Guiteras, the Government expert on tropical diseases, has been ordered from Philadelphia to Tampa to take charge of the medical arrangements for the protection of the troops from climatic diseases. It is reported that in view of the invasion of Cuba, the medical authorities of the United States army have prepared a large supply of yellow fever antitoxin, and that all the unacclimatised troops sent to Havana and other parts of Cuba will be inoculated with a prophylactic object. It is added that a thorough test of the curative properties of the serum will be made in cases originating in the island. We reproduce this last item of intelligence with all reserve, since, as far as we are aware, the only "yellow fever antitoxin" before the profession is that of Dr. Sanarelli, to which reference was made in a very recent number of the British Medical Journal; and the Italian investigator in his report expressly stated that he had a very limited supply. But the mere mention of a prophylactic antitoxin among the contents of the medicine chest of an army in the field is an interesting sign of the times.

We are informed by Messrs. Spottiswoode that the *British Pharmacopœia, 1898*, will be ready for issue in the ordinary course on May 11th, after which date it can be obtained through any bookseller, price 10s. 6d.

It is stated that a new law relative to compulsory education which is now before the Dutch Legislature provides that children whose parents refuse to have them vaccinated shall not be admitted to the public schools.

Sir Francis Maccabe has retired, under the "65" rule, from the position of Medical Commissioner to the Irish Local Government Board, and has been the recipient of an address from the officers who served under him.

The annual *conversazione* of the Medical Society of London will be held on the evening of Monday, May 16th. The guests will be received by the President at 8.30 P.M. Dr. Frederick Roberts will deliver the annual oration at 8.45 P.M., and has chosen for his subject The Moscow Congress: a Holiday, with Comments on suggested Topics.

Lord Lister will take the chair at a complimentary dinner to be given to Dr. W. S. Playfair, on his retirement after 35 years service from hospital work, by his colleagues, former residents, and friends. The dinner will be held at the Grand Hotel, London, on June 4th, at 7.15 P.M. Among those who have expressed a wish to be present will be, in addition to the acting staff of King's College Hospital, the President of the Royal College of Physicians (Sir Samuel Wilks), the Right Rev. Bishop Barry, Sir Joseph Fayrer, Bart., Sir William Broadbent, Bart., Sir William Priestley, M.P., Sir Walter Foster, Sir Dyce Duckworth, M.P., Sir Felix Semon, Dr. Farquharson, M.P., the Principal of King's College, London, Professor Clifford Allbutt, Dr. Cullingworth, and Dr. Buzzard. No special invitations have been issued, but we are asked to state that any gentleman wishing to be present can obtain further particulars by applying to Dr. John Phillips, 68, Brook Street, Grosvenor Square, W.

The Croonian Lectures at the Royal College of Physicians of London will be given by Dr. Sidney Martin on June 14th, 16th, 21st, and 23rd, at the College, at 5 P.M. on each day. The subject is the Chemical Products of Pathogenic Bacteria considered with special reference to Enteric Fever.

The annual meeting of the Pathological Society of London will take place on May 17th. The list of officers proposed by the Council includes the names of Dr. J. F. Payne for re-election as President, and of Dr. H. D. Rolleston for election as Honorary Secretary. The new Vice-Presidents proposed are Dr. F. C. Turner, Dr. Sims Woodhead, Mr. A. A. Bowlby, and Mr. Pearce Gould; and the new members of Council, Dr. A. E. Garrod, Dr. Herbert Hawkins, Dr. R. G. Hebb, Mr. W. H. Battle, Dr. Cecil F. Beadles, and Mr. F. C. Wallis.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE LOCAL GOVERNMENT (IRELAND) BILL is progressing somewhat slowly in Committee, and Clause 9, which provides for the taking over by a committee of the county council of the management of the lunatic asylums, occupied most of two days, Monday and Tuesday. The main discussion centred on the question whether the Local Government Board in Dublin or the Lord Lieutenant should be the sanctioning and controlling authority over the Asylums Committee. The Lord Lieutenant was defined as only the expression for the Government of Ireland, and so was eventually retained in the clause. There was a good deal of criticism of the Lunacy authorities in Dublin, and personal references to them such as one seldom, if ever, hears in connection with English officials. This is due to the fundamental difference in the position of the officials in the two countries. In England all such officers are merely members of a department which has a parliamentary representative in the House of Commons. He is the person open to criticism, for he is responsible to the House for the actions of his staff. In Ireland, although the Chief Secretary is nominally in this position, it is obvious that he cannot in the same degree supervise and regulate the work of many departments in the same minute way that the parliamentary heads of departments do in England, and consequently the permanent officials in Ireland suffer this direct criticism. On the whole the Bill makes fair progress, but as the first week of parliamentary time devoted to it has only dealt with eight clauses, it is quite clear that some weeks must elapse before the seventy odd clauses and the schedules will get through Committee. The Lunacy clause (the ninth) was passed on Tuesday, but only after Mr. Lecky had endeavoured to strike it out of the Bill, in order to keep the charge of all lunatics under State control. He argued that the charge for lunatics should be an Imperial charge, and this financial view commended itself to some Irish members. He also argued that it would be better to have all the officials appointed by the Government, as local appointments in Ireland were greatly influenced by politics or religion. He quoted the case of one locality in which the three last doctors elected had all died of delirium tremens, and added that he believed they had all been appointed on religious grounds! The House enjoyed this greatly, but on the division the motion of the member for Dublin University to leave out Clause 9 was rejected by 251 to 25. So the new county councils will have charge of the lunatics.

THE POOR-LAW UNIONS ASSOCIATION BILL has, after a stormy time, passed through its Committee stage. The Grand Committee on Law spent two days on it, and have on the whole made it a better Bill. It has now been decided to place the new Association under the control of the Local Government Board; and as it is computed that its income may reach thousands even under the restricted contributions passed by the Committee, it is desirable that there should be some central control over a body to be subsidised so largely from the rates. There was a good deal of fear expressed in the Committee that the Association might be used too much to promote the interests of Poor-law officials. The amendments adopted will prevent this, as clerks to Boards of Guardians when sent up to represent their Boards as one of the two representatives contemplated by the Bill will not be allowed to vote. The preamble of the Bill as it now stands authorises the Association only to look after the common interests of Boards of Guardians, and to discuss matters connected with the Poor Law and their duties as guardians of the poor.

THE MIDWIVES REGISTRATION BILL has now practically no chance of passing its second reading on May 11th, or indeed during this session. The Duke of Devonshire, in answering the great deputation which waited upon him on Monday last, advised the promoters of the Bill to "rather direct their attention to proposals for a future Bill than to legislation in the present session." From this it is clear that the Government do not approve of the Bill in its present form, and that they will consequently not afford any facilities to its passage. Before next session the promoters should, following the advice of the Lord President of the Council, try to come to terms with the General Medical Council and the representatives of the medical profession generally; then a Bill to Improve the Education of Midwives will have an easy passage into law.

THE PHARMACY ACTS AMENDMENT BILL has repeatedly had to be postponed, as the amendments down for Committee prevent it being considered after 12 o'clock. Some fresh opposition to it has arisen of late from the large druggists, and its prospects are by no means satisfactory. Indeed, most private members' Bills have small chances this session. The Government will soon have to take the whole time of the House in order to pass their principal measures. There are still 64 clauses of the Irish Local Government Bill to discuss, and some 40 pages of amendments to be disposed of. This means that most of the time up to Whitsuntide will be occupied by this Bill, with the interruptions necessary for the Budget, which will be the first business on Monday next.

POLLUTED WATER AND SOMERSET HOUSE.—The question asked some little time back by Mr. H. J. Wilson with reference to an analysis made in the Government Laboratory at Somerset House of a specimen of water from a well at Maidstone, has excited a good deal of attention. The analyst's certificate was unfortunately worded, and certainly went too far in describing the water as "not liable to be contaminated from the immediate neighbourhood of the well." The liability, strictly speaking, was beyond the competence of the analyst to certify. The magistrates appear to have been influenced by this certificate, and refused to grant an order for the compulsory closing of the well. This, in face of the recent epidemic at Maidstone, was a most unfortunate result, and we are sorry, as we daresay others are, that the Somerset House Laboratory had anything to do with the matter. The efforts of local authorities to promote the supply of pure water to their districts ought not to be frustrated by any official certificate from a department which is not directly connected with Local Government. The Laboratory at Somerset House has, no doubt from notions of economy on the part of the Treasury, been allowed to be used for reference on questions of purity outside the scope of the Adulteration Acts, but questions of water analysis for public health purposes require more than mere chemical evidence for their satisfactory solution. We should be glad to see the Local Government Board authorised to undertake all these public health investigations. There is a strong feeling in many quarters that the present system is unsatisfactory, and that it is a penny wise and pound foolish policy which hesitates to equip the health department of the nation with the most perfect means of investigation under its own control.

THE PLAGUE.—Lord George Hamilton, replying to a question addressed to him by Sir John Leng, said that his latest information regarding the plague at Calcutta was dated May 1st and 2nd. The existence of local plague cases, he regretted to say, had been placed beyond doubt, and instructions had been given for carrying out the preventive precautions prescribed by the Venice Convention. Twenty-three cases of plague and 7 deaths occurred during the last four days of April. He was confident that the Government, in combating the plague at Calcutta, would give due weight to the religious sentiments of the people and would make every endeavour to obtain their co-operation.

PRIVATE LUNATIC ASYLUMS.—In response to Mr. Field, who inquired whether the Government intended to abolish private lunatic asylums, and whether, in the meantime, a more efficient system of inspection and reporting would be introduced, the Home Secretary said the question had not been specially under the consideration of the Government, and it was not proposed to make any change in the system of inspection. The Lunacy Bill, however, now before Parliament would give the Secretary of State and the Commissioners increased power over hospitals in regard to regulations and their general management.

THE ARMY MEDICAL SERVICE.—Captain Norton put a question to the Under-Secretary for War as to whether, before employing civil practitioners in affording medical aid to the troops, every effort had in the past been made to obtain for that purpose the services of retired army medical officers, whether these were retired on pension and liable to recall, or retired on a gratuity, and whose names appeared in the Monthly Army List up to December, 1897, as liable to recall. Mr. Brodrick, in reply, said: Every effort is being made to utilise the services of suitable retired medical officers, whether retired on gratuity or otherwise. The preference, however, is given to those who are in receipt of retired pay.

PROFESSOR SCHENCK'S RESEARCHES ON THE PREDETERMINATION OF SEX.

In view of the fact that Professor Schenck's conclusions as to the power of artificially determining the sex of offspring have served as a nine-days' wonder to some of the lay papers, it seems advisable to lay before our readers a plain statement of his argument, taken without comment from the pamphlet which he has just published.[1] It opens with the statement that it is impossible to command natural processes, but possible by scientific means to exercise a more or less effectual influence upon them, in order to extract from them the best possible results. His essay falls into three parts—a summary of the writings of his predecessors, an account of his own researches and deductions, and finally a description of the method of treatment he has devised, with illustrative cases.

In the development of an embryo the generative organs are at first indifferent—hermaphrodite; in the further process of growth one set develops while the other atrophies. This tendency must be predetermined from the time of fertilisation, for each cell formed from the ovum must have sexual characters, since these are not confined to the generative organs, but appertain to the whole body. The readiness with which an ovum can be fertilised depends upon its position in the ovary, the thickness of its envelope, etc., and these may also have a bearing on the question of sex. In other words, the predetermination may precede fertilisation, and of this confirmation is found in the development of bees and in the production of male and female flowers by plants under different nutritive conditions. In this connection Professor Schenck enunciates and discusses at considerable length the views of previous writers. He points out that the male sex preponderates to a definite though slight degree in the total number of births, and that the sex of a child is more likely to be that of its older parent. He pays particular attention to the theory of crossed sexual heredity, by which each sex tends to propagate the other. Thus if the sexual power of the male be greater a female offspring is more likely to result, and *vice versâ*. This theory is threshed out most thoroughly and with abundance of quotations and examples; in the end Professor Schenck practically accepts it, and makes use of it in his further work. With regard to the influence of environment upon sex, he quotes Robin's statement that in warm climates females preponderate, in cold and unfavourable males. Born also showed that 95 per cent. of artificially fertilised frogs' eggs hatched out as females, this being an effect of nutritive conditions acting after fertilisation. Thury's researches are fully analysed, and are stated to have originally called Professor Schenck's attention to the subject. Thury found that cattle fertilised at the beginning of "heat" threw more females, at the end more males. This he explained by the degree of ripeness of the ovum, but Professor Schenck accounts for it on the crossed inheritance theory, the sexual power of the female being at its greatest at the end of the period of rut. This part of the work is summed up in the statement that the sex of offspring largely depends upon the state of nutrition of the parents, particularly that of the mother during pregnancy. During this period the difference between intake and excretion represents the food of the embryo, and hence requires special attention. The temperature is slightly raised owing to oxidation processes, which entail a considerable consumption of red blood corpuscles and consequent diminution of hæmoglobin.

The second section begins with the enunciation of the fact observed in domestic animals and in insects that the better the mother is nourished the more females she produces, the number of males remaining practically constant. This influence upon the fœtus *in utero* has received but little attention from the practical point of view, and Professor Schenck consequently set out upon a series of observations based on the theory of crossed sexual inheritance. He first investigated the excreta, and particularly the carbohydrates of the urine. The presence of a certain amount of sugar, which is commonly recognisable by the phenyl-hydrazine test in perfectly normal individuals indicates incompleteness of the oxidation processes, whereby a certain quantity of heat is lost to the body. This physiological output of carbohydrate is in the male sex most marked during the period of growth—that is, between the ages of 14 and 19. In women there is no corresponding increase, but small quantities may appear in the urine before and after menstruation, while Iwanoff and others have shown that glycosuria is common in pregnant and parturient women. Now the amount of sugar normally excreted is equal in men and women, but more significant in the latter owing to the lesser activity of their metabolic processes. For the perfect ripening of the ovum it is necessary that oxidation shall be perfect—that is, that no sugar shall be left unburnt. Where there is a remainder of unburnt sugar the ovum stands a chance of being less ripe, and less well nourished. Hence the properties of its protoplasm are less well developed, and by the theory of crossed inheritance it is more likely to produce a female child. On the other hand, when the urine is free from sugar the ovum can attain perfect development, and give rise to male offspring. It is upon this cardinal principle that Professor Schenck's theory is based. He holds that a prolonged course of appropriate nourishment both before and after fertilisation will tend to the conception of male children only.

The next question is of the means to be adopted to ensure this end. If a male child is desired, and the maternal urine contains no sugar, but abundance of reducing substances (particularly the lævo-rotatory glycuronic acid) he allows impregnation forthwith. If, on the other hand, sugar is present, it must be removed, and the reducing substances increased before fecundation may take place. It is found that the urine of a woman pregnant with a boy contains more reducing substances than that of one with a girl. We need not enter into the details of the diet recommended, beyond saying that it contains a large amount of proteid, which seems to be required by a male embryo.

Finally Professor Schenck gives what may be called his clinical results. He quotes numerous cases to show that the bearing of female children is associated with glycosuria. In such instances he recommends a diet comprising plenty of proteid and fat, and as little carbohydrate as can be tolerated; this must be taken for two or three months before and three months after impregnation. He gives one example in which six boys were born in succession under this treatment, and a girl immediately it was relaxed; and others in which boys were born after repeated births of girls before the treatment. In all, out of 7 recorded cases, 6 were successful. He concludes that the nutrition of the mother plays a most important part in the determination of sex, and that in countries where much flesh is consumed there is a marked preponderance of male children. This can be imitated artificially, but it is far more important to ensure the completeness of oxidation processes in the body. As long as the combustion of the food is perfect, and the urine is totally free from sugar, the exact amount of meat consumed is of secondary importance. The birth of male children can thus, in certain cases, be predetermined, but the voluntary production of girls is a problem as yet unsolved.

[1] *Einfluss auf das Geschlechtsverhältnis.* Von Dr. Leopold Schenck, Professor an der k.k. Universität und Vorstand des Institutes für Embryologie in Wien. Magdeburg: Schallehn and Wollbrück. 1898.

THE LATE MR. ERNEST HART.

At a meeting of the Burmah Branch of the British Medical Association held at Rangoon on April 4th, 1898, it was proposed by the Right Rev. Lord Bishop Strachan (Vice-President):

That the Burmah Branch of the British Medical Association has learnt with extreme regret the demise of Mr. Ernest Hart. The members recognise the very important services he has rendered to the Association and they offer their sincere condolences to Mrs. Hart.

This was seconded by Surgeon-Colonel D. Sinclair, I.M.S. (President), and carried unanimously.

Nervous Diseases among Natives of India.—Surgeon-Captain A. E. Grant, M.B., writing in the *Indian Medical Gazette*, states that locomotor ataxy is not uncommon in Indian natives. He has also met with cases of infantile paralysis, pseudo-hypertrophic paralysis, progressive muscular atrophy, and various muscular dystrophies, lateral sclerosis, myelitis, multiple sclerosis, and all kinds of cerebral and peripheral nervous affections in this class.

REGISTRATION OF MIDWIVES.

AT the Privy Council Office on Monday the Duke of Devonshire received a deputation of supporters of the principle of registration of midwives. The deputation consisted of the representatives of many public bodies who were strongly convinced of the necessity of the training and control of midwives. It consisted of the following ladies and gentlemen: The Hon. A. de Tatton Egerton, M.P.; Mr. Heywood Johnstone, M.P.; Mr. Walter Hazell, M.P.; Mr. Charles Schwann, M.P.; Dr. Champneys; Sir John Williams, Bart., M.D.; Drs. Hayward, Foote, Howard Barrett, W. Black, Cullingworth, G. F. Romieu, and Danford Thomas; the Lady Balfour of Burleigh, Lady Mary Glyn, Mrs. Heywood Johnstone, Mrs. Charles Schwann, Mrs. Boulnois, Mrs. Herbert Paul, Miss Grant, Mrs. Schacht, Mrs. Greenwood, Mrs. Travers, Dr. Annie McCall (Medical Women), Miss K. Twining (Incorporated Midwives Institute), Mrs. Alfred Booth (National Union of Women Workers), the Hon. Mrs. Alfred Lyttelton (Women's Liberal Union Association), Miss E. Shaw Lefevre (Women's National Liberal Association), Mrs. Buchanan (Women's National Liberal Association), Mr. Hogg (Women's Industrial Council), Lady Trevelyan and Mrs. Charles McLaren (Women's Liberal Federation), Mrs. W. Rickman, and Mrs. Wallace Bruce.

The deputation was introduced to his Grace by the Right Honourable J. B. BALFOUR, M.P., who said the object of the Bill was to give a certain measure of security to the poorer classes by providing that a midwife should have a certain qualification. The necessity for such a measure was, he thought, not open to question. It had been established by the two reports of a Committee that there was an enormous mortality and a great deal of ill-health brought about by women of the poorer classes having only assistance which was unskilled and unsatisfactory. The deputation felt very strongly that the time was ripe for legislation, and the only question was, whether the Bill was to be allowed a second reading? There might be matters of detail fit for consideration in Committee, but he submitted that unless there were strong reasons which afforded an answer to the whole Bill, it should be allowed a second reading. It had been suggested that instead of registration, licensing would be a preferable term; but it rather appeared to the deputation that much of the criticism which had been made against the Bill would be more valid in the case of the term "licensing," because that would seem to imply that the person who received the licence started with a certain qualification higher than was implied by mere registration. A suggestion had also been made that instead of "midwife" "midwifery nurse" should be employed. That was open to grave objection, because it would seem to import that the person was not fit to attend alone even in cases of natural labour, and would suggest to the poor that they were merely persons who acted as assistants to a medical man. It had also been suggested that "roll" should be substituted for "register," but that was a matter which could be dealt with in Committee. If it was thought a better word there would be no objection to its adoption. With regard to the licensing authority, it was thought that the function should be performed by a central body, which would secure uniformity of qualification, and would also tend to minimise the risk of local influences, which in some cases might operate not only to make admission to the register easy, but to make it difficult.

Dr. CHAMPNEYS said the matter was of national importance, for the present condition of affairs was answerable for the deaths of a large number of women and children. In some districts from 30 to 90 per cent. of cases of labour were attended by midwives. The proposition that there should be legislation for the examination and registration of midwives had been repeatedly approved by such bodies as the General Medical Council, the College of Physicians, and Select Committees of the House of Commons. The members of the deputation were quite prepared to answer the recent criticisms of the General Medical Council, but considered it would be better to postpone the matter until the Bill had reached the Committee stage.

Mr. G. F. ROMIEU (the Coroner for West Sussex) and Mrs. BOOTH (President of the National Union of Women Workers) also laid the views of the deputation before his Grace.

The Duke of DEVONSHIRE asked whether the promoters of the Bill were prepared to accept what he understood to be the alternative suggestion of the General Medical Council, or whether they considered it as altogether opposed in principle to the Bill.

Mr. HEYWOOD JOHNSTONE said they did not see any vital distinction between "licence" and "registration," and between "roll" and "register," which would make them object to the alterations suggested by the General Medical Council, but it was felt it must be left to the Committee stage. If on consideration the General Medical Council still considered licensing to be preferable to registration, the alteration would not be resisted in Committee, nor would the alteration of the title on the third reading. He thought the alteration would involve very little alteration in the clauses of the Bill. Further replying to his Grace, he said the Midwives Board would not necessarily be swept away by the alteration. The constitution of that body would be a matter for discussion. The promoters would undertake that if after discussion the critics of the Bill were not convinced of the advisability of retaining the word "registration," they would accept their amendments on that point. With regard to the suggestions of the General Medical Council, he did not think the House of Commons would ever pass a clause making it penal for a woman to carry on her practice.

The Duke of DEVONSHIRE, in reply, said he understood that there was small probability of the Bill coming on, as the day was likely to be required for Government business. Therefore the proceedings of the deputation must rather have reference to any future Bill which might be introduced than to any probable legislation during the present session. It would be extremely desirable before another Bill was introduced that the promoters of the measure should come to some definite understanding with the medical profession as represented by the General Medical Council, because he could not help anticipating that the deputation still had very great difficulty before them, inasmuch as he did not understand there was any strong public opinion in the favour of the Bill, especially proceeding from those most interested in the matter, the working classes. Also, although the General Medical Council had given a kind of qualified assent to it, he did not understand that the medical body warmly supported the measure. He considered it would be very desirable, before another measure was introduced, that the promoters should come to terms, at all events with the General Medical Council, which he conceived in matters such as the Bill generally represented the bulk of medical opinion. Even then he thought all difficulties would not be removed, because it was somewhat uncertain how the clause relating to the action of the local authorities would be regarded. He had consulted the Local Government Board, who had sent him a memorandum on the subject, in which one of their assistant officers expressed doubt whether Clause 9 would commend itself to the local sanitary authority, which might be taken to mean the district council. Under that clause the local sanitary authority was to be called upon to appoint, and presumably to pay, the medical officer of health or other medical man to a post, the regulations and duties which were altogether outside the control of the appointing authority. It was also doubted whether a medical officer of health would be eager to undertake the duties, unless the salary and expenses for the work were on a definite and adequate scale. Should the proposed function be cast haphazard on the district councils, it would mean the payment of some 1,600 or 1,700 supervisors of midwives under conditions which would go far to ensure the post falling to the lowest bidder, who would generally be a private practitioner, and this would bring about a diversity in the administration of the regulations of the Central Board, and would entail the appointment of a staff of officers to supervise the supervisors appointed by the district council. With regard to Clause 13, which provided that the expenses of the prosecution should be defrayed out of the county fund, it would be unworkable, as there was no county fund. It was evident, continued his Grace, that the measure would throw considerable expense upon the local sanitary authorities, and the Bill would probably receive a large amount of criticism and oppo-

sition from that point of view. He therefore suggested that the Bill should be introduced in a manner which would obtain the support of the General Medical Council, and also that the promoters should enter into communication with the Local Government Board or the representatives of local authorities, in order to obviate the opposition which the measure in its present form was quite certain to encounter. Under the extremely improbable contingency of the Bill coming on for second reading on Wednesday, he understood it was the wish of the deputation that he should promise the support of the Government. Of course he had to consult his colleagues on the subject, but he thought the advice he should give to them would depend very materially upon whether he could rely that in Committee the Bill would be amended to meet the suggestions of the General Medical Council. If the promoters could promise acceptance of those amendments, then the House would probably be disposed to pass a second reading of the Bill, although it would require a considerable amount of consideration and amendment in Committee.

The deputation, having thanked the Duke, retired.

THE EAST ANGLIAN BRANCH.

The deputation from the East Anglian Branch to the members of Parliament for East Anglian constituencies, arranged for Thursday, May 5th, was given up on the announcement that the Bill would not come on for its second reading on May 11th. The amendments to have been suggested by the deputation were as follows:

1. That no one should be allowed to call herself a midwife, or to carry on the business of a midwife, till she had either passed an examination in simple midwifery and midwifery nursing, or had been recommended for registration by three medical practitioners under whose supervision she had worked.
2. That the right to the name of midwife should not be supported by anything of the nature of a diploma.
3. That midwives should be bound to nurse their patients, as well as to attend them in the confinement.
4. That every midwife should be required to produce each year a voucher from two qualified practitioners, under whose observation she has worked, certifying her continued fitness for the work of a midwife.

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary quarterly comitia of the College was held on Thursday, April 28th, Sir S. WILKS, Bart., M.D., F.R.S., President, in the chair. The following gentlemen were admitted to the Membership: Edwin Gilbert Emerson Arnold, M.B.Durh.; George Bertram Hunt, M.D.Lond.; William Lamb, M.D.Edin.; Ernest Playfair, M.B.Lond.; Harold Batty Shaw, M.D., B.S.Lond.

The Licence of the College was granted to 93 gentlemen, 33 of whom presented themselves under the regulations of 1892, and only one under the regulation in force prior to 1884.

Amongst the communications received the most important were (1) from the General Medical Council drawing attention to the results of a competition in November last for appointments in the Medical Service of the Navy, and to deficiencies shown in general education. The College Licentiates compared most favourably in this latter respect with those from other parts of the kingdom. (2) From the Secretary of the Midwives Bill Committee and the Secretary of the British Medical Association, enclosing a copy of a proposed "Midwifery Nurses Bill." Both were referred to a committee appointed on a former occasion, of whom Sir W. Priestley, Drs. Playfair, Champneys, and Black, and Sir R. Douglas Powell remained, the names of Drs. Dickinson, Frederick Taylor, and Duffin being added. (3) From the Dean of the Medical School at Guy's Hospital, forwarding a resolution adopted at a meeting of teachers, to the effect that changes in the curriculum should not be made without consulting the teachers.

Drs. Poore and Corfield were nominated as delegates to the Congress of the Sanitary Institute, to be held at Birmingham in September.

The following Members were, upon the nomination of the Council, elected Fellows: William Richard Huggard, M.D. R.U.I.; Oswald Auchinleck Browne, M.D.Camb.; Charles Joseph Arkle, M.D.Lond.; Joseph Wiglesworth, M.D.Lond.; William Bramwell Ransom, M.D.Lond.; Frederick Parkes Weber, M.D.Camb.; Harry Johnstone Campbell, M.D.Lond.; Horace George Turney, M.D.Oxford; George Redmayne Murray, M.D.Camb.; Arthur Newsholme, M.D.Lond.; Benjamin Arthur Whitelegge, M.D.Lond.; John Francis Walkingame Tatham, M.D.Dub.

On the motion of Dr. MOORE, seconded by Dr. LIVEING, reports of the Committee of Management were adopted, recommending that the Harris Institute, Preston; the Mercers' School, Holborn, and Winchester College be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry; that the course of laboratory instruction at the Technical School, Brighton, be recognised as fulfilling the requirements of the regulations for the Diploma in Public Health; and that the Borough Fever Hospital, Brighton, be added to the list of recognised fever hospitals.

Dr. NORMAN MOORE then moved, and Dr. GEE seconded, the adoption of a further portion of the report of the Committee of Management, to the following effect:

The existing regulations with regard to instruction in Chemistry, Physics, Practical Chemistry, and Biology had been drawn up with the intention that the student should complete these subjects as far as possible before entrance on the professional course proper, and whether registered as a medical student or not before commencing their study, he would still have five years' professional study to complete after entrance at a recognised medical school after passing in these subjects, whereas if the student entered at a recognised medical school immediately after passing his preliminary examination, the first of his five years could be devoted to these subjects. To remedy this the Committee of Management proposed that the regulation should be so altered that the first of the five years may be spent in obtaining instruction in these subjects, either at a recognised institution or at a recognised medical school, and that the candidate be required to spend four winter and four summer sessions from the date of passing Parts I and III of the First Examination at a recognised medical school and hospital before entrance to the examinations in Medicine and Surgery.

Dr. LEE was doubtful of the wisdom of the proposal, and it was especially undesirable that the teaching in Biology should be entrusted to others than teachers at the medical schools; it ought not to be separated from Anatomy and Physiology. He reminded the College that the General Medical Council would antedate a student's entrance, which removed much of the hardship.

Dr. PAYNE observed that if the scheme were accepted, one of the five years of the curriculum would be spent elsewhere than at a recognised medical school. Probably these subjects could be studied quite as well at some of the recognised institutions as at the medical schools, for example, at the universities and university colleges, and the public schools were perhaps as satisfactory; but there were others, the technical schools, for instance, which looked at science in its technical aspects. Because they were recognised at South Kensington it did not follow that the College should recognise them; the higher grade Board schools were, in his opinion, not suitable for taking an integral part in medical education. He thought it was a very rigorous requirement that the student was not allowed to commence the study of Anatomy before passing Part I. He concluded by moving an amendment that before agreeing to the resolution the list of recognised institutions should be revised.

Dr. PYE-SMITH seconded the amendment.

The PRESIDENT said that this was a large question, and one in respect of which there was room for much difference of opinion. There was no doubt that it had already been decided that all practical work should be done after registration, but this had been tried and substantially had failed, and that was why the question had come up again.

Dr. E. LIVEING pointed out that the proposal was quite in accord with the requirements of the General Medical Council. He was strongly in favour of the continued recognition of the higher grade schools.

Dr. COUPLAND asked whether boys at school could be registered as medical students before commencing the study of chemistry.

Dr. MOORE denied the existence of any tendency to downward competition which Dr. Payne saw in this scheme; they were but following the example of the Scottish universities, and also those of London and Oxford. The list of recognised institutions had been prepared with great care; each one had been proposed to the College in a separate report. In many instances the school had been visited and the laboratory inspected by a member of the Committee, and only recommended to this College when the laboratory was properly equipped and the teachers competent. He would be quite willing to accept Dr. Payne's amendment.

The further consideration was adjourned to May 12th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Extraordinary Council, May 4th, 1898.

Sir William Mac Cormac, President, in the Chair.

The minutes of the quarterly Council on April 14th were read and confirmed.

Admission of a Fellow.—Mr. C. S. Tomes, F.R.S., was admitted a Fellow of the College.

Practitioners in Italy.—A letter was read from the Secretary of State for Foreign Affairs, enclosing a copy of a despatch from Her Majesty's Ambassador at Rome reporting that the Italian Government do not contemplate making any change in existing laws with respect to the status of foreign practitioners in Italy.

Midwives Registration Bill.—The Council considered the report of the General Medical Council on the above,[1] and adopted this report with the exception of Clause 6, and a verbal change in Clause 9, where they recommended the use of the word "nursing" in place of "after-care."

It was resolved that Mr. Rowland Humphreys be informed of the decision of the Council of the Royal College of Surgeons.

Corporation Duty.—A letter was read from Mr. Ernest J. Wilde, the solicitor of the College, reporting that the claim of the College for exemption from Corporation Duty was heard on April 28th and 29th, before Mr. Justice Wright and Mr. Justice Channell, and that they gave judgment in favour of the Crown, except as regards the Conservator's House, which they considered to be exempt from duty, this partial success relieving the College from having to pay the costs of the Crown. The Council will consider the question of appeal at its meeting next week.

ACADEMY NOTES.

It is impossible to deny that the Royal Academy has lately lost a little of its former hold on social attention. This was specially noticeable last year when a commonplace collection of pictures, badly hung, co-operated with the loss of the two most prominent leaders of British art to make a dull impression on the public mind, and a considerable reduction in the annual receipts. We are therefore all the more happy to be able to congratulate the authorities of Burlington House on the more cheerful prospects of the coming season. Art seems to have resumed its old place as a leading conversational topic, and the verdict both of the general public and of those more authoritative persons who claim under the name of critics the right to guide our taste, is that the present show far excels in brilliancy and interest its immediate predecessors, and is well worthy of careful study; and we do not think that we shall offend national patriotism when we give some part of the credit of this revival to the two brilliant Americans who have placed their genius at our disposal. It has not yet been found necessary to place a rail in front of Abbey's "King Lear," but the daily crowds who gather four and five deep in front of this able and attractive work show that the public taste is generally tolerably sound, and that a really good thing in painting, as in everything else, will never lack appreciation; and Sargent's dexterous and sparkling portraits, dashed upon the canvas with superb audacity and almost palpitating with vigorous and characteristic life, show what can be done by the infusion of strong and enthusiastic personality into the occasionally too solid flesh of the ordinary sitter.

Herkomer is also in great force this year, and Orchardson reigns supreme in his two principal works. The old Scotch lady, with her combined look of patient and almost resigned dignity, contrasts sharply with her neighbour, the late Speaker, sitting "on the pounce," with the "Order, order!" face so familiar to members of the House of Commons, and by which we understand that he specially desired to be handed down to posterity. As long as works of this forcible yet simple power continue to be produced the British school may defy competition.

Yet wholesome rivalry from across the Channel is not wanting. Carolus Duran has sent from his Paris studio two beautiful specimens of his assured and skilful mastery over the difficulties of flesh tints and fashionable clothes, and Bonnat and Constant make good their claim to rank high in their respective lines.

Space does not allow us to go into any detailed examination of the "pictures of the year," but we should like to thank the Hanging Committee for the admirable way in which they have done their work. Not only is the general effect of the show excellent, but each individual item is placed where it can be seen to the best advantage, and amid surroundings which enhance rather than impair such qualities as it may possess.

It is therefore a real pleasure to go round the rooms to renew the acquaintance of old friends and be introduced to new, and coming out of the dust and bustle of London streets, it is refreshing to feel the spray of Peter Graham's matchless waves cooling the air, to sun ourselves beneath MacWhirter's blue skies, and to ramble with more or less poetic feeling through woods and over moors by the side of David Murray and Alfred East and Parsons.

Students of longevity cannot fail to note with satisfaction the undimmed eye and unfailing hand with which Sidney Cooper, at the age of 95, continues to ply his brush in his much-loved Canterbury meadows, and how Watts and Hook show that the term of octogenarian is compatible with the full retention of the great powers which are the admiration of us all.

It is remarkable how completely matters medical have been ignored in our present Academy; not a single sick child or convalescent girl, or dying veteran appeals to the sentiment of the tender-hearted; and whilst mayors and J.P.'s in every variety of ceremonial costume beam blandly on us from every wall, only two doctors—Anderson Critchett and Pickering Pick—have been called upon to endure the combined ordeal of sitting and hanging. Finally, no member of our profession has contributed anything this year. Sir Henry Thompson has apparently forsaken for the astronomical laboratory the studio from which so many excellent works used to emerge; and Sir Seymour Haden's sight no longer enables him to practise the delightful art in which he formerly excelled.

But there is much artistic talent secluded behind brass plates in all parts of London, and we hope to see it coming into the open at some future time, and showing that the keen eye and sure hand of our professional brethren can turn itself to something even more interesting than handling the stethoscope and scalpel.

THE PLAGUE IN THE EAST.

Calcutta.—For the moment all interest in the plague is centred in the threatened outbreak in Calcutta. The actual records are, that, up to May 1st, there had occurred in Calcutta 26 cases of plague and 12 deaths. The first assumption was that rats had brought the infection; this was based upon the fact that large numbers of dead rats had been found in the railway and steamship godowns (goods sheds). Since then opinion has veered round to the belief that the infection can be traced to a passenger from Bombay. It is well nigh an impossible task to trace the source of contagion with a frontier so wide as that of Bengal; but no doubt the most serious news is that rats are dying of plague in Calcutta. If the statement is true, there is every probability that plague will lay serious hold of the city. Patients with plague have been imported before and no spread resulted, but it is almost established as a principle that wherever rats die in numbers plague has come to stay. On May 2nd, 2 fresh cases were reported and 1 death, that of a European. From Calcutta there has been an enormous exodus, estimated at 250,000 people. The bulk of those flying from the city are women and children—owing, it is believed, to the fear of segregation. Telegrams of May 3rd state that the panic has subsided considerably and the exodus has abated, owing probably to the assurance given by the Lieutenant-Governor that the plague rules to be enforced would not be so stringent as those in Bombay. The same officer announced that, with the aid of the hot weather and the sanitary rules proposed, he had every reason to hope the disease would be stamped out quickly. Inoculation by Professor Haffkine's serum is being strongly recommended, and as an inducement to people to adopt the treatment the Governor has declared that, even

[1] See British Medical Journal, April 16th, p. 1037.

should plague break out in any family, everyone of which had been inoculated, the person attacked would not be removed to hospital. In no case would husband and wife be separated, and every respect would be shown to the *purdah* system. To those familiar with Calcutta the advent of plague is appalling. The slight fall to the sea renders drainage at all times imperfect. Although 100 miles up the Hooghly the city is but little above the sea level. "Sewage-logged" has been the epithet applied to this city, and Nature well nigh defies sanitary efforts. The smells of Calcutta streets, even in the better quarters, are proverbial; this may arise from the drains, but much more is it due to the enormous traffic in the streets. Cattle, not horses, are principally used as draft animals, and the fouling of the streets is thus much increased. The natives in Calcutta also are a much more dangerous element than in any other Indian city. Should the hot weather assist in abating the epidemic for the time, it is more than likely that the return of the autumn will see its revival.

Bombay.—The number of cases of plague in Bombay is diminishing satisfactorily, and by the end of the month we hope to hear that they have been reduced to a minimum. We would, however, urge upon the Bombay authorities that their efforts at sanitation must in no way relax. With the example of Hong Kong before them, where plague is again prevalent in what seems an endemic form, it is to be hoped that every effort of perfecting sanitation will be made in order to lessen the chance of recurrence.

Karachi.—The plague in this city seems to be kept well in hand, and it has as yet attained no great hold on the district.

Jeddah.—The news from this port is considered to be so satisfactory that the pilgrims are being allowed to return, and the isolation scheme has been discarded.

Hong Kong.—The plague has been much more serious in Hong Kong than we had gathered from the official statements. Not that there has been any attempt at concealment, for the authorities have at this port always, in the most straightforward manner, announced the state of the public health. Plague, however, has ceased to be the scare it was, and the public have come to regard it with equanimity. Up to May 1st there have been 609 cases of plague in the colony, estimating from January 1st, 1898.

Algiers.—It is in no spirit of alarm that we draw attention to the statement in the public papers that 45 cases of "typhus" have occurred in Algiers. Typhus, we know, is not an unheard-of disease in Oriental cities, but if it is true that "plague is the typhus of the tropics," it behoves the authorities to keep a strict watch on such outbreaks. Plague not so long ago visited the northern shores of the African coast.

THE GOVERNMENT INEBRIATES BILL.

A special meeting of the Inebriates Legislation Committee of the British Medical Association, to consider the Habitual Inebriates Bill recently brought forward by the Home Secretary, was held on May 3rd. Representatives from the Council of the Society for the Study of Inebriety, and the Homes for Inebriates Association, were also present, and the meeting resolved itself into a conference, presided over by Dr. Norman Kerr. Several members of Parliament took part in the proceedings.

After a careful consideration of the Bill, three resolutions were agreed to. The first warmly thanked the Home Secretary and the Government for the proposal to establish State inebriate reformatories and certified inebriate reformatories (the latter on the application of county or borough councils, aided by local funds) for the reformative treatment of criminal inebriates.

The second resolution, while approving of the above and other practical improvements on existing legislation, suggested the attestation by one justice only (instead of two justices as at present) in the case of voluntary applications for admission into licensed retreats, to remove a formidable barrier in the way of voluntary application.

The third resolution expressed the opinion that the usefulness of the Bill would be enormously enhanced if, with all due safeguarding of individual liberty, compulsory dealing were adopted in well-defined cases of non-criminal habitual drunkards.

It was, however, the unanimous opinion of all present that the Bill as it stands is so valuable, as initiating a revolution in the judicial treatment of criminal inebriates, that no step should be taken or amendment insisted on which would in the slightest degree imperil the passage of Sir Matthew White Ridley's Bill through the Houses of Parliament. There can be little doubt, from the tone of the conference, that the Government Bill will have the warm support of the medical profession.

THE COMING MEETING OF THE BRITISH ASSOCIATION IN BRISTOL.

[FROM OUR SPECIAL CORRESPONDENT.]

The preparations for the visit of the British Association, which will meet in this city from September 7th to 14th, are forming themselves into shape. The latest published list of subscriptions shows that over £3,400 has been promised, so that the executive need not fear being short of the prime necessity that makes such a visit a success. The Victoria Rooms, which were used for a similar purpose during the visit of the British Medical Association, are to be fitted up for the reception room, with the difference that the large hall will be used for that purpose and the small hall as the gentlemen's smoking room. The sectional meetings will be held in the school room of the Victoria Chapel—where Mr. Greig Smith gave the address on surgery—the Fine Arts Academy, the museum lecture room, University College, the Blind Asylum Hall, the Hannah More Hall, the Merchant Venturers' Technical College, and the Park Place Schools. The Drill Hall will be fitted up as a lounging room, a band (the Royal Horse Artillery) provided, and various objects of interest shown; this will be open to all members and associates of the Association free during the afternoon, but in the evening the hall will be open to the public at a charge. At present it is not quite decided where luncheons will be served, but it is probable that two places will be in use, a temporary erection near the reception room and in the premises of the late Salisbury Club.

The president's address and the lectures will be given in the Colston Hall, as will also be the *soirée* given by the General Committee. The other *soirée* will be given in the buildings and grounds of Clifton College on the invitation of the Bishop of Hereford, the headmaster, and Mrs. Glazebrook. This affords a fine place for such a function provided the weather is fine, as the cricket ground will be available for promenade and will be lighted with electric light.

In the Zoological Gardens will be a biological exhibition at which many objects of great scientific interest will be shown. Arrangements have been made with the authorities of the Marine Biological Station at Plymouth to show some of their most interesting tanks.

A large number of excursions have been arranged to various places of interest—namely, Wells, Glastonbury, and the lake villages, Cheddar Cliffs and Caves; Bath, where the corporation will show the magnificent baths recently opened; Bradford-on-Avon with its Saxon church and Norman bridge; Tortworth, on the invitation of Lord Ducie; possibly Salisbury and Stonehenge; the works at Swindon; the docks at Avonmouth, with a trip down the river to visit the Channel Fleet, if the Admiralty will allow it to come; and many others of interest to geologists, engineers, and botanists. A new feature will be introduced in short bicycle rides personally conducted to many of the Roman or British camps around Bristol.

The literature usually distributed is in a forward state, and the handbook will, it is hoped, be the most complete ever given out at a meeting of the Association. The articles are now all in the printer's hands.

Eight gentlemen have kindly consented to give garden parties, and the Clifton College masters will entertain a large party on September 12th. The invitations, issued some month or two ago, have been largely responded to, and many foreigners from the Continent are expected, as well as a strong contingent of scientific men from the Dominion. During the week the International Conference on Terrestrial

Magnetism and Atmospheric Electricity will hold its meetings in association with Section A (Mathematics and Physical Science). There will be no Section I (Physiology), as the international meeting will be held at Cambridge only a short time previous.

A REPORT ON THE OPEN-AIR TREATMENT OF PHTHISIS IN SANATORIA.

II.

OTHER SANATORIA IN GERMANY.

THERE are other sanatoria in Germany in which open-air methods are employed to a greater or less extent. There are, for instance, three sanatoria at *Goebersdorf*, in Silesia The oldest is the one named after Dr. Brehmer. Through tickets can be booked to Dresden, and thence on to Dattersbach, which is close to Goebersdorf. Dr. Brehmer's sanatorium at Goebersdorf is situated on a plateau 600 metres above the sea level; it was founded in 1859. The establishment consists of several cottages lying in a large park, and surrounded with beautiful scenery and pine forests. There is accommodation for 400 people. The entire family are able to live with the patient in the same house if they choose. The rooms face south, but it would appear are insufficiently ventilated, and have not an adequate amount of air space. Open-air treatment with moderate exercise is advised. In bad weather people sit in a large winter garden. The cases with high temperature are not allowed exercise. The hydrotherapeutic treatment is under direct medical supervision. It is usual for patients to have a tepid douche after walking, and then a cool pack for about half an hour. There are five meals during the day; the patients are encouraged to eat as much as possible. One litre of milk is supplied extra to each patient daily.

Falkenstein Sanatorium founded 1876, consists of one large building situated on a plateau 400 metres above the sea, and accommodating 200 patients. Protection from the north wind is afforded by a range of mountains. The sanatorium faces south-west. The climate is mild, the air is dry, and fogs are practically unknown. The treatment commences at 7 A.M., the entire body is rubbed with a dry towel. Breakfast is served at 8 A.M., and after this the patients are obliged to take exercise in the forest till 1 P.M., when the chief meal of the day is served. Two hours rest after the midday meal is insisted on, and, after this, the open-air treatment is resumed till 7.30 P.M., when supper is provided. The patients go to bed at 10 P.M.

SWITZERLAND.

Montana is a hotel situated in the Canton Valais in Switzerland, three miles from Sierre. Passengers can be booked through from London to Sierre; the rest of the journey is accomplished by diligence. The hotel is situated in one of the most beautiful spots in Switzerland; it is 1,511 metres above the sea level, and has a view extending for miles over mountain ranges. In the immediate neighbourhood are several small lakes. The hotel lies in a park extending for more than four kilometres, and faces south and south-west. Protection from the north and north-east winds is afforded by the neighbouring mountains. A great characteristic feature of Montana is the calm air. Beautiful grassy slopes extend from the front of the hotel down towards the Rhone Valley. A large pine forest is situated on the east side of the hotel. There is accommodation for 80 people, and other diseases besides tuberculosis are treated. Recent cases of bronchitis are said to do very well. The usual hygienic rules are carried out, but there is no special system of antiseptics, etc. The hotel is open all the year round. The open-air treatment is carried out in much the same manner as in other sanatoria. No special mention is made of the treatment of fever cases. There is no special line of treatment with regard to food; there are three meals in the day, and patients are encouraged to eat as much as possible. A good deal is done for the amusement and recreation of the patients. Lawn tennis and croquet are played in the summer, whilst the winter amusement consists in skating. The indoor amusements include acting and music.

Leysin Sanatorium is situated on a plateau, 1,450 metres above sea level, not far from the Lake of Geneva, in Switzerland. Through tickets can be obtained as far as Aigle, which is close to Leysin. The ascent has to be made by diligence. The sanatorium was constructed on the plan of Falkenstein; it is 300 metres above the village of Leysin, and overlooks the Rhone valley; a large pine forest may almost be said to surround it, and a mountain ridge shelters it from the north wind. The sanatorium consists of one large building five storeys high, and can accommodate 80 people. Nearly all the rooms face south or south-west. Much attention has been given to ventilation so as to render it possible to pass a sufficient current of air through the rooms without keeping the windows open. This plan, if carefully worked, will doubtless add to the general comfort of the patients. The rooms are kept clean, but no special antiseptic precautions are mentioned. There is a large dining room, restaurant, billiard room, and entertainment hall, also a large winter garden built for stormy weather, a gymnasium, with bath and douche rooms. No special line of treatment is adopted; the patient is advised to keep in the open air all day and to eat as much as possible; alcohol is not forbidden. The climate is not so cold as Davos. There is very little wind, and the soil is dry and porous. Patients are admitted all the year round. A physician lives in the sanatorium.

FRANCE.

For some time past the French have felt the need of a more scientific method for treating cases of phthisis, particularly amongst the poorer classes. The subject of sanatoria has only lately received serious attention, and this has been almost entirely due to the energy and enterprise of Dr. Samuel Bernheim. It is only two years ago since the first sanatoria were erected on French soil. The cause of this delay is difficult to understand, particularly when one thinks of the many ideal spots which exist in many parts of France; the most noteworthy would be the mountain range of Auvergne, and also along the Mediterranean coast. Dr. Bernheim was much influenced in his choice of a plan for an ideal sanatorium by the studies of M. van Pelt, then a student of l'Ecole des Beaux Arts.

In 1896 Dr. Bernheim published [1] an illustrated plan of two sanatoria which were the first to be erected in France. One is situated at Ardes, near Clermont Ferrand (Puy de Dôme); the other is on Mount Pacanaglia, close to Nice (Maritime Alps). The plan of construction in both is almost identical, and bears a close resemblance to some of the German sanatoria. The situations chosen are said to be remarkably beautiful, as regards both the immediate vicinity of the sanatorium and the surrounding neighbourhood. The entire building and garden occupy a space of 2,500 square metres; the usual pine forest is situated close by. The sanatorium consists of a central building facing south, and two side wings, the one facing east and the other west. The central building contains a large dining-room, sitting-rooms, billiard and concert rooms. On the first and second storeys there are 80 single bedrooms for patients; they are spacious, well-ventilated apartments. The side wings contain rooms for 40 patients in each. Large open-air shelters are provided for those who are not able to walk about. A special department for hydrotherapeutics has been instituted. There are no special rules as regards diet and no special drug treatment. The whole building is kept as clean as possible. All curtains or furniture that harbour dust are dispensed with.

RUSSIA.

Dr. Unterberger, Senior Physician to the Military Hospital in Zarskoje-Sselo, near St. Petersburg, has instituted what he calls a "house sanatorium" attached to the Military Hospital. The sanatorium was started in 1895, and has on the whole worked well. He merely selected cases of phthisis from the general wards and put them under more favourable conditions—that is to say, in large, well-ventilated wards facing south, in which he placed pine trees. Besides thoroughly cleansing the rooms no special antiseptic measures were taken. The supply of food was more liberal than the usual hospital diet, but otherwise no special treatment was adopted.

[1] *Indépendance Médicale*, March 25th, 1896.

DR. F. RUFENACHT WALTERS (Welbeck Street, W.) writes: I was glad to see your article on the open-air treatment of consumptives in sanatoria, the importance of which is not yet sufficiently appreciated, but which is likely enormously to diminish the mortality from consumption in this country. As I have paid considerable attention to the subject for some time past, I may perhaps be allowed to point out a few slips in your excellent description of some of the foreign sanatoria. Your second paragraph gives the impression that all the German and American sanatoria are confined to consumptives, and that no sanatoria exist elsewhere which are intended exclusively for such patients. This, as the writer of your article probably knows, is not quite correct. Segregation and grouping of the patients are observed in the Adirondack, Loomis, Nordrach, and Reiboldsgrün sanatoria, but not in some of the other German and American institutions.

The Adirondacks Sanatorium is stated to be 2,000 feet above the sea level; this should be 1,780 feet; and it can accommodate 94, not 90 patients. It is, of course, a slip of the pen to say that cod-liver oil is given to increase the appetite. At Hohenhonnef the accommodation is now, I believe, larger than is stated. When I was there a year ago separate houses were being built for the chief medical officer and the managing director, which would set free some nine or ten more rooms for patients. Owing to the divergence of the wings, a few of the patients' rooms have an easterly aspect, but are well sheltered by the neighbouring pine wood. The area of ground belonging to the sanatorium should be 40 hectares (98¾ acres), not 40 acres. In the description of Nordrach Sanatorium, Gleugenbach should be Gengenbach.

You are doing a great service in calling attention to the methods of sanatorium treatment. As Professor v. Leyden recently said, "The possibility of treatment outside a sanatorium with equally good results cannot be denied, but it requires much more prolonged rest and much more time on the part of the physician, and has by no means so certain a result. In any case, I regard it as a great advantage if the patient can spend once or twice a period of several weeks or months in a good sanatorium."

SPECIAL CORRESPONDENCE.

PARIS.

The Paris Water Supply.—Wet Nurses and Contagious Diseases.—The Proposed "Order of Medical Men."—The Notification of Leprosy in Algiers.—General News.

ALTHOUGH according to statistics the potable water supply of Paris ranks second among the capitals of Europe, and thirteenth among the capitals of the whole world, no one has ever attempted to deny that after a dry winter or hot summer the supply of drinking water falls short of the quantity required. In order to remedy this a commission of eminent engineers was appointed a few months ago to study plans for supplying not only Paris but the entire Seine Department with a sufficient supply of potable water. The prefectoral Administration was obliged to draw up a plan capable of immediately supplying sufficient drinking water for the wants of the Parisian population. M. Ambroise Rendu has completed the report which the Municipal Council commissioned him to make, and he states that the Paris water supply is at the rate of 220 litres per head, of which 124 are potable and 96 are river water. Among the 84,000 houses on the outskirts of Paris, 10,000 (accommodating 200,000 inhabitants) are not supplied with water by the city of Paris; they draw the water which they require from public fountains. In two years, by bringing into the Paris water supply water from the Loing and Lunan rivers, 50,000 litres will be added to it; 150,000 litres more are necessary in order to guarantee a supply of 120 litres of potable water to each inhabitant. M. Ambroise Rendu proposes to utilise 50,000 litres of spring water in the Paris environs, choosing those regions where the population will suffer the least from this monopolisation.

Dr. Duvernet, medical inspector of wet nurses at the Police Prefecture, considers that the law for the protection of infant life is not observed in a way calculated to prevent the transmission of contagious illnesses. The children of the wet nurses are not examined. These infants are a source of danger to the others reared at the wet nurses' houses. The habit of wet nurses suckling their children at the agency offices for wet nurses is an additional reason for exacting that the wet nurses' certificates should be delivered only after their own offspring has been examined and pronounced to be healthy.

The proposition that an "order of medical men" be organised, made by Dr. Lassalle, of the Gironde Department, last year, may be considered as definitively rejected. The report drawn up by Dr. Thibierge, and read at the general meeting of the Seine Medical Society, is entirely opposed to the creation of such an order for judging or deciding questions of medical ethics. All the members present at the meeting endorsed the views expressed in the report. The departmental societies have also shown themselves unfavourable to the proposed order.

Acting on M. Proust's report concerning leprosy, the Sanitary Council has decided that this disease in Algeria shall be inscribed on the list of diseases which may be notified without violation of professional secrecy. M. Hallopeau declares that a similar measure is desirable in France. He has treated during the last six months twenty lepers, of whom one-half were of French nationality. M. Proust and Professor Brouardel observed that M. Hallopeau's proposition requires careful investigation before it is adopted by the Health Commission.

The visit of the President of the Republic to the Nice Military Hospital will result in a new one being built a little outside the the town. The existing hospital is, according to the health officers, so insanitary that they hesitate to send to it men with slight illnesses, fearing they may contract some serious malady. The Civil Hospital was also visited by the President and a boys and girls' asylum for orphans. This establishment has been generously endowed, and is admirably organised.

At Ambuhimalaza, Madagascar, a native medical man has founded a hospital for his compatriots. It is the second hospital provided by private generosity among the Hovas.

BERLIN.

Aseptic Surgery and the Law.—The Stamping Out of Diseases in Cattle.—A New Municipal Hospital for Berlin.

IT is now about a year since Professor Seidel, chief surgeon of the Brunswick Hospital, committed suicide under sad circumstances which gave rise to much comment in the medical world. It became known that Seidel's assistants, dissatisfied with his methods, had addressed a written complaint to the Brunswick Ministry, in which they charged him with neglecting antiseptic and aseptic precautions, and especially with having caused the death of a patient by operating with an imperfectly healed furuncle on his finger. On receiving this letter the Brunswick Ministry sent for Professor Seidel, informed him of the charges made by his assistants, and said that an inquiry would at once be instituted which they hoped would entirely clear him, but that in the meantime they had decided to suspend him from his functions temporarily. Professor Seidel, who like many brilliant and hardworked surgeons was of a nervous and excitable temperament, committed suicide next day, leaving behind him letters in which he said that though he was innocent, the suspension from his office was a disgrace which he could not survive, and imploring his family and friends to clear his name. This duty was undertaken by his two brothers, who submitted the case to Professor von Bergmann, of Berlin, as the President of the German Surgical Society, and published his reply, in which he vehemently defended Professor Seidel, and condemned the behaviour of the assistants. Thereupon the brothers published other letters and papers bearing on the subject, and accused the assistants of having caused the death of Professor Seidel by underhand and undeserved denunciations. A lawsuit for libel followed, which was heard a fortnight ago, and which—after occupying several days—terminated in a verdict for the brothers of Professor Seidel, who, the Court found, had acted not improperly in the defence of the interests and good name of their late brother. The costs of the case were laid on the State. The chief interest of the lawsuit—from a medical point of view—was

undoubtedly the evidence of Professor v. Bergmann, which he gave in favour of the late Professor Seidel, and against the assistants, with such vehemence that the judge intervened more than once, warning him to beware of using injurious expressions. Bergmann said it was his decided conviction that the problems of asepsis and antisepsis in surgery were as yet by no means scientifically solved; that the most distinguished surgeons were very much at variance on the subject. He quoted the memorable "glove controversy" of this year's Surgical Congress, which showed that one and the same method was considered by some authorities a decided improvement in asepsis, and by others extremely dangerous, so that it was absurd to denounce a surgeon for not observing the precautions of certain modern methods.

In the course of a debate in the Prussian Diet on the subject of more stringent measures for stamping out cattle diseases, Professor Virchow gave it as his opinion that no sure prophylactic remedies against cattle diseases had hitherto been found. Even the inoculation against foot and mouth disease which was in general use, and which he thought should continue so, was by no means absolutely proved.

At the last meeting of the Berlin Society of Public Hygiene Herr Geheimrath Skinola reported on the progress made in the project of a new (fourth) municipal hospital for Berlin. The total expenses have been calculated at above 13 million marks (£650,000); the hospital is to be finished by 1903. It will occupy no less than 105 acres of land and is to consist of 62 buildings in all. There will be 26 one-storey pavilions of 46 beds each; the lying-in department and the isolation department are to be built more than one storey high. All arrangements for hydropathic treatment, baths of all sorts, and "medico-mechanical" treatment will be provided. Inmates of the lying-in department will be allowed to remain till the twentieth day after delivery—a great improvement on the practice at the Charité, where they are dismissed after the ninth day. The medical staff is to consist of a directing physician, two chief physicians, directors of departments, besides an assistant physician for every 50 beds. The drugs, etc., will be under the care of three chemists. A training school for nurses is to be affiliated to the hospital.

ROME.

Pensions for Poor-law Medical Officers in Italy.

THE Italian Chamber of Deputies has lately passed a Bill to provide pensions for the *medici condotti* (poor-law doctors) in Italy. This question has been before the country for many years, and various attempts have been made to induce the Italian Government to introduce such a measure. In 1896 the Minister of the Interior appointed a Commission to study the subject. The Commission some months later presented to the Minister a project of law, which has formed the basis of the Bill, which has now become law. Before giving a brief summary of this Bill it will not perhaps be uninteresting to give here a short historical summary of the position of the *medici condotti* in Italy. In 1882, out of the 8,259 communes in the kingdom, 7,564 were provided with *medici condotti* at the expense of the communes, and 108 were provided by other institutions. In the remaining 587 communes no *medici condotti* were appointed, and at most the authorities only paid a small sum to a phlebotomist for the performance of vaccinations.

Of the communes provided with *medici condotti*, 4,134 required them gratuitously to attend all the inhabitants, both rich and poor, and 3,410 the poor only. This service was entrusted to about 9,000 doctors, who represented about one-half the total number of medical men then practising in Italy, and the annual expense of this service was about 14,000,000 lire. This number of *medici condotti* appears to have remained stationary up till 1888. In 1894 the number had increased to 11,554, with an annual expense of 18,562,000 francs.

On the basis of these figures we find that the average yearly stipend of a *medico condotto* in the year 1882 was 1,550 francs (£62), and in 1894, 1,700 francs (£64). Now for this very inadequate income, which is often his sole means of livelihood the *medico condotto* has to perform multifarious duties, as besides attending all the poor in his district, and in some cases also the rich, he is obliged to perform vaccinations, to attend to sanitary affairs, to inspect the hospitals, schools, orphanages, and other charitable institutions. He is also obliged to notify to the syndic all cases of infectious disease, and to furnish the data for the compilation of public health reports, and all of these numerous and important duties are remunerated by a yearly stipend which varies in the different communes from a minimum of less than 500 lire (£20) to a maximum of 3,500 lire (£140). Very often the stipends are very irregularly paid, and if the *medico condotto* be permanently incapacitated through overwork or through some disease contracted in the performance of his duties he is dismissed from his post without the least compensation, and if he should die his wife and children are left penniless. Till now this has been the condition of things throughout Italy with the exception of the province of Venice and some parts of the ex-Pontifical States where pensions are provided for the *medici condotti*.

The Bill which has lately passed through the Chamber of Deputies will come into force on January 1st, 1899. It legalises the establishment of a pension fund to insure a pension to the *medici condotti* and to those medical men who are in the service of the provinces and the State. A yearly contribution of 120 lire will have to be paid into the fund for each doctor who becomes a servant of the State, the province, or the commune, half being paid by the medical officer, the other half by the authority which employs him. This contribution entitles the doctor to an indemnity when he becomes incapacitated through a disease contracted, or has served for a period of less than twenty-five years, and greater than ten years, and a pension to those who have served at least twenty-five years.

The indemnity is represented by as many hundreds of lire as the doctor counts years of service. The pension is liquidated on the basis of a table which has been calculated by taking into consideration the age in which the pension is conceded, and the number of years of service useful for the liquidation, and may reach, departing from a minimum of 500 lire (£20) for twenty-five years of service, a maximum of 2,500 lire (£100). If the medical officers should desire a larger indemnity and pension, they can subscribe to the fund a larger sum of 100, 140, or 180 lire, when the indemnity will be increased by one-third, two-thirds, or will be doubled; in the same proportion the pensions will be increased, which in the case of the greater facultative contribution will have respectively a minimum of 667, 834, and 1,000 lire, and a maximum of 3,333, 4,167, and 5,000 lire.

All the doctors who enter the service of the State, the provinces, or the communes must subscribe to the fund from the day it is instituted. It is optional for those who shall be nominated by charitable institutions and for those who receive from institutions where they are employed remuneration not exceeding a total amount of 500 lire.

These are the chief provisions of the Bill, which received the warm praise of Professors Baccelli and Celli in its passage through the Chamber of Deputies.

CORRESPONDENCE.

CHLOROFORM AND THE HEART.

SIR,—In your apparent anxiety to pillory me in the BRITISH MEDICAL JOURNAL of March 26th, you have been led into at least one very serious error, which I claim the right to rectify in my own language, without any of the emendations which seem to you to be necessary "for Dr. Lawrie's sake."

You state that I have accused the editor of the BRITISH MEDICAL JOURNAL "of (3) partly suppressing and partly glossing over Dr. Lawrie's views." Nothing was farther from my intention. What I accuse the editor of doing is of suppressing and glossing over the evidence of Messrs. Gaskell and Shore—which is an entirely different matter. Both these gentlemen spoke at considerable length, and in a manner which was perfectly characteristic, in the discussion on anæsthetics at Montreal. While the report of my remarks occupies columns of the BRITISH MEDICAL JOURNAL, the condensed report of their speeches, which is all that is vouchsafed to us, occupies about twenty lines. I believe the majority of the members of the British Medical Association

will agree with me that if it was necessary in their interests or in the interests of science, to publish my views on chloroform and the heart *in extenso*, it was *a fortiori* necessary to publish *in extenso* those of the pre-eminent Messrs. Gaskell and Shore.

You further state that, according to me, it appears to be your duty "to make the facts established at the Montreal meeting intelligible to the entire medical world," and you sarcastically add "upon this we may say that if Dr. Lawrie has failed to make them intelligible we cannot hope to succeed." Unfortunately for your ill-timed sarcasm the facts established at the discussion on anæsthetics at Montreal were made thoroughly intelligible, not only by myself but also by Messrs. Gaskell and Shore, to all those who were present at the meeting. It is solely because you have thought it consistent with honourable journalism to suppress the material portion of Messrs. Gaskell's and Shore's observations that they have not yet been made intelligible to those members of the British Medical Association who were not present and to the entire medical world.—I am, etc.,

Hyderabad, Deccan, April 14th. EDWARD LAWRIE.

*** We have referred the fresh charge brought against us by Dr. Lawrie of "suppressing" and glossing over the evidence of Drs. Gaskell and Shore to these gentlemen. We have received the following letter from Dr. Shore, who informs us that he expresses also the views of Dr. Gaskell:

SIR,—Since the evidence, published in the *Lancet*, February 11th and July 1st, 1893, which Dr. Lawrie brought forward in his attack on the cross-circulation experiments of Dr. Gaskell and myself, was shown by us at the meeting at the Medical and Chirurgical Society in July, 1894, to be valueless, he has subsequently brought forward, neither at the Montreal meeting, nor so far as I know elsewhere, any scientific evidence which shakes in the least the conclusions we arrived at. At the Montreal meeting I added nothing to what we had said before; it is therefore unnecessary for the remarks I made there to receive further publication.—I am, etc.,

St. John's College, Cambridge, May 3rd. LEWIS SHORE.

The position is now perfectly clear. It is for Dr. Lawrie to bring forward proofs. Unsupported assertions and charges of dishonourable conduct merely recoil upon his own head.

THE MIDWIVES REGISTRATION BILL.

SIR,—It certainly seems curious that Mr. Rowland Humphreys, in his official capacity as Honorary Secretary of the Midwives Registration Bill Committee, should have been so anxious to obtain the opinion of the Council of the Royal College of Surgeons of England upon the Bill, and yet, so far as we know, not have applied to the Obstetrical Society of London, who have had hundreds, perhaps thousands, of "licentiates" already in the field for many years, who are now waxing so bold and are so anxious the public should know that they have this valuable "diploma" that they issue or cause to be issued the following advertisement, which appeared in the *Borough of Marylebone Mercury* on Saturday, April 23rd:

MIDWIFERY BRANCH.

Ings House ... ... Nurses Co-Operation.
81, NEW BOND STREET, W.

Ladies are attended by Certificated Midwives at Fees from 7s. 6d.
(London Obstetrical Society Diplomée).
Matron can be seen privately every morning before 12 A.M.
All Cases must be booked and paid for beforehand.
Fully Trained Nurses are sent out for all cases.

Telephone No. 5,100.
Telegrams, "OVERNIGHT," London.

Is the President of the Obstetrical Society aware of this mode of procedure on the part of their "diplomées?" and, if so, does he approve of it, or have they sufficient "control" over them to stop such procedure to obtain practice? What the practice of midwifery will come to if such modes of procedure are to be tolerated amongst those "under control" it is difficult to say. Or will there be a clause inserted in the Bill in Committee stating that advertising will be considered as "infamous conduct in a professional respect" and render them liable to be struck off the register?—I am, etc.,

Manchester, May 2nd. G. H. BROADBENT.

COTTAGE HOSPITALS AND FEES AT INQUESTS.

SIR,—Now that the judges of the Queen's Bench Division have given their authoritative decision that honorary medical officers of cottage hospitals cannot legally insist on payment of their fees for giving evidence at inquests held on the bodies of persons dying while inmates of such institutions, it remains for the profession to find a remedy for the gross injustice which is thereby inflicted on them.

It appears to me a very simple matter—at least in the case of such cottage hospitals as are open to the patients of any registered practitioner resident in the place—that such practitioners should in future no longer allow themselves to be described by the managing committee—of which they are themselves often valuable and active members—as "medical officers" to the institution, but merely as having the privilege of attending their own patients when admitted there. The coroner would then allow their fees without any hesitation lest they should subsequently be disallowed by the auditors of the county councils.—I am, etc.,

J. HOLMES JOY, M.D.,
Tamworth, May 4th. Coroner for Staffordshire (East).

FEES TO SURGEONS FOR ATTENDANCE ON HOSPITAL PATIENTS.

SIR,—With reference to the case alluded to by you of Dr. Cranny *v.* Mr. T. J. Lee, for fees for surgical attendance, allow me to place before you the following letter, which I received about 10 o'clock on the night of the occurrence. It is from the house-surgeon of the hospital:

Jervis Street Hospital, November 17th, 1896.

DEAR DR. CRANNY,—There is a gentleman of the name of Lee (Alexander and Co., Mary's Abbey) who has just come in here with a compound fracture of leg. He is most anxious to see you, and asked me to send for you at once, if you would be kind enough to come.—Yours, etc.,
MORE CARAHER.

From this letter—which, owing to the rules of evidence, was not allowed to be placed before the jury—it appears to me I was justified in the position which I assumed, and which position was endorsed by the learned judge and by the jury—namely, that I was under the impression that I was specifically retained, at the request of defendant, to take charge of his case. The law, as laid down, and no doubt correctly, by the learned judge, has decided otherwise.

The important question remains as to whether a person of independent means, suffering from an accident or injury, and being admitted to a hospital and being cared for and treated as the necessities of his case demand—of which no question arises—but being in the rank of life capable of paying for surgical treatment, he should have a claim for the services of any hospital surgeon without paying for them, because this surgeon is expected to attend the poor without fee or reward, and because the patient has paid for his private ward a sum of three guineas a week to cover his maintenance and nursing. I submit that no hospital authority has the right to farm out the services of surgeons—nor, indeed, in my case do the managing committee of my hospital assert any such right. It would, in my opinion, be extremely detrimental to private practice were such a claim made.

Need I add that, had a plea of inability to pay been made, nothing further would have been heard of the case? It will be a warning to the profession to safeguard themselves.—I am, etc.,

Dublin, April 30th. JOHN J. CRANNY.

PAYMENTS BY HOSPITAL PATIENTS.

SIR,—I must congratulate the managers of the Central London Throat Nose and Ear Hospital on having such an able and influential advocate as Sir Henry Burdett. Whether he is quite justified in taking up the *rôle* of an advocate of one hospital when he is likely at no distant date to be called upon to act in the capacity of judge of several hospitals, is a question which I venture to say deserves his close consideration. Sir Henry states that the people attending this hospital "belong to the wage-earning class at the most active period of their working lives; that this [inquiry] system prevents those who can afford to pay from receiving hospital relief; and that it is so effective as to have impressed the people seeking hospital treatment with the feeling that to apply at this institution for hospital relief if they are unworthy is worse than useless, seeing that this latter class do not resort to it."

I hope Sir Henry will not consider it an impertinent question if I ask him how much time he spent in investigating the cases, and the number of people he interviewed? In his speech at the annual meeting he remarked that he went in the evening, and left at half-past seven o'clock. Unfortunately the managers have not published a list of the occupations of the patients for any year since 1879, and from that list it is perfectly evident that a considerable proportion of the patients belong to the class of skilled mechanics. For example, I give the following: Carpenters, 159; French polishers, 69; bookfolders, 51; foremen, 45; compositors, 40; masons, 32; lithographers, 30; engine drivers, 20; engine fitters, 27; pianoforte makers, 18; instrument makers, 17. All these classes earn wages averaging from £2 to £4 a week.

With respect to the inquiry system, I think it must strike most people that the principal object aimed at is to discover not whether the applicants are proper persons for hospital relief, but how much can be extracted from their pockets. It must be obvious that no system of inquiry is worthy of the name unless investigations are made of the employers of patients or at patient's own homes.

It is evident that Mr. Kershaw is not acquainted with all the recommendations made by the Hospital Reform Association, as I notice that in the last report of his hospital (which he has been good enough to send me) the first, and from some points of view the most important, recommendation has been totally ignored by the committee. This is hardly fair. The recommendation in question runs as follows:

"That inasmuch as the out-patient departments of hospitals and infirmaries of the United Kingdom are attended by (*a*) a large number of patients whose ailments are of such a trivial nature that they do not require the special skill of hospital physicians and surgeons; and by (*b*) a considerable number of patients who are in a position to pay either the fees of a properly-regulated provident dispensary, or those of general practitioners, the Hospital Reform Association is of opinion that these departments should be restricted to the treatment of patients whose cases require special skill, and whose circumstances necessitate their application for gratuitous treatment."

Now, sir, the question arises whether the first part of this recommendation is carried out at the Central London Throat and Ear Hospital, and, judging from the statement of diseases published in the last report, it is apparent that a very considerable number of patients are treated whose ailments are of a very trivial character, and do not require the special skill of its medical officers. I instance in the support of this contention the following cases:

	Cases.
Chronic enlargement of lymphatic glands	202
Goitre	93
Stomatitis	18
Tongue tie	5
Relaxation and elongation of uvula	224
Acute and subacute inflammation of tonsils... ...	565
Chronic inflammatory hypertrophy of tonsils ...	1,685
External and vestibular eczema of the nose	121
Chronic laryngitis	311
Impacted cerumen in the external meatus	1,732
Eczema of external meatus including auricle ...	127

Unless I am much mistaken, general practitioners would be able to deal with all these disorders quite as effectually as the specialists attached to the Central London Throat and Ear Hospital.—I am, etc.,

Cardiff, May 2nd. T. GARRETT HORDER.

PRIVATE PRACTITIONERS AND PUBLIC PAYMENTS FOR VACCINATION.

SIR,—In the BRITISH MEDICAL JOURNAL of April 16th a letter signed "Member" says, amongst other things, "If public vaccinator appointments were made for large districts, and were freed from the necessity of private practice, they would be valuable enough to encourage a good class of men to take them up." I must enter a strong protest against this. Take my own case, similar, I have no doubt, to a great many others; I have a so-called unopposed country practice, and I am medical officer and public vaccinator for my own district, and, without at all wishing to blow my own trumpet, I may say I attend my vaccination station regularly, and what is more I find the people bring their children well, and the percentage of unvaccinated children must be nearly *nil*. The people who do not care to attend the station are quite willing to have their children vaccinated privately; therefore, I should strongly object to my vaccination and the money (though this is small in amount) being handed over to help make up a district for someone else. I may say I see no need for domiciliary visits, at any rate in the country districts.—I am, etc.,

April 16th. M.B.

PRELIMINARY EDUCATION.

SIR,—In your article on "Preliminary Education" (in the BRITISH MEDICAL JOURNAL of March 26th, pp. 854-5, under "University Examinations," reference is made to those of the University of Durham, the inference from which is that this examination is ridiculously easy. It may be so, but apparently it is even now not sufficiently easy for the education of the class of men anxious to enter the profession. "We"—I quote the words of an examiner regarding the recent examination—"did our duty. There were five candidates for registration (certificate of proficiency). One sent up no papers, and the other four failed, grossly illiterate. English spelling in most, if not all, cases was disgraceful, and they failed in other subjects also. I do not wonder at the outcry if such men can get through anywhere."

I do not think the Council should themselves examine, but pressure should be brought to induce them to insist on a certain standard. We should not then be confronted with such a fiasco as that indicated in my quotation. Surely, amongst the limitless ninety-one some fifteen or twenty examinations could be found whose reputation was above question, and a rule passed by the General Medical Council that they would accept no certificate of proficiency in general education save from amongst those selected for the purpose of registration as a medical student.—I am, etc.,

SELBY W. PLUMMER, M.D.Dunelm.,

Durham. Member of Convocation.

PAROCHIAL GRATITUDE.

SIR,—Under the above heading you comment, in the BRITISH MEDICAL JOURNAL of March 12th, on a flagrant case of injustice to Dr. Mackechnie, the late parochial medical officer of Kilfinichen, Mull. On April 9th your correspondent, "M.B.A.," complains that he, too, has been dismissed from his appointment by a Highland parish council on false charges, the truth of which was not tested. In both cases the cause of dismissal is said to be simply personal spite. May one suggest, reading between the lines, that the spite was engendered by the too assiduous devotion of the medical officers to the sanitary interests of the poor? The parish councillor is, in private, most frequently the slum landlord, fattening on rents snatched from fever-stricken "dwellings," which no medical officer with a conscience can pass by in silence. The subject is one of great importance to the profession, for if such cases as these pass unnoticed and without appeal, the position of the parochial medical officer, or that of the medical officer of health, will in many cases become unbearable.

From the facts related by the Duke of Argyll it is apparent that no man was ever more entitled to the gratitude of the community than Dr. Mackechnie. The parish council of Kilfinichen thought otherwise, and dismissed their medical officer, as Lord Balfour states, "on grounds which have nothing whatever to do with his professional duties." This is the reward received for the noblest and most self-sacrificing devotion to duty. The true remedy for all such cases is, as you well say, that no medical officer shall be removable without the consent of the Local Government Board.

"Honour to whom honour is due."

At the forthcoming meeting of the Association at Edinburgh, I hope some expression of sympathy and regard will be shown Dr. Mackechnie in appreciation of his devoted services. "If one member suffer all the members suffer with it, or one member be honoured all the members rejoice with it."

After the Duke's appeal to all honourable men to abstain from canvassing for the vacant post, let us hope that we have heard the last of that emaciated and toothless bogey, "trade unionism." If there be one fact more patent than

another, it is the lamentable absence of any unionism in the profession.

One word more. We know that Mr. Bumble, the brass buttons of whose coat appropriately represented the Good Samaritan, despised the law and thought it "a hass." His children, wiser in their generation, have risen, by the aid of the law, to adorn the Board of which their distinguished ancestor was the humble servant, and many a Bumble junior is now in office. Well may we say with Quince:

Bless thee, Bottom! Bless thee, thou art translated

But the Bumble family grateful! Imagination reels at the idea. Their only gratitude consists in the enjoyment of the sweets of office and their lively expectation of more sweets—that is, of higher rates yet to come out of the pockets of their unfortunate victims.

As Mr. Bumble so eloquently denounced juries, so his children would doubtless include ratepayers, and especially doctors, in the same category: "Juries is ineddicated, vulgar, grovelling wretches. They haven't no philosophy nor political economy about 'em. I despise 'em. I only wish we'd a jury of the independint sort in the House for a week; the rules and regulations of the Board would soon bring their spirit down for 'em."

The spirit of Bumbledom is always the same, and it is not difficult to foresee that there will yet be a bitter struggle between science and humanity on one side, and on the other Bumbledom in its most arrogant and repulsive form.—I am, etc.,

Forest Hill, April 23rd. JOHN M. BRIGHT.

THE CORPORATE REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

SIR,—The protest of the Fellows and Members of the College of Surgeons against the usurpation of their right by the Council of the College is not a day too soon. Albeit the General Medical Council was instituted first to improve and regulate the education and qualifications of the practitioner, now that this vast work is fairly well accomplished other questions of a widely different nature press for consideration.

The members of the Council of the College are all well-to-do. What can they know of club practice, etc.? Can they care into whose pocket goes the small fee for vaccination? No one who has not been through the fire can tell what it feels like. Therefore it is not in the nature of things that one of the Council can adequately represent the Members of the College. Further, under the proposed Midwives Bill the College of Surgeons is to appoint three members of the Board. Who would appoint these? Would the Council be at all likely to nominate a man who has had some experience in guinea or 15s. midwifery? Yet we want such. Further still, a London University Bill is supposed to be on the way. Its composite Senate contains a member elected by the College of Surgeons. Again we may ask: By whom—President? Council? Fellows? Members? The same questions may be asked about the University members. No one would for a moment wish to displace Sir Wm. Turner. But who appointed him? Was it the Senatus? Practically the Medical Faculty, that is to say, Edinburgh College, not Edinburgh University, sends him up. (Not that the result is far wrong, for the Scotch professoriate always more or less remain in touch with their graduates in a way that is quite impossible to a mere examining body like the Colleges.) Nevertheless, I hold the election should be openly and plainly by graduates, or Licentiates, Members, and Fellows, whatever they may be called. What is wanted is a definition, whether by Act of Parliament or by a decision in the Law Courts. The result may be a copious infusion of new blood into the General Medical Council. Let us hope so.—I am, etc., A. G. P.

May 3rd.

THE ALKALINITY OF THE BLOOD IN GOUT.

SIR,—With reference to the conclusion contained in my paper on this subject in the BRITISH MEDICAL JOURNAL of April 23rd last that the alkalinity of the blood is not necessarily diminished during an attack of gout, Dr. Haig ventures this statement in the JOURNAL of to-day, that my "own figures show that it is slightly below normal during the attack, and this in spite of the administration of colchicum and citrate of potassium, which would tend to raise it." If Dr. Haig will refer to the figures on which he bases this criticism he will find that his deduction is remarkably erroneous. The estimations of the alkalinity of the blood made on thirteen days during the attack of gout show that on six days the alkalinity was normal, on three days above the normal, and only on four days below the normal. As a further indication of the unfortunate nature of the deduction drawn by Dr. Haig, the four occasions on which the alkalinity of the blood fell below the normal occurred while the patient was under treatment with colchicum and citrate of potassium, both of which, according to my critic, would tend to raise the alkalinity of the blood, but which on those occasions assuredly did not.

Dr. Haig reiterates his view, which is based on no experimental evidence whatever, that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urate out of solution, although I showed by the results of a series of experiments, described in the Goulstonian Lectures[1] last year, that a diminution in the alkalinity of blood serum showed no such tendency whatever. Since the publication of those experiments no refutation has appeared of the accuracy of the conclusions drawn from them.

With regard to Dr. Haig's question as to the hour of the day at which the blood was examined, it was on every occasion drawn at 2.30 P.M. I have not as yet made, although I intend to do so, any extended series of experiments to ascertain whether the alkalinity of the blood fluctuates during the day, but so far my observations tend to show such fluctuations do not occur.

In my paper I only tabulated the determinations of the total acidity of the urine for the days on which the alkalinity of the blood was also determined, and therefore Dr. Haig remarks that he "should regard such disjointed records as valueless." Unfortunately for this judicial decision, I determined the total acidity of the urine on every day throughout the attack of gout, and as all the figures came into line on the curve I gave, I only tabulated those obtained on the days on which the alkalinity of the blood was determined, in order not to burden the table with unnecessary figures.—I am, etc.,

Weymouth Street, W., April 30th. ARTHUR P. LUFF.

HE DIDN'T SEE THE JOKE OF IT.

SIR,—About a month ago I came across an amusing proof how entirely the antivaccinationists are lacking in the sense of humour. In the number for March of a little-known periodical entitled *Personal Rights*, presented to (not, I am glad to say, subscribed for by) the Oxford Union Society, there is a letter signed "William Tebb," in which the author calls attention to Dr. A. McCook Weir's statement in the BRITISH MEDICAL JOURNAL of January 22nd, p. 248, to the effect that he had had "the misfortune to be drawn into a contest with antivaccinationists for quite two years, and had always regretted it." Of course every person possessed of common sense understood Dr. Weir to mean (as I know he actually did) that it was of no more use to argue with antivaccinationists than with, as the *Standard* remarked some time ago, staunch believers in the Tichborne Claimant, or with those who assert roundly that the earth is flat, or with circle squarers, *et hoc genus omne* of faddists. Not so Mr. William Tebb. He gravely and triumphantly quotes Dr. Weir's utterance as a convincing proof that the arguments of antivaccinationists are incontrovertible. Could childish innocence go further than this?—I am, etc.,

April 28th. L. T.

THE ACCLIMATISATION OF EUROPEANS IN THE TROPICS.

SIR,—The somewhat sweeping assertions made by Dr. Sambon in his interesting address on The Possibility of Acclimatisation of Europeans in Tropical Countries call for some attention.

He tells us that "places which were considered the deadliest were now recommended as health resorts," that "authors, when speaking of tropical acclimatisation, had used the word climate as a synonym for heat."

"As for tropical deterioration, it was a phantom that was rapidly vanishing in the light of modern science." "It was

[1] BRITISH MEDICAL JOURNAL, 1897, vol. i, p. 7 9.

not true that European children could not thrive in tropical colonies. Under proper management they did very well."

It would be interesting to know the names of some of the deadliest places which have now become health resorts. I once remember a colonel on the retired list spending a few days at Sierra Leone when recovering from pneumonia from which he had been suffering in England, but his reason for going to Sierra Leone was an accidental one. He had been sent to the Canary Islands, but on account of quarantine he was brought on to Sierra Leone. He managed to escape without ill effects, but I fear Sierra Leone cannot be regarded as a health resort.

Whether it is true that most authors when they speak of climate merely refer to temperature I am unable to say, but I should not think that any scientific men would speak in so loose a way.

As to the question of deterioration, perhaps in the limited sense in which Dr. Sambon uses the term it may be a phantom, but it is a phantom grim to those of us who have much practical experience of the deadly regions of the tropics. One might be prepared more or less to agree with him if one might exclude from consideration the effects of malaria in all its forms—dysentery, ankylostomiasis, etc. But can we leave out of consideration these important factors from our estimate of the possibility of acclimatisation?

But perhaps Dr. Sambon's most astonishing statement is with regard to European children. I am sure that those of us who have much to do with tropical climates would be most thankful to hear how this statement could be justified by facts.

That a scientific study of tropical disease will do much to help Europeans to combat the dangers of tropical travel who can doubt? and personally I feel that we owe a great debt of gratitude to Dr. Manson for his constant advocacy of such study; but, as Dr. Felkin has said, I believe that with regard to most parts of the tropics acclimatisation is still outside the sphere of practical politics.—I am, etc.,

Charles F. Harford Battersby,
Stratford, E., April 30th. Principal of Livingstone College.

THE PATHOLOGY AND TREATMENT OF GENU VALGUM.

Sir,—Mr. Jackson Clarke in his letter in the British Medical Journal of April 30th, laments the fact that so many theories have been brought forward as to the pathology of genu valgum. So long as surgeons form their opinions from an examination of the limb in the usual way they will vary greatly, for such examination is very apt to mislead. If instead, surgeons will take skiagraphs of these cases, they will at least see where the bony deformity is, and I believe if Mr. Jackson Clarke will do so, he will have to abandon his view that there is frequently a deformity in the lower end of the femur.

There is hardly a possible abnormal condition of growth or form in the ends of the bones which is not described by some surgeon or other as present in genu valgum. I would ask Mr. Jackson Clarke for further proof of "softening and thickening of the cartilages." I do not think the fact that Mr. Clarke has been able in some cases to rectify the deformity by forcing the leg inwards any proof of such change, or indeed that of stretching of the internal ligament is a factor in the production of genu valgum, but I believe the rectification of the deformity in this way is rather the result of stretching of the external lateral ligament, and the ligaments are often very loose in these rickety children. Does Mr. Jackson Clarke maintain that the articular cartilages in genu valgum become compressible like intervertebral discs, and can be altered in shape by manipulation of the limbs? If so, surely he must give some proof of this.

Mr. Clarke says he considers that "the constant mention of operation in connection with genu valgum has had a bad educational effect," and that students are led to think operation the only treatment. Mr. Clarke must not consider that because surgeons may write and speak chiefly about the operative treatment of genu valgum they ignore any other. My own paper dealt only with operative treatment, because I had nothing new to say about other methods, but Mr. Clarke has no right, therefore, to conclude that I should operate on al cases.

Mr. Jackson Clarke thinks my two cases might have been completely cured without operation. I fully recognise the fact that in young children—and these were young children—the deformity will in many cases become rectified as the child grows, if the child is kept off its feet, but the difficulty is to do this in the case of hospital out-patients for a sufficient length of time.

This difficulty (and the tedious nature of the splint method) has led some surgeons to operate on all young children with genu valgum by the method of manual osteoclasis. Professor Ogston spoke of 34 such cases at the Glasgow meeting of the British Medical Association in 1888,[1] and more recently Mr. Murray, of Liverpool, has strongly advocated it.[2] He has practised it in young children in a very large number of cases at the Liverpool Children's Hospital. One of the cases, operated on by the method referred to in my paper, was sent into hospital from a country workhouse to be straightened, and the other was sent into my ward by one of the out-patient surgeons for operation, and I had not enough faith in the uniform success of treatment by splints, etc., to send them out again without operating. I think the chance of recovery without operation for the workhouse child would have been small, for prolonged and careful treatment by splints, which would have kept the child off his feet, would not have been carried out, and I presume that the out-patient surgeon who sent the other child into the ward for operation considered he could do no further good by out-patient treatment. There seems no doubt that if by means of splints, or in any other way, young children are kept off their feet for a sufficient length of time, the bones tend to grow straight. For instance, there is the case related by Mr. Edmund Owen in his book on *Surgical Diseases of Children*, in which the anterior curvature in one leg got well, while the other leg was kept in splints for a year, after forcible straightening. The difficulty is to get hospital out-patients to carry out the treatment. They get dissatisfied because the effect is so slow, and demand that the limb shall be straightened.

I very much doubt if splints or other forms of apparatus do more than prevent increase of deformity, and by preventing the child from walking they allow the bones to grow straight, as they naturally tend to do if the child is kept off its feet. Is it possible that by means of buckling straps or bandages, or even elastic bandages, fixing the limb against an outside splint, the bones which are deformed will become moulded into proper position, even if the skin of the child could stand much continuous pressure? I think not. The external lateral ligament does no doubt stretch, and the genu valgum is rectified to a certain extent; but the essential morbid condition, which consists in a change in the shape of the leg bones, cannot be altered in this way; and I think the same holds good with regard to repeated manipulations by the mother or nurse. In the method of treatment called "forcible straightening," probably a green-stick fracture occurs somewhere. I have treated many cases of genu valgum by splints, and at one time always employed elastic pressure on the inner side of the knee; but I do not now believe that gradual pressure can rectify the deformity, and at the present time I use splints simply to keep the children off their feet while the general condition of rickets is treated.—I am, etc.,

Clifton, April 30th. Charles A. Morton.

LIVING TUBERCLE BACILLI IN THE NEW TUBERCULIN.

Sir,—I noticed in the correspondence columns of the British Medical Journal of January 15th, a brief note of inquiry from "F.R.C.S." as to "whether it is an accepted fact that living tubercle bacilli may be obtained from Koch's new tuberculin"; and as the question, one of considerable importance, appears to have met with no answer, I now take the liberty of replying. That living tubercle bacilli and other micro-organisms have been found in Koch's new tuberculin (T.R.) the literature on the subject from reliable sources leaves little or no room for doubt.

If "F.R.C.S." has not already done so, it may interest him

[1] British Medical Journal, 1888, vol. ii, p. 1149.
[2] *Ibid.*, 1894, vol. ii, p. 413.

to refer to the following authorities, from whose writings short abstracts have been made:

1. Maragliano (*Compte Rendu Hebd. Soc. de Biologie*, June 18th, 1897) found that 2 guinea-pigs out of 7 treated with Koch's "T.R." became infected with tuberculosis; he also found other micro-organisms in the tuberculin.

2. G. Schroeder (*Münch. med. Woch.*, June 20th, 1897) found a few tubercle bacilli in 2 vials of tuberculin R. and pneumococci, yeasts, etc., in all vials opened. Three cases lost ground under treatment with "T.R."

3. Trudeau and Baldwin (*Medical News*, August 28th, 1897) found that out of 5 guinea-pigs treated with the new tuberculin "T.R.," 2 became infected with tuberculosis, and 34 vials out of 64 were contaminated with yeasts and other micro-organisms.

4. Huber (*Berlin. klin. Woch.*, No. 1. February 14th, 1898) found tubercle bacilli and staphylococci in the "T.R."; also 2 guinea-pigs became infected with tuberculosis without having been inoculated in any other way. He also failed to get any immunity with the tuberculinised animals, the controls living longer.

5. Burghart (*loc. cit.*) in a case treated with tuberculin R. found a cold abscess at site of inoculation, the pus from which contained only tubercle bacilli; he did not test the pus on guinea-pigs to see if the tubercle bacilli were living.

Besides the above numerous observers have reported contamination from streptococci, staphylococci, yeasts, etc., in previously unopened vials of "T.R."

From the above evidence it would seem that until the methods of preparing the new tuberculin R. have been improved upon extreme caution at least should be observed in its use as a method of treatment of human tuberculosis.—I am, etc.,

W. H. JAMIESON, M.D.

Saranac Lake, N.Y., March 30th.

THE MENTAL CONDITION OF HÆMOPHILIACS.

SIR,—In four cases of hæmophilia which I have seen I have noticed mental peculiarities in all: (1) A female, aged 22, suffered from melancholia, but in this case there was a family history of insanity, the father of the girl having drowned himself; (2) two patients were accomplished liars; and (3) one patient was so "bad tempered" that his parents said they would rather he died than have to live with him at home.

With regard to tattooing, I fail to see that the tattoo punctures would be likely to cause trouble, as no person who has had to deal with these unfortunate patients would think of completing the work "at one sitting." I am afraid the alternative suggestion would fail, as the patient would in all probability remove the label on the first possible opportunity.—I am, etc.,

Bedford General Infirmary, April 25th. S. J. ROSS.

CHURCH AND DEAD HOUSE.

SIR,—I think it should be pointed out how injurious to health is the practice which now holds among many church people, to place the body of the dead in the church for a day or two before burial. It was my painful experience to attend the funeral of a friend a few days ago, and on entering the church one detected at once the disagreeable effluvia of decomposition of a dead body; the body had been in the church for two days, an early service had been held that morning, and later on the church was filled with people, and all the windows closed.

If it is necessary to make the church into a dead house, then proper provision should be made; disinfectants should saturate the body, and at least the windows should all be left open.—I am, etc.,

Durham, May 1st. EDWARD JEPSON, M.O.H.

TINCTURA BELLADONNÆ *B.P.*, 1886.

SIR,—The increase in strength of this preparation is so marked that we think it desirable to call the attention of prescribers to the fact.

It is now required to contain about 0.05 per cent. of alkaloid. The tincture prepared according to *B.P.* 1885 rarely contained more than 0.025 per cent. of alkaloid, so that for all practical purposes the new tincture is double the strength of the old, while the official dose remains almost the same.

We hear from Messrs. Spottiswoode and Co., the publishers of the *British Pharmacopœia*, that that work will not be obtainable till May 11th, although by its advertisement in the *Gazette* on Friday, April 29th, it became binding on all dispensers from that date.

It would therefore be a great benefit if, for the present, prescribers would indicate by which *Pharmacopœia* they desire their prescriptions to be made up, as tincture of belladonna is not the only preparation of which the strength has been materially altered.—We are, etc.,

Oxford Street, W., May 3rd. JOHN BELL AND CO.

ANÆSTHESIA BY NITROUS OXIDE GAS AND OXYGEN.

SIR,—The possibility of safely producing prolonged anæsthesia with nitrous oxide gas deserves to be more widely known than it is, and Dr. Bellamy Gardner has done the medical profession a great service by publishing the result of his experience in the BRITISH MEDICAL JOURNAL of April 30th, p. 1133.

During the last few years a mixture of nitrous oxide gas and oxygen has come much into vogue—especially in dental cases—for producing a more prolonged anæsthesia than is usual with nitrous oxide alone.

More recently still it has become the fashion to use the mixture for surgical operations; but it is not generally known that results as good, or almost as good, can be produced with the old apparatus by allowing the patient to inspire his oxygen from the air.

When Dr. Hewitt's cumbrous and weighty machine is used, a very large quantity of gas is necessary to produce anæsthesia for any length of time. On the other hand, the same results can be obtained with much less trouble and greater economy by means of nitrous oxide administered through the ordinary three-way valve.

Since 1892 I have anæsthetised several hundred patients in this way with complete success for operations lasting from a few minutes to half an hour. No unpleasant after-effects were experienced, and in no case was there any difficulty during the operation.

I do not think that we have yet any sufficient data to guide us to an opinion as to the comparative safety of the two methods.—I am, etc.,

Chiswick Lane, W., May 3rd. G. P. SHUTER.

Obituary.

SAMUEL GORDON, M.D.DUB.,

Physician to the Richmond Hospital, Dublin.

THE death of Dr. Samuel Gordon, of Dublin, on April 29th, will cause deep regret among the large number of members of the profession who, not only at home but in the Colonies, can claim him as their teacher and their friend. For half a century he had held a very prominent position in the Irish metropolis, and there are few who have earned equal respect and affection among all classes.

He was born at Clonmel in 1816, and was educated there in the famous school of the Rev. Robert Bell. Thence he proceeded to Trinity College, where he graduated B.A. in 1837, and M.A. in 1841. He obtained his M.B. in 1844, and in 1877 the degree of M.D. was conferred by the University. His hospital studies were pursued in the Richmond, Whitworth, and Hardwicke Hospital. Here he served as intern pupil to the late Mr. Carmichael. He was a most industrious student, and soon after he had taken his degree he edited a volume of lectures on syphilis delivered in the hospital by his famous master. In the Fifties the Governors elected him a Visiting Physician, and he afterwards became Lecturer on Practice of Medicine in the Carmichael School. In his earlier days as Hospital Physician he proposed and carried out himself a laminectomy for pressure paralysis; and, although the patient did not recover, the case affords proof of his progressive views regarding treatment. Other appointments followed; he became Physician to Swift's Hospital for Lunatics, a Governor of his own hospital, Consulting Physician to the Coombe Hospital, and President of the Royal Zoological Society, in which office he succeeded the late Rev. Samuel Haughton, being himself succeeded by Field-Marshal Lord Roberts. Some years ago he was chosen President of the Royal College of Physicians of Ireland, an office which he held for three years, when he was elected President of the Royal Academy of Medicine for a like period. He was also a promoter, with the late Earl of Meath, of the Meath Industrial School for Pro

testant Boys, and in this institution he took the keenest personal interest.

Dr. Gordon worked up to the last, and his fatal illness—influenza followed by pneumonia—was contracted while pursuing his professional duties. People wondered at the extraordinary physique which seemed to carry him through everything. At social gatherings he was a welcome personage, enlivening them by his genial courtesy, and a fund of humour which always gave pleasure and never wounded. There was no professional movement for good in which he was not a leading influence. He would undertake almost any duty, and do it. His method was a lesson. An early riser, he breakfasted at 7 o'clock, summer and winter, disposed of all his correspondence before 9 o'clock, and then he was ready for his labours outside. He had a reverence for punctuality, and as a consultant he won the thanks of his brethren by never being late. All his duties were discharged with strict regularity, and in this way he managed to get through an amazing amount of work altogether outside the calls of his profession.

"Sam" Gordon, as his pupils called him with real affection, was a sound clinical teacher. He had not a very showy method of instruction, but what he had to tell was always worth hearing and remembering. He was an admirable diagnostician, and he gave his reasons to the pupils in language simple but forcible, making them follow step by step the facts which led him to a conclusion. While he did not hesitate to denounce an idler, his manner was always so paternal and kindly that no words from him left a sting, although they were not usually forgotten, and many a survivor of the generations of students whom he taught still treasure the lessons he gave. He was essentially a wise man, of great common sense, of the most generous instincts, and endowed with a kindliness of nature which secured his popularity everywhere.

His last important act was to preside at the laying of the foundation stone of a new surgical hospital to replace the present Richmond, and the hope of his colleagues was that he would live to see the new wards occupied. They regarded him with true affection. For some years he had not done ordinary clinical work, but they rejoiced to have the benefit of his counsel. At the Board meetings, where he almost always presided, he was business-like, and full of energy, and everyone recognised the force of his moderating influence. He did not write much on professional subjects. The truth seemed to be that the many calls upon his time gave no opportunity for regular literary work. But his brethren and the public knew his qualities as a physician, and valued them.

Even in the latter years of his life he did a very large consulting practice, for he had a rare experience in fevers and ordinary medical cases, and he was full of the knowledge which comes from careful observation. A personality such as this, whose life almost spanned the century, does not drop out of line without making the loss very apparent. This is especially so in the case of Samuel Gordon, for in a long life he made troops of friends, and had not outlived all of them. He kept in close touch with the succeeding generations, for he was young to the end; and so to-day there is real and widespread sorrow for the loss of one who held in so large a degree the esteem and affection of all who were privileged to know him.

THOMAS SANKEY COOPER, F.R.C.S., L.S.A., J.P.

This gentleman died at Canterbury on March 13th, at the ripe age of 80 years, deeply regretted by a wide circle of friends. He had been seriously ill for some time, but had apparently regained strength during the last week of his life. He died in the night during sleep. He became M.R.C.S. and L.S.A. in 1839, and F.R.C.S. in 1854. He had an extensive practice in his native city, but retired in 1867 at the early age of 50 years. In 1866 and again in 1875 he was elected Mayor of Canterbury; he had also been Chairman of the Commissioners of Income Tax since 1874. He was courteous, but firm, of a generous disposition, and always ready to help in cases of genuine necessity. The funeral, which took place in the churchyard, Thanington, Canterbury, was attended by the Mayor and a large number of the other officials and notabilities of the city.

We regret to have to record the death on April 21st of Mr. James Rhodes, of Glossop. He was born at Tintwhistle, about ten miles from Glossop, in 1830. In 1849 he was apprenticed to the late Dr. Turton, of Glossop. He attended lectures at the Pine Street School of Medicine in Manchester, and became L.S.A. in 1853, and M.R.C.S. in 1854. In the same year he began practice in Glossop, and was appointed Medical Officer to the Union, so that he had been associated with Glossop and its neighbourhood during the whole of his life. He was the first Medical Officer of Health for the Glossop Borough and District, was Honorary Surgeon to Wood's Hospital, and held various other appointments. He was also a Justice of the Peace for the borough, a member of the Manchester Literary and Philosophical Society. In spite of the calls of an extensive private practice he found it possible to devote much time to scientific pursuits. He leaves three sons and one daughter to lament his loss. The respect in which he was held was evidenced by the large number of borough officials, representatives of societies, and personal friends who followed him to the grave.

The death is recorded of Brigade-Surgeon George Moncrieff Govan, M.D., at Almora, North-West Provinces, India. The deceased entered the Bengal Medical Service in 1851 and retired in 1887. He served in the Burmese war of 1852-53, was present at the capture of Rangoon and at the storming of the stockade of the Dragon Pagoda, for which he received the medal and clasp. He served also in the Bhootan expedition, and took part in the capture of Buxa and the Tazagaon attack on the Bala stockade, for which he received the clasp.

We regret to announce the death from pneumonia of Surgeon-Captain James Walker at Jacobabad on the Upper Sindh Frontier District of India, at the early age of 28. The deceased was a graduate of Aberdeen University, where he took the degree of Bachelor of Medicine, and every prospect of a brilliant career seemed opening before him. He had been sent at the shortest notice from Quetta to Hyderabad owing to the shorthandedness of the medical military staff in India. On his return to Quetta he was sent on to the camp at Jacobabad with a battery of artillery for gun practice, and here shortly after his arrival he was taken ill. There being no other doctor in the station, he had to remain five days without skilled attendance until a doctor and a nurse could be procured from Quetta, but by that time the disease had gone too far to be arrested. The deceased officer was very popular with his fellow-students at Aberdeen, and much regret is felt for his relatives.

Deaths in the Profession Abroad.—Among the members of the medical profession who have recently passed away are Dr. Humbert Mollière, Physician to the Lyons Hospitals, and author of numerous monographs on the history of medicine and the medical antiquities of Lyons, aged 52; Dr. Jacob Schütz, the senior among the medical practitioners of Prague, author of monographs entitled, *Das Wesen und die Behandlung der Diphtheritis* and *Medicinische Casuistik*, aged 82; and Dr. Eduardo Periera Pimenta, Professor of Surgery in the Eschola Medico-Cirurgica, of Oporto, aged 60.

The death of Miss Higgins, one of the nursing sisters in the Civil Hospital of Hong Kong, has thrown the whole community of the colony into mourning. Ever since the outbreak in 1894 Miss Higgins has devoted her great abilities to the nursing of the plague-stricken. Miss Higgins proceeded to Hong Kong with the first batch of nursing sisters, who went to Hong Kong in the Government service in 1890. Of Irish birth, she received her training at the Marylebone Infirmary in London, and volunteered for service in Hong Kong when the Government first decided to have the nursing conducted by British nurses. Her devotion to duty, no less than her amiable and bright disposition, recommended her to the public, and by the Europeans and Chinese alike she will be long remembered and her memory respected. It may be remembered that another of the staff of sisters in Hong Kong, Miss Mackintosh, was attacked by plague in 1895, and narrowly escaped with her life. This circumstance, however,

did not deter Miss Mackintosh volunteering to go to India for plague when the Government called for volunteers to assist in nursing the plague-stricken in India.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

The following appointments have been made at the Admiralty: Robert Grant, M.B., Deputy-Inspector-General, to Chatham Hospital, April 27th; William R. White, C.B., Fleet-Surgeon, to the *Hannibal*, May 10th; John B. B. Triggs, Staff-Surgeon, to the *Alexandria*, April 26th; John L. Aherne, Staff-Surgeon, to the *Caledonia*, May 10th; Percival K. Nix, Surgeon, to the *Hannibal*, May 10th; William Jackson, Surgeon, to the *Rodney*, May 10th; Alfred H. Jeremy, Surgeon, to the *Australian*, May 10th; Arthur Gaskell, Surgeon, to the *Victory*, May 19th; John D. Hughes, Surgeon, to the *Tartar*, May 10th; George Ley, Surgeon, to the *St. Vincent*, April 27th; John K. Robinson, Surgeon, to Bermuda Hospital, April 27th; Thomas E. Honey, Surgeon, to the *Defiance*, April 27th; Walter B. Maurice, Surgeon, to the *Victory*, additional, to be lent to the *Agincourt*, April 27th.

ARMY MEDICAL STAFF.

Surgeon-Major H. E. R. James succeeds Surgeon-Lieutenant-Colonel H. Grier as second in command and Instructor at the Depôt and Training School at Aldershot.

Surgeon-Captain W. G. Beyts has been appointed Medical Officer to Sir William Lockhart when he assumes command of the forces in India.

INDIAN MEDICAL SERVICE.

Brigade-Surgeon-Lieutenant-Colonel Sir A. S. Lethbridge, M.D., K.C.S.I., Bengal Establishment, has been awarded a special additional pension of £100 per annum.

Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., Bengal Establishment, is promoted to be Surgeon-Colonel from April 2nd. He was appointed Assistant-Surgeon, October 1st, 1869, and Brigade-Surgeon-Lieutenant-Colonel, April 2nd, 1894.

Surgeon-Colonel S. B. Hunt, Madras Establishment, is permitted to retire from the service from March 1st. His first commission dates from March 31st, 1865.

Surgeon-Captain G. C. Hall, temporary half-pay Madras Establishment, retires from the service on permanent half-pay. He was appointed Surgeon-Captain, September 30th, 1886, and was placed on half-pay, March 12th, 1896.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Major William Collingridge, M.D., is promoted to be Surgeon-Lieutenant-Colonel on increase of establishment, May 4th.

THE VOLUNTEERS.

The undermentioned officers have resigned their commissions, dated May 4th: Surgeon-Lieutenant E. A. Malcolmson, 4th Volunteer Battalion the Queen's Royal West Surrey Regiment; Surgeon-Lieutenant L. A. Morgan, M.D., 1st Volunteer Battalion the King's Liverpool Regiment; Honorary Assistant Surgeon R. Lowe, 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders); Surgeon-Captain J. Wylie, M.B., 1st Dumbartonshire Rifles

Surgeon-Lieutenant J. G. Turner, 7th Middlesex Rifles (London Scottish), is promoted to be Surgeon-Captain, May 4th.

Mr. William B. Colquhoun is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Hampshire Regiment, May 4th.

Surgeon-Major T. A. M'Cullagh, 2nd Volunteer Battalion the Durham Light Infantry, is promoted to be Surgeon-Lieutenant-Colonel, May 4th.

The Queen has been pleased to confer the Volunteer Officers' Decoration upon the following: Surgeon-Major William Gandy, 2nd Volunteer Battalion the East Surrey Regiment; Surgeon-Lieutenant-Colonel Henry Wright and Surgeon-Captain George M. Lowe, M.D., 1st Volunteer Battalion the Lincolnshire Regiment; Surgeon-Lieutenant-Colonel David Cowie, M.B., 5th (Glasgow Highland) Volunteer Battalion the Highland Light Infantry; Surgeon-Lieutenant-Colonel Robert S. Turner, M.D., 6th Volunteer Battalion the Gordon Highlanders.

THE SURGEON TO THE COMMANDER-IN-CHIEF IN INDIA.

Surgeon-Major A. E. J. Croly, Army Medical Staff, has been appointed to the Personal Staff of his Excellency the Commander-in-Chief, General Nairne. Surgeon-Major Croly's commission as Surgeon-Major is dated March 6th, 1892.

THE NORTH-WEST FRONTIER RISING IN INDIA.

The *London Gazette* of May 3rd publishes some corrections in Sir William Lockhart's dispatch of January 26th, in which Surgeon-Major H. B. Briggs should have been described as of the Indian Medical Service instead of the Army Medical Staff. The other items referred have no special interest for medical readers

The same *Gazette* contains the report of the operations conducted by Colonel G. L. R. Richardson, C.I.E., with the Flying Column of the Kohat Field Force from August 20th to October 1st, 1897. Among the officers selected for special mention is that of Surgeon-Lieutenant-Colonel H. Hamilton, M.D., in charge of the 42nd Native Field Hospital.

THE NEW TITLES.

Surgeon-General Retired writes: As the compound titles were extended to medical officers of the Indian and Auxiliary Forces, it is presumed the new simple military titles will be likewise so extended. Of course, they must also be given to medical officers liable to recall; but why should not retired officers assume them? At present many of these officers have no titular designation to show they ever were in the army.

RECALL TO SERVICE.

Surgeon-Major asks: Would a retired officer, liable to recall to service, be permitted to reside in a colony where British troops are stationed?

*** We know of no regulation limiting residence of a retired officer liable to recall to service on emergency. Any regulation limiting such residence in a person liable to probably a remote contingency, would be impolitic and almost intolerable. Of course, anyone liable to such recall must always make known his address and whereabouts to the military authorities, and if necessary can get permission to reside anywhere. We have known officers so liable to reside abroad.

GOLD COAST CASUALTIES.

In the action in the district south of Gambaga in the Gold Coast Hinterland between the Haussa troops and the natives the casualties on our side were 17 wounded, including Lieutenant Middlemist and Dr. Tweedy, both very slightly. The expedition was commanded by Colonel Northcote and accompanied by four officers, inclusive of the two who were wounded.

RETIREMENT ON GRATUITY.

A correspondent writes that the answer of the Under Secretary of State to Colonel Welby on the employment of medical officers retired on gratuity was insulting. If these officers are unsuited for employment why are their names retained in the Army List as liable to recall to service?

*** We cannot but think it is a mistake to retain the names of officers retired on gratuity as liable to recall; they should be allowed to go; besides the State can have and has no hold on these officers. Of course it is different with those drawing pensions.

HOSPITAL AND DISPENSARY MANAGEMENT.

DOWN DISTRICT ASYLUM.

According to the annual report for the year ending December 31st, 1897, the total number of cases under treatment during the twelve months was 668, of whom 343 were males and 325 females. The admissions throughout the year numbered 50 males and 63 females; total 113, while the discharges were 67, and the deaths 50. The percentage of recoveries calculated upon the number of admissions was 37 4. A very large proportion of the newly admitted cases suffer from heart or pulmonary affections; and of the deaths 19 are returned as resulting from heart disease and 21 from pulmonary consumption, so that these two affections are mainly responsible for the high rate of mortality during the year. The Inspector of Lunatics speaks well of the asylum under Dr. M. J. Nolan's superintendence.

MEDICO-LEGAL.

THE ASSESSMENT OF THE ROYAL COLLEGE OF SURGEONS.

A petition of the Royal College of Surgeons of England praying for the discharge of an assessment made on them under the Customs and Inland Revenue Act, 1858, was heard in the Queen's Bench Division on April 29th. The ground on which the exemption was claimed was that the College was an institution for the promotion of "education, literature, science, or the fine arts." It was stated that the Crown had granted exemption in respect of the Museum, but contended that neither the library, the Examination Hall, and offices, nor the Conservator's House should be exempted, they not being both appropriated and applied in fact for the promotion of science. The Court found that the Conservator's House was exempt, but that the other parts were not exempt, although Mr. Justice Wright observed that the library came very near the line of exemption.

CONDENSED MILK.

The action of Petchley *v.* Taylor, which was heard in the Queen's Bench Division on April 20th, was a case stated by a metropolitan police magistrate upon convicting the appellant upon an information preferred under the Sale of Food and Drugs Act, 1875, for unlawfully selling to the prejudice of the purchaser milk which had 97 per cent. of the original fat abstracted, so as to effect injuriously its quality and substance without making disclosure of the said alteration, contrary to Section IX of the above Act. Mr. George Elliott appeared for the appellant and Mr. Courthorpe Munroe for the respondent.

On November 13th, 1897, the appellant, according to the report in the *Times*, sold to the respondent a tin containing a substance described as "Cup Brand Condensed Milk." On the tin were the words: "This tin contains skimmed milk with nothing added but the finest sugar." The substance in the tin was proved to be separated milk, or milk from which the cream had been separated by means of a machine called a separator, and that 97 per cent. of the original fat had been abstracted. It was also proved that the term "skimmed milk" meant milk from which a portion of the fat had been removed by the process of skimming the surface of the milk, and that the greatest amount of fat that could be thus removed was 63 per cent. Mr. Elliott contended that the alteration was sufficiently disclosed by the term "skimmed milk," and cited Jones *v.* Davies (69 *L. T.*, 497) and Platt *v.* Tyler (58 J.P., 72).

The court dismissed the appeal.

THE WATERING OF MILK.

In the Queen's Bench Division, Court for the Consideration of Crown Cases Reserved, before the Lord Chief Justice of England and six judges, a case stated by a magistrate which had been argued before a divisional

court on April 22nd and reserved for the special Divisional Court, was heard and decided on April 30th. This case decided that a man who takes milk round for his master and waters the milk for his own purpose can be convicted of malicious injury to personal property. The decision of the court was unanimous.

PROSECUTION UNDER THE MEDICAL ACT.

THE case against Mr. Leopold Liebster, which was mentioned in the BRITISH MEDICAL JOURNAL of April 23rd, page 1116, was further proceeded with at the Worship Street Police Court, on April 28th.

Mr. Fleming, barrister, appeared to support the summons on behalf of the Medical Defence Union; and Mr. Haldinstein defended.

The Magistrate said that the charge of having wilfully and falsely taken and used the title of a doctor of medicine, he not being a registered practitioner, must fail. The second charge was that the defendant had used the title of Medical Officer to the National Medical Aid Society. The prosecution withdrew the case on that head. The magistrate said that he was not satisfied that the defendant had held himself out to be a medical practitioner under the Act. He had stated to the person sent to him that he was not registered in this country. The magistrate dismissed the summons, and granted the defence £10 10s. cost.

The prosecution intimated that a case would be asked for the High Court.

The case is one of considerable importance, since it raises the question of the right of an unregistered person to practise in this country.

CONVICTS AND THE PRACTICE OF MEDICINE IN THE UNITED STATES.

THE Supreme Court of the United States recently affirmed the constitutionality of the Act passed by the New York State Legislature in 1895, prohibiting persons who have been convicted and punished for a crime from practising medicine in the State. The decision was given in the case of a man who after an imprisonment of ten years for an offence committed in 1878, began to practise as a medical man after his release. At the time the law in question was passed he was so practising, and he brought an action to have the law declared unconstitutional. The Supreme Court held that it was within the police power of the State to enact such a law.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

PALEY'S EVIDENCES.—The Senate by a large majority has decided to retain Paley as a subject of the Previous Examination, the proposed substitution of Old Testament having met with little favour.

DEGREES.—At the Congregation on April 28th the following degrees were conferred:

M.B. and B.C.—R. A. Yeld, B.A., Trinity; C. C. Stead, B.A.; A. Trethewy, B.A.; and E. J. Woolley, B.A., Gonville and Caius.

M.B. only.—G. F. McCleary, B.A., Trinity Hall.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the examiners:

Part I. Surgery and Midwifery.—Barnes, B.A., Christ's; Boulton, B.A., Cla.; Byles, King's; W. D. Chapman, B.A., Corp. Chr.; H. N. Clarke, B.A., Trin.; Denyer, M.A., Queen's; Dore, B.A., Joh.; W. Eardley, M.A., Joh.; Bryer, B.A., Christ's; Garrood, B.A., Joh.; Glasier, B.A., Emm.; Glynn, B.A., Cla.; W. D. Harmer, B.A., King's; Hart-Smith, B.A., Gonv. and Cai.; Hay, B.A., Gonv. and Cai.; Jordan, B.A., Sid. Suss.; Kemp, B.A., Cla.; Letchworth, B.A., Emm.; A. F. MacCallan, B.A., Christ's; H. F. Parker, B.A., Emm.; Pettinger, B.A., H. Selw.; S. P. Pollard, B.A., Gonv. and Cai.; Powell, B.A., Emm.; S. B. Reid, M.A., Joh.; R. E. Sedgwick, B.A., Gonv. and Cai.; Sewell, B.A., Pemb.; C. C. Simson, M.A., Trin.; G. R. Slade, B.A., Trin.; Stacey, B.A., Joh.; F. W. Sumner, B.A., Joh.; Sutcliffe, B.A., Emm.; Talbot, B.A., King's; Tallent, B.A., Joh.; E. C. Taylor, B.A., Joh.; Thorp, B.A., Emm.; I. Ll. Tuckett, M.A., Trin.; Ware, B.A., Pemb.; W. K. Wills, B.A., Joh.; R. J. Willson, B.A.; Emm.; A. G. Wilson, B.A., Gonv. and Cai.

UNIVERSITY OF LONDON.

A MEETING of Convocation will be held on May 10th; the report of the Standing Committee will be presented. It will be moved that the October meeting of Convocation be fixed for the second instead of the last Tuesday. Dr. J. Wilkie will move a resolution expressing the opinion that the Government ought to take the sense of the House of Commons upon the present London University Bill in a division. The three members of the Faculty of Medicine who retire this year are Dr. J. R. Bradford, Mrs. M. A. Scharlieb, and Dr. N. I. C. Tirard. They are all eligible for re-election at this meeting. The vacancy on the Senate caused by the death of Sir R. Quain will be filled up on the nomination of Convocation at a meeting to be held on May 24th.

UNIVERSITY OF DURHAM.

AT the Convocation, holden on Saturday, April 23rd, the following degrees were conferred, namely:

Doctor in Medicine.—E. C. Bridges, M.B., B.S., Durham; R. C. Brown, M.B., B.S., Durham; H. Crichton, M.B., B.S., Durham; C. H. Joy, M.B., B.S., Durham; N. Magoris, M.B., B.S., Durham; W. Rawes, M.B., Durham; W. R. Shortt, M.B., B.S., Durham; J. W. Summerhayes, M.B., Durham; W. E. F. Tinley, M.B., B.S., Durham.

Doctor in Medicine (Practitioners of Fifteen Years' Standing).—M. G. Biggs, M.R.C.S., L.S.A.; F. C. Bryan, M.R.C.S., L.S.A.; W. L. Chubb, M.R.C.S., L.R.C.P.; W. Darley-Hartley, M.R.C.S., L.R.C.P.; C. G. Havell, M.R.C.S., L.R.C.P.; H. M. Lightoller, M.R.C.S., L.R.C.P., L.S.A.; J. McC. McCarthy, M.R.C.S., L.S.A.; L. W. K. Phillips, M.R.C.S., L.S.A.; A. J. Turner, L.S.A.

Master in Surgery.—J. W. H. Eyre, M.D., B.S., Durham; E. R. Kendall, M.B., B.S., Durham.

Bachelor in Medicine (M.B.)—T. G. D. Adams, College of Medicine, Newcastle-upon-Tyne; H. E. M. Baylis, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. T. Bell, College of Medicine, Newcastle-upon-Tyne; F. W. Crossman, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; H. J. Godwin, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. Harris, B.A., Guy's Hospital; F. C. James, M.R.C.S., L.R.C.P., St. Thomas's Hospital; H. P. Kennard, St. Thomas's Hospital; R. A. R. Lankester, University College Hospital; H. T. Newton, College of Medicine, Newcastle-upon-Tyne; T. J. Phillips, College of Medicine, Newcastle-upon-Tyne; A. M. Rygate, M.R.C.S., L.R.C.P., Guy's Hospital; R. C. J. Stevens, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; T. J. A. Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; P. E. Turner, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; M. D. Wood, St. Bartholomew's Hospital.

Bachelor in Surgery (B.S.)—T. G. D. Adams, College of Medicine, Newcastle-upon-Tyne; H. E. M. Baylis, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. T. Bell, College of Medicine, Newcastle-upon-Tyne; F. W. Crossman, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. Harris, B.A., Guy's Hospital; H. P. Kennard, St. Thomas's Hospital; R. A. R. Lankester, University College Hospital; H. T. Newton, College of Medicine, Newcastle-upon-Tyne; T. J. Phillips, College of Medicine, Newcastle-upon-Tyne; R. C. J. Stevens, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; T. J. A. Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; P. E. Turner, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; M. D. Wood, St. Bartholomew's Hospital.

THIRD EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the examiners.

Second-class Honours.—H. H. C. Dent, M.R.C.S., L.R.C.P., Mason College, Birmingham; N. C. Bailes, College of Medicine, Newcastle-upon-Tyne.

Pass List.—S. Cross, College of Medicine, Newcastle-upon-Tyne; G. O. M. Dickenson, College of Medicine, Newcastle-upon-Tyne; H. B. Fawcus, College of Medicine, Newcastle-upon-Tyne; C. E. Fenn, King's College, London; C. T. Holmes, College of Medicine, Newcastle-upon-Tyne; J. R. Halliday, College of Medicine, Newcastle-upon-Tyne; D. Hethcote, College of Medicine, Newcastle-upon-Tyne; E. Inman, College of Medicine, Newcastle-upon-Tyne; S. P. Johnson, Mason College, Birmingham; M. Jacobs, College of Medicine, Newcastle-upon-Tyne; J. Milligan, College of Medicine, Newcastle-upon-Tyne; J. Muirhead, College of Medicine, Newcastle-upon-Tyne; R. L. Routledge, College of Medicine, Newcastle-upon-Tyne; Grace Harwood Stewart, London School of Medicine for Women; E. N. Threlfall, College of Medicine, Newcastle-upon-Tyne; C. A. Vogwell, College of Medicine, Newcastle-upon-Tyne; D. H. Weir, College of Medicine, Newcastle-upon-Tyne.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have passed the respective examinations:

First Examination, Five Years' Course.—J. W. Isbister, D. J. Cagney, D. Moodie, J. R. W. Sutton, W. Thomson, J. J. Egan, A. H. Curley, H. Williams, F. A. Georgeson, S. Zamiruddin.

First Examination, Four Years' Course.—J. G. Welsh, W. Hunter, P. Park, J. A. Maclardy, R. M'K. Wilkin, J. E. Boon, G. M. Freke, J. C. Shelmerdine.

Second Examination, Five Years' Course.—J. Noble, D. Cromby, C. W. Sharp, J. B. Walker, D. S. E. Macnab, P. H. Rainbird (with distinction), H. M. Roberts, W. M. Battersby (with distinction), J. C. Douglas (with distinction), P. M'K. Dewar, J. T. Griffiths, W. Burns, Alice Miles, W. Turner, J. B. O'Mahony, R. Elwell-Naish, F. A. Gray.

Second Examination, Four Years' Course.—A. C. Turner, J. M'Elroy, B. F. Murphy, L. S. Shennan, A. M. Crosfield, J. Ellul, O. Scanlan, A. S. Omand.

Third Examination, Five Years' Course.—J. V. Roche, T. R. W. Atkins, R. Storrs, J. Fulton, D. Fyfe, A. S. Sieger, J. T. Moore, T. D. Bird, C. M'Donnell.

Final Examination.—H. Macpherson, E. T. Walker, H. L. Phelps, H. Gard, R. Mackie, J. M'Glynn, K. F. Lund, A. F. Seacome, J. Boyd, H. O. Jones (with honours), J. Farmer, H. J. Fern, A. M'Credie, J. F. M'Givern.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

EXAMINERS.—The following examiners have been elected for the ensuing year: In Anatomy: Ambrose E. Birmingham, Alexander Fraser. In Surgery: R. Glasgow Patteson, William Stoker. In Physiology and Histology: Alfred J. Scott, Charles Coppinger. In Biology: Alfred J. Scott. In Pathology: Arthur Hamilton White, Edward H. Taylor. In Midwifery and Gynæcology: Alfred J. Smith. In Ophthalmology: Patrick William Maxwell, John Benjamin Story. In Sanitary Law and Vital Statistics: Edgar D. Flinn. In Bacteriology: Alfred J. Scott. In Engineering and Architecture: J. Charles Wilmot. In Dental Surgery and Pathology: Arthur W. W. Baker, Daniel Corbett. In Mechanical Dentistry: Shenstone J. Bishop, George W. Yeates. In Chemistry and Physics: J. Dallas Pratt, Edwin Lapper. In Languages: L. J. Woodroffe. In Mathematics, Physics, Dictation and English Essay: J. W. Tristram.

APOTHECARIES' HALL, IRELAND.

AT the April Examinations, Mr. G. O.C. Walsh passed in Biology and Physics and Chemistry, and Mr. R. Tracy in Biology and Anatomy, in the First Professional Examination; Mr. R. Tichborne, in Anatomy, in the Second Professional Examination; and Mr. F. E. Bass, in Pathology, at the Third Professional Examination.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE VACCINATION BILL.

AT a conference of delegates representing various societies interested in public health, convened recently by the Incorporated Society of Medical Officers of Health, the following resolutions were adopted:

I.—That evidence of efficient vaccination should be afforded on the admission of the child to a public elementary school.

II.—That the Vaccination Bill should contain a definition of "efficient" vaccination.

III.—That the powers and duties with regard to vaccination should be transferred from the Poor Law to the Sanitary Authorities.

IV.—That the Government should pay for vaccination performed by general practitioners, subject to the vaccination being done in accordance with the regulations of the Local Government Board, and being open to inspection.

V.—That it is essential that the State should take steps to require the revaccination of all persons on their attaining the age of twelve years.

VI.—That the age limit within which a child should be vaccinated after birth should be six months.

THE MEDICAL GUILD.

The Committee of the Medical Guild has issued a memorandum, signed by the officers of the Guild, pointing out objections to certain provisions in the Vaccination Bill, and calling attention to certain omissions as follows:

I. *Against the Extension of the Age Period.*—Section 1—(1) of the Bill:

(1) The longer period (nine months) during which the child would be unprotected.

(2) Vaccination should be well over before the commencement of teething. If it be delayed until the time of teething or of weaning, the troubles incidental to these periods would, by many parents, be regarded as the direct effects of vaccination, and would naturally develop in their minds a prejudice against the operation, which would make vaccination more unpopular than it is now.

(3) As children grow older they become more vigorous and active; consequently the movements of the vaccinated arm would be more energetic, and the risk of injury and of erysipelas and blood poisoning would be correspondingly increased.

(4) In manufacturing towns the extension of the time limit would, to a great extent, render the Act inoperative on account of the frequent changes of residence which occur among the working classes; many children would be lost sight of by the vaccination officers, and would thus remain unvaccinated, partly owing to the difficulty and cost of tracing them, and partly to the indifference of the parents.

(5) The extension of the age period is unnecessary, because the existing law empowers any medical practitioner to postpone vaccination when the operation is undesirable on account of the state of the child's health.

II. *Against the Abolition of Public Vaccination Stations.*—The retention of public vaccination stations would conduce to the greater safety and efficiency of the operation, and avoid needless expense to the ratepayers.

III. *The Provision against Repeated Penalties* would, it is believed, render compulsory vaccination null and void, and would seriously endanger the public health.

IV. *Two Omissions from the Bill* are noteworthy and call for protest, namely: (1) The absence of provision for efficient revaccination, and (2) The absence of a definition of "successful vaccination."

In order to make vaccination by both public and private practitioners more efficient and uniform than it is at the present time, the form of certificate for successful vaccination should specify that not less than three vesicles have resulted from the operation.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,462 births and 3,965 deaths were registered during the week ending Saturday last, April 30th. The annual rate of mortality in these towns, which had declined from 21.5 to 18.1 per 1,000 in the four preceding weeks, rose again to 18.4 last week. The rates in the several towns ranged from 10.3 in Cardiff, 13.0 in Wolverhampton, 13.0 in Nottingham, and 14.7 in Croydon, to 22.4 in Newcastle-upon-Tyne, 26.6 in Gateshead, 26.8 in Sunderland, and 30.0 in Liverpool. In the thirty-two provincial towns the mean death-rate was 19.3 per 1,000, and exceeded by 2.1 the rate recorded in London, which was 17.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the rate was equal to 2.8 per 1,000, while it averaged 1.7 per 1,000 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.0 in Derby, 3.2 in Halifax, 3.7 in Leicester, and 4.0 in Sunderland. Measles caused a death-rate of 1.2 in London, 1.4 in Oldham, 1.5 in Bristol, 2.2 in Halifax, and 2.5 in Leicester; whooping-cough of 1.4 in Liverpool and in Newcastle-upon-Tyne, 1.5 in Gateshead, and 1.7 in Bolton; and "fever" of 1.1 in Sunderland, and 1.2 in Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria in the thirty-three towns included 39 in London and 6 in Birmingham. No fatal case of small-pox was registered during the week under notice, either in London or in any of the thirty-two provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,421 to 2,334 at the end of the three preceding weeks, had further fallen to 2,302 on Saturday last, April 30th; 205 new cases were admitted during the week, against 234, 217, and 241 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 30th, 1,044 births and 657 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.2 to 22.0 per 1,000 in the four preceding weeks, further fell to 21.8 last week, but was 3.4 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.2 in Edinburgh and 21.1 in Leith to 26.4 in Greenock and 27.2 in Perth. The zymotic death-rate in these towns averaged 3.2 per 1,000, the highest rates being recorded in Dundee and Glasgow. The 310 deaths registered in Glasgow included 30 from measles, 16 from whooping-cough, 7 from diarrhœa, and 4 from scarlet fever. Four fatal cases of whooping-cough and 2 of "fever" were recorded in Edinburgh, and 1 death was referred to small-pox in Leith.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London last week exceeded that recorded in any recent week. The fatal cases of this disease, which had been 29, 34, and 31 in the three preceding weeks, rose again to 39 during the week ending Saturday last, April 30th. Of these 39 deaths, 4 were of persons belonging to Chelsea, 4 to St. Pancras, 4 to Islington, and 4 to Bethnal Green sanitary areas. The notifications of diphtheria in London, which had been 185, 205, and 181 in the three preceding weeks, further fell to 178 during the week ending Saturday last. Compared with the preceding week, there was a marked decline in the prevalence of the disease in West and in North London, while in East and South London there was a considerable increase. In nearly all the sanitary areas of West London there was a decline in the number of new cases, which was most marked in Kensington and Westminster. Among the various sanitary areas of North London the new cases in Islington and in Hackney were below those recorded in recent weeks, but in Hampstead the 5 new cases considerably exceeded the number notified in any recent week. In the sanitary areas of East London the increase in the prevalence of diphtheria was most marked in Whitechapel, Mile End Old Town, and Shoreditch; in the last named sanitary area, 10 new cases were notified, against 4 and 3 in the two preceding weeks. In St. George-in-the-East and in Poplar, however, the number of new cases showed a marked decline. Among the sanitary areas of South London there was a considerable increase in the prevalence of diphtheria in St. George Southwark, Lambeth, and Battersea; in the last-mentioned sanitary area 12 new cases were notified, against 9 and 3 in the two preceding weeks. On the other hand, in Newington, Wandsworth, and Greenwich there was a further decline in the prevalence of the disease. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 108, against 120, 108, and 105 in the three preceding weeks; and 927 cases remained under treatment in these hospitals on Saturday last, April 30th.

"NIGHT NURSE WANTED" FOR FIVE POUNDS.

THIS is the liberal salary offered by the Cavan Board of Guardians to any woman who seeks the post of night nurse. It is often said that in some respects Ireland is behind the age, but we never expected to find a Board advertising a salary which might have been called a remuneration a hundred years ago, but at the present value of money can hardly be looked upon as pocket money, certainly not sufficing for clothes or any other necessary expense. To put in such an advertisement is sheer waste of the ratepayers' money, and is an indication that the Guardians are quite ignorant of the market value of a night nurse; £5 a year is a fraction less than 3½d. a day.

MEMBERS OF DISTRICT COUNCILS AND NOTIFICATION FEES.

DR. MEREDITH YOUNG, M.D., D.P.H. (Medical Officer of Health, Crewe) writes: I notice in the BRITISH MEDICAL JOURNAL of April 30th, p. 1178, an inquiry by a member of a district council about fees payable under the Notification Act. May I call your attention to Section XI of the Act of 1889, which specially states that a payment made to any medical practitioner in pursuance of this Act shall not disqualify that practitioner for serving as any member of the council of any council or borough, or as member of any sanitary authority.

PAYMENT OF PUBLIC VACCINATORS.

PUZZLED PUBLIC VACCINATOR.—We stated in the BRITISH MEDICAL JOURNAL of October 9th, 1897, that where a public vaccinator has to give stational attendances under his contract which prove to be unremunerative on account of absence of vaccinees, he will do well to claim a mileage or attendance fee to cover actual loss. We think such claim should be met by the insertion in the contract of a clause embodying the principle. Since the public vaccinator has incurred loss by the performance of a contract duty which professes to carry with it remunerative payment, the circumstance will, we feel sure, secure assent to exceptional treatment.

INCREASE OF THE SALARY OF MEDICAL OFFICER OF HEALTH.

THE General Purposes Committee of the Huddersfield Corporation have recommended that the salary of the medical officer of health, Dr. E. G. Annis, should be raised from £400 to £500.

MAGHERAFELT UNION INFIRMARY.

WE are glad to see an advertisement in the *Belfast News Letter* of April 16th for two experienced attendants for the idiot wards of this infirmary. The condition of the hapless idiots as revealed in the report of our Special Commissioner makes this indication that at last the guardians are awaking to their responsibilities welcome. In the report of the Board meeting in the same paper, we read that the medical officer, Dr. Vesey, brought the matter before them with the result above noted, and it must be satisfactory to that officer to see that at last the guardians are prepared to second his efforts on behalf of the paupers committed to their charge, and unanimously voted for the adoption of his recommendations.

MEDICAL NEWS.

DR. T. C. HAYES has been elected Professor of Obstetric Medicine and Diseases of Women and Children, and Dr. John Phillips Lecturer in Practical Obstetrics in King's College, London.

A NURSES' home in connection with the Worcester General Infirmary was opened on April 26th. The opening ceremony was performed by Lady Mary Lygon, and there was a large attendance.

THE name of Sir Thornley Stoker was accidentally omitted from the list of those attending the dinner given by Sir George Duffey, President of the Royal College of Physicians in Ireland.

THE thirtieth annual dinner for the benefit of the French Hospital and Dispensary is announced for this day (Saturday) at the Hotel Cecil, His Excellency the French Ambassador in the chair, supported by the Lord Mayor and Sheriffs of London.

THE annual festival of the Universities Lodge, No. 2,352, was held in the Masonic Hall, Durham, on April 28th, when Bro. George Hare Philipson, M.D., Professor of Medicine in the University of Durham, was installed as W.M. of the lodge.

THE Presidents of the Institute of Chemistry, the Society of Chemical Industry, and the Society of Public Analysts, have issued invitations to a reception on Tuesday, May 24th, at the Royal Institute of Painters in Water Colours, Piccadilly.

WE are asked to state that the Middlesex Hospital will be closed from July 17th to September 19th for necessary repairs and alterations, repainting and cleansing. No new patient can be received after July 1st. The cancer wards will not be closed, and cancer patients will be admitted as usual.

THE Past and Present West London Hospital Dinner will take place at the Trocadero Restaurant, Piccadilly Circus, on May 31st, at 7.30 P.M. Gentlemen who have been connected with the hospital, and who may desire to attend, are requested to communicate with Mr. L. A. Bidwell, 59, Wimpole Street, London, W.

CHARITY ORGANISATION CONFERENCE.—The annual Conference of this Society will be held in Bristol on May 10th, 11th, and 12th. Five addresses are advertised, but none of particular medical interest except that, perhaps, to be given by Miss Lonsdale, of Lichfield, on "The Administration of Endowed and Subscription Charities." A *conversazione* will be held on May 10th at the High School for Girls, Clifton.

THE clinical lectures and demonstrations at the National Hospital for the Paralysed and Epileptic, Queen Square, were resumed on May 3rd, by Dr. Buzzard. Subsequent lectures will be given by other members of the staff of the hospital at 3.30 P.M. on Tuesday in each week until July 12th, except in Whitsun week, when the lecture will be given by Dr. Beevor, on Thursday, June 2nd.

REDCAR.—In the course of an article on Middlesbrough as a Centre of Infection we referred to Redcar as one of the places to which small-pox had been already carried. It should have been made plain that only one case has been notified at Redcar, and that that occurred early in the epidemic. The patient was a boy who had been sent from Middlesbrough, and the symptoms of the disease developed only a day or so after his arrival at Redcar, so that the infection was clearly contracted in Middlesbrough. There have been no other cases in Redcar.

THE LIVERPOOL LADIES' CHARITY.—Several changes have lately taken place on the staff of the Liverpool Ladies' Charity. The retirement of Dr. Glynn Whittle at the end of his term of office as medical officer to the lying-in hospital, led to a vacancy, which was filled by the promotion of Dr. Arthur Wallace, who has been district medical officer for some years. The vacancy on the hospital staff, caused by the resignation of Dr. T. B. Grimsdale, who was lately appointed to the staff of the Royal Infirmary, has been filled by the election of Dr. Alexander Stookes, who has also been district medical officer for some years. Both these gentlemen are connected with the medical school, and their appointment has given general satisfaction in the profession.

CHOLERA IN CEYLON AMONG IMMIGRANT COOLIES.—Owing to the prevalence of cholera in the districts of Southern India, from which coolies are imported for labour on the Ceylon estates, a quarantine camp has been established at Ragama to which all immigrant coolies are sent. The wisdom of establishing such a camp of observation has recently been demonstrated by an outbreak of cholera in the camp among a batch of coolies sent from the s.s. *Vita* from Negapatam. A death appears to have taken place on board the *Vita* during its voyage from India, but it was reported as a death from sea sickness, which indicates that the medical arrangements, if any, in the immigration service of coolies from India to Ceylon, are not as they should be.

REDHILL AND REIGATE COTTAGE HOSPITAL.—A special meeting of the subscribers to the Redhill and Reigate Cottage Hospital was held at the hospital on April 25th to consider the possibility of enlarging the west wing and the expediency of charging a fee of 2s. 6d. in all dental cases. On the motion of Dr. Walters, seconded by Dr. Berridge, it was decided to carry out the proposed enlargement at an estimated cost of £1,400. As the reserve funds of the institution only amounted to £1,700, a hope was expressed that part of the cost might be defrayed by public subscriptions, so as not to draw on the reserve more than necessary. On the motion of Dr. Walters, seconded by Dr. Berridge, it was agreed to charge in future a sum of 2s. 6d. in all dental cases where an anæsthetic was required, it being pointed out that it was necessary to put some check on the number of cases that applied for an anæsthetic in ordinary cases.

THE HEALTH OF SIDMOUTH.—Sheltered on the north and east by rising grounds of 500 and 700 feet, Sidmouth enjoyed last year some 1,606 hours of bright sunshine. Not that this Devonshire village is to be regarded as close and hot. On the contrary, the pure breezes of Exmoor, of Dartmoor, and of the Atlantic which play over it prevent anything of that sort. As a winter resort, it boasts a mild equable temperature, and the summer heats are tempered by its proximity to the ocean and the moorland. In a district of 1,600 acres live some 4,000 people, chiefly grouped over some one-sixth part of the parish. The death-rate, which for twenty years has averaged 17.1—just below that of England and Wales in 1897—fell last year to 11.75, or, excluding foreigners—after the manner of watering-places—to 9.75. We are led to these remarks by the printed report of the medical officer of health which the local authority have issued in pamphlet form—wisely judging that perfect frankness in these matters is in the long run best. Dr. Pullin is by no means a mere prophesier of smooth things. While giving the town credit, as he has a right to do, for the good things he has to say about it, he does not hesitate to insist upon the various faults of omission on the part of his authority. While, for instance, praising the excellence of the abundant water supply, he does not fail to press upon the Council the importance of securing a periodical analysis of the water and a systematic and personal inspection of the sources. He criticises freely the sewerage system adopted, and directs the attention of his Board to other health matters of importance. He is to be congratulated on the courage of his Council, who publish his report in its entirety.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN, Steelhouse Lane, Birmingham. Resident Surgical Officer. Salary, £50 per annum, with board, washing, and attendance. Applications to the Secretary by May 10th.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £130 per annum, with rooms, coal, and gas. Applications to the Secretary by May 18th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CARDIFF INFIRMARY.—Assistant Resident Medical Officer. Appointment for six months without salary, but with board, washing, and apartments. Applications to the Secretary by May 5th.

CARMARTHEN, SOUTH WALES, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £100, rising to £120, with board, lodging, washing, and attendance. Applications to Medical Superintendent.

CHESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £40 per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management, 29, Eastgate Row North, Chester, by May 21st.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon; unmarried, or widower, without family. Salary, £100 per annum, with board, residence, and washing. Applications to the Committee before noon on May 20th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant. No salary, but board, lodging, and washing provided. Applications to the Honorary Secretary by May 18th.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £20 per annum, with board, lodging, and washing. Applications by May 12th.

GLOUCESTER: THE GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTER EYE INSTITUTION.—Assistant Surgeon. Applications by May 11th.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; not to exceed 30 years of age, and unmarried. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Hants County Asylum, Fareham, br May 17th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. No salary, but residence, board, and washing provided. Applications to the Secretary by May 20th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications to the Secretary by May 18th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Honorary Physicians and Honorary Surgeons. Applications to the Secretary-Superintendent by May 21st.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—House-Surgeon to Out-patients, non-resident. Salary, 25 guineas. House Physician (unmarried). Salary, £25, with board and residence. Appointments for six months. Applications on forms provided to the Secretary, by May 13th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Also Clinical Assistant. Applications to the Secretary before May 14th.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital, Harrow Road. Salary, £50 per annum, with board, lodging, and washing. Surgeon to Out patients at the Dean Street Hospital; must be F.R.C.S.Eng. Applications to the Secretary at Harrow Road by May 18th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Eastern Fever Hospital, Homerton, N.E.; unmarried, and not more than 35 years of age. Salary, £160 a year, rising to £200, with board, lodging, attendance, and washing. Applications on forms provided to be sent to the chief office of the Board, Norfolk House, Norfolk Street, Strand, by May 11th.

ST. THOMAS'S HOSPITAL.—Assistant-Physician; must be M.R.C.P. Lond. Applications to Mr. E. M. Hardy, Treasurer's Clerk, by May 11th.

SCARBORO' HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £50 per annum. Appointment for six months. Applications to the Honorary Secretary.

SCHOOL BOARD FOR LONDON, Victoria Embankment, W.C.—Two Medical Practitioners, one female and one male. Salary, £250 per per annum. Applications, on forms provided to be sent to the Clerk of the Board by May 13th.

SHOREDITCH: PARISH OF ST. LEONARD.—Medical Officer for the Infirmary, Hoxton Street, N., and the adjacent Workhouse. Between 30 and 45 years of age. Salary either £300 per annum with furnished apartments, board, washing, and attendance, or £400 per annum with furnished apartments, light, fire, and washing. Applications on forms provided to the Clerk to the Guardians, 213, Kingsland Road, N.E., by May 16th.

SUFFOLK COUNTY ASYLUM, Melton.—Second Assistant Medical Officer; under 30 years of age. Salary, £100 per annum, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, County Asylum, Melton, Suffolk, by May 10th.

VENTNOR, ISLE OF WIGHT: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Resident Medical Officer. Salary, £100 per annum, with board and lodging. Applications to the Board of Management, 34, Craven Street, Charing Cross, W.C., by May 7th.

WADSLEY, NEAR SHEFFIELD: WEST RIDING ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, with board, etc., rising £10 annually to £230. Applications to the Medical Superintendent by May 18th.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Assistant House-Surgeon, unmarried. Salary, £60 per annum. Applications to the Honorary Secretary by May 10th.

WARNEFORD HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Appointment for six months but may be renewed. Applications to the Secretary before May 12th.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck Street, W.—Honorary Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by May 16th.

WHITTINGHAM, LANCASHIRE: COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary commencing at £100 per annum, with furnished apartments, board, attendance, and washing. Applications to the Superintendent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon and House-Physician. Salaries, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by May 13th.

MEDICAL APPOINTMENTS.

ANDERSON, G., M.B., C.M.Edin., appointed Medical Officer for the Swinefleet District of the Goole Union.

BAILEY, John George, M.B., C.M.Edin., appointed Resident Medical Officer to the Victoria Hospital, Burnley, *vice* J. S. Warrack, M.D., resigned.

BLACKLOCK, J., M.D.St.And., appointed Medical Officer for the Brindle District of the Chorley Union.

BLAXALL, F. R., M.D.Lond., appointed Bacteriologist to the Local Government Board.

BROUGH, Daniel, M.B., C.M.Edin., appointed Resident Medical Officer to the Royal Albert Hospital, Devonport.

BURGES, Robert E., M.D., M.Ch., reappointed Medical Officer of Health to the Hoole Urban District.

CAMERON, John, M.B.Aberd., appointed Certifying Factory Surgeon for the Black Isle District of Ross and Cromarty.

COOKE, William H., M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., appointed an Honorary Medical Officer to the Eastern Dispensary, and Anæsthetist to the Royal United Hospital, Bath.

COOMBS, S. Wellesley, F.R.C.S., L.R.C.P.Edin., reappointed Medical Officer for the North Claines District of the Droitwich Union.

DYSON, M. G., M.R.C.S., L.R.C.P.Lond., appointed Resident Assistant Medical Officer at the St. John's Road Workhouse and Infirmary of St. Mary Islington Parish.

FOX, E. Lawrence, M.D.Cantab., appointed Honorary Physician to the Plymouth Royal Eye Infirmary.

HARNESS, H. Nelson, M.R.C.S., L.R.C.P.Lond., appointed Resident House-Surgeon to the Royal Cornwall Infirmary, Truro.

HOWARD, J. A., M.D.Lond., M.R.C.S.Eng., appointed Medical Officer for the Seventh District of the St. Saviour's Union.

HOWES, F. C. P., M.D.Edin., L.R.C.P.Lond., appointed Medical Officer for the No. 2 District of the Lincoln Union.

INGLE, Arnold C., M.D., B.C., reappointed Medical Officer for the Third District of the Cambridge Union.

KENDALL, N. F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Chiddingfold District of the Hambledon Union.

KENT, Percy W., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon and Anæsthetist to the Royal Orthopædic Hospital, *vice* H. C. Crouch, M.R.C.S., L.R.C.P., resigned.

LEVICK, H. Driffield, M.B., B.S.Lond., F.R.C.S.Eng., appointed Senior Resident Medical Officer to the Royal Free Hospital.

LIGHTBURNE, E. A., L.R.C.S.&P., appointed Police Surgeon for Bow, London.

LLOYD, Mr. L. N., appointed Assistant Medical Officer and Dispenser at the St. John's Workhouse and Infirmary of St. Mary Islington Parish.

MACGILL, H. M., M.B., C.M.Edin., appointed Medical Officer for the Hartlepool District of the Hartlepool Union.

MACLAREN, J. A., M.B., appointed Second Resident Assistant Medical Officer at the Workhouse of the Township of Manchester.

MCMUNN, C. A., M.D.Dub., appointed Third Honorary Physician to the Wolverhampton General Hospital.

MELLISH, J. S., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health to the Wells Port Sanitary Authority and the Wells-next-the-Sea Urban District Council.

MORRIS, S. Glanville, M.D., M.S., appointed Certifying Factory Surgeon for the District of Nantgaredig.

MUDD, F. B., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Gloucester General Infirmary.

O'RAFFERTY, J. C., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the First District of the Daventry Union.

PARSONS, Allan C., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Royal Free Hospital.

PATON, G. A., L.R.C.S.I., L.A.H.Dub., appointed Medical Officer for the Second and Third Districts of the St. Saviour's Union.

PROBYN-WILLIAMS, R. J., M.D.Durh., L.R.C.P., M.R.C.S., appointed Assistant Anæsthetist to the Dental Hospital of London.

ROBERTSON, F. W., M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed Medical Officer in charge of the Casualty Department at the East London Hospital for Children, Shadwell.

ROBINSON, A. S., M.B., appointed Medical Officer for the Kirkleatham District of the Guisborough Union.

SHARDLOW, Joseph, M.B.Lond., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the East London Hospital for Children, Shadwell, *vice* R. P. Cockburn, M.B.Edin., M.R.C.S., L.R.C.P., resigned.

SMITH, A. Hopewell, M.R.C.S., L.R.C.P., L.D.S., appointed Dental Surgeon to the Chelsea Hospital for Women.

SMITH, E. Temple, M.B., B.Ch., B.A.O.Roy.Univ.Irel., M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to the Mount Morgan Hospital, Queensland, Australia.

WILLIAMS, Ralph Paul, M.B., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Royal Free Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

GASTER.—On May 2nd, 1898, at 68, Greencroft Gardens, West Hampstead, N.W., the wife of A. Gaster, M.D., M.R.C.P.Lond., of a son.

GILL.—On April 30th, at Downgate, Liskeard, Cornwall, the wife of Jos. Wm. Gill, D.P.H.Lond., M.R.C.S., L.R.C.P.Lond., of a son.

LEWER.—On April 29th, at Burley-in-Wharfedale, Yorkshire, the wife of E. Stewart Lewer, M.B., M.R.C.S., of a son.

MARRIAGES.

HAWKES—COGHILL.—On April 14th, at the Parish Church, Ventnor, by the Rev. A. L. B. Peile, M.A., Master of St. Catherine's and Chaplain to the Queen, assisted by the Rev. H. D. Macnamara, Rector of St. James's, Garlickhithe, E. C., Priest in Ordinary to the Queen, Rev. A. Alloway, Chaplain to the Ventnor Hospital, and Rev. G. P. Bassett Kerry, Vicar of Ventnor, Lewis Arthur Hawkes, M.D., to Mary Stuart Coghill, L.R.C.P., L.R.C.S., eldest daughter of Dr. and Mrs. Sinclair Coghill, Ventnor, I. W.

JOHNSTONE—PICKERING.—On April 27th, at Pemberton Parish Church, Wigan, by the Rev. John Leach, M.A., Vicar of Kirkby, assisted by the Revs. E. F. Forrest, M.A., Vicar of Pemberton, and Canon Mitchell, M.A., Vicar of Prescott, John Lloyd Johnstone, M.R.C.S. (England), and L.R.C.P., London, eldest son of the late Dr. Johnstone, Hall Green, Upholland, to Beatrice Mary, youngest daughter of James Pickering, Harvey House, Gathurst, Wigan.

LAKEMAN—ASHLEY.—April 28th at St. George's Church, Modbury, by the Rev. G. C. Green, Thomas Lakeman, M.R.C.S., L.R.C.P., elder son of Nicholas Lakeman, of Modbury, to Elizabeth (Dil), younger daughter of Richard Ashley, J.P., of Modbury.

THORNE THORNE—HOUGHTON.—On April 27th, at St. Peter's, Old Woking, by the Rev. F. J. Oliphant, M.A., Vicar, assisted by the Rev. W. F. T. Hamilton, M.A., Berthold Bezly, eldest son of Sir Richard Thorne Thorne, K.C.B., F.R.S., to Ruth Goldieu, daughter of the late John Houghton, of Liverpool, and of Mrs. Houghton, of Poundfield, Old Woking.

DEATHS.

BLUMER.—On Saturday, April 30th, 1898, at 12, Park Place East, Sunderland, Luke Blumer, M.D., aged 70 years.

HEWLETT.—On April 18th, at Cannes, France, Caroline Julia, wife of John C. Hewlett, Esq., of Hillside House, Beckenham, Kent, and 40, 41, and 42, Charlotte Street, London, E.C.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8 P.M.—General meeting for election of officers and council for session 1898-99; 8.30 P.M., Ordinary meeting, Mr. C. Mansell Moullin: The Treatment of Tuberculous Disease of the Bladder. Dr. Macnaughton-Jones: Recurrent Hæmatemesis caused by Hepatoptosis, discovered by Laparotomy.

London Post-Graduate Course, London Throat Hospital, 8 P.M.—Dr. Edward Woakes: Nasal Neurosis.

TUESDAY.

Royal College of Physicians, 5 P.M.—Dr. S. Monckton Copeman: On the Natural History of Vaccinia. Milroy Lecture III.

Roentgen Society, 11, Chandos Street, Cavendish Square, W., 8 P.M.—Mr. A. Apps: Notes on the Description of a New Induction Coil (with demonstration.' Dr. J. Macintyre: Some notes on Contact Breakers.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. Samuel West: Intrapleural Tension. Mr. Alban Doran: A case of Cyst of the Urachus, with notes on Urachal and so-called "Allantoic Cysts."

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Lichen Planus and Acuminatus.

WEDNESDAY.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases will be shown by Drs. Dundas Grant and Pegler, and by Messrs. Wingrave, Baber, Robinson, Walsham, and others.

Hospital for Consumption and Diseases of the Chest, 4 P.M.—Dr. C. Theodore Williams: The Open-Air Treatment of Consumption as practised in German Sanatoria.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of recent Specimens.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

Charing Cross Hospital, Post-Graduate Class 4 P.M.—Dr. Waterhouse: Clinical Demonstration of Surgical Cases.

Harveian Society of London, 8.30 P.M.—Dr. Montagu Handfield Jones: The Clinical Aspect of Cancer of the Body of the Uterus.

British Gynæcological Society, 8.30 P.M.—Specimens will be shown by Dr. G. Bantock and Messrs. J. Furneaux Jordan, C. Ryall, W. D. Spanton, and F. Bowreman Jessett. Papers: Dr. F. Edge: Case of Uterus Septus Bilocularis and Vagina Subsepta. Dr. F. Purcell: The Risks to the Ureters when performing Hysterectomy. Dr. Bantock will open a discussion on Dysmenorrhœa.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Dr. Theodore Williams: Clinical Lecture.

FRIDAY.

Clinical Society of London, 8.30 P.M. Dr. D. B. Lees and Mr. A. Q. Silcock: Case of Cæcal Intussusception: Excision of Involved Gut: Recovery. Dr. W. S. Colman and Mr. F. H. Kellock: Case of Chronic Intussusception of the Cæcum with extreme Latency of Symptoms. Dr. D. B. Lees: Case of Chronic Intussusception treated by Irrigation and Ice-bag: Recovery. Dr. H. D. Rolleston: Case of Perforation of the Vermiform Appendix in the course of Ambulatory Typhoid Fever: Operation: Death.

London Post-Graduate Course, Bacteriology at King's College, 8 to 5 P.M.—Dr. Wilkinson: Examination of Air Soil, and Water, etc

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30 Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Tu., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dentzl, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M., Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Tu. F., 1.30; Children, S., 1.30 Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 8.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 2.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

SENILITAS desires to hear of measures to diminish the passive serous secretion from the nasal cavities, which tends sometimes in old age to become excessive and very embarrassing.

A.B.C. would be glad to know of any place where the surgical anatomy, bandaging, and apparatus, could be gone over by residing in London for three to four weeks before the examination for the diploma of M.R.C.S.

PAYMENT FOR A NIGHT CALL.

W.H.N. was summoned from his bed at 3.30 A.M., to attend to a child some little distance from his own house. Whilst examining the child another doctor was announced as the usual medical attendant of the family; all are strangers. In obedience to the dictates of medical ethics, "W.H.N." retires, leaving the case in charge of the family doctor. No fee was offered to him.

*** A fee can fairly be claimed in this case, and one guinea is a most reasonable demand. It is usual for the doctor remaining in charge to suggest this payment of a fee. In this case the only course which appears to be left is to make the demand.

LEOPARD'S BANE.

DR. REGINALD C. WORSLEY (Ramsgate) writes: I shall be glad to know whether any member of the British Medical Association is aware of the poisonous properties of the leopard's bane (*Doronicum pardalianches*), of which I send you a specimen. It appears to have peculiarly irritant properties on some persons' skins. A lady of my acquaintance gathered some of its flowers in the garden, and, after merely handling it, had a severe attack of acute eczema of the face, palms, and wrists—the face especially suffering—so that she had to remain indoors for nearly a week. I note that Anne Pratt, in *Flowering Plants of Great Britain*, describes it as having poisonous properties, but refers more particularly to the root.

*** There are a good many cases of poisoning on record by leopard's bane, but the plant referred to in those cases is the *Arnica montana*. The specimen sent is *Doronicum pardalianches*. There are no records of poisoning by this plant. It is cultivated largely for ornamental purposes by Mr. H. W. S. Worsley-Benison, F.L.S., of Lulworth, Sutton, Surrey, and he states, in response to an inquiry, that, although he and his family have handled it freely for years, it has produced no ill-effects.

EDUCATION OF THE BLIND.

A MEMBER wishes to know of an institute (north midlands preferred) where blind boys are taken in and taught a trade. The family could afford about £30 per annum. Also, what is the name of the institute in London of which Dr. Campbell was principal?

*** 1. Our correspondent might apply to the Birmingham General Institution for the Blind, Edgbaston (the charge to *guardians* for blind pupils is £20 per annum). 2. Royal Normal College for the Blind, Norwood, S.E., of which Dr. Campbell is still the Principal.

ANSWERS.

H. T. (Ceylon) —The practice is most objectionable, but can be dealt with only by local police regulations.

Y. is clearly entitled to precedence. Had there been but one vacancy he alone would have been elected.

K.—1. A lithographed circular letter of the kind mentioned, sent out to patients only, would be a proper mode of intimating the change. 2. We could not recommend our correspondent to have his diplomas framed and hung up in his consulting-room.

A DEATH VACANCY.

CYMRO.—A widow would be perfectly justified in telling her late husband's patients that she was about to sell her interests to a successor, but this should only be done personally or by private communication.

VOLUNTEER MEDICAL STAFF.

M.A., M.B.—We are informed that in future volunteer medical officers will be on the same footing as combatant officers, namely, they will receive £20 towards the expense of outfit.

NOTES, LETTERS, Etc.

AN APPEAL ON BEHALF OF THE FAMILY OF THE LATE MR. JOHN PAGE HENTSCH

DR. G. DAVID KNIGHT (410, Brixton Road, S.W.) writes: Enclosed is a further list of contributions to this fund:—

	£	s.	d.
H. H. Clutton, F.R.C.S.	2	2	0
Dr. W. F. Brooke	1	1	0
Dr de Havilland Hall	1	1	0

SUPERSTITION IN SICILY.

W. D. D. writes: A writer in the *Nineteenth Century* speaks of a certain pious Marchesa whose husband lay grievously sick. His doctor ordered him certain pills, which he duly swallowed, until one, larger and harder than the rest, stuck in his throat. Having pulled it out he discovered it was a piece of paper rolled tightly up to represent a pill. His better half had substituted a printed prayer to the Virgin, in the firm conviction that he would derive more benefit thereby than from any drugs.

AN EXTERNAL APPLICATION.

SOME of the devices of the vendors of proprietary remedies are curious. We have received from a correspondent in an Eastern dependency the advertisement of a certain oil which, it is said, "expels veneria[l] (*sic*) poison, purifies the blood, removes nervous debility, imparts sexual power and fresh vigour to the brain," etc. We have heard all this before, or something very like it, but the novelty is the direction. "Apply to the top of the head ½ oz. of the oil, remain quiet for half an hour, and use red soap nut paste for removing the oil, and bathe in hot water every week."

ODOR MORTIS.

DR. G. D. MACKINTOSH (Lower Kennington, S.E.) writes: There is a certain faint, peculiar, indescribable odour which is noticeable usually three days before the death of a patient. I have frequently, but not invariably observed this *odor mortis*. My attention was first called to it eighteen years ago in the wards of the Edinburgh Infirmary by Mr. Joseph Bell, who was much annoyed at the time by fifty or sixty students crowding round the bed of the moribund man to stamp the smell upon their memories. Everyone in general practice has often been worried by patients' friends anxious to know if there is any hope of recovery. When the typical *odor mortis* is present the answer can be safely given in the negative. Probably this smell is due to some putrefactive changes in certain organs of the body prior to actual death. I should be glad to hear if many practitioners notice and value this symptom.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Messrs. Arnold and Sons, London; Mr. G. R. Anderson, Southport; J. M. Atkinson, M.B., Hong Kong; Alpha; A. B. C.; W. E. Allen, M.B., Ambleside; Mrs. E. Garrett Anderson, London; Mr. A. Atkinson, London. B Miss M. Breay, London; Mr. G. H. Broadbent, Manchester; Mr. W. M. Beaumont, Bath; Dr W. Bain, Harrogate; Mr. L. A. Bidwell, London; Mr. M. W. Blyth, London; Dr. G. B. Bate, London; Mr. H. T. Butlin, London; Messrs. J. Bell and Co., London; Messrs. Baillière, Tindall, and Cox, London; A. Brownlie, M.B., Redcar; Dr. T. W. Blake, Bournemouth. C Mr. W. M. Clemmey, Bootle; Mr. C. Campbell, Saddleworth; Mr. W. G. Cook, Gateshead-on-Tyne; Caryophyllum; Messrs. T. Christy and Co., London; Mr. T. Chase, Birmingham; Mr. J. Collinson, London; Dr. J. J. Cranny, Dublin; Mr. R. M. Connolly, Rathmines. D W. D. Donnan, M.B., Holywood; Mr. W. H. Dodd, Brighton. E Dr. W. A. Evans, Bradford; Enquirer. F C. R. Francis, M.B., London; Mr. P. J. Fryer, London; Dr. G. S. P. Ferdinands, Aberdeen. G Mr. F. J. Gant, London; Mr. T. L. Gaskin, Barbados; Dr. O. Grant, Inverness; Mr. L. M. Griffiths, Clifton; Dr. H. L. Gordon, London; Dr. L. G. Guthrie, London; G. P. H H. H. Haward, M.B., Castleton; Dr. J. A. Harris, Chorley; Dr. J. Haddon, Denholm; Mr. T. G. Horder, Cardiff; Dr. C. F. Harford-Battersby, London; Hope; Mr. R. Harrison, London. I Indignant. J Mr. D. H. Jack, Glasgow; Dr. E. Jepson, Durham; Dr. R. Jones, Festiniog; J. H. Joy, M.B., Burton-on-Trent. K Dr. C. Kevin, Belfast; Dr. G. D. Knight, London; Mr. C. M. Krohne, London. L L. T.; Dr. A. P. Luff, London; Dr. T. Landau, Berlin; L.R.C.P., M.R.C.S.; W. Leask, M.B., Birkenhead; J. M. Lazenby, M.B., Whitley-by-the-Sea. M Mr. H. H. B. MacLeod, Shrewsbury; Dr. R. W. Merrick, Surbiton; Miss B. McDonnell, Drogheda; Dr. P. F. MacGregor, London; Member; Mr. C. A. Morton, Clifton; Dr. D. J. Mackenzie, Glossop; Mr. G. D. Mackintosh, London; Mr. F. C. Melhado, London; M.D. N Nemo. O Dr. J. G. Ogle, Reigate; Dr. J. Oliver, London; Mr. E. A. Onyon, Eye. P F. M. Pope, M.B., Leicester; Dr. G. H. Philipson, Newcastle-on-Tyne. R Dr. R. Renney, Sunderland; Mr. G. Rendle, London; Dr. J. Ross, Bowmore. S J. Stoddart, M.B., Leith; Sanitas Co., London; Dr. A. E. Sansom, London; W. Simpson, M.B., Newcastle-on-Tyne; Surgeon-Major Retired Half-Pay; Semlitas; Dr. A. Stewart, Manchester; Dr. S. Sunderland, London; G. P. Shuter, M.B., London. T Mr. E. H. Tweedy, Dublin; Dr. G. G. S. Taylor, Liverpool; Mr. W. T. Thomas, Liverpool. W A. Westlake, M.B., Great Grimsby; Mr. R. W. Welbank, Banbury; Messrs. J. Weiss and Sons, London; F. C. Wallis, M.B., London; Messrs. Wills, Limited, London; Mr. F. R. Walters, London; Mr. E. W. Wallis, London. Y Dr. M. Young, Crewe; etc.

BOOKS, ETC., RECEIVED.

Chavasse's Advice to a Mother on the Management of her Children. By G. Carpenter, M.D. London: J. and A. Churchill. 1898. 2s. 6d.

Chavasse's Advice to a Wife on the Management of her own Health. Revised by Fancourt Barnes, M.D., F.R.S.E. London: J. and A. Churchill. 1898. 2s. 6d.

A Manual of Surgery. By Wm. Rose, M.B., B.S., F.R.C.S., and A. Carless, M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1898. 21s.

French Self-Taught. By C. A. Thimm, P.R.G.S. London: E. Marlborough and Co. 1s. 6d.

On Failure of Brain Power (Encephalasthenia), its Nature and Treatment. By J. Althaus, M.D., M.R.C.P., M.R.I. Fifth Edition. London: Longmans, Green, and Co. 1898. 5s.

Bidrag til det Norske Militær-Sanitetsvæsens Historie 1611-1814. Af N. Torgersen. Christiania: S. and J. Sørensens. 1898.

Norsk Tidsskrift for Militærmedicin udgivet af det Militær-Medicinske Selskab i Kristiania. 3 og 4 Hefte. Christiania: S. and J. Sørensens. 1898.

*** In forwarding books the publishers are requested to state the selling prices.

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THE MILROY LECTURES
ON
THE NATURAL HISTORY OF VACCINIA.

Delivered at the Royal College of Physicians

BY S. MONCKTON COPEMAN, M.A., M.D.CANTAB., M.R.C.P.,
Medical Inspector to Her Majesty's Local Government Board; and Lecturer on Public Health in the Medical School of Westminster Hospital.

LECTURE II.

MORPHOLOGY AND CHEMISTRY OF VACCINE LYMPH.

FRESH vaccine lymph, taken before full maturity of the vesicle, is a clear, transparent, limpid fluid, almost colourless in man, and slightly straw-coloured when obtained from the calf; this difference in colour depends on the varying quality of the normal pigment present in the blood plasma. Calf vaccine lymph is also somewhat more viscid than human lymph, and does not flow so readily when the vesicle is punctured, for which reason it is necessary to use compression forceps in the ordinary method of collection of calf lymph. Examined microscopically, vaccine lymph contains a certain amount of epithelial *débris*. Leucocytes are usually present also, the number depending on the stage at which the lymph is taken; few, or even none, are to be found in the contents of the vesicle when first formed, but at or after the period of maturation they may be so numerous as to render the lymph turbid, or even puriform. A few red blood corpuscles may be noticeable, although most observers will hardly agree with the statement made by Dr. Husband to the Royal Commission on Vaccination that this is invariably the case.

In stained specimens particularly, micro-organisms of one or more varieties can readily be demonstrated, the actual numbers being dependent to a certain extent on the care with which the lymph has been collected.

Vaccination lymph, chemically speaking, consists of the plasma of the blood. When freshly obtained, therefore, it is faintly alkaline in reaction; but it tends to become distinctly acid after a time when stored. In addition to the various salts and proteids normally present in the blood plasma, vaccine lymph contains some substance—possibly of the nature of a toxin or ptomaine—which results from the vital activity of the specific organism peculiar to vaccinia. That this is so may be proved either by filtration of the lymph through porcelain or by exposure of it to a temperature of about 50° C. If, as I have shown, such filtered or sterilised lymph be inoculated on the skin in the usual manner, no obvious effect is produced at the point of inoculation; but it will be found that the animal has been rendered temporarily immune to the effects of subsequent vaccination with lymph of normal potency.

BACTERIOLOGY.

As long ago as the year 1809 Sacco placed on record the fact that in vaccine lymph there might be found certain granules, generally collected together into masses and possessed of the power of automatic movement. The observation appears to have stood alone for more than half a century; but in 1863 Dr. Lionel Beale gave an impetus to the investigation of the morphological constituents of vaccine lymph by his description of the existence in it of transparent or hyaline particles of extreme minuteness. Dr. Beale expressed the opinion that these granules constituted the contagious principle of the disease, but he does not appear to have obtained experimentally any facts in support of his belief. Hallier and Zurn (1867) and Keber (1868) called attention to the presence in vaccine lymph of numerous micrococci, or "grains," as they were termed by the latter observer, who also evidently regarded the bodies found by him as the carriers, if not the actual generators, of the virulent principle.

It is, however, to M. Chauveau (1868) and Professor Burdon Sanderson that we owe the first real step towards the elucidation of the micro-pathology of vaccinia, these observers having demonstrated that vaccine lymph, when freed from its contained particles and inoculated on a living animal, no longer causes vaccinia, while, on the other hand, the precipitate or deposit, separated from it in one way or another, when employed in similar fashion, remains capable of producing the disease.

Chauveau found that vaccine lymph taken at the stage of maturation of the vesicles contained minute granular bodies, to which he gave the name of *corpuscles noirs;* and not infrequently also much larger bodies resembling the leucocytes of pus. He further found that if the lymph was diluted ten times, and allowed to stand, these leucocytes when present gradually subsided to the bottom of the containing vessel, and could then be removed. When this was done, and the material employed for an experimental vaccination, a local result was still obtained, thus showing that the active principle was contained, not in these leucocytes, but either in the granules or in the fluid portion of the lymph.

In order to determine this point, Chauveau devised a method of diffusion by which he was eventually able to separate the granules from the fluid portion of the lymph. The layer which contained the "granules" in suspension, was found to be active as vaccine, normal vesicles being obtained as the result of its inoculation.

Professor Burdon Sanderson shortly afterwards repeated Chauveau's work, employing certain improvements in the method which seemed likely to render it more accurate, and thus to afford results of greater scientific value. He also made use of another method of his own, consisting in the filtration under pressure of the liquid to be tested through a layer of unglazed porcelain, by which means all solid particles were effectually separated from the fluid containing them. Professor Sanderson fully confirmed the results announced by the French investigator. Further, Chauveau, by largely diluting vaccine lymph with distilled water, and employing the mixture for vaccination, found that the difference between the effect of inoculating extremely diluted lymph and that of inoculating the lymph itself without any addition of water, does not manifest itself, as might be expected, in the size of the individual vesicle or vesicles produced. He found, on the other hand, that the difference consisted entirely in the numerical relation of successes to failure. If successful, inoculation with a liquid containing an extremely small proportion of lymph may communicate the disease as completely as the original lymph itself, a result which is not only perfectly consistent with the fact that contagium is particulate, but which is in itself a necessary consequence of its being so. As bearing on this question, it may be mentioned that Schultz, of Berlin, has quite recently been engaged on an investigation having for its object the determination of the extent to which, in order to save time and expense, glycerinated vaccine lymph could be diluted without losing its efficiency as vaccine. In the course of his experiments, he found that an emulsion containing 1 part only of vaccine pulp in 2,000 parts of glycerine and water was capable of producing locally a normal vesicle in a small proportion of the cases in which it was employed for vaccination.

In 1872 Cohn of Breslau treated the morphological aspects of the subject with much completeness. His observations, which related to both vaccine lymph and variolous lymph, received general corroboration from all subsequent workers. He, however, apparently believed certain micro-organisms found by him to be of one species only, to which accordingly he gave the name micrococcus vaccinæ or variolæ, as the case might be; whereas later observers have shown that organisms of more than one species are usually to be found in any given specimen of crude lymph.

Cohn called attention to the fact that in perfectly fresh vaccine lymph the "corpuscles" for the most part occur singly, but that others are joined together in pairs in a form resembling the figure 8; and he states that after the lymph has been kept for a time, the number of the "double cells increases, and soon chains of four begin to be distinguishable. These chains are usually curved or in zigzags; their attachment one to another is evidently very slight, as they can readily be displaced.....After a few hours' observation they are seen to be all aggregated into irregular colonies or clumps, each consisting of sixteen, thirty-two, or more corpuscles." He also noted a point of importance in connection with the opacity which is apt to occur in stored lymph—namely, that

"in capillary glass tubes the enlargement of colonies sometimes lasts a long time, so that groups of them acquire considerable size, and present themselves as flocculi."

Klebs (1873) isolated from vaccine lymph micrococci united together in the form of tetrads, which he considered as specific, and to which he gave the name of tetracoccus vaccinæ. Cornil and Babes (1873) also met with micrococci.

Koch (1882) found micrococci in the vaccine vesicles of a child, and noted that human lymph freshly prepared with glycerine contained what he appears to have regarded as the specific bacteria of vaccine. These developed but slowly even in the incubator, and were met with in fewer numbers in old lymph, even though it still remained active.

Quist (1883) published a series of experiments dealing with the possibility of cultivating outside the animal body the micro-organisms present in vaccine lymph. The culture fluid employed by him was composed of equal parts of blood serum, glycerine, and distilled water, this mixture being rendered alkaline by the addition of $\frac{1}{300}$ part of carbonate of potash. After sterilising this fluid by exposing it to a temperature of 60° C. for an hour and a half on three successive occasions, it was inoculated with a minute piece of sterilised sponge soaked in clear lymph, or with a piece of vaccine "crust," which had been washed in distilled water and then carefully dried. He found that growth eventually occurred both on and below the surface, the former consisting of minute scales, while the latter gradually settled to the bottom of the vessel as a fine sediment. The scales, forming a scum on the surface of the fluid, he found to be composed of swarms of micrococci, which when inoculated on the skin of calves in some cases gave rise in his opinion to a typical eruption of vaccinia. Although Quist did not attain any great measure of success in the immediate object of his inquiry (the identification of the vaccine organism), still he showed that the specific contagium of vaccinia could exist, for a time at any rate, in a fluid containing a considerable proportion of glycerine. Voigt isolated three species of bacteria by making gelatine plate cultures of vaccine lymph. Of these, one, which alone was constantly to be found, he considered to be specific, and consequently termed it the vaccinococcus.

In 1886 Meguin called attention to the fact that the number of micrococci contained in vaccine lymph increased considerably from the second day onwards after the removal of the lymph. During the same year (1886) Dr. Buist succeeded in isolating from vaccine lymph three varieties of micrococci which, when grown on nutrient media, gave rise to colonies of a white, yellow, or orange colour. From specimens of variolous lymph he succeeded in obtaining one organism only, the colour of which was white when grown on solid media. With none of these cultures did he obtain any definite result on the inoculation of calves, monkeys, or human beings.

A certain small measure of success appears to have attended inoculation experiments in the hands of Carmichael (1887), who does not, however, give any detailed description of the morphological characteristics of the growths which he obtained, and which, by the way, although differing from one another in colour, he seems to have considered were the product of one species of micrococcus only. As was doubtless the case in Quist's experiments, in the few in which true vaccine vesicles resulted at the site of his inoculation, success was in all probability due to the presence in the material employed of a small proportion of the lymph originally used for the seeding of his culture medium.

Pfeiffer (1887) recorded the existence in vaccine lymph of micro-organisms of several different forms, including a yeast (named by him saccharomyces vaccinæ), two sarcinæ (lutea and aurantiaca), a short bacillus allied to proteus vulgaris, but differing from it in not being pathogenic, and certain micrococci, of which one, the staphylococcus cereus albus (Passet), was of constant occurrence. Pfeiffer, however, believes that the specific agent of variola and vaccinia is not to be sought for among the bacteria, but rather belongs to the class of sporozoa. This subject will require further notice later on.

Professor Leoni (1890) met with several pyogenic microbes in fresh vaccine lymph, notably the staphylococcus pyogenes albus, which was invariably present.

As the result of my own work (1891) it would appear that there are at least three species of micro-organisms—namely, staphylococcus albus (epidermidis), S. pyogenes aureus, and S. cereus flavus, corresponding probably to Buist's white, orange, and yellow vaccine respectively, one or more of which are almost universally to be found in every specimen of human or calf vaccine lymph examined. Of these the S. albus is usually to be found in the upper layers of healthy skin of unvaccinated persons. In addition I have been able to satisfy myself as to the occasional presence of the streptococcus pyogenes. I myself have never detected the streptococcus of erysipelas, but Dr. Klein has placed on record the fact that in one instance he isolated this microbe from a specimen of human vaccine lymph, the use of a portion of which was believed to have given rise to the occurrence of the disease.

Professor Crookshank (1891) succeeded in isolating from various specimens of vaccine lymph, by the method of plate cultivation, an immense number of bacteria, including micrococci, bacilli, torulæ, etc. All of these he recognises as well-known saprophytic bacterial forms associated, some of them, with processes of suppuration, but none of which, he says, can be regarded as the contagium of vaccinia, seeing that no single one of them is constantly present in vaccine lymph, human or bovine.

M. Besser (1893) found in the papules of a case of small-pox at the fifth day a small bacillus which he is disposed to look upon as the specific organism of variola. He obtained cultures on various nutrient media, coverslip preparations from which always showed the organisms arranged in palisade-like rows.

The late Professor Straus (1893) found that the seeding of gelatine plates with fresh vaccine material, whether glycerinated or not, gave rise to the appearance of numerous colonies of micrococci, among which the staphylococcus pyogenes aureus and albus were most frequently met with. When glycerinated lymph which had been kept for a considerable period was employed in similar fashion, the number of colonies was greatly diminished.

M. Anthony (1893), in the course of the examination of a number of different specimens of vaccine lymph, glycerinated or otherwise, finds that four different kinds of micrococci and three species of bacilli are apt to be present. Of these, what he terms from its appearance the porcelain micrococcus is invariably present in fresh vaccine. M. Anthony concludes that vaccine lymph cannot be regarded as above suspicion as long as it is found to contain any microbes other than the porcelain micrococcus. The inoculation of cultures of his porcelain bacillus on heifers afforded only negative results.

Dr. Klein agrees with me in maintaining that none of those microbes which ordinarily can be cultivated from vaccine lymph are "an essential inhabitant in vaccine," or "can have anything to do with its active principle." In the report of the Medical Officer to the Local Government Board for 1892-93 he, however, described a peculiar extremely minute bacillus as occurring in calf lymph, and in variolous lymph of human origin, obtained at an early phase of the disorder, in calf lymph 72 to 96 hours after vaccination, in human variola during the third or fourth day. In both instances the lymph was collected aseptically. Only clear lymph as free as possible from epidermal *débris* was used for film specimens, which, after heating and treatment with 30 per cent. acetic acid for some minutes, was subjected to prolonged staining in alcoholic gentian violet. Some of the films of calf lymph (collected after removal of the epidermis as a whole) showed an abundance of these minute bacilli, generally massed together, some of the specimens looking indeed like film specimens of an artificial culture. Lymph of early human small-pox vesicles showed the same bacilli, but not so abundantly. Calf lymph of later stages, five or six days old, showed no bacilli, or only a few here and there. In certain of these bacilli Dr. Klein succeeded in demonstrating spore-like bodies which, together with the absence of the bacilli in the lymph of later stages, led him to the conclusion that disappearance of these bacilli from late lymph was possibly the result of their having broken up after the formation of spores, which might alone be present about the time of maturation of the vesicle. Dr. Klein adds that these bacilli are incapable of cultivation in the ordinary culture media, no growth whatever having been obtained by him on solidified blood serum, glycerine agar, ordinary agar, sugar gela-

tine, or ordinary gelatine, although in specimens of the same lymph as was employed for this purpose, and which on transference to the calf produced perfect vaccine vesicles, bacilli were found in abundance.

Dr. Buttersack (1894) described the appearance in vaccine lymph, dried on cover glasses, of a dense networth of threads associated with numerous granules which he considered as peculiar to vaccine. These threads he regarded as the growing vegetative part of a vaccine fungus, the granules, in his opinion, representing spores. It appears fairly certain, however, that what he believed to be a mycelium with spores in reality consisted merely of threads and granules of fibrin or of some other albuminous substance.

In this same year (1894) I published a description of numerous minute bacilli sometimes to be found in considerable numbers in the vaccine vesicles both of the calf and human being at an early stage of their development, in this respect apparently confirming the experience of Klein, which was published in the same year and of which mention has already been made. Similar bacilli were also demonstrated by Mr. Kent and myself in sections of skin passing through the site of a vaccine vesicle obtained from the calf.

An account of certain experiments dealing with the possibility of cultivating these micro-organisms, and also a similar one isolated from variolous material, I propose deferring for the present.

Landmann (1895) found that in Germany no less than 80 per cent. of certain children vaccinated successfully presented an excessive inflammatory condition of the arm, sometimes of an erysipelatous or hæmorrhagic character. In searching for the cause of these unfortunately numerous complications Landmann undertook an elaborate study of the lymphs distributed from thirteen of the German institutes. As a result of his research he found that the number of germs present in the various specimens of lymph varied from 50 to no less a number than 2,500,000 per c.cm. Among the microbes which he succeeded in isolating were the streptococcus pyogenes, the staphylococcus albus, and staphylococcus aureus.

Two American observers, Dr. Stephen C. Martin and Professor Ernst, recorded (in 1895) the isolation of a micro-organism which they considered to be specific to vaccinia. This was a short thin bacillus, which they found was capable of growth on serum obtained from ox or horse's blood, but not on other media. The growth, which is of a white colour, forms chains, and under certain circumstances, according to these observers, takes on the form of a micrococcus. With a cultivation of this microbe of the fourteenth generation they produced a vaccine vesicle on an infant in 1 attempt out of 10, better success, however, attending their attempts at inoculation of a calf.

M. Le Dantec (1895) found staphylococci in lymph, the reactions of which, he says, shows that they are related to the ordinary pus cocci. These staphylococci differed according to the species of animal from which they were obtained; those isolated from calf lymph liquefying serum, while those obtained from human lymph did not do so. M. Arloing (1896) concluded that the virulent agent of vaccinia must be of the nature of a soluble toxin.

M. Paul (1896) published a voluminous account of his researches on the occurrence and significance of pathogenic micro-organisms associated with vaccine lymph. He lays stress on his observation that the staphylococcus pyogenes aureus is by far the most ubiquitous of the microbes that are found in vaccine lymph, although it is certainly not an essential concomitant. He finds, moreover, that it exhibits both variable resistance and variable virulence. A sample of lymph, for instance, of supposed Jennerian stock, he found to contain this staphylococcus in a phase of much higher virulence and resistance than was a specimen of this same microbe obtained from a sample of calf vaccine lymph. This staphylococcus, he adds may be present without causing suppuration; but the use of a lymph containing it in large quantities should naturally be avoided. According to this observer the number of bacteria present in fresh lymph appears to be independent both of the origin of the stock from which it is derived and of the method of vaccination employed. This, as shown elsewhere, does not accord with my experience.

Quite recently (1897), in conjunction with Dr. Blaxall, I have carried out a further extensive series of investigations on the bacterial flora of calf vaccine, with the outcome that, as the results of former work had led us to anticipate, and as has been repeatedly shown by other observers, calf lymph (or rather vesicle pulp) may contain a large number of micro-organisms which are in no way concerned with its specific activity. Human lymph, as a rule, we find to contain remarkably few microbes, but conceivably this might not be the case were the whole substance of the vesicle removed as is now usual in collecting from the calf. We have shown also, as have other investigators, that lymph, if carelessly collected, may be found to be contaminated with many of the numerous saphrophytes common to dust, etc., in addition to containing certain possibly pathogenic microbes.

On the other hand, lymph taken directly from calves vaccinated with vaccine material rendered free from extraneous organisms, as, for instance, glycerinated lymph a month after emulsification, often presents remarkably few colonies of "extraneous" organisms. In one such sample only four colonies appeared on a plate culture of the lymph—one of staphylococcus cereus albus, and three of a light brown yeast.

The fact that in vaccine lymph or in the vesicle pulp micro-organisms are found which, under certain circumstances, are known to be provocative of suppuration, does not in any way imply that the lymph in which they are present is purulent, or that if such infected lymph were employed for vaccination in the human being suppuration would necessarily ensue.

The recent Berlin Commission, indeed, report that of 18 samples of lymph examined, only 5 contained staphylococci which were pathogenic for small animals, and, further, that no harm resulted on the vaccination of children with these particular specimens of lymph. From this circumstance it is evident that the virulence of these micro-organisms for rodents, for instance, cannot be accepted as a measure of their power to affect injuriously the body tissues in the healthy human subject. The streptococcus of pus must be a rare inhabitant of calf lymph, the Berlin Commissioners, indeed, stating that they never once met with it in the course of the examination of 64 samples of lymph. In human lymph it is by no means of so infrequent occurrence.

With reference to the question of the possible presence of the tubercle bacillus in lymph, I am not aware of any authentic record of its having been found even in lymph derived from the calf. But, as I shall presently have occasion to show, we are enabled, by the use of a special method of preparing and testing vaccine lymph, to obviate any possibility of danger to which the presence of the tubercle bacillus or other pathogenic microbes in the original specimen of lymph might conceivably give rise.

In 1894 Dr. Klein and I, as previously mentioned, showed concurrently, though independently, that in specially stained specimens of vaccine lymph taken at a period antecedent to full maturity of the vesicles, minute bacilli can be demonstrated, often in considerable numbers, and in practically pure culture. These bacilli cannot be found, or only with difficulty, in mature lymph, for the reason probably that they have by then given place to spores.

For some time it appeared impossible to obtain further evidence as to the *rôle* of these bacilli, as they altogether refused to grow on any of the ordinary culture media, and under either aërobic or anaërobic conditions, though this very fact obviously tends to show that they are not of a merely saprophytic nature. In the following year, however, the results of certain experiments appeared to prove that it is possible to obtain a growth of these bacilli in a particular culture medium, and even to carry on such growth in secondary cultivation.

As it seemed to me, the desideratum for the purpose of inducing growth of the supposititious micro-organisms was a medium which had not been artificially sterilised, which *a priori* should afford the necessary pabulum, and which at the same time, whether it was to be considered aërobic or anaërobic, was secure in its circumstances against contamination. Hence the choice appeared to lie between the intraperitoneal fluids of one or another living animal and the hen's egg, which has already been made use of as an alternative culture medium.

As regards intraperitoneal fluid I foresaw difficulty, in that it is apt to contain leucocytes, which might easily vitiate experiment, and accordingly I adopted the hen's egg as a matter of first instance. I had no experience to guide me as to the best method of carrying out the inoculation of the egg, or as to the period of incubation best suited for the object I had in view, and my attempts for a time, therefore, met with but small success. My inoculations were carried out by first cleansing the surface of the egg with corrosive sublimate solution and afterwards with alcohol, and then breaking a small hole in the shell by means of a sterilised needle and forceps. Through the opening thus made I mixed the yolk and albumen of the egg by means of a platinum needle, and then carried out the inoculation by means of a glass capillary pipette, which had recently been drawn out in the blow-pipe flame. For the purpose of such inoculations I employed variolous crusts obtained from the small-pox ships of the Metropolitan Asylums Board. These crusts were rubbed up in a small glass mortar with a minimal quantity of water or sterilised normal saline solution. Of the resulting emulsion a drop or two was then taken up into the glass pipette and the inoculation carried out. Finally, the small hole in the egg was closed up, either by means of a small pledget of sterilised cotton wool soaked in collodion or with melted sealing wax. The eggs inoculated in this manner were then placed on beds of cotton wool, and kept in the incubator at a temperature of 37° C. Here they were left for varying periods of time, a month being the period which was eventually found to be that which was most desirable.

On opening an egg thus treated I found that in its interior was contained a creamy material, which in great part had replaced the ordinary egg contents. This material examined in cover-glass specimens appeared to contain a pure culture of one organism only, namely, a bacillus which morphologically was not to be distinguished from the bacillus which I have previously described as to be found in early vaccine lymph.

My next step was to attempt to grow it in subculture, and to make observation also of the effect of its direct transference by cutaneous inoculation into the calf. As regards attempt at subculture in all media most usually employed for such purpose, including gelatine, sugar gelatine, agar, glycerine agar, sugar agar, and serum, these at this time failed, as subculture of the bacilli contained in vaccine lymph had always failed, when the ordinary culture media are adopted, but with the calf it was different, and as the result of inoculation of egg cultures on this animal I obtained a strain of lymph which, after being passed through a series of calves, was successfully employed for the vaccination of children. The calves were all subsequently vaccinated, with negative results.

More recently, Dr. Blaxall and I have been further investigating the possibility of the cultivation in artificial media of the organism specific to small-pox and vaccinia respectively. Our work received considerable impetus by the discovery that certain culture tubes which had been inoculated with vaccine lymph, but which appeared to remain completely sterile, nevertheless contained a growth of a microbe indistinguishable morphologically from that which I found in egg cultures, and which although invisible to the naked eye, became obvious when cover glass impressions were taken from the surface of the nutrient medium, and afterwards stained and examined with the microscope. Dr. Blaxall subsequently devised a method by means of which pure cultivations of apparently the same organism were obtained on the surface of agar plates, and this not only when vaccine lymph, both of human and bovine origin, was employed, but from variolous lymph as well. From these plates agar tubes and tubes of peptone beef broth were also in turn inoculated. In these also, in the first removes, practically no growth was visible except on careful examination by reflected light, but as generations further removed from the original stock were obtained the growth became more obvious, showing as a haziness in the fluid media, and as a semitranslucent greyish-white line on a sloping surface of agar.

Broth cultures of the ninth and succeeding generations, when employed for the inoculation of calves, afforded in our first series of experiments results which we regarded as most encouraging, seeing that we were enabled to carry on the infection to other calves, and subsequently to children, in all of which it took the form of apparently typical vaccinia. Some weeks after, the calves were vaccinated with active calf lymph, but without result. A later series of experiments, however, were not attended with success. The reasons for so great a divergence in our results at one and another time are by no means obvious, unless the fact of increased vegetative function shown in the later subcultures of the microbe may have had as a concomitant a lessened degree of pathogenicity. On this point we are at present unable to make any definite statement, but needless to say the investigation is being continued.

Another direction in which our research work has been extended was suggested to us by certain statements in the report of the Berlin Scientific Commission. In that report an account is given of certain experimental inoculations performed by Freyer with the juice of the spleen, liver, inguinal and mesenteric glands, and marrow of previously vaccinated calves. Using such material, vesicles were produced by the employment of almost every organ, which shows in Freyer's opinion that the vaccine germ must be conveyed to them by the circulating blood. This general distribution of that micro-organism takes place, he states, up to three or four weeks after vaccination, but no mention is made by him as to the earliest period at which it was found to occur. The greatest amount of success was obtained by the use of inguinal gland and spleen juice. It is further stated that since calves were successfully vaccinated with this material the postulate of an absolutely bacteria-free efficacious lymph was complied with.

It is of course obvious that where generalised vaccinia occurs as the result of a local vaccination, as, according to Chauveau, is always the case with solipeds, the micro-organism concerned must have been conveyed to a distance from the original point of insertion by means of the circulation. Presumably this may also take place, although perhaps to a more limited extent, in that form of the disease where, as in the case of the vaccination of the human being or the calf, the resulting disorder remains to all appearance strictly localised, a secondary eruption being prevented by the spleen or other organ, such as the liver, being enabled to seize upon and ultimately destroy any of the specific germs that happen to be carried thither.

It seemed to me that if Freyer's results were capable of confirmation, the possibility of vaccinating by means of spleen juice, for instance, must depend on the employment of such material at a period sufficiently late to ensure the active principle having reached the particular organ, and antecedent to that at which it would have been destroyed. I thought, also, that if the most favourable period could be determined, it would be possible then to obtain a material free from bacterial growth other than that on which its potency for vaccination depended—a material, therefore, which would afford exceptionally favourable opportunity for the isolation of the organism specific to vaccinia.

But unfortunately, notwithstanding the categorical statements in the report of the German Commission, we have been unable, as the results of numerous experiments, to obtain similar results, *quâ* vaccination, to those described by Freyer. Neither have we been able to demonstrate the presence of any micro-organism in culture media inoculated from the fresh spleen, liver, or glands obtained at various dates after vaccination or in the interior of fresh or hardened sections of these same organs. We have therefore temporarily abandoned this portion of our inquiry pending the receipt from Freyer of more detailed instructions.

PROTOZOA.

Renault (1881) first called attention to the fact that peculiar bodies which he regarded as parasitic could be demonstrated in the epithelial cells of the vesicles in vaccinia and variola. Van der Loeff, on examining in the warm chamber a hanging drop of clear calf vaccine lymph, discovered "numerous small bodies capable of independent movement." In 1887 L. Pfeiffer described the occurrence in lymph, obtained from cases of vaccinia and variola, of small, unicellular, generally spherical bodies, which he believed to constitute the specific contagium of these diseases. These parasites he found in still greater numbers in the Malpighian layer of the skin, multiplication taking place by division, and also by endo-

genous formation of spores. These statements were in part confirmed immediately afterwards by Rieck. Guarnieri having invariably found, in the epithelial cells of the skin in the vesicular stage of small-pox, small particles half as large as the cell nucleus or even smaller, next attempted (in 1892) the cultivation of similar bodies in the living animal. For this purpose he inoculated the cornea of rabbits and guinea-pigs with vaccine lymph, with the result that these protozoa, as he considered them, appeared in the cells of the epithelium covering the cornea. After an interval of about fifty hours from the time of inoculation the surface of the cornea was scraped and the material examined in a hanging drop of aqueous humour. Guarnieri also employed for examination sections taken through the site of inoculation and stained in various ways. In either case he found numerous parasites within the epithelial cells of the affected area, generally occupying a zone of the protoplasm immediately surrounding the nucleus, but not intruding upon it. In the hanging drop they appeared as little refractile bodies endowed with slight amœboid power. Examination of sections further showed that they vary much in shape and size, and, further, that they were most numerous in the deep layers of the epithelium, the superficial cells not being involved. To this "parasite" Guarnieri gave the name of cytoryctes vaccinæ. Monti obtained similar results, and both Guarnieri and Monti exhibited, at the International Congress of Medicine at Rome, preparations in which they demonstrated the presence of the parasite.

Ruffer and Plimmer, who in this country had been working at the subject, also attended the Congress, and were thus able to compare their own specimens with those shown by Guarnieri and Monti, thereby establishing, according to Dr. Ruffer, the fact that the protozoa described by all of them were identical in character. Ruffer and Plimmer (1894) described the alleged parasite as a small, round body, which, when treated with appropriate reagents, appears to have a more darkly staining centre. It is, they say, about four times the size of an ordinary staphylococcus, and generally lies in a clear vacuole in the protoplasm of the epithelial cells of the stratum Malpighii, and occasionally indents the nucleus, although they have not found it enclosed in the latter body. These observers state that they have found the same organism in sections of skin from small-pox patients and in small-pox pustules of the larynx and the trachea.

In the same year (1894) L. Pfeiffer not only confirmed the results obtained by Guarnieri, but announced also the discovery in the blood of persons suffering from small-pox and in the blood of children and calves that had been vaccinated, of amœboid cells, which he regarded as parasites. These he found to be most numerous during the pyrexial stage of the disorder, whether variola or vaccinia. These bodies, which are somewhat larger in the blood of the calf than in that of the child, being in the latter about a quarter the size of an average blood corpuscle, are, Pfeiffer states, provided with pseudopodia and are occasionally flagellated. According to this observer they also contain from one to four nuclei, which are readily stained. They occur free in the blood, not being contained in cells as is the case in the vaccinated cornea; nevertheless, Pfeiffer considers that they represent a similar stage in the life-history of the organism, of which the more mature form is of a cystic nature, to which he gives the name "monocystis epithelialis." This cyst he believes to give rise, in due course, to a number of spores. It should be mentioned that he describes similar bodies as occurring in various other vesicular eruptions of man and the lower animals.

Ogata (1895), as the result of careful microscopic examination of stained film preparations of vaccine lymph derived from the human being and the calf, and also of human variolous lymph, concludes that certain protozoa which he has been able to demonstrate in each case should be classified with the gregarinidæ. Further confirmation of Guarnieri's experiments was afforded in 1895 by von Sicherer, Ernst Pfeiffer, and Mr. Jackson Clarke. According to E. Pfeiffer the bodies vary considerably both in size and shape, being sometimes as large as a red blood corpuscle. They resemble the corpuscles also in their affinity for certain staining reagents.

There can, of course, be no doubt as to the occurrence of most of the appearances described, although we may not be prepared to accept the interpretation put upon them; and in this connection it is well to bear in mind not only that the bodies enclosed in cells, described by Guarnieri, Monti, and Ruffer, are said by them to differ essentially in their staining reaction, and in their appearance from those of the Pfeiffers, van der Loeff, and others, but also that all the more recent experimental work in this direction has been carried out on the cornea of the rabbit and the guinea-pig, both of them animals which there is reason to believe are insusceptible to vaccinia. It is therefore, I think, conceivable that the "parasites" in question may represent merely the result of epithelial irritation caused by the scarification, together with that (of a non-specific nature, however) set up by the vaccine lymph employed.

That such is indeed the case there is now a considerable amount of evidence to show. Thus Ferroni and Massari (1893) expressed the belief that Guarnieri's so-called parasites are in reality derived from the nuclei of the cells, or are due to the immigration of leucocytes. They base their opinion on the results of certain experiments devised by them in which they inoculated the cornea of rabbits and guinea-pigs with croton oil and Indian ink. On subsequent examination of stained sections they were able to demonstrate the presence in the epithelial cells of numbers of small bodies apparently identical with those described by Guarnieri. It should, however, be stated that E. Pfeiffer failed to find them under similar circumstances, although they were invariably present after the inoculation with vaccine lymph.

In the *Annales de l'Institut Pasteur* for April, 1897, appeared a most important paper by M. Paul Salmon. This investigator brings to bear on the subject a thorough knowledge of modern staining reactions, by the light of which he shows that Guarnieri's parasites, while differing in their affinity for certain stains from either the protoplasm, nucleus, or nucleolus of the epithelial cell, correspond in all respects, as judged by such tests, to the nuclei of the migratory leucocytes, the chromatin masses of which rapidly break down in the substance of the invaded cells. The paper is illustrated with drawings showing all stages of the process of invasion of the corneal epithelium by the leucocytes, from that of their first appearance in the underlying tissue to that of their final dissolution, represented by the presence of minute granules of chromatin only, in the protoplasm of the epithelial cells. No one, I think, comparing this plate with the drawings and descriptions of the corneal "parasites" of Guarnieri and others, can fail to be struck with the truth and completeness of Salmon's explanation of the facts previously observed.

Recent researches have tended to confirm the statements of L. Pfeiffer as to the presence also in the blood of variola and vaccinia, especially during the pyrexial stage, of minute, free, granular amœboid cells. It is, however, doubtful whether it is possible to demonstrate a nucleus. These cells, as already mentioned, are regarded by Pfeiffer as the causative agent of these diseases. This question has been investigated by Dr. Walter Reed (1897), whose attention was directed in the first instance to the microscopical examination of fresh preparations of the blood of vaccinated monkeys and calves, and subsequently to that of vaccinated children and small-pox patients. Of 11 vaccinated animals (9 monkeys and 2 calves) whose blood was examined, Reed found in the blood of 7 (6 monkeys and 1 calf) "granular amœboid bodies, having a diameter about one-third that of a red blood cell" during the active stage of vaccinia, which on the decline of the local inflammation again disappeared. As showing, however, that these bodies have no causative relationship to vaccinia is the fact that Reed occasionally met with quite similar bodies in the normal blood of healthy children and of monkeys.

As the outcome of the most recent investigations dealing with the question under discussion, it must, I think, be admitted, that although Guarnieri and others, who have described the presence of protozoa in the blood and tissues of man and the lower animals, during certain stages of invasion by variola or vaccinia, are undoubtedly correct in their statements as to the occurrence of the particular bodies described by them, they are altogether mistaken as to the true nature and affinities of these bodies. There would, indeed, appear to be good reason for the belief that these so-called parasites are in fact nothing more nor less than the fragments of

amœboid leucocytes, which had originally invaded the peripheral circulation, and in turn the particular tissue affected, under the influence of chemotaxis.

Variola and Vaccinia in the Monkey.

Professor Michael Foster suggested to me some years ago that in view of possible deterioration of lymph stocks, after employment through a long series of generations, it would be well, if possible, to devise some practical means of investigating the efficiency of the protection afforded by some of those at present in use against variolous infection.

The inoculation of small-pox on the human subject being now a penal offence, I turned my attention to the monkey tribe, on account of their similarity in many respects to man, although assured on high authority that they were not susceptible to either vaccinia or variola. On putting the matter to the test, however, I found that the inoculation of vaccine and variolous lymph each gave, in my hands, successful results in every instance in which I have tried it on the monkey. Briefly described, the *modus operandi* has been as follows: The upper arm, or occasionally the inner surface of the thigh, is shaved on both sides of the body; the skin is then washed with a solution of some disinfectant, such as corrosive sublimate or carbolic acid, and afterwards with alcohol. Each arm (or thigh) is then scarified in three or four places, and the lymph well rubbed in.

In the first series of experiments I used ether as an anæsthetic, but I afterwards found this quite unnecessary, as the monkey appears by no means to dislike the scratching process, becoming absolutely quiet as soon as the operation is commenced, and remaining with limbs limp and eyes half closed, as if hypnotised, until its termination, when it at once becomes again as lively as ever.

In the case alike of variola and of vaccinia the local result of inoculation attains its acme (*quâ* vesiculation) in the monkey, as in the human being, about the eighth day. The first signs of reaction appear usually on the third day, by which time, if variolous lymph has been used, there is a distinct, though very thin, crust over the site of inoculation. In the case of vaccinia the appearance of crust at this date is less marked. By the fifth day vesiculation in both cases has generally commenced, this becoming more obvious up to the eighth day, though even then, it is much less marked in variolous cases than in those which have been vaccinated, the difference being recognised with the greatest ease. Later the vesicle gives place in either instance to a pustule, by which time there is not infrequently considerable swelling of the skin, and subcutaneous tissue, and of the nearest lymphatic glands; the pustule gradually dries up and a scab is formed, which is more pronounced in the case of vaccination than variolation, and which falls off some time during the third week, if the monkey has not picked it off before. The chief difference noted between the effects resulting from the local inoculation of these two diseases is that in the case of variola there is more or less of a crust from the first; that vesiculation is less marked than in vaccination; that about the ninth to the eleventh day a general eruption may appear, which in some instances, as in a monkey which at the request of Professor Foster was inoculated at Cambridge, covers the whole surface of the body; and that the final scab at the site of inoculation is not so elevated in the variolated as in the vaccinated animal.

In both cases there is usually a rise of body temperature, which is more marked and longer sustained in variola than in vaccinia. After variolation it was noticed in several cases that the monkey suffered from diarrhœa, that its eyes were suffused, and that it was not as active as usual. A peculiar odour was also noticed, quite distinct from the well-known smell of "monkey." In no instance had the experiment a fatal termination.

Having thus proved to my own satisfaction that monkeys are susceptible not only to vaccination but also to small-pox, I next determined to make trial as to the protection against small-pox afforded in the monkey by previous vaccination, and the protection against vaccination afforded it by variolation, and I went on to compare the effect produced by the use of human and of calf vaccine respectively. For this purpose humanised lymph was obtained from Birmingham, where, to the best of my belief, the same strain has been continuously carried on by means of arm-to-arm vaccination for the past thirty-eight years. The calf lymph used was obtained from the Government Animal Vaccination Station in Lamb's Conduit Street, while small-pox lymph was supplied to me from the Hospital Ships, from Warrington, and from Manchester.

In no one of numerous experiments performed on these lines at intervals of one to five months after the primary inoculation, whether vaccinal or variolous, did anything in the nature of a successful result follow the first or subsequent reinoculations.

From these experiments it would appear that the protective power of lymph obtained from these three different sources, when inoculated on the monkey, is practically identical in all respects.

THE EVOLUTION OF THE DUM-DUM BULLET.

By Surgeon-Major-General J. B. HAMILTON, A.M.S.

There seems to be so much misunderstanding on the subject of "expanding bullets" as distinguished from "explosive bullets," that perhaps a short description of the new so-called "dum-dum" bullet will be interesting to the profession. I propose briefly to review what I may call the evolution of the present projectile, and show the various steps that led to its adoption.

Everyone is familiar with the old spherical musket bullet, the projectile that prevailed from the invention of gunpowder up to the period of the Crimean war. With it Marlborough, Napoleon, and Wellington fought their battles, and its only variation was the "belted bullet" used by rifle regiments, which was merely the ordinary spherical bullet, with a zone or belt raised round one circumference to enable it to fit into the grooves of the rifle.

Shortly before the Crimean war the conical bullet was introduced. It was shaped like a sugarloaf, "and was a distinct advance on the spherical form, as it gave greater range and penetration." The "Minié" was the first outcome of this new invention, followed by the "Enfield," a muzzle-loading rifle of considerable power throwing a conical bullet, solid in front, with a hollow in the base, which caused the lead to expand and take the grooving of the rifle. So far the bullets were solid, and caused much the same class of wound as the old spherical ball.

When the Prussians adopted the needle gun, with which they so conspicuously defeated the Austrians, the English Government was forced into arming its troops with a breech-loader, and adopted the Snider principle of breech action, which had this great advantage, that it was feasible to convert the Enfields in stock into breechloaders. With the introduction of the Snider changes were made in the bullet; a hollow, filled by a plug of wood or clay, was introduced into the front part of the bullet, and the base was also hollowed and plugged, a diaphragm of solid lead being left in the centre. This was a most deadly projectile, the plug in front expanding the bullet on impact and causing terrible injuries to soft part and bones. The next step was to form a hollow in the front, over which the lead was "drawn," leaving a space filled with air; then came a solid portion of lead, and finally a hollow in the base plugged with clay. This was a more deadly bullet than the previous one, and its "smashing" powers were so great that it was adopted for sporting purposes. On soft-bodied animals, such as tigers and panthers, its effects were wonderful, the biggest tiger often dropping dead to a single shot when well placed. This form of Snider bullet, though called "expanding," was really explosive, its bursting power being probably due to the air it contained being greatly compressed on striking, acting like a small charge of powder exploded by the impact.

This bullet was far more deadly to man and animals than anything that had before been invented, excepting, of course, "explosive" bullets, which I shall now briefly describe. Speaking generally, there were two forms of "explosive bullets" used by sportsmen (I speak in the past tense, as these bullets are now practically abandoned): one the bullet cast with a cavity in the apex, extending about two-thirds of its length, the other a bullet cast in two parts and "swaged" together in a machine. The first form was very simple, the

cavity being merely filled with detonating powder, generally a mixture of chlorate of potash and sulphuret of antimony in equal parts, and closed with beeswax. This bullet used generally to burst after it had penetrated some distance into the animal's body and inflicted very deadly wounds, but frequently it either failed to explode or burst on impact, causing a large skin wound, but doing little serious damage at the moment; that is to say, it did not "stop" the charge of the tiger, though he might subsequently die of the wound. The second form was a most terrible projectile, and in my experience no soft-bodied animal fairly struck by it could do further mischief.

This bullet was cast in two parts, the base something like a thimble with a flat top, the apex conical, with a hollow leading down from the point. The base, or thimble-shaped end, was nearly filled with ordinary powder, then a piece of thin cloth was laid over the top, the apex was fitted in, and the two parts were then "swaged" together in a machine. There was thus formed a conical bullet, generally a 12 bore (that is, a bore that took a spherical bullet of 12 to the pound), with a charge of powder in the base, a thin diaphragm, and a hollow leading to it from the point. Down this hollow detonating powder was poured, and the hole closed with wax. This was a typical form of explosive bullet and most deadly in its effects. I shot a great deal of heavy game with it in India, and never lost an animal I knew I had struck. I have seen a stag 15 hands high hit behind the shoulder collapse on the spot as if its legs had turned into jelly. On one occasion I saved my life by killing a charging bear in dense jungle, dropping her within a few feet of me. In this case I observed smoke issuing not only from the wound, but also from the mouth and nostrils, and on opening the chest found the lungs and heart torn to pieces.

This was the true explosive bullet, and it was against it and similar inventions that the Geneva Convention legislated.

As I pointed out before, the Snider bullet, though not strictly an "explosive" bullet, became in its latter form equivalent to one, but it was never forbidden in warfare.

The next advance was the Martini-Henry rifle, with a hardened projectile of 0.450 diameter—the Snider was 0.577—with greatly increased velocity and penetration and a much lower trajectory. This bullet was complained of as not having stopping power—that is, it passed through the limbs or body without causing immediate collapse unless some vital part or important bone was struck. In European warfare this was of comparatively little consequence, as civilised man is much more susceptible to injury than savages. As a rule when a "white man" is wounded he has had enough, and is quite ready to drop out of the ranks and go to the rear; but the savage, like the tiger, is not so impressionable, and will go on fighting even when desperately wounded. The Martini-Henry was in use for many years, but was at length superseded by the Lee-Metford, the present military rifle of this country. This rifle has a bore of only 0.3 inch, the bullet being of lead surrounded by a jacket or covering of nickel, and, fired with smokeless powder, gives a very high velocity with a very low trajectory and immense penetration. As an instance of its extraordinary power I will detail an experiment I saw carried out at Enfield by Mr. Rigby, the then superintendent of the Government Small Arms Factory.

A strong wooden box, about 6 feet long and 1 foot wide and 1 foot deep, was constructed of 1 inch planks, screwed, and bound with hoops of iron. A sheet of india-rubber about a quarter of an inch thick was substituted for wood at one end. The box was filled with water, and a Lee-Metford bullet fired into it through the india-rubber. This was done to prevent the projectile from altering its shape. So tremendous was the energy that the bullet, in forcing its way through the water, displaced it so violently that it tore the box open, bursting the planks asunder and rending out the screws and nails.

It was also found that on firing into a dead animal the bones were frequently comminuted to an extraordinary degree, though on other occasions the bullet merely drilled a hole in passing through. This was the experience of our troops in India, and while in some cases terrible wounds were inflicted, in others little or no damage was done. There is the well-known instance of the "Chitrallee" who walked into one of our field hospitals to have his wounds dressed, when it was found that no fewer than five Lee-Metford bullets had passed through various parts of his body.

The men felt that their weapons failed in "stopping" power, and that though they might hold straight and hit their adversary fairly, he was still able to charge home and perhaps cut them down.

Some experiments were then made at the Dum-Dum Ordnance Factory near Calcutta, when it was found that by leaving a small portion of the lead at the apex of the projectile uncovered, the bullet "set up" or mushroomed soon after impact and inflicted sufficient shock to stop the most determined Ghazi. This was effected either by removing part of the envelope or by putting merely a wrapper of nickel as far up the bullet as was necessary to enable it to take the rifling, leaving the lead bare at the conical portion.

In the last Soudan fight this was effected by filing off a small portion of the point or nose of the bullet, and leaving it flat and bare of envelope. In a similar way these bullets "set up" or mushroomed after impact, and gave the necessary stopping power.

It will be seen from the above that the Lee-Metford is in no sense an "explosive bullet," but merely a partially expanding one, and even now is not for a moment to be compared in its destructive powers to the Snider bullet, which was never objected to by the Geneva Convention or the Great Powers.

ACTION OF THE LEE-METFORD AT SHORT RANGES.

BY SURGEON-MAJOR C. M. THOMPSON, M.B., I.M.S.,
In charge of 44 Native Field Hospital, 3rd Brigade Tirah Expedition.

IN your remarks in the BRITISH MEDICAL JOURNAL of March 19th, writing of injuries caused by the Martini-Henry and Snider rifles as compared with the new Lee-Metford, you say, "The more severe injuries produced by the latter, if indeed they prove to be more severe, depend solely on their much greater muzzle velocity."

I think it very questionable if wounds inflicted by the Lee-Metford and dum-dum bullet at short range are as severe as wounds inflicted by either the Martini-Henry or Snider rifles at similar range; my experience during the late Tirah expedition certainly goes to prove that they are not.

During the retirement from the Saran-Sar on November 9th a party of the 15th Sikhs, consisting of a British officer, a jemadar, and four sepoys, was fired into from a range of about 300 yards; of the whole party, the British officer only was not wounded. The wounds were undoubtedly inflicted by the Lee-Metford and dum-dum bullet. The jemadar was struck on the outside of the right thigh; the bullet passed through the muscles on the outside, but did not touch the bone. One sepoy was struck on the left side of the chest; the bullet entered a couple of inches above the nipple, and emerged between the scapula and the spinal column on the same level; another was struck in the fleshy part of the right buttock, the bullet passed through the muscles, but no bone was hit; another sepoy was struck in the lower part of the abdomen, and the hole of exit was through the left side of the sacrum. One sepoy was killed on the spot, and I had no opportunity of examining his body. In the case of the jemadar, and the sepoys wounded in the buttock and chest, the wounds of entrance and exit were all very small, about a quarter of an inch in diameter, or less; there was no sign of setting up of the bullet. All these cases recovered, and were sent down to the base hospital in a few days convalescent.

The wound of entrance was also small in the case of the sepoy hit in the abdomen, but in his case the wound of exit, through the sacrum, was about the size of half-a-crown.[1] Serious injury must have been inflicted on the abdominal or pelvic organs, as he only lived a few hours; the pelvic bones were smashed, but the fragments were not much displaced, and there was very little comminution: the bullet appears to have drilled a hole in the bone with radiating fractures.

These cases and others which came under my notice during the campaign lead me to believe that the dum-dum bullet at close range certainly does not set up, if only soft tissues are traversed; and that even if a massive bone be struck the

[1] The diameter of this coin is 3.2 cm.

resulting injury, though very serious, will compare not unfavourably as regards the possibility of recovery with similar wounds caused by the Martini-Henry or Snider rifles.

I have seen a good many penetrating wounds of the chest inflicted by Martini and Snider rifles, but I have never seen one recovery when the bullet passed through the lung. In all such cases that I have seen the patient either died within a few hours from shock or hæmorrhage, or subsequently from pneumonia or other complications. I attribute the recovery of the sepoy wounded in the chest, whose case I have quoted to the small calibre of the bullet and to the fact that there was no setting up. The small wound in the skin caused by the small bullet can be very effectually closed by the natural elasticity of the tissue and deep septic infection of the bullet track thereby prevented. The jemadar suffered so little from shock that he was able to walk into Camp Maidan, a distance of two miles; the sepoy wounded in the buttock had lost a good deal of blood before he was brought to hospital, and was suffering from shock, partly the result of that loss; the sepoy wounded in the chest was in a very precarious condition for some hours, suffering from profound shock.

I am inclined to believe that the high muzzle velocity of the Lee-Metford, associated with a bullet of small calibre, tends rather to drill a hole in even a massive bone than to smash it up into small fragments; and that at short range the dum-dum bullet does not set up, even if it impinges on a large bone.

THE ROENTGEN RAYS IN BULLET EXTRACTION.

By I. L. G. GILLANDERS, M.B., C.M.Aberd.

On February 11th I was asked to undertake a small operation. The patient, D. A., aged 14, whilst cleaning a pistol, accidentally shot himself (January 24th), the bullet lodging in



Fig. 1.

the palm of the right hand. The wounded hand had been subjected to the Roentgen rays on February 1st, the skiagraph revealing the bullet lying in the second interosseous space close to the proximal ends of the first and second metacarpal bones (Fig. 1).

When I examined the patient (February 11th), I found the wound of entrance situated ½ inch from the distal end of the third metacarpal bone on the palmar surface. The hand was œdematous, and the patient complained that he "was losing the power of his fingers."

The following day I operated, Dr. Tipper, Coldharbour Lane, acting as chloroformist. I made a free incision in the palm, carefully explored the first, second, and third interosseous spaces, but with a negative result. Then I controlled the chloroform, and Dr. Tipper operated. He also met with non-success. The operation was postponed, and next day the patient was taken to Mr. Glew's radiographic laboratory. I placed a strip of lead foil along the wound. Another skiagraph was taken which indicated the comparative relationship of my incision to the bullet (Fig. 2).



Fig. 2.

I then resolved to operate on the hand while the rays were actually passing through the tissues, and substituted the fluorescent screen for the sensitive plate. The strip of lead foil was removed, Dr. Tipper put the patient under chloroform, and the room was darkened. Mr. Glew controlled the Roentgen apparatus, and held the screen between me and the boy's hand. On introducing the bullet forceps into the wound a perceptible shadow of the instrument was thrown upon the screen, and my own hand appeared in skeleton outline. Removal of the piece of lead was a question of very few minutes. I was so struck by the success and rapidity of the operation that I venture to make the following suggestions with regard to the removal of foreign bodies.

First, that the direct use of the screen is preferable in many cases to operating by the aid of a fixed skiagraph, provided that the foreign body is lodged in the less dense tissues.

Secondly, that it is advisable to place over the skin a piece

of metallic foil, or other opaque substance, indicating the line of proposed incision before operating.

Of course a foreign body can be accurately localised by one of several methods known to the profession—for example, by Messrs. Rémy and Contremouline's plan, by the ingenious method adopted in Dr. Waymouth Reid's case, by the cross wires, etc. All these methods take time, involving as they do reskiagraphy and complicated mathematical measurements. Yet I see no reason why, with perfected apparatus, one could not extract bullets and other foreign substances from any part of the body by the direct use of the screen a few minutes after their lodgment in the tissues. In military field surgery, or in our large factories and ironworks, this method of operation for obvious reasons ought to be of great value.

The failure of my first operation, I believe, was due to the fact that the bullet had become flattened against the bone, and was bound tightly down by the powerful flexor tendon. After removal of the bullet recovery was uneventful, with the exception of the appearance of dermatitis. It is interesting to note that desquamation took place from both the dorsal and palmar aspects of the hand. It appears to my mind that if the Roentgen rays cause such extensive superficial disturbance, there must needs be an immense field for original research open to dermatologists. Yet curiously enough up to the present time the practical application of the rays in this respect has been of little or no therapeutic value. The rays have been proved to exercise no appreciable influence upon cultures of tubercle and diphtheritic bacilli, but has the effect been tried *in extenso* at our skin hospitals? Do the rays act simply as a depilatory, and is the curative action in skin diseases *nil*?

ON THE CURATIVE POWER OF THE ANTIVENOMOUS SERUM

Used for the Treatment of Australian and Indian Venomous Snake Bites.

By A. CALMETTE, M.D.,
Director of the Pasteur Institute of Lille.

In the *International Medical Journal of Australasia*, Melbourne, August 20th, 1897, Dr. C. J. Martin, Professor of Physiology in the Melbourne University, published a paper concerning the curative power of the antivenomous serum on animals inoculated with Australasian snakes' venom.

In this note Dr. Martin describes the experiments he has undertaken in order to ascertain whether the antivenomous serum prepared in the Pasteur Institute of Lille is, as I have stated on several occasions, as active against the venom of Australasian snakes as against that of Indian cobras or American crotalus. By these experiments he has shown that in the Australasian venom there are two constituents: one is easily destroyed by heating, the other, separable from the former by filtering through a porous earthenware filter impregnated with gelatine, is very resistant to heat.

According to Dr. Martin my antivenomous serum might have a manifest preventive power against the latter constituent, which is the more poisonous, especially when the antivenomous serum is injected intravenously a few hours before the animal is inoculated with the venom. On the other hand, Dr. Martin says my serum has almost no action, either preventive or curative against the former constituent.

The experiments of Dr. Martin have been made in a manner so different from mine that I am not at all surprised at the results he has obtained, and what is more, if one follows the method described by him, I must allow that one will find that his statements are correct. I will, however, take the liberty to say that his experiments do not at all invalidate the results which I have obtained and published concerning the curative power of my serum.

Dr. Martin does not take into account an essential point which has to be kept in mind when experiments with snake venom are made—namely, that the resistance of animals increases with their weight; and, on the contrary, that in order to protect or cure an animal, the quantity of serum necessary is greater in proportion as their weight is smaller.

For example: in order to kill a guinea-pig weighing about half a kilogramme in twelve to twenty-four hours with the venom of pseudechis porphyriacus, it is necessary to use, on an average, $\frac{1}{1000}$ of a milligramme—that is, $\frac{1}{1000}$ of a milligramme for one kilogramme of guinea pig; whereas, in order to kill in the same time a rabbit weighing 2 kilogrammes it is necessary to use $\frac{1}{180}$ of a milligramme—that is, $\frac{2}{360}$ of a milligramme for one kilogramme of rabbit. In order to kill a dog weighing 8 kilogrammes in twelve to twenty-four hours, a dose of 4 milligrammes is necessary—that is, $\frac{1}{2}$ of a milligramme for 1 kilogramme of dog. The following table brings out these numbers:

For a guinea-pig	...	$\frac{2}{1000}$ of a milligramme for 1 kilogramme.
For a rabbit	...	$\frac{2}{1000}$ " "
For a dog	...	$\frac{500}{1000}$ " "

If experiments are made upon other animals, offering various degrees of resistance, such as the ichneumon or the hedgehog, it is found that in order to kill an ichneumon it is necessary to use fourteen times more venom than is necessary for killing a rabbit of the same weight. Consequently, there is no exact correlation between a dose of venom fatal in twelve to twenty-four hours, and the weight of the animals to which that dose is fatal. Everything depends on the resistance of the kind, and on the size of the same.

These principles being clearly understood, it will be easy to see that a much smaller dose of venom will be required to protect or cure a dog or ichneumon than would be necessary to protect or cure a rabbit. For the natural resistance (or want of sensitiveness) of the dog and ichneumon to the venom is much greater than that of the rabbit. It will be evident, also, that in order to immunise a guinea-pig it will be necessary, weights being equal, to use four times more serum than to immunise a rabbit.

Dr. Martin in his experiments does not take any account of these differences of susceptibility, and he inoculated his rabbits with doses of antivenomous serum which were much too small. During the last seven years I have made a very large number of experiments with venoms of all kinds. I have studied the venoms of Australian snakes, the venoms of nearly all the kinds of snakes found in India, Indo-China, Africa, and America. I have been able to satisfy myself that all these venoms derive their toxicity from a substance which is the same in all these snakes. I have found, however, that some of them produce very intense local phenomena, some hæmorrhages, others simply bulbar paralysis.

The venom of viperidæ differs from that of the colubridæ generally by its very intense local effects. These local phenomena are prevented by heating the venom to 75° C., after which the venom of viperidæ produces exactly the same toxic effects as that of the colubridæ.

On the whole, apart from these local effects and the production of hæmorrhages, there are only differences of intensity in the various venoms; these variations are quite comparable to the differences of virulence observed in various races of streptococci or diphtheria bacilli.

I maintain in the most categorical manner, and in spite of Surgeon-Major Cunningham and Professor Martin's adverse opinion, that the serum of an animal hypervaccinated against a very active venom, such as of the Indian naja tripudians, can, when injected in a sufficient quantity, prevent the death of an animal inoculated with fatal doses of venom of the daboia russelii, pseudechis porphyriacus, crotalus adamantus or bothrops atrox.

The experiments I made in London (July, 1896) in the laboratory of the Royal College of Physicians and Surgeons were quite conclusive. On that occasion, in order to prove the preventive and curative effects of my antivenomous serum, I used a mixture of equal parts of the venoms of the Indian naja, the American crotalus, and the bothrops lanceolatus from the Martinique. The horses from which I had obtained the serum used in these experiments had not been inoculated either with the venom of bothrops or crotalus, but only with very large doses of the venom of naja tripudians.

If Dr. Martin had repeated these experiments in the way described in my publications, he would undoubtedly have obtained the same results. I consider that I have absolutely proved this first point, that is, that the toxic principle of various venoms is identical and that my antivenomous serum is efficacious against them all.

Dr. Martin's second contention, that my serum is too weak to be of any value for treating people bitten by snakes, I will answer by the following evidence.

First, let us consider the experimental facts.

If Dr. Martin be good enough to repeat his experiments

and use doses preventive or curative, the larger the less resistant the animals are, he will find:

1. That in order to protect a guinea-pig against a dose of venom lethal in twelve to twenty four hours it will be necessary to inject hypodermically 8 c.cm. of serum in the right flank at the same time as the venom is injected into the left flank or the thigh.

2. That in order to cure a guinea-pig after injecting a dose fatal in twelve to twenty-four hours 15 c.cm. of serum must be injected two hours after and 20 c.cm. four hours after the poison has been introduced into the system. A successful result will then be invariably obtained.

3. That in order to protect a rabbit weighing 2 kilogrammes against a dose fatal in twelve to twenty-four hours it will be sufficient to inject 4 c.cm. of serum instead of 10 c.cm., as in the previous case. The serum is injected in the right flank, whilst the venom is injected into the left flank or into the thigh.

4. That in order to cure a rabbit after the administration of a dose fatal in twelve to twenty-four hours it will be enough to inject 4 c.cm. of serum half an hour after injecting the venom, 6 c.cm. an hour after, 10 c.cm. two hours after, or 20 c.cm. four hours after.

5. That in order to protect a dog weighing 8 kilogrammes against a dose lethal in twelve to twenty-four hours, it will only be necessary to inject 6 c.cm. of serum in the flank at the same time as the venom is injected into the thigh.

6. In order to cure a dog which has received a dose fatal in twelve to twenty-four hours, one has only to inject 10 c.cm. of serum two hours after the injection of the venom or 20 c.cm. four hours after.

Therefore I have a right to say that in the case of man, who is much more resistant to venom than the dog, weight for weight (as is proved by some rare accidents following the bite of indigenous vipers, some of these showing the resistance even of children) a dose of 10 c.cm. of my antivenomous serum will be more than sufficient to prevent intoxication and death—that is, provided this dose of serum be injected two, or even four, hours after the snake bite. The most dangerous venomous snakes of tropical regions seldom kill man in less than eight to twelve hours.

Besides, practical experience proves that I am right. It is now nearly two years since the use of my antivenomous serum was introduced in India, in Algeria, in Egypt, on the West Coast of Africa, in America, in the West Indies, Antilles, etc. It has been very often used for men and domestic animals (dogs, horses, oxen), and up to now none of those that have received an injection of serum have succumbed, however long the intervention has been delayed. A great number of observations have been communicated to me, and not one of them refers to a case of failure. It is, indeed, a lamentable fact that in Australia, where accidents from snake bites are numerous, the use of antivenomous serum does not yet prevail, and that practitioners continue to prefer the use of strychnine, which has no efficacious properties against the venom.

I am sure that, if Dr. Martin repeats the experiments in the manner I have just pointed out, he will agree with me. He will be able to verify that the absorption of the serum takes place much more rapidly than that of the venom, provided the serum is injected in a sufficient dose. He will also recognise that the immunity produced by the serum is immediate if it be injected intravenously. I think that in practice the intravenous injection of serum is useless in man; but it furnishes an excellent means of estimating rapidly and surely the degree of activity of the antivenomous serum.

When one wishes to ascertain whether a serum is sufficiently active, the following method should be adopted: One determines first with any given venom (weighed in the dry state and diluted with a certain quantity of water) the dose which, when injected into the marginal vein of the ear of a rabbit weighing about 2 kilogrammes, will cause death in fifteen to twenty minutes. This dose being determined, the two following experiments are made:

1. A first rabbit receives into the marginal vein of the right ear 2 c.cm. of serum. After five minutes the dose of venom (lethal in fifteen to twenty minutes for an animal of the same weight) is injected into the marginal vein of the left ear. The animal should show no sign of discomfort; it should resist indefinitely.

2. A second rabbit first receives the venom (the same dose fatal in fifteen to twenty minutes) into the right marginal vein. After five minutes, when it begins to show respiratory embarrassment, 4 c.cm. of serum are injected into the left marginal vein. The animal should before long revive entirely and begin again to eat.

These two experiments are very easily repeated, and they prove abundantly how rapidly the serum renders insusceptible the cells of organism which are affected by the venom. All our serums are capable of acting at least preventively in doses of 2 c.cm., and we are now preparing others which are still more active. Our immunised horses can bear up to 1 g. of dry cobra venom, injected all at once intravenously, without being in the least incommoded, whereas by 10 mg. of the same venom a fresh horse is rendered seriously ill.

It has taken us three years to obtain this tolerance, and undoubtedly we shall make further progress. Contrary to the opinion of Dr. Martin, we do not think it would be useful or desirable to establish centres for preparation of this serum in different countries. This preparation is extremely difficult and delicate; it requires much time, a good deal of patience, and it demands continued watchfulness. The vaccinated animals have to be watched continuously.

We have in the Pasteur Institute of Lille a special staff and a working stock which now enables us to meet the wants of the whole world. We have erected hothouses where venomous snakes of every kind sent to us by our correspondents produce in abundance the venom we want. Dr. Martin is justified in expressing the hope that in a few years the antivenomous serum treatment will give us the means of preventing the large mortality occasioned in so many countries by snake bites.

ENTERIC FEVER IN INDIA: ITS TREATMENT ON THE ANTISEPTIC PRINCIPLE.

BY BRIG.-SURG.-LIEUT.-COL. RICHARD H. QUILL, M.D., A.M.S.

STATISTICS OF ANTISEPTIC TREATMENT.

THE purpose of this paper is to give a plan of treatment which I adopted during my last tour of service in India, and which I found to reduce very considerably the mortality of the fever under consideration. Early in 1893 I commenced systematically to treat all cases of enteric fever coming under my care on the basis of the antiseptic principle, and continued to do so up to November, 1895, when I left India. The result has been as follows:

(a) Number of cases treated	46
(b) Number of deaths	2
(c) Percentage of mortality	4·3

I am well aware that statistics in connection with enteric fever are in many respects unreliable, the more especially when the number of cases under treatment has been, comparatively speaking, small. I therefore in no sense submit the above figures as being in any degree decisive; nevertheless, it is a gratification to me to be able to record them, the average mortality of the fever I am discussing being in India seldom below 20 per cent. None of the 46 cases were diagnosed as examples of enteric fever without careful consultation and a unanimity of opinion as to the type of the fever. This precaution ought to dispose of criticism directed against the accuracy of my diagnosis of the cases in question. The 46 cases were consecutive, all had practically the same treatment, and many of them were severe examples of the fever. In the 2 cases which proved fatal recovery was hopeless, the fever in both being of a most malignant type. Before giving any special details of the treatment I advocate, some preliminary observations appear to me to be called for.

DIET.

No drug or combination of drugs can possibly exercise a favourable influence on the course of the enteric type of fever unless the suitability of the dietary and the efficiency of the nursing be above suspicion. No detail in connection with these important items of treatment ought to be ignored. As my experience has increased, I have come to realise with more conviction how very limited is the gastro-

intestinal digestion during the acute stage of enteric fever. I am further convinced that nowadays there is a very undesirable tendency on the part of physicians to over-feed patients suffering from that fever, an error arising from some latent feeling that the more nourishment we can induce them to swallow the better will their strength be maintained. In this connection I would instance an over-abundant administration of milk. Four or even five pints of milk are ordered for a twenty-four hours' consumption, with the addition probably of a pint or more of beef tea, and at a period of the fever when the absorptive power of the patient is quite unequal to the task it is asked to accomplish. What is the result of giving food in these cases, all of which cannot be absorbed? It means the introduction of decomposable material into an intestine which, for the safety of the patient, ought to be kept as free as possible from such material. It means, moreover, the maintenance of diarrhœa, when intestinal rest is of the utmost consequence, and further, it means the production of tympanites.

Consideration of these points ought to impress on us the obligation of laying down precise directions in regard to all matters connected with our patient's feeding, and when doing so to endeavour to estimate aright the extent of his absorptive power. Thus, if we find he cannot absorb satisfactorily three pints of milk in the twenty-four hours, give him two pints; if he cannot assimilate two pints, give him, for the time being, only one pint, and peptonise that limited quantity.

I can testify from experience to the manifest benefit which frequently accrues to enteric fever patients from the temporary diminution of nourishment just advocated.

Further, a correct judgment as to whether our dietetic arrangements are judicious or otherwise can only be arrived at by a daily and systematic inspection of one or more of the patients' stools. This is an important duty which is too often neglected or passed on to the supervision of the nurse.

Sir W. Broadbent writes: "The secret of success in treating enteric fever lies in a constant examination of the stools." Wise counsel, for such inspection informs us how far the milk we are giving to our patient is being assimilated, and thereby affords us an invaluable guide for his judicious feeding.

The following diet table is the one I am in the habit of handing to those responsible for the nursing of my enteric fever patients. It is subject of course to occasional modifications, but, taken as a whole, it contains, I think, all that is essential for the efficient nutriment of those passing through the acute stage of enteric fever.

Notes of Case.	Time.	Milk.	Beef Tea.	Soda Water.	Medicine.	Remarks.
		oz.	oz.	oz.	oz.	
Name ———	6 A.M.	...	—	—	1	
	7 ,,	...	—	—	—	
Age ———	8 ,,	...	—	—	1	1.
	9 ,,	...	—	—	—	All milk to be boiled.
	10 ,,	...	—	—	1	
Disease ———	11 ,,	...	—	—	—	
	12 noon	...	—	—	1	2.
	1 P.M.	...	—	—	—	To each pint of milk add 1 ounce of the following alkaline mixture:—
Day of disease —	2 ,,	...	—	—	1	
	3 ,,	...	—	—	—	
	4 ,,	...	—	—	1	
Diet ———	5 ,,	...	—	—	—	3.
	6 ,,	...	—	—	1	*Alkaline Mixture.*
	7 ,,	...	—	—	—	R Sodæ bicarb. 3ss
N.B.—20 ounces, equivalent to 1 pint; 2 tablespoonfuls equivalent to 1 ounce.	8 ,,	...	—	—	1	Sodii chloridi 5j
	9 ,,	...	—	—	—	Aquæ 3xij
	10 ,,	...	—	—	—	Ft. mistura.
	11 ,,	...	—	—	—	
	12 midnight	...	—	—	—	4.
	1 A.M.	...	—	—	—	The antiseptic mixture to be given immediately after a portion of milk or beef tea. The frequency of its administration may be lessened in mild cases.
	2 ,,	...	—	—	—	
	3 ,,	...	—	—	1	
Date ———	4 ,,	...	—	—	—	
	5 ,,	...	—	—	—	
	Total	...	—	—	10	

A copy of this form, filled up daily, should be hung up over the patient's bed-head for the information of the orderly attendants.

On examining this table it will be found that milk, boiled, diluted, and made alkaline is the basis of the dietary I recommend. Two and a half pints of milk, at suitable intervals, are usually ordered for a twenty-four hours' consumption. This quantity of milk may, in most cases, be advantageously supplemented by 16 ounces of well-made chicken broth or beef tea. If there be evidence of any undue exhaustion, the occasional addition of an ounce or two of raw meat juice to a portion of milk, or the yolk of an egg previously whipped up in a little boiling water and added to the beef tea, will be found most beneficial.

Alcohol is not given as a matter of routine, but is kept in reserve as a drug of inestimable value when certain conditions call for its employment. I would urge the daily examination of the heart, the pulse alone being a fallacious guide, and on the smallest indication of a weakening of the first sound becoming evident, the administration of alcohol should without delay be commenced. When the morning temperature has fallen to normal and has remained at that level for two or three successive days, it is in my judgment an evidence that the specific element of the fever has spent itself, and is an indication that we may safely but carefully increase the nourishment of our patient. Thus egg flip, a little stale bread boiled in milk, and a small quantity of fresh butter spread on some soft biscuit, will be useful additions to the dietary.

At this period of the case I am in no way concerned should the evening temperature continue to rise a little above normal. Indeed, such a rise is almost invariable for a week or more after the morning temperature has fallen to normal and remained there. This evening rise is no evidence that the specific element of the fever still remains; it merely tells us that the nervous system has not yet recovered its equilibrium, and upon such nervous disturbance the administration of increased nourishment will have only a beneficial effect. Nothing really solid in the shape of food should be given until all pyrexia has ceased for a week or ten days.

Nursing.

In relation to the nursing arrangements, there is one detail upon which I should like to dwell, as on many occasions I have found it a most valuable help. Should any distension of the abdomen or appearance of blood in the stools be noticed, I invariably direct an ice poultice to be applied to the abdomen, and to be kept there more or less continuously until all disquieting symptoms have disappeared. As my method of using an ice poultice is somewhat peculiar I will describe it:

I take an ordinary surgical cradle made a little broader than usual, and inside the cradle I attach a specially made ice tray. This tray is made of a light tin frame, about 14 inches long by 10 inches broad, the sides being 2 inches deep, and pierced with a few holes. A floor for this frame is made by attaching to its sides a piece of thick flannel, lined on its outside with oiled silk. The tray thus made having been lightly filled with small lumps of ice, is placed inside the cradle, and attached to its hoops by means of tapes. It is thus suspended over the patient in a way that will permit the floor of the tray to be lightly in apposition with his abdomen.

I can confidently recommend this detail as being very effectual in dealing with two symptoms which, in enteric fever, must ever be a source of anxiety. This "ice tray" has a still further use. Should there be no abdominal indication for the apposition of ice, we may employ the tray as a controller of temperature. The cradle tapes are shortened, so that the tray is merely suspended over the patient's body, in much the same way as Dr. Fenwick directs his "ice pails" to be used. Then, by throwing a light sheet over the cradle, leaving an aperture at either end, a constant current of cooled air will surround the naked or lightly clad patient, keeping in check his temperature, whilst his general comfort is increased.

The advantage I claim for this modification of ice cradling is that with one apparatus we have the means of either surrounding our patient with cooled air or of applying to his abdomen an effectual and safe ice poultice.

Early Treatment.

When a fever of a continued type in its early stage comes under our care it is frequently impossible to decide offhand as to the exact nature of the type. Thus it may, in its subsequent course, prove to be enteric or after a few days all suspicious symptoms may disappear, the fever being due to some gastro-intestinal disturbance or to malaria. The rule I follow in such doubtful cases is to treat them from the day of admission both dietetically and medicinally, as if they belonged to the enteric type. Such practice is, I think, judicious, for

should the fever prove to be a veritable case of enteric no valuable time has been lost in dealing with it, while, on the other hand, should it turn out that we have to deal with a simple febricula or fever of the malarial type no harm has been done to the patient by our caution.

Should the case come under our care within the first week of fever, 2 grains of calomel are given on the night of admission and half that quantity is given on the following night should there be no special contra-indication to its use. I look upon this preliminary use of calomel as a highly important item of the antiseptic treatment of enteric fever. Calomel is not only a hepatic stimulant but an antiseptic of no small power; thus its use at the commencement of an attack of enteric fever not only removes all retained fermenting matters in the intestine, but disinfects the gut as well, and so places it in a favourable condition for the subsequent maintenance of antisepsis.

Should constipation occur during the progress of the fever a simple enema is given, supplemented if necessary by half a grain of calomel, while should there be, on the contrary, a tendency to undue looseness an enema of starch and opium, with perhaps 10 grains of tannic acid or subnitrate of bismuth added to it, is directed to be given.

The Antiseptic Method Employed.

Coming now to the more special treatment of the fever, I would urge that our aim ought to be the production and maintenance of intestinal antisepsis. This desirable condition can, in my judgment, be greatly promoted by the free use internally of some reliable antiseptic. I at once admit that it may not be possible for the antiseptic agent we employ to enter the blood current in sufficient abundance to exert there any influence of importance on the product of the bacilli, the typhotoxin, which we presume to be the prime cause of the group of symptoms, taken together, which make up our conception of enteric fever. But we have to remember that the bacilli which produce the typhotoxin grow and multiply in the wall of the ileum, and presumably on its mucous surface. If this be admitted, it is reasonable to suggest that in the intestine the potency of the bacilli can to a large extent be neutralised by the free internal administration of some reliable antiseptic; on doing so we cut off a large depôt, so to speak, for the production of the specific fever element. Looked at from this standpoint, the production and maintenance of intestinal antisepsis is, I submit, a highly important remedial measure. It renders harmless, to a large extent, the bacilli in the intestinal canal; in other words, "the reserves" which supply to the blood the fever poison.

But success will be endangered if we omit to give our antiseptic early in the fever. Each day that is lost in allowing septic products in the intestinal canal to remain there unneutralised, and to be diffused in that condition throughout the system, will obviously tend to lessen the efficacy of the antiseptic we may eventually employ. I would therefore urge that in all suspicious cases of fever coming under our care there should be no delay in commencing the free internal use of some reliable antiseptic.

The antiseptic combination I recommend in enteric fever, and the one I have employed in the cases upon which this paper is based, is carbolic acid and chloroform. I usually prescribe them as in the following formula: ℞ Acid. carbolici purissimi ♏xxxvj (Calvert's No. 1), tinct. chloroformi co. ℥ij, tinct. cardamomi co. ℥ij, syrup. aurantii ℥j, aquæ chloroformi ad ℥xij. M. Ft. mist. One ounce with an equal quantity of iced water to be taken every second or third hour immediately after food.

In mild cases of enteric fever five or six doses of the above mixture are given in the twenty-four hours at suitable intervals; while in severe cases ten doses are given. It is advisable to continue its use in from three to five doses daily for at least a week after the temperature has fallen to normal. Doing so decreases, in my experience, the occurrence of relapse. I have found the above combination not only efficient in an antiseptic sense, but most palatable; the latter quality in medicines is at all times a desirable one, but more especially so in a fever of the enteric type, where it is of the utmost importance to keep the stomach in good humour, and as undisturbed as possible. I have never had to omit this mixture for any untoward effect produced, nor has any patient of mine on any occasion made the smallest objection to taking it; more than can be said for other antiseptic combinations I have known prescribed.

It may possibly be argued that owing to carbolic acid and chloroform being very diffusible bodies they would leave the alimentary tract long before they could reach the lower portion of the ileum and exercise there an antiseptic influence. To such an objection I can only reply from the standpoint of practical experience, that the antiseptic combination I recommend, if given as advised, does satisfactorily disinfect the intestinal tract. The best evidence is that the stools under the use of the medicine almost invariably lose their unpleasant odour, and are maintained in that condition if the treatment be persisted in. One case bearing on this point clearly comes to my mind as I write.

A case of fever which promised to be of a very severe type came under my notice. From the patient's breath and body an odour almost putrefactive exhaled and the "septicæmic stools" passed were so intensely offensive that all in attendance were nauseated by them. The man was at once placed on full doses of the carbolic acid and chloroform combination, with the result that within twenty-four hours all unpleasant odour from breath, body, and stools had disappeared to the very great comfort of all engaged in the nursing duties.

I think it may be fairly claimed that, in this case the dispersion of the unpleasant odours was due to the disinfectant action on the intestinal canal, and it may be on the blood, of efficient antiseptics administered with freedom.

In past years, although carbolic acid has been more than once recommended as a reliable antiseptic in enteric fever, it has never been generally adopted. I believe that this neglect of the remedy would not have happened had it, in proper combination, been given with much more freedom than is usual. To give the acid in doses of ♏j or ♏ij three times a day is a mere trifling with therapeutics in their relation with the fever under consideration. If satisfactory results are to be looked for, an acid of trustworthy purity must be given in full doses, properly combined, well diluted, and at short intervals.

In the series of cases upon which this paper is based were several which took a large quantity of carbolic acid before convalescence was established, but in none of the cases were any ill-effects noticed which would be ascribed to the pure acid I use. One patient took from first to last over 2 ounces of carbolic acid with an equal quantity of chloroform, and in other cases 1½ ounce of each drug was taken, yet the urine never became black, or anything approaching that colour; occasionally it became a little high-coloured, that was all.

But I am far from wishing to press unduly the merits of the particular combination of antiseptics I employ to the exclusion of other drugs similar in action. What I am contending for is the principle of treating cases of enteric fever with the aim of producing intestinal antisepsis. So long as that condition is secured I am very little concerned as to the method by which it is brought about. I certainly recommend the combination according to the formula I have given, because I have observed excellent results to follow its exhibition, results which have not, in my experience, followed from other antiseptics, and I have tried most of those recommended. In this connection I would make an exception in favour of eucalyptus oil, which I have used in a few cases, and with results quite as favourable as those which have followed the employment of carbolic acid. Indeed, the only objection I have to make against eucalyptus oil is its flavour, which is decidedly objectionable to some people. If, however, the stomach does not rebel against the oil, I would employ it with quite as much confidence as I do carbolic acid.

The following is the formula I have used when prescribing eucalyptus oil: ℞ Ol. eucalypti, ℥j; mucilag. acaciæ, ℥j; spt. ammon. aromat., ℥ss; glycerini, ℥ij; spt. chloroformi, ℥ij; aquæ chloroformi ad ℥xij. M. Ft. mist. Sig: One ounce every third or fourth hour.

An extended trial of the new antipyretic compounds, such as antipyrin and its congeners, has made me very sceptical as to the wisdom of using them in enteric fever unless under exceptional circumstances.

To reduce a protracted high temperature, and to keep the pyrexia, generally speaking, within moderate limits, I invariably trust to cold bathing or ice packing, a measure which not only reduces the unduly high temperature, but gives at the same time a beneficial fillip to the nervous system generally.

To avoid misconception as to what I claim for the free antiseptic treatment of enteric fever, I will, before bringing this paper to a close, briefly state my case. The cure of any disease must be conditional—that is, we cannot truly estimate the value of any remedy we employ in disease unless on our commencing its exhibition the possibility of a cure exists. A fatal termination under any form of treatment is what, unfortunately, we have occasionally to expect, and for such an eventuality we must be prepared, even though our patient be at the time well under the influence of our pet remedy. Dr. Burney Yeo has very justly remarked "that occasionally fierce and destructive conflagrations occur which water will fail to extinguish. Yet none the less is water an extinguisher of fire."

In connection with this observation I would say that more than once I have seen remedies tested in cases, obviously in a hopeless condition, and discredited because a miracle did not follow on their employment. I claim no "miraculous properties" for the antiseptic combination advocated in this paper, but I do maintain that its free use (in conjunction with the other items which, taken together, make up the antiseptic treatment of enteric fever) will reduce the mortality of that fever from 25 to 10 per cent., or even less. Surely that is no small gain!

CONCLUSIONS.

I will state my case in this way: Take 100 cases of enteric fever, as that fever is observed in India, and treat them expectantly with a well-arranged dietary and efficient nursing; from 70 to 80 of those cases will recover, leaving a mortality of from 20 to 30 per cent. Treat a second batch of 100 cases with the same dietetic and nursing arrangements, but instead of the expectant treatment, or rather in addition to it, employ the antiseptic system (which I may remind all readers of this paper does not solely consist in giving so many doses of an antiseptic mixture), and instead of a death-rate of from 20 to 30 per cent. we shall have something about 10 per cent. So much, and no more do I claim for the antiseptic treatment of enteric fever.

I will bring this paper to a close by stating explicitly and succinctly certain effects observed during the progress of the fever, which I ascribe to the method of treatment advocated in this paper:

1. Intellectual clearness of the patient, with very slight tendency to delirium or stupor.
2. Food invariably well assimilated.
3. Abdominal distension except to a very moderate extent, invariably absent.
4. Early cleaning and moistening of the tongue; dryness very rarely present.
5. Stools almost completely deodorised.
6. An offensive odour from breath or body of patient rarely observed.
7. Tendency to undue looseness of bowels rarely present.
8. Secondary complication of any kind never noticed.
9. The fever pursued its course "kindly," with little distress to the patient.
10. Convalescence rapid and complete.

I was unable to satisfy myself that: (*a*) The duration of the fever was lessened; (*b*) that there was any marked and continuous lowering of the thermometric range; or (*c*) that an occasional tendency to relapse was removed.

A CASE OF PERNICIOUS BERI-BERI.

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Now that the subject of tropical medicine is at last about to receive that attention which most assuredly it deserves, the following case of pernicious beri-beri seems worth recording. It also may not be amiss to recount the various stages passed through on the road to its diagnosis.

At the end of the year 1888 I went out to Manila, taking with me a fair experience of alcoholic paralysis and the knowledge that beri-beri was also a peripheral neuritis, which, however, sometimes assumed an œdematous form. Passing through Hong Kong I visited Mr. Ho Kai. From him I learnt that, owing to the efforts of our old fellow-student Mr. Takaki, beri-beri had been practically stamped out of the Japanese navy, and that this change had apparently been effected by the introduction of a more nitrogenous dietary. Mr. Ho Kai also told me that a case of undoubted beri-beri had recently occurred in a member of the local British colony. Absolute immunity was not therefore to be obtained merely by the liberal indulgence in nitrogenous food, nor was the Britisher to be regarded as being exempt from the disease.

Arriving in Manila, and calling on Mr. Donelan, I was surprised when, speaking of the cholera epidemic of 1882 in that city, he informed me that an even more fatal *epidemic* of beri-beri had immediately succeeded it—an epidemic which, as I afterwards learnt, according to the estimate of Roeniger,[1] caused the death of 20,000 people, the mortality reaching 60 per cent. In this epidemic no children were attacked, but the susceptibility of women after parturition was very marked. As a result of this conversation I now modified my mental picture of the disease and began to associate its symptoms with the paralysis of diphtheria (which I then regarded as a peripheral neuritis) rather than with the neuritis of alcohol.

The first few months of my residence were consumed in acquiring a superficial knowledge of Spanish, together with my licence to practise. At about the end of that period I was consulted by a young half-caste lady, the wife of a patient, as to an ingrowing toenail. For this I performed partial avulsion under a local anæsthetic; and three days afterwards, calling to see her, I found her walking about the house in comparative comfort. Two days later I received at night an urgent message to visit her, as she was dying. Arriving at the house they told me that two or three hours before she had been seized with shortness of breath, and had lain down on her bed complaining of what was apparently an acute attack of indigestion. I found her sitting up in bed suffering from well-marked orthopnœa; her face blanched, and covered with cold perspiration; her pulse was 140, and her temperature subnormal. With difficulty she was able to ejaculate that she felt intense substernal pain, and that she was dying. Hastily examining her chest, I found dulness and absence of breath sounds extending posteriorly and equilaterally up to the angles of her scapulæ; while above, and over the whole of her thorax anteriorly the lungs were filled with minute crepitations suggestive of œdema; the cardiac sounds were practically inaudible. By chance some of her urine was obtainable, and with this I drove off to my consulting room, in order to test the specimen, and to fetch such remedies as might be necessary.

Examination of the urine showed absence of albumen, so, taking with me an aspirator, and such drugs as suggested themselves, I returned to my patient, pondering over the pathological obscurity of her symptoms, and wondering at the fact that I should have heard, for the first time in my life, what appeared to be crepitations characteristic of œdema at the apices of the lungs. The general appearance of the patient, and the suddenness of her attack, suggested pulmonary embolism, while the physical signs pointed to a partial and equilateral thrombosis of the pulmonary veins—a condition impossible to more than momentarily contemplate. Returning to the bedside I examined her legs, and found some slight œdema of both; her condition was now yet more grave, and within two hours she was dead. I certified the case as one of heart disease, and though by no means prepared to be cross-examined as to this, I remained unshaken in my belief for a space of about a fortnight.

During this period I happened to visit an acquaintance of my late patient, an elderly half-caste woman, who, referring to the phenomenon of the sudden end of one so young and apparently healthy, remarked that the cause was "certainly beri-beri." This observation my limited knowledge of Spanish most fortunately compelled me to let pass—for my association of beri-beri with the neuritis of diphtheria had not gone so far as to admit of the possibility of death in a few hours in a case of the former disease. On this same day, interviewing my late patient's mother, I learnt from her that her daughter had suffered from slight œdema of the legs for some days before her death. How long she did not know; nor did my operation throw any light upon this, for, refusing to take chloroform, she had, with characteristic native modesty, merely exposed to my

view the affected toenail. Some days afterwards, going round the wards of S. Juan de Dios, I was shown a marked case of ascites in a beri-beric patient, and a remark was made as to the rarity of such cases and the relative frequency of pleural and pericardiac effusions.

I now consulted other local sources of information, and, finding that beri-beri was sometimes fatal in a few hours, with just such symptoms as my patient had presented, I began to suspect that the diagnosis of the aged half-caste might indeed have been the correct one. Subsequent experience and further information as to a feebleness in the patient's legs for a couple of days before death (obtained through the medium of her husband, who was away when the catastrophe occurred) later removed all doubt as to this.

At that time the only Philippine publication I could discover concerning beri-beri consisted of a contribution to the *Diario de Manila*, early in 1888, by Dr. Yglesias. In this he laid stress on three points: First, that the disease was of bacterial origin, the micro-organism being found in mud and commonly obtaining ingress, as in tetanus, by means of cuticular lesions; secondly, he described the symptoms as being due to a neuritis; and, lastly, stated that amongst them the chief characteristic was a myositis. At this time Dr. Miciano had only recently commenced his work in connexion with this disease at the Hospital of S. Juan, into the wards of which I have a note that there entered in a little over five months, in the year 1887-88, 228 beri-beri patients, of whom 55 died.

But though there was then very little published in Manila in reference to beri-beri one found the local Spaniard, thanks chiefly to the writings of Lacerda and other South American observers, quite proficient in its symptomatology and not ignorant of its bibliography and of such work as we have done in the elucidation of the disease. Thus, in a series of articles as to the etiology of beri-beri published by Dr. Maceras in 1893, not only were the publications of Anderson and Simmons commented on, but a further reference was made to the work of Lind (1757), Clark (1792), W. Hunter (1804), Rogers (1808), and Marshall (1822).

Thanks to Dr. Patrick Manson and Allbutt's *System of Medicine*, our knowledge of beri-beri has been now brought up to date. Owing to Dr. Manson's able advocacy tropical medicine generally will no longer be treated with insular indifference. In time we may even see established at home a society modelled on the lines of the Colonial Society of Germany. In any case, however, one can foresee that the path of the British practitioner in the tropics is soon to be rendered much more smooth and pleasant to start upon. It is in order to possibly emphasise the necessity for this that I venture to publish this case.

REFERENCE.

1 Quoted in the *Correspondencia Médic*

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE WET PACK IN BERI-BERI.

My only excuse for sending you the following notes is the success which attended the wet-pack treatment. I had not tried it in previous cases.

On September 12th, 1897, S. H., a fireman, complained of pain in the legs, difficulty in walking, fulness about the abdomen, and shortness of breath. He had some œdema over the crest of each ilia, and there was some effusion into the abdominal cavity, and œdema in the lumbar region. The temperature was normal, and the pulse 120. He was vomiting food. The urine was small in quantity and of a high colour, but contained no albumen.

The patient was isolated; and was ordered milk, beef tea, and lime juice, and the following mixture: Pot. nit. ʒj; tinct. scillæ ʒss; tinct. digitalis ♏viij; liq. ammon. acet. ʒss; aq. ad ʒj. Cap. ʒj tertiis horis. On September 13th the temperature was normal, the pulse 120, and vomiting had ceased. On September 14th the morning temperature was normal, and the pulse 125. He was vomiting everything. The urine was scanty and high-coloured, but contained no albumen. He was ordered milk and soda water. The evening temperature was 100° F. He was put in a hot wet pack, and left in it for about half an hour. He perspired freely, and his temperature was normal soon afterwards. The next morning he felt better, and had not vomited. The temperature was 100° F., the pulse 130, rather incompressible; the urine scanty. The kidneys were dry-cupped, and a poultice applied afterwards. The evening temperature was 102° F., and the patient was put in hot wet pack again, and perspired freely. On September 16th the morning temperature was 98.8° F., the pulse 130. The œdema did not appear to be less. The evening temperature was 101.2° F. He was again put in the wet pack. On September 17th he felt much better, although there was a good deal of œdema still. The tension of the pulse was much less, and he was passing a fair quantity of urine. The temperature was 98.6° F., and the pulse 120. The patient made a good recovery, and resumed duty on October 1st. The œdema had all disappeared.

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HYPERPYREXIA IN ACUTE CROUPOUS PNEUMONIA.

ON April 5th I was called to see W. M., a young man 28 years of age, of distinctly nervous temperament. He was suffering from croupous pneumonia of the lower lobe of the left lung, evidently consequent on an attack of influenza. The disease ran its ordinary course till the morning of April 10th (the sixth day of the pneumonia), when after a restless night my patient became drowsy, and when I saw him at 3 P.M. he was quite unconscious, breathing stertorously, and was just recovering from a convulsive seizure. I found his temperature to be 108·6°. I had no other thermometer at the time with which to check this result, but I subsequently compared the thermometer I used with three others, and found them all to correspond. The pulse was about 130, and rapidly failed, so that my patient died in half an hour without regaining consciousness. The highest temperatures in acute pneumonia that I can find recorded in the authorities at my disposal are 109·4° (fourteenth day) and 108·9 (seventh day).

Fochabers, N.B. S. O. IRONSIDE, M.B., C.M.

A CASE OF INTRAUTERINE PULMONARY RESPIRATION.[1]

I WAS called to attend Mrs. F. on the morning of April 17th in her fourth confinement. I had attended her in each of her previous pregnancies. She always had a fairly good time and required no instrumental aid. I arrived at the house at 9 A.M. and found she had been ill with pains for the greater part of the night, but had slept for some hours. She was awakened at 4 A.M. by the rupture of the membranes with a severe pain. The pains subsided to a great extent and were occurring every ten minutes when I saw her. The os was dilated about a third. It was a head presentation, but I could feel the apex of the child's left ear by sweeping my finger round the os. I returned to my own house, and came back to the patient at 10.30 A.M. Sitting by the bedside during the interval between the pains, I heard a distinct sobbing, smothered cry. I immediately examined and found the os very little more dilated, not quite half. I asked Mrs. F., "What noise was that?" She replied, "It is the child crying, and it has been crying at intervals since yesterday evening." I called the nurse, and she heard the sound: in fact, it could have been heard from any part of the room. It was just like a child sobbing under the bedclothes. I examined with the stethoscope and found it most distinct just where the mother pointed out to me as the place from whence she felt the sounds proceeding—namely, a point midway between the umbilicus and the iliac spine of the mother's right side. This was where I heard the fœtal heart beat. The os was soft and dilatable. I examined the child's heart every few minutes, and I was prepared to use instruments if any failure manifested itself in the fœtus. The cry was heard a number of times, and about 12 o'clock, when I gave a drachm of liquid extract of ergot, Mrs. F. remarked that "baby had gone to sleep." No further cry came till 12.30, when a couple of strong pains following each other rapidly expelled the

[1] Read at the Spring Meeting of the North of Ireland Branch, British Medical Association.

child face to pubes. It was screaming lustily during the last pain, and did not require artificial respiration by any means. The cord was pulsating in a marked manner, and I did not separate the child for two or three minutes. The placenta was expelled edgeways in about ten minutes, but nothing of an abnormal nature was discovered. The placenta was very succulent, and a gush of blood came splashing out from it during expulsion.

I cannot vouch for the mother's statement that she heard the child cry the evening before (Mrs. F. is well educated and very intelligent), but I can vouch for the fact that this child cried and sobbed for two hours before birth, beginning before the os was half dilated. Though it was a case of ventriloquism it could not have been the mother, for I engaged her in conversation while the cry was still proceeding. Never having heard of such a case before, nor read of one, I thought it worth recording. The case appears to me to knock the bottom out of most of the explanations we have had as to how the lungs are inflated at the moment of birth.

Belfast. CHARLES KEVIN, M.D.

COMPOUND DISLOCATION OF THE UNGUAL PHALANX.

THE interesting reports in your late issues of cases of the above occurrence urge me to forward you the particulars of an instance of a compound dislocation of the ungual phalanx of the thumb which I treated some years ago. A boy, aged 11 years, came to me with the proximal end of the bone protruding through the skin on the palmar aspect, which he said was produced through a fall whilst walking along the street. The opening, which was about an inch in length, was transverse, and the head of the bone had as far as could be seen into the wound all its muscular and ligamentous attachments torn from it, thus leaving only its periosteal covering on. With assistance I reduced the dislocation and put the thumb in a splint after dressing it antiseptically. After a time the lesion healed up, though not without leaving impaired movement in the joint.

Brighton. R. HILL SHAW, M.B.

CONGENITAL PTOSIS, WITH ABNORMAL ASSOCIATED MOVEMENT OF THE AFFECTED LID.

I SHOWED to members of the Northumberland and Durham Medical Society at last November meeting the following case, which was brought under my notice by Dr. Munro, of Middlesbrough.

P. T., aged 9, has marked left-sided congenital ptosis, and the affected lid cannot be raised voluntarily: but when he opens his mouth the lid rises abruptly and involuntarily, that is to say, when he brings his digastric muscles into action there is an unusual associated movement upwards of the drooping lid. The lid remains up for a second or two, then tends to droop. Likewise when he moves his jaw to the opposite side there is a marked and sudden movement of the lid upwards, and it remains up so long as the jaw is over to the right side. The muscle associated with the levator palpebræ superioris in the latter instance is the right external pterygoid. If the patient moves his jaw from side to side the lid rises and falls involuntarily with each movement. In this case the left superior rectus is paralysed and the left pupil is larger than the right. The fundi are normal, but he has considerable hypermetropia.

As is well known the first of these cases was reported by Mr. Marcus Gunn in 1883. The left eyelid was affected, the pupil of that side was smaller than the other, the face of that side less developed, and associated movement got when the jaw was moved to the same side. Altogether about thirty cases have been reported, which have been collected by Mr. Walter Sinclair, of Ipswich; and for those who desire a full account, together with the different theories, I would refer them to his admirable paper in the *Ophthalmic Review* for October, 1895.

I might add that the commonly accepted view is that of the Committee of the Ophthalmological Society elected to examine Mr. Gunn's case. That Committee suggests that the levator receives a nerve supply from the nucleus of the fifth as well as the third nerve nucleus.

Stockton-on-Tees. VICTOR MILLER.

REPORTS

MEDICAL & SURGICAL PRACTICE IN [illegible] SPITALS AND ASYLUMS OF THE BRI[illegible]RE.

BRITISH ROYAL NAVAL SICK QU[illegible] CRETE.

GUNSHOT INJURY OF RIGHT KNEE-JOINT, [illegible] RECOVERY.

(Under the care of WILLIAM SPENCER [illegible]TFOOT, Staff-Surgeon R.N., H.M.S. *Syl*

WHEN stationed in H.M.S. *Sybille*, at [illegible]te, I had under my charge the British Royal [illegible]uarters in that town. They were intended for in[illegible] occurring on board any of H.M.'s ships in those wate[illegible] subject of this note had been under my care for se[illegible] for forty-four days, coming to me from H.M.S. *Royal Oak* in October, 1897.

He had recovered, and both he and his three attendants, consisting of a sick bay steward and two royal marines, being free from infection, I had decided to re-embark them on December 7th, 1897.

On December 3rd, H.M.S. *Sybille* was ordered round to Suda Bay to coal, so on December 6th I drove up from Suda to visit the "sick quarters," not having done so for two days, in order to make my final arrangements in connection with the men rejoining the ship on the next day, on our return to Canea.

M. M., aged 19, an ordinary seaman, on the afternoon of December 5th, 1897, was in a half-leaning, half-sitting position on a stone parapet of a balcony, with a marine standing close to him on his left side cleaning a service revolver. It appears that two charges had been left by accident in the revolver, which had been specially supplied for use in the sick quarters, when some trials for murder of natives were being held by the International Tribunal, and some trouble was anticipated from the Turkish troops and mob.

On the charge exploding, the bullet entered the joint on the inner side, between the femur and head of the tibia, as near as possible midway between the front and back aspects of the joint. It passed in an outward and slightly forward and downward direction, posterior to the patella, and made its exit half an inch above the head of the fibula. The revolver had been so close that M. M.'s trousers were singed, and the hole of entrance was bruised, and much larger than the hole of exit, which was very small and clean. As is very usual, the hæmorrhage was slight, and I detected no synovial fluid; but it must not be forgotten that I did not see the injury until the day after it occurred, and that light dressings had been placed on the wounds, and that the joint had been washed. The diameter of the bullet was 0.441 inch. The sick-berth steward, who was with the man, at once placed him in bed, and adjusted the light carbolic acid solution dressings already spoken of.

On visiting the man on December 6th I did no more at the time beyond making a very slight examination of the joint, leaving the patient exactly as I found him until I could remove him on board H.M.S. *Sybille* on the following day.

On December 7th, on our arrival at Canea, there was a very nasty sea and a strong wind, with every indication of both becoming worse, so a cutter was immediately sent ashore for the patient, who, being slung in a cot, felt no inconvenience whatever, and was hoisted inboard with the utmost comfort to himself.

Disturbing the joint as little as possible, I now found that it admitted of easy but limited flexion and extension; the patella was in proper position, and allowed of its proper amount of movement; also I could find no evidence of injured bone anywhere. I dressed the wounds with iodoform and pads of carbolic oiled lint, covering the whole with alembroth wool and antiseptic gauze bandaged firmly on, the limb being confined in a McIntyre splint.

On December 10th I again dressed the wounds, and found only very slight articular disturbance. From this day the dressings were changed regularly once a week, not because there was any evidence of the necessity to do so, but for my own information.

On December 17th, on being redressed, the hole of exit was found to be all but healed.

On December 24th it had probably been healed four days, that is, fifteen days after the accident.

On December 31st the hole of entrance was almost healed, all swelling and bruising had almost gone, and passive motion of the joint was painless.

On January 3rd, 1898, two days after our arrival in Malta from Crete, I removed the man to the Royal Naval Hospital there, and advised that the dressings should be left undisturbed for the usual week, which was done, and when next the injuries were seen so little was found requiring attention that a small daily dressing was adopted.



Gunshot Injury of Knee-joint.

General Condition of the Patient.—His symptoms were throughout negative; at the time of the accident he suffered from no shock, did not vomit, experienced no pain to speak of, the inflammation was very slight, with only some swelling and slight local rise in temperature, there being no general rise to record and no constitutional disturbance at all.

I placed him on low diet, but only for a few days, for finding his temperature continued normal I gradually increased it, adding soup, fowl, and milk puddings, two eggs and port wine ℥iij. I gave him iron and quinine c. sp. chloroformi, for he was much debilitated after the scarlet fever and was very weak, a condition which I venture to suggest bore greatly on the satisfactory course and termination of the case. The eggs were soon increased to four and the port wine to ℥vj, and he was for several days before leaving my charge victualled from his own mess in the usual manner, the eggs and port wine being continued.

On January 25th, 1898, after an interval of three weeks, occasioned by the absence of Her Majesty's ship *Sybille*, I again visited the patient in the Royal Naval Hospital in Malta, and found him up and walking about in the grounds with some slight assistance from a walking stick only. On examining the knee-joint I found that both the wounds were satisfactorily healed, with no signs of adhesion in either cicatrix, and no tendency to retract; the joint was still somewhat stiff, but improving daily, and still a little swelled; there was also thickening of the synovial membrane. Throughout the case there has never been the slightest evidence of injured bone; and in my opinion, which is also shared by the medical officer in whose charge he has been since his removal to hospital, the knee-joint will before long be of the same utility to the man that it was prior to the accident.

On February 16th, 1898, M. M. rejoined his own ship, H.M.S. *Royal Oak*, and returned to his duty, sixty-three days after sustaining the gunshot injury.

I enclose a photograph of the knee-joint, showing the positions of both the holes of entrance and exit.

SWANSEA HOSPITAL.

VAGINAL HYSTERECTOMY FOR COMPLETE AND IRREDUCIBLE PROCIDENTIA IN AN EPILEPTIC; OPERATION FOLLOWED BY MANIA; RECOVERY.

(By R. C. ELSWORTH, M.B Edin., F.R.C.S.Eng., Surgeon to the Swansea Hospital.)

THE operation of vaginal hysterectomy is so rarely undertaken except for malignant disease that I am led to hope the following will prove of interest. I believe I am correct in stating that vaginal hysterectomy, though almost exclusively performed now for the relief of malignant disease, was originally designed and practised for procidentia, and that, too, before the Christian era.

M. M., aged 25, was admitted on August 5th, 1896, suffering from complete irreducible procidentia.

History.—The patient, who is a nullipara and unmarried, has suffered from epilepsy for about ten years. During an epileptic seizure two years before admission partial prolapse occurred. This condition was aggravated by each succeeding attack, and finally became permanent and complete. She suffered extreme discomfort and pain from the parts becoming chafed and inflamed, so that her life became a burden.

State on Admission.—On examination a red ulcerated mass as large as a fœtal head was found protruding from the vulva, on the distal extremity of which was the flattened out cervix and os uteri. There was also rectocele and cystocele, and the uterus was enlarged, the sound passing in a little over 3 inches. The mass could not be reduced, and after ten days' rest in bed and the almost continuous use of the hot douche all efforts at reduction failed. This failure I considered to be due to adhesions which had formed between the uterus and the everted vagina, and which no reasonable manipulation or force could overcome. I therefore decided to perform vaginal hysterectomy, after fully explaining the consequences to the patient.

Operation.—On August 17th, anæsthesia having been induced, I operated, commencing with a circular incision round the cervix, about three-quarters of an inch from the os uteri, but it was found impossible to strike the pouch of Douglas. I therefore made an incision along the middle line of the posterior wall of the vagina from the circular incision to the fundus, which could be distinctly felt, and opened the peritoneal cavity above the fundus uteri. The uterus and its appendages were then found to be firmly matted together, and these in turn to the surrounding everted vagina by dense fibrous adhesions. With difficulty these adhesions were broken down, and the uterus and its appendages removed after ligature of the broad ligaments. Owing to the conical shape of the mass included in the ligatures they would not hold, and each vessel had to be deligated separately. Even after this was done the hæmorrhage from the extensive raw surface from which the uterus and its appendages had been stripped continued so free that I decided to pack the cavity of the everted vagina, and leave it till the next day. The following day the patient was anæsthetised, and the packing removed. The margins of the vaginal wall, namely, the margins of the roof and the margins of the incision of the posterior wall, were brought into apposition and sutured with catgut. The whole of the everted vagina was then returned into the pelvis, and a glass drainage tube passed through the posterior incision into the pouch of Douglas, a sponge being applied to the free end to absorb the discharges.

After-History.—Three days after the operation the patient refused to take food, could not be got to speak, and became noisy, restive, and very restless; tongue thickly coated, breath very offensive, and the temperature rose to 100.6° F. She was isolated on account of the restlessness, the drainage tube removed as there was no discharge, and the bowels were relieved by a purgative. She was fed with the stomach tube

three times daily, receiving each time 1 pint of milk, 2 switched eggs, brandy ℥j, and digitalis ♏x. This treatment was continued for three days, when her mental condition began gradually to improve, she became quiet, and was able to take food in the ordinary way. After this she had a daily douche of hot boracic lotion, the ostium vaginæ being kept open during the douching by means of a cage-like nozzle so as to prevent undue pressure upon the tender cicatrix. From this time she made an uninterrupted recovery, generally as well as locally.

It should be mentioned that from the time of the operation until her mental condition returned to normal the epileptic seizures were in abeyance, a condition not uncommon in the experience of alienist physicians, and one which has occurred in this patient on previous occasions during periods of temporary insanity.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 10th, 1898.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

INTRAPLEURAL TENSION.

DR. SAMUEL WEST, who read this paper, said that "intrapleural tension" was for all practical purposes equal in amount to the elastic contraction of the lung, but opposite in direction. The respiratory movements caused constant variations in this tension. Besides this, the air was somewhat hampered both in its entrance and in its exit from the air tubes to the extent of half a millimetre of mercury on inspiration and one and a-half to two millimetres on expiration, causing a respiratory oscillation equal to about two inches of water. Normally, both on inspiration and expiration, the intrapleural tension was negative. During forced inspiration the negative value was increased, but during forced expiration the negative value might be converted into a positive one; but as long as the two layers of the pleura were in contact this positive pressure during expiration was supported by the chest walls, and did not, except theoretically, affect the pleura. Under pathological conditions, if the pleura contained air or fluid, this pressure would affect the contents of the pleura also. The effects produced varied according as the pleura was occupied by incompressible fluid or by compressible air. The methods of estimating intrapleural pressure were mainly two: first, by measuring the elasticity of the lung, as Donders did; and, secondly, by direct investigations by passing a trocar into the pleura through the chest walls. Perl's observations were referred to, and various conclusions which might be drawn from them were stated with comments. When one side of the chest was opened, this went a long way to satisfy the elasticity of the lungs on both sides. Where the two layers of the pleura were more or less adherent, the intrapleural tension was more or less diminished. Where the pleural cavity was obliterated, and the one lung contracted while the other had become enlarged, the elasticity of the sound lung was greatly increased, proving that this was a condition of complementary hypertrophy, and not, as it was often called, complementary emphysema. Arguments were adduced to show that the contractility of the lung was probably not purely elastic, but partly muscular, and that there was such a thing as "pulmonary tone." Under pathological conditions the two layers of the pleura might be separated either by fluid, which fluid had weight, but was practically incompressible, or by air, which was compressible, while its weight might be disregarded. With fluid, therefore, the height of the column above the point of the trocar would affect the manometer reading. With a small punctured wound, or where the lung was injured, the air did not often enter the pleura, but made its way to the subcutaneous tissue. Where there was an opening through the chest walls at least as large as the cross-section of the trachea, air passed in and out easily during respiration, and no effect was produced upon the lung, which collapsed by virtue of its own elasticity, but not completely, for in such cases the lung was not infrequently considerably expanded and quite near to the chest walls, especially if there were forced expiratory efforts, as in coughing. Where the opening in the chest walls was not large enough to allow the air to pass freely out during expiration the pressure within the pleura rose during expiration, and tended to compress the lung; this was almost always the case where the perforation of the pleura was from within. During inspiration the air entered the pleura as long as the pressure within the pleura was below that of the atmosphere. The inspiratory pressure, therefore, could not exceed that of the atmosphere with air alone, or very slightly where there had been deep inspiratory efforts. If the respiratory pressure was permanently raised some other factor was necessary to produce it, generally the presence of effusion. The expiratory pressure in pneumothorax was always positive, and might be high if the expiration were forcible. On the affected side the chest was usually in the position of maximum inspiratory expansion, and on the opposite side, owing to the displacement of the mediastinum, the expiratory contraction of the lung was diminished. These statements were founded on 20 paracenteses performed in 11 cases of pneumothorax. In 2 the inspiratory pressure was zero, but in the rest it was positive. It was probable that the pleura was kept dry in health by the action of what had been described as the "lymphatic pump," namely, the stomata, and the valved lymphatics into which they led, worked by the respiratory movements. Fluid might be poured out in larger quantities than the pump could remove, or the amount of fluid might not be above the normal, but the pump defective. When fluid collected in the pleura it fell by its own weight to the lower part, and it was the lower parts of the lung, consequently, that became more collapsed; but the tension in the upper part was also reduced. In estimating the intrapleural pressure with serous effusion, something depended upon the seat of puncture, and allowance had to be made for the height of the column of fluid above the mouth of the trocar. Observations upon the pressures in pleural effusion showed that with serous effusion the pressures varied greatly and irregularly. The respiratory oscillation was generally reduced, and might be completely absent. When absent at the commencement of paracentesis, it often returned at the end, showing that the lymphatic pump had been set to work once more. This explained why the removal of a small amount of fluid often determined the rapid disappearance of the rest. Intrapleural pressure in empyema was much simpler than in serous effusion. In all the cases observed, the pressure was considerably increased, the lowest being + 3, and the highest + 16; but, as might be expected, small effusions were quite as likely to have high pressures as large. The respiratory oscillation was practically absent. The bearing of these various facts upon practice was referred to in the course of the paper.

Dr. W. S. LAZARUS-BARLOW did not think it was proved that when one pleural cavity was obliterated the sound lung on the other side was in a condition of complementary hypertrophy, or that the manometric readings recorded showed that its elasticity was increased. The recoil in the manometer tube might well be due in part to the resilience of the chest wall. Again the greater recoil of the sound lung might be due to the fact that it had previously been overdistended rather than to its elasticity being increased. As to complementary hypertrophy of the sound lung, it seemed unlikely that real hypertrophy of such a complicated structure as the lung should occur; the same improbability existed about new formation of yellow elastic tissue, and hyperplasia of fibrous tissue would not lead to any increase in pulmonary elasticity. With regard to the existence of pulmonary tone, he had from histological examination come to the conclusion that there was no muscular tissue in human lung tissue apart from that in the vessel walls. Cohnheim had found that experimentally it was practically impossible to increase the pressure of air inside the pleura of dogs since it was so rapidly absorbed; from this it would appear that the positive pressure observed in some cases of pneumothorax was due to a pathological condition of the pleural surfaces. With regard to the absorption of fluid from the pleural cavity, Dr. West said the lymphatics were the important channel. Starling's researches showed that absorption from serous cavities took place chiefly by the veins, and he was inclined to the same view.

Dr. NORMAN MOORE said that the paper was valuable in

directing attention to the mode of entrance and exit of air from the pleural cavity. Formerly it was thought that a serous effusion after a certain time became purulent; now, of course, microbic intervention was recognised as the cause. More empyemata than were generally recognised were tuberculous in origin.

Dr. CALVERT, from laboratory experiments, had shown that in effusion the lung contracted as a whole. It was not absolutely true, as was often said, that a positive pressure in the pleura could not be obtained until the lung was completely collapsed, for the pressure in one part of the pleural cavity, for example, under certain conditions near the diaphragm, might be positive without its being so elsewhere. With regard to the occurrence of positive pressure in cases of pleural effusion, this might be due to lymph uniting the two layers of the pleuræ, and thus leading to localised collections. He thought that in a hydrothorax, where there was no lymph, the pressure would probably not be positive. When a negative pressure was found to coexist with a large pleural effusion, it was probable that the pressure had been positive at a previous stage, but that absorption having begun, the lung had not expanded, and that a negative pressure was thus brought about. In the author's cases of pleural effusion where the pressure was negative at the first paracentesis and positive at a later time, it was possible that in the interval coughing had torn through adhesions, limiting the expansion of the lung, and that this increase in size of lung explained the altered pressure.

Dr. J. ROSE BRADFORD agreed with the last speaker in thinking that positive pressure in a pleural effusion depended on the latter being localised. From a clinical point of view a localised pleural effusion resembled an empyema. If the effusion was localised the lung could not collapse as it would when the effusion was free, and so the pressure was raised. Physiologists generally agreed that absorption from serous cavities took place mainly by the blood vessels. It was possible that, when a small quantity of fluid was removed and the remainder became absorbed, the absorption was partly due to the lung expanding: the circulation through the lung was increased and absorption by its blood vessels thus rendered more active. Veterinary surgery had, in fact, shown the remarkable power of absorption possessed by the lungs. He thought the valvular view of pneumothorax rather theoretical. In association with Mr. H. P. Dean he had performed experiments which showed that the vessels in the lung were under the control of the nervous system, but not to the same extent as the blood vessels elsewhere. There was a possible fallacy in these experiments; this was that the hepatic circulation might be controlled by nerve fibres leaving the cord at the third and fourth dorsal vertebræ.

Mr. A. PEARCE GOULD inquired what were the factors determining the displacement of the heart and mediastinum in pleural effusion, for the author stated that its occurrence did not correspond to position pressure in the pleuræ. He had found markedly positive pressure in a case of traumatic pneumothorax where there was no evidence of liquid in the pleuræ.

Dr. S. WEST, in reply, thanked the speakers, and said that the paper was written rather from a clinical standpoint. With regard to complementary hypertrophy, *a priori* considerations did not render it improbable, for it occurred in the kidney. He was familiar with Cohnheim's experiments, showing the difficulty of keeping up pneumothorax in dogs, but his own results from men were useful for comparison. The *rôle* of the lymphatics in leading to absorption was one which could not be eliminated.

MEDICAL SOCIETY OF LONDON.

A. E. SANSOM, M.D., President, in the Chair.

Monday, May 9th, 1898.

TREATMENT OF TUBERCULOUS DISEASE OF THE BLADDER.

MR. C. MANSELL MOULLIN agreed that constitutional treatment ought in every instance to have a thorough trial before recourse was had to any other measure. Drainage was at best only a palliative; sometimes, indeed, it only made matters worse, the track of the drainage tube becoming infected in its turn. The only procedure that in suitable cases held out some hope of cure, or at any rate of considerable relief, was suprapubic cystotomy, which gave access to the disease. Against this operation had been urged its danger; that even after it had been done the removal of the tuberculous material was almost impossible; and, lastly, that as the growth in the bladder was most often secondary to disease elsewhere, the effect of the operation must be practically *nil*. Taking these points *seriatim*, he observed that, if properly performed, suprapubic cystotomy was virtually unattended by risk. The removal of the tuberculous disease might indeed present considerable difficulty in certain cases, especially in those in which the diagnosis had been made too late. He insisted on the necessity of arriving at a diagnosis much earlier than was usually done. The disease was one which manifested itself from the very beginning by irritability of the bladder and hæmaturia. The cystoscope enabled one to detect ulceration of the bladder at once, and the detection of the bacillus, even when present in small numbers, was rendered easy by the centrifugal machine. It was a very different disease when diagnosed as it ought to be from what it was as usually diagnosed; in fact, this tended to prove that if the disease had been allowed to progress beyond a certain stage it was not easy to deal with. He believed that the bladder was nearly always infected through the blood vessels and lymphatics, for when intact the epithelium was a sufficient protection against direct infection, so that it could spread from the kidney to the bladder without infecting the ureter. When this was the case the disease was usually situated on or near the orifice of the ureter, and when he found the ulcer in this situation he regarded it as presumptive evidence of tuberculous pyelitis. The trigone was most frequently attacked in the other cases simply because it was physiologically the most important part of the organ. During the last few years, since, in fact, one had paid more attention to the subject, the proportion of cases of primary disease of the bladder had gone on increasing, and operations had been performed with a fair measure of success. He himself had operated in three cases. The first, though still sometimes obliged to get up once in the night, was in good general health. The second was a boy who had remained well ever since, and the third was too recent to form an opinion about. He had come across two cases in the *post-mortem* room in which he felt sure that if the diagnosis had been made early enough the patients might have been spared terrible suffering, even if the fatal termination had not been thereby averted.

Mr. FREYER remarked that there was, perhaps, no other such debatable surgical subject as that of surgical interference with tuberculous disease of the bladder, except, perhaps, senile hypertrophy of the prostate. The diagnosis was obscure and the symptoms closely resembled those of stone. It was true that there was rarely sudden stoppage of micturition in tuberculosis of the bladder, but that symptom was not altogether frequent with stone. While, however, frequent micturition in tuberculosis of the bladder persisted by night as well as by day, that was not the case with stone. His own experience led him to believe that tuberculosis of the bladder was almost invariably secondary to tuberculosis of the epididymis, of the vesiculæ seminales, the prostate, the testicle, and, lastly, of the kidney. He himself had opened the bladder in 6 or 7 cases, and in only 1 had he had occasion to regret having done so. His opinion, however, and that of his colleagues at St. Peter's Hospital was in favour of abandoning the surgical treatment of this affection. The disease generally increased after operation, no matter what they did, and the suprapubic wound was often very long in healing. He challenged the author's view that suprapubic cystotomy was without risk, and he referred to the experience of Barling, of Birmingham, who had lost 20 cases out of 40 or 50 children operated upon in this way for stone in the bladder, though this was much less severe than the operation for tuberculosis of the bladder.

Mr. BATTLE divided the cases into two classes according as there was chronic ulcer or granulations involving a larger area. Few cases of primary tuberculous disease of the bladder came under observation, but such cases were, he thought, distinctly amenable to surgical intervention. He himself had operated on six cases, two females and four males. In none of them had he been able to find evidence of tuberculous disease elsewhere, but he admitted that it was often

difficult to say whether the disease was primary or secondary. Personally he had not seen any grave results following mere opening of the bladder, unless one had attempted to close the suprapubic wound too soon.

Dr. Clifford Beale remarked that on looking through numerous *post-mortem* records there was not a single instance in which tuberculosis of the bladder was associated with tuberculous disease of the lungs.

Mr. Mansell Moullin, in reply, thought that if they could save even a few lives by operating it was worth attempting in view of the miserable plight of such patients. If the epididymis or the vesiculæ seminales were implicated he would not hesitate to clear them away as well.

Recurrent Hæmatemesis due to Complete Hepatoptosis.

Dr. Macnaughton Jones related the case of a married woman, aged 36, the mother of seven children, who at 18 years of age was treated for severe gastrodynia with vomiting, followed by amenorrhœa and anæmia. She had hæmatemesis for the first time the following year, and was treated for gastric ulcer. She had good health after that until she married when 23. Five months after her first labour she again vomited blood. There was nothing abnormal in any of her labours. In 1895 she had a miscarriage, which was followed by metrorrhagia, and in December of that year there was again hæmatemesis. In June, 1896, she had typhlitis, followed by severe metrorrhagia. In July, 1897, the hæmatemesis recurred, and had continued up to the time of his seeing her in consultation with Dr. W. Barker, of West Hampstead. On examining the abdomen, he found resonance everywhere except in the right hypochondriac, lumbar, and inguinal regions, and within the dull area he defined a fairly large movable mass, the edge of which was felt extending from the lower ribs to the inguinal region. This felt like an enlarged spleen. There was neither renal nor hepatic line of demarcation. He inclined to the diagnosis of a renal tumour. He did not see the patient again until September, when he advised abdominal exploration. He opened the abdomen by the ordinary Langenbuch's incision for nephrectomy; but he soon discovered that it was the edge of the liver he had felt, the right lobe being in the right iliac fossa. He passed his hand under the diaphragm and found the vault empty. The liver was raised and examined. It was darker than usual and the surface somewhat deeply injected. Both kidneys were normal. The liver was resting almost directly on the right kidney. It was replaced and the stomach taken out, laid on the abdominal wall, and closely examined, but nothing abnormal was found. The patient made an excellent recovery without any complication. There had been no return of the sickness, and she had gradually returned to ordinary diet. He gave a brief epitome of the literature of the subject, and remarked that from a perusal of the various cases reported the symptoms depended on the hepatic complications of the displacement, the association of a displaced or mobile and enlarged kidney, and upon the degree and position of the displacement. Jaundice and ascites were rarely present, gastric disturbances with epigastric and hypochondriac pain being the most frequent consequences. Whenever, therefore, one met with these symptoms associated with the presence of a tumour simulating an enlarged kidney, hepatoptosis should be suspected. This suspicion would be strengthened by finding undue resonance in the hepatic region.

Mr. Battle mentioned a case at present under observation. The patient was a woman aged 45, who came complaining of abdominal pain on the right side. On examination he found that when lying on her back there was a large tumour which ran transversely across into the right flank from the umbilicus, extending towards the kidney region. He could pass his hand under the swelling, and under the ribs on the right side, apparently over the convex surface of the liver. When the patient stood up the tumour sank down until it rested on Poupart's ligament. Besides the pain, there was a certain amount of gastric disturbance. He had applied an ordinary flannel bandage, which gave her much relief, and her appearance had since changed for the better.

The President remarked on the fact that the dislocation which produced hæmatemesis had not produced ascites.

Dr. Macnaughton Jones, in reply, said the principal interest of the case to him was the very close resemblance which it presented to a previous case of his own, in which the tumour proved to be a carcinomatous kidney. He presumed that the hæmatemesis was due to congestion resulting from some twisting of the ligaments and their vessels.

OBSTETRICAL SOCIETY OF LONDON.

C. J. Cullingworth, M.D., President, in the Chair.

Wednesday, May 4th, 1898.

Primary Carcinoma of the Fallopian Tube.

Dr. Hubert Roberts reported this case. The patient, aged 43, had been married seven years, but had not been pregnant. She had been in good health till March, 1896, when she had a violent attack of abdominal pain accompanied by a vaginal discharge. Other similar attacks occurred in July and November, and gushes of watery fluid were noted. On admission in February, 1897, the patient was thin, and the uterus was displaced to the left side by a fixed mass, the size of a hen's egg, felt in the right fornix, not tender. There was a watery vaginal discharge. The right tube, enlarged to the size of a Bologna sausage, was removed by Mr. Meredith on February 24th, 1897; it was full of papillomatous-looking growth, which microscopic sections showed to be carcinoma. Reference was made to published cases of primary carcinoma of the Fallopian tube. Removal was advocated, the prognosis being by no means gloomy.

Mr. Alban Doran gave a short history of the literature of primary carcinoma of the Fallopian tube with a table of the 23 cases published up till April, 1898, to which he now added a twenty-fourth case reported by Jacobson in *La Gynécologie* for April, 1898. The tube was removed through a vaginal incision, and, as in other reported cases, the uterine end was free from disease. The patient was sterile, and it was interesting to note that out of the 24 cases only 3 had borne so many as three children. Mr. Doran had recently operated on a woman, aged 45, who had been twelve times pregnant. On March 13th she had an attack of labour-like pains, a similar seizure occurring two days later; with each pain much water escaped, till at length she was drenched as in an ordinary labour. A large tender mass could be felt in the right fornix, and a smaller body on the opposite side. The symptoms suggested papilloma or cancer of the tube, but he simply found tough tortuous tubes, with their canals undilated, closely adherent to the uterus and adjacent structures. He believed that primary cancer was commoner than papilloma of the tube, or that the latter was very liable to malignant degeneration. Of 7 authentic cases of papilloma, 2 had died of the operation, whilst 1 (Watkin, New York) was very recent; Kaltenbach's case (No. 3 in the tables), had proved malignant, whilst the earliest of all the papilloma series (Spencer Wells, 1879) was alive and in excellent health in 1897, though the clinical symptoms before operation were very grave. He agreed with Dr. Stevens that cancer of the tube might arise from Wolffian tubes included in the tubal wall (Von Recklinghausen). In order to gain as precise knowledge as possible about recurrence, Mr. Doran had communicated with all the authors of cases where the report was incomplete. As for surgery, removal of the tube alone through the vagina seemed questionable, as the state of surrounding parts could not readily be ascertained. Watkins and Schauta removed the uterus with the cancerous appendages. This operation was questionable, however, when the uterine end of the tube was free from disease, and useless when the outer end had infected structures to which it had become adherent.

Dr. Peter Horrocks pointed out that carcinoma of the cervix was common, and nearly always occurred in parous women; carcinoma of the body of the uterus was much rarer, and occurred chiefly in multiparæ; whilst carcinoma of the Fallopian tubes was the rarest of all, and occurred in sterile women chiefly. Clinical evidence showed that tissues which were used much and were liable to damage, were more prone to carcinoma than others, and this rather favoured the idea that carcinoma was due to, or in some way associated with, a microbe which would first meet with the cervix, and if that were damaged (split cervix) elect the damaged part for its growth. But if it were a multiparous cervix then the microbe might travel into the body or Fallopian tube. It was better to remove this growth in the tube by abdominal than by vaginal section.

Dr. Amand Routh alluded to the difficulty of diagnosis. In Case 2 in Mr. Doran's table, which had occurred in his own practice, and in the majority of those in the table, there was usually early continuous pelvic pain, simulating acute salpingitis with slight perimetric extension, and when this was associated with sanious, often offensive, discharge, together with a tubal swelling, the diagnosis of some new growth in the tube was probable, and fairly certain if by a preliminary dilatation the uterus could be excluded as the source of the discharge.

Dr. Addinsell drew attention to the fact that in nearly all the recorded cases the most noticeable clinical features were pain and watery discharge, and pointed out that the presence of these symptoms could not be considered pathognomonic of either primary carcinoma or papilloma of the tube, as they occurred in some cases of hydrosalpinx.

Dr. Giles drew attention to the unfavourable prognosis in cases of cancer of the Fallopian tube. Of the 23 cases in Mr. Doran's table in 2 no operation was performed, or it was incomplete: in 2 which recovered the patients were lost sight of; in 2 the operation was fatal; of the remaining 17 cases recurrence took place in 10, the time of recurrence averaging six to eight months after operation; of the 7 cases reported as remaining well, there was only 1 that could be safely pronounced to be cured (seven years after operation); in the others the time was too short to allow of a positive statement, the longest time being nineteen months.

Dr. Roberts and Mr. Doran replied.

Specimens.

The following specimens were exhibited: Mr. Targett: Intestinal Obstruction following Ovariotomy.—Dr. Peter Horrocks: Fibromyoma of the Uterus with Sarcomatous Degeneration.—Mr. Alban Doran: Hæmorrhage from the Fallopian Tube without evidence of tubal gestation.

HARVEIAN SOCIETY OF LONDON.

Jas. F. Goodhart, M.D., President, in the Chair.

Thursday, April 28th, 1898.

Treatment of Stone in the Bladder.

Mr. Freyer read a paper entitled "My Latest Series of One Hundred Cases of Stone in the Bladder, with some Practical Remarks Thereon," which will be published.

Mr. Swinford Edwards was thoroughly in accord with everything which had fallen from the lips of Mr. Freyer. Though in skilled hands litholapaxy was easy to perform and gave the best results, he considered that for surgeons who had not some experience in the operation, complicated or difficult cases would be best treated by suprapubic lithotomy. In his own last 100 cases of litholapaxy there were 5 deaths, in 4 of which the fatal termination was due to advanced renal mischief.

The President asked whether Mr. Freyer ever met with stones which it was impossible to crush on account of their hardness. He asked for details as to the method of washing out the bladder. In experiments in the cadaver he had sometimes found great difficulty in emptying that viscus.

Surgeon-Colonel Caldecott spoke of the success which attended litholapaxy in India as compared with the results of other operative procedures.

Mr. Temple Mursell remarked upon the rapidity with which cases of vesical calculus complicated with cystitis of long standing recovered after litholapaxy, without drainage, and frequently without any further washing out of the bladder. It was very rare to find calculi which resisted crushing, but in the few cases that were found, or where the calculus had formed around a foreign body which could not be extracted through the urethra with the lithotrite, suprapubic cystotomy could readily be performed by cutting on the point of the lithotrite still holding the calculus or foreign body pressed against the anterior bladder wall.

Mr. Freyer, in reply to the President, said (1) that amongst several hundreds of operations for calculi performed by him during the last ten years, since he had become more or less expert with the lithotrite, he had only met one stone that was too hard to crush, though the calculi had ranged up to 6½ ozs. in weight. Strange to say this was a comparatively small urate stone of 2 ozs., in a female, on which his largest lithotrite (No. 18) could make no impression. He found, contrary to what was usually taught, that certain urate stones were more difficult to crush than oxalates; (2) that a practised hand, as a rule, found no difficulty in clearing the bladder of the last fragments with a properly constructed aspirator. Experiments on the cadaver were deceptive, as the bladder did not expand and contract as in the living subject. There was no selection of cases, these 100 being the only bladder stones that came under his care during the period over which they extended. His success was not unique, as several surgeons in India had recorded similar series of 100 litholapaxies without a death; and he might point to the excellent results from this operation in St. Peter's Hospital, where last year they had 51 litholapaxies with only 1 death. When stricture of the urethra was complicated with perineal fistulæ, he (Mr. Freyer) preferred, as a rule, external to internal urethrotomy, as more likely to cure the fistulæ, but he agreed with Mr. Swinford Edwards that internal urethrotomy might sometimes be preferable, particularly when there was only a single fistula; in fact, he had such a case at present under his care in private practice, where the fistula had rapidly closed after internal urethrotomy. He regretted to have to differ from his friend and colleague, Mr. Edwards, regarding suprapubic lithotomy, which should be had recourse to only in exceptional cases, such as very large and hard or encysted stone. It was true that the operation was simple, and the instruments required might be found in a pocket case, but in its very simplicity lay one of its chief dangers, as being tempting to the young and inexperienced surgeon not provided with litholapaxy instruments. He maintained, however, that an operation was to be judged of not by its simplicity, but by its results, and Mr. Barling, of Birmingham, had recently in the British Medical Journal published statistics collected from twelve large London and provincial hospitals, from which it appeared that suprapubic lithotomy in children had been attended by the the appalling mortality of about 20 per cent., whereas lateral lithotomy and litholapaxy were attended by a mortality of less than 5 per cent.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Clinical Evening.

H. H. Swanzy, F.R.C.S.I., President, in the Chair.

Thursday, May 5th, 1898.

Chip of Steel in the Eye, with Skiagraph.

Messrs. Ernest Clarke and Mackenzie Davidson showed a case. The patient was struck by a chip of steel in the right eye in November, 1897. A scar could be seen in the cornea, and in the anterior and posterior portions of the lens capsule. The opacity in the lens had somewhat increased since, and vision was reduced from $\frac{6}{9}$, when first seen, to $\frac{6}{24}$. A skiagraph taken by Mr. Mackenzie Davidson showed that the piece of metal was lodged in the ciliary region at the lower part. On ophthalmoscopic examination a mass of exudation could be seen at this point. The skiagraphic exposure had now been reduced to 90 seconds, and in the case of a child to one minute.

Ophthalmoplegia Externa with Impairment of the Orbicularis Oculi.

Dr. James Taylor showed a case. Hughlings Jackson had first drawn attention to a case exhibiting weakness of the orbicularis in paralysis of the third nerve exemplifying Mendel's hypothesis that the ultimate nerve supply of the orbicularis was the third nerve. Mention was made of the similar association between paralysis of the orbicularis oris and the hypoglossal nerve.

Dr. Beevor said that he had shown a case at this Society a few years ago in which there was double ptosis and weakness of the orbicularis; it was probable that in most of the cases where the nucleus of the third nerve was involved the orbicularis was affected. Dr. Taylor's case was important, as other muscles which had a nerve supply originating in the bulb—those of the palate—were affected; he believed this to be rare.

Mr. Flemming said that anatomists were now agreed on

anatomical evidence that the orbicularis was supplied from the third nerve nucleus.

Rudimentary Development of the Iris.

Mr. John Griffith showed two cases. The patients were brother and sister, in whom the iris was present only as a rudimentary band, which was absent in the lower outer part entirely; the choroid and ciliary body were normal. In one of the cases there were anterior polar cataracts, without sign of previous perforation of the cornea, and the lenses were slightly displaced upwards. In both patients there was defect of the enamel of the teeth, and there was a history of fits.

Mr. Sydney Stephenson had shown at the Society two brothers with aniridia, in whom there was deficiency of the enamel of the teeth, known to dentists as hypoplasia.

Conical Cornea Treated by Galvano-cautery.

Mr. G. A. Critchett showed a case. The improvement in vision had been in the right eye from $\frac{6}{60}$ to $\frac{6}{9}$, and in the left from $\frac{6}{60}$ to $\frac{6}{12}$. In the last series of cases, about 15 in number, he had tried not to perforate the cornea; he used the cautery wire at the lowest possible red heat, so that not much more than the epithelium was affected; the whole area intended to be affected was burnt with this, then at a slightly greater heat he burnt a smaller disc within this area; then at a higher temperature still he burnt the centre at a point only. During the first burning the aqueous disappeared, and the iris came into contact with the cornea. He used a flat, medium-sized point except for the central and last burning, when he used a small one.

Mr. Hartridge asked the reason for using the different degrees of heat; he was in the habit of using one temperature only, and had never seen the aqueous disappear.

Mr. Critchett said he thought a better cicatrix was obtained by this method.

Remarks were made by Messrs. Doyne, Gunn, and Griffith.

Case of Retinitis Circinata.

Mr. Fischer showed a case. The patient was a woman, aged 66, unconscious of anything wrong with her left eye. She was healthy, and had no ascertainable kidney disease. The right eye was quite normal; in the left there was well-marked retinitis circinata completely surrounding the yellow spot, which was degenerated.

Mr. Lawford thought this case was not typical inasmuch as there was little or no change at the yellow spot, and the band of exudation was distinctly raised.

Mr. Gunn thought this one of the manifestations of old-standing œdema of the retina, and that it was similar in nature to the asterisk seen in renal retinitis.

Mr. Doyne thought that the exudation was decolorised blood.

Mr. Hartridge had shown a case at the Society some years ago; the exudation had since entirely disappeared.

Peculiar Condition of Lens.

Mr. Marcus Gunn showed a child who had a cataract in the right eye which had been diagnosed in early life, but nothing had been done for it. The right iris was much lighter in colour than the left; there was punctate deposit on the back of the cornea; the centre of the pupil was like an ordinary opaque membrane, with holes in it through which the o. d. could be seen with + 10 D. The peripheral part of the lens appeared like a brown grey granular exudation raised above the level of the central capsule.

Specimens, etc.

Mr. Rockliffe showed (1) Two specimens of Cystic Retina; some of the cysts were between the inner and outer nuclear layers, and the others were difficult to locate owing to degeneration of the retina; (2) specimens of Pseudo-Glioma. Remarks were made by Mr. Devereux Marshall.—Surgeon-Captain Herbert showed specimens of Epithelial Xerosis of Conjunctiva.—Mr. Devereux Marshall and Mr. Ridley showed specimens of Persistent Hyaloid Artery with Atypical Development of the Vitreous.—Dr. G. H. Hogg showed a case of Polycoria.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Wm. V. Snow, M.D., President, in the Chair.

Wednesday, April 27th, 1898.

Action of Drugs and Mineral Waters on the Bile.

Dr. Wm. Bain (Harrogate) read a paper, entitled, The Action of certain Drugs and Mineral Waters on the Secretion and Composition of Human Bile; an Experimental Investigation. He experimented on a patient with a cutaneous biliary fistula. The patient was in moderately good health at the time, and the obstruction in the common bile duct was complete. He gave the patient 36 gr. of purified ox bile throughout the investigation, thus approximating the experimental to the normal conditions. He tried the effect of the old sulphur spring, the strong Montpelier, the Kissingen Spa, and the chloride of iron spas, Harrogate, also Carlsbad mineral water, euonymin, iridin, benzoate and salicylate of soda, podophyllo-resin and podophyllotoxin. He found the following to be cholagogues:—Old Sulphur Spring, Kissingen Spa, Carlsbad water, euonymin, benzoate and salicylate of soda, while podophyllo-resin markedly increased the total solids, and iridin had a similar effect in a less degree. Neither of them increased the quantity of bile. Strong Montpelier, Harrogate, and podophyllotoxin decreased both the total solids and the quantity of bile. Neither hot water nor soda water in large doses augmented the amount.

Dr. A. P. Luff regarded sodium salicylate as a cholagogue in a limited sense. He had no doubt from his own experience that it increased the excretion of uric acid, but considered that it did so by uniting with glycocine in the liver to form sodium salicylurate, and so conveyed an increased amount of glycocine to the kidneys, where by the union of that body with urea an increased amount of uric acid was formed. He considered that the employment of sodium salicylate in the treatment of gout was open to objection.

Dr. Solly (Harrogate) and Dr. Hobhouse made remarks, and Dr. Bain briefly replied.

Gout and Rheumatism in Relation to the Seashore and Salt Water Baths.

Dr. Edmund Hobhouse introduced a discussion on this subject. He considered that prolonged observation was required, and except in the acute forms it was difficult to determine the effect of any particular set of circumstances. Chronic rheumatic arthritis was a separate disease, which should be dealt with separately. It seemed doubtful whether sea air in itself had any direct effect apart from the question of soil and general meteorological conditions. It was also largely a question of season; the seaside was drier and freer from fogs than the country during the autumn and winter, but more windy in the spring. Individual cases varied greatly; hence the interrogation of a large number of patients and the tabulation of results was the best way to obtain evidence. Collective investigation on this point might yield valuable results. Only with regard to acute and subacute cases were statistics of any value to be obtained, and these mostly came into hospital. Statistics at Brighton showed somewhat less acute and subacute rheumatism than in London—7.2 per cent. of all medical cases, as compared with St. Bartholomew's, St. Thomas's, and the London Hospitals about 8.3 per cent. At Hastings it seemed to be a little more, but the statistics were for a short period only. At Plymouth there was a good deal less—4.51, but the chronic cases were much more numerous. These figures seemed to show the sea had little influence on the acute and subacute forms, but, generally speaking, marine climates were not indicated in the treatment of rheumatic affections, though patients weak and anæmic after acute attacks might be greatly benefited. Rheumatism in children was probably benefited by the sea—an important point on which investigation was desirable. As to chronic conditions, lumbago, sciatica, myalgias, etc., it was impossible to estimate their comparative prevalence by the sea, but it seemed to be agreed that they were very common in most resorts. Whether they were benefited or not depended on the place chosen, the time of year, etc. Gouty patients with any active symptoms were better away from the sea; they could live there, but had to be extremely careful as to

diet and alcohol. Sea air predisposed to what Murchison called "lithæmia;" this applied to all kinds of gouty patients. Rheumatoid arthritis was probably not commoner by the sea than elsewhere, but some rheumatoid patients felt more pain there. Salt water baths were unquestionably of great value, especially in subacute rheumatism, but the question was whether their value was due to the heat or the salt; probably it was chiefly to the latter.

Dr. Archibald Garrod thought that the factors at work at different seaside places rendered any generalisation on the point difficult, even if desirable. His impression was that cases of the classes mentioned in the paper were usually better away from the sea. Many patients with rheumatoid arthritis certainly found their pains worse by the sea. On the other hand, he had not observed that any specially large number of such patients were from among residents in seaside resorts. As a rule gouty patients were better away from the sea.

Dr. Luff considered that cases of acute and subacute gout did not do well at the seaside. He attributed the effect of sea air in such cases, in part at least, to the large amount of aqueous vapour present in the air.

Mr. Hamilton Cumming (Torquay) found that in the higher parts of Torquay gout was not affected for good or ill, and that acute articular rheumatism was uncommon. Chronic rheumatism greatly varied according to the character of the seasons. He found hot sea-water baths with extract of fucus vesiculosus beneficial.

Dr. Street (Westgate) had seen good results in cases of chronic rheumatism from the use of seaweed baths.

Dr. Hyde (Buxton) said that the different influences of climate in treatment were sometimes incomprehensible even between one inland resort and another, but especially between inland climates and seaside climates. The opinion of Dr. Hobhouse that a seaside climate as a rule was unsuitable for gouty patients with acute and subacute tendencies, accorded with the testimony he had frequently received from such patients. It had been pointed out by Professor Beneke that heat was lost more rapidly from the body at sea levels than at inland and elevated climates. As a result, the processes of metabolism were more active in a marine climate than an inland climate. He therefore thought that the explanation of why such cases were aggravated at the seaside would be found in this direction. Possibly increased products of waste, including uric acid, due to increased tissue change, were accumulated in excess of the powers of elimination, and that these set up those irritative processes about the joints and other parts of the body which were peculiar to the gouty state.

Dr. Tyson (Folkestone), Dr. Solly (Harrogate), Dr. Ward-Humphreys (Cheltenham), and Dr. Bowen Davies (Llandrindod) made remarks.

Dr. Symes Thompson stated that information collected by the Royal Medical and Chirurgical Society showed that whilst rheumatic affections were prevalent in the soft humid atmosphere of the South and West of England, neuralgic disorders were common in the exposed parts of the North and East.

Dr. Hobhouse, in reply, said that he did not wish it to be supposed that because many so-called rheumatic affections were reported to be prevalent at the seaside, they were necessarily more prevalent there than inland. There were no figures to make any true comparison possible on this point, and those with reference to acute rheumatism gave no clue. All the actual statistics he had quoted were derived from hospital records, and there might be very wide discrepancies between such results and those of private practice. As regards gout his remarks only applied to it in an active form; hundreds of gouty people lived by the sea, and with care lived in comfort, but if they got an attack would not shake it off easily without change.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of State Medicine.

H. C. Tweedy, M.D., President, in the Chair.

Friday, April 29th, 1898.

Serum Diagnosis of Typhoid Fever.

Dr. McWeeney demonstrated a method which he had introduced with a view to clear up the diagnosis in cases which did not give the agglutination phenomenon with sufficient distinctness. His plan was to cause the typhus bacillus to grow in a hanging drop of broth containing a small percentage (generally 1 per cent.) of the suspected serum. After four hours at 37° C. the preparation was examined, when, if the serum were from a typhoid case, the bacilli would be found to have grown out into beautiful chains, which at the end of twenty-four hours were exquisitely twisted and convoluted; motility was quite absent. If, on the other hand, the serum were non-typhoid, the bacilli were separate and freely motile. They were usually short, but occasionally grew out into filaments, especially if the temperature were low; but these filaments must be carefully distinguished from the chaining which took place with the homologous serum. He submitted microscopic preparations showing ordinary agglutination and chain formation both fresh and stained, and also demonstrated microphotography illustrating the two methods, by means of optical lanterns.

The Mortality of Children in Ireland.

Dr. Langford Symes contributed a paper on this subject. From his estimate of ten years ending December 31st, 1896, it appeared that in Dublin city out of every 1,000 children born there died in the 1st year 171.2; and in every 1,000 total deaths, 306.2 were children under 5 years of age. In Belfast the death-rate of children was enormous. In every 1,000 total deaths in that city no fewer than 519.8 were children under 5 years of age. The classes of disease, systems affected, and actual registered causes of death were shown in separate tables. The systems chiefly affected were found to be as follows in order of frequency, the most important only being mentioned:

Under One Year. Causes of Death.	Deaths Under One Year.	Under Five Years. Causes of Death.	Deaths Under Five Years.
1 Ill-defined and not specified causes	30,716	1 Respiratory diseases ...	34,557
2 Diseases of nervous system	21,998	2 Ill-defined and not specified causes	34,228
3 Diseases of respiratory system	18,976	3 Diseases of nervous system	28,828
4 Miasmatic diseases ...	8,423	4 Miasmatic diseases ...	26,790
5 Constitutional diseases	6,274	5 Constitutional diseases	16,690
6 Diarrhœal diseases ...	6,201	6 Diarrhœal diseases ...	8,990
7 Developmental diseases	4,715	7 Diseases of digestive system	8,288
8 Diseases of digestive system	4,690	8 Developmental diseases	4,758
9 Accident or negligence	1,325	9 Accident or negligence	3,773

Of the actual registered causes of death for all children in the whole of Ireland, the following were the eleven chief diseases found to produce this infantile mortality in their order of importance. They were identically the same diseases for both ages, but in varying proportions:—

Under One Year. Cause of Death.	Deaths Under One Year.	Under Five Years. Cause of Death.	Deaths Under Five Years.
1 Debility, atrophy, inanition	29,136	1 Debility, atrophy, inanition	32,062
2 Convulsions	20,764	2 Convulsions	25,261
3 Bronchitis	14,017	3 Bronchitis	24,773
4 Diarrhœa and dysentery	5,762	4 Whooping-cough ...	11,456
5 Whooping-cough ...	4,893	5 Diarrhœa and dysentery	8,383
6 Premature birth ...	3,827	6 Tabes mesenterica ...	7,564
7 Tabes mesenterica ...	3,512	7 Measles	7,552
8 Pneumonia	2,519	8 Pneumonia	5,868
9 Tuberculous meningitis	1,755	9 Croup	5,509
10 Measles	1,691	10 Tuberculous meningitis	5,069
11 Croup	1,589	11 Premature birth ...	3,827

Dr. Symes drew particular attention to the unsatisfactory terms "debility, atrophy, inanition." Again, "convulsions" was not a true disease at all. "Croup" was equally misleading. With the correct diagnosis and proper application of the terms "diphtheria," "laryngitis," and "laryngismus

stridulus," the name "croup" should be dispensed with, for its identity as a distinct disease vanished. Again, "dentition" should not be so often registered. It actually appeared in Ireland to rank twelfth as a cause of death in sucklings. Another very striking fact revealed by this paper was that young children—in Ireland at least—died almost entirely from so-called "medical" diseases. Surgery had apparently little or no part in the production of infantile mortality.

Dr. GRIMSHAW (Registrar-General) said that in a great many of the deaths of children there was never any diagnosis made, there having been no medical attendant. Again, the medical man was only called in, in other cases, at the very last moment, and then for the purpose of giving a certificate for the insurance company. These two facts tended very much to damage the accuracy of such statistics. It was a question whether a medical certificate should be given in cases where the doctor was called in at the last moment and had no opportunity of making a diagnosis. He thought that the withholding of a certificate in a doubtful case had a most beneficial result, and should always be exercised by the medical attendant. Again, when a certificate was withheld the coroner should interfere. Medical men should be very particular as to what they put on death certificates; for instance, the primary cause might have been discovered in many of the cases recorded as "convulsions." He believed that if there was better accommodation for children in hospitals a great many of them would be better attended to. He thought that students were not sufficiently trained in the treatment of diseases of children.

Dr. DOYLE said he had never been able to arrive at primary causes of diseases. Secondary and tertiary causes were easily arrived at. He maintained that convulsions, tuberculosis, meningitis, chorea, diphtheria, croup, whooping-cough lay within the province of the surgeon and not the physician. Granular conditions in the nares and back of pharynx often accounted for such diseases as convulsions. Whooping-cough could be cured, but by the surgeon. The condition at back of fauces and nares should be attended to. Whooping-cough was caused by the continuous and repeated reinfection from the Eustachian tubes and back of pharynx. Similar remarks applied to tuberculosis. There was still room in Dublin for more children's hospitals.

Dr. FALKINER thought that the establishment of a new hospital with 50 beds would not have the smallest effect on the death-rate. His opinion was that medical relief was carried to the darkest parts of Dublin, and carried efficiently. The onus of neglected children was much more on the Government and the people of the country than on the doctors, who did the work as well as they could. When a child dying of neglect was brought to him it was his custom to write to the Inspector of Prevention of Cruelty to Children, who generally succeeded in having the child cared for.

Dr. TURNER thought that in Dublin there was a great necessity for having an institute for children, where students would have an opportunity to study and receive instruction which would enable them to be successful practitioners among infants.

The PRESIDENT said that it seemed to him that a large number of cases mentioned under the heading, "debility, atrophy, inanition," really came under the head of preventive medicine, and were largely due to insanitary conditions generally, and also to the ignorance of parents. The system of feeding children was often most barbarous, starchy foods being continually given to infants. What was the use of writing a prescription for a child when what it really wanted was warmth, cleanliness, food, etc.? The district nurse would be almost more useful in such cases than the doctor.

Dr. SYMES, in reply, agreed with the Registrar-General that the coroner should be communicated with in all cases where a medical certificate was not procurable. He was greatly relieved to hear that Dr. Doyle could cure consumption and whooping-cough by surgical methods. However, he thought that surgery had nothing to do with the deaths in the tables. He thought there were already enough hospitals in Dublin, and that an amalgamation of some of them would be beneficial.

BATH AND BRISTOL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

E. MARKHAM SKERRITT, M.D., Retiring President, in the Chair.

Wednesday, April 27th, 1898.

THE NAUHEIM TREATMENT OF HEART DISEASE.

DR. J. G. DOUGLAS KERR read a paper on the treatment of certain forms of heart disease by baths, exercises, etc. He said the bath season, being a winter one, offered decided advantages for the carrying out of the treatment. In England there was a tendency to trust too much to the baths, and to relegate the exercises to a subsidiary position or to dispense with them altogether, which was unsound. Much investigation had been undertaken into the effects of muscular contraction upon the circulation. At the instigation of the Scientific Grants Committee of the British Medical Association, Drs. Lauder Brunton and F. W. Tunnicliffe entered upon a series of experiments, which were fully reported in the BRITISH MEDICAL JOURNAL of October 16th, 1897. If it were granted that the treatment produced the results claimed for it, it only remained to arrive at conclusions as to the cases in which it should be employed. In his opinion the best results had been obtained in those cases in which the disease was functional rather than structural in origin. Was it necessary, Dr. Douglas Kerr asked, or was it consistent with the dignity and usual practice of the profession, to sensationalise this treatment, by supplying the patients with charts indicating the supposed shrinkage of the heart's size?

Dr. PRESTON KING read a paper on the limitations of the Nauheim treatment. The treatment had not received that calm and philosophic consideration which was due to a new therapeutic agent. It was one among the many means that existed which when properly applied might be of use in alleviating suffering, but at the same time it was one which too easily lent itself to the insidious suggestion and the unlawful practices of the charlatan and the quack. There was no peculiar virtue attaching to the use of a natural water, and the benefits derived from the treatment followed equally the use of baths artificially produced. As to the decrease in the size of the heart, which had often been observed as a result of a few immersions, he would suggest that this was in many cases *post hoc* and not *propter hoc*. Again, was the decrease in the frequency of the pulse a direct result of the treatment *qua* treatment? Might it not be the effect of the warm bathing? The benefits of the treatment might be allowed without its necessarily following that it produced changes in the circulatory apparatus which both reason and experience tended to show were not peculiarly its own. He was willing to allow that it was of benefit in certain cases, but even in these he thought the Schott resistive movements were the most important factor.

Dr. LAUDER BRUNTON said he had sent a large number of cases to Nauheim, most of which were greatly benefited. He thought that in all probability the exercises were really more useful than the baths, but with baths their usefulness was increased.

Dr. BEZLY THORNE, after relating cases which had derived great benefit from the treatment, referred to the value of marking out the areas of dulness. In cases of Graves's disease he could not advise anyone to hold out the slightest promise of absolute cure, though the application of not less than four courses would be of value.

Dr. MYRTLE (Harrogate) did not think that the Nauheim treatment was required in purely functional cases. He had seen a number of cases treated with the greatest benefit. It was not possible to measure the relative value of baths and exercises.

The CHAIRMAN could not take the same favourable view of the treatment as had been expressed.

Dr. KERR replied on the discussion. He was inclined to think that if some of them were unduly enthusiastic on the results of treatment, it was a fault in the right direction.

TUMOUR OF BRAIN.

Dr. J. MICHELL CLARKE read notes of two cases of tumours of the præfrontal region of the brain, on which remarks were made by DRS. LAUDER BRUNTON and MYRTLE.

Laryngological Society of London.—At an ordinary meeting held on April 13th, Mr. H. T. Butlin, President, in the chair, Mr. Wyatt Wingrave showed: (1) A case of Cyst of the Epiglottis in a girl aged 13. A mass was seen attached to the left half of the laryngeal aspect of the epiglottis, resembling a small white-heart cherry in size and colour. The only symptom was occasional pain on swallowing, the singing and speaking voice being normal. (2) A case of Chronic Pharyngitis in a man aged 26 who had been under treatment for chronic suppurative middle ear disease for six years. The pharynx showed a symmetrical flesh-like thickening, which commenced behind the posterior pillars, and met in the middle line above the level of the soft palate, extending upwards into the naso-pharynx. This tissue proved tough on attempting to scrape with finger nail. Was the condition due to asymmetrical hypertrophy of the lymphoid tissue, or was it of inflammatory origin? Dr. Spicer called attention to the adhesion in this case between the salpingo-pharyngeal fold and the pharyngeal wall, as had been observed in connection with Tornwaldt's disease. Dr. Grant ascribed the condition to hyperplasia of the salpingo-pharyngeal folds, which had become adherent to each other at a lower level than the choanæ. Mr. Spencer advised removal of the bands on account of deafness. Dr. Hill suggested that it was a case of adhesion of the lower portion of the hypertrophied salpingo-pharyngeal fold to the posterior pillar of the fauces. Dr. Edward Law thought it resembled a gummatous condition of the lateral pharyngeal wall. Dr. StClair Thomson suggested that the condition might be a hypertrophy left by a syphilitic process. Mr. Wingrave, in reply, said there was a doubtful history of congenital syphilis which suggested a possible prenatal or postnatal inflammatory process. — Dr. Dundas Grant showed: (1) A Modification of Baratoux's Electrical Laryngo-phantom. The instrument was tested by many of those present at the meeting, and was highly approved by them. (2) A case of Empyema of the Frontal Sinus cured by the Ogston-Luc operation.—Mr. Wyatt Wingrave showed Microscopical Section of Tissue from Frontal Sinus (Dr. Dundas Grant's collection). This consisted of small cell or lymphoid tissue containing nodules similar to ordinary adenoid growth.—Mr. W. G. Spencer showed a case of Œdematous Hypertrophy of Arytenoids. More than a year ago Dr. de Havilland Hall showed the patient, a man aged 47, to the Society. It was difficult to get a good view of the laryngeal condition, and the case was considered to be an unusual one of chronic laryngeal œdema. As dyspnœa was increasing an extra-laryngeal operation was performed. On retracting the alæ of the thyroid cartilages it was found that each arytenoid had become a tumour of the size of the thumb, with a perfectly smooth surface. Each tumour was seized with a volsella, and cut off with scissors, the line of division being through the apex of the cartilage. Healing occurred, and the patient had remained well for a year, except for an occasional catarrh. On examining the larynx now there was not much deviation from the normal, except that the arytenoids appeared flat-topped. Under the microscope the tumour was seen to be a soft œdematous fibroma, covered by normal stratified epithelium, and containing normal arteries, veins, and nerves, also groups of mucous glands embedded in it.—Mr. Yearsley showed a case of Papilloma of the Septum Nasi, which was easily removed under cocaine with a cold snare. The specimen shown under the microscope proved the growth to be a papilloma.—Dr. Lambert Lack showed a case of Laryngeal Stridor and Nasal Obstruction in a weakly child aged 5 months. The case seemed to be one of laryngeal spasm, probably due to adenoids. It was proposed to give an anæsthetic, to examine the throat thoroughly, and remove the adenoids or other cause of nasal obstruction.

West London Medico-Chirurgical Society.—At a meeting on May 6th, Dr. H. P. Potter (President) in the chair, Mr. McAdam Eccles read a paper on Operation *versus* Taxis in Strangulated Hernia. By a strangulated hernia he understood a hernia which contained bowel, the lumen of which was obstructed by pressure from without, either partially or completely, while at the same time this pressure caused an interference with the circulation through the vessels of the intestinal wall. Two lines of treatment offered themselves in such a condition: taxis, or operation, either being undertaken to procure the reduction of the gut with as little delay as possible. Against taxis it might be urged that it might bruise, lacerate, or even rupture the bowel; (2) that it did not permit of a view of the intestine before reduction; (3) that it involved the return of fluid from the sac as well as the bowel, which fluid might be septic; (4) that it allowed of no attempt to treat the hernia radically; (5) that it might bring about reduction *en masse*. Against operation, on the other hand, it might be urged (1) that it involved loss of time in preparing for it; (2) that it usually required a general anæsthetic; (3) that it might cause a risk of septic peritonitis; (4) that it might necessitate confinement to bed; (5) that it might cause the aperture to be enlarged; (6) that it might be greatly objected to by the patient. Mr. Eccles gave it as his opinion that children with strangulated hernia should but rarely be subjected to operation, for the gut could nearly always be returned by gentle taxis, and was seldom very acutely strangled. Old persons, the subjects of chronic lung trouble, should also be treated, if feasible, by taxis alone. Almost all other instances of strangulated hernia might be safely dealt with by operation, and he considered that the old adage "If in doubt operate," might be more widely extended. Dr. F. H. Alderson entirely agreed with Mr. Eccles as to the rarity with which operation was required in the strangulated herniæ of infants. Mr. Keetley alluded to the difference of taxis under various conditions, but gave it as his opinion that operation was indicated in nearly every case of strangulation. Mr. Mallam inquired whether it was common to find that the fluid reduced by taxis gave rise to peritonitis. Mr. G. E. Twynam thought it very doubtful that operation could be carried out with success in many cases where assistance was difficult to obtain. He thought that circumcision should always be performed in male infants who had strangulated herniæ with a view to the cure of the protrusion. Dr. R. D. Batten and the President having joined in the discussion, Mr. Eccles replied.—Mr. A. H. Tubby read a paper on the Surgical Treatment of Spastic and Infantile Paralysis. After describing types of cases of infantile spastic paralysis, he thought that the results of operation on these children showed that surgical interference was justified in appropriate cases. The method of treatment was to divide the tensor vaginæ femoris, sartorius, and adductor tendons at their pelvic attachments, as well as the hamstrings and the ilio-tibial bend at the knee, and to apply weight extension for a month, then to sever the tendo Achillis, and finally to maintain the rectification by means of a light apparatus. In severe cases of infantile paralysis he advocated tendon grafting and arthrodesis. The indications for and the limitation of tendon grafting were pointed ont. Arthrodesis of the ankle was in his opinion a successful method of dealing with the flail-like joints resulting from infantile paralysis, and he described the mode in which the operation was performed. Mr. McAdam Eccles asked whether the length of the sartorius muscle in cases where it was implanted into the tendon of the extensor of the thigh was of much importance. Mr. Keetley thought that much benefit arose in cases of spastic paraplegia by the division of contracted tendons. He was doubtful of the utility of arthrodesis of the hip-joint, and he further questioned whether stiff knee-joints and ankle-joints were to be regarded as beneficial in many instances. Mr. Tubby replied.

North of England Gynæcological and Obstetrical Society.—At a meeting held at Owens College, Manchester, on April 22nd, Dr. J. W. Martin (President) in the chair, Dr. Rumboll (Leeds) showed a large Fibroid Tumour of the Uterus, removed by abdominal hysterectomy. Treatment by electrolysis (Apostoli) had failed.—Dr. Donald (Manchester) showed the Uterus and Appendages which he had removed from a patient aged 30, who had been suffering for eight months from acute pelvic inflammation. The patient was unfit for work, almost entirely confined to bed, and had been bleeding constantly for four months. After palliative treatment in hospital for four weeks without any change in her condition operation was decided upon, and the vaginal route chosen. Both tubes were useless from purulent inflammation, and the mischief having evidently commenced in the endo-

metrium, extirpation of the uterus was thought best. Dr. Donald remarked that the radical vaginal operation for bilateral, tubal, and ovarian suppuration had not so far met with much support in this country, although for some years it had been recognised on the Continent as the best means of dealing with cases which did not improve under rest and palliative treatment. After appendage removal the uterus was a useless organ, and the objection to its removal mainly sentimental. When the uterus was healthy, and the appendages not septic, there was no need to remove it.—Dr. Donald read notes of a case of Rupture of the Vagina during Labour. The first case was that of a 9-para, aged 40, attended by a midwife. When admitted to hospital a loop of large intestine was hanging from the vagina, 2 feet in length, very distended and congested; the funis prolapsed, cold, and pulseless; there was a large rent in the posterior vaginal wall, the cervix about two-thirds dilated, the vertex presenting R.O.A. Cranioclasm was performed, and after extraction of fœtus and expulsion of placenta it was found that the tear in the posterior vaginal wall began at a point one inch from the posterior commissure of the vulva, ran transversely for about 2 inches, and then almost vertically and a little to the left of the middle line, up to the highest point of the posterior vaginal fornix. The uterus was loosely packed with iodoform gauze, and the hole in the vaginal vault plugged with several thick strips of iodoform gauze, which was removed from the uterus fifty-six hours after delivery, but not from the abdominal cavity until the seventh day. The patient made an uninterrupted recovery.—Dr. Walls (Manchester) described a case similar to Dr. Donald's, but of less severity, an 8-para, with conjugata vera of $3\frac{3}{4}$ inches, with history of large children and forceps labours. The breech was impacted. Chloroform was administered, and a leg brought down; the arms were delivered with difficulty, the head extraction being comparatively easy. A laceration was discovered in the neighbourhood of the right sacro-iliac synchondrosis, external to the cervix; the laceration admitted two fingers, which passed into the tissue of the broad ligament and then into the peritoneal cavity. The tear was plugged with iodoform gauze; the cervix uteri plugged separately and the vagina tightly packed with iodoform gauze beneath all. A good recovery was recorded.

West Kent Medico-Chirurgical Society.—At a meeting on May 6th, Mr. W. Arbuthnot Lane, President, occupied the chair. Before the meeting Messrs. Maw, Son, and Thompson gave an exhibition of surgical instruments and apparatus.—Dr. Prior Purvis was unanimously elected an honorary member.—Mr. Lane delivered his Presidential address on the Principles that should guide us in Operations for Malignant Disease. He pointed out that the two chief indications were the complete removal of the growth at all costs, modified of course by the wishes of the patient, who must be made fully aware of the disadvantages associated with any particular procedure, and the ensuring to the patient a minimum of discomfort and pain in consequence of the operation. He illustrated his meaning by descriptions of operative measures for the removal of the larynx, tongue, breast, and rectum, which were based on the application of these two principles. He then read another paper on the Treatment of Ununited Fractures by Steel Screws, illustrating the cases by radiograph.—Mr. Bidwell and Drs. Dockrell and Toogood discussed the papers; and Mr. Lane replied.

Erratum.—The remarks on a Case of Graves's Disease with Bradycardia at the meeting of the Clinical Society (British Medical Journal, May 7th, p. 1,200) attributed to Dr. Leonard Guthrie were made by Dr. Arthur Davies.

Canadian Treatment of Inebriates.—The Executive of the Toronto Prisoners' Aid Association recently appointed Dr. Rosebrugh to visit American inebriate hospitals, and otherwise inquire into the after-history of inebriates who had been under treatment. He has reported that of 10,000 cases treated at the Boston Washingtonian Home, 34 per cent. had remained abstainers for over ten years. After the same interval 34 per cent. of 600 cases treated at Fort Hamilton had also remained sober. In Minnesota only a half of 57 discharged criminal inebriates had relapsed at the expiry of a a year and a-half. Among other recommendations for dealing with inebriate prisoners, he suggests for male inebriates an industrial reformatory on the farm colony plan.

REVIEWS.

The Treatment of Sarcoma and Carcinoma by Injections of Mixed Toxins. By C. Mansell Moullin, M.D Oxon., F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital, etc. London: John Bale, Sons, and Danielsson. 1898. (Demy 8vo, pp. 66. 3s. 6d.)

The mixed toxins to which this little book refers are those of the streptococcus of erysipelas and the bacillus prodigiosus (Coley's fluid). The book has grown out of a paper which Mr. Moullin read before the Harvelan Society of London, and an appendix is added containing brief particulars of all the instances which the author could find in which malignant growths have disappeared after attacks of erysipelas, whether occurring accidentally or communicated, and of some of the most important of those in which a like result has followed the injection of the mixed toxins.

While we are much indebted to Mr. Moullin for putting into such a convenient form so much of the material relating to this method of treatment, we cannot but own to a feeling of disappointment at the results with which it has been attended in the hands of surgeons in this country. Mr. Moullin seems, at first sight, to have been more fortunate than other English surgeons, for three of his five patients were vastly improved, if not cured, by the injections, but in not one of the three was the diagnosis of sarcoma confirmed by microscopical examination, and this is the more important because the clinical account of the cases leaves room for the gravest doubt whether the disease was sarcomatous in any one of them. The first of the three patients (H.K.) was suffering from a swelling in the groin, and some enlarged glands. The whole growth was of quite recent duration. The patient looked ill, and his temperature was very irregular (on two evenings 101°). No doubt those who examined the tumour thought it might be a sarcoma, but those who read the case must see that the diagnosis rested on very uncertain grounds.

The second patient (F. D.) suffered from a very large tumour within the abdomen, also of very short duration, which was first noticed after the patient had been seized with a sharp pain in the left flank, where the tumour was situated. There is nothing in the account of the case to prove that the tumour was a new growth. It is notorious that large intra-abdominal tumours which have been actually explored and pronounced to be malignant, do sometimes disappear without treatment. Such cases have been described by Thornton, Greig Smith, and others: and the late Mr. Greig Smith suggested, in a paper read before the Royal Medical and Chirurgical Society in January, 1894, that these reputed malignant tumours are probably inflammatory.

The third case (that of I.V.) is even more likely to have been a case of inflammation. The injections appear to have been only employed over about two weeks, and were suspended on account of the weak and prostrate condition of the patient. He is said to have had an abscess in the region of the hip where the tumour was two months after he left the hospital.

The study of these three cases, which were cured, as the author believes, by injection of the mixed toxins, leads us to the opinion that the tumour was, in all three of them, probably of inflammatory origin, and not malignant; and we are the more sorry to adopt this opinion because we are anxious to think favourably of the treatment by the toxin of erysipelas. It is founded on a sound basis—the occasional disappearance of malignant growths after an attack of erysipelas. It has been properly brought before the profession, and, in the first place, Professor Bruns, and, later, Dr. Coley of New York, deserve the highest praise for the work they have done in this connection. Unhappily the results, so far as this country is concerned, are very disappointing. They show that the treatment by injection is very distressing to the patient; that it is not free from danger to life; and that no really successful case is on record unless Mr. Moullin's three cases of doubtful tumour are to be regarded as cured cases of sarcoma. We wish we could believe they were.

OUTLINES OF PSYCHOLOGY. By WILHELM WUNDT. Translated by CHARLES H. JUDD, Ph.D. London: Williams and Norgate. New York: Gustav E. Stockart. Leipzig: Wilhelm Engelmann. 1897. (Demy 8vo, pp. 360. 7s.)

ALREADY Professor WUNDT is well known by two of his larger works, *Grundzüge der physiologischen Psychologie* and *Vorlesungen über die Menschen und Thierseele*. This book is intended to provide his students with a handy supplement to his lectures, while it gives in a concise form the author's views on modern psychology. We can recommend the volume as fulfilling both its objects. The translation is good, and there is a most useful and convenient glossary at the end, in which is shown the translation given to some of the words, such as for example "perception," which are capable of more than one connotation.

Though Professor Wundt's reputation rests chiefly on experimental psychology, the volume really deals with what is more generally understood as psychology. The earlier part is distinctly introductory, and sets forth concisely the differences between mediate and immediate experience, between what is objective and what is subjective, between the natural sciences as they are generally understood and the consideration of changing states of consciousness. After considering the general theories and methods of psychology, a broad survey of the subject follows, and this concludes the first part of the book.

To most readers the interest of the book will increase as they advance, for in the second section the psychical elements are studied, and here we see Professor Wundt's clear conception of parts of mind exemplified. Later, in "psychical compounds," we have studies of special ideas, followed by studies of temporal ideas, which are of course very closely connected with much of Wundt's original work.

The development of the emotions and their composition and classification form a very admirable study, though the reader's attention must be persistent if he is to grasp the whole subject. We think perhaps this part of the volume and the sections on volitional processes, consciousness, and attention are rather too concentrated for any but those at present either attending lectures on the subject or for those who are real students of psychology.

The chapter on psychical development is a worthy complement to the preceding subject, and is very interesting in its treatment of the mental powers of animals and those of children. The periods of appearance of the various faculties of the child are not so dogmatically given as they are by some recent observers, and we think our author is the more correct in being less definite. The special and latest evolved of human characteristics are studied in their proper place, and the whole book is itself a sketch or outline of the methods by which modern psychology has reached its present level. We feel sure that this book will take its place among the best books on modern psychology.

TREATISE ON THE DISEASES OF WOMEN, FOR THE USE OF STUDENTS AND PRACTITIONERS. By ALEXANDER J. C. SKENE, M.D., LL.D., Professor of Gynæcology in the Long Island College Hospital, Brooklyn, etc. Third Edition, Revised and Enlarged. London: H. K. Lewis. 1898. (Roy. 8vo, pp. 1,010, 294 illustrations. 28s.)

THIS work has already established a reputation, and the medical public will naturally desire to know what are the innovations which the author, a man of recognised authority, has thought fit to introduce into the new edition. He still emphatically recommends the electrical treatment of fibroids—a method from which it is evident he has had very good results. The precise manner in which electricity acts on a fibroid is not explained; all that is said in the way of preliminary observations is that "this method takes a high rank among the means of treating fibroma of the uterus. In order fully to comprehend this subject some knowledge of the elements of electro-physics should be obtained. For this we must refer our readers to the textbooks on this subject."

As is the case with the rest of the work, the subject of hysterectomy is treated in a manner suited mainly to the experienced operator. Baer's operation is quoted in full, being "so much in advance of the older ways"; then follows another quotation in full of Howard Kelly's method, which Dr. SKENE informs us is the operation which he has adopted.

The chapter on the methods of exploration of the bladder and urethra is of special interest, as the author is an authority on the endoscope and cystoscope. Dr. Skene has added fresh matter, and dwells on the management of these instruments and the relative advantages of different varieties. For the examination of the urethra he still uses his old endoscope, perhaps, Dr. Skene adds, because he is used to it, but he feels bound to acknowledge that the older endoscope, improved in mechanism by Kelly, is more easily employed and satisfactory to the majority of surgeons.

One of the best chapters is that devoted to injuries of the pelvic floor from parturition and other causes. Unlike many others in this work, it is specially fitted for the student. From it he may gain a sound groundwork of knowledge before he hastens to repair a ruptured perineum. Not only is great attention paid to anatomy, but the elementary principles of plastic suturing are clearly explained. In many textbooks we read of this or that method—of silver sutures, and of silkworm gut sutures. Dr. Skene shows how to apply the suture—a very important matter. The object of taking up plenty of tissue is demonstrated by two diagrams. In chapters on the perineum in books of this kind we generally meet with a goodly number of second-hand drawings. It would be well if these two little sketches were widely borrowed. Dr. Skene has done well to perfect and yet simplify this valuable chapter on the pelvic floor.

The *Treatise* is a standard work indeed, though by no means milk for medical babes. To the specialist it is indispensable, but as the words "for the use of students" are retained on the title-page, we think that it would be good if the author would make other chapters as light and as judiciously blended with elementary matter as is that which relates to the perineum. Much that is taught in other chapters is suited for Dr. Skene's medical peers, and not likely to be misunderstood by them, but very unsuitable for the beginner.

LA DEPURAZIONE DELL'ACQUA E I PREGIUDIZI CONTRA L'ACQUA BOLLITA. [The Purification of Water and the Prejudices against Boiled Water.] By Professor G. BIZZOZERO. Milan, etc. Francesco Vallardi. 1898. (Cr. 8vo. Pp. 100. L. 1.50.)

BY tracing epidemics back to their first cases, it was proved many years ago that several diseases, and especially enteric fever, were spread through contaminated water. Later bacteriological research further strengthened this conclusion by showing the presence of the pathogenic microbe in the water. Thus it becomes a matter of the first importance to the community to protect itself against such diseases by efficiently destroying disease-producing germs in water. The object of Professor BIZZOZERO's very readable monograph is to show that boiling is the best method of effecting this, and also to break down the prejudices of the public against boiled water. The author investigates carefully the disinfection of water (1) by filtration, (2) by chemical means, and (3) by boiling. He argues that up to a certain point some filters, porcelain and other, may be efficient for a time, but that they have a dangerous tendency not to remain so. The chemical method is undoubtedly less satisfactory than filtration, and both are inferior to boiling. Two-thirds of Professor Bizzozero's book deal vigorously with the objections raised against the use of boiled water. Although boiled water loses a large part of the air contained in it, yet much of such air is regained within twenty-four hours. The contention that by driving off the carbon dioxide the water loses its freshness is denied, as a larger proportion of this gas would have to be present in ordinary water if such freshness is to be attributed to it. Neither is all the carbonate of lime got rid of in this way. The unpleasant taste attributed to boiled water has more to do with the conditions of boiling (the vessel used, etc.) than with the actual boiling itself. The cost of boiling the drinking water is also trifling. If this booklet succeeds in directing the attention, not only of the profession but also of the public, to the important subject of which it ably treats, it will have done a great service.

LA PHYSIOLOGIE GÉNÉRALE [General Physiology]. By Dr. J. LAUMONIER. Paris: Schleicher Frères. 1897. (Cr. 8vo, pp. 582, 28 figures. Fr.5.)

THE term "general physiology" is here used in a special sense. Just as the term general anatomy was at one time a synonym for histology, so now certain authors have introduced the expression general physiology for that portion of biological science which treats of the functions of the cell. The pioneer in this direction is undoubtedly Max Verworn, whose epoch-making treatise appeared only a few years ago. Max Verworn and his disciples regard the cell as the key to the understanding of physiological problems, and no doubt when the manner of action of individual cells is known it will be possible easily to deduce the modes of activity exhibited by organs and organisms which, in origin at any rate, are collections of cells.

In the present work Dr. LAUMONIER attacks the problem principally from the chemical standpoint; the essence of cellular activity is recognised as chemical, and the heads of his chapters—biochemistry, metabolism, and the like—indicate the bent of the book. The author, however, does not seem to have recognised that biochemistry, in the strict sense of the term, is in a very backward state. We know a good deal of what is called chemical physiology or physiological chemistry, and very important knowledge this is, but it is not the chemistry of living protoplasm. The chemist labours under an obvious disadvantage directly he touches living things with his reagents, for he is then examining not living substance but only its *débris*. We read in the present volume, for instance, much about nucleins and allied materials which are obtainable from cells, but any theories based upon such facts must remain theories until some means of overcoming the primary difficulty of the physiological chemist is discovered.

Dr. Laumonier acknowledges his indebtedness not only to Verworn, but also to Delage's *L'Hérédité*, and Dantec's *Théorie Nouvelle de la Vie*. When, however, we compare his work with that of Verworn's, we do not think the disciple has made any advance on the work of the master. The book after all is very much like any ordinary book on physiology, in which the chemical portion is written fairly fully, and the cell is dwelt upon at great length, and everything else, as for example the circulation, is scamped in a few pages. When we examine more fully into the presentment of chemical facts, we find that in details the author is in many cases woefully behind the times. Thus we read that indol is a product of the activity of pancreatic juice, that milk globules are coated with a pellicle of casein, that maltose yields dextrose and lævulose on inversion, that fibrin is very soluble in water, that fibrino-plastin is an essential in blood coagulation; and numerous other similar mistakes are scattered through the pages. The whole question of fermentation, which is a subject particularly germane to general physiology, is written in a most confusing, imperfect, and often erroneous style.

Dr. Laumonier is evidently a biologist who takes what appears to be a *dilettante* interest in physiological and hygienic problems, who has some very good ideas concerning cellular activity and the importance of chemistry in explaining such activity, but who possesses neither the necessary knowledge, nor sufficient lucidity of style to warrant his writing a book on the subject.

PHYSIOLOGIE ET PATHOLOGIE DE LA SECRETION GASTRIQUE [Physiology and Pathology of the Gastric Secretion]. By A. VERHAEGEN. Paris: Masson et Cie. 1898. (Demy 8vo. Pp. 40. Fr. 1.25.)

THIS pamphlet belongs to the series of clinical monographs upon new questions in medicine, surgery, and biology.

In his introduction, Dr. VERHAEGEN draws attention to the advances made in our knowledge of gastric diseases since the introduction of the stomach tube. Previously the term "dyspepsia" did duty for a considerable number of stomach affections, and even still continues to do so. In this country the stomach tube has met with very little favour, at any rate in diagnosis; hence the few writings by British authorities on this subject. This is not altogether easy to understand, as it must be of importance to know what the condition of the gastric secretion is, and to find surer indications than at present exist for the treatment of so called dyspepsia. After a short historical survey, the author gives a succinct account of the physiology of the gastric secretion. In discussing pathology, he divides the different forms of gastritis into acute and chronic, the former being arranged under acute catarrhal gastritis, toxic gastritis, and the rare phlegmonous gastritis. As acute gastritis is mostly efficiently dealt with in the textbooks, the author limits himself to chronic gastritis, which he subdivides into (1) simple chronic gastritis, (2) gastritis with hyperchlorhydria; (3) gastritis with hypersecretion; and (4) nervous gastritis, better called nervous dyspepsia. The etiology, symptoms, treatment, etc., of these various affections are carefully described. Dr. Verhaegen takes a more hopeful view of chronic hyperchlorhydria than some authorities.

The third part of this pamphlet contains an account of the technique of the examination of the stomach. A good description is given of how the stomach tube should be passed together with the possible difficulties and also the practical uses. In the chemical examination the Hayem-Winter method is highly valued, but the author admits that it is too elaborate, and requires too much time for ordinary use. For clinical purposes Verhaegen recommends Hepner and Seeman's method. Leo's method, which is not mentioned here, is also an easy one to carry out.

An essay of this kind, carefully worked out, is certainly a welcome contribution to a subject of which our knowledge is as yet only too limited.

DIE FÄRBETECHNIK DES NERVENSYSTEMS [Methods of Staining Nervous Tissues]. Von Dr. BERNHARD POLLACK. Aufl. Berlin: S. Karger; and Glasgow: F. Bauermeister. (Cr. 8vo, pp. 172. M.3.)

THE call for a second edition of this little book within twelve months of its first appearance is sufficient evidence of its value. The author has increased this value in the new edition by some judicious omissions and additions.

In the chapter on the changes of weight produced in the brain by various preserving fluids many unnecessary details are omitted, and the results more concisely summarised. The method of preserving the brain for museum purposes by a 2 per cent. solution of formalin in glycerine, as suggested by Laskowski, is a wise addition to the older methods.

Some interesting facts are added concerning the weight of the brain in the sexes and at different ages, and the respective weight of the two hemispheres in right-handed and left-handed people.

A method of cutting sections through the whole thickness of the brain, as described by Pal, will be best appreciated by those who have attempted this difficult feat. Amongst many additions to the methods of staining, we may mention a process for the staining of nerve cells introduced by v. Lenhossék: toluidin blue is the selective stain, eosin being used as a counterstain. The results obtained are very beautiful, but unfortunately not very permanent.

A new gold chloride process for the demonstration of medullated nerves and their endings, by von Frey, may also be mentioned. The most important addition to the book is the chapter on the retina. Here, as elsewhere, the account of the various methods of preparation and staining is eminently practical, and to those who desire to emulate the exquisite preparations of Ramón y Cajal and of Dogiel, as shown in their monographs on the retina, this chapter will be most useful.

The value of the book is greatly increased by the list of references appended, and the author has brought this thoroughly up to date. It is to be wished that the author had given his own experience of the comparative value of the various methods a little more freely, but otherwise the book is excellent, and we venture to think it will have a wide circulation. Certainly those who are interested in the subject in this country will be glad to hear that an English translation is in course of preparation.

NOTES ON BOOKS.

Reports and Transactions.

Edinburgh Hospital Reports, Vol. V. Edited by G. A. Gibson, M.D., D.Sc.; C. W. Cathcart, M.A., M.B.; John Thomson, M.D.; and D. Berry Hart, M.D. (Edinburgh: Young J. Pentland. 1898. Pp. 450, with 9 plates and 22 figures in the text. 12s. 6d.)—This volume contains a large number of original articles. The first is by Dr. John Thomson on a case of gall stones in a newborn child, an affection so rare that the author has succeeded in collecting only six parallel observations. Rarity also characterises the condition of duodenal septum described by Dr. Menzies Hutton in a man aged 35; and Mr. J. S. Fowler's example of acute leucocythæmia, fatal in about seven weeks. Of a different nature is Dr. Lockhart Gillespie's analysis of 2,368 cases admitted with cardiac lesions into the Royal Infirmary, Edinburgh, during the five years 1891-96. The analysis is limited to the lesion, age, sex, and mortality, but the results as far as they go are very valuable, and are brought out clearly by means of charts. The statistics as regards complications are interesting. Dr. J. C. Simpson's remarks on intravascular coagulation are suggestive, and he appends a good bibliography. Dr. Lovell Gulland records a case of tuberculous meningitis in which the lesion was limited to the left motor area. Dr. Byrom Bramwell's paper on Abscess of the Brain is one of the longest and most important in the volume. It contains notes of 12 cases extending over a period of twenty-five years. Sir T. Grainger Stewart and Dr. G. A. Gibson record 5 cases of cerebellar tumour (in one of which the diagnosis was unconfirmed by operation or necropsy), being all those seen in their wards during three years. Two of them were successfully operated upon, and in one of these recovery occurred after a large amount of fluid had drained from the cerebellum, but no cyst was found. Mr. David M. Greig contributes an essay on Unilateral Hypertrophy, in which he comes to some interesting conclusions. Dr. W. F. Robertson's paper on the Neuroglia is a useful addition to the literature of a difficult and much-debated subject. There are many other articles, reports, and statistical reports in the volume, which is indeed far more than its title implies.

King's College Hospital Reports, Vol. III. Edited by Nestor Tirard, M.D., F.R.C.P.; W. Watson Cheyne, F.R.C.S., F.R.S.; John Phillips, M.A., M.D., F.R.C.P.; and W. D. Halliburton, M.D., F.R.S. (London: Adlard and Son. 1897. Pp. 334. 7s. 6d.)—This volume comprises the reports from October 1st, 1895, to September 30th, 1896. Its late issue is explained by the rearrangement of work necessitated by the death of Sir George Johnson, and by the anxiety of the editors to include some account of the new ophthalmological theatre consecrated to his memory. The book opens with an obituary notice of the deceased physician, illustrated by an excellent portrait. It includes, in addition to the ordinary general and special reports, statistical tables, etc., several articles of special interest by members of the staff. Of these we may select for particular mention those on Hæmaturia and Allied Conditions, by Dr. Tirard; on the Treatment of Hydrocele in Children, by Mr. Burghard; and on Graves's Disease, by Dr. Raymond Crawfurd. The section entitled What old King's Men are Doing cannot fail to be of interest to past and present students.

Eleventh Annual Report of the State Board of Health of Ohio for the year ending October 31st, 1896. (Norwalk, Ohio: Laning Printing Co. 1897. Roy 8vo, pp. 458.)—The administrators of public health in Ohio appear to have to contend with difficulties. "The State system of collecting vital statistics is so imperfect as to make the returns of no practical value." Again, in the Annual Reports of township Boards of Health, the phrases "no health officer, no rules, no meetings, nothing done, no expense" are of quite common occurrence. It is interesting to note that an Act is in force for the regulation of plumbing; the working of this Act is attended with difficulties in small cities, and we learn that "in cities where there is but one plumber, he would practically examine himself, licence himself, and inspect and pass upon his own plumbing work." The most readable portion of the report is that concerned with the proceedings of the seventh annual meeting of the Boards of Health of Ohio. An abstract of several papers read at this meeting is given, and the delegates indulged in "the freest possible discussion." The Attorney-General contributes a paper On the Constitutional Limitations of Health Boards. A delegate questions him concerning quarantine in scarlet fever. "Where we shut up a family and don't let them come out at all, and, if they do, put them in the calaboose, we are not authorised to keep them there and let them starve, are we?" Says the Attorney-General, "What county are you from?" "Dresden, down here in Muskingum County." The oracle thereupon replies, "You ought to feed them." A report on a school outbreak brings to light some curiosities in connection with quarantine administration. A delegate states that it is well, in dealing with cases of whooping-cough to keep the children from school until they no longer whoop. "It is an annoyance to the school. I think it ought to be kept out of the school until it does not disturb the school, but that is not a sanitary matter." Again, pig nuisances are discussed. A delegate observes that in his district there is a very "industrious health officer; he is called the 'smeller' in our town, and they have to keep their places clean." "A gentleman" reports, "I do not suppose we have a dozen hogs, and they are very careful to keep their pens clean." Again, it is stated that there is "a very clean kind of hogs in Shelby;" but another delegate disconsolately states, "I do not believe we have that kind of hogs." Finally questions are asked. One of them is, "How many health officers at a yearly salary of 100 dollars make a personal general inspection of the town or city in which they reside as to its sanitary conditions? Would like all such to stand up." It is recorded that three persons stood up in response. Ohio should "forge ahead;" it may not have yet attained perfection, but there is evidence of the existence of enthusiasm among those who are responsible for its health administration.

Handbuch der Laryngologie und Rhinologie. [Handbook of Laryngology and Rhinology.] Edited by Dr. Paul Heymann. Parts 14 to 22. (Vienna: Alfred Hölder. 1897.)—Since our last notice of this interesting work, nine parts have appeared in rapid succession. Of these parts, 14, 16, 17, and 21 belong to Vol. I (Larynx), and contain articles by Hajek on laryngeal perichondritis (conclusion) and œdema of the larynx, by Rosenberg on adhesions and stenoses of the larynx and trachea, one by Semon on nervous diseases of the larynx and trachea (an exhaustive article of 177 pages), and a large instalment of an article by Jurasz on benign growths of the larynx. Parts 15, 18, 19, and 20 go to form Vol. II (Pharynx), and contain the conclusion of Chiari's article on inflammation of the pharynx and naso-pharynx, two articles by Jurasz on foreign bodies in and injuries of the pharynx and naso-pharynx, Körner on neuroses of the pharynx, Mikulicz on new growths in the pharynx and naso-pharynx, and Heymann on contractions and adhesions of the same regions. The articles following comprise an introduction to the diseases of the lymphatic pharyngeal ring, by Kayser; an article by the same and by the late Professor Gottstein on diseases of the pharyngeal tonsil, Bloch on diseases of the palatal tonsils, Strübing on peritonsillar and retropharyngeal abscess, Michael on diseases of the lingual tonsil, and Catti and Landgraf on the pharynx in acute infectious diseases. Part 22, which belongs to Vol. III, contains the conclusion of Lange's article on diseases of the septum nasi, an article by v. Bergmann on injuries of the nose (fractures and dislocations), and a portion of one by Seifert on foreign bodies, rhinoliths, and parasites in the nose and its accessory cavities. Roentgen rays, we note, are recognised as of great importance in the diagnosis of the presence of many foreign bodies in these regions. As before, each article is furnished with a copious bibliography, and there are many woodcuts in the text. The mere recital of the names of the authors is sufficient to show that these parts of this work contain an abundance of highly interesting matter.

The muzzling order has been revoked in the following Midland districts: Leicestershire, Gloucestershire, Herefordshire, Nottinghamshire, Derbyshire, Carmarthenshire, Glamorganshire, parts of Warwickshire and Worcestershire.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW INSTRUMENTS FOR INTESTINAL ANASTOMOSIS.

MR. J. JACKSON CLARKE, M.B. Lond., F.R.C.S. (London, W.) writes: In 1896 I published a "suggestion" for intestinal anastomosis; this was a bobbin which differed from a Murphy's button in several important particulars. For example, its lumen had about double the diameter of that of a Murphy's button; the approximation was effected by the pressure of two indiarubber rings instead of by a metal diaphragm; and again, the bobbin was very light. The instrument worked well on the cadaver, but on trying it on an anæsthetised dog I found so much difficulty in getting the rubber rings into place, that I decided not to use the bobbin for human surgery until certain modifications which I am now devising are completed. Meanwhile recent experience of

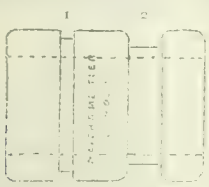


Fig. 1.—Side view of rubber bobbin for end-to-end anastomosis. The interrupted lines show the size of the lumen.



Fig. 3.—Rubber ring grooved, with recurved lips, for lateral anastomosis: side view and section.

Murphy's button has decided me against employing it again, and as additional resources in intestinal surgery I have devised the two instruments described below, which have been carefully made for me by Messrs. Mayer and Meltzer.

Bobbin for End-to-end Anastomosis.—This is a red rubber instrument, shown in Fig. 1. The two ends of the bowel are secured by purse-string sutures in the narrow groove (1), then

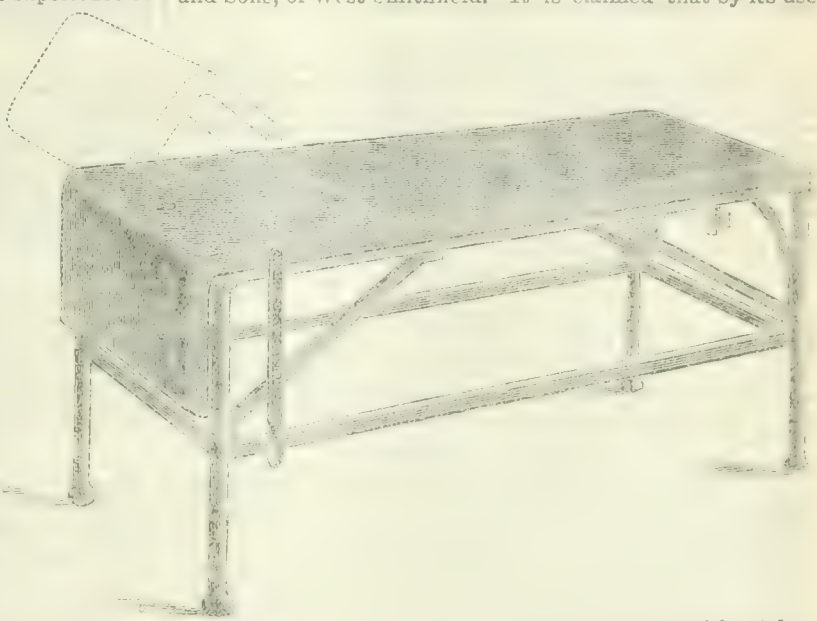


Fig. 2.—The anastomosis complete.

a lateral opening is made in that section of the bowel that is on the side of the narrow, and away from the broader, groove. The lateral opening is made so far away from the divided ends of intestine that it is clear of the bobbin when the anastomosis is completed, as shown in Fig. 2. This is effected by drawing the end of the bobbin with the attached sections of bowel through the lateral opening, and slipping a soft rubber ring over the bobbin as far as the broad groove (2), where the ring compresses together the peritoneal surfaces of the two sections of the bowel. The anastomosis is completed by withdrawing the protruding bobbin, etc., into the lumen of the bowel, closing the lateral opening and stitching the mesentery, as shown in Fig. 2. For lateral anastomosis—for example, gastro-enterostomy—I have devised the simple oval rubber ring, the side view and section of which are shown in Fig. 3. The margins of the two lateral openings in the bowel, etc., are secured in turn by purse-string stitches to the bottom of the groove in the rubber ring, and the anastomosis is completed by Lembert's stitches.

A HOT-WATER OPERATION TABLE.

AN operation table, made of iron enamelled white, with zinc top to hold hot water, has been constructed by Messrs. Arnold and Sons, of West Smithfield. It is claimed that by its use



the Trendelenburg position can be maintained without loss of heat, as the hot water remains at whatever incline the table may be placed. Its general form and construction are shown in the accompanying drawing.

A NEW DOMESTIC REFUSE DESTRUCTOR.

THIS destructor commends itself by reason of its simplicity. The ashpit of an ordinary range is enclosed, making a chamber into which the refuse is placed to be dried by the heat of the fire. It is stated that all greasy matter and fat is effectually absorbed by the ash falling through the fire bars. When everything is reduced to a combustible condition it is shovelled into the fire. The escape of smells and vapours into the kitchen during the process of drying is provided against by an adequate draft. Further particulars can be obtained from the maker and patentee, J. B. Petter, Yeovil, Somerset.

AN ASEPTIC CABINET.

MESSRS. ARNOLD AND SONS, of West Smithfield, have made a cabinet for instruments which is constructed of iron enamelled white; the top, back, sides, and door, as well as the two shelves, are made of plate glass. The cabinet is made in two sizes, one 18 inches, the other 24 inches, high, price respectively 35s. and 55s. Owing to its construction, the cabinet is easily cleaned and is likely to be useful.

ERRATUM.—In the article on Mr. H. F. Baker's wrench for talipes equinus (BRITISH MEDICAL JOURNAL, May 7th, p. 1209) the blocks were accidentally transposed.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

RESEARCH SCHOLARSHIP.

The Council of the British Medical Association are prepared to receive applications for one of the three Research Scholarships, which is of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications to be sent in writing to the General Secretary on or before June 15th, stating the particulars of the intended research, qualifications, and work done.

FRANCIS FOWKE, *General Secretary.*

429, Strand, London, May 14th, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—ISAMBARD OWEN, M.D., 40, Curzon Street, W., and H. B. ROBINSON, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting will be held on Thursday, May 26th, at 4.30 P.M., at the Clinical Museum, Great Portland Street, W. (by kind permission of Mr. Jonathan Hutchinson, F.R.S., F.R.C.S.). Mr. Hutchinson will make some remarks On Subjects of Interest in the Museum. Some clinical cases will be shown. G. Crawford Thomson, M.D., Vice-President, in the chair. Tea and coffee at 4 P.M.—THOMAS DUTTON, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held, by kind invitation of Dr. Adams, at Brooke House, Upper Clapton, on Thursday, May 19th, at 8.30 P.M. The chair will be taken by Dr. St. Clair Shadwell, Vice-President of the District. Dr. Stephen Mackenzie will give a Demonstration of Diseases of the Skin. Visitors are cordially invited.—HERBERT E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton, E.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting will be held at Wigan, on Tuesday, June 28th. Applications for membership and all communications should be addressed to the Honorary Secretary, Dr. JAMES BARR, 72, Rodney Street, Liverpool.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting will be held at the Masonic Hall, Woking, on Friday, May 27th, at 3.45 P.M. Dr. Duncan of Croydon will preside. Agenda: 1. Minutes of the Godalming meeting. 2. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. McCann: Six Cases of Malignant Disease of the Uterus treated by Vaginal Hysterectomy. 4. Mr. G. F. Roumieu: The Midwive Registration Bill. A discussion will follow.—ALEX. HOPE WALKER, Honorary Secretary, Cranleigh.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting will be held at the White Hart, Lewes, on Thursday, May 26th, at 3.30 P.M., Dr. Crosskey in the chair. Members are requested to send notice of any communications before May 14th to the Honorary District Secretary, J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards.

MIDLAND BRANCH.—The annual meeting will be held at Lincoln on Thursday, June 2nd. Any members proposing to read papers or make other communications are requested to communicate with FRANK M. POPE, M.B., 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

SHROPSHIRE AND MID-WALES BRANCH.—The spring meeting of this Branch will be held at the Salop Infirmary on Tuesday, May 24th, at 3 P.M. Members who wish to read papers, or show patients, or bring any business before the meeting are requested to communicate with the Honorary Secretary not later than Saturday, May 14th.—H. WILLOUGHBY GARDNER, M.D., Honorary Secretary, Swan Hill, Shrewsbury.

EAST ANGLIAN BRANCH.—The annual general meeting of the East Anglian Branch will take place at Norwich, on Thursday, June 16th, under the presidency of Mr. Haynes S. Robinson. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Beverley, Norwich. Members desirous of nominating candidates for election as officers of the Branch under By-law 9, must send their nominations to Dr. Barnes, Eye, so as to reach him not later than May 25th. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries.—EDGAR G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; THOMAS CARR, M.D., Braintree, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The members of this Branch residing in the counties of Roxburgh, Berwick, Selkirk, and Peebles, are requested to meet together in the Station Hotel, New Town, St. Boswells, on Friday, May 27th, at 3.30 P.M., to form a section of the Branch, and intimate the same to the next meeting of the Branch. There will be a discussion on Influenza, its various forms and their treatment. Members are requested to bring any specimens they possess. Members intending to be present will oblige by intimating the fact to the Honorary Secretary, W. HALL CALVERT, The Laurels, Melrose.

NORTH OF ENGLAND BRANCH.—The spring meeting of this Branch will be held at the Royal Infirmary, Newcastle-on-Tyne, on Thursday, May 26th, at 4.45 P.M. Notice of papers, etc., should be sent at once to the Secretary. The dinner after the meeting will take place at the Douglas Hotel at 6 P.M., 6s. 6d. each, wine extra.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE last meeting of the session was held at the Highgate Infirmary on May 4th, Dr. MORTON, Vice-President of the District, in the chair.

Election of Officers.—The officers for the next session were re-elected: *Vice-President:* Dr. Morton. *Representative on Branch Council:* Dr. H. Woods. *Honorary Secretary:* Dr. Macevoy. *District Committee:* Drs. and Messrs. C. F. Bailey, A. W. George, F. Greaves, Norman Kerr, Cubitt Lucey, Dysart McCaw, Hooper May, Ogier Ward.

Scarlet Fever.—Dr. WASHBOURN read a paper on Points of Interest in Scarlet Fever. He said that although the real nature of the virus was unknown, certain peculiarities were evident: (*a*) It can live outside the body for some time (clothes, etc.) in the absence of sunlight and air; (*b*) it may be carried a short distance through the air; (*c*) it is capable of multiplication outside the body (milk, etc.); (*d*) it may be destroyed by disinfection. While the entrance of the virus into the body probably took place in most cases through the fauces, this was not the only mode of entrance; it might enter through a wound—surgical scarlet fever—which was usually a mild disease. The rash in these cases might occasionally be septicæmic, and not truly scarlatinal. Did the virus remain local as in the case of diphtheria bacillus, or was it generally distributed as with the spirillum of plague? The general idea was that it resided especially in the skin, but as scarlet fever seemed to be most infectious in the early

stage, this was an argument against the view. Dr. Washbourn also referred in this connection to Dr. Priestley's cases, who left the hospital peeling, and did not spread the disease; again some cases remained infectious after peeling had ceased. In the case of so-called "return cases" arising apparently from intercourse with patients discharged from scarlet wards, inefficient disinfection of clothes, etc. (especially at home), might be at fault, but possibly also the virus might lurk about their fauces as in diphtheria. In any case it was important to remember that cessation of desquamation was not an absolute guide to freedom from infection in scarlatina. To explain the varying degrees of malignancy of the disease, one might imagine that the virus was capable of intensification; often, of course, individual predisposition would explain it, mixed infection—that is, the association with other micro-organisms (streptococci, etc.). Among malignant cases of scarlet fever Dr. Washbourn referred to at least two varieties: (*a*) a toxic or malignant scarlet fever, generally fatal though profound intoxication (with delirium, high fever, weak pulse, etc.), in which no bacteria were found (2 cases recorded); (*b*) septic scarlet fever (with violent faucial inflammation, pultaceous or membranous exudation, ulceration, and even gangrene of the throat, "bull neck," etc.), in which streptococci were found in the fauces and glands of the neck, etc. (2 cases recorded). Antistreptococcic serum might be, and often was, disappointing. The association of scarlet fever with other diseases, and especially diphtheria, was referred to, and also the subject of relapses in scarlet fever. One point in diagnosis Dr. Washbourn especially emphasised—namely, the differentiation from German measles in the stage when the papules had disappeared from the face and those on the trunk and limbs were coalescing. The paper was subsequently discussed, and a hearty vote of thanks passed to Dr. Washbourn.

Cases.—Dr. Chilcott showed some cases of interest in the wards of the infirmary (leprosy, aortic aneurysm, congenital heart disease, cancer of the floor of the mouth, Charcot's disease of the knee-joint (? tuberculosis), etc.).

Votes of Thanks.—Votes of thanks to Dr. Chilcott and the Infirmary authorities were passed.

NORTH OF IRELAND BRANCH.

The spring meeting of this Branch was held in Belfast on April 28th. The President (Dr. R. Gray, of Armagh) occupied the chair, and twenty-eight members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Death of Dr. Bingham.—On the motion of Dr. M'Keown, seconded by Dr. McCaw, the Honorary Secretary was instructed to convey the sympathy and condolence of the members of the Branch to Mrs. Bingham, and to express their regret at the death of her late husband, Dr. Henry Bingham.

New Members.—Dr. J. K. Gibson (Randalstown), Dr. John Ewing (Ballycastle), and Dr. J. M. Heron (Downpatrick) were elected members.

Communications.—Dr. W. A. M'Keown showed: (1) A case on which he operated for Cicatricial Ectropion; (2) read notes of a case of Septic Thrombosis of the Cavernous and other Sinuses, with Orbital Cellulitis, probably caused by germs introduced into the circulation from a suppurative eruption of the scalp.—Dr. Kevin read notes of a case of Pulmonary Respiration *in Utero* published at p. 1258.—Dr. St Clair Boyd read Notes of the Removal of an Omental Cyst from the Sac of a Femoral Hernia.

Specimens.—Dr. Lorrain Smith showed the Brain from Dr. M'Keown's case of Septic Thrombosis.—Dr. John Campbell showed a Hydatid Cyst of the Liver removed by abdominal section.

SOUTH EASTERN BRANCH: NORTH KENT DISTRICT.

The April meeting of this District was held in the Council Chamber of the Urban District Council, Beckenham, on April 14th, Mr. Primrose Wells in the chair.

Next Meeting.—It was decided that the next meeting of the District should be held at Bromley, and that Dr. Scott be asked to take the chair thereat.

Reappointment of Hon. Secretary.—Dr. A. Tennyson Smith was reappointed Honorary Secretary for the ensuing year.

Representatives of District on Branch Council.—Dr. Ilott, of Bromley, and Mr. Sturges, of Beckenham, were nominated as the District's candidates for election on the Branch Council.

Meetings of District.—After some discussion it was decided that in future the District meeting be held on the first Thursdays of October, March, and May.

Communications.—Dr. W. Ewart read a paper on The Tracheal Injection of Creosoted Oils in Diphtheria for Threatening Asphyxia after Tracheotomy, and on The Nasal Injection of Medicated Oil for the Relief of Asthma, and other Affections of the Air Passages.—Dr. James Taylor read a paper on The Treatment of Epilepsy. Both papers were listened to with great attention, and gave rise to considerable discussion, and both Dr. Ewart and Dr. Taylor were cordially thanked for their papers.

Tea.—During the meeting, the Chairman entertained the members at tea.

REGISTRATION OF MIDWIVES.

A deputation from the Parliamentary Bills Committee of the British Medical Association waited upon the medical members of Parliament at the House of Commons, on May 5th, to explain the views of the Association with regard to the proposed legislation for the registration of midwives. The medical members receiving the deputation were Sir Charles Cameron (who presided), Sir W. Priestley, Dr. Clark, Dr. Farquharson, Dr. Fox, and Dr. Macdonnell. Sir J. Blundell Maple and Sir George Duffey were also present. The deputation consisted of Mr. Victor Horsley and Mr. George Brown, and Mr. Francis Fowke (the General Secretary).

Both Mr. Victor Horsley and Mr. Brown spoke in condemnation of Mr. Balfour's Bill, and explained the provisions of the Bill which had been drafted by the Parliamentary Bills Committee.

Sir Charles Cameron pointed out that there was no prospect of the former Bill coming on on Wednesday, and expressed his belief that it could not come before the House during the present session.

Sir J. Blundell Maple said he had taken a great interest in the question, and had had a Bill drafted which he wished to submit to the deputation for consideration. He proposed that every woman should be attended by a medical man; and if not so attended, that the local medical officer should attend and be paid from the common fund—2s. 6d. for a visit within a mile, and 6d. extra for every part of a mile. This Bill proposed that each medical officer should keep a list of the women who were competent to practise as midwives, and see that in every confinement which they attended the case was visited by a medical man or by himself. He disapproved of registration, for he believed it would be the first step towards doing away with doctors altogether. A woman once registered would be rather nervous in calling in anyone else, as it would rather tend to prove that she was not a competent person. He thought it would be wise if those interested in the subject could see their way to bringing in a Bill which would be a sort of halfway house. He contended that every confinement should be attended by a doctor, and if the patient could not afford the fee it should be paid out of the Poor-law fund.

Dr. Fox considered that one of the difficulties which would have to be met was the question of what was to be done with the women of good character who had been practising for several years, and had not undergone the three months' training necessary for registration. He thought it might be met by accepting a certificate from two or three medical men that the woman was of good character and had been practising.

Dr. Clark believed that the best way of bringing about legislation would be to allow the Bill to be read a second time, and then deal with its provisions in Committee. It was utterly impossible, he said, for anyone to do anything except the Government, and pressure, therefore, should be put upon the Government to introduce a Bill. Everyone agreed to the principle of registration, and the machinery could be developed in Committee. He believed that in accepting the principle of registration it was necessary to go as far as the

British Medical Association proposed, and absolutely prohibit the practising for gain.

Sir Wm. Priestley suggested that the British Medical Association should draw up a Bill as nearly as possible on the lines laid down by the General Medical Council, because the Government were more likely to listen to any dicta emanating from that body than from any other body representing the profession. If that were done, it was just possible that the Government, if they could not take up the Bill themselves, might yet assist it in passing through the House. It was important also that the interest of the profession should be kept in the background, as the primary question with the House was the interest of the public. Any scheme proposed should be economical, for if it were an expensive scheme it would meet with opposition from the Chancellor of the Exchequer if the money came out of public funds, and from the members of populous districts if it came out of the rates.

Mr. Brown pointed out to Sir Blundell Maple that the suggestion had been made that many women would object to an examination by a doctor, and asked how that difficulty was to be met.

Sir J. Blundell Maple thought that the reason poor people objected was because they could not pay a fee, and he provided for that by providing that she should be visited by the medical officer of the district. He proposed only one visit, but a second could be made if necessary.

Replying to questions raised by the members, Mr. Horsley said that what the Association wished to do was to put an end to the coroners' inquests which were frequently being held throughout the country in consequence of untrained women acting as midwives. They were equally anxious to resist to the utmost any legislation which while appearing to deal with the matter did not really do so. Mr. Balfour's Bill did not deal with the evil at all. With regard to the question of the matter being left in the hands of the General Medical Council instead of creating a new Central Board, he pointed out that the income of the Council was derived from the members of the profession, and therefore the Council did not feel justified in spending that money for people not in the profession. If, however, Parliament would pay the Council for doing the work they were quite willing to do it.

Several of the members expressed their willingness to back the Bill drawn up by the Association, but the question of its introduction was left to be considered, Dr. Farquharson believing that in matters affecting the medical profession, it was better to get somebody unconnected with medicine to act as introducer.

Sir Wm. Priestley said that the general impression of a considerable number of members of Parliament was that the Medical Act was passed, not in the interest of the medical profession, but to enable the public to discriminate between qualified and unqualified practitioners. If it had been a penal Bill penalising those practising medicine or bone-setters—whom some of the members believed in most implicitly—it probably never would be passed in the House of Commons. The question therefore arose whether the House would pass a penal clause for midwives, and that was a matter deserving very careful consideration.

The following is the text of the Bill drafted by Sir J. Blundell Maple, Bart., M.P.:

A BILL TO PROVIDE FOR THE REGISTRATION OF MIDWIVES AND FOR GIVING NOTICE OF BIRTHS IN CERTAIN CASES TO POOR-LAW MEDICAL OFFICERS.

ARRANGEMENT OF SECTIONS.

	Section.
Register of midwives to be kept by Poor-law medical officer ...	1
Removal of names from register	2
Publication of copies of register	3
Notice of birth to be given to Poor-law medical officers in certain cases	4
Duty of Poor-law medical officer on receiving notice	5
Payment of fees	6
Extent of Act	7
Short title	8

1. *Register of Midwives to be kept by Poor-law Medical Officer.*—It shall be the duty of every poor law medical officer to keep a register of the name and addresses of women resident within his Poor-law union who apply to him to be registered under this Act and are in his opinion qualified to attend cases of labour and to be registered as competent midwives and to give a certificate of registration to every woman so registered.

For the registration of each name and the grant of the certificate the medical officer shall be entitled to a fee of two shillings and sixpence from the applicant.

Every such certificate shall contain a declaration by the medical officer that he is personally satisfied of the competency of the applicant or that the applicant has been recommended to him in writing as competent by some legally qualified medical practitioner and any such certificate may be in the form in the schedule to this Act.

Any such officer who makes such a declaration falsely shall be liable on summary conviction to a fine not exceeding fifty pounds.

2. *Removal of Names from Register.*—Every Poor-law medical officer shall remove from the register the name of every woman dying or ceasing to practise as a midwife as soon as he becomes cognisant of the fact and he shall also remove from the register the name of any woman who by reason of professional misconduct or negligence or of intemperate habits or for any other sufficient reason is in his opinion unfit to be registered under this Act.

Every such medical officer shall also enter on the register any change of address notified to him by or on behalf of any registered woman.

3. *Publication of Copies of Register.*—It shall be the duty of the board of guardians to cause printed copies of the register kept as aforesaid to be conspicuously displayed outside the offices of the Poor-law union and in other places where Poor-law notices are usually posted.

4. *Notice of Birth to be given to Poor-law Medical Officer in Certain Cases.*—In every case of the birth of a child if the mother is not attended at or within twenty-four hours of her delivery by a legally qualified medical practitioner it shall be the duty of the father and mother of the child and in default of the father and mother of the occupier of the house in which to his knowledge the child is born and of each person present at the birth and of the person having charge of the child to give to the Poor law medical officer for the union within twenty-four hours after the birth notice of the birth and of the sex of the child and of the name and surname and place of abode of the mother. In default of notice being given as required by this section every person who without reasonable excuse has failed to comply with the provisions of this section shall be liable to a penalty not exceeding twenty shillings.

5. *Duty of Poor-law Medical Officer on receiving Notice.*—On receiving any such notice it shall be the duty of the medical officer as soon as practicable to visit the mother and for such visit he shall be entitled if the house is within one mile of his residence or office to a fee of two shillings and sixpence and to a further sum of sixpence for every mile or part of a mile beyond the first.

If he has considered a second visit necessary he shall report the fact to the board of guardians and he shall not be entitled to a fee for any visit after the second unless he obtains the sanction of the board of guardians to his attendance.

6. *Payment of Fees.*—All fees to Poor-law medical officers under this Act shall be paid by the board of guardians out of the common fund of the union.

7. *Extent of Act.*—This Act shall not extent to Scotland or Ireland.

8. *Short Title.*—This Act may be cited as the Midwives Registration etc. Act 1898.

SCHEDULE.

Form of Certificate of Registration as Midwife.

I Medical Officer of the Union hereby certify that being personally satisfied of the competency of A. B. of [or that A. B. having been recommended to me in writing by of a legally qualified medical practitioner as competent] to attend cases of labour I have placed her name on the register of midwives kept by me in pursuance of the Midwives Registration etc. Act 1898.

The Manchester Medical Guild have addressed a letter to the members of Parliament for Lancashire and Cheshire and to the medical members of Parliament asking them to vote against the Midwives Registration Bill on the following grounds:

1. That whereas the Medical Act, 1886, requires that practitioners of midwifery shall possess a competent knowledge of medicine and surgery, the Midwives Registration Bill provides for the creation of a body of partially-educated and ill-trained practitioners of midwifery having no such knowledge.

2. The Midwives Registration Bill, whilst in no way remedying present evils—since it permits practice for gain by non-resident persons provided they do not assume a certain title—creates an inferior order of midwifery practitioners practising without medical supervision or control and independently of the Medical Acts.

3. The Bill stands condemned by the unanimous vote of the General Council of Medical Education and Registration, by the voice of almost every practitioner of medicine in the country, and (as stated by the Lord President of Council) there exists no strong public opinion in favour of it.

A donation of £100 has been received from Messrs. Rothschild and Sons in response to a special appeal of the Committee of Management of the Royal London Ophthalmic Hospital, Moorfields.

A Clear Day.—At a recent meeting of the Royal Meteorological Society, a paper by the Hon. F. A. Rollo Russell was read describing the result of observations on haze and transparency. He found that the greatest clearness occurred with winds from the westward, and the least clearness with winds from the eastward. The highest mean visibility was 24 miles, with west winds; the lowest was 10.6 miles with north-east winds.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 14TH, 1898.

THE VACCINATION BILL.

THE division on the second reading of the Vaccination Bill was taken on Monday night, and, in a House of 260 members, only 23 irreconcilables were to be found. A perusal of the discussion serves to strengthen the views expressed in the report of the Council of the British Medical Association. Mr. T. W. Russell said that the Royal Commission had not gone the length of recommending legislation for revaccination, and that the Government might be excused for not going further than the Commission. This does not indicate any rooted objection to extend the scope of the measure in the Committee stage, and Mr. Russell should take note of the fact that on the one side of politics Sir Charles Dalrymple, the only Commissioner who has now a seat in the Commons, had no hesitation in advocating the inclusion of revaccination, while, on the other side, Mr. Labouchere twitted the supporters of the measure with its omission of all reference to repetition of the operation.

In the Standing Committee on Law, to which the Bill has now been referred, Sir Walter Foster or some other member will no doubt find an opportunity of bringing forward an amendment on this essentially important point.

Another amendment must be proposed regarding the relationship of the private practitioner to the future Vaccination Act. When he is able to report or certify that a vaccination performed by him reaches the standard of efficiency required by the Local Government Board, he should be paid for such report or certificate, as he ought to be for all professional work done for the State. One very strong reason why Government should agree to these two amendments is to be found in the fact that such agreement would open the way to a concession which would go very far to disarm opposition to the Bill. With State acceptance of the work of private practitioners, and their consequent enlistment in the public service, and with systematic revaccination of children before leaving school, the vaccination net would be spread so wide, and the total amount of protection against small-pox would be so great, that there would be less risk than under any other circumstances from the non-protection of children unfortunate enough to have professed antivaccinationists for parents. If recognition of a sworn declaration of objection to vaccination should be accepted by Mr. Chaplin his Bill would have a comparatively smooth course through Parliament, and the way towards such recognition is to be found in the two amendments above suggested.

A Bill passed on these lines would, we venture to prophesy, create, in its actual operation in the country, far less friction and difficulty than the measure as it stands at present. On the first night of the discussion Mr. Chaplin said that he would not shrink from coming back to Parliament again and again for fresh powers, if the powers acquired under the proposed Act turned out to be insufficient. But the present Government will not last for ever, and it would be far better that, when they have the business in hand, they should carry a measure which, while doing everything reasonably possible to promote vaccination, would yet tend to allay foolish opposition, and to discourage aspirants to the glories of antivaccination martyrdom.

In this matter, *fortiter in re* and *suaviter in modo* may well be combined. The former indeed should usher in the latter, for the *fortiter in re* would be exhibited in legislation for revaccination and for the inclusion of the profession as a whole in the vaccination service, while the *suaviter in modo* would appear in the acceptance of the declarations of so-called conscientious opponents of vaccination. Without revaccination, and without the aid of the private practitioner, concession to antivaccinationist folly and ignorance might do infinite mischief; with systematic revaccination, and with the systematic employment of the private practitioner, the concession might be far more than atoned for, and the vaccinal defences against small-pox be greatly strengthened throughout the land.

MONEYLENDING.

THE evidence offered last year before a Parliamentary Committee showed that the proceedings of usurers, both legal and illegal, have become of national importance. We fear that no classes suffer more at their hands than clergymen and medical men, for they are both inexperienced in money matters and more than usually anxious for secrecy. The lack of business capacity which marks the professions makes them careless in the first instance; and since with them more than with others respectability is the guide of life, they are most easily oppressed and pillaged. It is much to be regretted that men do not perceive that character is the secret of success, that respectability is merely the shadow of character, and that in the effort to preserve the shadow the substance is often sacrificed. Almost every man wants once or twice in his life to borrow money. The great majority are solvent and have good security to offer, yet a large number will sooner play a fool's part and borrow from those of whom they know nothing than face the unpleasant but safe way of borrowing from those whose position and reputation are a guarantee of honesty. It is true that usurers' advertisements, of which a large collection is given by Mr. Farrow in the *Moneylender*, are specious and plausible, but it is quite clear that not one of them is to be believed. Many emanate from banks which, like the Clerical and Medical Bank, are mere names for individual moneylenders, and many seemingly different individuals are the same person acting under different names. Some thrive solely upon the fees which they exact for preliminary inquiries, and do no business at all; the rest deceive when they can, which is nearly always, and use the law without scruple and without mercy. The rate of interest, when advertised at 5 per cent., is always 5 per cent. per month, or 60 per cent. per annum, and very often more;

while the unscrupulous use of their legal powers and the straits of their clients often enable them to keep a debtor in their hands till he has paid five or six times the original debt.

In the case of a medical practitioner what usually happens is something of the following kind. He answers one of the usual circulars and is visited at once by a supposed clerk of the bank who is the moneylender himself. He is offered £100 for a year at 15 per cent., and is asked to sign a promissory note for £115. He perhaps notices that it is drawn at three months, and if so it is explained that this is a mere form and that he will hear nothing of it until the year's end; more often he signs without reading it. He is at the same time required to make a statutory declaration that the amount that he owes elsewhere is not above a certain sum, and that his house and property are of a certain value. At the end of three months he is unexpectedly confronted with his note for £115, and as he has usually made some mistake in his statutory declaration he is at the same time threatened with a suit for obtaining money under false pretences. He then borrows again in order to pay off the first debt, and thus begins a game which has no ending. Sometimes the promissory note contains a clause that "in case default is made in payment of any one of the said instalments the whole amount remaining unpaid shall become due and payable forthwith, together with interest at the rate of a halfpenny in the shilling per week from the date of such default," which is at the rate of 216 per cent.

It would be incredible, but for the facts abundantly proved, that men could be so tricked, yet it happens every day. The borrower feels the need of money, and he is so ashamed of borrowing that, instead of treating it as a transaction in which he is conferring a benefit and can exercise the most scrupulous care in scrutinising the offer, he actually looks upon the usurer as his benefactor, and is afraid to offend him by pressing his own interests. He dislikes the process, and wishes to finish it at once rather than to begin a similar affair afresh. And, lastly, he believes that by the time the money is due he will certainly be able to repay it.

Besides the use of forms permitted by the law, the usurer is frequently guilty of practices which are illegal. The detection and punishment of these is the object of the National Anti-Usury League lately formed (28, Finsbury Pavement, E.C.), but the advantage allowed by the law to the usurer is so great that legislation upon the subject is clearly necessary.

The Parliamentary evidence was collected chiefly by Mr. Farrow, whose recommendations for reform in the law, as given in a pamphlet called *Shylock at the Bar*, are that usurers should be licensed and made to trade in their own names, that the rate of interest should be fixed at not above 25 per cent., that preliminary fees should be limited, that bills of sale should be abolished or more strictly regulated, and that other regulations should be made which will render the legal proceedings of moneylenders more comprehensible, and in consequence less dangerous. But perhaps the most far-reaching of all is his suggestion that money should be lent on reasonable terms either by State or municipal banks, as in some foreign countries, or by some voluntary organisation, the reputation of whose members shall be a guarantee to the public. This suggestion was given practical form by the Societies Borrowing Powers Bill introduced into the House of Commons by Mr. Horace Plunkett on May 11th. The Bill proposes to give societies registered under the Friendly Societies Acts the power to borrow from other than from their own members. The Bill has the approval of the Chief Registrar of Friendly Societies, and is backed by Sir Charles Dilke, Messrs. Courtney, Healy, John Redmond, Butcher, and Yerburgh.

OUR RELATION TO THE PAUPER CHILD.

During the past three years we have at various times, more particularly in a series of reports on the hygienic condition and administration of metropolitan district schools, called public attention to the need of a healthier and more humane treatment of pauper children. The subject, we are glad to think, has now been taken up by the lay press, and the formation last year of the State Children's Aid Association under the presidency of Viscount Peel, renders it certain that the matter will not be allowed to sleep. The facts with regard to the prevalence of ophthalmia are alone sufficient to establish the necessity for reform. In 1873 Mr. Nettleship took charge of the children in the Anerley School, which Dr. Bridges had described as "a great ophthalmic infirmary." In the following year he reported for the Local Government Board on all metropolitan Poor-law children, but in spite of the facts then brought to light, ophthalmia has continued to prevail to a variable, but often to a most serious, extent. Mr. Sidney Stephenson's more recent investigations have had for one of their results the removal of all children afflicted with ophthalmia from the care of the guardians to that of the Metropolitan Asylums Board, which has determined to treat these unfortunate children in a special hospital school at Brentford consisting of cottages, each to contain not more than 10 children, the total number in the institution being limited to 270.

Further advance is marked by the special arrangements which are now to be carried out under which feeble-minded children, children convalescent from illness or suffering from ringworm, as well as the "remanded children," are to be removed from the control of the guardians.

Important reforms have taken place also in the internal management of the schools. The hours of labour have been curtailed, the intellectual requirements raised, and the subject of diet both in the schools and workhouses brought under the consideration of a Special Committee. Finally, we have the important declaration from the President of the Local Government Board that "no brick shall be added to the existing so-called barrack schools." Already the largest barrack schools at Sutton have been doomed, and in another year the 1,500 children housed there will be scattered. So also the Kirkdale barrack schools of the Liverpool authority have ceased to be thus employed, the Lewisham guardians have asked permission to remove their children from the Anerley schools, and the Forest Gate schools of the Poplar Board have been condemned by the Local Government Board. Further, there is reason to believe that the Lambeth Board is reconsidering its arrangements at the Norwood schools, and that the Marylebone guardians are investigating the scattered homes system.

Though we may regard the great amount of good which has already been effected with no little satisfaction, yet much still remains to be done. We have already pointed out that

legislation is necessary for that large class of children who wander in and out of the schools as may suit their parents' convenience, and to meet their needs the State Children's Aid Committee have a Bill now before Parliament which, having received the support of the Government, it is hoped will shortly pass into law. Well known facts with regard to "remanded" children lend force to the suggestion that a strong central metropolitan authority should be established and put in possession of buildings, appliances, and powers, to enable it to classify pauper children completely, so that each class might be placed under the most favourable conditions.

Increased powers should also be given to the Metropolitan Asylums Board. At present that body, though it has the right to expend large sums to provide accommodation for some 2,000 children, must depend upon the goodwill of the various Boards of Guardians to yield up such children as may belong to any of the five classes for which the Metropolitan Asylums Board has been made responsible. This the guardians are not in all cases ready to do. There is need also of more skilled inspectors, especially since the development of interest in the subject is leading to various experiments which will require to be carefully guided by experience. Receiving homes are required into which children can be drafted on becoming chargeable, as well as small emigrant training homes where the children may be free from all relation with the workhouse, and prepared to start a new life in a British colony.

The mistakes committed in the erection and in the management of the barrack schools must not be perpetuated by the erection of villages where colonies of pauper children should live in villa residences within a ring fence. A home and not an institution is the proper place for every child. The object to be aimed at is that these children of paupers should be trained up to be useful members of society and, this can only be done if they are suitably housed, adequately fed, properly taught, and the utmost care exercised that their up-bringing shall approximate as nearly as possible to that of an ordinary child in an ordinary home.

THE UNIVERSITY OF LONDON.

A large number of graduates assembled on Wednesday afternoon to witness the celebration of the presentation of degrees by the Chancellor. Lord Herschell, in an address at the conclusion of the ceremony, referred to the University of London Commission Bill, and expressed his satisfaction at the announcement of the Government that they intended to bring the subject to a discussion, and if possible to a solution, in the House of Commons. There was, he said, a very strong public opinion, in fact a conviction, that the University work of London needed some fresh organisation, and a preponderating opinion that the need should be supplied not by the creation of another University but by a reorganisation of the existing University. Beyond that, he said, was the region of controversy, for it was impossible to frame any scheme which would satisfy everybody. That being so, all parties ought to face the fact and to realise that however strong their individual views might be upon this or that point the problem must be solved. The view held by some that the existing charter gave to the graduates a right which would be infringed if any measure were passed dealing with the University except with their sanction and consent was erroneous. Since the charter was granted an important change had taken place. Parliament was not now content that the Government of the day should have power to advise Her Majesty to grant a charter to the new university or a new charter to an old university without consultation with Parliament. Parliament was the guardian of the public interest and would not be content simply to register the determination of any university or college unless it were satisfied that the proposal was for the public good. Parliament had a distinct right of intervention with reference to the grant or refusal of a new charter and a governing and determining voice with regard to all universities in the future. The members of the University were not in a position to dictate to Parliament what change should be made when it had come to the conclusion that a change must be made in the public interest. He believed that all might agree in the hope that the controversy would not now be prolonged, and that the University, whatever changes might be made by the wisdom of Parliament, would not decline from its ancient usefulness, or sacrifice the high position which it had achieved, but in the future would be an even more potent instrument of educational good than it had been in the past. Among the graduates who received degrees were a large number of ladies. Of the 79 M.B.'s 7 were ladies, and of the 31 M.D.'s 3 were ladies.

THE ROYAL SOCIETY "CONVERSAZIONE."

The exhibits at the *conversazione* of the Royal Society on May 11th included many relating to medicine and the more closely allied sciences. Dr. J. Mackenzie Davidson exhibited his Roentgen Ray Apparatus for Localisation Purposes. This instrument has been fully described in the British Medical Journal. He also showed Stereoscopic X-Ray Photographs seen in a Wheatstone Stereoscope, an arrangement which, while giving perfect stereoscopic effect, allows of adjustment of varying width between the eyes. Dr. Leonard Hill and Mr. Harold Barnard, F.R.C.S., showed a simple form of Sphygmomanometer. Mr. Alan A. Campbell Swinton showed some striking experiments upon the Circulation of the Residual Gaseous Matter in Crookes's Tube. His Roentgen Ray Camera, for showing the position, dimensions, and form of the source of the *x* rays in a Crookes's tube, is a useful instrument. The Roentgen rays not being capable of refraction, the use of a lens is inadmissible, but by means of a pinhole the image of the active antikathode area is thrown upon a fluorescent screen, or a sensitive plate may be substituted for the screen and the image photographed. Professor Sherrington, F.R.S., showed some beautiful specimens of Sensorial Organs. The preparations illustrated the mode of ending of the nerve fibres in tendon-organs, muscle-spindles, and some tactile corpuscles. Sir Richard Thorne, F.R.S., and Dr. Copeman demonstrated the Bacteriology of Calf Vaccine Lymph by a series of beautiful preparations, many of which were familiar from the published work of the same gentlemen in the Local Government Board's medical reports. Professors Herdman and Boyce, of Liverpool, showed a series of Healthy and Unhealthy Green Oysters, illustrating the causes of the coloration, and tracing by cultures and other preparations the bacteriology of the oyster and the connection between oysters and disease. Dr. McMunn exhibited microscopic preparations illustrating the Structure of the Digestive Gland of Mollusca and Decapod Crustacea, showing the cell inclusions in the so-called "ferment" and "hepatic" cells. An attractive exhibit was that of improvements in Hertz-wave space telegraphy by Professor Oliver Lodge, F.R.S., and Dr. Alexander Muirhead. In the apparatus as perfected the sender of the message at either end is an automatic transmitter (with specially punched tape), which is thrown in and out of action by a special switch. The receiving apparatus at one end is a siphon recorder in direct circuit with the tapped-back coherer, and displaying on its tape all the fluctuations of the current. Professor Oliver Lodge also showed some improvements in Magnetic Space-telegraphy. Two addresses were given during the evening illustrated by photographs shown by the Electric Lantern; the one by Dr. Sorby, F.R.S.,

related to the various methods which he employs for obtaining permanent preparations of marine organisms, in many cases in their natural colours, in others slightly stained. The other address was by Sir Norman Lockyer, who gave some account of the results obtained during the total solar eclipse by the party at Viziadrug. He paid a very high compliment to the admirable services rendered by the officers and crew of H.M.S. *Melpomene*, and expressed the opinion that it might be possible in the future to entrust the task of making observations on many points to one of Her Majesty's ships, if some preliminary training were given before leaving this country.

THE MEDICAL PROFESSION AND THE WAR.

Medical preparations for the contingencies of war are being made on a large scale by the U.S. Government. About 20,000 dols. of the 50,000,000 dols. appropriated for the use of the President in preparation for war has been allotted to the Army Medical Department, this sum to go in the purchase of surgeons' instruments as enumerated, supplies and medicines of all sorts, sanitary mattresses, etc. Surgeon-General Sternberg made requisition for the money. The Government has set apart the naval ambulance ship *Solace* for the transportation of wounded soldiers and marines from Cuba, if that be the field of operations, and a government hospital team is to run from Tampa up to various hospitals in the State of Florida and along the Atlantic coast. Every effort is to be made to avoid hospital crowding in Cuba. A company of men "salted" against yellow fever has been organised in New Orleans. Over 800 medical men have offered their services to the army authorities, and more than 1,000 to the naval medical department. These are by no means all young men or recent graduates, for many offers are received daily from men, some of whom saw service in the Civil War on one side or the other, and others who have come on the stage since that time, but who stand in the front rank of the professsion. The nurses are not behind the doctors in the ardour of their patriotic enthusiasm. Offers have been received in Washington from over 400 women, who are ready to go to Cuba or any part of the States as army nurses. Among them are sisters of charity, deaconesses of the German Lutheran Church, members of the Salvation Army, and individual trained nurses. In addition, the Red Cross Society has had many applications from women desiring commissions as Red Cross nurses. The Marine Hospital Service is making every effort to be ready for war. Large orders have been placed for surgeons' instruments with New York houses, the largest one calling for immediate delivery of the following items: 20 U.S.A. staff surgeons' capital operating sets, 50 U.S.A. staff surgeons' minor operating sets, 18 sets of amputating instruments, 950 bullet probes, 20 Otis's U.S.A. compact field sets, 20 Post's general operating sets, 35 Blackman's general operating sets, 50 Buck's general operating sets, 30 Wood's general operating sets, 18 No. 1 set Tiemann and Co.'s amputating instruments, 30 J. Willston Wright's antiseptic pocket sets, 800 folding litters, 3,700 yards of adhesive plaster, 1,150 boxes marine lint, 900 lbs. of roller bandage, 2,100 spools antiseptic ligatures, and 150 Byrd's wire gauze and Smith's splints. The number of medical officers in the army is to be increased, and the Surgeon-General has been authorised to appoint as many contract surgeons in emergencies as may be necessary at rates of payment not exceeding 150 dols. (£30) a month.

THE UNITED STATES AMBULANCE SHIP "SOLACE."

Last week we gave an account of the plan of an ambulance ship for use in naval warfare, as suggested by Surgeon-General W. K. Van Reypen, of the United States Navy, who first advocated the fitting out of such a ship in a paper on the Handling and Care of the Wounded in Modern Naval Warfare, read by him at the International Medical Congress held in Moscow in 1897. The following description of the *Solace* (formerly the *Creole*), which has been fitted out in accordance with Dr. Van Reypen's suggestions, is taken from an article by Passed Assistant Surgeon Charles F. Stokes, in the *New York Medical News*, of April 30th: The *Solace* is primarily a vessel adapted for the care and welfare of sick and wounded men, and all other considerations are made subservient to this end. She has a displacement of 3,600 tons, and an average speed of 14 knots, is 352 feet on the load line, and about 370 feet over all. Forward below is a tank of 27,000 gallons capacity. The ship carries powerful steam launches and barges for transferring the sick and wounded at sea. On the upper deck on both sides there are steam winches for hoisting and lowering the wounded, or boats which can be used simultaneously. On the uppermost deck are some of the officers' quarters and offices. On the next deck forward is an operating room 30 by 30 feet, well lighted and magnificently equipped with aseptic hospital furniture of the best pattern, and the outfit of instruments, sterilisers, dressings, etc., is complete in every detail. The floor is so tiled that it can be easily cleaned and slipping avoided. A dressing room and dispensary adjoin the operating room. On this deck are mess rooms for the officers of the ship, for wounded officers able to be about and for the petty officers of the ship. There is a lounging and smoking room for those able to be on deck. On the engine-room deck is a fully-equipped steam laundry, with a drying room, and a disinfecting chamber for wash clothes. An ice machine has been set up, and a cold storage room of good size is ready for use. The ship is equipped with three large formaldehyde generators. There are numerous state rooms for wounded officers, and the men will be berthed in spacious wards in the forward and after parts of the ship below, which will be ventilated by powerful blowers and supplementary electric fans. The vessel is heated by steam, and lighted by electricity throughout. There will be accommodation for about 350 patients. There are 4 medical officers attached to the ship, 3 apothecaries, one of whom is a trained nurse and an embalmer; 8 graduated nurses from the Mills Training School, Bellevue Hospital; 2 laundrymen, 1 cook, and 4 mess attendants for the sick and wounded complete the medical department of the ship. As soon as an action is over, the steam launches of the *Solace* will tow their barges alongside the ships that have been in action, and the wounded will be lowered into them, and the boats will return to the ambulance ship, when the wounded will be brought on board and placed in the surgeons' care for treatment. With the facilities at hand the results ought to be excellent. In no sense is the *Solace* a hospital ship. When it is found that a second action is not impending, she will steam to the nearest hospital and place her sick and wounded on shore for treatment, and will then rejoin the fleet. Should the army invade Cuba, it will probably fall to her lot to transfer its wounded to Key West. The vessel is more properly designated an "ambulance ship." The ship will fly the Red Cross, and will be protected by the articles of the Geneva Convention. The medical officers are Drs. T. H. Streete, C. F. Stoker, E. T. Smith, and E. S. Bogert, jun.

A COURAGEOUS GYNÆCOLOGIST.

We frequently have to record deeds of valour by medical men in the public services. Those deeds shed lustre on the profession, but at the same time, in the case of men who are in the strictest sense soldiers, they must be regarded as "all in the day's work," for it is the business of a soldier to be brave. Civilian practitioners, though they are more exposed to dangers than most other classes of the community, are seldom called upon to show the courage of the warrior. It is therefore with pride as well as pleasure that we quote from the *Daily News* the following account of the heroic conduct of Professor Porro during the recent riots in Milan. "The mob," says the correspondent of our contemporary, "did not even respect the hospitals, but wished to invade them, and the Ospedale Maggiore was particularly threatened.

Behind the gate of that building stood Professor Porro, a Senator, a well-known doctor, and the most noted Conservative in Milan. The crowd were quick to see him. "There is Porro, our oppressor," they cried threateningly, and insults were shouted at the Professor, who now, pale but calm, resolutely opened the gates, and stood with his arms folded, saying sternly: 'Let him who has the courage advance. He will find a good revolver ready for him. I will show how a good physician does his duty.' No one accepted the invitation." The incident illustrates the power which a determined man often exercises over an angry mob. Professor Porro with his revolver recalls the sentry at Marlborough House when the mob of the "unemployed" streamed along Pall Mall with threats of pillage after one of the disorderly meetings in Trafalgar Square some years ago. The sentry in a businesslike way prepared to use his rifle, and the crowd showed its appreciation of the maxim that the better part of valour is discretion. Professor Porro's name is writ large in the history of modern gynæcology, and we have no doubt that if the hospital had been attacked he would have used his revolver as effectively as he wields the knife. We congratulate him in the name of the profession of this country on his splendid devotion to the interests of his patients and his hospital.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS

The election of members of Council of the Royal College of Surgeons will take place this year on July 7th. There are three obligatory vacancies—Mr. Mitchell Banks and Mr. Langton having been elected in 1890, have served their full term, and Mr. Morris, who was elected as a substitute member on the death of Mr. Marcus Beck, also goes out of office. All these gentlemen are eligible for re-election, but in the event of one of them not seeking re-election—a contingency said to be not very improbable—Mr. F. Richardson Cross, Ophthalmic Surgeon to the Bristol Royal Infirmary, President of the Bath and Bristol Branch of the British Medical Association, and High Sheriff of the City and County of Bristol, has been asked by a considerable number of Fellows to allow himself to be nominated as a candidate. It is felt that the West of England, and in particular Bristol, with its University College and long-established Medical School, has some claim on the Fellows, more especially as all of the provincial members of the Council hitherto have with one or two exceptions come from the northern parts of the kingdom. Mr. Cross, we are informed, does not wish to be considered the representative of any party, but would stand as an independent candidate, with no pronounced opinions on what may be called college politics.

A JOURNAL OF TROPICAL MEDICINE.

We have now from several sides gratifying evidence of a growth of interest in the study of tropical diseases. At the annual meeting of the British Medical Association in Edinburgh this year there will be for the first time a Section of Tropical Medicine. The Colonial Secretary has shown a keen interest in the subject, and an enlightened appreciation of the arguments advanced first, we believe, in these columns as to the need for suitable instruction, pathological and clinical, in tropical medicine for medical men appointed to the medical service in tropical colonies. Lastly, we have the announcement of the foundation of the approaching publication of the first number of the *Journal of Tropical Medicine*. It is to be devoted to the publication of papers on tropical diseases, and to the discussion of subjects scientific and practical affecting the interests of medical men in tropical and subtropical countries. It will be edited by Mr. James Cantlie, who for some years practised in Hong Kong, and by Dr. W. J. Simpson, who was until recently medical officer of health for Calcutta. Much advantage to pathology and medicine may be expected from the publication of this journal. Many current doctrines on the subject of tropical disease have been framed upon experience so local as to render the basis somewhat uncertain; the special facilities given by the new journal will, it is hoped, by the increased opportunities for intercommunication afforded, in time supply a wider basis for generalisation. It is said that there are well nigh 6,000 medical men holding British diplomas practising their profession outside the British Isles, and doubtless a large proportion of these reside in tropical or subtropical countries; in addition there are the medical officers of the naval and military services, who are always liable to be called upon to serve in hot climates, and who, as a matter of fact, do spend a large part of their period of service in such countries. The promoters of the journal may therefore look forward with some confidence to establishing it on a sound basis of a long list of annual subscribers. The subscription to the *Journal of Tropical Medicine* will be 17s. annually post free, and the publishers are Messrs. John Bale, Sons, and Danielsson, Limited, Great Titchfield Street, London, W.

THE HEALTH OF EGYPT.

The steady, systematic, and essentially solid manner in which England is accustomed to proceed in the civilisation of a country is well illustrated by Lord Cromer's report on the progress of reforms in Egypt during 1897. In every branch of the public service some distinct advance is recorded. Medicine and public health share in the general improvement, and in connection with these departments we select a few of the more salient points for comment. During the past year the alterations in the Kasr-el-Aini Hospital at Cairo, commenced in 1893, have been completed, and the hospital, which contains accommodation for 420 patients, is now, "in the opinion of competent authorities, not inferior to similar institutions in the most advanced countries in Europe." A bacteriological laboratory has also been built, and among the works in course of construction are four provincial hospitals, a quarantine park for cattle, and buildings for the reception and disinfection of Mecca pilgrims at Tor. More than 20,000 patients were received into the Government hospitals in 1897, being 1,000 in excess of the number in 1896, although the number of infectious cases fell from 4,936 to 3,472, two-thirds of which were small-pox. This scourge will no doubt rapidly diminish, as we read that about 330,000 successful vaccinations were performed, for some 50,000 of which the calf lymph was provided by the new Vaccine Institute. The medical school has now been reorganised, and a higher tone among the native sanitary officials is already noted. Sanitation in general is making rapid strides under the able direction of Rogers Pasha. The lesson of the cholera epidemic of 1895-96, and the terrible example of Bombay, have been taken to heart. A large number of private mosques have been dealt with under the law providing for their improved sanitation, and an attempt is being made to substitute reservoirs with taps for the open ablution basins in general use in the mosques. The transferment of cemeteries proceeds apace, and successful well sinking promises soon to provide the urban population with a supply of pure drinking water. The Khalig, a historic but dangerous canal in Cairo, has at length been filled up, and buried beneath an electric tramway. The Bombay plague epidemic was studied by a special commissioner, and a number of horses have been immunised in case of an outbreak; fortunately Egypt has not been invaded so far. With regard to the important question of disease affecting the domestic animals, Rogers Pasha reports that as a result of the prohibition of the importation of Syrian sheep, the deaths from anthrax have fallen from 383 in 1890 to 75 in 1897, while the cases of sheep-pox fell simultaneously from 1,307 to 57. Two outbreaks of cattle plague occurred, but the energetic measures adopted succeeded in confining them to the quarantine parks, averting thereby what might have been a national disaster. It will thus be seen that those responsible for the public health of Egypt are animated by admirable wisdom and forethought, and the same

is evident in the report of the Cairo Lunatic Asylum, ably directed by Dr. Warwick, to whom Lord Cromer pays a special tribute. More space is however required, for the admission rate is five times that of English asylums, and a number of patients must consequently be discharged in a condition only less unsafe than that of the more acute cases which replace them. This premature discharge of half-cured patients unfortunately leads to serious crimes from time to time. It is interesting to note that more than one-third of the male admissions owed their insanity to hasheesh smoking, which is, although illicit, a real danger to the country. Another most serious evil is the accumulation of refuse to the depth of several feet, which characterises almost every house in the native quarter of Cairo. The danger of this in the case of an epidemic is fully realised by the authorities, who may be relied on to combat and eventually remedy this evil with the same success that they have had in many other instances.

THE FELLOWSHIP OF THE ROYAL SOCIETY.

WE find the names of two members of the medical profession included among the fifteen nominated this year for election to the Fellowship of the Royal Society, namely, Dr. William Osler and Professor E. Waymouth Reid. Dr. Osler is Professor of Medicine at the Johns Hopkins University, Baltimore, and was formerly Professor of Physiology at McGill College, Montreal, and of Clinical Medicine at Philadelphia. He has been for many years actively engaged in the advancement of scientific medicine, and has published a large number of communications of great interest and importance chiefly dealing with clinical and pathological matters. He is also the author of several important articles in systems of medicine, and of one of the most widely-read textbooks on the *Principles and Practice of Medicine*. He has long occupied a leading position, first in Canada and now in the United States, as a scientific physician, and is well known in this country and throughout Europe as one of the foremost representatives of clinical medicine and pathology. Professor Edward Waymouth Reid, M.B.Cantab., formerly acted as assistant to Dr. Waller, and is now Professor of Physiology at University College, Dundee. He has become distinguished among the younger physiologists of the present time by the originality and painstaking care exhibited in his research work. His inquiries relate principally to absorption, secretion, osmosis, and electro-motive phenomena. To both of the successful candidates we tender our hearty congratulations on the well-earned honour they have obtained.

THE ANALYSIS OF DRINKING WATER.

AT the monthly meeting of the Society of public analysts Mr. Matthew A. Adams, M.O.H. for Maidstone and Public Analyst for Kent, read a paper on Water Supply in Relation to the Recent Epidemic. He detailed facts already well known to our readers, showing how the district specially and earliest attacked by the disease was the part of the town supplied by the Farleigh springs. He advanced a theory of his own as to the probable effect of certain unusual meteorological conditions on the penetration of pollutions through the subsoil to the sources, and insisted on the necessity of frequent periodical examinations and strict supervision of all sources of supply. An interesting discussion on the aid rendered by bacteriological examination followed. Only last week we spoke of the absurdity of a chemist on the strength of a single analysis pronouncing *ex cathedrâ* that a particular water cannot be polluted. The absurdity of such a statement is manifest if we compare the three slightly varying analyses of the water in question with the standard for water of the immediate district which the county analyst has as the result of years of labour compiled. The water in question contained on each analysis varying quantities of solid matters, but in all three the solids were 69 per cent. in excess of the local average. The oxidised nitrogen was much in excess and was greater in the two later analyses. It exceeded its standard nearly three times in the September and nearly four times in the December and February samples. The free ammonia also varied in each sample, being three times the local normal in the first, twice in the second, and four times on the third occasion. The chlorine varied from 3·4 to 2·7 grains a gallon; the local average being 2·3. When some years ago Dr. Cory added a grain and threequarters of typhoid motion to the gallon of tap water in one case, 3½ grains to the gallon in another, and sent the two specimens, with a sample of the unpolluted water, to Dr. Dupré, analysis showed all three samples to contain 1·05 grains of chlorine per gallon. The albuminoid ammonia showed to some extent the amount of pollution, but even this evidence is apt to fail when nitrification has advanced, as it evidently had in the well water in question. In a report recently presented to his Council, Mr. Adams refers to the difficulty of getting magistrates to close a well on account of the evidence that can always be produced by the defence that the water is not polluted. The Irishman who was told that a witness was prepared to swear he saw him do the deed offered to bring twenty witnesses to swear they did not see him do it. It seems always to be easy to find analysts who cannot find pollution. Perhaps before agitating for an alteration of the law it might be worth while to try the effect of stronger evidence against the well. It should surely not be difficult, by selecting the psychological moment, to get samples sufficiently polluted to justify the magistrates in enforcing the section. They must, of course, act on the evidence laid before them, and when Mr. Gregory and Mr. Wanklyn declare the water all a water ought to be, and when Messrs. Bannister and Jewin affirm that from the results of their analysis "there are grounds for stating that the water is not liable to contamination from the immediate neighbourhood of the well," what are the Bench to do? We trust the Maidstone Council will not now let the matter rest, but take an early opportunity of securing a sample, which an outside analyst will have no difficulty in pronouncing contaminated.

THE PREDETERMINATION OF SEX.

WE published last week a brief summary of Professor Schenck's theory on this subject, and of its important and far-reaching practical corollaries. We propose now to make a few of the more obvious critical observations which arise from a study of his memoir. Professor Schenck is an embryologist of distinction, whose deliberate opinion cannot be laughed aside, but demands serious consideration. Nor can any objection be raised to the facts which he adduces from the animal kingdom; in fact others of a confirmatory nature readily occur to the mind. Thus the curious little crustacean called apus appears to get along very well indeed without males under ordinary circumstances. Generation after generation of parthenogenetic females is hatched forth as long as the environment remains favourable; but with a change for the worse in the physical conditions it becomes necessary to produce males in order, it appears, that the race may be strengthened by sexual fertilisation. This, however, occurs so seldom that a male is a great rarity, and indeed no specimen was ever described till as recently as 1857. Such facts and the well-known circumstances which he proves in connection with bees must be held sufficiently to prove Professor Schenck's first point, that the nutrition of the parents exercises an important influence on the sex of the offspring. But there is one objection which must strike everyone from the outset. Professor Schenck's study and treatment of the human subject are limited to the female sex, and it seems somewhat unreasonable to exclude the male from any participation in sex determination. If perfect metabolism in the female leads to the production of ova which tend when fertilised to produce males, surely similar conditions in the male should cause the spermatozoa to be female-procreating. The spectacle of a pædophobic man and his pædophilic wife, each endeavouring to attain perfect meta-

bolism in order to thwart the designs of the other, would certainly afford food for reflection if not for amusement. It seems probable that Professor Schenck will be compelled to extend his views so as to allow for the male element in the production of sex. Another point in which they seem to require modification is the assumption that in the human female the period of menstruation corresponds to that of ovulation. This is now certainly not the current opinion, and human menstruation appears to be a distinct thing from the œstus or rut of animals, but as the question does not bear directly upon Professor Schenck's main contention, it does not require further notice here. The same may be said of his statement that fertilisation occurs in the human uterus, whereas the general view is that it takes place in the Fallopian tube. But turning to the question of treatment, it seems only right to point out an apparent contradiction. The dietary course recommended by the author extends over a period lasting from three months before conception to three months after. Now, if the sex is predetermined by the female, by the condition of the ovum when fertilised, surely it is unnecessary to continue treatment after this has taken place. And, furthermore, what is being treated during this latter period is not the female ovum only, but the joint product of fertilisation, containing the male element as well. And if this latter can be influenced now, why should it not be susceptible of treatment before fertilisation, that is, while it is still in the reproductive organs of the male? In spite, however, of these objections, which may possibly be met by an extension of the inquiry, there can be no doubt that Professor Schenck honestly believes that he has predetermined the male sex in a certain number of cases. Whatever be the scientific value of his theory his facts can, and no doubt will, be tested, for the treatment appears to be neither onerous nor dangerous.

FRENCH CONGRESS OF MEDICINE.

The fourth French Congress of Medicine, which was recently held at Montpellier under the presidency of Professor Bernheim, was exceptionally brilliant both in regard to the number of those who took part in it and the value of the scientific communications presented. France is the classic land of centralisation, and it was with considerable misgiving that the experiment of holding such gatherings in provincial towns was initiated. The first of them was held in Lyons, and on that occasion 262 members were present; at the second, held in Bordeaux, there were 290; at the third, held in Nancy, there were 312; at Montpellier the attendance numbered 660. Professor Bernheim took as the subject of his presidential address the Influence of Philosophy on Medicine, and the Influence of the Mind on Morbid Manifestations. The address was a vigorous plea for the recognition of psycho-pathology and psycho-therapeutics in the complexity of our functional activity. The discussions on the Clinical Forms of Pulmonary Tuberculosis, on Microbic Associations and Mixed Infections, and the Therapeutic Uses of Organs with Internal Secretion, were ably introduced, but indifferently sustained. Among the other communications was an important paper by Professor Arloing on the Antitoxic Action of Diphtheria Serum. M. Pitres read a paper on Displacements of the Heart in Pleurisy; M. Courmont discussed the Elimination of the Toxin of Tetanus by the Urine, and in another paper dealt with the question of the existence of Specific Nervous Lesions in Tetanus. Among the other papers presented were the following: M. Combemale (Lille) on Thyroid Treatment in Hæmophiliac Accidents; M. Gauthier (Geneva) on the Employment of Ox-gall in Biliary Lithiasis; MM. Arnozan and Féré on Pulmonary Juice; M. Chambard-Hénon (Lyons) on the External Use of Salicylate of Methyl in Hepatic Colic; and MM. Bezançon and Griffon on the Serum Diagnosis of Pneumococcic Affections. The municipal authorities and the medical profession of the historic town of the South, whose famous University celebrated its sexcentenary two or three years ago, vied with each other in entertaining the visitors, and the meeting was in every respect a great success.

THE LATE MR. GREIG SMITH.

After the death of Mr. Greig Smith a movement was made to found some memorial in Bristol which would perpetuate his name. A subscription list was opened, and the committee decided to place a bust in some suitable place, and hand over the surplus to assist in the renovation of the operating theatre at the Royal Infirmary—a scheme in which Mr. Greig Smith was much interested at the time of his death. A small sum was also devoted to placing a medallion in the theatre. On May 5th the High Sheriff (Mr. F. Richardson Cross, M.B.) unveiled the bust in the vestibule of the museum in the presence of a large company. He spoke in feeling terms of the great loss the profession at large, and more particularly in Bristol as well as the public, had suffered in the death of his colleague about a year ago, and, in unveiling the bust of him in a place always accessible to the public, he hoped that the memory of one of Bristol's greatest citizens would be kept green. The Dean of Bristol, and Dr. J. Beddoe, F.R.S., who proposed and seconded the vote of thanks to the High Sheriff, also spoke in high terms of admiration of Mr. Greig Smith. The bust, which is of bronze, is the work of a local artist, Mr. Fabian, and was much admired and pronounced an excellent likeness.

THE DOCTOR AS A JOURNALISTIC ATTRACTION.

The "medical column" is put forward as an attraction by various newspapers in this country, but not even the most enterprising of our journalistic impresarios has yet as far as we know offered the services of a real live doctor to his subscribers. It is announced that a well-known Paris newspaper has adopted this means of extending its circulation. It has engaged a doctor of medicine at a salary of £480 a year to give gratuitous advice at the office of the paper to all the purchasers of an illustrated weekly supplement which it publishes. Many years ago a firm of cheap tailors in London used to boast that they kept a poet; is the time coming when daily newspapers will advertise the fact that "we keep a doctor?"

THE PENSION AS A FACTOR IN LONGEVITY.

A potent factor in the prolongation of human life beyond the common span which has been unaccountably overlooked in recent discussions on the subject is the possession of a pension. Sir Andrew Clark has recorded the case of the chaplain to a London hospital who was pensioned off on account of heart disease, which it was thought would speedily slit the thin-spun thread of his life, and who lived for nearly half a century afterwards, doubtless praising God, and, let us hope, blessing the enlightened liberality of the committee. But probably the most striking examples in illustration of the effect of a pension in promoting longevity are to be found in the United States, where a large army of veterans who fought in the great Civil War live on in spite of most complicated ailments, which would certainly kill most people whose constitution is not fortified by the elixir that dwells in a grant of public money. Many of these veterans, like Artemus Ward, escaped a wound in battle because they were not there, but a disability contracted in the service does just as well. With a little ingenuity it is possible to devise pathological conditions of the most moving kind. The following is a copy of an actual certificate sent in with an application for an increase of pension:

Affiants discover upon the right instep of the applicant a soft and movable cicatrix, as if the integument had been ploughed up by a bullet. We find no deformity or displacement of the tarsal or metatarsal bones and no erythema or hyperæsthesia of the surface of the wounded region. Affiants also discover that the applicant's disabilities are greatly increased at times by the reaction of the described cicatrix on the higher nerve

centres. We believe that a sensory impression conveyed from the cicatrix through the second pair of cranial nerves is intensified in the cerebrum by certain processes of intellection, one of which is known as expectant attention. The impression so intensified and modified is then reflected to the region where the trauma was sustained, and the applicant's sufferings are increased many-fold. Under such circumstances, and at the time when these reflex nervous phenomena are manifested, we believe the applicant's disability is extreme, and that an increase is urgently indicated as a therapeutic measure.

The indication here referred to was recognised by Dr. Lettsom, when he prescribed "One guinea to be taken immediately" to a needy patient. Some other medical certificates in regard to pension claims, quoted in a recent number of the *Iowa Health Bulletin*, show that American practitioners are sometimes as eccentric in their spelling as in their pathology. The following is an example:

———, June 8, 1896. Dear Sir,

Yours received I treted Wm. Akens after he cum Hoam from the serfis for polypup in his nosee and Running soar in his pastur. The polypup from the nite are and exposure the wonde cum from the cick of a hoars.

———, M.D.

Here is another in which the learned doctor appears to be confused in his dates, as well as in other elements of knowledge:

———, February 30, 1897, Sur,

I surtify I treted the sed sojer fum 18888 to Date ——— foarmerly his stumik tub was jined to his nervious sistem but now it air rotted off cosing grate expectoring and hard of breth. Your Obt. servent

———, M D.

The name of the place and that of the certifying practitioner are given in each case. But the pensioner can speak for himself, as witness the following application in which another therapeutic effect of the pension is hinted at:

Martch 20, 1896. Presedent of Pensioners. i let you no i wor treted by a root and erb docter he give me running milk week for running soar and no avale ..... iff my clam is loude i can voate weth a free conchents.

But the veterans of the Civil War are not the only patriots who think they have claims on a grateful country. Mr. Davis, Assistant Secretary of the Interior, who has to deal with many of these claims, says that he recently had a letter from a German, who claimed a pension because "one the 19th of Sept, 1889, I lifted a hog over a fence, and have suffered from asthma ever since." The matter has its serious side, as pointed out by Dr. John H. Girdner, in a recent number of the *North American Review*. He bluntly charges the medical profession with the part it has played "in constructing the fraudulent pension list which the taxpayers of the United States have had saddled on them." Speaking from his own experience, he estimates that at least one-third of those claiming to be disabled while in the discharge of duty are frauds. By way of remedy he proposes that a Board of Medical Examiners should be established in each State, such Board to be composed of two members, one a physician, the other a surgeon, selected solely for their eminent and acknowledged professional ability and their honesty and standing in the State. They should give all their time to this work, and be paid a salary of 20,000 dollars a year each. That such a proposal should be seriously made is a striking evidence of the magnitude of the sum paid by Uncle Sam in pensions. In view of the large additions to the pension roll of the United States likely to be made by the present war, it is clear that something will have to be done to weed out impostors from those who have really been disabled in the service of their country.

THE LATE PROFESSOR DRECHSEL.

The late Professor Edmund Drechsel, whose untimely death in Naples last September was so great a loss to physiology, was a single-hearted man of science. As chief of the chemical Department of Ludwig's Institute at Leipzig, and latterly as Professor of Physiological Chemistry at Berne, he not only himself accomplished much important work in physiological chemistry, but inspired others, and to them with admirable modesty he left the credit. The most important of the many papers which appeared under his own name are the series dealing with the constitution of the proteids, as studied through their products of disintegration: and especially his brilliant discovery of the production of urea from the breaking down of proteids in the absence of any process of oxidation. Though he laid science under a great debt, he had not the faculty of making money, and the post which he held in Switzerland does not entitle his widow to a pension. In these circumstances a fund is being raised by Professor Kronecker, of Berne, to contribute to the education of his two sons, and to provide a modest memorial to Drechsel in the place where he is buried. The Physiological Society at its last meeting voted 25 guineas to the fund, and further subscriptions will be received by the Secretary of the Society, Dr. Ernest H. Starling, Lecturer on Physiology at Guy's Hospital (8, Park Square, London, N.W.), by whom they will be forwarded to Professor Kronecker.

PASTEUR'S FIRST PATIENT.

The shepherd Jupille, who was the first patient who underwent Pasteur's antirabic treatment, has been appointed *concierge* of the Pasteur Institute in Paris. At the age of 14 he went to the rescue of two children who had been attacked by a mad dog, and was himself badly bitten. He is now to be seen any day by visitors to the famous Institute of the Rue Dutot, a picture of health, wearing on the breast of his coat a silver medal awarded him for the courage which he displayed on that memorable occasion. He married some years ago, and is the father of two fine children. It may be worth mentioning for the edification of antivivisection fanatics that Jupille looks upon Pasteur as having saved his life. "Had it not been for him," he says, pointing to the group by Truffaut in front of the Institute, where he is represented struggling with the dog; "Had it not been for M. Pasteur, that is all that would now remain of me." Jupille was first sent to Garches; then, as he grew up, he was employed in the antirabic laboratory in the Rue Dutot, and afterwards under M. Roux. He is now 29, and is very proud of his office and of the neat little dwelling which M. Duclaux has given him.

A NEW CONSUMPTION HOSPITAL.

A new hospital has lately been opened in Glasgow for the treatment of phthisis. It is intended to erect five other hospitals and forty patients are to be treated in each. Mr. Quarrier gave a very hopeful prognosis as to the treatment which is to be carried out in these institutions. Three months, he thought, would be a sufficient time to effect a cure; some cases might require four months, and others only two months. It would be well if Mr. Quarrier would make provision for a considerably longer period of treatment if he entertains the idea of cure rather than amelioration of symptoms. The vestibule of the hospital is marble-walled. The corridor is 120 ft. long by 7 ft. 6 in. wide. The floor is made of polished pine, and there are plateglass screens to regulate the draughts. Three marble-tiled fireplaces are on each floor. The bedrooms are situated upstairs, eight are double-bedded rooms, the rest are for single beds. Everything is so arranged that lodgment of dust is impossible, and to guard against cold every window, except those for the staff, is double. All the rooms have hollow walls with air cushions, in order to secure an equable temperature in all seasons and weathers. The dining hall is on the second storey, to which there is a lift from the kitchen. The propulsion system is employed for ventilation, and in the wall of each room are apertures by which pure air enters and foul air goes out. Besides the kitchen on the top storey, there are two convalescent rooms. The propulsion system is not carried into these rooms, and there are no double windows, for in these convalescent rooms the patients who have undergone treatment are gradually hardened by breathing a

cooler atmosphere before returning to their homes. The engine-room is in the basement of the building. Russian, Turkish, and earth baths have been instituted. To the east of the main buildings are situated the parlour, kitchen, etc. Sir William Gairdner, addressing a distinguished company at the opening ceremony, said that Mr. Quarrier had carried out successfully many schemes, and the least they could do was to show gratitude to him for this new departure.

THE OXFORD MEDICAL SCHOOL.

In spite of the impoverished condition of the University chest, Convocation on May 3rd passed a decree empowering the University to expend a sum of £7,500 in erecting a new laboratory and lecture room for the joint use of the Professors of Botany and Comparative Anatomy. The Warden of All Souls, who introduced the decree in Congregation, stated that this expenditure was rendered necessary by the increase in the number of those attending the medical school, as the accommodation already provided was insufficient to meet the requirements of those pursuing their preliminary studies with a view to medicine. It augurs well for the future of medicine in Oxford that the decree should have been passed without discussion or dissent, and it is to be hoped that a like generous impulse will provide suitable laboratories for pathology and pharmacology, the claims of which, already recognised by the appointment of university lecturers, are fast becoming pressing.

THE ABATEMENT OF THE SPITTING NUISANCE.

Although hygiene is gradually teaching us to live cleanly, the disgusting and dangerous practice of spitting in the streets, in omnibuses and railway carriages, and in other public places is still sufficiently prevalent among us to constitute a nuisance which calls for abatement. In this matter we might well take an example from our cousins across the Atlantic. A crusade against spitting in public is now being conducted in America by the Women's Health Protective Association. The Health Board of New York has expressed special sympathy with the movement. It is said that some of the street cars in New York are in such a disgusting condition that they are not fit for human beings to enter. The President of the Women's Association has suggested that conductors should be supplied with tickets bearing the words, "Don't expectorate on the floor. By order of the Health Board," to be handed to passengers who are seen breaking the law. It is thought that this will prevent unpleasant scenes. On the other side of the ticket will be printed the words, "Keep this in your pocket," so that an offender may not be guilty of breaking another rule by scattering papers on side walks or in cars. The Association does not intend to desist from its efforts for the suppression of the habit complained of until the question is settled one way or other, either by the enforcement or the repeal of the law. In Boston the following notice has been placed on all the cars of the West End Street Railway Company: "The Board of Health adjudges that the deposit of sputum in the street cars is a public nuisance, a source of filth, and cause of sickness, and hereby orders that spitting on the floors of street cars be, and hereby is, forbidden." Above this is posted a copy of the statute stating that the fine for infringement of the order of the Board of Health is 100 dollars (£20). At Holyoke, Mass., the order runs: "When it comes to spitting on the car floor, Don't." In the village of Saranac Lake, New York, there are stringent regulations against spitting in public places. A law to the same effect was passed some time ago by the Board of Supervisors of San Francisco. A similar enactment has been made by the Board of Health of Brooklyn, Mass. At a recent meeting of the Albany Board of Health, the health officer was directed to notify the authorities of the Albany Railway that a notice must be placed in each carriage forbidding expectoration therein. That these laws are not intended to be mere expressions of a pious opinion appears from the fact that fines have been inflicted in Philadelphia, Chicago, and elsewhere, for violation of the rule against spitting. A prominent Chicago lawyer sued a street railway company for 50,000 dollars, because he was arrested for spitting on the floor. We regret to be unable to state the result of this interesting action, but we hope that the plaintiff was nonsuited. On account of the difficulty in carrying out a similar order by the Health Department of St. Louis, it has been suggested that a few special cars should be reserved for those citizens who insist on exercising their rights of free expectoration, labelled "Spitting Cars." An American paper expresses the opinion that this would cure the "human hogs" who indulge in this practice, but we venture to doubt it. The facts which we have stated at least prove the growth of a healthy public opinion in the States in regard to the matter, and doubtless the citizens of the great Western Republic will in time cease to look upon the ejection of their sputum in public places as a manner of asserting their freedom. Here, although we do not, as Dickens said of the Americans, illustrate Dove's law of storms by promiscuous expectoration, we are too tolerant of the practice. It is much to be wished that an organised movement for the repression of this loathsome practice were set on foot.

A VICTORY FOR MEDICINE.

As no official report of the proceedings of Grand Committees is required by the House of Commons, the general public must either attend personally to hear the debates, or content themselves with the scrappy and occasional information provided in the daily press, and it is therefore more than probable that the important victory gained for medicine on May 6th may not obtain due recognition. We refer to the amendment carried by Mr. Davitt that one of the Prison Commissioners shall be a medical man skilled in mental diseases. The powerful if somewhat sombre eloquence of the member for South Mayo was vigorously aided by Mr. John Burns, whose brisk and breezy style of speaking, and evident familiarity with the necessities of the prison population, and the responsibility of those who have the regulation of their lives, materially helped to carry the proposal by 25 votes against the 7 followers of the Home Secretary. Mr. Burns had no difficulty in showing with practically unanswerable force that if we wish to treat with due regard to reclamation as well as deterrent seclusion a hapless set of folk, who are not only too often hereditarily predisposed to the crime amidst which they are afterwards brought up, we must place among the superintending body someone skilled in physiology and psychology. Many of those whom we are compelled to shut up like wild beasts behind iron bars are born with wretchedly-balanced minds, and are frequently hovering on the border line which separates the gaol from the madhouse; and in the interest of these miserable beings we hope that Sir M. White Ridley will loyally adopt the finding of the Committee, and produce in the end a Prisons Bill worthy of the great traditions of the office which he so successfully fills.

HOSPITALS OF PASSENGER-SHIPS.

Dr. Wellesley Harris, in his report on the port sanitary district of Southampton for 1897, gives in tabular form an exhaustive account of an examination of twenty-eight passenger vessels in respect of their accommodation for the isolation of cases of infectious sickness occurring on board. Such examination has led him to the conclusion that there is much need for improvement as regards situation, cubic space, ventilation, lighting, and lavatory accommodation in connection with these hospitals, which, moreover, are not as a rule provided with a sufficient number of berths. A hospital far aft on the poop deck, with free circulation of air, a minimum of 200 cubic feet per berth, having complete isolation, separate offices, and means for treating two diseases in both sexes—such is Dr. Harris's claim for a passenger vessel. Wherein the ships examined failed to fulfil his views is shown in the table which he gives. His report should be of

use to steamship companies that desire to place their vessels in a condition best calculated to meet emergencies in these days of travel.

PRESENTATION TO SIR WILLIAM STOKES.

An interesting ceremony took place in the Royal College of Surgeons, Dublin, on Saturday, May 7th, when an address and some valuable plate were presented to Sir William Stokes on the completion of his twenty-fifth year of office as Professor of Surgery in the School. The subscribers comprised many old and present pupils, his colleagues and numerous admirers, including Lord Lister, Sir James Paget, and Professor Ogston, of Aberdeen, who was able to be present. The chair was occupied by Sir William Thomson, President of the College, who made the presentation, and speeches were delivered by Sir Charles Cameron, Sir George Duffey, and Mr. Myles. Sir William Stokes made a most effective reply, marked as it was by great eloquence; and he made touching allusion to the gift to Lady Stokes which accompanied the presentation. In the evening the Professors entertained their colleague at dinner. Sir Charles Cameron was in the chair, and there were also present Sir Wm. Thomson, Sir George Duffey, Professor Ogston, Dr. James Little, Professor Frazer Mr. Myles, Dr. J. W. Moore, Mr. Heuston, and many others.

LIQUID HYDROGEN.

On Tuesday last, Professor Dewar, at the Royal Institution, accomplished a feat which he and many other investigators have been seeking to perform. Other experimenters have believed that they had succeeded in producing a trace of liquid hydrogen, but Professor Dewar actually produced as much as a wineglassful of the liquid gas in five minutes, and had the supply of hydrogen been larger the process would have been capable of producing any quantity. The boiling point of the liquid is placed at from 30° to 35° of absolute temperature, that is to say, at about 240° C. below zero. A tube closed at the lower end, when immersed in the liquid hydrogen was almost instantaneously filled with solid air. No fact could demonstrate in a more striking manner the extraordinary degree of cold of liquid hydrogen. The density of the liquid (0 6, water being unity) far exceeds that arrived at by calculation, a matter of great scientific interest. Using liquid hydrogen, helium was also liquefied on Tuesday last, and its boiling point is estimated to lie not very far from that of hydrogen. Professor Dewar communicated a preliminary paper on these new and important observations to the Royal Society on Thursday afternoon.

IRISH LOCAL GOVERNMENT BOARD.

Dr. Thomas J. Stafford has been appointed Medical Commissioner of the Local Government Board, Ireland, in room of Sir Francis Maccabe. Dr. Stafford is a Licentiate of the College of Surgeons and Physicians, 1882. He first served as a medical officer to the dispensary and the workhouse hospital in Boyle, co. Roscommon, and some years ago was appointed a medical inspector under the Local Government Board. He has proved himself a very capable officer, and it is hoped that he will be able to suggest and carry out some much-needed reforms in the Poor-law Medical Service in Ireland.

DEFECTIVE ARMY LITTERS.

The Special Correspondent of the *Times* lately in Egypt, in a letter addressed to that paper, (*see Times* of May 9th) comments on the replies recently given in the House by Mr. Brodrick to Sir Alfred Hickman and Sir J. Fergusson to which we adverted in the Journal of May 7th. In reference to Mr. Brodrick's statement that the provision of folding hoods for the litters has been "under consideration," the writer says that it must have been "under consideration since 1885," as in carrying the wounded from Metammeh to Korti exactly the same pressing need was felt for some protection from the sun; and he urges that relatives and friends of those now out in the Soudan are entitled to ask that they shall not be told after the next fight that Roentgen rays and proper stretchers are "on the way out." It seems strange that with former bad experience of "hoodless" litters nothing has been done during the past thirteen years to remedy a grave defect in the transportation of wounded and sick in the desert.

MATERIA MEDICA.

The newly-appointed Lecturer on Pharmacology at Oxford, Dr. J. Smith-Jerome, perhaps better known as Dr. W. J. Smith, delivered a public lecture on "Pharmacology: its Aims and Methods." In the course of an extremely interesting and eloquent address, the lecturer took the opportunity of urging that the greater part of materia medica should be relegated to its natural habitat—the druggist's shop. Such an opinion must be welcome to many when expressed by so competent an authority.

Surgeon Arthur R. Bankart, M.B., R.N., has been appointed a member of the Fourth Class in the Royal Victorian Order.

The President (Dr. Frederick Wallace) and the Council of the Metropolitan Counties Branch of the British Medical Association will give a *conversazione* on June 7th. It will be held, by permission of the President and Council of the Royal College of Surgeons, in the Museum of the College in Lincoln's Inn Fields.

Mr. John W. Taylor, F.R.C.S., gave the first of the course of Ingleby Lectures for 1898 at Mason University College, Birmingham, on Wednesday, May 11th. Subsequent lectures will be given on May 18th and 25th at 4 P.M. The subject of the course is Extrauterine Pregnancy.

Dr. Napias, the well-known sanitarian, has been appointed Director of the Assistance Publique of Paris in the room of Dr. Peyron, who has resigned. Dr. Napias, who is a member of the Académie de Médecine, has been Inspector-General of Charitable Institutions for some years, and is the author of numerous important writings and reports on subjects of hygiene and charity administration.

Sir William O. Priestley, M.P. for the Universities of Edinburgh and St. Andrews, presided at the dinner of the Edinburgh University Club at the Holborn Restaurant on May 11th. There was a large gathering, including Sir Samuel Wilks, Bart., Sir Joseph Fayrer, Bart., Sir George Robertson, K.C.S.I., Professor Masson, and Dr. Henry Barnes, of Carlisle. The toast of the evening was given by the Chairman, and the health of the Chairman by Sir Joseph Fayrer.

The Bubonic Plague in Manchuria.—Dr. J. J. Matignon, Physician to the French Embassy in Pekin, records the prevalence last year of an epidemic disease restricted to the Valley of Solenko in Manchuria. This disease is very contagious, is nearly always fatal, has a very rapid course (thirty-six hours), and is characterised by grave typhoid phenomena, deep prostration, a temperature reaching and passing 40°C., and by the production of several buboes specially in the groins, axillæ, and behind the ears. The buboes rarely suppurate, death supervening too quickly, and sometimes they are wanting. The plague begins about the end of July, attains its maximum intensity in August or September, and disappears in October. It is believed to have been brought to the district by workmen from Charitong and the southern provinces. So far it has been confined to the Valley of Solenko, but communication with Russia may easily lead to its propagation.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE VACCINATION BILL.—The House of Commons is full of surprises, and Monday last illustrated this feature of the Chamber in a most striking way. At question time Mr. Balfour was asked when the Vaccination Bill would come on, and he was unable to fix a day. Some three hours after the debate on the second reading was resumed, and the Bill was referred to Committee before midnight. When the orders of the day were read the Bill was seventh on the list, and some members went away, regarding its chances as settled for the present, but old Parliamentary hands thought that the Budget resolutions, which stood first, would soon be passed, and this proved to be the case. Then all the other Bills which followed proved to have no materials for debate, and so the Vaccination Bill was reached and the debate resumed. The most weighty speech was made by Sir C. Dalrymple, who is the only member of the Royal Commission now in the House. Speaking as he did with the authority of one who had given several years to the study of the question, his support of the positions taken up by Sir Walter Foster was all the more important. A thorough believer in vaccination, he held that the conscientious objector should be recognised, and compulsion not used so as to keep up an agitation against an invaluable prophylactic. The Leicester position was well and temperately stated by Mr. Hazell. Dr. Farquharson made a most useful speech; and Dr. Clark, while criticising the Bill and the statistics advanced in favour of the value of vaccination, supported the second reading. The most vigorous defence of vaccination was, oddly enough, made by Mr. T. P. O'Connor, who used his literary memory, his personal experience, and some striking figures to show the marvellous results which have come from Jenner's discovery. The second reading was carried by a majority of 214; 237 voting for, and only 23 against, the second reading. There was a further discussion and division on the question of sending the Bill to the Grand Committee on Law, but this was also carried by a majority of 151. It is a Bill which will require and receive much discussion in Committee, and in a Grand Committee there will be more chance of amending it satisfactorily than in a Committee of the whole House. In the Grand Committee party lines are less strong, and there is more opportunity for quiet reasoning to have effect, while the passion of fanatical opponents has less opportunity of preventing progress. Fifteen additional members will be specially selected for addition to the Committee, and possibly before, but most probably after, Whitsuntide the consideration of amendments some of which are already on the paper will commence. The fight will rage chiefly round Clause 2.

THE LUNACY BILL.—Last week the Lord Chancellor moved and carried the second reading of the Lunacy Bill in the House of Lords. The Bill is substantially the same as the one dropped last year, but this year the Government hope to succeed in passing the measure after full consideration. The Lord Chancellor pointed out that the main occasion for the introduction of the Bill was the necessity of safeguarding the power to make urgency orders for the detention of persons supposed to be of unsound mind. The abuse of an urgency order in the case of a lady who had peculiar views about the necessity of the marriage tie was referred to, and other similar cases cited. Such cases constituted a gross abuse, he held, of an order which was primarily intended to meet cases dangerous to themselves and others, which required prompt treatment. The Bill provides that any person who certifies shall be made responsible for any misstatement, and shall be obliged to give reasons on the face of the certificate for the necessity of the order. The Bill is one which contains a good deal of controversial matter in its 31 clauses and 2 schedules. The control of county councils by the central authority has been somewhat strengthened, and this is sure to excite discussion and possibly opposition. Local administration is in these matters rather justly jealous of central control. There are provisions as regards pensions for asylum officers, and the Lord Chancellor spoke warmly of the claims of asylum officers to liberal treatment in this respect. The state of public business in the Lower House does not look very favourable at present for the passage of the Bill this session, but it may be got through by the aid of a Grand Committee.

IMPORTED MILK.—The question of the milk imported from France and the possibility of its being derived from infected places, was raised in a question by Mr. Heywood Johnson a few days back. The President of the Local Government Board was able to assure the House that he had already taken steps for the chemical and bacteriological examination of milk from abroad. He could not, however, at present give guarantees that the sources of the milk imported from Cherbourg were dairies at which there was no infectious disease. The supply from that district is, however, apparently declining rapidly, as the figures given by Mr. Chaplin show. In January 20,500 gallons were imported, in February 28,500 gallons, in March the supply had fallen to 14,000 gallons, and in April to 528 gallons.

THE ARMY MEDICAL DEPARTMENT.—On Thursday Sir William Priestley asked the Financial Secretary to the War Office what further rank and title would be conferred on army medical officers under the expected new Warrant after they had reached the rank of colonel, and might be called upon to assume a position of greater responsibility.—Dr. Farquharson asked further when the warrant containing the new constitution of the Army Medical Department would be issued, and whether its provisions could be stated.

Mr. Powell Williams said: The Royal Warrant relating to the Army Medical Corps will be issued as soon as certain minor details which involve reference to India can be supplied. It will provide for the creation of a Royal Army Medical Corps, members of which up to the rank of colonel will bear military titles, the present compound titles being abolished. Above the rank of colonel members of the corps will bear the title with the precedence and privileges of major-general in the army such as they now enjoy.

THE ROYAL COMMISSION ON THE DISPOSAL OF SEWAGE has now definitely been constituted as follows: The Earl of Iddesleigh (Chairman), Sir Richard Thorne Thorne, K.C.B. (Medical Officer to the Local Government Board), Professor Michael Foster, Professor William Ramsay, F.R.S. (Professor of Chemistry, University College, London), Major-General Constantine Phipps Carey (Deputy Engineering Inspector to the Local Government Board), Dr. James Burn Russell (Medical Officer of Health for the City of Glasgow), Colonel Thomas Walter Harding, Mr. Thomas William Killick, and Mr. Charles Philip Cotton (Chief Engineering Inspector to the Local Government Board for Ireland). It will thus be seen that, as we anticipated, a physiologist and a chemist are placed on the Commission, while Dr. Russell will represent the interests of medical officers of health. The others represent the officials of the Local Government Boards of the three kingdoms. A representative of the medical officers of health of England would have improved the Commission. The reference is to inquire and report: "(1) What method or methods of treating and disposing of sewage (including any liquid from any factory, or manufacturing process) may properly be adopted, consistently with due regard for the requirements of the existing law, for the protection of the public health, and for the economical and efficient discharge of the duties of local authorities; and if more than one method may be so adopted, by what rules, in relation to the nature or volume of sewage, or the population to be served, or other varying circumstances or requirements, should the particular method of treatment and disposal to be adopted be determined: and (2) to make any recommendation that may be deemed desirable with reference to the treatment and disposal of sewage." This is a broad and comprehensive reference, and will, we trust, produce valuable results.

THE MIDWIVES REGISTRATION BILL.—Wednesday found this Bill blocked by the Local Government (Ireland) Bill, as was expected, and when at 5.30 P.M. the measure was called,

Mr. J. B. Balfour postponed the second reading to May 19th. The Bill is, however, for all practical purposes dead, and the promoters would do wisely to withdraw their proposals in their present form, and prepare for next session in conjunction with their opponents a measure which may have a better chance of passing. There has been a profuse distribution of literature on the subject, and members have been fully informed by the number of communications they have received.

THE VACCINATION BILL.

ADJOURNED DEBATE.

THE adjourned debate on the amendment to the second reading of the Vaccination Bill was resumed on Monday by Mr. Hazell (Leicester), who said his constituents desired to be let alone. They wanted the great experiment of sanitation and thorough isolation, which had been successful with them so far, to be continued. He objected to the penal clause of the Bill as amounting to class legislation.

Sir C. Dalrymple (Ipswich), as the only remaining member of the Royal Commission in the House, expressed his gratitude to the Government for taking up the question, even though the measure was of small dimensions. He was amused at seeing it pleaded as an excuse for not enforcing vaccination that the Bill did not follow the recommendations of the Royal Commission. Very few people had, he believed, read the report; if they had they would have known that three out of the four of its provisions were founded upon the recommendations of the Commission. The Bill, no doubt, was a compromise, but it proceeded on the right lines. The main object was to make vaccination more acceptable and to remove apprehensions which might not unreasonably be felt. He thought, further, revaccination should certainly receive mention in the Bill. When much was heard about interference with personal liberty, it occurred to him that vaccination could not be a greater interference with liberty than the system prevailing at Leicester. On the slightest suspicion, not only the person suspected of disease, but the members of his family, were subjected to isolation treatment. He hoped that in Committee the Government would be willing to reconsider Clause 2, and to give effect in a greater degree to the recommendations of the Commission.

Mr. Channing (Northamptonshire, E.) said the Bill was a rather inconsistent and foolish attempt to bolster up a system which was really discredited by the evidence of the Royal Commission. The country had come to the common-sense conclusion on this question that it wanted no more compulsory vaccination. Some 122 Boards of Guardians had refused to carry out the policy of the Vaccination Acts, and did the right hon gentleman seriously expect he was going to find these gentlemen willing at once to adopt and give effect to this Bill when it became an Act?

Mr Labouchere (Northampton) thought it was most improper to oblige parents to have their children vaccinated, having regard to the divergent views entertained as to the efficacy of vaccination. The supporters of the Bill were very illogical. Their doctrine was that small-pox was so infectious that unless all children were vaccinated the community must suffer owing to the spread of the disease. Logically, therefore, they ought to insist absolutely on the vaccination of every child in the public interest, and they ought to insist also on revaccination. He understood that in seven years the supposed preventive effect of vaccination disappeared. He would like to know how many members of that House had been revaccinated during the last seven years. Let them begin at home, and punish every member who jeopardised the health of Parliament by abstaining from revaccination. With regard to calf lymph, there was a point requiring explanation. He had heard that cows were liable to consumption. If the lymph were taken from an apparently sound calf could anyone be sure that the animal did not come from a consumptive family, and what guarantee could be given to a parent that his child would not take with the lymph the germs of that terrible disease into his system?

After some remarks from Mr Ascroft (Oldham),

Dr. Farquharson (Aberdeenshire, W.) said he was convinced that the more vaccination was inquired into the more its merits would become patent. After some considerable experience he might say that vaccination left the court without a stain on its character. He should have preferred the Government to have taken a strong and vigorous line. Still they must go with the times. There was one point which no one would dispute—small-pox had diminished and had ceased to be the terrible disease that it used to be. What was the reason for that? They all remembered the number of marked people who used to be seen about. But it was said that the diminution of those cases was due to improved sanitation. No one doubted that the want of sanitation was a cause of disease. Give people good air, good water, and let their houses be well drained, and they would be in a better position to withstand disease than if they lived under insanitary conditions. He was bound to say, however, that the opponents of vaccination must go further than that; they were bound to prove some scientific connection between sanitation and small-pox. He did not think that any scientific man had proved that small-pox had any specific relation with sanitary conditions. There were, as they all knew, some diseases which were reduced by good sanitation; but he might instance Germany, particularly Berlin, where sanitary matters were not satisfactory, and there small-pox had gone on diminishing and diminishing. It was almost entirely stamped out in Germany. They had heard a great deal about calf lymph, but he showed how utterly unfounded were the fears in this regard expressed by the member for Northampton. Respecting house visitation, he said that in Scotland vaccination was performed by the family medical attendant, and he thought parents would much prefer being visited by a doctor whom they knew than by a stranger who, metaphorically presenting a pistol at their heads, said, "I have come to vaccinate your children." As to revaccination, he stated that when he was at Rugby School he revaccinated with the parents' permission 500 boys: he did it with great success and with some pecuniary advantage to himself. He would, however, have got more pecuniary advantage out of a good epidemic of small-pox. The Bill was a good one as far as it went. It would, he believed, be beneficial in many directions, and therefore he should be happy to give it his support.

Dr. Clark (Caithness) could not agree with his hon. friend as to the view he took of the results of the Royal Commission. Years ago he and others, in pressing for an investigation into the merits or demerits of vaccination, made certain charges, and every one of those charges had been borne out by the report of the Commission. Personally, he believed vaccination modified small-pox, but, looking at the matter from an historical standpoint, neither the medical profession nor the House, and especially the Local Government Board, had cause to feel very strongly upon it. He thought the blunder the Local Government Board had committed was in decrying isolation. The proper method of treating the matter was to carry out the best system of sanitation and isolation.

Mr. T. P. O'Connor said he could not understand how any human being, with an ordinary amount of eyesight and common sense, required many statistics to show that vaccination had done infinite service. When he was a boy in Ireland one out of every four or five peasants was deeply pitted with small-pox. They could not see one out of every hundred now. He supposed the same was the experience of every member of that House. Take the statistics as quoted by the hon. member for the Ilkeston Division (Sir Walter Foster), which had never been seriously contested. Those showed that an examination was made of 53,000 children in the schools of London. Of those who were unvaccinated it was found that 360 out of every 1,000 were pitted with small-pox, while of those who were vaccinated only two in every 1,000 were so pitted. How were they going to get over figures like that? Other statistics showed that in England, generally, 1 died for every 20 before vaccination; in Scotland, 1 for every 25; in Sweden, 1 for every 12; and in Copenhagen, 1 for every 24. And, in face of those figures they were asked to go back to the time when this hideous holocaust of life took place every year in order to preserve what was called "the liberty of the subject"—liberty to spread pestilence and disease all around him. He hoped the Government would stand to their guns, and especially that they would not yield to the menace by which they had been threatened. This was a matter which, in the opinion of all reasonable men, irrespective of party or political feeling, involved the deepest and highest interests of the community, and any Government which would place party or political interest in front of the interest of the community in this respect ought to be thrown out of office by the joint votes of all honest and sensible men.

Mr. T. W. Russell (Tyrone, S.) said the Government were prepared to take the question of vaccination as settled by the exhaustive report of the Royal Commission. What the Government had to deal with was a disinclination on the part of a considerable section of the people to comply with the law, arising in some cases from conscientious objections, and due, secondly to ignorance and largely to indifference. Parliament ought to be supreme; Parliament had to take a view of the whole country; Boards of Guardians took merely a local view; and he maintained that no Board of Guardians had the right to set aside the decision of Parliament. They might object to an Act and might endeavour to get it altered, but while the law remained it was the duty of a Board of Guardians to administer the law. All he had to say on the part of the Local Government Board was this: if it was their duty to require their vaccination officers to enforce the law and conduct prosecutions they would not shrink from their plain duty to carry out the Act. The conscientious objector to vaccination had been largely provided for. There would be no danger to his child, and he would be relieved from the imposition of repeated penalties.

The debate was continued by Mr. Whittaker (Yorkshire, Spen Valley), Mr. Allan (Gateshead), and Mr. J. W. Wilson (Worcestershire, N.), and on a division being taken the numbers were: For the second reading, 237; against, 23; majority, 214. The Bill was therefore read a second time.

GENERAL MEDICAL COUNCIL.

A FOURTH REPORT BY MR. VICTOR HORSLEY TO THE REGISTERED PRACTITIONERS OF ENGLAND AND WALES.

LADIES AND GENTLEMEN,—In my first report to you on the work of the General Medical Council, to which you appointed me as one of your direct representatives, I communicated to you instances of serious unconstitutional action on the part of the President of the Council. It was generally hoped, both within and without the Council, that with the appointment of a new President a stricter observance of constitutional procedure would ensue, and that the efficiency of the work of the Council would be notably promoted.

I regret to be obliged to report to you that immediately upon the recent appointment to the Presidential Chair there has been committed by the President a deliberate attack on the rights of individual members of the Council, and a new and very serious infringement of constitutional government.

The facts are as follows: After the November session of last year I commenced a research among the valuable archives of the Council to determine, first, the exact position of many legal questions concerning the practice by medical men of their profession; secondly, the methods according to which the legal work of the Council is conducted, and, thirdly, the cost to the Council of such legal work.

For several months—that is, up to April 7th—I carried out my investigations; visited the office from time to time, inspected such documents as were necessary for the elucida-

tion of different points, the Registrar producing the same when requested.

In the course of my work I became aware of certain grave matters, which I communicated without reserve to Sir William Turner, the then acting Chairman. Upon April 7th, the President having been elected on April 5th, I suddenly received notice from the Registrar that he was instructed by the President to refuse me any access to any document or financial paper belonging to the Council unless I had previously obtained the permission of the Executive Committee or of the Council. Having ascertained that the Registrar was acting solely under the President's instruction, I wrote to the President and asked him:

1. By what regulation of the Council or legal enactment he sought to debar me of my right and privilege to inspect the documents of the Council for the purpose of preparing work for the Council's session.

2. Whether he included all documents in his embargo; and

3. Whether he considered that he, like his colleagues, was similarly debarred from inspecting any document unless he had previously obtained the permission of the Executive Committee or Council.

I regret to have to report that the President has complicated his extraordinary action by refusing in uncivil terms to answer any of my questions.

The constitutional point thus raised is so simple that I need not extend the position save to explain that of course the Medical Acts and Standing Orders of the Council confer no such power, as that which the President claims, upon that officer, and that I am taking all steps that may be necessary to clear away this novel and foolish hindrance to my work for the execution of which you appointed me.

Cavendish Square, W., May 6th. VICTOR HORSLEY.

THE LOCAL GOVERNMENT IRELAND BILL.

THE following memorial has been presented to the Chief Secretary for Ireland on behalf of the Royal College of Surgeons of Ireland:

THE MEMORIAL OF THE PRESIDENT, VICE-PRESIDENT, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND

Showeth—

That your Memorialists have considered the provisions of the Local Government (Ireland) Bill, so far as they affect the Fellows and Licentiates of this College and the medical profession generally, and they respectfully submit, for your consideration, the following expression of their opinion thereon:

1. The College regards the existing system of election of Poor Law Medical being also sanitary officers, as very unsatisfactory, inasmuch as it has the effect of giving, and, in fact, has given, predominance in the election of such officers to considerations other than the competency of candidates for office, and the necessities of the sick poor. The College, without desiring to deprive the local authorities of their legitimate influence in the selection of medical officers, considers that it should not be open to guardians or dispensary committees to place in charge of the sick poor persons who may be entirely inexperienced, and whose competency for the special duties confided to them may be entirely unguaranteed. The College, therefore, submits that all candidates for such appointments should be subjected to a previous competitive examination, in which a knowledge of their special duty as medical officers, as sanitary officers, and as public vaccinators could be verified.

2. The College is strongly of opinion that in this Bill adequate provision should be made to enable Poor law medical officers to retire upon a pension as of right, if incapacitated from duty by ill-health, or upon abolition of their offices, or after completion of the period of service required from civil servants. The College begs to remind you that the unlimited discretion vested in guardians by the existing law has, in numerous cases, inflicted extreme hardship on worn-out medical officers, and has had the effect of retaining such officers in their appointments long after they had ceased to be capable of efficient duty, to the great disadvantage of the sick poor of their districts. The College urges that, inasmuch as medical officers have been recognised by Parliament as entitled to pension, and have been placed by the Local Government Board in the position of civil servants in regard to the amount of that pension, it is but right that they shall be treated in all respects as civil servants in this matter.

3. The College submits that the occasion afforded by this Bill should be availed of to improve the sanitary service in Ireland, by providing adequate supervision by superintendent medical officers of health. It must be evident that the system of relegating the sanitation of a district to a dispensary medical officer, uncontrolled by any superior officer, and altogether dependent on local guardians, has had the effect, in very many instances, of rendering nugatory the law provided by Parliament, and the College is of opinion that no improvement in the existing condition of things can be hoped for until a supervising medical officer, devoting his whole time to his function, shall be provided to superintend the sanitation of the group of districts committed to his care.

4. The College is of opinion that it is indispensable to the efficiency of the future administration of district lunatic asylums in Ireland, that the experience and competency of future resident medical superintendents and assistant medical officers should be guaranteed by requiring, as a qualification for these offices, a sufficient period of previous service in a public asylum, together with such other safeguard as may be deemed necessary.

5. That the College, having already addressed you on the subject of the future administration of county infirmaries in Ireland, refrains from further reference to the subject.

Your memorialists therefore earnestly request you to avail yourself of the opportunity afforded by this Bill to reorganise, in regard to the subjects above referred to, the public medical service of this country.

(Signed)

WILLIAM THOMSON, Kt., President.
ROBERT L. SWAN, F.R.C.S., Vice-President.
CHARLES A. CAMERON, Kt., F.R.C.S., Secretary of the College.
ROBERT H. WOODS, F.R.C.S., Secretary of Council.

MEDICAL REFEREES UNDER THE WORKMEN'S COMPENSATION ACT.

TERMS, DUTIES, AND FEES.

THE Home Secretary has drawn up regulations, which have been approved by the Treasury, as to the appointment and payment of medical referees in England and Wales.

"*Medical referee*" is defined to mean a legally qualified medical practitioner appointed by the Secretary of State for the purposes of the Workmen's Compensation Act, 1897.

"*Reference*" means the appointment of a medical referee by a committee, arbitrator, or judge of a county court to report on any matter material to any question arising in an arbitration under the Act.

"*Committee*" means a committee representative of an employer and his workmen with power to settle matters under the Act in the case of the employer and workmen.

"*Agreed arbitrator*" means a single arbitrator agreed on by the parties; "*appointed arbitrator*" means a single arbitrator appointed by the judge.

"*District in which the case arises*" means the county court district in which all the parties concerned reside, or if they reside in different districts the district in which the accident occurred.

The conditions of reference are that before making any reference the committee, arbitrator, or judge shall be satisfied, after hearing all medical evidence tendered by either side, that such evidence is either conflicting or insufficient.

The form and mode of reference prescribed is that the reference shall state in writing the matter on which the report of the medical referee is required, and the question to which such matter seems to be material. It shall be accompanied by a general statement of the medical evidence given on behalf of the parties. If the evidence has been given before a committee or an agreed arbitrator each medical witness will sign the statement of his evidence, and may add any necessary explanation or correction. The committee, arbitrator, or judge making the reference will direct the injured workman to submit himself for examination by the medical referee, at a time and place to be fixed by the medical referee, provided that the workman be fit to travel. If not, it shall be so stated in the reference.

Selection of Medical Referee.—In the case of a reference by a committee or agreed arbitrator, the medical referee shall be one of those appointed by the Secretary of State for the county court circuit which includes the district in which the case arises. If the circuit has been subdivided, and medical referees appointed for each subdivision, the referee selected shall be one of those appointed for the subdivision which includes the district in which the case arises, or if a rota has been established he shall be selected in accordance with the rota. In the case of a reference by a judge or by an appointed arbitrator the medical referee shall be one of those appointed by the Secretary of State for the circuit. Where there has been a previous reference in any case any subsequent reference shall if possible be made to the same referee.

Report of Medical Referee.—The medical referee shall not accept any reference unless signed by the judge, appointed arbitrator, or registrar, and sealed with the seal of the county court. The medical referee shall, on receipt of a reference duly signed, appoint a time and, in cases where the injured workman is able to travel, a place for the examination of the workman, and shall send him notice accordingly. The medical referee shall give his report in writing, and shall forward it to the registrar from whom he received the reference. The committee, arbitrator, or judge may, by request signed and forwarded in the same manner as the reference, remit the

report to the medical referee for further statement on any matter to be specified in such request.

Personal Attendance of Medical Referee.—In any case of special difficulty the judge, or appointed arbitrator, may require the attendance of the medical referee at any proceedings in the arbitration subsequent to the receipt of the report, at a date and hour to be arranged, and the medical referee shall attend accordingly, but this regulation shall not authorise the medical referee being called as a witness.

Fees.—The following shall be the scale of fees to be paid to the medical referees:

(i.) For a first reference, to include examination of the injured workmen and written report	2 guineas.
(ii.) For a further statement under Regulation 18 on any matter not covered by the original reference	1 guinea.
(iii.) For a second or subsequent reference to the same referee in a further arbitration on the same case, to include examination, if necessary, and written report	1 guinea.
(iv.) Where a medical referee attends at the request of the county court judge or appointed arbitrator, for such attendance	3 guineas.
(v.) Where in order to examine the injured workmen or to attend on the county court judge or arbitrator the medical referee is compelled to travel to a place distant more than 2 miles from his residence or such other centre as may be prescribed by the Secretary of State, in addition to the above fees—5s. for each mile distant from such residence or centre.	

The medical referee will be required to send a quarterly statement to the Home Office of the fees due to him.

THE PLAGUE IN THE EAST.

Bombay.—Although Bombay still heads the lists as regards the mortality from plague of all Asiatic cities, the numbers are sensibly diminishing week by week. Since the recrudescence began, the week ending May 8th shows the smallest returns. During the week the deaths from plague were 263, giving an average daily mortality from plague of 37.5. The total death-rate from all causes now averages a rate of 53.66 per mille.

Calcutta.—The telegraphic reports from Calcutta, dated May 6th, state that "no cases of plague have been reported during the previous 48 hours. The outbreak is apparently not epidemic. Business is resuming its normal conditions." This is welcome news, and we hope that the abatement may be maintained. The Indian lay authorities seem still to be impressed with the idea that the hot weather is fatal to the prevalence of plague. There is, unfortunately, no justification for this belief. In Hong Kong, Canton and Macao plague first appeared in the spring of the year, and continued during May, June, and July. Calcutta practically is on the same latitude as Hong Kong. We would rather hope that the explanation is that plague has not taken root in Calcutta. Calcutta has not within our knowledge had an outbreak of plague, and it may be that conditions of soil or surroundings are unfavourable to the development of the bacillus. Certainly they are not so favourable as those met with on the western shores and slopes of India, otherwise the disease would have spread thither long ago. When human beings and rats, however, have been infected, it is perfectly possible that any soil may become infected, and it must be remembered that this is the second time the disease has striven to proclaim itself in Calcutta. The first time when it was reported by Dr. Simpson the rats died in numbers, and several individuals had attacks which resembled plague in every particular. Again rats have died, and this time, after the death of a few people, the epidemic again subsides, and there is some reason to hope that the disappearance may be permanent.

Hyderabad.—The territories of the Nizam are being visited by plague, but up to the present Hyderabad city itself has been free. Now a case of plague is reported as having occurred there, and something like a scare has ensued. Surgeon-Colonel Lawrie has been unceasing in his efforts to limit the spread in these dominions, and, it would seem, with much success.

Karachi.—The recrudescence seems to be following the usual course, and has given rise to great alarm and immense expense. On April 20th there were 28 cases of plague and 21 deaths, the total to date since the recurrence being 195 cases and 129 deaths.

Punjab.—In the Hoshiarpore district the epidemic is subsiding, but fresh villages in the Jullundur district have been attacked. We regret to know that Surgeon-Captain R. Heard, who has been engaged in the Punjab on plague duty, has been invalided home.

Suez.—Considerable alarm exists at Suez, where a case of plague has been landed from an Egyptian steamer plying in the Red Sea. It is needless to say that every means is being taken to prevent the disease spreading, and so far there is no cause for alarm.

Hong Kong.—The telegrams from Hong Kong are distressing. Last week we had to chronicle the death of Sister Frances Higgins, and this week two more of the nine sisters at the Civil Hospital, Sister Gertrude Ireland and Sister Frances Young, are reported to have died of plague. Not only is the nursing staff thereby rendered insufficient, just when the greatest demands upon it are made, but two most valuable lives have been cut short. The plague in Hong Kong is stated to show no signs of decrease, and during the 24 hours ending Thursday, May 5th, 39 new cases and 28 deaths had occurred. Since January 1st of this year there have been 792 cases and 690 deaths from plague. Some cases of a dangerous form of pneumonia from plague have been observed. The disease in Hong Kong is believed to have come from Macao, a Portuguese possession some thirty miles along the coast, where it is stated the disease has existed for some time, unknown to the government of Hong Kong, as the Portuguese authorities have not seen fit to warn their neighbours that they were affected by plague.

Our Hong Kong correspondent writes:—Since the beginning of the year there has been a steady increase in the number of cases, as reported daily to the medical officer of health. The men of some of the regiments stationed here have been appointed to help the Sanitary Board in its work of inspection. The following is a copy of the weekly abstract since January 1st; the total number of cases up to date of writing (April 5th) has been 286, with 243 deaths.

Week Ended.	Cases.	Deaths.
January 1st, 1898 ...	Nil.	Nil.
,, 8th ,, ...	2	1
,, 15th ,, ...	Nil.	Nil.
,, 22nd ,, ...	2	2
,, 29th ,, ...	4	2
February 5th ,, ...	5	3
,, 12th ,, ...	5	5
,, 19th ,, ...	9	6
,, 26th ,, ...	46	42
March 5th ,, ...	22	17
,, 12th ,, ...	16	12
,, 19th ,, ...	31	28
,, 26th ,, ...	47	40
April 2nd ,, ...	45	40

THE COVENTRY PROVIDENT DISPENSARY.

The constitution of the Coventry Provident Dispensary has frequently been referred to in the British Medical Journal, and its objectionable features pointed out. The members of the medical staff in November, 1896, presented a memorial to the committee of the dispensary making certain suggestions, and the result of this memorial appears from the report of the sixty-seventh annual meeting of the dispensary, which was held on April 26th.

The first point to which attention was drawn by the memorial was that there was no definition of the class for whom the institution is intended, nor any wage limit defined. The rule of the dispensary at that time was as follows:

> The object of this institution is to insure to its members, by their own periodical payments, efficient medical advice and medicine during illness.

The memorial pointed out that the previous rule was:

> The object of this institution is to enable the working classes to insure to themselves and their families efficient medical advice and medicine during illness.

It was pointed out further that the term "'working classes" is not considered definite enough by the authorities of our profession, and in all instances a wage limit is demanded." At the annual meeting after some discussion, during which it was stated by the chairman that no wage limit would be adopted, and that they did not want to restrict the membership in any way, the following motion was carried:

> Expunge the word "members," and insert instead "working men, their wives and families."

The next point raised by the memorial was as to the payment of members, and the opinion was expressed that the rule referring to children, namely, "'a penny a week for three children, and twopence for any number under 12 years of age,' was altogether inadequate and unjust." The memorial of the medical staff asked that the rule should be altered so that one penny a week each should be paid where there were only two children, and above that number a halfpenny a week each in addition for each child under 12.

At the annual meeting the following was adopted as the rule:

Every member above 12 years of age shall pay 1d. per week. Families of children under that age shall pay 1d. for the first and ½d. for each one in addition.

The next question referred to in the memorial was the sum paid by clubs in the dispensary. It was stated that 3s. a member a year was too small a sum, and that very few clubs held by other medical men of the town paid less than 4s., 4s. 6d., or 5s. This suggestion does not appear to have been accepted by the dispensary committee.

The next point was the request that the whole medical staff should be *ex officio* members of the committee, a rule which, it was added, had existed for many years after the foundation of the provident dispensary. This representation also appears to have been ignored.

Another representation was that the rule with regard to the maximum average sum paid to medical officers should be amended. The rule was as follows:

When the money to be divided among the medical officers reaches an average annual amount of £350 each from all sources, the committee shall at once proceed to elect another medical officer.

The annual meeting agreed to substitute £400 for £350. The memorial had asked for £450.

At the same meeting the fee of the midwives was increased from 7s. 6d. to 10s.

AN APPEAL.

AN earnest appeal is made by a number of medical men to fellow practitioners and others on behalf of the young widow of Dr. Arthur Jefferies Barlow, who died suddenly on March 10th last at the early age of 37. He was the eldest and only surviving son of the late Frederick Archer Barlow, of 14, North Great George Street, Dublin, and will be remembered by many old friends and fellow students at Trinity College, Dublin, where he graduated. Unfortunately his position through ill-health prevented him from making any provision for his widow, who is without any means whatever, and has no friends to assist her. She is in exceedingly delicate health caused by the long strain of nursing her husband and the shock of his sudden death. It is hoped that a generous response will be made to the appeal, so that substantial aid may be given to so sad and deserving a case. Subscriptions will be received by Dr. J. W. Moore, 40, Fitzwilliam Square, West Dublin; Dr. John Barton, 26, Upper Merrion Street, Dublin; Dr. G. J. Clibborn, 80, Ovoca Terrace, University Street, Belfast; Dr. L. H. Ormsby, 92, Merrion Square West, Dublin; Dr. Henry, 2, Lewisham Park, Lewisham, London; Dr. A. Matson, 619, Holloway Road, London.

Subscriptions already received and promised:

	£	s.	d.
A Friend	5	0	0
Dr. John Barton, 26, Upper Merrion Street, Dublin ...	2	2	0
Dr. A. W. Baker, 18, Lower Fitzwilliam Street, Dublin	2	2	0
Dr. H. R. Swanzy, 23, Merrion Square, Dublin... ...	2	2	0
Dr J. Little, 14, Stephen's Green North, Dublin ...	2	2	0
Dr. J. W. Moore, 40, Fitzwilliam Square West, Dublin	1	1	0
Sir W. H. Porter, Bart., 3 Merrion Square, Dublin ...	1	1	0
Dr. Clibborn, 76, Ovoca Terrace, Belfast	1	1	0
Dr. A. Matson, 619, Holloway Road, London	1	1	0
Dr. Henry, 2, Lewisham Park, Lewisham, London ...	1	1	0

LITERARY NOTES.

WE are pleased to see that the brief note on the late Mr. James Blake Bailey, which appeared in the BRITISH MEDICAL JOURNAL at the time of his death a year ago, has been republished in a supplement to the last number of the *Library*. We mention the fact, however, chiefly in order to call attention to the perpetuation which this reproduction is likely to bring about of an error in our paragraph, which though natural enough, would have been peculiarly distasteful to so accomplished a bibliographer as Mr. Bailey. We there attributed to him the authorship of a work entitled *Modern Methusalehs*. That book was written not by the late Librarian to the Royal College of Surgeons, but by Mr. John Burn Bailey. Its full title is *Modern Methusalehs or Short Biographical Sketches of a Few Advanced Nonagenarians or Actual Centenarians who were Distinguished in Art, Science, Literature, or Philanthropy; also Brief Notices of Some Individuals Remarkable Chiefly for their Longevity*. Among the "nonagenarians or actual centenarians" whose lives are chronicled are St. Anthony the Great (whose "temptations" have furnished a theme for many artists), Luigi Cornaro, Titian, Fontenelle, Mrs. Somerville, and Sir Moses Montefiore. There is a copy of the book in the Library of the Association.

Messrs. Baillière, Tindall and Cox will almost immediately publish the new *Manual of Surgery*, by Professor William Rose and Mr. Albert Carless, of King's College, which was expected last autumn. The same firm also announce a new edition of Pearmain and Moor's *Manual of Applied Bacteriology*, the first edition of which has run out in a few months; and a new work for students, entitled, *Outlines of Practical Surgery*, by Mr W. G. Spencer, F.R.C.S., of Westminster Hospital.

The Scientific Press has added two new volumes to the Burdett Series of popular nursing textbooks. These are *Notes on Pharmacy and Dispensing for Nurses*, by C. J. S. Thompson, and the *Rational Use of Antiseptics in Midwifery Practice*, by R. Brooks Popham, M.R.C.P.Edin., L.R.C.P.Lond., both of which will shortly be issued.

The *Centralblatt für Anthropologie* (Heft 1, 1898) refers to Dr. Ferriani's work on the criminology of minors, which is based on records of 2,000 cases. The influence of steady employment is shown by the fact that, of these 2,000 young criminals, no fewer than 1,112 were idlers. Ferriani says that illegitimate birth, poverty, neglect, and a bad social environment explain the majority of the cases. The prevailing crime was theft. Nearly all the men were masturbators and nearly all the females were profligate. Ferriani recommends farm colonies under active supervision as the best remedy.

In the "Pages from a Private Diary" in the *Cornhill Magazine* for April there occurs the following:

The doctor told me this morning an anecdote which may interest psychologists. He had been attending for some considerable period a country parson, and according to a fashion now becoming antiquated, attending him *gratis*. When in due course the parson died, his widow wrote to inquire how much the doctor would allow her for the medicine bottles. When I recalled Wordsworth's lines:

Alas! the gratitude of men
Has oftener left me mourning,

the doctor observed, first, that Wordsworth was not in medical practice, and secondly, that he says nothing about women. In regard to the first point, I believe it is a fact that country doctors find great difficulty in collecting their fees; and in regard to the second, as gratitude depends upon imagination, it may well be that women, having less imagination than men, are less grateful. The doctor told me "intermittent heart" is a not uncommon female ailment. Sophia, to whom I communicated the anecdote, will have it that it makes nothing against women in general, but only against a particular species with sharply-defined virtues and defects, the country parsoness.

A very important contribution to the anthropology of European populations is promised for publication in the forthcoming *Comptes Rendus* of the Association Français pour l'Avancement des Sciences. Dr. J. Deniker, librarian of the Musée d'Histoire Naturelle of Paris, will publish, with full bibliographic data: a large and detailed map of the cephalic index of Europe. This is based not only upon an exhaustive collection of published material, but upon a large body of new data from Portugal, the Balkan States, and other out-of-the-way regions, of which little has heretofore been known. This work is to be followed by similar treatment of the stature and pigmentation as well, large maps in colour having already been constructed for each characteristic.

Messrs. Whittaker and Co. announce the issue of a new and enlarged edition of *The Chemist's Compendium*, by C. J. S. Thompson. The important additions will include a complete synopsis of the new edition of the *British Pharmacopœia* (with essential details), a synopsis of the United States *Pharmacopœia*, a synopsis of the French *Codex*, modern remedies brought up to date of publication, new photographic formulæ, formulæ for preparing medicated wools and surgical dressings, and miscellaneous formulæ, including recipes for all well-known unofficial preparations, etc.

SPECIAL CORRESPONDENCE.

PARIS.

A Painful Occurrence in a Paris Hospital.—Prevention of Contagious Diseases in the French Army.—The Plague.—General News.

A PAINFUL incident has occurred at the Pitié Hospital. A former house-surgeon, M. Martin-Durr, was taken ill, and became a patient in the hospital where he had tended so many others. Death ensued, and his colleagues, the house-surgeons, asked for a pair of sheets to bury him in; these were refused, and the cloth provided by the hospital for burials was offered. The house-surgeons provided what they considered requisite, and paid for the burial, the administration of the Assistance Publique refusing to do so. M. Martin-Durr was held in high esteem in the profession for his abilities, knowledge, and zeal. This occurrence has produced a painful impression in the hospital world. The Paris Medical Society, at its last meeting, protested against the customary vagaries of the administration of the Assistance Publique, and especially against the Martin-Durr incident. M. Martin-Durr was secretary to the Society. The Society demands that house surgeons and dressers shall have the right to treatment in the Paris hospitals without payment.

A new decree, modifying the decrees of 1892, has been issued which ordains that soldiers leaving on sick leave are to be medically examined in order that those suffering from illness or in process of incubation should not be under orders to return to their regiments before complete recovery. The War Minister directs that men shall be examined before leaving their regiment on furlough, and when presenting symptoms of an illness, though slight, which is not contagious, they are to be kept in their regiment. Men on sick leave are to stay with their families as long as their condition renders it necessary.

By a decree of the Minister of the Interior, Hedjaz in Arabia, Canton in Hong Kong, and Mecca are declared to be contaminated by plague, and the necessary sanitary measures are exacted.

The Algerian Local Health Commission declares that it has done all within its power to arrest the epidemic of typhus. The Commission called upon the Prefect of Algiers to carry out the necessary sanitary measures, and declares that the responsibility of possible results rests with the Prefect. Several deaths have occurred.

BERLIN.

A Sanatorium for Nerve Diseases.—Transference of the State Institute for Serum Research to Frankfurt-on-Main.—General News.

A COMMITTEE has been constituted for the erection of a sanatorium for nerve diseases at Zehlendorf, near Berlin. It is intended for the poorer classes, and is to be organised on similar lines as the lung disease sanatoria established of late years in Prussia, which have already done such good work. Of the need for such an institution there can be no doubt. In many nervous diseases it is of the greatest importance to remove the patient from the worry of his ordinary life, and to place him in quiet and agreeable surroundings, under constant medical supervision and skilled nursing. But to the artisan, the small tradesman, the underpaid public school teacher, etc., with their families, a prolonged "cure" of this description has hitherto been unattainable, and the new sanatorium, if efficiently managed, will supply a great want, and will no doubt be the forerunner of similar institutions in other parts of Germany. It is to be built and partially supported by voluntary contributions, so that the charge for each patient need not exceed 3s. a day. The Committee, which includes many persons whose names are well known in scientific, artistic, and financial circles, has published an appeal for funds, and hopes to receive sufficiently large subscriptions to enable it to found several free beds. Dr. Laehr, who for for some years was assistant physician in Professor Zolly's clinic, has been chosen as the medical director of the sanatorium. The plot of ground has been presented to the Committee; it is 26 acres in extent, and admirably situated for its purpose.

The work connected with the transfer of the "State Institute for Serum Research" from Berlin to Frankfurt-on-the-Main is being pushed energetically. By a contract with the State the city of Frankfurt has bound itself to find the building ground (in close proximity to the municipal hospital) and to erect the building and keep it in order, and also, if necessary, to cover a working deficit up to 10,000 marks (£500), the land and building to be placed at the disposal of the State, but to remain the property of the city. The total building expenses have been estimated at about 125,000 marks (£6,250), a sum which seems by no means excessive for a State Institute with such complicated arrangements as are here projected. The cellarage is to contain the electro-motor room, the incubation room, the inoculation room, the bouillon kitchen, a workshop, baths, and the apparatus for heating the building; on the ground floor are the private rooms of the director and his assistants, a chemical laboratory, examination and rinsing rooms, and on the first and second floors other sterilising rooms, laboratories, and workrooms for junior assistants and fifteen students. On the top floor are bedrooms and sitting rooms for the officials and servants. The stables are to be divided into compartments for two horses and a cow, several goats and sheep, and a number of guinea-pigs.

The Central Committee of the German Red Cross Societies at its last meeting decided to be on the alert in case its help should be desirable in the Spanish-American war.

One of the principal subjects proposed for discussion at this year's meeting of German physicians will be "University Education for Women." Professor Penzoldt, of Erlangen, has undertaken to introduce the subject by an address.

MELBOURNE.

Fees for Necropsies.—A Chemist's Error.—The Tuberculin Test in Cattle.—Increase of Typhoid Fever.—Risks of Skin Grafting.

MEDICAL officers attached to hospitals, who are in receipt of a salary, are much concerned at the decision of the Crown law officers that *post-mortem* examinations are not to be paid for out of the general revenue. Until this decree went forth those examinations are regarded very much as the plums in a Christmas pudding, and as part of the legitimate perquisites of resident officers. The Government now declare that salaried officers of subsidised charitable institutions must perform these duties without pay. The younger members of the profession are not contented with this reading of the Act, and propose to test its legality by presenting a case before the courts.

Through an error on the part of a chemist, who substituted sulphate of atropine for muriate of morphine, Dr. S. I. Williams met with a tragic death. He was on his way to visit a lady patient, and stopped at a chemist's to obtain some morphine solution. The chemist made a solution with atropine instead, and the doctor, who was in the habit of taking morphine largely, gave himself an injection before entering the house. After administering a dose to the patient, he gave himself a second injection, and immediately afterwards became ill, then unconscious, and after lingering awhile sank and died. The patient also exhibited symptoms of poisoning, but recovered.

The Government veterinary surgeon has been demonstrating in the pastoral departments of the colony the efficacy of the tuberculin test as a means of diagnosing tuberculosis in cattle. The larger stockholders are recognising the value of the test, and are gradually applying it to their herds. The killing of the diseased cattle in the presence of dairymen and others, with the after-exhibition of the tuberculous character of the disease, is eloquent evidence of the reliability of the test in the very early existence of the disease. Stock breeders are beginning to see that the export trade of frozen meat can only benefit by the publicity given to these demonstrations, as the English consumer would be more likely to support the produce of a country where attempts were being made to minimise the extent of this disease, and would appreciate the efforts made to stamp it out.

Typhoid fever seems to be on the increase. Dr. Gresswell

in his capacity as Chairman of the Board of Public Health is strenuous in his efforts in disseminating information throughout the colony to secure abatement of this scourge. The Board has very little power in regard to the water supply, and the public, particularly the working classes, seem hardly to realise the importance of securing for themselves the purity of drinking water. An attempt is again being made to impress school teachers and parents with the necessity of adopting every sanitary precaution in their daily habits, and in boiling and filtering all water intended for drinking.

A rather curious suit for £500 damages was brought against a Wellington surgeon by a young lady for alleged personal injuries. The lady's statement of claim set forth that defendant desired to perform a skin grafting operation on a girl who was his patient in the Auckland Hospital, and that he arranged with a gentleman who was the city missionary to part with some of his skin, and to get two others to do likewise. The missionary represented to plaintiff and another girl that to part with a little skin for such a purpose would be a gracious act of charity on their part, and they all cheerfully agreed to submit to be operated on. Defendant placed plaintiff under chloroform, and removed from her 52 square inches of skin, and also portions of her flesh and tissues. Plaintiff suffered for a long time grievous agony, and stated that her body was permanently disfigured. She declared the wounds on her arm were 5 inches long and 4 inches broad, making 20 inches in all. The wound on her leg was 8 inches long and 4 inches broad, and she never consented to an operation like that. The defendant remarked that he thought she had given him leave to take as much skin as he required for the operation, and that he had not thought it necessary that he should have informed plaintiff how much skin he intended to remove. After a good deal of expert evidence had been given on behalf of the defendant, the jury found a verdict in his favour. The patient on whom the grafting was performed had been severely burnt on the thighs, and ultimately died from her injuries.

HONG KONG.

Small-pox, Rinderpest, and Foot-and-mouth Disease.

THE epidemic of small-pox has continued throughout the month of February, and cases are still being reported. Free vaccinating stations have been opened in various parts of the colony, and a careful inspection of the soldiers in the garrison and of the inmates of most public institutions has been made for purposes of vaccination, while house-to-house visitation has been practised in the specially infected districts of the city. The cases and mortality have been as follows:—

	Cases.			Deaths.		
	Non-Chinese.	Chinese.	Total.	Non-Chinese.	Chinese.	Total.
January ...	11	43	54	2	29	31
February...	25	62	87	7	33	40

An outbreak of rinderpest occurred just at the close of the month of February in one of the sections of the stock of the Dairy Farm Company, and by order of the Sanitary Board several European-bred cattle have been slaughtered. Stringent measures are being adopted to prevent the spread of the epidemic to other herds in the colony. Fortunately, foot-and-mouth disease, recently prevalent all over the colony, has now almost disappeared, but is still widely spread among the cattle on the mainland in the adjoining province of Kwang-Tung (Canton).

SUCCESSFUL VACCINATION.—Mr. F. H. Turner, of East Bergholt, public vaccinator for the Capel District of the Samford Union, has received the Government grant for efficient vaccination. Dr. J. J. Rutherford, public vaccinator for the Seventh District of the North Bierley Union, has received the grant for the third time; and Dr. A. T. Brand, public vaccinator for the Driffield District of the Driffield Union, has been awarded the grant for the fifth time.

CORRESPONDENCE.

FRIENDLY SOCIETIES.

SIR,—On several occasions you have been asked your opinion of the National Deposit Friendly Society, and (latterly at any rate) your answer has always been that it is inadvisable that medical men should accept its terms. There are, apparently, large numbers of medical men who do not share your opinion, and who seem to jump at these terms as they, unfortunately, do at others far less remunerative.

The National Deposit Friendly Society has a magazine, and in the issue for April the Manchester Medical Guild and the practitioners of Gateshead are specifically mentioned as examples of the minority which refuses to act for the Society. Our Association (which includes all the practitioners in the town) discussed the whole question a few months ago. We then resolved that we could not attend patients on the Society's scale, and this resolution having been loyally kept the National Deposit Friendly Society has made no more members here. *Hinc illæ lachrymæ.*

We have thought it only fair to give the reasons for our action, and a letter has been sent to the National Deposit Friendly Society *Magazine*, which the editor has kindly promised to print in the June number. But this is a question which concerns the whole profession, and we would like to place the matter before your readers.

First, it is to be noted that this Society has two excellent rules well worthy of imitation by the other friendly societies. It pays the doctor for work done, and not by contract, and it allows its members to select any medical man they please, providing the latter will accept payment on the Society's scale. This scale is as follows:

	£	s.	d.
Visit and medicine for two days	0	2	6
Beyond three miles, extra per mile	0	0	6
Members entitled to over 5s. daily sick pay, extra for every 1s. over 5s., per visit	0	0	6
Intermediate visits in dangerous cases	0	1	0
Attendance at surgery and medicine for two days ...	0	1	6
Fresh supply of medicine for two days	0	1	0

These terms would in my opinion be perfectly fair if guarded by a strict wage limit. Unfortunately, however, there is no wage limit, and our local experience leads us to say that the people attracted are chiefly the best-paid artisans. These men constitute with us the great bulk of our best patients, and they have always in the past paid, and paid willingly, the usual 2s. 6d. all round.

The Society has in addition to its medical and sick benefits an elaborate and apparently good system for the promotion of thrift. We are thus practically asked to forego part of our incomes in order that it may be added to the savings of members of the upper working classes—people quite as well off in their way as the average practitioner. Being men in pursuit of a livelihood, and not capitalists with an abnormally developed taste for philanthropy, we decline. Our objections may be summed up as follows:

There is no wage limit, and unsuitable people gain admittance to this Society, and thus get cheap medical advice. The only grounds on which a claim for reduction of fees can be rightly made is poverty. The members of the National Deposit Friendly Society cannot as a whole make this claim. Secondly, and this we would press earnestly on the attention of the profession, if this scale be accepted generally, without any wage limit, and this Society gets a good hold, the standard of medical remuneration must fall to this level. It would be impossible to go on charging 2s. 6d. all round to A., while B., his neighbour, in as good or better circumstances, is getting 1s. intermediate visits and 1s. 6d. consultations.

The profession has made a huge mistake in its dealings with the friendly societies, and it is our duty to see that this mistake is not repeated when new arrangements are being made. When the rate of medical remuneration was fixed for the friendly societies there can be no doubt that it was meant to apply to poor men. The 2s. 6d., 3s., or 4s. per annum now paid is obviously a charge fixed on a semi-charitable basis. How the system has been abused we all know, and we shall have only ourselves to blame if we allow another yoke to be fixed on our necks by the National Deposit Friendly Society and similar societies which cater for the

better-paid class of workmen, for their wives and families, and, in fact, for anybody they can get.

As far as Gateshead is concerned we can have no dealings with this Society on its present scale of charges, or so long as this scale is applied indiscriminately.—I am, etc.,

ALFRED COX, M.B.,
May 2nd. Hon. Sec. Gateshead Medical Association.

PAYMENTS BY HOSPITAL PATIENTS.

SIR,—Mr. T. Garrett Horder is wrong in stating that I have "taken up the *rôle* of an advocate of one hospital." This is, of course, not the case, although I fail to see on what grounds I am debarred from stating the truth about any particular hospital which I find to be well administered and thoroughly efficient.

I have merely dealt with the system of check in the out-patient department of the Central London Throat and Ear Hospital, which has been successfully worked there for twenty years and upwards to my personal knowledge.

As to the time I devoted to the investigation, I spent upwards of three hours at the hospital on the day of my visit; I went over the whole of the new cases of the day, and also those who were in attendance at the hospital extending over a period of some three weeks. I picked out patients actually in attendance, after going over the whole number present, and I further investigated every case on the books which seemed to me to offer *primâ facie* reason for special inquiry. The methods of investigation adopted by the representatives of the Hospital Reform Association seem to be very different, if I am correctly informed that they spent three minutes in this hospital when they came to make this inquiry into the system of out-patient relief.

If Mr. Horder's Society undertakes investigations it is necessary that they should give an amount of time to the work and adopt much more thorough methods than have heretofore prevailed, if I may judge from the report which has been made to me by hospital authorities in regard to these so-called visits of inspection.—I am, etc.,

Porchester Square, W., May 7th. HENRY C. BURDETT.

SIR,—The letter of Mr. Garrett Horder in the BRITISH MEDICAL JOURNAL of May 7th has been brought under my notice, and in it I observe the following paragraph: "With respect to the inquiry system, I think it must strike most people that the principal object aimed at is to discover not whether the applicants are proper persons for hospital relief, but how much can be extracted from their pockets." Permit me, as the Chairman of the Committee and Treasurer of the hospital since its foundation, close on twenty-five years ago, to repel this unworthy charge.

It is within my personal knowledge that while on the one hand applicants offering to pay large contributions are repeatedly refused admission (ample evidence of this can be given if the fact is doubted), on the other hand it is a constant occurrence that, on just cause being stated, a patient's contribution is either reduced or remitted altogether.

In the last annual report of this hospital, from which Mr. Horder quotes when it suits his purpose, he might have found the statement that out of 13,112 patients admitted (over 42 per cent.) 5 547 were received absolutely free, and that, taking the whole of the patients paying and non-paying together, the contributions amount to an average of 6d. for each attendance.

I am sure, Sir, that after this explanation you will feel regret that such a gratuitous insult to the "managers" of this hospital should have gained admission into your columns, and that you will join me in calling upon Mr. Horder either to withdraw it or to better substantiate its veracity.—I am, etc.,

ALFRED HUTTON,
Chairman Central London Throat and Ear Hospital.
Army and Navy Club, May 9th.

THE MASTOID OPERATION.

SIR,—Mr. Marsh, in his interesting paper on Cerebral Abscess, concludes that his cases show the necessity for a mastoid operation in all cases of suppurative middle-ear disease that do not yield to careful treatment by ordinary methods.

I fail to see that these cases prove anything except the importance of curing cases of middle-ear disease, and that the treatment by the ordinary methods is often unsatisfactory, for of Mr. Marsh's cases two (Nos. I and V) had had no treatment at all, and in Cases II, III, and IV, the ordinary treatment had failed. Mr. Marsh's line of argument appears to be—these cases did badly, they had not been operated on, therefore operation should have been done. His conclusion is illogical, and I think it is also erroneous. It is to my mind extremely doubtful whether in uncomplicated cases we gain anything by making an opening through the mastoid. The most troublesome cases I have ever had have been those in which the mastoid had been opened either by disease or by the surgeon. It is likely enough, however, that some of these neglected cases benefit by the greater attention they receive after operation.

That the treatment of this disease by the "ordinary methods" is unsatisfactory I know well, and on this subject I have already trespassed on your valuable space, but I am confident that the methods I have advocated in the JOURNAL, if carefully carried out with judgment and perseverance, will prove successful in uncomplicated cases. Cases that are complicated with cerebral or bone abscess require, of course, operations, and the case with pin-hole perforation needs special consideration; but in this case the mastoid operation is probably not the most rational procedure. The "ordinary methods" of treatment, as I have seen them in out-patient aural departments, have proved a failure. These cases, if they are to be cured, as they undoubtedly can be, must be taken in hand and not be left to look after their own treatment. After all, the difficulty is, to a great extent, one of time and accommodation; but if these cases can be taken into hospital for operation, it is surely better to admit them for cure without operation. I do not wish to enter now into details as to the best course to take with these cases, but I should like to insist upon the necessity of frequent irrigation for a considerable period, and once more to express a preference for the silico-fluoride. If strong spirit lotions are used in the early stages the discharge may usually be lessened; but this is, in my opinion, undesirable, and the apparent improvement is often only temporary. Inspection of the middle ear should frequently be made. This is sometimes omitted. Only this week a lad was brought to me whose ear had been syringed daily for three months by a medical man. As the meatus was blocked with polypi, the lotions used could never have affected the middle ear. In conclusion, let me say that it is only by "extraordinary" care and perseverance that many of these cases may be cured. The results, however, well repay the trouble, and render the mastoid operation unnecessary.—I am, etc.,

F. FAULDER WHITE, F.R.C.S.,
May 9th. Surgeon to the Coventry Hospital and to the Aural Department.

THE ALKALINITY OF THE BLOOD IN GOUT.

SIR,—If Dr. Luff is satisfied[1] with testing the effects of an attack of gout on the alkalinity of the blood, while giving drugs the influence of which on that alkalinity he cannot really estimate, and further contents himself with investigating his physiological foundations after he has published his pathological conclusions, it is certainly open for critics to suggest that the drugs might have raised the alkalinity of the blood, but for the effect of the gout attack in depressing it.

It is not quite true that my view of the causation of a gout attack is based on "no experimental evidence whatever," but it is based on no chemical experimental evidence of my own, for the simple reason that the evidence of others has been amply sufficient to explain my results, and because much of the chemical explanation of physiological, clinical, and pathological facts, has admittedly been hypothetical and unimportant.

Such a fact as this, that dozens of people who, like myself, suffered from severe recurrent bilious or sick headaches, have got almost complete freedom from them as the result of giving up animal flesh and tea, is none the less a fact because chemistry in the hands of Dr. Luff may fail to give an explanation. Chemistry will have to try again, till it succeeds, and personally I do not think it will have much difficulty.

Similarly, with the causation of arthritis there seems to me to be plenty of physiological, pathological, and clinical evidence that it is due to the local irritant effects of uric acid,

[1] BRITISH MEDICAL JOURNAL, May 7th.

probably in the form of quadriurate in strong solution or suspension, and after the arthritis thus caused has gone on for some days, part of this uric acid may be deposited as a biurate, about the solubility of which we have heard so much from Dr. Luff in his Goulstonian Lectures; but this biurate, as clinical and pathological experience tells us, may lie in the tissues for months and years, giving rise to almost no irritation of any kind.

In speaking, therefore, of the causation of a gout attack I am dealing only with the solubility of uric acid or a quadriurate, and the researches of Sir A. Garrod or Sir W. Roberts have never raised in my mind any doubt that the chemistry of the above compounds would suffice to explain completely all my clinical results.

Now, Dr. Luff himself tells us in the above-named lectures that serum dissolves less and less uric acid the more it is neutralised with hydrochloric acid, and Sir W. Roberts tells us[2] when speaking of the solubilities of uric acid and quadriurates that "the chemical and solvent power of these media on uric acid depends on the sodium carbonate contained in them."

Clinically, if you administer to anyone sodium carbonate you get an increased excretion of uric acid in the urine, or if hydrochloric acid a diminished excretion, as I pointed out in the *Journal of Physiology*, vol. viii, some ten years ago. These changes, together with changes in acidity, occur in the urine within two or three hours of the dose being swallowed, yet Dr. Luff has been content to examine the blood once in twenty-four hours, and compare its reaction with the total acid in the urine of the day.

The above chemical observations either serve to explain the clinical results or they do not, but no one, I suppose, will argue that clinical experiences which can be repeated and verified by anyone in six hours are to remain unrecorded, and the diseases on which they bear untreated, till chemistry can give them a satisfactory explanation.

When we come to do with the re-solution of deposits in old gouty joints, and are really concerned with the solubilities of the biurate, the researches of Sir W. Roberts suffice, as I have elsewhere[3] pointed out, to explain very completely both my clinical results and pathological observations; and Dr. Luff's recent work has not, so far as I know, disturbed this foundation.

Dr. Luff naturally seeks to exalt the importance of chemistry, but I would remind him that pyramids have as part of their natural endowment the power of standing firmly enough on their base, but refuse to attain to stable equilibrium on their vertex, and that chemistry cannot justly claim to be more than the vertex, and that still incomplete, of the pyramid formed by the physiology and pathology of uric acid.—I am, etc.,

Brook Street, W., May 9th. ALEXANDER HAIG.

DOSAGE OF CHLOROFORM.

SIR,—The admirable address of Dr. Waller, on the "Dosage of Chloroform," will be studied by the profession with the greatest interest. The Society of Anæsthetists should investigate the matter. There is no apparatus for the proper dosage of chloroform. The following considerations may be of use in constructing one.

If it is necessary to measure the chloroform vapour, it is also requisite to gauge the air used if we would establish a definite proportion between them. Therefore, a close-fitting face piece, and a chamber to mix the vapour and air in, are necessary.

The amount of tidal air for an adult breathing quietly is 20 cubic inches. A child might breathe 5 or less. Deep respiration would probably amount to 100 cubic inches. This air should all pass through the mixing chamber to evenly dilute the chloroform. If the chamber is too large it will not be thoroughly emptied, and chloroform vapour will accumulate. Therefore it should be rather smaller than the tidal-air measurement. A box 5 inches cube would be large enough, and it could be made smaller to any required degree by having one end made to push up into the box.

The expired air contains chloroform, as only a part of that inspired is absorbed (for greater accuracy the amount of this unabsorbed expired chloroform ought to be ascertained). Such expired air ought not to be rebreathed. Therefore the face piece should be as small as possible and separate from the mixing chamber, and have an ingress tube and an exit tube, both valved. The face piece should be aseptic. Therefore it ought to be easily detachable from the other parts. It should be made of hard polished material, not acted on by moisture, ether, or chloroform, or ordinary antiseptics or hot water. No leather or rubber should be used about it (except, perhaps, the valves).

Patients' faces differ in size and shape, therefore the mask should be adaptable, or several must be carried. The mask might be made child's size, and to the lower edge attached a strip of stout cloth, 2 inches wide, coated on the outer side with a varnish unacted on by ether or chloroform (Christia Tissue). This could be easily renewed for each patient, and cut to shape as required.

To volatilise the chloroform the Junker principle would be well adapted; but the pump should be capable of delivering small and very exact amount of chloroform vapour. A bellows with a stop adjustment and index to deliver from one-tenth to one minim volatilised into the mixing chamber would meet the requirements; or several indiarubber bellows balls of proper sizes, one behind the other on the tube, the the smallest nearest the chloroform bottle. In either case the anæsthetist could easily vary the dosage by moving his fingers.

Another device would be to dilute the chloroform (as in the A. C. E. mixture, 1 in 6). The anæsthetic might be atomised or sprayed, and allowed to fall on a diaphragm of any porous material across the air current in the mixing chamber.—I am, etc.,

Twickenham, May 7th. H. HOWARD MURPHY, M.D.

THE PATHOLOGY AND TREATMENT OF GENU VALGUM.

SIR,—I fully acknowledge the value of the skiagraphs Professor C. A. Morton has published, and I recognise also the importance of deformities of the tibia in many cases of genu valgum. Professor Morton has apparently misread my previous letter, which reads: "Softened and thickened epiphysial cartilages," not "articular cartilages." It is not uncommon for an epiphysial cartilage in severe rickets to be replaced by a layer of soft tissue half an inch or more in depth, and even more compressible than an intervertebral disc. A good example of this in a case of genu valgum is given by Hoffa.[1] In this instance the thickened epiphysial cartilage is "from two to three times broader on the inner than on the outer side." I think that a good vertical frontal section of the bones at the knee is quite as instructive as a skiagraph, and on such dead-house specimens I have based my pathological opinion. This case of Hoffa's also illustrates the efficacy of deformity of the femur as a cause of genu valgum. It would not, however, be right of me to let it be supposed that I under-rated the importance of deformity of the tibia as a cause of genu valgum. This, indeed, has long since been established by Mikulicz and Symington on pathological, and by Noble Smith and J. Ewens on clinical, grounds.

The exact nature of the anatomical deviation underlying the condition pales in importance before the fact that over 90 per cent. of cases of genu valgum in children can be completely cured by splints that can be made for eighteen pence a pair, that do not require the patients to be "kept off their feet," but, on the contrary, allow them to walk about, and that are so simple that the mother readily learns to apply them with accuracy and efficacy. If osteotomy is done in young children, the same course of splinting is required as without it, and therefore the operation is wholly unnecessary.

A relatively small proportion of cases of rickets require rest in bed, but this is on account of general malnutrition and not on account of deformity. I know that some writers, whom no one honours more than myself, recommend the use of splints reaching beyond the feet; but, from the experience of hundreds of these cases annually, I know that this is unnecessary and undesirable.

Since many children under 6 months of age who have never

[2] Croonian Lectures, 1892, p. 84
[3] *Uric Acid*, fourth edition, p. 500.

[1] *Orthopædi Surgery*, p. 593.

been "on their feet" have genu valgum, it is doubtful whether keeping children off their feet will cure the deformity save in exceptional cases. By proper splints the commonest rickety deformities, genu valgum and genu varum, can be completely cured, and this with the children running about, going to school, and what not. The more difficult anterior curving of the tibia can also be cured in slight cases and improved in severe cases by the addition of a posterior to the internal splint.

I have ventured to write somewhat fully only because of the vast importance of the subject, which concerns thousands of poor children, and influences the rates and taxes and also the recruiting fields for the navy and army, as well as the individuals immediately concerned.—I am, etc.,

Old Cavendish Street, W., May 9th. J. Jackson Clarke.

AN ADVERTISEMENT.

Sir,—I take the liberty of enclosing for your perusal the following advertisement, which appeared in to-day's *Glasgow Herald*:

MEDICAL.—Wanted, strong Man as Surgeon for ——— Friendly and Trades Societies Medical Institute; hard night worker, active walker; must be civil, trustworthy, obliging, sober.—Apply, Committee, with last character.

It seems to me that what the Committee of the — — Friendly and Trades Societies Medical Institute really require is a hybrid betwixt Sandow, a night policeman, and a club waiter.—I am, etc.,

John Freeland Fergus, M.A., M.D.

Strathaven, May 9th.

Obituary.

Deputy-Surgeon-General S. B. PARTRIDGE, C.I.E., Q.H.S.

Bengal Medical Service (retired).

On May 11th, in the presence of relatives, brother officers, and friends, the mortal remains of Samuel Bowen Partridge were laid to rest in the cemetery at Norwood.

This distinguished medical officer was born at Cardiff in 1828 and was educated at King's College, London, where he had a most brilliant career, during which he gained many prizes. After passing the Royal College of Surgeons he entered the East India Company's service on the Bengal establishment as an assistant surgeon in the year 1852. Shortly after his arrival in India he was ordered to Burmah to join the Bengal Field Force, and after performing excellent service in a variety of ways, on his return to Bengal he served as civil surgeon and also with a cavalry regiment. On the outbreak of the mutiny in 1857 he served with a cavalry regiment in Oude, and when the siege of the Residency of Lucknow commenced he served throughout the whole of that eventful period in Dr. Fayrer's house in the garrison, where his energy, activity, and professional knowledge were of the greatest benefit. He was present with the expedition under Colonel Burmester, in which several officers were killed, and he also accompanied the ill-fated expedition to Chinhut, where he had a narrow escape of losing his life. Subsequently he distinguished himself as field-surgeon in the operations under the Commander-in-Chief at the recapture of Lucknow. For these services he received the brevet promotion of surgeon, was allowed to count a year's service, and received the thanks of Government in general orders.

The state of his health after all these exceptional services rendered it necessary for him to return to England. After a short stay, during which he became a Fellow of the Royal College of Surgeons, he resumed his duties in India, and was then appointed to the Medical College of Calcutta, in which he had on a former occasion officiated for a short time, as Professor of Anatomy and Surgeon of the Medical College Hospital. He was also an Examiner in the University of Calcutta, a member of the Senate, and for a short time President of the Medical Faculty of the University. Subsequently, on the retirement of Dr. Fayrer, he succeeded to his appointment as First Surgeon and Professor of Surgery in the Medicl College Hospital, which appointment he continued to hold with the greatest distinction. In addition he had an extensive practice in Calcutta until 1880, when he retired from the service.

After his return to England Deputy Surgeon-General Partridge was appointed member of the India Medical Board at the India Office, where he rendered most valuable service, until loss of sight made his resignation of that appointment necessary, to the deep regret of his colleagues and friends.

The news of his death will be received in India, as it has been in this country, with the greatest sorrow. He was held in the highest esteem by everyone who knew him; no man was ever more deservedly loved and respected than he was. His intellectual powers were great, and he was as much characterised by the breadth as by the accuracy of his knowledge; most laborious in his studies, most persevering in pursuing to the end any object which he had undertaken; with the profoundest mathematical problem as with the simplest piece of mechanics he was equally at home. As an anatomist he was unrivalled in the clearness of his demonstrations; as a surgeon he was remarkable not only for his skill as an operator but for his great powers of diagnosis, nor was he less remarkable for his capacity for dealing with disease in its tropical and other forms, whilst his firm, gentle, and patient method of treatment inspired all who came under his care with confidence and affection. Notwithstanding his great attainments and his remarkable intellectual power, he was as humble as a child. The simplicity of his character was not less marked than its strength. He was naturally beloved by all his brother officers, associates, and pupils, and in fact by everyone who knew him. Whilst so gentle and tender in every way, a rock was not firmer than he where firmness was required. Not even Bayard himself, or Outram (with whom he was justly compared) better deserved the title of "Chevalier sans peur et sans reproche."

On Deputy Surgeon-General Partridge's retirement from the India Office the Government signified their approval of his services by creating him a Companion of the Indian Empire. He had previously been made an Honorary Surgeon to the Queen, and had also received a medal and clasp for Burmah, and a medal and clasp for the siege and for the recapture of Lucknow.

J. F.

ALFRED JOHN WALL, M.D.Lond., F.R.C.S.

Indian Medical Service (retired).

Dr. Wall, whose death was announced a few days ago, was the son of a medical man who had a large practice in the West End of London. He was born in 1847, and after receiving his preliminary education at Epsom College, matriculated at the University of London in 1865; he then entered St. Mary's Hospital where he was known as a hard worker and won a number of prizes. In 1868 he gained the Scholarship of Anatomy of his school, a distinction which carried with it the title and duties of Assistant Demonstrator of Anatomy. In 1870 he was appointed Resident Medical Officer of the hospital, becoming Resident Obstetric Officer in 1871. He took the degree of M.B. in 1871, that of B.S. in the following year, and that of M.D. in 1873. In 1872 he became a Fellow of the Royal College of Surgeons of England by examination. He took a high place in the examination for the Indian Medical Service in 1873, and almost immediately on his arrival in India in the early part of 1874 he was appointed Resident Medical Officer at Bhangulpore.

In 1875, when the Snake Poison Commission was appointed, Dr. Wall was offered a seat on it. The greater part of the practical work of the Commission fell upon him as the youngest member. He held the position for three years, and then, in consequence of failing health, he sent in his resignation. He was twice asked to reconsider this step, but when he adhered to it he received a letter of thanks from the Government for the valuable work he had done, and was given his choice between an appointment as Residency Medical Officer in Nepaul and Deputy Professor of Anatomy in Calcutta. Considerations of health led him to choose the the former. Some time afterwards, when travelling on furlough, he contracted malarial fever, which became complicated with pneumonia. In consequence he came home invalided, and never recovered sufficiently to return to India.

In 1883 he published a book entitled *Indian Snake Poisons*

which made his name widely known. He next took up as a a subject of special study the cholera, and followed successive outbreaks of the disease over Europe. In Italy and Sicily he was especially distinguished for his services during these. The Municipal Council of one town presented him with an address and the freedom of the town in recognition.

In 1893, as a result of these travels and investigations, he published a book on *Asiatic Cholera*, which was favourably received.

He had always been an indefatigable student of pathology, and he now turned his attention still more closely to it, working at it for many months together in Buda Pesth, Berlin, and Paris.

In December, 1897, he left England with the intention of going to the Riviera, in the quiet there to put his pathological notes into form. But whilst staying in Paris *en route* he became so ill that by the advice of a specialist whom he consulted he returned to England and asked his sister to go to Hastings with him.

His condition became so much worse that on April 21st he was brought up, under care, to London, and after consultation with Dr. Savage was placed in charge of a trained attendant under the care of a medical man. On Wednesday, April 27th, he managed to escape from his attendant by going out another way from St. George's Hospital, where he had gone, he said, to call upon some friends on the medical staff there. Although the police were at once communicated with in London, and telegraphed to stop him at the ports of Dover, Folkestone, Harwich, and Newhaven, nothing was heard of him by his friends until the following Monday, when, in consequence of information received by his sister, she went down to Guildford, and identified a body lying there as that of her brother. He had made his way there the previous Thursday, and early in the morning had ended his life by stabbing himself to the heart. A *post-mortem* examination showed that Dr. Wall was suffering from thickening of the membranes of the brain, and this, together with the evidence his sister was able to give at the inquest that evening, caused an immediate and unanimous verdict of "Whilst of unsound mind" to be returned, in which the coroner fully concurred.

Another St. Mary's man and intimate friend of Dr. Wall from student days writes of him:

"In manner he was diffident, quiet, and retiring. He was extremely well informed in every subject of art, science, and literature—the best possible of companions. He talked German, French, and Italian fluently, and was keenly interested in the politics as well as the literature of the countries in which he made his home."

This brilliancy of mind continued to the last, and even whilst under medical care and restraint he captivated all with whom he came in contact by his mental power and gentleness of demeanour. Throughout his life Dr. Wall had been singularly abstemious, and of very regular and quiet habits.

JOSIAH AUSTEN, M.R.C.S., L.R.C.P.

MR. JOSIAH AUSTEN, who died at Ealing on May 2nd, at the age of 62, had been for some months rapidly failing in health with organic disease and general arterial degeneration. He received his medical education at Middlesex Hospital, and obtained the diploma of M.R.C.S. in 1852 and that of L.R.C.P.Lond. in 1869. Almost immediately on qualifying he entered the Royal Navy as Assistant-Surgeon, and was appointed to the East India Station, joining his ship at Rangoon during the Burmese war. Here he first saw active service in charge of boats blockading Meaday up the Irrawaddy, for which he received the medal and clasp. After this he was employed on the Hong Kong station as supernumerary, and on several occasions served in expeditions against pirates. He subsequently served in Japan (being present at the opening of the treaty ports by the British squadron), the Gulf of Tartary, and through the greater part of the China War of 1856-57, on many occasions seeing active service (medal). He was invalided in 1857, and shortly afterwards was appointed to Haslar Hospital, where he remained three years as Pathological Assistant, being a near successor in that office to the late Sir Andrew Clark. He became Staff-Surgeon in 1861, and retired from the navy in 1864. Mr. Austen then settled at Ramsgate, where he practised for twenty-five years. He was held in high esteem, and held the post of Surgeon to the Ramsgate and St. Lawrence Royal Dispensary. He retired in 1890 to live at Crouch End and latterly at Ealing. His bright temperament caused him to be beloved, while his upright character and devotion to the best traditions of the profession made him respected by all with whom he came in contact. He leaves a widow, four sons, and one daughter to mourn his loss.

WE have to record the death on April 30th of Dr. LUKE BLUMER, of Sunderland, at the age of 70. Dr. Blumer, who received his medical education in Edinburgh, became L.R.C.S.Edin. in 1849, and L.R.C.P.Edin. in 1859. In 1862 he took the degree of M.D.St.And. He held the post of Poor-law Medical Officer and Public Vaccinator in the Sunderland Union for 46 years, and was held in high esteem by his medical brethren, and by all who knew him. By indefatigable energy he built up a large and valuable practice, and had the satisfaction of living to see his sons take distinguished positions; one of them is Medical Superintendent of the State Asylum, Utica, New York, another is Surgeon to the Sunderland Infirmary, and a third Surgeon to the Staffordshire General Infirmary. Dr. Blumer's familiar form and genial presence will be sadly missed by a large circle of attached friends.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Anton Krassowski, the leading gynæcologist of Russia, for many years Professor of Midwifery in the Military Medical Academy of St. Petersburg, author of an *Atlas zur Ovariotomie*, Lecturer on Midwifery and Diseases of Women, etc., aged 77; Dr. Ludwig Schillbach, Extraordinary Professor of Ophthalmic Surgery in the University of Jena, aged 73; and Dr. George Rosenbaum, of Berlin, a neurologist of considerable repute, aged 40.

SIR RICHARD QUAIN, Bart., F.R.S., whose will was proved recently left property sworn for probate at £118,121 13s. 2d.

THE Russian Government some time ago announced its intention of officially adopting the metric system throughout the Czar's dominions. The *Allgemeine Zeitung* of Munich, in a recent issue, asked: "How long will England stand out? Does she mean to allow the present century to come to an end before making up her mind to take a similar step in progress?"

MEDICAL ETHICS IN FRANCE.—The Gironde Medical Society recently passed a resolution that in every medical school in France regular courses of instructions should be given in professional ethics and in the law relative to the practice of medicine. The majority of the other local societies in France, however, are said to regard the proposition with perfect indifference.

A BILL has been introduced into the Maryland State Legislature prohibiting the issue of a marriage licence to any person suffering from consumption, tuberculosis, insanity, dipsomania, or syphilis. Presumably, therefore, intending bridegrooms will have to arm themselves with one or more medical certificates before presenting themselves before the official whose business it is to issue the fateful document.

THE PASTEUR INSTITUTE AT CONSTANTINOPLE.—The Pasteur Institute at Constantinople, which recently had to close its doors owing to want of funds and the utter indifference as to its wellbeing shown by the Turkish Government, has been reopened. This gratifying result is due partly to the intervention of M. Boulinière, Chargé d'Affaires of the French Embassy, and partly to the action taken by the Imperial Society of Medicine, which addressed a strong protest on the subject to the Sultan. His Majesty's attention having thus been drawn to the condition of the institution, in which he had always taken the keenest interest, at once gave instructions that Dr. Nicolle should be furnished with everything that he required, and satisfactory guarantees were given that funds and all other assistance that might be needed should henceforth be abundantly supplied. It is expected that the outcome of the affair will be a considerable development of the usefulness of the Institute.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

Fleet-Surgeon Thomas L. Horner is promoted to be Deputy-Inspector General from March 9th. He was appointed Surgeon November 9th, 1868; Staff-Surgeon December 26th, 1870: and Fleet-Surgeon April 17th, 1879.

Fleet-Surgeon Edward E. Mahon, C.B., is also promoted to be Deputy-Inspector-General, dated April 4th. His previous commissions are as follow: Surgeon June 4th, 1878: Staff-Surgeon July 18th, 1881: and Fleet-Surgeon June 16th, 1890. He was Surgeon of the *Boadicea* at Durban during the Zulu war in 1879 (medal). As Surgeon of *Flora* he landed with the Naval Brigade during the Boer war, and was present at the actions of Laing's Nek and Majuba Mountain (mentioned in despatches); specially promoted to Staff-Surgeon for gallant conduct at the mountain. He served with a battalion of Royal Marines in the war in Egypt in 1882; he was P.M.O. of the R.M.L.I. Battalion during the first portion of the campaign, and P.M.O. of the R.M. Artillery Battalion for the latter portion, being present at the actions of Mallaha Junction, Tel-el-Mahuta, Mahsameh, Kassasin (August 28th and September 9th), and Tel-el-Kebir: with R.M.A. at the occupation of Cairo and Aboukir Forts (medal with clasp, Khedive's bronze star, Osmanieh 4th Class). As Staff-Surgeon of the *Bacchante*, and served with the Naval Brigade during the Burmese war in 1885-7 (medal with clasp). He was nominated C.B. on Her Majesty's birthday, May 24th, 1892.

Fleet-Surgeon John C. B. Maclean, M.A., M.B., also is promoted to be Deputy-Inspector-General, April 5th. He entered the service as Surgeon March 30th, 1872, became Staff-Surgeon July 11th, 1882, and Fleet-Surgeon December 23rd, 1890. He was Surgeon of the *Alexandra* at the bombardment of the Alexandria forts and during the Egyptian war in 1882, receiving the Egyptian medal with clasp and the Khedive's bronze star.

The following appointments have been made at the Admiralty: Richard D. White, M.A., M.D., Fleet-Surgeon, to the *Ramillies*, May 6th; John John Tyndall, Fleet-Surgeon, to the *Excellent*, May 6th; Gerald J. Irvine, Fleet-Surgeon, to Haslar Hospital, May 6th; William B. Drew, Fleet-Surgeon, to the Royal Marine Depôt, Walmer, May 14th; William S. Lightfoot, Staff Surgeon, to the *Pembroke*, May 14th; Thomas Bolster, Deputy Inspector-General, to the Hong Kong Hospital, May 6th; Thomas L. Horner, Deputy Inspector-General, to Haslar Hospital, May 6th; William Cook, Deputy Inspector-General, to the *Crescent*, June 8th; Norman L. Richards, Staff-Surgeon, to the *Dido*, May 10th; Arthur E. Kelsey, Surgeon, to the *Victory*, additional, May 27th; David W. Hewett, Surgeon, to the *Vivid*, additional, for dental duties, May 10th; Algernon C. Bean, Surgeon, to the *Triton*, May 10th.

ARMY MEDICAL STAFF.

Surgeon-Colonel J. Maxham, M.D., lately Principal Medical Officer at the Cape of Good Hope, is appointed Principal Medical Officer, Bengal, *vice* Surgeon-Major-General T. Walsh.

Surgeon-Major Patrick J. Nealon, M.D., half pay, retires from the service with a gratuity, May 11th. He was appointed Surgeon February 4th, 1882, and Surgeon-Major twelve years thereafter, and retired on half pay on June 5th of last year. He was with the expedition to the Tambaka country, West Africa, in 1892, including the capture of Tambi, and has received the West African medal with clasp.

Surgeon-Major Francis H. Treherne, from the Seconded List, is appointed Surgeon-Major, *vice* E. D. Farmar-Bringhurst, retired, April 17th. Surgeon-Major Treherne, it will be remembered, has just vacated the position of Surgeon to Sir George White on his relinquishing the command of the forces in India.

ARMY MEDICAL RESERVE.

Surgeon-Major G. G. Sparrow has resigned his commission, May 11th.

INDIAN MEDICAL SERVICE.

Brigade Surgeon-Lieutenant-Colonel D. D. Cunningham, M.D., C.I.E., Bengal Establishment, is permitted to retire from the service from June 26th. His commission as Assistant Surgeon from April 1st, 1868; that of Brigade-Surgeon-Lieutenant-Colonel from October 24th, 1892.

Surgeon-Colonel T. H. Hendley, C.I.E., Bengal Establishment, is appointed Inspector-General of Civil Hospitals, Bengal, from April 9th.

Brigade Surgeon-Lieutenant-Colonels Sir A. S. Lethbridge and D. D. Cunningham, C.I.E., have been granted the two extra pensions of £100 each available for the Bengal Establishment for 1898-99, and Brigade-Surgeon-Lieutenant-Colonels F. H. Blenkinsop and J. Arnott those due to the Madras and Bombay Establishments respectively.

Now that the Frontier war is over, leave, which has been stopped for many months past, will be reopened for the Medical Service. A number of officers have been retransferred from the military to the civil side, and it is hoped that a fair proportion of medical officers will now be able to obtain leave.

THE VOLUNTEERS.

Mr. Thomas H. Thomson, M.D., is appointed Surgeon-Lieutenant in the 1st Argyll and Bute Artillery, May 11th.

Surgeon-Captain J. W. Martin, M.D., 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment, is promoted to Surgeon-Major, May 11th.

Surgeon-Major M. H. Taylor, 2nd (Renfrewshire) Volunteer Battalion the Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Lieutenant-Colonel, May 11th.

NURSING ORDERLIES IN INDIA.

Sanction has been obtained from the Government of India to increase the grant for nursing orderlies from Rs.12,000 to Rs.20,000. For this we have to thank the Principal Medical Officer in India, whose representations have at last been successful. Last year, just before the campaign, four trained orderlies were obtained in native regiments instead of two.

CHANGES OF STATION.

The following changes of station amongst the officers of the Army Medical Staff have been officially reported to have taken place during the last month:

		From.		To.
Brig.-Surg.-Lt.-Col.	E. H. Fenn, C.I.E.	Scots Guards	...	Dover.
,,	J. Armstrong	Bombay	...	Cork
Surg.-Major	P. M. Carleton, M.D.	Madras	...	Dublin.
,,	J. L. Halt	Woolwich	...	Jamaica.
,,	C. E. Faunce	Gibraltar	...	Hownslow.
,,	J. R. Barefoot	Punjab	...	Dover.
,,	C. Birt	Bengal	...	Netley.
,,	H. A. Haines, M.D.	Buttevant	...	Punjab.
,,	A. T. I. Lilly	Pembroke Dock		Crown Hill.
,,	C. L. Josling	—	...	West Africa.
,,	R. G. Thompson, M.D.	Curragh	...	,,
,,	F. W. H. D. Harris	Egypt	...	Devonport.
,,	A. A. Sutton	Devonport	...	West Africa.
,,	W. R. Crooke-Lawless, M.D.	Coldstream Gds.		Scots Guards.
Surg.-Capt.	H. T. Baylor	Crete	...	Egypt.
,,	R. W. Wright	Malta	...	,,
,,	J. R. Burrows, B.A., M.D.	Chester	...	,,
,,	D. M. O'Callaghan	Malta	...	,,
,,	G. Raymond, B.A., M.B.	Devonport	...	West Africa.
,,	J. W. Cockerill	Canterbury	...	,,
,,	J. Girvin	Cork	...	Cahir.
,,	A. J. Luther	Malta	...	Egypt.
,,	W. T. Mould	Lydd	...	West Africa.
,,	F. Smith	Netley	...	,,
,,	W. W. O. Beveridge, M.B.	Tregantle	...	Bermuda.
,,	E. McK. Williams	Bengal	...	Portsmouth.
,,	H. E. Dowse	Punjab	...	,,
,,	C. W. Duggan, M.B.	Curragh	...	Gibraltar.
Surg.-Lieut.	L. Addams-Williams	Horfield	...	Malta.
,,	M. MacG. Rattray, M.B.	Edinburgh	...	,,
,,	J. H. Power	Lichfield	...	,,
,,	R. E. G. Phillips	Woolwich	...	Home District.
,,	T. H. M. Clarke, M.B.	Haulbowline	...	Malta.
,,	H. O. B. Browne-Mason	Aldershot	...	Woolwich.
,,	F. S. Penny	,,	...	,,
,,	J. D. G. Macpherson, M.B.	,,	...	Portsmouth.
,,	W. P. Gwynn	,,	...	Chester.
,,	S. de C. O'Grady, M.B.	,,	...	Cork.
,,	A. H. O. Young	,,	...	Curragh.
,,	E. A. Bourke	,,	...	,,
Quart.-Master	G. Merritt	,,	...	Woolwich.
,,	D. J. Gillman	,,	...	South Africa.
,,	W. H. Barton	York	...	Aldershot.
,,	C. Crawley	Crete	...	,,

Surgeon-Major H. E. R. James has taken over duty as Second in Command and Instructor at the Aldershot Depôt and Training School, *vice* Surgeon-Major H. Grier, who however remains stationed at Aldershot.

Quartermaster C. Crawley has succeeded Quartermaster D. J. Gillman at the Training School, Aldershot; the latter officer proceeds to South Africa.

ROYAL MEDICAL CORPS.

We have received communications suggesting that confusion is likely to arise, unless the simple military titles which are to be conferred on the officers of the Royal Corps be extended to two classes of medical officers: (1) Those liable to recall up to 55 years of age. (2) Those now holding retired pay appointments up to 65 years of age. A good deal could be said in favour of these suggestions, which we have no doubt will receive the attention of the Secretary of State for War.

THE SICK AND WOUNDED OF THE FRONTIER.

While statements regarding the large number of sick and wounded arriving at Netley are in circulation we consider it fair to say that only some 441 cases are strictly traceable to the North-Western Frontier operations up to the end of February, and this number includes wounded. The troops in the Khyber, that is, up to despatch of last mail, were in very good health, and a large proportion will be withdrawn before the later hotter and more unhealthy months.

COMMENTS ON LORD LANSDOWNE'S SPEECH.

We have received a number of press comments of a favourable character on Lord Lansdowne's announcements concerning the Army Medical Service.

The *Army and Navy Gazette* asks: "What's in a name?" and answers, "That depends on the circumstances of the case to which the question refers. Lord Lansdowne has acceded to the wishes of the army doctors and formed them into a corps, and if that in any way conduces to their happiness, social and military position, and professional ambition, no reasonable man—soldier, or surgeon, or civilian—can object to the organisation. It will be a source of immense satisfaction if the best men now come forward from the schools to join the new corps."

The *Broad Arrow* says: "The medical profession may fairly congratulate itself on having gained a complete victory, and routed the War Office with all its traditions and distinctions between combatants and non-combatants. The army generally will be only too pleased to accept the alteration, shadowy as it is rather than substantial. We may hope, if we do not quite believe, that we have now heard the last of army medical troubles."

The *Freeman's Journal* says: "There has been a long-sustained conflict between the medical profession and the military authorities..... At last the army authorities found the game of defiance played out ..... The profession has won."

The *Pall Mall Gazette* says: "The 'Royal Army Medical Corps' is to be congratulated on the success which has attended the justifiable and well-managed agitation of its members; not less is Lord Lansdowne to be congratulated upon having overcome certain old-fashioned prejudices

and upon the accomplishment of an act of justice that will do much to promote good fellowship between the combatant officers and their medical comrades."

The *Naval and Military Record* says: "The recognition of the combatant titles of the doctors is now to be carried to its logical conclusion ..... Thus on all important issues the War Office has given way."

THE VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

THE official inspection and examination of the present class of regimental stretcher bearers took place on May 4th at the Queen's Westminster headquarters, James Street, S.W., when a large number of officers, non-commissioned officers, and men representatives of the volunteer corps of the Home District went through a searching ordeal at the hands of Surgeon-Major F. M. Wilson, C.M.G., Army Medical Staff, and Surgeon-Lieutenant R. M. Cooper, Grenadier Guards.

After the inspection in line the class was taken through the stretcher and hand seat drill, and then each member underwent a *vivâ voce* examination in "First Aid." At the conclusion Surgeon-Major Wilson addressed the men, and expressed himself much pleased with the excellent manner in which the work had been done throughout. He then presented the prizes to those who were successful at the prize competition held during the previous week. The London Scottish Rifle Volunteers won the Hamilton Challenge Bowl, and will hold the same until the next competition.

In the unavoidable absence of Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, Senior Medical Officer Instructor, Surgeon-Captain R. R. Sleman was in command.

THE VOLUNTEER MEDICAL STAFF.

THE annual dinner of the Volunteer Medical Staff took place on May 4th at Limmer's Hotel; Sir Joseph Fayrer, Bart., K.C.S.I., presided, and about fifty officers were present. Among the guests were Colonel Barrington Campbell, Scots Guards, who responded for the toast of "The Army," Colonel Mackinnon, A.A.G., and Surgeon-Major Bedford, who proposed the toast of "The Volunteer Medical Association," and made allusion to what it had done and what it might do if it continued to be properly and judiciously managed. The toast of "The Visitors" was given by Brigade-Surgeon-Lieutenant-Colonel Danford Thomas, V.D., and that of "The Chairman" by Surgeon-Captain Rory Fletcher. Sir Joseph, in his reply, alluded to the new Army Medical Warrant, and expressed the opinion that it would tend to popularise the service and overcome the present difficulty of obtaining a sufficient number of medical officers. The proceedings were enlivened by some excellent music arranged by Surgeon-Captains Dundas and Graham Grant.

SURGEON-CAPTAIN C. DALTON, A.M.S.

ANOTHER case of distinguished heroism is thus alluded to in the *Army and Navy Gazette* of May 7th:

"When Lieutenant Craig-Brown, 1st Battalion West India Regiment, was severely wounded in the fighting recently in Lagos, Surgeon-Captain C. Dalton, A.M.S., dressed his wounds on the spot where he was shot down midst a hail of fire. A carrier who was by his side at the time was shot dead. Another thrilling act was performed by the same officer, together with Sergeant Major M'Killop. It was found when the company got into safe quarters that a wounded West India native had been left behind. The man was badly wounded. Captain Dalton and M'Killop at once went back, a distance of 500 yards, into the enemy's quarters under fire, and brought the poor fellow back. Unfortunately the man, whose name was Barrett, died. The act was none the less one of great gallantry, and, as a correspondent puts it, 'at a time when some would try to make out that the army doctor is simply a civilian hanger-on to the army, it is right that all honourable men among combatant officers should rise in revolt against such a libel and injustice, which can in the long run only produce its proper result.'"

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

LONG VACATION COURSES.—Professor Kanthack announces a series of courses and lectures and practical instruction in General Pathology, Morbid Anatomy, Morbid Histology, Bacteriology, and Clinical Pathology in the ensuing Long Vacation, beginning on July 8th. Dr. Hill and Dr. Barclay Smith will hold classes in Practical Histology, beginning on July 5th.

ZOOLOGICAL STATIONS.—The University tables in the Zoological stations at Naples and Plymouth will be vacant in June. Applications for leave to work there are to be sent to Professor Newton by June 1st.

BOTANICAL STUDENTSHIP.—The Frank Smart Studentship in Botany, value £100 a year for two or three years, will be vacant in June. Candidates must have obtained honours in the National Sciences Tripos. Names are to be sent to the Master of Gonville and Caius College by June 11th.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

Part II. Medicine, etc.—Betteridge, B.A., Gonv. and Cai.; T. H. Brown, B.A., Pemb.; Byles, King's; Carter, B.A., Jes.; Corner, B.A., Sid. Suss.; H. G. Deller, B.A., Trin.; A. B. Green, M.A., Down.; Gregory, B.A., Joh.; Harrison, B.A., Magd.; Heilborn, B.A., Gonv. and Cai.; Levick, B.A., Jes.; E. A. C. Matthews, B.A., Trin.; H. E. May, M.A., Cla.; F. A. Mills, B.A., Cla.; Naish, B.A., Trin.; Prest, B.A., Joh.; Ransome, B.A., Gonv. and Cai.; Roderick, B.A., Emm.; J. E. Sandilands, B.A., Trin.; Sargent, B.A., Joh.; Hon. G. H. Scott, B.A., Trin.; C. White, B.A., Christ's.

EXAMINATION IN STATE MEDICINE.—The following candidates have satisfied the Examiners in both Parts of the Examination:

H. W. L. Barlow, O. Beven, H. L. Billett, J. J. Boyd, J. Brownlee, C. E. Corlette, W. E. Dixon, O. Eaton, W. M. Eaton, T. A. Ellwood, W. Hanna, A. Hudson, H. E. R. James, W. H. Jewell, A. E. Larking, W. J. Lubeck, R. P. Mackenzie, E. J. Moore, B. N. Mullan, R. W. C. Pierce, A. E. Roberts, E. Robertson, A. Sheppard, A. C. Turner, S. Worthington.

UNIVERSITY OF LONDON.

A MEETING of Convocation was held at the University Building on May 10th. It was some minutes after the appointed hour of meeting before a quorum was present. Mr. E. H. Busk was re-elected Chairman of Convocation; and Mr. H. E. Allen was reappointed Clerk of Convocation. The report of the Standing Committee was received.

It was resolved that Standing Order 5 be altered so as to fix the October ordinary meeting for the second, instead of the last, Tuesday in October.

Dr. J. Wilkie proposed, and Dr. Robert Barnes seconded the resolution, "That in the opinion of this House the Government ought to take the sense of the House of Commons upon the present London University Bill in a division." After a short discussion, this was carried in a thin house by 20 to 13. Several members did not vote.

In regard to the preservation of examination papers written in the University, for reference in case of necessity, it was stated by the Chairman that all such papers are kept for three years.

The members of the Standing Committee belonging to each of the four Faculties who retired by rotation, were all re-elected.

The House then adjourned.

UNIVERSITY OF EDINBURGH.

THE following candidates have passed examinations in the Faculty of Medicine as undernoted.

First Professional Examination.—May Agnew, W. L. L. Alston, J. Arthur, A. W. Atkinson, A. K. Baxter, A. W. Beveridge, H. Beveridge, W. Black (with distinction), M. N. Bose, C. H. Bosenberg, J. R. Bosman, J. C. Boyd, F. H. Bridgman, J. Brocket, R. D. Brown, D. G. Carmichael, A. Clark, C. E. Clay, A. P. Coskey, D. M. Crooks, W. J. Crow, T. M. Cuthbert, N. S. Cuthbertson, F. I. Dawson, W. H. Elder, S. A. Ellerbek (with distinction), A. P. R. Fennell, N. C. Fischer, Stephen Garvin, Sidney Gilford, J. M. Glasse, R. A. Glegg, W. Goodchild, R. M. Grant, H. W. Gush, F. M. Harper, A. Hutley, R. C. Irvine, I. Ivey, Bertha Jex-Blake, E. Johnston, A. R. Khan, J. Kirkwood, P. Y. Langmore, A. Leach, A. B. Leakey, J. G. M'Caughey, R. J. M'Clelland, F. D. S. Mackenzie, M. E. Mackenzie, D. Mackinnon, T. H. Mackinnon, W. M'Lachlan, R. P. M'Neil, D. M. Macrae, J. B. Mason, J. K. Matheson, P. Mathews, R. Morison, D. N. W. Murray, R. Murray, E. G. O. Nixon, A. C. Owen, J. L. Palmer, Sophie Palmer, J. Politachi, E. T. Potts, E. C. Prichard, H. St. J. Randall, F. L. Rigby, W. A. Robinson (B.A., B.Sc.), T. W. E. Ross, A. J. Rowan, C. J. Shaw, Kate Southon, W. C. Speirs, D. A. Stewart (M.A.), W. H. Swaffield, J. M. Taylor, G. C. Trotter, B. P. Watson (with distinction), J. Wier, Ada Wilkinson, D. Young.

Second Professional Examination.—T. H. W. Alexander, J. D. Anderson, H. E. Arbuckle, S. A. Ballantyne, J. W. Barrack, M. C. Beatty, A. L. Bennett, J. M. Benson, C. A. Bentley, H. Bishop, A. B. Black, J. A. Black, J. S. Bostock, J. B. Boyd, O. C. Bradley, L. P. Brassey, J. M. L. Brown (M.A.), A. Brydon, G. F. Buist, P. C. Camperiole, M. Campbell (M.A.), G. S. Carmichael (with distinction), K. Chapel, C. S. Clark, H. E. Coghlan, V. A. P. Coghill, W. P. Cormack, J. Craig, T. A. Davies, S. L. Dawkins, W. I. Dunn, W. Eadie, J. S. Enslin, D. J. Fergusson, D. C. L. Fitzwilliams, A. Fleming, J. G. Forsyth, A. Frew, W. E. Frost (with distinction), J. S. Geikie, W. Girdwood, T. Graham, St. L. H. Gribben, G. W. Guthrie, P. S. Haldane, G. H. Hannah, N. E. J. Harding, H. Harris, W. E. Herbert, D. Heron, H. O. Hobson, K. W. Hogg, H. J. Hoile, J. T. Hurst, E. B. Jamieson, L. Laurie, R. G. Leach, E. A. Loch, S. L. M'Elderry, A. C. N. M'Hattie, A. J. Mackenzie, D. S. Macknight, H. J. M'Lean, A. J. Mackenzie, D. S. Macknight, H. J. M'Lean, J. M. A. M'Millan (M.A.), A. M'Nab, G. W. P. Maitland, A. A. Martin, A. G. Martin, H. Mason, F. C. Matthew (M.A.), M. M. Meikle, E. T. Melhuish, E. G. D. Menzies, S. H. Morris, J. A. S. Mouat, J. Muuro, H. C. Nixon, N. Patterson, J. Pender (with distinction), L. C. P. Richie, D. Robertson, J. K. A. Robertson, G. A. P. Ross, R. A. Ross (with distinction), W. C. Ross, R. A. Savage, T. B. H. Scott, W. S. Scott, E. T. Selkirk, J. F. Selkirk, H. D. Shepherd, P. W. Shepherd, T. S. Shepherd, F. D. Simpson, G. W. Smith, J. A. Smith, C. B. Snow, C. E. Southon, G. B. A. Speirs, E. R. Sproull, C. S. Steavenson, T. G. Stewart, M. A. Swan, F. T. Thompson, J. H. Thornley, A. Trotter, A. Tweedie, C. S. Vartan, A. G. Watson, N. S. Wells, A. Whyte, G. D. Whyte, F. M. Wigg, W. G. Williams, A. W. Wilson, M. R. Wilson, T. J. G. Wilson, W. H. Winstanley, A. M. Wood (with distinction), C. G. Wotherspoon (M.A.), Frank Young (M.A., with distinction), J. C. Zuidmeer.

Third Professional Examination (New Regulations).—I. Aird, J. Anderson, H. Baird, W. J. Baird, C. A. J. A. Balck, W. J. Barclay (with distinction), E. F. Bashford, J. G. Bell, F. P. Bester, P. J. Bodington, G. A. Brogden, W. J. D. Bromley, A. P. L. Brown, E. B. Brown, G. H. J. Brown, T. C. Caldwell, D. A. Callender, H. G. Carlisle, J. C. Carr, L. M. Chesnev, B. J. Courtney, W. Darling, H. B. Dodds, C. H. Durrant, D. Ewart, W. Ewart, W. R. Eyton-Williams, R. R. Fason, H. Faulkner, D. Fenton, D. Ferrier, E. G. Ford, A. S. Frank, J. Fullarton, J. J. Galbraith, H. A. H. Gilmer, J. H. Gordon, T. B. Gornall, F. J. Gray, A. H. Griffith, P. W. Hampton, F. J. Hathaway, G. G. Hay, A. C. Heath, J. K. M. Hermon, H. T. Holland, A. M. Holmes, J. Hosack, A. G. Jack (with distinction), W. T. Jarvis, R. F. Jardine, J. W. Jerry, D. B. King (M.A.), G. D. Laing, J. S. Lessing, T. Livingstone, E. A. Loch, J. L. Lewis, J. Lockhart, B. G. Macdonald, J. M. Macdonald (M.A.), P. H. Macdonald, P. N. M. Macdonald, W. R. Macdonald, H. Macfarlane, W. M. Mackay, M. MacKelvie, H. M. Mackenzie, T. C. Mackenzie, G. Mackie, R. C. M'Lachlan, P. A. Maclagan, L. Maclagan-Wedderburn, G. C. M'Leavy, R. A. Macneill, W. Macniven, L. W. Macpherson, A. G. Martin, J. Masson (M.A., B.Sc.), D. B. Merry, F. N. Menzies, G. H. Menzies (M.A.), J. Miller (B.S.) (with distinction), J. G. Mitchell, R. M. Mitchell, J. R. Munro, W. A. Murray, A. W. Nankervis, T. P. Oates, J. Orr, T. S. A. Orr, W. Park, A. S. Parker, A. S. M. Peebles, E. J. Peill, A. Preston (with distinction), R. M. Pringle, S. C. Pritchard, W. Purves, H. G. P. Raeburn, F.

G. Ralston, W. Reid (M.A.), A. C. Renwick, R. Ritchie, T. R. Robertson, T. Rogerson, R. M. Rowe, S. Simpson (B.Sc.), C. E. Smith, A. K. Smith-Shand, V. E. Sorapure, S. Southall, W. J. Stuart (M.A.), W. W. Thom, G. N. W. Thomas, J. A. Thompson, R. G. Thomson, R. B. Turnbull, N. D. Walker, C. H. Watson, C. H. J. Watson (with distinction), A. Whyte, A. S. Whytock, H. D. Wilson, A. H. Wood, E. M. Young.

ROYAL UNIVERSITY OF IRELAND.

SECOND EXAMINATION IN MEDICINE.—The examiners have recommended that the following candidates be adjudged to have passed the examination:

Upper Pass.—P. J. Carroll, B.A., Queen's College, Cork; A. G. Heron, B.A., Queen's College, Belfast; D. McMordie, B.A., Queen's College, Belfast; J. O'Leary, Queen's College, Cork; A. M. Thomson, Queen's College, Belfast.

The above may present themselves for the further examination for honours.

Pass Division.—M. D. Ahern, Queen's College, Cork, and Catholic University School of Medicine; J. P. Brady, Catholic University School of Medicine; M. Crowley, Catholic University School of Medicine; J. P. Harold, Charing Cross Medical School; J. Hartigan, Catholic University School of Medicine; P. J. Kane, Catholic University School of Medicine R. Kennedy, Queen's College, Belfast; J. McCrea, B.A., Queen's College, Belfast; Everina S. J. Massy, Royal College of Surgeons, Royal College of Science, and Catholic University School of Medicine; J. A. Mills, B.A., Queen's College, Galway; H. Ross, Queen's College, Cork; H. B. Smith, Queen's College, Belfast; W. J. Thompson, Queen's College, Belfast; W. Watson, Queen's College, Belfast.

M.B., B.CH., B.A.O. EXAMINATION.—The following candidates have satisfied the examiners:

Upper Pass.—*R. T. Booth, Queen's College, Cork; D. Brown, Queen's College, Belfast; *G. E. Charles, B.A., Queen's College, Cork, and University College, London; G. M. Keating, B.A., Catholic University School of Medicine; T. McKelvey, Queen's College, Galway, Edinburgh School of Medicine, and Catholic University School of Medicine; Frances O'C. Sinclair, B.A., Catholic University School of Medicine, and Medical College for Women, Edinburgh.

* Those marked with an asterisk may present themselves for the further examination for Honours.

Pass Division.—Dora E. Allman, Queen's College, Cork; W. L. Armstrong, Queen's College, Belfast; T. Downard, B.A., Queen's College, Galway; R. S. A. Drought, B.A., Queen's College, Cork; T. K. Greenfield, Queen's College, Belfast; G. A. Hogg, Queen's College, Belfast; J. Keogh, Catholic University School of Medicine; W. H. W. McWhirter, Queen's College, Belfast; J. Sloan, Queen's College, Galway; W. J. Sweeney, Catholic University School of Medicine; W. J. Wilson, Queen's College, Belfast.

M.D. EXAMINATION.—The following candidates have satisfied the Examiners:

I. H. McBurney, M.B., Queen's College, Belfast, and Catholic University School of Medicine; A. P. Mooney, M.B., Catholic University School of Medicine; Hester D. Russell, M.B., Royal Free Hospital, London.

THIRD EXAMINATION IN MEDICINE.—The following candidates have passed the Examiners

Upper Pass.—*I. M. Byers, Queen's College, Belfast; *M. Curran, B.A., Catholic University School of Medicine; *W. McCarthy, Queen's College, Cork; W. Starkey, Catholic University School of Medicine.

* Those marked with an asterisk may present themselves for the further Examination for Honours.

Pass.—J. M. Ahern, Catholic University School of Medicine; W. J. Bannister, Queen's College, Cork; J. H. Barbour, Queen's College, Belfast; J. J. Crowley, B.A., Queen's College, Cork; J. M. Dunne, Catholic University School of Medicine; D. J. Farnan, Catholic University School of Medicine; W. C. Gavin, Catholic University School of Medicine; J. R. Gillespie, M.A., Queen's College, Belfast; J. Good, Queen's College, Cork; B. J. Hackett, Catholic University School of Medicine; Alexandrina C. Huston, Queen's College, Belfast; A. F. Kennedy, Queen's College, Belfast; T. Kennedy, Queen's College, Belfast; R. McCarrison, Queen's College, Belfast; T. J. McDonagh, B.A., Catholic University School of Medicine; E. W. S. Martin, Queen's College, Belfast; J. O'Mahony, B.A., Queen's College, Cork; M. L. Rowan, B.A., Queen's College, Belfast; A. W. C. Spence, Queen's College, Belfast; J. Torpey, Queen's College, Cork; J. Waddell, Queen's College, Belfast.

CONJOINT BOARD IN IRELAND.

THIRD PROFESSIONAL EXAMINATION: FOUR YEARS' SCHEME.—Candidates have passed this examination as undernoted:

Completed the Examination.—J. F. C. Meyler, W. I. Murphy, A. McMunn, R. A. O'Donovan, J. W. Shortt, M. R. Whitla.

In Anatomy.—T. F. Cormack.

In Physiology.—A. T. Benson.

THIRD PROFESSIONAL EXAMINATION: FIVE YEARS' SCHEME.—Candidates have passed this examination as undernoted:

Completed the Examination.—W. J. P. Adye Curran, J. Gordon, A. W. A. Irwin, G. Kennedy, F. W. Langstaff, C. A. A. Lever, W. Meagher, P. J. O'Reilly, R. W. Orpen, T. A. E. Rooke, M. J. Russel, J. Sinclair, A. T. Thurston, H. J. C. Wallace.

In Medicine.—W. S. D. Bird, J. Foley, C. E. Jones, C. A. A. Lever, J. McDonald.

In Surgery.—W. S. D. Bird, C. G. Jones, C. A. A. Lever, T. F. Loughrey, R. H. Moffit, J. McDonald.

In Pathology.—J. Foley, C. G. Jones, N. P. Kirby, C. A. A. Lever, R. H. Moffit, J. McDonald.

In Therapeutics.—J. Foley, M. F. Hession, C. G. Jones, C. A. A. Lever, R. W. Richards, H. W. Spaight.

In Forensic Medicine, etc.—J. Foley, M. F. Hession, R. H. Moffit, J. McDonald, R. W. Richards, H. W. Spaight.

FOURTH PROFESSIONAL EXAMINATION.—Candidates have passed this examination as undernoted:

Completed the Examination.—F. A. Benson, R. L. Davis, E. Kennedy, G. R. McDonald, T. A. J. White, M. R. Whitla.

In Medicine.—M. J. Hynes, D. Jackson, G. Kennedy, T. A. E. Rooke.

In Surgery.—W. Kennedy, C. I. D. O. de Vaine, C. N. O'Sullivan, J. P. O. D. Quinn, M. S. Walsh, T. F. White.

In Midwifery.—D. Jackson, M. M. Maughan, M. S. Walsh, T. F. White.

In Ophthalmology.—M. J. Hynes, W. Kennedy, C. N. O'Sullivan, J. P. O. D. Quinn, T. A. E. Rooke, A. F. Studdert, M. S. Walsh, T. F. White.

In Mental Disease.—M. J. Hynes, G. Kennedy, W. Kennedy, T. A. E. Rooke, C. I. Vahey, T. F. White.

In Forensic Medicine, etc.—J. C. Baskin, D. Jackson, A. Gill, V. P. Tighe, M. S. Walsh.

Mr. H. Benson Goulding, F.R.C.S., has passed the examination for the diploma in State Medicine and Public Health.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen, having passed the necessary examinations and having conformed to the By-laws and Regulations, have been admitted Members of the College, namely:

Allen, L. L.	Hall, E. S.	Pike, C. R.
Anderton, W. B.	Hancock, E. D.	Porteous, H. L.
Ashby, E.	Harris, H. G.	Primrose, W.
Atal, P. P.	Harrisson, A. E.	Provis, F. L.
Barnes, F.	Hartigan, T. J. P.	Raines, R.
Barnes, J. A.	Hay, W. L.	Rees, H. W. M.
Bascombe, E. C. D.	Hayward, M. C.	Richards, R. M.
Battersby, J.	Herbert, T.	Richardson-Jones, A. T.
Belfrage, S. H.	Hodgkins, A. E.	Riviere, C.
Bell, K. de R.	Hosken, J. G. F.	Robinson, J. E.
Bernard-Onraët, H.	Howells, J.	Roderick, H. B.
Billups, C. R.	Hunter, J. W. W.	Ross, H. C.
Bingham, S. O.	Inkson, E. T.	Sargent, P. W. G.
Blaker, P. S.	Lacey, W. W.	Schölberg, H. A.
Bond, J. H. R.	Lander, C. L.	Scott, A. L.
Briscoe, J. C.	Langley, J. E.	Scott, E. H.
Clapham, S. C.	Lankester, R. A. R.	Silas, W. B.
Clay, J.	Le Fleming, E. K.	Smallwood, M. E.
Corner, E. M.	Levison, H. A.	Smith, C. C.
Daly, J. R.	Leyden, C. D.	Smith, M. A.
Daniel, A. W.	Lidderdale, F. J.	Smithson, A. E.
Daniel, P. L.	Long, J. E.	Stratton, P. H.
Deller, H. G.	MacLeod, R. A.	Talbot, F. T.
Domela Nieuwenhuis, T.	May, W. J.	Taylor, H. J.
	Matthews, E. A. C.	Taylor, I.
Evans, D.	Mercer, A.	Turner, H. W.
Evans, E.	Millen, S. A.	Walker, G. C.
Fell, M. G. H.	O'Neill, G.	Watson, C. G.
Furnivall, C. H.	Ormond, J. S.	White, F.
Gill, F. P.	Osborne, R. S.	Winchfield, C. F.
Gladstone, A. E.	Pearce, G. H.	Winchfield, W. B.
Godson, A. H.	Penfold, T. C.	Wood, L.
Grapel, F. G.	Pershouse, F.	Woodbridge, E. W.
Gray, H. E.		

MEDICO-LEGAL.

PROSECUTION FOR LIBEL BY DR. WM. BEVAN LEWIS AGAINST MR. HENRY YEO AND MRS. YEO.

ON May 5th a special sitting of the Wakefield City Magistrates was held at the Town Hall to hear charges of libel preferred by Dr. Wm. Bevan Lewis, Medical Superintendent of the Wakefield Asylum, against Mr. Henry Yeo, Editor of the *Spy*, a newspaper published at Manchester, and Frances Edith Yeo, his wife.

Mr. J. Roskill, of London (instructed by Mr. Tevor C. Edwards, solicitor, Wakefield), appeared for the prosecution, and Mr. T. W. Millar, solicitor, Manchester, for the defence.

According to the reports in the local press, Mr. Roskill, opening the case, said that three summonses had been issued, two upon information laid against Henry Yeo, and the third upon information laid against the female defendant. Some of the libels complained of were contained in a newspaper called the *Spy*, and others were contained in divers letters and postcards written by the male defendant. The female defendant was accused of distributing copies of the *Spy* containing one of the libels in the streets of Wakefield on November 6th and 20th of last year.

In accordance with the provisions of the Newspaper Libel Amendment Act, 1888, an order had been applied for and obtained from Mr. Justice Darling giving leave for criminal proceedings to be commenced against the defendants.

It would appear that the general effect of the alleged libel was to charge the complainant with culpable inhumanity, despicable and immoral conduct, and other offences of a like extraordinary character.

Dr. William Bevan Lewis, in giving evidence, stated that he had been Medical Officer at the Wakefield Asylum for twenty-three years, and for the last fourteen years he had been Medical Superintendent of that institution, which accommodated about 1,400 inmates. That the defendant, Henry Yeo, came under his treatment as a criminal lunatic on January 25th, 1896, and on July 8th of that year was removed to Prestwich. Dr. Lewis stated that there was not a shadow of truth in any of the allegations contained in the newspaper extracts which had been read or in the charges contained in the letters, that such statements had caused him much annoyance, and that papers had been sent to two lady members of his family. In cross-examination witness stated that he considered Yeo was insane when he was in the Wakefield Asylum, and it was possible that he was a lunatic still.

In reply to questions as to the female defendant, Dr. Lewis stated that he could not consider her to be blameless in the matter. She had dis-

tributed copies of the paper containing one of the libels in the streets of Wakefield.

Evidence was then called to prove that the libellous copies of the *Spy* were printed to Yeo's order, and distributed according to his instructions. Witnesses were also called to prove the distribution of the papers by Mrs. Yeo, and the receipt through the post of libellous letters and postcards in Mr. Yeo's handwriting.

Mr. Millar then addressed the court on behalf of the defendants, and said that Mr. Yeo was prepared to take the whole responsibility for his actions. If the female defendant had sold papers containing the articles objected to, she had done so at her husband's directions, and could have no possible malice against Dr. Lewis, whom she did not know.

In reply to the charge, the male defendant said he had written and published the alleged libels for the public benefit, and as the result of personal experience.

Mrs. Yeo, in reply to the charge, said she believed her husband's statements to be true and for the public benefit.

The Mayor stated that the Bench had unanimously decided that the defendants should be committed for trial at the next assizes at Leeds. Bail was allowed, the male defendant in his own recognizances for £50, and one surety for £50; and Mrs. Yeo in her own recognizances for £10, and one surety for £10.

HEMANS *v.* COLGATE AND SKINNER.

ACCORDING to the report in the *Times* of May 11th, this action was brought in the Queen's Bench Division by Mr. Henry Hemans, an engineer and merchant, of 35, Queen Victoria Street and Buenos Ayres, to recover damages against Dr Henry Colgate and Mr. George A. Skinner, medical practitioners at Eastbourne, for negligent and unskilful treatment and for false imprisonment in the Waterside Hydropathic Establishment at Eastbourne.

Both defendants denied that there had been any negligent or unskilful treatment on their part, or that the plaintiff had been imprisoned at all.

The plaintiff having given evidence and been cross-examined, the foreman of the jury intimated that they did not think he had made out any case.

The Lord Chief Justice said he thought the plaintiff's ill-health had made him irritable and conceive troubles and wrongs which did not not exist.

The plaintiff was non-suited.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the first or winter quarter of this year, and to the marriages duringthe three months ending December last. The marriage-rate was equal to 17.8 per 1,000 of the population; this rate was 0.4 per 1,000 above the mean rate in the corresponding periods of the ten preceding years, and, with two exceptions, exceeded the rate recorded in any quarter during the past ten years.

The births registered in England and Wales during the three months ending March last numbered 232,145, and were equal to an annual rate of 30.0 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty-one and a half millions of persons in the middle of this year. This rate was 1.1 per 1,000 below the mean rate in the corresponding periods of the ten preceding years. The birth-rates in the several counties ranged from 22.6 in Sussex, 24.0 in Oxfordshire, and 24.5 in Huntingdonshire to 34.3 in Warwickshire and in Monmouthshire, 35.2 in Durham, and 36.2 in Staffordshire. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 31.3 per 1,000, and exceeded by 1.3 per 1,000 the general English rate. In London the birth-rate was equal to 30.8 per 1,000, while it averaged 31.6 in the thirty-two provincial towns, among which it ranged from 23.4 in Huddersfield, 23.9 in Oldham, 24.8 in Bradford, and 24.9 in Brighton and in Halifax to 35.4 in Birmingham and in Salford, 36.5 in Liverpool, 36.8 in Gateshead, and 38.7 in Wolverhampton.

The births registered in England and Wales during the quarter ending March last exceeded the deaths by 81,131; this represents the natural increase of the population during that period. It appears from returns issued by the Board of Trade that 36,323 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 36,323 emigrants, 17,584 were English, 3,055 Scotch, and 3,919 Irish, while 11,765 others were of foreign origin. Compared with the averages in the corresponding quarters of recent years, the proportion of emigrants from England and from Ireland showed a decline, while that from Scotland showed a marked increase.

During the first quarter of this year the deaths of 151,014 persons were registered in England and Wales, equal to an annual rate of 19.5 per 1,000 of the estimated population, which was 1.6 per 1,000 below the mean rate in the corresponding periods of the ten preceding years. The lowest county death-rates last quarter were 14.9 in Westmorland, 15.9 in Middlesex, 16.7 in Bedfordshire, and 16.9 in Surrey; while the highest rates were 22.2 in North Wales, 22.7 in Rutlandshire, 23.1 in Herefordshire, and 23.4 in Cornwall. In the urban population of England and Wales, estimated at nearly twenty-one and a half millions, the rate of mortality during the quarter under notice was 19.8 per 1000; while in the remaining and chiefly rural population of nearly ten millions the rate was 18.9 per 1,000. These urban and rural rates were 1.8 and 1.3 per 1,000 below their respective averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 20.6 per 1,000, or 1.1 in excess of the general death-rate in England and Wales during the same period. In London the rate was 21.7 per 1,000, while it averaged 19.8 in the thirty-two large provincial towns, among which the rates ranged from 15.7 in Croydon, 16.3 in West Ham, 17.1 in Burnley, and 17.2 in Birkenhead to 21.9 in Birmingham, 22.4 in Swansea, 22.5 in Wolverhampton, and 23.5 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of nearly four millions, the mean death-rate was 18.3 per 1,000, or 2.3 per 1,000 below the rate in the thirty-three great towns.

The 151,014 deaths registered in England and Wales during the three months ending March last included 4,690 which were referred to measles, 3,004 to whooping-cough, 2,024 to diphtheria, 1,252 to diarrhœa, 1,155 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 999 to scarlet fever, and 176 to small-pox; in all, 13,300 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.72 per 1,000, which corresponded with the average rate in the first quarters of the ten preceding years. The mortality from scarlet fever, whooping-cough, and diarrhœa was below the average; that from small-pox and from "fever" corresponded with the average; while that from measles and from diphtheria showed an excess. Of the 176 fatal cases of small-pox registered in England and Wales during the quarter under notice, no fewer than 165 occurred in the registration district of Middlesbrough, of which 153 were of persons belonging to the municipal borough of that name.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under one year of age to registered births, was equal to 141 per 1,000, and was slightly below the average proportion in the corresponding periods of the ten preceding years. In London the rate of infant mortality was 141 per 1,000, while it averaged 148 in the thirty-two provincial towns, among which it ranged from 109 in Croydon, 127 in Birkenhead, 130 in Bolton, and 131 in Newcastle-upon-Tyne to 162 in Leicester, 168 in Gateshead, 175 in Blackburn, 178 in Oldham, and 195 in Swansea. The mortality in England and Wales last quarter among persons aged between one and sixty years was equal to an annual rate of 9.9 per 1,000 of the estimated population at this group of ages, and was 0.9 below the mean rate in the ten preceding first quarters. In the thirty-three great towns the mortality at this age-group averaged 11.7 per 1,000, and ranged from 7.3 in Croydon, 8.5 in Norwich, and 8.9 in Portsmouth to 12.5 in London and in Birmingham, 12.9 in Swansea and in Manchester, and 14.3 in Liverpool. Among persons aged sixty years of age and upwards the death-rate in England and Wales last quarter was equal to 86.5 per 1,000 of the estimated population at this age-group, and was 4.8 per 1,000 below the average rate. In the thirty-three great towns the rate was 89.2 per 1,000, ranging from 67.7 in Gateshead, 71.7 in Brighton, and 72.8 in Leicester and in Preston, to 96.7 in Halifax, 96.8 in Liverpool, and 105.8 in Bolton.

The mean temperature of the air during last quarter at the Royal Observatory, Greenwich, was 41.5°, and was 2.6° above the average in the corresponding quarters of 127 years; it showed an excess of 6.9° in January, and of 2.4° in February, but was 1.4° below the average in March. The rainfall during the quarter amounted to 3.24 inches, and was 1.71 inches below the average.

ZYMOTIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE "BRITISH MEDICAL JOURNAL."]

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during each week of the first quarter of the current year. The fluctuations of each disease, and its fatal prevalence as compared with that recorded in the corresponding weeks of recent years, can thus be readily seen.

Small-pox.—Not one fatal case of small-pox was registered in London last quarter, the corrected average number in the corresponding periods of the ten preceding years being 9; and only 1 small-pox patient was under treatment in any of the Metropolitan Asylums Hospitals during the quarter.

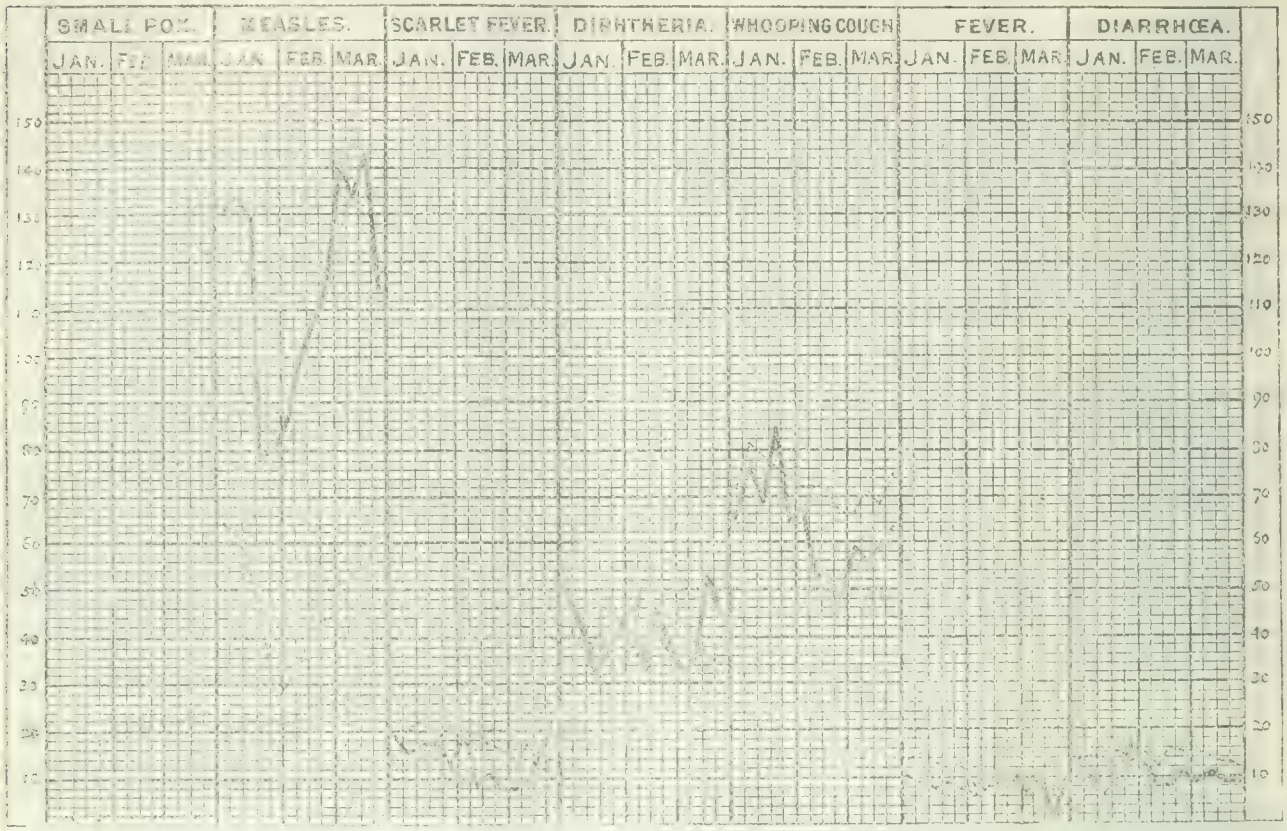
Measles.—The deaths referred to measles, which had been 162, 298, 302, and 1,167 in the four quarters of 1897, rose to 1,494 during the first three months of this year, and were more than double the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in Hammersmith, Chelsea, Westminster, Islington, Holborn, Shoreditch, Poplar, St. George Southwark, Battersea, and Woolwich.

Scarlet Fever.—The fatal cases of this disease, which had been 151, 216, and 247 in the three preceding quarters, declined to 182 during the three months under notice, but were 59 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionally most fatal in Fulham, St. Martin-in-the-Fields, Rotherhithe, Battersea, Lee, and Plumstead. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,786, 3,585, and 3,507 at the end of the three preceding quarters, had further declined to 2,377 at the end of March last. The number of cases admitted into these hospitals, which had been 3,289, 4,592, and 4,441 in the three preceding quarters, fell again to 2,823 during the three months ending March last.

Diphtheria.—The fatal cases of diphtheria registered in London, which had been 428, 488, and 704 in the three preceding quarters, declined to 534 during the three months under notice, but exceeded by 29 the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Fulham, Westminster, Hackney, St. Saviour Southwark, St. Olave Southwark, Battersea, and Plumstead. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of March last was 1,000, against 864, 1,033, and 1,066 at the end of the three preceding quarters; 1,733 new cases were admitted during last quarter, against 1,437, 1,832, and 1,995 in the three preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had been 471, 373, and 455 in the three preceding quarters, further rose to 816 during the three months ending March last, but were 129 below the corrected average number; among the various sanitary areas whooping-cough was proportionally most fatal in Clerkenwell, St. Luke, Shoreditch, Bethnal Green, St. George-in-the-East, Limehouse, Mile End Old Town, and Poplar.

Deaths from Zymotic Diseases in London during the First Quarter of 1898.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted lines show the *average* number of deaths in the corresponding week of the ten preceding years, 1888-97.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had been 85, 144, and 237 in the three preceding quarters, declined to 107 during the three months ending March last, and were 31 below the corrected average number. Of these 107 deaths from "fever," 2 were certified as typhus, 103 as enteric fever, and 2 as simple continued fever. Among the various sanitary areas the highest proportional fatality of "fever" was recorded in Paddington, St. Martin-in-the-Fields, Strand, Bermondsey, Greenwich, and Lee. The Metropolitan Asylums Hospitals contained 64 enteric fever patients at the end of March, against 70, 173, and 116 at the end of the three preceding quarters; 171 new cases were admitted during last quarter, against 148, 322, and 281 in the three preceding quarters.

Diarrhœa.—The 131 fatal cases of diarrhœa registered in London during the three months ending March last were 50 below the corrected average number; this disease was proportionally most fatal in Holborn, St. George-in-the-East, and Lewisham sanitary areas.

In conclusion, it may be stated that the 3,264 deaths referred to the principal zymotic diseases in London during the first or winter quarter of this year were 624, or nearly 24 per cent., above the average number in the corresponding periods of the ten preceding years, 1888-97, owing to the excessive fatality of measles. The mortality from each of the other zymotic diseases, except diphtheria, which showed a very slight excess, was below the average. Among the various sanitary areas the lowest zymotic death-rates last quarter were recorded in St. George Hanover Square, St. James Westminster, St. Martin-in-the-Fields, Strand, London City, Lee, and Lewisham; and the highest rates in Hammersmith, Westminster, Islington, Holborn, Shoreditch, Bethnal Green, Limehouse, and Woolwich.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,351 births and 3,750 deaths were registered during the week ending Saturday last, May 7th. The annual rate of mortality in these towns, which had declined from 21.5 to 18.4 per 1,000 in the five preceding weeks, further fell to 17.4 last week. The rates in the several towns ranged from 10.9 in Croydon, 12.4 in West Ham, 12.9 in Cardiff, and 13.3 in Burnley and in Swansea to 20.8 in Newcastle-upon-Tyne, 20.6 in Huddersfield, 21.1 in Oldham, and 26.2 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17.8 per 1,000, and exceeded by 0.9 the rate recorded in London, which was 16.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 2.4 per 1,000, while it averaged 1.6 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.4 in Wolverhampton, 2.5 in Derby and in Gateshead, 2.6 in Sheffield, and 2.8 in Liverpool. Measles caused a death-rate of 1.1 in London and in Halifax, 1.2 in Bristol and in Wolverhampton, and 1.3 in Bradford; scarlet fever of 1.0 in Burnley; and whooping-cough of 1.0 in Salford, in Sheffield, and in Gateshead, 1.2 in Liverpool, and 1.6 in Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria in the thirty-three towns included 27 in London, 3 in West Ham, and 3 in Liverpool. One fatal case of small-pox was registered in Gateshead, but not one in London or in any other of the thirty-three towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,421 to 2,302 at the end of the four preceding weeks, had further declined to 2,271 on Saturday last, May 7th; 209 new cases were admitted during the week, against 217, 241, and 205 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, May 7th, 1,056 births and 654 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.2 to 21.8 per 1,000 in the five preceding weeks, further fell to 21.7 last week, but was 4.3 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.7 in Leith and 18.6 in Paisley to 23.1 in Dundee and 34.0 in Perth. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Paisley, Greenock, and Glasgow. The 317 deaths registered in Glasgow included 23 from measles, 18 from whooping-cough, 11 from diarrhœa, and 4 from "fever." Two fatal cases of measles and 2 of whooping-cough were recorded in Edinburgh, and 4 of whooping-cough in Paisley.

DIPHTHERIA IN LONDON.

Although the mortality from diphtheria in London showed a decline last week, the prevalence of the disease, judged by the notifications, showed a marked increase. The deaths referred to diphtheria in the metropolis, which had been 34, 31, and 39 in the three preceding weeks, declined to 27 during the week ending Saturday last, May 7th; of these, 2 belonged to Chelsea, 2 to Hackney, 2 to St. Luke, 2 to Whitechapel, 2 to St. George-in-the-East, 2 to Wandsworth, and 2 to Camberwell. The notifications of diphtheria in London, which had been 181 and 178 in the two preceding weeks, rose again to 202 during the week ending Saturday last. Compared with the preceding week, there was a decline in the prevalence of diphtheria in East London, but in West, North, Central, and South London there was an increase. In nearly all the sanitary

areas of West London there was an increase in the prevalence of diphtheria, especially in Fulham, where 8 new cases were notified, against 4 and 3 in the two preceding weeks. Among the sanitary areas of North London there was little change in the prevalence of the disease, the new cases in Islington and in Hackney slightly exceeding those recorded in the preceding week. Although in most of the sanitary areas of East London there was a decline in the prevalence of diphtheria, in Poplar the 12 new cases exceeded the number notified in any week during the past two months. Among the sanitary areas of South London the increase in the prevalence of the disease was most marked in St. Saviour Southwark, Wandsworth, Lewisham, and Camberwell. In the last-mentioned sanitary area the new cases, which had been 4 and 6 in the two preceding weeks, further rose to 13 last week. There was also a further increase in the number of new cases notified in Lambeth, while in Battersea there was a marked decline, the 6 new cases being but half those recorded in the preceding week. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 131, against 105 and 108 in the two preceding weeks; and 937 patients remained under treatment in these hospitals on Saturday last, May 7th.

PLAGUE ON A TROOPSHIP IN 1897.

PERUSAL of the annual report for 1897 of the medical officer of health for the port of Southampton leads to the conclusion that there has been distinct gain by the entire abolition, as regards plague, of our old quarantine laws, just as in the case of cholera. Dr. Harris details the action taken on the arrival of the plague-infected troopship *Dilwara;* and, although four distinct interests were involved, namely, those of the port sanitary authority, the Local Government Board, the Navy, and Army, no friction seems to have arisen. It is true there was "much cry" in the way of disinfection (12,400 articles), but at any rate there was, as usual, no spread of disease beyond the patient primarily infected abroad. The account of the measures adopted is worthy of the space assigned to it.

THE ISLE OF WIGHT COUNTY COUNCIL AND PUBLIC HEALTH.

IT will be a matter of surprise to a good many persons to learn that the county council of a district so largely frequented as a health resort as is the Isle of Wight should have no county medical officer of health. During the last two years the County Council has not even contained among its members any medical man. Previous to that time Dr. Dabbs, of Shanklin, was a member of the Council, and after he ceased to be a member of the Council he continued to advise that body in an honorary capacity on public health matters. Recently Dr. Dabbs suggested that he should be given a *locus standi* by being appointed an honorary sanitary adviser to the Council, pending such time as it should think proper to appoint a paid officer. We understand from Dr. Dabbs that his intention in making this suggestion was to retire as soon as the Council had been brought to see the necessity for appointing a county medical officer with a suitable salary. As apprehension has, however, been expressed that the acceptance by Dr. Dabbs of an honorary appointment might rather have the effect of encouraging the county to postpone the appointment of a county medical officer with a suitable salary—an appointment which is urgently necessary in the interests of the island—Dr. Dabbs has, he informs us, asked leave to cancel his formal acceptance of the post.

LONDON WATER SUPPLY.

AT the meeting, on May 6th, of the Select Committee of the House of Commons appointed to consider the scheme of the Southwark and Vauxhall Water Company for the construction of new reservoirs, the case for the London County Council was continued. Sir Alexander Binnie objected to the proposed site as inconvenient. He considered that water for the supply of London should not be taken from any point below the Bell Weir, if due regard was to be paid to purity, and to sanction the scheme would be to prejudice the decision of the Royal Commission now sitting, as the proposed works would be of a permanent character. Cross-examined by Mr. Baggallay, he said that if the natural flow of the Thames at Teddington—namely, 418,000,000 gallons per day—were reduced to 200,000,000 as proposed in the Bill, when the population of London increased and the amount of sewage poured into the Thames at Barking Creek was doubled, in the hot weather they would have the Thames passing the Houses of Parliament in the condition in which it was when they were boys—in such a state that they would not be able to sit in the committee rooms with the windows open. In the case of the River Lee, the water companies had practically taken all the water, and the result was that the tidal part of the stream at Bow Creek was one of the most offensive parts of London.

THE PROGRESSIVE NEWTON ABBOT BOARD.

IT is our pleasing duty to hold up this Board of Guardians as an example to other provincial Boards; at the last meeting the Board unanimously adopted a far-reaching reform which will have a most beneficial effect on future generations. The scheme comprehends the removal of the children from the workhouse, the classification of all able-bodied inmates, and the separation of the imbeciles, placing the latter class in proper quarters and under efficient treatment and supervision. As the *Western Morning News*, from whose columns we are quoting, says: "The surprising thing is that the necessity has not been earlier recognised, and that most Boards of Guardians are still content to permit the indiscriminate mixing together of the sick and aged, imbeciles and children." The reason why the average guardian is so slow to grasp this necessity is that he still looks on the workhouse as the social dustbin, the contents of which are not worth the thought and trouble of classification.

MUSHROOMS AS FOOD.—A mycological club has been founded in New York with the object of studying edible mushrooms, and those poisonous kinds that may be mistaken for them, and arousing a wider appreciation of the value of a cheap and abundant food supply which has hitherto been comparatively neglected in the United States.

MEDICAL NEWS.

THE Passmore Edwards Jubilee Cottage Hospital at Acton was opened on May 4th by the wife of the Bishop of London. The building is the gift of Mr. Passmore Edwards, and the site the gift of Lord Rothschild and Mr. Leopold Rothschild.

THERE are in course of erection at the London School of Medicine for Women, in Handel Street, a series of new laboratories and class rooms, which will be opened by H.R.H. the Princess of Wales in July.

MEDICAL MAGISTRATE.—Dr. George P. Bate, Medical Officer of Health for St. Matthew, Bethnal Green, has been appointed by the Lord Lieutenant to the Commission of the Peace for the County of London.

WE regret to have to record the death on May 7th of Mr. John Alcock, of Burslem. Mr. Alcock was President of the Staffordshire Branch of the British Medical Association in 1890-91.

PRESENTATION.—Mr. W. Mawer, L.S.A., has been presented with a silver-mounted walking-stick and a silver-mounted pipe by members of the Essex County Council's class in first aid to the injured at Tollesbury.

PROFESSOR VON DÜRING, the well-known German dermatologist of Constantinople, has been appointed Sub-director of the Haidar Pacha Hospital with the rank of "Miri-Miran" and the title of Pacha.

THE Society of Apothecaries of London have given notice that after the official publication of the new *British Pharmacopœia* on Wednesday, May 11th, the Society will supply all preparations in accordance with the new *Pharmacopœia* unless requested to do otherwise.

THE medical practitioners of Augsburg have been granted permission to use bicycles in all the streets of the town. Instead of the usual badge they carry a red cross on a white ground, so as to be readily recognisable by the police and the public a long way off.

THE annual meeting and May dinner of the Aberdeen University Club will take place at the Holborn Restaurant on Wednesday next at 7 P.M. The chair will be taken by Colonel Sir William S. Bissett, R.E., K.C.I.E. Further particulars can be obtained from Dr. James Galloway, 54, Harley Street, W.

RADCLIFFE INFIRMARY, OXFORD.—At the last quarterly court of the Governors of the Radcliffe Infirmary, a discussion took place on the high rate of expenditure on alcohol in comparison with other hospitals of a similar nature. It was decided to leave the matter to the consideration of the staff. On the motion of the Chairman it was, after discussion, unanimously agreed to pay the deficit of the year 1896 out of invested capital.

THE MADRID CONGRESS OF HYGIENE AND VACCINATION FROM THE CALF.—At the Congress of Hygiene recently held in Madrid the following resolution, proposed by Dr. Palbo Lozano, was adopted: "Inasmuch as tuberculosis is easily transmitted by vaccination when it is done directly from the calf, the International Council of Hygiene and Demography asks that in all the nations represented at the meeting the practice should be adopted of using in official vaccination stations only the lymph of calves which have been examined *post-mortem* and pronounced to be free from tuberculosis."

THE OXYGEN HOME.—The second annual report of the Committee of the Oxygen Home for the treatment of ulcers and wounds by oxygen gas, which was read at the annual meeting held at the Home, Fitzroy Square, on May 10th, bears testimony to the value of the work carried on during the past year. The majority of the cases under treatment have been chronic ulcers. Such cases are not well suited for treatment in a large general hospital, as it is often impossible to give the prolonged rest and recumbency necessary for their cure.

CREMATION IN FRANCE.—The Society for the Propagation of Cremation, which was recognised by the French Government as "of public utility" on October 12th, 1897, held its

first general meeting in Paris on May 7th, M. Bourneville, Editor of the *Progrès Médical* was in the chair. The membership of the Society is increasing and a sum of £11,200 has recently been granted by the Paris Municipal Council for the completion of the crematory in the Père la Chaise Cemetery. Crematories are in course of construction at Rouen and Rheims.

THE foundation stone of the new wing of the Warneford Hospital, Leamington, was laid last week by Lord Leigh. In connection with the Diamond Jubilee a sum of about £3,000 was raised, and will defray about half the cost of the extension. The new wing, which is from the designs of Messrs. Young and Hall, will accommodate 32 additional patients. After certain of the rearrangements have been effected the hospital will contain 125 beds. Lord Leigh observed that the hospital was founded in 1832 in consequence of a gift of £3,000 from Dr. Warneford, who at his death left £10,000 as a trust for the institution.

CONGRESSES AS MATRIMONIAL MARTS.—The utility of medical congresses has sometimes been called in question, and it must be admitted that the picnic element too often tends to predominate over the scientific at these gatherings. Still picnics have their uses, as is well known to British matrons with marriageable daughters. This particular advantage of medical congresses has not yet been sufficiently recognised; it may therefore be not only interesting but instructive to some of our readers to know that among the other results of the Congress of Hygiene and Demography recently held in Madrid will be the marriage of Dr. Kempner with Miss Susanna Rubinstein, assistant in the Institute for Infectious Diseases of Berlin. The betrothal of this scientific couple was announced to the German members of the Congress at Madrid.

A HOUSE dinner of the Savage Club on May 7th was attended by many members of the medical profession as guests of the Chairman, Mr. J. Y. W. MacAlister, the Librarian of the Royal Medical and Chirurgical Society. Among those present were the Presidents of the two Royal Colleges (Sir Samuel Wilks and Sir Wm. Mac Cormac), Sir Thomas Smith, Sir Dyce Duckworth, Dr. Ferrier, Mr. Bryant, and many medical members of the Club. The after-dinner entertainment was opened by Mr. Beerbohm Tree with a recitation. Songs, music, stories, and recitations followed in rapid succession till 12.40. During the evening Dr. Frank Low showed some of the recent triumphs of skiagraphy on the lantern screen, including an entire figure taken in 20 minutes by Dr. Morris, of New York.

THE TITLE OF DOCTOR AND THE PRACTICE OF MEDICINE IN FRANCE.—The Société Médicale de la Gironde recently passed a resolution that it is desirable that the university title of Doctor should not give the right to practise medicine, but that this right should be conferred on doctors of medicine of French nationality who have not been convicted of any disgraceful offence by a professional jury consisting of a certain number of practitioners chosen outside the teaching body, and presided over by a professor of the Faculty. The examination by this body should bear on questions of practice, on medical legislation, and on professional ethics. This proposal has been favourably received by other medical bodies in France.

ASSAULTING A LADY SANITARY INSPECTOR.—The cause of law and order was vindicated by the infliction by the Liverpool stipendiary of a fine of 20s. and costs upon a dock labourer for assaulting a lady sanitary inspector. This lady, along with a fellow inspector, also a lady, called in uniform at this man's house. His wife, apparently imagining that the visitors were in some way going to interfere with the children, became abusive and conducted them into an inner room to her husband, who became violent. The inspector was made to show her book, and then locked up in the room for more than half an hour. The defence was that the man had quarrelled with his wife just before the inspectors' visit, and his temper was consequently in a condition of unstable equilibrium. Perhaps as his wife had taken the initiative, this was his chivalrous way of making the *amende*. The Bench, however, took a somewhat serious view of the incident.

HISPANO-PORTUGUESE SURGICAL CONGRESS.—The first meeting of this Congress, which it has been arranged to hold every year, in Spain and in Portugal alternately, was held in Madrid from April 18th to the 23rd, under the presidency of Dr. Calvo y Martin. The list of communications included about 90 papers. The proceedings seem to have been somewhat hurried, or the orators and readers of papers were allowed a more liberal time limit than is customary elsewhere, inasmuch as of twenty-two communications on the programme of the first day only ten could be dealt with. Portugal was not represented at the Congress.

OPERATIVE TREATMENT OF EPILEPSY.—Dr. Julius Donath has recently (*Wien. klin. Woch.*, No. 16, 1898) published notes of 3 cases of epilepsy in which the superior cervical ganglion of the sympathetic was removed on both sides. The operation had no effect on the fits or on the general condition of the patient. Dr. Donath argues that there must be a vasomotor spasm at the commencement of a fit, which is evidenced by the sudden pallor of the face that comes on immediately before a fit. His experiments on animals go to show that fits may be produced at will by stimulating the cervical sympathetic. If the sympathetic is cut, no fits can take place. If Professor Leonard Hill is right in saying that vasomotor fibres do not exist in the brain, the pallor of the face before a fit does not in any way indicate a similar condition in the brain substance, and the reason why Dr. Donath's operations failed is evident.

A HOSPITAL FOR JOCKEYS.—A hospital for jockeys and stableboys is about to be opened at Chantilly. The new buildings, which have been erected with the help of subventions granted by the Minister of Agriculture from the funds of the *Pari-mutuel*, together with subscriptions from racing societies and individuals, were designed by M. Sanson, and were blessed the other day by the Bishop of Beauvais. The Committee of the *Pari-mutuel* gave 100,000 francs; the "Société d'Encouragement" 150,000 francs, and a site representing a value of 50,000 francs; the "Société des Steeplechasses," 10,000 francs; the "Société Sportive d'Encouragement," 5,000 francs; the "Société du Demi-sang," 5,000 francs. A collection among "sportmen" realised 100,000 francs. The hospital has been placed in the nursing charge of the Sisters of St. Vincent de Paul.

FRENCH HOSPITAL AND DISPENSARY.—The thirtieth annual dinner in aid of the funds of this institution was held on May 7th at the Hotel Cecil. In the unavoidable absence of Baron de Courcel, the French Ambassador, the chair was taken by M. Leon Géoffray, the French Chargé d'Affaires, who was supported by the Lord Mayor and Sheriffs of London, and many representatives of the diplomatic and consular bodies. After the usual loyal toasts, including that of "The President of the French Republic," the Chairman proposed the toast of the evening, coupling with it the names of the Lord Mayor and Baron Whettnall. The Lord Mayor recalled the pleasure which his predecessors had always felt in assisting so deserving a charity, and took advantage of the opportunity to advise discrimination, in order that the funds should not be expended on undeserving persons, hospital abuse being a matter at present very much before the public. During the evening subscriptions amounting to upwards of £3 000 were promised.

PUBLIC MEDICINE IN THE NEW YORK STATE LEGISLATURE.—During the session of 1898, which included 58 working days, 139 Bills relating to public health were introduced into the New York State Legislature. Of these, 30 passed both Houses and went to the Governor, 21 passed one House, 72 found a grave in Committee, and 16 were slaughtered on the calendar. The majority of these Bills were amendments of the public health and agricultural laws. Most of the Bills now in the Governor's hands are of a local nature. Of the 139 Bills introduced 67 had a general application, and the few of this number that passed do not effect any radical change in the existing medical laws of the State. Among the Bills which failed to become law are the Dispensary Bill for the reform of medical charities; a Bill for the reform of the system of medical expert witnesses; a Bill for the legalisation of the system of quackery known as "osteopathy"; and several Bills for the sanitary control of barbers' shops. A resolution of the Senate concerning the State Colony for Consumptives was negatived by the Finance Committee.

The Life-Saving Society.—Though only seven years in existence, this Society, as appears from its annual report, has already established centres in many parts of the United Kingdom, as well as in some of the colonies. The name does not perhaps quite express its aim, which is to save life from drowning. It encourages the teaching of swimming in schools and public institutions, and provides efficient instructors to demonstrate the various methods of rescuing the drowning as well as reviving the apparently drowned. It is well known that many lives are lost annually through boat accidents, and expert swimmers are sometimes overpowered by the struggles of those they are attempting to rescue, not knowing how to free themselves from the clutch of the drowning. The various methods of doing this, and thus saving two lives, are specially taught. In the course of each summer the Society organises on a large scale a swimming and life-saving competition, which last year took place in the West India Docks in the presence of a large and distinguished company, including the Duke and Duchess of York.

The Royal London Ophthalmic Hospital.—The Duke of Cambridge, who presided at the festival dinner of the Royal London Ophthalmic Hospital on May 6th, said that it was hoped that the new buildings would be ready for occupation within the year. They would provide accommodation for 140 in-patients, which was 40 in excess of the number which could be accommodated in the present building in Moorfields. Sir John Lubbock, who responded, to the toast of "Prosperity to the Hospital," said that it was the oldest ophthalmic hospital in the world, having been established in 1804, and he might have added that there is none which has had more distinguished ophthalmic surgeons on its staff or has been instrumental in contributing more to the advance of ophthalmic medicine and surgery, and thus benefiting suffering humanity throughout the world. The total expenditure of the hospital is £6,379, which leaves a deficit of over £1,000. Donations and subscriptions were announced amounting to £1,435.

Antirabic Inoculations.—The *Annales de l'Institut Pasteur* contains a brief summary of the work for the year 1897. The number of persons bitten by rabid animals and treated at the Institute was 1,521, and of these 8 died. If 2 cases in which death occurred before treatment could take effect are excluded, the 6 deaths give a total mortality of 0.39 per cent. The cases are classified under three heads: 1. Those bitten by dogs proved by injection experiments to have been rabid. 2. Cases bitten by animals certified as mad by veterinary surgeons. 3. Cases in which the rabies is suspected only. The mortality in the first of these classes is always higher than in the other two. It never, however, exceeds 1 per cent., and during the year in question only reached 0.7 per cent. Bites on the face and head were most fatal, the hands and limbs coming next in order of danger. Of the fatal cases one died six months after treatment, most of the others at intervals of a few weeks only. It is interesting to note that in 2 of the fatal cases the rabid dogs which inflicted the wounds were known to have bitten other persons who have not subsequently developed any symptoms of rabies. One of these persons had undergone a course of treatment at the Institute, the other had not. Of the 1 521 persons treated in Paris 175 were foreigners; the countries contributing the greatest number being—England, 83; India, 33; and Switzerland, 33.

MEDICAL VACANCIES.

The following vacancies are announced:

BARNSTAPLE UNION.—District Medical Officer. Salary, £10 a year and usual extra fees. Will also be appointed Public Vaccinator. Applications to the Clerk by May 10th.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing. Applications to the House Governor by May 28th.

BIRMINGHAM WORKHOUSE INFIRMARY.—Resident Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, laundry, and attendance. Applications on forms provided to be sent to the Clerk, Parish Offices, Edmund Street, Birmingham, by May 20th.

BRISTOL: CITY AND COUNTY OF.—Medical Officer for the Workhouse. Salary, £250 per annum, with allowance of £50 per annum for rent. Applications on forms provided by May 26th.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary £130 per annum, with rooms, coal, and gas. Applications to the Secretary by May 18th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CARDIFF INFIRMARY.—Assistant House Surgeon and Assistant House-Physician. Appointments for six months. Board, washing, and apartments. Applications to the Secretary by May 23rd.

CARMARTHEN, SOUTH WALES, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £100, rising to £120, with board, lodging, washing, and attendance. Applications to Medical Superintendent.

CHESTER GENERAL INFIRMARY.—Assistant House-Surgeon. Salary, £40 per annum, with residence and maintenance in the house. Applications to the Chairman of the Board of Management, 29, Eastgate Row North, Chester, by May 21st.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon; unmarried, or widower, without family. Salary, £100 per annum, with board, residence, and washing. Applications to the Committee before noon on May 20th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant. No salary, but board, lodging, and washing provided. Applications to the Honorary Secretary by May 18th.

EGYPTIAN GOVERNMENT: SCHOOL OF MEDICINE AND THE KASR-EL-AINI HOSPITAL.—Professor of Surgery at the School and Senior Surgeon to the Hospital, £400 per annum; Professor of Clinical Surgery at the School and Surgeon to the Hospital, £320 per annum; Professor of Clinical Medicine at the School and Physician to the Hospital, £320 per annum; Resident Medical Officer to the Hospital, £250 per annum and quarters; Resident Surgical Officer, salary £250 per annum and quarters. Applications on forms provided to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, Examination Hall, Victoria Embankment, by June 13th.

FULHAM UNION.—Assistant Medical Superintendent of the Union Infirmary; unmarried. Salary, £120 per annum, increasing £10 yearly to £150, with board, furnished apartments, attendance, and washing. Applications on forms provided to the Clerk, Union Offices, Fulham Palace Road, W., by May 23rd.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; not to exceed 30 years of age, and unmarried. Salary, £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Hants County Asylum, Fareham, by May 17th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—Assistant House-Surgeon. No salary, but residence, board, and washing provided. Applications to the Secretary by May 20th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications to the Secretary by May 18th.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Honorary Physicians and Honorary Surgeons. Applications to the Secretary-Superintendent by May 21st.

HOSPITAL FOR WOMEN, Soho Square, W.—Registrar. Appointment for twelve months. Honorarium, 25 guineas. Applications to the Secretary by May 25th.

LONDON COUNTY ASYLUM, Claybury, Woodford Bridge, Essex.—Junior Assistant Medical Officer (male) between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications on forms provided to R. W. Partridge, Clerk to the Asylums Committee, Asylums Committee Office, 21, Whitehall Place, S.W., by May 18th.

LONDON LOCK HOSPITAL.—House-Surgeon to the Female Hospital Harrow Road. Salary, £50 per annum, with board, lodging, and washing. Surgeon to Out-patients at the Dean Street Hospital; must be F.R.C.S.Eng. Applications to the Secretary at Harrow Road by May 18th.

LONDON THROAT HOSPITAL, Great Portland Street.—House-Surgeon (non-resident). Salary, £25 per annum. Appointment for six months. Applications to the Honorary Secretary, Medical Committee.

NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary, £80 per annum, with board and lodging. Applications on forms provided to the Secretary by May 26th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Two Female Assistant Anæsthetists. Appointments for one year. Applications to the Secretary by May 25th.

PRESCOT UNION.—Resident Medical Officer for Workhouse and Infirmary at Whiston. Unmarried. Salary, £80 per annum, rising to £100, with furnished apartments and residential allowances. Applications on forms provided by May 23rd.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—House Surgeon. Applications to the Secretary by May 28th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, unmarried. Salary, £105 per annum, with residence and attendance. Applications to H. Peter Bodkin, Secretary, 23, Gordon Street, Gordon Square, W.C., before June 6th.

SCHOOL BOARD FOR LONDON.—Lecturers in First Aid and Home Nursing. Fee, 3 guineas for Course of Six Lectures. Applications on forms provided to the Clerk of the Evening Continuation Schools Subcommittee, School Board for London, Victoria Embankment, W.C.

SHEFFIELD: UNIVERSITY COLLEGE.—Lecturer in Physiology. Applications to the Registrar by June 11th.

SHETLAND: PARISH COUCIL OF WALLS, SANDNESS, PAPA STOUR, AND FOULA.—Medical Officer and Public Vaccinator. Salary, £35 per annum, exclusive of medicine. Applications to the Clerk of the Council by May 30th.

SHOREDITCH: PARISH OF ST. LEONARD.—Medical Officer for the Infirmary, Hoxton Street, N., and the adjacent Workhouse. Between 30 and 45 years of age. Salary either £300 per annum with furnished apartments, board, washing, and attendance, or £400 per annum with furnished apartments, light, fire, and washing. Applications on forms provided to the Clerk to the Guardians, 213, Kingsland Road, N.E., by May 16th.

UNITED LAW CLERKS SOCIETY.—Medical Officer. Applications on forms provided to the Secretary, 3, Old Serjeant's Inn, Chancery Lane, W.C.

WADSLEY, NEAR SHEFFIELD: WEST RIDING ASYLUM.—Second Assistant Medical Officer. Salary, £180 per annum, with board, etc., rising £10 annually to £230. Applications to the Medical Superintendent by May 18th.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, Welbeck Street, W.—Honorary Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by May 16th.

WHITTINGHAM, LANCASHIRE: COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried, and not over 30 years of age. Salary £100 per annum, rising to £250, with furnished apartments, board, attendance, and washing. Applications to the Superintendent.

WIGAN MUTUAL INDEMNITY COMPANY.—Medical Officers for the Company in Lancashire and Cheshire. Applications to C. Gidlow Jackson, Registered Office of the Company, 18, King Street, Wigan.

MEDICAL APPOINTMENTS.

ALLAN, Dr. E. B., appointed Health Officer for Daylesford, Victoria, Australia.

ARMSTRONG, W. G., M.B., M.S.Sydney, appointed Medical Officer of Health for the combined Metropolitan Districts, Sydney, New South Wales.

BELL, K. de Risley, M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

BENNETT, H. C. M.B.Lond., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Staffordshire General Infirmary, Stafford.

BENSON, P. L., B.A.R.U.I., M.D., D.P.H Camb., appointed Medical Officer of Health to the Buckingham Rural District Council.

BOWIE, J. C., M.B., C.M.Aberd., appointed Medical Officer of Public Health for the District, including the Parishes of Sandsting, Aithsting, Walls, and Foula, and Sandness and Papa Stour in the county of Shetland.

BRISCOE, J. C., M.R.C.S., L.R.C.P., appointed House-Physician to King's College Hospital.

CARSTAIRS, J. Lindley, M.A., M.B., C.M., appointed Physician for Diseases of Women to the Glasgow Central Dispensary, *vice* Archibald Sloan, M.B., C.M., F.F.P.S.G., resigned.

CHENERY, A., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

CUTHBERT, John, L.R.C.P.Edin., L.R.C.S.I., appointed Health Officer for the Victoria Park District of Sydney, Western Australia.

DICK, Robert, M.B.Sydney, appointed Medical Officer of Health for the combined Hunter River Districts of Newcastle, New South Wales.

FITZGERALD, John J., M.D.Brux., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., L.A.H Dub., appointed Fourth Assistant Medical Officer to the Cork District Lunatic Asylum.

FLUX, George, M.D.Brux., M.R.C.S., L.R.C.P., L.S.A., appointed Assistant Anæsthetist to the Dental Hospital of London.

FULLER, Mr. J., appointed Medical Officer of Health to the Long Ashton Rural District Council.

GARDNER, Thos. H., M.R.C.S., L.R.C.P., appointed House Physician to King's College Hospital.

GODFREY, H. P., F.R.C.S.Eng., M.B.Melb., appointed Health Officer for Bardock, Western Australia.

HALL, J. W., L.A.H.Dub., appointed Resident Medical Officer to the Simmer and Jack Hospital, Germistan, South African Republic.

HASSLACHER, F. J., M.R.C.S., L.R.C.P., appointed House Accoucheur to King's College Hospital.

HAWKEWORTH, T. A., M.R.C.S., L.R.C.P., appointed House-Surgeon to King's College Hospital.

JAMES, P., F.R.C.S.Eng., appointed a Surgeon to the Wellington Hospital, New Zealand.

JEFFARES, J. L.R.C.P., M.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Kegworth District of the Shardlow Union.

LEWIS, C. T., M.R.C.S., L.R.C.P., appointed Assistant House Accoucheur to King's College Hospital.

MARSH, J. H., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health of the Little Hulton Urban District Council.

PARRY, George Hearn, M.B., C.M.Edin., appointed Assistant Resident Medical Officer to the Royal National Hospital for Consumption and Diseases of the Chest, Ventnor.

RANSOME, A. S., M.B., B.C.Camb., D.P.H., appointed Medical Officer of Health to the Southgate Urban District Council.

SUTTON, Frederic Reginald, M.B., B.S.Durh., appointed Resident Surgeon to the Birmingham General Dispensary.

TAYLOR, Frank E., M.A., M.B., Ch.B., B.Sc.Vict., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Hospital for Women and Children, Leeds.

WILKIN, R. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the Fifth District of the Thirgoe Union.

WILLIAMS, D. E., L.R.C.P., L.R.C.S.Irel., appointed Health Officer for Bunbury, Western Australia.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

DOUGLAS.—At Sanchez, Santo Domingo, on April 4th, the wife of Robert Douglas, M.B., C.M., of a son.

DUNKLEY.—May 10th, at The Limes, Kempsey, Worcester, the wife of W. Wilberforce Dunkley, F.R.C.P.E., of a daughter.

ROBERTS.—On May 6th, at the Beeches, Lowestoft, the wife of Reginald John Roberts, M.A., M.B., B.C., of a son stillborn.

MARRIAGES.

EATON—IBBETSON.—On May 5th, at the Church of St. Lawrence, Reading, by the Right Rev. the Bishop of St. Albans and assisting clergy, Walter Musgrave Eaton, M.B., C.M.Edin., D.P.H.Camb., to Margaret Emily Ibbetson, second daughter of the late Rev. Denzil Ibbetson, of Adelaide, South Australia.

HATTON—SETON-BROWNE.—On April 11th, at the Parish Church, St. Andrew's, Grenada, B.W.I., by the Rev. R. Mediey Fulford, Rector, assisted by the Rev. Canon Jones-Bateman, Edwin Fullarton Hatton, M.D. Toronto, M.R.C.S., Medical Officer, St. Andrew's Hospital, to Marion Isabella Seton-Browne, only daughter of the late Captain M. G. Browne, R.H.A.

JOHNS—DICKINSON.—On April 26th, at Misson, by the Rev. F. W. Keene, assisted by the Rev. H. McNaught, John Francis Johns, M.D., of 3, Lansdown Place, Cheltenham, to Lucie, third daughter of the late John Dickinson, Misson Bawtry.

PRICE—MALONE.—On April 21st, at St. Matthew's Church, Redhill, by the Rev. H. Brass, George Elliott Price, M.R.C.S., of Buckland House, Redhill, to Elizabeth Richenda, only daughter of the late Charles G. Malone of Dublin.

DEATHS.

AUSTEN.—At Ealing, on May 2nd, aged 67, Josiah Austen, M.R.C.S. L.R.C.P., late Staff Surgeon, R.N.

KER.—On May 7th, at Hadley House, Cheltenham, Claudius Buchanan Ker, M.D.Edin., aged 77 years.

WALL.—On April 20th, after a long and painful illness, Alfred John Wall, M.D.Lond., F.R.C.S., Indian Medical Service (retired list), aged 50 years.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M. Annual *Conversazione*. Reception by the President. 8.45 P.M.—Oration by Dr. Frederick Roberts: The Moscow Congress—a Holiday—with comments on suggested topics.

Central London Throat and Ear Hospital, 5 P.M.—Mr. Wingrave: The Pathology and Histology of Lupus and Tubercle of the Upper Air Passages.

TUESDAY.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Sir W. R. Gowers, F.R.S.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Leprosy.

Pathological Society of London, 8.30 P.M.—Annual general meeting for the election of officers for the ensuing session. Reports of the Morbid Growths Committee upon specimens referred to it during the last six months. Dr. C. P. White and Dr. T. A. Bowes: Intestinal Obstruction due to Inflammation of the Great Omentum. Dr. C. P. White: Sarcoma of the Kidney. Mr. S. G. Shattock: Glanders Bacillus. Dr. H. Morley Fletcher: A Tumour of the Spinal Cord. Dr. Parkes Weber: Microscopic specimen illustrating an apparent Thickening of the Subcutaneous Veins. Mr. H. J. Curtis: A Large Lipoma of the Perineum (card specimen). Mr. S. G. Shattock: Experimental Infection in Animals (card specimens). Dr. C. P. White: Ununited Fracture of the Scapula (card specimen).

City Orthopædic Hospital, 5.30 P.M.—Mr. J. Jackson Clarke: The Pathology and Treatment of Flat Foot.

WEDNESDAY.

West London Post-Graduate Course, West London Hospital, W., 5 P.M.—Dr. Whitfield: Anæmia and Allied Conditions.

Hospital for Consumption and Diseases of the Chest, Brompton, 4 P.M.—Dr. Fowler: Clinical Varieties of Pulmonary Tuberculosis.

North-West London Clinical Society, 8.30 P.M.—Demonstration of Clinical Cases.

Royal Meteorological Society, Royal Astronomical Society's Rooms, Burlington House, W., 4.30 P.M.

Royal Microscopical Society, Hanover Square, W., 8 P.M.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Mr. Jonathan Hutchinson. Clinical Lecture.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Galloway: Demonstration of Skin Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Batten: Cerebral Palsies in Children.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

Central London Throat and Ear Hospital, 5 P.M.—Dr. Dundas Grant: Suppurative Diseases of the Middle Ear. Chronic Catarrh of the Middle Ear.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Dr. Wilkinson: Anthrax and Malignant Œdema.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations*.—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances*.—M. W. Th. S., 2; Tu. F., 5. *Operations*.—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations*.—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances*.—Daily, 1.30. *Operations*.—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—M., 1.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations*.—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances*.—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Tu., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations*.—M. W. Th. F.

GUY'S. *Attendances*. Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations*.—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances*.—Daily, 10. *Operations*.—M. Th., 2.

KING'S COLLEGE. *Attendances*.—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations*.—W. Th. F., 2.

LONDON. *Attendances*.—Medical daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations*.—Daily, 2.

LONDON TEMPERANCE. *Attendances*.—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations*.—M. Th., 4.30.

METROPOLITAN. *Attendances*.—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations*.—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.15; W., 9. *Operations*.—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances*.—Daily, 2; Ophthalmic, W. S., 9.30 *Operations*.—Tu. F., 9.

NORTH-WEST LONDON. *Attendances*.—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations*.—Th., 2.30.

ROYAL EYE, Southwark. *Attendances*.—Daily, 2. *Operations*.—Daily.

ROYAL FREE. *Attendances*.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations*.—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances*.—Daily, 9. *Operations*.—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*.—Daily, 2. *Operations*.—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 3; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations*.—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances*.—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations*.—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances*.—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations*.—M. 9; Tu., 2.30.

ST. MARY'S. *Attendances*.—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Tu., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations*.—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances*.—M., 2 and 5; Tu., 2; W., 3; Tu., 2; F. (Women and Children), 2; S., 4. *Operations*.—W. F., 2.

ST. THOMAS'S. *Attendances*.—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, M. Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations*.—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances*.—Daily, 1.30. *Operations*.—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances*.—Daily, 1.30; Tu. F., 6.30. *Operations*.—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations*.—Tu. W. Th., 2.

WEST LONDON. *Attendances*.—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations*.—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations*.—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

PRECEDENCE OF PARTNERS.

ALPHA writes: A. and B. are assistants to C., and propose taking over the practice of the latter, as he wishes to retire. A. is the elder of the two, and has been associated with the practice for two years; B.'s service extending to about six months. 1. In what order ought the names of A. and B. to be arranged in the firm's name? 2. What considerations ought to govern the arrangement of names? 3. Is it a general or universal rule that the names of equal partners are always arranged in alphabetical order irrespective of any other considerations?

*** There are no fixed laws which regulate the arrangement of names in a medical partnership. It is a matter for private settlement and a question of policy as to the best means of securing success. There are certain accepted axioms for guidance: (1) An established practitioner taking a partner has his name first; (2) the largest shareholder should *de grâce* have his name first; (3) when two practitioners start *ab initio* together, there are considerations which help the decision: the older man, the one best known in the district, the one whose name is likely to carry most weight, would stand first. In this case it would appear that A.'s name should be first, as A. knows the clients and is best known by them; policy therefore suggests his name at the head. The first consideration should always be what is best for insuring practice, all personal considerations waived. Other things being equal, the arrangement of the names is quite a personal matter for friendly settlement. No fixed rule like alphabetical order could meet with general acceptance, nor be always wise and politic.

ANSWERS.

W. L. (Paisley).—The details given by our correspondent are not sufficiently precise to enable us to answer his questions.

C. G. S.—Under the present regulations for the London Matriculation Examination the following books may be recommended: Chemistry: Roscoe's *Elementary Chemistry* (London, Macmillan, 4s. 6d.); Mechanics: Lodge's *Elementary Mechanics* (London and Edinburgh, W. and R. Chambers, 3s.). Botany: *Elementary Botany*, by Oliver (London, Blackie and Son, 1894, 4s. 6d.); *Heat and Light*: By D. E. Jones (London, Macmillan, 3s. 6d.); Electricity and Magnetism: L. Cumming's *Electricity for Schools* (London, Longmans, Green, and Co., 4s. 6d.). We would remind our correspondent that the new regulations for this examination commence next year, when there is to be a General Science paper instead of the Optional Sciences.

LEOPARD'S BANE.

DR. T. REUELL ATKINSON (Sherborne) writes: In reply to your correspondent Dr. Reginald C. Worsley, I would say that in the district of Herefordshire in which I formerly practised, the leopard's bane (*Doronicum pardalianches*) was a common wayside flower, and was picked and used by all the residents for decorative purposes, and in no case did I ever hear of or see any injurious consequences following upon the handling of the plant. Hulme, in *Familiar Wild Flowers*, says the juice of the plant was formerly used, when mixed with raw flesh, to poison wild beasts, hence the specific name *pardalianches*. He adds that Dodonæus calls it panther bane, and says that "it is very hurtful to man's nature, and killeth out of hand. The report goeth that if this herbe, or the roote thereof, be layd by the scorpion, that he shall lose his force and be astonied, until such time as he shall happen agayne to touch the leaves of white elebor by vertue whereof he commeth to himself agayne."

NOTES, LETTERS, Etc.

AN APPEAL ON BEHALF OF THE FAMILY OF THE LATE MR. JOHN PAGE HENTSCH.

DR. G. DAVID KNIGHT (410, Brixton Road, S.W.) writes: I beg to acknowledge the following donations:—

	£	s.	d.
Mr Sers	1	1	0
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Mr. J. W. Coles	0	10	6

ACADEMY NOTES.

MR. W. B. WOODHOUSE (Hanover Square, W.) writes: In an article on the Academy of 1898 in the BRITISH MEDICAL JOURNAL for May 7th, I see a statement to the effect that no medical man is exhibiting this year. I think this is scarcely accurate, as I know at least one medical man who has a picture in this Academy—namely, Mr. H. C. Baldwin, M.R.C.S., L.D.S., whose exhibit is No. 650. Perhaps there are other medical men who also have works on view.

AN INJUDICIOUS ADVERTISEMENT.

WE have received a communication from the Honorary Surgeon to the Herne Bay St. John Ambulance Brigade, stating that he has directed that an alteration should be made in the advertisement to which we called attention in our issue of April 30th, page 1,183. We are glad that our anticipation, that the honorary surgeon would be the first to desire an alteration in its wording, has been fulfilled. He further informs us that the instructions given to each member of the brigade are to send either for the nearest doctor, or for the one specially asked for by the patient.

CATS AND CHLOROFORM.

L.R.C.P., M.R.C.S. writes: With reference to the question of chloroforming cats, I should like to state that I have often done it without any death ensuing. I wrapped them up in a thick rug to avoid being scratched and administered the chloroform very freely. They came round without any assistance, though rather slowly.

MEDICAL STUDENTS *v.* UNQUALIFIED ASSISTANTS.

M.D. writes: In asking you for space to say a few words on the above subject, I have no desire to reopen the question of unqualified assistants. I have no doubt the Council had grounds for their action, and when it had come to medical men who hold public appointments going away for prolonged absences, and leaving unqualified men to do responsible work, it was time that something should be done.

Speaking of the difference between an unqualified assistant attending a midwifery case and a hospital student doing so, you say: "A patient who sees a brass plate bearing the name of a qualified medical man, and who goes into the house to get medical attendance.....expects to be treated by a qualified medical man; and it is a fraud upon the patient if the qualified man allows an unqualified man to represent him and act for him."

I do not see that the brass plate has much to do with the matter. I have no brass plate, and never had one; and dozens who like myself hold a colliery appointment have never put one up. Up to a year and a half ago I had an unqualified assistant, when through illness I was obliged to get a qualified man also, whom I have still. As I wished to loyally obey the Council, at the beginning of the year I stopped the unqualified man attending midwiferies, or seeing any cases except very trifling ones which had already been prescribed for. Then, seeing the absurdity of keeping a person of whose services I was unable to avail myself, I very reluctantly dispensed with the unqualified assistant altogether.

Perhaps my conscience has been seared, but I cannot admit being guilty of fraud during any of that period. Indeed, it was as perfectly well known that the assistant was not qualified as that I am, and there was no pretence in the matter whatever. For more than three years I had a sober steady man of nearly full curriculum, who had attended over a thousand cases of midwifery, and it is a singular fact that the only two perineal ruptures in my practice for a very long period occurred in two consecutive summers during my holidays, when the qualified "locums" unfortunately put on the forceps. I am sorry to add they were unable to suture them properly afterwards. I would have entrusted a broken limb to this unqualified man with more confidence than to many newly qualified men. I venture to say that in these colliery districts you will find unqualified men who have had an experience which is quite unique, and who are capable of acting in most serious emergencies. On the other hand, in all these colliery surgeries there is a great deal of work which any unqualified man is quite capable of performing. I refer to the writing of certificates and the handing out of salts, senna, pills, and plasters, which are given promiscuously for the asking.

If some of the consultants on the Council could pay a visit to these colliery surgeries they would see much work which is not a fraud to have done by an unqualified man, and they might also find men in them whose code of honour and devotion to their profession is of as high a standard as their own.

ODOR MORTIS.

DR. WM. HARDMAN (Blackpool) writes: Dr. Mackintosh's interesting note on this sign recalls an experience of my own, which, though not strictly relevant, may yet be worth recording as bearing upon the subject of the relationship of odours to disease and death. Whilst I was going through the invaluable experience of resident physician's assistant to the Middlesex Hospital, amongst the patients in the wards under my care was an apparently strong healthy member of the nursing staff, known as Sister Cambridge. She suffered from a severe attack of typhoid, and towards the end of the first or the beginning of the second week, I noticed a peculiarly heavy odour or fœtor about her, though there was nothing in the case at that time to indicate that a fatal termination was inevitable. But I had noticed this odour in bad cases before, and in each instance death had occurred, and so I felt considerable anxiety about our poor sister. My worst fears were realised when shortly afterwards she was attacked by pneumonia, to which she succumbed about a fortnight from the time when he took to bed.

Very shortly afterwards I was attacked by a severe form of the same disease, I think I laid up on the second day, being quite sure what I was in for. On the fourth or fifth day of the disease my temperature became very high, and as far as I can remember it was 105° or over for about a week. But the interest in the present context lies in this, that before I had long been ill I became aware that I was exhaling the very same odour I had noticed in the Sister and other fatal cases. Each day the fœtor became stronger and more unmistakeable, and having all my faculties not only perfect, but preternaturally acute, it occurred to me that this sensation of the death-impending odour might be merely subjective and based upon nothing more substantial than suggestion. To settle the matter, I laid a very simple trap for the unsuspecting old nurse who did the night duty. "Nurse," said I, "do you notice any smell about me? "Yes," she replied promptly, "I do." "Did you ever notice the same smell about anyone else before?" I went on. "Yes," said she, "about Sister Cambridge." You can imagine my feelings. Suffice it to say that I soon afterwards requested the services of our kind and good chaplain. However, notwithstanding my gloomy anticipations, towards the end of the second week the temperature moderated, the odour gradually departed, and ultimately I made an excellent recovery from an attack which presented other features of interest besides those I have mentioned.

As regards the odour, I have met with it occasionally since, and still regard it as of extremely unfavourable import, but I have seen fatal cases in which it was not present.

DR. PERCY NEWELL (Crowborough, Sussex) writes: I wish to say I have noticed the odour for many years past. I have found it to occur about forty-eight hours prior to death, and have never known recovery take place in a case in which I have noticed it; in fact, I believe it to be pathognomonic of death. I have looked up various textbooks but find no mention of it.

THE TREATMENT OF SYPHILIS IN THE ARMY BY INTRAMUSCULAR INJECTIONS OF MERCURY.

SURGEON-CAPTAIN F. J. W. PORTER, A.M.S. (Sangor, India) writes: I think the greatest credit is due to Surgeon-Major Lambkin for bringing this method of the treatment of syphilis to the notice of army surgeons. It has been adopted by very many medical officers in this country, and with the greatest benefit to the soldier and the State. The reasons why it is not more extensively used are (1) the difficulty of procuring a suitable syringe; (2) manufacture of the cream with impure mercury; (3) too large a dose of the cream. I have not found the vulcanite syringe answer in this country; the barrel works loose and the needles separate from the vulcanite. I now use an ordinary syringe made by Weiss in which the needles screw on. I make the cream from Ash's chemically pure dental mercury, and never inject more than 5 minims at a time. With the man standing, I insert the needle high up near the crest of the ilium, and push it downwards and forwards. I have given about 900 injections and have never had an abscess. The men are able to perform all their duties, and even to ride.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Messrs. Arnold and Sons, London; A. M. S.; Dr. T. R. Atkinson, Sherborne; Dr. H. W. C. Austen, London; Mr. R. B. Anderson, London. **B** Dr. A. T. Brand, Driffield; Mr. T. F. I. Blaker, Brighton; Sir H. C. Burdett, London; Dr. T. W. Blake, Bournemouth. **C** Dr. W. B. Coley, New York; Mr. J. D. Costine, London; A. Cox, M.B., Gateshead; Mr. H. J. Collins, Birmingham; J. J. Clarke, M.B., London; Mr. E. F. Clowes, Winchester; Mr. R. M. Connolly, Rathmines; Mr. P. Carmody, London. **D** J. H. Dewhurst, M.B., Chipping Campden; Disgusted; Mr. N. C. Dobson, Bristol; Dr. M. Dockrell, London; Dr. T. Dutton, London. **E** Messrs. J. Emerton and Son, London; Endemic Goitre; R. C. Elsworth, M.B., Swansea; Mr. J. Evans, Bristol; Dr. W. A. Evans, Bradford. **F** Dr. J. F. Fergus, Strathaven; Mr. E. C. Fenoulhet, Herne Bay. **G** *Gleaner*, The Editor of the, Kingston, W.I.; Mr. G. P. Gaskell, London; J. E. Gemmell, M.B., Liverpool; R. M. Gibson, M.B., Hong Kong; Dr. A. W. Gilchrist, Nice. **H** Dr. H. Handford, Nottingham; W. Hardman, M.B., Blackpool; H. W. H. Dr. A. Haig, London; Mr. A. Hutton, London; Dr. J. P. Henry, London; Mr. A. W. Harris, Southampton; Dr. G. A. Heron, London; Dr. W. G. Holmes, London; Mr. S. Haynes, Stansted-Montfichet. **I** Inquirer. **J** Dr. E. L. Jones, Cambridge; Dr. A. J. Jefferson, Rochdale; Mr. R. Jones, Liverpool. **K** Dr. G. D. Knight, London. **L** E. A. Lermitte, M.B., London; Mr. C. L. Lauder, Wilton.; L.R.C.P. **M** A. Montgomery, M.B., Belfast; Medico; Messrs. Macmillan and Co., London; Dr. H. H. Murphy, Twickenham; Dr. J. Metcalfe, Bradford; A. E. Maylard, M.B., Glasgow; Mr. G. D. Mackintosh, London; B. G. A. Moynihan, M.B., Leeds; G. B. Morgan, M.B., Sunderland; Dr. E. D. Mapother, London; Mr. A. F. Miller, Rothbury; Dr. J. D. McCaw, London; Member. **N** Mr. P. Newell, Crowborough; Mr. T. Nottingham, Bridlington Quay. **P** Dr. F. W. Pavy, London; Mr. W. E. Pain, London; Miss R. Paget, London; Public Vaccinator; Perplexed. **R** Mr. B. B. Rawlings, London; R. A. M. Corps; Dr. J. J. Rutherford, Shipley; Mr. W. Randall, Bridgend; Mr. F. J. Reid, London; Dr. W. R. Rice, Coventry; Dr. J. Ratcliff-Gaylard, Manchester; Mrs. Francis Rye, London. **S** Dr. R. R. Sleman, London; Dr. A. T. Schofield, London; Dr. J. O. Symes, Clifton; Dr. C. W. Suckling, Birmingham; Surgeon-General Retired; Mr. P. R. W. de Santi, London; Dr. E. Seaton, London; W. Snodgrass, M.B., Glasgow; Mr. A. R. Sieveking, Sheerness; Dr. J. G. Sharp, Leeds; Mr. N. Smith, London; Mr. W. D. Spanton, Hanley. **T** Mr. F. H. Turner, East Bergholt; Dr. J. C. Thorowgood, London; Dr. F. W. Tunnicliffe, London; T. St. P. Tuckey, M.B., Tywardreath; Dr. W. E. F. Thomson, Glasgow; A. Thomson, M.B., Oxford. **W** Dr. J. Woodman, Exeter; R. H. Woods, M.B., Dublin; Mr. F. F. White, Coventry; J. A. Waring, M.B., Nottingham, etc.

BOOKS, ETC., RECEIVED.

Scientific Method in Biology. By Dr. Elizabeth Blackwell. London: Elliot Stock. 1898.

The Botanist's Vade Mecum. By J. Wishart. Edinburgh: E. and S. Livingstone. 2s.

Diseases of the Upper Respiratory Tract, the Nose, Pharynx, and Larynx. By P. W. Williams, M.D. Third edition. Bristol: John Wright and Co. 1898. 8s. 6d.

Blennorragie et Mariage. Par Dr. L. Jullien. Paris; J. B. Baillière et Fils. 1898. Fr. 3.50.

Valencia como Estación Invernal. Par Dr. V. Guillén. Valencia: Manuel Alufre. 1898.

Physiologie de la Volonté. Par Dr. J. Dallemagne. Paris: Masson et Cie. Fr. 3.

The Voice of the Spirit: Literary Passages from the Bible rewritten, idea for idea, in modern style. Books I and II. London: Sampson Low, Marston, and Co. 1898.

Operative Gynecology. By H. A. Kelly, A.B., M.D. Vol. I. London: Henry Kimpton. 1898. 63s. Two vols.

Spectroscopie de l'Urine et des Pigments. Par A. Hénocque. Paris: Masson et Cie. Fr. 3.

L'Oreille: IV Symptomatologie; V Pathologie. Par P. Bonnier. Paris: Masson et Cie. Fr. 3 each.

Brief Essays on Orthopædic Surgery. By N. M. Shaffer, M.D. New York: D. Appleton and Co. 1898.

William Stokes, his Life and Work (1804-1878). By his son, Sir William Stokes. London: T. Fisher Unwin. 1898. 3s. 6d.

A Treatise on Aphasia and other Speech Defects. By H. C. Bastian, M.A., M.D., F.R.S. London: H. K. Lewis. 1898. 15s.

*** In forwarding books the publishers are requested to state the selling prices.

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A LECTURE
ON
THE OPEN-AIR TREATMENT OF PULMONARY TUBERCULOSIS AS PRACTISED IN GERMAN SANATORIA.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton.

BY C. THEODORE WILLIAMS, M.D., F.R.C.P.,
Consulting Physician to the Hospital.

THE system of open-air treatment of pulmonary tuberculosis as practised in German Sanatoria is the title of the lecture which, at the request of my colleagues, I deliver to-day as the introductory one of the clinical course usually given in the summer term at this hospital. The topic is selected as one much discussed at the present moment by the medical profession and even by the public, and, considering the success which has followed the system in Germany, France, and Switzerland, its adoption in some form or other in this country seems highly desirable, and specially in connection with such an institution as the Brompton Hospital.

Treating the consumptive by abundance of open air is no new doctrine, and was apparently in use in ancient times, and more recently many tuberculous patients have regained their health in trekking in ox waggons in South Africa for months at a time, hunting by day and sleeping in the waggon at night; or, again, others have recovered through an open air life in the Australian Riverina, or by camping out while fishing and shooting in Colorado or New Mexico, and all this without the aid of any *Heilanstalt*, and with but irregular and intermittent medical superintendence.

Another form of open-air treatment for the consumptive is the sea voyage, for at sea, at least during the daytime, the patient is probably more completely brought under the influence of the atmosphere than is possible in a sanatorium, for, lying on a chair or lounge on the deck of a clipper or steamer making a fair passage, he inhales not one but a succession of oxygenating atmospheres, and, provided he is kept warm, is greatly benefited thereby. At night however, his conditions are inferior generally to those of a *Heilanstalt*, as the cabin is small compared to a bedroom, and in rough weather ventilation is often imperfect and open windows impossible.

Turning to the etiology of tuberculosis, it has been demonstrated over and over again, and by none so energetically as the late Dr. MacCormac,[1] of Belfast, that impure air, or as he calls it rebreathed air, is the principal debilitating or predisposing cause which renders the individual vulnerable to the attack of the tubercle bacillus, and we almost invariably find immunity from consumption associated with more or less open-air life, and the presence of the disease in conjunction with close confinement and aggregation of mankind. But let us consider what there is new in the so-called open-air treatment.

We may answer that the principle has been reduced by Brehmer and others to practice in a complete and sensible manner in the various establishments at Görbersdorf, Falkenstein, Nordrach, Hohenhonnef, and others.

Brehmer,[2] who established his sanatorium at Görbersdorf in 1854, laid down as rules that such institutions should be situated (1) in the mountains, and (2) in districts with immunity from consumption. Brehmer adopted Küchenmeister's theory of fixing the elevation of immunity from phthisis for each degree, and even fraction of a degree, of north and south latitude; which for the latitude of Germany and Switzerland requires an addition of 375 feet for each degree as the equator is approached. Brehmer considered that an altitude of 500 metres was sufficient in Germany, and 1,500 to 1,700 metres in Switzerland. Brehmer was led on this account to settle at Görbersdorf, in Silesia, at an elevation of 560 metres (1,800 feet). This immunity theory has long ago been exploded, for it has been shown (1) that the death-rate from phthisis depends on the density of the population in a given district, even among mountains; and also (2) that there are localities free from phthisis which, like the Khirgis Steppe, are below sea level. Brehmer had another erroneous theory—that consumption was caused by the heart being too small to nourish the lungs properly, and that mountain air cured consumption by stimulating the heart's action to greater exertion.

However, it is admitted now that these views were wrong, and that some of the characteristic effects of a mountain climate are not to be obtained at so low an altitude as that of Görbersdorf, and though excellent results are produced there, the success must be attributed chiefly to the system of treatment. At moderate elevations, such as Görbersdorf and Falkenstein, the air is purer and contains fewer microbes than at sea level, but for the arresting power of a mountain climate, as seen in the Andes and at Davos and St. Moritz in the Alps, it is found that an altitude of at least 5,000 feet is necessary. According to my experience the results of residence at these altitudes far surpass those of open-air treatment alone.

But to return to the system. Brehmer laid down as laws: (1) That the sanatorium, to avoid dust, should be away from public traffic; (2) that the air should be dry and aseptic, and yet that there should be abundant rainfall. His other climatic conditions, such as diathermancy and low barometric pressure, hardly apply to low elevations. The leading principle of the treatment is that the consumptive should pass the greater part of his time in the open air, protected from weather, and as a rule in the prone position, and that at night he should sleep with windows open.

This is carried out either in covered balconies or terraces with one side open, or in pavilions, some of which are arranged to rotate, and thus to enable the invalid to be always protected from wind and exposed to sunshine. The covered terraces or *Liegenhalle*, as they are called, are of considerable depth and height, and the drifting rain and snow are kept out by curtains and the too intense sun heat by blinds. The patients lie out for seven to eleven hours a day, only moving for meals and exercise, and going indoors at night. Thus protected, all kinds of weather, frost, snow, rain, hail, damp, and fog have to be borne, and are well borne, provided only the patients are duly covered up in furs and wraps. At Falkenstein the cold of winter is not complained of, but only the fogs which roll up from the plain below.

To resist cold the prone position is far better than sitting, probably on account of the equalising effect it has on the circulation of the body and the less strain it exerts on the heart. People can endure degrees of cold when lying down which would cause chill in a sitting posture. When I visited Dr. Turban's well-known sanatorium at Davos in December, 1891, there was thick snow on the ground, and the temperature was −4° F., but I found a large number of patients clothed in furs lying out in the *Liegenhalle*, reading by electric light, and playing chess and draughts after sunset. I made a point of feeling their hands and feet, and rather to my astonishment, I found them perfectly warm, though for hours they had been exposed to this freezing atmosphere. I was told both there and at Falkenstein that though hot bottles were always to be had, they were seldom asked for. This life of reclining in open air hardens the invalid against fresh cold, increases the appetite, promotes sleep, reduces night sweats, but most important of all, lowers pyrexia. I know of no more certain means of reducing the high temperature of acute tuberculisation, no matter what the condition of the lung, than the open-air treatment, and it succeeds when all medicinal agents have failed.

The objections to the reclining system are that in advanced consumptive cases it is not well adapted for clearing cavities by expectoration, and there is risk of the secretion from the cavity, instead of being expectorated, falling back into another bronchus, and thus infecting a fresh centre. A second objection—and this applies to incipient disease—is that without exercise it is impossible in the large proportion of patients to maintain the muscles and functions of the body in proper order.

Brehmer was always much in favour of exercise, and specially of hill climbing, but among his disciples there appears to be a difference of opinion, some holding to the *Liegenhalle* system alone, and others strongly urging hill climbing and certain forms of pulmonary gymnastics. At all

the establishments there are graduated ascents to some neighbouring height, and the amount of exercise is regulated day by day for each patient, who is enjoined during ascents to go slowly, to refrain from talking as far as possible, to breathe through his nose, and to stop short of actual fatigue, only walking so far as his physician ordains.

Forced respiration or lung gymnastics is carried on in some establishments, and is recommended by Dettweiler[3] to be practised as follows:—During steady walking, take 5 or 6 deep breaths through the nose every 100 or 150 paces, or when lying in the open air take 10 or 12 deep breaths every five or ten minutes.

The dietetic treatment pursued in these *Heilanstälter* is that of stuffing with a rich and varied diet, including much meat, milk, fatty, and farinaceous foods and vegetables, given in large quantities at a time, with in most cases moderate intervals between meals, but sometimes very frequently. Dr. Smythe,[4] who was himself an inmate of the Nordrach Sanatorium for a year, describes it: "The patient eats double the amount of food he desires. Patients are not infrequently sick after a meal, and if this happens they return and finish the meal, finding no difficulty in retaining the remainder."

Under this system a gain of 2, 3, and 4 lbs. a week takes place, and often before the patient's departure upwards of 2 stones have been gained. That this addition should be not mere fat, but muscle and bone and nerve tissue, exercise is essential, and this is recognised by many of the sanatoria in their constructing winter gardens and colonnades for indoor exercise to be taken when the weather precludes outdoor.

Brehmer recommended hydropathy to be combined with the open air treatment and specially douches to the thorax, which he used to administer with his own hand at Görbersdorf. They were given partly to stimulate the respiratory muscles and induce the patient to take deeper breaths, and partly to harden against catarrh. Cold friction is also largely used, that is, enveloping the patient in a sheet wrung out in cold water, then rubbing the whole body rapidly and firmly, and wrapping the patient in a second dry sheet and rubbing him again. Afterwards a good walk in open air is ordered, or, failing this, in the winter garden.

In the internal arrangements of these sanatoria, the greatest stress is laid on a complete system of disinfection. Linoleum is used for the floor covering, the walls are painted with oil colours, or are inlaid with wooden panels, or papered with washable materials. Electric light is used, and the heating is done by hot water or steam pipes, or else by the ordinary German stoves. Ventilation appears generally to depend on windows opening upwards, or else, as in Turban's sanatorium at Davos, at a lower level. The air is heated, and admitted into the rooms some 4½ feet from the floor level. The exits for the impure air are not near the ceiling as usual, but low down, about 1 foot above the floor, the reason assigned being that owing to the cold external climate the warm air would continually ascend to the top and escape, leaving the cold air where the patients sit, but by this arrangement it gradually descends, giving off some of its heat inside instead of outside.

The sputum is received into vessels mixed with strong disinfectants, or else into Dettweiler's sputum flasks, which the patients carry with them; and it is afterwards burnt. The linen, table knives and forks, and spoons of the patients all undergo elaborate disinfection.

The floors are not swept, but swabbed with damp cloths every day to prevent dust. In the construction of the rooms and passages, and especially the wainscotting, all corners likely to harbour dust are carefully avoided and usually filled in, and this is a hint we might well adopt in our hospitals.

The sputum is frequently examined for tubercle bacilli in all the sanatoria, and at Nordrach, when after repeated examinations none can be detected, a cubic centimetre of the sputum is injected under the skin of a guinea-pig, and if, at the close of a period varying from three to six weeks, no tuberculosis follows, the patient is considered fit to return home.

In all these establishments the patient is under the personal supervision of the doctor, who orders every detail of his life, enforces his rules—especially at meals, when he is of course present—visits him two or three times a day, and has, in Dettweiler's words, to make of the sanatorium "his religion, his politics, his despair, and his delight."

The principal sanatoria are Görbersdorf, where are three establishments; Falkenstein in the Taunus, Hohenhonnef in the Siebengebirge on the Rhine, Reiboldsgrün in Saxony, St Blasien in the Black Forest, Nordrach also in the Black Forest, nine miles from Biberach Zell; Schoemberg in Wurtemberg, Rehburg near Hanover, St. Andreasberg in the Hartz Mountains, and other smaller ones. Besides these there are in Switzerland Dr. Turban's sanatorium at Davos and one at Arosa, the sanatorium at Leysin in the Canton Vaud; and in the Pyrenees Dr. Sabourin's on the Canigou, and others, besides several in the United States of America. It is not my intention to describe these establishments in detail, as there is a careful account of them appearing in a report upon open-air sanatoria for phthisis in the British Medical Journal; but I only wish to consider how far we can adopt the open-air treatment of consumption in this country.

There is no reason why a certain number of sanatoria for upper class patients should not be established in the United Kingdom. On the South Coast, or on the hills of Surrey, Sussex, or Hampshire; or again on the Wharfdale of Yorkshire, the Malvern Hills, or the mountains of the East Coast of Scotland, are plenty of appropriate sites. A certain number of consumptives, chiefly those without families, who do not wish to go abroad, would gladly avail themselves of such institutions, and there is the advantage in these establishments of example, a powerful assistance in carrying out the doctor's directions, and the society of other invalids may be an inducement to some, though this is perhaps not an unmixed blessing, but the great gain is the personal superintendence of the medical men experienced in similar cases.

There are at present several small establishments started, two at Bournemouth alone, and the treatment is being also admirably carried out at Cromer by Dr. Burton Fanning,[5] who has recently published his results.

However, English people as a rule, and particularly English ladies, do not like sanatoria, or any institution of the kind where they have to live always in public, and especially when they are ill, preferring, if possible, the congenial family life.

English and Americans are intelligent patients enough if their condition and the required treatment is properly explained to them, and they do not require the minute rules and constant supervision which our German brethren appear to find necessary. I confess that during a large experience of pulmonary tuberculosis in hospital and private practice, extending over thirty-four years, I do not remember many cases of phthisis that would have benefited from having three visits a day from the doctor; but there must be proper medical supervision, and the details of the patient's life must be rigorously laid down.

It is obvious that if we want to introduce the open-air treatment largely into England, we must, if it can be done without sensibly impairing its utility, modify it to suit the spirit and habits of the people, and this is easy enough. There is no reason why it should not be carried out in country houses, or even in suburban ones.

The rules of dietary and the regulation of disinfection are already often laid down by English medical men, and for reclining in the open air all that is wanted is a wooden shed with sides or shutters, which can be partly removed, so that one side is always open to the air, erected in the garden; or a verandah or a covered balcony facing south, sufficiently deep to allow of a couch being introduced for the patient to lie on. This should look on a garden to ensure pure air and privacy, and avoid dust. If there be no such verandah or covered balcony, a tent similarly arranged will answer the purpose, and you have the elements of the *Liegenhalle*.

If there be no fever, and the disease be not very advanced, exercise is highly desirable, but the patient, after returning from the walk, must go back to his verandah or shed, and not to the drawing-room or indoors.

I will now give a sketch of two private cases which were, at my suggestion, treated by the open-air method, with excellent results. On March 26th, 1896, I saw, in consultation with a medical man in Sussex, a high-spirited young lady, aged 15, who had apparently been overstudying, and for the last three weeks had been pyrexial, the temperature rising between 12 and 6 P.M. to 102° and 103° F. Her aspect was flushed, her pulse rapid. There was some wasting and slight

cough, but no expectoration, the catamenia were present but irregular. I detected some crepitation on cough in the first intercostal space on the right side, and made a diagnosis of acute pulmonary tuberculosis with doubtful prognosis. Quinine and cod-liver oil was prescribed, but the open-air treatment was strongly urged. A sheltered nook of the garden, where the dwelling-house acted as a protection from northerly and easterly winds, was selected, and here was erected a wooden shed of sufficient size to hold a comfortable sofa, a table, and a few chairs; it was fitted with sides, removable according to the necessities of wind or rain.

In this shed our patient lay on the sofa, well wrapped in warm clothing and coverings, for eight or nine hours every day, and she slept at night in a lofty bedroom with the window open. In the course of four weeks of this treatment the temperature had fallen to under 100° F. and gradually subsided to within normal limits, only rising above them during the menstrual periods. Cough became more troublesome and was accompanied by yellow sputum, in which a few tubercle bacilli were detected. The patient gained 2½ lbs. and looked much improved; weight 7 st. 13 lbs.

I saw her next in her shed June 20th with her medical attendant, and found her looking stouter and less delicate, with a pulse from 70 to 80, temperature normal, cough still troublesome, and expectoration scanty. She had been nearly three months in the open air and liked it. The lungs showed well-marked disease of both apices, and on the left side the signs extended to the lower lobe (upper border); weight the same.

In August, after continuing the same treatment, I found the physical signs had diminished considerably, the right lung being clear, and in the left lung the area of crepitation was smaller. As her home was not a favourable wintering place a villa with a garden and pine trees was taken at Bournemouth, and hither she was transported, shed and all, and there she spent the winter of 1896-7, a remarkably windy and wet one, in the open shed, as at her home, with great advantage.

When I saw her in May, 1897, she had grown taller, weighed 9 st. 6 lb., and looked the picture of health. Her chest had become larger and deeper; cough and expectoration were slight; no tubercle bacilli could be found in the latter. The right lung was clear, but some crepitation was still audible above the left scapula. She returned to her home, and was able to ride on horseback through last summer and winter.

Her medical adviser reported to me that she was quite well all through the winter and did not require any special treatment, but at the beginning of March caught cold and lost her voice, and there was a return of cough with slight expectoration, which contained tubercle bacilli. A return to the open-air treatment seems to have been successful in stopping these symptoms, and now (May 1st, 1898) she is well, weighing 9 st. 4 lb., and has grown considerably.

Another case was that of a lady nurse, aged 27, who had been under my charge for two years for heart disease, and, after an attack of influenza and considerable worry as matron of a nurses' home, developed tuberculosis of the left lung, the physical signs being chiefly confined to the lower lobe, and accompanied by pyrexia and much pleural pain and dulness on percussion. I saw her on February 8th, 1897, with Dr. Gale, at Kingston, and at my request he aspirated the left side for fluid, but with negative result. Later on the physical signs indicated a spread of lung tuberculosis upwards, the crepitation appearing at the apex as well as at the base. The pulse was always from 100 to 120, the respirations quickened and often painful, and the temperature continued to rise every afternoon to 100°, 101°, and even to 102° F., with a subnormal record in the morning—in fact, presented a typical chart of phthisical pyrexia—and this continued in spite of all medicinal treatment. The patient wasted considerably, suffered from night sweats, and the cough was troublesome and the expectoration almost *nil*.

As the patient's condition was worse and the continuous pyrexia was greatly distressing her—for it had lasted for ten weeks—I urged the open-air treatment; but the conditions were not very promising, as the only available space for the practice was a small walled yard at the back of the nursing home. Here, however, a tent was erected, furnished with a couch and table, and the patient was carried down and placed in it for several hours every day.

She at once commenced to improve; the temperature began to fall, the pyrexia assuming an intermittent character, the night sweats ceased, the pulse became less frequent, and cough and pain in the side less. In fourteen days she was removed to a house with a garden in Surrey, and later to a ladies' home in Bournemouth, all this time the open-air treatment being steadily persevered with. The journey to Bournemouth caused a rise of temperature, but when she was settled there it fell to normal, appetite improved, and weight was gained. The physical signs indicated some clearing up of the base of the left lung; but loud crepitation was most marked in the upper lobe, especially in the supra-scapular region; weight 8 st. 12 lb.

In August she spent five weeks at Margate, not following the open-air *régime*, but was not so well, there being some return of the afternoon pyrexia, 101° F. being once recorded, but this ceased on return to the open-air treatment for a short time.

April 30th, 1898. The patient has been on the west coast of Ireland all the winter, living a good deal out of doors, though not carrying out the open-air system as before, and has been remarkably well with the exception of slight pharyngitis and aphonia. The cough and expectoration are moderate.

As to the physical signs, crepitation is well marked at the left apex, but quiescent at the left base. Weight 10 st., being a gain of 16 lbs. Pulse and temperature normal. Breath a little short, but she can walk two or three miles a day.

These two cases exemplify to some extent the influence of the open air treatment. The first was an instance of acute tuberculisation of the lungs, and considering the obstinacy of the pyrexia, the obscurity of the physical signs, and the scanty expectoration, there is little doubt that it presented the usual unfavourable aspect of that variety of consumption. Nevertheless, under the open-air treatment, a nearly complete arrest has been attained.

The second case was also an instance of acute tuberculous disease, with an insidious origin and course, which was undoubtedly checked by persistence with the open-air treatment, though the circumstances under which it was carried out were far from favourable. I know of several other cases where the system has been carried out in private houses successfully, under the care of persevering and energetic practitioners, of whom we have as many in England as in any country.

The system should be tried in all our hospitals and homes for consumption which are situated in the country or by the seaside, as it is at the present moment being tried at Bournemouth and Cromer. It should also be carried out in sanatoria arranged specially for the upper classes: and lastly it should be introduced into private families living in the country or at the seaside, under the direction and supervision of the medical attendant, care being taken that all rules of exercise and dietetics be vigorously enforced.

[At the close of the lecture a demonstration was given of a temporary *Liegenhalle*, which had been fitted up in the court of the hospital.]

References.

1 *Consumption and the Breath Rebreathed*, 1872. 2 *Die Therapie der chronischen Lungenschwindsucht*. 3 Von Jaruntowsky, *Sanatoria for Consumptives*, translated by Dr. E. C. Beale. 4 British Medical Journal, April 30th, 1898. 5 *Lancet*, March 5th and 12th, 1898.

A Historic Grant for Successful Inoculation.—The late Mr. Robert Dimsdale, who had been a member of the House of Commons in three Parliaments, was a descendant of Dr. Dimsdale, a famous inoculator of the eighteenth century, on whom the title of Baron Dimsdale of the Russian Empire was conferred by the Empress Catherine for inoculating her against small-pox. For his services he received a fee of £10,000, which has been estimated as equal to at least three times that sum at the present day, and £2,000 as an allowance for travelling expenses. He was also appointed Councillor of State and Physician to her Imperial Majesty, with an annuity of £300, which was punctually paid him till his death in the early years of the present century.

THE MILROY LECTURES
ON
THE NATURAL HISTORY OF VACCINIA.

Delivered at the Royal College of Physicians

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Lecture III.
Animal Vaccination.

By the term "animal vaccination," as it is now applied, is meant the employment for the vaccination of the human subject of the virus of cow-pox, as propagated upon a succession of calves or heifers, the original virus having been derived from pocks upon the cow, spontaneously affected with the natural disease.

The practice of animal vaccination appears to have originated with M. Negri in Naples, who was seemingly the first to propagate natural cow-pox by successive inoculations upon the heifer. Prior to this time cows had been, in various places and by various persons, inoculated with vaccine virus derived from the human subject, the lymph obtained from pocks thus produced being used for human vaccinations. This practice has been termed "retro-vaccination." There appears to be no great difficulty or uncertainty attending retro-vaccination so long as animals sufficiently young are made its subjects and the human lymph is taken under circumstances favourable to its activity.

In his report on vaccination in France during 1864 M. Depaul, in the name of the Académie de Médecine, gave an account of the observations made in Paris on this subject, and in February, 1866, the French Government placed a sum of 6,000 francs at the disposal of the Académie for the purpose of experiment in the matter. A Commission was appointed, the report of which was drawn up by M. Depaul. This report was favourable to the practice of animal vaccination. The Commission, however, were much divided in opinion, and the Académie did not then recommend that the practice should be adopted.

At first the virus used by the Commission was that in use by MM. Lanoix and Chambon, and which they had previously obtained from Naples. But after four transmissions of this lymph had been made a new source of virus from natural cow-pox was discovered at Beaugency (Loiret), and then the use of the Neapolitan strain was abandoned and this new and undoubted cow pox virus alone employed.

MM. Lanoix and Chambon also adopted the use of this strain to the exclusion of that they had before employed, and having, in the autumn of the same year (1866), met with another case of natural cow-pox at St. Mandé, near Paris, they introduced this lymph also into their practice of animal vaccination, and the strain which they have employed from 1866 onwards is a mixture of the two natural sources discovered at Beaugency and at St. Mandé.

Whatever the origin of the Neapolitan virus may have been therefore, there can be no question that the inoculations made by the Commission (after the first four) and those afterwards made in Paris by MM. Lanoix and Chambon were transmissions of the virus of a cow-pox of spontaneous origin.

From Paris the practice of animal vaccination extended in many directions. Thus in February, 1865, it was introduced into Brussels by Dr. Warlomont, whose first supply of lymph was obtained from M. Lanoix (Neapolitan source). At a later period he obtained from Paris virus in course of propagation from the Beaugency source, and still later on he introduced a third source obtained in July, 1868, at Esneux (Liége). In July, 1868, an "Institut Vaccinal de l'État" was established at Brussels, under the direction of Dr. Warlomont, for maintaining the practice of animal vaccination, and distributing gratuitously lymph obtained from the animals, or lymph taken from children who had been vaccinated direct from the animals, according to the preference of the vaccinators or other practitioners demanding it.

The practice was introduced into Berlin by Dr. Pissin in June, 1865, and the establishment which he founded is still carried on as a private speculation. Animal vaccination appears to have been introduced into Vienna in a similar manner about the same time, and many of the great capitals of Europe rapidly followed suit. Thus early in 1868 the Society for Promotion of Cow-pox Inoculation at Rotterdam determined to open a station for the practice of animal vaccination, and they commenced operations in April of that year distributing lymph throughout Holland and its colonies. A similar course was adopted in the following year by the corresponding Society of Amsterdam. Switzerland also owes the comparatively recent introduction of animal vaccination into that country to private enterprise, what is now known as the Institut Vaccinal Suisse having been founded in 1882 by M. Charles Haccius, the present Director of the establishment. Originally a private venture, the institute, which is situated at Lancy, on the outskirts of Geneva, is now recognised by the various Cantonal Governments; M. Haccius, in consideration of an annual subvention, supplying to public vaccinators throughout Switzerland, free of cost, all the lymph required by them in the performance of their duties. The Institut de Vaccine Animale at Paris is also practically a private concern, although the municipality of the city of Paris contract with the Directors to carry out all such public vaccinations within their jurisdiction as may be necessary.

In Germany, all the establishments visited by Sir Richard Thorne and myself, at Berlin, Dresden, and Cologne respectively are under Government control. Of these, that at Cologne is the most recent of its kind, and its buildings with their fittings are of the most modern description. This institution, of which Dr. Vanselow is the Director, was erected in 1889 for the production of animal lymph to meet the needs of the Rhine province and Hohenzollern districts.

At Brussels the propagation, storage, and distribution of calf lymph is carried out at the Ecole Véterinaire, under the supervision of Professor Degive, the Director. The accommodation in the present building is insufficient. A new vaccinal institute is about to be erected, in the construction of which all modern scientific requirements will be amply provided for.

Although the practice of animal vaccination is now practically universal throughout Europe, in England up to the present time it has been employed to a very limited extent. At the Government Animal Vaccine Establishment at Lamb's Conduit Street, which was founded in 1881 as the result of investigations by the late Sir George (then Dr.) Buchanan and Dr. Cory, direct vaccinations of children from calf to arm have been carried out from that date onwards to the present time.

From the calves vaccinated at Lamb's Conduit Street, lymph has also been supplied to public vaccinators in quantity sufficient to enable them to start their periodical vaccinations, and provision has also been made for supplying a comparatively small amount of lymph to private practitioners in addition. The lymph thus sent out has for the most part been preserved by drying on "ivory points," although a certain proportion has been stored in the liquid form in capillary glass tubes. Until quite recently, however, all public vaccinations in this country, with the few exceptions just mentioned, were required to be performed by direct transmission of the virus from arm-to-arm, stational attendance at fixed periods having been arranged for in order to render feasible such method of operating, weekly attendance having been provided in large towns, while quarterly, or even half-yearly, periods suffice for the required purpose in scattered country districts. As the result, however, of the findings of the Royal Commission on Vaccination, legislative measures have been introduced by which arm-to-arm vaccination will be entirely superseded, in public work at any rate, by animal vaccination, and the adoption of the use of preserved glycerinated calf lymph having been determined on, the necessity for stational attendance will disappear except in so far as may appear desirable for purposes of control or in order to provide facilities for teaching.

The principal grounds on which the practice of animal vaccination has been advocated are, first, the opinion—widely though not universally held—that the results of vaccination from arm-to-arm are not such as they used to be in the earlier years of the practice of vaccination; in fact, that by

repeated human transmission the virus has become weakened, and that the pocks produced by the introduction of lymph which has passed through a large number of human beings are not so fine or so perfect as those which result from the use of animal lymph. Jenner himself, indeed, appears to have been under the apprehension that lymph stocks would be liable to degenerate as the result of long-continued transmission through the human subject. In the present state of our knowledge, however, such enfeeblement of the specific virus can hardly be regarded as probable, except under such conditions as may be obviated by reasonable skill and care on the part of the operator. Jenner early discovered that vaccine lymph only exhibited its full degree of activity when taken at the stage of maturation of the vesicle and before its contents became at all purulent. If this precaution be observed, together with strict cleanliness in removal and insertion of the lymph, experience has shown that no appreciable degeneration can be demonstrated.

Secondly, the opinion that certain other human diseases may be propagated together with vaccinia when vaccinations are performed from arm-to-arm. Galbiati, who was one of the first, if not the first, to vaccinate with bovine lymph, adduced this belief as his reason for practising vaccination from the cow, arguing that on vaccinating the cow from the human subject vaccinia alone would be communicated to her, any other morbid germs which might be introduced along with it remaining without effect. He considered, apparently, that in practising retro-vaccination according to the method which he devised, he, as it were, filtered human vaccine material from any possible contamination.

As the result of all the evidence brought before them during the lengthy period of seven years the English Royal Commission have reported that the risks incurred from arm-to-arm vaccination "are undoubtedly real and not inconsiderable in gross amount," although "when considered in relation to the extent of vaccination work done they are insignificant." And they add that "there is reason further to believe that they are diminishing under the better precautions of the present day, and, with the addition of the further precautions which experience suggests, will do so still more in the future."

It is, indeed, acknowledged on all hands that cases of syphilis can be, and unfortunately have been occasionally, conveyed from one human being to another as the direct result of vaccination, and although the number of cases that can be authenticated are extraordinarily small in number there is advantage in the adoption of a method which, while equally efficacious, entirely obviates the possibility of so lamentable an occurrence. Erysipelas and tuberculosis are two of the not inconsiderable number of diseases with the spread of which vaccination has been credited. No doubt the greater proportion of cases of erysipelas following on the process are of what has been termed "late" origin. These are due to infection of the vaccination wound at or about the time when it has been customary to open the vesicle. The general use of animal vaccination, by obviating the necessity for opening the vesicle, may be expected to be followed by a diminution of cases originating in the manner suggested, though accidental injury to the arm or the use of improper dressings, will doubtless prevent the complete disappearance of erysipelas or other septic diseases. Invaccinated erysipelas, however, we may anticipate, will shortly become, in great measure at any rate, a thing of the past; and, fortunately also, the possibility even of the invaccination of tubercle may be eliminated as the result of the treatment of calf vaccine with glycerine after a method which I first advocated some years ago, and which has now been officially adopted by the Government.

Glycerinated Lymph.

In a paper presented to the International Congress of Hygiene held in London in 1891, and subsequently published in the *Transactions* of that Congress, I called attention to a special method for the bacteriological purification and preservation of vaccine lymph. This method consisted in the intimate admixture of a given amount of lymph, or rather vesicle pulp, with a sterilised 50 per cent. solution of chemically pure glycerine in distilled water, and in subsequent storage of the resultant emulsion in sealed capillary tubes for several weeks.

For some years antecedent to 1891 I had been engaged in investigating the nature and mode of action of the specific virus contained in vaccine lymph, chiefly from the bacteriological point of view. To this work I have referred in a previous lecture.

Early in the course of my experiments it struck me that the exuberant growth commonly manifested by what were so evidently "extraneous" organisms might be very possibly interfering with, if not superseding, the more important and essential organism that I was seeking. I therefore turned my attention to the discovery, if possible, of some means of so treating vaccine lymph as to inhibit the multiplication in it of all "extraneous" organisms, and eventually to destroy them altogether, without at the same time injuring its potency for vaccination.

Without detailing the various experiments adopted with this object in view, it is necessary here to state briefly the lines on which the work was carried out. In the first place trial was made of the method of exposure of lymph for definite periods to a temperature considerably above blood heat, which had, in the hands of Kitasato, met with conspicuous success in the isolation of the bacillus of tetanus; but I speedily found that some method of readier application and requiring less delicate manipulation was desirable. This I at length found in the addition to the lymph, or rather to the vesicle pulp, obtained from a vaccinated calf, of a sterilised 50 per cent. solution of chemically pure glycerine in distilled water prior to storage of the mixture in capillary tubes, which had themselves been previously sterilised by heat.

Admixture of glycerine and vaccine lymph is of course no new device. Many years ago, in 1850, the late Mr. R. R. Cheyne showed that vaccine lymph could be kept in the fluid state and in active condition by adding to it a small quantity of glycerine. Nearly twenty years later Müller, of Berlin, showed that by such addition of glycerine the volume of the lymph could be considerably increased without injury to its potency as vaccine.

But from this statement it is quite obvious that the sole object of employing glycerine in the manner described was to increase the amount of material available for vaccination. With the object also of increasing the quantity of material available, glycerine was used by Dr. Stephen Mackenzie at the London Hospital in the epidemic of 1870-71, the mixture being made made up immediately before it was required for a large series of revaccinations. Similar means for increasing their amount of available lymph have been frequently employed by public vaccinators (among the earliest my present colleague, Dr. Bruce Low) and others in times of stress, but until recently altogether without appreciation of the inhibitory action exerted by the glycerine in bringing about bacteriological purification of the lymph, when the mixture is stored for some time prior to use under conditions preventing access of air and light. When, however, a glycerine emulsion is properly prepared after the method I have advocated, it is found that the growth of extraneous aërobic bacteria is at once greatly inhibited, while after a longer or shorter period they are practically all killed out. This effect is best demonstrated by making a series of plate cultivations from tubes of glycerinated lymph at gradually increasing intervals of time, a control plate being poured in each instance from a specimen of the lymph material prior to the admixture of the glycerine.

These observations of mine, since their publication in 1891, have received ample corroboration from a number of observers in various parts of the world, as follows:

In 1892 a paper dealing with this question was published by MM. Chambon and St. Yves Ménard in which they relate their experience of the use of glycerinated calf lymph when kept for a considerable period in capillary glass tubes. Not only were the results they obtained with originally active lymph highly satisfactory, but lymph which in its fresh state had given mediocre results produced, after fifteen days' admixture with glycerine, a passable vesicle, and after forty, fifty, or sixty days a typical one. The improvement in the activity of such lymph seemed to them to be due to the gradual extinction of extraneous microbes under the combined influence of glycerine and time.

Professor Straus, who made plate cultures with their glycerinated lymph, found that when fresh it gave rise to numerous colonies of various microbes, especially staphylo-

coccus pyogenes aureus and staphylococcus albus, but that when it had been stored fifty to sixty days plate cultures therefrom remained absolutely sterile as regards these extraneous microbes. Samples tested at intervals between these two extremes presented fewer and fewer microbes as they became older. These experiments were repeated many times, and invariably with similar results. This evidence, so entirely corroborative of my own work, is the more important as it appears certain, from a perusal of their original paper, that the authors were ignorant that similar results had been previously arrived at, and that these had been published nearly twelve months before the appearance of their article.

The value of glycerine in this connection is also strongly advocated by Professor Leoni in a paper read before the Medical Congress held at Rome in April, 1894, and afterwards published in the *Revue d'Hygiène*. He finds that vaccine lymph as freshly collected is apt to contain large numbers of micro-organisms, some of which he says are capable of exerting pathogenic properties when inoculated into the system along with the true vaccine virus, and he states that these microbes disappear completely from, or that at the least their number is vastly decreased, in vaccine which, having been prepared with glycerine is afterwards preserved, for a period of from one to four months before use.

Dr. Klein also bears witness to the power exerted by glycerine in freeing vaccine lymph from bacteria. In speaking of the organism specific to vaccinia as being probably a spore-bearing bacillus, he says: "..... it is established that the active principle of vaccine is preserved in glycerine, although, as is also known, pure glycerine acting for long times is a germicide for cocci and sporeless bacilli."

In 1896 a Commission under the presidency of Dr. Schmidtmann, and including Drs. Koch, Pfeiffer, and Frösch, together with the directors of the Vaccine Institutes of Berlin, Cologne, and Stettin, was appointed by the German Government to inquire and report as to the best methods for the collection, preservation, storage, distribution, and use of vaccine lymph. In their report, which has been recently published, the Commissioners arrive at the conclusion among others that fresh lymph contains numerous microbes, the number of which on the addition of glycerine diminishes as the age of the mixture increases. To determine to what extent glycerine is efficacious in destroying the vitality of various definitely pathogenic microbes, numerous streptococci and diphtheria bacilli were mixed with specimens of lymph. As a result the streptococci were killed in eleven days and the diphtheria bacilli in twenty days.

Attempts by these experimenters, as also by Kitasato in Japan, to make other chemical agents serve for rendering vaccine lymph free from bacteria, led to no results of value, as although the lymph could thus be rendered free from extraneous bacteria, it was found to be then inefficacious as vaccine.

By consent, therefore, of a number of observers, fully qualified to judge of the matter, we have in glycerinated calf lymph, properly prepared, a vaccine material which, while even more efficient as vaccine than the original lymph, can be produced practically free from the extraneous organisms which at one time or another have been isolated from fresh or stored lymph by the method of plate cultivation. Of not least importance is the fact that, as shown by Dr. Blaxall and myself, vaccine lymph may by this method of preparation with glycerine, be rendered free also from pathogenic bacteria, such as those of tubercle and erysipelas, even when these have previously been added in considerable quantity, for experimental purposes.

The question of quality of vaccine lymph naturally engaged the attention of the English Royal Commission on Vaccination at the time they were taking the evidence of witnesses, and among the recommendations contained in their final report is one to the effect that no persons should be required to submit to vaccination by means of any other lymph than that derived from the calf. The reason for this recommendation appears to be avoidance of even remote risk of inoculation in the process of vaccination of infections other than cow-pox—such, for instance, as those of syphilis and leprosy (Section 433)—as also the desirability of minimising the opportunity for infection by erysipelas by obviating the necessity for opening vaccine vesicles involved in arm-to-arm vaccination (Section 447). The succeeding section of the report which deals specially with the subject now being discussed may be set out in full. It is as follows:

> 448. We think that safety would be increased by preserving the lymph in tubes instead of on "dry points." There is some difference of opinion on this matter among those with whose opinions we have been furnished. On the whole, however, we think the weight of experience as well as reason is in the direction we have indicated.
>
> In connection with this subject, our attention has been drawn to the experiments recently made by Dr. Copeman as to the effect of the storage of vaccine lymph in glycerine. The conclusions at which he arrives are that the addition of glycerine, whilst it leaves the efficacy of the lymph undiminished, or even increases it, tends to destroy other organisms. If it be the fact that the efficacy of the lymph remains unimpaired, its storage in glycerine would largely diminish the difficulties connected with the use of calf lymph which are inseparable from calf-to-arm vaccination. The investigation has not reached a point at which it is possible to pronounce with certainty whether the anticipated results would be obtained. And it was at one time suggested that the introduction of glycerine was likely to be mischievous. The question is one a further investigation of which is obviously desirable.
>
> If lymph is to be preserved in glycerine, due care would be requisite to ensure its purity and the absence of contamination in its introduction. We think that, whether mixed with glycerine or not, each tube should contain only sufficient lymph for the vaccination of one person.

In this section (448) of the Royal Commissioners' report a sentence occurs to which some special reference is desirable. This is as follows: "And it was at one time suggested that the introduction of glycerine was likely to be mischievous." The reference made is to an outbreak of disease having the clinical characters of impetigo, which occurred in the summer of 1885 in villages situated on the island of Rügen in the Baltic, after the vaccination of 79 children in the latter part of June of that year. This outbreak forms the subject of a paper by the late Sir George Buchanan in the *Transactions of the Epidemiological Society* for 1885-86. He states that for the vaccination of these 79 children only two tubes of lymph (of human origin) were available, and consequently their contents were further mixed with glycerine (glycerinum purissimum) before use. Thymol, to the extent of one-third, had also been mixed with the lymph previous to its having been sent out (from the Government establishment at Stettin). Sir George Buchanan states that the principal misgivings of the Commission appointed to inquire into the outbreak had concern with the glycerine, but adds that several points in the circumstantial evidence, however, suggest that the Stettin mixture before glycerine had been added may have been responsible for some irritation. He further says, however: "I do not know of any experience in England of inoculation with thymol or thymol and glycerine, but I have heard of dilutions of lymph with glycerine, always from people complaining of the lymph."

In giving evidence before the Royal Commission on Vaccination in 1893, I was asked whether this statement did not condemn my suggested use of glycerine in connection with lymph supplies. I pointed out, however, that, in the first place, dilution of lymph with an indefinite quantity of "glycerine" of unknown composition just before employing the mixture for vaccination, was a very different matter from storing lymph with chemically pure glycerine in definite amount and of definite strength, the whole being protected from light and air for a length of time before use; and that, in addition, what at the time of the outbreak in question may have been termed glycerinum purissimum, would in all probability at the present day be considered by no means deserving of that term.

This latter statement I made on the authority of Messrs. Price, the chief manufacturers of glycerine in this country, whose manager, at the request of the directors, was good enough to put at my disposal his extensive practical knowledge of the details and the literature of this subject. The information thus obtained has been published in the appendix to the last volume of evidence, recently issued by the Royal Commission on Vaccination.

The glycerine which has been employed in my investigations is that manufactured in this country by Messrs. Price; but in Germany, where this method of purification and preservation is now carried out in all the Government establishments for the supply of vaccine lymph, a glycerine made by Sarg of Vienna is used.

In order to obtain an authoritative opinion as to the degree of chemical purity obtained in the manufacture of glycerine at the present time, and also an accurate estimate of the

difference, if any, in the nature of the English and Austrian brands, I requested Dr. Wilson Hake to analyse samples of glycerine manufactured by Messrs. Price and Sarg respectively, and also samples of a new English brand which had just been placed on the market by Messrs. Lever Brothers. The result of the chemical examination of these samples, which Dr. Hake was kind enough to make for me, proves incontestably that all three samples exhibit a high degree of purity, most markedly so in



Fig. 1.—Photograph of agar plate incubated for seven days subsequent to inoculation with one loopful of rubbed-up vaccine pulp prior to its admixture with glycerine.

the case of Messrs. Price's manufacture. In all there is complete absence of metallic contamination of any kind, while the amount of organic impurity is insignificant. The main difference observed is the slightly greater degree of concentration obtained in the English products as opposed to that of Austrian manufacture.



Fig. 2.—Photograph of agar plate incubated for seven days subsequent to inoculation with equivalent quantity of the same material immediately after glycerination. The number of colonies in these two plates will be observed to correspond closely.

In accordance with the suggestion contained in Section 448 of the Report of the Royal Commission, the Local Government Board instructed me to make arrangements with Dr. Blaxall, the Lecturer on Bacteriology at Westminster Hospital, to carry out a further series of experiments on the lines indicated by me in the evidence which had been tendered to the Commission, with the object of elucidating more fully the exact value of my glycerine method for the purification and preservation of vaccine lymph. The results of this series of experiments are set out in the Report of the Medical Officer to the Local Government Board for the year 1895-96, published in the autumn of 1897.

Although devoting our attention mainly to the results which ensued on the employment of glycerine, it was thought desirable that investigation should be made concurrently as to the possible value for the preservation and purification of

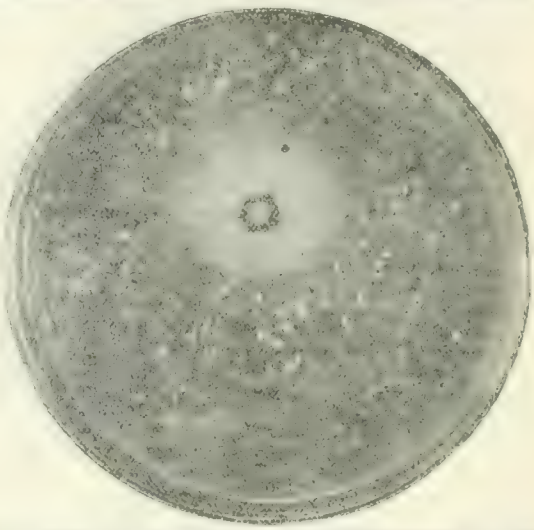


Fig. 3.—Photograph of agar plate inoculated with stock glycerinated emulsion one week after preparation. The number of colonies is somewhat diminished.

vaccine material, of lanolin and vaseline, substances which within quite recent years have been introduced by two officers of the Indian Medical Service, Surgeon-Lieutenant-Colonel King and Surgeon-Major Bamber respectively, as being superior, in their opinion, to glycerine as agencies for the preservation of vaccine. Neither of these observers, however, has as yet brought forward any bacteriological evidence as to a possible germicidal action of the substance they advocate, as will be seen on reference to their original papers. And Dr. Blaxall has shown that from this point of view, at any rate, neither lanolin nor vaseline can be regarded as possessing any value whatever. Indeed, it would appear that the extraneous organisms originally present in the



Fig. 4.—Photograph of agar plate inoculated two weeks after glycerination. A further decrease in the number of colonies is now apparent.

lymph with which these substances are admixed, so far from exhibiting as time goes on any diminution in numbers, tend, on the contrary, to become largely increased, as shown by the test of plate cultivation.

The Advantages of Glycerinated Calf Lymph.—1. By employing the method of glycerination of lymph (pulp) great increase in quantity can be obtained without any consequent deterioration in quality, the percentage inser-

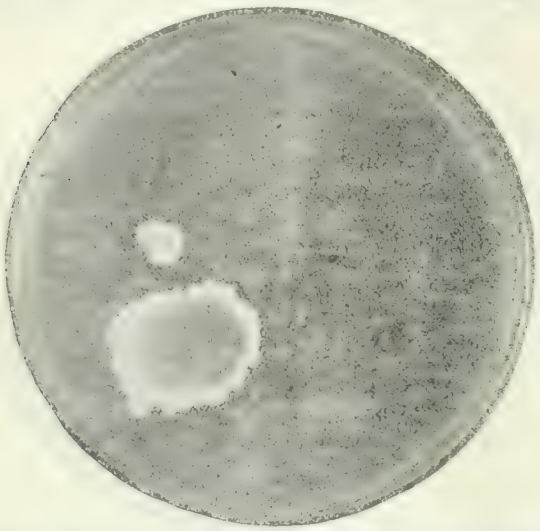


Fig. 5.—Photograph of agar plate inoculated three weeks after glycerination. The decrease in the number of colonies is still more marked.

tion success following on its use being equal to that obtained with perfectly active fresh lymph.

2. Glycerinated lymph does not dry up rapidly as does unglycerinated lymph, thus simplifying the process of vaccination.

3. Glycerinated lymph does not coagulate, so that it never becomes necessary to discard a tube on this account.



Fig. 6.—Photograph of agar plate inoculated four weeks after glycerination. No growth whatever has occurred.

4. Glycerinated lymph can be produced absolutely free from the various streptococci and staphylococci which are usually to be found in untreated calf lymph, and which are considered by Crookshank and others as liable to occasional suppuration.

5. In like manner the streptococcus of erysipelas, in the event of its having been originally present in the lymph material, is rapidly killed out by the germicidal action of the glycerine.

6. The tubercle bacillus is effectually destroyed even when large quantities of virulent cultures have been purposely added to the lymph.

7. The possibility of inoculation of syphilis is eliminated, as the calf is not subject to this disease.

8. The necessity for collecting children together, with the attendant risk of spread of infectious diseases, or of transporting a calf from place to place, is obviated, while the danger of "late" erysipelas in the child is minimised by reason of there being no necessity to open the mature vesicles for the purpose of obtaining lymph.

9. The bacteriological purity and clinical activity of large quantities of the lymph can be readily tested prior to distribution.

10. By reason of the possibility of keeping large stocks of glycerinated lymph on hand for considerable periods of time without appreciable deterioration, any sudden demand, such as is likely to arise on an outbreak of epidemic small-pox, can be promptly met.

11. The expense of producing glycerinated lymph is proportionally small, since the amount obtainable from each calf is enormously increased.

The Preparation of Glycerinated Calf Lymph.

The method best adapted for the production of glycerinated calf lymph which shall be free from all extraneous organisms, of perfect efficacy, and yet affording material for the vaccination of many more children than the original unglycerinated calf lymph, is briefly as follows:

The Preparation of the Calf.—A calf of suitable age, about three to six months, should be kept in quarantine for a week, after which, if found to be quite healthy, it may be removed to the vaccination station. It is there placed on a tilting table, and the lower part of the abdomen, reaching as far forward as the umbilicus, is thoroughly washed with a solution of carbolic acid, and then rinsed with sterile water and dried with soft sterilised towels.

Inoculation of the Calf.—With a sterilised sharp scalpel incisions about 4 inches long and half an inch apart, parallel to the long axis of the body, are made on this clean shaved area. The depth of the incision should be such as to pass through the epidermis and to open the rete Malpighii, if possible without drawing blood. As these incisions are made, glycerinated calf lymph, which by examination has been proved to be free from extraneous organisms, is run into them by means of a sterilised blunt instrument, and the point of the scalpel is from time to time dipped into the vaccine emulsion.

Collection from the Calf.—After 5 days, or 120 hours, the vaccinated surface of the calf is first thoroughly washed with warm water and soap, rubbed over it by the clean hand of the operator, and finally the whole area is carefully cleansed with sterile water. The remaining moisture is then removed by sterilised sheets of blotting paper. The vaccinated incisions will now appear as lines of continuous vesicles raised above the surface, each line separated from its neighbour by about a quarter of an inch of clear skin. Any crusts which appear in the vesicular lines are picked off with a blunt sterilised instrument. The vesicles and their contents are then removed by means of a sterilised Volkmann's spoon, and transferred to a sterilised bottle of known weight. By going over the lines only once with the spoon it is quite easy to remove the whole of the pulp without any admixture of blood. The abraded surface is carefully washed, and may be dusted over with fine oatmeal or starch and boracic powder. Subsequently the calf is transferred to the slaughterhouse, and the carcass is examined by the veterinary surgeon, who forwards a certificate of its condition. Should this not be satisfactory, the vaccine pulp obtained from the animal is destroyed.

Preparation and Glycerination of the Lymph Pulp.—The bottle containing the vaccine pulp is taken to the laboratory and the exact weight of the material ascertained. A calf vaccinated in this way will yield from 18 to 24 grammes, or even more, of lymph pulp. This material is then thoroughly rubbed up in a sterilised mortar or in a mechanical triturating machine. When it has been brought to a fine state of division

it is mixed with six times its weight of a sterilised solution of 50 per cent. chemically pure glycerine in distilled water. The resulting emulsion is then transferred to small test tubes, which are then aseptically sealed and should be stored in a cool place protected from light. When required for distribution it is drawn up into sterilised capillary tubes, which are subsequently sealed in a flame of a spirit lamp.

Bacteriological Examination of the Lymph Emulsion.—As soon as the vesicular pulp is thoroughly emulsified with the glycerine solution agar-agar plates are established from it, and after suitable incubation for seven days the colonies that have developed on the plates are counted and examined. Week by week this process is repeated, and invariably the number of colonies diminishes with the age of the emulsion, until at the end of the fourth week after the collection and glycerination of the lymph material the agar-agar plates inoculated at that time show no development of colonies. The lymph is then subjected to further culture experiments, and if these results of freedom from extraneous organisms are confirmed the emulsion is ready for distribution. The elimination of the extraneous organisms in our experiments has occurred with marked regularity at the end of the fourth week. The only exception to this rule arises when the lymph originally contained a considerable number of spores or bacilli of the hay bacillus or B. mesentericus. These organisms are very resistent to the action of glycerine, but if the precautions detailed are carried out in the treatment of the calf their presence may generally be excluded.



Fig. 7.—Photograph of child after vaccination (eighth day) with glycerinated lymph which, as shown in Fig. 6, was found when tested by the method of plate cultivation, to be free from extraneous micro-organisms.

DURATION OF ACTIVITY OF GLYCERINATED CALF LYMPH.

This varies in all probability with atmospheric conditions, with the fineness of division of the vesicle pulp, and above all with the condition of the calf itself. Some calves yield an excellent lymph, others a poor lymph, and the problem is to determine the value of the lymph yielded by any given calf. A lymph which was collected and glycerinated on July 13th, 1897, has been used at intervals of from twenty-four weeks to forty-two weeks after glycerination for the vaccination of children. During this period 71 children have been vaccinated with this lymph, in five places each, with a mean insertion success of 99 per cent.

Thus by the methods described glycerinated calf lymph can be prepared which becomes freed from extraneous organisms, is available for a large number of vaccinations—at least 2,000 from an average calf—and retains full activity for ten months, and will, under favourable circumstances, continue to do so in all probability for still longer periods if necessary.

From the description that I have given, it will, I think, be obvious that the preparation and testing of glycerinated calf lymph, properly so called, is a matter requiring considerable skill and care. Sir Richard Thorne insists strongly on this fact in his introduction to our joint report, recently presented to Government, on the administration of certain of the chief Continental vaccine establishments. In every instance, he says, we found that the work of collecting, preparing, and storing the glycerinated lymph was carried out with the greatest care; a condition of scientific cleanliness was specially aimed at, and a laboratory fitted with bacteriological and other scientific apparatus always formed an essential part of the vaccine institution. The extent to which the desired end of freedom from extraneous impurity was attained depended largely on whether a first attempt to adapt an existing calf station or similar establishment to its new purposes had been maintained, or whether it had been abandoned in favour of an institution constructed especially for the purposes of that which is in the main scientific laboratory work. Several of the stations which we visited are already under condemnation because of the difficulty of ensuring that freedom from micro-organisms which should be aimed at during the preparation of the lymph supply. The Cologne station is one of the newest, and may well serve in its main features as a type of that which should be aimed at. The condition of scientific cleanliness to which I have referred extended to such matters as the following:

(*a*) The construction and administration of the stabling for the calves.

(*b*) The means of washing or bathing calves before their vaccination.

(*c*) The construction, cleansing, etc., of the operating rooms.

(*d*) The cleansing of the vaccinated surface of the calf with germicidal preparations and sterilised cloths before collection of the lymph.

(*e*) The use of clean sterilised outer garments by all officials concerned in the processes carried out.

(*f*) The sterilisation of all instruments, etc., employed.

(*g*) The admixture of the lymph material or pulp with glycerine; its preparation and storage under conditions of laboratory freedom from extraneous organisms.

With a view of meeting all possible criticism as to the chance of conveying tuberculosis together with calf lymph, we found that, notwithstanding the well known rarity of that disease in calves, together with the now recognised germicidal effect on the tubercle bacillus when deliberately added to calf lymph prepared with an aqueous solution of glycerine as described, it was the practice not to issue any lymph until a report had been received from a veterinary surgeon, after slaughter of the animal, of the freedom of the calf in question from tuberculosis or other disease. In brief, the lymph used is that of healthy calves only.

The information which we obtained in the course of our visits does not profess to be complete. Much remains to be ascertained by careful scientific research, in order to learn what are the precise conditions under which glycerinated calf lymph can be prepared and stored, so as to secure the utmost freedom from extraneous, and especially from pathogenic, micro-organisms, whilst at the same time retaining to the utmost the undiminished protective value of the lymph material against small-pox. In every country visited further research is being made in this direction, and in Germany a Special Commission of medical and bacteriological experts has been appointed by the Government, in order to study and report upon the subject. But the information which is now available in this country, and that which, during the course of our visits abroad, was placed at our disposal with a readiness and a courtesy which calls for an expression of the fullest acknowledgment, suffices to enable me to submit the following conclusions:

1. It is desirable that vaccination, both primary and secondary, carried out under the auspices of the Government, should be performed exclusively with vaccine lymph derived from the calf.

2. There will probably be advantage in retaining, for a time at least, the system of calf-to-arm vaccination at the Board's Animal Vaccine Station for such parents and others as may request it, and for the purposes of comparing its results with those following the use of calf lymph preserved in one or another way.

3. The distribution of calf vaccine from the National Vaccine Establishment should be limited to glycerinated or similar preparations of lymph or pulp material in airtight tubes or other glass receptacle.

4. To give effect to the above it will be requisite that the Board's Animal Vaccine Station should be reorganised, both as regards construction and administration. Notably will it be requisite that it should include a properly equipped laboratory under the direct supervision of a bacteriological expert.

These recommendations are now in process of adoption by the Government, and already suitable laboratories have been secured, which are to be placed in the charge of Dr. Blaxall. I trust, therefore, that we shall shortly be in a position to supply bacteriologically pure and fully active glycerinated calf vaccine lymph in any quantity that may be found desirable.

ENUCLEATION OF UTERINE FIBROIDS.*

By WILLIAM ALEXANDER, M.D., F.R.C.S.,
Surgeon to the Royal Southern and Workhouse Hospitals, Liverpool.

MEDICAL men are much divided in their opinions as to the treatment of uterine fibroids. Some hold that severe operative treatment is very rarely required, and that medicinal treatment and the occasional performance of minor operations—such as dilatation of the uterine canal, curetting, and electrolysis—will tide most cases of fibromyoma over the menopause. When this period is reached the tumours may be expected to shrink in size and to become innocuous.

Others hold that fibroids are not the comparatively harmless growths that they are sometimes represented to be, but that they kill their hosts more frequently than many medical men admit, and that to prevent their harmful and often fatal effects a severe mutilating operation is not only justifiable, but one to be recommended.

As regards this unsettled question, my experience is that once a fibroid asserts itself by symptoms or signs, the life of the patient is always more or less spoiled. She may live to the average age; but even then the life is very often that of an invalid, often that of a great invalid. As to her prospects of existence, no medical man would recommend her at first-class rates to an insurance company, and probably she could not obtain an insurance policy from any office, a sure proof that the disease shortens life either directly or indirectly.

I have in my mind a patient, the subject of a uterine fibroid, whom I have watched for seven to eight years, and who is now undergoing the "change." I must say that she has been a great sufferer as well as a great drain on her husband's resources. Her life has been threatened very seriously on several occasions from attacks of peritonitis, and once she nearly required operation for obstruction of the bowels. She has had a nurse or a companion all the time, and the social amenities of the household have been in abeyance for the same period. Her nerves are now all unstrung, and any departure from the most quiet life brings on not only intestinal or renal disturbances, but at the same time an attack of "nerves" most painful to behold.

This represents one of the more grave cases; but many others have lesser symptoms, such as a sense of weight, dragging pains in the back, irritable bladder, attacks of metrorrhagia, uterine displacements, sterility, that render their lives very uncomfortable, if not rather miserable. In these, if married, we have the risks of abortion, with its complications and sequelæ, and the greater risks accompanying parturition or those attending the artificial termination of labour. Most of these cases would be much healthier and happier without their fibroids, if these could be removed without great risk and without much sacrifice of healthy organs.

But when such patients seek complete relief the treatment hitherto advised seems to me to more than justify the attitude of those who are reluctant to try such means of cure except for cases where life is threatened or the condition of the patient very wretched indeed. Except in a few cases, where the tumour can be enucleated through the natural uterine and vaginal passages, and some more or less pedunculated subperitoneal fibroids that may be ligatured and snipped off or enucleated, the operative treatment of most single and of all multiple uterine fibroids is extremely sweeping in its extent. The mildest plan is by removal of the ovaries and tubes, but this is not so certain as partial removal of the uterus and fibroids, with or without removal of the appendages, and this is not so neat as removal of the uterus and tumour through the vagina; and this is not so easy or so applicable to all cases as panhysterectomy, by which all the internal reproductive organs are removed at one fell swoop.

The medical journals contain many references to the more severe operation even for small fibroids, and in young people, and with good results as far as the mortality is concerned. But lessened risk of death from an operation does not necessarily justify an operation. To amputate a limb for a strumous joint would be a safe and neat method of getting rid of a troublesome disease, but the sufferer has afterwards to do without a very useful part of his body. Hence, true conservative surgery has so modified the treatment of joint disease, that amputation of limbs, from being the staple occupation of surgeons, has become comparatively rare, and now healthy limbs are scarcely ever sacrificed except for malignant disease.

The operative evolution from partial hysterectomy to vaginal and panhysterectomy in the treatment of uterine fibroids was no doubt legitimate from an operative point of view, as these latter operations are cleaner and safer, and the difference in the amount of mutilation in each is small and unimportant. But if it should become safe to remove the tumours alone without removal of the uterus, ovaries, or appendages, then in all cases it is better surgery to remove only the offending parts, and in young women with small tumours the conservative operation would be obligatory. The prosecution of this idea has led up to the results to be described in the remainder of this paper.

In 1894 I read before the North of England Obstetrical and Gynæcological Society a case where I removed a large uterine fibroid from the fundus uteri, and left behind nearly all the uterus as well as all the uterine appendages. A circular incision was made round the tumour down to the capsule, and the tumour was enucleated below the incision. Fig. 1 will explain the process and the state of affairs after the operation. The thick, dark line is composed of the lower

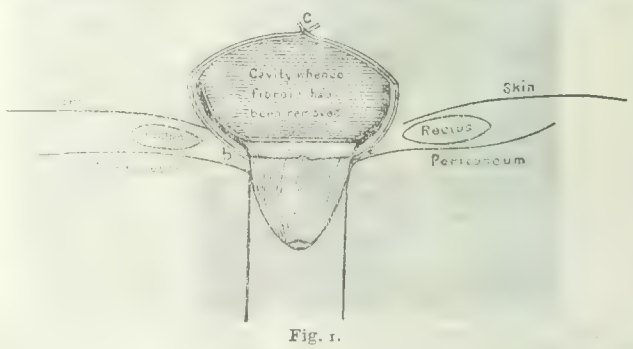


Fig. 1.

part of the capsule of the tumour covered externally by the wall of the uterus. Hæmorrhage was restrained by a stout double silk ligature (*a* and *b*) passed through the transfixed fundus uteri just below the tumour, and tied tightly at each side. A large mass of lint steeped in perchloride of iron was laid in the cavity whence the fibroid had been enucleated, and the lint was firmly held in its place by tying over it the ends of the ligatures (*c*) that had transfixed the uterus. Fear of hæmorrhage suggested the iron and the pressure. The peritoneum was stitched to the uterus so as to surround it just below the ligature, and the wound closed. There was no sloughing and no hæmorrhage, and the uterus gradually dropped into the abdominal cavity perfect except for the piece of the wall of the fundus taken away with the tumour. I performed another operation in a smaller way and with a like result. In neither case was the uterine cavity opened,

* Read before the British Gynæcological and North of England Obstetrical and Gynæcological Societies.

and the uterus dropped gradually into the pelvis as the stump does after the clamp has been used.

It was obvious that this operation, though a true conservative one, would only be suitable for fibroids on the summit of the fundus, and above the limit of the Fallopian tubes, and that the removal of a piece of the uterine wall was a disadvantage that prevented the operation from being classed in a satisfactory category.

In June, 1896, I made a longitudinal incision over a troublesome fibroid in the fundus, enucleated it completely, packing the cavity with lint dipped in perchloride of iron, and stitched the peritoneum to the margin of the opening. The whole uterus was here left in the abdominal cavity, and the patient went out of hospital with all her organs practically perfect. A year after I heard that she was in good health, doing her work, and that her uterus was normal.

Encouraged by the success of these three cases, I next operated on Mrs. H., aged 45, on September 12th, 1896, and removed from her three fibroids (Figs. 2 and 3), averaging

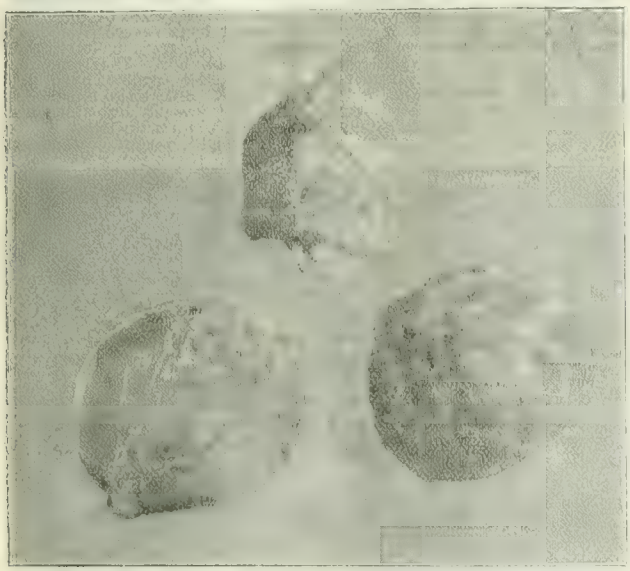


Fig. 2.

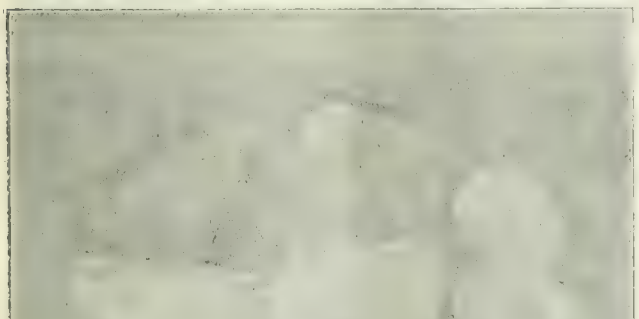


Fig. 3.

half a pound each in weight. The symptoms complained of were severe abdominal pain, weight, inability to get about, and menorrhagia. As the method of operation adopted in this case is nearly the same as that adopted in the subsequent cases, I will here describe what I consider the best method of operating. (See Fig. 4.)

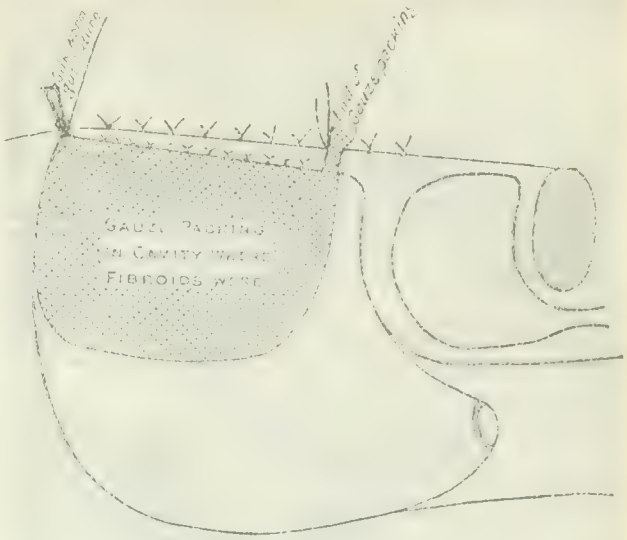


Fig. 4.

The abdomen was opened in the ordinary way, in the middle line by an incision of sufficient length to allow the tumour to come through the opening thus made. An assistant with two fingers in the vagina now pushed the uterine tumour into the wound from below, when three large fibroids were exposed to view—one in the anterior wall, one in the posterior wall, and one in the fundus. Warm, dry, aseptic sponges were placed round the uterus, completely shutting off the rest of the abdominal cavity from the field of operation. A vertical incision was made into the wall of the uterus covering the anterior tumour until the white surface of the fibroid could be seen. By means of the finger and blunt dissector the tumour was readily enucleated, and any bleeding points were caught by compression forceps and tied at the time or afterwards with catgut ligatures. The finger now palpated the bottom of the wound for the locality of the tumour in the fundus, and the incision deepened till its surface came into view. It was also easily removed. In the same way the posterior tumour was also removed through the same opening. A sponge was now stuffed into the deep cavity and left there until a strip of iodoform gauze, many yards long, was produced. The sponge was removed, and the already lessened cavity was packed with the gauze, the end of the single strip emerging from the lower end of the opening into the uterus. The wound in the uterine wall was now closed with numerous superficial and deep catgut sutures, except where the piece of gauze emerged below. A single silkworm gut suture was passed through the uterus at the upper end of the incision in its wall, and each end of it through the whole thickness of the abdominal wall at the upper end of the laparotomy wound, tied externally so as to fix the fundus uteri temporarily to the abdominal wall. Before it was tied all the sponges were removed from the abdominal cavity, which was found unstained.

The laparotomy wound was now closed by buried sutures in the peritoneal layer and deep silkworm gut sutures through all the layers, except at the lower end where the strip of gauze which passed out of the cavity in the uterus emerged on the abdominal wall. This strip drains at the same time the cavity in the uterus as well as the abdominal cavity, which it traverses between the uterine and abdominal walls. The abdominal wound was dressed in the ordinary way with double cyanide gauze and salicylic wool, the wool being changed when necessary during the first forty-eight hours. At the end of that time about a foot of the strip of gauze was gently and slowly pulled out, and the same amount daily until it was all removed. The wound healed up without any complication except some recrudescence of an old-standing emphysematous and bronchitic pulmonary complaint which arose after the first week. There was no shock and no collapse.

I examined the patient a few days before Christmas, 1897. The uterus was normal in size and in position, and the patient was robust. A small sinus remained in the abdominal wall due to the use of some silk sutures which were used to close the uterine wall in this case. Since then I use catgut and have no sinuses. The silkworm gut suture was removed at the end of fourteen days, and the uterus allowed to drop into the pelvis.

CASE V.—Mrs. E., aged 45, married, seven children, two miscarriages, last child seven years ago. Parturition always normal, menstruation irregular, dysmenorrhœa. Several months ago she commenced to feel unwell and to "flood." Dragging pains were felt in her back and left side, worse on lying down and at night, with frequent micturition and defæcation. She became sleepless and worried, and applied for admission to hospital on June 29th, 1896. A mass of fibroids filled up the pelvis; the uterus was retroverted. The patient was so anæmic and reduced that the tumour was pushed up into the abdomen, a thick ring pessary inserted to keep the mass out of the pelvis. Tonic treatment was prescribed, and the patient sent home. She was readmitted on September 26th, much worse, very anæmic and exhausted, and with the uterine tumour much increased in size. The operation was performed on October 12th, and four fibroids (Fig. 5) were removed through one incision in the same way as Case IV.

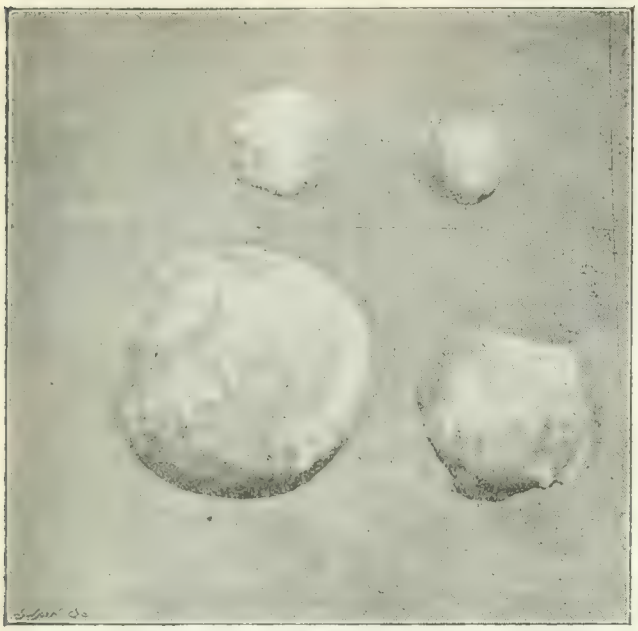


Fig. 5.

In this case the uterine cavity was opened, and an india-rubber drainage tube was passed right through from the abdominal wall to the vagina in addition to the packing previously described. Antiseptic lotions were syringed through the tube after the iodoform gauze was removed. By this means the large cavity left in the uterus by the removal of the fibroids was kept free from infection likely to be caused by its contiguity to the infected mucous membrane of the uterus, until the operation cavity shrunk up and disappeared.

The temperature only reached 100° once, on the third day after operation, and was all the rest of the time quite normal or subnormal. There was no shock such as might have been expected in so feeble a patient. She went home six weeks after operation, and has not been seen by me since.

On January 14th, 1898, I caused inquiries to be made, and found that she improved considerably after operation, all her pelvic symptoms disappearing. She then began again to lose flesh, jaundice set in, and signs of cancer of the liver appeared, from which she died in the summer of 1897.

CASE VI was that of a lady, aged 49, who was rapidly becoming insane through the worry of a mass of fibroids that filled her pelvis. She was restless, talkative, and occasionally "queer," of spare frame, and sallow complexion. She had frequent attacks of febrile symptoms, tongue dirty, skin unhealthy, irritable bladder, and, speaking generally, her state was most unsatisfactory. Her mind was fixed on her fibroids, and in the endeavour to give relief the twenty-five fibroids seen in Fig. 6 were

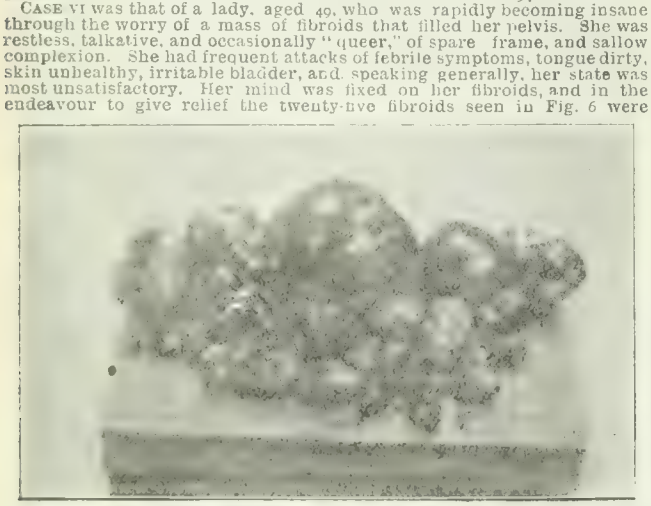


Fig. 6.

removed on September 23rd, 1896. Twenty intramural growths were enucleated, and five were ligatured and snipped off, being pedunculated and subperitoneal. The wound healed without any febrile disturbance, and her mental condition seemed to improve for three weeks, when she became incoherent, sleepless, and refused her food. On October 26th, rather more than a month after operation, her temperature rose to 102.2°, and remained there for two days, dropping to normal. Her mental condition remained the same. On November 6th the temperature again rose, and on the 8th reached 105.2° accompanied with wild delirium. On the 9th she became comatose, and died on November 10th, three weeks after the operation had been quite recovered from.

A *post-mortem* examination showed very distinct thickening of the membranes of the brain, with deposits of lymph both old and recent. There was intense congestion of the meninges and œdema of the arachnoid. The uterus was normal in size, adherent to the abdominal wall and to the neighbouring organs by loose bands of lymph. No signs of inflammation or suppuration.

CASE VII.—Mrs. A., aged 51, admitted to hospital October 5th, 1896, when the previous case was considered out of danger. Twelve years ago she had laparotomy performed in London, and had not since been unwell till two years ago, when metrorrhagia began. She was very much blanched from loss of blood, and her condition was very unfavourable. The absence of shock in the previous case encouraged me to operate, and twenty-three fibroids were removed, so similar in size and kind to those removed in Case IV that they were not photographed. There was no shock and no disturbance and no temperature for two days, then persistent vomiting and abdominal distension set in, and she died from obstruction of the bowels on the fifth day. Colotomy failed to give relief. About 6 inches of small intestine were found gangrenous without any apparent reason. There was no peritonitis or uterine complication.

CASE VIII.—Miss H., aged 36, admitted to the private ward of the Royal Southern Hospital on March 1st, 1897, suffering from severe dysmenorrhœa, pain across the lower part of the abdomen, great irritability of bladder, and frequent micturition both by day and night. The dysmenorrhœa has existed for several years, but the bladder troubles have only been in existence for rather more than a year. A year ago she placed herself under medical treatment with temporary benefit, but since last November she has been a complete and very uncomfortable invalid.

A uterine fibroid (Figs. 7 and 8), two pounds in weight, was enucleated from

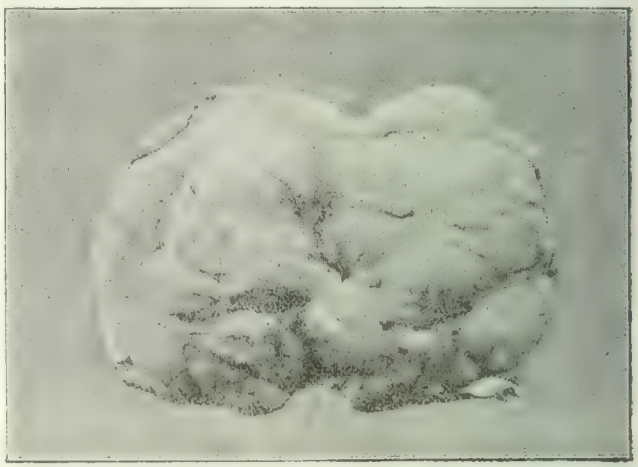


Fig. 7.



Fig. 8.

the body of the uterus on March 4th, without any difficulty. The uterine cavity was not opened, and no drainage was used. There was practically no trouble afterwards, except a little phlebitis of the left leg in the third week. I examined the patient on January 10th, 1898. Her uterus was normal in size, in good position, and she was quite cured of all her pelvic troubles.

CASE IX.—Mrs. W., aged 31, admitted to hospital on April 5th, 1897, suffering from uterine fibroids, producing pressure symptoms, of which the most prominent was frequent micturition. She was practically unable

to carry on her work as a nurse through the infirmity, and, as there also was a probability of marriage pending, her mental anxiety on both counts was very considerable. I told her about these operations, and advised the performance of a similar operation upon her. Someone advised the operation being done in London, where she would be near her friends. I then explained to her the different methods of dealing with her case, and warned her against the mutilating operations, and that I thought she should have the fibroids alone removed. After consulting several medical men in London she returned to Liverpool, because she said no one offered to perform the operation I have described, and some said that such an operation was not possible. Fig. 9 shows the four fibroids



Fig. 9.

that were removed on April 8th, 1897. The temperature and pulse remained perfectly normal for fourteen days; then a misunderstanding arose between the friends of the nurse and her attendants, the wound suppurated, and some phlebitis supervened. There was never any danger, but the convalescence was delayed, and she was not able to leave the hospital until June 23rd. The uterus was then small and in good position. I had a letter from this patient on January 21st, 1898, saying

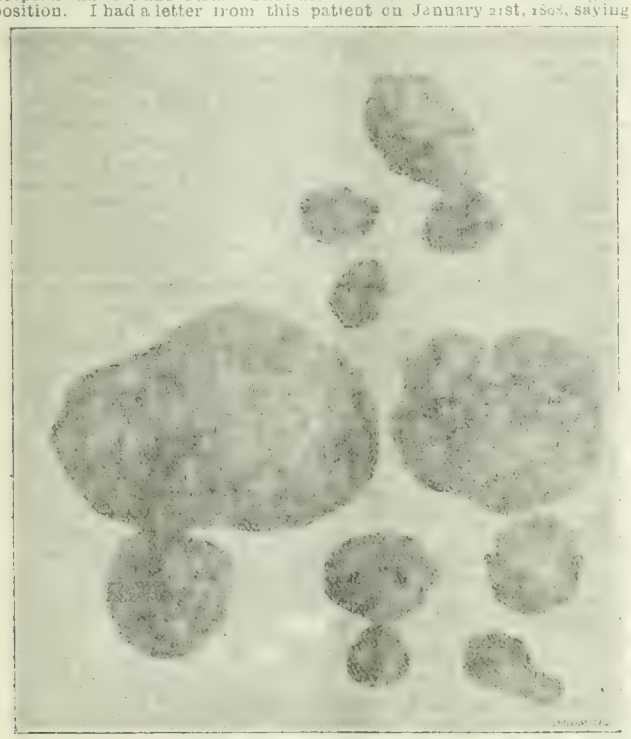


Fig. 10.

she had gained a stone in weight since before operation. Her menstrual periods are natural but rather frequent and quite free from pain. There is no return of the kidney trouble. She says: "I am so grateful to you doctor, for all you have done for me. You do not know what a pleasure it is to go to bed and to be able to rest without being disturbed. The operation from the bladder point of view was a great success."

Case X.—A cook, aged 30, admitted to the workhouse hospital on October 3rd, 1897, complaining of pain, weight, bladder irritation, and menorrhagia for four years, and during all that time she has been unable to work. She was very anæmic on admission. Four years ago a tumour was removed by the vagina at a neighbouring hospital without any relief. On October 13th twelve intramural fibroids (Fig. 10) were removed in the usual way. The uterine cavity was opened, and a pedunculated intra-uterine fibroid polypus was removed, and three others were removed from outside the mucous membrane. The convalescence was practically uninterrupted, although the cavity suppurated. This was due to my depending upon gauze drainage, and not passing a drainage tube through. She is now (February 10th) walking about, feeling well except that she is anæmic. She is free from all bladder symptoms.

Case XI.—Mrs. W., aged 33, consulted me in July last for metrorrhagia. She had a large uterus with a distinct tumour in the fundus diagnosed as a fibroid. Medicinal treatment and rest were prescribed, and up to the end of October the hæmorrhage was kept in check. In October serious flooding set in, and as the patient lived in the country some distance from assistance, an operation was recommended. On opening the abdomen a diffused swelling occupied the fundus. The uterus was opened, and the swelling was found to be not a circumscribed fibroid, but a mass projecting into the cavity of the uterus. The thickening was shaved off from the inside till the uterine wall was equal all round. Then the mucous membrane of the uterus was curetted transperitoneally, as there were some villous growths upon it, and the cavity was then washed out. A strip of gauze led from the uterine cavity into the vagina, and the uterine wall was stitched up completely, no gauze being used to pack the wound. The abdominal wound was closed except below where a small strip of gauze was inserted down to the peritoneum. The convalescence was quite uninterrupted, and the patient has menstruated twice since in a perfectly normal way. The piece removed weighed an ounce. It had the microscopical structure of a myoma, but seemed to me a nodular thickening of the uterine fundus.

Remarks.

We have thus recorded 11 cases of uterine fibroids, some of them of a very grave character, treated by this method of enucleation, with one death from the operation. This death was not so much due to the special operation *per se* as to an accidental complication that may follow any abdominal section.

In performing these operations it must be remembered that I had to feel my way, unassisted by any clear directions either from textbooks or from medical journals. For though enucleation is named by gynæcologists it evidently has been reserved for single tumours, and only very infrequently has it been performed for them.

With the experience now gained I think the mortality after these operations will in the future compare very favourably with any operation for abdominal tumours. A low mortality being secured, the non-mutilation of the patient should give this operation a tremendous advantage over the other deprivative operations. For even women near the menopause do not like to be deprived of their organs, and married ladies, no matter how dark their prospects of pregnancy may be, do not like absolutely to lose hope of ever having a child. Young women with troublesome symptoms; sterile women with fibroids, but without troublesome symptoms, can all be relieved without interference with the ordinary functions of the uterus.

Mere number of tumours is no contraindication to the operation, nor is size of tumour, provided it has not absorbed the uterus or appendages and left nothing worth preserving. Hæmorrhage was the great danger dreaded in the performance of these operations, but I found it was not so great as anticipated, and that it could be controlled by pressure forceps and sponges in much the same way as in operations elsewhere. The treatment of after-oozing was a matter of great concern. It was necessary to prevent any trickling of blood into the abdominal cavity, and at the same time to leave the uterus inside the abdomen in a natural position, and in a natural state when the wounds had all healed up. These conditions have been fully attained by the method of treatment adopted.

The removal of all the tumours does not present any difficulties. The uterine walls can be ransacked quite easily. Whether these tumours will grow again is a matter for future experience to decide. What experience we have is against such growths as the effects of traumatism has always been, so far, to make uterine fibroids shrink. The time necessary for a fresh crop to grow would, however, generally bring such cases to a period of life when such growths would tend to cease in course of Nature, and should a second operation become necessary there is no reason why it should not be performed.

How far the uterus and appendages will be able to resume their functions of pregnancy and parturition has not been practically settled by the occurrence of these states on patients operated on. There are no *a priori* reasons, however, why such occurrences should not proceed naturally, as Nature tends to go back to the normal condition when disturbing causes have been removed.

The operation is a plain, straightforward one, much easier than panhysterectomy, and very much easier than that Chinese puzzle of removing a comparatively large fibroid-laden uterus through a comparatively narrow vagina. In some cases no doubt deprivation of the uterine organs is not of great moment, and in other cases enucleation may be out of the question, so that I do not recommend it as a panacea for fibroids. But in all cases enucleation can be considered as the most desirable of all the operations for uterine fibroids, if it can be safely and conveniently performed, and I can recommend the method of treating uterine fibroids to greater consideration at the hands of the profession than it has so far obtained.

If this paper will have rendered the operative technique of enucleation safer, and extended the operation further than the very limited field enucleation has hitherto held, then an additional resource will be placed in the hands of gynæcologists whereby troublesome small fibroids can be removed earlier, because by the so much milder operation, and even in more advanced cases the disease may be removed without destroying the functions of the sexual organs, although the retention of that function may not seem to the operator of much importance.

AN ANSWER TO MR. LEONARD HILL'S REJOINDER REGARDING THE HYDERABAD COMMISSION.

By T. LAUDER BRUNTON, M.D., F.R.S.,
Physician to St. Bartholomew's Hospital.

In his rejoinder[1] to my reply,[2] Mr. Leonard Hill takes up a curious position, for on the one hand he says that he regrets exceedingly that vigour of criticism should be regarded by Dr. Lauder Brunton as a personal offence, and on the other he says, "The strength of my attack is justified to the full by Dr. Brunton's statement that he stands alone responsible for the work of the second Commission."

These two statements are so contradictory that the only conclusion I can come to is that Mr. Leonard Hill does not know himself what he means, but I am quite willing to believe that he does not see the whole gravity and scope of his accusations, and I shall therefore pass over their personal bearing, and confine myself as far as possible to their bearing on the character of the work of the second Hyderabad Commission, which, being more important than the first, is usually simply called the Hyderabad Commission. I have already explained in my reply how I came to be responsible for any deficiencies in the work of this Commission, but I am very far indeed from claiming the credit for the work actually accomplished, which belongs to the Commission and not to me individually.

It is obvious, however, that as I am so far responsible for the work, any accusations brought against it are really directed against me personally, whether they were intended to be so or not, and the duty of answering them devolves upon me rather than on any other member of the Commission.

Before proceeding to examine the arguments by which Mr. Leonard Hill, in his rejoinder in the BRITISH MEDICAL JOURNAL of March 19th, attempts to support the accusations he brought against me in the JOURNAL of April 17th, 1897, I will endeavour to correct some misapprehensions under which he appears to labour (*a*) in regard to the constitution of the Hyderabad Commissions, and (*b*) in regard to my reason for mentioning the shortness of the time occupied in the work.

(*a*) In his rejoinder Mr. Hill asks: "Were Surgeon-Lieutenant-Colonel Lawrie and Dr. Lauder Brunton the first and second Commissioners respectively, and the Commissioners Bomford, Rustomji, Hehir, Kelly, Chamarette merely assistants?" Mr. Hill appears not to have read with care the report which he has so violently attacked, for otherwise he would have known (1) that, so far from Surgeon-Lieutenant-Colonel Lawrie *being* the first Commissioner, he was not even a member of it; and (2) that the second Commission continued its work during my absence through illness, which it could not have done had I *been* the Commission instead of being merely a member of it.

(*b*) Mr. Hill asks why my three months' ticket was not extended? The answer simply is that I could not be absent longer from my engagements in London, and accepted the invitation to join the Commission only for this limited time. But Mr. Leonard Hill completely misapprehends my meaning when he says: "It is a curious excuse to bring forward in defence of deficiencies that the work of scientific investigation was done in a hurry." He does not appear to understand that there is all the difference in the world between doing things quickly and doing them in a hurry, for this term implies a want of the complete co ordination of action requisite to obtain the best result.

The scientific work of the Commission was done in a short time, but it was not done in a hurry, and I have not brought forward hurry as an excuse for any deficiency in the work done by the Commission, with one exception, which I will presently mention, and which I ought to have specified in my reply. Notwithstanding the shortness of time allowed for collecting apparatus, I was able, either by purchase or by selection from what I possessed, to obtain all the instruments I thought necessary, with one exception, namely, Ludwig and von Basch's electrodes. Those which I have had in my possession for many years, and used in former researches, were unfortunately mislaid, and I was unable to obtain new ones before sailing. The electrodes I had with me were such as had been generally in use by physiologists previous to 1874, and are quite sufficient for most work, although the possession of Ludwig's electrodes would have ensured more perfect application of the stimulus to the vagi than was attained in Experiment 95. As a doubt regarding the application of the stimulus was carefully mentioned in the report the record of the experiment was perfectly trustworthy, and affords no ground for Mr. Hill's objections. With this exception my mention of the shortness of time employed in collecting apparatus, and in the work of the Commission, was not brought forward by me as an excuse for any imperfections in the work *actually done* and recorded in the report. It was intended as an excuse for the work which the Commission in spite of the other advantages at its disposal was *obliged to leave undone*, and which is therefore altogether outside Mr. Hill's criticism. The work of the Commission has been supplemented by the researches of Gaskell and Shore, and also of Hare and Thornton, both of which researches were initiated by Surgeon-Lieutenant-Colonel Lawrie. Yet much remains still to be done, and some of the lines of research on which the Hyderabad Commission worked are still in the same state as it left them. The Commission began to investigate the influence of altered tissue change and excretion on the susceptibility of the cardiac nerves to stimuli, and on the production of shock either with or without chloroform, but this question still remains to be worked out, although a new research by Cyon on the effect of thyroid extract upon the excitability of the cardiac nerves gives reason to hope that our knowledge regarding this subject may soon receive a substantial increase.

Having now tried to correct Mr. Hill's misapprehensions, I will proceed to examine the arguments by which he endeavours to support the accusations of (1) prejudice, (2) carelessness, (3) ignorance of scientific methods; and (4) incompetence, which he brought against me in the BRITISH MEDICAL JOURNAL of April 17th, 1897. In his rejoinder he says, "I never intended any attack that I have made upon the conclusions of the Hyderabad Commission as a personal attack upon Dr. Lauder Brunton, for whose work I naturally have the highest appreciation." But the attack now in question was made by Mr. Hill not upon the conclusions of the Hyderabad Commission, but upon their experimental work. Their conclusions might have been wrong, and yet the experimental work perfectly right. But Mr. Hill has chosen to deny the trustworthiness of the experiments, and thereby he attempts to nullify the whole work of the Commission. In

his rejoinder he does not withdraw his accusations, but on the contrary tries to substantiate them. In order to justify this action he must prove his accusations to be true. I shall now take them up *seriatim*, and examine the evidence by which he attempts to prove them.

1. His first accusation is that of prejudice. In his lecture,[3] he said the "Hyderabad Commission engaged on a wild goose chase to prove that the respiration ceases before the heart failed." In my answer,[4] I mentioned my responsibility in connection with the work of the Commission, and showed that when I set out for India any prejudice that I had was in favour of danger arising from the direct action of chloroform on the heart, so that when the results of many experiments caused me to change my opinion the announcement was mentioned by the *Lancet* with a certain amount of surprise in the annotation which I quoted in my reply. In his rejoinder, Mr. Leonard Hill simply gives a short historical summary of the appointment of the Commissions which has no apparent bearing on the subject, and then quotes from a leading article in the *Lancet* the following passage: "Clinical experience and physiological experiments have led to the conclusion that it (chloroform) has a paralysing effect on the heart, while ether exerts such an action in a very minor degree, if at all. It is almost impossible to believe that the conclusion at which European and American surgeons and scientists have arrived is, after all, destitute of foundation, and little better than an idle dream." It was because this passage exactly expressed my opinions on the subject when I left England that the *Lancet*, in the annotation to which I have already referred, expressed surprise at the change they had undergone, and anxiety to learn the experimental evidence which had induced this change. Had any further evidence been wanted to show how utterly groundless Mr. Leonard Hill's accusation of prejudice was the quotation which he himself gives in his rejoinder would supply it.

2. His second accusation is that of carelessness. This charge is of the very gravest kind, for if it be true it entirely deprives the experimental work of the Hyderabad Commission of any value whatever. So important is it that I shall again quote it. Mr. Leonard Hill says in his lecture that the conclusions of the Hyderabad Commission were "upheld by a series of experiments, many so careless in their execution that they could not for one moment be accepted by a trained physiologist." Although Mr. Hill only states that many of the experiments made by the Commission are untrustworthy yet he practically condemns every one of them as utterly valueless, for, as his accusation at present stands, it is impossible to bring forward a single one of the Commission's experiments without being liable to the retort that it is one of the "many" which Mr. Leonard Hill has declared to be so careless in execution that they cannot be accepted by a trained physiologist. If his accusation be true, the most extensive research ever made on the action of chloroform is nothing more than a complete and useless waste of time, labour, animal life and money. It is evident that these charges are of the gravest nature, and before making them Mr. Hill ought to have been certain that he could prove them by incontrovertible evidence. Let us now see what the evidence is which he actually brings to support them. It is of such an extraordinary character that I shall quote part of it verbatim. He says: "In justification of my charge of carelessness I can bring forward the following facts:

"(1) That the work of the first Commission was conducted by men unskilled in experimental methods and apparently without apparatus.

"(2) That the second Commission was conducted in an out-of-the-way place with such apparatus as could be hurried together in the fortnight preceding Dr. Brunton's departure.

"(3) That the research was hurried through in forty-seven days.

"(4) We may turn to the internal proof to be drawn from the experiments themselves.

"(*a*) An absolutely insufficient method was used to record the energy of the heart.

"(*b*) That chloroform was injected into the jugular vein, and was not washed on into the heart by normal saline solution. Thus no syncope occurred."

From this quotation we see that the first proof Mr. Hill brings forward in support of an accusation of the utmost gravity, which, if true, would utterly destroy the value of all experiments done by the second Hyderabad Commission, and for which I am responsible, is that these experiments were careless in execution because the first Commission, which sat nearly two years previously, and of which I was not a member, "was conducted by unskilled men and apparently without apparatus." A more remarkable *non sequitur* it would be hard to find.

His next proofs are, if possible, still more extraordinary. Mr. Hill lays down a standard of his own, by which he judges our experiments, and condemns them as careless, whilst he appears to be ignorant of the meaning of the term. He seems not to know that carelessness does not depend on the place where a thing is done, on the apparatus with which it is done, nor on the time employed in doing it, but on the way in which it is done. It is a term quite inapplicable to place, materials, or time, and applies only to the manner in which the operators employ the means at their disposal. If Mr. Hill's standard of carelessness were correct, we might at once cast aside as worthless all the observations of travellers or exploring expeditions because they have been made in out-of-the-way places. Henceforth civilised Governments may save themselves the trouble and expense of sending out expeditions to observe the transit of Venus or total solar eclipses because any results they obtain will, according to Mr. Hill's canon, be condemned beforehand as absolutely untrustworthy, inasmuch as the observations must necessarily be made (1) in out-of-the-way places; (2) without the aid of such large telescopes or such perfect apparatus as would have been available at home; and (3) in a space of time which has to be measured by seconds. The absurdity of Mr. Hill's general proofs of carelessness it would be difficult to surpass.

Let us now turn to the internal proofs of carelessness which Mr. Leonard Hill draws from the experiments themselves. His first proof is (*a*) "an absolutely insufficient method was used to record the energy of the heart." Even if this were true, which it is not, this statement is no proof at all of carelessness in the performance of the experiments. It is simply a question of apparatus, and I will consider it in its proper place, namely, under his third accusation, of ignorance of exact physiological methods. His second proof is (*b*) "that chloroform was injected into the jugular vein after ligature of the vein, and was not washed on into the heart by normal saline solution." This experiment was cited by Mr. Leonard Hill in his lecture as a proof of my ignorance of exact physiological methods.

In my reply I showed that his position was untenable, so he now shifts his ground and brings it forward as a proof of carelessness. He tries to do this by stating that it was not the method but the manner in which the injection was carried out that is open to severe criticism.

But in the two objections just quoted there is no question whatever of either carelessness or any other defect in the manner of performing the experiments, and it is only to the methods that Mr. Hill's remarks apply. These methods are (1) ligature of the vein previous to injection; and (2) omission to wash the chloroform into the heart by normal saline solution. I have already shown in my reply that in objecting to our method of ligaturing the vein before injection, Mr. Hill is in a minority, and that instead of my being ignorant of exact physiological methods, it is Mr. Hill who was either ignorant of the fact that the method I employed was the one recommended by Burdon Sanderson, Cyon, and Gschenden, or else in his superior wisdom he sat in judgment on the writers of the best handbooks on physiological methods, and included them in the same condemnation with me. It is, therefore, unnecessary for me to discuss this objection any further. His objection to the second method, namely, that we injected chloroform into the jugular vein, and did not wash it into the heart with saline solution, I will answer by two questions, (1) If the chloroform reached the heart without the injection of saline solution, of what use would such an injection have been? (2) If the chloroform did not reach the heart, how did it kill the animal as it did?

The other experiments which I dealt with in my reply under the accusation of incompetence, but which Mr. Hill now brings in under carelessness, are those on the effect of alteration of position. I have already said that Mr. Leonard

Hill's statement with regard to them is absolutely incorrect, and I will again consider it under the charge of incompetence.

As I have already pointed out more than once, Mr. Leonard Hill's accusation that many of the experiments performed by the Hyderabad Commission were so careless in execution that they could not for a moment be accepted by trained physiologists, applies in its present form to all their experiments, and must so apply until the experiments to which it actually does apply are specified so as to exclude those to which it does not apply. I asked him to specify the untrustworthy experiments, and with the exception of those which I shall deal with under the head of incompetence his "*many*" have dwindled into *one* solitary experiment which he utilises for a double purpose, employing it in his lecture as the basis of an accusation against me of ignorance of exact physiological methods and using it in his rejoinder as the basis of an accusation of carelessness; but, as I have already shown, this solitary experiment upon which Mr. Hill would found so much affords no basis whatever for either of his accusations.

Having thus examined the evidence by which Mr. Hill attempts to support his accusation of carelessness—an accusation which if proved would totally destroy the whole experimental work of the Hyderabad Commission—we find that it consists, first, in a fancy of Mr. Hill's that work is untrustworthy if it is done (1) in an out-of-the-way place, (2) with limited apparatus, and (3) in a short time, a fancy which fortunately for the world at large exists only in Mr. Hill's imagination, and does not correspond with facts; secondly, in a statement that the apparatus employed did not meet with Mr. Hill's approval: finally, we find that the "many" experiments which he denounced as untrustworthy have shrunk down into a solitary one, and even against this Mr. Hill's evidence of carelessness utterly breaks down. Such are the grounds on which Mr. Hill seeks to destroy the whole experimental work of the Hyderabad Commission.

I will now take up Mr. Hill's third accusation of ignorance of physiological methods. In his lecture he attempted to prove this charge by bringing forward the experiment of injecting chloroform into the jugular vein. In my reply I showed that this so-called proof was worthless, and that all the best textbooks on physiological methods recommended the method I used. In his rejoinder he finds it convenient to shift his ground, and say it was not the method but the manner of using it that was objectionable, and he now brings it forward as a proof not of ignorance but of carelessness, and under this heading I have already dealt with it. Another proof which he brings forward in his rejoinder in support of his accusation of carelessness, but which, as I have already shown, ought really to have come under the heading of ignorance of exact physiological methods is that "an absolutely inefficient method was used to record the energy of the heart. A heart when poisoned with chloroform is thrown into paralytic dilatation; it continues to beat, but is incapable of emptying its cavities. A needle thrust into the heart would exhibit the efforts of contraction, it tells us nothing of the efficiency of action of that organ, and yet this was the method employed by the Commission." This statement of Mr. Hill's is a most extraordinary one, for if he has read the report he must know that the Commission did not employ a needle in the heart in order to record its energy, but simply in order to ascertain whether it was contracting or not, for which purpose, as Mr. Hill himself acknowledges, it was amply sufficient.

I now come to Mr. Hill's last accusation—namely, that of incompetence. In his lecture he affirms that I, in experiments on the effect of altered position, paid no attention to the absolute necessity of placing the arterial cannula in the axis round which the animal was turned, and that by neglect of this simple precaution the experiments on the point were rendered utterly worthless. Although it is in another place that he applies the word "incompetent," yet if his accusation that I neglected this simple precaution were true, I should well deserve the epithet. But this statement is a pure product of Mr. Hill's imagination. It does not correspond to the facts of the case, and is therefore untrue. Nevertheless Mr. Hill considers that he was justified in uttering it, without taking the trouble to ascertain previously whether it were true or not because he did not find in the report a statement that certain precautions were taken. The reason why no such statement appears in the report is that my long experience in physiological work has led me to look upon these precautions as so indispensable that I no more thought of mentioning them than I did of commencing my account of each day's work with the statement that the sun had risen, and consequently there was light enough to see our apparatus. For want of such a statement Mr. Hill may feel justified in rejecting all our experiments; and indeed, in order to be consistent, he ought to do so, for we have neither stated that the sun was up, nor that we employed artificial light when making our experiments, and consequently Mr. Hill has no assurance that we were not working in total darkness. But no amount of incredulity on Mr. Hill's part, nor of tenacity in holding to his fancies, will ever convert these fancies into facts, or change his statement from untruth into truth. It is curious to learn from the data with which Mr. Hill furnishes us how he came to make this unfounded statement. He is apparently unable to conceive of an axis without an axle, and so he postulates a swing board as a necessity for the experiment. His imagination, limited by the experience of the scanty supplies in a London laboratory, cannot picture to itself a supply of animals nearly of the same size, nor can he conceive that a floor may be temporarily heightened in the part required by means of blocks. Having thus laid down a canon to which experiments must necessarily conform, he condemns those which do not do so as being utterly valueless, in the same way as he condemned those which did not conform to his canon of carefulness. In neither case does it seem to have entered into Mr. Hill's mind that he could possibly be mistaken, and so he takes upon himself to act as the mouthpiece of trained physiologists, and, in this assumed capacity, to condemn our experiments without further inquiry.

I have now taken up Mr. Hill's accusations of prejudice, ignorance, carelessness, and incompetence, one by one, and have shown that all those accusations are absolutely groundless, and that the experiments of the second Hyderabad Commission are perfectly trustworthy, and may be accepted as such both by trained physiologists and by everyone else.

References.
[1] British Medical Journal, March 19th, 1898. [2] *Ibid.*, March 5th, 1898. [3] *Ibid.*, April 17th, 1897. [4] *Loc. cit.*

THE EFFECTS OF THE DUM-DUM BULLET FROM A SURGICAL POINT OF VIEW.

By Surgeon-Colonel W. F. STEVENSON, A.M.S.,
Professor of Military Surgery, Army Medical School, Netley.

Professor Bruns is reported to have stated at the late meeting of the German Chirurgical Society, that the use of the dum-dum bullet in warfare is "brutally inhuman"; and the inferences to be drawn from certain questions lately put by members of the House of Commons to the Secretary of State for War are sure to conjure up before the minds of hysterical persons, who have no means of knowing the facts of the case, the notion that the English Government has selected for use in the English army a small-arm projectile which in the spirit, if not in the letter, contravenes the agreement come to at the Congress of St. Petersburg, in 1868, not to use explosive shells of less than 400 grammes in weight. As a matter of fact, there is no doubt that the effects of the dum-dum bullet have been exaggerated. This enhanced idea regarding the damage caused in human tissues by this missile is probably the result of reports from India, which were grounded on experiments made there by firing it through animals of greater resisting power than man, and on the natural prejudice in favour of the home-made article. Experiments on animals give only a general idea of the effects of a projectile; they supply no reliable evidence of the injuries it will produce in man or in other animals than those experimented on, inasmuch as these depend altogether, other things being equal, on the resistance offered by the tissues to its passage: the greater the resistance the greater will be the damage done by it.

All war may be said to be "inhuman"; but if the inhumanity of war is to be judged by the greater or less severity

of the wounds produced by the weapons and projectiles used in it, then war is more humane now, dum-dum bullet notwithstanding, than when it was when Sniders or even Martini-Henrys were employed. The object to be attained by leaving the point of the dum-dum bullet uncovered by the cupro-nickel envelope was to increase its stopping power on traversing soft parts only, in consequence of its breaking up without contact with bone; but this does not nearly always occur, and then the wounds it produces in soft parts are precisely similar to those of the service Lee-Metford or of the French Lebel bullets. When it does break up it causes a severely lacerated wound of the soft parts, but one not nearly so severe as those resulting from the ordinary small-bore or any of the older rifle bullets when they meet bone in their passage. The fractures of the shafts of long bones and of their cancellous ends resulting from the dum-dum bullet are comparable in every way with those produced by the service Lee-Metford, and are no more difficult of cure than the latter, notwithstanding that particles of the core and of the envelope are liable to remain in the tissues. The Snider bullet was probably the most destructive small-arm projectile ever used in an army, but the inhumanity of its employment in war was never suggested. When travelling at the same velocity it produced more extensive fractures of bones than any small-bore bullet, dum-dum or other; it comminuted the bone into larger fragments, and displaced these to a greater extent; the fissuring of the bone did not extend so far from the seat of fracture as it does in the case of the small-bore missile, but in the former case the periosteum was also greatly lacerated, while in the latter it, to a great extent, remains untorn over the fissures, and preserves the larger fragments in their normal positions, this being, of course, favourable towards recovery. Besides increased accuracy of shooting, the only advantage a small-bore rifle possesses over the older weapons is that it preserves a higher rate of "remaining velocity" at all ranges than they do, and, as a result, will cause a greater number of severe injuries. But at equal velocities the Snider and Martini-Henry bullets produce greater damage to bony structures than do the Lee-Metford or dum-dum bullets, while the latter, if it deforms, causes a more lacerated wound of the soft parts.

I have made experiments with dum-dum bullets; I have seen our men who were hit with them on the Indian frontier, and I have received numerous letters from medical officers who saw and treated the injuries produced by them in the Tirah campaign, and I am convinced that an exaggerated idea of their effects exists. The experiments referred to proved that they often pass through the soft parts without changing their shape or breaking up; the fractures resulting from them in the wounded from India are no more severe—are, indeed, perhaps less so—than those caused by the Afridi Snider and Martini-Henry missiles; and the information obtained from some of the medical officers in the late expeditions in India goes to show that they often produce clean, punched-out holes in long bones, a class of injury favourable to recovery and seldom seen to result from Snider bullets.

That the dum-dum bullet, when it breaks up, produces a more lacerated track through soft parts is no doubt true; for this it was invented, because the "stopping power" of the Lee-Metford was found to be *nil* when bone was not implicated, and something had to be done to render the small-bore weapon effective against the rushes of Asiatic fanatics. But that the fractures of bones caused by it are more severe, or more lethal in their results, I very much doubt. The carcasses of the animals experimented on did not show it on dissection; the wounded men now at Netley afford no evidence of it, nor do the statements of some medical officers in India bear out this view.

It was with reference to fractures that Bruns raised this question of the "brutal inhumanity" of the dum-dum bullet; but if the suggestion that it produces no more damage to bony structures than the service Lee-Metford does be correct, then it follows that its use in warfare is no more "inhuman" than is the employment of any of the small-bore weapons with which the armies of all the civilised nations of the world are now armed, for they all produce injuries of about the same degree of severity; and with regard to this latter class of small arm Bruns himself has stated that "the new arm of small calibre is not only the best, but it is also the most humane, in that it lessens the horrors of war as far as possible."

In conclusion, it may be well to point out that the articles of the Geneva Convention do not refer at all to the use of small-arm shells in warfare, but to quite different matters; it was, as already mentioned, at a Congress of the representatives of all the European Powers held at St. Petersburg in 1868, that a minimum weight of 400 grammes, or about 14 ozs., for explosive projectiles was agreed upon.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE SCHOTT TREATMENT OF CARDIAC DISEASE.

A REVIEW of certain cases of cardiac disease which have been treated at Nauheim, or by the Nauheim method, without benefit, leads me to venture on a discussion as to the *rationale* which governs that treatment.

It is now generally accepted that a portion of the change in the area of cardiac dulness and in the position of the apex beat is due to the altered relations of the lungs and diaphragm to the heart which result from the treatment. There is, however, a real reduction of the capacity of the heart in those cases which receive benefit.

I find that among the numerous explanations which have been advanced to account for the contraction of the organ there is one assumption in common—that there exists some specificity in the Nauheim waters residing in the salts contained therein. I venture to maintain that there is a law of hydrostatics involved which has been altogether disregarded.

The principle to which I allude is the complement to the principle of Archimedes, that "a body immersed in a liquid loses a portion of its weight equal to the weight of the liquid displaced." "Every body immersed in a liquid is subject to a resultant pressure equal to the weight of the liquid displaced." If a body float on the surface of a liquid, the pressure on the immersed portion of that body equals the weight of the body. If a human body be floated in a bath of water, the pressure exerted by the water on the skin and underlying structures equals the weight of the subject.

The result in the case of a living subject is the application of massage to the immersed portion of the body by hydraulic pressure. The effects may be enumerated as follows: (1) Compression of the vessels (arteries, veins, and lymphatics) in all tissues unprotected by the bony skeleton; resulting in greatly increased resistance to the heart's action in circulating the blood, with propulsion of the lymph and venous blood towards the cavities protected by the bony skeleton. (2) The reflex effect on the heart (retarding it) through the splanchnic nerves, dependent on increased pressure on the abdomen from without. (3) The ascent of the diaphragm in response to the increased abdominal tension, a consequent diminution of the long axes of the lungs, an increase in the short axes of the lungs, and a displacement of the heart upwards (resulting in alteration of the relations of the heart and lungs). (4) A reflex action of doubtful existence and degree from the cutaneous nerves. (5) The influence of the temperature of the water in which the body is immersed, varying with its degree.

I do not refer to the other portions of the Schott method; they are "exercises," and have no pretensions to being anything more.

We have evidently in the Schott treatment a new demonstration of the old truth that exercise is beneficial in some forms of cardiac disease, and it is highly doubtful if we have anything more. The balneological treatment is doubtless an ideal one for some cases; the exercise can be perfectly graduated, respiration is free, and the cardiac beat is well regulated from the splanchnic area—but it may be potent for evil as for good.

There is another lesson to be learnt from a study of the law of hydrostatics referred to, namely, that there are many cases

of heart disease which should never be subjected to the strain involved on the organ by immersion of the body in a bath.

Chapel Street, S.W. KENNETH STEWART, M.D.

A CASE OF CHOREA DUE TO FRIGHT.

THE remote effects of shock or fright to the nervous system may afford grounds for much divergence of opinion. For example, a child aged 12 years, the son of highly neurotic parents, happened to be in a railway accident in which three or four people lost their lives and many were severely injured. After the accident the boy walked home in company with his parents seemingly none the worse for his adventure.

When 11 he had an attack of rheumatic fever, which lasted for some weeks and ultimately left him in a debilitated condition. About a week after the accident he developed symptoms of chorea. The convulsive movements of the hands and facial muscles were extremely well marked. The features at times were distorted, articulation impeded, appetite irregular, and temper irritable. A soft systolic murmur was audible at the apex. The patient was confined to bed and treated with arsenic and cod-liver oil. As soon as convalescence was established he was allowed plenty of fresh air and exercise. The case, at first severe, made a speedy recovery.

The question arises in this case as to the cause of the disease. Was it due to the rheumatic fever which such a short time previously preceded the attack or to the fright of the accident? Fright, I think, must be considered as an exciting cause in a subject predisposed.

Gateshead-on-Tyne. WM. GLADSTONE COOK, L.R.C.P.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BRITISH GENERAL HOSPITAL (No. 3) NOWSHERA, PUNJAB, INDIA.

CASES OF BULLET WOUND.

(Under the care of Surgeon-Major W. C. T. POOLE, M.B., F.R.C.S.I., Army Medical Staff.)

CASE I.—*Bullet Wound of Left Elbow received in Action in Tirah: Joint Disorganised: Recovery.*—Private S., aged 26, seven years' service Oxfordshire Light Infantry, was wounded in the left arm on December 30th, 1897, during a rear-guard action in the vicinity of the Khyber Pass, about five miles from Lundi Kotal.

The bullet entered the flexor aspect of the left forearm, about 2 inches below the elbow, and came out about 2 inches above the joint on the anterior surface of the arm, fracturing the upper third of the ulna, and disorganising the joint as it passed. He was at first removed to one of the Khyber villages, and afterwards to the field hospital, where the olecranon process of the ulna was excised.

He was transferred to No. 3 British General Hospital, Nowshera, on January 7th, 1898. On arrival he was in a very weak and anæmic state; the arm was greatly swollen and œdematous, and both wounds were in a septic condition. Shortly after admission secondary hæmorrhage set in from the upper wound, probably from a branch of the superior profunda artery. It was promptly controlled by a boracic compress and bandage.

Treatment.—The wounds were washed out with a solution of mercury perchloride, 1 in 1,000, and the injured part freely dusted over with boracic acid, covered with boric lint and wool, and the arm placed in a poroplastic splint. All inflammatory action rapidly subsided, and the wounds assumed a healthy appearance. He regained partial use of his arm, and was discharged from hospital and invalided to Netley on February 16th, 1898, forty-eight days after admission.

CASE II.—*Bullet Wound of Face received in Action in Tirah: Recovery.*—Private W. C., age 22, service four years King's Own Yorkshire Light Infantry, was wounded in the face whilst out reconnoitring in the Shin-Kamar Pass in Tirah on January 29th, 1898. He was in a stooping position at the time, with his head inclined to the left, in the act of picking up a wounded comrade. The bullet entered the right side of the upper jaw, close to the right ala nasi, passed through his mouth, and came out below the ramus of the left jaw, fracturing the inferior maxilla, and bulging out a small portion of the digastric muscle as it passed. It then entered the upper part of the chest, close to the outer end of the clavicle, and came out in the axilla.

He was transferred to No. 3 British General Hospital, Nowshera, on February 14th, 1898, sixteen days after receipt of the injury. On arrival, he was in a weak state, the upper lip and tongue were greatly swollen, his powers of mastication were interfered with, and he was unable to open his mouth wide or to articulate distinctly. Both wounds in the chest were small, but discharged pus freely.

The wounds were washed out with a solution of mercury perchloride, 1 in 1,000; afterwards dusted with boracic acid and boracic wool applied. He made a good recovery, and was discharged. He was invalided to Netley, March 16th, 1898, thirty-two days after admission.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

J. F. PAYNE, M.D., President, in the Chair.

Tuesday, May 17th, 1898.

REPORTS OF THE MORBID GROWTHS COMMITTEE.

THE SENIOR SECRETARY read the reports which had been made upon various specimens referred to the Committee during the session: (1) Dr. Wellington's specimen of Spina Bifida; the Committee considered that the deeper sac in this case had the disposition of a meningo-myelocele, the unusual feature consisting in the presence of a second more superficial sac corresponding with the subdural space. (2) Dr. Littlewood's case of Sarcoma of the Tongue; the author's view of this was confirmed. (3) Dr. Raymond Crawfurd's Tumour of the Colon; this the Committee regarded as an œdematous swelling due to a second intussusception which had escaped observation in consequence of reduction. (4) Dr. Raymond Crawfurd's specimen of Tumour of the Pulmonary Artery. The majority of the Committee considered this as a spindle-celled sarcoma, rather than an organised blood clot. (5) Mr. D'Este Emery and Dr. Kelly's case of Spheroidal-Celled Carcinoma of various organs, following on papillary tumour of the breast removed four years previously. The Committee, on examination of the original growth and the mammary tissue around determined that there was carcinomatous disease, and that the series of growths afterwards observed were true recurrences.

INTESTINAL OBSTRUCTION DUE TO INFLAMMATION OF THE GREAT OMENTUM.

Dr. C. P. WHITE and Dr. T. A. BOWES shortly recounted this case, which concerned a man 66 years of age, who died with the symptoms of intestinal obstruction. After death recent peritonitis was found, and a greatly contracted condition of the omentum, which had led to constriction of the colon. Microscopic examination showed no malignant disease.

SARCOMA OF THE KIDNEY.

Dr. C. P. WHITE exhibited this specimen, which was obtained from a child 6 years of age, who died with ascites, but without renal symptoms. After death the growth was found projecting from the hilum, and reaching across the middle line to the opposite kidney. The proper renal tissue was not involved. There were secondary growths in the submucous coat of the intestine, especially the transverse colon, as well as in the mesentery and lesser omentum. Histologically the neoplasm was a round-celled sarcoma.

FAT IN THE GLANDERS BACILLUS.

Mr. S. G. SHATTOCK presented a communication on this subject. He had been led to inquire whether the bacillus contained fat from the luminosity of the flame having often struck him whilst sterilising the loop in carrying on cultures. The method adopted was to transfer superficial portions of potato cultures to coverglasses, mix with distilled water, and expose the material in dark, sealed chambers to the pro-

longed action of osmic acid vapour. Examinations of the material (still moist) were made by means of the hanging drop. Careful microscopic study revealed the presence of minute points of fat, coloured deep black, in the longer forms of the bacilli. Such points were limited to the longer forms which occurred especially in potato cultures; they did not correspond in size or number with the clear oval or spherical unstained areas seen in preparations dyed with carbol fuchsin; these the author regarded as vacuoles, similar to those in the cholera spirillum; such spherical vacuoles had again to be distinguished from the segmentation of the protoplasm often presented by this bacillus. The presence of fat in yeast had been long known. Brieger's analysis of Friedlaender's pneumococcus had shown the presence of fat, moreover, in this, whilst Koch had demonstrated the same class of substance in the tubercle, and Unna in the lepra bacillus; a fatty acid was elaborated again by the diphtheria bacillus. The fat, however, lay in some of these cases without or around the bacterial cells. Whether the presence of fat in the glanders bacillus was physiological, or a mark of degeneration, was debateable. The author exhibited also a series of white mice infected with pure cultures of the glanders bacilius by subcutaneous injection. Death occurred in from two to three weeks; the chief organ affected was the spleen, which was greatly enlarged, and studded with glanderous nodules, in which microscopic examination showed the bacilli in an unmixed condition. The testicles were uninvolved. It was invariably stated that white mice were immune. The disease ran a somewhat chronic course, for in the field mouse death took place in from two to eight days. The insusceptibility, in short, was relative, not absolute, in this case.

Gliosarcoma of the Spinal Cord.

Dr. H. Morley Fletcher recorded the case of a patient affected with loss of power in the lower limbs, sluggishness of reflexes, difficulty of micturition, etc., the diagnosis of Dr. Gee being a tumour of the lumbar enlargement of the cord. Death occurred after a sudden attack of abdominal pain, followed by collapse, the explanation of which was not cleared up. The necropsy revealed a tumour involving the posterior half of the cord in the lumbar region, reaching close to the central canal and destroying the posterior cornua. Tumours of the cord itself were rare, especially those of a sarcomatous character; there was a frequent history of fall or blow in the cases which had been described.

Microscopical Specimens Illustrating an Apparent Thickening of Subcutaneous Veins.

Dr. Parkes Weber remarked that if the superficial veins in a series of rather thin cachetic men, especially those slightly under the middle age, were felt it was found that in some of those cases the veins had apparently thickened walls, and occasionally that they could be rolled about like cords under the finger. So far as he had been able to obtain microscopical examinations he concluded that what clinically appeared to be "phlebosclerosis," was in these cases due to great development of the longitudinal unstriped muscle fibres in the most internal portion of the tunica media, and possibly also to a state of contraction of the circular muscle fibres. To decide how far this condition was abnormal required further careful investigation. The condition was more noticeable in the internal saphenous veins than in the veins of the upper extremities. In the case of a man who had had syphilis two and a-half years before his death (from ulcerative endocarditis), Dr. Weber found this condition to be associated in one of the internal saphenous veins with a certain amount of endophlebitis proliferans. During life the internal saphenous veins in the thighs felt like hard cords. When the veins in this case were cut open longitudinal folds were noticed, similar to those described by Cornil in commencing varicose veins.

Dr. Lazarus-Barlow observed that he had been struck in examining sections of lung with the close similarity which normal arteries and veins presented, when contracted, to those affected with chronic inflammation of the intima, and thought that normal vessels had not infrequently been regarded as diseased from want of careful comparison.

The President suggested that artificial distension of the veins would remove the fallacy arising from contraction.

Card Specimens.

Mr. H. J. Curtis: A Large Lipoma of the Perineum.—Mr. S. G. Shattock: A series of (Formalin) Preparations, showing the results of experimental infection of animals with the micro-organisms of plague, tuberculosis, anthrax, glanders, bacillus coli, staphylococcus pyogenes aureus.—Dr. C. P. White: Ununited Fracture of the Scapula.—Mr. T. D. Lister: Thrush of the Œsophagus.

CLINICAL SOCIETY OF LONDON.

John Langton, F.R.C.S., President, in the Chair.

Friday, May 13th, 1898.

Ileo-cæcal Intussusception: Excision of Involved Intestine: Recovery.

Mr. David B. Lees and Mr. A. Quarry Silcock contributed this case. A boy, aged 4½, was admitted to St. Mary's Hospital in December, 1896, on account of intussusception. Under an anæsthetic, 28 ounces of water were injected into the rectum, and reduction was apparently effected. He was discharged from the hospital, two days later, on December 30th. On January 1st, 1897, he was readmitted, the symptoms having recurred, and the tumour reappeared, reduction was again effected by injections of water. Again and again the tumour reappeared with symptoms as before, which subsided more or less completely under treatment. In the latter part of February and in March the abdominal pain became more constant; castor oil and rectal injections were frequently used to combat the constipation. At the end of March the condition of the boy became very serious. The tumour was now never wholly reducible, and operation was determined upon. It was found that the parts concerned in the intussusception were the lower end of the ileum and the cæcum. The intussusception was irreducible, and these were therefore excised, the ileum being divided two or three inches above the ileo-cæcal valve, the colon some inches below the cæcum. The cut ends of the intestines were approximated and united by Lembert and quilt sutures. The patient made an uninterrupted recovery, and was now (May, 1898) quite well. Examination of the specimen showed that the posterior wall of the cæcum carrying with it the appendix had been invaginated into the ascending colon; the ileo-cæcal valve had been dragged upon, carrying with it about one inch of the ileum. The authors were unable to explain the mechanism by which the intussusception was brought about. The form of the intussusception seemed to belong to the same category of cases as those in which an inversion of the appendix into the cavity of the cæcum had obtained. In this case the wall of the cæcum carrying with it the appendix seemed to have been the starting point of the mischief. It was clear from an inspection of the specimen, that the complete reduction of the intussusception by the injection of air or water was an impossibility.

Chronic Intussusception of the Cæcum with Latency of Symptoms.

Dr. W. S. Colman and Mr. T. H. Kellock communicated this case. The patient was a boy, aged 8, admitted to the Hospital for Sick Children, Great Ormond Street, on August 17th, 1897, on account of periodical abdominal pain and wasting. The paroxysms of pain had been noticed for fifteen weeks, and were usually attended with vomiting. His bowels had been open once or twice daily, the motions being solid. On admission he was thin, but his abdomen was full, and somewhat resistant. There was a movable swelling in the left flank between the iliac crest and costal margin, which varied in size during examination. An hour later during an attack of pain the mass became larger and harder, and almost reached the middle line. It was thought at first that the case might be one of axial rotation of a wandering spleen, but later the splenic dulness could be mapped out as distinct from that of the tumour. The severe attacks of pain returned almost daily, but there was no change in the character of the motions, and nothing could be felt *per rectum*. The boy was getting up, and except for the attacks of pain appeared perfectly well, until three weeks after admission and eighteen

weeks after the onset of symptoms, when the vomiting and pain became severe, and his general condition serious. The character of the tumour was more definitely sausage shaped, and one end of it was very hard. The abdomen was opened by Mr. Kellock, September 13th. There was no free fluid in the peritoneum, no peritonitis. A large intussusception of the transverse colon and splenic flexure was found in the left hypochondrium. This was easily reduced at first, but owing to œdema and induration of the last 2 inches there was much more difficulty. A perforating ulcer with discoloured edges was found close to the root of the vermiform appendix. The ulcer was excised, the edges being brought together by Lembert's sutures. The cæcum was then returned to the abdomen. Two days afterwards, as there was pyrexia and tenderness over the cæcum the wound was reopened at the lower end and some pus was liberated, but the child died. Leave for a *post-mortem* examination was refused. Attention was drawn to the latency of the symptoms, the bowels acting naturally throughout, and to the great variations in the size and position of the tumour. In any similar case it was suggested that if an ulcer had to be excised, a fresh opening should be made in the right iliac fossa and the cæcum stitched in position there.

Intussusception of Six Weeks' Standing successfully Treated by Irrigation and the Local Application of an Icebag.

Dr. Lees described this case. A boy, aged 3, had suffered for six weeks from abdominal pain, severe enough to make him scream. There had been no blood in the motions, and vomiting had occurred only during the last of the six weeks. His appetite was very bad, and he was wasting. A transverse swelling was detected in the position of the transverse colon, which, while handled, became distinctly harder and firmer, afterwards softer again, obviously from peristaltic action. Under chloroform the tumour was felt more easily, and the peristaltic hardening was still more evident. Twenty-five ounces of water were passed into the rectum under low pressure, and soon the tumour became shifted towards the right. The irrigation was repeated, but apparently without further effect. A good deal of mucus came away, but no blood. A few hours later the swelling occupied a vertical position in the line of the ascending colon; evidently the reduction was incomplete. Remembering that in fatal cases of intussusception it was often found that the real difficulty was with regard to the last half inch, which was swollen through congestion, Dr. Lees applied an icebag over the cæcal region, taking care to keep the child's feet and legs warm with hot-water bottles. The icebag was kept in place for eight days; it was well borne, but hot fomentations were occasionally applied over the bladder to assist micturition. After the ice had been applied for four days the tumour was found to be less distinct. Three days later only a small rather hard lump, somewhat resembling a gland, could be detected. The appetite had greatly improved, and during the week the child gained 2 lbs. in weight. After eight days the ice was removed and another large enema administered; this produced a copious motion. The small lump could now no longer be felt. Recovery was complete, and five months later it was found that the boy was still quite well, and nothing abnormal could be detected in his abdomen. In this case, though the symptoms were subacute, the history of severe abdominal pain for six weeks, the characteristic position and shape of the tumour, the peristaltic hardening, and the effect produced by irrigation left no doubt as to its nature. It was worthy of note that the intussuscepted intestine, even after six weeks, had not become fixed by adhesions, and that it was still possible to obtain a very definite amount of reduction by irrigation. Yet it would probably have been necessary at last to open the abdomen if it had not been for the assistance rendered by the icebag, which apparently reduced the congestion of the wall of the intestine, and allowed a final enema to complete the reduction. There was difficulty in the adoption of this method of treatment in an acute case of intussusception, because of the marked tendency to collapse, but the plan seemed worthy of further trial in subacute cases. In conclusion, Dr. Lees alluded to the similarity of his case to that of Dr. Colman and Mr. Kellock, especially in regard to the hardness of the head of the intussusception, which made it resemble a solid organ such as a floating kidney.

Mr. Barker said the question whether to operate or inject naturally occurred in every case. In the series of 15 cases he lately described to the Society 14 were treated by operation, 10 recovered and 5 died. Most of his cases were totally unsuited for injection; in some it had been tried without success; but in 3 there was gangrene, and disaster must have followed injection. On the average it would be far safer if laparotomy were always done at once, and valuable time not wasted. A small opening should be made in the abdominal wall, and one or two fingers, at the most, introduced for the reduction of the intussusception. In some of his cases the caput cæci was inverted and as hard as a cricket ball when reduced; whilst there was subsequently a great tendency to a recurrence of the intussusception. In a recent case he found an intussusception in the right iliac region, besides a hard mass, probably of tuberculous glands, over the front of the transverse colon and corresponding mesocolon. In one case of enteric intussusception there was no vomiting—a very unusual event.

The President thought that in acute cases, at any rate, injection should not be tried, as the last part was apt to remain unreduced and valuable time to be lost, whilst even in chronic cases rupture might take place even under very low pressure. The operation was not very dangerous in itself, but delay increased the fatality of the disease for which the operation was done. If operation were done early the patient almost certainly recovered. In the cases in which there was a return of intussusception after injection, a small part of the bowel had probably never been reduced.

Dr. Guthrie observed that the diagnosis often presented much difficulty, and related a case in illustration of this. To temporise by irrigation or inflation was dangerous to a degree in advanced cases where ulceration might have already occurred. Injection or inflation should be attempted only in cases not more than 48 hours old, and with all the symptoms only in a slight degree.

Dr. F. J. Poynton said that the diagnosis, if blood and mucus were not present in the stools, rested upon the presence at some time or other of a sausage-shaped tumour, hardest at its lower end, of variable resistance, and which might disappear from time to time.

Mr. Silcock, in reply, said that he quite agreed with the observations which had been made respecting injection. It was tried in his case because the tumour was small, varied in size, and seemed all to disappear under that treatment, the child subsequently appearing to be perfectly well for some months.

Mr. Kellock thought the opening of the abdomen of a small child was a very serious matter. Many cases so treated died on the second or third day afterwards, although apparently without serious symptoms until the day of death. If the operation became necessary it should be done with one or two fingers through a very small opening, and the reduction effected by the fingers being pressed against the point of the intussusception rather than by pulling the invaginated gut out of the containing bowel. He preferred also to bring the last piece outside the abdomen partly to facilitate reduction and partly to make sure that reduction was complete. In two cases he had seen the child when left to itself assume the genu-pectoral position.

Dr. Lees also dwelt upon the great seriousness of the operation in quite young children. On the other hand, he had seen several who had immediately recovered under slight irrigation. Others had failed, as they had also failed under subsequent treatment by laparotomy. He had seen three cases admitted to the Children's Hospital in one day, neither of them being of more than three days' standing, and all being handed over at once to the same surgeon. All had been operated upon, and all three died.

Perforation of the Vermiform Appendix in Ambulatory Typhoid Fever: Operation: Death.

Dr. Rolleston recorded the case of a man, aged 21, admitted to St. George's Hospital with enteric fever. After being in for twelve hours, abdominal pain and signs of collapse came on. After palliative treatment by morphine, it was

decided that perforation had probably occurred; the liver dulness remained, and it was thought that the perforation had been small, and had not allowed of the entry of gas into the peritoneum. Mr. T. Pickering Pick performed laparotomy, and found fibrinous peritonitis due to perforation of the appendix close to the cæcum. The appendix was removed, the stump being invaginated into the cæcum; the peritoneum was washed out, and a tube left in for drainage. On the next day the Widal reaction was found by Dr. C. Slater to be strongly marked. The patient rallied temporarily after the operation, but died on the second day, this result being probably due to the grave constitutional symptoms, and to the fact that he had been at work to within five days of his death. At the necropsy ulceration of the intestine of a typhoid character was found. The points of interest in the case were (1) the frequency of appendicular lesions in enteric fever; (2) the question of operative interference during the height of the fever. In 14 out of 60 fatal cases of enteric fever examined in St. George's Hospital, the appendix was found to be altered; being swollen in 5, ulcerated in 7, and perforated in 2. In those 60 cases perforation (including the appendix cases) occurred in 18. So that the appendix was perforated in 11 per cent. of cases of entire perforation. This was the percentage arrived at by Nacke; Osler found it even higher (4 in 16); while Finney placed it at 5 per cent., and Fitz at 3 per cent. The statistics of operative interference in perforation during enteric fever were referred to, and two recent cases of cadavers in which a perforated appendix was successfully removed during enteric fever were mentioned.

Dr. GOODALL had seen only one operation for perforation during typhoid fever, in a girl aged 8. She was then very ill with a recrudescence. The ulcer was extremely difficult to find, which was not usually the case, and he was struck by the difficulty of distinguishing from the outside of the gut where the ulcers were situated. The aperture was closed by suture and the patient lived four days, which was longer, at any rate, than patients usually lived after perforation during typhoid when no operation was performed. *Post mortem* there was not the slightest evidence of any attempt at repair; in fact, the stitches had given way, and another perforation was found caused by one of the sutures which had been passed through an adjoining ulcer. He thought with Mr. Bland Sutton that it might be well to bring the perforation to the external wound and leave it there, and he asked whether the author had any records of this having been tried.

Mr. BARKER objected to the author's phrase that "the results of the surgical treatment of perforation were appalling." He pointed out that the author admitted that none of these cases were likely to recover if left alone, and the surgical mortality was only 78 per cent.; in other words, 22 per cent. might be saved who probably otherwise would have died.

Dr. ROLLESTON, in reply, said the greater proportion of the cases of appendicular perforation were from American sources. He admitted that no doubt the condition was responsible for the great mortality after surgical treatment.

HARVEIAN SOCIETY OF LONDON.

JAS. F. GOODHART, M.D., President, in the Chair.

Thursday, May 12th, 1898.

THE CLINICAL ASPECT OF CORPOREAL CANCER OF THE UTERUS.

DR. M. HANDFIELD-JONES read a paper on this subject, which will be published.

The PRESIDENT said that microscopical examination, although sometimes useful in the detection of malignancy, was very unreliable. More valuable evidence was afforded by digital examination and by the clinical aspects of the case. A growth at the time of the menopause was far more likely to be malignant than simple. He was convinced that simple growths might eventually become cancerous. On the other hand, the growth of a cancer was sometimes delayed for months or even for years. In the case of hepatic cancer, the growth might become quiescent, or even shrivel up and practically disappear. It was therefore difficult to decide whether extirpation of the uterus should be the rule of practice as soon as malignancy was discovered. Much depended on the mortality which attended vaginal hysterectomy, and on this point he asked the author of the paper for further information.

Dr. GOW considered that the microscopic examination of intrauterine growths was often unsatisfactory, and that the evidence of malignancy or non-malignancy obtained by this method should not be allowed to weigh against the results of clinical examination. If a soft, well-defined growth was found inside the uterus of a woman who had passed the menopause and was suffering from hæmorrhage, it was a safe rule to consider it malignant, and act accordingly. In some cases, where the patient lived many years after malignant disease of the body of the uterus had been diagnosed, it was open to doubt whether the diagnosis was correct.

Dr. AMAND ROUTH emphasised the importance of looking upon metrorrhagia at the menopause as a very serious symptom, requiring investigation to determine its origin. He considered the microscopical examination of scrapings from the uterus to be unreliable, owing to the fact that surface scrapings might be benign, yet the deeper parts might be infiltrated with a malignant form of the same growth. He instanced cases of papilloma and adenoma. He thought the finger *in utero* a better guide in most cases. He advocated the removal of any uterus after the menopause, where, after curetting, recurrence of metrorrhagia occurred, with a definite progressive enlargement of the body of the uterus, and he would do this even if surface scrapings gave a negative result. Ordinary senile or fungous endometritis did not cause progressive enlargement of the uterus, though they might in a few cases recur, and be cured by a second curetting.

Mr. PARKER YOUNG thought at present too much reliance must not be placed on the microscope, as he had found that in undoubted malignant disease both of uterus and breast negative results were obtained, and one ought therefore to be careful in pronouncing an opinion that the case was not malignant, when the examination by the microscope failed to detect it. In listening to the paper he had not heard mention of examination *per rectum*, which often helped materially in diagnosis, also the peculiar odour of the discharge. As regards the length of time malignant cases might live, in his own practice one case (pronounced as malignant by leading gynæcologists) had survived over ten years, and some over seven, without any operative interference.

Mr. C. B. KEETLEY asked whether oöphorectomy had been practised in cases of uterine cancer.

After some remarks by Mr. JACKSON CLARKE, Dr. HANDFIELD-JONES replied.

BRITISH GYNÆCOLOGICAL SOCIETY.

H. MACNAUGHTON-JONES, M.D., President, in the chair.

Thursday, April 14th, 1898.

ENUCLEATION OF UTERINE MYOMATA.

IN discussing Dr. W. Alexander's paper on this subject (see p. 1318), Mr. BLAND SUTTON said he was glad to find that the author appreciated the fact that uterine myomata might destroy life in many cases as surely as malignant tumours, though more slowly. It was another plea for early treatment. He could not, however, agree with him as to enucleation. This procedure had been found by Continental operators to be attended with more disastrous results than hysterectomy, and had been given up. He had adopted it in 8 cases, and the enucleation itself was easy enough, but there were four objections to it: (1) The danger of oozing; (2) the length of the operation; (3) the protracted convalescence; (4) the resulting sinus. With hysterectomy, the operation lasted half an hour; the patient was walking about in eighteen days; there was no anxiety about hæmorrhage, and there was no sinus. The two last points were the most important, and if hæmorrhage and the sinus could be obviated, enucleation would be a satisfactory operation. But there was a further objection to it; most fibroids developed after the child-bearing period, and the uterus was then a non-vital and unimportant organ; and he thought that hysterectomy, leaving one or both ovaries, left the woman in a much better position. He felt sure that a woman was better off with two ovaries and no uterus than with a uterus and no ovaries.

Dr. W. SMYLY (Dublin) agreed with Mr. Bland Sutton that

enucleation was good in a limited number of cases, but that where the woman was past the child-bearing period, and the uterus was a useless organ, hysterectomy was better. Enucleation was specially indicated in the case of a young woman with but one or few myomata, and he had performed the operation in five such cases. Another objection to enucleation was the risk of other fibroids developing later, but perhaps the main argument against it was the fact that Martin, of Berlin, its originator and developer, had abandoned it of late.

Dr. Granville Bantock remarked that the novelty in Dr. Alexander's operation was not the enucleation itself, but its application to multiple fibroids. But how would Dr. Alexander deal with a case in which there was one fibroid in the anterior and one in the posterior wall? The removal of a dozen or more nodules was a work of supererogation, for such a uterus could be of no use to the patient, and he did not think that in this procedure Dr. Alexander would find many imitators. He did not agree with Mr. Bland Sutton as to the extent to which fibroids destroyed life, and he thought there was a tendency to operate too often in these cases.

Mr. Bowreman Jessett also urged that there should not be too much hurry in removing fibroids, but when interference was really necessary he thought it was easier and better to take away the whole uterus than to enucleate.

Mr. J. Furneaux Jordan (Birmingham) asked how Dr. Alexander checked hæmorrhage; in his earlier cases he used perchloride of iron; what did he do in the later cases? In a case with multiple nodules he should think it was impossible to bring the edges to the abdominal wound, and also to bring the surfaces into apposition; and unless this could be done hysterectomy seemed to him the better operation.

Dr. Herbert Snow observed that Dr. Alexander had brought forward this operation, not from the point of view mainly of its ease or safety, but as conserving the child-bearing organs, and by this it must stand or fall. In such a case as the one in which thirty fibroids were removed, what reason had he for thinking that a uterus so far diseased could resume its functions?

Dr. Heywood Smith was of those who thought that hysterectomy was better than enucleation in most cases, but if enucleation were done the tincture of matico was a styptic which could be relied on.

Mr. Christopher Martin (Birmingham) agreed with Dr. Bantock and Mr. Jessett that they ought to be very careful in the selection of cases; the reduction of mortality had led to unnecessary operations. But granted a suitable case, he thought that if there were more than one nodule hysterectomy was better than enucleation, being less risky and more certain to cure. He had lately to do hysterectomy in a case in which a distinguished surgeon had performed enucleation five years previously; no doubt at the time there were no nodules left, but after twelve months symptoms recurred, necessitating a second operation.

Dr. C. H. F. Routh put in a plea for less heroic measures in dealing with fibroids; the mere incision of fibroids, without attempting to remove them, often brought about their disappearance.

Dr. F. Edge (Wolverhampton) remarked that whilst they were anxious to preserve organs they were more anxious to preserve life, and the mortality of enucleation was about twice as great as that of hysterectomy. In the case shown in Dr. Alexander's figures of the uterus removed from a woman who died, it seemed to him that had the patient lived she would have been better without a uterus at all than with such a ragged uterus.

The President thought it needed much boldness on the part of a surgeon to bring forward a discredited operation, and enucleation had been abandoned both here and on the Continent. In the paper one case was reported as having died from the operation, but there were three necropsies, and they ought to look at the ultimate results. Most of Dr. Alexander's cases were fairly well advanced in age, and past the child-bearing period; hence there was no object in retaining a mangled uterus. They had not, of course, time as yet to judge of Dr. Alexander's results, as his cases were too recent.

Dr. Alexander, in reply, thanked the Fellows for their criticisms, to which he would reply *seriatim*. The oozing was much less than would be expected, especially if the uterus were incised in the median line. He now used iodoform gauze to pack into the cavity. A sinus resulted in his early cases, when he used silk; but in the later ones, where catgut was used, there was no sinus. The return of growths was an important question, and Mr. Martin's case was very much to the point; but the mere opening of a uterus often interfered with the life of a fibroid, and he thought it would not be often necessary to operate a second time. As to its being a "discredited operation," he frankly recognised that it had been abandoned by many operators; but that was no reason for not trying it again. After he had brought out his operation on the round ligaments he found that it had been tried and given up three times. There were three deaths recorded in his list; but one died seven weeks after operation of brain disease and another eight months after of cancer of the liver. This left only one that could be attributed to the operation, giving a mortality of 9 per cent., which was no more than that of hysterectomy. He did not advise operation in every case of fibroid, nor enucleation in every operative case; but he thought that it would at least give them an alternative to hysterectomy, and that in being a non-mutilative operation it presented a marked advantage over total removal of the uterus.

Card Specimens.

Card specimens were shown by Dr. Macnaughton-Jones: Hæmorrhage into the Ovary and Cystic Ovary, causing Oöphoralgia and Dysmenorrhœa; by Mr. J. Furneaux Jordan: Unruptured Tubal Gestation.

EDINBURGH OBSTETRICAL SOCIETY.

R. Milne Murray, M.D., Vice-President, in the Chair.

Wednesday, May 11th, 1898.

Specimens.

The President (Dr. Halliday Croom) sent specimens of: (1) Myoma of the Ovary; (2) Fibroid removed by myomectomy, part of which had to be cut away before the ovaries could be reached for removal; (3) Fibroid removed by hysterectomy; (4) Dermoid Ovarian Tumour.—Dr. Brewis showed a Four-months Pregnant Uterus, with several small fibroids and one large fibromyomatous tumour removed by hysterectomy, owing to the rapid growth of the latter tumour.—Dr. Jardine (Glasgow) showed: (1) Two Uteri from cases of Cæsarean section; and (2) a Drawing of a curious Central Tear of the Perineum.—Dr. R. C. Buist (Dundee) showed a Malignant Adenoma of the Fundus Uteri removed from a patient in whom the signs and symptoms had come on eighteen months after the menopause.—Dr. Haultain showed a Tubal Gestation, apparently at the end of the second month, removed not because of rupture, but because of internal hæmorrhage. The blood was actually seen escaping from the fimbriated extremity.—Dr. Haig Ferguson showed two specimens of Tubal Gestation removed at one operation from the same patient; the one an intraligamentous sac, the other a lithopædion.

Recent Modifications of Anterior Colporrhaphy.

Dr. R. C. Buist (Dundee) read a paper on this subject. Cases of prolapse might be divided into two groups: (1) Those with an initial retroversion or retroflexion; (2) those with an initial weakness of the pelvic floor and cystocele. Cystocele implied weakness not only of the pelvic floor but of the muscular wall of the bladder. The healthy bladder was able to empty itself, in whatever position the body might be, by reason of its intrinsic contractions. This power was lost in cystocele, and unless the patient adopted special means the bladder was never emptied, and the wall never fully contracted. Thus there was soon produced impairment of the muscle, this in turn increased the difficulty of evacuation and emptying. Obliteration of the cystocele was therefore an important factor in the success of any treatment of prolapse. The fact that cicatricial tissue was weak tissue was one of the main elements in the failure of operations of this kind. Many attempts had been made to ensure that the cicatrix or line of greatest weakness was not also the line of greatest strain. Having referred to the methods of different operators, Dr. Buist noted that nothing was done directly to correct the dip of the cystocele. He described a plan he had carried out in

operating on a case of cystocele persisting after total extirpation of the uterus and cystic ovaries. A mesial incision was made in the anterior wall of the vagina, extending from the urethra to the fundus of the vagina, and dissected on each side between the vagina and bladder. The loose bladder wall was then stitched together with chromic gut, the stitches were passed through the muscular wall only. The anterior wall of the vagina was then shortened by bringing the two ends of the longitudinal incision together so that it became transverse, and it was stitched up in that position. This left a little redundant tissue, which could be left or trimmed away. As the vulvar cleft was rather long, he carried the knife round the posterior end of the aperture, splitting as in Tait's operation. The result had up to the present time been eminently satisfactory.

Professor A. R. SIMPSON, Drs. HAULTAIN, BARBOUR, BALLANTYNE, and MILNE MURRAY spoke; and Dr. BUIST replied.

TOXÆMIA IN PREGNANCY.

Dr. KYNOCH (Dundee) read a paper on this subject. By toxæmia in pregnancy was generally understood that condition which occurred as the result of the presence in excess of toxic material, and so far as was known the poison was of the nature of an alkaloid or alkaloids. The excretion of waste material was mainly effected through the kidneys; and this might account for the albuminuria of pregnancy rather than mechanical pressure or reflex spasm. Clifford Allbutt found evidence for the presence of a circulatory toxin in pregnancy from the fact that healthy urine contained toxic material. Bouchard found that such urine, when injected into animals, produced symptoms ending in coma. The nature of the poison was unknown. Bouchard found that it was not urea, inasmuch as, in order to bring about a fatal issue, more urea was necessary than the amount present in the urine injected; and the potash salts present were also insufficient to explain the result produced. Many obstetricians now believed that the theories already advanced to explain eclampsia did not cover all cases, and therefore they accepted the toxæmic theory as a substitute. They considered that the convulsions arose from the action on the nerve centres of a poison which was the result of tissue metabolism elaborated partly by the mother and partly by the child. Chambrelent's experiments proving the increased toxicity of the blood in eclampsic conditions, and the diminished mortality as the result of treatment based on this theory, were in favour of the correctness of the theory. Bacteriology pointed to the same conclusion. Lindermann had reported a case of fatal vomiting where he found neuritis in several nerves, fatty degeneration of liver and kidneys in both mother and fœtus; the spleen was enlarged, differing from the atrophy which was found where death had been due to inanition. He therefore believed the cause of the vomiting to have been an auto-intoxication. Salivation in early pregnancy had also been regarded as due to an excess of a toxin present in normal urine. Toxins absorbed from the bowel might be rendered harmless by the protective influence of the liver, but if there was disease of the liver or an excess of toxins then symptoms of poisoning were produced. Dr. Kynoch gave details of three illustrative cases.

Professor SIMPSON, Drs. CONNELL, ELDER, HAULTAIN, BUIST, and others spoke; and Dr. KYNOCH replied.

TOTAL HYSTERECTOMY OF GRAVID UTERUS.

Dr. N. T. BREWIS read notes of a case of total hysterectomy of a four months gravid uterus for rapidly-growing fibromyomata. The patient, when seen, had not menstruated for four months, and had a rapidly-growing abdominal tumour. This was found on operation to be a large fibro-cystic tumour, weighing 10 lbs., attached by a pedicle to the uterus. The uterus was enlarged to the size of a four months' pregnancy, and as it also contained fibroids, which might give trouble later, the whole was removed. The broad ligaments were tied, and divided to a point below the round ligaments; the peritoneum incised, and the bladder separated, a wire passed round the cervix, and all above cut away. Clamps were then placed on each side of the cervix from the vagina, and the cervix cut out. Gauze was placed in the vagina and between the clamps, and the peritoneum stitched over the gauze and clamps. The patient made an excellent recovery.

CÆSAREAN SECTION.

Dr. JARDINE (Glasgow) read notes on this subject, based on four cases. Cæsarean section was to some extent displacing craniotomy. He preferred the former. The interests of the mother were paramount, but the unborn babe had also claims for consideration: (I) 1-para, aged 22, had been some time in labour; os was the size of a halfcrown piece, membranes unruptured; head free above the brim. The pelvis was rickety, and the promontory projected sharply forwards. Cæsarean section was decided on. Bleeding from the uterus was controlled by firmly pressing a pessary down to it. Eighteen to twenty silk sutures were put into the muscular and serous coats only; the tubes were tied in two places and divided, thus sterilising them. On the twenty-first day menstruation began. She was discharged well at the end of six weeks. (II) 1-para, aged 20; labour begun; deformity in legs and back; 3 feet 11 inches in height; os the size of a sixpenny piece. She was dismissed well, with a living child, which she nursed for a month. (III) 2-para, aged 22; deformed pelvis; in her first confinement the presentation was breech, and the head had to be perforated. Labour had begun; the os was the size of a halfcrown piece; the membranes were unruptured; the head was presenting; there was a septic vaginitis (? gonorrhœal). Looking to the size of the child and the size of the maternal pelvis, Cæsarean section was resolved on. The membranes ruptured before the operation. She died four days after the operation. The child, which weighed 7 lbs., only lived a minute or two. Infection had travelled up from the vagina into the uterus, and thence into the peritoneal cavity by the lower stitches. (IV) 4-para, aged 27; with first three children craniotomy had to be done. She was in labour, head presenting, membranes intact. Cæsarean section was done. She died six days later, in a comatose state. A good deal of albumen was found in the urine, but on *post-mortem* examination the kidneys were not found in such a diseased state as to cause death. Dr. Jardine concluded by referring to some of the points of importance in the operation of Cæsarean section.

CENTRAL TEAR OF PERINEUM.

Dr. JARDINE also read a short note on a curious central tear in the perineum.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

JAMES CARMICHAEL, M.D., F.R.C.P.E., Vice-President, in the Chair.

Wednesday, May 4th, 1898.

CASES, ETC.

DR. SCOT SKIRVING showed a patient after operation for Ectopic Perineal Testicle, a cast of the original condition of the patient, and the testicle and covering removed.—Dr. WILLIAM TAYLOR exhibited and explained an instrument which he had designed and named the Electro-Thermogen. The object of the instrument was the production of a stream of hot dry air, and Dr. Taylor had found it useful in neuralgia and other painful conditions.

THE ACUTE PNEUMONIA OF CHILDHOOD.

The VICE-PRESIDENT read a paper on this subject, which was illustrated by numerous charts and drawings showing the types of temperature and diagrams of the areas of consolidation and auscultatory signs. He classified the disease into fibrinous and catarrhal varieties, the latter including most of the pneumonias in infants and children under five years of age. The fibrinous pneumonias were almost invariably primary, the catarrhal cases either primary or secondary in their nature. Dealing with the bacteriology of the disease, he pointed out that the fibrinous forms were almost invariably pneumococcus pneumonias, Fraenkel's or Friedlaender's organism being present either alone or associated with other forms. Primary catarrhal cases were frequently due to pneumococcus alone, but often other organisms, chiefly streptococcus, were also present. In the secondary catarrhal cases the organisms were more various. In addition to the organism of the primary ailment, as in such disease as measles and diphtheria, streptococci or staphylococci were usually present. He concluded that the acute pneumonias of childhood were associated with the presence of various organisms, any of

which might produce the disease. In explanation of the fact that infections by similar organisms should in the infant produce a catarrhal pneumonia, and in the child over 5 years or in an adult a fibrinous pneumonia, he showed that the probable explanation lay in the fact that in the infant and young child the ultimate ramifications of the bronchial tree and the alveoli and the lung and interstitial tissues were in a growing and immature state, and therefore possessed less immunity to the infective process than more mature tissues, and that the micro-organism consequently found a more suitable nidus for growth and development. He concluded by allusion to treatment, expressing the hope that the antitoxin might yet be discovered wherewith we might combat the disease. At present all that could be done was to treat the patient according to rational therapeutic principles applicable to each individual case.

Dr. George W. Balfour made some remarks; and Dr. Carmichael replied.

The Gouty Paroxysm.

Dr. George W. Balfour read a paper entitled A Fit of Gout (Paroxysmus Podagræ), a Pathological Study. After recalling the history of opinion on this subject, Dr. Balfour mentioned the various theories now advocated in regard to it. His own opinion was that the symptoms observable in the metatarso-phalangeal joint and its neighbourhood during an attack of gout could only be explained on the hypothesis of a localised thrombosis causing an interference with the blood supply of the various tissues of the part. This view was founded on a study of the natural history of a gouty attack, on which study Craigie and Todd had long ago insisted as affording the only clue to its pathology and treatment. It was, moreover, supported by therapeutic results. Dr. Balfour mentioned a number of cases where exercise and rubbing heroically carried out had cured gout; and in his own experience he had found that gentle massage was an excellent prophylactic. He anticipated continuing the subject in a further communication.

Dr. Foulis made some remarks on the paper, to which Dr. Balfour replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

F. W. Kidd, M.D., President, in the Chair.

Friday, April 29th, 1898.

Specimens and Cases.

Dr. W. J. Smyly showed a Myomatous Uterus removed by panhysterectomy. In reply to the President, Dr. Smyly said he considered it by no means necessary to remove every myomatous tumour, nor the majority. The indication for operation in this case was that the patient could not follow her occupation as a cook. He thought a hysterectomy better than having to have a catheter passed often.—Dr. E. Hastings Tweedy showed an Ovarian Cyst of the right ovary removed by cœliotomy.—Dr. R. D. Purefoy showed a case of Myomatous Uterus.

Report of Rotunda Hospital.

Dr. R. D. Purefoy read a clinical report of the Rotunda Lying-in Hospital for 1896 97.

Dr. Macan said that, as an old Master, he would like to offer his congratulations to Dr. Purefoy upon the success of his first year. He did not agree with Dr. Purefoy in his four hours' teaching of putting on forceps in the second stage. He thought that every student should be given absolute indications for putting on forceps. If the head was already far down in the pelvis, the os fully dilated, the occiput turned towards the front, and the outlet not very narrow, the forceps would do no harm. As regards morbidity, the limit of normal during his Mastership was 100 4 instead of 100.8 as at present. The total monthly morbidity was given but not the percentage of the cases, and, therefore, it did not help much unless the number of patients delivered in the month was stated. He was tolerably content with the treatment of eclampsia by chloroform and chloral hydrate in large doses. There was no objection against morphine as well.

Dr. A. Smith said that in the application of forceps the time test was very limited and begged the question; the condition of the parts must be normal. The proper tests were conditions on the part of the mother and conditions on the part of the child. If the mother's temperature was raised, and pulse quick, or if the child showed pressure effects, such as quickening or slowing of heart, and meconium passing away, with vertex presenting, the forceps should be used. In the report it was an interesting point that in each case of accidental hæmorrhage strong labour was present. The patients had strong labour pains, or the pains came on after treatment, such as plugging. Was the plugging in these cases the cause of strong labour pains or not?

Dr. Smyly was struck by the steady increase in the deliveries in the Rotunda. There was also a decrease in the mortality, mainly due to antisepsis and asepsis, but also due to the discipline in the hospital. Results in private practice were not at all commensurate with those in hospital practice, chiefly, he thought, due to the rules being carried out in a perfunctory manner. Regarding mortality, in contrast to the results of late years, he read the following from an old *Rotunda Hospital Report:* In 1869 there were 1,159 deliveries with 25 deaths, in 1870 there were 1,087 deliveries with 27 deaths, in 1871 there were 1,161 deliveries with 33 deaths, in 1872 there were 1,193 deliveries with 20 deaths, in 1873 there were 1,191 deliveries with 32 deaths, in 1874 there were 1,236 deliveries with 15 deaths. The indication for the use of forceps was a very great difficulty. If everything was favourable, it was cruelty to leave the woman to suffer longer than was necessary. He believed that in rupture of the uterus the classical symptoms were frequently absent, giving one remarkable case to illustrate this. He had never found rise of temperature much of an indication for the use of forceps, as rises of temperature were generally due to vaginal examinations.

Dr. E. Hastings Tweedy was glad that Dr. Purefoy was against the use of the curette in the treatment of abortion. The curette was apt to scrape away the muscular tissue and leave placental tissue behind.

The President said that formerly the fact of a man being Master of a lying-in hospital was against his private practice on account of his being daily in touch with septic cases Now, however, as shown by statistics, a lying-in hospital was the safest place for a woman to be delivered in. He thought there was some serious mismanagement in connection with private cases, probably because the nurse did not carry out the rules as she would under a matron in hospital. With regard to the use of forceps, he would steer a middle course, and would not adopt the four-hour system, nor would he leave a woman in labour for thirty-six or forty-eight hours, simply because no indication arose. Certainly it destroyed the patient's powers of resistance.

Dr. Purefoy, in reply, said that he did not adhere very strictly to the four-hours second stage limit, and the application of forceps was carried out with due regard to the other conditions present. He thought chloroform in the treatment of eclampsia more valuable than Dr. Smyly was inclined to admit. Venesection in some cases was useful. He rather dreaded chloral hydrate in the doses commonly recommended. If he used morphine, he gave first of all a large dose, and a somewhat smaller dose repeated in about two hours, or at a shorter interval if the symptoms were severe. If the first dose ameliorated symptoms, the second dose was postponed. In the recorded case no eclamptic seizures occurred after the administration of morphine, and the maniacal condition was not formidable to life.

ULSTER MEDICAL SOCIETY.

J. A. Lindsay, M.D., President, in the Chair.

Thursday, May 5th, 1898.

Specimens.

Dr. John Campbell showed (1) Two distended Fallopian Tubes removed by abdominal section from a young married lady; the left contained about 19 ounces of pus, the right, which was unopened, appeared to contain about 4 ounces; (2) a Hydatid Cyst removed by abdominal section from a young unmarried lady; it was pedunculated, and grew from the left lobe of the liver.

Tropical Diseases and Bubonic Plague.

Dr. J. H. Lowry read a paper entitled Some Notes on

Tropical Diseases and Bubonic Plague taken during residence in China 1881-1896. He dealt first with acute dysentery, and pointed out the necessity of giving large doses of ipecacuanha, and the uselessness of trying to cure the disease with small doses. He was strongly in favour of promptly arresting tropical diarrhœa in its early stage. He referred to the form of diarrhœa known as sprue or psilosis, and he agreed with Dr. Thin that there was no means of cure, except to send the patient out of the tropical zone, and keep him upon a diet of milk. He had had no success in the treatment of the disease with santonin, so strongly recommended by Dr. Begg. As regards Asiatic cholera, he referred to the success which Drs. Little and Cox, of Shanghai, were having with intravenous saline injections, and spoke of the uselessness of blisters over the vagus, as recommended by the late Dr. Harkin. Of malarial fevers he had not had much experience. He condemned the indiscriminate use of quinine, and urged that the microscope should be employed to detect the malarial parasite before the remedy was begun. He referred to the old days in China, when by way of prophylaxis against malaria men dosed themselves with quinine and sherry, with the result simply of congesting their livers. Skin diseases in China constituted a large subject. One of the most important was tinea circinata, from which many Europeans suffered, the part most frequently affected being the fork. The best treatment was the use of a lotion of hyposulphide of soda or Vleminckx's solution of quicklime, sulphur, and water. When the disease had been cured the patient should wear silk drawers like bathing drawers, and should wash them in his own bath tub. Dr. Lowry next dealt with opium smoking, and concluded his paper by some remarks on bubonic plague, stating that he was the first medical man to observe the disease in China, it having come under his notice in the treaty port of Pakhoi in South China in 1882. He read extracts from copious notes taken at the time. He referred to the discovery of the plague bacillus, and to the still high mortality both in India and Hong Kong. He mentioned that a North of Ireland lady had lately fallen a victim to the disease when acting as a nurse in Hong Kong.

Dr. CALWELL, Surgeon-Major PIKE, and Brigade-Surgeon MCFARLAND made some observations; and Dr. LOWRY replied.

TYPHOID FEVER.

Dr. E. COEY BIGGER read a paper on Some Points in the Treatment of Typhoid Fever. The patient should be promptly put to bed when the symptoms were first recognised, and his strength husbanded in every possible way; the bed clothes should be light, a warming pan to be used if necessary. The nourishment should be entirely liquid until the evening temperature had been normal for three successive days at least, then a small quantity of bread and arrowroot might be allowed, and provided no ill-effects were noticed this might be increased day by day, until the evening temperature had been normal for nine or ten days, when the patient might be allowed meat. In cases where there was reason to suspect that there had been severe and deep ulceration of the bowels it was better to withhold meat for 14 days. Milk was the most suitable diet, and three pints in 24 hours were sufficient. If a larger quantity were given vomiting and diarrhœa were often the result. If the patient complained of thirst, potash, soda, or barley water might be mixed with the milk. Lime water should be given if there was diarrhœa, the others when constipation was present, but neither soda nor potash water should be given if there was tympanites. Milk might be peptonised, but the speaker had not found this plan very successful. He had often found whey very useful. He did not usually give beef tea, chicken soup, or mutton broth until towards the end of the disease. Drugs might be used to improve the secretions of the stomach and intestines, so as to assist digestion and lessen fermentation and sepsis. For this purpose the following drugs were useful: calomel, salol, turpentine, liquor hydrargyri perchloridi, and salicylate of bismuth. Turpentine was useful when the tongue was dry, or when there was tympanites or hæmorrhage; it was best prescribed in capsules of 10 minims every three or four hours. Salicylate of bismuth, combined with opium in cases of diarrhœa, should be given with typical or only slightly greenish stools. Liquor hydrargyri perchloridi was one of the best preparations for the treatment of septic conditions of the bowel. Strychnine and nux vomica were very valuable as nerve and respiratory stimulants. As regards alcohol, he used it only in a small proportion of cases, very rarely in the early stages, except in intemperate patients. The indications for its use were a quick, weak, or irregular pulse, nervous twitchings, tremulous tongue, sordes on the teeth, delirium, involuntary passage of motions, cold extremities, etc., also in pneumonia and bronchitis. A single dose of an ounce of whisky at bedtime sometimes promoted sleep. For the treatment of hyperpyrexia the best means was by the application of external cold, either by sponging, cold effusion, the cold sheet, the cold bath, or the continuous tank bath employed by Dr. Barr. He thought antipyrin and antifebrin usually injurious. Quinine was sometimes useful. Insomnia required careful attention. Hot milk, hot spirits, and tepid sponging sometimes brought sleep. If these failed, Dover's powder, sulphonal, trional, or paraldehyde might be tried. For low muttering delirium, camphor, carbonate of ammonia, and ice to the head were useful. He regarded constipation as, on the whole, favourable. Where it required treatment castor-oil with laudanum might be used, or an enema of tepid water. Glycerine enemata should not be used after the first few days. In hæmorrhage from the bowel he relied upon turpentine and opium. Peritonitis and perforation should be treated with morphine, opium, hot fomentations, or the application of a large piece of lint wet with a warm anodyne lotion.

HYPERPYREXIA IN TYPHOID FEVER.

The PRESIDENT read notes of a case of hyperpyrexia in typhoid fever. The patient, a male, aged 19, was admitted to hospital upon the ninth day of the disease, suffering from an attack of moderate severity. The evening temperature was usually about 104°. From the ninth to the twenty-first day the case pursued its course without material change. On the morning of the twenty-first day the patient was seized with a severe and prolonged rigor, and the temperature rose to 108°. He was bathed in perspiration, very restless, but partially conscious, and the pulse was very weak and almost uncountable. No evident cause for the hyperpyrexia could be made out. There was no pneumonia, phlebitis, or septicæmia. Owing to the profound prostration of the patient, it was decided not to attempt any active, antipyretic measures, but to rely upon free stimulation. The rigor lasted half an hour, and at its termination the temperature was still 108°. Two hours later it had fallen to 106°, and it remained at this point for several hours. The following morning it was 96°, and did not rise above 99° in the course of that day. On the next day also it remained low, but on the third day after the rigor it again rose to 104° in the evening, and the case resumed its course. The patient gradually convalesced, and was ultimately discharged well. This case was encouraging, as showing that even the most desperate cases of hyperpyrexia might recover.

Dr. DARLING was in favour of more liberty in the diet of typhoid cases. He allowed bread and butter, arrowroot, and tea in the milder cases.

Dr. CALWELL thought constipation on the whole favourable. He had not seen any mischief from the use of glycerine enemata. He agreed generally with Dr. Bigger as regards stimulants. He thought clear soups, yolks of eggs, etc., might be given in cases where these was fair digestive power. He was inclined to recognise the existence of "gastric fever" as independent of typhoid.

Dr. KEVIN advocated more liberty as regards diet, especially in the case of children. For the relief of constipation he gave castor-oil, guarded with laudanum. He condemned the indiscriminate use of stimulants in typhoid fever.

Dr. A. P. B. MOORE related the particulars of a case of six persons taking typhoid apparently from eating cockles.

Dr. DEMPSEY demurred to taking liberties with regard to diet, and he thought relapses were often the result. He usually allowed four pints of milk in the twenty-four hours. He thought calomel useful in the early stage. He valued alcohol more highly than the previous speakers, but thought it should not be given in the early stage.

Surgeon-Major PIKE, Dr. RUSK, Dr. MCKISACK, Brigade-

Surgeon McFarland, Dr. Robb, and Dr. Lynass having made some remarks,

The President said there seemed to be a reaction at present against some of their most cherished ideas relative to the treatment of typhoid fever. He thought they would need much more evidence than had yet been brought forward before they could afford to throw over the teaching of such men as Jenner, Murchison, Fagge, and Osler. The doctrine that much liberty in diet might be allowed, and that the use of purgatives was harmless, seemed to him fraught with great peril.

Dr. Bigger replied.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Pathological and Clinical Section.

R. M. Simon, M.D., in the Chair.

Friday, April 29th, 1898.

Election of Officers.

The following officers were declared elected for the ensuing year :—As Chairman, Jordan Lloyd, M.B., F.R.C.S.; as Honorary Secretaries, J. W. Russell, M.D., M.R.C.P., and J. H. Clayton, M.B.

Tuberculosis of the Skin.

Dr. Short showed a case of tuberculosis of the skin in a man aged 26. The first sore appeared on the right hip seven years ago, and since that time forty-one places had appeared in various parts of the body. He had deposit of tubercle in the right upper lobe and slight chronic laryngitis. The unusual point about the case was the large number of lupus spots, which practically defied treatment.

Acute Intussusception treated by Abdominal Section.

Mr. George Heaton showed two children on whom he had recently performed laparotomy for the reduction of acute ileo-cæcal intussusception with a successful issue in each case. (1) A boy, aged 4 years, who had a typical attack of intestinal obstruction due to intussusception on March 28th. The attack commenced suddenly with violent collapse, and was followed by the passage of several stools of pure blood. A long, sausage-shaped tumour could be felt in the right lumbar region. Abdominal section was at once performed, and the intussusception, which was of the ileo-cæcal variety, reduced by manipulation. Uninterrupted recovery followed. (2) A boy, aged 3, who was admitted into hospital twenty-four hours after the first case. The onset in this case was sudden, but there was no passage of blood or mucus *per anum*, nor was the initial collapse so marked. Abdominal section was at once performed, about eight hours after the onset of symptoms, and an ileo-cæcal intussusception reduced. Rapid recovery followed. In neither case was any attempt made to reduce the intussusception by external manipulation or inflation, but abdominal section was at once performed as being the surest method of completely reducing the intussusception.

Scarlet Fever during the Puerperium.

Dr. Millard read notes of two cases :—(1) Mrs. S., aged 26, a multipara, was confined on February 11th, 1898. The labour was a protracted one and forceps had to be applied. The child appeared healthy. The mother at first did well, but on February 13th her temperature went up, and she had sore throat and vomiting. The following day a rash appeared, and the patient was sent into the City Hospital the same afternoon. On admission she was found to be suffering from a severe and undoubted attack of scarlet fever. The rash was bright and typical, present all over the trunk and limbs, the fauces were swollen and congested, and the tongue was coated but cleaning at the tip and edges. The temperature the same evening was 105°, and the pulse 130 and of low tension. She passed a very bad night, and remained delirious till the end. There was troublesome diarrhœa. There was no pain or tenderness on palpating the abdomen, and the lochia were small in amount but not offensive. The temperature remained up, and the patient died on the fourth day. The case presented very much the features of an ordinary malignant case of scarlet fever. Shortly before death a swelling was observed in the right iliac region, but its nature was not made out, and, owing to the circumstances of the case, a *post-mortem* examination was not asked for. There had been a recent case of scarlet fever in the patient's house. (2) The second case occurred in the practice of Dr. Tatham, of Halesowen, who kindly supplied the notes. Mrs. X., a multipara, was confined on September 30th, 1897. The labour was normal. Two days later she had a rigor, and the next day she had sore throat and a typical scarlet-fever rash. There was no vomiting, and the tongue and throat were not typical. Dr. Tatham, however, had no doubt as to the case being one of scarlet fever, as there was a child in the same house who was supposed to have had measles three weeks before, but who was found to be desquamating and to have double otorrhœa. The woman rapidly became worse, the temperature rose to 105°, and she died the following day, the second day after the rigor, and the fifth day of the puerperium. There were no puerperal symptoms.

Hydatid of Lung with Pyo-pneumothorax.

Dr. Codd read a note on this case. Three weeks before admission the patient complained of pain in the left side, and the day before was said by a medical man to have pleuritic effusion. On admission, the cardiac apex beat was in the second and third spaces, half an inch to the right of the sternal margin. On the right side of the chest in front, dulness began at the third rib, and extended down to the liver dulness with puerile breathing. The left side, front and back, was hyper-resonant, with absence of breath sounds, vocal resonance and fremitus; bell sound and succussion splash were present. No abnormal dulness behind on sitting up, but when in the horizontal position there was a line of dulness below the mid-axillary line. On exploration pus was found. This was let out and was very offensive, and the contained air was at a high positive pressure. Thirteen days later a hydatid cyst was extruded from the wound, and henceforward the patient made a steady recovery. The apex beat returned to its normal position, though it eventually was pulled over to half an inch outside the nipple line.

Congenital Deformity of Forearm.

Mr. Thomas exhibited skiagraphs of a case of congenital deformity of the right forearm in a child aged 1 year and 7 months. The complete absence of the radius was well shown, and also the entire suppression of any rudiment of a thumb. Mr. Thomas had attempted to devise some mechanical arrangement to obtain an artificial opposable thumb, but without success, on account of the shortness of the forearm and the irritation which any mechanical restraint caused. He was of opinion that such cases usually acquired considerable dexterity in using the imperfect member, and therefore mechanical assistance was hardly desirable.

Syphilitic Disease.

Dr. Foxwell showed a liver, kidney, spleen, and lung from a case of probable syphilis, the patient owning to gonorrhœa only. There was also a fairly long history of three to four pints of beer being drunk daily. He also had aortic valvular disease. The reasons for thinking the condition syphilitic were these: First, the liver capsule was much thickened throughout, over considerable areas averaging $\frac{1}{32}$ of an inch, and having the blue opaline smear characteristic of syphilitic scars; the organ weighed 4 lbs. 4 oz, and the surface, though irregular, was not hobnailed; the section was also fairly smooth, and neither markedly fatty nor too red; under the microscope the cirrhosis was seen to be intercellular. Secondly, the peritoneum of the upper abdomen was in a condition similar to that of the liver capsule. Thirdly, the spleen weighed $14\frac{1}{2}$ oz., an enlargement greater than that usually due to alcoholic cirrhosis; its capsule also resembled that of the liver, and on section its surface was seen to be finely granular, the microscope showing some increase of fibrous tissue. Fourthly, the kidneys weighed $13\frac{1}{2}$ oz., were rather pale, and their capsules slightly adherent; they were tough and their section looked cirrhotic, but all the details were strangely blurred as if smudged over with some semi-transparent material. Under the microscope the epithelium of most of the tubules looked healthy, but there was a slight general proliferation of round cells between the tubules. Fifthly, the lungs were distinctly denser, tougher, and less

aërated than usual, with a few pleuritic adhesions on each side; microscopically an excess of fibrous tissue was observed around the bronchioles and arterioles, in some instances to more than twice the thickness of the normal wall. On the other hand, the heart wall gave no evidence of morbid change, although the aortic valve had only two cusps, and these were severely suffering from both old and recent endocarditis. There was no evidence of rheumatism.

NITROUS OXIDE COMBINED WITH OXYGEN.

Dr. MCCARDIE showed Hewitt's apparatus for the administration of nitrous oxide and oxygen for dental and ordinary surgical work, both in a portable form, and as used in the operating theatre of the London Hospital. He expressed his indebtedness for instruction to Dr. Hewitt, and read a note on the use of nitrous oxide combined with oxygen; making the following points: (1) The mixture forms the safest general anæsthetic known; (2) there is no strain on the heart or peripheral circulation; Dr. Hewitt has given the mixture more than 2,000 times for dental purposes, and has never observed a sign of respiratory or circulatory embarrassment; (3) it can be used often safely when chloroform and ether are dangerous, for example, in cases of heart or lung disease; (4) no special preparation is needed except in long cases; (5) there are practically no after-effects; (6) anæsthesia is induced in about two minutes, recovery takes place in about one minute, and the patient is perfectly well as regards the anæsthetic in two to four minutes; (7) anæsthesia can be prolonged indefinitely; (8) the drawbacks are that much experience is necessary to give the mixture successfully for longish operations, and that sometimes there is a little inconvenient rigidity of the muscles. He did not consider it suitable for very long, or severe, or abdominal operations. The scope of this mixture had hitherto been limited chiefly to dental operations, but now it could be most successfully used for operations lasting say up to 15 or 20 minutes, and was especially advantageous in cases where there had been no preparation, and the patient had to return home shortly after the operation. He had used the mixed gases very successfully in the following cases amongst others: (1) Circumcision.—Three boys and one man, all of whom were able to dress and depart in two minutes after the removal of the facepiece. (2) Extraction of needle from the foot. (3) Amputation of finger. (4) Removal of multiple sebaceous cysts from the face. In this case the anæsthesia lasted eight minutes. (5) Exploratory needling of the chest in a child, one of whose lungs was entirely solid, and who was the subject of acute nephritis. There was a good deal of embarrassment in this case. He would not have dared to give this child any other anæsthetic. (6) Tenotomy of the internal rectus for strabismus. The facepiece was not at all in the way, and the child made a railway journey of 25 miles directly afterwards. There was no trouble in this delicate operation. (7) Exploration of the hip-joint; five minutes' anæsthesia. (8) Lupus of foot; scraping and cauterisation. Though there was some slight movement of both legs here, yet it was not increased by the severe sensory stimulation. Seven to eight minutes' anæsthesia. (9) Excision of small rodent ulcer by the side of the nose. Here it was necessary to remove the facepiece once because it covered the ulcer. Points in using the apparatus are in the main as follows: (1) Accurate fitting of facepiece. (2) The bags must be kept equally but not fully distended. (3) In most cases oxygen should be given from the beginning, and gradually increased up to the points on the dial marked 7-8, and about there maintained, striving to keep a mean between the excitement and too quiet breathing of too much oxygen and the cyanosis and jactitation of too much nitrous oxide.

PAPER.

Mr. LEEDHAM-GREEN read a note on the Diagnosis of Diphtheria.

PATHOLOGICAL SOCIETY OF MANCHESTER.

C. E. RICHMOND, F.R.C.S., President, in the Chair.

Wednesday, May 11th, 1898.

FIBRO-ADENOMA OF BREAST.

THE PRESIDENT showed and described a case of fibro-adenoma of the breast, with chronic mastitis; also an intramuscular cyst.

ACUTE HÆMORRHAGIC PANCREATITIS.

Dr. REYNOLDS and Dr. MOORE showed specimens from a case of acute hæmorrhagic pancreatitis in a man, aged 29 years. During life the patient had suffered from several pseudo-angina-like attacks; the fatal termination was very sudden, being ushered in by somewhat anomalous mental symptoms. The pancreas, examined nine hours after death, was enlarged, weight 146 grammes, firm, and of a bright red colour, mottled with dark grey and yellowish patches. The duct was patent and normal in size. Microscopically the periglandular fat showed areas of necrosis and large masses of decolorised and more recent blood clot. The gland parenchyma in many parts appeared but little altered, the individual acini being more widely separated than normal; in other parts it was in a condition of coagulation necrosis or had disappeared entirely, its place being occupied by a necrotic *débris*. The interstitial tissue was the seat of considerable exudation, having decided hæmorrhagic characters, and here and there small foci of suppuration. In the necrotic areas the bacillus coli communis was found both by cultivation and histologically, but no other organism. The first part of the duodenum was the seat of an acute necrotic inflammation, the mucous membrane being necrosed and in great part absent, the submucous and muscular coats being markedly infiltrated and congested.

THE DECIDUAL CHANGES IN THE OPPOSITE FALLOPIAN TUBE IN CASES OF ECTOPIC GESTATION.

Mr. E. STANMORE BISHOP showed microscopic sections of a non-gravid tube from a case of ectopic pregnancy to illustrate the changes described by Webster, of Montreal. For purposes of comparison, sections of ordinary decidual membrane, of a normal and of an inflamed Fallopian tube were also shown, these having been kindly lent by Dr. Fothergill. Other sections were shown from the gravid tubes of both cases, showing chorionic villi, and one mucous fringe with well-marked decidual change. Mr. Bishop detailed the changes found in these tubes, the differences between such changes and those found in ordinary salpingitis, and emphasised the fact that if these observations were confirmed, a clear idea could be obtained as to the causation of such cases, and a scientific reason for the belief that all ectopic pregnancies are primarily tubal.

EMPYEMA OF THE FRONTO-ETHMOIDAL AND SPHENOIDAL CAVITIES.

Mr. WESTMACOTT read a paper on the pathological anatomy of empyema, of fronto-ethmoidal and sphenoidal cavities. After demonstrating the anatomical limits of the cavities met with in different skulls, both in the recent state and macerated condition, the appearances of the part when filled with pus were described as seen through the nasal speculum and with the rhinoscopic mirror. Finally a few points of interest in differential diagnosis and operative treatment were detailed. A number of prepared specimens and photographs were shown.

DISSECTING ANEURYSM.

Dr. KELYNACK showed a preparation of dissecting aneurysm of the thoracic and abdominal aorta from an elderly woman. There was a history of sudden strain a year before death. Cardiac symptoms dated from the period of injury. A slit-like aperture existed in the descending thoracic aorta, and dissection of the middle coat of the vessel extended to the common iliac arteries. There were several communications between the sac of the aorta and the lumen of the vessel. Death was gradual, and due to progressive cardiac failure.

CARD SPECIMENS.

Mr. STANMORE BISHOP: (1) Ureteral and Vesical Calculi. (2) Pyosalpinx.—Dr. FOX EDWARDS: Flattened Bullet removed from Nasal Bone.—Dr. HARRIS: Aortic Aneurysm compressing Trachea from a female subject.—Dr. HIGGINSON: Supernumerary Digit.—Dr. KELYNACK: Aortic Malignant Endocarditis from medico-legal case.—Mr. RICHMOND: Cerebellar Abscess following Mastoid Disease.—Dr. STEELL: Melanotic Sarcoma of Liver and Kidney.—Mr. WESTMACOTT;

(1) Localised Tubercle of Vocal Cords. (2) Carcinoma of sinus Pyriformis. (3) Trauma of Larynx in a Sword Swallower.—Mr. WOLSTENHOLME: Epithelioma of Glans Penis in a Horse.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on April 29th, Dr. DUNDAS GRANT (President) in the chair, Dr. BARCLAY BARON (Bristol) showed a case of Cyst of the Epiglottis in a gentleman of middle age. There was merely a tendency to "hawking" which was probably due to elongation of the uvula. On the lingual surface of the epiglottis were two cysts, one about half an inch across, covered with thick mucous membrane, with dilated vessels on its surface, and another about the size of a pea. Dr. Baron asked whether the Fellows agreed with him that there was no need to operate until symptoms occurred to demand interference, and if they disagreed with him in this expectant treatment what would be the best operation to perform? Drs. WHISTLER, STOKER, VINRACE, BROWN KELLY, and the PRESIDENT discussed the question of operative interference. Mr. WYATT WINGRAVE also showed a case of Cyst of the Epiglottis.—The PRESIDENT showed a case of Malignant Disease of the Left Tonsil in an elderly woman.—Mr. WYATT WINGRAVE showed a woman, aged 66, from whose right vocal cord a Fibroma had been removed six months previously with a Krause's snare, there had been no return. He also showed a similar case in a man, aged 38, where a Fibroma had been partially removed from the right vocal cord by Dr. Dundas Grant's laryngeal cutting forceps. The structure was an angio-fibroma, and recurrence was taking place.—Dr. BROWN KELLY (Glasgow) read a paper on Cysts of the Floor of the Nose. He described three cases of his own, and referred to nine others that have been recorded. In all of these the cyst appeared at the anterior end of the floor immediately behind the junction of the skin and mucous membrane. He had found large ducts in this region, which indicated the probable origin. The most marked sign was prominence of the ala nasi of the affected side. The cyst might be treated from the nose, but when large it should be dissected out from the gingivo-labial fold. Mr. WYATT WINGRAVE suggested that such cysts might be of developmental origin.—Mr. WYATT WINGRAVE read the notes of three cases of Lupus of the Nose in which the new tuberculin had been employed by Mr. Lennox Browne and himself. The author did not consider the results to be encouraging.—The PRESIDENT cited a case of Lupus of the Cheek shown by Dr. HERON at the Clinical Society, where healing had resulted from the injection of new tuberculin.—Mr. ST. GEORGE REID showed for Dr. YONGE a new Laryngeal Auto-insufflator.—Dr. STOKER showed a case of Rodent Ulcer of the Nose and a case of Lupus of the Face treated by concentrated sun's rays applied by means of a biconvex glass lens of 4-in. focus. The results of a series of observations as to the penetrating effect of sun's rays on raw meat had led him to adopt this treatment, which so far had realised his hopes, and he trusted to show the cases cured later on.—Dr. STOKER also showed a girl of 17 years of age, who had had ulcers on each side of the neck, the result of suppurating cervical glands, which had existed some years. These had been treated with oxygen and were now healed, with no puckering or contraction; the cicatrix was even and vascular, and the margins were the colour of the surrounding skin. He believed from experience of other oxygen cicatrices that the redness would disappear and there would be no disfigurement.—The PRESIDENT, Mr. ST. GEORGE REID, Dr. WHISTLER, and Messrs. VINRACE and WINGRAVE discussed the subject.—The PRESIDENT showed (1) several cases of Cortical (Non-radical) Operation on the Mastoid for acute disease. Those in adults made rapid and complete recoveries. In one recent case, in a boy who was badly fed, healing had been delayed; in another, where there was no bilateral necrosis of the mastoid in a tuberculous child, a further operation was to be carried out. (2) A case of Hæmorrhagic Myringitis occurring suddenly in a woman who was a few months past her menopause. (3) Several cases of Chronic Dry Catarrh of the middle ear of the sclerotic type. These had resisted the usual methods of treatment, and he had tried the effect of mechanical vibration applied to the dorsal spine. Under this "indirect massage" of the tympanic structures (presumably of the stapedio-vestibular articulation) considerable improvement had taken place, as was shown by several of the cases presented. Dr. PEGLER and Messrs. WAGGETT and WINGRAVE made remarks.—Mr. WYATT WINGRAVE showed a specimen or Cystic Cholesteatoma of Auricle, which he described in detail, and narrated several cases of Cyst of the Auricle which simulated othæmatoma.—Mr. ATWOOD THORNE exhibited for Dr. WILLIAM HILL a patient having a Congenital Fistula of the Auricle.

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting on May 4th, under the presidency of Mr. T. A. I. HOWELL, questions raised by the proposed Midwives Bill were discussed.—The PRESIDENT argued that among the reasons for the Bill were the facts that in a large proportion of the women attended by unskilled persons the mortality, both among mothers and children, was increased, and that those cases also were responsible for much of the ophthalmia neonatorum which later on drifted towards the hospital. For these and other reasons it was agreed on all hands that something ought to be done. In a general criticism of the Bill he pointed out the necessity for limiting the responsibility to the person who actually had the conduct of the case; the omission in the Bill of all reference to stillbirths; and the absence of any necessity on the part of the proposed midwife to provide a certificate of character. He urged the necessity of protecting the practice, as well as the title, of the medical man, and of restricting the practice of the midwife solely to the functions which she was intended by the Bill to fulfil. He showed that by-laws could not be made contrary to the spirit of the Act, which seemed to be the case in the Bill under consideration. As regarded local funds, they ought not to be available for expenses incurred in carrying out the provisions of the Act; and he especially objected to Clause 9, which virtually appointed medical detectives. Public opinion, he was sure, was generally adverse to the passing of such a measure.—Mr. ROWLAND HUMPHREYS said the proposed Bill was only there in outline, and that the details were left to be filled in by the Board. He assured the meeting that deputations representing 20,000 persons in favour of the Bill had been received, and that petitions to the same effect were constantly being sent in. Legislation had been hampered to a great extent by the views taken of the matter by various women's societies. He thought that a certificate of character would be of no use, and that it would be a very difficult thing to provide against the risk of the midwife practising for gain.—Dr. BARKWELL spoke against the Bill.—Dr. EDEN said that since the Bill had been condemned by the General Medical Council it ought not to be allowed to pass. The Bill should have been promoted by the profession at large and not by any particular body, no matter how good their intentions. At present there were no means of dealing with midwives who were deserving of censure; they were practically under no control. This was very different from the regulations on the Continent—in Italy, for example, where every midwife must give full particulars of each case which she had attended to the local authority. There, also, midwives were trained gratuitously; but in this country the probabilities were that the certificated midwife would not reach the class for which she was intended—namely, the very poor.—Dr. MCCOOK WEIR said that if this Bill passed, ultimately the midwives would treat all diseases of women and children. He stated that the signatures in favour of the Bill were obtained by canvassing; that in his opinion the constitution of the Midwives Board was bad; and that the General Medical Council had been over-ridden by the Privy Council and by other influences. He gave an outline of a Bill prepared by himself which he would call the Obstetric Nurses Bill, and was strongly of opinion that a certificate of character was a most essential qualification.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a special meeting held on April 27th, Dr. C. H. CATTLE, President, in the chair, Dr. FREDERICK TAYLOR read a paper on Combined Pleural and Pericardial Adhesion. Dr. Taylor described the case of a woman, aged 42, who was admitted to hospital for dyspnœa, cough, and pain in the chest. Five months pre-

viously she had noticed that her abdomen was getting larger. A month previously she had chill, shivering, dyspnœa, pain between the shoulders, and cough. Œdema of the legs followed, and the physical signs of fluid at the right base. This was explored without result. On admission the physical signs of right pleural effusion persisted; and the left base presented the same in less degree. The heart's impulse was felt in the normal position, the dulness was normal in extent, the pulse was regular, but feeble and rather rapid: there was no murmur. The urine a few days later contained some albumen. The patient never improved, and died about six months after admission. The *post-mortem* examination revealed universally adherent pleurae and adherent pericardium; the lungs were compressed and airless except at the apices; some bronchial tubes were dilated; the right auricle was dilated, the right ventricle dilated and hypertrophied, the left ventricle very small; the vessels and other structures in the mediastinum were matted together by inflammatory tissue (mediastinitis); the peritoneum was universally thick and opaque, and presented some recent lymph as well. Dr. Taylor pointed out that the mere coexistence of pericardial and pleural adhesions was common, as found *post mortem*, but a very small proportion of them seemed to present the features seen in this case—great prominence of the physical signs on the side of the pleura, and absence of local evidence on the side of the heart. The etiology of this case was obscure. There was no history of rheumatism or acute pneumonia, and other causes of multiple serous inflammations were not present, with the exception of scarlet fever. The consideration of the relation of the different serous inflammations to one another and to the symptoms showed that the pulmonary lesion seemed unequal to the production of the symptoms except through failure of the right heart, and no doubt the dilatation of the right cavities as a result of adherent pericardium was the chief cause of the dropsy. The author referred to an interesting paper by Heidemann, who showed that ascites was likely to occur as an early symptom in adherent pericardium, probably because there had been, with the pericarditis, simultaneous peritonitis. This had a possible bearing upon the present case. The subject of mediastinitis was then discussed, and its probable influence on the symptoms in this case was shown to be small. In the diagnosis Dr. Taylor suggested that the coexistence of lesions in two or more serous membranes as the result of former inflammation rather increased than lessened the difficulties of diagnosis, especially in consideration of the interaction of the heart and lungs one upon the other. The chief guide was probably the recognition of adherent pericardium acting upon the right heart as a possible cause of failing circulation, when the local evidence of heart disease was not forthcoming. Suspicion of adherent pericardium might be strengthened by evidence that the pleura was or had been inflamed. Dr. Taylor referred in conclusion to another case in which a similar diagnosis seemed allowable.—The PRESIDENT thanked Dr. Taylor for his interesting address, and Dr. HANDFORD proposed, and Mr. CHICKEN seconded, a vote of thanks to Dr. Taylor, which was carried unanimously.

REVIEWS.

RECOLLECTIONS OF THIRTY-NINE YEARS IN THE ARMY. By Sir CHARLES ALEXANDER GORDON, K.C.B. London: Swan Sonnenschein and Co., Limited. (Royal 8vo, pp. 328. Frontispiece. 12s.)

SIR CHARLES GORDON'S personal reminiscences are strictly limited to the period of his service in the Army Medical Department, during which it was his fate to take an active and useful part in events which have deeply graven themselves on the historical tablets of the century which is now about to come to a close. These include the Gwalior campaign of 1843-44; operations against King Quako Acko of Amelycha on the coast of Guinea, which were of a very trying description and resulted in the overthrow and capture of that savage; the Indian Mutiny, in which as surgeon of the 10th Foot he participated in the work of the Jounpore Field Force, the capture of Lucknow, and the proceedings of the Azimghur Field Force; the Chinese War of 1860 61; and finally the siege of Paris of 1870-71, throughout which, as a medical commissioner deputed to report on the military and medical arrangements of the French army, he was a witness of the stirring and tragic circumstances of that memorable period.

Possessed of keen powers of observation and accustomed to note matters which arrested his attention in some detail at the time of their occurrence, he is enabled now to compile an interesting narrative of his experiences of the medical service of the British Army in peace and in war at home and abroad. The personal element is not as in many autobiographies unduly conspicuous. The work does not furnish the materials of a psychological study, indicating the ancestry, education, and conscious reaction to surroundings of a human being. The principal personal incidents of a very active career are duly and accurately recorded, and the conclusion as regards the narrator, which the narrative discloses, is eminently favourable. We perceive in these pages the picture and work of a man of good physique and sound mind, faithful to all the obligations of life and service, striving always, and often under strain and sickness, to fulfil his duty, humane and altruistic as becomes a member of his profession, ascending step by step the ladder of promotion in his department from the lowest to the highest rung, winning golden opinions from those under whom he served, respected and trusted by officers and men, and gratefully appreciating those special mentions in despatches and titular decorations which are so highly prized in the army as the reward of good service.

Sir Charles Gordon has been in his day a prolific writer, and many of the works which he has published have been of considerable merit and use. He refers modestly to some of them and might with advantage have given a list of them. The style in which the book is written is somewhat jerky and dry, and the construction of sentences is not always faultless; but there is never any doubt about what the author means to say, and truthfulness and accuracy are strong points.

Apart from the general interest of the story, which is considerable, it possesses a special value in presenting contrasts between military hygiene and service in the past and present. The discomforts and dangers of transport by sea and land in what is called the presanitary period, are faithfully depicted. The sacrifice of life by outbreaks of cholera, which were so apt to occur during the weary boat journey up country in India, described in the fifth chapter, is happily a matter of history, and it is pleasant to state as a practical deduction from the perusal of this book that many similar dangers to life and health which encompassed the soldier in times past, have as a result of hygienic reforms been consigned to the limbo of lapsed evils. Sir Charles Gordon spent the early years of his service as a regimental surgeon, and is proud to note the gallantry of the Buffs, the 10th and the 57th, with which he served. He viewed the abolition of the regimental system with disfavour, and in several passages throughout the book illustrates the value of the bond which that system established between the doctor and the regiment. He also writes disparagingly of the short service system, and points out several inconveniences which its introduction entailed. On one point his reminiscences offer very vivid testimony, namely, the reality of the position which the medical officer holds in the army as an integral and essential element in the military organisation. In one passage (p. 132) he tells us that "while these operations (the capture of Lucknow) were in progress, one or other regimental surgeon was constantly with the fighting line, rendering what aid was practicable to those struck down; and here it is well to mention that whenever officer or soldier felt himself wounded, his first call was for 'the doctor.' Nor is it to be questioned that the moral effect of his presence was very considerable: the presence of a hand to succour imparted confidence." Many of the events and experiences recorded in the volume, especially those relating to the Indian Mutiny, the occupa- of Tientsin, and the siege of Paris, are of a very interesting character, and throughout the book there are passages which are well worthy of quotation did the limits of this review permit.

We may commend the book as a sound and entertaining narrative of incidents of great intrinsic interest, and a record of a very useful and meritorious career in the public service.

THE ORIGIN AND DEVELOPMENT OF THE ST. JOHN AMBULANCE ASSOCIATION, WITH SPECIAL REFERENCE TO THE POLICE AND "FIRST AID." (London: Published by the Association. Demy 8vo, pp. 32.)

IN this pamphlet, issued under the auspices of this Association, Mr. John Furley, after giving a sketch of The Origin and Development of the St. John Ambulance Association, draws especial attention to the work the Association is doing among the police force throughout the kingdom. The practical work of teaching "first aid" began in the year 1878, so that the Association is now in the twentieth year of its existence. At the outset all ambulance materials were obtained from Germany, where Esmarch's example and teaching had brought ambulance work to great perfection in the German army. British workers, however, felt that amidst the industries of their country there are entailed dangers to life as deadly as are those of the battle field, which, when taken throughout a period of time, prove many times more frequent. It was the desire to abate the suffering in the busy streets, in the mine and in the factory which stimulated the people in this commercial and industrial nation to take up ambulance work; and in a very short time to such perfection was it brought by Mr. Furley and others, that we have become the teachers to the world, and the emporium whence ambulance stores are obtained. But amongst all its pupils the Association aim primarily at educating the police, and as early as May, 1878, the first police ambulance class was held at Scotland Yard.

The advantages to the public which accrue through the knowledge of ambulance acquired by the police has led many chief constables to consider that a course of "first aid" should be made a necessary part of a policeman's training. The question of providing for the cost of instruction has from time to time arisen, but it is now settled that the police fund is available; in other words, that the Government authorise the expense of ambulance instruction of the police to be charged to the rates.

To enable the police to keep up their knowledge they are encouraged to form or join a division of the St. John Ambulance Brigade. The Brigade is an offshoot of the Association, having for its principal object the constant training of those of its pupils who have attained certificates, and of brigading them together so as to render them available collectively for public "first aid" work on a large scale. The proofs of progress in the work of the brigade are afforded by contrasting the work done by the Brigade in London on Jubilee Day, 1887, when 20 of all ranks were on duty, and in 1897, when 910 men and nursing sisters were placed upon the line of route. A stimulus to encourage a high standard of perfection in rendering help to the injured is attained by establishing competitions amongst the police throughout the length and breadth of the country. In the month of May, 1897, five teams, selected after local competitions at many centres in various parts of the three kingdoms, entered for the final prize at the great ambulance competition at the Crystal Palace. After a keen contest, in which national feeling played a considerable part, the prize was awarded by the judges to the Dublin City Police.

ATLAS DER SYPHILIS UND DER VENERISCHEN KRANKHEITEN, MIT EINEM GRUNDRISS DER PATHOLOGIE UND THERAPIE DERSELBEN [Atlas of Syphilis and Venereal Diseases, with an Outline of their Pathology and Treatment.] Von Professor Dr. FRANZ MRACEK, in Wien. Munich: J. F. Lehmann. 1898. (Crown 8vo, 71 coloured plates and 16 illustrations; pp. 128. M. 14.)

THIS work forms Vol. VI of Lehmann's series of medical hand atlases, and, of the 71 plates contained in it, 60 represent the chief lesions of the several stages of syphilis, and 11 show various local diseases of the male and female genital organs. The plates for the most part are very good, and the colouring, on the whole, is satisfactory. Exception must, however, be taken to the plate which is supposed to show the malformation of the teeth, which was first described by Mr. Hutchinson as one of the consequences of inherited syphilis, and which would appear to be imperfectly understood by many Continental observers. This plate seems likely to mislead, and, moreover, "chisel-shaped"—the term here employed to describe the teeth—is just what "Hutchinson's teeth" are not.

Opposite each plate is given a short but sufficient history of the case from which the illustration is taken. The letterpress which follows the plates contains a useful summary of venereal diseases, including also a number of formulæ for their treatment. In the treatment of syphilis the introduction of mercury by inunction appears to be the method most favoured by the author.

The book is well bound, and its convenient and handy size will no doubt form an additional recommendation to those who are on the look out for an atlas of venereal diseases.

TWENTY-EIGHTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MASSACHUSETTS. Boston: Wright and Potter. 1897. (Royal 8vo, pp. 986.)

THE *Twenty-eighth Annual Report of the State Board of Health of Massachusetts* covers 986 pages of closely printed matter, for the most part bristling with tables, but containing only three or four small diagrams. The Board consists of seven unpaid members, of whom three at least, including the Chairman, Dr. Henry P. Walcott, belong to the medical profession, but no doubt much of the labour of compilation fell upon the Secretary, Dr. Samuel W. Abbott, in conjunction with the engineer to the Board, Mr. X. H. Goodnough. The period under report is the twelvemonth ending September 30th, 1896, but with regard to water supply and sewerage the information is carried down to the end of the calendar year 1896.

One of the most important duties of the Board is in the supervision and control of all water supplies and systems of sewerage throughout the State. This power was conferred in 1886, when a new law designed to protect the purity of inland waters was passed by the Legislature. It would be difficult to overestimate the value of this measure. An experimental station is maintained at Lawrence and a laboratory in Boston for the constant examination of the waters of the State. In both these institutions many important additions to science have originated. The total budget at the disposal of the Board in 1896 was 57,300 dols., the appropriations for the different departments being as follows: General work of Board, 15,800 dols.; food and drug inspection, 11,500 dols.; protection of purity of inland waters, 30,000 dols. Included in the first item there is an expenditure of 6,369 dols. on account of the bacteriological laboratory, of which the work has of late been much increased in consequence of its having been made a central station for the distribution of antitoxin to local Boards of health, hospitals, and physicians in private practice. The *personnel* under the orders of the Board in the several departments numbers thirty-six individuals, who are paid collectively a sum of 38,900 dols., exclusive of travelling expenses.

Dr. Abbott is to be congratulated on the 40 years' summary which he has prepared, as it presents features of national and international importance. During that period the population has more than doubled itself, being in 1895 2,500,183, of whom only 1.15 per cent. were coloured persons. Expressing the fecundity of marriage by the proportion existing between the children born in a given year, and the marriages of five years previous, the unexpected result is obtained that during 1851-55 it was 2.8 children per marriage, while in 1886-90 it was 3.4 children per marriage. The accuracy of this is confirmed by the fact that the birth-rate in 1856-64 was 27.38, and in 1888-93 was 26.79 per 1,000

The section of the report dealing with the causes of death shows that the death-rate from small-pox, which was 6.7 in 1872 (the maximum) had declined to 0.13 per 10,000 in 1894. An interesting curve on page 775 shows a similar curve of decline of scarlatinal mortality in Sweden, England, and Massachusetts. The death-rate from diphtheria has declined from 19.6 per 10,000 in the epidemic year of 1876 to 5.3 in 1891, the year of minimum prevalence.

Valuable evidence of the waterborne prevalence of enteric fever is furnished by the curve on page 781, showing the diminution of this disease almost exactly *pari passu* with the

decline of the percentage of population not supplied with public water.

The death-rate from phthisis, as shown by a curve on p. 788, has ever since 1850 been considerably higher in Massachusetts than in England. Another interesting difference is that while the death-rate from phthisis was lower in Massachusetts throughout the entire period among females than among males, in England it was lower among females up to 1866, but from that time was higher among females than among males, the difference between the two sexes gradually becoming accentuated. The Massachusetts curve shows the same tendency to a relatively higher death-rate among females, the female gradually approximating to the higher male curve in recent years. The square diagrams representing in small squares enclosed in a larger square the percentage of deaths from tuberculous diseases to total deaths from all causes bring out some striking results. Thus in 1856-7, 46.2 per cent. of the deaths from all causes at ages 15 to 60 were caused by phthisis, while in 1894-5 this proportion had declined to 27.8, while at ages under 15 the proportion had declined from 5.4 to 2.1 per cent.

We have named only a few points of interest. Dr. Abbott's report is a mine of information, which will be valued by all statisticians both for the accuracy and completeness of its data, and the skill with which facts are presented.

La Bicyclette: ses Effets Psycho-physiologiques. [The Psycho-physiological Effects of Bicycling.] Par Dr. Eugene Guillemet. Paris: Baillière et Fils. 1898. (Roy. 8vo, pp. 113. Fr. 3.50.)

The author gives some interesting observations on the effect of the exercise. At high speed and for long distances the temperature rises considerably, to fall rapidly with rest. Dynamometric tests showed a constant increase in the pressure of the grasp after a ride of moderate length. He gives several cyrtometric tracings showing development of the chest cavity, and maintains that exercise of the legs such as this, leaving the chest free, has actually a greater effect in its development than exercises of the arms which require the thorax to be fixed. But he found, in a patient who had given up bicycling for five months, that the chest had returned to its original condition. He emphasises the great importance for speed of breathing properly, and has noticed that a good singer who has studied respiration is less distressed than an ordinary person. He confirms other observers as to its effect upon the heart, both in increasing the frequency of the beat, and in dilating the organ for the time, or if excessive exertion be repeated too often, permanently. Training greatly reduces this effect. His observations on diet and excretion are not important.

He notices the importance of automatism in great effort, since it saves energy, and makes the curious observation that he was much less tired when his pacemaker was an automotor machine than when he followed a man on a bicycle. This he explains by the fact that in the former case he more readily fell into the semi-unconscious mechanical state in which effort is little appreciated.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

Research Scholarship.

The Council of the British Medical Association are prepared to receive applications for one of the three Research Scholarships, which is of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications to be sent in writing to the General Secretary on or before June 15th, stating the particulars of the intended research, qualifications, and work done.

Francis Fowke, *General Secretary.*

429, Strand, London, May 14th, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Metropolitan Counties Branch: West London District.—A meeting will be held on Thursday, May 26th, at 4.30 P.M., at the Clinical Museum, Great Portland Street, W. (by kind permission of Mr. Jonathan Hutchinson, F.R.S., F.R.C.S.). Mr. Hutchinson will make some remarks on Subjects of Interest in the Museum. Some clinical cases will be shown. G. Crawford Thomson, M.D., Vice-President, in the chair. Tea and coffee at 4 P.M.—Thomas Dutton, Honorary Secretary.

Metropolitan Counties Branch: South London District.—The annual meeting will be held at Bethlem Royal Hospital, S.E., at 3.45 P.M., on Friday, May 27th, 1898. The election of officers for the next year will take place. Cases of clinical interest from the wards of the hospital will be shown and demonstrated on by Dr. R. Percy Smith.—Theo. B. Hyslop, Hon. Secretary.

Lancashire and Cheshire Branch.—The annual meeting will be held at Wigan, on Tuesday, June 28th. Applications for membership and all communications should be addressed to the Honorary Secretary, Dr. James Barr, 72, Rodney Street, Liverpool.

South-Eastern Branch: West Surrey District.—The next meeting will be held at the Masonic Hall, Woking, on Friday, May 27th, at 3.45 P.M. Dr. Duncan of Croydon will preside. Agenda: 1. Minutes of the Godalming meeting. 2. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. 3. Dr. McCann: Six Cases of Malignant Disease of the Uterus treated by Vaginal Hysterectomy. 4. Mr. G. F. Roumieu: The Midwives Registration Bill. A discussion will follow.—Alex. Hope Walker, Honorary Secretary, Cranleigh.

South-Eastern Branch: East Sussex District.—The next meeting will be held at the White Hart, Lewes, on Thursday, May 26th, at 3.30 P.M., Dr. Crosskey in the chair. Members are requested to send notice of any communications before May 14th to the Honorary District Secretary, J. W. Batterham, M.B., Bank House, Grand Parade, St. Leonards.

Bath and Bristol Branch.—The seventh ordinary meeting of the session will be held at the Medical Library, University College, Bristol, on Wednesday, May 25th, at 7.30 P.M., Mr. F. Richardson Cross, M.B., President, in the chair. The following communications are expected:—Dr. A. J. Harrison: (1) Favus (2) Dermato-syphilis of Nose, (3) Eczema in Unusual Situations: Mr. J. Paul Bush: Specimen from case of Perforated Ulcer of Stomach Successfully Treated by Operation: Mr. J. Lacy Frith: Notes of a case of Laparotomy for Suppurating Ovarian Hydrocele: Dr. W. S. Melsome: Bacteriological Examination before, during, and after Surgical Operations: Dr. Walter C. Swayne: Dystocia caused by Large Fœtus: Dr. J. Michell Clarke: Specimens recently added to the Bristol General Hospital Museum.—J. Michell Clarke, Clifton, W. M. Beaumont, Bath, Hon. Secretaries.

South-Eastern Branch: East Kent District.—The annual meeting of this district will be held at the Kent and Canterbury Hospital on May 26th, at 3 P.M., Dr. Parsons, of Dover, Treasurer of the British Medical Association, in the chair. Agenda: The usual business of the annual meeting; The question of the proposed medical officer of health for the County Council; Mr. Raven: A case of acute pneumonia and its significance; Dr. Latter: The difficulties of diagnosis in the more common zymotic diseases. The annual dinner will take place at the County Hotel at 6 o'clock. Charge, exclusive of wine, 7s. It is hoped that the dinner will be well attended, and members intending to dine are particularly requested to communicate with the honorary secretary by May 25th, so that adequate arrangements may be made. A seat at the dinner table will be reserved for each member of the recently formed dinner club. All members of the South-Eastern Branch are entitled to attend these meetings and to introduce professional friends.—Thos. F. Raven, Hon. District Secretary, Barfield House, Broadstairs.

Shropshire and Mid-Wales Branch.—The spring meeting of this Branch will be held at the Salop Infirmary on Tuesday, May 24th, at 3 P.M. Members who wish to read papers, or show patients, or bring any business before the meeting are requested to communicate with the Honorary Secretary not later than Saturday, May 14th.—H. Willoughby Gardner, M.D., Honorary Secretary, Swan Hill, Shrewsbury.

East Anglian Branch.—The annual general meeting of the East Anglian Branch will take place at Norwich, on Thursday, June 16th, under the presidency of Mr. Haynes S. Robinson. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Beverley, Norwich. Members desirous of nominating candidates for election as officers of the Branch under By-law 9, must send their nominations to Dr. Barnes, Eye, so as to reach him not later than May 25th. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries.—Edgar G. Barnes, M.D., Eye; Michael Beverley, M.D., Norwich; Thomas Carr, M.D., Braintree, Honorary Secretaries.

Border Counties Branch.—The members of this Branch residing in the counties of Roxburgh, Berwick, Selkirk, and Peebles, are requested to meet together in the Station Hotel, New Town, St. Boswells, on Friday, May 27th, at 3.30 P.M., to form a section of the Branch, and intimate the same to the next meeting of the Branch. There will be a discussion on Influenza, its various forms and their treatment. Members are requested to bring any specimens they possess. Members intending to be present will oblige by intimating the fact to the Honorary Secretary, W. Hall Calvert, The Laurels, Melrose.

North of England Branch.—The spring meeting of this Branch will be held at the Royal Infirmary, Newcastle-on-Tyne, on Thursday, May 26th, at 4.45 P.M. Notice of papers, etc., should be sent at once to the Secretary. The dinner after the meeting will take place at the Douglas Hotel at 6 P.M., 6s. 6d. each, wine extra.—G. E. Williamson, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

South Midland Branch.—The annual meeting of this Branch will be held at Luton on Thursday, June 9th, 1898. President-Elect, Mr. Horace Sworder.—Charles Jewel Evans, Honorary Secretary, Northampton.

Midland Branch.—The annual meeting of this Branch will be held at the Guildhall, Lincoln, on Thursday, June 2nd, at 2.15 P.M. After the transaction of the usual business the following papers will be read:—Dr. Handford and Mr. Anderson: Case of Perforation of a Typhoid Ulcer. Operation. Recovery; Mr. Anderson: Transperitoneal Uretero-lithotomy; Dr. Newman: a short note upon Prostatic Troubles; Dr. J. Stitt Thompson: Function Irregular Action of the Heart; Mr. W. J. Cant: (1) an Improved Method of Operating for Hare-lip, (2) Specimen of Sarcoma of the Choroid; Dr. Headley Neale: Agoraphobia as viewed by personal experience and observations of others; Dr. R. Sevestre: the Effects of Foreign Bodies in the Bronchi; Dr. R. A. Farrar: Operation for Carcinoma of the Cervix Uteri, withinotes of two successful cases: Mr. F. S. Lambert: Appendicitis, three cases of, with Notes on Treatment; Mr. S. W. Daman: Medical and Surgical Cases and Specimens. Luncheon will be provided by the President-Elect at his residence, Silver Street, at 1 P.M. The annual dinner will take place at the Saracen's Head Hotel, at 6 P.M., price 7s. 6d. exclusive of wine.—Frank M. Pope, 4, Prebend Street, Leicester, Hon. Secretary and Treasurer.

Staffordshire Branch.—The third general meeting of this Branch will be held at the Victoria Hotel, Wolverhampton, on Thursday, May 26th. The President, Mr. G. A. Phillips, will take the chair at 5.15 P.M. Agenda: Minutes of the last general meeting; Mr. Lawson Tait will move, "That the resolution—[That this meeting, having considered the report of the Constitution Committee concerning the election of members of Council by unattached as well as attached members, recommends that the proposal be not adopted]—passed at the last meeting be rescinded, and that the opinion of the Branch on the more important parts of the report be forwarded to the General Council"; correspondence; election of new members; exhibition of living cases, pathological specimens, etc.; Dr. Pietersen: Prognosis of the Principal Forms of Insanity; Dr. Deanesly: Stack's Mastoid Operation. Dinner at the Victoria Hotel at 7.15; charge 5s.—F. Milnes Blumer, Hon. Secretary, Stafford.

Northern Counties of Scotland Branch.—The annual meeting of this Branch will be held on Wednesday, June 15th. There will be an excursion on board Mr. McBrayne's s.s. *Elmgany* from Inverness to Fort Augustus. Members allowed to invite their friends. Fuller particulars by circular.—J. W. Norris MacKay, Secretary and Treasurer, Elgin.

CORK AND SOUTH OF IRELAND BRANCH.

A general meeting of this Branch was held on May 14th, Dr. J. J. Curran (Killeagh), Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Treasurer's Report.—The Honorary Treasurer reported £12 to the credit of the Branch.

Election of Officers for 1898-1899.—The following were elected officers for the ensuing year: *President:* Dr. J. Giusani. *Vice-President:* Dr. J. Curran. *Council:* The Council was unanimously re-elected. *Honorary Secretary and Treasurer:* Dr. Philip Lee was re-elected. *Representative on Council of the Association:* Professor H. Corby, M.D. *Representative on Parliamentary Bills Committee:* Professor H. Corby, M.D.

Allocation of Funds of the Association for Research.—A letter was read from North of Ireland Branch containing the following resolution:

That this Branch is of opinion that in allocating the funds of the Association the Council should attach more weight to the claims of provincial members.

Hospital Abuse.—The meeting then took up the question of hospital abuse in the city. Circulars had been sent to every member of the Branch, to every medical practitioner in Cork, and to many others in the county of Cork, asking them to attend and suggest remedial measures, or by letter if unable to be present. A valuable letter was received and read from Dr. P. J. Macnamara (Kilmallock), but no other replies to the circular were received. Dr. Curran expressed himself strongly on the subject of the great and growing abuse of hospitals in the city. He said it affected city practitioners, but chiefly men in the country, as with the increased railway facilities patients came direct to the hospitals, and in that way never called in the services of their local doctor. He instanced many cases of well-to-do farmers and their families who habitually attended at the city hospitals from his districts.—Dr. Corby spoke on the difficulties of dealing with the question.—Dr. Moriarty suggested that all the staffs should be represented on the Boards of Trustees.—Minutes from the meeting on hospital abuse held June 16th, 1894, were read, in which the trustees of the various hospitals stated their readiness to do all in their power to prevent abuse of hospitals.—Dr. Giusani proposed, Dr. Corby seconded, and it was carried unanimously:

That the notices, as previously sent to the hospitals, be framed and again forwarded by the Secretary, and that he see that they are hung in conspicuous parts of the waiting rooms, halls, or externs in all the hospitals in the city, and to hold a meeting after the expiration of a few months to again consider the question.

The meeting, after some general discussion, adjourned.

THE LATE MR. ERNEST HART.

At a meeting of the Dorset and West Hants Branch of the British Medical Association, held at the County Hospital, Dorchester, on May 11th, the following resolution was proposed by Mr. Parkinson, seconded by Dr. MacDonald, and carried unanimously:

That the members of the Dorset and West Hants Branch of the British Medical Association desire to express their deep sense of the loss sustained by the death of Mr. Ernest Hart, D.C.L., late editor of the British Medical Journal, and their deep sense and appreciation of his valuable labours and untiring energy for the benefit of the medical profession and the relief of suffering humanity.

Holidays in the University of Paris.—The students of the University of Paris, medical and other, are not likely to suffer from intellectual overpressure, if one may judge from the number of holidays which they enjoy. An Alsatian student in Paris has used some of the abundant spare time which the bounty of his Alma Mater in the matter of "free days" leaves him to compile the following list of holidays: The Great Summer Vacation, 64 days; All Saints' holidays, 3; Christmas and New Year, 10; St. Charlemagne, 2; free days in Lent, 2; the Easter Vacation, 15; Whitsuntide, 3; the National Festival, 3; Sundays, 52; Thursdays, 52; memorial days of great men, 10; total, 216 days. Thus the future doctors, lawyers, and politicians of France appear to devote only 149 days out of the 365 to the business of their education.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 21ST, 1898.

PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE first annual report of this Fund has now been issued, and will be perused with deep interest by all who are concerned in our metropolitan charities. We propose to point out some of the facts which it discloses: but the whole document is worthy of a careful study, and its complete effect cannot be gathered from a necessarily imperfect summary.

We shall perhaps best consult the reader's convenience by looking at the report from three points of view: 1. Of the past—what the Fund was meant to do; 2, of the present—what it did do during the year 1897; and 3, of the future—what prospect it holds out to the charities for whose benefit it was intended.

As to the intentions of the Fund, they were the purest and wisest that could have been conceived. The Prince and his advisers saw the significance of the undoubted fact that our hospitals are at present supported only by a small minority of comparatively rich people, and calculated that there are in London 450,000 households which contribute nothing to hospitals, though their inmates could afford at least some small contribution. It was to provide all these people with an opportunity of supporting the hospitals that this Fund was founded. It was proposed to collect from 1s. to 10s. a year from this immense constituency, and thus raise an annual income of £100,000 to £150,000. But it was expressly stated that this great sum was to be derived "from those who have not hitherto regularly contributed." If the reader will examine the subscription list in this report, he will see how much this benevolent expectation has hitherto been disappointed. We have taken the letter A as a basis for estimate, in which the annual subscriptions amount to the sum of £1,603 11s. 6d., and of this sum, if we have reckoned correctly, just £8 14s. 6d. is contributed in sums not exceeding half a guinea. If this proportion holds for the other letters of the alphabet, it would follow that of the whole annual subscriptions (which amount to £21,443) less than £120 was raised from the class to whom the Prince looked for his £100,000 a year. Nor does the matter look different if we examine the list of donations. These amount to £204,639 inclusive of the sale of stamps. The "donations under 5s." are separately given at the end of each letter of the alphabet, and amount to less than £51 in all. It is therefore evident that if the poorer subscribers and donors are to be reached, some different means of doing so must be devised. This is a matter of vital importance, for no one can doubt that much of the larger subscriptions and donations is not clear gain, but only represents sums transferred from individual hospitals to the common fund. In this essential particular, then, of the procuring subscriptions from fresh and lower social circles, the past experience of the Fund has been a decided failure.

In another, but very minor aspect, it has been an equally striking success, for the total sum (£227,551 12s. 5d.) received by the Fund has been raised at the cost of only £1 12s. 6d. per cent.—a strong testimony to the efficiency of the Committee's management.

We pass on to our second head—what the Fund actually accomplished in the past year. We have mentioned the gross sum collected, large in itself, but pitiably small as compared with the object aimed at, that is, the raising of an annual income of £100,000 to £150,000. The sums contributed as annual income amounted, as we said above, to only £21,443. There remains over, however, for investment £167,020; after making the grants mentioned below, and the interest on this sum will add, say, £5,000 a year to the income of all future years.

Out of the funds thus received the Council distributed £56,826 5s., of which £22,050 was allotted in annual grants to thirteen general hospitals, each having 100 or more beds permanently occupied, and most of them having vacant beds which they are not able to occupy for want of funds. These grants, though liable to modification in future years, "either by way of increase or diminution," are made "on the understanding that they will be on a more or less permanent footing." They comprise all the great metropolitan hospitals, except St. Bartholomew's and St. George's, and the sums vary from £6,600 (to Guy's) to £500 (to the Sick Children's Hospital and the Seamen's Hospital). Then comes a long list of donations, amounting on the whole to £34,776 5s., derived from the sale of Jubilee programmes and stamps, and distributed as a Jubilee gift, "for this year only," to a miscellaneous collection of general, special, and cottage hospitals, ending with two institutions—the establishment for gentlewomen in Harley Street and the Invalid Asylum, Stoke Newington. We refrain from criticising this list, merely observing that no intelligible principle seems to have guided a selection which has excluded St. Thomas's while admitting "Phillips's Memorial Homœopathic Hospital." We believe, however, that the distribution was made on this occasion through the Distribution Committee of the Hospital Sunday Fund. On the whole, and with such individual exceptions as we have hinted at, the very disappointing total sum at the disposal of the Council seems to have been fairly appropriated; and the resolve to endeavour first to open the closed wards in our existing hospitals will be universally commended, and has added at once over 180 beds to those now in use—almost equal to the addition of a hospital of moderate size to those now in existence.

We come now to the future prospects of the Fund. We will assume, and are probably justified in assuming, that the Fund will be able to maintain the annual grants it has already made; and this would be no small boon, though these annual grants amount to less than one-fifth of the sum which the Fund was intended, and we presume still hopes, to obtain. But if that sum is to be obtained we contend that some more efficient organisation must be devised to reach the class of whom the Prince first

spoke—the inhabitants of the 450,000 London houses from which at present no contributions seem to come. The sale of stamps is indeed to be renewed, and may bring in a substantial sum, though we can hardly expect that this will produce as much as in the Jubilee year. We note with pleasure the reference in the report to a scheme of organising District Committees throughout London for the purpose of urging on the inhabitants of its various divisions the duty of maintaining this most useful Fund.

The report does not deal with the machinery proposed to be set up for dealing with the claims of the various hospitals in the future. No difficulty of this sort was experienced last year, when only well-known hospitals of admitted merit were selected for annual grants. But when the question occurs of placing the various charities which received special donations in 1897, and others not named in that list, but which will doubtless put in their claims, on the roll of those entitled to a division of the permanent income, an authority will be required sufficiently imposing to command respect, both for its knowledge and its impartiality, and acting on intelligible and avowed principles. And it is on this ground that we regret the repudiation by the great hospitals and by the managers of this Fund of the proposal for a central hospital Board. But something of the same essential character, though perhaps under a different name, must be used to sift and classify the claims on the Fund.

Finally, we note with pleasure that the report holds out hopes of assistance to those hospitals which are in want of funds for the purpose of the renovation and improvement of their existing structures. All managers of hospitals know how great these needs are in many of our hospitals, built before the principles of hospital construction were so well understood as at present. For this purpose also it is most important that the Fund should obtain increased public support.

On the whole, though we cannot regard the Fund as having been successful hitherto, it has done very good work with the money entrusted to it, and has justified the national confidence felt in its founder and in its managers. We hope next year to be able to record its substantial progress.

THE NEW RULES OF THE ENGLISH CONJOINT BOARD.

The College of Physicians have taken, after two days' debate, an important decision, for the proper understanding of which a little explanation is needed. At the present time the Royal Colleges hold three examinations—the first in Chemistry, Physics, and Biology; the second in Anatomy and Physiology; and the third in Medicine, Surgery, and Midwifery.

For the First Examination they require that a student should have passed one of the required entrance tests in general education, and that he should show certificates of instruction in the subjects of the examination. But these certificates may be obtained at a large number of teaching institutions, public schools, technical schools, and higher Board schools, besides the recognised medical schools, and it is not required that a man should have joined a medical school either for instruction in these subjects or before passing the examination therein. But he has not hitherto been admitted to the Final Examination until five years from the date of his registration as a medical student, that is from the date of his joining a medical school, and therefore no time or money has been saved by passing the First before joining. A man who joined after passing the First was still obliged to spend five years over his other subjects, the same time which was allowed to those who did not begin their Chemistry until after joining. The resolution of the Royal College of Physicians, if approved also by the Royal College of Surgeons, will destroy this anomaly. For the future the first year of a student's course can be spent in the study of Chemistry, Physics, and Biology at places of learning which are not medical, but which have been approved by the two Colleges. His five years will be taken to date from his Entrance Examination with the proviso that four years must elapse after passing the First Examination.

The second change sanctioned was not less important. Hitherto the rule has been that two years must elapse between the Second Examination and the Final, and six months between the First and Second. The shortness of this latter interval was a grave disadvantage to proper teaching of Anatomy and Physiology, and we have often deplored it. Twelve months have now been made the minimum, and the College has thereby gone some way, though not far enough, toward freeing Anatomy and Physiology from interference, and giving them the time of study which their importance requires.

To the second of these changes no objection was raised, but upon the first a debate took place, in which strong arguments were brought forward. In the first place the "fifth year" of the medical course, which was brought in with such a flourish of trumpets in 1892, has now sunk into a year at a lay school spent upon preliminary science. It is no longer a medical year, and the real medical curriculum has been at once reduced to four years. A boy will now pass his Entrance Examination a year before he would naturally leave school, and will attend science classes at the same school for his last year. Then he will pass the First Examination. Then he will enter a medical school, and will pass Anatomy and Physiology at the end of his second winter, as was done twenty years ago; and also, as was then done, will take his Final Examination at the end of his fourth year. The extra time, which was meant for special clinical work, has been diverted to work which is not only not clinical, but not even medical.

Secondly, the schools recognised by the Colleges for the purposes of the first year are a mixed assembly. There are public schools like Winchester, Charterhouse, and Epsom; there are technical schools of less or great repute; and there are a few higher Board schools. It was alleged by the Committee of Management, who brought forward the proposals, that in the first place they were on all fours with the Scotch Universities, and took even more pains in the matter than the Universities of London or Oxford, which allowed a student to prepare these subjects anywhere he pleased; and, in the second, that all these lay places of instruction had been carefully examined before recognition was granted. But however true the second allegation may be the first is misleading, for the statements as to the Scotch universities were erroneous, and Oxford and London hold searching and thorough examination in these subjects, which the Royal Colleges do not.

On the whole, it cannot be maintained that the Colleges secure a high standard of preliminary science. This may,

however, be improved in the future; and, meanwhile, the new rules will go a long way to secure the separation of Chemistry and Physics from Anatomy and Physiology, and consequently to improve the study of these latter subjects. On the whole, the benefit outweighs the disadvantages, and those who held this opinion were no doubt unwilling to imperil the proposals by criticism. But since the teaching of preliminary science will tend to be less and less under immediate supervision, the colleges will be obliged to test its results more stringently in the future than they have in the past.

PROGRESS IN CRIMINAL TREATMENT.

The current number of the *Nineteenth Century* contains a very instructive article on The Prisons Bill and Progress in Criminal Treatment, by Sir Edmund Du Cane, the late Chairman of the Prison Commissioners. His long and unique experience of prison administration, covering the period when local prisons came under the control of the State, and the ability which characterised his management, render this contribution to the subject particularly deserving of attention. After pointing out the changes which will be effected by the Bill, and observing that these changes "may have far-reaching consequences, for they involve the fundamental principles on which a prison system ought to be conducted," he shows that certain clauses "make it possible and not difficult to effect an entire revolution in those principles at the will of a Secretary of State, although nothing of the sort may be intended under the rules now proposed."

It must not be forgotten that the Act of 1865—the basis of the existing prison system—was specially intended to remedy evils which arose under a system of local control, and that the tendency of legislation for the past fifty or sixty years has been in the opposite direction. The same may be said of the proposals for an increase of associated labour. Separation was one of the essential features of this Act, which was adopted "after long years of discussion and at great expense," and "which is in all countries admitted as the best system." The elasticity, in fact, which resulted from the power of local authorities to conduct their own prisons in their own way, was, by the wisdom of Parliament, limited by the Act of 1865, which aimed at uniformity of prison treatment, and finally condemned by the Act of 1877, which placed all prisons under the control of the Secretary of State. The system on which a sentence of imprisonment was to be carried out was, to this end, "prescribed in detail in these Acts, and one of its principal characteristics was its distinctly penal and deterrent character." The changes were all adopted on the recommendation of Parliamentary Committees and Royal Commissions, which had their origin in the public alarm and agitation caused by an increase of crime. The present cry is raised under totally different conditions. Crime has largely decreased, more especially in recent years, and it is not unreasonable to infer that these legislative measures have had some effect in producing this result.

Our penal system, then, whatever may be its merits or defects, has been arrived at by a process of evolution, and is the outcome of large and varied experience and of much public discussion. The founders of it undoubtedly believed that punishment was the first object of a sentence. In the eyes of some at the present day reformation of the individual criminal should be the chief, if not the sole, object of imprisonment. To this end they are prepared to sacrifice the principal penal elements of the existing system. Each prisoner is to be a kind of psychological study for governors, medical officers, and warders, and is to be treated according to his individuality, solely with a view to his reclamation. He is to be lectured, classified, trained in physical drill, freely supplied with books, taught in school, instructed in technical arts; and, with a view to prepare him mentally and morally for the reception of these advantages, he is to be relieved from the most disagreeable of the penal consequences which have hitherto been connected with imprisonment. All these alterations are contained in the report of Mr. Herbert Gladstone's Committee, and are very large concessions to make even to a rapidly decreasing criminal class. No right-minded person would withhold the means of improvement from people who need it so badly as those who are in prison, but Sir E. Du Cane expresses a doubt whether we possess any more effective remedy for its prevention and cure, or, in other words, any better reformatory agent, than punishment.

On the question of the probable success or failure of the reformatory treatment of prisoners, Sir E. Du Cane makes some very pertinent remarks, and points out certain practical difficulties. Reformation is a process distinctly requiring time. The minimum statutory period fixed for reformatory boys with a view to cure is two years, and the average detention period is in practice three years. Sentences of imprisonment, however, are on the average much too short for effecting improvements in the thoughts and habits of adult prisoners who have been living by crime, and in whose interests these benevolent schemes are in practice to apply. In 1896, out of 148,148 sentences passed 111,586 were for four weeks or under, 59,566 for two weeks or under, and only 1,696 had sentences of a year or over. If, then, the reformatory principle is to have a fair trial, an entire change in the criminal law rather than in the prison system is needed. Longer sentences will have to be inflicted, and magistrates and judges will find themselves face to face with the indeterminate sentence, an innovation which would be peculiarly distasteful to them, and probably odious to the public. Hitherto, a sentence has had a definite length and a definite meaning laid down by law, each judge knowing the effect of the sentence he pronounces, but if prison treatment is in future to be modified to suit individual temperaments, it is to be feared that, in trying to reclaim our criminals, we may incur the risk of sacrificing our ancient principle of "equal laws for all."

MEDICAL REFEREES IN SCOTLAND.

The Secretary of State is now prepared to receive applications fof the appointment of medical referee under the Workmen's Compensation Act, 1897, in Scotland. The arrangements adopted for Scotland are the same as those already announced for England and Wales, except that in the distribution of appointments the Sheriffdom is substituted for the County Court Circuit. The duties and fees of the referees and the qualifications required of candidates are exactly the same, and are stated in the British Medical Journal of April 23rd, p. 1088, and May 14th, p. 1289. All applications should be addressed to the Private Secretary, Home Office, Whitehall, S.W.

THE VALIDITY OF BY-LAWS.

The decision of the High Court in the case of Kruse *v.* Johnson is one of the most important which has been delivered for many a year because it touches a matter of local government which comes very nearly home to every citizen. The judgment of the Lord Chief Justice was as clear as it was closely reasoned, and ought to be read in its entirety, because he discussed very fully the nature and effect of a by-law. Considering the multiplicity and importance of the by-laws which have been passed and administered during the last quarter of a century by local authorities, it is indeed surprising that the Courts have not been called upon ere this to express an opinion. The great majority of the cases in which the question of by-laws has been discussed have been instances of by-laws made by companies which carry on their business for their own profit, although incidentally for the advantage of the public, and not by-laws of a public representative body, the consideration of which, the Lord Chief Justice said, ought to be approached by the Courts from a different point of view. They ought to be benevolently interpreted, and credit should be given to those who had to administer them that they would be reasonably administered. Parliament has delegated to representative public bodies in towns, cities, and counties, the power of exercising their own judgment as to what were the by-laws proper to make for good rule and government in their own localities. The power is safeguarded in various ways. Notice of the proposed enactment of the by-law must be given with the view of eliciting the public opinion of the locality upon it. The by-law must be approved by the Secretary of State, and finally the Privy Council may disallow the by-law, wholly or in part. Since the power was thus safeguarded, the Lord Chief Justice held that while it was the duty of the Courts to watch jealously the exercise of these powers by local authorities, and guard against their unnecessary or unreasonable exercise, yet they must approach the consideration of the matter with the feeling that the by-law ought to be supported if possible. The Lord Chief Justice indicated some of the faults in a by-law which might lead the Courts to condemn it. If it were partial or unequal in its operation as between different classes, if it were manifestly unjust, if it disclosed bad faith, if it involved such oppressive or gratuitous interference with the rights of those subject to it as could find no justification in the minds of reasonable men, the Courts might find it to be unreasonable and *ultra vires*. In matters which directly and mainly concern the people who have the right to choose those whom they think best fitted to represent them in their local government bodies, such representatives must, he said, be trusted to understand their own requirements. The definition which somebody has given of the best kind of judicial pronouncements, that they are "sublimated common sense," would apply very well to this judgment of the Lord Chief Justice. It brings out very clearly a principle which is easily grasped, since it is in thorough accord with our ideas of the principles upon which representative government rests.

STREET NOISES.

The case which led to the judgment of the Lord Chief Justice to which we have referred was that in which the county council of Kent has made a by-law forbidding the playing of musical instruments and singing in any public place or highway within fifty yards of any dwelling house after a request to desist either by the occupants or by their servants or by a police constable. It is extremely satisfactory to find the validity of the by-law upheld by six out of seven judges in a very strong Court. One of the most intolerable, because one of the most unnecessary, of the burdens laid upon the dwellers in modern cities is the burden of noise. Day and night—with at most the exception of a few hours after midnight—there is a continual hullabaloo, grinding of organs, blowing of bands, rattling of milk cans, screaming of hawkers, and shrill whistling of errand boys. Even the stillness of the Sabbath is taken away from us. First the morning editions of the Sunday papers are cried by boys who pervade the quietest streets, and make up by the shrillness of their screams for the smallness of their trade. If the great weekday morning newspapers can be distributed in silence, why should the Sunday papers be made an occasion for bawling? Then after the newspaper boys come the brass bands and discordant singing of the Salvation Army, while the parks are made vociferous in the afternoon by the tireless exponents of every sect in religion and every fad in politics and sociology. Finally, as the day closes, times must be very dull if a "great battle," or "shocking murder" or "alarming news from the East" does not afford occasion for fresh battalions of sturdy youths with lungs of brass to go bawling past our doors. The nuisance, or if that word has now too legal a flavour, the annoyance suffered by rich and poor through unnecessary noises adds seriously to the strain of life in great cities, and the increasing proportion of the population which lives in cities adds to the weight of the grievance. We are therefore glad to see signs of returning life in the Society for the Suppression of Street Nuisances. The decision of the Court of Queen's Bench declaring the validity of the Kent by-law ought to be a great encouragement to this too modest Society. A great deal, as is truly said in a circular before us, might be done by quickening public opinion and stimulating the action of the authorities. It is absurd to pretend that this is a question of rich against poor. The rich, even if we assume that they are cursed with more sensitive nerves, and therefore suffer more from the same amount of noise than the poor, have to endure a less quantity of noise than the poor. Moreover, it is not true as a general proposition that the rich are more sensitive to noise than the poor. Such sensitiveness is largely a matter of individual peculiarity, and sensitive persons are to be found in all social grades. The Society to which we have referred suggests that in the first place an attempt should be made to suppress street cries on Sundays, and those who agree with this modest proposal should communicate with the Secretary, Mr. H. J. Johnson, 10, Basinghall Street, E.C.

STREET FILTH.

At the risk of incurring the wrath of the medical officers of health of at least some districts of the metropolis and some of our great towns, we would venture to say that at this season of the year the need for a better scavenging of the streets is very forcibly brought to the notice of dwellers in towns by appeals to the nostrils and to the respiratory organs which cannot be ignored. One of the resolutions adopted at the recent International Congress of Hygiene and Demography, on the recommendation of an international committee which commenced the consideration of the subject nearly four years ago, is that "the paving of streets should be smooth, and as far as practicable impervious, to facilitate cleansing, and also to prevent contamination of the subsoil." Apart from the question of the contamination of the subsoil an impervious roadway is really rather worse than a porous unless it be kept clean. Not the most optimistic can pretend that this condition is fulfilled in the most important thoroughfares in London. If we had tramcars and omnibuses, cabs and vans driven by steam or electricity, matters might be better, but, as it is, in fine weather we are constantly inhaling finely pulverised horse-dung. So far as we are aware nobody has yet pretended that this is a useful application to the respiratory membranes, and Dr. Klein has recently published some observations which appear to point to one very distinct danger. In previous investigations he had shown that a particular bacillus—bacillus enteritidis sporogenes—is responsible for a form of diarrhœa which is liable to prevail in epidemics and to cause serious danger to life. He has found this bacillus in the sewage of London and other large towns in England, in sewage effluent, and in

many rivers, but he has now found its spores in exceptionally large numbers in horsedung. It is, therefore, not surprising to learn that the dust of the streets, where so many horses are used for draught, is also richly provided with the spores of this bacillus. It grows well in milk, and, as we have said, there can be little doubt that it is accountable for many cases of severe diarrhœa, a disease which is responsible for the deaths of a far larger number of children in most large towns than any other single scourge of humanity.

AN UNSUSPECTED SOURCE OF DIPHTHERIA INFECTION.

Où la vertu va-t-elle se nicher? asked the sentimental French philosopher. We are not aware that microbes have anything to do with virtue, and at present the only bond of relationship between virtue and microbes is the faculty which both have in common of hiding themselves in the most unlikely places. The bacillus in one form or another has been found in the air we breathe, the food we eat, the liquids—even the "mineral waters"—we drink, and the raiment wherewith we are clothed; it has been found in bibles and prayerbooks, and in the dust of churches, but till lately it has not been found in the holy water font, possibly because nobody thought of looking for it there. But to the bacteriologist, as to the sapper, nothing is sacred, and Professor L. Vincenzi has proved that if the devil fears holy water the microbe does not. He recently examined the holy water from one of the most frequented churches of Sassari, and found in it a large number of microbes—staphylococci, streptococci, coli bacilli, Loeffler's bacillus, and others. He cultivated the diphtheria microbe, and obtained from his specimens absolutely characteristic pure cultures. He further proved the virulence of the bacillus by experimental injections into animals. Guinea-pigs weighing more than 400 grammes died quickly after the inoculation of very small doses, and on *post-mortem* examination he found the characteristic lesions of experimental diphtherial infection (œdema at the point of inoculation, clear exudation in the pleural cavities, and multiple hæmorrhagic foci in the suprarenal capsules). At the time these investigations were made there were four cases of diphtheria, one of which proved fatal, in Sassari. As holy water is not generally used as drink even by those who believe most in its mystic virtues, the danger of infection being conveyed by it would appear to be so slight as to be outside the sphere of practical hygiene. It seems, however, that in certain places some devout worshippers are in the habit of applying the fingers moistened with holy water to their lips. Dr. Vincenzi's investigations should certainly lead to the discontinuance of this custom.

BORIC ACID IN FOOD.

Birmingham seems to be making a determined effort to check the indiscriminate addition of boracic acid to foods. A tradesman of that city was fined recently for selling butter containing 70 grains of boric acid to the pound. One per cent. of a deliberately added ingredient is of course a considerable adulteration. We understand from a paragraph in the *Birmingham Daily Mail* that Dr. Hill, the veteran health officer and analyst of that city, stated in evidence that boracic acid caused vomiting, diarrhœa, hæmorrhage, impaired digestion; that it affected the heart, and produced such skin diseases as eczema. Even repeated 5-grain doses—and an ounce of the butter in question would contain nearly that quantity—were, Dr. Hill said, capable of producing these symptoms. Dr. A. P. Luff supported Dr. Hill, and Dr. Vachell, of Cardiff, said that in prescribing this drug medicinally, he generally found that when exhibited over a period of two or three weeks it produced eczematous skin affections. We wish all success to Birmingham in its crusade against this growing form of adulteration. How far the occasional addition of a drug possessed of antiseptic properties may be useful—say for the very few weeks in the year when our climate makes it difficult to preserve milk stuffs—is one thing; the habitual addition of a powerful preservative during the winter months is quite another. In no case should any such chemical be allowed to be added to an article of food unless its presence and nature be declared to the purchaser. Green peas coloured by treatment with copper sulphate, milk, butter, cream sterilised by boric acid, if they are to be sold at all, should be sold for what they really are—foods adulterated with these mineral drugs. The addition of arnotto to weakened milk or of copper to bottled peas is clearly intended, by deceiving the eye, to conceal the inferior quality of the article supplied. The addition of boracic acid to milk and butter is to allow the vendor to handle these articles under conditions to which undrugged butter and undrugged milk would manifest their resentment by signs of incipient putrefaction. A correspondent, who recently called the attention of the President of the Local Government Board to a statement made by Major Rasch, M.P., to the effect that thousands of gallons of milk doctored with boracic acid were imported and sold at the same price as English produce, has received a communication in which Mr. Chaplin reiterates his intention to take steps for the examination of milk at ports of entry with the view of samples being analysed both chemically and bacteriologically. If milk is to allowed to be imported from foreign countries—a course the expediency of which is very much open to question unless it can be shown that special precautions are taken to safeguard the sources of supply—then advantage should be taken of the modern appliances by which food stuffs can now be preserved almost indefinitely from putrefactive changes. The public ought to insist on having fresh milk and fresh butter so preserved instead of submitting to have themselves drugged at the option and caprice of a butter factor.

THE JUDICIAL OATH.

While the uncleanly and even dangerous practice of "kissing the book" still continues to be the form of oath in England, Wales, and Ireland, the more cleanly and reverent form of swearing with the uplifted hand would appear to be spreading in the United States of America. Early in 1896 a letter appeared in the Baltimore *Sun*, from Mr. Benjamin P. Moore, in which he called attention to the movement in this country against "kissing the book." In a communication recently published, Mr. Moore expresses his belief that this letter was chiefly instrumental in the enactment of the law by the Legislature of the State two years ago, substituting the laying of the hand upon the Bible for kissing the same in judicial oaths. The Legislature of 1898, recently adjourned, has enacted a more radical measure, of which the substance is as follows: (1) The form of judicial and all other oaths to be taken or administered in this State shall be as follows: "In the presence of Almighty God I do solemnly promise (or declare)," etc., and it shall not be lawful to add to any oath the words "so help me God," or any imprecatory words whatever. (2) The manner of administering oaths shall be by requiring the person making the same to hold up his hand in token of his recognition of the solemnity of the act except in those cases wherein this form is not practicable, or when it shall appear that some other mode is more binding upon the conscience of the sworn. "Thus," Mr. Moore adds, "a ceremony which has been practised in the courts of England and of this country from the earliest times, so profane and idolatrous in its origin and so obscure in its meaning, has been changed in our State for one of far more reverent character, and conforming in all respects to the requirements of an oath according to the modern interpretation thereof." Some exception must be taken to this, since Mr. Francis A. Stringer, our highest authority on oath administration, has shown conclusively that the oath with uplifted hand is the most ancient of all, the oath of the earliest times. Kissing the book is comparatively modern, dating only from the last

century. It would be unprofitable to inquire how it ever began to be practised, Sir G. Sherston Baker, Bart., the learned Recorder of Barnstaple, having expressed his conviction that there is no legal requirement for it existing in any Act of Parliament. What is more profitable is to keep impressing on the members of the medical profession, and through them on the public, most wearisome task though it be, the dangers of the practice. So far the battle has been fought by a very limited number of medical practitioners aided by the medical and daily press. Has not the time come when they should receive more powerful assistance?

ANTHRAX AT THE PARCELS POST OFFICE.

Cases of anthrax occur now and again under rather peculiar circumstances. A man, aged 53 years, employed at the Parcels Post Depôt, Clerkenwell, has recently succumbed to the disease. For nine years he had been engaged in the blacksmith's shop of the postal department, his duty being to repair the wooden packages and baskets used in the foreign service. These repairs included the fixing of hinges and fastenings of strips of the skins of animals. Mr. R. P. Williams, who had treated the patient in the Royal Free Hospital, stated in his evidence at the coroner's court that the deceased was admitted suffering from anthrax, that there was a sore on the back of the neck, surrounded by an extensive zone of inflammation; and that this sore had primarily been a pimple, which the deceased admitted he had scratched with his finger after having worked among some raw hides. It appears that the hides which the employee had been in the habit of using were bought untanned, and were simply cut and soaked in water. Nine years ago a case of blood poisoning, almost similar to the one recorded, occurred in the postal department. It may be that there is some special advantage in using untanned hides for Post Office purposes. If so, there should be no difficulty in obtaining skins that have been rendered so thoroughly antiseptic that a recurrence of this form of blood poisoning would be impossible. It was stated by a representative from the Home Office at the inquiry that the authorities would frame and enforce a code of special rules for hide sorting and working.

MEDICAL WITNESSES AND THEIR FEES.

An inquest was held last Saturday at Lowestoft which called attention very emphatically to the injustice inflicted by the present state of the law on the medical officers of cottage hospitals. The case was one in which a man met his death in a quarrel, and resulted in a verdict of manslaughter. Before giving his evidence as to the cause of death, Mr. H. Bournes Walker made a strong and proper protest on behalf of himself and his colleagues at the Lowestoft Hospital, against the law which compelled him to attend and give evidence without fee or reward. In this instance the medical testimony, which was most important, not only covered the symptoms observed during life, but also described the conditions discovered by careful investigation after death. The inquest lasted some three and a half hours, so that we are justified in assuming that the medical witness spent over the *post-mortem* examination and the inquest the greater part of a working day. For this the Coroner could allow him no remuneration whatever. It is true he expressed in strong terms his sympathy with Mr. Walker in being placed in this position, because he happened to give unpaid service to the local hospital, and he said the law was wrong. He went further, and said that he had brought the matter under the notice of the local M.P. (Mr. H. S. Foster), and before the Council of the Coroners' Society. From this latter source he obtained the unanimous opinion that hardship was done to medical men by the existing state of the law; but the Coroners' Society appeared unwilling to take steps themselves to remedy the evil, and inclined rather to leave it to the Council of the British Medical Association. We think the county coroner (Mr. C. W. Chaston) has acted very properly in this matter, and we hope that he will still further press upon his fellow coroners the importance of making representation to the Home Secretary in favour of an amendment of the law. The assistance of the Association will not be wanting, but in a question like this the most effective help can be given from non-medical quarters, and we are justified in appealing for such aid, because the serious hardship to which the profession is exposed must sooner or later prejudicially affect the public interest.

DEATH IN THE MATCH FACTORY.

There was considerable expression of adverse public opinion a few years ago when the painful character of the malady endured by match makers and the fact that several of the sufferers had died became generally known. The attention of the Government was directed to these circumstances, and as a consequence the Home Secretary, Mr. Matthews, drafted new rules, but as these were soon found to be insufficient, another inquiry was instituted into the manufacture of matches by yellow phosphorus. Within the last few weeks public feeling has again been aroused upon this important question. Recently a match dipper in Bryant and May's, aged 22 years, died after a lingering illness, during the course of which a swelling appeared on the right jaw which had to be lanced, the discharge being extremely offensive. Subsequently an abscess, which had to be opened, appeared in the chest; the patient had rigors, became delirious, and died. By the medical officer of the works the cause of death was certified as cellulitis. The registrar reported the circumstances to the coroner, and in due course Mr. W. E. Baxter held an inquiry at Bow. A *post-mortem* examination was made by an independent medical witness, and as extensive necrosis of the lower jaw was found, this circumstance, along with the story of the employment of the deceased and the medical opinion that death was due to exhaustion from blood-poisoning set up by necrosis of the jaw, led the jury to return the verdict that death was due to phosphorus poisoning. The case formed the subject of questions in the House of Commons by Sir Charles Dilke and Mr. Pickersgill as to whether the time had not come for prohibiting the manufacture and importation of matches requiring the employment of the more dangerous form of phosphorus. To this Sir Matthew White Ridley returned an answer alike cautious and straightforward. He admitted that the case had not been reported, either by the visiting doctor or the firm, and that there had therefore been a contravention of the 29th Section of the Act of 1895, which requires every case in which there are symptoms of necrosis of the jaw in a match maker to be reported. Promising that further inquiries would be made, the Home Secretary stated that, as no other cases of phosphorus poisoning had been notified since the Act of 1895 came into operation, the evidence did not seem to him at present sufficient to justify the unconditional prohibition of yellow phosphorus. Scarcely had these words fallen from the lips of the Home Secretary than there were published in the newspapers the particulars of the painful illness of another match dipper which had also not been reported. Doubtless there may be a difficulty at times in arriving at a proper diagnosis in these cases, but as the Act provides for such it is safer to conform to the law by notifying them. There are good grounds for the opinion that the only way to stop phosphorus poisoning in match works is absolutely to prohibit the use of yellow phosphorus. From the paragraphs which have appeared in the daily papers it might be assumed that on the Continent the use of this dangerous substance is already prohibited. We are told that in the French match factories the men and women workers revolted against the shocking conditions of labour to which they were subjected under this State monopoly, and also against the use of yellow phosphorus, that concessions were wrung from the State, and that yellow phosphorus was abolished. A correspondent who has given special attention to the subject, however, writes as follows:

"I am in a position to contradict to some extent the sweeping character of this statement. French matches, to begin with, are notoriously bad compared with English. In one of the State factories I recently saw matches being made from both forms of phosphorus. It is true that it was the minimum of the more dangerous kind of phosphorus that was used, sometimes not more than 0.5 per cent. in the composition. Still, there it was, and it had to be mixed and matches had to be dipped therein. I have visited match factories in this country, in Sweden and in Belgium, in all of which the yellow phosphorus was used, and apparently very little risk was being run owing to the excellent system of ventilation and the means employed for removing the phosphorus fumes. A strong down draught, for example, on the off-side of the dipper's plate completely prevents the odour rising. This and similar methods adopted in other parts of the factory greatly minimise the risks to health of the workers." But, after all, some risk remains, and as the employment of amorphous phosphorus is unattended by risk, it would be better for all could it supplant its more dangerous rival. Dr. Heinrich Haeckel, of Jena University, after considerable experience, throws in the weight of his authority in favour of the total abolition of matches made with yellow phosphorus: so, too, do the Swiss inspectors of factories. Economic considerations, however, still prevail, and so long as matches continue to be made in our own country as they are to-day, we repeat that it is a duty incumbent upon medical men to report to the Home Office all cases of necrosis of the jaw occurring in people employed in match factories. We would remind members of the medical profession that they are required by the Factory and Workshop Act, 1895, to report cases of plumbism, arsenic, phosphorus, and anthrax poisoning to the Chief Inspector of Factories. For not complying with the requirements of the law, the medical officer to Bryant and May's has been all but prosecuted. The Home Secretary has intimated that he intends to proceed against the firm, but that, recognising the difficulty of making a diagnosis in the case of the match dipper, it is not his intention to prosecute the doctor. Clearly upon all medical men there rests a very important duty in regard to the illness of workpeople engaged in the dangerous trades that have been scheduled. The reporting of a case of phosphorus necrosis by a medical man to the manufacturer is not the fulfilment of the requirements of the Act. In future this will be dealt with as an evasion of the law, if at the same time notification is not made to the Home Office. The case is the first of a series that have not been reported to the authorities. The details of five other have been published, and there are still more to follow. In answer to questions raised in the House of Commons the Home Secretary stated that a rigorous inquiry will be made into all the circumstances attending the unreported cases of "phossy jaw," and as to why they were not brought under his notice.

THE PRISONS BILL IN COMMITTEE.

The Prisons Bill is undergoing some salutary changes in Committee. We commented last week on the gain of a Medical Commissionership as an important victory for medicine, and one that is likely to be attended with much benefit to the Prisons Department. The desirability of creating such an office was pointed out in these pages years ago, and it was recognised in one of the original recommendations of Mr. Herbert Gladstone's Committee, which we think the Prisons Board very unwisely resisted. In a Parliamentary paper issued by them in July, 1895, they admitted that the medical questions arising in connection with administration were "many and important," but they preferred to "keep the medical authority subordinate to, and not co-ordinate with, the Board." We pointed out at the time that the new scheme of prison reform suggested by the Departmental Committee would afford ample work of an administrative character for a Medical Commissioner with an inspector to assist him, and we are glad to find that a large majority of the Standing Committee recognise the necessity of a responsible medical official armed with authority. Hitherto the medical inspector has been merely an adviser to the Board, destitute of the power and authority which alone could give proper weight to his views more especially with the Treasury. In consequence many of his recommendations which involved expenditure were ignored. The views we expressed recently in regard to cranks and treadwheels as instruments for enforcing hard labour are also adopted by the Committee, so that the doom of these out-of-date contrivances is on a fair way to be sealed. Further, plank beds are to be abolished or minimised, and the silent system to be less rigorously enforced. Sir Matthew White Ridley has undertaken that the new code of rules shall be laid before the Committee after Whitsuntide, and the vexed question of diet is to be referred by him to a small committee of experts for report before he decides finally on the concessions to be allowed. This is a very prudent course to adopt, as the subject is one which is suited for calmer consideration than it met with in the discussion in Committee.

THE HOSPITALS ASSOCIATION.

Not many years ago, if a man was injured in the streets of London he was promptly bundled into a cab, and conveyed by the first policeman who happened to be on the spot to the nearest hospital, where he often arrived suffering from complications due to the transit. To-day, however, matters are managed better, and the patient, having in many cases received first aid, is transported with skill in an ambulance. Much of the credit of this reform is due to the Hospitals Association. On May 14th Mr. Cosmo Bonsor, M.P., took the chair at the annual meeting of this Association, and Sir Henry Burdett, in seconding the adoption of the report, drew special attention to the work of the street ambulance branch. During the past year fifty-seven new street ambulance stations were opened, and the number of times they were employed was 2,086, showing a large increase both in number of stations and of cases attended over those of any previous year.

CREMATION AND URN BURIAL.

In a paper read before the Pocklington and Derwent District Agricultural Societies, after briefly outlining the history and archeology of the practice of cremation, Mr. Alex. Leadman, F.S.A., observed that at the present time crematoria are established in many Continental countries and in America. In England the first was opened at Woking, and Glasgow, Manchester, and Liverpool have followed suit. He pointed out that it was undoubtedly legal in England, and that any doubt lingering on this point was set at rest by the case of Dr. Price, who cremated his deceased son on the summit of a hill in Caerlaw Fields in Wales with full Druidical rites, and was in consequence prosecuted at the Cardiff Assizes for an illegal act. Mr. Justice Stephens stopped the case on the ground that the practice of cremation was not contrary to law, which decision was later upheld by Lord Selborne. To any objection on the part of the clergy Mr. Leadman replies with the witty answer given by the late Lord Shaftesbury, "What would become of the blessed martyrs?" Mr. Leadman argued that the present method of burial was open to many objections. In England and Wales there were some 600,000 bodies to bury every year, and, granting that each had a separate grave, this meant, he maintained, the withdrawal from cultivation of 600 acres of land, while cemeteries were not only a continual expense but a substantial source of danger to the public health. Mr. Leadman drew a contrast between the two practices, and said that, even admitting the necessity for burial, many localities were quite unsuited by reason of the character of the soil for the practice. For example, graves in clay or marl became water-logged in wet weather, and in times of drought the ground was liable to crack and fissure. With regard to the objection that by adopting cremation much crime would

remain undetected, Mr. Leadman pointed out that even the present system left many loopholes for illegal acts. The number of uncertified deaths in England and Wales alone was no less than 11,000 annually. Cremation, M. Leadman argued, did not favour crime, but, if practised under the stringent rules of the Cremation Society, would give very great facilities for its detection. On the question of expense, the recent offer of the Scottish Burial Reform and Cremation Society to cremate the remains of persons dying in the Glasgow Poorhouse at the rate of 8s. for an adult and 4s. for each child under 12 years of age is instructive. A committee appointed to report on the matter advised: (1) That the parish council adopt cremation in lieu of earth burial in the disposal of those bodies with which it has to deal. (2) That adequate precautions be taken beforehand (as by the present rules of the Cremation Society) against its being carried out where any circumstances existed which might render exhumation of the body necessary. (3) That no application of the practice be made in any case where objection thereto has been intimated by the individual or by his or her responsible relatives. This report has been rejected by the parish council.

DEATH FROM NITRIC ACID FUMES.

In the neighbourhood of Birmingham there recently occurred a death under rather unusual circumstances. A man who was employed as an annealer and dipper in a metal works, and whose duty it was to dip copper cups into a solution of nitric acid and water, inhaled rather freely the acid fumes and was immediately overpowered. After exposure to the fresh air he recovered, and shortly afterwards was able to proceed with his work. Re-exposure to the fumes brought on a fresh attack of difficulty of breathing, which obliged him to retire. The same evening he died from acute congestion of the lungs. Strong nitrous and nitric acid fumes have a very deleterious effect upon the lining membrane of bronchi and lungs. It is not so long since several men belonging to a fire brigade succumbed in a similar manner to the workman whose death has been recorded. A fire having broken out in a large chemical store, attempts were made to extinguish it; but when the firemen entered the store they were so overcome by the nitrous and nitric acid fumes that they were immediately incapacitated. A peculiar form of congestion of the lung, almost akin to a corrosion, developed in each of the firemen, which resisted treatment, death supervening in the course of a few days.

DENTAL PRACTICE IN ITALY.

Although at present it is lawful for foreign medical practitioners in Italy to minister to people of their own nationality, they are forbidden under pain of prosecution and fine to so much as administer first aid to an Italian in a street accident. As regards the practice of dentistry the regulations are even more stringent. By the law of 1888 an examination without a prescribed curriculum was held for those wishing to practise as dentists. This was practically valueless, and was abolished probably as the result of the action of the Italian Odontological Society, which lodged with the authorities a protest against the irregularities surrounding the granting of this diploma. In 1891 a new Act came into force making it compulsory for those practising as dentists to have passed the examination for the *laurea* of one of the Italian universities. This is not the place to discuss whether it would have been better to have established a special dental curriculum and diploma, as has been done in Great Britain; but, following the decree, some establishments should have been found in which the science and art of dentistry might be learned. This, however, is not the case; the theoretical lectures (*corso libero*) which are delivered at several of the universities, cannot in any sense be said to fulfil the requirement. The practical result has been that Italian dentists have had to seek such instruction in other countries; we believe we are right in saying that several have come to England for the purpose, but have been content with six months' instruction, while the Dental Hospital course in this country for those who have taken the Conjoint diploma extends over two years. A dentist who had practised in one Italian city since 1869, and who possessed the English licence in dental surgery, and was duly registered on the books of the municipality, was prosecuted for illegal practice. His case was brought before the Prætor and dismissed. The public prosecutor then appealed to the tribunal, and the former verdict was supported. The case was subsequently taken before the Court of Appeal, and finally to the Supreme Court of Cassation in Rome, with the result that the first verdict was maintained. Those who commenced practice before 1888 cannot be disturbed. As regards the future, however, there seems to be no doubt that only those possessing a national medical degree will be permitted to practise dentistry in Italy; it is imperative, therefore, that some teaching centres shall be established where dental surgery shall be practically taught. It is possible that competition may ensure doctors who wish to practise dentistry securing the education necessary to do so, but that in no sense relieves the nation of its responsibility. Dental hospitals, or large and well-regulated dental departments of general hospitals, are urgently and instantly demanded.

THE NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

On May 12th, many of those interested in the welfare of the epileptic colony at Chalfont St. Peter assembled to witness the opening of Victoria House, a new home for men, by the Duchess of Marlborough, and the laying of a memorial stone of two other new stones, one for boys and one for girls. All these are the gift of Mr. Passmore Edwards. The colony, which has been in existence only some three years, has already proved a great success. The principles of the management of epileptics in colonies are the removal of the patients from the bad hygienic surroundings of towns, regular employment under competent supervision, and avoidance of excitement by a regular life and abundance of simple food. Under a system based on these principles it has been found that the inmates of the Chalfont colony have benefited to a marked extent. The frequency of the fits diminishes, their severity becomes less, and there is a change for the better both in the mental and physical condition. Another element in the system of treatment adopted in these homes which probably has contributed largely to the success already gained is the adoption of the principle of small homes confined to one class of case. None but epileptics are admitted, and the spectacle common in asylums of curable and incurable cases indiscriminately mixing in large rooms is not to be seen. These homes are capable of being made of great utility, but much still remains to be done. A resident medical officer is urgently needed, not only for the benefit of the inmates, but in order that the experience may be collated and made known to the medical world. The honorary secretary to the honorary medical staff is Dr. Colman, 22, Wimpole Street, W.

THE TREATMENT OF LOCOMOTOR ATAXIA.

At the National Hospital for the Paralysed and Epileptic, Queen Square, on May 16th, Dr. Frenkel, of Heiden in Switzerland, demonstrated a new method of treating locomotor ataxia by systematised exercises. The basis of his plan is the well-known fact that in locomotor ataxia the muscular tonicity, or that elasticity in virtue of which a muscle at rest is not completely relaxed, is greatly reduced. He showed that in tabetic patients the limbs could be passively moved into positions commonly supposed to be peculiar to acrobats, and without either pain or any appreciable overstretching of the antagonist muscles. For example, in a recumbent tabetic patient the fully-extended lower limb was easily and painlessly brought to an acute angle with the trunk, a movement that caused in a healthy control person not only pain, but also excessive

tightening of the muscles of the back of the thigh and bending of the knee. The classical physiological experiment of "the headless frog" appears to throw some light on these phenomena, demonstrating as it does the intimate connection between the sensory nerves and the muscles, for on stimulating the skin of the decapitated animal with blotting paper dipped in vinegar, quasi-purposive movements result. The converse of this—that division of the sensory nerve roots produces not only loss of muscle tone but also actual paralysis—has been proved by Claude Bernard, Sherrington, Mott, Contejean, and others. The new method of treatment consists essentially in developing by carefully-devised movements those muscles whose tone is lowered. Causing a recumbent patient to bring his heel, by short excursions, towards the trunk, moving it about 2 inches at a time, and then as slowly moving it back, may be mentioned as an example of many different movements. For the hands similar but more delicate exercises are employed. Dr. Frenkel claims that in this way the jerky movement of the ataxic is transformed into the approximately even movement of a healthy person, and he appears to think that it is due to an effect not so much on the muscles which normally produce the movement in question, as on those which antagonise or steady them. Whether this method will become established as a therapeutic measure remains to be seen, but it appears at least to have in it some elements of promise.

SEPTIC INFECTION OF BULLET WOUNDS.

FROM the point of view of treatment, bullet wounds may be arranged in three divisions: those which contain no infective germs; those which contain germs in very small quantity or of slight virulency; and those which contain a sufficient quantity of actively pathogenic germs to set up serious mischief. In most instances the injury belongs to the second category, but as the surgeon cannot determine this, and it is necessary to prevent secondary infection, endeavour should always be made to disinfect the wound. Such treatment, however, in cases of infection of a gunshot wound by a virulent organism, is not very promising, as in observations made in gunshot wounds of rabbits infected by staphylococcus aureus and streptococcus capsulatus death resulted, in spite of the energetic application of the actual cautery, and of carbolic acid and tincture of iodine. Tavel[1] has published the results of some experiments made by Müller in the Bacteriological Institute at Berne, with the objects of making out how infection may be originated in a wound caused by a rifle bullet, and whether infective organisms carried on a missile can be destroyed during its discharge by heating due to great velocity and friction, or be rubbed off in the penetration of clothing material which is practically sterile. The microbe made use of in these experiments was the extremely virulent streptococcus of Marmorek, which was applied in some instances to the tip or the cylindrical portion of the bullet, in others to the inside of the rifle barrel, and in others, again, to clothing over the seat of injury. In all the experiments, which were made on rabbits, fatal infection of the wounds was set up. It is concluded from these researches: (1) That a gunshot wound may be infected by pathogenic germs transmitted either from the bullet itself or from the barrel of the rifle, or from perforated clothing; (2) that such infection is not prevented or influenced in any way by a great initial velocity or heating of the missile; and (3) that after the wound has been inflicted, infective mischief, when once established, cannot be arrested either by the application of iodine, or drainage, or cauterisation of the track of the bullet. The infective microbes, it is held, are at the moment of the injury driven beyond the wound and into the surrounding tissues. This paper is followed by another on the same subject, in which Koller shows by the results of experiments carried on, as were those of Müller, in the Bacteriological Institute at Berne, the extreme difficulty, if not impossibility, of dealing effectually with infected gunshot wounds. Koller agrees with the former investigator in the conclusion that neither excessive heating of the rifle barrel nor great velocity of the bullet can destroy or remove any infective germs. By these experiments, in which not one only but several forms of infective microbe were used, it was shown, the author states, that for infection to occur in a gunshot wound, the pathogenic germs must possess a high degree of virulency. With regard to the assumed failure of disinfectant treatment in cases of gunshot wound, it is pointed out that there is a marked distinction between this class of injury and incised wounds. In the former, the liability to infection is much greater on account of the more serious and more extensive wounding of the tissues. Karlinski[2] states, in a paper on Infection of Gunshot wounds by Particles of Intruded Clothing, that a wound caused by a carefully disinfected bullet invariably becomes infected if such bullet has passed through dirty or artificially infected clothing. Such mischief, which cannot be prevented by cauterisation or the injection of sublimate solution, is indicated by the formation of abscesses around the track of the bullet, and subsequently by general infection. The disseminated centres of suppuration around the original wound are attributed to the forcible intrusion into the surrounding tissues of particles of clothing, which are carried far beyond the influence of any disinfecting agent applied to the actual seat of injury.

[1] *Deut. Zeit. f. Chir.*, Bd. xlvii, Hft. 2 u. 3.

SANITATION AND LONG LIFE.

AT a meeting of the Yorkshire Branch of the Sanitary Inspectors' Association held on September 14th in the Leeds Town Hall, Dr. Spottiswoode Cameron gave an address on the Economic Measure of Sanitary Progress in Terms of Lives Lengthened during the Years of Robust Manhood. After dealing with various considerations which must be borne in mind in dealing with the birth-rate and death-rate of the population, and showing that the average acreage per head of the population in England and Wales had shrunk from two and a quarter acres in the decade 1841-45 to one and a third acre in the decade 1881-90, he pointed out that the death-rate at old ages was growing gradually larger. This was satisfactory, since it proved that more people became old than formerly. With regard to consumption, he pointed out that since 1851 both men and women were dying less frequently from consumption, but that the women's chances of escaping had become greater than those of men, a reversal of the relations which existed in 1851. It was an interesting evidence of the improvement which had been brought about in the homes of the people that though the death-rate of both sexes from consumption had increased, yet it was the stay-at-home women who had been most beneficially affected. Notwithstanding the tendency to huddle into the large towns, there had been a tremendous gain in regard to the important work-producing years of life, and men lived longer than they used to do, notwithstanding the fact that they now exchanged the pure air and quiet existence of the country for the feverish life and foul air of the town to so much greater an extent than before.

MEDICAL WAR NEWS.

SURGEON-GENERAL STERNBERG, of the U.S. Army, is negotiating for a large merchant vessel to be used as a floating army hospital, to be stationed in the harbour selected as the base of supplies for the army operating against Cuba. The vessel is to be equipped with 500 beds and many of the contrivances now being installed in the naval ambulance ship *Solace*. Unlike the *Solace*, however, she will generally be stationary, except when it may be necessary to transport the sick and wounded to American ports. The Fall River Line has offered its steamer *Providence* for this purpose. It has been asserted that the Navy Department would not accept the services of women as nurses. In contradiction of this statement it is announced that Surgeon-General Van Reypen

[2] *Cent. f. Bakt. u. Parasit.*, Bd. xxii., Nos. 12-15.

has accepted the offer of the services of 20 nurses made by the Graduate Nurses' Protective Association, a regularly incorporated body of the State of New York. It is understood that these nurses will be assigned to duty on board the hospital steamer *Creole*, renamed the *Solace*, recently purchased from the Cromwell Line. The uniform of these nurses will consist of a navy blue India silk waist and skirt, with a white apron.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Mr. Mitchell Banks has decided not to offer himself for re-election on July 7th, whilst Mr. Langton and Mr. Henry Morris will again be candidates. We publish in another column our usual list of the members of Council, including full notes of the year of election, of substitutes, and of the representation of the medical schools and the provinces.

THE UNIVERSITY OF LONDON QUESTION.

The vacant seat on the Senate of the University will be filled up by an election now in progress, and the issue will be declared at a meeting of Convocation to be held next Tuesday afternoon. The candidates are Dr. J. B. Benson and Mr. J. Fletcher Moulton, Q.C., M.P. The former is in favour of the London University Commission Bill now before the House of Commons, whilst the latter is its determined opponent. When the subject has during the last two or three years been discussed and come to a vote in meetings of Convocation, it has invariably received the approval of a majority of graduates present: but elections to the Senate are decided by means of voting papers that may be sent through the post, and on the two last occasions Dr. T. B. Napier and Mr. Walter Rivington, who championed the opponents of the University Bill, were returned by respectable majorities. It is probable that the result will be similar next week, as the nomination of Mr. Moulton, according to the agenda paper, has been signed by 1,315 graduates, whilst the number of Dr. Benson's nominators is 538. If this decision be confirmed at the election, it will indicate that a majority of graduates are hostile to the Government proposals. These opponents, it is stated, are chiefly provincial B.As.; at any rate, their attitude to the Bill is something with which its promoters must reckon. The election has formed the occasion for the issue of a large amount of literature anent the Bill. Much of it deals in personalities; where such is not the case, it reiterates points which have been for years past discussed under various heads in the columns of the British Medical Journal.

BARGAINING FOR PURE MILK.

The mere word "contract" is so associated with the idea of low price and inferior quality, that it is refreshing to find a Board like the Court of Governors of the Northampton General Infirmary, under the presidency of Earl Spencer, inserting in their specifications for milk tenders certain important safeguards as to the purity of the article to be supplied. In addition to requiring, as some other hospital authorities have done, a certain standard of strength—3.5 per cent. of fat, and 8.5 per cent. of solids not fat—in addition to requiring the ticketing, labelling, and locking of each churn of milk delivered to them: "no milk is to be sent from any cow that is not in good health, or that is under physic." The contractor has also to undertake that any such cow shall be removed from the herd, and all such cases of ill-health notified to the veterinary inspector of the Board; that no cow shall be allowed to remain in the herd if it shows any sign of tuberculosis, and that in cases of doubt the tuberculin test will be applied. He also undertakes to notify the governors when any addition is made to the herd, not to send them the milk of any cow not in his possession twenty-four hours, nor the milk of any newly-calved cow, till such milk does not curdle on being boiled. There are many other necessary restrictions and conditions which it would take too much space to enumerate, but an appendix to the contract form requires that the contracts shall conform to certain modifications of the clauses of the London County Council Regulations as to cowsheds and dairies then and there enumerated. These include, *inter alia*, for each animal in a separate stall a superficial area of at least 8 ft. by 4 ft. 6 in., for two animals in a stall 8 feet by 7, with an air space of at least 600 cubic feet per head, where there are satisfactory means of ventilation, and in other cases of 800 cubic feet, in each case excluding height above 16 feet in estimation of air space. If large customers like infirmaries, workhouses, and hotels would insist upon conditions of this sort, and if individual families would form themselves into a syndicate for the same purpose, and enforce their requirements by adequate inspection, a great move might be made in the direction of supplying the public with pure, unadulterated, tubercle-free milk.

THE NOTIFICATION OF TUBERCULOSIS.

Reference was made in the British Medical Journal of March 5th to the admirable report of Mr. William Brown, Medical Officer of Health for Carlisle, in which, among other things, he strongly recommended the addition of phthisis, tuberculous meningitis, and tabes mesenterica to the list of notifiable diseases. This recommendation was adopted by the Town Council, which, moreover, agreed to endeavour to induce the County Council to take common action with regard to tuberculosis. We understand that in this determination the Town Council of Carlisle was considerably influenced by the important results in lessening the ravages of tuberculous disease in New York set forth by Dr. Hermann M. Biggs's address on Preventive Medicine in the City of New York, published in the British Medical Journal of September 11th, 1898. Application was in due course made to the Local Government Board to have the affections specified above placed upon the list of notifiable diseases under the Notification Act of 1889. A few days ago the surveyor announced to the Health Committee that a reply had been received from the Local Government Board as follows:—"The Board are not prepared to approve of the resolution on the subject passed by the Town Council." That was all the letter contained, and no reason was given in explanation of the inability of the Local Government Board to allow the suggestion of the medical officer to be carried out. There are doubtless difficulties in the way of the step proposed by the Town Council of Carlisle being taken at once; but a body which had displayed so progressive a spirit in a matter of the greatest importance to the public health surely deserved something better than a curt reply, which might well be taken for an official snub. Perhaps the Local Government Board deems it prudent to follow the advice given to a newly-appointed judge whose knowledge of law was believed to be somewhat scanty—to give his decisions without giving his reasons.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

The annual dinner of the Pharmaceutical Society of Great Britain took place at the Hotel Cecil, London, on the evening of May 17th. The chair was taken by the President, Mr. Walter Hills, who, in proposing the the toast of "The Houses of Parliament," referred to the precarious condition of the Pharmacy Acts Amendment Bill in the House of Commons, and expressed the acknowledgment of the Society to the Hon. W. F. D. Smith, M.P., who had taken charge of the Bill. Mr. Smith, in responding to the toast, dwelt on the obstacles which beset the path of a Bill introduced by a private member into the House of Commons. If it was easy to say "I beg to move," it was equally easy to say "I object;" and the only hope was to be able to utter the first formula when those who were prepared to utter the second were absent. The toast of "The Medical Profession" was

given by Mr. G. T. W. Newsholme, Vice-President, who expressed dissatisfaction with the present state of the law which permitted men to be employed as Poor-law dispensers who had not passed through the curriculum and examinations prescribed by the Pharmaceutical Society for all persons who proposed to engage in the craft. Sir Walter Foster, M.P., who acknowledged the toast, recognised the objections which must be felt to the system at present followed with regard to Poor-law dispensers. He dwelt on the important services rendered to the public by pharmacists, who were the indispensable auxiliaries of the medical profession in the fight against disease, suffering, and death. He referred also to the astounding extent to which nostrums were patronised by the public. It was not, he said, a matter in which the State could interfere, and trust must be put in the gradual effect of the spread of education to teach the public to cease to place reliance on the interested assertions of the vendors of preparations usually worthless and sometimes dangerous. The toast of "Science," given by the President, was acknowledged by Professor Dewar, who observed that his prolonged experiments at low temperatures which had now resulted in the liquefication of hydrogen had only been rendered possible by the generous manner in which the Royal Institution had provided the costly apparatus necessary. After the toast of "The Pharmaceutical Society of Ireland" had been given by Mr. Hills and acknowledged by Dr. R. J. Downes, the President of the Irish Society, the toast of "The Pharmaceutical Society of Great Britain" was given in eloquent terms by Sir J. Crichton Browne, and acknowledged by the President of the Society.

THE BRITISH PHARMACOPŒIA, 1898.

SOME confusion seems to exist as to the date at which the *British Pharmacopœia, 1898*, comes into force. The Medical Act of 1862 enacted that the *Pharmacopœia* when published shall for all purposes be deemed to be substituted throughout Great Britain and Ireland for other *Pharmacopœias* which were in existence at the date of the passing of the Act, and it was further enacted that notice in the London, Edinburgh, and Dublin *Gazettes* to the effect that the *British Pharmacopœia* has been published, shall be deemed sufficient evidence of its publication. It would appear, therefore, that the *Pharmacopœia, 1898* came into force on the date of the publication of the notice in the *Gazettes*, which was April 29th. As a matter of fact, however, we were informed by the publishers that the *Pharmacopœia* was only ready for issue in the ordinary course on May 11th, and the decision, which has been reached by certain leading pharmacists, to follow the old *Pharmacopœia* until Midsummer Day, unless the contrary is specified in the prescription, appears to afford a reasonable compromise.

THE INDIAN PASTEUR INSTITUTE.

THE views of the Indian Government as to a Pasteur Institute for India have apparently changed since two years ago. Then it promised to a Committee who interested themselves in the establishing of such an institution in India that if sufficient funds were collected to maintain the Institute they would provide a medical officer to take charge of it. Later the Government of the Punjab promised they would give a site for the building if the consent of the Government of India was obtained. This favourable commencement was very encouraging to the Committee, and soon Rs.77,000 were collected from the public. Eighteen months ago the Committee applied to the Government of India to sanction a site offered by the Punjab Government, but it appears from the report of a meeting of the Committee held recently at Lahore that they have as yet failed to obtain an answer to their letter. The sum in the hands of the Committee is not sufficient to start the work of the Institute unless it is supplemented by the site and medical officer promised, and it is obvious that no advance can be made until a reply is received from the Government of India. We hope that now the attention of the Indian Government is again drawn to the subject that the letter will be taken from its pigeon hole, and a favourable answer given to the communication. There can be no doubt as to the urgent need for such an institution.

POST-GRADUATE STUDY IN LONDON.

WE are informed that it is proposed to found in London an institution, to be styled the Medical Graduates College and Hospital, in order to improve the facilities for post-graduate study in London. It is pointed out that isolated attempts have been made to supply the need of post-graduate courses, and that from the success of those more wisely organised it is believed that the larger scheme now contemplated will meet with ample support. It is proposed that the College should consist of a building containing lecture theatres, classrooms, laboratories, a clinical museum, a library and a reading room, and that there should be attached to it a clinical hospital containing a limited number of beds with an out-patient clinic. It is not contemplated that patients should be admitted into the hospital for prolonged treatment, but it is hoped that medical men having patients among the poorer classes for whom they desire further advice will be disposed to bring them up for consultation at these clinics, in which it is intended that medical men of eminence should conduct public consultations and clinical teaching.

CORNS IN COURT.

A GERMAN law court has recently decided that remedies for corns cannot be considered as falling within the definition of medical treatment, on the ground that "corns on the feet are not a disease." According to the definition in one of the most popular of modern works on disorders of the skin, a corn "is a hyperplasia of the horny layers, in which there is an ingrowth as well as an outgrowth of horny substance, forming circumscribed epidermal thickenings." This is, in words at least, a sufficiently formidable indictment, and possibly if the pathological process had been described to the court in terms as solemn as these it might have taken a different view. Evidently, however, the historic phrase *Il y a des juges à Berlin* has not lost its actuality. Mankind owes to the judges a debt of gratitude which, perhaps, it does not sufficiently appreciate. Did not a Lord High Chancellor of England "dismiss hell with costs?" Now another luminary of the Bench has ruled corns out of existence, for if they are not a disease, what are they? We only hope that the millions of mortals who are afflicted in their feet will find comfort in this decision. But would it be contempt of court to ask if the learned judge who gave it had any personal experience of corns?

SIR WILLIAM THOMSON, President of the Royal College of Surgeons in Ireland, was entertained at dinner by the Vice-President and Council on Saturday, May 14th, in the Shelbourne Hotel. The chair was occupied by Mr. R. L. Swan, the Vice-President.

THE usual summer session of the General Medical Council will commence on Tuesday next, and the meeting of the Executive Committee will be held on the previous day. Among the business which it is understood will come before the Council at this meeting are matters connected with the penal and disciplinary powers of medical authorities, medical aid associations, and the position of certain classes of unqualified assistants.

THE President and Council of the Medical Society of London entertained a large number of Fellows and visitors at the annual *conversazione* held in the Society's rooms on Monday evening last. The oration, with which the work of the session concludes, was delivered by Dr. Frederick Roberts, on The Moscow Congress: a Holiday: with Comments on Suggested Topics, and was highly appreciated by those who were fortunate enough to secure seats in the crowded meeting room.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE VACCINATION BILL is exciting a good deal of attention both in the House and in the country. Members have put down a number of amendments, most of which are directed against Clause 2, and also in the direction of allowing a declaration of conscientious objection to prevent any proceedings. The most ingenious amendment is one by Mr. Gedge, which evidently seeks to enlist both the public and profession on the side of vaccination by the simple expedient of paying the parents 1s. for having the child vaccinated and the doctor 2s. 6d. for performing the operation and certifying to its success. The Treasury, we are afraid, will stand in the way of this crude and commercial method of dealing with objections to vaccination. Many more amendments are sure to appear on the paper before the Bill is considered in Committee, especially as the Boards of Guardians in many districts are studying the provisions of the measure as they affect their administration. The Committee of Selection have nominated the following fifteen additional members to the Grand Committee on Law for the consideration of the Bill, namely, Mr. Chaplin, the Attorney-General, Mr. T. W. Russell, Sir C. Dalrymple (Ipswich), Sir W. Priestley (Edinburgh and St. Andrews Universities), Colonel Long (Evesham), General Russell (Cheltenham), Mr. J. W. Wilson (North Worcester), Sir Walter Foster (Ilkeston), Mr. T. P. O'Connor (Liverpool), Mr. Thos. Bayley (Chesterfield), Mr. Channing (Northants), Mr. Hazell (Leicester), Mr. Steadman (Stepney), and Sir Charles Cameron (Glasgow). There is no chance of the Grand Committee being able to consider the Bill till after Whitsuntide, but the interval should be used by all those interested to prepare the amendments necessary to make the measure as generally acceptable as possible. The local authorities in many places think that Clause 3 (which gives the Local Government Board power to make rules and regulations with respect to vaccination) is a dangerous extension of power, and urge that all such regulations should be approved by Parliament. A conference of guardians and members of Parliament has been called for the 25th inst. to consider this and other points affecting the power of local authorities.

THE PRISONS BILL is having a hard time in Committee. Last week we reported certain concessions of a valuable nature, which the Home Secretary had been able to accept, and since then he has shown in some respects a most conciliatory spirit. The dietary was fully discussed last Friday, and although the particular amendment before the Committee was rejected, the promise was made that the subject should be referred to a small Committee on which there will probably be two medical men and a member of Parliament. The torture inflicted in many cases by the plank bed will be lessened, if not abolished; so also will the useless and irritating labour with crank and treadmill. It is difficult to conceive anything more depressing and demoralising than the daily repetition of a useless and unproductive task on an intelligent and reasoning being, who might, on the other hand, be improved and interested by being set or even compelled to perform a task for which he would see some tangible and useful results. The Home Secretary has, moreover, undertaken to submit draft rules regulating all these matters before the new clauses are considered. The progress made at Tuesday's sitting was very slow, and it is just possible that the two sittings that remain before Whitsuntide will scarcely suffice to finish the Bill. The main advantage gained on Tuesday by the reformers was a promise to limit the period of solitary confinement to six months.

NECROSIS IN MATCH FACTORIES.—The interest in the cases of "phossy" jaw which have recently occurred has so far in nowise diminished, and questions are still asked of the Home Secretary. In one answer he spoke very gravely of the systematic neglect in reporting cases of phosphorus poisoning which he said his inquiries had revealed, and he informed the House that he had given instructions to prosecute the offenders. There is a strong feeling that commercial interests should not be allowed any longer to bring about these ghastly results, and that the industry must be regulated and the workers saved at any cost. We are glad to observe that the Home Secretary was able to acquit the factory surgeon of wilful misstatements, and to reduce the charge against him to a breach of the Factory Acts in not reporting the facts to the chief inspector. The demand for a special committee to investigate the whole subject has not yet been conceded, but the spirit in which the matter is being considered by the Home Office ought to result in stopping any more sacrifices to this industrial Moloch.

THE IRISH LOCAL GOVERNMENT BILL makes slow progress through the Committee stage. There are still some thirty pages of amendments and new clauses to be considered, some of which are of great medical interest as relating to public health, the position of asylum medical officers, and the county infirmary surgeons. The general estimate is that the Bill may be got through by Tuesday or Wednesday next, but it is possible that the twelve o'clock rule will have to be suspended in order to close the Committee stage before Whitsuntide. It is unfortunate that the medical questions to which we have referred should have to come on under these conditions, as they require very careful consideration, and both public and professional interests of far-reaching importance are involved, more especially in the new public health clauses, placed on the paper by Mr. Horace Plunkett.

VACCINATION.—Mr. Brigg asked the President of the Local Government Board if he was aware that the Council of the Association of Public Vaccinators had declared that the time and trouble required under the proposed Vaccination Bill would be ten times that now paid for, thus increasing the probable cost to the ratepayers from £78,000 per annum to £780,000 per annum; and could he hold out any hope that this largely-increased cost would be taken over by the Imperial Exchequer. Mr. Brigg also asked if the right hon. gentleman was willing to accede to the wish of the Council of the Association of Public Vaccinators that a public vaccinator should no longer be engaged by the Board of Guardians, but be appointed direct by the Local Government Board, thus removing every vestige of popular control or influence. —Further questions respecting the Vaccination Bill were, whether the public vaccinator having received part of his fee on the birth of a child would receive the second moiety of his fee in cases where he instituted proceedings but failed to enforce vaccination; whether the refusal of a Board of Guardians to sanction the costs of prosecutions under the Vaccination Bill would subject them to imprisonment for contempt of court; and whether in cases of the refusal of parents to allow their children to be vaccinated on account of ill-health, or what might appear to them some other good reason, would the power of instituting legal proceedings rest with the vaccinator, without any other reference or appeal, either to guardians or medical authority. Mr. Chaplin: It will probably be convenient to the hon. member and the House if I answer his five questions at the same time. With regard to the first question, I am not aware that the Council of the Association referred to has made any such estimate of the cost. In any case, my view is altogether different from that stated in the question. The reply to the next two questions is in the negative. With regard to the fourth, I am afraid I have nothing to add to the answer given previously, that I have no right to assume that local authorities will refuse to pay any expenses legally payable by them, and I cannot undertake to reply to hypothetical questions. As to the other question, the power of a vaccination officer, who I presume is the officer intended to be referred to, of instituting legal proceedings will be subject to certain conditions. If the child were unfit to be vaccinated through ill health or otherwise, and the parent procured a certificate from a medical practitioner to that effect, it would be a bar to proceedings under Section XXIX of the Act of 1867 so long as the certificate continues in force. Further, the section referred to provides that a parent will be guilty of an offence for not causing the child to be vaccinated in the absence only of a reasonable excuse being rendered by him to the satisfaction of the justices.

ENTERIC FEVER AMONG BRITISH TROOPS IN INDIA.—In answer to General Russell, Lord G. Hamilton said no definite conclusion had been arrived at as to the cause of the increase in enteric fever among British troops in India, and the investigations on this subject were still proceeding, selected medical officers having been specially detailed for this duty. Generally the measures taken to check the spread of the disease were the improvement of the water supply, the provision of pure milk and butter, and improved sanitation of camps, cantonments, and barracks. One cantonment, Dragshais, where there had been serious outbreaks of enteric fever, had been completely evacuated for a year, pending the installation of an improved water supply and the disinfection of the barracks and their vicinity.

THE SANITARY INSTITUTE.—At an examination for inspectors of nuisances, held in London on May 6th and 7th, 1898, 109 candidates presented themselves, and 64 were certified, as regards their sanitary knowledge, competent to discharge the duties of inspectors of nuisances. At an examination in Practical Sanitary Science, held in London on the same days, 12 candidates presented themselves, and 5 candidates were granted certificates.

THE QUEEN'S VISIT TO NETLEY.

Her Majesty the Queen has once again displayed her great sympathy with her afflicted and suffering soldiers by visiting the sick and wounded now under treatment in the Royal Victoria Hospital, Netley. The warm interest shown by Her Majesty cannot fail to have a cheering influence on the sufferers.

On May 14th the Queen, accompanied by their Royal Highnesses Princess Christian of Schleswig-Holstein, Princess Henry of Battenberg, and her Royal Highness Princess Victoria of Schleswig-Holstein, travelled from Windsor by special train, and arrived at Netley Station at 4.30 p.m. Her Majesty was received by the Earl of Northbrook, G.C.S.I., Lord Lieutenant of the County, and General Davis, C.B., Commanding the Southern District, and his staff. Her Majesty's reception as she passed from the station to the Royal Hospital was enthusiastic in the extreme. A guard of honour was supplied by the East Lancashire Regiment, the officers and men coming from Portsmouth accompanied by their band; they received the Queen, both on arrival and departure, with the usual Royal salute. During the visit no persons were allowed within the hospital. The front of the hospital had been beautifully decorated, and a temporary platform erected on a level with the carriage steps; this was covered with crimson cloth and adorned with flowers and shrubs. On Her Majesty's arrival she was received by Surgeon-Major-General W. Nash. Immediately afterwards a beautiful bouquet was presented by Miss Nellie Stevenson, the daughter of Surgeon-Colonel Stevenson. Surgeon-Colonels Lane-Notter, Stevenson, Brigade-Surgeon Lieutenant-Colonels Blennerhassett and Webb, Surgeon-Lieutenant-Colonel Chester, Surgeon-Major Dick, and Miss Norman, lady superintendent of the hospital, had the honour of being presented to Her Majesty.

The Royal party, having been joined by Prince Maurice Victor of Battenberg, who had driven over from Lyndhurst with his tutor, were conducted through the hospital. A special chair had been brought for Her Majesty's use, and this was wheeled by her Indian attendants. She proceeded through a long file of of convalescents, who had been drawn up for her inspection. Her Majesty's attention was first called to a fine picture which hangs in the lower corridor of the hospital. It represents Her Majesty on her first visit to the wounded from the Crimea. By her side stands the Prince Consort, and Her Majesty is represented as standing near one of the wounded. This picture is full of historic interest, because it shows the great difference in the treatment of the wounded now and then. Having delayed her progress for a few moments, Her Majesty ascended by the lift to the top corridor, which is the surgical division. Here the Royal party proceeded to the bedside of the wounded soldiers, and Her Majesty spoke a few words of kindly sympathy to every patient. There were in all in this division fifty-four of the wounded from the Indian frontier. The Royal Princesses also showed their sympathy and spoke to many of the patients, nearly all of whom are suffering from gunshot injuries. The men were very pleased and gratified at the Queen's visit and the exceedingly kind and sympathetic manner shown by Her Majesty. Half way down this corridor the Queen came to the two soldiers whom she most particularly desired to see. These were Piper Findlater, of the Gordon Highlanders, and Lance-Corporal Vickery, of the Dorset Regiment. Findlater was seated in a chair, and was about to rise when the Queen told him to remain seated. Her Majesty leaned forward, and with her own hands placed the Victoria Cross on his left breast. In doing so Her Majesty congratulated Findlater on having secured the highest honour a British soldier possibly could, and hoped he would live for many years to come. Lance-Corporal Vickery was also decorated by Her Majesty, and here again the scene was pathetic and watched with the deepest interest by those around. Her Majesty then passed on to the other wards.

Her Majesty saw altogether 889 non-commissioned officers and men, representative of nearly every regiment in the British army. Perhaps in no other place can so many sick and wounded soldiers be seen together, and the great solicitude which Her Majesty has shown for her army is deeply felt and appreciated by her soldiers. Several of the cases now in hospital were there at the Queen's last visit. Corporal Grey, of the 11th Hussars, who has been in the Royal Hospital for a long time, received kindly notice. Her Majesty expressed her great pleasure at seeing him again, and remarked, "I hope you are getting better; you look better than when I last saw you." Her Majesty also spoke to Private Gibson, who was in hospital on the last occasion of her visit, and whom she at once remembered. In one ward Her Majesty left her chair, and leaning on the arm of an Indian attendant and escorted by Major-General Sir John McNeill, V.C., went to the bedside of a wounded man. "Are you getting better since I saw you last?" the Queen said to him, and the answer was a grateful "Thank you; I think I am."

Her Majesty was much interested in the case of Piper Kidd of the Gordon Highlanders, to whom she remarked, "You pipers must have suffered much; I am sorry to see that you have lost your leg." It is unnecessary to add more. It was the same kindly sympathy throughout the whole of Her Majesty's visit, who by her words cheered every heart by her kind consideration. The Queen delayed her departure until she had seen every man in hospital. Before leaving the hospital Lieutenant Pears of the Cameronians, one of the officers who was wounded at the front, had the honour of being presented.

The inspection completed the Queen left in her carriage. The scene was a brilliant one, for the sun was shining and Southampton Water looked at its best. The band played the National Anthem, and the crowds cheered to greet their Queen and to testify their appreciation of her gracious act of kindness. The impressions of Saturday, May 14th, will long remain, and can never be effaced from the memory of those who had the privilege of being present.

In connection with this Royal visit it may be stated that the foundation stone of the Royal Victoria Hospital was laid by the Queen on May 19th, 1856, just forty-two years ago. In the long period which has elapsed between these two events, many changes have taken place, particularly as regards the care of the sick and wounded of Her Majesty's Army.

THE PLAGUE IN THE EAST.

Bombay.—The telegrams bearing date of May 12th state that, "during the week 138 deaths had occurred from plague as compared with 263 in the previous week. The deaths from all causes amounted to 725, as compared with 872, showing a rate of 44.04 against 53.66 per 1,000 in the preceding week." From these accounts it would appear that plague is rapidly abating, and the epidemic may be said to be well nigh over. This improvement is generally attributed to the advance of the hot weather, but with the increase of the disease in Karachi coincidently with the warmer weather, the evidence does not seem to be conclusive.

Karachi.—The recrudescence of plague is now, unfortunately, firmly established, and the latest reports have it that the disease is rapidly assuming alarming proportions.

	Cases.	Deaths.
April 20th	28	21
,, 21st	10	23
,, 22nd	7	12
,, 23rd	45	32
,, 24th	35	26
,, 25th	37	31
,, 26th	40	28

The total cases and deaths from plague to April 26th at Karachi are 395 cases and 281 deaths. Two hundred new huts for isolation are being built in the neighbourhood of the town. We have no news of any extension up the Indus valley from Karachi, but in the upper reaches of the river at Jullundur and Hoshiapur the disease is slowly advancing. In all, some 57 villages in these districts are now, or recently have been, the seat of plague.

Calcutta.—The scare of plague has subsided for the time being, no cases of a pronounced form of the disease having been met with during the past week. Experts in India are now taking a wider view of plague than has hitherto been the case, and believe that the general idea that cases of plague must be rapidly followed by an epidemic, is false. The cases reported by Dr. Simpson in 1896 have been affirmed

not to have been cases of plague for this very reason, but the recurrence of plague, which has again disappeared during the last few weeks, has altered the opinion of many. We are glad to know that Dr. Cooke, the newly-appointed Health Officer for Calcutta is advocating inoculation by Haffkine's method.

Suez.—A Reuter's telegram from Suez, dated May 16th, states that "no further case of plague has occurred, and that the quarantine restrictions are now removed." Jeddah also is declared free of plague; the Red Sea littoral is thereby pronounced to be rid of the disease.

Hong Kong.—Grave fears are expressed from Hong Kong that the outbreak of plague this year may be as serious as that of 1894. One of the perils of the situation is, it seems, that only a portion of the cases from Macao, and more especially Canton, are reported upon. In fact Canton is stated by the Chinese to be free of plague. We may state frankly that we do not believe this, and the Hong Kong authorities are not likely to be deceived by the declaration. The European residents of Hong Kong are demanding that they be protected by inoculation of Haffkine's serum. We have no doubt the medical authorities have already taken steps to satisfy their request. The death of the nurses has, for the first time, caused considerable anxiety as to the possibility of Europeans being attacked by the disease. We are anxiously waiting fuller statements concerning the deaths of the nurses. It is, of course, admitted that anyone coming in contact with plague patients may contract the disease, but hitherto it has only when nurses have been allowed to eat and sleep in plague hospitals that infection to any extent has occurred. With an expert in plague in Hong Kong, such as Dr. Lowson, it is not at all likely that such laxity of rule has been permitted.

ROYAL COLLEGE OF PHYSICIANS.

An extraordinary comitia of the Fellows was held on Thursday, May 12th, Sir S. WILKS, Bart., M.D., F.R.S., President, in the chair. After the formal admission of newly-elected Fellows the Murchison Scholarship was awarded to Mr. J. Basil Page, of St. Mary's Hospital, who was called in and presented by the President with the certificate and cheque.

The adjourned debate on the report of the Committee of Management respecting the proposed changes in the regulations relating to the teaching of the elementary scientific subjects was then resumed (for previous debate *vide* p. 1226). After some preliminary observations from the President,

Dr. CHURCH observed that the present practice was that any student who had passed a qualifying arts examination could be registered; he was then asked at what institution he had studied; if it was one of those recognised, his time was allowed to commence from his study there; but if the institution was not amongst those recognised, then his time would date from the moment of his registration, but he could petition to have this antedated, and the petition was sometimes granted. The ideal thing, no doubt, would be for students to commence their medical curriculum after passing in these preliminary scientific subjects, but at present this was not practicable. Formerly, except at the Universities and a very few other places, the student could not get instruction in these preliminary sciences, and so the medical schools had been obliged to provide instruction in these subjects. He held that the proposals of the Committee of Management would not really interfere with or lessen the time of medical study, but on the contrary would increase it. If he had got rid of these preliminary subjects before his entry at a medical school, the student would then be free to spend his whole time in professional study, and the rigorous exclusion from clinical work at present so stringently enforced might be relaxed, and the student might be allowed to spend a certain amount of time in the out-patient rooms, wards, and operating theatre whilst still studying anatomy.

The REGISTRAR, in reply to a question, said that the institutions which were recognised had either been visited and certified by South Kensington, or where this was not the case they had been visited and reported upon by one of the members of the Committee of Management.

Dr. MACKENZIE was not satisfied with Dr. Payne's amendment, because it seemed to suggest that there was not a sufficient scrutiny. But he was opposed to the report on several grounds. It was taking away one year from the curriculum; under it students after registration would attend away from the schools, and would therefore lose the valuable collegiate influence of the schools during that period. The student would go where he liked, cramming would be encouraged and teaching discouraged. It would also involve great hardship on the medical schools which had at great expense provided the necessary instruction in these subjects, and would have to maintain it for the sake of a very few men.

Dr. LEE moved that the report be referred back to the Committee for reconsideration. The regulations much needed revision, as they were in places contradictory, and there was confusion as to registration by the General Medical Council which was really not compulsory. He was of opinion that these subjects ought to be passed before entry at a medical school.

Dr. FOWLER was in favour of the adoption of the report, which had been referred to eighteen medical schools, the great majority of which had supported the proposals. He welcomed this scheme as a means of obviating the five years curriculum, which he had never approved of.

Dr. WASHBOURN seconded Dr. Lee's amendment. The regulations were very complicated, and should be all reconsidered and put in a more simple form. The provision for the study of anatomy and physiology should be adequate, at least one winter and two summer sessions would be required. In the report of the Committee on Biology a further change in the regulations was contemplated, and this was an additional reason for sending the report back. He had no doubt that these elementary subjects could be as well studied in some of the recognised institutions as in the medical schools, or perhaps better. They must safeguard against cramming by making the examinations sufficiently searching.

Dr. PAYNE asked leave to withdraw his amendment in favour of Dr. Lee's.

Dr. PYE-SMITH said that they were not carrying out the idea of the five years curriculum if they allowed the first year to be spent anywhere; at the leading institutions it might be satisfactory, but not at the inferior places where science was only studied in its technical or commercial aspects. He did not think it was desirable that medical students should be in the position of school boys.

Dr. COUPLAND did not see why the College should not be allowed to do what the University of London did in the matter of its Preliminary Scientific Examination. He thought the time had come when they should definitely say that no one should be registered as a medical student till he had passed an examination in the preliminary scientific subjects.

Dr. MOORE, in reply, defended the Committee of Management, who had done their best, and had not failed for lack of industry or pains. It was very difficult to frame clauses to meet exceptions which might occasionally arise; the regulations had been drawn up with the utmost care, and nothing could be more disastrous than to be constantly reconsidering them as a whole. Mention had been made of injustice to the medical schools, but as Dr. Fowler had observed the vast majority of the schools had already approved the proposals. As to the collegiate life influence theory, surely four years was ample. Formerly the College did not care where a candidate got his knowledge, but this was found to lead to cramming, hence the existing list of laboratories and institutions recognised.

The amendment was then put and lost, and the report of the Committee of Management was then approved.

The report of the Committee on Biology was then received and adopted. It recommended that biology should be retained in the curriculum, and to meet the difficulty occasioned by the interference of the subject with the study of anatomy and physiology, which affects a large majority of students, it suggested an alteration in the regulations relating to the examinations. The report was then referred to the Committee of Management.

A communication from the Foreign Office was received in answer to a protest by the College against the threatened legislation respecting foreign practitioners in Italy, informing

the College that the proposal to require all foreigners to take an Italian diploma had been abandoned.

A communication was received from the Secretary of the Royal College of Surgeons.

The quarterly reports of the Finance Committee and of the Examiners for the Licence were received and adopted.

Thanks were returned to the donors of books during the past quarter.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on May 12th, Sir WILLIAM MAC CORMAC, Bart., President, in the chair.

The minutes of the preceding meeting were read and confirmed.

Admission of a Fellow.—Mr. W. D. Spanton was admitted a Fellow of the College.

Donations to the Library.—The CHAIRMAN OF THE LIBRARY COMMITTEE reported that Mrs. William Hunter, of 51, Norland Square, W., had, at the suggestion of Mr. Thomas Bryant, presented to the College forty-three volumes of works on medicine, surgery, anatomy, etc., which formed part of the library of her husband, the late Dr. William Hunter, of Rothesay, N.B., and originally belonged to Surgeon-General William Hunter.

Fellows' Gown.—The wearing of a special gown was authorised by the Council. The details as to its form, and the occasions on which it may be used, were left for a Committee to report upon.

Assessment Appeal.—It was unanimously resolved that the solicitor of the College be instructed to enter an appeal against the judgment of Mr. Justice Wright and Mr. Justice Channell, in respect of the Corporation duty paid by the College.

Letter from Fellows and Members.—A letter of May 7th was read from the Committee acting for those Fellows and Members of the College who signed the petition claiming the right of electing the representative of the College on the General Medical Council, forwarding a copy of a protest and claim in course of signature by Fellows and Members.

THE COUNCIL: VACANCIES AND CANDIDATES.

THE members who retire in July, having served eight years, are Mr. Langton, Mr. Mitchell Banks, and Mr. Henry Morris. Mr. Langton and Mr. Banks have served in person. Mr. Morris was elected in 1893 as substitute for Mr. Marcus Beck (deceased), who was elected in 1890. Mr. Langton and Mr. Morris, but not Mr. Banks, will seek re-election.

The Council consists of the following members, twenty-four in number, including the President and Vice-Presidents. Three retire yearly, whilst, as above explained, substitutes are elected to fill up the term of death vacancies:

President.—Sir William Mac Cormac, Bart.; C, (1) 1883, (2) 1891.
Vice-President.—Mr. Willett; C, (1) 1887, (2) 1895.
Vice President.—Mr. Howse; C, (1) 1889, (2) 1897.
Other Members of Council.—Mr. Bryant; C, (1) 1880, (2) 1888, (3) 1896; P. 1890-92.
Sir Thomas Smith, Bart.; C, (1) 1880 (substitute), (2) 1884, (3) 1892.
Mr. Macnamara; C, (1) 1885, (2) 1893.
Mr. Reginald Harrison; C, (1) 1886, (2) 1894.
Mr. Pick; C, (1) 1888, (2) 1896.
Mr. Langton; C, 1890.
Mr. Mitchell Banks; C, 1890.
Mr. T. R. Jessop; C, 1891.
Mr. Howard Marsh; C, (1) 1892 (substitute), (2) 1894.
Mr. Tweedy; C, 1892.
Mr. Henry Morris; C, 1892 (substitute for Mr. Marcus Beck until this year).
Mr. Mayo Robson; C, 1893.
Mr. J. Hardie; C, 1894.
Mr. Ward Cousins; C, (1) 1895 (substitute for Mr. Hulke), (2) 1897 (substitute for Mr. Rivington until 1899).
Mr. Alfred Cooper; C, 1895 (substitute for Mr. Durham until 1900).
Mr. Butlin; C, 1895.
Mr. Treves; C, 1895.
Mr. Davies-Colley; C, 1896.
Mr. Edmund Owen; C, 1897.
Mr. R. J. Godlee; C, 1897.
Mr. Watson Cheyne; C, 1897 (substitute for Mr. Oliver Pemberton until 1901).

The following list explains the proportional representation of metropolitan medical schools, of special hospitals in London, and of the provinces:

St. Bartholomew's	5
Guy's	3
King's College	1
London	1
Middlesex	1
St. George's	1
St. Mary's	1
St. Thomas's	1
University College	2
Westminster	1
Total number of members of Council attached to London schools...	17
Members attached to special hospitals in London	2
Provincial members	5*
Total ...	24

* Leeds 2, Liverpool 1, Manchester 1, Southsea 1.

Last year, when Mr. Christopher Heath did not seek re-election, Mr. Howse and Mr. Ward Cousins were re-elected, and Mr. Edmund Owen, Mr. R. Godlee, and Mr. Watson Cheyne became members of Council for the first time. There were 11 candidates for the 5 vacancies. The result of the elections in 1897 was that the provinces and the London Hospital each lost 1 member, whilst King's College and St. Mary's, then unrepresented, gained 1 member apiece. Mr. Godlee replaced Mr. Heath as representant of University College.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE election of President, Vice-President, and Council will take place on the first Monday of June. Mr. R. L. Swan, Surgeon to Steevens's Hospital, will succeed to the presidential chair, which has now been occupied for two years by Sir William Thomson. For the vice-presidency, which becomes vacant by Mr. Swan's promotion, there are two candidates, Dr. C. B. Ball, Regius Professor of Surgery, Trinity College, and Mr. Thomas Myles, Surgeon to the Richmond Hospital. It is believed that the contest will be very close. For the Council, Mr. H. G. Croly, Mr. M'Causland, Mr. Robert H. Woods (who retires from the secretaryship to Council), Dr. Cranny, Mr. Chance, and Mr. J. Harrison Scott will be candidates.

THE ASEPSIS OF TOWNS AND DWELLINGS.

AT the request of the Organising Committee of the International Congress of Hygiene and Demography held at Buda-Pesth, 1894, Professor Corfield prepared a series of resolutions relating to the sanitary conditions of towns and dwellings. These resolutions were submitted to a special joint meeting of three of the Sections of the Congress, and were the subject of a very animated debate. They were ultimately referred to an International Committee consisting of the following members: Professor Corfield, London (proposer); Dr. Pistor, Berlin (seconder); Herr Andreas Meyer, Chief Engineer of Hamburg, M. G. Bechmann, Ingénieur-en-Chef des Ponts et Chaussées, Paris; Professor Fodor, Buda-Pesth; Mr. Arthur Cates, Architect, London; Herr Berger, Chief Architect, Vienna; Herr Lindley, Engineer, Frankfort-on-Maine; and Dr. A. J. Martin, Member of the Consultative Committee of Public Hygiene of France.

The resolutions were revised by this Committee and were submitted to the International Congress recently held at Madrid, where they were adopted as resolutions of the Congress. They may be taken to represent the maximum amount of agreement possible at the present moment among sanitarians of different European countries. They are as follows:

1. That the general health of the population is improved and the spread of diseases prevented in towns and dwellings by the immediate removal of all foul matters, and by a copious supply of pure water.

2. That the paving of streets should be smooth, and as far as practicable impervious, to facilitate cleansing and also to prevent contamination of the subsoil.

3. Special measures should be taken in the construction of houses to prevent the access of ground air and moisture to the floors and walls.

4. House drains should be arranged so as to avoid stagnation of their contents, and to secure a rapid flow to the street sewer. They should be impervious to liquids and gases, freely and continuously ventilated, and provided with siphon traps to prevent the access of foul air to the houses.

5. The public sewers should be so constructed as to ensure the rapid

and uninterrupted flow of the sewage to their outlets. They should always be freely ventilated.

6. The streets should be as wide as possible in proportion to the height of the houses; this proportion should be fixed in each locality, regard being had to local circumstances and to climate. Every inhabited building should be well-lighted throughout its whole depth, and arranged so as to have an access of air from at least two sides.

7 Special regulations should be made in each locality by the public authorities with the view of enforcing the practical application of the principles herein laid down.

Governments and municipalities should resolutely and energetically carry out the preceding recommendations, especially those concerning the healthiness of dwellings.

A REPORT ON THE OPEN-AIR TREATMENT OF PHTHISIS IN SANATORIA.

III.

Sanatoria in England.

The open-air treatment of phthisis is still in the tentative stage in England, but a movement has been begun in this direction, of which Dr. Burton-Fanning, Dr. Walters, and Miss Jane H. Walker have the honour of being pioneers. The importance of thorough ventilation and a generous diet has long been recognised in the hospitals in this country devoted to the treatment of phthisis, but the history of the Royal National Hospital for Consumption at Ventnor affords interesting evidence of the growth of opinion as to the importance of sunlight, large air space in sick rooms, and open-air life in cases deemed suitable. The history of the Royal National Hospital for Consumption, Ventnor, is interesting in this connection. It is planned on the pavilion system, and consisted at first of eight blocks. Each patient has a large bedroom facing south, opening on to a verandah by a large French window extending from floor to ceiling. The corridors stretch from east to west along each block, ending in large windows freely open to light and air. The sitting-rooms face south and open on to verandahs.

The grounds, of 22 acres, descend in a succession of natural terraces to the sea, and are so arranged and laid out as to afford abundance of sheltered seats and walks, with lawns for games. The patients are encouraged to spend as much of their life as possible in the open air in favourable weather.

In the earlier years the natural ventilation was alone depended on, and heating was effected imperfectly by hot water apparatus and open fireplaces in the rooms.

A greater abundance of light and air was provided in blocks more recently constructed, and an elaborate system of heating and ventilating by steam was introduced. Under this system a continuous supply of fresh air from the outside, warmed by passing over steam-heated gills at the rate of 500 cubic feet an hour for each patient, is obtained by the withdrawal of an equal quantity of exhausted air by means of a large fan working in an extracting chamber connected with each apartment and corridor by flues. This system was found to act so efficiently that it was extended to each of the eight original pavilions.

In the new block now under construction the demands for a still more ample provision of light and air have been met. Each of the twenty-five south bedrooms have an average area of no less than 17,000 cubic feet, and open on to verandahs of 10 and 11 feet respectively in width. In this block and in the one previously constructed each pair of bedrooms is divided by a large sliding door, by which means double the cubic space can be made available.

Plans are under consideration for the erection in the grounds of a large winter garden of glass and iron in connection with the main building, so that patients lying in bed can be carried into it.

In the new block it has been arranged to have no cornices or ledges where dust may lodge; the angles of the walls and junctions of walls and ceiling and also the junctions of walls and floor are rounded. The floors are to consist of polished teak. The frames of the windows and doors are to be flush with the walls. Some patients are treated by hypodermic injections of guaiacol ♏v to which liq. strychninæ ♏v is added, since it is found to counteract the depression caused by the guaiacol.

During the last three years Dr. Burton-Fanning has been actively engaged in carrying out the open-air treatment at Cromer. His results on the whole have been successful; but, owing to the inadequate accommodation afforded him, his endeavours have in many instances been curtailed. The patients had often to leave before the time requisite for their cure had expired, in order to made room for fresh comers. The feature which distinguishes the Cromer treatment from that on the Continent is the difference in the geographical position. High altitudes are usually chosen for open-air treatment in foreign lands, whereas in England a flat, low-lying district has been selected.

Many parts of Norfolk have an unusually low rainfall, the average of the last five years at Cromer being 24 inches. The air is keen and bracing, and, with the exception of occasional mists from the sea, fogs are unknown. There is a great deal of sunshine, but the summer heat is usually moderated by a cool breeze. The early part of the winter is considered the best time of the year, as bright and dry weather is usually experienced then. The soil of Cromer is composed of sand and gravel.

Dr. Burton-Fanning, however, admits that, as far as climate is concerned, a winter spent abroad has advantages over one spent in England. The smaller amount of moisture, the lessened rainfall, the greater amount of sunshine, and especially the exhilarating effect of the air of some of the foreign resorts, are points which must be in their favour. The summer in England is on the whole exceptionally suitable for the open-air treatment. His plea for the erection of sanatoria in England chiefly concerns the poorer classes who are unable to seek relief in foreign lands.

It will be remembered in the description given of Continental sanatoria, that the two chief beneficial effects of the open-air treatment consisted in: (1) The reduction of pyrexia; (2) the increased appetite. Both these points are emphasised by Dr. Burton-Fanning, and in addition he gives some interesting observations in regard to the time occupied before a normal evening temperature is recorded; the average duration was from twenty-one to sixty-eight days.

Those patients whose morning temperature did not fall below 99.6° F., and those suffering from an acute accession of fever, were not submitted to the open-air *régime*, but were kept in bed in a well-ventilated room until their morning temperature became normal, or the exacerbation subsided. The appetite was markedly increased, and this took place without the aid of any special drug treatment. Another interesting point is alluded to by Dr. Burton-Fanning, namely, that in one-third of his cases gain in weight was observed to precede any decline of the fever, but in the remainder it corresponded closely with lessened evening temperature.

Many of the cases showed no improvement until at least one month had elapsed. The cough was usually increased for the first week. No system of hydrotherapeutics was employed, neither was there any special regulation of the diet; the food was supplied to meet the requirements of each individual case.

The method of open-air treatment carried out at Cromer is very simple. It consists in the erection of shelters, constructed so to protect the patients from rain and wind; they lie in the shelters all day, and are well provided with warm clothing.

Miss Jane H. Walker has also made a similar experiment in the same part of England, and has to some extent applied the principles of dietary which form so important a feature of the treatment at Nordrach, described in a previous article. The patients are received in a small farmhouse in the north-east of the county of Norfolk, and since 1892 she has had in all 17 patients, of whom 4 have died, 4 are still undergoing treatment, and 9 have now returned to their ordinary avocations and are doing well, as is ascertained by an interview from time to time. The treatment pursued is continuous fresh air, as perfectly carried out as can be, where patients are not under perpetual medical supervision. Bedroom windows are kept open always, and a very generous dietary is given, consisting of eggs, cream, and an abundant supply of milk. The patients take gentle walking exercise, and go out for

rides in a donkey cart. They are taken out in all weathers except a high wind. The district is considered to be very suitable for phthisical patients, the soil being very light and sandy, and drying up quickly after rain. There is a great deal of sunshine, and as the country is flat or only very slightly undulating patients can take exercise with very little fatigue.

ANTIVACCINATORS AND THE VACCINATION BILL.

[FROM A CORRESPONDENT.]

THE opponents of the Vaccination Bill are making energetic efforts to organise a further attack upon it both in Grand Committee and when it comes again before the House. For this purpose a conference has been summoned, not, as might have been expected, by the council of the Antivaccination League, but by what is called the "Gateshead Union." It may be presumed that it is the Gateshead Board of Guardians which is thus sounding the tocsin. This is a new departure for Poor-law authorities, who have not hitherto considered agitation amongst their duties. The Leicester Board of Guardians, as might be expected, are not behindhand. They have also been circularising their fellow authorities all over the country in the hope of stirring them up to resist Mr. Chaplin's Bill. Judging from the way in which their overtures have in many cases been received they have not met with much success. Still Gateshead and Leicester will doubtless find some allies. The gravamen of their complaint appears to lie in Mr. Chaplin's announcement that the Local Government Board proposes now to use the powers which it has possessed for the last thirty years to compel defaulting vaccination officers to do their duty. It is clear that this power was conferred on the Board to meet such a contingency as occurred not long after at Keighley. As its exercise involves no new legislation, Mr. Chaplin's position is impregnable, except in the event of a fresh enactment by Parliament abrogating the powers it has already conferred on the Local Government Board, which is in the highest degree improbable.

On the merits of the case the Gateshead Board are not likely to meet with much support. Their contention simply amounts to a claim to decide by local option on a matter on which Parliament has expressed a definite opinion. The opinion that vaccination is necessary and must be promoted for the protection of the public health is overwhelming, both inside Parliament and without it, and it was expressed with sufficient force in the majority of 10 to 1 by which the second reading of the Bill was carried. The attempt, therefore, to persuade Boards of Guardians to agitate against the Bill on the ground that it is an attack upon local self-government will deceive none but those who are very badly in want of an excuse to cover an attack upon vaccination itself. Mr. Pickersgill, who has been addressing a meeting of the Antivaccination League at Weston-super-Mare, could find nothing more appropriate to say of the statement of the President of the Local Government Board than that it was a parody on local self-government, and that anything so absurd or topsy-turvey had never been seen outside the realm of the comic opera of Mr. Gilbert. But Mr. Pickersgill must be well aware that the Local Government Board has very large powers for the restraint of local authorities from things which Parliament has not given them permission to do, and for compelling them to carry out duties which it has enacted they shall perform.

Mr. Pickersgill was on firmer ground when he attacked the second section of the Bill as being "contrary to every principle of criminal jurisprudence, as it struck down the first offender while it allowed the habitual criminal to go free." The object of the section, to prevent the possibility of the repeated prosecutions by Boards of Guardians, which have done so much harm to the cause of vaccination, is excellent; but the method by which it proposes to attain this object is very objectionable. If penalties are to be retained at all, the only justification for doing so is to use them as the most convenient and effective test of the solidity of the objection to vaccination. The test when applied at the first stage of the child's life in infancy need not be then repeated. But there is every reason for bringing it again into operation when the child is commencing a new stage of its existence and will be exposed to additional risks, as it is when it enters upon school life, and as it is again when it is about to leave school. The Government by so modifying their proposal to limit penalties as to restrict them to three, to be thus brought into operation at these three successive stages of the child's life, would at the same time give valuable aid to the promotion of vaccination and remove the objection to the proposal to which it is now open.

There is another point which Mr. Pickersgill has made which needs consideration.

The utility of the addition of glycerine to calf lymph has been amply demonstrated, especially in regard to increasing the keeping power of the lymph and augmenting its volume without diminishing its efficacy. In these respects it must be looked on as a laboratory expedient of considerable value. But it is perfectly possible that further research may provide us with an even better medium than glycerine. That glycerine has valuable properties in arresting the development of microbes in lymph may be regarded as well established. What is doubtful is the propriety of so inextricably associating the official practice of vaccination with the use of glycerinated calf lymph, as is done in the first section of the Act, that if a better medium than glycerine should be discovered it will require another Act of Parliament to establish it.

On the subject of domiciliary vaccination, on the effect of which Mr. Chaplin also entertains sanguine hopes, he may obtain some suggestive information from the speech of a prominent medical antivaccinator who followed Mr. Pickersgill at the Weston meeting:

"The doctors," this authority asserted, "did not like the proposal for domiciliary visits at all. They would have to go round from door to door, instead of having the children brought to them, and they would have to say, 'Please I have come to vaccinate your dear little child with glycerinated calf lymph.'—[Loud laughter.]—He (the speaker) should do his best to stir up the mothers and their tongues, to prepare them for the moment when the public vaccinator came.—[(Laughter.) A Voice: 'They will have something if they come to my house']—The doctor, perhaps, would find that the baby was out, and he would have to call again, when the same thing would again happen. The baby would never be at home.—[Renewed laughter.]—The Bill opened up no end of difficulties for the medical profession."

Mr. Chaplin will be wise if he considers carefully this candid forecast of tactics which are certain to be adopted. Would not the difficulty be to a great extent removed by the employment by the Government of the family practitioner for purposes of domiciliary vaccination?

MEDICAL PRELIMINARY EXAMINATIONS AT THE SCOTCH UNIVERSITIES.

THE Joint Board of Examiners of the Scotch Universities have issued statistics relative to the last preliminary examination for Degrees in Medicine.

From these it appears that at Edinburgh 112 candidates entered, 13 failed in all subjects, 49 passed in all subjects, 9 passed in three subjects, 17 in two subjects, and 24 in one subject. At St. Andrews 11 candidates entered, 2 failed in all subjects, 7 passed in all subjects, and 2 passed in two subjects.

At Glasgow 97 candidates entered, 11 failed in all subjects, 44 passed in all subjects, 5 in three subjects, 15 in two subjects, and 22 in one subject.

At Aberdeen 34 candidates entered, 7 failed in all subjects, 11 passed in all subjects, 3 passed in three subjects, 9 in two subjects, and 4 in one subject.

The following details apply to Edinburgh University only: English, 56 passed and 26 failed; mathematics, 71 passed and 16 failed; Latin, 44 passed and 57 failed; Greek, 10 passed and 1 failed; French, 40 passed and 32 failed; German, 8 passed and 1 failed; Russian, 1 passed. These figures afford no indication of the number of students qualified to enter the Faculties of Arts, Science, and Medicine under the new regulations, because the majority of the students now entering the University are exempted from preliminary examination by leaving and other certificates. The number of women who entered for the April Medical Preliminary was 12, for the Arts and Science Preliminary was 46, and for the M.A. Examinations 84.

ROENTGEN SOCIETY.

COMMITTEE OF INQUIRY INTO THE ALLEGED INJURIOUS EFFECTS OF X RAYS.

IT having been alleged that injurious effects on the human body have been caused by exposure to *x* rays, it was decided at a meeting of the Council of the Roentgen Society on April 5th to nominate a Committee to collect information on the subject. The following members were selected, with power to add to their number: Professor S. P. Thompson, President; Dr. David Walsh, Secretary (*ex officio* members); Mr. Thomas Moore, Dr. Barry Blacker, and Mr. Ernest Payne, Secretary to the Committee, Hatchlands, Cuckfield, Sussex.

This Committee will be glad to receive information from all workers with *x* rays of any case of injury that may have come under their notice after exposure of a patient to the rays. In order to obtain accurate information, the Committee have prepared a set of questions to which they would be glad to receive answers as complete as possible. The questions are framed with a view to elicit opinion and collect information which will show whether the injury was the result of any of the following causes:

1. The *x* rays themselves directly.
2. Some electrolytic or electrothermal action of a leakage discharge current from the leads or from the terminals of the tube.
3. Some action due to the varying electrostatic charges on the surface of the tubes.
4. Some combination of these causes.
5. Some other hitherto unrecognised kind of radiation emitted simultaneously with the *x* rays.
6. Some other cause hitherto unobserved.

A list of the questions is given below. The Secretary of the Committee will be glad to send copies to any medical man or other worker who may have information of any case about which he is willing to give particulars.

It is to be clearly understood that no names will be published connected with the information supplied, except by the distinct consent or request of those concerned.

The Committee will also be glad to receive accounts and results of any experiments that may have been tried which throw light upon the subject. They hope to be able to collect sufficient details of the cases that have occurred (which are happily not numerous) to enable them to lay the results before a general meeting of the Society before the end of the year.

QUESTIONS.—I. MEDICAL.

1. Nature of injurious effect.
2. Description of case radiographed.
3. Part exposed to rays.
4. Condition of subject.
   (*a*) Well nourished or emaciated.
   (*b*) Temperament—nervous or phlegmatic.
   (*c*) Diathesis of patient.
   (*d*) Local condition of part exposed.
5. Did the patient complain of any feeling of warmth, tingling, or other sensation during or after exposure?
6. Remarks..... Duration of effects; temporary or permanent.

II. ELECTRICAL.

7. Apparatus employed. Induction coil, voltage and ampèrage used in exciting same, or influence machine, spark length.
8. Form of tube, length from terminal to terminal.
9. Distance of tube from patient's body.
10. Number of exposures. Interval, if any, between each exposure. Duration of each exposure.
11. Situation of tube with regard to body or limb of patient, that is, position of anode and cathode.
12. What covering or garment, if any, was used?
   (*a*) Material of which it was composed.
   (*b*) Rough or smooth.
   (*c*) Colour, if dyed.
13. Remarks..... ...

DEATHS UNDER ETHER DURING 1897.

DURING the year 1897 at least 15 cases of death whilst under the influence of ether were reported in the public press. As this number is greatly in excess of the previous yearly average mortality, we were led to investigate the individual cases. By the courtesy of the several medical attendants we obtained full details of certain cases, and had hoped to be able, by carefully sifting the particulars, to arrive at some explanation of such a sudden increase in mortality. The several factors of each case, however, proved so various that no trustworthy conclusion could be arrived at. We therefore give the following brief summary of the facts in the hope that they may be useful. The details of 10 of the following cases were furnished direct to us; of the remaining 5 we have no further information than that given at the several coroners' inquests.

Case I was of intestinal obstruction, the result of malignant disease. The patient, a man, aged 53, was rather collapsed before the administration of the anæsthetic, which was given by a Clover's inhaler. He took the anæsthetic well, but while manipulation of the intestines was in progress vomited. There was no preliminary retching, and a large amount of vomit entering the trachea, the patient was suffocated. This case emphasises the necessity of emptying the stomach before operating on collapsed and debilitated subjects.

Case II was that of a woman, aged 39, suffering from ruptured tubal gestation, and in a moribund condition.

The details of Cases III and IV will be found respectively in the *Sussex Daily News*, June 7th, 1897, and the *South London Mail*, April 16th, 1897.

Case V died under chloroform, and Case VI will be found in full in the BRITISH MEDICAL JOURNAL of January 8th, 1898.

Case VII was that of a female, aged 12; the operation was for the removal of a large suppurating multilocular cyst of the broad ligament weighing about 8 lbs. Previous to the operation the patient was in fairly good condition, but had had a more or less elevated temperature for three weeks. The operation lasted thirty minutes, and about ℥v of ether, which was preceded by gas, were used. During the administration the pulse became more and more weak, the pupils kept contracted, and the breathing became somewhat shallow. The patient having been put into bed and hot bottles, etc., applied, the pulse greatly improved, but the pupil remained contracted, dilating only at the moment of death.

Case VIII was reported in the *Echo* of October 8th, 1897.

Case IX, a woman, aged 39, was submitted to an operation for the removal of a retained placenta after abortion. The condition previous to operation was very bad, temperature 104° and pulse 120. Ether alone was administered by a Rumboll-Birch gas and ether inhaler, and anæsthesia had been attained and preliminary irrigation performed, when the pulse ceased to be felt and respiration stopped. From ℥ij to ℥iv of ether were used.

Case X was one of abdominal section; ℥vi of ether were given through a Clover's inhaler.

Case XI is reported in the *Western Daily Press* of September 15th, 1897.

Case XII was an operation for relief of strangulated femoral hernia in a man, aged 37. Previous to the operation there was profuse stercoraceous vomiting; ℥vj of ether were administered from a Clover's inhaler. The patient took the anæsthetic well at first, except for some struggling, but, while passing into the stage of complete anæsthesia, some vomit was observed to come up into the mouth without straining, and respiration ceased entirely from that moment.

The operation on Case XIII, a woman, aged 60, was for removal of the appendages, together with supravaginal hysterectomy. About ℥vi of ether were given, preceded by gas. Previous to administration the patient was in an apparently good condition and the heart's action was good. At first there was a great deal of cyanosis, but after this the patient took the anæsthetic well till about half an hour before the close of the operation, when the pulse became feeble and the respiration shallow. *Post mortem* advanced fatty degeneration of the heart was found.

Case XIV was reported in the *Sussex Daily News* of December 14th, 1897.

Case XV was an attempted hysterectomy as a last resource in a case of protracted hæmorrhage in a woman of 44.

ST. BARTHOLOMEW'S HOSPITAL.—The question of space has long been a serious one at St. Bartholomew's Hospital. The present residential college has stood for many years condemned, and more extensive and convenient premises are wanted for the Nurses' Home. We understand that negotiations have been in progress for some time to purchase a portion of the site now occupied by Christ's Hospital, and, on the removal of that institution to Horsham, St. Bartholomew's will in all probability acquire the ground they so much need.

LITERARY NOTES.

A MEDICAL journal having recently referred to the author of *Hugh Wynne* as "the late Dr. Weir Mitchell," the distinguished neurologist, poet, and novelist of Philadelphia, wrote to explain that he is still alive. Our contemporary duly published the letter, but was careful to put over it the following editorial note: "We do not hold ourselves responsible for the opinions of our correspondents." Able editors cannot be too cautious. Did not one Partridge, as far back as Queen Anne's day, have the impertinence to maintain that he was alive, although some "eminent hands" had killed him in the journals of the day? For this disregard of fitness of things he was justly held up to the contempt of all right-thinking persons by Jonathan Swift.

The following is a sketch of William Harvey by a seventeenth century gossip, which we extract from *Brief Lives, chiefly of Contemporaries, set down by John Aubrey, between the Years 1669 and 1696.* Edited from the Author's MSS. by Andrew Clark, M.A., LL.D. (Clarendon Press.):

He [William Harvey] was not tall, but of the lowest stature, round-faced, olivaster complexion; little eie, round, very black, full of spirit; his haire was black as a raven, but quite white 20 yeares before he dyed. I have heard him say, that after his booke of the Circulation of the Blood came out, that he fell mightily in his practize, and that 'twas beleeved by the vulgar that he was crack-brained; and all the physitians were against his opinion, and envyed him; many wrote against him. With much adoe at last, in about 20 or 30 yeares time, it was recieved in all the Universities in the world; and, as Mr. Hobbes sayes in his book "De Corpore," *he is the only man, perhaps, that ever lived to see his owne doctrine established in his life time.* He was much and often troubled with the gowte, and his way of cure was thus: he would then sitt with his legges bare, if it were frost, on the leads of Cockaine house, putt them into a payle of water, till he was almost dead with cold, and betake himselfe to his stove, and so 'twas gonne. He was hott headed, and his thoughts working would many times keepe him from sleepinge: he told me that then his way was to rise out of his bed and walke about his chamber in his shirt till he was pretty coole, i. e. till he began to have a horror, and then returne to bed, and sleepe very comfortably.

In a letter recently addressed to the *Glasgow Herald* by Dr. William Findlay, some particulars are given concerning two medical men who were friends of Robert Burns. These were Mr. John Mackenzie, surgeon, of Mauchline, and Dr. William Maxwell, of Dumfries. The former was intimate with the poet during his residence at Lochlea and Mossgiel. He afterwards practised for many years in Irvine, and, after having attained the highest honours of the magistracy in that burgh, retired in 1827 to Edinburgh, where he died, January 11th, 1837, at an advanced age. In the year of his retirement the Irvine Burns Club was founded, and he presided at the opening dinner on January 25th. Dr. Maxwell, besides being the bosom friend of the bard, attended him in his last illness. He removed from Dumfries to Edinburgh in 1834 (nearly forty years after Burns's death), and died there in October of the same year. Dr. Findlay is anxious to learn whether any portraits of Mr. Mackenzie or Dr. Maxwell are in existence.

The following editorial deliverance, which we quote from a well known American medical journal just received, is offered for the admiration, but not for the imitation, of controversialists on this side of the water. Some of them may be disposed to envy the freedom of style with which journalistic combatants can express their feelings in the "ampler ether" of the great Transatlantic Republic.

The antediluvian editor of the ———, who for years has been running a mendicant sheet, seems to have a great fear of an insane hospital. He is protected by his antiquity both from bodily harm and from a commitment warrant. Few judges are likely to commit an old man far advanced in his dotage, whatever may be his delusion and vagaries. He may sleep as sweetly or as sourly as his ancient frame will permit. He is safe.

This elegant extract is especially interesting to us, as the organ of sweetness and light in which it appears has occasionally taken us to task for "Philistinism" and other offences. We can now bear these criticisms with greater fortitude.

The passage above cited will almost bear comparison with the following, which the *Practitioner* quotes from a French medical journal:

Mais Péan, le grand confrère, l'homme qui a le plus fait dans ce siècle pour la profession médicale, vient d'être conduit en terre dans un tombereau de fumier.—Un journaliste de la grande presse a jeté sur son cercueil quelques pelletées d'immondices particulièrement puantes. Nous croyons savoir quel est le jeanfesse qui souffle à ce gazetier ses chroniques latéro-médicales. Un jour ou l'autre on le pincera sur le fait. Il y a promesse de mariage entre un soulier et son fond de culotte."

Our monthly contemporary somewhat wickedly commends this "to writers on professional ethics, the iniquities of the Council of the British Medical Association, medical reform, the registration of midwives, and the like inflammatory questions, as a model of controversial style."

The Magazine of Medicine, a "medico-surgical literary journal" published at Atlanta, Ga., U.S.A., is probably the only medical journal in the world which has a poet among the regular members of its editorial staff. Among the "associate editors" we note the name of "Wm. Colby Cooper, M.D., poet." If we were to confess that we had never heard the name of this medical bard before, we should doubtless have "Whom not to know argues oneself unknown" quoted against us; we therefore think it prudent like Brer Rabbit to "lie low and say nuffen." The poet can speak for himself. One day when the divine afflatus blew hot and strong upon him a strange thing happened—if we may be forgiven a phrase which overuse has made threadbare. He was carried away

> On, on, out in planet-isled space till at last
> A crystalline bound burst in sight
> With star-circled portal, high-vaulted and vast,
> All glowing with iridal light.
>
> And I caught, in the instant the gates sprang ajar,
> The glimpse of a glittering throng,
> And there fell on my hearing from hosts, near and far,
> The refrain of a triumphant song.
>
> 'Twill haunt me for ever, through pleasure and pain
> That song from Away and Above,
> With its sweet and its solemn and sacred refrain:
> The Spirit of Beauty is Love.

We do not deny it. But as Mr. Weller, senior, said of matrimony, Was it worth while to go through so much to learn so little?

It is announced that a new edition of the official Russian *Pharmacopœia* will shortly be published, the previous issue being completely sold out.

A correspondent of *La Chronique Médicale* points out that the word "microbe" made its first official appearance before the scientific world in a note presented to the Académie des Sciences by M. Sédillot in 1878 (*Comptes Rendus de l' Acad. d. Sci*, t. lxxxviii, p. 634). The author, before using the word, seems to have had some doubt as to its legitimacy, and he consulted Littré, the great philological oracle of that day in France. Littré tried to quiet Sédillot's scruples in the following letter, dated February 26th, 1878:

Microbe and *microbie* are very good words. For the designation of the animalculæ I should give the preference to "microbe," in the first place because, as you say, it is shorter, and in the next place because it leaves *microbie*, a feminine substantive, to designate the state of a microbe.

The word evidently incurred the disapprobation of the "unco' guid" of philology. Their pedantic objections were brushed aside by Littré in a second letter, dated May 13th, 1878:

It is very true that *microbios* and *macrobios* signify in classical Greek "shortlived" and "longlived;" but as you justly remark, it is not a question of classic Greek usage, but of the use which our language makes of Greek roots. Now the Greek tongue has *bios*, life, *bioun*, to live, *bious*, living, the root of which may very well figure under the form *bie* or *be*, with the sense of "living" in "aërobie," "anaërobie," "microbe." My feeling is not to reply to the criticism, and to let the word defend itself, which it will no doubt do.

The originals of these two letters were given by M. Sédillot to M. Pasteur, in whose possession they remained till his death.

In the Philadelphia *University Medical Magazine*, Dr. Charles W. Dulles calls attention to the following passage which occurs in Varro's *De Re Rustica* (Lib. i, Cap. xii):

Advertendum etiam, si qua erunt loca palustria et propter eadem causas et quod arescunt et quod in iis crescunt animalia quædam minuta quæ non possunt oculi consequi et per aera intus in corpus, per os ac nares, perveniunt atque efficiunt difficiles morbos.

This, Dr. Dulles points out, "contains an interesting anticipation of the theory that disease is due to infection by parasitical organisms, invisible to the naked eye, then conceived as belonging to the animal kingdom." The date of Varro's work was about B.C. 37.

"CHRONICS" IN FRENCH MEDICAL SCHOOLS.—The Société de la Gironde has passed a resolution to the effect that medical students who have failed a certain number of times in their examinations, or who have been convicted of a disgraceful offence, should not be allowed to pursue their medical studies.

SPECIAL CORRESPONDENCE.

PARIS.

The Repression of Tuberculosis.—The Shepherd-Slayer.

The prophylaxis of tuberculosis is as absorbing a subject to the Paris Academy of Medicine as that of depopulation. A late member of the Academy, Professor Verneuil, founded the Congress for combating tuberculosis. Professor Grancher is one of the Commission, which includes MM. Roussel, Bergeron, Besnier, Brouardel, Colin, Magnan, Monod, Motet, Napias, Nocard, Proust, Roux, and Vallin. Professor Grancher has drawn up the report of the results of the work done by the Commission. The following is a summary of its conclusions: Pocket spittoons, containing 5 per cent. coloured carbolic solution, are to be used. Washing with wet dusters should replace sweeping. Milk should be boiled no matter where it is obtained. In private cases, as soon as tuberculosis declares itself, the physician is urged to enforce the observance of every prophylactic measure; he should also try to make an early diagnosis of tuberculosis, and arrest its development by prophylactic means. Soldiers are to be sent on sick leave before Koch's bacillus is detected in the sputa. When it is detected the patients are to be discharged from military service and restored to their families. Schoolmasters, factory owners, the heads of commercial establishments are called upon to carry out rigorously the directions formulated in the report. In hospitals tuberculous patients are to be treated in isolated pavilions; the wards are to be kept in an antiseptic condition, sweeping is to be discontinued, and the floors cleaned. The nurses are to be better paid, recruited from a better class, and to be entitled to a retiring pension. A special sanitary nursing body is to be organised. The Academy approves of the laws already proposed concerning tuberculous meat. The total destruction of tuberculous animals should be practised only in those rare cases where tuberculosis is generalised. Farmers are recommended to use tuberculin for the early diagnosis of the first stage or latent tuberculosis, and to kill at once for butcher's meat animals which are attacked but not dangerous as food. The Academy has appointed a permanent commission entitled Commission de Prophylaxie de la Tuberculose. The Public Assistance will shortly distribute manuals containing the directions embodied in Dr. Grancher's report.

Dr. Lacassagne, Dr. Pierret, and Dr. Rebatel, directed by the criminal court of Lyons to examine Vacher, the shepherd slayer, have sent in their reports. Dr. Pierret, head physician of the Brou Asylum, gathered information concerning that portion of the prisoner's life which preceded the numerous crimes of which he stands accused. Dr. Pierret concludes that it is very difficult to discover hereditary taint in the antecedents of the prisoner. Vacher's infancy was characterised by a peculiar condition of mind which became more and more marked as he grew older. Whilst he was in the army he was the terror of his fellow-soldiers, who slept with their bayonets in their beds. When he tried to kill his betrothed, all the circumstances were taken into consideration, and he was unhesitatingly confined as a lunatic at the Dôle Asylum. At St. Robert, where he was confined after being at Dôle, he improved. At the Dôle Asylum he was considered to be a dangerous lunatic; but, according to the custom at the St. Robert Asylum, no notes of his case were forwarded to the authorities of that asylum. Dr. Pierret concludes that Vacher's moral responsibility is limited. Dr. Lacassagne, who investigated the criminal period of Vacher's life, concludes that he is entirely responsible. His conclusions are based on the following reasons: In all the crimes admitted by Vacher and those imputed to him there is to be observed a way of setting about his crimes that does not indicate madness; on the contrary, he always took care to disguise himself previously, to disappear afterwards, or to disfigure himself; he skilfully avoided coming in contact with the gendarmes after committing his crimes. Dr Rebatel studied Vacher whilst he was at the St. Paul Asylum of Lyons. Dr. Rebatel believes Vacher to be a skilful *simulateur* and excessively violent. When Dr. Rebatel asked embarrassing questions, such a ferocious look came into Vacher's eyes that Dr. Rebatel was not free from fear. Dr. Rebatel believes in his responsibility, "but perhaps slightly attenuated." Thus two of the experts concluded that Vacher is responsible. All three have carefully discussed the three reports drawn up by themselves. The result is that Vacher is declared to be "responsible to a limited degree."

BERLIN.

Medical Courts of Honour.—Professor Schweninger and the Profession.—The Examination of Tuberculous Sputum.—Sanatoria for Tuberculosis.—The Recent Milk Conference.—The Berlin Home-Nursing Society.

On May 14th the Berlin-Brandenburg "Aerzte-Kammer" (representative body of medical men) held a meeting in Berlin. The first subject of debate was once again the projected Bill for the establishment of medical courts of honour. Dr. Schwalbe, the referee, advocated acceptance of the Prussian Minister's draft, as it contained important concessions, and as there seemed little hope of obtaining more, if it were sent back another time. He moved, therefore, that the Minister be requested to bring the Bill before the Prussian Diet. The majority of the meeting, however, were not of his opinion, and after a debate a vote was passed stating that the Berlin-Brandenburg Aerzte-Kammer could not accept the draft if it did not expressly declare that all doctors carrying on private practice, that is, Government medical officers and military surgeons too, were recognised as coming under its jurisdiction, and that there would be entire immunity in all matters connected with politics, religion, and science.

A second subject before the meeting was of a more personal character, namely, "The position to be taken by the Aerzte-Kammer with respect to Professor Schweninger's attacks on the profession." In public lectures given in Berlin, Vienna, and Munich ("Medical Causeries," as he called them), Professor Schweninger has repeatedly spoken of doctors and their doings in a way that many of his colleagues considered derogatory, and they had petitioned the Committee of the "Aerzte-Kammer" to appeal to the medical faculty of the University to intervene in the matter. This was not feasible, for technical reasons, but the Committee had decided to lay the whole matter before the meeting, and have it threshed out in open debate. Before the subject was entered on, however, Professor O. Liebreich rose, and moved that it should be withdrawn from the order of the day. In words which showed alike chivalrous feeling and admirable good sense, he reminded the meeting that to judge without hearing the accused could hardly be considered a fair proceeding, and said that the only possible course under the circumstances would be an appeal from the Committee of the "Aerzte-Kammer" to the Prussian Cultus Minister. Liebreich's proposal, however, was negatived, and the Reporter of the Committee—Dr. Marcuse—was allowed to introduce the subject, which he did in such a way as to call forth the dissatisfaction of a large portion of the meeting—a dissatisfaction to which Professor Liebreich once more gave voice. He condemned censure based on mere newspaper reports, and spoke of Professor Schweninger as a man whose abilities could not be denied, even though one might disagree with his methods. He said that the "Aerzte-Kammer," by its attitude in this affair, had shown a want of enlightenment worthy of the Middle Ages, and that they would find that the only practical effect would be to make Dr. Schweninger more *en vogue* than ever. Professor Mendel said a few words in a similar sense, and finally the meeting without further discussion passed to the order of the day.

The Central Committee of the Berlin sick clubs, recognising the advantages of early diagnosis in cases of phthisis, have petitioned the Prussian Cultus Ministry to allow sputum examinations to be made for the sick clubs by the bacteriological institutes of the Berlin University. The Ministry has granted the request, and has ordered the institute for infectious diseases (the Koch Institute) to undertake the examinations. Arrangements are to be made for regulating the transmission of the sputum to the institute, and of the diagnosis from the institute to the doctor in attendance with the greatest expedition possible.

From all parts of Germany come accounts of projected tuberculosis sanatoria, showing the quickened interest of the

population in this important question. Thus meetings are being held in Essen and neighbouring towns of the Rhine district for the purpose of raising funds for a large sanatorium for lung diseases; and near Erfurt a similar sanatorium is to be erected by the "Johannitter" Knights from funds left to the order by the will of the late Baron v. Seebach.

As a result of the late Milk Conference in Berlin, a set of regulations containing detailed directions for sanitary and hygienic precautions to be adopted in dairies as well as by milk salesmen, has been submitted to the Berlin magistrates for sanction, and will probably come into force early in June.

One of the youngest but most useful charitable institutions of Berlin has just completed its first year of working life; it is the Home-Nursing Society, a branch of the Berliner Frauen-Verein. The object of the Society is to supply sick or disabled women of the poorer classes with an attendant, who, though not a trained nurse, is able to look after the comfort of the invalid, and at the same time keep the household in order, cook for the family, etc. These attendants are selected from the working classes, widows and single women by preference, and it is easy to understand how valuable their aid must be in the numerous cases where otherwise the wife and mother, too ill to fulfil her household duties, herself neglected, and worried by the thought of a neglected family, has a poor chance of recovery. In cases where trained nurses, midwives, etc., are required, their work does not clash at all with that of the attendants provided by the Home-Nursing Society. The report states that in this, the first year, the nursing attendants have been employed for 5,130 days in 514 families; 212 cases were confinements.

Professor Robert Rieder, one of the head surgeons of the University surgical clinic at Bonn, is about to migrate to Constantinople, where he has accepted the chair of surgery at the Sultan's Academy for Military Surgery.

MANCHESTER.

Owens College Summer Session; Entries.—Probable Reopening of Infirmary Site Question.—Manchester Corporation and its Sewage.—Handsome Bequests to Local Institutions.

THE summer session at Owens College is now in full swing, and the total attendance, we believe, considerably exceeds that of last year. While the greater number of undergraduates are preparing for the examinations of Victoria University, a considerable number are also in training for the degrees of London and other universities, and for the Conjoint Board diploma. The only change in the staff is in the department of hygiene, where Dr. C. Niven, the Medical Officer of Health for Manchester, has succeeded Dr. Paget as lecturer on that subject. A fair number of candidates have entered for the D.P.H. of Victoria University.

One hears again, as it were, the far-off rustle of the infirmary site question. It is stated that a new proposal may be brought forward that the city buy the whole site of the present infirmary with a view to erect thereon corporation picture galleries and a free library. So much has been heard as to this question that it will be well to wait for definite information.

The Manchester Corporation is beset with great difficulties in regard to its sewage. The history of this question is of some importance. In 1888 the Manchester Corporation put forward plans by which the sewage was to be dealt with by land filtration at Davyhulme, and on the strength of the evidence given by the officials, by the chemist, and others of eminence, the Local Government Board, after a long inquiry before a civil engineer appointed by them, allowed a loan to be contracted for the purchase of land for the purpose, and it was proved by those witnesses that the land at Davyhulme and thereabouts was eminently fitted for the purpose. A portion of the land was bought and works were completed in 1894, and the sewage was gradually brought to those works. In 1895 a change seems to have come over the plans of the Corporation, for in this year Sir Benjamin Baker reported in favour of a culvert scheme, and the Corporation determined on that scheme. This scheme was rejected by the ratepayers in 1897. A new committee was appointed, and it brought forth a new scheme—namely, filtration by bacterial beds. The Court was again asked to extend the time for the construction of sewage works, it having already extended the times by successive orders from September, 1896, to May 11th, 1898. The stipendiary magistrate, in giving the decision of the Court, pointed out that the scheme as such was not absolutely adopted by the Council, but rather was the whole question under discussion by the City Council, so that in the view of the Court the scheme was purely tentative. In the meantime, after the establishment of four acres of filter beds, the sewage (the solids precipitated) of 600,000 people was to run into the canal, that is, into an almost stationary body of water, unpurified. This has been going on for at least five years. The Court was of opinion that the Corporation was no nearer a final settlement of the question than they were in 1893. If the Court were to prolong that period it would be stultifying itself and the order made by it, with the consent of the parties, in 1896. The Court therefore unanimously and unhesitatingly refused the application with costs. This decision carries with it a penalty for each day sewage is discharged into the canal. The Rivers Committee of the City Council resolved unanimously to appeal to the Salford Hundred Quarter Sessions against the decision above stated.

The sum already received for Hospital Saturday is £1,521, against £1,492 for the corresponding period of last year. The following bequests and legacies were announced last week: The late Mr. E. O. Bleackley assigned £500 to each of the following institutions: The Manchester Infirmary and Owens College. Mr. John Whitehead, of Bury, has left, amongst others, the following legacies: Royal Infirmary, £300; St. Mary's Hospital, £100; Adult Deaf and Dumb Society, £50. At the meeting of the Southport Infirmary Committee held last week the announcement was made that under the will of the late Miss Garton, of Lord Street, Southport, several local charities would receive £1,000 each, and the residue of the estate would be divided between Southport and St. Helens Infirmaries. It is expected that the half of the residue will exceed £20,000, and may even reach £30,000. Miss Garton contributed £1,000 to the building of the Southport Infirmary.

CORRESPONDENCE.

MONEYLENDING.

SIR,—I have read with deep interest your admirable leading article on the subject of moneylending, summarising as it does the precise position of matters at this moment. I have, unfortunately, abundant evidence in my possession that large numbers of medical men fall an easy prey to the wiles of the usurer, and the trick you describe in connection with three months bills is resorted to with astonishing success.

I have fought and won several of such cases, but, for obvious reasons, it is difficult to get medical men and clergymen to come forward and face the publicity of the Courts. Indeed, it is the knowledge of this fact which enables the moneylender to levy extortion and blackmail with absolute impunity.

May I add that if any of your readers will acquaint me with any instances of extortion which may have come under their notice, or give me particulars of any difficulties in which usurers may have involved them personally, I shall be happy to render them every assistance in my power. Such communications should be sent to me at the offices of this journal, and will, I need hardly say, be treated as strictly confidential.—I am, etc.,

THOMAS FARROW,
The Councillor and Guardian, 29, Old Queen Street, Westminster.

May 18th.

THE PROSECUTION OF REGISTERED PRACTITIONERS BY THE GENERAL MEDICAL COUNCIL.

SIR,—The recent prosecution by the General Medical Council of Mr. H. K. Hunter, L.S.A.Lond., of Gamlingay, Cambridgeshire, for assuming the titles "Physician and Surgeon" must have come as a surprise to most members of the profession. It undoubtedly seems strange that the Council should use its funds in prosecuting a registered medical practitioner, whilst hosts of unqualified persons are permitted to practise medicine and surgery with impunity.

After reading the report of the case of the proceedings in the *Times* of April 8th last, I communicated with the Registrar of the General Medical Council, asking for information as to who ordered the prosecution, as I had no recollection of the facts of the case having been brought before the Council. From him I learnt that the General Medical Council when *in camerâ* on November 25th, 1897, directed, on the recommendation of the Penal Cases Committee, the prosecution under Section XL of the Medical Act of 1858 of certain persons, amongst whom was Mr. H. K. Hunter.

I shall feel obliged if you will permit me to state in your columns that I had not the slightest idea that the name of a registered practitioner was among those recommended for prosecution by the Penal Cases Committee. I was under the impression that the persons reported upon by the Committee were those only whose names had already been removed from the *Medical Register* and still continued to practise and use medical titles. Had I known that the name of a registered practitioner was included in the list, I should have dissented from the recommendation. I have reason to believe that most of the other members of the Council, the Penal Cases Committee excepted, were likewise ignorant of the fact that Mr. Hunter was a registered practitioner.

This, however, I freely confess, does not relieve us of our responsibility as being parties to the action. We ought not to have assented to the recommendation of the Penal Cases Committee without having had all the facts of each case before us. That the Council should have been placed in such an unfortunate position indicates that our methods of procedure are faulty. Instead of referring cases reported to the Council for prosecution to a small committee, it would in my opinion be far better that the cases should be considered by the Branch Council for the division of the kingdom in which the persons complained of practise. It is, therefore, my intention at the forthcoming session of the Council to propose that the Penal Cases Committee be not reappointed, and that penal cases be hereafter referred for consideration and report to the respective Branch Councils. Should this proposal be adopted, we may hope that the law officers of the Council may not again be called upon to prosecute a registered practitioner under similar circumstances.—I am, etc.,

George Brown,
Direct Representative for England and Wales.

Gibson Square, Islington, May 16th.

THE VICE-PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

Sir,—I desire to intimate, through the British Medical Journal, that I have relinquished the intention which I had formed to seek the Vice-Presidency of the College at the approaching election in June next. When I expressed to the Fellows my determination to offer myself for that office, I felt that my long service to the school and College as an examiner and a councillor, and my seniority as a surgical teacher and as a hospital surgeon might reasonably deserve recognition by the Fellows, and that I might hope to be honoured with election to the office which I seek. Unhappily, personal and domestic circumstances prevented me from giving prominence to my candidature until others had occupied the ground in some degree; and as a contest is extremely distasteful to me, and in my opinion is not to the advantage of the College, I have thought it best to refrain from presenting myself for the vice-chair until the next vacancy may occur. I desire, however, to assure the Fellows that under any circumstances I shall do so when that time arrives, and that meanwhile I shall hope to retain my seat on the Council for re-election, to which I now offer myself. With this assurance before them, I trust my friends and supporters will not be induced to pledge their votes to any other candidate for a succeeding vice-presidency.—I am, etc.,

L. Hepenstal-Ormsby, M.D., F.R.C.S.I.

Dublin, May 16th.

THE ALKALINITY OF THE BLOOD IN GOUT.

Sir,—Apparently Dr. Haig has failed to carefully perus my paper on this subject before criticising it, since he writes in your last issue of my being "satisfied with testing the effects of an attack of gout on the alkalinity of the blood, while giving drugs the influence of which on that alkalinity he cannot really estimate." The essence of the paper was to show that the alkalinity of the blood in the case of gout recorded, which was determined before treatment began and during treatment, did not at any time appreciably differ from that of normal blood. In the paper in question the figures are plainly given, and show that before treatment began the alkalinity of the blood was 0.167 on the scale given, whilst during treatment the average alkalinity was between 0.166 and 0.167. These figures show conclusively that the attack of gout had not depressed the alkalinity of the blood, and that the drugs given did not raise the alkalinity of the blood, and therefore completely disprove Dr. Haig's assertion that I was giving drugs the influence of which on the alkalinity of the blood I could not really estimate.

In my letter published in the British Medical Journal of May 7th last, I stated that "Dr. Haig reiterates his view, which is based on no experimental evidence whatever, that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urate out of solution." Dr. Haig replies to the effect that it is true that he has not produced any chemical experimental evidence of his own, but that the evidence of others has been amply sufficient to explain his results. It will interest many of your readers if Dr. Haig will produce, or give references to, this "evidence of others" that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urate out of solution. Until Dr. Haig does that I maintain the accuracy of my statement that such a view is based on no experimental evidence whatever. On the other hand, I have produced experimental evidence which clearly points in the opposite direction.

May I be permitted to point out that I have never attempted, and therefore cannot have failed, as Dr. Haig suggests, to give an explanation of the reason why abstention from animal flesh and tea secures Dr. Haig exemption from his sick headaches? What I have pointed out is, that Dr. Haig is in error in assuming that the production of the headache is due to the introduction into the system of ready-formed uric acid in such articles of diet, by drawing attention to the fact that his assumed estimations of uric acid in those articles of diet were not necessarily estimations of uric acid at all.

I will not occupy your space by discussing the delightful problems of the structure and equilibration of pyramids with which Dr. Haig concludes his letter, but I should like to point out, as I have done elsewhere, that in assuming that uric acid is the causative factor of a vast number of diseases possessing no common relationship, Dr. Haig is, in my opinion, endeavouring to make a huge mountain (or pyramid if he prefers the term) out of a very small molehill.—I am, etc.,

Weymouth Street, W., May 14th. Arthur P. Luff.

THE PATHOLOGY OF GENU VALGUM.

Sir,—In 1892, in the Children's Section of the Nottingham meeting of the British Medical Association, I read a paper entitled "Over growth of the Inner Tuberosity of the Tibia as Cause of Genu Valgum, independent of Elongated Inner Condyle of the Femur," basing my observations on three cases in my own practice in which a wedge operation on the head of the tibia was attended with success.[1]

In the British Medical Journal of May 29th, 1897, Mr. Morton published a paper on this subject, followed by one by Mr. Footner, of Tunbridge, in the Journal of December 4th, 1897. Mr. Footner had not seen my paper, as courteously acknowledged by him on sending him a reprint. I presume Mr. Morton must have forgotten it, as he was present at the meeting and took part in the debate.

All who saw my cases agreed that the femur was not involved. Subsequently I had a similar very successful case. These were shown at the British Medical Association meeting in Bristol, in 1894. I mention this to show that the deformity was recognised by me ten years ago, my first operation being in January, 1889. Should any gentleman not have access to the journals quoted, I shall be pleased to send him a copy of my paper. I consider any cutting operation on either of the bones unneces-

[1] The *Provincial Medical Journal* of January, 1893, and an abridgment in the British Medical Journal of February 18th, 1893.

sary, as a rule, in children under 3 or 4 years of age, but after that period osteotomy offers the best chance of speedy and complete recovery for the majority of children affected amongst the poor, who have neither time nor intelligence to give proper attention.

A straightened limb, with support for a reasonable time presents very little chance of recurrence of the deformity. I have so often experienced difficulty in getting appliances to restore the limb to its normal position, that in children over 4 I rarely attempted it unless the case was under my constant supervision. Formerly I adopted with success in older children the application of plaster-of-paris bandages, renewing them frequently, thus gradually straightening the limb. But the drawback was the trouble to the patient thus deprived of the use of his legs for a much longer period than by osteotomy. Manual osteoclasis for ordinary genu valgum from femoral deformity I have not found successful as a rule. I succeeded in two cases, but in another the operation set up synovitis so that I discontinued it. In some hands it seems to answer well, but I consider the cutting operation the safest and best except in very young children. Ordinary curves of the tibia do not, as a rule, require removal of a wedge. For moderate "bow legs," a padded splint for the inside of the leg, with a curved iron peg to fix into the heel of the boot, is a very useful and cheap appliance.—I am, etc.,

JOHN EWENS,
Bristol, May 10th. Consulting Surgeon to the Bristol Royal Hospital for Children and Women.

SIR,—Although I do not wish to take up much of your valuable space by the correspondence between Mr. Jackson Clarke and myself on the subject of genu valgum, I shall be glad if you will allow me briefly to reply to some points raised in his last letter.

I am sorry to say I wrote the word "articular" for "epiphysial," but I did not for a moment think Mr. Jackson Clarke was writing of the articular cartilages, which are of course too thin to be of any importance in the production of genu valgum. But I must say I very much doubt if the epiphysial cartilages in rickets are as soft as Mr. Jackson Clarke states, except in quite rare cases.

We cannot get sufficient evidence of the pathology of genu valgum in the *post-mortem* room. The opportunities for a thorough *post-mortem* examination of cases of genu valgum (which must include examination of the whole of the bones of the lower limb cleared of soft tissue, so that we may see their exact outline) are not sufficient for any surgeon to investigate the subject thoroughly in this way, and hence the great discrepancy as to the pathological changes. For instance, until I began to take skiagraphs of these cases the very marked general curve of the fibula was not described, and yet it was present in all my cases.

It has been, of course, a well-recognised fact that there is a deformity in the upper end of the tibia in certain rare cases of genu valgum, and this statement will be found in the ordinary textbooks of surgery. When I made my first communication to the BRITISH MEDICAL JOURNAL,[1] some surgeons stated in letters in the JOURNAL that they had observed such a condition, but I then pointed out that what we wanted to know was, if it was rare, or the condition commonly present in genu valgum, and I suggested that skiagraphs should be taken to determine this. This evidence I have now myself been able to provide by the skiagraphs of six consecutive cases, which all show that the deformity commonly lies in the tibia and fibula, and not in the femur at all.

There is one objection which might be raised to my evidence—but has not been—and that is, that my skiagraphs do not show the outline of the epiphysial cartilage, and therefore are not evidence that there is no elongation of the internal condyle. But if there had been, then the whole tibia would have been tilted outwards, and that this bending out only takes place below the head of the tibia is plainly seen in all the skiagraphs. Moreover, the change in the lower end of the femur is generally believed to be not a simple enlargement of the internal condyle, but an excessive growth at the inner part of the diaphysis pushing down the epiphysial cartilaginous part of the condyle, hence its supposed elongation rather than general enlargement. That this is not the case the skiagraphs clearly demonstrate. I am sorry it has not been possible to reproduce them in my paper as clearly as they are seen in the prints, but I hope to show them all at the Edinburgh meeting of the Association.

Mr. Jackson Clarke maintains that it is not necessary to keep children off their feet, but that the application of splints is alone required, and that by their means 90 per cent. of cases are cured. So many surgeons believe that it is needful to keep children off their feet, and it seems so obvious that the pressure on the bones in walking will tend to increase the deformity that I need say no more about it. With regard to the value of splints I have already written at length, and that 90 per cent. can be cured by them alone I very much doubt.—I am, etc., CHARLES A. MORTON.

Clifton, May 15th.

SIR,—There seems at last to be a probability of the locality of the deformity in genu valgum being generally recognised, but it is sixteen years since I pointed out the fact that in the majority, if not in all cases, the deformity is in the tibia and not in the femur. This opinion was based upon clinical observation, and it has since been verified by the examination of morbid specimens in museums, and more recently by the Roentgen process. I have, however, met with a few instances of enlargement of the internal condyle of the femur, but this deformity is probably very rare. With regard to treatment, if the plan of using splints which I advocated at that time[1] were thoroughly carried out, 95 per cent. of the children with genu valgum, not exceeding 10 years of age, could be cured without keeping them off their feet for a single day, and without causing abrasions or pain.

I have allowed the large proportion of 5 per cent. for extraordinary deformities, and I have given a limit of 10 years, although a great many older children can be cured by this means. In the majority of cases no inconvenience will be caused, but when the deformity produces a separation of the ankles to the extent of 5 or 6 inches or more, then some little trouble may be experienced by the child in walking at first. The most important points are: (1) The pressure must be firm, but not painful; (2) the pressure must be continuous—that is, kept up night and day—although the splints can be taken off at any time for washing; (3) the knees must be kept extended. Many a patient has been brought to me wearing elaborate and complicated instruments which have been absolutely useless, chiefly on account of the knees being left free to bend.—I am, etc.,

Queen Anne Street, S.W., May 9th. NOBLE SMITH.

*** We shall be unable to allow further space to correspondence on this subject.

TREATMENT OF TUBERCULOUS DISEASE OF THE BLADDER.

SIR,—In the report of the proceedings of the Medical Society of London of May 9th, 1898, published in the BRITISH MEDICAL JOURNAL of May 14th, I am credited with having, in the course of my remarks on Mr. C. Mansell Moullin's paper on Tuberculous Disease of the Bladder, made the following statement: "He (Mr. Freyer) challenged the author's view that suprapubic cystotomy was without risk, and referred to the experience of Barling of Birmingham, who had lost 20 cases out of 40 or 50 children operated upon in this way for stone in the bladder." What I did say was that Mr. Barling had published in the JOURNAL[2] statistics of between 40 and 50 suprapubic cystotomies for stone in children, performed in twelve large hospitals in London and the provinces, showing the appalling mortality of about 20 per cent. Will you kindly insert this correction in the next issue of the JOURNAL?—I am, etc.,

Harley Street, W., May 14th. P. J. FREYER.

[1] BRITISH MEDICAL JOURNAL, May 29th, 1897.

[1] *Surgery of Deformities*, 1882.

[2] BRITISH MEDICAL JOURNAL, May 5th, 1894, p. 959.

THE United States War Revenue Bill provides for the taxation of patent and secret proprietary medicines, perfumery and cosmetics, at the rate of 1 cent for every 25 cents of the selling price. It is also proposed to tax chewing gum, mineral waters, and wines of all kinds.

THE Treasurer of the Middlesex Hospital has received a donation of £250 from the Goldsmiths Company.

Obituary.

JOHN ALCOCK, M.R.C.S.Eng., L.S.A., J.P.

We briefly announced last week the sudden death of Mr. John Alcock, of Burslem. He had been in his usual health and had left home to pay his ordinary visit to the Hospital on May 7th. On his return he suddenly fell near his own house, and expired immediately. His friends were aware that he suffered from grave heart disease, and that he had had previous warnings that the end might come suddenly. This, however, did not deter him from pursuing his usually active life, and devoting himself to his professional and social duties. John Alcock, who was born in 1833, was the son of Mr. Samuel Alcock, who founded the Hill Pottery at Burslem. He was educated at the Newcastle Grammar School and the City of London School, and matriculated at the London University. He had first entered his father's manufactory, but finding the work uncongenial, he was articled to Mr. Samuel Mayes Turner, of Newcastle-under-Lyme, Surgeon to the North Staffordshire Infirmary. The pupil of a hospital surgeon in those days held a position unknown to the modern student, and had opportunities of acquiring experience in those minor details which help so much not only to make a practical surgeon, but to develop the highest professional and personal qualities. Young Alcock made excellent use of his opportunities, and subsequently went to King's College Hospital, where he had a very successful career and became an Associate. In 1857 he obtained the diplomas of M.R.C.S.Eng. and L.S.A.Lond., and was appointed House Surgeon to the North Staffordshire Infirmary. Subsequently he commenced practice in Burslem, and in 1865 was elected Honorary Surgeon to the North Staffordshire Infirmary. This position he filled with the utmost assiduity and unfailing conscientiousness to the day of his death. He was the first Honorary Surgeon to the Haywood Hospital, Burslem, the establishment of which he was largely instrumental in securing. He was a Governor of the institution, and lost no opportunity of maintaining the best interests of the profession, while keenly alive to the welfare of its patients. As a surgeon he was accurate in diagnosis and skilful as an operator, and by his kind and sympathetic manner gained the confidence and esteem of all his patients. Both in private and professional life he was highly respected and beloved, and his charm of manner endeared him to all, and not least to his professional colleagues. He gave active support to every benevolent scheme, and was one of the principal founders of the Burslem Nursing Institute, and laboured indefatigably in his position as chairman to promote its usefulness. He was a Conservative in politics and an ardent Churchman. He was a justice of the peace for the county of Stafford, and in 1890 was President of the Staffordshire Branch of the British Medical Association, in the work of which he took an active part. He was laid to rest in St. Paul's Churchyard, Burslem, on May 11th, and the close of his active, useful, and unostentatious life has called forth universal expressions of sympathy.

Surgeon-General JAMES IRVING, M.D.,

Indian Medical Service (Retired).

This officer died at Clifton on May 3rd at the age of 75. He was born in Edinburgh in 1822 and after graduating in the University of that city in 1843, entered the Bengal Medical Service in 1847. He attained the rank of Deputy-Surgeon-General in 1874, and retired with the honorary rank of Surgeon-General on December 13th, 1879. He served with distinction throughout the Indian Mutiny. Most of his executive service was spent in the North-West Provinces, where he held important civil charges. For many years he filled the responsible office of Civil-Surgeon of Allahabad, and gained a high reputation as a skilful physician and surgeon. Under a somewhat testy manner he concealed a kindly disposition and most charitable heart, and his advice and aid were eagerly sought and highly valued by those in sickness or trouble. He was an observant man and hard worker, and contributed several papers to the medical press, the best known being Observations on the Palsy caused by the Vetch (Lathyrus Sativus).

His administrative life was spent in Bengal. He was the first Surgeon-General of the combined provinces of Bengal, Behar, and Oressa when the separation took place in 1878 between military and civil medical administration. His work in this capacity was characterised by competence, independence, and shrewdness. Since his retirement he has lived a quiet life, devoting himself to labours of charity and kindliness. He was emphatically a conscientious, good man, able withal, and devoted to his profession.

DAVID GARNETT HURTER, M.B., B.Ch.Victoria,

House-Physician in the Royal Infirmary, Liverpool.

We regret to have to record the early death of David Garnett Hurter, which took place at the Liverpool Royal Infirmary on May 9th. Mr. Hurter was a native of Schaffhausen in Switzerland, where he was born in 1875. In October, 1892, he became a student of University College, Liverpool, and the five years of his student career were marked by steady devotion to his work. He gained numerous honours and prizes, and won silver medals in anatomy, medicine, and forensic medicine. He was *proxime accessit* in the examination for the Derby Exhibition, and obtained his M.D. degree with honours in July, 1897. Last October he was appointed Dr. Barr's House-Physician in the Royal Infirmary, and was about to assume the duties of House-Surgeon to Mr. F. T. Paul, when his fatal illness laid him low. The circumstances of his death were peculiarly pathetic. About two months ago he lost his father, Dr. Ferdinand Hurter, after a few hours' illness, and some time afterwards was himself laid up with a severe attack of influenza. With his usual enthusiastic devotion to work, he did not ask for a holiday, but continued his duties in the wards, and worked especially at Widal's test for the recognition of enteric fever.

On April 25th he became seriously ill, and his malady was soon recognised as enteric fever. There was great prostration almost from the first, and he suffered all along from the most persistent vomiting, which made it impossible for him to retain sufficient nourishment, and which resisted all the efforts of the staff of the infirmary to restrain. He finally succumbed to an attack of intestinal hæmorrhage, which appeared about the eighteenth day of the disease.

It is probable that, as he himself believed, he contracted the fever while studying Widal's reaction, and he died the victim of his devotion to science and duty.

He was beloved and esteemed by all who knew him, and those who were associated with him as teachers and colleagues anticipated an honourable and perhaps distinguished career for him. He was an enthusiastic lover of the mountains of his native country. His untimely death has cast a gloom of sadness over the medical school, and especially the Royal Infirmary, where he had endeared himself to all with whom he came in contact.

C. HERBERT HURST, Ph.D.

Five years ago we had to chronicle the tragic death of Professor Milnes Marshall, and to-day we regret to have to announce the untimely death of his former able assistant and coadjutor Dr. Hurst, which occurred at Dublin on May 10th. Dr. Hurst was an alumnus of the Manchester Grammar School, and afterwards he studied Biology under Professor Huxley with marked success. He entered Owens College as a student in 1881, and in 1883 he was appointed Assistant Lecturer and Demonstrator under the late Professor Milnes Marshall. These posts he held for eleven years, and he fulfilled the duties of his office with conspicuous success. Dr. Hurst was essentially a laboratory man. All details of laboratory work were perfectly familiar to him, and he proved a most excellent organiser and teacher. With Professor Marshall, he produced the well-known *Textbook of Practical Zoology*, a work which has become not only familiar, but almost indispensable to teachers and students of practical zoology.

In 1889 Dr. Hurst studied at Leipzig, where he produced a valuable monograph on the gnat, for which he was awarded the degree of Ph.D.

Dr. Hurst held strong views on many zoological subjects, nor did he hesitate to express them. He delighted in the critical dissection of current topics, and included in his *Criticism of Biological Theory* were papers on The Nature of Heredity, Evolution and Heredity, The Recapitulation

Theory, and other kindred topics. He held some not generally-accepted views on the functions of the crystalline lens, and on the cochlea. His latest publication of importance was on the Archæopteryx. In 1895 Dr. Hurst left Owens College to fill a similar position in the Royal College of Science, Dublin.

Dr. Hurst's untimely death came as a surprise to his former colleagues and his numerous former pupils. He had been ailing for some time from a nervous affection. His premature death robs zoology of a conscientious and enthusiastic worker, whose merits were best known to those who came into intimate relation with him.

WE have to record the death on May 7th of Dr. JOHN HAMILTON KINGLAKE, of Taunton, at the age of 83. His family, which had been settled in the neighbourhood of Taunton for many generations, came from Scotland with James I, and the name is said to be a variant of Kinloch. He was a brother of the author of *Eothen* and of the *History of the Crimean War*. Dr. Kinglake was educated at Dr. Davis's school in Taunton, and afterwards went to Edinburgh University, where he graduated M.D. in 1837. He established himself in practice in Taunton, and was appointed Honorary Physician to the Taunton and Somerset Hospital in 1840. He resigned this position in 1859, but as a life governor retained his interest in the hospital, of which he was a liberal supporter. For some years he was Visiting Physician to the West Somerset Lunatic Asylum. His practice was mainly as a consultant, and his opinion was much valued for many miles round Taunton. In his earlier years he took a prominent part in the political and social life of the district, but for some time before his death had lived in retirement.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the profession abroad who have recently died are Wilhelm Grube, formerly Professor of Surgery in the University of Charkow, aged 71; Dr. Amadeo Marianelli, Extraordinary Professor of Dermatology and Syphiligraphy in the Medical Faculty of Modena; Dr. Philogonio Lopes Utinguassu, Deputy Professor of Physiology and Pathological Anatomy in the Medical Faculty of Rio de Janeiro; Dr. Cornelius N. Hoagland, of Brooklyn, widely known in the United States as a philanthropist, and particularly as a generous giver of money for the furtherance of medical science; and Dr. David W. Yandell, of Louisville, a well-known American physician.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following appointments have been made at the Admiralty: GEORGE W. BELL, Fleet-Surgeon, to the *Crescent*, June 8th; ALFRED J. PICKTHORN, Staff-Surgeon, to the *Marathon*, June 2nd; WILLIAM M. CRAIG, M.B., Staff-Surgeon, to the *Galatea*, June 2nd; JOHN J. DINNIS, M.D., Staff-Surgeon, to the *St. Vincent*, June 8th; SHIRLEY H. BIRT, Surgeon, to the *Crescent*, June 8th; ARTHUR E. KELSEY, B.A., M.B., Surgeon, to the *Collingwood*, lent to the *Devastation*, temporarily, June 8th; EDWARD C. WARD, M.D., Staff-Surgeon, to the *Severn*, May 22nd; JOHN A. KEOGH, Surgeon, to the *Isis*, May 14th.

ARMY MEDICAL STAFF.

SURGEON-CAPTAINS C. G. WOODS, M.D., and H. T. BAYLOR, are promoted to be Surgeon-Majors. Their first commissions date from August 1st, 1888.

Surgeon-Major-General S. A. LITHGOW, M.D., C.B., D.S.O., retired pay, is appointed Honorary Physician to the Queen, *vice* Surgeon-General S. Currie, M.D., C.B., half pay, deceased. Surgeon-Major General Lithgow's military career has been of a distinguished character. He served with the 75th Regiment during the Indian campaign of 1857-59 (in medical charge from the commencement of the operations against Delhi until the relief of Lucknow), and was present at the action of Budleekeseral, siege of Delhi and capture of the city, pursuit of the enemy and actions of Bolundshuhur, Agra, Allyghur, Akrabad, and Kanoj, advance into Oude, and affairs of Maragunge, Alumbagh, and Dilkoosha, and relief of Lucknow by Lord Clyde, thereafter remained with Outram's Division at the Alumbagh, and was present at the repulse of the several attacks and at the affair of Guilee (medal with two clasps). He was with the Nile expedition in 1884-85 as Principal Medical Officer on the Line of Communication (mentioned in despatches, medal with clasp, and Khedive's star); with the Egyptian Frontier Field Force in 1885-86, including the engagement at Giniss (mentioned in despatches); and in the operations of the Zhob Valley Field Force in 1890 (mentioned in despatches). He was nominated a Companion of the Order of the Bath in 1885 for his services with the Nile Expedition, and a Companion of the Distinguished Service Order in 1886 for service with the Egyptian Frontier Field Force.

Mr. OPIE BEWLEY SMITH, late Surgeon 7th Dragoon Guards, died at Clifton on May 13th, aged 70 years. He entered the service as an Assistant-Surgeon, February 4th, 1853; and was placed on half-pay, October 22nd, 1861.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT COLONEL JAMES MOORHEAD, M.A., M.D., Bengal Establishment, has retired from the service from May 20th. He was appointed Surgeon, September 30th, 1876, and Surgeon-Lieutenant-Colonel twenty years thereafter.

Brigade-Surgeon-Lieutenant-Colonel ALEX. CROMBIE, M.D., Bengal Establishment, is permitted to retire from the service, which he entered as Assistant-Surgeon, March 30th, 1872.

The death is announced of the undermentioned officers: Inspector-General JOHN EMELIUS MAYER, retired, on December 3rd, 1897; Deputy-Inspector-General WILLIAM EVANS, M.D., Madras Establishment, retired, at Ladley, Hampshire, on February 21st; Deputy-Surgeon-General JOHN HOUSTON, M.D., retired, at Edinburgh, on December 25th, 1897.

The question having arisen whether all Indian Medical Service doctors are entitled to exchange compensation allowance, the Government have decided that this is the case, provided they are Europeans. This term includes Eurasians who are not statutory natives.

MILITIA MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT H. E. MORTIS is promoted to be Surgeon-Captain.

PRESS COMMENTS ON LORD LANSDOWNE'S SPEECH.

THE *Dublin Express* "is delighted a satisfactory arrangement has been arrived at in reference to the position of army doctors. . . . That it has taken so long to bring this about is due to the obstinate manner in which the officials adhered to what was an antiquated system. The feeling of civilians if tested would be that the medical officers are entitled to the very fullest consideration, and that, in recognising these claims Lord Lansdowne has acted wisely will be the verdict of the public."

The *Irish Times* says: "Lord Lansdowne has steadily striven to overcome the prejudices and practical difficulties that stand in the way of recognition of the true position of the army surgeon. . . . He deserves the highest credit for his successful effort to settle the controversy, and we believe it will be the general verdict that he has determined it wisely and sufficiently. The medical profession will bear in mind the obstacles that the Minister had to overcome, as well as some natural embarrassments in the case."

The *Birmingham Post* says: "The announcement which the Secretary of State for War made at the Mansion House is held by the medical executives to be absolutely satisfactory, and to mean the termination of the difficulties which have resulted from the dearth of applicants for medical positions in the army."

The *Manchester Guardian* says: "Lord Lansdowne's speech at the Mansion House has won favourable opinions from the medical press. It was, indeed, high time that some definite move was taken in the matter he referred to. The chief difficulty has not lain with emoluments, but in such matters as precedence and social status. The bestowal of army rank and title will do away with the social inferiority, which has so long been the bane of the service, and by degrees the evils complained of will disappear. The medical officers' position while actually in the army should at least be well defined and free from obloquy; and Lord Lansdowne's promises will be welcomed on all sides as securing that end."

The *Glasgow Herald* says: "There is good reason to believe that it will be found for once that a great department of State has instituted a reform which is at once thorough and whole-hearted, and entirely satisfactory to those whom it is intended to benefit.....Army surgeons will henceforth have a better chance of being treated by their colleagues and superiors as officers and gentlemen.....The profession will doubtless look with interest for the details of Lord Lansdowne's scheme, and hope that Sir William Mac Cormac's unconditional eulogy of it was not premature."

The *Morning Post* says: "Again and again in the past have promises and fair statements been made in high quarters, which altogether failed to find fulfilment when the actual dry-as-dust details have come to be published in the prosaic form of a Royal Warrant. Lord Lansdowne should be particularly careful not to allow himself to be persuaded into reducing to the very slightest extent the present prospects of promotion to the highest grades of the Medical Staff .....It is the easiest thing in the world to insert a clause in the Royal Warrant declaring that the rank of major-general, when conferred on a medical officer, shall not carry with it any authority of command outside the ranks of the Royal Army Medical Corps."

A military correspondent of the *Morning Post* "expresses surprise at that paper advocating the granting of the rank of major-general to medical officers; Lord Lansdowne had shown great weakness in giving way to the medical officers, and in granting combatant rank to non-combatants. But in refusing to make general officers of doctors, he had prevented them becoming the laughing-stock of the Army. Equal treatment should now be meted out in regard to precedence and promotion: a medical officer enters the army with the rank of lieutenant and becomes a captain after three years' service, while a combatant enters as a sub-lieutenant, and does not become a captain under nine years or more."

*** This writer ignores the fact that medical officers enter the army fully professionally equipped at their own expense, at an age from 4 to 8 years older than the combatant: if he attains the rank of captain at from 26 to 28 years of age, so also does the combatant.

THE KHYBER FORCE.

THE demobilisation of the Tirah Expeditionary Force has been decided on, to take effect from April 7th. The troops to be retained in position and until further orders are to be designated the "Khyber Force," and will include the following among other officers: Surgeon-Colonel E. Townsend, as Principal Medical Officer of the Force; and Brigade-

Surgeon-Lieutenant-Colonel W. E. Saunders as Principal Medical Officer of the Staff at the Base.

The composition of the Force includes No. 11 British Field Hospital and No. 64 Native Field Hospital with the First Brigade; No. 6 British Field Hospital and No. 31 Native Field Hospital with the Second Brigade; No. 5 British Field Hospital and No. 4 Native Field Hospital with the Third Brigade; No. 12 British Field Hospital and No. 53 Native Field Hospital on the lines of communication.

The Force will enjoy the same concessions and privileges as were granted to the Tirah Expeditionary Force.

LEAVE FOR MEDICAL OFFICERS.

IT is stated that leave, which has been stopped for many months past, will be reopened for the Medical Service now that the Frontier War is over. A number of officers have been retransferred from the military to the civil side, and a fair proportion of medical officers will, it is hoped, now be able to take leave. Meantime, we understand that owing to the prevalence of plague many officers of the Indian Medical Service find it very difficult to get leave. This seems hard after the good service done on the harassing work of the frontier. From all reports a large import of civil doctors from England is much needed in India.

THE ARMY SANITARY COMMITTEE.

THE delay in the appointment of a President to the Army Sanitary Committee has caused some comment. In the monthly Army Lists for both May, and back even into February last, page 50, the space opposite "President" remains blank, while the names of all the members appear.

Now, we strongly recommend that the name of the Director-General of the Army Medical Staff, or of a Surgeon-Major-General on full pay, should fill the blank space. This would give the Sanitary Committee the benefit of an expert's casting vote on army sanitary matters where the members (eight in number) of the Committee may be equally divided on a specified point of military sanitation. Now that (thanks to Lord Lansdowne) medical officers are qualified for the presidency of Mixed Boards, there can be no Committee more suitable for the presidency of a medical officer than the Army Sanitary Committee.

THE EXPECTED WARRANT.

HOPE writes: I understand the pay of medical officers in the new Royal Medical Corps will be adjusted similarly to the methods in the Royal Engineers and Army Service Corps. But an officer on sick leave, in addition to losing his allowances as at present, will also lose his corps pay, and be reduced to the bare regimental pay of his rank. This will be a serious loss, in view of the much greater strain thrown upon the health of the medical officer than upon others. It is to be hoped this will be fully inquired into.

*** We do not know upon what authority our correspondent makes his statement; we have always heard there was no intention to alter the present financial relation in a new corps.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

APPOINTMENTS.—Mr. A. C. Seward, St. John's, has been appointed University Lecturer in Botany; and Mr. H. Y. Oldham, King's, Reader in Geography. The appointment in each case is for five years.

DEGREES.—At the congregation on May 12th the following degrees were conferred:

M.D.—T. F. Budden, B.A., Caius; H. E. Wingfield, M.A., Caius; G. P. Mathew, B.A., Trinity Hall; H. Hollis, B.A., Sidney Sussex.

M.B. and B.C.—F. R. Martin, B.A., Caius; C. A. Trouncer, B.A., Jesus.

B.C. only—H. E. May, B.A., Clare.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST PROFESSIONAL EXAMINATION FOR THE DIPLOMA OF "FELLOW."—The following gentlemen have passed this Examination:

C. H. Bullen, Mason University College, Birmingham; W. Gough, B.Sc.Lond., Yorkshire College, Leeds; J. I. Sangster, M.R.C.S.Eng., L.R.C.P.Lond., M.B., Ch.B.Adel., Adelaide University, Yorkshire College, Leeds, and London Hospital; E. D. Telford, Cambridge University; A. E. Finney and W. P. Noall, Owens College, Manchester; W. S. Dickie, St. Mungo's College, Glasgow; W. J. Young, University College, Liverpool; N. B. Harman, M.R.C.S.Eng., L.R.C.P.Lond., M.B., B.C.Cantab., Cambridge University and Middlesex Hospital; J. T. Hewetson, M.R.C.S.Eng., L.R.C.P.Lond., M.B., C.M.Edin., Edinburgh University and King's College Hospital; A. G. Pitts, Charing Cross Hospital; N. F. Ticehurst, B.A.Cantab., Cambridge University and Guy's Hospital; A. S. Morley, St. George's Hospital.

Nineteen gentlemen were referred for six months.

The following are the arrangements for the forthcoming Final Examination for the Fellowship, for which 40 gentlemen have entered their names:

At Examination Hall.

Monday, May 23rd	...	Written Examination	1.30 to 5.30
Tuesday, May 24th	...	Clinical Examination (written and *viva voce*)	2.30 to 5.30
Wednesday, May 25th	...	Operations	1.30 to about 4
Thursday, May 26th	...	Surgical Anatomy	2 to 4
		At Royal College of Surgeons.	
Friday, May 27th	...	Pathology	5 to 7.40
Saturday, May 28th	...	Pathology	3 to 5.40.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THE following candidates having passed the examination for the licence in Midwifery of the College, were admitted as licentiates on May 13th: G. H. Brand, L.S.A.; A. W. Shea, L.S.A.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

DENTAL EXAMINATION.—The following candidates having passed the necessary examination, have been admitted licentiates in Dental Surgery of the College:

J. J. Hayden, F. H. G. Pakenham, T. J. Rea, and A. G. Taylor.

Miss A. H. Hall and J. I. Potter have passed the primary part of the examination.

MEDICO-LEGAL.

THE TITLE OF "DR."

AT Newcastle Thomas Paine Hetherington, styling himself "Dr.," but not on the *Medical Register* or holding any registrable qualification, was charged before the magistrates under the 40th Section of the Medical Act, 1858, with wilfully and falsely pretending to be a doctor of medicine. It was stated that the defendant was a dentist and a doctor of medicine of the United States. The case was however practically undefended, no evidence being called on behalf of the defendant, and who, in the absence of proof that he held any medical qualification, was fined £20 and costs. The prosecution was instituted by the Medical Defence Union.

UNQUALIFIED MEDICAL PRACTICE.

AT the Newcastle County Court, recently, before Judge Greenwell and a jury, Thomas Paine Hetherington (who, as above stated, was fined £20 at the police-court for illegally using the title of "Dr") was sued by the Society of Apothecaries for having practised without having a medical diploma. The jury found for the Society, and judgment was given against the defendant for the full amount claimed, £20 and costs.

ANDERSON AND WILLIAMS *v.* DR. TIBBLES' VI-COCOA, LIMITED.

THIS case was heard before the Lord Chief Justice on May 18th.

Mr. H. F. Dickens, Q.C., for the plaintiffs, said: In this case, my Lord, judgment is to be entered by consent, but the object of the action will not be attained unless I say a few words for the plaintiffs, because it is right that the medical profession should know how the matter stands. The two plaintiffs are medical students who are studying at a school in Chandos Street, connected with the Charing Cross Hospital, and also with the Dental Hospital in Leicester Square, and before very long they hope to pass the examination which will qualify them to practise as surgeons. I daresay your Lordship is aware that the Royal College of Physicians and the Royal College of Surgeons have very strong views with regard to any medical practitioner giving testimonials for the purpose of advertising either medicine or other commodities of that kind. They look upon it as derogatory to the best interests of the profession and contrary to the conditions of the profession, and anybody who does that can be very severely dealt with. Of course the plaintiffs, the medical students, are not yet members of the College; but if they do anything which unfits them to become members of the College they can be turned back on presenting themselves for examination. A short time ago—in October last year, I think it was—in several of the London papers, and not only in the London papers, but in all of the country papers as well, a very flaming testimonial appeared in the advertisement of Dr. Tibble's Vi Cocoa, and it was headed in very large characters "Two Medical Students and Vi-Cocoa," and in that advertisement it appeared that the following unsolicited letter from two medical students was received, by which they advocated that students should use Vi-Cocoa, and praised it up to the skies. In order to make it worse, in order that there might be no question about it they had photographs of these two gentlemen very plainly appearing upon the advertisement. The first the plaintiffs heard of this was one day they went to the hospital on the very day it appeared. When they got on the steps one of the students asked them if they had enjoyed their Vi-Cocoa for breakfast. When they got into the students' room they were greeted with roars of laughter, and posted on the wall was the *Daily Chronicle* with this advertisement appearing upon it, and since that time they have been subjected to every kind of annoyance that they possibly could be subjected to. Of course it was necessary for them to put themselves right, not only with these medical students but also with the Dean and the Governor of the hospital and the school, who looked upon it as a serious matter if this had been in any way done through their instrumentality. Therefore they communicated with the Vi-Cocoa Company, and unfortunately the Vi-Cocoa Company did not see their way at that time to giving any apology, and this went on.

The Lord Chief Justice: Had the students given a certificate?

Mr. Dickens: No, my Lord; it is an absolute concoction by somebody. I do not for a moment suggest who did it.

The Lord Chief Justice: Did they sit for the photographs?

Mr. Dickens: Yes, my Lord. The way that arose was this: It appears that the students sit for their photographs, and then they exchange photographs one with the other, and there is no doubt somebody—I wish we could find out who it was——

The Lord Chief Justice: A practical joke.

Mr. Dickens: A practical joke of an extremely bad character, and an extremely annoying one to us. The Dean and the Governor also made an inquiry upon the subject, and it was thought necessary in order to clear themselves that there should be either a public apology or they should be put right in the eyes of the profession. Unfortunately, the defendants did not give an apology, and unfortunately also, whether it was through negligence of anybody connected with them I do not know, but this went on appearing up till November. It first appeared on October 21st, and also by some slip apparently as late as February it was alluded to in another testimonial that was given. That being the state of things, the defendants have now met us very fairly, they have felt and appreciated the importance of this to my clients, and in order to show that the plaintiffs had nothing on earth to do with this they are prepared that judgment should be entered for £200 and costs as between solicitor and client, and that my friend Mr. Carson should apologise for the defendants

I only wish to say that I do not for a moment suggest the defendants were not acting *bonâ fide*. They have said that they have been taken in, and it is clear they have been taken in by somebody or other. I will not say anything more, otherwise there might be an unsolicited testimonial from a Queen's Counsel. I will not run the risk of that. I will leave that to my learned friend, although in his case it could, possibly, not be said to be unsolicited. In this case, however, it has now been made clear that the plaintiffs had nothing whatever to do with this, and the plaintiffs' names have been fully cleared from any suggestion of the kind in the only way in which they could be cleared, and I am perfectly content with what my learned friend will say on behalf of the defendants they will consent to.

Mr. Carson, Q.C.: I appear for the defendants, and it is only right and fair that I should state on their behalf that so far as they are concerned they had nothing in the world to say to the concoction of this testimonial. It came to them purporting to be a *bonâ fide* testimonial, and there is a fact that was omitted by my learned friend—the testimonial was not sent in the names of these two gentlemen, it was sent with other names, and the only way that they are identified with it at all is by the fact that their photographs were enclosed. Upon the face of the testimonial itself it states that we are at liberty to make such use as we may please of the testimonial, and to all intents and purposes it appeared a perfectly *bonâ fide* testimonial, and it was published exactly as we procured it. It appears that these medical students are in the habit of exchanging photographs one with the other, and it is quite plain now, looking back at the matter, what happened was that somebody for a practical joke—some of the other students apparently as a practical joke—sent forward this testimonial not in the names of these two gentlemen, but putting down two names and sending in the photographs at the same time. The defendants (the directors of Dr. Tibbles' Vi-Cocoa Company) are sincerely sorry that there should have been any mistake about the matter whatsoever, and they regret that the plaintiffs should have been put to any annoyance. Under the circumstances they have agreed to the terms that my learned friend Mr. Dickens has mentioned. I think they are liberal terms, considering the fact that there was no malice of any kind, or no intent to impute anything in the nature of a libellous character to these gentlemen. My Lord, under the circumstances I think you will see that my clients have very fairly met the plaintiffs in this matter.

The Lord Chief Justice: Then there will be judgment for the plaintiffs for £200 on the terms agreed.

Mr. Dickens: If your Lordship pleases, and an injunction.

Mr. Carson: Oh, an injunction!

The Lord Chief Justice: You hardly need that, I think. Liberty to apply, if you desire it.

Mr. Dickens: Very well; it is one of the terms.

CHARGE OF COMMITTING AN ILLEGAL OPERATION.

THE final examination of William Maunsell Collins, M.D., whose name does not appear on the *Medical Register*, on the charge of causing the death of Mrs. Uzielli by performing an illegal operation, took place at the Westminster Police Court on May 12th, when the evidence of Sir John Williams was taken. The prisoner was committed for trial on the capital charge. On May 16th an application was made to the Recorder on the part of the prosecution that the trial should be postponed until the next session. The Recorder granted the application.

HEMANS *v.* COLGATE AND SKINNER.

IN our report of this case (BRITISH MEDICAL JOURNAL, May 14th, p. 1301) it should have been stated that Drs. Colgate and Skinner were defended by the London and Counties Medical Protection Society, of which they are members.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,291 births and 3,577 deaths were registered during the week ending Saturday last, May 14th. The annual rate of mortality in these towns, which had been 18.4 and 17.4 per 1,000 in the two preceding weeks, further declined to 16.6 last week. The rates in the several towns ranged from 10.0 in West Ham, 10.2 in Brighton, 11.7 in Cardiff, and 11.8 in Bristol to 20.0 in Plymouth, 21.8 in Manchester, 22.1 in Bolton and in Halifax, and 22.6 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17.3 per 1,000, and exceeded by 1.6 the rate recorded in London, which was only 15.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was 2.0 per 1,000, while it averaged 1.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.3 per 1,000 in Bristol and in Norwich, 2.4 in Salford, and 2.7 in Liverpool. Measles caused a death-rate of 1.0 in Bristol, 1.1 in Bradford and in Halifax, and 2.0 in Derby; and whooping-cough of 1.0 in Leeds and 1.2 in Sheffield and in Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 50 deaths from diphtheria in the thirty-three towns included 20 in London, 6 in Birmingham, 4 in West Ham, 4 in Cardiff, and 3 in Burnley. No fatal case of small-pox was registered during the week under notice, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,421 to 2,271 at the end of the five preceding weeks, had further fallen to 2,246 on Saturday last, May 14th; 229 new cases were admitted during the week, against 241, 205, and 209 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 14th, 1,022 births and 596 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.2 to 21.7 per 1,000 in the five preceding weeks, further fell to 19.8 last week, but was 3.2 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.2 in Perth and 10.3 in Paisley to 19.6 in Dundee and 23.3 in Glasgow. The zymotic death-rate in these towns averaged 2.8 per 1,000, the highest rates being recorded in Glasgow and Dundee. The 325 deaths registered in Glasgow included 27 from measles, 2 from scarlet fever, 17 from whooping-cough, and 5 from "fever." Five fatal cases of whooping-cough and 2 of diphtheria were recorded in Dundee.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a further decline last week. The fatal cases of this disease, which had been 31, 39, and 27 in the three preceding weeks, further fell to 20 during the week ending Saturday last, May 14th; this was a lower number than has been recorded in any week during the past six years. Judged by the number of new cases notified last week in the metropolis, there was, however, only a very slight decline in the prevalence of diphtheria. The notifications of this disease in London, which had been 181, 178, and 202 in the three preceding weeks, were 196 during the week ending Saturday last, May 14th. Compared with the preceding week, there was an increase in the prevalence of diphtheria in West and North London, but a decline in East, Central, and South London. Amongst the sanitary areas of West London there was a marked increase in the prevalence of the disease in Kensington, 11 new cases being notified, against 3 in the previous week; the new cases recorded in Chelsea and in Westminster also exceeded those in any recent week. The increase in the prevalence of diphtheria in North London was due to a further rise in the number of notifications in Marylebone and in Hackney; in the latter sanitary area 20 new cases were notified, against 12 and 15 in the two preceding weeks. In the sanitary areas of East London there was but little change in the prevalence of diphtheria, the 13 new cases in Poplar showing a slight further increase upon those recorded in recent weeks. Although in most of the sanitary areas of South London there was a decline in the prevalence of diphtheria last week, in Battersea and in Greenwich there was a marked increase. In the latter sanitary area the new cases, which had declined from 8 to 3 in the three preceding weeks, rose to 10 last week. On the other hand, there was a considerable decline in the number of new cases notified in Lambeth and in Wandsworth. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 131, against 105, 108, and 131 in the three preceding weeks; and 944 cases remained under treatment in these hospitals on Saturday last, May 14th.

WORKHOUSE NURSING.

THE *Poor Law Officers' Journal* of May 13th gives a good report of Miss Gibson's paper on this subject read at the West Midland Conference. The question has been so frequently discussed in these columns that we do not propose to do more than draw our readers' attention to it, with the suggestion that they should read the paper for themselves. We are quite in accord with Miss Gibson's advice that the training of nurses for workhouse nursing should be carried on in the larger infirmaries. This is so self-evident that it is surprising that it is still the exception.

LONDON WATER COMMISSION.

AT the meeting of the Royal Commission on May 16th some interesting evidence was given by M. Gaston Cadoux bearing on the question of municipal control. M. Cadoux, who is Chef de Bureau à la Préfecture de la Seine, considered that the circumstances of Paris in regard to water supply were formerly very similar to those now prevailing in London, but since the municipal authorities had bought up the old water company a very decided improvement had taken place both in the quality of water and in the conveniences of the supply. Sir Alexander Binnie also gave further evidence at the same sitting. He laid stress on the point that as the sewage effluent into the lower reaches of the Thames increased with the population more water would be required to carry it away, and this could only be got by maintaining the downward flow of upland water from the higher reaches.

SANITARY CONVENIENCES IN BRADFORD.

ON Monday the Bradford stipendiary, Mr. Skidmore, gave his reserved decision in a case where the Bradford Corporation prosecuted the owner of certain midden privies for not altering them into waterclosets in the way prescribed by the corporation. Proceedings were taken under Section XXI of the Bradford Improvement Act, 1873. The owner, instead of remedying the nuisance by constructing waterclosets in accordance with the plans and specifications accompanying the notice, did something which, while it mitigated the nuisance, left the objectionable filth accumulators which property owners in some of the northern towns seem so loth to part with.

The learned stipendiary said he found the notices were "good" in law. It had been contended that the corporation had passed the plans when these privies were originally built. The plans passed by the corporation in 1873 could not be held as binding for all time. What might do for a small town might not be sufficient for a larger community. This particular case, he found, had been dealt with on its merits. He did not find, as it had been contended, that the corporation had made up their minds to have waterclosets in all cases as a general scheme of sanitation. Nor did he express any opinion upon the deputy town clerk's contention that his duties were merely ministerial. He had preferred to hear the whole facts of the case, and he found that at the time of the notices and proceedings the closets and ashpits were out of repair, though according to the report of the sanitary inspector they had been improved. The powers of the corporations were of an arbitary and stringent character, though it was not for him to criti-

cise but to administer the law. He fined the defendant 20s. and 8s. costs, or seven days. Asked to say if he found the privies were in good order at the date these proceedings were instituted, the magistrate replied he would decide that point in drawing up the case the defence asked for. The deputy town clerk added that the corporation were not satisfied with the repairs and alterations that had been made.

Though this case, even if the Higher Court sustain the judgment as given above, only settles the law so far as Bradford is concerned, it will be of interest to many other towns, especially in Lancashire and Yorkshire. The landlord element has carefully impressed the public, and too often the governing authorities of these towns, with the idea that because a few years ago certain cheaper and dirtier forms of sanitary convenience were tolerated, and because, often for want, on the part of the corporations, of power to do otherwise, plans for these objectionable structures were officially stamped, that this type of legitimatised nuisance is to continue to all time. Usually—and it seems to have been so in this Bradford case—the corporation refrain from requiring an alteration in the principle of the convenience until something in the nature of dilapidations has occurred, and then, to save the owner expense, they require him to make the changes demanded by modern sanitation when he is called upon to remove the grosser nuisance. For there is, we admit, an element of comparison in these matters, and the older forms of pump are viler than the more modern, and vilest of all when they get out of repair. In the open country these may be the only arrangements possible. In crowded cities they are an abomination and a disgrace. We would remind any who cherish a lingering fondness for these structures of the fact, lately drawn attention to in these columns, of the discovery by Professor Delépine, of the typical bacillus in earth removed from the floor and walls of such places after they had been "cleansed and disinfected."

PORT SANITARY WORK.

THE work of a port medical officer can scarcely be described as a "daily round" or "common task." He must naturally often be confronted with something out of the common occurring on ships from foreign ports. The report of Dr. Collingridge, Medical Officer of Health for the Port of London, for the second half of 1897, shows indeed that the unexpected happens also within the limits of the port itself: witness the history of the barge *Lothair*, which was found last September stranded on the Surrey shore just below Teddington Lock with refuse from the Lambeth Vestry Wharf. No one being in charge the owner was served with a notice to abate the nuisance by covering the barge and removing her as soon as the tide allowed her to float. This was done, but early in October she was found lying off Chiswick waterlogged, and a notice was served to abate the nuisance by transferring the cargo to a seaworthy barge and removing it down the river within twenty-four hours. As this was not done the owner was summoned, and a fine imposed, but in the meanwhile she had been taken down the river and beached at Dagenham. The owner of the slip refused to discharge her, whereupon a second notice was served, and finally she was emptied and cleansed. Again, there was the curious adventure of a cargo of eggs which led to a complaint from the Limehouse Board of Works of a nuisance due to sorting 423 cases of eggs within their district. It appears that some of the eggs had gone bad, and in the process of separating the good from the evil, which was done under the supervision of an inspector, the nuisance arose. From the list of notices to abate nuisances it appears that in a very large number of instances the notices had to do with barges containing manure, and the report contains the by-laws drawn up for the conveyance of offensive cargoes which have been made under Section XVI (1) (*a*) of the Public Health (London) Act, 1891, and now in force in the Port of London. Some further idea of the varying character of the duties devolving upon a port medical officer may be indicated by the reference to the fact that during the latter part of 1897 he exercised supervision over the provision made in the docks and elsewhere for the shelter of non-unionists in connection with the engineering strike, and reported upon the condition of the river Brent, while again his report concludes with a recommendation concerning the systematic education of canal boat children.

During the six months 14 795 vessels (7,322 of which were from "foreign") were inspected, and structural alterations affecting ventilation, water supply, etc., were carried out in 217 of these.

Again the work of medical inspection of vessels arriving from infected ports may be instanced. During the half year the diseases requiring attention were practically only yellow fever and plague. At Gravesend 448 vessels were medically inspected, involving the examination of 6,927 persons. At Sheerness the difficulties attending inspection are at the present time considerable. The Customs take the medical officer when he is ready on the spot, but do not wait for him. "Not only is the distance great, but at times, owing to fog and other causes, a vessel is not seen till she is close in. The medical officer is telephoned for, but by the time he arrives at the Point the coastguards have put off, and the vessel is not medically visited." It appears that between May 11th and October 24th 25 vessels passed up the Medway without any medical inspection at all, and on investigation Dr. Collingridge finds that the following causes for such escape obtained: "In 14 cases your medical officer was too late in reaching Garrison Point Fort, the coastguard boat having put off; in 3 cases the weather was too bad to put off in a boat, 3 others passed during illness of your medical officer, and 2 were missed owing to a fall from a bicycle, 1 during his absence at Rochester, 1 owing to absence of proper signal on vessel, and 1 for which no explanation is forthcoming." It seems that the subject of medical inspection at Sheerness is receiving the careful consideration of the Port Sanitary Committee "with the view of effecting an improvement in the arrangements which will facilitate the boarding of vessels at Sheerness."

It is interesting in connection with medical inspection to note that a case reported to be bubonic plague was notified on July 26th. The patient was found, however, on examination by the acting medical officer of health, Dr. Williams, to be suffering from enlarged glands the result of injury.

The report also contains, it may be noted, the by-laws for conveyance of offensive cargoes made under Section XVI (1) (*a*) of the Public Health (London) Act, 1891, which are now in force in the Port of London.

FEES FOR NOTIFICATION OF INFECTIOUS DISEASES.

C.E.L.—We are not aware of any judicial decision on the point of whether an institution such as that to which our correspondent refers would be deemed to be a public institution within the meaning of the Infectious Diseases Notification Act, 1889, Section IV, Subsection II. We think, however, that such an institution would be deemed to be a public institution, and that our correspondent would only be entitled to a fee of 1s. for notifying each case of infectious disease.

RENT OF VACCINATION STATIONS.

PUBLIC VACCINATOR.—Boards of Guardians are required by Section VII of the Vaccination Act of 1867 to provide all vaccination stations, except when they are at the residence or surgery of the public vaccinator. Provision is held to include payment of rent, the rental being matter for sanction by the Local Government Board so far as London is concerned.

MEDICAL NEWS.

A PAPER by Professor Dewar on the liquefication of hydrogen was communicated to the French Academy of Sciences by M. Moissan on May 16th.

THE late Mr. Henry Horsfall, of Wakefield, whose will was proved recently, left property sworn for probate at £112,105 8s. 6d.

MEDICAL MAGISTRATE.—Dr. W. A. Satchell, of Ealing, has been appointed by the Lord Chancellor to the Commission of the Peace for the County of Middlesex.

PRESENTATION.—Dr. W. E. Williams, medical officer of health for Abertillery, has, on the occasion of his marriage, been presented with a set of silver dessert knives and forks with a silver centre piece and dessert service.

THE late Mr. George Henry Leather, of Bingley and Bradford, Yorks, has by his will bequeathed £400 each to the Bradford Infirmary and Dispensary, the Bradford Children's Hospital, and £200 to the Eye and Ear Hospital.

THE physicians and surgeons of the various children's hospitals in Paris, at a meeting recently held under the presidency of M. Cadet de Gassicourt, decided to found a Society of Infantile Medicine and Surgery.

THE spring meeting of the Northern and Midland Division of the Medico-Psychological Association will be held at the Cheadle Asylum, near Manchester, on Wednesday, May 25th. Dr. Mould will open discussions on (1) The New Lunacy Bill, and (2) The Villa Treatment of Insanity.

THE Athletic Ground and Pavilion of the Union Society of University College and Hospital, London, will be opened at 3.30 P.M. on Wednesday, May 25th, by Mrs. McKinnon Wood, the wife of the Chairman of the London County Council. The ground is situated at Acton, close to the G.W.R. station, and a special train will leave Paddington at 3.5 P.M. Further particulars can be obtained from Mr. W. F. Addey, Hon. Sec.

CHELSEA CLINICAL SOCIETY.—This new and active society concluded its first session on Tuesday, May 10th, with a dinner at the Criterion Restaurant, the President, Dr. J. Foster Palmer, in the chair. The society, which owes its establishment largely to the energy of Dr. J. J. Marsh, has already a membership of over forty, and a substantial cash balance, while the papers read before it have been both numerous and interesting. At the dinner the principal speakers were the President, the Rev. Mr. Bridgewater, Mr. Edmund Owen, Dr. Marsh, Dr. Cuthbert Gibbes, and Dr. Austin Cooper, the Secretary. During the evening the members were variously entertained by Dr. Elliott, Dr. Blumfeld, Dr. Robert Maguire, Dr. George Herschell, and others.

SIR WILLIAM BROADBENT presided on Thursday, May 12th, at the annual meeting of the Medical Mission Auxiliary of the Church Missionary Society at Exeter Hall. Dr. Herbert Lankester, Secretary of the Medical Committee, presented his report, which showed that there was a deficit of £1,122. The Society has 47 medical men on active service. During the past year new stations have been opened in Africa, Persia, India, and China. Sir William Broadbent declared that whatever criticisms might be passed on missions, no one could object to taking the blessings of medical science to foreign lands. Commenting on the cost, he said he was amazed at the small expenditure by which the hospital and other work was supported.

The Third Pan-American Medical Congress.—The third meeting of the Pan-American Medical Congress is to be held in Caracas, Venezuela, in Christmas week, 1899. The Organising Committee has been constituted as follows: President, Dr. José Manuel de los Rios; First Vice-President, Dr. Nicanor Guardia: Second Vice-President, Dr. José I. Cardozo; Third Vice-President, Dr. Alfredo Machedo; Treasurer, Dr. Luis Ezpelosin; Recording Secretary, Dr. Luis Rizetti; Corresponding Secretary, Dr. Francisco A. Rizquez; with several other members.

A Naval "Non-combatant."—We take the following account of a recent incident from an American newspaper; it has a moral of general application. The *Topeka* was forced to pick up hastily a crew in a foreign port. The best she was able to do was to ship a brood of "wharf rats" of various tints of villainy. They were in a semi-mutinous state all the way to New York. The only naval officers on board were the commanding officer, Lieutenant Knapp, and Surgeon La Monte, and these two officers took turns, night and day, on the bridge. We do not mean (says our contemporary) to imply that such gallant actions are unusual in the medical corps of the navy; we simply make use of this recent instance to emphasise the fact that they are not. The truth is that nobody on board a man-of-war can properly be called a non-combatant.

The Belfast Hospitals Bill.—The Belfast Corporation (Hospitals) Bill has passed the second reading in the House of Commons, having previously passed through all its stages in the House of Lords, and it has been referred to a Committee, of which Sir William Houldsworth is chairman. The second reading was opposed by Mr. Knox, M.P., and a considerable section of the Irish Party, on the ground that the Bill proposed to confer exceptional advantages upon the new Royal Victoria Hospital, and that similar benefits were justly due to the new Roman Catholic hospital in Belfast, the Mater Infirmorum. In view of the allegations regarding sectarianism in the management of the present Royal Hospital (to which the Royal Victoria Hospital will be the successor) the Board of Management of that institution have issued a memorandum, in which these charges are positively denied.

"Changed Stroke" Respiration.—"From the sublime to the ridiculous is but a step," and even into the tragedy of a deathbed scene which has been watched with sympathetic interest by the whole civilised world the evil genius that delights in misleading the newspapers in things medical has contrived to introduce a touch of farce. In an interview with a reporter published by many newspapers Dr. Dobie, of Chester, is made to say that Mr. Gladstone's breathing was of the "changed stroke" type. There is certainly a "stroke" here which sadly needs to be changed, but it is one introduced by the reporter, for the printer's devil must clearly be acquitted this time. To print "changed stroke" for "Cheyne-Stokes" is an absurd blunder. When a newspaper informs us that an interesting prisoner is in a critical condition as "pneumonia is supervening upon inflammation of the lungs," or that an illustrious personage died of "cardiac apoplexy," one is not disposed to look too critically at the form of words. But such phonetic travesties as "changed stroke" are as ridiculous as the "ulsters in the stomach" and the "conflagration of diseases" of which illiterate patients complain; and in the press, the professed business of which is the diffusion of knowledge, they are inexcusable.

Birkenhead Medical Society.—The annual dinner of this Society was held on April 30th, in the Masonic Hall, the President (Dr. R. Sydney Marsden) in the chair. There was a large attendance, the three vice-chairs being occupied by Dr. A. C. E. Harris, J.P.; Dr. W. C. Cornwall, J.P.; and Dr. A. Stewart. Amongst those present were: the Rev. Dr. Knox, the President of the Liverpool Medical Institution (Dr. Macfie Campbell), the President of the Literary and Scientific Society (Dr. Nazeby Harrington), Professors Boyce, Carter, Glynn, Rushton Parker, Wallace, and Mitchell Banks, of University College, Liverpool; Drs. Barr, Briggs, Blood, Brien, Butcher, Caton, P. Davidson, W. R. Floyd, Stanley Gill, Grimsdale, Gemmell, Gorringe, Hamilton, Hunt, F. Johnston, Lambert, Marsh, Murray, Fawse-Nesbitt, Permewan, H. L. Pearson, Pinkerton, Shears, and Vacher; the Borough Coroner, and Messrs. Thos. Mansell, L.D.S., and F. Griffin. After the loyal toast, Dr. Vacher proposed "University College, Liverpool," which was responded to by Professors Glynn and Boyce; "The Birkenhead Medical Society" was given by Professor Carter, and responded to by Dr. Marsden; "Kindred Societies," proposed by Dr. Johnstone and replied to by Dr. Macfie Campbell, Dr. Harrington, and Dr. Barr; "The Guests," proposed by Dr. H. L. Pearson, and responded to by Rev. Dr. Knox, Dr. Gill, and the Coroner. A number of songs were given during the evening, and many of the speeches were both witty and amusing.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing. Applications to the House Governor by May 28th.

BRISTOL: CITY AND COUNTY OF.—Medical Officer for the Workhouse. Salary, £250 per annum, with allowance of £50 per annum for rent. Applications on forms provided by May 26th.

BRENTFORD UNION.—Dispenser for the Infirmary, Workhouse, and Schools. Salary, £100 per annum, with dinner and tea daily. Applications on forms provided to the Clerk, Union Offices, Isleworth, Middlesex, by May 25th.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £60, with board and residence. Applications to the Secretary by June 1st.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th

CARDIFF INFIRMARY.—Assistant House Surgeon and Assistant House-Physician. Appointments for six months. Board, washing, and apartments. Applications to the Secretary by May 23rd.

CHESTERFIELD: CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress. Applications to the Secretary by June 2nd.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House Surgeon. No salary, but board, lodging, and washing provided. Applications to the Hon. Secretary by May 31st.

EGYPTIAN GOVERNMENT: SCHOOL OF MEDICINE AND THE KASR-EL-AINI HOSPITAL.—Professor of Surgery at the School and Senior Surgeon to the Hospital, £400 per annum; Professor of Clinical Surgery at the School and Surgeon to the Hospital, £320 per annum; Professor of Clinical Medicine at the School and Physician to the Hospital, £320 per annum; Resident Medical Officer to the Hospital, £250 per annum and quarters; Resident Surgical Officer, salary £250 per annum and quarters Applications on forms provided to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, Examination Hall, Victoria Embankment, by June 13th.

FULHAM UNION.—Assistant Medical Superintendent of the Union Infirmary; unmarried. Salary, £120 per annum, increasing £10 yearly to £150, with board, furnished apartments, attendance, and washing. Applications on forms provided to the Clerk, Union Offices, Fulham Palace Road, W., by May 23rd.

GLASGOW UNIVERSITY.—Examiner in Physics for Degrees in Medicine and Science. Appointment for three years. Annual fee £30 Applications to A. E. Clapperton, Secretary of the Court, by June 1st

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Physician or Surgeon to the Skin Department. Applications to the Secretary by June 13th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—Two House Surgeons to Out-patients (non-resident). Appointments for six months. Salary £26 5s. Applications to the Secretary by May 31st.

HOSPITAL FOR WOMEN, Soho Square, W.—Registrar. Appointment for twelve months. Honorarium, 25 guineas. Applications to the Secretary by May 25th.

INVERNESS: NORTHERN INFIRMARY.—House Surgeon and Dispenser. Salary £70, with board, etc. Applications to the Hon. Secretary by June 1st.

IPSWICH: EAST SUFFOLK, AND IPSWICH HOSPITAL.—Senior House Surgeon; unmarried. Salary £80 per annum, with board, lodging, and washing. Applications to the Secretary by May 24th.

ISLINGTON: GUARDIANS OF ST. MARY.—Resident Assistant Medical Officer. Salary £80 per annum with rations, apartments, and washing. Applications on forms provided to the Clerk, Guardians' Office, St. John's Road, Upper Holloway, N., by May 24th.

MIDDLESEX COUNTY ASYLUM, Upper Tooting, S.W.—Assistant Medical Officer. Unmarried and not more than 30 years of age. Salary commencing at £160, rising to £200, with furnished apartments, board, etc. Applications to the Medical Superintendent.

NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary, £80 per annum, with board and lodging. Applications on forms provided to the Secretary by May 26th.

NEW HOSPITAL FOR WOMEN, 144, Euston Road, N.W.—Two Female Assistant Anæsthetists. Appointments for one year. Applications to the Secretary by May 25th.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary, £60 for six months, with furnished rooms. Applications to the Secretary.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Salary at the rate of £50 per annum Applications to the Medical Superintendent, 285, Harrow Road, W., by May 28th.

PRESCOT UNION.—Resident Medical Officer for Workhouse and Infirmary at Whiston. Unmarried. Salary, £80 per annum, rising to £100, with furnished apartments and residential allowances. Applications on forms provided by May 23rd.

READING: ROYAL BERKS HOSPITAL.—House Surgeon. Salary £60 per annum with board, lodging and washing Assistant Medical Officer. Board, lodging, and washing provided, and honorarium of ten guineas. Appointment for six months. Applications to the Secretary by June 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Hunterian Professors, the Erasmus Wilson Lecturer, and the Arris and Gale Lecturer. Applications to the Secretary by May 30th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, West Strand, W.C.—House Surgeon and Clinical Assistants. Applications to the Secretary by May 28th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W. —Resident Medical Officer, unmarried. Salary, £105 per annum, with residence and attendance. Applications to H. Peter Bodkin, Secretary, 23, Gordon Street, Gordon Square, W.C., before June 6th.

ST. PETER'S HOSPITAL, Henrietta Street, Covent Garden, W.C.—House Surgeon. Appointment for six months Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by May 31st.

SHEFFIELD: UNIVERSITY COLLEGE.—Lecturer in Physiology. Applications to the Registrar by June 11th.

SHETLAND: PARISH COUCIL OF WALLS, SANDNESS, PAPA STOUR, AND FOULA.—Medical Officer and Public Vaccinator. Salary, £35 per annum, exclusive of medicine. Applications to the Clerk of the Council by May 30th.

TOWER HAMLETS DISPENSARY, White Horse Street, Stepney.—Resident Medical Officer. Salary £120 per annum, with furnished rooms, coals, gas, and attendance. Applications to Dr. Corner, at the Dispensary, by June 1st.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Appointment for six months. Board, lodging, and washing provided. Gratuity £20. Applications to the Secretary.

WHITTINGHAM, LANCASHIRE: COUNTY ASYLUM.—*Locum Tenens.* For five or six months. Two guineas a week. Applications to the Medical Superintendent.

WOLVERHAMPTON: WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by June 3rd.

MEDICAL APPOINTMENTS.

ALTHORP, C. F. M., M.B Lond., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to the Bradford Royal Infirmary *vice* John Appleyard, M.B.Lond., F.R.C.S.Eng., resigned

ATKINS, J. F., M.R.C.S Eng., L.R.C.P.Lond., appointed Medical Officer to Messrs. Tangye's Cornwall Works, Smethwick, Birmingham.

BOWES, C. K., M.A., M.B., B.Ch.Oxon., appointed Medical Officer for the St. Anne's Home, Herne Bay.

BURGESS, A. H., C.L.B.Vict., appointed Medical Officer for the Crumpsall Workhouse, Manchester.

BURGESS, Robert E., B.A., R.U.I., M.D., M.Ch., reappointed Medical Officer of Health to the Hoole Urban District.

CAYLEY, F. P., M.R.C.S.Eng., L.R.C.P.Lond., appointed Clinical Assistant at the Whitechapel Union Infirmary.

CHETWOOD-AIKEN, K. C., appointed Ophthalmic Surgeon to the Royal Cornwall Infirmary, *vice* Dr. Helm, deceased.

COOPER, W. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the Staveley District of the Kendal Union.

DINGLE, C. V., M.D., B.Sc.Durh., B.Hy., appointed Medical Officer of Health for Middlesbrough, *vice* J. A. Malcolmson, M.D., R.U.I., deceased.

EHRMANN, A., M.R.C.S., L.R.C.P., appointed Clinical Assistant to the Chelsea Hospital for Women.

FRASER, Dr. D., appointed Medical Officer of Health to the Buckley Urban District Council.

HARDWICK, Geo., M.R.C.S., L.R.C.P., appointed Resident Medical Officer at Ida Hospital.

LIMRICK, W. S., L.R.C.P., L.R.C.S.Edin., reappointed Medical Officer of Health to the Waterloo District Council.

LLOYD, Mr. E. E., appointed Junior Assistant Medical Officer to the Fulham Union Infirmary.

MACKAY, Dr., appointed Medical Officer of Health to the Crook Urban District Council.

MACPHERSON, Dr., appointed Medical Officer and Public Vaccinator for the Bere Ferrers District of the Tavistock Union.

MARKLEY, H., M.R.C.S., L.R.C.P., appointed House Surgeon to the General Infirmary, Leeds.

MARTINEAU, A. G., M.R.C.S., L.R.C.P., appointed House Surgeon to the Nottingham General Hospital, *vice* W. R. Smith, M.D.Lond., B.S., resigned.

OVEREND, W., M.D., B.Ch., appointed a Clinical Assistant to the Chelsea Hospital for Women.

PIERSON, C., M.R.C.S., L.R.C.P., appointed House Physician to the General Infirmary, Leeds.

SIBBALD, Ian G., M.B., C.M.Edin., appointed House Surgeon to the Northern Infirmary, Inverness, *vice* Dr. Taylor, resigned.

SIMPSON, G. B., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Lastingham District of the Pickering Union.

SPRAKELING, R. J., M.R.C.S.Eng., L.S.A., reappointed Medical Officer of Health to the Bootle Town Council.

TALBOT, F., M.R.C.S., L.R.C.P., appointed House Surgeon to the General Infirmary, Leeds.

TURNER, Arthur F., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Borough of Tewkesbury.

VEALE, H., L.S.A., appointed House Physician to the General Infirmary Leeds.

VLIELAND, C. J., M.D.Durh., M.R.C.S., reappointed Medical Officer of Health to the St. Thomas Urban District Council.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

CUSHNY.—At Ann Arbor, Michigan, on May 1st, the wife of Arthur R. Cushny, M.D., Professor of Materia Medica and Pharmacology in the University of Michigan, of a daughter.

FLEMING.—On the 17th inst., at 37, Hyde Park Gate, the wife of Samuel Fleming, M.B., D.P.H., Barrister-at-Law, of a daughter

OWEN.—On May 15th, at Irlams-o'th'-Height, Manchester, the wife of David Owen, M.R.C.S., of a daughter.

WILLIAMS.—On May 12th, at Gwaun House, Fishguard, Pemb., the wife of G. J. Williams, M.B., B.S.Dunelm., of twins, son (stillborn) and daughter.

MARRIAGES.

STANWELL—EVANS.—On May 12th, at St. Martin's, Stamford, by the Rev Charles Stanwell, M.A., Vicar of Ipsden, uncle of the bridegroom, assisted by the Rev. A. Jones, M.A., Vicar of the Parish, St. John Stanwell, M.B.Ed., M.R.C.S., fifth son of the late William Stanwell, M.R.C.S., of Rochdale, to Alice, third daughter of Daniel J. Evans, of Stamford.

THOMAS—DAVIES.—On May 10th at All Saints, Wellington, Salop, by the Rev. T. C. Davies, Curate of St. Mark's, Sheffield, assisted by the Rev. H. M. Marsh-Edwards, Vicar of Wellington, William George Thomas, M.R.C.S. and L.R.C.P.Lond., of Small Heath, Birmingham, to Annie M. Davies, second daughter of Walter Davies, Esq., of Wellington, Salop.

DEATHS.

COVENTON.—On the 4th inst., at Indore, St. Leonard's-on-Sea, Helen, the wife of Charles A. Coventon, M.R.C.S., L.R.C.P., age 45.

OATES.—On May 15th, after a short illness, John Harrison Oates M.R.C.S Lond., L.R.C.P.Edin., Manor Place, Dewsbury.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Lennox Browne: Diseases of the Lingual Tonsil, and their Treatment.

TUESDAY.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Lupus.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Dr. Ferrier.

Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 4.30 P.M.—Dr. Harry Campbell: Neuralgia and Headache.

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. Alban Doran: A Case of Cyst of the Urachus; with Notes on Urachal and so-called "Allantoic Cysts." Dr. H. Lambert Lack: Fibrinous or Membranous Rhinitis and its Relation to Diphtheria (communicated by Dr. Allan Macfadyen). Mr. J. Lynn Thomas will show Two Large Vesical Calculi, and Nine Calculi removed from the Urethra.

WEDNESDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Mansell Moullin: Gynæcological Cases.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Kidd: Cases of Pneumothorax.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M. —Dr. Seymour Taylor: Drugs in Chlorosis.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Mr. Stanley Boyd: Demonstration of Surgical Cases.

Harveian Society of London, 8.30 P.M.—Clinical Evening.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Lantern Demonstration to Senior Students—Lung Disease.

FRIDAY.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Dr. Wilkinson: Tuberculosis and Leprosy, etc.

Clinical Society of London, 8.30 P.M. —Annual General Meeting. Election of Officers for Session 1898-99. The following papers will be read:—Mr. Howard Marsh: Case of Primary Sarcoma of the Synovial Membrane of the Knee-joint. Dr. C. R. Box and Mr. Cuthbert S. Wallace: Case of Acute Dilatation of the Stomach. Dr. Hugh R. Smith: Seven Cases of Cirrhosis of the Liver in Children. Dr. G. F. Still: Erythema Enematogenes (Enema Rash) in Children.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 3.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 3. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M. 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Tu., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Tu., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

T. C. W. would be glad to know of a practical book on the rearing and management of children for household use, as he is frequently asked for such a work by his patients.

*** The following would probably meet our correspondent's wants:—Chevasse's *Advice to a Mother on the Management of Her Children*, by George Carpenter, M.D. (London: J. and A. Churchill. 1898. 2s. 6d.) Also a little book by Mrs. Langton Hewer, entitled, *Our Baby.* (Bristol: John Wright and Co. 1897. 1s. 6d.)

TREATMENT OF SLOUGHING EPITHELIOMA.

INQUIRER writes: I should be grateful for any hints as to treatment of a sloughing epithelioma situated in the groin, especially with a view to overcoming smell and discharge. The size of the sore is about as big as a hand. Operation is out of the question.

M.D. BRUSSELS.

A CORRESPONDENT writes to say he has lost his diploma of graduation as M.D Brux., and is desirous of knowing how to obtain a duplicate of the same.

*** The best course to adopt would be to apply to M. A. Lavachèry, Secrétariat, Université Libre, Bruxelles, stating the loss of diploma. We are informed, however, that it is hardly likely the University will grant another.

CLUB PATIENTS.

A. is a member of a workmen's club. B. is A.'s family's medical attendant. C. is medical officer of A.'s club. When A. became ill he sent for his club doctor, C., to attend him, but after a time he left C. and sent for B. to attend him, who then took up the case. What ethical conditions are involved?

*** This is a complication which not infrequently arises in club practices, involving no doubt in its more serious aspect tender questions of medical ethics generally settled by the doctors by a few friendly lines communicating the facts. A. was justified in sending for C. and it was C.'s duty to attend on A. When A. dismissed C. and sent for B, C.'s responsibility to A. ceases; but should A. be in receipt of other benefits from the club necessitating a medical certificate, it would be C.'s duty to call upon A. and report on his health whenever the club required him to do so. When A. sent for B. strict ethics would require him to refuse attendance until he was satisfied A. had explained to C. his intention of consulting B., but in this case one friendly line from B. to C. would render the matter simple.

PARALYSIS OF THE FOREARM FOLLOWING SUBGLENOID DISLOCATION OF THE HUMERUS.

ENQUIRER writes: I should be glad to know if any member of the Association has met with a case like the following. I was called some four weeks ago to see a lady who had had a fall and dislocated her right humerus into the axilla. Complete paralysis of sensation and motion of the forearm and hand immediately set in. I did not see her for four days after the accident, during which period the dislocation continued. On my first visit the patient was placed under ether, and the dislocation reduced by manipulation with the greatest case, but the reduction did not relieve the paralysis of the forearm and hand. When she fell it is supposed she struck her arm with great force against a chair and injured the median and musculo-spiral nerves. Since the date of the accident the paralysis continues notwithstanding treatment consisting of rubbing, massage, and galvanism has been adopted in turn. Would any of your numerous readers kindly state in the BRITISH MEDICAL JOURNAL if they ever met with such a case, and with what result? And if the paralysis continued for any length of time after such an accident, what treatment would be the best to adopt?

UNFERMENTED WINES.

CAROLUS asks: (1) For the names of firms who supply so-called unfermented wine; (2) what preservative is used to prevent the decomposition of these wines; (3) what percentage of alcohol is added when that agent is used as a preservative?

*** (1) We are informed that unfermented wine can be obtained from Frank Wright, Mundy, and Co., 27, Merton Road, Kensington, W. (2) Probably different producers employ different antiseptics. The above firm employs heat, with preservation in bottles from which the air has been expelled. (3) Possibly 18 to 20 per cent., and upwards; but we have no definite information. The density of the substance to be preserved would vary the percentage.

ANSWERS.

C.P.—We understand that our correspondent can obtain the information on application to the Secretaries of the Companies.

H.—The principle involved in our correspondent's question has not, so far as we can ascertain, been decided in a court of law, and it is impossible to foresee what view might be taken.

PRIAM.—Any registered practitioner who is a natural-born subject of Her Majesty is eligible as a candidate for the Indian Medical Service if between the ages of 21 and 28. Full particulars can be obtained on application to the Under Secretary of State, India Office, London, S.W., and a short statement will be found in the Educational Number of the JOURNAL, published on August 28th, 1897, p. 557.

H.W.H.—So far as we are aware there is no law which would be set in motion to restrain a British medical man from attending in Brussels under the circumstances mentioned. The names of British medical practitioners in Brussels can be found in the *Medical Directory* under the heading "Registered Practitioners Resident Abroad."

THERMOMETER.—The notice recently issued by the General Medical Council sets out that the substitution of the services of an unqualified person for those of a registered medical practitioner is in its nature fraudulent and dangerous to the public health, but that the legitimate employment of dressers, midwives, dispensers, and surgery attendants, under the immediate supervision of registered medical practitioners is not contrary to the spirit of the Medical Acts. The essential point is contained in the words "immediate personal supervision."

NOTES, LETTERS, Etc.

A DISCLAIMER.

DR E. LLOYD JONES (Cambridge) asks us to state that extracts from his book on *Chlorosis*, recently circulated in a pamphlet by a firm of manufacturing chemists, have been so circulated without his knowledge or consent, and after he had refused to allow his name to be used by that firm.

AN APPEAL ON BEHALF OF THE FAMILY OF THE LATE MR. JOHN PAGE HENTSCH.

DR. G. DAVID KNIGHT (410, Brixton Road, S.W.) writes: I beg to acknowledge the sum of £3 3s. from Sir T. Smith (Stratford Place). The total amount received is £34 2s 6d. In closing the list I beg to convey the thanks of the widow to those who have forwarded donations and to you for the use of your valuable space.

THE LOCAL GOVERNMENT (IRELAND) BILL.

A CORRESPONDENT writes to suggest that the following improvements might be incorporated while the Bill is in Committee:

(1) Superannuation on English system after 30 or 35 years' service and at 65 years of age. If not of 30 years' service at 65 years of age, then at the usual Civil Service scale.

(2) One month's annual holiday (substitute paid). To be accumulative up to three years (so as to allow time for study for higher degrees, etc.).

(3) Exchange of districts, officers exchanging to be of near same age and service, exchange to be notified to District Council and sanctioned by Local Government Board.

(4) Tickets deemed by medical officer to be issued in undeserving cases to be presented on special form for cancelling or otherwise at the weekly meetings of the guardians in District Council. (*a*) Any person issuing two tickets which have been cancelled inside one year to be deprived for two years of the power of issuing tickets. (*b*) Any person five of whose tickets have been cancelled to be deprived of ever again having the power to issue tickets.

(5) Guardians (or District Council) to be bound to recover fee in all cases which have been attended on a ticket, which ticket has been cancelled. Issuer of ticket to be liable with receiver of attendance on ticket. Issuer of ticket may claim compensation if at any loss from person liable for attendance on sick in such cases provided he made proper inquiries before issuing ticket.

(6) A third form of ticket, meaning "urgent case," which must obtain for the person named therein prompt medical aid. No case to be considered urgent which is over thirty-six hours unwell. Other form of visiting ticket to be attended to by medical officer at his convenience any time under thirty-six hours from presentation.

Better than all improvements is for the Government to take over the whole Poor-law medical business as far as the officers are concerned, and make it a branch of the Civil Service, and so settle the financial grievance question. Such officers to be paid sufficiently and not allowed any private practice except consultation practice.

*** Our correspondent is apparently unaware that the principle of compulsory superannuation has been accepted by Government.

ODOR MORTIS.

DR. RICHARD NEALE (Hampstead, N.W.) writes: A reference to Section 170: 4 of the *Medical Digest* will show that Dr. Althaus, in 1881, gave a very lucid description and history of the diagnosis of disease by sniffing, and no one with healthy olfactory nerves can have failed to notice the presence of the "cadaverous odour" in cases of approaching dissolution.

DR. THOS. P. TUCKEY (Tywardwreath, Par Station, R.S.O.) writes: I have often noticed the peculiar *odor mortis*. I have never seen any case in which it was noticed by me which did not die, even in persons where the rest of the prognosis was not so very bad. The odour of the body in those about to die, and the odour of the breath in those about to become insane, are certain if not constant signs.

THE DETERMINATION OF SEX.

DR. HAMILTON HALL (Frant) writes: In the summary of Professor Schenck's work on this subject, and in your note this week, I see no allusion to one or two points which appear to be relevant, and indeed more nearly akin to human conditions than observations on bees and frogs are likely to be. It is matter of general opinion among horse and cattle breeders in countries where these animals roam at large and practically free of any sort of control, that the age of the mother has a very strong influence in determining the sex of the offspring. Old mares and cows are considered, perhaps wrongly yet very generally, to produce males in nearly every pregnancy. As it is the habit of stallions to keep their mares with Oriental jealousy, the male element, as an individual one, remains constant, and the young mares do, in my own observation, appear to throw fillies, and the old mares colts, very frequently. The bull does not manage his affairs in quite the same way, but I have also known the same sire to get heifers from young cows, and bull calves from old cows in the same season. Also, in the matter of fowls, it is very generally believed that the eggs of old hens are nearly always male eggs. These observations, if fairly true to the facts, may be only a gross way of stating some conditions of the ovum, but, if so, they would appear to lead to the conclusion that the ova of exhausted females tend towards males in placentalia, which is precisely opposite to the statement that the sexual vigour of the parent tends to the reverse sex in the offspring.

Going next to the human sex, a study of human pedigrees certainly leads to the general impression that in the issue of two parents girls are more common early, and boys more common late, in sexual life. This appears to be a possible explanation of the larger number of females observed in warm climates, where sexual life begins early; and also of the observed preponderance of males in cold climates, where the sexual age begins later, and where life being harder, and toil more general, the general strength of the mother might probably be sooner exhausted within the sexual age.

LETTERS, COMMUNICATIONS, ETC., have been received from

A C. F. M. Althorp, M.B., Bradford; Messrs. Arnold and Sons, London; Mr. R. B. Anderson, London; Avenue. **B** T. M. Bartlett, M.B., Bath, W.L.; L. E. Barnett, M.B., Dunedin, N.Z.: Dr. T. L. Brunton, London; Mr. J. Brown, London; Mr. A. H. Bird, London; Mr. G. Brown, London; J. Berry, M.B., London. **C** C. E. L.; Carolus; Dr. A. Craigmile, Liscard; Sir S. Crossley, Bart., London; Mr. F. H. Cox, Goodooga, N.S.W.; Mr. H. F. Craggs, London; Professor W. H. Corfield, London; Mr. H. M. Councell, Thornbury; Country Practitioner. **D** Dr. T. B. Darling, Edinburgh; Messrs. Down Brothers, London; Doubtful; Dum Spiro Spero; Mr. F. H. Dayus, London; Mr. G. T. H. De Clive-Lowe, Hokianga, N.Z.; H. E. Durham, M.B., Cambridge. **E** Enquirer; Mr. J. Ewens, Bristol; Messrs. Evans, Gadd, and Co., Exeter; Dr. W. Edgecombe, Harrogate. **F** Mr. F. C. FitzGerald, Hanley; Mr. P. J. Freyer, London; Mr. W. A. Frost, London; Mr. J. B. Fry, Esher. **G** Mr. C. H. Garland, London; G. H.; Dr. L. G. Guthrie, London. **H** A. J. Hall, M.B., Sheffield; Messrs. Hedgcock and Co., London; Dr. W. Habgood, Marple; G. E. Hale, M.B., Eton; Mr. T. W. Hannaford, London; Mr. W. H. Hall, Frant; Mr. T. H. Hall, London. Mr. W. B. Holderness, Windsor; H. **I** Inquirer. **J** Dr. A. H. Jones, Northampton; Dr. E. L. Jones, Cambridge; J. A. **K** Mr. R. Kershaw, London; Dr. G. D. Knight, London. **L** Mr. C. Lageman, Erfurt; Dr. A. P. Luff, London; W. Leask, M.B., Birkenhead. **M** G. B. Morgan, M.B., Sunderland; M.B.A.; Mr. P. E. Miall, Bradford; R. S. Marsden, M.B., Birkenhead; J. R. MacMahon, M.B., London; Mr. C. A. Morton, Chilton; J. F. MacGregor, M.B., Morvern; M.D.Edin.; Mr. R. Maples, Kingsclere; M.D. Dublin; Old Member. **P** Mr. C. Pound, Odiham; Dr. E. F. Potter, London; Mr. F. Page, Newcastle-on-Tyne; Mr. J. R. Polson, Worcester; Priam; Dr. A. Purkiss, Wolston; Mr. E. Payne, Hayward's Heath. **R** Mr. J. J. A. Raye, Banbury; Mr. T. F. Raven, Broadstairs; Dr. E. W. Roughton, London; Mr. F. J. Reid, London. **S** Dr. C. E. Shaw, Belfast; Mr. W. D. Spanton, Hanley; Dr. J. W. Springthorpe, Melbourne; Messrs. Street and Co., London; Mr. W. P. Stocks, Manchester; Dr. J. G. Sharp, Leeds; Messrs. J. P. Segg and Co., London. **T** Mr. M. R. Taylor, South Petherton; Thermometer. **W** Mr. W. B. Woodhouse, London; Dr. H. Woods, London; Dr. C. T. Williams, London; Mr. F. H. Welch, London; Mr. R. C. Worsley, Ramsgate; Dr. R. Walker, Edinburgh; Dr. A. Wilson, Edinburgh. **X** X.Y.Z. **Y** Dr. M. Young, Crewe. **Z** Mr. A. Zoppritz, Stuttgart.

BOOKS, ETC., RECEIVED.

The Blood: How to Examine and Diagnose its Diseases. By A. C. Coles, M.D. London: J. and A. Churchill. 10s. 6d.

An Atlas of Illustrations of Pathology. Compiled for the New Sydenham Society. Fasc. xi, Diseases of the Nerves. London: The New Sydenham Society, 1898.

Congresso Nacional de Tuberculose, 24 a 27 de Março de 1895. Actas redigidas pelo Dr. A. A. da Rocha. Coimbra: Imprensa da Universidade. 1898.

Tubal Gestation. By C. J. Cullingworth, M.D., D.C.L., F.R.C.P. London: Medical Publishing Company. 2s.

On the Treatment of Uterine Myomata (Fibroids). By J. Bland Sutton. London: Medical Publishing Company. 3s. 6d.

Applied Bacteriology. By T. H. Pearmain and C. G. Moor, M.A. London: Baillière, Tindall, and Cox. 1898. 12s. 6d.

Die Bedeutung der Reize für Pathologie und Therapie im Lichte der Neuronlehre. Von Dr. A. Goldscheider. Leipzig: J. A. Barth. 1898. M. 2·40.

Lehrbuch der Histologie des Menschen einschliesslich der mikroskopischen Technik. Von A. A. Böhm und M. von Davidoff. Zweite Auflage. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1898. 7s.

Die infectios-eiterigen Erkrankungen des Gehirns und Ruckenmarks. Von Wm. Macewen, M.D. Autorisirte Deutsche Ausgabe von Dr. P. Rudloff. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1898. 16s.

Forensic Medicine and Toxicology. By J. D. Manu, M.D., F.R.C.P. Second Edition. London: Charles Griffin and Co. 1898. 21s.

Archiv für Dermatologie und Syphilis. XLIII und XLIV Band. Festschrift gewidmet Filipp Joseph Pick. Theil I und II. Wien und Leipzig: W. Braumüller. 1898.

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REMARKS
ON
A CASE OF CONGENITAL WEB BETWEEN THE VOCAL CORDS ASSOCIATED WITH COLOBOMA OF THE LEFT UPPER EYELID.

By SIR FELIX SEMON, M.D., F.R.C.P.

THE patient whose case forms the subject of the following communication was shown at the meeting of the Clinical Society of London on November 27th, 1885.[1] For some reason or other—speaking from memory after the lapse of so many years, I should say probably it was because I wished to append to my notes the result of the treatment then intended—I did not deliver my notes to the Secretary immediately after the meeting and the matter fell into oblivion. Looking through some old records, I accidentally came across my notes of the case not long ago; and as congenital diaphragms of the larynx are extremely rare, and the connection observed in this case of the laryngeal web with a malformation of the eye is, so far as I know, unique, I think it right to put the case, however late, on record.

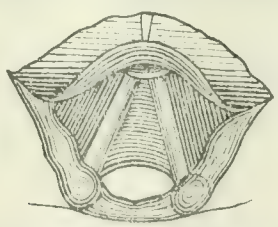
B. S., a girl aged 16, applied at the Throat Department of St. Thomas's Hospital in the autumn of 1885, on account of hoarseness and occasional difficulty in breathing. She is one of a family of seven boys and girls, none of the others I was assured, showing any congenital deformity or deficiency. Immediately after her birth, a gap of the left upper eyelid throughout its entire length was observed. For about one or two years after birth she suffered from chronic incontinence of the bowels, which after that time spontaneously improved. From the moment of birth it was observed that the child's cry was both weak and hoarse, and, when the voice was used for crying, inspiratory stridor was observed. The stridor improved about the age of 7 or 8 but never entirely disappeared. It has in the course of the last few months again become worse. Her speaking voice has been very hoarse and weak throughout her life.

The eye mischief was, under continuous observation at Guy's Hospital from one month after birth until three years afterwards, when Mr. Bader succeeded in closing the gap. Nothing has ever been done for the throat.

Present State.—The patient is a rather small otherwise well-formed girl. There is a deficiency of the central part of the eyebrows on each side, but much more developed on the left.

Eyes.—Right eye: she sees perfectly, slightly hypermetropic. Left eye: has a visual acuteness of one half when its hypermetropic astigmatism is corrected. (These data were kindly ascertained by Mr. Nettleship.)

Larynx otherwise well formed. Movements of vocal cords perfect. Between the anterior three-fourths of both vocal cords a perfectly symmetrical, somewhat transparent, slightly reddish triangular membrane is expanded, the free border of which is of a crescentic form, and apparently considerably thicker than the rest of the web; this border is of perfectly white colour. The glottic opening left between this crescentic border and the inter-arytenoid fold has the form of a horizontal-lying oval, and represents hardly one third of the width of the glottis under normal circumstances. The lateral borders of the web pass apparently over into the vocal cords without any appreciable limitation, the vocal cords being distinct from the diaphragm only by somewhat greater bulk and somewhat more rounded form. On attempted phonation the cords come



almost entirely together, and the web forms apparently a fold below their level. The voice is very hoarse almost aphonic; after walking, speaking for some length of time, etc., inspiratory stridor occasionally is observed.

My notes end here. The following description of the treatment of the case is written from memory:

In view of the fact that during the last few months before the patient applied to the hospital there had been increasing dyspnœa, it was obvious that the condition could not be left to itself, and the question was only whether it was better to proceed by external operation, that is, thyrotomy, followed by cutting out the membrane with scissors, or by intralaryngeal operation. Of the former procedure I had had a discouraging experience. Once before I had removed a laryngeal web, the result of traumatism, by this method,[2] and although the operation in its immediate consequences had been successful, I had not been able, in spite of methodical and long-continued dilatation, to prevent reformation of the diaphragm, which rendered the ultimate result of the operation quite nugatory. I therefore decided to give the intralaryngeal method a trial this time.

Originally it was intended to proceed as follows—namely, to insert Mackenzie's guarded laryngeal knife at the anterior commissure of the vocal cords close to the edge of the right vocal cord, and to cut through the web along that edge until close to the crescentic border of the diaphragm; then to repeat the same process along the border of the left vocal cord; and, finally, when merely a small bridge had been left, from which the triangular flap cut out would hang down, to grasp this bridge with cutting forceps and remove it bodily in the same way in which growths are removed from the vocal cords by intralaryngeal operation. I had not, however, sufficiently reckoned with the remarkable thickness and toughness of the web, factors which are insisted upon by almost everybody who has described cases of this sort. Nothing, as a rule, can be more fallacious than the appearance of such a diaphragm; it looks more or less transparent, and sometimes one thinks that one sees the rings of the trachea through it; but when it comes to the employment of slender cutting instruments, one too often finds that with all the force one can reasonably employ one does not make the least impression upon the tough structure, and a case is even on record[3] in which the point of the knife simply broke during the operator's efforts to cut through the diaphragm. No such untoward accident occurred in the present case, but it was found simply impossible to incise, much less to cut through, the obstruction with either Mackenzie's guarded laryngeal knife, or later on with any of the stronger unprotected laryngeal knives that were employed. After many fruitless attempts, this method was finally given up, and the galvano-cautery substituted. This method, however, was not resorted to without serious misgivings; the breathing space left by the diaphragm was so small that it was obvious that if any considerable inflammatory reaction resulted from the employment of this method, very sudden and serious dyspnœa might occur. Under these circumstances, instead of availing myself of the galvano-caustic knife, I used a pointed galvano-cautery, and placed the point near the anterior commissure, in order to avoid as much as possible an extension of subsequent inflammatory reaction towards the small remaining glottic space. On establishing the current, the point of the galvano-cautery entered into the obstructing mass, but instead of quickly perforating it, as I had anticipated, with the hot point, I found I had entered into a dense mass of several millimetres thickness, through which the point of the instrument at white heat very slowly penetrated. Only when the platinum part, which was about 1 centimetre in length, of the instrument had almost disappeared in the mass, firm pressure being exercised all the time, it became noticeable by a sudden downward jerk of the instrument that at last it had pierced the entire thickness of the obstruction. It was quite difficult to withdraw the cautery through the narrow channel just made.

I distinctly remember that on this first occasion I did not repeat the puncture, as I wished to observe first whether any considerable inflammatory reaction would follow the galvano-caustic interference, and, secondly, whether there would be much tendency to a rapid closing up of the narrow channel made by the pointed instrument. In both respects I was most agreeably surprised when I saw the patient a few days later. There had been no reaction worth speaking of so far as could be ascertained, and the margins of the opening had remained as far apart as they were immediately after the operation. I then decided to repeat the perforation a number of times at some distance from one another, in the hope that the vitality of the web would thus be destroyed, and that it would ultimately be possible to get hold of its shrivelled remains by cutting forceps. The further steps of the galvano-caustic operation presented no difficulty whatever, and it was remarkable that the great thickness of the obstruction above referred to was limited to its anterior portion, and that towards the posterior free border it rapidly became much thinner. After a certain number of punctures had been made (I cannot say after so many years, and speaking from memory, how many altogether were required) the shrivelling process hoped for actually took

place, and this even in a much more satisfactory form than I could have expected. Seeing that the web apparently passed into the vocal cords without any definite border line, I had been much afraid that the ultimate result of my galvano-caustic interference might have been that a number of shreds would remain hanging from the free borders of the vocal cords, which it would be very difficult to remove. But, contrary to this expectation, it was found that the shrivelling extended up to the vocal cords only, and there ceased abruptly, so that without any further operation the borders of the vocal cords gradually shaped themselves out quite nicely, and the voice became much stronger and more natural, whilst the dyspnœa entirely disappeared. The only part of the obstruction demanding further interference was the subglottic part on the anterior wall of the larynx, where the thickness of the tissue, as before stated, amounted to about a centimetre. These parts, however, could be removed by means of cutting laryngeal forceps, though a good deal of force had to be used in tearing out the tissue grasped between the branches of the instrument. It was quite remarkable how little reaction followed these operations, and, what was most important, there was no tendency whatever to renewed formation of the obstruction. Ultimately, practically the only sign of the mischief which had existed for so many years was a certain unevenness visible on laryngoscopic examination on the anterior wall of the larynx, below the level of the vocal cords. The voice had become quite loud, though remaining slightly veiled, and the difficulty of breathing of course had entirely disappeared. The patient attended off and on for some considerable time because I wished to be certain that no insidious reformation of the obstruction should take place. Ultimately I lost sight of her, but I remember distinctly that once again after a long interval she turned up simply to show herself, when it was found that the results obtained by the operation had been permanent.

Remarks.

Membranous or pseudo membranous webs between the vocal cords may be either acquired or congenital. In the first category syphilis and next to it traumatism are the most frequent causes of the condition. It is also said that "Stoerk's blenorrhœa" not seldom leads to the formation of membranous adhesions between the cords. Finally, there is a number of cases on record in which no definite etiology could be ascertained. Altogether these acquired diaphragms are rare, but not nearly so rare as those belonging to the congenital form In his essay on The Congenital Diaphragm of the Larynx, published in 1893,[4] Professor Paul Bruns enumerates 12 cases of this class altogether which he has found in the literature of the subject. He himself adds the thirteenth. Since then only two further cases, so far as I have been able to find out, have been reported, one by Chiari,[5] the other by Lacoarret,[6] and the present case forms the sixteenth of the list. In all these congenital cases, with the sole exception of Chiari's, the aspect was curiously alike—that is, as in the case just described, the larger anterior part of the glottis was obstructed by an apparently membranous web connecting the anterior part of the borders of the vocal cords, and ending posteriorly in a semicrescentic ridge. In Chiari's case, however, a congenital web occupied the posterior part of the glottis. The thickness of the web in most of the cases was very considerable, and increased in the direction from behind forwards. The thickness near the anterior wall of the larynx in the case of Seifert and Hoffa above referred to, and in Bruns's own case amounted, like in my own just described, to 8—10—15 mm.

By far the most interesting series of these cases has been observed and described by Seifert. In his first communication on the subject[7] he had affirmed, on the strength of statements made by the patient's relatives, that the girl came from a healthy family, in which no other malformations existed. Shortly afterwards he had to correct this statement[8] after personal examination of the rest of the patient's family, when the following very remarkable state of things was disclosed:

1. The father, aged 48, quite healthy, with clear loud voice, has never suffered from hoarseness. Nevertheless, in the anterior commissure there is a membranous adhesion 3 to 4 mm. in width between the vocal cords, which, however, does not interfere with the movements of the cords.

2. The mother aged 49, perfectly healthy, the larynx quite normal.

3. Son, aged 23. This young man was a half-brother of Professor Seifert's patient, her own father being his step-father. The larynx of this young man is absolutely normal.

4. The patient, whose case Professor Seifert had described, in which a large diaphragm, quite similar to the one described in my present case, had existed and had been operated upon

5. A sister, aged 12. Speaks with natural voice, has never suffered from hoarseness or dyspnœa. In her larynx, however, a membranous adhesion of the anterior parts of the vocal cords exists, very similar to that seen in her father's case.

6. A sister, aged 7, born healthy, could cry loud, but from the very first some hoarseness in her vocalisation, to which not much attention was paid. There is some slight breathlessness on exertion. Voice somewhat hoarse but loud. On deep inspiration slight laryngeal stridor can be heard. In her case a membrane exists in the anterior part of the vocal cords, the size of which is about midway between that seen in Cases 1 and 5 on the one hand and that seen in Case 4 on the other. The membrane appears very thin, and on phonation it folds together below the vocal cords.

There could therefore be no doubt that the three girls had inherited the laryngeal anomaly from their father. This fact is particularly important, because the congenital nature of these webs has been doubted more than once. Seifert's observations establish this fact, I think, beyond doubt, and if any further corroboration were needed it is given by my own present case, in which the laryngeal anomaly was associated with so undoubted a congenital arrest of development as coloboma of the eyelid is. My case, so far as I know, is the only one on record in which the laryngeal anomaly in question was associated with some other congenital malformation.

The origin of the laryngeal malformation is still shrouded in considerable obscurity. Dr. Poore[9] expressed himself as follows when bringing his case before the Laryngological Section of the London International Medical Congress:

"I formed the opinion that the web was congenital, first, because the patient's voice had always been peculiar since her first cry; secondly, because from her earliest infancy she has been liable to attacks of dyspnœa; thirdly, from the appearance of the web, which had nothing about it to suggest inflammatory or pathological origin. Two questions occurred to me. How were such webs caused? Either by the occurrence of disease or inflammation *in utero*, by the arrest of development, or the survival of some fœtal condition. Normally, I believe, there never is a web in the larynx at any period of the development of the fœtus, so that the last theory is untenable."

A series of sections of the larynx of human fœtuses at various periods from the second month onwards, kindly presented to me by Professor A. Politzer, of Vienna, seemed to corroborate Dr. Poore's last statement; certainly in this series there is full patency of the glottis in its entire length throughout. But I find in Bruns's description[10] an interesting statement bearing upon this question which points in the opposite direction. He discusses the explanation originally advanced by Seifert in his first case, namely, that the diaphragm was due to a hypertrophic inflammation of the vocal cords during intrauterine life, and rejects this as extremely improbable, seeing that the same malformation was present in three children of the same family (see above). "Possibly," he adds, "a phenomenon described by W. Roth[11] and observed in the course of the embryonic development of the larynx gives a clue. Roth showed that the upper part ("Anfangsstück") of the air tube in its first development is glued together, the epithelial glueing matter being formed in part from elements of the outer terminal layer (epiblast), and in part from the elements of the intestinal gland layer (hypoblast). The agglutination is not only found in the territory of the aditus ad laryngem, but it can be followed further down to a locality which corresponds to the rima glottidis."

"In an illustration given by Roth of a transverse section of the embryo of a rabbit of eighteen days, the rima glottidis throughout shows an agglutination in which the most superficial cells of the epithelial lining of the rima glottidis take part. In the hindermost part of the glottis a small gap can be seen, which Roth looks upon as the starting point for the later opening of the glottic space. This agglutinated mass, as shown by a series of sections, extends far down, and can still distinctly be recognised at the commencement of the trachea." Bruns continues: "Should those statements of Roth's be confirmed, the cause of the formation of diaphragms in the larynx would seem to be traceable to the agglutination of the

original formation, being only incompletely loosened and persisting in part. Slight indications of such membranes are often enough seen distinctly when making a laryngoscopic examination, a point already well insisted upon by Schrötter; sometimes the anterior commissure of the vocal cords, instead of forming an acute angle, represents a small bow line, sometimes below the commissure a slight fold of membrane extends from one side to the other, and projects more or less far into the character of the larynx."

The case now communicated would seem to lend some support to Roth's views, particularly so because, as in his series of sections, the agglutination was not limited to the vocal cords themselves, but in front extended almost a centimetre into the subglottic cavity. On the other hand it is difficult to explain Chiari's above mentioned case on the strength of Roth's statements.

The only question remaining is that of the treatment to be adopted in such cases. Undoubtedly in lighter cases—that is, such in which no respiratory troubles exist, and in which the voice is moderately or not at all affected, there may be no need to interfere in any way, and in a number of cases reported the policy of abstention has been followed. In cases, however, in which there is either total loss of voice or persistent or paroxysmal dyspnœa of a more serious character, or finally a combination of both aphonia and dyspnœa, surgical interference will be obviously required, and the only question is which treatment seems the most appropriate for these cases. To conclude from my own experience and from a study of the cases recorded in literature, I think that no hard and fast rule can be laid down. Much depends upon the thickness of the diaphragm, upon the patient's age and power of co-operation, and upon the tendency to re-adhesion during the process of removal. Theoretically one might think that thyrotomy, followed by total excision of the obstructing mass, would be both the quickest and the most radical treatment; but, apart from my own case above mentioned, Seifert and Hoffa state that they have had for a long time to carry on mechanical dilatation after the performance of thyrotomy and removal of the web in order to prevent readhesion which was threatening. On the other hand no definite rule can be laid down with regard to intralaryngeal treatment. In Krieg's case[12] mere incisions into the diaphragm produced such an amount of swelling that tracheotomy had to be performed. In Greenfield's[13] and my own cases attempts at cutting the membrane with ordinary laryngeal knives were unsuccessful; in Seifert's case the knife even broke, as stated above. Bruns, to whom Krieg's patient applied after the performance of tracheotomy, succeeded by very persistent dilatation with special bougies introduced from the tracheal wound through the larynx in effecting complete disappearance of the laryngeal stenosis and restitution of normal voice. The treatment, however, carried on with interruptions, required a year and a half. Morell Mackenzie in his case obtained a good result by intralaryngeal removal of the web by means of cutting forceps. In my own case the combination of this method with the galvano-caustic treatment was equally successful. Should any future case come under my observation, I should make it entirely dependent upon the thickness of the mass which treatment to adopt, but should certainly give a trial to the intralaryngeal one before having recourse to thyrotomy.

Notes and References.

[1] See programme of that meeting, British Medical Journal, November 21st, 1885, p. 1001. [2] See British Medical Journal, 1878, vol. ii, p. 834, Meeting of the Royal Medical and Chirurgical Society, Case of Thyrotomy, etc.; and *Monats. f. Ohrenheilk.*, No. 6, 1879, Eine Thyreotomie. [3] *Berl. klin. Woch.*, 1886, No. 10. [4] *Archiv für Laryngologie und Rhinologie*, vol. i, Heft 1, 1893. [5] *Wiener klin. Woch.*, 1897, No. 25. [6] *Annales de la Polyclinique de Toulouse*, No. 5, Mai, 1897. [7] *Berl. klin. Woch.*, 1888, No. 10. [8] *Ibid.*, 1889, No. 2. [9] *Transactions of the International Medical Congress*, London, 1881, vol. iii, p. 316. [10] *Loc. cit.* [11] *Mittheilungen aus dem embryologischen Institut zu Wien*, 2tes Heft, 1871, p. 155. [12] *Atlas der Kehlkopfkrankheiten*, 1892, p. 112. [13] This case has, so far as I know, never been reported in full. Having seen it at St. Thomas's, I referred to it with Professor Greenfield's permission in my paper on Thyrotomy in the *Monats. f. Ohrenheilk.*, 1879, No. 6.

Donations and Subscriptions.—An anonymous donor has given £1,000 to endow a bed at St. Thomas's Hospital in memory of the late Charles Kingsley.—The Queen has forwarded her annual subscription of 100 guineas to the Middlesex Hospital.

CLINICAL LECTURE
ON
BRONCHO-PNEUMONIA,
TO SHOW THAT PNEUMOCOCCAL PNEUMONIA IN A CHILD TAKES THE LOBULAR AND NOT THE LOBAR FORM.

Given at St. Bartholomew's Hospital,

By SAMUEL WEST, M.D.,
Senior Physician Royal Free Hospital; Assistant Physician to St. Bartholomew's Hospital.

I have long been of opinion that the distinctions made between lobular pneumonia of children and the lobar pneumonia of adults do not hold with anything like the preciseness they should if the two conditions are really as distinct from one another as they are usually stated to be.

The question is largely a bacteriological one, and it is only recently that bacteriological investigation has turned in this direction.

I shall endeavour to prove that under the one term "broncho-pneumonia" several different conditions are included, and that many of them are pneumococcus inflammation; in other words, that some of the broncho-pneumonias of children are really the same disease as the common pneumonia of the adult, or, to put the proposition in another form, that the only difference between the pneumococcus inflammation of the adult and of the child is that in the one case the inflammatory consolidation which results is lobar or massive, and in the other lobular or patchy.

The evidence which I shall bring forward in proof of this thesis falls into two groups: the first clinical, the second bacteriological.

Of croupous pneumonia I do not intend to say much. The cases, as a whole, present a close family resemblance to one another; so much so that the less obvious, but not, therefore, less important, special features of individual cases are liable to be lost sight of. Yet it is clear on careful observation that there are many varieties of the disease, or many variations in it, and that these stand in close relation with the circumstances under which it has arisen, and with the course it is likely to run.

Bacteriology is gradually, step by step, explaining, or at any rate suggesting explanations of, these variations, and it is to this part of the subject only that I will briefly refer.

There is no doubt that the pathogenic organism with which croupous pneumonia is most commonly associated is the diplococcus pneumoniæ or pneumococcus. But this is not the only pathogenic organism found, for the streptococcus, tubercle bacillus, Friedlaender's bacillus, the staphylococcus and others have been present in different cases, sometimes alone, sometimes variously combined and associated. Still there is no doubt that the pneumococcus is by far the commonest of them all, for in about half the cases it exists alone, and in another quarter in combination with one or other of the bacilli mentioned. In the remaining cases other organisms are found, sometimes alone, more commonly in combination.

It thus appears:

1. That acute inflammation of the lung is not due to one pathogenic organism only, but to many and various organisms, though some are more likely to produce it than others, either because the lung is especially susceptible to their attack, or because they are more generally prevalent.

2. That the usual organism of croupous pneumonia is the pneumococcus.

3. That the different forms of, or variations in, pneumonia are very probably connected with different kinds of pathogenic organisms.

4. That even where the pneumococcus is the cause of the attack other pathogenic organisms may be associated with it, and thus produce variations in the symptoms; in other words, that the infection is not rarely a mixed one.

5. That secondary and subsequent infection with some other organism may account for a pneumococcus pneumonia ending in a particular way, as, for example, in abscess,

gangrene, or tubercle, though it must be borne in mind that the same organism that can produce these results may also be the cause itself of the original inflammation.

I have referred to these facts in connection with croupous pneumonia because it will become evident that facts of a similar kind are being discovered about the pathology of broncho-pneumonia, to which affection I now turn.

The following is a brief account of the commonly accepted views in respect to broncho-pneumonia at the present time; that it is closely related to capillary bronchitis, from which it can hardly be distinguished clinically; that it is, as a rule, a secondary affection, and met with under the following conditions:

1. As the consequence of bronchitis.
2. As a sequela of the infectious diseases, such as measles, diphtheria, whooping-cough, scarlet fever, etc.
3. As a result of the aspiration of infective particles or foreign substances, the so-called "aspiration or deglutition pneumonia."

In respect of the morbid anatomy the lung is found studded irregularly with small patches of consolidation, the development of which follows the following course: the small air tubes become plugged with secretion, the corresponding alveoli become collapsed and ultimately inflamed, while the surrounding parts pass into a condition of complementary emphysema.

All stages may be found between the portions of the lung which are collapsed and those which are consolidated. In the early stages the collapsed alveoli become filled with secretion which contains a certain number of leucocytes and catarrhal cells. These cells gradually increase in number until they form the mass of the consolidation.

The consolidation of broncho-pneumonia is stated to differ from the lesions of croupous pneumonia in the absence of fibrin network and of alveolar casts, in the preponderance of catarrhal cells, and in the usual absence of blood cells. In addition to this there is generally a considerable infiltration of the bronchial walls and surrounding interstitial tissue. In the aspiration or deglutition pneumonia there is a more dense infiltration of the air cells with leucocytes, producing suppuration or foci of softening, and occasionally gangrene.

Clinically, three classes of cases are usually distinguished:

1. That which corresponds with capillary bronchitis, in which there is little or no consolidation, but the signs of very acute congestion. This is sometimes called "congestive broncho-pneumonia."
2. The disseminated form, which is by far the most common condition, corresponding with that of which the pathological description has just been given.
3. A pseudo-lobar form in which the consolidation is more extensive and not so widely disseminated; but even in this case the consolidation is not massive as it is in croupous pneumonia, so that even when a whole lobe or a considerable part of the lung is involved, there are between the patches of consolidation areas of collapsed or even emphysematous lung.

All these conditions are fairly called broncho-pneumonia, inasmuch as the inflammation either follows directly upon some form of bronchitis or results from some infective substances clearly introduced through the air passages.

This account of the disease is correct so far as it goes, but it is a part of the truth only, and not the whole truth. There are really two clinical groups of broncho-pneumonia, one of which, like that just described, follows bronchitis or stands in direct relation with some affection of the air passages or mouth; while in the other there is no antecedent bronchitis at all or any lesion connected with the air passages or mouth to which it is likely to be secondary. To this group many of the cases placed under the heading of pseudo-lobar broncho-pneumonia belong. We may, if we like, call this latter group "primary" or "idiopathic" broncho-pneumonia, and the former "secondary" broncho-pneumonia. Clinically, the two groups differ in a very pronounced way.

SECONDARY BRONCHO-PNEUMONIA.

In the ordinary secondary broncho-pneumonia which follows bronchitis the child is generally weakly, often rickety, perhaps tuberculous, liable to attacks of diarrhœa, and subject to bronchitis, from which it is suffering at the time of onset. The child then becomes more seriously ill; the bronchitis becomes more severe, and the temperature rises to 103° or more. Besides the signs of general bronchitis, there are spots irregularly distributed over the chest where sharp, crackling crepitation is heard, and possibly bronchial breathing, bronchophony, or pectoriloquy. These spots correspond, as is proved by *post-mortem* examination, with patches of consolidation; but the consolidation is rarely sufficient to give rise to dulness, especially as the patches are surrounded with emphysematous lung.

The child is pale, somewhat cyanosed, suffers with a good deal of dyspnœa, and sweats profusely, especially during sleep. There is probably marked inspiratory recession of the lower ribs and intercostal spaces. The temperature is of a hectic or irregularly remittent type, remains high for many days, and terminates by lysis. Recovery is slow and tedious, and there is a great tendency to relapse. The mortality is considerable, especially in very young children. The symptoms are severe, but local rather than general. What general symptoms there are depend upon the cyanosis, which is to a greater or less degree always present. The diagnosis has to be made from capillary bronchitis rather than from anything else. It is in the temperature chart especially that the chief characteristics of the cases are seen.

This is the common form of broncho-pneumonia, upon which the usual clinical and pathological descriptions are based, and of which the 4 cases following are good examples:

CASE I.—T. S., 1 year and 5 months old, was in good health until attacked by measles 5 weeks ago, after which he caught cold and had some diarrhœa. He was admitted with broncho-pneumonia and a temperature of 104·4°. There were the signs of general bronchitis, with a few small patches of dulness, one at the apex and another near the heart on the left side, and others at both bases behind: there was considerable recession of the lower parts of the chest, so that the dulness at the bases was pro-

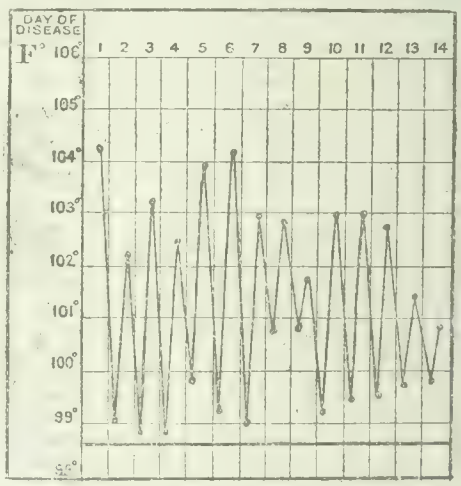


Chart I.—Case I.

bably due in great part to collapse. In various parts of the lung there were patches over which small, sharp, crackling crepitations were heard. The child was somewhat cyanosed, and though evidently very ill was at times bright and intelligent. The temperature was of a distinct hectic type, oscillating daily between 103° or 104° and 99°. The chart is characteristic, and shows the main features of the case, which continued without much alteration of physical signs or conditions until death occurred, rather more than a fortnight later, when the patient died somewhat suddenly. There was no *post-mortem* examination.

CASE II.—D. R., aged 1 year and 8 months. The child was a healthy baby; had whooping cough at 12 months of age, from which she completely recovered; and measles seven weeks ago, since which time she had never been quite well. Four weeks before admission, that is, three weeks after the commencement of measles, the child developed bronchitis, and it was for this that she was brought to the hospital, having at the time a temperature of 103·6. There was impairment of percussion more or less over the whole of the right lung, where the breathing was greatly exaggerated, and in places almost bronchial in character; elsewhere on both sides of the chest the ordinary signs of bronchitis were present. The course of the case need not be minutely described. It was a very long one, and was characterised by a succession of relapses, the temperature rising considerably during each relapse, and the physical signs constantly changing, a patch of dulness, of bronchial breathing, or of crepitation appearing first in one part then in another, the whole case being gradually drawn out for a period of three months. The temperature chart gives a better record of the case than any description would. Ultimately the patient completely recovered

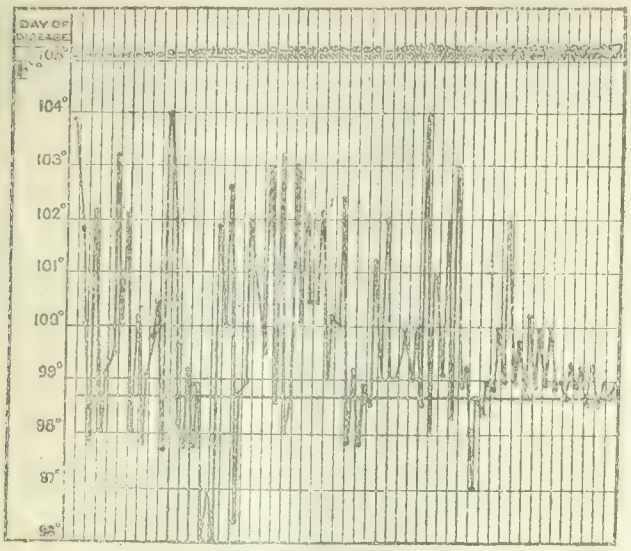


Chart 2.—Case II.

CASE III.—L. C., 2½ years of age, was well until attacked with whooping cough two months before admission. For the last three weeks the patient had had a good deal of cough and the breathing had been rapid. Two days before admission the patient had become suddenly worse, and was then admitted with a temperature of 103° and all the signs of broncho-pneumonia. The whole of the right side was impaired to percussion, and there were several patches of bronchial breathing, pectoriloquy, and sharp crepitation. In a day or two's time bronchial breathing was to be heard over almost the whole of the right lung, but this rapidly

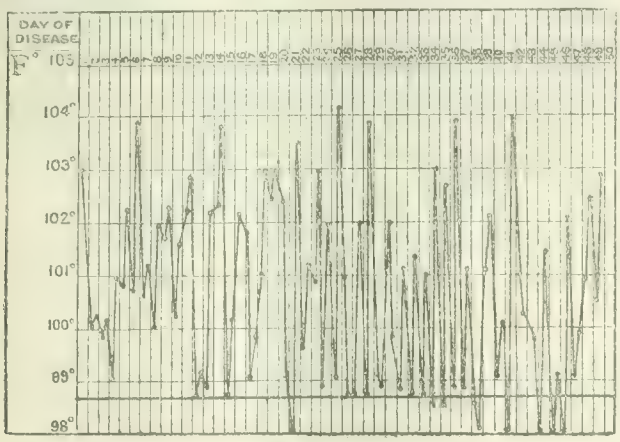


Chart 3.—Case III.

improved; then a patch was found on the left side below the angle of the scapula. The case was evidently one of broncho-pneumonia with numerous patches of consolidation and collapse in the whole of the right lung and with similar conditions, though not so extensive, in the left. After about a week the patient got better, and then in a few days' time again relapse set in with a good many fresh patches in the left lung. So the case went on, with one relapse following another for a period of three months. The temperature chart really shows the features of the case better than any description. In the end the patient recovered completely.

In the next two cases, although the affection proved ultimately to be broncho-pneumonia, the onset was of a more sudden character; but with this exception they do not differ in their clinical course from those preceding.

CASE IV.—A. D., aged 3, was in good health until October 3rd, when after being at school she became restless and feverish and complained of being giddy; she then got some bronchitis, with very rapid breathing, and on the 6th was admitted with a temperature of 103·6°, pulse 96, respiration 60. The only physical signs were those of bronchitis, and there was no definite consolidation to be found anywhere. The fever was of a markedly hectic character, varying from 103° to 99·5° daily for about a week; after this it became less hectic for a period of fourteen days longer and finally subsided; the patient gradually recovered completely.

CASE V.—D. T., 1 year and 8 months of age, was attacked with whooping-cough on January 1st, having been previously in good health. The attack proved to be a severe one, so that she would have attacks every hour or so. She vomited a good deal, had frequent epistaxis, and rapidly lost flesh and strength. On January 15th breathing became rapid, and she was found to have bronchitis. By the 20th the symptoms were much worse, and there was marked recession of the lower part of the chest. On January 21st she was admitted, with high temperature, respirations 56, pulse 150, temperature 101°. The signs of general bronchitis, with marked

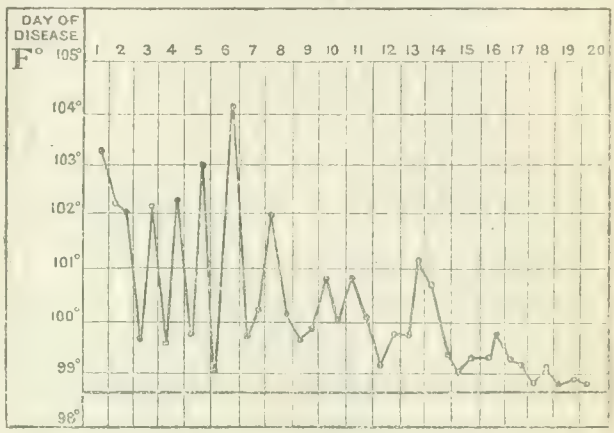


Chart 4.—Case IV.

recession of the lower parts of the chest. The chest was hyper-resonant, except on the right axilla, where there was a considerable patch of dulness, over which the breath sounds were bronchial. Besides this there were signs of general bronchitis over both sides. The next day the temperature rose to 106°, and remained very high for the whole of that day in spite of frequent sponging. Pulse 180, respirations 76. In the course of

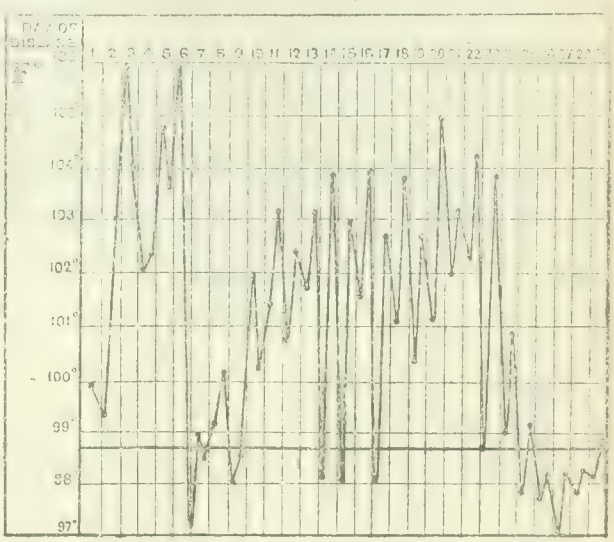


Chart 5.—Case V.

the next two days the signs of bronchitis cleared off to a great extent, but the dulness remained the same. The temperature was very high on January 24th; temperature 104°, pulse 200, respirations 80. The condition remained much the same till January 27th, when the temperature went up to 100, and was reduced by bathing; but it quickly went up again to 104°. That night a crisis occurred, a fall of 10·5° taking place in a few hours; and when the temperature fell to 98°, the pulse was still 148 and the respirations 76. This continued for three or four days, but on January 30th the temperature began again to rise, and continued high until February 14th—that is, eighteen days longer. Signs of bronchitis appeared in the chest again, with some patches of consolidation on the left side as well. The respirations and pulse still remained very rapid, the respirations averaging 40 to 50, and the pulse 160. On February 14th the temperature began to fall, and on the 16th was subnormal, from which time the patient made an uninterrupted recovery, the respirations however remaining rapid for another week, and the pulse also. The first attack appeared to be broncho-pneumonia, but with considerable consolidation on the right side. The second attack presented the ordinary features of broncho-pneumonia.

PRIMARY BRONCHO-PNEUMONIA.

The second form stands in strong contrast in almost every respect to the one just described. The children are often robust and healthy, and well till suddenly attacked with

severe symptoms. The fever rises abruptly, and is often ushered in by convulsions or nerve symptoms. The temperature is less remittent and of a higher average. It is of shorter duration; terminates, as it begins, suddenly, and often by a well-marked crisis; there is no great tendency to relapse; recovery is rapid, the mortality small, and there is no antecedent bronchitis, often no coincident bronchitis, and though in the later days of the disease signs of bronchitis may present themselves, they are evidently secondary. The physical signs are more often local, that is to say, one lung or a part or parts of one lung may be involved only, while the signs of general bronchitis are not so marked. The consolidation may sometimes be sufficient to give signs of percussion dulness, but in the large majority of cases no dulness is present. The general symptoms are often much more severe than the local ones, so that the pulmonary affection may be more or less masked. The patients may be unconscious or delirious, and it is in this group of cases that the diagnosis from meningitis often presents difficulties.

Case VI.—H. B., aged 9 months, was a weakly child, and had had one or two slight attacks of bronchitis, from which he had completely recovered. He was in his usual health till March 31st, when he woke up one night crying and in a cold sweat. Until his admission on April 5th he had continued very ill, having a good deal of wheezing on the chest, very rapid breathing, and a good deal of fever. On admission the child's temperature was 103°, pulse 200, respirations 70, with a good deal of wheezing over the whole chest, with crepitation in nearly all parts, and extreme recession of the lower part of the neck. The only part where there was any impairment of percussion was at the left base behind, and here the breathing was exaggerated and was almost bronchial. The child was very ill, somewhat cyanosed, and with considerable dyspnœa. The condition remained much the same, without any marked change in the patient till April 5th, when the temperature suddenly fell, just as it does in croupous pneumonia, and in the course of a few hours dropped from 104° to 98°. This was accompanied with great prostration, from which the child did not rally, but died of exhaustion on the following day. From the sudden onset and termination the case presented the clinical features of croupous pneumonia. The physical signs, however, were those of a general bronchitis, with possibly some consolidation at the left base.

On the *post-mortem* examination the following condition was found: On the right lung there were small patches of consolidation throughout the whole of it, and in the base one or two considerable areas of collapse in addition. The larger bronchial tubes contained but little secretion, but the smaller ones contained some frothy fluid. In the left lung the lower lobe was almost completely collapsed, while the upper lobe, though still crepitant, contained a large number of small patches of consolidation. The posterior surface of the lung was covered with a thick exudation of lymph, a quarter of an inch thick over the lower part, which extended along the diaphragmatic surface and reached above to the middle of the upper lobe. In this lung there was a good deal of muco-purulent secretion in the smaller bronchial tubes throughout. The pathological lesions found were those of ordinary broncho-pneumonia.

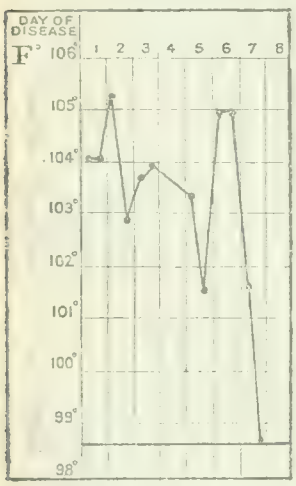


Chart 6.—Case VI.

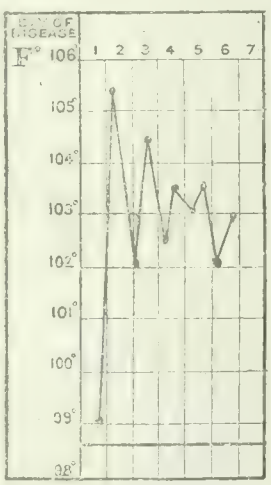


Chart 7.—Case VII.

Case VII.—D. D., aged 7 months, was a weakly child, but had been in its usual health until February 12th, when it became restless and fretful. It vomited and had some wheezing on the chest, with a good deal of cough. On the 13th it was admitted, and had then a considerable amount of dyspnœa; the temperature was 105°, pulse 50, respirations 60, and there was a good deal of recession of the lower part of the thorax. The physical signs were those of general bronchitis, but in the right middle lobe there was an area of impaired resonance. The child remained in much the same condition until January 20th, when it seemed to be somewhat better, but it died somewhat suddenly that day without any obvious cause. There was no *post-mortem* examination.

Case VIII.—W. T. W., aged 3½ years, has always been a fairly healthy child, except for two attacks of bronchitis during his second year. He was well till December 25th, 1891, when his digestion was upset by some plum pudding. On December 28th he complained of thirst, lost his appetite, was drowsy, and had some cough. On January 1st he became delirious and had a slight fit. On admission he was found to have the signs of some general bronchitis, which, however, rapidly subsided as the signs of consolidation appeared at the right apex, where there was

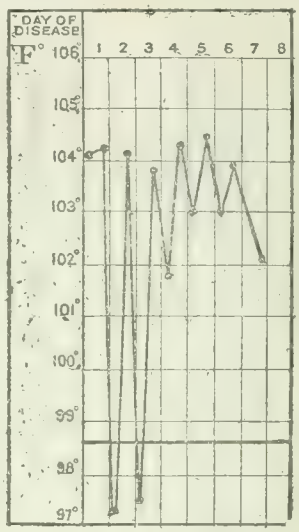


Chart 8.—Case VIII.

some impairment of percussion and well-marked bronchial breathing. The pulse was 120, the respirations 64. The temperature averaged about 103°, occasionally reaching 104°; it was hectic in character, but retained high general level. He remained very ill, but gave no special cause for anxiety, and on January 7th appeared to be somewhat better in the morning, but in the middle of the day gave a cough, was seized with dyspnœa, and died in a few minutes. There was no *post-mortem* examination.

Case IX.—F. R., aged 4½ years, was in good health till October 12th, when he was suddenly seized with shivering and coughing, and on the 13th he was very feverish, and vomited. The respirations were 40, pulse 150; the temperature was so high that the patient had to be bathed and sponged on several occasions. The physical signs were those of broncho-pneu-

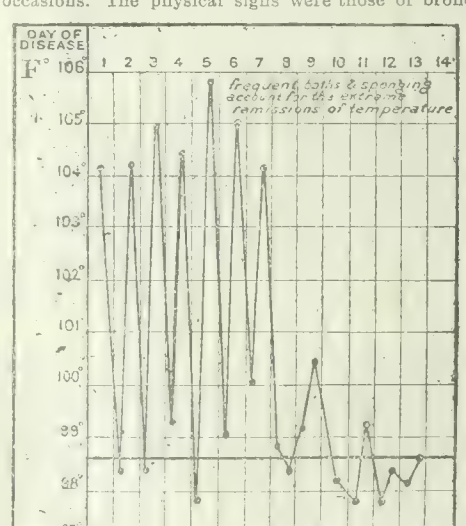


Chart 9.—Case IX.

monia, without any very definite local signs of consolidation. The fever was very high, and the patient very ill, but it was intermittent in character, and it terminated suddenly with a well-marked crisis. At the same time a brother, aged 2, was also in the hospital with broncho-pneumonia, after which an empyema developed, and the child died

To compare with this last series of cases we may take another series, in which, on account of the more marked physical signs, the diagnosis of croupous pneumonia was made.

Case X.—E. K., 1¼ year old, a healthy and strong child, was well till January 20th, when he suddenly became very restless, had a kind of fit, vomited several times, and his breathing became short. He was admitted

into the hospital on January 25th—that is to say, on the sixth day of the disease. His pulse was 150, respirations 60, and his temperature very high. The whole of the lower half of the left lung was almost dull, the resonance

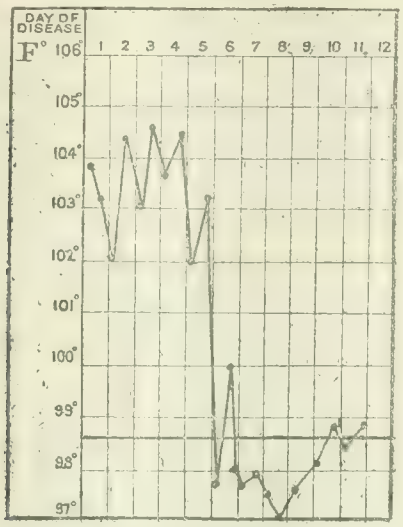


Chart 10.—Case X.

greatly impaired, and there was well marked bronchial breathing. There was nothing remarkable about the case, except the severity of the fever. On the tenth day the temperature fell suddenly by a well-marked crisis. Recovery was then rapid, and in five days all physical signs had disappeared.

CASE XI.—G. K., aged 8, was well till October 5th, when he was suddenly attacked with pain in the right side, frontal headache, vomiting, and pain in the chest. Temperature 103·8°, pulse 130, respirations 72. On October 9th the whole right lung was found to be solid from top to bottom, over which bronchial breathing was audible. There was only one part which maintained its resonance, and that was a small portion in the region of the nipple in front; no crepitation was present anywhere. On the left side the breathing was normal, except that it was somewhat exaggerated and puerile. The temperature fell abruptly on October 10th—that is, on the sixth day of the disease, and the patient made a very rapid recovery.

CASE XII.—F. J., aged 5 and fairly robust, was well until January 30th, when he was suddenly seized with sickness and shivering and seemed very ill. On the 31st he was admitted into the hospital with well marked signs of left base pneumonia, the whole lower part being dull and presenting well marked bronchial breathing. The respirations were 160, the pulse 150, the temperature 103.8°. The case presented no particular features, except the extreme rapidity of the pulse, which retained about an average of 160. On February 5th, the seventh day of the disease,

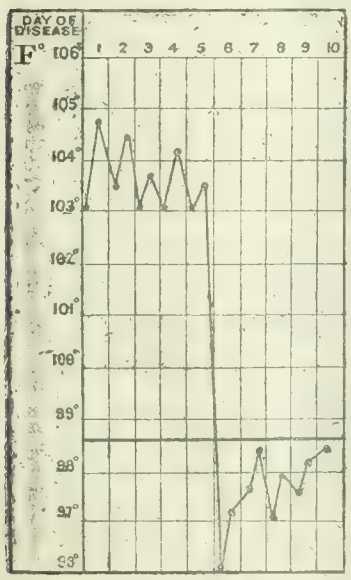


Chart 11.—Case XII.

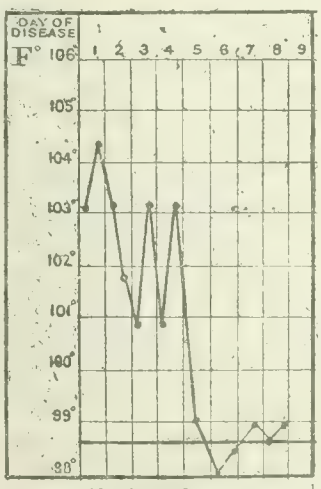


Chart 12.—Case XIII.

the temperature fell suddenly, falling 9° in 16 hours. The temperature chart is very characteristic. The fall in the pulse was almost as remarkable as the fall in the temperature, dropping from about 160 to 60. The child made a rapid recovery, except that it was left with some contraction of the affected side.

CASE XIII.—A. C., aged 5½, had been a fairly healthy child, except that it had had two attacks of bronchitis at the ages of 3⅔ and 4½, but for the last two months it had been a little ailing from some indefinite cause. It was then a little restless at night and was troubled with dyspepsia. A week before admission it suddenly became delirious and vomited, complained of pain which it referred to the abdomen and had several shivering fits. On admission it was found to have a temperature of 104, pulse 160, respirations 56; there were marked physical signs of consolidation at the right apex, but no general bronchitis. The case ran its usual course and terminated by crisis on the tenth day. Recovery was rapid and complete.

The cases that I have quoted prove that there are three clinical varieties of broncho-pneumonia:

1. That in which the disease is of gradual onset, preceded by some affection of the air tubes, the temperature hectic in character, the course prolonged and interrupted by frequent relapses, and the termination by lysis.

2. That in which the history and symptoms are similar, but the disease is of sudden rather than gradual onset.

3. That in which there is no antecedent affection of the air tubes, the affection is of sudden onset and short duration; the temperature persistently high, without any marked tendency to relapse, and the termination is by crisis, the clinical symptoms being those of croupous pneumonia, but the lesions those of broncho-pneumonia.

From the last group, lobar pneumonia differs only in the extent of the consolidation; that is to say, in little more than physical signs.

In other words, the secondary and primary broncho-pneumonias are clinically and pathologically different diseases; and while the secondary stand in close relation with bronchitis and similar affections of the air tubes, the primary stand in close relation with lobar pneumonia.

Whether there is a real specific difference of this kind between the two forms can only be decided by bacteriological investigation. Unfortunately in most of the investigations made so far, the distinction between these two forms has not been made, so that the results obtained, though of interest and importance in a general way, do not throw much light upon the special question at issue.

Before turning to the bacteriological side of the question it will be interesting to refer to some statistics which show first the general frequency of broncho-pneumonia compared with lobar pneumonia, and the relative frequency *inter se* of the primary and secondary forms. On both these points Holt[1] gives some interesting figures:

I.—*Frequency of Broncho-Pneumonia compared with Lobar Pneumonia.*

—	Broncho-Pneumonia.	Lobar Pneumonia.	Proportion of Broncho-Pneumonia to Lobar Pneumonia.
Under six months	72	11	6·7 to 1
From six to twelve months...	96	29	3·3 to 1
In second year	73	40	1·8 to 1
In third year	19	23	0·8 to 1
In fourth year	0	6	0·0 to 6
	261 = 75 %	109 = 25 %	
Total	370		

The last column is especially interesting, as showing the steady and rapid diminution there is in the relative frequency of broncho-pneumonia and lobar pneumonia as children advance in age. Unless a specific difference between lobar and lobular pneumonia be assumed, all that these figures really show is that acute inflammation of the lungs tends to take the lobular form in very young children, but more and more the lobar form as the children grow older. This fact is sometimes stated in another way, namely, that in the first year of life broncho-pneumonia is the usual form, after the third year lobar pneumonia, while during the two intervening years the two forms are often combined.

II.—*The Relative Frequency of Primary and Secondary Broncho-Pneumonia.*

442 cases	Primary—that is, without previous bronchial affections		*154
	Secondary—		
	1. To bronchitis of larger tubes		41
	2. To some infectious disease:		
	Measles	89	
	Whooping-cough	66	
	Diphtheria	47	
	Scarlet fever	7	238
	Influenza	6	
	Varicella	2	
	Erysipelas	2	
	Acute ileo-colitis	19	

* Possibly some of these had their origin in influenza.

Excluding the cases of broncho-pneumonia developing in the course of some infectious disease, the primary bear in this table to the secondary the proportion of 4 to 1. This must be unusual. It is at any rate far above the proportion which my own experience would lead me to regard as correct for this country, and probably the difference is to be explained, as Holt suggests, by the inclusion among the primary cases of a large number of instances in which the broncho-pneumonia had its origin in influenza. I should think that the primary and secondary broncho-pneumonia occur in about equal proportions.

The Bacteriology of Broncho-Pneumonia.

Speaking generally broncho-pneumonia is shown to be associated with several varieties of pathogenic organisms; for example, the streptococcus, staphylococcus, Friedlaender's bacillus, the tubercle bacillus, and others; but chief among them all is the pneumococcus, which, taking all cases together, is present either alone or in association with some of the others named, at least 50 per cent.

Thus Netter[2] examined 42 cases, and found

Pneumococcus alone in	10	19	= 45 per cent.
With others in	9		
Streptococcus alone in	8	25	= 60 ,,
With others in	15		
Staphylococcus alone in	5	13	
With others in	8		
Friedlaender's bacillus alone in	2	6	45 ,,
With others in	4		

Weichselbaum[3] in 15 cases found the pneumococcus in 7, streptococcus in 6, Friedlaender's bacillus in 1, and streptococci and staphylococci in 1.

Horton Smith[4] in 11 cases found the pneumococcus alone in 5, with others in 3—that is, in 8 out of 11, and in only 3 cases was it absent.

There are only two sets of observations known to me in which the primary and secondary broncho-pneumonias have been separated and the results of the bacteriological examination kept distinct.

Mosny[5] examined 4 cases of primary broncho-pneumonia, and found the pneumococcus in 3 and the staphylococcus in 1. In 13 secondary cases the pneumococcus was present alone in 1, and associated with the streptococcus in 1. The streptococcus was found alone in 5, and associated with other bacilli in 5 more. Friedlaender's bacillus was present in 1, and an unknown bacillus also in 1.

The most complete series is recorded by Holt,[6] as investigated by Dr. Martha Wollstein, under his direction.

Of primary cases in 17 the pneumococcus was found alone in 9, with streptococcus in 7, with staphylococcus in 1; in 1 the streptococcus was found alone, in 1 the staphylococcus was found alone. Of 14 secondary cases the pneumococcus was found alone in 2 and with others in 9 = 11; it was absent only in 3.

As far as the evidence goes it seems to show that in secondary broncho-pneumonia the streptococcus is the most frequent organism, and in primary broncho-pneumonia the pneumococcus, and that among the latter the pneumococcus is almost as common as it is in lobar pneumonia of adults.

Thus bacteriology gives confirmation of the conclusion to which clinical investigation has led, namely, that primary broncho-pneumonia is of pneumococcal origin, or, as it may be stated in other words, that the pneumococcus, which in the adult produces lobar consolidation, in the infant and young child produces lobular or disseminated consolidation.

It is now well known that the microscopical distinctions often drawn between the minute lesions of lobar and lobular pneumonia cannot be regarded as absolute, and that for example even the fibrin network which is so common in acute lobar pneumonia is not uncommon in acute broncho-pneumonia, while it may be absent in lobar pneumonia.

The conclusions to which this evidence points are obviously these:

1. That the primary and secondary broncho-pneumonias have a different bacteriological origin.

2. That secondary broncho-pneumonia is for the most part due to streptococcus infection, derived from some source in connection with the air tubes, throat, or mouth.

3. That primary broncho-pneumonia is of pneumococcal origin.

4. That pneumococcus inflammation occurs with almost equal frequency in the child and the adult.

5. That pneumococcal inflammation takes a different form in each, in the adult producing massive consolidation and in the child disseminated patches of consolidation; in other words, that there are no real pathogenic distinctions between lobar pneumonia of the adult and primary lobular pneumonia of the child.

Now the question may fairly be asked if this be so, why the inflammation of the lung takes a different form in the child from that in the adult. The answer is that it depends in all probability upon the peculiarities of the child's lung.

The respiratory mechanism in children presents many peculiarities. The chest walls are elastic and yielding owing to the incomplete ossification of the ribs and the thorax approaches the cylindrical in form. The type of respiration is diaphragmatic rather than costal and remains so up to about the 6th or 7th year; very slight causes easily produce irregularities of respiration and may even lead to local defects of expansion in different parts of the lung.

In structure also the lungs of children present many notable differences from that in the adult. Thus the trachea and main bronchi in the young child are relatively much larger; the other bronchi are also larger and occupy greater relative space; the air cells are smaller and occupy less relative space; the interstitial tissue of the lung is more abundant; the epithelial lining of the small bronchi and alveoli is relatively larger, the cells are of relatively larger size; they respond more actively to slight irritation under which they proliferate readily and are easily shed, thus giving the catarrhal or epithelial character to the resulting inflammation.

With so many peculiarities in the child's lung and respiratory mechanism it can hardly be matter of surprise that inflammation in the child should present peculiar features.

To sum up the matter, I am of opinion that the term "broncho-pneumonia" would be best reserved for those inflammations of the lungs which follow antecedent affections of the bronchi, and that their exciting cause for the most part will be found to be other organisms than the pneumococcus, while, on the other hand, the primary broncho-pneumonia of children is really croupous pneumonia occurring in a disseminated and patchy form instead of a massive consolidation.

Although it is convenient at the present time to deal with these two forms of broncho-pneumonia under the same heading and in relation to bronchitis, because I do not think we are yet ripe for their clinical separation from one another, still, in my opinion, the proper scientific place for the primary forms of broncho-pneumonia is not with broncho-pneumonia at all as it is commonly understood, but with croupous pneumonia.

It was not until I prepared this paper and was looking up the literature of the subject that I came across an article upon this subject by Holt. It is gratifying to find that his conclusions are practically the same as my own, and arrived at in the same way, namely, by clinical observation, and with this additional advantage, that he is able to support his views by the bacteriological investigations conducted under his own directions, to which I have referred.

The division of broncho-pneumonia in the manner which I have suggested certainly removes some of the difficulties which are felt at the bedside and some of the confusion which exists on the subject; and even if it should seem that we may have gone somewhat beyond the facts at present at our disposal in endeavouring to connect these varieties with different bacteria, there is no doubt in my mind of the importance of the clinical distinction between the groups to which I have drawn attention.

If, as I have pointed out, the primary and secondary broncho-pneumonias are distinguished from each other not only in clinical history, course, and results, but also in bac-

	Clinical History.	Bacteriology.		
Broncho-pneumonia, lobular, patchy, disseminated	1. Gradual onset, tendency to relapse. Fever, hectic, markedly remittent, of long duration, with gradual fall. 2. Gradual onset, with sudden aggravation, in other respects the same as above. 3. Sudden onset, no tendency to relapse. Fever high, not markedly remittent, of short duration, with sudden fall.	Streptococcus chiefly, and others Streptococcus, etc., associated probably with pneumococcus	Secondary broncho-pneumonia after bronchitis, measles, whooping-cough, diphtheria, etc.	
Croupous pneumonia, lobar or massive consolidation	Similar in all respects to the last	Pneumococcus Pneumococcus	Primary broncho-pneumonia.	Croupous Pneumonia.

teriology, the case for the recognition of these two forms seems to be clearly made out.

The table here given represents in a diagrammatic form the views I have been expressing.

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[1] *Diseases of Childhood*, 1897. [2] *Arch. de Méd. Expér.*, June, 1892. [3] *Med. Jahrb.*, 1886. [4] *St. Bart's. Hosp. Rep.*, 1897. [5] *Etudes sur la Broncho-pneumonie*, 1891. [6] *Loc. cit.*

THE USE OF CREOSOTED OIL FOR THE EXPULSION OF TRACHEAL FALSE MEMBRANES AFTER TRACHEOTOMY; AND OF INTRA-NASAL INJECTIONS OF OIL IN VARIOUS AFFECTIONS.*

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THE time-honoured treatment of croup by emetics, which aims at the removal of the membrane in the earliest stage, and is sometimes successful, deserves to be thought of in all cases seen at the beginning. For the later stages it has been superseded by modern methods of treatment. In all forms of diphtheria the injection of antitoxin should be our first care; and in the naso pharyngeal cases it often succeeds almost without other aid. In tracheal diphtheria this fortunate result cannot be depended upon. Tracheotomy, which relieves that part of the dyspnœa which is due to superadded spasm, is powerless to clear the membrane away from the trachea and from the bronchial tubes. It is in these cases that the method suggested is of special value.

Tracheotomy itself was formerly too often delayed until the symptoms became urgent, indeed, sometimes to the verge of asphyxia, the disinclination to operate early being perhaps explained by the not infrequent failure of tracheotomy to save life. The author's opinion and practice have long been in favour of early tracheotomy. The scar which is left in the neck is after all a small matter compared with the risk to life involved in delay based upon a doubt as to the diagnosis. Our improved methods are arguments in favour of an early operation. Antitoxin accelerates the detachment of the membrane, and this will be the more readily expectorated if the child has not been exhausted by prolonged dyspnœa; whilst the method now advocated, which has for its chief object to promote the expectoration as well as the detachment of the membrane, cannot conveniently be applied except after a preliminary tracheotomy, but distinctly improves the prospects of that operation.

The present treatment, previously mentioned in a joint communication[1] by Mr. Hubert and the writer is applicable, after tracheotomy, in cases of simple tracheal diphtheria or in those in which the trachea is involved in addition to the pharynx. Its objects are: (1) To promote the expectoration of the membrane; (2) to assist its detachment; (3) to lessen its infectiveness *in situ*; and (4) to stimulate and soothe the ulcerated mucous surface.

The first two indications are the most urgent, and in so far as it has succeeded in fulfilling them, the method has contributed to the saving of life, since death when it occurs is due to the direct obstruction set up by the membrane or to its unchecked extension into the small tubes.

In the following cases, as in that previously reported,[2] the diphtheria was limited to the trachea; and they resembled it also (1) in having been diagnosed at first as simple laryngitis, but when first seen by the writer as latent diphtheria necessitating tracheotomy; (2) in the circumstance that no membrane was seen, even at the time of the operation; and (3) in the fact that the relief afforded by the latter was only temporary and was followed by death from gradual asphyxia in the one case (in which the treatment was not applied and no antitoxin was injected), and in the other by asphyxia and apparent death through impaction of membranes, resuscitation being fortunately obtained by artificial respiration.

The first case illustrates the result of the non-expulsion of the tracheal membrane, death occurring within thirty hours after the tracheotomy, and the necropsy showing a thick membrane extending down the trachea from the level of the tracheotomy wound. In this case an opportunity of prescribing the creosoted oil was unfortunately not afforded, and the child remaining without any effectual cough after the tracheotomy, no membrane was expectorated from first to last. Death was due to gradual asphyxia of mechanical origin, not to broncho-pneumonia.

The second case came under treatment on the fourth day, with considerable dyspnœa. Tracheotomy did not show the presence of any membrane, but only some suspicious stringy mucus; but membrane was coughed up on the same evening, and for twenty-one days subsequently, and its diphtheritic nature was shown by cultures both in the early stage and towards the end of the case. Fifteen drops of creosoted oil (1 in 20) were introduced immediately after tracheotomy, and 4,000 units antitoxin were injected at the same time, and again the next morning. The treatment by creosoted oil was continued throughout the case with an interval of four days, during which simple olive oil was substituted. The slight tinging of the sputum, which had been observed at intervals under the creosote, continued under the influence of the pure olive oil; and further proof that the hæmorrhage was not set up by the creosote was also obtained by raising the strength of the creosote for a while to 1 in 15, and even to 1 in 10: no undue irritation and no hæmoptysis were thereby induced. The original strength (1 in 20) was then resumed, and the treatment continued until membrane ceased to be discharged. Recovery was uninterrupted in spite of the unusually long membranous and pyrexial stage, the signs of broncho-pneumonia at the right base ultimately disappearing. After a rise due to two successive antitoxin rashes, the temperature finally fell, and the tube was removed on April 12th. No paralytic symptoms occurred in the case. The albuminuria, at first considerable, disappeared within the first fortnight. An abundant crop of pustular acne on both legs, which occurred soon after the antitoxin rash, is the only other point deserving notice.

Frequency and Mode of Administration.—Fifteen drops were at first introduced every two hours, but from the third day every four hours. The immediate effect of the creosoted oil was to set up cough, and its influence in aiding the detachment of the membrane was indicated by the ease with which, during the intervals, membrane was expectorated by spontaneous cough. In the cases hitherto treated an ordinary drop bottle has answered every purpose. The oil did not cause the slightest distress to the patients. Indeed, up to the present no practical objection to the method has been noticed; and its safety, which enables it to be carried out by any trained nurse, is a recommendation.

Addendum.—The practical aspects of the question as to early tracheotomy is illustrated by another case of latent diphtheria which was submitted to the same treatment shortly after this paper was read. The case, which appears from the result to have been one of mild laryngeal diphtheria with only slight extension down the trachea, might probably have done well without operation, under antitoxin alone. But the risk had to be dealt with of the case being perhaps more severe than it appeared, and possibly ingravescent with extension of the membrane into the lung. Again, the injection of oil after the tracheotomy and its systematic employment, although the breathing had become free, were part of a precautionary treatment for the tracheal diphtheria which could reasonably be suspected, and were prophylactic measures

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against the extension of the process to the bronchi and bronchioles.

The boy, aged 4 years and 8 months, was admitted on the sixth day after the first symptoms of sickness and headache. The croupy cough and voice had been noted two days before admission. The respiration was slightly noisy, the cough hoarse and brassy, but there was no expectoration. There was moderate inspiratory recession at the base of the thorax. No membrane could be seen, but there was some pharyngeal redness, and the tip of the epiglottis was red and slightly swollen. These symptoms had developed whilst the child had been kept in the house for two or three days, and were not therefore explained by laryngitis or exposure. Temperature 99.4°, pulse 108, respirations 28. On April 17th, the diagnosis of diphtheria having been made, immediate tracheotomy was prescribed, to be followed by the introduction of 15 drops of creosoted oil (1 in 20), and by an injection of 4,000 units of antitoxin. The operation was performed successfully and at leisure, there being no urgent dyspnœa, but no membrane was seen, and some opaque mucus only was expectorated on opening the trachea, and after the introduction of oil. A first examination of the sputum for bacilli was not successful, but a cultivation taken two days later showed them. The breathing was completely relieved, and only a few rhonchi were heard in the chest. The progress of the case was satisfactory and rapid. The expectoration, promoted by the oil, which was repeated every two hours at first, and subsequently, on the 19th, every four hours in mv doses, consisted chiefly of opaque viscid mucus or muco-pus, which did not present a true membranous aspect until the third day after the tracheotomy, when a small piece of membrane was brought up. On the second day after the operation the epiglottis appeared much less red and not swollen, but when the plug was introduced into the tracheotomy tube there was still stridor. On the third day these symptoms were much less. The child presented no bad symptoms, and no continued pyrexia. There was a trace of albumen in the urine on the 19th, none afterwards, and no paralytic symptoms. The tube was removed on the tenth day after the operation.

This was an instance of early tracheotomy which may not have been absolutely indispensable, but at any rate was the source of complete and speedy relief to the patient, and of absence of all anxiety to the physician, and is therefore not to be regretted.

THE INTRANASAL USE OF MEDICATED OILS OR OILY FLUIDS.

In diphtheria the occasional occurrence of a prolonged period of infectiveness after apparent recovery has suggested an important precaution, that of keeping, throughout the attack and for some time after recovery, the nares protected by some antiseptic and healing application. For some years the writer has made this a rule of nursing in his cases, and carbolised oil (1 in 60) has been systematically introduced either by the swab or by the dropping method. A very small quantity of oil repeated twice a day will suffice. It is not improbable that, after the pharynx has cleared itself of membrane, some of the infection may linger in the large mucous tract above, especially in the absence of any cleansing treatment, and that in reported instances of late infectiveness the mischief may have really resided in the nasal fossæ. At any rate, it is believed that this precaution, if carried out methodically, might materially diminish the risk of a late transmission of diphtheria during convalescence.

In affections of the nostrils, naso-pharynx, and sinuses the local application of oil does not appear to have occupied the therapeutic position which some of its advantages seem to deserve. It is not referred to in current literature, and does not seem to have been practised with frequency, if at all. This circumstance may have been the result of the only drawback which the method presents, namely, that it is somewhat unpleasant to sensitive persons, and unless used with discretion, apt to nauseate. On the other hand, its simplicity and its efficacy in fulfilling the objects for which it is prescribed are recommendations. Its good results are manifest chiefly where it is locally applied to the mucous membrane affected; but it is also beneficial in those respiratory affections in which the trachea and the larger bronchial tubes suffer jointly with the nose and the naso-pharynx, and also in some cases of neurotic dyspnœa or asthma in which the nose is the seat of irritation. Its action in these cases would be one partly reflex, and therefore distinct from the results obtained by the strictly local method of intralaryngeal injections continued for long periods; moreover, it does not claim to cure the affections in question, but merely to alleviate their symptoms and to obviate the recurrence of the attacks.

The same mode of application is suitable to all cases. A small quantity of carbolised oil (1 in 60), flavoured with some essential oil such as that of almond or bergamot, is introduced into the nostrils whilst the patient is lying down with the head thrown back. A small glass syringe fitted with a spray nozzle is best, but failing this a common nozzle will answer; or the oil may be simply dropped into one or both nostrils. The patient should be directed to turn the head from side to side to facilitate the spreading of the oil. Where the object is local treatment of the frontal sinuses it will be necessary to throw the head still further back, and to keep it in that position for a minute or two. If the quantity of oil should have been excessive, or if it should have been dropped instead of sprayed, it will trickle down the back of the throat, and this often excites some nausea. The quantity which has generally been used is about a saltspoonful or 15 drops, but even a less quantity may be found useful, and the objection stated may then not arise. The oil may be made the vehicle for various remedies. Recently, for instance, in a case of recurring epistaxis, in which the source of hæmorrhage was thought by the patient to be in the left frontal sinus, tannin was added to the oil, and the latter was felt by the patient to reach the spot in question. In many cases stimulation is wanted quite as much as, or even more, than mere protection. I have therefore availed myself of a well-known formula:

Menthol, thymol, āā gr. i; ol. eucalypt., mv; ol. olivæ ad., ʒjss;

and this has been preferred by some patients to the oil, and in others has been found efficacious where the latter did not relieve the symptoms. The stimulating solution is specially useful in neurotic cases.

The conditions in which the local use of medicated oil may be found of value are the following:

1. *In continued pyrexia* the drying and caking of secretion in the nasal cavities is a source of much discomfort; the mouth often has to be kept open in consequence, and the dry tongue of fever is the result. In these cases, as in the following, the quantity of oil required is very small provided it be thoroughly applied, and this can be done by introducing a thin swab of twisted cotton wool or of lint charged with the oil.

2. *Nasal dryness and fœtor* are also apt to occur in all varieties of continued hurry of breath, but particularly in that which belongs to heart disease with broken compensation. Among valvular diseases, advanced mitral stenosis, with or without associated regurgitation, in which there is considerable pulmonary and venous congestion, is that most often accompanied by these symptoms. The ozæna-like odour was formerly supposed by the writer to be dependent upon some local lesion special to this disease; but it is probably explained simply as a result of permanent congestion and of the drying of a mucous membrane lined with secretion. The comfort to the patient and to the physician arising from this treatment is well worth the small trouble which it gives.

3. *Tachypnœa and Hysterical Tachypnœa.*—A passing reference may be made to the word "tachypnœa," a convenient addition to a useful series of terms. "Dyspnœa" requires no explanation. The meaning of "tachypnœa" is analogous to that of tachycardia, and exclusively refers to the increase in rate. It enables us to restrict the use of the term "hyperpnœa" to its proper meaning, which should be equally exclusive—namely, that of increase in the depth of respiration. For instance, in the dyspnœa of over-exertion there is tachypnœa as well as hyperpnœa; the breathing is deep as well as rapid. The same association is sometimes present for many hours before death in cases of cardiac exhaustion, and in them a slackening in the speed and in the depth of the loud breathing is the immediate harbinger of death. On the other hand, in the air-hunger of diabetic coma the respirations are deep but they are not hurried. And lastly, in the panting of the obese—as in that so familiar in the lapdog roasting before a fire, hyperpnœa is conspicuously absent; there is respiratory hurry but the breathing is quite superficial. These are typical instances easily described, but in analysing other conditions which may be less obvious the distinction in terms is a help. No cases of hysterical tachypnœa have been under observation since this treatment was taken in hand, but it is not unlikely that some impression might be made upon inveterate cases by this method of local treatment or some modification of it. At any rate, it may be worth trying.

We now pass to the large group of the respiratory affections. The chief benefit is to be gained in those affections in which the mucous membrane of the upper air passages is immediately or indirectly concerned—namely, the obstructions and

catarrhs of the nose and throat and of the pharynx, and in spasms and cough set up by naso-pharyngeal irritation.

4. *Among the obstructive and naso-pharyngeal troubles* permanent or progressive structural defects, such as narrowing of the passages, polypi, adenoid growths, etc., are curable only by surgical means. But striking alleviation of any superadded congestion or catarrh may be brought about by the use of oil, which is particularly indicated for impacted foreign bodies. Much benefit may accrue in children suffering from large tonsils or adenoid growths, and from nocturnal restlessness and cough, if the mucous membrane can in this way be kept free from irritative congestion, swelling, and dryness, by protecting it from the results of open-mouth breathing. The same applies in the adult, where the nostrils are blocked by a polypus or by secretion and swelling.

5. *Dry naso-pharyngeal catarrh and granular pharyngitis* are both susceptible of much relief. The treatment is specially adapted to cases in which dense adhesive mucus forms scabs on the pharynx, and leads to the well-known distressing symptoms; and as a protecting agent it also may be of much service in granular pharyngitis. Acute catarrhal pharyngitis, if submitted to this local treatment sufficiently early, when the sore, raw feeling, or the stiffness and pain limited to one spot, with which the affection often begins, are first perceived, would probably be manifestly relieved, but there are no cases to report. This might be the means of checking the usual extension of the catarrh to the mucous membrane of the trachea and large bronchi.

6. *Bronchial catarrh* of the large tubes, or common chest cold, is frequently the sequel or the concomitant of naso-pharyngeal catarrh. This conjunction led the writer to try the treatment in his own case, and he was much impressed by the relief afforded, not only to the nasal catarrh, but to the chest symptoms, including retrosternal pain and rawness, painful cough and expectoration. He has since then observed equally satisfactory results in other cases.

Remarks on the Treatment of Tracheal and Bronchial Catarrh.—It is difficult to explain how a local application in the nose can relieve the chest, since it is doubtful whether the oil, although spreading so readily, can find its way downwards into the air passages. The influence is probably one partly brought about by associated nerve agencies. If, therefore, we regard the resulting relief as one merely reflected from the pharynx, we can hardly expect that the nasal method can be of much service in bronchitis of the smaller tubes. On the other hand, the direct application of oil might perhaps be of use, and one at least of the cases narrated is an instance of the success of this treatment in the broncho-pneumonia of diphtheria. The results noted from the indirect or intranasal method causes us to inquire again whether the more frequent use of intralaryngeal injections might not be of advantage. Hitherto they have been chiefly employed in chronic pulmonary affections; but if directed to the cure of the more acute catarrhs of the large tubes, their efficacy might be more manifest, and probably many a protracted chest affection might be avoided or considerably shortened in duration. It may be thought that this is too powerful an engine to apply to small work. But the intralaryngeal injections are really not troublesome to the patient if successfully performed, and their performance presents no difficulty to anyone familiar with the laryngoscope.

On the other hand, it would be premature, without previous trial, to recommend intralaryngeal injections in broncho-pneumonia, and their desirability in acute bronchitis must also remain an open question till further experience has been gained.

7 *Asthma*.—It is well known that in a proportion of cases of asthma the affection is connected with some nasal trouble, usually a congestive hypertrophy of the mucous membrane; and the opinion has been held that asthma itself is a congestion and swelling of the bronchial mucous membrane. The late Sir Andrew Clark took that view. Only a proportion of these cases yield to local nasal treatment by the galvano-cautery or to local medication such as that by perchloride of mercury, carbolic acid and quinine, formerly recommended by Sir Andrew Clark. Among the local methods which might still be resorted to in the unrelieved cases the present one suggests itself for trial. But in the probably larger catarrhal group the indication is a double one, and it is to this group that the following cases belong.

The first case was the most successful, that of a man aged 58, of gouty parentage and the bearer of Heberden's nodules, suffering from severe catarrhal asthma and emphysema, which no form of treatment seemed to relieve. His chest symptoms dated back to influenza six years previously, and his dyspnœa had unfitted him for work for fifteen months. His present severe attack had lasted almost unabated for six weeks, when a trial of this method was suggested to the writer by the relief he had personally obtained from it. The treatment by carbolised oil gave immediate results. The nose which had been blocked, became pervious, and the dyspnœa, as well as the catarrh, was greatly relieved. In this case the relief was kept up, and the patient never complained of the treatment, but ascribed his improvement to it. After a while the parolein solution of menthol, thymol, and eucalyptus oil was substituted for the oil, and this also gave much relief, and was preferred to the other application; but the symptoms had no longer presented any severity when it was first tried.

The second case was also striking in the immediate relief given by the application of the oil during a protracted attack of asthma which the inhalation of the datura cure and Himrod's cure, the former usually a sovereign remedy in this case, had been tried ineffectually for several hours. The patient was orthopnœic, and inhaling Himrod at the time the treatment was applied. Under its influence the spasm relaxed, and the patient was soon able to lie down. This attack had originated in the hospital after an attack of articular gout, for which the patient had been admitted. He had been liable to occasional asthma for sixteen years. In spite of this conspicuous relief to the asthma, the patient did not care to submit to the treatment for the remaining catarrh, which was dealt with in the ordinary way.

In another case of inveterate catarrhal asthma recurring in the winter months since the age of 10, for which the datura inhalation was usually an immediate cure, but which on this occasion failed to be relieved by it owing to the severity of the catarrh, the introduction of carbolised oil into the nose did not control the symptoms, and other treatment was applied, the symptoms yielding gradually. At a later date the carbolised oil was again used for the catarrh, with good, though not striking, results, and the parolein solution was substituted after a while.

The conclusion to be drawn from these experiences is that the method is well worth trying, but cannot be relied upon to benefit every case of asthma, though its trial will probably not be detrimental in any of them.

In reviewing the whole subject it should be understood that these are suggestions rather than dogmatic statements as to the absolute value of the method; whilst its failures may sometimes have more to do with questions of detail than of principle. Much will depend, for instance, upon the kind and the strength of the ingredients added to the oil; and idiosyncrasies have to be borne in mind. Again, the mode of application and the amount injected at one time may have to be varied according to the case; but in all cases the application in the form of spray will probably be more efficacious as well as more acceptable than either the simple injection or the dropping method.

REFERENCES.
[1] BRITISH MEDICAL JOURNAL, November 27th, 1897. [2] *Loc. cit.*

ONE HUNDRED CASES OF PULMONARY TUBERCULOSIS TREATED WITH LARGE DOSES OF BEECH-WOOD CREOSOTE.

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I AM indebted to the visiting physicians of this hospital for permission to record the results obtained by treating 100 cases of phthisis with large doses of creosote. Some twelve months ago I noticed that patients objected much less to a mixture of cod-liver oil and a few minims of creosote than to the oil without the antiseptic, and with the sanction of the physicians I determined to watch the effect of gradually increasing the dose of creosote, and was surprised to find that the toxic symptoms which are said to accrue from the administration of large doses of this drug were absent in practically every case; indeed, in the majority of cases this seemingly nauseous mixture was taken without the slightest complaint, whilst in no case did any bad effect result.

As I have been unable to find any detailed account of the best method to adopt in giving creosote in large doses by the mouth, and as attention to details appears to be of the greatest importance to ensure that more than 90 per cent. of consumptive patients will take these so-called poisonous doses without discomfort, as well as to know accurately the amount of creosote taken on any day throughout the treatment, it will perhaps be advisable to give a fairly full description of the method which has been found most efficacious at this

hospital during the past nine months, if only to show that creosote is worthy of further trial before being cast aside for its more expensive and more fashionable substitutes, the carbonates of creosote (creosotal) and guaiacol (duotal), which are at present too costly to be used by the large majority of phthisical patients, if these drugs are to be given in efficient doses and for a sufficiently long period to have any lasting effect. The large doses are usually prescribed as an emulsion with cod-liver oil, sometimes in a mixture containing alcohol in which creosote is freely soluble.

The drug is also ordered in the form of an "instillation," by dropping a few minims of equal parts of creosote and alcohol on an oro-nasal respirator; and a few cases, especially those expectorating large quantities of fœtid sputum, have been treated in the "creosote chamber," which was introduced by Dr. Arnold Chaplin in 1894 and described by him before the Hunterian Society.[1] The two latter methods are merely adjuncts to the administration by the mouth. In the majority of cases the following formula has been prescribed: ℞ Creosoti ♏v; ol. morrh. ad ℥ij. M. Three times daily after food. Five minims of creosote are added every other day to each dose up to a maximum of 40 minims three times a day, so that on the fifteenth day of the treatment these patients are taking 2 drachms of the pure drug daily with 4 drachms of cod liver oil. In the last ten cases of this series, however (and I might add in nearly every case since), the maximum dose has been further increased to a drachm three times daily, so that by the twenty-third and subsequent days these patients are taking equal parts of creosote and cod-liver oil. In order that no mistake may arise it is advisable to write the dates on the patient's bottle upon which the dose must be increased, and gradually cross them out as the drug is added, and for subsequent reference the dose is entered on the temperature chart as the prescribed amount is given. Should a patient be unable to take cod-liver oil the creosote is then prescribed in the following spirituous solution: ℞ Creosoti ♏v; tinct. gent. co; spirit. vini rect., ää ♏xx; ext. glycyrrh. liq., ℥ss; aquam ad ℥j. M. Three times daily after food. Five minims of creosote are added to each dose every other day, as with the oil and creosote emulsion. The amount of spirit in this mixture will dissolve about 20 minims of creosote to the ounce, but when the larger doses are reached an emulsion is formed with the extract of liquorice when the bottle is shaken. It is therefore preferable to dissolve the creosote in the spirit before adding the other constituents.

Though it is of the greatest importance to give the drug only on a full stomach, it is equally important that some discretion should be used in the choice of the meals after which the drug should be taken, for some patients who are unable to take the emulsion during the earlier half of the day without the slightest discomfort, complain that the oil "repeats" when administered in the evening, whilst others like it better after supper than after breakfast or luncheon.

Patients sometimes complain that creosote causes a burning sensation in the throat when swallowed, but unless there is some local inflammatory trouble involving the pharynx or upper parts of the larynx, the discomfort is at once relieved by sucking a piece of lemon or sipping a little milk or water. Even when the large doses are reached, indeed, a patient has usually no more trouble after taking a drachm dose than he had after a dose of 5 minims a month previously, if the amount has been gradually increased and given in the way described above.

In regard to the other methods of giving creosote, namely, by fumigation, instillation, inhalation, subcutaneous and intratracheal injection, or in the form of pills or capsules, only the two former have been employed at all extensively in this hospital during the past two years. The other methods have been used only when there was some particular reason for selecting a special form of prescribing the drug.

In this series of 100 consecutive cases in which creosote was given in doses gradually increasing to 40 minims three times a day, only 5 patients were unable to continue taking the drug. Two of the latter were women with very advanced disease, both of whom died within three weeks after their admission. The third objected both to the smell and taste of creosote, neither could this patient be persuaded to take the cod-liver oil alone, or mixed with extract of malt. The other two were able to take cod-liver oil, but not when creosote was added to it. The two latter were the only patients who preferred oil alone to an emulsion of oil and creosote. In all the other cases the latter drug either made no material difference, or its addition made the cod-liver oil more palatable.

Of those patients who were able to take the drug, 85 took 40 minims three times a day, and 10 were having 3 drachms daily at the time of their discharge.

As no less than 95 per cent. of all cases can take at least 120 minims daily without any ill-effect, but, on the contrary, with great benefit, it is evident that a much larger amount can be ordered in many cases if it is thought desirable; but, with two exceptions, larger doses were not prescribed, as it was thought advisable to ascertain that no harm could accrue from giving 2 to 3 drachms daily before still further pushing the drug. The two exceptions mentioned were suffering from bronchiectasis, and the amount was increased to 240 minims daily by giving the emulsion four times a day. In addition to this, the patients were exposed to the fumes of coal-tar creosote in the "creosote chamber" for four hours daily, and each wore an oro-nasal inhaler sprinkled with creosote and alcohol throughout the night, so that the amount of this drug introduced during every twenty-four hours through the combined alimentary and respiratory systems must have been enormous; and though this treatment was continued up to the time of their discharge a month later, both men took their food with relish, gained in weight, their sputa became less offensive and less profuse, and their urines remained normal, except that they assumed a faint olive-green colour. It is perhaps questionable whether these enormous quantities of creosote can be absorbed; the average limit, however, has not yet been determined either clinically or experimentally.

Though it was thought advisable in a few cases with much gastric trouble to commence with the creosote mixture without increasing the dose instead of the creosote and oil, and to prescribe the latter when the stomachic irritability had subsided, these 100 cases have in no way been selected, creosote having been ordered irrespective of the condition of the patient or the stage of the disease.

Of the 100 cases, no fewer than 62 had disease of both lungs, and 18 showed signs of cavitation, many were of an acute type, 3 had diarrhœa, and 4 were suffering from albuminuria when the creosote treatment was commenced. In all doubtful cases the drug was not prescribed until tubercle bacilli were found in the sputum.

In 68 cases the symptoms either partially or entirely disappeared, the patients increased in weight, and the temperature fell, or remained unchanged in those chronic cases showing little rise of temperature. The average stay in hospital of these patients was about two months, and during this short time the average gain in weight was no less than 4 lbs.

In many cases the physical signs also improved greatly, but not in comparison to the symptoms. This may have been because the patients were not under observation long enough; for the symptoms must necessarily be first relieved before any marked improvement in the condition of the lungs can be expected. Indeed, in those cases which I have had the opportunity of examining after they have attended as out-patients, and continued to take the creosote subsequent to their discharge as in-patients, I have found notable improvement in the physical signs.

Of the remaining 32 cases, 15 did not alter materially during the time they were in hospital; in 7 the disease showed signs of advancing at the time of their discharge; 5 patients died whilst under treatment; and 5 were unable to take the drug for reasons stated previously.

The albumen disappeared from the urine in all of those cases suffering from albuminuria when the treatment was commenced, although in one case this did not occur until after the patient was taking 165 minims of creosote daily. In 2 of the 3 cases with diarrhœa this grave complication was relieved; but the third rapidly became worse, and died; at the necropsy very advanced intestinal ulceration was found.

These results seem to show that though creosote is by no means a specific for pulmonary tuberculosis, it is certainly worthy of a place of importance amongst the drugs used in

the treatment of this disease, more especially for its marked effect on the symptoms, though how the drug exerts its beneficial action—whether through its antiseptic action in the alimentary canal stopping the pathological fermentative changes which occur in the gastro-intestinal tract in these cases, or by neutralising the toxins generated by the tubercle bacilli and other micro-organisms present in the lungs of patients suffering from chronic phthisis,[2] or, as other observers contend, by promoting sclerotic changes[3]—is a question which requires further investigation. Furthermore, it would appear that this beneficial action is more marked when the larger doses of the drug are administered.

Having had the opportunity of watching day by day these 100 patients while they were taking creosote, I would enter a plea against the generally-accepted idea that large doses of this drug are poisonous, or at least are so irritant that it is inadmissible to prescribe more than minute quantities.

Severe pain in the throat during and after swallowing the drug, anorexia, nausea and sickness, pain in the epigastrium, diarrhœa, and other symptoms of gastro-enteritis are some of the ill-effects said to be produced by creosote; it is also credited with the production of hæmoptysis and sometimes of nephritis, whilst in other cases profuse sweating and collapse, and even coma have supervened, when a dose of 20 minims has been administered. If the best beechwood creosote is used and given with care in the way described above, even the least serious of these symptoms will rarely occur.

The burning sensation in the throat when the drug is swallowed never amounts to more than a little discomfort, which is often entirely avoided by taking the emulsion in milk, or immediately relieved by sucking a piece of lemon or drinking a little beef-tea or fruit-juice afterwards.

Anorexia, nausea, and sickness are rarely complained of, even then it is usually found that the oil rather than the creosote is the cause, for these patients will take the same dose of creosote if given in a spirituous solution without the oil. In the majority of cases the appetite is increased and the symptoms of dyspepsia disappear. The troublesome eructations so common in phthisis are invariably relieved, so that such antifermentative remedies as pills of thymol and galbanum and mixtures containing carbolic acid or its derivatives are never required.

Creosote tends to act as a gentle laxative by increasing the intestinal peristalsis, so that, in spite of its antiseptic action, it should be ordered with caution when much diarrhœa and other signs of intestinal ulceration are present. On *post-mortem* examination no circumscribed inflammations of the mucous membrane of the stomach and intestines were found, though these lesions have been demonstrated by Bourget[4] after the drug has been given in capsules. Though a large number of patients gave a history of previous attacks of hæmoptysis, only one had an attack while taking creosote.

The two following cases are of interest in this connection. A man stated that he had had several profuse attack of blood-spitting during the twelve months before his admission; the last attack occurred four days before he came to the hospital. On admission, his sputum was much stained, and five days afterwards he suddenly brought up 21 ounces of bright blood; the following day the creosote and oil emulsion was prescribed, the former drug to be rapidly increased as in other cases. Two days later he had another attack, when he expectorated 2 ounces of blood, after which he had no recurrence of the hæmoptysis up to the time of his death, which occurred five weeks later from pneumothorax, although he had then been taking 2 drachms of creosote daily for over a fortnight.

Another patient had had hæmoptysis every menstrual period for the previous six months, although for half this time she was under careful treatment as an in-patient at another hospital, so that the accuracy of her history was easily confirmed. After taking creosote in increasing doses for a week, her sputum became stained slightly, and the following day she began to menstruate; the period lasted for four days, and was unaccompanied with any hæmoptysis. She remained in hospital over two other menstrual periods, neither of which was accompanied with any hæmoptysis, though during the last six weeks she was taking 3 drachms of creosote daily. Other similar instances might be quoted, but these two cases, together with the facts already mentioned, will, I think, suffice to show that large doses of creosote do not tend to cause hæmoptysis, but that this drug acts as a hæmostatic in cases of phthisis.

In regard to the action of creosote on the kidney, the supposed toxic effect of the drug on this organ has also apparently been much exaggerated. In only one case did albumen appear in the urine when absent on admission, and in spite of repeated examinations the albuminuria was only present for three days, though this patient was taking 180 minims of creosote daily, and continued this amount until his discharge a fortnight later; in this case the disease was very advanced, and just before the albumen was found in the urine the temperature suddenly ran up very high, so that it is not improbable that the albuminuria was caused by a sudden acute exacerbation of the tuberculous process accompanied with a febrile temperature, than due to the creosote.

The urine has been frequently and carefully examined in all these cases, but in no other was there any trace of albumen in so far as the ordinary macroscopic tests would demonstrate. In the four patients who had albuminuria on admission, the albumen rapidly disappeared, though possibly the creosote had little or no influence in effecting this change. Neither the quantity, specific gravity, nor the reaction appears to be changed in the slightest, nor is the daily quantity of urea excreted materially altered by large doses of creosote. In nearly all cases the urine is slightly changed in colour, whilst in about 20 per cent. it assumes a dark olive-green or a brownish tint. This is best seen in urines containing a fair amount of pigment normally, and it becomes even more marked after the specimen has been allowed to stand for a few days.

The amount of discoloration of the urine is not proportionate to the amount of creosote administered; indeed, it is not infrequently found that a patient's urine is darker in colour when he is taking the small doses of creosote than when he reaches the larger quantities, so that the colour of the urine is of no assistance in estimating the amount of creosote which has been taken or absorbed.

Dr. Eschle[5] has shown that creosote is excreted by the kidneys in the forms chiefly of guaiacol and cresol combined partly with sulphuric and partly with glycuronic acids, and can only be separated by distillation with sulphuric acid. Creosote is probably decomposed into its various constituents in the stomach, by far the chief of which is guaiacol (60 to 90 per cent. in beechwood creosote), and it is probable that the compound drug owes its chief value to guaiacol, though Dr. Solis-Cohen[6] states that pure guaiacol is less efficacious in the treatment of phthisis than when given in combination with cresols and phenols and the other constituents of creosote. Dr. Walters[7] says that Professor Poggi has shown by experiment that no more than 15 to 20 minims of guaiacol can be absorbed per diem by the alimentary canal; this, however, was subsequently denied by Dr. Seifert,[8] who quoted Dr. Eschle's experiments upon himself, which demonstrated that at least 100 minims were daily excreted in the urine alone for four consecutive days after taking carbonate of guaiacol, and as the latter drug passes through the stomach unchanged, and is only slowly decomposed when it reaches the intestine, whilst pure creosote is rapidly split up in the stomach, the amount of guaiacol absorbed will probably be greater after the administration of creosote than when duotal is given. And since creosote is said to be also excreted by the skin, lungs, and fæces, the maximum amount of guaiacol which can be absorbed daily must be much larger than Poggi's experiments appear to indicate.

It is generally stated that creosote gives its characteristic, and somewhat disagreeable, odour to the breath of patients who are taking large doses of the drug. This is, however, contrary to my experience; indeed, within half an hour subsequent to the administration of these very large quantities of creosote, I have been unable to detect the faintest smell either in the expired air or the sweat to indicate that the patient had recently taken any of the drug.

Although creasote, as salts of guaiacol, cresol, etc., is largely excreted by the kidneys, it is extremely uncommon to detect the odour of guaiacol in the urine; but if the specimen be set aside for a few weeks the characteristic smell usually becomes apparent. In this connection it is interesting to

note the marked "keeping" properties of the urines of patients taking large doses of creosote. I have allowed some of these specimens to stand for nearly two months without any change occurring in their reaction or production of fermentative changes. I have, unfortunately, not had the opportunity recently of treating a case of cystitis, or other disease of the genito-urinary tract in which fermentative changes occur, and where a non-irritant disinfectant would be of value, but it seems possible that creosote would be of use in such a case, seeing that no symptoms, either subjective or objective, have been noticed in any of these cases to show that the drug produces the slightest irritation when the mucous membrane is normal, though, of course, it might prove harmful to a diseased mucous membrane.

Lastly, it is asserted by many that creosote cannot be given to children in more than minute doses. I regret I have not had the opportunity of testing this objection, as few children suffering from phthisis are admitted into this hospital. I have, therefore, only been able to watch the effects of the drug in three cases. Two of the patients were 5 years of age and the other was 2 years older. The two former had marked pulmonary tuberculosis, the latter was suffering from fibrosis of the left lung with bronchiectasis and fœtid expectoration. They all took 30 minims of creosote three times daily, with decided improvement in each case, and certainly no signs of toxæmia.

Having compared the objections raised against the administration of beechwood creosote in phthisis with the results obtained at this hospital by treating 100 cases with this drug, I would suggest that the following points are worthy of consideration and further investigation.

1. The best beechwood creosote can be given with benefit, in amounts varying from 120 to 240 minims daily, in cases of pulmonary tuberculosis.

2. The drug is best administered in cod-liver oil or in a spirituous solution, and in some cases the "creosote chamber" or oro-nasal inhaler may be ordered in addition, with advantage.

3. The dose should be small at first, but it can be rapidly increased to 40 minims three times daily for an adult. In 3 cases doses of 30 minims three times a day were well borne by children.

4. Large doses rarely cause any gastric disturbance; on the contrary, the appetite is frequently increased, symptoms of dyspepsia disappear, and cod-liver oil is more easily assimilated. The cough, expectoration, and night sweats are diminished, and the physical signs improved.

5. Owing to its disinfectant action in the alimentary canal the drug probably diminishes the risk of tuberculous enteritis by autoinfection when patients swallow their sputa, but owing to the increased peristalsis, which is created by creosote, it is usually contraindicated in cases where the ulceration is already advanced.

6. The drug does not tend to cause hæmoptysis, but rather to prevent its recurrence.

7. Creosote does not irritate the normal mucous membrane of the genito-urinary tract.

8. Owing to its extremely small cost pure creosote can be given to a much larger number of patients than the carbonates of creosote and guaiacol, which respectively cost four times and twelve times as much as the older drug.

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PAPILLOMA OF THE NASAL SEPTUM.

BY MACLEOD YEARSLEY, F.R.C.S.ENG.,

Assistant Surgeon to the Royal Ear Hospital; Surgeon in Charge of Throat, Nose, and Ear Department, the Farringdon General Dispensary, etc.

As true papilloma of the nasal septum is undoubtedly of rare occurrence, every instance met with should be added to the list of recorded cases. The following case, sent to the Royal Ear Hospital by Dr. Alexander, agrees in its microscopical characters with those laid down by De Santi,[1] and may therefore be regarded as qualified for addition to the record.

E. B., female, aged 20, complained of pain in the right nostril lasting for three months. There was occasional slight bleeding on rubbing, picking, or blowing the nose. Some difficulty of breathing on the same side had been noted. On examination a small papillary growth was seen in the vestibule growing from the cartilaginous septum about three-quarters of an inch from the orifice. It bled rapidly on touching with a probe. There was in addition slight hypertrophic rhinitis with a small spur on the right side. The growth was easily removed, under cocaine, with the cold snare. It consisted of unbranched fimbriæ springing from a base about half an inch in breadth. The fimbriæ under the microscope were found to consist of a central vessel, with a very small amount of fibrous stroma, covered with several layers of epithelium. The specimen, a photograph, and section were shown at the Laryngological Society of London on April 13th.

Owing to the confusion caused by the papers of Hopmann[2] and Schaffer, in which both authors have included a number of growths which are not true papillomata, it is somewhat difficult to arrive at the number of undoubted cases on record. In compiling the following list I have not mentioned those in which no microscopic examination was made. Wright[3] remarks "it is impossible to say how many cases of true nasal papilloma have been observed." He gives an excellent summary of the bibliography.

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A CASE OF GANGRENE OF BOTH FEET IN AN EARLY GENERAL PARALYTIC.

BY JOHN R. LORD, M.B.,

Assistant Medical Officer, London County Asylum, Hanwell; late Resident Clinical Assistant, Joint Counties Asylum, Carmarthen.

THE trophic changes in general paralysis are many and varied, the most common being the occurrence of a large sloughing bedsore, usually forming very quickly; but the rapid and simultaneous occurrence of gangrene involving both feet is so unusual and perhaps unique that I have thought it worthy of recording. The case is as follows:

M. D., aged 50 years, was admitted to the Joint Counties Asylum, Carmarthen, on January 12th suffering from what appeared to be general paralysis of the insane, the supposed duration being fourteen days. Her mental condition mainly showed considerable loss of mental power, with ideas of grandeur as regards money, her musical capabilities, her connection with the Royal Family, etc. Physically she was a well-built woman, inclined to obesity, with flabby muscles, and exhibiting various signs which pointed to changes in the nervous system. The pupils were unequal, right larger than left, and the latter reacting much more readily to direct light and accommodation. There were coarse tremors generally, and the speech was suggestive of general paralysis. The left knee-jerk was exaggerated, but there appeared to be no motor or sensory paralysis. On January 15th she was examined carefully and nothing unusual noticed. On the following day, however, both feet were found to be cold and of a dark blue colour, nearly black, with swollen dorsa and ankles and considerable tenderness. There were swellings in each popliteal space and on the outer side of the left knee-cap a black patch, the latter disappearing in a few days. Her general condition was good and the temperature normal. The treatment adopted was thorough disinfection of the parts and protection in cotton wool.

By January 17th a change was noticeable. She was very exhausted, with a weak pulse and a dry brown tongue. The feet had become warm except the toes, and the dorsum and ankle had assumed a dull red black colour. The temperature in the evening was above normal. In three or four days blebs formed, and the peculiar odour of gangrene exhaled. She was restless and sleepless, requiring hypnotics, but otherwise her general condition had improved. For some days her condition remained stationary if it did not improve; but soon a downward course commenced, and she steadily grew worse. The temperature up to January 20th was normal in the morning with an evening rise to 100°; after that the temperature was usually 100° in the morning and in the evening above 102°.

On February 7th large sloughs appeared on both buttocks in spite of the use of an air bed, etc.; later diarrhœa set in, and the patient succumbed on February 12th, just a month after admission. The treatment maintained throughout was in the direction of local disinfection and supporting the patient's strength, amputation being out of the question.

The case presented many interesting features. The duration of the mental disorder was said to be fourteen days. In any case it was early, so early as to make so gross a trophic change unusual. The gangrene was spontaneous, secondary, infective, the toes being dry and the rest of the foot moist. The exact cause was obscure. Double embolism was possible but not probable, and was practically inadmissible with regard to the sloughs on the buttocks. There was no traumatism, no sore or injury. The question of diabetes arose, but there was neither polyuria nor sugar in the urine. The question of some general change like scurvy, purpura hæmorrhagica, etc., also arose, but succeeding events lent no support to such a view, and the only conclusion one can come to is that the occurrence was due to an obscure neurotrophic change depending upon some morbid change in the central or peripheral nervous system.

A SIMPLE METHOD FOR DEMONSTRATING THE PRODUCTION OF GAS BY BACTERIA.

BY HERBERT E. DURHAM, M.B., B.C.CANTAB.,
Grocers' Research Scholar.
(From the Pathological Laboratory of Cambridge University).

THE following simple modification of the fermentation tube, which has proved very useful in my hands, appears to be unknown generally. Small test tubes are placed in an inverted position within the ordinary test tubes used for cultivations; it is necessary that they should be freely movable when placed inside. The larger tube is then plugged in the usual manner with cotton wool and sterilised.



The capacity of the small tubes should be measured so that in filling the tubes an allowance of about 50 per cent. in excess of that amount may be made. The tubes are filled in the ordinary manner by means of a burette or other measuring apparatus (a glass three-way cock connected on the one hand with a reservoir, and on the other with a graduated tube, is the form I generally use for all media). They are then sterilised in the steam steriliser on three successive days. In most cases the smaller tubes become completely filled after the first sterilisation; sometimes a tiny bubble remains, but this always becomes disposed of in the second or third steaming; indeed, it is not usual for a bubble to persist after the second. It need hardly be mentioned that the tubes must not be tilted too much when they are inoculated.

The inner tubes can also be filled by boiling the medium *in vacuo* at a low temperature; this was the means of filling which I tried at first; but when the media will not become deteriorated at 100° C., it is much simpler to subject them to the steaming process at the atmospheric pressure.

In testing the power of gas production of any given bacillus in the presence of a given sugar or other fermentable substance, care should be taken that the medium contains no other substances which are capable of producing gas. Theobald Smith has pointed out the importance of using meat broth free from "muscle sugar."

In my own work I never use any meat broth unless the object is to see whether gas is formed from muscle sugar; moreover, care is taken that the media are not exposed to the temperature of 100° C., except when in the neutral condition. A 1 per cent. solution of Witte's peptone (without the addition of salts) in distilled water forms the basis of my gas-testing media. This is carefully brought to the litmus-neutral point by means of a weak solution of citric acid; the substance to be tested (sugar, starch, mannite, etc.) is then added in any desired proportion (1 per cent. is quite sufficient for most purposes); when this is dissolved the reaction is again tested, and corrected if necessary; the solution is then filtered and placed in the prepared tubes. Some substances, such as mannite, are apt to lead to some precipitation or cloudiness when they have been steamed, so that if a clear medium is desired it must be heated in the water bath, and refiltered or allowed to sediment before it is distributed in the tubes; white of egg is not admissible for clearing purposes.

It should always be remembered that grave alterations may occur in sugars, if they are heated in the presence of acids (mineral) and alkalies. It appears to me that it is an advantage to use media tinted with neutral litmus solution, so that the reducing action of the bacterium on this coloring agent as well as any change of reaction may be observed simultaneously with its gas-producing power.

The use of stab or shake cultivations in gelatinising media, which is one of the modes in common use, necessitates preliminary experiments to ascertain that the gelatine or agar is not a source of possible fallacy; for this purpose combinations have to be tried. Some agar-agar was tested in a strength of 1 per cent.: (1) alone, (2) with peptone, (3) with glucose, by means of two or three of varieties of the B. coli group; although growth occurred in the two latter there was no evolution of gas bubbles. The addition of a few drops of glucose solution to the peptone agar, and of peptone to the glucose agar, determined the formation of gas. Gelatine is notoriously variable in its constitution; I have not subjected any samples to this form of test.

The other common mode of determining gas production is by the use of "fermentation tubes"; the form of apparatus described above is, in fact, a modification of the U shaped "fermentation tube"; but both in filling and in cleansing the use of two separate tubes presents advantages not possessed by the U-shaped tube. Moreover, no special form of rack or support is required. The inoculation of liquid media is less laborious than the process of preparing shake cultivations.

May, 1898.

A CASE OF PNEUMONIA.

BY
J. DUNBAR-BRUNTON, M.B., Leatherhead. and JOHN HURD-WOOD, M.D., Leatherhead.

ON February 19th, 1898, B. F., aged 9 years, was found to have well-marked pneumonia on the right side, and some pleurisy near the base in the axillary line. She had a good deal of pain. The temperature was 104° F. and the respiration 40. This pneumonia cleared up under treatment, the temperature falling by lysis, and becoming normal on February 23rd. The physical signs in the lung were clearing well, some pleurisy persisting, and on February 25th and 26th she was so well and bright that she wished to be carried downstairs to the sitting room.

On the morning of February 27th she had again a temperature of 104° F., and intense dyspnœa. There was absolute dulness all over the right lung below the level of the fourth rib behind, with complete absence of local fremitus, resonance, and breath sounds. On February 28th and 29th the temperature varied between 101° F. and 104.5° F., with occasional rigors and perspirations. The diagnosis of empyema was made, and she was admitted into the cottage hospital on the morning of March 1st. The temperature on admission was 103.6° F., pulse 140, and respirations 43. She lay on her back, and turned always towards the left side. There was still complete dulness below the level of the fifth rib, with some ægophony posteriorly. Above the fourth rib the lung was hyper-resonant.

On March 2nd she was seen by Dr. Hurd-Wood, when the physical signs were found to be the same, and he advised exploration for pus, which was done on March 3rd with an aspirator, but with no result. On March 4th the morning temperature was 104.2° F., respirations 30, pulse 136; the evening temperature 99° F., pulse 110, respirations 25. Her condition remained almost unchanged till March 8th, when she was put under chloroform, and the pleural cavity

thoroughly explored by puncturing in three places with an aspirator, but again with negative results.

On March 9th the temperature was: 10 A.M., 103° F.; 2 P.M., 99° F.; 9 P.M., 102° F. She had several perspirations, the tongue, furred at the back, was raw and cracked. She was slightly delirious during the night, and appeared hopelessly ill. On March 10th the lung condition remained the same. There was marked ægophony below the sixth rib posteriorly, with absolute dulness on percussion. We came to the conclusion that any further operative interference would be useless, and that we could only keep up her strength and wait. Dr. Hurd-Wood advised a mixture containing: ℞ Potassium iodide gr. j; ammonium carbonate gr. ½; liquid extract of cinchona ♏ x every two hours. On March 11th the temperature had fallen to 99° F., and remained so all day. Pulse 104, respirations 25. The dulness seemed somewhat less marked, so that down to the sixth rib breath sounds and vocal resonance could be slightly heard; below this there was absence of breath sounds, with ægophony as before. Her temperature never rose again, except for two-tenths or three-tenths of a degree after this date, the respirations and pulse beats falling to normal. She was then sent home. Now (March 26th) the little patient is very well and running about. The dulness is nearly gone, but has left an obscurity in the breath and vocal sounds. There is a diminution of fremitus on the affected side, and a good deal of rough friction. In the hospital her diet consisted of large quantities of champagne and milk, with bovril and fruit.

NOTE BY DR. HURD-WOOD.

The chief points of interest in the above case are: The absolute dulness of the right lung below the fifth rib, with complete absence of vocal fremitus and resonance; the absence of fluid following any of the four aspirations; the almost typical pyæmic temperature and perspirations without any empyema; the severity of the general condition almost rendering a fatal prognosis necessary. The relief given by the punctures in themselves seems an additional proof of the value of the treatment advocated by Mr. Treves in a recent paper, in which he points out the value of exploratory incisions. The relief following also so rapidly on the administration of the potassium iodide was very interesting. There was no retraction of the right side. The measurement was actually one inch more than the other unaffected one. At the present time, as above stated, the little girl is almost completely restored to health.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE TREATMENT OF ADDISON'S DISEASE WITH SUPRARENAL GLAND SUBSTANCE.

IN April, 1897, a gentleman, aged 49, consulted me with the following symptoms:

For three months he had constantly fainted, often in bed, and for seventeen days running he had fainted in bed in the early morning between the hours of 2 and 4 A.M.; he also fainted in the daytime. He complained of pains in his legs, and also of their feeling heavy, and of his inability to walk. He was very depressed, crying at times, and declaring he would drown himself. He complained also of pains in the back and of nausea; his pulse was very feeble, about 60, and the pulse waves ran in pairs, the so-called pulsus bigeminus (Traube). I observed pigmentation and leucoderma on the back of the hands and forearms, and also in a marked degree on the scrotum. I ordered him to rest, and prescribed tabloids of suprarenal gland substance, gr. v (B. W. and Co.), beginning with two a day and telling him to increase the number as long as he found no ill-effect from them.

His report of May 26th, 1897, was that he had been worse, and that if he walked about he went faint, and he also still fainted in bed. His report of June 21st, 1897, was that he felt better; his pulse was 72 and normal in rhythm. He had taken 20 of the suprarenal gland tabloids daily. The patient continued taking the tabloids about 20 or 35 a day, and he found at times that they caused pain in the back, which was relieved by diminishing the number taken. He also complained of their making his tongue sore, but he was getting gradually better and stronger. On January 4th, 1898, he drew my attention to a growth of hair across his back, opposite the first lumbar vertebra. At this date he had not fainted for six months, and he had continued to improve in health. At the present date (May, 1898) he is perfectly well; the pigmentation and bleaching of the skin are almost gone, the pulse is normal, and he can do a heavy day's work, and tells me that he very often pulls the garden roller about for an hour or two at a time for exercise. The urine has been perfectly normal throughout.

Birmingham. C. W. SUCKLING, M.D.

A CASE OF ACUTE YELLOW ATROPHY.

[Communicated by the DIRECTOR-GENERAL, of the Medical Department, Royal Navy.]

MRS. B., aged 32, but looking at least ten years older, first complained on January 21st, 1898, of feeling unwell. The family history was good, and she herself had enjoyed good health until seven years ago, when, after the birth of her first child, she suffered more or less complete procidentia, for which she has worn a stem pessary. There are two children. She was apparently suffering from an attack of ordinary catarrhal jaundice, characterised by yellowness of skin and conjunctivæ, light coloured stools, bile in urine, constipation, and anorexia, with normal temperature. The usual remedies were adopted. During the next week the jaundice deepened, and there was much difficulty in getting a satisfactory action of the bowels.

She had been doing well for a week, and the colour was disappearing to some extent, when on February 11th she had a relapse. Obstinate vomiting came on, and the skin again became deeply jaundiced. Urine not very high coloured. The temperature was normal or subnormal. Liver dulness was normal. The edge could be felt below the costal margin. The pulse was 70 to 80, and of good strength. The bowels obstinately confined.

Surgeon Mornement, who had been attending the patient from the commencement of her illness, was not satisfied with her condition, and a consultation was held. Brandy, ice, and milk were ordered, with bismuth and calomel at intervals. The following notes were made by Surgeon Mornement during the next few days:

February 15th. Patient's condition worse. Vomiting returned and she was unable to retain any food; pulse 100, temperature normal; jaundice increased. Diet: milk only. Treatment: ice to suck; iced champagne ʒj every ten minutes. By 6 P.M. the vomiting had ceased and patient's general condition improved.

February 16th. Passed a restless night, and at times lapsed into a state of muttering delirium. No vomiting; temperature normal, pulse 120; liver dulness present but less defined. 6 P.M. Condition unaltered; constant muttering delirium; has not slept during the day. Sulphonal gr.xx given.

February 17th. Slept two hours after the sulphonal, but is decidedly worse this morning. Pulse 140, temperature normal; tongue very dry and furred, sordes on lips and teeth; no distension of abdomen; liver dulness almost absent; edge cannot be felt. Crystals of leucin and tyrosin found in urine, which also contains a little albumen. Patient is now almost unable to take anything.

February 18th. Condition worse; quite unconscious; passes urine in bed; muttering delirium continues; liver dulness not distinguishable. Leucin and tyrosin again found in the urine.

The patient gradually got worse, and sank and died at 7 A.M. on February 21st. The temperature rose to 101° eight hours before death; it had not previously been above 99°. When the relapse occurred malignant disease was suspected; but there was no tenderness nor sign of a tumour, and the vomited matter contained nothing suggestive. When delirium supervened and the hepatic dulness diminished acute yellow atrophy was suggested.

A partial necropsy was allowed, with the following results: Liver: weight 32 oz., capsule firmly adherent, consistence firm and tough on section, bright yellow colour; no structure can be made out. Kidneys: much enlarged, each weighing 7 oz., capsule not adherent, structure normal. Spleen: 8½ oz., structure normal.

J. C. B. MACLEAN,
Fleet-Surgeon R.N.

BY a recent Imperial ukase female medical practitioners in Russia are granted the right to hold appointments in the public service.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NATIVE FIELD HOSPITAL (No. 52), LINE OF COMMUNICATIONS, TIRAH EXPEDITIONARY FORCE.

BRIEF NOTES OF THE TREATMENT OF THE NATIVE WOUNDED AT DARGAI.

(By Surgeon-Captain J. DAVIDSON, I.M.S.)

AFTER the fight at Dargai on October 18th, 1897, 14 wounded native soldiers were admitted into this field hospital—Sections B, C, and D of No. 52 Native Field Hospital—and after the fight on October 20th 52 cases of gunshot wound in native soldiers were admitted. Of the total 66 cases of gunshot wound, there were:

1. Flesh wounds—of head and neck, 5; of trunk, 17; of upper extremity, 9; of lower extremity, 19.
2. Penetrating wounds of the abdomen, 2.
3. Wounds complicated by fracture of bones—of head, 1; of trunk, 1; of upper extremity, 5; of lower extremity, 7.

The only cases that ended fatally were the 2 penetrating wounds of the abdomen, and 1 case in which six wounds were received, one of which caused a fracture of the bones of the left forearm. Secondary amputation was subsequently performed at the General Hospital, Rawal Pindi, but the patient died.

No operative procedures were found to be necessary beyond incisions for the extraction of bullets that had lodged, and one counter-opening for drainage. The bullets extracted were for the most part Snider, ricochets, and a few round bullets. The treatment adopted was to avoid as much as possible all probing or insertion of the finger into the wounds, to cleanse the wounds and the skin around them thoroughly by perchloride of mercury lotion, to dust the wounds with iodoform, and to cover them with boric lint wrung out of perchloride of mercury lotion and with antiseptic wool.

CASE I.—A Ghoorkha rifleman, admitted on October 18th, had received a wound about 1 inch in diameter in the centre of the forehead, about ¤ inch from the roots of the hair. He did not seem to suffer any inconvenience from it. On examination by the finger, a small depression was found in the outer table of the skull and a fissured fracture extending from the depression could be detected by the nail. Next day slight bleeding from the nose occurred, but he afterwards recovered without a bad symptom so far that he was sent to the General Hospital at the base.

CASE II.—Another Ghoorkha was admitted the same evening with an entrance wound 3 inches above and in front of the right great trochanter, and an exit wound in the middle line over the centre of the sacrum. The small size of the wounds made it seem probable that the injury was due to a solid Lee-Metford bullet. The wound was not probed, nor was any drainage tube inserted, and under the simple antisepsic dressing described above both wounds had healed up completely within a fortnight without the formation of a drop of pus. A small knob of callus developed near the exit wound where the sacrum had been penetrated.

CASE III.—A Goorkha rifleman, wounded on October 20th and admitted on 21st, had received a fracture of the right femur in the middle third. The wound of entrance was on the outer and anterior part of the middle of the thigh, and the exit wound was in the middle of the back of the thigh. No drainage tube was inserted and under the dressing described the wounds healed without the formation of pus. The splint used was a long wooden splint reaching from the axilla to beyond the sole of the foot; a perineal bandage was applied to prevent shortening. On the transfer of the patient to the base on December 9th the femur had united with only three-quarters of an inch of shortening.

CASE IV.—In another case of fracture of the right femur admitted on the same day the wounds of entrance and of exit were on the outer and inner sides of the thigh respectively, 3 inches above the lower end of the femur. The limb was placed in a wire backsplint (with side and foot pieces) which reached from the middle of the thigh to beyond the heel, and had a slight bend at the knee; over this a long wooden straight splint reaching from the axilla to beyond the sole of the foot was applied and extension was maintained by a perineal bandage. In the first day or two the knee-joint became greatly distended, the skin over it was dark in colour, and the patient suffered from fever. It was feared that suppuration had occurred, but only serum was found on puncture by a hypodermic syringe. The swelling of the knee subsided under evaporating lead lotion and the fever subsided with it. But a fortnight after admission a slight discharge of pus took place from the inner wound and a few minute fragments of bone came away. As this wound healed a similar slight discharge of pus occurred from the outer wound. No drainage tube was inserted. On transfer to the base on December 9th the femur had united, the inner wound had healed and only a small ulcer remained at the outer wound. There was, however, about 2 inches of shortening.

In addition to the 66 cases referred to above, a few other wounded men were sent to this hospital from other hospitals with the force. Of these the only case worthy of remark was the following:

CASE V.—A transport driver was hit on October 18th on the right great trochanter, the bullet passing through from front to back. He was a most restless patient, yet his wounds healed readily without the insertion of drainage tubes, and the bone healed under treatment by a long wooden side splint and a perineal bandage. On his transfer to the base on December 9th no shortening could be detected, which leads me to believe that the femur had not been completely broken across.

The successful result of the treatment of the majority of the wounds may be attributed to the following amongst other causes:

These fights occurred at the beginning of the campaign, and, prior to the receipt of injury, the wounded men had not been debilitated by prolonged fatigue and exposure. The wounded were promptly treated on the field, and so contamination of the wounds was prevented. Owing to the excellent arrangement made on the line of communications, it was possible for these wounded men to remain in this field hospital in Shinawri, the nearest camp, until healing had advanced so far that they could be sent to the base with little risk of healing being retarded. The wounds were received at the beginning of the cold weather, and were treated in a dry and healthy climate.

THE TOTTENHAM HOSPITAL.

A CASE OF HERNIA OF THE OVARY IN A CHILD 7 MONTHS OLD.

(Under the care of E. HOOPER MAY, F.R.C.S., Senior Honorary Surgeon.)

[Recorded by H. ASHLEY BELBIN, ex-House Surgeon.]

ON October 10th, 1897, E. M. L., a female child 7 months old, was brought to the casualty room with a swelling in her left groin. The story was that for two days the child had been very fretful and "out of sorts," had taken the breast badly, had not had its bowels opened for two days, and had vomited twice that day. The mother first noticed the swelling when washing the child the night before. Next morning the swelling appeared larger.

I found a swelling in the left groin extending from the internal abdominal ring into the labium majus, the swelling was painful on handling, very tense, irreducible, dull to percussion, non-translucent, and gave no impulse or increase in size on crying. The skin over the swelling was already red and tender from handling, so that examination was necessarily restricted. The diagnosis was strangulated inguinal hernia, and considering the vomiting and handling it had undergone an early operation was indicated.

Mr. May decided to operate immediately. An incision was made over the long axis of the swelling for the whole of its length and the peritoneal sac cut down to. On opening the sac some blood-stained fluid escaped, and a dull purple mass resembling a damson was seen. This was at first thought to be a knuckle of gangrenous gut, but on further exposure the fimbriated end of the Fallopian tube was seen peeping out from the lower end of the mass and immediately disclosed the nature of the case. The pedicle had a double kink or fold like the folds of a cracker. The folds were slightly stuck together with inflammatory lymph; they became unfolded when the ovary was lifted out of the sac. The ovary was intensely engorged with blood; when incised the blood spurted out, and numerous distended follicles could be seen. The fimbriated end of the Fallopian tube was black and swollen from congestion. There was no tightness or constriction of the pedicle at the internal ring, the congestion being apparently entirely due to the kinking described. The pedicle was ligatured as high as possible, and after removing the mass below was returned to the abdomen. The sac and canal were treated as in a radical cure. Thin catgut was used for suturing the skin incision, and the wound then dressed with strips of cyanide gauze soaked in collodion, with "flakes" of cyanide wool over this.

The child did not cause us an anxious moment throughout. On the sixth day the dressing was removed *en masse*, most of the sutures coming away at the same time, the wound being perfectly healed. The child was discharged on the seventh day. This dressing of collodion and gauze appears to be an ideal one for operation wounds about the genitals of young children. The sweat and sebaceous matter excreted by the skin under the collodion dressing in the course of a few days loosens it considerably, so that it can be readily removed without pain.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, May 24th, 1898.

EXHIBITION OF SPECIMENS.

MR. J. LYNN THOMAS showed: (1) Nine Urethral Calculi, weighing 330 grs., composed of triple phosphate, removed by median perineal section from a man who had a stricture just anterior to the bulbo-membranous part of the urethra where the calculi were found. The man had never had gonorrhœa, and had no phimosis. The onset had been sudden six years previously, and during that time there had been incontinence of urine, which was relieved by the operation. (2) A Calculus, weighing 6 oz. 6 dr., removed on October 9th, 1895, from a collier aged 49. A perineal section was first made, but it was found impossible to remove the stone, so a suprapubic incision was made and the stone pushed up from the perineal wound; no forceps were used. The calculus was composed of alternating layers of uric acid and oxalate of lime. (3) A Calculus, weighing 7 oz., with an outer layer of oxalate of lime, which was peculiar in not having the usual mulberry appearance and in being free from pigment; there were layers of uric acid, phosphates, and urates as a nucleus.

A CASE OF CYST OF THE URACHUS; WITH NOTES ON URACHAL AND SO-CALLED "ALLANTOIC CYSTS."

MR. ALBAN DORAN read this paper. The patient was a woman, aged 59. During an attack of abdominal pain a cystic tumour of considerable size was detected. The uterus moved separately behind the cyst, which occupied the middle line of the abdomen between the umbilicus and pubes, bulging towards the left. The cyst lay in front of the peritoneum; inferiorly there was another cyst or loculus lying immediately in front of the bladder. A pint or more of dirty brown slightly glairy fluid containing shreds of lymph was found inside the cyst, the wall of which was largely made up of plain muscular fibre. After free incision along its whole length the cyst was packed with iodoform gauze. The patient made a good recovery, and the cyst shrank to very small dimensions. The author noted that Luschka and Wutz showed many years since that the urachal canal was patulous to a certain extent in most human subjects, and that minute cystic dilatations were frequent. Urachal fistula was a well-known complaint; it was sometimes associated with suppuration of part of the canal. Much had been written, especially in Germany and America, on urachal cysts, but the term had been applied too freely to various tumours and collections of fluid closely related to the abdominal walls below the umbilicus. Cases reported by Lawson Tait, George Morgan (Brighton), Ill (Newark, U.S.A.), and Douglas (Nashville, U.S.A.) were noted by the author and compared with his own case. Reference was also made to a remarkable series of very large cysts described by Lawson Tait and Byron Robinson. Tait attributed them to arrested development at the stage of embryonic life when the allantois was growing out of the peritoneal cavity. Instead of contracting into the umbilical vesicle, the allantois became included in the abdomen; then it served as peritoneum to the pelvic and lower abdominal viscera, and sometimes filled with fluid, forming an "allantoic" or big urachal cyst. Tait and Byron Robinson, however, admitted that their explanation of the development of these cysts was purely theoretical, and had never been confirmed by a *post-mortem* examination, dissection, or frozen section. Wutz, a few years before Tait's cases were published, showed that older reports of very large "urachal cysts" were faulty. Cases reported by Hoffmann, Heinecke, Roser, and Wolff, seemed to Wutz to be more than doubtful. Most of them were probably old encysted dropsies. In Tait's series tuberculous disease of the peritoneum was diagnosed in several instances. Byron Robinson's description of the supposed allantoic membrane, which replaced, according to Tait's theory, the peritoneum, was compared with notes of the appearances of the parietal and pelvic peritoneum noted by the author, Cone (Baltimore), and others, in chronic tuberculous peritonitis, with or without encysted dropsy. The theory failed to explain how the bladder, a part of the allantois, seemed to be perfectly normal in Tait's cases, whilst the rest of the allantois underwent at an early stage of development such extreme modifications. In short, Tait's cases, though of high interest and deserving of further consideration, were not evidently of allantoic origin. In conclusion, some words were said on the surgery of true urachal cysts. When such a cyst could be dissected out (Tait, Douglas), the peritoneum attached from behind it should be trimmed away, as it was apt to slough. Frequently the cyst could not be enucleated from the parietes and the peritoneum (Ill, author), then it must be freely incised and drained. In all cases the operator must carefully inspect the relations of the upper boundaries of the cyst to the peritoneum and abdominal viscera. He must likewise be sure of having determined the position of the bladder below. Its cavity might communicate with the cyst, then the communication must be closed according to the principles of plastic surgery. Every case should be watched, as the bladder might give way after the operation through the forcing open of the vesical orifice of the urachus, or through yielding of its walls damaged during operative manipulations, or possibly by the pressure of the drainage tube.

THE PRESIDENT recalled 2 cases which, in the light of the author's excellent paper, must have been urachal cysts: (1) On operating on what had been diagnosed as an ovarian cyst, he suddenly opened a cyst from which sero-sanguineous fluid drained away. The peritoneum was behind it, and it was with difficulty separated from the bladder. When this was done the cyst came away in his hand, and it was clear that it had no pedicle or connection with the broad ligament. (2) A man, about 30 years of age, with slight epispadias, had had a tumour the size of a small cocoa-nut below the umbilicus for years. He came under observation with great swelling and tenderness between the pubes and the umbilicus. This was thought to be an abscess. The urine was normal. On opening the swelling very fœtid matter came out, but there was no urinous smell; it was plugged with terebene, and some days later urine came from the wound.

MR. DORAN, in reply, said that the President's second case had some resemblance to a case recorded by Rotter, in which there was hæmaturia and extensive swelling in the hypogastrium, suggesting a large cancer of the bladder. By the cystoscope a localised villous growth at the fundus was detected, and, on operating, a urachal cyst was found, which was removed, together with the growth at the fundus of the bladder, with a satisfactory result. Possibly, in the President's case, Wutz's valve had been forced, and some urine had passed into the cavity of the urachal cyst, and had set up inflammation both in the cyst and at the level of the valve. This valve was not a very definite structure, and required further investigation. In former days, when ovarian cysts were incised instead of being removed, they might contract, and if they became fixed near the abdominal wall might, on a subsequent laparotomy, resemble a urachal cyst. Such cases had occurred in Mr. J. K. Thornton's practice.

BRITISH GYNÆCOLOGICAL SOCIETY.

Thursday, May 12th, 1898.

H. MACNAUGHTON-JONES, M.D., President, in the Chair.

SPECIMENS.

MR. J. FURNEAUX JORDAN: Myoma of the Uterus removed by Hysterectomy.—Dr. GRANVILLE BANTOCK: Uterine Fibroid removed by Hysterectomy.—Mr. CHARLES RYALL: Large Uterine Fibro-myoma removed by Abdominal Hysterectomy.—Mr. F. BOWREMAN JESSETT: Uterine Fibroid complicating Pregnancy.—These four specimens were discussed by Drs. HEYWOOD SMITH, PURCELL, NEIL MACPHATTER (Denver, Colorado), ARTHUR GILES, and MACNAUGHTON-JONES.

CARD SPECIMENS.

Mr. W. D. SPANTON (Hanley): Biliary Calculus.—Dr. T. DOLAN (Halifax): Intrauterine Myoma.

THE RISK TO THE URETERS IN THE PERFORMANCE OF HYSTERECTOMY.

Dr. F. A. PURCELL, in a paper on this subject, dealt with the risk to the ureters when performing abdominal hysterectomy in which the combined method was employed—in-

other words, panhysterectomy—illustrating his remarks by quoting a case and showing the specimen of a large adeno-carcinoma of uterus with diseased os and a much enlarged and widely-distended neck. During the operation both ureters became compressed, and no urine was voided from the bladder. Fifty-eight hours after the first operation the patient was anæsthetised, and the abdomen again opened; the laced peritoneum across the floor of the pelvis, which was intact and free from inflammation, was ripped asunder and the ureters examined. Both were found ballooned. The silk ligatures on the uterine arteries were cut through and removed; by this means the patency of the ureters was restored and urine flowed into the bladder, the toilet was again performed, and eventually the patient made an uninterrupted recovery. Dr. Purcell reviewed the relations of the uterine arteries and ureters, and stated that one, if not the greatest, risk that presented itself in performing panhysterectomy was the endangering of the ureters. He regarded the uterine artery as being the most important vessel surgically, running its course downward and inward between the folds of the broad ligament until it arrived at a point below the level of the os internum just above the lateral fornix, where it made a sharp turn across the ureter to the neck.

Mr. Bowreman Jessett said that Dr. Purcell's case was interesting from many points of view, and, among others, from that of diagnosis. The question lay between malignant disease and a sloughing fibroid; and the conclusion, which was borne out by the operation, was that it was a sloughing fibroid which was becoming malignant. One lesson from the case was that it might have been better to divide the arteries and tie them after the removal of the tumour. The ureters were not included in the ligatures, but were kinked by the puckering up of adjacent tissues.

Dr. George Keith related a case he had seen in Edinburgh some fifteen years previously in which a small piece of tube was found on an ovarian tumour after its removal. It was sent to a pathologist to be examined, and he reported that it was not ureter; however, the *post mortem* examination showed that a piece of ureter had really been removed.

Dr. Neil Macphatter had had trouble with a ureter in his first hysterectomy. The tumour was very large, weighing 46 lbs. after removal, and was operated upon under the impression that it was ovarian. While separating adhesions a uniform band was noticed, and he was about to divide it when his assistant suggested that it might be the ureter. This timely suggestion saved the patient. The ureter had become so much elongated by the tumour that after it was freed it lay in a little coil.

The President observed that in these cases the normal relations were so disturbed that exact anatomical knowledge might be of little avail, and injury was generally due to displacement or congenital anomaly of the ureter. In Doyen's method of panhysterectomy the risks to the ureters were minimised, especially because he adopted the plan of drawing the uterine and ovarian arteries out of the surrounding tissues and securing the vessel alone. He had written to several eminent operators asking their experiences with the ureters. Howard Kelly had promised to send statistics, and Martin of Berlin, Doyen of Paris, and Kufferath of Brussels had written giving their experience. These letters the President read. To Howard Kelly, whom they had had the pleasure that evening of proposing as a Fellow of the Society, they were indebted for some of the most important advances in the protective and reparative surgery of the ureter. To him was due the method of ureterostomy, and through his work on the catheterisation of the ureter they were able to determine which kidney was affected in cases where nephrectomy was required, thus obviating the necessity of a preliminary abdominal section. He congratulated Dr. Purcell on his boldness and success under very trying circumstances.

Dr. C. H. F. Routh suggested that when uræmic symptoms threatened and there was reason to fear injury to the ureter, it might be advisable as a preliminary step to open the kidney from behind. By this means present danger could be averted, and a secondary operation could be performed later if necessary.

Dr. Purcell, in reply, said that when the injury to the ureter was discovered at the time of operation Dr. Routh's suggestion might be adopted with advantage. But if it were not found out till later it would be necessary to first discover which side was affected. As a rule, if one side only were injured, the remaining kidney would go on ex reting, and there would then be no danger of uræmia.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

J. M. Purser, M.D., President, in the Chair.

Friday, May 6th, 1898.

Adeno carcinoma of the Mamma.

Dr. McWeeney, the Secretary (for Mr. Wheeler), described this specimen, and demonstrated the slides, which presented the typical microscopic appearances of this condition—a plexus of glandular tubules, most irregular in shape, occasionally filled up with epithelium, elsewhere cystic, and presenting small papillomatous ingrowths. In places the basement membrane had been broken through, and irregular masses of epithelium were lying free in the connective tissue. The cells were mostly high columnar, but in some groups were nearly cubical, and presented typical examples of the conditions described by Hansemann as anaplasia and hyperchromatosis. To the naked eye the tumour resembled a lymphatic gland, being soft, white, egg-shaped, and distinctly encapsuled. The microscope showed that in one spot the tubular structure had broken through the capsule, and just begun to invade the adipose tissue outside. The tumour had been removed from a lady aged 67, and had been noticed a year prior to operation.

Dr. E. H. Bennett said the case reminded him of one which occurred in his practice three years ago. The tumour in his case was perfectly movable, non-adherent to the skin or tissues of the gland. Both he and his colleague thought it benign. The lady, 35 years of age, was in the third month of pregnancy at the time, but as the tumour was growing rapidly, though still believed to be benign, he removed it. It was encapsuled, and shelled out quite easily. Perfect recovery took place in six days. Subsequent examination of the tumour proved it to be a most malignant adenomatous carcinoma, rather a carcinoma than an adenoma. In less than two months the tumour recurred. There was no enlargement in the axilla, but it was clear that the tumour was of a similar character, and was adherent to the scar. He removed the breast and tumour and glands in the neighbourhood without meeting any infected tissue in the glands. The operation was severe, and was almost immediately followed by abortion. Recovery ensued, and at present there was no sign of recurrence.

Addison's Disease.

Dr. A. R. Parsons related three cases of Addison's disease.

Dr. Craig said that he thought those present were left in rather a haze as to what Dr. Parsons meant by the term Addison's disease. He thought the second case the only one of the three which seemed to agree with all the symptoms which went to form a picture of Addison's disease. With regard to the cause, there were two different schools, one of which considered that disease of the suprarenal capsules produced all the symptoms and bronzing; and the other, which looked on the disease of nervous origin, and that involvement of the semilunar ganglia was necessary in order to produce the bronzing.

After some remarks by Dr. R. Travers Smith and Dr. McWeeney,

Dr. Parsons, in reply, said that he understood that the term Addison's disease was applied to a certain group of clinical symptoms. It was quite possible, apparently, for one of those symptoms to be absent without involving the diagnosis. He himself was under the impression that bronzing of the skin was an essential in the disease, and it never dawned on him that he was dealing with Addison's disease; but, on looking up the question later on, he found that several authorities gave cases in which bronzing was absent. One authority gave the average duration of the non-bronzed cases as 4.8 months, and the average duration of the bronzed cases as 23.6 months. It was also worth bearing in mind that pigmentation of the mucous membrane and skin might occur in conditions which were not Addison's disease. In illustration he cited a case where a woman was admitted to Sir Patrick Dun's Hospital

with most marked pigmentation of the mouth, looking exactly like a dog's mouth. Subsequently *post-mortem* examination showed the suprarenals intact; yet there was extensive disease of the bodies of the vertebræ, and the final cause of death was the bursting of an abscess into the spinal canal. With regard to the dissecting-out of the semilunar ganglia, that was done in the second case, but an incision in the abdomen was not permitted in the other cases, and in these the specimens were removed with great difficulty. At any rate, when the whole of the suprarenal capsule was involved in a mass of malignant disease, even if one could open the whole abdominal cavity, it would be very difficult to dissect out the semilunar ganglia.

PAPERS.

Dr. E. J. M'WEENEY read a paper on the Growth of Typhoid Bacilli in Broth containing the Serum of Typhoid Patients.—Dr. KNOTT described a series of Pathological Humeri from a private museum.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Friday, May 6th, 1898.

Professor C. J. WRIGHT, Vice-President, in the Chair.

PAPERS.

DR. BAIN (Harrogate) read a paper on the Action of certain Drugs and Mineral Waters on the Secretion and Composition of the Bile, which will be published.—Dr. EDGECOMBE (Harrogate) read a paper on the Effect of Exercise on the Hæmoglobin with reference to the value of Rest in the Treatment of Anæmia.

LEONTIASIS OSSEA.

Dr. CHURTON showed a girl, aged 9, admitted into the Leeds Infirmary on April 30th, 1898, for enlargement of bones of face; weight of child 3 st. 5 lbs. Parietal region much enlarged, the bones thick and firm; occipital bone and ridge thick; frontal large, but might pass as an ordinary large forehead; nasal bones level with enlarged upper maxilla on each side so that no bridge appeared to exist; temporal and malar bones thickened; lower jaw at first glance appeared, in comparison with the upper, small, but is really much thickened; teeth are being changed; spine normal; chest not deformed. Ribs: The ends are markedly enlarged at their junctions with the cartilages, the cartilages being only slightly, if at all, thickened at the point of attachment. Arms: Lower ends of radii and ulnæ resemble in appearance ordinary rickets; no other enlargements; pelvis is perhaps thickened. Legs: Femora are short and curved outwards; tibia distinctly curved forwards, and there is "knock knee." The external and internal malleoli are thick and elongated; other bones normal; the upper maxillary bones are those most conspicuously enlarged; the orbits are small and the eyeballs slightly project. Patient is the ninth child in a healthy family; was well and strong to the age of 7; the enlargement was first observed eighteen months ago. There is no diminution of intelligence. During sleep perspiration is rather profuse about the head, otherwise the child is in fairly good health.

GANGRENOUS APPENDICITIS WITH PERITONITIS.

Mr. LITTLEWOOD showed a patient (H. H., aged 22) on whom he had operated on April 2nd, 1898; attack commenced six days previously. At the time of the operation the temperature was 99°, and pulse 80. Abdomen opened in the middle line; small intestines distended and inflamed, with patches of purulent lymph on surface. Right rectus divided; appendix found quite gangrenous, and lying in a collection of pus on the right surface of the mesentery of the small intestine; appendix removed; peritoneum wiped out with pieces of gauze and gauze drainage. Pulse 120 after operation, and on the evening of the next day was 148; on the fifth day the pulse was 100; bowels well opened in about twenty-four hours with large doses of Rochelle salts and enemata. The patient made a good recovery.

CASES, PATHOLOGICAL SPECIMENS, ETC.

The following were also shown: Dr. CHURTON: Case of Paræthesia of Seventh and Eighth Cervical and First Dorsal Nerves, caused by localised syphilitic pachymeningitis.—Dr. SIDDELL (Harrogate): (1) Two Cases of Ichthyosis; (2) A Case of Raynaud's Disease.—Dr. HELLIER: Thrombosis of Broad Ligament Veins from a puerperal case (with temperature chart).—Mr. PRIDGIN TEALE: "Carter's Suture Case" for use in fracture of jaw, which he had designed and presented to the Leeds Infirmary.—Dr. ADOLPH BRONNER (Bradford): (1) Case of Osteosarcoma of Orbit; (2) Case of Transplantation for Traumatic Defect of Both Eyelids.—Dr. TREVELYAN: (1) A Case of Recurrent Syphilitic Hemiplegia, with anomalous and partial recovery from the second attack; (2) A Case of Secondary Spastic Paraplegia, recovery; (3) An Unusual Case of Paralysis of One Arm; (4) A Case of Erythromelalgia with Trophic Disturbance; (5) Cultures from a Case of Acute and Complicated Lumbar Myelitis; (6) A Specimen of Cerebral Hæmorrhage; (7) A Case of Deep Jaundice, with considerable glycosuria.—Dr. TREVELYAN and Mr. LITTLEWOOD: An Unusual Specimen of Laryngeal Tuberculosis, with microscopic preparations.—Mr. LAWFORD KNAGGS and Dr. TREVELYAN: A Case of Traumatic Division of the Sciatic Nerve six months previously, with immediate suture.—Mr. LAWFORD KNAGGS: (1) Colectomy Nine Months previously, Patient and Specimen; (2) Erasion of Ankle by Clutton's Method.—Mr. HALL (Bradford): Columnar Carcinoma of the Ovary.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

W. ARNOLD EVANS, M.D., President, in the Chair.

Tuesday, May 3rd, 1898.

SPECIMENS.

DR. T. LODGE showed specimens of: (1) Sarcoma of the Eyeball; (2) Foreign Body in the Eyeball, together with several microscopical specimens.—Dr. GLADSTONE showed a stomach affected with Diffuse Cancer of the Pyloric Extremity.

THE HISTORY OF SYPHILIS.

Mr. MIALL read a paper on the above subject. He mentioned that though contagion in general was recognised from the earliest times, it was not till the end of the fifteenth century that contagion from sexual connection was distinguished. It was probable that much of the "leprosy" spoken of by writers was really syphilis. The study of contagion threw much light on disease in general, and was probably instrumental in fostering habits of cleanliness. The use of mercury in the treatment of syphilis had been in vogue from very early times, and the effects of mercurialisation were also recognised. Reactions in favour of other drugs had from time to time occurred, and guaiacum, china root, sarsaparilla, juniper, mezereon, sassafras, and many others had been vaunted as specifics in the treatment of syphilis. Iodine was discovered early in the present century, and was used in the treatment of venereal ulcers of the throat as a substitute for burnt sponge.

Remarks were made by Drs. GOYDER, HORROCKS, and CAMPBELL; and Mr. MIALL replied.

HENOCH'S DISEASE.

Dr. ANGUS read a paper on Henoch's disease. Alluding to the confusion existing in the classification of purpuric diseases, he justified, on the ground of this confusion, the use of the name of the physician who first described cases in which there was a definite group of symptoms associated with a purpuric eruption. The symptoms were colic, abdominal tenderness, vomiting (often of green material) bloody stools, pain, and usually swelling of the joints. A further characteristic of the disease was the recurrence of the symptoms at intervals of eight days or more. Dr. Angus then read notes of 3 cases which had come under his care. The first was that of a boy aged 9, who had always been strong and healthy, and was the son of well-to-do working people who lived on the edge of the moor. There was a family history of rheumatism on the father's side. The case conformed closely to Henoch's type. There was at first slight pain in the limbs, then severe hæmorrhage from the bowels and abdominal pain; the next day the purpuric rash appeared, chiefly on the limbs. The abdominal pain was very severe, resembling lead colic. There was no fever. In four or five days there was improvement, but this was followed by a relapse with recrudescence of all the symptoms; the temperature rose to 101°. One of the extravasations near

the knee-joint formed a superficial abscess which was opened and healed readily. Several relapses occurred, and convalescence was not established for three months, and there was then some pain in one foot and one wrist. There was ultimately complete recovery. The second case was of a similar nature to the first, except that there was hæmaturia. After three months' treatment in bed he was convalescent, and able to walk about, but the urine remained albuminous. He died three months later from nephritis. The third case was that of a boy, aged 12, in comfortable circumstances, and with a good family history. The illness began with epistaxis and abdominal pain. There was tenderness of the abdomen and vomiting, and a purpuric rash about the elbows and knees. There was no rise of temperature or hæmorrhage from stomach or bowels. After about a month's treatment in bed he recovered, but for some time was nervous and irritable. In none of the cases was there any heart murmur. Dr. Dreschfeld, of Manchester, had described a number of cases of Henoch's purpura, and did not consider it a very rare disease. Dr. Angus stated that nothing was known as to the pathology of the disease, and that examination of the blood had given negative results. Fatty degeneration of the cutaneous vessels had been described. Bacilli had been obtained from patients dying with symptoms resembling those described, but these might have been cases of septicæmia. Henoch suggested the presence of a vasomotor neurosis, leading to a paralytic dilatation of the smallest blood vessels, stasis of the blood, and rupture of the vessel wall or diapedesis of the corpuscles. The abdominal pain might be due to sympathetic irritation. Treatment had been confined to rest in bed, with morphine to relieve pain. Hæmostatics appeared to have had no effect.

The paper was discussed by Drs. Goyder, Berry, Major, and Campbell; and Dr. Angus replied.

Peliosis Rheumatica.

Dr. Metcalfe read a paper on peliosis rheumatica, and showed sketches illustrating the nature of the eruption. He described the course of the affection, and recommended salicylate of soda, followed by iron and arsenic, in the treatment.

Cambridge Medical Society.—At a meeting on April 1st Professor Kanthack discussed the pathology of Asthma. Asthma had been explained as being due to: (1) Spasmodic contraction of the bronchial muscle, which might be (*a*) produced by a nervous irritation *in situ*, or (*b*) reflexly—through irritation of the nasal, laryngeal, or gastric mucosa, for instance; (2) spasmodic contraction of the diaphragm; (3) distinct anatomical changes of a catarrhal nature in the smaller bronchi and bronchioles, producing a sudden obstruction (*a*) through swelling of the mucous membrane, (*b*) through the exudation of a thick and viscid secretion. A considerable amount of discussion had taken place regarding the reflex irritation, asthma being in most cases described as a reflex neurosis. Sandmann concluded from experiments that in nasal asthma the paroxysms were due mainly to spasm of the diaphragm. That spasmodic contraction of the diaphragm occurred in asthma had, moreover, recently been demonstrated by direct skiagraphic examination. But if all the cases of asthma were reviewed it would be found that almost always there was distinct evidence of a lesion of the bronchial mucous membrane. A complete and extensive obstruction of the capillary bronchioles was sufficient to produce a respiratory spasm, in a similar manner as was found in the paroxysms of whooping-cough, which, by the way, was a direct antecedent of many cases of asthma in early life. The spasm of the diaphragm must be regarded not as the primary cause, but as the natural result of want of air. There were many cases in which there was no direct evidence of disease of the bronchioles, namely, all the cases of hay asthma or nasal asthma. With Clark and Osler it must be agreed that if the structural changes occurring in the nasal mucous membrane were to occur also in various parts of the bronchial mucosa, their presence there would readily account for an attack of asthma; and laryngologists, indeed, had demonstrated redness of the larynx and trachea in asthma. Careful note should always be made after an asthmatic attack of any expectoration, which should be carefully examined, histologically and bacteriologically. He himself had always found enormous numbers of micro-organisms in the asthmatic expectoration, and it could easily be understood how such organisms passing the deranged nasal filter could produce either an inflammatory swelling or a catarrhal condition in the bronchioles. He doubted not that physicians would recognise that there was a true anatomical basis of asthma, and that the so-called neurotic tendencies, apart from hysteria and neurasthenia, were altogether of secondary importance. Bronchial asthma should not be called a neurotic affection, but the result of a bronchiolitis which might or might not be exudative; the exudation when present might be mucous or viscid or fibrinous in appearance. Professor Kanthack showed microscopical specimens of the asthmatic expectoration, illustrating the spiral eosinophile cells, epithelial cells, micro-organisms, and crystals found. He drew attention to the fact that sometimes one might find distinct mucous casts of the bronchioles and infundibula. He had examined two cases of capillary fibrinous bronchitis, and in both cases the minute casts consisted not of fibrin but of condensed mucus. Lastly he alluded to some chemical investigations. On boiling with 3 per cent. H_2SO_4 the mucus of the expectoration yielded a body reducing Fehling's solution, and giving an osazone with phenylhydrazin. With regard to micro-organisms, he had found numerous streptococci, encapsuled diplococci, staphylococci, leptothrix, a black mould, and a bacillus resembling the diphtheria bacillus, but certainly differing from it. Streptococci and minute bacilli were always found in quantity, besides many other organisms, such as spirilla, which refused to grow upon the ordinary media. He did not regard the streptococci or minute bacilli as specific asthma organisms, but it was important to remember that enormous numbers of bacteria found their abode in the bronchial tracts, and they might act as an irritant more subtle than hay dust or pollen grains.—Dr. Ingle reported a case of Prostatic Hypertrophy, in which castration had been followed by marked results, in a man aged 62.—Mr. Nichols read a paper on a Novel Method of Draining an Empyema.

Bristol Medico-Chirurgical Society.—The eighth meeting of the session was held on May 11th in the medical library of University College, Dr. J. E. Shaw in the chair.—Dr. B. J. Baron showed a patient with Congenital Syphilis of Throat and Nose.—Dr. Symes showed microscopic specimens of Trichomycosis Nodosa (Leptothrix).—Dr. W. H. Newnham showed a specimen of Dermoid Cyst. Dr. Aust Lawrence commented on the specimen.—Dr. W. H. Newnham read a paper on Twelve Abdominal Sections. Mr. Morton, Dr. Aust Lawrence, Dr. Waldo, Mr. Carwardine, and Dr. Stack spoke on the subject.—Mr. W. R. Ackland read a paper on Some Secondary Effects of Dental Irritation. Mr. Harsant, Mr. Ewens, Dr. Cave, and Dr. Aust Lawrence made remarks.—Professor Fawcett showed numerous Anatomical Specimens recently added to the School Museum; he also showed various microscopic specimens of the Minute Anatomy of the Brain, and on this subject he spoke at length, and illustrated his remarks by many diagrams, and by a large number of most beautiful sections, which he threw directly on the screen by means of the oxy-hydrogen light. Professor Fawcett read a paper on the Surgical Anatomy of the Frontal Sinuses, and exhibited a large number of skulls to illustrate his paper.

Birkenhead Medical Society.—At the annual meeting on May 13th, Dr. R. Sydney Marsden (President) in the chair, the following gentlemen were elected office-bearers for the ensuing year, 1898-99: *President:* Francis Johnston, M.B., C.M. *Vice-President:* H. Nazeby Harrington, M.R.C.S. *Treasurer:* James Pinkerton, M.D. *Secretary:* William Leask, M.B., C.M. *Librarian:* S. Wilkinson, M.R.C.S. *Council:* Francis Vacher, M.R.C.P., F.R.C.S.Ed.; W. R. Floyd, B.A., M.B., Ch.B.; J. H. Fardon, M.R.C.S.; A. Herbert Butcher, L.R.C.P.and S.Ed.; Ellis Pearson, L.R.C.P.and S.Ed. *Auditor:* H. R. Preece, L.R.C.P.and S.Ed. A valedictory address was given by the retiring President, Dr. R. Sydney Marsden.

REVIEWS.

The Medical Examination for Life Assurance, with Remarks on the Selection of an Office. By F. de Havilland Hall, M.D., F.R.C.P. Bristol: John Wright and Co. 1898. (Crown 8vo, pp. 73. 2s. 6d.)

Dr. de Havilland Hall has acted for many years as physician to an important Life Assurance Company, and in that capacity has gained a large experience of the subject with which he deals in the present little book, which is an expansion of an article on the selection of lives for life assurance contributed by him to the *Medical Annual* for 1896. The book is stated to be specially designed for "practitioners who have not time to consult the larger works on the subject." The author says he has endeavoured to give a concise account of the method of examination, but he has really done a good deal more and has discussed at some length the conditions demanding for the security of the assurance company additions to the ordinary rate of premium.

The part dealing with the medical examination, which forms about a sixth of the book, is good as far as it goes, but we think that it might with advantage have been considerably expanded. A few practical remarks from Dr. Hall on the chief characteristics of a good life for assurance would have been more useful to the medical referee than Hufeland's fancy portrait of a man destined to long life which is given *in extenso*.

What is required of the medical referee is that he should put forward the important facts bearing on the life under consideration clearly and succinctly. He has to make careful inquiries into the personal and family history and accurately to record the results of these inquiries and of his examination of the proposer. Facts rather than conclusions are wanted, and as a rule only a general opinion as to whether the life is good, under average, or uninsurable is asked for. Although the medical referee should know something of the principles which underly the assurance of impaired lives, he is not expected to make the exact assessment of the extra risk. If he correctly supplies the facts of the case, any necessary extra rating can be assessed by the chief medical adviser at the head office, in conjunction with the actuary.

It is indeed in regard to extra rating that there are the greatest differences in practice among different offices. A few offices take none but first class lives, and most offices will have nothing to do with invalid lives on any terms. We think it necessary to point this out, for from the somewhat dogmatic way in which Dr. Hall has expressed his views as to the mode in which extra rates should be applied, or as to the lives which should be declined, an inexperienced practitioner might infer that he was expected himself to assess extra-rating, and that the views put forward by Dr. Hall were those universally adopted in practice.

Although many of the recommendations as to the treatment of extra risks would be generally agreed to, there are some which would not. If Dr. Hall had simply stated that he rejected "all applicants under 25 with a distinct family history of phthisis," no objection could have been raised, but when he commands his readers to do the same he is telling them to assume the duty of the chief medical adviser.

With regard to cancer, Dr. Hall says, "An applicant under 40 (with a cancerous history) might be taken at the ordinary rate or with an addition, whereas an applicant over 50 would require a large addition or possible rejection." The reader is left in the dark as to what constitutes a cancerous history, and as to what is to be done with the applicant who is neither under 40 nor over 50.

On page 48 Dr. Hall gives a somewhat complicated rule for calculating the expectation of life. A simpler, more easily remembered, and for practical purposes sufficiently accurate rule is to subtract the age of the assured from 80 and take two thirds of the difference.

The remarks on the selection of an office do not amount to more than a mention of the fact that there are many good offices from which to choose, but, as Dr. Hall says, to give advice as to the choice of an office is a matter of some delicacy. Appended to the book are a list of offices, a table devised by Dr. Leslie Ogilvie for rapidly recording the salient features of assurance cases and the forms for medical examination recently drawn up by the Life Assurance Medical Officers' Association, and already adopted by several offices.

On the whole, the little book will usefully serve the purpose for which it is intended, provided the practitioner will bear in mind that there are many questions connected with the medical aspect of life assurance regarding which unity of opinion does not at present exist, and that in giving his conclusions he need not commit himself to an opinion as to the exact number of years to be added when extra rating is required.

The Study of Children and their School Training. By Francis Warner, M.D.Lond., F.R.C.P., F.R.C.S.Eng., Physician to and Lecturer at the London Hospital, etc. New York: The Macmillan Co.; London: Macmillan and Co. 1897. (Crown 8vo, pp. 284; 19 illustrations. 4s. 6d.)

The preface to this work states that it is addressed chiefly to teachers, parents, and others in daily contact with children, in the hope of aiding an advance in the care of the latter, and in the practice of educational methods. Those familiar with the persevering labours and ingenious methods pursued by Dr. Warner in the study of children from the standpoint of biological science, will understand that his own observations are limited to the physical side, though he claims that the points used for observation indicate brain power and mental expression, "such as render it possible to give descriptions of children, as of other living things, by describing facts seen."

In contrast with some other publications by the same writer, this book does not so bristle with figures as to deter the average reader, but, by gradually introducing him to the subject through concrete instances, pleasantly leads him on to the study of modes of observation and of description of school children. Actual cases are cited illustrating the relation of "nerve signs" to "brain disorderliness," and showing how suitable physical training may simultaneously remove the signs of motor and mental disorder. "The Body of the Child: its Construction and Growth," is the heading of Chapter II, which deals with points in anatomy and physiology useful in connection with child study, while the development and evolution of the brain forms the subject of Chapter III. "What to look at and what to look for" in observing the child come next under consideration, and it is urged that "we should form a judgment by the signs which we observe, not by the answers to questions put to the child as to his thoughts and respecting health."

The principles on which methods of observation should be based are commented on, and the lack of appreciation of the "points" of the young human animal is set in contrast with that lavished on the lower animals. Movements, the direct outcome of brain action, can be observed and studied by all; and much may be learnt as to mental states from postures and attitudes of the body as well as from speech.

Reference is made to investigations in schools in and around London, carried on under the auspices of the British Medical Association and other bodies; and it would appear that, of the 100,000 children seen, 80 per cent. of the boys and 84.1 per cent. of the girls were normal, the remainder being specially examined and scheduled for abnormalities. Examples of schedules are given for various types of children, such as the normal, the nervous, the dull and backward, the normal but dull, the feebly-gifted, the delicate, etc.; and it is shown how by the method of printed cards defects may be methodically and quickly noted. A chapter on adolescence emphasises the importance of special watchfulness at that period. Some valuable hints are given as to the care and training of children. It is urged that in earlier years the faculty of co-ordination is to be promoted by appropriate movements, due attention being paid to avoidance of fatigue and to giving due scope to the child's spontaneity. It is pointed out that drill should be regarded not so much as a means of "getting up the muscles," as of exercise of the various parts of the brain through precise imitative moment; and some hints are given as to finger drill and training of eye movements.

The book cannot fail to be most suggestive to teachers who wish to bring their methods into line with modern scientific views of childhood. Many aspects of the subject will be of interest to the medical observer also.

NOTES ON BOOKS.

NOTE-BOOKS ON THE "BRITISH PHARMACOPŒIA, 1898."

THE appearance of a new *Pharmacopœia* is always the signal for the publication of small books which are intended to save busy practitioners, students, or pharmacists the trouble of reading the new volume and of finding out for themselves the alterations that have been effected. We have on our table four such publications. The name is, of course, different in each case, but the intent is always the same; and whether the book is called a synopsis, pocket guide, annotations, or a short guide, the primary idea appears to be to save trouble by representing the changes in a concise form.

Of the four books on our table the *Short Guide to the British Pharmacopœia*, by Mr. J. C. Umney, appeared almost simultaneously with the *Pharmacopœia*, and while it contains much that will doubtless be of value to pharmacists, the information is scarcely, perhaps, grouped to the best advantage, and the author has certainly fallen into a curious error in stating, on page 4, that the omissions have been in part based upon the results of an inquiry instituted by the General Medical Council. We are not aware that any such inquiry was ever conducted by the General Medical Council, but we have the strongest possible evidence in Mr. Umney's book that he is referring to the inquiry instituted by the Therapeutic Committee of the British Medical Association, for which inquiry the Committee was responsible, and the Association paid. On the other hand, Mr. Umney has been at the trouble to construct several tables in which many of the alterations are set forth very clearly; for example, we find tables of solubility, of limits, of ash, of essential oils, of ointments, and of tinctures.

The next book on our list is the *Pocket Guide for Pharmacists and Students*, issued from the office of the *Pharmaceutical Journal*, and within the space of forty-eight pages a vast amount of material has been compressed. Three pages are devoted to a reprint of the list of additions and omissions, while in the succeeding pages the alterations are arranged in alphabetical order. This booklet is likely to be of great service to medical students, who are anxious to study the alterations in the *Pharmacopœia* before a sufficient time has elapsed for the preparation of new editions of the ordinary textbooks. The alphabetical arrangement enables careful comparison with the textbooks to be made, but it is not easy to realise quickly all the changes which have been effected; for example, in the official preparations from any particular drug, or in the list of chemical compounds of any particular metal. For educational purposes this is perhaps an advantage, as it would entail additional study.

In the *Annotations on the British Pharmacopœia*, issued by Mr. Thomas Chase, pharmaceutical chemist, the author has attempted criticism which is frequently of sufficiently obvious character; thus, for example, he takes occasion to say, with regard to the nomenclature, that the English is not always a correct translation of the Latin name. In the preface to the volume, which Mr. Chase dismisses with the epithet "wordy," it is distinctly stated that the English titles do not pretend to be literal translations of the Latin, and that the Latin titles have been changed as little as possible, while the English titles have been modified so as to be in accordance with the advances of chemistry.

The fourth book on our list is entitled *A Synopsis of the British Pharmacopœia of 1898*, and has been compiled by Mr. H. W. Gadd, of Exeter. In this little volume criticism has not been attempted, and the author aims only at showing concisely in what way the *British Pharmacopœia* of 1898 differs from that of 1885, and he also gives a complete synopsis of the new work. He reprints the usual list of additions and omissions, and in the list of preparations of which the composition has been altered he indicates in a side column the nature of the alteration. Tables of the alcoholic solutions contained in the *British Pharmacopœia* are inserted, and he has compiled lists of the preparations made with alcohols of various degrees of dilution. The main pages of the book consist of a complete table of chemicals, drugs, and preparations. In the compilation of this table the author appears to have been largely assisted by the index of the *Pharmacopœia*. He has, however, included a column of extremely doubtful value, giving the dose of the various articles in metric terms. Narrowness of space renders this column somewhat difficult to read, and in the present state of medicine it may well be doubted whether there is much advantage in giving the dose for arsenious acid and some other drugs to the fifth place of decimals. It must be admitted that in many pages of this book the author appears to have made free use of the original text of the *British Pharmacopœia*.

REPORTS ON PLAGUE.

The Report on the Epidemic of Plague from February 22nd to July 16th, 1897, by JAMES A. LOWSON, M.B., Plague Commissioner, Bombay, is a condensed and able exposition of the subject. A perusal of the *Report* will convince the reader that Dr. Lowson has a thorough grasp of the practical side of the question of prevention so far as that was known when the report was written, and of the valuable assistance which he and Surgeon-Major W. Read rendered to the Bombay Government in devising and carrying out measures to check and mitigate the severity of the plague epidemic in Western India. If any fault is to be found with the report it is that the views expressed, especially with reference to the modes of infection, are rather dogmatic; for instance, Dr. Lowson states that "the commonest mode *must* be by inoculation, as external primary buboes are present in from 60 to 90 per cent. of all cases." We should have preferred to see some proof in support of the statement rather than the bare assertion and a reference to some experiments made by the Russian Commission in Bombay on monkeys. This inoculation theory carried to the extreme was the rock on which the Bombay Municipality and Government came to grief in the latter part of 1896, since it seems to have prevented them from taking early measures to check the spread of the disease from the Island of Bombay to other parts of India. We are far from thinking that the modes of infection are thoroughly known, even the most common mode. It is still a subject for inquiry and investigation, and we should like to see it worked out conjointly in the laboratory, in the hospital, and in the village. Until this is done we must be satisfied with empirical preventive precautions based on our knowledge as to the manner in which other infectious diseases are successfully met.

The *Account of Plague Administration in the Bombay Presidency from September, 1896, to May, 1897*, by M. E. COUCHMAN, I.C.S., is another of the reports on plague written and issued by a layman. On a former occasion we commented on the absurdity of a plague report being compiled by a layman. The system prevails in India probably because there is no proper sanitary department to deal with these matters. The compilation places on record the principal administrative features of the campaign against plague during the earlier period of its prevalence in Western India, and the compiler is to be congratulated on the careful manner in which he has accomplished his laborious task.

Atlas der Syphilis und syphilisähnlichen Hautkrankheiten. Atlas of Syphilis and of Skin Diseases resembling Syphilis.] Von Dr. MARTIN CHOTZEN. Heft 3-8. (Hamburg und Leipzig: L. Voss. 1897-98. Roy. 8vo, 6 coloured plates with letterpress in each part. M. 3 each part.)—The first two numbers of this *Atlas* were noticed in the BRITISH MEDICAL JOURNAL on their appearance several months ago. Since then six more of the twelve parts of which the whole work is to be made up have been published. These six parts include thirty-six plates, illustrating chiefly the syphilides, but also some of the various non-syphilitic affections of the skin most likely to be mistaken for syphilis. The description which accompanies each plate gives a short account of the case represented, and the remarks on diagnosis add considerably to the value of the letterpress. The affection described by French writers under the title "syphilide pigmentaire," but here, as in many German works, called "syphilitic leucoderma," is well shown in two plates, and is considered by Dr. Chotzen to be merely the remains of an earlier macular or papular syphilide, and not a primary affection of the skin. Another useful plate shows on the same page a papular syphilide of the penis contrasted with molluscum contagi-

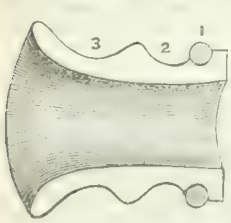
osum of the same organ. The plates are not all of equal merit, among the less satisfactory being one or two of those of psoriasis and that of lichen ruber planus. On the whole, however, the representations so far are good, and the *Atlas* will no doubt be found useful by many medical men, especially by those who have but few opportunities of studying these diseases in the living subject.

Fat and Blood: an Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M.D., LL.D. Seventh Edition. (Philadelphia and London: J. B. Lippincott Company. 1898. Demy 8vo, pp. 178. 5s.)—It is with much pleasure that we record the appearance of the seventh edition of this well-known work. The essay on which it is founded appeared as far back as 1875 in *Seguin's Series of American Clinical Lectures.* The treatment has been generally adopted all over the world, and appears to have undergone very little modification since its original inception. The weak point in the former editions was the chapter on massage, which was not in accordance with the best European teaching. This fact was fully recognised by the author, and in the present issue an attempt has been made by Dr. John K. Mitchell to remedy the defect. The chapter on dietetics and therapeutics is of considerable practical value, and many of the cases described, although not new, are of much clinical interest. With respect to the Weir Mitchell treatment generally we entirely concur with the author in his expression of opinion that it is more likely to be misused, or used where it is not needed, than that it will not be used at all. The only suggestion we have to make is that in future editions some account should be given of the more recent physiological studies of the effects of massage on the lower animals.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

NEW INSTRUMENT FOR INTESTINAL ANASTOMOSIS.

Mr. F. T. Paul, F.R.C.S. (Liverpool), writes: Under the above heading Mr. Jackson Clarke describes in the British Medical Journal of May 14th an apparatus similar in principle to one that it had occurred to me might be an improvement some time ago, but mine was so much like that of Mr. P. J. Hayes that I did not make any use of it. It consists of a partly decalcified bone tube having three grooves. Groove No. 1 carries an india-rubber umbrella ring; No. 2 the cut ends of the bowel attached by purse-string sutures; No. 3 is intended to receive the ring manipulated into position over the invaginated bowel by the fingers acting from outside. If this apparatus proved easy to use it would have an advantage over bobbins held in position by purse-string sutures alone, since the latter hold more or less indefinitely, whilst an elastic ring cuts it clean away in a week or less, and it would also have an advantage over Mr. Jackson Clarke's instrument in dispensing with the longitudinal incision for placing the ring in position.



Rainy Months.—In a paper read recently before the Royal Meteorological Society, Mr. R. H. Scott, F.R.S., stated as the result of a statistical inquiry at forty stations in the British Islands for the twenty years ending 1895, that June is the month with the least number of rainy days. The summer maximum of rain occurs in July, bringing the well-known Lammas floods. November is the month with the greatest number of rainy days.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

Research Scholarship.

The Council of the British Medical Association are prepared to receive applications for one of the three Research Scholarships, which is of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications to be sent in writing to the General Secretary on or before June 15th, stating the particulars of the intended research, qualifications, and work done.

Francis Fowke, *General Secretary.*

429, Strand, London, May 14th, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

Meetings of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—Isambard Owen, M.D., 40, Curzon Street, W., and H. B. Robinson, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

Lancashire and Cheshire Branch.—The annual meeting will be held at Wigan, on Tuesday, June 28th. Applications for membership and all communications should be addressed to the Honorary Secretary, Dr. James Barr, 72, Rodney Street, Liverpool.

East Anglian Branch.—The annual general meeting of the East Anglian Branch will take place at Norwich, on Thursday, June 16th, under the presidency of Mr. Haynes S. Robinson. It is requested that gentlemen desirous of joining the Association or Branch, and members willing to read papers or contribute cases to the meeting, will communicate at once with Dr. Beverley, Norwich. Members who have not yet paid their subscriptions for the current year will oblige by sending them to one of the Honorary Secretaries.—Edgar G. Barnes, M.D., Eye; Michael Beverley, M.D., Norwich; Thomas Carr, M.D., Braintree, Honorary Secretaries.

South-Western Branch.—The annual meeting of this Branch will be held at the Alverne Hall Public Buildings, Penzance, on Friday, June 17th, under the Presidency of Dr. Hugh M. Montgomerie. Programme: 1 to 2.30 P.M., Luncheon, by invitation of the President-elect, in the Lecture Hall, Public Buildings, Penzance. 2 P.M., Meeting of the Council of the Branch, in the Museum of the Penzance Natural History and Antiquarian

Society in the Public Buildings. 2.30 P.M., General Meeting of the Branch, in the Alverne Hall, Public Buildings; Dr. Davy will resign the chair to the President-elect, Dr. Hugh M. Montgomerie. President's address, Business. After the meeting, about 4 P.M., by invitation of the President, there will be an excursion by steamboat across the Bay to St. Michael's Mount. By kind permission of the Right Honourable Lord St. Levan, the members will have an opportunity of viewing the Castle. For those who do not go to the Mount, tea will be provided, at 4.30 P.M., at 5, Clarence Place (Dr. Montgomerie's House), and the Museum of the Royal Geological Society of Cornwall and other points of interest may be visited. Returning to Penzance by boat, the annual dinner will take place at the Queen's Hotel, at 7 P.M.; tickets 7s. 6d., exclusive of wine. Should a sufficient number of members inform the Honorary Secretary by June 3rd, it is possible arrangements may be made by the Great Western Railway for a special train to leave Penzance after the dinner, and run as far as Truro or Exeter. The Honorary Secretary trusts that those members who intend to be present will inform him by that date, June 3rd. The members of the Branch in West Penwith invite those staying for the Saturday (18th) to a luncheon and excursion to Land's End. The guests will be brought back to Penzance in time to catch the up mail at 4.50 P.M., arriving in Exeter at 10.15 P.M. This excursion, however, cannot be given unless at least twenty five accept the invitation, and notify the same to A. R. F. Evershed, M.R.C.S., Sheari, Morrat Road, Penzance, on or before June 13th. The Honorary Secretary takes this opportunity of expressing his regret that he cannot again offer himself for re-election to office.—WILLIAM GORDON, Honorary Secretary, 3, Barnfield Crescent, Exeter.

PERTHSHIRE BRANCH.—The summer meeting will be held within the Rooms of the Literary and Antiquarian Society, George Street, Perth, on Friday, June 3rd, at 4 P.M.—A. R. URQUHART, Honorary Secretary, James Murray's Royal Asylum, Perth.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The next meeting of this District will be held at the Medical Library, 5, Pembroke Road, Portsmouth, on Saturday, June 4th, at 9 P.M. Mr. Tubby, M.S., F.R.C.S., will read a paper on Recent Progress in the Treatment of Deformities, illustrated by lantern slides.—C. C. CLAREMONT, M.D., Elm Grove, Southsea, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The forty-third annual meeting of this Branch will be held at Holly Lodge, Luton, on Thursday, June 9th, 1898, at 3.30 P.M. The President-Elect, Mr. Horace Sworder, invites the members to luncheon at 1.30 P.M., and will be glad of a reply, to be sent to him not later than June 2nd. After the luncheon a visit will be made to the Sewage Works, under the guidance of the Borough Engineer. Agenda: Report of the Committee of Management; Proposal of New Members; Vacancies in the Committee of Management to be filled up; President's Address. Mr. H. Stansfield Collier, of St. Mary's Hospital, will read a paper entitled Remarks upon some Cases of Peritoneal Adhesions.—CHARLES JEWEL EVANS, Honorary Secretary, Northampton.

MIDLAND BRANCH.—The annual meeting of this Branch will be held at the Guildhall, Lincoln, on Thursday, June 2nd, at 2.15 P.M. After the transaction of the usual business the following papers will be read:—Dr. Handford and Mr. Anderson: Case of Perforation of a Typhoid Ulcer, Operation, Recovery; Mr. Anderson: Transperitoneal Uretero-lithotomy; Dr. Newman: A short note upon Prostatic Troubles; Dr. J. Stitt Thompson: Function Irregular Action of the Heart; Mr. W. J. Cant: (1) An Improved Method of Operating for Hare-lip, (2) Specimen of Sarcoma of the Choroid; Dr. Headley Neale: Agoraphobia as viewed by personal experience and observations of others; Dr. R. Sevestre: The Effects of Foreign Bodies in the Bronchi; Dr. R. A. Farrar: Operation for Carcinoma of the Cervix Uteri, with notes of two successful cases; Mr. F. S. Lambert: Appendicitis, three cases of, with Notes on Treatment; Mr. S. W. Daman: Medical and Surgical Cases and Specimens. Luncheon will be provided by the President-Elect at his residence, Silver Street, at 1 P.M. The annual dinner will take place at the Saracen's Head Hotel, at 6 P.M., price 7s. 6d. exclusive of wine.—FRANK M. POPE, 4, Prebend Street, Leicester, Hon. Secretary and Treasurer.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at Inverness on Wednesday, June 15th. There will be an excursion on board Mr. McBrayne's s.s. *Elmgany* from Inverness to Fort Augustus. Members allowed to invite their friends. Fuller particulars by circular.—J. W. NORRIS MACKAY, Secretary and Treasurer, Elgin.

DORSET AND WEST HANTS BRANCH.

THE annual meeting of this Branch was held at Dorchester on May 11th, under the presidency of Dr. ALLAN MCLEAN. Forty members and visitors were present.

Vote of Thanks to Retiring President.—A cordial vote of thanks was passed to the retiring President, Dr. James Davison, for his services during the past year.

The late Mr. Ernest Hart.—The resolution published in the BRITISH MEDICAL JOURNAL of May 21st, p. 1340, was passed.

Dr. Roberts Thomson.—On the motion of Dr. MOORHEAD, seconded by the President, it was resolved:

That the Honorary Secretaries be requested to write, on behalf of the Branch, to Dr. Roberts Thomson, of Bournemouth, conveying its warm sympathy in the serious accident which has befallen him, and expressing its sincere hopes for his speedy and satisfactory recovery.

Elections to Branch Council.—The following gentlemen were elected to fill the vacancies on the Branch Council: Dr. James Davison, of Bournemouth; Dr. Henry Geary Dyer, of Ringwood; and Dr. Frederick William Ramsay, of Bournemouth.

Representative on Association Council and Parliamentary Bills Committee.—Mr. C. H. Watts Parkinson was re-elected the representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee.

New Members.—The following were elected members of the Branch: Mr. Cecil Walter Ramsay Banham, of Wool; Dr. George Edward James Crallan, of Bournemouth; Surgeon-Captain Philip Glover Levers, of Dorchester; Dr. George Edwyn Middlemist, of the Dorset County Asylum; and Dr. George Gavin Morrice, of Weymouth.

Summer Meeting.—It was resolved that the summer meeting should be held at Wimborne.

Report of Constitution Committee.—Communications were received from the East Anglian and Worcestershire and Herefordshire Branches, and from the Council of the Association. On the consideration of the report of the Constitution Committee the Branch unanimously and strongly disapproved of the election of members of Council, the payment of election expenses by the Council, the registration of members as electors in only one Branch, and, above all, of the appointment of an Executive Committee by the Council. They approved of the Council reporting in first instance to the Branches, of the election of members of the Association by the Council of Branches, and of the clause relating to the expulsion of members.

St. John Ambulance Association.—A discussion on the working of the St. John Ambulance Association in the county of Dorset was opened by the PRESIDENT, and taken part in by Dr. MOORHEAD, Dr. MASTERS, Mr. CURME, and Mr. DU BOULAY.

Communications.—The following were presented:—Dr. LAWRIE: A Case of Chronic Membranous Colitis of over ten years' duration, cured by right inguinal colotomy, and subsequent closure of the artificial anus.—Dr. LEACH and Mr. RAMSAY: A Case of Abdominal Hysterectomy.—Dr. LYS and Mr. RAMSAY: A Case of Abdominal Hysterectomy.—Mr. RAMSAY: Notes and Specimens of three other cases of Abdominal Hysterectomy.

Dinner.—The members and friends subsequently dined together at the King's Arms Hotel.

MONTREAL BRANCH.

A QUARTERLY meeting of this Branch was held on May 5th, in the Medico-Chirurgical Rooms, Montreal, Dr. LACHAPELLE in the chair. There was a fair attendance of members.

Communications.—Drs. ADAMI and JAMES STEWART showed a case of Atrophic Liver, with accompanying remarkable pigmentation.—Dr. WYATT JOHNSTON showed Medico-Legal Cases.—Dr. WILLIAM NELSON showed some Living Cases.

The Annual Meeting, 1897.—Dr. J. A. HUTCHISON reported that a balance in hand of 737.32 dollars remained in the bank after defraying all the expenses of the Montreal meeting. This balance was placed by the Executive Committee in the hands of Drs. Roddick, Lachapelle, and Armstrong to dispose of as they deemed best.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

AN ordinary general meeting of this Branch was held in the Aberdeen Royal Infirmary on May 18th, the PRESIDENT, Professor Finlay, in the chair.

New Members.—Dr. Alex. Low, Cothill, Woodside, and Dr. Peter Mitchell, Portlethen, were admitted members of the Branch.

Communications.—Professor FINLAY showed a case of Sporadic Cretinism, and read notes of cases of Phthisis beneficially treated by large doses of creosote.—Dr. EDMOND read notes of a case of Thoracic Aneurysm, and exhibited a specimen of the same.

PATRIOTIC AMERICAN DRUGGISTS.—A large number of firms connected with the drug trade in the United States have promised, at the termination of the war, to reinstate in their former positions any of their employees who enlist for service; and some firms have decided to pay the wages of such of their staff as enlist during the time they are on active service.

THE REFORM OF THE LUNACY LAWS.

THE TREATMENT OF INCIPIENT INSANITY.

AT a meeting of the Joint Committee of the British Medical and Medico-Psychological Associations held on May 10th, Dr. W. F. CLEVELAND in the chair, the question of the provision of temporary care for persons suffering from incipient insanity was considered. The following draft of a clause to be introduced into the Lunacy Bill, and draft of a form for certifying such cases, which had been prepared by counsel, were adopted:

(1) Where a medical practitioner certifies that a person is suffering from mental disease, but that the disease is not confirmed and that it is expedient with a view to his recovery that the patient should be placed under the care of the person whose name and address are stated in the certificate for the period also therein stated, not exceeding six months, then during that period the provisions of Section CCCXV of the Lunacy Act, 1890, shall not apply.

(2) A medical practitioner who signs such certificate shall within three days after signing the same send a copy thereof to the Commissioners, and it shall be lawful for any Commissioner to visit the patient. The person under whose care the patient is placed shall not be the person who signs the certificate.

(3) The person who receives a patient under such certificate shall within ten days after the expiration of the period mentioned in the certificate, or if he ceases to have the care of the patient under the certificate at an earlier date, then within ten days after such earlier date, send a report to the Commissioners stating whether the patient recovered, and, if not, in what manner he was dealt with when the person making the report ceased to have the care of him under the certificate.

CERTIFICATE.

I [*insert full name and address*], a duly registered medical practitioner, certify that [*insert name, address, and description of the patient*], is afflicted [*state the nature of the disease*], but that the disease is not confirmed; and I consider that it is expedient, with a view to his [*or her*] recovery, that he [*or she*] should be placed under the care of [*insert full name and description*] at [*insert full address of the place where the patient is to be received*] for a temporary residence for a period of [*specify a period not exceeding six months*] from the day of , 18 .

Dated . Signed .

The proposed clause and certificate were placed before the Lord Chancellor by the General Secretary of the British Medical Association, who further asked his lordship to receive a deputation on the subject. The following reply has been received from the Permanent Secretary (Sir K. Muir Mackenzie, K.C.B.):

[COPY.]

House of Lords, S.W., the 16th of May, 1898.

SIR,—I am directed by the Lord Chancellor to acknowledge the receipt of your letter of the 13th inst., and enclosures, with reference to the introduction of a clause into the Lunacy Bill dealing with the treatment of incipient insanity, and to say that his lordship will carefully consider these papers, and will let you know whether he wishes to see a deputation on the subject.—I am, Sir, your obedient servant.

F. Fowke, Esq., K. MUIR MACKENZIE.
Secretary, British Medical Association.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

THE annual report of the Registrar-General of Births, Deaths, and Marriages, which has just been issued, deals with the vital statistics of England and Wales for 1896. Although the earlier publication of quarterly returns somewhat discounts the interest attaching to the principal statistical facts of the year, the report now published contains a large amount of detailed information relating to the causes of death and the age at death necessary to the true appreciation of the death-rate. With regard to the marriage-rate, it showed a marked increase upon that recorded in 1895, and was higher than in any of the twenty preceding years. The births registered in England and Wales during 1896 were equal to a rate of 29.7 per 1,000 of the estimated population, which, with one exception, was the lowest rate on record. The highest birth-rates were, as usual, in the manufacturing counties of South Wales, Monmouthshire, Staffordshire, and Durham, their populations containing a large proportion of young married people. The male births were in the proportion of 1,036 to each 1,000 female births, which corresponded with the average.

The 526,727 deaths registered during 1896 were equal to a rate of 17.1 per 1,000 persons living, or 1.7 per 1,000 below the average rate in the ten preceding years. With the exception of the rate in 1894, which was only 16.6 per 1,000, the death-rate in 1896 was considerably lower than that in any year on record. The lowest county death-rates were 12.8 in Rutlandshire, 13.1 in Berkshire, 13.3 in Surrey, and 13.4 in Westmorland: and the highest rates 18.2 in London, 18.7 in North Wales, 19.0 in Staffordshire and in Warwickshire, and 19.8 in Lancashire. With regard to mortality at different age-periods, with the exception of the rates for both sexes at ages 5 to 10, the rates at all age-periods in 1896 were below the corresponding rates in the preceding year; and at all age-periods, with very few exceptions, the death-rates in the year under review were lower than those recorded in any year since the establishment of civil registration in 1837. The proportion of deaths of infants under one year of age to registered births was 148 per 1,000, and almost corresponded with the average. Infant mortality falls much more heavily on males than on females; to 1,000 of each sex born during 1896 the proportions of deaths under one year of age were 161 and 134 respectively, showing an excess of 21 per cent. among males as compared with females. At ages under three months the disparity is still greater, for to every 100 deaths of females there were 126 deaths of males. This excess of male infant mortality varies but slightly, although the death-rates among infants of both sexes varies greatly from year to year.

With reference to the causes of death in England and Wales during the year under notice, the death-rate from zymotic or specific febrile diseases showed a decline from that recorded in the preceding year, and was below the average of the ten preceding years, owing principally to a marked decline in the mortality from influenza and from diarrhœa; the mortality from scarlet fever and from enteric fever was also below the average, but that from small-pox, measles, diphtheria, and whooping-cough showed an excess. The fatal cases of small-pox, which had been 431, 1,457, 820, and 223 in the four preceding years, rose again to 541 in 1896, of which no fewer than 443 occurred in the registration district of Gloucester. Of the 541 deaths from this disease recorded in England and Wales, 45, or 8 per cent., were certified to have been vaccinated, and 118, or 22 per cent., to have been unvaccinated; while with regard to the remaining 378, or 70 per cent., no sufficient statement as to vaccination appeared in the certificates. It is to be greatly regretted that in so large a proportion of cases medical practitioners omit to give this very desirable information.

The 3,753 deaths referred to influenza during 1896 were considerably fewer than in any year since the first epidemic in 1890; in every county of England and Wales there was a marked decline. Hydrophobia was the certified cause of death in 8 instances during 1896, against 4, 13, and 20 in the three preceding years; of these 8 deaths, 4 occurred in London, and 2 in Lancashire. The mortality from constitutional diseases during the year under review was lower than in any of the ten preceding years, although the death-rate from cancer was the highest on record.

The causes of death in 22,603 cases, or 4.3 per cent., of the total deaths were so unsatisfactorily stated in the returns as to be useless for purposes of scientific classification. The number of such cases would have been larger but for the practice of the Registrar-General to issue inquiries by letter to medical practitioners concerning obscure certificates of causes of death. No fewer than 4,221 replies were received during the year, with the result that upwards of 3,000 contained information which led to the more accurate classification of death causes. For instance, 597 deaths from vague headings, such as tumour, or disease of the brain, liver, ovaries, uterus, etc., were transferred to cancer; 101 deaths, most of which had originally been returned as from "tumour of the brain," were found to be due to syphilis; and in 111 cases of "stricture of œsophagus," no fewer than 74 were found to be due to malignant disease, and 4 to syphilis.

MORTALITY FROM DIARRHŒAL DISEASES IN LONDON, 1861-97.

By LOUIS PARKES, M.D., D.P.H.Lond.,
M.O.H. Chelsea.

IT is a somewhat remarkable fact that during recent years the deaths registered in London as due to enteritis have undergone a great increase. Under the heading of Enteritis are also included by the Registrar-General all deaths certified as due to gastro-enteritis. At the present time a large proportion of these enteritis deaths are deaths of infants under 1 year of age. This has not always been so, as appears from a reference to Table I.

TABLE I.—*Percentage of Deaths at Three Age Periods to Total Deaths.*

Years.	Diarrhœa and Cholera.			Enteritis.		
	Under 1.	1 to 5.	Over 5.	Under 1.	1 to 5.	Over 5.
	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.	Per Cent.
1861-5	62	20	18	30	12	58
1866-70	68	18	14	36	12	52
1871-5	71	17	12	37	13	50
1876-80	70	17	13	44	14	42
1881-5	71	16	13	38	13	49
1886-90	73	16	11	49	12	39
1891-95	74	15	11	61	13	26
1896-7	79	13	8	68	13	19

It is evident from this table that, whilst the age incidence of diarrhœa and cholera mortality has undergone some variation in the direction of increasing the percentage mortality of infants under 1 year, the age incidence of enteritis mortality has undergone a much greater change in the same direction; for whereas 30 years ago only 30 per cent. of the deaths were of infants under 1 year, during the past two years the percentage has been 68, with a corresponding reduction in the percentage mortality over 5 years of age.

TABLE II.—*Showing the Number of Deaths Registered as due to Enteritis in Quinquennial Periods Stated in Relation to every 100 Deaths from Diarrhœa and Cholera.*

Years.	Deaths.	Years.	Deaths.
1861-65	11	*1861-85*	*10*
1866-70	8	1886-90	18
1871-75	9	1891-95	35
1876-80	12	1896-97	52
1881-85	12	—	—

It is evident from these figures that, assuming that the fatal illnesses registered under the heading of enteritis are of the same character as those registered as diarrhœa or cholera, the neglect to take account at the present time of the former in calculating the diarrhœa mortality of London, will lead to a grave understatement of death-rate, and possibly to erroneous comparative conclusions. This will be more apparent after a study of the following table, which gives the average death-rates per million per annum from diarrhœa and cholera and from enteritis in London for these decennial periods, and for 1891-97.

TABLE III.—*Death-rate per Million in London.*

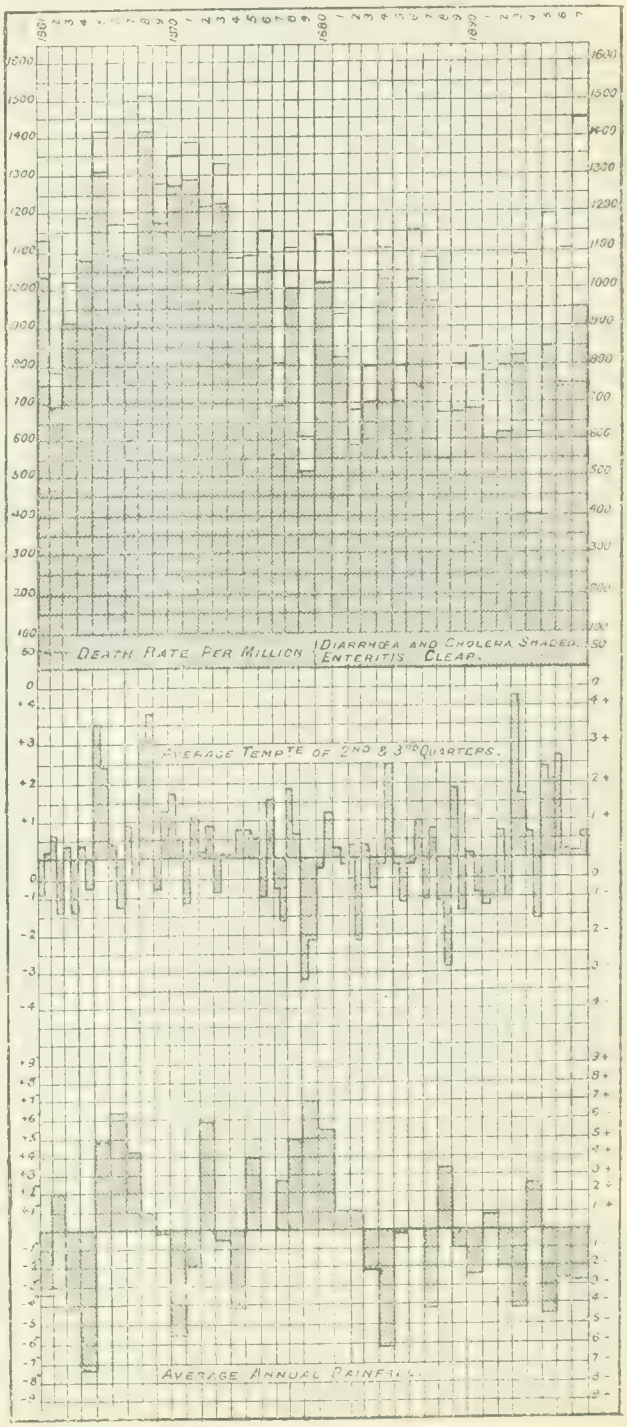
Years.	Diarrhœa and Cholera.	Enteritis.	Diarrhœa, Cholera, and Enteritis.
1861-70*	1,105	102	1,207
1871-80	987	100	1,087
1881-90	772	115	887
1891-97	711	291	1,002

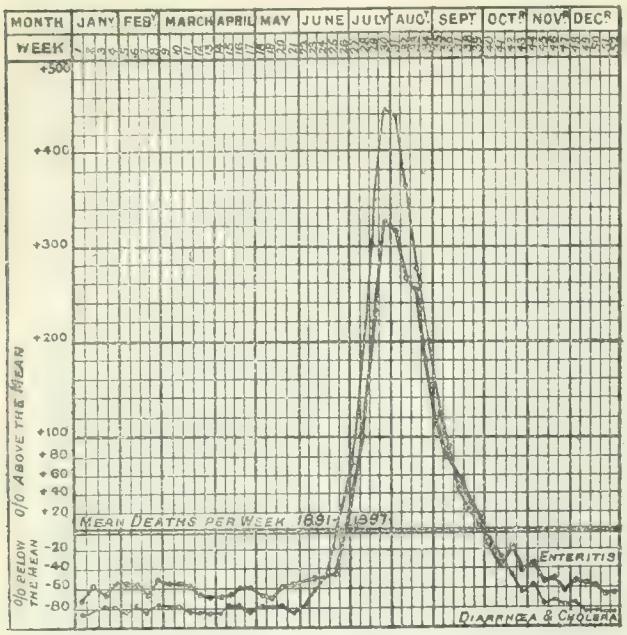
* The deaths from Asiatic cholera in 1866 have been excluded.

Judging from the diarrhœa and cholera death-rate alone, it might be concluded that there has been during the past thirty years a steady diminution in diarrhœa mortality which, if somewhat arrested during the present decade, is still continuing. The real facts as to mortality from diarrhœal diseases, are, I think, more fairly shown by the third column of combined diarrhœa and enteritis mortality. There was a steady diminution until the present decennium was reached, since then a rise.

In the first decennium—1861-70—there was only one year (1862) when the combined diarrhœa and enteritis mortality was less than 1,000 per million; in the second decennium there were two such years (1877 and 1879). In the 1881-90 period there were as many as seven such years, whilst in the present decennium there have, so far, been only three such years. Last year (1897) the death-rate was very high—diarrhœa 950, enteritis 496, combined death-rate 1,446 per million—which is higher than any rate recorded since the year 1868 (1,512 per million), a year famous for its exceptionally hot summer.

A careful study of London diarrhœa death-rates (see chart),





and of mean summer temperatures, since 1861, shows how very much diarrhœa mortality depends upon temperature, as is now so well known. But it also shows that the great decrease in mortality in 1871-80, as compared with 1861-70, went on irrespective of temperature, for whereas in the earlier period there were only 5 years when the mean temperature of the third quarter of the year exceeded the average, in the later period there were no fewer than 8 such years. In 1881-90 everything, as regards temperature, was favourable for a decrease as compared with 1871-80, for in 1881-90 there were only three years with summer temperature above the average, and no fewer than seven years of low summer temperature. In the present decennium there have been four years of summer temperature above the average, and the increased mortality is doubtless due to this circumstance.

There appears to be, however, some other (unknown) factor besides high summer air and earth temperatures (the latter being dependent upon the former), which determines excessive diarrhœa prevalence and mortality in London, otherwise diarrhœa mortality would correspond much more exactly than it does with mean summer temperature. For instance, the hottest year of this decennium has been 1893 (mean temperature of second quarter 4.3° F. above the average, of third quarter 1 7° F. above the average), but the death-rate of 1,084 per million of 1893 is exceeded by both 1896 and 1897 years, with much cooler summers. The very high death-rate of 1897 (1,446 per million) was attained notwithstanding that the summer temperature, except for a short period in July and early in August, was by no means excessive.

Table IV gives the deaths of infants under 1 year from diarrhœa, cholera, and enteritis to every 1,000 births, and also the percentage which these deaths form of the total deaths in six quinquennial periods and in 1891-97.

TABLE IV.—*Deaths under 1 Year from Diarrhœa, Cholera, and Enteritis.*

Years.	Per 1,000 Births.	Percentage of Total.
1861 65	18.8	59
1866-70	23.8	66
1871 75	23.5	68
1876-80	18.3	68
1881-85	17.0	68
1886 90	19.6	69
1891-97	23.7	72

These figures are interesting, but are not in themselves sufficient to enable any opinion to be formed as to whether the present high rate of diarrhœa infant mortality is in any way attributable to a greater prevalence of the system of artificial feeding of infants than was current thirty or forty years ago.

In support of the view that the deaths registered as due to enteritis are the result of a disease very similar in character, or perhaps identical, with that causing the deaths which are registered as due to diarrhœa, we have, apart from any consideration of the symptoms common to each, the following facts:—(1) That in London (1896-7), 79 per cent. of the diarrhœa deaths were under 1 year of age, 68 per cent. of the enteritis deaths. Each is a disease largely affecting infants. (2) The seasonal prevalence of each disease is very marked, a large proportion of the deaths occurring in the third quarter of the year. Thus, in London (1891-7) 77 per cent. of the diarrhœa deaths of children under 5 years occurred in the third quarter of the year, and 67 per cent. of the enteritis deaths. Over 5 years of age the respective percentages are 52 and 33. The seasonal curves of the two diseases are also very similar (see chart), the only distinguishing features being that the abrupt rise in enteritis mortality occurs a week later than the diarrhœa rise, that the enteritis maximum is less pronounced than the diarrhœa maximum, and the fall in enteritis mortality is somewhat more irregular. Also, during the months when diarrhœal diseases are least prevalent, a relatively larger number of deaths are registered as due to enteritis than to diarrhœa.

On the whole, however, it would appear that the disease registered as enteritis has climatic or seasonal relations of a similar character to diarrhœa and cholera, and the inference is a fair one, so far as young children are concerned having regard to the community of symptoms, that both diseases own a common cause. If this is so, it is only right that the death-rate of a community from diarrhœal diseases should take cognisance of enteritis mortality as well as of that directly registered as due to diarrhœa, cholera, and dysentery. So far, this has not been done, either in the reports of the Registrar-General or in other official documents. The difficulty is with regard to the deaths from enteritis of those over 5 years of age, which form at the present time some 20 per cent. of the total, for it is highly probable that in a majority of these cases the illness is of a definite inflammatory nature, unassociated with any particular form of bacillus.

THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE fifteenth annual general meeting of this Society was held on May 18th, in the rooms of the Medical Society of London, 11, Chandos Street, W., Dr. DE HAVILLAND HALL in the chair. Among those present were: Dr. G. E. Herman, Dr. J. B. Ball, Dr. W. Knowsley Sibley, Dr. Walter Smith, Dr. Major Greenwood, Mr. J. Brindley James, Dr. F. J. Allan, Dr. J. Owen, Dr. H. Child, Dr. J. V. C. Denning, Dr. J. Miller, Dr. W. T. Evans, Dr. W. A. Dingle, Dr. D. R. P. Evans, Mr. Edward Bartlett, Dr. E. H. London, Dr. R. H. Barkwell, and Dr. J. Cahill.

The annual report presented to the meeting showed that the Society had paid in sickness benefit £40,000, and had an accumulated fund of £115,000. On December 31st, 1897, there were 1,803 members upon the books, the net gain of membership during the year after allowing for deaths, resignations, etc, was 68, in addition to which 12 members had increased their sickness benefits. During the year the Society had paid 417 sickness and accident claims for periods averaging four weeks and two days each. The total amount of sickness benefit paid to members during the year was £5,939 58. The Society subscribes to the Royal Medical Benevolent College, and uses the votes thus obtained for members of the Society or their families.

The CHAIRMAN said that on looking back on the past year he thought the Committee were justified in congratulating the members on the work done. The Society continued to grow, and the rate of sickness also continued to grow steadily; that was to be expected, and was provided for in the tables constructed when the Society was started. Taking the average for the year the claims were well under the

margin allowed, and there seemed no reason to expect that things would be different in the future. They might congratulate themselves upon the extremely economical way in which the Society had been conducted in the past. Ten per cent. of the premium income was set aside in the tables for the management expenses, but they hardly ever exceeded 5 per cent., and during the past year it had been less, therefore he thought the members would congratulate the Committee on having conducted the affairs of the Society most economically. At the end of the present year the books would be closed for the valuation and for the declaration, he hoped, of a bonus; but that, of course, would depend upon their financial position when the valuation was made. At the present time they were practically limited to their sickness fund, as they accepted no policies for life insurance nor for annuity grants, as it had been found that they were more economically carried out by the Rock Insurance Company through the agency of the Society. The sickness fund showed the great need of such a society for the profession. Influenza continued to hold the first place in the calls upon the fund, and the other diseases were such as might be expected having regard to the exposure inevitable in medical work. The Society had at present eight or nine gentlemen who were permanently disabled, some of whom were entirely dependent upon the funds of the Society for maintenance. They had had several grateful letters from members who had experienced its benefits, and he thought they had had very few complaints. He could not help feeling a little anxious as to those members who, when they reached the age of 65, would cease to be eligible for sick pay. It seemed to him a great pity that new members at the time of joining for sickness assurance did not also take up an annuity with the Rock Assurance Company. He would like to press on members when joining the Society the necessity of making provision for themselves after they had reached the age of 65, when all benefits from the Society would cease. The only point in the report which was likely to lead to a discussion was a proposal for an alteration of Rule iv with regard to payments of contributions. The Committee had found that nearly all new members of the Society elected to pay their contributions twice a year, and it would greatly facilitate the work of the office if older members would do the same. He hoped they would agree to the proposed alteration on the understanding that it would not be obligatory on old members. He regretted that early in the present year the Society had lost their President and first Chairman (Mr. Ernest Hart). He (Dr. Hall) had been connected with the Society almost from its commencement, and he knew the immense amount of time and energy Mr. Hart devoted to the Society; he was always ready to give it the benefit of his advice, and it was well recognised that if it had not been for the influential position Mr. Hart occupied, and his great financial genius, the Society would never have reached the position it had done. He wished to say how deeply they regretted the loss to the Society, and how grateful they all had been for the work which Mr. Hart had done in the past. He concluded his remarks by thanking his colleagues on the Committee for the assistance they had kindly given him in the work of the past year, and expressing his high appreciation of the work done by their Secretary. He would formally move:

That the report of the Committee and the audited accounts for the twelve months ending December 31st, 1897, be adopted.

Dr. MILLER called attention to the hardship of the rule that a member should cease to be entitled to any benefits on reaching the age of 65.

The CHAIRMAN pointed out that if the rule was altered the rate of contributions would have to be considerable advanced.

After some further discussion the report was adopted.

The CHAIRMAN said he would now propose the alteration of Rule iv. The only alteration was that payments, instead of being made quarterly, would be made half-yearly.

Dr. WALTER SMITH proposed, and Dr. MILLER seconded, an amendment that the matter be deferred for twelve months.

The amendment, on being put from the chair, was declared to be lost, and the proposed alteration of the rule adopted, with the addition of a proviso that the alteration should come into force at the close of the current year.

The Chairman, Vice-Chairman, members of the Executive Committee, and five arbitrators, were unanimously re-elected.

The CHAIRMAN proposed a hearty vote of thanks to the medical and insurance press, and the BRITISH MEDICAL JOURNAL in particular, for the extremely valuable support given to the Society during the past year.

The resolution was carried unanimously.

A vote of thanks to the Chairman brought the proceedings to a close.

THE VACCINATION BILL.

THE GUARDIANS AND THE VACCINATION BILL.

THE want of knowledge regarding the Vaccination Bill displayed by some newspapers, which show more or less favour to antivaccination, is almost beyond belief. The Bill has been before the public since March, and so late as May 10th we find a champion of the "cause," the London *Star*, writing as follows: "The two chief blots upon the Bill, as we have insisted from the first, are (1) that it perpetuates compulsion, and (2) that it confers upon vaccination officers the power to institute prosecutions." Needless to say, the Bill confers no such power on vaccination officers. In the course of the second reading debate Mr. Chaplin explained that he is advised that under the existing law the Local Government Board can, if it sees proper, cause a vaccination officer to prosecute. That is a very different thing, and even if the impossible had happened and an already existing power had been "conferred" by the Bill, that would not have been at all equivalent to giving the power to the vaccination officer. So also the *Newcastle Daily News* of May 11th writes that "another unjust and undemocratic clause in the Bill is that which takes the power of prosecution out of the hands of the guardians, and places it in the hands of the vaccination officer"; and in *London* we read that the Bill "will enable the Local Government Board to try and override the opinions of Boards of Guardians."

With the press so far astray it is hardly surprising that individual antivaccinators should also be at sea. Mr. J. West, of Bradford-on-Avon, writes regarding the Bill to the *Birmingham Post* about "the proposal to equip vaccination officers, who are interested parties, with full powers for instituting prosecutions without the duly elected guardians' veto....." How a "veto" should be required in order to permit a prosecution only an antivaccinationist can tell. Again, Mr. M. Minifie, the chairman of a League meeting at Weston-super-Mare, said "the Bill sought to substitute an irresponsible official of the Local Government Board as a public prosecutor instead of the members of the Board of Guardians." Independently of all this absurd blundering, the whole attitude of the League towards the particular point in question is characteristically contradictory. For years we have had dinned into our ears protestations both loud and deep against a system by which in one union a man would be prosecuted and fined repeatedly for neglect of vaccination, while in the next union only a single fine would be imposed, and in the next again there would be neither fine nor prosecution, the law being nothing more than a dead letter. This has been a standing complaint of antivaccinationists; but now, when intimation is made that this anomaly can be abolished by the exercise of powers which have hitherto been left in abeyance the news is received with a whine of dismayed protest and appeal.

On March 21st, a few days after the Bill was printed, the National Antivaccination League issued an official manifesto, which is partly as follows:

The Government Vaccination Bill is more remarkable for what it omits than for what it contains. It omits (its framers having declined the invitation) to make the inoculation of infants with cow-pox an integral part of the public health law of the realm. It entrusts, as before, this extraordinary and incomprehensible operation to the guardians of the poor, not to the health authorities. ..... It is to the board of guardians that the law entrusts the rags and tatters of a worn-out medical fashion. ..... It is because the Government does not know what else to do. Will the guardians of the poor consent to execute this queer statutory duty? ..... Having followed the course of events closely from year to year, we have sufficient grounds for our belief that the administrators of the Vaccination law, notwithstanding the diversion which they hope to make with the help of glycerine, have open to them no alternative course to repeal, but to let the law become gradually and silently a dead letter everywhere.

This was issued on March 21st. The second reading debate followed on April 19th, and in it Mr. Chaplin announced his intention of exercising powers which would make it needless to trouble Boards of Guardians possessed of scruples regarding the wearing of "the rags and tatters of a worn out medical fashion." The Local Government Board itself intends in future, where necessary, to "execute this queer statutory duty." This announcement fell like a bombshell on the Anti-vaccination League. It was not in the least what they had contemplated, and it showed how far their self-complacency was astray when out of the depths of their watchful experience they evolved the theory that the law was to "become gradually and silently a dead letter everywhere." And so the Executive Council of the League had another consultation, and resolved to issue another and a very different circular. Here it is, the more important part being italicised:

50, Parliament Street, Westminster, May 10th, 1898.

SIR,—I am directed by the Executive Council of this League to draw your attention to the effect the present Government Bill for the Amendment of the Vaccination Acts will have, if passed into law. Mr. Chaplin stated in the House of Commons, that "under the powers which the Board already possess, they proposed in future to make it the duty of the vaccination officer to institute the necessary proceedings." *From this you will see that the Boards of Guardians, elected as representatives of the people, are to be ignored altogether, and their authority set on one side. My Council are of opinion that your Board would never consent to occupy such an undignified position, and we should be glad to have from you an expression of opinion.* My Council further desire me to say that they hope Boards of Guardians will be able to defeat the provisions of the Bill if it should be passed into law.

I am, yours obediently,
CHARLES GANE,
Hon. Secretary.

There is nothing here about the contemptible position which the guardians would occupy as keepers of a rag store. On the contrary, to take away from them this duty of looking after "rags and tatters" is now described as leaving the Board in "such an undignified position" that any self-respecting public body "would never consent to occupy it," and that to do so would be to allow the guardians "elected as representatives of the people.....to be ignored altogether, and their authority set on one side." In short, the Anti-vaccination League wanted first of all to persuade Boards of Guardians that they were being treated with contumely because they were to be left in charge of the alleged "rags and tatters," and now the League endeavours to persuade the same Boards that they will be treated with contumely in any case in which the central authority steps in to do, as a substitute for the local authority, the work of prosecution which the League considers so degrading. Its sudden change of front on this matter reminds us of the sanctimonious cobbler, who, praying at the back of an old stone wall, begged that as a penance the Almighty would overturn the wall on him. A practical joker on the other side gave unlooked-for effect to the petition, and, as the stones began to tumble on the astonished cobbler, he shouted in haste to stop the avalanche, "Oh, Lord! you surely didn't suppose I was in earnest."

All the same, we trust that if in future there are to be any prosecutions, say for neglect of vaccination, or for failure to make a declaration of conscientious objection, Mr. Chaplin will persist in his view that if necessary they shall be carried out by an officer acting independently of local authority. Every common-sense Board of Guardians ought to be glad to be relieved of such work.

The Powers of the Local Government Board with regard to Vaccination.

An important letter has been addressed to Mr. Labouchere by Mr. T. W. Russell, the Parliamentary Secretary to the Local Government Board. It throws light on the meaning of Clause 3, and on the question of the remuneration of public vaccinators. The letter is as follows:

Local Government Board,
Whitehall, S.W.,
May 20th, 1898.

DEAR LABOUCHERE,—The reply to your letter of the 18th inst. as to the Vaccination Bill is as follows:

1. The officers appointed under the Vaccination Acts to prosecute persons charged with offences against those Acts or otherwise to enforce those provisions are the vaccination officers.

The Vaccination Bill now before Parliament gives no additional powers to the Local Government Board with regard to these officers or the institution of proceedings by them.

2. The Bill gives no additional powers to the Local Government Board with regard to obliging Boards of Guardians to institute proceedings under the Vaccination Acts.

3. The substitution of domiciliary vaccination for stational vaccination will render it necessary for the Board to make regulations with regard to the duties and remuneration of the public vaccinators, and the reference to public vaccinators in Clause 3 is for this purpose.

4. The provisions of Section VI of the Vaccination Act of 1867 which are proposed to be repealed refer only to the remuneration of the public vaccinators, and in no way affect the remuneration of the vaccination officers or any payments in respect of the institution of proceedings by the guardians of those officers.

Any provision which may be made by the Local Government Board in regulations issued by them as to the institution of proceedings, either by the guardians or the vaccination officers, would be made under powers which the Board already possess, and not under any powers conferred by the Bill.

Yours very truly,
T. W. RUSSELL.

It appears from this that if Clause 3 passes, the Board will have the power to regulate the remuneration of public vaccinators for such work as domiciliary visits and vaccinations. In that case it will not be necessary to amend the Bill by adding a clause laying down a scale of fees, and taking cognisance of distance, means of conveyance, etc.

BIRTHDAY HONOURS.

THE Queen has been pleased to confer the following honours upon members of the medical profession:

To be Knight Commander of the Order of St. Michael and St. George: Surgeon-Lieutenant-Colonel J. G. Rogers, C.M.G., Head of the Egyptian Sanitary Department. Sir John Godfrey Rogers served in the Afghan War of 1878-80 with the Candahar Column and the Ghunzee Field Force, and afterwards with the force under Major-General Phayre (medal). Served with the 19th Hussars in the Egyptian War in 1882, and was present in the action of Kassasin (September 9th) and at the battle of Tel-el-Kebir (promoted Surgeon-Major, medal and clasp, and Khedive's star). Served in the Nile Expedition in 1884-85 as Principal Medical Officer of the Egyptian Army (clasp), in the operations of the Egyptian Frontier Field Force in 1885-86 as Principal Medical Officer of the Egyptian Army, and was present in the engagement at Giniss (D.S.O.), and in the operations near Suakim in December, 1888, including the engagement at Gemaizah (mentioned in despatches, clasp, and 2nd class of the Medjidie).

To be Ordinary Member of the Military Division of the Third Class of Companion of the Most Honourable Order of the Bath: Surgeon-Major-General Robert Harvey, D.S.O., Indian Medical Service. Surgeon-Major-General Robert Harvey entered the Indian Medical Service as Assistant Surgeon on March 31st, 1865. He served with the Bhootan Expedition in 1865-66 (medal and clasp), with the Looshai Expedition in 1871-92 (clasp), with the Hazara Expedition in 1891 as Principal Medical Officer (clasp), with the Miranzai Expedition in 1891, under Sir William Lockhart, as Principal Medical Officer (mentioned in despatches, D.S.O., and clasp), and with the Isazai Expedition in 1892 as Principal Medical Officer. He was promoted to the rank of Surgeon-Major-General on April 1st, 1895.

To be Companion of the Most Eminent Order of the Indian Empire: Brigade-Surgeon-Lieutenant-Colonel Arthur Mudge Branfoot, M.B. Brigade-Surgeon-Lieutenant-Colonel Branfoot entered the Indian Medical Service as Assistant Surgeon on March 30th, 1872, and became Brigade-Surgeon-Lieutenant-Colonel April 1st, 1895. He is Superintendent of the Maternity Hospital, Madras, and Professor of Midwifery at the Madras Medical College.

THE LATE MR. ERNEST HART.

AT the annual meeting of the Sydney and New South Wales Branch of the British Medical Association the following resolution was passed:

That the Sydney and New South Wales Branch of the British Medical Association desires to convey to Mrs. Ernest Hart an expression of deep sympathy with her in the sad bereavement occasioned by the death of her husband, the late Mr. Ernest Hart.

THE next examination for the certificate in Psychological Medicine of the Medico-Psychological Association of Great Britain and Ireland will be held in London, Edinburgh, Glasgow, and Aberdeen, on Thursday, July 7th; the examination for the Gaskell Prize at Bethlem Hospital on July 8th and 9th. Candidates for either examination must give seven days' notice to Dr. Spence, Burntwood Asylum, Lichfield.

THE EMBALMING OF THE DEAD.

It is not often in these days, at any rate in this country, that medical men are called upon to give practical advice as to the embalming of a dead body. In America embalming is, we believe, more frequent; and it may be noted that the *Solace*, which has been fitted as an ambulance ship for service in the present war, carries an embalmer among her medical complement. It may happen here, however—as, for example, on the occasion of a State funeral—that medical men may be asked to have the body prepared for the lying-in-state, and there are circumstances in which a doctor may have to carry out the procedure with his own hands. We have known instances in which young practitioners engaged to accompany invalids on a voyage have been requested by the friends to hold themselves in readiness to embalm the body if the patient should chance to die on the high seas. It is well, therefore, that it should be borne in mind that the operation of embalming is among the possible emergencies of medical practice.

Embalming in Ancient Egypt.

The embalming of the dead had its origin, as is well known, in Egypt. Herodotus gives an account of three methods in use among the ancient inhabitants of that country. One of these which, as being expensive, was reserved for personages of high rank, was as follows:—The brain was removed through the nostrils by perforation of the cribriform plates with a bent iron hook, the clearing out of the cranial cavity being completed by the injection of medicated liquids. The abdominal viscera were extracted through an incision in the left side, the cavity being afterwards cleansed with palm wine, and filled with myrrh, cassia, and other odoriferous substances. The incision was then stitched up, and the body afterwards steeped for seventy days in a solution of natron or neutral carbonate of sodium (Na_2CO_3). After this the body was washed, and finally swathed in gummed cloths; it was then ready to be placed in the coffin. In another less expensive but still costly method of embalming, the abdomen was injected with "cedar tree pitch," supposed to be the liquid distillate of the pitch pine. This, it is stated by Herodotus, had a corrosive and solvent action on the viscera. After steeping for a certain number of days in natron, the contents of the abdominal cavity were allowed to escape and the process was complete. In the case of poor persons, the body was simply kept in natron for seventy days after a previous rinsing of the abdomen with "syrmæa."

Embalming among the Guanches.

Embalming was also practised by the Guanches, the aborigines of the Canary Islands. The method which they employed is described by an ancient Spanish writer (quoted by B. W. Richardson from Glass's *History of the Canary Islands*) as follows: "They carried the dead body in a case, stretched it out on a flat stone, opened it, and took out the bowels; then twice a day they washed the porous parts of the body, namely, behind the armpits, behind the ears, the groin, between the fingers and the neck, with cold water. After sufficient washing, they anointed those parts with sheep's butter, and sprinkled them with a powder made of the dust of decayed pine trees, and a sort of brushwood which the Spaniards called *bressos*, together with the powder of pumice stone; then they let the body remain until it was perfectly dry, when the relatives came and swathed it in dressed goat skins, girding all tight with thongs of leather. The body was finally placed in a cave. In some cases amongst the Guanches the cavities of the body, after being washed with salt water, were made to receive aromatic substances, and the whole body was then dried in the sun or in air artificially heated.

Embalming in the Middle Ages.

In the Middle Ages embalming was not infrequently practised. Maître Henri de Mondeville, Surgeon to Philip the Fair of France, in his *Chirurgie* (written between 1306 and 1320) devotes a chapter to the subject. He says surgeons are sometimes called upon to preserve bodies from corruption; "that is an honourable and lucrative duty, which it is therefore useful to know." Different methods were employed, according to the quality of the deceased and the time the body was to be kept. In the case of rich persons whose bodies were to be preserved "for a month or a year" the procedure consisted mainly in anointing the corpse freely with substances supposed to have antiputrefactive properties (astringent red powder, incense, mastic, dragon's blood, etc.), bandaging it tightly so as to squeeze out fæces and urine, plugging the orifices with pledgets of linen impregnated with the antiseptic agents, and waxing it all over. The body was then placed in a coffin and carefully sealed up. For kings and pontiffs who were to lie in state with the face exposed the bandaging was more elaborate and the substances used more costly. The face was anointed with balsam. One gathers that it did not always succeed; indeed, Mondeville says he has little confidence in it, as he had tried it in the case of two kings of France with little or no effect "perhaps because they were and had been of lax, very soft complexion, delicate and very beautiful of countenance, or because the balsam was sophisticated or old."

In some cases, for which it appears that a special privilege had to be obtained from the Roman Church, the front wall of the belly was incised from the middle of the chest to the pubes in men; in women the incision was made "from the fork or orifice of the stomach, passing down in the form of an inverted shield to the two flanks or ilions." Then the entire wall comprised between the incisions was turned down over the genitals, and all the viscera extracted down to the anus. The interior of the body was next powdered with myrrh, aloes, and other spices, "preventing corruption and neutralising stench, such as roses, violet, camphor, sandal wood, musk, in such quantities as may be judged necessary with an amount of salt equal in bulk to all the rest." The cavity from which the guts had been extracted was filled with sweet-smelling herbs to such an extent as to restore the habitual and decent form of the body. The body was then stitched up, and placed in the coffin.

Our own Edward I ("Longshanks") was embalmed, and the bill for medical attendance and embalming the body is still extant—written in not altogether choice Latin. The following items in the account relate to the embalming:

	£	s.	d.
Pro emplastris cironcis	4	0	0
Item pro terebintine destillato	0	40	0
Item pro uno emplastro pro collo Regis cum ladano et ambras orientalis	0	60	0
Item pro vj malis granates	0	60	0
Item pro sex unciis de balsamo ad corpus Domini Regis unguendes	13	0	0
Item pro pulveri aromatice de aloeis thuris myrrhæ ad ponendem in corpore Regis ...	4	0	0
Item pro museo uncia iiij ad ponendum in membris Regis (a)	0	60	0

The embalmers, Master Nicolas, of Tynwycke (who the King said "was more learned and fit to have the care of his health than any one in the realm"), Master Peter, the surgeon, and Richard, of Montpellier, the *Espicer* or apothecary, did their work well, for in the early days of the present century the tomb of Edward I was opened, and the body found entire. An antiquarian enthusiast was induced to taste the "pickle" in which the royal remains were preserved, and even then, more than 500 years after the embalmment, it showed traces of the spices used, which are set forth in the account quoted above.

Embalming in the Eighteenth Century.

In the eighteenth century George II. was embalmed, the two sergeant-surgeons getting £122 8s. 9d. each for "opening and embalming," and the apothecary £152 for "a fine double cere cloth and a due quantity of rich perfume powders." In 1769 Gabriel Clauderus introduced a plan of injecting into the cavities of the body what he called his "balsamic spirit," which consisted of one pound of salt of tartar, half a pound of sal ammoniac, and six pounds of water. The whole body was also immersed in this solution, in which it was allowed to remain eight weeks, after which it was dried in the sun or in heated air. Some time after Clauderus it became the practice to make incisions into bodies that were to be preserved, and to insert into the incised parts tincture of myrrh or other similar antiseptic substance. Lastly, an improved covering for the embalmed body was devised—a cere cloth coated with wax, oil, and aromatic preservatives.

The process, as it was carried out in the last century, is described by Benjamin Gooch of Norwich as follows:

After evisceration, as has been directed in opening a dead body, and

continuing the incision farther upwards—even into the mouth, and, if practicable, without cutting the skin of the neck, all the cavities are to be well cleansed, and the humidity sucked up with sponges, then washed with tinctura myrrhæ, and filled with a species compounded of fragrant herbs, aromatic drugs, and gums reduced to powder, not very fine, first restoring the heart to its former residence, after having opened its ventricles, cleansed and washed them with the tincture; stuffed them with the species, and sewed them up; and then the cavities are to be stitched very close with the glover's or spiral suture. Large and deep incisions are also to be made in all the most fleshy parts, cleaning and washing them with the tincture in the same manner, filling them with the antiseptic species, and stitching them up. Then the head, trunk, and limbs are to be perfectly well covered with cere cloth, putting a piece under the chin, to be secured by sewing on the top of the head: after having well adjusted the cap of the skull, sewed the scalp together, and cleaned the mouth, as has been directed for the other parts, and putting in some of the species. The cere cloth is to be prepared with a composition made of wax, resin, storax, and painter's drying oil S.A. After the application of the cere cloth with great care and exactness, cut into suitable pieces, according to the respective parts, and closing them well everywhere, the face being close-shaved, is to be covered with some of the above composition, wetted and laid on with a brush of a proper degree of heat and of moderate thickness; and it may have a faint flesh colour given to it with vermilion; and when it has grown cold and stiff upon this part it may be lightly struck over with hard varnish; or this varnish applied thick may here serve the purpose alone. A cap is to be well adapted to the head, falling down upon the neck, and to be sewed under the chin, making a few circular turns about the neck with a roller of a fit breadth. All the rest of the corpse is to be enclosed in a sheet, to be artfully cut, and sewed on very close and smooth with the finest tape, over which an appropriate dress is to be put, as the relations or friends think fit to direct and appoint, and then laid into a coffin, which should be in readiness; but when it is some great personage, who is to lie in State for public view before the funeral rites are solemnised, the dress must be appropriate to his dignity and character. The brain and other viscera are to be put with some of *the species* into a leaden box. Sometimes the heart, prepared as has been directed, to preserve it from putrefaction, is deposited in an urn by itself.

Modern Methods.

The basis of modern methods of embalming—the injection of the vascular system with preservative fluids—was introduced by William Hunter. The following are the details of his method, as described by Sir Benjamin Ward Richardson:

In the first place, he injected into the crural arteries a solution compounded of oil of turpentine, Venice turpentine, oil of lavender, oil of camomile and vermilion. This solution was forced into the vessels until it had made its way over the whole of the body, and had produced a general redness of the skin. The body was now allowed to remain for several hours untouched, to permit of the diffusion of the injected fluid completely through its structures. When this part of the process was completed, the operator returned, and proceeded to lay open the body as if he were making a *post-mortem* examination. The viscera of the chest and abdomen were removed, the fluid in them was squeezed out, their vessels were injected with the preservative solution, and the organs were steeped in camphorated spirits of wine. Then through the aorta more of the preserving fluid was driven, and the cavities of the chest and abdomen were washed with camphorated spirit. The viscera were next replaced, and the intervening spaces were filled up with a powder of camphor, resin, and nitre. The same powder was put into the nostrils, mouth, and other external cavities, and finally the body was rubbed over with the essential oils of rosemary and lavender. The body thus treated was placed in a coffin upon a bed of dry plaster-of-paris, by which all moisture was to be extracted from it. The coffin was closed up for four years, then it was to be opened, and at the end of that time, if the desiccation were not complete, another bed of plaster-of-paris was to be added.

By this method William Hunter embalmed the body of the wife of Martin Van Butchell, who, by the terms of the lady's marriage settlement, was to have the control of her fortune as long as she remained above ground. She is "above ground" still, and may be seen by the curious in a somewhat out-of-the-way room in the College of Surgeons Museum, where she is kept in company with the bodies of a boy and a rat found in a mummified state in a cellar after the great fire of London.

In our own day, Sir Benjamin Ward Richardson embalmed many bodies, "but only in two or three instances the bodies of English." Full details of his method, with much curious information on the subject, may be found in a series of papers on the Science and Art of Embalming contributed by him to the *Medical Times and Gazette* in 1871 and 1875.

Some Simple Methods of Embalming for Temporary Purposes.

It would be impossible within the space at our disposal to describe all the methods of preserving bodies from putrefaction by mummification, petrifaction, or embalming that have been proposed in modern times. Two simple methods, however, may be mentioned which perhaps may be found useful by any practitioner who is called upon to undertake the operation. Mr. Howse, in the *Guy's Hospital Reports* for 1872, describes a plan by which he kept bodies in a good condition for many months. This consists in saturating the body with a solution of arsenic in pure glycerine. This is injected into the femoral artery opened at the apex of Scarpa's space. The average cost is 30s.

Other methods are described by A. Sauter in *Fortschritte der Medicin* for 1885. If only a temporary retardation of putrefaction and decomposition is required, the filling up the coffin with sublimated wood-wool will answer better than any other means. Common wood-wool is treated with a solution of 1 part of bichloride of mercury, 100 of alcohol of 5 to 10 per cent., and dried for use. Instead of wood-wool common sawdust, prepared in the same manner, will likewise answer. The corpses ought to be previously washed with the same solution, diluted with 10 parts of water.

The best and easiest method of embalming consists in gradually injecting, under gentle pressure, the preservative fluid into the carotid artery by means of an Esmarch's irrigating can, or by a larger ordinary injecting syringe. The quantity required will vary between 6 to 8 pints (3 or 4 litres), consisting of 1 part of carbolic acid, 10 of glycerine, 50 of alcohol, and 40 of water. This fluid will preserve the body and retain the epidermis for several days. If, however, it be desired to keep the corpse in perfect condition for several months or longer, this must be followed by a second more copious injection of 1 part of chloride of zinc and 3 parts of water, slightly tinged with fuchsin or with a saturated neutral solution of sulphate of aluminium coloured with cochineal. After having injected the whole quantity of the fluid (about 10 to 16 pints), the carotid artery and jugular vein must be tied. The surface of the body may be lubricated with vaseline or covered with varnish of sandarac, to which 1 per cent. of carbolic acid is added. The cavities of the body are filled with sublimated wood-wool soaked in glycerine containing 5 per cent. of carbolic acid.

These methods of preserving corpses neither require unusual skill nor involve great expense.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The annual general meeting of the Society was held on May 20th at 11, Chandos Street, W., Mr. Christopher Heath, Vice-President, in the chair. From the report read by the Secretary it appeared that 8 new members had been elected in 1897, 12 had died, and 1 ceased to be a member, leaving 287 on the books. One widow and 3 orphans had been taken on, 4 widows had died, and 2 orphans had become ineligible through age for further grants. At the end of the year there were 50 widows and 12 orphans in receipt of grants. The interest from the funded property had been £2 989 18. 7d., subscriptions £302 8s., and donations £22 1s. No legacies had been received, and a sum of £77 14s., life subscriptions, had to be invested. The funded property amounted to £97,300. A sum of £2,924 16s., including a Christmas present of £434, had been given to the widows and orphans, and the expenses of the year were £245 7s.

Mr. Warrington Haward was elected a treasurer in the place of Sir R. Quain, Bart., deceased; Mr. C. F. Keele, Dr. Bate, Sir A. Garrod, Mr. Hazel, Mr. Lynch, and Dr. Cullingworth directors in the place of the six senior who retire.

A discussion among the members took place as to the best way of making the Society better known, and of increasing the number of members, since the Society held out such easy means of providing for widows and orphans of deceased members.

A special grant of £26 was made to a widow who was not eligible under the by-laws for ordinary grants.

Mr. Heath proposed from the chair a resolution expressing regret that the President, Sir James Paget, Bart., had been prevented from presiding at the meeting for the first time during his presidency of fourteen years.

A vote of thanks to the editors of the medical journals for their kind assistance in making known the work and objects of the Society was moved by Sir Samuel Wilks, Bart., seconded by Mr. Lynch, and carried unanimously.

A vote of thanks to the Chairman closed the meeting.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 28TH, 1898.

MR. GLADSTONE AND THE MEDICAL PROFESSION.

WHATEVER differences of opinion there may be as to the results of Mr. Gladstone's political activity, medical men of all parties must unreservedly admire him as an example of magnificent vitality, prolonged far beyond the normal limits. Carlyle somewhere says that perfect health is in itself so great a thing, that when he met a healthy-looking man in the street he felt inclined to take off his hat. Many years ago a distinguished statesman is reported to have said that what he envied most in Mr. Gladstone was not his mind, powerful as that undoubtedly was, but his body, which, like a thoroughbred steed, could do whatever was required of it. Success in climbing to the highest peak of political eminence is largely a matter of survival, as indeed is the case in the medical and other professions. It is strange now to recall the fact that Mr. Gladstone's staying power in a physical sense was in his earlier days seriously doubted by some who foresaw for him a brilliant career if his bodily powers should not prove too weak for the strain of the race. Yet in an age remarkable for the predominance in nearly all spheres of activity of men who have exceeded the limit of life laid down by the Psalmist, there has been no such striking instance of the retention in undiminished vigour of physical, as well as intellectual power as that of the great man who has just passed away.

At an age when many men who have done the State good service are glad to rest Mr. Gladstone undertook an oratorical campaign, the mere physical strain of which would have broken down many a strong man in his prime. Until a year or two ago he was in the thick of the political battle, and when past 80 he ruled this great country through periods big with the fate of nations; yet he bore the burden of the work of Government and of active political warfare to all appearance without fatigue.

Nor did his political work exhaust his exuberant energies; he was one of those exceptional men who find rest in change of work. Hence he could turn aside from the dust and noise of the political arena and gain not only solace but actual reinvigoration in various forms of brain work which would in themselves have severely taxed the powers of ordinary men. As to the value of Mr. Gladstone's contributions to the literature of theology, Biblical criticism, and scholarship, opinions may reasonably differ: but the fact remains that the output of his tireless pen would in point of quantity do credit to a hard-working writer who had done nothing else.

Mr. Gladstone himself attributed his exceptional length and fulness of days to "strict regularity of life, hard work, and plain living." It may be added that he illustrated in his own person the great hygienic value of a sufficient amoun of rest. He did not stint himself of sleep, allowing himself as a rule seven hours, and more when he could get it. Moreover, his practice of putting aside all thought of political or other worldly matters from Saturday night till Monday morning must, in addition to its advantages in a religious sense, have been of the very highest benefit to his bodily health. Another thing which doubtless tended to the preservation of his health was regular exercise. It is not everyone that can amuse his old age by the felling of trees, but everyone who has the use of his limbs can imitate Mr. Gladstone's practice of walking a certain distance every day, whatever might be the state of the weather.

In a medical journal it is impossible to refer to Mr. Gladstone's political career without pointing out that in his conception of statecraft the care of the public health did not hold a prominent place. We have it on the authority of one of his oldest friends, himself greatly interested in sanitary progress, that although he had often tried to interest Mr. Gladstone in the subject he had never succeeded. It is certainly remarkable that, while Mr. Gladstone's sympathies were perhaps too easily aroused by the sufferings of oppressed peoples and the victims of misrule in foreign countries, he should have taken so little thought of the incalculable amount of preventable suffering and the enormous waste of human life in our own country, brought about by evils and abuses which it is the first duty of a Government to remove. It is difficult to estimate the good that might have been effected by Mr. Gladstone if the burning eloquence which could paint the horrors of Neapolitan prisons and denounce the atrocities of the unspeakable Turk had been employed in the cause of sanitary reform at home.

It is admitted even by his admirers that among the multifarious intellectual interests of Mr. Gladstone, there was little or no room left for physical science. It must, however, be said to his credit that he had a much better appreciation of the importance of the medical profession and of its position in the State than most politicians. He was Prime Minister when the Medical Act of 1886 was passed, and for the improvement in the position of the profession before the law brought about by that Act, we owe him a debt of gratitude. One memorable utterance of his on the future of the medical profession may fitly be recalled on this occasion. At the opening of the Medical College of Guy's Hospital on March 26th, 1890, he said that two or three centuries ago the medical profession was almost without a recognised existence. It had luminaries in distant times, here and there, who stood out upon the waste as objects of great interest; but, as a continuing profession, filling a great part in society, enjoying respect in a high degree, recognised as a great member in the body politic, it could hardly be said to have existed. He commented on the extraordinary change which had occurred in the development of the medical profession in the competition with the other great professions. Until a comparatively short time back it was nowhere. There was the great name of Harvey; but, as regards social position and influence, the time of Dr. Mead

and Dr. Freind early in the last century was almost the earliest in which the medical men of this country had assumed a position of influence and power with general recognition. New wants were arising in the medical sphere as everywhere else. Those wants were the opportunities of the medical man. He saw human nature at the point of junction between mind and body with a greater insight and on a larger scale than any other person; and, both from social considerations and likewise from the immense and steady advance which he made in that knowledge of his great science, he was from year to year, from generation to generation, becoming a more powerful and more important person as a portion of the great social machine. Mr. Gladstone laid stress on the fact that there exists "an opportunity for the medical profession to exercise increased knowledge and a greater share in the leadership of thought."

Since these words were spoken there has been a notable increase of knowledge in nearly all departments of medicine, but there is as yet little sign of Mr. Gladstone's prophecy of leadership of thought and predominance in the councils of the State being fulfilled in the near future. Perhaps this may be (as pointed out by Sir Walter Foster in his pamphlet on "The Political Powerlessness of the Medical Profession") in a great measure our own fault, owing to our failure to take our due share in the public work of the communities in which we live.

Of Mr. Gladstone's personal relations to the medical profession it would not be fitting to say much. He honoured his physician for the need he had of him in the person of Sir Andrew Clark, and he numbered several other members of the profession among his friends. He was the Senior Governor of Guy's Hospital, having been appointed in 1835, and through the whole of his life he took an active interest in the welfare of that institution. One of his daughters was, we believe, trained in pharmacy in the dispensary of Guy's.

As a patient Mr. Gladstone was obedient with the intelligent submission to authority which is one of the best proofs of a well-disciplined mind, but which is not always found in men who have been accustomed to rule. His medical advisers he uniformly treated with the consideration and gracious courtesy which was one of his distinguishing characteristics.

We are sure the whole profession will heartily approve the resolution passed by the General Medical Council on May 24th, the text of which is published at p. 1415.

THE ARMY NON-EFFECTIVE LIST.

This list, which appears quarterly, has undergone important alterations in the Monthly Army List for April. Formerly the non-effective lists were given separately in ranks and corps; now all are consolidated into a huge list alphabetically arranged; the change facilitates general reference, but renders analysis of the various items somewhat difficult. The new consolidated return is termed "List of Officers of the Army Retired from the Active List," which is more strictly correct than the term "non-effective," because it contains the names of officers either still employed or, at all events, liable to recall to serve in emergency. It is portentous in its dimensions, and as such would doubtless have been denounced by the jealous economists of a past generation, in their attacks on what they called the "spending departments," as if these earned nothing and produced no return. Fortunately, such narrow views have been succeeded by a wider and higher ideal among all classes, of our Imperial needs and responsibilities; and the consequent necessity of maintaining our fighting forces at a high standard of numbers and efficiency at whatever cost. A "bloated" non-effective list really means, or ought to mean, an active list maintained, by a reasonable system of retirement and promotion in a high condition of mental and physical efficiency.

The new consolidated list embraces in round numbers about 7,500 retired officers of all ranks; for such a list, with a high death-rate and constantly fluctuating, may only be considered in round numbers. It has probably already attained a maximum, since first it began to increase immensely, through the abolition of purchase in the army and the substitution of pensions. The purchase system, although radically bad and indefensible, was cheap for the State; and its abolition has led to an enormous increase in the non-effective vote.

We desire to confine our attention to the question, Is the non-effective medical vote really excessive, either in itself or by comparison? Several Parliamentary economists have declared it to be so, and singled it out for special animadversion. We think their conclusions on this matter have been based on misapprehension, and their economist zeal therefore misplaced. Even a cursory analysis of the new consolidated list will show that the non-effective medical portion is but a small item in a big total, and in no way disproportionate, compared with other branches of the service.

In arriving at correct estimates, it is necessary to premise that the present non-effective list is naturally and necessarily drawn from those who served some time during the past half-century; so that the average strengths of the active lists during that time must be considered, and not merely their present strength.

Now, the greatest strength of the Army Medical Department was in the early Sixties, when the numbers were close upon 1,100; since then the decrease has been steady, until the present attenuated establishment of 800 has been reached; perhaps the average strength since the Crimean war may have been about 950. The present non-effective list is about 400, including 30 apothecaries, quartermasters, and nurses; leaving the actual number of medical officers about 370.

Actuarial calculations placed before Sir Ralph Thompson's Committee, in 1879, foretold with marvellous correctness that the non-effective medical vote would attain its maximum about 1892, which it actually did, for it is now decreasing.

Taking the average active strength at 950, and present non-effectives at 370, the proportion works out as about 39 of the latter to 100 of the former. But of the 370 implied medical non-effectives, about 120 form a reserve liable to recall on emergency; and no fewer than 94 are now actually employed in retired pay appointments. Without them the service before this would have completely collapsed. The unemployed non-effectives are therefore about 280, or in the proportion of 29 to 100; while the wholly non-effective—ranging between 55 and 80 years of age—are only about 200, or 22 to 100. Further, this so-called "bloated" medical non-effective list, even taken at its highest figure—370—forms only about 5 per cent. of the total new consolidated list.

If we turn to the Indian Medical Service the proportions range higher, although still in a moderate degree when the

nature of the service is considered. The total number of non-effectives in this branch is about 300, or about 4 per cent. of the consolidated list. Taking the average strength of the active list at about 620, the proportion of non-effectives is as 48 to 100. The two medical services combined thus form only about 9 per cent. of the consolidated non-effective list.

It is worth while comparing these figures with those pertaining to a combatant branch; and for this purpose we have selected the Royal Engineers, a compact body, whose motto is, "Ubique," and who serve everywhere as the medical officers do. It is rather difficult to strike an average strength of this corps in past years through its amalgamation with the Indian Engineers, but the two bodies combined seem to have averaged about 800 officers, a number somewhat under the existing strength. Its present non-effective list is about 320 (including a very few in civil appointments), forming about 4 per cent. of the total consolidated non-effectives, and in the proportion between retired and active officers as 38 to 100.

It is needless to comment on these figures, because they speak for themselves; and we trust they will be borne in mind next time an attack is made on the non-effective medical vote.

HISTORIC DEATH BEDS

ONE of the penalties of greatness in these days is the intrusion of the newspaper reporter into almost every circumstance of private life. It is of course inevitable that princes and potentates and politicians should live ever in the public eye, but it is surely hard that they should also have to die, as it were, before the footlights. The death bed should be unprofaned by the prying of a foolish or morbid curiosity; even those who have lived most in the public ways that public manners breed have a right that the curtain should be let fall silently on the last scene of all. Medical details of a historic case may legitimately be given in the proper place and in the proper way, but they are altogether out of place in ordinary newspapers. How can it interest the public to be informed that a dying statesman presents the symptom known as Cheyne-Stokes respiration? That relatives and friends should strive to piece into some semblance of meaning the stray words which fall from the beloved lips before they are closed for ever is natural. But that other watchers at the bedside should gather up the mutterings of delirium and permit them to find their way into the press is much to be regretted. We are willing to admit that the position of those who are called upon to attend the sick or dying bed of a person of national eminence is often one of great difficulty. On the one side there is the natural desire of the public, as represented by the press, to obtain authentic information, and on the other, the obligation of reticence which is laid upon everyone who enters the sick room, and not least upon the medical advisers. It is by no means easy for a medical man to maintain perfect reticence when reporters lie in wait for him at every corner. A casual word may be expanded into an interview, and even a look may be translated into a statement of opinion. In regard to the incidents which have led to these remarks being made, some excuse may perhaps be found for indiscretions in the free communications made by some members of the dead statesman's family. We do not feel called upon to attempt to apportion exactly the responsibility for the indiscreet publicity which has been permitted with regard to the last hours of Mr. Gladstone, but we would venture to express the strong opinion that when the supreme moment approaches a man is entitled to the sympathetic protection of those around him. Neither his relations and friends, nor his spiritual and medical advisers, have any right to let the public hear his cry of agony, or to repeat words muttered in the apathy of approaching dissolution. Certain French words believed to have been uttered by the dying statesman have been twisted by a foreign newspaper unfriendly to this country into affording apparent ground for conclusions as to Mr. Gladstone's opinions which are tantamount almost to a charge of want of patriotism. We repeat, we do not feel called upon to apportion the exact measure of blame that should rest on any particular individual for the disclosures which have called forth many criticisms not only throughout the medical profession, but among the educated public. Whatever others may think it permissible or expedient to do in regard to the privacy of the death bed, the duty of the medical man is clearly expressed in the words of the Hippocratic oath: "Whatever in connexion with my professional practice, or not in connexion with it, I see or hear in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret."

JOSEPH JACKSON LISTER AND THE ACHROMATIC MICROSCOPE.

HEREDITY may not be quite the master key to all the secrets of the human constitution and character that it is held to be by criminal anthropologists and writers of "scientific" novels. But it is certainly true, as some epigrammatic philosopher has said, that one of the best ways to succeed in life is to provide oneself with a sound ancestry. *Fortes creantur fortibus et bonis.* A particularly interesting illustration of the influence of heredity of the right sort is the fact that Lord Lister, who has made such excellent use of the microscope is the son of the man to whom that instrument largely owes its present perfection. It is hardly too much to say that the discoveries which have made the name of the son immortal could not have been made without the previous discoveries of the father. In a recent number of *Harper's Magazine* Dr. Henry Smith Williams says: "To Joseph Jackson Lister is due the chief credit for directing those final steps that made the compound microscope a practical instrument instead of a scientific toy, combining mathematical knowledge with mechanical ingenuity; and, having the practical aid of the celebrated optician Tulley, he devised formulæ for the combination of lenses of crown glass with others of flint glass, so adjusted that the refractive errors of one were corrected or compensated by the other, with the result of producing lenses of hitherto unequalled powers of definition. . . . . Lister had begun his study of the lens in 1824, but it was not until 1830 that he contributed to the Royal Society the famous paper detailing his theories and experiments. Soon after this various Continental opticians, who had long been working on similar lines, took the matter up, and their expositions, in particular that of Amici, introduced the improved compound telescope to the attention of microscopists elsewhere." The paper here referred to was entitled On Some Properties in Achromatic Object Glasses Applicable to the Improvement of the Microscope, and it was read on January 21st, 1830. Alexander Ross, in his article on the Microscope published in the *Penny Cyclopædia* in 1839, referring to the history of the achromatic microscope, says that soon after 1820 a series of experiments was begun in France by M. Selligues, which were followed up by Frauenhofer at Munich, by Amici at Modena, by M. Chevalier in Paris, and by Tulley in London. In 1824 Tulley, without knowing what had been done on the Continent, attempted to construct an achromatic object glass for a compound microscope, and produced one of nine-tenths of an inch focal length, composed of three lenses, and transmitting a pencil of eighteen degrees. This was the first that had been made in England. Such an angular pencil and such a focal length would bear an eyepiece adapted to produce a gross magnifying power of one hundred and twenty. Tulley afterwards made a combination to be placed in front of the first mentioned, which increased the angle of the transmitted pencil to 38 degrees, and bore a power of

300. While these practical investigations were in progress the subject of achromatism engaged the attention of mathematicians, such as Sir John Herschel, Airy, Barlow, and others, who contributed largely to the theoretical examination of the subject; and although the results of their labours were not immediately applicable to the microscope they materially promoted its improvement. For some time before 1829 the subject had occupied the mind of a man who not entirely practical like Tully, nor purely mathematical like Herschel and the other investigators just named, was led to the discovery of certain properties in achromatic combinations which had before been unobserved. These were afterwards experimentally verified, and in 1830, as already said, a paper on the subject by Mr. Joseph Jackson Lister was read before the Royal Society and published. The principles and results thus obtained enabled Mr. Lister to form a combination of lenses which transmitted a pencil of 50 degrees, with a large field correct in every part. His paper was the foundation of the great improvements in the achromatic microscope subsequently made by several makers who employed his formulæ.

MEDICAL WAR NEWS.

AMONG the recent purchases of vessels by the United States Government is the *Vigilancia*, belonging to the Ward Line. This vessel will be used as a hospital ship for the army, and fully equipped for that purpose. Surgeon-General Sternberg has decided to place on board this ship an *x*-ray apparatus for the use of the surgeons. A list has been issued by the War Department regarding the physical proportions for height, weight, and chest measurements. For the infantry and artillery, the height must not be less than 5 feet 4 inches, and weight not less than 120 pounds, nor more than 190 pounds. For the cavalry the height must not be less than 5 feet 4 inches, nor more than 5 feet 10 inches, the weight not over 165 pounds. No minimum weight is given for the cavalry, but the chest must be satisfactory. If the war is prolonged so that extensive hospital accommodation becomes necessary, the two hotels at Fort Monroe—the Chamberlin and the Hygeia—will be taken for that purpose. Fort Monroe has been chosen as the best place for the purpose, because of its healthful surroundings, the defences of the garrison there, and the ease with which men can be transferred from ships to the shore. In each surgeon's chest which has gone to the front with the army there has been placed a package containing three pairs of rubber operating gloves, sterilised, and wrapped in rubber tissue ready for use.

THE ROENTGEN RAYS IN WARFARE.

SURGEON-MAJOR W. C. BEEVOR, M.B., Army Medical Staff, gave an address on this subject at a meeting of the Royal United Service Institution on May 20th. The chair was taken by the Director-General, and the paper was concerned especially with the employment of the Roentgen rays during the recent operations on the frontier of India. Surgeon-Major Beevor observed that one of the greatest desiderata in the construction of all apparatus for military work was that every portion of the apparatus should be easy of access, so that repairs could be made, while at the same time the whole could be quickly packed and unpacked in cases suitable for transport under the very rough conditions of actual warfare in mountainous countries. It appears that the apparatus used during the frontier expedition consisted of a 10-inch spark coil, a primary battery, three tubes, a screen, and some Paget photographic plates. The lecturer showed a compact and portable wooden box, into which a serviceable folding tube holder and a screen could be packed. He showed also a vulcanite box with a handle to take a Crookes's tube, to which insulated electrodes could be attached. This could be freely moved about and placed in any position necessary for the examination of the patient with the screen. Surgeon-Major Beevor contended that it was the duty of every civilised nation to supply apparatus for the Roentgen rays not only at base hospitals, but also at every point where soldiers were fighting and exposing themselves to injury in the performance of their hazardous duties. The portable apparatus should not weigh more than 80 to 100 lbs., and could then be carried slung from a pole by two men. Transport by mules, camels, or wheeled vehicles was too uncertain a means of conveyance for delicate apparatus except where there were good roads. A difficulty which had been met with was that a hot sun might melt the wax which insulated the wire of the secondary coil. It was found that a mixture of paraffin wax and resin which did not melt under 150° F. was enough for all practical purposes, while a covering of felt protected the coil from sun, rain, snow, and frost. The screen, which was a most important part of the apparatus for urgent cases, could be enclosed in an aluminium case and protected from accidental scratches by a layer of celanite, as suggested by M. Laconteur, of the London Photographic Association. Surgeon-Major Beevor's paper was a valuable contribution towards the practical working out of the best apparatus for use in emergencies in the field, and those who have had experience of the difficulties which arise even in the best-appointed laboratories will be best able to form an opinion as to the serious character of the obstacles likely to be encountered under limited conditions.

OUR WIDOWS AND ORPHANS.

THE annual meeting of the excellent Society for the Relief of Widows and Orphans of Medical Men, which we report in another column, was more than usually interesting. The regretted absence of its President, Sir James Paget, owing to ill health was the subject of a sympathetic resolution proposed from the chair by Mr. Christopher Heath, and unanimously adopted. A discussion also took place among the members as to the best mode of making the advantages offered by the Society better known in the profession, and as a result it was resolved *nem. con.*, that one or two thousand copies of the annual report should be printed every year and distributed among members of the profession, half of these being sent to those who have just qualified. It is hoped in this way to make the Society, which it will be seen has accumulated funds to the amount of nearly £100,000, more useful to the rising generation of medical men, and to put a stop to some extent to the necessity for heartrending appeals on behalf of those who are left utterly unprovided for. Some changes may perhaps be required in the Society's rules to popularise it further, but the step in advance now taken will be welcomed by all who wish to see it prosper.

ANTIVACCINATORS AGAIN AT MIDDLESBROUGH.

THE Antivaccination League seem determined to spare no effort to capture the common sense of Middlesbrough. After a bombardment by Mr. Biggs, of Leicester, it has lately been shelled by a noted medical antivaccinator from further south. This gentleman treated a public meeting in the Temperance Hall to one of the highly-spiced addresses which he is in the habit of delivering. No doubt his visit to Middlesbrough was in some degree instigated by the desperate straits in which the antivaccinators have found themselves to explain away the evidence which the Middlesbrough epidemic offers of the value of infant vaccination, and of the need for revaccination in after-life. This is what he told the Middlesbrough people: "He had," he said, "had a look round Middlesbrough, and saw houses that were not fit for dogs to live in. They were not properly ventilated, and were badly constructed, and this, together with the pan-closet system, and the made soil on which the best part of Middlesbrough was built, was enough to account for the whole business." It is probable that his theory of the origin of the Middlesbrough epidemic is as veracious as that by which Mr. T. Bailey, M.P., sought in the House of Commons to explain the Gloucester epidemic by the statement that the inhabitants had been drinking Severn water infected with small-pox notwithstanding their

supply had been drawn from a totally different source. But whether there be any justification for this indictment of the sanitary authority at Middlesbrough or not—a point which may be left to that body to deal with—the suggestion that such an epidemic of small-pox as has lately prevailed in the town could be due to "pan-closets" or "made soil" is so absurd as to require no refutation. But there is another phase of the meeting at the Temperance Hall which is instructive. Mr. Wheeler, of Darlington, whose leading position in the antivaccination hierarchy entitles him to speak with authority, took occasion to "enter his solemn protest against the wholesale and indiscriminate way of taking people away from those who loved them" and isolating them in a hospital. But this is the essence of what has been so absurdly called the "Leicester method." So it appears that the latest version of the gospel of "sanitation" as issued by the Antivaccination League is that when a town is attacked by small-pox, neither vaccination nor isolation in hospital is to be advised, but the sick are to be left in their own homes, by the connivance of the authorities, and not unavoidably, as was the case at Gloucester and Middlesbrough, to spread the infection on all sides. And this, forsooth, on the plea that "from hospital reports they had the utmost justification for saying that if the smallest care were taken, there was not that danger in visiting the sick when they were lying ill." Surely the force of folly can no further go.

"PECULIAR INDUCEMENTS."

WE publish in another column a letter from a local practitioner commenting upon an advertisement issued by a lodge of Oddfellows in Stornoway. Our correspondent pledges himself for the accuracy of the statistics which he supplies, and that being so we should apprehend that few members of the medical profession, however young and inexperienced, will be disposed to consider that their worldly prospects would be advanced by obtaining this appointment. Though the rate paid by each member is so ridiculously small, the number of demands made on the medical officer appear to have been very large, and a medical man who declines to accept remuneration so inadequate and so little in accordance with the position which the medical profession holds, will have the sympathy of his brethren. We venture to hope that no member of the profession will think proper to play into the hands of the managers of this lodge by applying for the appointment. The disingenuous character of the concluding sentence of the advertisement is obvious, although it contains merely an expression of opinion. According to the latest information before us the population of the burgh of Stornoway is some 3,500 persons, so that the remainder of the population of 12,000, referred to in the advertisement, must be scattered over the 63,224 acres which compose the parish.

A COUNTY HEALTH OFFICER FOR THE ISLE OF WIGHT.

THE circumstance that a majority of the county council of the Isle of Wight were willing to appoint a health officer for the county, provided he would work for nothing, shows, we hopes that the council realise how needful it is in the interests of this "Garden of England," not only as a place of residence but as a health resort, that they should have some expert assistance in matters sanitary. Excellent as are the local health officers of the urban and rural districts of the island, not one of them is in full touch with the county council as a sanitary authority. They are the officers of the several authorities over which the council is expected to exercise a healthful supervision. Their excellent reports are presented to their several authorities, and although copies of them go of course to the central council, that body cannot be supposed to derive much benefit from them, nor can the island profit from their being thus sent to the co-ordinating authority, as Parliament intended it should, unless they can be submitted to and reported upon by a sanitary expert. It doubtless was the feeling that the council was in this way beating the air that induced Dr. Dabbs to offer to undertake the work without fee or reward rather than that it should not be undertaken at all. He offered his services temporarily as an honorary medical officer of health until the Council should see their way to appointing a properly-salaried official. Though everyone will credit him with the best motives in his offer thus to place his professional abilities at the call of the county, we must all feel that he has acted wisely in withdrawing from such an invidious position. The position of a public representative, subject to re-election at regularly-recurring periods, is one thing; that of a salaried official, employed to do certain work for which his training and skill specially qualify him, is quite another. Doubtless Dr. Dabbs would have rendered yeoman service to the public health had he carried out his first intention of acting as honorary officer to the Council, but his appointment might not improbably have tended to delay the date of the appointment of a county medical officer in the ordinary way, and thus in the long run have retarded instead of accelerated the cause of sanitation in the island, a consummation which everyone who knows Dr. Dabbs will agree is the very last he would have wished for.

CERVANTES AS PATIENT AND AS PHYSICIAN.

IT is related that Sydenham, being asked by Blackmore (afterwards pilloried in the *Dunciad* for his epics "writ to the rumbling of his chariot wheels") what works he should read to improve his medical knowledge, answered, "Read *Don Quixote*. It is a good book. I read it still." It is probable that our English Hippocrates merely wished to snub a pert youth; but, rightly understood, the advice might with advantage be followed by physicians more largely than it is, especially in these days, when the absorbing pursuit of the microbe tends to make us forget that there is also a macrobe which deserves attention. The physician has to deal with man as a whole, and the human body, whether it be regarded as a piece of "foolish-compounded clay" or as "the Lord's anointed temple," is something more than a happy hunting ground for bacilli. The great creative works of literature in which human life is depicted by men who, in the words of Matthew Arnold, have seen it steadily and seen it whole, and in which the workings of the complicated machinery of man's nature are made visible, can, if rightly studied, give the physician a knowledge which he will find most useful in his practice, and which cannot be got from medical books or learnt in the laboratory or the deadhouse. For those who appreciate the value of such knowledge, *Don Quixote* is indeed "a good book." It is a proof of the broad-minded view which the University of Paris takes of the art of healing that the other day it accepted a thesis, entitled, "Cervantes, Patient and Physician" from a candidate for the degree of Doctor of Medicine. The author, M. J. Villechauvaix, has not, we are bound to say, made the most of his subject, but his essay is interesting as far as it goes, and he appends a bibliography likely to be useful to anyone who may wish to make a deeper study of the creator of Don Quixote in his medical aspects. Cervantes was born on October 9th, 1547, and died after a life full of suffering, ill-health, and evil fortune of all kinds on April 23rd, 1616. He contracted malaria during a visit to Rome early in life, and on the very morning of the famous battle of Lepanto (September 7th, 1571) he was so ill with ague that the captain of the ship on which he served tried to induce him to remain below. He insisted on fighting, however, and received three arquebuss wounds, two in the chest and one on the left hand, which was permanently disabled. He was six months in hospital at Messina, and his wounds were yet incompletely healed when four years later he was made prisoner by Algerian Corsairs on the high seas on September 26th, 1575. For five years he was held captive by the Moors, suffering much ill-usage at their hands, but at last forcing them, out of fear of

the influence which his indomitable spirit gave him among his fellow-prisoners, to set him free. He died of dropsy, which M. Villechauvaix surmises to have been of cardiac origin, but there is really no evidence on the point. There is a tradition that Cervantes studied medicine, and there are in his works many passages which show that he had a considerable acquaintance with the art of healing as it was understood in his day. During his Algerian captivity he ministered to the needs of his fellow-prisoners in sickness with a skill which bespeaks, if not special training, a considerable experience in dealing with disease. How close and accurate an observer he was is shown by the wonderful picture of delusional insanity which he gives in *Don Quixote*. M. Villechauvaix points out that he anticipated Pinel in the rational treatment of insanity. The books of chivalry which had disordered the brain of the Knight of the Sorrowful Countenance are destroyed, and every effort is made to create a new mental environment for him, his very delusions being skilfully taken advantage of to this end. It is somewhat strange that M. Villechauvaix should have made no reference to Sancho Panza's famous physician, who in his strict views as to diet may perhaps be looked upon as the scientific forerunner of Sir Andrew Clark. He quotes, however, an apophthegm that the "stomach is the laboratory in which health is manufactured," which shows that Cervantes had very sound views as to the important relations of the digestive to other functions of the body.

INJURIOUS INDUSTRIES: A NEW DEPARTURE.

The action of the Home Secretary in appointing Dr. Oliver, of Newcastle-upon-Tyne, and Dr. Thorpe, F.R.S., Government Analyst, as experts to proceed to the Potteries for the purpose of inquiring into the various kinds of glazes in use there, and as to whether any substitutes can be found for those containing lead, is a new departure. Not only will the work undertaken by these gentlemen have a humane bearing and be of a scientific nature: it will be helpful also to the manufacturers. This is the first instance, we believe, in which the British Government has called to its aid expert help, not only to assist it in framing regulations for the health of the workers, but also of helping on industries. As the manufacturers are sure to co-operate heartily with those to whom has been entrusted this important special inquiry, it is to be hoped that results will be arrived at which will remove from one of our prosperous and oldest industries the stain that has so long lain upon it.

DEATH CERTIFICATION.

The General Medical Council have had on more than one occasion facts brought to their notice which strongly point to the necessity of early legislation on the subject of death certification. The report of the Select Committee of 1893 is full of the most instructive evidence on the deficiencies of the present system of registering deaths. The minutes of the General Medical Council contain other evidence of the many irregularities which are permitted under the existing law. Under these circumstances the Executive Committee of the Council did well last February to urge the Home Secretary to allow a deputation to lay before him representations as to the need for amendment of the law. From the correspondence which the Executive Committee had before it last Monday we learn that the Home Secretary is of opinion "that legislation is desirable." He shunted the deputation, however, on to his colleague, the President of the Local Government Board, who seems to have made no arrangements to receive it, and now the Executive Committee is informed by the Home Office "that there is no prospect of legislation this session in regard to death registration." This is much to be regretted. It is admitted by the Home Secretary that the law needs amendment. As it stands at present it not only leads to defective and misleading registration of the causes of death, and so vitiates our vital statistics, but, what is more serious, it renders possible the escape of criminals by the loose way in which certificates are issued and used. We need not dwell on minor evils which the defective state of the law encourages. The case for legislation is a very strong one, so strong indeed that, after the Select Committee reported some years ago, a Bill was prepared but never introduced. Mr. Chaplin and Sir Matthew White Ridley might profitably spend the Whitsuntide recess in studying that Bill and agreeing to bring it in next session, with such modifications as they may think advisable. The General Medical Council has very properly, through its Executive Committee, determined to ask the Government to receive a deputation in November next. That date gives plenty of time for consideration, and we hope that a strong statement of the case will then be placed before the Ministers, and that a promise of early legislation may be secured. There has already been too much delay in the public interest, and it is most desirable that other medical and general associations should now reinforce the demand of the General Medical Council for serious attention on the part of the Government.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Council elections will be held on July 7th at 1.30 P.M. Blank forms of the requisite notice from a candidate and of his nomination may be obtained on application to the Secretary, and the same must be received by him duly filled up not later than Monday, June 13th. A voting paper will be sent by post to each Fellow of the College whose address in the United Kingdom is registered at the College on Monday, June 27th, and Fellows will not be required to apply for voting papers. It is merely necessary to record his vote on the paper unsigned, and to enclose and fasten it in the envelope sent for the purpose. This envelope must be signed by the Fellow and his signature witnessed. It is then forwarded to the Secretary. Thus the voting paper system allows of direct voting without a proxy. Thanks to this system, which has removed certain mechanical obstacles to a fairly representative Council, the Fellows of the Royal College of Surgeons of England have of late years taken a far more intelligent interest in College affairs than they did before the recent reforms. Much that was matter for debate ten years ago is now matter of mere historical interest, illustrating the evolution of the College in adaptation to external changes. A Corporation like the College is bound to provide for periodical changes in its executive council. Three of the twenty-four members retire yearly, so that the whole Council is renewed every eight years. Re-election is of course permitted, otherwise experience and responsibilities would be thrown away, as in the case of self-denying ordinances familiar in English and French history. But an eight years' tenure may be interrupted by death or retirement. Thus arises a casual vacancy. This has to be filled and there are three ways of filling it. The first is to elect a member and allow him to hold his seat for the full term of eight years. This however is contrary to custom, and experience has proved that it may cause confusion. The second is to supply the vacancy by co-option, a plan open to obvious objections in a representative body. The third is the plan of substitute membership which makes the vacancy known to the Fellows, and empowers them and not the Council to fill it, and it gives a fair chance to the substitute when he is elected. There are objections; but no arrangement for casual vacancies can be free from objections. The reason why there has been much talk about substitute members since last July is, we believe, fairly known. Last year there were, in addition to the three usual vacancies, two that were casual. One member, who had served as a substitute for two years only, sought re-election and came in fifth on the poll. The fourth and fifth duly filled the two vacancies as substitutes. When there is more than one such vacancy to be filled up, the Fellow elected by the smallest number of votes shall be the substitute in the room of that member whose period of office would have first ter-

minated. Hence it came to pass last year that the re-elected two years' substitute came in to fill a second and equally short term of substitution, so that his time will be up next year. This is, however, an exceptional case, and undoubtedly hard upon the gentleman concerned, but by-laws cannot be changed to accommodate individuals, and such change would be sure to bring inconvenience sooner or later on somebody else.

THE TREATMENT OF CARBOLIC ACID POISONING.

AN unfortunate policeman has been taken severely to task by an anonymous correspondent of a Liverpool paper for having administered to a young man suffering from what proved to be a fatal dose of carbolic acid, an emetic of mustard and water. We fail to see that the conduct of the constable is deserving of censure. It can hardly be expected that in addition to their other duties the members of the force should qualify as expert toxicologists; moreover, the prompt evacuation of the contents of the stomach in such cases is in accordance with the teaching of the best authorities. Whether mustard and water is given as an emetic, or sulphate of zinc, or ipecacuanha wine, or even a hypodermic injection of apomorphine, is a mere matter of detail. A soft indiarubber tube, introduced with care and caution, might be better, but such an apparatus is not always at hand, and certainly requires some skill in its application. Poisoning by carbolic acid is becoming daily more and more common, a circumstance attributable in great part to the fact that it is the poor man's disinfectant. When there is a bad smell in the house, or the drains have "gone wrong," a supply is obtained from the nearest grocer, often in a ginger-beer bottle, to which it is not thought necessary to affix a label. If there is any left over, it is put away on a shelf for future use, where it remains forgotten until some inquisitive person discovers it and investigates its contents with disastrous results. The symptoms are so characteristic that they cannot well be mistaken. An intense burning sensation is experienced in the throat and stomach almost in the act of swallowing, and the lips and mouth are whitened where the acid has come in contact with the mucous membrane. Vomiting may occur, but from the anæsthetic action of the poison on the gastro-intestinal tract is often absent. Respiration is laboured and hurried, and symptoms of collapse are very marked. The urine is diminished in quantity, and is frequently of an olive-green colour, due to the conversion of the carbolic acid into hydroquinone, and the subsequent oxidation of the latter into a brownish product. It has been found that in poisoning by phenol the sulphates are absent from the urine, and this has given rise to the custom of administering soluble sulphates with a view to the conversion of the carbolic acid into harmless sulphocarbolates. The treatment commonly adopted is to give an ounce of Epsom or of Glauber's salts in half a pint of water, and then to administer an emetic of mustard or sulphate of zinc. In the absence of the specific antidotes mustard and water is by no means a bad remedy. Saccharated lime, white of egg, and castor oil or olive oil, are also useful, but the point to remember is that time is all important, and that the best remedy is that which can be most speedily procured. The after-treatment consists in the administration of stimulants, such as hot brandy and water, chloric ether, and sal volatile, with the application of warmth to the extremities. As to the dose of carbolic acid which may be fatal, a rather interesting discussion has taken place at Berlin.[1] A man died, after presenting indefinite symptoms. At the *post-mortem* examination the cerebral sinuses were found to be distended and the brain substance congested; the heart showed signs of fatty degeneration, particularly on the right side. The life insurance company to which the patient belonged was not satisfied with the result of the examination, and the stomach was sent to an analytical chemist, who suspected carbolic acid poisoning from the smell of the stomach contents. The chemist, however, only succeeded in obtaining 0.6595 g. of carbolic acid. The body was exhumed after eleven days, and the kidneys, brain, and liver were examined for carbolic acid. The total amount found only amounted to 1 g. Professor Lewin, of Berlin, who was consulted on the subject, expressed the opinion that it was impossible for a man to be poisoned by 1 g. of carbolic acid. In his *Toxicologie* he gives from 8 to 60 g. as a fatal dose. No lesions were found in the alimentary canal in this case, and Professor Lewin asserts that the patient could not have swallowed a solution stronger than 4 per cent. without producing some signs which could be recognised after death. Professor Lewin admitted that sometimes death might be caused by the poison acting directly on the nervous system, but 1 g. would not be sufficient to produce this effect.

[1] *Deut. med. Woch.*, April 21st.

FŒTUS IN BROAD LIGAMENT: (?) CRIMINAL ABORTION.

M. HIVET, of Paris, related at the April meeting of the *Société Obstétricale et Gynécologique de Paris* a case of perforation of the pregnant uterus, a three-months' fœtus being forced into the parametrium between the layers of the left broad ligament. This case is of great importance in respect to evidence relating to suspected criminal abortion. A multiparous woman, aged 41, was admitted dying into Professor Le Dentu's wards in the Hôpital Necker one day last March; she died within half an hour of admission. The period had been absent for three months and a half. For three days the woman had complained of violent hypogastric pains, and on the night before admission there were symptoms of internal hæmorrhage. A practitioner detected retro-uterine hæmatocele involving the left fornix. At the necropsy the coils of small intestine in the pelvis were found covered with the exudation familiar in the lowest type of peritonitis. There was no blood in the peritoneal cavity, but the layers of the left broad ligament were separated by a large hæmatocele, which extended into the vesico-uterine pouch forwards and posteriorly passed behind the peritoneum into the lumbar region. The fundus uteri reached above the pubes; the tubes and ovaries were free from any disease or abnormality. On laying open the distended left broad ligament, a three months' fœtus was found lying in a mass of clot and blood. The pouch in the broad ligaments formed by the hæmorrhage was now seen to communicate with the uterine cavity by a circular perforation as large as a five-franc piece, situated in the left and anterior aspect of the supravaginal part of the cervix. The placenta was attached to the fœtus, and lay in the abnormal pouch. Its original seat was the anterior aspect of the inner surface of the uterus. There was no disease of the walls of the uterus, and no history of an external injury. Spontaneous rupture of the uterus at the third month is unknown and out of the question in this case where the walls were normal. The perforation was evidently due to an internal injury, most probably caused by a rigid stem. When once produced, it is easy to understand that the uterine contractions set up by the injury managed to force the fœtus and its placenta into the parametrium. No doubt septic infection caused inflammation of the peritoneum, itself unwounded. Had the patient recovered for awhile, and died later, after the healing of the uterine wound, the condition might have been taken for a rare variety of extrauterine pregnancy.

DANGER OF CHLOROFORM INHALATION IN THE PRESENCE OF ILLUMINATING GAS.

THERE have been during the past few years various references to the changes which take place in chloroform when its vapour becomes burned in a room lighted by ordinary illuminating gas. The carbonyl chloride, which under these circumstances becomes developed together with hydrochloric acid, produces dyspnœa, cough, and a feeling of suffocation alike in operator and patient. In damp weather, or when fog is present, these discomforts are accentuated, and it is just at such times that more thorough ventilation becomes most

difficult. However, temporary inconvenience appears not to be the only risk run in these cases. Dr. Mey, of Berne, has reported a death as resulting from the generation of these fumes. Dr. Mey found himself compelled to undertake a serious operation involving abdominal section, which occupied several hours. It had to be undertaken at night, and besides the operator and patient, a colleague of the surgeon, and two nurses were present in the room. Chloroform was administered, and coming in contact with the illuminating gas caused severe cough. Some hours after the operation Dr. Mey suffered from severe dyspnœa, which persisted for some time. The two nurses had similar seizures, and one of them eventually died from the effects upon her lungs. So serious a result is, we believe, a unique experience, and one which is likely to deter surgeons from an unguarded employment of chloroform when an open flame is the only means of illumination. The dangers referred to are minimised when the chloroform is given from an inhaler, such as Snow's, Clover's, or Junker's. With such an apparatus comparatively little chloroform vapour escapes into the air, and, therefore, little, if any, is burnt. A further precaution is a thorough ventilation; a large room with an open fireplace, and an efficient ingress for air will do much to obviate such untoward accidents. In hospitals there should be no possibility of either impure chloroform or of such crude arrangements being in use as unguarded gas lamps and chloroform given from a cloth or towel. With the simple means of testing and purifying chloroform which Professor Ramsay has given, no excuse can reasonably be made for jeopardising the lives alike of the patients and of the officiating staff, by using decomposed chloroform. It is to be hoped that to be forewarned will prove to be forearmed, and the occurrence of the death of the nursing sister at Berne will prevent the possibility of another fatality from a cause which seems distinctly preventable.

ANTIRABIC VACCINATIONS IN RUSSIA.

FROM a report published by Dr. V. Kraïouchkine in the last number of the *Archives des Sciences Biologiques*, published by the St. Petersburg Imperial Institute of Experimental Medicine, it appears that during the year 1896 388 persons who had been bitten by animals applied at the department. For various reasons 83 of these did not undergo the inoculations; 15 discontinued the treatment soon after its commencement, either of their own accord or in consequence of an intercurrent illness which had nothing to do with rabies; 14 had only had their hands wetted with the saliva of rabid animals, and were treated merely by way of precaution; in the case of 4 patients who went through the entire course it turned out afterwards that the animals by which they had been bitten were perfectly healthy; and 4 insisted that they should be treated although their clothes at the places corresponding to the bites were not torn. Deducting these 120 cases, there remains a total of 268, of whom 226 were bitten by dogs, 28 by cats, 6 by wolves, 2 by cows, 1 by a horse, 1 by a fox, the animals in all cases being proved to be rabid; 4 other persons were bitten by a man suffering from hydrophobia. Of the whole number 4 died, but in 2 of these the disease developed while the inoculations were still in progress. The total mortality, therefore, was 1.4 per cent., or, deducting the persons who died during the treatment, 0.7 per cent. The same periodical contains the annual report for the same year of the antirabic station of the Municipal Hospital of Samara. Dr. B. B. Rodzewitch reports that during 1896 the number of persons who applied at the station was 854; of this number, 4 for various reasons did not undergo the treatment. The bites were inflicted in 711 cases by dogs, in 19 by wolves, in 46 by cats, in 26 by horses, in 6 by cows, in 3 by pigs, and in 6 by marmots; 34 persons were not bitten, but were exposed to infection either by tending persons or animals suffering from rabies, or by taking part in *post-mortem* examinations of such subjects. Of the total number of patients, 5 died, 2 during the treatment and 2 within fifteen days of its completion. Deducting the former, there remains a total of 3 deaths, or 0.36 per cent. If the 2 patients who died within a fortnight of completing the treatment are left out of account, the mortality was only 0.12 per cent. Dr. Rodzewitch adds, however, that his information as to the subsequent fate of persons treated may be very incomplete, inasmuch as the antirabic station of Samara draws its patients from an area of vast extent.

SCOTTISH UNIVERSITY STATISTICS.

A STATEMENT has been issued of the numbers of students in attendance at Glasgow University during the years 1889 to 1897. It shows a diminution of 568 in the nine years, of which 253 belong to the Faculty of Medicine. In Edinburgh University, during the same years, the decrease has been 995, of which 608 belong to the Medical Faculty. But these statistics do not include women students, of whom there are now 256 matriculated in Glasgow and 206 in Edinbugh, the greater number in Glasgow being doubtless due to the facilities afforded women in Queen Margaret College of the University.

THE PRINCE OF WALES'S HOSPITAL FUND.

THE Visiting Committee appointed by the Council of the Prince of Wales's Hospital Fund for London to investigate the needs and relative merits of hospitals within the metropolitan area has chosen Sir Trevor Lawrence to be Chairman, and Viscount Duncannon to be Vice-Chairman. The last day for receiving applications to share in the benefits of the Fund is May 30th, and the Committee proposes to begin its investigations on June 1st.

UNIVERSITY OF LONDON.

THE result of the polling for the vacancy in the Senate caused by the death of Sir Richard Quain was declared at a meeting of Convocation on Tuesday last. Mr. J. Fletcher Moulton, Q.C., obtained 1,344 votes, Dr. J. B. Benson 1,139. Mr. P. Daphne 15. Mr. Moulton's name consequently heads the list of those from whom Her Majesty will select one to serve on the Senate. The voting was by ballot papers through the post.

DR. RICHARD CATON, of Liverpool, will give two lectures at the Royal Institution of Great Britain, Albemarle Street, on June 4th and 11th, at 3 P.M., on the Temples and Ritual of Asklepios at Epidauros and Athens.

DR. G. V. POORE will deliver an address on Circumstances which Influence the Effectiveness of Climatic Treatment, at a *conversazione* to be given by the President of the British Balneological and Climatological Society (Dr. William V. Snow, of Bournemouth) at Limmer's Hotel, Conduit Street, on June 8th, at 9 P.M.

IT was announced in the *London Gazette* of May 20th that the Queen in Council had nominated Mr. Charles Sissmore Tomes, F.R.S., to be, for five years, a member of the General Council of Medical Education and Registration of the United Kingdom. Mr. Tomes's name appears both on the *Medical* and *Dentists' Registers*.

WE learn that the Home Secretary has appointed the following Committee to inquire into the question of prison dietaries: The Right Hon. J. L. Wharton, M.P. (Chairman); A. H. Downes, M.D., Medical Inspector, Local Government Board; Herbert Smalley, M.D., Medical Inspector, Prisons Board; with Dr. John Barker as Secretary.

AN Antivivisection Bill having been submitted to the United States Congress by certain fanatics, a recent convention of the National Stock Growers' Association held in Denver, Col., unanimously adopted resolutions calling upon the congressmen of the States there represented to cast their vote against any measure that will prevent scientific research being continued in the interests of the animal kingdom.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE MIDWIVES REGISTRATION BILL flickered up into momentary importance last Friday. The manner of it was this. Mr. Heywood Johnstone, one of its ardent supporters, had put down a long question reciting the fact that the General Medical Council, the College of Surgeons, and other bodies, had reported on the Bill, and asking the Government to give it special help this session. Then just before question time he appeared on the front Bench below the gangway with his arms full of mysterious bundles, which afterwards turned out to be petitions. The House on this particular Friday sat sad, silent, and solemn, in expectation of the proceedings in connection with Mr. Gladstone's death. Up rose Mr. Johnstone, however, and expressed his desire to present petitions, from over 200 localities, signed by some 12,000 persons. The announcement was received in surprised silence, and when the hon. member gathered the petitions in his arms and staggered up to the table with them, there seemed to go up from the silent senators a sigh of relief, that an incongruous incident was over. But all this parade of petitions was to lead up to the question, but when questions were called the House asserted itself, and a shout of "No questions" told the Speaker that the day and the hour were not to be broken by trivial questionings, but were to be given up to the fit expression of its sorrow over the loss of the greatest member that Parliament had ever produced. Questions went over till Monday, and on that day the Government somewhat curtly dismissed the claims of the Midwives Bill for special facilities, by remarking that the reports on the Bill by no means endorsed its proposals, and that no special assistance could be given to its promoters. It is put down for June 8th, but it will have no chance on that day, and so the Midwives Bill will cease for this session to interest either legislators or doctors.

THE PRISONS BILL has not yet finished its career in the Grand Committee, and will be considered at one or possibly two more meetings after Whitsuntide. Last week the question of imprisonment for debt was discussed, and Sir Charles Cameron very properly protested against the subsection of Clause 5, which placed debtors on a level with criminals. The Home Secretary contended for the necessity of subjecting contumacious debtors to some industrial labour, and some restrictions as to the supply of their food from outside, but agreed that they should not be placed in association with convicted prisoners, nor be compelled to wear prison dress. Concessions were also made in connection with the lighting of cells and the provision of seats. It is inconceivable that any Government ever intended that a woman, for example, should be left many hours at a stretch in a cell with no place to sit down upon except the stone floor. Such methods are out of harmony with the humanitarian sentiments of the present day. The improvements wrought in this Bill in the Grand Committee do great credit to those members who have given their attention to the reform of our prison system, and this session of Parliament will be honourably redeemed from its otherwise not very brilliant record by the remarkable results attained in the direction of making our treatment of criminals and prisoners less barbarous and at the same time probably much more reformatory.

THE IRISH LOCAL GOVERNMENT BILL passed through its long Committee stage early on Wednesday morning after a sitting of more than twelve hours. It is certainly a far-reaching measure, and will generally tend to the development and progress of local life all over Ireland. As regards the medical profession, the Committee stage has secured some advantages, notably those in connection with the asylum medical officers, which were accepted on the motion of Sir Walter Foster. In the first place the word "registered" was substituted for "legally qualified" as the description of the medical practitioner eligible for such appointments. The change is merely one of nomenclature, but is nevertheless important, inasmuch as the more the word "registered" is used in public documents the more the public mind will associate registration with the right to practise. The other amendment provided that a superintendent medical officer of an asylum "should have already served for not less than five years as medical officer in an asylum." The amendment was resisted on the ground that there should be freedom of choice for the county councils, and also on the ground that it would "prolong Orange ascendency." The Committee did not take that view, but interpreted it as a means of securing the best men for the positions, and so passed it without a division. The same hon. member was, however, less successful in his attempt on Tuesday to secure the surgeons of county infirmaries from contingent losses. It is thought that they may suffer under the Bill in loss of salary and allowances, if the local subscriptions fall off after the Act comes into force, but the financial lines upon which the measure is drawn did not permit the insertion of the proposed amendments to safeguard the infirmary surgeons. We regret this, as it is undoubtedly to the public advantage that the county infirmaries should be maintained in full efficiency, and we trust that even if in the future stages of the Bill no opportunity occurs to remedy the possible injury, the public spirit of each county will guarantee the infirmary officers against losses in salaries and allowances. Later on a question arose as to the mode of election of the honorary medical staff of the Meath Hospital, but the matter was deferred till the report stage. The other new clause which excited most interest in the profession was the one which sought to secure to medical officers the right to superannuation. This was resisted by the Government, and finally rejected on the ground that it would make superannuation compulsory in cases in which it is now only optional, and so add heavily to the financial responsibilities of the county councils. Many of the new clauses were postponed to the report stage, so that we may anticipate further consideration for some questions.

THE REGISTRATION OF MEDICAL PRACTITIONERS IN INDIA was the subject of a question on Tuesday, in which it was pointed out that at present uneducated and unqualified persons have freedom to practise in India to any extent. The Secretary of State admitted that this was so, but declined to bring in a Registration Bill, on the ground that it would be impossible to prevent the people having resort to native practitioners. In giving the answer Lord George Hamilton was evidently labouring under a misconception as to the nature of the legislation asked for. A Registration Act on the English lines would not prevent the people resorting to native doctors; it would only enable them to differentiate between qualified and unqualified persons, and so to protect themselves against ignorant pretenders. Without a Registration Act the people have no means of distinguishing between the man who really has qualifications and the man who advertises falsely that he has them; and it is to give the natives this power of protecting themselves, and not for the purpose of preventing them resorting to native practitioners, that legislation is required.

THE LONDON UNIVERSITY BILL, which now stands for second reading after the recess, will, it seems, meet with considerable opposition from below the gangway on the Liberal side. Mr. Ellis Griffith, who leads the opposition to the Bill, counts on the support of Sir Charles Dilke and several other Radicals.

THE VACCINATION BILL will apparently not get into Committee till the second or third week in June. In the meantime amendments will continue to grow, and the struggle in Committee is sure to be severe, as well as in the House on the report stage. Still, on the whole, the prospects of the Bill are good, and there is in influential quarters a growing desire to introduce clauses in favour of revaccination.

FOOD ADULTERATION.—Sir Michael Hicks Beach, in reply to various members who had given notice of questions on the subject, said that a Bill had been prepared dealing with the adulteration of food products but he was unable to name a day for its introduction.

LUNACY BILL.—The Lunacy Bill has passed through Committee in the House of Lords.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SPRING SESSION, 1898.

Tuesday, May 24th.

Sir Wm. Turner, President, in the Chair.

The spring session of the General Medical Council opened on Tuesday last at the offices, 299, Oxford Street, W.

The New Crown Nominee.

The first business was the receipt of an official notification of the nomination of Mr. Charles Sissmore Tomes, F.R.S., F.R.C.S., L.D.S., to be for five years a member of the Council. Mr. Tomes was introduced by Mr. Bryant.

Apology for Absence.

A letter was read from Sir John Batty Tuke regretting his inability to attend the Council owing to illness, but expressing the hope that he would be enabled to do so before the session terminated.

President's Address.

The President spoke as follows: My first duty is the very pleasing one of announcing to you that I have received a letter from Miss Quain, in which, writing on behalf of her sisters and herself, she asks the General Medical Council to accept a marble bust of her late father, in memory of his long association with the Council as a member and of late years as our President. The bust was executed in 1886 by the eminent sculptor Mr. Thomas Brock, R.A., who had previously modelled the bust of our President, Mr. John Marshall, which was presented to the Council after his death by Mrs. Marshall, and now adorns our Council Chamber. At the proper time I shall move that the hearty thanks of the Council be given to Miss Quain and her sisters for the very appropriate present, admirable both as a likeness and a work of art, which I am sure the Council will highly value and treasure as a memorial of one whom those of us who had long been his colleagues not only esteemed as a President, but regarded with affection as a warm-hearted personal friend. The vacancy in the Council due to the loss of Sir Richard Quain, who had sat for thirty-five years as a Crown representative for England, has been filled up by the appointment of Mr. Charles Sissmore Tomes, M.A., F.R.S. The Council welcomes Mr. Tomes as distinguished in scientific research, an eminent dental practitioner, and a Fellow of the Royal College of Surgeons of England. Acting under the instructions given to me by the Council at the conclusion of our meeting in April, I wrote to the Lord President of the Privy Council and transmitted a copy of the resolutions of the Council on the Midwives' Registration Bill, on which the Lord President had asked us to favour him with such observations as we might desire to offer. The Bill was put down for second reading in the House of Commons on May 11th, but, as was generally anticipated, owing to the pressure of Government business, the second reading did not take place. From the reports in the public prints of an interview granted on May 2nd by the Lord President to the deputation consisting of the supporters of the Bill, it would appear that his Grace the Duke of Devonshire intimated to the deputation that, owing to the small probability of the Bill proceeding during the present session, the deputation should apply itself rather to the consideration of the terms of some future Bill than to the one now before Parliament. Also that the promoters of the measure should come to a definite understanding with the medical profession, as represented by the General Medical Council, before they introduced a Bill in another session. He referred to the objections taken by the Council in their observations on the present measure, as well as to difficulties which might arise on the part of the Local Government Board, with which body, as well as with the General Medical Council, the Lord President suggested that the promoters of the measure should put themselves into communication. Should, however, the Bill pass its second reading, the Lord President thought that the course which the Government would take would materially depend upon whether the promoters of the Bill were prepared to amend it in Committee so as to meet the suggestions of the General Medical Council. The action of the Lord President in this matter will, I am sure, commend itself to the Council. I have now received from Mr. Rowland Humphreys, Honorary Secretary to a Committee for promoting a Midwives Bill, a letter in which he states that at a recent meeting of his Committee it was resolved, in accordance with the suggestion of the Lord President, to approach the General Medical Council with the view of making such alterations in the present Bill as would secure for it the support of the Council, or of arriving at a clear understanding with regard to the lines upon which another Bill should be framed. His Committee have appointed seven delegates, and he asks the Council either to receive them or to appoint a Committee to confer with them. The Council will doubtless direct what reply should be given to Mr. Humphreys's request. The very important resolution arrived at by the Council at the meeting in November last regarding the employment of unqualified assistants by registered practitioners has led to a considerable correspondence with both myself and the Registrar. Numerous letters have been received from employers asking for an interpretation of questions raised by the Council's resolution. Many letters have also been received from unqualified assistants, some of whom are married men with families, who, having been dismissed by their employers in consequence of the Council's resolution, have been deprived of the means of making a livelihood. A number of these assistants have had a partial training at medical schools, and a few have finished the course but have not completed the Final Examination. Petitions have been received from a number of registered practitioners pleading for the institution of special examinations for those unqualified assistants who have gone through a complete medical curriculum and are over 40 years of age. A memorial signed by 138 practitioners in Leeds states that as a difficulty is now experienced in obtaining the services of a sufficient number of qualified assistants to replace those who are unqualified, the Council might modify its recent action in regard to unqualified assistants. In view of these statements from both practitioners and assistants, I have thought it right to call your attention to the matter, in case you might wish to give such explanations as have been asked for, or desire any further discussion on the matter. Since the Council rose on April 6th, I have, as your President, been called on to consider and give an opinion on an important matter, and as my action has been adversely criticised by a member of the Council, and a charge of unconstitutional procedure has been brought against me, I cannot pass this subject by in silence. It is due to the Council that I should give them a narrative of the facts: On April 7th our Registrar told me that he had been requested by Mr. Horsley to produce for his inspection and examination certain papers belonging to the Council, and asked me what reply should be given to the request. The point was, so far as my experience went, a novel one; but, after giving it consideration, I instructed the Registrar to tell Mr. Horsley that, in my opinion, he would have to move either the Executive Committee or the Council for leave to have the papers placed at his disposal for purposes of examination. As I felt that the question raised was one which, on the one hand, affected the Council's position as regarded its property in its unpublished papers, and, on the other, the rights of an individual member to make use of that property before leave had first been granted by a proper authority, and before any statement had been made to the Council of the object for which they were desired, I thought it necessary to take the opinion of our standing counsel, Mr. Muir Mackenzie, on the matter. I may remind the Council that, although the Act of 1858 did not formally incorporate us, yet, by a subsequent Amendment Act, passed in 1862, we became a body corporate, and were deemed to be and to have been one since the date of our first establishment. Mr. Muir Mackenzie, in reply to my request for his advice on the question raised, intimated to me that I was absolutely correct in the opinion which I had directed Mr. Allen to communicate to Mr. Horsley, inasmuch as it was established law that the papers of a corporate body belonged to the body and not to its individual members.

Accordingly, when later in the month of April the Registrar forwarded me a letter received by him, in which Mr. Horsley asked that certain papers which he specified should be produced for his inspection, I instructed Mr. Allen to reply as follows: "That the Council's papers are the property of the corporate body, and not of its individual members, and that the papers referred to cannot be produced for your inspection without leave being first granted by the Council or the Executive Committee. It is necessary, therefore, that you should move either the Council or the Executive Committee for an order to permit you to examine and to use them." On April 27th Mr. Horsley wrote to me a letter, which I received on the following day, in which he asked me questions bearing on my right, as President, to debar him, as a member of Council, from inspecting for the purposes of the work of the Council documents which are its property. In reply I repeated the above instructions which I had given to the Registrar regarding the rights of the Council in its own papers, and the necessity of individual members first obtaining leave before they could be produced for inspection. I further stated that, so important did I regard this question, as one of constitutional procedure, that as the Council's chief executive officer I considered that I was justified in giving to the Registrar these instructions. I also called Mr. Horsley's attention to the fact that as the Council would meet at an early date, he could then make application, and at the same time explain the object which he had in view in requesting the Council's papers to be produced for his inspection. The Council will observe that throughout this correspondence I have consistently acted so as to preserve the rights of the Council as a corporate body in its own property, and in my judgment I should have been guilty of a grave dereliction of duty as your President had I done otherwise. It now remains for Mr. Horsley, should he continue in his desire to examine and use the papers for which he applied, to specify to the Council the papers to which he desires access, to move that the necessary leave should be granted to him, and to state the definite object for which the use of the papers is required. It will then be for the Council to decide whether, having regard to the ground on which the application is based, it is one to which it would be right to accede. As regards a subject which was before both the Council and the Executive Committee during last year, of possible changes in the Italian law, which would impose restrictions on medical practice in Italy by our countrymen, I am able to state that information has reached Her Majesty's Government, through the British Ambassador, that there is no present intention on the part of the Italian Government to modify the laws regarding the practice of foreign physicians. The very important question of the granting of death certificates by unregistered persons has been under the consideration of the Executive Committee, who directed the Registrar, in February last, to ask the Home Secretary to receive a deputation from the Council at his earliest convenience, to urge upon him the importance of the amendment of the law regulating the granting of such certificates. The Home Secretary, in reply, stated that he had communicated with the President of the Local Government Board, and expressed the opinion that legislation was desirable. In a subsequent letter the Home Secretary informed the Executive Committee that, as there could be no legislation on the matter during the present session, he was unable to receive a deputation. The new edition of the *Pharmacopœia* was announced in the London, Edinburgh, and Dublin *Gazettes* of April 29th, as ready for publication, and the price has been fixed by the Treasury at 10s. 6d. per copy. The editor, in accordance with the request of the Council's Pharmacopœia Committee will submit a memorandum on the steps to be taken for the production of an Appendix on Indian and Colonial Drugs. He has also drawn up a report on the methods adopted in preparing the *British Pharmacopœia, 1898*. These documents I have referred to the Pharmacopœia Committee. The Executive Committee has to report that Mr. Arthur Chance, who was appointed in May last to be Assistant Examiner in Surgery to the Apothecaries' Hall, Dublin, resigned his appointment, so that an assistant examiner will require to be chosen in his place. Dr. Sidney Coupland, who was appointed Inspector of the Examinations of the Hall, has visited and reported on an examination held in April last; but as the observations by the Apothecaries' Hall on his report have not yet been obtained, the Examination Committee is not in a position to give a report to the Council on this examination. Owing to the death of Sir Richard Quain, Mr. Wheelhouse remains as the only trustee of the funds of the English Branch Council; it is advisable, therefore, that the Branch during the present meeting should appoint additional trustees. The Executive Committee will report on communications which have been received from the Scottish universities regarding the question of penal powers to be exercised over medical graduates. The Council's solicitor will report on the present position of certain cases where prosecutions have been ordered by the Council. Three cases of discipline, the final disposal of which were, at the November meeting, adjourned to the present session, will come before you. The Council will be called on to investigate a penal case specified in the programme of business, and the Penal Cases Committee will report in favour of the institution of proceedings in two new cases. I am satisfied that the Council will bestow on the subjects to which I have referred, and on such other matters as may require attention during the session, the care and thought which in has been its habit to give to the serious and important questions which from time to time come under its consideration.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, the President was thanked for his address, which it was agreed should be entered on the minutes.

The late Sir Richard Quain.

A letter was read from Mr. G. A. St. Croix Rose, returning thanks on behalf of the family of the late Sir Richard Quain for the Council's message of sympathy and the resolution which had been passed.

A letter from Miss Quain was read, asking the Council to accept a marble bust of her late father, Sir Richard Quain, which had been executed by Mr. Brock, R.A., in 1896, and exhibited in last year's Academy.

The Death of Mr. Gladstone.

The President said a suggestion had been made to him that the Council should join other public bodies in recording their sense of the loss which had befallen the nation through the death of Mr. Gladstone. He would therefore move:

That this Council desires to place on record its sense of the grievous loss which has befallen the nation by the death of the Right Hon. W. E. Gladstone, whose interest in the profession of medicine was ever warm and sympathetic, and under whose administration the Medical Act of 1886 was passed into law. The Council further requests the President to transmit to the widow and family of the deceased statesman a suitable expression of the Council's heartfelt participation in the national sorrow.

The last time the President had seen Mr. Gladstone was at a dinner given by Sir Henry Acland, the then President of the Council. Mr. Gladstone was the honoured guest on that occasion, and in replying to the toast of his health he took for his text the profession of politics and the profession of medicine. He had drawn a most eloquent comparison between the two, and the conclusion to which he came was that the profession of medicine took a higher place than the profession of politics. That was an additional reason why the Council should send an expression of sympathy to the family of Mr. Gladstone.

The resolution was put from the chair and carried unanimously:

The President announced that an application would be made to the Earl Marshal for thirty admission tickets on the occasion of the funeral of Mr. Gladstone at Westminster Abbey.

Appointment of Business Committee.

Sir Dyce Duckworth moved and Sir Richard Thorne seconded the appointment of a Business Committee, to consist of the following members: Dr. MacAlister (Chairman), Mr. Bryant, Sir Philip Smyly, and Dr. Bruce. The resolution was agreed to.

Results of Professional Examinations.

On the motion of Dr. Heron Watson, seconded by Sir Richard Thorne, the following yearly tables for 1897 were received:

Results of Professional Medical Examinations during 1897; Results of Professional Examinations for Qualifications in Sanitary Science, Public Health, or State Medicine during 1897; Results of Professional Dental Examinations during 1897; Results of Preliminary Examinations during 1897; Exceptional Cases in regard to Length of Course of Study during 1897; Results of Competition held on November 22nd, 1897, for Commissions in the Medical Staff of the Royal Navy; Results of Competition held in February, 1898, for Commissions in the Medical Staff of the Army; and Results of Competition held in February, 1898, for Commissions in the Indian Medical Service.

THE QUALIFICATIONS OF CANDIDATES FOR THE PUBLIC SERVICES.

Dr. HERON WATSON then moved and Sir RICHARD THORNE seconded:

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, to the Director-General of the Army Medical Department, and to the Examining Board of the Medical Department of the Indian Medical Service, for the statements they have respectively furnished to the Council of the degrees, diplomas, and licences of the candidates for commissions in those department of Her Majesty's service of the dates mentioned showing the numbers of vacancies to be competed for, the numbers that did not pass, the number obtaining commissions, distinguishing the qualifications, both medical and surgical, under the several licensing bodies, and indicating the subjects in which those who did not pass were found to be deficient; with the request that these returns may in the future be continued to be furnished to the General Medical Council.

THE RIGHTS OF MEMBERS OF THE COUNCIL.

The next business was the following notice by Mr. Horsley:

That at the earliest convenient occasion he proposes to call the attention of the Council to the infringement of the rights and privileges of the members of the Council by the recent action of the President in compelling the Registrar to refuse a member the exercise of his right of inspection of documents, the property of the Council.

Dr. MACALISTER asked Mr. Horsley to substitute the word "directing" for the word "compelling."

Mr. VICTOR HORSLEY, having complied with the request, said that the point to which he wished to draw attention was certainly not, as had been stated in the presidential address, a novel one in the sense there indicated. According to the President's statement it would appear that no member of the Council had, until April 7th, sought to instruct himself in the work of the Council and in the laws affecting the medical profession by a study of the documents in the possession of the Council—in other words, that no member of the Council had taken sufficient interest in its work to consult them, and that he felt was virtually impossible. In his own case, from November, 1897, until April, 1898, he had entered the office of the Council, had requisitioned documents from the Registrar, and had received them from the Registrar without the slightest let or hindrance. It was not till April 7th that he was suddenly refused by the Registrar the privilege which he had hitherto enjoyed. He was informed by the Registrar that he was acting solely under the President's order, and that order he conceived to constitute a distinct encroachment on the rights and privileges of corporate bodies such as theirs. The speaker, in the course of a somewhat lengthy address, said that he had asked the President to reply to three specific questions: First, by what legal enactment or regulation did the President claim the right to debar a member of the Council from inspecting for purposes of the work of the Council documents which were its property and open to the inspection of the Registrar? Secondly, did the President claim the right to refuse him access, for the purpose of the work of the Council, to all unpublished documents, as well as to those specified in his application to the Registrar. Thirdly, did the President consider that he himself was similarly debarred from inspecting the documents of the Council, except with the special leave of the Executive Committee or the Council? To those questions he had received no specific answer. To the first he had received no answer at all, but the Council had that afternoon been told that "Mr. Muir Mackenzie states that it is established law that the documents of a corporate body are the property of that body." He quite agreed to that. Mr. Muir Mackenzie also went on to say, "And therefore the President acted quite rightly in refusing access to those documents." There he joined issue with Mr. Muir Mackenzie absolutely. Nothing could be learned from counsel's opinion unless one had the case upon which the opinion was founded. That opinion was totally at variance with the opinion of the solicitor of the Council given on July 5th, 1882, where he said in connection with the Dentists Act, "As the President has stated an opinion was taken on behalf of the Council, and every member of the Council is entitled to examine it as much as he chooses. Every one of the opinions, in fact, belongs to the Council, and to every member of the Council." They had seen plenty of contradictions among lawyers, and he did not rest his case on any one lawyer. The Council had not yet had before it any legal opinion on the subject, and he therefore suggested that they should put aside what they had heard as to what was established law, and discuss the matter from the point of view of common sense. He had consulted members of other corporate bodies, and had ascertained that it was not the custom in any one of them to refuse individual members access to the documents possessed by the body. It was not his object to raise a discussion, and therefore he did not conclude with a motion. His object was to report to the Council as his co-trustees what had happened in relation to that very important matter. What steps the Council in their wisdom saw fit to take was entirely for them to decide.

The REGISTRAR, at the request of the PRESIDENT, then read the case submitted to Mr. Muir Mackenzie, together with his opinion. Mr. Muir Mackenzie stated that the President had acted quite rightly in the matter, as it had been held that the documents of a corporate body belonged to the abstract entirety, and not to the members composing that body either individually or collectively. Therefore no individual member had a right to inspect the documents without the consent of the whole body. He was, however, far from saying that there was no case in which a member might not obtain inspection of certain documents if sufficient cause were shown.

Mr. VICTOR HORSLEY criticised the Opinion, and stated that it was not quite parallel to the position.

Sir CHRISTOPHER NIXON moved:

That Mr. Horsley be granted permission to inspect the documents of the Council for the purpose of carrying out the investigations of which he has given notice.

The PRESIDENT said that Mr. Horsley had given no notice.

Sir CHRISTOPHER NIXON said that Mr. Horsley had stated that the purpose for which he was carrying on the investigation was in connection with the legal expenses incurred by the Council.

The PRESIDENT said that that was the subject of the next motion, and he ruled that Sir Christopher Nixon's motion was not in order. Mr. Muir Mackenzie had advised that not only should the application be made to the Council, but that the documents asked for should be specifically stated, together with the object for which they were required.

Mr. BRUDENELL CARTER said that the only course which could be pursued in order to bring the matter to an issue, would be that Mr. Horsley himself should move that the Council should grant him permission to examine certain documents.

Dr. MACALISTER then moved:

That the Council having heard the President's statement as to the legal ground of his action in reference to Mr. Horsley's application, expresses its complete satisfaction therewith, and passes to the next business on the programme.

Dr. PETTIGREW seconded the motion.

Mr. TEALE said that as one of the senior members of the Council he could not allow the motion to pass without making some remarks on the action of Mr. Horsley in attacking the President in the public medical press. That was quite a new departure, and he felt that the whole Council had suffered a certain amount of injury by the action of Mr. Horsley in that respect.

Mr. VICTOR HORSLEY said that Mr. Teale had forgotten that as a direct representative of the Committee he had direct responsibilities, which Mr. Teale had not. He most distinctly conceived it to be his duty, and should always conceive it to be so, when the interests of those whom he represented were seriously involved, to report the fact to them, and that was all he had done.

Dr. GLOVER, as a direct representative, while giving Mr. Horsley full credit for his motives and agreeing with the object he wished to advance, thought that he had not approached the question in the right way. It was not, in his

judgment, right to make partial statements and personal charges against any member of the Council, and certainly not against the President.

Sir William Gairdner thought that the Council should in the most thorough manner affirm their agreement with the President, and their repudiation in the strongest possible terms of the injury which had been done him by the attacks in the press.

Mr. George Brown regretted very much the turn which the discussion had taken. He did not feel that he could vote against the motion of confidence in the President, for it practically amounted to that; but he regretted very much that obstructions were put in the way of Mr. Horsley with regard to inspecting such documents as he considered necessary in order to investigate the matters connected with the work of the Council in which he was interested.

Dr. MacAlister's motion was then put and carried, with one dissentient.

Dr. Pettigrew requested that the names should be taken down; but after several members of the Council had expressed their dissent to such a course, the request was withdrawn.

Notice of Motion by Mr. Victor Horsley.

Mr. Victor Horsley moved:

That a Committee be appointed to inquire into, first, the conduct of the legal business of the Council in the past and at present; and, secondly, the cost to the Council incurred thereby; the Committee to report to the Council during the present session.

He said that before he had entered that Council he had taken a great interest in its legal work, and in connection with the appointment which he then held he became acquainted with a great many of the details. When he joined the Council he had applied that knowledge in connection with the general financial condition of the Council. As the income of the Council appeared to be decreasing, and the general expenditure increasing, it seemed to him expedient to study the general question with regard to the conduct of the legal business of the Council, in order to see whether they could not introduce certain amendments and alterations which would secure at once greater efficiency and also economy. At present the legal business of the Council was very much left to the solicitor, and he had found that that had led to the solicitor dealing with matters which he (Mr. Horsley) considered came within the professional purview, and therefore should be dealt with by the Council as a whole. But there were much graver questions behind that—questions relating to the special legal work of the Council. The work of the Council consisted of two totally distinct parts, the general work, which might be spoken of as administrative or conveyancing, and penal work. He had had no experience with regard to the first, but in the second he had had considerable experience as to the cost of carrying it out, and he had no hesitation in saying that up to 1897, at any rate, it had been carried on in a very extravagant way. He had extracted from the legal accounts of the Council cases which were known to him personally where he considered that money was distinctly wasted. Again, he had found that there had been extra expense incurred in the way of taking counsel's opinion on matters which were for the most part purely medical matters, which should be decided by medical minds rather than legal minds. In the legal accounts items were put down, but the smaller details of those items were not given, and under those circumstances it was obvious that the Council could not control the legal expenditure. As to the way in which the details of the legal business of the Council had been conducted, he thought the method had not been so efficient as it should have been.

Dr. Glover seconded the motion.

After some discussion on the subject,

Mr. George Brown withdrew his notice of motion which immediately followed Mr. Horsley's, as the latter included the object he wished to secure.

Dr. Atthill asked if Mr. Horsley would delete the words "during the present session"; it was impossible that the Committee could report during the present session.

Mr. Horsley said that in deference to the far greater experience of Dr. Atthill he would withdraw the words.

Dr. MacAlister asked what case had been made out for th appointment of a special committee.

Dr. Glover said that the very fact that the question had been so sharply raised was a very good answer to Dr. MacAlister.

Mr. Bryant thought the proposal that the question should be looked into was certainly a reasonable one, but he could not support the view that a special committee should be appointed. He thought the Finance Committee would be the proper body to carry out the investigation, and Mr. Horsley would, no doubt, supply it with any information he possessed.

Mr. Horsley was sorry that he could not accept the suggestion. He thought the Committee should consist of the Treasurer, with Sir William Thomson and Dr. Bruce, and he also hoped to be added to it.

Mr. Bryant then moved as an amendment:

That the Finance Committee be instructed to inquire into the legal business of the Council, and into the cost which is incurred thereby, and to report to the Council.

Sir Dyce Duckworth seconded the amendment, although he conceived the whole discussion to be purely academic. He did not for a moment believe that the Council would save a five-pound note in the course of twelve months.

Mr. Brudenell Carter was exceedingly unwilling to support any resolution which would even appear to cast the slightest innuendo upon gentlemen who deserved the entire confidence of the Council. He expressed the hope that the matter should be allowed to drop altogether.

Dr. Leech thought that there should be an inquiry into the matter, and that Mr. Horsley should be a member of the Committee, and he would therefore vote for the motion.

Sir Christopher Nixon said he should vote for the motion, inasmuch as if the amendment were carried, it would simply be a direction to the members of the Finance Committee to report upon their own action.

Dr. McVail said he should be very sorry if either the motion or the amendment were carried. The first inquiry was whether Mr. Muir Mackenzie had given valuable legal advice. It was not a mere inquiry as to whether the Council could buy legal advice more cheaply in the future than it had done in the past. From his experience on the Council, Mr. Muir Mackenzie's advice had been most admirable; in every case where it had been taken it had been right; in one case the Council had not followed it, and they had been wrong. He did not think that the legal expenses were excessive. Again, not one single case had been brought before the Council to substantiate Mr. Horsley's position. He could not support anything which would reflect on Mr. Muir Mackenzie. Mr. Muir Mackenzie would attend in a day or two to act as assessor, and was he to know that the members of the Council were actually suspecting him of incapacity, or of taking too much money from the Council? If that were so, he could not imagine but that Mr. Muir Mackenzie would at once resign his appointment. He hoped that Mr. Bryant and Sir Dyce Duckworth would withdraw their amendment, because it was really a serious thing for such an amendment to be moved and seconded by the two Treasurers of the Council. They were not only the Treasurers, but they occupied the very highest position in the Council next to the President himself, and he did not think that it should appear on the minutes that they had moved, and seconded the amendment.

Mr. Teale asked if on the strength of a Committee's report the Council could say that they had lost confidence in Mr. Muir Mackenzie and would throw away all his accumulated experience of the work of the Council? They would require a very extraordinary reason before making a change in their legal adviser.

Sir Richard Thorne said that their legal advisers had an unbroken record of success; there had not been a single syllable implying that they had not done their duty rightly and honourably towards the Council.

Mr. Brudenell Carter appealed to the Treasurers to withdraw their amendment.

Mr. Bryant said he would be very pleased indeed to do so.

The Council gave permission for the amendment to be withdrawn.

Dr. Atthill asked if the resolution implied a vote of censure on the legal advisers.

The President thought that Dr. McVail had made a very wise speech. He thought no case had been made out; they had only had certain statements of a more or less vague kind by Mr. Horsley in support of his motion. He could not regard the motion as anything else but a direct vote of censure on their legal advisers. Those gentlemen had been good officers of the Council, and he should certainly do what he was not in the habit of doing—namely, vote on that occasion.

Mr. Victor Horsley, in reply to the remarks which had been made, maintained that he had not moved any vote of censure upon the legal advisers; if he had wished to do so he would have done so in stated terms. As a specific example he stated that Mr. Farrer, for reasons which no doubt were perfectly satisfactory, did not conduct the penal cases himself, but they were conducted through agents, and therefore the Council not only paid certain fees to Mr. Farrer but also the agents' fees. He maintained that they were undoubtedly paying a larger sum than they would do if Mr. Farrer conducted the cases himself. Pressed for a specific instance of a defective method of conducting business, Mr. Horsley cited the Whitefoord case, in which Mr. Muir Mackenzie's opinion had been obtained without the specific facts of the case being supplied to him, therefore that opinion was rendered useless. He was confident that he could satisfy the Committee that amendments could be introduced in the conduct of the legal business with advantage to the funds of the Council. If the Council rejected his motion it did not recoil upon him in any sense, neither did it for one single moment substantiate the allegation that the motion had been put forward as a vote of censure. When he did move a vote of censure he was in the habit of couching it in plain English.

The motion was then put to the Council and negatived, 9 voting in its favour and 18 against; 2 members did not vote, and there was 1 absentee.

On the requisition of Mr. Horsley the names were taken down.

Wednesday, May 25th.

Sir Wm. Turner, President, in the Chair.

Reciprocity with Foreign Countries.

The first business before the Council was the consideration of the following notice of motion by Mr. Horsley:

That the late President's letter of July 1st, 1897, addressed to the Privy Council on the matter of medical practice in Italy and the publication advertised by the Council, entitled, "Reciprocity of Medical Practice in Relation to Foreign Countries," be and are hereby rescinded and withdrawn.

Mr. Victor Horsley, in moving the above resolution, said that his object in doing so was to obtain a distinct statement from the Council upon the very important question of reciprocity of practice between the practitioners of England and foreign countries. There was practically only one country between which and the United Kingdom reciprocity could be said to exist—namely, Italy. It was, therefore, with considerable feeling that the English practitioners in Italy last year wrote to the Council and asked its help practically to oppose a measure which had been brought forward by the Italian Government after the manner of similar measures brought forward in other countries, notably France, whereby English practitioners in that foreign country must obtain a national registration and qualification. That appeal led to a letter being sent to the Privy Council by the President of the Medical Council in accordance with a resolution of the latter body. That letter contained a passage to which he (Mr. Horsley) took exception—namely, that "foreign practitioners can practise medicine in Great Britain without restriction." It was not intended that foreign practitioners should have unrestricted practice in this country. The Council had already attempted in a liberal spirit to introduce reciprocity, and its attempts had not been very successful in the past. The reciprocity which the Council extended to America in relation to dental practice had to be withdrawn. Then the Council came to the conclusion that many of the foreign degrees were only to be used as additional qualifications, and that none since the passing of the Act of 1886 should be so added. Therefore the Council of course fully recognised that unless reciprocity in practice was fully observed from the commercial point of view, and was fully safeguarded by the examination of qualifications in individuals seeking reciprocity, it could not be adopted. English practitioners felt that graduates of other countries should not be allowed to practise habitually in this country, although they had no right to say that they should never even visit a patient here.

Sir William Thomson seconded the motion.

Dr. MacAlister said that a publication of the Council could not be withdrawn, however it might be rescinded. The motion was a roundabout method for getting the Council to support a contention of Mr. Horsley that the Medical Acts protected practice and not merely registration. The statement in the report was correct: foreigners *were* free to practise in this country, and the Medical Acts said nothing to prevent it. They could not practise as apothecaries in England and Wales without being subject to certain penalties, but those penalties since 1815 had never been put in force, and they were never likely to be put in force by the Apothecaries' Society.

Mr. George Brown pointed out that the Apothecaries' Act of 1815 would only touch foreign practitioners when they dispensed medicines.

Sir Christopher Nixon thought they ought to protest against foreign practitioners coming over to England and practising without any control on the part of the General Medical Council. He pointed out that there would be nothing to prevent them employing unqualified assistants, for one thing.

Dr. McVail said that if Mr. Horsley would eliminate the first part of his resolution with regard to the late President's letter, he would support it. He was prepared to support Mr. Horsley with regard to the second portion of his resolution, because he thought that the document referred to was entirely and wholly misleading. It was a bit of special argument which had been evidently used to induce foreign Governments not to proceed in some course which they had threatened. He thought it was most unfortunate for the Council that the document had ever been published.

Mr. Horsley said that his seconder and himself agreed to alter the motion to read as follows:

That the publication advertised by the Council, entitled "Reciprocity of Medical Practice in Relation to Foreign Countries," be referred to the Executive Committee for report thereon.

The President pointed out that this was a new motion. Personally he saw no objection to referring the matter to the Executive Committee, but he thought the Executive Committee ought to have a little more instruction as to what it was to do with it.

Mr. Victor Horsley said that his object was simply to get the Reciprocity Report corrected, and he thought the discussion had shown in what direction it should be corrected.

The President asked if the resolution could not be put in some such form as that the publication entitled "Reciprocity," etc., be referred to the Executive Committee, with a view of a new edition being prepared, and to bring it up again, or something of that kind.

Mr. Horsley said that he would insert the words "For revision" instead of "For report thereon."

Dr. MacAlister moved as an amendment:

That the memorandum "Reciprocity of Medical Practice in Relation to Foreign Countries" be not reprinted.

Dr. Heron Watson seconded the amendment.

Mr. Horsley contended that that was not an amendment. He quite agreed with it, and should have to vote for it. He did not want the old Reciprocity Report reprinted. He thought it would be a great mistake to reprint it. The amendment did not affect his motion at all.

Dr. MacAlister's amendment was then put and carried.

On its being put as a substantive motion,

Mr. Victor Horsley asked the President's ruling as to whether, if it were carried as a substantive motion, it would do away with his motion altogether.

The President suggested that Mr. Horsley might add the following words to the motion: "And that its further issue should cease."

Mr. Horsley said he would be very glad to accept it.

Dr. MacAlister said it seemed to him that it would be a calamity if, on the *ex parte* statements which had been made, a document should be condemned which had been

approved by the Lord President of the Council. If any motion at all were passed, it must be of a neutral kind, and solely refer to the number of copies in their hands. He would add to his motion, so that it should read:

That the memorandum on Reciprocity be not reprinted without further order of the Council.

Mr. VICTOR HORSLEY moved as an amendment:

That the following words be added to the motion of Dr. MacAlister: "And that it be withdrawn from publication."

Sir PHILIP SMYLY asked if the resolution were carried, if that fact would be communicated to the Lord President and the Secretary of State for Foreign Affairs.

Sir WM. THOMSON thought that Dr. MacAlister's proposition was intended for the purpose of shelving the question altogether.

Dr. MACALISTER: Certainly.

Sir WILLIAM THOMSON said that if the amendment was carried the Council would stand in this position, that they would practically have abolished the document, because they condemned it by withdrawing it. If it were absolutely true and correct, why should they be ashamed of it, and why were they going to withdraw it? What was to become of the matter as soon as the 30 or 40 copies which were now in existence had gone, and a foreigner or a foreign Government asked to be informed upon the question of reciprocity? The Council would be in the position that it had condemned its own document by ceasing to reprint it.

The PRESIDENT ruled that Mr. Horsley's addition was really a rider to the resolution, and not an amendment.

Accordingly Dr. MacAlister's motion was put and carried.

Mr. HORSLEY then moved:

That the following words be added to the motion of Dr. MacAlister: "and that it be withdrawn from among the publications issued by the Council."

He said that he would take the opportunity to reply to the criticisms which had been made. He denied that his motion was a roundabout way of obtaining support to his views on the Medical Acts. Dr. MacAlister had said that the Apothecaries Act had never been enforced against persons without British qualifications, but that was not the case. The fact that Dr. Brown-Séquard had been allowed to practise as a consultant in London without opposition had no bearing upon the question, because in 1892 the French Government introduced a law by which no Englishman could practise in Paris. Thereby the state of things was entirely altered. There was no reciprocity between the United Kingdom and France, and therefore they could not refer to what went on 30 or 40 years ago.

Mr. Victor Horsley's rider was then put from the chair and declared to be negatived, 10 voting in its favour and 14 against.

On the requisition of Mr. Horsley the names were taken down, when it appeared that the numbers tied, 14 voting in favour and 14 against.

The PRESIDENT gave the casting vote against the rider, explaining that he followed the precedent of the Speaker of the House of Commons, who under like circumstances always voted in favour of things remaining as they were.

Sir CHRISTOPHER NIXON moved as a rider:

That the memorandum be referred to the Executive Committee for consideration and report.

Sir WILLIAM THOMSON seconded the motion.

The PRESIDENT stated that the proposition would read:

That the memorandum on Reciprocity be not reprinted without further orders of the Council, and that it be referred to the Executive Committee for consideration and report.

This was agreed to, 25 voting in favour and none against.

THE RIGHTS OF MEMBERS OF THE COUNCIL.

Dr. GLOVER moved and Dr. BRUCE seconded a resolution, which, after several suggested alterations had been accepted, and after an amendment by Mr. GEORGE BROWN—to the effect that all petitions, memorials, letters, and documents, excepting those relating to purely registration business, should be open to inspection by members of the Council for three days in each month—had failed for want of a seconder, was adopted in the following terms:

That members of the Council who desire access to documents which are the property of the Council be required to obtain leave for inspection either from the Council, from the Executive Committee, or, when neither body is in session or about to be in session, from the President. The application for leave to be in writing, and to specify as far as possible the nature of the documents to which access is desired, and also the purpose for which the inspection is to be made. Leave to inspect documents relating to penal cases not to be given except by the Council itself. All information obtained from the inspection of documents to be regarded as strictly confidential.

THE MIDWIVES BILL.

The following letter from the Honorary Secretary of the Midwives Bill Committee, dated May 19th, remitted by the Executive Committee to the Council, was read:

On May 2nd the Lord President of the Privy Council received a deputation of the promoters of the Midwives Registration Bill now before Parliament. The Lord President entered fully into the subject, and pressed on the promoters of the measure the extreme desirability of their coming to some definite understanding with the medical profession as represented by the General Medical Council. As directed by the Lord President, the Midwives Bill Committee at their last meeting resolved to approach the General Medical Council with the view of making such alterations in the present Bill as would secure for it the support of the General Medical Council, or of arriving at a clear understanding with regard to the lines upon which another Bill should, in their opinion, be framed. With this object the promoters of the Bill appointed seven delegates, four of whom are members of the Midwives Bill Committee, one being Mr. J. B. Balfour, M.P., and the others medical members of that Committee; while the remaining three delegates are members of the Association for Promoting Compulsory Registration of Midwives, a body representing a section of the general community in sympathy with the movement. The promoters of the Bill have carefully studied the recent report of the General Medical Council to the Lord President, and are especially anxious to ascertain the precise bearing of some of the clauses of that report, as well as the opinion of the General Medical Council on some important points not explicitly mentioned in it. I am therefore instructed by the Midwives Bill Committee to inquire whether the General Medical Council would be willing to receive the above referred to delegates of the promoters of the Bill, or to appoint a committee to confer with them.

Dr. BRUCE moved and Dr. ATTHILL seconded the following motion:

That a committee be appointed to confer with the delegates of the Midwives Bill Committee, and to report to the Council.

In the course of the discussion which followed it was pointed out that the word "confer" simply meant that the Committee would listen to the arguments of the delegates, and not that it would discuss the matter with them.

Dr. MCVAIL thought that the delegates should state what they had to say before the Council in the presence of reporters, and he therefore moved as an amendment:

That the Midwives Bill Committee be informed that the General Medical Council is willing to receive a deputation of the Committee during the present session.

Mr. HORSLEY seconded.

The amendment was put and negatived. The original motion was then agreed to by 17 against 6.

Dr. BRUCE moved that the following should constitute the Committee: Sir Richard Thorne, Dr. Glover, and Dr. MacAlister.

Dr. ATTHILL seconded the motion.

Dr. MCVAIL moved the addition of Sir Christopher Nixon's name to the Committee, and Dr. Bruce accepted the suggestion.

The Committee was accordingly appointed to consist of these gentlemen.

ASSISTANT EXAMINER: APOTHECARIES' HALL, IRELAND.

The Council considered the subject of the appointment of assistant examiner to the Apothecaries' Hall, Dublin, rendered necessary by the resignation of Mr. Arthur Chance. Mr. Chance, in his letter of resignation, explained that he found the dates on which the Final Examinations in Surgery were to be held clashed with his engagements as Examiner to the College of Surgeons.

A committee was appointed, consisting of Mr. Bryant, Mr. Carter, Mr. Tichborne, Dr. Little, and Dr. Heron Watson, to consider the appointment.

Thursday, May 26th.

Sir WM. TURNER, President, in the Chair.

DISCIPLINARY INQUIRIES.

The Council first considered the case of Mr. William Masson, of Cottingham, East Yorkshire, registered in Scotland as M.B., Mast. Surg., 1888, Univ. Aberd. Mr. Masson had been charged at the November session with "covering," and

the Council then decided that the charge had been proved, but that its further consideration should be adjourned until the present session.

Mr. MASSON attended in answer to the summons, and declared that the unqualified assistant complained of had been dismissed, and that he had no other. He also gave an assurance that he would not in future employ any unqualified assistant.

The Council considered the case *in camerâ*, and on strangers being readmitted

The PRESIDENT announced that the Council, having further considered the charge, did not judge Mr. Masson guilty of infamous conduct in a professional respect. In coming to that decision reliance had been placed upon the statements Mr. Masson had made.

The next case, that of Mr. Julius Mostertz, of 13, Salisbury Road, Noel Park, N., registered in England as Lic. Soc. Apoth. Lond., 1893, was similar in all respects to the foregoing. Mr. Mostertz attended, and made a like statement to that made by Mr. Masson, and his case having been considered *in câmera*, he was informed that the Council did not judge him guilty of infamous conduct.

NOTICE OF MOTION BY MR. TEALE.

On the motion of Mr. TEALE, seconded by Mr. BROWN, it was agreed that the petitions and communications relating to unqualified assistants referred to the General Council by the Executive Committee, be now referred to a Committee for report thereon to the Council, the Committee to consist of Mr. Teale (Chairman), Dr. Church, Dr. MacAlister, Dr. Bruce, Mr. Bryant, and Mr. Brown.

[The report will be continued in our next issue.]

LITERARY NOTES.

THE English translation of Professor Schenk's book on *The Determination of Sex*, a full analysis of which was published in the BRITISH MEDICAL JOURNAL of May 7th, p. 1224, has now been published in London by the Werner Company.

The fundamental points in the teaching of Lombroso and his school are that certain criminal tendencies in man depend more on the organic constitution of the individual than on his will, and that criminal acts are often the result of impulsive movements which escape, to a greater or lesser extent, the control of the intellect and the will. A writer in the *Unione Medica Italiana* points out that both these doctrines were clearly formulated in the writings of a great luminary of scholasticism, St. Thomas Aquinas. In the *Summa Theologica* there occurs the following passage (1a, 2a, Quaestio xvii, Art. vii):

Appetitus sensitivus in hoc differt ab appetitu intellectivo, qui dicitur voluntas quod appetitus sensitivus est virtus organi corporalis.....omnes autem actus virtutis utentis organo corporali dependent non solum ex potentia animæ, sed etiam ex corporalis organi dispositione sicut visio ex potentia visiva et ex qualitate oculi.....; unde et actus appetitus sensitivi non solum dependent ex vi appetitiva, sed etiam ex dispositione corporis.....Qualitas autem et dispositio corporis non subiacet imperio rationis; et ideo ex hac parte impeditur quin motus sensitivi appetitus totaliter subdatur imperio rationis.

Which may be rendered as follows:

The sensitive appetite differs from the intellective appetite, which is called will, in this, that the sensitive appetite is the faculty of a bodily organ ..... But all acts of a faculty using a bodily organ depend not only on the power of the soul, but also on the disposition of the bodily organ, as sight or visual power, and the quality of the eye. Wherefore the acts of the sensitive appetite also depend not only on the appetitive power but on the disposition of the body. The quality and disposition of the body, however, are not under the control of the vision; and thus it is that the movement of the sensitive appetite is not entirely subject to the governance of the reason.

The Angelic Doctor goes on to say:

Contingit etiam quandoque, quod motus appetitus sensitivi subito concitatur ad [sequendam] apprehensionem imaginationis vel sensus, et tunc ille motus est praeter imperium rationis. (It happens sometimes that the movement of the sensitive appetite is suddenly excited to follow the apprehension of the imagination or the senses, and then that movement is beyond the dominion of the reason.)

The following account of Thomas Hobbes, "the philosopher of Malmesbury," author of the *Leviathan*, is given by Aubrey, whose description of William Harvey was recently quoted in this column. Even in these days of "grand old men," Hobbes would have been remarkable for the conservation of his intellectual vigour to a very advanced age. He lived to be 91. His mode of life is, therefore, interesting from a hygienic point of view:

Mr. Thomas Hobbes's person, etc.:—In his youth unhealthy; of an ill yellowish complexion; wett in his feet, and trod both his shoes the same way. From forty, or better, he grew healthier, and then he had a fresh, ruddy complexion. He was *sanguineomelancholicus;* which the physiologists say is the most ingeniose complexion. In his old age he was very bald (which claymed a veneration); yet within dore, he used to study, and sitt, bareheaded, and sayd he never tooke cold in his head, but that the greatest trouble was to keepe off the flies from pitching on the baldnes. His skin was soft and of that kind which my Lord Chancellor Bacon in his *History of Life and Death* calles a goose-skin, i.e., of a wide texture. Face not very great; ample forehead; whiskers yellowish-redish, which naturally turned up—which is a signe of a brisque witt. Belowe he was shaved close, except a little tip under his lip. Not but that nature could have afforded a venerable beard, but being naturally of a cheerfull and pleasant humour, he affected not at all austerity and gravity and to looke severe. He desired not the reputation of his wisdome to be taken from the cutt of his beard, but from his reason. He had a good eie, and that of a hasell colour, which was full of life and spirit, even to the last. He was six foote high, and something better, and went indifferently erect, or rather, considering his great age, very erect. ..... His contemplation was much more then his reading. He was wont to say that if he had read as much as other men, he should have knowne no more then other men. Besides his dayly walking, he did twice or thrice a yeare play at tennis (at about 75 he did it); then went to bed, and was well rubbed. This he did believe would make him live two or three yeares the longer. He had alwayes bookes of prick-song lyeing on his table:—e.g., of H. Lawes', etc. *Songs*—which at night, when he was abed, and the dores made fast, and was sure nobody heard him, he sang aloud (not that he had a very good voice) but for his health's sake; he did beleeve it did his lunges good, and conduced much to prolong his life .....

A bust of Sainte Beuve, the famous French critic, will shortly be placed in the Luxembourg Gardens in Paris. The erection of this memorial to the author of the *Causeries du Lundi*, is due to the initiative of Dr. Cabanès, editor of *La Chronique Médicale*. Sainte Beuve in early life studied medicine; he was a dresser under Dupuytren, a clinical clerk under Richerand, and a deputy *interne* in the St. Louis Hospital. The hero of Sainte Beuve's first work, *Joseph Delorme*, was a medical student, whose passions (as Macaulay said of those who fell under the spell of Byron) had consumed themselves to dust, and on whom the sweetness of the heart had ceased to fall like dew. The hero, in whom Sainte Beuve had pictured himself, was unkindly described by Guizot as *un Werther carabin* (*Carabin* = Sawbones). Sainte Beuve retained throughout life his interest in medicine, and a large proportion of the subscribers to his memorial are members of the medical profession.

In a recent number of the *Janus* Dr. K. Karoe, of Copenhagen, shows that for some four centuries the public executioners in Denmark practised medicine and surgery. In the seventeenth century King Christian the Fourth called in the hangman of Glückstadt to examine the foot of the Crown Prince. The diseased extremity did not get well under the care of the man of art, whose special skill, it may be surmised, lay more in the treatment of the head than of the foot. Nevertheless, he received a fee of 200 rix dollars, besides a large silver-gilt goblet. King Christian the Fifth paid a like sum to the executioner of Copenhagen for curing the leg of one of the royal pages. Another hangman of the same city, Andreas Liebknecht, is said to have been the author of a book on the Neapolitan disease (syphilis). Traces of the legal recognition of the public executioner as a medical practitioner are to be found up to the present century. The most likely explanation of this remarkable association of functions is, we fear, to be found in a hazy notion that a man who could kill *secundum artem* must be credited with some skill in curing.

A similar cumulation of functions existed in Norway. Thus Eric Petersen, born in 1766, a chairmaker by trade, was appointed executioner at Tronjhem in 1796. After two years' practice in helping malefactors to shuffle off this mortal coil, he was judged fit for the exercise of the healing art, and was appointed assistant in the hospital of that city. In 1808 he served as surgeon-major in the war with Sweden, when he had charge of an ambulance. From 1810-12 he was in medical duty at Tronjhem throughout an epidemic of typhoid fever. In 1814 he retired with the rank of surgeon-major. But he still continued to practise his other profession of executioner, occupying his leisure moments partly in vaccinating and partly in making chairs. In 1818 he conceived a wish to resume the practice of medicine, and applied for a licence to that end; but times had changed, and his request was refused. Petersen died in 1835.

A REPORT ON THE OPEN-AIR TREATMENT OF PHTHISIS IN SANATORIA.

IV.

SANATORIA IN ENGLAND *(continued)*.

ABOUT two years ago Dr. Arthur Ransome, F.R.S., brought to the notice of the Bournemouth Medical Society the importance of the systematised treatment of phthisis in the open air, as pursued on the Continent and in America. Dr. Ransome's scientific position and the important contributions which he has made to the etiology and treatment of pulmonary tuberculosis enabled him to speak with authority, and his words fell upon fruitful ground. We are informed that during the last eighteen months there have been two fully equipped sanatoria in existence at Bournemouth, under the direction of Dr. Pott and Dr. Denton Johns respectively. They are specially arranged for the open-air treatment of phthisis, but cases have been treated on this principle at Bournemouth by Dr. Ransome during the last three years. In another address to the Bournemouth Medical Society Dr. Ransome recently gave some account of the results which he had been able to observe, and discussed the conditions which must be fulfilled if the open-air treatment of phthisis is to yield its best results. He expressed the opinion that neither a particular latitude nor any special altitude above the sea could be considered necessary, and that very varying conditions of climate might be attended with equal success. He quoted the views recently expressed by Professor von Ziemssen upon these points. The advantages of mountain climates were the pure dry air and the slight wind in winter; the disadvantages were the occurrence of marked atmospheric changes (rain, snow, etc.), the wearisome journey, the separation from the family, the want of comfort in severe illness, and the financial anxiety. Dr. Ransome quoted the following conditions as to the sites for open-air treatment laid down by Dr. Léon Petit, after Turban:

1. The surrounding air must be pure, and hence the sanatoria must not be near great towns or factories giving off dust, soot, or deleterious gases.

2. The soil upon which a sanatorium is constructed should be sandy, without humidity, so as to give the smallest possible amount of mist or fog after sunset. Plains well exposed to the south, or broad valleys fully open to the sun, are particularly favourable, provided they are sheltered by hills against north and north-west winds. The immediate neighbourhood of a forest of pines is likewise very desirable, both as a purifier of the air and as a shelter, in summer against the heat, and in bad weather against the wind.

3. The consumptive patient must not feel himself to be in a barrack or in a prison; he should have before his eyes something better than walls. An extensive view exercises upon both mind and body a reflex action that is most beneficial. An elevated site and gentle slope from it is therefore indicated. Well provided with fresh water, if possible from a spring, it should be sufficiently extensive to afford a large garden, or better still, a park surrounding the building.

4. The access to a sanatorium for phthisical patients should be as easy as possible, and it should not, therefore, be far from a railway station, and the roads in the neighbourhood should be in good order.

Dr. Ransome observed that all these conditions could be fulfilled at Bournemouth and in its immediate neighbourhood. He then pointed out that in the treatment of all cases the constant supervision of the medical attendant is absolutely necessary. The treatment involved (1) for many patients rest in the recumbent posture for the greater part of the day, generally in open verandahs or shelters, sometimes in the open grounds; (2) careful, but full, feeding; (3) "massage" in certain cases; (4) in others carefully graduated exercises; (5) the judicious use of baths or cold sponging; (6) the provision of suitable amusements; and (7) appropriate medicinal treatment.

While the hygienic rules for the treatment of a phthisical patient are simple, their application in individual cases is often difficult and delicate. In order to inspire the necessary confidence in the patients and in his attendants, who are often difficult to convince, the physician must have full faith in the efficacy of his method for the cure of a large proportion of all cases. He must have a sufficient knowledge of the extent of the disease, and of the temperament of the consumptive, to enable him to arrive at something like an accurate prognosis. In not a few cases the disease, even under the most favourable circumstances, runs its course almost without a break, whereas in not a few advanced cases periods of quiescence occur which give some hope of permanent improvement, and the physician should know both how to warn and how to encourage.

Dr. Ransome teaches that in the early stages of the treatment the patient must be acclimatised to the open air, and his fear of catching cold must be gradually overcome. The great object is to have perfectly pure air everywhere about the patient day and night. The air of an inhabited chamber is seldom absolutely pure, and even with the windows wide open ozone can seldom be detected within it. In the daytime, therefore, the object should be to get the invalid into the open, or lying down in an open verandah or kiosk. At night windows must be kept as widely open as the velocity of the wind will permit. Patients quickly lose their dread of cold when they find how seldom a "chill" occurs in the open air. Another point to which Dr. Ransome attaches importance is the regulation of the time during which the patient must be in a recumbent position. For some an hour's recumbency after each meal was sufficient, whereas others must lie down most of the time that they are in the open, as they cannot be kept thoroughly warm in any other position. Such patients often require massage also, in order to keep up muscular tone and assist nutrition. The amount of exercise and its nature must be prescribed by the medical attendant, and its effects watched. Further, the amusement permissible must be rigorously laid down. Dr. Ransome recommends that while the object to be aimed at in feeding is to give the fullest possible diet; the particular food which each invalid can take and use must be ascertained. Dettweiler's saying, "*Ma cuisine c'est ma pharmacie*" must be taken very seriously. The object to be aimed at is to nourish the body to the utmost without overtaxing the alimentary organs, and for this watchful supervision is necessary. Baths and bathing, often of great service, also need discrimination in their application. With regard to treatment by drugs, Dr. Ransome condemns the routine practice of ordering a few capsules of creosote or guaiacol or small doses of their carbonates. Constant medical attendance is necessary for phthisical patients, and an active interest must

No.	Name.	Sex.	Age.	Stage of Disease.	Date of Commencing Treatment.	Duration of Treatment.	Weight Gained or Lost.	Remarks.
1	H.	M.	29	III. Both sides	Aug., 1895	18 months	+ 28 lbs.	Quiescent 2½ years.
2	O.	F.	23	III. Both sides	Sept., 1895	2 years	+ 28 lbs.	Quiescent 2 years.
3	S.	F.	21	III. Left	Oct., 1895	4 months	+ 8¾ lbs.	Quiescent 2½ years.
4	F.	M.	22	I. Left	May, 1896	1 year	+ 14 lbs.	Quiescent 2 years.
5	B.	M.	18	II. Right	Oct., 1896	6 months	+ 19 lbs.	Quiescent 1½ year.
6	N.	F.	28	I. Right	Nov., 1896	4 months	+ 5 lbs.	Lost sight of.
7	Sl.	M.	45	III. Left	Nov., 1897	7 months	+ 7 lbs. in 6 weeks	Temporary improvement; quiescent 2 months.
8	G.	M.	27	I. Right	Dec., 1896	4 months	+ 10 lbs.	Quiescent 1 year.
9	M.	F.	26	III. Right	Dec., 1896	3 months	—	General improvement; lost sight of.
10	Hm.	F.	34	III. Both sides	Oct., 1897	8 months	+ 6 lbs. in 6 weeks	Quiescent 6 months.
11	By.	F.	49	III. Right	Jan., 1898	5 months	+ 9 lbs.	General improvement.
12	T.	F.	24	II. Left	Nov., 1897	6 months	+ 11½ lbs.	Quiescent 5 months.
13	Sh.	F.	34	III. Left	Jan., 1897	1 year	Not taken	Quiescent 18 months.
14	C.	F.	30	I. Right	Oct., 1897	4 months	Stationary	Quiescent 6 months; bacilli disappeared from sputum.
15	C. C.	M.	23	III. Both sides	Oct., 1897	8 months	Increased 6 lbs. at first	Temporary improvement only, worse afterwards.
16	Hy.	F.	16	III. Left. I. Right	Sept., 1896	1 year	+ 12 lbs.	Quiescent several months.
17	de W.	M.	4	? III. Right	Oct., 1896	1 year	—	Recovery.

be taken in their daily management. Dr. Ransome was able to make a report upon 17 cases of phthisis which had been treated by medical men who had adhered strictly to the necessary conditions. In 15 of these cases the tubercle bacillus was found. In the 2 other cases no sputum was obtainable.

The period of time during which they have been under observation is too short to justify any conclusions as to the likelihood of complete cure; it is only possible to point to evidences of improvement in their general condition, and of, at any rate temporary, quiescence of the disease. A small number—6 or 7—of obviously hopeless cases in which the open-air treatment was tried, but in which the disease progressed from bad to worse from the outset, have been omitted from the list; but it may be mentioned that even in these cases some amelioration in their condition from the use of abundant aëration was apparent.

It will be seen from the table, that 2 of the patients gained about 28 lbs. in weight during the treatment; 1 gained 19 lbs.; 9 others gained weights varying from 5 to 12 lbs.; 1 was stationary; and of 3 the weight was not taken. In 7 cases the disease is now quiescent, and has been so from periods of from one to two and a-half years. Most of these may probably be put down as deserving of Dettweiler's designation of "relative cures." Four others are also now quiescent, and have been quiet for periods of four to six months; and these must still be regarded as under suspicion. Two are simply noted as having improved, and 3 as having improved for a time and then relapsed, the disease now progressing. The child mentioned as being a doubtful case has now entirely recovered.

Though these results are inconclusive, yet so far as they go they seem favourable to a more prolonged trial of the system. They compare favourably with the results which we were in the habit of obtaining from the older methods of treatment, combined simply with free ventilation, without such systematic exposure to the open air. They are at least not less favourable than those reported from the various sanatoria on the Continent.

THE PLAGUE IN THE EAST.

Bombay.—We are without official statements as regards the numbers of plague patients in the city of Bombay during the past week, but the general statement that plague is rapidly disappearing is satisfactory. Only a fortnight ago we stated that Bombay, of Asiatic cities, led in regard to the death-rate from plague, but two others now claim priority, namely, Karachi and Hong Kong.

Karachi.—The news from the great seaport at the mouth of the Indus is bad. Plague is spreading, and the people are flying panic-stricken from the town. The actual numbers up to May 6th are as follows:

	April,		May.					Total for the Week.
	29th.	30th.	1st.	2nd.	3rd.	4th.	5th.	
New Cases ...	64	86	70	83	78	100	101	582
Deaths	43	67	58	44	76	72	80	440

The total number of cases and of deaths in Karachi since the recrudescence down to May 6th has been 1,007 and 740 respectively. The same objections are being raised in Karachi by the natives as elsewhere. On May 2nd 500 Mohammedans petitioned the Commissioners in Sindh that quarantine restrictions should be removed, and that their sick might be allowed to be treated in their own homes. The present outbreak far exceeds in virulence the epidemic of 1897.

Punjab.—In the Garhshankar district of the Punjab serious plague riots have occurred, and several lives have been lost. The cause of the outbreak is, as usual, the objection to segregation. The natives refused to comply with any of the Government demands, and even went so far as to bury the bodies of those who died of plague inside their dwelling houses.

Calcutta.—Whatever is the cause, there seems no doubt that plague is disappearing in Calcutta. The epidemic with which the city has been threatened now, for the second time, has abated, and the latest reports have it that during the past week only some half-dozen cases have occurred. Some ascribe the immunity to quarantine, some to the high temperature, others to the belief that Calcutta is outside the plague zone. One or two of these points at least will be settled when the cold weather returns, and it is to be hoped that between this time and winter the natives of Calcutta will be educated in the measures which the Government intend to adopt for its suppression. The feeling of the masses in Calcutta has been again shown, by their breaking out in open rebellion, and causing a serious riot at Bhowanipur on May 20th. In this suburb a doctor, who was engaged in selecting an isolation site, was mobbed and pursued until he found refuge in a house near by. The crowd threatened to break into the house, so that the doctor in self-defence had to fire his revolver at the assailants. One person was killed and two more wounded, and it was not until the police arrived in force that the medical officer was rescued from his perilous position.

Hong Kong.—According to a telegram received at the Colonial Office, dated May 23rd, 112 cases of plague, with 107 deaths, had occurred in Hong Kong during the week. From first to last there have been no riotous outbreaks in Hong Kong. This may be due to the superior intelligence of the Chinese; but it must be ascribed in part, perhaps, to the greater harmony between the Chinese and the British authorities generally, and to the means of repression which have been adopted. Dr. Clark, in his health report, bewails the continuance of insanitary dwellings in the city of Victoria, and raises his voice in no uncertain manner against the criminal licence allowed landlords in the matter of building and letting out their tenements.

MIDWIVES REGISTRATION.

SIR J. BLUNDELL MAPLE'S BILL.

WE have received the following correspondence for publication:

129, Dulwich Grove, May 16th, 1898.

DEAR SIR BLUNDELL MAPLE,—As I see you are interested in the midwives question, I think you may like to know the opinion of medical men among your constituents on the subject. The principle of your Bill, which is printed in this week's BRITISH MEDICAL JOURNAL, appears a sound one—namely, that every parturient woman should be seen by a qualified medical practitioner (either male or female) and that if she is too poor to pay for medical attendance, it should be paid for out of public funds; but the mode in which it is proposed to carry out this principle seems open to objection. (1) In the first place, the fee of 2s. 6d. is altogether inadequate: it would not remunerate the Poor-law medical officer for being called at any hour of the day or night to a confinement, and having to investigate the proceedings of a midwife and share her blame if anything subsequently went wrong with the case: 7s. 6d. in the country, with mileage allowance, and 10s. in towns, would be quite little enough for such work. (2) The Poor-law doctor is hardly a suitable person to be made sole judge whether a midwife should be registered or not, and whether, after registration, she should be kept on or put off the register. The County Council or its medical officer would be a much better authority, and in any case there should be provision for an appeal. (3) The Bill makes no provision for stopping the so-called midwives procuring abortion, which many of them almost openly do, and advertise themselves as having a stock of drugs, chemicals, &c., and it is well known some of them use instruments for the purpose.

The only satisfactory legislation, I think, would be on the lines of the General Medical Council's report, a copy of which I enclose herewith.

Faithfully yours,

H. NELSON HARDY.

Sir J. Blundell Maple, Bart., M.P.

Clarence House, Clarence Terrace, Regent's Park, May 18th, 1898.

DEAR SIR,—I am desired by Sir J. Blundell Maple to acknowledge the receipt of your letter of the 16th inst., and, in reply, to say that he is much obliged to you for entering at such length upon a subject in which he takes a very considerable interest.

I am, dear Sir,

Yours obediently,

JOHN L. LUCAS.

Dr. H. Nelson Hardy, 129, Dulwich Grove.

THE notice issued by the French Minister of Agriculture to the effect that all importations into France of meats containing borax or boracic acid will be prohibited takes effect from next month.

SPECIAL CORRESPONDENCE.

BERLIN.

Medical Reform.—Return of Professor Koch.—The Berlin Ambulances.

The medical reforms long promised by the Prussian Government are beginning to show their first signs of life; a draft of a new set of rules and regulations regarding (*a*) the position and sphere of the "Kreisarzt" or district physician; and (*b*) the compulsory establishment of Hygienic Committees and Boards of Health in all towns with more than 5,000 inhabitants, has been submitted to the provincial governors, and is expected to occupy the Diet during the next session. With regard to the "Kreisarzt," the draft states that he is (1) to give his report or opinion on matters connected with public health when called upon to do so by the lay district officials; (2) to watch carefully over the hygienic conditions of his district, and to enlighten its population on subjects connected with hygiene; (3) to see that the sanitary laws are properly and efficiently carried out, and to exercise supervision over the registered midwives, dressers, chemists and druggists of his district; and (4) to bring to the notice of the proper authorities unsatisfactory or faulty conditions, and propose measures for their removal or improvement. The draft states further, that the lay district authorities as well as the head of the police are to consult the "Kreisarzt" before making any new arrangement or issuing police orders in matters connected with public health. Another paragraph provides that where delay would be dangerous the "Kreisarzt" is empowered to give orders and make arrangements for the prevention, diagnosis, or stamping-out of epidemic disease without consulting the lay authorities. And, finally, the "Kreisarzt" is to be the coroner of his district. These are the chief provisions of the draft with regard to the district physicians. Detailed and evidently carefully thought out, they are still far from giving complete satisfaction. In fact there is much comment on them in medical circles. In the first place the district physician's sphere of action is limited and hampered on all sides. An official whose *rôle* is confined to "proposals for reforms" and "opinions" to be submitted to the lay authorities, and who is not allowed to act independently except in cases of the greatest urgency and danger, can hardly hope to effect great reforms. But what is thought the chief defect of the draft is that it says nothing of an increase of salary for the district physician, though that is known to be a burning question. At present the salary accorded by the Government is so small that the holders are obliged to eke out their income by private practice; and when one considers their multifarious and onerous official duties, as enumerated in the draft, it is easy to see that it is almost impossible to combine the two without frequent clashing. Perhaps when the Bill comes before the House desirable changes may be made in it. It would certainly be for the credit of the profession, as well as for the benefit of the population, that the district physician should be a well salaried full Government official, with a freedom of action more in harmony with the important nature of his duties. The second division of the draft regulates the establishment and arrangement of local Boards of Health, or hygienic committees, over which the "Kreisaerzte" are to preside. These Boards of Health are to replace the old sanitary Commissions, the form of which is considered antiquated. Like these, however, they are purely honorary in character, and there seems to be no reason why they should not present the same dilemma as the old ones—namely, to call them in often causes the members to demur at the amount of time they are obliged to give up, and to call them in rarely renders them practically almost useless.

Professor Robert Koch has returned to Berlin after an absence of a year and a half, which he has devoted to the study of infectious disease in Africa and India. He and his wife were received at the station by many of his colleagues with their wives; bouquets were presented to Mrs. Koch, and there was something like an ovation.

On May 19th, Berlin was the scene of a curious experiment. Following the example of the military garrison-alarms, which the German Emperor delights in, the Berlin ambulances in all parts of the city were simultaneously called up by the fictitious alarm of a great catastrophe (accident to a crowd) at the Alexander-Ufer. It must be said that the police were in the secret, and had given permission for the experiment to be made. In little more than half an hour the ambulances with all their apparatus were on the spot, and so were surgeons from various hospitals (to whom information had been telephoned from the ambulance stations), with assistants, dressers, instruments, stretchers, etc. The result, on the whole, was highly satisfactory; still it must be confessed that an experiment of this kind is not without dangers of its own, for the rumours of a catastrophe on such a large scale might easily have produced a panic among the population; nor is it likely that the feelings of the surgeons and doctors thus suddenly forced to interrupt their hospital work were entirely favourable and complimentary. It would perhaps have been wiser to inform the medical staff of the hospitals beforehand of the fictitious nature of the alarm.

PARIS.

Diphtheria at the Children's Hospital.—Sanatoria for Poor Consumptive Patients.—Typhoid Fever among Arabs.—Medical Legislation.

M. Sevestre has very carefully drawn up the diphtheria statistics at the Hospital for Sick Children; they are as follows: Among 380 children attacked with diphtheria, angina, or croup, 102 died; the total mortality is thus at the rate of 17.40 per cent.; the corrected mortality rate is 10.68. M. Sevestre classes diphtheria cases under two headings, "pure diphtheria" and "associated diphtheria." In the mass he has met with 99 cases of streptococcal diphtheria. In pure diphtheria the total mortality is 14.34 per cent., and the corrected mortality is 8.24, but the mortality in streptococcal diphtheria is 32.32 per cent., and the corrected mortality 23.80. Dr. Sevestre treated his patients with antidiphtheria serum, and also washed out the throat with liqueur de Labarraque 50 per cent.; in very serious cases with chloral solution, 1 per 1,000.

Dr. Gaston Branthomme, practising in the Oise Department, suggests to the charitable that the sanatoria for tuberculous patients are undeniably luxurious and satisfactory, but not within reach of the poorer classes. At Agnetz, in the Oise Department, the Assistance Publique has built a costly sanatorium for its patients, but how many people can afford to pay 15s. a day, or even 10s. a day, the price paid by patients at Canigou? The only hope for the French tuberculous poor is the sanatorium at Agincourt. M. Branthomme expresses the hope that French provincial hospitals will one day possess sanatoria. He observes that it appears incredible that the same France which at one time owned 18 000 leper hospitals should not soon own hospitals for tuberculous patients. If the necessity for isolation were the only plea, that would be a powerful one, inasmuch as tuberculosis is the most terrible of all diseases, more destructive than cholera or the plague. It is easily circumscribed, yet it is allowed to spread insidiously. Not only have the poor to be considered, but the large section of human beings who earn a good living, but are neither rich nor poor. When illness overtakes them they fall into such straits that their condition is almost as bad as the absolute poverty which can appeal to charity. For this class of patients sanatoria from £2 10s. a month to £4 are necessary. The hospital at Berck under the jurisdiction of the Assistance Publique accepts patients at £2 10s. a month. Hospitals take in-patients at 10s. a day. M. Branthomme affirms that without incurring any great expense sanatoria for the poor and needy could be constructed near forests, having a much more cheerful aspect than characterises the majority of hospitals, asylums, *lycées*, or barracks of the present day.

Dr. Vincent, of the Val-de-Grâce Hospital, has observed that as a general rule French soldiers suffer a hundred times more severely from typhoid fever in Arabia than the native soldiers. This fact is somewhat startling, inasmuch as typhoid fever in Arabia is excessively serious. According to M. Vincent this immunity of the Arabs to typhoid fever is inherent and cannot be attributed to previous attacks or to

slow acclimatisation. Dr. Vincent has tested the agglutinating power of the Arab blood when in contact with the typhoid bacillus. In twenty-three cases not one furnished a clear instance of "clumping"; their blood behaved like that of people accessible to the attacks of typhoid. Dr. Vincent thus furnishes a fresh proof that the agglutinating property of blood is not really connected with typhoid immunity, either natural or acquired, but is undeniably a reaction from infection, perhaps one of defence, but not one of immunity.

Twenty-five medical men will sit in the new Chamber of Deputies: sixteen are Radicals, six Moderates, two Socialists, Revisionists, or Boulangists, and one Monarchist.

ROME.

Foreign Practitioners in Italy.—Suicides in Italy.

THE Italian Government has officially stated that it has no intention of modifying the laws at present in force in relation to foreign practitioners in Italy; consequently these practitioners can freely practise among non-Italian residents and visitors at least as long as the present Government remains in power. There is no doubt that this change in the intentions of the ministry is largely due to the action taken by the British medical men in Italy, and the support they have received from the British ambassador in Rome, Her Majesty's Government, the Medical Council, the various medical corporations in the United Kingdom, as well as the medical and the lay press.

The statistics of suicides in Italy, furnished by the Director-General of Statistics for the year 1896, show an increase of 50 per cent. in ten years. This increase is possibly due to the greater struggle for existence caused by the heavy taxation of the country, and perhaps also to the spread of education. The latter is supported by the fact that the greatest proportionate number of suicides has taken place in the provinces where education is most advanced. Thus in the province of Rome it was highest, 11.43 per 100,000 living; next come the provinces of Emilia, 10.11; Liguria, 10.11; and Lombardy, 7.17 per 100,000 living. It was lowest in the provinces of Calabria, 2.39; Basilicato, 2.92; and Puglia, 3 49 per 100,000 living where education is much neglected. The total number of deaths from suicides in 1896 was 2,000, which gives a mortality of 6.41 per 100,000 living; of this number 1,594 were males and 596 females. With reference to the civil state 884 were unmarried, 813 married, 177 widowers, 61 widows; of the remaining 65 the civil state was not known. These figures give 7.1 suicides in 100 from 10 to 20 years; 39.6 from 20 to 40; 33.1; from 40 to 60; 18.2 from 60 to 80; and 1.3 above 80 years. The greatest number of suicides caused their death by firearms (498), next come drowning (415), hanging (306), poisoning (168), asphyxia (105), and precipitation from a height (156). The greater number of suicides takes place in the summer (614), and in the spring (572), the least in the autumn (404).

MANCHESTER.

Feeble-minded Children.—Proposals with Regard to New Building for St. Mary's Hospital.—Sewage Question.—Infirmary Site Question.—"Royal Infirmary Students' Gazette."

IT seems remarkable that Manchester should have been so backward in taking effective steps to provide for the care and training of feeble-minded children. As long ago as last September a subcommittee was appointed by the Manchester School Board to visit London and report on the provision made by the London School Board for the instruction of feeble-minded children. It appears that in London there are no fewer than thirty schools provided by the London School Board for these children, who, by reason of physical or mental defects, could not be properly taught in the ordinary standards or by ordinary methods. Miss Dendy, at a recent meeting held to discuss this subject, under the chairmanship of Dr. S. Woodcock, brought forward some very important data relative to such children in Manchester. Miss Dendy visited all the Board schools of the city, saw no fewer than 36,900 children, and made note of over 500 cases that seemed to her to require special treatment. The Committee in September last decided that it was desirable that special centres for the treatment of feeble-minded children should be established by the Manchester Board. Subsequently Dr. Ashby visited the schools along with Miss Dendy. Presumably a similar state of things exists in the voluntary schools, so that probably there are considerably over 1,000 children in the elementary schools of Manchester who require special teaching or training entirely separate from the other children. It appears that there are about 1½ per cent. of the school-going population in need of special help in school; but these children vary greatly in their feebleness of mind. At present there is no power to compel parents to send their children to special homes that may be provided for defective children. Finally the following resolution was passed:

That the Manchester, Salford, and other local School Boards are strongly recommended to take early action in the direction of establishing special classes for the training of feeble-minded children.

Similar schools or centres exist in Birmingham, Bradford, and other large centres of population.

At a recent meeting of the Board of Management of St. Mary's Hospital the Chairman announced legacies to the amount of over £600. After more "than many days"—the proposed amalgamation between St. Mary's and the Southern Hospital having fallen through—the St. Mary's Board has now occupied itself with the preliminaries for a commencement of the building of the new hospital in Gloucester Street, Oxford Road, "which, greatly to the dissatisfaction of the Board, has been so long delayed." The excavations for the foundations will very shortly be commenced, although the necessarily large funds to be expended on the undertaking are, however, at present insufficient. The considerable sum already subscribed justifies a commencement, and the Committee hope that the public interest will be so stimulated during the progress of the work as to lead to increased subscriptions.

Still another phase of the sewage question. The City Council again discussed this question on a motion asking it to revert to the culvert scheme. After discussion the motion was withdrawn, and general approval was expressed of the course which the Rivers Committee are about to take, namely, to seek the opinion and advice of no fewer than three experts representing chemical, biological, and engineering science upon the scheme approved by the Council on the 20th ult.—in favour of bacterial treatment—and that "such experts shall be requested and authorised to advise as to any alternative scheme which may be put before them or which they may themselves recommend."

It seems pretty evident that the local courts mean to enforce their instructions to offending corporations in the question of sewage. At the Salford County Court this week the Salford Corporation were summoned for non-compliance with an order made as long ago as 1895 in respect of pollution of the river Irwell and the Manchester Ship Canal. The proceedings were instituted by the Mersey and Irwell Joint Committee. The judge, in giving his decision, said that he regarded what had been put forward by the Corporation as flimsy excuses. He warned the Corporation that if a small fine was of no use then he supposed it would be his duty to inflict the maximum penalty—that is, £50 per day. A penalty of £100 was imposed.

We wrote last week of the "rustle" of the approaching infirmary site question. On Monday last the Manchester Infirmary Board had before them the following resolution, passed by the Committee of the City Council:

That inasmuch as the City Council has declined to entertain the purchase of the land adjoining the Manchester Royal Infirmary, at the price of £286,000, and having regard to the need for a new public library and art gallery for the city, the infirmary trustees are respectfully requested to state whether they are prepared to negotiate for the sale of the entire infirmary area, including the site of the existing buildings, and, if so, what is the lowest price they will ask? Further, should the Infirmary Board think it desirable to reserve sufficient land for the purpose of a receiving house facing Parker Street, what is the lowest price they would require for the remainder of the infirmary area?

The House Committee of the infirmary, after discussion, and by 8 votes to 6, resolved to reply to the Corporation Committee:

That the Board of Management is of opinion that it would not be desirable in the interests of the infirmary to sell the infirmary site.

An amendment generally favourable to the resolution of the Corporation was defeated. Later on the Infirmary Board unanimously approved of the decision of the House Committee.

The first number of the *Manchester Royal Infirmary Students' Gazette* is admirably got up, with a striking red cover with the letters R.I.M. printed diagonally on it. Its object avowedly is that of filling up the gap which undoubtedly exists between past and present Manchester men. It is edited by Messrs. Wylie and Roney Schofield. The staff of the infirmary contributed fourteen out of the thirty pages. This new departure ought to have a long and prosperous career.

CORRESPONDENCE.

DEATHBED SCENES.

SIR,—In reading the newspaper accounts of the illness and death of Mr. Gladstone, it strikes me as being a great pity that medical men of high standing, on being interviewed by representatives of the press, should enter into such unnecessary details. How many of the general public, for instance, are likely to know the meaning or significance of "Cheyne-Stokes breathing?" If such graphic descriptions of a deathbed must appear to satisfy the cravings of morbid minds, let them come from other than members of the medical profession. We have no wish to surround the practice of our noble profession with mystery, but I do think the way in which medical men enter into details of diseases and the action of drugs with their patients and the public is both unnecessary and absurd. But here, again, those high in the profession are often the greatest offenders. Is it that they are so learned they cannot keep it to themselves, or is it that they know so little they wish to make the most of it? To me the whole thing seems very akin to advertising, but this is only the opinion of

May 22nd. A COUNTRY PRACTITIONER.

THE VACCINATION BILL.

SIR,—Although you have persistently advocated the payment of private practitioners by the Government for vaccination performed according to the regulations of the Local Government Board, yet I must confess that I have failed to see the cogency of the arguments you have adduced in favour of such a proposal. In the first place, I would like to ask whether the fee which will be paid is likely to induce private practitioners to take any trouble in "hunting up" the children whose vaccination has for various reasons been neglected? In the second place, supposing that family doctors must be more keen in looking after the infants, is it likely that the parents would become more reconciled to the operation of vaccination, especially if performed according to the rules of the Local Government Board? It can hardly be disputed that at present the number of vaccinations performed by medical men whose practice lies chiefly amongst the working classes is due to the fact that they (the medical men) vaccinate in one or two places only. In the third place, I may ask, Is it quite fair to public vaccinators who have not been remunerated at too excessive a rate for the work they performed to make all practitioners share in the proceeds? It cannot be denied, I fancy, that public vaccinators have carried out the duties of an office which has proved anything but popular with the public at large.—I am, etc.,

Cardiff, May 24th. T. GARRETT HORDER.

MEDICAL WITNESSES AND THEIR FEES.

SIR,—I am glad to see that at last there seems a likelihood of some action being taken by the Council of the Association to bring before Parliament the injustice of the present state of the law as contained in the Coroners Act, and especially as it bears on honorary medical officers of cottage hospitals, who are now refused fees for giving evidence and making *post-mortem* examinations on cases that come under their care.

As a medical officer of a cottage hospital which treats a large number of accident cases during the year, the injustice of this refusal of fees has repeatedly come under my notice both in my own case and in the practice of my colleagues. I have myself tried, and the Committee of our hospital have also tried, by communications with the coroner, with the local members of the Kent County Council, and with its Chairman, to see if we could obtain redress, but all our representations have been set aside by quoting the Section of the Coroners Act which has been often referred to in the columns of the BRITISH MEDICAL JOURNAL. From this and the recent decision of the judges of the Court of Appeal, it seems clear that the only means of redress is by a rewording of the Section or the addition to the Act of a short clause excepting from its scope medical officers of cottage hospitals.

What makes this refusal of fees so unfair to medical officers of cottage hospitals is the fact that paid medical officers of union infirmaries do receive such fees, the favour being conceded to them I believe owing to powerful representations made by the Poor-law Medical Officers' Association. If this could be effected by the energetic action of a small body such as I have referred to, surely a large powerful body such as the British Medical Association ought to be able to procure an alteration of the law in favour of its members.—I am, etc.,

HERBERT J. ILOTT, M.D., C.M.Aberd., M.R.C.S.

Bromley, Kent, May 21st.

*** The proviso to Section XXII of the Coroners Act, 1887, has given rise to a good deal of difference of opinion among lawyers as to the institutions to which it applies. The London County Council in paying fees to medical officers of workhouse infirmaries are acting upon an opinion of Sir H. B. Poland, Q.C.

THE EFFECTS OF THE DUM-DUM BULLET FROM A SURGICAL POINT OF VIEW.

SIR,—It appears that Professor von Bruns's communication on Bullet Wounds in the German Surgeons Congress has been misunderstood. His paper has not yet been published, but I was present when it was delivered, and heard every word. And he had besides the goodness to show me privately his photographs and skiagraphs.

Von Bruns did not employ, so far as I understood, the words "inhuman" or "brutally inhuman," and certainly not in reference to the dum-dum bullet.

Unmenschlich is the German word for inhuman; *inhumane Kriegsgeschosse*, the term he used, signifies "inhuman projectiles."

Moreover, von Bruns expressly guarded himself from condemning the dum-dum bullet in wars with barbarous races; his aim—a most laudable one in my estimation—was to arouse public opinion against the introduction into European warfare of bullets so far denuded of their mantle as to be virtually explosive.

Von Bruns's experiments were made with bullets which he exhibited, stripped of their mantle for about 1 centimetre from the tip, such as are used by sportsmen from the Mauser rifle in killing big game, and the illustrations he gave of their effects were most convincing, and justified his thesis. Even the soft parts, when struck by them, were blown away as if from the mouth of a gun, while the skin was torn with long slashes, evidencing internal expansion of a most violent kind.

The dum-dum bullet, on the contrary, has its mantle removed for only 2 or 3 millimetres from its tip, and its explosive or expanding action must be much less marked.

But it is certain that a further extension of the dum-dum system would produce bullets as explosive as the hollow expanding bullets already condemned in warfare, though retained in killing large game.—I am, etc.,

Aberdeen, May 21st. ALEX. OGSTON.

SIR,—I have read with great interest the remarks of Surgeon-Colonel Stevenson, A.M.S., in the BRITISH MEDICAL JOURNAL of May 21st, and gather from it that he attributes to Professor v. Bruns undue warmth in his recent remarks upon the effects of the dum-dum bullet. If I am correct, I cannot but feel that in this he quite unintentionally does Professor v. Bruns an injustice. I happen to have been present when the address was delivered. I was but a few feet

off from the speaker, and listened to the address with the closest attention and, I admit, a certain amount of sensitiveness, as was natural. I also examined the specimens illustrating the effects of the bullet, and the skiagraphs. The conclusion I came to was that no one could have handled the gruesome subject in better taste than v. Bruns. The title (now before me) in the printed "Tages-Ordnung" was "Inhumane Kriegsgeschosse," but beyond demonstrating on the human body the terrible effects of the bullet, and suggesting that these might call for a modification of the Petersburg Convention, there was nothing in the address to hurt the feeling of any Englishman. In conversation subsequently with v. Bruns, he expressed the hope that he had not gone too far, and I felt obliged to compliment him cordially upon the way in which he had handled so delicate a matter.

As to the wounds themselves, I have never seen anything so terrible, whether in railway injuries or in war. It fell to my lot to see many gunshot wounds during the campaign of 1870 and 1871, but anything so horrible as these I never saw.

I venture to think that it would be a pity if this purely scientific address of one of Germany's greatest and most temperate surgeons should, however unintentionally, be interpreted to reflect upon the want of humanity of our people. I had many opportunities subsequently of discussing the matter with several of the most distinguished German surgeons, and feel sure that such an intention was not harboured in any way.—I am, etc.,

ARTHUR E. BARKER,
Professor of Surgery at University College, London.

Harley Street, W., May 24th.

NATIONAL DEPOSIT FRIENDLY SOCIETY.

SIR,—Allow me, as an old member of the Executive of the National Deposit Friendly Society, a short response to Dr. Cox of Gateshead.

He desiderates a maximum wage limit, but apparently for our Society only. Can he point to any large benefit society which has such a limit? Would it not approach the impracticable and the invidious? He says that the people attracted to the National Deposit Friendly Society are chiefly the best paid artisans, the men who have hitherto paid willingly the "usual 2s. 6d." That sum for every attendance may fit the incomes of such men, but it cannot fit the average income of the wage-earning class in Gateshead, and it is for the whole, not a section, of that class that our Society caters. The majority of our members do not pay more than 2s. monthly contribution. Thousands of them are agricultural labourers. From particulars now before me of about fifty members at Gateshead, it appears that their weekly incomes range from about 20s. to 40s., without reckoning some lads whose income is under 10s.; 35s. is, I am told, the highest pay of an engineer when trade is good, his house rent being about 5s. 9d.

What do the doctors of Gateshead receive from labourers? One cannot help inferring that if "2s. 6d. all round" be the usual remuneration made by the best paid artisan, the scale of our Society is above—far above—the average remuneration received by the faculty from the wage earners of that great town.

The National Deposit Friendly Society pays the doctor punctually and monthly. It not only, as Dr. Cox says, pays for work done (not by contract), but some of its members have extra attendance and pay extra charge with which the Society has nothing to do.—I am, etc.,

Bedford, May 23rd. EDWIN RANSOM.

SIR,—My friend Mr. Alfred Cox has a letter on the above in the BRITISH MEDICAL JOURNAL of May 14th. The Society has lately sought to establish itself in this district, and my attention has been drawn to its rules and methods.

Its operations are quite different to those of any ordinary friendly society, in that it pays the doctor for work done, and not by contract. The members' bill is paid monthly, and there are no bad debts.

Persons in good circumstances are not at all likely to join this Society, as the largest amount of sick pay is only £3 per week, of which 15s. would have to be deducted from the member's own deposit account. Thus so small a benefit is not likely to attract "rich people."

The doctor is entirely independent. It is argued against the Society that there is no wage limit. But as it is not probable that any rich person would think it worth while to join the Society for the small benefit to be received, a wage limit is not necessary. Moreover, we must remember that a contribution of 10s. per month would entitle the doctor to a fee of 5s. per visit, with medicine for two days, by no means an unfair remuneration.

Mr. Cox gives the scale of payment, and writes: "These terms would, in my opinion, be perfectly fair if guarded by a strict wage limit." We have seen, however, that this is rendered unnecessary by the scale of payment guaranteed to the doctor, and by its method the contribution of a member not to exceed 10s. per month.

Moreover, by amendments at the recent annual meeting it was carried that an extra 6d. per mile per visit may now be charged beyond two miles in place of three as before; also for a visit between 9 P.M. and 8 A.M. of the following day an extra 1s.; and for attendance at the doctor's office between the same hours an extra 6d.

It seems to me, Sir, that the profession should rather welcome a Society which is doing much to meet the objections which naturally arise against the unreasonable methods of the ordinary friendly societies and medical aid tyrannies

During a long professional life I have never had any official relations with these egoistic institutions, but a close scrutiny into the principles of the National Deposit Friendly Society leads me to suggest that it deserves considerate treatment.

May I also add that a spirit of altruism would be kindly received by those we aid, and through this Society a voluntary co-operation established, in which the mutual rendering of services is enforced, and neither party subordinated.—I am, etc.,

Malvern Link, May 23rd. EDWD. W. FORSTER.

THE DISMISSAL OF PAROCHIAL MEDICAL OFFICERS IN SCOTLAND.

SIR,—I have to thank you for giving publicity in the BRITISH MEDICAL JOURNAL of April 9th to my complaint as regards dismissal of parochial medical officers. Since then I found out that the circular calling the meeting concerned about my dismissal was misleading and incorrect. So much was that the case that a councillor says he did not know anything about my dismissal till it was all over. I then informed the Parish Council that their decision was arrived at illegally, and that I still held my appointments. In due time, after another meeting of Council, I received a second notice, saying that in the terms of the circular calling the meeting my services would not be required after May 16th. This gives me notice of 18 days to clear out. Neither can this second notice be legal, and I still hold my appointments.

My position now is that the Council, having already acted illegally in more than one particular, may turn me out, which amounts to assault. They threaten me in every way, and brought a man here in my place, and he asks me if I sell my furniture and drugs. I mean, however, to remain in my appointments. There is much need of some remedy to prevent parish councils from acting in such a cruel and illegal manner.—I am, etc.,

May 10th. M.B.A.

THE ALKALINITY OF THE BLOOD IN GOUT.

SIR,—I would reply to Dr. Luff that the blood was not examined before the attack of gout, and that it is therefore impossible to say that its alkalinity was not relatively diminished by the attack, and this is my whole point, as shown in my previous letter in the BRITISH MEDICAL JOURNAL, page 1171.

Dr. Luff asks for some references to the work of others to show "that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urate out of solution." I would refer him to Sir A. Garrod's well-known thread test,[1] where the addition of acetic acid to blood serum throws out uric acid crystals on a cotton thread. Here we may also see that Sir A. Garrod found some uric acid in

[1] *Gout and Rheumatic Gout*, Third Edition, p. 86.

normal blood, and hence made the statement that uric acid was present in the blood in gout "in abnormal quantities" (p. 85).

If a little dilute acetic acid be swallowed, it not only diminishes the excretion of uric acid in the urine, but may also at the same time cause pricking and shooting pains in various joints and fibrous tissues, as described by Sir A. Garrod, and attributed to gout of those tissues; and I have inferred that the uric acid fails to appear in the urine because it is driven out of the blood in much the same way that it is driven out of the serum in Sir A. Garrod's test, and that the pains in the tissues tell us where it has gone to.

Exactly similar pains can also often be produced by the administration of iron, and these have been attributed by Sir A. Garrod[2] to the insolubility of urate of iron. Here again I have shown that iron diminishes the excretion of uric acid in the urine, and no doubt it would be easy to show that it is doing this at the time these pains are being produced.

To say that the uric acid which fails to appear in the urine is retained in the kidney in physiology, and in the tissues in pathology, is to give at best two explanations of the same result, while to admit with Sir A. Garrod that there is some uric acid in the blood even in health at once removes all difficulty.

Dr. Luff, I know, has failed to find any uric acid in the blood of a healthy man or men, but I have elsewhere[3] given my reasons for refusing to draw any sweeping conclusions from his negative results.

I do not understand that Dr. Luff denies that tea contains a compound of xanthin, and the paragraph which he himself quotes in his lectures[4] shows that I acknowledged the substance I found in animal flesh might be a similar xanthin compound, and then went on to point out that xanthin compounds are physiologically equivalent to uric acid. How then can Dr. Luff now speak of my "assumed estimations of uric acid;" he has himself shown that I refrained from making the assumption?

If headaches are due to xanthin in tea they may equally be due to xanthin in meat, and they can be produced by swallowing several different compounds of xanthin. This chemical question is, I maintain, trivial; and, moreover, a little later on it may be quite easy to decide it.—I am, etc.,

Brook Street, W., May 23rd. ALEXANDER HAIG.

PAYMENTS BY HOSPITAL PATIENTS.

SIR,—I am quite content to let Mr. Garrett Horder's letter, so far as it concerns the management, be judged by the answers of Sir Henry Burdett and Captain Hutton.

I am, however, requested by the honorary medical staff, eight in number, all of them members of the British Medical Association, to protest against Mr. Horder's suggestion that the hospital is unworthy of support because of the trivial character of the medical work. This is the more necessary because the recent grant of the British Medical Association to the Hospital Reform Association confers a certain importance on Mr. Horder's letters, which they would not, on their merits, otherwise carry. This protest may be contained in a few words. It has already been published that at this hospital during the past year close upon 2,000 patients came on the recommendation of what Mr. Horder's Association calls a "competent medical authority," and on the day before Mr. Horder's letter appeared in the BRITISH MEDICAL JOURNAL, 22 out of the 38 new cases admitted were sent by medical practitioners. Of these 22 patients, 13 at least were the subject of diseases which Mr. Horder considers "general practitioners would be able to deal with quite as effectually" as the staff of this hospital. I enclose the details for your verification.—I am, etc., RICHARD KERSHAW,

Central London Throat and Ear Hospital, Secretary.
Gray's Inn Road, May 14th.

AN ADVERTISEMENT.

SIR,—In the *Scotsman* and *Glasgow Herald* of May 16th the following advertisement appears:

MEDICAL OFFICER.—Wanted by the Loyal Lewis Lodge of Oddfellows, Stornoway, a professional gentleman, to act as medical officer; to enter upon the duties on 1st July next. Applications to be lodged not later than 6th June with the Secretary, who will furnish further particulars as to salary, etc. Stornoway Burgh and Parish, with a population of 12,000, offer peculiar inducements to an energetic medical man.

Of course, these advertisements are regarded now by the profession with a certain amount of suspicion, and few take any notice of them. In case, however, there may be any who might think of applying for "further particulars," it may be well to state the facts of the case so as to obviate the possibility of any respectable member of the profession becoming a "blackleg." The late medical officer of the lodge held the office for over nine years. He visited the lodge patients at distances within a radius of three miles, supplied medicines and appliances, and examined candidates (no fee). His remuneration was at the rate of 2s. 6d. per member per annum. Here is an abstract of the work done and medicines, etc., supplied during the past twelve months.

Examinations of new members	49
Visits	305
Consultations	164
Bottles of medicine	274
Packets of powders	189
Boxes of pills, capsules, suppositories, tabloids, etc.	81
Lotions and liniments	93
Dressings	92
Boxes of ointment	14
Plasters	4
Minor operations	17

For all this work, medicines, etc., the medical officer received the sum of £33. Finding that he could not afford to continue this one-sided arrangement any longer, he recently inquired of the lodge if he was expected to continue all this at the same remuneration. In reply he was offered 6d. per member additional, thus increasing the allowance to 3s. per member. This offer the medical officer naturally regarded as playing with the question, and he tendered his resignation; hence the advertisement. In case the "further particulars" may not include the fact, I may state that there are already five medical men in active practice in the burgh and parish, and outside of the burgh the population consists mainly of crofter fishermen, who are not blessed with too much cash.

The most pleasant relationship has always subsisted between the medical officer and the members of the lodge, and all his communications on the subject of remuneration were couched in most courteous and considerate terms. Only a handful of members attend the lodge meetings, and a great number of the members have expressed their indignation at this attempt to introduce a "blackleg."—I am, etc.,

May 10th. A LOCAL PRACTITIONER.

[2] BRITISH MEDICAL JOURNAL, April 14th, 1883.
[3] *Uric Acid*. Fourth Edition, p. 406.
[4] *Ibid.*, Third Edition.

Obituary.

DR. ROBERT KIRKWOOD, of Largs, Ayrshire, died on May 21st at his house in Largs, at the age of 74 years. He had retired for some years from the active practice of his profession, but continued to reside in Largs, which was his native place, and where for a long time he had been held in the highest esteem. He graduated in Glasgow University in 1854, and became a Fellow of the Faculty of Physicians of Glasgow in 1866. He was specially interested in sanitary science, and had contributed a great deal to awaken and develop public appreciation of sanitary measures. After his retirement from professional work his efforts on behalf of public health found scope in the Ayrshire County Council. He was also a Justice of the Peace for his county.

WE regret to have to record the death, at the age of 32, of Dr. FRANK GRANGE, of Southampton. Dr. Grange received his medical education at Charing Cross Hospital Medical School, and was House Physician to that hospital and to the Hospital for Consumption and Diseases of the Chest, Brompton. He had a distinguished career as a student at the University of London. He obtained the gold medal and exhibition in Materia Medica and Pharmaceutical Chemistry at the Intermediate Examination in 1886,

and took first class honours in Medicine and Forensic Medicine when he took the degree of M.B. in 1890. He became M.D. in 1891. After acting as House Surgeon to the Blackburn and East Lancashire Infirmary he settled in Southampton about six years ago, and proved himself to be a successful practitioner. In 1891 he took the diploma of D.P.H.Cambridge, and afterwards held the appointment of Sanitary Surveyor to the Board of Trade and Medical Superintendent of Quarantine under the Privy Council for Southampton. Owing to failing health he found it necessary to go to Mentone last November. He returned improved in health, and was anxious to resume his practice under the necessary limitations imposed by Dr. Mitchell Bruce, whom he had previously consulted. Though as far as possible he confined himself to advising with his partner, Dr. Atkey, in cases presenting special features, his persistent attention to his patients and visits paid in inclement weather proved too much for his waning strength. He went for rest and change to Wigginton, Tring, his old home, where he died on May 12th. His physician, Dr. Mitchell Bruce, has said that he fell a victim to duty, and all who had been brought into contact with him will miss a skilled medical adviser and true friend, not least the poor of the city in which he practised.

WE regret to have to record the death, on May 7th, of Dr. ANGUS MACKINTOSH, of Chesterfield. He was a native of Blair Athol, Perthshire, and graduated M.D. at the Glasgow University in 1861. The early years of his professional career were spent in private practice in Cornwall. Some twenty-six years ago he was appointed Medical Officer of Health to the Chesterfield Rural Sanitary Authority, which post he continued to hold up to the time of his death. On the passing of the Public Health Act, 1875, Dr. Mackintosh was appointed Medical Officer of Health to several local Boards. Some of these he gave up some years ago, but he continued to be associated with the Whittington, Clay Lane, and Dronfield Urban Districts.

DR. E. A. PRAEGER, who recently died at Los Angeles, Cal., U.S.A., at the age of 43, was born in England. He was a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and of the Society of Apothecaries of London. He practised his profession for a short time in Africa and in England. Some fifteen years ago he had an attack of blood-poisoning which disabled him for nearly a year. After his recovery he went out to British Columbia, and built up a large practice, besides holding the appointment of Surgeon to the Vancouver Mining Company, who employ over 1,000 men. Owing to the illness of his little daughter, he sacrificed this fine position, and went to Los Angeles. He held various important offices in the County Medical Society, and was elected a member of the faculty of the Medical College. Never before (says the Southern California *Practitioner*) in the history of Southern California has the profession met with so great a loss as it has sustained in the death of Dr. E. A. Praeger. Although a resident here only four years, the profession had learned his merit, and had this year unanimously chosen him President of the County Society. He was a man of high ideals, a close observer of medical ethics, a staunch upholder of the high standing of his profession. As a surgeon he was courageous, successful, and honest. He never refused to operate from a fear of hurting his own record, he never operated for the sake of doing something. Dr Praeger leaves a widow and three children. The qualities which endeared him to his associates made him a beloved husband and father.

WE regret to announce the death of Mr. THOMAS HENDERSON, son of Dr. T. Brown Henderson, of Glasgow, a student of medicine of great promise, who has, at the early age of 22, fallen a victim to blood poisoning, contracted in the discharge of his hospital duties. Having assisted at an operation for osteomyelitis in the Royal Infirmary seven weeks ago, he became affected with symptoms of blood poisoning, which seemed to have passed off. On May 15th, however, after returning from church, fresh symptoms manifested themselves in the form of purpura hæmorrhagica, and in spite of all that medical skill could do, the disease proved fatal in 73 hours. Mr. Henderson was of a singularly amiable disposition, and ardently devoted to his medical studies, and much sympathy is felt for his father in the sad circumstances. It is noteworthy that several members of the profession in Glasgow have recently suffered from blood poisoning, similarly contracted. One of these was, we understand, an eminent surgeon, who was infected from the case as Mr. Henderson; only in Mr. Henderson's case has a fatal result ensued, although in the case of the surgeon referred to the illness assumed for a time a serious character.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Surgeon-General Ignaz Neudörfer, late of the Austrian army, formerly *Privatdocent* of surgery in the University of Vienna, and author of numerous contributions to military surgery, aged 73; Dr. Gustav, Reichsritter von Wiedersperg, member of the Imperial Council and of the Chamber of Deputies of Austria, and a prominent sanitarian, aged 59; Dr. T. Halbertsma, Professor of Obstetrics and Gynæcology in the University of Utrecht; and Dr. José Lopez Alonso, Professor of Clinical Medicine in the University of Salamanca.

NAVAL AND MILITARY MEDICAL SERVICES.

HONOURS FOR THE TIRAH EXPEDITION.

IN the *London Gazette* of May 20th the following medical officers are rewarded and a short record of their services during the war is also noted. Full particulars have already appeared in the BRITISH MEDICAL JOURNAL.

K.C.B.—Surgeon-Colonel George Thomson, C.B., was mentioned in despatches by General Sir William Lockhart as P.M.O. of the troops in the field, and Sir William Lockhart's "indebtedness" to him and to the other officers of the department for "the high state of efficiency" in which the department was maintained is acknowledged.

C.B.—Surgeon-Colonel Edmond Townsend, A.M.S., was P.M.O. of the 1st Division, to whom Sir William Lockhart says his "acknowledgments were due"; as also to Surgeon-Colonel George McBride Davis, D.S.O., A.M.S., who served on the Staff of the 2nd Division; and also to Brigade-Surgeon-Lieutenant-Colonel William Egerton Saunders, I.M.S., who was on the Staff of the line of communications.

Distinguished Service Orders are bestowed on Brigade-Surgeon-Lieutenant-Colonel Charles Henry Swayne, A.M.S., who was employed in the 1st Division. Surgeon Major Johnston Shearer, I.M.S., 2nd Division; Surgeon-Captain Thomas H. J. C. Godwin, A.M.S.; Surgeon-Captain John Fisher, I.M.S.; Surgeon-Captain William Selby, I.M.S., regimentally employed, and Surgeon-Lieutenant James H. Hugo, I.M.S.; this officer was mentioned in Major-General Sir Bindon Blood's despatches as having "served with distinction throughout the defence of Chakdara." It was stated that Surgeon-Captain T. H. J. C. Goodwin, A.M.S., was to be recommended for the V.C. "for conspicuous gallantry at Shabkadr on August 9th, 1897"; also that Surgeon-Captain Selby, I.M.S. (1st Battalion 2nd Ghoorkas), would "probably receive" the same decoration for displaying "great gallantry" in saving a Ghoorka sepoy's life when "the enemy were almost upon him." Surgeon-Captain J. Fisher, I.M.S., is mentioned in despatches by Major-General Sir Bindon Blood for "great gallantry" during the Mamund operations in making "a most determined (though unsuccessful) attempt to take medical aid to the wounded of Captain Ryder's detachment through a hot fire."

Promotion to Surgeon Lieutenant-Colonel.—Surgeon-Major Hayward R. Whitehead, A.M.S., served in the 2nd Divison.

Promotion to Surgeon-Majors.—Surgeon-Captain Chas. H. Burtchael, A.M.S., served in the 4th Brigade. Surgeon-Captain John J. Gerrard, A.M.S., served in the 2nd Division.

INDIAN MEDICAL SERVICE.

Promotion to Brigade-Surgeon-Lieutenant-Colonel.—Surgeon-Lieutenant-Colonel Henry Hamilton, served on the line of communications.

Promotion to Surgeon-Lieutenant-Colonel.—Surgeon-Major Thomas Grainger, served regimentally in the 4th Brigade.

To all the above-named officers, Sir William Lockhart's "acknowledgments are due."

ARMY MEDICAL STAFF.

SURGEON-GENERAL WILLIAM SIM MURRAY, M.B., died at Colchester on March 27th. He entered the service as Assistant-Surgeon, January 10th, 1851; became Surgeon January 26th, 1858; Surgeon-Major, January 10th, 1871; Deputy-Surgeon-General, June 26th, 1877; and Surgeon-General, September 8th, 1883. He went on retired pay, October 28th, 1889.

Surgeon-Major THOMAS MURTAGH died at Hove, Brighton, on March 29th. His commissions bore date:—Assistant-Surgeon, December 14th, 1858; Surgeon, March 1st, 1873; and Surgeon-Major, March 11th, 1874. He was placed on retired pay, December 29th, 1888.

Surgeon-Captain JAMES WALKER, M.D., died at Jacobabad, Bombay Presidency, on March 23rd, aged 28. He was appointed Surgeon-Lieutenant, July 28th, 1894; and Surgeon-Captain, July 28th, 1897.

Brigade-Surgeon-Lieutenant-Colonel F. W. TREVOR has taken charge of the current duties of Principal Medical Officer, Sind District, from March 4th, as an additional duty.

Surgeon-Captain ROBERT A. BOSTOCK, Scots Guards, retires from the service with a gratuity, May 25th. He was appointed Surgeon-Captain,

July 28th, 1886, and, after passing a short time at Aldershot, joined the Scots Guards in November, 1887, and has remained with the 2nd Battalion of that regiment up the time of his retirement. He has no war record in the *Army Lists*.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL P. DE H. HAIG, Bengal Establishment, 1st Punjab Cavalry, Principal Medical Officer of the Native General Hospital at Nowshera, is granted the temporary rank of Brigade-Surgeon-Lieutenant-Colonel from August 9th, 1897.

Surgeon-Lieutenant-Colonel J. C. H. PEACOCKE, Bombay Establishment, is permitted to retire from the service from May 14th. He was appointed Assistant Surgeon, October 1st, 1877, and Surgeon-Lieutenant-Colonel twenty years after.

Deputy-Surgeon-General ALEXANDER LAING BOGLE, M.D., late of the Bengal Establishment, died at St. Leonard's-on-Sea on May 23rd, at the age of 75. He joined the department, October 29th, 1847, and retired from it, November 7th, 1872.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN T. PHILIP, M.B., is promoted to be Surgeon-Major, May 25th.

MILITIA MEDICAL STAFF CORPS.

THE following are the arrangements for the training of the Militia Medical Staff Corps under the command of Surgeon-Lieutenant-Colonel W. Collingridge, M.D., which will take place this year during July. The Hants company will be attached to the Royal Victoria Hospital, Netley; the Surrey company to the Cambridge Hospital, Aldershot; and the Middlesex company to the Herbert Hospital, Woolwich. The Eastern Counties, Berkshire and Kent companies, will be encamped at Aldershot.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps specified, dated May 18th: KEITH W. MONTSARRAT, M.B., 1st Volunteer Battalion the King's Liverpool Regiment; RANSOM PICKARD, M.D., 1st (Exeter and South Devon) Volunteer Battalion the Devonshire Regiment; HENRY J. HOLMAN, 1st Cinque Ports Rifles; CHARLES A. GOULLET, 5th (West) Middlesex Rifles. The following similar appointments date from May 25th: ARTHUR R. RENDLE, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment; FRANCIS WARD, M.D., 1st Volunteer Battalion the Suffolk Regiment; CHARLES PORTER, M.D., 4th Volunteer Battalion the Cheshire Regiment; JOHN ALLISON, M.D., 1st Volunteer Battalion the Northamptonshire Regiment; FREDERIC H. WESTMACOTT, 2nd Volunteer Battalion the Manchester Regiment; JOHN K. TOMORY, M.D., 1st Sutherland (the Sutherland Highland) Rifles.

Surgeon-Captain C. S. SMITH, 1st Surrey (South London) Rifles, is promoted to be Surgeon-Major, May 25th.

THE SOUDAN EXPEDITION.

THE *London Gazette* of May 24th publishes the despatches of Sir Herbert Kitchener, Sirdar of the Egyptian army, reporting the operations in the Soudan of the troops under his command, from March 16th to April 8th, including the expedition to Shendy, the cavalry reconnaissance of March 30th and April 4th, and the battle of the Atbara. After describing the nature of the operations undertaken, and the brilliant results achieved, Sir Herbert speaks of the services rendered by the officers under his command, and goes on to say: "The medical arrangements of the British brigade, under Brigade-Surgeon Lieutenant-Colonel McNamara and his staff, and of the Egyptian army, under the direction of Brigade-Surgeon-Lieutenant-Colonel Gallwey, and his staff, were, under the somewhat difficult circumstances of the operations, satisfactory, and the energy and skill displayed by the medical staff under their direction is deserving of much credit."

In addition the Sirdar brings to notice the valuable services of the following officers, among others, of the British brigade: Surgeon-Major Braddell, Surgeon-Major Carr, Surgeon-Major Adamson, Surgeon Captain Mathias, Surgeon-Lieutenant Bliss; of the Egyptian army: Surgeon-Captain Penton, Surgeon-Captain Hill Smith, Surgeon-Captain Spong, Surgeon-Captain Dunn.

AMBULANCE SHIPS IN NAVAL WARFARE.

IN connection with the remarks made in the BRITISH MEDICAL JOURNAL recently as to the necessity of providing ambulance ships to accompany fleets on active service, we have received a communication from Mr. Henry Foxton Craggs (of R. Craggs and Sons, shipbuilders, Middlesbrough-on-Tees), in which he calls our attention to a proposal made by him in the *Shipping Gazette* of April 25th, 1896, to establish an "International Blue Cross Ocean Life and Salvage Service." Briefly his proposal is to build a certain number of ocean steam lifeboats with a speed of at least 12 knots, their number and cruising stations to be fixed by an International Board representing the countries which adopt the scheme, each nation being represented in proportion to its tonnage.

It is suggested that the stations of the boats should be fixed by latitude and longitude, and that within a certain area they should cruise at fixed times. One of the chief features of the proposed scheme is that one or more of the boats, specially fitted up for the purpose, should be attached to each squadron and fleet to act as hospital ships. It is pointed out by Mr. Craggs that in the warships of the present day the internal arrangements are such as to make it almost impossible to do more than give first aid to the wounded during a battle. The boats of the proposed Blue Cross Service would be at all times covered from capture, and, flying the blue cross, would enjoy the same immunity at sea as the Red Cross ambulances are allowed in civilised warfare on land. Mr. Craggs does not, we gather, bring forward his proposal as a philanthropic but as a business scheme. But we do not consider this to be a serious objection. That there is need for the provision of what may be called ambulance ships under the modern conditions of naval warfare is, we think, unquestionable; it is equally clear, however, that Mr. Craggs's proposal as it stands would be quite inadequate for the exigencies of any but a very "little war" at sea. In any case, such a scheme should not be left to private enterprise. We have no doubt the Medical Department of the Royal Navy is fully alive to the necessity of providing for the transport of the wounded from battleship to hospital ship; but the department has, of course, the Treasury to reckon with, and experience has too often shown that even the most pressing needs of the public services may be sacrificed to a penny-wise and pound-foolish policy. We venture to think that it would be reassuring to the public and interesting to the medical profession to know something of the arrangements made or being made for the purpose indicated.

PALTRY ALLOWANCES TO CIVIL SURGEONS.

THE *Englishman* (Calcutta) writes strongly on this subject, to which we have already adverted. It says it is to be noted that police officers get an additional Rs. 300 a month for plague duty, which to them is so much gain, while the medical officer withdrawn from civil employ loses all his other allowances and private earnings. Combatant and military medical officers get Rs. 300, exactly double the honorarium paid to civil surgeons.

THE OPERATIONS IN MASHONALAND.

THE *London Gazette* of May 20th contains the announcement that the Queen has been graciously pleased to appoint Andrew Milroy Fleming, Esq., M.B., Medical Director of the British South Africa Company and Principal Medical Officer of the British South Africa Police, a Companion of the order of St. Michael and St. George, in recognition of services rendered by him in connection with operations in Mashonaland last year.

MEDICO-LEGAL.

NOT A PROPERLY QUALIFIED MAN.

UNDER this heading a case in the Rugby County Court is reported where a chemist who was not even a registered member of the Pharmaceutical Society, sought to recover £1 3s. 6d. for "medical and surgical attendance and medicine." We should have wondered at the stupidity or audacity displayed in bringing such an action had not the judge, after the plaintiff's own admissions, laboured through the Medical Acts, carefully explaining their effect to him, and apparently seeking to excuse or justify himself for the obvious necessity he was under of giving judgment for the defendant. In fact he actually offered the plaintiff an adjournment to obtain legal assistance to argue the question. Doubtless the tenderness of the judge may have suggested to a local contemporary that some subtle distinction exists between a man who is not properly qualified and one who is unqualified altogether.

A PUBLIC APOLOGY.

WE learn from a letter signed by Messrs. Hempsons, solicitors for the Medical Defence Union, published in the *West Ham Herald*, that The Twentieth Century Press, Limited, which recently published a placard containing a serious libel upon Dr. Vallance, have, in consideration of Dr. Vallance foregoing his legal remedies, executed a full apology, and paid ten guineas into the funds of West Ham Hospital. The apology unreservedly withdraws all and every the allegations which were made, and expresses to Dr. Vallance unfeigned and sincere apologies for having published such placards.

MEDICAL WITNESSES' FEES FOR ATTENDING INQUEST AND MAKING *POST-MORTEM* EXAMINATION.

HOUSE-SURGEON writes that at an inquest he was allowed a fee of two guineas by the coroner—one guinea for giving evidence and one guinea for making the *post-mortem* examination; but two months later he was asked by the coroner to refund the money, as objection had been raised by the county authorities. Our correspondent inquires if he is liable for such a mistake on the part of the coroner, and whether he ought in any case to comply with his request.

*** The money having evidently been paid by the coroner under a mistake of law, we do not think he could recover it. There is no doubt, however, that the county authorities have power to surcharge the coroner, and he would be subject to the loss; and under all the circumstances of the case we are inclined to think that our correspondent would adopt the proper course if he were to comply with the coroner's request and refund the amount.

FEES TO HOSPITAL OFFICERS FOR CERTIFICATES.

HOUSE-SURGEON inquires: 1. Whether he is legally entitled to charge a fee for signing an accident insurance certificate. 2. Whether a Hospital Board of Management can compel him to sign such certificate without a fee. 3. Whether, if he refuses to sign such certificate, the Board of Management can legally dismiss him from his post of house-surgeon.

*** 1. Assuming that it does not come within the sphere of his hospital duties to give such certificate, we think our correspondent is legally entitled to charge a fee for giving such certificate.

2. This depends upon the terms of the engagement.

3. We do not think the Board of Management would be legally entitled to dismiss our correspondent from his post of house-surgeon without the usual notice in such a case, assuming that it is not a breach of duty. But, of course, the Board could dismiss our correspondent with proper notice if the engagement be not for a time certain.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

M.B. PASS EXAMINATION.—The following candidates have satisfied the examiners:

First Division.—P. E. Adams, St. Bartholomew's Hospital; A. J. Cleveland, Guy's Hospital; W. J. Harding, St. Bartholomew's Hospital; A. A. Montague, St. Thomas's Hospital.

Second Division.—F. H. Atkinson, Charing Cross Hospital; J. F. Dobson, Yorkshire College and Leeds General Infirmary; W. N. East, Guy's Hospital; R. C. Field, School of Medicine and Leeds General Infirmary; R. T. FitzHugh, Guy's Hospital; Lucy Elizabeth Harris, Royal Free Hospital; R. Hatfield, St. Bartholomew's Hospital; W. J. Hirst, Yorkshire College and Leeds General Infirmary; R. Hughes, St. Thomas's Hospital; F. H. Jacob, King's College; J. D. Jenkins, London Hospital; R. Kay, Guy's Hospital; W. D. Knocker, St. Thomas's Hospital; Marian Sandford Linton, B.A., London School of Medicine and Royal Free Hospital; Ethilda B. M. Meakin, Royal Free Hospital; F. A. H. Michôd, St. Mary's Hospital; E. C. Morland, B.Sc., St. Bartholomew's Hospital; J. B. Page, St. Mary's Hospital; A. E. Payne, St. Mary's Hospital; C. Rivière, St. Bartholomew's Hospital; E. L. M. Rusby, King's College; J. M. Schaub, King's College; R. O. Sibley, St. Mary's Hospital; D. L. Smith, Guy's Hospital.

ROYAL UNIVERSITY OF IRELAND.

SECOND EXAMINATION IN MEDICINE.—The following candidates have satisfied the Examiners:

Honours, Second Class.—*D. M'Mordie, B.A., Queen's College, Belfast; *J. O'Leary, Queen's College, Cork.

Upper Pass.—P. J. Carroll, B.A., Queen's College, Cork; A. G. Heron, B.A., Queen's College, Belfast; A. M. Thomson, Queen's College, Belfast.

Pass Division.—M. D. Ahern, Queen's College, Cork, and Catholic University School of Medicine; J. P. Brady, Catholic University School of Medicine; M. Crowley, Catholic University School of Medicine; J. P. Harold, Charing Cross Medical School; J. Hartigan, Catholic University School of Medicine; P. J. Kane, Catholic University School of Medicine; R. Kennedy, Queen's College, Belfast; J. M'Crea, B.A., Queen's College, Belfast; Everina S. I. Massy, Royal College of Surgeons, Royal College of Science, and Catholic University School of Medicine; J. A. Mills, B.A., Queen's College, Galway; H. Ross, Queen's College, Cork; H. B. Smith, Queen's College, Belfast; W. J. Thompson, Queen's College, Belfast; W. Watson, Queen's College, Belfast.

THIRD EXAMINATION IN MEDICINE.—The following candidates have satisfied the Examiners.

Honours, First Class.—†M. Curran, B.A., Catholic University School of Medicine.

Honours Second Class.—*W. McCarthy, Queen's College, Cork.

Upper Pass.—I. M. Byers, Queen's College, Belfast; W. Starkey, Catholic University School of Medicine.

Pass Division.—J. M. Ahern, Catholic University School of Medicine; W. J. Bannister, Queen's College, Cork; J. H. Barbour, Queen's College, Belfast; J. J. Crowley, B.A., Queen's College, Cork; J. M. Dunne, Catholic University School of Medicine; D. J. Farnan, Catholic University School of Medicine; W. C. Gavin, Catholic University School of Medicine; J. R. Gillespie, M.A., Queen's College, Belfast; J. Good, Queen's College, Cork; B. J. Hackett, Catholic University School of Medicine; Alexandrina C. Huston, Queen's College, Belfast; A. F. Kennedy, Queen's College, Belfast; T. Kennedy, Queen's College, Belfast; R. McCarrison, Queen's College, Belfast; T. J. McDonogh, B.A., Catholic University School of Medicine; E. W. S. Martin, Queen's College, Belfast; J. J. O'Mahony, B.A., Queen's College, Cork; M. L. Rowan, B.A., Queen's College, Belfast; A. W. C. Spence, Queen's College, Belfast; J. Torpey, Queen's College, Cork; J. Waddell, Queen's College, Belfast.

EXAMINATION FOR DEGREES OF M.B., B.CH., B.A.O.—The following candidates have satisfied the Examiners:

Honours, Second Class.—*E. G. Charles, B.A., Queen's College Cork, and University College, London; *R. T. Booth, Queen's College, Cork.

Upper Pass.—D. Brown, Queen's College, Belfast; G. M. Keating, B.A., Catholic University School of Medicine; T. M'Kelvey, Queen's College, Galway, Edinburgh School of Medicine, and Catholic University School of Medicine; Frances O. C. Sinclair, B.A., Catholic University School of Medicine and Medical College for Women, Edinburgh.

Pass Division.—Dora E. Allman, Queen's College, Cork; W. L. Armstrong, Queen's College, Belfast; T. Downard, B.A., Queen's College, Galway; R. S. A. Drought, B.A., Queen's College, Cork; T. K. Greenfield, Queen's College, Belfast; G. A. Hogg, Queen's College, Belfast; J. Keogh, Catholic University School of Medicine; W. H. W. Mewhirter, Queen's College, Belfast; J. Sloan, Queen's College, Galway; W. J. Sweeny, Catholic University School of Medicine; W. J. Wilson, Queen's College, Belfast.

EXAMINATION FOR M.D. DEGREE.—The following candidates have satisfied the Examiners:

J. H. McBurney, M.B., Queen's College, Belfast, and Catholic University School of Medicine; A. P. Mooney, M.B., Catholic University School of Medicine; Hester D. Russell, M.B., Royal Free Hospital, London, W.C.

† First Class Exhibition. * Second Class Exhibition.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEDICAL PRACTICE IN ITALY.

THE following letter was addressed to the Marquis of Salisbury, K.G., Secretary of State for Foreign Affairs, on April 14th, 1898, by the President and Vice Presidents:

MY LORD,—We beg to inform you that the Council of this College have received a memorial from several Members of the College resident in Italy in reference to a proposal for the abrogation of Article 23 of the Italian Sanitary Law, whereby foreign medical men are permitted to practise their profession amongst non-Italian residents and visitors, and for the enactment of a fresh clause whereby not only foreign medical men, who may desire to practise in the future, but also those who are actually practising there, will be required to pass through all the stages of the usual student's curriculum of study and obtain the necessary diploma for practice in one of the Italian Universities before they can exercise their profession even amongst their own countrymen.

The reason assigned for this proposed alteration of the law is that Italian medical men cannot practise their profession in other countries of Europe, including the United Kingdom, without undergoing examinations and obtaining a qualification in those countries.

With regard to this contention we would point out that there is no provision in the Medical Acts of the United Kingdom forbidding the practice of their profession by foreign medical men who have obtained a qualification to practise in their own country, provided they do not wilfully and falsely assume any title implying that they are registered under the Medical Act, or are recognised by law as medical practitioners.

We would further point out that the proposal that foreign medical men wishing to practise in Italy should be required to undergo the course of study and all examinations required by the regulations of the Italian Universities is most unjust to Members of this College and Licentiates of the Royal College of Physicians of London, inasmuch as the two Colleges afford special facilities to foreigners wishing to obtain a registrable qualification in the United Kingdom by a clause in the Regulations of their Examining Board, whereby it is provided that medical graduates of foreign Universities recognised for the purpose (among these being included nine Italian Universities) may be excused the First Examination in Chemistry and Physics, Practical Pharmacy, and Elementary Biology, and the Second Examination in Anatomy and Physiology, and may be admitted to the Third or Final Examination in Medicine, Surgery, and Midwifery without being required to undergo any course of study in this country.

We moreover believe it to be of great importance to British subjects visiting Italy for the sake of health that they should be able to avail themselves of the services of British rather than Italian medical men, and that many invalids will in future be deterred from visiting Italy if unable to obtain in that country the advice of those accustomed to their habits of life and acquainted with the methods of medical treatment best suited thereto.

As, therefore, the proposed alteration in the law not only affects the interests of British medical men in Italy, but concerns very nearly the welfare of the many subjects of Her Majesty who reside in and visit that country, we have ventured to bring these matters under your notice, in the hope that your Lordship will take such steps as may be possible in respect to the question at issue.

We have the honour to be, my Lord, your obedient servants,

WILLIAM MACCORMAC, President.
ALFRED WILLETT, } Vice-Presidents.
HENRY G. HOWSE, }

The following reply was received to this letter:

[Copy.]

Foreign Office, April 20th, 189 .

SIR,—With reference to your letter of the 14th instant, I am directed by the Marquess of Salisbury to enclose herewith copy of a despatch which has been received from Her Majesty's Ambassador at Rome, reporting that the Italian Government do not contemplate making any change in existing laws with respect to the status of foreign doctors in Italy.

Copies of Sir Clare Ford's despatch have already been communicated to various other public bodies interested in this question.—I am, Sir,

Your most obedient, humble servant,

F. H. VILLIERS.

The Secretary to the Royal College of Surgeons of England,
Lincoln's Inn Fields, W.C.

[Copy.]

Rome, March 22nd, 1898.

MY LORD,—I have the honour to acknowledge the receipt of your Lordship's despatches Nos. 13 and 14 of this series of the 17th instant, on the subject of the fear entertained by British doctors practising in Italy that there is an intention of altering the laws which allow them the right to practise medicine in this country in a manner unfavourable to them.

In my despatch No. 7 of this series of the 3rd ultimo, I reported to your Lordship that Signor Arcoleo, Under Secretary of State for the Interior, had on the previous day made a statement in the Chamber of Deputies on the subject of the agitation which was being raised in favour of prohibiting foreign doctors from practising in Italy.

On the receipt of your Lordship's above-mentioned despatches, I wrote to Signor Malvano, Director-General at the Italian Foreign Office, calling his attention to the words used by Signor Arcoleo in the Chamber of Deputies, and inquiring whether they represented the views of the Italian Government.

I have just received in reply a note from that gentleman enclosing the official text of Signor Arcoleo's statement above mentioned, of which I beg to enclose a translation. Signor Malvano adds: "Il en resulte qu'il n'y a aucune intention de modifier à la charge des médecins étrangers les lois en vigueur."

I hope that these words will prove satisfactory to Her Majesty's Government, and will tend to reassure the British medical doctors who practise in Italy; therefore, unless I receive instructions from your Lordship to the contrary I propose for the present to make no further representations to the Italian Government in this matter.

I have, etc.,

(Signed) FRANCIS CLARE FORD.

The Marquis of Salisbury, K.G., etc.

[*Copy, translation.*]

Session of the 2nd February, 1898.

Signor Arcoleo, Under Secretary of State for the Home Department. The honourable member, Signor Santini, is partly right; he wished to

see how our legislation stands with regard to that in foreign countries and has found that whereas elsewhere in States which are the most civilised and tolerant, there are restrictions to practising the medical profession, in Italy an undue toleration is allowed, and the honourable member who asked the question, therefore, wishes, unless I am mistaken, for a modification of our sanitary law in the sense of a prohibition to foreigners from exercising their profession in our country.

The question of the honourable member, Santini, is the reflection of a movement sufficiently widely spread in Italy. In many parts protests have been made (by doctors) possibly as a just guarantee of their own professional dignity, perhaps also in order to avoid competition, and the demand has been put forward that foreign doctors should be absolutely prohibited from carrying on their profession. The Administration thought it desirable, in the first place, to ascertain whether there are a great number of doctors in these conditions in Italy; and whereas in a memorandum, and also in a sort of petition presented to the Minister of the Sanitary Council, the number was brought up to 1,500, it is known from information from all parts of the kingdom that the number of these doctors scarcely amounted to 108.

Such being the state of affairs, the danger from foreign doctors exercising their profession would certainly not be great.

I can assure the honourable member that at the present time, as an administrative measure, doctors accompanying foreign families (to health resorts) during the proper seasons would be warned (*si diffideranno*) to limit the exercise of their profession to the families who bring them with them, and not to practise freely among the public.

As a legitimate measure, the question is being studied of obtaining at least among civilised States a system of reciprocity in the sense that our doctors may obtain the same facilities abroad as foreign doctors in Italy

FIRST PROFESSIONAL EXAMINATION FOR THE DIPLOMA OF FELLOW.—The following gentlemen have passed this examination:

T. H. Edwards, St. Thomas's Hospital; W. F. Feddon, St. George's Hospital; W. F. V. Bonney, M.R.C.S.Eng., L.R.C.P.Lond., M.B., B.S.Lond., Middlesex Hospital; H. S. Newland, M.R.C.S.Eng., L.R.C.P.Lond., M.B., Ch.B.Adel., Adelaide University and London Hospital; A. M. Crabtree, M.R.C.S Eng., L.R.C.P.Lond.; A. E. J. Lister and A. R. Tweedie, St. Bartholomew's Hospital; N. Navarra, Middlesex Hospital; H. Balean, London Hospital; J. A. Bonnin, M.R.C.S.Eng., L.R.C.P.Lond., M.B., Ch.B.Adel., Adelaide University and London Hospital; F. M. Ogilvie, M.R.C.S Eng., L.R.C.P.Lond., M.B., B.C.Cantab., Cambridge University and St. George's Hospital; T. Pettey, M.R.C.S.Eng., L.R.C.P.Lond., M.D., C.M.Edin., Edinburgh University and Charing Cross Hospital; J. L. Adam, M.B., C.M.Aberd., Aberdeen University, Middlesex Hospital and King's College, London; L. Reynolds, B.A Cantab., Cambridge University and St. Mary's Hospital; J. C. Newman, St. Bartholomew's Hospital; R. C. Turnbull, London Hospital; R. Warren, B.A.Oxon., Oxford University and London Hospital; D. G. Greenfield, Guy's Hospital; H. McD. Parrott, F. G. Cross and P. W. L. Camps, Guy's Hospital; W. H. Lowman, King's College, London; A. B. Soltau and B. C. Broomhall, London Hospital; and T. C. English, St. George's Hospital.

Fifty-one gentlemen were referred for six months.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

THE following gentlemen have been admitted to Licences in Medicine and Midwifery:

F. A. Benson, A. Daly, R. L. Davies, E. Kennedy, G. R. M'Donald, T. A. J. White, T. F. White, M. R. Whitla.

The following registered practitioners have been admitted Licentiates in Midwifery:

G. H. Braud, L.S.A.Lond., 1890; A. W. Shea, L.S.A.Lond., 1897.

Mr. H. B. Goulding, F.R.C.S.I., has passed the examination for the diploma in State Medicine granted conjointly by the Royal Colleges of Physicians and Surgeons, Ireland.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following candidates, having passed the necessary examinations, have been admitted Fellows of the College:

A. J. M'A. Blaney, B.Ch., etc., Royal University; Miss R. Cohen, M.B., Calcutta University; W. J. Corbett, L.R.C.S.I.; J. Dundon, B.Ch., Royal University; H. S. Jackson, L.R.C.S.I.; and W. Taylor, L.R.C.S.I.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, May, 1898.—The following candidates passed in:

Surgery.—F. Atthill (Section II), Charing Cross Hospital; D. Davies, London Hospital; M. Paine (Section I), Royal Free Hospital; H. Spinks, Manchester.

Medicine.—E. Fryer, Guy's Hospital; W. J. Henson, Guy's Hospital; F. A. Leete (Section II), Royal Free Hospital; M. Paine (Section I), Royal Free hospital; C. C. Pratt, St. George's Hosptal and Bristol).

Forensic Medicine.—M. Paine, Royal Free Hospital; C. C. Pratt, St. George's Hospital and Bristol; H. J. Watts, Manchester.

Midwifery.—J. Ash, St. Thomas's Hospital; L. D. B. Cogan, Guy's Hospital; E. Fryer, Guy's Hospital; W. J. Henson, Guy's Hospital; F. A. Leete, Royal Free Hospital; S. J. Meredith, Birmingham and London Hospital; G. H. Proctor, London Hospital; H. Spinks, Manchester.

The diploma of the Society was granted to the following candidates: Messrs. J. Ash, W. J. Henson, and H. Spinks.

THE foundation stone of the new chapel of the City of London Asylum at Stone, near Dartford, will be laid on Saturday, June 18th, by the Lord Mayor, who will be accompanied by the Sheriffs of London.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,193 births and 3,533 deaths were registered during the week ending Saturday last, May 21st. The annual rate of mortality in these towns, which had declined from 18.4 to 16.6 per 1,000 in the three preceding weeks, further fell to 16.4 last week. The rates in the several towns ranged from 8.8 in Cardiff, 9.2 in Croydon, 9.8 in West Ham, and 10.7 in Brighton, to 22.6 in Liverpool, 23.6 in Newcastle-upon-Tyne, 23.7 in Wolverhampton, and 24.3 in Sunderland. In the thirty-two provincial towns the mean death-rate was 16.9 per 1,000, and was 1.2 above the rate recorded in London, which was 15.7 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was equal to 2.2 per 1,000, while it averaged 1.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.4 in Wolverhampton, 2.5 in Liverpool, 2.7 in Salford, and 3.0 in Bolton. Measles caused a death-rate of 1.0 in Derby; and whooping-cough of 1.1 in Plymouth and 1.2 in Salford and in Sheffield. The mortality last week from scarlet fever and from enteric fever showed no marked excess in any of the large towns. The 50 deaths from diphtheria in the thirty-three towns included 31 in London, 2 in Birmingham, and 3 in Leeds. No fatal case of small-pox was registered during the week under notice, either in London or in any of the thirty-two large provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,421 to 2,246 at the end of the six preceding weeks, had further fallen to 2,241 on Saturday last, May 21st; 223 new cases were admitted during the week, against 205, 209, and 229 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 21st, 1,009 births and 599 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 24.2 to 19.8 per 1,000 in the six preceding weeks, was 19.0 last week, and was 3.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.2 in Perth and 10.9 in Leith to 21.8 in Glasgow and 22.0 in Paisley. The zymotic death-rate in these towns averaged 3.4 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 303 deaths registered in Glasgow included 15 from measles, 3 from scarlet fever, 2 from diphtheria, 22 from whooping-cough, and 2 from "fever." Four fatal cases of scarlet fever and 2 of measles were recorded in Edinburgh; 5 deaths from measles occurred in Paisley and 4 in Dundee.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a marked increase last week. The fatal cases of this disease, which had been 39, 27, and 20 in the three preceding weeks, rose again to 31 during the week ending Saturday last, May 21st. Of these 31 deaths, 4 were of persons belonging to Lewisham, 3 to Islington, 3 to St. Luke, 3 to Poplar, and 5 to Battersea sanitary areas. The notifications of diphtheria in London, which had been 178, 202, and 196 in the three preceding weeks, rose again to 212 during the week ending Saturday last, May 21st, and exceeded the number recorded in any week during the past two months. Compared with the preceding week, there was a marked decline in the prevalence of the disease in North London, and a slight decline in East London, while in West London and South London there was a considerable increase. The increase in the prevalence of diphtheria in West London was largely due to an outbreak in Chelsea, where no fewer than 17 new cases were notified, against 6 and 8 in the two preceding weeks. There was a general decline in the prevalence of the disease in the sanitary areas of North London, which was most marked in Islington, where only 5 new cases were notified, against 15 and 12 in the two preceding weeks. Among the sanitary areas of East London there was but little change in the prevalence of diphtheria during the week under notice, except in Poplar, where the cases notified, which had increased from 6 to 13 in the three preceding weeks, declined to 7 last week. Among the sanitary areas of South London the increase in the prevalence of diphtheria was most marked in Wandsworth, Camberwell, Lewisham, and Greenwich; in the last named sanitary area the new cases, which had been 3 and 10 in the two preceding weeks, further rose to 14 last week. In Lambeth, however, there was a further decline in the prevalence of the disease, 6 new cases being notified, against 15 and 9 in the two preceding weeks. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 130, against 131 in each of the two preceding weeks; and 948 cases remained under treatment in these hospitals on Saturday last, May 21st.

THE POLLUTION OF THE BRENT

THE Bill introduced by the Middlesex County Council with the object of improving the condition of the Brent met with considerable opposition when it was brought before the Select Committee of the House of Commons on May 23rd. The Hanwell Urban District Council contended that the scheme was a sham one, while the Tottenham Urban District Council objected to being called upon to contribute to the cost. However, the Committee, while declining formally to pass the preamble of the Bill, indicated that practically a great portion of it was, in their opinion, proved, and that as far as they were concerned a Bill could be passed.

MEDICAL NEWS.

It is stated that the Bengal Government have applied to Bombay for the services of twenty-five special plague medical officers and as many nurses.

The Goldsmiths Company have made a grant of £600 to the Building Fund of the North-Eastern Hospital for Children, Shoreditch.

On Wednesday evening the St. Andrews University Graduates' Club gave a *conversazione* at the rooms of the Medical Society. It was attended by a large number of guests, who were received by the President, Dr. W. F. Cleveland.

The name of Surgeon-Colonel K. MacLeod, Professor of Military Medicine, Army Medical School, Netley, was inadvertently omitted last week from the list of officers presented to Her Majesty on the occasion of the Queen's recent visit to Netley Hospital.

The Birmingham Hospital Saturday collection took place on May 21st. The sum of £12,901 17s. 2d. was paid into the bank from the factories, while the street collection amounted only to £300. It is expected that £18,000 will have been collected when all the contributions have been received.

Presentation.—Dr. Richard Greene has, on the occasion of his resigning the post of Medical Superintendent of the Northampton County Asylum, Berry Wood, been presented with an illuminated address as an acknowledgment of the excellent services he had rendered the county. Dr. Greene had held the post of medical superintendent for twenty years.

Defective Children in London.—The School Board for London has appointed Dr. Shuttleworth and Mrs. Berry, M.D., to take charge of the work in connection with the examination of defective children and children alleged to be defective. The new officers are to work in conjunction with the medical officer of the Board. The appointments are made for one year, and the salary in each case is £250.

The Presidents of the Institute of Chemistry, the Society of Public Analysts, and the Society of Chemical Industry gave a *conversazione* at the galleries of the Royal Institute of Painters in Water Colours on May 24th. The guests, who numbered about 1,500, were received by Dr. and Mrs. Stevenson, Professor and Mrs. Frank Clowes, and Dr. and Mrs. Bernard Dyer.

At the annual meeting of the Belfast and District Branch of the Royal Medical Benevolent Fund of Ireland Dr. Purdon, the treasurer, stated that of the 175 members of the profession in Belfast only 57 were subscribers, and out of 120 country only 7 were subscribers. At the April meeting the Committee had had to deal with 7 applications, and had recommended the grant of sums amounting to £80.

University College and Hospital Union Society.—Past as well as present students of University College can now congratulate the officers of the Union Society on the success that has attended their efforts to obtain an athletic ground worthy of the name. The new ground is conveniently situated at Acton and is already in very good condition. It was formally opened on Wednesday, May 25th, by Mrs. McKinnon Wood, in the presence of Lord Monkswell and the Deans of the Faculties.

Poor-law Guardians and the Vaccination Bill.—A meeting attended by various Poor-law guardians and members of Parliament was held in London on May 25th, under the presidency of Mr. Affleck, chairman of the Gateshead Board of Guardians. About 100 delegates and eight or nine members of Parliament were present. A resolution was adopted expressing the opinion that Clause 3 of the Vaccination Bill was an infringement of the liberties of the people and of the liberties and powers which should be exercised by Poor-law guardians. Mr. T. Bailey, M.P., said the question was whether the powers of local self-government should be increased, or whether they should be handed over to an irresponsible body such as the Local Government Board. An amendment approving of the Bill, moved by Mr. St. Cedd, found few supporters.

Yellow Fever in Jamaica.—Considerable difficulty was experienced by the military authorities at Jamaica in obtaining the services of trained female nurses during the recent outbreak of yellow fever. Owing to this, General H. J. Hallowes, Commanding the Troops there, has now inaugurated a military nursing fund, with the object of providing two or more of these nurses, who will be permanently attached to the military hospitals of the Colony, the scheme being analogous to that initiated in India by Lady Roberts. Such a scheme is most commendable, for in a station like Jamaica, where the average strength of the troops is only about 500, and the average constantly sick only 30.80 or thereabouts, the services of one or more of the regular army nurses are scarcely to be expected.

The London Hospital.—On May 18th the Lord Mayor entertained a large number of distinguished guests at a dinner held to promote the interests of the London Hospital. The toast of "Success to the Hospital" was given by the Lord Mayor, and acknowledged by the Duke of Cambridge, President of the hospital, who said that during the past year it had rendered assistance to 11,000 in-patients, and more than 100,000 out-patients. Mr. Sydney Holland, in thanking the Lord Mayor for his assistance, said that the Committee had had to close 100 beds in three years. The London Hospital was the largest in England, and £70,000 a year was required to carry on its work. The Lord Mayor stated that in response to the special appeal donations amounting to £39,000 had been received, and annual subscriptions to the amount of £4,250.

Photography as an Aid to Sanitation.—Dr. Hope has contributed a very interesting section in his annual report for Liverpool (1897) on Insanitary Property, in which he shows that the city health authorities are moving in the direction of the demolition of houses unfit for habitation as fast as circumstances permit. He gives a series of photographs of groups of dwellings, courts, slums, and the like, to aid the reader to a right appreciation of the actual state of the properties which he describes; he has also given a ground plan of some of the localities which form the subject of his condemnation. This method of appealing to the eye is very useful. The camera as an aid to sanitation may be expected to do much good, and Liverpool is not alone in the adoption of pictorial annual reports, as witness Newcastle-on-Tyne, Southampton, and other examples.

Cassell's Black and White Exhibition.—For the sixteenth year Messrs. Cassell exhibit a selection of the works in black and white which have been executed to illustrate their various publications. The exhibition is held, as in former years, at the Cutlers' Hall in Warwick Lane, Newgate Street, a spot intimately associated with the history of English medicine, for it is built upon the site of the Old College of Physicians. The collection is well worthy of a visit, for it shows that Messrs. Cassell strive to enlist the highest talent in their service. Mr. H. Railton's drawing of Ightham Mote; Mr. Pennell's illustrations of the Charterhouse; Mr. H. A. Harper's wash drawings in the East; and Mr. Brock's numerous examples of good line work are especially noticeable, whilst there are excellent examples of MacWhirter, Gordon Browne, and Couldrey's work.

The Invasion of Cuba: Prevention of Yellow Fever.—Dr. John Guiteras, Professor of Pathology in the University of Pennsylvania, who has had an exceptionally large experience of yellow fever, has been instructed by the Surgeon-General of the United States Army to proceed to Tampa, Florida, to act as medical adviser to the commander of the army which it is expected will invade Cuba. With reference to the dangers which may beset troops in Cuba, and the precautions which should be adopted, the following statement, says the *Philadelphia Medical Journal*, is attributed to Dr. Guiteras: "It is possible to prevent the infection of military garrisons, though whether it can be done in a campaign remains to be seen. Yellow fever is circumscribed within certain areas, and if it is possible to keep troops away from those areas there will be little danger of infection. Contrary to the prevailing idea, altitude does not govern the disease. There are no extremely high altitudes in Cuba, and yet there are places where there is no

yellow fever. In some places on the coast the disease is not to be found. As a general rule, the more important the town, the greater its commercial activity, the more infected it is. Yet a congregation of people in the interior could not originate yellow fever. The cities where the disease prevails are infected because they are permanently inhabited by a crowd. Still the disease may be carried to a garrison from an infected town. To guard against this the troops must be placed by themselves, in uninfected places, and they must not communicate with infected places. Then, too, no depôt of supplies should be placed in an infected port. This is, of course, a desideratum that it may be difficult to obtain for strategic reasons. Ideal conditions are not always possible in a military campaign. Whether or not yellow fever can be kept from the troops depends entirely upon whether these plans can be carried out."

THE BRITISH DENTAL ASSOCIATION.—The annual general meeting of the British Dental Association commences this day, Saturday, at Bath, and will be continued on Monday and Tuesday next. An informal reception by the President of the Western Counties Branch of the British Dental Association is announced to be held on Friday evening. At the first general meeting on the following day the President, Mr. W. A. Hunt, L.R.C.P.Lond., M.R.C.S., will deliver his address. On Monday the President of the Microscopical Section, Mr. F. J. Bennett, M.R.C.S., will deliver his address, and on the evening of the same day the annual dinner will be held in the Assembly rooms. The Microscopical Section will meet again on Tuesday morning, and on Tuesday afternoon the concluding general meeting will be held. The Local Arrangements Committee have provided various evening entertainments as well as excursions after the meeting.

PORTUGUESE CONGRESS OF MEDICINE.—The first meeting of the Portuguese National Congress of Medicine was held in Lisbon, under the presidency of Dr. Manoel Bento de Sousa, from May 11th to 16th. The King and Queen of Portugal were present at the opening ceremony. Addresses were delivered by Professors Count de Ficalho, Augusto Rocha, and others. Among the communications presented were the following: Alcoholism in Portugal, by Dr. Alfredo Figueiredo; The Necessity of the Reform of Pharmaceutical Instruction in Portugal, by Dr. Sousa Telles; Leprosy in Portugal, by Dr. Zeferino Falcao; and Colonial Military Hygiene, with Special Reference to the Prophylactic Action of Sulphate of Quinine, by Dr. J. Baptista Dias. Other communications were presented on Arthrectomy in White Swelling, Abdominal Hysterectomy in the Treatment of Uterine Fibroma, Radical Cure of Hernia, Surgical Treatment of Psychoses. The principal subjects discussed were Syphilis and Paludism.

WESTMINSTER HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes and conversazione were held in the Westminster Town Hall on May 24th. Dr. Monckton Copeman and Dr. Blaxall exhibited their work on the Bacteriology of Vaccine Lymph and the preparation of Glycerinated Calf Lymph. Dr. Blaxall showed also cultivation of Phosphorescent Bacteria, the cause of marine phosphorescence. Dr. Gossage exhibited specimens showing the termination of some sensory nerves. During the evening the Medical School was open for the inspection of visitors. Prizes and scholarships were awarded as follows: Guthrie Scholarship, £60, G. L. Bunting; Entrance Scholarship, £40, P. J. Marett; Entrance Scholarship, £30, W. C. Nimmo; Treasurer's Prize, 10 guineas, C. C. Whitehead; President's Prize, 20 guineas, W. Payne and E. R. Carling; Bird Medal and Prize, £14, H. C. Barlow and H. H. Cheesman; Class Prize for Medicine, E. C. Lambert.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The twenty-second annual meeting of this association was held on May 23rd at the Examination Hall on the Victoria Embankment. Dr. G. Sims Woodhead presided. The annual report read by Dr. Ridge, the honorary secretary, showed that 24 new members and 136 student associates had joined during the year, making a total of 466 members, 424 student associates, and 3 lay associates, all being total abstainers from alcohol. The prizes for essays on the action of alcohol on the nervous system, offered to fourth year students were awarded to Mr. E. A. Boxer of Edinburgh, and Miss L. Beatty of Belfast. A conference was held subsequently with medical officers of metropolitan workhouses, infirmaries, and poor-law districts. Mr. W. C. Amery read a paper on Alcohol in Relation to Sick and Healthy Paupers, and after a discussion the following resolution was adopted: "That this conference declares its opinion that medical officers of infirmaries, workhouses, and Poor-law districts should reduce the prescription of alcoholic liquors to the lowest possible limits, while feeling that it must leave the matter in the hands of those who are responsible for the medical treatment."

SWIMMING BATHS FOR SOLDIERS.—On April 17th, 1897, in a note on the Soldier's Tub in India, we alluded to the insufficient provision in barracks for the personal cleanliness of the soldier. We have now to call attention to some very significant remarks made by the district coroner of Aldershot on the need of a swimming bath in the camp of that large garrison to which the military authorities at the War Office would do well to devote attention. The teaching of swimming is necessary alike for soldiers and for their children, and were a proper swimming bath provided for the camp at Aldershot this useful art might be acquired by many now ignorant of it. The jury, as a rider to their verdict on the death by drowning of a soldier's child in the canal, supported the district coroner's remarks by stating that "provision should be made for soldiers and soldiers' children in the way of a swimming bath;" and we may add that it is astonishing when so many thousands of pounds have been spent in the camp at Aldershot of late over barracks and subsidiary buildings that the absolute necessity of swimming baths for some 14,000 troops has never occurred to the War Office in its Quartermaster-General's department. In the German army the very best facilities for general cleanliness and swimming are given, and thorough drills in swimming exist. In Austria and America also swimming is well attended to.

MEDICAL VACANCIES.

The following vacancies are announced:

ASTON MANOR URBAN DISTRICT COUNCIL.—Medical Officer of Health for the District, and Medical Attendant at Infectious Hospital. Salary, £125 per annum. Applications to Joseph Ansell, Clerk, Council Offices, Albert Road, Aston Manor, Birmingham, by June 13th.

BELFAST DISTRICT ASYLUM.—Assistant Medical Officer; unmarried, and not more than 32 years of age. Salary, £100 per annum, with £50 in lieu of rations; also furnished apartments, fuel, light, washing, and attendance. Applications to the Resident Medical Superintendent by June 11th.

BIRMINGHAM CITY ASYLUM.—Clinical Assistant. Board, lodging, and washing, but no salary. Applications to the Medical Superintendent.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £60, with board and residence. Applications to the Secretary by June 1st.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CHESTERFIELD: CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House Surgeon and Dispenser. Salary £50 per year, with board, apartments, and laundress. Applications to the Secretary by June 2nd.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House Surgeon. No salary, but board, lodging, and washing provided. Applications to the Hon. Secretary by May 31st.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Secretary by June 9th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House Physician. Board, residence, etc., provided, and honorarium at completion of six months' approved service. Applications to the Secretary by June 11th.

EGYPTIAN GOVERNMENT: SCHOOL OF MEDICINE AND THE KASR-EL-AINI HOSPITAL.—Professor of Surgery at the School and Senior Surgeon to the Hospital, £400 per annum; Professor of Clinical Surgery at the School and Surgeon to the Hospital, £320 per annum; Professor of Clinical Medicine at the School and Physician to the Hospital, £320 per annum; Resident Medical Officer to the Hospital, £250 per annum and quarters; Resident Surgical Officer, salary £250 per annum and quarters. Applications on forms provided to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, Examination Hall, Victoria Embankment, by June 13th.

GENERAL LYING-IN HOSPITAL, York Road, Lambeth.—House Physician. Salary at the rate of £50 per annum, with board and residence Applications to the Secretary by May 31st.

GLASGOW UNIVERSITY.—Examiner in Physics for Degrees in Medicine and Science. Appointment for three years. Annual fee £30. Applications to A. E. Clapperton, Secretary of the Court, by June 1st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Physician or Surgeon to the Skin Department. Applications to the Secretary by June 11th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, Bloomsbury.—Two House Surgeons to Out-patients (non-resident). Appointments for six months. Salary £26 5s. Applications to the Secretary by May 31st.

INVERNESS: NORTHERN INFIRMARY.—House Surgeon and Dispenser. Salary £70, with board, etc. Applications to the Hon. Secretary by June 1st.

ISLINGTON: GUARDIANS OF ST. MARY.—Resident Assistant Medical Officer at the Workhouse and Infirmary, and Temporary Medical Officer of the Highgate Hill Temporary Workhouse. Remuneration, £80 per annum, and rations, apartments, and washing. Applications on forms provided to the Clerk, Guardians Offices, St. John's Road, Upper Holloway, N., by June 6th.

LEEDS: YORKSHIRE COLLEGE.—Demonstrator of Physiology. Salary, £50. Applications by June 10th.

READING: ROYAL BERKS HOSPITAL.—House Surgeon. Salary £60 per annum with board, lodging and washing. Assistant Medical Officer. Board, lodging, and washing provided, and honorarium of ten guineas. Appointment for six months. Applications to the Secretary by June 2nd.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Hunterian Professors, the Erasmus Wilson Lecturer, and the Arris and Gale Lecturer. Applications to the Secretary by May 30th.

ROYAL EAR HOSPITAL, Soho.—House Surgeon, non-resident, for six months. Honorarium, 12 guineas. Applications to the Honorary Secretary by June 7th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, unmarried. Salary, £105 per annum, with residence and attendance. Applications to H. Peter Bodkin, Secretary, 23, Gordon Street, Gordon Square, W.C., before June 6th.

ST. PETER'S HOSPITAL, Henrietta Street, Covent Garden, W.C.—House Surgeon. Appointment for six months. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by May 31st.

SHEFFIELD: UNIVERSITY COLLEGE.—Lecturer in Physiology. Applications to the Registrar by June 11th.

TOWER HAMLETS DISPENSARY, White Horse Street, Stepney.—Resident Medical Officer. Salary £120 per annum, with furnished rooms, coals, gas, and attendance. Applications to Dr. Corner, at the Dispensary, by June 1st.

WAKEFIELD: WEST RIDING ASYLUM.—Assistant Medical Officer for ten weeks. Salary, £3 3s. per week, with apartments and board. Applications to the Medical Director.

WOLVERHAMPTON: WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by June 3rd.

MEDICAL APPOINTMENTS.

ANDERSON, Dr., appointed Medical Officer for the Atherington District of the Barnstaple Union.

BARLING, A. S., M.R.C.S., L.R.C.P., appointed Surgeon to H.M. Prison in Lancaster Castle.

BARRETT, R. H., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Gedney Hill District of the Holbeach Union.

BLACK, Mr. C., appointed Medical Officer to the Sheffield Union Workhouse.

BOISSIER, A. H., M.R.C.S., L.R.C.P.Lond., appointed Honorary Medical Officer to the Horton Infirmary, Banbury.

BOULTON, Arthur, M.R.C.S., L.R.C.P.Lond., D.P.H., appointed Medical Officer of Health to the Woodhall Spa Urban District Council.

CHITALE, V. N., F.R.C.S., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Assistant Medical Officer to the Aston Union Workhouse.

DIBBS, W. S., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Hedgerley District of the Eton Union.

DURRAN, David, M.B., C.M.Glasg., appointed Medical Officer of Health for the Burgh of Thurso.

EDWARDS, H. J., L.R.C.S., L.R.C.P.Edin., D.P.H.Lond., appointed Honorary Medical Officer to the Horton Infirmary, Banbury, Oxon.

EDWARDS, J. Watkin, M.B., C.M.Edin., appointed Medical Officer of Health to the Tees Port Sanitary Authority, *vice* Dr. Malcomson, deceased.

EVANS, Mr. Owen, appointed Medical Officer of the Flintshire Dispensary, Holywell.

FREELAND, E. Harding, M.D., F.R.C.S., appointed Assistant Surgeon to the Hospital of St. Francis, New Kent Road, S.E.

GARFIT, C. C., M.B., Ch.B.Vict., appointed Medical Officer for the Glenfield District of the Blaby Union.

JENKINS, Edgar M., appointed Medical Officer of Health to the Calverley Urban District Council.

LESLIE, William Murray, M.D., M.Ch., F.R.C.S., appointed Assistant Physician to the Hospital of St. Francis, New Kent Road, S.E.

LONG, S. H., M.B.Cantab., L.S.A.Lond., appointed Physician to the Norfolk and Norwich Hospital.

LORY, Arthur G. B., L.S.A., appointed Medical Officer and Public Vaccinator for the Moretonhampstead District of the Newton Union.

MELLAND, Charles H., M.B.Lond., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria Park, E.

MILNER, E. A., M.B., C.M.Edin., reappointed Medical Officer of Health to the Lostwithiel Town Council.

PERKINS, J. J., M.A., M.B.Cantab., M.R.C.P.Lond., appointed Assistant Physician to St. Thomas's Hospital.

PRESTWICH, J., M.B., Ch.B.Vict., appointed Assistant House Surgeon to the Nottingham General Hospital.

ST. JOHN, A. S., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Sixth District of the Bromley Union.

SMITH, G. Pender, L.S.A., appointed Medical Officer of Health to the Wivenhoe Urban District Council.

SYKES, Lilian Edith, L.R.C.P., L.R.C.S.Edin., M.D.Brux., appointed Medical Officer in charge of the Dufferin Hospital, Lucknow.

TAYLOR, Frank Edward, M.A., B.Sc., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., appointed House Surgeon to the Hospital for Women and Children at Leeds.

TURNER, W. P., M.D.Durh., M.R.C.S.Eng., appointed Medical Officer to the Workhouse and School of the West Ham Union.

TURTON, Wm. H., M.B., C.M.Edin., reappointed Medical Officer of Health to the Heanor Urban District Council.

WEIR, J., M.B.Glasg., appointed Extra Dispensary Surgeon to Victoria Infirmary, Glasgow.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

CULHANE.—On the 10th inst., at Glin House, Hastings, the wife of F. W. S. Culhane, of a son.

DIACK.—On May 24th, at Freshwater, Isle of Wight, the wife of Patrick W. Diack, M.A., M.B., of a daughter.

ELAM.—On May 24th, at 96, Manor Road, Stoke Newington, the wife of G. Elam, M.D., of a daughter.

HARWOOD-HARDMAN.—At 17, Kensington Gardens Square, W., on May 18th, the wife of Frederick Harwood-Hardman, M.B., of a daughter.

MARRIAGES.

BURNEY—PINK.—On May 24th, at St. Mark's Church, Battersea Rise, by the Rev. E. G. Gordon, Vicar, Charles Dudley Francis Burney, M.R.C.S., L.R.C.P., to Ethel Beatrice, second daughter of John Francis Pink, of Sisters Avenue, Clapham Common.

COUTTS—GALLETLY.—On the 5th inst., Francis J. Coutts, M.D., B.S.Lond., of Leytonstone, to Jeanie S. Galletly, M.B., B.Ch.Irel., daughter of Rev. Wm. Galletly, Tillicoultry, Scotland.

WILLIAMS—CORNFORD.—On the 21st inst., at St. Nathaniel's, Bristol, by the Vicar, assisted by the Rev. W. S. Bruce, Ernest Graham Hamilton Williams, M.R.C.S. (late D.M.O. Jamaica), eldest son of Major-General Williams, late 108th Regiment and 42th Regimental District, to Mary Frances Cornford, M.B., B.S., only daughter of the Rev. N. Cornford, M.A., of Cotham, Bristol.

DEATHS.

OLIVER.—On the 22nd inst., at Westcott, Surrey, Alice Mary, wife of George Oliver, M.D., F.R.C.P., of Harrogate, aged 52.

TINLEY.—On May 24th, at Hildegard House, Whitby, Dorothy Mary, wife of T. Tinley, M.D., J.P., aged 50 years.

DIARY FOR NEXT WEEK.

TUESDAY.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Lupus Erythematosus.

WEDNESDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. S. Paget: Surgical Cases.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Maguire: Dynamics of the Chest in Disease.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Mr. Doran, Drs. Burton, Amand Routh, and others. Papers.—Dr. H. R. Spencer: Two Cases of Fibromyoma of the Uterus Removed by Operation from Women under 25 years of age; Dr. Roper: Note on Some Difficult Cases of Fronto-anterior Positions of the Fœtal Head.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Mr. John Hopkins: Clinical Lecture.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Colman: Demonstration of Selected Cases.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Mitchell Bruce: Demonstration of Medical Cases.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Dr. Beevor.

London Temperance Hospital, 2 P.M.—Dr. Soltau Fenwick: Clinical and Lantern Demonstration to Senior Students—Liver Diseases.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Dr. Dundas Grant: Tinnitus Aurium and Vertigo.

FRIDAY.

West London Medico-Chirurgical Society, 8.30 P.M.—Clinical Meeting. Cases will be shown by Dr. Potter and Messrs. Keetley, Swinford Edwards, and McAdam Eccles.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Dr. Wilkinson: Actinomycosis and Glanders, etc.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Tu., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, 1.p., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 2. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F. 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Opthalmic), Tu., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Tu., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

RESPIRATORS FOR PHTHISICAL PATIENTS.

DR. E. D. SHIRTLIFF (Malvern) desires to be recommended a good form of sanitary respirator for a phthisical patient to wear when out in damp or cold air.

BICYCLE HEART.

M. writes: A patient, middle-aged has produced palpitation by cycling while in delicate health. There is no organic change in the heart, and all the valves are perfectly competent. After seven months' complete rest and treatment the slightest exertion still raises the action of the heart. 1. How long should it be before the heart thoroughly settled? 2. What is the best treatment?

BICYCLE SADDLES.

J. B. F. asks for advice as to the most suitable bicycle saddle, or seat, for a man just recovering from an operation for fistula and piles. He thinks the trouble arose from riding too forward on a long slack saddle of the ordinary pattern.

*** We are indebted to Mr. E. B. Turner for the following reply to this question: Whatever saddle "J. B. F." determines to try, it will be necessary for him to be most careful in its adjustment. No saddle, patent or otherwise, will suit him unless he takes care to place it so that there is no undue pressure anywhere, and that the reach is adapted to the length of his leg. With these precautions, any good saddle will suit him, such as "Brookes, B 28, size 3;" and of patent saddles, perhaps the 1st grade Pattison Hygienic would be the best, but he must remember that he must be just as careful about the adjustment of that saddle as of any other.

STUDENT'S MICROSCOPES.

MICROSCOPE writes: As my son, a medical student, is about to purchase a microscope, I shall feel extremely obliged for information as to the most suitable one (not too expensive) for his work. He is anxious to procure one that would ultimately be of service for bacteriological research.

*** We are advised that a good microscope for the purpose and price mentioned is Swift's "Pathological" Model. It costs about £10 without oil immersion lens, which at an extra cost of £5 may be added later. A Leitz or a Reichert may be obtained at about the same price, but Swift's stands and lenses are now as good as can be obtained at "students'" prices.

ANSWERS.

M.D DUBLIN.—There can be no objection to putting M.B. or M.D., coupled with the university after the name, on a brass plate, although we believe that such an announcement is unusual.

G.V.H.—Under the new regulations foreigners can obtain from the French universities only an academic degree of Doctor of Medicine which does not confer the right of practising in France.

WHITCHURCH.—There can be no objection to a medical man giving public lectures on non-medical topics, but care should be taken that the lectures are not advertised in such a manner or in such places as would lend colour to the suggestion that the advertisements were made partly for the purpose of attracting practice.

AVENUE.—Books on household medicine are not things lightly to be recommended to all sorts and conditions of people, for much mischief often results from amateur treatment, but as the clergyman in question is "very intelligent," we may suppose he will not trust too much to mere book knowledge. The books which we would suggest are, *A Manual of Family Medicine*, by the late Sir William Moore or *Gardner's Household Medicine and Sickroom Guide*, a thirteenth edition of which edited by W. H. C. Staveley, F.R.C.S., has just appeared (Smith, Elder, and Co.). The latter is practically a new work. There is a good deal of sound advice in regard to children in the new edition of *Chavasse's Advice to a Mother*, which again is an old book almost rewritten by Dr. Carpenter.

QUACK INSTITUTES.

A. H. B.—There can be only one opinion concerning the so-called institute; but as the person who is associated with it does not use medical titles, nor, so far as appears, prescribe or dispense drugs, no action would lie against him under either the Medical or Apothecaries Acts.

UNQUALIFIED DENTISTS AND OTHER PRACTITIONERS.

DOUBTFUL; MEDICO.—In the BRITISH MEDICAL JOURNAL of February 12th, 1898, p. 475, in reply to a similar question, we pointed out that a registered medical man who, by administering anæsthetics to the patients of an unqualified dentist or other unqualified practitioner, thereby enables the latter to practise as if he were duly qualified, would probably be held to have rendered himself liable to be convicted of the offence known as "covering." If convicted, his name might be erased from the *Register* by order of the General Medical Council.

MIDWIFERY ENGAGEMENTS.

PERPLEXED.—It is usual for medical men to help each other by attending each for the other midwifery cases during unavoidable absence. It is rather a general custom afterwards to share the fee though there is no fixed rule. "Perplexed" has so far acted his part thoroughly and well. He attended the case, and wrote to A. that he was acting for him, and also explained this to the patient. Now he is aggrieved because A. has not acknowledged his letter; and further because at his last visit to the patient nothing was said about a fee. He asks Shall I demand a fee? and shall I attend them as my own patients should they summon me by-and-bye? "Perplexed" cannot now ask for a fee. So far his conduct

would command the respect of every practitioner, Why sacrifice this? A.'s apparent lack of courtesy in not answering the letter and acknowledging his obligation may be due to this: that when he paid his visit to the patient nothing was said about the fee, and that, concluding "Perplexed" had received it, he did not care to write to him.

TREATMENT OF SLOUGHING EPITHELIOMA.

DR. GEORGE E. CROWE (Didsbury, Manchester) writes: In reply to your correspondent "Inquirer," in the BRITISH MEDICAL JOURNAL of May 21st, regarding the treatment of sloughing epithelioma, I would recommend him to try a solution of liq. calcii chlorid. *B.P.*, 1 in 40, or stronger if necessary. I have often found it most advantageous, especially in cases of cancer of tongue.

DR. W. B. HOLDERNESS (Windsor) writes; I would suggest to "Inquirer" to dust the surface of the epithelioma over twice or three times a week with finely powdered permanganate of potash, and over that a piece of Christa lint well spread with an ointment made of dermatol 3ij in thymol ointment 3j (20 gr. to the ounce).

NOTES, LETTERS, Etc.

"THE BRITISH PHARMACOPŒIA, 1898."

DR. JOHN WORNUM (Exeter) writes to call attention to the strength of the tinctura chloroformi et morphinæ composita. It contains nearly $4\frac{1}{2}$ times the amount of morphinæ hydrochlor. that the old one did. The *Pharmacopœia* of 1885 had in each 10 minims of this tincture $\frac{1}{15}$ of a grain, whereas the *Pharmacopœia* of 1898 contains $\frac{1}{71}$ of a grain. As this tincture is often contained in county and colonial medicase cases serious results may easily accrue from the new tincture being supplied in lieu of the old one. Again, the stronger tincture of ginger is left out. This will lead to essence of ginger of various and varying strengths being sold instead of its having a fixed standard.

*** Attention is called to the change in the strength of the tinctura chloroformi et morphinæ composita in a note which is given a prominent place in the *Pharmacopœia*. The former tincture frequently failed to give any relief. Although the dose is the same is in the last *Pharmacopœia*, it has been arrived at from a consideration of the alkaloidal strength, and it has been therefore found that the new tincture will act with safety, while the old tincture was practically inoperative.

AN APPEAL ON BEHALF OF THE WIDOW OF THE LATE DR. ARTHUR BARLOW.

THE following additional subscriptions have been received on behalf of the fund for the widow of the late Dr. Arthur Barlow:

Per Dr. J. W. Moore, 40, Fitzwilliam Square West, Dublin:

	£	s.	d.
Samuel A. Clarendon, Esq., M.B., Dublin ...	1	1	0
"K.," Taunton	0	5	0
Ch. E. Cormack, Esq., M.D., Vichy...	1	1	0
A.B.	1	1	0
Alexander Patten, Esq., M.B., Finglas, co. Dublin	1	1	0
A. H. Barlow, Esq., Dublin	1	1	0
Per Dr J. Agar Matson, 619, Holloway Road, N.:			
"An Old Friend"...	5	0	0
H. F. N. Scott, M.D.	1	1	0

THE PROSECUTION OF REGISTERED MEDICAL PRACTITIONERS BY THE GENERAL MEDICAL COUNCIL.

L.S.A. LONDON writes: Under the above heading I saw a letter from Mr. George Brown in the BRITISH MEDICAL JOURNAL of May 21st. He says it "must have come as a surprise to most members of the profession." This is an extremely mild way of expressing it. I was simply astounded, and resolved to sever my connection with the British Medical Association if that is what we pay our subscription for. A few weeks ago I received a postcard from the Medical Council asking if I were in favour of the Medical Council taking up medical defence and if I were willing to pay an extra subscription. Though I am a member of the Medical Defence Union, I immediately replied, Yes. The thanks I receive are the prosecution of a fellow registered medical practitioner with the same qualification as myself. My diploma, obtained in 1894, states that "after deliberate and careful examination, I am found to possess the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery." That diploma was duly registered; if I am not a physician and surgeon, what am I? Will the General Medical Council please reply? In the past I have been very moderate in my claims, simply putting Mr. ——, L.S.A. Lond.; in future I shall add Physician and Surgeon, so if you want another prosecution I will give you every facility, and enclose my name and address.

*** Our correspondent appears to labour under a slight mental confusion. The British Medical Association has had nothing to do with the prosecution of a registered medical practitioner; and the General Medical Council has nothing to do with medical defence. We think it unlikely, therefore, that "he received a postcard from the Medical Council asking if he were in favour of the Medical Council taking up medical defence." If he is anxious to be made a martyr to his view of medical titles, possibly the General Medical Council may be disposed to oblige him. But we have no authority to speak for that august body, and with all respect, we must decline to be held accountable for its actions.

ANÆSTHESIA BY NITROUS OXIDE GAS AND OXYGEN.

MR. T. NOTTINGHAM, L.D.S. R.C.S. (Bridlington Quay) writes: With reference to the letter on this subject in your issue of May 7th, I should like as a constant administrator of nitrous oxide for dental and other surgical operations for the last fifteen years, to say a few words in reply to some of the statements therein which are, I consider, rather misleading. Your correspondent lays stress on the fact that Dr. Hewitt's machine is cumbrous and weighty, and requires a very large quantity of gas to produce any lengthy anæsthesia. The machine is one which may easily be carried in an ordinary hand bag. With regard to the second point, my experience is that no more gas is required in using Dr. Hewitt's apparatus than in any other if as much, but one thing I am certain of, and that is that it is far easier to control a patient when under the influence of gas and oxygen administered by Dr Hewitt's apparatus than of any other I know of where air is administered in place of oxygen. I have had in use both English and American appliances, and have recently visited Paris, where I have inspected the French systems, but to my mind the most perfect, complete, and manageable is that of Dr. Hewitt, and I think if it were generally known a great many medical gentlemen who reside in the provinces would adopt it, and so avoid the use of chloroform in minor operations.

THE DETERMINATION OF SEX.

DR. ANDREW WILSON (Edinburgh) writes: In connection with Dr. Schenck's views regarding the determination of sex, may I point out to your readers that some years ago in the BRITISH MEDICAL JOURNAL I wrote a note regarding a theory of sex, in which I maintained that the sex of the embryo was determined by its condition at the time of impregnation. I held (and still hold) that if an ovum is fertilised premenstrually, it veers over to the male side, because it is vitally a better and stronger ovum than one post-menstrually impregnated. The matter is therefore one of nutrition; the better nourished ovum—that is, one just liberated—tending to become a male, and *vice versâ*. I elaborated this theory at length, and replied to criticisms thereon in the pages of the *Lancet* some years ago. Dr. Schenck's view that nutrition is the cause of sex is not new, and one may well fail to see how any amount of dieting the mother can affect a matter which is determined, if inference be permissible at all, at the time of impregnation. I may explain that while in lower life the feebler ovum may become a male, in mammals the male is the larger, and by parity of reasoning must arise from a stronger ovum than that which begets a female.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Mr. R. B. Anderson, London; Messrs. Arnold and Sons, London; Dr. W. P. Ashe, London. **B** Messrs. Burroughs, Wellcome, and Co., London; Miss L. Brierley, Tetbury; Mr. J. P. Bush, Clifton; British Medical Temperance Association, Secretary of, London; Mr. J. B. Blackett, London; Dr. T. Barr, Glasgow. **C** Mr. A. Clarke, London; Dr. T. Churton, Leeds; Mr. H. Cripps, London; Dr. G. E. Crowe, Manchester Country Practitioner; Messrs. J. and A. Churchill, London; Chirurgus; J. G. Cooke, M.B., Londonderry; Mr. H. J. Clark, Swanage. **D** Mr. W. Dickson, Leicester; Dr. E. T. Davies, Liverpool. **E** Electric Light Bath Company, Battle Creek, U.S.A.; Mr. J. Evans, Dublin. **F** F.M.; Mr. J. Farmer, Brackley; Mr. T. Farrow, London; F.B.H.C.; F.R.C.S.; Mr. E. W. Foster, Malvern; Mr. J. H. Ferguson, Killygordon. **G** P. E. Griffiths, M.B., Cardiff; Mr. T. P. Gostling, Worcester; Mr. H. W. Gadd, Exeter. **H** Messrs. C. J. Hewlett and Son, London; Dr. A. Haig, London; Mr. C. J. Harris, London; Mr. W. B. Holderness, Windsor; D. F. Harris, M.B., Glasgow; H. R.; Mr. T. G. Horder, Cardiff. **I** Dr. H. J. Ilott, Bromley. **J** J. L. H.; W. D. Johns, M.B., Bournemouth. **K** Mr. R. Kershaw, London. **L** Local Practitioner; L. S. A., London; Mr. H. Lawrence, Melbourne: Dr. D. Lowson, Hull; L.R.C.P.E.; Listerian. **M** Medical Supply Association, Edinburgh; Dr. J. A. Macdonald, Taunton; Dr. R. Maclaren, Carlisle; Dr. J. Macdonald, Carlisle; Microscope; R. W. Middleton, M.B., Southsea; Dr. J. A. Matson, London; Mr. J. O. McWalter. **N** Never Asked; Dr. D. Newman, Glasgow; A. E. Normington, M.B., Newcastle, Staffs; Mr. G. E. Neild, London. **O** Professor A. Ogston, Aberdeen. **P** Mr. F. T. Paul, Liverpool; Mr. J. H. Power, Peterborough: Perplexed; Dr. C. Porter, Stockport; Phosphorus; Dr. H. M. Page, Redditch. **R** Mr. J. J. A. Raye, Banbury; Mr. E. Ransom, Bedford; J. S. Riddell, M.B., Aberdeen; Dr. A. Ransome, Bournemouth; Dr. J. Rowat, Troon. **S** Mr. A. G. Southcombe, London; Dr. E. D. Shirtliff, Malvern; Dr. F. F. Schacht, London; W. Simpson, M.B., Newcastle-on-Tyne; Mr. C. H. Sers, London; L. E. Stevenson, M.B., Temple Sowerby; Dr. J. Swain, Clifton; Messrs. Steadman and Van Praagh, London; Surgeon Captain. **T** Mr. J. Turner, London. **U** Undrained Wivenhoe. **W** Dr. G. N. Wynne, Dublin; Dr. T. J. Wood, Bradford; Dr. F. H. Welch, London; Whitchurch; Mr. J. J. Weaver, Southport; Dr. C. T. Williams, London; Mr. W. G. Westcott, Chichester. **Y** Dr. D. Young, Glasgow.

BOOKS, ETC., RECEIVED.

The Light of the West. By J. A. Goodchild. Part I. The Dannite Colony. London: Kegan Paul, Trench, Trübner and Co. 1898. 5s.

Dyspepsies Nerveuses et Neurasthénie. Par Dr. P. Glatz. Bale et Genève: George and Co. 1898.

Guide et Formulaire de Thérapeutique Générale et Spéciale. Par Dr. V. Herzen. Paris: J. B. Baillière et Fils. 1898. 5fr.

Comfort and Cleanliness. By Mrs. C. M. Buckton. London: Longmans, Green and Co. 1898. 2s.

The Schott Treatment for Chronic Heart Diseases. By R. Green, F.R.C.P.Ed. Second edition. London: The Scientific Press. 1898. 6d.

The Determination of Sex. By Dr. Leopold Schenk. Authorised translation. London: The Werner Co. 1898.

*** In forwarding books the publishers are requested to state the selling prices.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

REMARKS
ON
THE SURGICAL TREATMENT OF PYLORIC OBSTRUCTION, WITH AN ACCOUNT OF TWENTY CASES, AND OF A NEW WAY OF PERFORMING GASTRO-ENTEROSTOMY.*

BY F. T. PAUL, F.R.C.S.,
Surgeon to the Royal Infirmary, Liverpool.

STENOSIS of the pyloric orifice of the stomach is brought about in several different ways. It is due to—

1. Congenital insufficiency.
2. Obstruction from the external pressure of tumours, bands, etc.
3. Reflex spasm.
4. Fibrous contraction.
5. Cancerous and other growths.

In dealing with these conditions I propose to restrict my remarks to personal experience.

CONGENITAL INSUFFICIENCY

I have no positive knowledge of in the adult, unless it was the primary cause of stenosis in Case IV.

OBSTRUCTION FROM WITHOUT

in such a degree and under such circumstances as to suggest surgical interference is very rare, owing to the mobility of the stomach. I have known omental bands connected with a hernial orifice and acting through the transverse colon to so drag on the stomach as to give rise to symptoms of obstruction. In such a case the treatment is obvious and simple. Scirrhous cancer of the gall bladder also drags on the pylorus, but in the opposite direction. It is somewhat rare. I have seen two cases in which obstruction was caused in this way.

REFLEX SPASM

occurs both in association with ulceration and independently of it. In 1896 I operated upon a case in which symptoms of pyloric obstruction apparently depended upon muscular spasm only.

CASE I. The patient was a man, aged 21. He was admitted into the Royal Infirmary under the care of Dr. Caton in November, 1895, for pain in the epigastric region and a lump. The lump proved to be a largely dilated stomach, in which splashing sounds could be easily produced. He was treated by careful dieting and washing out the stomach, but not having materially improved in January, 1896, was transferred to me. The patient was anæmic, and decidedly of neurotic type. On Jan. 6th the abdomen was opened for exploratory purposes. The stomach was found dilated, the pylorus thick but not fibrous, and upon invaginating the anterior wall upon the forefinger into the pyloric orifice abnormal resistance was met with. This was gradually overcome by continued steady pressure, and ultimately the opening was over-dilated without splitting by passing three fingers through it. No cut was made in the organ. The patient healed well, but was subsequently attacked with acute mania, and had to be sent to the County Asylum, where he remained five months before he got his discharge. He had no recurrence of the gastric symptoms.

FIBROUS STRICTURE

is a condition presenting the greatest possible interest for surgical treatment. It is secondary to ulceration or other inflammatory change in the walls of the stomach. Out of nine cases, all but two have occurred in men, although gastric ulceration is so much more common in women. None were traumatic. Perhaps fibrous stricture with or without preceding ulceration may sometimes be of syphilitic origin, a point to which I drew attention at this institution in 1881.[1]

Whatever the cause of these strictures, they sometimes lead to almost complete occlusion, with extreme gastric dilatation and great emaciation of the patient. Several operations have been suggested and employed for the cure of fibrous stricture, including pylorectomy, divulsion, pyloroplasty, and gastro-enterostomy. Pylorectomy ought not to be practised for a stricture known to be of simple nature, unless under some exceptional circumstances, and the same may be said for divulsion or Loreta's operation. The choice therefore lies between pyloroplasty and gastro-enterostomy. I have never employed pylorectomy for simple stricture, but have used divulsion in two cases in addition to the one just described.

* Read at the Liverpool Medical Institution.

LORETA'S OPERATION.

CASE II.—P. K., aged 36. Fibrous stricture of pylorus. Two years ago vomited blood in small quantities on four occasions. Eleven months ago first began to suffer from the collecting of "burning wind" in his stomach, with nausea but no vomiting. He gradually gave up various articles of diet, living mostly on bread and milk. He lost 3 st. in weight. Was admitted under Dr. Caton in November, 1890, and was for some time under medical treatment for obstructed pylorus with dilated stomach. He was transferred to me in January, 1891. On January 7th the abdomen was opened, a fibrous contraction of the pylorus found, which was forcibly dilated with the forefinger. The viscus was not opened, its anterior wall being pushed before the finger. The stricture gave way suddenly, the coats rupturing nearly to the peritoneum. The wound did well for a few days, and then discharged rather a lot of pus from the upper end, and subsequently healed. He gradually got on to common diet, and left the infirmary cured on March 30th. During the succeeding two years he was twice readmitted with complaints regarding the "burning wind," but as he ate common diet heartily without vomiting, and was a man of very weak intellect, nothing more was done. I thought his symptoms greatly relieved, but not nearly to the extent they would have been by the more modern pyloroplasty, for which the case was eminently suitable.

CASE III.—G. S., aged 41. Fibrous stricture of the pylorus. For four years this patient had suffered from marked symptoms of pyloric obstruction, during which time his weight had dropped from 12 st. to 8 st. He had been under the care of Dr. Glynn, and was transferred to me in April, 1892. On April 5th the abdomen was opened, and a thick tough fibrous stricture discovered, through which I was unable to pass a finger, even after incising the anterior wall of the stomach. Ultimately the stricture was overcome by the use of Hegar's uterine dilators, but again it was not a genuine dilatation, as it was felt to be ruptured on the under side. Progress was pretty good at first. The patient recovered sufficiently to get up and commence going out, but he was never thoroughly comfortable, and on May 24th, exactly seven weeks after the operation, he had a fatal hæmatemesis. At the necropsy it was seen that the gastro-duodenal artery had been exposed on the floor of the ruptured stricture, and was now opened into by the ulceration which had supervened.

Of the three cases of Loreta's operation, in two only was it employed for the treatment of genuine fibrous stricture. The first was certainly benefited, but the other died from an accident for which the operation was directly responsible. Even the first probably ran considerable risk, for the suppuration is quite as likely to have originated with the injury to the pylorus as in the superficial wound, and, though the patient was relieved, he was not thoroughly cured. In slight cases, where the stricture is chiefly spasmodic, dilatation without cutting into the stomach may be beneficial, and is practically devoid of danger; but for tough fibrous strictures the day is past for using divulsion, which must give place to the more effective, and I believe less dangerous, operations of pyloroplasty and gastro-enterostomy. In choosing between these, the choice will now always fall upon the former whenever it is possible to do it thoroughly and efficiently, the latter being reserved for those cases in which, owing to great thickening and fixation of the parts, or the presence of still active ulceration, it is undesirable or impossible to adopt pyloroplasty. I have performed pyloroplasty for fibrous stricture five times, with one death, the death being due to peritonitis pure and simple, the stomach wound having closed perfectly.

PYLOROPLASTY.

CASE IV.—G. D., aged 31. Fibrous stenosis of pylorus; pyloroplasty; recovery. Ever since he was a little child of about 6 has had to be very careful in regard to food, living chiefly on milk. For several years has often vomited a large quantity at night before he could sleep, and for the last eighteen months has regularly emptied his stomach with a tube and washed it out. Has been steadily losing flesh, and is now very emaciated, as he is above average height and weighs only 8 stone. Was sent to me by Dr. Masson, of St. Helens. October 8th, 1896, pyloroplasty was done. The pylorus was very much constricted, but no great thickening and hardness, so that a good band of healthy mucous membrane could be brought into the pyloric orifice. He made excellent progress. On October 24th had chicken and potatoes and rice pudding for dinner. On the 31st was discharged weighing 9 st. 5 lbs. When seen a few months later was in excellent health weighing 11 st. In 1897 he was accepted as a first-class life in the Lancashire Alliance Insurance Company, and has since remained quite well. Altogether this proved one of the most satisfactory surgical cases I have ever met with.

CASE V.—W. A., aged 26. Fibrous stricture; pyloroplasty; recovery. Sent to me by Dr. Finegan. First began with indigestion five or six years ago. For the last two or three years has suffered from periodic vomiting. Is thin but not emaciated. Has a considerably dilated stomach, in which splashing sounds are easily produced. On January 20th, 1896 explored and found a slight fibrous stricture. Pyloroplasty was easily done, and the recovery was uneventful. On February 15th he was discharged apparently quite well, and when last seen a few months later was still in good health.

CASE VI.—W. H., aged 38. Tough fibrous stricture: pyloroplasty; recovery. Fourteen years ago was said to have had an attack of biliary colic. The attacks occurred subsequently about every six months. Has also suffered much from indigestion. Was admitted under Dr. Caton, February 18th, 1897, with all the symptoms of pyloric obstruction and

dilated stomach, possibly complicated with gall stone. He was not much wasted. Patient improved considerably under medical treatment, but the symptoms of obstruction remaining he was transferred to me on April 1st, 1897. On April 5th pyloroplasty was done. The pylorus was found thickened, hard, and adherent. The operation was satisfactory, but not quite so much so as in Case IV. He made an uninterrupted recovery. Commenced common diet April 27th, and was discharged cured, May 6th. He was seen several months later by Dr. Gullan, and was then in excellent health. A report just to hand states that he has been perfectly well ever since.

Case VII.—Mr J., aged 46. Old fibrous stricture; pyloroplasty; recovery. Subject to indigestion with pain since about 20. Had attacks of vomiting about every two months, always after food that had disagreed with him. Often used to make himself vomit to obtain relief. For the last five or six years stomach symptoms have been steadily increasing in severity, and in March 1897, they became decidedly worse. Vomits now three times a week, and is much wasted. In September Dr. Wilson Paton asked me to see patient with him with a view to operation. There was no doubt he had pyloric obstruction with considerable gastric dilatation, but no tumour could be felt. On September 14th the abdomen was explored, and old fibrous contraction of the pylorus being found pyloroplasty was done, though the parts were too hard and adherent to permit of a perfect result. He recovered well, and was greatly benefited for a time, but has lately had a certain amount of recurrence of symptoms of obstruction. Whether this is due to some subsequent contraction, or to the development of malignant growth not detected at the time, or to careless habits in diet which are undoubted, I cannot say; but should the symptoms continue I am afraid nothing less than a gastro-enterostomy would afford him any permanent relief. A later report states that he is much better again, and gaining weight.

Case VIII.—Miss H., aged 42. Fibrous stricture; pyloroplasty; death from peritonitis. Had suffered for many years from what she regarded as bilious attacks, which of late had been accompanied with a good deal of pain in the region of the gall bladder, but not so acute as the pain of biliary colic. Vomiting was severe, and during the attacks almost continuous. On October 12th, 1897, I explored the abdomen with the assistance of Dr. McAfee. There were no gall stones, but the pylorus was scarred and contracted. Pyloroplasty was easily done, and I felt no anxiety as regards the result. The latter however was very disappointing. The operation was followed by septic peritonitis, from which she died on the 15th. At the *post-mortem* the pyloroplasty wound was found to have healed perfectly, the peritonitis evidently having originated directly from the operation.

Gastro-enterostomy for Fibrous Stricture.

Case IX.—E. F., aged 24. Active ulceration; gastro-enterostomy; recovery. Patient was a very healthy man until eleven months ago, when he began to vomit after food. He dieted himself carefully, and worked until eight months ago, when pain in the epigastric region set in, and the vomiting continued. The pain became very bad both night and day. He was for three months under the care of Dr. Davidson, in the Royal Infirmary, and later in the Northern Hospital, under Dr. Dickinson, where clots of blood were washed out of the stomach on two or three occasions. He went from bad to worse, and was sent to me by Dr. Finegan in a very wasted and broken-down condition. In the dresser's report he is described as "an emaciated, miserable looking, dejected, neurotic man." He was in almost constant pain, and frequently vomiting. The stomach was considerably dilated. On May 10th, 1895, the abdomen was opened. The pylorus, duodenum, and colon were all found matted together in a large, hard mass, the duodenum being apparently constricted in two places, and what was believed to be a large ulcer was felt in the pyloric region. Pyloroplasty and pylorectomy were out of the question, therefore gastro-enterostomy with Murphy's button was done. The patient did as well as such a neurotic type of individual could be expected to. He had plenty of pains and discomforts, but the temperature never exceeded 99·5°, and he began to get up on July 8th. On July 12th he commenced common diet. As the button was not passed he was given a very full meal on the 18th, and made to vomit afterwards, but without effect. So far as we know, the button has never been passed. I have had him examined with the *x* rays on two occasions, but without a definite result. He is now well-nourished, florid, and healthy-looking; but came to see me the other day nearly three years after the operation with a slight return of the old pain. A few days' rest in bed seemed to put him all right, but I feared a slight recurrence of the ulceration. The obstruction seemed to have been quite relieved.

Case X.—Mr. A., aged 44. Old duodenal ulcer; stenosis; gastro-duodenostomy; death from cardiac failure on seventh day. Two brothers had similar but less severe gastric symptoms. At the age of 17 had first gastric attack, which lasted three or four months. Has been subject to such attacks since at intervals. They are characterised by flatulence, pain, constipation, and vomiting of quantities of fluid. Between the attacks he is quite well, and is able to enjoy food. The symptoms have tended to gradually increase in severity. He has now flatulence, pain, frequent nausea, and occasional vomiting of large quantities of frothy fluid containing sarcinæ. The abdomen is distended, there is tenderness over the epigastric region, and considerable dilatation of the stomach. On May 19th, 1895, the abdomen was opened. The pylorus was thickened, contracted and tucked up under the liver. The second part of the duodenum lay near the pyloric end of the stomach, and an anastomosis was established between them with Murphy's button. The subsequent course of the case was unsatisfactory throughout. He began with nausea and frequent cough with mucous expectoration, which we attributed to the ether. The pulse became rapid and bounding. Temperature ranged from 99·5° to 102°. He suffered from flatulence, and frequently vomited small quantities of fluid. After a slight temporary improvement he began to fail, and died on May 26th, seven days after the operation. The patient was markedly of the neurotic type, but sensible and patient throughout. Dr. Carter of Preston, whose patient he was, made a *post-mortem* examination of the parts. He found the pylorus constricted to the size of a cedar pencil, and an annular ulcer in the duodenum. The button was still in position, there had been no leakage, and there was no septic peritonitis. Apparently the patient was not in a condition to bear the operation, and had died from cardiac failure without any fault which could be directly attributed to the operation.

Case XI.—A. C., aged 35. Gastric ulcer; pyloric stenosis; gastro-enterostomy; recovery. Patient began to suffer from symptoms of gastric ulcer six or seven years ago. Since then she has been three times in the infirmary for this complaint. The fourth attack occurred a year ago with hæmatemesis. On January 30th, 1897, she was admitted under Dr. Caton with a largely dilated stomach, and was moderately emaciated. She improved under medical treatment, and was transferred to me in March for operation. On March 11th the abdomen was opened. The parts in the pyloric region were hopelessly matted together and adherent to the underside of the liver. Pyloropasty had to be abandoned, and gastro-enterostomy with Murphy's button was done in its place. A finger was introduced through the stomach opening to examine the pylorus; it was found thick, hard, and contracted, with a very large and thick-walled ulcer spreading into the pyloric end of the stomach. Patient made a good recovery, and was discharged well on April 24th. The button was not passed. She was seen on June 11th in very good health eating all kinds of food with enjoyment. Her weight then was 10 st. 12 lbs. Before the operation it was just 8 st.

Of the three operations used in the treatment of fibrous stricture of the pylorus, divulsion, pyloroplasty, and gastro-enterostomy, the former, as has already been said, is unsatisfactory, and must now give place to the other two. Pyloroplasty is the best operation, but unfortunately it is not applicable to all cases. When the parts are sufficiently yielding to permit a broad band of healthy mucous membrane to be drawn into the contracted pyloric orifice, the result is perfect; better I think than is ever obtained by any other stomach operation. But when the hardness and fixation of the surrounding tissues is such as only to allow the approximation of a little mucous membrane from stomach to duodenum, the result is not superior to that obtained by gastro-enterostomy, if as good, and when this can only be effected with much tension on the sutures, gastro-enterostomy is distinctly the better operation. Moreover, when active ulceration is present, it is generally undesirable to operate in its immediate neighbourhood. Pyloroplasty is probably a less severe operation than gastro-enterostomy, but one need not attach so much importance to this in vigorous subjects, since in such cases the dangers of the latter are greatly lessened, and patients with fibrous stricture are as a rule much stronger, and have much more reparative power than those suffering from malignant disease. When the patient is exhausted pyloroplasty should be done if possible.

In regard to the two deaths, Case VIII died from septic peritonitis, the result of the operation, though I was not aware of any source of contamination of the peritoneal cavity. The pyloroplasty wound could not have looked more firm and healthy than it did at the *post-mortem* examination, the sutures being entirely covered with firm plastic exudation. Some people are specially susceptible to septic inflammation of the peritoneum. Case VIII was one of these, for the operation was easy and there was no accident of any kind. The death following Murphy's operation (Case X) occurred in a similar neurotic type of subject, though not exactly in the same way. Vomiting commenced soon after the operation, and was accompanied later by rapid pulse and elevation of temperature, with increased flatulence, but he did not die until the seventh day, and at the *post-mortem* examination no evidence of septic peritonitis was found. I think there must have been some septic element in the case, perhaps connected with the slough produced by the Murphy's button. The result would probably have been different had it occurred later, when the advantages of pyloroplasty were known and appreciated.

For malignant stricture of the pylorus I should have said there were only two operations—pylorectomy and gastro-enterostomy—were it not that my colleague, Mr. Rushton Parker, has recently been trying pyloroplasty with some success in cases in which the pylorus was not entirely surrounded by growth. The value of the operation in malignant cases must remain *sub judice* pending further experience. There seem to be some *a priori* objections to it in these cases; but such objections are readily met by practical experience, and it cannot be said that the latter under similar circumstances presents gastro-enterostomy in a very favourable light. I have done pylorectomy in two cases only. The first died, the patient being almost *in extremis* at the time of the operation. The second recovered, dying sixteen months later from recurrence, after having been very strong and well for about a year.

Pylorectomy.

Case XII.—A. A., aged 45. Pyloric cancer; pylorectomy; death from

shock. Unfortunately the report of this case is missing, and I have only the essential details. Patient had been suffering from increasing symptoms of pyloric obstruction for nearly a year. She was admitted into the infirmary under the care of Dr. Davidson, with frequent copious vomiting and great dilatation of the stomach. She was wasted and considerably exhausted for want of food, but, as she vomited everything, had to be kept entirely on nutrient enemata. After ten days' rectal alimentation, as the patient was rapidly losing ground, she was transferred to me for operation. On April 22nd, 1891 the abdomen was opened and a small hard carcinoma was found in the pylorus almost completely obstructing it. The growth was freely movable, and the stomach was greatly dilated and distended with gas and dark brown fluid. I rapidly excised the pylorus, closing the wound with sutures. It was a very easy case to operate upon, the entire proceeding occupying under an hour, and the state of exhaustion did not seem to be very much increased. However, the patient showed no signs of rallying, and she quietly faded out next day. At the *post-mortem* examination the condition of the parts operated upon was found perfectly satisfactory. This would have been a very good case for pylorectomy had the operation been undertaken at an earlier stage of the complaint. It was, of course, an error in judgment to attempt it in her then condition.

CASE XIII.—A. S., aged 56. Carcinoma of pyloric end of stomach; pylorectomy (gastrectomy); recovery; death sixteen months later from recurrence. Patient was a widow with children; worked hard and supported her family. For the last six months she had been very ill with indigestion and pain, but no vomiting. Gave up all solid food and was easier. Seven weeks ago first noticed a lump in the epigastric region the size of a hen's egg, which grew steadily larger. She was sent to me by Drs. McDonald and Huskie. The patient was wasted, but healthy looking. The tumour was perfectly visible through the abdominal wall, and felt as large as a good sized orange. She had no vomiting. On May 25th, 1895, I opened the abdomen. The pyloric end of the stomach for 4 inches was the seat of a dense, thick, hard mass, more like sarcoma than the ordinary carcinoma, and a few adjacent glands were white and hard, and about the size of peas. On May 27th the affected structures were excised with scissors, and the viscera reconnected with a Murphy's button and sutures. The patient suffered very little from shock, but was not comfortable after food until June 12th, when perhaps the button became dislodged. It was not passed until June 25th, after which the patient felt quite well. She soon returned to her work, and continued in excellent health for a year, when evidence of recurrence began to manifest itself, not in the stomach, but in the glands and peritoneum. She lost flesh rather rapidly, and died at the end of sixteen months from the date of the operation.

Pylorectomy should be reserved for favourable cases. I would not again attempt it in an exhausted patient like Case XII. A gastro-enterostomy is the most that a person in such a condition can be expected to survive. In Case XIII the limit from another aspect, namely the extent of the growth, was about reached. It is true we have before us the recently published case of complete excision of the stomach by Dr. Carl Schlatter, but one may be allowed to hope that such an example will not be taken as a practical guide in the surgical treatment of cancer of the stomach. Strongly as I would urge, when reasonable, a curative in place of a palliative operation, I think pylorectomy should only be attempted when the growth is fairly small, and above all things freely movable. In regard to the manner of doing the operation the only differences of opinion relate to the method of closing the wounds. Here the choice lies between suture alone, suture and a mechanical appliance, and complete closure of the cut ends combined with gastro-enterostomy. In some cases the latter is imperative, because the cut ends will not come together, otherwise I should not think this plan desirable. As regards the choice between simple suture and suture combined with a button or bobbin I have some doubt, but incline towards the former when approximation is fairly easy. When there is any difficulty in applying the sutures the posterior ones are in danger of proving insecure, and under such circumstances the use of a button would probably be advantageous.

GASTRO-ENTEROSTOMY FOR MALIGNANT PYLORIC OBSTRUCTION.

I have done this operation on seven occasions, and am sorry to say that the mortality has been heavy. Two were done with Senn's bone plates, 1 died and 1 recovered; 1 with bone rings, which was fatal; and the remaining four with buttons, of which 2 died and 2 recovered. Of the 4 deaths the Senn's case and 1 of the Murphy's were due to shock and previous exhaustion, 1 was due to the button, and 1 to peritonitis.

CASE XIV.—R. C., aged 60, was admitted under Dr. Caton for scirrhous pylorus. On July 13th, 1889, I did gastro-enterostomy by Senn's method. The patient did very well for a few days, but in these early cases we were too much afraid of feeding, and this patient got nothing but small sips of water by the mouth until the end of the seventh day, when it was too late. The exhaustion was too profound, and he died the next day.

CASE XV.—Mrs. B., aged 48, a patient under the care of Dr. Barnes, suffering from cancer of the pylorus. I operated by Senn's method on November 11th, 1891. She recovered and was up by the end of the month. After a few weeks of comparative comfort the symptoms of obstruction recurred, and she died little more than two months subsequent to the operation. At the necropsy we found the opening had nearly closed again.

CASE XVI.—J. G., aged 45; symptoms of pyloric obstruction for upwards of a year. On June 2nd, 1892, I did gastro-enterostomy on the posterior aspect of the stomach by a method I recommended for producing a circular punched-out opening by strangulating a portion of the viscera with two bone rings ligatured together. The effect was exactly that caused by Murphy's button, but the rings could not be used with the same ease and speed as the button. Unfortunately the patient died from peritonitis on the second day, so the operation was never fully tested in the human subject, for I of course gave it up as soon as the better appliance suggested by Dr. Murphy was introduced.

CASE XVII.—John N., aged 35. Patient was admitted under Dr. Caton in August, 1896, having suffered from indigestion and vomiting for five months. Had gastric dilatation, and was anæmic and wasted. Improved under medical treatment. On November 5th I opened the abdomen and found a carcinoma of the pylorus, which was unsuitable for excision, and therefore did Murphy's gastro-enterostomy. He recovered rather slowly, and did not pass the button, which was beautifully shown by Professor Oliver Lodge, about three inches to the right of the umbilicus. He was discharged on January 1st, 1897, much relieved. In May he had hæmatemesis and soon after a nodule of growth was found in the abdominal scar. In June the growth had much increased, and on July 19th he died from exhaustion. The necropsy was made by Professor Boyce. The gastro-enterostomy orifice was 6 inches from the pylorus. It was completely surrounded by growth, but still admitted a finger easily. It was 3 inches distant from the pyloric growth, which was extensive, and had ulcerated into the gall bladder and liver. The abdominal scar was also infected, though not connected with the primary growth. Death was considered to be due to the liver complication, and hæmorrhage into the stomach. Professor Boyce pointed out that this was a marked case of secondary infection of scars.

CASE XVIII.—Harry C., aged 34. Symptoms of pyloric obstruction for nine months. Wasting, frequent vomiting, and a nodular lump in the pyloric region. The abdomen was opened on April 6th, 1897, and the growth proving too extensive for pylorectomy, Murphy's gastro-enterostomy was done. Patient made a good recovery, and left on May 8th, not having passed the button, but eating fish and minced meat with perfect comfort. The vomiting stopped completely. After his return home the growth increased rapidly, and he lived rather less than six months after the operation.

CASE XIX.—Mr. C., aged 50. Seen with Drs. Barron and Chisholm. This patient had an old history of indigestion, with signs of pyloric obstruction coming on for the last twelve months. When first seen in April, 1897, he was in good condition, and no tumour could be felt. Exploration was advised, but not acceded to. Subsequently he lost flesh rapidly, and a tumour in the pyloric region could be easily felt. On June 25th I did Murphy's gastro-enterostomy. The operation produced no shock, and for some days he progressed splendidly, having no pain and no elevation of temperature. On July 1st he became very weak, and later in the day something evidently gave way, as he was attacked with abdominal pain, became collapsed, and died the following day.

CASE XX.—C. D., aged 65. Had suffered severely from indigestion, vomiting, and hæmatemesis for the last seven months. When seen had a pyloric tumour and a dilated stomach. Was emaciated, anæmic, and prostrated. It was really too late for operation, but he was very anxious for it, so I consented to try gastro-enterostomy. The operation was easily and quickly accomplished on December 5th, 1897, a Murphy's button being used, but he died two and a half days later from exhaustion. The operation caused very little apparent shock.

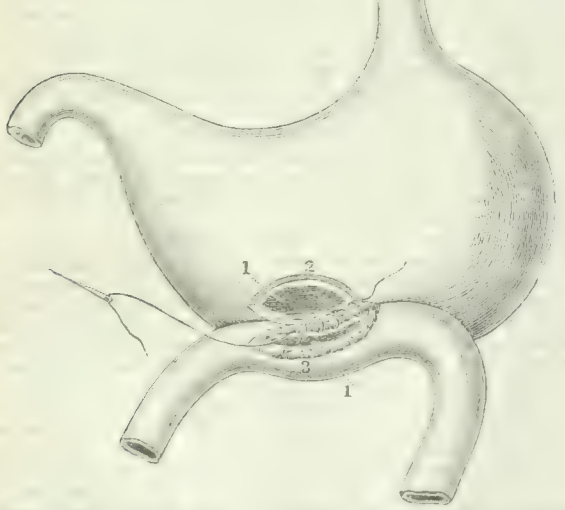
Gastro-enterostomy when done for malignant disease is a much less satisfactory operation than when done for fibrous stricture. It has all the disadvantages, associated with a continuance of the disease, which accompany colotomy for cancer of the rectum, without the safety characteristic of the latter. The two patients that recovered from the Murphy's operation were no doubt much relieved, and if the mortality could be substantially lowered, one would, I believe, look much more favourably on this method of treatment. Gastro-enterostomy, however, must not stand or fall on the results obtained in cases of advanced malignant disease. In non-malignant cases, and in young and robust subjects of all sorts its success is already very good.

The conclusions at which I arrive regarding the four operations of which the above 20 cases constitute my personal experience, are the following: Divulsion should be reserved for very exceptional cases, other and better methods having almost completely excluded it. In the complete form of Loreta's operation with an incision into the stomach, it is not likely to be employed in the future, but one can imagine cases in which one might explore with the expectation of finding a fibrous stricture, and discovering only a dilated stomach with a small and perhaps spasmodically contracted but not otherwise strictured pylorus, one might make use of such a simple and safe method of dilating the orifice as to pass one's fingers through it by invaginating the anterior wall of the stomach. Of the other three operations, pylorectomy under present conditions is only likely to be the best method of giving relief in a small percentage of cases, and though nothing can compete with pyloroplasty in the complete success which follows its employment when circumstances are favourable, there must always remain a considerable number of cases in which gastro-enterostomy alone is available.

After all, this operation with its many failings must re-

main a most important one, because it is always practicable when the others prove impossible. We may well, therefore, turn our attention towards endeavouring to improve it. Its greatest failing has always been a high mortality, primarily due no doubt to the exhausted condition of the patient at the time of the operation, or rather to the unsuitability of the operation for the class of cases for which it is required. One surgeon will blame the mechanical appliance for causing death, whilst another, who eschews buttons and bobbins, admits the danger of prolonged suturing operations with their risk of peritoneal contamination and their want of perfect water-tight security. As a matter of fact both methods are very well in their way, and succeed very well in the right sort of patients, but they are not suitable for exhausted subjects, and, unfortunately, the sort of subjects requiring this kind of relief usually are exhausted. When the patient is robust he reaps all the advantages of the button, plate, or bobbin, and is able, owing to vigorous and sound union, to withstand their dangers; but when, as is too often the case, the patient is in an exhausted condition, the nutrition low, and the union soft and delicate, the mechanical support becomes an active source of danger. As a foreign body it lies in contact with the wound, and in the case of the button about the sixth or seventh day perforation is liable to occur, with extravasation of gastric or intestinal contents into the peritoneal cavity, and rapid collapse and death. Plain suture in gastro-enterostomy has difficulties and dangers quite as great. The time occupied in effecting a water-tight union, the greater danger of contaminating the peritoneum during the operation, and the subsequent tendency which the opening shows to close are substantial objections to this mode of operating. At present one has to choose between the rapidity and primary security due to the ease and perfect coaptation of button operations, and the slowness and less perfect primary security of suture operations without a mechanical appliance.

Neither, unfortunately, are favourable methods to employ upon exhausted subjects. In fact, gastro-enterostomy still presents an open field for surgical ingenuity, as the objections referred to apply equally to the latest operations, such as those suggested by M. Faure and M. Desfosses. I make, therefore, no apology for proposing yet another plan. If it does not altogether hit the mark, it may be that a useful application for the principle will be found elsewhere, or that it will stimulate other and better proposals.



Anterior gastro-enterostomy by a new method. 1 The eschar produced by chloride of zinc. 2 Wound in the stomach made by excising a portion of the outer coats. 3 Wound in the intestine made by incising and rolling back the outer coats. The commencement of the continuous suture is shown.

The plan is as follows: The bowel and stomach having been exposed, a longitudinal incision is made in the form of —for about 2 inches in the human subject—through the peritoneal and muscular coats only. These are reflected with a small, curved, blunt dissector over an oval area, having a diameter of about 1 inch in the centre. The exposed submucosa is then rubbed with a stick of zinc chloride, say half a dozen times, being well dried between each application, when it assumes a grey dead look. The bowel is now wrapped in a piece of moist absorbent wool and laid on one side whilst the stomach is dealt with in an almost similar way. In preparing the stomach for the anastomosis, instead of making a linear incision, an oval patch of musculo-peritoneal coat is excised; the muscular coat being so much thicker in this organ, it is rather in the way if only reflected, and what is of more importance is that the loss of substance helps to prevent subsequent contraction of the opening. Both the wounds having been duly cauterised, they are brought together, and a continuous suture of the finest green gut or silk is run round the edges, as shown in the illustration—not, of course, penetrating the mucous membrane, but picking up as far as possible the tough submucous coat. Finally, a few Lembert or Halsted sutures are generally desirable, especially in anterior gastro-enterostomy.

The result of this operation in dogs—it has not been done in the human subject—is that the mucous and submucous coats slough and entirely disappear between twenty-four and forty-eight hours after the operation, and good firm union seems to take place with great rapidity. The complete removal of the slough might be a somewhat slower process in the average human patient; but probably an anastomosis would be effected within forty-eight hours—which is practically as soon as food could be digested, and quite early enough having regard to the proper adhesion of the external coats.

The features of this operation which it is hoped may be reckoned as advantages are:

1. The effect is one of pure traumatism. The viscera not being opened, all risk from such sources is avoided.
2. No foreign body is used.
3. The time occupied is less than for a suture operation, though more than for Murphy's.
4. The anastomosis resulting from loss of tissue should be more durable than in the majority of methods.

In performing the operation experimentally upon animals I have had the kind and valuable assistance of Professor Sherrington, who has personally helped me on each occasion, for which I feel very much indebted to him.

The chief points to which our attention has been directed were to ascertain:

1. The best chemical for causing necrosis of the mucous and submucous coats.
2. The interval between the operation and the breaking-down of the slough.
3. The character of the union.
4. The efficiency and durability of the anastomosis.

Eight animals were operated on, and the experiments have been continuously progressing from November 2nd, to the present time.

In regard to the general result the most noticeable feature has been the complete absence of shock in every case in which gastro-enterostomy alone was done. In estimating the severity of the operation, I am able to compare the effect of this method with that of several previous gastro-enterostomies in dogs in which the viscera were opened, and I attribute the absence of shock, and, indeed, of any appreciable pain or disturbance, to the fact that nothing of a dangerous nature was done. The viscera were not opened, and therefore the local peritoneal reaction was purely plastic and aseptic, and was not accompanied by that sensation of pain and insecurity which is present when the localised peritonitis is associated with septic as well as traumatic influences. Professor Sherrington has had a much larger experience of the effect of operations upon animals than I have, and he quite endorses this view.

Only three chemicals were tried, as in the first instance I was limited to five experiments, though the limit was subsequently withdrawn. Strong nitric acid well applied failed to produce an anastomosis. At the end of a fortnight firm adhesions were present over the area operated on, but no opening at all. Chromic acid was more successful, but I

thought not quite so efficient as zinc chloride, which has now been used seven times on six animals without once failing. Several other escharotics were thought of, but as the zinc chloride seemed to answer so well they were not tested.

The interval between the operation and the separation of the slough has not been quite definitely fixed. At 16 hours it was on the point of giving way. At 48 hours it was entirely removed, and strong union was present all round the opening. There were no other cases bearing upon this point.

The character of the union was very good in all the cases. The continuous suture was thoroughly embedded in a firm adhesion of plastic lymph which left nothing to be desired on the score of safety.

It has been difficult to decide as to the permanent efficiency of the anastomosis in dogs. In one the duodenum was divided, and gastro-enterostomy performed at the same sitting. The animal died at the end of two days from gangrene of the distal end of the duodenum, due presumably to division of the gastro-duodenal artery. Another in which the duodenum was greatly narrowed thrived well, but it seemed probable that some of the gastric contents continued to pass by the natural way, though the constriction of the bowel was sufficient to have produced dilatation above it. In a third, contraction of the pylorus was effected by destruction of the mucous membrane with zinc chloride, gastro-enterostomy being delayed until symptoms of pyloric obstruction were marked. After a few days' relief the severity of the symptoms increased, and the operation was a failure. At death a fortnight later the anastomosis was present, and would admit a little finger. It had either been made too late, or too small, or in a bad position, for it was high up near the lesser curvature towards the cardiac end. Probably all three conditions contributed to bring about failure. In this case the external coats of the stomach were incised only, and not cut out as I would now recommend, and the original incision itself was too small. Probably to get an orifice half an inch in diameter after complete recovery has taken place, one must operate on an area of twice that extent, and the loss of tissue should involve all the coats of the stomach if subsequent contraction is to be safely guarded against.

There was no evidence of regurgitation of intestinal contents into the stomach in any case. All the gastro-enterostomies were anterior, and in my limited experience in dogs and men this has not occurred in the anterior operation, though it did in one or two cases of the posterior operation in dogs which I performed in 1892.

In conclusion, I may say that I feel satisfied as to the safety of the operation I have proposed, and I believe there is a fair prospect that it will prove successful in effecting a satisfactory lateral anastomosis. The result of Murphy's operation in exhausted patients is sufficiently discouraging, in my judgment, to exclude it in this class of cases, though it is very successful under more favourable circumstances. I shall therefore feel justified in employing this method for my next gastro-enterostomy.

REFERENCE.

[1] *Liverpool Medico-Chirurgical Journal*, No. 1, p. 160, On Some of the Most Remote Effects of Syphilis.

THE OCCURRENCE OF MENSTRUAL SECRETION IN THE FALLOPIAN TUBES IN THE HUMAN SUBJECT AND ITS SIGNIFICANCE.

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I have published in the *Journal of Physiology* for February, 1898, a preliminary note on certain observations bearing on the normal and pathological secretions of the uterus and Fallopian tubes in the human female and in some of the mammalia. In the present communication I wish to draw attention to the subject as far only as it affects the human subject, and especially to the occurrence in some cases of a menstrual secretion in the Fallopian tubes.

Three years ago, on cutting across a Fallopian tube removed with the ovaries for uterine disease on the first day of the menstrual flow, I was struck by the fact that the tube contained a quantity of blood-stained mucus resembling menstrual fluid. Further observations were then carried out on cases operated on during the menstrual periods. Immediately after removal the tube was cut across near the uterine end, and the contained fluid, which exuded on gentle pressure from the cut end, examined both in the fresh state, and by means of dried films stained with logwood and eosin.

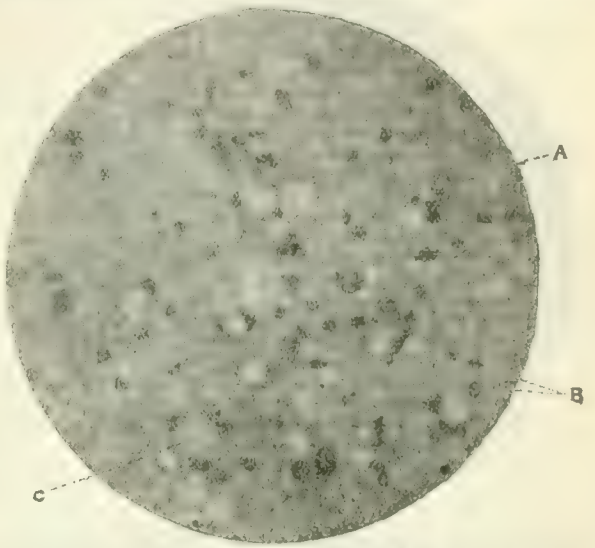


Fig. 1.—Film preparation of normal menstrual fluid from the external os on the second day of menstruation. Stained logwood and eosin ⅛ obj. A. Leucocytes. B. Red blood corpuscles. C. Altered epithelial cells.

Portions of the tubes immediately after removal were also hardened in formol 5 or 10 per cent. solution, and sections cut and stained with the same reagents.

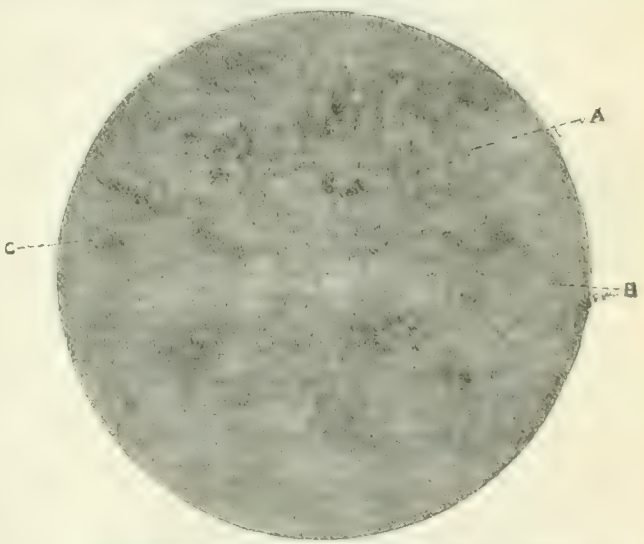


Fig. 2.—Film preparation of fluid from Fallopian tube on third day of menstruation. ⅛ obj. Stained logwood and eosin. A. Leucocytes. B. Red corpuscles. C. Epithelial cells.

It is, of course, necessary to exclude all cases in which at the time of operation the tubes are evidently diseased, and in which there had been peritonitis with obliteration of the infundibular ostium and distension with either blood, serum, or pus. Consequently the observations have been limited to those cases in which the tubes appeared to be, and indeed were, healthy, and on which the operation was performed for other conditions, such as fibroids or cystic or diseased ovaries, etc.

In four such cases, in which the tubes were removed and

examined on the first, third, fourth, and fifth days of the menstrual flow respectively, the contents were blood-stained mucus, while in healthy tubes removed in the intermenstrual period, the contents were either clear, or slightly opaque mucus from the admixture of epithelial cells. The secretion itself is apparently identical with menstrual fluid. To the naked eye it



Fig 3.—Transverse section of Fallopian tube third day of menstruation. ⅓ obj. Stained logwood and eosin. Lumen of tube occupied by mucus and blood corpuscles, with very numerous leucocytes. A. Mucus and blood.

is a viscid purple-coloured fluid, like a mixture of mucus and venous blood.

Under the microscope it consists of red blood corpuscles

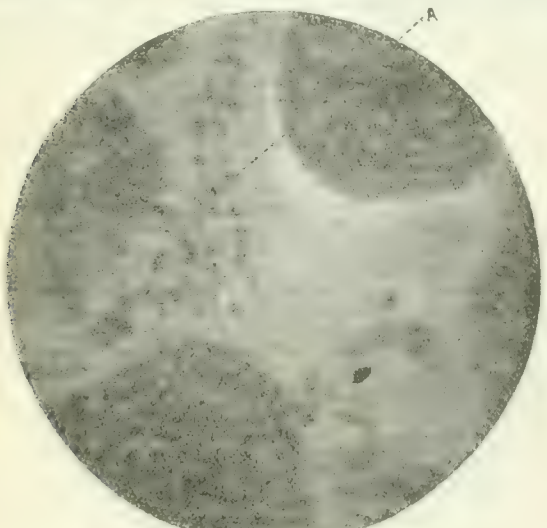


Fig. 4.—Same section, ⅓ obj. A. Leucocytes.

and a variable quantity of leucocytes, some epithelial cells in various stages of mucoid degeneration. The number of leucocytes varies; in one case examined on the third day of the flow, and in which marked clinical symptoms of dysmenorrhœa had been present, the leucocytes were very numerous.

A specimen of menstrual fluid removed from the external os on the third day of the flow in a healthy person, and examined for comparison, showed the same characters as the fluid removed from the tubes. Transverse sections across the uterine third of the same tubes show the following conditions of the mucous membrane. In addition to the mucus and blood which occupies the lumen, and is entangled amongst the villous processes, the tubal mucosa itself is altered: the fringe-like processes of membrane which cover the rugæ or villi are swollen and thickened in transverse diameter, and are infiltrated with leucocytes which can be traced passing in from the muscular and submucous coats, up the villi, and



Fig. 5.—Transverse section of Fallopian tube, second day of menstruation, obj ⅓. Stained logwood and eosin. A. and B. Mucus and blood covering the fringes and occupying lumen of tube.

between and among the ciliated epithelial cells. The epithelium itself is not shed or absent to any extent, but many cells show signs of mucoid degeneration.

On the other hand, in the intermenstrual period the leucocytes are few in number, the villi are shrunken, and consist only of an epithelial covering on the fibrovascular pedicle, and no red blood corpuscles are found free in the lumen of the tubes. Thus, increased blood supply, turgid vessels, and a marked leucocytic infiltration, with escape of red and white blood corpuscles, are the chief characteristics of the changes in the tubal mucosa at the uterine third during menstruation.

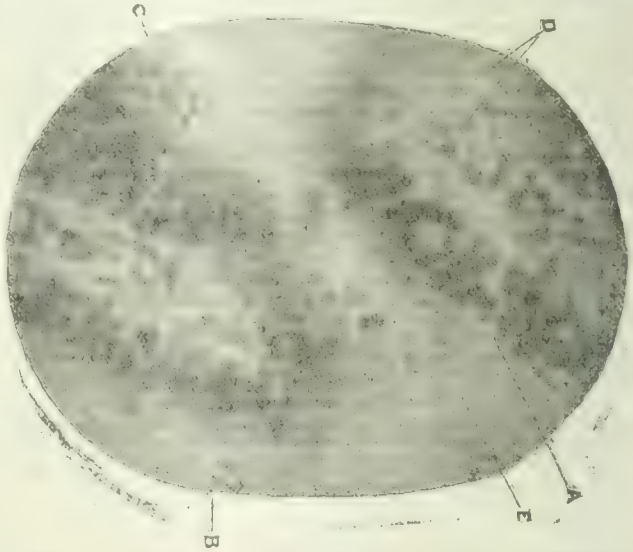


Fig. 6.—Same section, ⅔ obj. Two of the villi, highly magnified. Shows marked leucocytic infiltration of villi. Mucoid degeneration of some epithelial cells A, and mucus and blood in the tube B and C.

As stated above, the tubal secretion was found bloodstained on the first day of the external appearance of menstruation; it continued so throughout the period, and in one case,

examined twenty-four hours after the cessation of the flow externally, but in which the uterus (removed) still contained some bloody mucus, the tubal secretion was free from blood, thus suggesting that the menstrual process begins in the tubal membrane, and spreads downwards to the uterus, and ceases in the like order.

The presence of bloodstained mucus-like menstrual fluid in the lower portions of the Fallopian tubes during uterine menstruation having been thus shown to occur in some cases, the question arises whether it originates in the tubes, or is due to backward regurgitation from the uterine cavity.

This latter is a conceivable explanation, especially as in some of the cases in which the tubes were removed mechanical conditions, such as retroversion, were present, which might possibly favour such a process. Against this explanation is the fact that:

1. The secretion appears so early in the tubes coinciding with or even preceding the appearance of the flow externally.

2. That definite changes are found in the Fallopian mucous membrane itself.

3. Examinations of the uterus in women dying during menstruation are not common. But in a case of a young girl with healthy uterus in which at the *post-mortem* examination made ten hours after death the uterus contained menstrual fluid, blood-stained mucus was also found in the Fallopian tubes.

4. In cases of imperforate hymen with uterine distension, backward regurgitation does not occur, as a rule, into the Fallopian tubes unless there be infection and the contents be purulent.

5. Experimental evidence derived from the study of the subject in animals shows that no backward regurgitation from uterus to Fallopian tubes occurs; this forms the subject of further research, and will be brought forward later.

Assuming, then, that the fluid originates in the Fallopian tubes as a true Fallopian menstruation, this at first sight seems at variance with the established fact that the fluid of a hydrosalpinx, or the accumulated secretion in a blocked and distended tube is a colourless watery fluid containing no blood. I have, however, ascertained that such fluid contains a very large percentage of chloride of sodium in solution; this has a marked effect in breaking up red corpuscles and liberating hæmoglobin, which may be thus absorbed. Possibly, also, a very slight increase of intra-tubular pressure, if constant, such as would arise early in a commencing hydrosalpinx, is sufficient to arrest the menstrual process in the very delicate tubal mucosa.

A case also occurs to me in which, after an abdominal section for tuberculous peritonitis in a young girl, a sinus remained, leading down to the pelvis. In this case the uterus was healthy, and there was no stenosis of os, or retroversion. A bloodstained discharge, menstrual in character, however, appeared at the sinus at the beginning of the menstrual period on several occasions until the sinus closed. This must have come from the open end of the Fallopian tube. Whatever be the true explanation, however, of the presence of blood in the Fallopian tubes in the human female during menstruation, a somewhat prolonged inquiry in the case of the lower mammalia, which I hope to publish later, has demonstrated the fact that in these cases the tubal mucosa as well as the uterine participates in the increased vascular engorgement, the increased leucocytosis, and the increased secretion, the three factors which accompany ovulation, and constitute the essential characteristics of the periods of sexual activity.

There are other interesting and suggestive points in the normal uterine and tubal secretion in animals, both in the ordinary condition, in pregnancy, and in artificial conditions experimentally produced, which have come out in the course of this investigation, which I hope to publish elsewhere, and of which a preliminary note has appeared in the *Journal of Physiology*.

The occurrence of menstruation in the Fallopian tubes has an important bearing on certain points in human pathology. It is, for instance, possible that an abnormal menstruation in a tube may predispose to the occurrence of extrauterine or tubal pregnancy by providing a surface on which the ovum in its passage through the tube may become grafted. It is I think likely that much of the pain of dysmenorrhœa is tubal in origin, and due to tubal colic, or efforts to expel the tenacious bloody mucus, especially in those cases in which the pain precedes and coincides with the first day or two of the establishment of the flow. It may also throw light on certain cases of recurring local pelvic peritonitis in which the inflammatory process is started by exudation from the fimbriated opening of the tubes of tubal secretion at the menstrual period, even in the absence of gonorrhœa and other infective processes.

The occurrence of tubal menstruation, too, has an important bearing on certain cases of hæmato-salpinx, in which careful search fails to reveal the presence of any tubal pregnancy.

THE ACTION OF THE VAGINAL PLUG IN ACCIDENTAL HÆMORRHAGE.*

BY E. HASTINGS TWEEDY, F.R.C.P.I., ETC.,
Gynæcologist to Dr. Steevens's Hospital, Dublin; formerly Assistant Master Rotunda Hospital.

ACCIDENTAL hæmorrhage is one of the few complications in midwifery concerning which a marked disagreement as regards treatment exists. Before discussing this question, however, it is well to draw a distinction between those hæmorrhages associated with an atonic uterus and those not so associated.

In the absence of labour, the diagnosis between these conditions may present some difficulty; but should labour be in progress, the presence or absence of a contracting uterus will at once decide the point.

If labour pains are strong and the os dilated the prognosis is decidedly good, and to rupture the membranes or turn and bring down a foot will as a rule suffice. Forceps may at times be indicated, and even *accouchement forcé* can under the circumstances be often successfully accomplished. But in the presence of an atonic or inert uterus with a long unretracted cervix and a partially-opened os, how can we hope to improve matters by any of the above proceedings?

Rupture of the membranes, with or without podalic version, does not excite the uterus to contract for many hours; the hæmorrhage, therefore, is most likely to continue, and the operator, in spite of his better judgment, is not infrequently compelled to employ forcible dilatation of the cervix and rapid delivery.

In doing this, the cervix is liable to be torn, and large branches of the uterine artery to be laid open, but even should the latter accident be avoided, the performance of forced delivery produces a condition of shock which proves but too frequently greater than the patient can bear. It is no exaggeration to say that the performance of Porro's operation even would, under the circumstances, be a less hazardous proceeding. In the vaginal plug, however, we have an alternative to the above line of treatment capable, I believe, of obviating the worst dangers arising from accidental hæmorrhage.

It is curious to note that on few devices has greater obloquy been heaped than on this, and yet it seemed to Dr. Smyly during the latter years of his Mastership in the Rotunda Hospital to present fewer disadvantages than any other proceeding, and accordingly it became the "routine" treatment in that institution. Dr. Smyly dealt with this subject in a paper read before the Obstetrical Section of the British Medical Association at the annual meeting held in Bristol, and in it maintained that a properly-applied tampon prevented external bleeding, excited labour pains, and induced rapid dilatation of the os, this latter taking place without any fear of laceration or loss of its single layer of epithelium so necessary to it, as a barrier against germ invasion. He also stated that in the event of concealed hæmorrhage still flowing, the intrauterine tension would thereby be increased, and a greater and greater difficulty would thus arise against a systemic leak, and that this would be more readily brought about were a tight abdominal binder also applied. He did not advocate the plug save when the membranes were intact, a condition of course found in the majority of cases.

Few I think will deny any of the claims so far made in

* Read before the Section of Obstetrics, Royal Academy of Medicine in Ireland.

favour of the vaginal plug, but its action is more far-reaching, I believe, than Dr. Smyly has contended; for it acts not alone in the manner he states, but also, and above all, as a tourniquet to the uterine arteries.

If the cervix is fixed, and at the same time forcible pressure exerted on the vault of the vagina in the region of the lateral fornices, the uterine arteries become acutely bent and their blood flow impeded. This is probably brought about by the drag exerted on them through their cervical branches.

On the pregnant cadaver I have had but one opportunity of verifying this statement, and here shortly after death I easily induced this bending by exerting firm pressure in the lateral fornices. Other proofs, however, are forthcoming in support of my contention. Hysterectomy by Doyen's method furnishes us with an example of the complete manner in which the uterine circulation can be controlled by a down drag exerted on the cervix. And finally, there is abundant clinical evidence to show that blood to any serious extent does not form above a properly fitted tampon.

I am aware that this statement will not meet with universal assent, for, as a matter of fact, many cases of death have been recorded where this treatment was employed. But was the tampon properly applied in these cases? I think not.

In the discussion which followed the reading of Dr. Smyly's paper, one gentleman of great eminence stated that he carried a boiled sponge in his bag for the purpose of plugging the vagina, another stated that he preferred his silk pocket handkerchief. In other cases I have seen tenax, dry cotton wool, dry iodoform gauze, and a torn shirt used for the purposes of a tampon. With examples such as these before me I trust I shall not be considered presumptuous in assuming that the proper material to use or the proper mode of its application is not universally known.

To accomplish this little operation in a satisfactory manner many pieces of sterilised cotton wool are required, each the size of a small closed fist, and should be placed in a weak antiseptic solution. The patient is then brought out to the edge of the bed, put lying on her left side, and when the vulva and vagina have been asepticised, and the bladder emptied, the pieces of cotton wool are taken one by one, squeezed of their superfluous fluid, compressed into a comparatively small compass, and inserted without the aid of a speculum in such a manner that the entire cervix is surrounded by pledgets before the os is covered. Each piece is packed as tightly as possible, and then the vagina is filled to its utmost capacity down to the urethra, a diaper placed between the thighs, and a tight abdominal binder complete the operation.

It is simply astonishing the amount of cotton wool that can be introduced in this manner, and how hard and incompressible such a plug becomes, and it is in favour of such a tampon only that I contend.

Hæmorrhage ceases when it is thus inserted. The cervix safely and rapidly dilates in a manner much to be preferred to that accomplished by hydrostatic bags. Labour pains, moreover, are induced quickly. This latter effect is probably in great part to be accounted for by the inevitable accumulation of carbonic dioxide gas which must form in the uterine muscle in consequence of the obstruction in its vessels caused by the tampon.

The cervix, though becoming dilatable, does not always dilate, nor is it drawn up until the plugs have been removed, and so markedly was this a fact in one of my cases, that though the os when first felt while removing the pledgets did not appear to have a greater diameter than a two-shilling piece, it had nevertheless fully dilated before the end of the operation, a period of not more than two minutes having elapsed between the two observations. In fact, it seemed to spring open when once the restraining pledgets were taken away.

Nor is the tampon applicable to those cases alone in which the membranes are intact, for the circulation in the uterine vessels is still controlled even after their rupture.

I have not seen any case in which hæmorrhage continued in spite of this treatment, though one women unfortunately died shortly after I had inserted the plugs. Her history is briefly this, the case occurring in the out-patient maternity department of the Rotunda Hospital. She was at first attended by the night students on duty, who promptly summoned the clinical clerk, and when eventually I saw her she was in a condition of extreme collapse, with blood still freely flowing through an inefficient tampon. This was immediately removed, and a new one placed in position; then an intravenous injection of several pints of saline solution was administered. She died suddenly two hours later, from shock, no hæmorrhage having either passed through or been extravasated above the tampon, and this in spite of the large quantity of saline solution injected. How could the hæmorrhage have ceased in this case were the circulation in the uterine vessels not directly interfered with?

The conclusions arrived at here are as follows:

1. The vaginal tampon, when properly applied, is the most suitable treatment we possess for the worst forms of accidental hæmorrhage.

2. It may be relied on as sufficient in the majority of cases not amenable to other treatment.

3. It controls the circulation in the uterine arteries, acting in much the same manner as does a tourniquet.

4. It dilates the cervix partly by exercising a peripheral force on that structure, and in part by exciting uterine contractions.

5. These latter are induced not alone as a consequence of cervical dilatation, but are chiefly attributable to the power the tampon possesses in bringing about an accumulation of carbonic acid gas in the uterus.

A CASE OF PLASTIC OPERATIONS FOR BURNS.*

By RODERICK MACLAREN, M.D.,
Senior Surgeon to the Cumberland Infirmary, Carlisle.

USUALLY a surgical operation means one proceeding for a definite object, which either succeeds or fails; but occasionally, though rarely, it may involve a series of steps not all directly conducing to the ultimate result, some even apparently leading away from it. Such cases are generally of considerable interest, and the story of one which has just passed from my care seems worth telling.

Five years ago R. M., a girl aged 10, was admitted to the Cumberland Infirmary. Six weeks previously her clothes caught fire, and she was severely burned over the area to be described presently. She had been carefully treated outside by my friend Dr. Maclachlan, of Longtown. All charred skin had separated and the burnt surface was covered by healthy granulations. This granulating surface extended round the whole right arm and forearm from the middle of the deltoid to near the wrist; it involved the right side of the chest from the axillary line above to the margin of the ribs below, and from within 3 inches of the sternum in front to the same distance from the spine behind; the entire axilla was denuded and raw. The whole thickness of the skin appeared to have been destroyed over a considerable part of this area; the burning was greatest in the neighbourhood of the elbow-joint, and the tip of the olecranon was slightly bared. It was a matter of doubt when so large a surface would heal and whether the child's strength would support the drain from such an extensive suppurating area. The advisability of amputating the arm just below the shoulder was given due consideration. The arguments in its favour were that a large part of the suppurating surface was got rid of at once, and that the limb looked as if it would be of little use, even if healing occurred. However, as there seemed a possibility of getting a better result, it was decided to attempt this in the first instance. For the sake of diminishing the raw surface I had the arm bandaged to the side. Quick adhesion occurred, binding the arm to the thorax, thus diminishing the raw surface by a third.

The case progressed rapidly, and in four months healing had taken place except in a small area over the point of the elbow. In nine months complete healing had occurred. The arm was adherent to the side, and the cicatricial skin was continuous over the thorax and arm. I then proceeded to carry out the second stage of her treatment.

Two skin flaps were dissected from the wall of the upper

* Read before the Border Counties Branch of the British Medical Association.

thorax, one before and one behind, where the skin was uninjured. They were left attached at their ends and dressed underneath with glass slides for a fortnight (Croft's method). The arm was then separated from the side right up to the axilla; each flap was next cut across at the end farthest from the axilla; a bed was made for each in the armpit; they were turned and sutured together, so as to form a broad tape of healthy skin at the fold of the axilla. In cutting the arm from the side the incisions were not made where they joined, but at some little distance on the thorax, so as to get covering for the arm at the expense of the skin of the trunk; indeed, when sutured the arm was entirely covered in. Angular incisions were next made in the normal skin round the thoracic cicatrix; a good deal of subcutaneous dissection was done near these incisions, and they were sutured from the apex towards the base. This method utilised the natural elasticity of the normal skin to remove tension from the cicatrix, so that when the bare area in the mid-axillary line was drawn together with sutures a very small surface was left uncovered (Fig. 1). In two months the whole thing was

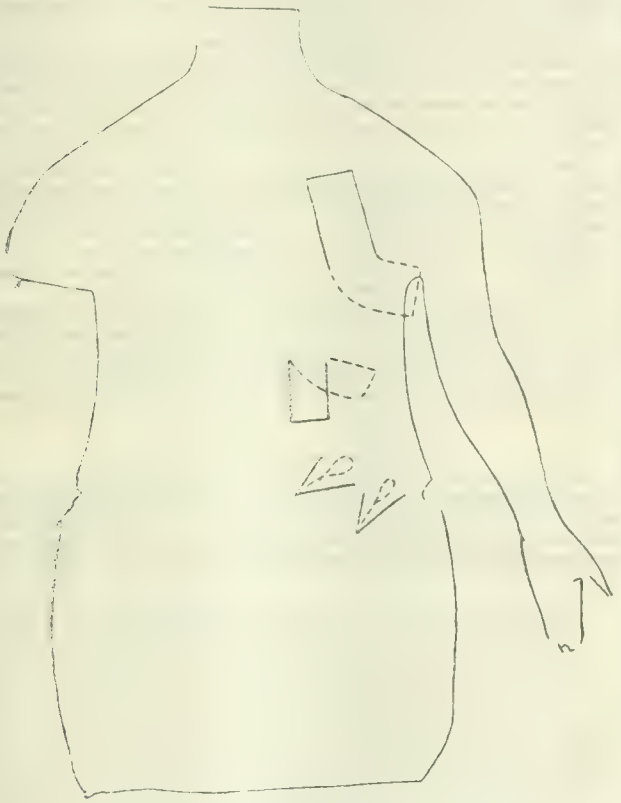


Fig. 1.—A diagrammatic scheme of the various incisions for transplanting and liberating skin; the dark lines representing incisions, the dotted lines the position subsequent to suturing. Back and front were almost identical.

nearly healed. She had a free arm with a fixed elbow. During the next two years she occasionally reported herself at hospital; her arm remained pretty much in the same condition. It was usually entirely healed, but occasionally the cicatrix broke down at the elbow. The limb was much hidebound, and as it grew in length became more so; the elbow was quite rigid.

The third stage of the treatment was then undertaken; this consisted in removing subperiosteally an inch and a half of the shaft of the humerus at the junction of the middle and lower thirds. The reasons for this were that the bone growing normally seemed unduly to stretch the hidebound tissues, and that the operation of shortening the shaft allowed the removal of bone at the elbow (when it came to be excised) to be very small, thus giving breadth and stability to the new joint. An incision 3 inches long was also made on the outer side of the arm near the insertion of the deltoid through the deep fascia to liberate tension. Thiersch grafts were applied but failed to take. Healing was slow but in four months it was complete, and the final stage was reached by excising the elbow, which was done by the usual posterior excision. Exceptionally little bone was removed and subsequently the case ran an average course. The condition now is as follows:

The movements of the shoulder-joint are nearly normal. The elbow admits of almost complete flexion and extension; rotation of the forearm exists to only a very small amount; the wrist has always been normal; the arm, of course, has not much power, but it is gaining in that respect, and also in freedom of movement. The cicatricial skin is gradually approaching nearer to the natural state; it is becoming less glazed and more pliable. The girl is being trained for domestic service.



Fig. 2.—From a photograph taken in January, 1898.

Fig. 2, reproduced from a photograph taken by Dr. Duncan, gives an excellent idea of her present state. It shows the amount of movement possible in one direction; it shows also the band of transplanted skin in the axilla and the extent of the cicatrix.

TWO CASES TREATED WITH INJECTIONS OF ANTISTREPTOCOCCUS SERUM.

BY

ALEXANDER GREGOR and WILLIAM A. CARDEN,
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THE following cases, which have been under our care lately, are interesting, as showing the utility and harmlessness of the serum treatment:

APPENDICITIS FOLLOWED BY ACUTE PERITONITIS.

W. R., aged 32, formerly a brewer's drayman, with a previous history of dropsy (?), was first seen on February 19th; he gave

a history of pain in the stomach and chill, commencing on February 18th. The pain was gradually increasing, the pulse rapid and feeble, the temperature normal, and there was pain and tenderness in the right iliac and lumbar regions.

A preliminary diagnosis of appendicitis was made, and the patient was given a hypodermic injection of morphine (gr. $\frac{1}{3}$), and a mixture containing liquor morphinæ (♏x) every four hours. The bowels were constipated, but he had not vomited. The urine showed a trace of albumen, which continued throughout.

On February 20th he was much worse in the morning. The temperature was 102.4°, the pulse 112 (hard and small), the tongue dry and brown. An area of deep dulness could be mapped out in the right iliac region, and of superficial dulness extending $1\frac{1}{2}$ inch to the left of the umbilicus. (See Diagram 1.) The bowels were still obstinately confined.

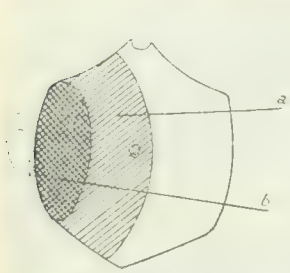


Diagram 1.—Before injections; *a*, superficial dulness; *b*, dulness on deep percussion.

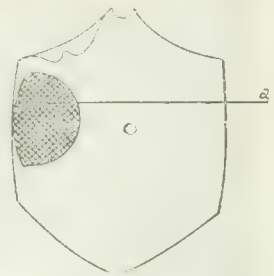
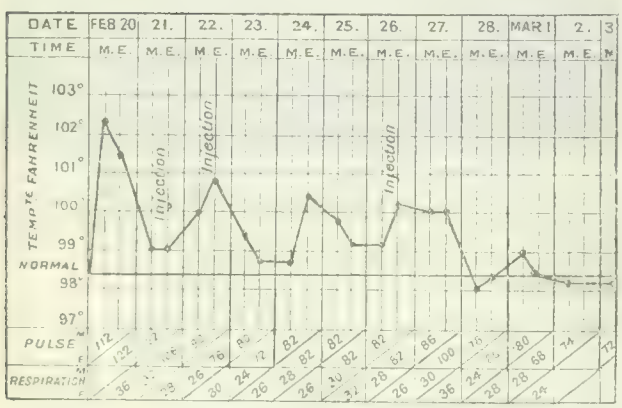


Diagram 2.—After first injection; *a*, dulness.



Diagram 3.—After last injection.



Case 1.—W. R., Temperature Chart.

Pain and tenderness were well marked, and the respirations rapid. He was in the same condition in the evening, except that the temperature was lower. An enema of olive oil (℥viij) was followed by a copious soap-and-water enema, as the oil was retained but nothing passed. The soap and water were also retained, but no fæces passed.

The following morning (February 21st) the bowels had moved and the temperature was down to 99°, but the local symptoms and general condition were much the same. The dulness extended $1\frac{1}{2}$ inch to the left of the umbilicus, and was well marked.

In the evening the first injection of serum was given, 10 c.cm. being injected under the skin in the right iliac region. The syringe was previously sterilised and the skin rubbed over with a solution of carbolic acid; no local inflammation occurred.

On the morning of February 22nd the morphine was left off and a simple mixture of dilute nitro-hydrochloric acid and rose water given. That morning the temperature was 100°, but the pulse was only 90 and the respirations 26. There was marked improvement in the local signs, the patient bearing well deep pressure to the right of the umbilicus. Another injection of serum was given the same evening, this time on the opposite side of the abdomen.

After this the patient improved rapidly, except that there was a tendency to diarrhœa and tenderness in the right hypochondrium. He could bear deep pressure in the right iliac region without the least symptom of tenderness. The tongue, which before was dry and brown, had become quite moist, with a slight whitish fur on the surface.

On February 26th, as the tenderness in the right hypochondrium did not improve, and a definite boundary of dulness could be made out separated from the liver dulness by an area of resonance two fingers' breadth in extent, we decided to inject 10 c.cm. more of serum in the right lumbar region.

The following day, February 27th, although the temperature was still somewhat raised, he could bear pressure in the right hypochondrium well, and complained of very little tenderness. He still had some diarrhœa, but this rapidly improved under bismuth and soda and Benger's food.

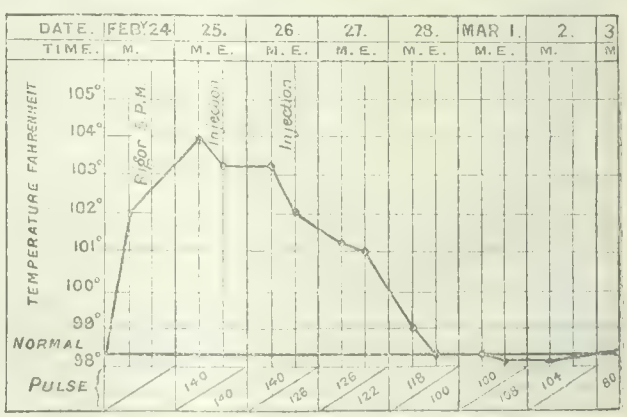
On March 2nd, only twelve days from the commencement of his illness, he was able to get up for part of the day.

We found after the dulness had cleared up in the right hypochondrium that he had a cirrhotic liver, as shown by diminished liver dulness, and the hard notched edge of the liver. This we thought accounted partly for the subsequent diarrhœa, and also the irregularity of temperature.

The diagrams and chart will indicate the progress of the case.

SUPPURATIVE NEPHRITIS.

Mrs. S., aged 29 years, six months pregnant, giving an indefinite history of influenza a fortnight before, was first seen on the morning of February 24th. There was pain and tenderness in the right lumbar region, the bowels were confined, and very little urine, high coloured and giving a deposit of



Case 2.—Mrs. S., Temperature Chart.

urates, was being passed with some pain. The tongue was furred. Vaginal examination yielded negative results. The child was living. A mixture containing a little diluted nitro-hydrochloric acid was ordered, but nothing else done. At 5 P.M. she had a rigor. The following morning (February 25th) the temperature was 104°, the pulse 140, and the general condition much worse. Whisky (℥iij) was ordered to be given in the twenty-four hours. The pain and tenderness in

the right lumbar region were increased, and a definite rounded swelling could be made out. On the same day, in the evening, 10 c.cm. of serum were injected under the skin to the front of the swelling. The urine was examined on February 25th, and contained a quantity of pus and some albumen.

On February 26th in the morning her condition was much the same, except that the urine which had been passed during the night was much clearer, and contained only a small quantity of pus. In the evening the temperature had fallen to 102° and the pulse to 126. The urine passed during the day was quite clear, and contained a little albumen but no pus. Pain and tenderness in the right lumbar region had almost disappeared. Ten more c.cm. of serum were injected in the right lumbar region, but closer to the spine. This injection, for which some dried serum was used from the Pasteur Institute, was followed by some erythema and tenderness of the skin around the spot, which gradually disappeared.

On February 27th the improvement was most marked, the temperature was only 101.2°, and the pulse 126. The tongue was moist and red at the edges, with slight fur down the centre. Pain and tenderness had quite disappeared. The urine still remained clear, and the albumen had diminished.

The next day there was a still greater fall in temperature and pulse. In the evening the temperature was normal. The pulse was still rather rapid, but this was probably due to the stimulant, which was ordered to be left off.

The patient continued to improve, and on March 3rd the pulse had fallen to 80, and she was practically well. The child was living. The urine still remained clear, all tenderness and pain had disappeared.

The serum was supplied by Messrs. Burroughs and Wellcome.

A CASE OF HÆMORRHAGIC INFARCTION OF THE SMALL INTESTINE: SUCCESSFUL RESECTION.*

BY T. E. GORDON, M.B., F.R.C.S.I.,
Surgeon to the Adelaide Hospital, Dublin.

THE history of the following case seems to me to possess sufficient clinical and pathological interest to justify my bringing it before you:

The patient is a woman about 45 years of age. She gave me a tolerably clear history of secondary syphilis contracted some eight or ten years ago, and she has now undoubted evidence of tertiary syphilitic ulceration of the hard and soft palate.

In November, 1896, she was operated on by Mr. Scott for strangulated femoral hernia on the right side, and she made a complete recovery. Her health continued good until the day before her readmission.

On the morning of that day—that is, August 17th—she was feeling as well as usual, and her bowels were moved. While she was having her lunch at 12 o'clock she got a sudden and most severe griping pain in the lower part of the abdomen. She was carried to bed, and Dr. Woods, of Amiens Street, was sent for, who gave her morphine when he arrived. At about 5 o'clock on the morning of the 18th she commenced to vomit, and this symptom persisted until the time of admission. The bowels were not moved subsequent to the attack of pain. She was sent at once to the Adelaide Hospital, and placed under my care in Mr. Scott's absence.

When I saw her, she appeared to be very ill but not collapsed. The abdomen was not distended, and was sufficiently flaccid to enable me to easily detect a tumour in the right iliac region, apparently formed by a distended coil of intestine. Dr. Peacocke saw the patient with me, and both he and I thought the case one for immediate operation. We supposed that there existed some form of mechanical obstruction. I accordingly operated, being assisted by Dr. Smyly.

On opening the abdomen in the middle line below the umbilicus, a considerable amount of blood-stained fluid escaped and a distended coil of very dark bowel presented in the wound. The peritoneum had not lost its polish, and, indeed, there were none of the unequivocal signs of gangrene present. There seemed to be a constriction at the upper end of the loop, and this marked off the darkened region very abruptly; below the transition to normal intestine was more gradual. The wall felt thickened, and emitted a heavy but not offensive odour. In the mesentery I found a continuation over a limited area of the same condition. I decided to resect and establish end-to-end anastomosis. I used for the latter purpose Mr. Ball's bobbin, of the smallest size I could obtain, and fixed the ends of the intestine into the groove with purse-string sutures. Over this I applied a continuous subserous suture of fine silk. For reasons already indicated I removed a considerable area of mesentery. Finally, I sponged out any fluid in the neighbourhood and closed the abdominal wound.

The amount of bowel removed measured 2 feet. It was found to contain a mass of foul-smelling blood clot. The wall was much thickened, and the constriction at the upper end proved more apparent than real. There was no stricture and no ulceration of the mucous membrane.

I did not discover any definite cause for the condition found. It is worth noting that some vessels in the mesentery bled freely as they were divided, and one of considerable size was cut, which may have been, in part, responsible for a complication which I must now refer to. On the third day after the operation, at 6.30 A.M., the patient complained of the most intense pain in the abdomen. The house-surgeon gave one-sixth of a grain of morphine, which relieved her, and when I arrived she did not appear to be in any great degree of danger. With the attack of pain a slight fall of temperature occurred, and the pulse was 128. By the 22nd—the fifth day since operation—the temperature reached normal, and the course of the case, until the 27th, seemed to promise an uninterrupted recovery. On that day I found, on removing the dressings, that a considerable leakage of intestinal fluid had taken place. I opened up the wound to some extent, and packed with iodoform gauze. A couple of days later (the 29th) a slough came away which seemed to represent the entire line of union, and contained a considerable length of both sutures, superficial and deep. Up to this time the bowels had not been moved satisfactorily, but there was clearly no obstruction, nor was there evidence of other than a purely local peritonitis. On the 30th I ordered a castor oil enema, which acted well. The discharge of bile-stained fluid was now so great as to necessitate very frequent change of dressings, on two occasions nine times in the twenty-four hours. On September 5th the patient passed a natural motion, and the discharge from the wound was reduced to very little, and had ceased entirely on the following day. It recurred to a very slight extent a few days later, a mere soiling of the plugging, before it finally ceased, that is, ten days after the discharge was first observed, and about three weeks from the date of operation. The subsequent history has been uneventful, and the patient now appears to be in perfect health.

REMARKS.

It is scarcely possible to form any definite opinion concerning the cause of sloughing at the suture line. The possible influence of the division of the mesentery I have already alluded to. It may, however, have been due to an extension of the pre-existing local condition, and the accident might have been avoided by a more liberal resection. Or again, the flange of the bobbin may have exerted undue pressure on the wall of the gut as it passed over it. This would have been avoided by using a smaller tube.

With some hesitation I have arrived at the conclusion that this case was one of hæmorrhagic infarction of the intestine dependent upon a sudden obstruction of some branch of the superior mesenteric vessels. The condition might conceivably have been due to:

1. Inflammation. This we can certainly exclude, for it is impossible that such a violently acute inflammation could have remained so distinctly local. The onset, too, was more sudden than could be explained on this hypothesis; and, finally, the microscopic appearances were not those of inflammation.

2. Some of the usual causes of internal obstruction. None of these were to be seen at the operation, and the appearance of the involved segment of gut was not such as one would expect to find if the cause had been, let us say, a peritoneal band. Had such been present, though overlooked, surely the delimitation of the area of strangulation would have been as marked at the one extremity as the other, and this, as we have seen, was certainly not the case. There were no evidences of previous inflammation about the hernial orifices.

3. If it is allowed that none of these extrinsic causes were at work, it follows that the cause of obstructed circulation must be looked for within the vessels themselves; must, in fact, have been either embolism or thrombosis.

The possibility of the occurrence of an infarction as the result of occlusion of the superior mesenteric vessels seems at first sight very difficult to admit. One is accustomed to find such a lesion in areas supplied by terminal arteries only. Experiments, however, as well as numerous recorded cases of intestinal infarct, place the possibility beyond doubt. The subject is dealt with in *Ziegler's Pathology* as well as by Cohnheim in a most important and convincing essay, by Coats and others. I will quote a few passages of special interest from the last-named pathologist. He writes: "It has been said that the hæmorrhagic infarction forms in the case of end arteries, but there is an apparent exception to this in the case of the superior mesenteric artery. If the superior mesenteric artery or one of its larger branches be obstructed, hæmorrhage occurs in the intestine and mesentery, and the portion of gut suffers necrosis, but it is well known that the anastomosis of the mesenteric arteries is tolerably free. The explanation of this apparent anomaly has been worked out by Cohnheim and his pupils in a very interesting manner. As a rule, it may be said that main stems have, in proportion to their size, much less considerable anastomotic communications than the smaller branches. If the main stem be obstructed, therefore, the restoration of the circulation occur

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much more slowly than when a small stem is the seat of obstruction. In the case of the superior mesenteric and its larger branches, obstruction is slowly recovered from, and for a time the circulation is virtually at a standstill."

"But here a very important element comes into consideration. The vessels of all parts of the body are not equally resistant. Those of the skin and muscles are peculiarly resistant, and are able to stand a considerably prolonged deprivation of blood. It is different with those of the intestines." The author then proceeds to describe an experiment made to test the vulnerability of the intestinal vessels. The conclusion drawn from this is that "before the anastomosis can be established the backward flow from the veins has already begun, and even the diapedesis. The re-establishment of the circulation even increases the tendency to hæmorrhage, as it subjects the blood to a higher pressure than that of venous blood. The experiments referred to showed that when the superior mesenteric artery is obstructed the hæmorrhagic infarction forms with a backward flow from the veins just as in other cases."

I must allow that it is more difficult to explain an infarction limited to a single loop of intestine than the occurrence of a more extensive lesion, for it seems necessary to assume that the obstruction which produces the less effect is situated in a part of the superior mesenteric distribution where the collateral circulation is extremely free. It is possible, however, that this may be explained by supposing that when one vessel had become occluded a rapid extension of thrombotic occlusion followed along the alternative blood circuits. This would be less difficult to assume possible if it could be shown that the vessels of the area were atheromatous or otherwise abnormal. I shall have something to say with reference to this point presently.

To conclude this part of my subject, I may add that the appearances in my case, both macroscopic and microscopic, were such as one would expect to meet with in a case of sudden vascular occlusion. Thus there was considerable hæmorrhage into the peritoneal cavity, the coil itself was full of foul smelling blood clots, and microscopic examination showed that the wall of the intestine was everywhere occupied by extravasated blood.

Although cases of hæmorrhagic infarction of the intestine are uncommon, I have found records of a considerable number. Osler, for instance, has recorded 3 which have occurred in his own practice. Most of the cases have been, as one would expect, associated with heart disease, but different causes have operated in others. Ulceration of the duodenum appeared to be the primary lesion in one instance, and aneurysm of the superior mesenteric artery caused infarction in one of Osler's cases. In the present case two important questions naturally suggest themselves. Could the lesion be in any way traced to the syphilis, and did the strangulated hernia take any part in its causation? Syphilitic arteritis is a well-recognised pathological condition, and although most writers on the subject deal almost exclusively with it as it affects the cerebral vessels, there can, I think, be little doubt that any artery may show similar changes. This is rendered probable by *a priori* reasoning, and more than probable by the record of numerous cases of endarteritis in vessels other than cerebral in syphilitic subjects. Instances of its occurrence in those whose age is much below that at which arterial disease from other causes usually takes place are of special importance. There is then nothing improbable in the supposition that this case may have been one dependent on arterial thrombosis in syphilitic vessels. Moreover, cases have been reported of mesenteric thrombosis stated to be of a syphilitic nature.

As regards the second question, it is worth noting that the damaged coil lay in the right iliac region, and the previous strangulation had been on the same side. It is, too, of interest in this connection to recall to mind Mr. Hutchinson's statement that "in almost all" (tertiary affections) "we see good reason to believe that in addition to the syphilitic taint some localising influence takes an important share in evoking the local changes." Is it not just possible that the strangulation may have acted in this instance as such an influence, and determined the occurrence of the syphilitic arteritis in this particular region?

The extent of intestine involved may range from a few inches to almost the entire length of the small intestine, as in a case recorded by Dr. Frederick Taylor; and I have seen a report of one case in which three distinct infarctions had taken place.

The disease is very generally fatal, but, it is supposed, not necessarily so in all cases. A case of Gull's is quoted in proof of this. In this patient copious hæmorrhage at the outset, with subsequent passage *per rectum* of long sloughs of mucous membrane, together with a preceding œdema of the arm of supposed syphilitic origin, were the signs relied on in making the diagnosis.

The symptoms are, as one would expect, very variable. Hæmorrhage from the bowels, followed by signs of intestinal obstruction, might in some cases lead one to suspect an infarction if there was some possible cause for embolism or thrombosis present. It will have been noted that there was no blood passed in this case of mine.

Little need be said with reference to treatment. Any case presenting such symptoms as these would be looked upon by most medical men as one urgently requiring operative interference, and it would then depend upon the extent of bowel implicated whether resection could be carried out or not. An example of successful resection for this condition is recorded in the *Annals of Surgery* for 1895.

NOTE ON A CASE OF PERFORATED GASTRIC ULCER.

By G. REINHARDT ANDERSON, F.R.C.S.,
Hon. Medical Officer, Southport Infirmary.

I was consulted on February 18th, 1897, by a young woman, apparently in good health, complaining of pain after food. The pain was not constant, nor accompanied by vomiting. She had vomited after every meal on February 16th, but this she attributed to a bilious attack. She had never vomited blood. The pain, she stated, had existed off and on for some months. I subsequently ascertained that twelve months previously, in the early part of 1896, she was a ward maid in the infirmary, but had to give up her situation because of anæmia and persistent dyspepsia. I found her somewhat anæmic, with pain and local tenderness in the epigastrium. I prescribed a milk diet and the usual remedies.

On February 21st, at 5 P.M., I received a call to see her as it was thought she was dying. I found the patient in a state of profound collapse, profuse perspiration, ashen face, and with a rapid, thready pulse. She complained of severe abdominal pain. There had been no vomiting.

It seems that after a very hearty meal at 1 P.M., consisting of calf's heart, peas, potatoes, and pastry, she had taken a walk of over three miles. When nearing home, at 4.45 P.M., she was suddenly seized with such severe pain in the abdomen that it became necessary to put her in a cab to get her there, though only three or four hundred yards away.

From this history I suspected perforation of a gastric ulcer, and on examining the abdomen I made out the following facts: The walls were rigid, hardly moving at all with respiration; there was marked tympanitic resonance with absence of the liver dulness to the upper border of the seventh rib, and there was shifting dulness in either flank to a small extent. Palpation elicited general acute tenderness. A small injection of morphine was given, and arrangements made for her immediate removal to the infirmary over a mile distant.

At 7.30 P.M., $2\frac{3}{4}$ hours after the onset of pain, I operated. The abdomen was opened by a mesial incision $5\frac{1}{2}$ inches in length from just below the xiphoid cartilage to within an inch of the umbilicus. On entering the peritoneal cavity there was an escape of gas and turbid serum with a marked gastric odour. Flakes of lymph were already visible on the surface of the liver and omentum as they presented in the wound. On drawing down the stomach, a small punched-out perforation readily came into view, from which the dark-brown fluid contents of the stomach escaped in plenty, unavoidably at first rushing into the peritoneal cavity. Traction on the stomach induced retching, increasing the flow. The perforation was now surrounded by sponges, and the stomach emptied as much as possible into a porringer. I then secured

the perforation by three rows of Lembert sutures, infolding the stomach on itself, in its long axis. Fine silk was used. The peritoneum was flushed out by large quantities of sterilised water—poured out of jugs and also by irrigation with a glass tube—above and below the liver into either flank, and down into the pelvis. This was continued till it escaped quite clear and free from all gastric odour. Very few solid particles came into view. After systematic sponging, the abdominal wound was secured in the usual way. No drain was used. The operation lasted 1 hour and 20 minutes, and the patient bore it well.

The subsequent progress was an almost uninterrupted one towards recovery. Vomiting (troublesome for the first forty-eight hours) was relieved by sips of very hot water and powders of bismuth carbonate. A slight attack of pleurisy with effusion on the left side appeared on the fourth day, but this gradually and completely cleared up without aspiration.

Rectal feeding was maintained till the ninth day after the operation, in view of the tendency to vomit, and also because her general condition kept so good as not urgently to demand food by the mouth. Fish was given on the seventeenth day, and chicken on the twenty-seventh day. The stitches were all removed on the ninth day, the wound was soundly healed, and there was neither abdominal pain nor tenderness. The temperature, which had never been higher than 102° F. (on the second day after operation), became normal on the thirteenth day, and remained so. She was allowed up for the first time on March 24th, and was discharged on April 29th.

Eight months after the operation the patient crossed from Holyhead to Dublin. She was very sick, but sustained no harm. She is now (April, 1898), in perfect health, and free from all dyspeptic symptoms.

In submitting the notes of this case, I am aware that there is nothing very unusual to comment upon. I was fortunately able to see the patient within fifteen minutes of the perforation, and it is to the very short time that elapsed between the accident and opening the peritoneum that the happy result I believe is largely due. Also, the perforation was small (not larger than a crow quill), situated on the anterior surface, near the cardiac end, and though the stomach was loaded with partially digested food, not much had time to escape into the body cavity.

Moreover, I was not hampered by those difficulties which have beset many others operating on similar cases—namely, induration around the seat of ulcer, extensive adhesions, and the position of the perforation being such as to render efficient occlusion almost impossible.

The chief interest, it seems to me, lies in the absence of previous symptoms pointing urgently to a gastric ulcer. Her complaint was of vague pain and discomfort after food; her appearance that of good health; and she was able to fulfil the arduous duties of waitress in a busy restaurant without trouble, so that I must confess on my first and only interview with the patient three days before the acute mischief, I was not impressed with the idea that she had a gastric ulcer. I prescribed the milk diet more as a precautionary measure, advice which was evidently disregarded.

The presence of these small, solitary, punched-out ulcers, which in recorded cases so frequently are found in sudden perforation of the stomach, is a matter of some interest, for they may exist without giving rise to more than ill-defined symptoms of dyspepsia, and can easily be overlooked without careful palpation for a tender or painful area. Certain it is that since my experience recorded above, I have treated with more respect similar cases coming under my care, enforcing the absolute rest needful to avoid a possible perforation.

In the treatment of this accident there is little doubt that the best chance for the patient is early diagnosis and prompt operation.

An Association of Medical Librarians was organised at a meeting of a number of representatives of medical libraries held in Philadelphia on May 2nd. The officers elected were:—*President:* Dr. George M. Gould, Editor of the *Philadelphia Medical Journal*; *Vice-President:* Dr. J. L. Rothrock, of St. Paul, Minn.; *Secretary:* Miss M. R. Charlton, of Montreal, Canada; *Treasurer:* Dr. William Browning, of Brooklyn, N.Y.

THREE CASES OF FOREIGN BODIES IN THE ŒSOPHAGUS.

By GEORGE HEATON, M.B., B.Ch.Oxon, F.R.C.S.,
Surgeon to the General Hospital, Birmingham.

The three subjoined cases which have recently been under my care illustrate well the value of the Roentgen rays in localising foreign bodies in the food passages. In two of the cases the bodies (coins) had been impacted for some considerable time, and gave but little evidence of their presence. In the third case, where a whistle had been swallowed, the symptoms were more urgent, and the body was so firmly impacted that œsophagotomy was necessary to remove it.

It is noteworthy that in all the cases the body was lodged in the œsophagus, either just above the level of or behind the manubrium sterni, at a point where the œsophagus is compressed between the sternum in front and the spinal column behind.

Case I. *Whistle impacted in the Œsophagus: Œsophagotomy: Cure.*—R. S., a little boy, aged 5, was admitted under my care into the General Hospital on January 15th with symptoms of œsophageal obstruction. The previous day, while sucking a small round whistle, he accidentally swallowed it, and it seemed to stick in his throat. He coughed up some blood soon after, and has had pain at the episternal notch, and inability to swallow anything but fluids.

Condition on Admission.—A pale, delicate boy. Complete inability to swallow; much pain at episternal notch. Nothing abnormal to be felt in the neck. A skiagraph showed the whistle lying behind the first piece of the sternum, with its long flattened axis lying transversely. (Fig. 1.)



Fig. 1.—Skiagraph of whistle in œsophagus.

January 16th. An anæsthetic was administered, and several attempts were made to remove the body with forceps and coin catcher. It could be felt distinctly in the œsophagus about 6 inches measured from the teeth, but no instrument could be passed beyond it. Œsophagotomy was then performed. A 3-inch incision was made along the interior border of the left sterno-mastoid, the lower end of the incision reaching almost to the clavicle. The large vessels of the neck being drawn to the outer side, the œsophagus was easily exposed in the lower part of the wound. It was opened, and the lips of the incision held open by a suture passed through them on each side. On passing a probe down the œsophagus the whistle was felt firmly impacted behind the sternum. After several fruitless attempts it was finally extracted with forceps. The wound in the œsophagus was closed by a double row of catgut sutures, the inner row being passed through mucous membrane only. The outer wound was closed above, but its lower half was packed with iodoform gauze.

The boy made a good recovery. No food was given by the mouth for the first forty-eight hours. There was a little leakage from the wound in the œsophagus for two or three days. This, however, quickly ceased, and he was discharged well on February 14th.

The whistle was made of tin, and measured 1¾ inch in diameter.

CASE II. *Coin in Œsophagus for Three Months.*—R. E., a girl, aged 13, was admitted into hospital on February 11th, complaining of pain and tenderness between the scapulæ, with a history of having swallowed a penny three months previously. Three months previously she swallowed a penny accidentally; it seemed to "stick" in her throat. She had been under medical treatment since for pain in the back. There was no difficulty whatever in swallowing either liquids or solids, the only symptoms complained of being pain and tenderness over the eighth dorsal spine. A skiagraph taken on February 10th revealed the penny situated just behind the

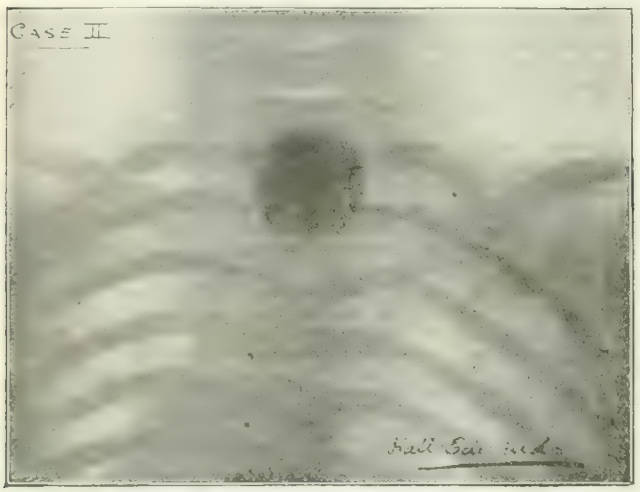


Fig. 2.—Skiagraph of penny in œsophagus.

sterno-clavicular articulation a little to the left of the median line (Fig. 2). The coin was lying transversely. On February 12th the patient was anæsthetised. A No. 14 œsophageal bougie passed into the stomach without any trouble and without grating against any foreign body. On passing a coin catcher down it was felt to grate against the coin, and after several unsuccessful attempts the coin was brought up. She left the hospital the next day.

CASE III. *Shilling and Sixpence in the Œsophagus for Six Weeks.*—M. E., an infant, aged 18 months, was admitted into the Children's Hospital, Birmingham, on March 1st, with a history of having swallowed a shilling and a sixpence forty days previously. The child was extremely fretful and peevish.



Fig. 3.—Skiagraph of coin in œsophagus.

She had no difficulty in swallowing fluids, but refused to swallow anything solid. There was nothing to be discovered in the neck by palpation. A skiagraph was taken, and showed a coin lying transversely in the upper part of the thorax just behind the manubrium sterni (Fig. 3). The day following the taking of the skiagraph several ecchymotic patches appeared in the lower part of the neck.

On March 4th the child was anæsthetised. On passing the coin catcher down the œsophagus a sixpenny piece was removed. No other coin could be detected with the coin catcher; but on passing a large œsophageal bougie there was some difficulty experienced in making it enter the œsophagus, and a grating sensation as it passed onward into the stomach. A long curved pair of forceps was passed into the œsophagus, and after several unsuccessful attempts a shilling was grasped and removed. Both coins were covered with a black film of sulphide of silver; they apparently lay together in the œsophagus, just behind the manubrium.

DIAGNOSIS AND TREATMENT OF SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

BY J. C. RUSSEL, M.D.,
Southport.

THERE is a form of stricture of the œsophagus which, I have reason to think, cannot be extremely rare, and yet few surgeons seem to recognise its existence, and cases are seldom heard of. This is that stricture which is situated at or near the cardiac orifice of the stomach, and is caused by muscular spasm, superimposed upon a greater or less degree of more permanent contraction.

Eleven years ago I met with such a case in my practice, and, directly or indirectly in consequence, I have since seen six similar cases, all, with one exception, living within a radius of less than 40 miles. Its apparent rarity I believe to be due, in the first place, to the misleading character of the symptoms, suggesting, as they do, disease of the stomach; and, secondly, to the inefficacy of treatment by bougies in this condition, causing a diagnosis of stricture, once made, to be abandoned or modified since the symptoms persist after supposed dilatation. As to treatment, that which in my hands has given good results consists in stretching the stricture, by an expanding dilator, to a calibre approaching that of the normal œsophagus at that point. This is not done suddenly or at one operation, but with bags of increasing size and at several sittings. Four cases were by this means completely cured, one was much improved, and of the remaining two one was not improved and the other has not been treated. The following is a brief history of my cases:

CASE I.—Mrs. S., about 40. Seen eleven years ago. For several years gradual aggravation of two symptoms, feeling that food did not reach the stomach, and regurgitation of what was swallowed. Had not previously been treated. Now no solid food will pass, and most of the liquid is rejected. A tight stricture at the cardiac orifice. Dilatation by bougies till No. 23 Jaques passed. No improvement in symptoms. I was then persuaded that further stretching beyond what a bougie could accomplish, or even overstretching as is practised on the anal sphincter, would be necessary to overcome the contraction. I accordingly made an instrument consisting of a sausage-shaped silk bag, rendered air tight by a very thin rubber bag within, and mounted on the end of a tube or hollow bougie. This was passed through the stricture in a collapsed state, and blown up by an air syringe when in position. This method proved successful; after a time swallowing became normal and continues so, the lady being now alive and in good health.

CASE II.—A man about 40 (J. H.), seen six years ago. His trouble came on suddenly about two years ago; while drinking a draught of liquid, it was suddenly rejected and nearly choked him. Since then liquid only has passed, and that is often rejected. This man had been seen by several physicians, one of whom advised washing out the stomach, and himself passed the tube and performed the operation. The washing was continued, first by the patient's ordinary adviser, and afterwards by the patient himself. This tube probably never entered the stomach. When I saw him a much smaller tube would not pass, and he was afterwards satisfied that the other had never passed. Treatment by dilator was not successful in this case. He had to be taught to feed himself with the stomach pump, which he has done since, and keeps up his health and strength. A case of mistaken primary diagnosis. It does not appear that stricture was suspected until the patient himself thought of it.

CASE III.—Dr. S., seen November, 1896, a surgeon in the Colonial service, aged 28. Symptoms coming on for about three years, regurgitation in particular. For about a year not more than one-third of the fluid he takes has passed into the stomach, the rest being rejected. Saliva collects and is brought up every two hours, night and day. His sustenance consists of milk and eggs taken through a small tube. He had been seen by several medical men. An eminent London surgeon had passed bougies up to 2 cm. in diameter without improvement in the symptoms. A hospital surgeon in Edinburgh also treated him, and came to the conclusion that not stricture but dilatation and atony of the œsophagus was at the root of the evil, and advised gastrostomy as the only remedy. Others propounded other theories. I used the expanding dilator, and

the swallowing power was soon completely restored. He rapidly gained flesh and strength, and returned to his duties on the West Coast, where, I regret to say, he died of fever about Christmas last. When last heard of, not long before his fatal illness, he had not had any return of his trouble. In his case the stricture was not exactly at the cardiac orifice, but about 2 inches above it. This is a case of failure of bougie treatment and consequent erroneous secondary diagnosis.

CASE IV.—D. W., a man aged 42: seen March, 1897. Two and a half years ago he felt uneasiness at pit of stomach while eating, and could feel his food "bolt" suddenly through. About six months after, food began to come back, first solids and then liquids also. He went to a hospital physician, who sent him to a surgeon. The latter passed bulbs eighteen inches down his throat and sent him back to the physician, who thereupon prescribed as for disease of the stomach. A month after, he saw a well-known physician, who suspected the bougies had not reached the stomach, but prescribed liquid food of specified kinds. There being still no improvement, he went to yet another prominent provincial surgeon, who passed a bougie 18 inches, and recommended washing out the stomach, which the patient was supposed to do himself. Although the tube did not enter the stomach some improvement ensued, and he became able to swallow rusks boiled in milk. When seen by me he had a stricture at the cardiac orifice, which would not pass a No. 23 Jaques but passed No. 18. It was easily dilated to No. 23 and then stretched, and in a few weeks he regained the normal power of swallowing. He continues well.

CASE V.—A retired naval officer, 65 years of age, seen April, 1897. For three or four years had intermittent difficulty of swallowing. Three years ago a physician diagnosed stricture, but no local exploration was made and no treatment used. When I saw him his diet was reduced to jellies, eggs, and milk, which sometimes returned. There was a tight stricture at the cardia. Bougies were used and then the dilator, with the result of restoring the function completely. At Christmas last he continued well.

CASE VI.—J. A., a youth of 20, seen April, 1897. A little over three years ago he began to vomit after some of his meals, and became gradually worse till he vomited a great part of each meal he took. He was never easy till it came back. It sometimes caused acute pain. It made no difference what the food was or whether solid or liquid. He was treated for dyspepsia, and was washing out his stomach. I could find no trace of stricture, the tube passing easily into the stomach. He was told to feed himself through the tube and report whether the food so taken returned. He did so, and reported that no more than a mouthful of that so taken returned. I stretched the cardia several times, with the result that he was usually able to eat without any food coming back, though occasionally some did so. He had then to leave the town and return to his work. I saw him about Christmas, and he reported great improvement but not absolute freedom from vomiting. I stretched the cardia once then and have not heard from him since. There might be some doubt as to the exact pathology of this case, but, as will be seen by the following case, there may exist undoubted spasm closing the cardia absolutely, without any stricture being perceptible by an instrument.

CASE VII.—Seen February, 1898; a medical man. Illness of about three years' duration. At one time scarcely able to swallow anything. At present he can eat a considerable quantity, say an entire course of a meal. He then feels that he can eat no more, and takes a large and continuous draught of water, during which the spasm gives way, and he feels food and water pass together into the stomach, after which he can go on with his meal, and repeat the process. If, however, he is interrupted in drinking, the entire quantity he has eaten is immediately rejected. No trace of stricture could be found on passing a tube. I only saw him twice as he was about to start on a distant voyage. There is no treatment to record, and I mention the case merely as being one of the kind in question, and showing the possibility of the œsophagus being completely closed without demonstrable stricture.

For the sake of brevity, I have omitted much that might be said, and if I have seemed to dwell unduly on faulty diagnosis it is because I believe this to be the chief obstacle to the proper treatment of these cases. I may be permitted to conclude with the following suggestions: That in all cases of persistent vomiting, unless obviously due to disease of the stomach, it should be positively ascertained whether or not a stricture is present. That it should not be assumed that no stricture or spasm exists because none can be detected by a bougie, nor that stricture is not the cause of the symptoms because these persist after the largest possible bougies have been passed. In cases of doubt, the behaviour of food given through a tube may be of assistance. In using instruments for the diagnosis or treatment of stricture, it is very easy to be deceived on the question as to whether they have passed into the stomach or not; measurement of the length passed is not an infallible guide. In using the dilator, I always pass it well below the point required, and then withdraw it until I judge it to be on the spot, before expanding.

I have seen it stated that Professor Loreta, of Bologna, stretched some strictures from below, through an opening made into the stomach. This plan might be useful if the dilator failed, as in my second case. In the *American Year-book* for 1898, p. 172, a case obviously of this kind is quoted under the title of "Fusiform Dilatation of the Œsophagus." It was treated by tube feeding. The author had collected records of twenty cases, in none of which was the diagnosis made during life, which tends to support my thesis that if this condition were more carefully looked for it would be more frequently found.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A PROLONGED CASE OF SARCOMA OF OVARY.

M. B., aged 35, domestic servant, unmarried, first complained of intermittent pain in the region of the left ovary in January, 1892. Mr. Page of Newcastle-on-Tyne diagnosed sarcoma of the left ovary, and in May, 1892, removed a solid sarcomatous left ovary. There were no adhesions, but a little fluid in the peritoneum. The right ovary seemed quite healthy.

The patient's condition was for some time critical, but eventually she made a good recovery and returned to service. In the autumn of 1893 the growth showed signs of recurrence, and by April, 1894, it had increased enormously.

Mr. Page again operated and he says: "The abdomen was occupied by a large soft growth springing from the stump of the left ovary and closely connected with the intestines and peritoneum from which it could not be separated; a large amount was however removed with difficulty. The hæmorrhage was very severe and the left ureter was accidentally torn across. The ends were fixed in the wound. The right ovary could not be found." After some weeks the patient returned home. Urine flowed from the wound for nine months and then ceased.

In June, 1895, and September, 1895, she had localised attacks of peritonitis from which she made good recoveries. By June, 1896, the tumour was the size of the gravid uterus at full term and occupied the left side of the abdomen principally, but from this date it seemed to grow more towards the right hypochondriac region.

In May, 1897, menstruation, hitherto normal, ceased, and from then till Christmas she had better health than she had had since the second operation; in fact, she frequently walked unaided a distance of four miles at a time. In December, however, cough, dyspnœa, insomnia, ascites, and general anasarca gradually developed, accompanied by syncope and weak, intermittent pulse.

On March 10th, 1898, aspiration was resorted to. At first only a little glairy fluid escaped, but eventually about two pints of clear serum were withdrawn, when the needle became blocked. Fluid, however, ran from the puncture for five days giving much relief.

By March 29th the ascites was so much worse that Southey's tubes were tried. They, however, became blocked at once, but on withdrawing the needles fluid ran for three days.

From this time, however, the patient got gradually worse, with increasing cachexia and syncope, till on April 20th she had a severe attack of hæmatemesis, from which she never rallied but died on April 26th, more than six years from the commencement of the symptoms. Unfortunately, a *post-mortem* examination could not be obtained.

The chief points of interest in the case are (1) the long course it ran; (2) the good health the patient had after the second operation, being practically free from pain for four years; (3) the marked improvement that followed the cessation of the catamenia for eight months when she died. Was this the menopause?

Harbottle, Northumberland. W. F. MILLER, M.B., B.S., etc.

DIPHTHERIA AFFECTING THE SKIN.

CASES of diphtheria affecting the skin surfaces are nowadays rare, hence the following cases may be worthy of record. Even in the essays of Bretonneau and his pupils I find few cases of cutaneous diphtheria, although it was no doubt more common than it is to-day. Diphtheria of the skin appears to be not so dangerous as the same malady affecting the mucous surfaces. Trousseau says, "It is not very dangerous when it affects the skin."

CASE I.—In November, 1895, I saw a boy, aged 2, with spots on the cheeks, lips, and breast. At first I thought the condition one of herpes which had become purulent, but on touching them I found them soft and leathery, and on removal a bleeding surface was revealed. Under the microscope they had a glassy appearance and stained badly. This

excited suspicion, and the bacteriological examination by Professor Trevelyan showed "numerous diphtheria bacilli, with staphylococcus aureus." Most likely the organism had become implanted on an herpetic eruption.

At this time the mouth and throat were free from the disease, but on the second day sores appeared, which, however, yielded to treatment. The most characteristic patch was over the top of the breast bone. It was dark red in colour, having a yellowish membrane at one side.

The child had had a cold some days previous to my seeing him. When I first saw him the temperature was 1° F. above normal, but soon came down. Vomiting and diarrhœa were present. The secretion of the mouth was highly acid. The glands under the jaw were swollen. No rash was seen. The urine could not be examined. There was no affection of the air passages. The local treatment consisted in the application of a solution of biniodide of mercury, 1 in 3,000. The patient was given internally sodium salicylate gr. iij, and potassium iodide gr. ij in solution every four hours. The diet was milk. In a week the parts were well, but on the ninth day a white speck appeared on the lower lip. This was removed, and there was no further trouble. In a fortnight the child was well.

CASE II.—The next case was a brother of the above, aged 6. He had his cheek burnt by a cracker, and the wound had not healed. Over the sore a membrane appeared similar to that already described. The upper lip also became affected. In this case there was no constitutional disturbance, and the condition yielded to local treatment alone. The membrane was not examined, but it was so like the former that the diagnosis may be considered correct.

The patients lived in an old stone house; the sanitary inspector found the traps to the kitchen sink defective. The kitchen sink itself was of soft sandstone, and was fixed against the soft stone wall, hence all the parts were highly absorbent, and, not having been too cleanly kept, exuded a foul-smelling slimy fluid. Probably this condition had something to do with the rise and spread of the disease. And here we are once more confronted with the question, Have insanitary conditions anything to do with diphtheria?

Leeds. GORDON SHARP, M.D.Edin.

TETANUS NEONATORUM.

ON April 26th I attended Mrs. P., a primipara. The presentation was occipito-posterior, and necessitated delivery with the forceps. The mother made an excellent recovery. For the first three days the baby appeared to be all right; on the fourth day the nurse informed me that the infant would not take the breast. Upon examination I found the mouth could scarcely be opened. The next day the muscles were in a state of tetanic spasm, the child every now and then becoming perfectly rigid. The facial expression constituting the appearance known as the "risus sardonicus" was especially marked. The child died on the seventh day, from exhaustion consequent upon the tetanic spasm. The umbilical cord came off on the fifth morning. The umbilicus after the cord had come off was slightly inflamed round the edge. The scissors used at birth to divide the umbilical cord were perfectly clean.

FREDK. H. DAVUS, M.R.C.S.Eng., L.R.C.P.Lond.
West Ham.

UREMIC ECLAMPSIA: COMA: DEATH.

ON April 16th, 1898, I was called to see M.M., aged 24, primipara. She had been confined three hours previously, being attended by a midwife. The patient had already had two fits, and while I was present had a third convulsion, after which she was semi-conscious, and had a death-like pallor. I at once injected pilocarpin gr. ½, which produced very little effect. I also gave mj of croton oil, and ordered a mixture of potassium bromide and chloral hydrate. The patient was placed between blankets, and hot fomentations applied to the kidneys. I saw her again the same evening, and to my surprise found that none of the medicine had been administered, and that the patient was still unconscious and had had three more fits. I administered a dose of medicine *per rectum*, and again another hypodermic of pilocarpin. I saw her again the following morning, April 17th. She was now in a state of coma, having had several convulsions through the night, in all amounting to fourteen. The bowels had acted well. Notwithstanding, she remained in a state of complete unconsciousness, unable to take either nourishment or medicine until her death on the evening of May 19th, the third day after her confinement. Her temperature continued rising to 105° F., and her pulse was 130, and very weak.

The urine was loaded with albumen. There was the faintest trace of œdema of her legs, but the conjunctivæ were very dropsical. The patient had been working in lead at a pottery for years previously.

There is a close similarity in many respects except the issue between this case and that recorded by Dr. A. Thompson in the BRITISH MEDICAL JOURNAL of April 23rd.

Hanley, Staffs. F. CHARLES FITZGERALD, L.R.C.S.I.

REPORTS
ON
MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

EAST SUSSEX HOSPITAL, HASTINGS.

A CASE OF HÆMORRHAGIC PANCREATITIS.[1]

(Under the care of Dr. TROLLOPE.)

[Reported by H. LANGDON, B.A., M.R.C.S., House-Surgeon to the Hospital.]

THE patient, a labourer 32 years of age, was admitted to the East Sussex Hospital on February 20th. He had been brought a distance of five miles in a cab, and arrived early in the afternoon, not having been examined by a medical man till that morning.

History.—His history was that he had been previously healthy, except for vague abdominal pains, till a week before admission. Then he had been suddenly attacked with violent pains in the abdomen accompanied by constant vomiting and obstinate and complete constipation. This had gone on for a week, and he had naturally been getting weaker progressively.

Condition on Admission.—On admission he was in a state of profound collapse. His face was somewhat cyanosed, his extremities cold. The pulse was all but imperceptible, the temperature below 96°. Examination of the chest revealed a diffuse and throbbing apex beat and a loud systolic murmur audible over the whole front of the chest. The lungs were normal. In the abdomen there was a somewhat indefinite swelling visible, occupying the epigastrium and reaching into the left hypochondriac and lumbar regions; otherwise the abdomen was retracted and not particularly tender. The area of gastric resonance was increased. There was violent pulsation visible and palpable over the epigastric swelling, but not of an expansile character, and on auscultation a loud rasping murmur was heard over the pulsating area, and a loud splash could be heard over the stomach at each beat. The patient, when left to himself, lay curled up on the right side, when he seemed fairly comfortable; on being turned over on his back he at once became distressed and the respiration became rapid and gasping. A curious feature of the respiration in this position was a little expiratory puff audible at the mouth, and synchronous with the epigastric pulsation, being evidently caused by the upward thrust of the diaphragm. A consultation of the staff was held, and the practically unanimous opinion was arrived at that the symptoms were due to an aneurysm of one of the branches of the cœliac axis, which had probably burst and was leaking. The patient's general condition precluded the possibility of operation, and treatment was confined to the administration of stimulants hypodermically and *per rectum*. These unfortunately had little or no effect, and the patient got gradually weaker, and died seven hours and a half after admission.

Post-mortem Examination.—At the necropsy held the next day the heart was found to be normal. The abdominal viscera were dry and congested, but there was no general peritonitis. The stomach was dilated; the intestines, especially the colon, were contracted. The duodenum and

[1] Read at a conjoint meeting of the East and West Sussex Districts of the South-Eastern Branch.

first part of jejunum were firmly bound down to the pancreas, and on attempting to dissect them out a large cavity was opened up, containing over half a pint of blood clot. It was difficult to see what relation the mass of clot bore to the mesentery, but as far as could be made out it was retro-peritoneal, and in close connection with the head of the pancreas; the lumen of the duodenum was flattened and obstructed by the pressure of the clot. The pancreas was large, and firmly adherent to the surrounding intestines; it was somewhat hard. On being cut into there were some softening spots, and some cysts present in the head, which contained a milky fluid resembling pus, but which microscopic examination showed to consist of fat globules floating in fluid. There was no sign of recent hæmorrhage in the pancreas itself. The other abdominal viscera were normal, and there was no disease of the abdominal aorta. No vessel could be found from which the hæmorrhage might have arisen. Microscopic examination of the pancreas revealed a condition of extensive fibrosis, with foci of suppuration. A few tuberculous nodules were also present.

REMARKS.—The necropsy revealed this to be one of the rather rare cases of pancreatic hæmorrhage consequent upon inflammation. This condition, so carefully studied by Fitz, is evidently uncommon, and comparatively few cases have been reported. There is a remarkable constancy of the symptoms. The majority of cases are adult males, although the disease has occurred in a boy of 9 months. To all appearance the patients have generally been healthy, though often given to alcoholism and not infrequently very obese, though in this case there was comparatively little fat on the body. There is generally a history of recurring attacks of gastric or intestinal pain, indicating a certain degree of gastro-duodenitis, though the symptoms are often slight. The symptoms of hæmorrhagic pancreatitis come on suddenly, without apparent exciting cause, and are generally fatal within five or six days, often within thirty-six hours. The symptoms of the above case are fairly typical: pain in the epigastric and left hypochondriac regions of a severe character, vomiting, complete constipation, some measure of tenderness, some evidence of swelling, generally resonant, between the epigastrium and umbilicus reaching over to the left side, and above all, the most profound collapse, from which the patient never rallies. Occasionally, however, there is temporary recovery followed by a second attack, but this is exceptional. A positive diagnosis with such symptoms is naturally extremely difficult, and often impossible. The conditions for which it is most liable to be mistaken are perforative peritonitis and acute intestinal obstruction. From the first, the absence of history of gastric or duodenal ulcer, the absence of air in the peritoneal cavity, the absence of any signs of reaction, may help to distinguish it. From acute obstruction it is often impossible to diagnose this condition, though the seat of pain and unusual position of the tumour may be of some assistance. In none of the other recorded cases has a diagnosis of aneurysm been made. That this case should have given rise to such a diagnosis was no doubt due to the position of the localised mass of blood clot and surrounding adherent intestine immediately upon the abdominal aorta, whose pulsations were thus transmitted.

In nearly every case recorded there have been interstitial hæmorrhages into the head of the pancreas, as well as hæmorrhage round it; but in this case there were no signs of interstitial hæmorrhage, although there was inflammatory softening, which might have given rise to it. It is noteworthy, also, that there was no evidence of fat necrosis. It is interesting to remark that in this case the condition of collapse was aggravated by actual mechanical obstruction at the duodenum, although probably irritation of the great retroperitoneal ganglia was the main cause of the collapse in this as in other cases.

As to the probable causation of hæmorrhagic pancreatitis, Balser's view that it is a primary fat necrosis due to excessive overgrowth of fat, producing vascular and tissue degeneration, is obviously inapplicable in this case, as there was no apparent overgrowth of fat. It has been suggested that it may be a specific disease more or less comparable to mumps; but this will strike many people as somewhat far-fetched. Probably in some cases the condition is similar to apoplexy, the result of primary arterial degeneration; but in this case the condition of the pancreas would lead one to suppose that some vessel was eroded in the process of softening of the pancreatic tissue, the result of chronic inflammation of the pancreas; this in turn may, as suggested by Fitz, have been the spread of an infective process from the stomach or duodenum.

Unfortunately there is no treatment so far known that offers the least prospect of success; palliatives in the nature of stimulants and anodynes can, of course, be used, but the disease is almost invariably fatal, although at least one instance of spontaneous cure has been reported. The great advantage, from the patient's point of view, of a correct diagnosis, is that he is not put to the needless pain and worry of abdominal section.

ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.

A CASE OF LARGE CALCULUS IN THE BLADDER: ATTEMPTED LITHOLAPAXY: FAILURE: REMOVAL BY SUPRAPUBIC LITHOTOMY.

(Under the care of T. A. BUCK, M.B.Lond.)

T. H., aged 76, was first seen on January 3rd, 1898. For over twenty years he had suffered pain in the back, loins, and bladder, used frequently to pass small calculi, and on two occasions, about five years ago, these stuck in the urethra, and had to be extracted by a surgeon. About ten weeks ago the pain in the bladder and the end of the penis became worse, with inability to pass urine. These symptoms continued to increase. Usually he had to pass urine every hour or half hour, the pain in the act being very severe, usually worse at the end, being felt especially at the end of the penis. He also had shooting pain through the rectum to the bladder. The urine was ropy, offensive, and contained pus. He had never passed blood.

His wife, to whom he had been married over forty years, said she never remembered him but as in suffering from pain in the bladder. He had four sons, aged 45, 41, 40, and 38.

On sounding, a large calculus was felt. On January 7th, under ether, litholapaxy was attempted, using a lithotrite, No. 13 stem, 15 bend. The stone was so large that when grasped the lithotrite would not lock; it was only grasped so as to bite securely about twice, and on one of these occasions the stone was noticed to slip off or crack in the lithotrite with an audible report. Some *débris* came away with the evacuator (about equal to the bulk of a small walnut in all), but after two hours' work it was obvious that no progress had been made in reducing the size of the stone, and as when grasped securely for the last time, no effort on my part could make the least impression on it, although I put forth all my strength, the attempt to crush was given up.

He passed a tolerable night. The urine was bloodstained, and mixed with detritus. On January 8th he was in great pain owing to sharp fragments engaging in the urethra. He was removed to the Royal Isle of Wight Infirmary and County Hospital, walking from his bedroom to the carriage, and upstairs to the ward. A 3.15 P.M. under ether, suprapubic cystotomy was performed. A calculus the size of a small fist was encountered, almost circular in shape, and so difficult to extract owing to size that this could only be done after it had been fractured by the lithotrite with extreme difficulty into three large and several small pieces. The bladder was irrigated thoroughly with iodine water, and no attempt made to close the wound in the bladder or abdominal wall owing to the chronic cystitis present, and the rough laceration inseparable from the extraction of such large fragments and *débris*. The operation occupied two hours.

The weight of the dried fragments of calculus is $10\frac{1}{4}$ oz. = 290.5 g.

The patient was relieved of all pain forthwith, and for the first fortnight seemed going on to recovery, but sank a month after the operation with uræmic symptoms. The bladder wound never healed, and although he had a most capacious urethra, he could not tolerate an instrument retained therein for drainage owing to the cystitis present.

MEDICAL MAGISTRATE.—Dr. John Joseph Lynch has been appointed by the Lord Chancellor to the Commission of the Peace for the Borough of Walsall.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

John Langton, F.R.C.S., President, in the Chair.

Friday, May 27th, 1898.

Acute Dilatation of the Stomach.

Dr. C. R. Box and Mr. Cuthbert S. Wallace contributed this case. A youth, aged 16, previously in good health, came under observation on account of vomiting and collapse. The condition was attributed to a blow on the epigastrium. The abdomen was rigid, distended, and almost motionless; its right lower quadrant was dull on percussion, and tender in the region of McBurney's point. Peritonitis being suspected, the abdomen was explored. An enormously distended stomach filled the whole belly, displacing the intestines towards the pelvis. The viscus was incised and emptied. Death followed in a few hours. *Post mortem*, no cause was found for the gastric distension. *Post-mortem* digestion of the walls was rapidly advancing. The whole intestinal tube below the stomach was collapsed and empty. The authors presented abstracts of 17 similar cases, and concluded that acute dilatation of the stomach was an exceedingly rare disease. The majority of cases occurred in the second and third decades of life, and the disease was of sudden onset and extremely fatal, the duration of life in the cases collected varying between nine hours and sixteen days. It was very likely to be mistaken for intestinal obstruction or peritonitis. Stress was laid on the importance of the succussion splash as a means of diagnosis. The coexistence in several instances of duodenal and even jejunal dilatation was held to show that the morbid condition was not necessarily a local disease of the stomach.

Dr. Parkes Weber had seen a case a few months ago in which acute dilatation of the stomach existed with acute pyrexia and pneumonia. The patient was a man, aged 50, and was thought to be suffering from intestinal obstruction. There was extreme dilatation of the upper part of the abdomen, with a loud tympanic note on percussion. The rigidity of the abdominal wall prevented the production of the succussion splash. The patient died in collapse; no necropsy was allowed.

Dr. Box, in reply, regretted that the gastric distension in his case was not recognised before the operation. He and his colleague, although they had made extensive researches, had failed to discover any adequate explanation of the occurrence. In the largest textbooks the disease was accorded only the slightest mention.

Cirrhosis of the Liver in Children and Young Adults.

Dr. Hugh R. Smith read a paper describing seven cases. The clinical history and *post-mortem* appearance of each case were given in some detail. The ages of the patients varied from 9 to 24 years at time of death The cases fell into two distinct groups, corresponding fairly accurately with the so-called atrophic and hypertrophic cirrhosis of adults. Thus in the first four there were ascites, absence of jaundice, and small hobnailed livers, which showed microscopically a well-marked multilobular arrangement of the new-formed connective tissue, and the course of the disease was short. Thus one case died eight days after the first appearance of definite symptoms, and the most protracted only lived four and a-half months. In the last three there was marked jaundice from the first, absence of ascites until the close of the disease, and a large liver, which showed a definite unilobular arrangement of connective tissue and very numerous new bile canaliculi; these cases also showed a much more protracted history, living ten, four, and five years after the first development of liver symptoms. In three of the atrophic variety death was due to acute purulent peritonitis for which, *post mortem*, no discoverable cause could be found. Two similar cases of apparently spontaneous purulent peritonitis occurring in adults suffering from alcoholic cirrhosis of the liver were mentioned, and it was suggested that in this disease there was an increased susceptibility of the peritoneum, so that acute inflammatory changes were readily set up. The difficulty of diagnosing the atrophic form of juvenile cirrhosis was dwelt upon, and it was shown that the majority of these cases were put down to tuberculous peritonitis during life, owing to the association of considerable acute and irregular temperature, which latter symptom was so frequent a feature of the cirrhosis in childhood. The production of this temperature was obscure, since, *post mortem*, no exciting cause could be discovered. It was pointed out that the same irregular temperature occasionally occurred in the alcoholic cirrhosis of adults without any discoverable cause being found *post mortem*. In one of the cases in which jaundice was associated with the cirrhosis, considerable stunting of growth and clubbing of the fingers were noticed. Exactly similar conditions had been described by Drs. Gilbert and Fournier in 1895, and by Dr. Frederick Taylor in 1897, in association with cirrhosis of the liver and jaundice, so that the connection was certainly not accidental, and seemed to be a definite symptom of the disease, which, however, appeared to have escaped notice until Drs. Gilbert and Fournier's paper in 1895. The etiology was then discussed. Although alcohol had been frequently shown to be the cause of cirrhosis even in young children, in the cases described this factor could be pretty certainly excluded, as could also a syphilitic origin in all but one case. In one of the cases where the cirrhosis was associated with jaundice, the symptoms had started shortly after a severe attack of scarlet fever. The connection of this form of the disease with both scarlet fever and measles had so frequently been shown to exist, that one was hardly justified in supposing that the association was accidental, more especially as Dr. Klein had demonstrated that interstitial hepatitis might actually develop in the course of scarlet fever. The possible origin of cirrhosis from the absorption of toxins from the intestines due to chronic enteritis might be the explanation of the appearance of the disease in two of the cases recorded in which there was a history of chronic diarrhœa, in one instance for two months and in the other for a year before definite signs of liver disease showed themselves. In the majority of these cases, however, the etiology was altogether obscure.

Dr. F. Parkes Weber suspected the rarity of cirrhosis in children to have been somewhat overestimated. In cases corresponding to Dr. Smith's second class (with chronic jaundice) the spleen was more enlarged than in the coarse hobnailed cirrhosis (without much chronic jaundice). Enlargement of the spleen accompanied by persistent jaundice (however slight) was, he thought, when present, the best clinical evidence of hepatic cirrhosis in children. He asked if in the second class of cases the liver had been found of a green colour at the *post-mortem* examinations.

Dr. Ormerod mentioned the case of a boy, aged 10, which was published in the *St. Bartholomew's Hospital Reports*. The boy came under the care of Dr. Gee, and at first had symptoms which were purely nervous. He became demented, and his limbs rigid and flexed, in which state he died. At no time had he any symptoms that pointed to cirrhosis. At the necropsy nothing was found in the nervous system to account for his symptoms, but the liver was hobnailed. The same set of sympcoms had been described by Sir W. R. Gowers as tetanoid chorea, associated with cirrhosis of liver. Professor Homen, of Helsingfors, had also described similar cases in conjunction with cirrhosis.

Dr. H. R. Smith, in reply, said that in the cases of the second class the liver was always green. In adults also where cirrhosis was associated with jaundice, greenness of the liver was present. An icteric tinge with enlargement of spleen was probably the best diagnostic sign. The spleen in his first class of cases was not nearly so large as in those of his second class. In some of the former cases, in fact, the spleen could not be felt.

Dr. Parkes Weber added that it was only in chronic cases of jaundice that the green colour of the liver obtained.

Annual Meeting.

Diphtheria Antitoxin Committee's Report.

Dr. Church, Chairman of the Committee, read the following abstract of the report:

On January 11th, 1895, the Council of the Society appointed a Committee for the purpose of investigating the clinical value of the antitoxin of diphtheria.

The Committee was composed as follows:

Dr. W. S. Church (*Chairman*) Dr. W. Pasteur (*Honorary Secretary*)
Dr. Stephen Mackenzie Dr. J. W. Washbourn
Dr. Sidney Coupland Dr. H. P. Hawkins
Dr. W. Hale White Dr. E. Goodall.
Dr. Sidney Martin

The Committee met for the first time on January 22nd, 1895; and after due consideration decided to conduct the inquiry as follows:

1. To test the effect of antitoxin on the mortality of diphtheria.
2. To analyse the evidence obtained as to the effects of antitoxin in proportion to the quantity administered:
   a. On the course of acute disease.
   b. On the complications and sequelæ.
3. To note any other effects of antitoxin.

In conducting this inquiry, the Committee had to use reports of some cases which had not been under the observation of any of its members. This disadvantage, which is incidental to all inquiries like the present, was, however, much lessened in this instance by the fact that a very large proportion of the cases investigated had been personally observed by members of the Committee.

In order to obtain the necessary material it was decided to invite the co-operation of the general hospitals, the hospitals for children, and the hospitals of the Metropolitan Asylums Board. At the time when the Committee commenced its work, the Metropolitan Asylums Board was itself engaged in the preparation of a report on the same subject, and could not let the Committee have the use of its cases.

At a later date Dr. E. W. Goodall, Superintendent of the Eastern Hospital, was able to place 475 cases at the disposal of the Committee. Dr. Sidney Martin contributed 116 cases from University College Hospital, whilst Guy's, the London, Middlesex, St. Bartholomew's, and St. Thomas's Hospitals, together with the London Fever Hospital, supplied 241. These 832 cases were analysed and tabulated by a Subcommittee, consisting of Dr. Sidney Martin, Dr. Pasteur, Dr. Washbourn, Dr. Hawkins, and Dr. Goodall, to whom the Committee is very greatly indebted for the immense labour they undertook, and the careful manner in which they executed it.

Upon examination 199 of the 832 collected reports had to be rejected, because the Committee were not satisfied as to the evidence of diphtheria, or because the amount of antitoxin administered was not stated in normal units, leaving 633 available for further analysis.

For the purposes of comparison statistical tables of the results in diphtheria and its complications in cases not treated with antitoxic serum are introduced; these were partly obtained from the published reports of the superintendents of the Asylums Board Hospitals and were partly compiled from the records of the general hospitals.

In analysing the evidence afforded by these 633 cases of the effects of antitoxin especial attention was paid to the following points:

1. The effect of antitoxin on the general mortality.
2. The effect of antitoxin on the laryngeal diphtheria and the extension of membrane from the pharynx to the respiratory passages.
3. On the occurrence of paralysis.
4. On the symptoms attributable to the antitoxin itself.
5. To the conditions under which death occurred.

It was considered desirable to group the cases in accordance with the seat of the membrane, and the groups were thus arranged:

1. Those in which membrane was present on the pharynx only.
2. Those in which membrane was present on the pharynx and larynx.
3. Those in which membrane was present on the larynx only.
4. Those in which membrane was present on the pharynx and in the nose.
5. Those in which membrane was present on the pharynx and larynx and in the nose.

The mortality in the different groups was compared. The cases were also arranged in two series; one in which the whole of the antitoxin administered was injected within the first forty-eight hours of treatment, and one in which the injection of antitoxin was continued over an extended period.

Of the cases which presented symptoms more or less severe of laryngeal affection nearly one-half escaped the operation of tracheotomy, a very much larger proportion than is usually the case in laryngeal diphtheria treated in other ways.

The tracheotomies performed may be divided into two groups:

(*a*) Tracheotomy within twenty-four hours of the first injection.

(*b*) Tracheotomy at a later period.

Only 2 out of the 75 belong to group *b*.

The Committee desires to draw especial attention to these facts, and also to the results of the operation of tracheotomy in which the mortality amounted to 36.0 per cent. as opposed to 71.6 per cent. in the control series compiled from the records of the general hospitals before the introduction of antitoxin.

The effect of age on the mortality in the antitoxin series is similar to that found under other kinds of treatment; the mortality falls as age increases, but it is in the first five years of life that the lessened mortality in the antitoxin series is most marked.

It is to the lesser frequency with which membrane extends to the larynx and trachea in cases treated by antitoxin, and to the effect of the antitoxin on them when membrane is present, that the lessened mortality in the antitoxin series is mainly due.

The total mortality in the 633 cases amounted to 124, or 19.5 per cent., as opposed to 29.6 per cent. in the non-antitoxin control series. Not only is the mortality in the antitoxin series much less than in the other, but the duration of life in the fatal cases is longer, a fact which has considerable bearing on the frequency with which paralytic symptoms occurred.

The closest investigation has failed to discover any connection between the occurrence of paralysis and the amount of antitoxin injected, nor did the period of the disease at which it was first used appear to exert any influence on the occurrence of paralytic symptoms.

Some form or other of rash followed the injection of antitoxic serum in very nearly a third of the cases. The rashes can be divided into two main types, those which were of an erythematous and those of an urticarial character; the former largely predominated. The rashes appeared at very variable times after the first injection; two-thirds were first noticed between the sixth and twelfth days after the first injection, and the eighth day was the one on which the rash most frequently appeared. The rashes also varied greatly in duration, and were accompanied by a rise of temperature in rather more than half the cases.

Neither age, the amount of antitoxin administered, nor the period of the disease at which it was used appear to have any influence on the occurrence of the rash. In no instance did the presence of a rash appear to have any bearing on the ultimate result of the case.

Joint pains, which are not met with in the non-antitoxin series, and are apparently due to the antitoxic serum, were observed in a small number of cases. Nearly all of these had also a rash and some accompanying fever. In a few instances rise of temperature without the presence of either joint pains or rash occurred during convalescence.

The percentage of deaths with suppression of urine was found to be practically the same in the antitoxin and the non-antitoxin series.

The general result of the inquiry shows that in the cases treated with antitoxin not only is the mortality notably lessened, but the duration of life in fatal cases is also prolonged. The injection of antitoxin may produce rashes, joint pains, and fever; with these exceptions no prejudicial action has been observed in the series of cases investigated to follow even in cases in which a very large amount of antitoxic serum had been used.

NOTE.—The Committee has added in an appendix the accounts of 3 cases communicated to them quite recently in which other symptoms were observed to follow the injection of antitoxic serum.

The PRESIDENT proposed a vote of thanks to the Committee for their valuable services.

Dr. ARCHIBALD GARROD seconded the resolution, which was carried unanimously.

Report of the Council.—Mr. MAKINS read the report of the Council for the past year. It showed that the Society was highly prosperous, numbering 588 members. It referred to the general index to the first thirty volumes of the *Transactions* recently issued and to the report of the Diphtheria Antitoxin Committee. The Treasurer's statement of accounts showed a satisfactory condition of the finances of the Society. It was resolved that the two reports be received, adopted, entered on the minutes, and printed in the next volume of the *Transactions*. The scrutineers, Dr. W. PASTEUR and Mr. CUTHBERT S. WALLACE, reported that the officers and members of Council for next year, nominated by the Council, had all been elected.

Votes of thanks to the retiring Vice-presidents and members of Council were passed, and a vote of thanks to the retiring Hon. Secretary, Mr. Makins, which was proposed in very cordial terms by the PRESIDENT and seconded by Dr. CHURCH, was carried with acclamation.

Mr. MAKINS briefly returned thanks.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

PATHOLOGICAL AND CLINICAL SECTION.

C. H. CATTLE, M.D., President, in the Chair.

Wednesday, May 18th, 1898.

CASES AND SPECIMENS.

DR. HANDFORD showed: (1) A Boy, aged 15, suffering from Ichthyosis; (2) a Woman, aged 33, suffering from a Growth behind the Sternum, causing pressure on the trachea, but whose condition had rapidly improved under large doses of iodide of potassium and perchloride of mercury.—Mr. ANDERSON showed a Gall Stone, measuring $2\frac{1}{2}$ by $1\frac{1}{2}$ inches, removed by Cholecystotomy.

DIFFUSED CARCINOMA OF STOMACH, COLON, AND BLADDER.

Dr. HANDFORD reported this case, which occurred in a man, aged 42, who had been an in-patient in January, 1897, with indefinite gastric symptoms. Since then he continued to lose weight, suffering from frequent vomiting and pain after food. The bowels were sometimes rather loose, and at others constipation amounted almost to obstruction. A fortnight ago the abdomen began to swell, and he was admitted into the General Hospital on April 30th, 1898, with symptoms of intestinal obstruction. On May 4th an exploratory operation was performed, and a large amount of ascitic fluid evacuated; but no permanent relief could be given, and he died on May 12th. At the necropsy the peritoneum generally was slightly thickened. The stomach was large, and the whole of the walls were somewhat thickened and indurated. The pylorus was occupied by a large new growth, causing obstruction. Neither the duodenum nor any part of the small intestine was in the slightest degree involved. The pyloric growth was adherent to the gall bladder and to the hepatic flexure of the colon, which was thereby tightly stenosed. The ileo-cæcal orifice was also nearly closed by thickening of the tissues, giving rise to a second obstruction. The whole of the colon was uniformly and greatly thickened and indurated from end to end, being infiltrated by apparently the same kind of new growth as the stomach. The urinary bladder, too, was small, and its walls had undergone a similar, but more extensive, uniform thickening and induration. The retroperitoneal glands were enlarged. No distinct nodules of secondary growth were found in any of the viscera. On microscopic examination a section of the wall of the colon showed that the submucosa and muscular coats were infiltrated with a scirrhous carcinoma associated with the growth of much fibrous tissue. The wall of the bladder showed much fibrous tissue invading its coats, and embedded in this were a few groups of carcinomatous cells like those in the wall of the colon; presumably these represented a secondary subperitoneal deposit from the primary cancer of the pylorus. The condition above described was far from common, though several cases had been carefully described.[1] The thickening of the whole colon and bladder was so uniform that Dr. Handford had little doubt that many cases described merely as "fibroid induration" had been malignant in character. Here the pyloric growth cleared up the diagnosis. Fagge described somewhat similar cases affecting the stomach as "gastric induration," but said "probably it is impossible to distinguish cases of this kind from those of diffused sarcoma."

[1] *Path. Soc. Trans.* vol. xl, p. 89.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—At the annual meeting held on May 26th, after the ordinary business had been conducted, Dr. J. F. PAYNE, the retiring President, gave a valedictory address, and then introduced the new President for the session 1898-99, Dr. RADCLIFFE CROCKER, who read a paper dealing mainly with our present and future methods of treatment as induced by a proper knowledge of the bacteriology of the skin.—Dr. J. H. STOWERS opened a discussion upon Drug Eruptions. He was followed by the PRESIDENT, and by Dr. J. F. PAYNE, Dr. BOWLES, Dr. STOPFORD TAYLOR, Dr. A. J. HARRISON, Dr. GALLOWAY, Mr. PERNET, and others.—Dr. PAYNE showed the following cases: (1) Prurigo in a child; (2) Morphœa in a little girl; (3) A case for Diagnosis in an old man.—The PRESIDENT showed two cases: (1) A case of Gyrate Eczema in a man; (2) Iodoform Dermatitis in a man. The cases were discussed by Dr. MOUILLOT, Dr. HARRISON, Dr. BOWLES, Dr. WALDO, the PRESIDENT, Dr. STOWERS, and Dr. PAYNE.—Dr. HARRISON showed a series of six photographs illustrating the case of a Large Hairy Mole in a woman.—Mr. JONATHAN HUTCHINSON exhibited a collection of drawings illustrating Lupus, Rodent Ulcer, etc.—Dr. STOPFORD TAYLOR also exhibited a Collection of Drawings.—The annual dinner was held in the evening at the Café Royal, the PRESIDENT in the chair. Among those present were Dr. Payne, Mr. Jonathan Hutchinson, Dr. Sansom, and about 40 other members and guests.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The following were elected (at the annual general meeting of the Society) office-bearers for the session 1898-99:—*President:* Dr. George S. Middleton. Section of Medicine—*Vice-President:* Dr. W. G. Dun. *Councillors:* Dr. John Love and Dr. Barclay Ness. *Secretary:* Dr. Hinshelwood. Section of Surgery—*Vice-President:* Dr. John Barlow. *Councillors:* Dr. Robert Kennedy and Dr. Henry Rutherfurd. *Secretary:* Dr. J. H. Nicoll. Section of Pathology—*Vice President:* Dr. Walker Downie. *Councillors:* Dr. W. R. Jack and Dr. Workman. *Secretary:* Dr. R. M. Buchanan. Section of Obstetrics—*Vice-President:* Dr. George Halket. *Councillors:* Dr. Munro Kerr and Dr. J. K. Kelly. *Secretary:* Dr. Balfour Marshall. *Treasurer:* Mr. Henry E. Clark. *General Secretary:* Dr. Walter K. Hunter.

REVIEWS.

JOHN ARMSTRONG: THE STORY OF A LIFE. By MAJOR GREENWOOD, M.D., LL.B. London: Digby Long and Co. (Crown 8vo, pp. 322. 6s.)

MEDICAL men might seem, from their special knowledge of the mechanism of human character and from their constant and intimate contact with human nature in its weakness and in its strength, to be peculiarly qualified to write novels. The experience of any family doctor with an extensive practice would furnish materials for a score of novels more full of passion and even of incident than most of those which help to wear out the counter at Mudie's. Yet few medical men have won distinction as writers of fiction—at least in the form of novels; and it is remarkable that those who have done so have owed little to their professional training. Smollett and Charles Lever, like Conan Doyle, were, as far as appears from their books, doctors *per accidens*, as the scholastics would have said. Mr. R. D. Blackmore, we believe, studied medicine in his younger days, but, except that he speaks with more knowledge of things medical than the average novelist, the fact does not seem to have influenced his literary development. In Dr. Weir Mitchell's *Hugh Wynne*, which is acknowledged to be one of the most successful novels of the past year, one sees even in the details of workmanship the hand of the artist, but the microtome of the neurologist is nowhere visible. In Wendell Holmes's novels, on the other hand, the artistic effect is to a great extent spoilt by the obtrusion of the physician. Medical knowledge is, however, used to good purpose by the excellent writer who

hides his name and professional title under the pseudonym of "Philip Lafargue," and the same thing may be said of Dr. MAJOR GREENWOOD. *John Armstrong* is a novel with a purpose, or rather, if we may parody Bolingbroke's famous definition of history, it is "the science of life teaching by examples," the particular point illustrated being the working of heredity in the transmission of tendencies to mental disease, and the influences which help or hinder the evolution of those tendencies. The moral of the book is accurately conveyed in motto on the title page: "The Gods are just, and of our pleasant vices made instruments to plague us." The plot is the old, old story of lovely woman stooping to folly and paying the penalty, while her betrayer escapes all punishment, except from his own conscience. The remorse of the great surgeon, Sir John Armstrong, as it pursues him throughout his career of splendid professional success, and finally deepens into insanity ending in suicide, is powerfully pourtrayed. The subsidiary characters are less elaborately drawn, but all are distinct and lifelike. The tale is excellently planned, and on the whole is well told. It would be easy to criticise the execution: signs of literary inexperience are not wanting; the author has an irritating tendency to platitudinous moralising, and he keeps his sense of humour somewhat severely under restraint. But as the proof of the pudding is in the eating, so it may be said the proof of a novel is in the reading. Tried by this test, *John Armstrong* must be pronounced a decided success. Dr. Major Greenwood must be congratulated on having produced an interesting and readable novel.

THE ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By CHARLES E. DE M. SAJOUS, M.D., and One Hundred Associate Editors, assisted by Corresponding Editors, Collaborators, and Correspondents. Vol. I. Abdominal Injuries to Bright's Disease. Philadelphia, New York, Chicago: The F. A. Davis Publishers. 1898. (Royal 8vo, pp. 611. Cloth, 5 dols.; half Russia, 6 dols.)

DR. SAJOUS deserves the thanks of the profession for the determined manner in which he attacks the difficult question of dealing with the huge mass of medical literature which issues from the press year by year. The volume now before us is a proof that he is a man not only of industry but of resource. Experience having shown him that while the *Annual of the Universal Medical Sciences*, started ten years ago, was of the greatest assistance to writers, teachers, and investigators, it did not altogether meet the wants of general practitioners, he has reconsidered his position, and now presents to the profession a cyclopædia which combines the qualities of a dictionary of medical science with those of a highly-condensed year book. The articles are arranged in alphabetical order, and each deals in a comprehensive manner with the general aspects of the disease under consideration, while a summary of the general tendency of recent literature bearing on each division of the subject matter—etiology, pathology, treatment, etc.—is inserted in its proper logical order. The volume is well illustrated both by engravings in the text and by lithographic plates.

SANITATION IN THE BRITISH MERCANTILE MARINE. By WILLIAM G. ROMERIL. London: The *Shipping World* Company, Limited. 1898. (Demy 8vo, pp. 64, 25 illustrations. 3s. 6d.)

THE Shipmasters' Society of London is doing much useful and excellent work in promulgating a knowledge of ship sanitation in the nautical world, and it deserves the cordial support of all concerned in the matter. Port sanitary authorities and the Local Government Boards are rendering wholesome assistance by adopting, and often enforcing, the measures submitted to their consideration; while the Board of Trade, which really possesses far greater powers and better opportunities of dealing with the subject, has never been properly armed by the Legislature with the necessary officer or officers, and is therefore proceeding *lente ac paulatim*. It seems, indeed, passing strange that at such an epoch as this of advance and enlightenment in matters pertaining to public health, the Board of Trade, in whose hands are placed the sanitary welfare and interests of the thousands on thousands who travel by sea and by land, should be unable, so far as we know, to reckon among officials stationed at headquarters a single responsible officer to guide and assist them in their deliberations concerning the measures to be adopted for the maintenance of health and comfort, the prevention of sickness and injury, and the preservation of life not only at sea, but also at home and in foreign ports, which must come so frequently under their notice. The Medical Officer of the Port of London has already referred to the fact that with regard to their sanitary surroundings seamen have for a long time been badly treated, and has recommended speedy reform in the matter; and the book we have now before us constitutes a useful auxiliary to the address he gave at the Fishmongers' Hall in the year 1894 and the discussion that ensued thereupon. What is most needed, of course, is an amendment of the law on the subject of which both he and Mr. ROMERIL speak; but in the meantime much might be done if a suggestion made, we think, by the latter elsewhere were to be followed—namely, that vessels should be under proper sanitary supervision while being constructed. Owners very properly resent being called on by a local authority to pull their vessels to pieces when they are built, and it would be only just to let them know beforehand exactly what is required.

With regard to lower forecastles, the space allowed should certainly be increased at least in the ratio if not to the same extent as obtains in the case of passenger spaces similarly situated. Mr. Romeril's remarks on the proper insulation of boiler spaces will be read with special interest, since the Registrar of Seamen has lately directed attention to the subject of heat frenzy; and the sketch that he gives of the very primitive mode of conducting inquiries into causes of death serves to confirm and to illustrate the statements made by Commander Dawson in *Colburn's Magazine* (1886) and in his note to Sir Henry Calcraft in the year 1893, which was referred to again only lately in his address at the United Service Institution.

Seamen of all grades, and friends of seamen too, would do well to read Mr. Romeril's book and to ponder on its contents; the language is simple, clear, and precise, and while he makes no effort to mince the matters he speaks of, he refrains from being censorious. In the narrow compass of 53 pages he treats of forecastles, etc., bilges, ventilation, engine rooms and stokeholds, etc., water, and inquiry into deaths of seamen at sea.

TWENTIETH CENTURY PRACTICE OF MEDICINE. Edited by T. L. STEDMAN, M.D. Vol. XII. London: Sampson Low, Marston, and Co. 1898. (Roy. 8vo, pp. 856; 9 illustrations. 30s.)

THE twelfth volume of this encyclopædic work is remarkably international from the point of view of the writers of the five articles, three hailing from France, one from Italy, and one—Dr. Blandford—from England. Thus, curious as it seems, there is no American writer in this volume of a system edited in New York. The subjects treated of are, in the first place, insanity, idiocy, and the somewhat allied subject of criminal anthropology—for which the editor has been fortunate enough to obtain the services of Professor Cesare Lombroso, of Turin—and, in addition, old age and the diseases of children.

Dr. Blandford has contributed a very complete monograph on the insanities, and has copiously illustrated the subject with cases from his wide experience. He enters fully into the predisposing factors, such as hereditary influences, and then discusses the exciting causes, such as alcohol, general diseases, and so forth. Incidentally in this section he refers to insanities of special conditions, such as those of the puerperal state, of childhood, senility, and those occurring after acute fevers. The various forms of insanity and their treatment are admirably described, and a valuable section is devoted to the prevention of insanity, in which the important subjects of education and marriage are dealt with from a sound, common-sense aspect. The difficult subject of idiocy is successfully undertaken by Professor Sollier, of Paris.

Professor Lombroso's article on criminal anthropology is

one of great interest. It is accompanied by drawings of criminals of different types, and is illustrated by numerous historical instances and by statistics. The physical, mental, and moral characters of criminals are described and the etiology and therapeutics of crime are dealt with. Under the heading of heredity the remarkable history of the Juke family is referred to. The founder of this family, who was born about 1720, left behind him 540 legitimate and 169 illegitimate descendants, including 77 criminals, 128 prostitutes, 142 vagabonds, 131 idiots, impotents, or syphilitics.

The remaining part, almost half, of the volume is devoted to two articles—on old age and on the diseases of children respectively. Dr. Boy-Teissier, of Marseilles, begins his article by a study of normal or physiological old age. The views explaining the lesions met with in senility as the result of changes in the respiratory system or as due to arterio-sclerosis are mentioned, but do not appear to be the cause so much as the effect of old age, which is then referred to two great causes (1) a diminution of the power of attraction of the constituent elements of the organs, and consequently (2) a diminution in the coefficient of vital resistance. Under the means of combating senility stress is laid on the dangers attending a diet of too generous or stimulating a character, and the writer says that the aphorism, "Wine is the milk of the aged" has been responsible for many cases of cerebral hæmorrhage, angina pectoris, and retention of urine.

With the exception of the infections and rickets, which are dealt with elsewhere, M. Comby's article is designed to embrace all the diseases of children. As a necessary result of this ambitious attempt, many of the diseases receive but scanty notice, and although the article may be useful as a general sketch of the subject of infantile medicine, it cannot be regarded as exhaustive, or as a source for reference. The diseases are divided into (1) those of general nutritional origin such as scrofula or lymphatism from which tuberculosis is excluded; arthritism, including migraine, asthma, obesity, and diabetes; blood disorders and arthrepsia; and (2) local diseases.

The editor is to be congratulated on the volume, which as a whole is one of the best of this gigantic undertaking.

Zur Bacteriologie der Puerperal-Infection. [On the Bacteriology of Puerperal Infection.] Von Dr. K. Strünckmann in Gottingen. Berlin: S. Karger. Glasgow: F. Bauermeister. 1898. (Demy 8vo, pp. 68. M.2.)

In this pamphlet we have a collection of recent literature. The author was induced to make it by having under his care a case of pyæmia following abortion, in which the only micro-organism found present was the staphylococcus pyogenes aureus. This led him to collect the results of other bacteriological investigators. The examination of the reports which the author has brought together induces him to quote with approval as apposite a remark of Schopenhauer's: "A conceived hypothesis gives us lynx eyes for everything that supports it, and makes us blind to everything that contradicts it." He does our country the honour of singling out an English observer—Dr. Bullock, of the London Hospital—as the representative of the teaching that he controverts. Dr. Bullock's words, to which our author takes exception, are the following: "In the great majority of cases of what is termed puerperal fever the cause is the infection of some part of the genital canal by the streptococcus pyogenes, but its action may be aided by other pyogenic cocci"—which Dr. Bullock then enumerates—"As a rule, however, puerperal fever is a pyogenic process caused by the streptococcus pyogenes only, and would therefore better be named 'puerperal streptomycosis.'"

This statement Dr. Strünckmann opposes. He holds that puerperal fever is not a specific disease due to a single organism, but a collective name for a group of diseases which are similar in being produced by infective micro-organisms. Many of the cases are instances of mixed infection. The part played by the different bacteria has not yet been defined with certainty.

Our author points out how practically important it is that we should know what micro-organism in any given case is producing the mischief, for upon this knowledge depends the selection of the antitoxin by which it is to be combated. He thinks we are as yet only upon the threshold of exact knowledge—that the combination of clinical with bacteriological work will open up a great and fruitful field for cultivation.

We must add that the reports of cases in which anti-streptococcic serum has been used which have from time to time appeared in our columns seem to us to lend considerable support to Dr. Strünckmann's views. In some of these cases such prompt and marked improvement has followed the use of this remedy as to leave little doubt that life has been saved by it. In others there has been either no effect or only some slight change in the patient's condition such as might have occurred without it. If we accept the position that the streptococcus is not the only organism that causes septicæmia and pyæmia, nor even the one always present, these different effects from a remedy designed to combat the streptococcus only are what would be expected.

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1. Aperçu Historique sur l'Hygiène Publique en Belgique depuis 1830. [Historical Sketch of Public Health in Belgium since 1830.] Par Dr. Hyac-Kuborn. Bruxelles: Hayez. 1897. (Roy. 8vo, pp. 284.)
2. Tablettes Mensuelles de la Société Royale de Médecine Publique et de Topographie Médicale de Belgique, Decembre, 1897. [Monthly Tables of the Royal Society of Public Health and of Medical Topography of Belgium, December, 1897.] Bruxelles: Hayez. 1897. (Roy. 8vo, pp. 22.)
3. Congrès National d'Hygiène et de Climatologie Médicale de la Belgique et du Congo. Première Partie—Belgique. [National Congress on Hygiene and Medical Climatology of Belgium and Congo. First Part—Belgium.] Bruxelles; Hayez. 1898. (Roy. 8vo, pp. 240.)

Together with material of quite local importance the last volume contains several articles which may interest English physicians. Spa is described by Dr. Schaltin, and its indications in disease are ably discussed. In regard to the antiquity of Spa, Dr. Schaltin is not content with its fame in the more recent centuries, but claims that its chalybeate waters were known to the Romans, and that it was to one of the springs of Spa that Pliny referred when he spoke of a gaseous water (in Belgium) tasting of iron; it is commonly supposed, however, that he alluded to the fountain of Tongaren. Dr. J. Felix, the Professor of Medical Hydrology at Brussels, makes suggestions for turning Chaudfontaine into an important thermal station, but we can hardly think that his scheme has a chance of great international success, when we consider that Schlangenbad can be so easily reached, and that as regards England there are the simple thermal springs of Bath and Buxton. Dr. F. Quintin, in discussing Belgian climatology, mentions amongst his conclusions that the hills of the "Little Switzerland" between Dinant and Namur (including these two places), and the climate of the Ardennes, lend themselves admirably to the erection of sanatoria. Dinant is described by Dr. Cassart, who considers it not only suited for tourists and holiday residence, but as possessing a healthy, temperate climate for invalids, as it is sheltered from north winds in winter, and cooled in summer by refreshing breezes wafted along the Meuse. Dinant possesses likewise facilities for hydrotherapeutics. Of great general interest are the articles in favour of seaside sanatoria for tuberculosis, and the open-air treatment of pulmonary phthisis. It is shown that in Belgium 12 out of 125 deaths every year are caused by consumption, to which disease nearly one-sixth of the total number of deaths occurring at Brussels are due. Dr. U. Timmermans, of Saint Trond, in his long and able article on the subject, joins with Dr. Moeller in advocating the sanatorium treatment, after the plan already carried out at Falkenstein, Goerbersdorf, and elsewhere. He especially urges the foundation in Belgium of charitable institutions of this class for the poorer classes.

The first two volumes deal more exclusively with the usual public health questions. The tables of mortality and disease show the great prevalence of affections of the respiratory organs. Dr. E. Schrevens, however, states that the influenza

epidemic has been characterised by less severe symptoms than former ones, and that convalescence has been more rapid. The history and progress of the various departments of sanitary science in Belgium since 1830 have been very carefully and fully dealt with in the first volume by Dr. Kuborn and collaborators, A. Devaux, E. Dupont, U. Laho, and G. Vandevelde. The volume cannot fail to interest all those occupied with public health questions, and the Royal Society of Public Health and Medical Topography in Belgium is certainly to be congratulated on the activity which it has shown.

NOTES ON BOOKS.

Reports and Transactions.

The Middlesex Hospital: Reports of the Medical, Surgical, and Pathological Registrars for the Year 1896. (London: H. K. Lewis. 1897. Demy 8vo, pp. 354. 2s. 6d.)—In the medical report, 1,614 cases are included. Abstracts are given of the cases of diphtheria treated with antitoxin, 25 in number. In 5 cases tracheotomy was performed. The number of deaths was 4; a result in striking contrast to the statistics of former years. Not a single typical case of diphtherial palsy occurred in the series. Amongst the miscellaneous cases we notice a case of acute intestinal obstruction, which proved fatal, due to acute pancreatitis. The surgical report contains abstracts of cases of appendicitis, acute intussusception, gall stones, and operations on the kidney, and special tables of cases of hernia. In the latter, 16 cases of strangulated hernia are included: 9 inguinal, 5 femoral, 2 umbilical. Of these, 7 died: 2 inguinal, 3 femoral, and 2 umbilical. This portion of the report is full of interesting information on every branch of surgery. The pathologist's report is a model of accurate and painstaking work, and contains as special items a list of abnormalities and an excellent abstract of the *post-mortem* reports. The reports, as a whole, are admirably done. No labour has been spared to make them as full and accurate and informative as possible, and the work reflects the highest credit upon those responsible for it. The work could not be better done.

The North London or University College Hospital Reports for 1895, Surgical Cases and Medical Cases. (London: Jas. Truscott and Son. 1898. Demy 8vo, pp. 147.)—The surgical report of this hospital has undergone certain alterations which tend to the improvement of the volume. A complete list of abdominal operations is given, and a list of deaths, including an abstract of the clinical features and *post-mortem* appearances. The tabulated lists are well and intelligently done, but in Table I Dupuytren's contraction appears in two places. On p. 16 Philp's operation is mentioned; presumably Phelps's is meant. In the description of the abdominal operations it is interesting to note that, in the majority of cases, the wound was stitched up by silk sutures which embraced the whole thickness of the abdominal wall. In the two cases of cholecystotomy, the gall bladder was first stitched to the peritoneum of the abdominal wall and then opened, a method which interferes very considerably with the freedom of manipulations during the later stages of the operation, especially if a stone, or stones, be lodged in the cystic duct. The medical report does not call for special mention. It might with advantage be much fuller. It is necessary to point out that the value of a report of cases occurring in the year 1895 is in many respects much diminished when published in 1898, especially from a surgical standpoint.

Bericht über die sechsundzwanzigste Versammlung der Ophthalmologischen Gesellschaft, Heidelberg, 1897. [Report of the Twenty-sixth Meeting of the Ophthalmological Society.] (Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1898. Roy. 8vo, pp. 295, 13 plates and 9 illustrations. 7s.)—This valuable report comprises twenty-seven papers with the discussions that followed, and an account of the demonstrations of ophthalmic specimens and instruments. Among the subjects treated of may be mentioned; The Pathogenesis of Choked Disc (Krückmann, Leipzig): the Eye in the Newborn (v. Hippel, Heidelberg); the Anatomical Basis of Ringscotoma, with Remarks on our Knowledge of Syphilitic Changes in the Eye (Baas, Freiburg); Intermittent Exophthalmus (Vossius, Giessen); the Function of the So-called "Parareticular" or "Amakrin" Cells in the Retina (Schirmer, Greifswald); Sympathetic Choroi-Retinitis (Haab, Zurich); Our Knowledge of the Origin of Phlyctenular Inflammation (Axenfeld, Rostock); the Operative Treatment of Congenital Dislocation of the Lens (Sattler, Leipzig); a Collection of Fat in the Upper Part of the Anterior Chamber (Leber, Heidelberg).

Mittheilungen aus der gynæcologischen Klinik des Professor Dr. Otto Engström in Helsingfors. Band 1, Heft 3. [Reports from Engström's Gynæcological Wards.] (Berlin: S. Karger; and Glasgow: F. Bauermeister. 1897. Roy. 8vo, pp. 118. M 4.)—This collection of articles on diseases of women is confined to cases in Professor Engström's wards. Hence it approaches the hospital "reports" familiar in British literature, but does not make a chief point of systematic statistical records of a hospital. Helsingfors has a very good school of medicine. Heinricius, whose work on pancreatic cysts is now well known, and Engström enjoy a wide reputation beyond the borders of Finland. All the articles in the present number are prepared with the extreme care characteristic of medical writers of the German school. Professor Engström has written a specially interesting paper on perityphlitis and inflammation of the right appendages, a very important subject, a second on uterine pregnancy after operations for tubal gestation, a third on sarcoma of the small intestine, and a fourth on a case of interstitial or tubo-uterine pregnancy. The communications prepared by his colleagues, all of considerable interest, are one by Boucht on two cases of peripheral paralysis attributed to chloroform, a second by Sandström on partial inversion of the uterus caused by tumours, a third by Sipila on prolapse (angioma) of the urethral mucous membrane, and a fourth on congenital malformation of the heart by Boige.

Elementary Physics. First Year's Course. By John G. Kerr, M.A., Headmaster of Allan Glen's School, Glasgow. (London: Blackie and Son. 1898. Crown 8vo, pp. 144, 54 illustrations. 1s. 6d.)—This small volume is intended to teach the elements of physics by a graduated series of exercises. It is divided into two parts designed respectively for laboratory and classroom reading. The exercises begin at the very elements of the subject, such as the determination of length by direct measurement and carry the reader progressively to such problems as the determination of specific gravities and fluid pressures. The apparatus required is of the simplest description, indeed we doubt if the whole subject has not been treated from rather too elementary a standpoint. We confess we should like to see a class of average boys solemnly proceeding to work out the following exercise: "Exercise 1, Chapter v. Obtain ideas of mass. Directions: Remove from their stand the two brass cylinders, each marked 1 hektogram (100 grammes), and also the one marked 2 hektograms. Attach the 2-hektogram mass to the spring balance and note the reading. Remove this mass and attach first one of the 1 hektograms, and then add the other, noting the reading in both cases." We should have thought that the accuracy of the result expected to be obtained in this experiment depended rather on the maker of the hektogram weights. But with exceptions such as these, in which a certain style of teaching physics that has lately come into fashion is rather overdone, the book is a good one, and could be safely put into the hands of young students.

The Commercial Uses of Coal Gas. By T. Fletcher, F.C.S. (Warrington: Fletcher, Russell, and Co., Limited. Fcap. 8vo, pp. 104. 1s.)—This little book is a supplement to *Coal Gas as a Fuel*, published by the same author, who is well known for the many ingenious devices he has worked out for the better application of gas as a heating agent for various industrial and commercial purposes. It consists to some extent of articles that have been previously printed elsewhere, but contains some original matter. A useful account is given of various forms of gas burners and gas furnaces for manufacturing and other purposes. It also contains an excellent account of the use of the blowpipe as applied to workshop practice, which will be found of value to the mechanic, both professional and amateur.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

The sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President: T. G. Roddick, M.D., Professor of Surgery in McGill University, Montreal.

President-Elect: Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: Robert Saundby, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: Charles Parsons, M.D., Dover.

An Address in Medicine will be delivered by Thomas Richard Fraser, M.D., LL.D., F.R.S., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by Thomas Annandale, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir John Batty Tuke, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. Medicine.

President: George William Balfour, M.D., LL.D. *Vice-Presidents:* Sir Christopher John Nixon, M.D.; John Mitchell Bruce, M.D., Alexander James, M.D.; George Alex. Gibson, M.D. *Honorary Secretaries:* J. J. Graham Brown, M.D., 3, Chester Street, Edinburgh; Samuel Herbert Habershon, M.D., 70, Brook Street, Grosvenor Square, W.; George Lovell Gulland, M.D., 6, Alva Street, Edinburgh.

The following subjects have been arranged for discussion:

1. Wednesday, July 27th.—The Clinical Varieties of Hepatic Cirrhosis. To be opened by Dr. Alexander James.

2. Thursday, July 28th.—The Significance and Consequences of different states of Vascular Tension with their General Management. To be opened by Sir William Broadbent, Bart., M.D.

3. Friday, July 29th.—Serum Diagnosis and Therapeutics in Infective Diseases. To be opened by Professor Wright (Netley).

The following, among others, intend to take part in these discussions: Sir Christopher Nixon, Dr. G. W. Balfour, Professor Bradbury, Dr. Graham Brown, Dr. Mitchell Bruce, Dr. Lauder Brunton, Dr. Foxwell, Dr. Gibson, Dr. Gulland, Dr. Habershon, Dr. Claude Ker, and Dr. Muirhead.

B. Surgery.

President: John Duncan, F.R.C.S., LL.D. *Vice-Presidents:* Alex. Gordon Miller, F.R.C.S.; John Chiene, F.R.C.S.; James Rutherford Morison, F.R.C.S.; Joseph Montague Cotterill, F.R.C.S. *Honorary Secretaries:* Francis Mitchell Caird, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. Beeman Hodsdon, F.R.C.S., 52, Melville Street, Edinburgh. Thomas Kennedy Dalziel, F.F.P.S.G., 196, Bath Street, Glasgow.

Special discussions will be held upon:

1. Injuries of the Elbow Joint.

2. The Origin, Effects, and Treatment of Septic Infection of the Urinary Tract.

C. Obstetrics and Diseases of Women.

President: Alex. Russell Simpson, M.D. *Vice-Presidents:* Charles E. Underhill, M.B.; George Ernest Herman, M.B.; D. Berry Hart, M.D.; A. H. Freeland Barbour, M.D. *Honorary Secretaries:* R. Milne Murray, M.B., 11, Chester Street, Edinburgh; F. W. N. Haultain, M.D., 17, Rutland Street, Edinburgh; John Campbell, M.D., 21, Great Victoria Street, Belfast.

It has been arranged that the first part of the meeting of this Section on each of these days shall be devoted to a discussion on a subject of Obstetrical or Gynæcological interest. The subjects selected are as follows:

1. Wednesday, July 27th.—The Surgical Treatment of Pelvic Inflammation. To be opened by Dr. Cullingworth (London).

2. Thursday, July 28th.—The Use and Abuse of the Midwifery Forceps. To be opened by Dr. Milne Murray (Edinburgh).

3. Friday, July 29th.—The Treatment of Puerperal Eclampsia. To be opened by Dr. Halliday Croom (Edinburgh).

It has been arranged that specimens illustrative of the subjects of the special discussions shall be exhibited in the Pathological Museum.

D. State Medicine.

President: Sir Henry D. Littlejohn, M.D., LL.D. *Vice-Presidents:* John C. McVail, M.D.; George Reid, M.D.; Thomas Goodall Nasmyth, M.D.; James McLintock, M.D. *Honorary Secretaries:* Charles Hunter Stewart, M.B., D.Sc., 18, Moray Place, Edinburgh; William Leslie Mackenzie, M.D., Public Health Office, Leith.

It is proposed to hold discussions on the following:

1. Rivers Pollution; with Special Reference to the Present Condition of Scottish Rivers.

2. Vaccination; with Special Reference to Prospective Legislation.

3. The Hygienic Control of Milk Supplies.

4. The Plea of Insanity in Criminal Cases.

E. Psychology.

President: Thomas Smith Clouston, M.D. *Vice-Presidents:* William Wotherspoon Ireland, M.D.; H. F. Hayes Newington, M.R.C.S.; Joseph Wiglesworth, M.D. *Honorary Secretaries:* John Macpherson, M.D., Stirling District Asylum, Larbert, Stirlingshire; George M. Robertson, M.B., District Asylum, Murthly, Perth.

F. Neurology.

President: Byrom Bramwell, M.D. *Vice-Presidents:* Joseph Arderne Ormerod, M.D.; William Russell, M.D.; Alexander Bruce, M.D. *Honorary Secretaries:* Robert Alexander Fleming, M.D., 10, Chester Street, Edinburgh; William Ford Robertson, M.D., 12, Bristo Place, Edinburgh.

The following discussions and demonstrations have been arranged:

1. Wednesday, July 27th, 10 A.M.—A discussion on the Treatment (Curative and Palliative) of Intracranial Tumours will be opened by Professor Ferrier, M.D., F.R.C.P., F.R.S.

2. Thursday, July 28th, 10 A.M.—A discussion on the Influence of Micro-organisms and Toxins in the Production of Disease of the Central and Peripheral Nervous System will be opened by Dr. Thomas Buzzard, F.R.C.P.

3. Friday, July 29th, 10 A.M.—Demonstration of (*a*) Preparations, lantern slides, and microscopic sections illustrative of the Morbid Anatomy of Diseases of the Nervous System (Brain, Spinal Cord, and Peripheral Nerves). (*b*) Patients, and Morbid Specimens from Individual Cases of Nervous Disease of special interest and importance from a clinical, pathological, and physiological point of view.

G. Pathology.

President: William Smith Greenfield, M.D. *Vice-Presidents:* Frederick Walker Mott, M.D., F.R.S.; John MacFadyean, M.B.; Almroth Edward Wright, M.D. *Honorary Secretaries:* Harold Jalland Stiles, M.B., 5, Castle Terrace, Edinburgh; Robert Muir, M.D., 20, Hartington Place, Edinburgh.

H. Pharmacology and Therapeutics.

President: James Ormiston Affleck, M.D. *Vice-Presidents:* Charles Douglas Fergusson Phillips, M.D., LL.D.; J. Theodore Cash, M.D., F.R.S.; Nestor Tirard, M.D.; Ralph Stockman, M.D. *Honorary Secretaries:* R. Dundas Helm, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. Lockhart Gillespie, M.D., 23, Walker Street, Edinburgh.

The subjects arranged for discussion are as follows:
1. The Treatment of Diseases of the Stomach.
2. The Treatment of Chronic Renal Disease.
3. The Therapeutic Value of Recent Synthetic Analgesics.

I. Ophthalmology.

President: D. ARGYLL ROBERTSON, M.D., LL.D. *Vice-Presidents:* R. MARCUS GUNN, F.R.C.S.; GEORGE A. BERRY, M.B.; GEORGE MACKAY, M.D. *Honorary Secretaries:* WILLIAM GEORGE SYM, M.D., 50, Queen Street, Edinburgh; ANGUS MCGILLIVRAY, M.D., 23, South Tay Street, Dundee.

J. Laryngology and Otology.

President: PETER MACBRIDE, M.D. *Vice-Presidents:* J. J. KIRK DUNCANSON, M.D.; J. DUNDAS GRANT, M.D.; ROBERT MACKENZIE JOHNSTON, M.D.; STCLAIR THOMSON, M.D. *Honorary Secretaries:* ADAM BROWN KELLY, M.B., 26, Blythswood Square, Glasgow; A. LOGAN TURNER, M.D., 20, Coates Crescent, Edinburgh.

The subject selected for discussion is The Mutual Relationship and Relative Value of Experimental Research and Clinical Experience in Laryngology, Rhinology, and Otology. The discussion will be introduced under these three heads by Sir Felix Semon (London), Dr. Greville MacDonald (London), and Dr. William Milligan (Manchester).

K. Diseases of Children.

President: JOSEPH BELL, M.D. *Vice-Presidents:* JAMES CARMICHAEL, M.D.; JOHN PLAYFAIR, M.D.; T. M. BURN-MURDOCH, M.B.; GEORGE ARTHUR WRIGHT, M.B. *Honorary Secretaries:* GEORGE HARRY MELVILLE DUNLOP, M.D., 20, Abercromby Place, Edinburgh; JOHN THOMSON, M.D., 14, Coates Crescent, Edinburgh; WALTER STACY COLMAN, M.D., 22, Wimpole Street, W.

The following subjects have been selected for discussion:

1. Wednesday, July 27th.—The Treatment of Spinal Caries. To be opened by Mr. Victor Horsley.

2. Thursday, July 28th.—Certain Aspects of Congenital Syphilis. To be opened by Mr. Jonathan Hutchinson and Dr. Henry Ashby.

3. Friday, July 29th.—Rheumatic Heart Disease in Childhood; with special reference to (*a*) physical signs, (*b*) prognosis. To be opened by Dr. D. B. Lees.

L. Dermatology.

President: WILLIAM ALLAN JAMIESON, M.D. *Vice-Presidents:* WALTER GEORGE SMITH, M.D.; JOHN JAMES PRINGLE, M.B.; ALEXANDER MORTON, M.D. *Honorary Secretaries:* JAMES LIMONT, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; NORMAN WALKER, M.D., 7, Manor Place, Edinburgh.

The arrangements are as follows:

On Wednesday, July 27th, after the President has delivered his introductory remarks, the Section will adjourn to the Royal Infirmary, where a Clinical Meeting for the Exhibition of Patients will be held and the cases informally discussed.

On Thursday, July 28th, the subject for discussion will be The Nature and Treatment of Lupus Erythematosus. To be opened by Professor Boeck (Christiania), and Dr. Unna (Hamburg).

On Friday, July 29th, the question for discussion will be, What are we to understand by Eczema? To be opened by Mr. Malcolm Morris (London), and Dr. Wallace Beatty (Dublin).

M. Medicine in Relation to Life Assurance.

President: CLAUD MUIRHEAD, M.D. *Vice-Presidents:* Sir R. DOUGLAS POWELL, Bart., M.D.; PETER ALEXANDER YOUNG, M.D.; JAMES RITCHIE, M.D. *Honorary Secretaries:* JAMES MURDOCH BROWN, M.D., 9, Walker Street, Edinburgh; FRANCIS DARBY BOYD, M.D., 6, Atholl Place, Edinburgh.

The subjects already arranged for discussion are:

The Prognosis of Cardiac Disease in its bearings upon Life Assurance, which Professor Sir William T. Gairdner, K.C.B., will inaugurate.

Middle-Ear Disease in relation to Life Assurance. This will be opened by Dr. McBride, President of the Section of Laryngology and Otology. (These two Sections will probably hold a joint discussion on this subject).

Does Evidence of Limited Family Vitality call for an advanced rate of Premium? To be opened by Dr. James Ritchie (Edinburgh).

The subjects of papers promised are:

Dr. PLAYFAIR (Edinburgh) conjointly with Mr. T. WALLACE. The Bearing of Pregnancy upon Life Assurance.
Mr. G. M. LOW. Extra Rating as a Statistical Problem.
Mr. JAMES MEIKLE. Gout as a Factor in Life Assurance.

N. Tropical Diseases.

President: PATRICK MANSON, M.D. *Vice-Presidents:* ANDREW DAVIDSON, M.D.; ANDREW SMART, M.D., LL.D.; WILLIAM JOHN RITCHIE SIMPSON, M.D. *Honorary Secretaries:* JAMES CANTLIE, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. LOUIS HUGHES, A.M.S., Aldershot.

The following discussions have been arranged: 1. The Unclassified Fevers of the Tropics. To be opened by Brigade-Surgeon-Lieutenant-Colonel Crombie, I.M.S.

2. Beri-Beri in Temperate Climates. To be opened by Conolly Norman, M.D. (Dublin).

3. The Epidemic of Plague in India. To be opened by W. J. R. Simpson, M.D. (late of Calcutta).

The following among others intend to take part in the discussions or to send papers: Surgeon-Major-General Hamilton, Inspector-General Turnbull, R.N.; Dr. Patrick Manson, Professor Haffkine, Mr. Hankin, Surgeon-Major Andrew Duncar, Surgeon-Major Ronald Ross, Surgeon-Captain Hughes, Surgeon-Captain Buchanan, Dr. Andrew Davidson, Dr. Daniels, Dr. Sandwith, Dr. Sambon, Mr. James Cantlie, etc.

O. Anatomy.

President: Sir JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, M.B., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

There will be a discussion on The Significance of Anatomical Variations.

P. Physiology.

President: WILLIAM RUTHERFORD, M.D., F.R.S. *Vice-Presidents:* JOHN ALEXANDER MACWILLIAM, M.D.; D. NOËL PATON, M.D.; E. WAYMOUTH REID, M.B. *Honorary Secretaries:* EDMOND WILLIAM WACE CARLIER, M.D., 39, Morningside Drive, Edinburgh; ROBERT ARTHUR YOUNG, M.D., 37, Trevor Square, Knightsbridge, S.W.

Programme of Proceedings.

TUESDAY, JULY 26TH, 1898.
9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.

WEDNESDAY, JULY 27TH, 1898.
9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, JULY 28TH, 1898.
9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, JULY 29TH, 1898.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine.

SATURDAY, JULY 30TH, 1898.
Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.
JOHN SHAW M'LAREN, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

The Annual Museum.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 26th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

ASSOCIATION INTELLIGENCE.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

RESEARCH SCHOLARSHIP.

The Council of the British Medical Association are prepared to receive applications for one of the three Research Scholarships, which is of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications to be sent in writing to the General Secretary on or before June 15th, stating the particulars of the intended research, qualifications, and work done.

FRANCIS FOWKE, *General Secretary.*

429, Strand, London, May 14th, 1898.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 16th, and September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The biennial *conversazione* of this Branch will be held on Tuesday, June 7th. By the courtesy of the President and Council of the Royal College of Surgeons, it will take place in the Museum and House of the College.—ISAMBARD OWEN, M.D., 40, Curzon Street, W., and H. B. ROBINSON, M.S., F.R.C.S., 1, Upper Wimpole Street, W., Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual meeting for the election of officers will be held at the Royal Forest Hotel, Chingford, on Wednesday, June 15th, at 6 P.M. At 6.30 the members and their friends will dine together. The chair will be taken by Dr. St. Clair Shadwell, Vice-President of the District. Price of dinner, 7s. 6d. (exclusive of wine); morning dress. Members intending to be present are particularly requested to inform the Secretary as early as possible, but not later than Saturday, June 11th.—HERBERT E. POWELL, Honorary Secretary, Glenarm House, Upper Clapton.

EAST ANGLIAN BRANCH.—The annual meeting of this Branch will be held at the Norfolk and Norwich Hospital, Norwich, on Thursday, June 16th. Programme of Proceedings:—10 A.M. Inspection of Hospital and Museum. 11 A.M. Meeting of Council. 11 to 12. Demonstration of Cases in the theatre of the Hospital. 12 noon. General meeting for transaction of business. Agenda: 1. To receive Report of Council of Branch. 2. To receive Treasurer's Report. 3. To receive Report of Election of Officers. 4. Introduction of new President by retiring President. 5. Dr. Barnes (Eye) will make a statement of the work of the Royal Medical Benevolent Fund. 6. Dr. Casley (Ipswich) will move that the Branch subscribe to the Epsom College Benevolent Fund. 7. Mr. H. B. Walker (Lowestoft) will call attention to the present state of the law relating to the inability of medical officers of public hospitals to claim fees for giving evidence at and making *post-mortem* examinations for coroner's inquests, and will move a resolution. 1 P.M. Luncheon at the Hospital by invitation of the President-elect, Mr. Haynes S. Robinson. 2 P.M. Resumed general meeting. 1. President's Address. 2. Migraine and its Relations to Certain Eye Conditions, by Miss Charlotte Ellaby, M.D. (London). 3. The Open-Air Treatment of Phthisis, by Dr. Burton-Fanning (Norwich). 4. A Case of Perforating Gastric Ulcer: Operation: Recovery, by Mr. Brogden (Ipswich). 5. A Case of Fractured Patella (with skiagraph) treated by wiring the fragments, by Mr. R. H. Lucas (Bury St. Edmunds). 6. Two Cases of Suture of Musculo-spiral Nerve after Fracture of Humerus, by Mr. S. H. Burton (Norwich). 7. A Case of Suprapubic Cystotomy for Tumour, by Mr. Donald D. Day (Norwich). 1. A Case of Lateral Sinus Pyæmia, treated by Operation, by Mr. H. A. Ballance (Norwich). (Patient will be shown.) 5 to 6.30. Reception and afternoon Tea by the President and Mrs. Haynes Robinson, in the Keep of Norwich Castle. 7 P.M. Dinner at the Royal Hotel; tickets 5s. each (exclusive of wine). There will be an exhibition of surgical instruments by Down Brothers, and of pharmaceutical preparations by Messrs. Parke Davis and Co.—E. G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; THOMAS CARR, M.D., Braintree, Honorary Secretaries.

BORDER COUNTIES BRANCH.—The annual meeting of the Branch will be held at Whitehaven on Friday, June 24th. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. DUNDAS HELM, Carlisle; W. HALL CALVERT, Melrose.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting will be held at Wigan, on Tuesday, June 28th. Applications for membership and all communications should be addressed to the Honorary Secretary, Dr. JAMES BARR, 72, Rodney Street, Liverpool.

SOUTH MIDLAND BRANCH.—The forty-third annual meeting of this Branch will be held at Holly Lodge, Luton, on Thursday, June 9th, 1898, at 3.30 P.M. The President-Elect, Mr. Horace Sworder, invites the members to luncheon at 1.30 P.M. After the luncheon a visit will be made to the Sewage Works, under the guidance of the Borough Engineer. Agenda: Report of the Committee of Management; Proposal of New Members; Vacancies in the Committee of Management to be filled up; President's Address. Mr. H. Stansfield Collier, of St. Mary's Hospital, will read a paper entitled Remarks upon some Cases of Peritoneal Adhesions. Mr. W. G. Nash (Bedford) will, if time permit, report Two Series of Cases due to Sewer Gas Poisoning.—CHARLES JEWEL EVANS, Honorary Secretary, Northampton.

NORTHERN COUNTIES OF SCOTLAND BRANCH.—The annual meeting of this Branch will be held at Inverness on Wednesday, June 15th. There will be an excursion on board Mr. McBrayne's s.s. *Elmgany* from Inverness to Fort Augustus. Members allowed to invite their friends. Fuller particulars by circular.—J. W. NORRIS MACKAY, Secretary and Treasurer, Elgin.

SOUTH EASTERN BRANCH.—The annual meeting will be held at the Town Hall, Tunbridge Wells, on Wednesday, June 22nd, at 2 P.M. The President-elect (Dr. Ranking) invites members to lunch at his house (near the Town Hall) from 12.30 to 2 P.M. Dinner at the Calverley Hotel at 6.15 P.M., at 7s. per head.—T. JENNER VERRALL, Hon. Secretary, Brighton.

SOUTH-WESTERN BRANCH.—The annual meeting of this Branch will be held at the Alverne Hall Public Buildings, Penzance, on Friday, June 17th, under the Presidency of Dr. Hugh M. Montgomerie. Programme: 1 to 2.30 P.M., Luncheon, by invitation of the President-elect, in the Lecture Hall, Public Buildings, Penzance. 2 P.M., Meeting of the Council of the Branch, in the Museum of the Penzance Natural History and Antiquarian Society in the Public Buildings. 2.30 P.M., General Meeting of the Branch in the Alverne Hall, Public Buildings; Dr. Davy will resign the chair to the President-elect, Dr. Hugh M. Montgomerie. President's address. Business. After the meeting, about 4 P.M., by invitation of the President, there will be an excursion by steamboat across the Bay to St. Michael's Mount. By kind permission of the Right Honourable Lord St. Levan, the members will have an opportunity of viewing the Castle. For those who do not go to the Mount, tea will be provided, at 4.30 P.M., at 5, Clarence Place (Dr. Montgomerie's House), and the Museum of the Royal Geological Society of Cornwall and other points of interest may be visited. Returning to Penzance by boat, the annual dinner will take place at the Queen's Hotel, at 7 P.M.; tickets 7s. 6d., exclusive of wine. The members of the Branch in West Penwith invite those staying for

the Saturday (18th) to a luncheon and excursion to Land's End. The guests will be brought back to Penzance in time to catch the up mail at 4.50 P.M., arriving in Exeter at 10.15 P.M. This excursion, however, cannot be given unless at least twenty five accept the invitation, and notify the same to A. R. F. Evershed, M.R.C.S., Shearl, Morrat Road, Penzance, on or before June 13th. The Honorary Secretary takes this opportunity of expressing his regret that he cannot again offer himself for re-election to office.—WILLIAM GORDON, Honorary Secretary, 3, Barnfield Crescent, Exeter.

BORDER COUNTIES BRANCH.

Formation of New Section.—Eleven members of this Branch residing in the counties of Roxburgh, Berwick, Selkirk, and Peebles, met in the Station Hotel, Newtown St. Boswells, on Friday, May 27th, at 3.30 P.M., and on the motion of Dr. SOMERVILLE, Galashiels, seconded by Dr. YOUNG, Earlston, unanimously agreed to form themselves into a section, and instructed Dr. Calvert (Melrose) to intimate the fact to the next meeting of the Branch, to be held at Whitehaven. The members present were: Drs. Menzies, Somerville, and Tyrell from Galashiels; Drs. Blair and Sturrock from Jedburgh; Dr. Haddon, Denholm; Dr. Young, Earlston; Dr. Marr, Greenlaw; Dr. M'Intosh, Swinton; Drs. Wade and Calvert, Melrose. Dr. CALVERT intimated that he had many letters from other members not able to be present, who were desirous that a section should be formed.

BATH AND BRISTOL BRANCH.

THE seventh ordinary meeting of the session was held at the Medical Library, University College, Bristol, on May 25th, F. RICHARDSON CROSS, M.B., President, in the chair. Sixty-three members were present.

New Members.—The following were elected: Brigade-Surgeon-Lieutenant-Colonel W. H. Steele, M.D., W. Roger Williams, F.R.C.S., and A. E. Carruthers, M.A., M.B., B.C.

Communications.—Dr. A. J. HARRISON showed a case of Eczema, in which the eruption occupied very unusual situations.—Mr. P. BUSH showed a specimen of a Perforated Gastric Ulcer, cured by operation, the patient dying subsequently from another cause. Mr. ROBSON remarked that some 18 years ago he had pointed out the advisability of operating in such cases.—Mr. J. L. FRITH showed a specimen which he considered to be an unusual form of Pyosalpinx, closely resembling a tubo-ovarian cyst, with purulent contents. The cyst opened into the Fallopian tube, which ended in, and was flattened out upon, its wall. The ovary could be separated from the tumour, which was thus distinguished from a tubo-ovarian cyst. The tumour was removed by operation, the patient making a good recovery. Dr. AUST LAWRENCE remarked on the importance of pain in the diagnosis of pyosalpinx, and Dr. CAVE alluded to the value of the discovery of the gonococcus in the pus in such cases. Dr. MICHELL CLARKE made some observations on the clinical features of the case, and Mr. MORTON and Dr. WALTER SWAYNE also discussed it.—Dr. W. S. MELSOME read a paper in which he insisted upon the necessity of Bacteriological and Microscopical Investigation into Cases before Operation; if this were always carried out accidents would often be prevented, and the subsequent course of the case more exactly anticipated. In cases of chronic abscess such examination was especially important; absence of pus cocci from the pus generally indicating a tuberculous lesion. Other instances were taken to illustrate the way in which a bacteriological examination might be useful to the surgeon during and after the operation. With regard to diphtheria, he considered that it was often more satisfactory to make a microscopical examination of a piece of the membrane on the spot rather than to send it away for cultures to be made. A long discussion followed the paper, in which Dr. SYMES questioned the statement that the presence of bacteria in urine or uterine secretion would preclude an operation on the genito-urinary tract. Dr. WALTER SWAYNE spoke of the value of bacteriological examinations in uterine operations, and Dr. CAVE of the difficulty of finding tubercle bacilli in serous effusions. Mr. CARWARDINE and Dr. MARKHAM SKERRITT said that the result of a bacteriological examination must be taken in conjunction with clinical symptoms. Drs. MARTYN, STACK, and COOMBS also made some observations.—Dr. W. S. SWAYNE read a paper on a case of Dystocia due to a large Fœtus weighing 15 lbs.; the case was further remarkable for the long duration of pregnancy.—Dr. STACK showed a specimen of Abdominal Aneurysm.—Dr. MICHELL CLARKE showed a large number of Pathological Specimens mounted to preserve their colour.

NORTH OF ENGLAND BRANCH.

THE spring meeting was held in the Library of the Royal Infirmary, Newcastle-on-Tyne, on May 26th.

Report of Constitution Committee.—A discussion on the report of the Constitution Committee took place, and it was decided to take up the subject again at the next meeting of the Branch.

Cases and Specimens.—Patients and specimens were shown by Dr. GEORGE MURRAY, Mr. RUTHERFORD MORISON, and Dr. LIMONT.

Dinner.—The dinner after the meeting took place, at 6 P.M., at the Douglas Hotel.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE 147th meeting (annual) of this Society was held at the Kent and Canterbury Hospital on May 26th. In the unavoidable absence, through illness, of Dr. Parsons, Treasurer of the British Medical Association, who was to have presided, Dr. GOGARTY, of Canterbury, was voted to the chair. Twenty-four members were present.

Confirmation of Minutes.—The minutes of the last meeting and of the last annual meeting were read and confirmed.

Accounts.—The accounts for the past year, audited by Dr. Cotton, were presented and passed.

Re-election of Honorary Secretary.—Mr. Raven, of Broadstairs, was unanimously re-elected Honorary Secretary.

Future Meetings.—It was resolved that the meeting in September next should take place at Hythe; and that the meeting in March, 1899, should be held at Sittingbourne. Dr. A. R. Davies, of Hythe, was appointed chairman for the September meeting.

Acute Pneumonia.—Mr. RAVEN read a paper on a Case of Acute Pneumonia and its Significance. A healthy boy, 12 years of age, was seized with acute right pleuro-pneumonia. The case, though severe, ran a favourable course until the seventh day, when instead of the predicted crisis sudden and premature resolution of the lung occurred. Hyperpyrexia threatened, and vigorous antipyretic measures, in the form of ice-cold packing and large doses of quinine, averted an apparently fatal tendency. Subsequently mediastinal abscess formed, and the heart was pushed over as far as 2 inches to the left of the nipple. Pus was at last evacuated through the bronchi, and the patient eventually made a complete recovery, the heart regaining its normal position, and the general health being thoroughly restored. No allusion to this extremely rare event in acute pneumonia could be found in any literature to which Mr. Raven had access. Sir William Broadbent, in all his experience, had met with only three cases of the kind, and all of them had been fatal. A full report of the case was published in the BRITISH MEDICAL JOURNAL of March 5th, 1898, page 605. Basing his argument upon this case and upon several others of acute pneumonia bearing some analogy to it—namely, where hepatisation was fugitive and incomplete (all of them being fatal), and comparing them with those of a favourable character, where consolidation was well marked and sustained until crisis was well over—Mr. Raven urged that for a satisfactory termination it was desirable to find adequately developed and maintained hepatisation, and that this condition should be regarded as Nature's method for the elimination of the disease. These considerations led to a critcism of the icebag treatment, and it was shown that this method was founded upon the exploded fallacy that the lung affection in pneumonia was the cause and not the effect of the disease. This appeared obvious from the fact that the more strenuous supporters of the icebag boasted that after a twenty-four hours' application bronchial breathing would give way to moist sounds; that, in fact, a premature resolution of the lung, according to their observation, was effected, premature resolution being one of the most deadly events that could occur in the course of the disease. Mr. Raven dealt with statistics, and showed that excellent figures could be adduced to support all sorts of treatment, many of them diametrically

opposite to each other; and he concluded that, given a good atmosphere, a good bed, good diet, and good attendance, the large majority of cases of acute pneumonia would get well of themselves; and that an exaggerated importance was attached to various methods of so-called curative treatment, whether by ice or heat, brandy or blood-letting, antimony or digitalin, or any other opposite plans.

The Proposed Appointment of a Medical Officer of Health for the County.—This question, adjourned from the meeting at Ashford in March, again came up. Dr. Fenoulhet moved and Mr. B. Rigden seconded a resolution to the effect

That two medical officers of health should be appointed for the county, and that the resolution be sent to the county council.

Dr. Latter moved and Mr. Clarke seconded the following amendment:

That while thanking Dr. Fenoulhet for his explanation of the position of proposed medical officer of health for the county, this meeting do adjourn the discussion of the appointment of such an officer until he can be endowed with greater legal powers than he could at present possess.

The amendment was carried by a majority of 1.

Dinner.—After the meeting twenty members dined at the County Hotel under the presidency of Dr. Gogarty.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.

The last meeting of the session was held at the Clinical Museum, Great Portland Street, W., on May 26th (by kind permission of Mr. Jonathan Hutchinson, F.R.S.), Dr. G. Crawford Thomson, Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Clinical Cases.—Mr. Jackson Clarke and Mr. C. G. Bullied showed a case of Talipes Equinus in a man 6 feet 7 inches in height; and a case of Doubtful Epithelioma on the Foot. A discussion ensued. Mr. Hutchinson thought the latter a case of syphilis. The Vice-President, Mr. Jackson Clarke, and Dr. Dutton joined in the discussion.

Communications.—Mr. Hutchinson gave a demonstration on some of the objects of interest in the museum. He showed some Skulls of Dogs. The dogs had been given mercury in their food, the enamel on the teeth being nearly destroyed. Mr. Hutchinson said that he had found that whenever children were treated for convulsions with mercury, the second dentition was sure to be defective in enamel, and therefore the teeth easily decayed. Mr. Hutchinson also showed Model of Contracted Fingers, and made some remarks on the cause and treatment.

Tea.—The members were invited to afternoon tea.

GIBRALTAR BRANCH.

An ordinary meeting of the Branch was held on May 12th; Dr. Turner (in the absence of the President) in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Financial Statement.—The Treasurer (Surgeon-Major Franklin) submitted his report, which was unanimously passed, and showed a balance in favour of the funds of the Branch.

The late Mr. Ernest Hart.—It was resolved, on the suggestion of Surgeon-Major Harley Thomas, A.M.S., seconded by Surgeon-Captain Austin, Grenadier Guards, that a letter of sympathy be forwarded on behalf of the Branch to the widow of the late Mr. Ernest Hart, under whose direct influence and at whose instigation the Gibraltar Branch of the Association was established in 1894.

Delegates for Annual Meeting.—The following members were appointed to represent the Gibraltar Branch at the forthcoming meeting of the Association in Edinburgh: Surgeon-Major Harley Thomas, A.M.S., and Surgeon-Major Black, A.M.S.

Representatives on Council and Parliamentary Bills Committee.—Surgeon-Major Macpherson was appointed representative of the Branch on the Council of the Association for 1898-99, and Dr. J. Errington Ker representative on the Parliamentary Bills Committee for 1898-99.

Communications.—Dr. Turner contributed remarks on the Treatment of Hæmorrhoids by the Whitehead operation, and proposed a modification of the method.—Surgeon-Captain Duggan read a paper on the Parasite of Malaria in the Fevers of Sierra Leone, illustrating his remarks by microscopic preparations and photographs. The paper has already appeared in the *Medico-Chirurgical Transactions*.—Dr. Turner introduced a discussion on the Modern Method of Treatment in Tertiary Syphilis by Hypodermic Injection. He advocated the use of cyanide of mercury in combination with cocaine hydrochlorate as the most effective and least objectionable preparation.

BRITISH GUIANA BRANCH.

The second quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on May 4th, 1898, Dr. Godfrey, President, in the chair, and 12 members attended.

Confirmation of Minutes.—The minutes of the last meeting were confirmed.

Delegates to Annual Meeting.—A letter from Sir T. Grainger Stewart, M.D., Edinburgh, inviting the President and delegates to the annual meeting, was read, and Dr. Gomes (Georgetown) and Dr. Ozanne were appointed.

Proceedings of Jamaica Branch.—The proceedings of the Jamaica Branch were laid on the table, and any member could obtain it from the Honorary Secretary for a short time.

The late Dr. Ramsay Hill.—A letter was read from Mrs. Ramsay Hill, thanking the President and members for their letter of condolence on the death of her husband.

Communications.—Dr. Fowler read a paper on a peculiar case of Malignant Disease of the Breast, which will be published. He exhibited the patient, with photographs and microscopic specimens.—Dr. Godfrey read a paper on Snakebite.—Dr. Daniels showed specimens and photographs of cases of Nasal Myasis, with the larvæ of lucilia macelloria and Blanchard's plates of the imago.

Dorset and West Hants Branch.—In the report of the annual meeting of this Branch, published in the British Medical Journal of May 28th, it should have been stated that Mr. Du Boulay narrated a case of Eye Worm—Filaria Loa—and exhibited the specimen. The name of Surgeon-Captain Levers was incorrectly spelt Levers.

BRITISH DENTAL ASSOCIATION.

The eighteenth annual general meeting of this Association commenced at Bath on Friday, May 27th, with an informal reception given by the President and members of the Western Counties Branch.

On Saturday morning about 200 members attended the opening business meeting under the presidency of Sir Edwin Saunders, who occupied the chair, in the absence through illness of Dr. Theodore Stack, of Dublin. After the routine business, the Chairman related a number of interesting and amusing incidents which had occurred to him during his prolonged term of practice, and then inducted to the chair Mr. W. A. Hunt, M.R.C.S., L.R.C.P., of Yeovil, who delivered his inaugural address.

After lunch several papers were read, among others one on Dental Cysts by Mr. J. G. Turner. He maintained that there were held to be two possible origins of dental cysts: (1) from paradental epithelial remnants found in the alveolo-dental ligament, (2) as a sequel of a chronic abscess or breaking down of a granuloma. On both theories a septic inflammation due to a "dead" tooth was the starting point, and they might be referred to as the epiblastic and mesoblastic inflammatory theories. The results of investigations were in favour of the epiblastic theory. He had cut sections of seventeen cyst walls, and had found epithelium in sixteen. The seventeenth was a small swelling, and might have been only a quiescent chronic abscess. He had been able to trace the development of epithelial dental cysts from paradental remnants through (1) masses and cylinders of epithelium found in chronically inflamed alveolar dental ligament; (2) Epithelial reticula formed by growth and branching of masses and cylinders, and forming small tumours attached to roots—epithelial root tumours; (3) definite small cysts attached to roots, containing a semi-solid mass, and lined by epithelium, formed by degeneration of the central cells and growth at the periphery; (4) a fully formed dental cyst, lined by grow-

ing epithelium and containing a translucent viscid fluid with crystals of cholesterin in suspension. Epithelial root tumours were of common occurrence, and in one case columnar ciliated epithelium was found lining a cleft. In the case of a large dental cyst ciliated epithelium was also found, and in the walls were numerous irregular acini. A cyst of the gums was described, and the name "gingival" cyst proposed. It occurred at the site of a chronic discharging sinus connected with a "dead" tooth. The cyst was epithelial, and due to the growth of one of the glands of Serres. It was pointed out that both in dental and gingival cysts the crusts, the irritant, and the tumour were demonstrable. A dental cyst was connected usually with the teeth most commonly found carious; its growth was progressive, but never caused pressure-pain; it might inflame and suppurate, even long after the extraction of a tooth. It was a smooth non-lobulated tumour, hard or tense, fluctuating in its most prominent part, with crackling around, or fluctuations all over, with an edge of bone at the periphery, according to the stage of growth. Its contents were serum albumen, serum globulin (abundant), nucleo-albumen (small amount), crystals of cholesterin, but no fats or fatty acids, no mucus or true mucoid, and no reducing body produced by boiling with acids. In either jaw the cyst hollowed out the body, expanded, thinned, and perforated the compact plate, presenting chiefly on the outer side. In the upper jaw it might present in or push up the antrum. Dental cyst had to be diagnosed in the early stage from solid tumour, from chronic abscess, chronic empyema, and cystic disease of the antrum, dentigerous cyst, and gingival cyst. Exploration was urged. Difficulty of diagnosis occurred chiefly in the early stage; pain and signs of inflammation pointed to chronic abscess, but the two processes might go on side by side in connection with the same tooth. Gingival cysts occurred in the mucoperiosteum of the gum, outside the bone. The paper was illustrated by lantern slides of microphotographs prepared by Mr. Douglass Gabell.

Mr. J. Smith Turner, M.R.C.S., L.D.S., read a paper in which he discussed the value of registration, and dealt with various matters connected with the administration of the British Dental Association. With regard to registration, he said that its value was sometimes questioned, but it was in fact one of the most elementary and yet most all-pervading conditions of organisation. There could be no corporate body without it. A man might assume a certain title by virtue of his diploma, but his real claim to it was proved by registration. It was the final condition of legal qualification, and unless it were fulfilled the legal status of a dentist was incomplete and insecure. A person registered was a declared member of the profession of dentistry, and when on the *Dentists' Register*, but not till then, the individual might legally and honestly call himself a dentist. "It is a common error," he said, "to suppose that registration in itself can do much for the profession. I was told a short time ago by a medical man that registration is of little value—indeed, he considered it hardly worth the trouble and expense involved. By way of supporting his position he recited certain grievances about illegal practitioners and advertising quacks and quack medicines and foreign qualifications, and seemed to think that the existence of a register should stop all such evils. My reply was that in the absence of registration there would be no legal difference between him and the quack of whom he complained, and that the public who cared to make the distinction could only do so by referring to a legally established register. Further, that the quack could have any number of bogus diplomas, and exhibit far grander and more imposing documents than anything he could produce in the shape of his legitimate diplomas; and that without registration one would be as valuable as the other in the eyes of the ignorant and credulous. Again, we may rest assured that all abuses which have to be attacked must be either assaulted or met from some vantage ground or stable position, such as the register alone affords; and that whatever legal reforms may in the course of time be effected could only be done by the profession being a distinct body held in evidence by registration. I need only add that the same applies to ourselves." With regard to the British Dental Association, Mr. Turner said that it had on its roll of members all that was best and all that was noteworthy, both as regards ability and education, in the dental profession on both sides of the Tweed and in the sister island. He urged the younger dentists to join the British Dental Association, which linked together the scattered members of the dental profession and afforded a means of communication between the dental profession and the public. The charlatan communicated with his special public by means of his brass bands and his gilded chariots, and by advertisements, at one time flaming and brilliant in impossible promises and at another modest and persuasive in whispered advantages, but always characterised by unscrupulous mendacity. The Association, in a measure, counteracted these methods by its annual and Branch meetings, and the public learnt—and, it might be, soon forgot, but yet it did learn—through the unpurchased medium of the press that there were gentlemen who served them in a scientific manner and on a professional basis, which was as far apart as the poles in every way from the methods of those who lived by cheating, and therefore cheated to live. After pointing out the advantages of intercommunication, he concluded by a plea for the multiplication of Branches.

In the evening the Mayor and Lady Mayoress held a reception in the Pump Room and Roman Promenade. On Sunday the members met the Mayor and Corporation at the municipal buildings, and walked in procession to the Abbey. The sermon was preached by the Rev. Canon Quirk to a congregation which filled every available part of the building.

The early part of Monday was taken up by the annual meeting of the subscribers to the Benevolent Fund, of which the Honorary Secretary, Mr. J. Ackery, M.R.C.S., L.D.S., gave a highly satisfactory account. The rest of the day was occupied by the business of the Microscopical Section. Mr. F. J. Bennett, M.R.C.S., L.D.S., the President of the Section, delivered an interesting inaugural address in which he advocated the view that a special course of pathological teaching should form part of the student's curriculum, since it was conducive to original research. He indicated his belief in the probable discovery of means for the prevention and arrest of caries through the aid of the microscope and the persistent study of bacteriology. The business of this Section was particularly interesting.

An original paper was that of Mr. Hopewell Smith, M.R.C.S., L.D.S., on The Healing Processes in the Dental Pulp. He showed broadly how far they resembled the same processes in the body generally, and wherein they differed.

Another interesting paper was read by Mr. Leon Williams, L.D.S., on The Nature of Hard and Soft Enamel. He maintained that the latter pathological condition was largely the result of acid fermentations due to micro-organisms, and was not due to developmental defect.

In the absence of the author an abstract from a paper read by Mr. C. S. Tomes, M.A., F.R.S., F.R.C.S., before the Royal Society, was read by the President.

Mr. Storrer Bennett, F.R.C.S., L.D.S., read a paper on Erosion, criticising adversely the theory of Professor Znamensky, of Moscow, as to the nature of the disease.

Mr. Arthur Underwood, M.R.C.S., L.D.S., showed some fine Photomicrographs of Defective Enamel in connection with Mr. Bennett's paper.

All the papers were fully illustrated by lantern slides, and some excellent examples of X-ray Photography were shown by Mr. F. Harrison, M.R.C.S., L.D.S.

In the evening the city architect, Major Davis, conducted a large party over the recent excavations, and gave an account of the Roman baths and promenade. The annual dinner took place on the same evening in the large assembly room, followed by a smoking concert in the Octagon Room adjoining. Tuesday, May 31st, was devoted to adjourned business, and to demonstrations of methods and means by different operators of repute bearing immediately on the practice of dentistry. Wednesday was devoted to excursions to various places of interest in the neighbourhood. There was a large display of dental appliances and instruments by several of the leading manufacturers.

Guy's Hospital Biennial Festival.—The dinner will take place this year on Tuesday, July 5th, at 6.30 p.m., in the Whitehall Rooms of the Hôtel Métropole. Dr. Goodhart will take the chair. Further particulars will be found in our advertisement columns.

SOME RECENT EXPERIENCES AS TO THE NOTIFICATION OF MEASLES.

Blackpool.

In a recent report Dr. Jasper Anderson has set forth many interesting facts relating to the prevalence of measles in the Borough of Blackpool during the first three quarters of 1897. Measles has been a notifiable disease in Blackpool ever since 1879, and the cases notified and deaths registered from the disease since that date are set forth in the following table:—

	1880	1881	1882	1883	1884	1885	1886	1887	1888
Cases...	119	4	266	16	68	130	233	37	88
Deaths	3	—	17	1	2	2	10	—	5

	1889	1890	1891	1892	1893	1894	1895	1896	To Sept. 4th, 1897
Cases... ...	180	173	248	48	122	320	108	147	732
Deaths ...			10	—	4	6	2	4	22

From this summary it will be seen that notification has failed to prevent the recurrence of the disease in epidemic form at periods of every two or three years, and there is little or no evidence of its having brought about a progressive reduction in the case-mortality. In comparing the case-mortality from measles, however, allowance must always be made for the season of the year when the epidemic rages, for an outbreak in the winter months will always furnish a higher case-mortality than another which occurs at a time of the year when the atmospheric conditions are more favourable to the sufferers. This circumstance may account for the fluctuations shown in the case-mortalities for different years in the above table.

The following facts are of special interest with reference to the Blackpool epidemic of 1897: Information was received of 732 cases occurring in 442 houses; of these cases 436 were notified by medical men, only 34 by householders, and the remainder were discovered by the sanitary officials. There were in all 529 primary cases and 203 secondary ones, and of those dwelling in the infected houses who were under 14 years of age and who had not had measles over one-third caught the complaint. Of the 436 medical certificates received 97 came on the first day the rash appeared, 146 by the second day, 83 by the third day, and the remaining 110 came to hand later. Only 49 of the 732 cases were among patients of over 11 years of age; in 610 the age did not exceed 8 years; and all the deaths but one were among patients not exceeding 5 years of age. Only 64 of the cases were removed to hospital, 52 of whom were over 4 years old.

The measures taken to check the spread of the disease were the following:—On receipt of the notification certificate inquiry was made at the infected house, and handbills of advice were distributed; the public library was notified, as was also the school attended by any occupant of the infected premises. If the case remained at home, isolation, "so far as possible," was enforced, and visits were made by inspectors ("as frequently as their duties would allow") with the view of preventing intercourse between non-infected and infected householders. Premises were disinfected, but, except in special instances, the householders were left to disinfect any infected bedding or clothing themselves. The school attendance officers reported every case of infectious illness, and all the public elementary schools in the borough were closed for about one month when the epidemic was at its height.

Dr. Anderson is a firm believer in the value of bringing measles within the scope of the Infectious Diseases Notification Act, but the fact that the sick-rate and the mortality-rate for Blackpool during 1897 are no better than those for many outbreaks of measles in districts where no notification is in force appears to justify the doubts of many other medical officers of health as to whether the measure is a necessary or a valuable one, if means be taken of promptly learning of the existence of cases of measles through the co-operation of the school-attendance officer, and if full advantage is taken of the other means adopted by Dr. Anderson of educating the public.

Lancaster.[1]

A report by Dr. Theodore Thomson on Epidemic Measles in the Borough of Lancaster has been issued by the Local Government Board. Lancaster is a town which has certain diseases notifiable under a local Act, and to the schedule of the Act measles may be added subject to the sanction of the Local Government Board. For several years that disease was made notifiable, but in March, 1895, the three years' period last sanctioned by the Board having come to an end, renewal of compulsory notification of measles was not sought; and since that time a system has been in force under which medical practitioners are not required to notify a second case in a house within thirty days of the first attack, but notification of all cases by householders is enjoined.

Dr. Thomson is of opinion that few cases of measles go unnotified under this system, information coming by way of practitioners, visitation by the sanitary inspector of invaded dwellings, notice by parents, and systematic intelligence from school authorities, and a local society's inspector. From these sources record was had of 1,185 cases of measles from December, 1896, to July, 1897, with 51 deaths. The town was placarded and handbills distributed early last year as to the obligation of parents and others respecting notification.

Information was given by the Town Council to school authorities and public libraries of infected households; scholars were excluded where they resided in invaded dwellings, and at times schools were closed. But news came from the school attendance officer to the council only weekly instead of daily; disinfection in regard to infected dwellings and articles was not practised; and no use, even in the inter-epidemic period, was made of the excellent isolation hospital for measles. Moreover, no attempt was made to secure closure of Sunday schools, which may often offer great facilities for spread of infection. The staff of inspectors also was apparently inadequate for the purpose, and it must be remembered that for three years there has been no statutory compulsion to notify.

[1] Dr. Theodore Thomson's Report to the Local Government Board on Epidemic Measles in the Borough of Lancaster, No. 124. (Messrs. Eyre and Spottiswoode; folio, pp. 11; price 3d.)

A Schedule of Inquiries as to Siriasis.—At the last meeting of the Lisbon Sociedade das Sciencias Medicas the following questions were, at the request of the Minister of Brazil in Portugal, distributed among the members: (1) Have you witnessed the occurrence of attacks of fever of ardent form, and do you attribute such exclusively to the atmospheric temperature independently of all malarial influence? If the answer is Yes, in what countries and with what summer temperature? (2) Do you know the frequency of such attacks among the engine-room artificers on board steamers? (3) Do the cases of *coup de chaleur* which you have observed manifest themselves by similar febrile attacks? (4) Do cases of direct insolation usually take the hyperpyretic form?

Medical Practitioners in Belgium.—According to official statistics recently published, the total number of medical practitioners in Belgium on January 1st, 1898, was 3,315. These were distributed among the several provinces as follows: Anvers (including Antwerp), 359; Brabant (including Brussels and Louvain), 867; West Flanders (including Bruges, Ostend, Courtrai, and Ypres), 312; East Flanders (including Ghent), 441; Hainault (including Charleroi, Mons, and Tournai), 513; Liége, 451; Limbourg, 85; Luxembourg, 92; and Namur, 195. Of the principal cities of Belgium, Brussels has 682 doctors; Liége, 281; Ghent, 237; Antwerp, 241; Charleroi, 158; Bruges, 67; Ostend, 32.

The new children's wing of the Lowestoft Hospital, which has been erected to commemorate the sixtieth year of the Queen's reign, was opened on May 17th. The cost of the erection and furnishing of the wing has been borne by Mr. W. Youngman, of Lowestoft. The Mayor of Lowestoft has endowed a cot in the new wing.

MR. GLADSTONE AND THE BRITISH MEDICAL ASSOCIATION.

IN the brief review of Mr. Gladstone's relations with the medical profession, which appeared in the BRITISH MEDICAL JOURNAL of May 28th, we omitted to recall the fact that the departed statesman was a guest at the annual dinner of the British Medical Association at the meeting held in London in 1873 under the presidency of Sir William Fergusson. Mr. Gladstone was Prime Minister at the time, and Sir James Paget, in proposing the health of Her Majesty's Ministers, took occasion to point out how perfectly the Chief of the Cabinet fulfilled the ideal of a first Minister of the Crown among all Englishmen. "Apart from political views," said Sir James, "I can believe that if all Englishmen could join with one voice to say what should be the character of the chief adviser of the Queen—the chief guide of the affairs of this country—they would say he should begin his life distinguished in all academical pursuits. He should be fond of the land and of the produce of the land, and yet he should find his recreation in the renewal of some of the severer studies of his earlier life. He should be one very jealous of the honour of his country, remarkable for his knowledge of all the things most difficult in political science, and yet familiar with the merest details of every department of the State. Especially he should be skilled in finance. Then, doubtless, he should be a great orator. He should be one ready alike for study and for debate, skilful in attack but unconquerable in defence. He should be a perfect master of the use of the priceless treasure of the English mind, the rich and various language. Besides, the First Minister of the Crown, according to the imagination of all Englishmen, should have within his reach all the happiness that can be given by competency and wealth, by the most perfectly cultivated intellect, by admiration of nature and of art, and by all the happiness of home, and yet he should be ready to sacrifice all this in the service of his Queen and his country. He should believe that in that service he renders the best service to his God. This is our ideal of England's First Minister of the Crown. Gentlemen, this is what England has."

In responding, Mr. Gladstone, after some preliminary observations, said: "I came here to acknowledge the debt of gratitude which I think society owes, but which at least I feel that I individually owe, to this distinguished profession, for I am very well aware that had it not been for the care and watchfulness of a succession of able medical advisers, it would have been totally impossible for me, not gifted with any special gifts or any special endowments either of mental or of bodily endurance, to go through the fatigues of a political life of forty years. I am deeply indebted to those gentlemen whose names I might recall, and regret to say several of them are numbered with the dead; and it is, sir, among the noble if mournful distinctions of your profession that it will ever be remembered how many of its members, although they have not that acknowledgment which follows the soldier when he falls upon the battlefield, how many of them—ay, countless numbers—are true martyrs of humanity, exhausting themselves in a ceaseless unnoted anxiety for those whose sufferings they seek to alleviate, and with all whose cares and all whose pain they deeply sympathise. To all these gentlemen and to one distinguished member of your profession sitting at this table, I feel a gratitude which I am glad to have the opportunity of recording in these few passing words. But let me say a few words, sir, also on the subject of your society, and on the subject of your illustrious profession. I believe this society to be genuinely representative of this great profession in its several branches of physicians, of surgeons, and of general practitioners. I believe it represents your tendencies to unity and your upward aspirations; aspirations upward, not in the sense of augmenting your well-earned and hardly-earned emoluments, but of augmenting your unity, augmenting your knowledge, augmenting your true dignity and your claims upon society. I rejoice then to think that in the prosecution of this work you should have been enabled to blend in one what were once the conflicting or alien, or at least unacquainted, elements of the town and the country profession; that you should have been able to do so much for promoting beneficent sanitary legislation, and for ministering in so many ways to the good both of individuals and of the country. But, gentlemen, permit me to say that if I am right it is more interesting to review the recent history of your own profession than that of some of the great professions of the country. The great profession of the law, with which to-night you have had the opportunity of placing upon record in terms of gratitude your kindly relations—that great profession of the law has ever borne from the earliest period of our history the high place which it now bears as one of the most essential conditions of our national life, and of the great safeguards of the country; but it has been given to you, gentlemen, I think, to achieve within the memory of living man a degree of real improvement and real advancement such as has, perhaps, hardly accrued to any other profession. It would be presumptuous in me, or in any one not belonging to your ranks, to presume to pass a judgment upon the scientific excellence of the physician or surgeon of to-day and the physician or surgeon of fifty years ago, and I am aware that fifty years ago, as well as a hundred and a hundred and fifty years ago and more, there were physicians and there were surgeons whom, as I believe, none of you can either hope or desire individually to surpass. I speak now of the body of the profession and not of the few, the elect and favoured children of fortune and of skill; and, speaking of the body of the profession even as an observer from without, it is impossible for us not to notice the change; it is impossible for us not to see how far more strongly now than of old the medical man of to-day conforms to those general laws of common sense and prudence which are after all universal laws of human life in every one of its departments. It is impossible not to see his greater and more sustained earnestness of purpose, that elevated sense of his professional dignity, that desire to make it subservient to the good of humanity, that general exaltation of his aims in the exercise of the profession. And, gentlemen, in every way, as it seems to me, the course of affairs tends to show that this process will continue. Your position has long been, and must continue to be, one of constantly-increasing influence and power."

Mr. Gladstone added that never in his life but once before had he had the honour of addressing a medical assembly. That was at the Middlesex Hospital, on an occasion when the distinguished staff and students were assembled, and on that occasion, some thirty years previously, he had expressed the same opinion, that both they and their profession had before them a rapidly opening and extending career. After some remarks on the relations between the wonderful body and the yet more wonderful mind and soul of man, and on the nature of the problems which formed the subject matter of medical study, Mr. Gladstone went on to speak of the prospect open to the medical practitioner, "that as the *physicus* of the Middle Ages on his first appearance established his place among the great branches of learning and of human culture, so from age to age he will more and more vindicate his title to perhaps a yet higher place in the more noble emulation in which he has ever stood with the great profession of society." After once more acknowledging his personal debt to the profession, and expressing the hope that those whom he was addressing might be at once ministers of healing and ministers of knowledge and truth, Mr. Gladstone concluded by asking the company to drink with all the enthusiasm which it deserves, "Prosperity to the British Medical Association," coupling with the toast the name of the late Mr. Southam, of Manchester. A full report of the proceedings may be found in the BRITISH MEDICAL JOURNAL of August 16th, 1873.

MEDICAL STUDENTS IN GERMAN UNIVERSITIES.—According to the *Universitäts-Kalender* recently published, the number of medical students in the universities of Germany and the German-speaking universities of Austria and Switzerland are as follows:—Vienna 1,508, Munich 1,396, Berlin 1,360, Würtzburg 742, Leipzig 724, Graz 521, Erlangen 434, Freiburg 392, Zurich 353, Breslau 345, Strassburg 329, Greifswald 293, Geneva 289, Halle 265, Bonn 264, Kiel 263, Tübingen 255, Marburg 249, Göttingen 236, Königsberg 235, Giessen 224, Bern 208, Heidelberg 203, Jena 198, Lausanne 157, Basel 149, Rostock 106.

THE DUTIES OF THE MEDICAL OFFICER OF HEALTH UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

The Society of Medical Officers of Health for Scotland have drawn up the following memorandum on this subject, signed by the President, Dr. Campbell Munro, and the Secretary, Dr. Maxwell Ross:

Several instances of friction between medical officers of health and private practitioners in connection with the operation of the Infectious Disease (Notification) Act having recently been brought under the notice of the Society, it has been thought desirable, especially in view of the extension of the provisions of the Act to the whole of Scotland under the Public Health Act of 1897, that an expression of the carefully-weighed opinion of the Society upon the question of the mutual relations of medical officers of health and private practitioners under the Notification Act should be circulated amongst medical officers of health in Scotland.

The existence of a good understanding between medical officers of health and private practitioners generally is a thing not only desirable in itself, but essential to the efficient control of infectious disease. Anything of the nature of friction is highly unpleasant to both parties, tends to lower the prestige of the profession to which both belong, and, what is more important, is greatly detrimental to the public interest.

It may be laid down as a general rule of conduct that it is not the duty of the medical officer to review the diagnosis of a medical practitioner as stated in his notification certificate, and it appears essential to a good understanding that the medical officer of health should have that rule continually before his eyes. It may even be said that, if he keeps this rule in view, the exceptions will be found in practice to be exceedingly few, and when they do occur they will seldom lead to friction.

The medical officer must start from the belief that the certificates he receives under the Notification Act are expressions of genuine opinion. The Act requires that if a practitioner has formed such an opinion he must express it in this way. His certification should not be made the occasion of inflicting upon him a professional indignity, and possibly a material injury. In the case of certification and many other formal expressions of opinion regarding infectious disease, the opinion of the medical officer has no more authority in the eye of the law than that of any duly qualified medical practitioner. In respect of diagnosis, the private practitioner has, as a rule, an advantage over the health officer. He has probably had the case under observation for a time; he has always a better chance of ascertaining the full history, and he is generally familiar with the history of the family. To reject a diagnosis arrived at under such circumstances must always involve a grave responsibility.

Are there any circumstances under which the medical officer is justified in assuming this responsibility, and, if so, how should he set about it?

That there are such circumstances admits of no question. Where the medical officer of health, having carefully excluded every irrelevant consideration, is convinced that in the interest of the public or of the individual he ought to review the diagnosis of a private practitioner, then he must do so, but with a clear apprehension of the delicacy of the undertaking, with due attention to professional etiquette, and, above all, in remembrance of the golden rule. Such junctures do arise, but they are rare. The following may serve as illustrations:

When a medical officer determines to apply for a warrant to remove a patient to hospital the whole proceeding rests upon an opinion that the person suffers from an infectious disease and is in a fit state for removal. Private practitioners generally concur cordially in the procedure, but may refuse to be active parties. The medical officer may therefore have to examine the patient before granting a certificate.

Small-pox and typhus are examples of diseases which demand the most drastic and conspicuous repressive treatment when they occur, but they are diseases which occur so rarely that few practitioners have the opportunity of becoming familiar with them. Suppose a case to have been certified as small-pox. There is only one course open as to the patient—removal to hospital. Revaccination must be pushed, not only in the family, but among all their familiars. Employments may be interfered with. The case must be reported to the Local Government Board, and letters may have to be written to other local authorities. After all this there comes, perhaps within twenty-four hours, the information that the case is not one of small-pox. The practitioner who has thus committed himself would have welcomed a request to meet the medical officer to consult over his diagnosis, or even a private and friendly note thanking him for his certificate, for which the fee would be paid, but adding that the case is one of chicken-pox, and that no special measures will be necessary.

In all cases, even where there may be grounds for suspecting gross carelessness or *mala fides*, the revisal of a diagnosis ought to be carried out by prearrangement, as a professional consultation. In no such case should the patient be visited without prior communication with the private practitioner. The right of personal inspection conferred upon the medical officer of health by Section xlv of the Public Health Act ought to be held in reserve for the direst emergency. The knowledge of its existence should not be allowed to influence the official tone and attitude.

Actuated by a false notion of economy, local authorities are sometimes inclined to concuss the medical officer into making a practice of reviewing the diagnosis expressed in certificates under the Notification Act. On the ground of expediency any such endeavour ought to be firmly resisted. Yielding will really go far to defeat the purpose of the Act.

Under whatever circumstances the medical officer of health has come to form an opinion which differs from that of the practitioner, that opinion should reach the patient or relatives, not from the medical officer of health, but through the practitioner.

The medical officer of health should also take steps to secure that when a further observation of a case which has been removed to hospital leads to a reversal of the original diagnosis, the utmost care should be taken that the patient is not discharged in such a way as to suggest any reflection upon the action of the practitioner who certified the case.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The Representation of Dentists on the General Medical Council.

The following report of the Dental Diploma Committee of the Royal College of Surgeons of Edinburgh, on the representation of dentists upon the General Medical Council, was forwarded to the Privy Council on May 16th:

The Dental Diploma Committee has had under its consideration the question of the representation of dentists on the General Medical Council, and the opinion of the Committee is that the general body of dentists practising in England, Scotland, and Ireland, should be represented through the medium of the licensing Boards from which they receive their diplomas.

That for this purpose each of these licensing Boards should make such provision, either by appointing a Dental Diploma Committee—such as that of the Royal College of Surgeons of Edinburgh—of which Committee the representative upon the General Medical Council for the corporation to which it belongs should be *ex officio* a member; or in such other way as would secure his being conversant with, and competent to discuss and deal with such matters as dental education, examination, and general dental business, coming before the Council.

The Committee considers that it might appear one-sided and would be objectionable to appoint or exclusively set apart one individual nominated by or selected from one or other of the dental licensing Boards, for the purpose of what would virtually amount to supervising and legislating for the others—that is, one representative or referee for the whole dental body along with its qualifying Boards, upon whom should devolve the entire guidance of the General Medical Council in all dental business, especially while such a representative was not elected in the same manner as is the case in the direct representation of medical practitioners—namely, by means of voting papers sent to each dental practitioner in his constituency.

The report is signed by Dr. John Smith, Chairman of the Dental Diploma Committee. The other members of this Committee are Dr. Patrick Heron Watson, Sir Henry D. Littlejohn, Dr. Francis Cadell, and Mr. William Guy, F.R.C.S., L.R.C.P.& S., L.D.S.Edin.

German Arctic Expedition.—Among the scientific members of the German Expedition to the North Pole, which started on May 26th, is Dr. Brühl, assistant in the Physiological Institute of the University of Berlin. He proposes to collect special anatomical and histological material, to make observations on the blood at different latitudes, and to make bacteriological examinations of air, water, and soil. The expedition goes first to Spitzbergen, next to Tromsöe, then by Archangel and the White Sea to Nova Zembla, and, with favourable conditions of weather and ice, to the south coast of Franz Josef Land.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 4TH, 1898.

THE GENERAL MEDICAL COUNCIL.

THE session of the General Medical Council, which concluded on Tuesday last, has been interesting on many accounts, but its significance resides mainly in the preparation which has been made for work to be done in the future. Of the more important matters which came before the Council the revision of the dental curriculum is practically the only one which has been brought to a definite issue, unless we are to accept the report of the Committee with regard to the applications made on behalf of unqualified assistants as absolutely final. The report does little more than reiterate the position taken up in the notice issued by the General Medical Council after its last meeting, and in particular the Council has definitely expressed an opinion that it has no power either to request or to authorise any of the licensing bodies to institute special examinations for the benefit of those unqualified men whose unfortunate case has aroused the sympathy of many members of the profession which they had served. Further, the Council has reaffirmed in very clear terms that it sees no ground for suspending the operation of the resolutions which it adopted "with a view to the repression of fraudulent and dangerous practices." The position which the Council has taken up is logical, although it must be admitted that it would have been a satisfaction to the conscience of many members of the profession had it been found possible to suspend for a time the operation of the resolution adopted last November. The best and indeed the only counsel which it seems possible to give to unqualified assistants who have a full curriculum is that they should seek to obtain one of the numerous qualifications for registration which are still open to them.

It will be noted with satisfaction that the promoters of the Midwives Registration Bill have frankly accepted the position as defined for them by the Lord President of the Council, and have sought a conference with representatives of the General Medical Council with a view to drafting a Bill which shall meet the desiderata laid down in the report of the Council passed at its special meeting last April.

The Medical Aid Associations Committee presented a second interim report in which they repeat the conclusion of the Committee which reported five years ago to the effect that serious evils are incident to the present system of working medical aid associations and medical institutes. The Committee was able to acknowledge the readiness of all parties to help in the elucidation of the subject, and the fact that local conditions must be taken into account in dealing with this very complex subject is fully recognised in the concluding paragraph of the report. When, however, we are enjoined to use the spirit of conciliation we feel bound to recall that the present action of the medical profession has been forced upon it by the unjustifiable encroachments of medical institutes and the unblushing system of trading introduced by medical aid associations. The medical profession has no desire to cripple the friendly societies when conducted on sound principles, fair alike to the members seeking medical benefit and to the medical officers who render such important services to the benefit societies.

Another matter, already of considerable importance, and one which in the future, if proper means are not taken to check the growth of a reprehensible system may assume still greater significance, is the amendment of the Companies Acts. It is satisfactory to find that the Council is prepared to take action in this matter, and has nominated a Committee to take steps to insert in the Companies Act Amendment Bill now before Parliament a provision which would prevent the registration of companies to carry on medical, surgical, and dental practice. A deputation from the Council will seek an interview with the President of the Board of Trade in order to point out the danger which exists that the provision of the Medical Acts may practically be set at naught in the manner indicated, unless special provision is made by Parliament to prevent such an abuse.

The Council has reconsidered its position with regard to reciprocity of medical practice with foreign countries so far as to resolve that the document which it has hitherto issued on this subject should not be reprinted, but that it should be referred to the Executive Committee for consideration, and report. During the discussion which took place before this decision was reached the terms of the document were freely condemned by several members of the Council, and it will be generally felt that Mr. Horsley has taken a commendable course in bringing the matter forward.

Upon another matter which engaged the attention of the Council for a considerable time it is at the present stage undesirable to enter at any length. Mr. Horsley desired to complete the examination of certain documents the property of the Council, but suddenly found that he was prevented from doing so owing to the fact that the President objected on the ground that such documents, though the property of the Council, were not open to the inspection of individual members except by special leave of the Council. This view, which was supported by an opinion given by Mr. Muir Mackenzie, the counsel usually consulted by the Council, has been adopted by the Council, and, with certain limitations as to the power of the Executive Committee or the President in the intervals between the meetings of the Council, has been added to the Standing Orders.

The question thus raised, whether a member of a Council has the right to inspect, for the purpose of his business as a member of such Council, documents obtained by the Council in the course of business, is one of considerable interest. So far as we are aware it has not been raised or decided in exactly the same form before. It

is essentially a legal question, and as we understand that it is likely to be raised in some form in a court of law it would be premature at the present time time to discuss it, although the development of the matter will be watched with much interest.

THE ACTIVE LIST OF THE ARMY MEDICAL STAFF.

We recently commented on the numbers and elements forming the non-effective list of the Army Medical Staff, and arrived at the conclusion that such list, whether taken by itself or viewed in comparison with the lists of other branches of the service, is neither excessive nor out of proportion. We now make a similar review of the active list, especially in relation to its coming organisation into a Royal Army Medical Corps.

There is some reason to fear that this corps may, for a time at least, be exposed to sharp military criticism; which, from indications already observed in the service press, seems likely to turn largely on a proposition which may be thus stated: Seeing that the "doctors" have now got army rank and titles, their promotion must not be too rapid, but must be brought into line with other branches of the service.

As a general proposition this looks fair and reasonable enough; but it entirely turns upon the point whether there is such equality in the conditions of medical service compared with the combatant branches as to admit of equality in promotion according to length of service. There is, and indeed can be, no such equality. According to the Army List for May the active medical list is made up as follows: Director-General, 1; surgeon-major-generals, 11; surgeon-colonels, 25; brigade-surgeon-lieutenant-colonels, 52; surgeon-lieutenant-colonels, 44; surgeon-majors, 344; surgeon-captains, 268; surgeon-lieutenants, 69; total, 814.

But of the 37 administrative and 777 executive officers, 3 of the former (including the Director-General) and 22 of the latter are seconded, or hold staff appointments, which removes them from the effective strength available for duty with British troops; leaving the present real strength 34 administrative and 755 executive medical officers—not, of course, including the 35 quartermasters.

The total of 789 medical officers is just 101 short of the late Sir Thomas Crawford's "dangerously low" establishment of 890. But the shrinkage is even more serious, because, with the coming increase of 23,000 men in army strength, 92 additional medical officers (in the proportion of 4 per 1,000) will be required; provision for the new garrison of Wei-Hai-Wei will also have to be made. It may therefore be safely estimated that the establishment of the new Royal Army Medical Corps should not be less than 1,000 medical officers and 40 quartermasters; which means that the army will shortly want 200 more medical officers, and 5 quartermasters.

Considered by ranks, the active medical staff list at present shows a very great disproportion in numbers between senior and junior officers, which of course has resulted from the automatic promotion according to length of service of those serving, and the decrease for years in the numbers entering the service. But the proportion of seniors in the medical ranks will always remain high, being limited by age retirement only; whereas in the combatant branches retirement is compulsory, not only through age, but by the limitation of command and staff appointments.

To revert to the question of quicker promotion in the medical than in the combatant branches: it is necessary to consider how, if it exists, it comes about, and to compare it with promotion in such corps as the Royal Engineers and Army Service. If the proportion of officers in the different ranks of these corps be compared with the medical—quartermasters being omitted, as well as seventy surveyors, who, although civilians, have military rank in the Royal Engineers civil staff—it will be found that the total strength of the Royal Engineers and the Medical Staff is, curiously, exactly equal, and may therefore be readily compared:

	M.S.	R.E.	A.S.C.
Ranking as general officers	12	30	0
Field officers	465	256	69
Captains	268	230	77
Subalterns	69	296	83
Total	814	812	229

In the prizes of general officers rank and emolument the engineers have the advantage over the medical officers in the proportion of five to two; while in field rank the medical have decided advantage; but it is the sole compensation they possess. For the Royal Engineers have an immense number of military, semi-military, and civil appointments of both honour and profit open to them; whereas the Medical Staff have none worth mentioning and nothing to look to but their ordinary duties and bare pay.

Having contrasted ranks, we will now compare promotion in the two corps so far as that is possible, starting as it does from widely different conditions. Promotion by length of service in the combatant and medical branches cannot possibly be fairly contrasted, because the original start is unequal and the conditions which governs entrance entirely unlike. The former are educated for the army partly at the public expense and enter young; the latter come into the army equipped entirely at private cost, not as youths but grown men; the combatant earns money in his teens; the medical little or nothing until nearly 25 years of age. The promotion of the medical officer, therefore, must have more relation to age than to length of service.

With this in view we have taken the five and twenty junior officers in the ranks of lieutenant, captain, and major, of the Royal Engineers and Medical Staff, in order to ascertain their average age on entrance, as well as at the subsequent steps in promotion, brevets being excluded. The result[1] shows that the medical officer starts five to six years older; but he and the Royal Engineer obtain the rank of major practically at the same age. Would it be fair that the medical officer, handicapped by age at the outset, should remain so throughout life in the service?

We fear that a five years' curriculum will still more handicap the medical officer of the future, and so render accelerated promotion even more a necessity than now, if the army as a career is to have popularity in the medical schools. The supersession cry would have some force if it involved general command; but as it does not do that it has really little meaning. No doubt a combatant captain might sometimes on a mixed board find himself junior in rank to a

[1]

	M.S.	R.E.
Average age on entrance	24.64	19.00
,, promotion to captain ...	27.64	29.28
,, promotion to major ...	36.70	37.32

medical while senior in point of service; but he would still be face to face with a man of his own age.

It seems therefore quite clear and just that promotion in a Royal Army Medical Corps must have definite relation to the age of the medical officers on entrance; otherwise they would find themselves fatally handicapped throughout their service from first to last.

DRUGGED FOODS.

THERE is a general consensus of opinion that the addition of active drugs belonging to the class of nervine stimulants to beverages and articles of dietary in ordinary domestic use is not for the benefit of the community, and is likely in time to produce a deterioration of the public health. It is not long since that we had occasion to condemn in somewhat emphatic terms the indiscriminate use of wines containing cocaine or extract of coca, and we have reason to believe that our action in this matter was attended with beneficial results. Cocaine is the most typical example of that particular class of remedies to which we refer. The insidious production of cocainism by the unsuspected employment of this alkaloid is as serious as the induction of chronic alcoholism, and is less easily controlled. At the present moment we are beset by another danger arising from the addition of kola to certain articles of food. The kola or Java nut is the product of Sterculia acuminata, a tree indigenous to Western Africa, and cultivated in various tropical countries. It is largely employed as a stimulant to the nervous system, and like coca, is credited with marvellous sustaining powers, so that persons under its influence are temporarily enabled to endure great and protracted exertion and deprivation of food without suffering from fatigue or hunger. It is reasonable to suppose that a drug reputed to exert so decided an action on the animal economy is not without its disadvantages, and that during the stage of reaction there is considerable depression of the vital powers. It is with drugs of this class that a habit of constant indulgence is most readily established, and the dangers of the prolonged use of cocaine and morphine, both of which are nervous stimulants, have long been recognised. Kola has been found on analysis to contain 2.13 per cent. of caffeine—a considerably larger quantity than is met with in the finest Mocha coffee. Caffeine is an alkaloid possessing a very decided physiological action. In frogs it induces violent tetanic convulsions, general paralysis, and death by asphyxia, whilst in man the symptoms are a sensation of heaviness in the head, flashes of light before the eyes, singing in the ears, loss of sleep, restlessness, and in large doses delirium. Caffeine is undoubtedly a useful drug when employed in suitable cases and in appropriate doses, but if taken habitually in large quantities it is capable of inducing an undesirable condition of over-stimulation of the nerve centres.

LORD PLAYFAIR.

NOT only did Lord Playfair—whose death at the age of 80 occurred on May 29th—promote the science of preventive medicine, but he also played, during some thirty years of parliamentary life, a prominent part in perfecting the machinery by which its principles are administered for the public benefit. It was in Manchester, soon after his appointment to the Professorship of Chemistry in the Royal Institution of that city, that he first gained repute as a student and exponent of matters affecting the public health. No one appreciated more than he the great value of educating the public on this subject, and its vital importance both to the individual and the State. His published essays, addresses, and memoirs often deal with public health subjects, and hygiene formed one—and that not the least important in his view—of the subjects which he advocated should be taught in his scheme of higher education. When the Science and Art Department was established in 1853, Playfair was elected to share the duties of Secretary to the Department along with Mr. Cole. Shortly after this appointment, by the request of the Admiralty, he and Sir Henry de la Bèche carried out a valuable inquiry into the causes of accidents in coal mines, and he subsequently did much useful public health work upon various Commissions. The first Commission to which he was nominated was that which investigated the sanitary conditions of large centres of population, and no man ever directed greater energy and higher abilities to the study of this difficult and complex subject. The facts obtained by this Commission played a considerable part in shaping future public health legislation, and many trade industries benefited materially from the scientific attainments of Lord Playfair. He was also one of the Royal Commissioners appointed to consider and report upon the causes and prevention of cattle plague when that disease visited these islands; and more recently he sat upon the Commission on the Condition of the Aged Poor. As a member of the House of Commons Sir Lyon Playfair was often heard as an able advocate of what was best in the various Public Health Acts which became law during his long parliamentary career. He was opposed to the appointment of medical officers of health to small rural and minor urban districts; and on the second reading of the Public Health Act, 1872, while drawing attention in a very able speech to some of the weak points of that measure, he dwelt more particularly upon the fact that the Bill had been so drafted as specially to favour the appointment of Poor-law medical officers to be health officers for their respective Poor-law subdivisions and the making of small appointments. Section XVII of the Local Government Act, 1888, which provides for the election of county medical officers of health, was virtually his, and his able advocacy was largely instrumental in securing the important provisions enacted by Sections XVIII and XIX of that Act, the latter section amending all previous legislation with reference to the professional qualifications for a medical officership of health. It must also be gratefully remembered that he was the Minister in charge of the Medical Acts Amendment Bill, which passed into law in 1886. He was an honorary member of the British Medical Association, and at two annual meetings (1873 and 1875) he was President of the Section of Public Medicine. Lord Playfair, who was the son of Dr. George Playfair, Inspector-General of Hospitals, Bengal, is survived by two brothers, Sir Lambert Playfair, formerly consul-general in Algeria, and Dr. W. S. Playfair, lately Professor of Obstetric Medicine, King's College.

MORE PICTURE GALLERIES.

CONTINUING our artistic tour round the almost inconveniently numerous picture galleries, we dropped into the "New," and worked steadily through it, catalogue in hand. True to our *rôle* of professional critic, we first tried to discover whatever there might be of medical or pathological interest; but although we puzzled over Watt's mysterious skeleton, and although our fingers itched to prescribe iron and nux vomica for Burne-Jones's wan and weary maidens, we failed to find much to catch the eye of the "busy practitioner;" nor, indeed, can we congratulate the managers on having given us a specially interesting show this year. Some of the respected veterans of past pre-Raphaelite days still stick loyally to the ship, but we do not envy the Queen on her purchase of Holman Hunt's hard and wiry head of Christ, from which all suspicion of flesh and blood is conspicuously absent, and it is quite evident that the Royal Academicians, as in duty bound, have sent their best works to Burlington House. Sargent, it is true, sparkles and shines here as elsewhere, but we wish that someone else would explain the strange optical delusion that makes the heroine of his principal picture slip forward from her chair, and the chair itself project itself violently towards the eye of the onlooker with an energetic forward movement irresistibly suggestive of a rough day on

the Channel. But the commonplace is in the ascendant this year, and the general impression we take away is of a dowdy dead level of uninspiring mediocrity, only lighted up here and there by dainty touches of supreme merit, such as Watt's little girl, and the gems of true artistic brilliancy which shine from the brush of Alma Tadema and his accomplished wife. If no doctors have this year exhibited anything, the second generation is coming well to the front, and we specially congratulate Mr. Spencer Watson on his excellent portraits. He has given us a "joy for ever" in the shape of a "pretty girl," and his old lady coming ghost-like out of a dark background has some of the charm of Whistler without his eccentricity; and Tuke, whose sapphire seas delight us both in the Royal Academy and the Tate Gallery, contributes an excellent likeness of Miss Kitson, well modelled, well drawn, and with a pleasant touch of character which lifts it out of the ruck of purely conventional portraiture. Anyone who wishes to study the forward movement of art, and more especially the peculiarities of the modern French school, should pay a visit to the International Exhibition, where Admiral Maxse, with the help of Whistler and others, has converted his winter skating rink at Prince's into a summer picture gallery. Things are arranged very much on the Salon plan. Nothing is hung much above the eye, and diaphragms of white cloth conduct the light pleasantly to the walls. Each man's works are hung together, so that one may get a consistent idea of his methods. Manet, who is supposed to have had a great influence on French art, is here represented by two of his supposed masterpieces; but both the execution of Maximilian and the strolling players seem to us black, hard and uninteresting, both in subject and arrangement, nor are we much charmed by the angular and elderly ballet dancers of Degas, or the absinthe-tinged brutalities of Toulouse de Lautrac, who has an amazing gift for dissecting the seamy side of human affairs. After such lurid renderings of low life, it is refreshing to whiff the briny spray from Mestag's moving seas, or to see Zorn's simple peasants dancing with all the energy, if not the poetry of motion, to shiver in Thaudau's snow, and to see Crawhall's inimitable cock and and rabbit, redolent of the poultry and farm yard: and before we go out we may throw a rapid glance at Aubrey Beardsley's half-crazy imaginings, strange pathological and almost delirious outcome of an ill-balanced mind in a diseased body, struggling to realise the unrealisable, and only succeding in producing in hard black line the perfection of ugliness in every sex and at every age. We have, perhaps, been more severe on Aubrey Beardsley's work than may be acceptable to his friends, for he was evidently an attractive personality, and his sad and early death has evoked much popular sympathy. But a public man is public property, whether he be alive or dead, and must face up to the music of criticism and accept the responsibility for what he has done or left undone, and because it is the duty of physiological physicians to denounce every morbid modern tendency we venture to say what we think about the squalor and meanness of some modern French art, and to express when we get the chance strong dissent from the ostrich necks and lascivious eyes and cruel mouths of Rossetti. Turning from them to Millais and Leighton, and Waterhouse, and the landscapists by sea and shore, is like a breath from breezy wave and moor after inhaling the heavy atmosphere of a sick room.

SURGEON-CAPTAIN HOPTON SCOTT, A.M.S.

This officer, who was, as our readers know, severely wounded in action in West Africa, is, we are glad to hear, making some progress towards recovery in St. Thomas's Home. What is not so well known is the fact that, like his distinguished brother officer at Majuba Hill, although his left femur was smashed by a heavy slug, and another missile of a like formidable kind had torn his chest without actual penetration, he stuck to his duty, and while prostrate on a stretcher and severely tortured by his wounds, he continued to give surgical aid to his wounded comrades. We have seen an extract from a letter of his to his family, written from the hospital in Sierra Leone, in which he thus modestly refers to his brave conduct on the above occasion: "Six reserve men of the M.S., including Corporal Frost, of Portsmouth, came to see me. Really kind of them, was it not? They were all full of the fact that I kept on doing duty after being hit. It was the least one could do to help them, as I was the only medico. I thought nothing of it, but Donovan also spoke so warmly about it." If the Secretary for War needed any justification for the full measure of justice extended to the Medical Staff of the Army, Surgeon-Captain Hopton Scott, like his brother officer on Majuba Hill, has supplied it; both, by their bright example, inspiring their brethren when on the path of duty how "to suffer and to die."

THE UNIVERSITY OF WALES.

It is not often that we can watch the birth of a university, and therefore Dr. Isambard Owen's account of the conception, gestation, and parturition of the University of Wales is all the more interesting. They are the subject of an address to the Teachers' Guild of Great Britain and Ireland at their Tenth General Conference. There were already in existence three colleges of university rank—Aberystwyth, Bangor, and Cardiff—and the problem was to organise a university of which they should be constituents. The government is vested in the University Court, of whose 101 members 36 are named by the colleges, 13 by the graduates, and 12 by lower educational bodies, while 40 are named by the Crown and the county councils. The teachers and the taught together are therefore in a large majority. The Court has as its expert adviser the Senate, which is formed of all the heads of the departments of teaching in the several colleges. No regulation can be made by the Court concerning education unless it has previously been considered by the Senate. The teachers, therefore, may be said to be paramount in the University. The course of instruction in each subject is left in the hands of each College subject to the approval of the Senate, by which means the greatest possible freedom is secured to the various teachers. The examinations are conducted by the professors themselves along with external examiners, and since students naturally follow the teaching of those who will examine them, the professorial as opposed to the tutorial system is thereby assured. The University, wishing to lay stress on the course of instruction rather than upon examinations alone, has given the colleges almost unlimited power over their students. "No candidate can claim the right of examination until his college is itself satisfied with the progress he has made, and formally presents him for the examination." The encouragement of research consists partly in the professorships, and partly in a system of research fellowships, which seem to be rather a hope of the future than a fact. It will strike everyone who reads the address that the guiding principle has been to trust the teachers. The courses are left to them, the approval of candidates is left to them, and the examinations are in their hands. From first to last they are the chief power in the University. It has not been forgotten that there is some danger lest the teachers in their own interest should lower the standard, but in the first place the framers of the constitution have taken the definite ground that if you get good teachers you may be confident that they will act for the advancement of education, and not from a shortsighted desire for money; secondly, they have given the external examiners supreme power; and, lastly, they have relied upon the Colleges to keep one another up to the mark by criticising in the Senate the proposals which each may bring forward. The pamphlet will be laid down with a wish that as much common sense and as much common faith in the honesty of others were to be found in the neighbourhood of London.

MUSIC AS A SEDATIVE IN NEURALGIA.

MR. GLADSTONE during the many weeks of acute neuralgia which ushered in the last phase of his fatal illness is said to have found great relief in music. Mr. Herbert Spencer is said to have had recourse to music for the relief of nervous disturbance; and the Empress of Austria is reported to have been cured of neuralgia by certain strains of sound repeated at frequent intervals. Many other less illustrious sufferers have had their pain charmed away by the same sweet medicine. The "music cure" had considerable vogue some time ago in Germany, and a special hospital for its systematic application was, we believe, established in Munich. It is probable that music acts in such cases by diverting the attention, the pleasant impression overpowering and for the time obliterating the painful sensation. Attempts have, however, been made to show that music is something more than merely a sweet oblivious antidote. Nicolai, of Halle, a pupil of Hoffmann, and a disciple of the iatro-mathematical school, contended that the vibratory movements of the tympanum produced by musical sounds set up some kind of oscillatory movement in the nerves, and thus soothed the disturbed brain. Ferrari has quite recently suggested that the effect of music is to be explained by its acting on the organ of hearing in a manner analogous to massage, and so bringing the brain centres under the influence of "vibration treatment." An American physician, Dr. William F. Hutchinson, of Providence, Rhode Island, made a series of experiments as to the possibility of producing anæsthesia by very rapidly repeated blows, which may perhaps throw some light on the sedative effect of music. By arranging a number of small hammers with elastic handles on a revolving wheel, he was able to make a rapid percussion, each stroke representing a weight of 10 grains, and being repeated four hundred times a minute. This number of strokes did not materially lessen the sensibility of the part to which they were applied. Dr. Hutchinson afterwards succeeded in getting constructed an induction apparatus consisting of very carefully measured coils, and having a rheotome, made of metallic ribbon, which could be made to vibrate very rapidly. By means of very accurately made tuning forks he measured the number of vibrations which this "singing rheotome" made in a minute, and found that when it sounded the note of C major, representing 540 vibrations per second, anæsthesia was produced, but if the interruptions were made still more rapid, this effect was lost. The change in the number of vibrations was produced by altering the tension on the rheotome, and this tension was so great, 740 pounds to each centimetre in length, when tuned to C major, that steel was not strong enough, and it became necessary to make the metallic ribbon of phosphor-bronze. Three Burnley cells were used to run the apparatus. By experiments on himself and others Dr. Hutchinson had found that with the number of vibrations corresponding to A major, 540, one minute was sufficient to produce numbness; on stopping the current there was a rapid return of sensation. An attempt was then made to produce local anæsthesia on a patient suffering from a whitlow on the finger. The finger was placed in a metallic tube partially filled with sponges moistened with salt water. Starting with A major and running up to G major during a period of three minutes, it was found that the sensibility had been scarcely diminished; but when the rheotome had tuned to C major sufficient anæsthesia was produced in three minutes to allow of an incision being made in the whitlow without the patient suffering any pain whatever. In a case of tic douloureux, in which galvanism and franklinism had both been tried and had proved useless, the induced current from this machine was tried, the rheotome being adjusted to C major, and the negative electrode being applied to the nape of the neck and the other to the forehead. In five minutes the pain had sensibly diminished, and in ten minutes it had been completely relieved, and the patient was able to enjoy the first sleep for two days. In Dr. Hutchinson's experience every kind of pain yielded equally well to the currents produced when the rheotome was adjusted to C major. It would appear, therefore, that the note C major produces vibrations which neutralise the disordered vibrations in the affected nerve. It might, perhaps, be worth while to try the effect of airs in which C major predominates in cases of neuralgia. It would, however, be prudent for the experimenter first to assure himself that the patient is not one that hath not music in himself, nor is not moved with concourse of sweet sounds; otherwise he might find himself made the subject of experiments in rapid percussions and vibrations tuned to D major, which would have an effect the reverse of anæsthetic.

THE CARE OF THE WOUNDED CUBAN INSURGENTS.

ACCORDING to Mr. Emery W. Fenn, who served for ten months with the Cuban insurgents, and has recently related his experiences in the *Century*, the Cubans, owing to the guerilla method of warfare which they have adopted, are suffering from a lack of surgeons. One surgeon, as a rule, has medical charge of an entire division. He has no skilled assistance, but has to depend on men requisitioned from the ranks and instructed in the merest elements of first aid. These improvised assistants are often not in the way when they are wanted, and the wounded have to be transported on horseback or in hammocks for long distances before they can be treated. Owing to the delay slight wounds often become serious. The only hospitals available are deserted country houses, with beds made by driving four forked sticks into the ground, two at the head and two at the foot; a heavy stick is then laid on each pair of forks, and then sticks are laid lengthwise on these. The frame is then covered with banana leaves and a sheet, if one can be got, makes the bed complete. Each hospital is in charge of a *praticante* (trained assistant) under the general supervision of a surgeon, who visits it as often as possible. They are well supplied with bandages and medicines. The wounds being mostly inflicted with the Mauser bullets, amputation is seldom required, but wounds made by a Remington with the ordinary lead bullet, or the lead bullet with a thin brass jacket (explosive bullet) often prove fatal, or recovery is very slow.

YELLOW PHOSPHORUS IN MATCH MAKING.

THROUGH the publicity given to recent cases of "phossy jaw" in the newspapers, the question has again been raised as to whether the use of the yellow or dangerous form of phosphorus should not be absolutely forbidden. If its employment is to be prohibited in this country, it is clear that in justice to home manufacturers no matches made abroad from yellow phosphorus should be admitted into our markets. Under improved ventilation "phossy jaw" has already materially diminished in this country, but there will always be a certain amount of risk, even though workpeople rinse their mouths and wash their hands before eating, and periodically undergo medical examination. It should be remembered that the prohibition of yellow phosphorus in match making does not rest altogether with the Home Secretary. He must be supported in such a step by a public willing to buy not always in the cheapest market, and willing to some extent to sacrifice utility and convenience. The ordinary match is so very convenient; it will ignite by being rubbed against any dry surface. The safety match will only do so on a specially prepared paper. Phosphorus, as our readers know, is sold in two forms: (1) the very inflammable yellow phosphorus; and (2) the red or amorphous, invented by Schrötter. The amorphous is obtained by heating common phosphorus in closed iron vessels to a very high temperature, whereby it is rendered odourless, loses its phosphorescence, does not strike on percussion or moderate friction, and is harmless to the workers. British match makers have reduced as far as possible the amount of yellow phosphorus in ordinary matches, but in spite of this and improved

methods of manufacture, "phossy jaw" still occasionally occurs. As a nation we are rather disposed when anything unwholesome arises in our industries to decry ourselves and our methods and extol the foreigner. The daily press has to some extent lent countenance to this. We are told, for example, that in France no common phosphorus is used in match making, that it is forbidden in Belgium, and that in Scandinavia the "sanitary arrangements are so complete and perfect" that phosphorus necrosis does not occur. A correspondent who has visited match works in Sweden writes: "I can bear testimony to the excellence of some of the arrangements, but to say that nothing but amorphous phosphorus is used is erroneous. Besides, match making in Sweden is frequently carried on in small villages where the conditions are much healthier than in a large city like London, but the hours of labour are much longer." Until recently ordinary matches were dipped in a paste composed of chlorate of potass, yellow phosphorus, fine glass powder, whiting, and glue, but as match makers found that less and less phosphorus gave equally good results, the dangerous ingredient became reduced to a minimum. Safety matches, on the other hand, are dipped in a mixture of chlorate of potass, sulphide of antimony, and glue, while the friction paper put upon the match box is coated with a paste composed of antimony, amorphous phosphorus, and glue. There should be no insuperable difficulty in replacing the ordinary by the safety match. There would be many inconveniences. Common matches are too cheap, and their manufacture is dangerous. Since match making is a dangerous trade it is clear that a responsibility rests upon the workpeople themselves as well as upon the employers. Workpeople are not always observant of rules or attentive to precautions. Still, that is no reason why their occupation should continue to be needlessly dangerous.

THE CORONERS' SOCIETY.

The annual meeting of the Coroners' Society of England and Wales was held in London on May 26th. At the annual dinner, which took place on the evening of the same day, the chair was taken by the President of the Society, Mr. George F. Roumieu, Coroner for Surrey. The toast of the evening was given by Mr. Croly, of Dublin, who referred to the useful work which such a society did in promoting an enlightened public spirit among the incumbents of the ancient office of coroner. The President referred to the fact that the Society had celebrated its jubilee a few years ago, and stated that it included among its members the coroners of nearly all the principal districts in England and Wales. He congratulated the Irish coroners upon the formation of a sister society, and expressed the hope that the two societies might work in unison, even if more intimate relations were not established. He, in common with other speakers, made sympathetic allusions to the medical profession, with which the coroners were so closely associated in their work. It was stated by all the speakers that the coroners desired that the medical profession should be fairly and liberally treated by the State, and that the Coroners' Society would be willing to support any well-considered scheme for the removal of existing grievances. The influence of the medical journals in bringing about a better understanding was freely acknowledged, and the toast of "The Visitors" was coupled with the names of Dr. Dawson Williams, Editor of the British Medical Journal, and Mr. Thomas Wakley, one of the Editors of the *Lancet*. Dr. Danford Thomas, in a short speech, made an earnest appeal to his fellow coroners to give serious consideration to the fact that according to the returns of the Registrar General for 1896 the number of uncertified deaths in England and Wales was over 11,000. He observed that this startling fact was made the more serious when it was known that no fewer than 204 of these uncertified deaths were attributed to different forms of violence. He hoped that the time would come when coroners in making their preliminary inquiries which might or might not lead to an inquest being held, would be authorised to obtain the assistance of a medical man, and empowered to pay him a reasonable fee. He observed that the responsibility which rested upon coroners with respect to deaths reported to them in which no medical certificates had been given, was very serious, and expressed the opinion that the matter was one to which they should give their most serious attention from the point of view alike of public policy and private interest.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A meeting of the Fellows of the Royal College of Surgeons of England residing in the Midlands was held in the Birmingham Medical Institute on June 1st in support of the candidature of Mr. Bennett May for election to the Council of the College. The chair was taken by Dr. Thomas Savage. Mr. Bennett May, at the request of the Chairman, stated his views on College matters, and expressed his willingness to offer himself as a candidate at the election next month. The following resolution, proposed from the chair and seconded by Mr. Gilbert Barling, was carried unanimously: "That this meeting of Fellows of the Royal College of Surgeons of England residing in and around Birmingham is of opinion that it is desirable that the Midlands should be represented on the Council of the College, and pledges itself to support the candidature of Mr. Bennett May." A Committee was appointed, of which Mr. J. T. J. Morrison, 3, Great Charles Street, Birmingham, is Honorary Secretary, to take further steps to promote Mr. Bennett May's election.

THE SITE FOR THE NEW INFIRMARY, NEWCASTLE-ON-TYNE.

A poll of the owners and ratepayers of Newcastle was taken last week on the question of the Bill promoted in Parliament by the Corporation for the purpose of granting a site of 10 acres for the new infirmary on the public land known as the Leazes. The vote was "in favour of" or "against," and it was recorded on papers left at the houses of the inhabitants. The result was made known on Saturday, May 28th, when it was declared that 14,236 were in favour of the site, and 8,198 against it. This majority, although perhaps not so large as was looked for, will probably convince Parliament that public opinion in Newcastle is sufficiently in favour of the Bill. The form of voting paper issued is unfortunately complicated, so that a large number of votes were spoiled by errors in filling it up, in spite of the strenuous efforts previously made to educate the electors as to the correct way of voting.

THE STUDY OF CANCER AND TUBERCULOSIS.

The late Mrs. Caroline Croft, of Boston, U.S.A., has left a sum of £20,000 to be expended, under the direction of Drs. Henry K. Oliver and John Collins Warren, in encouraging the discovery of some method of curing cancer, consumption, and other diseases regarded as incurable. The will provides that the income of the capital sum is to be paid to Dr. Oliver for services to be rendered and expenses to be incurred by him in prosecuting researches with the object specified above. At his decease, or inability or unwillingness to carry on the work, the money is to be made over to Harvard College, the medical department of which is to prosecute the work till a satisfactory cure shall be discovered. The testatrix says: "I design that the researches and investigations shall consist in part of the subjection to trial of medicines which may be extolled as specific or as possessed of marked efficiency in the disease for which a remedy is being sought, and, in case of such a medicine being a so-called secret one, of the analysis and subjection to trial of the medicine. I design that the researches and investigations shall still progress, notwithstanding any exemption from the disease which may come of surgical interference, so long as the

exemption is merely temporary." It is expressly declared that the bequest is not intended to be applied to the general purposes of the Harvard Medical Department, but as a public charity for the benefit of persons afflicted with the diseases named. If the Harvard authorities refuse to accept the trust, the fund is to go to the Massachusetts General Hospital for the installation of a cancer ward in which a fair trial shall be made of any remedy which may at any time be supposed to exert a markedly favourable influence in cancer.

MEDICAL TITLES: THE TITLE OF PHYSICIAN.

WE are authorised to state that the draft of the case appealing from the conviction of Mr. Hunter for calling himself physician has been settled by Mr. Haldane, Q.C., M.P. (who will argue it on behalf of the Society of Apothecaries), and is now before Mr. Muir Mackenzie to settle on behalf of the General Medical Council. As soon as he has done this it will be set down for argument before the Queen's Bench Division and an application will probably be made for a day to be fixed for the hearing. Under any circumstances the case is expected to be disposed of before the Long Vacation. We take this opportunity of explaining that the General Medical Council issued separate summonses against Mr. Hunter, one for calling himself physician and another for calling himself surgeon, but did not proceed with the latter. Mr. Hunter called himself physician and surgeon.

COOKERY AS A BRANCH OF MEDICAL STUDY.

THE medical faculty of the State University of Minnesota has decided to add a new course to the medical studies of that institution. As soon as the new term begins the senior class will have to take up the study of cooking. On the catalogue this study will be designated "Practical Dietetics." The students will have to go into the "laboratory" and make soups, teas, gravies, farinas, and a host of other dishes for the sick and convalescent. Is the time coming, when the overburdened medical student will be required to "take up the study" of cutlery (to be designated "Practical Scalpelography") because he may have occasion to use knives; of plumbing because it may fall to his lot to inspect drains; of bedmaking, sweeping, and dusting that he may more efficiently direct the practice of these mysteries in the sick room; of hardware manufacture that he may be able to pass a sound judgment on the quality of his gallipots?

A POLYGLOT CIRCULAR.

WE took occasion some little time ago to call attention to the absurd form in which some of the advertisements of foreign inventors and foreign spas reached this country. We have before us the printed circular issued by a medical practitioner in a foreign spa, which, though it is not at all amusing, must unquestionably have produced a very bad impression on those practitioners in this country who may have received it. Everybody is familiar with the polyglot advertisements which the vendors of quack remedies wrap round their bottles. The device is stale, but it is calculated, perhaps, to produce a certain effect on the untutored mind as it conveys the impression that if the proprietors of the substance find it desirable to give directions for its use in the languages of Hindustan or the Hawaian Islands, its use is, indeed, extended throughout the world. The inference would be incorrect, but the vendors of quack remedies are not generally supposed to be endowed with any hampering respect for hard facts. The circular to which we have referred above does not, indeed, appear in more than five languages, and the "Curarzt" has the complacency to print even his German in Latin characters. "Gentleman! I am taking the liberty to inform you by this notice that I have begun my medical practice in ——." A liberty, indeed! So great that when addressed to practitioners in a foreign country who never heard of the Curarzt in question, it may properly be described as an impertinence. "Should be exceedingly obliged by usual assistance and attention." The "liberty" which here becomes familiarity is, perhaps, corrected by the ornate conclusion: "I remain, gentleman, yours respectfully." The Curarzt addresses his German colleague as "Verehrter Herr Collega," and tells in French "*Que je viens de commancer ma pratique.*" He is, perhaps, not so great a linguist as his circular in five languages might at the first glance lead us to believe; but however this may be, we would take the liberty of telling him that this polyglot method of seeking practice is contrary to the traditions and customs of the medical profession in this country at any rate, and is calculated to alienate any support of which he may on other grounds be worthy.

EARLY OPERATION IN OBSTRUCTION OF THE COMMON BILE DUCT.

So great is the difficulty of reaching the common bile duct, and so much harder is it to apply sutures when the duct is healthy, that surgeons often wait for months or years for the duct to dilate and thicken rather than interfere promptly in cases of obstruction of the common bile duct by stone. The dangers of delay are well known. In order to reach the duct Halsted[1] has in several cases adopted Lange's plan of dividing ribs and cutting through the diaphragm. This practice answers well when the liver is very large, and also when it is extremely small and high up under the ribs. Halsted opens the exposed duct, and incises it through its duodenal end after passing two temporary stitches to serve as retractors. The duct is opened between them, the stone removed, and the whole canal carefully searched. For applying the sutures a hammer-head-shaped aluminium rod is used; it bears a very slender handle fixed close to one of its ends, which forms a heel. The other end is passed into the incision, which is widened by the assistant pulling the suture retractors. The whole hammer head is easily slipped in, heel last; it must be a little longer than the incision. Then the operator pulls gently on the handle of the hammer; the duct is thus drawn forwards till it lies conveniently near to him. Silk mattress stitches are then applied to the wall of the duct, one over the heel of the hammer, the others over the longer part of the hammer head. After the instrument is retracted the silks are tied. The advantages of the hammer, with heads of various calibres from 3 to 17 millimetres, are evident. The duct, normal or thickened, is greatly expanded by the hammer, hence the stitches can be inserted with great accuracy and without fear of including the opposite wall or of occluding the lumen of the duct. The hammer blocks the duct and prevents the escape of its contents. With the hammer wounds of thin normal ducts can be easily and almost infallibly sutured, and hence the surgeon may, if he chooses, fearlessly operate upon the common duct as soon as the obstruction takes place. He need no longer wait till the walls are thickened, but the patient's condition made graver by changes in the liver, alimentary canal, and blood.

THE ANTI-KREOPHAGISTS.

SIR HENRY THOMPSON has been moved by various criticisms and comments on his paper in the *Nineteenth Century* entitled "Why Vegetarian?" to which we drew attention a short time ago, to publish a rejoinder which is perhaps even more interesting than the original article. In matters of faith and conduct there are as a rule to be distinguished two tendencies, the one to say "Thou shalt do this," the other, "Thou shalt not." While the former attitude perhaps distinguished the early part of the present epoch, we now appear to have passed into a phase in which our self-constituted teachers have returned to the system of prohibition. There is a great similarity in the mental attitude of those who take up these crusades. The objects of these "anti" organisations may be dissimilar, even mutually destructive, but the methods of controversy are the same. In another part of this same June issue of the *Nine-*

[1] *Bulletin of the Johns Hopkins Hospital*, April, 1898.

teenth Century in which Sir Henry Thompson's rejoinder appears the editor, Mr. James Knowles, in describing Mr. Gladstone's manner of conducting a controversy, writes: "He would always declare that nothing ought to be kept back in discussion—everything ought to be said right out, so that the trial should be exhaustive and complete." This is not the method favoured by the controversialists to whom we have here referred, and Sir Henry Thompson gives some striking illustrations of their more favourite mode of controversy, which consists in the suppression of facts which tell against their position, and the suggestion of error by the severance of a statement from its context. Sir Henry Thompson has to complain that his meaning has been distorted in certain specific instances which he gives, so that finally the views attributed to him are exactly the opposite of those which he actually expressed. "I am not disinclined," he says, "to surmise that these grossly inaccurate representations may be greatly due to a certain torpor or obliquity of the moral sense, insensibly acquired through want of due respect for the meaning of words and a consequent loose habit in employing them—a condition too commonly occurring among those who, somewhat hastily perhaps, have become ardent advocates of peculiar views." Man is undoubtedly in his anatomy most nearly allied to the higher apes, and these animals, though they show obvious tendencies to be omnivorous, are yet, in the main, eaters of nuts and fruits. But man is not a higher ape, and in the process of development to his present high status he has become omnivorous. It is true that he can obtain from vegetables the nutriment necessary for his maintenance in health, but he has learnt that he can obtain what he wants at less cost of energy from a mixed diet, and he is not likely to unlearn this lesson. We are constantly being told by enthusiastic converts that they never felt so well as since they gave up meat and took to a vegetable diet. This may very well be true, but it is not necessarily a proof that the improvement is due to the exclusion of meat, for a very large proportion of persons who lead sedentary lives eat too much meat among other things. They have not only to waste energy in digesting an excess, but to run the risk of eliminating an unnecessary quantity of waste products. Sir Henry Thompson has done a real service in insisting that the diet must be adjusted, both as to its quantity and quality, to the degree of activity of the individual, and to his age. Advancing age limits activity, so that it is folly to continue at seventy a diet which may be harmless or even advantageous at thirty or forty. The modern vegetarians are themselves split up into many sects. The logical adherents of the theory that man should model his diet on that of the higher apes (who call themselves "fruitarians") denounce in no measured terms the "strict vegetarians," that is to say those who consume no product of the animal kingdom (after infancy), but make cereals the staff of life, while the followers of the modified diet, the people who eschew butchers' meat, the antikreophagists, are anathema to both of the other sects. The whole crusade is rather amusing than serious, for nobody will contend that an occasional experiment in vegetarianism can do the average man any harm, provided that he does not waste too much time in thinking about what he puts into his stomach, nor too much of the time of others in expounding his views.

THE ADULTERATION OF FRENCH MUSTARD

The mustard sold in this country is very free from harmful adulterants. The pure flower of the mustard seed possesses too acrid a taste to be palatable, and does not keep well, so that other flours are incorporated with it. When too much foreign flour is added, a little cayenne pepper or ground chillies is generally employed, in order to keep up the sharp flavour, and turmeric is added to improve the colour. Dr. Carles, of Bordeaux, has recently called attention to a possible danger attending the use of French mustard. He points out that the cork stoppers fitted to the pots in which the condiment is sold are covered with a metallic capsule, which is very rich in lead, and that after the pots have been opened the capsule alone is used to close them, owing to the fact that it is frequently difficult or impossible to replace the cork. The capsule being thus exposed to the vapours of vinegar, a thin coat of plumbic acetate forms upon it, and as this deposit adheres very loosely, it falls into the mustard when the capsule is disturbed. The consumer of French mustard is, on this account, held to be exposed to the risk of lead poisoning. We are not disposed to consider that the danger to which Dr. Carles draws attention is one which need be very seriously apprehended, having regard both to the smallness of the area of a capsule exposed, and the quantity of mustard consumed. Still, as so many people prefer French mustard, it is worth calling attention to the matter.

THE PASTEUR MONUMENT.

The monument to Pasteur, which is to be erected in Paris in the space in front of the Pantheon, is now almost completed. M. Falguière, the sculptor, has introduced certain modifications into his original design, in which Pasteur was simply represented as overcoming Death, which was in the act of flight. Now a group of a mother with her child, thanking Pasteur, has been added on the right, while behind the central figure Fame is shown crowning him with laurels. The international subscription to the memorial now amounts to nearly £13,000.

COTTAGE NURSING.

The various attempts that are made in different parts of the country to meet the needs of the sick poor in their village homes is a sure indication that there is a want which is not adequately met by the many forms of nursing provided in the present day. We have before us a notice of the Essex Cottage Nursing Association published in the *Southend-on-Sea Observer*. This Association trains the cottage nurses by giving them a course of lectures, and the practical work is taught by a trained nurse; according to the report, the results are "of a most satisfactory character." We do not feel satisfied that in the absence of hospital or infirmary it is possible to train even a cottage nurse, and we say this in no cavilling spirit, but with the sincere desire to find out in what manner these most necessary nurses can be trained. If by conference or other concerted action a practical solution of the difficulty can be arrived at, then these experiments will have their value.

The annual *conversazione* of the Royal Society will be held on Wednesday, June 8th.

In consequence of the death of Lord Playfair the complimentary dinner to be given to Dr. W. S. Playfair on Saturday, June 4th, has been postponed.

The foundation stone of the new building of University College Hospital, to be erected through the generosity of Sir J. Blundell Maple, M.P., will be laid by the Prince of Wales, Vice-Patron of the hospital, on Tuesday, June 21st, at 3.30 P.M.

Sir William H. Flower, K.C.B., F.R.C.S., has received from the German Emperor the Royal Prussian Order *Pour le Mérite* in the division of Science and Art. The distinction is recognised as one of the highest that can be conferred on a man of science.

Sir Walter Grindlay Simpson, Bart., whose death has just been announced, was the son of Sir James Young Simpson, whose name must always be associated with the introduction of chloroform into obstetrical and surgical practice. Sir Walter, who was educated at Cambridge, edited one volume of his distinguished father's collected writings.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE VACCINATION BILL.—In the papers issued on the rising of the House for the Whitsuntide recess, we observe that the Grand Committee on Law have the Prisons Bill still to finish, next the Poor-law (Scotland) Bill, then the Universities and College Estates Bill, and lastly the Vaccination Bill. This means that the Grand Committee will probably have to hold three or four sittings before the Vaccination Bill can be considered, and that therefore the Committee stage will begin towards the end of June. There are at present some three or four pages of amendments given in, making some thirty suggested alterations in all, but many of these are duplicates. Mr. Channing (Northants), who was the first to put down amendments, would leave out or radically alter Clauses 1 and 3, and add to Clause 2 a provision for a declaration of conscientious objection. Mr. Labouchere (Northampton) would make the Act read that no parent should be under any legal obligation to have his child vaccinated, and would repeal all existing Acts imposing penalties for non-compliance. If prosecutions are maintained, he would allow none except with the sanction of the guardians of the poor. Mr. Hazell, the member for Leicester, would enact that no order for the the vaccination of a child should be made in any union where two-thirds of the guardians are opposed to compulsory vaccination. Mr. Logan, who represent the Harborough division of Leicestershire, has drafted amendments to enable a parent to make a statement before the guardians or a statutory declaration of conscientious objection to vaccination, and also would prevent any local or educational authority requiring vaccination before employment or admission to a school or institution. The first amendment to alter the age limit to six months instead of twelve, as provided in the Bill, stands in the name of Mr. Carlile (North Bucks), who entirely redrafts the first clause, and provides for inspection of the child on the eighth day, and for a penalty of £5 on any vaccinator not obeying the rules and regulations of the Local Government Board. He also puts down an amendment in favour of allowing conscientious objection, and Colonel Long (Evesham) does the same, and suggests a form of declaration for the purpose. The proposal of the member for Walsall (Mr. Gedge) to give the parent 1s. for having the child vaccinated, and reimbursing the doctor, who pays the money, and giving him 2s. 6d. for the operation, we have referred to in a previous issue. Lastly, the amendments of Mr. Briggs, the member for Keighley, would limit the penalty under Clause 2 to 5s. inclusive of costs, and would require before conviction a certificate from a medical man that the child is fit to be vaccinated. The rules and regulations to be made by the Local Government Board are to fix all fees, and to limit the charge for such certificate to 1s., and all such rules and regulations are to be submitted to Parliament. Other amendments in the name of the same hon. member give the sole power to appoint public vaccinators and vaccination officers to the guardians, and to sanction proceedings for non-vaccination, and, further, to enact that the Act is not to come into force till 1901, and no child born before January 1st, 1899, is to be affected by it. This analysis of the amendments already printed is enough to show that there is sure to be a vigorous fight in Committee. The modifications of the Bill which the Parliamentary Bills Committee have suggested go into most of the points referred to above, and will raise also the questions of revaccination and vaccination by private practitioners. When these suggestions have been put into shape there will be another couple of pages of amendments and new clauses for the Government to consider before the struggle in Committee comes on.

THE BILLS BEFORE PARLIAMENT have their chances generally settled by the time the Whitsun holidays are reached. There are this year nearly 200 public Bills on the paper, and so far only nine have passed. Of the Bills which more especially interest the medical profession, those dealing with the Registration of Midwives, the Registration of Plumbers, the Public Health Acts Amendment, the Superannuation of Poor-law Officers (Scotland), the Pollution of Rivers, the Superannuation of Officers of Local Authorities, the Habitual Inebriates, and the London University have all so far failed to get a second reading, and all may be considered, if not dead, at least past hoping for, except the London University Bill and the Inebriates Bill, which are Government measures. The Pharmacy Acts Amendment Bill has got into Committee, but has so far failed to make any progress, and, except for some lucky accident, may be regarded as lost. The Vaccination Bill alone remains, and its chances depend on its own shape and on the state of Government business when it emerges from Grand Committee, but it is pretty certain to have the strong support of the Government, and so is likely to pass into law. The Lunacy Bill has passed the House of Lords, but has not yet reached the Commons.

THE HABITUAL INEBRIATES BILL has been put down for second reading for Thursday, June 9th, but is not likely to be reached on that day unless by some happy accident. After the second reading is carried the Bill may be referred to a Grand Committee, as this course will in the present state of Government business give it the best chance of passing this session.

THE PLAGUE IN THE EAST.

Bombay.—During the week ending May 14th, the total mortality for all diseases in Bombay amounted to 872, or only 276 in excess of the normal, and the *Times of India* remarks: "There seems no reason why the normal should not be reached in a fortnight." The rapidity of the decline of plague when once the virulence of an epidemic shows signs of abatement is remarkable, and from what seems to be a hopeless struggle against its ravages to comparative freedom is but a matter of a few weeks. The following table shows the rate of decline in Bombay:

Week ending March	22nd	1,259
,,	29th	978
,, April	5th	678
,,	12th	562
,,	19th	541
,,	26th	442
,, May	3rd	263

The recrudescence of plague in Bombay has run its eight months' course, and the disease may now be said to be existing merely in a sporadic form.

Karachi.—A temporary decline in the severity of the recrudescence in Karachi raised hopes that the disease was likely to speedily abate. Unfortunately the hopes were doomed to be disappointed. The returns are as follows:

	May						
	4th.	5th.	6th.	7th.	8th.	9th.	10th.
New Cases	100	101	75	102	84	67	96
Deaths...	72	80	72	64	66	57	77

Punjab.—The reports from the Jullundur district are much more favourable, no fresh villages having been attacked since the end of April. The totals to date for the whole region are 1,369 cases and 1,022 deaths.

Calcutta.—There seems to be every hope that plague has quite disappeared from Calcutta, at any rate for the time being. The work of inoculation is being encouraged and favoured in so much that the natives are informed that, should they submit to inoculation, they will be free to remain in their own homes in case of plague occurring in their households. Surgeon-Major-General Harvey, discussing the value of plague serum, arrives at the following conclusions: That M. Haffkine is working in the right direction; that he has already obtained a measure of success; that there is reason to hope that still better results may follow from further experiments and observations; and that it may be possible to deal with plague as with small-pox.

Darjeeling.—A plague scare with but little justification has occurred at Darjeeling. The town is situated some 9,000 feet

above sea level in the Himalayas, and quite isolated from any populous district. The latest information is to the effect that the dread of an epidemic of plague taking hold on the town has passed.

Hong Kong.—A telegram, dated May 31st, has been received at the Colonial Office, stating that the number of cases of plague at Hong Kong last week was 63, and the total number of deaths 61.

LITERARY NOTES.

The current number of the *Medical Chronicle* of Manchester contains an interesting article by Professor Leech on the new *British Pharmacopœia*. Professor Dixon Mann contributes a very useful paper entitled "Some American Opinions and Statistics in Relation to the Use of Water Gas as a Means of Domestic Illumination."

In a recent number of the *North American Review*, Dr. Langdon Kain discusses the question of "Man's Span of Life." After mentioning the fact that Mr. Thom and Sir Richard Owen were agreed that there was no authentic case on record of a person living beyond 103 and a few months, he says that popular opinion, and even expert or medical opinion, is not disposed to accept this limit. The explanation of the wide differences of opinion as to human longevity is, according to him, that writers on the subject are of different degrees of credulity. The cases of Cornaro and others have been, he says, cruelly overworked. Dr. Langdon Kain complains that the great difficulty in the way of a scientific study of longevity is the absence of trustworthy vital statistics. This makes it all the more remarkable that he should apparently have thought it not worth while to notice the critical analysis of a number of authentic cases collected by a Committee of the British Medical Association which was made by the late Sir George Murray Humphry. This is beyond all comparison the most important document on the subject in existence, and no scientific investigation of longevity in which it is not taken into account can have any claim to be exhaustive. Dr. Langdon Kain contributes nothing of his own to the subject beyond some stories of the usual kind about American centenarians. He seems to accept the limit of human life laid down by Thom and Owen, for, speaking of the United States, he says that "reputed centenarians in this country whose age exceeds 100 by more than three or four years have no documentary or satisfactory evidence to offer."

The June issue of the *Practitioner* is a "Special Tuberculosis Number," being entirely devoted to articles by recognised authorities dealing with the repression of tuberculous disease. The venerable President of the Royal College of Physicians gives with characteristic breeziness of style his experience of the treatment of consumption. The gist of the paper is contained in its concluding words: "The only remedies I know for consumption are air and sunshine—AIR, AIR, FRESH AIR." The emphasis of the capitals reminds one of Sayre's insistence on "REST—R, E, S, T—REST" for diseased spine. Dr. Arthur Ransome discusses the susceptibility to tuberculosis under different conditions with the fulness of knowledge which he has taught us to expect from him in connection with this subject. Dr. Sims Woodhead writes on the Bacteriology of Tuberculosis, Dr. Allan Macfadyen on the Relation of Tuberculosis of Animals to Man, Dr. J. E. Pollock on the Hospital Treatment of Consumption, Dr. Hermann Weber on the Sanatorium Open-air Treatment in Pulmonary Tuberculosis, Dr. Theodore Williams on the Treatment of Pulmonary Tuberculosis by Residence at High Altitudes, Dr. Michael G. Foster on the Mediterranean Littoral as a Health Resort in Phthisis, Dr. F. M. Sandwith on Desert Climate for Lung Tuberculosis. Dr. Alfred P. Hillier writes glowingly on the Climate of South Africa, illustrating his paper with some useful maps and meteorological tables. Dr. Parkes Weber contributes a brief note on Ocean Voyages in Phthisis. Dr. Rufenacht Walters gives a summary of the various methods of sanatorium treatment in use in foreign countries, and both he and Dr. F. W. Burton-Fanning (in a communication on the Open-air Treatment of Phthisis in Great Britain) strongly urge its adoption under suitable conditions in this country. Dr. Hector Mackenzie discusses the medicinal treatment of tuberculosis in a spirit at once practical and scientific. Dr. Archibald Kerr Chalmers, of Glasgow, shows what can be done by legislation to prevent the diffusion of the disease; and Dr. Hermann M. Biggs tells once more how the mortality from tuberculosis in the City of New York has been reduced by enlightened sanitary administration by nearly one-half in a period of ten years. The editor advocates an organised movement for the provision of sanatoria for poor tuberculous patients, and an active crusade for the suppression of tuberculosis on the lines of the "Leagues" against the disease which have been formed in France and Belgium.

In the *Westminster Review* for May, Mr. D. F. Hannigan gives an interesting account of "a forgotten Oxford poet," Thomas Lovell Beddoes. The genius of Beddoes was acknowledged by Walter Savage Landor, and by Browning, who is reported to have said: "If ever I were professor of poetry at Oxford, my first lecture at the University would be on Beddoes." The writer of whom Browning speaks thus warmly is placed very high in the hierarchy of English poets by so competent a critic as Mr. Edmund Gosse, and Mr. Hannigan holds strongly that "justice has not been done to the man who, more perhaps than any other Englishman of the nineteenth century, was impregnated with the spirit of Ford and Massinger." To readers of the British Medical Journal, Thomas Lovell Beddoes is perhaps chiefly interesting by the fact that he was a member of the medical profession. His father, Dr. Thomas Beddoes, of Clifton, was a celebrated physician in the early years of the present century who had been professor of chemistry at Oxford, and had been forced to resign his chair in that Conservative seat of learning by his declared sympathy with the French Revolution. He then opened a pneumatic institution for the cure of phthisis and a variety of other diseases by the inhalation of gases. In the conduct of this institution Dr. Beddoes had Humphry Davy for his assistant, and it was there that Davy discovered by experiment on himself the anæsthetic properties of nitrous oxide. The younger Beddoes was born in 1803, and made his appearance in print as a poet while still a schoolboy at Charterhouse. While still an undergraduate at Oxford he published the *Improvisatore*, the *Bride's Tragedy*, and other poems which excited the admiration of many good judges, but failed to catch the ear of the public. In 1825 he went to Göttingen to study medicine, and when he had taken his doctor's degree he practised at Zurich. After a time his revolutionary political views got him into trouble, and he had to leave Switzerland. In 1844 he went to Giessen to study chemistry under Liebig. After various wanderings we find him in 1847 at Frankfurt, where he contracted blood poisoning in examining a dead body. He recovered, but suffered from mental dejection, which led him at Basle to inflict a deep wound on his leg with a razor. His leg was amputated, and this seems for a time to have had a salutary effect on his mental condition. At the beginning of 1849, however, he poisoned himself with curare, leaving the following note scrawled in pencil: "I am food for what I am good for—worms..... I ought to have been..... a good poet. Life was too great a bore on one peg, and that a bad one." His most perfect work is *Death's Jest Book*.

In the *Bidrag til det Norske Militaer-sanitetsvaesens Historie, 1644-1814* [Contribution to the History of the Norwegian Army Medical Service, 1644-1814] Captain N. Torgersen gives an interesting account of the Army Medical Department in Norway between the middle of the seventeenth century and the end of the Napoleonic wars. As the result of a great deal of patient research he is able to put before his readers many curious bits of information regarding the constitution of the service, the status of the medical men engaged in it, the contents of the field medicine chest, the methods of surgical treatment in vogue, the military hospitals, and so forth. Full details are given of the Army Medical Department in the wars of 1788 and 1789, and of 1808 and 1809.

Dr. J. Sanarelli, Director of the Institute of Experimental Hygiene at Montevideo, has summarised the results of his researches on yellow fever in a monograph of 36 octavo pages, entitled *La Fièvre Jaune*, which has just been published as one of the series entitled *L'Œuvre Médico-Chirurgicale*, which Dr. Critzman is editing for Masson et Cie., of Paris. Dr. Sanarelli gives a concise but complete clinical history of yellow fever, and discusses the etiology, treatment, and prophylaxis in the light of his own work.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SPRING SESSION, 1898.

Thursday, May 26th.

Sir Wm. Turner, President, in the Chair.

(*Continued from page 1420.*)

Unqualified Assistants.

The following are the petitions and communications relating to unqualified assistants, which, on the motion of Mr. Teale, seconded by Mr. Brown, were referred to a Committee for report to the Council:

From 339 registered medical practitioners residing in various districts, desiring that special examinations should be held during the present year for unqualified assistants who have gone through a complete medical curriculum, and are over 40 years of age.—From the Mayor of Wisbech, forwarding a petition, stated to be signed by 3,449 persons, praying that Mr. Henry Thorns may be reinstated in his position as an unqualified assistant.—From Mr. B. E. Reeves, late an unqualified assistant, seeking permission to continue the practice of midwifery under the supervision of his late principal.—From a committee of medical practitioners in Leeds, signed by 138 persons suggesting that the General Council might modify its recent action in regard to unqualified assistants in view of the fact of the difficulty which is being experienced in obtaining the services of a sufficient number of qualified assistants.—From Mr. T. V. de Deune, who represents that he is unable at the present time to procure the services of a qualified assistant either through friends or agents.—From Robert Hugh Wilkin, a registered practitioner, M.R.C.S.Eng., 1893, L.R.C.P.Lond., 1893, on behalf of his father, aged 63, who all his life has been engaged in medical work, having been apprenticed in 1850, and who was prevented from qualifying by the necessity of immediately assisting his father, whose health had broken down. Latterly the petitioner, who has taken a country practice, has employed his father in a perfectly legitimate manner as an assistant, but now finds himself in the painful position of being no longer able to thus assist his father, and, owing to the increased expense of engaging someone else, to terminate the career of a brother whom he has been supporting during his course at Edinburgh.—From C. Dugdale, who is over 60 years of age, and out of employment in consequence of the resolution of the Council, seeking permission to be allowed to continue his work. He was apprenticed to a medical man in Accrington, and went through a regular course of study at University College, London, but, owing to family circumstances, was unable to go up for the examination. He has assisted in one practice for thirty-five years, and can produce testimonials as to his efficiency.—From Samuel Whitaker, aged 39, son of a late medical practitioner, seeking permission to continue his employment. His hospital course at Guy's was interrupted after two or three years by illness, for which he was sent abroad. On his return he completed his course but, funds failing him, was unable to go up for examination, and since then has been acting as an assistant.—From W. P. Thomas, aged 40, who has acted as an assistant for twenty-two years to leading practitioners in Wales, desiring permission, in order that he may support a wife and family, to commence business as a chemist, or be allowed to pass an easy Final Examination.—A letter from the Secretary of the Committee of Medical Practitioners in Leeds, requesting the Committee to receive a deputation.

Inspection of the Apothecaries' Hall, Ireland.

A report was received from the Executive Committee, stating that, pursuant to resolutions passed by the Council on November 30th, 1897, they had appointed Dr. Sidney Coupland, F.R.C.P.Lond., M.R.C.S.Eng., as Inspector for the Council at all the examinations, Primary and Final, of the Apothecaries' Hall, Dublin. Dr. Coupland had already inspected an examination of that body held on April 18th, 1898.

On the motion of Dr. Glover, seconded by Sir Dyce Duckworth, Dr. Coupland was reappointed Inspector.

Disciplinary Inquiries.

The case of Mr. George Hamilton Wyse, of 51, Talbot Street, Southport, Lancashire, registered in Ireland June 27th, 1871, as Lic. Apoth. Hall, Dubl., 1871; Lic. R. Coll. Phys. Edin., 1871; Lic. R. Coll. Surg. Edin., 1871, was next considered. It will be remembered that Mr. Wyse was charged at the November session with covering two unqualified assistants, named Cowan and George Wyse, the former at 95, Wallgate, Wigan, and the latter at 88, Adelphi Street, Preston. The Council then found that the charges had been proved in respect to both Cowan and Wyse, and adjourned the further consideration till the present session.

Further complaint had been received from the Wigan Medical Guild that Mr. Wyse still employed his unqualified assistant, Cowan; that he had acted contemptuously towards the General Medical Council in not at once complying with their instructions given in November. It was stated that it was common knowledge to the members of the Guild that the conduct of Mr. Wyse had not materially improved since he was admonished by the General Medical Council, and that the unqualified man Cowan still continued to prescribe for and visit patients as formerly. Also that, owing to the fact that Mr. Wyse still resided at Southport, about sixteen miles from his dispensary at Wigan, he had not or could not exercise that control and supervision over his practice that was required by the General Medical Council.

Affidavits were read confirming this charge, and also an affidavit of Mr. Cowan, denying that he had acted in any way except as dispenser.

Mr. Wyse attended in answer to the charge with his counsel, Mr. Acland. The Wigan Medical Guild were not represented.

After the documents in the case had been read, Mr. Wyse went into the box, and answered various questions put to him by the Council. The Council then considered the case *in camerâ*, and on strangers being readmitted,

The President announced that the Council, having further considered the charges proved against Mr. Wyse, judged that he had been guilty of infamous conduct in a professional respect, and directed the Registrar to erase his name from the *Register*.

The Council proceeded to the consideration of the case of Joshua Hamilton Hart, of Cliff Cottage, Morley, near Leeds, registered in Scotland, December 31st, 1891, as Lic. R. Coll. Phys. Edin. 1891, Lic. R. Coll. Surg. Edin. 1891, Lic. Fac. Phys. Surg. Glasg. 1891, who had been summoned to appear before the Council on May 26th, 1898, at 3.30 o'clock P.M., to answer the following charge on the complaint of Hugh Woods, of 11, Archway Road, Highgate, registered as M.B., M.D., Bac. Surg. 1886, M.A.O. 1887, Univ. Dubl., President of the Incorporated Medical Practitioners' Association: That he, as a registered medical practitioner, had been guilty of infamous conduct in a professional respect in connection with certain quack remedies which were styled and extensively advertised as "Munyon's Homœopathic Home Remedies." The particulars of the complaint against him were: (1) That he associated himself with and was a party to the sale and dissemination and advertisement of these quack remedies. (2) That he acted as consulting physician at the place where such quack remedies were administered, and sold and permitted his name and qualifications to be advertised as those of the consulting physician at such place.

Dr. Hugh Woods attended on behalf of the Incorporated Medical Practitioners' Association, and Mr. J. H. Hart appeared in answer to the summons, with his counsel, Mr. W. H. Clay.

Dr. Hugh Woods opened the case against Mr. Hart, and stated that representatives of the Incorporated Medical Practitioners' Association had called at Munyon's business premises in Shaftesbury Avenue, and had made inquiries into the nature of the remedies advertised for sale. They saw a person who declared himself to be a registered practitioner, but who refused to give his name or any particulars with regard to the remedies, except that they contained vegetable extracts. That person was not Mr. Hart. It was most difficult in all such cases to obtain the names and addresses of the practitioners connected with such establishments, and the Association had taken steps to obtain letters addressed to Shaftesbury Avenue by patients confidentially with a view of getting the signature of the doctor concerned. The result was that a letter came into their possession signed by Mr. Hart, written from Munyon's establishment, and upon his notepaper.

Dr. Woods then called Dr. Madden as a witness to prove the statements made.

Mr. Clay submitted that Mr. Hart had done nothing deserving the name of infamous conduct, and stated that that gentleman was willing to sever his connection with Munyon if the Council so desired.

Mr. J. H. Hart then went into the witness-box. In answer to Mr. Clay he explained that his duties consisted in opening the letters addressed to Munyon, and writing upon them the organs which in his opinion were affected, judging by the symptoms described. The letters were then taken away, and he had nothing more to do with the matter. The public never saw him, nor were his name and qualifications published.

In cross-examination witness refused to state whether he thought the mere mention of the name of the organ affected was sufficient to an intelligent prescription. Asked why he called himself M.B. and M.A., witness explained that the presence of the letters M.B.M.A. was intended to convey that he was a member of the British Medical Association. Pressed on this point, he stated he had once been a member, but his subscription had not been paid this year nor last.

The Council considered the case *in camerâ*. On the re-admission of strangers, the President stated the Council had found Mr. Hart guilty of infamous conduct in a professional respect, and directed the Registrar to remove his name from the *Register*.

Friday, May 27th.

Sir Wm. Turner, President, in the Chair.

Funeral of Mr. Gladstone.

The President announced that a letter had been received from the Earl Marshal regretting his inability to offer the Council admission to Westminster Abbey on the occasion of the funeral of Mr. Gladstone owing to want of space.

Dr. McVail said there could be little doubt that the unfortunate declination to recognise the Council was simply due to the fact that the Council had never taken any steps to take its proper place in national ceremonies. It was in no way the intention of the Government in any department to belittle the Council. He begged to move:

That it be remitted to the Executive Committee to take the steps that may be necessary to secure that the General Medical Council shall receive due recognition and representation in national functions and ceremonies.

Dr. Philipson seconded the motion.

Dr. Heron Watson asked if the Council had been represented at either of the jubilee celebrations, and, on being informed that it had not, suggested that it might be added as a rider that this was not the first time the Council had been neglected.

The motion, as originally moved, was agreed to.

The Bust of the late President.

The President announced that the bust of Sir Richard Quain had arrived, and moved:

That the hearty thanks of the General Medical Council be given to the daughters of Sir Richard Quain, Bart, for their valuable and most acceptable gift of a bust in marble, executed by Mr. Thomas Brock, R.A., of their father, the late esteemed and lamented President.

The motion was carried.

Medical Aid Associations.

The second interim report of the Medical Aid Associations Committee was read as follows:

The Committee have had under their consideration at various meetings memorials to the General Medical Council on the subject of medical aid associations or medical institutes, especially those from Norwich, Yarmouth, and Beckenham. They have endeavoured, by correspondence and conference with the memorialists and with officers of the "institutes," to ascertain the causes of friction and complaint in connection with these bodies, with a view to their removal, and they are not without hope of some success. They acknowledge with pleasure the readiness of all parties to help in the elucidation of the subject. They are still engaged in such endeavours, and are as yet unable to present more than an *ad interim* report. Their investigations so far confirm the conclusions of the Committee of 1893 as to the evils incident to the present system of working such institutions, which, when composed of *bonâ-fide* members of friendly societies, and managed on sound principles, are entitled to, and have always received, the friendly consideration of the medical profession. Pending their final report, the Committee would venture to suggest to all concerned—managers, their medical officers, and members of the medical profession generally—a suspension of judgment on questions of dispute and the use of local efforts to adjust differences in a spirit of conciliation.

Dr. Glover moved, and Mr. Teale seconded, that the report be received and entered on the minutes.

Mr. George Brown called Dr. Glover's attention to a report in the *Coventry Times* for April 27th, where there was a reference to the work of the Committee. It contained a report of a special meeting of the Coventry Provident Dispensary held for the purpose of altering the rules, in order, as was stated, to put themselves in line with the General Medical Council's ideas. Among other alterations, the word "members" was struck out, and the words "working men, their wives, and families" were substituted, and it was stated that that was done in order to please the General Medical Council. These words were interpreted at the meeting to mean that if a millionaire or rich man applied for membership they would not enrol him; but if a working man or a clerk applied, whose wages might be good one week and who might be out of work the next, he would be enrolled and no wage limit would be imposed. He hoped the Committee would not have dust thrown in their eyes by any mere verbal alteration of rules which did not meet the case at all, but were put in, as was expressly stated, in order to please the General Medical Council.

Dr. Bruce said there had certainly been no attempt whatever on the part of the managers of those friendly societies to throw dust in anybody's eye. The Committee had been met in the most open and gentlemanly way, and no expression of that kind should be used, because certainly the managers of those friendly societies were disposed to look at the question in the most liberal light.

After some discussion upon the grammatical construction of the last paragraph, it was agreed that certain words should be deleted from the report, so that it should read: "Pending their final report, the Committee would venture to suggest to all concerned the use of local efforts to adjust differences in a spirit of conciliation."

The report as amended was received and ordered to be entered on the minutes.

Dental Education and Examination Committee.

Mr. Bryant moved:

That the recommendations of the Dental Education and Examination Committee as to the course of study and examinations to be required of candidates for Licences in Dentistry or Dental Surgery be adopted by the Council.

The report stated:

In November last, when the third report of the Committee was brought before the Council, it was remitted to the Committee to draw up their recommendations in the form of a series of propositions, each dealing with a single subject, in order that the Council might be enabled in May to come to a definite decision on the questions before them. This has consequently now been done. The Committee have also to report that the dental curriculum, as now brought before you, has received the support of all the dental schools (except Manchester and Dublin), which have not yet spoken.

Then follow the recommendations of the Committee, which were each moved separately and discussed, the Council going into Committee for the purpose. The following recommendations were agreed to:

1. That every dental student shall at the commencement of his studentship be registered in the manner and under the conditions prescribed for medical students. 2. That no person shall be registered as a dental student who has not previously passed one of the preliminary examinations in general education recognised by the Council, unless before July 22nd, 1878, he commenced professional study by apprenticeship to a dentist entitled to be registered, or by attendance on professional lectures. 3. That every candidate for a licence in dentistry or dental surgery shall be required to produce certificates showing (*a*) that he is at least 21 years of age. (*b*) That he has been registered as a dental student. (*c*) That he has, subsequently to the date of registration, been engaged in professional study for at least four years. (Not more than one year of *bonâ fide* apprenticeship to a registered dentist, if served subsequently to the date of registration, may be reckoned as a portion of the four years of professional study required.) (*d*) That he has attended courses of instruction in the following general subjects at a recognised medical school (*a*) chemistry and physics (with practical laboratory work) for six months."

This Clause provoked considerable discussion.

Dr. Heron Watson asked that the term "course" should be defined.

Mr. Bryant said that every body must be free to make what regulations they pleased in carrying out the large recommendations. The Committee did not wish to bind them to deviate in the slightest degree from the course which they thought best. It would be a mistake to define what "course" meant. What might suit teachers in one part of the country would not suit another.

Dr. Heron Watson asked if he were entitled to inform the body which he represented that the recommendations were guiding lines, and were not meant to be followed absolutely, but only relatively, according to the opinion entertained by that body.

Mr. Bryant: Certainly.

Dr. McVail said that in the Scotch schools chemistry and physics were taught in separate classes, which meant that students there would require to take six months of chemistry in one session, and not less than three months in physics in another session. Again, with regard to practical laboratory work, if the student had to take six months in that, that

would be a separate class altogether. There was no six months' course of chemistry and physics with practical laboratory work in Scotland.

Dr. HERON WATSON said that as long as "course" was a doubtful quantity the problem would never be brought to a termination.

Mr. CARTER suggested the addition of certain words, so that the recommendation should read "at a recognised medical school for at least the periods specified."

Mr. BRYANT agreed to the insertion of the words.

Dr. HERON WATSON asked what physics included. Did it include, for instance, hydrostatics, hydraulics, optics, and electricity? According to his view it did, and for medical students certainly the three last subjects he had mentioned were of extreme importance.

The PRESIDENT said that in the medical regulations physics was to a certain extent specified.

Dr. BENNETT said the question would be settled by stating "chemistry and physics as required from medical students." These requirements were quite familiar to all bodies, and there was no necessity for putting the dental student on a lower footing than the students he was working with.

Mr. BRYANT thought Dr. Bennett's suggestion was the best which had been made. He considered it was practically equivalent to the Committee's recommendation.

Mr. TICHBORNE moved as an amendment that the clause should read "chemistry, theoretical and practical course six months; physics, three months."

Dr. PETTIGREW seconded the amendment.

Dr. REID pointed out that it was not possible to carry out that suggestion in Scotland.

The amendment was negatived by 15 votes against 6.

Sir CHRISTOPHER NIXON moved, and Sir WILLIAM THOMSON seconded the following amendment:

That the recommendation read as follows: "Physics, a three months' course; chemistry, a six months' course of theoretical and a three months' course of practical."

The amendment was negatived by 15 votes against 9.

On the requisition of Dr. MCVAIL the names and numbers were taken down.

The original recommendation of the Committee, with the addition of the words "for at least the periods specified," was agreed to.

Sir RICHARD THORNE called attention to the great disproportion that existed between some of the courses, and asked if, by passing the recommendations separately, the Council was prevented from altering them afterwards when they came to be considered as a whole.

The PRESIDENT pointed out that the Council was now in Committee. When the Committee reported to the Council it was open to any member to raise that point.

At this point the further debate on the Committee's report was suspended while the Council considered *in camerâ* a report by the Solicitor in regard to the prosecutions directed by the General Medical Council at the November session, 1897.

Saturday, May 28th.

Sir WM. TURNER, President, in the Chair.

MEDICAL TITLES.

THE Council proceeded to consider the following notices of motion by Mr. BROWN:

1. That a copy of the information laid against Mr. H. K Hunter, the report of the legal advisers of the Council thereon, and copies of all correspondence with Mr. Hunter relating to the charges made against him, be presented to the Council and entered on the minutes.

2. That all legal expenses connected with any proceedings that may be necessary to obtain the opinion of the superior courts as to the legality of Mr. Hunter's conviction at the Caxton Petty Sessions in April last for describing himself as a physician and surgeon be defrayed by the Council.

3. That the Council vote Mr. Hunter a sum sufficient to defray any law costs he may have incurred in defending himself in the proceedings taken against him by the Council.

Mr. BROWN obtained from the Council permission to withdraw his motions on the ground that the case was *sub judice*.

Strangers having by direction of the Council withdrawn, certain of the recommendations of the Penal Cases Committee as to prosecutions were adopted. A prosecution which was suggested by a member was agreed to. Attention was called by a member to the practice of unqualified persons obtaining registration under the Companies Act, and trading as apothecaries, physicians, and surgeons. A communication was read from the Apothecaries Society of London in regard to its powers of restoring names to its List of Licentiates.

REAPPOINTMENT OF REGISTRAR.

At the close of the proceedings *in camerâ*, it was moved by Dr. MACALISTER, seconded by Mr. BRYANT, and agreed to:

That Mr. Allen be reappointed General Registrar in accordance with the provisions of Standing Order XVIII, 2.

THE LIST OF THE APOTHECARIES' SOCIETY OF LONDON.

The following communication to the President was received from the Solicitor to the Apothecaries' Society of London, and directed to be entered in the minutes:

SIR,—The names of the two Licentiates erased by the Society and restored to their list, after the General Medical Council had restored them to the *Register*, are David Hyman Dyte and Neville Holland: the first restored in June, 1893, and the second in December, 1896. This will enable the Registrar approximately to find the dates when they were restored to the *Register*. As permitted by you, I place my views in writing on the subject of erasure by the Society: The Council cannot cancel or get back a diploma, because it has no statutory power to do so. By its Amendment Act, 1874, it can only erase a name, in the case of "infamous conduct in a professional respect," after the General Medical Council has erased the name from the *Medical Register*. If a licentiate has been convicted of a crime, the Society can act on its own motion. When a name has been erased because the General Medical Council has first struck it off the *Medical Register*, it may be assumed that (*a*) the Society would not restore it, unless under the special direction or advice of the General Medical Council, and (*b*) that it would expect the Council to tell the Society what conditions must be imposed in the matter of examination before the name was restored. Referring to what Mr. Muir Mackenzie says in his opinion as to the statutory right of the Council to restore a name, this would equally apply to the Society. He, however, adds that "the erasure from the list of Licentiates of the Apothecaries' Society involves 'the loss of the qualification entitling' the person to be registered." If this be so, does not a serious question arise whether the Society, without requiring the person to pass a qualifying examination, can restore a name once erased from its list? I venture to repeat that in my opinion fresh legislation is required.—Your most obedient servant, JAMES R. UPTON.

DISCIPLINARY CASES.

Strangers having been readmitted, the PRESIDENT announced the decisions that had been arrived at:

1. That no further proceedings be taken in regard to the case of Isaac Cohen.

2. That the petition in regard to the registration of Mr. Waldo Elmore Royce be not acceded to.

3. That the petitions in the cases of Mr. A. P. Merrill, Mr. T. E. Bush and Mr. E. L. Oldfield, be not acceded to.

Monday, May 30th.

Sir WM. TURNER, President, in the Chair.

THE AMENDMENT OF THE COMPANIES ACT.

Mr. TOMES asked the President if the Council would permit the resolution arrived at *in camerâ* on Saturday, May 28th, regarding a deputation to the Board of Trade upon the amendment of the Companies Act, to appear upon the public minutes of the Council.

The Council having given the requisite permission, the following resolution was placed upon the minutes:

That the President, Mr. Tomes, and Mr. Horsley be a Committee to take such steps as they deem most effective to induce the Government to insert a clause in the Companies Act Amendment Bill, now before Parliament, with the object of preventing the registration of companies to carry on medical, surgical, and dental practice.

The PRESIDENT said that he had written to the Secretary of the Board of Trade, intimating to him that a deputation had been appointed, and asking the President of the Board of Trade to receive it.

PROCEEDINGS IN CAMERÂ.

The Council then proceeded to consider *in camerâ* a report by the Solicitor on a prosecution which had been directed on November 25th, 1897.

PROCEEDINGS IN PENAL CASES.

With the permission of the Council, Sir John Batty Tuke withdrew the following notice of motion standing in his name in favour of a resolution recommended for adoption by the Penal Cases Committee:

That it be an instruction to the Penal Cases Committee that no case be laid before the Council which is not based on information given in the form of statutory declaration, or on written statements made by persons

who express their willingness to attend the inquiry for the purposes of cross-examination.

Mr. Brudenell Carter moved the following resolution recommended for adoption by the Penal Cases Committee:

That no case or complaint should be considered by the Penal Cases Committee until a statutory declaration as to the facts of the case has been supplied by the complainant.

He said that it had repeatedly been the experience of the Penal Cases Committee that charges of a character which probably could not be sustained had been brought by medical practitioners against their neighbours, but when further inquiry had been made the person making the charge did not wish his name to appear, and would not furnish any information. The Committee wished to be relieved from the duty of investigating cases of that kind. The resolution which he had moved made it necessary that the name of the complainant should be made known as well as that of the person complained of, and he hoped would serve to put a stop to the anonymous delators who wished apparently to injure some of their competitors in practice.

Sir John Batty Tuke seconded the motion, which was unanimously adopted.

On the motion of Dr. MacAlister, seconded by Dr. Glover, the following words were added to the foregoing motion:

That the Executive Committee be instructed to add words to the Standing Order xiv, 2, which will carry into effect the foregoing resolution of the Council.

Dental Education and Examination.

The Council then resumed in Committee the consideration of the recommendations of the Dental Education and Examination Committee.

It was moved by Mr. Bryant, seconded by Mr. Tomes:

That Recommendation (iv) (*b*) read as follows: (iv) (*b*) Human Anatomy for six months.

The following amendment was moved by Dr. Bruce, seconded by Dr. Leech:

That words in Sections iv and v of the report of the Dental Education and Examination Committee, fixing particular periods for the "courses of instruction" specified after line 8, page 7, Appendix I., be deleted, and that the subjects of professional study and examination be specified as in the recommendations for the professional education of medical students, without the duration of instruction in each subject being defined, and become recommendations of the General Medical Council for candidates for licences in dentistry and dental surgery.

In opposing the motion, Dr. McVail argued that the course as laid down was on wrong principles. They had no right to incite a man to say that he had a complete medical education when it was not necessary to ask him a single question in medicine. From letters he had read there were members of the dental profession who believed that the present proposals were a deliberate wrong to the dental student; that the course which he had to follow did not enable him to do his work properly; that he had to sit at lectures on medicine and on endless subjects, and the best way in which he could spend his time was to put a book before him and do his best, notwithstanding the lecture, on dental subjects.

Mr. Tomes was quite at one with what Dr. McVail had said, and would very much like to see the dentists of England fully-qualified medical practitioners. A man to get his full medical qualifications had to serve four or five years. If he had also to get special dental education, which was very special, and involved his education to a very large extent in manipulative dexterity, that would take him a very considerable additional period, so that the net result would be that the dentist would have to spend six or seven years on his professional education. He did not think that that at the present moment was practicable.

Mr. Brudenell Carter asked Mr. Tomes whether he was right in holding the opinion that diseases of the teeth were to some extent connected with various constitutional idiosyncrasies, and in such a way that a knowledge of the general principles of medical pathology would be helpful to a dentist in dealing with the various conditions which came under his daily work. If that were so it seemed to him that it would not be difficult that the dental students should be so guided in their medical studies as to derive the maximum of benefit with the minimum waste of time.

Mr. Tomes said that in the everyday practice of the dentist the knowledge of general pathology came in. Hardly a day passed without his seeing and having to form an opinion about cases in which it was difficult to know whether the trouble was local or constitutional.

Dr. Bruce's amendment was lost, 3 voting for, 15 against, and 12 not voting.

The original motion, with the addition of the words "and dissections (with demonstrations) for twelve months," was then put and carried.

On the motion of Mr. Bryant, seconded by Mr. Tomes, the following recommendations were agreed to:

c. Physiology for six months (with practical laboratory work or a separate course of practical physiology).

d. Surgery (including the elements of surgical pathology) for six months.

It was moved by Mr. Bryant, seconded by Mr. Tomes:

That Recommendation (iv) (*e*) read as follows: (*e*) Medicine (including the elements of general pathology) for six months.

The following amendment, moved by Sir Richard Thorne, seconded by Sir John Tuke, was put to the Council and lost, 11 voting for, 15 against, and 4 not voting:

That since the Dental Committee deem it unnecessary to require candidates for the licence in dentistry to undergo any examination whatever in medicine, the requirement that they shall attend a course of at least six months in medicine, and a course of clinical medicine at a general hospital extending over at least twelve months, be eliminated from the regulations.

The original motion was then put and carried.

It was moved by Mr. Bryant, seconded by Mr. Tomes:

That Recommendation (iv) (*f*) read as follows: (*f*) Clinical Surgery and Medicine (at a recognised general hospital) for twelve months.

Dr. McVail contended that the resolution was a sham. Nothing could be worse, and it was making a complete burlesque of the whole medical education. It meant nothing at all, and degraded the whole system of medical education. He moved as an amendment the omission of the words "and medicine."

Sir Christopher Nixon seconded the amendment.

Mr. Bryant contended, in answer to Mr. McVail, that the bulk of men who came up to study medicine had to educate their eyes, and look at disease and see and recognise it. If a student was put under the guidance of a skilled teacher for six months or a year, although it would not make him a competent practitioner, it would give him an immense amount of general knowledge in the observation of disease. To say that that was useless was extraordinary.

The amendment was put to the Council and lost, 11 voting for, 18 against, and 1 not voting.

Dr. McVail moved as a further amendment:

Clinical Surgery during nine months, and subsequently Clinical Medicine during six months, at a recognised general hospital.

Dr. Heron Watson seconded the amendment, which was put to the Council and lost, 2 voting for, 18 against, and 10 not voting.

The original motion was then put and carried.

It was moved by Mr. Bryant, seconded by Mr. Tomes:

That Recommendations (v) and (vi) (*a*), and (*b*) read as follows: (v) That he has attended courses of instruction in the following *Special Subjects*, at a recognised Dental School for at least the period specified. (*a*) Dental Anatomy and Physiology, human and comparative (with practical work and demonstrations in Dental Histology), for [three] months; (*b*) Dental Pathology and Surgery for [three] months, including Materia Medica and Therapeutics applicable to Dental Surgery for [three] months.

On (*b*) Mr. Bryant explained that it had been thought expedient to cut out the whole course of lectures on Materia Medica, as the student was only wanted to know the small part that belonged to his own profession.

Dr. Leech thought the students should have a knowledge of materia medica, as the dentists were constantly using arsenic and carbolic acid in the treatment of their cases.

Dr. Heron Watson thought it was a great mistake to leave out materia medica.

The recommendations were carried, the word "with" being substituted for "including" in (6).

On the motion of Mr. Bryant, seconded by Mr. Tomes, the following recommendations were also passed:

(c) Dental Metallurgy (with practical work and demonstrations) for [three] months.
(d) Dental Mechanics (with practical work and demonstrations) for [three] months.
(VI) That he has for two years attended the practice of a recognised dental hospital, or of the recognised dental department of a general hospital.
(VII) That he has, before or after registration as a dental student, received for three years practical instruction in Mechanical Dentistry from a registered dentist, or in the mechanical department of a recognised dental school and hospital.
*** No portion of this instruction which is anterior to the date of registration shall be reckoned as a portion of the four years of professional study required.

C. PROFESSIONAL EXAMINATIONS.

4. That the Examinations for a Licence in Dentistry or Dental Surgery shall be partly written, partly oral, and partly practical, and shall include the following subjects:
(a) Chemistry and Physics.
(b) Practical Examination in Dental Mechanics and Metallurgy.
(c) Dental Anatomy, Physiology, Pathology, and Surgery, with Materia Medica and Therapeutics applicable to Dental Surgery.
(d) Practical Examination in Dental Surgery.
(e) Human Anatomy and Physiology.†
† It is recommended that a synopsis of the scope of the examination in these subjects be issued by the licensing bodies.
(f) Principles of Surgery and Medicine (as) in their application to Dental Surgery †
† It is recommended that a synopsis of the scope of the examination in these subjects be issued by the licensing bodies.

5. That the prescribed subjects of examination may be combined or distributed at the discretion of the licensing bodies, and may be taken at two or more successive stages during the course of professional study; provided that no candidate shall be admitted to any Final Examination in Dental Surgery and Mechanical Dentistry until he shall have completed the required four years' course.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the Council then resumed, and the REGISTRAR read the report by the Dental Education and Examination Committee as amended by the Committee of the whole Council.

On the motion of Mr. BRYANT, seconded by Mr. TOMES, the report of the Committee was adopted for issue as the recommendations of the Council.

Tuesday, May 31st.

Sir WM. TURNER, President, in the Chair.

Mr. BRYANT read an additional report of the Dental Education and Examination Committee with regard to a suggestion made at the last session in relation to the two Scotch licensing bodies.

This report was not entered on the minutes, and nothing was done with regard to it.

DISCIPLINARY OR PENAL POWERS OF THE QUALIFYING MEDICAL AUTHORITIES.

The Council considered the fourth report on the above subject. It will be remembered that the Executive Committee was instructed in November, 1895, to consider the matter and report to the Council as to the best means of further defining and confirming these functions, and bringing them into harmonious and efficient co-operation. Since its last report the Committee announced that further communications on the subject had been now received from the Scottish Universities, and a considerable advance had been made. An epitome was given of the answers received from the licensing bodies up to date, and the conclusions of the Committee are as follow:

As the disciplinary powers of the twenty qualifying bodies vary vastly, and the views of these bodies differ widely as to the expediency of their seeking for more powers than they now possess, the conclusion seems to be clear that this Council must take the matter into its own hands, either by adopting a suggestion which was embodied in a report of this Committee, received by the Council in May, 1896, and supported by a carefully considered opinion of Mr. M. Muir Mackenzie, or by acting on the suggestion of the Scotch universities, and so amend Section XL of the Medical Act as to prohibit the use of a university degree by a medical graduate whose name has been removed from the *Register*. If the latter measure is thought by the legal advisers of this Council to be expedient, it seems to this Committee to be the best and soundest one to adopt; for the prohibition of the use of any medical title, whether of a university or otherwise, by anyone who has had his name erased from the *Medical Register* for infamous conduct, would be a simple and effective action.

Mr. BRYANT read portions of the report, and ended by moving:

That the President be requested to communicate with the Lord President of the Privy Council as to the practicability of obtaining such an amendment of the law as would more effectually prevent the holder of a medical diploma or [degree from using the title thereof after his name has been erased from the *Medical Register* under Section XXIX of the Medical Act, 1858, and for so long as the erasure continues in orce.

Dr. MACALISTER seconded the motion, which was agreed to.

DIRECT REPRESENTATION.

The following notice of motion by Mr. BROWN was next considered:

That in the opinion of the Council, in view of the large increase in the number of registered practitioners residing in the United Kingdom, the time has come when it would be expedient to confer upon them the power of returning an increased number of direct representatives to the General Medical Council, as provided for in Section X, Subsection I, Paragraph C of the Medical Act of 1886, and that representations be made to the Privy Council accordingly.

Mr. GEORGE BROWN stated that the last time such a motion was brought forward was in 1891, when 5 members voted for it, 21 against, 3 members were absent, and 1 did not vote. There was such a large accession of new blood to the Council that he had hoped the resolution would be received with more favour, but it had been represented to him that at that late period of the session it would be inadvisable to bring forward that motion. With the consent of the Council he would, therefore, postpone it till the November session.

ADMINISTRATION OF THE DENTISTS' ACT.

Mr. HORSLEY moved, and Mr. GEORGE BROWN seconded:

That Standing Order No. 15, Chapter VII be and hereby is rescinded. The Standing Order in question runs as follows: The Executive Committee shall carry out generally the provisions of the Dentists' Act in accordance with the Council's resolutions thereon.

Mr. Horsley's contention was that the Council had no right to delegate its authority in the matter to the Executive Committee.

The motion was agreed to by 9 votes against 8; 13 did not vote.

NOTICES OF MOTION.

On the motion of Dr. ATTHILL, seconded by Mr. TEALE, the following notices of motion were referred to the Executive Committee for consideration and report:

Notice of Motion by Mr. HORSLEY for a new Standing Order, Chapter IX: "That the following be added to the Standing Orders, Chapter IX, to follow Standing Order No. 7: 'Each Committee shall be convened by the Chairman of his own motion or by the requisition of any two members of the Committee.'"

Notice of Motion by Mr. HORSLEY: "That the Penal Cases Committee shall be included among the other Committees to be annually appointed in May under Standing Order No. 8, Chapter IX."

Notice of Motion by Mr. HORSLEY: "That in Standing Order No. 5, Chapter IX, the following shall be a new sub-section: (IV) The Penal Cases Committee shall meet at least once a month."

Notice of Motion by Mr. HORSLEY: "That the sentence 'as and when approved by the President,' in Sub-section *a* of Standing Order No. 3, Chapter XIV (p. 24), be and is hereby rescinded."

Notice of Motion by Mr. HORSLEY: "That in Standing Order No. 5, Chapter XIV, after the word 'offence,' the Order shall read, 'the matter shall be referred to the Committee of Penal Cases.'"

Notice of Motion by Mr. HORSLEY: "That in Standing Order No. 6, Chapter XIV, for the word 'Solicitor' shall be substituted the words 'General Registrar,' and that with regard to Appendix A, p. 31, the letter scheduled therein shall be signed by the Registrar to the General Medical Council."

Notice of Motion by Mr. HORSLEY: "That Standing Order No. 8, Chapter XIV, shall read as follows: 'When any answer, evidence, or statement is forwarded, or application made by the accused person between the date of the issue of the notice and the day named for the hearing of the charge, copies thereof shall be immediately sent by the Registrar to each member of the Penal Cases Committee."

Notice of Motion by Mr. HORSLEY: "That in Standing Order No. 9, Chapter XIV, for the word 'President' shall be substituted the words 'Penal Cases Committee.'"

THE RIGHTS OF MEMBERS OF THE COUNCIL.

On the motion of Mr. HORSLEY, it was agreed:

That the opinion by Mr. Mu r Mackenzie, read on the first day's meeting of the present Session, May 24th, be entered in the Minutes.

THE DIPLOMA OF PUBLIC HEALTH.

Sir WILLIAM GAIRDNER called attention to apparent diversities of interpretation given at different places to the Regulations of the General Medical Council as regards the course of study for a Diploma of Public Health. The particular requirement involved is that as to the candidate for a Diploma of Public Health "having personally studied the duties of outdoor sanitary work under the Medical Officer of Health of a county or large urban district during a period of six months." He moved:

That the consideration of this subject be remitted to the Public Health Committee.

This was agreed to.

DENTISTS AND UNQUALIFIED ASSISTANTS.

The Council proceeded to the consideration of a communication from the British Dental Association, dated February 12th, referred by the Executive Committee to the General Medical Council, as to the issue of a notice to dentists in regard to the employment of unqualified assistants. The letter stated:

Certain members of the dental profession, who possess medical qualifications, have received an important notice from the General Medical Council as to the employment of unqualified persons and assistants. On behalf of the British Dental Association I beg to submit that the time has arrived when a somewhat similar notice as regards "covering" might be sent to all dentists, or that the notice issued to the dental profession by the General Medical Council in 1893 might be repeated. The notice of 1893 was found to be of much service in helping to check the spread of the practice of "covering," as members of the Executive of this Association have reason to know; and it is felt that the issue of another notice at the present moment would, as a preventive measure, be most opportune.

On the motion of Dr. MACALISTER, seconded by Mr. TOMES, it was resolved:

That the question raised by the foregoing letter be referred to a Committee consisting of the members of the Dental Committee for consideration and report.

ADMINISTRATION OF ANÆSTHETICS FOR UNQUALIFIED DENTAL PRACTITIONERS.

A letter, of which the following is an extract, was also referred to the same Committee. It was a communication referred by the Executive Committee to the General Medical Council, from the Dundee and District Branch of the British Medical Association, signed by the Secretary (Dr. Buist), as to the administration of anæsthetics by registered medical practitioners for unregistered dental practitioners—a practice which, in the opinion of the Executive Committee, is most reprehensible. It ran as follows:

I have been asked by the Council of this Branch to ask you whether the recent notice issued by the General Medical Council will extend to the case of a registered medical practitioner, who by administering anæsthetics for dental operations by persons not registered under the Dental Acts gives countenance to this most objectionable form of practice.

DENTAL BUSINESS.

On the motion of Dr. MACALISTER, seconded by Mr. HORSLEY, it was agreed:

That the Executive Committee be empowered to receive and consider all applications and communications relating to dental business other than matters pertaining to the Dental Committee, and report thereon to the Council.

INSTRUCTION IN TROPICAL DISEASES.

On the motion of Sir JOHN TUKE, seconded by Dr. MACALISTER, the report of the Education Committee on special instruction in tropical diseases was adopted.

The Committee recommend that the Council inform the Secretary of State for the Colonies that, while the Council is not prepared to recommend that tropical medicine should be made an obligatory subject of the ordinary medical curriculum, it deems it highly desirable in the public interest that arrangements should forthwith be made by the Government for the instruction in tropical medicine, hygiene, and climatology of duly qualified medical practitioners who are selected for the Colonial Medical Service, or who otherwise propose to practise in tropical countries.

PRELIMINARY EXAMINATIONS.

Sir JOHN TUKE moved the adoption of the Education Committee's interim report on the revision of recognised Preliminary Examinations. The Committee recommended:

That notwithstanding the Council's resolution of November 29th, 1897, the revised list of Preliminary examinations to be submitted by the Education Committee at the November Session do not come into force until January 1st, 1900.

Dr. MACALISTER seconded the motion, which was agreed to.

THE EXAMINATIONS OF THE SOCIETY OF APOTHECARIES.

Mr. BRYANT moved, and Dr. HERON WATSON seconded, the reception of the report of the Apothecaries' Hall Examinership Committee, together with the following resolution:

That Mr. H. G. Howse, M.S., F.R.C.S., be appointed an Assistant Examiner in Surgery at the Examinations of the Apothecaries' Hall, Dublin, in the room of Mr. Arthur Chance, resigned; and that the duties and conditions of his appointment be the same as those relating to the appointment of Mr. Chance.

This was agreed to.

FINES UNDER THE MEDICAL ACTS.

Sir DYCE DUCKWORTH moved:

That the interim report from the Committee on Fines under the edical Acts be received and entered on the minutes.

This was agreed to.

The report merely stated that as late as May 17th the Registrar had been informed by the Commissioner of Police, who was in communication with the Home Secretary, that the matter was still under consideration.

FINANCE COMMITTEE.

The Council proceeded to consider the report of the Finance Committee.

The Finance Committee reported that the income of the General and Branch Councils for the year ending December 31st, 1897, was £7,942 18s. 4d., but that the expenditure for the same period, having been £10,761 1s., exceeded the receipts by £2,818 2s. 8d., as against an excess of £1,526 18s. 10d. last year. The fees received by the Branch Councils were considerably less than last year, as £557 7s. 6d. less was received from that source in England, £254 10s. less in Scotland, while Ireland alone shows a small increase of £32 5s., making a total decrease of £779 12s. 6d. Among the items of increased expenditure may be specified the following: An increase of £404 for the *British Pharmacopœia;* an apparent increase of £451 in salaries, caused by the vote of £1,000 as an honorarium to the late Registrar; an increase of £172 in law expenses, due chiefly to counsel's fees in the appeal by the Apothecaries' Hall of Dublin to the Privy Council; an increase of £60 on account of the interest due on the mortgage entered into by the General Medical Council, the amount having been increased from £20,000 in 1896 to £22,507. On the other hand, a decrease of expenditure has to be noted: In fees paid to the General Medical Council, £343; in miscellaneous printing, £352; in inspection and visitation of examinations, £65.

The Report stated further that—

The question of establishing a sinking fund for the repayment of the loan of £20,000 from the English Branch Council should be considered by the Council. This may be done either by the annual deposit of a sum of money at the Bank of England and the investment of capital with its interest, so that a capital sum would be secured at a fixed period, or by making an annual payment to a sound and established insurance company. An inquiry at the Bank of England as to the best method to adopt elicited a letter from the Manager, in which he informs the Committee that it would probably be more advantageous for the Council to arrange the matter with some first-class insurance office than to do so with the Bank of England, both on the grounds of cheapness and simplicity. Under these circumstances, it seems best to your Committee that this advice should be followed, and your Committee have to advise that by making an annual payment of £172 10s. to the Alliance Insurance for fifty years the sum of £20,000 would be realised. By means of this fund the whole of the debt of the General Medical Council would be wiped out, and the Council would have its freehold buildings rent free; and this would be done by the payment of a sum of money every year which would hardly be felt by the Council. The question of raising the Oxford Street building another storey should also be entertained, for more Committee rooms, and a room for the President, are much wanted.

Mr. BRYANT moved:

That the suggestions contained in the Finance Committee's report as to the formation of a sinking fund be referred to the several Branch Councils for consideration and report to the General Council.

Dr. BRUCE seconded the motion, which was agreed to.

ENLARGEMENT OF THE COUNCIL HOUSE.

It was moved by Mr. BRYANT, seconded by Dr. MACALISTER, and agreed to:

That the President and Treasurers be empowered to obtain plans and estimates for the addition of another storey to the present offices, and report to the Council.

EXECUTIVE COMMITTEE.

The following gentlemen were elected to the Executive Committee: Sir Dyce Duckworth, Mr. Bryant, Mr. Carter, and Dr. Glover, as members of the English Branch Council; Dr. Heron Watson and Sir William Gairdner as members of the Scottish Branch Council; and Dr. Atthill and Sir Philip Smyly as members of the Irish Branch Council.

On the motion of Dr. MACALISTER the standing orders were suspended until the conclusion of the business before the Council.

THE POWERS OF THE EXECUTIVE COMMITTEE.

It was moved by Mr. HORSLEY, seconded by Sir CHRISTOPHER NIXON:

That the powers and duties delegated in accordance with the Standing Orders (as amended at the present session) to the Executive Committee be vested in the said Committee until the next May meeting of the General Medical Council.

The motion was lost by 18 to 5.

PHARMACOPŒIA COMMITTEE.

On the motion of Mr. CARTER, seconded by Dr. LITTLE, the report of the Pharmacopœia Committee was adopted. The Committee appended an account of the methods adopted in preparing the *British Pharmacopœia, 1898*, and reported that the distribution of copies commenced on May 7th, and that up to May 25th 11,385 copies had been sold.

Votes of thanks were passed to the Pharmacopœia Committee, and to all those who had rendered assistance in preparing the *Pharmacopœia*.

REGISTRATION OF NAME.

A report from the English Branch Council, recommending the General Medical Council to register the name of Robert Arnold Barker, Lic. Soc. Apoth. Lond. 1861, M.D. Univ. St. And. 1862, was adopted.

STUDENTS' REGISTRATION COMMITTEE.

The Committee reported that applications had been made to them either for exceptional registration as students or for the antedating of the commencement of professional study, and stated the manner in which those applications had been dealt with.

On the motion of Sir DYCE DUCKWORTH, the Report was approved.

COMMITTEE ON UNQUALIFIED ASSISTANTS.

It was moved by Mr. TEALE, seconded by Dr. BRUCE, and agreed, that the report be received and entered in the Minutes.

Report.

The Report stated that the Committee found, on examining the petitions and communications referred by the Council to the Committee, that the chief questions raised therein might be fairly classified under the following heads:

"(i) Whether the Council can, consistently with the law, authorise the Examining Bodies to hold special Examinations for a particular class of persons who have lately been employed as unqualified assistants. (ii) Whether the Council is prepared to suspend the operation of the resolution adopted on November 24th, 1897, in the interest of certain practitioners who state that they are at present unable to obtain qualified assistance in their practice. (iii) Whether the Council can take any steps for the reinstatement of certain unqualified assistants who have been dismissed by their employers since the issue of the Council's Notice. (iv) Whether the Council should issue any detailed definitions or explanations as to the extent to which unqualified persons may be 'legitimately employed' by registered practitioners."

"The Committee have carefully considered these questions, and beg leave to recommend that the answers of the Council thereto should be to the following effect. The Committee do not think it necessary that the Council should receive any deputations on the subject. (i) The Council has no power under the Medical Acts to request or to authorise any of the licensing bodies to institute special examinations for a registrable licence, other than the 'qualifying examinations' in medicine, surgery, and midwifery defined by the Act of 1886. (ii) There appears to be evidence that at the present moment certain practitioners do find difficulty in obtaining the services of legally qualified assistants. Junior practitioners are no doubt unwilling in many cases to accept the inferior and ill-paid positions which have hitherto been occupied by unqualified men. But it is reasonable to expect that before long improvement in the terms and conditions offered by principals, and the natural operation of the economic law of supply and demand, will remove the difficulty complained of. The Council cannot regard such a temporary inconvenience as a ground for suspending the operation of a resolution deliberately adopted by it, with a view to the repression of fraudulent and dangerous practices. (iii) It is not within the province of the Council to take any steps in the direction suggested. (iv) The terms of the Notice issued by the Council convey with sufficient clearness the limitations which it was intended to place upon the employment in connection with medical practice of unqualified persons by registered practitioners. The registered practitioner will be liable to proceedings before the Council—

(1) If he knowingly allows 'such unqualified persons to attend or treat patients in respect of matters requiring professional discretion or skill.'

(2) If he thus allows 'such a substitution of the services of an unqualified person' for his own, this substitution being 'in its nature fraudulent and dangerous to the public health.'

(3) If under cover of his own qualifications he knowingly does anything to enable 'an unqualified or unregistered person to attend or treat any patient, to procure or issue any medical certificate or certificate of death, or otherwise to engage in medical practice, as if the said person were duly qualified and registered.'

"The employment of unqualified 'dressers, midwives, dispensers, and surgery attendants' can be 'legitimate' only (1) if it does not come under one of the foregoing heads, and (2) when it is carried out 'under the immediate supervision of registered medical practitioners.' The Council do not think it necessary or expedient to issue more precise definitions, or to lay down regulations intended to meet all the particular cases which may arise. As in all other instances, the Council must deal with each case on its merits. Whenever a practitioner is alleged to be making improper use of unqualified assistance, the Council will have to be satisfied that the allegation is fully substantiated.

"T. PRIDGIN TEALE, Chairman."

The Committee's recommendations were moved and discussed severally, and all were agreed to.

INSPECTION OF DOCUMENTS.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, it was resolved:

That in pursuance of the Council's resolution adopted on May 25th, 1898, in reference to the inspection of documents, the following chapter be added to the Standing Orders:—XXIII. Inspection of documents: 1. Members of the Council who desire access to unpublished documents (other than documents relating to penal cases) which are the property of the Council shall be required to obtain leave for inspection thereof either from (1) the Council, or (2) the Executive Committee; or (3) if neither body be in session or about to be in session, from the President. 2. The application for leave shall be in writing, and shall specify, so far as is possible, the nature of the documents to which access is desired, and also the purpose for which the inspection is to be made. 3. Leave to inspect documents relating to penal cases shall not be given except by the Council itself. 4. Documents to which access is permitted under this Standing Order shall not be removed from the offices of the General Medical Council. 5. All information derived from the inspection of the Council's documents under this Standing Order shall be regarded as strictly confidential.

CONCLUDING BUSINESS.

The following Committees were appointed: Pharmacopœia, Finance, Dental, Examination, Education, Public Health, Dental Education and Examination, and Students' Registration.

The recommendation of the Executive Committee as to increase of the salaries of Mr. Allen and the staff was agreed to.

This concluded the business of the Council for the session.

SPECIAL CORRESPONDENCE.

BERLIN.

The Health of Shop Girls.—Medical Examination of School Children.—Small-Pox in an Ethnological Show.—Poor-law Medical Officers and their Pay.—Report of the New Lying-in Home.—Berlin Ambulance Societies.—General News.

A CIRCULAR has been addressed to the doctors of the Berlin sick clubs, asking their opinion on the employment of shop-girls in connection with the diseases so prevalent amongst them as to be almost typical—anæmia, nervous exhaustion, and similar disorders. It appears that the answers are unanimous in condemning the long hours, and especially the constant standing, as extremely hurtful to young women, and that they urgently demand the following reforms: (*a*) Maximum of work, ten hours daily, with a two hours' rest in the middle of the day; (*b*) a sufficiency of seats behind the counter, with permission to use them; and (*c*) proper ventilation of the sale rooms, the floors to be washed or mopped up with wet clothes once during the day.

There is much talk of the appointment of "school doctors" in Berlin for the periodical examination of school children and supervision of the sanitary conditions of school buildings. Several German towns are ahead of Berlin in this respect—for instance, Wiesbaden, where the institution has

been in force since 1896. The school doctors keep written notes of each school child found delicate or suffering from some ailment, and besides supervising the ventilation, drainage arrangements, periodical cleaning, etc., of the school houses, are present at the teachers' meetings, and from time to time read papers there on questions connected with school hygiene.

Small-pox has broken out among the Togo negroes, who are on view in one of the Berlin ethnological shows. The whole troupe has been removed to the Moabit Hospital for observation, and the persons attacked—ten men and two women—carefully isolated.

The Berlin "Armenaerzte" (Poor-law medical officers) have decided to petition the municipality for an increase of salary; it is to be hoped that they will meet with success. The districts being large the work is extremely arduous, while the remuneration (from £60 to £75 per annum) is below that paid by many of the sick clubs to their doctors.

The new Berlin "Lying-in-home," a charitable institution supported entirely by voluntary subscriptions, has just published its first annual report, and may congratulate itself on its successful work during the first year of its existence. The home has been quite free from epidemic disease and fever, and, as a rule, the health of both mothers and babes has been remarkably good. One advantage of the home is that its inmates may remain until four weeks after confinement, though, as a rule, they leave from ten to eighteen days later.

The new Berlin Ambulance Society, "Rettungs-gesellschaft," of which Professor von Bergmann is the president, has succeeded in establishing a connection with the twelve most important Berlin hospitals. Its central bureau now communicates by private telephonic wire with each of these hospitals, and is thus enabled, by night or day, to answer inquiries from any of the local ambulance stations, as to where beds are free, and to which hospital the case in question should be transported. In cases where specialists are found necessary, their aid can be obtained by telephonic application to the central bureau.

The Prussian Council for the Regulation of the Preparation and Sale of Drugs has just held its annual meeting in the medical department of the "Cultus" ministry. A number of ministerial officials took part in the proceedings.

Professor Hefter, of Leipzig, has been appointed a member of the Imperial Board of Health after having filled the post of an assistant for about a year, during which time his work has been chiefly on matters connected with pharmacology and the German *Pharmacopœia*.

EDINBURGH.

Dr. John Sibbald.—The Date for Adoption of the New Pharmacopœia.—The Harveian Festival.—The Edinburgh Royal Infirmary Residents' Club and Lord Lister.—The Club and the British Medical Association.

The retirement of Dr. John Sibbald, one of Her Majesty's Commissioners in Lunacy for Scotland, which would, under the Civil Service regulations, have taken place a few weeks hence, has, we understand, been postponed till March 31st, 1899, by the Lords Commissioners of Her Majesty's Treasury. This has been done in consequence of representations made by the General Board of Lunacy, and by Lord Balfour of Burleigh. Certainly in this case the Lords Commissioners might well have been more liberal, and extended for a longer period Dr. Sibbald's official connection with lunacy in Scotland, since it is admitted on all hands that his retirement will be a serious loss to lunacy administration.

The new *Pharmacopœia* is giving rise to considerable difficulties and heart-burning to the chemists. Most of these difficulties might have been obviated had the Council decreed that it would not come into full operation, say, till January 1st, 1899. For example, a chemist the other day received a prescription for tincture of aconite where evidently the desire and intention of the physician was that his patient should receive a minim dose each hour. But the 1898 strength of aconite is two-fifths of the strength of the *British Pharmacopœia* of 1885. Shall the chemist, then, dispense according to the latter or the former *Pharmacopœia*? Legally he is bound to go by the 1898 *British Pharmacopœia*. Similar difficulties have arisen in connection with the tinctures of belladonna, nux vomicæ, and strophanthus, and the hypodermic injection of morphine, all of which have been greatly altered in strength. Mr. Martindale has intimated that he will not dispense by the new *Pharmacopœia* till Midsummer Day, unless the new *British Pharmacopœia* is specially stated on the formula. On the other hand, the President of the Pharmaceutical Society gave orders to his assistants to dispense only by the new *Pharmacopœia* from the date of publication. But surely it is an anomaly if chemists are to be left to judge when the new *Pharmacopœia* is to be the order of the day. The Council might further, and with great advantage and convenience to practitioners, have printed on the first page of the new book a summary of the more important changes. It is curious that only now does terebene appear in the official list, and apparently the belated drug is now very little prescribed in Edinburgh.

The 116th Harveian Festival will be held in the Hall of the Royal College of Physicians of Edinburgh on June 3rd, when Dr. Alexander Ballantyne, of Dalkeith, will give the Oration on "Harvey and Embryology."

The fourth annual dinner of the Edinburgh Royal Infirmary Residents' Club will be held on Thursday, June 16th, in the Royal Hotel, when Lord Lister, the President of the Club, will occupy the chair. The dinners have always hitherto been well attended—seventy members on an average, and this year the function is likely to be still more successful. An additional interest is given to the meeting from the fact that the President (along with Lord Wolseley) will receive the freedom of the City of Edinburgh on the previous day. On the afternoon of the same day Lord Lister is to be the guest of the President and Fellows of the Royal College of Surgeons of Edinburgh, when a large company has been invited to meet him. The club itself, the membership of which is limited to past house-physicians and surgeons to the Royal Infirmary, has at present 262 members. Three years ago it presented a handsome challenge cup for inter-ward football matches, with the view to encouraging a greater interest in athletics among students. The competition for the cup has always been very keen, as many as nine teams competing annually. The present holder is the Dean of the Faculty of Medicine (Professor T. R. Fraser). Last year the club offered a prize in clinical surgery, and this it is proposed to give annually. Curiously enough proficiency in this subject had previously not been recognised by any special prize, though there are annual prizes both in clinical medicine and obstetrics.

On the occasion of the forthcoming meeting of the British Medical Association at Edinburgh it is proposed that the Residents' Club should entertain the members of the Association at a smoking concert on the night of Monday, July 25th. As, unfortunately, the kitchen of the infirmary, so well known to all Edinburgh men as the scene of the Residents' concerts, will not be available, the club has secured the hall of the University Union, which, though not hallowed by the same associations, will be probably more comfortable, and certainly cooler. The Committee of the club cordially invites all members of the Association who arrive on the Monday evening to make their way to the Union Hall.

GLASGOW.

Resignation of Principal Caird.—Final Medical Examination, Glasgow University.

Rumours that Principal Caird would probably resign were current some months ago, when he was seriously ill. However, we are glad to know that he has steadily recovered from this illness, and his resignation has therefore come rather as a surprise to those connected with the University. He has, however, been more or less incapacitated from taking an active part in University affairs since the spring of 1896, when he suffered from a slight hemiplegia, and probably more complete retirement is indicated. The venerable principal will be much missed at the University, whose head he has been for the last twenty-five years. He is now in his 79th year. The appointment of his successor rests with the Crown.

The Final Examination in Medicine at the University is again in progress. A new departure has been made this year by having the various written papers first, and the clinicals afterwards. The number of candidates is 127, of whom 19 are women.

MANCHESTER.

The Infirmary Question in Abeyance.—New Union Hospital at Patricroft.—Artisans' Dwellings.—Conference on Disposal and Treatment of Town Sewage.

IT can hardly be taken that the decision of the Board of Management of the Infirmary chronicled in the BRITISH MEDICAL JOURNAL of May 28th settles the matter one way or the other. The question is for the moment in abeyance; the diversity of opinion amongst those who take an interest in the question is so great that the wisest course seems to be to let the question slumber for a time at any rate. This will give the Corporation and the Infirmary authorities time to consider it further. No scheme yet put forward appears to meet the requirements, and each scheme has been met with strong opposition. The Committees appointed by the Corporation with reference to a combined art gallery and reference library still continue their deliberations, but of course if the Infirmary's refusal to sell the site is final, then some other course will have to be taken by the respective Committees.

The Local Government Board have empowered the guardians of the Barton Board to borrow £20,000 for the erection of a new union hospital at Patricroft. Of this sum £16,000 is repayable in thirty years and £4,000 in fifteen years.

It is a hopeful sign of the times to find, in a report by the Unhealthy Dwellings Subcommittee of the Corporation in regard to the occupation of the Corporation dwellings in Oldham Road, which were erected under the Artisans and Labourers Dwellings Act, that the strong prejudice amongst the labouring classes in regard to buildings of this description has died away. The buildings were erected in 1894, and so large now is the number of applicants for tenements, that the Committee are enabled to refuse any applicants whose character may not be satisfactory.

Under the auspices of the Sanitary Association, Dr. Leech presiding, an important conference was held last week relative to the disposal and treatment of town sewage. The conference was well attended by medical officers of health from the surrounding districts, and by others interested in sanitary matters. The subject was dealt with under the following heads: (1) The public health aspect of the question; and (2) methods of treatment of sewage. Dr. Charles Porter, Medical Officer of Health for Stockport, read a paper on the Public Health Aspect of the Sewage Disposal Question. He urged that whatever method of water carriage be adopted, a staff of men should be employed by the sanitary authority to see that the appliances in cottage property were kept in proper condition. This is done at present in Burnley, Stafford, Leeds, and Sheffield. Comparing conservancy systems with water-carriage systems he emphasised the superiority and growing necessity of the latter. With reference to the degree of sewage effluent purity necessary for public health purposes, all that was required was that the effluent would not, when turned into a water course, undergo a subsequent secondary decomposition, and smell offensively. It had been asserted by at least one competent chemist that the public health requirement of no secondary decomposition could be fulfilled by an effluent of considerably less purity than that for which Manchester was called upon. If this were so, it would be interesting, from the public health point of view, to learn why this apparently unnecessary degree of purification was required.—Dr. D. B. Hewitt, Chairman of the Health Committee of the Cheshire County Council, read a paper on Methods of Treatment of Sewage. He pointed out the impracticability of land treatment as far as Manchester was concerned. Berlin had 18,000 acres of suitable sandy land under treatment, and yet had to send its effluent from dyeworks to be treated elsewhere. Some means should certainly be taken to prevent waste of public money in purchasing unsuitable land. The Local Government Board had passed dozens of schemes without systematic inquiry as to whether they were workable. The comparatively small town of Leigh had purchased 220 acres of land for sewage treatment, whilst Manchester, with a population of over half a million, only possessed about thirty acres. The experimental beds at Davyhulme had proved successful, and, after a personal inspection of them, he was surprised that the Rivers Committee of the Corporation had not long since decided to extend them. The only explanation which occurred to him was the absence of any hope of profit. There would be no direct pecuniary profit, but the waters of the Ship Canal would be made purer and less offensive.—Mr. G. J. Fowler, under whose superintendence the experimental filters at Davyhulme have been working, stated that the results to-day were quite as satisfactory as at first.—Sir Bosdin Leech, Chairman of the Rivers Committee of the Manchester Corporation, stated that Manchester had the most sewage of any town in the kingdom. In addition to domestic sewage, they had the refuse from dye works and manufactories of various kinds. One firm alone turned into the city sewers 60,000 gallons a day, and another 100,000 gallons. This made the sewage vastly more difficult to purify.

LIVERPOOL.

Royal Infirmary: Annual Medical Report.—The Liverpool Medico-Chirurgical Journal.—The Hospital for Women, Shaw Street.

THE annual medical report of the Royal Infirmary for 1897 has just been issued in the form of a neat volume of more than 100 pages, which presents in tabular form the condensed records of the wards and the *post-mortem* room. This is the second annual volume of the kind which has been issued since the Committee, acting on a recommendation of the Medical Board, sanctioned the publication of a complete medical, surgical, and pathological report, distinct from the ordinary secretarial report supplied to the general body of subscribers. A feature which at once strikes the reader is the immense variety of diseases and the large number of serious cases which are met with in this comparatively small hospital, where the average number of beds occupied is about 250. For instance, we find recorded Addison's disease, 6 cases; idiopathic anæmia, 2; Hodgkin's disease, 3; leucocythæmia, 2; Friedreich's disease, Raynaud's disease, Graves's disease, 9; myxœdema, 4; operations for hernia, 86; and for pyloric obstruction, 7; laminectomy, 2. The total number of major operations performed in the surgical wards was 898. Of these operation cases, 76 per cent. were cured, and 17 per cent. relieved, while only 4.6 per cent. died. Besides these there were 118 major operations performed in the gynæcological wards, with only 4 deaths. The Roentgen ray apparatus, which was installed in July, was employed sixty-nine times before the end of the year. Perhaps the most valuable part of the report is that which deals with the *post-mortem* examinations, and comprises a short summary of 149 necropsies, with comments thereupon. The volume has been considerably augmented and improved as compared with the issue of last year, and will be of undoubted value to the student and to the compiler of statistics. It is generally supposed that its scope will be still further extended in future years.

The *Liverpool Medico-Chirurgical Journal*, which has been conducted for several years by a Committee elected conjointly by the promoters of the *Journal* and by the Medical Institution, became the property of the latter body on January 1st of this year. The next half-yearly number, which is being prepared by a committee of the Institution, with Dr. James Barr as Editor, will be published on July 1st. It will in appearance be uniform with former numbers of the *Journal*, but will give greater prominence to the Transactions of the Medical Institution. It is hoped that now that the *Journal* is the property and organ of the Institution, all members of the latter will subscribe to it. In this case its financial success will be assured.

The vacancy on the staff of the Hospital for Women, which became vacant when Mr. T. B. Grimsdale was appointed to the Royal Infirmary, has been filled by the election of Dr. John Gemmell, who has been assistant medical officer for some time. Dr. Gemmell has held several important posts in Liverpool, including that of chloroformist to the Royal In-

firmary, and is one of the hospital medical officers to the Ladies' Charity. The appointment meets with the universal approval of his professional brethren.

CHICAGO.

Affiliation of Rush Medical College with the University of Chicago.—New Medical Society.—Chicago Doctors and the War.—The American Medical Association.

RUSH Medical College has complied with the requirements demanded by the University of Chicago in liquidating its debt of something like 71,000 dollars, and the affiliation with the University is now regarded as complete. This gives the new University of Chicago, which has been so heavily endowed by Mr. Rockefeller, the Standard Oil magnate, a large medical department, thoroughly established and equipped and fifty years old. At the same time there is a distinct advantage to the medical school in that it will enjoy the dignity of having a very strong sponsor; and it prevents the University from establishing a new medical school—a purpose that had frequently been talked about. This connection is bound to carry with it the opening of the doors of the Medical School to women, inasmuch as the University is a co-educational institution and all its departments must come under such a course. This will be drastic medicine for Rush College, as it has always strongly fought against the admission of women to its classes, and they really never have been allowed in the building in the pursuit of instruction of any kind.

A new medical society—the Society of Internal Medicine—is on the eve of organisation. The necessity for such an organisation has long been felt by those who have taken but moderate interest in the long surgical and other specialised papers and discussions before the older general societies.

The Spanish-American war has provoked much enthusiasm in medical ranks, and there has been quite a rush for service, though with but few chances of appointment. Chicago physicians who have offered their services to the War Department have been told that no appointments ever are made in the regular army except after examination by an army Medical Examining Board, and that only graduates in medicine less than 29 years old are eligible. Few contract surgeons are wanted for the rank of acting assistant surgeons, and only those immune to yellow fever. Such of this class as are taken will be sent to coast hospitals or follow the army. Nearly 2,000 physicians have offered their services to the War Department. Many of those anxious to serve, however, have a chance through appointments in the volunteer army. Another matter that has been definitively settled by the War Department is that women nurses and physicians will not be used by the Government in any of the army hospitals or in any field service. This order will not interfere with the nurses already on the staffs of established marine hospitals. Dr. Nicholas Senn, the eminent surgeon and surgical writer, who is Surgeon-General of the State of Illinois, has relinquished his large surgical practice and taken his place in the field at the head of the surgical staff of the State. At present all the required State quota, some 10,000 troops, is rendezvoused at Springfield, and there the medical staff is at work in the matter of examinations of the men previous to muster into the Government service.

The annual meeting of the American Medical Association takes place at Denver, Colorado, in the first week in June. A number of special trains are scheduled to start from various eastern points, and a number of excursions into the picturesque mountainous regions of the West have been announced. It is believed that the war excitement and unrest will very materially lessen the expected attendance, especially from the more distant points.

A SANITARIUM IN BURMAH.—An officer of the Royal Artillery, Captain Younge-Bateman, who was recently on reconnaissance duty in the Shan States, reports that he has found a capital site for a hill station at Namsan, about 30 miles from Thibaw. It is over 5,000 feet high, and has abundance of water. The principal drawback lies in the fact that the railway does not come nearer to it than Thibaw, and, for the present at least, a hill station to insure success in Burmah must be close to the river or the railway.

CORRESPONDENCE.

THE ROYAL ARMY MEDICAL CORPS.

SIR,—At the dinner which the Lord Mayor was so kind as to give to our profession Lord Lansdowne, in his important and welcome speech, said: "I trust that the members of the profession will recognise the sincerity with which we have endeavoured to meet them, and that they on their side will help us, to the utmost of their ability, to secure the services of the best of their students." To this the Lord Mayor's guests gave an affirmative reply by hearty cheers. A bargain is a bargain, even if made after dinner, so it now rests with each member of every hospital staff to do his utmost to get the right men for the Royal Corps. But, in my opinion, our most loyal endeavours are likely to be frustrated by the system of the examination of the candidates, for it is as wrong as it can be. Lord Lansdowne wants smart, practical, young surgeons, and he is frightening them away by insisting on examining them in materia medica, chemistry, and pharmacy—dull and uninteresting subjects which, as qualified men, they have already duly and sufficiently studied, and have rejoicingly and long since put behind them. Many a good, practical man absolutely refuses to work up these subjects again; and small blame to him.

Lord Lansdowne wants smart, practical young surgeons—men, for instance, who have recently been house-surgeons; yet he insists on examining them in such unpractical subjects as the branches of the otic ganglion and the composition of bile. What time, I would ask, has a house-surgeon to give to cramming up abstruse points in anatomy and physiology? He is, or should be, busy night and day with the practical work of his house-surgeoncy, and when his time of office is ended he is disinclined to enter into competition with men who may never have done a surgical operation, but have probably all the while been grinding unpractical elementary subjects at a crammer's. It says little for the plan of the examination for the Army Medical Service that a house-surgeon must go to a crammer's for six months before venturing to compete, but such is unfortunately the case. Whilst the examination is conducted on the present cram lines his lordship will miss the very men we want him to secure.

In my opinion the subjects of the examination should be entirely limited to medicine, surgery, operative surgery, and surgical anatomy, and if this were so the house-physician or house-surgeon would be able to go straight from his practical work confident of making a good and a successful show. By way of supplement to such an examination I, personally, would like to see the candidates enabled to secure extra marks on the running path, over the hurdles, and in feats of strength. Possibly objections might be urged against this plan, but I know that its adoption would be more helpful towards working up the Royal Army Medical Corps than the scheme at present in action. At every hospital the footballers and athletes generally are amongst our smartest and most popular men; they are willing and first-rate dressers, and industrious and trustworthy house-surgeons. In brief, they are splendid fellows at practical work, but they usually loathe such uncongenial and outside subjects as "chemistry and pharmacy, and a practical knowledge of drugs." Many of them would like to become captains in the new Royal Corps, but when they refer to the regulations for the examination,[1] they discover that "chemistry and pharmacy, and a practical knowledge of drugs" are compulsory subjects valued at 600 marks, whilst surgery itself counts but 1200!

I would urge that the examination be at once altered so that it may be rendered worthy of the new Warrant, and may, with it, become the means of securing for Her Majesty's army an abundant supply of gentlemen who possess not only sound, practical knowledge of their profession, but also a plentiful reserve of physical energy and manly vigour.—I am, etc.,

EDMUND OWEN.

St. Mary's Hospital, W., May 30th.

[1] See *Medical Directory*, 1897.

PRELIMINARY EDUCATION FOR THE MEDICAL PROFESSION.

SIR,—The subject of the preliminary education given to intending medical students is one of great importance, and it presents problems of no small difficulty. An able statement of what may be called the professional view of the question has recently appeared in the BRITISH MEDICAL JOURNAL, advocating a higher standard of knowledge on the part of those entering on the study of medicine and the abolition of the easier qualifying tests. I venture to suggest that there is the parental view to be considered, and also the view of the student himself.

The profession of medicine is a very costly one to enter, and the training is long and severe. The tendency of late years has been to lengthen the course of study, and so add to its cost. No doubt there are good reasons for this, but where is it to end? If students are to reach a higher standard before entering, and that without any remission of the years given to special study, this will only mean more money out of the parental pocket, and a longer strain on the student than at present. Is this desirable in the true interests of the profession? It may be, but if the tacit purpose of such changes be to limit the number of those who succeed, it will not command much sympathy. The effect of raising fresh barriers is generally to add to the number of quacks, and it would be a loss to the profession if those who fail to reach a high standard in youth should be rigidly excluded from its portals. But it is well worth considering how to effect improvements without putting further pressure on students and their parents.

It is probably true that a large number of those who enter on the study of medicine have not received so good a general education as others entering on other careers of a similar kind. There are obvious reasons for this. The study is in itself severe and engrossing, and a boy begins his training early in his school life. Few professions are so hereditary. Parents decide that their sons shall follow in their steps because they can best help them to a sustenance, and benefit by the assistance of their sons in their own line. Few but those who have had direct experience of the training of boys for this career can realise the strong bias given from the first to those studies which will be of use in the future. Both parents and boys combine to reduce the time given to preliminary studies. Too much is sacrificed to the getting speedily registered as a student. The boy's mind is mainly directed to becoming an earner at a time when in other lines he would fairly be in receipt of something, although a medical training must take time. This greatly hampers the teacher, but it is not surprising under the conditions. The clever boy can be given a good education, the industrious boy will reach a fair standard, but the average boy or the son of poor parents seeks to acquire only what he must; he looks askance on general culture, or thinks he has no time for such ornamental accomplishments. This is not a pleasant picture, but the remedy surely does not lie in merely raising the standard of the entrance examination on present lines.

Would it not be possible to distinguish more clearly than at present the three stages which are generally recognised in the evolution of the medical student? We want a more definite time for the second of these stages. And the eager haste to become registered as a medical student should be checked by insisting that it mark the commencement of the third or directly medical stage. It should not be possible to be registered before this had been reached, whether at the time of entrance to the medical school of the hospital, or after this. There should then be more unity of aim and purpose introduced into the various qualifying examinations. No boy can matriculate at London University before he is 16. Certainly no boy should drop his ordinary school subjects earlier, whatever his standard. The preliminary stage would thus be maintained in the subjects of a general character up to a definite minimum period, and the various test examinations in arts might be made of such a kind that a better average of general culture was requisite. At this point the second stage would be taken, and science subjects begun. Young boys would enter upon these subjects at school; older boys, who had passed their entrance examination with more difficulty at 17 or 18, would enter upon them at the hospitals in most cases; but not less than one year, and generally two years, would be given to the very needful thorough scientific training. At present this training is very unsatisfactory; it is sandwiched in between the preliminary subjects and the medical studies proper, and I believe that it too often fails altogether to give the qualities for which it is really intended, and is alone of value.

I see a good deal of young students passing through this second stage, and they cannot be properly taught to grasp scientific principles when a large range of subjects has to be dealt with, and the teacher has to cover the prescribed course. The pass lists of the London Preliminary Scientific Examination show how few manage to pass in biology, chemistry, and physics all at once; and few can have been studying these subjects less than a whole year. It is proposed, I see, to devote the first year of hospital study entirely to these subjects. It is merely common sense not to expect good results if more be attempted. In the interest of the student such a change would be most beneficial. The third stage is the study of medical subjects proper; and here only should it be permissible to register as a medical student. The four-year course is probably ample, on the condition that a sound preliminary and scientific training has previously been required.

I have spoken generally of the preliminary tests. I am acquainted with the Lower Certificate of the Joint Universities' Board, the Junior Locals, and the examinations of the College of Preceptors, besides the London Matriculation. The first three mark three different standards, and none are high. The third admits boys who are by no means fit to begin any special study, as a rule. The first two are good as far as they go, and I would not quarrel with them. Many boys cannot get much further at a reasonable age. But it is absurd to let a boy of 14 pass them, as he can do, and then begin to specialise. The education of such a boy should be carried further on general lines. That is why I would have a lower limit of age—not under 16. The first of these examinations is good in that it does not prescribe set books, which is the sure promotion of cram. It is of importance that Languages should be taught, together with History, English, and Mathematics, up to the point that there is something to show for the time given to them, and the mind cultivated thereby.

The London Matriculation is a test of a different and far harder character. But its difficulty lies not in its demanding a higher standard of knowledge in ordinary subjects, but in the extent of the ground to be covered at one time. And science is begun here. Boys who enter thus are really at 15 or over introduced to the second stage. Except in schools which work for this examination alone, special classes have to be formed to prepare boys to pass it. They have seldom received what may be called a good education first, and they find some of the subjects, especially science, which they have to do occupy most of the time. The more ordinary subjects, for example, Latin, are within the reach of an intelligent fourth-form boy, while few sixth-form boys in a public school can pass the whole examination without some special coaching. The fault is not in the schools. The teacher feels that it is at once too hard and too easy—too hard if he is to educate, for much is demanded of the young student; and too easy in that neither on the classical nor mathematical side has it been possible to lay stress, and quicken the intellect. And it must be remembered that this is the test by which some of the best material seeks to enter the profession. It sets the note to which all who pass these tests attune themselves. There is a hurry everywhere to get on to the second stage, and we see it clearly here. Those who have matriculated and work on at the further science subjects are specialists already, and unless they possess exceptional ability, are hampered and preoccupied, with a fixed idea that there is nothing worth knowing except what they have to do, and that they have no time to give to any intellectual study outside the prescribed course; and I sympathise with them—though it is bitterly to be regretted that the practical effect of the preliminary training on many boys should be such as it undoubtedly is.

It seems, then, if I have made these points clear, that the preliminary training received for medicine tends from many different causes to shape itself on too narrow lines. This is not felt, perhaps, in the upper grades of the profession—amongst those who have been to a large public school or have

had the advantage of a university career—but in the rank and file it is apparent, and is the cause of the dissatisfaction felt. It is for these that reform is needed most. It seems too much to ask that they shall reach the standard of a high form at a public school before they can qualify as medical students. It is fatal to think that examinations are infallible, and to shut the doors too fast, so that the boy of late development or the boy whose parents count every hour of the time given to education, shall find no means of entry. Many of the most skilful men have betrayed but little ability while working at school. But it is a first requisite to see that the preliminary test shall be a good one, and that whatever the minimum standard it shall be of some educational value, and that on purely general lines and in the subjects ordinarily included in a liberal education.

This surely points to the need of co-ordinating and, if possible, reducing the number of preliminary examinations held throughout the kingdom. It would be a great gain if a body like the Joint Universities Board could be trusted to conduct these qualifying tests in all schools, and if we could have some system corresponding to the leaving examinations in Germany. But it seems too much to hope for. The tendency of the times points the other way. Competition enforces early specialising, and that is but another name for cram or undigested or unprofitable knowledge, forgotten when the need of it passes away; and so when the student has to work in earnest at the hospital, he has a vast amount of leeway to make up. The remedy is not simply in higher standards, but in a careful readjustment of the requirements at each stage.—I am, etc.,

May 26th. A HEAD MASTER.

THE EFFECTS OF THE DUM-DUM BULLET FROM A SURGICAL POINT OF VIEW.

SIR,—I beg you will correct a misprint in my letter on Dum-dum bullets printed in last week's BRITISH MEDICAL JOURNAL. "Signifies inhuman" in the third paragraph of the letter should read "signifies inhumane." Von Bruns, in using the latter term, conveyed quite another meaning than if he had used the former.—I am, etc.,

Aberdeen, May 29th. ALFX. OGSTON.

SIR,—The letters of Professors Ogston and Barker on the above subject in the BRITISH MEDICAL JOURNAL of May 28th contain very important matter. It was far from my intention in my note in the JOURNAL of May 21st to attribute undue warmth or a charge of inhumanity against this country to von Bruns's remarks with reference to the Dum-dum bullet. I merely attempted to suggest that, judging from experience and experiments, the German Professor held too high an opinion of the destructive effects of the projectile. Professor Ogston now tells us that von Bruns did not apply the term "inhuman projectiles" to the Dum-dum bullet, and, furthermore, that his address had reference to experiments made with a bullet of quite a different pattern from the Indian missile. Evidently the reports previously made of von Bruns's speech at the Congress are somewhat incorrect, and the subject of it was the general one of the employment in warfare (and more especially in European warfare) of bullets which are practically explosive in their effects rather than that of the Dum-dum bullet in particular. Professor v. Bruns is not at all likely to argue from the effects seen to be produced by an experimental Mauser bullet, with its core exposed at the point for about 1 centimetre, to those of a Lee-Metford bullet having its mantle removed only to the extent of 2 or 3 millimetres, as he would himself be amongst the first to admit that all experience teaches that the amount of fragmentation undergone by each, and therefore the amount of damage done, would be very different.

I am not aware that the use of projectiles of the class under consideration, in war against civilised nations, has been suggested by anyone; but the English Government has had sufficient experience of the matter to know that none other will check the rush of Asiatic fanatics at close quarters. No doubt their employment in European warfare would be barbarous and inhumane; but the gentle Afridi is a person of a very logical mind in this matter, and would smile at the notion of his enemy being influenced by humane intentions in the preparation of the means used to kill him. He is not at all influenced by such himself and does not expect to find evidence of them in the actions of others.

But what did v. Bruns refer to when he expressed to Mr. Barker (an English member of his audience) "the hope that he had not gone too far"? He must have said something about the Dum-dum bullet. If so, what was it? Were his experiments made with bullets obtained from India? And had he seen injuries produced by them in man? If these questions be answered in the affirmative then (and then only) his opinion will have weight. Assuming that he had complied with these essential conditions, my note in the JOURNAL of May 21st was intended to indicate that possibly he had formed an exaggerated idea of the effects of the Dum-dum bullet, and it was written because I considered that statements by such an authority as Professor v. Bruns should not be allowed to pass without challenge if there were any evidence on the other side.—I am, etc,

W. F. STEVENSON, Surgeon-Colonel, A.M.S.,
Netley, May 30th. Professor of Surgery, Army Medical School.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

SIR,—This Society appeals to the public on the grounds of "thrift." Dr. E. W. Forster seems to justify it on the grounds of "altruism." It appears to me that the way to come to a proper decision on the matter is to consider whether the scale of charges allowed by this Society is adequate, and whether it tends to professional dignity to have to fill up as required "statements" of services rendered and to send in a monthly account to an outside party.

The adequacy of the scale of charges may be tested in two ways: A. In comparison with ordinary "club" rates. B. In comparison with ordinary charges to similar people. A. In 1896 this Society numbered 20,020, and the amount of money paid by its members to its medical staff was £2,392 9s. 8d. If this same number had belonged to an ordinary medical "club" at 4s. per member per annum the amount paid to the medical profession would have been £4,040. If 4s. per member per annum is to be considered the minimum at which ordinary "club" practice ought to be held, what must be thought about the adequacy of the scale allowed by this Society, which averages "2s. 0¾d. per member per annum," to quote the figures of their own General Secretary? B. In order to compare the Society's scale of charges with the ordinary charges to "skilled artisans and small shopkeepers," which this Society appeals to, I have monied out a page in my daybook at their charges. The result is as follows: The professional services rendered to the thirty-three families on that page during that month are booked at £19 12s. The same services at the Society's scale (even accepting Dr. Forster's latest amendment) would only amount to £13 6s.—a difference against the Society of £6 6s.

The inability or unwillingness of this Society to institute a wage limit further emphasises the inadequacy of their scale of fees, and ought in my opinion to absolutely condemn it, for the reason that, if the profession allows itself to accept this scale without a wage limit, it would tend to become the "quasi-legal" standard of medical charges for the general practitioner.

It is stated that a wage limit is unnecessary because "rich" people are not likely to join, and, even if they did, the doctor would be entitled to a fee of 5s. per visit with medicine for two days. This is true, but not all the truth, as the following items will show:

	s.	d.
Visit and medicine for two days	5	0
Visit same night	2	0
Visit next day, morning	1	0
Visit next day, evening	2	0
Four visits for	10	0

The 5s. per visit has dwindled into the more modest 2s. 6d. But the same gentleman who is to pay 5s. per visit will be able to get a medical consultation and medicine for two days for 1s. 6d., and his medicine would be renewed every two days for the sum of 1s. paid at the end of the month.

With regard to the class of people who have joined this Society it is not easy to get evidence. All we know is that there is absolutely nothing to prevent anyone between the ages of 13 and 55 from becoming members. It is possible, however, to get some idea of the class of possible members

from a small "syllabus" or illustrated advertising handbook issued by the Derby division. Amongst the committees of the various "districts" in Derby, the names of tobacconists, grocer and beer retailer, master printer, master joiner, bootmaker, bookseller, and a general engraver appear. One of the committee is fortunate enough to live next door to one of the medical officers. I have no personal knowledge of Derby, but these particulars have been obtained from the *Directory*, and I trust are fairly accurate. With regard to this "syllabus" and its thirty pages of advertisements containing the names and qualifications of thirty-four medical men, a good deal might be said.

It seems strange to find the names and qualifications of thirty-three medical men on page 25, and to see "Coals, clean, hot, and durable" *vis-à-vis* on page 24. But I suppose if the profession allows itself to join a business undertaking it must adopt business ways.

All the same, it was surprising to find a consulting physician and thirty-three medical men—amongst whom was the Honorary Secretary of the Branch of the British Medical Association, a member of the local Council, and fifteen members of the Branch—within the pages of an illustrated advertising syllabus; and it was still further surprising to find that this array of medical talent had been procured for the year ending 1896 for the modest sum of £338 17s. 6d.—I am, etc.,

R. HANSON WOLSTENHOLME, L.R.C.P.Ed., M.R.C.S.

Salford, May 31st.

IS SYPHILIS EFFICIENTLY TREATED IN THE ARMY?

SIR,—I had hoped that the question embodied in the above heading of your leading article of April 9th would have received a reply notice from some of the army medical officers on the active list in view of the importance of the question raised both to the army at large and to their professional status; yet as one greatly interested in the best method of meeting the evils acknowledged to exist, will you allow me to make a few comments on two points—the extent of unfitness for active service due to syphilis and the other venereal forms respectively, and the relation of the present virulence to the treatment advocated, and to suggest an alternative remedy? The basis of your article is, I think, the potency of mercury to neutralise the virus, and the best method of administration.

Now, in the BRITISH MEDICAL JOURNAL of July 19th, 1879, the Editor remarks that "primary sores and their sequelæ are in reality quite as disabling to the soldier as the secondary affection, if not more so"—an opinion to which most will subscribe; and if to these we add the more numerous local non-infecting maladies (for example, ulcers of the penis and suppurating buboes) it will be generally conceded that so far as crippling the army as a powerful movable war machine is concerned these primary and local forms exert a major influence, and over these the constitutional mercurial treatment has no effect. Hence, from this point of view, curtailment of the local maladies has an importance not possessed by the more severe constitutional malady. The treatment advocated, in its results beyond those hitherto attained by mercury as administered in the past, cannot influence the inefficiency for active service due to other than constitutional disease, and what its influence may be within these limits remains to be seen when generally and fully applied. This JOURNAL has borne witness in the past that we do possess a power capable of bringing about what we want—sanitary control.

On the other hand, the constitutional disease (minor cause of temporary inefficiency, and much the major cause of permanent inefficiency through deaths and invalidings) has varied much in the past as to time and place. As a rule, the permanent loss bears a fairly constant ratio to the admissions for secondary disease; and in respect to virulence, the character of the infecting sore is a fair index subject to variations of human soil in which the germ is planted; hence, whatever can lessen the frequency and modify the character of the primary sore, or can antagonise the virus, will operate beneficially, be the agent sanitary control or drug, the major importance residing in that which can influence both; and on this there is no doubt. And as bearing on these variations in the past, an agency has been in operation in their production, and the importance of elucidating it is apparent as explanatory of the present state, and in view of the future; for the question you raise is upon the "increased virulence of the disease" as now seen, and whether it may not "reasonable be attributed to inadequate treatment."

Now, as bearing on the reply, and the influence of this special mode of administering mercury on the result, clearly hypodermic injection spread over a long period is more common now—say from 1891—than prior to that date; and, assuming its potency, the results should be inversely to what pertains. And taking mercury as generally administered, irrespective of any one special mode, is it less employed now; and, if not, how can augmented frequency or intensity of disease be attributed to present deficiency in use? Take India as a local illustration. In 1879-80 the invaliding was but 0.13 per cent., in 1894-5 it had increased to 0.5; in this last official year the secondary disease was four times more prevalent than in 1873, and more severe. In 1896 the constitutional disease gave 97.7 admissions, 0.23 deaths, and 6.36 invalids per 1,000 of strength, against a ten years' average of 55 8, 0.11, and 2.79 respectively. Can these augmented results be ascribed to the withholding of mercury or its non-use in a particular way? Were medical officers more negligent of recognised treatment during the last ten years in that country, and especially in 1896 over these years? There are no grounds for an affirmative reply. Yet, assuming an inadequate use of the drug as the true exponent, we have to meet a simultaneous decrease in Gibraltar and South Africa, a close approximation in some stations, and and increase in others in 1896 over the previous ten years' average. It seems impossible to explain the present frequency or virulence of syphilis in the army on the want of any one mode of administration or of the general use of mercury as compared to the past; an explanation other than the treatment adopted is wanted, and an explanation tested in the past is at hand. It is to be found in the statement of Mr. Lane in the BRITISH MEDICAL JOURNAL of December, 1874, on the cause of "the diminished quantity and quality of syphilis," in the remarks of the JOURNAL of November 7th, 1868, to the same effect, and in the latest conclusion of the Sanitary Commission on the cause of the "virulent and destructive character now attained by venereal disease in India." The agency in operation was sanitary control, now in abeyance for many years; its action ranged beyond the syphilitic virus to the crippling local forms over which mercury has no power worth consideration; and in view of the "very serious state of affairs" which "calls imperatively for a remedy," does not that remedy unmistakably lie in the suppression of the cause rather than in the curing of results, limited at best?

And this alternative suggests itself in view of the difficulties which arise to the efficient carrying out of the procedure suggested when the actual army conditions are given full consideration. Yet, granted to the full the value of the drug and the thorough performance of the necessary inspection and sequential action, what will be the worth of these syphilitic and mercurialised men in the field? Their physical state may be better than syphilis *minus* the drug; it is not better than one *minus* both virus and drug; and, if army needs be the deciding factor, do not again these details strongly make for prevention? Surely the therapeutic remedy is at best but second best in the scale of army efficiency.

It requires to be borne in mind that the use of mercury in the army to counteract the syphilitic virus has been tested in the past in the old ways, and this special way can only supply what was wanting formerly. Assuming its power in this respect to be of decided value as to results, it must be made general in application, and not left to individual opinion. Yet, that accomplished, there still remains the necessity of grappling with the major causes of unfitness for active service due to local venereal maladies. If attempted cure of results covers but a part of the difficulty, the agency of moral and sanitary principles covers the whole.—I am, etc.,

FRANCIS H. WELCH, F.R.C.S.,
Surgeon-Colonel (retired) A.M.S.

Lee, S.E., May 13th.

THE HYDERABAD COMMISSION.

SIR,—In my address to the Society of Anæsthetists I sought to show that a great part of the work of the Hyderabad Commission could not be accepted in the face of the contrary results obtained by Snow, the Glasgow Commission, Ringer, MacWilliam, Hare and Thornton, Gaskell, and Shore. To this view my own researches lent support. For criticisms far milder in tone than those to be found in the report of the Commission and in the diatribes of Surgeon-Lieutenant-Colonel Lawrie, I have been attacked by Dr. Lauder Brunton.

The report of the Commission was thrust upon the world as a dogma, backed with all the pomp of the Eastern world. All criticisms of this dogma have been dealt with by Surgeon-Lieutenant-Colonel Lawrie in a spirit of contempt. Science does not bow down to authority, and is not to be overridden by dogma. Against this I have made my protest. To Dr. Brunton's personal attack I shall reply no further, not for the lack of controversial material, plenty of which is at hand in the report of the Commission, but because the continuance of a controversy with a personal element does not forward the ends of science.

The deaths from chloroform chronicled year by year have not fallen, but risen in number since the report of the Commission was published. Thus is justified my protest against the final acceptance of the dangerous doctrine that chloroform does not paralyse the heart.—I am, etc.,

Frognal, May 30th. LEONARD HILL.

THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS.

SIR,—I notice that a memorial signed by 138 practitioners in Leeds has been sent to the General Medical Council, stating that difficulty is now experienced in obtaining the services of a sufficient number of qualified assistants to replace those who are unqualified. I should very much like to know why qualified men give Leeds such a wide berth, as any principal in any other provincial hospital town advertising for a qualified assistant would receive thirty or forty replies from all sorts and conditions of men, from which he would have no difficulty in selecting one suitable.—I am, etc.,

May 30th. X. Y. Z.

THE DENTAL EXAMINATIONS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—At the recent Dental Examination of the Royal College of Surgeons of England in the Anatomy, Physiology, and Surgery paper, appear the two following questions: (1) Describe the structure of the skin, and give the functions of its glands. (2) What affections of the tongue may be met with in the various stages of syphilis? Give their diagnosis and treatment. I do not hesitate to express the opinion that these questions are altogether irrelevant and outside the scope and purpose of dental education and practice. One of the examiners described a disease to a candidate, and I presume expected him to recognise it, which, however, he failed to do—whether from want on the part of the examiner of exactitude and descriptive powers or obtuseness on the part of the candidate I cannot say, but finally the examiner was good enough to disburden himself by saying that the disease referred to was "leucoplakia." Now apart from syphilis and the irritative effects of excessive tobacco-pipe smoking leucoplakia, as a specific disease, is almost unknown. It is therefore a monstrous thing to my mind that a young man having necessarily only a limited field for clinical work and seeking a dental qualification only, should upon a mere verbal description be asked and expected to recognise one of the rarest of rare diseases—a disease which probably not one medical man in ten has ever heard of, and which not one in twenty has ever seen, and I make this statement based upon a professional experience as a consultant of nearly thirty years.

I do not, moreover, see what dermatology has to do with dentistry, still less what dentistry has to do with the fœtal circulation and the os innominatum. I do not deprecate either the thoroughness or severity of any examination, especially where public interests are concerned, but let examinations be conducted upon their own lines and in fairness to candidates. Such questions as I have indicated are not fair or legitimate, but are questions suitable only for a medical qualification. If dentists are expected to diagnose and treat syphilis in its various stages, is it not a distinct and direct invitation to them to transgress the Medical Act?

The profession already cries out, and with reason, against irregular practitioners, but here under the ægis of a Royal College are to be found the transgressors. I think it time the attention of the Council of the College was directed to this matter.—I am, etc.,

May 23rd. F.R.C.S.

THE INFECTIVITY OF ENTERIC FEVER.

SIR,—My attention has been directed to a somewhat widespread impression that the number of nurses and attendants who contracted enteric fever during the late epidemic at Maidstone was unusually large, and this is in great part attributable, I think, to the publicity given through the medium of your columns[1] to a statement made by Dr. J. S. Tew, the Medical Officer of Health for West Kent, that of the nurses and attendants at Barming Asylum (84) who were vaccinated against enteric fever all escaped infection, "while of 120 nurses and attendants living under similar conditions but not vaccinated 16 contracted the fever."

This taken by itself, whether we attribute any importance or not to the view that the 84 owed their immunity to antityphoid inoculation, suggests that the disease was contracted by the nurses and attendants in the usual way from contact with the sick, and represents the infectivity of enteric fever as being very much greater than it really is.

But when we consider that the "similar conditions" under which vaccinated and unvaccinated were living included an infected water supply, which was distributing enteric fever to patients and attendants alike, it is evident that here contact with the sick was not, at any rate, alone responsible for the large number of attendants affected.

Among the nurses working under the sanitary authority in the emergency hospitals and in the affected districts, who were in the majority of instances imported into the town after the time that most of the cases of enteric fever had been contracted, and when precautions as to boiling of water and milk had been generally adopted, the number affected was very much smaller. Out of the 139 nurses employed, only 4 contracted enteric fever, that is, 2 8 per cent. And this small percentage of attendants attacked is also seen in the following statistics of the Metropolitan Asylums Board Hospitals, supplied to me by the courtesy of Mr. Duncombe Mann:

Year		1892.	1893.	1894.	1895.	1896.
Number of officers employed in the M.A.B. Hospitals in which enteric fever is treated.	Males	143	144	184	202	282
	Females* ...	1,147	1,301	1,153	1,276	1,771
	Total	1,290	1,445	1,337	1,478	2,053
Number of officers attacked by enteric fever.... ...	Nurses	11	[illegible]5	3	8	9
	Other officers	2	6	3	3	1
	Total	13	11	6	11	10
Percentage of officers attacked...		1.01	0.77	0.45	0.74	0.49

* The number of nurses employed is only ascertainable for the year 1896, when of the 1,771 females, 453 were nurses, the others being ward-maids, laundry-maids, etc. Of these 453 nurses, 9 were attacked—that is, a percentage of 1.9.

It is, I think, important to recognise that though the nursing and attendance on enteric fever is accompanied by a certain risk, even when every care is taken to avoid infection, the danger is not so great as to cause the contraction of the disease by so large a number as 16 out of 120, or even 16 out of 204—that is, in either 13 or 8 per cent. of those who attend upon it; but that even among nurses, the class most exposed to infection, the number attacked is only some 2 to 3 per

[1] BRITISH MEDICAL JOURNAL, April 2nd, 1898.

cent., and that among attendants generally the risk of infection is considerably less even than this.—I am, etc.,

E. ARTHUR SAUNDERS,
Late Assistant-Superintendent Emergency Fever Hospitals, Maidstone.

Dorking, May 31st.

THE ALKALINITY OF THE BLOOD IN GOUT.

SIR,—In my letter of May 21st last, I asked Dr. Haig to produce or give references to the "evidence of others" that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urates out of solution. Dr. Haig, in his reply in the BRITISH MEDICAL JOURNAL of May 28th, refers me to Sir A. Garrod's well-known test that the addition of acetic acid to blood serum causes a deposition of uric acid crystals. This reference is entirely beside the point, as uric acid never occurs as a deposit in the joints, the deposit always consisting of sodium biurate. Moreover, the test depends on the serum being rendered absolutely acid by the addition of acetic acid; and surely Dr. Haig does not contend that the blood ever becomes acid in reaction. My question still remains unanswered, and I await with interest the reference to the evidence that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the uric acid out of solution.

With regard to Dr. Haig's attempt to shift the responsibility for certain articles of diet producing headaches from uric acid to xanthin, I have pointed out[1] that Dr. Haig's assumed estimations of uric acid or xanthin in articles of food were simply estimations of something by Haycraft's process, and the subsequent calculation of that something in terms of uric acid or xanthin. No attempt was ever made to identify this assumed uric acid, whilst the statement that the substance estimated might be xanthin was a most unfortunate one, as I pointed out that Haycraft, in his original paper[2] expressly states that xanthin is not estimated by his process, and Dr. Haig[3] subsequently himself admits the impossibility of doing so.—I am, etc.,

ARTHUR P. LUFF.

Weymouth Street, W., May 28th.

Obituary.

JOHN BARRITT MELSON, B.A., M.D.CANTAB., J.P.,

Birmingham.

ON May 30th Birmingham lost one of its best-known citizens and its oldest physicians by the death of Dr. Melson, at the ripe age of 87 years. He was born at Brechin, in Scotland, on February 8th, 1811, and was the son of a Wesleyan minister, who was at that time stationed in Forfarshire. He was brought up in the wholesome and strict discipline of the Connexion. To this much of his after-career may be traced, and his devotion to the Wesleyan Church, in which he was for many years, although a practising physician, an active and distinguished preacher. He was educated at a Wesleyan school, and showed early in life an aptitude for classical studies. At the age of 13 he was selected as a specimen scholar to deliver a Greek speech before the Wesleyan Conference. When it was decided that he should enter the medical profession he was apprenticed to Mr. Thomas Harris, of Temple Row, Birmingham, and afterwards proceeded to Cambridge, where he took the degrees of B.A. and M.D. in 1841.

He began practice in Newhall Street, Birmingham, as a physician, and when the Queen's Hospital was established he became, with the late Dr. Birt Davies and Dr. Percy (the chemist) one of the first three physicians. He was also for some years Professor of Clinical Medicine and Professor of Natural Experimental Philosophy in Queen's College. He took an active part in the earlier part of his career in the work of the Birmingham Philosophical Institution, and delivered lectures there on experimental physics, and had among the students the late Archbishop of Canterbury and Bishop Westcott of Durham, who were both Birmingham boys. Dr. Melson always maintained an active connection with the Wesleyan Church, and preached all over England even when engaged most largely in medical practice. He used to pride himself on having for over thirty years preached 100 sermons a year. They were carefully studied discourses, full of classical quotations and scientific illustrations, and for many years drew very large congregations wherever he preached. His work in this respect, however, interfered with his professional success, which never equalled that of some of his local contemporaries. He was one of the first Presidents of the Birmingham Branch of the British Medical Association, and was also later on President of the Midland Medical Society. He was one of the earliest appointed magistrates for Birmingham, and for many years was a prominent and active worker in connection with the social progress of the great community in which he lived. Of late years he had resided with his eldest son at Lapworth, near Birmingham, and had recently decided to remove his books and papers from his old home in the city. It was while engaged on this work that he is supposed to have overtired himself, and brought on the weakness which closed a life of long and varied activity.

THOMAS GIORDANI WRIGHT, M.D., M.R.C.P.LOND.

DR. T. G. WRIGHT, of Wakefield, died on May 27th after a few days' illness. He was born on February 8th, 1808, and had thus seen the jubilees of the two longest reigns in English history. He was born at Stockton-on-Tees, where his father was the organist of the parish church, a post which his grandfather and great-grandfather had also occupied. After a rather severe experience of the old-fashioned pupilage at Darlington, he was in 1823 apprenticed to Mr. Macintyre, of Newcastle, and had in his possession one of the original splints designed by that surgeon. He spent the session of 1825-6 at Edinburgh University, and proceeded subsequently to London, where he entered at the institution which subsequently became University College. Among his teachers were Professor Grant in Edinburgh and Sir Charles Bell in London. He became L.S.A. in 1830 and M.R.C.S.Eng. in 1831, but as the London University was not at that time constituted he proceeded to Leyden, where, after a period of residence, he obtained the degree of M.D. with honours. He became a Licentiate of the Royal College of Physicians of London in 1841, and was made a member in 1859. He settled at Wakefield in 1833, and was appointed Consulting Physician to the West Riding Asylum, a post which he retained for sixty-five years. He was an active member of the staff of the Wakefield House of Recovery during the twenty-six years for which its wards were kept open, and when that institution was merged in the Clayton Hospital he became its Physician. He was also for some years Consulting Physician to the Beckett Hospital, Barnsley, and was Medical Visitor of the licensed houses for the insane in the West Riding.

He edited, about 1835, a work on the blood left unfinished by Mr. Thackrah, one of the founders of the Leeds School of Medicine. He published some valuable reports on the epidemic of cholera in the West Riding Lunatic Asylum in 1849, and gave up much time to scientific pursuits, especially astronomy and physical science, taking a special interest in the development of the electric telegraph. Dr. Wright was for many years a conspicuous figure in the life of the locality in which he practised, and had seen many changes among men and things. He numbered among his friends Charles Waterton, the famous naturalist.

He married in 1835 the daughter of Mr. Hubbard, of Leeds, and on the occasion of his golden wedding he was presented with a piece of plate, and entertained at a complimentary dinner by the medical men of his district, by whom he was highly esteemed. On retiring from practice, he was presented with a testimonial, amounting to 900 guineas, by a large circle of friends. He leaves three daughters and three sons, among whom is numbered Professor C. J. Wright, of Leeds. The funeral took place on May 30th, the first part of the service being conducted at Wakefield Cathedral, and the interment taking place at Thornes Church. The funeral was attended by nearly all the medical men in the city and suburbs, by many of the principal residents, and by representatives of several public bodies.

[1] *The Practitioner*, April, 1898, p. 435.
[2] BRITISH MEDICAL JOURNAL, 1885, ii, p. 1102.
[3] *Ibid.*, 1891, i, p. 10.

MARTIN B. HECKSCHER, M.D.,

Formerly of Manchester.

By the death of Dr. Martin B. Heckscher, Manchester loses another link with the past. Dr. Heckscher was a contemporary of the late Professor Williamson, but their lines fell in different spheres. Dr. Heckscher went to Manchester many years ago, and his practice lay largely amongst the numerous families of Germans, or, at least, German-speaking races, who have taken up their abode in Manchester. For many years Dr. Heckscher was the trusted physician of a large number of German families, and only a year or two ago he retired from the active duties of his profession, having well earned a period of repose. Always assiduously devoted to duty, his well-known figure will be missed even in the busy throng of Manchester life.

Dr. Heckscher studied at Berlin, Leipzig, and Prague, and graduated as M.D. as long ago as 1847 in Berlin. He took the M.R.C.P. in 1860, having previously, in 1858, obtained the M.D. of St. Andrews. He died at his residence, Didsbury, on May 29th, aged 74. Although for him the active duties of his profession had ceased, with his passing there disappears for many families one who was not only medical adviser, but counsellor and friend.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Professor F. J. Trier, of Copenhagen, one of the leading clinicians of Denmark, aged 67; Dr. Smet-Van Aeltert, formerly Senior Surgeon of the Ostend Hospitals; and Dr. Erasmus Garrott, Chief Medical Inspector of the Health Department of the City of Chicago, aged 62.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A SURGEON-MAJOR, 35th on the list of Field Officers for foreign service, would exchange to go abroad. Egypt, China, West Indies, or Colonies preferred, but no objection to India. Officer exchanging would have at least another year at home, and longer if a Surgeon-Captain on the verge of promotion, as his promotion would bring him lower down the roster for foreign service. Please address, with offers, No. 1832, care of BRITISH MEDICAL JOURNAL Office, 429, Strand, London, W.C.

MEDICAL DEPARTMENT, R.N.

THE undermentioned gentlemen, who competed on May 16th and following days at Examination Hall, Victoria Embankment, for appointments as Surgeons in the Royal Navy, have been granted commissions:

Names.	Marks.	Names.	Marks.
H. C. Whiteside	2,646	H. J. Chater	2,237
R. L. Dickinson	2,563	R. St. G. S. Bond, M.B.... ...	2 223
H. W. B. Shewell, M.A., M.B.	2,539	C. C. Macmillan, M.B.	2,188
J. Martin	2,521	F. C. B. Gittings, M.B.	2,147
C. B. Fairbank	2,494	R. M. Richards	2,132
F. F. Lobb	2,489	H. E. Raper	2,119
G. B. Brown	2,445	A. G. Eastment	2,105
S. D. T. Halliday	2,407	G. E. Duncan	2,057
J. G. Corry, M.B....	2,354	J. G. Watt	2,022
L. B. Todd	2,324	G. E. Glynn, B.A., M.B. ...	1,973

THE NAVY.

STAFF-SURGEON MICHAEL J. MCCARTHY, M.D., has been promoted to be Fleet-Surgeon, May 14th. He was appointed Surgeon, March 31st, 1877; and Staff-Surgeon twelve years thereafter. He was Surgeon of the *Carysfort* during the Soudan campaign in 1884, when he served with the Royal Marine Battalion, and received a medal and the Khedive's bronze star.

The following appointments have been made at the Admiralty: ROBERT HICKSON, Staff-Surgeon to the *Sans Pareil*, when commissioned, undated; WILLIAM W. PRYN, Staff-Surgeon, to the *Lion*, May 27th; WILLIAM R. TRYTHALL, Surgeon, to the *Wildfire*, additional, May 27th; HORACE B. MARRIOTT, Surgeon, to the *Wildfire*, May 31st.

ARMY MEDICAL STAFF.

BRIGADE SURGEON-LIEUTENANT-COLONEL F. W. TREVOR, who is serving in the Bombay Command, has taken charge of the current duties of Principal Medical Officer Sind District as an additional duty, from March 4th.

Brigade-Surgeon-Lieutenant-Colonel J. M. BEAMISH, M.D., serving in the Bombay Command, is directed to proceed to Mhow to officiate as Principal Medical Officer, Mhow and Deesa Districts.

INDIAN MEDICAL SERVICE.

BRIGADE-SURGEON-LIEUTENANT-COLONEL J. ARNOTT, M.D., Bombay Establishment, has been permitted to retire from the service from April 1st. He was appointed Surgeon April 1st, 1867, and Brigade-Surgeon-Lieutenant-Colonel April 30th, 1891. He served with the Field Hospital during the Abyssinian war in 1867-68 (medal); in the Afghan war in 1879-80 as Principal Medical Officer of the Reserve Brigade in the Bolan Pass, and in medical charge of the headquarters staff at the defence of Candahar (mentioned in despatches), and present in the sortie of Deh Khojah (mentioned in despatches) and at the battle of Candahar (medal with clasp). He is in receipt of a reward for distinguished service granted him in 1895.

The Government of India have formally opened leave for the medical service, and local governments are given power to sanction leave and furlough, but have to make their own arrangements.

THE YEOMANRY AND VOLUNTEER RIFLES.

SURGEON-LIEUTENANT H. C. MARTIN, M.D., Suffolk Yeomanry (the Duke of York's Own Loyal Suffolk Hussars) is promoted to be Surgeon-Captain, May 18th.

Surgeon-Major R. M. P. LOW, M.B., 1st Middlesex Engineers, has resigned his commission, retaining his rank and uniform, May 18th.

Surgeon-Major A. NAPIER, M.D., 3rd Lanarkshire Rifles, is promoted to be Surgeon-Lieutenant-Colonel, May 18th.

VOLUNTEER MEDICAL STAFF CORPS.

MR. WILLIAM B. PRITCHARD is appointed Surgeon-Lieutenant in the Manchester Companies, May 18th.

VOLUNTEER GRANTS.

SURGEON-CAPTAIN could not claim the grant on getting a new uniform, even though the corps changed its uniform. The order says £10 on appointment and £10 on obtaining certificate.

THE NORTH-WEST FRONTIER RISING IN INDIA.

A FINAL despatch from Sir William Lockhart, describing the operations of the Tirah Expeditionary Force from January 27th to April 5th has been published in India. Sir William writes in the most laudatory manner of the conduct of the troops, not only while actively engaged in the field, but also while employed on the tedious and monotonous duties of a blockade. Among the officers selected for special mention is Surgeon-Lieutenant M. Dick, of the Bombay Establishment. The following, omitted from previous reports, are also specially brought to notice: Surgeon-Major A. E. C. Spence, M.B., and Surgeon-Captain J. C. Jameson, M.B., both of the Army Medical Staff.

A correction in Sir B. Blood's despatch of January 19th, 1898, noticed in the BRITISH MEDICAL JOURNAL of March 26th, appears in the *London Gazette* of May 31st: For "Surgeon-Major C. W. Johnson, Army Medical Staff," read "Surgeon-Major H. H. Johnston, Army Medical Staff."

CONTINENTAL REGULATIONS FOR THE TRANSPORT OF SICK AND WOUNDED BY RAIL.

AN instructive and interesting paper on this subject by Surgeon-Captain C. H. Melville, A.M.S., appears in *The Journal of the Royal United Service Institution* for May. The importance of the subject, in a military no less than in a military-medical point of view, will attract, we trust, the attention at home and in India that it well deserves. Surgeon-Captain Melville considers and compares in his lengthy article the regulations for the transport of sick and wounded by rail as laid down in four of the leading Continental armies—namely, those of Germany, France, Austria, and Italy, and has followed the classification of hospital trains used in the French service as far as the names of the three classes go—namely, permanent hospital trains, improvised hospital trains, and ordinary trains. The paper will well repay careful perusal, and should be studied in detail by all ranks of the medical services.

MEDICO-LEGAL.

DOCKRELL *v.* DOUGALL.

THIS case, which was heard in the Queen's Bench Division before Mr. Justice Ridley and a common jury on May 26th and 27th, was an action for damages and for an injunction to restrain the defendant from further publishing the alleged libel and from distributing circulars imputing to the plaintiff that he prescribes or uses sallyco as an habitual drink.

Mr. Blake Odgers, Q.C., and Mr. Brooke Little appeared for the plaintiff, and Mr. Witt, Q.C., and Mr. E. de Witt for the defendant.

The plaintiff, Dr. Morgan Dockrell, is a physician of St. John's Hospital for Diseases of the Skin, and the defendant Dr. Keir Johnston Dougall (a licentiate of the Royal College of Physicians, Edinburgh, and the Faculty of Physicians and Surgeons, Glasgow, but not now practising) is the proprietor of a recipe for a mineral water known as "sallyco" and trades as "The Sallyco Company."

The plaintiff in his evidence stated that in April last he saw defendant and told him that he had been trying his "sallyco," but could not go on taking it nor order it for patients without knowing what its constituents were. At this interview Dr. Dockrell said jocularly, "Nothing seems to have done my gout so much good." He also added, "I have been taking other drugs and perhaps sallyco is getting the credit for it."

The defendant told the plaintiff that it contained one-sixtieth of a grain of colchicine, 3 grains of salicylate of soda, some carbonate of lithia and bicarbonate of potassium, and was really a dose of medicine in an aërated bottle of water.

It appeared that in July last it was brought to the plaintiff's notice that certain circulars were issued containing the statement that "Dr. Morgan Dockrell and many of the leading physicians are prescribing sallyco as an habitual drink. Dr. Dockrell says nothing has done his gout so much good."

The plaintiff stated that it was quite untrue that he had ever prescribed sallyco as an habitual drink, and complained to the defendant, and in reply he received an undertaking that no more of his circulars should be sent out. He subsequently saw Dr. Dougall, and told him that he was bringing him into collision with the hospital authorities, and was likely to injure his practice and injure him socially, as it was considered unprofessional conduct to attach his name to puff an article of commerce. Dr. Dougall made a full apology, and promised that the circulars should not be issued, and that they would all be destroyed.

As late as October 15th, however, plaintiff received another of the circulars at his private address and it came to his notice that other persons, or at all events another person had received a circular of the same kind, and thereupon he placed the matter in his solicitor's hands, and eventually it was decided to commence the present proceedings.

Evidence was also given by a lady, who stated that she had been advised by Dr. Dockrell to try a little sallyco, and the witness proved the receipt of one of the circulars.

Professor Victor Horsley gave evidence to the effect that the appearance of Dr. Dockrell's name on the advertisement was distinctly detrimental to him from a professional point of view, because it would appear as though Dr. Dockrell was puffing or pushing the sale of this water, which was a secret remedy; and it was wholly contrary to the etiquette of the medical profession that a medical practitioner should be in any way associated with the sale or use of a secret remedy; and the statement on the circular that the plaintiff prescribed sallyco as an habitual drink would do him harm with the governing body of the hospital, with his professional colleagues, and socially.

Dr. Arthur Ernest Sansom, F.R.C.P., and President of the Council of the Medical Society of London, agreed with the opinion of Professor Victor Horsley in every particular.

Mr. Witt then stated the defendant's case; and

Dr. Dougall, the defendant, said in his evidence that he always told every medical man what the ingredients of sallyco were: he did not keep it a secret; he said that one of the ingredients was colchicine, which, however, differed from the commercial form of colchicine, in that every particle of the poisonous oil was removed from it. Dr. Dockrell had said that nothing had done him so much good as sallyco.

The defendant gave evidence as to the destruction of the circulars, and how it was that some circulars had not been destroyed and had been subsequently sent out, but that only five or six of the old circulars were sent out in October.

Dr. Archibald Keightley said that he had prescribed sallyco for between twenty and thirty patients, and that he and his wife used it every day. In cross-examination he stated that he would not entirely recommend the sallyco for general consumption but should do so as a rule. There were specific cases, as mentioned by the plaintiff in his evidence, in which he would not recommend it, and he also said it was a little too sweeping to say that this was a health-restoring beverage which suited all constitutions.

Mr. John Campbell Maclean also gave evidence in favour of sallyco, and of having taken it and prescribed it for patients.

Mr. Granville Hawley Sharp, formerly Principal of the Liverpool College of Chemistry, deposed that he had made an analysis of sallyco, and stated that, in his opinion, there was nothing injurious in it, and that colchicine was not cumulative in its action. In cross-examination he stated that in certain doses colchicine as contained in the sallyco was medicinally a poison.

Mr. Miller, the defendant's manager, said that he drew up the circular and put in Dr. Dockrell's name. It was an oversight that they were not all destroyed after Dr. Dockrell's complaint. It was through one of the clerk's carelessness that some of those not destroyed were subsequently sent out, and the clerk was dismissed.

Counsel having addressed the jury, Mr. Justice Ridley summed up, and the jury, having retired for some time, on their return into court stated that their unanimous verdict was that there was no libel.

Mr. Justice Ridley: A verdict for the defendant?

The jury: For the defendant.

Mr. Blake Odgers said there was this point of law: even if it be no libel still, it being the unauthorised use of the plaintiff's name, that was a matter which gave him a ground of action and the right to an injunction.

The case was adjourned for further consideration, and judgment was not given.

COUNTY COUNCIL APPOINTMENT: MEDICAL OFFICER OF HEALTH.

DISGUSTED.—In reply to our correspondent's question under this head, we do not think that any useful step could be taken in the matter. The provisions of the Local Government Act (1888) are to the effect that the county council may, if they see fit, appoint and pay a medical officer of health. If the county council do not appoint such medical officer, it would probably be obligatory upon the district council under the Public Health Act (1875) to make such appointment; but where the county council has appointed a medical officer of health, the obligation of the district council under the Act of 1875 in that respect is to be deemed to be satisfied.

THE TITLE OF "DR."

J. A. inquires if it is right for a medical man with the L.S.A. to print Dr. —— over his door.

*** This subject has been much discussed in the columns of the BRITISH MEDICAL JOURNAL, and we would refer our correspondent to the views expressed in the article in the JOURNAL of December 14th, 1895. He will there find it stated that in the opinion of the writer "no legal proceedings would lie against a qualified medical practitioner who chooses to call himself 'Dr.,' or even to put that title on his doorplate," and we cannot carry the matter further than this.

THE Prince of Wales's Hospital Fund for London has received from "A Lady" a donation of £1,000. The donor requested that her name should be withheld.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

DR. ALEX HILL, Master of Downing College, has been re-elected Vice-Chancellor.

READERSHIP IN SURGERY.—Joseph Griffiths, M.A., M.D., F.R.C.S., Surgeon to Addenbrooke's Hospital, and late Assistant to the Professor of Surgery, has been appointed Reader in Surgery from Midsummer, 1898.

LECTURESHIP IN CHEMICAL PHYSIOLOGY.—The General Board of Studies propose the establishment of a new University Lectureship in Chemical Physiology. In view, however, of the state of the University finances they are unable to assign to the office a stipend from the University chest, and the lecturer will probably be paid from the fees received by the department of Physiology.

MEDICAL REGULATIONS.—The Medical Board report that the work of examining in Anatomy and in Physiology for the M.B. Examinations, the Tripos, and the Special Examinations has become too onerous for a single Board of four examiners. They accordingly propose that separate examiners shall in future be appointed for the Tripos and Special Examinations on the one hand, and the Medical Examinations on the other. The Board further proposes that, with a view to the earlier study of pharmacology and therapeutics, evidence of attendance on a course of instruction in these subjects shall be required before Part I (Surgery and Midwifery) of the Third M.B. Examination, instead of before Part II (Medicine, etc.) as at present.

HONORARY DEGREES.—Among the recipients of honorary degrees on June 15th will be Sir William Turner, F.R.S., President of the General Medical Council, on whom the degree of Doctor in Science will be conferred.

DEGREES.—At the Congregation on May 26th, the following degrees in Medicine and Surgery were conferred:

M.D.—M. Craig, M.A., Caius; A. Eichholz, M.A., Emmanuel; C. E. Hedges, B.A., Sidney Sussex.

M.B.—C. R. Skyrme, B.A., Christ's.

M.B. and B.C.—H. D. O'Sullivan, B.A., Emmanuel; E. M. Corner, B.A., Sidney Sussex.

B.C.—F. A. Mills, B.A., Clare.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,704 births and 3,548 deaths were registered during the week ending Saturday last, May 28th. The annual rate of mortality in these towns, which had declined from 18.4 to 16.4 per 1,000 in the three preceding weeks, rose again to 16.5 last week. The rates in the several towns ranged from 8.0 in Croydon, 10.1 in Wolverhampton, 10.4 in West Ham, and 11.1 in Brighton, to 22.1 in Gateshead, 22.2 in Newcastle-upon-Tyne, 22.5 in Liverpool, and 23.2 in Sunderland. In the thirty-two provincial towns the mean death-rate was 16.8 per 1,000, and exceeded by 0.8 the rate recorded in London, which was 16.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the rate was equal to 2.1 per 1,000, while it averaged 1.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.3 in Birmingham and in Hull, 3.0 in Liverpool, 3.5 in Manchester, and 7.0 in Halifax. Measles caused a death-rate of 1.1 in Bradford and 4.3 in Halifax; scarlet fever of 1.6 in Halfax; and whooping-cough of 1.1 in Birmingham and in Sunderland, 1.2 in Liverpool and in Sheffield; 1.5 in Gateshead, and 1.9 in Newcastle-upon-Tyne. The mortality from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria in the thirty-three towns included 27 in London, 4 in West Ham, 4 in Cardiff, 4 in Liverpool, and 3 in Leeds. One fatal case of small-pox was recorded in Newcastle upon-Tyne, but not one in London or in any other of the thirty-three large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,421 to 2,241 at the end of the seven preceding weeks, had further fallen to 2,195 on Saturday last, May 28th; 256 new cases were admitted during the week, against 209, 229, and 223 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 28th, 1,023 births and 647 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.8 and 19.9 per 1,000 in the two preceding weeks, further rose to 21.4 last week, and was 4.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.8 in Aberdeen and 15.7 in Leith to 23.7 in Dundee and 26.2 in Paisley. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 325 deaths registered in Glasgow included 14 from measles, 3 from scarlet fever, 2 from diphtheria, 18 from whooping-cough, and 9 from "fever." Seven fatal cases of measles, 3 of scarlet fever, and 2 of diphtheria were recorded in Edinburgh.

DIPHTHERIA IN LONDON.

THERE was a slight decline last week in the mortality from diphtheria in London. The deaths referred to this disease, which had been 27, 20, and 31 in the three preceding weeks, fell to 27 during the week ending Saturday last, May 28th. Of these 27 fatal cases, 3 belonged to Battersea, and 2 each to Kensington, Chelsea, Westminster, St. Pancras, Bethnal Green, and Lewisham sanitary areas. The notifications of diphtheria in London, which had been 202, 196, and 212 in the three preceding weeks, declined again to 201 during the week ending Saturday last, May 28th. Compared

with the preceding week, there was an increase in the prevalence of diphtheria in North and East London, but in West, Central, and South London there was a decline. The decline in the prevalence of the disease in West London was most marked in Chelsea, where the new cases, which had been 6, 8, and 17 in the three preceding weeks, declined to 7 last week. There was, however, a fresh outbreak in Paddington, 9 new cases being notified, against 3 and 2 in the two previous weeks. The increase in the prevalence of diphtheria in North London was mainly in Hackney, where 25 new cases were notified, a higher number than in any week for some months past. Among the various sanitary areas of East London the increase in the prevalence of the disease was confined to St. George-in-the-East, Whitechapel, and Bethnal Green; in the last-mentioned sanitary area the new cases, which had been 4 and 7 in the two preceding weeks, further rose to 10 last week. Among the sanitary areas of South London the decline in the prevalence of diphtheria was most marked in Greenwich and in Camberwell; in the latter sanitary area the new cases fell to 13, against 21 in the preceding week. On the other hand, the new cases notified in Lambeth, which had declined from 15 to 6 in the three preceding weeks, rose again to 11 last week. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 142, against 131 and 130 in the two preceding weeks; and 917 cases remained under treatment in these hospitals on Saturday last, May 28th.

LEAD POISONING IN THE POTTERIES: DEPUTATION TO THE HOME SECRETARY *re* WOMEN INSPECTORS.

AN influential deputation of members of Parliament, and of others interested in the health conditions of the Potteries, was received recently by Sir M. White Ridley at the Home Office. Sir Charles Dilke, in introducing the deputation, said that of 400 cases of plumbism annually occurring, while fully one half of them were males, as shown by Government statistics, private inquiries demonstrated that there were many deaths of women and young persons from lead poisoning that were improperly certified. He suggested the appointment of a woman inspector, drew attention to the necessity of excluding young persons from the dangerous processes, and to the advisability of assimilating the special rules for the Potteries to those of the white lead industry. Sir William Stirling Maxwell suggested in addition the systematic medical inspection and the non-re-employment of people once poisoned by lead. Remarks in a similar strain were made by Mr. Tennant, M.P., and by Mr. William Allen, M.P. In his reply, the Home Secretary stated that he did not require to be convinced, by any allusion to the distressing cases of plumbism in the Potteries, for the matter was one that had given him some anxiety, and to it he had devoted considerable attention. He had recently appointed two experts—Dr. Thomas Oliver and Dr. Thorpe—to go down to the Potteries with the view of making special inquiries into the various kinds of glazes and pigments used. By these gentlemen he hoped to be furnished with material upon which to frame regulations. Already the special rules were being made more stringent, new rules were being provided which would exclude children and young persons from certain dangerous processes, also for periodical medical examinations, and for better arrangements for washing and meals. While agreeing with much that had been said by members of the deputation in regard to women inspectors, it seemed to him unwise to set up in the Pottery district a co-ordinate and dual inspectorship by the appointment of a lady responsible only to the Chief Inspector of Factories at the Home Office.

THE DISPOSAL OF HOSPITAL SEWAGE.

THE treatment of the sewage of Mr. Quarrier's consumption hospital, along with that from the several houses built and planned by the same philanthropist at the Bridge of Weir, is a matter of some little interest. The wastes from the several buildings are collected about halfway between the homes and the river Gryffe into a high and a low level sewer, and the contents of the latter pumped into the former. The sewage then flows into a settling or grit chamber; thence it passes to a septic tank, where it remains twenty-four hours. Both these tanks are in duplicate, as in fact are all parts of the works. The closed tank, in which the sewage remains for twenty-four hours, cannot be completely emptied. Its contents are discharged by a siphon or floating valve, but not to within a few feet of the bottom. A process of anaërobic putrefaction, resulting in a liquefaction of the organic solids, is therefore constantly going on, and the anaërobic microbes in the bottom of this intermittently discharged cesspool are sufficient to set up the putrefactive fermentation in the next charge of sewage. From this tank the comparatively clear fluid goes to a bacteriological filter bed of coke, covered with a thin layer of gravel, the former 2 ft. 9 in., the latter 3 in. thick. This tank is open to the air, and it is intended that the aërobic bacteria should complete the oxidation of the organic constituents of the sewage and fit it to pass at once into the river. There are certain sludge drains at the bottom of the tanks, intended to be used once or twice a year if necessary for the removal of any sludge that may accumulate. The aërobic tanks are to work each once in twenty-four hours; during sixteen hours it is filling or full, during eight empty and aërating. It may, of course, be questioned whether the closed tanks are really necessary—whether the Dibden tanks over which their contents are afterwards distributed would not have done the work equally well without them; and if so, apart from the question of extra cost, whether the open-air treatment would not be less offensive with non-putrescent than with putrescent sewage. The matter, however, is one we are glad to see put to the test of experiment.

A FLAW IN SANITARY ADMINISTRATION.

THE constitution of parishes into new urban districts, each with its separate local administrative council, is not without its drawbacks, and is certainly likely to prove disadvantageous to sanitary officials who, by the process of deductions from areas for which they act of these newly-formed urban districts, stand in danger of proportionate deduction from their already sufficiently scanty emoluments. In a recent case, a rural area from which an urban district has been recently carved, the newly-elected councillors decided to dispense with the services of the long-tried and exceptionally competent medical officer of health of the rural area. This is but a solitary instance of what is happening in the country, and it does not appear that any care is taken to arrange that no loss shall accrue to existing health officers by the creation of these new districts. Further, we find parishes claiming to be thus created into local administrative areas seemingly with a desire to elude the enforcement of necessary sanitary reforms which their continued inclusion in large rural districts would have brought about.

SMALL POX IN THE NORTH.

THE thundercloud of small-pox, which discharged itself with such effect at Middlesbrough, is still hanging over our north-eastern counties. Six cases have occured at South Shields, five of them in one house, and the other in another part of the town. Single cases have also been discovered at Carlisle, Rochdale, High Heworth, Huddersfield, and Workington. In most of these cases the subjects of the attack have been tramps, stopping temporarily in lodging-houses. With the machinery for the diffusion of infection thus well established, there is no immediate prospect of a cessation of this dropping fire of cases. Apart, however, from this source of infection, there appears to be good evidence that the disease has been imported from beyond seas. At Newcastle, where there have been ten cases, several have been on board vessels, but one of the latest, a child of 3 months old, occurred in the town. At Goole, several cases have been notified, one of them on board a steamer from Hamburg. At all these places the authorities are preparing for eventualities, and in most cases arrangements for the isolation of a limited number of cases in buildings of a more or less temporary character, hurriedly run up, are being made.

The cost of the epidemic, it is stated, will not be nearly so great as was generally supposed, not being more than would be met by a rate of 1s. 1d. in the £ for two or three years. This, we presume, only refers to the cost incurred by the council itself, and is independent of what the guardians may have spent, and of the much larger loss that has fallen on traders and others through collapse of business. Amongst the results which must be reckoned as compensations for the penalty which Middlesbrough has thus had to pay, is the stimulus which has been given to vaccination in neighbouring towns where default has been much greater than it was at Middlesbrough. Amongst these Darlington, a notorious defaulter, may be specially mentioned, where Dr. Laurence, the medical officer of health, in his last quarterly report, states that "the small-pox scare, as it has been called, has borne fruit in the number of vaccinations and re-vaccinations that have been performed during the last two months."

Apropos of the theory which has traced the origin of the Middlesbrough epidemic to Bilbao, whence it is supposed to have come in vessels laden with the iron ore which is so largely exported thence, it has been pertinently asked why, if this be so, Cardiff, which has much more extensive relations of this kind than the Tees port has should have escaped importations of the disease, as it apparently has?

FILTHY "CLEANSING."

THE special report of the health officer for the Carlisle Rural District recently made as to two parishes, Stanwix and Edentown, makes mention of the filthy practice of removal of refuse from houses only to be deposited in front of dwellings until the accumulation can be carted away. As a consequence the soil around is rendered filthy, and there is the danger of foul effluvia entering dwellings, food stores, etc., as well as the serious probability of wind-borne *débris*, perhaps of an infective character, being carried into living rooms and pantries.

PAYMENT FOR CALF LYMPH.

F. H. B. C.—The public vaccinator is the only person who has the function of deciding what form of lymph to use and whence it shall be obtained. If guardians desire that there shall be calf lymph used in any district at the public vaccinator's discretion, the contract should be endorsed in a manner which shall render valid an extra fee for each vaccination performed with calf lymph, such fee being now generally sixpence or a shilling, as the guardians and their officers may mutually agree. The following form of endorsement is that often adopted, and must of course be submitted for sanction by the Local Government Board: "It is hereby agreed by and between the within-written guardians and [public vaccinator] that any vaccinations to be performed under the within-written contract may be performed with calf lymph, to be provided by and at the cost of the public vaccinator, and that for every successful vaccination so performed an additional payment of shall be made to the public vaccinator by the said guardians. In witness whereof, etc."

A PUBLIC HEALTH QUESTION IN SHEERNESS.

FOR all sanitary districts, means for the prompt isolation of early cases of infectious disease should be deemed a prime necessity. Yet the number of districts devoid of all means of isolation is still very large. A correspondent has drawn our attention to the unpreparedness in this respect of the important town and dockyard of Sheerness, which is peculiarly open to importation of infectious disease, yet the claims of its resident civil population to the benefits to be derived from measures of prompt isolation and disinfection are ignored, notwithstanding the repeated protests of their official health adviser.

RIVER POLLUTION PROSECUTIONS.

THE Guildford Corporation and the Hambledon Rural District Council have both been fined at the suit of the Thames Conservancy Board for polluting the River Wey. Guildford has recently laid down a new sewage system in place of the old surface drains which discharged into the river, but the onus of connecting the houses with the new system fell on the owners of the property, with the result that many disregarded the warnings of the corporation.

NOTIFICATION FEES.

W. G. W.—The resident medical officer of a public infirmary who visits patients on behalf of the establishment at their own homes would appear to be entitled, as the officer of a "public institution," to the fee of 1s. only in respect of the notification of cases of infectious disease in the persons of patients thus visited.

HOSPITAL AND DISPENSARY MANAGEMENT.

SURREY COUNTY ASYLUM, BROOKWOOD.

THE total number of patients under treatment at this asylum during the year 1897 was 1,355, and the average number daily resident was 1,066. Overcrowding continued in the asylum throughout the year, and the committee record their satisfaction at the appointment of a special committee to report upon the provision of further accommodation for the pauper lunatics of the county, and express the hope that their labour will result in the early establishment of another asylum. There were 296 patients admitted during the year, and of these only about 34 per cent. were thought to have a favourable prospect of recovery, 78 were over 50 years of age, 31 were epileptics, 21 were idiots or imbeciles, and 17 were general paralytics. Dr. Barton in his report states that the large majority presented a mental condition of a most unfavourable character, being mostly cases of chronic mania and dementia. The recovery-rate for the year stands at 28.47 per cent, the lowest recovery-rate since 1876, and it is accounted for by Dr. Barton in the few curable cases remaining in the asylum at the end of 1896, and the very unfavourable nature of the cases admitted. The death-rate is 8.44 per cent. of the average number resident. No deaths from injury occurred, but a homicidal assault was committed by an ex-criminal patient upon an attendant.

MEDICAL NEWS.

ALFRED MAXWELL WILLIAMSON, M.B., C.M., B.Sc. (Public Health), has been appointed sanitary inspector for the city of Edinburgh. The salary is £400.

THE Rev. H. Golding-Palmer of Reading has by his will bequeathed £2,000 to the Royal Berks Hospital, and £1,000 to the Essex and Colchester Hospital.

WE are asked to state that the library of the Royal College of Surgeons of England will be closed on Tuesday, Wednesday, and Thursday next, to enable the necessary arrangements to be made for the *conversazione* of the Metropolitan Counties Branch of the British Medical Association.

THE late Mr. Edward Mackeson has left his residuary estate, so far as it is applicable for charitable purposes, in equal shares to the Royal Asylum of St. Anne's Society, the Surgical Aid Society, and the Association for Promoting the General Welfare of the Blind. It is expected that the institutions will thus receive eventually about £100,000.

THE next meeting of the International Prison Congress will take place at Brussels in the year 1900. It will consist of four sections—Penal Legislation, Penitentiaries, Preventive Methods, and the Protection of Children. The programme has been drawn up, and further particulars will be supplied by Mr. E. Ruggles-Brise, Prison Commission, Home Office.

THE annual general meeting of the St. George's Hospital Graphic Society will be held at the hospital on June 7th, at 2.30 P.M. By permission of the Board of Governors the annual exhibition, which is strictly limited to the work of members, will be held in the Board-room of the hospital. The exhibition will be opened immediately after the meeting, and will remain open until the end of the week.

DURING the annual Congress of the Institute of Public Health, which will commence in Dublin on August 18th, a health exhibition will be open, and will be continued until August 27th. The exhibition will be of a comprehensive character, and will include, in addition to sanitary appliances, bicycles and tricycles and motor cars. The President of the Congress will be Sir Charles Cameron, and the Honorary President the Lord Mayor of Dublin.

WE are glad to be able to correct the statement of a contemporary that Miss Hart, sister of the late Mr. Ernest Hart, has died. Miss Charlotte Hart, who was the trusted assistant of her brother in the conduct of the *London Medical Record* and of the *Sanitary Record* while under his direction, and who in the early days of his editorship of the BRITISH MEDICAL JOURNAL rendered him unwearying assistance, still lives in London and enjoys the esteem and affection of a large circle of friends.

THE late Mr. Richard Berry has, among other bequests, bequeathed £1,000 each to the Earlswood Asylum for Idiots, the London Fever Hospital, Guy's Hospital, St. Thomas's Hospital, the London Hospital, the Metropolitan Hospital, the Poplar Hospital for Accidents, Charing Cross Hospital, the Middlesex Hospital, the Royal Free Hospital, King's College Hospital, and the Great Northern Central Hospital; and £500 each to the London Lock Hospital and Asylum, the City of London Hospital, Queen Charlotte's Lying-in Hospital, and the General Lying-in Hospital.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been appointed house-officers from June 7th, 1898: *House-Physician:* R. W. C. Pierce, M.B., B.Sc.Lond., L.R.C.P., M.R.C.S., L.S.A., D.P.H.Camb. *Obstetric House Physicians:* (Senior) H. T. M. Alford, L.R.C.P., M.R.C.S.; (Junior) L. Gilbert, L.R.C.P., M.R.C.S. *Clinical Assistants in the Special Department for Diseases of the Throat:* F. R. Martin, B.A., M.B., B.C.Camb., L.R.C.P., M.R.C.S. *Clinical Assistants in the Special Department for Diseases of the Skin:* W. J. E. Davies, L.R.C.P., M.R.C.S.; P. W. G. Sargent, B.A.Camb., L.R.C.P., M.R.C.S. *Clinical Assistants in the Special Department for Diseases of the Ear:* F. H. Allfrey, B.A.Camb., L.R.C.P., M.R.C.S.; H. P. Kennard, M.B., B.S.Durh. *Clinical Assistants in the Electrical Department:* S. H. Belfrage, L.R.C.P., M.R.C.S.; W. Thornely, M.A., M.B., B.C.Camb., L.R.C.P., M.R.C.S. Several other gentlemen who held offices before received an extension of their appointments.

DINNER OF THE WEST LONDON HOSPITAL.—On May 31st about 90 of those connected either in the past or present with the West London Hospital, sat down to dinner at the Trocadéro Restaurant. Mr. Alfred Cooper was in the chair, and in proposing "The West London Hospital," he briefly sketched the history of the hospital, and referred to Mr. Ernest Hart's connection with the institution. The cordial relations existing between the staff and practitioners in the neighbourhood were emphasised, a fact largely due to the West London Medico-Chirurgical Society and its close association with the hospital. The post-graduate course was mentioned, and increased facilities for post-graduate work promised in the near future. A Pathological Laboratory is about to be opened in which examinations of hospital specimens will be made and investigations undertaken for the practitioners of West London for a small charge. The Chairman stated during the course of the evening that the past residents have given two beds in the new wards. Amongst the other speakers were Dr. Darley Hartley, of South Africa, who is well known in Cape politics, and Mr. Butlin, who in an appreciative speech proposed the health of the Chairman.

MEDICAL VACANCIES.

The following vacancies are announced:

ASTON MANOR URBAN DISTRICT COUNCIL.—Medical Officer of Health for the District, and Medical Attendant at Infectious Hospital. Salary, £125 per annum. Applications to Joseph Ansell, Clerk, Council Offices, Albert Road, Aston Manor, Birmingham, by June 13th.

BELFAST DISTRICT ASYLUM.—Assistant Medical Officer; unmarried, and not more than 32 years of age. Salary, £100 per annum, with £50 in lieu of rations; also furnished apartments, fuel, light, washing, and attendance. Applications to the Resident Medical Superintendent by June 11th.

BIRMINGHAM GENERAL HOSPITAL.—House Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by June 25th.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, 109, Edmund Street, Birmingham, by June 15th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant. Applications to the Secretary, 13, St. Paul's Square, Birmingham, by June 14th,

BRADFORD ROYAL INFIRMARY.—Honorary Physician. Applications to the Secretary,

BRIGHTON THROAT AND EAR HOSPITAL.—Resident Lady Dispenser. Salary £30, with board, lodging, and washing. Applications to the Hon. Secretary by June 18th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House Surgeon. Salary £80 per annum, with board and lodging. Applications to the Rev. Thomas Lund, Hon. Secretary, by June 11th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House Surgeon. No salary, but board, lodging, and washing provided. Applications to the Hon. Secretary by June 10th.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House Surgeon, Appointment for six months. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary by June 9th.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis Road, Shadwell, E.—House Physician. Board, residence, etc., provided, and honorarium at completion of six months' approved service. Applications to the Secretary by June 11th.

EGYPTIAN GOVERNMENT: SCHOOL OF MEDICINE AND THE KASR-EL-AINI HOSPITAL.—Professor of Surgery at the School and Senior Surgeon to the Hospital, £400 per annum; Professor of Clinical Surgery at the School and Surgeon to the Hospital, £320 per annum; Professor of Clinical Medicine at the School and Physician to the Hospital, £320 per annum; Resident Medical Officer to the Hospital, £250 per annum and quarters; Resident Surgical Officer, salary £250 per annum and quarters. Applications on forms provided to the Director-General, Sanitary Department of the Egyptian Government, care of the Secretary, Examination Hall, Victoria Embankment, by June 13th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Senior Resident Medical Officer. Salary £70 per annum, with board and washing. Applications to the Committee of Management by June 21st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Physician or Surgeon to the Skin Department. Applications to the Secretary by June 13th.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon. Salary £75 per annum, with residence, board, and laundry. Applications to the Secretary by June 24th.

HEMEL HEMPSTEAD, HERTS: WEST HERTS INFIRMARY.—House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, well-furnished rooms, board, fire, light, attendance, and washing. Applications to the Honorary Secretary by June 9th.

ISLINGTON: GUARDIANS OF ST. MARY.—Resident Assistant Medical Officer at the Workhouse and Infirmary, and Temporary Medical Officer of the Highgate Hill Temporary Workhouse. Remuneration, £80 per annum, and rations, apartments, and washing. Applications on forms provided to the Clerk, Guardians Offices, St. John's Road, Upper Holloway, N., by June 6th.

LEEDS: YORKSHIRE COLLEGE.—Demonstrator of Physiology. Salary, £150. Applications by June 10th.

LINCOLN COUNTY HOSPITAL.—Assistant House Surgeon. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by June 27th.

MIDLAND COLLIERY OWNERS' MUTUAL INDEMNITY COMPANY.—Consulting Surgeons. Applications to Mr. W. Saunders, Wilson Street, Derby.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary £100, with apartments, board, and washing. Applications to the Medical Superintendent by June 14th.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £50, with board, lodging, and washing. Applications to the Secretary by June 4th.

PAISLEY: RICCARTSBAR ASYLUM.—Assistant Resident Medical Officer. Salary £70, with board and apartments. Applications to the Clerk by June 13th.

ROYAL EAR HOSPITAL, Soho.—House Surgeon, non-resident, for six months. Honorarium, 12 guineas. Applications to the Honorary Secretary by June 7th.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston Road, N.W.—Resident Medical Officer, unmarried. Salary, £105 per annum, with residence and attendance. Applications to H. Peter Bodkin, Secretary, 23, Gordon Street, Gordon Square, W.C., before June 6th.

SHEFFIELD: ROYAL INFIRMARY.—Vacancy on the Honorary Surgical Staff. Applications to the Secretary by June 27th.

SHEFFIELD: UNIVERSITY COLLEGE.—Lecturer in Physiology. Applications to the Registrar by June 11th.

SHOREDITCH: PARISH OF ST. LEONARD.—Second Assistant Medical Officer for the Infirmary, Hoxton Street, N. Appointment for six months. Salary at the rate of £60 per annum, with rations, washing, and furnished apartments. Applications, on forms provided, to the Clerk to the Guardians, 213, Kingsland Road, N.E., by June 13th.

WAKEFIELD; WEST RIDING ASYLUM.—Pathologist. Salary £150, increasing to £200. Applications to the Medical Director.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon. Appointment for six months. Board, lodging, and washing. Gratuity £20. Applications to the Secretary.

WEST HAM UNION.—Dispenser. Salary £40 per annum. Applications, on forms provided, to the Clerk, Guardians' Offices, Union Road, Leytonstone, E., by June 8th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House Physician and House Surgeon. Appointment for six months. Applications to the Secretary Superintendent by June 22nd.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser. Salary £70 per annum, with board, residence, and washing. Applications to the Secretary, Worcester Chambers, Pierpoint Street, Worcester, by June 18th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to W. Draper, Esq., De Grey House, York, by June 13th.

MEDICAL APPOINTMENTS.

ASHTON, George, M.B., appointed Medical Officer to the London County Asylum, Claybury, Essex.

BROOKS, Charles, M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Gerrard's Cross District of the Eton Union.

COLEMAN, P., M.B., appointed Medical Officer for the Eighth District of the Tendring Union.

COOMBS, Wellesley, F.R.C.S., L.R.C.P.Edin., appointed Anæsthetist to the Worcester Infirmary.

CROMPTON, H. J., M.B., B.Ch.Vict., appointed House Physician to the Royal Infirmary, Manchester.

DON, W. W., M.D., appointed Clinical Assistant to the Chelsea Hospital for Women.

DUNCAN, R. B., M.D., B.S., B.Hy. Dunelm, appointed Surgeon to the Hele District of the Great Western Railway.

GARNER, John E. M.D.Aberd., reappointed Medical Officer for the No. 1 District of the Preston Union.

GEMMELL, John E., M.B., C.M.Edin., appointed Honorary Acting Medical Officer to the Hospital for Women, Shaw Street, Liverpool, *vice* T. B. Grimsdale, M.B.

GOODWIN, Dr. Herbert, appointed House Surgeon to the Durham County Hospital.

KELSALL, R., M.B., B.Ch.Vict., appointed House Surgeon to the Royal Infirmary, Manchester.

MULLICK, S., M.B., C.M., reappointed Resident Medical Officer to the National Hospital for Heart and Paralysis, Soho Square, W.

ORFORD, Dr., appointed Medical Officer of Health to the Market Bosworth Rural District.

PATON, Robert N., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer to Her Majesty's Prison, Wormwood Scrubbs.

STEVENSON, John Findlay, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Casualty Surgeon, Glasgow Police, *vice* Professor Glaister, resigned.

WYLIE, D. S., M.B., B.Ch.Vict., appointed House Surgeon to the Royal Infirmary, Manchester.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

BENSON.—On May 26th, at Broomhill, Sheffield, the wife of Henry Mitchell Benson, M.B., C.M.Edin., of a daughter.

FALCONAR.—On May 25th, at "Penlea," Shirehampton, near Bristol, the wife of Henry Barclay Falconar, of Avonmouth, Bristol, of a daughter.

MARRIAGE.

NORRIS—JOHNSON.—On May 3rd, at St. Anthonys, Montserrat, B.W.I., by the Rev. F. W. Haines, assisted by the Rev. G. Evans and Rev. C. W. Johnson, Frederick Laing Norris, M.B., C.M., to Emma, daughter of the late Burdett Johnson, M.R.C.S.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C. 5 P.M.—Mr. Lennox Browne: The Treatment of Lupus and Tubercle of the Upper Air Passages.

Odontological Society of Great Britain, 8 P.M.—Papers by Mr. Kenneth D. Goadby and Mr. W. R. Humby.

TUESDAY.

Roentgen Society, 11, Chandos Street, Cavendish Square, W., 8 P.M.—Mr. T. C. Porter: Work on the X Rays; Mr. A. A. Campbell Swinton: A Pin-hole Roentgen Ray Camera and its Applications.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Dr. Ormerod.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Dr. T. Dixon Savill: Cases of Neurasthenia and Acroparæsthesia.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Neoplasms.

WEDNESDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Donald Hood: The Symptoms of Gastric Ulceration.

Dermatological Society of London, 11, Chandos Street, Cavendish Square, 5.15 P.M.—Demonstration of Clinical Cases.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Wethered: Incipient Pulmonary Tuberculosis.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases and Specimens by Drs. Permewan, Tilley, Pegler, and Spicer, Mr. Lake, and others. Council meeting at 4 P.M.

THURSDAY.

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Dr. Heron: Clinical Lecture.

British Gynæcological Society, 8.30 P.M.—Specimens: Mr. Skene Keith: Ovaries illustrating a Cause of Failure of Apostoli's Treatment; Mr. Charles Ryall: Uterine Myoma. Dr. F. Edge (Wolverhampton): Uterus Septus Bicularis and Vagina Subsepta. Dr. G. Bantock: Dysmenorrhœa.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Dr. Dundas Grant: Clinical Anatomy and Methods of Examination of the Sinuses of the Nose.

Ophthalmological Society of the United Kingdom.—Cases and Card Specimens at 8 P.M. Papers at 8.30 P.M. Mr. Percy Flemming: A Case of Retinitis Proliferans, in which the Eyeball was Examined after Death; Mr. Holmes Spicer: Œdema of the Conjunctiva; Mr. Treacher Collins: The Pathogenesis of Anterior Polar Cataract.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Mr. Wallis: Demonstration of Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.

FRIDAY.

Ophthalmological Society of the United Kingdom, 8 P.M.—Mr. Priestley Smith: The Bowman Lecture, on the Etiology and Educative Treatment of Convergent Strabismus.

London Post-Graduate Course, Bacteriology at King's College, 3 to 5 P.M.—Dr. Wilkinson: Typhoid Fever and Diphtheria, etc.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Tu., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F. 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 1.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W. 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0. Eye, Tu. F., 9; Ear, M. Tu., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, Tu. F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Opthalmic), Tu., 2; (Gynecological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynecological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Tu., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Tu., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

J. S. H. desires to be recommended to a good school in a healthy situation for the daughters of professional men.

GONOCOCCI AND THE DIAGNOSIS OF GONORRHŒA.

H.R. asks: Does demonstration of gonococci in pus from urethritis prove the existence of genuine gonorrhœa, and also prove the unchastity of the female from whom the urethritis was caught? Simple urethritis from intercourse with a woman suffering from leucorrhœa or menstruation does not, I believe, contain gonococci.

*** The greatest caution must be observed in dealing with such a case as that mentioned Lustgarten, Bumm, and others, maintain that there are several "pseudo-gonococci," which may appear even in the healthy vagina or urethra. It is very difficult to distinguish these "pseudo" forms from the real form, except in acute cases, and even then there is a relative difficulty. The unchastity of the person referred to should certainly not be accepted on the evidence submitted.

FORMATION OF MEDICAL CLUBS.

COUNTRY PRACTITIONER.—A correspondent writes that he has been requested by the "X" Assurance Society to form a medical sickness club in his village; he is already medical referee to the "Y" Assurance Society, and he is in doubt whether he can rightly act for both societies.

*** If the proposed club tends to injure the "Y" Assurance Association, our correspondent could not honestly act for both societies; otherwise there would be nothing to prevent him from doing so. The formation of cheap medical clubs by individual practitioners, nominally under the direction of friendly societies, is much to be deprecated especially in districts where there are other practitioners; ill-feeling is nearly sure to be engendered in the minds of the latter, whose practices tend to be unfairly injured by such clubs.

ANSWERS.

DR T. EDMONDSTON SAXBY and ANTI-HUMBUG.—As the question of right is shortly to be argued before a court of law, we think it inadvisable to publish our correspondents' letters at present.

D. W. R.—Dr. George Oliver's hæmoglobinometer and hæmocytometer may be obtained from the Tintometer Company, 6, Farringdon Avenue, London, E.C., from whom particulars as to price and other details may be obtained.

A T.—We have no reason to doubt the truth of the statement. Efforts have been made to ascertain the name of the qualified medical man in question in order that his conduct should be inquired into by the General Medical Council, but without avail.

CHIRURGUS.—The net receipts must, we apprehend, be understood to mean after expenses are paid; that is to say, net profits. Having regard to all the circumstances, and the comparatively small sum involved, we think that our correspondent would be ill advised to take the case into court. The matter might be referred to a common friend for his decision.

CORONERS' FEES.

NEVER ASKED.—The fees paid to the medical witness are, like all the other disbursements at the conclusion of an inquest (police fees, hire of room, removal of body to mortuary, expenses of ordinary witnesses, etc.), paid in the first instance by the coroner out of his private resources. He has no fund on which he can draw. These disbursements are subsequently, if passed by the county auditor, refunded to the coroner, usually at the end of the quarter, out of the county rates. Beyond the inconvenience of having to advance the medical witness's fee in this way and so lock up the amount for some months, the coroner has no pecuniary interest one way or the other in summoning a medical witness. There is of course a possibility of fees being disallowed—a very frequent occurrence formerly whenever the magistrates thought in their wisdom that an inquest had been "unnecessarily" held. Our correspondent says that "many inquests have been held in his district, and in only one of them has a medical man been summoned to give evidence, and that was by the deputy coroner. It is hard to imagine a long series of cases in which medical evidence was not required. This happens in a small proportion of cases (accidents witnessed by trustworthy eye witnesses, and so on); but in almost all cases coming under the head of "sudden death, the cause of which is not known," an inquest without a *post-mortem* examination settles nothing.

NOTES, LETTERS, Etc.

AN APPEAL ON BEHALF OF THE WIDOW OF THE LATE DR. ARTHUR BARLOW

THE following additional subscription has been received on behalf of this fund:

	£	s.	d.
Per Dr. J. W. Moore, 40, Fitzwilliam Square West, Dublin—"Postmark," Waterford	1	0	0

LEOPARD'S BANE.

DR. A. CRAIGMILE (Liscard) writes: On May 7th I saw a lady with severe nettle rash of face, wrists and hands. On May 8th small bullæ had developed over the worst patches on the face, and the eyelids were greatly

swollen. She had eaten none of the ordinary substances that cause such an eruption, such as shellfish, lobster, pork, etc., so I inquired if she had been handling the primula obconica, which I had seen cause it, but she had not. She then stated that the only flowers she had handled were some marguerites, and on my asking to see them I found they were the doronicum pardalianches, which is cultivated freely about here, and which grows well in my own garden. She had the same experience a fortnight before on handling the flowers, but did not connect the two as cause and effect.

I mentioned the case to a medical friend on May 8th, and having handed him the British Medical Journal to look at while called out of the room, I was much interested to have my attention called by him to Dr Reg. C. Worsley's note on the doronicum.

Dr. Reginald C. Worsley (Ramsgate) writes: I am obliged by your reply to my query *re* the leopard's bane, and to Dr T. R. Atkinson for his comment. I was not aware that the plant belonged to the same family as the arnica montana, and this fact explains its effect on the skin of my patient. She has on two occasions had acute erysipelas of the face after using liniment containing arnica to rub another person with (a fact I have verified for myself), and it would seem that some skins are peculiarly susceptible to its irritant properties. (*Vide* Mitchell Bruce's *Materia Medica and Therapeutics*). In the present instance the plant caused very severe eczema.

Odor Mortis.

Dr. Louis E. Stevenson (Temple Sowerby, Penrith) writes: I think there can be no doubt that such an odour exists, although inappreciable to the average nasal organs. The following passage which I translate from M. P. Mégnin's interesting work, *La Faune des Cadavres*, shows that this odour attracts also certain species of flies to the dying in certain seasons: "The approach of death in a human being or animal at a time of year when insects are in active life, is for certain heralded by the determined way in which certain flies settle on the skin and particularly in the neighbourhood of the natural openings, especially the nostrils. This means that certain odours indicate to them the rapid approach of an event by which they will obtain abundant nourishment for their offspring and these flies eagerly before dissolution hasten to lay their eggs in the nostrils, mouth, or even eyes" (p. 21).

Phosphorus writes: Under the above heading Dr Thos. P. Tuckey, in the British Medical Journal of May 21st, page 1372, refers to "the odour of the breath in those about to become insane."

I have, from time to time, noticed what I think is referred to as the "Odor Mortis." I am familiar with an odour which I have, after many years' observation, come to regard as almost symptomatic of syphilis; the peculiar sweetish and sickly smell of advanced consumption must be familiar to most people; small-pox has its own smell; and nothing can well be more disgusting than the partly fishy, and partly cold cabbage water like penetrating stench of the breath of a person with ichthyosis; but the distinctive smell of incipient insanity I am not familiar with, though I can readily understand that a person presenting one of the many odours closely connected with different pathological states may become insane, but in such a case the insanity cannot be said to have any direct relation to that particular and previously existing odour.

Dr. J. Rowat (Troon) writes: Twelve years ago I was asked to visit a child suffering from severe sickness and vomiting. On entering the house I noticed a peculiar heavy, sweetish smell, which seemed chiefly to be exhaled by the lungs. When the child vomited the odour was stronger. Death occurred in forty eight hours. In another case a few months later I recognised the same smell, and had a consultant called in. He did not seem to think the case one for consultation. A few doses of bismuth and grey powder were ordered. The child died in twenty hours. Out of eight such cases only one recovered. One child, aged 4 years, lived a fortnight. A consultant was called in on the third day. The right lung was consolidated from apex to base, the temperature ranged from 101° to 105°, the child became unconscious, rolled its head from side to side, and gave vent now and again to a sharp, fierce cry. The consultant was not particularly struck with the smell, and saw no sufficient reason why the child should not recover. The other cases, mostly children lived from one to three or four days. A man who had been an imbecile all his life, took a cold. The same smell led me to warn those in charge of the extreme gravity of his symptoms. He died in forty-eight hours. As stated above one case recovered. The smell was faint, vomiting slight, but bad prostration and collapse pointed to the severity of the illness. Only two patients were fevered.

The "British Pharmacopœia, 1898."

Mr. John Evans (Dublin) writes to draw attention to the following points in the revised *Pharmacopœia:* Tinctura colchici seminis is one and a-half times stronger than the same preparation in 1885. Tinctura nucis vomicæ contains about twice the proportion of strychnine to that of 1885. The strength of infusum ergotæ has been doubled. Pilula phosphori is nearly twice the strength of the older preparation. Although it may still be a disputed point as to whether medicines administered by the mouth are more or less powerful than when otherwise introduced into the system, the new *British Pharmacopœia* gives one grain as the maximum dose of extract. belladonnæ alcoholic., but the suppositories are directed to be made with $1\frac{1}{2}$ grain in each. Strange to say, in the *British Pharmacopœia* of 1885 the dose of iodide of arsenium was given as $\frac{1}{20}$th grain but the dose of liquor arsenii et hydrarg. iodid. was 10 to 30 minims, which, roughly speaking, would be $\frac{1}{4}$ grain for a dose. In the new edition the dose of arsenii iodidum is given $\frac{1}{20}$ to $\frac{1}{2}$ grain, but for the liquor 20 minims is given as the maximum dose, which agrees with the maximum dose of the salt of arsenic, but the patient would take just $\frac{1}{4}$ grain mercuric iodide, although the maximum dose of this latter salt is stated to be $\frac{1}{6}$ of a grain.

Street Noises.

Dr. D. F. Harris (University, Glasgow) writes: I cannot refrain from saying how much I agree with, and how much every sensitive person in Glasgow ought to agree with, your most excellent and much-needed leaderette of May 21st, on the subject of street noises.

Some districts of Glasgow can outdo many in the metropolis in the matter of street noises. Let me specify the various kinds that can often be heard at one and the same instant in the district, say, of Hillhead in this city: Shouting of coal men, rattling of cabs, beating of carpets, ringing of hand bells in the street, "shrill whistling of errand boys," "rattling of milk cans," grinding of organs, "screaming" of hawkers of fish, blowing of all sorts of steam whistles on steamers and at the large factories and on railway engines; then after dark we have the omnipresent cats fighting, bands of semi-intoxicated youths yelling and singing, and blowing of steamer and engine whistles.

Prompt and severe action on the part of "the authorities" (whatever section of them is empowered to act) can alone mitigate the nuisance.

LETTERS, COMMUNICATIONS, Etc., have been received from:
A A. T.; Messrs. Arnold and Sons, London; Anti-humbug; Accuracy; Mr. R. B. Anderson, London; Dr. J. H. Ashworth, Halstead. **B** Mr. J. F. Briscoe, Alton; Mr. W. M. Barclay, Clifton; Dr. G. T. Beatson, Glasgow; Dr. E. Bielby, Lahore; Dr. T. A. Bowes, Herne Bay. **C** Dr. R. Caton, Liverpool; Dr. J. Cargill, St. Andrew, W.I.; Mr. R. H. Capper, London; Dr. J. W. Carr, London; Dr. G. W. Crowe, Worcester. **E** Mr. T. S. Ellis, Gloucester. **F** Mr E. H. Freeland, London; F.R.C.S.; Mr. W. T. Freeman, Reading; Mr. T. Fowler, Epping; Mr. G. R. J. Fletcher, London; Mr. W. W. Farnfield, London. **G** Dr. A. E. Garrod, London; Mr. C. H. Garland, London. **H** Mr. T. G. Horder, Cardiff; Dr. W. Habgood, Marple; Hope Deferred; Dr. W. J. Howarth; L. E. Hill, M.B., London. **I** Interested; Inquirer. **J** Messrs. Joshua Bros., London; Dr. E. Jepson, Durham. **K** Dr. P. King, Bath. **L** Dr. J. M. Lawrie, Weymouth; Dr. A. P. Luff, London. **M** Dr. R. B. McCausland, Dublin; Mr. J. H. Menzies, London; Mr. J. H. McAulay, Dublin; J. F. MacGregor, M.B., Morvern; Member; Medical Fees; M.D.St.And.; Mr. R. Maples, Kingclere; J. T. J. Morrison, M.B., Birmingham. **N** Dr. D. Newman, Glasgow. **O** O. F. S.; Dr. A. Ogston, Aberdeen. **P** Dr. F. W. Pavy, London; P. V.; Mr. A. S. Parkinson, Bradford; Mr. G. Pernet, London. **R** Messrs. R. W. Richards and Co., London; Mr. G. M. Ross, London; D. W. Russell, M.B., Glasgow; Mr. T. F. Raven, Broadstairs; R. T. W.; R. S.; J. M. Ross, M.B., Dumfries; Dr. D. A. Robertson, Edinburgh; Dr. J. Rowat, Troon. **S** Dr. A. Sheen, Cardiff; Dr. K. T. Stewart, London; Mr. J. Snowman, London; Dr. J. Smith, Edinburgh; Dr. R. R. Sleman, London; Mr. P. R. W. de Santi, London; Dr. W. Sykes, Gosport; Mr. T. E. Saxby, London; C. Slater, M.B., London; Dr. C. J. Symonds, London; E. A. Saunders, M.B., Dorking. **T** Mr. J. J. Tisdall, Liverpool; Mr. T. G. Turner, London. **V** Vejos Ltd., London. **W** Dr. W. G. Walford, London; Dr. D. Walsh, London; Dr. A. H. Watkins, Kimberley, S.A.; A. Wilson, M.B., Edinburgh; Mr. W. S. Wilmore, Birmingham; T. D. Wilson, M.B., Edinburgh; C. P. White, M.B., Birmingham; Mr. H. Wickham, Ormskirk; Mr. C. J. Wright, Leeds; Mr. R. H. Wolstenholme, Salford. **X** X. Y. Z.

BOOKS, Etc., RECEIVED.

Beiträge zur Klinik der Rückenmarks und Wirbeltumoren. Von Dr. H. Schlesinger. Jena: Gustav Fischer. 1898.

Über Herzbewegung und Herzstoss. Von Dr. L. Braun. Jena: Gustav Fischer. 1898.

Die Zelle und die Gewebe. Von Dr. O. Hertwig. Jena: Gustav Fischer. 1898.

The Potter and Lead Poisoning. By W. D. Prendergast, M.D. London: Marshall, Russell and Co., and Longton: Hughes and Harber. 1898. 1s.

A System of Medicine. Edited by T. Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A. Vol V. London: Macmillan and Co. 1898. 25s.

Die Protozoen als Krankheitserreger des Menschen und der Hausthiere. Von Dr. G. Schneidemühl. Leipzig: W. Engelmann. 1898.

Handbuch der Therapie innerer Krankheiten. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. Zweite Auflage. Elfte und zwölfte Lieferung. Jena: Gustav Fischer. 1898.

Mitteilungen aus der Augenklinik des Carolinischen medico-Chirurgischen Instituts zu Stockholm. Herausgegeben von Dr. J. Widmark. Erstes Heft. Jena: Gustav Fischer. 1898.

B. Bradshaw's Dictionary of Bathing Places, Climatic Health Resorts, Mineral Waters, Sea Baths, and Hydropathic Establishments. London: Kegan Paul, Trench, Trübner and Co. 1898. 2s. 6d.

The Operation of Membrane Excision. By H. Davies, M.D. London: A. Churchman. 1898.

A Manual of Jail Hygiene. By Surgeon-Captain W. J. Buchanan, B.A., M.B., B.Ch., D.S.M. Calcutta: Bengal Secretarial Press. 1898. Rs.3.

Normale und pathologische Anatomie der Nervenzellen auf Grund der neueren Forschungen. Von Dr. A. Goldscheider und Dr. E. Flatau. Berlin: H. Kornfeld. 1898. M.6.

Die willkürliche Bestimmung des Geschlechts. Von Dr. L. Cohn. Zweite Vermehrte Auflage. Würzburg: C. Kabitzsch. 1898.

Treatment: A Journal of Practical Medicine and Surgery. Vol. I. London: Rebman Publishing Co. 1898. 12s.

Die Arcadi und ihre Verwandten. Von Dr. F. Schatz. Berlin: August Hirschwald. 1898. M.2.

Llangammarch Wells as a Health Resort. By W. B. Jones, M.D., B.S., D.P.H. London: J. M. Kronheim and Co. 1898. 6d.

Atlas und Grundriss der traumatischen Frakturen und Luxationen. Von Dr. H. Helferich. Munich: J. F. Lehmann. 1898. M.12.

Outlines of Practical Surgery. By W. G. Spencer. M.B., M.S., F.R.C.S. London: Baillière, Tindall and Cox. 1898. 12s. 6d.

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AN ADDRESS
ON
CIRCUMSTANCES WHICH INFLUENCE THE EFFECTIVENESS OF CLIMATIC TREATMENT.

Delivered before the British Balneological and Climatological Society, June 8th, 1898.

BY G. V. POORE, M.D., F.R.C.P.,
Physician to University College Hospital, etc.

MEDICAL teaching in the present day is nothing if not practical, and some of us find a kernel of good in the methods of Mr. Squeers by which the boy who spelt "w-i-n, win, d-e-r, der, winder," was straightway sent to clean them, and so become practically acquainted with his subject. In all seriousness this method is very necessary with drugs, mineral waters, peptonised foods, and the numerous much be-puffed articles of diet.

I had the good fortune to begin life as the pupil of a practitioner of very high standing in a rural district, and for eighteen months I was handling all the ordinary drugs day after day, and thus became thoroughly acquainted with their physical and many of their physiological qualities. That knowledge has been of great service to me, and is, to my thinking, so necessary that when I find my house-physician has been ordering the last new tar product, it is my invariable practice to send to the dispensary for a sample, and to examine it with the eye, the nose, and the tongue, with the not infrequent result that we discover that the patient to whom such drug is being administered has to endure some very positive ills as a set off against probable good.

This practical knowledge is especially necessary with regard to climatic health resorts of all kinds, and I take it that one of the circumstances which greatly interfere with the usefulness of climatic treatment is precisely this want of practical knowledge on the part of the prescriber.

It is a frequent cause of regret to myself, and must be also to others who are similarly circumstanced, that I have never resided in the tropics and have never had the good luck to visit our southern Colonies or India. We who practise in London cannot but be impressed with the fact that this City is the centre of the world towards which our patients are centripetally impelled after residence in every variety of climate. It is often very desirable to have a knowledge of the mode of life and the influences for good or ill to which those who consult us have been or will be subjected, and when I see "Jack," who has been invalided from the West Coast, or "Tom," concerning whom I am asked whether he is strong enough to join his uncle in Assam, I confess to an inward feeling that the knowledge of the West Coast and Assam which I may have got by studying books and atlases is not quite the same thing as that personal acquaintance with the details of existence which only comes of residence.

Among many pieces of good advice which I received from the late Dr. Wilson Fox, I am especially grateful to him for one, namely, never when travelling to neglect visiting any locality which had a reputation as a health resort by virtue of its climate or mineral springs. "It will well repay you," he said, "even though such places should be at some distance from your main route." I have followed this advice, and have found it so useful that I shall continue to follow it.

Students who have just taken their qualifying degree or diploma, always receive from me the advice that if an opportunity for travelling offers itself, whether as the companion of a patient or as surgeon to a ship, they should seize it. A few months spent in this way before settling down is well spent. This advice is not universally given, and I know very well that at University College a distinguished colleague of mine will often advise a student that time spent in that way is generally time lost. It often happens, therefore, that a man who has been dissuaded by my friend, and nevertheless is still longing to see something of the world, will, to ease his conscience, seek further advice from me, well knowing what the tenour of such advice will be: I say "Go by all means, and find out as soon as possible that the world does not begin and end in Gower Street. You will get a much-needed rest for your brain after five years of work at examinations, and you will lay in a valuable stock of health; you will see new countries, new men, new modes of life; you will practically find out what the word 'climate' means; you will see something of diseases which you seldom or never see at home; and it may be that life on board ship will discipline your mind and teach you to give and take, to make allowance for the peculiarities of others, and not to be exacting about trifles. We have abundant evidence in this country that life on board ship develops a race of men who are distinguished for their kindliness, courtesy, strength, and courage, and to associate with such may well serve as a moral education. The proper study for mankind, especially doctors, is man. Go and return with widened sympathies and an expanded mind, and if you should find that in your absence a rival has earned undying fame by the discovery of a new kind of leucocyte, you must seek consolation in the hope that you have laid in a stock of health and energy that will soon enable you to pull up abreast of him."

The first circumstance, therefore, which interferes with the effectiveness of climatic treatment is the want of knowledge on the part of the consultant of the places to which the patient is to be sent. For my own part, I am always careful to tell a patient who wishes to go to some locality with which I am unacquainted that I am unable to advise him from personal knowledge. I may say that I know the place by reputation and have nothing to say against it, and no objections to raise to the patient's proposal, but I am very careful not to make myself answerable for the statements which are put forward in advertisements.

Such an attitude is very necessary in the present day when healing springs are "boomed" by syndicates, and municipalities spend enormous sums in advertising in the hope of recouping themselves by increased trade. We all know how it is done. A poet is hired to do the description; a chemist is found whose report leads one to suppose that he is almost stupefied by the marvellous purity of the drinking water; the reports of the sanitary officials are ransacked for a paragraph which states that the death-rate is 8.046 (mark the accuracy of the decimals), and which, it is hoped, will make the whole world eager to visit this colony of Nestors. These selected facts are joined to a wealth of chromo-lithography which shows that in this favoured locality the sun is always setting in splendour, the almond trees are ever in a state of bloom, and the famous waterfall, despite the perennial clearness of the sky, continues in a maximum flood.

One knows that pictures and photography are of enormous service in disseminating knowledge; but there are certain facts which seldom find entrance even among the bald ugliness of the photograph, such as dust, cutting winds, noises, and odours. The proprietors of a foreign mineral spring have recently called in the aid of the comic artist, and have disseminated pamphlets which are intended, I suppose, to show that in their favoured locality all the pangs that flesh is heir to dwindle to the dimensions of a titillation which excites laughter.

This is an advertising age, and it seems to be true that advertisements attract the public exactly in proportion to their unblushing boldness. Our profession in this country sets its face strongly against all forms of professional advertising, and here it is happily uncommon to find the names of professional men linked with statements which science forbids us to take seriously.

We are, happily, all differently constituted, and I confess to be one of those who still believe that "good wine needs no bush," and am free to admit that I am repelled and not attracted by that damnable iteration which seems sufficient nowadays to bring money to the broadcloth rogue.

Although no mere printed statement will ever be able to replace that intimate knowledge of a locality which residence alone can give, it is very necessary that such statements should be reliable, and that vital and meteorological statistics should be based upon adequate data. In localities which are subject to periodical invasion of visitors, and which are rapidly growing and developing, it must be almost hopeless to attempt to compare the vital statistics with those of any other locality, or with those of the country as a whole.

Such a Society as this is capable of doing a great service to the profession and the public by the publication of good

maps and plans of health resorts, and a few necessary dry facts and figures which should be allowed to speak for themselves.

Before settling in, or advising a patient to settle in, any particular district in England, I should want to know something of the situation, aspect, soil, vegetation, character of surface (whether flat or undulating), population, area, water supply, sanitation, local industries, vital and meteorological statistics, amount of local indebtedness, rateable value of district, rates in the £. I should inquire very carefully into the character of the local council, and should try to avoid the misfortune of settling in a district in which one would be under the heel of a few scheming tradesmen, bent on using the ratepayer for their own ends.

The excellent report issued by the Royal Medical and Chirurgical Society, on the Southern Health Resorts of England, is a step in the right direction for which we cannot but feel deeply thankful to Dr. Ord and his coadjutors.

It is not only necessary that a doctor sending a patient to a health resort should have a practical acquaintance with the main climatic conditions of the country or district, be it mountainous, maritime, or what not; but it is equally necessary that the patient should have the benefit of local knowledge as well. The word "climate" is generally used in a wide sense, but it is very necessary to remember that climates are often extremely localised. Go to the south side of a garden wall running east and west, and bask in the brightness and warmth, feast on the peaches ripe and ruddy, and listen to the hum of insects glinting in the sunbeams. Then go to the north side—damp, all in chilling shadow; content yourself with a few hard pears or acid cherries, scrape off the damp moss growing in the mortar, and sniff the fusty smell arising from the dank sour soil. Can any contrast be greater? And yet these climates are only separated by a space of some nine inches. In houses there are rooms with different climates; in towns there are streets with different climates; and in districts, as we all know, it makes all the difference whether the house is on the north or south side of a hill; whether it is in a hollow where the air stagnates and the mists are only reached by the sun when the day is far advanced; or whether it is fairly open to the purifying influences of the wind and sun.

Another circumstance which interferes with the effectiveness of climatic treatment is the ability of the patient or the patient's family to bear the expense of it. If, in order to compensate for the expense of the journey, a patient is obliged to forego some of the comforts to which he is accustomed when at home, it is obvious that the advantages which are to be expected from the journey are made less probable. The patient who journeys in state to his villa in the sunny South with the command of servants, carriages, and horses, and all other luxuries that anxious forethought can suggest or wealth supply is in a very different position to those who "make every sacrifice" in order that the doctor's wishes as to locality may be carried out, no matter how penuriously. Climatic cures attempted under the latter circumstances are seldom successful, and are a mistake from every point of view.

I think we should aways be exceedingly careful before making recommendations to ascertain that there are adequate means for carrying them out effectively. If possible, our recommendations should be agreeable to the patient. "The labour we delight in physics pain," and in making choice of a locality we should always give reasonable attention to the likes and dislikes of the patient.

Many of us are painfully insular. It is a defect, no doubt, but unfortunately it is very often a fact, and we not infrequently meet with patients who have a downright repugnance to foreign travel. It is unnecessary to say that persons of this class should be sent to English rather than to foreign health resorts.

I remember once encountering at Homburg an English squire of the old type, whose sojourn at this famous resort was most distasteful to him. He had come alone. He spoke no word of German or French; he hated the daily routine of fashionable conventionalities; he hated the food; he hated the light wines; he hated the noise of the *table d'hôte*. To be up at six in the fresh morning air was no novelty to him, and to one accustomed to an outdoor life in a healthy English village, with its park, pleasant fields, and woodlands, the change which he had been ordered was no change for the better. The whole thing was to him like the treadmill to a prisoner. He was longing to be back to the harvesting operations on the home farm, and, like a famous statesman, he protested that he preferred the gout to the annoyance of the prescribed cure.

In selecting health resorts we have to endeavour to suit the patient to the place and the place to the patient, and this can scarcely be done without some personal knowledge of bath-life both in England and on the Continent. To send a fashionable person to a quiet place, or a quiet person to a fashionable place, is an error which should be avoided where possible.

It is a very necessary thing that an invalid should have amusement and generally acceptable surroundings. This I think is particularly necessary with tuberculous patients, who become depressed if they are congregated in herds and are constantly comparing notes as to the progression and retrogression of their troubles.

I once had the good luck to be taken ill in a *Curhaus* for the tuberculous. The house had been carefully and thoughtfully constructed, and presented many points of excellence, but the result of my eight days' sojourn, in weather which happened to be execrable, impressed me with the idea that the collection of phthisical patients in great numbers in one locality, or, still more, in one house was a mistake, quite apart from the doctrine of contagium vivum, which has caused a very general change of opinion on this question. Breakfast in this establishment was a most depressing meal; the general want of light in the huge rooms, which had been built partly with an eye to theatrical entertainments, the listless way in which the guests without healthy appetite chipped their eggs and played with the coffee, the flushed cheek, the bright eye, the occasional bursts of coughing, were all painful and depressing. The scraps of conversation were equally so. Mamma could not come to breakfast, her temperature was up again, and she was ordered to stop in bed. Tom had had a little return of hæmorrhage. Mr. So-and-so had been sick all night, and once we learnt that the Colonel who had been there all the winter had "left," which turned out to be true, for he had left this world for good. I was very thankful when my own trivial ailments enabled one to continue one's journey and mix again with healthy persons.

There can be little doubt that modern facilities for travelling and modern modes of life are a danger to health resorts because they are apt to bring about an undue concentration of population. A couple of years since I spent a week in a seaside place which had been known to me by reputation as a pleasant village remote from the haunts of man known and patronised only by a select and favoured few. Now, it has two railway stations connecting it with two different railway systems. The place is rapidly being transformed into a sort of Chicago-super-Mare. Land syndicates, water companies, gas companies, tramway companies, are making money by handfuls. The speculative builder is rampant. The new streets bid fair to be absolutely straight and at right angles to each other, the pavements will rival those of Cheapside, and the curtilage of the houses will be reduced to that almost invisible minimum which is sanctified by the name of "model." Soon will follow invitations to trippers who will respond in trainsful, and these will be catered for by every form of noisy amusement which one meets with in the London streets and on racecourses. These health resorts soon cease to be desirable places for invalids or for tired and jaded persons who need rest, albeit that they serve excellently as places of amusement for the teeming populations of our big towns.

Occasionally it may happen that the popularity of a place may lead to serious overtaxing of the accommodation for visitors. I remember being at a well known spa in Auvergne at the height of the season, and such was the competition for baths that invalids were sometimes obliged to take their turn at this Bethesda literally in the middle of the night.

The amusements provided for chronic invalids are most important, and I think that we shall all agree that crowded assemblies indoors, whether they be for amusement or for any other purpose are not permissible. I leave out of consideration the many excellent outdoor games which need no recommendation nor criticism in an assembly of Englishmen. The

question, however, of the kind of amusement to be provided between dinner and bed-time is all important, and especially so in winter. The winter evenings are long, even in the south of Europe, and the temptation for young people to participate in crowded balls or equally crowded theatrical entertainments is very great. It is clear, however, that such temptations should be avoided if possible. Is it too much to hope that it might be possible to dance under conditions of dress and ventilation which should satisfy the demands of hygiene?

Nothing can have more influence on the effectiveness of climatic treatment than the house in which the patient lives. At midwinter in Europe the patient must be indoors for nearly twice as many hours as he is out of doors, and it might be urged that the house has twice as much influence for good or ill as the "climate."

It seems to me to be quite clear that the average modern hotel can be no fit place for the permanent residence of a chronic invalid.

The fault of the modern hotel, which is an invention intended to economise space in a crowded city, is that the area is wholly inadequate for the cubic contents. As a consequence the population in a crowded hotel is so concentrated that anything like fresh air, privacy, or quiet is impossible. The city hotel is too often imitated in the country, and, as a matter of fact, I have seen one of these towering foul-air traps standing in the middle of ten acres of ground in a developing watering place in England.

If one wants to see wholesome and sensible planning of a house one must look at an infectious hospital, where everything is done to prevent the travelling of foul air (like Satan in the book of Job) "to and fro" and "up and down"; and where in the details of internal construction facilility for cleaning is the paramount object. A maximum of area and a maximum of simplicity, with a minimum of plumbing, no hidden pipes, no lifts, no heavy cornices, no embossed ornaments on walls and ceilings. In short, the construction of a hotel should in many respects resemble that of a hospital. The mediæval college as seen at Oxford or Cambridge is the best model for a hotel—the living rooms and bedrooms in one-storeyed or two-storeyed buildings and connected with the public rooms by cloisters or corridors. The kitchens, hall or *table d'hôte* room, library or news room, smoking room, billiard room, and so forth should be separated from the living rooms, and in the living room the visitor should be able to "sport his oak" at will.

I am far from saying that a country hotel should be built without regard to æsthetic considerations, but I feel sure that all expenditure devoted to the overloading of the rooms with a mass of vulgar ornamentation is money misspent, and from the point of view of health and comfort it is senseless to be paying interest on capital sunk for such objects.

Hotels, especially those used by persons seeking health, sadly need reformation. Decoration should be chaste and simple and no guest should succeed another until the rooms have been, in housekeepers' phrase, thoroughly "turned out." It surely must be possible to attain an elegant simplicity without giving the appearance of an "institution." In these days of contagia viva this reform is sure to come.

The food, one need hardly say, should be simple and first-rate of its kind. The bread, unless ordered to be otherwise, should be real wheaten, fermented bread; the coffee should have no admixture of taraxacum or chicory; the milk should be new and fresh; the butter should not be margarine nor be made with "separated" cream, which produces a negative grease which is not butter on the palate, whatever chemists may say to the contrary; the eggs should not be fusty; the "roast" meat must not be cooked in the oven; the green vegetables must not be soaked in fat nor have their colour deepened with carbonate of soda; the chicken must be tender and the fish not so high as to necessitate its being smothered in herbs and cheese to make it passable. In short, the diet should be composed of first-rate materials and should be ample and not too complicated. To keep even a strong man at table in a hot, close, crowded room for an hour or more while he discusses the various items of a meretricious *menu* consisting of disguised garbage catalogued in meaningless French is a sure way to dyspepsia. The quantity of food must be sufficient. I can recall an experience of a *pension* in which I once spent a week—and a delightful week, for the situation and surroundings were most charming—in which the *pensionnaires* were compelled to rise from their meals not merely hungry but voracious; and another where the food was not merely small in quantity but uniformly second-rate, and we made the discovery that the tradesmen of the adjoining town were invited to supply the hotel with stale bread, and generally with such other articles as were unable to stand the competition of the open market.

It is hardly necessary to speak of wine. Hotel wine is a by-word all the world over, and it is well known that the hotel keeper looks to make his profit out of the wine. This, of course, is wrong. On the one hand, it is necessary that the small quantity of wine or beer which is needed by a chronic invalid should be thoroughly sound and fresh drawn at every meal; and, on the other hand, the guests must be prepared to pay a good remunerative price for their rooms and food, and to remember that the cost of lodging must be relatively great in establishments which are only open for part of a year. It may be true that in some primitive spots the cost of living is, as compared with London or Paris, singularly small; but, nevertheless, people are themselves to blame if they take up their residence in establishments in which the tariff is too low to be properly remunerative. That we must all be prepared to pay a fair price for a good article goes without saying.

When we advise a patient to leave the certainties of home for the uncertainties of a health resort, it is necessary as a rule to place the patient under medical care, and we none of us like to place a patient under the professional care of anyone concerning whose qualifications, character, and abilities we know nothing. It is very possibly a piece of gross insular prejudice upon my part that I should prefer to place English patients under the care of a doctor of their own nationality—one who knows the mode of life, customs, constitutions, and necessities of the patient. I shall be accused of additional prejudice if I say that therapeutic specialists are often prone to run their special therapeutic agent, be it a drinking water or a bathing method, a little hard, and occasionally to the detriment of the patient.

Further, it is notorious that health resorts are the happy hunting grounds of irregular practitioners of every kind and description, so that it behoves us to be exceedingly circumspect as to the selection of a practitioner to whose care a patient is to be confided.

The question of reciprocity of practice is now agitating the medical world, and undoubtedly it is a question of great importance. It is not, I think, very probable that English doctors will continue to send patients to places where they cannot have the advantage of the professional care of their own countrymen. The difficulties of obtaining this advantage for our patients seems, in Europe, to be upon the increase, and, as in commerce so in medicine, no country seems inclined to follow our example of free trade.

This state of things will lead to the improvement of our health resorts at home, and to the establishment of new ones in our colonies and dependencies.

The world gets smaller every day, and the facilities for travelling increase almost hourly. When one can get to the Antipodes in a month, basking beneath the awning of a palatial steamboat, and have most of the comforts of home in the shape of fresh bread, fresh fruit and vegetables and fresh meat, and the daily luxury of a salt-water bath, it is evident that the difficulties of placing our various colonial climates at the disposal of British invalids are getting less and less.

Already, both in Egypt and South Africa, sanatoria are being established which are attracting much and well-deserved professional attention, and doubtless in our other colonies, from Canada on the one hand to New Zealand on the other, similar advantages will soon be found. The invalid who is obliged to run away from the rigours of our winter enjoys in the Southern hemisphere the advantage of a long day, which, as it gives him the opportunity of being more out of the house than in it, is, of course, a priceless boon.

To sum up, I may say that the circumstances which often interfere with the efficiency of climatic treatment are:

1. Want of practical knowledge on the part of the prescriber.
2. The selection of an undesirable locality for residence.
3. The want of adequate means on the part of the patient.

4. The want of adaptability of the patient to his surroundings.
5. Overcrowding in ill-constructed and ill-planned houses.
6. Second-rate food and wine.
7. The want of reliable English doctors.

These deficiencies it is the province of this Society to lessen and remove. Already your excellent *Journal* is disseminating a large amount of useful knowledge, and I have no doubt that the real wants of our expatriated invalids will be adequately provided if they should receive distinct utterance at the hands of a powerful Society like this.

A NOTE
ON
A METHOD OF OPERATING FOR ECTROPION OF THE LOWER EYELID.

By D. ARGYLL ROBERTSON, M.D., LL.D., F.R.C.S.Ed.,
Surgeon-Oculist to Her Majesty the Queen in Scotland; and Consulting Ophthalmic Surgeon to the Edinburgh Royal Infirmary.

The operative procedures for the cure of ectropion of the lower lid that have been employed or recommended by various surgeons are so numerous that the following method of operating which I have recently adopted may have little claim to originality; at the same time as I am unaware of any surgeon having employed exactly the same procedure, and as the results obtained have been eminently satisfactory, I have deemed it advisable to report the method for the consideration of my professional brethren.

The operation consists in making an incision through the skin of the outer third of the lower lid, parallel to and about a line (2 mm.) distant from its margin. When the incision has been carried as far as the outer canthus the knife is directed a little more upwards, and the incision continued for about half an inch. It is then carried horizontally outwards for about 3 lines (6 mm.) and lastly downwards and inwards, nearly parallel to the upward incision, but diverging a little from it below, for the distance of about and inch and a quarter. Fig. 1 indicates the course of the incision.



Fig. 1.



Fig. 2.

The flap of skin thus outlined is then dissected from subjacent parts, and reflected back as shown in Fig. 2.

Next a suitable V-shaped portion of the whole substance of the lower lid is removed at a little distance (say 3 mm.) from the outer canthus. The "strap" of skin which had been reflected is now drawn upwards and outwards till the edge of the lid is brought up to its natural position, and the skin which it then overlaps is outlined by bringing the knife along the edge of the strap, and the portion thus outlined dissected off. Lastly, the "strap" is replaced and fixed in position by several sutures, as seen in Fig. 3.

It is advisable not to remove a large V-shaped portion of the lid at first, as a little more can easily be snipped away if on drawing the lid into position by means of the "strap" a puckering of the edge of the lid indicates that too little has been removed.

This operation is particularly useful in senile ectropion or in eversion of the lid from long-continued palpebral conjunctivitis, when the free edge of the lid has by traction been elongated and the curvature of the tarsal cartilage altered, but it may be advantageously employed in other forms of ectropion also.

The chief advantages I have found in this method of operating are: (1) that the exact amount of lid tissue that should be removed is easily ascertained; (2) that by means of the strap of skin very efficient and permanent traction on the lower lid is obtained, thus bringing it and fixing it in proper position.



Fig. 3.

Instead of removing the skin that lies under the strap when it is drawn up so as to bring the lid into position, a small portion of the extremity of the strap might be cut off and the effect would be similar. But I prefer the method described, giving, as it does, a larger surface on which to fix the strap.

I have only had the opportunity of performing this operation on three cases, but in all (and one was a very severe and complicated traumatic case) the result was excellent.

For the sketches illustrating the operation I am indebted to the kindness of Dr. Jessie MacGregor.

AN ADDRESS
ON
THE PATHOLOGY OF ANTENATAL LIFE.

Delivered before the Glasgow Obstetrical and Gynæcological Society.

By J. W. BALLANTYNE, M.D.,
Lecturer on Midwifery and Diseases of Women, Minto House, Edinburgh.

[Abstract.]

After a preliminary reference to the relation between antenatal and postnatal life, in which he pointed out that the postnatal was not independent of, but, on the contrary, largely the direct continuation and outcome of the antenatal life, Dr. Ballantyne described

The Physiology of Antenatal Life,

subdividing it into three periods:

1. *Germinal Life*, about which little was known in the human subject, the period which ended in the mysterious phenomena of germ and sperm maturation, of the expulsion of the polar globules from the ovum, of the atrophy of the female element of the sperm-cell, and of the impregnation of the ovum by the spermatozoon with the resulting formation of the morula mass.

2. *Embryonic Life*, the period beginning with the differentiation of the blastoderm and ending about the end of the second month, the period of evolution or development during which the lines of future growth were laid down.

3. *Fœtal Life*, the period in which the organism showed its vitality chiefly by growth along lines which had been already definitely laid down.

It was necessary to point out, however, that these periods could not be sharply marked off from one another. One part might be in the embryonic stage while the others were in the fœtal. The third month of intrauterine life more than any other was characterised by readjustment and by change, most of the organs passing at this time from the embryonic into the fœtal state.

Antenatal Pathology.

Postnatal and antenatal life were both subject to disease and death, and probably all estimates of the antenatal death-rate fell far below the reality. Dr. Ballantyne then referred

to the want of attention to the morbid anatomy of antenatal life, and discussed the causes of this neglect—for example, its inherent difficulty, the practical impossibility of exact diagnosis, the discouraging results of attempts at antenatal therapeusis, imperfect study of antenatal physiology, conflicting theories of human embryology, and perhaps, most of all, the fact of its being antenatal. There was also a prevalent notion that antenatal was something apart and different from postnatal pathology. His wish was to show that the causes of morbid processes were the same in postnatal and in antenatal life. The effects of these causes might differ markedly, but this was due to altered environmental conditions, and the peculiarities in the structure of the organism acted upon. This was specially evident in the diseases of the newborn infant—for example, jaundice, sclerema, trismus, and Winckel's disease. The peculiar character of such diseases was due to the fact that the usual causes were acting upon organs and tissues which were in a state of transition between the fœtal and infantile stages, and it was probably because of this, too, that they were so fatal.

Pathology of Fœtal Life.

Dr. Ballantyne said that a prolonged study of antenatal pathology had led him to the conclusion that the fœtus was liable to the same diseases as the infant, the child, and the adult. It enjoyed partial immunity from parasitic skin diseases, and was protected from external violence, and on the other hand was apt to be affected with certain maladies in an aggravated form, and it was exposed to one gross traumatism —parturition. Fœtal peculiarities were largely due to peculiarities of environment and physiology. In illustration of this, he described fœtal ichthyosis, general fœtal dropsy, fœtal ascites, hydronephrosis, cystic kidney, fœtal endocarditis, and showed a number of diagrams, sketches, and coloured plates. He had some years ago called this peculiarity of fœtal diseases their "potential mortality," that is, the fœtal environment and mode of life permitted the existence of an amount of disease quite incompatible with the maintenance of extrauterine life; the fœtus was potentially dead, and would die as soon as it was born. Fœtal maladies also differed in character as well as degree from those occurring after birth, for example, fœtal small-pox, in which the face was almost free of the eruption; crusts were seldom formed, and the cicatrices were but feebly marked, because *in utero* the skin was kept moist, and was not under the influence of light and air; fœtal typhoid fever, in which, probably because of the quiescent condition of the bowel and the infection being by way of the placenta, it was rare to find any intestinal lesion. At this point reference was made to the relation of the placenta to fœtal diseases. By means of the placenta the fœtus was able to live with several of its viscera in a far advanced stage of disease, while on the other hand it was exposed to fevers and microbic conditions affecting the mother, altered blood states, such poisons as lead, arsenic, morphine, alcohol.

From recent investigations it seemed possible that infection might occasionally find its way from the maternal blood through the amniotic fluid to the mouth and stomach of the fœtus. The placenta in its fœtal portion was an organ of the fœtus, and being the most vulnerable of its organs, injury to it soon endangered the fœtal life. According to Porak it had the power of storing up certain poisons, but this, if it did not poison the fœtus, interfered with its own functions, and led to abortion or premature labour. The distinctive *post-mortem* change of the fœtus dying *in utero*, maceration rather than putrefaction, was also due to the intrauterine conditions preventing the access of air. He was quite certain that *rigor mortis* occurred. Probably every variety of neoplasm had been met with in fœtal life.

The Pathology of Embryonic Life.

The morbid states arising during this stage were very peculiar, but it was now beginning to be realised that they were subject to the same laws as general pathology. Teratology was a chapter of pathology. The one function of the embryo was to evolve the three layers of the blastoderm into the complex aggregate of organs and tissues which made up the body of the fœtus. When a morbid cause acted on the embryo it interfered with this function, and a monstrosity or a structural anomaly was produced.

Dr. Ballantyne then described the experiments of Dareste, Panum, Warynski, and Fol, Lombarduir, and especially of Féré in this connection—for example, by partially varnishing eggs during incubation, raising or lowering the temperature of the incubator, shaking the eggs or wounding their contents, injecting various substances—alcohol, nicotine, etc.

Just as it was the placenta which to a large extent impressed on fœtal pathology its peculiar characters, so the presence of the amnion accounted for much in embryonic pathology, although the allantois and umbilical vesicle doubtless played a part in producing malformations. One of the earliest phenomena in embryology was the development of the extra-embryonic somato-pleure to form the amnion, and anything which interfered with its evolution would disturb growth. Probably defects of the head and tail folds explained anencephaly, spina bifida, and sympodia. Delayed separation of the amnion from the body of the embryo, as in cases of absence of the liquor amnii, would result in pressure, and this would arrest development in the stage then reached, while the other parts would go on developing. In some such way exomphalos might be produced. Fusion of neighbouring parts would be caused by continued pressure. In this way we might get the sireniform fœtus.

The morbid changes which resulted from death of the embryo were also determined by the nature of the organism. Maceration was characteristic of the fœtus, but dissolution and mummification marked embryonic death. There were some grounds for supposing that the embryo might die, and the rest of the blastodermic vesicle go on growing. Dr. Ballantyne referred here to the investigations of Giacomini. Curious forms of abortion sac were thus produced, in which no embryo at all, or only a stunted nodular embryo, was found. The passage from the embryonic economy to the fœtal was accompanied by a great destruction of embryos, explaining in some measure the frequency of abortion at the second and third months. It was not always possible to distinguish between a disease and a monstrosity, because the whole organism did not pass out of the embryonic into the fœtal stage at the same time; for example, the limb buds, which were still embryonic when most of the internal organs were in the fœtal stage. A morbid cause acting upon two parts of the organism might, therefore, produce a disease in the one and a deformity in the other. This was one reason why the so-called fœtal bone diseases and the malformations of the limbs were so difficult to understand. Sharply defined morbid conditions could not always be found either in antenatal or in postnatal existence.

Pathology of Germinal Life.

Dr. Ballantyne pointed out how little was certainly known of this. The great phenomenon of germinal life was impregnation, with its antecedent phenomena of maturation and polar extrusion, and its subsequent phenomena of nuclear division and the formation of the morula mass. Morbid changes at this stage would cause a disturbance of the normal progress of the phenomena of impregnation and segmentation. Reference was made to the experiments of Hertwig, Chabry and Roux, and others, showing that monstrosities could be caused by traumatic or toxic agencies during the segmentation of the ovum of ascidians and echinodermata, and the well-known placental parasites were instanced as possibly due to a similar cause. Double monsters were regarded by many as due to polyspermy or the entrance of more than one spermatozoön into the ovum. It was possible also that such puzzling structures as dermoid cysts might originate in the absence of the normal male element. It was noted that monstrosities by defect were characteristic of embryonic pathology; monstrosities by excess belonged to germinal pathology. The conclusion seemed to be warranted that the same morbid causes—toxic, microbic, traumatic—were at work in the germinal as in the other epochs of antenatal and postnatal life.

Dr. Ballantyne here recapitulated the leading points of his address so as to emphasise the fact of there being a unity in morbid causes throughout all the epochs of both antenatal and postnatal life, varying only according to the environment and structure of the organs acted upon.

He concluded by a reference to hereditary tendencies which were evident in the fœtal and embryonic periods of antenatal

life. Many fœtal diseases were hereditary—for example, ichthyosis, general dropsy, fœtal rickets, etc. Direct heredity could seldom be proved, but family prevalence was very common. He had reported two, and even three, anencephalic fœtuses in the same family, and polydactyly was often seen in several generations and in several individuals of the same generation. It was evident that in addition to morbid causes coming from without, we had to deal constantly with hereditary tendencies for or against pathological developments existing already in the organism. This was true of the pathology of all periods of life, antenatal as well as postnatal, and the net result was the health or disease, deformity or malformation of the individual.

REMARKS
ON
A FROZEN SECTION OF THE FIRST STAGE OF LABOUR.*

[WITH SPECIAL PLATES]

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THE frozen section here presented is one of a 7-para, aged 37, who died suddenly during the first stage of labour. The case was first seen by a physician two or three hours after death. He found the fundus about 2 or 3 inches above the umbilicus, and the os internum dilated sufficiently to admit about one half-finger. He then expanded the calibre of the cervical canal by manual dilatation to the extent of admitting three fingers. An old cerebral abscess was found *post mortem*. The body was injected with red starch injection through the right carotid artery, and was frozen in the nearly vertical position.

I and II. (See description of Plates.)

III. Vertical mesial section, the outlines from an original tracing.

Pelvic Measurements.—Obstetrical conjugate 11.2 cm. (4.42 in.) Transverse diameter of brim about 12.4 cm. (4.9 in.) Oblique diameters about 12.7 cm. (5 in.) each. Pelvic floor projection (coccyx partly lacking) about 7 cm. (2.75 in.) The obstetrical conjugate is narrowed by the compressed soft parts 1.27 cm. (0.5 in.) anteriorly, and 1.22 cm. (0.48 in.) posteriorly. The aperture of the inlet was found on subsequent dissection to be padded within its entire circumference by a thick layer of fat, the latter not only narrowing but also deepening the inlet. Estimated narrowing of transverse diameter of brim by soft parts, about 2.28 cm. (0.9 in.) on each side; of oblique diameters, each about 2.54 cm. (1 in.) behind, and 1.5 cm. (0.6 in.) in front.

Uterus.—The shape of the uterus is globular. The longest antero-posterior diameter of the uterine cavity in the plane of the section, including the placental thickness, is 13.7 cm. (5.4 in.). The walls of the uterus posteriorly exhibit above a thickened portion (1 cm. or 0.4in.), and below a thinned lower segment (0.5 cm. or 0.2 in.), the limit between which is marked by a bulging of the uterine muscle (1.5 cm. or 0.6 in.). Anteriorly the walls show no marked variations in thickness. The fundus is in contact with the breech. The height of the fundus above the brim is 18.4 c.m. (7.25 in.) The length of the line of placental implantation measured in the plane of the section is 20.3 cm. (8 in.). The membranes are unruptured.

The Fœtus.—The presentation is an L. O. A. The head is well engaged in the inlet. A scalp tumour has formed, the limits of which are not restricted at the cranial sutures. The angle formed by the intersection of two lines drawn in the respective long axes of the head and trunk measures about 135° and opens posteriorly. The spinal column looks to the left and forwards.

The peritoneum descends anteriorly 1.2 in. below the brim, and posteriorly as far as to a line passing from the lower border of the symphysis to the junction of the fourth and fifth pieces of the sacrum. Laterally it is reflected directly into the middle of each iliac fossa.

The bladder is collapsed and flattened between the child's head and the pubic bones. The upper portion is embedded in a mass of fat. The apex reaches just above the brim. The cavity of the bladder was found on subsequent dissection to Y-shaped, the shorter arm of the Y extending downwards and backwards from the neck of the viscus.

The rectum is distended with fæces.

The coccyx below its first piece is tilted backwards.

IV. Vertical mesial section with fœtal parts of opposite side superimposed, showing child in relief. Shows attitude of fœtus. The head is strongly flexed. The right extremities of the fœtus are more prominent than the left. The bladder is slightly opened up (*Cf.* II, Fig. 1).

V. Interior of the left half of the uterine cavity, placenta, and membranes *in situ*. (*Cf.* VII, Fig. 4). With the exception of a short depth posteriorly, and a small margin anteriorly, this half of the uterine cavity is an almost perfect mould of the segment of the fœtus therein contained. The bulging in the posterior uterine wall is here seen to preserve its form as a thickened ridge as far as the left (about 3.2 c.cm. or 1.25 in.), as accommodation for its unrestricted development is provided by displacement of liquid contents of the ovum, that is, as far laterally as to the area of close embrace of the fœtus by the uterine wall. (See VIII, Fig. 4.) From the termination of the thickened ridge, and forming an obtuse angle with the same, a much smaller ridge passes downwards and forwards through this area of fœtal compression, fitting closely a groove between the upper part of the child's trunk and the umbilical cord, and becomes lost anteriorly.

The membranes are separated posteriorly from below upwards to a point a little more than an inch below the site of greatest thickening of the bulging area, anteriorly to just below the brim. Laterally the line of separation runs a little way below the impression of the umbilical cord.

VI. Interior of the right half of the uterine cavity, placenta and membranes *in situ* (*Cf.* VII, Fig. 3). Laterally, impressions of the fœtal irregularities are distinctly outlined in the uterine wall as well as in the placental mass in this situation. The bulging of the uterine muscle passes on this side from behind forwards, finally merging into the area of placental implantation. As it passes forwards it fits the fœtal interspaces.

DESCRIPTION OF PLATES.

I.—Photograph quarter life size of vertical mesial section. Original by the three-plate colour process. Negative by Dr. Edward Leaming.

II.—A.—Photograph quarter life size of vertical mesial section with frozen fœtal parts of opposite side placed in exact superposition; the cavity of the bladder is slightly opened up. Negative by Dr. Edward Leaming.

II.—B.—Photograph quarter life size showing interior of left half o uterine cavity with placenta and membranes *in situ*. Negative by Dr. Edward Leaming.

III.—(Quarter life size). 1, Third lumbar vertebra; 2, liquor amnii; 3, left thigh; 4, left forearm; 5, promontory; 6, retraction ring; 7, coronary vein (injected); 8, Presacral pad of fat; 9, left parietal bone; 10, rectum (distended with fæces); 11, fifth sacral vertebra; 12, sagittal suture; 13, right parietal bone; 14, *cul-de-sac* of Douglas; 15, caput succedaneum; 16, membranes; 17, posterior fornix; 18, mucus; 19, fibres of levator ani; 20, vagina; 21, (not yet identified); 22, bladder; 23, symphysis pubis; 24, (not yet identified); 25, uterovesical peritoneum; 26, right ear; 27, umbilical cord; 28, right arm; 29, placenta (injected); 30, cord; 31, right thigh.

IV.—(Quarter life size). 1, Third lumbar vertebra; 2, amniotic fluid; 3, retraction ring; 4, promonory of sacrum; 5, coronary vein (injected); 6, presacral pad of fat; 7 amniotic fluid; 8, fifth sacral vertebra; 9, *cul-de-sac* of Douglas; 10, membranes; 11, rectum distended with fæces; 12, symphysis pubis; 13, uterovesical peritoneum; 14, bladder (slightly opened up); 15, umbilical cord; 16, outer canthus of right eye; 17, placenta.

V.—(Quarter life size). 1, Retraction ring; 2, promontory of sacrum; 3, coronary vein (injected); 4, height to which membranes detached posteriorly; 5, impression of left ear; 6, impression of umbilical cord; 7, approximate location of three collapsed coronary sinuses; 8, height to which membranes detached anteriorly; 9, left limit of bulging; 10, situation of left Fallopian tube.

VI.—(Quarter life size). 1, Situation of right Fallopian tube; 2, situation of right thigh; 3, situation of right knee; 4, umbilical cord; 5, situation of right forearm; 6, impression of prominent right frontal region; 7, approximate location of three collapsed coronary veins; 8, impression of right foot; 9, impression of right hand; 10, coronary vein (injected); 11, promontory of sacrum; 12, retraction ring; 13, impression of left leg; 14, impression of left foot.

* Read in the Section of Obstetrics at the annual meeting held at Montreal.



Fig. 1.

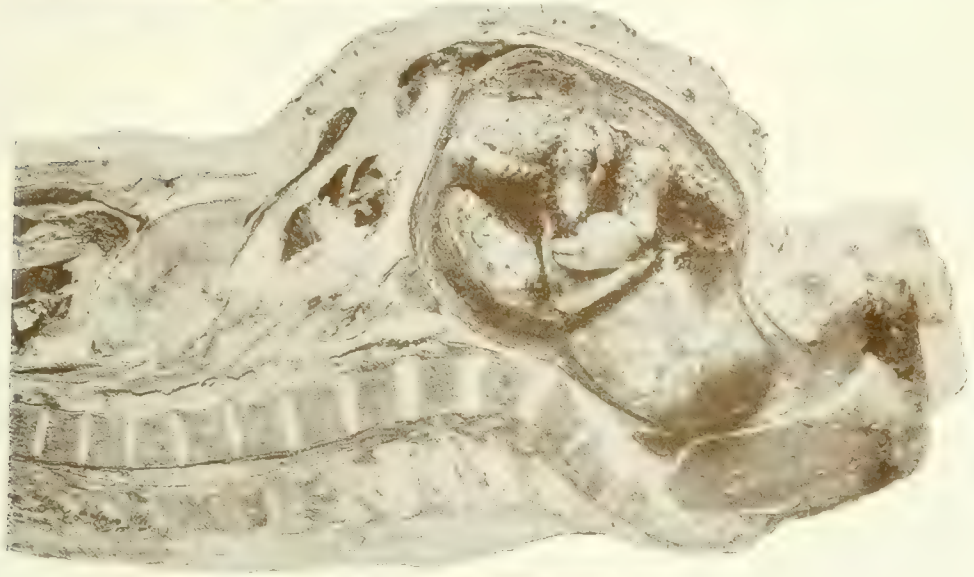


Fig. II.—A.



Fig. II.—B.

TO ILLUSTRATE DR. WILLIAM C. LUSK'S PAPER.



Fig. III.



Fig. IV.



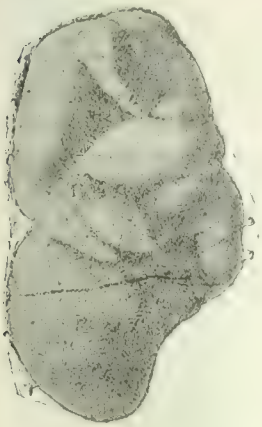
Fig. V.



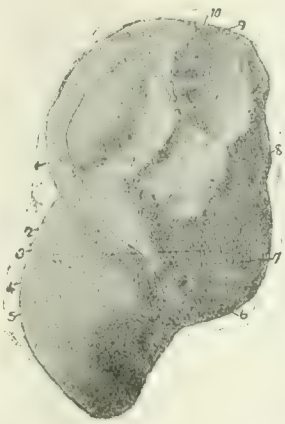
Fig. VI.

TO ILLUSTRATE DR. WILLIAM C. LUSK'S PAPER.

VII. Lateral aspects of cast of fœtus in comparison with corresponding aspects of a mould of the interior of the uterine cavity.



VII, Fig. 1.—Cast of fœtus viewed from right side (quarter life size). 1, Anterior fontanelle; 2, umbilical cord; 3, prominent right frontal region.



VII, Fig. 3.—Cast of uterine cavity, right aspect (quarter life size). 1, Impression of left knee; 2, impression of right foot; 3, impression of right hand; 4, groove due to bulging; 5, right limit of bulging; 6, placental outline; 7, impression of prominent right frontal region; 8, region of right knee; 9, impression of left foot; 10, placental outline.



VII, Fig. 2.—Cast of fœtus viewed from left side (quarter life size). 1, Posterior fontanelle.



VII, Fig. 4.—Cast of uterine cavity, left aspect (quarter life size). 1, Placental outline; 2, situation of left Fallopian tube; 3, placental outline 4, left limit of bulging; 5, groove due to bulging; 6, impression of right ear.

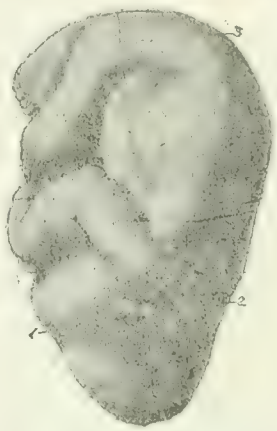
Fig. 1. Cast of fœtus viewed from right side.

Fig. 2. Cast of fœtus viewed from left side. The spinal column is rotated more or less anteriorly on the vertical axis of the trunk, so that a mid-point in the back is turned more anteriorly than is the occiput of the fœtal head. This is most marked in the thoracic region. The right shoulder rests above the horizontal ramus of the left pubic bone. A portion of the umbilical cord lying between the right shoulder and ramus is flattened like a ribbon. The spinal column is bent laterally toward the child's left, as evidenced by the closer approximation of the shoulder and buttock on this side than on the right. The wrinkles in the left flank would seem a natural consequence of this flexion.

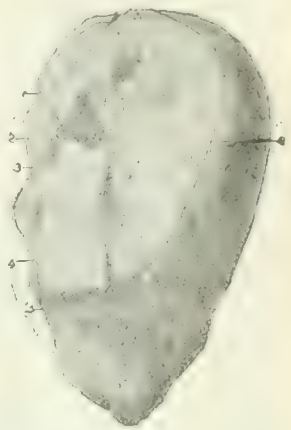
Figs. 3 and 4. Casts of interior of uterine cavity, right and left aspects respectively. The fœtal impressions are deeply outlined on both lateral aspects. That part of the mould of the uterine cavity corresponding to the portion that contained the fœtal head is seen to resemble the latter in both shape and size.

Cubic Measurements.—Cubic contents of cast of interior of uterine cavity, 1,600 c.cm. (97.6 c.in.); cubic contents of cast of fœtus and umbilical cord, 1,510 c.cm. (92.1 c.in.); cubic contents of amniotic fluid, 90 c.cm. (5.5 c.in.).

VIII. Anterior and posterior aspects of casts of fœtus in comparison with corresponding aspects of a mould of the interior of the uterine cavity.



VIII, Fig. 1.—Cast of fœtus, anterior aspect (quarter life size). 1, Groove due to brim; 2, umbilical cord; 3, line of section.



VIII, Fig. 3.—Cast of uterine cavity, anterior aspect (quarter life size). 1, Placental outline; 2, depression due to stump of cord; 3, line of section; 4, placental outline; 5, groove due to brim; 6, impression of right side of fœtus.



VIII, Fig. 2.—Cast of fœtus, posterior aspect (quarter life size). 1, Line of section.



VIII, Fig. 4.—Cast of uterine cavity, posterior aspect (quarter life size). 1, Situation of left Fallopian tube; 2, groove due to bulging; 3, placental outline; 4, impression of left knee; 5, line of section; 6, placental outline; 7, impression of left foot.

Fig. 1. Cast of fœtus, anterior aspect.—The right extremities of the fœtus lie almost entirely to the (mother's) right of the line of sagittal section. The soft parts bulge in right frontal and temporal regions above groove due to brim.

Fig. 2. Cast of fœtus, posterior aspect. The left extremities of the fœtus are sunk considerably into the left half of the uterine cavity.

Figs. 3 and 4. Cast of uterine cavity, anterior and posterior aspects respectively. In contrast to the sharp fœtal impressions laterally, areas of comparative indefiniteness of outline or complete absence of impressions are observed in front and rear, which bespeak the presence of more or less amniotic

fluid in these situations. Owing to the inclination forward of the fœtal trunk against the anterior uterine wall, a larger space for amniotic fluid is provided behind them in front.

Displacements of the Cranial Bones.—There is overlapping at both the coronal and lambdoid sutures, which is far greater on the right side of the fœtal head which is directed toward the pubic bones than on the left. At the coronal suture both parietal bones overlap the frontals. At the lambdoid suture, on the other hand, the left parietal overlaps, while the right parietal is depressed beneath the occipital bone. There is no overlapping at the sagittal suture.

IX Microscopic section of posterior uterine wall just to left of median line, from os externum to about 1 inch above bulging area. The hardened section of this region as mounted for microscopic examination preserves a contour similar to that of the gross specimen. The bulging in the former is, however, less prominent than in the latter.

Microscopic Examination.—The epithelial and decidual structures have suffered more or less destruction. The membranes have been torn away. The appearance at the site of the bulging and above it is one characteristic of tissue belonging to the body proper of the pregnant uterus. A broad muscular layer, its outer fibres longitudinally and its inner fibres transversely or obliquely disposed, adheres firmly to the peritoneal covering. Within this layer the appearance is as one of intersecting muscle bundles. Thus, here are found certain lamellæ unevenly thickened and of irregular outline, their individual fibres exhibiting, where distinguishable, rounded or ovoid contours, and presenting an abundance of well-stained nuclei likewise of rounded or oval shapes, which could well be regarded as having suffered cross section; while other bundles less numerous discovered in this area, having more or less clearly-defined and parallel margins, their individual muscle fibres as well as nuclei presenting themselves in their long axes, would appear to have been cut longitudinally.

The structure of the tissue below the bulging area downward until cervical tissue is reached is, in general, characteristic of lower uterine segment. It consists of clearly outlined anastomosing muscular plates loosely associated together, the individual muscle fibres generally presenting themselves in their long axes, though sometimes they give evidence of oblique section. The muscle nuclei, though taking the stain badly, where apparent are usually spindle-shaped. A small area of this lower segment, however, situated anteriorly in the tissues immediately below the bulging, extending downwards from the latter for the distance of about one inch, and occupying about three-fourths the breadth of the section, contains patches of muscle bundles similar to those of the body, suggesting an area of transition from body to lower segment structure. The lower limit of this area would seem, by comparison with the gross specimen, to correspond approximately to the lowest limit of attachment of the membranes in the plane of this section.

The change from muscular into more fibrous tissue determines the boundary between lower segment and cervix, at which situation the region of the os internum can readily be located. This region can be designated in the illustrations as a little above a horizontal line passing through the site of reflection of the utero-rectal peritoneum. The cervix presents many dilated venous spaces indicating an œdematous condition. The glandular structures cannot be distinctly defined.

General Considerations.

In the study of this section it is to be regretted that the exact duration of pregnancy is unknown, that the cervical canal suffered *post-mortem* manual dilatation, and that the body could not have been frozen until some days after death. Gestation can be approximately fixed as being at the end of the seventh month.

Two conditions here found are of particular interest—one the presence of but a small amount of amniotic fluid (90 c.cm. or 5.5 c in.) within the ovum, and the other the considerable encroachment by the soft parts upon the size of the inlet. As a result of the former, the contained fœtus is subjected to unusual influences of pressure and counterpressure from the surrounding structures. That the latter condition has here in effect converted this sizable pelvis into a moderate justo-minor seems unquestionable in the presence of certain supporting evidences.

The uterus presents features characteristic of the contracted state. Its shape is globular, and the greatest transverse (13 cm.) and antero-posterior (13 7 cm., including placental thickness) diameters approximate equality. That the former diameter is narrowed to a minimum is evidenced by the close embrace of the fœtus laterally by the uterine walls. The compensatory lengthening in the antero-posterior direction affords accommodation centrally for the fluids displaced by the lateral pressure.

Though still early in the first stage, the uterine wall on section presents posteriorly an appearance suggestive of a certain amount of permanent change characteristic of advancing labour having already taken place in it. In this connection are noted the thickening of the wall above, the thinning below, and the bulging between. That the latter is an area in which permanent thickening has taken place, and not a mere moulding of the contracted uterine muscle on the fœtus, is supported by the fact of the preservation of its contour in the hardened specimen. The bulging might, therefore, not improperly be termed a retraction ring, although still in its incipiency. The microscopic examination of the specimen shows this ring of retraction to have taken origin at the lowest limit of body tissue proper—that is, down to, but not including, the area described above as that of apparent transition between body and lower segment. The extent of the ring laterally has not yet been definitely determined.

Regarding the absence of any gross appearance in the anterior uterine wall suggestive of retraction, it would seem likely, from indications on the child's head of the receipt of a considerable pressure at the situation where it encounters the resistance of the pubic bones, that any such change here had been prevented by an effectual catching of the lower uterine segment between the head and the brim. (The microscopic section of this portion is still unfinished.)

The detachment of the membranes to the height indicated cannot with positiveness be regarded as the result solely of physiological procedure in the presence of the fact that the cervical canal suffered *post-mortem* manual dilatation.

The forces of pressure and counterpressure here concerned in the progress of labour are best studied together with a consideration of their effects upon the fœtus. In this connection of especial interest are the influence of the obstetrical canal upon the conformation of the head, the mechanism of descent of the head, and the position of the fœtus.

Regarding the first consideration, one observes at once that the head, already well engaged, presents features distinctly characteristic of transverse narrowing of the inlet—namely, its extreme flexed condition, the tendency of the small fontanelle to occupy the middle point of the pelvic space, the neck resting upon the linea terminalis, the anterior portion of the head pressed against the opposite pelvic walls, the long diameter of the head (from chin to vertex) lying in the axis of the pelvis, and the face looking upward toward the fundus uteri. Also characteristic of justo-minor pelves as observed in this case, is the formation of a scalp tumour during the first stage of labour while the membranes are still intact. Turning now to look for the condition of which these effects are the apparent result, it is found that, though the bony pelvis is one of good size, the opening of the superior strait has actually been so encroached upon by the thick layer of fat within its circumference that its diameters, after deducting the soft parts, are reduced to those of a moderate justo-minor (obstetrical conjugate 8.7 cm., or 3 44 in., transverse diameter about 7 87 cm., or 3.1 in.; oblique diameters about 8.6 cm., or 3.4 in.). Adding to this the observation gained from a comparative study of corresponding elevations and depressions in the casts of the fœtus and uterine cavity, that a circumference of the head accurately fits this opening, as well as the fact of the overlapping at the cranial sutures within this site of encirclement, there would seem to be lacking no link in the chain of evidence that, consequent upon a moderate disproportion in size between the inlet and the child's head, the latter was here undergoing the characteristic moulding process in accommodating itself to transit through the narrowed canal.

Inferences regarding the probable mechanism of descent of

the head here taking place can be made, based upon a study of the forces of resistance met at the narrowed inlet, the most reliable information regarding the action of which can be gained through an investigation of the effects produced at the yielding cranial sutures. At each of these several sutures the extent to which the bones overlap might reasonably be taken as an index of the relative degrees of pressure exerted upon the bones themselves, while that bone which is depressed beneath its over-riding fellow might be regarded as the one having received the greater pressure of the two. Reasoning from such premisses, the actual findings here would seem to indicate the action of forces of counterpressure of varying intensity upon different portions of the fœtal head. Thus the greater over-lapping at the coronal and lambdoid sutures on the right side (anterior aspect) of the fœtal head than on the left, at about the plane of the superior strait, would indicate a stronger resistance encountered anteriorly and antero-laterally at this level than behind. Also the absence of overlapping at the sagittal suture, here situated well below the brim, would indicate an absence of any particular antero-posterior compression within the pelvis acting upon the parietal bones. The depression of the right parietal beneath the occipital bone, instead of its over-riding the latter, suggests its having met a resistance of especial intensity against the left horizontal pubic ramus to have thus influenced it in this particular situation. Hence it would appear that the circle of cephalic embrace at the inlet is one of unevenly distributed pressure, the greatest resistance being met anteriorly against the brim, and the least behind; while within the pelvis there seems to exist a space devoid at least of antero-posterior compressing influences.

In the presence of which observations the mechanism would plainly not be one of direct downward descent of the head into the inlet, but rather can it be imagined that, the site of greatest resistance anteriorly exercising a pivotal influence on the head, descent is taking place by rotation over this pivotal site around a transverse axis. In perfect conformity with this idea of mechanism, it can be seen how the head, sweeping over the soft tissues of the inlet posteriorly, its vertical circumferences touching the latter at each point of contact in the relation more or less of a circle to its tangent, would meet a lesser resistance in this situation than in those at which opposition is more directly encountered. Similarly as well could the non-overlapping at the sagittal suture be accounted for on the supposition that, in the rotation of the head over the brim, the long axis of the former is not tilted far enough toward the vertical position for the right parietal bone to here encounter marked resistance against the posterior surface of the symphysis. The evidence suggestive of the head's having met a resistance of especial intensity against the left horizontal pubic ramus might be interpreted as indicative of a tendency to forward rotation of the occiput, possibly here the result of a twisting action imparted by the trunk of the fœtus, which is as well rotated in the same direction on its vertical axis, but to a greater degree than is the head.

In view of the foregoing, the cause of the bulging of the soft parts in the right frontal and temporal regions could as well be attributed to a pushing upward of the loose scalp tissues by the force of the friction encountered at the site of pivotal action of the brim upon the head as to a *post-mortem* change. Owing to this bulging the bitemporal diameter of the fœtal head is relatively increased.

The more or less close embrace of the fœtal trunk by the contracted uterine muscle suggests the probable importance of the latter as a causative factor in having determined the position of the child as here found. The position presents certain features of similarity with that existing in a frozen section of a case of generally contracted pelvis (diagonal conjugate 11 cm.), described by Professor Leopold in his recent work, *Uterus und Kind*. In his case, however, the fœtus was at term, and labour was less advanced than here, the head not having become firmly fixed at the brim. The features in common are the marked forward rotation of the spinal column on the vertical axis of the trunk, the bowing forward of the back, and the opening posteriorly of the angle formed by the intersection of the long axes of the head and trunk. In Leopold's case this angle is much more marked (95° to 97°) than here (about 135°). In the case here presented one is inclined to associate the contact of the fundus with the breech of the child on the one hand and the lateral bending of the back on the other in the relation of cause and effect.

TWO LECTURES
ON
THE TEMPLES AND RITUAL OF ASKLEPIOS AT EPIDAURUS AND ATHENS.

Delivered at the Royal Institution of Great Britain

BY RICHARD CATON, M.D., F.R.C.P.

LECTURE I.

LADIES AND GENTLEMEN,—You are aware that during the last twenty-five years the energy and enthusiam in archæological research of such men as Dr. Schliemann have not merely thrown a considerable amount of light on historic and prehistoric Greece, but have also awakened a keener enthusiasm among classical scholars and in archæological societies, and have even influenced Governments for the further advancement of these studies. We have seen the German Government spending large sums in the excavation of Olympia and Pergamos; the French Government has also spent much in the excavation of Delphi and on other works, each nation thus making the whole world its debtor. The American school has explored the Heræon and other classical sites, and lastly our own British school in Athens has done much, considering its difficulties and the lack of the sufficient pecuniary support with which other countries have endowed their representatives.

Although considerable interest is felt by the English public in regard to the work just referred to, one important field of investigation has remained almost unknown in this country, I mean the exploration of the shrines of Asklepios, the God of Healing, at Epidaurus and Athens, about which I am to have the honour of speaking to you. As the time allotted to us is brief, it is needful to avoid all prefatory remarks, and to restrict this paper almost entirely to a consideration of the new discoveries and to inferences from them. As a matter of fact there is but scant information as to the sanitary and medical aspects of Greek life in ancient literature. Homer and Pindar have brief references to Epidaurus and other sanctuaries; so also Plato, Hippys of Regium, Strabo, and some of the dramatists, as Aristophanes, also certain of the late Greek writers, especially Pausanias. Under these circumstances most precious are the researches made by the spade. The pioneer in this inquiry was M. Cavvadias, the eminent archæologist, now Minister of Education in the Greek Government. He was aided efficiently by the Greek Archæological Society. M. Stais has deciphered the hundreds of inscriptions which were found. MM. Defrasse and Lechat, and M. Girard, associated with the French school; Dr. Doerpfeld, Dr. Furtwaengler, Herr Baunack, Professor Reinach, Dr. Koechler, connected with the German school, and others, have had a share in the work; but little has been done by the English, and and still less has been published in our language. An interesting paper by Professor Percy Gardner in his *New Chapters in Greek History*, some valuable references by Miss Jane Harrison, the admirable notes in Mr. Fraser's new edition of *Pausanias*, and one or two articles in American journals are among the chief. I have to express my acknowledgment to the authorities I have named, but chiefly to M. Cavvadias for his kindness in giving me special facilities in Greece, and for allowing me the use of some of his plates; also to MM. Defrass and Lechat, who permit me to show you some of their beautiful restorations. Apart from these, most of the lantern slides I shall show you were taken by myself on the spot.[1]

According to tradition Asklepios, the son of Apollo and Koroni, was born in the Hieron valley, in the Argolic peninsula; the place names still preserve the legend; the hamlet of Koroni commemorates his mother, the hill Titthion owes

[1] Of course only three or four of these can be reproduced in the BRITISH MEDICAL JOURNAL.

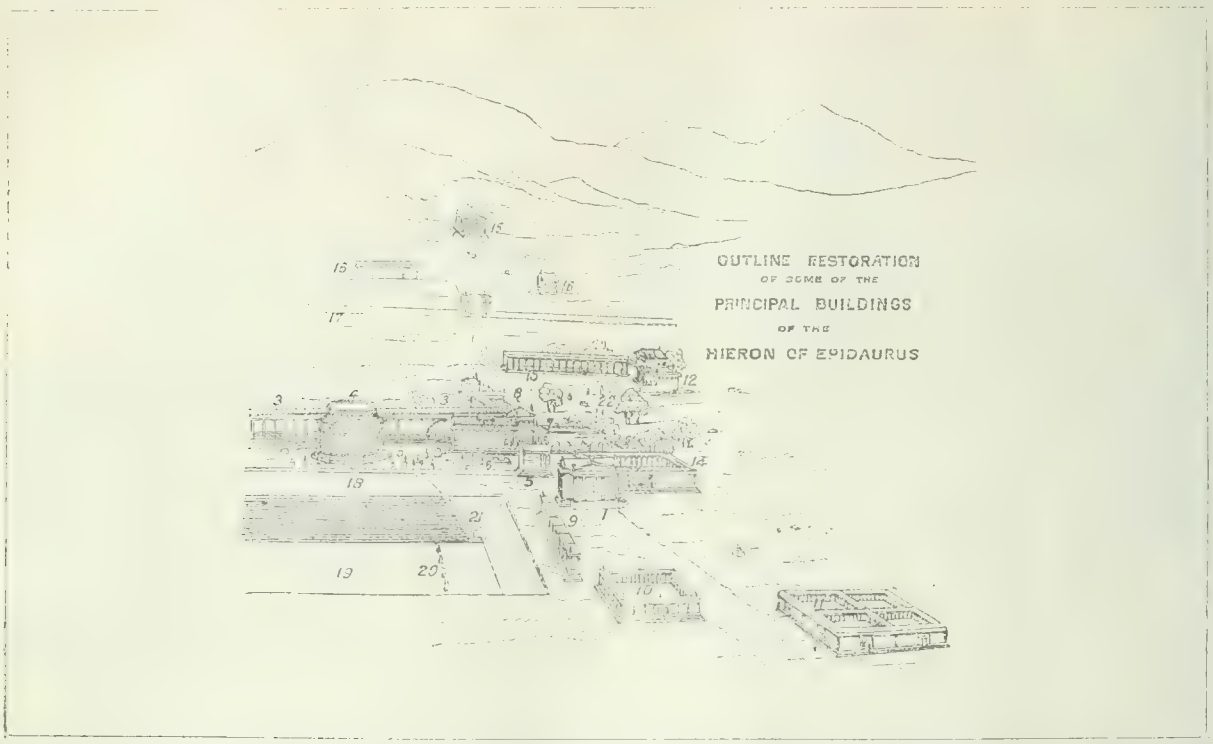


FIG. A.—1. The Propylæa. 2. Temple of Asklepios. 3. The Abaton. 4. The Tholos or Thumela. 5. Temple of Artemis. 6. Altars. 7. ? Hostel. 8. Baths of Asklepios. 9. Portico of Cotys. 10. ? Gymnasium. 11. ? Hostel. 12 and 13 ? Baths. 14. ? Hostel. 15. Temple of Aphrodite. 16. Buildings of unknown purpose. 17. Northern Boundary of Precinct. 18. Part of Southern Boundary. 19. Stadium.

its name to his having been there suckled by a goat, while on the opposite hill, Kynortion, stood the temple of the Maleatean Apollo.

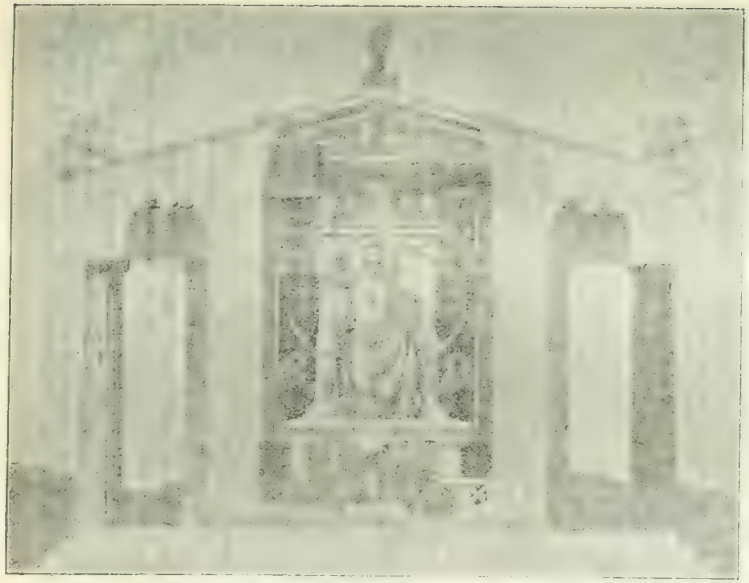
The Hieron, six miles from the town of Epidaurus, was the chief seat of the worship of Asklepios, though minor ones existed in Athens, in Delphi, Pergamos, Troezen, Cos, Tricca, and other places.

Here is an outline restoration (A) (only approximately accurate) of a portion of the Hieron. [It should be stated here that all the numbers which follow correspond with those on Fig. A.] No. 1 is the Propylæa, the great ceremonial gateway of the sacred precincts.

No. 2 represents the Temple of Asklepios, the central shrine, a richly decorated and coloured Doric building, erected in the fourth century B.C., as shown in the accompanying restoration by Defrass (B). At the east and west gables were pediment groups representing a battle with Centaurs and a combat of Greeks and Amazons, together with Acroteria, Nereids alighting from horseback on the two sides, and a central winged victory. A beautiful ivory door, which cost 3,000 drachmæ, closed the sanctuary; within, the cella was only a single chamber, there being no opisthodomus. Here stood, as shown in Defrass's drawing (C), the great Chryselephantine statue of Asklepios made by Thrasymedes of Paros, a work somewhat resembling the Parthenon figure, or the vast Zeus of Olympia; the flesh was all ivory, the rest gold splendidly enamelled in colours. The god was sitting on a throne, a large golden serpent rising up to his left hand; on his right lay a dog, and in front was an altar.

No. 3, in my first illustration, is the Ionic portico or Abaton, a part of which is seen in the second photograph; the western part is in two storeys, the lower one being in the basement. It is open on the south side; a double colonnade supports the roof, the eaves of which, together with the walls and columns, probably showed colour decoration. This constituted the ward or sleeping place for the sick who were awaiting the miraculous interposition of the god. The Abaton was furnished with pallets, lamps, tables, altars, and probably curtains, the patients themselves supplying their own bed clothing. The details of this building I shall give in my next lecture.

No. 4 is the Tholos or Thumela (shown in the annexed restoration by Defrass) (D), the most beautiful circular temple probably that the Greeks ever built, far surpassing the Philippeion at Olympia. It was built in the fourth century B.C., by Polycleitus the younger, and took twenty-one years to build; externally there was a beautiful Doric colonnade, with peculiarly rich cornice, coloured. Within was a circle of sixteen graceful Corinthian columns of marble, the wall and floor were also decorated with variously coloured marbles. Here were two celebrated paintings by Pausias, the Greek artist; the first represented Methe (drunkenness), a woman holding a large wine goblet to her lips, the glass of which was so well painted that the face was seen through it. The second, a picture of Eros (Love) laying aside his bow and quiver and taking up his lyre. Perhaps we may suppose that the painter here indicated the relation of Bacchus and Venus to the ailments which afflict mankind. The scourges which we are told the gods make out of the pleasant vices of men doubtless often brought the wealthy Greek as a suppliant to Asklepios. What was the purpose of the Tholos? Defrass and Lechat believe it was a drinking fountain, a sort of pump room, in which in old times a healing spring arose; if so, we can imagine the gouty Athenian being sent here to drink large potations of the pure element, he envying meanwhile Methe and her occupation on the wall before him. The foundations are most curious, consisting of a series of circular walls forming a labyrinth. Defrass and Lechat think this basement was a water cistern. It is not cemented, and I can find no trace of a conduit. This theory seems improbable for various reasons—for example (1), the word "thumela" means a sacrificing place; and (2) Pausanias speaks of the tholos and the sacred well as though they were entirely distinct places. More probably the tholos was employed for minor sacrifices, and perhaps the labyrinth below may have been associated with some mysterious Asklepian rite of which we are now ignorant; or the labyrinth may have been the home of the sacred serpents. We do not



(C) Chryselephantine Statue of Asklepios (restoration).



(F) Great Theatre at the Hieron. (From a photograph.)



(D) The Tholos or Thumela (restoration).



(B) Temple of Asklepios and part of the Abaton (restoration).

quite know what were the domestic economics of these creatures; they along with the dogs were the incarnation of the god. They received from the sick the utmost veneration; perhaps this curious basement structure was their retreat, and conceivably the upper stage of the tholos was employed for the offering of sacrifices to them as representatives of the god.



(E) Temple of Artemis-Hekate (restoration).

No. 5. The Temple of Artemis (E) is smaller than that of Asklepios; the eaves were decorated by a rich cornice of sculptured heads of dogs, the attribute of Artemis-Hekate. She was a divinity of healing and succour, the chaste moon goddess, and sister of Apollo, who healed Aeneas. Acroteria of Victories decorated the western gable; within was a row of marble columns, and externally stood a triple figure of Artemis-Hekate.

Nos. 6 and 6 represent a large and a smaller altar, which stood in the open air.

No. 7. The square building has occasioned much discussion. It contains the base of an altar surrounded by many bones of sacrificial animals and much ash, also fragments of bronze and earthenware, many of them bearing dedications to Apollo or Asklepios. Its period of erection seems to have been not later than the beginning of the fifth century B.C. It contained great numbers of statues and inscriptions. It may have been a large open portico giving shelter to the sick during rain, hot sun, or cold winds; employed also for minor sacrifices and for the exhibition of statuary, ex votos, and inscriptions. On the other hand, it may have been a house for priests or officials, or even a hostel, or possibly contained the library, the locality of which has not yet been identified.

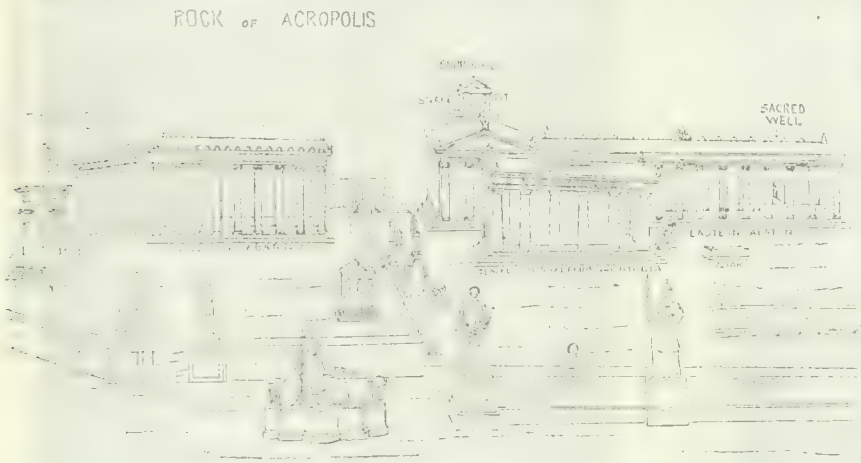
No. 8. A large building, believed to have been the baths of Asklepios, and this building perhaps may have also contained the library, which was dedicated to the Maleatean Apollo, and Asklepios, which one would think is likely to have been in some central position.

No. 9 is the portico or colonnade of Cotys, built originally of unburnt brick, and having not improbably wooden columns. These materials were often used in ancient Greece, even for important purposes, as, for example, the Heraeon at Olympia. The portico was rebuilt in more durable materials in Roman times.

No. 10. A large quadrangular building with Doric colonnade, supposed to have been the gymnasium. During the Roman period a small theatre or odeion was constructed in one of its angles. There still remain nine rows of seats, arranged in a curve, with a central gangway in front of the stage; the old Greek shafts of a part of the colonnade are still to be seen embedded in walls of Roman brick.

No. 11. The building with the four quadrangles, only lately excavated. Each quadrangle is surrounded by a large number of rooms. A colonnade ran round the interior of each quadrangle. Query, What is it?—a gymnasium, a palæstra, a college for the priests, or a great hostel? I confess the last-named seems the most probable. When one considers the large number of the sick who came to the Hieron, it is obvious that extensive accommodation must have been provided for them somewhere. The two chambers of the abaton could not have held more than 120 beds, supposing these to have been placed in two rows, or if we suppose the almost dark lower storey of the western end to have been a dormitory also, 180 would then have been the greatest possible accommodation. If this were the extreme number to be entertained, why were seats for 12,000 or 14,000 provided in the Stadium, and why was the great theatre seated for at least 9,000 spectators? It appears likely, therefore, that this and other undetermined buildings were hostels for the accommodation of those whose ailments were slight or who were convalescent.

No. 12 The Eastern Roman building seems as though it had contained baths. Hot-air or hot-water pipes may be traced there, and certain peculiar pit-like recesses strongly suggest a sort of sitz-bath. At right angles to this ran a colonnade (No. 13), and in front of it an open aqueduct with stone basins placed at every eleventh yard of its course.



(G) Attempt at an outline restoration of the Asklepeion at Athens.

No. 14 is a great rectangular building of limestone, its purpose quite unknown; it was probably a hostel.

No. 15. The Temple of Aphrodite, external to the precinct, was only excavated in 1892. It was a Doric temple. An inscription discovered on the spot speaks of the sanctuary of Aphrodite; not far from it was found a statue of the goddess in Parian marble.

The Temple of the Maleatean Apollo stood on Mount Kynortion much further to the south; the ruins are of so fragmentary a description that it is hardly possible from them to reconstruct the temple.

The Great Theatre (F), situated to the south of the precinct, was built about the year 450 B.C. by Polycleitus, the architect of the tholos. Pausanias, who was a

great traveller, tells us it was the most interesting of all the theatres existing in his time, and to-day anyone who is familiar with the theatres of Greece and the Greek colonies will say that this is more impressive than any of them. The Koilon or auditorium consisted of fifty-five rows of marble seats with twenty-four lines of stairs. The space for the chorus is, according to the ancient system, circular, and in the centre doubtless stood an altar of Bacchus. The stage was elevated nearly 12 feet, the proscenium being enriched by splendid sculpture. The acoustics of the theatre are perfect; a sound little louder than a whisper uttered on the stage can be heard in every part. The theatre is so placed on the slope of Kynortion that the occupants of the major part of the auditorium had a charming view (over the top of the stage) of the mountains to the north and of the whole range of beautiful buildings of the Hieron. While witnessing here the sublime tragedies of Æschylus or Sophocles, or such a comedy as *The Plutus* of Aristophanes (in which, as you will remember, great fun is made of Asklepios and his priests), the contrast afforded by glancing from the stage to the blues and purples of the mountains, the verdancy of the grove, and the beautiful forms and colours of the group of temples would be most pleasing. The Greeks were acute in perceiving and taking advances of subtle sources of pleasure like this, and I believe that the sites of many of their theatres were chosen so as to secure for the audience this double pleasure. The Theatre of Delphi is an example of this provision, as also in a less degree is that of Tauromena. This theatre has been said to seat 12,000 spectators; according to my own rough computation, it unquestionably will hold over 9,000 without crowding.

No. 16 represents certain Roman buildings external to the precincts, the object of which is undetermined.

No. 17 is probably the northern boundary of the precinct.

No. 18 represents a part of the southern boundary, the rest of the boundary line has not yet been ascertained.

No. 19. The Stadium. It is not certain yet which is the semicircular end; formerly it was supposed to be that adjoining the sanctuary, now it appears more likely to have been at the other extremity. As yet only a portion of it is excavated. It was over 600 feet long, and on either side were fifteen rows of marble seats; probably foot, horse, and chariot races took place here as well as other forms of athletic exercise.

Before saying anything about the ritual and the treatment of the sick at the Hieron, it will be well to turn to the Asklepeion at Athens, and examine briefly the structural arrangements there. Situated on the south side of the Acropolis, at an elevation of perhaps 80 feet above the plain, adjoining on the east the theatre of Dionysius, the locality was probably as healthy as any the immediate neighbourhood of Athens could supply. The buildings were to a certain extent an imitation, on a smaller scale, and on a limited area, of those at the Hieron of Epidaurus. Remains of what were probably a temple of Asklepios and Hygeia, of Doric architecture, also a supposed temple of Themis, and a shrine of Isis, exist, while smaller shrines of Serapis, Core, Hypnos, Herakles, Panaceia, Demeter, and other divinities have left no distinct traces. There are considerable remains of a large Eastern portico or abaton of Pentellic marble, from which is reached a circular chamber in the rock containing the sacred well. Close to the abaton is a curious well like structure, surrounded by marble columns, which perhaps was the serpent pit. A western portico or abaton also existed, and a grove containing great numbers of statues, busts, ex-votos, and inscriptions. The annexed outline sketch (p. 1512) may help in giving some general idea of the precinct. The theatre of Dionysius close at hand was doubtless frequented by the sick as a diversion. The stall occupied by the priest, with his name on, it is still in excellent preservation. The Panathenaic stadium, about half a mile away, doubtless was also frequently visited by the convalescents from the Asklepeion.

BY the will of the late Dr. Elizabeth H. Bates, of Port Chester, N. Y., the University of Michigan will receive 125,000 dollars, the income from which is to be used in establishing a chair for the diseases of women and children, to be known as the Bates Professorship.

COMPLETE ATROPHY OF THE DELTOID WITH VICARIOUS RESTORATION OF FUNCTION.*

[WITH SPECIAL PLATE.]

BY ROBERT KENNEDY, M.A., B.Sc., M.D.,
Dispensary Surgeon, Western Infirmary, Glasgow.

M. K., aged 22, presented himself at the dispensary of the Western Infirmary, Glasgow, on June 21st, 1897, complaining that after a hard day's work he experienced stiffness in his back and right shoulder.

On January 29th, 1895, he fell into the hold of a ship, and, on being admitted to the Western Infirmary, it was found that he had sustained a subcoracoid dislocation of the right shoulder-joint, together with a fracture of the radius of the right forearm. The dislocation was reduced on the day of his admission, and the forearm put in splints.

After removal of the splints he was unable to use his arm for about six months, and, although practising daily with dumb-bells, was unable to elevate his arm at the shoulder-joint to any appreciable degree for eleven months, at the end of which time he returned to his work. The improvement then steadily advanced, and now his range of movement and power at the shoulder-joint is such that only careful inspection detects any abnormality.

At present, and as shown in the accompanying illustration, his physique is good, the muscular system being well developed. With the arms hanging by the sides, it is easily seen that the right deltoid is greatly atrophied, the roundness of the shoulder having disappeared, and the acromion and coracoid processes and head of the humerus rendered prominent. Seen from behind, the outer half of the spine of the scapula is prominent from absence of the deltoid, and from the front there is a hollow below the outer half of the clavicle from absence of muscular tissue.

Despite this condition of the deltoid, the degree to which the right arm can be elevated is not much less than in the case of the left arm, and the movement is performed with apparently as much ease on the one side as on the other. In this position of the arm, however, the area of the deltoid shows no prominence corresponding to the contracted deltoid of the opposite side, but there is a well-marked prominence corresponding to the portion of the trapezius inserted into the angle between the clavicle and the spine of the scapula, a prominence which is entirely absent from the left side. Another point of difference between the two sides is the degree of rotation of the scapula when the arm is elevated, which is so marked on the right side that the inferior angle is carried in front of the lateral line. This rotation of the scapula is marked, when the patient is viewed from the front, by the axilla looking more in a forward direction than that of the opposite side.

His range of movement in the affected arm leaves little to be desired. He can place the right hand on the crown of his head and on the nape of his neck with as much ease as he can his left, and has quite as much power in performing these movements on the right as on the left side; indeed, using his right arm at his work more than the left, he performs these movements at the right shoulder-joint with greater precision and ease than in the case of the left. There are, however, some movements which he performs defectively. Thus he has difficulty in throwing a stone, and when he puts his hand in his trouser pocket he cannot withdraw it so easily as in the case of the other arm. The total absence of contractility in the right deltoid is demonstrated when the hand is placed over the muscle, and the patient directed to elevate the arm; for, while all the neighbouring muscles become tense and prominent, the region of the deltoid is found in precisely the same condition as it is when the arm is hanging by the side. The various bony prominences are felt as if covered only by skin and subcutaneous tissue. There is absolutely no response to electrical stimuli. There is also distinct atrophy of the muscular mass at the axillary border of the scapula, due doubtless to atrophy of the teres minor. On the other hand, on placing the hands over the cervical portions of the trapezii, and directing the patient to raise

* The paper was read and the patient shown at a meeting of the Glasgow Medico-Chirurgical Society.

his arms, there occurs on the right side a striking tension and bulging, evidently from hypertrophied muscular tissue. Also when the arm is elevated the region of the supraspinatus is more prominent and tense than that of the left side, and the lower fasciculi of the serratus magnus can easily be felt to be more bulky than those of the opposite side.

The marked degree to which the scapula of the right side, as compared with that of the left, is rotated during the movement of elevation of the arm, is manifest from the following measurements taken with compasses. With the arms hanging by the sides, the distance from the dorsal median line to the inferior angle of the scapula is on either side 3½ inches, while in maximum elevation the distance increases on the left side to 6 inches, and on the right to 8 inches. In the latter position the inferior angle of the right scapula is in front of the lateral line, the posterior surface directed more in an outward direction than that of the left side, and the right axilla looks almost directly forwards.

The upper part of the vertebral border of the scapula in elevation of the arm approaches the median line to a greater extent than on the opposite side, and the distance from the tip of the acromion to the spines of the vertebræ, which with the arms hanging by the sides is on either side 8 inches, becomes in elevation of the arm on the left side 6 inches, and on the right 5½ inches. The acromial end of the clavicle also is considerably elevated and drawn backwards when the arm is raised.

The comparative levels of the roots of the spines and of the inferior angles of the two scapulæ alter during the movement of elevation of the arms, for in extreme elevation the former point on the right side sinks 1 inch below that of the left side, and the latter point rises on the right side 1 inch above that of the left side, a result only possible by extreme rotation of the right scapula.

In addition to the above measurements, taken with the object of showing increased rotation of the scapula as a factor in the elevation of the arm, several angular measurements were taken to determine the extent to which elevation is effected by movement at the shoulder joint. Thus a straight line drawn from the inferior angle to the tip of the acromion meets the axis of the limb at an angle of 50°, and that on both sides. When the arms are elevated to the maximum, the same two lines form on the left side an angle of 140°, and on the right that of 80°. Taking the difference of angles between the two positions of the arm, it is evident that on the left side movement of the humerus on the scapula takes place through an angle of 90°, while on the right side the range is limited to 30°. These results are verified by comparing the angles formed in the two positions of the arms by the junction of a line corresponding to the spine of the scapula with the axis of the arm. Thus, with the arms depressed, the angle on either side between these two lines is 90°, while in maximum elevation, on the left side the angle is 180°, and on the right 120°, a difference again of 90° and 30° respectively.

Remarks.

Vicarious muscular supply was first brought prominently forward by Létiévant[1] in 1873. The case first published by him in 1869[2] was one of traumatic tetanus arising from a wound in the hand, for the treatment of which, in accordance with the pathology of the time, the median nerve was divided in the upper third of the arm. As a result of this the muscles supplied by that nerve were paralysed, and at the end of nine months, although reunion of the nerve had not occurred, and although as a result atrophy of the muscles supplied by it had taken place, yet movements resembling those performed by the paralysed muscles were possible, and in some cases strongly developed. This result Létiévant showed to be due to muscles in the neighbourhood, whose supply remained intact, taking the place of the paralysed muscles, although necessarily imperfectly. On this case he founded his theory of "suppléances motrices et sensitives."

The case the history of which I have given above illustrates the possibility of a very complete substitution by neighbouring muscles for the function of an atrophied deltoid. The explanation of the atrophy of the deltoid in this case is clear from the history. The circumflex nerve was either torn at the time of the dislocation and did not reunite, or if not torn it was ultimately subjected to pressure by cicatrisation resulting in damaged tissue in its vicinity. In any case the total atrophy of the deltoid with atrophy in the region of the teres minor indicates the destruction of the circumflex nerve. The previous history of the case shows that from the time of the accident until after the lapse of many months the arm was practically useless, and that improvement only occurred very gradually, and that when the arm had sufficiently recovered its function to enable the patient to return to his work, the regular exercise thereby secured was followed by a steady recovery of function. It thus required a period of at least eighteen months for the neighbouring muscles destined to supply the function of the atrophied deltoid to adapt themselves to the new conditions. It is impossible to say what time must elapse before the adaptation reaches its limit, for the complaint which brought the patient to me, namely, pain in the back and shoulder after a hard day's work, shows that the muscles supplying the function of the deltoid are still, two years and a-half after the accident, overtaxed by the work they have to perform.

The arm is now raised by:

1. The supraspinatus.
2. Muscles rotating the scapula.
3. Torsion and curvature of the vertebral column.

The degree to which the supraspinatus elevates the arm is shown by the angular measurement between the scapula and the axis of the limb to be 30°. On the left side the combined action of the deltoid and supraspinatus results in a range of 90°. It is not likely that the normal elevating power of the supraspinatus is 30°, and if so that muscle is probably in this case hypertrophied, and acting as one of the vicarious factors. The abnormal tension over the supraspinous fossa is accounted for on the supposition of such hypertrophy.

The second vicarious factor in raising the arm, namely, increased rotation of the scapula, accounts for a considerable extent of the restoration of function of the deltoid; for while on the sound side the rotation during complete elevation of the arm causes the inferior angle of the bone to move through a distance of 2½ inches, the same movement causes the right inferior angle to move through a distance of 4½ inches. This rotation is brought about by the combined action on the scapula of the portion of the trapezius inserted into the angle between the acromion and the clavicle, and by the lower portion of the serratus magnus. The portion of the trapezius in question is much hypertrophied, standing out in contraction as a bulky mass. In its action it also raises and draws backwards the clavicle, whose rhomboid ligament has probably become stretched. The hypertrophy of the serratus magnus, although of course not visible like that of the trapezius, still can be felt, and probably several of the lower slips are acting as a powerful factor in rotating the scapula.

The extent to which the arm can be raised by the application of these two factors is shown in the illustration, the patient having been placed with the body straight, but elevation to the almost vertical position can be effected by the aid of torsion of the body to the right, and lateral curvature to the left. When the patient was directed to raise his arms to the utmost, he at once assumed this attitude of body. Thus the supraspinatus alone raises the arm to 30° as compared with 90° effected by the combined action of a normal deltoid and supraspinatus, and the difference of 60° is attained in the first instance and chiefly by the rotation of the scapula, and finally, when rotation has done its maximum, the elevation is completed by torsion and curvature of the trunk.

The case illustrates the extent to which, at least in some cases, recovery of function may be expected in cases of atrophy of the deltoid, resulting from injury to the circumflex nerve, without any operative interference. The recovery in this case is so nearly perfect that it is questionable if a better result could have been attained had the nerve been exposed and treated with a successful result. Taking into account even the length of time necessary for the establishment of supplementary function, it is still questionable if, by operative interference for the repair of the circumflex nerve, any time would have been saved in the restoration of the power to elevate the arm, as in any case atrophy of the deltoid would have been far advanced before the nature of the case could have been sufficiently established to warrant an operation of the kind. Then, with atrophy so far advanced,

ATROPHY OF DELTOID.



TO ILLUSTRATE DR. ROBERT KENNEDY'S PAPER (page 1513).

ACUTE RACHITIC CURVATURE.



TO ILLUSTRATE MR. JOHN POLAND'S PAPER (page 1515).





TO ILLUSTRATE ARTICLE ON PAGE 1528.

recovery of the muscle would have been a matter of at least many months.

I publish the case partly for its general interest, as showing vicarious muscular supply after nerve injuries, and partly for its special interest, as showing what may be expected in favourable cases in the way of recovery of function in cases of atrophy of the deltoid.

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[1] Létiévant, *Traité des Sections Nerveuses*, Paris, 1873. [2] *Ibid.* Phénomènes physiologiques et pathologiques consécutifs à la Section des Nerfs principaux du Bras, *Lyon Méd.*, No. 21-22, 1869. Virchow-Hirsch, *Jahresbericht*, 1869, Bd. 2, pp. 291, u. 321.

CASE OF ACUTE RACHITIC CURVATURE OF TIBIÆ BACKWARDS.

[WITH SPECIAL PLATE.]

BY JOHN POLAND, F.R.C.S.,
Surgeon to the City Orthopædic Hospital.

As regards the rachitic changes in the lower limbs, although the enlargements of the upper end of the tibia and the lower end of the femur occur next in order of frequency to the lower end of the former bone, we do not find the upper end of the tibia nearly so often bent as its lower extremity. While it is very rare to meet with such a condition as the present one of acute yielding of the bone directly backwards below the line of junction of its upper epiphysis, we sometimes find the upper end of the shaft projecting somewhat backwards and outwards at a point just below the tuberosities. Indeed among the numerous casts of rachitic deformities in the museum of the City Orthopædic Hospital there is no example which at all approaches it in severity.

The girl (E. G.), who was aged 17 years on admission, but looked no more than 12, had had somewhat severe rickets during infancy. Her father and mother were quite healthy, and her three brothers, residing in the United States of America, older than herself, had no affection of any kind. She did not attempt to walk until 2 years of age, and at the age of 3 it was noticed that her legs began to be crooked, and she was treated for rickets in a New York hospital. An apparatus was fitted to the spine, but no splints were applied to the legs, as she was told the condition of these would get better of itself in time. After her arrival in England her mother took her at the age of 8 to the Evelina Hospital for the bending inwards of the knees, but no splints were applied during the twelve months she attended there. The patient then came to this hospital under the care of my late colleague, Mr. E. J. Chance, who applied first of all straight wooden splints to the lower extremities, and then for the last three years steel mechanical appliances.

The patient then came under my charge, and it was clear that although the steel supports had effected much in correcting the valgus condition of the knees, they did not seem to have benefited the unusual curves of the legs which were now presented, and had up to this time been progressive. The bend at the upper end of each tibia was at the lower level of the tubercle, and presented an appearance not unlike dislocation of the knee. The rest of the bone in each limb appeared quite normal, with the exception that the lower end, like the other long bones of the limbs, was still a little bulky. The femora were much curved anteriorly, but the shafts of the bones of the upper limbs were quite normal. I therefore decided to perform osteotomy on the tibiæ at the point of curvature, which was done on the right side on July, 1897. The tibia and fibula were carefully and gradually divided—the former from within outwards, the latter from without inwards—with an Adams's saw, and their diaphyses forcibly bent backwards, bringing them into a straight line with their upper epiphyses. The limb was then placed on a double inclined plane, to maintain the bones in their normal relations, and prevent pressure on the tibial vessels. Firm consolidation took place in the flexed position, and in order to allow the new bone filling the gap in the divided diaphyses to become quite solid, the limb was kept in this position for two months. At the end of this time extension of the knee was commenced, and carried out gradually to its fullest extent, with an excellent result, as presented by the condition of the patient when shown to the Hunterian Society in December, 1897.[1]

The skiagraphs of the two limbs afforded an interesting comparison of the tibiæ before and after correction of the deformity by osteotomy. The epiphysial lines of the femora and tibiæ were seen to be unaltered from their normal direction. The bones of the left leg were subsequently divided in a similar manner, with an almost equal result. After the correction of the tibial curves the valgus position of the knees became more noticeable. To remedy this, as well as the anterior curvature of the femora, it is proposed to perform infracondyloid osteotomy of each femur.

UNILATERAL RETINAL CHANGES IN CEREBRAL HÆMORRHAGE, EMBOLISM, AND THROMBOSIS.*

BY R. T. WILLIAMSON, M.D.LOND., M.R.C.P.,
Medical Registrar, Manchester Royal Infirmary; Assistant to the Professor of Medicine, Owens College.

IT is well known that in a large number of cases of cerebral hæmorrhage, ophthalmoscopic examination reveals albuminuric retinitis in each eye. It is also well known that in cases of cerebral embolism associated with ulcerative endocarditis, hæmorrhages and white patches may sometimes be found in each retina on ophthalmoscopic examination. Occasionally embolism of the central artery of the retina, with its characteristic ophthalmoscopic appearances, may be associated with cerebral embolism; but such an association is exceedingly rare. In patients suffering from arterio-sclerosis minute changes may be found in the retinal vessels—general or localised narrowing of the arteries, white lines along the sides of the arteries, localised narrowing of the veins, localised varicose dilatations, etc., and of course these may be present when cerebral hæmorrhage occurs. Other rarer retinal changes have occasionally been found in cerebral hæmorrhage and softening.

But apart from the changes just mentioned, I have observed two others in certain severe cases of cerebral hæmorrhage, embolism, and thrombosis, namely, retinal hæmorrhages or dilatation of the retinal vessels in the eye of the same side as the brain lesion, whilst the opposite retina has not presented either of these changes.

The following are brief abstracts of my notes on the ophthalmoscopic examination in 13 severe cases of cerebral hæmorrhage, embolism, or thrombosis. In 12 of the cases the examination was made shortly before death; in one case death did not occur for some time afterwards. The cases were all in-patients at the Manchester Royal Infirmary, and to the kindness of the medical staff I am indebted for permission to record the observations which I have made on patients under their care.

CASE I.—Right-sided hemiplegia. Necropsy: Cerebral hæmorrhage in basal ganglia of left side. Ophthalmoscopic examination during life revealed three large hæmorrhages close to optic disc on the side of brain lesion (left). See Fig. 1. In the opposite retina no hæmorrhages present.

CASE II.—Right-sided hemiplegia. Necropsy: Cerebral hæmorrhage in the basal ganglia of left side. Ophthalmoscopic examination revealed a large hæmorrhage covering a portion of the optic disc on the side of the brain lesion (left). See Fig. 2. The opposite retina presented no changes.

CASE III.—Left-sided hemiplegia. Necropsy: Cerebral hæmorrhage into right basal ganglia. Ophthalmoscopic examination revealed a large retinal hæmorrhage obscuring a portion of the optic disc on the side of the brain lesion (right). See Fig. 3. The opposite retina presented no hæmorrhages.

CASE IV.—Right-sided hemiplegia. Necropsy: Cerebral hæmorrhage into left basal ganglia. Ophthalmoscopic examination revealed several retinal hæmorrhages in the upper half of the retina on the same side as the brain lesion (left). The opposite retina presented no hæmorrhages.

CASE V.—Left-sided hemiplegia of sudden onset; coma; signs of granular kidney; albuminuric retinitis in both eyes; fatal termination no necropsy.

CASE VI.—Right-sided hemiplegia; fundi normal. *Post-mortem* examination revealed hæmorrhage into the left basal ganglia.

CASE VII.—Right-sided hemiplegia; no retinal hæmorrhage or other changes. *Post-mortem* examination revealed hæmorrhage into the left basal ganglia.

CASE VIII.—Right-sided hemiplegia; albuminuric retinitis in each eye. *Post-mortem* examination revealed cerebral hæmorrhage into the left basal ganglia.

[1] BRITISH MEDICAL JOURNAL, December 25th, 1897, p. 1859.

* Communicated at a meeting of the Manchester Medical Society.

Case IX.—Right-sided hemiplegia. Necropsy revealed thrombosis of the left middle cerebral artery, the clot extending down into the internal carotid artery for a short distance. Ophthalmoscopic examination during life revealed marked dilatation of the retinal vessels, especially the veins, on the side of the brain lesion (left). The retinal vessels, especially the veins near the optic disc, were also very tortuous. The retinal vessels and fundus of the opposite eye were normal.

Case X.—Right-sided hemiplegia with aphasia; cardiac valvular disease. Necropsy: Embolism of left middle cerebral artery. Ophthalmoscopic examination during life: Retinal vessels a little dilated and tortuous on the side of the brain lesion (left); the opposite retina normal.

Case XI.—Right-sided hemiplegia with aphasia; mitral stenosis. No *post-mortem* examination was obtained, but there can be little doubt that the case was one of embolism of left middle cerebral artery. Ophthalmoscopic examination during life: Retinal vessels a little more dilated and tortuous on the side of the lesion (left); retina on the opposite side normal.

Case XII.—Right-sided hemiplegia; mitral disease. Necropsy: Embolism of the left middle cerebral artery. Ophthalmoscopic examination revealed no changes in either retina.

Case XIII.—Left-sided hemiplegia; mitral disease. Necropsy: Embolism of the right middle cerebral artery just at its origin. Ophthalmoscopic examination: A large hæmorrhage (see Fig. 4) in the centre of the retina on the side of the brain lesion (right); opposite retina normal.



Fig. 1.—Case of cerebral hæmorrhage. Three large retinal hæmorrhages on the same side as the brain lesion in the other retina no hæmorrhages present.



Fig. 2.—Case of cerebral hæmorrhage. Retinal hæmorrhage on the same side as the brain lesion; in the other retina no hæmorrhages present.

These are the results of the ophthalmoscopic examination in 13 severe cases of cerebral hæmorrhage, embolism, or thrombosis. In 11 of these the diagnosis was verified by *post-mortem* examination, and in the other 2 there can be no doubt that the diagnosis was correct. In 5 of these 13 cases —4 hæmorrhage, 1 embolism—there was a large retinal hæmorrhage on the same side as the brain lesion, whilst the retina of the other eye was practically normal. In 1 of the 13 cases the retinal vessels were markedly dilated and tortuous on the side of the brain lesion—thrombosis of the middle

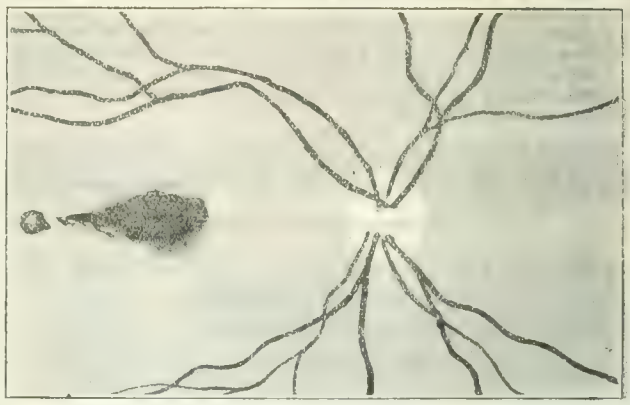


Fig. 3.—Case of cerebral hæmorrhage. Retinal hæmorrhage on the same side as the brain lesion; in the opposite retina no hæmorrhage present.

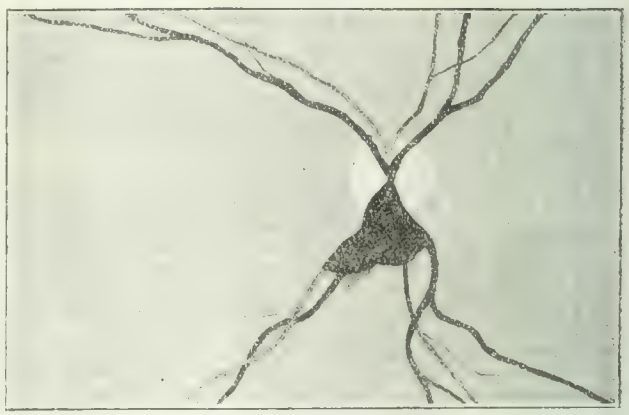


Fig. 4.—Case of cerebral embolism. Unilateral retinal hæmorrhage on the same side as the brain lesion.

cerebral extending into the carotid—whilst the other retina was normal. In 2 cases—cerebral embolism—the retinal vessels were a little dilated on the side of the lesion, whilst the other retina was normal. Thus, in 8 out of the 13 cases there were unilateral retinal changes on the same side as the brain lesion, whilst the other retina was not affected by these changes. In tabular form the results may be expressed as follows:

Cases of Brain Lesion.	Large Retinal Hæmorrhage on side of Brain Lesion only.	Dilated Retinal Vessels on side of Lesion only.	No Retinal Hæmorrhages or Dilated Vessels.	Bilateral Albuminuric Retinitis.
Hæmorrhage (8)	4	—	2	2
Embolism (4)	1	2 slight	1	—
Thrombosis—middle cerebral extending into carotid (1)	—	1 marked	—	—

The above are the results obtained by careful ophthalmoscopic examination—direct and indirect methods—in severe cases which terminated *fatally*. Probably these changes will rarely be found in mild cases which do not end fatally. Also, they are sometimes present only during the last 24 or 48 hours of life. From these results the following conclusions may be drawn:

1. In cases of hemiplegia from cerebral hæmorrhage which

terminate fatally, large hæmorrhages are not infrequently found in the retina on the same side as the brain lesion, whilst no hæmorrhages are present in the opposite retina.

2. In cerebral embolism the same retinal condition is occasionally met with; also in cerebral embolism occasionally the retinal vessels are slightly dilated on the side of the brain lesion.

3. In thrombosis of the middle cerebral artery, when the thrombus extends down into the internal carotid, the vessels of the retina on the side of the brain lesion may be markedly dilated and tortuous, whilst the retinal vessels of the other eye are normal.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

ELEPHANTIASIS OF BOTH LOWER LIMBS.

The accompanying illustration represents the legs of an old lady, aged 87, who has never lived elsewhere than in England. The condition began over seven years ago, and at that time she was so ill that she had to remain in bed for a number of months. She had suffered from ulcers on the right leg for five years previously, but they healed under the influence of rest in bed in spite of her illness. The illness consisted of feverish attacks, with redness, pain, and swelling in the legs. In the patient's own words the skin looked "like pickled cabbage," and, so far as her memory serves, the condition began simultaneously in each limb. It occurred in exacerbations, at first severe and at short intervals; subsequently less severe and less frequently, but in all cases attended by a gradual increase in the size of the limbs.



At the present time the right leg measures in its thickest part 22¼ inches, and the left 22¾ inches. The skin is of a dusky leaden hue, and is everywhere unbroken. It is covered with thick, sebaceous crusts, and about the toes the epidermis is hypertrophied into masses of horn. Pitting cannot be produced in the affected part of the legs, although it is easily obtained for a few inches above that level.

The patient has a double cardiac murmur and a considerable degree of chronic bronchitis, but she is able to walk short distances, and is remarkably strong considering her years. The abdominal viscera appear to be normal, and there is no albuminuria, nor is there any history or sign of syphilis. The inguinal glands are slightly enlarged.

Of the various causes of extratropical elephantiasis, erysipelas seems to have been the one obtaining in this case, and the condition may therefore be regarded as analogous to Hutchinson's solid œdema, that is, recurrent erysipelatous lymphangitis.

Elephantiasis is admittedly uncommon in this country, and it appears to be especially rare in both lower limbs. One such case, unaccompanied by an illustration, is reported by Dr. Purdam.[1]

Wanstead. Patrick F. Macgregor, M.D., D.P.H.

THE USE OF PUMICE-STONE SOAP IN THE DISINFECTION OF THE SURFACE OF THE BODY.

The most effective element in the sterilisation of the hands of the surgeon and of the patient's skin is undoubtedly the preliminary washing and scrubbing with soap and warm water that should invariably be carried out. This mechanical method of disinfection is really more important than the subsequent chemical one by some disinfectant, and as an aid to it I have found the use of pumice-stone soap of the greatest assistance. As is well known, pumice, or pumice stone (for it occurs in two forms) is a light porous material of volcanic origin, and composed chiefly of silica. It varies in colour, being white, black, or grey, but it is so hard that it is used either in its solid form or as powder for polishing glass, bone, ivory, marble, and even metals. By the ancient Greeks it was employed for procuring a fine gloss and smoothness on the human skin, and at the present day it is sold by druggists for removing stains and marks from the hands. It does this so effectually that it occurred to me that in the form of the pumice-stone soap it might be made use of in my surgical work in connection with the disinfection of the human skin. For a considerable time I have so used it, and, I think, with great advantage. Mechanically it helps to remove the dirt and effete epidermal cells from one's hands in a way that no other soap does, and I have consequently come to regard it as a valuable aid to asepsis of the human skin.

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INTESTINAL OBSTRUCTION: EVACUATION OF A GALL STONE: RECOVERY.

M. P., aged 71, on April 1st, 1898, after her dinner, was suddenly seized with vomiting and acute pain in the abdomen. The bowels had been freely open on the previous day. About a year previously she had had an attack of acute abdominal pain, without vomiting, but with complete obstruction, resisting all aperients, and lasting four days. The bowels then acted, and all pain speedily disappeared; the motions were then not examined.

On the present occasion the vomiting was almost continuous. There was great abdominal tenderness, especially to the left of the umbilicus, slightly coated tongue, and normal temperature. The rectum on digital examination was empty. No sign of any external hernia. Calomel gr. v given and retained for an hour; vomiting then again started, and continued until April 4th. In the meantime various purgatives were tried, and several very copious enemata given, two of which contained castor oil, and were retained for at least an hour. There was still no action of the bowels. Operative interference was urged, but absolutely refused. On April 4th vomiting ceased, and small quantities of fluid nourishment retained. In the evening two calomel and colocynth pills were given, with the result of starting the vomiting again in four hours. After six hours vomiting again ceased. Her general condition kept good, and at midday of April 10th she was ordered half-drachm doses of magnesium sulphate every two hours until ℥ss had been taken.

Early on April 11th she passed three large motions, and in

[1] British Medical Journal, 1881, vol. ii, p. 1281.

the first was found a smooth, round gall stone, measuring 1¼ inch in its longest diameter, and weighing 130 grains. The patient made a speedy and uninterrupted recovery.

On the third day of her illness she had retention of urine, which had to be relieved by catheter, and after that a good deal of pain and irritation in the bladder.

Taking into consideration the attack she had a year ago, and the absence of signs of acute strangulation, a diagnosis of obstruction by a gall stone had been made; and had not patient and friends been so firmly set against any operative interference, the diagnosis would have been confirmed in a different manner.

Chipping Campden. JOHN H. DEWHURST, M.B.Cantab.

AN OVERDOSE OF EXALGINE.

Last month I was attending Mrs. H. for severe facial neuralgia caused by several carious teeth. On April 28th I administered chloroform whilst the teeth were extracted. After the extraction the patient became very hysterical, and I gave a hypodermic injection of morphine and hyoscine. Later in the evening, on completely regaining consciousness, she complained that the pain in her face and head was as great as ever. Knowing by previous experience that the case was not amenable to treatment by bromides, quinine, or butyl-chloral-hydras, I ordered a mixture containing 2 grains of exalgine in 2 drachms, and ordered this dose to be taken every four hours. That night she took one dose, and the next morning at 8.20 A.M. a friend administered two tablespoonsful of the mixture instead of two teaspoonsful. Thus she took 8 grains of exalgine as a single dose. Very shortly afterwards she exclaimed; "I am dying, send for the doctor." I arrived half an hour later, and found the patient sensible, although somewhat dazed. The pulse was 84, full, strong, and regular. The breathing was regular, and there was no dyspnœa. No symptoms of collapse were present.

I then received the following account from the patient: "Shortly after taking the dose of medicine I noticed pain in the stomach and felt very faint, but not giddy. I also noticed that the pain in my head left me quite suddenly. I then lost my sight and felt paralysed, although still quite conscious and able to hear and understand all that was said in the room." These symptoms disappeared gradually in about 20 minutes. With the exception of slight faintness about 9.45 A.M. the patient had no other unpleasant symptom. Later in the day the neuralgic pains recurred, though in a modified degree.

I consider the case one of interest, as I cannot find any report of so large a dose having been taken, whereas cases have been reported in which a dose of 1¼ grain has given rise to vertigo and faintness, and in one case it caused an epileptiform fit. The mildness of the symptoms and the rapid recovery are also remarkable.

E. A. LERMITTE, M.B., B.S., M.R.C.S., L.R.C.P.

Stamford Hill, N.

A CASE OF CÆSAREAN SECTION.

On the evening of November 21st, 1896, I was called to see a female East Indian immigrant, aged about 22, who was reported to be in labour. I found that the patient, who was a primipara, had been in labour for some hours. On examination the condition of the pudendum was remarkable, the labia being represented by fibrous masses of about the size of turkey's eggs. Within them were venereal sores from which purulent material exuded. There was fibrous contraction of the vagina for the greater part of its extent, and it admitted one finger only. Near its orifice was a thin transparent membrane, which was ruptured by the examining finger, slight hæmorrhage resulting. A pronounced sacral "dip" was noted, and with some difficulty the forefinger was made to impinge on the fœtal head, which was impacted at the brim. The os was dilated to the size of a half-crown (3.2 cm.). The membranes were not felt. The general condition of the patient was satisfactory. Early the following morning I had her removed in a cart to Hordley Hospital, a distance of five miles on a level road, calling for Dr. George J. Neish, the district medical officer in charge of the hospital, on my way.

Dr. Neish agreed with me that interference by way of the passages was impracticable. Accordingly Cæsarean section was proposed. This, however, the woman absolutely declined, and she was therefore left at the hospital. The pains had by this time ceased. On the same evening I received a message to the effect that the woman had consented to the procedure proposed. The pains had not returned. On the next morning, twenty-six hours after her removal to the hospital, the operation was performed by Dr. Neish with my assistance, the patient having rested well the night before. An incision extending from 2 inches above the umbilicus nearly to the symphysis pubis was made, the dispenser of the hospital administering chloroform. The uterus was incised as nearly as possible in the middle line and the placenta was at once encountered, the hæmorrhage for a few seconds being very free. The uterus was supported by a finger in either angle of the wound and the placenta rapidly extracted. The hæmorrhage soon ceased. The removal of the child, which was alive, presented no difficulty, the head coming last. The uterus contracted well and the incision was very carefully sutured with silk, a series of deep sutures, avoiding the mucous membrane, being employed, then a close series of superficial sutures approximating the inverted edges of peritoneum to avoid leakage. The interior of the uterus was not treated in any way. The pelvic cavity was carefully swabbed out with sponges that had been boiled and transferred to boric solution. The sutures had been treated in a similar way, while the instruments had been placed in carbolic solution (1 in 40) after boiling. The abdominal incision was completely closed and the wound dusted with boric and iodoform powder, covered with lint wrung out in corrosive sublimate lotion (1 in 2,000), a broad bandage investing the abdomen. Recovery was uninterrupted, the wound healing by first intention.

Up to the present time, 18 months later, there has been no further conception.

It would seem that in this case the usually unfavourable result of delay in operating was counteracted by the opportunity it afforded for the night's rest and recuperation.

Bath, Jamaica T. M. BARTLETT, M.B.Edin., D.M.O.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE LONDON HOSPITAL.

A CASE OF CEREBELLAR HÆMORRHAGE.

(Under the care of Dr. WILFRED HADLEY, Assistant Physician.)

M. C., aged 36, a servant, was admitted on March 8th, 1898, in a semi-comatose condition. She was said to have had a fit whilst preparing breakfast on the day of admission. The friends then noticed some twitching of the left side of the mouth.

She was partially conscious and could be roused, as if in a deep sleep, rather collapsed, the breathing being somewhat stertorous. The pupils were contracted, equal, and reacted sluggishly to light. The conjunctival reflex was lost on the right side. There was great difficulty of swallowing. The patellar reflex was absent on the right side, and there was diminished movement and power of the right arm and leg. This was not marked, and at times she seemed to move all four limbs equally well. The face was expressionless, the left eyelid drooped more than the right, and when told to shut the eyes, the right eye closed better than the left. On examining the fundi, the vessels at the upper margin of the right disc were found to be buried. The speech was unintelligible. The pulse was 58 and laboured, and over the mitral area a faint systolic *bruit* could be heard.

The temperature rose to 101.7° that night. On March 9th there was sugar and albumen in the urine. The sugar was definite in amount in the morning, but had diminished to a trace by the evening. Her general condition was much the same.

On March 10th the sugar had disappeared altogether from

the urine; a trace of albumen was still present, and there never was any acetone reaction.

The patient lived until March 14th, much in the same condition. For the last twenty-four hours there was much greater difficulty of swallowing, and coughing caused by attempts at feeding. Towards the end she developed bronchitis, the temperature rose to 103.5°, œdema of the lungs came on, and she died.

Necropsy.—Lungs: œdema and slight bronchitis; heart muscle and valves healthy; pancreas, no visible disease; kidneys strip readily, no morbid changes; liver healthy, but pale; brain, slight excess of fluid at the base of brain, no appearances of meningitis, but the meninges were rather more adherent than usual, slight excess of fluid in lateral ventricles (℥ij); the right cerebellar hemisphere was converted into an upper and lower layer by hæmorrhage, which had extended throughout the whole of the lobe, and had forced its way into the fourth ventricle, but otherwise had not crossed the middle line; the right restiform body was lacerated; the inferior peduncle completely torn across; the middle peduncle not much injured.

REMARKS.—The comatose condition, coupled with the glycosuria, made it at first somewhat difficult to distinguish the case from one of diabetic coma, but the sudden onset, absent conjunctival reflex on one side and not on the other, slight paresis, fundal changes, aided us in coming to a right diagnosis. Later it was rendered still easier by the absence of any acetonuria, and there being no apple-like odour in the breath. The localisation was more difficult, but taking into consideration the great difficulty of swallowing, the contraction of the pupils, and the flush of sugar in the urine, one placed the lesion in the medulla and fourth ventricle. It will be seen from the *post-mortem* report how the implication of that ventricle had produced this physiological glycosuria.

DISTRICT HOSPITAL, KRIAN, PERAK.

A CASE OF ELEVATED FRACTURE OF THE SKULL AND LACERATION OF THE BRAIN.

(Under the care of R. M. CONNOLLY, B.A., L.R.C.S.E., District Surgeon.)

THE patient, a Tamil, was wounded in the head on the night of April 17th, 1897, by a blow from an axe, and though felled to the ground, was able to rise and walk to his master's house about 300 yards away. He was discovered the following morning, and was brought to hospital. On examination he was found to be paralysed on the left side in the upper and lower extremities, the face was drawn slightly to the left, and the tongue pointed to the left. He was able to speak, but his mind was not clear; and he suffered considerably from vertigo and headache. There was a deep incised wound about 6 inches long on the right side of the head filled with a pulsating clot, and partially covered by it. When the clot was removed the right parietal bone was found to be fractured for 6 inches, the outer border was much elevated, and the inner depressed and comminuted posteriorly. There was a space of ½ inch between the two borders through which lacerated membrane and brain substance protruded. These it was necessary to pare away. A large clot lay on the surface of the brain underneath the parietal bone, and this was also removed by copious irrigation. Three small pieces of comminuted bone, which were driven into the dura mater posteriorly, were taken out, and a triangular piece was cut out of the outer border and a thin longitudinal piece out of the inner border to free the brain from pressure. As much periosteum as could be saved was left behind. The wound was dressed antiseptically, a drainage tube inserted, but the sutures were purposely tied loosely.

On April 23rd he was seized with a convulsion of the left side, with unconsciousness lasting for an hour and a-half. The wound was slit up, irrigated, and patient recovered consciousness. He stated afterwards he felt a throbbing sensation in the left eyeball just before the fit. There was a small semipurulent clot on the brain under the sutures. After this there was for a week a troublesome hernia cerebri, which was reduced by the icebag, but patient improved and the paralysis gradually passed away.

On May 23rd he had a second seizure with unconsciousness for about two minutes. He was sitting on his bed at the time, when he felt the aura of a fit and called for help. The mouth was first dragged to the left side, there was twitching of the muscles of the left side of the face, convulsive movements of the eyeballs, and tremors of the left upper and lower



limbs. The sutures were again opened, and the fit passed away. The wound was then allowed to heal slowly; there was no further attack, and the patient was discharged on July 5th.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

C. J. CULLINGWORTH, M.D., F.R.C.P., President, in the Chair.

Wednesday, June 1st, 1898.

UTERINE FIBROIDS IN YOUNG WOMEN.

DR. HERBERT SPENCER read a paper on two cases of fibromyoma of the uterus removed by operation from women under 25 years of age. The diagnosis of the nature of the tumour was verified by examination with the microscope, and the age of the patients by obtaining their certificates of birth. In the first case (aged 24) the tumour weighed 4 lbs. 9¾ ozs., and was removed by amputation after laparotomy, the pedicle being treated extraperitoneally. In the second case (aged 23) the tumour with the uterus weighed 16¼ ozs., and was removed by vaginal hysterectomy after the peritoneum had been opened in an attempt to enucleate the tumour. The patients were in good health two years and one year after operation. A brief abstract was given of 40 recorded cases of uterine fibroid tumours occurring in women under 25 years of age. In at least 11 of the cases the diagnosis was clinical, and in only 4 cases was the diagnosis verified by examination with the microscope. The author concluded that uterine fibromyoma is rare before the age of 25 and very rare before the age of 20, and that there is no satisfactory record of its occurrence before the age of puberty.

Dr. BOXALL gave details of his case referred to by Dr. Spencer. The patient was born on August 9th, 1870. She was,

therefore, just 23 years of age when she came under observation in August, 1893. On account of pain and fever an operation was performed. Two fibroid nodules, not larger than a nutmeg, were visible on the abdominal surface of the uterus near the fundus. A mass in the left broad ligament was enucleated and removed with the uterus and appendages, the pedicle being secured by a clamp outside the abdomen. The mass proved to be composed of involuntary muscle growing from the left side of the uterus. Under the microscope it exhibited the ordinary characters of a fibromyoma.

Dr. HERMAN, in reference to some remarks by Dr. William Duncan, said that his opinion as to the practicability of enucleation in the case of the tumour shown by Dr. Duncan at the November meeting of the Society remained the same as it was in November. He did not think Dr. Duncan had shown (as was stated in the *Transactions*), that the uterus might easily have been perforated had enucleation been attempted. He thought, on the contrary, that by *morcellement* the fibroid could easily and safely have been removed. Had Dr. Duncan's tumour been removed in this way the patient would have recovered capable of every function instead of being minus her uterus. He did not think Dr. Spencer's case showed that any greater damage attended enucleation, for his patient recovered as well as she could have done after abdominal hysterectomy, and without the disadvantage of an abdominal scar. He (Dr. Herman) thought the preliminary dilatation was most safely done by tents.

Dr. PETER HORROCKS did not think that the paper was intended to provoke a discussion on the relative merits of enucleation of fibroid tumours of the uterus and their treatment by hysterectomy. It had been said by Mr. Alban Doran that these tumours never occurred, or were practically unknown before the age of 25. It must be admitted that true fibroids (that is, fibromyomata) of the uterus were rare before 25, and unknown before puberty. They were also much commoner in single than in married women, and in women who had never been pregnant than in women who had. Moreover, the tumours began to atrophy, as a rule, after the climacteric. All these facts proved that in some way fibroids were associated with active menstrual life.

Dr. LEWERS agreed with the remarks that had been made by Dr. Herman as to enucleation. He considered that the justifiability of enucleation *per vaginam* depended chiefly on the position of the fibroid in relation to the uterine wall. When the fibroid was so situated that its largest diameter projected free in the uterine cavity and only a moderate part of the tumour (one-third or less) still remained embedded in the thickness of the uterine wall, enucleation by *morcellement per vaginam* was free from any great risk, and was the proper treatment for the case. When, however, examination showed that the largest diameter of the tumour was still in the thickness of the wall of the uterus, he regarded enucleation as exceedingly dangerous.

The PRESIDENT said that in the course of a discussion upon a specimen of fibroids of the uterus in a girl aged 26, shown for him (the President) by Dr. A. F. Stabb fifteen months ago, Mr. Doran had remarked that a monograph on the subject of fibroids in early life was much wanted. Such a monograph had now been produced. It was to be hoped that Fellows would henceforth recognise the importance of recording, on the lines Dr. Spencer had laid down as essential for scientific accuracy, all cases that came under their observation of uterine fibromyomata occurring in young subjects. As regarded enucleation *per vaginam*, he was bound to say that in his experience this method had proved more dangerous than removal of the entire uterus.

Dr. SPENCER, in reply, said that the object of the paper was to show that fibromyoma of the uterus did occur in women under 25 years of age. Its rarity, judged by public records, was shown by the fact that Dr. Boxall's was, as far as he knew, the only other case fully and satisfactorily described by an English author. He had not discussed the treatment of these cases, but he might say that enucleation of submucous tumours *per vaginam* had given him very good results, and was an extremely valuable operation.

INCONTINENCE OF URINE.

Dr. MACNAUGHTON JONES read notes of a case of complete incontinence of urine cured by ventrifixation of the uterus.

SPECIMENS.

The following specimens were shown: Mr. DORAN: Blood Concretions in the Ovary.—Mr. BLAND SUTTON: Ovary containing a Calcified Ball, probably a Large Calcified Corpus Fibrosum.—Mr. A. BURTON: A Deformed Fœtus.—Dr. HORROCKS: Uterine Fibroid Undergoing Cystic Degeneration. Dr. LEWERS: Primary Sarcoma of the Body of the Uterus (Deciduoma Malignum), the patient remaining well sixteen months after hysterectomy.—Dr. A. ROUTH: (1) An Ovarian Dermoid removed by the vagina during pregnancy. (2) Ruptured Tubal Gestation at three to five weeks.—Dr. W. DUNCAN: A Five Months Fœtus born with placenta and membranes intact.

HARVEIAN SOCIETY OF LONDON.

JAS. F. GOODHART, M.D., President, in the Chair.

Thursday, May 26th, 1898.

JACKSONIAN EPILEPSY.

Dr. JAMES TAYLOR showed a patient who, three months before admission to hospital, had a fit commencing in the right foot, spreading upwards, and leading to loss of consciousness followed by weakness of the right side, but not by any speech affection. There were other attacks of a similar nature, and since the last the weakness of the right leg had persisted, and was accompanied by weakness of the lower extremity. Dr. Taylor thought the symptoms pointed to a local lesion, probably gummatous, over the leg area in the left cerebral hemisphere. There was no optic neuritis, and now no headache, although headache had been present.

The PRESIDENT asked whether syphilitic vascular lesions were not more commonly found in such cases than gummata.

Dr. TAYLOR, in reply, said that in his experience the condition giving rise to localised fits was more frequently a thickening of the meninges than arterial disease.

IDIOGLOSSIA ASSOCIATED WITH PSEUDO-HYPERTROPHIC PARALYSIS.

Dr. LEONARD GUTHRIE showed a boy, aged 7, who was a well-marked example of pseudo-hypertrophic paralysis. The symptoms were of about two years' duration. The lower extremities were chiefly affected, the gastrocnemii and vasti externi being extremely large and firm. A brother of his had died of this disease at the age of 15. The term "idioglossia" had been used to denote the peculiar defects of speech exhibited in this patient. It was open to objection because the subjects did not speak a peculiar language of their own. They spoke English, but mispronounced letters and words. In this case the defect consisted in substitution of consonants for each other, and in substituting vowel sounds for certain consonants. (The patient was made to illustrate his mode of speech by repeating the alphabet, reciting certain nursery rhymes and singing a well-known hymn). It was shown that, whilst capable of producing all the elementary sounds of which language is composed, he used them in the wrong place, and was unaware whether or not he produced them correctly. The defect was therefore rather in his ear than in his motor vocal apparatus. He was unable to discriminate shades of difference between sounds. In favour of this view was the fact that he had hardly any ear for music. If his attention could be gained, he could be made to frame his lips and tongue in imitation of the speaker, and then he pronounced letters and words correctly. But his attention soon wandered, and his utterance became as faulty as before. Such cases were sometimes much improved by training on the oral method. Dr. Guthrie did not regard the condition as pathological, but as an exaggerated form of defective enunciation common in minor degrees. The patient's elder brother (who died of pseudo-hypertrophic paralysis) and also a younger sister had similar defects of speech, but there was no causal connection between pseudo-hypertrophic paralysis and idioglossia.

INSUFFICIENCY OF PULMONARY AND MITRAL VALVES.

Dr. MACLURE showed a girl, aged 24, who had suffered from cardiac symptoms ever since she could remember, and whose life till two years ago had been spent in various public institutions. She came under his notice 18 months ago, and remained bedridden till last March, when she had an attack

of mania, since which time her general health had much improved. Her present condition was as follows: A to-and-fro murmur could be heard loudest in the pulmonary area, and conducted downwards to the left of the sternum; apex beat in fifth intercostal space in nipple line; presystolic thrill at apex with other evidence of double mitral disease. The absence of Corrigan's pulse, capillary pulsation, and of much hypertrophy and dilatation of left ventricle was in favour of pulmonary rather than aortic disease, whilst the point of maximum intensity and characters of to-and-fro murmur showed some additional lesion other than mitral.

Mr. JACKSON CLARKE observed that the appearance of a swelling in the left supraclavicular region was due to a very sharp spinal curve (scoliosis) high in the dorsal region. This degree of scoliosis would be sufficient to account for some of the dyspnœa present.

HEART DISEASE.

Dr. G. A. SUTHERLAND showed a boy, aged 9 years, suffering from heart disease. His peculiar complexion and the duskiness of his hands suggested a congenital lesion. There were also definite evidences of acquired endocarditis and pericarditis. The extensive area of precardial dulness and pulsation further suggested the possibility of mediastino-pericarditis, to which support was lent by the extremely chronic character of the pericarditis.

Dr. ALEXANDER MORISON considered that, in view of the cyanosis present and the great transverse dimensions of the heart, congenital stenosis of the pulmonary arterial orifice with patent septum ventriculorum suggested itself; but further examination of the case, associated as it was with triple rhythm and chronic pericardial friction, pointed rather to mitral regurgitation with pericardial adhesion. The case exhibited by Dr. Maclure he regarded as one of mitral stenosis. He could not satisfy himself that there was any pulmonary arterial reflex.

EPIDEMIOLOGICAL SOCIETY.

Friday, May 20th, 1898.

Professor J. LANE NOTTER, President, in the Chair.

ENTERIC FEVER IN NORWICH.

DR. H. COOPER PATTIN read a paper on enteric fever in Norwich. The city, he said, was situated on the chalk, which was there about 1,000 ft. in depth, and, where it did not come to the surface, was thinly covered by loose drift gravel. The water supply was in the hands of a company, who drew from the river Wensum, which rose on a plateau nearly thirty miles distant, flowing through a purely agricultural district. The intake of one and a-half million gallons daily was about a mile above the city, the nearest source of serious pollution being a paper mill four miles higher up the river. The arrangements for subsidence and filtration were excellent, and the water was served from covered reservoirs by gravitation at the rate of 18 gallons per head of the total population, but since one-fifth, or until recently one-fourth, of the houses obtained their supply from private wells, and very few had baths, the actual quantity available was really greater than appeared. These wells were shallow and more or less suspicious, and he had during his five years of office obtained the closure of nearly 200. The sewerage was by no means satisfactory, the old sewers being very ill laid; they were freely ventilated by gulleys and shafts, and the flow of the sewage was assisted by Shone's ejectors, but bad smells were general, especially on the escarpment of the higher ground. There was no adequate accommodation for fever patients, and secondary or successive cases in the same house were of frequent occurrence. Only a minority of the houses were provided with waterclosets, the usual form of convenience being the "bin," a combination of privy, ash, and refuse pit; or a pail closet, but there was as a rule only a single pail to each house, which was emptied by the scavenger, but rarely, if ever, cleaned. Notification of infectious diseases had been in force since 1880, but the few cases reported and the apparently high mortality during the first few years were probably to be accounted for by imperfect diagnosis of the milder forms of enteric fever. Since 1883 the cases had varied from 106 to 314, and the deaths from 19 to 36, except in 1885, in which year, with 584 cases and 92 deaths, the disease assumed the proportions of an epidemic. The average for the whole period had been 214.5 cases, with 30.5 deaths, or a mean case mortality of 14.5 per cent. Dr. Cooper Pattin then gave analyses of the age incidence, the relative overcrowding of the affected houses, the proportion supplied with the company's water and from wells, the relative incidence of disease in houses with waterclosets, pail closets, and bins respectively, proximity to sewer gulleys, the state of the yards and other domestic sanitary conditions, the occupations of the persons attacked, and the possible influence of milk, shellfish, and the conditions under which their food was kept, for the last three years. As regards age, 48 per cent. of the cases were among children under 15 years, and the persons attacked belonged almost exclusively to the working classes, but beyond the facts that while a fourth of the houses in the city were provided with waterclosets, only one-tenth of the cases occurred in such houses, and that 70 per cent. of the dwellings attacked were surrounded by soil sodden with impurities, no definite conclusions could be drawn from these figures.

Dr. PARSONS expressed his belief that the direct transmission of enteric fever from one person to another was more frequent in the overcrowded dwellings of the poor than was commonly supposed, and remarked that the case mortality was to a great extent dependent on accuracy of diagnosis, that the lesser incidence on houses with waterclosets might be due to the cleanlier habits of the occupants in other respects, and that milk outbreaks were often so limited and local as not to affect the general prevalence of the disease, or to be recognised except in spot maps.

Dr. CHILDS asked if Pettenkofer's ground-water theory had been worked out in Norwich.

Drs. BULSTRODE and DUDFIELD criticised the statistics, as did Dr. WILLOUGHBY, who pointed out the fallacies consequent on the relations between the incidence of the disease and the several factors considered having been calculated on the affected houses only instead of on the total numbers in the city. He also called attention to the probability under the conditions described of the contamination of wells at considerable distances from the sources of pollution.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

JAMES CARMICHAEL, M.D., F.R.C.P.E., Vice-President, in the Chair.

Wednesday, May 18th, 1898.

CASES, SPECIMENS, ETC.

SIR T. GRAINGER STEWART showed a case of peculiar Nervous Affection presenting some analogy to Thomsen's Disease.—Mr. ALEXIS THOMSON showed a case of Depressed Fracture of the Skull with very localised cortical symptoms.—Dr. ALEXANDER JAMES showed a patient with Double Aortic Disease. He exhibited tracings from this case, and advanced a theory as to the causation of the predicrotic wave manifest.—Dr. GEO. ELDER showed a case of Congenital Absence of the Radius and Thumb, with a Skiagraph of the Limb; also a case of Rheumatoid Arthritis in a girl.—Dr. AFFLECK showed two cases of Tuberculous Peritonitis after surgical treatment.—Mr. CATHCART showed a patient after Excision of Intussuscepted Bowel, and a patient after operation for Ruptured Tubal Pregnancy.—Dr. G. A. GIBSON showed a case of Pseudo-Tabes Syphilitica, and a case of Tricuspid and Mitral Obstruction and Incompetence.—Dr. JAMES CARMICHAEL showed a case of Pseudo-hypertrophic Paralysis, and a photograph of another similar case.—Dr. DAWSON TURNER exhibited Stereoscopic Roentgen Photographs, and showed an experiment relating to Subjective Colour Phenomena.—Dr. GRAHAM BROWN (for Dr. MCGILLIVRAY) showed a Uterus with Fibroids from a case of Abdominal Hysterectomy, and a Cystic Tumour of the Breast removed from a boy of 5.—Mr. CATHCART showed a specimen of Multiple Gastric Ulcer.—Dr. G. A. GIBSON showed a Drawing of a case of Addison's Disease, a large Gall Stone removed from a patient by Mr. Caird, and a Skiagraph of a case of Inversion of the Viscera.—Dr. R. A. FLEMING showed specimens of Suprarenal Changes from a case of Addison's Disease.

Wednesday, June 1st, 1898.

JAMES CARMICHAEL, M.D., F.R.C.P.E., Vice-President, in the Chair.

PATIENTS.

DR. ALEXANDER BRUCE showed (1) a case of Achondroplasia, with cast and photographs. The patient was a highly-intelligent man who had been a schoolmaster; and (2) a case of Congenital Displacement Upwards of the Scapula, and where the clavicle was throughout its entire course curved concavely outwards.—Dr. NORMAN WALKER showed (1) a case of Lichen Scrophulosorum; and (2) a case which at first sight resembled Alopecia Areata, but which was not this ailment. The edges were elevated and slightly inflamed. The condition had been described by two or three dermatologists.

SPECIMENS.

Dr. ALEXANDER BRUCE showed: (1) An Aneurysm of the Anterior Communicating Artery, with Rupture into the Lateral Ventricles of the Brain. (2) An Aneurysm of a Small Branch of the Internal Carotid, which had pressed on the third nerve and led to a subdural hæmorrhage. (3) A very unique specimen of an Encysted Subdural Hæmorrhage of large size. (4) Microscopic sections from (*a*) a case of *Diabète Bronzé*; (*b*) Arterial Sclerosis in Basal Ganglia as a source of Cerebral Hæmorrhage; (*c*) Arterial Sclerosis and Miliary Aneurysm in Medulla.—Dr NORMAN WALKER showed microscopic sections of Lupus Erythematosus and of Acne.—Dr. HARVEY LITTLEJOHN showed: (1) Infarction of the Left Coronary Artery. (2) Specimen from Suicidal Cut-throat, which showed some of the traditional signs of a homicidal wound. (3) Interstitial Extrauterine Pregnancy. (4) Two further specimens of Cut-throat.

SUBACUTE AND CHRONIC RHEUMATIC MYOSITIS.

Mr. A. G. MILLER pointed out that myositis might be, and perhaps not infrequently was, mistaken for articular rheumatism, especially in cases in which the affected muscle covered a joint—as in the case of the deltoid. He described his own experiences as a sufferer from rheumatic myositis of the deltoid. In regard to diagnosis, he directed attention to the following points: (1) The pain was in the muscle itself, which could be made out by careful palpation; (2) all movement of the limb did not hurt, only voluntary contraction of the muscle affected and those movements that stretched it. In regard to treatment, he thought that internal remedies were of little use. The myositis subsided of itself in a few days. Locally he considered dry heat the best application for relieving the pain. Mr. Miller then referred to chronic myositis with stiffness, the result of muscular contraction and atrophy. This condition, he considered, was mistaken for adhesions the result of synovitis. The ankylosis was more apparent than real, being the result of muscular fixation of the limb—partly voluntary and partly involuntary—to prevent painful movements of the limb. The treatment consisted in exercise of the limb, both passive and voluntary, the latter being the more important. Mr. Miller mentioned how his own left shoulder had become almost completely ankylosed from contractions, the result of rheumatic myositis. By constant exercise of the arm in all directions—especially those which were painful—he gradually recovered the complete use of the limb. At the same time he had the shoulder massaged by his friend, Dr. J. H. A. Laing. Mr. Miller referred to the well-known susceptibility of rheumatic persons to barometric changes, and especially to the curious fact that pain came on before rain or change of weather. He pointed out that the ordinary explanations of this fact would not apply to all circumstances. He ventured a suggestion that there was a combination of cold and damp before rain. He had noticed frequently that the air became chilly before a shower, and he had been told by his friend, Mr. W. S. Bruce, the naturalist, that the atmosphere might be more saturated before a shower than when the rain was actually falling. Mr. Miller said a word for the use of cimicifuga in muscular rheumatism. He had seen a single full dose (3j) relieve lumbago and pleurodynia. He did not say it would cure rheumatism. He did not believe that any drug could in the sense of removing the rheumatic conditions of susceptibility to cold, damp, and weather changes. He did not think that diet had much influence on rheumatism. He thought that those who were benefited by dieting were most likely gouty.

Drs. JOSEPH BELL and WILLIAM CRAIG and the VICE-PRESIDENT spoke; and Mr. MILLER replied.

THE CHOICE OF OPERATIONS IN SENILE ENLARGEMENT OF THE PROSTATE.

Mr. ALEXIS THOMSON said that the class of case in which operative interference was indicated was that in which catheter life was failing or had failed, and in which there was the development of the well-known complications of prostatic enlargement. Such patients were in a critical condition, and although the crisis might be tided over by what might be conveniently described as medical treatment, along with skilful catheterisation and it might be the tying in of a catheter, such crises tended to recur with increased gravity and to carry off the patient ultimately with the phenomena of renal or general septic infection. Drainage of the bladder from the perineum or above the pubes was indicated in advanced septic cases; a permanent suprapubic fistula was not, however, an ideal condition of affairs, and the necessary apparatus might be a source of difficulty. Destruction or division of the obstructing parasitic tissue by the galvano-cautery, which had yielded excellent results in the hands of Bottini and others, was but little practised in this country. Suprapubic prostatectomy was regarded as the ideal operation in suitable cases—for example, those in which the prostate projected into the bladder and in which there was no pronounced sepsis. An illustrative case was cited in which Mr. Thomson had removed a pedunculated middle lobe nearly three years ago with complete and permanent recovery of the bladder functions. There still remained a number of cases which did not lend themselves to the preceding methods, and in which very good results might be obtained by double castration. Mr. Thomson cited 4 cases from his own practice in which he had removed both testicles. In 3 of these the operation had been done more than two years ago, and the patients had been under observation ever since. All of them were in a critical condition from failure of catheter life or from complications. The results were not ideal, but were uniformly good. The prostatic disease had been robbed of its progressive and dangerous tendencies. The catheter had either been dispensed with since the operation or become only an easy and occasional adjunct. The contractile power of the bladder had improved. Complications had disappeared. The general health had improved. No mental symptoms had been observed. Vasectomy had been practised only in 1 case by Mr. Thomson. From the experience of others Mr. Thomson was inclined to discard it in favour of castration, because it was less rapid and less certain in its results. Angio-neurectomy of the cord, as practised by Albarran and Motz, gave promise of being superior to vasectomy, but had not yet been sufficiently tested.

Messrs. JOSEPH BELL, A. G. MILLER, COTTERILL, SHAW MCLAREN, and DAVID WALLACE took part in the discussion; and Mr. ALEXIS THOMSON replied.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY. — At the clinical meeting on June 3rd, Dr. H. P. POTTER in the chair, the PRESIDENT showed a woman on whom he had performed Double Arthrectomy of the Knee-joint for Tuberculous Disease. The first operation was undertaken in June, 1897, and the second in February of this year. At both operations he had considerable difficulty in cutting away the whole of the synovial disease, but the result on each side was eminently satisfactory, for the patient showed no evidence whatever of any relapse, and, moreover, had perfect movement in both joints. Mr. MCADAM ECCLES remarked how uncertain it was that a really movable joint could be obtained after these operations. Mr. KEETLEY said that although all the disease might not be removed, yet a surgeon must not despair of an ultimately successful result. Mr. EDWARDS asked whether the operation occupied much time in its performance. Dr. ATKINSON made some remarks as to the great success of the case, and the PRESIDENT replied.—Mr. KEETLEY brought forward a case of Extensive Suppuration and Sloughing over the Front of the Knee-joint in a woman, in which he had performed a most satisfactory plastic operation. The

PRESIDENT made a few remarks.—Mr. MCADAM ECCLES exhibited two cases of Testicular Disease. The first was that of a man, aged 58, who at the age of 13 was struck on the right testis by a cricket ball, Much swelling and pain resulted, and there had remained a densely hard tumour ever since. Mr. Eccles thought that it was probably an instance of calcification of the old hæmatocele. Mr. KEETLEY admitted that the case was one of considerable difficulty in diagnosis, but suggested that its real nature might be that of an enchondroma of the testis. Mr. EDWARDS thought that the disease was wholly in the epididymis, and that this was become calcified as the result of chronic inflammation. Mr. PARDOE inquired the condition of the prostate on the side of the testicular swelling.—Mr. ECCLES then showed his second case, a young man who had one year ago an attack of gonorrhœa, but at this time there was no enlargement of the testis. About two months back he had noticed that the left testis was enlarging. He now presented a hard and enlarged globus minor, with a vas greatly thickened as high up as it could be felt. Mr. Eccles was of the opinion that the case was one of tuberculous infection of the epididymis. Mr. KEETLEY inclined to the belief that it was chronic epididymitis, the outcome of the urethral inflammation. Mr. EDWARDS, however, was in favour of tubercle. Dr. ATKINSON thought the case had most of the signs of inflammation the result of urethritis.—Mr. SWINFORD EDWARDS showed a Renal Calculus, weighing nearly 2 ounces, removed by operation from a boy. The stone had been successfully located by means of the *x* rays, by Dr. F. H. LOWE, who made some remarks on the procedure used in the case. Mr. PARDOE congratulated the skiagrapher and the operator on their success.—Mr. EDWARDS also brought forward a case of the Transsacral Method of Excision of the Rectum in a man, aged 67. This was his seventeenth case of the kind, with only two deaths.—Dr. ABRAHAM exhibited a case of Traumatic Dermatitis in a man who had had a Pott's fracture, for which plaster-of-paris had been applied, and had caused some slight sores. These, however, had been treated by some rather strong ointment, with the result that there was now an extensive superficial ulceration of the leg, almost as high as the knee.

LARYNGOLOGICAL SOCIETY OF LONDON.—At a meeting on May 11th, Mr. H. T. BUTLIN, President, in the chair, Mr. H. BETHAM ROBINSON showed: (1) A Case of Carcinoma of Larynx subsequent to Laryngeal Tuberculosis in a single woman aged 36; on microscopical examination the growth proved to be a non-cornifying epithelioma, such as might arise from the glands of the laryngeal ventricle; (2) A Case of Almost Fixed Cords from Syphilis simulating Bilateral Abductor Paralysis in a married woman aged 50.—Mr. CRESSWELL BABER showed the latest form of instrument of Kirstein's Autoscope.—Dr. PEGLER showed a Case of Malignant Disease of the Laryngo-œsophageal Region in a married woman aged 37.—Dr. DUNDAS GRANT showed: (1) A Case of Recurrent Multiple Papillomata of the Larynx in a girl aged 20; (2) Nodal Agmination of Secretion on the Vocal Cords of a Singer, (?) Incipient Nodules, in a female student of singing aged 21; (3) a Case of Sigmatic Dyslalia in a woman aged 30.—Dr. SHARMAN showed a Case of Sessile Papilloma of the Left Tonsil associated with Pedunculated Papilloma of the Left Posterior Faucial Pillar in a boy of 15.—Mr. ATWOOD THORNE showed for Dr. HILL a man aged 38 with Laryngeal Paralysis (previously shown at the March meeting) who had recently had several Epileptiform and Vertiginous Attacks associated with Laryngeal Spasm and Irritation.—Dr. EDWARD LAW showed a Case of Pharyngo-mycosis.—Mr. SYMONDS showed: (1) a Case of Syphilitic Ulceration with Perichondritis of the Larynx in a man aged 35; (2) a Case of Sessile Fibroma of the Vocal Cord.—Mr. MORLEY AGAR showed a Case of Frontal Sinus disease in a man aged 27.—Mr. R. LAKE showed a Section of Tuberculous Epiglottis removed by the Galvano-cautery Snare.—Mr. LAURENCE showed for Mr. BUTLIN a Case of Subglottic Swelling in a woman aged 55. Mr. SPENCER said it was a case of malignant disease, and that some glands in the neck were becoming infected. Sir FELIX SEMON and the PRESIDENT said that they could not convince themselves of a tumour being present, and thought that possibly some chronic perichondritis with chronic laryngeal inflammation would account for the appearances. Iodide of potassium and Leiter's coil were recommended.—Dr. BENNETT showed a Case of Paresis of the Right Divergents of the Larynx in a man aged 45.

MANCHESTER THERAPEUTICAL SOCIETY.—The fifth meeting for the session 1897-98 was held at the Owens College on May 25th, 1898, Dr. J. DIXON MANN presiding.—Dr. DRESCHFELD read a paper on Diuretin. He said that he had employed diuretin in many cases during the past eight years, and he considered it a valuable remedial agent. He had found it act well in acute Bright's disease, especially in cases in which the urine was scanty. He had frequently seen the urine increase in amount from 12 or 15 ounces to 80 or 100 ounces in the 24 hours. In post-scarlatinal nephritis the drug did not seem to give such good results. In chronic parenchymatous nephritis he had found it act when digitalis and other drugs had not succeeded, but the effects were only temporary. There was no definite reduction of the amount of albumen. On the other hand, there was no evidence of irritating action. In interstitial nephritis the results had been disappointing, and in these cases toxic effects were more liable to occur. As regarded its use in heart disease, Dr. Dreschfeld had found diuretin of great value in cases of mitral disease, especially when the dropsical symptoms had come on suddenly. In aortic disease the results had not been so satisfactory; there was no relief to the anginal symptoms, no great diuresis, and the drug was not always well borne. In simple dilatation without valvular lesion when digitalis had failed diuretin had some times succeeded. In cirrhosis of the liver the effects of diuretin were sometimes startling. He had seen diuresis amounting to 4 or 5 quarts of urine in the 24 hours. The cases which seemed to respond best to diuretin were those in which dropsy had developed suddenly. In older people with ascites coming on gradually diuretin had failed. In two cases of pleuritic effusion Dr. Dreschfeld had observed rapid recovery under the use of diuretin, but in other cases no marked effect was observed. In cases of peritonitis no relief had been obtained; he had not tried it in pericarditis, and did not think it likely to be of much use. Dr. Dreschfeld considered diuretin to be a useful and powerful diuretic, acting probably on the epithelium of the convoluted tubules of the kidney. He gave 10 to 12-grain doses three times a day at first, increasing to 30-grain doses if necessary. As regarded its ill-effects sometimes diuretin was not well borne, producing nausea, vomiting, and occasionally signs of collapse; often when diuretin alone did not answer well it succeeded when combined with digitalis. The SECRETARY, on behalf of Dr. STEELL, showed a series of charts illustrating the diuretic effects of diuretin in cases of aortic disease, mitral disease, functional heart disease, cirrhosis of the liver, and pleurisy. One of the charts showed a marked diuretic effect obtained three times in succession in the same patient. Dr. Steell gave diuretin in 2-gr. doses every hour, day and night. In 2 cases of Bright's disease he had observed hæmaturia following the use of diuretin, and he had not employed the drug in such cases since. Dr. MANN had observed similar results to those described by Dr. Dreschfeld. In heart cases he had found diuretin very successful. He had had no good results in cases of large white kidney. In cirrhosis of the liver he had observed little result, perhaps because they were cases of more gradual onset. He had found theobromine alone very useful, and suggested that theobromine in some soluble form might be more advantageous than diuretin, which was sometimes depressing owing to the salicylate of sodium it contained. Dr. WILD and Dr. COUTTS also took part in the discussion.—Dr. WILD made a preliminary communication upon the constitution and pharmacological action of a new synthetic compound, Glucophenine, in which the phenetidin molecule was combined with a glucose molecule. The product was a crystalline solid, soluble in water and almost tasteless. The drug showed a remarkable absence of toxic effect, and there was already some evidence of a therapeutic value in certain cases.

WIGAN MEDICAL SOCIETY.—At a meeting on April 5th the PRESIDENT (Mr. Berry) read his opening address on the Sanitary Progress in Wigan During the Last Thirty Years. In moving a vote of thanks to the President for his address

Mr. WM. MITCHELL ROOCROFT said that it was advisable for each sanitary authority to have a bacteriological assistant in its public health department. This met with the approval of the members present. The following cases were exhibited by members of the staff of the infirmary: (1) Fracture of the Patella; (2) Double Inguinal Hernia, radical cure; (3) Lumbar Colotomy for Cancer of Rectum; (4) Compound Fracture, Excision of Malleoli; (5) Severe Lacerated Wound of Arm; (6) Resection of Inferior Maxilla; (7) Talipes Equino-Varus.—A meeting was held on June 2nd, Mr. BERRY (President) in the chair. There was a good attendance of members. Dr. CHARLES MACALISTER (Liverpool) delivered an address on Osteo-arthritis, illustrated by lantern demonstrations of the disease and of radiographs taken from interesting cases which came out well on the screen. The lecture was much appreciated and a discussion followed, Drs. R. PROSSER WHITE, BLAIR, and BENSON taking part in it. A hearty vote of thanks was accorded to Dr. MACALISTER on the proposition of Mr. GRAHAM seconded by Mr. BRADY.

REVIEWS.

DIE ZUCKERKRANKHEIT UND IHRE BEHANDLUNG. [Diabetes and its Treatment.] Von Professor Dr. CARL VON NOORDEN, Oberarzt am städtischen Krankhenhaus in Frankfort a. M. Zweite vermehrte und umgearbeitete Auflage. Berlin: August Hirschwald. 1898. (Demy 8vo, pp. 276. M. 6.)

DIE DIAETETISCHE BEHANDLUNG DER ZUCKERKRANKHEIT. [The Dietetic Treatment of Diabetes.] Von D. KARL GRUBE, Arzt in Bad-Neuenahr. Bonn. 1898.

DIABETES MELLITUS AND ITS TREATMENT. By R. T. WILLIAMSON, M.D.Lond., M.R.C.P., Medical Registrar, Manchester Royal Infirmary. Edinburgh and London: Young J. Pentland. 1898. (Demy 8vo, pp. 434. 12s. 6d.)

WESEN, URSACHE UND BEHANDLUNG DER ZUCKERKRANKHEIT (DIABETES MELLITUS). [The Nature, Cause and Treatment of Diabetes Mellitus.] Von Dr. ALBERT LENNÉ, in Bad-Neuenahr. Berlin: S. Karger. Glasgow: F. Bauermeister. 1898. (Demy 8vo, pp. 156. 3s. 9d.)

PROFESSOR VON NOORDEN'S views upon diabetes are best known to English and American readers by his brilliant article in the *XXth Century Practice of Medicine*. He is an advocate for the theory that diabetes is caused by diminished sugar destruction within the body, and he has contributed powerfully to the support of that doctrine by his own researches on metabolism. He admits, however, that glycosuria (following traumatism, for example) is caused by a sudden discharge of the glycogen stored in the liver, and that in diabetes there is permanent incompetence of the glycogen reservoirs, so that all the sugar formed in digestion passes into the circulation, and that the diabetic organism has actually more sugar to deal with, even if no more is excreted than can be accounted for by the carbo-hydrate ingesta *plus* the sugar split off in the formation of urea from the food albumen.

Although Bouchard has recently demonstrated to his own satisfaction that the sugar excreted in diabetes is no more than can be accounted for by the food, yet the question cannot be regarded as settled. Many physiologists still hold that (1) the formation of sugar by the liver is increased; (2) that arterial and venous blood show the same variation in the amount of sugar in diabetes as in health; (3) that the CO_2 excreted is the same in diabetes as in health. Von Noorden accepts all that modern pathological and physiological researches have contributed to our knowledge of the importance of the pancreas in relation to diabetes, but regards it as certain that only part of the cases which we group clinically as diabetes depend upon pancreatic disease, and that in the absence of special symptoms, for example, pancreatic tumour, colic referable to the pancreas, maltosuria (?), steatorrhœa, azotorrhœa (an excessive quantity of nitrogenous matter in the fæces), pancreatic diabetes cannot be diagnosed. In the treatment of diabetes he divides his cases into three instead of following the usual practice of making two groups, and he has three diet tables to correspond to his groups of mild, medium, and severe diabetes, but he follows the general principle of abstinence from carbo-hydrates, except in so far as experience shows that the patient can tolerate them, while the details of his dietaries are more suited to German than to English patients. He strongly advocates the plan of treating diabetes for a time in a private (or public) hospital where the patients' dietary can be studied and regulated accurately. He begins always with strict diet and adds carbo-hydrates gradually. He attaches due importance to general hygienic measures, fresh air, moderate exercise, baths, massage, etc.

Dr. GRUBE'S little book deals only with the dietary of diabetes, and is chiefly valuable for the tables showing the carbo-hydrate value of most articles of food and drink and for a number of recipes for diabetic cookery.

The handsome volume which Dr. WILLIAMSON has produced contains a good account of diabetes and the various problems which are grouped around it. He flounders as well as he can through the immense morass of physiological and experimental data with which the subject is surrounded, and leaves us on the whole with the impression that he sides with Dr. Pavy as well as with those who regard diabetes as due to diminished destruction of sugar, although it would seem that they do not occupy common ground, and that if the absence of glycosuria in acute yellow atrophy of the liver is a good argument against those who regard the liver as occupied in storing up and keeping back sugar from the circulation as glycogen, it is equally valid against those who regard this organ as a "line of defence" capable of turning sugar into fat, etc.

The chief points in the book are the author's own observations: (1) Upon the action of diabetic blood upon methylene blue, which it seems to be tolerably certain is due to the presence of sugar; (2) upon the appearance resembling sclerosis of the posterior columns of the spinal cord in portions of cord preserved in Müller's fluid, but which under the microscope does not prove to be due to sclerosis; and (3) the constant presence of granular casts in great numbers in the urine of patients suffering from or about to suffer from diabetic coma. Kulz long ago drew attention to the occurrence of casts in the urine in this condition, but the author states that their appearance is constant. He says: "In all of the fifteen cases (of diabetic coma) there was a small, opaque, white or yellowish-white deposit exactly at the bottom of the urine glass. Microscopically, this deposit consisted of enormous numbers of casts and a few epithelial cells." He discusses the diagnosis of diabetic coma at some length, although there is rarely any difficulty about it, but he ignores the fact repeatedly reported that Kussmaul's type of coma is seen in non-diabetic persons.

His treatment follows the ordinary lines, but he prefers to begin with some carbo-hydrates, and gradually to diminish them, a plan which is not the best to follow as a general rule. It depresses and wearies the patient to have less and less to eat each week, whereas it cheers and encourages him when, after abstinence for a time, he is allowed some of the things for which he has a strong craving. It is not only more easy to manage the patient in this latter way, but we are also able much more quickly to measure the extent of the disease, and to form our prognosis. The book is very well written, and is evidently the outcome of honest clinical and pathological work.

Dr. LENNÉ'S book probably does not claim to rank as more than a clear exposition of the author's own opinions, founded upon a considerable experience as physician at a spa frequented largely by diabetic patients. He accepts von Noorden's doctrines, and his own observations are most interesting under the heading of treatment. For the prophylaxis of coma he suggests that one to two litres of normal salt solution should be infused under the skin (hypodermoclysm) from time to time, but he does not say that he has practised this method. Of greater value are his well-timed remarks on the futility and danger of routine treatment, for, as he well says, if this were not so, any diabetic who has read a book on diabetes, or has been through a course of treatment at Carlsbad or Neuenahr, could treat diabetes. This remark holds good especially as regards diet, and

although he lays down a very stringent rule that the main object of the physician is under all circumstances to get rid of the sugar from the urine, he qualifies this by allowing that the body weight must not be reduced by treatment. This dictum is hardly well enough formulated to be worthy of spaced type (the German equivalent for italics), as in some obese diabetics a reduction of weight might be regarded with favour. No one who has a number of diabetics under his charge can be blind to the need for adjusting his treatment to their individual requirements, and he is quick to perceive the differences in cases and their peculiarities. Dr. Lenné speaks without much respect for drugs, but is orthodox in regarding opium and alkalies as the most valuable, although he does not turn to them until he has effected all that is possible by diet. He expresses himself very guardedly upon prognosis, for while admitting that the disease may disappear and that there are relatively mild cases, he remarks with truth that as a rule a diabetic remains a diabetic, requiring to order his life carefully, and that mild cases may become severe or terminate rapidly by one of the fatal accidents of the disease.

A Manual of Surgery for Students and Practitioners. By William Rose, M.B., B.S.Lond., F.R.C.S., Professor of Clinical Surgery in King's College, London, and Senior Surgeon to King's College Hospital, etc.; and Albert Carless, M.S.Lond., F.R.C.S., Senior Assistant Surgeon to King's College Hospital, and Teacher of Operative Surgery in King's College, London, etc. University Series. London: Baillière, Tindall, and Cox. 1898. (Demy 8vo, pp. 1162, 392 illustrations. 21s.)

There are good grounds for offering a hearty welcome to this volume. The association in its authorship of much practical experience with a wide knowledge of recent surgical progress both at home and abroad tends to ensure for such endeavour almost complete success. A work of this scope, we hold, is much needed at the present day. Certainly surgeons have at their disposal a long list of English textbooks, but such as are intended to meet at the same time the stringent demands of actual practice and the no less stringent requirements of the examiner are few in number and not altogether sufficient for this double purpose. As, in accordance with the recent vast and almost revolutionary changes in both the science and practice of surgery, it has been found necessary to supply to the teacher and advanced surgeon new works of the dictionary type, so for the student and general practitioner an exposition of surgical facts in a compressed and less cumbersome form is needed.

The authors have endeavoured with some success to overcome the main and almost insuperable difficulty in the preparation of a work of this kind. They have compressed into a small space the immense amount of material with which they had to deal, and so have attained the important object of presenting a comprehensive treatise in a single volume of convenient form and size. The manner in which this has been done, however, is not free from disadvantage. We find in far too many places that the large and clear type in which most pages are printed is replaced by one that is small and rather difficult to follow. Moreover this alteration seems to have been made here and there in a somewhat capricious manner, for some subjects certainly of much interest and importance—the surgery of the cranium and its contents, for instance—are set forth exclusively in the smaller type. Historical and bibliographical references have to a large extent been omitted, and diseases of special regions, such as the eye, ear, and female genital organs, have also been practically excluded. It would have been well, too, we think, if much of the space devoted to operative surgery had been used in some other way, as a full knowledge of this subject can readily be obtained from many excellent manuals on this branch of surgical work.

A careful perusal of this volume will, we believe, convince even the most critical of readers that Professor Rose and Mr. Carless may be congratulated on having supplied a thoroughly comprehensive work on modern surgery; one ably arranged and clearly written, and omitting no subject or detail on which either student or practitioner might turn to its pages for instruction, with the exception—probably a single one—of brain surgery, which we hold to be inadequately dealt with. Each branch of surgical work has been discussed at due length with regard to its relative importance, and even where an author on the score of original work might justly have claimed more than ordinary attention, as, for instance, on the subject of the operative treatment of facial neuralgia, somewhat more than the usual degree of compression has been exercised. The book is thoroughly modern, and gives in succinct form, yet clearly and fully, the results of the best and most recent surgical work in this and other countries. Although endeavour has been made to preserve the results of the good and useful work of bygone generations, almost every page affords an indication of the dependence of modern surgery, both in its scientific and in its therapeutical aspects, on bacteriological research and on the work of Lord Lister, to whom, as the "Father of Antiseptic Surgery," this volume is appropriately dedicated.

The book contains many illustrations of varying quality. Among those specially prepared for the authors are some very useful diagrams. The laborious work of preparing a good and complete index to a work containing so much compressed matter has been well performed by Mr. William Turner. With regard, however, to this useful and indispensable section of the work, we are tempted to suggest that it would be advisable in future editions to distinguish in some way between references to the main subject, and those to its incidental relations with other diseases.

Ethnological Studies among the N. W. Central Queensland Aborigines. By Walter E. Roth, B.A.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., etc. Brisbane: By authority, E. Gregory. London: Queensland Agent-General's Office. 1897. (Royal 8vo, pp. 246, with map and 438 illustrations).

This is an extremely valuable, though hardly what Charles Lamb called a readable book. The author found himself in the somewhat leisurely position of surgeon to the hospital at Boulia, near the Upper Georgina River, in Western Queensland, where the aborigines are still pretty numerous; and, fortunately for ethnological science, he made use of his enforced leisure in studying first the language and thereafter the customs and domestic life of the "blackfellows." We have the results in this volume, which, though by no means thick, contains a large amount of clear though rather small print, with numerous tables, a copious index, a map, and 23 pages of plates, of which 9 are devoted to the elucidation of the sign language of these people. These, with the chapter of letterpress appertaining, constitute not the least valuable portion of the book. It was known, in a general way, that the blackfellows could and did to a certain extent communicate by signs; but Dr. Roth made this discovery independently, and having done so, with characteristic perseverance worked out the subject thoroughly. The ideagrams in use strike one as being mostly well chosen and easy to be understood, though very few of them resemble signs of corresponding import among ourselves.

The book contains also a grammar and vocabulary of the speech of the Pitta-pitta tribe, a comparison with other dialects, a pretty complete sociology of the people, and a valuable chapter on their ethno-pornography.

The pharmacopœia, apart from charms, amulets, and other witchcraft, is scanty; human blood and seminal fluid are among the materials taken by the mouth, and blood and sweat are in much esteem for external application. That the aborigines have some rudimentary idea as to the circulation of the blood would appear from their placing a ligature round the arm when they wish to draw blood, and round the leg above the wound in case of snake-bite. Scarification and sweating over moistened and heated leaves are also used in the latter case.

Cannibalism is not extinct, though now uncommon in most of the districts in question; and a young or even an old person dying suddenly and not emaciated is liable to be devoured by his friends. On the other hand, Dr. Roth knows of no case in North-west-central Queensland in which an adult male or female has been killed for the sole purpose of providing a repast.

With regard to the curious and complicated form of exogamy which with small variations seems to prevail all over Australia, and of which as practised in his own district the author gives a clear account, he is of opinion, for reasons given, that it is not based on their objection to consanguineous marriage, but on the concurrent system of assigning different kinds of food to the several exogamic and heteronymic subdivisions. At the same time, consanguineous marriages are prohibited on pain of death, even when they do not violate the heteronymic rule.

DIE UNTERSUCHUNG UNSERER WICHTIGSTEN NAHRUNGS-UND GENUSSMITTEL. [The Examination of our most Important Foodstuffs.] Von Dr. C. BEIER. Leipzig: C. G. Naumann. (Cr. 8vo, pp. 147. M.2.)

IN his preface to the work, the author states that he does not intend to give a full description of the chemical analysis of foods. His object has been to place before the general practitioner a practical rather than a theoretical treatise. He describes the manufacture of the various foods, such as beer, bread, butter, chocolate, fat, wine, flour; also methods for detecting the abnormal constituents of food when their presence has been suspected. Numerous tables are given showing the minimum and maximum percentage of proteid, fat, sugar, etc., found in foods; also an interesting table giving the composition of various classes of beers, from which we extract the figures as to specific gravity and alcoholic strength:

—	Specific Gravity.	Alcohol Per Cent.
German summer beer	1.0149	3.46
German winter beer	1.0165	3.95
German export beer	1.0180	4.31
English beer...	1.0122	5.56
English porter	1.0258	5.36
French beer	—	3.29
Belgian beer	1.0048	6.08
Swiss beer	1.0163	5.02

The various other constituents of beer are also given. The difference in alcoholic strength between German export and the ordinary German beer, and the high proportion in Belgian and Swiss beer, may tend to dispel certain delusions.

The article on meat contains analytical particulars as to the various meats, and of the diseases which their ingestion can convey to man. Bread, it is pointed out, should not be kept damp, since bacterial infection, probably a frequent cause of dyspepsia, is much more likely to occur. Artificial colouring matters employed by manufacturers, and the means for detecting them in foods, are subjects well treated in this book. In the chapter on milk Dr. BEIER argues that the specific gravity of milk should not be estimated until twelve hours after milking, since the specific gravity varies considerably if taken earlier. Tea, coffee, and chocolate are treated in the same manner as the other articles of diet. The book fulfils its object, and will no doubt prove of use.

PASTEUR (THE CENTURY SCIENCE SERIES). By PERCY FRANKLAND, Ph.D., B.Sc., F.R.S., and MRS. PERCY FRANKLAND. London: Cassell and Company. 1898. (Crown 8vo, pp. 220. 3s. 6d.)

THIS life of Pasteur for English readers, well arranged, well thought out, has surely been a labour of love. The whole book from beginning to end is careful, exact, and complete, and save for one or two involved sentences and mixed metaphors, the style and the level of it are right. The authors have made clear the magic ascent of Pasteur's work, from crystals to ferments, from ferments to micro-organisms, from silkworms to fowls, from sheep and cattle to men. They have emphasised that patriotism which was so wonderful in him; the faith that he worked for the honour and glory of France, for her salvation after the war. The sketches of his home life and of his temperament are carefully written. Among the many virtues of the book we must reckon the account of his influence on other men, those followers of Pasteur who carry forward his work over the world "*et quasi cursores vitai lampada tradunt.*"

It was high time we had such a book, and a good biography is one of the few things in this world that have no drawbacks. We congratulate Dr. and Mrs. FRANKLAND on a delightful bit of work, and we hope and believe that it will be read far and wide. We would commend it especially as a final answer to anybody who doubts the value and necessity of experiments on animals; but it has this far higher merit—that it is a good life of the greatest man of science France ever gave to the world.

STABLE SANITATION AND CONSTRUCTION. By T. E. COLEMAN, F.S.I. London: E. and F. N. Spon. 1897. (Crown 8vo, pp. 210, 183 illustrations. 7s. 6d.)

CLEAR in type and style, freely illustrated, carefully put together, this little work will commend itself to the lover of horses. There are chapters on the selection of a site and on general arrangement and construction; on ventilation (to which important subject four well-written chapters are devoted); on temperature and humidity; on the general plan of the stable. Water supply, light, paving, drainage—each has its chapter. Another is on roofs, another on doors, and another on internal wall surfaces. The author recommends on the whole lining the walls, manger-high, with wood, as "the risk of nervous or restive animals damaging themselves is minimised." The various non-absorbing bricks and tiles are dealt with, and the qualities of wood discussed. Here, as elsewhere, there is, if possible, a little too much choice and scarcely, perhaps, enough guide as to selection. The cow-house, piggery, and kennel are remembered, and the fittings of these, as well, of course, as those of the stable itself, are discussed. A chapter is devoted to cost, and another to legislative requirements as to cattle, dairies, etc.

There are a few instances of carelessness in revision. The following (p. 17) is confused: "Air containing more than 50 per cent. of carbonic-acid gas than is found in the ordinary atmosphere is impure and unfit for healthful respiration." To state (p. 29) that "it is usual to consider the value of the acceleration due to gravity as 32.2 feet per second" is an elliptical expression somewhat wanting in strict accuracy. Neither is it quite correct to say (p. 31) that "the frictional resistance varies inversely as the diameter or area of the tube or shaft." What might prove a more serious error is found on page 37, where it is stated that "the total minimum area of inlet and outlet to be provided" (for ventilation) "will amount to 80 square inches per horse." This is only half what the writer really means. Fortunately for the horses, on the next page he demands a minimum of 80 square inches for outlet, and 100 more for inlet—a "total minimum area of inlet and outlet" of 180, and not of 80 square inches. The book, however, notwithstanding these minor errors, is an excellent one on the subject. We wish the poor of our larger towns were as well and as healthily housed as the horses and cattle who are to be stalled as Mr. COLEMAN directs.

NOTES ON BOOKS.

Chirurgie du Cou. [Surgery of the Neck.] Par FÉLIX TERRIER, Professeur à la Faculté de Médecine de Paris; A. G. GUILLEMAIN, Chirurgien des Hôpitaux de Paris; et A. MALHERBE, Ancien Interne des Hôpitaux de Paris. (Paris: Félix Alcan. 1898. Crown 8vo, pp. 248, 101 illustrations. Fr.4.)—This little volume is a summary of the lectures on the surgery of the neck delivered in 1896 by Professor Terrier. Dr. Malherbe is responsible for the description of the diseases and operations affecting the larynx, while the rest of the work is attributed to Dr. Guillemain. Over the whole Professor Terrier has exercised a control. Each section is preceded by a brief historical review of the chief work which has been done in that region. Throughout the volume the work of English surgeons seems to have been almost completely ignored, and the references to German work are brief and unsatisfactory. To mention only the most glaring instances, Patrick Heron Watson's introduction of the operation of laryngectomy is not mentioned; the very important modifications of complete laryngectomy by Solis-Cohen and Ward are

not even hinted at; and the name of Horsley is not found in a fairly complete description of the diseases of the thyroid gland. Halsted's case of ligature of the first portion of the left subclavian artery is not referred to; and Phelps's operation for wry-neck receives no attention. A full measure of acknowledgment, however, is given to the French surgeons, and for us in England this is both interesting and useful. The descriptions of diseases and of operations are lucid and succinct, and the work shows admirably how much information can be conveyed in little space. There is, perhaps, a little lack of perspective: an operation such as exothyropexy has as many pages as it should have had words, while aneurysms receive somewhat scant recognition. On the whole, however, the work is worthy of its authors.

Garden Notes for the Colonies and Abroad. Second edition. (London: J. Carter and Co. 1898. Demy 4to.; pp. 50. 1s.)—This pamphlet contains much information useful to the amateur gardener dwelling in warm climates. It would seem that in many tropical countries British flowers, vegetables, and fruit can be cultivated with profit and advantage if only a little pains and care be taken and suitable methods employed. It is also plain that it only requires the civilising influence of the European to introduce to hitherto barren regions plants at once useful and decorative. The Abyssinian mountains, at present destitute of trees, could be covered with Australian gums and American pines. In Barbadoes successive crops of English vegetables and flowers, more especially in elevated situations, may be obtained at almost any season. Turnips, marrows, tomatoes, broccoli, cauliflowers, cabbage, onions, carrots, radishes, and spinach, will thrive under fair treatment. Flowers, also, such as the aster, chrysanthemum, dahlia, petunia, mignonette, begonia, gloxinia, etc., are to be well grown in these tropical islands. In India, with its wide range of climate, almost every fruit, tree, and flower native to Britain can grow and flourish. At Ootacamund, in the Nilgherries, apples and pears, and even strawberries, attain wonderful qualities, both in flavour and appearance. Not only is this the case, but it would seem that there is in many countries, more especially America, New Zealand, Australia, and the Cape, a great demand for seeds of English growth to rejuvenate the cereals that are apt to become weakly under warmer skies. Messrs. Carter's book is a practical guide; it states exactly what plants suit the different countries, and gives precise details as to the time of year best suited for striking and growing the various seeds and fruits.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL PREPARATIONS.

Byno-Phosphates.—Messrs. Allen and Hanburys, Limited, Plough Court, Lombard Street, E.C., prepare a modification of the well-known Parrish's Chemical food (syrupus ferri phosph. comp.) by replacing the syrup with bynin (liquid malt). Byno-phosphates is a solution of the phosphates of iron, lime, potash, and soda, and the matters extracted from malt. The combination of the phosphates with the nutrient and diastasic power of malt extract is a very excellent one. The preparation has a sweet, pleasant taste, and is readily taken by children.

Hydrobromate Cachets.—Messrs. Fletcher, Fletcher, and Co. have sent a specimen of their hydrobromate combinations in a dry form, enclosed in cachets. The syrup of the hydrobromates, and the hydrobromates with strychnine are preparations which Messrs. Fletcher have manufactured for many years. The drawbacks to the administration of the hydrobromates in a liquid form are the tendency of iron salts to blacken the teeth and the objectionable taste of the iron and quinine. The contents of the cachets are perfectly soluble in distilled water, forming a green solution, and giving the reactions of a ferrous or unoxidised iron compound. Each cachet contains 2 gr. of iron bromide and 1 of hydrobromate of quinine. The triple combination has in addition $\frac{1}{30}$ gr. of strychnine.

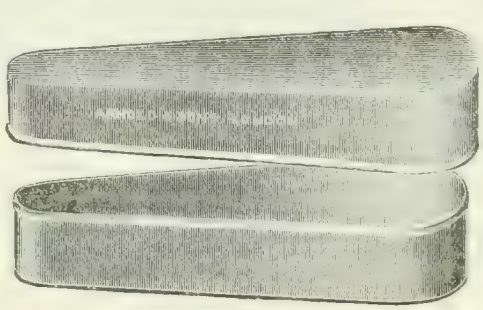
MEDICAL AND SURGICAL APPLIANCES.

Hoods for Stretchers.—The appended illustrations represent a contrivance successfully used by Surgeon-Major-General J. B. Hamilton in the enteric fever wards at Lucknow when he was in medical charge there. The illustrations explain themselves. The apparatus is a simple hood of rod iron with a cover of mosquito netting, on the principle of the ordinary



perambulator hood. It is bolted to the head of the bed and works on a hinge. The hood effectually kept off mosquitos and flies. When the patient required to be fed or attended to, it was thrown back. Surgeon-Major-General Hamilton suggests that a similar arrangement, with canvas in lieu of netting for the cover, might with great advantage be used for stretchers.

Antiseptic Trays.—Messrs. Arnold and Sons, West Smithfield, have made for Mr. T. Hope Lewis, of the Auckland Hospital, New Zealand, a dressing tray constructed of tinned copper, so that it can be easily cleaned and boiled. The trays are made in sets of three, which fit into each other, and can be used for boiling instruments. Shut up in the form of a box they serve for carrying dressings and sponges in a moist condition. Mr. Lewis finds that they can be well adapted to catch liquids at laparotomies or operations about the inguinal canals, one tray being placed between the thighs, and the other two on the outer sides. In other cases they can be used as instrument holders if half filled with antiseptic lotion.



POSTERIOR DICHOTOMY: A THREE-LEGGED BOY.

[With Plate.]

The mystery of double monsters and reduplication of the limbs, head, or lower part of the body is of such interest that many theories have been framed to account for it. It seems at least certain that all such monsters arise from a one-yelk twin ovum; in short, they are all "homologous" twins. Interference with the fœtal circulation of one twin causes it to atrophy and form a parasite of fantastic shape attached to its brother. The parasite may be represented by two or four limbs and more or less of a trunk—as in the celebrated Laloo, who lives yet. His portrait, with Dr. Khory's report on his peculiarities and our own impression of his deformity, will be found in the first volume of the British Medical Journal for 1888, page 436. Messrs. Sutton and Shattock at the same time drew up a very complete report, now published in the *Transactions of the Pathological Society*, vol. xxxix, p. 427. Since 1888 Laloo has been much heard of and still more quoted. His portrait is familiar to us, as it has been reproduced in numerous textbooks.

There is a close relation between this kind of monstrosity, in which a parasite is attached to a perfect fœtus (termed the "autosite"), and the class of monsters with double heads or reduplicated legs. Both are derived from a single ovum. But in the case of a parasitic fœtus distinct twins develop at first, whilst afterwards one brother is affected by interference with the circulation. In dichotomy, or doubling of one end of a fœtus, there are never two distinct embryos, but one end of the dorsal groove only undergoes reduplication. It is, in fact, arrest in the development of twins, not arrest in the growth of one twin after the pair have become distinct. Mr. Benjamin Thompson Lowne, in his *Catalogue of the Teratological Series in the Museum of the Royal College of Surgeons*, reminds us that the evidence which exists enables us to do little more than speculate as to the primitive cause of the doubling of the dorsal groove.

Several cases of posterior dichotomy represented by an extra leg have been reported. Mr. Ernest Hart described the celebrated Dos Santos thirty-three years ago, and nine years since Bugnion described and figured the *dame à quatre jambes*. Dos Santos had a dorsal limb, as was the case also in a female fœtus described by Mr. Bland Sutton. Dr. J. Zammit has furnished us with a similar case, which we figure from photographs.

The subject is a boy about 12 years of age, a native of Sicily. The femur of the large supernumerary limb moves freely in an apparently perfect joint situated in the sacral region of the pelvis. The leg is somewhat atrophied. Close to the knee-joint is a conspicuous tapering appendix with a bony core. It possibly represents the other (left) leg of the abnormal pair, but it will be considered further on. The whole supernumerary limb can be moved freely by its bearer, who cannot, however, use it in walking, as it is a little shorter than the normal pair. He can sit on the right femur, with the knee touching the ground. He walks but little inconvenienced by his third limb, which he keeps bent against his back, deftly screened by a picturesque Sicilian cape.

The boy himself is a well-formed male. Between his back and the attachment of the abnormal limb projects a kind of labium with a voluminous clitoris or malformed penis protruding at the upper angle. One-yelk twins are invariably of the same sex, just as they always have one common placenta. Hence the external organs must represent a very ill-developed penis and scrotum. Dr. Zammit notes that they look more like the pudenda of a female. From under the labium a tumour having the size of a small orange bulges rather prominently. Its rose-coloured surface resembles a mucous membrane and is always moist, having the appearance of an everted bladder. The rectum of the boy opens close by, but it has no sphincter. This defect causes some inconvenience, but the boy is well-nourished and very lively.

The appendage near the knee is of great interest. The attachment of the extra leg reminds us of the well-known "congenital sacral tumour" or "teratoma," allied to posterior dichotomy and parasitic fœtus. In form and size the tail-like body closely resembles the anomalous appendage attached to a sacral tumour in a case described by Mr. Edmund Owen, and figured in the same volume of the *Transactions of the Pathological Society*, which includes the full report of Laloo above noted. Our readers specially interested in teratology should compare the engraving[1] with the appendage near the knee in the drawing which accompanies these notes. It would not be safe to assume positively that the tail-like appendage in Dr. Zammit's case represents the fellow to the abnormal leg, yet it may be so. The homologies of the appendage so like it in Mr. Owen's case were also obscure.

Had the child at its birth presented at the breech, the midwife or obstetrician would undoubtedly have been puzzled. Congenital sacral tumour may give trouble in vertex presentations. Thus, Westerschulte[2] relates a case where a midwife delivered a child as far as its waist, but the presence of a sacral tumour arrested complete delivery, which was not effected till after firm traction maintained for a quarter of an hour. On the other hand, a supernumerary leg is not likely to impede delivery after the birth of the head. Leon[3] speaks of a case of sacral tumour in a girl aged 3, which contained cranial elements and a tongue, eyelids, and teeth. This, however, was rather parasitism than dichotomy; we mention it because, as in the case of the supernumerary leg, its attachment was sacral.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Annual Meeting.

The annual meeting of the Royal College of Surgeons in Ireland was held on Saturday, June 4th, Sir William Thomson, President, in the chair. The report showed an increase of income amounting to £548 7s. 5d.; 14 Fellows, 39 Licentiates in Surgery under the Conjoint Scheme, 9 Licentiates in Dental Surgery, and 8 Diplomates in Public Health were admitted during the year; 12 Fellows and 47 Licentiates died during the same period. The last instalment of the debt due by the general fund under the amalgamation scheme having been paid off, the Professors have again assumed control of the school finances. A new theatre for the teaching of experimental and natural science has been constructed and fitted. The report was adopted.

Election of President, Vice-President, and Council.

On Monday, June 6th, the election of the new officers was held in the College. The outgoing President, Sir William Thomson, was succeeded by Mr. Robt. Lafayette Swan, the Vice-President, and Surgeon to Steevens's Hospital.

For the vice-presidency there were two candidates, Dr. Ball, Regius Professor of Surgery in the University of Dublin, and Dr. Myles, Surgeon to the Richmond Hospital. The contest has been in progress for many months, and it was generally believed that the finish would be very close. Naturally the keenest interest prevailed; 267 Fellows voted, and after allowing for spoiled votes the poll closed as follows: Myles, 133; Ball, 127. On the Council there were three vacancies, and one member (Mr. Murray) lost his seat. The new members are Messrs. Croly, Chance, Cranny, and Sherlock. The following is a full list of the officers elected:

President: Robert Lafayette Swan. *Vice-President:* Thomas Myles. *Secretary:* Sir Charles A. Cameron. *Council:* Archibald H. Jacob, Edward Hallaran Bennett, Henry Gray Croly, Sir Philip Crampton Smyly, Sir William Stokes, Henry Rosborough Swanzy, William Ireland Wheeler, Sir William Thomson, Austin Meldon, Sir Charles A. Cameron, L. Hepenstal-Ormsby, Richard D. Purefoy, John J. Cranny, Henry Gregg Sherlock, Henry Fitzgibbon, Arthur Henry Benson, Francis T. Heuston, John Lentaigne, and Arthur Chance.

New Candidates.

For the next vice-presidency (1900) two candidates have already declared themselves—Mr. Francis T. Heuston, Surgeon to the Adelaide Hospital; and Mr. L. Hepenstal-Ormsby, Surgeon to the Meath Hospital.

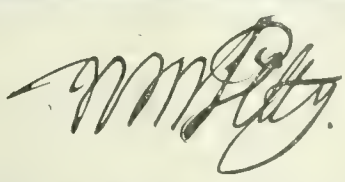
[1] *Loc. cit.*, Plate XXXVI, Fig. 1.
[2] Epitome of the British Medical Journal, July-December, 1891, p. 132
[3] Epitome of the British Medical Journal, January-June, 1892, p. 99.

LORD LANSDOWNE'S MEDICAL ANCESTOR.

SIR WILLIAM PETTY, M.D., F.R.S.

IT is an interesting circumstance that Lord Lansdowne, whose name will henceforth be associated in the mind of the medical profession with a great reform in the medical service of the army, numbers among his ancestors a distinguished man who was not only a doctor, but a medical officer of the army. The Earls of Kerry can be traced to a remote antiquity, but the higher fortunes of the family date from the marriage of Thomas Fitzmaurice with Anne Petty, daughter of Sir William Petty, Doctor in Physic of the University of Oxford, and Physician-General to the Army of the Commonwealth in Ireland. The grandson of Anne Petty's husband acknowledged the benefits of this infusion with their ancient race of what Georges Sand would have called *du bon sang plébéien* when he wrote of his noble ancestor as having "married luckily for me and mine a very ugly woman, who brought into the family whatever degree of sense may have appeared in it, or whatever wealth is likely to remain in it." The life of Sir William Petty has been ably written by another descendant, Lord Edmond Fitzmaurice, on whose work[1] the following brief sketch is founded. In this JOURNAL we are of course mainly concerned with Sir William Petty as a member of the medical profession; those who wish to study his extraordinarily diversified career in its numerous other aspects — as mechanical inventor, public servant, writer, statistician, political economist—will find it all impartially and lucidly set forth by Lord Edmond Fitzmaurice.





Sir William Petty was the son of a clothier, and was born at Rumsey, in Hampshire, in 1623. From a very early period he showed a marked talent for mechanics and a keen interest in handicrafts of all kinds, his chief amusement when a boy being, according to Aubrey, "looking on at artificers; for example, smyths, the watchmakers, carpenters, joiners, etc., and at 12 years old he could have worked at any of the trades." He was also remarkable for a satirical humour which in boyhood expressed itself in the drawing of caricatures and in later life in a tendency to caustic speech which more than once brought him into trouble. He received his early schooling at Rumsey; by the age of 12 he had acquired "a competent smattering of Latin, and was entered into the Greek before 15." Very early he gave evidence of a spirit of singular independence and self-reliance. Aubrey says:

> He informed me that about 15, in March, he went over to Caen, in Normandy, in a vessel that went hence with a little stock, and began to play the merchant, and had so good success that he maintained himself and also educated himself; this I guess was the most remarkable accident that he meant.

But Petty was not content with these attempts at trading; he continued to learn "the French tongue, and perfected himself in Latin, and had Greek enough to serve his turn." He also "studied the arts."

At sea he was ill-treated, and finally left by the sailors with a broken leg in a small inn on the French coast, near Caen. But he was able to tell his pitiful story in Latin, and soon the fame of the learned English cabin boy spread through Caen, then the seat of universities of high repute. An officer who had won distinction in the Civil Wars of France, wishing to know something of naval tactics, engaged young Petty to teach him. Though the medium of instruction was Latin, the result was satisfactory to the pupil. Petty determined to give up a seafaring life, and became a pupil at the Jesuits' College at Caen. The following amusingly characteristic letter, written in the year before his death, gives the story of his life at this period:

> Piccadilly,
> 14 July, 1686.
>
> Deare Cozen,—The next part of my answer to yours of the 10th inst. is, (1) How I gott the shilling I mentioned to have had at Xmas, 1636: which was by 6d I got of a country Squire for showing him a pretty trick on the cards, which begot the other 6d fairly won at cards. (2) How this shilling came to bee 4s 6d. When I went to sea was 6d given (or rather paid) mee by Mother Dowling, who having been a sinner in her youth, was much relieved by my reading to her in the "Crums of Comfort," Mr. Andrew's "Silver Watchbell," and "Ye plain man's pathway to Heaven." The next 6d I got for an old Horace given (why do I say given) or delivered mee by Len Green, for often construing to him in Ovid's *Metamorphoses* till my throat was soare, though to so little purpose that hee, coming to say his lesson, began, *Protinus* (signifying "soon after") King Protinus, etc. My next booty was 18d, given me by my God-father for making 20 verses to congratulate his having been made a Doctor in Divinity by some good Luck. The other shilling was impressed by my Aunt, whom I repaid by a Bracelet brought in France for 4d but judged to be worth 16d This 4s 6d

[1] *The Life of Sir William Petty.* London: John Murray. 1895. Medium 8vo. Pp. 335. 16s.

was layd out in France upon pittiful brass things with cool'd glasse in them, instead of diamonds and rubies. These I sold at home to the young fellowes, whom I understood to have sweethearts, for treble what they cost. I also brought home 2 hair hatts (which within these 11 years might have been seen) by which I gayned little lesse. Having been ten months at sea, I broak my leg, and was turned ashore, strangely visited by many, by ye name of *le Petit Matelot Anglois qui parle Latin et Grec* neer my recovery; and, when I resolved to quit ye sea, as not being able to bear the envy of our crew against mee for being able to say my compasse, shift my tides, keep reckoning with my plain scale, and for being better read in the "Seaman's Kalender," the "safeguard of saylers," etc., than any seamen of our ship. I made verses to the Jesuits, expressing my desires of returning to the muses, and how I had been drawn from them by reading Legends of our countryman Captain Drake, in these words:

> Rostra ratis Dracis nimis admiratus, abivi
> Nauta scholam fugiens, et dulcia carmina sprevi.

I must not omit that "La Grande Jane," ye farrier's wife, had an *escu* for setting my broken leg; the Potticary 10 sols, and 8 sols a payer of crotches, of which I was afterwards cheated. Upon the remainder (my Ring trade being understood and lost) I set up, with the remainder of 2 cakes of Beeswax sent mee in reliefe of my calamity, upon the trade of playing cards, white starch, and hayre hattes, which I exchanged for tobacco pipes and the shreds of Letter and Parchment, wherewith to size paper. By all which I gott my expences, followed by Colledge, proceeded by Mathematics, and cleer'd four pounds.

By the time he was 15 he had, in his own words, "obtained the Lattin, Greeke, and French tongues, the whole body of common Arithmetick, the practicall Geometry and Astronomy conducing to Navigation, Dialing, etc., with the knowledge of several Mathematical Trades." This he says "and having been at the University of Caen preferred me to the King's Navy, where at the age of 20 years I had gotten up about three score pounds with as much mathematices as any of my age was known to have had." With this intellectual equipment and financial provision he went in 1643, when the Civil War broke out, to the Netherlands and France for three years and "vigorously followed" his studies, especially that of medicine, at Utrecht, Leyden, Amsterdam, and Paris. In Paris he made the acquaintance of Hobbes, the philosopher of Malmesbury, whom he assisted in the preparation of a treatise on optics. Aubrey says "that they read Vesalius together, and that the younger student traced the optical schemes for the elder, for he had a very fine hand in those days for drawing, which draughts Mr. Hobbes did much commend." Through Hobbes Petty was brought acquainted with several of the most prominent of the English refugees then in Paris, such as the Marquis of Newcastle and Sir Charles Cavendish: he also became intimate with the celebrated mathematician Father Marsin Mersen, whose house was the centre of a brilliant scientific and literary circle. Young as he was, Petty corresponded with Pell and other distinguished mathematicians on a footing of apparent equality. He was, however, at this time often in great straits, at one time living for a week on threepennyworth of walnuts, at another being arrested for debt. Nevertheless, he returned in 1646 to Rumsey, "where I was born, bringing back with me my brother Anthony, whom I had bred, with about ten pounds more than I had carried out of England." For a time he followed his father's business, but his inventive brain was never idle; besides improvements in cloth manufacture, he designed an instrument which appears to be the prototype of the manifold letter writer of modern times. In 1647 he published a pamphlet on education in which, among numerous other proposals, he suggested the establishment of a "Nosocomium Academicum," or model hospital, where medicine might be studied by scientific methods. About this time Hartlib, at whose suggestion John Milton had published his Tractate on Education in 1644, wrote as follows to Robert Boyle (afterwards described in his epitaph as "Father of Modern Chemistry and Brother of the Earl of Cork") concerning Petty:

> I have put into your hands the design of the history of trade; the author is one Petty, twenty-four years of age, a perfect Frenchman, and a good linguist in other vulgar languages, besides Latin and Greek; a most rare and exact anatomist, and excelling in all mathematical and mechanical learning; of a sweet natural disposition and moral comportment. As for solid judgment and industry, altogether masculine.

In 1649 Petty proceeded to Oxford, where almost immediately he took the degree of Doctor in Physic. Three months later he entered himself at the College of Physicians in London, and, with his carefulness in recording such matters, he adds that, after paying the fees for admission, he had about £60 left.

In 1650 he was created a Fellow of Brasenose by virtue of a dispensation from the delegates of the University, the reason assigned for his election by an unfriendly writer being that "he had cut upp Dogges and taught anatomy in the War." He was also appointed Deputy to the University Professor of Anatomy, Dr. Clayton, who felt an unscientific discomfort in the presence of "a slovenly unhandsome corse," and was therefore glad to leave dissection to his substitute. "Anatomy," says Aubrey, "was then little understood by the University, and I recollect that Dr. Petty kept a body that he brought by water from Reading, a good while to read on, some way preserved or pickled."

In 1650 Petty's name became famous in connection with an event which excited great interest throughout the country. One Ann Green had been executed at Oxford for the murder of her illegitimate child. It was observed "by the spectators that she seemed to take an unconscionable time in dying, so her friends went to assist her in getting out of this world, some of them thumping her on the breast, others hanging with all their weight upon her legs, sometimes lifting her up and pulling her down again with a sudden jerk." At length the unfortunate woman was certified to be dead. The body was then cut down, put into a coffin, and taken into the dissecting room. When the coffin was opened, however, she was seen to be still breathing, and to "rattle," "which being observed by a lusty fellow who stood by, he, thinking to do an act of charity in ridding her out of the reliques of a painful life, stamped several times on her breast and stomach with all the force he could." Just at this moment Dr. Petty and Dr. Wilkins appeared on the scene, and observing a flicker of life, wrenched open the woman's mouth, poured cordials down her throat, and put another woman in bed with her to restore warmth. Distinct signs of life soon began to appear; the doctors bled her, ordered her a julep, and so left her for the night. In two hours the supposed corpse had come to life. Though legally defunct she is said to have lived to be a mother of a family of children, to the confusion of the hangman and the glory of Dr. Petty.

Soon after this exploit Dr. Petty was made Vice-Principal of Brasenose, and succeeded Dr. Clayton in the Chair of Anatomy, the duties of which he had practically been for some time performing, "upon Dr. Clayton renouncing his interest therein purposely to serve him." He continued to reside at Oxford till 1651, occasionally visiting London, where about this time he received the appointment of Professor of Music at Gresham College. "At Oxford," says Aubrey, "he was beloved of all ingenious scholars"; one of his most intimate friends was Christopher Wren. At the end of 1651 he received the appointment of Physician-General to the army in Ireland and to General Ireton, the Commander-in-Chief. On landing at Waterford in September, 1652, he found Ireton dead from illness contracted at the siege of Limerick, but received the same appointment from Ireton's successors, General Lambert and General Fleetwood, "at the rate," as he is careful to record, "of twenty shillings *per diem*, at which I continued till June, 1659, gaining by my practise about four hundred pounds per annum above the said sallary."

Dr. Petty had not been long at his new post before he began to institute reforms. To quote his own words he observed

> The vast and needless expense of medicaments, and how the Apothecary-General of the army, with his three assistants, did not spend their time to the best advantage; and forthwith to the content of all persons concerned, with the State's bare disbursement of £120, he did save them £500 per annum of their former charge; and furnished the army, hospitals, garrisons and headquarters with medicaments without the least noise or trouble, reducing that affair to a state of easiness and plainness which before was held a mystery, and the vexation of such as laboured to administer it well.

When he had been about two years in Ireland an event occurred which changed the whole subsequent course of his life. After the conquest of Ireland there came the question of parcelling out the land among the conquerors and the "adventurers" who had lent money to the State for the equipment of the army. An essential preliminary was a survey of the country. This had been entrusted to Benjamin Worsley, who by an odd coincidence was also a member of the medical profession. Petty, who may not altogether rashly be suspected of some amount of prejudice, describes his professional brother as one who "having been frustrated as to his many severall great designs in England hoped to improve and repaire himselfe upon a less knowing and more credulous

people. To this purpose he exchanged some dangerous opinions in religion for others more merchantable in Ireland and carried also some magnifying glasses," by means of which, adds Petty, "he impressed an ignorant public with a vast idea of his scientific attainments." Worsley was a dreamer of dreams—of the discovery of a universal medicine, of making gold, sowing saltpetre, establishing a universal trade, and other projects which the practical minded Petty contemptuously characterised as "mountain bellied conceptions." Worsley's work as Surveyor-General was severely criticised by Petty, who propounded a rival scheme which was accepted by the Government. The story may be told in his own words:

About September, 1654, I, perceiving that the admeasurement of the lands forfeited by the forementioned Rebellion, and intended to regulate the satisfaction of the soldiers who had suppressed the same was most insufficiently and absurdly managed, I obtained a contract, dated the 11th of December, 1654, for making the said admeasurement, and by God's blessing so performed the same that I gained about nine thousand pounds thereby, which, with the £500 above mentioned, my sallary of 20s. per diem, the benefit of my practice, together with £600 given me for directing an after survey of the adventrs. lands, and £800 more for 2 years' sallary as Clerk of the Councell, raised me an estate of about thirteen thousand pounds in ready and reall money.

For his services in connection with the survey Petty received a considerable share of the forfeited lands, and largely increased his portion by judicious purchase, so that he became an extensive landowner in Kerry and other parts. He never returned to the practice of medicine, but spent the remainder of his life in devising improvements in ships and inventions of the most diverse kinds, including a velocipede, in scientific experiments, in writing on all manner of subjects, and last but by no means least in protecting his interests as an Irish landowner. In his *Political Arithmetick* he laid the foundation of what is now known as political economy. The "dreary science" had indeed a great fascination for Petty's mind, and considering the almost total absence of trustworthy statistics in his time, his sagacity in the discussion of such matters must be accounted wonderful. He was one of the original members of the Royal Society, and was knighted by Charles II on the incorporation of that body in 1662.

He took an active part in the establishment of the Dublin College of Physicians. In the minutes of the Philosophical Society of Ireland, of which he was one of the founders, are notes of many papers by him, one of which is described as containing a list of experiments for examining mineral waters.

In 1667 Petty married Lady Fenton, widow of Sir Maurice Fenton, and daughter of Sir Hardress Waller, whose signature appears to the warrant for the execution of Charles I. His letters to his wife show him to have been an affectionate husband and father. He laid down minute directions for the education of his sons, most of them very judicious, though it is startling to find among the directions "for my son Henry," then hardly 11 years old, the following: "To hear tryals of criminals and see executions of various kinds." At the end of 1687 he died in London, the immediate cause of his death being gangrene of the foot.

His personal appearance at the age of 57 is sketched by Aubrey as follows:

He is a proper handsome man, measures six foot high, good head of brown hair, moderately turning up—*vide* his picture as Dr. of Physick. His eyes are a kind of goose grey, but very short sighted, and as to aspect, beautiful, and promise sweetness of nature; and they do not deceive, for he is a marvellous good natured person, and εὐσπλαγχνος. Eyebrows thick, dark and straight (horizontal). His head is very large, μακροκεφαλος. He was in his youth slender; but, since these twenty years and more past, he grew very plump, so that now (1680) he is *abdomine tardus*.

Sir William Petty was an inventive genius of the highest order, a political philosopher in the truest sense, and a man of almost universal accomplishment. Had he not been diverted from the path of medicine he would doubtless have greatly enlarged the boundaries of the science. In his old age he often amused himself in the composition of Latin verse, for which he laughs at himself as follows:

Lord, that a man 54 years old should after thirty-six years' discontinuance return to the making of verses which boys of 15 years old can correct, and then trouble clerks at the Council and Secretaries of the Admiralty to read them.

But let us hear Evelyn's opinion as to this and the more serious endowments which made Sir William Petty one of the greatest men of his age:

There is not a better Latin poet living when he gives himself that diversion; nor is his excellence less in Council and prudent matters of State, but he is so exceeding nice in sifting and examining all possible contingencies that he adventures at nothing which is not demonstration. There were not in the whole world his equal for a superintendent of manufacture and improvement of trade, or to govern a plantation. If I were a Prince I should make him my second counsellor at least. There is nothing difficult to him.....but he never could get favour at Court, because he outwitted all the projectors that came neare him. Having never known such another genius, I cannot but mention those particulars amongst a multitude of others which I could produce.

The portrait of Sir William Petty, which is given at p. 1529, is from a picture by Closterman in the collection at Lansdowne House. We wish to express our acknowledgment of the courtesy of Mr. John Murray, by whose permission the portrait is reproduced.

THE TITLE OF DOCTOR.

A LAWSUIT OF THE LAST CENTURY.

THE question as to the title of Doctor is still, as Wordsworth says of the world, "too much with us." It is one which, as our readers have had ample reason to know, is apt to give rise not only to considerable elevation of mental temperature, but to some remarkable eccentricities, not to say perversions, of the logical faculty. But in all the correspondence on this perennial subject with which our columns have from time to time been flooded we do not remember any instance in which objection was made to the title of Doctor of Medicine as being in itself an indignity to be avenged with the help of the law. In the last century, however, an action was fought out in the Scottish law courts to determine the point whether a man was justified in feeling himself aggrieved by being designated "Doctor of Medicine" instead of "Physician." In Boswell's *Life of Samuel Johnson* we find Boswell, who practised as an advocate in Edinburgh, writing to his venerated friend under date January 19th, 1775, as follows:

But I am now to apply to you for immediate aid in my profession, which you have never refused to grant when I requested it. I enclose you a petition for Dr. Memis, a physician at Aberdeen, in which Sir John Dalrymple has exerted his talents, and which I am to answer as counsel for the managers of the Royal Infirmary in that city. Mr. Jopp, the Provost, who delivered to you your freedom, is one of my clients, and, *as a citizen of Aberdeen*, you will support him. The fact is shortly this. In a translation of the charter of the Infirmary from Latin into English, made under the authority of the managers, the same phrase in the original is in one place rendered *Physician*, but when applied to Dr. Memis is rendered *Doctor of Medicine*. Dr. Memis complained of this before the translation was printed, but was not indulged with having it altered; and he has brought an action for damages on account of a supposed injury, as if the designation given him was an inferiour one, tending to make it be supposed he is *not a physician*, and consequently to hurt his practice. My father has dismissed the action as groundless, and now he has appealed to the whole Court.

On February 7th, 1775, Dr. Johnson replied as follows:

Dr. Memis's question is so narrow as to allow no speculation; and I have no facts before me but those which his advocate has produced against you. I consulted this morning the President of the London College of Physicians, who says that with us *Doctor of Physick* (we do not say *Doctor of Medicine*) is the highest title that a practiser of physick can have; that *Doctor* implies not only *Physician* but teacher of physick; that every *Doctor* is legally a *Physician*; but no man not a *Doctor* can *practise physick* but by *licence* particularly granted. The Doctorate is a licence of itself. It seems to us a very slender cause of prosecution.

The law's delay was well exemplified by this case, for it seems to have taken the highest court in Scotland just two years to decide the grave matter in dispute. The decision was conveyed to Dr. Johnson by Boswell in a letter dated February 14th, 1777, as follows:

Dr. Memis's cause was determined against him, with 40*l.* costs. The Lord President, and two other of the Judges, dissented from the majority, upon this ground; that although there may have been no intention to injure him by calling him *Doctor of Medicine*, instead of *Physician*, yet, as he remonstrated against the designation before the charter was printed off, and represented that it was disagreeable and even hurtful to him, it was illnatured to refuse to alter it, let him have the designation to which he was certainly entitled. My own opinion is, that our court has judged wrong. The defendants were *in malâ fide* to persist in naming him in a way that he disliked. You remember poor Goldsmith, when he grew important, and wished to appear *Doctor Major*, could not bear your calling him *Goldy*. Would it not have been wrong to have named him so in your "Preface to Shakespeare," or in any serious permanent writing of any sort? The difficulty is, whether an action should be allowed on such petty wrongs. *De minimis non curat lex.*

Whatever may be thought of Boswell's opinion of the judgment of the court in this case, most reasonable people will agree with him as to the pettiness of the alleged wrong.

THE Duke of Cambridge opened the new joint isolation hospital for the use of the borough of Richmond and the districts of Hounslow, Isleworth, and Heston on June 1st.

ROYAL MEDICAL BENEVOLENT FUND OF IRELAND.

THE fifty-sixth annual meeting was held in the Royal College of Physicians, Dublin, on Monday, June 6th. Sir GEORGE F. DUFFEY, President Royal College of Physicians, occupied the chair

From the report it appeared that the total amount of the grants recommended since last distribution was £1,172. The total number of applications considered during the year was 73, including 4 from medical men, 61 from the widows of medical men, and 8 from or on behalf of their orphans. Amongst the applicants in only 21 instances had the medical man, by whose death or misfortune the application had been rendered necessary, ever contributed to the Society's funds, and the Committee regret extremely the apathy shown by so many of the members of the profession practising throughout the country in their attitude towards this fund. During the financial year 1897-98 the dividends on Stock amounted to £735 10s., which is an increase of over £80 when compared with the previous year. The only donation received during the year amounted to £4 12s. 6d. It was received from Dr. M'Dowel Cosgrave, who for some years past has annually sent his "notification fees" to the Society. There is a marked diminution in the amount of subscriptions received from Branches amounting to over £230. This is, however, more apparent than real, and is to some extent due to the fact that this year a large number of the more important Branches did not forward their subscriptions till after the close of the financial year. During the month of May the sum of £204 8s. 6d. has been received from various Branches. The total amount of grants made in 1897-98 exceeded that of the previous year by about £80. No addition has been made to the funded capital of the Society.

Among the speakers were Sir William Stokes, Dr. J. M. Finny, Dr. Gray (Armagh), Dr. Tagert, Dr. Parsons, Dr. P. Macnamara, Mr. Edward Hamilton, Mr. H. Gray Croly, Dr. McGuire, Dr. E. H. Bennett, Dr. Strahan, and Dr. Falkiner.

IRISH MEDICAL ASSOCIATION.

THE annual meeting of the Irish Medical Association was held in the College of Surgeons, Dublin, on June 6th, Dr. MOORHEAD, of Cootehill, in the chair.

The report referred to the efforts of the Association in reference to amendments in the Local Government Bill.

On the motion of Dr. P. J. MACNAMARA, seconded by Dr. MAGUIRE, the report was adopted.

The following motion, proposed by Mr. A. H. BENSON, seconded by Dr. MACDONNELL, Dundalk, was adopted:

That the Council be requested to persevere in the efforts made for so many years to induce successive Governments to amend the present Poor-law system; that particular regard be given to the question of superannuation of medical officers; the issue of medical relief tickets, so that persons in independent circumstances may be prevented from availing themselves of the means provided by the ratepayers for the sick poor; and that annual leave of absence be granted to medical officers.

The following was the result of the ballot for officers:

President: Sir Thornley Stoker.

Vice-Presidents: Dr. Greene, Ferns; Dr. Jefferson, Lisburn; Dr. J. Cotter, Cork; Dr. Kinkead, Galway.

County Councillors: Antrim, Dr. Mussen; Armagh, Dr. Fergus; Carlow, Dr. Bloomfield; Cavan, Dr. Caldwell; Clare, Dr. Counihan; Cork, Dr. Bennett; Donegal, Dr. Gilmore; Down, Dr. Dickson; Dublin, Sir Philip Smyly; Fermanagh, Dr. Fitzgerald; Galway, Dr. Rossiter; Kerry, Dr. Pierse; Kildare, Dr. Darby; Kilkenny, Dr. Walsh; King's County, Dr. Moorhead; Leitrim, Dr. Pentland; Limerick, Dr. Hayes; Londonderry, Dr. Creery; Longford, Dr. MacGuire; Louth, Dr. Adrian; Mayo, Dr. Johnston; Meath, Dr. Daly; Monaghan, Dr. Elliott; Queen's County, Dr. D. B. Jacob; Roscommon, Dr. Donellan; Sligo, Dr. Martin; Tyrone, Dr. Duncan; Waterford, Dr. Mackesy; Westmeath, Dr. Carleton; Wexford, Dr. J. H. Bogan; Wicklow, Dr. Truell.

General Councillors: Dr. Armstrong, Foxrock; Dr. Arthur H. Benson, Dublin; Dr. J. W. Boyce, Blackrock; Dr. J. G. Burne, Dublin; Dr. Burnside, Clondalkin; Dr. Chapman, Dublin; Dr. T. Tenison Collins, Ballinasloe; Dr. Cope, Dublin; Dr. Cranny, Dublin; Sir Francis Cruise, Dublin; Dr. H. Davy, Terenure; Dr. Delahoyde, Dublin; Dr. Donnelly, Dublin; Dr. N. M. Falkiner, Dublin; Dr. J. P. Garland, Dublin; Dr. Gibson, Clontarf; Dr. Hamilton, Dublin; Dr. Hepburn; Dr. A. H. Jacob, Dublin; Dr. W. G. Jacob, Maryboro'; Dr. J. C. King, J.P., Castlepollard; Dr. R. Leeper, Rathdrum; Dr. P. J. Macnamara, Kilmallock; Dr. A. Meldon, D.L., Dublin; Dr. T. Hamilton Moorehead, Cootehill; Dr. Henry W. Oulton, Dublin; Dr. J. F. Pollock, Blackrock; Dr. Ringwood, Kells; Dr. Joseph Smyth, Naas; Dr. J. B. Story, Dublin; Dr. M. Strahan, Dublin; Dr. W. M'D. A. Wright, Dalkey.

The chair having been taken by Sir THORNLEY STOKER, a vote of thanks was passed to Dr. Moorhead, on the motion of Dr. GRAY (Armagh), second by Dr. MURPHY.

Dr. MOORHEAD urged that the Association should provide a medical journal for its members, and so increase their number and influence.

In the evening the annual dinner was held, Sir THORNLEY STOKER presiding. Several toasts were proposed, and among the speakers were the President, the Lord Mayor, the Lord Chancellor, Right Hon. C. Hemphill, M.P., Surgeon-General Preston, Mr. J. H. Campbell, M.P., Sir George Duffey, Mr. R. L. Swan, Dr. O'Carroll, and Dr. Moorhead.

THE LATE MR. ERNEST HART.

AT a general meeting of the Malta and Mediterranean Branch, held on May 23rd, at the Station Hospital, Valletta, the following resolution, proposed by the President (Surgeon-Major-General T. MAUNSELL, C.B.), and seconded by the Honorary Secretary (Surgeon-Lieutenant-Colonel L. MANCHÉ, M.D., R.M.A.), was carried unanimously:

That the members of the Malta and Mediterranean Branch take this first opportunity since the lamentable death of Mr. Ernest Hart, the late able and accomplished editor of the JOURNAL, to express their warm appreciation of the very valuable services he rendered to the Association and to the medical profession in general; and that they desire to convey their sympathy to Mrs. Hart in her bereavement.

THE RIGHTS OF MEMBERS OF THE GENERAL MEDICAL COUNCIL.

IT will be remembered that at the last meeting of the General Medical Council the question of the right of members of the General Medical Council to inspect documents the property of the Council was raised in connection with a request of Mr. Horsley to examine certain documents, a request which had been refused by the President of the Council. In his opening address the President stated that he had been supported in the course which he had taken by an opinion given by Mr. Muir Mackenzie. The text of this opinion, which appears upon the minutes of the Council, is as follows:

OPINION.

The question on which I have been requested to advise the General Medical Council is, as I understand it, the following: Can a member of the Council, without previous application to the Council, require the Council's officer to deliver to him for independent inspection and examination by him documents belonging to the Council which are in the custody of the officers of the Council?

My opinion upon this question is as follows:

The General Medical Council is by Act of Parliament a corporation, and the documents belonging to the Council are part of its corporate property. The rule of law with regard to the corporate property belonging to a corporation has been laid down in the following terms: "The individual members of the corporation are not owners of that property, nor is each of them owner of any part of it, nor are they joint owners of the whole; although they are interested in the property, but the abstract entity, the corporation, is the owner, and the only owner, of the property."[1]

Thus the documents in question are the property of the Council alone; and the individual members of the Council are not in any sense the owners or part owners of these documents.

As regards the right of a member of a corporation to have the documents of the corporation produced to him for his independent investigation and inspection, the law on the subject is fully explained in the decision of the Court of Queen's Bench in the King against the Merchant Taylors' Company.[2] In that case the company was a corporation by Royal Charter, and certain members who alleged grounds on which they believed that the affairs of the corporation were improperly conducted, and complained of misgovernment in some particular instances (not affecting the complainants personally) applied to the officers of the corporation to have the books and records in the possession of the officers of the corporation, and belonging to the corporation, or relating to its affairs, produced for inspection. The officers of the corporation refused to produce the documents asked for, and on an application by the complainants to the Court of Queen's Bench, that Court refused to make any order for the production of the documents, and held that the members had not any right to the production which was asked for. In the judgments of the Court the following observations were made: "I think the members of the corporation have no right on speculative grounds to call for an examination of the books and muniments, in order to see if by possibility the company's affairs may be better administered than they think they are at present. If they have any complaint to make some suit should be instituted, some definite matter charged, and the question will then arise whether or not the Court will grant a mandamus."[3] I am far from saying that there may not be particular instances in which the corporator may apply to inspect the documents, or some of them, if he can show a specific ground of application, and that the granting of it is necessary to prevent his suffering injury, or to enable him to perform his duties. But he must state a definite object.[4]

The principles laid down in the authoritative decision above referred to establish that if a member of a corporation desires to have the documents of the corporation produced to him for his inspection and examination, he must apply to the corporation or to the governing body of the corporation, and establish that the object which he has in view is one which makes it right that the particular documents which he desires to inspect should be produced to him.

[1] R. v. Arnaud 1895, 9 Q B. 817, Grant on Corporations, p. .
[2] 1831, Q.B. and Ad. 115.
[3] Q.B. and Ad., pp. 127, 128.
[4] Q.B. and Ad., p. 130.

My opinion is therefore that the proper course for adoption by a member of the Council who desires to have any of the Council's documents produced to him for the purpose of making an independent examination of them, is to apply to the Council; and that it is for the Council in its corporate capacity to direct which (if any) of its documents are to be produced in compliance with the application. An individual member of the Council in my opinion has no right without previous application to the Council or its Executive Committee to require the Council's officers who have the custody of the Council's documents to deliver them to him for examination and inspection.

Signed) M. MUIR MACKENZIE.

4, Temple Gardens, Temple, E.C.,
May 19th, 1898.

UNQUALIFIED ASSISTANTS.

WE printed last week the text of the report of the Committee on Unqualified Assistants which was adopted by the General Medical Council. In moving the adoption of the conclusions of the report, Mr. T. Pridgin Teale called attention to the fact that the recent resolution of the Council was a new departure, and that thereby the Council was putting an end to what it had to a certain extent sanctioned, inasmuch as it had hitherto condemned "gross misuse of an unqualified assistant in certain specified ways." He felt that the Council was acting suddenly in the matter, and he much regretted that they did not accept his resolution, suggested by the original Committee reporting on the unqualified assistant, by which any action of the Council under the new regulation would be held in suspense until 1900. This would have afforded a great mitigation of the hardships which were complained of.

The memorials addressed to the Council deal with four main points:

Can the Council give any relief to the older men, who will be deprived of their means of living, by enabling them to become qualified by a modified examination? This is clearly out of the power of the Council, which is bound by the Act of 1886, which requires that everyone admitted to the *Register* shall have been fully qualified in Medicine, Surgery, and Midwifery.

Secondly, can any relief be given to practitioners who find extreme difficulty in meeting with qualified men as assistants? That this difficulty is a real and serious one Mr. Teale was fully convinced. There was a suddenly increased demand for qualified assistants, and they were not forthcoming in sufficient numbers. A suspension of the action of the rule until 1900 would here have afforded much of the relief required, and would have given the much-needed time for readjustment. He trusted that in time one good result of this action of the Council would be that newly-qualified men would seek the opportunities thus opened out in abundance with eagerness, in order to complete their medical education, one half of which had still to be learned, after leaving their medical school and hospital as qualified men.

Thirdly, he trusted that the report and conclusions of the Committee would tend to mitigate a sort of panic which had prevailed amongst many highly respected practitioners who were employing young unqualified, but not uneducated, men in a way which would not call for the disapproval of the Council. It was evident that the Council would not deal with any but clearly defined cases of abuse. It would be very much on its guard against being made the tool for oppressing an envied rival. Indeed, the recently adopted "standing order" that no complaint would be entertained that was not made on a sworn affidavit would be a great protection to the profession. Again, the statement that every case "would be dealt with on its merits"—that is, that no case that seemed frivolous or incapable of clear proof of being a breach of the spirit of the regulations of the Council—would pass beyond the "Committee for Consideration of Penal Cases"; in other words, would cease to be a confidential communication to the Council.

Finally, although the Committee have not advised a more exact definition of what is allowable under the term "*bonâ fide* medical student," etc., they trust that by directing attention to the exact wording of the regulation, the profession will understand the principle on which delegation of professional duties to others is allowed.

Dr. Bruce, in supporting Mr. Teale's resolutions, said that it must be remembered that the Council owed a duty not only to the profession in this matter, but also to the public at large. It is necessary for the public to distinguish clearly between the qualified and unqualified practitioner, and hence the issue of the warnings complained of. The law is quite plain, and the Council as long as the law stands must enforce it. He was sorry for the effects of their instructions, but there was no escape from the position which they as a Council had to take up.

LITERARY NOTES.

PROFESSOR WILLIAM MACEWEN'S well-known work entitled *The Pyogenic Diseases of the Brain and Spinal Corn* has recently been translated into German, with the author's permission, by Dr. Paul Rudloff, of Wiesbaden. The volume, which contains reproductions of the illustrations of the original, is published by Bergmann, of Wiesbaden.

Dr. Beattie Crozier, author of *Civilization and Progress*, *The History of Intellectual Development on the Lines of Modern Evolution*, and other works, is finishing a new book to be entitled *My Inner Life, being a Chapter in Personal Evolution*, which will probably appear early in the autumn. Dr. Beattie Crozier, who is a graduate in medicine of the University of Toronto and a Licentiate of the Royal College of Physicians of London, was in 1894 awarded a Civil List pension in recognition of his literary work.

It is, perhaps, not generally known that Professor Charles Richet, who delivered an address on The Work of Pasteur and the Modern Conception of Medicine at the annual meeting in Montreal, is a novelist and a dramatic author as well as a physiologist of the first rank. Under the pseudonym of "Charles Epheyre" he has gained a considerable reputation in contemporary French literature. His most successful novel, *La Douleur des Autres*, was published in 1896, having first appeared serially as a *feuilleton* in the *Indépendance Belge*. Among his other works of fiction may be mentioned *Sœur Marthe*, the plot of which turns on the love of a physician for a hypnotisable patient; *Amour de Garnison*, *Bonne et Mauvaise Etoile*, *A la Recherche de la Gloire*, and *Le Microbe et le Mirosaurus*. "Charles Epheyre's" last play, *Judith*, written in collaboration with M. Octave Houdaille, was produced at the Bodinière Theatre on March 28th, 1898. Professor Richet is also the author of *L'Homme et l'Intelligence* and other works on transcendental psychology, and the Editor of the *Revue Scientifique*.

Among the numerous predecessors of Professor Schenck, whose theories as to the determination of sex are now being unearthed, the most interesting from some points of view is the Great Napoleon. In the *Correspondance de Napoleon 1er*, t. xiii, p. 122, there is a letter from him dated August 31st, 1806, to the Princess Augusta, wife of his stepson, Prince Eugene, who was then in an interesting condition, in which he advises her to take care of herself, adding, "Try not to have a girl. I will tell you the receipt for that, but you will not believe it: it is to drink every day a little undiluted wine." Apparently the lady did not carry out the treatment, or the receipt failed, for she had a daughter. In writing to her about the event the Emperor tells her for the comfort of her husband, if not for her own, that when "one begins with a girl one has at least twelve children." These *idées Napoléoniennes* on obstetrical subjects are interesting, if not altogether scientific. In reading them one cannot help thinking how different the history of the nineteenth century would have been had Napoleon devoted himself to the practice of midwifery, and helped a thousand or two human beings into the world instead of hurrying millions out of it.

In the *Scottish Medical and Surgical Journal* for June some interesting extracts are given from an old work entitled *Medicina Musica, or a Mechanical Essay on the Effects of Singing, Musick, and Dancing on Human Bodies*, by Richard Brounc, "Apothecary in Oakham," 1729. Of singing, after dwelling on its efficacy in chasing away "dark, gloomy ideas," he says:

Singing must mightily conduce to the Dissolution of the Aliments and Prevention of Crudities and Indigestions, the ill consequences of which are too well known to want Demonstration; the Diaphragm also and abdominal Muscles, by this Exercise compressing the Stomach with more force than ordinary, give more Assistance to the Stomach in Comminuting the Food into Chyle, and rendering it fit for its Translation into the Blood.

The reader is warned, however, that "singing when not rightly us'd is often prejudicial to the Lungs and brings on

fatal Diseases," and in cases of phthisis "the sad Catastrophe of Bloodspitting may be the Consequence." On the effects of music our author discourses as follows :

That Excesses of our Passions, by disordering the Spirits, may bring on Diseases is what no body can deny, and thus we find that Anger, Rage, Impatience, etc., are attended by a violent and irregular Motion of the Spirits; on the Contrary, a Defect of Spirits is the Consequence of Fear, Melancholy, Despair, etc., each of which Excesses may produce Diseases peculiar to the Affection of the Spirits. For the Prevention, therefore, of the first a soft Adagio will be most convenient, as by its languishing Strains it seems to be more particularly adapted to soften us into Temper; on the contrary, when the Soul is dejected, nothing can be more conducive to its Elevation than a brisk Allegro.

But here again we are warned that there may be danger even in an adagio, which if "played alone to Persons entirely free from Disorders..... may, for Reasons aforesaid, so enervate the Body as in some measure to tend to the Production of Diseases." In certain cases of madness "a soft languishing Adagio" is indicated, while "a brisk Allegro may be of Prodigious Service in the Cure of Apoplexies, Lethargies, etc." Dancing, says the worthy apothecary, "excels in the cure of the Spleen and Vapours and Melancholick Affection; in Agues and in a Suppression of the Catamenia."

Messrs. Williams and Norgate have sent us a supplement to their ordinary Scientific Book Circular giving a list of important medical works forming the library of a well-known phthalmologist recently purchased by them, and now offered at greatly reduced prices. Among them we notice sets of the *Annales d'Oculistique* (1887-91), the *Annali di Ottalmologia* (1887-91), Virchow's *Archiv für pathologische Anatomie und Physiologie* (Vols. 109-131), the *Archiv für Augenheilkunde* (Vols. xx-xxvi), the *Archives d'Ophtalmologie* (Vols. i-xi), the *Centralblatt für praktische Augenheilkunde* (1877-90), the *Jahresbericht über die Leistungen und Fortschritte un Gebiete der Ophthalmologie* (Vols. xiii-xxi), the *Receuil d'Ophtalmologie* (Series III, Vols. ix-xii), the *Revue Générale d'Ophtalmologie* (Vols. i-x), the *Zeitschrift für vergleichende Augenheilkunde* (Vols. i-vi), and others. The list also includes sets of over 250 German inaugural dissertations and over 60 French theses on ophthalmological subjects.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE LONDON UNIVERSITY BILL, which Mr. Balfour specially named on Monday as a measure which the Government hoped to pass, is likely to meet with a good deal of opposition. The recent election of Mr. Fletcher Moulton has given great encouragement to the opponents of the Bill, and they are determined to try their strength on the second reading and in Committee. On the other hand the authorities of the University are pressing the Bill forward, and leading members of the Government and the front Opposition bench are strongly in its favour. The limit of thirty miles as the radius beyond which institutions cannot be recognised is felt to be very hard on Brighton, which is a populous centre, and one so situated that it would find it difficult to affiliate with any other University. This point is sure to be raised in Committee, and a danger signal has also recently been hoisted with reference to the possible development of theological teaching in the University, which was strictly prohibited in the original charter. Altogether there are likely to be some lively debates before the Bill becomes law.

PHOSPHORUS AND LEAD POISONING have been the subjects of important questions this week, and the Home Secretary in his replies expressed great confidence that the new rules which are being framed would meet the requirements of safety. He is not inclined to appoint more lady inspectors as urged by some members, but is rather disposed to rely on increased medical inspection, and in this matter he is right. He was also careful to point out that the medical man connected with the cases at Messrs. Bryant and May's was surgeon to the firm, and not employed by the Home Office. Mr. John Burns was anxious that the surgeon in question should be reported officially to the Royal College of Surgeons, but he did not receive any definite promise that such a course would be pursued. The Home Secretary stated also that he had no power to prevent the use of yellow phosphorus, and that he was considering other methods of manufacture.

THE LUNACY BILL has not yet passed the Committee stage in the House of Lords, having been remitted to the Standing Committee. There are a number of amendments down to it in the names of the Lord Chancellor, Lords Ripon, Russell, and Thring. The most serious of these are those which deal with Clause 18 as regards plans for building and enlarging asylums, a new clause dealing with the property of a lunatic in a workhouse, and Clause 20, which grants superannuation to the officers and servants. There is not only a motion to reject this clause by Lord Ripon, but an amendment to it by Lord Russell defining the scale of superannuation. Clause 23, which provides for the remuneration of pauper lunatics' labour, it is also suggested should be omitted.

THE VACCINATION BILL will probably be before the Grand Committee on Law next week. Now the Prisons Bill is finished there are only two small measures before it. The first is the Poor-law (Scotland) Bill, which deals with the settlement and removal of paupers, and reduces the period for acquiring residential settlement in Scotland to three years, and makes English and Irish paupers irremovable from Scotland after ten years' residence. There are only a few amendments to the Bill, so that it will not take long to pass the Committee. The other Bill is the University and College Estates Bill, and it is hoped that this, too, will be disposed of on Friday's sitting. This will give the Vaccination Bill its committee stage on Tuesday next. Sir Walter Foster has put down most of the amendments suggested by the Parliamentary Bills Committee of the British Medical Assscia-tion, and in these and the other amendments previously printed there is room for ample discussion.

THE PRISONS BILL closed its prolonged career in the Grand Committee of Law on Tuesday, and has been much improved. It has been a most interesting struggle between officialism with its old-fashioned routine, and the reforming spirit inspired by the experience of prison life from the prisoner's side. It was an inestimable advantage to have men on this committee who had suffered prison discipline, and who were able from their own personal experience to drive home their arguments for reform. The Home Secretary has been conciliatory and sympathetic, and has drafted his new rules in this spirit; still, the amount of real reform effected will depend very much on the earnestness of the Home Secretary for the time being. It is hoped that much good will come from the appointment of the new medical commissioner. If a good and strong man is put in that office, much will be done to break down the barbarous methods which have prevailed too long in our treatment of criminals. The last meeting of the Committee, amid some minor successes, resulted in a great advance as regards corporal punishment by enacting that any offence for which a prisoner was to receive this punishment should be tried in open court and not before a selection of the Visiting Committee. Mr. Michael Davitt's amendment, which sought to lessen the hardships of political prisoners, was rejected, and this country remains in this respect among the most backward of civilised nations.

THE PHARMACY ACTS AMENDMENT BILL completed its Committee stage, and not being amended passed also its third reading on Wednesday. The first Wednesday after the recess was, indeed, a propitious day for private members, for the Poor Law Unions Association Bill, as amended by the Standing Committee, also passed, and two other private Bills were advanced. The second reading of the Workmen's Dwellings Bill occupied a good part of the afternoon, and it was finally read a second time.

THE HABITUAL INEBRIATES BILL was down for second reading on Tuesday, but was not reached till half-past eleven. As there remained so little time to discuss the Bill it is perhaps fortunate that the Government did not press the second reading, but postponed it till Thursday. There is no opposition to the measure, but a short discussion will not only assist the Bill by calling public attention to its provisions, but also tend to smooth its way through the Committee stage.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 11TH, 1898.

THE ASSOCIATION AND ITS ANNUAL MEETING.

THE annual general meeting of the British Medical Association will be held next month in Edinburgh, and in another column will be found a detailed statement of the arrangements which have been made. After the highly successful meeting last year in Montreal, the chief city of a great colony, it is very fit and proper that the Association should meet in one of the chief cities of the home countries, a city remarkable alike for the beauty of its site and the many historical memories which cling about its grey walls, a city distinguished also for the eminent services which its sons have rendered to art and science, to learning and literature, and to the betterment of life, and to the progress of the human race. The renown Edinburgh as a centre of light and leading in medical matters is in all lands. It rests upon a solid basis of good work done in the past; but the modern visitor will find new buildings, new organisations, and increased opportunities, not only for gaining the knowledge necessary for the practice of medicine but also for original research, and will recognise in these things material evidence of the enlightened spirit which guides those who direct the fortunes of Edinburgh.

Three-and-twenty years ago the Association met in Edinburgh, under the presidency of Sir Robert Christison, and many changes have taken place during that period. Sir Robert Christison has gone, and many of those who took prominent part in the work of the meeting of 1875 have ceased from their labours. But the spirit which animated them is continued in their successors, and there is every reason to expect that the meeting over which Sir T. Grainger Stewart is to preside will be very largely attended. Doubtless many old students of the Edinburgh schools will take this opportunity to renew old acquaintance, and to observe the great improvements that have been carried out in connection with the University and hospitals. The Royal Infirmary and the University buildings have risen on a new site open to the meadows, and near about them are other academical buildings—the great McEwan Hall, in which the addresses to the Association will be given; the University Union, which has been courteously thrown open to members during the meeting; and the Research Laboratory of the Royal College of Physicians. Thanks are due to the University for the generous manner in which the buildings have been placed at the disposal of the Local Committee for the purposes of the annual meeting.

The programme of business arranged by the officers of Sections is long enough and varied enough to attract those who have no early associations with the city and University, and we are glad to learn that among those who intend to be present are many Colonial members of the Association, and not a few guests from foreign countries. In addition to the Sections in which the business of the annual meeting is ordinarily carried on, there are for the first time this year Sections devoted to medicine in relation to Life Assurance and to Tropical Diseases, two departments which have grown into positions of great practical importance during the present generation.

Our Edinburgh hosts, moreover, have not forgotten to give due attention to the lighter social side of the meeting, and their plans have been cordially seconded by the citizens of Edinburgh. At the conclusion of the President's address on Tuesday evening, the members will be received by the Lord Provost in the Museum of Science and Art, and on Friday evening the Lord Provost and the magistrates of the city will give a reception and ball. Both the Royal College of Physicians and the Royal College of Surgeons will give receptions, and the first-named body has granted the use of its house on Thursday to the Ladies' Committee, by whom a *conversazione* will be given on that evening. The Royal Medical Society also will hold a reception, and private hospitality will be extended on a generous scale, so that there will be no difficulty in finding opportunities for relaxation after the business of the Sections is over for the day.

By many the annual meeting of the Association is made a part of a summer holiday, and the excursions which are arranged to take place after the meeting are always looked forward to with pleasurable anticipations. Edinburgh is unrivalled as a centre from which excursions long or short may be made, and the list which has been arranged by the Excursions Committee is so large and so inviting that some embarrassment may well be felt in making a choice. But it will be impossible to make a mistake, for each and every trip will take the traveller through beautiful scenery, and will make him acquainted with the warm Scottish welcome which our brethren across the Tweed are ready to extend.

But although the annual meeting is the chief event of the Association's year, it is far from representing the whole or indeed the major part of the work done by and through the Association from week to week throughout the year not only in these Isles but in every part of the British Empire. By the formal recognition of the New Zealand Branch the organisation of Branches in all the principal British Colonies has been completed. The whole of Australasia is thus brought into direct relation with the parent Association, and we may heartily join in the aspiration that this new link may strengthen the feeling of brotherhood among the scattered members of a profession who, by the very nature of their duties, often find themselves isolated from their fellows in communities which have an inadequate conception of the aims of hygiene and medical science. The Association, through its Council, its standing Committees, and special Committees, is in a particularly favourable position to investigate questions affecting medical interests, and to bring arguments and evidence to bear upon the Government and

upon public opinion. In this way it has been largely instrumental in effecting those reforms in the constitution of the medical department of the army which are about to be embodied in a Warrant constituting a Royal Army Medical Corps. It has assisted in educating public opinion upon the question of the regulation of the conduct of midwives in this country, and has seen the main principles for which it has contended adopted by the General Medical Council and by the Government. It is now engaged in urging upon Parliament the amendment of legislative proposals concerning local Government in Ireland, the superannuation of Scottish Poor-law medical officers, and the improvement of the Vaccination laws. Other questions affecting the interests of the medical profession are still in the preliminary stage of inquiry and discussion. Chief among these may be reckoned the amendment of the Medical Acts with the view of rendering them more efficient in the prevention of quackery and unqualified practice. But the Association wisely considers it to be its duty to look beyond the material and social interests of the profession, and to take its part in advancing the study of those institutes of medicine upon which the whole fabric rests. For many years past it has annually voted a sum of money for the advancement of scientific medicine by research, which is distributed on the recommendation of a special Committee, of which many leading pathologists and physiologists are members. At the present time it maintains three research scholarships, and in addition makes numerous grants to independent workers.

Since the beginning of this year it has been found that the financial position of the Association warranted the purchase of the freehold of the building which it now occupies in London. The Association thus has now a permanent home, and the deepest gratitude of all members is due to those who so long and so conscientiously have watched over its business affairs, and especially to Mr. Fowke, the General Secretary, who for nearly thirty years has given unstinted labour to the work of consolidating the financial position of the Association.

Finally, among the agencies which the Association maintains for the benefit of its members must be mentioned this Journal, which forms the most effective link between our scattered members and Branches, while affording a means of intercommunication and of advancing the scientific work of the profession by bringing to its members the new discoveries, new theories, and new observations of clinical and pathological workers not only in the British Empire but throughout the world. The Journal has lost in Mr. Ernest Hart, its late Editor, one under whose direction it had grown from a comparatively small periodical with a small circulation to a position in which it may claim to be one of the leading medical journals in existence. The number of members of the Association continues to show a steady growth, and the circulation of its Journal has increased so that at the present time more than 21,000 copies are printed weekly. The Association is powerful through its numbers, its extensive organisation and its Journal; it takes the lead in promoting reforms, for there is no other body in which the rank and file of the profession in all its departments are so well and directly represented. But it can do its work for the profession effectively only when there is practical unanimity as to the object to be attained, and the means to be employed. The prosperity of the Association, which is in itself the best proof that it meets the needs of the profession, depends upon the loyal co-operation and hearty goodwill of many workers and of all its members. Criticism is useful, and the power of adaptation is a proof of vitality, but it is easier to destroy than to build, and all honour should be given to those who have contributed to build up this great Association.

THE ESTIMATION OF THE MERITS OF HOSPITALS.

We announced in our issue of May 28th that the Visiting Committee of the Prince of Wales's Fund was on the point of beginning its investigations, and had appointed as Chairman Sir Trevor Lawrence, and as Vice-Chairman Lord Duncannon.

The whole profession and the public, not in London only, but throughout Great Britain, will watch with intense interest this, the first attempt which has ever been made to determine the relative merits of the various hospitals in the metropolis. It is indeed a great task, and we can only hope that those who have undertaken it will prove successful in discharging it worthily. If they do they will receive in no scanty measure the gratitude of a public now bewildered between the desire to help the sick and the consciousness that they are no judges of the merits of the various institutions which profess to be founded for that purpose.

We hope that it will not be judged presumptuous on our part if we venture on a statement of the main points to which any such investigation ought to be directed. The objects of the inquiry are, we presume, twofold: 1. To establish some test by which those hospitals shall be excluded from the list which are undeserving of public support. 2. To classify those retained on the list in the order to which they are entitled by their merits and their needs, taken together.

The first object is not so simple as at first sight it would appear. Besides the exclusion of those so-called "hospitals" which are private speculations, and those which are superfluous, there are others founded to support a quackery, and it is clear that when any form of quackery is fashionable a committee of laymen may easily be led into giving public patronage to the most undeserving objects. We are glad, therefore, to see that the chairman, at any rate, of the committee is a surgeon, and one who bears a name ever to be honoured among surgeons. But it is certain that Sir Trevor Lawrence's committee have some tough problems awaiting them at the threshold of their career, and that they must think seriously on the consequences of throwing open the fund permanently to an *omnium gatherum* of institutions.

When the first question has been settled, and a hospital has been placed on the list, the second question, that of its comparative needs and merits, is hardly less difficult. Roughly speaking, the present needs of a hospital may be estimated by taking on one side its income in the present year from subscriptions, donations, and investments, with the addition of an average sum for legacies, calculated on the experience of a given number of years; and on the other the average for the same period of ordinary and extraordinary expenditure. Even this matter, however, is complicated by the consideration of how the income has been obtained, and how the expenditure is controlled. Begging and touting are not regarded as commendable in private life; and

what is disgraceful to a citizen ought not to be rewarded in an institution. The policy of spending freely what you have not got and only hope to get by public begging, and by the usual machinery of "charity" entertainments, has been carried much too far; and it would be well if it could now receive a check at the hands of the managers of this Fund. The control of the expenditure, too, involves the whole management of the hospital, its constitution, the part which the subscribers take personally in voting and superintending the expenditure, and many other matters which can be judged only by personal and thorough investigation.

Again, the report of the Fund just issued has very properly pointed out that many of the older hospitals require thorough repair, in some cases almost reconstruction. This is an obvious need, yet one which it requires a very intimate knowledge of the hospital in question to estimate accurately. Too great facility in admitting such claims would lead to giving a very undesirable stimulus to that love of "bricks and mortar" by which the managers of all large establishments are so often inspired.

In estimating the needs of hospitals, are their histories to be taken into account? The examples of Guy's and St. Thomas's naturally occur to the mind; both are in sore need, but in the case of the former it is believed that the need is caused only by the fall in the value of agricultural land, while in that of the latter a huge expenditure on a costly building is thought to be a large element in producing the present state of things. If so, are the errors of their predecessors to be in any way charged against the present managers? We have mentioned a salient instance, but St. Thomas's is not the only hospital whose needs have been attributed in part to improvidence.

Lastly, how are the merits of a hospital to be estimated and compared? The great merit of a hospital is that it should admit no one who ought to be excluded, and exclude no one who ought to be admitted. The first thing, therefore, which the Committee would have to settle is what constitutes a claim to admission as an in-patient or an out-patient; and when they have solved this pretty problem, what means are taken at the institution in question to admit the eligible and exclude the ineligible? This, again, involves all sorts of minor questions—of governors' letters for in-patients and out-patients; of investigation into the patient's circumstances, medical and other; of payment by the patients; of the rights of organised bodies of subscribers such as workmen's clubs—besides many other considerations which will occur in the course of the investigation. If we place in the next rank the efficiency of the treatment given, we shall not perhaps be far wrong, and in this connection will occur the very difficult question how far the out-patient treatment is efficient. Do the mass of the out-patients get any real treatment? Do they swallow the medicine which they carry away, and if they do, is that really efficient treatment for their ailments? We presume that as to the in-patients the Committee will be satisfied that there are proper arrangements for treatment, an adequate staff, and adequate attendance by the members of the staff in person.

Then comes the thorny question of "casualties." Is it or is it not a merit in a hospital to admit all comers to some at any rate of its benefits? At some great hospitals—St. Bartholomew's, for example—all persons who apply receive some treatment if there is anything discoverable the matter with them. At others—for example, St. Thomas's—a selection is made, and the persons rejected receive no treatment at all. Which plan is meritorious? Ought hospital charity to be distinguished from all other by the fact that it makes a merit of being indiscriminate?

All these matters concern all hospitals; but there are many other questions which concern only special hospitals. These are certainly more exposed than the general hospitals to the abuses so widely alleged to exist in the out-patient department, and are much more likely than the general hospitals to be used for the illegitimate advantage of their medical officers.

Then there are local considerations. Allowing that the hospital is wanted, is it wanted where it is, or should it be set up in a part where it is more needed? If the Committee should so determine, even though its removal may be judged at present impracticable, its situation might largely detract from its merits.

Such are some of the main factors in determining the merits of a hospital. They are by no means all; the experience of the Committee will soon supply others; and then comes the very difficult task of striking a balance between needs and merits, and arranging the various hospitals in anything like fair order. If the Committee succeed in doing this, or anything like this, so as to escape severe blame not from disappointed institutions only but from the public also, they will indeed have done well.

OUR WIDOWS AND ORPHANS.

A CORRESPONDENT, whose letter will be found in another column, calls attention to two points in the working of the Society for the Relief of Widows and Orphans of Medical Men, which certainly seem to require consideration on the part of all who are interested in the Society. If it be a fact, as he states, that it depends on the caprice of a committee whether those left behind benefit by the subscriptions paid by a member during his lifetime, then it is easy to understand why new members are not attracted to it, and why, though its wealth accumulates, its men, or members, decay. We believe, however, it will be found on investigation that there is no caprice whatever in the matter; that every widow or orphan who is eligible receives assistance as ample as the funds of the Society permit, and that the impression to the contrary liable to be produced by the extracts from the by-laws sent to all applicants is due to their unfortunate wording, which seems to us to require revision. With reference to this point we have examined the by-laws of the New York Society for the Relief of Widows and Orphans of Medical Men, and find that under them the annuities allowed are: to the widow of a member an annuity of 400 dollars (say £80) a year, but for every 10 dollars, or multiple of 10 of income, an amount equal to 50 per cent. of said income shall be deducted from the annuity. The principle is the same as in the London society, on which the New York one was, we believe, modelled; but the wording makes it clear that the widow is not only eligible but entitled to receive the annuity. As to the restriction of the benefits of the Society to Londoners, we find from a short account of its history, published in 1888, on the occasion of the centenary of the society, that its original name was the Society for the Relief of Widows and Orphans of Medical Men in London and Its Vicinity; but this was altered by the Royal Charter of 1864, to the Society for the Relief of Widows and Orphans of Medical Men. This, says the historian, was a very important change,

as it enabled all members of the profession to become members of the Society. Up to the present, however, the society continues to be limited, by by-law, to those residing, when they join it, within 20 miles of Charing Cross, though if they afterwards remove elsewhere they can continue their membership. It seems clear that a thorough revision of the by-laws is urgently required, if the Society is to be brought into line with the requirements of the present day.

KRYPTON.

Professor W. Ramsay, of University College, London, communicated to the French Academy of Sciences on June 6th, and to the Royal Society on June 9th, an account of the discovery of a new element in the atmosphere. This gas, of which air contains probably not more than 1 part in 10,000 of its volume, was obtained from a volume of 750 c.cm. of liquid air supplied to Professor Ramsay, and to Mr. Morris W. Travers who has been associated with him in this research, by Dr. Hampson. This volume was reduced by evaporation to 10 c.cm. This residue was purified from oxygen by metallic copper, and from nitrogen by a mixture of magnesium dust and lime, followed by sparking with oxygen in presence of caustic soda for five or six hours. There then remained 26 c.cm. of a gas which presented, besides the weakly-defined spectrum of argon, an additional spectrum till then unknown. It was characterised by two exceedingly brilliant lines, one being almost identical with D 3. The other, green, may be compared in intensity with the green line of helium. Its wave length was 5566.3. Another, slightly weaker, gave 5557 3. The density of the gas was approximately 22 5, that of oxygen being 16. According to the velocity of sound, the ratio of specific calorics is 1.666, the same as that of argon and helium. It therefore follows that the new gas is monatomic and is an element. The position of this new element, which is less volatile than oxygen, nitrogen, or argon, in the periodical table has not been determined in an absolute manner, but the conjecture is hazarded that the pure gas has a density of 40 and an atomic weight of 80, and that it may be classed with helium. M. Berthelot, through whom the communication was made to the Academy of Sciences, has examined, in a Plücker tube, a small supply of the new gas sent to him by Professor Ramsay, and has verified the spectroscopic observations.

EXPERIMENTS ON LIVING ANIMALS.

The annual reports and returns of the inspectors under the Act commonly called the Vivisection Act have just been issued as a Parliamentary paper. Dr. Poore, Inspector for England, reports that the number of persons who held licences during 1897 was 224, of whom 61 performed no experiments. The tables show that licences and certificates have been granted and allowed only upon the recommendation of persons of high scientific standing, that the licensees are persons who by their training and education are fitted to undertake experimental work and to profit by it, and that such work has been conducted in suitable places. The tables showing the number and the nature of the experiments is divided into two parts for the purpose of separating experiments of the nature of inoculations and hypodermic injections or similar proceedings from the rest, and attention is again drawn to the fact that the only experiments performed without anæsthetics are of the nature of inoculations or hypodermic injections. We have in previous years called attention to the manner in which these inoculation experiments serve to swell the total number of experiments returned as performed under the Act, so that the antivivisectionists are enabled to indulge in such expressions as that "80 per cent. of vivisections are performed under exceptional certificates which remove all restrictions upon the tortures inflicted." Dr. Poore points out that it would be cruel rather than otherwise to anæsthetise an animal before subjecting it to the trivial operation of a prick with a needle, and yet the wording of the Act is such that the administration of anæsthetics can in no case be dispensed with except by a certificate (A) stating that "insensibility cannot be produced without necessarily frustrating the objects" of such experiments. Notwithstanding that the wording of Certificate A is not wholly applicable to the circumstances, it is nevertheless allowed for inoculations. The reason for the increase in the number of such experiments is that the rapidly-growing knowledge of diseases caused by inoculable organisms has necessitated the study of the life-history of such organisms by inoculation experiments and other measures. Further, inoculation is largely used for the diagnosis of disease in man and animals, to determine the necessity or otherwise of surgical interference, and to decide whether valuable herds of animals shall be sacrificed or preserved. Again, the discovery of antitoxins has led to their preparation on a large scale; but, as these remedies cannot be safely and effectually used upon human beings without being previously tested upon rodents, the preparation of antitoxins has necessitated a large number of inoculation experiments. Further, a considerable number of experiments so returned—but as we think improperly—are those made with the object of diagnosing rabies, for the public have largely acted upon the advice contained in the notice printed by the Government upon the backs of dog licences to the effect that if a dog suspected of being rabid is killed after it has bitten any person or animal, the spinal cord should be forwarded to the Brown Institution or some other licensed institution in order that it may be ascertained with certainty whether the animal was suffering from rabies. Of the remaining experiments more than three-fifths were of such a nature that the animals could suffer no pain because complete anæsthesia was maintained from before the commencement of the experiment until the animal was killed. In the remainder the animal was anæsthetised during the operation but was allowed to recover, but inasmuch as in order to ensure success such operations are necessarily done with as much care and with as much regard to antiseptic precautions as are similar operations in the human subject, no pain results during the healing process. In Ireland the number of experiments performed during the year was not large, and the inspector, Sir Thornley Stoker, reports that they appear to have been of a useful character and humanely carried out. It should be said that in England and Scotland the total number of physiological experiments was 1,462, and of experiments by inoculation or hypodermic injection—many of which were, as we have observed, rather administrative than scientific—7,360.

DEATH AND TORTURE UNDER CHLOROFORM.

The current number of the *Nineteenth Century* contains a paper in which, under the above melodramatic title, Mrs. King deals not so much with "death under chloroform" as with the methods of giving the anæsthetic. Were it not that her paper will probably be read by many persons as little acquainted with the subject as she is herself, we should not deal with so singularly weak and carelessly-prepared a diatribe. As it is, one or two points are advanced based upon absolutely mistaken and false premisses, and ought to be noticed. Relinquishing all her former positions, this lady now states that there are two schools among those who give chloroform—those who hold "the pad" at a respectful distance from the patient's face, and those who do not. For the latter Mrs. King suggests the picturesque name of "stiflers." She assures us that Dr. Lauder Brunton and others state that most deaths occur under chloroform from asphyxia. But this statement might be extended, as Dr. Lawrie would tell her that all fatalities result from it. Mrs. King, however, is unfortunately talking about what she does not understand, for she mistakes the meaning of the word "asphyxia," assuming that it connotes not the paralysis of the respiratory centre in the medulla oblongata due to over-narcotisation, but the mechanical act of smothering by holding something tightly over the nose and

mouth. Of course, to speak of "a school of anæsthetists" which teaches what Mrs. King calls the stifling method, is a fond fiction arising from her personal experience with some medical men who appear to have made her very unhappy while she inhaled her chloroform. It is really absurd that a lady whose articles show in every paragraph how completely ignorant she is about chloroform, should, after a personal experience of inhaling an anæsthetic only twice in England and twice in India—we are not at all sure that it may not in two instances have been ether after all—and having acquired some crude notions from the Hyderabad Report and the *Hospital*, undertake to enlighten the public about chloroform and the correct way of administering it. Nor is this all. She appeals, with all the persuasive force of the shrieking sisterhood, for legislation to protect the "unhappy poor" who take chloroform in our hospitals, and warns the richer folk to avoid the "stiflers," and patronise those gentle souls who will solemnly vow never "to hold the pad" near the face! There is no doubt that individual practitioners might be found whose method of giving chloroform leaves much to be desired. Happily, the old method of Syme, of unstinted chloroform poured on a towel, is passing into desuetude, and the special study given during the past years to chloroform and its administration, in which the British Medical Association has taken so conspicuous a part, has led most medical men to adopt methods that allow of the regulation of the dose of the anæsthetic to the need of the individual. And yet Mrs. King upholds the "open method" to admiration, and sniffs in contempt at the "young men," who, she is informed, refuse to give chloroform unless from a regulating inhaler. It is curious to find Mr. Knowles, the most exacting of editors, admitting such a production. It is pretty certain that an article on history, or literature, or politics containing mistakes of a similar grotesque kind would never have appeared in the periodical which he directs with so much ability. The occurrence suggests certain obvious reflections as to the present state of scientific education in this country.

WHITE WINE.

An old caricature of Cham's depicted the horror of a French gentleman who had made inquiries of his wine merchant as to the prospects of the vintage, and had received the reply that the outlook was good, for the price of potato spirit had fallen and the supply of fuchsine was ample. During the bad years after the phylloxera, the public mind became firmly imbued with the belief that the red wines of France were particularly liable to be adulterated. The notion that white wines were less likely to be sophisticated gave rise to a fashion which has continued after the belief on which it was founded has ceased to have any good ground. We do not propose to attribute to French wine makers any exceptional increase of conscientiousness, but the fact appears to be that recent vintages have been so copious that it is not worth while to adulterate. Nevertheless, the public belief in a greater purity of French white wines persists, and, as one consequence, they have become dearer than red wines of corresponding quality. Supply follows demand, and producers of red wine have set about to find means to convert it into white. Recent analyses made in France prove that one mode of obtaining this end is to treat red wine with a mixture of animal charcoal and potassium permanganate. This process bleaches the wine but at the same time leaves a considerable quantity of manganese in solution. Wine which has thus been treated can be recognised by adding to it in an open vessel an excess of caustic soda and shaking. After a few minutes a thin brown layer forms on the surface of the liquid due to the oxidation by the air of the oxide of manganese set at liberty by the alkali. There can be no doubt that this manipulation, which transforms red wine into white, renders it less wholesome; and it is curious to reflect that this has been brought about by the desire of the public to escape from adulteration. Seeking to avoid fuchsine, they are now dosed with manganese. Well may M. Hugounenq, the analyst who drew attention to this new device, exclaim that the making of wine is becoming more and more complicated. To understand it, he says it is necessary to have an acquaintance with chemistry which is growing more and more extensive. Whether it is really wiser to drink white wine or red wine, even supposing that both were pure, is open to doubt. There is great rivalry between the white wine and the red wine districts in France, and a statistician has recently attempted to decide the question by comparing the number of old men living in a district where red wine is drunk with the number living in a district where white wine is drunk. He counted the electors in each district, and found that in the white wine district 2.9 per cent. were over 75 years of age, whereas in the red wine district 4.9 per cent. were over this age. The numbers are hardly sufficiently large enough to give the percentages much value in settling the question as to which kind of wine conduces to longevity, or is least inimical to it. Further, the white wine districts are richer than the red wine districts, so that possibly the difference in the number of old men, if it exist, may be due to the quantity and not the quality of the wine imbibed, or we may accept the alternative that the white wine bibbers have been drinking the decolorised red wine, which would doubtless account for their early decease.

THE NEW VACCINE LABORATORY.

The new laboratory for the preparation of glycerinated vaccine lymph, which has been leased by the Local Government Board in the new buildings of the British Institute of Preventive Medicine, will probably be ready to be taken into use in the course of next week. The laboratory will be in charge of Dr. F. R. Blaxall, Lecturer on Bacteriology at Westminster Hospital Medical School, and we understand that the post of assistant has been offered to Dr. H. S. Fremlin. The calves which will yield the vaccine will for the present be kept at the institution in Lamb's Conduit Street, but the work of preparing vaccine with glycerine and of testing its bacterial purity will be carried on in the new laboratory in the British Institute of Preventive Medicine.

"HEADACHE POWDERS."

An inquest was held recently on the body of a young man who died from the effects of taking two "headache powders." From the analysis of the contents of the stomach it appears that the powders in question were composed of antifebrin, but the exact quantity administered was not ascertained. Antifebrin, like most aniline derivatives, is a drug which should be employed with especial caution. It is official under the name of acetanilide, and its potency is sufficiently indicated by the fact that the maximum dose assigned to it is only 3 grains. There have been many cases of poisoning from the injudicious administration of this remedy, the symptoms produced by it being of the aniline type. The patient usually complains of giddiness, noises in the ears, throbbing in the temples, and a dull, heavy pain in the head. The face becomes livid, the lips are blue, and the pupils are contracted. This is followed by symptoms of collapse, the face and extremities are cyanosed, the skin is covered with cold clammy perspiration, the pulse is feeble, and respiration becomes shallow and frequent. There is no specific antidote, and after the administration of a brisk emetic the sufferer should be kept in a strictly recumbent position, and plied vigorously with stimulants. The effects are usually of considerable duration, and in one case the patient was not out of danger for fourteen hours. We are informed that there is a considerable demand for powders of this description, the purchasers being chiefly young women of the sempstress class. Whether the sale of these drugs should be in some way restricted may be an open question, but it is quite clear that some intimation should be given that they are not free from danger, and that they cannot be taken in unlimited

quantities with impunity. Many people acquire an unfortunate habit of dosing themselves with remedies of unknown composition, and this death under such sad circumstances may be taken as an indication that the custom is not one which can be indulged in with safety.

LORD LISTER.

LORD LISTER will in October next open the new Physiological and Pathological Laboratory at University College, Liverpool. The honorary degree of Doctor of Science will be conferred upon him by the Victoria University on this occasion. A clause in the charter prescribes that all honorary degrees must be conferred in a building provided by Owens College, but the Court of the University at its meeting recently gave its consent to the degree on this occasion being conferred in Liverpool.

SIR ROBERT RAWLINSON.

SIR ROBERT RAWLINSON, who died last week at the age of 88, rendered many important services to public health in this country. For years he was Chief Engineering Inspector to the Local Government Board, and acted as Chairman of the Royal Commission on the Pollution of Rivers in 1866. The most striking episode in his career, however, was his appointment to be a member of the Special Commission which was sent out to the Crimea to take steps to remedy the terrible condition of things which had been brought forcibly under public notice by Mr. (now Sir W. H.) Russell, the correspondent of the *Times*. For once the War Office capitulated at discretion, and gave to this Committee, which consisted of Dr. Sutherland, Dr. H. Gavin, and Mr. Rawlinson, full power to examine into the causes of the unhealthy state of camp and hospitals, to find remedies for them, and to superintend the application of these remedies from day to day until they were completed. Common sense was substituted for red tape, and expert knowledge, previously stifled, was permitted to take the place of that "incompetency, lethargy, aristocratic hauteur, official indifference, favour, routine, perverseness, and stupidity," which then, we are told, reigned, revelled, and rioted in the camp before Sebastopol, in the harbour of Balaclava, and in the hospitals of Scutari. The Commission went to work with a will, and in a few weeks, to quote the words of the historian of the war, effected "a change which if only it had been preceded by mummery, instead of ventilation and drainage, would have easily passed for a miracle." Rawlinson was not always judicious in the way in which he sought remedies, and in some instances showed defective judgment in visiting on individuals faults which were really those of the system by which they were bound hand and foot, but the emergency was pressing, the difficulties were great, and at the present day we need only remember that the emergency was met and the difficulties completely overcome.

SANITATION IN THE ISLE OF WIGHT.

WHILE some of the largest towns in the Isle of Wight have councils and water supplies, sewerage schemes, surveyors, and medical officers of their own, a very large portion of the island is under the care, sanitarily, of a Rural District Council. We gather from the very complete report presented to this body by their very able medical officer that the first triennial term of office of this Board is about to expire, and Dr. Groves seizes the opportunity to review at some length the good work which they have been able partly to accomplish, partly to initiate during this period. Dr. Groves however is neither a mere *laudator temporis acti*, nor a sycophantic prophesier of smooth things. He apportions praise ungrudgingly where it is due, but does not hesitate to point out the wiser course where the authority he advises seem in danger of choosing the easier rather than the better path. On the whole he has much progress to report; sewerage schemes are being carried out or arranged for, water supplies extended or new ones contemplated, and there are not many councils for large rural districts which can boast a greater amount of sanitary progress for the period they have held office. It is to the reverse side of the shield, however, that Dr. Groves feels it necessary specially to direct the attention of the authority, and many pages of the report are devoted to the careful consideration of such matters as sewerage and water supply in individual townships. Dr. Groves carries his readers from one end of the island to the other, explaining here why certain wells are sources of danger to those using them, or how elsewhere by tapping certain water-bearing strata wholesome water can be made to gush out of the rock, in each case manifesting a familiarity with the conditions of life in the village, the geological formation of the district, and at the same time showing a careful consideration for the pockets of the ratepayer. We can heartily congratulate the retiring rural authority upon the results of its three years' work, and the members who shall succeed them, upon their good fortune in finding in office an expert health officer with the talent, energy, and farsightedness which characterise Dr. Groves.

AN AMERICAN VIEW OF THE LONDON MEDICAL MAN.

IT is proverbially useful to see ourselves as others see us. It may therefore be instructive as well as interesting if we give the gist of some Notes on London and Vienna Hospitals, recently contributed by Dr. John E. Somers, of Cambridge, Mass., to the Boston Gynecological Society. He remarks at the outset: "That London is a great medical centre is beyond question, but that London is not a great medical teaching centre for post-graduate work is also as much beyond question. Post-graduate teaching is not organised, not systematised, at least not in the manner nor to the extent we would have a right to expect in such a large centre of population." On this charge we must sorrowfully return a true bill, but we hope that the grievous deficiency of organisation will before long be remedied. Dr. Somers speaks with high praise of the clinical opportunities and sound teaching in several of the special hospitals of London; but he says that "in internal medicine and in surgery a medical man must only jump around from one hospital to another, picking up what he can and as best he can in the various lines of his profession." He admits that the operating rooms of most of the large hospitals "average better" than those of his own country; but some—notably the historic theatre of University College Hospital—are not up to the mark. To Dr. Somers it was a most surprising thing "to find a city with a population of nearly 5,000,000 supplied with adequate hospital facilities for the treatment of every ail, both medical and surgical, to which man is heir." This, he thinks, shows two things: (1) That the people must be most liberal and charitable; and (2) that their public charities from a financial standpoint are well organised. With regard to this point, while we are pleased that our hospital organisation finds favour in the eyes of an American critic, candour compels us to say that we think it hardly deserves his praise. Dr. Somers was much surprised "to find in the former home of chloroform the almost universal use of ether," and unlike most of his countrymen, he thinks that as regards anæsthesia London practice is a distinct advance over the methods in the United States. The antiseptic work in our hospitals he thought hardly up to the standard attained in the large cities of the States. He admits that the English surgeon as a rule operates with care, and is sufficiently conservative, but he lacks that dexterity, grace, and finish found on the other side of the Atlantic. The sanitary conditions of the various London hospitals he pronounces to be generally speaking behind the times. Dr. Somers's opinion of London doctors must be given in his own words: "The London medical man strikes you as haughty and entirely unapproachable, and you in turn are entirely mistaken, for underneath that cold demeanour you will later discover a warm-hearted gentleman. He has his faults, of course. That is nothing. His ancestry is ancient,

and his pedigree is long. He never descends to frivolity. He is too ponderous to comprehend a joke. That would be *infra dig.* He moves about in the outside world but little. That is in the little world outside of London. His knowledge of American medical men and literature is limited. He never for a moment loses consciousness of ownership in the whole world, never for a moment lessens in the strength of his belief that the Lord first built the British Isles as a nucleus, and then created the rest of the world round it. These little vanities, these little sentiments do not detract from the work of the man. He is always courtly, never condescending or patronising in his manner. He is too much of a gentleman for that. The English surgeon as you enter the operating room strikes you as rather a formidable personage, and you secretly wonder within yourself whether or not you dare ask any privileges of such a man. However, you will find that when the thin coating of ice with which he is invariably covered has melted away there stands revealed a very fine fellow, and although still reserved always glad to be of assistance to you." We hope the London medical man will not be unduly exalted by these compliments, and in particular that he will not presume too much on his long pedigree. Before taking leave of Dr. Somers we feel it our duty to assure him that a London medical man has been known to "comprehend a joke."

JUVENILE SMOKING.

ACCORDING to the newspapers, a drastic measure directed against the evils of juvenile smoking has been drafted by the Social Committee of the Norwegian Storthing, and, it is expected, will pass into law. It absolutely prohibits the sale of tobacco in towns to persons under the age of 16. In country districts tobacco may be sold to juniors if provided with a written order for a certain limited quantity signed by some person actually known to the seller. It will be open to any country authority, however, to enforce the more stringent regulations applicable to the towns. In town and country alike grown-up persons will be strictly prohibited from furnishing juveniles with tobacco, either in return for payment or otherwise. No person under 16 will be allowed to be employed in a tobacco factory. The police will be authorised to take pipes or tobacco from any juvenile found smoking in a public place. The penalty for contravening the law ranges from 2 to 100 kroner. The question of the supply of tobacco to "tender juvenals" was raised in the House of Commons a week or two ago, when Mr. Lough asked the Chancellor of the Exchequer whether he was aware that at many general shops in which tobacco was sold it was customary to give children of 9 or 10 years of age who bought other goods free cigarettes; and whether a regulation could be introduced that would make the licence of any tobacconist liable to forfeiture who gave tobacco in any form, without receiving direct money payment, to children under 16. The Chancellor of the Exchequer, in reply, said he was not aware of the practice to which the hon. member referred. There was no provision in the law for attaching such a condition as he suggested to the grant of a tobacco dealer's licence; and he saw no ground for legislating on the subject. There can be no doubt, as we recently had occasion to point out, that excessive cigarette smoking, especially in youths, acts injuriously on the digestive and nervous systems, and also on the heart; but although a coroner in the North of England recently said that there appeared to be an epidemic of deaths from cigarette smoking among young persons, there is not, as far as we are aware, any trustworthy evidence of the serious prevalence of the evil in this country. The case appears to be different in the United States. We attach little importance to the frequent occurrence of such lurid headlines as "A Bright Schoolboy made a Lunatic by Cigarettes;" "Crazed by the Use of Cigarettes;" "Eleven Year Old Boy in Prison: A Wreck from Cigarette Smoking," in the American papers, which are nothing if not sensational; but there is the hard statistical fact that last year over four billions of cigarettes were sold in the United States, largely to young persons. It is small wonder, therefore, that the Legislatures of Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachussetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wisconsin have passed stringent enactments forbidding the sale, barter, or giving of tobacco to young persons. The age of minority for this purpose is fixed by most of these States at under 16; in one or two cases it is 14, and in a few it is as high as 21. These legislative restrictions are not founded upon any belief that American cigarettes are largely adulterated with dangerous substances, for it has been shown by repeated analysis that both paper and tobacco are as a rule free from such admixture. The enactments are based on the conviction that the use even of pure tobacco is so injurious to the young as to justify its prohibition in the interest, not of the individual alone, but of the State.

"DEPOT SORE THROAT" AT PORTSMOUTH.

A CORRESPONDENT writes: A number of men and officers of Her Majesty's navy quartered in the hulks and on board the ships in Portsmouth Harbour have been laid up with a disease euphemistically called by the naval medical authorities "depôt sore throat." Its distinctive clinical features are *malaise*, a high temperature of about 103°, and in some cases more; a sore throat with white patches of a follicular or diphtheritic character; much consequent enlargement of the glands at the angles of the jaw; pain in the limbs, and rather slow recovery. It is undoubtedly infectious; whether it be an infectious form of follicular tonsillitis, or an abnormal development of influenza, or, again, an outbreak of mild diphtheria (as seems not improbable), the authorities have not yet decided. In our opinion such names as "depôt sore throat" are dangerous screens for want of pathological certainty, and we would recommend the Admiralty authorities to appoint a Sanitary Committee of medical specialists, including some trained bacteriologists, thoroughly to examine the matter—for example, the condition of the rather old hulks in which the men are stowed, the drainage into the harbour, the water supply of the ships, and the exact bacteriological nature of the throat lesions, lest a worst thing happen to Her Majesty's navy. There are already several secondary cases among the families of naval men and marines on shore. If the epidemic is one of follicular tonsilitis, why is it so widely infectious; if of diphtheria, why are the Admiralty shutting their eyes?

THE ELIMINATION OF THE MUSSACK.

THE question of the water supply to troops in India occupies a large space in the report of the Army Medical Department for 1896. A great deal is being done to lessen the mortality from enteric fever, which claimed a larger number of victims in 1896 than in the years 1886 to 1895. Surgeon-Major Davies (late Assistant Professor of Hygiene at Netley) was directed to make sanitary and bacteriological examinations at Subathu and Dagshai. His reports, now printed, are said to be the first of this nature made on any military cantonment in India. Several schemes for improved water supply are under consideration, and only await bacteriological reports to be proceeded with. With regard to the disposal of excreta the report says: "No system, however excellent in theory, will continue to be effective unless carried out under supervision by Europeans." The Government of India has adopted the principle of the elimination of the mussack, and is endeavouring to convey the water direct to the kitchens and lavatories by means of pipes, thus obviating the necessity of conveying water in leather mussacks by the native carriers. This is an important step in the right direction,

or it will notably diminish the risks of contamination. n a statement to the House of Lords concerning the British roops in South Africa the Marquis of Lansdowne appears to ave favoured an opinion, unfortunately deeply rooted in he popular mind, that the spread of infection in the case of yphoid fever may be due to the presence in water of decomposing animal matter or of the carcasses of animals that ave died from other kinds of disease. The Marquis of ansdowne stated that "there had been a great deal of nteric fever, due, he believed, in a great measure to the ollution of the streams from the dead bodies of the umerous cattle that had perished from rinderpest of ate." It cannot be too clearly recognised that typhoid or enteric fever is a specific infective fever, which s transmitted rarely directly but often indirectly rom patient to patient; that it is not the result of he action of putrefying or diseased animal matter; that it oes not arise *de novo*, but is always brought into a camp or arracks by a patient already suffering from the disease. The urest method of getting rid of enteric fever is to appreciate his fact. The addition of organic impurities to water does ot necessarily convert it into disease-producing water, although the presence of animal organic matter indicates the possibility of the access of infective matter. Water contaminated by sewage even may not be infective, although the presence of such sewage points to he liability of the water to become specifically infected should a case of enteric fever occur amongst the people rom amongst whom the sewage material is taken. Until his fact is thoroughly appreciated and efforts are made o trace and get rid of the sources of specific infection, much ain effort will be put forth to quell typhoid and cholera pidemics, and the real cause will be allowed to continue its peration undisturbed, and often even assisted.

FORMIC ALDEHYDE AS A DISINFECTANT.

Experimental data with reference to the disinfecting power of formic aldehyde are already very numerous, and there is no conflict of evidence as to the gas being a reliable disinfectant when used in solution. Considerable difference of opinion exists, however, as to its value when used in a gaseous state. This appears to be due mainly to the fact that the gas has generally been employed in quantities far too small. The good results which have been recorded from the use of small quantities may be ascribed either to the use of weak stock cultures of the organism experimented upon or to neglect of the precautions necessary to guarantee that what is claimed as disinfection is not in reality mere inhibition. The agent has been largely used in America during the past year or two, owing to the satisfactory nature of the experiments performed by Kinyoun, Robinson, and Wyatt Johnston; in France Vaillard, Lemoine, Bosc, Roux, Trillat, and others have reported favourably upon it, and in this country the employment of the aldehyde has been advocated by Wynter Blyth, Kenwood, and Rideal. In the form of a $\frac{1}{2}$ to 1 per cent. solution, which may be used as a wash or spray, formic aldehyde is a cheap, rapid, and powerful disinfectant, costing considerably less than carbolic acid of equal germicidal strength. It possesses, however, little power of penetration. Judged from the same standpoint every known method of room disinfection would be found equally unsatisfactory. But by "room disinfection" is implied practically nothing but surface disinfection, and all articles requiring penetration must be dealt with specially. It will be difficult to find a gas or vapour which possesses greater power of diffusion than formic aldehyde, the density of which is almost identical with that of the atmosphere. The fact is that no gas or vapour can sufficiently penetrate articles of clothing and bedding when employed at the current atmospheric temperatures and pressures of living rooms, and it is absurd to expect any so-called "aërial" disinfectant to possess such powers. In aqueous solution the gas can be concentrated to about 40 per cent., in which form it is sold as "formalin," but if further concentration be attempted, polymerisation takes place and a white amorphous substance is obtained ($C_3H_4O_3H_2$), which is known as "paraform." Aldehyde vapours are non-poisonous, but very irritating to the eyes and throat; they possess marked deodorant and disinfectant properties, and are well suited to the purposes of room disinfection, for they do not affect colours, or (with the exception of iron or steel) metallic surfaces. They fix stains of blood or fæces, however, and on account of their high diffusibility are apt to escape from a room which is not very carefully sealed. In damp atmospheres a certain amount of polymerisation occurs, and Abba and Rondelli have shown that the higher the temperature and the drier the atmosphere the greater is the disinfectant action of the aldehyde. The use of the reagent in a gaseous form appears to possess over disinfection by sulphurous acid the advantages that it injures nothing except iron, it diffuses better, and it possesses greater disinfectant power. The gas can be liberated from "formalin" by heat. An apparatus invented by Trillat, in which the "formalin," containing a little calcium chloride ("formo-chloral") is heated under pressure in an autoclave, is an excellent means of room disinfection by formic aldehyde in a gaseous state, and owing to the great diffusibility of the aldehyde and the large quantities which can be generated, it is especially suitable where passages, corridors, or staircases, with communicating rooms, require disinfection at the same time. The drawbacks to the use of this apparatus are its weight, and the time consumed in getting up steam and charging the room. The cost of the apparatus is about £18, and the formalin consumed in the disinfection of an ordinary room entails an expenditure of about 2s. 6d. The production of the gas by means of methyl alcohol lamps has not been found satisfactory in practice; but considerable quantities may be conveniently and cheaply furnished by means of an "alformant" lamp, which is a lamp so constructed that the hot and moist products of combustion from the spirit burned act upon tablets of "paraform." The number of tablets recommended to be used by the vendors is 1 to every 100 cubic feet of space, but this quantity is far too small to ensure reliable disinfection.

INFLUENZA IN PREGNANCY AND CHILDBED.

During the epidemic of influenza in Paris last winter, the Clinique Tarnier suffered severely. The greatest number of patients were attacked between December 10th and 15th; by January 18th the epidemic had subsided. The report, drawn up by MM. Bar and Boullé, is of great importance.[1] Just 50 cases are reported, 40 occurring in pregnancy, 10 in childbed. Of the 40 pregnant women, 1 suffered from the nervous form of influenza, and 2 from the variety in which irritation of the alimentary canal prevailed; all the rest were troubled with respiratory symptoms. The sole patient with "nervous" influenza rapidly recovered, but 1 out of the 2 in the second class had a grave complication—pyelitis associated with infection by the colon bacillus. Of the 37 cases in which the respiratory tract was attacked, 33 went on well, at least till delivery; 4 had pneumonia, of whom 2 recovered after delivery, 1 died three days afterwards, and 1 in whom otitis and meningitis from pneumococcus infection had developed died a few hours after expulsion of the fœtus. Thus the proportion of deaths in cases of pneumonia was high. On the other hand, the influenza, though relatively severe, seemed to have no appreciable effect on the course of the pregnancy. In only 2 out of the 40 did metrorrhagia, said to be frequent in the circumstances, occur. The 10 women attacked by influenza after delivery suffered severely; 2 died, and as 2 of the 4 in the first series of 40 attacked by pneumonia died after delivery, it is not surprising to find, that while 6 of the 10 in the second or childbed series, as it may be called, suffered from the same formidable complication, pneumonia also accounts for the 2 deaths in the 10 cases. There was in addition 1 case of uterine

[1] *L'Obstétrique*, May 15th.

infection with streptococci. The 6 cases of pneumonia in childbed are classified by MM. Bar and Boullé, so as to show that the worse form of a grave complication in influenza prevailed; the list reading—2 with pneumococci, 1 with pneumococci and streptococci without infection elsewhere, yet fatal, and 3 with both microbes infecting the system, the streptococci also attacking the genital tract. One of the 3 died, and the recovery of the 2 which remained is the more remarkable, since 1 was attacked with influenza after symphysiotomy. The unfortunate patient suffered intensely from dyspnœa due to the pneumonia, from sloughy patches on the vulva, from subcutaneous abscesses under the deltoid and elsewhere, and lastly from an enormous bedsore; yet ultimately she recovered. Thus the obstetrician need never despair when his patients suffer from influenza, although they are almost certain to fare worse than other women. It would be instructive to compare trustworthy evidence as to 40 cases in private or "extern" practice with MM. Bar and Boullé's notes, which certainly will tend to prejudice us against lying-in hospitals during the prevalence of influenza in epidemic form, even when so admirably managed as is the Clinique Tarnier.

THE EMBALMING OF THE DEAD.

SIR JOHN STRUTHERS in a letter published elsewhere has courteously called our attention to an omission in our recent article on the embalming of dead bodies. We desire to apologise to the distinguished anatomist for this omission, which we proceed to repair. Sir John Struthers, in the *Edinburgh Medical Journal* of September, 1890 (vol. xxxvi, p. 297 *et seq.*), described a method of embalming for which he claims the advantages of efficiency, simplicity, and cheapness. The body is injected from the femoral artery, at a little below Scarpa's triangle, with a fluid composed of methylated spirit two-thirds, and glycerine one-third, an average amount of two gallons being employed. Some of the fluid (about two pints) should also be injected into the peritoneal cavity by puncture at the umbilicus, some into the nasal cavities and mouth, some into the bladder after any urine that may be contained in that viscus has been drawn off, and some into the rectum after previous washing out. Some may also be thrown up into the veins, also either at the femoral cut or by the great saphena in front of the ankle. The novelty of Sir John's method lies in the external application of preservative agents. For this purpose he uses carbolic acid and glycerine in the proportion of 1 of the former to 8 of the latter; if decomposition has begun a strength of 1 to 6, and if it be advanced of 1 to 4 is used. The body should be painted all over with this fluid, a large brush as thick as the wrist being used for the purpose. The fluid should be painted on "as thick as it will take without running off. Using the common cheap carbolic acid and glycerine, the body is black for the moment, but in a little time the body is white again. Repeat this process three or four times, say twice the first day, and the same next day, and the body may be regarded as cured." Sir John Struthers states that this process alone, if repeated often enough, will preserve at least an open body, but injection should always be employed as well. "The affinity of glycerine for the serum of the tissues makes it go in rapidly, carrying the carbolic with it. The perfect preservation of the skin is a special advantage of this method. If the cuticle had not already been loosened by decomposition, the skin of our subjects months afterwards is natural, with the cuticle firm. . . . . The painting of the front of the body may be done when the injection is going on by gravitation. . . . . If decomposition is far advanced, it may be arrested and the body restored by the above injection and external application being used in the strong proportions." For embalming purposes no process, says Sir John, could surpass the results of the method above described, and the cost is very small. Aromatics can be added in such amount as may be desired, and the viscera need not be removed. The body remains perfectly fresh, the features unaltered, and Sir John Struthers does not doubt would remain so and unshrunken for years, placed in a coffin or other receptacle, or with an envelope sufficient to prevent evaporation. The process may be had recourse to in the case of bodies to be sent for burial from distant parts. The body would have to be placed on a table, and the hand-syringe used; on the unshaved head it would be advisable to use spirit and perchloride of mercury alone, and on the rest of the body clear glycerine and perchloride instead of the carbolic, for the sake of appearances and to avoid the smell of the carbolic. We sometimes hear of hundreds of pounds being paid for embalming. Evidently such expense is altogether needless. It may be added that some at least of the processes used by experts in this gruesome art are worthless. As an example, it may be mentioned that in 1879 the German Government bought, in order to make public, from Wickersheimer, of the Berlin Museum, a secret process, and much was said about it at the time as an important discovery. It contained alum, cooking salt, saltpetre, potash, and arsenious acid in certain proportions (207 gr. in all), dissolved in 3,000 parts of water, and to 10 litres of this were added 4 litres of glycerine and 1 litre of methylated spirit. "I was credulous enough," adds Sir John drily, "to try it, and lost a good subject by it."

THE STRYCHNINE POISONING CASE.

THE conviction of Horsford for the wilful murder of Annie Holmes can have surprised no one who read through the evidence given at the Huntingdon Assizes. That the deceased met with her death from strychnine poisoning was certain. The symptoms set in in about twenty minutes after she took the poison, and the fatal termination was not long delayed. Dr. Stevenson found no less than 7 gr. in the contents of the viscera and tissues after death, and estimated that the dose swallowed must have been probably from 10 to 12 gr. The crime was brought home to the prisoner by evidence of the most convincing kind. The deceased believed herself to be pregnant by the prisoner and evidently took the strychnine which was sent to her by the prisoner with the belief that it would induce abortion. Even if the prisoner had given the poison with the sole intention of procuring abortion this would, as the judge was careful to point out in his charge, in no way have reduced the crime from wilful murder to one of less degree, not even though, as in this case, the woman was not pregnant. This judicial reminder that to cause the death of a woman in the attempt to procure criminal abortion is nothing less than wilful murder constitutes indeed the chief medico-legal interest in this case, which would otherwise be memorable only for the unusually large dose of the poison taken and the barefaced way in which the poison was sent by the prisoner to his victim.

METROPOLITAN HOSPITAL SUNDAY.

NEXT Sunday the annual appeal on behalf of the medical charities of the metropolis will be made in churches of all denominations, and the result will be anxiously awaited by those who are responsible for the maintenance of the voluntary system. There is no doubt that we are passing through a period of crisis which would have been still more acute but for the special assistance which the hospitals have received through the Prince of Wales's Fund. Two opinions prevail as to the influence of the Diamond Jubilee celebration upon public charities. On the one hand, it has been thought that the special efforts made last year only succeeded in diverting from their ordinary channels the gifts of benevolent persons. On the other hand, it is maintained that the impulse then given has really reached a wider area and elicited an interest among classes who were formerly indifferent. We are glad to find that Sir Henry Burdett is to be numbered among those who held the latter opinion. He calculates that upwards of one million separate people have shown their good will towards the London hospitals by voluntarily contributing something

towards their support. He further holds that the results show by the actual published accounts of the hospitals for 1897 prove that any well equipped hospital in London which puts forth sufficient efforts in wise directions can secure generous contribution from the public, despite the fact that special efforts are being made to collect money for other purposes. The data upon which these opinions are stated are contained in chapters prefixed to *Burdett's Hospitals and Charities* for 1898, which has just been issued. The facts, Sir Henry Burdett maintains, prove that there is not an average maximum contribution to charity, and this opinion ought to give confidence to those who are to make the appeal to the public on Sunday next.

UNIVERSITY COLLEGE, SHEFFIELD, AND THE VICTORIA UNIVERSITY.

At a special meeting of the University Court of Victoria University, held on June 7th, the request of University College, Sheffield, to be incorporated as a College of the University was considered. The Council reported that the College being readily accessible from the seat of the University in Manchester, and being situated in the midst of a large population, and in contact with public authorities which were giving it active support, it was by its position and local condition suitable for admission. The report recognised, also, the efforts which were being made to increase the efficiency of the College, and to prepare it for taking its place in the university system. The Council, however, considered that the application was premature, and this view was unanimously approved by the Court. At the same time, a hope was expressed that at some not distant date the application might be renewed.

MEDICAL WAR NEWS.

The following physicians, who are "yellow-fever immunes," have been selected by Surgeon-General Sternberg for medical service with the U.S. army Dr. John Guiteras, of Philadelphia; Drs. W. E. Parker and W. W. Calhoun, of New Orleans, all of whom will be stationed at Tampa; Dr. Barnard E. Baker, of Charleston, S.C., who will be stationed at Key West; and Dr. Aristides Agramonte, a Cuban by birth, whose assignment has not yet been decided upon. The *John Englis*, of the Maine Steamship Company, has been purchased for use as a hospital ship for the army. It will take about three weeks to fit her up. She will have a refrigerating plant, a distilling apparatus, and machinery for carbonating water, the latter presented by the Colonial Dames. There will be accommodation for 500 patients. It is the purpose of the War Department to use the *John Englis* not only as a hospital ship, but as an ambulance ship to transport sick soldiers to Tampa. The *John Englis* was built in 1897, and is 300 feet long, 46 feet beam, and of 3,000 tons. She has a speed of 15 knots. Dr. George H. Torney will be Surgeon-in-Chief, and will have five assistants. There will be twelve nurses on the ship. Although it is contrary to army regulations to enlist women for nurses, it is said that six from the Johns Hopkins Hospital, Baltimore, have secured permission from the War Department to join the corps of nurses to be assigned to the ship. The other six will be men taken from the hospital corps. The name of the ship will be changed to the *Relief*.

THE MEMORY OF FISHES.

British studies of the intelligence of lower animals have since the regretted death of Mr. Romanes been much too rare. For this reason, as well as for its essential merits, Professor McIntosh's article on the memory of fishes in the April number of the *Journal of Mental Science* is worth careful attention. He gives a large number of examples, some to prove piscine intelligence, while others are devoted to the study of the faculty of memory in these animals. Thus the acquirement of an artificial habit, such as the climbing of a model salmon ladder by a young trout, naturally betokens both intelligence and memory, while the rejection of all specimens of the "scaleback"—a kind of worm—after the first has proved unpalatable, demonstrates these faculties in a green cod of from 6 to 8 inches in length. The fact that some fish are more easily captured by certain definite baits may be taken to indicate a memory of the pleasant sensations afforded by previous meals. When this memory is obscured by turbidity of the water, the reminiscence is dimmed, and other baits become relatively more effectual. Professor McIntosh refers next to the fact that a large number of fish, such as cod, flounders, and dabs, when kept in confinement recognise figures approaching their tanks, and manifest the most eager expectation and excitement. Under similar circumstances, note may be taken of the care with which even young fish avoid the well-remembered tentacles of stinging anemones. There can be no doubt, also, that fish after being harassed by various implements for their capture remember to avoid them or even to change their habitat. Professor McIntosh lays considerable stress on the service rendered by memory to such fishes as the fifteen-spined stickleback in the choice of suitable materials and localities for nest building. Here, as he himself suggests, it is somewhat difficult to dissociate the memorial element from the important part played by that most mysterious of qualities, instinct. This applies still more to the examples which he quotes in reference to the care of eggs by certain male fishes, and the appropriate use of their natural weapons by others. The fact that certain fishes will return to a fresh lure while the old hook is still fixed in the jaw is attributed by Professor McIntosh to courage and voracity rather than lack of memory. He states that a porbeagle shark may present a nice discrimination in regard to hooks and lines, and "pass along a fisherman's line biting off the snoods with their attached haddocks to the number of a dozen or more, as if trained to the pursuit." The memory of this fish is thus quite equal to that of a gull, or even a porpoise. It must be remembered also that some fishes are extraordinarily hardy, so that an eel for example may live for a year or two with a hook protruding through the gut into the abdomen. The memory of the injury is thus hardly likely to be proportional to its severity. Professor McIntosh concludes his interesting article with the suggestive hint that the function of memory may possibly not be so exclusively dependent on the cerebral cortex—even in man—as is commonly believed.

NEW MEDICAL INSPECTOR IN IRELAND.

Mr. A. Edgar Flinn, F.R.C.S.I., who has just been appointed a medical inspector under the Irish Local Government Board, has been acting as temporary inspector for the past three years in the North and West of Ireland, and on several occasions has been engaged on special duty connected with the Poor-law administration. His appointment was looked upon as certain, and it has been received with general satisfaction.

We are asked to state that the offices of the Medical Defence Union have been removed from 20, King William Street, Strand, to 4, Trafalgar Square, W.C.

Mr. Howard Marsh will give the Cavendish Lecture before the West London Medical Society on June 24th. The subject of the lecture will be Growth as an Agent in (*a*) Production, and (*b*) the Removal of Deformity.

A Medical Centenarian.—Dr. Mavrogenis, the last survivor of the Greek War of Independence, has just completed his hundredth year. Born at Paros in 1798, his medical studies in an Italian university were interrupted by the rising of 1821. Fired with patriotic ardour he returned to Greece and fought against the Turks with a valour which was proved on many a stricken field. He was more than once severely wounded, but this does not appear to have impaired his remarkable vitality. Dr. Mavrogenis lives with a sister, who is said to be ten years older than himself.



Royal College of Surgeons of Edinburgh and Dome of University. (From a photograph by Mr. G. W. Wilson, Aberdeen.)

SIXTY-SIXTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

EDINBURGH, 1898.

THE Sixty-sixth Annual Meeting of the British Medical Association will be held in Edinburgh on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, and 29th.

THE INVITATION.

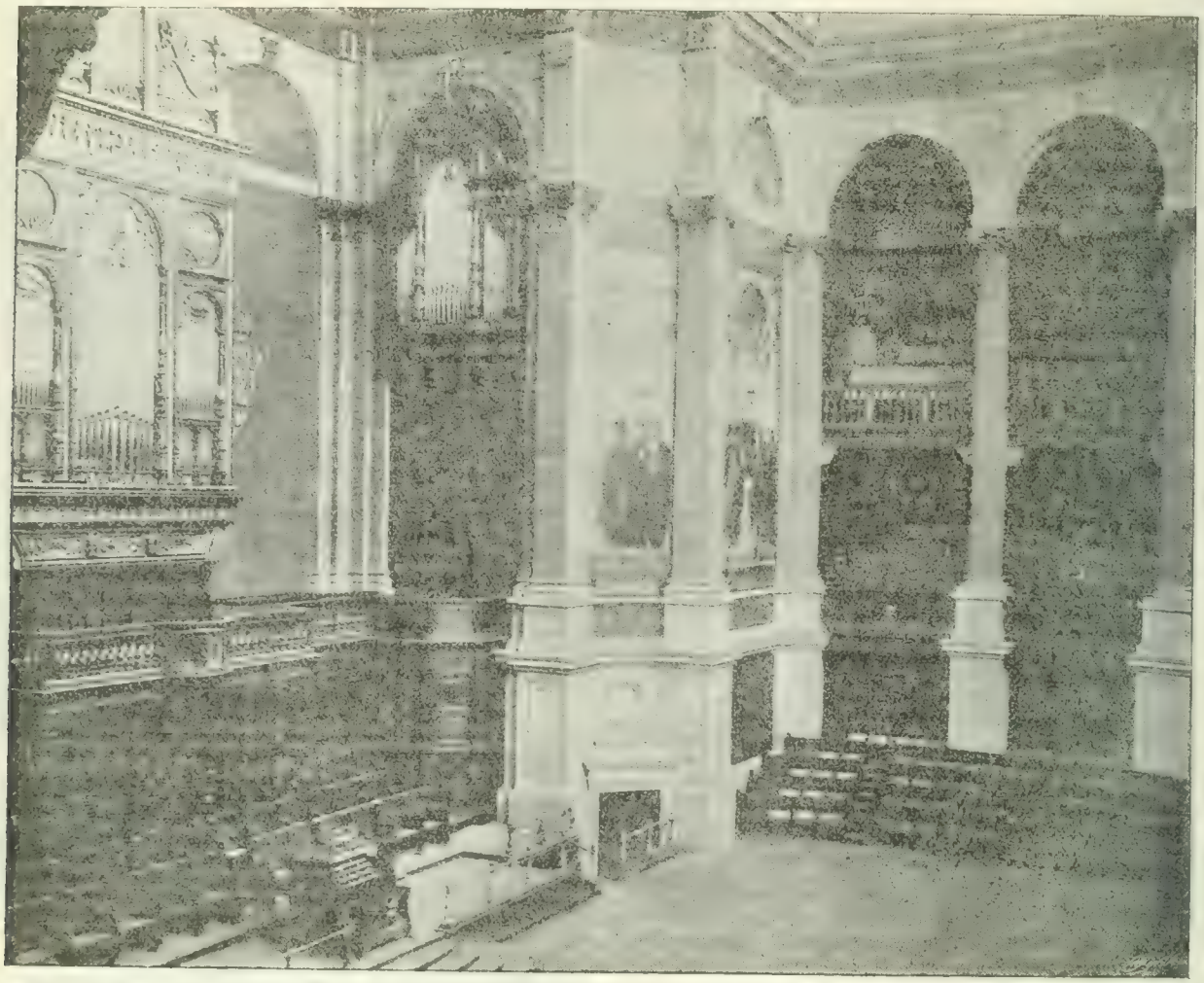
Twenty-three years have elapsed since the Association met previously at Edinburgh (1875 under the Presidency of Sir Robert Christison, Bart.), and ten years since it last met in Scotland (Glasgow, 1888, under the Presidency of Dr., now Sir, William Tennant Gairdner, K.C.B.).

Many causes combine to make Edinburgh a peculiarly fitting place of meeting for the Association. The city has a renown for learning and science, and has played an important part in relation to professional education. Since 1875 the Medical School, which was then large, has developed to a remarkable extent. New medical buildings, University and extramural, have sprung up on every side. The Royal Infirmary and the Royal Hospital for Sick Children have removed to new and palatial homes. The Royal Asylum has extended its borders greatly, and new hospitals have been opened for the treatment of zymotic diseases and of consumption. The extensive laboratories of the University have been supplemented within recent years by the foundation of the Royal College of Physicians' Research Laboratory, the Royal College of Surgeons' Laboratory, and the Scottish Asylums' Laboratory, in addition to the laboratories attached to the hospitals.

The proposal to invite the Association took formal shape in July, 1896, when the Edinburgh Branch, having obtained from the University, the Royal College of Physicians, the Royal College of Surgeons, and the Town Council an indication of approval and desire to co-operate, unanimously agreed that an invitation should be conveyed to the Council of the Association at the Carlisle meeting. The invitation was received and accepted by the Association in July last.

EDINBURGH (LOTHIANS AND FIFE) BRANCH OF THE ASSOCIATION.

The Edinburgh Branch of the Association, which comprises the Lothians and Fifeshire, was recognised in 1875, about the date of the last meeting in the city. The first President was Sir Robert Christison, Bart., who was succeeded, in 1882, by Professor Annandale, who in turn was succeeded, in 1897, by Dr. G. W. Balfour, the present President. For long the Branch continued small, the membership numbering as recently as 1891 some 53. Since 1892 the membership has grown steadily, till now it stands at some 250. Meetings are held regularly both for the consideration of scientific matters and the demonstration of patients, and for the discussion of Association questions. An interesting feature in relation to the work of the Branch has been the development of combined meetings in conjunction with several of the neighbouring Branches, as, for example, with the Border Counties, the



Interior of McEwan Hall, University of Edinburgh. (From a photograph by Mr. A. A. Inglis, Edinburgh.)

Stirling, the Perth, and the Dundee and District Branches. Members of the profession in the area of the Branch who may wish to join the Edinburgh Branch in view of the present meeting are requested to apply to the Honorary Secretary of the Branch, Dr. R. W. Philip, 4, Melville Crescent, Edinburgh.

General Arrangements.

Officers.—The President-Elect is Sir Thomas Grainger Stewart, M.D., LL.D., F.R.C.P.E., Professor of the Practice of Medicine and of Clinical Medicine in the University of Edinburgh. An Address in Medicine will be given by Dr. Thomas R. Fraser, F.R.C.P.E., LL.D., F.R.S., Professor of Materia Medica and Therapeutics and of Clinical Medicine in the University of Edinburgh. An Address in Surgery will be given by Mr. Annandale, F.R.C.S.Eng., F.R.S., Professor of Clinical Surgery in the University of Edinburgh. An Address in Psychological Medicine will be given by Sir John Batty Tuke, M.D., D.Sc., F.R.S.E., President of the Royal College of Physicians of Edinburgh. The officers of the various Sections are detailed elsewhere. The Local Honorary Treasurers are Drs. C. E. Underhill and P. A. Young, and the Local Honorary Secretaries Dr. R. W. Philip, 4, Melville Crescent, and Mr. J. Shaw McLaren, 14, Walker Street, Edinburgh.

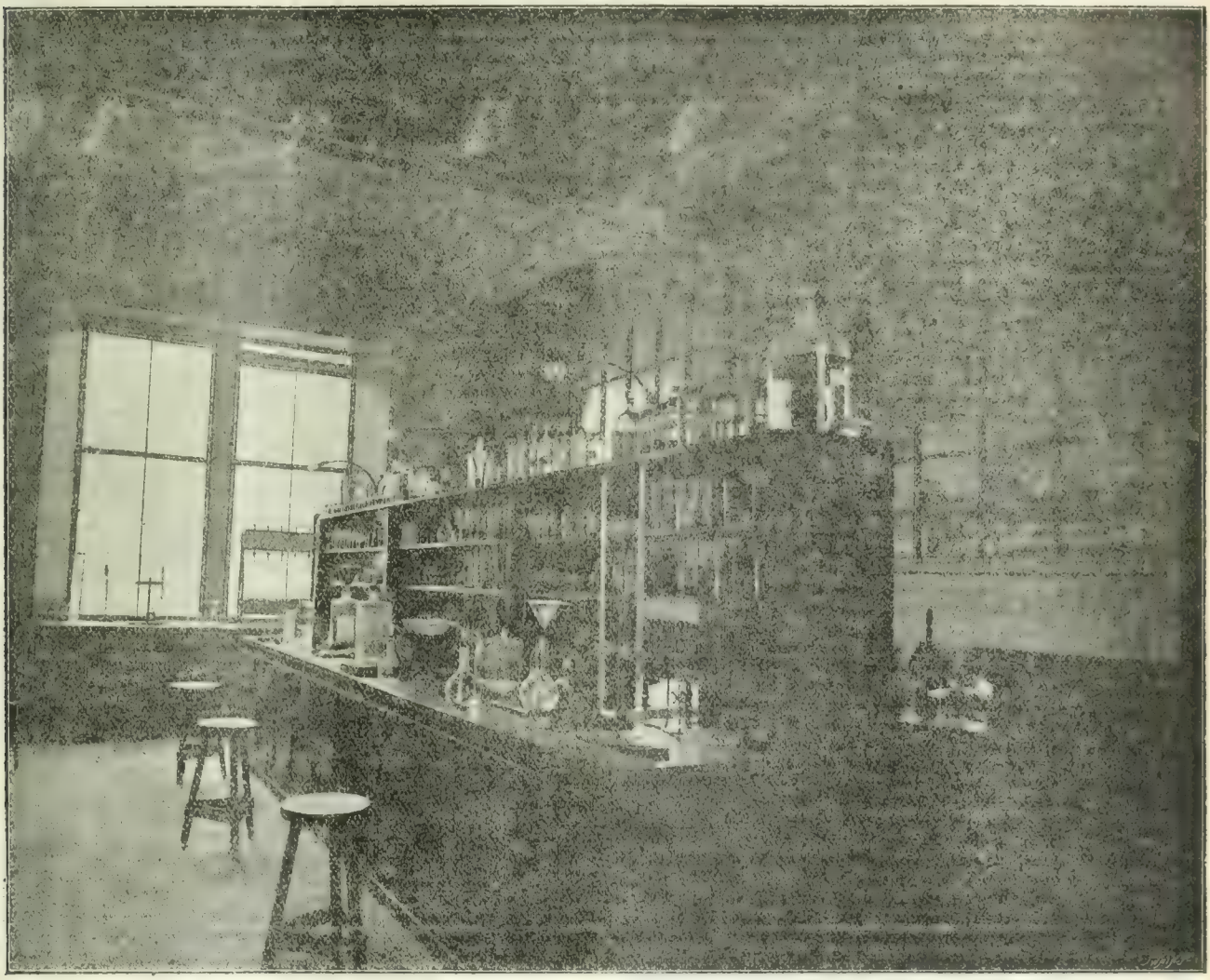
Places of Meeting.—As will be seen from the sketch on p. 1548 plan, the meeting places are most conveniently disposed in relation to each other. The main reception room is to be on the ground floor of the Oddfellows' Hall, Forrest Road: that for foreign guests in an office adjoining the entrance to the hall. Excursion tickets will be distributed in the smaller hall on the first floor. Suitable arrangements for post office and correspondence will be found in the main reception room.

The various addresses will be delivered in the stately McEwan Hall of the University, and there, too, or in the large Chemistry Theatre, the other general business of the Association will be transacted. The Sections will be housed most comfortably within the new buildings of the University in Teviot Place. Spacious well-lit class rooms have been allotted to each of the sixteen Sections into which the meeting will be divided. Those are in closest proximity to each other, and thus members will be able to pass from one to the other without inconvenience. For the purposes of combined Sectional meetings this proximity of the rooms will prove most serviceable. Excellent accommodation for illustration both by microscope and lantern will be available where this is desirable.

The Committee owe a debt of gratitude to the University Court for the generous way in which they have placed the University Buildings at their diposal for the reception of the Association.

The University Union has also been kindly granted by the Union Committee for the use of the members, that is to say, all the members of the Association will be made honorary members of the Union during the week of the meeting. This means excellent provision in respect of luncheon rooms, smoking room, writing rooms, General and Local Secretaries' rooms, Editor's room, etc.

Special accommodation for ladies has been arranged in the



Royal College of Physicians of Edinburgh Research Laboratory: Chemistry Department.

immediate vicinity of the University at the Masson Residential Hall, 31, George Square, where writing and tea rooms, reserved for ladies, will be found.

The Pathological Museum will be located in the splendid Practical Anatomy Room of the University. This building is of large dimensions and excellently lit. The Museum promises to be a feature of the meeting. The Committee will be glad to receive specimens on loan for exhibition. They have arranged more particularly for the illustration of recent methods of preparation, mounting specimens, casts and models. They are also arranging a "discussion series," that is, specimens illustrative of the more important subjects announced for discussion in some of the Sections, and further a "bacteriological series" illustrative of methods and cultures of micro-organisms. Facilities will be given for microscopic demonstration as far as possible. Intending exhibitors should communicate with the Hon. Secretaries of the Pathological Museum, Mr. C. W. Cathcart, F.R.C.S., 8, Randolph Crescent, and Dr. Alexander Miles, F.R.C.S.Edin., Edinburgh, before July 1st, as to the number of microscopes and the powers required.

The Annual Exhibition will be arranged in the Drill Hall, Forrest Road, almost directly opposite the Reception Room. The Hall is particularly well suited for the purpose. Its situation in relation to the meeting places is exceptionally advantageous. The exhibits which have been announced are both numerous and important. Most of the space has already been let. Intending exhibitors should apply without delay to the Hon. Secretary of the Exhibition Subcommittee, Dr. Walker, 7, Manor Place, Edinburgh.

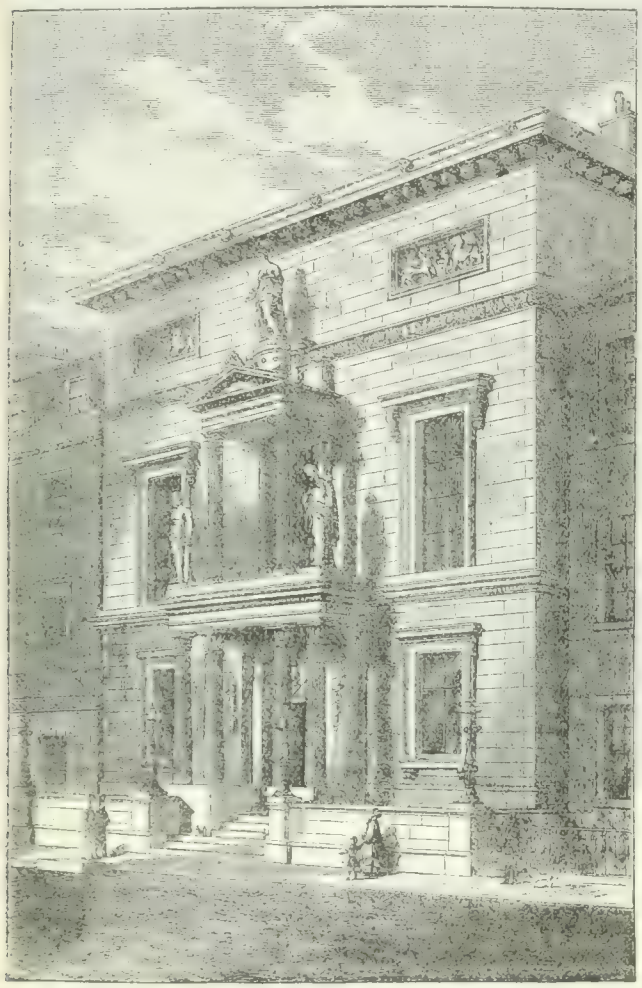
THE BUSINESS OF THE MEETING.

The provisional programme is generally as follows:

On Tuesday, July 26th, there will be a meeting of the 1897-98 Council in the Council Room, McEwan Hall, at 9 30 A.M. At 11 A.M. a special religious service will take place within St. Giles Cathedral, at which the three Presbyterian Churches of Scotland will be represented by the Very Reverend the Dean of the Thistle and of the Chapel Royal; the Very Reverend Dr. Alexander Whyte, Moderator of the Free Church, who will preach the sermon; and the Very Reverend Dr. Blair, Moderator of the United Presbyterian Church. The first general meeting will be held in the McEwan Hall of the University at 2 30 P.M., when the report of the Council and the reports of committees will be presented. At 8.30 P.M. the Association will reassemble in general meeting in the McEwan Hall to hear Sir Thomas Grainger Stewart's Presidential Address. Thereafter at 9.30 P.M., in the immediately adjoining Museum of Science and Art, Chambers Street, a reception will be given by the Right Honourable the Lord Provost of Edinburgh.

On Wednesday, July 27th, the first meeting of the Council

for 1898-99 will take place in the Council Room, McEwan Hall, at 9.30 A.M. The Sections will meet from 10 to 2 within the University Medical Buildings. At 3 P.M. the second general meeting will be convened in the McEwan Hall, when the Address in Medicine will be delivered by Professor T. R. Fraser, and the general business of the Association continued, should this not have been completed on Tuesday. Later in the afternoon various garden parties have been arranged, including one to be given by Dr. and Mrs. Clouston at Craig House, Morningside. From 9.30 to 12 P.M. a reception will be given by the Local Committee in honour of the Association within the McEwan Hall and New University Quadrangle.



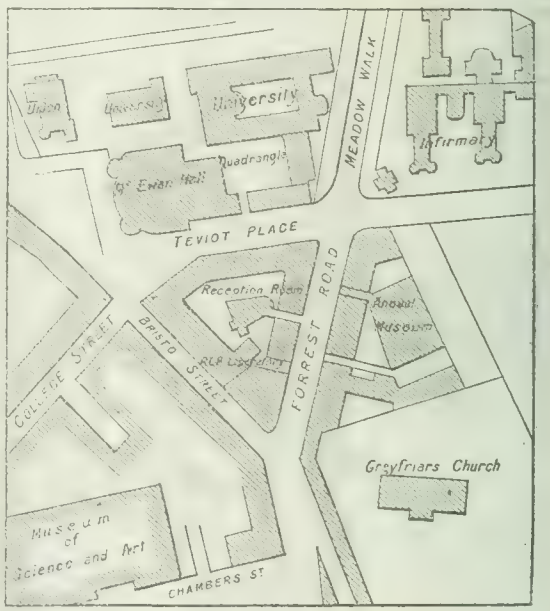
Royal College of Physicians of Edinburgh.

On Thursday, July 28th, the Sections will continue their sittings from 10 A.M. to 2 P.M. At 3 P.M. the third general meeting will take place in the McEwan Hall, when the Address in Surgery will be delivered by Professor Annandale. Later in the afternoon a reception and garden party will be given by the Royal College of Physicians within the College and the adjacent Queen Street Gardens; a reception by the Royal College of Surgeons within the College; a reception by the Royal Medical Society within the Society's Hall; and a garden party by Professor and Mrs. Balfour, Inverleith House. At 7.30 P.M. the dinner of the Association will take place in the Music Hall, George Street, at which accommodation can be made available for some 500 guests. The same evening, from 9 to 11, the Ladies' Committee will give a *conversazione* to ladies and invited guests within the Royal College of Physicians.

On Friday, July 29th, the Sections will continue their sittings from 10 A.M. to 1.30 P.M. At 3 P.M. the concluding general meeting will be held in the McEwan Hall, when the Address in Psychological Medicine will be delivered by Sir John Batty Tuke. In the afternoon, garden parties will be given by the Right Honourable the Earl of Hopetoun, G.C.M.G., at Hopetoun House, and by others. In the evening a reception and ball will be given by the Right Honourable the Lord Provost and the magistrates of Edinburgh, in the Music Hall, George Street.

For Saturday, July 30th, an attractive series of excursions, both whole day and half day, have been arranged. These will be referred to presently.

At 10 A.M. on Saturday the University Graduation Ceremonial will take place within the McEwan Hall. The occasion will be one of peculiar interest, from the fact that this is the first medical graduation held within the Academic Hall, and from the presence of a number of distinguished visitors, some of whom the University will doubtless promote to honorary degrees.



Sketch Plan of Places of Meeting.

LOCAL SIGHTS.

It is needless to dwell on the attractiveness of Edinburgh. In respect of beauty of situation and general amenity "the grey Metropolis of the North" stands high among the cities of the world. The visitor does not require to seek for the local sights. From the chief streets and the Castle Hill panoramic effects of exquisite character are constantly in view. To aid his peregrinations and make spare time slip pleasantly, the Committee have arranged a local guide, with abundant maps and plans, which will be presented to each member on enrolment. There is no need, therefore, to detail at length the individual buildings and other places of interest. They include the Castle, with St. Margaret's Chapel, Queen Mary's Room, the Crown Room, and the ancient Regalia of Scotland; Holyrood Palace and Chapel; the Parliament House; the old Mercat Cross restored by the late Mr. Gladstone; St. Giles Cathedral; the National Gallery; the National Portrait Gallery; the Botanic Gardens and Arboretum; the Register House, and many historical monuments. In respect of medical institutions, there is the Royal Infirmary, the Royal Hospital for Sick Children, the Royal Maternity and Simpson Memorial Hospital, Longmore Hospital for Incurables, the Royal Asylum, the City Hospital for Fevers, the Victoria Hospital for Consumption, and others which will be open to members at certain times on presentation of their card of membership. The Public Health Committee of the City have the intention to invite

such members as may be more specially interested to afternoon tea at the buildings of the great City Hospital which is in course of erection on a lovely site some two or three miles south of Edinburgh. The University and Extra-mural Schools and the Medical College for Women will also be open. The various museums, including the fine Anatomical Museum of the University, the Museum of Science and Art, the Antiquarian Museum and others, and the various laboratories, to which reference has already been made, may also be visited. Edinburgh is rich in libraries; these include the Library of the Royal College of Physicians, the University, the Royal College of Surgeons, the Advocates', Signet, and Public Library. Several of the social clubs will afford facilities to limited numbers of the members. More detailed arrangements regarding these privileges will be published later. A number of manufacturers and others will be pleased to receive members of the Association who are interested in their special department of work.

HOTELS AND LODGINGS.

Edinburgh is abundantly supplied with hotels and lodgings. A list of the leading hotels with their tariffs, and furnished apartments, will be published in a future number of the JOURNAL. At the end of July the hotels are usually well patronised, and members would do well, therefore, to make their arrangements in advance. Applications may be made directly to the hotels, or through the Honorary Secretaries of the Hotels and Lodgings Subcommittee, Mr. David Wallace, F.R.C.S., 11, Rutland Street, or Dr. Harvey Littlejohn, 11, Stafford Street, Edinburgh.

EXCURSIONS.

An attractive series of excursions, both for the half day and the whole of Saturday, has been arranged by the Excursions Subcommittee.

I. Short excursions, either on Saturday or on some of the week-day afternoons. These include visits to the Forth Bridge by coach or rail, to Dalkeith and Roslin Chapel and Castle, Professor Cossar Ewart, F.R.S., has indicated his intention of inviting members to inspect his hybrid foals. An international golf match between teams representative of England and Scotland is in course of arrangement for Friday afternoon.

II. Whole day (Saturday) excursions. The series includes the following:

(*a*) *St. Andrews.*—The Marquis of Bute will entertain the members at luncheon, and allow them to inspect his recent excavations in the neighbourhood.

(*b*) *Falkland Palace and Kinross.*—Visiting the palace, where the Marquis of Bute will provide luncheon, and thence driving to Kinross for Loch Leven and Castle.

(*c*) *Dunkeld and Crieff.*—By rail to Dunkeld and thence driving by the Small Glen and Amulree to Crieff, where the members will be entertained to dinner at the Hydropathic, by invitation of Dr. Meikle.

(*d*) *Dollar and Rumbling Bridge.*—Visit to Castle Campbell and other picturesque places in the neighbourhood. The members will be entertained to luncheon at Blair House and at Hilfoot House.

(*e*) *Perth and Dundee.*—By rail to Perth through Glen Farg. Thence by steamer down the Tay to Dundee. The members will be entertained at luncheon at Perth by Dr. Urquhart and in the afternoon by the Perth and Dundee Branches.

(*f*) *Melrose and Scott Country.*—By rail to Melrose and thence by carriage to Abbotsford, Dryburgh, etc. The members are invited to afternoon tea at Melrose Hydropathic.

(*g*) *Stirling and District.*—Visiting the famous Howietoun Fish Ponds and thence driving through Stirling, where the members will be entertained to luncheon by the Stirling, Kinross, and Clackmannan Branch, to Bridge of Allan, where a garden party will be given by the directors of the Mineral Wells Company.

(*h*) *St. Mary's Loch.*—By rail to Selkirk and thence driving by the celebrated St. Mary's Loch to Innerleithen and the Tweed.

(*i*) *The Trossachs.*—By rail to Callander and thence through the Trossachs.

LONGER TOURS IN SCOTLAND.

After the meeting tours of several days or a week or more may be conveniently undertaken. A number of suitable tours of varying length and cost will be suggested and arranged by Messrs. J. and H. Lindsay, tourist agents to the meeting, 7, Waterloo Place, Edinburgh, or at the Reception Room.

CANADA AND THE COLONIAL BRANCHES.

Several Colonial Branches have already announced their intention to be represented. Last year's meeting place will be represented by the genial President of the Association, Dr. Roddick, whom the members will be especially glad to greet on this side, and by Drs. Wesley Mills, and Shepherd, of Montreal, and others.

FOREIGN GUESTS.

A considerable number of distinguished members of the medical profession resident in America and the Continent of Europe have accepted invitations to take part in the proceedings. The list of those expected continues to be added to daily, including at present:

From America.—Drs. Bowditch, Musser, Osler, Sachs, and Turck.

From France.—Drs. Blanchard, Brouardel, Comby, Doyen, Guiart, Magnan, and Meyer.

From Germany.—Drs. Baginsky, Ewald, Fehling, Joseph, Martin, Melchior, Mikulicz, Pistor, Quincke, Rosenbach, and Unna.

From Belgium and Holland.—Drs. Nuel, Rosenstein, and Snellen.

From Austria.—Dr. Benedikt.

From Italy.—Drs. Kurella, Morselli, Pestalozza, and Porro.

From Switzerland.—Drs. Dufour and Gamgee.

From Denmark, Norway, and Sweden.—Drs. Boeck and Rovsing.

INTERNATIONAL GOLF MATCH.

It is proposed to hold a golf match on the afternoon of Friday, July 29th, over Muirfield and Archerfield Links, between resident Scottish and other members of the Association.

In order to facilitate arrangements, Secretaries have been appointed as follows: Dr. Colcott Fox, 14, Harley Street, London, W., for the South of England and Wales; Dr. Richardson, 19, Savile Row, Newcastle-on-Tyne, for the North of England and Ireland; and Dr. Blaikie, 42, Minto Street, Edinburgh, for Scotland.

Members wishing to play in the match are requested to communicate with one or other of these gentlemen not later than July 20th, naming their club and stating club handicap in strokes.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

THE sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President: T. G. RODDICK, M.D., Professor of Surgery in McGill University, Montreal.

President-Elect: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by THOMAS RICHARD FRASER, M.D., LL.D., F.R.S., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by THOMAS ANNANDALE, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir JOHN BATTY TUKE, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. MEDICINE.

Anatomy Theatre, University New Buildings.

President: GEORGE WILLIAM BALFOUR, M.D., LL.D. *Vice-Presidents:* Sir CHRISTOPHER JOHN NIXON, M.D.; JOHN MITCHELL BRUCE, M.D., ALEXANDER JAMES, M.D.; GEORGE ALEX. GIBSON, M.D. *Honorary Secretaries:* J. J. GRAHAM BROWN, M.D., 3, Chester Street, Edinburgh; SAMUEL HERBERT HABERSHON, M.D., 70, Brook Street, Grosvenor Square, W.; GEORGE LOVELL GULLAND, M.D., 6, Alva Street, Edinburgh.

The following subjects have been arranged for discussion:

1. Wednesday, July 27th.—The Clinical Varieties of Hepatic Cirrhosis. To be opened by Dr. Alexander James.

2. Thursday, July 28th.—The Significance and Consequences of different states of Vascular Tension with their General Management. To be opened by Sir William Broadbent, Bart., M.D.

3. Friday, July 29th.—Serum Diagnosis and Therapeutics in Infective Diseases. To be opened by Professor Wright (Netley).

The following, among others, intend to take part in these discussions: Sir Christopher Nixon, Dr. G. W. Balfour, Professor Bradbury, Dr. Graham Brown, Dr. Mitchell Bruce, Dr. Lauder Brunton, Dr. Wm. Ewart, Dr. Foxwell, Dr. Gibson, Dr. Gulland, Dr. Habershon, Dr. Claude Ker, and Dr. Muirhead.

The following papers have been announced:

ANDERSON. Professor McCall. A Plea for the More General Use of Tuberculin by the Profession.
CAMPBELL, Dr. H. The Treatment of Thoracic Aneurysm by Electrolysis.
CAVERHILL, Dr. The Open-air Treatment of Consumption, with exhibition of patients treated in German sanatoria.
DRUMMOND, Dr. D. On Ether Pneumonia.
HAIG, A., M.A., M.D.Oxon., F.R.C.P. On the Granules Precipitated in the Blood by Chloride of Ammonia (Process of Mr. Barber Smith), and what we may Learn from them.
HILLIER, Dr. A. P. Chronic Dysentery.
MURRAY, G., M.A., M.D., F.R.C.P. (Newcastle). On the Early Diagnosis of Thyroidal Fibrosis.
STRACHAN, Dr. J. The Alcoholic Neurosis.
THORNE, W. Bezly, M.D., M.R.C.P. (London). On Cardio-vascular Therapeutics.

B. SURGERY.

Surgery Theatre, University New Buildings.

President: JOHN DUNCAN, F.R.C.S., LL.D. *Vice-Presidents:* ALEX. GORDON MILLER, F.R.C.S.; JOHN CHIENE, F.R.C.S; JAMES RUTHERFORD MORISON, F.R.C.S.; JOSEPH MONTAGUE COTTERILL, F.R.C.S. *Honorary Secretaries:* FRANCIS MITCHELL CAIRD, F.R.C.S., 21, Rutland Street, Edinburgh; J. W. BEEMAN HODSDON, F.R.C.S., 52, Melville Street, Edinburgh. THOMAS KENNEDY DALZIEL, F.F.P.S.G., 196, Bath Street, Glasgow.

Discussion I: Injuries of the Elbow Joint. To be introduced by Professor Bennett (Dublin), followed by Messrs. Roberts (Philadelphia), Chiene, Bryant, Keetley, Jones, Macnamara, Thomas, Warden, Morgan, Poland, Murphy, and Dalziel.

Discussion II.: The Origin, Effects, and Treatment of Septic Infection of the Urinary Tract. To be introduced by Messrs. Henry Morris and Newman, followed by Messrs. Rovsing (Copenhagen), Moullin, Macnamara, Macewen, Will, Melchior (Copenhagen), Lawson Tait, Morgan, Stanmore, Bishop, and Nicoll.

CRIPPS, Harrison. On Abdominal Surgery.
CHEATLE, Lenthal. Operation for End-to-End Anastomosis of Bowel.
CASPAR, Leopold (Berlin). On Catheterism of the Ureters in Both Sexes.
DOYEN, Dr. (Paris). (1) Surgery of the Brain. (2) Operations on the Stomach and Intestine. (3) Operations for Congenital Dislocations of the Hip-Joint.
FREYER, P. J. The Instruments Required in Litholapaxy, with an Analysis of 650 Operations for Stone by this Method.
HUTCHINSON, J., jun. Removal of the Gasserian Ganglion for Trigeminal Neuralgia
HUTTON, W. Menzies. On the Treatment of Empyema.
KEETLEY, C. B. On the Preservation of Mobility in Joints Operated On.
LITTLE, E. Muirhead. On Coxa Vera.
LLOYD, Jordan. On Cirsoid Aneurysm.
MELCHIOR, Max (Copenhagen). On Septic Infection of the Urinary Tract.
MORISON, A. E. On Floating Kidney.
MILLER, A. G. On Muscle Atrophy in Connection with Joint Affections.
MORRIS, Henry. Title not announced.
MORISON, Rutherford. Wound Treatment. The Result of One Year of Antiseptic Treatment in Freshly-made Operation Wounds in Uninfected Tissues.
NEVE, Arthur. Clinical Paper on Chloroform.
NEWMAN, Dr. David. (1) The Value of Catheterism of the Ureters in the Diagnosis of Diseases of the Kidney, with illustrative cases. (2) Cases Illustrating Some Points of Interest in the Etiology and Treatment of Hæmaturia.
STOKES, Sir William. Thyroidectomy in Exophthalmic Goitre.
NICOLL, Jas. D. (1) The Treatment of Chronic Enlargement of the Prostate. (2) The Pathogeny and Treatment of Tuberculous Lymphatic Adenitis.
PEARSON, C. Yelverton. The Treatment of Spina Bifida by "Open Operation," followed by Closure of the Spinal Canal, with photographs and notes of a successful case.
POLAND, John, F.R.C.S. The Treatment of Injuries of the Elbow-joint in Children.
ROBSON, Mayo. (1) The Operative Treatment of Hydatids of the Liver, illustrated by cases. (2) Two Cases of Partial Hepatectomy for Malignant Disease. (3) On a Series of Cases of Choledochotomy, including two of Duodeno-choledochotomy.
ROVSING, Dr. On Some Mysterious Hæmorrhages from a Single Kidney, and their Cure by Nephrotomy.
RAWDON, H. G. Two Cases of Successful Enterectomy following Strangulated Hernia, in which Murphy's Button was used.
ROBERTS, Dr. The Advantage of the Extended Position in Fractures of the Condyloid Portion of the Humerus.
SMITH, Noble. On the Treatment of Fractured Spines: (*a*) by Reduction and Fixation; (*b*) by Laminectomy; A Plea for more Active Treatment
TAIT, Lawson. On the Secondary Results of Operation on the Liver and its Ducts.
WYLSSON, Alex. The Treatment of Accidents under Chloroform.
WHEELER, W. S. The Radical Cure of Hernia by Displacement Method.

Communications are also expected from Professors Mikulicz (Breslau) and Kocher (Bern).

C. OBSTETRICS AND DISEASES OF WOMEN.

Medicine Theatre, University New Buildings.

President: ALEX. RUSSELL SIMPSON, M.D. *Vice-Presidents:* CHARLES E. UNDERHILL, M.B.; GEORGE ERNEST HERMAN, M.B.; D. BERRY HART, M.D.; A. H. FREELAND BARBOUR, M.D. *Honorary Secretaries:* R. MILNE MURRAY, M.B., 11, Chester Street, Edinburgh; F. W. N. HAULTAIN, M.D., 17, Rutland Street, Edinburgh; JOHN CAMPBELL, M.D., 21, Great Victoria Street, Belfast.

It has been arranged that the first part of the meeting of this Section on each of these days shall be devoted to a discussion on a subject of Obstetrical or Gynæcological interest. The subjects selected are as follows:

1. Wednesday, July 27th.—The Surgical Treatment o Pelvic Inflammation. To be opened by Dr. Cullingworth (London).

2. Thursday, July 28th.—The Use and Abuse of the Midwifery Forceps. To be opened by Dr. Milne Murray (Edinburgh).

3. Friday, July 29th.—The Treatment of Puerperal Eclampsia. To be opened by Dr. Halliday Croom (Edinburgh).

It has been arranged that specimens illustrative of the subjects of the special discussions shall be exhibited in the Pathological Museum.

The following among others are expected to take part in the discussions:—Dr. W. S. Playfair (London), Dr. Sänger (Leipzig), Dr. Martin (Berlin), Dr. Landau (Berlin), Dr. Gardner (Montreal), Dr. Bowreman Jessett (London), Dr. More Madden (Dublin), Dr. Stephenson (Aberdeen), Dr. Smyly (Dublin), Dr. Handfield Jones (London), Dr. Donald (Manchester), Dr. Kynoch (Dundee), Dr. Buist (Dundee), Dr. Sloan (Glasgow), Dr. Macan (Dublin), Dr. Byers (Belfast), Dr. Yelverton Pearson (Cork), Dr. Aust Lawrence (Bristol), Dr. Giles (London), Dr. Routh (London).

The following papers have been promised:

DOYEN, Dr. (Paris). (1) Abdominal Hysterectomy and its Indication (tumours, suppuration, etc.). (2) Modification of the Technique of Vaginal Hysterectomy.
TAIT, Mr. Lawson (Birmingham). (1) Further research into the Effects of Removal of the Uterine Appendages as the best treatment of Uterine Myomata. (2) Case of Ruptured Tubal Pregnancy.
DONALD, Dr. A. (Manchester). On Vaginal Section.
SMYLY, Dr. W. J. (Dublin). Extirpation of Myomatous Uteri by the Vagina.
PARSONS, Dr. Inglis (London). A New Method of Treatment for Prolapse of the Uterus.
SCHARLIEB, Dr. M. (London). On a case of Missed Labour verified by Operation and also *Post Mortem*.
KYNOCH, Dr. (Dundee) A case of Osteomalacia.
JESSETT, Dr. F. B. (London). (1) A hundred cases of Vaginal Hysterectomy for Carcinoma. (2) Surgical Treatment of Fibro-myomata of Uterus by Panhysterectomy or the Subperitoneal Method.
MADDEN, Dr. T. More (Dublin). On some Improvements in the Mechanism and Use of the Midwifery Forceps and in their Employment.
JONES, Dr. Handfield (London). The value of Curette Scrapings in Early Diagnosis of Corporeal Cancer.
BUIST, Dr. R. C. (Dundee). Two Symphysiotomies.

SMITH, Dr. Lapthorn (Montreal). Treatment of Displacements of the Uterus by Operation, based on 200 Cases.
FOTHERGILL, Dr. W. E. (Manchester). The Function of the Decidual Cell.
FARRAR, Dr. J. (Gainsborough). A New and Speedy Method of Dilating a Rigid Os in Parturition.
MACPHATTER, Dr. Neil (Denver, U.S.A.). The Treatment of Suppuration within the Female Pelvis.

D. STATE MEDICINE.

Medical Jurisprudence Theatre, University New Buildings.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

It is proposed to hold discussions on the following:

1. Rivers Pollution; with Special Reference to the Present Condition of Scottish Rivers. The following among others intend to take part: Dr. H. McLean Wilson, Professor Glaister, Dr. J. C. McVail, Dr. C. R. Macdonald.

2. Vaccination; with Special Reference to Prospective Legislation. The following among others intend to take part: Dr. J. C. McVail, Dr. J. Watkin Edwards.

3. The Hygienic Control of Milk Supplies. To be opened by Dr. T. G. Nasmyth. The following among others intend to take part: Dr. T. F. S. Caverhill, Dr. J. Watkin Edwards, Dr. Henry Kenwood, Dr. E. W. Hope, Dr. C. R. Macdonald, Dr. Templeman, Dr. W. H. Symons, Dr. A. K. Chalmers, Dr. J. Maxwell Ross.

4. The Plea of Insanity in Criminal Cases, conjointly with the Psychological Section.

The following intend to contribute papers:

ALLAN, Dr. F. J. Formaldehyde as a Disinfectant.
CAVERHILL, Dr. T. F. S. Temporary Hospitals.
CHALMERS, Dr. A. K. Meat Inspection.
DICEY, Dr. Diphtheria in London.
MILLARD, Dr. Killick. Return Cases of Scarlet Fever.
ROBERTSON, Dr. John (Sheffield). Soil as a Factor in the Spread of Certain Diseases.
SEATON, Dr. Sanitary Analysis of Water.

E. PSYCHOLOGY.

Students' Common Room, University New Buildings.

President: THOMAS SMITH CLOUSTON, M.D. *Vice-Presidents:* WILLIAM WOTHERSPOON IRELAND, M.D.; H. F. HAYES NEWINGTON, M.R.C.S.; JOSEPH WIGLESWORTH, M.D. *Honorary Secretaries:* JOHN MACPHERSON, M.D., Stirling District Asylum, Larbert, Stirlingshire; GEORGE M. ROBERTSON, M.B., District Asylum, Murthly, Perth.

The following discussions have been arranged:

1. Suicide: Its Social and Psychiatrical Aspects. To be opened by Professor Morselli of Genoa.

2. Aphasia in Relation to Testamentary Capacity. To be opened by Professor Sir William Gairdner, K.C.B.

3. Hypnotism: Its Phenomena and Theories. Introduced by Dr. J. Milne Bramwell of London. Mr. T. W. H. Myers of Cambridge has kindly consented to take part in this discussion.

4. Dr. Shuttleworth will introduce a discussion on Moral Imbecility.

The following among others have intimated their intention of taking part in the discussions: Professor Benedikt of Vienna, Dr. Marie of Dun-sur-Auron, Dr. Kurella of Breslau, Dr. Magnan of Paris, Dr. Pierson of Lindenlvos, Dr. Hayes of Dublin, Sir John Batty Tuke, Dr. A. Haig, of London, Dr. Yellowlees, Dr. Fletcher Beach, Dr. Ernest White, Dr. Sibbald, Dr. James Shaw, Dr. Crockley Clapham, Dr. Urquhart, Dr. Gutterson Wood, Dr. John Woods, etc.

The following papers have been intimated:

SUTHERLAND, Dr. J. F., Deputy Commissioner in Lunacy, Edinburgh. The Insanities of Inebriety from the Legislative and Medico-Legal Standpoint.
ADAM, Dr. James, West Malling, Kent. The Average Duration of General Paralysis.
MCLEAN, Dr. A., London. The Better Inspection of Institutions for the Insane in England and Wales.
HOTCHKISS, Dr., Glasgow. A case of Hæmatoporphyrinuria.
DAWSON, W. R., and RAMBANT, D. F., Drs., Dublin. The Ocular Phenomena in General Paralysis.
PASSMORE, Dr. E. S., London. The Clinical Diagnosis of States of Melancholia.
BOIS, C. A., and KERR, N. T., Drs., Hartwood, Glasgow. Clinical Studies with Spleen and Thyroid Extract.

Drs. Bruce, Easterbrook, Hamilton Mann, and Walter Bernard have also promised papers.

F. NEUROLOGY.

Midwifery Theatre, University New Buildings.

President: BYROM BRAMWELL, M.D. *Vice-Presidents:* JOSEPH ARDERNE ORMEROD, M.D.; WILLIAM RUSSELL, M.D.; ALEXANDER BRUCE, M.D. *Honorary Secretaries:* ROBERT ALEXANDER FLEMING, M.D., 10, Chester Street, Edinburgh; WILLIAM FORD ROBERTSON, M.D., 12, Bristo Place, Edinburgh.

The following discussions and demonstrations have been arranged:

1. Wednesday, July 27th, 10 A.M.—A discussion on the Treatment (Curative and Palliative) of Intracranial Tumours will be opened by Professor Ferrier, M.D., F.R.C.P., F.R.S. The following members have promised to take part: Dr. C. E. Beevor, Mr. H. J. Waterhouse, Dr. E. F. Trevelyan, and Mr. C. A. Morton.

2. Thursday, July 28th, 10 A.M.—A discussion on the Influence of Micro-organisms and Toxins in the Production of Disease of the Central and Peripheral Nervous System will be opened by Dr. Thomas Buzzard, F.R.C.P. The following gentlemen have promised to take part: Dr. W. S. Colman, Dr. F. J. Smith, and Dr. Fletcher Beach.

3. Friday, July 29th, 10 A.M.—Demonstration of (*a*) Preparations, lantern slides, and microscopic sections illustrative of the Morbid Anatomy of Diseases of the Nervous System (Brain, Spinal Cord, and Peripheral Nerves). (*b*) Patients, and Morbid Specimens from Individual Cases of Nervous Disease of special interest and importance from a clinical, pathological, and physiological point of view.

The following papers have been promised:

BEEVOR, Charles, E. On the Bilateral Action of the Latissimus Dorsi in Hemiplegia.
MURRAY, Professor George, M.A., M.D., F.R.C.P., and RICHARDSON, George, M.B., F.R.C.S. Case illustrating the advantages of Removal of Recurrent Cerebral Tumour.

G. PATHOLOGY.

Pathology Theatre, University New Buildings.

President: WILLIAM SMITH GREENFIELD, M.D. *Vice-Presidents:* FREDERICK WALKER MOTT, M.D., F.R.S.; JOHN MACFADYEAN, M.B.; ALMROTH EDWARD WRIGHT, M.D. *Honorary Secretaries:* HAROLD JALLAND STILES, M.B., 5, Castle Terrace, Edinburgh; ROBERT MUIR, M.D., 20, Hartington Place, Edinburgh.

A discussion on the Agglutinating or Sedimenting Properties of Sera and their Relation to Immunity will be opened by Herbert E. Durham, M.B., C.B.

The following communications have been announced:

AULD, A. G., M.D. Some Results of Extirpation of the Suprarenal Gland.
DURHAM, H. E., M.B. (1) An Inquiry into an Epidemic caused by a Variety of the Bacillus Enteritidis of Gärtner by means of Serodiagnosis (Gruber's Reaction) and Bacteriological Examination. (2) A Simple Method of Demonstrating the Formation of Gas by Bacteria.
MCFADYEAN, Professor J. (Subject to be afterwards announced.)
MCWEENEY, Professor E. J. On the Growth of the Typhoid Bacillus in Bouillon containing a Certain Proportion of the Homologous Serum.
MUIR, R., M.D. On the Nature and Significance of Changes in the Bone Marrow during Leucocytosis.
SMITH, J. Lorrain, M.D. The Pathological Effects of Breathing Oxygen at a High Tension.
STILES, Harold J., M.B. The Nature of Parotid Tumours.
STOCKMAN, Professor S. The Pathological Effects of Dead Tubercle Bacilli.
THOMA, Professor R. Normal Circulation and Circulatory Disturbances in the Spleen.

H. PHARMACOLOGY AND THERAPEUTICS.

Materia Medica Theatre, University New Buildings.

President: JAMES ORMISTON AFFLECK, M.D. *Vice-Presidents:* CHARLES DOUGLAS FERGUSSON PHILLIPS, M.D., LL.D.; J. THEODORE CASH, M.D., F.R.S.; NESTOR TIRARD, M.D.; RALPH STOCKMAN, M.D. *Honorary Secretaries:* R. DUNDAS HELM, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. LOCKHART GILLESPIE, M.D., 23, Walker Street, Edinburgh.

There will be three discussions on subjects of general interest and importance related to Pharmacology and Therapeutics. These subjects are as follows:

1. Wednesday, July 27th.—The Treatment of Diseases of the Stomach. Introduced by Dr. G. Herschell and Professor C. A. Ewald, and taken part in by, among others, Drs. Lauder Brunton, Saundby, Fenton, B. Turck, Symons Eccles, and Pearson. For convenience the subject will be considered

under the heads of: (*a*) General Treatment and Diet; (*b*) The Influence of Drugs upon Gastric Chemical Processes; (*c*) The Influence of the Treatment of co-existing Maladies upon Diseases of the Stomach; (*d*) The Indications for Surgical Treatment.

2. Thursday, July 28th.—The Treatment of Chronic Renal Disease. Opened by Dr. Nestor Tirard, Professor Ewald, and Dr. Saundby. With special reference to: (*a*) Hygiene and Diet; (*b*) The Influence of Drugs and other Therapeutic Measures; (*c*) Uræmia.

3. Friday, July 29th.—The Therapeutic Value of Recent Synthetic Analgesics: Their Benefits and Attendant Risks. Opened by Professor Ralph Stockman. Professor Cash and Dr. F. C. Phillips will take part. (The antipyretic properties possessed by members of this group will not form a part of the subject for discussion.)

It is also proposed to hold a demonstration of recently-devised intragastric instruments and other apparatus and measures for the treatment of gastric diseases; to this it is expected that Dr. Turck (Chicago), Drs. Herschell and Eccles, Drs. Einhorn (New York), and Hemmeter (Baltimore) will contribute. The Secretaries will be glad to receive notice of any member wishing to show any further novelty relating to this subject.

The following papers have been announced:

Cash, Professor. The Pharmacology of the Alkaloids of Aconitum Napellus.

Ewald, Professor C. A. (1) On the Present State of the Treatment and of our Knowledge of Gastric Disorders. (2) The Benefit of Repeated Tapping and Venesection in Chronic Kidney Disease, especially in Uræmia.

Gillespie, A. Lockhart. (1) Brief Note on the Action of the Bromide and Iodide of Strontium put together upon Exophthalmic Goitre in Children. (2) Preliminary Note on the Action of Stipa Viridula. (3) The Action of Diet, Antiseptics, and of some other Drugs upon the Intestinal Processes.

Herschell, George. The Treatment of Atony of the Stomach and Intestines by Mechanical Vibration.

Kerr, Norman. Alcohol in Drugs and Drug Preparations.

Phillips, C. D. F. On the Pharmacological and Therapeutical Actions of Hydrastis Canadensis.

Turck, Fenton B. (Chicago). (1) Pneumatic Gymnastics of the Stomach. (2) The Indications for Gastrostomy, with a Note on a new Method of Operation.

(Some of these papers will not be read separately, but used as a basis for the remarks made at the discussions.)

The demonstration and explanation of new gastric appliances (should it be found feasible) will take place on Thursday, July 28th, at 1 P.M. or any other hour which may be subsequently fixed upon. Details as to the appliances and measures to be illustrated will probably be specially noted later on.

I. Ophthalmology.

Chemistry Tutorial Class Room, University New Buildings.

President: D. Argyll Robertson, M.D., LL.D. *Vice-Presidents:* R. Marcus Gunn, F.R.C.S.; George A. Berry, M.B.; George Mackay, M.D. *Honorary Secretaries:* William George Sym, M.D., 50, Queen Street, Edinburgh; Angus McGillivray, M.D., 23, South Tay Street, Dundee.

The following paper has been announced:

Eyre, Dr. J. W. (London). A Clinical and Bacteriological Study of Diplo-bacillary Conjunctivitis.

J. Laryngology and Otology.

Surgery Tutorial Class Room, University New Buildings.

President: Peter MacBride, M.D. *Vice-Presidents:* J. J. Kirk Duncanson, M.D.; J. Dundas Grant, M.D.; Robert Mackenzie Johnston, M.D.; StClair Thomson, M.D. *Honorary Secretaries:* Adam Brown Kelly, M.B., 26, Blythswood Square, Glasgow; A. Logan Turner, M.D., 20, Coates Crescent, Edinburgh.

The subject selected for discussion is The Mutual Relationship and Relative Value of Experimental Research and Clinical Experience in Laryngology, Rhinology, and Otology. The discussion will be introduced under these three heads by Sir Felix Semon (London), Dr. Greville MacDonald (London), and Dr. William Milligan (Manchester).

The following gentlemen have intimated their intention of taking part in the discussion or in the work of the Section: Dr. Charles Warden (Birmingham), Dr. Richard Ellis (Newcastle-on-Tyne), Dr. Farquhar Matheson (London), Professor Urban Pritchard (London), Dr. Dundas Grant (London), Dr. David Newman (Glasgow), Dr. L. H. Pegler (London), Dr. J. Kerr Love (Glasgow), J. Walker Downie, M.B. (Glasgow), John Macintyre, M.B. (Glasgow), Dr. Watson Williams (Bristol), Dr. William Hill (London), Macleod Yearsley, F.R.C.S. (London), W. Jobson Horne, M.B. (London), Dr. H. S. Birkett (Montreal), Dr. Holbrook Curtis (New York), Dr. Von Stein (Moscow).

The following papers have been announced:

Newman, Dr. David. (1) On Laryngeal Paralysis from Pressure upon the Vagus or Recurrent Laryngeal Nerves. (2) Some Cases showing the Relationship of Nasal and Pharyngeal Disease to the General Health.

Thomson, Dr. StClair. Nasal Hydrorrhœa.

Downie, Walker, M.B. Three Cases of Foreign Body in the Throat in which the position of the Body was determined by the Roentgen Rays. Illustrated by Skiagraphs.

Macintyre, John, M.B. Demonstration on the X Rays, with special reference to the Diseases of the Upper Respiratory Tract.

Milligan, Dr. Some Observations upon Antrectomy as a means of Treatment in Suppurative Middle-ear Disease.

Yearsley, Macleod, F.R.C.S. The Thyroid Treatment of Middle-ear Disease.

Waggett, Ernest, M.B. Some New Methods and Instruments.

Horne, W. Jobson, M.B. The Pathogenesis and Earlier Clinical Evidence of Laryngeal Tuberculosis.

K. Diseases of Children.

Practical Materia Medica Room, University New Buildings.

President: Joseph Bell, F.R.C.S.Edin. *Vice-Presidents:* James Carmichael, M.D.; John Playfair, M.D.; T. M. Burn-Murdoch, M.B.; George Arthur Wright, F.R.C.S. *Honorary Secretaries:* George Harry Melville Dunlop, M.D., 20, Abercromby Place, Edinburgh; John Thomson, M.D., 14, Coates Crescent, Edinburgh; Walter Stacy Colman, M.D., 22, Wimpole Street, W.

The following subjects have been selected for discussion:

1. Wednesday, July 27th.—The Treatment of Spinal Caries. To be opened by Mr. Victor Horsley.

The following gentlemen are expected to join in the discussion: Robt. Jones, F.R.C.S.Edin. (Liverpool), T. S. Kirk, M.B. (Belfast), R. W. Murray, F.R.C.S. (Liverpool), Noble Smith, F.R.C.S.Edin. (London), A. H. Tubby, F.R.C.S. (London).

2. Thursday, July 28th.—Certain Aspects of Congenital Syphilis. In opening the discussion Mr. Jonathan Hutchinson will deal with the Lesions of the Bones and of the Organs of Special sense, and Dr. Henry Ashby will speak of those of the Brain and other Internal Organs.

The following members have intimated their intention to join in the discussion: Professor A. Baginsky (Berlin), M. Jules Comby (Paris), T. Telford Smith, M.D. (Lancaster).

3. Friday, July 29th.—Rheumatic Heart Disease in Childhood; with special reference to (*a*) physical signs, (*b*) prognosis. To be opened by Dr. D. B. Lees.

The following are expected to join in the discussion: H. Ashby, M.D. (Manchester), Professor A. Baginsky (Berlin), James Finlayson, M.D. (Glasgow), W. P. Herringham, M.D. (London), H. D. Rolleston, M.D. (London), J. Lindsay Steven, M.D. (Glasgow).

The following papers have been announced:

Batten, F. E., M.D. (London). On Diphtheritic Paralysis.

Carmichael, James, M.D. (Edinburgh). Types of Infantile Pneumonia.

Clarke, J. Jackson, F.R.C.S. (London). On Congenital Dislocation of the Hip Joint.

Collier, H. Stansford, F.R.C.S. (London). On Dislocation of the Hip joint following Infectious Diseases.

Comby, Jules, M.D. (Paris). On Movable Kidney in Children.

Coutts, J. A., M.B. (London). On Congenital Syphilis.

Eve, F. S., F.R.C.S. (London). On Tendon Grafting.

Jones, Robert, F.R.C.S.Edin. (Liverpool). On the Short Leg of Hip Joint Disease and its Treatment.

Murray, R. W., F.R.C.S. (Liverpool). 1. On Harelip and Cleft Palate. 2. On the Treatment of Club Foot.

Nicoll, James H., M.B. (Glasgow). The Radical Cure of Spina Bifida treated by Open Operation.

Still, G. F., M.D. (London). On the Micro-organism of Simple Posterior Basic Meningitis in Infants.

Sutherland, G. A., M.D. (London). The Treatment of Hydrocephalus by Intracranial Drainage.

L. Dermatology.

Students' Library, University New Buildings.

President: William Allan Jamieson, M.D. *Vice-Presidents:* Walter George Smith, M.D.; John James Pringle, M.B.; Alexander Morton, M.D. *Honorary Secretaries:* James Limont, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; Norman Walker, M.D., 7, Manor Place, Edinburgh.

The arrangements are as follows:

On Wednesday, July 27th, after the President has delivered his introductory remarks, the Section will adjourn to the

Royal Infirmary, where a Clinical Meeting for the Exhibition of Patients will be held and the cases informally discussed.

On Thursday, July 28th, the subjects for discussion will be (1) The Nature and Treatment of Lupus Erythematosus. To be opened by Professor Boeck (Christiania), and Dr. Unna (Hamburg); and (2) What are we to understand by Eczema? To be opened by Mr. Malcolm Morris (London), and Dr. Wallace Beatty (Dublin).

Papers will be communicated on Friday.

M. MEDICINE IN RELATION TO LIFE ASSURANCE.

Music Class Room, University New Buildings.

President: CLAUD MUIRHEAD, M.D. *Vice-Presidents:* Sir R. DOUGLAS POWELL, Bart., M.D.; PETER ALEXANDER YOUNG, M.D.; JAMES RITCHIE, M.D. *Honorary Secretaries:* JAMES MURDOCH BROWN, M.D., 9, Walker Street, Edinburgh; FRANCIS DARBY BOYD, M.D., 6, Atholl Place, Edinburgh.

The subjects already arranged for discussion are:

The Prognosis of Cardiac Disease in its bearings upon Life Assurance, which Professor Sir William T. Gairdner, K.C.B., will inaugurate.

Middle-Ear Disease in relation to Life Assurance. This will be opened by Dr. McBride, President of the Section of Laryngology and Otology. (These two Sections will probably hold a joint discussion on this subject).

Does Evidence of Limited Family Vitality call for an advanced rate of Premium? To be opened by Dr. James Ritchie (Edinburgh).

The subjects of papers promised are:

Mr. G. M. LOW. Extra Rating as a Statistical Problem.
Mr. JAMES MEIKLE. Gout as a Factor in Life Assurance.
Dr. PLAYFAIR (Edinburgh) conjointly with Mr. T. WALLACE. The Bearing of Pregnancy upon Life Assurance.

N. TROPICAL DISEASES.

Practical Pathology Room, University New Buildings.

President: PATRICK MANSON, M.D., LL.D. *Vice-Presidents:* ANDREW DAVIDSON, M.D., LL.D.; ANDREW SMART, M.D., LL.D.; WILLIAM JOHN RITCHIE SIMPSON, M.D. *Honorary Secretaries:* JAMES CANTLIE, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. LOUIS HUGHES, A.M.S., Aldershot.

The following discussions have been arranged: 1. The Unclassified Fevers of the Tropics. To be opened by Brigade-Surgeon-Lieutenant-Colonel Crombie, I.M.S.

2. Beri-Beri in Temperate Climates. To be opened by Conolly Norman, M.D. (Dublin).

3. The Epidemic of Plague in India. To be opened by W. J. R. Simpson, M.D. (late of Calcutta).

The following among others intend to take part in the discussions or to send papers: Surgeon-Major-General Hamilton, Inspector-General Turnbull, R.N.; Dr. Patrick Manson, Professor Haffkine, Mr. Hankin, Surgeon-Major Andrew Duncan, Surgeon-Major Ronald Ross, Surgeon-Captain L. Hughes, Surgeon-Captain Buchanan, Dr. Andrew Davidson, Dr. Daniels, Dr. Sandwith, Dr. Sambon, Mr. James Cantlie, etc.

The following papers have been announced:

BROWN, Surgeon-Captain E. Harold, I.M.S. Abdominal Surgery in the Tropics.
CANTLIE, Mr. James. Surgical Requirements of the Tropics.
DAVIDSON, Dr. Andrew, LL.D. The Malarial Problem in its Epidemiological Aspects.
HAFFKINE, Professor W. M. Plague in India.
HAMILTON, Surgeon-Major-General J. B, P.M.O. Plymouth. Enteric Fever in Armies and Tropical Climates.
MANSON, Dr. Patrick, LL.D. Appearance of Pigmentation in Lymphocytes in Relation to the Diagnosis of Malaria.
SANDWITH, Dr., Cairo. (1) Pellagra; (2) The Treatment of Acute Dysentery.
WALSH, Surgeon-Major Tull, I.M.S. Clinical Aspects and Treatment of Malarial Fever.
YARR, Surgeon-Major, A.M.S. Malarial Eye Affections.

O. ANATOMY.

Practical Physiology Room, University New Buildings.

President: Sir JOHN STRUTHERS, M.D., LL.D. *Vice-Presidents:* Sir JAMES A. RUSSELL, M.B., LL.D.; JOHNSON SYMINGTON, M.D.; ANDREW MELVILLE PATERSON, M.D. *Honorary Secretaries:* DAVID HEPBURN, M.D., University, Edinburgh. JOSEPH RYLAND WHITAKER, B.A., M.B.Lond., F.R.C.P.Edin., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

There will be a discussion on The Significance of Anatomical Variations.

Professor Symington will give a Lantern Demonstration on Cranial Topography, while Professor Young (Manchester) has promised to take part in the discussion.

P. PHYSIOLOGY.

Physiology Theatre, University New Buildings.

President: WILLIAM RUTHERFORD, M.D., F.R.S. *Vice-Presidents:* JOHN ALEXANDER MACWILLIAM, M.D.; D. NOËL PATON, M.D.; E. WAYMOUTH REID, M.B. *Honorary Secretaries:* EDMOND WILLIAM WACE CARLIER, M.D., 39, Morningside Drive, Edinburgh; ROBERT ARTHUR YOUNG, M.D., 37, Trevor Square, Knightsbridge, S.W.

The following discussions have been arranged:

1. Theories regarding the Production of Different Qualities of Sensation. To be opened by Professor Rutherford, F.R.S.

2. Intestinal Absorption. To be opened by Professor Waymouth Reid, F.R.S.

The following papers are promised:

CARLIER, E. W., M.D. Changes that Occur in Some Cells in Mucous Membrane of the Newt's Stomach during Digestion.
COPEMAN, S. Monckton, M.D. Biliary Secretion in Man.
HARRIS, D. Fraser, M.D. The Physico-Chemical state of Caseinogen.
MACWILLIAM, Professor J. A., M.D. The Influence of the Central Nervous System on the Rate of the Heart's Beat.
MILROY, T. H., M.D. Chemical Changes in Pelagic Ova during Maturation.
MILROY, T. H., M.D., and MALCOLM, J. M.B. The Metabolism of Nuclein under Physiological and Pathological Conditions.
PATON, Noel D., M.D. (1) Protoplasm and Zymin Action. (2) Further Observations on the Metabolism of the Salmon.
GULLAND, G. Lovell, M.D. On the Influence of Nerves on Intracranial Blood Vessels.
GILLESPIE, A. Lockhart, M.D. On Proteoses.
DUNLOP, J. C., M.D. On the Distribution of Nitrogen in the Urine.
PEMBREY, M. S., M.D. Observations upon the Deep and Surface Temperature of Man in Health and Disease.
RUTHERFORD, Professor, F.R.S. (1) On the Secretion of Bile in the Human Subject. (2) On the Action of the Internal Intercostal Muscle.
STURROCK, A. C., M.B. The Selective Power of Tissues, especially as Illustrated in the Mammary Gland.
THOMPSON, Professor W. H., M.D. On the Influence of Peptone and its Precursors on the Work of the Kidney.
TURNER, F. D. Dawson, M.D. (1) Experiments on the Production of Complementary Colour Sensations. (2) Stereoscopic Exhibition of Roentgen Photographs of Injected Blood Vessels.
WALLER, Augustus D., M.D., F.R.S. On the Action of Anæsthetics on Vegetable and Animal Protoplasm.
WATSON, D. C., M.B. The Place of Formation and *Rôle* of Uric Acid in the Animal Organism.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.

9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.
9.30 P.M.—A reception will be given by the Right Hon. the Lord Provost of Edinburgh, in the Museum of Science.

WEDNESDAY, JULY 27TH, 1898.

9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Professor T. R. Fraser.
Garden Party given by Dr. and Mrs. Clouston, at Craig House, Morningside.
9.30 to 12 P.M.—A reception will be given by the Local Committee in honour of the Association within the McEwan Hall and New University Quadrangle.

THURSDAY, JULY 28TH, 1898.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery, by Professor Annandale.
Reception and Garden Party by the Royal College of Physicians, within the College and the adjacent Queen Street Gardens.
Reception by the Royal College of Surgeons within the College.
Reception by the Royal Medical Society within the Society's Hall.
Garden Party by Professor and Mrs. Balfour, Inverleithen House.
7 P.M.—Public Dinner of the Association. Music Hall, George Street.
9 to 11 P.M.—The Ladies Committee will give a *conversazione* to ladies and invited guests within the Royal College of Physicians.

Friday, July 29th, 1898.
10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine. By Sir John Batty Tuke.
Garden Party by the Right Hon. the Earl of Hopetoun, G.C.M.G., at Hopetoun House; and by others.
A Reception and Ball will be given by the Right Hon. the Lord Provost and the Magistrates of Edinburgh, in the Music Hall, George Street.

Saturday, July 30th, 1898.
10 A.M.—The University Graduation Ceremonial will take place within the McEwan Hall.
Excursions.

Honorary Local Secretaries.

R. W. Philip, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.

John Shaw M'Laren, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

The Annual Museum.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 26th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A **meeting** of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 6th day of July next, at 2 o'clock in the afternoon.

June 9th, 1898. Francis Fowke, *General Secretary.*

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desire to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that they are prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C. Applications must include details of a precise character and objects of the research which is proposed.

Reports of work done by the assistance of Association grants belong to the Association.

Instruments purchased by means of grants must be returned to the General Secretary on the conclusion of the research in furtherance of which the grant was made.

Research Scholarship.

The Council of the British Medical Association are prepared to receive applications for one of the three Research Scholarships, which is of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Applications to be sent in writing to the General Secretary on or before June 15th, stating the particulars of the intended research, qualifications, and work done.

Francis Fowke, *General Secretary.*

429, Strand, London, May 14th, 1898.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The annual general meeting will be held at the Hotel Cecil on Tuesday, June 28th, 1898, at 6 P.M. The members will dine together at 7 P.M., Robert Farquharson, M.D., M.P., President-elect, in the chair.—Isambard Owen, H. B. Robinson, Hon. Secretaries.

Metropolitan Counties Branch: East London and South Essex District.—The annual meeting for the election of officers will be held at the Royal Forest Hotel, Chingford, on Wednesday, June 15th, at 6 P.M. At 6.30 the members and their friends will dine together. The chair will be taken by Dr. St. Clair Shadwell, Vice-President of the District. Price of dinner, 7s. 6d. (exclusive of wine); morning dress. Members intending to be present are particularly requested to inform the Secretary as early as possible but not later than Saturday, June 11th.—Herbert E. Powell, Honorary Secretary, Glenarm House, Upper Clapton.

Edinburgh (Lothians and Fife) Branch.—The annual meeting of the Edinburgh Branch will be held in the Royal College of Physicians, Queen Street, Edinburgh, on Wednesday, June 22nd, 1898, at 5 P.M. Notice of motion or other business should be sent at least a week before the meeting to the Honorary Secretary, R. W. Philip, M.D., 4, Melville Crescent, Edinburgh.

Northern Counties of Scotland Branch.—The annual meeting of this Branch will be held at Inverness on Wednesday, June 15th. There will be an excursion on board Mr. McBrayne's s.s. *Elmgany* from Inverness to Fort Augustus. Members allowed to invite their friends. Fuller particulars by circular.—J. W. Norris MacKay, Secretary and Treasurer, Elgin.

Border Counties Branch.—The annual meeting of the Branch will be held at Whitehaven on Friday, June 24th. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. Dundas Helm, Carlisle; W. Hall Calvert, Melrose.

Lancashire and Cheshire Branch.—The annual meeting will be held at Wigan, on Tuesday, June 28th. Applications for membership and all communications should be addressed to the Honorary Secretary, Dr. James Barr, 72, Rodney Street, Liverpool.

West Somerset Branch.—The annual meeting of this Branch will be held on Tuesday, June 28th, at 12.30 P.M., at St. Saviour's, Bridgwater, the residence of the President, Mr. R. H. F. Routh. Besides the ordinary business, the President will deliver an address on "Cycling: its Prophylactic and Curative Properties." The President has kindly asked the members of the Branch to lunch with him at his house after the meeting. During the afternoon, arrangements have been made for the amusement of visitors, including a drive to Lilstock, tickets 2s. 6d. There will be a dinner at the Clarence Hotel, Bridgwater, at 7.30, tickets 4s., exclusive of wine. Members intending to take the drive or be present at the dinner are requested to inform Mr. Routh before June 24th.—R. Liddon Meade-King, M.D., Taunton, Honorary Secretary.

East Anglian Branch.—The annual meeting of this Branch will be held at the Norfolk and Norwich Hospital, Norwich, on Thursday, June 16th. Programme of Proceedings:—10 A.M. Inspection of Hospital and Museum. 11 A.M. Meeting of Council. 11 to 12. Demonstration of Cases in the theatre of the Hospital. 12 noon. General meeting for transaction of business. Agenda: 1. To receive Report of Council of Branch. 2. To receive Treasurer's Report. 3. To receive Report of Election of Officers. 4. Introduction of new President by retiring President. 5. Dr. Barnes (Eye) will make a statement of the work of the Royal Medical Benevolent Fund. 6. Dr. Casley (Ipswich) will move that the Branch subscribe to the Epsom College Benevolent Fund. 7. Mr. H. B. Walker (Lowestoft) will call attention to the present state of the law relating to the inability of medical officers of public hospitals to claim fees for giving evidence at and making *post-mortem* examinations for coroner's inquests, and will move a resolution. 1 P.M. Luncheon at the Hospital by invitation of the President-elect, Mr. Haynes S. Robinson. 2 P.M. Resumed general meeting. 1. President's Address. 2. Migraine and its Relations to Certain Eye Conditions, by Miss Charlotte Ellaby, M.D. (London). 3. The Open-Air Treatment of Phthisis, by Dr. Burton-Fanning (Norwich). 4. A Case of Perforating Gastric Ulcer: Operation: Recovery, by Mr. Brogden (Ipswich). 5. A Case of Fractured Patella (with skiagraph) treated by wiring the fragments, by Mr. R. H. Lucas (Bury St. Edmunds). 6. Two Cases of Suture of Musculo-spiral Nerve after Fracture of Humerus, by Mr. S. H.

Burton (Norwich). 7. A Case of Suprapubic Cystotomy for Tumour, by Mr. Donald D. Day (Norwich). 1. A Case of Lateral Sinus Pyæmia, treated by Operation, by Mr. H. A. Ballance (Norwich). (Patient will be shown.) 5 to 6.30. Reception and afternoon Tea by the President and Mrs. Haynes Robinson, in the Keep of Norwich Castle. 7 P.M. Dinner at the Royal Hotel; tickets 5s. each (exclusive of wine). There will be an exhibition of surgical instruments by Down Brothers, and of pharmaceutical preparations by Messrs. Parke Davis and Co.—E. G. BARNES, M.D., Eye; MICHAEL BEVERLEY, M.D., Norwich; THOMAS CARR, M.D., Braintree, Honorary Secretaries.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next annual meeting will be held at Cardiff on June 30th. Further particulars in circular. —A. SHEEN, M.D., Cardiff; D. A. DAVIES, M.B., Swansea, Honorary Secretaries.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.—The annual meeting of this Branch will be held in Cambridge on Tuesday afternoon, July 5th, 1898. Members who desire to make any communications are requested to inform the Honorary Secretary as early as possible, in order that a full programme may be issued without delay. Members who wish to propose members of the Association as members of the Branch are requested to send notice to the Honorary Secretary not later than June 20th, 1898.—JOSEPH GRIFFITHS, Honorary Secretary, 63, Trumpington Street, Cambridge.

BATH AND BRISTOL BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 29th, in the Royal Mineral Water Hospital, Bath, at 4.30 P.M., when Mr. F. R. Cross will resign the chair to Dr. Lionel Weatherly, President-elect, who will deliver the Presidential Address. The business of the meeting will be to receive the report of the Council, to elect the officers of the Branch, to transact the necessary business, and such subjects connected with the interest of the Branch and of the profession as may be brought before it. Members having any communications for the meeting are requested to give notice to the Secretaries not later than June 14th. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. Members who have not paid their subscriptions are requested to do so immediately to the Local Secretaries. The dinner will be held at the Grand Pump Room Hotel at 7 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charges. The Bath Secretary particularly requests that members will inform him by Monday, June 27th, whether it is their intention to be present at the dinner. By so doing they will greatly facilitate the satisfactory completion of the necessary arrangements.—W. M. BEAUMONT, Bath, J. MICHELL CLARKE, Clifton, Honorary Secretaries.

SOUTH EASTERN BRANCH.—The annual meeting will be held at the Town Hall, Tunbridge Wells, on Wednesday, June 22nd, at 2 P.M. The President-elect (Dr. Ranking) invites members to lunch at his house (near the Town Hall) from 12.30 to 2 P.M. Dinner at the Calverley Hotel at 6.15 P.M., at 7s. per head.—T. JENNER VERRALL, Hon. Secretary, Brighton.

SOUTH-WESTERN BRANCH.—The annual meeting of this Branch will be held at the Alverne Hall Public Buildings, Penzance, on Friday, June 17th, under the Presidency of Dr. Hugh M. Montgomerie. Programme: 1 to 2.30 P.M., Luncheon, by invitation of the President-elect, in the Lecture Hall, Public Buildings, Penzance. 2 P.M., Meeting of the Council of the Branch, in the Museum of the Penzance Natural History and Antiquarian Society in the Public Buildings. 2.30 P.M., General Meeting of the Branch in the Alverne Hall, Public Buildings; Dr. Davy will resign the chair to the President-elect, Dr. Hugh M. Montgomerie. President's address, Business. After the meeting, about 4 P.M., by invitation of the President, there will be an excursion by steamboat across the Bay to St. Michael's Mount. By kind permission of the Right Honourable Lord St. Levan, the members will have an opportunity of viewing the Castle. For those who do not go to the Mount, tea will be provided, at 4.30 P.M., at 5, Clarence Place (Dr. Montgomerie's House), and the Museum of the Royal Geological Society of Cornwall and other points of interest may be visited. Returning to Penzance by boat, the annual dinner will take place at the Queen's Hotel, at 7 P.M.; tickets 7s. 6d., exclusive of wine. The members of the Branch in West Penwith invite those staying for the Saturday (18th) to a luncheon and excursion to Land's End. The guests will be brought back to Penzance in time to catch the up mail at 4.50 P.M., arriving in Exeter at 10.15 P.M. This excursion, however, cannot be given unless at least twenty-five accept the invitation, and notify the same to A. R. F. Evershed, M.R.C.S., Sheari, Morrat Road, Penzance, on or before June 13th. The Honorary Secretary takes this opportunity of expressing his regret that he cannot again offer himself for re-election to office.—WILLIAM GORDON, Honorary Secretary, 3, Barnfield Crescent, Exeter.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE annual meeting of this District was held at Bethlem Royal Hospital on May 27th, Dr. R. PERCY SMITH, Vice-President, in the chair.

Election of Officers.—The following officers were elected for the ensuing year:—*Vice-President:* Dr. R. Percy Smith. *Representative on the Council of the Branch:* Dr. Hector Mackenzie. *Honorary Secretary:* Dr. Theo. B. Hyslop. Also a Committee of ten members of the District.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed, and the Honorary Secretary's report for the year was read and adopted.

Demonstration in the Wards.—The meeting then adjourned to the wards, where Dr. PERCY SMITH gave an interesting demonstration on cases of insanity associated with syphilis.

Vote of Thanks.—The meeting closed with a vote of thanks to the Vice-President for his most instructive demonstration.

MIDLAND BRANCH.

THE annual meeting was held at Lincoln on June 2nd; Dr. CARLINE, President, in the chair. Forty members were present.

Vote of Thanks to Retiring President.—A vote of thanks to the retiring President, Mr. C. J. Bond, was passed.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Members.—The report of the Branch Council stated that the following gentlemen had been elected to the Association and Branch: G. H. Milnes, M.D., 103, Friar Gate, Derby; William Scott, M.D., Kimberley, Notts.; Robert Turner, M.D., Eastwood, Notts. The following members of the Association were elected members of the Branch: R. J. Bedford, Keymouth; J. Iredale, Mablethorpe; R. Sevestre, M.D., Leicester; W. C. Browne, Grantham; R. N. Clements, Leicester; F. B. Cooper, M.B., Lincoln; S. W. Daman, M.B., Lincoln; R. Domenichetti, Belshford, Lincs.; C. W. Evans, M.D., Bakewell; Alexander Gregor, M.B., Sutton-on-Trent, Notts.; R. W. Jamie, M.B., Coalville; W. E. Jones, Leicester; W. E. Leitch, Langwith, Mansfield; S. Wilson Parry, M.B., Youlgrave, Derbyshire; T. P. Shearer, Leicester; W. P. Simpson, M.B., Coningsby, Lincoln; J. Stitt Thomson, M.D., Lincoln; W. Morley Willis, Nottingham.

Payment of Expenses of Branch Representatives.—A resolution of the Council advising payment of expenses of representatives of the Branch on Committees of the Central Council from the Branch funds when not paid by the parent Association was agreed to.

Election of Officers.—The following were elected officers of the Branch: *Representatives on the General Council of the Association:* Dr. Handford, Dr. Pope. *Representatives on the Parliamentary Bills Committee:* Dr. Carline, Dr. Pope. *Vice-Presidents:* For Nottinghamshire, Dr. Mutch; for Leicestershire, Dr. F. W. Bennett. *Members of Branch Council:* Leicestershire, Mr. R. C. Stewart, Mr. Blakesley; Notts, Mr. Appleby, Mr. Anderson; Lincoln, Dr. Brook, Dr. Harrison; Derby, Dr. Benthall, Dr. Vaudrey. The District Secretaries were re-elected. Dr. Pope was re-elected Treasurer and Secretary for the Branch. Mr. E. M. Wrench, F.R.C.S. (Baslow) was elected President-Elect of the Branch, on the motion of Dr. BENTHALL, seconded by Mr. BLAKESLEY.

President's Address.—The PRESIDENT, Dr. Carline, delivered an address, in which he pointed out the great advantage which might ensue if teetotal associations were to help public bodies in securing a pure water supply for the public.

Papers.—The following papers were also read: Dr HANDFORD and Mr. ANDERSON: Case of Perforation of a Typhoid Ulcer, Operation, Recovery.—Mr. ANDERSON: (1) Transperitoneal Uretero-lithotomy; (2) A Case of Hydatid of the Kidney, with specimen.—Dr. NEWMAN: A Short Note upon Prostatic Troubles.—Dr. J. STITT THOMPSON: Functional Irregular Action of the Heart.—Mr. W. J. CANT: (1) An Improved Method of Operating for Hare-lip; (2) Specimen of Sarcoma of the Choroid.—Dr. R. SEVESTRE: The Effects of Foreign Bodies in the Bronchi.—Dr. R. A. FARRAR: Operation for Carcinoma of the Cervix Uteri, with notes of two successful cases.—Mr. S. W. DAMAN: Medical and Surgical Cases and Specimens.

Luncheon and Dinner.—Dr. Carline entertained the members at luncheon before the meeting, and about 20 members afterwards dined together.

STAFFORDSHIRE BRANCH.

THE third general meeting of the session was held at Wolverhampton on May 26th, Mr. G. A. PHILLIPS, President, in the chair; sixteen members were present.

Confirmation of Minutes.—The minutes of the last general meeting were read, approved, and signed.

Death of Mr. John Alcock.—On the proposal of the PRESIDENT, supported by Dr. T. R. BAILEY, a vote of sympathy with the members of the late Mr. Alcock's family was unanimously passed. Both the proposer and supporter of the motion spoke in feeling terms of the loss the Branch had

sustained by Mr. Alcock's death. He was an original member of the Branch, President in 1890-91, and for many years a member of the Council. His opinion was always valued and his advice appreciated as coming from a sound and able surgeon, while his genial presence and kindly courtesy endeared him to all.

New Members.—Arthur E. Normington, M.B., B.Ch.Vict., Workhouse, Stoke-on-Trent, and Augustus F. M. Powell, M.B., C.M.Edin., Sedgley, were elected members of the Branch.

Pseudo-hypertrophic Paralysis.—Dr. McMUNN showed a boy, aged 9, suffering from pseudo-hypertrophic paralysis. He began to have difficulty in walking a year ago, and six months later his gait became waddling and his calves large. His present condition shows the usual muscular atrophy, with well-marked lordosis and talipes equinus. Family history revealed nothing of importance.

Dermoid Cyst.—Dr. DEANESLY showed two well-formed teeth from a suppurating ovarian cyst, presumably a dermoid, which he had just removed from a patient in the Wolverhampton and Staffordshire General Hospital. The patient had given birth to her second child five months ago. She got up on the tenth day afterwards, but remained weak and ill, and noticed a tender swelling on the right side of the abdomen. This was found to be about the size of a fœtal head, and lay in the ileo-cæcal region, and was freely movable. The uterus was of normal size, movable, and no abnormal swelling could be felt in the pelvis. The diagnosis of ovarian cyst infected during childbed was confirmed by operation. The cyst was firmly adherent to great omentum, cæcum, and small intestine, and was burst during the separation of adhesions. The pedicle, which was long and slender, included the Fallopian tube, and was easily ligatured and divided. The cavity left by the cyst was loosely packed with iodoform gauze.

Urethrectomy for Impermeable Stricture.—Dr. DEANESLEY also narrated a case of urethrectomy for impermeable stricture with retention of urine. About an inch of the whole urethral tube was excised and removed, including the whole strictured portion. The healthy ends of the bulbous and membranous portions of the urethra were then accurately united by sutures over an indiarubber catheter tied into the bladder. The case, which was operated on seven days previously and was making excellent progress, would be published when completed. The operator hoped to obtain perfect recovery with little or no stricture.

Stercoral Ulceration of Rectum.—Dr. J. A. CODD showed a specimen of multiple stercoral ulceration of rectum from a man, who was admitted into the Wolverhampton Hospital in a moribund state, with the lower part of the abdomen distended, dull, and immobile. There was no available history, and he died in a few hours. *Post mortem* the rectum showed two longitudinal rows of deep crypts, extending from its commencement to an inch above the anus. Each crypt contained a concretion about the size of a pea, and the mucous membrane was eroded. One crypt near the anus had perforated, forming an abscess between the sacrum and the posterior wall of the rectum, which extended up to the promontory. Above this was a large area of purulent retroperitoneal infiltration which surrounded the left kidney, though this organ was otherwise healthy. There were also purulent loculi in the lower part of the peritoneum, shut off by fairly tough adhesions. Microscopically the crypts were lined with but partially denuded mucous membrane, containing Lieberkühn's follicles, but with only a small amount of round cell infiltration and no excessive hyperæmia.

Prognosis of the Principal Forms of Insanity.—Dr. PIETERSEN read a paper on this subject. After enumerating the general principles of prognosis in any case of mental affection, he dealt at length with the generalised insanities of Régis's classification. Mania and melancholia in their distinctive degrees of severity were fully considered, and, as undeniable factors in prognosis, special emphasis was laid on the value of prompt isolation and prompt nutritional treatment in every case of acute functional insanity. A short review was then given of the insanities peculiar to the critical age periods—puberty, adolescence, the climacteric, and senility—and those dependent on or associated with certain physiological conditions and various constitutional and visceral affections. Special reference was made to the influence of syphilis as a primary causative factor of general paralysis of the insane which the author defined as "a disease, or more probably a group of diseases, as yet not properly differentiated, of toxic origin, such toxicity being syphilitic, the poison being roused from latency to progressive activity by mental strain, shock, traumatism, alcoholism, and other minor causes." Mention was made of the complete recovery of a case of severe acute mania due to exophthalmic goitre.

Stacke's Mastoid Operation.—A paper was read by Dr. DEANESLY on Stacke's mastoid operation, the anatomy of which was demonstrated on a number of prepared bony specimens. The advantages of the operation and its superiority over simple opening of the mastoid antrum and cells were dwelt on and emphasis laid on the necessity of accurate knowledge of the anatomy of the parts in order to avoid wounding the facial nerve—the greatest danger of the operation. Two living cases were also shown: (1) A boy on whom the operation was performed two years previously, with complete cicatrisation and cure of a long-standing otorrhœa complicated with epidural abscess and necrosis of the modiolus of the cochlea; and (2) a man operated on a fortnight previously still showing the complete anatomy of the operation.

PERTHSHIRE BRANCH.

A SUMMER meeting of this Branch was held in Perth on June 3rd, Dr. ROBERTSON of Scone in the chair.

Business of Association.—Various matters regarding the business of the Association were discussed and adjusted.

Branch Representative.—Dr. Urquhart was reappointed representative member.

SPECIAL CORRESPONDENCE.

ROME.

Therapeutic Serums.—Antirabic Treatment at Milan.—Foundling Hospitals.

SINCE the suppression of the Direction of Public Health and the Government laboratories for the preparation of vaccines and curative serums in connection therewith, the state of things as regards the manufacture and sale of these products has been very unsatisfactory in Italy. To remedy this defect the Minister of the Interior lately introduced a Bill in the Chamber of Deputies. In presenting it he said that the continually increasing progress of serumtherapy, and the abandonment by the State of the preparation of vaccines and curative serums, had rendered necessary and urgent the adoption of regulations directed to control, precisely and efficiently, the manufacture and sale of these products. By this project of law he desired to provide for such a necessity. It had been drawn up by a Commission appointed from its body by the Superior Council of Health, and it was limited to affirm a few principles which later will be enlarged by special regulations to be made by the Council of Health. The principles of the Bill are briefly as follows: (1) The hygienic supervision of vaccines, serums, and similar products is limited to their sale and manufacture, safeguarding the liberty and dignity of scientific research. (2) The Superior Council of Health shall have the power of defining the products which may merit the special attention of the State, with the object of obtaining from modern discoveries the greatest hygienic and sanitary advantages, and also of defining the criteria which the service of control may think necessary in particular cases for the purpose of ensuring the genuineness of the products. The Bill will be the point of departure of a series of regulations that will be adopted by the Government definitely to control the very important question of the preparation and sale of serums.

During the year 1897, 584 persons bitten by rabid animals, or supposed to be so, presented themselves for treatment at the Antirabic Institute of Milan, which is connected with the School of Hygiene. Of these, only 376 were subjected to the treatment, as the others had not been bitten by rabid animals. Since the institute was opened in September, 1886, 4,728 persons have presented themselves, of whom 3,396 have

undergone treatment; the smallest in any one year, in 1897, when there were 231 patients; the largest in 1896, when there were 470. The number of persons bitten in each month of the year 1897 varies from a minimum of 18 and 19 respectively in December and November to a maximum of 45 and 49 in April and May. The mortality in 1897 was 0.26 per 100 treated. The general mortality of the 3,396 treated from September, 1886, to the end of 1897 was 0.73 per cent.

The Commission of Inquiry into the condition of the foundling hospitals (*brefotrofi*) in Italy, at a meeting lately held, discussed the reports sent in by the provincial physicians as to the state of the various *brefotrofi* in their provinces. The Commission decided to send some of the members to investigate certain foundling hospitals in different parts of the country. As soon as the Commission has completed its labours, it will present a report to the Government, which will be the basis for a Bill which it is earnestly to be hoped will be introduced during the present session.

BRISTOL.

Nursing in Workhouse Infirmaries: Proposal to Train Probationers.

AT the meeting of the Bristol Board of Guardians held on June 3rd the Hospital Committee called attention to the smallness of the nursing staff and the necessary employment of temporary nurses. In the Eastville Workhouse with 390 sick and imbecile there were 38 nurses, and in the Stapleton Workhouse 508 inmates with only 25 nurses. In this latter there are 181 aged sick under 3 day nurses and 1 night nurse, and in the nursery there are 19 infants with no paid nurse. The increase recommended by the Committee will give each night nurse 90 patients to look after, and each day nurse 30, by which it will be seen that the staff will be about doubled if the proposals are carried out. This will also be economical, for temporary nurses are paid twice as much as permanent.

In the discussion which followed this proposal it was suggested that probationers should be employed and trained, which, in other words, means that the sick should be left under the care of untrained persons who are to pick up what knowledge they can, for it is useless to suppose that the fully-trained nurse with so many patients could spare time to train a probationer. Compared with other towns, there would be in Bristol 1 nurse to 23 patients, against 1 to 16 in Liverpool, 1 to 15 in Manchester, and 1 to 11 in West Derby. An amendment to refer the matter back to the Committee on the plea that the extra expense was not justified was fortunately lost, and, though the report was carried, notice was given of a resolution to rescind the proposition, which one cannot help hoping will receive the same fate as the amendment.

MANCHESTER.

Again the Corporation and its Sewage Problem.—Death under Chloroform at the Royal Infirmary.—Burnley Hospital.

THE Manchester Corporation is beset with extreme difficulties in connection with its sewage operations. A deputation from the Corporation waited on Monday last upon the Mersey and Irwell Joint Committee in reference to the recent prosecution of the Corporation for the pollution of the Ship Canal with sewage. The Corporation have lodged an appeal against the decision of the county stipendiary magistrate, and the deputation proposed that the decision should be respected until October, and that in the meantime the Joint Committee should not obtain action to obtain penalties. The spokesman of the deputation stated the grounds on which the request was based, but the Joint Committee declined to go into the matter unless the Corporation appeal was withdrawn. The stipendiary magistrate had, it seems, suggested that the Corporation should call in the aid of experts, and this has now been done. These are Mr. Baldwin Latham, Dr. Percy Frankland, and Professor Perkin, Professor of Organic Chemistry in Owens College. It remains to be seen what step the Corporation will take as to the appeal.

The Manchester coroner held an inquest on June 6th on the body of a lad, aged 15, whose death took place at the Royal Infirmary while chloroform was being administered prior to an operation. The lad died within a few minutes after the beginning of the administration. Some misunderstanding, it appears, arose about the consent of the parents being obtained beforehand, and the coroner advised that a representation should be made to the infirmary authorities that consent in writing should be obtained in all such cases. A verdict of accidental death was returned.

A somewhat animated discussion took place at the last meeting of the Burnley Board of Guardians relative to the death of a Nelson drayman, named Smith, who died in the Royal Infirmary, Manchester. From the statements made at the coroner's inquest it appears that Smith on May 31st was kicked by a horse, and sustained a compound facture of the right knee-cap. It was further stated that he was taken to the Burnley Victoria Hospital, but as there was scarlet fever there the authorities advised that he should be removed to the Burnley Workhouse Infirmary. An order for his admission to the infirmary was procured, but for some reason he was not taken there. He remained at the hospital until the following night, when he was sent home, and it was not until Sunday morning, or two full days after the occurrence, that the limb was set at his house. On Tuesday he was removed to the Manchester Royal Infirmary, where he died a week later. Dr. Robinson, of the Workhouse Infirmary, wrote a long explanatory letter to the guardians. Ultimately it was agreed to appoint four guardians to meet a similar number from the Board of Management of the Victoria Hospital to make a joint inquiry into the matter.

BIRMINGHAM.

Report of the Medical Officer of Health: High Death-rate among Children: The Sewage Question: Isolation Hospital for Diphtheria.—Sanitary Congress.—State Lunatic Asylum.—Deaths under Anæsthetics.—Workhouse Infirmary.

THE Health Committee of the City Council have just issued the annual report of the medical officer of health for the city. It deserves the earnest consideration of all who have the sanitary well-being of the city at heart. The death-rate per 1,000 for the year has been 21.1. This is a higher rate than has occurred since the quinquennial period 1878-82 not caused by any exceptional epidemic. The increase is brought about by the increased number of deaths (chiefly among children) from diarrhœa, enteritis, and measles. There is no doubt whatever that this increase in the death-rate is due chiefly to the insanitary state of parts of the city, notably St. Stephen's Ward and St. Bartholomew's Ward, which have death-rates of over 29 per 1,000. The whole question of the disposal of the sewage will have to be reconsidered by the City Council in the near future, and a large sum of money expended on alterations and improvements if Birmingham is to be placed in a position of sanitary safety. Another recommendation which we heartily endorse appears in the health officer's report. A special isolation hospital is badly needed for the treatment of diphtheria cases. At present the General Hospital, the Children's Hospital, and the Queen's Hospital are the only institutions were such cases are received, and the accommodation is very limited, only the most urgent cases being admitted.

The Sanitary Congress is to be held here in September, and it is to be hoped that the Council will ere then have announced that it recognises its responsibilities in these matters.

The report of the Lunatic Asylums Committee also contains some interesting statistics of lunacy compiled by the Medical Superintendent at the City Asylum. There has been no appreciable increase in lunacy during the year; the small increase in the number of admissions during the year being explained by the increase in population. Of the new admissions during the last twelve months, in 24.4 per cent. of the males and 24.8 per cent. of the females the disease was directly due to intemperance in drink. These figures are exclusive of those cases in which a hereditary tendency existed, and drink was only the exciting cause.

A correspondence has lately been going on in the Birmingham press on the alleged increase in number of fatal cases whilst under the influence of anæsthetics. During the last six years there have been 22 fatal cases on which the city coroner has held inquests. Of these 22 cases, in 14 chloro-

form alone was the drug employed, in 7 mixtures of chloroform and ether or chloroform, ether and alcohol were used, and in only one case was ether alone the anæsthetic employed. There are on an average about three deaths from anæsthetics in Birmingham in each year. It does not appear that they are becoming any more frequent than they were, though attention is drawn more to them in the lay press. The use of anæsthetics, on the other hand, both in hospitals and in private practice, is becoming greater year by year, so that there does not appear to be any real cause for the alarm shown by some of the correspondents. The authorities at the General Hospital, however, realising the seriousness of any such death, have appointed a subcommittee of the staff to make inquiries into the subject and report.

Dr. A. H. Carter has resigned the post of Physician to the Birmingham Workhouse Infirmary. Dr. Thomas Wilson, Assistant Obstetric Officer at the General Hospital, has been elected to fill the vacancy.

CORRESPONDENCE.

FOREIGN PRACTITIONERS AND RECIPROCITY.

Sir,—With regard to the resolution on reciprocity of medical practice that I moved at the recent session of the General Medical Council, I should like to have the opportunity of correcting an erroneous statement on the subject made by Mr. Carter and Dr. MacAlister, relative to the Apothecaries Act and its effect in stopping medical practice in the United Kingdom by foreigners who possess diplomas enabling them to practise in their own country.

Mr. Carter admitted to the Council that he was responsible for a statement on this subject in the letter written by the Executive Committee of the General Medical Council to the Privy Council, and further he stated that "as to the Apothecaries Act he had the information from Mr. Upton, the solicitor to the Society, that although the Act had been put in force against the owners of bogus diplomas who were practising as notorious quacks it had never been put in force—and he (Mr. Upton) believed no attempt would be made to put it in force—against respectable men holding legitimate qualifications entitling them to practise in their own country and who might settle in this country." Although Mr. Carter represents in the General Medical Council the Apothecaries' Society, this statement, which Dr. MacAlister endorsed, is entirely erroneous. At the very time when these gentlemen were thus speaking in the Council, the Apothecaries' Society, as I knew, had, through Mr. Upton, their solicitor, actually sanctioned the prosecution of a man named Liebster, an M.D. of Vienna. Now that the case has been heard, I am glad to be able to draw the attention of your readers to the fact that the Medical Defence Union, who carried out this prosecution, won their case on June 3rd, and that the person in question was fined the full penalty of £20 and costs under the Apothecaries Act.

As regards the general question of foreigners habitually practising in the United Kingdom, the profession is now to be congratulated on the disappearance from among the advertised publications of the Council of the misleading and erroneous *Report on Reciprocity*.—I am, etc.,

Cavendish Square, June 4th. Victor Horsley.

THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS.

Sir,—The letter of "X.Y.Z." in your last issue must be very irritating to practitioners who like myself have suffered from the dearth of qualified assistants.

I welcomed the action of the General Medical Council, and have no doubt that in time the law of supply and demand will adjust the present temporary dislocation, but it is idle to deny that at present most serious inconvenience does exist. The advertisement columns of the British Medical Journal and those of your contemporary bear ample evidence of this. One sees the same advertisements in week after week, even in cases where liberal salaries are offered. I myself have advertised in your columns and those of other journals, but hitherto have only had one reply, and that not from a European.

This seems rather at variance with the "thirty or forty" replies mentioned by "X.Y.Z.", and yet I do not hail from Leeds. I offer a salary which a year ago would have been considered tempting, yet I do not even receive an application from a broken-down practitioner.

In addition to advertising I have made inquiries through medical agents, medical friends, and at large medical schools, with equally negative results. I know that my own case is not a solitary one, but that neighbouring practitioners have experienced the same fortune as myself. I have no desire for the General Medical Council to retreat from their position, but I do most strongly object to one clause in the report of the Committee on Unqualified Assistants, which states that junior practitioners are no doubt unwilling to accept the inferior and ill-paid positions hitherto occupied by unqualified men. I, and others, do not ask qualified men to accept ill-paid positions, but we are justified in grumbling a little when a liberal salary evokes no response. The fact of the matter is that something like 1000 vacancies have been sprung upon the assistant world all at once. The number of unemployed assistants must be a mere tithe of this. Deaths and retirement alone absorb 600 new men annually, and it is only the surplus over and above this number that are annually turned out from the medical schools, that is available for assistancies.

The General Medical Council and their supporters (amongst whom I reckon myself) do nothing to relieve the difficulty by denying its existence. If "X.Y.Z." will start a medical agency I feel sure that he will reap a fortune from the commission which practitioners would gladly pay him for putting them in communication with the number of men who can't get assistancies that he knows of.

In conclusion, I may say that to-day I have heard of a medical man failing so far to obtain a *locum tenens*, although he offers 25 per cent. more than the usual remuneration.—I am, etc.,

June 6th. G. P.

Sir,—I notice in the British Medical Journal of June 4th a good deal of matter *re* the unqualified assistant, and that a petition from the Leeds practitioners has presented to the General Medical Council. I will admit that it is hard on a man who has gone through the full curriculum and has failed to qualify from want of money. But, on the other hand, a great number of the unqualified men are from the ranks of hospital idlers, and men who have never seen the inside of a dissecting room.

I qualified fourteen years ago from Guy's, and I now know several men who were there in my time now unqualified; and I have no hesitation in saying that the fault was their own and not the hospital or school authorities.

If the present unqualified army are allowed a special examination, in ten or twenty years we shall have the same process occurring again.

I have found the unqualified assistant such a servile and undignified creature that the sooner he is swept away the better. I am also of the opinion that if a man has more work than he can attend to, well, let him take a partner or allow others as well qualified as himself to get a living. While the rank and file of the profession were allowed unqualified assistance the qualified medical man, especially if young, was at a great discount. If unqualified men are as capable of undertaking the treatment of diseases, I for one can see no use in passing examinations and going in for a long hospital training.—I am, etc.,

June 7th. Cymro.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

Sir,—The profession is indebted to the Hon. Secretary of the Gateshead Medical Association for the warning he has issued with reference to our dealings with the above Society—a warning similar to that issued by the Medical Guild some few months ago.

There is little doubt that the lines upon which this Society is established have been very carefully thought out, and that as a thrift society it is deserving of a good deal of commendation. Further than this, the arrangement of its purely medical structure is such that by the offer of apparently fair remuneration for medical services it has undoubtedly captured the attention and considerate interest of many amongst

us, who either from want of time or of business capacity are only too prone to accept a plausible thing without searching inquiry into its real nature and future effects.

I am not aware, however, that the fact of the National Deposit Friendly Society being an excellent organisation for the promotion of thrift amongst the laity demands our enthusiastic acclamation, especially if such increase of wealth is in part the result of our increased necessity; nor do I see why we should give our ready aid to any association which however plausible its prospectus may be was certainly not established for the pecuniary benefit of the medical profession.

One would almost imagine from the style of argument and language adopted by the supporters of the National Deposit Friendly Society, that the chief object of those responsible for its inception was the outcome of an overwhelming desire to increase the incomes of medical men and to reduce the annual amount of their bad debts. When, however, I see that by giving my aid to such a society I most certainly reduce my income, I begin to question the reality of this apparent solicitude on my behalf and to feel much more inclined to go on as I have been wont to do, even with the accompaniment of "bad debts."

Let a medical man who charges the orthodox and ethically correct fee divest his mind of the first pleasing impression made upon it by the very plausible but misleading scale of fees issued by this Society. Let him, then, go carefully into the question of what would be the effect upon his income of the wholesale admittance into the Society of those of his patients who are tradesmen, skilled artisans, shop assistants, clerks, etc. Then if he be not able to prove that his income would be considerably reduced thereby the assistance of figures is less than I imagine it to be. It is the specious

Visit and medicine for two days, 2s. 6d.

which throws dust in the eyes of most men, and it is not till they contrast the remuneration they usually obtain for attendance upon, say, a case of pneumonia with that which they would receive at the Society's rate, that the real value of the scale is manifest. A man who is the habit of charging small fees may not lose by giving his aid to the Society; but a man who charges the minimum ethical fee most certainly will. I do not suppose however that members of the Society wish to have only the services of third-rate men.

Apart from the question of adequacy of remuneration, there is another aspect of this matter which requires consideration, namely, the desirability or otherwise of permitting the intervention between us and our patients of a third party. In some cases this intervention is unavoidable; but it may be laid down as a broad principle that the more we sanction and acquiesce in such a condition of things the more we shall suffer, especially if the third party happens to be the laity in combination either in the form of medical aid institutes, industrial assurance companies, or national deposit friendly societies, for the very *raison d'être* of such bodies so far as we are concerned is the acquisition of medical services at as low a rate as possible.

We have suffered enough already from the action of lay combination, and it is time we ourselves combined and offered to it a firm resistance. The spirit of altruism of which one correspondent speaks has its limits. I am perfectly aware of the altruistic work done by the profession in the past; but when I consider that the result of all our modesty and self-abnegation has been ever-increasing exploitation by combinations of the laity, it appears to me that our altruism requires neutralising by the infusion of a little of the selfishness of commerce.

The sooner we realise the fact that as well as being scientists we must also be men of business the better will it be for our temporal welfare. Had we been more commercial and less altruistic in the past, so many of us would not be to-day draining the cup of poverty and impotency.—I am, etc.,

J. RATCLIFF-GAYLARD, M.D.,
Hon. Secretary, Extension Committee, Medical Guild.

Manchester, June 4th.

THE EMBALMING OF THE DEAD.

SIR,—The writer on the embalming of the dead in the BRITISH MEDICAL JOURNAL of May 28th has evidently not seen the paper by me on the Preservation of Bodies for Dissection, published in the *Edinburgh Medical Journal* of October, 1890. I have not seen the account of any of the various methods he mentions, but should think that none of them can be so simple, inexpensive, or so successful as that which I there described, and at which I arrived after trying many ways. Adaptation of the process to the case of domestic embalming is given. A body prepared by the process described may be kept, simply and inexpensively, in perfect preservation for any length of time. The external application part of the process, without internal injection, may alone be enough, if it is desired to keep the body for only a few weeks or months, as for sending a body home from distant parts, or for the public "lying in state" of the body of an important person. The features may be so perfectly preserved that in viewing them one may almost realise Byron's magnificent description of the appearances "ere the first day of death is fled."—I am, etc.,

Edinburgh, June 4th. JOHN STRUTHERS.

THE DUM-DUM BULLET.

SIR,—I have just read Professor Ogston's remarks on the Dum-dum bullet in the BRITISH MEDICAL JOURNAL of May 28th, in which he states that Professor von Bruns called it an "inhumane projectile," but "expressly guarded himself from condemning the Dum-dum bullet in wars with barbaric races."

Surely this is "differential treatment" with a vengeance, and I would ask whether, if the Dum-dum bullet be an "inhumane" projectile, it ought to be used at all? As I stated in the article you published on the Evolution of the Dum-dum Bullet, it can in no way be called an explosive bullet, the object of baring the lead at the apex being to allow it to "set up" on impact, in other words expand, and thus inflict a greater shock. Had the Lee-Metford rifle been used with a bare bullet, that is one composed of hardened lead without a mantle, no possible objection could be taken to it. Yet it would have inflicted far worse wounds, but because we envelop the projectile in a mantle of nickel, only allowing the point to be bare, we are held blameable.

War cannot be made with rosewater, and I submit that if it is allowable to use Dum-dum bullets on "black" men, by a parity of argument it cannot be wrong to use them on "white" ones. The only alternative would be to arm our troops with a different weapon when engaged with savage races, which would be a *reductio ad absurdum*.

Let me point out that if the Dum-dum bullet be used, it, as a rule, will injure but one man, as when "set up," its power of penetration rapidly ceases; if, on the other hand, a projectile entirely covered with nickel be employed, it will possibly pass through two or three men, and gradually "setting up," inflict great injuries on a fourth.

An admiral in command of a fleet would not hesitate to "ram" a battleship or blow her up with a torpedo, destroying perhaps 800 men in the operation, and would gain renown for the action; but if our War Office uses a projectile calculated to "stop" individuals, it is condemned as "inhumane"!

It is perhaps a question for European arbitration, but as matters stand it is absurd to blame us for using an efficient weapon.—I am, etc.,

J. B. HAMILTON,
May 29th. Surgeon-Major-General.

SIR,—Referring to Surgeon-Colonel Stevenson's letter of May 30th, the Dum-dum bullet was certainly the matter in question, whether it was actually experimented with by v. Bruns or not. And in conversation with many surgeons afterwards this bullet was referred to by them. What v. Bruns meant by his remarks to me was plainly that in commenting upon the effects of a missile used by a foreign Government he hoped he had not expressed himself in any way as reflecting upon those who employed it, his design being to demonstrate its effects and to suggest its exclusion from European warfare. And, as I said before, I thought his demonstration was admirable both in substance and good taste, as might have been expected from him.—I am, etc.,

ARTHUR E. BARKER,
Professor of the Principles and Practice of Surgery,
Harley Street, W., June 7th. University College.

THE DENTAL EXAMINATIONS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—In my letter in the BRITISH MEDICAL JOURNAL of June 4th on the above, I accidentally omitted a sentence which detracts materially from the force and point of a subsequent sentence. The omitted sentence should follow the sixth line in the printed letter, reading "give their diagnosis and treatment," and is as follows:—"At the *vivâ*, candidates were asked to describe the fœtal circulation and the os innominatum." With this inserted the purpose of the sentence further on in the letter beginning "I do not, moreover," is made clear."—I am, etc.,

June 4th. F.R.C.S.

INTRATRACHEAL INJECTIONS IN PHTHISIS.

SIR,—With reference to the misgivings expressed incidentally on page 84 of my article on Bronchiectasis in Clifford Allbutt's *System of Medicine*, vol. v, as to the value of this form of treatment in phthisis, Mr. Colin Campbell writes to remind me that in his paper in vol. lxxviii of the Medical and Chirurgical *Transactions* on the Treatment of Respiratory Affections by means of Large Medicinal Injections through the Larynx, he sets forth the advantages of distilled glycerine instead of oil as a vehicle, and relates a series of uniformly favourable cases. Inasmuch as a wider knowledge of his improvement in the method would modify any adverse impression which might be conveyed by my article, I venture to beg your kind insertion of this letter.—I am, etc.,

Curzon Street, W., June 3rd. W. EWART.

SMALL-POX IN THE NORTH.

SIR,—I fail to understand why the theory which has traced the origin of the Middlesbrough epidemic of small-pox to Bilbao should ever have been set up. That the late Dr. Malcomson did not hold this opinion is shown in his monthly report for December to the Eston Urban District Council:

On November 23rd a case of small-pox was reported in the South Bank portion of Eston. The case was at once removed to the Eston Sanatorium, and proved a very malignant one. The early notification of this case, the isolation accommodation provided by the council, and the re-vaccination of the people who were in contact with the patient prevented an epidemic in your district. I have reason to believe that the disease was imported into your district by some travelling shows (menagerie), as simultaneously the same disease appeared in Middlesbrough, and no common source of aggregation can be found save the same public shows. The man attacked (B. B.) was employed in clearing up the stand of one or more of these shows.

Being medical officer to the Eston Sanatorium, Dr. Malcomson asked me to have the case removed at once, this being the first case of small-pox which had occurred in this district for many years. I went with the ambulance myself, and made careful inquiries concerning the source of infection. I found that the patient was employed by the South Bank local authority in doing town sanitary work—sweeping streets, etc.; he had not been out of the town of South Bank for over three months, had never been near the docks or jetty, and had cleared away hair, etc., from the ground on which the menagerie stood; the show left South Bank on November 9th, and then went to Middlesbrough.

Why this show was not traced is that Dr. Malcomson had grown with the town of Middlesbrough, and was doing work which could only be done properly by two or three men, as a glance at the *Medical Directory* will show.

Dr. Malcomson, in discussing this epidemic with me, had no doubt in his own mind that the menagerie was the source of the present ou break of small-pox, so that I am at a loss to understand how the Bilbao theory has established itself.

I believe the first case of small-pox occurred in Middlesbrough a day or two after the case at South Bank.—I am, etc.,

GEORGE C. H. FULTON, M.B., C.M.,
Middlesbrough-on-Tees, June 5th. Medical Officer of Health.

PAYMENTS BY HOSPITAL PATIENTS.

SIR,—If Mr. Kershaw will refer to my letter, he will find that I stated that the Central London Throat and Ear Hospital had not (as was asserted in the annual report) adopted all the recommendations of the Hospital Reform Association. The question of the treatment of trivial disorders at our hospitals is a very important one, and no one is in a better position than Mr. Kershaw to appreciate the point. In my humble opinion, there is no aspect of the question which deserves so much attention as this treatment of minor ailments at the medical charities of this country. As long as hospitals continue to treat cases which could be quite as efficiently dealt with by general practitioners, so long will hospitals fail to receive that support from the profession which, under other circumstances, they would undoubtedly do.—I am, etc.,

Cardiff, June 7th. T. GARRETT HORDER.

THE SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS.

SIR,—Seeing your note *re* Widows Fund I wrote for details. As the result of subscriptions depends so thoroughly on the caprice of a Committee, it seems to me that our brethren are very wise in avoiding investing in the Society, for on one's death one has no knowledge whatever how those dearest to us will benefit, if at all. It is not a definite insurance scheme. Then I see it is limited to Londoners.—I am, etc.,

June 2nd. ENQUIRER.

THE ROYAL ARMY MEDICAL CORPS.

SIR,—Mr. Owen, in his letter on the Royal Army Medical Corps, loses sight of a cardinal fact—namely, that the chief *raison d'être* of a course at Netley is the instruction of the young medical officer in hygiene, a knowledge of which science is generally and rightly regarded as one of his most necessary professional equipments. To be really benefited by a course on hygiene, a thorough familiarity with chemistry is absolutely essential. Mr. Owen would choose as an army surgeon the man who could secure most marks "on the running path, over the hurdles, and in feats of strength," and whose technical knowledge was limited to "medicine, surgery, operative surgery, and surgical anatomy." Mr. Owen appears to forget that the services of an army surgeon are far more frequently required in the conditions of peace than for the casualties of warfare. Statistics show (as far as injury requiring surgical interference is concerned) that it is safer to be a British soldier than a British railway servant.

To be brief, to the army surgeon a knowledge of hygiene is probably more important than a knowledge of surgery.—I am, etc.,

Inner Temple, June 7th. STEPHEN TOWNESEND, F.R.C.S.

BRONCHO-PNEUMONIA AND LOBAR PNEUMONIA IN INFANTS.

SIR,—In the interesting lecture of Dr. Samuel West, published in the BRITISH MEDICAL JOURNAL of May 28th, it is suggested that the pneumococcus may set up lobular rather than lobar pneumonia in infants. It does not seem quite clear whether Dr. West considers that such lobular pneumonia is bilateral, or only confined to one lobe, or perhaps to one lung.

Should Dr. West intend to imply that the broncho-pneumonia is bilateral, there is one pathological feature of the action of the pneumococcus in infants that seems to militate against such a view. Empyemata in children appear to be more frequently due to the pneumococcus than to any other microbe, yet a bilateral empyema is quite the exception. It is also interesting to note how frequently an empyema is localised over one lobe. Only yesterday I made a *post-mortem* examination on such a case. The empyema was definitely localised to the surface of the right lower lobe, and pneumococci were found in the pus.

While the action of the pneumococcus in producing empyemata is almost invariably unilateral or over one lobe, those who have only had a small experience of children must know that the acute symptoms characteristic of lobar pneumonia are often unassociated with marked and extensive local signs in one lung. The explanation of Dr. West that the consolidation is lobular is interesting, but one would think, although lobular, it must generally be confined to one lobe, or at least one lung.—I am, etc.,

Bristol, June 4th. THEODORE FISHER.

THE HYDERABAD COMMISSION.

SIR,—Although Mr. Hill's letter in the BRITISH MEDICAL JOURNAL of June 4th, p. 1492, might lead a reader who had not followed the controversy to think that I had made an attack upon him instead of merely defending the work for

which I was responsible, yet my only object has been to defend this work against the attempt he made to destroy it. As he has completely failed in this attempt, and now retires from the contest, leaving the trustworthiness of the experiments beyond question, my object is attained. The only pity is that Mr. Hill has not recognised until now that the introduction of a personal element into a controversy does not forward the ends of science. Had he done so before he brought his accusations against the work of the Hyderabad Commission the whole of this controversy would have been avoided.—I am, etc.,

Stratford Place, June 7th. T. LAUDER BRUNTON, M.D.

Obituary.

MR. HENRY HAYMAN, F.R.C.S., who died recently at the age of 86, was one of the few remaining representatives of what in its best sense is understood by the old school of general practitioners. He was descended on both sides from old Devonshire families, and was born at Axminster, where his father conducted an extensive general practice for many years. He was educated at Blundell School, Tiverton, from which he passed to St. Bartholomew's Hospital, where he was a contemporary of Sir James Paget. He obtained the diplomas of M.R.C.S.Eng. and L.S.A. in 1834, and was elected F.R.C.S Eng. in 1858. He practised for some time at Chelsea and afterwards in Margaret Street, Cavendish Square, and was for some years a member of the staff of Queen Adelaide's Royal Lying-in Hospital. In 1848 he settled at Ottery St. Mary, but under the strain of a large general practice his health gave way. After a period of rest he again commenced active practice, in 1868, at Stokenchurch, Oxfordshire. While here he earned the public gratitude by securing a water supply in the face of bitter opposition. He was also the founder of a lodge of the Oddfellows Society known as "Court Hayman," the members of which have recently sent a letter to his family testifying their lasting gratitude to him. He finally retired from practice in 1884. He was a staunch Churchman, and a man of high culture, genial disposition, and fine physique. He possessed a keen sense of humour and an almost inexhaustible store of anecdotes, gleaned through a long life of active and varied intercourse with his fellow-men.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Leandro Urrecha, a distinguished obstetrician of Madrid; and Dr. E. Hildebrandt, the oldest practitioner of Berlin, aged 86.

NAVAL AND MILITARY MEDICAL SERVICES.

THE NAVY.

THE following qualified candidates for the Naval Medical Service have been appointed Surgeons in Her Majesty's Fleet, dated May 23rd: HENRY C. WHITESIDE, ROBERT L. DICKINSON, HERBERT W. B. SHEWELL, M.A., M.B., JOHN MARTIN, CHRISTIAN B. FAIRBANK, FRANCIS F. LOBB, GERALD B. BROWN, STRATFORD D. T. HALLIDAY, JOHN G. CORRY, M.B., LANCELOT B. TODD, F.R.C.S., HAROLD J. CHATER, REGINALD ST. G. S. BOND, M.B., F.R.C.S., CHARLES C. MACMILLAN, M.B., FRED C. B. GITTINGS, M.B., RAMSEY M. RICHARDS, HENRY E. RAPER, ALAN G. EASTMENT, GEORGE E. DUNCAN, JAMES G. WAIT, GEORGE E. GLYNN, B.A., M.B.

The following appointments have been made at the Admiralty: JOHN MENARY, M.D., Surgeon, to the *Tyne*, on recommissioning, June 1st; WILLIAM G. STOTT, M.A., M.B., Surgeon, to Chatham Hospital, June 1st; CORNELIUS BRADLEY, M.D., Surgeon, to the *Magnificent*, June 1st; FREDERICK C. STEARN, Surgeon, to the *Jackal*, June 1st; FRANCIS BOLSTER, M.D., Surgeon, to the *Pembroke*, June 1st; SAMUEL W. VASEY, Staff-Surgeon, to the *Barfleur*, undated; ANTHONY KIDD, Staff-Surgeon, to the *Diadem*, undated; CHARLES W. SHARPLES, Staff-Surgeon, to the *Furious*, undated; JOHN F. HALL, M.B., Surgeon, to the *Blenheim* for medical charge on the voyage to China, and to the *Barfleur*, undated; ALEXANDER T. WYSARD, Surgeon, to the *Barfleur* and to the *Blenheim*, undated; MALCOLM CAMERON, Surgeon, to the *Mars*, undated; JAMES W. O. UNDERHILL, M.B., and ROBERT V. GILMOUR, Surgeons, to the *Blenheim*, for the voyage home; HAROLD G. T. MAJOR, Surgeon, to the *Diadem*, undated; JOHN E. H. PHILLIPS, Surgeon, to the *Tamar*, June 3rd; JAMES D. S. MILLER, M.B., Surgeon, to the *Cæsar*, June 3rd; EDWARD B. PICKTHORN, Surgeon to the *Tamar*, June 7th; PERCY H. BOYDEN, Surgeon, to the *Vernon*, June 7th.

ARMY MEDICAL STAFF.

SURGEON-MAJOR-GENERAL THOMAS WALSH is placed on retired pay, May 29th. His commissions are as follows: Assistant-Surgeon, May 25th, 1858; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; Brigade-Surgeon, July 16th, 1884; Surgeon-Colonel, October 28th, 1889; and Surgeon-Major-General, July 18th, 1894. He served in the Jowaki Afreedee expedition in 1877-78 (mentioned in despatches, medal with clasp); in the Afghan war in 1879-80, being Senior Medical Officer to the force under Brigadier-General Charles Gough during the advance on Cabul in December, 1879 (mentioned in despatches, medal with clasp); and in the Egyptian war of 1882 as Sanitary Officer 1st Division, and was present in the engagement at Tel-el-Mahuta, at the action at Kassassin (September 9th), and at the battle of Tel-el-Kebir (medal with clasp, and Khedive's star). He was appointed Principal Medical Officer in Bengal in April, 1895, and Honorary Surgeon to the Governor-General of India in January, 1897.

Surgeon-Colonel JOHN W. MAXHAM, M.D., is promoted to be Surgeon-Major-General, *vice* T. Walsh, May 29th. He entered the service as Assistant Surgeon, March 31st, 1864; became Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; Brigade-Surgeon, December 19th, 1888; and Surgeon-Colonel, January 11th, 1894. He has no war records in the *Army Lists*.

Brigade-Surgeon-Lieutenant-Colonel JAMES F. SUPPLE is promoted to be Surgeon-Colonel, *vice* J. W. Maxham, M.D., May 29th. He was made Assistant-Surgeon, April 1st, 1867; Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1879; received the rank of Lieutenant-Colonel, April 1st, 1887; and appointed Brigade-Surgeon-Lieutenant-Colonel, April 9th, 1893. He was in the Ashantee war of 1873-74, being present at the attack on and defence of the hospital at Foomanah (medal); in the Afghan war of 1878-80 (medal); and with the Burmese expedition in 1886-87 as Senior Medical Officer 6th Brigade (mentioned in despatches, medal with clasp).

Surgeon-Lieutenant-Colonel HENRY CHARLESWORTH is promoted to be Brigade-Surgeon-Lieutenant-Colonel, *vice* J. F. Supple, May 29th. He was appointed Surgeon, March 31st, 1875; Surgeon-Major, March 31st, 1887; and Surgeon-Lieutenant-Colonel, March 31st, 1895. He was in the Afghan war of 1878-80, receiving the medal granted for the campaign.

INDIAN MEDICAL SERVICE.

SURGEON-LIEUTENANT-COLONEL OSWALD BAKER, Bengal Establishment, Civil Surgeon, Burmah, is permitted to retire from the service from July 6th. He was appointed Surgeon, April 1st, 1873; and Surgeon Lieutenant-Colonel, April 1st, 1893.

Surgeon-Lieutenant-Colonel J. F. FITZPATRICK, M.D., Madras Establishment, District Medical and Sanitary Officer, Coimbatore, is also permitted to retire from the service from July 9th. His commission as Surgeon dates from April 1st, 1868; that of Surgeon-Lieutenant-Colonel from April 1st, 1888.

THE MILITIA.

SURGEON-LIEUTENANT-COLONEL G. E. HYDE, 3rd and 4th Battalions the Worcestershire Regiment, has resigned his commission, June 4th; he is permitted to retain his rank and uniform.

THE YEOMANRY CAVALRY AND VOLUNTEER RIFLES.

SURGEON LIEUTENANT J. GORDON DILL, M.D., Hampshire (Carabiniers) Yeomanry, is promoted to be Surgeon-Captain, June 4th.

Surgeon-Captain T. F. S. CAVERHILL, Lothians and Berwickshire Yeomanry, is promoted to be Surgeon-Major, June 4th.

Surgeon-Captain G. B. FRASER, 1st Devonshire and Somersetshire Engineers, is promoted to be Surgeon-Major, June 4th.

Surgeon-Lieutenant J. W. JESSOP, 1st Volunteer Battalion the Lincolnshire Regiment, is promoted to be Surgeon-Captain, June 4th.

Mr. ARTHUR WILLIAM CLARK is appointed Surgeon-Lieutenant in the 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment, June 4th.

Mr. JOHN RICHARDSON ARMSTRONG, M.D., is appointed Surgeon-Lieutenant in the 3rd Volunteer Battalion the Welsh Regiment, June 4th.

Surgeon-Lieutenant-Colonel W. R. SMITH, M.D., from the 3rd Volunteer Battalion the Royal West Kent Regiment, is appointed Surgeon-Lieutenant-Colonel in the 1st London Rifles, June 4th.

Surgeon-Major J. CHARLESWORTH, M.D., 1st Volunteer Battalion the Prince of Wales's North Staffordshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, June 4th.

Surgeon-Captain J. F. PORTER, M.D., 2nd Volunteer Battalion the Princess of Wales's Own Yorkshire Regiment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on being appointed Senior Medical Officer to the East Yorkshire Brigade, June 4th.

Mr. DAVID FRANKLIN WILLIAMS is appointed Surgeon-Lieutenant in the 6th Lancashire Artillery, June 8th.

Second-Lieutenant W. R. MARTINE, 7th Volunteer Battalion the Royal Scots (Lothian Regiment), resigns his commission and is appointed Surgeon-Lieutenant, June 8th.

Lieutenant A. W. MESSER, 2nd Volunteer Battalion the Northumberland Fusiliers, resigns his commission and is appointed Surgeon-Lieutenant, June 8th.

THE INDIAN MEDICAL REGULATIONS.

A NEW and revised edition of Army Regulations, India, vol. vi, is now in print, and will shortly be issued for the information of the medical services in that country. This volume is always in need of being kept up-to-date, and the medical division at army headquarters, Simla, does well to keep it so.

THE PLAGUE AND NATIVE OPINION.

ONE of the great difficulties that has been experienced in fighting the plague in India has been the fanatical opposition of the native population. Not a few cases are on record in which the medical officer in the discharge of his duties has been in personal danger from the violence of an enraged mob. It is gratifying to learn from the *Indian Daily Telegraph*

and *Deccan Herald* that Surgeon-Captain Lloyd Jones has during his work at Poona won the thanks and admiration of the Hindu leaders at least. Surgeon-Captain Lloyd Jones on leaving to undertake his new duties as Superintendent of Matheran was publicly thanked for his work in connection with the General Plague Hospital by a meeting held in the Native General Library at Poona. Mr. Kashinath Parashram Gadgil said, "Plague hospitals have never been, and can never be, popular institutions in this country. Besides, the procedure followed in removing plague patients added to their unpopularity." This is the position as stated by a native gentleman of high standing. We congratulate Surgeon-Captain Lloyd Jones on the successful way in which he has overcome native prejudice, and in the face of great opposition so discharged his difficult duties as to win admiration from prejudice.

THE NORTH-WEST FRONTIER RISING IN INDIA.

THE final despatch from Sir William Lockhart respecting the operations recently concluded on the North-West Frontier of India is published in the *London Gazette* of June 7th. This despatch was briefly noticed in the BRITISH MEDICAL JOURNAL of June 4th, and contains no further item of special interest to medical readers, unless we may except the lists of casualties to the force in the several actions in January last, but which are too long for quotation here.

THE VOLUNTEER AMBULANCE ASSOCIATION.

THE report of the Council of the Volunteer Medical Association shows that a considerable increase in the number of members has taken place. This indicates that the Volunteer Medical Staff generally is taking a greater interest in its work. Among other matters which it has had in hand it is mentioned that medical officers and combatant officers are now placed on the same footing as regards the £20 grant towards the expenses of outfit, and the order extends to all those who have been gazetted since March 13th, 1896. The omission of the seniority list of the Volunteer Medical Staff in the new form of the *Army List*, the introduction of which was the outcome of the earnest representations of the Association in 1887, is pointed out, but we understand that a representation to the Secretary of State for War has elicited the reply that it is intended that the list shall appear quarterly instead of monthly. Other matters concerning volunteer medical organisation, such as volunteer infantry brigade bearer companies and the duties of members of the Army Medical Reserve, which are still engaging the attention of the Association, appear to have made no progress at headquarters since the last report. Notwithstanding a small loss on the challenge shield competition, owing to the unusually small number of competitors, attributed to the Jubilee celebrations, the finances of the Association are in a satisfactory condition.

ADOPTION OF A MILK STERILISER.

WE are informed that the reports made to the War Office of trials of Aymard's steriliser at Netley and Aldershot are satisfactory, and that in consequence its use has been authorised in the army, and a number of apparatus have been ordered. The apparatus being of simple construction, can it is thought, be introduced without trouble into messes and canteens, and it is believed that it will be found especially useful in India, where enteric fever is so severely prevalent, and is undoubtedly associated in some cases with specific pollution of milk.

THE SECRETARY TO THE P.M.O. H.M.'S FORCES, INDIA.

THIS appointment, which, according to the regulations put into force during the formation of the Army Corps in India, fell to the Indian Medical Service, will very shortly be vacated by Surgeon-Lieutenant-Colonel Beatson, I.M.S., tour expired and extended, who will be succeeded by Surgeon-Major J. Shearer, of the same service. The latter officer has, if we remember aright, already officiated in the appointment, and was mentioned in recent despatches for services rendered in medical charge of a native field hospital, 2nd Division of the Tirah Field Force. Surgeon-Lieutenant-Colonel Beatson has performed the duties during his tour with efficiency, and has well deserved the popularity he enjoys. He is a son of the late Surgeon-General G. F. Beatson, who for some time held the position of P.M.O. H.M.'s Forces in Simla, and will be remembered by the more senior officers of the A.M.S. and I.M.S.

PAY OF ACTING ADMINISTRATIVE MEDICAL OFFICERS.

THE Government of India have decided that a medical officer officiating in an administrative medical appointment shall receive the full consolidated salary of the appointment if available, provided that no other officer is concurrently holding a lien on the same post and counting service on its account for additional pension.

HYDROPHOBIA ALLOWANCE.

THE maximum allowance permissible to officers deputed to Paris for hydrophobia treatment is Rs. 1,200, not Rs. 12,000, as has been erroneously stated.

WE are asked to say that Surgeon-Captain I. A. O. MACCARTHY did not go to Woolwich to Bengal, as was stated in the BRITISH MEDICAL JOURNAL of March 19th, but from Egypt.

MEDICO-LEGAL.

PHOSPHORUS NECROSIS.

MESSRS. BRYANT AND MAY have been fined £29 2s. for a breach of the Factory Acts. The firm was found guilty of having deceived the inspector of factories for the district by having suppressed information of cases of phosphorus necrosis in its workmen. It cannot be said that the sentence is at all a heavy one. It was the duty of Messrs. Bryant and May to have reported cases of phosphorus necrosis to the inspector of factories for the district under the Acts of 1891 and 1895, yet they failed to notify 11 cases. It was only through one of the workmen dying from phosphorus poisoning and after at the inquest the cause of death was established the true facts came out. It is not the function of factory inspectors to be either spies or policemen. In industrial concerns a large amount of liberty must be conceded to employers and trust reposed in them, but unless owners are loyal to their undertakings, and recognise that factory legislation is not meant to be repressive but helpful, it is easy to conceal the truth. The fine imposed by Mr. Corser will not be felt by a wealthy firm like Bryant and May, but what will be felt, and that acutely, is the strong expression of adverse public opinion. Had the firm been obedient to the law and reported the cases, fresh instructions would have issued from the Home Office, the industry would have been purified, much suffering would in all probability have been prevented among its workpeople, and the name of the firm would not have been tarnished. Messrs. Bryant and May, in spite of all they have done to push the manufacture and sale of "safety matches," of which they were the introducers, can scarcely expect commiseration from the public in their present misfortune.

UNQUALIFIED MEDICAL PRACTICE.

AT the Whitechapel County Court on June 3rd, before his Honour Judge Bacon, Leopold Liebster, M.D. Vienna, was sued by the Society of Apothecaries for practising as an apothecary without the necessary diploma. Judgment was given against the defendant for the full amount claimed—£20 and costs.

THE CHARGE AGAINST W. MAUNSELL COLLINS.

THE trial of W. Maunsell Collins, M.D., whose name does not appear on the *Medical Register*, charged with the murder of Mrs. Uzielli, will take place at the Central Criminal Court, before Mr. Justice Grantham, during the ensuing sessions. The Attorney-General, Mr. H. Sutton, Mr. Charles Mathews, and Mr. Bodkin will prosecute on behalf of the Treasury, and the prisoner will be defended by Mr. C. F. Gill. The judge is expected to sit at the Old Bailey on June 22nd, and an early date after that day will probably be fixed for the trial.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

HONORARY DEGREES.—In connection with the Congresses of Physiology and of Zoology, to be held in Cambridge next August, it is proposed to confer the honorary degree of Doctor of Science on Professor Bowditch, of Harvard; Dr. Anton Dohrn, of Naples; M. A. Milne Edwards, of Paris; Professor Golgi, of Pavia; Professor E. Haeckel, of Jena; Professor Hubrecht, of Utrecht; Professor Kowalevsky, of St. Petersburg; Professor Kronecker, of Berne; Professor Kühne, of Heidelberg; and Professor Marey, of Paris. The honorary degree of M.A. is to be conferred on Dr. A. Willey, Balfour Student.

EXAMINERS FOR MEDICAL AND SURGICAL DEGREES.—Dr. Laurence Humphry, Dr. W. A. Foxwell, Dr. Sidney Martin, and Dr. Mitchell Bruce are appointed Examiners in Medicine; Dr. Cullingworth and Dr. Freeland Barbour, Examiners in Midwifery; and Mr. Bernard Pitts, Mr. W. H. Bennett, Mr. Watson Cheyne, and Mr. Golding-Bird, Examiners in Surgery.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 5,417 births and 3,611 deaths were registered during the week ending Saturday last, June 4th. The annual rate of mortality in these towns, which had been 16.4 and 16.5 per 1,000 in the two preceding weeks, further rose to 16.8 last week. The rates in the several towns ranged from 9.9 in Derby, 10.6 in Bolton, 11.1 in Brighton, and 11.3 in Croydon, to 22.7 in Liverpool, 23.1 in Gateshead, 24.3 in Newcastle-upon-Tyne, and 24.6 in Sunderland. In the thirty-two provincial towns the mean death-rate was 17.2 per 1,000, and exceeded by 1.1 the rate recorded in London, which was 16.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was equal to 2.1 per 1,000, while it averaged 1.6 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.2 in Manchester and in Halifax, 2.5 in Liverpool, 2.9 in Bradford, and 4.4 in Newcastle-upon-Tyne. Measles caused a death-rate of 1.0 in Manchester, 1.1 in Halifax, 1.6 in Bradford, and 2.3 in Newcastle-upon-Tyne; and whooping-cough of 1.1 in Bradford, 1.2 in Newcastle-upon-Tyne, and 1.3 in Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 54 deaths from diphtheria in the thirty-three towns included 30 in London, 4 in Liverpool, and 2 each in West Ham, Portsmouth, Cardiff, Birkenhead, Burnley, Leeds, and Gateshead. No fatal case of small-pox was registered during the week under notice, either in London or in any of the thirty-two large provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 4th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,241 to 2,195 at the end of the eight preceding weeks, had risen again to 2,207 on Saturday last, June 4th; 220 new cases were admitted during the week, against 229, 223, and 256 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 4th, 963 births and 694

deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 19.8 to 21.4 per 1,000 in the three preceding weeks, further rose to 23.0 last week, and was as much as 6.2 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 18.7 in Perth and 18.9 in Aberdeen to 26.2 in Paisley and 27.2 in Greenock. The zymotic death-rate in these towns averaged 3.7 per 1,000, the highest rates being recorded in Glasgow, Paisley, and Dundee. The 322 deaths registered in Glasgow included 10 from measles, 25 from whooping-cough, 5 from "fever," and 7 from diarrhœa. Five fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh; and 10 of measles and 4 of whooping-cough in Dundee.

DIPHTHERIA IN LONDON.

THE mortality from diphtheria in London showed a slight increase last week. The fatal cases of this disease, which had been 31 and 27 in the two preceding weeks, rose again to 30 during the week ending Saturday last, June 4th. Of these 30 deaths, 5 were of persons belonging to Hackney, 3 to Islington, 3 to Bethnal Green, and 3 to Camberwell sanitary areas. The notifications of diphtheria in London, which had been 212 and 201 in the two preceding weeks, rose again to 209 during the week ending Saturday last, June 4th, and with one exception exceeded the number recorded in any week during the past two months. Compared with the preceding week, there was a marked decline in the prevalence of the disease in West London, but in North, Central, East, and South London there was a slight increase. The decline in the prevalence of diphtheria in West London was mainly due to the fall in the number of new cases in Paddington and in Westminster; in Fulham, however, the 9 new cases notified exceeded the number in any week since March last. In most of the sanitary areas of North London there was an increase in the prevalence of the disease, which was most marked in Islington, where 10 new cases were notified, against 5 in each of the two preceding weeks. The increase in the prevalence of diphtheria in East London was mainly due to the further spread of the disease in Bethnal Green, in which sanitary area the new cases notified, which had been 4, 7, and 10 in the three preceding weeks, further rose to 14 last week. Among the sanitary areas of South London the increase in the prevalence of diphtheria was most marked in St. George Southwark, Wandsworth, and Greenwich; in the last-named sanitary area 15 new cases were notified, against 8 in the previous week. On the other hand, there was a considerable decline in the prevalence of the disease in Camberwell, where the new cases, which had been 21 and 13 in the two preceding weeks, further fell to 9 last week. There was also a further decline in the number of new cases in Newington and in Lewisham. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 147, against 130 and 142 in the two preceding weeks; and 967 cases remained under treatment in these hospitals on Saturday last, June 4th.

NURSES FOR POOR-LAW ENGAGEMENTS.

THE *Western Morning News* is surprised because there is such an evident reluctance on the part of the nurses to accept many posts offered to them by the country guardians. To those who are behind the scenes the cause of this reluctance is well known; the position of the infirmary nurse in nine-tenths of the country unions is almost intolerable, and is such as the self-respecting nurse cannot accept. Until the conditions of service are radically changed this difficulty will exist.

INCREASE OF SALARY OF M.O.H.

THE Crewe Town Council have appointed Dr. Meredith Young, M.D., M.S., D.P.H., Medical Officer of Health and Medical Superintendent of the corporation hospitals for a further term of three years, and have increased the salary from £300 to £350.

REMUNERATION FOR ATTENDANCE ON URGENT CASE AND CERTIFICATES OF CONDITION.

"PERPLEXED" writes to say that he was summoned by a patient's friends to attend a case of delirium tremens with cut throat; he at once visited the patient, adopted the requisite treatment, and then left. Some hours later he was called on by a police sergeant and relieving officer, who suggested the removal of the patient, as the family were unable to provide proper supervision. The relieving officer asked to be furnished with a certificate as to the patient's condition. This was given, and the patient removed at once to the workhouse and two days later to an asylum. Our correspondent asks: To whom should I apply for my fee, and what should be the amount?

*** The claim for remuneration in this case appears to us to be on the patient or his friends only as our correspondent was not engaged by either the police or the relieving officer, and when asked by the latter to give a certificate he readily did so. We doubt whether he can now claim any fee for this. If "Perplexed" was not a Poor-law medical officer the giving of a certificate was entirely optional.

NOTIFICATION FEES.

SANITAS.—Medical officers of health who are in private practice can charge the maximum fee of half a crown in respect of notifications of infectious disease under the Notification Act, if the cases occur in such practice; but if the cases be notified in the course of their official duties as health officers or Poor-law officers, only the minimum charge of one shilling can be claimed. It is quite customary for health officers to lay claim to these statutory allowances.

THE WAR.—The Colonial Dames of America have organised a committee to raise an emergency fund to be used for supplying fresh fruit and vegetables and other delicacies to the sick and wounded of the army and navy.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE CRICHTON ROYAL INSTITUTION, DUMFRIES.

THE average daily number of patients resident in this institution during 1897 was exactly 800; of these 376 were males and 424 females, and the number remaining in residence at the end of the year was 793. The total number under treatment was 1,098, which is 49 fewer than the previous year, and less than any year since 1890. One serious accident is recorded. A gentleman struck another a fatal blow on the head with a cricket bat. Dr. Rutherford considers that this was the impulsive act of a patient hitherto considered harmless. No fewer than 14 males and 4 females entered the institution voluntarily. These patients are treated in all respects as ordinary patients, but they can leave the institution at any time on giving three days' notice. The average ratio of recoveries to admissions for the year is 36.3 per cent. The pathological laboratory, which has been open for more than a year, is found to be a great source of interest and profitable instruction to the medical staff, and Dr. Ford Robertson, the pathologist of the Central Laboratory of the Scottish Asylums in Edinburgh, has paid an official visit, and expressed himself as highly pleased with the work done and the equipment of the laboratory. The great event of the year was the opening of the Crichton Memorial Church, an imposing edifice of great architectural beauty, which stands boldly out among the other palatial residential blocks which make up the institution. It should be mentioned that there are no fewer than 8 or 9 different residences for patients under the control of the authorities of the Crichton, and under the medical superintendency of Dr. Rutherford and four assistant medical officers. The general health of the inmates was good, and the death-rate, calculated upon the average number resident, was only 7.2 per cent.

INDIA AND THE COLONIES.

INDIA.

THE HEALTH OF CALCUTTA.—Dr. Simpson's annual report on the Calcutta Health Department for the year 1896 was submitted to the Commissioners in July, 1897. The year under review was distinguished by the introduction of several important sanitary measures, the necessity of which had been advocated for many years by the health officer. That, in spite of the most strenuous opposition, they were brought to a successful issue before Dr. Simpson's retirement must be a source of great satisfaction to him. The first important reform was the commencement of a new outfall to the sewers of Calcutta, in order to remove an obstructed drainage which was steadily producing a most unfavourable effect on the health of Calcutta; the second was the introduction of a new drainage scheme on the separate system into the suburbs in place of stagnant ditches; the third was the appointment of a Building Commission, which, after hearing the evidence and facts furnished by Dr. Simpson and others, relating to the building of houses and huts, and the absence of control over these, either to check the erection of too many houses on too limited an area, or to prevent the most insanitary houses being constructed, reported that the enactment of adequate building regulations for the town and the construction of wide streets through the most congested and insanitary portions were necessary. Dr. Simpson recommended that Burra Bazaar, a district which he characterised as a standing menace to the city, and one which, if plague should obtain a footing, would, owing to its insanitary condition, favour endemicity, should be demolished altogether. He suggested that the site should be replaced by a central railway station, proposals for which are being mooted. The area in question is 146·75 acres in extent, with a population of over 32,000 (220 persons per acre). Its birth-rate is only 6.4 per 1,000, while its death-rate is 41 per 1,000. Effective cleansing and ventilation are stated to be impossible, owing to the houses being so closely packed together. We trust that, in the interests of the metropolis of India, Dr. Simpson's recommendation of demolition may be found feasible. Much of the other part of the report is taken up with an account of the precautions practised against the introduction and lodgment of plague in Calcutta. The gravity of the situation at Bombay seems to have been appreciated by the health officer, for in one of his earliest memoranda to the Commissioners in 1896 he warned them that a recrudescence of the plague in India such as had not been seen in this century was quite possible. Early and careful preparation was made for defence by additional cleansing and limewashing of premises by a special conservancy staff under Dr. Banks, who was appointed superintendent; the division of the town into sanitary circles, each under a medical inspector; daily visitation of the lodging houses; medical inspection, with observation camps on the railway; the establishment of isolation hospitals and health camps; and arrangements for ambulance, nursing, and disinfection. Of peculiar interest is an outbreak of glandular sickness, which is described as resembling in every respect the milder forms of plague, and apparently similar in character to a recent outbreak which has occurred in Calcutta, but of a severer type. The outbreak of glandular sickness in 1896, which Dr. Simpson declared to be plague—pestis minor or ambulans—was followed in one quarter by a great mortality amongst rats, which were also affected by glandular swellings; diplobacilli similar to plague bacilli were found in their blood and organs. The measures adopted in 1896 to stamp out both outbreaks were successful.

BENGALI LADY DOCTORS.—The attractiveness of the medical profession for Bengali ladies, says the *Indian Medical Record*, may be gathered from the fact that among the forty-six students who passed the recent final or diploma examination from the Campbell Medical School, there are no fewer than seven native ladies: Miss Hemangini Mazumdar, Srimati Kiran Soshi Devi, Mrs. Bidyulatta Mallick, Srimati Nirmala Sunder Dasi, Miss Probodh Bala Pal, and Miss Hari Dasi Mullick. The Dacca Medical College furnished only one successful female student, Miss Kadambini Banerji; the Cuttack Medical School two, Mrs. Anderson and Miss S. Ruth Saranghy; and the Temple Medical School, Patna, the same number, Mrs. M. S. Endramba and Janki Bai.

MEDICAL NEWS.

Mr. A. J. Balfour will visit the medical school of Guy's Hospital on Wednesday, July 13th, at 3.30 P.M., and will distribute the prizes to the successful students.

The first annual conference of the Matrons' Council of Great Britain and Ireland will be held on June 15th and 16th, at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, W.

The medical practitioners of Philadelphia held an important meeting on May 4th, at the College of Physicians and Surgeons, to protest against the abuse in that city of public charity, and to see what measures could be adopted to stay it.

The Lord Mayor of Liverpool announced on June 7th that he had received £2,000 from an anonymous donor, who desired it to be devoted to some Liverpool charity. It will be given to the building fund of the Stanley Hospital.

Presentation.—After the presentation of certificates and medallions to the successful students of the G.W.R. class of the St. John Ambulance Association at Wrexham, Dr. J. E. H. Davies, the lecturer, was presented on behalf of the class with a silver-mounted stick suitably inscribed.

The late Mr. Wm. Holliday of Birmingham by his will bequeathed £1,000 each to the Birmingham General Hospital, the Queen's Hospital, Birmingham, and the Birmingham General Dispensary, and £500 each to the Birmingham Children's Hospital, and the Birmingham and Midland Hospital.

Dr. F. R. P. Taylor, who has been appointed Medical Superintendent of Darenth Asylum, Kent, was recently presented by the officers and staff of Claybury Asylum, Woodford, Essex, with a silver tea service, accompanied by an expression of their high appreciation of his services as a physician and friend. Dr. Taylor has been a member of the staff of Claybury Asylum since its opening in May, 1893.

A meeting of medical men was held in Cardiff on June 3rd to consider the advisability of founding a medical guild in Cardiff. After hearing addresses from Dr. Ratcliff Gaylard and Dr. R. H. Wolstenholme, of the Manchester Medical Guild, it was resolved that the meeting was of opinion that it was desirable to form an association or guild in Cardiff on the lines of that at present existing in Manchester, and recommended that steps should be taken to appoint officials.

The London Hospital.—At a quarterly and special Court of the governors of the London Hospital held last week it was resolved that in future governors' letters should not be issued to any future governors or subscribers; and, further, that out-patients should be charged for medicines and bandages supplied for their use. In the case of children no charge will be made for bandages, and the members of the medical staff will be able to exempt any case which in their opinion would be deterred from attending owing to the cost of bandages.

National Health Society.—On June 7th Dr. Christopher Childs, Lecturer on Bacteriology in Relation to Hygiene, University College, London, gave the first of two lectures on Public Health arranged by the National Health Society for the benefit of its training students and members. The lecture was given at 20, Hanover Square, and the chair was taken by Sir Richard Thorne, K.C.B. The subject of Dr. Child's lecture was the Present State of Knowledge with Regard to the Bacteriology of Typhoid Fever, and its Application to the Prevention of this Disease. Dr. Childs prefaced his lecture, which was listened to with much attention by a large audience, by a short sketch of the main facts of bacteriology and a description of the chief varieties of microbes. The second lecture, on Ventilation, was given by Dr. H. R. Kenwood on June 9th. The lecturer dealt in a practical way with the ventilation of domestic dwellings, and somewhat more fully with that of factories and workshops. The Princess Christian will present the diplomas, medals, and certificates of the Society to successful candidates this day (Saturday) at 3.30 P.M. at Grosvenor House.

Conversazione at the Royal Society.—The annual summer *conversazione* of the Royal Society (Ladies' Night) was held on June 8th. The objects exhibited were in the main similar to those shown at the previous *conversazione* referred in our columns on May 14th. They included an exhibition of green oysters by Professors Herdman and Boyce; an exhibition from the Marine Biological Association, illustrating the adaptation of marine animals to their environment; and Dr. Mackenzie Davidson's Roentgen Ray apparatus for localisation, and the application of stereoscopic vision to the examination of skiagraphs. Specimens illustrating the bacteriology of calf vaccine lymph, were shown by Sir Richard T. Thorne and Dr. Copeman. The adventitious microbes of calf lymph were shown in cultivation, as well as stored glycerinated calf lymph. The method of testing the bacteriological purity of glycerinated lymph was also demonstrated by a series of plate cultivations. A small test tube was also shown containing aseptic glycerinated lymph, to which for experimental purposes a considerable quantity of a virulent culture of the tubercle bacillus was added. Subcultures on solidified blood serum and glycerine agar made a month later from this lymph failed to yield any growth whatever, showing that the tubercle bacillus had been entirely killed out by the action of the glycerine. The chief novelty shown at the *conversazione* was the spectrum of krypton, the new constituent of the atmosphere recently discovered by Professor Ramsay and Mr. Travers.

Metropolitan Counties Branch, British Medical Association.—This Branch gave a highly successful *conversazione* on June 7th, which by permission of the President and Council of the Royal College of Surgeons was held in the Museum of the College, Lincoln's Inn Fields. The President of the Branch, Mr. Frederick Wallace, and Mrs. Wallace, accompanied by the other officers of the Branch; Mr. Eastes, Treasurer; Dr. Isambard Owen and Mr. H. B. Robinson, Secretaries, and several members of the Council received the guests, who numbered nearly 2,000, and to whom the magnificent collections of the College formed objects of much interest and curiosity. In the Museum, the band of the Royal Artillery, conducted by Sergeant-Major W. Sugg, rendered a charming selection of music, which was highly appreciated; and in the Lecture Theatre, which was crowded throughout the evening, Miss Mary Horton and the Folk-Song Quartette, under the leadership of Mr. H. E. Button, sang numerous quartettes and solos which gave great satisfaction. In the intervals of the music, Mr. Walter Churcher was heard in three "humorous sketches," which highly pleased all who were able to be present.

St. George's Hospital Graphic Society.—The annual meeting was held in the Medical School, on Tuesday, June 7th, at 2.30 P.M., and showed that the Society was in a flourishing state. After referring in high terms to the successful labours of the Secretary (Dr. C. Slater), Dr. Howship Dickinson, the President, declared the exhibition open until Saturday, June 11th. The exhibition is divided into general and pathological departments, the paintings, drawings, and photographs being contributed by past or present members of the Medical School. The Society was started some nine years ago with the object of encouraging the artistic treatment of pathological and other subjects. The pathological series has appropriately been placed in the museum, and contains some beautifully-executed paintings and drawings, chiefly of the liver, by Mr. E. A. Wilson, some ophthalmic drawings by Mr. H. B. Grimdale, drawings of bone by Mr. P. L. Mummery, photographs and skiagraphs by Mr. Clinton Dent, and some very successful photographs of clinical cases by Mr. H. G. Drake-Brockman. The general series is displayed on screens in the Board room. It contains some striking and impressive exhibits after the style of Dudley Hardy by Dr. H. B. Muir, some finished oil paintings by Mr. Henry Goodale, water colours by Mr. A. H. Ward (who also contributed to the clinico-pathological series), Drs. Dakin, W. H. Davis, C. Slater, and Messrs. E. A. Wilson and Penny. As in past years photographs of Alpine scenery by Messrs. Clinton Dent, and Spetta formed an attractive feature. During the week lantern demonstrations were given by Messrs. Dent, Spetta, and Mercer.

CREMATION AT LEEDS.—The Corporation of Leeds are taking steps to obtain a new cemetery, and it has been resolved to erect a crematorium. The argument which had greatest weight in bringing about this decision seems to have been that cremation would be a very desirable method of disposing of the bodies of persons who have died of epidemic disease.

MEDICAL VACANCIES.

The following vacancies are announced:

ASTON MANOR URBAN DISTRICT COUNCIL.—Medical Officer of Health for the District, and Medical Attendant at Infectious Hospital. Salary, £125 per annum. Applications to Joseph Ansell, Clerk, Council Offices, Albert Road, Aston Manor, Birmingham, by June 13th.

BIRMINGHAM GENERAL HOSPITAL.—House Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by June 25th.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—Honorary Assistant Surgeon. Applications to the Hon. Secretary, 100, Edmund Street, Birmingham, by June 15th.

BRIGHTON THROAT AND EAR HOSPITAL.—Resident Lady Dispenser. Salary £30, with board, lodging, and washing. Applications to the Hon. Secretary by June 18th.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—Resident Assistant House-Surgeon. Board, lodging, and washing provided, but no salary. Applications by June 14th.

CHELSEA HOSPITAL FOR WOMEN.—Resident Medical Officer. Salary £60 per annum, with board, lodging, and washing. Applications to the Secretary by June 13th.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Surgeon. Salary £100 per year, with board, apartments, and laundress. Applications to the Secretary by June 23rd.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician. Appointment for six months. Salary at the rate of £30 per annum, with board and residence. Applications to the Secretary by June 13th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House Surgeon. No salary, but board, lodging, and washing provided. Applications to the Hon. Secretary by June 14th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Senior Resident Medical Officer. Salary £70 per annum, with board and washing. Applications to the Committee of Management by June 21st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Physician or Surgeon to the Skin Department. Applications to the Secretary by June 13th. Also Junior House Physician. Appointment for six months. Board and lodging provided. Applications, on forms provided, to the Secretary by June 21st.

GROVE HALL ASYLUM, Bow, E.—Junior Assistant Medical Officer. Salary at the rate of £120 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon. Salary £75 per annum, with residence, board, and laundry. Applications to the Secretary by June 24th.

LINCOLN COUNTY HOSPITAL.—Assistant House Surgeon. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by June 27th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer. Salary £100, with apartments, board, and washing. Applications to the Medical Superintendent by June 14th.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—House Physician. Salary £60 per annum, with board, lodging, and washing. Tenable for two years. Unmarried, and under 30 years of age. Applications to the Secretary by June 28th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Anæsthetist. Applications to the Secretary by June 30th.

PAISLEY: RICCARTSBAR ASYLUM.—Assistant Resident Medical Officer. Salary £70, with board and apartments. Applications to the Clerk by June 13th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by June 14th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House Surgeon and Dispenser, unmarried. Salary £50 for first year and £70 second year, with board and lodging. Applications to the Hon. Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by June 30th.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—Assistant Demonstrator of Chemistry. Applications to Dr. Thomas W. Shore, Warden, by June 18th.

ST LUKE'S HOSPITAL, Old Street, E.C.—Clinical Assistant. Appointment for six months, with board and residence. Applications to the Secretary.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Resident Medical Officer. Salary 100 guineas per annum, rising 10 guineas annually to 120 guineas, with furnished apartments, attendance, coal, and light. Applications to the Secretary by June 30th.

SHEFFIELD: ROYAL INFIRMARY.—Vacancy on the Honorary Surgical Staff. Applications to the Secretary by June 27th.

SHOREDITCH: PARISH OF ST. LEONARD.—Second Assistant Medical Officer for the Infirmary, Hoxton Street, N. Appointment for six months. Salary at the rate of £60 per annum, with rations, washing, and furnished apartments. Applications, on forms provided, to the Clerk to the Guardians, 213, Kingsland Road, N.E., by June 13th.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried, and under 30 years of age. Salary, £100 per annum, rising £25 per annum up to £150, with furnished apartments, board, etc. Applications to the Medical Superintendent.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by June 22nd.

WALSALL AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, lodging, and washing. Applications to Mr. E. J. Brooks, Chairman, Leicester Street, Walsall, by June 20th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House Physician and House Surgeon. Appointment for six months. Applications to the Secretary Superintendent by June 22nd.

WOLVERHAMPTON: WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by July 1st.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser. Salary £70 per annum, with board, residence, and washing. Applications to the Secretary, Worcester Chambers, Pierpoint Street, Worcester, by June 18th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary £150 a year, with furnished apartments, coals, and gas. Applications to Dr. W. Draper, De Grey House, York, by June 13th.

MEDICAL APPOINTMENTS.

ALLAN, E. B., M.D., appointed Medical Officer of Health for Daylesford, Victoria, *vice* T. R. H. Willis, resigned.

ARMSTRONG, Wm. G., M.B., Ch.M.Syd., D.P.H.Camb., appointed Medical Officer of Health for the Combined Metropolitan Districts, Sydney.

BERTRAM, T. D., M.B., Ch.M.Glasg., appointed Visiting Surgeon and Dispenser for the Coonamble Gaol, New South Wales, *vice* E. O. Newland, L.R.C.P.Lond., M.R.C.S.Eng., resigned.

BINNEY, Edward Harold, M.B., Ch.M Syd., late Senior Resident Medical Officer and Medical Superintendent, Sydney Hospital, N.S.W., appointed Honorary Medical Officer for the Out-patients Department at the Sydney Hospital for Sick Children, Glebe, N.S.W.

BOOTH, James, L.R.C.P., L.R.C.S.Edin., L.F.P.S Glasg., appointed Health Officer and Public Vaccinator for the Shire of Dunmunkle, East Riding, Victoria, Australia, *vice* A. G. M. Colquhoun, resigned.

BRABYN, G. W., L.R.C.P., L.R.C.S.Edin., appointed District Medical Officer for South Wimbledon.

COOLEY, P. G., M.B., Ch.M.Syd., appointed Resident Medical Officer to the Coast Hospital, Sydney.

CUSCADEN, George, L.R.C.P., L.R.C.S.Edin., appointed Certifying Medical Officer for the Factories and Shops Acts for Port Melbourne, Victoria, Australia, *vice* W. S. Smythe, resigned.

CUTHBERT, J., L.R.C.S.Irel., appointed Health Officer for the Victoria Park District, Perth, West Australia.

DAVIES, Mr. W. J. E., appointed Assistant Medical Officer of the Infirmary of the Parish of St. Luke, Chelsea.

DEY, Robert, M.B., Ch.M.Syd., appointed Resident Medical Officer to the Coast Hospital, Sydney.

ELLIS, H. D. A., L.R.C.P., M.R.C.S.Eng., appointed Medical Officer of Health to the Amblecote Urban District Council.

FINLAY, S., L.K.Q.C.P., F.R.C.S.Irel., appointed Government Medical Officer for the District of Dugog, New South Wales, *vice* A. W. McMath, L.R.C.P., L.R.C.S.Irel., resigned.

FLINN, D. Edgar, M.R.C.P., F.R.C.S.Irel., D.P.H., appointed Medical Inspector under the Local Government Board for Ireland.

GREY, J. T., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the No. 4 District of the Hollingbourn Union.

HARVEY, R. R., M.B., Ch.B.Melb., appointed Health Officer for Norseman, Western Australia, *vice* A. Good, resigned.

HAY, J. B., M.B., Ch.M.Edin., appointed Health Officer and Public Vaccinator for the Shire of Heytesbury, Victoria, Australia, *vice* Dr. G. M. Reid, resigned.

HINDER, A. V. C., M.B., Ch.M.Syd., appointed Surgical Tutor in the University of Sydney, New South Wales, *vice* J. F. McAllister, resigned.

LAWSON, G. L. L., M.R.C.P.Edin., M.R.C.S., D.P.H., appointed Health Officer for Mullewa, Western Australia.

MACKENZIE, D. J., M.D.Aberd., M.B., C.M., appointed Medical Officer of Health for the Borough of Glossop.

MYERS, Charles J., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Louth Rural District Council.

SILVESTER, W. G., L.R.C.P., L.R.C.S., appointed House Surgeon to the Warneford, Leamington, and South Warwickshire General Hospital.

STONEY, W. W., M.D., Ch.B.Vict., appointed Medical Officer of Health for the towns of Kimberley and Beaconsfield.

WILLIAMS, Samuel, M.D Lond., appointed Medical Officer to the Llanelly School Board.

WOOD, T. Jason, M.D.Lond., appointed Honorary Assistant Surgeon to the Bradford Infirmary, *vice* C. F. M. Althorp, M.B.Lond., promoted.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

BOYD.—On June 3rd, at Portishead, Somerset, the wife of George Boyd, M.R.C.S., L.R.C.P., of a son.

HAUGHTON.—At Truro, on May 29th, the wife of J. Willey Haughton, L.R.C.P. & S.Irel., of a daughter.

OWEN.—On June 3rd, at St. Alban's Place, Blackburn, the wife of O. Trafford Owen, M.B.Edin., of a daughter.

MARRIAGES.

BATES—SPEAKMAN.—On June 2nd, at Faulkbourne, by the Rev. Stephen Penny, John Edwin Bates, M.B.Cantab., of Wimbledon, son of the late William Bates, M.D., F.R.C.S., of Manchester, to Marion, youngest daughter of the late Thomas Speakman, of Faulkbourne Hill, Witham, Essex.

FRITH—STYLES.—On June 2nd, 1898, at the Parish Church, Swancombe, Kent, by the Rev. W. A. Frith, M.A.Oxon., Rector of Welby, Lincs, father of the bridegroom, assisted by the Rev. F. Auriol Murray, M.A.Oxon., Vicar of St. Peter's, Rickmansworth, and the Rev. Hugh C. Frith, B.A.Cantab., Walter S. Frith, M.B.Cantab., of The Limes, Rickmansworth, to Caroline Elsie, daughter of the late George Gaviller Styles, of Knockhall, Greenhithe, Kent.

GRANT-WILSON—JENKIN.—On June 2nd, at St. James's, Swansea, by the Rev. Canon Roberts, of Llandaff (uncle of the bride), assisted by the Rev. Chancellor Smith, Vicar of Swansea, and the Rev. F. Millar, Curate-in-charge, Charles Westbrooke Grant-Wilson, of Bromley, Kent, elder son of George Grant-Wilson, of Heathfield House, Streatham Common, Surrey, to Lilian Frances, only daughter of the late Rev. Albert Jenkin, of Harbridge, Hants, and Mrs. Jenkin, of The Mirador, Swansea.

PEARSON—HUNTER.—On June 1st, at St. Bartholomew's-the-Less, London, E.C., by the Rev. W. Astle, M.A., Vicar, Maurice G. Pearson, M.B., B.Sc.Lond., F.R.C.S., second son of W. Grey Pearson, M.Inst.C.E., of Muswell Hill, to Agnes, youngest daughter of the late Hugh Hunter, Barrassie, Ayrshire. No cards.

DEATHS.

BARNES.—On June 3rd, at Hill House, Eye, Suffolk, Emma Elizabeth, the dearly loved wife of Edgar G. Barnes, M.D.

WELCH.—On May 25th, at Perak, Straits Settlements, John L. Welch, M.A., M.D.Edin., second son of the late Rev. John Welch, Jamaica.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Wyatt Wingrave: The Origin and Nature of Polypi of the Nose, Throat, and Ear.

TUESDAY.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. Rose Bradford and Dr. H. Batty Shaw: Five Cases of Acute Leukæmia. Dr. Arthur P. Luff: The Influence on Gout of the Mineral Constituents of Various Vegetables. Dr. Norman Moore will show a Case of Displaced and Movable Liver.

City Orthopædic Hospital, 5.30 P.M. Mr. John Poland: Deformities of Bones after Injury.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Mr. Marcus Gunn.

Royal College of Physicians, 5 P.M. Dr. Sidney Martin: The Chemical Products of Pathogenic Bacteria, considered with special reference to Enteric Fever. (Croonian Lecture I.)

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Mr. H. Work Dodd: On Disorders of Vision in Relation to Diseases of the Nervous System.

London Post-Graduate Course, Hospital for Diseases of the Skin, Blackfriars, 4.30 P.M.—Dr. Abraham: Nævi.

WEDNESDAY.

North-West London Clinical Society, North West London Hospital, 8.30 P.M.—Monthly Demonstration of Cases.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. McAdam Eccles: Femoral Hernia.

Royal Meteorological Society, Royal Astronomical Society's Rooms, Burlington House, W., 4.30 P.M.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Arkle: Aortic Valvular Disease.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

THURSDAY.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Montague Murray: Demonstration of Medical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Kellock: Demonstration of Selected Cases.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Dr. Dundas Grant: Diseases of the Antrum of Highmore.

Royal College of Physicians, 5 P.M. Dr. Sidney Martin: The Chemical Products of Pathogenic Bacteria, considered with special reference to Enteric Fever. (Croonian Lecture II.)

London Post-Graduate Course, Central London Sick Asylum, 5.30 P.M.—Dr. Patrick Manson: Clinical Lecture.

FRIDAY.

London Post-Graduate Course, Bacteriology (at King's College, 5 P.M.—Dr. Wilkinson: Erysipelas and Suppuration, etc.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 1.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W. 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M. 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Tu., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

HOME FOR MORPHINOMANIAC.

H. A. (Ireland) desires to hear of a home or asylum where a young medical man who has fallen a victim to the morphine habit could be taken in and treated. The means available are very small, but 10s. per week could be paid.

MASSAGE DIPLOMAS.

F.R.C.P. writes: I have just received a visit from a masseur and medical electrician, who informs me that he holds the diploma of the National Hospital and has printed on his cards, "Diplômé National Hospital, London." May I ask if the National Hospital for the Paralysed and Epileptic (Queen-square) has any right to grant "diplomas"?

FUNGATING SORE OF UMBILICUS.

APEX would be glad of suggestions for the treatment of unhealed umbilicus in a delicate boy, aged 3 years. It now presents a mass of unhealthy granulations the size of a strawberry. The ordinary local and general treatment has been persevered with for twelve months without the slightest success.

COTTAGE HOSPITALS.

DR. F. BRUMELL, jun. (Morpeth) writes: My District Nursing Committee are thinking of beginning a small cottage hospital by providing a few beds at the Nurses' Home for cases requiring special care, the nurse to continue her district nursing, and with the aid of an assistant to attend to the cases in hospital. Available income £200 a year. If any reader acquainted with an organisation on these lines will be kind enough to send me a copy of the scheme and rules I shall be greatly obliged.

MOTOR CARRIAGES AND CYCLES.

J. J. T. desires to hear the results of practical experience of the working of a motor carriage suitable for men in general practice. Another correspondent, J. M., makes a similar request with regard to motor tricycles.

*** We may refer our correspondents to the replies given in the BRITISH MEDICAL JOURNAL of April 3rd, 1897, p. 895; December 11th, 1897, p. 1770; March 5th, 1898, p. 672; March 12th, 1898, p. 739; and to a paragraph published on March 5th, 1898, p. 644.

HOME FOR INCURABLE.

DR. ARTHUR H. HART (Clapton) writes to ask for information as to obtaining admission for an imbecile boy into a home for incurables. He is suffering from spastic paraplegia of an extensive character.

*** There are two homes near London, one the Royal Hospital for Incurables, Wandsworth, S.W., Secretary, Frederick Andrew; the other the British Home for Incurables, Streatham, S.E., Secretary, R. Gofton Salmond, 72, Cheapside, E.C. Application for further information should be made to the Secretaries. Paralysed children are admitted into the Darenth Schools for Imbecile Children if the position of the parents renders them eligible. In this case application should be made to the relieving officer or the Clerk of the Board of Guardians of the parish in which the parents reside.

NOTIFICATION UNDER THE FACTORY AND WORKSHOPS ACT.

MR. J. H. MCAULEY (Dublin) writes: I see by the BRITISH MEDICAL JOURNAL of May 21st, p. 1347, that cases of plumbism, etc., are to be reported. Does the Act apply to Ireland? To whom are they to be reported here? And is there a fee?

*** No portion of the United Kingdom is exempt. So far as factory legislation is concerned, Ireland is governed in the same way, practically speaking, as Scotland, Wales, and England. The following is the paragraph of the Act which contains the answer to our correspondent's question:

"*Factory and Workshop Act, 1895.*—Every medical practitioner attending on, or called in to visit, a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning or anthrax, contracted in a factory or workshop shall notify to the Chief Inspector of Factories, Home Office, London, the name and address of such patient, and the disease he is suffering from, and shall be entitled to a fee of 2s. 6d. for so doing."

This is a complete statement of the requirements from medical practitioners under the Act of 1895. In the recent trial of Messrs. Bryant and May for concealing cases of "phossy jaw" among the workmen, counsel for the prosecution stated that the firm had not notified, as it ought to have done, to the medical officer of health. On this point counsel was slightly in error. It is to the inspector of factories that such an intimation should have been sent, and the responsibility for doing so rested upon the occupier and not upon the doctor. So far therefore as medical men are concerned in the excerpt from the Act given above their duties are fully defined.

If a medical practitioner fails to notify he is liable to a fine not exceeding forty shillings. Occupiers are required to send notice of every case of lead, phosphorus, or arsenical poisoning or anthrax occurring in a factory or workshop to he factory inspector and to the certifying surgeon of the district.

ASYLUM FOR ADULT IDIOT.

SILEX would be glad of advice as to the disposal of a congenital idiot, male, aged 25, who has an income of £20 per annum held in trust for him. The fact of his having this small income prevents him being admitted as a pauper into a public asylum.

*** We are indebted to Dr. Fletcher Beach for the following comprehensive answer to this question, which may be of use to other readers of the BRITISH MEDICAL JOURNAL—:

The parents or friends of the patient could not do better than apply for admission to one of the idiot asylums supported by voluntary contributions. The fact that the patient has £20 per annum held in trust for him will facilitate it. Earlswood Asylum, Redhill, Surrey, takes idiots from the whole of England; the Royal Albert Asylum, Lancaster, admits them from the seven Northern counties; the Eastern Counties Asylum, Essex Hall, Colchester, from the Eastern counties; Star Cross, Exeter, from the Western counties; and the Midland Counties Asylum, Knowle, near Birmingham, from the Midland counties. A letter addressed to the secretaries of these institutions will bring an answer giving full particulars of admission. If the patient lives in any of the parts mentioned in the above list application should by preference be made to that asylum; if not, then application should be made to the Earlswood Asylum. The Leavesden Asylum, Watford, Herts; the Caterham Asylum, Caterham, Surrey; and the Darenth Asylum, Dartford, Kent, admit adult idiots. In all cases the guardians require the parents or friends to pay something towards the cost of maintenance, so that failing admission into the voluntary asylums before mentioned application should be made for admission into one of these three asylums, provided the patient lives in London, as cases are only admitted into them from the metropolitan area. In that case application should be made to the relieving officer or clerk to the Board of Guardians of the parish in which the patient resides; either of these officers will furnish details regarding admission.

ANSWERS.

A. E. J. W.—The address of the Society for the Relief of Widows and Orphans of Medical Men is 11, Chandos Street, Cavendish Square, W., and the Secretary, Mr. J. B. Blackett. Some further particulars will be found in another column.

O. F. S.—Our correspondent will find some particulars with regard to the suitability of the baths and waters at Harrogate and Woodhall Spas in the treatment of psoriasis in the report of the Royal Medical and Chirurgical Society of London on *The Climates and Baths of Great Britain*, vol. i (London: Macmillan and Co., 1895, price 21s.), also in *The Spas and Mineral Waters of Europe*, by Dr. Hermann Weber and Dr. Parkes Weber (London: Smith, Elder, and Co., 1896). A new edition of this book, which will be published under the title of *Mineral Waters and Health Resorts of Europe*, is now in the press.

R.T.W.—It is very difficult to advise on this matter. The practice savours strongly of touting, advertising, and stealing a march on a professional brother, a course calculated neither to uphold the dignity of the profession, nor to maintain the friendly relations which ought to exist among neighbouring practitioners. Its only defence is a possible matter of convenience to the public. To go and do likewise would perhaps be the advice from a mercantile standpoint, but actuated by a higher conviction as to what should guide a man in his professional relationships, it would be wiser to leave A. to his own devices, to avoid that which is evil, and cleave to that which is good.

EXAMINATION FOR M.R.C.P.LOND.

M.D.EDIN.—A candidate for the M.R.C.P. is required to show a good general acquaintance with medicine, theoretical and practical. The following books may be read or consulted, but there are others which would serve the purpose equally well: Fagge's *Principles and Practice of Medicine*, edited by Dr. Pye-Smith (London: J. and A. Churchill, 40s.); or Osler's *Principles and Practice of Medicine* (London: Young J. Pentland, 24s.); Green's *Pathology*, edited by Montague Murray (London: H. Renshaw, 1895, 7s.); Sims Woodhead's *Practical Pathology* (London: Young J. Pentland, 25s.); Gowers's *Manual of Diseases of the Nervous System* (London: J. and A. Churchill, 1895); Whitelegge's *Hygiene and Public Health* (London: Cassell and Co., 7s. 6d.) Reference should also be made to articles in Clifford Allbutt's *System of Medicine* (Macmillan and Co.). We cannot recommend any book on medical anatomy, but should advise "M.D." to read parts of Quain's *Superficial Anatomy*, 10th edition, 1896 (Longmans, Green, and Co.), and to supplement this with reference to any standard book on anatomy.

NOTES, LETTERS, Etc.

AN APPEAL ON BEHALF OF THE WIDOW OF THE LATE DR. ARTHUR BARLOW.

WE may recall our readers' attention to the appeal which was made in the BRITISH MEDICAL JOURNAL of May 14th on behalf of the widow of Dr. Arthur Barlow, who died on March 10th, at the early age of 37. Unfortunately, through ill-health the deceased was prevented from making provision for his widow, who is without any means whatever, and is in exceedingly delicate health by the long strain of nursing her husband and the shock of his sudden death. Subscriptions will be received by Dr. J. W. Moore, 40, Fitzwilliam Square West, Dublin; Dr. John Barton, 26, Upper Merrion Street, Dublin; Dr. G. J. Clibborn, 8c, Ovoca Terrace, University Street, Belfast; Dr. L. H. Ormsby, 92, Merrion Square West, Dublin; Dr. Henry, 2, Lewisham Park, Lewisham, London; and Dr. A.

Matson, 619, Holloway Road, London. The following subscriptions have been received in addition to those already acknowledged:

	£	s.	d.
Per Dr. Moore:			
Acquaintance (Dublin)	1	0	0
Freemason (Goldaming)	0	10	0

The fund now amounts to £32 14s.

MIDWIFERY PRACTICE.

M.D.ST AND. sends the following advertisement from a recent issue of a local paper:

MIDWIFERY PRACTICE in ————; ill-health the cause of giving up; a thorough good investment for a certificated midwife; price £100. —Address, ————.

He considers that the advertisement affords an illustration of what would have been frequent had the Midwives Registration Bill passed into law.

DISLOCATION OF UNGUAL PHALANX.

DR. WALTER H. DODD (Brighton) writes: On looking over my notes, I find in the year 1888, whilst assisting Mr. T. Bell at Uppingham, one of the schoolboys came to me complaining of his finger being broken. It proved to be a dislocation forwards of the third phalanx of the right middle finger. The accident happened when playing fives; striking at a ball, he hit his finger against his leg. It was easily reduced.

DR. WILLIAM E. L. ALLEN (Hawkshead, near Ambleside) writes: H. G., aged 30, in hurrying to catch the post, slipped on the pavement, which was covered with ice, and fell on the point of his left thumb, causing a compound dislocation of the ungual phalanx forwards. The end of the ungual phalanx was exposed. The dislocation was easily reduced, and the wound healed quickly, leaving very slight stiffness afterwards.

THE TREATMENT OF PROLAPSUS ANI AND HÆMORRHOIDS ON PHYSIOLOGICAL PRINCIPLES.

DR. WALTER G. WALFORD (London, N.W.) writes to express the opinion that relaxation of the sphincter ani has an important part in producing the symptoms of prolapsus and hæmorrhoids. The plan that I have adopted to deal with this, he continues, is much the same as is used to strengthen a muscle in any other part of the body. I advise the patient to lie down, and replace with the finger every pile and every fold of membrane that ought to be inside the sphincter. By a little practice he will soon get to understand this. Then with the finger on the vent let him contract the sphincter, and go through a regular series of contractions of the muscle, say sixty or seventy times, and do this once or twice a day. It can only be done effectually in the recumbent position, and little good can be done unless all is replaced, or the sphincter will not act effectively. The pressure of the tip of the finger offers a little opposition, and in time the muscle will recover its power and feel like a little metal ring under the finger. After an action of the bowels the same thing should be done for a few minutes if possible, and a little solution of alum or cold-water bathing at the part will expedite affairs, otherwise the bowel is likely to prolapse and remain down all day. With prolapsus ani one sometimes notices that the rectum altogether loses its tone, and some of its power of expulsion as well as of retention; vesical troubles then sometimes supervene as well as uterine troubles, dysmenorrhœa, etc. I have certainly found that the plan I adopt acts as massage to the part, and often corrects all these disorders. A lady who followed this plan succeeded in three months in getting rid of a pile that had annoyed her for twenty-five years. The worst part of it is that, the plan being such an exceedingly simple one, people will not always carry it out properly in all its details, or discontinue it too soon when they feel better. Of course attention to the bowels is obviously required.

THE LATE DR. BROWN-SÉQUARD.

ACCURACY writes: At the recent meeting of the General Medical Council the above gentleman was referred to as a distinguished foreigner practising in London who had never been interfered with. The members appeared to have forgotten that he was F.R.C.P.Lond., and his name was on the *Medical Register* when he practised in London, but was afterwards erased on account of his neglecting to notify change of address.

THE SCHOTT TREATMENT OF CARDIAC DISEASE.

DR. KENNETH STEWART (Chapel Street, S.W.) writes: In stating the arguments in favour of the predominant part played by hydrostatic pressure in the Nauheim treatment in my memorandum of May 21st I omitted some very important considerations. When estimating the pressure exerted on the body by the liquid I should have included those at the various levels which neutralise one another. The weight of the body only represents the difference between all the pressures which is exerted vertically in an upward direction; it does not include those in the vertical, horizontal, and intermediate planes, which are neutralised. The total pressure exerted on the body when floating in a bath should be stated as the sum of all these forces.

STREET FILTH.

LISTERIAN writes: I am delighted to read your paragraph on the above in the BRITISH MEDICAL JOURNAL of May 21st. But prevention is better than cure. Why not have a non porous apparatus attached to the centre of the inferior portion of the bellyband of the horse, passing backwards between the hind legs, gradually widening, and fastened to the body of the vehicle far back? A well with a light valve at the top might be part of the apparatus for the offending matter to sink into. The eye and nose would not then be offended, and the disgusting state of the London streets might be greatly lessened. Of course this does not solve the problem of unattached horses; but surely in this inventive age some genius might introduce an apparatus that would be of real benefit to the human race. The inventor would at least have the grateful thanks of many sufferers.

PARALYSIS OF THE FOREARM FOLLOWING SUBGLENOID DISLOCATION OF THE HUMERUS.

DR. W. PERCY ASHE (17, Alexander Square, S.W.) writes: In reply to "Enquirer's" query concerning paralyses of muscles after dislocation of the shoulder, I am happy to record my experience of a case that happened to me some years ago. In this instance the muscle affected was the deltoid. There was complete paralysis, followed gradually by considerable wasting of the muscle. The treatment adopted was the daily application of the faradic current for ten or twelve minutes, together with friction, with a horse-hair glove, and gentle kneading and massage of the muscle. This was continued for over ten months, at the end of which time some voluntary power returned, and the muscle increased in size. Graduated voluntary exercises were then had recourse to, friction and cold douching being used as accessories, with the result that now no wasting is observable, and there is very little, if any, impairment of power.

LACERATION OF FUNIS THROUGH PRECIPITATE LABOUR.

MR. W. C. RAINSBURY, L.R.C.P.E., L.R.C.S.E., L.F.P.S.G. (Skegby, Notts) writes: On May 17th I was hurriedly sent for to attend a multipara. On arrival the midwife told me that when she got into the room she found the patient standing, with the child on the floor. The midwife immediately tied the proximal and distal ends of the funis, and got mother and babe on the bed. On examination I found that the funis was separated 3½ inches from the umbilicus. Mother and babe are doing well.

SEX PREDICTION MADE EASY.

THE following, which we take from a French medical journal, may supply a hint to disciples of Professor Schenck who do not care to prophesy before they know: Dr. X., of Paris, has, it is said, discovered an infallible method of determining the sex of the child *in utero*. After a conscientious auscultation and palpation of Madame Z., he announces that it will be a boy, and at the same time notes on his tablets: "Madame Z.—a girl." When the accouchement takes place, if the newcomer is a boy, well and good; if it is a girl, he exhibits his tablets and assures the mother that she must have misunderstood him.

LETTERS, COMMUNICATIONS, ETC., have been received from:

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BOOKS, ETC., RECEIVED.

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THE CROONIAN LECTURES

ON THE

CHEMICAL PRODUCTS OF PATHOGENIC BACTERIA CONSIDERED WITH SPECIAL REFERENCE TO ENTERIC FEVER.

Delivered before the Royal College of Physicians of London,

BY SIDNEY MARTIN, M.D., F.R.S., F.R.C.P.,

Professor of Pathology, University College; Assistant-Physician to University College Hospital and to the Hospital for Consumption, Brompton.

LECTURE I.

I PROPOSE in the following lectures to discuss generally the nature and action of the poisons and chemical products formed by pathogenic bacteria, and to illustrate the subject by an investigation that has occupied me recently of the pathogenic action and the chemical pathology of the typhoid bacillus and of two other bacilli closely related to it.

Most of the poisons which are to be considered are substances which cannot be defined chemically, and this at the outset is a very great difficulty in an attempt to classify such poisons accurately.

The transformations which bacteria, both non-pathogenic and pathogenic, produce in substances are of great variety. Some non-pathogenic bacteria are concerned, for example, with nitrification, a process in which ammonia compounds are transformed into nitrates and nitrites. These bacteria are more or less specific, and although some pathogenic organisms have a somewhat similar action in this respect it is very slight. Another example of a similar character is the splitting up of urea into ammonia and carbonic acid by the micrococcus ureæ. These actions, however, are not of the nature of the chemical changes produced by pathogenic bacteria. The changes which bacteria produce in carbohydrate substances—for example, starches and sugars—are, first, the transformation of the starch into one or other kind of sugar, and the decomposition of the sugar into alcohol and acid bodies, such as lactic, acetic, and butyric acids. Such changes are usually spoken of as those of fermentation, and are allied to changes which occur in the digestive processes of the higher animals by means of the organic as distinguished from the organised ferments.

Some bacteria are capable of still further acting on the acids produced in the first-named fermentations; thus the bacillus butyricus can transform lactic acid into butyric acid with the formation of carbonic acid and hydrogen. These are again not the changes which are of the greatest importance in considering pathogenic bacteria. Although some pathogenic bacteria act on starches and sugars with the formation of acid bodies and gases, yet the products so formed play but a small part in the production of disease. Fats, which are largely present in the body and are taken in with food, are also broken up by bacteria of one kind or another. The products, however, from a pathological point of view, are of minor importance. From the albuminous substances, however, the third great class of organic substances that serve as food and act as important chemical constituents of the body, the pathogenic bacteria produce substances possessing important physiological actions. The albuminous molecule containing carbon, hydrogen, nitrogen, sulphur, and frequently phosphorus, is unknown as regards its chemical constitution. It is no doubt highly complex, and is capable of being broken up both by organic ferments and by bacteria into numerous bodies of the most complex nature. Although the actual constitution of the albuminous molecule is at present undetermined, it is capable of being transformed only in certain directions. Thus, by the action of mineral acids and alkalies with the aid of heat, white of egg or the serum proteids are transformed into acid and alkali albumin, which differ from the original proteid mainly in their solubilities in acid or alkaline solution. The acid orm is precipitated by an alkali and *vice versâ*, the precipitate being still capable of coagulation.

Like the original proteid, however, these bodies are capable of digestion. The digestive transformation which takes place in the stomach and small intestines consists in the change of these slightly soluble and coagulable proteids into more soluble and diffusible ones, the formation of the so-called albumoses and peptone. The important members of this class are soluble in water, are not precipitated by heat, and are capable of some amount of diffusion. They all give a bright pink colour with a trace of copper sulphate solution and an excess of potash. True peptone differs from some of the albumoses in the fact that it is not precipitated by nitric acid. One of the characteristic albumose reactions, for example of proto-albumose, is that the precipitate by nitric acid is soluble on heating the solution, and comes down again on cooling.

Peptic digestion probably does not go farther than the formation of peptone, and results chiefly in the transformation of the proteids into albumoses. Pancreatic digestion, however, can split up the proteid molecule, or part of it, into crystalline bodies containing nitrogen, such, for example, as leucin and tyrosin.

This digestive action on proteids produced by organic ferments is also a feature of the action of some of the organised or bacterial ferments, except that the effect is more pronounced, and results in the breaking up of proteid molecule into many different non-proteid substances, which may be considered the final products of the digestive action.

This digestive action of pathogenic bacteria is, however, only a part of the question we shall have to consider. The chief cell of the peptic gland secretes pepsin, which is discharged in the gastric juice into the stomach cavity; the pancreatic cell secretes trypsin and other ferments, which are discharged into the small intestine with the pancreatic juice; and, therefore, in any digestive mixture obtained from the stomach or intestine there is present, besides the products of digestion, the ferment or the active agent in the transformation. In the case of bacteria growing in an artificial medium outside the body or developing in the body, there is—in addition to what digestive products may be formed—a living bacterial cell, and any secretion which it may produce; and it will be seen that the body of the bacterium as well as its secretion—whether this be of the nature of a ferment or not—are both of the highest importance in the consideration of diseased conditions and processes.

In bringing these aspects of bacterial action to your notice, it will be seen to what extent the products of their digestion of albuminous substances or the mere secretion of poisonous substances act in disease.

The study of putrefaction, which is produced by many different micro-organisms, has shown that—besides the production of albumoses as the early products of digestion—numerous chemical substances, or final products, are formed, some of which are not toxic, although many are highly poisonous.

It is not necessary to dwell on this part of the subject, except to say that the effect of these toxic bodies of putrefaction is: (1) that of intense local irritation, whether they are injected under the skin or introduced into the digestive tract; and (2) an action on the central nervous system whereby, besides the production of muscular twitchings and clonic and tonic spasms, there is with many of them a tendency to the production of stupor and coma, ending in death. These chemical products of putrefaction, with perhaps one exception—that of mydaleine—do not cause a rise of body temperature, so that the fever which is observed in cases of poisoning by putrefactive products, such as those occurring in some cases of food poisoning, are due to other products of the bacteria. At one time similar chemical products or animal alkaloids, as they are called, were supposed to play a large part in the processes of specific infective diseases. Thus Brieger isolated two bodies, tetanin and tetano-toxin, which were supposed to be the active agents in the production of the convulsive spasm of tetanus. He also isolated typho-toxin, a chemical body which was supposed to be an active poisonous agent in typhoid fever. The existence of these bodies has, however, not been confirmed by subsequent research. It does not follow, of course, that in all diseases such final products may not play a part in the production of the symptoms. As I have shown in anthrax, such a product is formed, and is one of the active poisons

in the disease. Of later years, especially as the result of the study of the chemical pathology of diphtheria and of tetanus, the most active poison which is produced by the micro-organism is not of the nature of an animal alkaloid, but a substance which cannot be defined chemically, but only by the investigation of its physiological action.

Separation of Bacterial Poisons.

The three kinds of poisons which have been indicated must be borne in mind, namely: (1) The poisons secreted by the bacterium itself; (2) the products of the digestive action of the bacterium, that is, the albumoses; and (3) the final non-proteid products, which may be provisionally called an animal alkaloid. The first two poisons are precipitated from solution by means of alcohol; generally speaking, the last class of poisons is soluble in alcohol. In the separation of the first two classes of poisons by means of alcohol great care has to be taken that they are not exposed for too long a time to the action of the reagent, so that their toxic properties may not be diminished. The prolonged action of alcohol, for example, on pepsin will diminish its activity; and so it is found that its prolonged action on the poisons of diphtheria and tetanus greatly diminish their activity. Any method, therefore, in which alcohol is employed must be a rapid one, the poison not being exposed to its action for longer than a few hours.

Another method which is employed in the separation of these poisons is precipitation by means of saturation of the liquid with neutral ammonium sulphate. By this means all the proteids are thrown down with the poisons, and may be collected and redissolved by means of dialysis. To my mind, however, this method is open to grave objections. Ammonium sulphate is itself poisonous, and it is extremely difficult to remove the last traces of the salt, except after prolonged dialysis in the presence of antiseptics, which may be hurtful to the poisons. During the process of dialysis the solution becomes greatly diluted owing to the absorption of water from outside the dialyser; so that there is at the end a very dilute solution of the poison, which has to be concentrated before it can be used. There is no advantage in this method, because although it gives rapid precipitation of the poison, yet the final product is not any purer than when alcohol is used as a precipitant. Other methods have been used by Brieger and others whereby the poisons have been precipitated by the salts of heavy metals, which are got rid of afterwards by various means. Even in this case we are not much nearer the chemical identification of the poisonous substances.

Preparation of Secretory Products of the Bacteria.

The two best known examples of toxic secretory products of bacteria occur with the bacilli of diphtheria and of tetanus. They are produced by growing the bacillus in a medium made of sterilised extract of meat, to which 1 or 2 per cent. of commercial peptone and a small proportion of common salt are added. This is the ordinary broth peptone. It is a medium in which the proteids exist in a digested form, so that any digestion of the proteids by the bacterium does not take place, as it might do if serum albumin or white of egg were present.

After growing in the medium for a certain time—three weeks, a month, or longer, and after filtering off the bacilli through a porcelain filter, a clear sterile liquid is obtained which is extremely poisonous. This liquid when injected into an animal gives rise, in the case of diphtheria, to the characteristic symptoms of the disease—namely, a palsy which is mainly dependent on the degeneration of the peripheral nerves; and in the case of tetanus to the characteristic symptoms of the disease. In this poisonous liquid no manipulation has as yet demonstrated the chemical identity of the poison. Such a liquid gives a copious precipitate with alcohol or saturation with ammonium sulphate, and this precipitate is itself highly poisonous, containing most of the poison present in the liquid, and consists almost entirely of the peptone which has been added to the liquid in the preparation of the culture medium with some of the salts of the broth.

An attempt was made by Roux and Yersin to isolate this poison by adding phosphoric acid and then lime to the liquid, the precipitate of calcium phosphate formed carrying down the poison. It was found that the small amount of this calcium phosphate mixture which killed an animal did not show any appreciable difference in weight from the amount of calcium phosphate present—that is, the amount of poison present was practically imponderable. This may also be appreciated by the statement that even as little as $\frac{1}{25}$ c.cm. of the broth filtrate may kill a guinea-pig weighing 300 g. in forty-eight hours.

Kitasato also found in his experiments on the bacillus of tetanus that the broth filtrate was poisonous in what were practically infinitesimal doses. It is evident that in these cases we are dealing with a poison which is at present quite outside the domain of chemistry; it cannot be expressed chemically, it can only be expressed from its pathological effects.

Separation of the Digested Products.

To obtain these it is necessary to grow the bacillus in a liquid containing either alkali-albumin, serum, or any of the liquids of the body containing proteids in solution. Extract of meat and salt (that is, broth without peptone) is with advantage added, as it thus makes a better culture medium for the bacterium. After the bacillus has grown in this liquid for three to five weeks, and it is filtered off through porcelain, the clear filtrate, after concentration at 40° C., is precipitated by an excess of alcohol, and the precipitate collected and redissolved in water, reprecipitated by alcohol, and after washing in alcohol and ether is dried over sulphuric acid. In this way a lightish brown powder is obtained, readily and completely soluble in water, and giving the reactions of albumoses—namely, the biuret reaction and the characteristi precipitate with nitric acid.

Some bacteria—for example, the anthrax bacillus—have practically no toxic secretion, and the albumoses are readily separated in as pure a form as can be obtained; but with others—for example, the diphtheria bacillus—where there is not only a secretory product, but also digested products, the powder which is obtained by the method thus stated contains not only the secretion, but also the albumoses. There are no chemical means of separating these secretory products from the albumoses, but some degree of separation may be obtained by keeping the solution at 60° C. for a longer or shorter period, whereby the secretory product is rendered inert. This is, of course, only a rough method, inasmuch as heat also damages, in some instances, the action of the albumoses.

Separation of the Final Products.

The third point is the separation of the final products. These final products are obtained in the alcoholic filtrate after precipitation of the proteids in solution. This alcoholic filtrate is evaporated to dryness at a temperature of 40° C., and extracted with absolute alcohol. The extract is filtered, evaporated again to dryness, and redissolved in alcohol. After filtration, and, if necessary, concentration, it is thrown into an excess of ether, which causes a precipitate, and the alcoholic extract may thus be separated into two parts, one of which consists of substances which are soluble in alcohol and insoluble in ether, and are precipitated by ether, and other substances—chiefly fats—which are soluble in ether and alcohol, but are insoluble in water.

This manipulation and separation of the substances is, of course, at present a very imperfect one, inasmuch as the substances so separated have not been obtained in a sufficiently large quantity, nor are their chemical characteristics sufficiently worked out to enable a definite idea of these characteristics to be obtained; but for the purposes of physiological experiment and of determination as to the general nature of the poisons produced by pathogenic bacteria, I have found this method of great value.

In the investigation of toxic products formed in infective disease, not only must they be studied by means of the artificial culture of the bacillus in suitable media, but a chemical examination of the body itself, especially as regards the blood, the spleen, and the liver, is necessary in order to determine whether the same products are found in the body as in the artificial culture.

This study is of great value when the poisons have a specific action; for example, in the case of diphtheria and of tetanus;

but in the diseases in which there is no specific symptom due to a chemical poison, it may be impossible to prove the identity of the poisons produced by the bacterium and those found in the bodies of patients dead from the disease.

Intracellular Bacterial Poisons.

The three classes of poisons just considered are described as xtracellular bacterial poisons, but besides these, which are present in the culture fluid in which the bacteria are grown, poisons may be present in the bodies of the bacillus—intracellular poisons—and these have to be studied by means of other methods. One method is to kill the bacillus, which is grown in broth, by means of chloroform. If a few drops of chloroform are added to the liquid and shaken up, and allowed to act for twenty-four hours or longer, the bacilli are killed, so that, on testing, the liquid is found to be sterile. The bacilli are still suspended in the liquid, and after evaporation of the chloroform *in vacuo* the liquid may be used for experiment. Besides the bodies of the bacillus it of course contains any secretory poisonous product it may form. The results obtained by the injection of this liquid may be compared with those observed with a broth culture, also chloroformed, and from which the bodies of the bacillus are removed by centrifugalising. The comparison of the two results enables one to observe the difference in the action between the poison contained in the body of the bacillus and the secretory product; between the intracellular poison and the extracellular.

Another method consists, after growing the bacillus on a large surface of agar, in scraping the culture from the surface and suspending it in a sterile salt solution. Some amount of extracellular poison may be present in this suspension as well as in the first case. In filtering a culture fluid through a Chamberland filter some of the toxic products may be held back by the filter itself, and this is the more likely to be the case if the solution contains a large amount of undigested proteid, for example—serum. The method of killing the bacillus in the fluid by means of chloroform and centrifugalisation to get rid of the bodies of the bacillus is therefore a very important one in the investigation of the toxic products of the bacterium, as in this way the intracellular poisons of the bacillus can be investigated.

Toxic Action and Reaction.

The physiological action of these products may be investigated by studying the effects produced by their injection subcutaneously, into the peritoneal cavity, or into the venous system. As the result of the intravenous injection of poisons a more rapid effect is produced than by other methods, and observations may be made in rabbits as to the effect of the poison on the temperature, on the body weight and on the intestine (as regards the production of diarrhœa) as well as its effects on the production of microscopical lesions in the nervous system, the heart, liver, spleen, and kidneys.

From the experimental point of view infective diseases may be divided into two great classes. In one of these the symptoms are only those of what we must call a toxæmia or blood-poisoning—that is, there is a fever in a greater or less degree, with great bodily depression, and loss of weight, with some alteration in the secretion of the glands, more evidently those of the kidney and the skin. At some period or other of this process the fever may be absent, and yet the process of poisoning may be progressive. In the second class of cases, besides the symptoms of toxæmia, there are present during the acute disease, or following as sequelæ, specific lesions, mainly of the nervous system.

Examples of toxæmia without specific lesions occur in anthrax or malignant pustule, and in typhoid fever.

Examples of the second class are diphtheria and tetanus, in both of which, besides the toxæmia, there are specific symptoms referable to the nervous system.

The animals which have been used in the investigation are rodents (rabbits and guinea-pigs) between which and the higher animals there is a great gap, chiefly on the side of the nervous system. This point must be borne in mind in any deductions made upon the action of poisons upon the nervous system in rabbits.

The method of procedure in the experiments is as follows: The weight and rectal temperature of a healthy rabbit are taken for two days at least previous to the experiment. In this wa an indication is obtained by the increase of weight in the animal, and by the regularity of the temperature as to whether it is healthy or not. The injection is then made, usually into the marginal vein of the ear, and the effect of poison on the temperature, body weight, etc., observed during the life of the animal. After death, or at killing, cultivations are made from the heart's blood, the peritoneal cavity, and the spleen or liver, to demonstrate the absence of bacterial action, and the nerves (the phrenic and branches of the anterior crural) are stained with osmic acid for the investigation of degeneration, and a portion of the left ventricle of the heart is also stained in the same liquid for examination of any change in the fibres. Bacterial poisons appear to have a specific action on the heart of the rabbit in the production of degeneration of the muscle fibre, a degeneration which is the expression of the cardiac failure so frequently observed in infective disease in the human being.

One important point as regards the action of these bacterial poisons must be noted, namely, that they have in many cases a very slow action; so that following on a single dose there may be some slight change observed in the temperature or in the body weight, which passes off. Subsequently, the animal either progressively goes down hill, and succumbs after a week or fourteen days, or longer, or there may be no apparent downward progress, and death occurs suddenly.

This slow action of the bacterial products is so common as to be noted particularly, and in some cases it precludes any exact investigation of their effects on the circulation of the blood within the time limits of an experiment.

Toxic Reaction.

Besides the poisonous effect of the bacterial products on the body whereby an injury is effected on the tissues, producing either alteration in function, with or without obvious degeneration of the tissue itself, bacterial products may produce what may be called a toxic reaction. This occurs most readily as the result of the injection into an animal refractory to the disease of small but gradually increasing doses of poison. There is no accumulation of the poison in the body, but there is a gradual increase in the blood and tissues of a substance or substances which are inimical to the poison or the bacillus—that is, under certain conditions they may prevent, when injected at the same time, the fatal effects of the poison on the bacillus.

These substances probably fall into two groups—(1) the antitoxic, which counteract the effects of the poison itself, and (2) the antimicrobic, which counteract the effects of the bacillus itself. In one and the same animal the blood may contain a substance or substances which are both antitoxic and antimicrobic, such, for example, as occurs in the process of the formation of the diphtheria and tetanus antitoxic serums.

As an introduction to the investigation which I have more recently done, it will be well to discuss as examples the chemical and pathological processes which occur in anthrax, diphtheria, and tetanus.

Anthrax.

I have previously shown, and subsequent experiment has only confirmed the observation, that the bacillus of anthrax produces in the body of an animal, the subject of anthrax, and in an artificial culture medium containing digestible proteids, a large quantity of albumoses, and also of a body which gives some of the reactions of an alkaloid. Both these classes of bodies are poisons, the albumoses producing fever and causing death in coma when given in large doses, the alkaloidal body, which is much more poisonous, producing no rise of body temperature, and causing stupor ending in coma and death in mice, guinea-pigs, and rabbits. According to the dose given death may not be produced, but the stupor and coma may last for a certain time and then be recovered from.

The bacillus of anthrax is a typical infective microorganism, and it is the chief example of the class of microorganisms whose toxic products are the results of the transformation of the proteid solutions in which it grows. Practically it produces no toxic secretion. If any is produced at all it must be in very small amount, inasmuch as when grown in peptone broth it imparts little or no toxicity to the liquid, as tested by injection after removal of the bacilli through the filter.

Tetanus.

This is quite different from the results obtained in the bacillus of tetanus. If this is grown in a solution of peptone broth under suitable conditions it is found to produce a highly toxic substance, which, as has been previously stated,

is practically unweighable. This substance, which must be considered a secretion of the bacillus, possesses a characteristic physiological action in that it produces the characteristic convulsions of the disease tetanus. It is the chief toxic agent produced by the bacillus. Kitasato once found it in the heart's blood of a patient dying of tetanus. In a number of cases of tetanus which I examined chemically I did not find this poison, although perhaps this result is not of much value, as the method I employed would possibly destroy the somewhat sensitive toxin. I found in the spleen and blood of patients dying of tetanus albumoses in fair quantity which did not possess any other action than that of producing fever; they produced no convulsions, and did not cause death. I have previously stated that in one experiment I found that the ether extract of the spleen in tetanus produced convulsions when injected intravenously in rabbits. This undoubtedly occurred, but I am not at all sure that it is of very great significance; at any rate, I could not confirm the observation, and I do not wish to lay any stress on it. It must be considered at present that the chief if not the only active poison in tetanus is the secretion of the bacillus, which, when injected into the body after a certain period produces convulsions.

With regard to the albumoses which are found in the body, in the spleen and blood of patients dying of tetanus, they are undoubtedly present, They may be in some cases the result of a mixed infection by the bacillus of tetanus and other bacteria, but they may be the result of the direct action of the tetanus bacillus or of its toxin, although the proof of this is at present wanting. I did not find that the tetanus poison had any digestive action.

Diphtheria.

The chemical processes of diphtheria closely resemble those of tetanus. There is a secretory product which is formed when the bacillus is grown in peptone broth, and which is present in the membrane of diphtheria, and probably in the tissues as well. This secretory product possesses a characteristic action on the nervous system, causing in rabbits paralysis dependent on nervous degeneration. When the bacillus is grown in a solution containing digestible proteids, it digests these with the formation of albumoses and certain by-products. These albumoses, separated in the ordinary way, have a toxic action similar to, although not so powerful as, that shown by the secretory product. They are also found in the spleen and blood of persons dying of diphtheria, and possess a similar action. What part of the toxic action of the products is to be ascribed to the albumoses themselves is perhaps a matter of debate, inasmuch as the only method by which the physiological action of the secretory product can be separated from that of the albumoses is that of heat, which also affects the action of the albumoses.

What I have called the secretory products of tetanus and diphtheria are remarkably sensitive to heat; that of tetanus, for example, is completely destroyed by raising to a temperature below 80° C.; that of diphtheria is destroyed at a temperature of 60° C., and heating to lower temperatures weakens the action of the poison or alters its effects.

It is evident that the action of the powerful secretory products of pathogenic bacteria is unlike that of crystallisable poisons. First, they produce a large effect in very small doses; secondly, this effect does not always come on immediately after injection even into the venous system, but is preceded by a period during which no apparent change is occurring in the body; thirdly, the poisons are frequently selective in their action, affecting mainly the nervous system, on which they produce a profound effect. They may also disorganise the general nutrition of the body. Fourthly, they are very sensitive to heat and external conditions. Their injection into the body—their effect being preceded by a period of incubation—reproduces the action of the bacillus itself, so that one has to do with a poison which, although not living, produces a progressive change in the tissues of the body like the bacillus.

Dr Robert Rieder, Extraordinary Professor of Surgery in the University of Bonn, has accepted an invitation from the Turkish Government to occupy the chair of surgery in the Military Medical Academy of Constantinople.

TWO LECTURES
ON
THE TEMPLES AND RITUAL OF ASKLEPIOS AT EPIDAURUS AND ATHENS.

Delivered at the Royal Institution of Great Britain

By RICHARD CATON, M.D., F.R.C.P.

Lecture II.

To-day we pass on to consider the ritual of the Asklepian shrines and the accommodation and treatment of the sick who frequented them.

It is convenient, first, to consider the Hierarchy. This consisted of the Hiereus or Hierophant, the priest, who was the head official. He was appointed annually, and he appears to have been frequently re-elected. From the Athenian inscriptions we know that sometimes he was a physician, sometimes not; so also it was with the subordinate officials. The priest was the general administrator, and had a share in the financial government of the temple. The Dadouchoi, or torch-bearers were probably subordinate priests; the Pyrophoroi, or fire carriers, among other functions. lighted the sacred fire on the altars; the Nakoroi or Zakoroi, whose duties in the temple are doubtful, but who sometimes were physicians; the Kleidouchoi, or key-bearers, who perhaps were originally a class of superior door porters, but who appear later to have assumed priestly functions; the Hieromnemones seem to have had purely secular functions, and in common with the Hiereus had charge of all receipts and payments; all were under the rule of the Boule of Epidaurus. The Kaniphoroi (or basket-bearers), and the Arrephoroi (or carriers of mysteries or holy things) were priestesses; perhaps in some measure they acted as nurses. There was als a special religious society termed the Asklepiastes.

Turning now from the priests to the suppliants. These we find came from all parts of the Greek world, and from what ancient writers tell us their numbers were great. Where were they housed? Some, of course, dwelt in the abaton, the women probably in one part, and the men in another, but as I have already pointed out, not more than 120 could find beds there at a time; perhaps the invalid was only housed there at first, and when he began to improve was drafted off to a hostel. Assuming that all the buildings which I have suggested to be hostels were such, they could not accommodate more than some four or five hundred patients. Perhaps the usual number attending may have been only some five or six hundred, while at the great festivals many thousands assembled. Whether this large number were lodged in tents or temporary wooden buildings is uncertain.

The patient on arriving probably had an interview with the priest or other official, and arranged about his accommodation with one of the Hieromnemones, or other secular person. He performs certain rites, bathes in the sacred fountain, and offers sacrifices under the direction of the Pyrophorus; the poor man gives his cake, the rich his sheep, or pig, or goat. When night comes he brings his bed clothing into the abaton and reposes on his pallet, putting usually some small gift on the table or altar. The Nakoroi having come round to light the sacred lamps, the priest enters and recites evening prayers to the god, entreating divine help and divine enlightenment for all the sick assembled there; he then collects the gifts which had been deposited on altars and tables; later the Nakoroi enter, put out the lights, enjoin silence, and command everyone to fall asleep and to hope for guiding visions from the god. The abaton was a lofty and airy sleeping chamber, its southern side being an open colonnade. It is singularly like the "shelter balcony" or "*Liegehalle*" now used in treating phthisis. According to the inscriptions the god frequently appeared in person, or in visions, speaking to the sick man or woman concerning their ailments. Whether these visitations were merely hallucinations in individuals whose imagination had been excited, or whether some priest in the dim light enacted the part of Asklepios; whether the patient was put under the influence of opium or some other drug provocative of dreams, or whether, by some acoustic trick, the priests caused the sick to hear spoken

words which they attributed to the deity, it is difficult now to say.

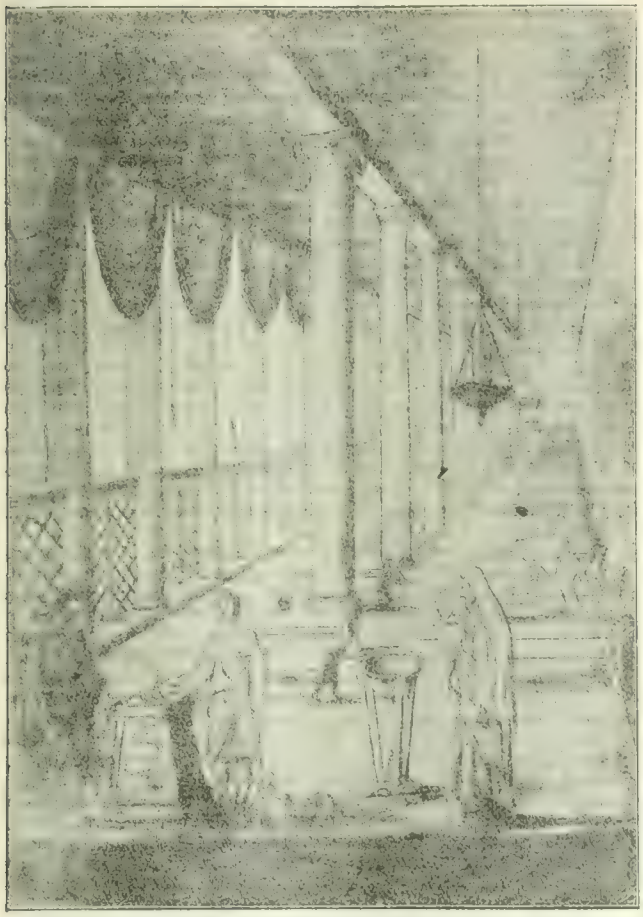


Fig. 1.—Interior of Abaton.

In the accompanying sketch of the abaton a miracle is in progress in the foreground. A lame man comes to the altar, he offers his sacrifice, the Pyrophorus lights the sacred flame, the Dadouchos or Nakoros enjoins silence while the holy serpent licks the affected part. The abaton is nearly empty as it is the day time, but one or two bedridden patients watch the miracle with interest. The valley of the Hieron was the *habitat* of a large yellow serpent, perfectly harmless, and susceptible like most snakes of domestication. I am afraid it is now extinct, though it has been seen during the present century. A number of these creatures dwelt in the sanctuary, perhaps in the vaults of the tholos. They were reverenced as the incarnation of the god. The sick were delighted and encouraged when one of these creatures approached them. The serpents seem to have been trained to lick with their forked tongue any ailing part. The dog also was sacred to Asklepios, and the temple dogs in like manner were trained to lick any injured or painful region of the body.

Many of the *malades imaginaires* who to this day are the support of the quack and the torment of the honest physician, doubtless visited Epidaurus. The priest would take such a person (as probably he took all suppliants) into the temple, and cause him to present himself before the image of the god; prayers, sacrifices, and rites of an impressive kind were then enacted. The man was caused to lay his hand solemnly and reverently on the altar, and then on the part affected; if there was really nothing the matter, he was proclaimed to be miraculously cured by the god, and doubtless his imagination was so impressed that he often himself believed in the cure.

The patients spent the day in rest or exercise, as was most agreeable to them. It must be remembered that the precinct was as beautiful as the noblest works of Greek art could make it; moreover, large and lofty trees formed a shady grove, protecting from the sun heat, while the soft breezes and the sweet pure air of the mountains formed in themselves a potent agency for the restoration of health. The patient had much around him to please and interest—beautiful buildings, rich with sculpture and with colour, scores of statuary figures and groups representing Asklepios and other divinities or subjects from the old Greek mythology in marble and



Fig. 2.—Asklepios.

bronze, reliefs, busts, and full-length figures of noted priests and physicians, ex-votos, stelæ, and tablets recording the marvellous cures effected by the god, coloured bas-reliefs, encaustic paintings, shrines, exedræ, decorative vases and fountains, beautified and added interest to the precinct. Sheltered seats, arranged in semicircles, of beautiful white marble, were so placed as to avoid sun or wind; they were convenient for converse, or for listening to a reader or a musician. Many shrines and chapels to subsidiary deities existed, as, for example, to Hygeia, Themis, the Egyptian Apollo, Helios, Selene, Epione (the wife of Asklepios), Zeus, Poseidon, Minerva, Hera, Demeter, the Eleusinian gods, Dikaiosunae, Telesphorus, Lato, Hypnos, and others.

Those of the sick who were not too ill would ascend the



Fig. 3.—Priest's seat.

hill of Kynortion to visit the temple of Apollo, or climb the neighbouring hill of Titthion, or engage in the exercises of the gymnasium or the stadium; if unable to participate in these more active pursuits they would become spectators of them. The plays in the theatre would often make half a day pass pleasantly. We know that both priest and patient went there constantly. A photograph of the priest's seat in the Dionysiac Theatre, next to the seat of the priest of the muses is given in Fig. 3. Music, religious dances, processions, and festivals would vary the interest and occupations of the day. The studious man could occupy himself with manuscripts from the library, and, reposing in the shelter seats, would dream over history, plays, or poetry. The solemn rites of the temple, the sacrifices, the study of the multitudinous tablets, would all tend to a calm and hopeful condition of mind, eminently helpful to recovery from slight forms of illness, even though no direct medical treatment were pursued.

In the earlier times it seems as though the health-restoring influence of the shrines was thought to be wholly miraculous, with but small aid or none from art; the god alone achieved it. The more ancient inscriptions contain childishly absurd reports of miraculous cures. The ruling idea was that the deity appeared to the sick man in the abaton, applied some medicament, performed some operation, or instructed the dreaming patient to perform some act when he awoke. The frauds of the god or his priest were so outrageous that some of the old Greeks must have been almost as foolish and credulous as many modern people are, who buy pills and soaps merely because the interested vendor makes town and country hideous with his lying advertisements.

Here are one or two extracts from the case book of Asklepios:

Line 72 of the first tablet in the abaton: A man who had only one eye is visited by the god in the abaton during the night. The god applies an ointment to the empty orbit. On awaking, the man finds he has two sound eyes.

Line 125: Thyson of Hermione is blind of both eyes; a temple dog licks the organs, and he immediately regains his sight.

Line 107: Hermodius of Lampsacus comes to the Hieron in a paralysed condition. As he sleeps in the abaton the god tells him to rise, to walk outside the precinct, and carry back into it the largest stone he can find. He does so, and brings in a stone so heavy that no other man can lift it, and the stone, as the inscription says, still lies before the abaton. It lies there to-day, and the visitor may yet in vain emulate the feat of Hermodius. It will be recognised in the illustration (Fig. 4) by the hole cut in it to put the hands in.



Fig. 4.—The stone of Hermodius.

Line 113: A man had his foot lacerated by the bite of a wild beast; he is in much pain, the servants of the abaton carry him outside during the daytime, as he is waiting to be healed; a serpent follows him, licks his foot, and he is at once cured.

Line 122: Herœus of Mytilene has no hair on his head; he asks the god to make it grow again. Asklepios applies an ointment, and next morning the hair has grown thickly over his scalp (unfortunately Asklepios forgot to write down the prescription for the benefit of futurity).

At Line 48 begins a story containing a good moral. Pandarus comes all the way from Thessaly in order to have a disfiguring eruption on his forehead cured; he is quickly made well. Returning to Thessaly his cure is observed by his neighbour Echedorus, who has a similar, but slighter, eruption on the face. He also goes to Hieron, carrying with him a sum of money sent to the god by the grateful Pandarus. Echedorus decides to retain this money himself; he consults the god about his own case, and in answer to a question states that he has brought no gift from Pandarus. On rising in the morning he finds that in place of having his skin disease cured that of Pandarus has been added to it.

Line 98: A man from Toronoea is so unfortunate as to have a stepmother who is not fond of him; she introduces a number of leeches into the wine he drinks. Being of a confiding temperament he swallows them unsuspectingly, but the results are so serious that he is obliged to visit the god. Asklepios cuts open his chest with a knife, removes the leeches, sews up the chest again, and the patient returns home next day, conveying the leeches as a gift to his stepmother. Asklepios treats dropsy surgically in a heroic manner; he first cuts off the patient's head, then holds him up by the heels; the fluid all runs out. He then puts the patients head on again, and all ends happily. I think it is not necessary to repeat any more of these preposterous stories.

In later times it seems clear that superstition and deception had a less share and art a larger one in the work of healing at Hieron. Probably among the acute citizens of Athens at no period were the frauds of the god so outrageous as in the early times at Hieron. We find the priests prescribing many things that were prudent and judicious: plain and simple diet, hot and cold baths, poulticing for certain chest ailments, and a variety of medicaments, hemlock juice, helebore, squills, lime water, and drugs for the allaying of pain are incidentally mentioned. Water was used extensively both internally and externally, active gymnastic exercise, riding, friction of the skin, massage, and counter-irritation. The tablet of Apellas of Idria tells us that when visiting Hieron on account of frequent illness and severe indigestion, the god or his priests ordered a diet of bread and curdled milk, with parsley and lettuce, lemons boiled in water, also milk and honey. Apellas being an irascible person, the god ordered careful avoidance of the emotion of anger, and desired him to run, and swing in the gymnasium, and use vigorous friction and counter-irritation to the surface of the body. Probably Apellas was a wealthy and luxurious city dweller, who took too much food and Chian wine, and who suffered, as many in that age did, from gout. He is eventually cured, and erects a tablet to show his gratitude. Here is the thanksgiving of another sufferer: "Oh! Blessed Asklepios, God of Healing, it is thanks to thy skill that Diophantes, relieved of his incurable and horrible gout, no longer moves like a crab, no longer will walk upon thorns, but has a sound foot as thou hast decreed." There can be little doubt that many of the sick benefited greatly by the rest, the pure air, the simple diet, the sources of mental interest, the baths, exercise, massage and friction, and in later days by the actual medical treatment adopted. Surgical treatment was also employed, for we find marble reliefs of surgical instruments. Not infrequently it would happen that persons with real and incurable diseases came to Hieron and got worse, notwithstanding their sacrifices and petitions to the gods. How the priests excused the impotency of their deity on these occasions we do not know; perhaps some lack of merit, purity, or sanctity in the individual may have been imputed. We know that in some cases the honour of Asklepios was saved by sending the unfortunate invalid to some distant shrine, but of course it happened that in some instances the patient died. Now, according to the religion of the Greeks, two events were considered to desecrate in the most dreadful manner any hallowed precinct—namely, birth and death: neither of these must occur within any sacred enclosure. While there was probably much kindliness, humanity, and real help for the sick at these shrines, and much actual benefit resulted, notwithstanding the superstition on which all was based, still,

in this one respect, Greek tradition and ceremonial was a cause of the most gross inhumanity. The unhappy visitant whose vital powers were finally declining was received and domiciled in the abaton, but when he failed to improve and was seen by priests and attendants to be obviously dying, instead of being tenderly nursed and soothed, he was removed from his couch, dragged across the precinct to the nearest gate, expelled, and left to die on the hillside unhelped and untended. Asklepios had rejected him, and no priest or minister of the god must defile himself by any dealings with death. One cannot but hope that the sympathy and humanity which exists naturally in the hearts of most men and of all women found some means of helping these unhappy beings, and that when death seemed probable such sufferers were conveyed to a hostel outside the precinct, and allowed to die in peace there. A like superstition existed regarding birth. Many a poor woman in the later months of pregnancy, who had been hoping for relief from some ordinary ailment, was suddenly and mercilessly expelled from the precinct just when she needed help and comfort most. Not until the time of the Antonines was any definite provision made for these two classes of sufferers. Either Antoninus Pius or Marcus Aurelius erected a home for the dying, and a sort of maternity hospital. Doubtless some of the ruins dating from the Roman period, which are at present unidentified, subserved these two purposes.

Among the hundreds of inscriptions found I have thus far only mentioned one class—namely, those referring to cures. There are, in addition, no fewer than thirteen other kinds of inscriptions. For example, the great poem of Isyllos, describing the genealogy and miracles of Asklepios, written by command of the oracle of Delphi. The Delphic Sybil had a great respect for the god of healing. On another occasion she addresses him in the following flattering terms: "O thou who art born to be the world's great joy." There are numbers of inscriptions relating to the priests, the Pyrophoroi, the Hieromnemones, or in honour of distinguished Greeks or Romans; others contain laws and judicial decrees, or refer to the contests of the stadium; others again give lengthy and minute details concerning the cost of construction of the temples. In the present notice it is useless for me to speak of the numerous votive tablets, as space will not allow me to supply reproductions of more than one of them. Note the group of suppliants, with their children, approaching the god and his attendants, who are all of heroic stature.

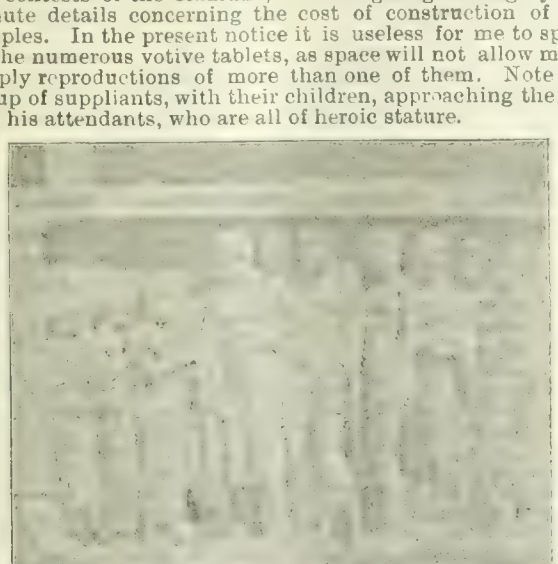


Fig. 5.—Suppliants asking help from Asklepios.

Every fourth year a great festival was held at the Hieron the Megala Asklepieia, at which athletic contests, races, processions, music, plays in the theatre, holy vigils, lasting all night, gorgeous rites, sacrifices, decoration of the temples and precincts, together with feasts, took place. Most probably the priests would arrange for the performance of a few miracles. Other festivals were also held, as the Megala Apoiloneia.

Lastly, there is a link which, though of no practical import, is still a genuine historic bond connecting the Hieron of Epidaurus with the medicine of western Europe. Three centuries B.C. Rome was visited by dire pestilence. The rulers of Rome, having in vain sought to check it, sought the counsel of the Sybilline books, and were directed to bring Asklepios to Rome from Epidaurus. A galley was sent to the Saronic Gulf, and a mission visited the Hieron, bringing back to the ship one of the sacred serpents. The galley returned, entered the Tiber, approached Rome, and as it touched the insula in the Tiber the sacred serpent at once left the ship and found a refuge on the island. From that moment the plague is said to have rapidly disappeared. In gratitude to the god who was thus visibly among them in the serpent form, the south end of the island was modelled into the shape of part of a great galley of hewn stone. A temple of Æsculapius (as the Romans called him) was built adjacent to it, with portico and abaton. A well existing there became sacred to Æsculapius, and from that day to this the island in the Tiber has, through pagan and Christian times alike, been devoted to the cure and treatment of the sick. The prow of the stone galley still exists, with the effigy of the serpent and remains of the image of Æsculapius. The Church of St. Bartholomew stands on the site of the temple, and on or near the spot where stood the ancient abaton now stands a hospital served by the brotherhood of San Juan de Dios, the benevolent saint of Granada, where the sick folk of Rome are helped and tended; and there, unlike their predecessors of 2,200 years ago, if illness should terminate in death the poor weary souls are kindly and tenderly ministered to by priest, physician, and nurse until they sink into the last sleep.

It is doubtless in consequence of this episode of the founding of a temple of Æsculapius on the island of the Tiber that the staff and serpent of the Epidaurian god have been, and remain to this day the symbol of our profession.

SURGEON-MAJOR RONALD ROSS'S RECENT INVESTIGATIONS ON THE MOSQUITO-MALARIA THEORY.

By PATRICK MANSON, M.D., LL.D., F.R.C.P.,
Lecturer on Tropical Diseases, St. George's and Charing Cross Hospital Medical Schools; Medical Adviser to the Colonial Office; Visiting Physician of the Seamen's Hospital attached to the Branch Hospital, Albert Docks.

READERS of the BRITISH MEDICAL JOURNAL will recollect that in the issue of December 18th, 1897, Surgeon-Major Ronald Ross described certain pigmented cells found imbedded in the stomach wall in two specimens of a peculiar ("dapple-winged") species of mosquito which had fed on a malarial patient whose blood contained the crescent plasmodium. The characters of the pigment in these cells were such that Dr. Thin, Mr. Bland Sutton, and myself concurred with Ross in regarding it as the product of the malaria parasite; but as to whether it belonged to a living parasite, or whether it was simply malarial pigment taken up by certain gastric cells of the insect as a normal physiological operation, the preparations and other evidence before us did not, we concluded, warrant a positive statement.

In a second communication to the JOURNAL of February 26th, 1898, Ross stated that he had subsequently found similar pigmented cells in a third "dapple-winged" mosquito fed on crescent-containing blood; and, also, in a grey or "barred-back" mosquito which had fed on a patient with benign tertian infection. He further pointed out this significant fact—namely, that whereas the pigmented cells were but 7 μ in diameter in one of his mosquitos dissected two days after feeding, in another mosquito killed four days after feeding the pigmented cells measured 17 μ; in a third killed five days after feeding they measured 19 μ; and in one killed about a week after feeding they had a diameter of at least 25 μ. In other words, these cells exhibited one of the evidences of life-growth.

Prior to these observations Ross had examined hundreds of mosquitos both after feeding on malarial blood and also after feeding on healthy blood; but, although the dissections and microscopic examinations had been carefully conducted, hitherto he had not once encountered any structure at all resembling the pigmented cells in question. The explana-

tion of this appeared to be that his earlier feeding experiments had been made with quite other and, presumably, unsuitable species of mosquito. Hitherto he had not experimented with "dapple-winged" insects fed on crescent blood, nor with "barred-back" insects fed on tertian blood.

These facts gave some grounds for believing that the newly discovered pigmented cells represented a phase in the extracorporeal life of the plasmodium; and, also, that it was not every kind of mosquito that could serve as host to the parasite. Further, they seemed to indicate that whereas the plasmodium of æstivo-autumnal malaria requires one species of mosquito, that of tertian requires another; circumstances which suggested that the parasite of quartan malaria also demands its own special kind of mosquito.

There was one feature in Ross's discovery which did not appear reconcilable with the mosquito-malaria hypothesis for which I was responsible, and by which Ross's investigations had been guided. According to this hypothesis the flagella of the malarial flagellated body are supposed to be the immediate agent by which the tissues of the mosquito are infected. As the flagellum carries no pigment, if the pigmented cells belong to the mosquito, or extracorporeal, phase of the malaria parasite how account for the pigment these cells contain?

It seems to me that MacCallum's recent discoveries in halteridium infection (*Lancet*, November 13th, 1897; *Journal of Experimental Medicine*, January 7th, 1898) have very opportunely supplied the explanation. This observer found that in the case of halteridium, a parasite of birds, strictly analogous to the malaria parasite of man, the function of the flagellum is to impregnate certain free pigmented halteridia spheres. Subsequently the impregnated spheres, apparently in consequence of the entry of the flagella, slowly change shape and become converted into locomotive vermicules in the posterior part of which the characteristic pigment accumulates.

The structure, shape, and behaviour of these travelling pigmented vermicules suggest that their objective is some cell in the stomach wall of the mosquito where they become pigmented bodies corresponding to those described by Ross. Doubtless what holds good for halteridium is equally applicable to the closely allied human plasmodium; indeed, although he has not witnessed the transformation of the plasmodial sphere into the travelling vermicule, MacCallum has actually seen and described its impregnation by the flagellum. There is nothing in MacCallum's discovery, therefore incompatible with the mosquito-malaria theory; on the contrary, it strongly supports it, supplying the explanation of the presence of pigment in Ross's bodies.

Up to the beginning of this year Ross had pursued his investigations under very unfavourable conditions. Early in the present year, however, the Indian Government, wisely recognising the importance of his labours, transferred him to Calcutta that he might devote himself entirely to malaria studies, and at the same time placed a well-equipped laboratory at his disposal.

Finding that the season of the year was unfavourable for procuring a steady supply of human malaria, Ross turned his attention to the corresponding parasites of birds—to halteridium and especially to proteosoma (Labbé). He very soon found that a certain species of mosquito fed on bird blood containing halteridia, when dissected always exhibited pigmented cells in the stomach wall. Ross, however devoted himself more particularly to the study of proteosoma of sparrows, larks, and crows. During the last few months he has conducted a series of experiments on this parasite which have yielded results of a highly important character. Indeed, he is now thoroughly convinced that the mosquito-malaria theory is sound, and that he has proved it. In due course the details of his work will appear as a report to the Indian Government. Meanwhile, he has sent me from time to time an account of the progress of his investigations, together with numerous preparations illustrating the various facts described in his letters, and he has now authorised me to state the general drift of his conclusions. These are, in his own words, as follows:

"1. Pigmented cells are found in the stomach wall of grey mosquitos fed on crows, larks, and sparrows with proteosoma.

"2. Pigmented cells are not found in control grey mosquitos fed on healthy men, or men with crescent plasmodia, on healthy sparrows, on crows and larks or on crows and pigeons with halteridium.

"3. These pigmented cells are found in the external coat of the stomach, and grow from a size of 6 μ in thirty hours to 60 μ at six days, and are probably coccidia.

"4. Successive feeds by the same mosquito on the same bird are followed by fresh crops of young coccidia.

"5. Similar pigmented cells have been found in mosquitos fed on human gymnosporidia (Labbé)."

As evidence of the care and scientific precision of Ross's work, I may cite the following experiment. He raised thirty grey mosquitos from a batch of grubs procured at the same time and from the same puddle. Ten of these mosquitos he fed on a sparrow in whose blood proteosoma was exceedingly plentiful; ten he fed on a sparrow in whose blood proteosoma was only moderately abundant; and ten he fed on a sparrow in whose blood he could find no proteosoma. Fifty hours later these thirty mosquitos were dissected and mounted for microscopical examination, and the pigmented cells counted in each mosquito and noted on the label on the slide. The slides were then sent to me to check the enumeration. The following table shows the result:

Enumeration of Pigmented Cells in the Stomach Wall of Mosquitos Fed on Sparrow's Blood.

A.		B.		C.	
Sparrows with severe Proteosoma Infection.		Sparrows with Moderate Proteosoma Infection.		Sparrows with Blood free from Proteosoma.	
Ross.	Manson.	Ross.	Manson.	Ross.	Manson.
25	27	112	173	—	—
109	142	6	33	—	—
15	15	29	78	—	—
125	150	14	57	—	—
162	235	40	74	—	—
15	18	1	17	—	—
78	65	12	31	—	—
9	1	30	26	—	—
445	407	24	40	—	—
25	24	24	42	—	—
100.8	108.4	29.2	57.1	—	—

This is only one of many experiments, all of which go to show that certain phases of the hæmatozoal intracorpuscular parasites of man and birds, after entering the stomach of special species of mosquito, pass into the tissues of the stomach wall of the insect (Fig. 1), rapidly increase in size, and probably, towards the termination of the life of the mosquito, sporulate, and leave the capsule which, by that time, has formed around them (Fig. 2).

Although no argument or fact of importance has been advanced against the mosquito-malaria theory, and although it has been approved by some writers of standing, it has nevertheless been looked on askance by not a few. I have been stigmatised as a sort of pathological Jules Verne, and hinted at as being governed by "speculative considerations," and as being "guided by the divining rod of preconceived idea." It seemed to me that the theory I enunciated was the logical outcome of well ascertained facts, and the most likely explanation of the relationship of these facts to each other, and the most promising guide to fresh facts. Despite my critics, I still think that work undertaken with the object of advancing knowledge is most economically expended if directed by "speculative consideration" and "preconceived idea," provided these considerations and ideas are founded on facts, and are compatible with ascertained facts.

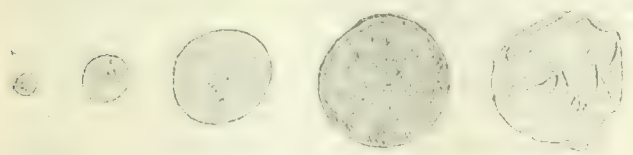
The speculation in question has certainly guided Ross to further and important facts, all of which point to the conclusion I ventured to indicate. After three years of incessant labour on the mosquito theory, Ross firmly believes in it, and, if I may be allowed to say so, there is no one with a better right to form, or more capable of forming, a sound opinion on the matter.

My object in making this communication is three-fold. First, again to call the attention of workers on malaria to

this promising field for investigation; secondly, to place on record Ross's claims to priority in discovery; and, lastly, to vindicate myself from the charge of unscientific and unwarrantable speculation.



Fig. 1.—From a preparation of mosquito's stomach dissected thirty hours after the insect had fed on bird's blood containing proteosoma. The pigmented cells evidently lie between the longitudinal muscular fibres which they have to some extent disassociated.



30 hrs. 3rd day. 91 hours. 108 hours. 6th day.

Fig. 2.—Development of the pigmented cell. The figure marked "6th day" is intended to represent what is evidently a capsule from which its contents have escaped.

Doubtless, important practical results will spring from these, at present, purely biological investigations; but before such a practical outcome can be looked for much additional work has to be accomplished. The many species of mosquito in India, and elsewhere throughout the malarial belt, will have to be studied, described, and classified, and their habits and haunts thoroughly ascertained. In addition, the behaviour of each species in respect to human and avian intracorpuscular protozoa will have to be determined. This is a work of great magnitude, and far beyond the power of any individual, no matter how diligent, to grapple with successfully. It would be well, therefore, that some plan of collective investigation be instituted in which competent entomologists, protozoologists, and pathologists might co-operate. Working on a well-conceived plan such a body of investigators would rapidly fill in the gaps (Fig. 3) in our knowledge of the extracorporeal life of the malaria parasites, and thereby prepare the way for a well-grounded and scientific prophylaxis for malaria.

The drawings represent (Fig. 2) the evolution of the pigmented cell in proteosoma-fed mosquitos; Fig. 1 the position of those cells among the muscular fibres of the insects' stomach. These were made from Ross's preparations. Fig. 3 is intended to represent more or less diagrammatically what has already been ascertained of the extracorporeal life-history of human and avian gymnosporidia, and to indicate the gaps yet to be filled in.

Dr. George H. F. Nuttall (late Associate in Hygiene Johns Hopkins University, Baltimore, U.S.A.), Assistant Hygienic Institute, Berlin, has sent me the following note: "I have seen the preparations referred to by Dr. Manson in the foregoing article, and consider that they bear out the interpretation put upon them. It is very important that these most suggestive and valuable observations should be followed up, and every encouragement given to such original investigations."

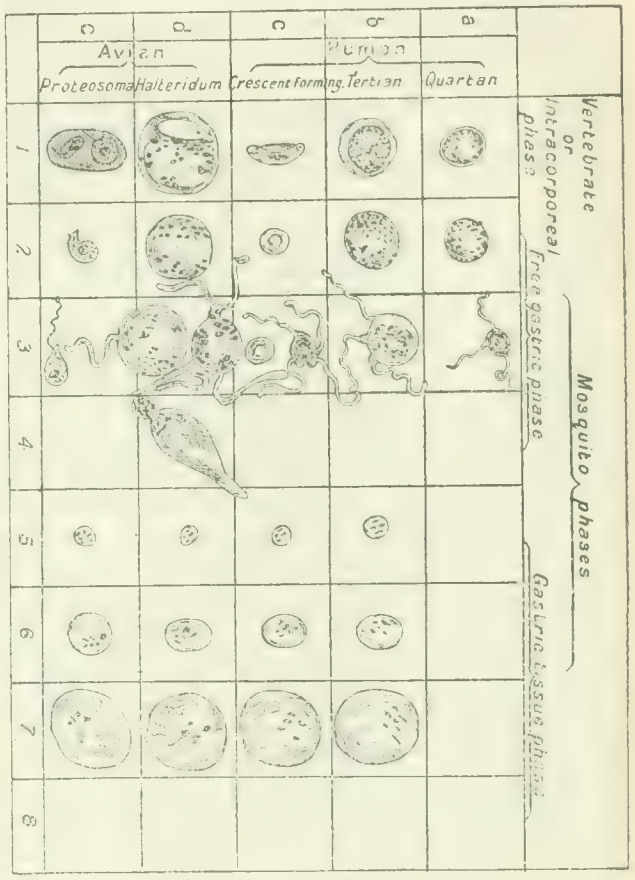


Fig 18

Fig. 3.—Diagram indicating what is now known and what is yet to be ascertained of the mosquito phase of certain human and avian plasmodia. A Quartan parasite. Impregnation of pigmented sphere (a, 3), vermicular (a, 4), and (a, 5, 6, 7, 8) entire gastric tissue phase yet to be ascertained. b. Tertian parasite. Impregnation of pigmented sphere (b, 3), vermicular (b, 4), and conjecture 1 sporulating phase (b, 8) yet to be ascertained. c. Estivo-autumnal parasite. Vermicular (c, 4) and sporulating phase (c, 8) yet to be ascertained. d. Halteridium. Sporulating phase (d, 8) yet to be ascertained. e. Proteosoma. Impregnation of pigmented sphere (e, 3), vermicular (e, 4), and sporulating (e, 8) phases yet to be ascertained.

I have a letter also dated June 12th, from Professor Laveran, who has received specimens direct from Dr. Ross. In the course of this letter M. Laveran expresses his opinion in words which may be translated as follows: "It appears to me to be undoubted that the elements discovered by Dr. R. Ross in the stomach of mosquitos fed on the blood of birds, the subjects of hæmosporidiosis, are really parasites, and that these parasites represent one of the phases of the evolution of the hæmatozoa. It is probable that it will now be easy to find the extracorporeal form (*la forme de résistance*) of the parasites in external media. The discovery of Dr. Ross appears to me, as to you, to be of very great importance. It is a great step forward in the study of the evolution of the hæmatozoon of birds, and very probably also in that of the hæmatozoon of malaria. I have shown the preparations to M. Metchnikoff, who shares my opinion."

A CASE OF ACUTE STREPTOCOCCAL ENTERITIS.

BY

W. C. C. PAKES, L.R.C.P.Lond., M.R.C.S.Eng., D.P.H. and J. W. WASHBOURN, M.D., F.R.C.P.

The case we are about to describe is of interest, on account of its resemblance to cases of so-called ptomaine poisoning. We are indebted to Dr. J. W. F. Jewell, of Balham, who had charge of the patient, for the following history of the case:—

Clinical History.—A gentleman travelled by train from Scotland to London. On the journey he partook of tinned fruit, and was seized, some six hours later, with vague pains in the abdomen. The pains gradually increased, and in fifteen hours after the first symptoms intense diarrhœa and vomiting supervened. When first seen by Dr. Jewell, twenty-five hours after the onset, he was completely collapsed, but conscious, and complained of agonising pain in the abdomen and over the region of the heart. The pulse was scarcely perceptible and the heart sounds were almost inaudible, the respirations 60 a minute, the lips blue, the face congested, the temperature in the groin was 105°. Brandy and milk were administered by the mouth, and ½ gr. of morphine was given hypodermically. In about half an hour the sickness and diarrhœa stopped and the pain in the abdomen was relieved. Injections of strychnine and digitalis revived the pulse, and the cyanosis was relieved by inhalations of oxygen. About an hour and a half before death he suddenly got worse, and although transfusion with saline solution revived him for a time, he gradually became unconscious, and died thirty hours after the first onset of the symptoms.

Necropsy.—A *post-mortem* examination, at which one of us was present, was made by Dr. Jewell ten hours after death. About 2 pints of turbid fluid were found in the peritoneal cavity. The mucous membrane of the stomach was slightly congested, but not more than could be accounted for by the constant vomiting. The mucous membrane of the first 4 feet of the small intestine was deeply congested and œdematous, and was blackened in patches. The intestines contained a moderate amount of liquid material. There was hypostatic congestion of the lungs, and the endocardium was blood-stained. The rest of the organs appeared quite normal. There was no wound or abrasion in the skin, with the exception of minute punctures produced by subcutaneous injections. Specimens of the heart blood, the peritoneal fluid, the liver, and the wall and contents of the first part of the small intestine, were collected in sterile tubes under the usual aseptic precautions.

Microscopical Examination.—The intestinal contents were examined microscopically, and showed a large number of streptococci in addition to other bacteria. The juice from the wall of the affected portion of the small intestine was examined microscopically, and showed a moderate number of streptococci, but no other bacteria. The heart blood showed, on microscopical examination, a large number of cocci in chains and pairs, and a few large bacilli. Inoculations were made in broth, on the surface of agar, and in the depth of glucose-gelatine. In all the tubes pure cultivations of streptococci were obtained. The juice from the liver showed, on microscopical examination, many cocci in chains and in pairs, and a few large bacilli. Inoculations were made in broth, on the surface of agar, and in the depth of glucose-gelatine. In all the tubes pure cultivations of streptococci were obtained. The peritoneal fluid showed, on microscopical examination, a few bacilli, but no cocci. Inoculations were made in broth, on the surface of agar, and in the depth of glucose-gelatine. In all the tubes cultivations of the bacillus coli were obtained. Sections of the small intestine showed the presence of diplococci and streptococci.

Inoculation Experiments.—The streptococcus isolated from the liver and heart blood was cultivated upon various media, and gave all the characters of the streptococcus pyogenes. A mouse inoculated subcutaneously with ½ c.cm. of a broth cultivation died in three days with streptococci in the blood and organs. Another mouse fed upon bread soaked in a broth cultivation was not affected. A rabbit and a guinea-pig inoculated with 1 c.cm. of a broth cultivation suffered from transient œdema at the seat of inoculation, from which they recovered.

Remarks.

In this case the symptoms were those that are usually attributed to ptomaine poisoning, that is to say, to the ingestion of toxic products of bacteria. The bacteriological examination pointed to an actual infection with streptococci starting in the wall of the jejunum. They were found in large numbers in the intestinal contents, in the tissues of the inflamed portion of intestine, in the blood of the heart, and in the liver. The streptococcus, as far as morphological and cultural characters were concerned, was similar to the streptococcus pyogenes; it was pathogenic to mice on subcutaneous inoculation, and produced transient local lesions in a rabbit and guinea-pig. The bacillus, which in addition to the streptococcus was found in small numbers in the blood and liver, was probably an anaërobic putrefactive bacillus growing only at the temperature of the body. It did not grow in broth or on agar at 37° C., nor in the depth of glucose gelatine at 20° C.

Booker,[1] in an investigation into the causation of infantile diarrhœa, attributes some of the cases to infection with a streptococcus. Tonarelli[2] describes a form of enteritis with typhoid-like symptoms caused by a streptococcus. The introduction of cultivations of this streptococcus into the stomach of rabbits after previous alkalinisation of the contents, caused diarrhœa followed by death. At the *post-mortem* examination a blood-stained serous exudation was found in the peritoneal cavity, and there was hyperæmia of the mucous membrane of the intestine without ulceration. Streptococci were present in the exudation and in all the organs. Hirsch[3] describes a fatal case of diarrhœa in a child in which streptococci were present in large numbers in the fæces during life, and were found in the heart blood and in the organs after death. The streptococcus isolated was difficult to cultivate, and would not grow on ordinary broth or gelatine. It was pathogenic to white mice. Tavel and Equet and de Cérenville have also ascribed cases of enteritis to the presence of a streptococcus.

References.

1 *Johns Hopkins Hospital Reports*, Vol. vi. 2 *La Riforma Medica*, 1896, Nos. 97 and 98. 3 *Centralbl. für Bact.* xxii, 14 and 15.

THE DIAGNOSIS OF DIPHTHERIA OF THE CONJUNCTIVA.

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Diphtheria of the conjunctiva is supposed to be a rare affection in Great Britain, although known to be common in some other countries—as Northern Germany and Southern France—where it is especially frequent during epidemics of throat diphtheria. No age is exempt, but it attacks for the most part young children, probably because they are more exposed to infection than older people. According to statistics, females appear to be slightly more liable than males. The ailment, as a rule, is bilateral, but an interval, amounting to some days, generally elapses before the second eye suffers. It is frequently associated with diphtheria of the fauces, nose, or other parts. It is prone to affect those whose powers of resistance have been lowered by some recent illness—as measles, scarlet fever, or whooping cough. It has been often observed to follow impetigo of the face or lids, but this may be a mere coincidence, seeing how common the latter are among unhealthy children. A foregoing affection of the conjunctiva, as trachoma or phlyctenular disease, predisposes, it is thought, to its development. The connection, however, can scarcely be a very close one.

The two following instances of conjunctival diphtheria, which have been carefully followed throughout their course, have recently fallen under my notice.

F. A., aged 4 years, was brought to the ophthalmic department of the North-Eastern Hospital, on February 9th, 1898, on account of her left eye, which had been inflamed for seven days. The child was delicate. She had suffered from empyema about two years before she came under my

notice, but had had no recent illness. Nobody else in the house was affected. When examined her state was found to be as under: The lids of the left eye were red, swollen, and half-shut, but they could be everted without any particular difficulty; a certain amount of thin yellowish-white discharge was present about them. The conjunctiva of the lower lid was covered with thick, semi-opaque membrane, detached and lying loose along the palpebral margin; a similar membrane was observed to cover the superior *cul-de sac*. Cornea clear; no chemosis. The angular glands were slightly but equally enlarged upon the two sides. No changes detected in throat or nose; no discharge from vulva. The general state of the child appeared to be good. Cover-glass preparations made from the membrane, and stained with carbol methylene blue and with weak fuchsin, showed a few cocci and diplococci, together with a larger number of bacilli, in some instances segmented. The latter retained their colour when Gram's method was employed. Tubes of agar-agar and of blood-agar were smeared with morsels of membrane, and placed in the incubator. Meanwhile, pending a precise bacteriological diagnosis, the inflamed eye was washed six times a day with sublimate lotion (1 in 5,000), while the everted lids, previously freed from membrane and discharge, were painted once a day with a 2 per cent. solution of silver nitrate.

The culture tubes were examined twenty-four hours after inoculation, when the agar-agar was found to show colonies of two kinds: (1) largish yellow, and (2) smaller grey. The former were made up of cocci, and the latter of bacilli, both staining by Gram. One of the blood-agar tubes contained four discrete greyish-white colonies, the diameter of which measured from 1.5 to 2 mm. These, when examined with the microscope, were found to consist of bacilli indistinguishable from those of diphtheria. A second tube of blood-agar included numerous colonies, of which some were yellow (staphylococcus pyogenes aureus), some white (staphylococcus pyogenes albus), and others greyish-white (Klebs-Loeffler bacilli, long variety). Sub-cultures upon various media were made from these different colonies, but no other organisms were found. The last step was to inoculate a couple of tubes of neutral broth with an agar subculture of the Klebs-Loeffler bacilli. After two days at 37.5° C., an abundant growth was obtained, while the fluid manifested a markedly acid reaction.

There being now no doubt as to diagnosis, the child was admitted to hospital on February 12th, and placed in the diphtheria ward. According to the notes made by Mr. C. G. Burton, house-surgeon, the temperature was 99° F., pulse 100 and respirations 28. General condition good. Patient walked to hospital. Mouth, nose, tonsils, and pharynx normal; no laryngeal symptoms. Submaxillary glands enlarged upon left side, but scarcely to be felt on the right side of the neck. No cough; no physical signs in chest. Skin showed no rash. Urine, 1015, acid, urates, but no albumen. 10 c.cm. antitoxin injected. The affected eye to be washed every four hours with a lotion containing to each ounce of water 4 gr. of quinine and 2 drops of sulphuric acid. Treatment of no other kind adopted.

February 13th. There is still membrane upon the conjunctiva, but it is easily washed off; swelling of the lids and redness of eye less marked. Urine contains no albumen. Child talks and plays with her toys.

February 14th. Knee-jerks present.

February 15th. The eye is better, although a piece of membrane was again found to have formed this morning. Mr. Burton carefully bandaged the affected eye, with a view of preventing infection of its fellow.

February 16th. Lids still a little puffy, but child opens eye widely. Palpebral conjunctiva thick, red, and smooth: no membrane present. Urine contained no albumen. Ung. hydr. oxid. flav. cum atrop., bis die.

February 20th. Slight amount of mucous discharge from left eye, the conjunctiva of which is still rather red and thick. Temperature, bowels, and urine normal. Appetite good. Conjunctiva of left eye to be painted once a day with a 2 per cent. solution of silver nitrate.

February 25th. The cornea is clear, and the eye now seems to have little the matter with it. Knee-jerks present. General health good. Discharged from hospital, and mother requested to bring the child to the out-patient department from time to time.

March 23rd. Child attended at hospital. Left eye free from any redness or discharge. Knee-jerks present. Urine, acid. No albumen. The mother stated that for a few days after the child had left hospital she noticed a little blood-stained secretion run from the left nostril, but that this soon ceased.

M. R., 10 months old, was brought to the Ophthalmic Department of the Evelina Hospital on February 25th, 1898. Her right eye, so it was stated, had been red and swollen for five days, although there had been but little discharge. The child, who was fretful and looked ill, had not suffered from measles, whooping-cough, or scarlet fever. For the past four months, however, she had been under treatment for bronchitis and "running ears." Upon inquiry it was ascertained that a brother, aged 6 years, had developed a diphtheritic throat in September, 1897, and on that account had been sent to an isolation hospital. He was returned at about Christmas, and had been living in the same house as the patient since. Upon examination of M. R., the lids of her right eye were noticed to be swollen and half closed, and to have traces of dried secretion about them. When they were drawn apart, threads of glutinous discharge were seen to stretch from one lid to the other. The palpebral conjunctiva was red and thick, and on everting the somewhat indurated upper lid (which could be done with more or less difficulty) a thin greyish pellicle could be observed to cover the upper *cul-de-sac*. The membrane could be readily wiped away, but was speedily reproduced. The cornea was intact, and there was no chemosis. The right preauricular gland was not involved, but the corresponding angular glands were rather enlarged. No membrane was found either on the tonsils or the uvula. There was some colourless discharge from the nostrils and ears, but this was not offensive to the sense of smell. Cough was severe and frequent; no physical signs in chest save a few rhonchi; respirations 44; pulse 116; nothing abnormal detected in heart; urine, acid, no albumen. Knee-jerks well-marked. Temperature 98.6° F. Cover-glasses smeared with a morsel of the detached membrane and stained in the usual way showed a few cocci and bacilli, but none of the latter were beaded. As I suspected that the inflammation might be of diphtheritic nature, the child was admitted to Charlotte Ward. She was placed upon milk diet: no application except distilled water was used to the eye; and 1,000 units of antitoxin were at once injected. Meanwhile two tubes of blood serum were inoculated with membrane and placed in the incubator. After twenty hours each contained a limited number of colonies, of circular outline, discrete grouping, and of white colour. After the lapse of three days a few of these were found to be sulphur coloured, and the others porcelainous white. The first-named, when examined with the microscope, were found to be made up of cocci, and the second of bacilli, both staining by Gram. Subcultures upon various media (agar-agar, blood-agar, gelatine, and broth) were made, and the sulphur-hued colonies were eventually found to consist of staphylococcus pyogenes citreus, while the white ones were composed of short Klebs Loeffler bacilli.

February 26th. A piece of membrane was removed from the right upper lid to-day.

February 27th. Eye much better; no membrane on lids. Child fretful, and cough troublesome. Knee-jerks present. Temperature 97.6° F.

February 28th. Pulse 120, respirations 22. Urine acid; no albumen, no deposit.

March 1. Child is very fretful, crying incessantly, except when asleep. Voice rather hoarse. There is still some little discharge from the right eye. Knee-jerks present. Temperature 97.2° and 101.4° F.

March 2nd. The conjunctiva of right eye, although rather red, looks almost well, and there is no discharge. Child opens eye easily. Nothing amiss with throat. Knee-jerks present. Temperature 99° and 97° F., pulse 138 and 124, respirations 30 and 36. Patient allowed to leave hospital.

March 11th. Child brought out to out-patient department to-day, and found to be in good health. The right eye appeared to be normal in all respects.

DIAGNOSIS.

In considering the question of diagnosis, we must at the outset recognise the clinical fact that the severity of conjunctival diphtheria varies much. Thus, its signs are sometimes of so trifling a nature that they may be easily put down to a wrong cause, unless associated with diphtheria elsewhere, or followed by nervous sequelæ. On the other hand, they may be so decided that the cornea may be destroyed within twenty-four hours; even life itself may be lost, although a fatal result does not seem to have been recorded unless diphtheria of other parts was also present. These latter cases are the only ones that have been looked upon as diphtheria of the conjunctiva—at all events until recently, when bacteriological researches have become more or less general.

Similar differences in regard to severity, it is well known, occur in many other inflammations of the conjunctiva. It would be a truism to say that in diphtheria of the conjunctiva (as in all ailments due to microbes) the clinical appearances must depend upon the relationship that exists between two factors: (1) the virulence of Klebs-Loeffler and of any associated germs; (2) the resisting powers, local and general, possessed by the patient. There is experimental proof that the virulence of certain bacteria may be heightened or lowered according to environment, as in Marmorek's well-known and widely quoted experiences. That observer found that the pathogenic powers of the streptococcus pyogenes might be exalted to a high pitch by alternately growing it in guinea-pigs and in a medium made of human blood-serum and bouillon, while even a highly virulent culture soon lost its malignant properties when grown *in vitro*. As to the second point, every practical surgeon knows that the clinical appearances of a particular affection will vary according to the patient's age, family tendencies, state of health, and so forth.

We must, I think, now recognise, with certain Continental writers, that diphtheria of the conjunctiva may clinically be met with under three forms—namely, the interstitial, the superficial membranous, and the merely catarrhal.

Indeed, the diagnosis of conjunctival diphtheria is by no means so simple an affair as one might at first sight be inclined to think. The history of the case may sometimes lead one to a correct conclusion. There may, of course, be a clear history of infection, as when a physician engaged in examining a diphtheritic throat, is so unlucky as to have a morsel of the specific membrane coughed into his eye. In such an event, the presumption will be that any resulting inflammation in the physician's eye will be of diphtheritic nature.

As an instance of the same sort take, again, a case related by Fuchs:[1] A child, labouring under throat diphtheria, was placed in the children's ward of a general hospital. The consequence was that, whereas the patient's right-hand neighbour developed faucial diphtheria, his left-hand neighbour soon showed symptoms of conjunctival diphtheria. Therefore a clear history of infection, when it can be got, is of great value in helping towards a correct diagnosis. In the same sort of way, importance must be attached to the prevalence of diphtheria in the neighbourhood whence the patient comes or the house where he lives, as in the case of M. R.

The coexistence of diphtheria of the fauces, nasal or buccal mucous membrane, skin, vulva, or elsewhere, would suggest the nature of the eye mischief; but, even then, proof as to the identity of the two affections would be lacking in the absence of a bacteriological examination. The occurrence, within two to five weeks after inflammation had subsided, of loss of knee-jerks or of pareses in various parts of the body would be almost conclusive[2] with regard to the nature of the antecedent eye ailment. Such cases have been recently recorded in England by Mr. Silcock,[3] Dr. Collins,[4] and others. But these signs, valuable though they be, come too late to be of any service from the therapeutic point of view, which is all-important now that we possess antitoxin. In diphtheria of the fauces or larynx, as everybody knows, the urine is often found to contain albumen from an early period of the disease, and this sign would be helpful if it chanced to coincide with a membranous conjunctivitis, as in cases lately reported by Dr. W. J. Collins[4] and by Mr. Percy Flemming.[5] Albumen, however, has not been present in any of my patients. Indeed, in this particular form of disease, as in wound diphtheria, the existence of albumen is possibly the exception rather than the rule. Still, it is always advisable to test the urine of any patient who presents membrane upon an inflamed conjunctiva.

One must recollect that the mere presence upon the palpebral conjunctiva of a false membrane is not conclusive as to the nature of the inflammation. As a matter of fact, a fibrinous exudation may take its appearance in almost any form of conjunctivitis, supposing the inflammation to be severe enough to give rise to a coagulation necrosis. For example, it is not unknown in the purulent ophthalmia of the newly-born, as pointed out by Chaisaignac[6] many years ago. It forms an almost constant sign of the inflammation set up by pneumococci; it is sometimes seen in that form of conjunctivitis which is associated with Weeks's bacilli; while I have observed it along with pus cocci, as in a case recorded by me in the *Lancet* of November 13th, 1897. Apart from these acute conditions, there is a curious chronic affection, where a thick greyish, fibrinous exudation is seen upon the palpebral conjunctiva for weeks or months together. The malady does not seem to be contagious, generally occurs in delicate children, and sometimes implicates the cornea. Instances have been reported in this country by Hulme,[7] Mason,[8] Hogg,[9] Nettleship,[10] Critchett,[11] Juler,[12] Bronner,[13] and Stanford Morton.[14] Then, there is the fact that false membrane may follow injuries to the conjunctiva, whether mechanical or chemical. Lastly, cases have been published by Sourdille,[15] Aubineau,[16] and by H. Coppez,[17] where Klebs-Loeffler bacilli were present, but membrane was absent. Hence there is nothing in the least pathognomonic about the presence (or absence) of these fibrinous conjunctival deposits. Neither can any conclusion be safely drawn from the naked-eye characters of the film, which in diphtheria is sometimes but lightly adherent to the mucous membrane, whereas at other times it can be peeled away with difficulty or not at all. Any attempt to base a diagnosis upon the state of the underlying conjunctiva when the membrane has been stripped off appears to me fallacious. At all events it could only be in the most pronounced cases, where the subconjunctival tissues were densely infiltrated ("brawny"), that a conclusion might, with tolerable certainty, be reached as to the nature of the diseased process. The existence of small, dusky-red haemorrhages, scattered over the surface of the diphtheritic plaques, has been a notable feature in some of my cases, although not observed in the present ones. For my part, however, I should hesitate to lay any great stress upon the point.

It is now well known that the preauricular glands (between which and the conjunctiva there is a direct connection) are liable to become involved in various forms of conjunctivitis. Some few years ago I[18] described a case of unilateral conjunctival diphtheria, in which the corresponding preauricular gland was swollen and markedly tender. But further experience has convinced me that no dependence is to be placed upon this sign, since the glands in question sympathise more or less with many of the severer conjunctival inflammations, especially when due to such organisms as tubercle bacilli and gonococci. For that matter, it was not observed in the two cases that form the text of the present communication. A similar remark applies to implication of other glands, as those about the angle of the jaw, which may or may not be enlarged.

In short, as it seems to me, the diagnosis of this ailment must be grounded upon one feature only—*the presence of diphtheria bacilli*. If these are found there can be no reasonable doubt as to the nature of the case, while their absence, after repeated and careful examination, tends to show that one is dealing with some other malady. In the latter event, a conclusion must be based on (*a*) the organisms demonstrated in membrane or discharges from the eye; (*b*) the general features of the inflammation; (*c*) the history of the case. In conjunctival diphtheria, then, as in diphtheria of the fauces and elsewhere, the discovery of Klebs-Loeffler bacilli must be regarded as the only certain, trustworthy, and scientific way of diagnosing the disorder, a fact that I have emphasised elsewhere.[19]

It is hardly necessary to make any remarks as to the method of identifying the bacillus in question, since that is so well understood at the present time. I will merely say that in conjunctival diphtheria the making of cultivations should not be employed to the exclusion of simpler means. Morax[20] has pointed out (and I am in a position to confirm his statement) that in a certain number of cases the discharge from the eye contains only that microbe which is the cause of the inflammation. Hence, in marked instances, examination of film preparations has brought to light such numerous and characteristic Klebs-Loeffler bacilli that he has been able at once to affirm the nature of the disease. There is one other point that should certainly be alluded to—namely, the confusion likely to arise between Klebs-Loeffler bacilli on the one hand and xerosis bacilli on the other. The latter are to be found in very many cases of conjunctivitis, and so marked is their resemblance to diphtheria bacilli that a mistake may be easily made if the investigation be not conducted with an eye to the fallacy.

Briefly, the main points of distinction are these:

1. Both stain by Gram's method, but in my experience the diphtheria organism loses its gentian violet, when in alcohol, much more quickly than the xerosis bacillus.

2. Klebs-Loeffler bacilli, according to Dr. Eyre,[21] give rise to an acid reaction when grown in neutral bouillon or milk, while xerosis bacilli never do.

3. The xerosis organism when inoculated into guinea-pigs, causes nothing more than a swelling at the site of puncture.

The last test (3) cannot, of course, be carried out except under licence from the Secretary of State.

NOTES AND REFERENCES.

[1] Fuchs, *Textbook of Ophthalmology*, 1894, p. 84. [2] A similar form of paralysis may follow measles, typhus, and typhoid, so that it cannot be taken as wholly conclusive of a preceding diphtheria. At the same time, it may occur as a sequel to the mildest attacks of diphtheria, and is much commoner after that than after other zymotic disorders. [3] Silcock, *St. Mary's Hospital Gazette*, December, 1896. [4] Collins, *Lancet*, June 27th, 1896. [5] Flemming, *Lancet*, October 2nd, 1897. [6] Chaisaignac, *Ann. d'Oculist.*, 1847. [7] Hulme, *Med. Times and Gazette*, October 31st, 1863. [8] Mason, *Oph. Hospital Reports*, 1871. [9] Hogg, *Lancet*, March 1st, 1873. [10] Nettleship, *St. Thomas's Hospital Reports*, 1880. [11] Critchett, *Trans. Ophth. Society*, vol. iii, p. 1. [12] Juler, *ibid.* [13] Brouner, *Trans. Ophth. Society*, vol. xiii, p. 26. [14] Morton, *Trans. Ophth. Society*, p. 29. [15] Sourdille, *Rev. des Mal. de l'Enfance*, 1895, p. 68. [16] Aubineau, *Essai sur l'Applic. de la Sérothérapie dans le Trait de la Diphtéric Conjunctivale*, Paris, 1895. [17] Coppez, *Rev. Gén. d'Ophtalmologie*, 1896, p. 51. [18] Stephenson, *Medical Press and Circular*, March 23rd, 1892. [19] Stephenson, *Epidemic Ophthalmia*, 1895, p. 12 (Young J. Pentland, London and Edinburgh). [20] Morax, *Ann. d'Oculist.*, April, 1895. [21] Eyre, *Journal of Pathology and Bacteriology*, July, 1896, p. 54.

SYMPATHETIC OPHTHALMIA.*

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Sympathetic ophthalmia is to be sharply defined from sympathetic irritation, the latter being recognised by functional changes only in the second or sympathising eye, while sympathetic ophthalmia is always characterised by visible organic changes of the nature of irido-cyclitis. Sympathetic ophthalmia never comes on in less than a fortnight from the time

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of the injury to the exciting eye, and seldom so soon; and even if the injured eye is enucleated, sympathetic ophthalmia may appear in the other at any time within a month of enucleation, its severity and duration being in no way affected, apparently, by the fact that the exciting eye is removed.

Up till the last decade, the generally accepted theory was that sympathetic ophthalmia was due to nervous sympathy of one eye with the other, the irritation being conveyed by the ciliary nerves. In 1882, Deutschmann [1] published a research which has become a classic on the subject, and over which a very vigorous controversy has been carried on. He stated that after infecting one eye of a rabbit with a small quantity of a suspension of staphylococcus albus or aureus, he could detect the micro-organisms in both optic nerves and in the chiasma, and in some cases in the posterior half of the second eye; and he assumed that if the rabbits had lived long enough they would have developed sympathetic ophthalmia in the second eye, though, as a matter of fact, they all died of general infection at various periods, depending on the dose of the infecting material which they had received.

Deutschmann further said that in examining eyes removed to avoid sympathetic ophthalmia, he rarely failed to find micro-organisms.

Deutschmann's theory was at once widely accepted, for it explained (1) why sympathetic ophthalmia exceedingly seldom follows any but perforating wounds of the globe, an entry being thus afforded to micro-organisms. (2) Why sympathetic ophthalmia does not start at once, but only after several weeks, this time being needed for the germs to travel up the one optic nerve, through the chiasma, and down the other, to the second eye, there to give rise to the inflammation. (3) Why enucleation of the wounded eye does not always prevent sympathetic ophthalmia—the germs may already have started, and be on their way up the nerve or in the chiasma, out of reach of the surgeon.

Deutschmann's experiments have been repeated many times, on rabbits, dogs, and guinea-pigs, but never, I believe, with success. Gifford,[2] Randolph,[3] Mazza,[4] Limbourg and Levy,[4] and Bach,[5] have all experimented with negative results. Then, in the examination of injured eyes enucleated for fear of, or on account of, sympathetic ophthalmia, confirmatory results have been almost totally wanting. Randolph[3] examined 20 eyes, and only found microbes once, in an eye enucleated a fortnight after injury. Ohlmann[6] examined 30 eyes, and never found micro-organisms at all. Baquis[7] examined 10 eyes with negative results. Bach[5] examined 16 eyes, 4 of which had already caused sympathetic ophthalmia in the other, and his results, too, were negative. My own results I shall mention later. Deutschmann has so far modified his earlier views as to say that the micro-organisms are small and not easily stained.

In support of Deutschmann's results, Pincus[8] records two cases in which he found numerous micro-organisms, one being specially interesting, as it was an old case of cysticercus, which only developed sympathetic ophthalmia after the affected eye had been operated on, and so, possibly, an entrance for micro-organisms afforded. Both in the scar and in the posterior part of the eye, and especially under Tenon's capsule and in the sheath of the optic nerve, he found numerous micro-organisms, chiefly bacilli. The other was an ordinary post-traumatic case, and showed the same appearances microscopically, with the ordinary methods of staining.

Numerous difficulties stand in the way of our full acceptance of Deutschmann's theory, or the migratory theory, as it is called. Two were obvious from its introduction. First, Why do the germs not produce meningitis? and secondly, Why is panophthalmitis not followed by sympathetic ophthalmia? To the first objection Deutschmann answered that the cocci lost in virulence as they ascended the nerve from the wounded eye against the lymph stream, and that when they reached the chiasma they were at once swept away by the lymph stream down the other nerve, to produce sympathetic ophthalmia in the other eye. This, however, is a very weak explanation, for even granting that it was so in some cases, one would expect the infection to be so severe in others that at least a slight meningitis would be produced, though this is never so. As regards panophthalmitis, which exceedingly seldom causes sympathetic ophthalmia, Deutschmann supposed that the intensity of the inflammatory process destroyed the micro-organisms; and Gifford suggested that the channels of communication with the other eye were blocked by inflammatory products.

But cocci have been found in eyes suffering from panophthalmitis by Schirmer[9] three weeks, by Schmidt-Rimpler[10] four weeks, and by Axenfeld[11] five weeks after the onset of the inflammation, and have even been detected in the optic nerve. It has lately been shown by Andogsky,[12] of St. Petersburg, that if a culture of cocci is injected into the vitreous a mass of leucocytes "march out" from the nerve and protect the disc, but if the cocci are injected into the posterior part of the vitreous they succeed in entering the nerve. This tells against the migratory theory, for it is not often in wounds of the vitreous that we find sympathetic ophthalmia, but after wounds of the ciliary region. Further difficulties in the way of the migratory theory have risen as the subject has been further studied. Among these is the occurrence of sympathetic ophthalmia in spite of optic neurectomy, as in cases recorded by Rohmer[13] (three weeks after), Trousseau[14] (thirteen weeks after), and Schmidt-Rimpler[11] (eighteen months after). To explain these Deutschmann made a series of experiments on rabbits, removing pieces of the optic nerve, and after varying times killing the rabbits, and injecting the sheath of the optic nerve from the meninges with Indian ink. He came to the conclusion that a fibrous connection was formed between the nerve ends, and that through this the injected fluid, and so presumably cocci, could pass; but his experiments were most carefully repeated by Velhagen[15], and later by Bach[5], who entirely failed to establish his results, and indeed showed plainly that, after a period of from two to five weeks, the injected fluid could not pass the cicatrised end of the nerve.

Another difficulty is the occasional occurrence of sympathetic ophthalmia in the absence of a wound of the other eye. Many cases have been reported, but most are probably cases of the same affection occurring in both eyes, one being later than the other, and both due to a common cause. But some undoubted cases of sympathetic ophthalmia have occurred after non-perforating injuries. Bronner,[16] of Bradford, has recorded a case where sympathetic ophthalmia appeared in the right eye eighteen days after a kick on the left, which had caused no external wound, and persisted two years in spite of enucleation. Donaldson,[17] of Londonderry, has recorded another case, where a blow on the eye caused a subconjunctival rupture of the sclerotic without external wound. The eye was enucleated in 20 days, but 27 days after the operation sympathetic ophthalmia appeared in the other. The enucleated eye showed a plastic cyclitis, which is the constant appearance of eyes which have caused sympathetic ophthalmia. Nieden [18] has recorded a case of sarcoma of the choroid, causing iridocyclitis in the same eye, and followed by sympathetic ophthalmia in the other. The eye was enucleated, and submitted to Deutschmann for examination. He reported that both in the neighbourhood of the tumour and in the optic nerve were numerous short thick bacilli.

Deutschmann explains these cases of sympathetic ophthalmia without external wound of the eye by supposing that the micro-organisms are carried by the blood stream, and settle in the eye already weakened by tumour or traumatism. Panas [19] has brought forward a great array of evidence to prove the frequent occurrence of endo-infection of the eye, as in the metastatic panophthalmitis sometimes seen in puerperal fever, ocular tuberculosis, gonorrhœal iritis, etc., and no doubt bacterial infection may occur in an eye without external wound. He explains sympathetic ophthalmia, not very satisfactorily, as due to "the general dyscrasia of the patient."

> In a case of this kind (that is, in a case of sympathetic ophthalmia) is the endo-infection of the sympathetically affected eye due to toxins or to attenuated germs carried in the blood stream? It is impossible to say. The presence of germs is not constant, but it is an undeniable fact that micro-organisms readily become localised in a traumatised eye..... When one eye has been irritated by a traumatism the other eye becomes the seat of various phenomena of vaso-dilatation. If the patient is already in a condition of toxæmia he will develop sympathetic ophthalmia; if he is not toxæmic all will be limited to some simple functional disorder.

To this de Wecker very pertinently objected that sym-

pathetic ophthalmia is most frequently found in vigorous patients. An explanation adopted by Schmidt-Rimpler,[10] Baquis,[7] Galezowski,[20] and others is that sympathetic ophthalmia is due to bacteria or their products carried by the blood vessels or lymph channels, acting on the second eye already subjected to irritation of the ciliary nerves. But a sympathetic irritation is not always seen before sympathetic ophthalmia sets in. Further, if it is present it disappears at once if the exciting eye is enucleated, whereas sympathetic ophthalmia may appear even a month later. Priestley Smith[21] does not consider this latter objection to be very strong, remarking that in syphilis there is always a considerable interval between the primary infection and its remote manifestations.

According to the nerve theory sympathetic ophthalmia depends on irritation of the ciliary nerves in one eye causing a reflex or sympathetic irritation in the other. These nerves are divided into the long and short sets, both derived from the sensory portion of the fifth nerve, the former set direct from its nasal branch, and the latter through the lenticular or ophthalmic ganglion, which receives also twigs from the sympathetic.

There are several great difficulties in the way of this theory as well as those I have mentiond as explained by Deutschmann's theory. One often raised is that an iridocyclitis in one eye is a necessary condition for the occurrence of sympathetic ophthalmia, which is also an iridocyclitis, in the other; and in the great majority of cases, this iridocyclitis in the injured eye is of an infective origin. Mechanical irritation, apart from iridocyclitis, and unless it first causes the latter, will not produce sympathetic ophthalmia, so that we should have to assume that this nerve irritation, supposed to cause sympathetic ophthalmia, can itself only be caused by bacteria or their products, an assumption for which there is no analogy, as Schirmer[22] points out. Nevertheless the adherents of the migratory theory admit the existence of a definite sympathetic irritation, causing physiological changes in the second eye, and as this sympathetic irritation is only seen in cases where sympathetic ophthalmia might be expected to follow, it must be assumed that it also is caused by bacterial irritation in the exciting eye, and by nothing else. And though it is true that it is generally clearly distinguished from sympathetic ophthalmia, and may last many months without being followed by sympathetic ophthalmia, still it is not always clearly distinguished, and, according to Fuchs,[23] often passes insensibly from simple irritation to actual inflammation.

Lately some positive evidence in favour of the ciliary nerve theory has been brought forward by Bach.[5] He irritated one eye in a rabbit by irrigating with a solution of perchloride of mercury, by electric currents, by mechanical irritation, etc., and immediately removed the other eye under chloroform and examined it microscopically. On careful examination he found various changes—fibrinous exudations, and in some cases corpuscular elements of the blood, both in the anterior chamber and between the ciliary processes. He concluded:

> That a prolonged irritation of one eye produces vascular dilatation and escape of the blood constituents, not only in this eye but in the other eye also, and that these changes are the first stage of an inflammatory process which, under long continuance of severe irritation, develops into sympathetic ophthalmia.

My own work has consisted of two proceedings—first, the pathological examination of eyes removed on account of injury; and, secondly, an experimental research to determine what changes, if any, follow prolonged irritation of one eye, both with and without traumatism.

I have examined eight injured eyes, four of which had already given rise to sympathetic ophthalmia in the other eye. In one case the injury to the exciting eye had been received two years before the onset of inflammation in the sympathising eye, and in the others less. Of the other four eyes, which had not caused sympathetic ophthalmia, three had received perforating injuries and one non-perforating—a blow on the eye causing hyphæma and glaucoma—the eye which which was useless being removed to relieve pain. In another of the four the eye had been injured eleven years before, and had lately become painful. In the third of this set (described and figured in the *Ophthalmic Review* for April, 1897) there were optic neuritis and commencing atrophy of the globe, and the fourth had been wounded by a piece of lead from a rifle bullet, iritis developing after seven days. In none of these four did sympathetic ophthalmia arise after enucleation. All these cases were carefully examined for micro-organisms and all gave a negative result. In the cases where sympathetic ophthalmia had arisen in the other eye evidences of iridocyclitis were found, as was to be expected. These observations, therefore, disagree with those of Deutschmann, and support those of Randolph, Baquis, and Bach quoted above.

In the experimental research my aim was to discover whether prolonged irritation, external or internal, of a rabbit's eye would produce any visible organic changes in the ciliary region, either in the irritated eye or in the other. In the first experiments the eye was cocainised, and a wound was made in the ciliary region without antiseptic precautions, and the cornea irritated with powdered jequirity seeds for varying periods, up to six months. The jequirity causes purulent conjunctivitis, and abundant cocci were present in the pus, but though in some cases the ciliary region was again wounded while the eye was bathed in pus, no iritis was caused. In one case there was an extensive ulcer of the cornea, which ultimately healed without perforating. The non-irritated eyes were examined at intervals with the ophthalmoscope, but no departure from the normal appearance of the disc was seen in any case.

Internal irritation was then tried, small shot being inserted into the eye, again without antiseptic precautions. In fact, soiled instruments were purposely used, to reproduce as far as possible the kind of wound which is most often found to cause sympathetic ophthalmia. When the incision was made in the sclerotic a few millimetres above the corneal margin, a little vitreous escaped on the shot being put in, but the wound healed rapidly, and in a few days no sign of it, or of external irritation, could be seen. When the wound was made in the ciliary region more external irritation was seen. In one case the wound opened after several days, the shot was expelled, and all signs of irritation disappeared. In another the shot was similarly expelled, but after some weeks, and irritation is still present at the end of five months, as shown by injection in the neighbourhood of the wound, but no signs of iritis are to be seen, either in the traumatised eye or in the other. This rabbit I have kept alive to observe how long the irritation lasts, and whether it will yet lead to any changes in the iris or ciliary body.

After periods varying from three to four months, the rabbits were killed, the eyes and parts of the optic nerves removed and hardened in formol, frozen, cut in two, further hardened in spirit, mounted in celloidin, and sectioned. The sections have been examined for micro-organisms and for deposits of fibrin or leucocytes in the ciliary region.

No trace of bacteria could be found in any case, and in only one were there signs of iritis, in the case where jequirity had caused the corneal ulcer. Here there was some exudation in the anterior chamber, probably akin to that seen in hypopyon ulcer, but there was no change in the ciliary body, which appeared quite normal.

We must conclude, therefore, that Bach's assumption is not warranted by the facts, and that, though a temporary irritation of one eye may cause a temporary exudation of fibrin and leucocytes both in the irritated eye and its fellow, it is not the case that long-continued irritation will cause abundant exudation and consequent organic changes in the second eye.

Further, it is plainly a matter of some difficulty to produce an irido-cyclitis in the eye of a rabbit, and in any further experiments I should be inclined to select some animal in which the ciliary muscle is better developed, and presumably more active, than it is in the rabbit.

Summary.

Practically the whole weight of the experimental evidence, and the greater portion of the clinical evidence, which has accumulated since the publication of the migratory theory, either fails to support that theory or is actually opposed to it. Even Deutschmann, the propounder of the theory, has in his later papers come very near contradicting his earlier observations; and, if his theory is to stand, it can only be on the assumption that the migratory germs are of such a nature that they can neither be inoculated, cultivated, nor stained

by any known method—an assumption for which there is no ground whatever.

It seems to me that we are obliged to fall back on some form of the old theory, that sympathetic ophthalmia is due, partially if not entirely, to irritation of the ciliary nerves. No doubt there are difficulties in the way, which experimenters have so far failed to remove, but in seeking for an explanation of these failures several possibilities are open to us.

The common occurrence of sympathetic irritation in one eye after injury to the other is generally acknowledged, and it may be that the mechanism by which this irritation is conveyed differs in man from that in dogs, rabbits, and guinea-pigs, and this seems not so unlikely when we remember the anatomical arrangement of the whole ocular apparatus in man, designed to secure binocular vision. Or it may be that the explanation lies in the anatomical and physiological relationships of the nervous mechanism conveying the irritation, of which we as yet know nothing, and I believe that it is by the study of these relationships that our knowledge of the cause of sympathetic ophthalmia is most likely to be extended.

I have to acknowledge my great indebtedness to Dr. Lorrain Smith, not only for his permission to work in the Pathological Laboratory of Queen's College, but also for valuable aid and advice in performing the experiments, and in the course of the research.

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OPHTHALMITIS OCCURRING LONG AFTER ENUCLEATION OF THE FELLOW EYE FOR INJURY.*

By GEORGE FERDINANDS, M.D.,
Aberdeen.

Any morbid condition occurring in an eye after its fellow has been removed for injury is of great interest to the ophthalmic surgeon. The two following cases which have come under my notice are worthy of record, especially as they tend to throw some doubt on the infallibility of preventive enucleation.

Case I.—J. S., when 5 years old, injured her right eye while attempting to cut a garter with a knife. She was taken to the Aberdeen Royal Infirmary, where, according to the statement of the patient's mother, an operation was performed on the injured eye—probably an iridectomy—eight or nine days after admission. Three weeks later the patient was discharged. Not long after—the exact period cannot be ascertained—the parents noticed that the uninjured eye was "weak," and the child could not bear light. Evidently the symptoms of sympathetic mischief had set in. The patient was taken back to the infirmary, where the exciting eye was removed, not, however, without some delay occasioned by the reluctance of the parents to consent to the removal of the injured organ. The sympathising eye then rapidly recovered, but, to use the patient's own words, "the eye was never very strong, especially in the winter." On December 15th, 1891, that is, fourteen years after the accident, the patient consulted me for the first time. She wished to begin wearing an artificial eye but the socket would not admit one. On examination the socket was found occupied by a mass of hypertrophied conjunctiva, and a narrow band of cicatricial tissue limited the movement of the upper lid. The swollen conjunctiva was removed, the cicatricial band divided, and the patient was ultimately able to wear a comfortably-fitting glass eye, which she only used occasionally. On March, 1895, that is, three years and some months after the patient commenced the use of an artificial eye, she was led into my consulting room, and the following was her story:—"For months past her health had not been good, and her eye grew 'weaker and weaker,' until the sight got so bad that she could not see to move about." Thereupon she thought it time to seek advice.

On examination the eye was found sensitive to pressure, the conjunctiva and sclerotic were injected, the cornea studded with keratitis punctata and the iris inflamed. V. = fingers at 2 ft. barely. The socket showed no sign of inflammation neither was it sensitive to pressure. The patient was ordered atropine and put under mercury and iodide of potassium. Under this treatment the eye made rapid progress, the vision being on June 21st $\frac{6}{12}$ and J. 1. Unfortunately this improvement was not permanent, and the eye has had several relapses, each of which only yielded temporarily to mercurial inunction. At present the vitreous shows signs of degeneration, and there are large floating opacities. V = $\frac{6}{18}$. The eye has to be kept continually under atropine, as its cessation causes a return of the active symptoms.

Case II.—J. W., farm bailiff. In 1875 injured his left eye; in his own words, "the eye was reduced to a pulp." It was removed four days after the injury. In 1896 he found that the artificial eye he was wearing irritated the socket, and as its use gave him "a pain over the brow" he discontinued wearing it. About this time he began to notice that he could not see to read so clearly as before, and this disability gradually increased until the eye showed "signs of inflammation." The patient first consulted me on June 26th, 1897. Examination of the eye revealed well-marked irido-cyclitis and a subcorneal deposit. The eye was very sensitive to touch, and the patient complained of severe "neuralgic" pain in the brow and temple. V = fingers at 3 ft. The eye improved under mercury and atropine; the subcorneal deposit cleared up so that in July vision improved to $\frac{6}{18}$. In August, however, the inflammatory process returned in all its activity, in spite of treatment. In February, 1898, the cornea began to ulcerate. Just now the eye is quieter, and the corneal ulceration shows signs of healing. V = fingers at 4 ft. No view of the fundus could be obtained.

Remarks.

The question of the difficulty of deciding whether such cases as narrated above are cases of true sympathetic ophthalmitis was fully discussed at the Ophthalmological Congress at Heidelberg. In the cases now recorded, the long interval between the removal of the injured eye and the onset of the inflammation is, I believe, without precedent. Of the thirty cases examined into by the Committee of the Ophthalmological Society, the interval between enucleation and the first appearance of sympathetic mischief was under three weeks in twenty-five cases, more than three and up to eight weeks in five cases. Since then Leopold Weiss[1] has recorded a case, which he regarded as one of sympathetic ophthalmitis, occurring nearly two and a-half years after enucleation for injury. So far as my own observation of the two cases goes, the symptoms and the progress are identical with those of sympathetic ophthalmitis. In Case II there is one point worthy of notice—that the inflammation appeared to follow the irritation caused by an artificial eye. The wearing of an artificial eye over a shrunken stump has been known to excite sympathetic mischief,[2] but in Case II the eye had evidently been wholly removed.

Hitherto in our treatment of injuries of the eye we have confined our attention almost exclusively to the injured organ itself. The recently-published experiments of Bach[3]—who found that irritation of an eye causes almost simultaneous sympathetic irritation of its fellow—while throwing fresh light on the probable cause of sympathetic inflammation, also indicates the direction in which additional preventive measures might be taken. The visual organs are so closely connected that clinically at least they should be regarded as one organ. In severe injuries of an eye, therefore, it may be well to extend our palliative treatment to its fellow.

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* Exhibited at a meeting of the Aberdeen Medico-Chirurgical Society

A CASE OF ACQUIRED NYSTAGMUS.

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The following case affords confirmatory evidence in support of the view that acquired nystagmus is essentially due to fatigue of the ocular muscles, and not to deficient illumination. The former view, as is well known, has been ably supported by Snell, Dransart, Nieden, and others.

J. A., a railway clerk, came to me complaining of dimness of sight. His visual acuity was normal when tested with test types under good illumination, and no abnormality of his fundus was detected on ophthalmoscopic examination. On inquiry as to the character of his work, he said that he was engaged all day in a well-lighted room, adding up long columns of figures in a large folio account book; he then declared that the figures that he looked at seemed to dance up and down.

On putting him into the position that he ordinarily assumed when at work, with his eyes running up the edges of the page of a large book, a vertical nystagmus at once became manifest. It is noteworthy that this nystagmus failed to appear on simply rotating his eyes upwards. He did not complain spontaneously of hemeralopia, but on inquiry he said he thought he saw less well than other people when the illumination was defective. I took him therefore into the dark room, and comparing his visual acuity with mine (which is presumably normal), I found that with

reduced illumination, while I could just discern "brilliant" he could only read "pearl" type. As I do not possess a proper photometric apparatus I could not determine whether his hemeralopia showed the peculiar features which are said to be characteristic of "miner's nystagmus."

The above case well illustrates the care with which patients' statements about themselves should be accepted. In this case the "dimness of sight" resolved itself on investigation into a complaint that objects seemed to dance up and down, and of some slight form of hemeralopia. I am convinced that many cases of asthenopia, which are not completely relieved by appropriate correcting glasses, would be found on careful investigation to be due to some form of muscular asthenopia, for example, heterophoria, or perhaps a nystagmus due to fatigue of the ocular rotators.

TRAUMATIC LESION OF THE PONS VAROLII.*

By J. E. GRAHAM, M.D.

The following case, which came under my observation five years ago, I thought of sufficient interest to present to this Association.

History.—The history was first taken in 1892. It was partly obtained from the parents, who had to trust to memory. A. L., aged 10 years. Nothing of note in the family history. The patient was perfectly well until 18 months old, when, while playing on a pile of wood about 2 feet high, he fell, and a slender jagged end of a spruce stick about 2 feet long entered the mouth and penetrated the soft palate near its junction with the hard palate. In the fall the stick was broken at the line of the teeth, and was so firmly imbedded in the tissue that it had to be moved from side to side, and much force was required to draw it out. The sliver measured between 3 and 4 inches. Profuse hæmorrhage followed. The accident occurred at 5 P.M., and the patient cried until 11 P.M., when vomiting of clotted blood commenced. Immediately after the vomiting, convulsions set in lasting about two hours, during which the child struggled violently. A second series of convulsions similar to the first, but shorter in duration, occurred on the next day. On the third night after the accident he had a third convulsive attack, and during the afternoon a fourth. The latter was followed by pain, which continued until morning, when the paralysis of the right arm and leg was noticed. The face of the opposite side was affected. The left eye was turned slightly inwards, and the pupil was contracted. He swallowed liquids with difficulty; no solid food was given. He vomited occasionally for two weeks, and remained in bed for seven months. Convulsions occurred frequently, which were epileptiform in character. Since the recovery of his strength he has had many convulsions—at first several in a day, but latterly they have become less frequent. A series would often last seven or eight hours. Latterly they have occupied ten to fifteen minutes, and the last one only five minutes. For the last five years they have occurred at night. They have been more frequent during the fall of each year. Constipation seems to precede the convulsions. His mind is always clear, but he is not so bright as other boys. The affected side is always colder than the other, and the right hand, which is rigid during the day, quite flaccid at night.

Present Condition.—The patient is a strong healthy-looking boy. Integument: Some small circular spots of psoriasis are found on the right leg and left arm. The teeth are a little irregular, otherwise normal. A scar, half an inch long, is seen in the soft palate running forward and outward from the median line, a quarter of an inch behind the hard palate. The following measurements of the two sides were made:

	Right.	Left.
Chest	12½	14
Humerus (length)	8⅜	9⅝
Radius (length)	7	7⅜
Median humeral circumference of arm	6⅝	7⅛
Circumference 2 inches below elbow	6⅝	7⅝
Circumference of wrist	5	5⅛
Thigh (6 inches above knee)	13⅝	14
Calf	9⅝	10⅜
Ankle	6⅝	7

The face is drawn slightly to the left side. No motion of the muscles of the fore right arm is possible, except slight additional flexion of the fingers, which are always considerably flexed, and cannot be easily extended. Motion of all the muscles of the humeral region can be made with some awkwardness. In the lower extremity all the muscles seem capable of motion, but the foot is capable of only about half the normal flexion on the leg, due apparently to some contraction of the muscles of the calf. Patient has an awkward limp, which seems due in part to the loss of motion in the ankle-joint, and in part to lessened general power over the muscles of the joint.

The following notes were taken by Dr. Robbin, of the Royal Victoria Hospital, September 1st, 1897:—

Present Condition.—Patient is a fairly well-nourished young man of 15, of rather above average stature. Intelligence is but fair. Facial expression is dull and heavy, and mental condition corresponds to this to some extent. Face is flushed, and has a slightly bluish tint. Fingers and toes are cyanosed considerably, the extremities are cold; finger-nails of the right hand are rough and harsh. Pupils are equal, and react well to light and accommodation. There is no paresis of the eyeballs, and no nystagmus. There is marked atrophy of the right upper extremity, and marked contracture of the flexors of elbow, wrist, and fingers. This contracture is most marked at the wrist, which is flexed to such an extent that the metacarpal bones make an angle of about 60° with the radius and ulna. There is some deformity of the carpus as a result of this. There is also some atrophy of the right lower extremity, but this is less marked. There is slight contracture of the right calf muscles, so that complete flexion of the ankle is not possible. On the flexor surface of hands and feet, and to a less extent on the flexor surfaces elsewhere, are seen a number of small scaly patches of an eruption somewhat resembling psoriasis. Pulse 64. Respirations 18, Temperature 98.5.

Glandular System.—Both epitrochlears are palpable, the right being slightly enlarged. Glands in left axilla and left groin are very moderately enlarged. In all cases these glands are firm and freely movable.

Locomotor System.—Skin is rather dry; general nutrition is fairly good; muscles on left side are of normal size and tone. On the right side there is some atrophy, but muscular tone is not increased, though contracture is present as already described.

Dimensions of Limbs.

	Right.	Left.
Calf	11½ inches	12⅝ inches
Mid-thigh	14⅝ ,,	16⅛ ,,
Forearm (maximum)	7⅞ ,,	9⅜ ,,
Middle upper arm	7⅝ ,,	9⅛ ,,

Nervous System.—Intelligence is perhaps rather below the average; mentally the patient is rather dull, though somewhat neurotic. He sleeps well.

Gait.—In walking patient tends to drag the right toe to the ground.

Voluntary Power.—On left side this is normal; on the right side there is but slight weakness in the lower extremity. Weakness is marked in the right arm. There is a slight paresis about the right angle of the mouth. Right half of occiput frontalis appears at times to contract less readily than opposite half. There are at times distinct spasmodic contractions of the muscle of the left side of the face, and if there is any difference the electro-instability to the faradic current is also more marked on the left side. Co-ordination is poor in the right upper extremity, and the muscular sense impaired.

Sensation is normal save in the right upper extremity. On both flexor and extensor surfaces of the right forearm and hand sensation is rather dulled, both to touch, pain, and temperature. Patient is slower in recognising touch and temperature on this side.

Reflexes.—Superficial reflexes seem normal. Deep reflexes in both upper and lower right extremities are increased, and ankle clonus is present on the right side. Clonus of the right quadriceps femoris can be induced by suddenly drawing the patella downward, and spontaneous clonic movements of the right quadriceps which last for some time. These are not constant, but recur frequently. Organic reflexes normal.

Atrophy.—There is slight atrophy of the muscles of the right upper extremity, more marked in the right arm. There is also contracture, as already mentioned. There is no spastic condition present. The small muscles of the hand do not appear to be particularly involved; but the pectorales are decidedly wasted, and there is perhaps slight atrophy of the scapular muscles. No tremor or athetoid movements are noticed in the hand.

Electrical Reactions: Faradism.—There is no diminution in the reaction of the paralysed muscles to faradism. If the reaction is at all changed, the paralysed arm reacts more readily than the sound arm.

Circulatory System.—Normal, save for the slight cyanosis already remarked on.

Respiratory System.—Normal.

Digestive System.—Tongue large and flabby, clean; papillæ are large. The organ is fissured. Appetite is good. There are no symptoms of gastric derangement. Bowels regular.

Abdomen is negative to physical examination.

Urine.—Clear straw, acid, 1010, no albumen, no sugar, urea 1.1 per cent., no bile, microscopically negative.

Special Senses.—Hearing is good; taste normal to bitter, sweet, sour, and salt.

Smell.—No definite abnormality, though patient appears unfamiliar with several of the substances generally used to test smell.

Speech is slow and drawling, and rather indistinct, many words being slurred over.

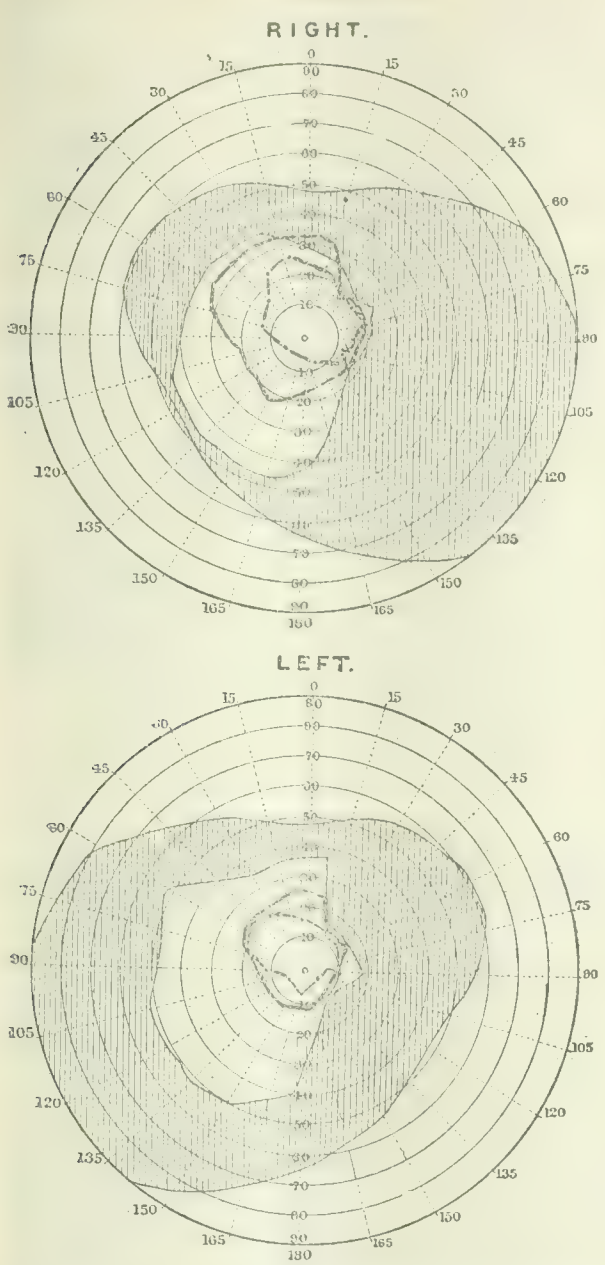
Since the meeting of the Association a careful examination of the eyes was made be Dr. J. McCallum, whose report is here given:

"V.R. ⅝, no Hm.; L. ⅝, no Hm. Pupils equal, 3½ mm. in diameter, active to light, consensually and convergence. When investigating the hemiopic pupillary reflex I was unable to satisfy myself that the pupil remained immobile when light was thrown upon the blind side. The difficulty of concentrating light upon the blind area, and that alone, is apparent. Temporal side of right disc slightly pale, no central scotoma. The annexed charts of the field of vision reveal a right homonymous hemianopsia which is absolute. The boundary line between the normal and the obliterated halves passes around the fixation point and is oblique. The half fields which are preserved show contraction for white, red, and green, although visual activity and colour sense are still normal."

There is marked atrophy of the muscles of the right side of the face, the palpebral fissure is smaller than the left. Movements of the eyeballs quite normal. Paralysis of the muscles of the lower portion of the right side of the face. The muscles of the right eye and the right side of forehead are slightly affected. A distinct spasm is occasionally noticed on movement of the muscles connected with the left corner of the mouth, and the left orbicularis.

The electrical reactions are nearly the same on both sides. The muscles of the left side respond a little more readily than those of the right, giving the impression that the former are hypertrophied.

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held in Montreal, in 1897.



Remarks.

1. The symptoms now present indicate a distinct lesion in the motor tract on the left side existing somewhere above the crossing of the facial nerves in the pons Varolii.

2. A lesion in the course of the fibres of the optic nerve on the left side above the nucleus.

3. The spasmodic character of the movements of the face on the left side which was much more marked five years ago than at present, would indicate an irritating lesion of the pons affecting the fibres of the facial on the left side after the latter had crossed over.

The lesion producing the hemiplegia must have been caused by either a hæmorrhage or an inflammation. It was not the immediate result of the accident. If from hæmorrhage, the seat of the lesion would probably be the anterior portion of the pons or the extravasation might be subdural in character, producing pressure on the leg, arm and face centre in the cortex. This would account for the number and severity of the convulsions. If the lesion resulted from inflammation, it is still more probable that the seat was in the pons Varolii. The inflammation might have extended so as to effect the optic tract above the corpora quadrigemina. The affection of both sides of the face, the temporary paralysis of the abducens on the left side and the contraction of the pupils at the time of the accident all point to the pons Varolii as one of the parts injured.

The present condition of the right arm and leg is no doubt due to a descending degeneration of the motor tract.

The writer has found that in driving a sharp-pointed steel instrument through the base of the skull following as far as possible the course of the piece of wood mentioned, that the point entered the cavity of the cranium beneath the anterior portion of the pons Varolii.

A hæmorrhage in the internal capsule or in the corona radiata, while it would explain the hemiplegia, would not account for the present condition of the eyes, nor would it account for many of the signs noticed after the accident.

It is in my opinion most probable that a meningo-encephalitis followed as a result of the accident, and that in this process the pons and the left cerebral hemisphere together with the membranes were to a greater or less degree affected. The present condition of the patient is not unlike that of many who, from various causes, have suffered from meningo-encephalitis in early infancy.

A CASE OF TUMOUR OF THE PONS VAROLII.

By HENRY HANDFORD, M.D., M.R.C.P.Lond.,
Physician to the General Hospital, Nottingham.

The patient, a boy, aged 10, was bright and intelligent until about a year ago, when he began to be dull, and his speech gradually became thick. About the same time an internal squint of the right eye, and paralysis of the right side of the face developed. He has had discharges from both ears at intervals ever since infancy. At the present time a perforation of the right tympanum can be seen, but the discharge is very scanty, and the ear disease seems quiescent.

Seven weeks ago he began to stumble while walking. He vomited, and complained of pain over the eyes. The vomiting continued daily for three weeks, until he was admitted into the General Hospital. It was found that he had a marked staggering gait, with a tendency to fall forwards and to the left, increased knee-jerks on both sides, paralysis of the sixth and seventh nerves on the right side, and advanced optic neuritis, with abundant exudation of lymph and hæmorrhages in both retinæ. The question arose how far the ear disease could be the cause of his trouble. It did not seem likely that the facial paralysis was due to the ear affection, because the latter would not explain the paralysis of the sixth nerve, nor the increased knee jerks, nor, in the absence of jugular thrombosis or cerebral abscess, the extreme degree of optic neuritis. The staggering gait, mental hebetude, and the vomiting pointed to cerebral tumour of some kind. The paralysis of the sixth and seventh nerves without any other motor or sensory loss suggested the base as the site. It was at first a little difficult to exclude cerebellar abscess, but the following circumstances pointed against that diagnosis, and it was decided not to operate: The long duration of the paralysis (a year); the absence of pyrexia or any history of rigors; and the extreme degree and rapid progress of the optic neuritis. And, further, in my experience a cerebral abscess is either quite quiescent or steadily progressive, but does not run the irregular course shown in this patient. He rapidly improved to a considerable extent; the vomiting ceased, and he ran about the ward fairly well, so that his friends took him home after about ten days.

On March 6th, 1898, he was readmitted under my care. The vomiting had returned, and some weakness of the left arm had developed. The pupils were irregular, otherwise he remained much the same. He was again put upon small doses of iodide and bromide of potassium, and improved considerably until March 17th, when the vomiting returned, he began to be drowsy, and there was manifest weakness of the left leg, with ankle clonus. He very gradually became worse, and died on April 18th. At the necropsy a tumour as big as

a large walnut was found occupying the lower half of the right side of the pons Varolii. It had pushed aside the cerebellum, thinning out the flocculus almost to a line. The right side of the medulla was indented by pressure. The sixth and seventh nerves were involved in the tumour, and could not be traced. Microscopic examination showed the tumour to be a myxosarcoma.

After the development of crossed paralysis the diagnosis of tumour and its localisation in the pons were easy. But the decision as to opening the mastoid cells, or trephining and searching for an abscess of the brain, had to be made at an earlier stage, when the diagnosis was more difficult.

YAWS IN THE SOUTH SEA ISLANDS.

By STAFF-SURGEON V. GUNSON THORPE, R.N.

FOR nearly a century the existence of yaws in the islands of the South Pacific Ocean has been known. William Mariner in 1807[1] when a prisoner for four years in the hands of the



natives of the Tonga Islands, made some accurate observations on the disease, and afterwards described it by its native name of *tona*; and it was then recognised as being identical with African yaws, to which continent the disease at that time was supposed to be entirely confined. Surgeon H. B. Guppy, R.N.,[2] mentions it as existing in the northern portion of the Solomon Islands, and I have myself seen children suffering from it in the southern islands of the group.

All actual observers seem to concur in recognising yaws as being distinct from syphilis, and agree that children are chiefly affected, the mother looking upon it as a necessary evil, which the child has to go through, or even as actually beneficial to its health. It is probable that the disease is due to a micro-organism which has its existence in the soil, especially as those parts of the body which frequently come in contact with the ground, as the feet, legs, and perineal regions, are, as a rule, primarily affected.

In Fiji, yaws is known by the name of *coko*, and it is prevalent not only amongst the natives themselves, but also amongst the Indian coolies employed upon the sugar plantations. When H.M.S. *Penguin* visited the islands in August, 1895, through the courtesy of the Hon. B. Glanvill Corney, principal medical officer, I was able to secure the photograph, which is here reproduced, of an Indian boy, about 12 years old, who was under treatment for the disease in the hospital at Suva, and who showed the characteristic eruption in a marked manner. It will be seen that the disease is in its second stage, and consists of raised tubercles, irregularly oval in form, with a raw ulcerated surface, a third of an inch or more in diameter, generally grouped together and tending to coalesce, though here and there single "yaws" can be seen. The eruption affected the face, the right eyebrow, the eyelids, lips and corners of the mouth, the arms and legs, front of the thighs and knees, and the scrotum and genital regions. As is usually the case, the trunk is unaffected. The lymphatic glands in both femoral regions, but especially the left, are seen to be enlarged.

REFERENCES.

[1] *An Account of the Natives of the Tonga Islands*, by William Mariner, and John Martin, M.D., 1817. [2] *The Solomon Islands and their Natives*, by H. B. Guppy, M.B., R.N., 1887.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

TUBERCULOUS TESTES FOLLOWING AN ATTACK OF MEASLES: DOUBLE CASTRATION: RECOVERY.

ON December 20th, 1896, W. T., a young unmarried labourer, aged 26, first consulted me as to his health. He then complained of general *malaise*, for which I could find no special cause, and which was but little relieved by tonic treatment. At the end of a week he became unfit for work and remained indoors. I then found him presenting all the symptoms of an influenzal cold, and I thereupon took measures to reduce his high temperature and relieve his aches and pains, and in this effort I was successful; but two days later I found he had developed an unmistakable measles rash, which, taken in conjunction with his suffused eyes, bronchial catarrh, and tonsillitis, enabled me at once to pronounce definitely on the exact nature of his ailment. In the course of a few days no trace remained of the above symptoms, but the original debility had distinctly increased. His convalescence was slow, but he was fit to resume work at the end of the following January.

He, however, had not been at work many days when he contracted a chill, which was followed by pericarditis, with many muscular aches and pains. With this illness he was bedfast for many weeks, as, although the minor symptoms of the rheumatic fever yielded readily to antirheumatic treatment, his pericardial affection was obstinate. His convalescence from this rheumatic attack was slow, and one day he drew my attention to a swelling and hardening of one of his testicles. I found the upper fourth of the right testicle distinctly indurated and swollen; the remaining three-fourths of the testicle, the epididymis, and cord on the same side were quite normal to palpation. On the left side there was an indurated and swollen condition of the

epididymis at its lower end (globus minor) of the size of a small marble. After making a careful examination and finding the testicular sensation quite normal, and having inquired into any possible venereal contagion, but with absolutely negative results, and knowing the patient's family history, I concluded that the case was in all probability one of idiopathic tuberculosis testis, and immediately recommended specially liberal and nourishing dietary, with syrup of the iodide of iron, and gentle open-air exercises. Slowly but surely the swellings increased on both sides, involving on the right side more and more of the testicle and on the left more of the epididymis, and this despite a month's change of air and scene.

At this juncture, the case becoming urgent, I, for reasons which I need not here set forth, sent my patient to Edinburgh Royal Infirmary for treatment, but he soon returned in the face of the most serious counsel to undergo an operation. For a few weeks subsequently he contemplated suicide, and as his physical condition called for immediate relief I proposed to operate. Consent was at once given, and on June 13th I carried out the operation of double castration after the orthodox fashion. Rather rapid softening of the tumours had taken place during the week preceding operation, and on section the right testicle presented a large caseating tuberculous focus centrally situated; the epididymis, vas deferens, cord, and membranes on this side were free and normal. The testicle on the left side was apparently normal. The epididymis at its lower end was indurated and craggy from congestion, and on section was found to be the seat of an advancing caseating tuberculous mass. The tunica vaginalis, which was to some extent infiltrated by the disease, was cut away. The cord and vas deferens were apparently quite free from new formation. After operation there was neither fever nor hæmorrhage, and while the scrotal wounds were slow to heal, the patient's general health improved apace and without interruption, and by the end of the year he was able to return to his employment, and up to the present is perfectly healthy and well.

Etiology.—The family history practically negatives the possibility of there being any hereditary predisposition to tuberculous disease. The disease was manifestly not secondary to any tuberculous mischief (pulmonary or other) in the patient. There are absolutely no signs of struma or scrofula. He had had some of the diseases peculiar to infancy and childhood. His surroundings and occupation are included in "a country life." That the malnutrition following an attack of measles so often met with in younger subjects predisposes to struma and other tuberculous affections is a well-established fact, and as I regard my case in this light, and the testicle being the only site of tuberculous mischief (surely a somewhat rare occurrence), I have thought fit to record the case.

Selkirk, N.B. JAS. B. SHAW, M.B. and C.M.Edin.

PES VALGUS, VARUS, AND LATERAL CURVATURE.

THE mother of the child whose case I am about to describe was a multipara, and had several miscarriages. On the present occasion comparatively little abdominal protrusion was observable when carrying the child, and a very small amount of amniotic fluid escaped at birth. The sacral region was the presenting part of the child, and a condition analogous to "caput succedaneum" developed thereon, and was manifest at birth.

The ovum was born *en masse* at the eighth month; that the child and afterbirth arrived together was attributable to the fact that the long umbilical cord usual at this period was represented by a condition which obtains about the beginning of the second month, in which the connection between the fœtus and the chorion is really a continuation of the body cavity, and quite short.

The right leg at the hip was greatly flexed and abducted, owing to the abdominal viscera protruding from the patent abdominal wall; the knee was also flexed and rotated out, whilst the tibia was bent outward, especially at its lower end. The foot was greatly adducted and rotated in, so that the plane of the sole lay against the right buttock, and was a typical club foot. It was difficult to disturb the relation of the parts, as the tendons and bones had adapted themselves to the condition and retained the position permanently.

In regard to the left lower extremity, the hip-joint was in a position of extreme flexion, and the rest of the limb was fully extended, the foot lying beside the head with its dorsum facing the crown. The foot presented a marked valgus deformity, with obliteration of the arch, eversion, and flattening of the sole. Here, also, it was impossible to bring the limb into its normal position. The trunk was bent round the left thigh, the spinal column presenting a lateral curvature to the right, extending from the upper dorsal region to its lower limit, and carrying the horizontal plane of the pelvis round to a corresponding degree, thereby tilting it at an angle to the horizontal.

Of the various explanations brought forward as to the causes of club foot, I do not think it will be difficult to select the causative factor in this instance, and the same factor that explains the talipes varus explains the valgus. The obvious cause is pressure due to the dearth of liquor amnii, and the consequent diminution of the cubic content of the enveloping membranes and uterus. It accordance with the nature of things, it was necessary for the feet to present their respective deformities, as the fœtus in the position that was assumed would have presented a considerable protuberance from the main body of each foot. Lack of room could not permit of this, and so the two projecting parts were pressed towards and moulded to the main mass as described.

Kensington. J. ROSS MACMAHON, M.B., C.M.Aberd.

ATRESIA ANI VAGINALIS.

D. M., aged 6 months, was admitted to St. Mary's Hospital for Children, Plaistow, on January 18th, 1898. I had seen the child when she was 3 months old, and recommended a delay until she was stronger, before operating. The anus was absent, an elevated ridge occupying the median line of the perineum. Fæces were discharged from an opening at the lower end of the posterior vaginal wall, which was about the size of a crow's quill, and led into the rectum. The following operation was performed:

An elliptical incision was made enclosing the opening into the rectum, and from the posterior end of the ellipse a straight incision was carried back in the median line nearly as far as the coccyx. The rectum was then freed from its attachment to the posterior vaginal wall and all around up to the insertion of the levator ani, and then carried backward so that the opening into it corresponded to the normal anal site. The opening was then dilated, and a large quantity of solid fæcal matter evacuated from the rectum, which was much distended. The mucous membrane was then sewn to the skin edges, and the remaining wound, which resembled that made in the operation for the repair of a badly ruptured perineum, was closed in the manner adopted in that operation.

The appearance of the parts directly after the operation was all that could be desired, but unfortunately the wound suppurated and the stitches gave way, it being impossible to keep clean. In spite of this the rectum could easily be kept in its new position, and the wound was granulating up when, ten days after, the child had an attack of diarrhœa, which caused its death.

This operation would give an excellent result if primary healing could be ensured. In a similar case I would adopt the following precautions, which might, I think, lead to a better healing of the wound:

1. Dilatation of the abnormal opening and evacuation of the rectum three weeks before operation, with daily washing out of the bowel to prevent accumulation of solid fæces.

2. Use of silkworm gut for deep sutures instead of silk, as being non-absorbent, or giving more support to the edges of the wound.

3. Fastening into the bowel a glass tube, on the principle of Paul's intestinal tubes, in order to prevent the wound from being contaminated, and to prevent the retention of flatus.

As regards the age at which to operate, probably after the first dentition would be the best, if the child's health were good, and provided that the opening allowed the fæces to escape sufficiently freely to obviate the evils consequent upon a chronic obstruction of the bowels.

Southend. ERNEST A. T. STEELE, M.R.C.S.Eng.

A GIRL, aged 19, was confined at the Union Infirmary, in whom this condition existed. She was unaware of any

abnormality, and suffered no inconvenience beyond a tendency to looseness of the bowels, which generally acted twice a day. The labour was normal, and her convalescence good. Through the vagina, and about 1 inch from the orifice, I could feel the opening into the rectum, which was large enough to admit the forefinger. I did not advise any operation, as all the functions of these parts were so well performed.

Eastbourne. James Adams, M.D., F.R.C.S.

YAWS IN THE MALAY PENINSULA.

Though it has been frequently asserted that there is no such disease as yaws or framboesia apart from syphilis, the experience of the majority of surgeons in the British Colonies is against this statement. Recently a Chinese was admitted for a most characteristic attack of yaws (known amongst the Malays as "puru") into Parit Buntar Hospital in Perak, where 50 per cent. of the Chinese patients were under treatment for syphilis in different stages. There was a well-marked granuloma about the size of a dollar on his right cheek, and smaller granulomata and ulcers, the result of suppuration, existed on the trunk and limbs. From the numerous cases of yaws which I had seen in West Africa amongst the Fantis and Houssas, I had no difficulty in recognising the disease. The case was treated with sulphate of copper externally, and without mercury in any form. There was a good recovery, and, as was afterwards ascertained, no recurrence.

The disease is very common among the Malays, but unusual among the Tamil and Chinese coolies, the latter of whom suffer most from syphilis.

R. M. Connolly, L.R.C.S.and P.Edin.

Rathmines, co. Dublin.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

PUBLIC HOSPITAL, GEORGETOWN.

A CASE OF CONTRACTING MALIGNANT DISEASE OF BREAST.*

(By J. F. S. Fowler, M.B.Aberd., Government Medical Officer, British Guiana.)

Those who attended the last meeting will remember my exhibiting a patient with a very contracted left breast, and as, in looking through my very limited library, and consulting with my colleagues, the case seems to be unique in many particulars, I will give a more detailed history of the case, with the progress it has made.



Fig. 1.—Malignant Disease of Breast. Taken soon after admission (January 26th, 1898.)



Fig. 2.—Taken March 6th, 1898.



Fig. 3.—Taken March 29th, 1898.

R. D. F., aged 30, a well-developed black woman, native of British Guiana, was admitted to the Public Hospital, Georgetown, on January 19th, 1898, complaining that her left breast had gradually been getting smaller since Christmas, 1895. It had caused her no pain or inconvenience, but she came to hospital because she was afraid the right one was going the same way, as it was getting hard as the other did before it began to contract.

Family History.—Mother and father both dead. States that mother died from kidney trouble after influenza; father also died of kidney trouble. Had two sisters and three brothers—

* Read before the second quarterly meeting of the British Guiana Branch, British Medical Association, with exhibition of patient.

two brothers and one sister dead; does not know cause of death of sister, but one brother died of consumption and the other from kidney trouble. All died grown up. The sister who is alive suffers from bad bowels, but is otherwise healthy. Does not know about the brother.

Previous History.—Up to Christmas, 1895, she was always well and strong, and never had any serious illness, only an occasional slight attack of malarial fever (ague). Recollects getting a blow on left side when young, but it was not serious. Has no children. Is a *virgo intacta*. Her occupation is that of a domestic servant.

General Condition.—A strong healthy-looking, well-developed negress. Heart and lungs normal. Urine, specific gravity 1018; no sugar or albumen. Abdominal organs apparently healthy. Has a small congenital umbilical hernia. Micturition and defæcation perfect. No keloids.

Present Illness.—About Christmas, 1895, she casually noticed that her left breast was very hard, but as it gave her no pain, and caused her no inconvenience, she did not bother about it, and it went on contracting to its present condition; but when she noticed her right breast getting hard, being afraid it was going the same way, she came to hospital. She is positive there was never any suppuration, ulceration, or breaking down in any way.

Condition on Admission.—In the position of the left breast, considerably smaller than normal, is a hard, irregular, lobulated mass, with crevices, lobules of different sizes and shapes, largest about 1½ × 1 inch; smooth on surface; firmly adherent and incorporated with skin above and chest wall below; immovable; no sign of nipple. There is a very small ulcerated part at bottom of one of the crevices, with a thin whitish discharge.

Right breast remarkably well-developed, measuring 10 inches horizontally across nipple, and 9 inches vertically, measured from fold to fold where the breast springs from chest wall. Quite smooth. General hardness throughout. Nipple slightly retracted. States it is in exactly the same condition as when she noticed the other one begin to contract two years ago. Axillary glands can be felt, but not large; size of beans.

General Symptoms.—Complains occasionally of *malaise*, but no distinct pain. I excised one of the lobules on February 14th for microscopic examination. Patient stood operation well, and took chloroform easily. There was very little hæmorrhage, nothing requiring to be ligatured, and wound very soon healed, in a little over two weeks.

Microscopic Examination of Portion Excised.—A hard, white mass, grating on section, and covered superficially with epidermis. The epidermis, hair follicles, sudoriferous and sebaceous glands appeared to be unaltered. Immediately below this was a narrow zone of fine but close fibrous tissue, with here and there a few single cells, staining readily with basic stains. The hair follicles and sudoriferous glands were imbedded in this mass. In the deepest portion of the part removed there were some groups of fat cells, and superficial to these some large alveoli packed with glandular cells, with no definite arrangement. This portion was in the situation of the mammary gland, but no trace of the normal gland structure was found. The alveoli and contained glandular cells resemble encephaloid carcinoma in structure, but the alveolar walls were thick, and the fibrous tissue composing them was continuous with the surrounding dense fibrous tissue. Whether to consider that this was the original structure of the tumour in its first stage, and that the rest of the growth had been destroyed by the contraction of the fibrous tissue, which seems most probable, or that the original growth was a hyperplasia of the fibrous tissue, and that these masses of glandular cells are destroyed remnants of the mammary gland, examination at this stage of the growth does not make clear.

Progress of Case.—Left breast has remained much the same; if anything it has contracted a little more and got even harder. Right breast has gradually got worse, contracting daily, beginning first by depressions which gradually increased in depth, mapping the breast into portions, which will probably become the same as the left. Nipple is gradually retracting and disappearing. Present size 7 inches horizontally and 6½ vertically. No sign of ulceration or breaking down. Had mild attacks of fever on January 22nd, February 18th, and March 23rd. She first complained on March 14th of a contracting dragging pain in both breasts. On April 4th she took to her bed for the first time, complaining of pains and numbness of legs and great stiffness both sides of her jaw, being unable to open her mouth more than half an inch, the muscles of which, the masseters in particular, being very stiff, hard, and contracted. No tumour. No indication of cerebral or spinal complication. On April 21st the patient was compelled to remain in bed as she could not flex, and if flexed, could not straighten her legs; she complained of a tight band around her chest, with numbness of all parts of body below. Muscles of legs very rigid. No anæsthesia. Her general condition has greatly deteriorated; she has lost flesh, and her cheerful countenance has given place to a despondent malignant cachexia, and she is now practically bedridden. Prognosis was most unfavourable from the first, as owing to the growth being firmly adherent and incorporated with the skin above and chest wall below, together with the other breast being also affected, operative interference was out of the question.

REMARKS.—The only apparently similar case I can discover is that of a case of contracting scirrhus mentioned by Mr. Jonathan Hutchinson in vol. ii of his *Archives of Surgery*, but from this it differs in several particulars. In his case the breast was replaced by a thin, smooth, glossy scar, like parchment, the nipples remaining apparently unaltered, whereas in this case, it is a hard lobulated mass, with the disappearance of the nipples. Unfortunately no microscopic examination of his case is quoted. That it is a malignant growth I have little doubt, and it seems probable that it began as an encephaloid cancer, with the development of a greater amount of fibrous tissue than is usual, and the subsequent contraction of which has obliterated the cellular contents.

I have to thank Dr. Daniels for very kindly making the microscopic examination for me, and for photographing the patient.

HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.

TWO CASES ILLUSTRATING SPASMODIC AND BRONCHIAL ASTHMA.

(Under the care of Dr. THOROWGOOD.)

[Notes by Dr. C. LAMPLOUGH, Resident Medical Officer.]

THE first of the two following cases is a typical one of spasmodic asthma in a lad, aged 15. The inspiratory nature of the dyspnœa, nasal obstruction, and the ultimately satisfactory effect of treatment are matters of practical interest.

J. S., aged 15, living in London, and by occupation a van boy, was admitted into Victoria Park Hospital in August, 1896. He has been liable to attacks of difficult breathing as long as he can remember. The attacks come on early in the morning, and last about one hour. He snores when asleep, and during the last six weeks there has been so much nasal obstruction that now he is only able to force a little air down the right nostril, while the left is quite stopped. About five weeks ago he coughed up a little blood.

The pulse is 108; tongue clean, and digestion good. Pharynx much congested, resistance felt in posterior nares. The chest is emphysematous, and bulges forward. Sibilant and sonorous rhonchi very marked with inspiration. Expiration is prolonged. Cardiac dulness diminished, sounds natural. Various remedies, including iodide of potassium, lobelia, and the decoction of euphorbia pilulifera were tried with very little effect. In September Dr. Lamplough was able to remove portions of polypi from the nasal passages, and the breathing became much easier. Sibilus and rhonchus were still audible in the chest.

September 24th. He was put on mij doses of Fowler's solution, which agreed well, but had to be suspended owing to an attack of acute tonsillitis with a temperature of 103°. This rapidly subsided under mj doses of tincture of aconite every half-hour for three hours. The temperature soon fell to 98.5°, and the patient felt much relief. It was observed that when this boy had an attack of asthma his chest was drawn up and the epigastrium drawn in. The dyspnœa was greatest with inspiration. On one occasion, in December, when the air was full of fog, he found his breathing much easier than at other times when the air was clear. The inhalation of

oxygen gas during an attack gave no relief, but seemed rather to increase the bronchial spasm. The boy's temperature, as a rule, ranged from 97° to 98°, except on one occasion, when he had his attack of tonsillitis, then it rose to 103°. Various medicines were employed in this case, and it became evident to all observers that after some of the polypi had been removed the boy was always easier. Tincture of teucrium marum (made by Corbyn and Co.) painted over a polyp seemed notably to reduce its bulk, and tend to dry it up. During the actual attack nothing gave so much relief as hot poultices, with mustard applied to the chest wall, and 5 gr. doses of the citrate of caffeine.

Dr. Lamplough in the early part of the present year saw and examined this boy. There was still evidence of emphysema of the lungs, but all traces of bronchitis had disappeared and the attacks of asthma were far less frequent. It seems that in the summer of 1897 he was in St. Bartholomew's Hospital, and then a thoroughly efficient clearing of the nasal passages was effected with most satisfactory results. In February, 1898, his nose appeared to be quite free. He still finds the caffeine cuts short a threatening asthmatic seizure. This case presents nearly all the features of that form of asthma which is often met with in young people, and is curable if proper means be employed. The inspiratory nature of the dyspnœa, with retracted epigastrium and sibilant and sonorous rhonchi all indicate bronchial spasm. Breathing with open mouth, some degree of deafness, and distinct evidence of nasal obstruction point out the direction for treatment, and the result showed that it was not till the nasal passages had been thoroughly cleared that real amendment took place.

It is noticed in these cases of asthma with bronchitis and nasal obstruction that the clearing of the nasal passages often cures the bronchitis. This may be due to the patient ceasing to breathe with open mouth and not taking so much cold air into his bronchial tubes. Signs of emphysema also improve after judicious nasal treatment.

CASE II.—This case of asthma contrasts in many respects with the first, and exemplifies asthma with overdistension of lung, depression of diaphragm, dilatation of the heart, and degeneration of vessels.

M. C., a man from Southampton, 48 years old, by occupation a cook, was admitted into Victoria Park Hospital, November, 1896, with extreme dyspnœa, lividity, and exhaustion. He says he has been bad in the chest for fifteen months, ever since he had erysipelas in the face. Nine years ago had an attack of rheumatic fever, and since then has been liable to bleeding from the nose. Pulse 75, artery hard. Urine, specific gravity 1020, no albumen, no sugar; tongue dusky, chest rounded, diaphragm depressed. Extra resonant and percussion note and cardiac dulness not easily defined. Respiratory murmur feeble, expiration prolonged, and *râles* very audible at both bases. Short systolic murmur at cardiac apex. Expectoration mucous and scanty; no blood. The least exertion causes severe dyspnœa. At times there are seizures of bronchial spasm.

In this man's case the asthmatic seizures were associated with real organic disease in the shape of highly-developed emphysema of the lungs. Of the numerous medicines given nux vomica seemed to relieve his distressing flatulence. Belladonna also was useful, and at times tincture of digitalis came in to help the weak dilated heart. Nitrite of amyl inhalations and fuming inhalations of stramonium, etc., gave no relief.

In January, 1897, he commenced the inhalation of oxygen gas from an iron cylinder, and with this remedy the note says "the patient seems much pleased." After a while he was able to move about, and his extremities became much warmer. At first his temperature was about 97°, but after fifteen or twenty minutes of oxygen inhalation it rose to the normal line, and his pulse was quickened.

M. C. left the hospital somewhat improved, but was very bad after his return home, and in answer to inquiry Dr. Russell Bencraft, of Southampton, has been kind enough to inform me that M. C. died in the Hants Infirmary. No *post-mortem* examination was made.

REMARKS.—These two cases are types of lung disorder of no very rare kind, but there may be some interest in comparing them together. The first, that of the boy, exemplifies spasmodic asthma with marked inspiratory dyspnœa, retracted epigastrium, and a certain amount of emphysema, but no dilatation of the heart. The reflex centre seemed to be in the nose, for after the nasal passages had been cleared by the surgeon the asthmatic seizures were far less frequent, and, if promptly checked by the use of citrate of caffeine, will probably in time disappear entirely.

Case II exemplifies asthma with overdistended emphysematous lungs and dilated heart, a form usually regarded by the public as quite beyond the reach of medical art. The diaphragm is pressed down, and the movement of air in the lung very slight. The capillary vessels are gorged with venous blood, the extremities blue and cold, and the discomfort of the patient very great. The line of treatment here must be directed first to the relief of the circulation; and a course of pil. hydrarg. with Carlsbad salt in hot water every morning will often give much relief. Judicious massage across the line of the diaphragm and over the abdominal muscles is a method I have seen very serviceable and comforting to the patient.

If there be suspicion of gout and lithæmia, then the use of distilled water, hot or cold, will be found most valuable in clearing the capillaries and setting free the circulation. About 5 grains of citrate of lithia may be added to a tumblerful of water with advantage in some of these gouty cases.

The inhalation of oxygen gas, or of compressed air, does much good, and seems powerfully to stimulate the capillary circulation. As the oxygen is drawn into the lungs the blood flows more freely, the pulse is quicker, and the temperature raised. In this form of asthma the patient is often better in a bracing stimulating air, while in the spasmodic asthma of young persons a dry stimulating air is often quite unbearable. The clear air of such places as Lowestoft, Margate, and Hunstanton I have known produce the utmost distress in the case of young asthmatics. My own observation confirms that of Riegel in *Ziemssen's Cyclopædia*, iv, p. 566, that young people usually grow out of this asthma; but with elderly people it is quite the other way, for they often grow rapidly into great respiratory trouble. Case II had in fifteen months got into a condition of constant and severe dyspnœa. While such tonics as nux vomica, caffeine, and arsenic are often of undoubted value, it is of importance in the first instance to give relief to the circulation, and the way to do this is by such remedies as pil. hydrarg., perhaps with digitalis. After this, massage and properly regulated movements of the limbs will do much to help both respiration and circulation, and thus the patient's existence will be made much more comfortable and prolonged.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, June 14th, 1898.

FIVE CASES OF ACUTE LEUKÆMIA.

DRS. J. ROSE BRADFORD and H. BATTY SHAW contributed this paper. Two cases were observed in 1890, the remaining three in 1897. All came under observation for anæmia, causing excessive pallor, weakness, swelling, and ulceration of the mucous membrane of the gums, cheeks, or lips, and fever. The anæmia and weakness preceded the affection of the mouth. Most of the cases also presented purpuric hæmorrhages in the skin, and in 2 cases there was some melæna. They all ran an acute and fatal course, the maximum duration of the illness being eight weeks. The lymphatic glands were enlarged in all cases, slightly in 4, considerably in 1. The spleen was slightly enlarged in 2 cases. The blood showed a great excess of white corpuscles, varying from 1 white to 4 red in Case I, to 1 white to 43 red in Case IV. Stained films of the blood were made in 3 out of the 5 cases, and showed that the excess of white corpuscles was almost entirely due to the presence of great numbers of large lymphocytes. In 2 cases these formed over 90 per cent. of all the white cells present, and in the third case these formed 61.8 per cent., and the small lymphocytes 12.2 per cent. of

the total number of white cells. In 2 cases a few myelocytes were present, and in all the polymorpho-nuclear cells were remarkably scanty. *Post-mortem* examinations were made in 4 cases, and are detailed in the paper. These cases are similar to those described by Fraenkel in 1895, as cases of acute leukæmia, and called by some authors acute lymphatic leukæmia.

Dr. TURNEY had seen a case of acute leukæmia in a man between 40 and 50 years of age. The onset was insidious; in the later stages there were hæmorrhages from the gums. The proportion of white to red blood corpuscles was 1 in 15, the white cells being chiefly large lymphocytes. At the necropsy there was no enlargement of the lymphatic glands, but the bone marrow was plum-coloured. He thought the time was hardly ripe to draw hard and fast distinctions between the various kinds of leukæmia.

Dr. ROLLESTON thought it was very difficult to distinguish some cases of acute leukæmia from acute lymphadenoma with a terminal lymphocytosis. He referred to a case of lymphadenoma in which the condition of the blood resembled that of a mixed leukæmia.

Dr. NORMAN MOORE inquired whether there was any explanation of the rapid course of the cases. He referred to two cases that were fatal in ten and twelve months respectively, and were complicated by primary syphilis and malaria contracted in Central Africa.

Dr. BRADFORD quite recognised the difficulty in distinguishing the varieties of leukæmia, and for this reason the cases were described as acute leukæmia rather than as lymphatic leukæmia. Incidentally in the paper reference had been made to a case of lymphatic leukæmia with enlargement of the spleen. He did not think his cases resembled acute Hodgkin's disease; clinically the nature of the first case was discovered by accident, and the other four by their close clinical resemblance to the first, which did not suggest Hodgkin's disease. He did not think that the examination of the blood in his cases supported the suggestion that any of them were of the nature of acute Hodgkin's disease. With regard to the explanation of the rapid course, in some cases it might be due to hæmolysis, but in his cases no septic or toxic cause was forthcoming.

THE INFLUENCE ON GOUT OF THE MINERAL CONSTITUENTS OF VARIOUS VEGETABLES.

Dr. ARTHUR P. LUFF read a paper on this subject. Since the delivery of the Goulstonian lectures of 1897 he had carried out a series of experiments on the mineral constituents of all the vegetables in ordinary use, and the results of these experiments were embodied in the paper. The objects of this inquiry were: (1) To ascertain the relative effects exerted by the mineral constituents of various vegetables on the solubility of sodium biurate at the temperature of the human body, and therefore presumably on uratic deposits; and (2) to ascertain the influence, if any, exerted by these constituents in retarding the conversion of the sodium quadriurate contained in the fluids of the body in gout into the biurate. Obviously the elucidation of these points would have a material bearing on the treatment of gout. The method of carrying out the experiments to ascertain the solvent effects exerted by the mineral constituents of vegetables on sodium biurate was the same as that described in the Goulstonian lectures last year. The vegetables employed in the experiments were spinach, Brussels sprouts, potato, asparagus, Savoy cabbage, French beans, lettuce, beetroot, winter cabbage, celery, turnip tops, turnip, carrot, cauliflower, sea-kale, and green peas. From the results obtained it appeared that 0.05 per cent. and over of the mineral constituents of nearly all the vegetables very appreciably increased the solubility of sodium biurate. The solitary exception was in the case of the mineral constituents of green peas, which practically exerted no influence whatever on the solubility of the biurate. He next endeavoured to ascertain whether these effects were due to the alkalinity of the vegetable ashes, or whether they could be referred to any one saline constituent of the vegetables. The series of tables embodying the results of this part of the investigation demonstrated conclusively that the solvent effect of a vegetable ash on sodium biurate bore no relationship, either of a direct or an inverse ratio, to the alkalinity of the ash, or to the proportions of potassium, sodium, calcium, magnesium, and iron salts present, or to the proportions of phosphates, sulphates, and chlorides present. The following examples demonstrated this. The solvent effect on the biurate of the ash of Brussels sprouts was high, while its alkalinity was low; on the other hand, the solvent effect of the ash of celery was low, while its alkalinity was high. The solvent effect of the ash of spinach was high, while the proportion of potassium salts was low; on the other hand, the solvent effect of the ash of turnip was low, while the proportion of potassium salts was high. The solvent effect of the ash of potato was high, while the proportion of sodium salts was low; on the other hand, the solvent effect of the ash of sea-kale was low, while the proportion of sodium salts was high. Corresponding results were obtained with the calcium, magnesium, and iron salts, and with the phosphates, sulphates, and chlorides present in the vegetable ashes. These results showed that the solvent effect exerted on sodium biurate by the mineral constituents of vegetables was not due to any one constituent. He next proceeded to ascertain whether an artificially-prepared ash of the same composition as the natural ash of one of the vegetables would exercise a similar effect in increasing the solubility of sodium biurate to that possessed by the natural ash. For this method of experimentation he selected the spinach ash, which had the greatest solvent effect on the biurate. An artificial ash was prepared with the same proportions of potassium, sodium, and calcium, and of sulphates, phosphates, and chlorides as those present in the natural spinach ash, and also of precisely the same degree of alkalinity. The results of the experiments with this artificial product on the biurate showed that it exercised, in all proportions, a deterrent effect on the solubility of the biurate, whereas the natural ash exercised a marked solvent effect. The only explanation that he could offer of these remarkable results was that in the natural ash there was some combination of the mineral constituents which could not be artificially imitated, and that upon this natural combination of the salts was dependent the increased solvent effect exerted on the biurate by the mineral constituents of most vegetables. If this view were correct, then modern science was but confirming the correctness of the practice of those ancients who employed vegetable ashes in the treatment of gout. Experiments were next undertaken in order to ascertain the effect exerted by the mineral constituents of the various vegetables on the conversion of sodium quadriurate into the biurate. It was well known from the researches of Dr. Bence Jones and of Sir W. Roberts that sodium quadriurate, which was the form in which uric acid first appeared in the blood in gout, was an unstable body, and was gradually converted by combination with the sodium carbonate of the blood into sodium biurate, which latter body, on account of its comparative insolubility, deposited in the tissues and then constituted the gouty uratic deposit. It was obviously of therapeutical importance to know whether the mineral constituents of any of the vegetables, in addition to exerting an increased solvent effect on the biurate, possessed the power of delaying the conversion of the quadriurate into the biurate. The results of the experiments undertaken with that object showed that the mineral constituents of some of the vegetables—notably spinach, Brussels sprouts, French beans, cabbage, turnip tops, and turnips—very considerably delayed the conversion of the quadriurate into the biurate. The inference was that if such mineral constituents were present in suitable proportions in the blood of gouty subjects, and if at the same time proper measures were adopted for promoting the excretion of the quadriurate by the kidneys, the elimination of that body might be secured without the occurrence of any precipitation of the biurate into the tissues. The net results of all the experiments indicated that the mineral constituents of most vegetables increased the solubility of sodium biurate, and also in several cases delayed for considerable periods the conversion of the sodium quadriurate into the biurate. On the other hand, the mineral constituents of meat diminished the solubility of the biurate, and, as he had shown elsewhere, exercised but little effect in delaying the conversion of the quadriurate into the biurate. He wished it to be clearly understood that he did not attribute the different effects of animal and veget-

able diets on gouty subjects to the saline constituents alone. He thought, however, that the results of these experiments clearly showed that it was to the different mineral constituents of animal and vegetable foods, and to the different physical effects they exercised on the quadriurate and biurate, that one must look for a partial and perhaps a main explanation of the known facts that an excessive diet of the one tended to produce gout, and of the other tended to retard it. From the results of these experiments it appeared that certain vegetables stood out prominently with regard to the effect exercised by their mineral constituents in both retarding the conversion of the sodium quadriurate into the biurate and in increasing the solubility of the latter. These vegetables were spinach, Brussels sprouts, French beans, winter cabbage, Savoy cabbage, turnip-tops, turnips, and celery. These were the vegetables which he considered likely to prove most beneficial to gouty subjects. Of these, in so far as the effects produced by their mineral constituents were concerned, spinach occupied the foremost place, both as regards inhibiting the decomposition of the quadriurate and increasing the solubility of the biurate. On account of this double beneficial action possessed by vegetable ashes on the chemical portion of the gouty process, it had occurred to him that the free use of a table salt composed of the ashes of certain of the vegetables in place of common salt might prove advantageous to the gouty. He was, therefore, having different mixtures of the mineral constituents of various vegetables prepared, with which he proposed to experiment in order to ascertain which combination was likely to prove the most efficacious to gouty subjects. He hoped to be able shortly to publish the results of his experiments with these vegetable table salts.

Dr. Ewart congratulated the Society and the author on the valuable paper, and hoped that therapeutic success would follow these researches.

Dr. Haig considered that the conclusions of this laborious paper did not represent much, for the author could not say how the salts acted. By grouping the author's results differently he was able to show that they supported the views put forward long ago by Sir A. Garrod, and since confirmed by himself. Thus, potassium and sodium salts increased the solubility, while calcium salts and acid radicles interfered with the solubility of uric acid and its compounds. Thus, spinach, containing 54.8 of soda and potash and but little in the way of calcium salts or acid radicles, was a good solvent; while sea kale, in which there was an excess of the acid radicles and of calcium salts over the potash and soda was a poor solvent; cabbage came between these two, both as regards the salts it contained and its solvent properties. The results were due to the balance of the constituents not to any one element. Green pea contained much albumen, which tended to raise the acidity of the blood, and thus was not such a solvent as might be expected from the chemical constitution of its ash (44 alkali, 42 acid). Dr. Luff's "table salt" ought to be made of salts rendering urates soluble, and to be free from sulphates, calcium salts, iron, ammonia, and acid radicles. He did not, however, attach much importance to such a "table salt." Gout was due to poisoning by tea and meat, and could be cured by preventing the ingestion of uric acid.

Dr. Luff, in reply, said he did not propose to discuss the question whether uric acid was introduced by food, as it did not come within the limits of his paper. Dr. Haig had missed the point. The experiments detailed in the paper dealt with sodium biurate, which was precipitated into the tissues and joints in gout, and not with uric acid. The characters of these two bodies were very different.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

H. R. Swanzy, F.R.C.S.I., President, in the Chair.

Thursday, June 9th, 1898.

A Case of Retinitis Proliferans.

Mr. Percy Flemming read this paper. The specimen was obtained from a man aged 22, who died from chronic renal disease. The following appearances were seen on section: The posterior part of the retina was much thickened, folded, and detached; a thin membrane stretched across the vitreous cavity from the ora serrata to the posterior part of the retina; another membrane had a similar origin in part, but ended freely about the middle of the vitreous cavity; the space between these membranes and the retina was occupied by blood clot; there were signs of cyclitis. The chief microscopic appearances were: A thickening of the retina and disorganisation of its inner layers, a definite transformation of the clot (as seen in successive sections) into connective tissue membrane with lacular spaces, and a pulled-out condition of the retina near the ora serrata, resulting in elongation and rupture of Müller's fibres. It was possible to trace a direct continuity between the membranes and the retinal tissue. A review of previously recorded cases was given, and the suggestion made that the essential factors of the disease were: (1) Hæmorrhage, and (2) an inflammation of the sustentacular tissue of the retina allied to sclerosis of the central nervous system.

Remarks were made by Mr. Wray.

Œdema of the Conjunctiva, due to Obstruction of the Lymph Stream.

Mr. Holmes Spicer said these cases presented themselves in two groups, the acute and chronic. In the acute cases, owing to a poison received into the conjunctival sac, supposed in one case to have come from wood pavement, the preauricular and cervical lymphatic glands became inflamed, although the local signs of conjunctival irritation were not marked. The flow of lymph was hindered, and a condition of extreme œdema of the conjunctiva was produced, in which the conjunctiva hung out from between the closed lids as a flaccid gelatinous bag. Two cases were narrated in which the glandular enlargement was increased by the simultaneous occurrence of follicular tonsillitis. In the second chronic group, owing to a suppurative inflammation of the lymphatic glands of one side of the face and neck, great cicatrisation had been produced, the lymph stream was hindered, the subconjunctival tissue spaces became filled with the solid constituents of the lymph, and a condition of solid œdema resembling elephantiasis in other parts remained, which was persistent in spite of treatment.

Mr. Batten described some cases which he thought might be explained in a similar way.

Mr. Bass thought the follicular tonsillitis might have been the original source of infection in the two acute cases narrated.

The Pathogenesis of Anterior Polar Cataract.

Mr. Treacher Collins first described a case in which a melanotic sarcoma of the anterior part of the ciliary body, coming in contact with the antero-lateral part of the lens, had produced an opacity of the lens in that position, which presented precisely similar microscopical appearances to those seen in anterior polar cataracts. This, he thought, strongly supported the view that these latter resulted from contact of lens and cornea arresting the osmosis of nutritional fluids to the lens. He next demonstrated the microscopical characters of a congenital cataract where there was a large anterior polar opacity, beneath which the lens fibres had undergone such extensive degeneration that the whole lens was much flattened from before backwards. He thought the changes could be accounted for by prolonged contact of the lens and cornea in fœtal life, after the anterior fibro-vascular sheath of the lens had disappeared. He then quoted several cases in which, besides an anterior polar opacity, there was a second opacity situated beneath it a little depth in the lens. In all these the cataract had been formed in early life, and several years had elapsed before the patient came under observation. He showed a drawing of the microscopical appearances of a lens presenting two such opacities. There was the usual laminated mass at the anterior pole, then some normal lens fibres, and then an area where the lens fibres had broken up into irregular amorphous granules and detritus. This area corresponded fairly accurately in shape to that of the mass at the anterior pole, and he thought there could be no doubt that they were at one time in contact, having become separated by the gradual growth of new lens fibres inwards between them.

Splinters of Steel Removed from the Eye with the Electro-Magnet.

Mr. Snell related two cases: (1) From the retina with

preservation of excellent sight. The piece was observed with the ophthalmoscope as fixed in the retina in the outer and lower quadrant; the fragment had passed through the cornea close to the sclero corneal junction, and when the patient was first seen four days after the accident, the glistening of the steel was distinct, but the foreign body was partially covered with exudation. V = fingers. The electro-magnet was inserted eight days after the accident between the inferior and internal recti, and the fragment removed. Later V = $\frac{6}{24}$. (2) From the vitreous, the foreign body being localised by the *x* rays. The patient was not seen for several weeks after the accident. The foreign body diagnosed as having entered upper part of cornea, passing through lens into vitreous. Dr. Mackenzie Davidson used the *x* rays, and localised the splinter in the upper part of the vitreous; a skiagraph showed it to be needle shaped, measuring 8mm. in length, and placed obliquely. The electro-magnet (fifteen weeks after the accident) was introduced through a scleral incision between the inferior and internal recti, and the splinter at once removed—V = fingers?

Mr. TATHAM THOMPSON spoke of the difficulty sometimes experienced in withdrawing the foreign body through a small wound which he had overcome by approaching the body from another direction so as to get it end on. He thought one of the chief advantages in using the *x* rays was the power of excluding foreign bodies in doubtful cases.

Mr. LANG described two cases in which foreign bodies had been located by *x* rays in the eyeball.

LARGE FIBROMA OF UPPER EYELID.

Mr. SIMEON SNELL related this case. The patient, a man aged 43, never remembered being without the tumour, and it had only increased in size very slowly. At the time of his being first seen it was pedunculated, the size of a filbert, and by its weight and situation interfered with the movements of the eyelid and with vision. It was attached to the left upper eyelid just external to the punctum. It was dissected off. The tumour was white and glistening in section, and under the microscope it was found to consist of fibrous tissue.

TOXIC AMBLYOPIA.

Mr. ANDERSON CRITCHETT showed a case of toxic amblyopia which was attributed to poisoning by iodoform. An elderly lady suffering from an extensive cancerous ulceration of her breast had been in the habit of applying iodoform to the ulcer over a period of three years. She developed somewhat suddenly extreme amblyopia, lost the recognition of all colours except blue, for which she had a large central scotoma, and was found to have slight pallor of the outer half of each optic disc and a small granular change to the inner side of each macula lutea. Since the iodoform had been stopped (ten weeks) the return of her colour vision had been very decided, she could recognise any colour by indirect vision, but still had a large central scotoma. Her visual acuity was still very bad, though it had shown some improvement.

CARD SPECIMENS.

The following card specimens were shown: Mr. HARTRIDGE: Phagedæna of the Eyelids. Mr. WRAY: (1) Pemphigus of the Conjunctiva; (2) Skiagram of a Foreign Body in an Eye. Mr. TATHAM THOMPSON: Intraocular Granuloma.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Sir GEORGE F. DUFFEY, M.D., P.R.C.P.I., President, in the Chair.

Friday, May 20th, 1898.

A CASE OF SLOW CARDIAC ACTION.

THE SECRETARY, for Dr. R. J. KINKEAD (Galway), read a paper on this subject.

The PRESIDENT said that decrease in rate was due to a great many causes, either certain heart diseases or certain nervous influences, such as compression of the nucleus of the accelerator nerve of the heart. The condition was sometimes paroxysmal, a pure neurosis, without any apparent cause.

MEMBRANOUS COLITIS.

Dr. W. R. DAWSON read notes on a case of this disease. A gentleman, about 42 years of age, some three years ago became subject to habitual constipation, which had since persisted. About a year later he began to observe shreds and patches of membrane in the fæces, and these appearances had been present ever since, but with aggravations at intervals of two or three months. At such times pieces of membrane came away in rather large quantities, mostly after the fæces, and there were dyspeptic symptoms also, but no pain in defæcation, nor on abdominal pressure. There was little or no general discomfort, and the patient's health, spirits, and nutrition were excellent. The membranes were of varying size, and appeared to consist entirely of mucus, embedding large numbers of degenerated cells, mostly epithelial. The treatment was purely general, the bowels being kept open by enemata rather than purgatives, and there has been, on the whole, some improvement.

Dr. WALLACE BEATTY had met with a somewhat similar case in a policeman, aged 27. All kinds of remedies were tried without benefit. He was placed on milk diet and cod-liver oil, and was doing very well and able to continue his work, and passed very little membrane.

The PRESIDENT thought that in Dr. Dawson's case the shreds of membrane consisted of mucin, and so, perhaps, mucus-colitis would be a better name, as it contained no fibrin. The pathology of this condition would appear to be a follicular catarrh of portion of the mucous membrane of the intestine. Very large enemata were useful; perhaps a quart or more of water, with 15 to 20 minims of dilute nitric acid, and this quantity of acid increased.

Dr. DOYLE also made remarks, and Dr. DAWSON replied.

DISSECTING ANEURYSM.

Dr. J. B. COLEMAN read notes of a case of dissecting aneurysm, and exhibited a specimen of that affection. The patient was a house painter, aged 65, and whilst engaged at his work he was suddenly seized with a violent pain extending from his lumbar region into his chest; he felt faint, but did not lose consciousness. With a quarter of an hour his lower extremities were completely paralysed. He had a "lead line" on his gums, well-marked arcus senilis, atheromatous arteries, heart hypertrophied, pulse high tensioned, aortic second sound accentuated, urine contained 2 per cent. albumen and a few hyaline and granular casts. Next day he felt much better, and he was able to move his legs freely. On the following morning he was able to walk a few steps. He died suddenly, about 52 hours after the onset of the symptoms. The *post-mortem* examination showed the right pleural cavity to be filled with blood; heart was large, there being hypertrophy of the left ventricle. The arch and upper part of descending aorta was distended, forming a tumour-like mass, from which the blood had escaped into the right pleura. On opening the aorta its inner aspect was covered with atheromatous plaques, and a dissecting aneurysm extended from the arch at the level of the innominate artery and terminated in the left femoral artery an inch below Poupart's ligament. A large mass of freshly coagulated blood was effused between the tissues at the level of the arch and in the upper part of the descending thoracic aorta, and here the separation of the tissues took place around nearly the whole circumference of the vessel wall. From the abdominal aorta through the left common iliac, external iliac, and femoral artery the coats of the vessels were separated by a thin layer of coagulum, but no palpable thickening of the arteries was so produced. In the lower half of the aneurysm the dissection of the arterial coats did not extend more than half way around the circumference of the vessels. The dissection was carried along the coats of the right renal artery, and the lumbar arteries were cut across, and their orifices contained thrombi. The kidneys were cirrhotic, the right one being, in addition, in a state of universal hæmorrhagic infarction. There was no hæmorrhage in the spinal cord or its membranes. Microscopic sections of the common iliac artery showed that the blood was effused in the substance of the middle tissue of the artery, so that the external wall of the aneurysmal canal was composed of the outer strata of the media, together with the adventitia. The situation of the internal rupture of the aorta could not be ascertained with certainty. The necropsy made the

explanation of the patient's symptoms clear. The intense pain at the onset was due to the primary rupture and separation of the coats of the aorta by the blood. The paraplegia was caused by the interference with the arterial supply to the lumbar cord, partly from thrombosis, partly from rupture of the origin of the lumbar arteries. The sudden death ensued on the rupture of the external wall of the aneurysm, and the consequent escape of blood into the right pleura. Dr. Coleman mentioned other cases of dissecting aneurysm, in which a remarkable series of symptoms was due to arrest of the vascular supply to the brain, kidneys, and cord.

Remarks were made by Dr. FINNY and Dr. KNOTT; and Dr. COLEMAN replied.

CASES.

Dr. A. R. PARSONS read notes of cases of (*a*) Pericarditis, (*b*) Urobilin Icterus, which were discussed by Dr. WALLACE BEATTY, the PRESIDENT, and Dr. DOYLE.

SECTION OF OBSTETRICS.

F. W. KIDD, M.D., President, in the Chair.

Friday, May 27th, 1898.

OVARIAN CYST.

DR. ALFRED SMITH showed an ovarian tumour which was removed on May 4th from a young married woman who had given birth to a child five months previously. Temperature on admission, 102° F.; pulse 120. There was enormous distension from free ascites. Abdominal section revealed extensive peritonitis. About thirty hours after operation the patient got a marked change for the worse. The abdomen became distended; vomiting set in. Four grains of calomel, followed by a seidlitz powder, failed to act upon the bowels. Two large enemata were also tried. The pulse became extremely weak (140); the patient's appearance was cyanosed and anxious. The abdomen was reopened. The small intestines were not distended, but the cæcum was found greatly blown out, dark in colour, without lustre. It was strangulated by a broad band. The band was cut through and slight taxis applied to the distended cæcum. The contents regurgitated into the ileum. The cæcum was then brought out of the abdomen and an artificial anus formed. The abdominal incision was left open to the extent of 3 or 4 inches, and a large gauze drain put in for twenty-four hours. The patient was now—three weeks after operation—doing well. It would be necessary to do an intestinal anastomosis later.

In reply to Dr. E. TWEEDY, Dr. A. SMITH said the distension was such that a positive diagnosis could not be made. There was no distension of the posterior *cul-de-sac*. After ligaturing and cutting the bands of adhesion round the colon, he tried taxis to see if the contents would move in the usual direction; but regurgitation took place towards the ileum. He therefore performed colotomy.

CLINICAL REPORT OF THE ROTUNDA GYNÆCOLOGICAL HOSPITAL FOR 1896-7.

The MASTER (Dr. R. D. Purefoy) read this report.

Dr. ALFRED SMITH said with relation to finger *versus* curette in abortions, he always used the latter before the formation of the placenta, but when the placenta was formed he used the finger. He made this distinction owing to the condition of the uterine muscle. When to operate in a case of fibromyoma was a burning question. Was it true that all cases after 45 years were small and withering away? He lately had some cases return to him—cases which he had said would get all right after 45 years, but these cases were now so bad as to make him hesitate to operate. Once myoma was recognised in the uterus he was in favour of early operation. He did not think panhysterectomy suitable for such cases, as the mortality was extremely high. The age of the patient was important. The deaths occurred in old people practically.

Dr. E. TWEEDY preferred the use of the finger to the curette in abortions. He had never tried formalin on the abdomen, as it was very irritating and very volatile.

Dr. J. H. GLENN did not agree with Dr. Smith in saying that pus occurring in an abdominal wound was always due to some fault in the preparation of the suture material. It was the lowest suture only that very often had pus. There was a tendency of the binder to "ruck up," and the dressing to become displaced upwards, allowing infective material to come in contact with the lower portion of the wound. He believed that, in closing the abdominal wall, bringing the aponeurosis together with properly sterilised catgut was much better than suturing *en bloc*, and prevented ventral hernia occurring, as here there was a double protection, for when the patient contracted the recti muscles there was a tendency for these to gape apart. He had always been an advocate for the use, not the abuse of the curette. The curette could be sterilised, but not the finger. He had never found patients complain of irritation from 2 per cent. solution of formalin. He covered it with protective usually.

Dr. KNOTT had seen a case of cystitis, cured by establishing artificially a vesico-vaginal fistula. The fistula was subsequently closed.

The PRESIDENT said that myomatous and fibromatous tumours should not be classified together. Fibromatous tumours were more likely to disappear after establishment of the menopause. A myomatous tumour was much more involved as part of the uterus itself, and the whole uterus was generally enlarged. With regard to a rule that one should operate on all these tumours, that would be impossible, as they were met with in enormous numbers of cases, which often gave rise to no symptoms. After completion of an abdominal wound, he placed iodoform gauze along the incision, and kept it in close contact with the wound by strips of adhesive plaster, and there was no possibility of "rucking up." It also sustained the abdominal walls, and aided the skin to regain its elasticity if vomiting occurred.

Dr. R. D. PUREFOY replied.

KIDDERMINSTER MEDICAL SOCIETY.—At a meeting on May 27th, Mr. W. HODGSON MOORE in the chair, Mr. J. LIONEL STRETTON showed: (1) A Dermoid Tumour of the Ovary removed from a woman, aged 42. She had been an in-patient two months previously with caries of the jaw, and had never had any abdominal trouble. The solid portion of the tumour weighed 2 lbs., and there was an opening about its centre as if a large cyst had been ruptured. The patient made a satisfactory recovery. (2) A Portion of the Stomach and Great Omentum removed from a woman, aged 57. There was a considerable amount of adhesion, and the transverse colon was wounded in removing the growth; this and the large gap in the stomach were closed with Lembert sutures. The amount of stomach removed was about one-third. The patient was very much collapsed; she never recovered from the shock, and died eighteen hours afterwards. (3) Fifty-nine Gall Stones removed from a woman, aged 57. 4. A row of Ingrowing Eyelashes with their roots removed from a woman, aged 52. She had suffered for many years, and had on several occasions had the lashes pulled out at various institutions. A flap of the conjunctiva was dissected up, and the whole of the roots and adjacent tissue dissected out in one piece, a couple of catgut sutures bringing the flap into position.—Mr. OLIPHANT read (1) notes of a Case of Peritonitis treated with antistreptococcic serum. The woman was 28 years of age, and was admitted with metrorrhagia following an abortion four years previously, for which the uterus was curetted on April 20th. Although every precaution was taken she developed an attack of acute peritonitis. Her condition was far too serious for any operation, and on May 3rd 10 c.cm. serum (Institut Pasteur) was injected into the left flank. The dose was repeated on May 4th and 5th with good effect. She continued to improve, and her temperature remained normal, but there was still pain and tenderness in the left iliac region, and on May 20th an exploratory incision was made. There were a considerable amount of adhesions around the left tube and ovary, and a small collection of pus in the left broad ligament; this was swabbed out and a drain inserted. She was now convalescent. It appeared probable that the serum caused a cessation of the peritonitic mischief, for these symptoms commenced to abate as soon as it was administered. (2) A man, aged 56, with a Sloughing Gummatous Mass involving the Left Tonsil and Soft Palate. He was admitted under the care of Mr. Hodgson Moore a month previously. The case presented all the appearances of malignant disease, and the man denied a specific history, but

under large doses of pot. iod. it was rapidly improving. (3) Two Enlarged Bursæ Patellæ removed from a girl aged 18 years.

BRITISH ORTHOPÆDIC SOCIETY.—At a meeting held in the Royal Mineral Water Hospital, Bath, on May 14th, Mr. KEETLEY in the chair, Mr. WILLIAM THOMAS showed a Shoe for the treatment of Talipes, and Mr. PAGAN LOWE showed a Boot for Flat Feet, which he had found useful in rheumatic and traumatic cases.—Mr. C. T. GRIFFITHS opened a discussion on Rheumatoid Arthritis, especially from a surgical standpoint. He said that Bath offered immense wealth of material for the study of the subject. Unless the disease was attacked in its early stages, little good could be done. In true rheumatism and gout patients usually came under treatment before serious joint complications had occurred. During the five years that he was resident medical officer in that hospital it was not uncommon for the physician to call in the surgeon, with the result that forcible movements were performed and adhesions broken down. These cases on the whole did well. Many surgeons fought shy of such proceedings, because, if anything went wrong, they were blamed, while they got very little credit for improvement; but, if more active treatment were followed, he thought results would be better. If must be remembered that this was a disease of debility, and that it was often associated with tuberculosis, which might contraindicate active interference. If the disease was due to primary inflammatory process rather than to a degenerative process, interference would be more hopeful. On the whole, he thought that operative interference should be more often resorted to when osteophytes were present, and the mushroom-shaped ends of the bones had become obtrusively evident. The CHAIRMAN related various cases in which he had with advantage removed bony and cartilaginous prominences from the articular surfaces of chronic rheumatoid joints, substituting depression. Ankylosis had not followed. Dr. WOHLMANN produced a cast showing typical Rheumatoid Arthritis. This disease was quite distinct from rheumatism, gout, and osteo-arthritis. Dr. BANNATYNE said he had isolated a bacillus diplococci from the fluid of the affected joints. As to surgical interference, aspiration might be useful in the acute stage, but forcible extension would only set up general mischief. When, however, the disease had worn itself out, interference was useful. Mr. TUBBY thought that the disease was due to a lesion of the central nervous system. He thought that surgical interference was justifiable only in the final stage. Repeated small movements under anæsthesia were more useful than complete rectification at one sitting. Mr. W. THOMAS thought that in the deformities left after active disease was at an end the best plan was to open the joint freely; he had seen much damage done when rough measures had been pushed too far. This was true of all kinds of arthritis. Mr. PAGAN LOWE said medical treatment was often curative. If there were fluid in a joint, surgical interference was contraindicated, but it might be aspirated. Joints should be well strapped after adhesions had been broken down. Mr. JACKSON CLARKE said that in making over 2,000 necropsies he had never found any evidence to connect the disease with rheumatism. He thought it more associated with gout. He had never seen true adhesions in a case of osteo-arthritis (as he preferred to call it). He had seen typical osteo-arthritis in a child, aged 3. Instruments were often useful. Loose bodies should be removed by operation. He thought the disease was due to auto-intoxication. Mr. NOBLE SMITH had found drilling into the bone near the joint beneficial. Dr. MELSOME considered the disease an infective one. He referred to the occasional occurrence of arthritis with glandular swellings in children. Mr. GRIFFITHS briefly replied.

STEPS are being taken to provide a really serviceable field stretcher for the Indian Army. This will be welcome news to those who saw the difficulties encountered with the cumbersome dhoolie in the Tirah campaign.

THE CLUB QUESTION IN THE UNITED STATES.—The Connecticut State Medical Society at its recent annual meeting passed a resolution condemning the making of contracts with lodges, mutual benefit societies, and medical clubs, for medical service at a fixed annual rate.

REVIEWS.

A SYSTEM OF MEDICINE BY MANY WRITERS. Edited by THOMAS CLIFFORD ALLBUTT, M.D., F.R.S., Regius Professor of Physic in the University of Cambridge. Vol. v. London: Macmillan and Co. 1898. (Pp. 1058, 71 illustrations, 7 charts, 3 plates. 25s.)

THE fifth volume of this successful *System of Medicine* deals with diseases of the lungs and vascular system, and would in the natural course of events have been published at the commencement of this year. Unfortunately where a number of contributors are concerned the chances of unforeseen accidents are increased. In the present instance the editor, naturally wishing to preserve, if possible, the proper sequence of his articles, delayed publication in the hope of including Professor Welch's contribution on Thrombosis and Embolism. In this, however, he was disappointed, for Professor Welch's time and energies had unhappily to be devoted to a desperate struggle for the freedom of physiological research in America.

The first article in this instalment is one by Dr. Ewart, in which the difficult subject of bronchitis is carefully and lucidly dealt with. Details are elaborately and accurately set forth, and many new methods of treatment are described. Bronchiectasis is divided by Dr. Ewart into capillary bronchiectasis or bronchiolectasis, which is well illustrated by drawings of a case described by Dr. Sharkey in *St. Thomas's Hospital Reports* as acute bronchiectasis, and ordinary bronchiectasis, which again is subdivided up. The mechanism by which bronchiectasis is established is fully discussed, and an account of the creosote treatment is given. These articles are likely long to remain standard sources of reference.

Acute pneumonia, catarrhal pneumonia, and chronic pneumonia are described in an interesting and philosophic manner by Dr. Pye-Smith. There are historical references scattered throughout the article on acute pneumonia, especially in the section on treatment. In an appendix 434 cases of pneumonia are tabulated, and further details about the cause of death in the fatal cases are given. In apical pneumonia a prognosis is shown to be no worse than in the ordinary forms.

The important article on phthisis has been entrusted to Dr. Percy Kidd, who has successfully managed the difficult task of making it sufficiently full without rendering it unwieldy. The subject of etiology is fully treated, and contains interesting data as to the spread of tubercle and the prevalence of bacilli in the air of hospitals. Baumgarten's theory of inherited tuberculosis is discussed, and the writer points out that intrauterine infection is entirely subordinate in importance to extrauterine invasion. The practical part of the article on the morbid anatomy, symptoms, and treatment is all that can be desired.

Dr. Arlidge writes on pneumokoniosis, with which his name is already closely associated, and illustrates his descriptions by reference to the specimens put up by the late Dr. Headlam Greenhow in the museum of the Middlesex Hospital.

After a short account of pulmonary aspergillosis from the pen of Dr. Rolleston, the rather uninteresting subject of emphysema is clearly expounded by Dr. Kingston Fowler, who also does full justice to syphilitic affections of the lungs, and in the latter article gives references to the twelve specimens illustrating this condition that are to be seen in the metropolitan museums. Dr. Goodhart has found himself on familiar ground in dealing with asthma and hay fever, and has provided an admirable article with plenty of practical illustrations and suggestive comments.

The diseases of the pleura are introduced by an excursus on the intrapleural tension by Dr. Samuel West, who concludes that the problem of intrapleural tension, especially under pathological conditions, is a very complicated and difficult one, and requires much further investigation. The article on pleurisy and empyema is full of Dr. Gee's practical wisdom and experience, and is written in his accustomed scholarly style. The section on morbid anatomy and pathogeny is by Dr. Herringham, while the account of pneumothorax is contributed by Professor D. W. Finlay.

The diseases of the vascular system are preceded by a

general physiological introduction by Professor Michael Foster. There are two other valuable preliminary articles, the first of which is by Dr. Copeman, who gives a helpful and extremely lucid account of the clinical examination of the blood. The methods of examination that can be employed easily in clinical diagnosis are described not only in minute detail, but also in a concise and readable form. This is followed by a valuable physiological essay on cardiac physics by Professor Sherrington. The method of closure of the valves and the method by which the first and second sounds of the heart are produced are fully and clearly set forth. The sections on the filling of the heart and the work done by the heart are useful summaries of our knowledge on these points, and are very complete and fully up to date.

The causes of chlorosis are discussed in a highly interesting and philosophic manner by Professor Clifford Allbutt, who lays stress on Lloyd Jones's view that chlorotic blood is an exaggeration of the condition most suitable for fertility, from having its plasma stored with albuminous bodies such as might serve for the nutrition of the fœtus during pregnancy. The section on treatment is full of valuable advice based on an extensive acquaintance with this common but rebellious disease. In his full and exhaustive essay on pernicious anæmia, Dr. S. Coupland adopts the hæmolytic origin of the disease, as described by Dr. William Hunter. Dr. West's description of splenic anæmia is illustrated by a case of his own, published in the *Medico-Chirurgical Transactions*. It is noteworthy that he is not inclined to accept as examples of this disease the condition in children which is commonly called splenic anæmia.

We are glad to welcome back as a writer on medicine Dr. Wickham Legg, who gives a full account of hæmophilia, the disease with which his name is so closely associated. Dr. Stephen Mackenzie has collected statistics of 200 cases of purpura for his interesting article on that disease, and finds that 30.5 per cent. were rheumatic in origin. Dr. John Thomson gives a systematic sketch of hæmorrhages in newborn children, while Mr. W. Johnson Smith writes out of the fulness of his practical experience on scurvy.

Infantile scurvy is the title of an interesting and well illustrated article by Dr. Cheadle; the alternative name for the disease, "scurvy rickets," is open to the objection that the cases are not necessarily rickety, and that its features are not those of even the more severe cases of rickets. Of 37 cases under the author's care, no fewer than 31 occurred in private practice, a fact which is explained partly by the artificial foods which give rise to it being more often employed by the well-to-do classes, and partly by poor children sharing at an earlier age their parents' food.

Dr. Copeman's article on hæmoglobinuria is both concise and complete. Leucocythæmia is described in a masterly fashion by Dr. R. Muir, as might be expected from his thorough researches into the blood changes and pathology of the disease. The style is clear, and the article is well illustrated by plates showing the blood in spleno-medullary and in lymphatic leucocythæmia.

Dr. Dickinson describes the pathological mechanism of the production of the various forms of dropsy. The inflammatory effusions are not dealt with; the cardiac, renal, œdema, and ascites due to cirrhosis are fully treated. The œdema of chlorosis is regarded as allied to that of nephritis, the blood containing toxic material, which has been retained as the result of failure of uterine excretion. Renal dropsy is due to increased exudation, cardiac dropsy chiefly to diminished absorption, and is essentially mechanical. In lardaceous disease the dropsy is much the same as in cardiac cases. The article closes with some remarks on the general principles of the treatment of dropsy, and some interesting results obtained by the dry treatment, in which the amount of fluid taken is much restricted.

Dr. L. Humphry divides his account of congenital heart disease into three parts, dealing respectively with the character of the lesions, their causation, and their clinical features and treatment. Dr. F. Roberts's account of diseases of the pericardium is very complete and exhaustive. The major part of the article is devoted to acute pericarditis, but the sections on pyopericardium and adherent pericardium show much thoughtful research and practical investigation. There are very copious extracts from the late Dr. Sibson, the writer of the corresponding article in Reynolds's *System of Medicine*. Considerable importance is attached to the adhesions left after acute pericarditis, and any tendency to neglect their importance in prognosis is deprecated. Dr. Ewart's recent observations on the signs of pericarditis are fully quoted, but the author is somewhat chary in expressing his opinion and experience with regard to their diagnostic value.

The somewhat difficult subject of functional disorders of the heart receives full justice in the editor's hands, who gives a philosophic description of palpitation, irritable heart, tachycardia, and bradycardia. He argues in favour of tachycardia being regarded as a disease, and not merely as a symptom, and discusses all, though he cannot accept any, of the various theories of its pathogeny. Bradycardia, on the other hand, is regarded as a symptom, and not as a disease. The conditions of which it is a phenomenon are mentioned, and its method of production discussed. In a well-considered article on mechanical strain of the heart Professor Clifford Allbutt arrives at the conclusion, based on thirty years' experience and study of heart disease, that the importance of muscular effort as a factor in cardiac disease has been much exaggerated. The discussion of the problems of the effects of mechanical strain is continued on the same lines in the article on aortic disease or disease of the aortic area of the heart. Aortic stenosis and reflux are well illustrated by cases, and many interesting points, such as capillary pulsation, retardation of the pulse, and Durozier's murmur in regurgitation are dwelt on, and their bearing on diagnosis discussed. The editor's charm of style render his articles pleasant reading. Scattered through them are aphorisms such as "give your prognosis on the best suppositions, treat your patient on the worst;" "the best all round medicine for heart disease is blue pill."

Dr. T. Oliver, from his experience of dangerous trades, discusses the medical bearings of electric currents of high pressure. It would appear that death in these cases is due not to respiratory but to cardiac failure; nevertheless, artificial respiration is the most efficacious treatment.

In his excellent article on endocarditis Dr. Dreschfeld deals with simple acute endocarditis, and with the morbid anatomy and clinical features of infective endocarditis, which were postponed from the article on the subject in Volume I. among the infections. Chronic endocarditis is included in the articles on the affected valves. He speaks favourably of the treatment of certain cases of simple endocarditis by the icebag, a piece of flannel being placed on the skin, since dry cold is much better borne than wet cold. Infective endocarditis is divided into four groups, and the treatment by antistreptococcal serum for the more chronic types is referred to.

The important article on diseases of the myocardium has been wisely entrusted to Sir R. Douglas Powell, who gives a well balanced account of the various morbid conditions which are arranged under seven headings, according to their causation.

Dr. Sansom, in his description of mitral regurgitation, discusses in well considered and critical terms the value of Schott's Nauheim treatment. Mitral stenosis is dealt with in a masterly fashion by the same authority. The theories explaining the various morbid sounds met with in this puzzling disease are discussed with the philosophy of one who has thought much on the subject. The so-called reduplication of the second sound at the apex is regarded as due to the second pulmonary sound followed by a sound of tension, the latter being produced by the forcible entry of blood into the left ventricle. Mitral stenosis is divided into four groups—those cases associated with rheumatism, those in which the disease is first declared by symptoms of lesion of the nervous system, by disorders of nutrition, and those seen in association with chronic renal disease and arteriosclerosis.

This brings to a conclusion the fifth volume, which more than maintains the high standard of excellence of the earlier volumes, and reflects the highest credit alike on the editor and his distinguished contributors.

DR. LYDIA RABINOWITCH, a pupil of Professor Koch, who has taught bacteriology for the last three years in the Women's Medical College, Philadelphia, has just been appointed Professor of that subject in the College.

ESSENTIALS OF OBSTETRICS. By CHARLES JEWETT, A.M., M.D., Sc.D., Professor of Obstetrics and Pediatrics in the Long Island College Hospital, and Obstetrician to the Hospital; assisted by HAROLD F. JEWETT, M.D. New York and Philadelphia: Lea Brothers and Co. 1897. (Demy 8vo, pp. 358. 2.25dols.)

Two different opinions may be held as to the place in mental training which books of the syllabus order may usefully occupy. Some will think that the student will understand his subject better if he begins with books that set out the subject with full explanation of detail, and of the reasons for and against opposing views; and that when he has studied his subject practically, with the help of the fullest information bearing on concrete cases that he can get, he may find a syllabus useful, as recalling to him the ground over which he has travelled. This, we believe, is the sounder view. But the authors of this work take the opposite view. They think the student should begin with the syllabus. This, they think, will ground him in the rudiments; and then he can go to the encyclopædic works, which, if taken first, will only confuse him. In our opinion the essential is that the student should understand; our experience is that until he understands he cannot recollect.

This work, as may have been gathered from the above remarks, is of the syllabus order. It is concise, clear, and dogmatic. Theoretical discussion, historical matters, and matters of minor detail have been excluded. It is very American. Our familiar instruments appear with trifling modifications by American obstetricians. Although the whole style of the work is dogmatic, yet occasionally more than one method of treatment is mentioned between which the student may take his choice; for example, in the section on eclampsia. The poorest part of the book is the section on operations. The account of cephalotripsy is scanty. The authors recommend decapitation by passing a tape over the neck, and tightening it by an *écraseur*. Have they ever tried this? We trow not. Ramsbotham's hook, the most perfect instrument for its purpose that has been devised, they do not mention.

NETTLESHIP'S DISEASES OF THE EYE. Sixth Edition. Revised and Edited by W. T. HOLMES SPICER, M.A., M.B., F.R.C.S. London: J. and A. Churchill, 1897. (Crown 8vo, pp. 486, numerous woodcuts, 8s. 6d.)

THE sixth edition of this well-known textbook appears in a form somewhat different from that of its preceding editions. It no longer constitutes one of the "Student's Guide Series," but is an independent book. In addition, the author has given over to the editor the entire responsibility of bringing it up to date. The principal features remain much as they were, and the arrangement of the subject has not undergone great alteration.

The chapter on the external examination of the eye contain much additional matter, while that on ophthalmoscopic examination has to a large extent been rewritten. The system of classification of diseases of the cornea is altered, the method being somewhat similar to that used by most German authors. The chapter on optic neuritis is improved and largely rewritten, while that dealing with strabismus is much improved and brought up to date; the operation of advancement of the defective muscle is fully and clearly described. A good deal of etiology which in previous editions was in a chapter at the end of the book has now been incorporated in the text under various heads.

The appendix containing formulæ, etc., has been revised and enlarged and we are pleased to see a description of the visual requirements of candidates for the public services; no textbook is complete without such a chapter. It is extremely difficult to remember the tests unless one is constantly in the habit of applying them, although nearly everyone is called upon sometimes to express an opinion on the prospect of a would-be candidate.

We could have wished that a still greater number of the old and well used blocks had been cut out and others substituted; many new ones have been put in, but there is still room for improvement in the way of illustrations. The new edition is one which is in every way worthy of the reputation of a book which has for so long a time held a high place among works on ophthalmology.

A PRACTICAL GUIDE TO THE EXAMINATION OF THE EYE. For Students and Junior Practitioners. By SIMEON SNELL, F.R.C.S.E. Edinburgh and London: Young J. Pentland. 1898. (Crown 8vo, pp. 190. 88 illustrations. 5s.)

THE book which Mr. SNELL has brought out is designed to render its readers familiar with the systematic examination of the eye. As is stated in the preface, "information on this subject is given in many excellent textbooks on diseases of the eye, but is usually arranged in a way that is not easy of reference." The introduction contains a very complete synopsis of the points to be attended to when taking a history and present state of an eye case; there is not much which would be left undone if all the points mentioned were carefully gone into.

The descriptions are arranged in a similar manner, commencing with the external parts of the eye and its appendages, and continuing the examination to the deeper parts, optic nerve, orbit, etc. The methods recommended are those which are in common use among all ophthalmic surgeons, and there are not many points mentioned that will be unfamiliar to the majority of those who are engaged in the eye clinics of our hospitals.

The book throughout is profusely illustrated by reproductions of photographs, and also by familiar woodcuts taken from well-known textbooks. Those taken from photographs leave much to be desired. They are somewhat indistinct in places, and the special feature which is intended to be brought out might be much better shown in a diagrammatic sketch, which would be quite accurate enough for the purpose. The custom of reproducing the features of an author or of his assistants is open to objection.

The methods of sight testing and the ways of using the ophthalmoscope and perimeter are well described. The book is one which is sure to find favour with students and with all who are commencing the study of eye diseases. The large experience of the author as a teacher, as an ophthalmologist, and as a practical surgeon is a sufficient guarantee that the information contained in its pages is sound and trustworthy.

CONSTIPATION IN ADULTS AND CHILDREN. By H. ILLOWAY, M.D. New York: The Macmillan Company; and London: Macmillan and Company. 1897. (Roy. 8vo, pp. 510. 17s.)

THE subject of constipation has until recently received comparatively little attention in English literature, whereas it has been copiously dealt with by French and German authors. We cannot regard, however, the present work by Dr. ILLOWAY as supplying in an adequate manner this deficiency on the part of English and American authors.

The book is divided into two sections, the first dealing with the varieties of constipation and their causation, and the second with treatment. The first section opens with a brief account of the anatomy and physiology of the intestines, followed by a classification of the causes of acute and chronic constipation. The classification of the causes of acute constipation is unnecessarily elaborate, and the assertion that absence or alteration of bile is the cause of acute constipation in biliary colic or acute hepatic disease cannot be accepted. The cases recorded at full length of foreign bodies in the intestines might with advantage have been omitted.

The etiology of chronic constipation is well discussed. Special interest attaches to the section dealing with malformations of the intestines. Under this head the author gives clinical notes of several cases of dilatation of the colon, and of the sigmoid flexure. The so-called idiopathic dilatation of the colon he regards as secondary to obstruction produced in the rectum by the sinking down in the pelvis of the sigmoid flexure filled with accumulated fæces.

The author discusses the question of "auto-intoxication" resulting from constipation. He agrees with Bouchard that this danger may occur in the earliest stage of constipation, but not later. Dr. Illoway considers that intoxication may also occur in those cases in which diarrhœa is present with constipation, and may even cause death.

The second part of the book deals entirely with the treatment of chronic constipation. There is little doubt that this very common condition is treated far too exclusively by drugs, at any rate in this country, and that the various forms of massage and hydrotherapeutic treatment so largely employed abroad, especially in Germany, may give very successful results when properly applied. The author describes clearly abdominal massage, Swedish exercises, and hydrotherapeutic and electro-therapeutic methods. It is unfortunate that the illustrations of this section are of the crudest character. The subject of dietary is also dealt with in this section, but less fully than its importance in the treatment of constipation deserves.

Formularies both for adults and children are appended to their respective sections, and the index is an ample one. The book, which is bulky, might with advantage have been considerably condensed, and though it deals with the subject of constipation in a very unequal manner, those interested in mechanical methods of treatment will find a considerable amount of information on these points.

DIE HEILUNG DER TUBERKULOSE DURCH RÖNTGENBESTRAHLUNG [The Cure of Tuberculosis by Roentgen Rays]. Von Dr. SINAPIUS, Nörenberg. Leipzig: B. Konegan. 1898. (Demy 8vo, pp. 31. M.0.60.)

IF Dr. SINAPIUS had been content to announce that he had treated tuberculosis with Roentgen rays instead of stating that he had cured it, he would have given a more accurate impression of the results he obtained in his cases. He gives short accounts of some dozen cases of phthisis in which he believes the rays had a beneficial effect. As no notes are given as to the history of the patients after they left Dr. Sinapius, it is impossible to say how long the beneficial effect lasted. The patient's chest is bared, and he is placed in such a position that the rays fall perpendicularly. After 10 minutes exposure to a definite area the rays are thrown on to another part of the chest. The sitting lasts one hour, and is repeated every day for three weeks, or longer if necessary. In all the cases cough and expectoration were diminished, and sometimes completely arrested, and the physical signs, as revealed by auscultation and percussion, greatly improved. All the patients gained in weight, and the appetite was increased. A case of lupus of the face was treated for eight days; the rays were employed for ten minutes each day. Inflammation and suppuration occurred, which subsided after the treatment was discontinued; fresh granulations appeared, and ultimately a smooth cicatrix formed. The case had been previously treated by scraping and cauterisation. Cases of emphysema and bronchitis were also, it is said, treated with success. Dr. Sinapius does not believe that tubercle bacilli are destroyed by the rays, but that increased metabolism takes place in the lung tissue, and that under these conditions the lungs are better able to resist the invasion of the bacillus. The rays appeared to do no harm beyond causing some redness of the skin.

STUDIEN AUS DER PRAXIS FÜR DIE PRAXIS UEBER DIE BISCHER BEOBACHTETEN UNERWÜNSCHTEN NEBENWIRKUNGEN DES DIPHTHERIE-HEILSERUMS [Practical Studies for the Practitioner with special reference to the Complications occurring in connection with Serum Injections for Diphtheria]. Von Dr. SCHWABE. Leipzig: B. Konegan. 1898. (Demy 8vo, pp. 90. M. 2.40.)

DR. SCHWABE'S chief idea is to give all the complications that may arise subsequent to serum injections. Descriptions are given of the various rashes that may appear. One group of rashes makes its appearance on the first or fourth day after the injection, and rapidly vanishes. Another group comes out at the end of the third or fourth week. A third group appears ten days after injection. The two groups last mentioned are the commonest, and in these the eruption may simulate rubella, measles, or scarlet fever; in other cases it takes the form of erythema multiforme simplex with hæmorrhages into the skin, and erythema multi-exudativum. Papular eruptions are also common, but one of the most frequent is urticaria with or without pains in the joints. A petechial eruption is occasionally seen associated with a general hæmorrhagic diathesis. Pityriasis versicolor and herpes are also met with. Dr. Schwabe thinks that many of these eruptions occurred before the days of the serum treatment, but that they were not so carefully noted as at the present day. It is known that after injections of distilled water subcutaneously in certain cases, urticaria makes its appearance; how far the serum is responsible for these rashes remains, he thinks, an open question. The skin as well as the syringe should be cleansed before injecting.

DIE HYGIENE DES GEFÄNGNISWESENS; DER VOLLZUG VON FREIHEITSSTRAFEN IN HYGIENISCHER BEZIEHUNG [The Hygiene of Prison Life; the Effect of Confinement in its Relation to Hygiene]. By Dr. A. BAER, Senior Physician to the Plötzensee Prison, Berlin. Fünfter Band, zweite Abteilung. Jena: Gustav Fischer. 1897. (Roy 8vo. Pp. 256. M. 6.)

THIS treatise forms the thirty-fifth part of the *Handbook of Hygiene*, edited by Dr. Theodor Wezl, Berlin. The work consists of 245 pages and 5 tables. Dr. BAER divides his subject into three parts. The first deals with the death-rate in prisons. Statistics are given showing the influence of prison discipline on the death-rate, and a very interesting account of the endemic diseases met with in prisons, particularly night blindness, in which no fundus changes are seen; the cause is believed to be a form of toxæmia, perhaps similar to that met with in prison cachexia. All the infectious diseases have considerably diminished of late years except tuberculosis, which has increased. A full account is given of measures which have been carried out for the prophylaxis of tubercle; isolation is thought to be useless.

The second part treats of the external arrangements of prison life including ventilation, bathing, etc.; also the internal arrangements such as clothing, nourishment, and punishment.

The third part deals with the systems of punishment individually. The thoroughness with which the subject is treated is a sufficient guarantee of the value of the book. There are five tables of statistics extending over the last fourteen years, also, at the end of the book, an elaborate plan of a prison as it should be.

UEBER GEDEIHEN UND SCHWINDEN IM SÄUGLINGS-ALTE. [Concerning the Nourishment and Wasting of Infants.] Von Dr. O. HEUBNER. Berlin: August Hirschwald. 1898. (Demy 8vo, pp. 36. M. 1.)

THIS volume contains a lecture given by Professor HEUBNER on the foundation day of the Emperor William's Academy for Military Education, December 2nd, 1897. He commenced his lecture by pointing out the intimate connection that should exist between the army doctor and the pædiatrist. The first few years of infancy are the most important in the man's life, and unless the physiology and pathology of this period be properly understood, the strength of the army will undoubtedly suffer. In discussing the question of the normal amount of nourishment required for infants at various periods, he praised highly a series of observations published lately. In sixteen individual cases they found that the daily amount of breast milk consumed by normal infants during the first half-year was as follows: during the first 2 weeks, 500 grammes; till 6 weeks old, 750 grammes; at 7 weeks old, 800 grammes; from 7 weeks to half year, 1,000 grammes.

Dr. Heubner remarked on the low percentage of albumen in breast milk. The daily amount of albumen that a child three weeks old consumes, is from 8 to 10 grammes. Yet the rapidity of the growth of a child at this period is more active than at any other period. If 15 per cent. proteid be taken as forming the average amount in the infant's body (which was rather over the mark than under), then 975 grammes, or nearly 1 kilo. of proteid would be used up during the first year by a child of about 6.5 kilo. The child would be breast fed in the majority of cases till the end of the first year, so that in this case it would assimilate $3\frac{1}{2}$ kilo. of nitrogenous food. The child would scarcely use up a third part of this (2.6 grammes daily) for its growth, the remaining two-

thirds would go towards maintaining the existing nitrogenous materials of the body. Voit gives 120 grammes of proteid as a daily allowance for a muscular adult; this would work out per kilo. body weight as 1.7 gramme per day.

According to Dr. Heubner's observations children require a proportionately smaller amount of proteid. For instance, a child of nine months, weighing 8 kilo., requires a daily supply of 6 to 7 grammes proteid in the breast milk; this gives a proportion of 0.8 gramme per 1 kilo. weight, in fact, half the amount given in Voit's table. The daily amount of fat, sugar, and water required has also been thoroughly investigated.

The subject of wasting is next considered. Dr. Heubner is in accord with other observers in believing that the great cause is artificial feeding; too large quantities of milk are given, and this causes dilatation of the stomach; milk is always present in the stomach between the meals, and bacterial infection next ensues. Dr. Heubner adds that he has lately treated several cases of wasting by emptying the stomach three hours after a meal, and so leaving the stomach empty for the next meal. The cases did very well, and this proceeding gave marked relief to the patients.

Mediterranean, Malta, or Undulant Fever. By M. Louis Hughes, Surgeon-Captain, Army Medical Staff. London: Macmillan and Co.; New York: The Macmillan Company. 1897. (Roy. 8vo, pp. 352. 7s. 6d.)

The importance to Great Britain of the subject of this excellent monograph is considerable; for, between navy and army, there is a force of upwards of 25,000 British sailors and soldiers permanently within the endemic area, the Mediterranean basin, and more especially in Gibraltar, Malta, and Cyprus. Moreover, it is not at all improbable that future research will show that the same disease occurs in India and in other of our tropical and subtropical possessions. Although the mortality attending Mediterranean fever is small (2 per cent.), the suffering it gives rise to is considerable, and, owing to its long duration, debilitating effects, and frequency, it is a common cause of invaliding, and, consequently, of inefficiency, and of expense to the country.

Surgeon-Captain Hughes clearly shows that the old view—one which is not yet wholly abandoned by some conservative spirits—that this disease is but a form of typhoid or of malaria, is untenable. He shows that, on the one hand, the characteristic intestinal lesions of typhoid and, on the other, the plasmodium malariæ are equally absent in all cases of this disease; moreover, he points out that there is no malaria in Malta, the very spot where this fever is most frequently encountered.

A great deal has been written on Mediterranean fever since Marston, in 1859, first clearly differentiated it as a special disease, and many important facts in its symptomatology and morbid anatomy have from time to time been made out. A powerful impetus to renewed study of the subject was given by Surgeon-Major Bruce's discovery of its specific cause—the micrococcus Melitensis. Gipps and Hughes have done much to confirm and extend Bruce's observations on the specific germ, and through their labours the subject may now be said to have entered on a more scientific phase. Surgeon-Captain Hughes has done well, therefore, to bring together at the present stage a complete history of Mediterranean fever. He has given us an admirable piece of work, embracing practically everything of importance to future students and practitioners. The task must have been a laborious one, seeing that the literature is by no means scanty and, moreover, is scattered over a great variety of publications in many languages. In addition to a careful digest of other men's work Surgeon-Captain Hughes has given us an excellent summary of his own extensive clinical and pathological experience. The remarks on geographical distribution and on diagnosis should be carefully studied by practitioners abroad, and the anomalous fevers met with in India and elsewhere in the tropics investigated carefully in the light of this work as to the possibility of their being identical with or allied to Mediterranean fever. Should Professor Wright's sedimentation and agglutination test with dead cultures of micrococcus Melitensis prove reliable we may expect soon to have fresh light on many of these obscure fevers which, at present, are so great a puzzle to the clinician in India.

It is to be regretted that some better name than undulant fever has not been found for this disease. To a certain extent the term is descriptive of many cases of Mediterranean fever; but it is not so of all, and it is quite as applicable to certain forms of malarial fever, of tuberculosis, of typhoid, of septic and other diseases. Perhaps some of our readers may suggest a better name than that selected by the author of this book which, in other respects, we heartily commend to our readers, more especially to navy and army surgeons and to all practitioners in the tropics and subtropics.

Die Behandlung des Nachgeburtszeitraumes. (The Conduct of the Third Stage of Labour.) Von Professor Dohrn. Jena: Gustav Fischer. 1898. (Roy. 8vo, pp. 32. M. 1).

Professor Dohrn has written this little work because his forty years' experience has taught him that the practice of medical men as to the management of the third stage of labour is capable of much improvement.

The author first describes the normal process of separation of the placenta and membranes. His account cannot be regarded as up to date, for he apparently has not read the papers on the subject contributed to the Obstetrical Society of London by Dr. Champneys—papers which form the present high-water mark of our knowledge on this subject, and which cannot be ignored by anyone who would adequately treat the question.

The author then describes the methods of procuring the expulsion of the placenta; first the old way of pulling on the cord; then Credé's method. This he differentiates from the Dublin method, the credit of which he gives to Spiegelberg, although it was used in Dublin long before Spiegelberg was born. Perhaps Dohrn is a patriot rather than a cosmopolitan, and so thinks that he who introduces an improvement into Germany is to be honoured, rather than the mere originator in a foreign land. After describing the Credé method, Dohrn strenuously warns against too great haste in its application. He says; "One often hears that the practitioner has not time to wait for the spontaneous expulsion of the placenta." But, he replies, he should always have time for a woman in labour. The methods of laying the hands on the uterus are described with what one may call supererogation of detail. Dohrn endorses Credé's caution against trying to press out the placenta when the uterus is not contracted.

After describing the management of the natural third stage of labour, Dorhn gives directions for the separation and extraction of an adherent placenta, the danger of which proceeding he rightly emphasises. He considers the "strictures" of the uterus which various writers have described. He has never seen one, nor have they ever occurred in the clinics to which he has been attached.

Lastly, he considers *post-partum* hæmorrhage. The methods of making the uterus contract are, he thinks, well known; he therefore describes only some newer remedies, the value of which he thinks is not generally known, namely, hot water injections and plugging the uterus with iodoform gauze. He approves of both. He does not mention what some think more trustworthy than either, namely, bimanual compression of the uterus.

It will be seen that Dohrn's monograph forms a trustworthy guide to sound practice in a very important matter. We have no doubt its influence upon German practice will be good.

Inaugural Address on Medical Geography as an Aid to Clinical Medicine: also Phthisis and the Isle of Man. By Alfred Haviland, M.R.C.S., etc. London: Jno. Bale, Sons, and Danielsson. (Demy 8vo, pp. 30. 1s.)

These two reprinted addresses represent new instances of the author's well-known lines of research. It is unfortunate that there is not more work of this class to which Mr. Haviland has devoted his life, and that no official sanction or pecuniary aid is given to it. The two addresses, so far as they relate to phthisis, traverse to a considerable extent the same ground. They are accompanied by a map of the registration districts of the Isle of Man in six colours, according to the average death-rate from phthisis during 1881-90.

The results, so far as physical, geological, and atmospheric conditions are concerned, confirm those found to hold true in England and Wales. The death-rate from phthisis is excessive in the Isle of Man. During 1881-90, it was 27.72 among males and 28.55 among females per 10,000 living, as compared with 18.46 and 16.08 in England and Wales. The Registration of Deaths Act was first promulgated from the ancient Norse Tynwald Hill on July 5th, 1878. It is quite possible that no accurate subdivision of death-rates in groups of ages is practicable. Otherwise the value of Mr. Haviland's results would have been enhanced by such subdivision. Mr. Haviland is opposed to large sanatoria for consumptives, and recommends as an alternative the building of small cottages in carefully-selected districts, constructed upon the rotary or turn-table principle so that they could be turned without difficulty to any point of the compass required, to ensure free currents of fresh air.

The cancer statistics for the Isle of Man similarly support Mr. Haviland's conclusions derived from facts in England on a wider basis. Attention is drawn to the accuracy of the induction made on this subject, so that not only can one infer from a map of the physical geography and geology of a district its relative cancer mortality, but, conversely, the truthful delineation of the distribution of cancer gives a clue to the physical geography and geology of a country. There are in the Isle of Man no extensive river basins subject to floods, but there is elevated ground and a central valley receiving the drainage of the northern and southern marshes. This central valley has an excessive death-rate from cancer.

Similarly, heart disease is much less fatal in the parts of the island lying in the axis of the island corresponding to the lines of the south-west and north-east prevailing winds than in other parts of the island. We commend Mr. Haviland's pamphlet for careful perusal by all who are interested in the subjects with which it deals.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Hydrocele Injection Apparatus.—Messrs. Arnold and Sons (West Smithfield) have manufactured at the suggestion of Dr. Cuthbert Bowen, of Bridgetown, Barbadoes, West Indies, a hydrocele injection apparatus, the barrel of which is graduated, so that the exact amount of fluid drawn up is indicated. The piston rod is similarly graduated and provided with a sliding stop ratchet, so that not more of the fluid can be used than is intended. The cannula screws on firmly by threads through the syringe so that none of the injection fluid is lost. The trocar screws into the cannula, and when the point of the trocar protrudes to the extent regulated by the threads, the trocar and cannula are so closely adjusted that there is no collar; for this reason it is more easily introduced and causes less pain. The projecting horns of the syringe render it easy to make the injection with one hand.



The Déchery Automatic Cautery.—Messrs. John Weiss and Son (287, Oxford Street, London, and 42, King Street, Manchester) have submitted to us an extremely ingenious automatic cautery. In this the bellows and benzoline reservoir of the ordinary thermo-cautery have been dispensed with. When once started the instrument works automatically. A minute stream of ether, projected into the previously heated platinum knife or point, supports incandescence which can be kept up for a period of thirty to forty minutes with a consumption of ether of about half an ounce. The general appearance of the instrument is shown in Fig. 1. The part grasped by the hand is covered by a non-conducting material. The instrument is brought into use as follows: The screw stopper (O. Figs. 1 and 2), is loosened by the key H and removed; the reservoir is then filled with ether at 720, and the stopper replaced; the milled head, M, is then screwed firmly home, and the platinum point (that is, F or F[1]) intended for use is adjusted. That part of the instrument which contains the vapour chamber, V, is then held in the flame of a spirit lamp for about two minutes, when small flames will be seen to issue from the air holes below the platinum part. The valve is then opened by slightly turning the milled head, M, and the point held in the flame until the sound of rushing air is heard. If any flame now remains it is blown out, and the platinum will continue to glow until the whole of the ether is exhausted. By manipulating the regulating screw, M, the temperature of the point may be modified within certain limits. A shows the rod which traverses the handle with the regulating screw M.



Fig. 1.

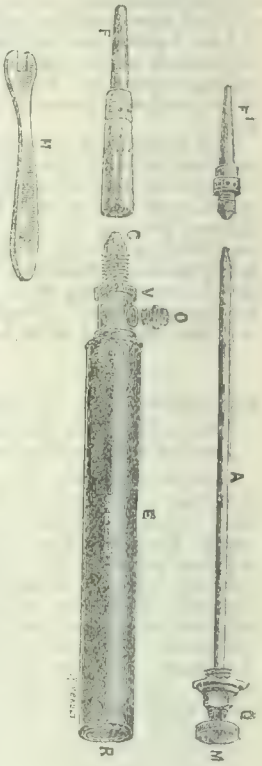


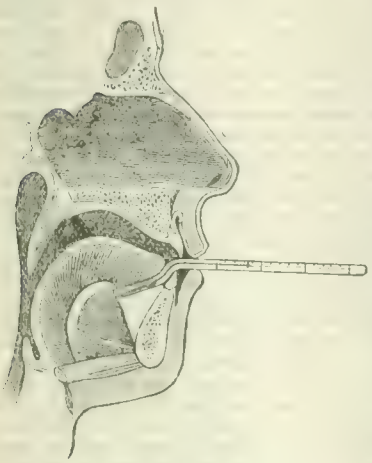
Fig. 2.

Aspirating Instrument.—Messrs. Arnold and Sons (West Smithfield) have made for Mr. L. B. Burnett, House-Surgeon to the Royal South Hants Infirmary, a modification of Potain's aspirator and Dr. Garratt's siphonage instrument for tapping the chest. It differs from a former model by the fact that the mount for the cannula is a single tube and stopcock. This permits the whole tube to be cleared, and also renders it possible to shut off the pleural cavity completely while the instrument is being changed from an exploring needle to an aspirator. After the trocar and cannula have been introduced in the ordinary way the trocar is withdrawn and the stopcock turned off. The exploring syringe is then connected by a piece of india-rubber tubing to the adaptor. When the exploration has been completed the tap is again turned off, and the aspirator or siphon tube applied by means of another adaptor. A metal test tube is provided for boiling the metal parts and bull-dog clamps for the siphon tube.

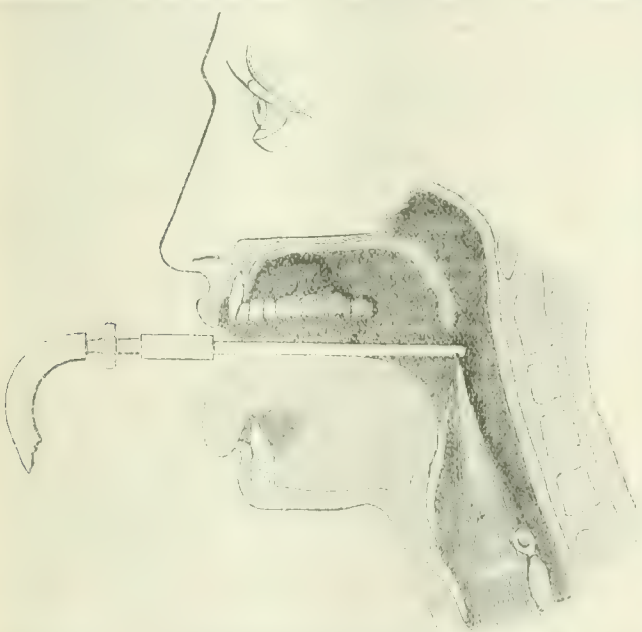
Improved Razor.—Our attention has been called to a razor of German manufacture called Ern's Reform Razor, for which Mr. G. W. Kiderlin, 27, Milton Street, E.C., is the London agent. It appears to present certain advantages which may render it useful in hospital practice. It is a hollow ground razor, and it is stated that its construction is such that it does not require grinding. Further, the back has been hollowed so that the razor is light, there is no tendency to fall back

when open, and the blade is more easily manipulated. Trial shows it to be a good razor which stands rough work.

Clinical Thermometer.—Messrs. Down Brothers (21, St. Thomas's Street, London, S.E.) have made, at the suggestion of Mr. A. H. Vernon, of Boscombe, Bournemouth, a clinical thermometer of the form shown in the accompanying diagram, from which a general idea of the instrument may be gathered. As will be seen, it has a double bend, and is designed to fit comfortably in the proper position under the tongue. The idea is undoubtedly ingenious; but the specimens sent to us were too large, so that they exercised considerable leverage, and were thus rather uncomfortable in use. If the thermometer was made lighter and rather more sensitive it would probably meet with general approval, although the form of the case is a little inconvenient for the pocket.



Laryngeal Auto-insufflator.—Messrs. Wood and Son (Manchester) have made for Dr. Eugene S. Yonge, Assistant Medical Officer of the Manchester Hospital for Consumption and Diseases of the Chest, an insufflator, which consists of a straight tube with a receptacle for powder at one end and a small hole like the eye of a catheter at the other. The aperture must be kept down when the tube is introduced,



and this can be ascertained by noting the position of a small ivory knob. The instrument is passed along the tongue until the soft palate is touched; a deep inspiration is then taken, and simultaneously the bellows compressed, so that the powder is partly aspirated and partly blown into the larynx. The advantages claimed for the insufflator are that it can be used by the patient himself, that the end is not liable to be jerked when the powder is insufflated, that the powder is evenly distributed, and that the apparatus is sold at the price of 5s. 6d.

ARCHÆOLOGICA MEDICA.

XLIV.—SIR JOHN FLOYER, THE TELLER OF THE PULSE.

IT seems somewhat singular at first sight that the old complex Galenic art of feeling the pulse did not include the more elementary art of counting it until the beginning of the last century. But a moment's reflection shows that the pulse could not be counted until there was a tolerably accurate method of measuring small divisions of time. Sandglasses and watches and clocks, whose least subdivisions, measured by a single hand, consisted of one-forty-eighth part of an hour, were ill-adapted for the purpose. It is to the credit of Floyer, therefore, that he tried to improve the old art of feeling the pulse by using a pulse watch, "made and sold by Mr. Samuel Watson, Watchmaker in Long Acre, by Sir John Floyer's direction."

Floyer was born, says Anthony Wood, at Hintes, in Staffordshire, son of Richard Floyer. By the kindness of the Rev. W. F. B. Hayter, the present Vicar of Hints, the following entries relative to Sir John Floyer have been copied from the parish register:

> Richard flloyer and Elizabeth Babington were married at Manchester als Mancester, in ye county of Warwick, on ye one and twentieth day of March, 1645, by Mr. Abell, in ye presence of Busans (?) Endsor, Robert Smart et aliis.
>
> John flloyer, second sonne of thaforesd Rich. and Eliz., was borne the 6th (?) of Aprill, 1649, Wendesday (*sic*)

Mancester mentioned above is a small parish close to Atherstone, and now commonly called Mancetter.

Floyer matriculated at Queen's College, Oxford, June 10th, 1664, aged 15 years; took the degree in arts in 1668, that of Master being completed February 23rd, 1670-1. He entered on the physic line, and took the degrees in that faculty (Bac. Med., 1674; Med. Doc., 1680). He practised in the city of Lichfield, where on April 5th, 1680, he was licensed to marry Mary Fleetwood, a widow; was knighted, but whether for political or other reasons is not now known (January 24th, 1684-5), much esteemed in those parts, and died February 1st, 1734.

The date of Floyer's birth was long looked upon with suspicion, though the recently published registers of the University of Oxford settled the question. Dr. Johnson, the lexicographer, writing to Mr. Langton, March 27th, 1784, says, complaining of his asthma: "Sir John Floyer, whom the physical race consider as an author of one of the best books upon the affection, panted on to 90, as was supposed; and why were we content with supposing a fact so interesting of a man so conspicuous? Because he corrupted, at perhaps 70 or 80, the register, that he might pass for a younger man than he was. He was not much less than 80 when, to a man of rank who modestly asked his age, he answered, 'Go look,' though he was in general a man of civility and elegance." Dr. Johnson was able to form a fairly accurate estimate of Floyer's age, for his father Michael Johnson published his first book, and we may still read on its title page: "The Touchstone of Medicines, printed for Michael Johnson, bookseller, and are to be sold at his shops at Litchfield and Uttoxeter, in Staffordshire, and Ashby-de-la-Zouch in Leicestershire, 1687." Besides, it was Floyer who sent Johnson to London that Queen Anne might touch him for the cure of his scrofula.

The Treatise on Asthma is thrown into the form of a letter to John Thorp, M.B.Oxon., F.R.S., "concerning the Rupture in the Lungs which is the cause of the Asthma in Mankind, and of the broken Winds in Horses, and of the Crocke in Hawks." It is interesting as containing the first clear description of emphysema in the following words: "That there is such a rupture as I have mentioned in broken-winded horses I am certain, for I have dissected five of them, and in every one of them I found such bladders full of air upon the exterior skin of the lungs, and there appeared not any other evident cause of the broken wind in those horses. The cause of this rupture may be either hard drawing or straining the Breath or a vehement cough."

Floyer was a prolific writer; besides the Treatise on Asthma he wrote an essay on the Galenic art of preserving old men's health, and (with Edward Baynard) a history of cold bathing, which ran through six editions between 1705 and 1732. Floyer

after recommending a general method of bleeding and purging before the patient uses a cold bath, continues: "I have commonly cured the rickets by dipping children of a year old in the bath every morning: and this wonderful effect has encouraged me to dip four boys at Lichfield in the font at their baptism, and none have suffered any inconvenience by it."

But the most interesting of his works, and certainly the most important is "*The Physician's Pulse-Watch, or an Essay to Explain the Old Art of Feeling the Pulse, and to Improve it by the Help of a Pulse-Watch*, published by Samuel Smith and Benj. Walford, at the Prince's Arms in St. Paul's Churchyard, 1707." The preface to the work begins: "I have for many years Try'd Pulses by the minute in common watches and pendulum Clocks, when I was among my patients; after some time I met with the common Sea-minute glass, which I used for my cold bathing, and by that I made most of my experiments; but because it was not portable I caused a Pulse-Watch to be made, which run sixty seconds, and I placed it in a box to be more easily carried, and by this I now feel Pulses, and since the watch does run unequally, rather too fast for my minute-glass, I thereby regulate it; and add 5 or 6 to the numbers told by the watch. I also made a half-minute glass, whose case turns like a dark lanthorn, and that was portable and useful in feeling my patients' pulses, but that differed 4 beats from the minute-glass, which I always kept at home as my standard. After I had found this useful measure for pulses I read over all that Galen had writ about the Pulse, which I epitomised. . . . . After by my Pulse watch I had found the most healthful pulse I easily discerned what were the exceeding and deficient pulses."

Sir John Floyer considers "the most useful distinction of pulses and the most certain is the difference we observe of the numbers of the pulse in a minute. The most natural pulse will have from 70 to 75 in a minute in perfect health; if the pulse run above those numbers the body is overheated, and the blood and spirits too much rarefied, and the pulses are greater, quicker, and more frequent from 75 to 120 pulses in a minute; and all these numbers are the exceeding Pulses, because they exceed the natural numbers in a healthful pulse. And this happens in hot constitutions and hot diseases; and the contrary, which fails in the number of pulses, I will call a deficient pulse, which happens in cold tempers and cold diseases. These pulses are so deficient in magnitude, force, celerity, and frequency, and they are weaker, softer, more slow and rare. I have observed them from 70 to 75." Moreover, he made the accurate observation that "the Physician must measure the pulse by his own Respiration, there being naturally 4 or 5 pulses to one respiration."

Floyer professed a great reverence for the Chinese art of feeling the pulse, for he says: "A Chinese Emperor writ about the pulse 4,292 years ago, since which the Chinese have been famous for pulses," and he endeavours to "prove first that they have a real great knowledge in that practice, and that they may well build a Practice of Physic on their art of feeling the Pulse." He confesses, too, that "the Chinese take half an hour to feel the pulse, and in less time 'tis almost impossible to consider the differences of the pulse and the several causes of its alteration..... and the Chinese lay the breast bare to observe the skin or motion of the breast in Respiration."

Floyer's writings on this subject breathe a true spirit of scientific inquiry, for he counted the pulse under every available condition, and he sought to eliminate error and to modify his results by such experimental methods as were then available.

In the Cathedral Library at Lichfield there is an old MS. book labelled "Receipts collected by J. Floyer, M.D.", on the inside of the cover is written in Sir John's handwriting, "Country Receipts, collected by mee John ffloyer," and lower down, "Facile parabilia. In this are Collections from our Country Receipt Books and salmon (?) which I designed to have reduced into classes by yr physical tastes." The passage is not very legible, but the word "salmon" is fairly distinct. Is there some dialect word of Saxon origin allied to the German "Sammlung, a collection," used to denote such lists of remedies as are copied into this book? Below this passage are the Cathedral book plate, number, etc. On the next page is written, "MSS. No. 12 Bibliothecæ Lichfeldensis ex dono dñi Johis Floyer Mil. M.D.", and then in paler ink, and in a different hand (not Sir John's), a table explaining the signs used in the receipts. Five pages are occupied by an index relating to the first sixty-eight pages of the book, which contain in the same elegant handwriting a number of receipts attributed to various persons, such as "Mrs. Cooper's Medicine for ye Headache," "Dr. Jo. Holloway's receipt for ye Fluxe," to which is added "Certain and often Tryed." This remedy consists of a decoction of watercress seed in milk. "A most excellent Medicine for a Consumption often prooved" is made by boiling "a pint of ye kernells of Hazell Nutts blancht in a pottle of good Muscadine until halfe bee consumed, and take a pretty good draught morning and evening, fasting 2 houres after. This hath often been prooved and never failed." There is "Mr. Wall's Receipt for ye Cough and Tisick of a long continuance," which we are quaintly told was "experimented upon Mr. Walls man of 60 and others." As the ingredients are milk, ale, pennyroyal, hyssop, and white sugar, it is probable, and is certainly to be hoped, that they were none the worse for it. After many remedies are affixed the words "pbatum," that is, probatum. An "excellent" remedy for the "scurvy" is credited to "Aunt Russell," one for the stone to "my unkle Fleetwood," one for the green sickness to "Bp. Wright's lady," the last not so bad, as it is a mixture of iron, aloes, spices, and sugar powdered and kept dry, of which as much as will lie upon a sixpence is to be taken night and morning. Many of the remedies are decoctions of herbs, of which some are still used, others are now out of credit, but none have maintained the reputation attributed to them in these receipts. For example, an infusion in Malaga sack of liver wort, dandelion root, and elecampane "has done great wonders in such cases of consumption as never were knoune before." Many are of the nature of charms; for example, garden worms to be tied in a linen bag to the navel of a child as a vermifuge, the "fur from the belly of a live boar" boiled in aqua vitæ and applied to the soles of the feet as a remedy for convulsions in children. Others again are at least contrary to our modern taste, such as the following, which is curious enough to be worth quoting *in extenso:* "Captain Herbert, Brother to ye Ld Cherbury, had a flux called ye Irish Bunnion, 3 years, and went frequently 24 times in so many hours. Dr. N. had him in cure but could not stop it and upon his desire to go to ye physitians at London sent his prescriptions up with him wch were very well approved of, and receiving no benefit there into ye country he came again and by chance mett with an old woman who taught him this medicine. To take a boar and give him his belly full of any meale he will eat overnight; put him in a convenient roome; next morning ye Patient is to drive him about with a stick till he dungs wch take up and straine into a glass of ale, which he is to drink; and to do so for three mornings together. It cured him perfectly. Dr. Needh (? Needham) and Fr. Fitzherbert told me this Dec. 10th, 69."

These sixty nine pages do not seem to have been written by Sir John Floyer, whose rough and very illegible MS. makes up all the remainder of the book except twenty pages (in a clerkly hand, not so elegant as the former part), devoted to medicines for horses, cows, calves, and sheep. Sir John's notes are very brief, very miscellaneous, and very difficult to read. He adds some remedies for horses, dogs, etc., to the above-mentioned list, and then gives "Receipts Collected out of an Old Booke lent me by Mrs. Walmesly." These occupy several pages, and are followed by another list of veterinary medicines; then "Mrs. Rowe's Receipts," which also on examination prove to be, at least in part, for horses. Then follow a few miscellaneous notes, among them "My Syrup of Verjuice," a page of extracts from Columella, *De re Rustica*, on the diseases of horses, a good many pages of "Lord Cesterfield's book, and by hand transcrib'd into other bookes." In the last, under diabetes, we find "acorne powder, bole, and sugar of roses," for bleeding, "bole, alum, white of eggs and vinegar," "urine stopt a lilly roote boyled in wine or ale." Then we have "my syrup of snailes for a consumption" and "a receipt for a running of the reynes" (that is, gonorrhœa for which by the way there is an abundance of receipts, this one being "powder of acorne

cuppes in cinnamon water") with a "collection out of an old booke," and "some of Ratcliffe receipts amended." For diabetes again we find "decoct of bramble berryes unripe or decoction of oake barke with sloes and (?) in coole ointment to the backe." He did make an attempt at classification according to the taste as mentioned on the cover, tabulating astringents, acids, mucilaginous tastes, sweet tastes and oyly, bitter tastes, nauseous bitters purging or vomiting, purgative bitters, aromatic acids, acrid tastes, acrid gums, fœtids, pungent noxious tastes, corrosive tastes or burning, salt tastes, dry earthy tastes, bones and stones, mucilaginous tastes (again), sour tastes, sweet tastes, oyly or unctuous taste, neutral salts, volatile salts, styptic salts, styptic earths, etc., and under these headings a repetition of the old remedies. There is a passage headed "Bleeding in ye small-pox from exptan (*sic*): ferdinandus," which gives the indications for bleeding in this disease, directions how to give a hot air bath, and after some other remarks concludes with these two valuable hints "often washe the hands and feet, this helpes digestion. Smoaking tobacco helpes stammering"! More horse medicines and extracts from Hippocrates complete the book, but we are rather tired of Sir John's crabbed hand, and fear our readers may be weary of this account of what a learned and eminent physician two hundred years ago could regard as valuable matter. He would have made an excellent professor of materia medica, and if he had lived in these days would no doubt have edited the *British Pharmacopœia* and have written on pharmacology.

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THE MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of this Society was held on May 27th, at 429, Strand, London, W.C.

There were present Dr. de Havilland Hall (in the chair), Dr. F. J. Allan, Mr. F. S. Edwards, and Dr. W. Knowsley Sibley.

The accounts presented showed that during the first four months of the current year the Society had paid away in sickness claims more than in any previous period of the same length. About one half the claims had arisen from influenza, and of these the cases which produced the longest periods of incapacity were those caused by the sequelæ of influenza. Nervous prostration had compelled not a few members of the Society to cease work this spring, and in some cases there was reason to fear that a considerable time must elapse before the patients could hope to resume professional duties.

The claim record for the month of May showed a great improvement, and there was every reason to hope that the Society would, as usual, more than recover during the summer months the heavy amount it had disbursed for sickness claims through the winter and spring.

Thirteen members were on the half-pay list, and there was not much hope of permanent improvement in any of these cases. A short statement had just been issued showing the large amounts that some of the "chronic sickness" members had received from the Society. In one case the member had been continually on the funds for more than thirteen years, and had received more than £1,500. Another had received £980. Notwithstanding these heavy claims, the general financial condition of the Society was very satisfactory. In no year of its working had the Society paid in claims so much as was provided for in the table of premiums charged. In 1893-4 the sum of £5,000 was returned as a bonus to the members, and it was hoped that when the valuation was made at the end of this year a considerable surplus would be found to exist.

Prospectuses and all information can be obtained on application to Mr. F. Addiscott, Secretary Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

NOTES ON HEALTH RESORTS AND SANATORIA.

VITTEL.

By W. T. LAW, M.D.

VITTEL is situated in a picturesque valley of the Vosges, about three miles from Contrexéville. It is probable, from Roman remains found near the springs, that the waters were used by the ancients, and it is supposed that the name Vittel is derived from Vitellius, a Roman governor who dwelt here. The town is a municipality of about 1,600 inhabitants, situated at an elevation of about 1,100 feet. The springs, which have possessed local celebrity for upwards of forty years, are now the property of the Société Anonyme des Eaux Minérales de Vittel, which is most energetically developing what is already a very attractive health resort. Its property comprises several large hotels, a casino designed by Garnier of Paris, baths, covered promenades, water drinking saloons, shops of various kinds, etc., all situated in a park of 50 acres, where all kinds of outdoor games are provided, including pigeon shooting and cycling. A band plays twice daily in the park during the season, which extends from May 25th to September 25th. The best route to Vittel is from Paris—about six and a half hours by *train de luxe* during the season—*viâ* Belfort or Avricourt, or from London—about eighteen hours *viâ* Calais and Chaumont. Various excursions may be taken from Vittel—the forest of Chèvre-Roche, Gérardmer, Bussang, etc., but one of the most interesting is Domrémy, the home of Joan of Arc, whose cottage is shown to visitors. At Vittel there are ample space, charming promenades, shady walks, lakes, and fields, with an uninterrupted view of the Vosges mountains in the distance.

The springs of Vittel are of the cold saline variety. The four chiefly employed are: (1) "Grand Source"; (2) "Source Marie," of which it is only necessary to say that it resembles No. 3, but is less mineralised; (3) "Source Salée"; (4) "Source des Demoiselles," a mild chalybeate. I append analyses of the two most important springs, namely, No. 1, the "Grand Source," and No. 3, the "Source Salée." As the former resembles the "Source de Pavillon" at Contrexéville, the following tables enable a comparison to be made.

	Vittel ("Grand Source"). Per 1,000 Parts.		Contrexéville ("Source de Pavillon"). Per 1,000 Parts.
Sulphate of lime	0.4400	.....	1.165
Sulphate of magnesia	0.4320	.....	0.030
Sulphate of soda	0.3260	.....	0.236
Bicarbonate of lime	0.1850	.....	0.402
Bicarbonate of magnesia and soda	0.0750	.....	0.035 (magnesia)
Chlorides of sodium, potassium, and magnesium*	0.2200	.....	0.010 (sodium and potassium)
Arsenic	trace	.....	trace
Iron	0.0100	.....	0.007
Bicarbonate of lithium	0.0014	.....	0.004
Iodine	trace	.....	trace
Free carbonic acid ⅓ per vol....	—	.....	—

* Chiefly the latter.

Though small amounts of other substances, such as aluminium, silicon, strontium, and magnesium phosphate were also present, the above table sufficiently indicates the character of the two springs.

The "Source Salée" (Vittel).

	Per 1,000 Parts.		Per 1,000 Parts.
Carbonic acid	0.2835	Sulphate of lithium	trace
Carbonate of lime	0.3188	Chloride of sodium	0.0155
Carbonate of magnesia ...	0.0028	Silicate of sodium	0.0342
Carbonate of iron	0.0005	Silicate of potassium	0.0110
Sulphate of lime	1.4215	Organic matter	0.0118
Sulphate of magnesia	0.8216		

A large bottling trade in these waters is carried on. The waters have a reputation in chronic gout, renal calculus, cystitis, cystic catarrh, enlarged prostate, some forms of urinary incontinence, gouty glycosuria, etc. ("Grand Source"), while in gall stone, constipation, hepatic troubles, and uterine disorders the "Source Salée" is indicated. Both these waters are tasteless and pleasant to take, a very great advantage where large quantities must be taken. From personal experience of several pints daily, I can testify that they are very digestible and easily borne by the stomach. This is a point of the first importance in view of modern theories of uric acid formation. The researches of Luff and others render it highly probable that the seat of uric acid formation is the kidney itself, where a conjugation of glycocine with urea takes place. By very freely flushing the kidneys and encouraging diuresis, the newly-formed uric acid or its factors may be washed out of the glands before there is time for its appearance in the blood as a quadriurate. I do not suggest that this is the sole explanation of the use of mineral waters in the gouty state, as their efficiency probably depends in some degree on their chemical composition and general physiological effect as well as upon other salutary influences surrounding the invalid at a foreign spa; but I believe the digestibility of any given mineral water is no less important than its chemical constitution. In both these respects the springs of Vittel deserve commendation. An English physician, Dr. Goodman Marucheau, of Paris, practises at Vittel in the season.

THE Queen has forwarded a donation of twenty-five guineas towards the fund now being raised for the new building of the Royal Ear Hospital, Soho, of which institution Her Majesty has been patron since 1841.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 18TH, 1898.

MODERN SURGERY IN WAR.

THE announcement that it has been found possible to bring home some of the wounded in Egypt without changing the aseptic dressings applied when the wounds were first treated will have been heard with great satisfaction. It is, in fact, a triumph for good surgery and good organisation, and proves that military surgery has shared to the full in the remarkable advance in surgical ideals and methods which the present generation has witnessed. The ideals which surgeons have had before them in regard to the healing of wounds at various epochs form, indeed, a very interesting part of the history of surgery, and especially of military surgery. Very great changes have taken place in the standards set up, even in our own times, and nothing has ever done more to diminish the sufferings of the wounded than the introduction of aseptic methods, which render it not only unnecessary but undesirable to resort to the frequent dressing of wounds which used to be obligatory. Many surgeons who have hardly yet reached middle life can remember the anxiety with which some Nestor of his youth looked out for a free discharge of what he would call "laudable pus" from all but the simplest wounds. To this exudation he looked to carry off, especially in lacerated wounds, all the bruised and torn tissue whose vitality was destroyed by the violence inflicted. His ideal was only realised when dressings were rapidly soaked with discharges so that they needed to be frequently changed; and he encouraged this state of things by poultices and fomentations in great variety.

Later on, in the earlier days of the antiseptic period, the hope of surgeons appeared to lie in the destruction by chemical antiseptics of all the forms of low vegetable life which under ordinary conditions gained access to most wounds, and in the carrying off, by means of numerous drainage tubes all blood and exuded serum which might have formed a favourable soil for these organisms. But the drawbacks of this treatment soon became apparent. In the laudable efforts to destroy the germs which were correctly recognised as the cause of dangerous inflammation, conditions were produced which were actually hostile to the healing of wounded tissues. The chemicals employed not only destroyed the microbes but also many of the tissue elements. And not only had the latter to be shed off before healing could take place, but in the process of elimination, and under the stimulus of the germicides, increased exudation took place, which required elaborate provision for the escape of fluid from wounds, and the reception and disinfection of the latter in special dressings which called for frequent change, lest they in their turn should become the soil for organic life. This, though tending in the right direction, and affording a necessary transition from the older methods, was based upon a false ideal. The chemicals irritated the wounds; the secretion was consequently greater. This called for frequent interference with the injured part, and consequent risk of fresh infection from without at each exposure. But not only this, but one of the greatest factors in healing, namely, physiological rest, was not maintained, and the debilitated patient was put to much physical pain as well as psychical distress, both serious depressants of vitality in themselves.

Our present ideal is different. The highest aim of wound treatment is now to see that Nature is left as much as possible to herself. To this end we exclude ferments from wounds by every known means applied to the surrounding air, the dressing utensils, instruments, and hands brought in contact with the injured part. We do as little as possible to the actual wound, whether with antiseptics or by manipulation, and so secure a maximum of rest and a minimum of pain and fright to the patient; and if by these means the wound is left clean and at rest Nature will do the remainder.

The case of an excision of a joint well illustrates this change which has come about. In our fathers' days, if such an operation was attempted at all, which, on account of its great mortality, was rare, free suppuration was provided for as a matter of course for weeks and months, and the patient suffered untold misery all through this long after-treatment on account of the constant dressing of the wound and the physical and mental unrest thereby entailed. Then came the blessings of the antiseptic period, with the elimination of infection, but with the drain tubes and the still frequent dressing and interference with the damaged part. We have now arrived at a point where by the aseptic treatment wounds are left in a state of rest, untouched until healed under one dressing in nine out of ten cases. It is, indeed, becoming a very common experience to see these large and complicated wounds of joints, as well as of other parts, left absolutely undisturbed under the dressing put on at the operation until the tenth day. The dressing is only then removed because the wound has been perfectly healed. Indeed inconsiderate patients are often dissatisfied because so little has been done for their wound. They think it ought to have been looked at at least once every day or so. And when the surgeon who has put forth all his powers based upon his knowledge of pathological and physiological processes, as well as the experience of countless cases, points triumphantly on the tenth day to an absolute union without a spot of pus and without drainage, the patient often quietly says, "Yes; I have excellent healing flesh," and ignores his part altogether, ignorant of the fact that only the surgeon's conscientious and patient carrying out of countless details in principle and manipulation have saved him from all the disasters of sepsis. In some cases, even, he is reproached with having done so little, and consequently receives but scant gratitude.

In no branch of surgery has this rapid evolution of ideals been more strikingly illustrated than in the treatment of bullet wounds. The poultice, or frequently changed water

dressing, with all its foulness and risk, gave way at first to the cumbrous ritual of the antiseptic period, with its greatly reduced risks of septic infection, but with its constant change of dressings and frequent irrigation with chemicals. Then, with the more perfect knowledge of the nature of infection, and of its sources, came the knowledge that these could be eliminated by attention to the perfect cleansing of the media which must almost necessarily come into contact with wounds sooner or later. An ideal has thus been reached which for simplicity and the excellence of its results would excite our fathers, could they see it, almost to incredulity.

The modern soldier now carries in his knapsack simple simple antiseptic dressings, to be applied at once by himself or his comrade to his wound. The aim of this dressing is less to act as a germ-destroying covering for the wound itself that to protect the latter from the access of microbes from without, and with such a dressing the wound can be left untouched for days, and frequently to complete cicatrisation with perfect impunity. Indeed, one of its greatest advantages is that with it exposure of the wound, with all its risks of infection, is rendered unnecessary. In short, the ideal which the civil surgeon places before himself in dealing with the terrible wounds of modern operations is realised in the far simpler wounds made by the modern small-bore projectile, with its high velocity and clean-cut hole.

Those soldiers are indeed fortunate who when wounded fall into the hands of military surgeons who fully grasp the principles of asepsis. They conscientiously carry out its details, and their confidence in the precautions for warding off sepsis is such that they positively forbid the removal of a dressing once applied to a bullet wound with due regard to asepsis, so long as pulse, temperature, and general condition indicate that Nature is left undisturbed in her healing powers. These surgeons will then order their patients to be removed at once from the seat of war with a permanent antiseptic dressing and so will prevent that overcrowding of field or base hospitals which in former days not only hampered the commanders in their military movements, but also led to those outbursts of wound infections which swept away countless valuable lives.

Some of us who have seen the horrors of war under the old *régime* must feel deeply thankful that we now possess in our soldier-surgeons men fully impressed with the newer teaching and with the courage and confidence to give effect to it in their own noble work.

FAITH-HEALING IN ANCIENT GREECE.

Dr. Caton's lectures on the Temples and Ritual of Asklepios at Epidaurus and Athens are interesting in themselves as embodying a skilful reconstruction of one of the most pathetic ruins of antiquity, and also as affording a proof that even in these days of crowded scientific life there are still among us some worthy successors of the old race of scholarly physicians who found leisure for other studies in the spacious times when the art of medicine was neither so long nor so absorbing as it is at the present day. Dr. Caton has clothed the dry bones of archæology with flesh, and has enabled us not only to see in the mind's eye the buildings and material environment, but to understand the inner life, and as it were to breathe the spiritual atmosphere of the most celebrated temple of Asklepios, the god of healing.

The Greek Asklepieia had a twofold character, for they were sanatoria as well as shrines. It is difficult to say which of these characters predominated in the earlier days; probably both existed in varying degree at different times and in different places according to the mental constitution of those who had the direction of affairs. As Dr. Caton points out, sometimes the Hierophant was a physician, and in such a case it may reasonably be conjectured that hygiene and medical treatment had a prominent place in the "cure." But for the most part the priestly element was preponderant in the staff of the Asklepieia, and the treatment was thus largely of a spiritual nature. Hence gradually the shrine overshadowed the sanatorium till the temples of Asklepios became simply places to which superstitious or despairing invalids resorted in the hope of a cure by miraculous agency. As the first dawn of rational medicine brightened more and more into day, the thaumaturgic powers of the shrines became discredited, and their glory finally departed when the old gods were driven from Olympus by the triumph of Christianity.

It has been said that the Asklepieia were to some extent sanatoria, and accordingly great care seems to have been taken in the selection of their sites. That of Epidaurus was situated in a pleasant valley and well sheltered by woods. That of Athens was built on a height commanding an extensive view across the plain to the Gulf of Phaleron, Ægina, and the mountains of Argolis. It had a southern aspect, and was protected from cold winds by the rocky eminence of the Acropolis. The hygienic treatment consisted largely in baths and other hydrotherapeutic measures; walking barefoot was also prescribed, so that Asklepios may be said to have been a precursor of Father Kneipp. Simplicity of diet was enjoined, and bodily exercise in the form not only of gymnastics, but of riding and hunting, was also insisted upon in suitable cases, while music and the drama were largely employed as adjuvants. Nor was purely medicinal treatment neglected, as is clear from the tablet to which Dr. Caton refers, on which the case of Marcus Julius Apellas is recorded. This grateful patient, whose statement is interesting as showing that valetudinarians in antiquity were curiously like unto those of the present day, testifies that he was suffering from many afflictions, not the least being indigestion. Asklepios began his course of treatment by advising the patient not to be so nervous about himself. At Epidaurus Apellas was ordered a *régime* of bread and curdled milk, and a salad of parsley with lettuce; he was to drink lemonade, and also honey mixed with milk; he was further ordered to take exercise, and to rub himself in the bath, but was nevertheless to pay the attendant his fee. He was directed to use anise and oil for his headache, and to gargle with cold water for a swelling in the glands. When his cure was accomplished, he was told that he must pay his fee; and, further, must draw up an account of his cure. Hence we have this record, which reads amusingly like one of the testimonials to the marvellous virtues of the remedies offered to a confiding world by the vendors of modern nostrums.

But in the Asklepieia hygiene, diet, and medical treatment were always supplemented, even when not altogether replaced, by faith-healing. The patient's mind was prepared beforehand for miraculous effects by means excellently adapted to the production of the highest degree of "suggestibility," which the profane describe as "gullibility" writ

large. On arriving at the Temple he was not suffered at once to enter; he had first to be cleansed by bathing in the sacred well, after which he was allowed to pay his homage to the deity of the shrine. He was then admitted to the altar, whereon he placed cakes and choice articles of food as offerings to Asklepios, on whose behalf they were graciously accepted by the priest. Each suppliant had also to bring a supply of food and bedding for himself, the Temple furnishing nothing beyond a heap of leaves for him to lie upon. At nightfall the sacred lamps were lighted under the porches, and propitiatory prayers were offered up by the priests with an imposing ritual. The lights were then extinguished and the patients enjoined to compose themselves to sleep. Full of expectation of the promised visit of Asklepios, excited further by the solemnity of their surroundings, hypnotised by the lamps, and made drowsy by the fumes of incense and the languorous atmosphere of the crowded temple, one after another passed into the land of dreams. Is it to be wondered at if the poor sufferers, whose faith had been inflamed almost to delirium by the religious ceremonies, were visited by the god and told by him what they were to do to be made whole. It is not unlikely that the priests, who had learnt from the patients on their arrival something at least of the nature of their complaints, had already suggested to them a line of treatment which would be confirmed by the vision. But what of those to whom sleep was denied, and to whom, therefore, no dream of healing could come? It may well be, as Miss Jane Harrison suggests, that for such cases in "the half dawn of the grey morning," when life is at its lowest daily ebb, some dream-like pageant was arranged by the priests, which was probably as effective as the dream.

When the cure was accomplished, there naturally came the question of the fee, and the hardly less important one of the testimonial. Of the latter several specimens are given by Dr. Caton, but the reader who is interested in this kind of literature will find a large and varied assortment in the writings of M. Solomon Reinach. In regard to the fee, Asklepios appears to have been willing to accept anything in the nature of what Mr. Wemmick called "portable property." The floor of the Temple was heaped with vessels of gold and silver, censers and tripods for the religious rites, ornaments of all kinds, musical instruments, mirrors, precious stones, and money. The poor gave earthenware vases or whatever else they could afford. Almost everyone who found relief presented an *ex-voto* offering in the form of a leg, arm, breast, or whatever part of the body might have been the seat of the disease which had been cured; these were often made of gold or silver. These testimonies of gratitude were hung about the sanctuary, just as they may be seen even at the present day about numberless altars in the south of Europe.

It may be added that the custom of sleeping in a sacred edifice in the hope of obtaining a miraculous cure has not altogether died out. Perrot bears witness to its existence in Lesbos, and other travellers tell of its continuance in other islands of the Greek Archipelago. Girard and Miss Harrison have each described a curious observance—evidently a survival in a modified form of the ritual of the Asklepieia—which they saw in the island of Tenos. At the feast of the Panageia pilgrims flock in crowds to the church of the monastery; members of the "devout female sex" sometimes making the last part of the journey on their knees. The faithful, finding room where they can, remain all night in the church. At the psychological moment the bishop appears, surrounded by his clergy; they walk in procession among the worshippers, bearing the sacred image or *eikon* to whose influence the sufferers look for healing; they struggle to get near enough to kiss it. Endless litanies are sung through the night, while fireworks are let off outside, and the noise of the revelry of the villagers and the friends of the pilgrims, who are making a night of it in honour of the expected miracles, mingles with the chanting in the church.

There is no question here of sleep or heaven-sent dreams, but the healing influence is the same—namely, faith and prayer. In the morning printed lists of the cures wrought during the night are distributed, and there is great rejoicing; the subjects of the miracle are treated with particular respect by the faithful, who reverentially touch their garments and bring children to them to be blessed.

The names and the outward appearances of things change as the generations of men follow each other like the leaves of spring, but, in spite of all our boasted progress, man himself changes in nothing but the fashion of his mental garments. Miracles were doubtless wrought at Epidaurus and in the other Asklepieia more than twenty centuries ago; and miracles are still wrought at Lourdes and at St. Winefrede's Well, and will continue to be wrought there or at newer shrines as long as the human race endures, for in these matters man, in the words of Mephistopheles,

> Bleibt stets von gleichem Schlag
> Und ist so wunderlich als wie am erstem Tag.

HONOUR TO WHOM HONOUR IS DUE.

The telegraphic reports of Professor Koch's speech on malaria, delivered before the Colonial Society of Berlin on June 9th, are manifestly incomplete. The reader of these reports, if unacquainted with the history of the subject touched on, might be led to infer that Koch is the discoverer of the germ of Texas cattle fever, of the action of the cattle tick in transmitting this disease from one cow to another, of the principles by which the administration of quinine should be guided, and of many other things, including the *rôle* of the mosquito in the propagation of malaria. Koch certainly made no such claim. He has done much for medical science, and he is the first to acknowledge what others have done in the same field. The short article on Surgeon-Major Ronald Ross's most recent work on the mosquito in malaria, which we publish to-day, shows that in this particular line of investigation for once our countrymen have been observing, reasoning, and proving, whilst their Continental *confrères* were still only speculating. Dr. Manson, in our columns of December 8th, 1894, and again in his Goulstonian Lectures (British Medical Journal, March 14th, 21st, and 28th, 1896), distinctly indicated the *rôle* of the mosquito in malaria; and Surgeon-Major Ronald Ross, working on the lines thus pointed out, succeeded last year in actually demonstrating the malaria parasite in the tissues of the mosquito.[1] He has now shown that the analogous parasite of birds, the proteosoma of Labbé, is similarly subserved and by the same insect. M. Laveran, the discoverer of the

[1] British Medical Journal, December 18th, 1897, and February 26th, 1898.

malaria parasite; M. Metchnikoff, Director of the Laboratory of the Pasteur Institute in Paris; and Dr. Nuttall, of the Johns Hopkins University, Baltimore, and at present assistant in the Hygienic Institute, Berlin, have inspected preparations sent from India by Surgeon-Major Ross, and express themselves as being convinced that he is right. Koch has no claim whatever to this important discovery.

It must be extremely gratifying to the Government of India to know that their appointment of Surgeon-Major Ross to this special work has so speedily received its justification, and to find in the ranks of their own services men capable of the highest order of research. Surgeon-Major Ross has opened a vast field for further work, and we do not doubt that if he be assisted and encouraged, his labours will result, sooner or later, in not only a great increase of knowledge, but in great benefits to a huge section of suffering humanity. The Indian Government must not stop here. It is its manifest duty not only to retain Ross at his present work, but to provide him with every assistance he may require. If those British colonies which suffer from the scourge of malaria could be got to co-operate in the good work, so much the better.

"THE MEDICAL EXPERT AID COMMITTEE."

Probably most consultants in London have received the prospectus of an organisation calling itself the "Medical Expert Aid Committee," which has recently been formed with the twofold object of enabling persons of limited means to obtain expert advice, and of discouraging the abuse of hospitals. No one will be disposed to deny that both these objects are in themselves highly commendable, but the methods by which the Medical Expert Aid Committee proposes to accomplish them appear to us distinctly questionable. It is undoubtedly true, as the Committee states, that "in the middle classes of society there are many persons who cannot afford to pay the ordinary fees of consultants, but who, in the opinion of their medical attendants, are nevertheless in need of further advice in certain special departments of medicine and surgery, and yet who are not so destitute as to render them fit and proper subjects for hospital treatment." But when the Committee goes on to say that "the majority of such persons are forced either to forego the benefits of special advice or else to pauperise themselves by seeking aid at various hospitals intended only for the relief of the poorest classes," we feel it necessary to object to their statement of the problem. The dilemma which they present does not really exist, for it is not the fact that the majority of the class of persons whom the Committee proposes to aid are forced to forego the benefits of special advice. There is probably no consultant who does not in the ordinary course of his practice see for a reduced fee patients whom he has reason to believe entitled to such consideration. This he does not only out of humanity, but as a matter of professional comity towards the general practitioner, who is the natural and recognised intermediary between him and the patient. As every general practitioner throughout the country is in direct professional relation with one or more consultants in all special departments of medicine and surgery, no difficulty is ever likely to arise in procuring the advantage of "special advice" in any given case. The evil which the Medical Expert Aid Committee professes to desire to remedy does not in fact exist, and there appears to be a very real danger that it may create other evils which we are willing to believe the ladies of title and clergymen, of whom it mostly consists, do not in the least foresee. No consultant of any position is likely to lend himself to a scheme which makes him practically the servant of a lay committee, farming out, under the guise of a specious philanthropy, his professional skill at a price which he cannot accept with dignity, and which at the same time is too high for the class whom it is desired to benefit. Several consultants have already written to us to protest against a body of lay persons thrusting themselves between the general practitioner and the patient of limited means, and we do not think the Committee will find its proposed intervention accepted either by consultants or general practitioners. The scheme is thus foredoomed to failure, and we can only express our regret that even one medical man has been found willing to become a member of an organisation which can only add to the troubles of the already grievously-burdened general practitioner, while doing no good to any one else.

THE EXTENSION OF HONG KONG FROM A SANITARY POINT OF VIEW.

The large addition of some 200 square miles to the Crown Colony of Hong Kong is no doubt made chiefly for military reasons, but we are also aware that the great increase in the population has helped to determine the step. The island itself contains an area of some twenty-nine square miles only, and this, together with the little tongue of three square miles of the mainland opposite, named Kowloon, constituted the entire colony up to a few days ago. The chief part of the population is crowded together in the city of Victoria, and here well-nigh a quarter of a million of people find a home. The surface of the island is so precipitous and so unsuited for building purposes that many of the Europeans prefer to cross the harbour, and take up their residence on the low-lying levels which obtain throughout Kowloon. The newly-annexed territory provides several excellent harbours and ports of shelter around its deeply indented coasts. High hills, reaching in many instances over 2,000 feet, rise abruptly from the sea, and plentiful streams of excellent water traverse the frequent valleys. Viewing the mainland from the island of Hong Kong, the Kowloon "Hinterland" is completely shut out by the proximity of these mountains to the shore. Here and there passes at high levels are to be seen, but the crest of the hills form a ridgeway which, were they to be occupied by an enemy, would render the city of Victoria untenable from a military point of view. But with these hills in the possession of Britain, not only will the military status of the colony be improved, but also the health of the community. At present all who can afford to do so dwell on the higher levels of the island; but the building sites there are well nigh exhausted, and the high rents at the "Peak" limit the benefit of these altitudes to the richer residents. In the new territory ample building accommodation is available. The European can select a site at any level from that of the sea to some 2,000 feet up. All the coasts and adjacent islands of this part of China are of granite and associated volcanic rocks of carboniferous age. Immediately to the west of the newly acquired territory, and washing the base of the hills, lies the Pearl (Canton) river, the common discharge of the Sikiang and other streams. This alluvial tract, with its delta, supports a vast population both on land and water; it is a highly malarious region, but it lies without the British sphere. It is to be hoped that, with attention to drainage and sanitation, what has been acquired may be rendered a veritable sanitarium, not only for the residents, but for the troops which garrison the colony. Here, as elsewhere, the country is destitute of trees. China is practically devoid of forests; the Chinaman cuts down every tree as though it were a curse. Fuel, in spite of the immense coal fields to be met with almost everywhere in China, is scarce and dear, and the peasantry drag up by the roots every patch of grass they can lay hold of. Since the British acquired Hong Kong over fifty years ago, the aspect of the island has been completely changed. Trees have been planted abundantly, and what was once a bare granite rock has been enhanced in beauty and healthfulness by the efforts of the afforestation department; and it is to be hoped that the same salutary steps will be followed in the government of

the freshly-annexed region. The acquisition of a number of Chinese villages and towns is not without its sanitary dangers. Within the area are several fair-sized towns and many villages, each one vying with its neighbours in dirt, squalor, and insanitary abominations. In time, these will no doubt be altered, and all that can be done to improve matters will, with the energy characteristic of British government, be accomplished. We are more than astonished, however, to hear a report that the native city of Kowloon, situated in the heart of this acquired territory, is to be left under the jurisdiction of the Chinese. Such a decision would be objectionable from a moral standpoint; for here is the home of that gambling evil which has proved powerful enough to resist the laws made for its suppression by the Hong Kong Government. The city will prove a veritable Alsatia to the criminal scum of South China, and on hygienic grounds we must most emphatically condemn the retention of this cesspool within the area of a British colony. If for other purposes the jurisdiction of the mandarin is to be retained, we ought to insist that the native city of Kowloon shall be, for sanitary purposes at least, placed under the sole charge of the Medical Officer of Health of Hong Kong. The Colony has had severe lessons within the past four years, and to allow this pestiferous town to remain under the mismanagement of the Chinese would, from the sanitary point of view, undo all the good which the increased room is likely to do this important Colony.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

WHEN fully equipped, the London School of Medicine for Women will possess as well-appointed laboratories as any medical school in London. The new buildings are to comprise three blocks surrounding a square, which is now the garden of the three houses thrown together, in which the students have hitherto carried on their work under not very advantageous conditions. Only one of these blocks is at present completed. It is to be known as the Pfeiffer wing, and will be opened next month by the Princess of Wales. So far the various laboratories have not been fitted, having been left empty to provide space for the opening ceremony. The new dissecting room is, however, in full use. This is situated on the top floor, and is very well lighted, and certainly enjoys the distinction of being the prettiest dissecting room in London. The walls are covered with artistically-coloured tiles, and the woodwork is painted to harmonise. The students wear many-coloured overalls, and the whole scene is more like the atelier of an artist than that which we usually associate with necrotomy. The same block will include a physical laboratory, situated in the basement to be free from tremor, and a large physiological laboratory with a good light. In the second wing there will be two lecture rooms, and a room with north light for microscopical work, while the third wing will contain the school library, museum, and administrative quarters.

THE INDIAN MEDICAL SERVICE.

THE second annual dinner of the Indian Medical Service was held at the Trocadero Restaurant, London, on June 9th, and it is hoped that the agreeable opportunity thus afforded for meeting old friends will become an annual event. The chair was taken by Sir Joseph Fayrer, Bart., K.C.S.I., and, after the usual loyal toasts had been honoured, Surgeon-General De Renzy proposed that of the sister services. This was acknowledged in a very telling speech by Surgeon-General Jameson, C.B., the Director-General of the Army Medical Department. He referred to the brotherly feeling which existed between the medical services of the army and of the navy, and to the even more intimate relations between the army and the Indian Medical Service. He claimed for the military medical services that they discharged their duties to the Empire in a manner which had not been surpassed by the medical service of any other country, and he enforced his claim by a reference to the comparative mortality of expeditions recently conducted by France and by Great Britain. He concluded by proposing the toast of the Indian Medical Service, which was acknowledged by Sir Joseph Fayrer. The toast of "The Guests" proposed by Sir Joseph Ewart was acknowledged by Sir R. Douglas Powell, Bart., and Dr. Sansom. Due acknowledgments were also expressed to the Chairman and to Mr. P. J. Freyer, the Honorary Secretary. Before the company separated Sir Joseph Fayrer made some weighty remarks upon the new army warrant which Lord Lansdowne has promised to issue constituting a Royal Army Medical Corps. He emphatically repudiated the allegation that the medical officers desired general military command; they did not desire to step out of their proper sphere, but they claimed that within that sphere they should have a defined position, and should possess definite army rank. This, he said, was essential in the interests of the service as a whole, for without it the medical services could not discharge their duties to the army at large with efficiency.

THE REFORM OF THE UNIVERSITY OF LONDON.

THE essential hollowness of the arguments employed against the scheme for the reform and extension of the University of London has been shown once more by the collapse of the opposition in the House of Commons to the London University Commission Bill. A vehement beating of the big drum, a great flourishing of the standard of revolt, and then a strategic movement to the rear—these are tactics to which we have grown to be rather accustomed on the part of those who have fought so long and so obstinately against a much-needed reform. The fact is that when the arguments against the scheme have to be stated to an impartial audience accustomed to weigh words and not very apt to be swayed by rhetoric, even those who give utterance to them are obviously oppressed by the inherent weakness of their case. The ground of opposition has been shifted again and again, and curiously enough the final appeal against the Bill was made on the score of sentiment. An appeal of this nature is worthy of respectful attention, and it may interest the promoters of that Westminster University scheme, which had a short life at the end of last year, to learn that the University of London can inspire feelings of this nature, but after all, the graduates of the University of London who are opposed to the scheme embodied in the Bill can hardly expect Parliament to show itself more careful of their not very ancient traditions than it has been of the more antique privileges of Oxford, of Cambridge, and of the Scottish Universities. The scheme to which the Statutory Commission is instructed to give effect contains provisions which will amply safeguard the interests of those undergraduates of the University who may not become attached to any of the colleges of the University. There is no reason why its inspiring influence on lonely students in many parts of the country, of whose case Mr. Harwood drew so pathetic a picture, should be in any way diminished. There is no desire on the part of anyone to diminish it, but it is claimed that the lonely student should not block the way to a reform which has long been necessary. The question is, indeed, one which affects the higher education in London in all its branches, and not least, medical education. It is for this reason that the members of the medical profession in England, so large a proportion of whom receive their medical training in London, have taken, and will continue to take, a deep interest in the fortunes of the Bill. It has now gone to the Grand Committee on Law, and Sir John Lubbock, it is stated, intends to move an amendment to the clause in the scheme which would limit the teachers of the University to members of the staff of public educational institutions within thirty miles of the University buildings. This amendment is stated to be proposed in the interests of Brighton and other places in the south-east of England. He will move also other amendments to give external—that is to say, non-collegiate—

students the option of submitting themselves to the same examination as the internal—that is to say, collegiate—students. There is every reason, however, to hope that the Bill will come down to the House of Commons again without undue delay. It would not be wise to assume that opposition will cease in the House of Commons, and it will be necessary for those who desire to see the Bill succeed to watch its progress and to use their influence to induce members of the House of Commons to give serious attention to the Bill when it is again before the House, but the comparative ease with which it has passed a second reading augurs well for its progress in the future. The Statutory Commission, to whom it is proposed that the task of framing the new regulations should be referred, consists of Lord Davey (chairman), the Bishop of London, Sir William Roberts, M.D., Sir Owen Roberts, D.C.L., Dr. R. C. Jebb, M.P. (Regius Professor of Greek in the University of Cambridge), Dr. Michael Foster (Professor of Physiology in the same University), and Mr. Edward Henry Busk, M.A. (Chairman of the Convocation of the University of London).

THE CAMBRIDGE MEDICAL SCHOOL.

Professor T. Clifford Allbutt, the Regius Professor of Physic in the University of Cambridge, has issued a further appeal for subscriptions and donations, to be paid in instalments during the years 1898 to 1901 inclusive, or at such earlier dates as may be convenient, towards the sum of £20,000 to provide buildings urgently required for the departments of pathology, pharmacology, and public health in the University. The very existence of the school is jeopardised, he says, "by the want of due provision for ordinary work; and this at a time when on the continent of Europe and in America schools of medicine, already equipped in a manner scarcely realised anywhere in the United Kingdom, are adding persistently to their resources, and not only turning out apt pupils, but also forwarding that progress in pathology and therapeutics which is so remarkable a feature of the medicine of our own time, and in which Cambridge hitherto has taken an honourable position. The researches initiated and pursued in such laboratories have led, even in our own generation, to a saving of life which is inestimable, and of many times their cost in money." The University has granted a site, and it is confidently hoped that old Cambridge men will not only give themselves, but will influence others to do the like. Sir Reginald Hanson, Bart., has promised £100 on condition that nine other non-medical graduates do the same, and the Master of Trinity Hall has come forward as the first of the nine. The Mercers' Company have given 1,000 guineas, and many past and present members of the medical school have made extremely generous contributions. We can only express the strong hope that the appeal may meet with the response which it deserves. It would be little short of a national disgrace if the Cambridge Medical School were not afforded the opportunities for continuance of its work which is of national importance.

THE MANUFACTURE OF EARTHENWARE AND CHINA.

The Chief Inspector of Factories, Dr. Arthur Whitelegge, has issued a series of special rules to be observed in the manufacture of earthenware and china. The rules will raise the age at which a person can be employed in the more dangerous parts of the works to 15, and a new rule requires that all women and young persons—that is to say, all persons under 18 years of age—shall be examined once a month by the certifying surgeon for the district, who shall keep a register of persons examined by him, and shall have power to order suspension from employment in those departments of the works where processes dangerous to health are carried on. The employer will be required to provide suitable overalls and head coverings for women and young persons, and to make suitable provision for the accommodation of the workers during meal times, no person being allowed to prepare or partake of any food or drink during meal times in any of the departments indicated. The employer is required also to provide suitable washing conveniences, in a proportion of one basin to every five persons, and to lay on a constant supply of water by tap. The rules also extend the requirements with regard to the use of exhaust fans for the effectual removal of dust. There are also rules defining the duties of persons employed in these respects, and as to the cleansing of workshops. It is proposed that the rules shall come into force in part on August 1st, 1898, in part on January 1st, 1899. But they are at present open to protest by the employers, and we do not propose to discuss them further at the present time. It is obvious, however, that though the rules do not accomplish all that might be desirable, they are a distinct advance upon what has previously existed. It is certain that the Secretary of State will be prepared to sanction their revision in the future, for he has, as he announced some time ago, appointed Dr. Thomas Oliver and Dr. Thorpe, F.R.S., to make inquiries into the various kinds of glazes in use, and as to whether any substitutes can be found for those containing lead. At the same time inquiries are, we understand, being made as to the regulations and the practice of foreign countries. We believe that this is the wisest course which could have been taken. It would be most injudicious for the Home Office to issue rules prohibiting certain methods and processes without being fully informed on the means by which their dangers may be minimised, or as to the practicability of alternative methods which may have been suggested.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The time allowed for applications by candidates for the Council expired on Monday, and the names of only five candidates have been received. Mr. Langton and Mr. Henry Morris, as already announced, seek re-election. The sole new candidate from a London school is Mr. Clement Lucas (Fellow, June, 1871; Member, January, 1868), of Guy's Hospital, but there are two provincial candidates—Mr. Bennett May (Fellow, June, 1876; Member, January, 1868), of Birmingham, and Mr. F. Richardson Cross (Fellow, June, 1878; Member, January, 1871), of Bristol. Last year Mr. Bennett May was a candidate, coming in sixth in a competition for five vacancies; Mr. Lucas also presented himself, and was eighth on the poll. There are only three vacancies to be filled up in July, Mr. Mitchell Banks retiring to give a chance to another provincial candidate. The election will be held on Thursday, July 7th, from 1.30 to 3.30 P.M., and the voting papers will be posted to the Fellows on Monday week. It cannot be said that there is much excitement about the contest this year.

THE ARMY MEDICAL STAFF DINNER.

The annual dinner of the Army Medical Corps, which took place at the Hôtel Métropole on June 15th, was attended by 130 members and guests. Among the latter were Sir Samuel Wilks, Bart., President of the Royal College of Physicians; Sir William Mac Cormac, Bart., President of the Royal College of Surgeons; Dr. Gordon (Exeter), President of the Subcommittee of the Parliamentary Bills Committee of the British Medical Association appointed to report on the condition and reforms needed in the Army Medical Service; and the Editors of the British Medical Journal and the *Lancet*. After the usual loyal toasts, the Director-General, as chairman, gave a very frank and interesting account of the steps and stages of a controversy which had finally eventuated in the decision to form a Royal Medical Corps, the mention of which was received with the greatest enthusiasm. He spoke in the highest terms of the statesmanlike grasp and firmness of Lord Lansdowne in dealing with the subject, and acknowledged the support received from Lord Haliburton, and especially from the Adjutant-General, Sir Evelyn Wood, V.C., who saw no difficulty whatever in giving medical officers full army status and

titles. He also alluded to the signal support which army medical officers had received from the heads of the universities and medical schools, and the powerful advocacy of the BRITISH MEDICAL JOURNAL, as the mouthpiece of the great Association which it represents. He said all must work for the solidarity and honour of the Royal Medical Corps, and take for an example the Royal Engineers, whose collective loyalty to each other had made their corps one of the foremost in existence. The Director-General's statement was received with much enthusiasm, and it was clear that while he markedly referred to the work of others, the feeling of his audience was that the happy solution of the army medical question was largely due to his own tact, insistance, and sagacity in overcoming difficulties. Short speeches followed by the distinguished Presidents of the Colleges, whose remarks were mainly of a congratulatory character and expressive of a hope that a Royal Medical Corps would never belie its name. Dr. Gordon gave an interesting account of how his masterly report, drawn up for the Parliamentary Bills Committee, was framed, and of the steps which ensured for it the ear and support of the profession at large, and of its sympathetic reception at the hands of Lord Lansdowne. The sonorous band of the Medical Staff performed a selection of music during the evening.

LORD LISTER AT EDINBURGH.

LORD LISTER was on June 15th presented with the freedom of the city of Edinburgh by the Lord Provost. The ceremony took place in the McEwan Hall of the University in the presence of a large and representative gathering of citizens. Viscount Wolseley, Commander-in-Chief, received the same honour, and the burgess tickets were contained in silver caskets of similar design. Lord Lister, in acknowledging the presentation, said that there was no city in the world an honour from which could have given him better satisfaction. The maintenance of the University of Edinburgh had always been a matter of deep concern to the municipality, and within his memory the appointment to a large number of chairs in the University was vested in the Town Council which still exercised an important influence on the selection of professors. He dwelt on the liberal policy of the University and of the two Royal Colleges of Physicians and Surgeons, which in his own case had been of the greatest assistance, inasmuch as it enabled him to start a course of lectures soon after the expiration of his house-surgeoncy in the Royal Infirmary. Such an advantage did not, at that time at any rate, exist in connection with any other medical school in Great Britain. It had enabled him to begin those investigations which had led to the freedom of the city of Edinburgh being conferred upon him; and highly as he esteemed that honour, no worldly distinction could weigh in the balance against the hope that he had been the means to some degree of reducing the sum of human suffering.

OLD BOOKS.

CHARLES LAMB used to say, "When a new book comes out read an old one." It would not do, of course, to take this counsel too literally in respect of medical books; but, on the other hand, it is to be feared that in the matter of professional literature we are, as a class, too apt to accept the new simply on the ground of its novelty, and to despise the old because it is "out of date." This habit of mind is naturally fostered by the rapid growth of knowledge in all directions; nevertheless it is, to use a phrase of Matthew Arnold's, "vulgar and retarding." If our mental view is more extensive than that of our intellectual forbears, it is because we stand upon a height raised by their labours. In his presidential address delivered at the recent annual meeting of the Yorkshire Branch, Dr. Thomas M. Dolan discoursed eloquently and forcibly on this text. The address conveys a lesson much needed in these days, when medical men, like the Athenians of old, are ever asking for some new thing. Let no one deem the study of the history of medicine unprofitable. As Oliver Wendell Holmes—whom Dr. Dolan quotes—says: "The *débris* of broken systems and exploded dogmas form a great mound, a Monte Testaccio of shreds and remnants of old vessels which once held human beliefs. If you take the trouble to climb to the top of it, you will widen your horizon, and in these days of specialised knowledge your horizon is not likely to be any too wide." Dr. Dolan gives a rapid review of the great works in which epoch-making discoveries in medicine were announced by Laennec, Stokes, Graves, Trousseau, and others, and of the old anatomical treatises—of Vesalius, Cheselden, and Bidloo, with their magnificent illustrations. He has the instinct of the bibliophile, and records with natural exultation his purchase for a few shillings of William Cowper's *Myotomia Reformata* (reprinted in folio in 1774 from the edition of 1694) and Cheselden's *Anatomy of the Human Body*, published in 1713. But is not the pleasure of the book-lover most intense—because it has in it something of guilt—when he buys a book which he cannot afford? Who can forget Elia's narrative of his purchase of the folio edition of Beaumont and Fletcher when he had to go in rags on account of his extravagance? We commend Dr. Dolan's address, which is published in full in the current issue of *The Scalpel*, to all medical readers interested in old books.

THE GOVERNMENT INEBRIATES BILL.

THE lead given by the Association's Inebriates Legislation Committee has been well followed up by various influential organisations in encouraging the Cabinet to proceed vigorously with their Inebriates Bill. The Church Sanitary Association forwarded to every member of the Cabinet copies of a resolution thanking the Government for the Bill, and suggesting compulsory dealing with non-criminal inebriates. Almost identical resolutions have been adopted by prison aid, reformatory, temperance, and other social reform societies; by religious bodies, by justices, and others. In Scotland the General Assembly of the Established Church, and the other great annual religious gatherings, have declared in favour of the Bill, while the same course has been pursued by various corporations. The Scottish Association for the Reclamation of Habitual Offenders and Inebriates has petitioned the House of Commons in favour of the Bill, suggesting whether there might not be added to the list of convicted habitual inebriates that large class which does not come under police supervision.

NOTIFICATION IN SMALL TOWNS.

WE have frequent inquiries as to the advisability of adopting the Notification Act in small urban authorities. Though the earlier private Acts conferring these powers were obtained by large towns, there are many advantages to smaller places in adopting the Act of 1890. Amongst these are: (1) "The increased possibility of limiting an outbreak by isolation of early cases in hospital or even at home. The sanitary authorities when they know of the existence of a case are able often to point out to comparatively ignorant parents dangers of spreading the disease they would have overlooked themselves, and the parents are more anxious to carry out available means of isolation when they feel that the eyes of the authority are upon them. (2) There are collateral advantages, difficult to overestimate, in the examination of insanitary dwellings brought about by notification of disease. (3) The knowledge of the whereabouts of infectious cases enables an authority to prevent children from infected families carrying infection to schools. (4) Inquiries as to milk supply of infected families often enable a prompt removal of dangers to neighbourhood from infected supply. (5) Dangers from defective drainage, polluted water supply, as well as from infected milk, are detected earlier when every case is heard of." Many other advantages might be mentioned, but these are as many as we have space for. We have never heard of any medical officer of health who, having

once had the Act in force in his district, would wish to forego its advantages. It is, of course, only where compelled to do so by law that a medical man has any right to report a case of infectious disease except at request of those who call him in.

MARTYRS TO DUTY.

Two medical men have within the past fortnight fallen victims to typhus in Ireland. The first was Dr. Paul Dillon, of Killarney, a gentleman who was greatly beloved in his district. He had previously been assistant physician to St. Vincent's Hospital in Dublin, and was a very highly-trained practitioner. He was a comparatively young man, having qualified in 1883. He contracted the fever while visiting a poor patient in consultation, and in the same nest two other medical men were also infected, although they have happily recovered. From the North of Ireland the death of Dr. Thomas Sullivan, son of Mr. T. D. Sullivan, M.P., is also announced from the same cause. Here again the disease was the result of a visit to poor dispensary patients, and death resulted in three days. These are fresh instances of the terrible risks which every day threaten the medical man. We should like to know what the sanitary authorities have to say.

ELECTRICAL ANÆSTHESIA.

Professor E. W. Scripture, of Yale University, writes to our American contemporary, *Science*, as follows: "While making some experiments on the sensations derived from sinusoidal currents I noticed (April 12th, 1898) that anæsthesia of the tissues resulted from currents of high frequency, the condition lasting for some time after the removal of the electrodes. While in this condition the finger could be pricked with a pin without any resulting sensation except that of dull contact. Sensitiveness to cold was also removed. The investigation has been continued, and has shown the possibility of employing a sinusoidal current of high frequency as an anæsthetic." Full details as to the requisite frequency and intensity are promised later.

TWO OLD MASTERS OF THE VIENNA SCHOOL.

Statues of Skoda and Rokitansky were recently unveiled in the Arcade of the University of Vienna. Addresses in honour of these eminent men were delivered by Professors Weichselbaum and Nothnagel. The latter characterised Skoda as "the Lessing of clinical medicine, a critic of crystalline lucidity of expression, a scientific creator of undying love of truth, and of penetrating acuteness of mind" He praised him as the master who introduced the concepts and methods of work of the exact sciences into clinical medicine. Professor Weichselbaum painted in glowing colours the immortal services rendered to science by Rokitansky as the founder of pathological anatomy, and gave an interesting survey of the intellectual life of the great pathologist as naturalist, philosopher, and politician.

HOSPITALS AND WORKING MEN'S CONTRIBUTIONS.

We have received a report, published in a late number of the *Coventry Herald*, of a meeting of the General Committee of the Coventry and Warwickshire Hospital to consider the question of the admission as patients of workmen who claim such admission because they are subscribers to the Hospital Saturday Fund of the city, though they may be in receipt of good wages, and though their contribution to the Fund may be as low as a penny a week. That there may be no ambiguity about the matter in question, we may state that a Subcommittee was appointed by the governors of the hospital to confer with the Committee of the Saturday Fund, and that the following significant questions and answers are recorded in the report of the Subcommittee. The questioners are the hospital governors, and the answerers the representatives of the workmen who subscribe to the Saturday Fund. "Question: If a man who subscribes to the Hospital Saturday Fund, and earning, say, £3 or £4 per week, applied for a ticket from his works, would he be granted one?—Answer: No answer could be given. Question: The Subcommittee suggest making inquiries as to the position of candidates (say for one month) who it is considered can well afford to pay a medical man, and ask if the members of the Hospital Saturday Committee are willing to assist them in obtaining the necessary information?—Answer: They could not entertain the suggestion." Nothing can show more plainly than the replies of the workmen's representatives that the latter are bent on maintaining a system by which a man earning some £200 a year may be entitled to gratuitous treatment in any condition of sickness, grave or trivial, in return for a merely nominal subscription to a hospital. No wonder that the local practitioners protest against such a system, and no wonder that the subscribers to the hospital referred back the report of their Subcommittee, which seemed to deal too timidly with so gross an abuse. We repeat that a hospital should deal only with cases of a certain gravity, and should deal with them in the way of charity. To convert a hospital into a cheap dispensary is to pervert the very nature and essence of the institution.

Mr. John Barton, F.R.C.S.I., was on Thursday, June 9th, elected Secretary of Council, Royal College of Surgeons, Ireland, in room of Dr. R. H. Woods, resigned.

Lord Lister has been unanimously elected an Honorary Fellow of the Faculty of Physicians and Surgeons of Glasgow. His connection with the Faculty dates from 1860, when he was admitted an ordinary Fellow on his advent to Glasgow as Professor of Surgery. The Faculty have now done him the highest honour in their power.

The announcement of the death at Montreal on June 14th of Sir Joseph Adolphe Chapleau, late Lieutenant-Governor of Quebec, will be read with regret by all those who remember the part which he took in the reception of the British Medical Association last year in Montreal, and the eloquent speech he delivered on behalf of the Province of Quebec at the opening meeting on August 31st.

The minutes of the General Medical Council and of its various committees from January 1st to June 1st, 1898, have been published for the Council by Messrs. Spottiswoode. The volume contains the minutes of the special meeting of the Council in April, of the ordinary session last month, of the meeting of the Executive Committee in February and May, and reports of various committees.

At the meeting of the Royal Statistical Society on Tuesday next at the Royal United Service Institution at 5 p.m., Mr. T. A. Coghlan will read a paper on Death in Childbirth. He will discuss the probability of death at the first confinement at various ages, the risk at subsequent confinements at various ages, the probability of surviving successive confinements, and the average number of children borne to women marrying at different ages. It is expected that the chair will be taken by the Right Hon. Leonard Courtney, M.P.

We have received a letter from Surgeon-Captain Hopton Scott on the subject of the notice of his brave conduct, which appeared in the British Medical Journal on June 4th. We regret, as does the writer, that its publication has given offence to this officer. We cannot agree with him that its contents are in any way likely to prejudice his military career; but as he is apparently of this opinion, we take this, the earliest, opportunity of stating that neither he nor any member of his family, was cognisant of the article in question, which was written and sent to this Journal by a contributor of many years' standing entirely on his own initiative and responsibility.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondents.]

THE VACCINATION BILL entered on its Commitee stage on Tuesday last. As soon as the Bill came on the Committee grew in numbers, and it was evident that there was much interest in the proceedings. The President of the Local Government Board hurried in to support the Parliamentary Secretary, and the antivaccinators also showed up in force. The debate opened with an amendment which sought to limit the operation of the Bill to three years on the ground that it was experimental in its nature and that possibly glycerinated calf lymph might be superseded by 1902. The discussion lasted some time, but the amendment was finally defeated. The whole question of compulsion was then momentarily raised by Mr. Steadman, but he afterwards withdrew his amendment in order to meet the convenience of the Committee. The age limit next came under consideration on an amendment which proposed to substitute six months for twelve months limit in the Bill. The shorter period was generally supported, and the President of the Local Government Board, having accepted the amendment it was carried without a division. Mr. Sydney Gedge next moved that every parent or person having the custody of a child taken to a public vaccinator or other practitioner to be vaccinated should receive 1s. on the performance of the operation. He supported it as a cheap and effectual method of getting the people vaccinated. The amendment was opposed by the Government, was repudiated on behalf of the working classes, and was finally negatived without a division, after the Committee had refused to allow it to be withdrawn. Then the chief amendment of the day was reached, which stood in the name of Sir Walter Foster, and which sought to make provision for a statutory declaration of conscientious objection by any parent believing vaccination to be injurious, and provided for the registration of such objection as a bar to any proceedings for non-vaccination within the appointed time. The debate on this amendmend will occupy most of Friday's (this day's) sitting. The proposal is likely to be opposed by Mr. Chaplin, but it will nevertheless receive support from some Conservative members, and is exciting a good deal of interest, inasmuch as it seeks to bring the Bill into harmony with the recommendation of the Royal Commission. There is no doubt that while its acceptance would greatly facilitate the passage of the Bill through the House, its rejection will render the opposition to the measure much more strenuous. The out-and-out opponents of vaccination will rejoice if this conscience clause is rejected, as the Bill will, in spite of its merits, give them plenty of ground for the continuance of their agitation.

THE LONDON UNIVERSITY BILL came on as first order of the day on Tuesday, and the second reading was moved by Sir John Gorst. The Lobby was more or less animated by the arrival of those interested in the Bill, but the House itself was listless, and for a considerable portion of the mover's speech he had no support on the Government front Bench. Now and then an Irish or Scotch member of the Government listened for a few minutes, but no one seemed to care to stay long. The front Opposition Bench, on the other hand, was unusually well filled. The Vice-President of the Council made out a good case for the Bill, and then its rejection was moved by Mr. Harwood, an old graduate of the University, in a very strong speech. The debate went on till nearly 11 P.M., and then suddenly collapsed, and to the surprise of the whole House the Bill was allowed to pass without a division. This was the more remarkable, as a considerable section had made up their minds to vote against the second reading, but as there was no chance of carrying the rejection no division was taken. The Bill was referred to the Grand Committee on Law, where no doubt some amendments will be introduced. It will probably be considered by the Grand Committee in the last week in June.

THE ARMY MEDICAL DEPARTMENT IN RECENT FIELD OPERATIONS.—In reply to questions by General Russell, with regard to the preparations made for the proper equipment of the Army Medical Department during recent field operations, Mr. Brodrick said that the field medical equipment for each regimental unit was fully supplied with chloroform and anæsthetics. There was an ample reserve at Wady Halfa, and there was no reason to suppose that there was any deficiency at the battle. The gallant General then asked, whether there were no light ambulances attached to the cavalry in Egypt; and whether the only way of carrying the wounded after the cavalry reconnaissance before the battle of Atbara was by tying them on to gun limbers; and, if so, whether steps would be taken in future to have more attention paid to the medical arrangements. To this Mr. Brodrick gave a very conclusive answer, declaring that no British cavalry were employed at the reconnaissance referred to. The medical arrangements for the cavalry who were present rested with the Sirdar. General Russell then asked whether the litters for the conveyance of wounded after the battle of Atbara were unprovided with sunshades such as were always attached to litters in hot climates; and, if so, if he would state the cause of this omission; and whether any steps had been taken to ensure proper litters being provided for the wounded in future. Mr. Brodrick replied that the stretchers hitherto provided had not been fitted with covers, but a supply of stretchers with folding hoods were on their way to Egypt. The wounded in the battle of Atbara were carefully placed in the shade, and only removed after dark. General Russell further inquired whether complaints had reached him that the medical arrangements for the reception of the wounded British officers at Cairo, were unsatisfactory; that seven wounded officers were put into one small ward; and that the nursing staff was entirely inadequate; and whether the Government would order a searching inquiry to be made in this matter. Mr. Brodrick replied that the ward in the Citadel Hospital, Cairo, in which the seven wounded officers were placed, was large and lofty, and the cubic space and superficial area ample. The nursing staff consisted of five female nurses and over sixty men of the Medical Staff Corps, all of whom were trained as nurses. Every attention was being paid to the men wounded in the recent action. General Russell then put questions in regard to the use of the Roentgen rays during the operations in Egypt. He asked whether there was not reason to believe that some lives of wounded officers and men might have been saved had these appliances been available; and whether in future the Government would take steps to prevent any question of economy in transport interfering with every precaution being taken to save valuable lives. Mr. Brodrick said that the Roentgen ray apparatus, which was a very recent invention, was difficult to adapt for field service, and was not carried with the field army in the recent operations. From the returns the medical authorities did not consider there was a single case in which life could have been saved by the use of the apparatus. Two sets were now in Egypt, and one more would be sent out shortly. Two had been adapted as far as possible for field service and one was for use in the base hospital. General Russell, despite these reassuring replies still holds by the view his queries indicate—namely, that there has been a failure of the medical department in the Soudan. He has given notice that on "an early day" he will call attention to the breakdown of the medical department during the recent operations in the Soudan; and move: "That in the opinion of this House it is the duty of Her Majesty's Government to take immediate steps to ensure that due provision is made for the care of the sick and wounded during the remainder of the campaign." Seeing that the Government have now taken possession of all private members' time, it is difficult to imagine when that "early day" will come.

THE POOR-LAW SCOTLAND BILL, which passed the Grand Committee on Law last week with some Government amendments, has now been circulated. Mr. Dillon succeeded in making five years' residence in Scotland secure the irremovability of an English or Irish pauper, and this, with the reduction of the period of settlement to three years, will make the law work better in Scotland. The number of paupers removed from parishes in Scotland in 1896 was 1,222, of whom 896 were removed to other Scottish parishes, 209 to Ireland, and 117 to England.

ABSTRACT OF A REPORT ON THE VISION OF CHILDREN ATTENDING LONDON ELEMENTARY SCHOOLS.

By Arnold Lawson, F.R.C.S.Eng.,
Ophthalmic Surgeon at the Children's Hospital, Paddington Green.

At the request of the Education Department an inquiry was held during 1897, by the present writer, into the condition of the eyesight of children attending London elementary schools. The report was forwarded to the Education Department in December, 1897. As the education of the masses is one of the leading topics of the day, and defective vision, especially as regards myopia, is frequently said to be on the increase, owing to the strain of the present system of higher education, this abstract of the latest report on the subject may not be without some points of interest even to those who do not make a special study of ophthalmology.

Selection of Schools.

It was primarily a somewhat difficult matter to decide upon a satisfactory basis for the report, as it was obviously impossible to examine all the children at that time attending elementary schools. It was considered that the examination of 2,000 children would form a sufficient number upon which to base general conclusions, provided that the children were representative types of the different classes that attend elementary schools, and that the schools themselves presented notable examples of old and recent methods of construction.

To carry out this plan of action seven schools were selected, some national schools and some Board schools, which might be said to form fair examples of all the different types of buildings now in use. In this way the statistics of children attending large modern Board schools presenting the most recent methods of construction as regards light and ventilation, etc., might be compared with those of national schools older and ill-furnished in these respects.

Further, these schools were selected with a view of comparing the different classes of children. There is no doubt that, taken as a general rule, the children attending national schools are drawn from a richer and higher grade of society than those attending Board schools. Thus, in the two Board schools the children are largely drawn from the lowest class, and in a large number of cases are ill-nourished and poverty-stricken, whilst in some of the national schools the children are more usually well nourished and cared for. It was considered that in this way the report would be made as practical and typical of the general run of London schools and school children as possible, and that whilst comparing any influence of school construction on the vision of the attendant children one might also be able to draw inferences as to the influence of poverty and neglect in the causation of defective sight. The Jewish school was included in the list to give the foreign element in the examination. A large section of population is now drawn from other countries, and it is notorious that defective vision is very common amongst these immigrants, so that it was considered advisable to include one school where the children were largely Russian or German.

The following is the list of the selected schools:

1. Stephen Street, Lisson Grove, Board Schools.
2. Aldenham Street, St. Pancras, Board Schools.
3. St. Jude's National School, Gray's Inn Road.
4. St. Charles Roman Catholic National Schools, Ogle Street.
5. St. John's National School, Whitfield Street.
6. Christ Church National School, Hampstead.
7. Jewish Schools, Bayswater.

Of these schools, Nos. 1, 2, 6, and 7 were satisfactory as regards lighting and ventilation and sufficiency of room, whilst Nos. 3, 4, and 5 were faulty in these respects. In Aldenham Street Board School the method of construction is by far the best, whilst St. Jude's National School presents the most glaring deficiencies.

Method of Examination.

A Snellen's test type was sent to the heads of each school with full directions as to use. A primary examination of all the children was undertaken by the head master and head mistress of each school, and the result of the examination of each child was recorded on cards printed for the purpose. The cards registered on the one side the school to which the child was attached, its age, and sex, whilst on the other side was registered the vision R V $=x$ and L V $=x$. The cards, when filled in, were forwarded to me. The number of cards thus returned amounted to 2,014.

Those cards which registered V $=\frac{6}{9}$ in each eye were not further examined, and such children are returned as being of normal vision, whilst all children whose cards registered a deficiency of sight in one or both eyes are returned as being of subnormal vision, and were submitted to a further examination by myself. This examination consisted of testing the refraction of each eye by the retinoscope, checked by the use of test types and the ophthalmoscope. In the course of this examination I was enabled to add a further list of 128 children who were possessed of normal vision, but who, through some error, had been returned as subnormal in one eye.

Table I.—*Normal Vision.*

	Boys and Girls.	Per cent.	Boys.	Per cent.	Girls.	Per cent.
General Analysis:*						
Normal vision in both eyes ...	698	34.60	411	37.80	287	30.90
Defective in one or both eyes..	1,316	—	675	—	641	—
Totals	2,014		1,086		928	
Analysis in Schools:						
1. Stephen Street...	174	44.4	95	45.02	79	43.30
2. Aldenham Street	198	36.3	132	42.40	66	28.20
3. St. Jude's, Gray's Inn ...	88	31.5	45	31.80	43	31.10
4. St. Charles, Ogle Street ...	79	32.7	44	30.50	35	36.08
5. St. John's, Whitfield Street	59	23.5	36	27.40	23	19.10
6. Christ Church, Hampstead	57	31.2	34	39.50	23	24.90
7. Jewish School	43	33.8	25	40.00	18	27.60

* Number of returned cards, 2,014.

A glance at the above table will show that the total percentage of normal vision amounted to 34.6, being 37.8 in the case of the boys, and 30.9 in the case of the case of the girls. The difference between the boys and girls is curious, as it appears in most examinations of this sort. On referring to the subjoined tables it will be seen that the difference lies entirely in the greater relative frequency of hypermetropia and mixed astigmatism in girls than boys. Myopia appears as frequently in boys as in girls.

Referring to the analysis of normal vision in separate schools, it will be seen that the two best lighted and constructed schools—Stephen Street and Aldenham Street—give a far higher percentage of normal vision than any of the other schools. I am not inclined, however, to attach any pathological significance to this fact. It simply emphasises the point that two of the schools are much beyond the others in the matter of lighting. Reference to the subjoined tables will show that the lower percentage of normal vision in the national schools is accounted for by the higher percentage of cases reported as hypermetropic. It is more than probable that the illumination of the test types was not so good as that provided at the Board schools, and that a greater acuity of vision was required to read $\frac{6}{9}$. Thus many cases of slight hypermetropia were discovered in the national schools which passed unnoticed at the better-lighted Board schools. Further, it will be seen later on that the Board schools do not show a smaller percentage of myopia than some of the other schools which are less well lighted and constructed.

Defective Vision.

It would have greatly complicated the subjoined statistics if each eye were treated as a separate unit. The following method of classification was therefore adopted: All children exhibiting myopia in one or both eyes are classed as myopes; children exhibiting mixed astigmatism in one eye, and normal or hypermetropic refraction in the other, or mixed astigmatism in both eyes, are classed under the head of mixed astigmatism; whilst children hypermetropic in both eyes, or hypermetropic in one and normal in the other, are classed as hypermetropes.

Thus in all cases where the character of the refraction differs in the two eyes, the child is specified as belonging to the class exhibiting the more serious refractive error. Thus myopia is considered to be always the more serious refractive error. When myopia and mixed astigmatism occur in the same

child, the child is styled a myope, on the ground that when he has grown up he will probably be myopic in both eyes. So, too, in the case of hypermetropia and mixed astigmatism occurring together. Mixed astigmatism is considered the more serious error, as it not only causes greater defect in vision than hypermetropia, but also the eye of a child exhibiting mixed astigmatism will very probably ultimately become myopic.

Having thus explained the basis of these statistics, it remains to give a short account of the various errors of refraction, and their relative frequency to each other and the population in general.

General Analysis of Defective Vision.

Total number of cases of defective vision	1,316
Left before examination	251
Total number of examined cases from which tables are drawn	

HYPERMETROPIA AND HYPERMETROPIC ASTIGMATISM.

TABLE II.—*Showing the Various Errors of Refraction and the Relative Frequency of one Form of Error to Another (Cases 1,065.)*

	Boys and Girls.	Per cent	Boys.	Per cent.	Girls.	Per cent.
Hypermetropia	637	59.80	337	61.10	300	58.30
Hypermetropic astigmatism ...	235	22.06	122	22.10	113	21.90
Mixed astigmatism...	102	9.50	43	7.80	59	11.40
Myopia	91	8 50	49	8 80	42	8.10

TABLE III.—*Showing the Relative Frequency of each Error in all Cases of Normal and Subnormal Vision (Cases 1,763).*

	Boys and Girls.	Per cent.	Boys.	Per cent.	Girls.	Per cent.
Hypermetropia	637	36.1	337	35.04	300	37.4
Hypermetropic astigmatism ...	235	13 3	122	12 60	113	14.1
Mixed astigmatism...	102	5 7	43	4 40	59	7.3
Myopia	91	5.1	49	5.09	42	5.1

TABLE IV.—*Showing Number of Cases of Hypermetropia of 4D and over.*

School.	Hypermetropia.		Hypermetropic Astigmatism		Total.
	Boys.	Girls.	Boys.	Girls	
1. Stephen Street	3	3	5	4	15
2. Aldenham Street ...	7	3	10	7	27
3. St. Jude's	2	4	3	9	18
4. St. Charles	1	2	3	1	7
5. St. John's	2	3	4	2	11
6. Christ Church	1	2	1	7	11
7. Jewish School	0	0	1	0	1
Totals	16	17	27	30	
	33		57		90

It will at once be seen that hypermetropia is by far the most common visual defect. Simple hypermetropia claims 637 cases out of a total of 1,065 examined cases of visual errors. It is very evenly distributed between boys and girls, there being 337 cases among the boys and 300 among the girls.

Besides these 637 cases of simple hypermetropia, there are 235 cases of hypermetropia complicated to a varying degree by astigmatism, 122 cases occurring in boys and 113 cases in girls.

Thus the total number of hypermetropes amount to 872 cases, forming 81.8 per cent. of all cases of subnormal vision, or, if the total number of children attending the schools be taken, less the number that had left before the examination, we then find that hypermetropia occurs in 44.4 per cent. of all the children.

It is thus seen that only about 18 per cent. of cases of subnormal vision are other than hypermetropic, and reference to the statistical tables will show that this 18 per cent. is made up by cases of mixed astigmatism in 9.5 per cent., and by myopia in 8.5 per cent.

In the very large majority of cases the amount of hypermetropia was insignificant (+1 D. or less) and in no way interfered with the health of the children or the general acuity of vision. In fact, a good many of the children might have passed as emmetropes had their primary examination been conducted with better illuminated test types *(vide supra)*.

The report then goes on to deal with the disadvantages entailed by the higher grades of hypermetropic squint, ciliary cramp, headaches, and general reaction on the body health. Of the greatest importance is the mental effects that uncorrected hypermetropia in the higher grades produces. The child is only able to decipher the ordinary reading print with slowness and difficulty. Even distant objects cannot be made out with the distinctness and rapidity of other children, and the child becomes correspondingly slow in action and slow in thought. If such children are allowed to grow up without treatment this sluggishness of mind and action will become permanent. Treatment by suitable correcting glasses exercises the most beneficial effects. The sleepy languid manner disappears, and the health at once improves, with a general strengthening and bracing of the whole body that no amount of medicine would effect. These evil effects of hypermetropia are more frequent in cases complicated by astigmatism either as hypermetropic astigmatism or as mixed astigmatism.

Table IV was drawn up to show the number of cases of high hypermetropia which presented themselves during the examination. The limit +4 D. was taken because any defect over that amount is held to seriously disqualify a candidate for some of the public services, as the patient would not have more than half normal vision. Of the 90 cases in this table 8 cases suffered from hypermetropia of 7 D. or more, and only 3 or 4 wore any correcting glasses. Very many of them exhibited asthenopic symptoms of varying degree, and several had pronounced squints.

This table would seem to show that 10.03 per cent. of all cases of hypermetropia, or 4.4 per cent. of the general population, exhibit a hypermetropic error amounting to +4 D. or more.

MIXED ASTIGMATISM.

Mixed astigmatism claims 102 cases, 43 cases occurring in boys and 59 cases in girls. Asthenopic symptoms are very common in this class of refractive error, and its suitable treatment is especially important, as undoubtedly mixed astigmatism is frequently a transition stage, the child ultimately becoming a myope.

MYOPIA.

The relative frequency of myopia, and the influence, if any, of school life and school construction are important features of this report.

Myopia was found present in 91 cases, 49 being boys and 42 girls. As regards the relative frequency of myopia to other refractive errors, this would indicate that myopia occurs in 8.5 per cent., whilst if the total number of children of normal vision and the 1,065 examined cases of subnormal vision be reckoned, myopia may be expected in 5.1 per cent. of the population.

It must, however, be borne in mind that the children examined were all under 14 years of age, and it is very probable that a certain number of cases of mixed astigmatism and of children emmetropic at the time of examination would become myopic at a later date, and the percentage of myopia thus increased. Moreover it is certain that myopia is relatively more frequent among the highly educated classes than among the children of labourers and mechanics.

The importance of myopia must be considered from two aspects:

1. Its transmissibility through parents to the children. From this point of view every case of myopia must be regarded as the possible germ of several others.

2. The physical disabilities that myopia confers. These

disabilities increase with every unit of increase in the myopia. In extreme cases they may amount to the production of total blindness.

Myopia may be said to be of material importance, even when of the mildest type, on account of its tendency to increase. The smallest amount of myopia disqualifies for service in the navy, and myopia of — 3 D. disqualifies for the army, for distant vision then only amounts to one-tenth of the normal.

TABLE V.—*Cases of Myopia exceeding Three Dioptres.*

School.	Numbers.	Sex.	Age.	Myopia. Right.	Myopia. Left.	Astigmatism. Right.	Astigmatism. Left.	State of Fundus.
St. Jude's	1	M.	11	— 2 D	— 6 D	1 D	4 D	L. progressive
	2	M.	13	— 6 D	— 6 D	2 D*	2 D*	Fair.
	3	M.	10	— 6 D	— 3.5 D	5 D	4.5 D	V. progressive.
	4	M.	12	— 6.5 D	— 6.5 D	1.5 D	1.5 D	Progressive.
	5	M.	10	— 4 D	— 3 D	1 D	2 D	Fair.
	6	M.	12	— 9 D	Hyperm.	o	o.o	R. progressive.
Stephen Street	7	M.	10	— 4 D	— 2 D	?	?	Fair.
	8	M.	8	Emm.	— 7 D	o	— 2 D	L progressive.
	9	M.	10	— 10 D	— 9 D	o	— 4 D	Progressive.
	10	M.	10	— 11 D	Hyperm.	o	o	R. progressive
	11	M.	10	Mixed Ast.	— 7 D	o	o	L. progressive.
	12	F.	10	— 6 D	— 6 D	o	o	Fair.
	13	F.	9	— 4 D	— 4 D	1 D*	1 D*	Fair.
	14	F.	9	— 9 D	— 9 D	1 D*	1 D*	Progressive.
	15	F.	13	— 5 D	— 5 D	o	o	Fair.
	16	F.	10	— 2 D	— 4 D	o	o	Fair.
	17	F.	9	— 9 D	— 7 D	o	o	Very progressive.
	18	F.	10	— 2 D	— 5 D	o	o	Fair.
Aldenham Street	19	M.	7	— 1.5 D	— 4 D	1 D	2 D	Progressive.
	20	M.	8	— 2 D	— 8 D	o	2 D	L. progressive.
	21	M.	12	— 5 D	— 5 D	o	o	Progressive.
	22	M.	12	— 8 D	— 7 D	4 D	3 D	Fair.
	23	M.	10	— 7 D	— 5 D	3 D	3.5 D	Progressive.
	24	M.	12	— 10 D	— 1.5 D	o	1 D	Very progressive.
	25	F.	11	— 5 D	— 5 D	o	o	Progressive.
	26	F.	10	— 16 D	— 11 D	4 D	3 D	V. progressive.
	27	F.	9	— 4 D	— 3 D	o	o	Progressive.
Jewish School	28	M.	13	— 4 D	— 4 D	o*	o*	Fair.
	29	M.	8	— 14 D	— 14 D	6 D	6 D	Progressive.
	30	F.	9	— 13 D	— 11 D	4 D	2 D	Very progressive.
	31	F.	11	— 3.5 D	— 3.5 D	2 D	2 D	Progressive.
St. John's	32	M.	9	— 4 D	— 4 D	1 D	1 D	Progressive.
	33	M.	11	— 5 D	— 4 D	1 D	o	Fair.
	34	M.	9	— 14 D	— 9 D	o	o	Progressive.
	35	F.	12	— 5 D	— 11 D	2.5 D	o	V. progressive.
	36	F.	10	— 8 D	— 5 D	1.5 D	o	V. progressive
Christ Church	37	F.	12	Mixed Ast	— 6 D	o	o	L. progressive.

* Wears glasses.

The myopia in each case where astigmatism is noted is that of the higher meridian.

The above table shows that 37 cases of myopia were encountered exceeding — 3 D. Four of these cases exhibited myopia exceeding — 12 D., and 8 cases were myopic from — 8 D. to - 12 D. Several of these cases showed severe destructive changes in the fundus of the eye, and were of a pronouncedly progressive character.

Only 4 of these cases wore any correcting glasses or had previously been submitted to any examination or course of treatment. Many of them were children of the lowest class, badly nourished, neglected, and poverty-stricken in appearance.

As the danger of myopia varies with the progressive character of each case, so the tendency to progress is in proportion to the age at which the myopia makes its first appearance. It will be noted that several of the worst cases of myopia occur in quite young children.

With regard to the frequency of myopia as exhibited in the several schools, a few interesting facts came to light. If the statistics of myopia at Aldenham Street School, as representing the school best equipped as regards lighting, space, and ventilation, are compared with those drawn from St. Jude's National School, decidedly the worst in the above respects, it will be found that the percentage of myopia is higher, namely, 5.2 per cent., at Aldenham Street than at St. Jude's, where it amounts to 4.2 per cent. On the other hand, the number of cases of myopia exceeding — 3 D. at Aldenham Street is less than half the number occurring at St. Jude's.

Thus myopia, though of greater degree in the worst-lighted and ventilated school, occurred actually more frequently in the school where good light and ventilation were all that could be desired.

The Jewish School furnishes much the largest number of cases of myopia in proportions to its numbers, the reason no doubt being that so many of the children are of foreign extraction—German, Polish, Russian, etc. If this school be omitted from the statistics myopia is found to exist in the other schools in the proportion of 4 2 per cent. only.

At St. Charles and St. John's Schools so many children had left before the examination was concluded that the results as regards myopia are not reliable.

Again, if the results obtained at Stephen Street are compared with those obtained at Christ Church, Hampstead, it will be seen that myopia occurs rather less frequently at the former (6.1 per cent.) than at the latter (6.5 per cent.). There is nothing very much to choose between the schools in the way of light space and ventilation, but the Hampstead children live in a much healthier situation, and are not so poor or neglected as many of the children of Lisson Grove, who attend Stephen Street School.

Thus, though the schools were carefully selected to give variety in types of old and recent construction, and also to provide children of every grade of society that attend elementary schools; the results do not show that school construction exercises any immediate influence on the production of myopia. Such influence as it may possess is insidious, and cannot be definitely manifested in a single examination. Periodical examination extended over several years and applied to several schools might clear up the point. As regards the influence of poverty and neglect, it was striking how many of the most progressive types of myopia were encountered in the poorest class of children. On the other hand myopia of a simple type seems to be as common in the better class children as in the less well-to-do.

TABLE VI.—*Showing Analysis of the Various Errors of Refraction at each School and the Proportion of each Form of Error to the others.*

Number.	School.	Sex.	Hypermetropia Cases.	Per cent.	Hypermetropic Astigmatism Cases.	Per cent.	Mixed Astigmatism Cases.	Per cent.	Myopia Cases.	Per cent.	Left Cases.	Total.
1	Stephen Street	Boys	63	54.3	32	27.6	9	7.60	12	10 3	— 116	=218
		Girls	55	53.8	22	21.5	13	12.70	12	11.7	— 102	
2	Aldenham Street	Boys	94	60.6	31	20 0	15	9.60	15	9.6	24 179	=347
		Girls	84	63 6	25	18.9	16	12.10	7	5.3	36 168	
3	St. Jude's	Boys	65	67 7	18	18.7	7	7.20	6	6.2	— 96	=191
		Girls	48	60.7	26	32.9	4	5.06	1	1.2	16 95	
4	St. Charles	Boys	30	62.5	10	20.8	2	4.10	6	12 5	52 100	=162
		Girls	19	63.3	4	13.3	3	10.00	4	13.3	32 62	
5	St. John's	Boys	35	55.5	17	26.9	5	7.90	6	9.5	32 95	=192
		Girls	22	50.0	16	25.0	11	17.10	5	7.8	33 97	
6	Christ Church	Boys	27	64.2	12	28.5	2	4.70	1	2.3	19 52	=122
		Girls	41	68.3	13	21.6	2	3.30	4	6.6	10 70	
7	Jewish School	Boys	23	74.1	2	6.4	3	9.60	3	9.6	6 37	= 84
		Girls	21	44.6	7	14.8	10	21.20	9	19.1	— 47	

Total number of examined cases, 1,065. The number of cases which had left before examination are not reckoned in the statistics of each school.

GENERAL SUMMARY.

1. Hypermetropia, with or without astigmatism, claims a very large proportion of all cases of subnormal vision.

2. The amount of myopia is small.

3. The conditions of some schools are very unsatisfactory as regards lighting space and ventilation. Though no

relation can be ascertained between visual defects, especially myopia, and the state of each school in these respects, it is highly probable that such deficiencies, by impairing the general health, increase the tendency to myopia. Any harm that can be produced cannot be gauged by a single examination, but can only be estimated by a series of periodical examinations extended over several years.

4. There are a very large number of children attending London elementary schools suffering from hypermetropia, squint, and myopia, who require, and who have never had, proper medical examination and treatment.

5. There should be some active supervision of the eyesight of children attending elementary schools.

6. This supervision should take the form of a regular periodical examination of the children's vision. I would suggest that every child after entering the school, or when it has arrived at a sufficient knowledge of its letters, should, on the earliest convenient occasion, have its vision tested, and that such an examination should be repeated before the child leaves the school. Moreover, at each of these periodical examinations any other child whom the teachers have reason to suspect of some defect of vision should also be re-examined. These examinations could be carried out with very little trouble and expense of time by the teachers themselves by supplying each school with an ordinary Snellen's test type, with a few necessary directions as to use. The results of such examinations should be recorded in each school in a book kept for the purpose. Such records would be of considerable scientific value.

7. The records of these examinations should be under the supervision of some responsible medical officer, whose duty it would be to see that suitable medical treatment is supplied to such cases as may need it by drafting them to hospitals, etc., for examination. Further, this officer should be responsible for the regular and proper conduct of these examinations at the schools, and should be prepared to report on any deficiencies in the school building and equipment that may come under his notice.

These suggestions are only intended as a rough basis upon which to formulate some complete and efficient plan for the supervision of the eyesight of children attending elementary schools. The advantages of some such plan lie in the settling of the vexed question of the deterioration of sight amongst school children; there would be no further occasion for scattered reports costing much time and labour; the influence of school buildings and equipment, and the methods of school work could be accurately determined; whilst remedies might be scientifically applied and practically tested.

THE NATIONAL ASSOCIATION FOR PROMOTING THE WELFARE OF THE FEEBLE-MINDED.

A MEETING on behalf of this Society was held at Stafford House on June 10th.

The Duchess of SUTHERLAND, President of the Association, occupied the chair, and set forth in an admirable opening address the objects for which the Society had been founded, namely (1) the improvement of the physical and mental condition of children so far deficient as to need special care though not actually imbecile; and (2) the kindly supervision of feeble-minded adults in suitable occupations so as to save them from degradation. The special classes for instruction of mentally-feeble children established by the London and other School Boards had shown how much might be done in the direction of education; but it was necessary to supplement these efforts by after-care in adult life, so that the Association was prepared not only to aid in the training of the children by boarding out in the vicinity of special instruction classes, etc., but also to give a helping hand to those who were so heavily handicapped in the struggle for existence as to tend, if unaided, to drift into the workhouse, the prison, or the criminal lunatic asylum. The Association had been instituted to co-ordinate previously existing isolated efforts of this kind throughout the country, and thus justified its title of "national." It had also established cottage homes of its own in the vicinity of London both for girls and for boys, and at Hendon was working a steam laundry in connection with which older feeble-minded women were employed.

Lord HERSCHELL moved a resolution to the effect that the existence of large classes of feeble-minded persons in the community was a matter of public concern, and pointed out that the establishment of the Association seemed to him justified by the fact that above the grade of recognised idiots or imbeciles there was a class of defective beings who without special guidance would be apt to drift into immorality and crime, and that it was a gain to the State to diminish the number of paupers and criminals.

Sir DOUGLAS GALTON, in seconding the resolution, referred to the scientific study of children which had of late helped on our knowledge of the necessities of the feeble-minded class.

Sir JAMES CRICHTON BROWNE, in supporting the resolution, spoke of the progressive discrimination of idiots from lunatics, and of feeble-minded from idiots and imbeciles, expressing his belief that though efforts in favour of the last-named class had been most useful and beneficent, there was still room for further charitable organisation in aid of those most pitiable persons who seemed doomed, by inherent infirmity rather than by their own fault, to failure in the struggle for existence, and who were often painfully conscious of their own exceptional condition. He questioned the assumption that the infirmity was necessarily lifelong, as he thought much might be accomplished by early diagnosis, and the application in childhood of judicious mental hygiene. He pointed out that the decrease of infantile mortality that had taken place in recent years tended to the survival of the unfit, and consequently the number of defective children to be dealt with would probably increase rather than diminish, a result to which also would contribute the fever and fret, the strain and stress, of our modern civilisation.

Mrs. GARRETT ANDERSON, M.D., moved, and Mr. DICKINSON, L.C.C., seconded a resolution commending the Association to generous public support; and Sir UGHTRED KAY-SHUTTLEWORTH, M.P., and Miss DENDY of Manchester afterwards spoke of the necessity of legislation on the lines recommended by the Departmental Committee on Defective Children which recently reported to the Education Department.

The office of the Association is at 49, Victoria Street, S.W.

THE LOCAL GOVERNMENT BOARD, SCOTLAND.

THE third annual report of the Local Government Board for Scotland, 1896-97, is, like its predecessors, an eminently business-like document. Brevity is its characteristic. Apart from the appendices, it falls within the compass of 36 pages, in the course of which are dealt with the subjects of Poor-law administration, audit, local government, public health, and vaccination.

The Board record, with a well-merited acknowledgment of his pre-eminent services to the country, the retirement, during the year, of Sir John Skelton, Chairman of the Board, who had been connected with the department, as Secretary and Chairman, for the long period of twenty-nine years. Sir John was emphatically a "strong" man, and his name will always be intimately associated with the vigorous growth of the Poor-law and public health systems of Scotland in the latter part of this century. It is matter for regret that he did not long survive to enjoy the repose he had so well earned.

The number of persons in receipt of relief at the end of the year was 99,503, of whom 87,221 were ordinary poor, and 12,282 lunatic poor. Of the ordinary poor, 88.41 per cent. were in receipt of outdoor relief, 11.36 per cent. were lodged in poorhouses (workhouses), while 0.23 per cent. are set down as vagrants. It is notable, as illustrating special and most praiseworthy characteristics of the Poor-law administration of Scotland, that 85 per cent. of all the children provided for by the Poor-law authorities were "boarded out"—33 per cent. with relatives, 53 per cent. with other persons; while 22 per cent. of the lunatic poor were resident in private dwellings. Taking the increase of the population into account, there has been a relative decrease in the ordinary poor between 1868 and 1897 of nearly 48 per cent. *Per contra*, however, lunatic

poor have increased over the same period by 65 per cent. How far this increase is to be attributed to an increase of lunacy, to a stronger humanitarian feeling, or to the bestowal of a capitation grant for lunatics, is matter for conjecture.

Turning to the public health section of the report, we find the passing of the Public Health (Scotland) Act, 1897, characterised as the leading event of the year. In the month of November, the Board issued a useful if somewhat circumscribed circular, directing attention to the more important provisions of the Act, and, later on, model by-laws for common lodging-houses, houses let in lodgings, and slaughterhouses. They also issued, by request, a code of model regulations, based upon the English code, for sanitary officers, which promises to be of utility in assimilating Scottish methods of sanitary administration, in certain respects, with those in vogue in England.

The most interesting part of the report is that which deals with the work of local authorities in connection with infectious disease. Under the Public Health Act of 1897 the Infectious Disease (Notification) Act is extended to every district in Scotland. It had already, however, been adopted by districts comprising 94 per cent. of the population of Scotland. Copious tables are appended, furnishing a statement of the cases of infectious disease in all the districts in which the Notification Act had been adopted, the deaths from infectious disease, and the removals to hospital. The total number of cases of infectious disease notified was 42,349. In the case of the diseases specified in the Act only 14.6 per cent. were removed to hospital in rural districts, as compared with 32.2 per cent. in urban districts. The figures in the districts in which whooping-cough is compulsorily notifiable show a fatality-rate for that disease greater than is generally apprehended—namely, 6.2 per cent.

It is impossible to conclude a review of the work of the Scottish Board without a reference to the starved condition of the central Public Health Department of Scotland. It is unprovided with a single medical or engineering inspector. It is not permitted to spend a penny for purposes of scientific research. It is housed in a way which would be discreditable to a private company. It is surely time that the representatives of Scotland in Parliament made an effort to secure from the Treasury a more adequate recognition of the the necessities of the case.

EDINBURGH HARVEIAN FESTIVAL.

The 116th Harveian Festival was held in the Hall of the Royal College of Physicians, Edinburgh, on June 3rd, when Dr. Alexander Ballantyne of Dalkeith gave the oration.

Harvey and Embryology.

After the orator had expressed his surprise that while Harvey's work in regard to the circulation had deservedly been treated in every possible way to show the greatness of the discovery and its great value to practical medicine, so little attention should have been paid to his other scientific work. In the life of Harvey recently written by Mr. D'Arcy Power a quaint observation of Fuller's respecting him is quoted. "The Doctor," says Fuller, "though living a bachelor, may be said to have left three hopeful sons to posterity—his books (1) *De Circulatione Sanguinis*, which I may call his son and heir, the Doctor living to see it at full age and generally received; (2) *De Generatione*, still in its minority, but I assure you growing apace into public credit; (3) *De Ovo*, as yet in the nonage thereof, but infants may be men in due time." No doubt this was a true description of the relative advance of these subjects at the time Fuller wrote. As Willis says, "On the doctrine of the circulation the dawn had long been visible; Harvey appeared, and there was day." On the subject of embryology before Harvey all was night. Though Harvey, from the intrinsic difficulties of the subject and from the want of a microscope, was unable to solve many of the problems of embryology, and was even led into error by his naked eye observations, accurate as they were, he did much valuable pioneer work. He disproved what had been the prevailing idea for many hundred years, that the higher animals were developed from "excrement" or from any visible deposit left in the uterus. He showed that the division of the higher animals into oviparous and viviparous was to a great extent arbitrary, inasmuch as all such animals may be said to arise from eggs; and so announced the general truth, *Omne animal ex ovo*, though not exactly in the same sense as held by the embryologists of to-day. On the other hand, because he failed to find anything in the uterus after fruitful union, he held there was no corporeal continuity between the parent and offspring—a legitimate conclusion without the aid of a microscope. He was the first to show that the reproductive process in the egg begins at the cicatricula. He believed that the generation of insects might arise from inanimate matter, which he calls "generation from metamorphosis," although he hinted in regard to this that such creatures might arise from seeds or ova so small as to be invisible. He demonstrated that in all cases of what he called "generation properly so-called," the development of the embryo took place by epigenesis. No one can doubt that he established the law of epigenesis, and that the naked eye observations made by him proved it to be not a mere speculation but a fact. No doubt in 1759 the observations of Wolff, with the aid of the microscope, showed the actual mode of formation according to this plan of more than one organ in the embryo, and broadened the law of embryonic formation by demonstrating that it was of a like nature in plants and animals. And Pander, in 1817, with still greater precision, detailed the plan of formation of parts in the embryo of birds. The complete confirmation was a progressive one, interrupted by the views of Haller on preformation, and by its amplification by Bonnet. Harvey then established the law, Wolff broadened and emphasised it, and Pander, by his still greater precision, placed it upon a basis sufficiently secure to be accepted by all embryologists. Might it not, then, justly be said that to Harvey belongs the credit of enunciating and demonstrating epigenesis 100 years before Wolff? Dr. Ballantyne then detailed some of the more noteworthy incidents in the great advance embryology has made since Harvey's time; the attack of Francesco Redi upon the doctrine of spontaneous generation; the cell theory enunciated by Schleiden and Schwann; the necessity for conjugation of dissimilar individuals in the continued propagation of some protozoa; the egg production of the metazoa and the early formation of ova in the embryos; the conditions necessary to ensure fertilisation and the part played by the polar bodies and the other parts of the ovum and spermatozoon. The subject of heredity was then taken up. Evolution, heredity, and regression went hand in hand in solving the various problems, heredity acting as an inhibitory power. The views of Weismann, Trevianus, Brooks, Galton, and Eimer were then discussed. In conclusion, it must be admitted that the laws governing heredity were as yet for the most part unknown; yet there was much in these days to give the hope that the discovery of these laws was within measurable distance, and that until heredity found its Newton there must be a persistent and patient interrogation of Nature after the manner of Harvey, with a mind unwarped and unbiassed by preconceived notions.

On the motion of Dr. Joseph Bell, the orator was given a cordial vote of thanks.

The Harveian Dinner.

Thereafter the Harveians, to the number of about forty, dined. The President was supported right and left by Drs. Joseph Bell and George W. Balfour. The two Secretaries, Dr. Crum Brown and Mr. Francis Cadell, acted as croupiers.

After the usual loyal and patriotic toasts, the immortal memory of Harvey was drunk in silence. The Senior Secretary then gave the toast of "The Honorary Member, the Pontifex Maximus, the very Rev. James MacGregor, D.D., Senior Minister of St. Cuthbert's Parish." "The Medical Schools of Scotland" were given by Dr. George W. Balfour, and Dr. Renton (Glasgow) replied. Dr. Foulis gave "The President," Dr. William Craig "The Vice-President" (Dr. Crum Brown), and Dr. Lockhart Gillespie "The Guests." Stories and songs were given by various Harveians during the evening, which was closed by "*Floreat Res Medica.*"

The Merchant Taylors' Company have contributed £1,000 to the Prince of Wales's Hospital Fund, the amount to be repeated annually during the next two years.

MEDICAL WAR NEWS.

THE CAMP AT TAMPA.

A CORRESPONDENT writes from Key West, under date May 28th:

Key West is a town of some 2,000 inhabitants, built entirely on a coral reef, amongst a string of similar islands, protected by barrier reefs and sand bars, with difficult channels to trace. At this spot is to be the base hospital, and the present hospitals are fully adapted for this work. The Marine Hospital faces the sea, and is ably served by Dr. Borden with six other surgeons. It is fully equipped for surgical and medical work, and will soon be fitted with its scientific and research appurtenances. There is also the Convent, which can act as an overflow hospital. The *Solace*, which is the Government hospital ship, lies off the wharf, and can accommodate quite 200 cases.

As far as can be learnt here there are to be no base hospitals on the island of Cuba. The field hospitals will be sufficient for the emergency cases and the more acute accidents and primary operations. Ambulance waggons holding four patients will bring the patients from the field to these hospitals, and from thence to the *Solace*.

A visit to the Red Cross ship, the *State of Texas*, is indispensable to a visitor here as an act of respect to Miss Clara Barton, whose work in this charitable department is universally known and appreciated. Dr. Egan has been with Miss Clara Barton through most of her charitable campaigns; Dr. Joseph Gardner and Dr. Hubble are his associates. The motto of the Society is "Humanity and Neutrality." The nurses come from the New York Red Cross Hospital and Training School for Red Cross Sisters. At present the ship, which is between 2 000 and 3,000 tons, is replete with medical and surgical stores, and equipped with all kinds of food stuffs intended for the relief of the Cuban *reconcentrados*, indeed to supply the wants of anyone of any nationality who is in distress or wounded during the war. On board there will be room for 200 or 300 cots, and with an awning stretched over many more patients can be accommodated.

The same Correspondent writes from the headquarters of the United States army, Tampa Bay, Florida, on May 29th:

At Tampa is the seat of the headquarters of the army. The camp surrounds the town, being situated as near the water's edge as possible for bathing purposes and to prevent discomfort from the sand blowing over the quarters. The water is laid on in pipes from the town, with standards at every 400 yards. The only shade is from the pine trees, and the ground is covered by a sparse palmetto grass, which in some places has been burnt to get rid of the undergrowth or to "blaze" the trees and clear the ground. This makes the camp in some cases rather dirty. It is, however, in the best sanitary conditions; a fresh breeze blows from sea and land alternately, and refreshes where and when it comes. The dry sandy soil makes an admirable dry earth system for the latrines, and no smell or disease has been traced to this source. Beyond the ordinary run of camp trivialities, there is nothing to record as to disease. Diarrhœa was at first rife on arrival, but was only due to the irritating constipation produced by the inconveniences of long travel and necessary faulty accommodation on the way, and perhaps even to change of diet, etc. But even a day in the field hospital with moderate purges, soon brought the men up to fatigue duty again. No epidemic has caused any anxiety; a few aguish attacks and a little undetermined febricula have alone been reported.

The field hospitals are fully equipped, even to sterilising apparatus. The one which struck me as being particularly handy and neat was Schering's formalin steriliser, made in Berlin. This is a japanned tin box, 2 feet by 1½, with one side to open; in this are placed the dressings on wire-work netting shelves. The disinfectant is formalin, which is heated in 5 gr. pastilles on a wire-work cup placed over an ordinary alcohol flame, which burns for ten minutes. This period suffices for ordinary purposes. Instruments, etc., are all boiled, but the ligatures, which are of catgut, are made up in envelopes, one to each, and baked by dry heat to temperature 284° F. for three hours after Dr. E. Broeckmann's method.

The same correspondent writes under date June 3rd: The health of the camp continues universally good; indeed, the troops are now much improved by the regular drilling, life under canvas, and the opportunities taken for bathing. Observers here are struck by the almost total absence of drunkenness in the army. It is one great benefit of such a town that very few intoxicating drinks are sold. In fact, like Atalanta in Georgia, Tampa may be described as a "soft drink" town. The dust, which was very discomforting, has been laid by the tropical rains that have lately prevailed.

The camp has not suffered in health so far from the weather. There have been a few cases of measles, which have been immediately isolated, and mumps has broken out in a few regiments, and a case or two of typhoid and malaria sum up the total mortality. Speaking at random, among the 20,000 troops here there are about 100 doctors, and perhaps fewer patients. The medical department is now fully organised and is in full working order. The question now disturbing the activity of the camp, which at any moment may be moving to the seat of war, is the prevention of yellow fever.

A quarantine station is being constructed down the Tampa Bay, near St. Petersburg, for the purpose of isolating cases of yellow fever coming from Cuba, and is under the care of Dr. Dudley.

THE QUEEN'S BIRTHDAY CELEBRATION AT TAMPA.

One of the most pleasing functions took place here on May 24th. It was the celebration of the Queen's Birthday. In the large banqueting room of the Tampa Bay Hotel, surrounded by its gardens and glasshouses, filled with the beautiful foliage and flowers of the happy and luxuriant South, the assembled guests partook of a splendid dinner. Behind the president's chair were unfolded the Union Jack and the Stars and Stripes. Beneath the folds of these ensigns Colonel A. A. Wiley, of Montgomery, Governor of the State of Alabama, presided. Around him were placed the officers of the army resident in camp here, and also some of the naval officers from the *Helena* and *Bancroft*. On one side was the table for the war correspondents, who are here in great numbers, and on the other for the civilians The body of the hall was filled with visitors and guests. In the entrance to the hall was an immense framework tricolour tastefully decorated with flowers in a tricolour arrangement in the form of a crown.

The first toast was "The Queen, to Her Majesty, Victoria, Queen of England and Empress of India, the greatest ruler of the greatest country in the most marvellous country of the world's story." This was responded to by Dr. Andrew Ellis Wynter, of Beckenham, Kent. Dr. Wynter is a fluent speaker, and made an excellent speech, in which he strongly favoured the proposed alliance between Great Britain and the United States.

PLAN OF WORK OF THE ARMY MEDICAL CORPS.

The following, according to Lieutenant-Colonel Brown, of the Surgeon-General's staff, is a brief outline of the comprehensive plan of work determined upon for the medical corps of the army:

The hospital corps is divided into two detachments, one for service in the field hospitals, and the other for the ambulances and litters to take the wounded from the field. In the field hospital service there are four lines, the first being coincident with the line of battle, and including regimental surgeons, orderlies, and company bearers; the second includes the first dressing stations where the ambulance surgeons are at hand to dress wounds, and litters are stationed to carry the wounded on to the third line, the ambulance station. At intervals, reception, operating, and dressing tents are erected, where the new cases are treated until they are to be moved to the division hospital. No member of the hospital corps serves in the line of battle; but privates from each regiment are detached as company bearers, to carry wounded men from the line. These bearers are not connected with the corps in any way. Wounded men have their wounds temporarily dressed at the first dressing stations, whence they are carried on stretchers to the division hospitals, where as complete arrangements are made as are possible under the circumstances; comfortable cottage beds are in readiness; bandages, medicines, drinks, etc., are at hand at once to relieve the sick men. In these hospitals they

are cared for until it is possible to transfer them to permanent hospitals. One of the most interesting details of every medical equipment is the medical pannier, carried by pack mules. These mules are taken into the field where it is not possible to take wagons with supplies. The panniers fit the backs of the mules so that they are comfortably carried; they are completely fitted up with everything necessary in a hospital, on a small scale—splints, bandages, antiseptic plasters, instruments, drugs, etc. The panniers are all carefully lined so as to minimise the danger of breakage. They are also so arranged that, when taken from the backs of the mules, they can be set up to serve as fairly good operating tables. They are of inestimable service when it is impossible to reach a hospital speedily.

THE HOSPITAL SHIP "RELIEF."

The New York *Medical Record* of June 4th says that the hospital ship *Relief* (formerly *John Englis*) now being fitted up, will have accommodation for 150 patients. All the staterooms on the main deck will be removed, giving space for large airy wards. The frames of the bunks will be in two tiers, are to be of gas pipe, and each cot will have a woven wire and cotton mattress. On each side a wire screen will be attached to prevent the patient falling out with the rolling of the ship. Attached to the rear of each cot will be a wire crate to contain bandages, dressings, and medicines. The cots will be arranged in rows, the space between rows being wide enough to permit the easy passage of a litter and its bearers. On the port and starboard rails davits will be fixed, to which will be fastened cradles, to be raised and lowered by a steam windlass, by means of which the sick or wounded can be expeditiously raised to the deck from the transport barge alongside the ship. The cradle will then be run along a track to the ward, or to a bath room if the patient's condition will allow of a bath. There is a disinfecting apparatus for the purification of the patient's clothes, and of the mattresses and bed clothing after a cot has been vacated. There will be separate bath and toilet rooms for convalescing patients, for the officers and medical staff, and the nurses. There will also be an isolating ward on the upper deck. The ship will also be provided with electric fans, an *x* ray plant, a refrigerating plant, an ice-making machine, and a distilling plant. As quickly as possible the patients taken aboard the ship will be transferred to the nearest shore hospital. Dr. L. H. Williamson (St. Louis) and Dr. R. M. Myers (Washington) have been appointed for service on the *Relief*.

It is reported that the Government paid 1,050,000 dollars (£210,000) for the *Solace* and the *Relief*—600,000 for the former, and 450,000 for the latter. The fitting up of the *Relief* is estimated to cost a further sum of 50,000 dollars.

FEMALE NURSES FOR THE ARMY AND NAVY.

A Bill has been introduced in the House of Representatives by Mr. Cummings, of New York, authorising the Secretaries of War and Navy to enlist 100 female nurses for service in hospitals and hospital ships during the war with Spain. The nurses must be graduates of training schools, and will have the same pay as hospital stewards.

On this subject the *Medical News* of New York (June 4th) says: Although it was positively announced at the beginning of the war that women nurses would not be enlisted in either the army or the navy, the plans have been changed, and for the first time in the history of this country women are being enlisted into military service as nurses. Dr. Anita Newcomb McGee, of Washington, has just been charged with the selection of all the women nurses for the Government during the present conflict. There were women nurses during the Civil War, but they were not enlisted, being paid by the Sanitary Commission. By the present plan applicants must be between the ages of 30 and 50; they must be graduates of reputable training schools, and preferably with practical experience and without family ties; they must be strong and healthy; surgical nurses are in much the greater demand. They will receive $30 per month, wear a uniform consisting of white dress, cap, and apron, and a badge in the form of a red cross of enamel, surrounded by a circle of blue enamel. In addition to their pay, each nurse will receive her rations daily, and lodging when practicable. There is a great demand for nurses who are immune to yellow fever, but so far not one has applied. No women nurses will be sent to Cuba, neither will any be permitted aboard the naval vessels.

OUTBREAK OF YELLOW FEVER IN THE SOUTH.

The announcement that yellow fever has broken out in the South has caused much uneasiness in the United States. In the town of McHenry, on the Mississippi, seven cases were officially admitted last week. McHenry suffered from yellow fever last year, and the recrudescence of the epidemic, though not altogether unexpected, justifies alarm as to the future. An army medical officer has been sent to McHenry with plenary powers. The town will be surrounded by a guard, and passengers on the trains inspected. Already segregation camps have been formed on an island near Tampa, at Key West, and at New Orleans.

GENERAL HOSPITALS.

Four general hospitals are now ready for the reception of the sick and wounded troops: Key West; Fort McPherson, Georgia; Fort Thomas, Kentucky; and Fort Meyer, Virginia. Together these hospitals can accommodate 2,000 men.

A HOSPITAL TRAIN.

Surgeon-General Sternberg has secured a hospital train for the transport of invalided troops from the front. The train is to consist of ten tourist sleeping cars and one dining car, and is to be in charge of a staff of medical officers and attendants. There will be accommodation for 400 men.

MEDICAL WAR EXPENSES OF THE NAVY.

The Naval Bureau of Medicine and Surgery has estimated that the additional war expenses during the fiscal year ending June 30th, 1899, will amount to 100 000 dollars. The amount appropriated for the current fiscal year was 75,000 dollars.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary council was held on June 9th, 1898, Sir WILLIAM MAC CORMAC, Bart., President, in the chair. The minutes of the preceding meeting were read and confirmed.

FELLOW'S GOWN.

A form of gown recommended by the Committee was approved. This may be worn by Fellows on all ceremonial occasions. Fellows who are graduates of universities have the option of wearing their university gowns. The gown (made by Messrs. Ede and Son, Chancery Lane, W.C.) is of black silk or stuff, with crimson satin facings.

REPORT OF THE LABORATORIES COMMITTEE.

1. *The Work on Diphtheria for the Metropolitan Asylums Board.*—The DIRECTOR reported that the new stables have been completed and taken over, and that they are admirably suited for the purpose for which they are required—the preparation of antitoxic serum. Since March 4th 6,000 doses of antitoxic serum, each containing 2,000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board had been supplied and all the demands fully met. During this period 12,000,000 units have been supplied, against an average of 12,252,000 for the preceding two quarters. During this period the average strength of the antitoxin had been so far raised that it had been possible to send out the 2,000 units in quantities of from 6.5 to 7.5 c.cm.

2. *Researches in Connection with the Grant from the Goldsmiths' Company.*—Dr. T. G. Brodie and Dr. Cartwright Wood had continued their investigations, and had obtained some most satisfactory results. In fulfilment of one of the conditions of the grant from the Goldsmiths' Company, that antitoxin should, if possible, be supplied for use amongst the poorer classes of the community, the Director had continued the supply of antitoxic serum to various general and children's hospitals in London during the past quarter, as well as to certain medical practitioners for cases fulfilling the necessary conditions.

3. The report concluded with a list of those engaged on work at the laboratories.

REPORT FROM THE NOMINATION COMMITTEE.

On the recommendation of the Committee it was resolved: "That in future it should be permissible for Examiners in Elementary Biology to hold office for five consecutive years,

as permitted in the case of all other examiners of the College, and that Clause 1, Section XIV, of the Regulations of the Council now limiting their period of office to three consecutive years should be altered by the substitution of the word 'five' for 'three.'"

The following list of examiners was adopted by the Council on the recommendation of the Committee:

Elementary Biology.—Peyton T. B. Beale, Frederick Gymer Parsons, Thomas William Shore, Thomas George Stevens.

Anatomy (Membership).—Stanley Boyd, William Bruce Clarke, George Henry Makins, Arthur Robinson.

Physiology (Membership).—John Rose Bradford, Leonard Erskine Hill, Walter George Spencer.

Anatomy (Fellowship).—William Frederick Haslam, James Ernest Lane, Charles Barrett Lockwood, Frederick Gymer Parsons.

Physiology (Fellowship).—Thomas Grigor Brodie, D'Arcy Power, Ernest Henry Starling, William Henry Thompson.

Midwifery.—William Radford Dakin, Arthur H. N. Lewers, Amand Routh, Herbert Ritchie Spencer.

Public Health.—Part I: Arthur Pearson Luff. Part II: Edward Seaton.

ELECTION OF REPRESENTATIVES ON THE GENERAL MEDICAL COUNCIL.

A letter of June 6th was read from Mr. R. B. Anderson, F.R.C.S., stating that he intends to take proceedings to establish his right and that of all Fellows and Members, to exercise the franchise conferred on them by the Medical Acts for the purpose of choosing a member of the General Medical Council, and asking whether the Council would treat such proceedings as a friendly suit, and pay the costs of both sides with the College funds. It was resolved that Mr. Anderson be informed that the Council are not prepared to accede to his proposition.

THE LATE MR. THOMAS ALCOCK.

The PRESIDENT reported that he had accepted on behalf of the Council an oil portrait by Benjamin Robert Haydon of Thomas Alcock, M.R.C.S., father of the late Sir Rutherford Alcock, K.C.B., presented to the College by Lady Alcock.

The donation was acknowledged with the best thanks of the Council.

COURT OF EXAMINERS.

The PRESIDENT stated that the vacancy on the Court of Examiners occasioned by the expiration of Mr. R. J. Godlee's period of office on July 7th next, and the vacancy on the Board of Examiners in Dental Surgery occasioned by the expiration on the same date of Mr. J. H. Mummery's period of office, would be filled up at the quarterly meeting of the Council on July 14th. The President also stated that Mr. Godlee and Mr. Mummery were both candidates for re-election.

AN APPEAL.

SIR,—We venture to bring a pitiable case to the notice of the medical profession. Mr. James McGregor Laing, a surgeon in the employment of the Coolie Emigration Service, died in Calcutta on July 6th, 1889, leaving a widow and four children—a girl and three boys—totally unprovided for.

Assisted by friends, the widow took a boarding house in Bayswater, but eventually failed to make ends meet. In the last few months she has lived in a small office in 16, Colville Road, W., a tiny place, without fireplace of any kind. The rent of this has been paid up to the end of this month by some generous Freemasons. She has tried to get dressmaking work, but has not succeeded in doing so. Since her failure she has had grants of £10 and £12 from the Medical Benevolent Fund, £10 from Grand Lodge, and small amounts from other Masonic lodges.

Her children's ages are—the girl 14 years, the boys 12, 11, and 9. The girl is at a school, by the kindness of the teachers, obtaining tuition without charge. The eldest boy has been elected into the Masonic school, but is too ignorant to be admitted; the second is a candidate for Epsom. The boys go to the Westbourne Park schools at present, helped to do so by the clergy of All Saints, Notting Hill. For a long time the providing of food for these hungry young mouths has been an intense anxiety to the mother; indeed, there actually has not been a sufficient supply of proper nourishment. Mrs. Laing will have to leave her present abode at the end of this month, as she has no money to pay the rent.

We can personally guarantee the urgency of this poor lady, and are desirous of placing her in a small shop to enable her to gain a living for herself and her children. We strongly recommend the case to the generous consideration of your readers.

It is proposed to form a small committee to administer any moneys forwarded for Mrs. Laing's benefit, and we have agreed to act as treasurer and secretary.—We are, etc.,

J. PICKETT, M.D.,
26, Colville Square, W.
REGINALD HARTLEY, M.D.,
68, Porchester Terrace, W.

THE PLAGUE IN THE EAST.

Bombay.—The most recent telegram from Bombay, dated June 10th, brings the welcome news that the death-rate on that day was normal. With this information we assume that plague has practically disappeared. We dare hardly to hope that Bombay can be congratulated on having finally got rid of the disease. With the yearly recurrence in Hong Kong, ever since 1894, plague must be expected to recur in Bombay, and that, too, in a form as virulent as heretofore. We have yet to learn how Hong Kong was reinfected (if, indeed, it is a reinfection and not a recrudescence) before it is possible to state definitely what steps ought to be taken to try to prevent the same thing happening elsewhere.

Karachi.—Up to June 1st plague showed no signs of abatement, but since then a marked diminution is evident. Several of the hospitals are closed, and trade is reviving.

Punjab.—Equally favourable reports are to hand from the infected districts beyond Lahore. The telegrams have it that "plague accounts from the Punjab are reassuring."

Central India.—The epidemic is said to be increasing in the Mahratta country, but no virulent outbreak is reported.

Calcutta.—On June 10th four fresh cases were announced as having occurred in Calcutta. The Europeans affected are progressing favourably, and for days together no cases occur. In consequence of the example set by several leading members of the native community, many of the latter are now voluntarily submitting to inoculation, and over 1,500 have been so treated.

Hong Kong.—Plague still causes many deaths a day, and the neighbouring districts of China are widely affected.

LITERARY NOTES.

MESSRS. CHAPMAN AND HALL will shortly publish a volume entitled *Medical Works of the Fourteenth Century*, by Rev. Professor George Henslow, M.A., F.L.S., etc., formerly Lecturer on Botany at St. Bartholomew's Hospital Medical School. The work is described as consisting of transcripts, with notes, from four MS. volumes, dating from a period contemporary with the works of Wiclif and Chaucer, three of which are in the British Museum and one in the possession of Professor Henslow. The volumes are collections of recipes for ointments, drinks, and remedies of different kinds for various complaints, diseases, and wounds. Professor W. W. Skeat has provided introductions and notes calling attention to philological points of interest to students of Early English. The work will also contain an alphabetical list of upwards of 700 medical and other plants mentioned in works of the fourteenth century, compiled and identified with their modern English and Latin equivalent names by Professor Henslow.

The *Inquiry into the Relative Efficiency of Water Filters in the Prevention of Infective Disease*, by Drs. Sims Woodhead and Cartwright Wood, which appeared in the BRITISH MEDICAL JOURNAL of November-December, 1894, and January, 1898, has been reprinted in convenient form, and can be procured at the office of the Association, price 2s. In their preface the authors state that as the outcome of the investigations made by them they believe they are warranted in concluding that they have been able to settle the principle on which must be based the method of testing the efficiency of filters in preventing the transmission of waterborne infective disease. The method, they add, had already been suggested by Gruber and his pupils, but they were able to carry out experiments on so many types of filters, and over such prolonged periods, that they hope that this vexed question has

been finally set at rest. The report is almost indispensable to officers of health, medical officers of the army and navy, and to all having sanitary charge of hospitals, infirmaries, schools, and other large buildings. It is also most useful to private medical practitioners, and indeed to all householders.

In the May number of the *Indian Medical Gazette*, Surgeon-Major Ronald Ross, whose name is well known by his researches on the life-history of the malaria parasite, advances a strong plea for the establishment of a reference and circulating library in India, from which medical men in all parts of that country could obtain such professional literature as they require. His own experience has been that "it is very difficult under present conditions to procure from Europe any medical books except new publications and the commonest textbooks." The libraries of the various medical colleges are, he says, intended for medical students rather than for the profession at large. Surgeon-Major Ross complains that in order to read up a subject thoroughly one must take furlough and go to London. He adds that in order to study even tropical diseases, men in India must go to England rather than to the large Indian cities. Surgeon-Major Ross states that he has reason to know that many men would attempt research work in India except for the difficulty of procuring the necessary literature. The attention of the Government, which now shows signs of awakening to its duty in the matter of encouraging scientific research, might well be called to the question raised by Surgeon-Major Ross.

Dr. Paul Stewart, of Glasgow, some time ago sent us an interesting note on the "magic potion" which is said by some writers to have caused the death of Niccolò Machiavelli, author of *Il Principe*, whose Christian name, according to Macaulay, supplied a popular designation, "Old Nick," for the enemy of mankind. Dr. Stewart writes:

"Machiavelli," according to Henry Morley, "having failed in health after his last reverses, increased his ailment by an overdose of castor oil, a medicine then in particular repute, and died two days afterwards, on June 22nd, 1527."

Another account has it that he died after having partaken of a magic potion. The nature of this may be gathered from the following excerpt from a letter written by him to his friend Francesco Guicciardini, and the annotation in the French translation by M. Périès, edited by M. Ch. Louandre. The letter is dated at Florence, August 17th, 1525, nearly two years before his death.

After referring to the pleasure one of his plays, *La Mandragora*, had given to his friend, and to the possibility of his being sent on a mission to Venice, he proceeds:

"I send you twenty-five pills made for you already four days since; you will find the receipt for them at the end of my letter. I tell you they have resuscitated me. Begin by taking one after supper; if it has any effect you will cease; if not, you will take two or three, but not beyond five. As for myself, two have always sufficed, and that only once a week, except when my head is heavy or my stomach loaded.....But let us return to the receipt for the pills:

Aloes	dragme	1½
"Carman. deos." ...	"	1
Saffron	"	½
Myrrh	"	½
Betony	"	½
Pipinella	"	½
Armenian bole	"	½

The following is the editorial note referred to:

"Such was the medicine of which Machiavelli ordinarily made use, and which Paul Jove, in his usual strain, by a malicious construction, entitles an enchanted potion, saying that Machiavelli, after having taken it, died mocking God, and pretending that he was, so to speak, become immortal."

Carman. deos.—This is copied literally from the French translation. The explanation that suggests itself to me is that the term is a mistake for Cardamoms (Cardamomi semina). The manuscripts of Machiavelli's letters suffered somewhat in the hands of well-meaning or ill-meaning persons, or may be there was some misunderstanding on the part of the transcriber. Betony roots are said to possess purgative and emetic properties. Pipinella is presumably pimpinella, whose fruit is aniseed. Armenian bole contains oxide of iron, and besides, owing to its consistence, would act as an excipient.

It will be seen that Machiavelli's pill very nearly resembles a mixture of two in the *Pharmacopœia*, the aloes and myrrh and the aloes and iron pills; but his dose is a heavy one. No one, however malicious, would now state that such a combination would be magical, or would cause a man to die mocking God, and pretending he was become immortal. These pills are usually given or taken for other purposes.

We have received the first number of the *Zeitschrift für diätetische und physikalische Therapie*, edited by Professors E. v. Leyden and A. Goldscheider, of Berlin. The first number promises that this new *Zeitschrift* will be an extremely valuable periodical, as was indeed to be expected from the names of its editors. It contains, among other articles, an interesting paper upon Premature Senility by Dr. Hermann Weber, of London; a Retrospect of Works on Hydrotherapy, by Professor Winternitz, of Vienna; a critical article on Hydro-electric Baths, by Professor Gustav Gaertner, of Vienna; and a series of reviews, abstracts, short notes on clinical subjects, and a short report of the Congress at Wiesbaden. The periodical is published by Georg Thieme, Leipzig.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 6th day of July next, at 2 o'clock in the afternoon.

June 9th, 1898. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the latter meeting—namely, September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—The annual general meeting will be held at the Hotel Cecil on Tuesday, June 28th, 1898, at 6 P.M. The members will dine together at 7 P.M. Robert Farquharson, M.D., M.P., President-elect, in the chair.—ISAMBARD OWEN, H. B. ROBINSON, Hon. Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The sixty-second annual meeting of this Branch will be held in Powell's Boys' Reading Room, Wigan, on Tuesday, June 28th, 1898, at 2 P.M. Agenda: Inaugural Address by the President, Mr. W. Berry, F.R.C.S.I. Report of Council and Financial Statement. Election of Office Bearers, Representatives in the Council of the Association, Representatives in the Parliamentary Bills Committee, and Ordinary Members of the Council for 1898-99. Choice of Place for holding next Annual Meeting. (A cordial invitation, which has been provisionally accepted by the Council, has been received from the members resident in Bolton, to hold the next annual meeting in that town.) Appointment of two Auditors. Votes of Thanks to the Office Bearers and Members of late Council. Medical and Surgical Communications: Dr. E. T. Davies: Abdominal Hysterectomy for Fibroid Tumours, with Specimens. Dr. C. Thurstan Holland: Foreign Bodies and the Use of the *x* Rays. Mr. E. Stanmore Bishop: A Case of Ureteral Calculus. The President and Members resident in Wigan are anxious that, as far as possible, this day should be spent as an enjoyable holiday. From 12 to 2 P.M. Arrangements will be made for the inspection of the Free Library and Reference Library, the Wigan Parish Church, and the Exhibits. At 4 P.M. conveyances will be provided to convey members to Haigh Hall, on the invitation of the Earl of Crawford, K.T., to view the Gardens and inspect the Library. Mr. Walter Simpson has kindly invited a limited number of gentlemen to Longhurst for Afternoon Tea and Bowls. The Royal Albert Edward Infirmary will also be open to visitors, who will be received by members of the medical staff. Drugs and Medical Appliances.—There will be an Exhibit of New Drugs and Chemicals, Medical and Surgical Instruments, etc., in the Reading Room. Luncheon.—A luncheon, provided by the President and Members of the Wigan Medical Society, will be served at the Old Council Chamber from 12 to 2 P.M. Dinner.—Arrangements have been made for a dinner at the Old Council Chamber, Rodney Street, Wigan, at 6.30 P.M.; tickets (wine not included) 5s. each. In order to facilitate arrangements the Secretary will feel

much obliged if every member who intends to be present at the meeting will kindly inform him whether he purposes being present at luncheon and dinner. Those gentlemen who intend coming, but who, on the day of meeting, may find it impossible to do so, will not be held responsible for their dinner tickets. The Secretary is very anxious to get the number as correctly as possible, in order to assist the Reception Committee. N.B.—Those gentlemen who have not yet paid their subscriptions will please remit such, without further delay, to the Honorary Secretary, Dr. Barr. Subscriptions to the Royal Medical Benevolent College can be paid to Dr Barr. A Council meeting will be held at Haydock Lodge on June 21st. Those who wish to become members of the Branch, or of the Association and Branch, should communicate with the Honorary Secretary at once. There are over 1,000 members of the medical profession in these two counties who are not members of the British Medical Association; and 400 who are members of the British Medical Association, but not of this Branch. There is thus a large field in which members can render valuable aid in stimulating the growth and importance of this Branch. The Secretary has sent a notice of this meeting, a list of members, and an application form to each of the 400; he hopes that members will induce as great a number of these as possible to join the Branch. It may be pointed out to these that at present they have no representation, and the small annual subscription of 2s. 6d. is a good investment Those who are outside the pale of the Association and Branch have frequently received circulars, but on the present occasion it has not been deemed necessary to notify them. Application forms can be had by applying to the Secretary, 72, Rodney Street, Liverpool. It is intended to hold a joint meeting with the North Wales Branch, in Chester, in September. Gentlemen wishing to take part in this meeting should communicate with Dr. Barr.—JAMES BARR, M.D., Honorary Secretary, 72, Rodney Street, Liverpool.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at Hereford on June 24th under the presidency of Dr. East.—GEO. W. CROWE, Worcester, Honorary Secretary.

NORTH WALES BRANCH.—The annual meeting will be held at Llangollen on or about July 13th. Members having papers to read, cases to communicate, or specimens to show are requested to intimate the same before July 2nd.—W. JONES-MORRIS, Is-y-coed, Portmadoc, Honorary Secretary.

EDINBURGH (LOTHIANS AND FIFE) BRANCH.—The annual meeting of the Edinburgh Branch will be held in the Royal College of Physicians, Queen Street, Edinburgh, on Wednesday, June 22nd, 1898, at 5 P.M.—R. W. PHILIP, M.D., 4, Melville Crescent, Edinburgh, Honorary Secretary.

BORDER COUNTIES BRANCH.—The annual meeting of the Branch will be held at Whitehaven on Friday, June 24th. Members intending to contribute papers, etc., please communicate with the Hon. Secretaries, R. DUNDAS HELM, Carlisle; W. HALL CALVERT, Melrose.

WEST SOMERSET BRANCH.—The annual meeting of this Branch will be held on Tuesday, June 28th, at 12.30 P.M., at St. Saviour's, Bridgwater, the residence of the President, Mr. R. H. F. Routh. Besides the ordinary business, the President will deliver an address on "Cycling: its Prophylactic and Curative Properties." The President has kindly asked the members of the Branch to lunch with him at his house after the meeting. During the afternoon, arrangements have been made for the amusement of visitors, including a drive to Lilstock, tickets 2s. 6d. There will be a dinner at the Clarence Hotel, Bridgwater, at 7.30, tickets 4s., exclusive of wine. Members intending to take the drive or be present at the dinner are requested to inform Mr. Routh before June 24th.—R. LIDDON MEADE-KING, M.D., Taunton, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next annual meeting will be held at Cardiff on June 30th. Further particulars in circular.—A. SHEEN, M.D., Cardiff; D. A. DAVIES, M.B., Swansea, Honorary Secretaries.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.—The annual meeting of this Branch will be held in Cambridge on Tuesday afternoon, July 5th, 1898. Members who desire to make any communications are requested to inform the Honorary Secretary as early as possible, in order that a full programme may be issued without delay. Members who wish to propose members of the Association as members of the Branch are requested to send notice to the Honorary Secretary not later than June 20th, 1898.—JOSEPH GRIFFITHS, Honorary Secretary, 63, Trumpington Street, Cambridge.

BATH AND BRISTOL BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 29th, in the Royal Mineral Water Hospital, Bath, at 4.30 P.M., when Mr. F. R. Cross will resign the chair to Dr. Lionel Weatherly, President-elect, who will deliver the Presidential Address. The business of the meeting will be to receive the report of the Council, to elect the officers of the Branch, to transact the necessary business, and such subjects connected with the interest of the Branch and of the profession as may be brought before it. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. Members who have not paid their subscriptions are requested to do so immediately to the Local Secretaries. The dinner will be held at the Grand Pump Room Hotel at 7 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charges. The Bath Secretary particularly requests that members will inform him by Monday, June 27th, whether it is their intention to be present at the dinner. By so doing they will greatly facilitate the satisfactory completion of the necessary arrangements.—W. M. BEAUMONT, Bath, J. MICHELL CLARKE, Clifton, Honorary Secretaries.

SOUTH EASTERN BRANCH.—The annual meeting will be held at the Town Hall, Tunbridge Wells, on Wednesday, June 22nd, at 2 P.M. The President-elect (Dr. Ranking) invites members to lunch at his house (near the Town Hall) from 12.30 to 2 P.M. Dinner at the Wellington Hotel at 6.15 P.M., at 7s. per head.—T. JENNER VERRALL, Hon. Secretary, Brighton.

SOUTH MIDLAND BRANCH.

THE forty-third annual meeting of this Branch was held at Luton on June 9th. Twenty-three members and one visitor were present, and were previously to the meeting entertained by the PRESIDENT (Mr. Horace Sworder).

Visit to Sewage Works.—After luncheon the members paid a visit to the sewage works and farm, under the guidance of the borough engineer, who explained the method of disposal of the sewage, and pointed out the chief features in the newly-constructed main culvert.

Reports.—The report of the Committee of Management, including those of the Honorary Treasurer and Honorary Secretary, were read and confirmed.

New Members.—The following gentlemen were elected members of the Branch only, being already members of the parent Association, namely: F. G. Crookshank, M.D., Berrywood; Chas. Ed. Paget, M.O.H., Northampton; John Terry, Daventry; J. E. C. Scott, Yardley Hastings; J. C. O'Rafferty, Daventry. Thomas Cairns, Northampton; A. G. Hayes, Culworth; Horace C. Colman, Northampton Infirmary, were elected members of the Association and Branch. C. I. Hill Aitken, Bedford, was elected a member of the Association only.

Future Meetings.—It was resolved that the autumnal meeting be held at Wellingborough on October 6th, and the annual meeting next year at Kettering, under the presidency of John Allison, M.D.

Election of Officers.—Mr. J. Hughes Hemming was re-elected representative of the Branch on the General Council and on the Parliamentary Bills Committee of the Association, a hearty vote of thanks being accorded to him for his past services. Mr. G. H. Percival and Mr. C. J. Evans were re-elected Honorary Treasurer and Honorary Secretary respectively. Mr. William Gunner Nash and Dr. Allison were selected to retire from the Committee of Management as representatives for Northamptonshire, Mr. E. C. Sharpin for Bedfordshire, and Mr. M. Hailey as representative for Buckinghamshire. The vacancies so caused were filled up by the election of Dr. W. Harding (Berrywood) and Mr. Audland (Wellingborough) for the first county; Mr. Walter Gifford Nash for Bedfordshire; and Mr. W. H. Bull (Stony Stratford) for Buckinghamshire.

Subscriptions.—It was resolved:

That the usual subscription of one guinea be sent to the Royal Medical Benevolent College and the British Medical Benevolent Fund.

The SECRETARY stated that the two candidates to whom the Branch votes were given were elected, the foundation scholar having had connection through his family with the town of Luton for many years.

Death of Mr. Ernest Hart.—It was resolved:

That the South Midland Branch desires to place on record its deep sense and appreciation of the important and valuable services to the medical profession in general, and to the British Medical Association in particular, of the late Mr. Ernest Hart, Editor of the JOURNAL, and of the great loss sustained by his death; and, further, to convey its sincere sympathy to his widow and her family in their bereavement.

Venereal Disease in the Army.—A circular was read from the Worcestershire and Herefordshire Branch on the subject of the increase of venereal disease in the army. In consideration of the recent favourable action of the Government in the matter the circular was ordered to lie on the table.

Legislation for Inebriates.—A circular was read from the General Secretary enclosing a memorandum on this subject. The Honorary Secretary was directed to write to the members of Parliament for the county and borough, drawing their urgent attention to the matter, and to forward a copy of the memorandum.

Corporate and Medical Reform Committee.—A letter was also received from the General Secretary, together with the report of the "Corporate and Medical Reform Committee." It was resolved:

That this Branch considers the said report to be an unwarranted attack on the General Council, and that a reply be addressed to the General Secretary to that effect.

Constitution Committee.—A further letter was read from the General Secretary containing a "Report of the Constitution Committee." The several clauses were discussed by the members present, the clause relating to "expulsion of members" being approved of; all the other clauses were negatived.

Obstetric Bills.—A copy of the "Draft Obstetric Nurses Bill" together with memorandum by British Medical Association of regulations proposed for adoption by the Obstetric Nurses Boards, was presented. After discussion, it was resolved:

That this Branch expresses its general approval of the Bill of the Parliamentary Bills Committee, and its grave opposition to Mr. J. B. Balfour's Bill presented to Parliament.

President's Address.—At this stage of the proceedings the President delivered his introductory address, taking for his subject the Sanitary Administration of the Town of Luton Past and Present, classifying the subject under different heads, and entering into much detail.

Paper.—Mr. H. Stansfield Collier, St. Mary's Hospital, read a paper entitled Remarks upon Some Cases of Peritoneal Adhesions.

Votes of Thanks.—Cordial votes of thanks were passed to the retiring President for his services during the past year; to the President for his excellent address and for his kind hospitality; to the Borough Engineer, and to the reader of the paper.

YORKSHIRE BRANCH

The annual meeting of this Branch was held at Halifax on June 8th.

Election of Officers.—Dr. Dolan (Halifax) was elected President and Dr. Kilner-Clarke (Huddersfield) Vice-President for the ensuing year. The Council and Secretary were re-elected. Mr. Jessop, Dr. Dolan, and Dr. Dyson were re-elected representatives of the Branch on the Council, and Dr. Dolan and Dr. Cameron on the Parliamentary Bills Committee,

President's Address.—The President gave an interesting address on "Some of our Old Masters" (see p. 1611).

Communications.—Dr. Major read notes on a case of Continuous Involuntary Movement of the Auricles and Scalp.—Dr. Alexander: An Unusual Case of Distended Gall Bladder from Inspissated Bile.—Dr. Trevelyan: A demonstration of a simple method (Toepfer's) of Quantitatively Estimating the Various Acids in the Stomach Contents.—Dr. Armstrong (Buxton) and Mr. Greville demonstrated an Electrothermic Apparatus for the local application of heat to various regions of the body.

Luncheon.—A large number of the members were most hospitably entertained at luncheon by the President, Dr. Dolan.

Visit to Royal Infirmary.—After the meeting, several members visited the Royal Halifax Infirmary.

Dinner.—Eighteen members dined at the Old Cock Hotel.

HONG KONG AND CHINA BRANCH.

A meeting of the Hong Kong and China Branch was held in Hong Kong on April 29th, Surgeon-Colonel Evatt, M.D., P.M.O., Vice-President, in the chair.

New Members.—The following gentlemen, already members of the Association, were elected members of the Branch:—H. H. Brown, M.B., Surgeon-Major A.M.S.; J. H. Pead, M.B., Surgeon R.N.; M. J. Whitty, M.D., Surgeon-Captain A.M.S.

Representatives of Branch at Annual Meeting.—The following gentlemen were appointed representatives of this Branch at the annual meeting of the Association in Edinburgh:—James Cantlie, M.B., F.R.C.S.; William Hartigan, M.D. Mr. Cantlie was again re-elected representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee.

The late Mr. Ernest Hart.—It was resolved:

That the members of the Hong Kong and China Branch of the British Medical Association desire to express their sense of the great loss sustained by the Association by the death of Mr. Ernest Hart, and beg to tender their sincere sympathy to Mrs. Hart in her bereavement.

Paper.—Surgeon-Colonel Evatt read a paper on The Organisation of the British Medical Association.

CEYLON BRANCH.

A meeting of this Branch was held at the Colonial Medical Library, Colombo, on April 30th. Surgeon-Major Perry, P.C.M.O., took the chair, and 13 members were present. Justice Laurie was present as a visitor.

Branch Delegates to Annual Meeting.—A letter from the President of the parent body having been read, Sir William R. Kynsey, C.M.G., and Dr. H. Marcus Fernando were unanimously elected delegates of the Branch to the forthcoming meeting to be held at Edinburgh in July.

New Members.—Drs. G. de Saram, L.R.C.P. and S.Edin., J. S. Goonesakera, L.C.M.C Ceylon, and T. Morgan, L.C.M.C. Ceylon, were elected members.

Communications.—An interesting paper was read by Dr. H. G. Thomas on Surgical Bacteriology and Asepsis in Surgery. He dwelt at length on the different bacteria and microbes that were present and that attacked the human subject. He laid special stress on the production of tetanus and abscesses, and spoke of how best to combat these conditions. He enumerated the more important micro-organisms that were to be met with in different surgical states, and finally he advocated the importance of attending minutely to the idiosyncrasy of the person to be operated on. The Hon. Dr. W. G. Rockwood and the Chairman took part in the discussion which followed, Dr. Rockwood showing a case of Cancer that had been operated on some years ago by him.—Owing to the lateness of the hour the other papers had to be postponed.—Dr. J. Attygalle demonstrated the Roentgen Rays.—Several interesting Skiagraphs and Microscopic Specimens and Clinical Cases were also shown.

Vote of Thanks.—The meeting terminated at about 10.30 P.M. with a vote of thanks to the Chairman.

SPECIAL CORRESPONDENCE.

PARIS.

The Prevention of Tuberculosis.—Microbes in the Chamber of Deputies.—Ambulance Stations in Paris.—The President and the Hospitals.—Athletic Sports in French Schools.—The Army Medical Service.

Dr. Gibert, of Havre, stated at a recent meeting of the Paris Academy of Medicine that there are entire streets in that town where there has not been for a considerable time a death from phthisis. He believes that this immunity is owing to the fact that the streets are exposed to the wind from the sea. He urges the Academy to call upon all prefects to adopt the measures which will ensure the disinfection of all dwellings where phthisical patients have lived, whether in town or country. M. Laveran urges that sanatoria for tuberculous poor should be established. M. Collen complained of the inadequate precautions used in the army to prevent tuberculosis. He insists that the floors should be renewed and rendered impermeable; also that the barracks and military effects should be periodically disinfected, that the infirmaries should be isolated instead of being in the barracks. In a word, all the measures which the health service has been so long urging on the authorities should be adopted.

A distinguished scientist and fellow worker with Pasteur a few days ago at a social gathering of Deputies and Ministers caused some sensation by making the following statement: "I have analysed the air in different localities—on the boulevards, hospitals, and theatres. I have counted the microbes found in it and ascertained their comparative virulence. Among the analyses I made, the most dangerous air breathed is that of the Chamber of Deputies."

The Paris Municipal Council has furnished the Public Assistance with means for organising in Paris permanent urban ambulance stations. Any person who is ill as well as victims to accidents can be attended to at these ambulance stations. A few days ago one was opened at Coulaincourt, a suburb of Paris. A ground floor is arranged to receive several patients, all apparatus necessary for dressings, bandages, and medicine were supplied. Four ambulance carriages are in readiness to fetch and take back patients requiring medical care.

The President of the Republic during his stay at St.

Etienne visited the different hospitals of the locality. Likewise the asylum for children, to whom he offered a country excursion with luncheon. At the old unhealthy Hôtel-Dieu Hospital, which will soon be evacuated, the President distributed medals among the staff. The new hospital, which will replace the Hôtel-Dieu, is called the Bellevue. It is admitted to be a model hospital, constructed in accordance with the teachings of sanitary science. M. Félix Faure formally opened the building before leaving St. Etienne, and presented M. Lamargière, the architect, with the Legion of Honour.

The distinguished writer, Jules Lemaître, at a recent lecture on education given by him at the Sorbonne, deplored the fact that according to the present educational system observed in French *lycées* five minutes a day are all that is left for athletic sports. The first meeting of the Commission de l'Education Physique was held at the Sorbonne a few days ago, no less a person than M. Gréard, Vice-Rector of the University of Paris, was in the chair. M. Rabier, Director of Primary Instruction, in the name of the Minister of Instruction, praised the private initiative of the authors of this movement, and acknowledged the necessity of physical exercises. He assured the meeting that the University was willing to co-operate. The first meeting of this commission was devoted to the study of how to make itself useful. The following conclusions were adopted: The present commission should be divided into two commissions, one to occupy itself with methodical exercises—those that are now officially taught, such as target practice, fencing, and gymnastics. The second commission will devote its attention to school games and all kinds of athletic sports. Both commissions will pay attention to the encouragement of athletic sports, to organise matches, and the "pedagogy of sports." All educational establishments of whatever degree are to share in the advantages of a physical education. Whether all this machinery will result in stretching the five minutes for daily sports referred to by M. Jules Lemaître into one or two hours time will show. It is possible that this movement will find opponents in some of the professors of the *lycées* who now complain that there is no work done when football matches are coming on. The pupils are so absorbed and excited by the coming event that work is out of the question. The best pupils turn their backs on Horace and Homer, and the best mathematicians forsake their problems for the fascinating game. The question of public health and medical training involved in the practice of athletic sports will not be, it is to be hoped, lost sight of by the Physical Education Committee.

Considerable discontent has been expressed because the law remodelling the measures concerning army surgeons passed on May 5th, 1898, has not yet been carried into effect. When the reasons for remodelling the law of 1882 were stated by the War Minister in the name of the President of the Republic, M. Billot affirmed that the law of March 16th, 1882, did not provide a sufficient number of medical officers even for time of peace, much less for the exigencies of mobilisation. This affirmation resulted in the law being immediately voted. Since then no further step has been taken.

BERLIN.

Professor Koch on Tropical Diseases.—The German Red Cross Society in the Greek War.—The Repression of Tuberculosis.

THE announcement that Robert Koch would give an address on his eighteen months' work in South and East Africa and India, drew a crowded audience to the meeting of the German Colonial Society on the evening of June 9th. Almost all the notabilities of the medical world, many Government officials, military men, etc., were present as guests, so that the Assembly Room of the Kaiserhof was hardly large enough, and a tropical temperature reigned, which—though perhaps in harmony with Koch's subject—could scarcely be called agreeable. Tropical fever and black-water fever were the topics most exhaustively treated in the address. Hitherto the opinion prevailed that tropical malaria was not marked by the periodicity characteristic of ordinary malaria and that its fever curve was entirely devoid of regularity. Koch, persuaded that the constantly repeated doses of quinine given in tropical fever prevented the development of a characteristic curve (such as the tertian ague curve, for instance), discontinued quinine for a time, and obtained a regular periodic curve. The periodic course of the fever runs parallel with the development of the plasmodia in the red blood corpuscles, which are similar to, but not identical with, the plasmodia of ordinary malaria. Having, by microscopic observation, determined the most suitable phase in the fever's course, Koch then, and then only, gave 1 g. of quinine, and succeeded in arresting the development of the parasites. Koch is strongly opposed to the prevalent method of continuous quinine-dosing; in fact he thinks that very probably the most serious form of tropical fever—the "black-water fever" (a disease in which, through the disintegration of the red blood corpuscles, their colouring matter passes into the kidneys, giving to the urine a dark-brown colour) may be caused by the deleterious effect of large and long-continued doses of quinine. That the infection of tropical malaria is carried by mosquitos Koch thinks very likely, though not as yet conclusively proved. But it is a fact that a small island in the German-African territory, where there are no mosquitos, is free from malaria. Mosquito nets and single doses of quinine given at a certain period exactly determined by microscopic examination of the blood Koch thinks the rational method of combating tropical fever. He believes in immunity to malaria. Many of the aboriginal races are practically immune by nature, and persons who have had malaria without taking quinine show a tendency to gradual slow recovery, which is often combined with immunity. The discovery of a method for the production of artificial immunity cannot, Koch thinks, be considered as beyond the range of possibility. In conclusion, he strongly advised the appointment of doctors, well schooled in microscopic work, and acquainted with malaria, to carry out an exactly-planned treatment by quinine in German Africa.

The Crown Princess of Greece, who has been staying in Berlin on a visit to her brother the German Emperor, gave an audience to the Committee of the German Red Cross Society, in order to express her thanks for the efficient aid rendered by the Society during the late war.

A permanent committee for combating tuberculosis is hoped for as an outcome of this year's Congress of Naturalists and Medical Men. The preparatory work has been going on since last year's meeting under the direction of Professor Hueppe in Prague, and it has been resolved that all the chief methods of tuberculosis treatment are to be represented in the committee.

HONG KONG.

The Plague Epidemic.

THE epidemic of plague has during the past few weeks attained somewhat serious proportions, the daily average of cases reported being now between 20 and 30, and on May 5th the number of cases in twenty-four hours reached a total of 39 with 24 deaths. The total number of cases since the year began has been 792, of which 686 have been fatal. The weekly statistics during April were as follows:

Week ended—	Cases.	Deaths.
April 2nd	45	40
,, 9th	106	87
,, 16th	97	92
,, 23rd	127	109
,, 30th	119	112

A larger proportion of Europeans than in previous years is being attacked, and during the past week the fatal cases have included two members of the nursing staff at the Government Civil Hospital, Miss Higgin (Sister Frances) and Miss Ireland (Sister Gertrude). Among the fatal Chinese cases has been Dr. U. J. Kai, the resident house-surgeon in the Alice Memorial Hospital, a young man of much promise professionally, and one of the most enlightened of his race. He was educated in the Hong Kong College of Medicine for Chinese and in the Government Civil Hospital, where he for several years acted as an assistant dispenser, and he is deeply regretted by a large circle of friends. Energetic measures to cope with the epidemic are being adopted by the Government; search parties and house-to-house cleaning parties, under the supervision of soldier volunteers, being at work all over the city. A large hospital for the treatment by native Chinese methods of plague patients has been opened on the seashore to the west of the city by the directors of the

Tung Wa Hospital, under the supervision and control of Dr. J. C. Thomson, Government Inspecting Medical Officer of the Tung Wa Native Hospital. This has been sanctioned by the Government in order to induce the Chinese to declare all cases of plague early, instead of concealing them as has hitherto been the case.

MANCHESTER.

Sewage Appeal Withdrawn.—Owens College Hospital Estate: Enlarged Powers.—Lady Demonstrator of Anatomy.

The Rivers Committee of the Corporation have decided that the appeal against the decision of the stipendiary magistrate relative to the sewage effluent poured into the Ship Canal shall be withdrawn. This will leave the Mersey and Irwell Joint Committee a free hand to press for the enforcement of penalties or otherwise as they see fit. The chairman of the Joint Committee (Sir John T. Hibbert), at the recent meeting between the Corporation representatives and the Joint Committee, said "that while they could not make any bargain," he at the same time expressed the hope that the Corporation would have faith that they would be treated fairly and honourably.

The Council of Owens College have obtained from the Charity Commissioners a scheme giving the College enlarged powers of dealing with the "Hospital Estate"—that is, an estate of thirteen or more acres given by the legatees of Sir Joseph Whitworth for hospital purposes. Broadly the scheme is as follows: The Owens College, Manchester, as the trustees of the Hospital Trust of the Owens College, Manchester, and the endowments thereof, shall be authorised at any time, and from time to time, to alienate by conveyance or long lease, with or without valuable consideration, the whole or any part or parts of the lands of the charity to any person or persons, corporation or corporations, who may be willing and able to undertake, establish, and maintain a hospital or hospitals upon the same lands or part thereof; subject always to providing and securing to the Medical School of the Owens College all requisite facilities for instruction; and also subject to safeguarding the provisions of the said indenture of February 17th, 1892, so far as they relate to the treatment of the disease of cancer. No such alienation as aforesaid shall be made without the sanction of the Charity Commissioners, and subject to such conditions as the Commissioners think proper, for providing that the land of the charity shall remain subject to charitable trust, and for protecting and perpetuating the interests of the Owens College.

Miss Gertrude Halley, a granddaughter of the late Rev. Dr. Halley, of Manchester, has been appointed one of the Demonstrators in Anatomy in Melbourne University.

LIVERPOOL.

Changes in the Staff of the Hospital for Women.—Appointment of a Medical Referee under the Workman's Compensation Act.—Street Collection for Hospital Saturday Fund.—New Laboratories.

Two vacancies have lately occurred on the assistant staff at the Hospital for Women, owing to the resignation of Dr. Smart, and the promotion of Dr. Gemmell to the senior staff. The committee of the institution have decided to fill only one of these vacancies, and to appoint a non-resident stipendiary assistant.

The Secretary of State for the Home Department has offered the appointment of medical referee under the Workman's Compensation Act, 1897, for the Liverpool County Court Circuit to Mr. George G. Hamilton, F.R.C.S., one of the assistant surgeons to the Royal Infirmary. It is understood that Mr. Hamilton has accepted the appointment.

The annual street collection by ladies in aid of the Hospital Saturday Fund was made on June 11th in brilliant weather. About £700 was collected, a substantial increase on the collection of last year.

The Thompson-Yates Laboratories of Physiology and Pathology, which have been erected and equipped by the Rev. S. A. Thompson-Yates in the most adequate way for study and research at a cost of over £25,000, will be formally opened on October 8th by Lord Lister, President of the Royal Society.

CORRESPONDENCE.

FOREIGN PRACTITIONERS AND RECIPROCITY.

Sir,—I find in the British Medical Journal of June 11th a letter from Mr. Victor Horsley containing a false assertion about me which I must ask leave to notice. Mr. Horsley seems to aim at eclipsing the reputation of a writer of memoirs of the early part of the century, one of whose books gave occasion to the epigram—not, be it observed, epitaph—which runs as follows:

> Men, measures, seasons, scenes, and facts all,
> Misquoting, misstating,
> Misplacing, misdating,
> Here lies Sir Nathaniel Wraxall.

Mr. Horsley writes: "Mr. Carter admitted to the Council that he was responsible for a statement on this subject in the letter written by the Executive Committee of the General Medical Council to the Privy Council." I reply that no part of this assertion is true.

In the spring of 1893 certain papers relating to the medical practice of Englishmen in foreign countries were sent to the General Medical Council by the Government; and, on May 23rd, 1893, the Council referred these papers to the Executive Committee. That Committee prepared a report on the whole subject, afterwards known as the Report on Reciprocity of Medical Practice in Foreign Countries, and this report contained, among other matter, "a statement, prepared by direction of the General Medical Council, showing the conditions under which foreign medical practitioners are allowed to practise medicine in England; for submission to foreign Governments, with a view to induce them to reconsider the regulations by which English qualified practitioners are, in a great measure, excluded from practising medicine on the Continent." An introductory memorandum mentions that the "statement" thus referred to had been "submitted to the Lord President of the Privy Council, by whom it was approved, and who most courteously undertook to bring the same before the notice of the different European Governments through the Secretary of State for Foreign Affairs." The "statement" is in parallel columns, in English and French; it covers little more than a page; and it is divided into five clauses. Clause 2 states that "foreign practitioners can practise medicine in Great Britain without restriction—but must not take or use any name or title implying that they are registered." Clause 4 points out that "practitioners, native or foreign, who are not on the *Register*, cannot recover their fees by legal process, nor give medical evidence in courts of law, nor hold public medical offices."

On November 27th, 1893, the Executive Committee resolved to issue their report, as a separate document, among the official publications of the Council; and on the following day the report was laid before the Council itself, and was ordered to be entered on the Minutes. All this was in 1893; and I did not become a member of the Executive Committee until 1897. I had no share in the preparation of the report, I never saw it until it was published, I had no responsibility for it, and I never admitted any. Moreover, the "letter written by the Executive Committee to the Privy Council" seems to be a figment of Mr. Horsley's disordered imagination. There is nothing to show that any such letter was ever written in relation to the subject. All we know is that the "statement" in five clauses which formed part of the report had been "submitted" to the Lord President and "approved" by him.

On May 27th, 1897, a letter from Mr. Eyre, of Rome, on the position of English practitioners in Italy, was read to the General Medical Council; and a special Committee, consisting of the late President, Sir Dyce Duckworth, Sir Richard Thorne Thorne, and myself, was appointed to "frame and forward to the Privy Council a representation calling attention to the subject of Mr. Eyre's letter." We did "frame and forward" a representation accordingly; and to parts of this, with which the Executive Committee had nothing to do, Mr. Horsley took exception. I spoke in the discussion which he initiated, and "admitted," if it were an admission, that I had prepared the original rough draft of our letter, which, of course, underwent revision. It would have been superfluous to "admit" and idle to deny that I shared with my colleagues our joint responsibility for the finished production.

But instead of "admitting responsibility" for the statement objected to by Mr. Horsley, I pointed out that even the Committee as a whole was not responsible for it, because it was a mere repetition of a declaration publicly made under the authority of the Council four years previously—a declaration which had been "approved" by the Lord President of the Privy Council, and the substantial accuracy of which had not then been questioned. We, as a Committee, could not write an official letter containing statements at variance with those already sanctioned by the body which had appointed us.

Mr. Horsley is at least premature in congratulating the profession on the "disappearance from among the advertised publications of the Council" of what he calls "the misleading and erroneous report on reciprocity." He moved that it should "disappear," and he was defeated. Motions were afterwards carried that it should not be reprinted without further order from the Council, and that it should be referred to the Executive Committee for consideration and report. In the meanwhile, there are copies enough in stock to meet any probable demand, and the epithets applied to the document by Mr. Horsley afford a reasonable presumption that it is absolutely correct and trustworthy.

I have no knowledge of the case of Dr. Liebster or of the circumstances or representations which induced the Society of Apothecaries to sanction proceedings against him. But I believe we have everything to lose and nothing to gain by any systematic persecution of respectable foreign practitioners. The Englishmen who desire to practise in foreign health resorts are probably far more numerous than the qualified foreigners who desire to practise in this country, and the exclusion of the latter will furnish foreign Governments with a complete justification for rigorous enactments against the former.—I am, etc.,

Harley Street, W., June 11th. R. BRUDENELL CARTER.

THE MEDICAL EXPERT AID COMMITTEE: AN INSIDIOUS SCHEME.

SIR,—In common, I presume, with most of the consultants in London, I have received a circular letter setting forth the praiseworthy desire of a Committee of influential (but almost exclusively lay) persons "to enable persons of limited means to obtain expert medical advice." This it is proposed to do by having a body of consultants affiliated to the Committee who will engage to see and treat these persons, subject to certain necessary safeguards, the most important of which is that the Committee will only pass on to the consultant those who have been recommended to it as suitable subjects for its assistance. This Committee desires to know from me "in the course of the next seven days" whether I am willing to see any patients referred to me by the Committee upon the terms contained in the forms it encloses, and at the same time I am desired, if I agree to the proposal, to indicate the branches of medicine or surgery I "more specially practise."

I do not for one moment wish to impugn the *bona fides* of the Committee (indeed, it is careful to provide as many safeguards as possible against abuse), nor do I wish to controvert the view that there is a large and most deserving class that should be able to obtain expert advice for a reduced fee. What I do wish most emphatically to insist upon is that the proposed plan for effecting this is, apart altogether from the abuse that is likely to result from its introduction, quite uncalled-for. I venture to say that there is practically not a single consultant in London who does not see and treat patients of limited means when they are recommended to him as fit subjects by a general practitioner upon a scale of fees which for generosity compares well with the Committee's proposed tariff. And I would go further than this, and say that there is hardly a general practitioner in England who is unable to obtain for his deserving patients this important boon. The general practitioner knows that the consultant is always ready to oblige him by seeing cases for a reduced fee if he vouches for their inability to afford the ordinary rate, and the consultant knows that the general practitioner is not likely to put himself under the slight but definite obligation implied unless for a sufficient cause. But this will no longer be the case if the Committee's scheme supersedes the present state of things. The consultant (to be chosen by the Committee) will probably be one personally unknown to the medical attendant, and undoubtedly in these cases there will be many instances where abuses will creep in. The patient, who of course will soon get to know all about the aims of the Committee, will desire to avail himself of the chance of obtaining advice at less than half its market value, and the medical attendant, having little personal interest in the matter, will probably view with a more lenient eye than usual pessimistic statements as to financial position. Indeed leniency in this respect (entailing pecuniary loss on the consultant alone) might even prove a useful adjunct to the practice of a struggling practitioner in opposition to a more rigid opponent.

The most objectionable feature of the scheme I have left to the last, as it concerns the affiliated consultants alone. In the circular referred to it states that the Honorary Secretary will, on receipt of the application and fee, forward a slip bearing the name of a consultant to whom the patient is to write. The circular does not go on to inform us as to who is responsible for the selection of the name of the particular consultant; whether it is left to the Honorary Secretary or to the General Committee, consisting mainly of clergymen and ladies of title, assisted by a single medical man, or to the Subcommittee of Management, consisting of three clergymen again assisted by the aforesaid medical man, is not explained. In any case, the process of selection, however competent the selecting body may be, cannot fail to be often the subject of attack; certainly selection by a lay body, even when fortified by the valuable advice of a single medical man, requires no words of mine to render its absurdity apparent.—I am, etc.,

June 14th. SCRUTATOR.

SIR,—I was taught from my earliest youth to admire philanthropy, and to reverence a philanthrope when I met him, but I must confess if I were to meet any of the Committee of the above, or more especially of the subcommittee, I should only be able to do so after a severe inward struggle, if at all, for their philanthropy is of a somewhat peculiar kind. When I first saw the title of this body I had visions of a holiday in the Engadine, when, thanks to the generosity of a body of subscribers, my expenses would be reduced to one-half or one-third of the actual amount. I further stocked my cellar, in imagination, with some of the finest brands o champagne of 1874, and other excellent vintages at the price of ordinary Sillery, and the dream that, with a pardonable youthful enthusiasm I used to indulge in, of driving to my hospital in a carriage seemed to be within a measurable distance of realisation; but, alas, on reading the documents through I found that the Committee proposed to aid medical experts in a very different fashion. What the Committee offer me is that after going four miles to see a patient in consultation they will give me the magnificent remuneration of 1 guinea, less 6d. deducted for expenses of "stationary (*sic*), etc." I will make only one comment on this most extraordinary proposal—namely, for one person within three miles of the Marble Arch able to pay a guinea, there are ten able to pay 7s. 6d. Why not afford them the luxury of a consultation beyond their means?—I am, etc.,

June 14th. A CONSULTING PHYSICIAN.

THE ALLEGED DEARTH OF QUALIFIED ASSISTANTS.

SIR,—This question is of such importance that I venture to inquire what is the cause of the scarcity that is said to exist.

The lengthening of the curriculum, and the action of the General Medical Council with regard to the employment of unqualified assistants, is credited with it I venture to think there is another cause, which even to a larger extent might be held responsible, and that is the action of the various medical agencies in endeavouring to interfere with the law of supply and demand, possibly to their advantage, but certainly very much to the disadvantage, not only of principals, but also of young qualified men, who, instead of accepting salaries within the means of general practitioners, are encouraged to buy practices or junior partnerships, or

even to attempt to build up practices themselves, rather than work with senior men for the first year or two of their professional life. This state of affairs is unfortunate, and is apt to bring discredit on the profession generally.

1. It puts a fictitious value on small practices.

2. It encourages insufficiently-experienced men to buy, who do not know what they are buying, or how to conduct a practice when it is bought.

3. It encourages others to settle down for themselves, with the result that the keenness of competition causes otherwise strictly honourable men to stoop to actions which before were utterly foreign to their nature.

But does this dearth exist to the extent that some would have us believe? My personal experience is quite the opposite. I have been surprised at the large number of qualified men from London schools who have recently applied to me, and still more surprised at the fact that a great number of them were under 30, who had already attempted practice on their own account and failed.

In every other walk in life we find young men first associating themselves with those who, from their seniority, are able to show them the practical side of their work. It is equally advantageous in our profession. A young man when first qualified has a very rudimentary knowledge of prescribing, and still less of dispensing. He knows nothing of the routine of practice; he does not know where economies can be effected, or many other small matters which help to make him successful in life. These he can learn in association with a senior practitioner, to whom at the same time he infuses some of his youthful energy and enthusiasm, and keep him up to date with his more recent knowledge, to the advantage of himself, his principal, and his patients.

Young qualified Englishmen have possibly shrunk from this work, in consequence of the disrepute brought upon it by unqualified assistants; but now that that is a thing of the past, I believe the advantages will be recognised more and more, and that the present tension, if it really exists, will diminish rather than increase, to the benefit of all.—I am, etc.,

High Wycombe, June 8th. LEWIS W. REYNOLDS.

SIR,—I enclose a copy of the memorial submitted by the Leeds practitioners for the benefit of "X.Y.Z.," "Cymro," and others, and maintain that the memorialists were justified in their action.

The dearth of qualified assistants is very real, as is also the suffering of the unqualified men, caused by the decision being immediate in its action. I have advertised for more than three months for a qualified assistant, and have had two replies. The references of the first were unsatisfactory (intemperance), and the second would only come if a partnership within a year was included in the agreement.

"Cymro" has been exceedingly unfortunate in his acquaintances amongst the unqualified. I have met a large number, having myself served nearly four years in their ranks, and they certainly were not recruited from the ranks of the hospital idlers, and I am pleased to say that the "servile" and "undignified" creatures have always been conspicuous by their absence. It is just possible that "Cymro's" "servile" and "undignified" creatures have some existence, but I will undertake to supply him with the names and addresses of a dozen or more unqualified men who are skilled in their work, theoretical and practical, and who have attended at least a thousand cases of midwifery successfully, but who are gentlemanly in their conduct, temperate, willing, and obliging to an extent we hardly dare to look for in the qualified men we shall now have to take as assistants, but they are not "servile," and they do not lack "dignity." No doubt much depends upon the employer, who to a great extent moulds the character and makes the assistant what he thinks he ought to be.

In reply to "G. P.'s" very sensible letter, had Mr. T. Pridgin Teale's recommendation suspending action until 1900 been carried out, the present dislocation and serious inconvenience would undoubtedly have been avoided. So far as the memorialists are concerned the decision has no serious effect, excepting so far as the scarcity of qualified men is concerned. The action taken has been chiefly to afford some assistance to the unqualified men, and if possible prevent them joining the ranks of the "herbalists," "eye and ear specialists," "consulting hernia specialists," etc., who are surely a far greater menace to public health than ever the unqualified assistant under supervision has ever been or ever could be.

Some of the letters I have received from unqualified men are very pitiable, and to these a time allowance would be of infinite benefit, and could not in any way injure or prove to be of damage to the best interests of the profession and the public at large.—I am, etc.,

Leeds. HON. SEC.

SIR,—The letters of "G. P." and "Cymro" are delightful reading, and give a ray of hope to the young practitioner. The action of the General Medical Council does not altogether account for the dearth of qualified assistants. The treatment of the assistant throughout the whole country is simply abominable; he is little better than a domestic servant, and a thorn in the side of the doctor's wife. Any treatment does for him, and comforts are conspicuous by their absence. Out of an income of £1,000 to £1,500 he is offered £80 a year, and is expected on that paltry income to keep up both his own position and that of the house, work night and day, and save to better himself. Is it any wonder men prefer to starve behind a brass plate? There must be hundreds of men in practice now who would be glad of a decent assistantship; men who would act in every way conscientiously if their position as such were assured, and their honour not blighted. The action of the General Medical Council will be a great help to this class of practitioner if they will stand shoulder to shoulder, and demand better pay and better treatment in return for the time and money they have spent in educating themselves for a profession as they thought the highest of all callings, but which is in reality an abominable trade, the truth of which comes as an awful revelation to the young man when he leaves college to earn his living at medicine.—I am, etc.,

June 12th. A. C. T.

SIR,—If "G.P." offers a fair salary and cannot obtain an assistant, I can only presume that he either keeps an open surgery or else the duties are chiefly dispensing and book-keeping, or perhaps there is an abnormal amount of midwifery and night work.—I am, etc.,

X.Y.Z.

*** We have received other letters on this subject. One correspondent, "Dignitate," who had three terms as assistant, states that his first principal treated him in a very kind and honourable manner, that his second principal got all the work he could out of him, and nearly starved him, and that his third principal was so unsatisfactory that he felt compelled to forfeit a month's salary and leave at once.

Another correspondent, "M.B., B.S.," approves of the action of the General Medical Council, and observes that up to the present the assistant has been crushed between the principal and poverty. He believes that if principals will see that it is to their interest to put aside jealousy and underselling, and combine to transfer the pressure to the clubs, which are placed between them and reasonable fees, so much the better for all. He mentions that in the case of one assistancy lately vacant, it was stated that the assistant "must be a good walker, and must provide his own minor surgery instruments. Indoor, £70." In another case, the terms were: "£130 a year indoor, unfurnished house, provide own servant." It appeared that the house was really the surgery. In another instance the principal had just admitted babies over 12 months into a club at 1s. a year each. He adds that it is not money only that assistants are on the look out for, but considerate treatment.

Another correspondent, "Undergraduate," states that he is now close upon qualifying, and in no way injured by the decision of the Council, but desires to record his protest against the statements of "Cymro." He says that during his experience as an unqualified assistant he has invariably been treated by his principals as a gentleman and as an equal. He thinks it absurd to suppose that there can be any demand for the worthless class of assistants referred to by "Cymro."

DIABETES MELLITUS AND ITS TREATMENT.

SIR,—I beg to thank the reviewer of my book on diabetes for the notice which appeared in the BRITISH MEDICAL JOURNAL, but would draw attention to the remarks with reference to treatment. Some re ders may be disposed to infer from the review alone that I have advocated a dietetic treatment which practically consists in progressive and prolonged carbohydrate starvation, or in giving the patient "less and less to eat each week." This would be a very dangerous plan in many cases, and would certainly not be cheering to the patient. But anyone who takes the trouble to read my description will find a very different plan of treatment advocated. I have pointed out clearly that the more severe the case becomes the less rigid the diet should be as a general rule. In describing the treatment of the mildest forms of the disease I state on page 326, "the carbohydrates should be withdrawn from the diet for a few weeks. Then a little bread may be allowed, and if no sugar is excreted in the urine a little more carbohydrate food may be given," etc. In speaking of other mild cases I state on page 327, "Such a rigid diet cannot as a rule be continued for a very long period, and hence after a time a small amount of carbohydrates must be allowed, and we must be content.....if we can limit the sugar excretion to 500 or 600 gr. daily." What I have particularly drawn attention to is simply the danger, especially in severe cases, of *suddenly* placing a patient on a very rigid diet when he first comes under observation. The importance of this point is now well recognised, and the practitioner who disregards it will probably succeed in producing diabetic coma not infrequently, if many diabetic patients suffering from the severe form of the disease should be so unfortunate as to come under his treatment.—I am, etc.,

Manchester. R. T. WILLIAMSON.

*** The reviewer has read his notice over again, and has referred to Dr. Williamson's book. He cannot believe that any unprejudiced person imagines that he had accused Dr. Williamson of condemning his patients to "progressive and prolonged carbohydrate starvation;" nor, on the other hand, can he find that it was only in severe or exceptional cases that Dr. Williamson speaks of the danger of sudden withdrawal of carbohydrates. The reviewer was speaking of "the general rule," to which he understood Dr. Williamson also refers in his section on The Management of a Case of Diabetes (pp. 321-22), where he writes: "The diet should then be restricted, but it is important to make the change gradually."

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

SIR,—The question raised by Dr. Cox and discussed by your later correspondents is of fundamental importance to the profession generally. There seems to be a danger, however, that the principles involved may be altogether lost sight of in the discussion of details.

The programme of the National Deposit Friendly Society threatens the right of the medical profession to manage its own affairs. Why should outsiders be allowed to dictate to the profession what fees it shall charge? Every day companies are being floated, with their armies of canvassers, to help those who are well able to help themselves, if they only knew it, for a consideration. The consideration is always substantial, sometimes enormous, but invariably astutely concealed. The canvassing fraternity must live on somebody; it is for the medico to take care that he is not the obliging host.

I can well understand that the unfortunate victim of the family club at 3d. a week is sorely tempted. But that way his salvation does not lie, a fact which he will probably discern when it is too late to escape from the toils.

The fee question, like many other questions, demands discussion. Let medical men discuss it in their societies, and be loyal to one another. Only thus (to invert the substance of a classic counsel) will they be loyal to themselves.—I am, etc.,

June 6th. M.B.

SIR,—If I admit a patient as a member of the above Society I tell him that I do not pledge myself to accept the Society's scale of charges, and I have told the local agent and committee the same.

I make out my own bill, and if it is more than the Society allows the member pays the difference himself to the agent who pays me.

I point out to the members that by the society's scale a medical man can only claim one shilling if he is sent for to see a patient three miles off, in the night, if he happens to have visited him less than forty-eight hours previously. I am glad to say that the majority of people will freely own that a shilling is not more than they sometimes pay to the man who brings the message to me. I have adopted this plan for the last three years, and find that it answers.

Would it not be possible for, say, members of the British Medical Association to have a printed form, which they could hand to the agent and to the members of the National Deposit Society on admission, stating plainly that they intend to manage their practices in their own way, and will not be bound by any scale of fees fixed by a committee of persons interested in making a profit out of them?—I am, etc.,

St. Neots, June 13th. EDWARD J. CROSS.

SIR,—I should have thought it was a work of supererogation to preach altruism to the medical profession, especially in its relation to the poor; but Mr. Forster, in the BRITISH MEDICAL JOURNAL of May 28th appears to think otherwise. That system of ethics which teaches that the happiness of others is the highest good surely requires its disciples to be thoughtful in their doing, and the happiness, the well-being of others in respect to health, will not be achieved by inefficient medical attendance. If it is only just possible—and I doubt even this—to give good, thoughtful, and thorough attendance to members of a benefit society for an annual payment of 4s. per member, well or ill, how impossible must it be to do so at the rate of 2s. 0¾d. per member, which in reality is the rate paid by the National Deposit Friendly Society? As shown by Mr. Hanson Wolstenholme in his very sensible letter in the JOURNAL of June 4th, whether or not we are paid for work done, or by contract, the fact remains that under the scale of payment of the above Society we get much less than we should under the contract system—and the tables of the Society for the last 25 years show little difference in the rate. I am not an officer of the Society, but I have a farmer patient who is a member. I charge him 5s. a visit, and the Society pays their proportion of his account; it is less than half. Moreover, by accepting these terms we admit a very dangerous principle, for we admit, assuming the money is paid and paid regularly, that this low scale of fees provides sufficient emolument for our services; and the public will argue fairly that whether it is paid by a society or by individual patients cannot be material.

Mr. Ransome writes, in the JOURNAL of May 28th, that a wage limit is impracticable and invidious; but on page 1 of this Society's rules are these words: "No member is allowed to receive as sick pay more than his or her weekly income." How, I would ask, is members' sick pay checked in regard to this rule? This objection is a favourite with the opponents of a wage limit, but I have before me the form of certificate for members of the United Patriots Benefit Society to warn on the club, and it bears the "invidious" words: "My earnings when in health and employed are £ s. d. per week."

Mr. Forster's contention, another favourite, that persons in good circumstances are not likely to join because the maximum sick pay, £3, is not enough to attract the rich, is misleading. In the first place, it is not so much "the rich," though they are by no means blameless, as those somewhat better off than the artisan and mechanic who are the chief offenders. If a man wishes merely to get his medical attendance cheap, he will have no object in paying for the higher scale of sick benefit, and he will have the satisfaction of knowing that whether or not he requires the doctor, he will not be paying his money away for nothing; such a man would most probably pay the smallest premium that would entitle him to medical attendance. That is certainly my own experience with other societies.

Mr. Forster writes that "10s. a month entitles the doctor to 5s. a visit," and "wage limit is rendered unnecessary by the scale of payment guaranteed to the doctor." Certainly the doctor's fees are in proportion to the members' contribution; but there is no guarantee or even suggestion as to what rate of payment the members shall choose; in fact, the rule on

page 1 says, "Candidates fix their own rate of payment." Experience shows that, as is usual in the world generally, they fix them at the lowest possible rate for which they can obtain what they want.

So persistently is it suggested that those who are rich will not become benefit society members because of the small sick pay, and that a permissive graduation of contributions will act as a wage limit, that I have ventured once again to point out as briefly as possible the error involved.—I am, etc.,

Freshford, June 5th. CHAS. E. S. FLEMMING.

THE ROYAL ARMY MEDICAL CORPS.

SIR,—Mr. Edmund Owen, in his letter published in the JOURNAL of June 4th, has raised a most important point as to the examination for the medical staff of the army. The matter in an equal degree affects the Indian Medical Service.

The suggestions which he has put forward must, I think, have the approval of those who are in a position to judge of the importance of the issues involved. There can be little difference of opinion as to the chief defect of the present examination, which consists in not giving sufficient prominence to the practical and really important branches of medical education. There seem to be no good reasons for assigning special marks for anatomy and physiology. It ought to be quite possible to test a candidate's knowledge of these two subjects during the examinations in medicine and surgery. The marks (600) obtainable for natural sciences unduly favours the candidate who has been specially prepared or crammed for the examination.

The minimum age should also be raised to 22 years, as was formerly the case, I believe, in the Indian Medical Service. The present low limit of 21 years gives a great advantage to a candidate competing immediately after obtaining his qualification, and who must necessarily have very little practical experience.

To put an illustrative case: Two intending candidates of good ability obtain their medical qualifications at the same time at the age of 21 years. One of them immediately devotes six months to working with a crammer, paying particular attention to the optional subjects. He will almost certainly pass, and owing to the additional 800 marks which he may very readily obtain for his optional subjects, will probably obtain a high place. The other becomes house-surgeon and house-physician, and perhaps clinical assistant in the ophthalmic department, devoting eighteen months to such practical work. He then enters for the examination, but having no time for special preparation, though doing well in medicine and surgery, he will probably not do so well in anatomy and physiology, possibly badly in chemistry and pharmacy, and will be unable to take up the optional subjects at all. It is not at all improbable that he may fail to obtain a place, and at best will be low down in his year. He will in addition, during the whole of his service of twenty-five to thirty years, have the mortification of being junior to the candidate who passed six months in cramming, but who had no practical experience. There can be no question as to which of the two is likely to prove the more valuable and efficient medical officer.—I am, etc.,

June 9th. INDIAN MEDICAL SERVICE.

"SCRUTIN DE LISTE" AT THE ROYAL COLLEGE OF SURGEONS.

SIR,—I have received from the Secretary of the College of Surgeons a letter informing me that the President is unable to take any steps in the direction of altering the method of election at present in vogue. It is the answer that I expected, and I wrote simply to place on record a protest against the retention of an unscientific system of election in that College.

It seems to me a matter of regret that a historical institution devoted to the development of scientific medical education and investigation should retain as an integral part of its constitution a method of election alike obsolete and absurd.—I am, etc.,

Melbourne, May 10th. JAMES W. BARRETT.

THE ALKALINITY OF THE BLOOD IN GOUT.

SIR,—In the BRITISH MEDICAL JOURNAL of June 4th Dr. Luff again speaks of the deposit of sodium biurate as if it were the cause of the gout attacks; but if he will consult Sir W. Roberts,[1] he will see that in quantities at all likely to be met with in the blood or tissue fluids, sodium biurate does not begin to deposit for at least thirty-three hours; while Sir A. Garrod tells us[2] that wines may produce gout "before quitting the dinner table," and I have often seen them or other drugs produce it in two or three hours or less; so that the deposition of the biurate is, as I have maintained, not the cause of the arthritis, but one of its results; it is also an inconstant and comparatively late result, taking in the living body probably days rather than hours.

But Dr. Luff's question in the JOURNAL of May 21st was about the solubility of uric acid in the blood, and as I have now shown that acidifying serum throws out uric acid, it is clear that a smaller alteration of its reaction may interfere with its solubility to a less extent, but to a sufficient extent to produce results visible under the microscope, and these results Dr. Luff may see for himself by repeating the observations of Dr. Mordhorst, whom I have quoted.[3]

What is thrown out and becomes visible is what Dr. Mordhorst calls the spherical urate, and this urate in strong solution or suspension as microscopic spheres, has an irritant action on the tissues, while the needle urate (biurate), which is occasionally thrown out much later on, may lie in the tissues for years without producing any symptoms.

If pointing out that headaches and many other effects, both physiological and pathological, can be as well produced by a dose of uric acid as by one of xanthin, hypoxanthin, thein, caffeine or theobromin, that in fact all these substances are equally toxic, is trying "to shift the responsibility," then I have not only done this, but I did it some considerable time before Dr. Luff had written anything on the subject; and acting on this knowledge has enabled me for years past to prevent and cure disease.

Swallowing any of the above substances produces, as I first showed in 1893,[4] an equivalent increase of uric acid in the urine, which can be estimated by Haycraft's or any other process, and identified by the murexide test, and I have estimated this substance in muscle by swallowing known quantities of flesh, and observing the corresponding increase in the excretion of uric acid in the urine.

By this process I found that a pound of beef, such as is used for making beef-tea, produced the same effect on the excretion of uric acid in the urine as swallowing 6 to 8 grains of xanthin or uric acid, and thence concluded that the meat contained one of these substances in about that quantity,[5] and since 1893 similar facts have been published by several independent observers, who attribute the increased excretion of uric acid to the absorption from the food of some compound of xanthin.[6]

Chemistry may some day cease telling us what this substance is not, and afford us the more valuable positive information what it is; but, meanwhile, it is sufficient for clinical purposes to know that as regards several physiological and pathological processes in the body, and the excretion of uric acid in the urine, it makes no difference whether a person swallows 3 or 4 gr. of xanthin, or uric acid, or half a pound of the above-named meat; or, as I have shown in the case of chlorosis,[7] an equivalent quantity of beef-tea made from the meat.

If the substance in meat is xanthin its chemical formula is $C_5H_4N_4O_2$; if uric acid, then it is $C_5H_4N_4O_3$, and the physiological difference is also O, or, in a word, *nil*.—I am, etc.,

Brook Street, June 6th. ALEXANDER HAIG.

SIR,—By your courtesy a proof of Dr. Haig's letter, printed above, has been sent to me in order that I might answer it in the present issue of the BRITISH MEDICAL JOURNAL, and in order, as I think you have very rightly decided, that the discussion may be closed, at all events for the present.

Dr. Haig is perfectly correct in stating that I consider the

[1] Croonian Lectures. 1892, p. 97.
[2] *Gout and Rheumatic Gout*, 3rd ed., p. 245.
[3] *Uric Acid*. 4th ed., p. 153.
[4] *Journal of Physiology*, vol. xv.
[5] *Uric Acid*, ed. iii. p. 535.
[6] See for instance a paper by Dr. W. J. S. Jerome in the *Journal of Physiology*, vol. xxii, September, 1897.
[7] *Uric Acid*, 3rd ed., p. 372.

deposition of sodium biurate to be the cause of gout attacks, and that is also the opinion of Sir W. Roberts and Sir A. Garrod, an opinion which is not in the slightest degree affected, as anyone can see for himself, by the references given by Dr. Haig to the writings of these two gentlemen.

In the JOURNAL of May 21st, I asked for "the evidence of others that a diminished alkalinity of blood containing uric acid in solution tends to throw some of the urate out of solution." I still maintain that it is entirely beside the point to refer me to the experiment known to every student of medicine in his third or fourth year, that the acidification of the blood serum of a gouty patient causes a deposition of uric acid. That has nothing to do with the assertion that a diminished alkalinity of blood tends to throw some of the urate out of solution, and therefore my question still remains unanswered.

On the other hand, the experiments that I described in my Goulstonian Lectures demonstrate that such a diminished alkalinity of the blood produces no such effect, and Dr. Haig, without attempting to show that the results of those experiments are wrong, quietly ignores them because they happen to be in opposition to one of his theories.

In my opinion it is not a scientific deduction to draw, that because a certain increase of uric acid appears in the urine after eating a pound of beef such increase is due to ready formed uric acid introduced in the beef. In the BRITISH MEDICAL JOURNAL of December 8th, 1894, Dr. Haig gave the number of grains of uric acid that a man may introduce into his system with an ordinary dinner, the estimations of the amounts of so-called uric acid having been made by applying Haycraft's process to the soup, fish, meat, and meat extract comprising the meal. In the fourth edition (1897) of Dr. Haig's book he gives the number of grains of "uric acid and xanthins" present in the same articles of food as found also by Haycraft's process. It appears to me that it is entirely within the bounds of fair criticism to point out that the attempt to shift the responsibility to xanthin is unfortunate, as Haycraft's process—the only one employed by Dr. Haig—does not estimate xanthin at all; while, on the other hand, no attempt was ever made to identify the assumed uric acid stated to be present in these foods.—I am, etc.,

Weymouth Street, W., June 11th. ARTHUR P. LUFF.

ERRATUM.—In the last line of the first paragraph of Dr. Luff's letter on page 1493 the words "uric acid" should have read "urates."

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

SIR,—In your report of the annual meeting of the above Society the Chairman alluded to the "hardship" on the members in being debarred from participating in the benefits at the age limit of 65. As a member I wish to emphasise this serious disadvantage in the working of the Society, and would urge that the age limit now in force should be extended to the end of one's natural life. It does, indeed, appear to me a hardship that, during the most healthy period of one's life, I, with many others, should contribute out of our scanty earnings an annual premium in order to secure a few weeks' sick pay in the event of sickness or accident; whilst at a time of life—after 65—when sickness is far more likely to occur, one is to be ruthlessly cast out into the cold. I have always looked upon this as a very serious and cruel flaw in the constitution of the Society. The accumulated funds of the Society, now amounting to £115,000, are rapidly increasing, and must necessarily increase at a more rapid rate in the future. The Chairman spoke of a probable bonus being paid at the end of the year. I would respectfully venture to suggest that instead of paying a bonus the funds be allowed to accumulate to enable the directorate to abolish the hardship of age limit altogether. The Chairman deplores the fact that members do not also take up an annuity with the Rock Assurance Company. I also deplore it equally as much as he does, but with many of the members their means will not permit of their doing so. Such, at all events, is my own case. When I became a member of the Society, now several years ago, I communicated with the officials of the Rock Assurance Company, had an interview with the agent, but found the annual premium was quite beyond my reach out of a limited and precarious income. In conclusion I venture to submit that the Committee should endeavour to reopen the annuity system on reasonable terms, for, after all, it is just in one's declining years—after 65—that one needs help.—I am, etc.,

May 30th. A MEMBER.

Obituary.

HENRY LEE, F.R.C.S.,

Consulting Surgeon to St. George's Hospital.

ST. GEORGE'S HOSPITAL has lost one of its ablest officers by the death of Mr. H. Lee, and all those connected with it have to lament the loss of one who, whether as surgeon, teacher, or colleague, had earned the affectionate regard of all with whom he came into relation in those capacities.

Mr. Lee, who was the son of Captain Pincke Lee, of Woolley Firs, Maidenhead Thicket, was born in the year 1817. He commenced his medical education at King's College in 1833, but entered St. George's Hospital as a pupil in 1834. He became M.R.C.S.Eng. in 1839, and F.R.C.S. in 1844. He served for some time on the staff of King's College Hospital as Assistant Surgeon before he returned to his old hospital. His early career at St. George's was a distinguished one. He was one of the first, if not the first, Surgical Registrar to the Hospital, and, after serving as Curator of the Museum, was appointed Lecturer on Physiology there in 1845, when the Medical School was being remodelled under the vigorous rule of the late Sir Prescott Hewett. But he did not hold that office long. Promotion at St. George's was slow in those days, and Mr. Lee was keen in the pursuit of surgery and anxious to distinguish himself as a surgeon; therefore he gladly seized an opportunity of connecting himself with the newly-founded hospital of King's College, to which he was appointed Assistant Surgeon in 1847. His connection with the Lock Hospital as Surgeon dates from about the same period.

He soon showed how true a follower he was of the great surgeon, Brodie, who was at that time the boast of St. George's Hospital, and who by precept and example inculcated upon his pupils the persistent study of pathology as the foundation of scientific surgery. Accordingly, Lee's earliest labours were in the field of pathology, and the first paper of his with which we are acquainted is that published in the *Medico-Chirurgical Transactions* for 1852 on the deposition of fibrin on the lining membrane of veins. The pathology and the surgical treatment of the diseases of veins was, throughout his life, a favourite subject of his study, as it was of his master, Brodie, and he devised the most successful of the palliative operations which were in use for the treatment of varicocele and varicose veins, before the progress of the antiseptic method enabled surgeons to use the radical and really curative operation of excision. Mr. Lee's operation consisted in blocking the circulation in the varicose vein in two places by pins thrust under its course with a figure-of-8 ligature wound about each, and then dividing the vein subcutaneously between the pins. It was based on an old proceeding of Brodie, which, however, Brodie himself had characterised as unsuccessful. Mr. Lee's operation, though not by any means uniformly successful, yet involved but little danger or discomfort, and was certainly often followed by a long period of cure.

His position, however, as Surgeon to the Lock Hospital, and his ardent study of Hunter's works, naturally turned him to the important subject of syphilis; and accordingly we soon find him writing on the pathology and treatment of the various forms of syphilitic infection, on which he afterwards became one of the chief English authorities. A paper of his on Calomel Fumigation in Primary, Secondary, and Tertiary Syphilis, based on his practice at the Lock Hospital, was read at the Medical and Chirurgical Society in 1856. It marks a very real and a very important improvement in the practical treatment of these affections, and would be sufficient, if Mr. Lee had rendered no other service to surgery, to entitle him to grateful recollection as a benefactor to humanity. His colleagues had many opportunities of seeing how easily, painlessly, and safely the mercurial action necessary for the

cure of the constitutional form of syphilis could be produced, and of contrasting this with the terrible results which often followed the old methods of introducing mercury into the system. But it was not merely in such practical matters that Mr. Lee showed his knowledge of this great subject. His lectures on syphilis, and his treatise in Holmes's *System of Surgery*, remain to show how completely he had mastered its pathology and its history, and place him in the first rank of authors on venereal affections.

In 1861 a great change occurred in Mr. Lee's professional position. Two vacancies were created on the staff of St. George's Hospital by the simultaneous resignation of Mr. Cæsar Hawkins and Mr. Cutler. Mr. Henry Gray and Mr. T. Holmes announced their intention of standing for the vacant posts, with the sanction of the medical staff; but at that very time Mr. Gray was attacked by confluent small-pox, and his death deprived the profession of one whose name is still a household word wherever anatomy is studied in English-speaking countries, and who would if he had lived out his time doubtless have been one of the brightest ornaments of our profession. This calamity left the Governors in some perplexity, for there was no other surgeon educated at the hospital school and unattached who was at once properly qualified and willing to serve. Under these circumstances Mr. Lee's consent to return from King's College to his old hospital was most welcome to all who had the interests of St. George's at heart, and he served well and zealously for seventeen years as Assistant-Surgeon from 1861 to 1863, and as full Surgeon from the latter year to 1878 when he resigned his post, and was succeeded by Mr. Pick. He was then elected Consulting Surgeon, for though he had not earned that rank by the usual term of service (twenty years) it was thought that the hospital gained distinction from having his name on its consulting staff.

He was most active in the performance of his surgical duties; in fact his zeal for surgery and his fondness for operation made him in the judgment of some of those who followed his practice a little too active; but if this were so at first it was soon corrected. His judgment in consultation was sound and his powers of diagnosis considerable. As a colleague no one could be more thoroughly honest and trustworthy, and his retirement from the hospital seemed premature and was much regretted by the rest of the staff, though he thought that as he was over 60 years of age he had arrived at a time of life when he ought to make room for his juniors.

During his active career as a hospital surgeon he made many innovations, both in the mode of performing old operations and in the introduction of new proceedings, for he was quite unfettered by tradition. Yet in some things his independent and original practice brought him back in a strange way to the very oldest methods. This was remarkably evidenced by his great fondness for the actual cautery as a hæmostatic in the major operations, which he (at any rate at one time) regarded as both safe and free from the drawback of subsequent sloughing if the iron was not too hot. We believe that he afterwards admitted the superior safety of animal ligatures. As was natural in a former colleague of Sir W. Fergusson, he was active in promoting the treatment of diseased joints by excision, and published the results of his hospital practice in this branch of surgery in the year 1869.[1]

He survived his retirement from the hospital for twenty years, enjoying a fair share of practice, excellent health, domestic happiness and the priceless blessing of an equable and happy disposition, which even the sufferings and weakness of old age could not discourage. A long time before his death he began to suffer from dropsy, and almost lost the power of walking; this was followed towards the close of his illness by total or almost total loss of sight, and by cerebral symptoms too surely significant of the end. Still, he seemed to enjoy his life, took the air in Kensington Gardens till within a few days of his death, and received any friend who went to see him with cheerful and intelligent conversation. His only son had long predeceased him. He had been destined for the medical profession, worked hard at it, and obtained his qualification, though under disabilities from ill health that would have stopped the career of almost anyone else. Mr. Lee was twice married, and his second wife survives him, as well as daughters by both marriages.

[1] *Med. Chir. Trans.*, vol. xii, p. 1.

He will long be remembered by his many friends, pupils, and colleagues as a man who used considerable talents to worthy ends—a good surgeon, a good colleague, and a good friend.

THOMAS FITZPATRICK, M.D.,

Dublin.

We have to announce with much regret the death of Dr. Thomas Fitzpatrick, of Dublin. To the younger members of the profession he was hardly known, for he had long since passed out of the activities of medical life. He had reached the patriarchal age of 92, having been born in 1806 at Trim, co. Meath, where his father was a practitioner. He went to Dublin to pursue his studies, and was apprenticed to Mr. Justin Kearney, of William Street. He joined the Meath Hospital, where he was a pupil of Stokes and Graves, and then proceeding to Edinburgh he obtained the M.D. of that University. On his return to Dublin he entered upon practice as a physician, and he succeeded in attaining considerable success. He never held any hospital appointment, but his practice was large and lucrative. He was held in high esteem by the profession, who valued his energy and wisdom and high rectitude. He was a member of the Roman Catholic Church, and he associated himself with the promotion and support of charities connected with it. One of the most successful of his projects was the establishment of St. Vincent's Lunatic Asylum, Fair View. One of his sons is Sir Denis Fitzpatrick, K.C.S.I., until lately the distinguished Lieutenant-Governor of the Punjab, and now a member of the Council of India in London.

WILLIAM ILIFFE, M.R.C.S. Eng.,

Medical Officer of Health of the Borough of Derby.

Mr. William Iliffe, medical officer of health of the borough of Derby, died suddenly on June 3rd. He had been unwell for some time, but latterly had been in rather better health, and on the evening of his death was sitting in his dining-room in company with his wife and daughters, when he suddenly fell back and became unconscious, death resulting from syncope.

William Iliffe was born May 21st, 1845. He was a native of Nuneaton, and had been medical officer of health of the borough of Derby since 1876. In that year the corporation advertised for a medical officer of health at a salary of £50 per annum, and Mr. Iliffe, who was then elected to the office, has held it for the past twenty-three years. In February, 1895, he undertook to devote the whole of his time to the duties of his post, relinquishing private practice, and his salary, which had been augmented from time to time as the work performed by him increased in scope and importance, was then fixed at £550 per annum.

Mr. Iliffe's long connection with public health work, and his experience as medical officer of health of Derby, led to his being frequently asked to advise in matters connected with hygiene, and to his employment as an expert witness in a number of important cases. He was especially associated with the work of the Infectious Diseases Hospital of the borough, and in this institution he at all times took particular interest. At a recent meeting of the Town Council striking testimony was borne to the value of the work which he had accomplished in bringing about sanitary improvements in Derby, and a number of those who had been specially associated with him in this work bore witness to the severe loss which the corporation had suffered by his death.

Mr. Iliffe leaves a widow and three children; his only son is a medical student at Owens College, Manchester.

Dr. Erasmus Garrott, Chief Medical Inspector, Department of Health, City of Chicago, whose death was announced in a recent issue of the British Medical Journal, was born at Knoxville, Frederick Co., Maryland, in 1836. He graduated at the Medical Department of the University of Maryland in 1856, was an *interne* in the hospital at Baltimore for a year, and was afterwards in country practice for three years in West Virginia. In 1860 he engaged in practice in the mining town of Central City, Gilpin Co., Colorado. Settling in Chicago in 1873, he at once became connected with public sanitary work during the rebuilding of the city after the great fire of 1871.

At this time a great responsibility fell upon the medical profession, because of the increased illness in the city from lack of proper food and shelter. Dr. Garrott was appointed Medical Inspector in the Department of Health in 1877, and Chief Medical Inspector in 1890, serving the city faithfully more than twenty-one years. Dr. Garrott was wholly wrapped up in his public work, and he was so devoted to duty that he forgot how to take relaxation. He was an acknowledged authority on small-pox, which he fought with unceasing activity. He used to say that the only recognition of his labours he wished to have placed on his tombstone was the legend, "He Vaccinated."

NAVAL AND MILITARY MEDICAL SERVICES.

THE PARKES MEMORIAL PRIZE.

THIS Prize, founded in memory of the late Professor E. A. Parkes, M.D., F.R.S., and awarded triennially, is open to all medical officers of the army, navy, and Indian services of executive rank on full pay. The prize, which is of the value of 25 guineas, accompanied by a bronze medal, has been awarded this year to Surgeon-Captain Fred. Smith, of the Army Medical Staff. The assessors were Dr. Arthur Ransome, F.R.S., Dr. James Niven, and Professor Sheridan Delépine, M.D., of the Victoria University. The assessors also declared that Staff Surgeon W. W. Pryn, R.N., and Surgeon-Lieutenant-Colonel Andrew Duncan, Indian Medical Service, contributed essays of great merit. The subject was "The Etiology, Prevalence, and Prevention of Diphtheria."

CHANGES OF STATION.

THE following changes of station amongst the officers of the Army Medical Staff have been officially reported to have taken place during the last month:

		From.	To.
Surg.-Colonel	J. F. Supple	Dover	C. of G. Hope.
Surg.-Lt.-Col.	E. H. Fenn	,, ...	Bombay.
,,	J. L. Peyton	Bengal ...	Belfast.
,,	J. Armstrong	Cork ...	Kilworth.
Surg.-Major	P. E. Polloyd	— ...	Madras.
,,	J. J. Falvey... ...	Colchester ...	Weedon.
,,	A. E. J Croby	Madras ...	India.*
,,	R. H. Forman, M.B. ...	,, ...	Dover.
,,	P. M. Carleton, M.B. ...	Dublin ...	Cork.
,,	E. Butt	— ...	Dundalk.
,,	G. H. Younge	Madras ...	Chatham.
,,	W. G. Clements	Chatham ...	Tower.
,,	W. Babtie, M.B.	Crete ...	Aldershot.
,,	F. H. Treherne	India* ...	Dover
,,	H. J. Barratt	Punjab ...	Canterbury.
,,	W. W. Pike	Belfast ...	Aldershot
,,	E. V. A. Phipps	Bengal ...	Lanyard Fort.
,,	T. W. O'H. Hamilton, M.B.	,,	Fort George
,,	R. P. Bond	Bury ...	Alcar.
,,	A. E. Tate	Bengal ...	Colchester.
,,	H. N. Thompson, M.B....	,,	Aldershot.
,,	B. F Zimmermann ...	Madras ...	,,
,,	W. T. Swan, M.B.... ...	Gosport ...	Portsmouth.
,,	R. G. Hanley, M.B. ...	Punjab ...	Aldershot.
,,	J. H. Brannigan	Bengal ...	Dublin
,,	F. J. W. Stoney	Fermoy ...	Limerick.
,,	L. P. Mumby, M.B. ...	Punjab ...	Colchester.
,,	J. B. W. Buchanan, M.B.	Bombay ...	Dover.
Surg. - Capt.	L. Way	Shorncliffe ...	Lydd.
,,	T. B. Beach	Bengal ...	Woolwich.
,,	C. W. R. Healey	,,	Coldstrm. Gds.
,,	G. L. Robinson	Cork ...	Fort Camden.
,,	J. E. Brogden	Punjab ...	Devonport.
,,	J. C. Jameson. M.B. ...	,,	Woolwich.
Surg. - Lieut.	S. A. Archer	Woolwich	Egypt.
,,	W. E Hudleston	Aldershot	,,
,,	M. P. Corkery	,,	,,
,,	F. J. Gaine	Woolwich	,,
,,	J. Poe, M.B.	Curragh ...	,,
,,	H. L. W. Norrington ...	Preston ...	,,
,,	R. D. Jephson	Curragh ...	,,
,,	G. B. Carter, M.B. ...	Aldershot	Curragh.
,,	N. H. Ross, M.B.	,,	Portsmouth.
Quart.-Master	J. H. W. Beach	Cork ...	Egypt.
,,	A. Freshwater	London ...	Cork.

* Surgeon to Commander-in-Chief in India.

Deputy-Surgeon-General H. J. ROSE, retired pay, has relinquished the Medical Charge of the School of Musketry at Hythe, and has been succeeded by Surgeon-Lieutenant-Colonel W. M. JAMES, retired pay, lately stationed at Beverley.

THE NAVY.

STAFF-SURGEON FRANCIS A. JEANS has been promoted to be Fleet-Surgeon, May 21st. He was appointed Surgeon, September 29th, 1877, and Staff-Surgeon twelve years later. He was Surgeon of the *Coquette* during the Egyptian war of 1882, receiving the medal and the Khedive's bronze star, and during the operations in the Eastern Soudan in 1884-85, for which he received a clasp

Staff-Surgeon ROBERT H. NICHOLSON has been appointed to the *Caledonia*, June 20th.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL BREAME WESTON FOWLER, retired pay, died at St. Helena, where he was in medical charge of the troops there, on April 24th. He entered the service as Surgeon, September 30th, 1873; became Surgeon-Major, September 30th, 1885; and Surgeon-Lieutenant-Colonel, September 30th, 1893. He went on retired pay, April 18th, 1894. He has no war record in the Army Lists.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN J. W. T. GILBERT is promoted to be Surgeon-Major, June 15th.

INDIAN MEDICAL SERVICE.

SURGEON-COLONEL G. HUTCHESON, M.D., Bengal Establishment, is confirmed in the appointment of Administrative Medical Officer and Sanitary Commissioner, Central Provinces, from April 9th.

Brigade-Surgeon-Lieutenant-Colonel WILLIAM ALEXANDER BARREN, Bombay Establishment, in medical charge of the Bombay Sappers and Miners, died in London on June 8th, aged 48 years. His first commission was dated March 31st, 1874; that of Brigade-Surgeon-Lieutenant Colonel, September 15th, 1897. He was in the Afghan war in 1880 in medical charge of the 4th Bombay Infantry (medal), and with the Burmese expedition in 1886-88 (medal with two clasps).

Surgeon-Major J. SHEARER, M.B., Bengal Establishment, has been appointed to succeed Surgeon-Lieutenant-Colonel C H. Beatson as Secretary to the Principal Medical Officer, Her Majesty's forces in India, on expiration of three months' extension of appointment granted to the latter to permit of completion of his general report on the medical history of the recent frontier operations.

THE VOLUNTEERS.

SURGEON-LIEUTENANT W. H. WEBB, 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment, is promoted to be Surgeon-Captain, June 15th.

The surname of the medical officer 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers, hitherto described as Brigade-Surgeon-Lieutenant-Colonel SHRIMPSHIRE, is SKRIMSHIRE.

Surgeon-Lieutenant J. MCWATT, M.B., 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers, has resigned his commission, June 15th.

Surgeon-Major R. P. O'GORMAN, 4th Volunteer Battalion the Manchester Regiment, has resigned his commission, June 15th; he is at the same time granted the rank of Surgeon-Lieutenant-Colonel, and permitted to retain his uniform.

Surgeon Major T. FORT, 6th Volunteer Battalion the Manchester Regiment, is promoted to be Surgeon-Lieutenant-Colonel, June 15th.

A PRESENTATION.

SURGEON-MAJOR J. J. DE ZOUCHE MARSHALL recently attached to the 3rd Volunteer Battalion of the East Surrey Regiment has been presented with a silver bowl bearing the following inscription: "Presented to Surgeon-Major J. J. de Zouche Marshall by the officers of the 1st Cinque Ports Volunteer Rifle Corps on his exchange from that Corps after twelve years' service, 1885 to 1897, to the 3rd V. B. East Surrey Regiment. June, 1898."

THE VOLUNTEER AMBULANCE ASSOCIATION.

SURGEON-CAPTAIN R. R. SLEMAN, 20th Middlesex (Artists) Rifle Volunteers, writes, with reference to the statement on page 1562 of the BRITISH MEDICAL JOURNAL of June 11th as to the grant for equipment to volunteer medical officers, to point out that no volunteer medical officer will get the grant unless he has been appointed direct to the medical branch and to the establishment of his corps. By turning to pages 608, 625 (and many others) of the *Army List*, it will be seen that many corps have supernumerary medical officers; these will not get the grant, nor will combatant officers who are transferred to the medical branch.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

BENEFACTIONS.—The Vice-Chancellor announces that over £6,000 has been received for the University Benefaction Fund started last year. Many of the donations are expressly assigned to the rebuilding of the Medical Schools. The late Mr. A. W. G. Allen has bequeathed £10,000 to the University for the purpose of establishing a prize or scholarship in memory of his grandfather, a former Bishop of Ely. Many will be of opinion that the building of one of the many new schools that are required for the proper equipment of the University would be a more serviceable and opportune memorial.

MATHEMATICAL TRIPOS.—St. John's College this year again claims the Senior Wrangler in Mr. R. W. H. T. Hudson, son of the Professor of Mathematics in King's College, London. A lady, Miss Cave, of Girton, is Fifth Wrangler.

MEDICAL DEGREES.—At the Congregation on June 9th the following degrees were conferred, namely:

M.D.—J. Nachbar, B.A., Clare; E. T. Fison, M.A., Corpus; A. M. Mitchell, M.A., Queen's; H. W. J. Marks, M.A., Jesus; L. G. Davies, B.A., non-coll.

M.B. and B.C.—R. H. Bell, B.A., Trinity; Hon. G. H. Scott, B.A., Trinity; H. L. Gregory, B.A., St. John's; T. H. Brown, B.A., Pembroke; P. Levick, B.A., Jesus; B. R. Turner, B.A., Emmanuel; A. B. Green, M.A., Downing.

B.C.—H. W. A. Marks, M.A., Jesus.

UNIVERSITY OF EDINBURGH.

THE CHAIR OF PUBLIC HEALTH.—The University Court of the University of Edinburgh has received the Order of Her Majesty in Council declaring her approbation of the Ordinance of the Scottish Universities Commissioners that a Professorship of Public Health and Sanitary Science be instituted in the University, the chair to be called "The Bruce and John Usher Chair of Public Health." The Court, in which the patronage of the chair is vested, intends to make the appointment on Monday, July 18th next. The Court has learned with great satisfaction that through the munificence of a benefactor of the University a sum sufficient to build and equip a laboratory and classroom in connection with the chair is to be placed at the disposal of the Court.

MEDICAL PRACTICE IN ITALY.—A representation was recently submitted to the Senatus of the University of Edinburgh by British practitioners of medicine in Italy, requesting that the University should take steps to prevent, if possible, the passing of a law, which was being strongly supported, to prevent British medical men from practising in Italy, even amongst their own countrymen, unless they possessed a diploma from one of the Italian universities. The Senatus prepared a memorial in support of the existing conditions under which British graduates in medicine practise in Italy, and this was submitted by Lord Balfour of Burleigh to Her Majesty's Secretary for Foreign Affairs. A communication has now been received from the Scottish Office to the effect that the Secretary for Scotland has received information from the Foreign Office that it has "been decided not to alter the existing law relative to foreign doctors in Italy."[1]

VICTORIA UNIVERSITY.

APPLICATION OF UNIVERSITY COLLEGE, SHEFFIELD, TO BECOME A CONSTITUENT COLLEGE OF THE UNIVERSITY.

IN view of what may happen in connection with the London Colleges in relation to the proposed new university for London, it may be instructive to give in outline some more details of the report than we were able to publish in the BRITISH MEDICAL JOURNAL of June 11th. The Charter of Victoria University in Clause XXIII, which deals with the admission of colleges, states that the University Court, after a report to be made in each case by the University Council, may accept the application of an incorporated college, on the Court being satisfied (1) that the college applying has established a reasonably complete curriculum, and possesses a reasonably sufficient staff in the departments of Arts and Sciences at least; (2) that the means and appliances of the college for its teaching are established on a sound basis, and (3) that the college is under the independent control of its own governing body. The report practically assumes that 3 will be satisfied. As to 1 and 2, the Council made full inquiries as to the details of its financial position, and also requested the Board of Studies to report as to the academical fitness of the college for admission as a college of the University, having regard to the first and second points of the Charter (Cap XXIII). The following statements *inter alia* are given as to finance and buildings: Total capital of College (sites and buildings), £139,503, of which £64,690 goes for sites, buildings, and equipments; £16,555 for capital for specific purposes; £58,258 for capital yielding income. Of the £64,690 there has been expended: £29,070 for central College buildings (chiefly arts and science); £8,790 for medical school building; £26 830 for technical school. Of the capital specifically appropriate, £5 815 belongs to the medical department. The College is reported to be "ill provided with permanent buildings except for the technical department, and a very considerable expenditure upon buildings and equipment would be necessary in order to make satisfactory provision for the advanced teaching of any considerable number of students." With regard to the medical department, the report states that the number of students is very small. The total number of medical students now availing themselves of instruction in the college is 45. One student in each year paid the composition fee at the medical school. Also, "generally speaking, the number of class rooms and laboratories is insufficient." Only one member of the staff, the professor of anatomy, devotes his whole time to teaching and the duties of his office. It is important to note, however, that the council of the College propose to elect a lecturer on physiology, who similarly shall devote all his time to the duties of that office. The Board of Studies, after reporting on the points referred to them, unanimously resolved that, in their opinion, the College does not at present fulfil the requirements of the University, having regard to the first and second conditions laid down in the University Charter, Cap XXIII. The council, while recognising all the advantages and efforts of University College, as narrated in the BRITISH MEDICAL JOURNAL of June 11th, after full consideration, are not satisfied that the College has at present "established a reasonably complete curriculum, and possesses a reasonably sufficient teaching staff in the departments of arts and sciences at least, or that the means and appliances of the College for its teaching are established on a sound basis," and "that they do not recommend the Court to admit University College, Sheffield, as a College of the University." The Court, as is already known, passed a resolution not accepting the application of University College for admission to the University.

APPOINTMENT OF LECTURER.

At the same Court, James Niven, M.A., M.B., was appointed as a Lecturer of the University. Dr. Niven is Lecturer in Public Health in Owens College.

THE DEGREE OF M.D.

At a meeting of the University Council held on Thursday, June 9th, the following candidates were declared deserving of the M.D. degree in virtue of the Theses submitted by them: W. C. T. Brown, Owens; F. J. H. Coutts, Owens; J. S. Dockray, Owens; F. C. Moore, Owens. F. J. H. Coutts and F. C. Moore were awarded gold medals.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having previously passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Fellows of the College:

G. W. Roll, B.A., M.B. and B.C. Camb., L.R.C.P.Lond.; D. D'A. Wright, L.R.C.P.Lond.; H. Tilley, M.D., B.S Lond., L.R.C.P.Lond.; J. E. S. Frazer, L.R.C.P.Lond.; G. A. Clarkson, L.R.C.P.Lond.; A. W. R. Cochrane, M.B.Lond., L.R.C.P.Lond. (Surg.-Lt. I.M.S.); F. S. Collard, L.R.C.P.Lond.; J. L. Prain, L.R.C.P.Lond.; E. J. Toye, M.B., B.S.Lond., L.R.C.P.Lond.; A. Cooke, M.A., M.B., B.Ch.Oxon., L.R.C.P.Lond.; H. F. Tod, M.A., M.B., B.C.Cantab., L.R.C.P.Lond.; J. R. Benson, L.R.C.P.Lond.; J. A. O. Briggs, M.B Lond., L.R.C.P.Lond.; J. C. H. Leicester, B.Sc., M.D.Lond., L.R.C.P.Lond.; H. J. Price, L.R.C.P.Lond.; A. H. Godson, L.R.C.P.Lond., B.A., M.B., B.C.Cantab.; H. M. Másiná, L.M. and S. Bombay.

One other gentleman passed, but, not having attained the legal age, will receive his diploma at a future Council; 15 were referred for six months and 5 for one year.

The following gentlemen, having previously passed the necessary examinations and having now conformed to the by-laws and regulations, have been admitted members of the College:

J. H. Crawford, M.B., B.S.Edin.; R. H. Strong, M.B., B.S.Melb.

The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:

W. M. Anderson, L. F. Barton, W. H. Bean, Surg.-Capt., M.R.C.S.Eng., L.S.A.Lond; F. R. Bishop, G. P. Cardell, A. E. Carden, H. Cardwell, and F. Coleman, of Charing Cross and the Dental Hospital of London; S. d'A. Corbett, of St. George's and the Dental Hospital of London; F. L. Etheridge, of St. Bartholomew's and the National Dental Hospital; S. W. Garne and Z. J. Gibson, of Charing Cross and the Dental Hospital of London; W. J. Grewcock, of Mason University College, Queen's, General, and the Dental Hospital, Birmingham; H. M. Griffiths, of Middlesex and the National Dental Hospital; J. Harper, M.R.C.S.Eng., L.R.C.P.Lond., of St. Thomas and Guy's Hospital Dental Department and School; H. C. Hessenaur and F. Holding, of Charing Cross and the Dental Hospital of London; R. C. Holt, of University College, Royal Infirmary and Dental Hospital, Liverpool; W. W. James, of Middlesex and the Dental Hospital of London; G. F. W. Jennings, of Charing Cross and the Dental Hospital of London; W. H. Jones, of Owens College, Royal Infirmary and Victoria Dental Hospital, Manchester; H. P. Joscelyn, of Mason University College, Queen's, General, and the Dental Hospital, Birmingham; W. H. Loosely, of Guy's Hospital Dental Department and School; A. R. Marks, of St. George's and the Dental Hospital of London; C. E. Mountford, of Mason University College, Queen's, General, and the Dental Hospital, Birmingham; E. G. Narramore, of University College, Royal Infirmary and Dental Hospital, Liverpool; W. Nicholson, of Owens College, Royal Infirmary and Victoria Dental Hospital, Manchester; C. D. Outred, of Guy's Hospital Dental Department and School; A. M. Partridge, of University College, Royal Infirmary and Dental Hospital, Liverpool; H. J. Paterson, of Mason University College, Queen's, General, and the Dental Hospital, Birmingham; O. C. Penfold, of Middlesex and the Dental Hospital of London; H. W. Robey, of Charing Cross and the Dental Hospital of London; A. L. Rowley, of Guy's Hospital Dental Department and School; W. A. H. Saul, of University College, Royal Infirmary and Dental Hospital, Liverpool; F. W. S. Stone, M.R.C.S.Eng., L.R.C.P.Lond., of St. Thomas's and Guy's Hospital, Dental Department and School; E. Stringfellow, of Guy's Hospital Dental Department and School; H. Tattersall, of Middlesex and the National Dental Hospital; W. A. Taylor, of Westminster and the Dental Hospital of London; D. P. Tracey, R. Umney, E. W. West, and T. H. Wilkinson, of Guy's Hospital Dental Department and School; H. Winder, of Charing Cross and the Dental Hospital of London.

Twenty-one gentlemen were referred back to their professional studies, one of whom was referred for 1 year.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,982 births and 3,643 deaths were registered during the week ending Saturday last, June 11th. The annual rate of mortality in these towns, which had increased from 16.4 to 16.8 per 1,000 in the three preceding weeks, further rose to 16.9 last week. The rates in the several towns ranged from 8.4 in Croydon, 10.3 in Norwich, 11.1 in Brighton, and 12.2 in Hull to 20.3 in Manchester, 20.4 in Liverpool, 23.6 in Sunderland, and 24.1 in Newcastle-upon-Tyne. In the thirty-two provincial towns the mean death-rate was 17.3 per 1,000, and was 1.0 above the rate recorded in London, which was 16.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.8 per 1,000; in London the rate was equal to 2.1 per 1,000, while it averaged 1.5 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.1 in Liverpool, 2.5 in Gateshead, 3.4 in Salford, and 4.0 in Newcastle-upon-Tyne. Measles caused a death-rate of 1.3 in Bradford, 1.5 in Salford, and 2.1 in Newcastle upon-Tyne; scarlet fever of 1.0 in Gateshead; and whooping-cough of 1.2 in Salford, 1.5 in Gateshead, and 1.6 in Newcastle-upon-Tyne. The mortality last week from "fever" showed no marked excess in any of the large towns. The 42 deaths from diphtheria recorded in the thirty-three towns during the week under notice included 23 in London, 3 in Cardiff, 3 in Birmingham, 2 in West Ham, 2 in Sheffield, and 2 in Hull. No fatal case of small-pox was registered last week, either in London or in any of the thirty-two large provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 11th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,195 and 2,207 at the end of the two preceding weeks, had declined again to 2,169 on Saturday last,; 206 new cases were admitted during the week, against 223, 256, and 220 in the three preceding weeks.

[1] BRITISH MEDICAL JOURNAL, May 28th, p. 1430.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 11th, 1,009 births and 642 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had risen from 19·8 to 23·0 per 1,000 in the four preceding weeks, declined to 21.3 last week, but was 4·4 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.6 in Leith and 13.3 in Aberdeen to 23·3 in Glasgow and 24·0 in Dundee. The zymotic death-rate in these towns averaged 3·8 per 1,000, the highest rates being recorded in Dundee and Paisley. The 324 deaths registered in Glasgow included 10 from measles, 2 from scarlet fever, 27 from whooping-cough, 4 from "fever," and 5 from diarrhœa. Five fatal cases of measles and 3 of whooping-cough were recorded in Edinburgh; 13 of measles and of whooping-cough in Dundee; and 7 of whooping-cough in Paisley

DIPHTHERIA IN LONDON.

ALTHOUGH the mortality from diphtheria in London showed a decline last week, the prevalence of the disease, judged by the number of notifications, showed a further increase. The deaths referred to diphtheria in the metropolis, which had been 31, 27, and 30 in the three preceding weeks, declined again to 23 during the week ending Saturday last, June 11th. Of these 23 fatal cases, 2 each belonged to Paddington, Kensington, Islington, St. George Southwark, Battersea, and Wandsworth sanitary areas. The notifications of diphtheria in London, which had been 201 and 209 in the two preceding weeks, further rose to 212 during the week ending Saturday last, June 11th. Compared with the preceding week, there was a decline in the prevalence of the disease in North London, but in West, Central, East, and South London there was a slight increase. The increase in the notifications in West London was mainly due to the further increase in the prevalence of diphtheria in Fulham, 12 new cases being reported against 5 and 9 in the two preceding weeks. On the other hand, the 3 new cases in Kensington showed a further marked decline from those recorded in recent weeks. Among the sanitary areas of North London there was a general decline last week in the prevalence of diphtheria: in Hackney the cases notified, which had been 25 and 20 in the two preceding weeks, further fell to 16 last week. In most of the sanitary areas of East London there was a slight increase last week in the prevalence of the disease, but in Bethnal Green the new cases, which had steadily increased from 4 to 14 in the four preceding weeks, declined to 7 during the week ending Saturday last, the 11th inst. Among the various sanitary areas of South London the increase in the prevalence of diphtheria was most marked in Newington, Bermondsey, and Battersea. On the other hand, the new cases notified in St. George Southwark and in Greenwich showed a marked decline from those recorded in the preceding week. The admissions of diphtheria patients into the Metropolitan Asylum Hospitals during last week were 140, against 130, 142, and 147 in the three preceding weeks; and 966 cases remained under treatment in these hospitals on Saturday last, June

THE CRYPT OF ST. GEORGE'S, SOUTHWARK.

IT is much to be regretted that so simple an operation as the removal of certain human bones from the crypt of a church should be made the cause of so much ill feeling as has been the case at St. George, Southwark. Columns of type have been set on both sides of the question, and the medical officer of health has been made the object of much unnecessary criticism. The whole question is purely one of expense, for we can hardly believe that much danger exists from the presence of even a large number of bones in the crypt—certainly not more than is daily and hourly experienced from many nuisances of a less sensational character. That a small element of risk exists no one would deny, and the whole question is, Are the parishioners willing to pay heavily for the luxury of an additional safety? We only wish as much enthusiasm could be displayed over matters, sanitarily speaking, infinitely more important but unfortunately devoid of the sensational element.

THE EXETER SEWAGE TANKS.

OUR readers will recollect that some little time ago an inquiry was held by the Local Government Board, on the application of the Exeter City Council for leave to borrow money for the purpose of carrying out, on a larger scale, the method of sewage purification devised by Mr. Cameron, the City Surveyor. The Board, in sanctioning the borrowing of £40,000 for this purpose, has made it a condition that the Corporation shall provide, as part of the sewage works, an acre of land for every 2,000 inhabitants. We are glad the experiment of the septic tank is to be tried on a larger scale. As the method may still be regarded as somewhat of a novelty, it is not perhaps to be wondered at that a certain amount of land should have been insisted upon as a condition. Such a condition might, however, be exceedingly difficult to comply with in the case of some of our manufacturing towns. Birmingham was fortunate in acquiring a large tract of country for its sewage farm. But towns like Bradford, with thickly populated villages lining the river for miles below, are less happily situated. One great hope of sanitarians was that the bacteriological processes, whether Cameron's septic tank or Dibden's bacterial filter, or a combination of the two, would so purify the sewage that the Local Government Board might see their way to moderate their demand for a large acreage of land adjacent to the sewage works. Where every acre adjacent to the stream is eagerly sought for factories and cottages for mill-hands, land suitably situated for irrigation purposes is very difficult to obtain, and often very expensive where it is still to be had.

MELTON MOWBRAY AND THE NOTIFICATION ACT.

AT their fortnightly meeting the Urban District Council of Melton Mowbray refused, by 6 votes to 5, to adopt the Act for the Notification of Infectious Diseases. A memorial, signed by nearly all the medical practitioners in the town, in favour of adopting the Act, was laid before the Council, and it was pointed out by the proposer that in nearly the whole county of Leicester the Act was now in force. The usual arguments for and against were rehearsed, and the time-honoured one that the adoption of notification would mean an isolation hospital was made use of to the fullest extent. The idea of refusing to use the facilities now placed in the hands of every sanitary authority for knowing where infectious diseases are breeding, because if this were known it might afterwards be thought necessary to try to prevent their becoming epidemic, reminds one of the intelligent Hindu who broke the microscope which showed him the minute animal organisms that had invaded his vegetarian food.

One very interesting statement contributed to the discussion by an opponent of the measure is worth repeating: It had been urged that the surrounding rural districts had adopted the Act, and this gentleman stated that they had done so, not because they liked it, but because large dairy contracts could only be obtained by farmers living in districts where the Act was in operation. We are glad to learn that these shrewd business men realise that the public intend to insist upon having their milk supply free from all risk of contagion. But is it not possible that the day is not far distant when the public will insist that other forms of food supplied to it shall also be free from suspicion of contagion, and will refuse to purchase their "delicious pork-pies" till assured that the Notification Act has come into operation in the Urban Sanitary District of Melton Mowbray?

WATERBORNE TYPHOID IN CORNWALL.

THE report of Dr. Bruce Low, made to the Local Government Board after a detailed inquiry into the outbreak of typhoid fever in and around Camborne last winter has now been issued. Dr. Low had conferences at the time of his visit for the express purpose of calling especial attention to requisite local action, but it is stated that Camborne has practically ignored the recommendations which Dr. Reece left with the District Council in 1894 at the time of his sanitary survey of the locality. The outbreak included 165 cases notified as typhoid fever in 149 houses in Camborne, Illogan, and Crowan, with a joint census population of 26,480. There were also preceding cases in large number of transient illness, and probably unnotified typhoid cases of mild nature which did not come under medical treatment. The outbreak occurred during December and January, 12 deaths being recorded, the case mortality being a little over 7 per cent., that of females (75 cases) 13 per cent., and that of males (90 cases) only 2 per cent.

Milk services and sanitary circumstances other than water supply failed to account for the outbreak. The Camborne water company supply all three places, and 3,333 houses using this water suffered fever more than nine times heavier in proportion than did 2,486 houses having other sources of supply—4.2 as against 0·4 per cent. Moreover, of the 165 recorded cases, only 2 were known to have occurred in persons as to whom doubt existed of opportunity of drinking the incriminated water.

Briefly stated, the origin of the outbreak appears to have been the occurrence of 4 cases of fever in a house located on one of the two adjacent gathering grounds. During the latter part of October and throughout November this house continued to be infected, its only drainage being to a pond, which latter in rainy seasons overflowed to a channel leading to a brook which fed the reservoir of the Boswyn service. Heavy rains occurred at times, which accounted for the fever as the result of consumption of water coming from this reservoir, and which also accounted for the continuance of the fever until into January. The feeder which admitted this specifically polluted pond water to the reservoir was disconnected on discovery of its existence; but other obvious sources of danger on the Boswyn, and also on the second (Cargenwyn) gathering ground are shown by Dr. Low to have existed at the time of the outbreak. It is believed, however, that all danger has for the future been averted by the action taken by the water company, the water now impounded being from springs properly protected from source to storage tank.

THE LOUGHBOROUGH BOARD OF GUARDIANS ON THE NURSING QUESTION.

IT is extraordinary, considering the frequent discussions on the nursing of the sick poor, to come across a Board who profess themselves satisfied with providing a casual female picked up somewhere about the parish, for 1s. 6d. a week "to attend on the patient, keep the room clean, and do the washing." The medical officer reported to the Board that the nursing of the destitute sick was most unsatisfactory, but even then the Guardians could not see the path of duty, but first tried to shunt the responsibility on to the shoulders of the relieving officer and the medical officer, and when the medical officer reiterated his demand for a trained nurse, took refuge in a resolution to instruct the Relief Committees to see to it that the sick poor were properly nursed. All this time was wasted because the Board would not subscribe to the Nursing Association, or, failing that, appoint a parish nurse for their own poor.

WATER ANALYSES BY HEALTH OFFICERS.

ENQUIRER asks: (1) Is water analysis one of the duties of a medical officer of health with salary of £40 a year in a district with a population of 12,000? (2) Is it usual for a district council to demand, and for their medical officer of health to furnish, details of every analysis of water made by him

*** (1) We are advised that a district council are within their rights in calling upon their medical officer of health to undertake ordinary qualitative examination of water, but not to demand of him an elaborate quantitative analysis, unless by some special financial arrangement, as being outside the scope of his duties.

(2) An expressed desire to be furnished with the details of any such analyses, on the part of the district council, should be met by compliance.

By an order dated June 14th the Board of Agriculture has directed that the provisions of the order as to the importation of dogs to Great Britain shall not apply to dogs brought from the Channel Islands.

MEDICAL NEWS.

We understand that Mr. Vincent Jackson has been appointed by the Home Secretary Medical Referee, under the Workmen's Compensation Act, for County Court Circuit No. 35, Wolverhampton, and Mr. A. Stanley Barling for the Lancaster County Court District.

Special sermons were preached in the churches and chapels of London on June 12th, and collections were made on behalf of the Hospital Sunday Fund. Up to June 14th the sum of £10,000 had been received at the Mansion House for the Fund.

Farmers and Tuberculosis.—It is interesting to find that farmers, who as a class have not the reputation of readily adopting new ideas, are moving in the matter of the prevention of tuberculosis. The Bury and District Tenant Farmers' Association recently forwarded to local members of Parliament copies of a correspondence between them and Sir William Harcourt, with a covering letter calling attention to the effect of tuberculosis upon agricultural interests. The letter asks the members to give their assistance in removing what is regarded as a great injustice to the farming interest.

Bequests and Donations.—St. Thomas's Hospital has received a donation of £1,000 from "G. R." to endow a medical bed. Mrs. Douglas Henty has forwarded a cheque for £1,000 to the St. Mark's Hospital for Fistula, City Road, for the purpose of endowing a bed to be called the "Julia Henty Bed." The trustees of Smith's (Kensington Estate) Charity have contributed £200 to St. Thomas's Hospital, and £250 to the Dental Hospital of London, and £100 to the East London Hospital for Children and Dispensary for Women, Shadwell, E.

The Queen's Jubilee Institute for Nurses.—A permanent Committee has been formed to co-operate with the representatives of the music halls to assist annually the funds of this nursing institution. Last year a large sum had been handed in from this source, and under the auspices of the Duke of Westminster a scheme had been matured by which this will become an annual contribution. It is probable that music-hall performers have as much cause as any of Her Majesty's subjects to feel grateful for the timely help of the Queen's nurses; their opportunities of breadwinning depend entirely on their health.

Pack and Ambulance Saddles and Stretcher.—An inspection of the improvised pattern of combined pack and ambulance saddles, also of an improved pattern of folding stretcher for use in mountain warfare, has been held by a committee at Simla, comprised of the Principal Medical Officer of H.M.'s Forces at Simla, the Commissary General in Chief, the Director-General of Ordnance in India, the Deputy Quartermaster-General, the Secretary to the P.M.O. H.M.'s Forces, and the Commissary General of Transport. Reports from the Tochi and Malakand Field Forces on the combined pack and ambulance saddles were considered.

Ruthin District Nursing Association.—The report of the meeting of this Association is of interest to us, as Dr. Lloyd Roberts shadows forth a scheme of a central nursing home to meet the wants of the locality by providing nurses for those who can pay as well as for the poor. It appears that the committee are feeling their way to some form of provident nursing association; and as the population is principally composed of the wage-earning class, it is likely that the proposal may take shape before long; but by whatever means the wants of the various classes of the community are met we would urge that the scheme should be comprehensive. It is only possible to obtain efficient and economical nursing by the grouping of districts.

Sanatoria for Consumptives in Sweden.—The Swedish Parliament has voted the sum of 850,000 kroner for the establishment of a public sanatorium for lung diseases in South Sweden. Two other sanatoria, one for Central, the other for North, Sweden, have been established with the help of the fund of 2,200,000 kroner presented by the nation to King Oscar on the occasion of his jubilee not long ago. For all three sanatoria the State has provided the site and the timber required for the buildings. Queen Sophia takes a special interest in the provision of sanatoria for lung diseases in Sweden; and it was at her wish that the national gift to the King was applied to this purpose.

The first annual conference of the Matrons' Council was held at the rooms of the Medical Society of London on June 15th and 16th. Miss Stewart, Matron of St. Bartholomew's Hospital, who was in the chair, said that the chief object the Council had in view was to bring about a uniform system of education, examination, and certification of nurses with State regulation. A resolution was adopted recommending the Matrons' Council to take steps to draw the attention of the Red Cross Society to the desirability of organising a corps of nurses for active service in foreign wars. Various papers were read on subjects of practical interest to nurses.

The West London Medico-Chirurgical Society.—The West London Medico-Chirurgical Society will hold its meeting for the Cavendish Lecture to be delivered by Mr. Howard Marsh at the Hammersmith Town Hall on Friday, June 24th, at 8 P.M. The hall will be suitably decorated, and in connection with the smoking *conversazione* which will follow, given by the President and Council, there will be an exhibition by many of the well-known firms who cater for the needs of medical practitioners. Upwards of twenty firms will be represented, all the available space for the purpose having thus been allotted. Formerly the meeting and *conversazione* were held in one of the new wards of the West London Hospital; but the attendance of members and their friends last year exceeded the accommodation, and thus the Council this year decided to take larger quarters.

The National Health Society.—The Princess Christian distributed on June 11th, at Grosvenor House, the diplomas, medals, and certificates gained during the past year by candidates at the examination of the National Health Society. The Duke of Westminster said that during the twenty-one years he had been the President of the Society he had been greatly impressed by its extraordinary success. Its work had largely increased in the country districts, and it had been able to accede to an application to examine quartermasters of regiments stationed at Aldershot in hygiene and sanitation. In conclusion, he referred with deep regret to the loss which the Society had sustained by the deaths of Mr. Ernest Hart, a former chairman of the Society, and of Sir Robert Rawlinson, a member of its Council. The Rev. C. J. Ridgway moved a vote of thanks to the Princess Christian, which was seconded by Sir J. Crichton Browne, who referred to the great diminution in the rate of tuberculous disease during the past fifty years, attributable to increased knowledge on sanitary matters. He hoped that the National Health Society would spare no effort to hasten the day when pulmonary consumption in this country would be a mere memory of the past.

National Society for the Employment of Epileptics.—The above Society has issued, at the desire of H.R.H. the Duke of York, an appeal to make known its claims to sympathy and support, its present position, and its immediate needs. The rapid development of the colony established by the National Society at Chalfont St. Peter's has led to a widespread impression that the Society is in a state of extreme prosperity. This impression is, unfortunately, erroneous. The object of the colony is to provide epileptics with a home amidst healthy surroundings, under suitable medical treatment. The success that has so far attended the operations of the society has in one way been the cause of its present wants. The necessity for increasing the accommodation has so weighed upon the minds of the Society's principal supporters that they have from the first given their contributions specifically for the building of new homes, each of which has involved considerable outlay in furnishing, and one of which is still unfurnished. The result is that the Society finds itself in the unfortunate position of having both accommodation and patients, but not the wherewithal to maintain them adequately. Apart from the philanthropic aspect of the work that is being carried on, there is a large opportunity for the careful clinical study of the disease under the best conditions for remedy. On both counts the Society is worthy of support.

French Congress of Gynæcology and Obstetrics.—The second annual meeting of the French Congress of Gynæcology, Obstetrics, and Pediatrics will be held at Marseilles from October 8th to 15th. Dr. Pozzi will preside over the Gynæcological, Professor Pinard over the Obstetric, Dr. A. Broca over the Pediatric Section. The Gynæcological and Obstetric Sections will combine to discuss the following questions: (1) The diagnosis and treatment of extrauterine pregnancy; (2) auto-intoxications in gravid women. In the Pediatric Section the principal questions discussed will be: Congenital abdominal herniæ; microbic associations in diphtheria; the dyspepsia of schoolboys; the treatment of infantile heart disease; the purpuras of childhood; the diplegias of childhood; colitis in childhood; and the treatment of paralytic clubfoot.

Medical Men in the French Legislature.—The general election of 1893 in France resulted in the return to the Chamber of Deputies of 61 members of the medical profession; at that which has recently taken place the number returned was 57. This leaves the proportion of doctors in the Chamber practically what it was before, namely one-tenth of the whole number of Deputies. France probably stands first of all the countries of Europe in respect of the numbers of its medical legislators. The following are the names of the medical members of the new French Chamber with those of the places which they represent: Drs. Amodru (Etampes); Barrois (Lille), Baudon (Beauvais), Bizarelli (Valence), Bontemps (Vesoul), Borne (Montbe'hard), Bourgeois (La Roche-sur-Yon), Boutard (Saint Trieix), Cazals (Aurillac), Cazanvieilh (Bordeaux), Chambige (Clermont Ferrand), Chapuis (Toul), Chassaing (Paris), Chautemps (Bonneville), Chevillon (Marseilles), Chopinet (Senlis), Clamant (Bergerac), Clédou (Orthez), Cosmao-Dumenez (Quimper), David (Châteauroux), Defontaine (Avesnes), Delarue (Gannat), Delbet (Coulommiers), Devins (Brioude), Dubief (Mâçon), Dubois (Paris), Dubuisson (Châteaulin), Dufour (Grenoble), Duquesnay (La Martinique), Gacon (La Palisse), Girard (Riom), Herbet (Bourg), Hugou (Saint Flour), Isambard (Evreux), Lachaud (Brive), de Lanessan (Lyon), Langlais (Pontivy), Leoraud (Paris), De Mahy (Réunion), Mathey (Louhans), Merlou (Auxerre), R. Paulin-Méry (Paris), Pédebidou (Tarbes), Peschaud (Murat), Pourteyron (Ribérac), Quinta (Pau), Rey (Cahors), Ricard (Beaune), Sarrazin (Sarlat), Theulier (Nontron), Turigny (Nevers), Vacher (Tulle), Vaillant (Paris), Vazeilles (Montargis), Viges (Orleans), Vigné (Lodève), and Villejean (Tonnerre).

Beckenham and Penge Medical Society.—The annual dinner of this Society was held at Howard's Assembly Rooms on May 26th, when some five-and-thirty were present. The company included the Rector of Beckenham and Dr. Walker, honorary members of the Society, and the majority of the medical practitioners of the neighbourhood. Among the visitors were Dr. Frederick Roberts, Mr. Bland Sutton, Mr. Marmaduke Sheild, and Mr. Keetley. The dinner was a great success, and the pleasure of the evening was in no way decreased by the absence in the speeches of any allusion to the bitter conflict of last year. The medical practitioners evidently remain as they were, but prefer to leave to the healing influence of time and the good sense of the public the settlement of the club question. The toast of "The Queen" was proposed by the President, Dr. Frank Sturges, who made a feeling reference to the death of Mr. Gladstone. Mr. Prangley, Vice-President, proposed "The Royal Colleges of Physicians and Surgeons," urging on them a more serious attention to the duties devolving on them as the governing bodies of the profession. This was replied to by Dr. Roberts for the College of Physicians and by Mr. Sheild for the College of Surgeons. In proposing "The Local Medical Society" the rector spoke in the warmest terms of his love and admiration for his old profession, and dwelt on the many advantages of the Society in rubbing away rough corners and promoting good will and good fellowship among the members. Dr. Sturges replied on behalf of the Society. Dr. Wells proposed "The Visitors," Mr. Keetley replied; and the health of his old friend "The Chairman" by Mr. Bland Sutton, and the chairman's reply concluded the list. During the evening Mr. C. A. Lidgey presided at the piano, and Dr. Roberts and Mr. Henley sang.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—One additional Examiner in (1) Botany, (2) Chemistry, (3) Medical Jurisprudence and Public Health. Grant, £30 per annum. Applications to the Secretary by July 5th.

BIRMINGHAM GENERAL HOSPITAL.—House Surgeon. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by June 25th.

BRADFORD POOR LAW UNION.—Medical Officers for the No. 4 and No. 5 Districts. Salaries, £50 and £40 respectively. Applications to Thos. Crowther, Clerk to the Guardians, 22 Manor Row, Bradford, by June 20th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Assistant House-Surgeon, unmarried, and under 30 years of age. Salary not exceeding £30 per annum, with board and residence. Applications to the Secretary by June 29th.

CAVAN INFIRMARY.—Surgeon. Salary, £94 per annum, with house and garden. Applications to the Secretary by July 1st.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—House Surgeon. Salary £100 per year, with board, apartments, and laundress. Applications to the Secretary by June 23rd.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 18th.

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Secretary by June 30th

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.—Two Resident Medical Officers. Applications to Messrs. Henry and Scott, 20, St. Andrew's Square, Edinburgh, by July 9th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge Road, S.E.—Senior Resident Medical Officer. Salary £70 per annum, with board and washing. Applications to the Committee of Management by June 21st.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Physician or Surgeon to the Skin Department. Applications to the Secretary by June 13th. Also Junior House Physician. Appointment for six months. Board and lodging provided. Applications, on forms provided, to the Secretary by June 21st.

HALIFAX: ROYAL INFIRMARY.—House-Surgeon: unmarried. Salary, £80 per annum, increasing to £100, with residence, board, and washing. Applications to the Secretary by June 29th.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon. Salary £75 per annum, with residence, board, and laundry. Applications to the Secretary by June 24th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications to the Secretary by June 29th.

LINCOLN COUNTY HOSPITAL.—Assistant House Surgeon. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by June 27th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at Gore Farm Convalescent Small-pox and Fever Hospital, Darenth. Salary, £160, increasing to £200 per annum, with board, lodging, and washing. Unmarried, and age not to exceed 35 years. Applications to the Office of the Board.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—House Physician. Salary £60 per annum, with board, lodging, and washing. Tenable for two years. Unmarried, and under 30 years of age. Applications to the Secretary by June 28th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Anæsthetist. Applications to the Secretary by June 30th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners; and an Examiner in Dental Surgery. Applications to the Secretary by July 6th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by June 30th. Also Junior House-Surgeon. Salary, £50, with board and residence. Applications to the Secretary by July 4th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—House-Surgeon. Applications to the Secretary by July 2nd.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Resident Medical Officer. Salary 100 guineas per annum, rising 10 guineas annually to 120 guineas, with furnished apartments, attendance, coal, and light. Applications to the Secretary by June 30th.

SALISBURY INFIRMARY.—Assistant House-Surgeon; unmarried. Honorarium of £10 at end of six months' satisfactory service. Applications to the Secretary by June 23rd.

SHEFFIELD: ROYAL INFIRMARY.—Vacancy on the Honorary Surgical Staff. Applications to the Secretary by June 27th.

SHOREDITCH: PARISH OF ST. LEONARD.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary, £120 per annum, with rations, furnished apartments, and washing. Applications, on forms provided, to the Clerk by June 27th.

SUNDERLAND BOROUGH ASYLUM, Ryhope, near Sunderland.—Clinical Clerk for three or six months. Salary at the rate of £20 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by July 7th.

VICTORIA HOSPITAL FOR CHILDEN, Queen's Road, Chelsea, S.W., and VICTORIA CONVALESCENT HOME, Broadstairs.—House-Physician. Honorarium, £50, with board and lodging; House-Surgeon and Anæsthetist to Out patient Department. Appointment for six months. Honorarium, £20, and luncheon provided. Applications to the Secretary by June 25th.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by June 22nd.

WALSALL AND DISTRICT HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, lodging, and washing. Applications to Mr. E. J. Brooks, Chairman, Leicester Street, Walsall, by June 20th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—House Physician and House Surgeon. Appointment for six months. Applications to the Secretary Superintendent by June 22nd.

WOLVERHAMPTON: WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary, £100 a year, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by July 1st.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and a small honorarium. Applications to the Chairman of the Medical Committee by July 1st.

MEDICAL APPOINTMENTS.

BLUMFELD, J., M.D., B.C.Cantab., appointed Anæsthetist to the Grosvenor Hospital for Women and Children.

BOWDEN, W. J., M.B., Ch.B.Vict., appointed Medical Officer for the Glossop Union Infirmary.

BROWNE, Ada M., L.S.A.Lond., appointed Senior Assistant Anæsthetist to the New Hospital for Women, Euston Road, London.

CANTLIE, James, M.A., M.B., F.R.C.S., appointed Surgeon to the West End Hospital for Nervous Diseases, Welbeck Street, *vice* Edward Cotterell, F.R.C.S., deceased.

CHRISTOPHER, S. R., M.B., Ch.B.Vict., appointed Assistant Medical Officer of the Mill Road Infirmary of the West Derby Union.

DAVIES, W. T., M.R.C.S.Eng., L.R.C.P., appointed Medical Officer for the Second and Third Districts of the Hertford Union.

DICK, Robert, M.B., Ch.M.Syd., D.P.H., appointed Medical Officer of Health for the Combined Hunter River Districts, Newcastle, N.S.W.

FORBES, J. G., M.B., C.M.Edin., appointed Assistant Resident House-Surgeon to the Cardiff Infirmary.

FULLER, E. Barnard, M.B., C.M.Edin., F.R.C.S.E., appointed to the Honorary Visiting Staff of the Somerset Hospital, Cape Town, Cape Colony, *vice* Dr. C. F. K. Murray, resigned.

GODFREY, H. P., M.B.Melb., F.R.C.S.Eng., appointed Health Officer at Bardock, Western Australia.

GOUGH, Bernard B., M.R.C.S., L.R.C.P.Lond., appointed House-Surgeon to the Burton-on-Trent Infirmary.

GREENWOOD, T. Parker, M.B., C.M., B.Sc.Edin., appointed Third Assistant Medical Officer to the County Asylum, Fareham, Hants.

HART, J. W., M.B., C.M.Edin., appointed Government Medical Officer and Vaccinator for the Gunning District, *vice* Dr. W. H. Tibbits.

HUNT, S. J., L.R.C.P.Edin., M.R.C.S.Eng., appointed Government Pathologist for Queensland.

LETHBRIDGE, R. W., M.B., appointed Acting Medical Superintendent to the Ballarat Lunatic Asylum, Victoria.

MADDOX, W. G., L.R.C.S.Eng., appointed Honorary Consulting Surgeon to the Launceston Hospital, Tasmania.

MORLEY, H. W., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer at the Infirmary of the Portsea Island Union.

MULLEN, W. L., M.D., appointed Acting Medical Superintendent to the Sunbury Lunatic Asylum, Victoria.

OLIVER, Archibald R., M.B., C.M., appointed Extra Dispensary Surgeon to the Glasgow Central Dispensary.

PARDEY, J. M'I., M.B., B.Ch.Melb., appointed Honorary Consulting Surgeon to the Launceston Hospital, Tasmania.

POWELL, Caleb J., L.R.C.S.Irel., L.R.C.P.Irel., L.M.Rotunda Hospital, appointed Visiting Physician to the North Dublin Union Hospital.

REYNOLDS, F. M., M.B., C.M.Edin., reappointed Medical Officer of Health to the Ottery St. Mary Urban District Council.

SEACOME, Arthur F., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Assistant House-Surgeon to the General Infirmary, Chester.

SIDEBOTTOM, R. B., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Whitfield District of the Glossop Union.

SINCLAIR, Eric, M.D., Ch.M.Glasg., appointed Inspector-General of the Insane of N.S.W., *vice* F. Norton Manning, resigned.

TABB, J. F., M.R.C.S.Eng., L.S.A., appointed Medical Officer for the East District of the Greenwich Union.

THOMPSON, J. L., M.B., appointed Acting Medical Superintendent to the Ararat Lunatic Asylum, Victoria.

THOMSON, H. Hyslop, M.B., C.M., appointed Extra Dispensary Physician to the Glasgow Central Dispensary.

THORNE, May, L.S.A.Lond., M.D.Brux., appointed Assistant Anæsthetist to the New Hospital for Women.

TURNER, G. Nelson, M.B., C.M., appointed Physician to the Glasgow Central Dispensary, *vice* Thomas Colvin, M.B., C.M.Glasg.

WIGGINS, W. D., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Officer to the Greenwich Union Workhouse and Infirmary.

WILLIAMS, D. E., L.R.C.P.& S.Irel., appointed Health Officer for Bunbury, Western Australia.

WILLIAMS, John D., M.D., B.Sc.Edin., appointed Honorary Consulting Gynæcologist to the Cardiff Provident Dispensary, Cardiff.

WOOD, T. Jason, M.D.Lond., M.R.C.S., L.R.C.P., appointed Assistant Surgeon to the Bradford Royal Infirmary.

YOUNG, Archibald, B.Sc., M.B., C.M., appointed Surgeon to the Glasgow Central Dispensary, *vice* James Luke, M.B., C.M.Edin., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 2s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

BIRTHS.

BERRIDGE.—On June 8th, at Enderby, Leicestershire, the wife of William Robert Morpott Berridge, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

MARTINE.—On the 9th inst., the wife of W. R. Martine, M.B., C.M.Edin., Weston, Haddington, of a son.

TUCKETT.—On June 5th, at Woodhouse Eaves, Loughborough, Leicestershire, the wife of W. Reginald Tuckett, of a son.

MARRIAGES.

AUSTIN-ROBINSON—ROGERS-JENKINS.—On May 10th, at St. Augustine's, Durban, Natal, by the Rev. Canon Booth, M.D., assisted by the Revs. Hayes Robinson and J. Walton, Frederick Augustine Robinson, L.R.C.P., M.R.C.S., District Surgeon Nondweni, Zululand, to Lilian Agnes Rogers-Jenkins, L.R.C.P.& S.Edin., L.F.P.G., etc., late of Lucknow, N. India.

BOWER—SHERINGHAM.—On June 9th, at Tewkesbury Abbey, by the Rev. H. A. Sheringham, Vicar, brother of the bride, assisted by the Ven. the Archdeacon of Gloucester and the Rev. Ernest Dykes, Vicar of Barrow-in-Furness, cousin of the bridegroom, Ernest Dykes Bower, of Elton House, Gloucester, to Margaret Dora Constance Sheringham, youngest daughter of the Archdeacon of Gloucester and Canon of Gloucester Cathedral.

GREENWOOD—WOOLLEY.—At Oswaldtwistle, Accrington, on June 9th, by Rev. J. Greenwood (father of the bridegroom) and Rev. W. C. Rank, Alan Young Greenwood, M.B., C.M.Edin., to Clara, elder daughter of Edward Woolley, Esq., of Accrington.

JOHNSTON—BAKER.—On June 9th, at St. Peter's Church, Earley, Reading, by the Rev. F. J. Greenham, assisted by the Rev. C. E. Adams, Vicar of St. Peter's, David Richmond Johnston, B.A.T.C.Dublin, L.R.C.P. Edin., and of Reading, youngest son of the late Rev. Thos. Johnston, of Killarney, co. Kerry, Ireland, to Maud, eldest surviving daughter of Edward Edmund Baker, Esq., C.E., of Stoneleigh, Eastern Avenue, Reading.

LEWITT—SANDERS.—On the 9th inst., at St. Martin's Church, Leicester, by the Rev. J. N. B. Woodroffe, assisted by the Rev. F. L. Donaldson, Frederick William Lewitt, L.R.C.P., M.R.C.S., of Abbotsleigh, Leicester, to Winifred, daughter of the Rev. Canon Sanders, LL.D., Leicester.

SIBSON—POLLARD.—On June 1st, at the Friends' Meeting House, Tottenham, Arthur B. Sibson, M.R.C.S., L.R.C.P., L.D.S.Eng., youngest son of Daniel Sibson, L.D.S., of Stockton-on-Tees, to Henrietta Louisa, eldest daughter of Henry J. Pollard, Esq., Essex Lodge, Tottenham.

WILSON—FLOOD.—On June 8th, at the Parish Church, Ilstock, by the Rev. S. Flood, Rector of Ilstock, father of the bride, assisted by the Rev. T. Flood, uncle of the bride, and Rev. T. A. Smith, brother-in-law of the bridegroom, Thomas Nash Wilson, M.B., C.M., The Manor, Ilstock, to Frances Annie Flood.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Lennox Browne: The Treatment of Lupus and Tubercle of the Upper Air Passages.

TUESDAY.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Dr. Tooth.

Royal College of Physicians, 5 P.M. Dr. Sidney Martin: The Chemical Products of Pathogenic Bacteria, considered with special reference to Enteric Fever. (Croonian Lecture III.)

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Dr. Dundas Grant: On Disorders of the Ear in their Relation to Diseases of the Nervous System.

WEDNESDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Robinson: Gynæcological Cases.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Habershon: The Diagnosis of Pleural Effusion.

THURSDAY.

Royal College of Physicians, 5 P.M. Dr. Sidney Martin: The Chemical Products of Pathogenic Bacteria, considered with special reference to Enteric Fever. (Croonian Lecture IV.)

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Clinical Lecture or Demonstration of Recent Specimens.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Dr. Dundas Grant: Diseases of the Frontal Sinus.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Mott: Demonstration of Medical Cases.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations*.—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances*.—M. W. Th. S., 2; Tu. F., 5. *Operations*.—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations*.—Th. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances*.—Daily, 1.30. *Operations*.—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations*.—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances*.—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin W., 2.30; Dental, W., 2. *Operations*.—M. W. Th. F.

GUY'S. *Attendances*.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations*.—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances*.—Daily, 10. *Operations*.—M. Th., 2.

KING'S COLLEGE. *Attendances*.—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Th., 10; Skin, W., 11.30. *Operations*.—W. Th. F., 2.

LONDON. *Attendances*.—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations*.—Daily, 2.

LONDON TEMPERANCE. *Attendances*.—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations*.—M. Th., 4.30.

METROPOLITAN. *Attendances*.—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations*.—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations*.—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances*.—M. Tu. Th. F., 2. *Operations*.—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances*.—Daily, 2; Ophthalmic, W. S., 9.30 *Operations*.—Tu. F., 9.

NORTH-WEST LONDON. *Attendances*.—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations*.—Th., 2.30.

ROYAL EYE, Southwark. *Attendances*.—Daily, 2. *Operations*.—Daily.

ROYAL FREE. *Attendances*.—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations*.—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances*.—Daily, 9. *Operations*.—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*.—Daily, 2. *Operations*.—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances*.—Daily, 1. *Operations*.—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations*.—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances*.—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations*.—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances*.—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations*.—M. 9; Tu., 2.30.

ST. MARY'S. *Attendances*.—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations*.—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances*.—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations*.—W. F., 2.

ST. THOMAS'S. *Attendances*.—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F. 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations*.—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances*.—Daily, 1.30. *Operations*.—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances*.—Daily, 1.30; Tu. F., 6.30. *Operations*.—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations*.—Tu. W. Th., 2.

WEST LONDON. *Attendances*.—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations*.—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances*.—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations*.—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies*.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London*. The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London*.

☞ *Queries, answers, and communications relating to subjects to whic special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

DYNAMICS asks: In a patient with a distended bladder, would voluntary efforts at defæcation be likely to rupture, or have a tendency to rupture, that organ?

ANSWERS.

ENQUIRER.—Our correspondent will find the subject discussed with much authority in *A System of Surgery*, edited by T. Holmes, M.A.Cantab., and J. W. Hulke, F.R.S. Third edition, p. 552.

SCAPULA.—If "X.Y.Z" seeks consultations, but fails to keep them, and will not take any of the steps usual to obtain from the patient the consultant's fee, the only course which appears open to our correspondent, if the circumstances are such that he cannot decline the consultation, is to state his own fee, and to obtain it if possible before attending the case.

FUNGATING SORE OF UMBILICUS.

DR. C. E. LIESCHING (Tiverton) writes: In reply to the query of "Apex" in the BRITISH MEDICAL JOURNAL of June 11th, I have always found powdered nitrate of lead cure these cases if applied for a short period at intervals.

ANTIVACCINATION ASSERTIONS.

P. V.—The accuracy of the statement is on a par with the majority of those which emanate from the same party. We may refer our correspondent to the last report of the Medical Officer to the Local Government Board, p. 39.

ANALYSIS OF WATER.

W.—We are not prepared to express a definite opinion on the "analysis" sent by our correspondent. We are disposed to think, from an inspection of the figures, that the accuracy of some of them is doubtful. Assuming that the "albuminoid ammonia" figure is correct, the water would appear to be one that is unfit for drinking purposes.

NOTES, LETTERS, Etc.

ERRATUM.—In the paper by Dr. R. T. Williamson, on Unilateral Changes in Cerebral Hæmorrhage (BRITISH MEDICAL JOURNAL, June 11th, p. 1516), Figures 3 and 4 were accidentally transposed.

AN APPEAL ON BEHALF OF THE WIDOW OF THE LATE DR. ARTHUR BARLOW.

THE following additional subscriptions have been received on behalf of this fund:

	£	s.	d.
Per Dr. Clibborn:			
Dr. F. MacLaughlan (Strangford)	1	1	0
Dr. J. M. Elliott (Rathfirland, co. Down) ...	1	1	0
Per Dr. J. W. Moore:			
Sir Francis Cruise, M.D. (Dublin)...	1	1	0
Professor Macan (Dublin)	1	1	0

PRIMULA OBCONICA.

DR. EDWARD J. CROSS (St. Neots) writes: From the middle of April to May 7th, Mrs. B. was suffering at intervals from very severe urticaria, limited entirely to the fingers, wrists, and face, followed by marked desquamation, and accompanied by considerable constitutional disturbance. The eyelids were sometimes so much swollen as to prevent reading, and intolerable irritation rendered sleep impossible. The temperature was usually 99° F. to 99.4° F., when the rash was at its height. At first I attributed the rash to dyspepsia, and dieted and treated the patient accordingly, but without success. I now feel certain that it was due to handling the primula obconica, for the following reasons:

1. In the mornings preceding the first and second severe attacks she had been arranging some primula obconica.

2. From April 17th to April 23rd the patient was away from home, during which time she did not touch any primula, and was free from any urticaria.

3. On April 26th she again arranged the flowers in the morning, and in the evening had another severe attack lasting until April 28th.

4. From April 29th to May 5th she was suffering from rheumatism, and stayed in bed. During this time she did not touch any primula, and had no rash.

5. On May 6th she handled some more in the morning, and was again attacked by urticaria in the evening.

6. Mrs. B. always arranged the flowers in the morning about 11, and the irritation and rash always commenced about 7 or 8 in the evening, the same regions being always affected.

7. Since May 7th the patient has not touched any primula obconica, and has not had a sign of urticaria.

HÆMATURIA AFTER EATING RHUBARB.

DR. F. J. PALMER (Dublin) writes: A man, aged 23, apparently in perfect health, took a large quantity of stewed rhubarb, both after dinner and at supper, and on the following evening an attack of hæmaturia occurred. On examination the urine was smoky, and brownish red in colour; it was strongly alkaline, and on microscopic examination showed a very large number of characteristic crystals of calcium oxalate, and of red blood corpuscles. The red corpusles were crenated, and many appeared to be extruding their hæmoglobin in the form of small globules. The urine was examined in every case immediately after passage; it was apparently not diminished in quantity, and the patient did not seem at all the worse for the attack, while the temperature remained normal throughout. The attack lasted about two hours, and then gradually passed off, the urine becoming less

alkaline, and the oxalate crystals fewer in number, as the blood corpuscles disappeared. The filtered clear urine passed during the attack gave a very slight precipitate of albumen. The patient was a heavy meat eater, and particularly fond of fat, and had taken a great deal of exercise before the attack. At no time was a large quantity of blood present in the urine. On the following morning the urine was perfectly clear, neutral in reaction, and contained no blood, albumen, or calcium oxalate crystals. I obtained a perfect family history. The patient's paternal grandfather died, aged 60, of chronic Bright's disease; his father was operated on eight years ago for stone in the bladder following renal colic, and is perfectly healthy now. About six years ago both the patient and his father had a similar attack of hæmaturia after eating large quantities of rhubarb. There was no suspicion of nephritis in the present case. The alkalinity of the urine was evidently due to liberal vegetable diet, and the irritation of the angular oxalate of lime crystals apparently caused laceration of some capillary vessels in the kidney, thus causing the hæmaturia. That the blood really came from the kidney was shown by the presence of a certain number of tube casts composed of red blood corpuscles. A hereditary idiosyncrasy apparently existed.

Odor Mortis.

DR. THOMAS TUCKEY (Tywardwreath) writes with regard to the subject of an odour associated with the approach of death to point out that anybody who has noticed ravens so often flying over a house where the last sad scene of all is being enacted, may well believe that some smell peculiar to the dying emanates from the house. Ravens, now so scarce in other parts of England, are by no means uncommon in Cornwall, and he has had many opportunities of verifying a statement which is now looked upon as a mere relic of superstition. Dr. Tuckey also states that he has noticed a peculiar odour in patients liable to attacks of mania shortly before the attack.

An Antivaccinationist.

WE have received from Mr. Alexander Wheeler, of Darlington, a letter in the course of which he complains that our remarks on his words at a meeting held at Middlesbrough "give not the least fair interpretation" of his meaning, and, indeed, distinctly oppose his declarations. Seeing that we quoted verbatim from the local report of Mr. Wheeler's speech, and that he does not even yet complain of that report, it is surely not our fault if the quotations "give not the least fair interpretation" of his meaning, nor are we responsible if his "words" oppose his "declarations." Self-contradiction is a common phenomenon in antivaccination writings. We find that part of the antivaccination creed, which involves an objection to compulsory isolation, is being carefully kept in the background for the present by most of Mr. Wheeler's more prominent colleagues, and isolation is being largely advocated as a substitute for vaccination. When legislation is in hand, it is important to remember that optional isolation is as much a part of the doctrine of the liberty of the subject as is optional vaccination. It appears, also, that to Mr. Wheeler's mind, whether a man refuses vaccination or insists on repeated vaccination, he equally furnishes evidence of his want of faith in vaccination. It is not the least surprising that to such a mind no lesson is conveyed by the fact that in Gloucester, where infant vaccination was neglected, children were largely attacked, while in Middlesbrough, where the neglect referred to revaccination, adults were largely attacked. We leave Mr. Wheeler's pathological speculations to speak for themselves.

Anosmia.

DR. ROBT. HUGH HODGSON (Peckham, S.E.) writes: I think the following an interesting case of anosmia showing that a patient may have complete anosmia and yet retain the sense of taste intact.

On March 16th I was called to see a Mrs. E., aged 65, a native of Mecklenburg, but resident in this country for thirty-eight years. I found her to be suffering from non-obstructive jaundice. After treating her for about ten days she observed that she could smell the medicine, which was the first thing she had smelt for fourteen years. On inquiry I found that fourteen years ago she fell from some steps and injured "her inside." An abscess formed in her abdomen which confined her to bed for many weeks. The abscess eventually discharged itself through the meatus urinarius. The history is too vague to allow me to form an opinion as to the exact seat of the abscess. Both her sense of smell and taste are now perfect.

Maternal Impressions.

MASTIN[1] relates the following case: A man was shot through the chest, the bullet emerging in front in the intercostal space between the fourth and fifth ribs. His wife was near, and in rendering assistance she got her hands and face covered with blood. She was approximately fifty days pregnant, and was much agitated by the conviction that the child would be born with a "bloody face." After confinement she brought her baby, saying that it had not got a bloody face, but that it had the holes where the ball went through her husband's breast. On examination there were no holes, but there were bright red marks, consisting of elevated nævi and bright carmine spots, very near, though not identical with, the location of the wound on the father's chest. The mother had seen the wounds during her husband's illness, and they made her feel sick every time she looked at them.

[1] *Medical News*, New York, April 2nd, 1898.

The Open-air Treatment of Pulmonary Tuberculosis as Practised in German Sanatoria.

DR. RONALD E. S. KROHN (Funchal) writes to confirm the importance of the principles of treatment so ably advocated by Dr. Theodore Williams. It is, he says, the only treatment likely to benefit our patients until some real specific is found. Let me not be misunderstood: I do not mean that this treatment can only be carried out in sanatoria, but am referring to the principles practised there, and which can be fairly well carried out in most places, as Dr. Williams points out.

It seems to me that the profession in general are apt to neglect two points when dealing with phthisis. First, they are usually not courageous enough in the early stages of phthisis to explain to the patient the seriousness and the true nature of his complaint, and seek to comfort him with such expressions as "Your lungs are a little touched," or "You have a weak chest"; give him cod-liver oil and iron, and tell him to be careful. If the patient knew not only that his complaint was serious, but also that it was curable, and that he had himself to contribute quite as much to the cure as his medical man can; if the principles of life, diet, skin treatment, amount of exercise permitted, lying in the open air, and avoidance of all excesses were fully explained to him, far more satisfactory results would be obtained than is at present the case. It is just the details of treatment which make all the difference. The second point is the disposal of sputum. A patient should be taught that unless he is scrupulously clean in this matter he becomes a danger both to himself and others. I have met with several cases who came out here without having the faintest idea that they were tuberculous, having been told that they had some apical catarrh, and who were very careless about swallowing their sputum and spitting about, and yet on examination their sputum was found to be teeming with bacilli. A little instruction in the first instance would have prevented all this.

"Divine Healers" and the Law.

ACCORDING to the New York *Times*, Attorney-General Boyle, of Topeka, Kas., has recently given an opinion to the effect that "divine healers" cannot be prosecuted by the State Board of Health under the antiquack law. He holds that the State Board may proceed against magnetic healers and hypnotists as "quacks," because they pretend to possess personal healing powers, but that "divine healers" are exempt from prosecution because they declare the power to come from Jehovah, and Jehovah, he is careful to explain, is not amenable to the laws of the State. The law of the land in Kansas does not claim so comprehensive a jurisdiction as the police under the old French monarchy, who put up a public notice to the following effect: *De par le Roi, défense à Dieu de faire miracle en ce lieu.*

LETTERS, COMMUNICATIONS, ETC., have been received from:

A Mr. R. B. Anderson, London; Alma Mater; Abroad; Alpha; A.C.T.; Australian Member; Messrs. Arnold and Sons, London; Anxious Sufferer. **B** Mr. J. Bland, London; Dr. A. Bronner, Bradford; Dr. J. W. Barrett, Melbourne; Messrs. Burgoyne, Burbidges, and Co., London. **C** Messrs. T. Christy and Co., London; Mr. E. J. Cross, St. Neots; Dr. N. H. Choksy, Bombay; Mr. R. B. Carter, London; Messrs. J. and A. Churchill, London; Mr. R. H. Capper, London; Dr. G. W. Crowe, Worcester. **D** C. V. Dingle, M.B., Middlesbrough; Dynamics; Dignitate; Dr. T. M. Dolan, Halifax. **E** Enquirer. **F** E. B. Fuller, M.B., Cape Town; Mr. L. A. Francis, Uxbridge; Dr. T. Fenton, Bakewell; E. R. Fothergill, M.B., Halifax; Sir J. Fayrer, Bart., London. **G** Dr. K. Grube, Neuenahr; Mr. T. P. Greenwood, Fareham; Mr. H. H. Graham, London; Mr. B. B. Gough, Burton-on-Trent; Mr. A. L. Gillies, Edinburgh; Mr. A. Greenwood, London; A. Gregor, M.B., Newark; A. C. Godfrey, M.B., Southampton. **H** Mr. A. Higginson, Bolton; Dr. R. Hartley, London; Hon. Sec. **I** Indian Medical Service. **J** Justitia; J.L.S.; Mr. W. J. Morris, Portmadoc. **K** Dr. T. A. B. Kane, Spennymoor; E. M. Knowling, M.B., Tenby; Dr. R. E. S. Krohn, Funchal; A. D. Keith, M.B., Aboyne. **L** D. Love, M.B., Cumbernauld; Dr. G. H. Lilley, London; Mr. G. S. Loch, London; L.R.C.S., and P.E.; Mr. E. M. Little, London; Mr. C. E. Liesching, Tiverton. **M** Member; Dr. R. Martin, Manchester; Mr. J. J. de Z. Marshall, London; M.R.C.S.Eng., etc. **O** Onlooker. **P** G. D. Parker, M.B., Manchester; Mr. W. Phillips, Northampton; Mr. J. F. Pink, London; Dr. H. B. Pope, Kington; Mr. C. J. Powell, Dublin. **R** Mr. L. W. Reynolds, High Wycombe; R.D.P.; T. Rutherford, M.B., Kelso; D. Rorie, M.B., Cardenden; E. W. Reid, M.B., Dundee; Mr. W. A. S. Royds, St. Mary Bourne. **S** J. L. Spiers, Gateshead; Dr. J. E. Squire, London; Mr. E. C. Saunders, London; Mr. W. H. Spurgin, Newcastle-on-Tyne; Surgeon-General; Dr. R. R. Sieman, London; Mr. J. A. Southern, Derby; Dr. T. D. Savill, London; Scrutator. **T** Mr. W. Tebb, Burstow; Dr. J. C. Thresh, Chelmsford. **U** Undergraduate. **V** Vexed; Verax; Mr. T. J. Verrall, Brighton. **W** Messrs. Williams Bros., Trefriw; Dr. T. J. Wood, Bradford; Dr. R. N. Wolfenden, London; H. Wintle, M.B., London; Dr. R. T. Williamson, Manchester; Dr. F. Willcocks, London; Mr. C. H. Warren, London; Mr. C. F. Wighton, Leicester. **X** X.Y.Z.

BOOKS, ETC., RECEIVED.

Travels and Life in Ashanti and Jaman. By R. A. Freeman. London: Archibald Constable and Co. 1898. 21s.

Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. XIII. London: Sampson, Low, Marston, and Co. 1898.

Aids to Examinations. Part II. By T. R. Atkinson, M.D. London: Baillière, Tindall, and Cox. 1898. 2s. 6d.

Massage Gynécologique (Méthode Thure-Brandt). Par G. de Frumerie. Paris: G. Steinheil. 1897. Fr. 2.

Memoirs of a Young Surgeon. By F. Ashurst, M.B. London: Digby, Long, and Co. 1s. 6d.

The Wonderful Century, its Successes and its Failures. By A. R. Wallace. London: Swan Sonnenschein and Co. 1898. 7s. 6d.

A Course of Lectures on Medicine to Nurses. By H. E. Cuff, M.D., F.R.C.S. Second Edition. London: J. and A. Churchill. 1898. 3s. 6d.

A Manual of Bacteriology, Clinical and Applied. By R. T. Hewlett, M.D., M.R.C.P., D.P.H. London: J. and A. Churchill. 1898. 10s. 6d.

Appendix XI to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England. By J. H. Targett. London: Taylor and Francis. 1898.

*** In forwarding books the publishers are requested to state the selling prices.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A POST-GRADUATE CLINICAL LECTURE
ON
MITRAL STENOSIS,
WITH SPECIAL REFERENCE TO RECENT INVESTIGATIONS.

Delivered at the London Hospital

By A. ERNEST SANSOM, M.D., F.R.C.P., Etc.,
Physician to the London Hospital; President of the Medical Society of London; etc.

In the course of clinical lectures which I have delivered this session I have considered the clinical and pathological signs of mitral stenosis as evidenced by the cases under our observation in this hospital. On this occasion I shall confine myself chiefly to a review of the investigations which have been made in recent years towards the elucidation of some of the problems presented by this form of disease.

We will, in the first instance, examine the patients who will serve as object lessons, and I will in the briefest terms state the circumstances with regard to these which I wish you to note.

Case I.—C. M., aged 31, female. From 18 years of age suffered from anæmia, palpitations, and shortness of breath. Six weeks before admission had hæmoptysis, two attacks. No rheumatic history. Pulse-rate 73 irregular. Slight thrill at apex. Long purring presystolic *bruit*, finishing up suddenly at the first sound, which is short and sharp in character; double shock sound during diastole heard at apex. Pulmonary second sound accentuated. Patient improved very much while in hospital, her chief trouble being indigestion. Temperature normal; no albumen in urine: quantity passed normal in amount.

Case II.—E. P., aged 22, female. Patient had right hemiplegia. She could not write, but recognised her name. The heart examination showed all the signs of uncomplicated mitral stenosis, presystolic murmur, and thrill, with double second sound. The hemiplegia gradually cleared up, so that on discharge patient could walk well. The patient could copy print, etc., but could not write anything original. Intelligible speech was absent; she could only say "No." We had no doubt that this patient when admitted was suffering from embolism of the left middle cerebral artery. Nutrition was re established in the areas served by all the branches save that supplying the speech centres; in these a destructive lesion persisted.

In the cases shown to you there is no physical clinical sign of mitral regurgitation; the lesion, so far as the evidence indicates, is obstructive only. The morbid condition of the mitral orifice is that defined by Duroziez[1] and other French writers as "pure mitral stenosis." This is said by these observers to be characterised by a slow, gradual, progressive narrowing of the mitral orifice, evidenced:

(1) *Anatomically* by a funnel-shaped transformation of the mitral valve due to the complete union of the two curtains, the resulting membranous funnel retaining a smooth and polished appearance; and

(2) *Clinically* by the following signs: (*a*) Thrill felt near the apex; (*b*) a prolonged snoring murmur of low pitch, heard during the ventricular diastole, followed by a short and rougher *bruit* in the presystolic period; (*c*) a reduplication of the second sound.

I am unable to accept these views in their entirety. In the first place, a progressive narrowing of the mitral orifice even in young subjects does not invariably result in the funnel-form of mitral stenosis. For example, Hayden recorded the case of a boy, aged 7, in whom there was no rheumatic history, but who died from cerebral embolism, the result of mitral stenosis of button-hole form.[2] In this case Dr. Hayden distinctly stated that the murmur of mitral regurgitation did not exist. It is quite clear that the funnel form of valve change cannot with confidence be predicted in the so-called pure mitral stenosis; conversely the funnel mitral in its typical form I have found in old subjects in the degenerative period of life and associated with fibroid changes.

Now as to the etiology of this slowly developing obstructive disease at the mitral orifice. Duroziez has said that pure mitral stenosis is not a rheumatic affection. With this statement I can by no means agree. I have never myself observed nor found any record of observations indicating that mitral stenosis is a congenital malformation; but in very rare cases I have witnessed examples in which other congenital anomalies of the heart have been in association with a fringe of vegetations around the mitral orifice, and with thickenings which, I could have no doubt, represented an early stage of mitral stenosis. Congenital malformation is one thing and intrauterine endocarditis is another. The vegetations observed had exactly the character of those of endocarditis of the rheumatic form. Duroziez thought that rheumatic endocarditis always resulted in mitral insufficiency or mitral insufficiency and stenosis combined, and not in pure mitral stenosis. In the one case he said that the mitral orifice was unequal with hard edges often cretaceous, in the form of crescent or slit, whilst in the other there was only a polished funnel; the first was complicated by disease of the other orifices, the second was uncomplicated and was as the crater of an extinct volcano. These observations also do not accord with my experience. In my Lettsomian Lectures (1883) I gave reasons for the conclusion that there was an intimate association between mitral stenosis and rheumatism, but with its insidious rather than its pronounced forms. Rheumatic fever, especially repeated attacks of the disease, is more frequently attended with mitral regurgitation—the slight, insidious, sometimes clinically indetectable forms of rheumatism by mitral stenosis.

Further experience has but confirmed me in these views. Take for an example the following case:

A girl, R. W., whom we had long under observation. At the age of 14 she came under my care for suffering attributed to her heart. She had never experienced rheumatic fever, but had growing pains and subfebrile attacks. A presystolic murmur and also a systolic murmur were heard. She was discharged and readmitted a twelvemonth after. Then there were thrill and presystolic *bruit* with a slight systolic blow. After severe lung complications she died, and the *post-mortem* examination showed the funnel form of mitral stenosis, with some vegetations having all the characters of rheumatic endocarditis encircling the auriculo-ventricular orifice.

The case is only an example of many others in which we have found rheumatic endocarditis in the subjects of funnel mitral, and I think that there is a chain of *post-mortem* evidence which shows that morbid changes having the exact characteristics of rheumatic endocarditis, bringing about mitral stenosis in greater or less degree, are to be found in subjects who have presented very slight signs of rheumatism or even no signs at all. Clinical evidence goes hand in hand with that of morbid anatomy in demonstrating the rheumatic origin of many cases. I described in my Lettsomian Lectures cases in which, after typical and undoubted attacks of rheumatism, there were, first, the development of signs of mitral insufficiency, and then, in the course of years, those of the combined lesion or of mitral stenosis pure and simple.

In a case very carefully observed by my then house-physician, Dr. Needham, the physical signs changed from those of regurgitation to stenosis-plus-regurgitation in fifteen days, and ten days subsequently the systolic murmur of mitral regurgitation had quite disappeared, a typical presystolic murmur of mitral stenosis and reduplication of the second sound remaining.

In December, 1897, I examined a lady, aged 26, who presented all the signs of mitral stenosis without regurgitation thrill, prolonged diastolic-presystolic murmur, with termination in a sudden tap and reduplication of second sound (so-called) from second left costal cartilage downwards to just within the apex. Three months previously this patient was examined by a competent observer, and then no cardiac lesion was in evidence. Three weeks before my examination a systolic murmur was found at the apex. This patient had never suffered from notable rheumatism but I knew that the members of her family were rheumatic; one brother had suffered from pericarditis and and another from endocarditis.

From many such considerations I cannot swerve from my opinion that in a very large proportion of cases mitral stenosis, though unaccompanied by any signs of regurgitation, is a rheumatic disease. The endocarditis which produces the lesion is protracted and progressive, giving rise to a comparatively slow formation of fibrous quasi-cicatricial tissue which, under the even pressure of the blood, both on the side of the auricle and on that of the ventricle, tends to form the smooth and even membranous funnel which has erroneously suggested a congenital malformation.

Yet I would not assert that the origin of mitral stenosis must be always in rheumatic endocarditis. Dr. Pierre Teissier[3] has written a valuable memoir containing a condensed report of a large number of cases, in which he maintains that the gradual and progressive narrowing of the mitral orifice is due to tuberculosis. I entirely dissent from this conclusion, which I consider an extraordinary example of special pleading. Teissier cites my observations, and says, "Sansom is obliged to recognise the fact that mitral stenosis could develop insidiously without the intervention of rheumatism." I did recognise this fact, and pointed it out most strongly, but Teissier would have been more correct if

he had quoted me as saying "without the intervention of rheumatism as clinically evidenced." For I showed that the form of endocarditis as observed in the *post-mortem* examination was usually just that which we find associated with rheumatism. In a very few cases the lesion, or the commencement of the lesion, must have existed in intrauterine life. Obstruction at the mitral orifice was found *post mortem* in an infant who survived birth only twenty-one hours by Benezerd Smith, by Parrot in one who lived twenty-four hours; and in a case recorded by Gerhardt of an infant only 4 months old. In the majority of cases the lesion is recognised about the age of 14 or 15 years—in women especially at the time of puberty. It is to be remembered that mitral stenosis is much more frequent in the female than in the male. Potain, Landouzy, Broadbent, and others, have pointed out that mitral stenosis in the female is frequently associated with anæmia and chlorosis.

That there is some relation between mitral stenosis and tuberculosis I quite agree. Potain found *post-mortem* evidence of tuberculosis in 12 cases out of 35 of pure mitral stenosis, a proportion of 35 per cent., and Teissier brings evidence to show that this figure is under the mark. I have myself found very rapid pulmonary tuberculosis evidenced in a case in which there was a funnel mitral, and I have observed clinically other cases in which tuberculous changes were manifested in the subjects of mitral stenosis. I have not found, however, the coexistence in anything like the proportion quoted by Teissier. Taking the cases in Teissier's abstract with those cited by Percy Kidd and others, I find a total of 31 in which the association of mitral stenosis with tuberculous lesions were proved *post mortem*: of these 11 presented also the signs of tricuspid stenosis or of endocarditis affecting the tricuspid valve, and 5 others manifested disease of the aortic valves. Uncomplicated mitral stenosis was present, therefore, in only 16 cases. An interesting case has been recorded by Gerhardt of an infant prematurely born at the eighth month, and dying at the age of 4 months from acute tuberculosis. In this case the mitral alone among the valves of the heart was diseased; it was puckered, and its cordæ tendineæ were fused together and thickened. Teissier agrees with Letulle in the statement that a search in the diseased endocardium of cases of mitral stenosis for the bacillus tuberculosis, or for any specific tuberculous lesion therein has always been fruitless; nevertheless he thinks that an attenuated tuberculosis, acquired or hereditary, is the cause of pure mitral stenosis. My conclusion is very different to this. The gradual development of mitral stenosis from a slow endocarditis, for the most part, but not exclusively, due to rheumatism, causes an insufficient supply to the left ventricle, to the aorta, and to the general arterial system; hence a circulatory starvation which brings about a diminished resistance to the morbid influences of the bacillus tuberculosis. In aortic valvular disease the comparative proneness to tuberculous changes was noted long ago. Traube, observing the frequent association between aortic insufficiency and the development of tubercle, limited the law of antagonism between valvular diseases of the heart and tubercle which had been formulated by Rokitansky to mitral disease. An *a fortiori* argument obtains, therefore, when there is the combined lesion of mitral and aortic disease. A still more marked predisposition exists when there is the combination of mitral and tricuspid stenosis. In tricuspid stenosis there is, of course, an impeded blood supply to the pulmonary artery. Our experience teaches that the subjects of stenosis of the pulmonary artery almost universally die of tuberculosis, and tricuspid stenosis means impeded pulmonary blood supply or obstruction of the pulmonary artery thrown back only one stage.

The practical clinical significance of these observations appears to me to be the following: In any case presenting the physical signs of mitral stenosis the probability of the existence of or the advent of tuberculosis must be duly weighed. Some such cases present signs of marked anæmia, others incomplete development or faulty nutrition. In these the probability of tubercle is greater. Many cases of mitral stenosis, however, show signs which may be easily mistaken for those of pulmonary tuberculosis. They may manifest infraclavicular dulness with *rales* and auscultatory signs of lung consolidation; by no means infrequently there is hæmoptysis, and hectic fever may accompany these conditions. Yet the signs and symptoms may be entirely independent of tubercle and due to embolisms of branches of the pulmonary artery, to which the subjects of mitral stenosis are prone. A case which simulates phthisis pulmonalis when mitral stenosis concurs is not of the grave significance of a case in which mitral stenosis is absent. The favourable prognosis must not be hazarded until a complete examination of the sputum has been made and bacilli have or have not been found.

We will now turn to a type of mitral stenosis in which there is no evidence of the intervention of rheumatism in any form—this is the form termed by Huchard, "the mitral obstruction of arterio-sclerosis." Goodhart found on an analysis of the *post-mortem* records of 192 cases in which there were *post-mortem* evidences of granular kidney that about one-fourth of the whole number presented thickenings of the mitral valves or stenosis of the mitral orifice. G. N. Pitt found from an examination of the records of the *post-mortem* department of Guy's Hospital that the cases of mitral stenosis in the subjects of granular kidneys were to those who did not manifest this form of renal lesion in the proportion of three to one. I have described a case in a woman, aged 52, in whom there was a gradual fibroid transformation in many situations, including a sclerosis of the mitral valve with obstruction of the orifice. Huchard's pupil, Frederic Auguste Blind,[4] has well described a typical case, and has summarised the evidence, which appears convincing, that this form has a definite nosological position. In this variety the disease commences gradually in persons, more frequently males than females, at or after middle age. There are often signs of degeneration of the arterial walls and the left ventricle is hypertrophied or dilated and hypertrophied; in some cases the physical signs as regards the heart are typical of mitral stenosis, but in many a sudden and loud first sound or a slight systolic localised blowing murmur are all the auscultatory signs observed.

From the evidence which I have examined, therefore, I believe that the most frequent cause of mitral stenosis is a slowly developing endocarditis of the rheumatic form and another cause far less frequent, but one operating for the most part in advanced life, namely, a general or widely diffused, slowly developing fibrosis. I recognise, however, that there may be other forms of obscure etiology, though I find that the hypothesis of any tuberculous causation is not supported by anything like sufficient evidence.

It has been shown that in mitral stenosis of the funnel form there has been in some cases a systolic murmur heard in the neighbourhood of the apex. Exceptionally the presystolic murmur is not heard; only a short systolic murmur is audible. It is the opinion of Goodhart and of Potain that this systolic murmur may be due not to mitral but to tricuspid regurgitation Dr. D. W. Samways[5] has made an inquiry concerning this point by examining the *post-mortem* record of 70 cases examined at Guy's Hospital. In 40 of these a systolic murmur had been audible during life, and in 15 the situation of audibility of the murmur suggested a tricuspid causation. Dr. Samways considers that it is reasonable to conclude that in cases of mitral stenosis, regurgitation through the mitral aperture is less common than has been supposed, a tricuspid reflux having often been mistaken for a mitral regurgitation.

We come now to a very interesting question. Finding, as we do, that in the so-called pure mitral stenosis there is no clinical evidence of mitral regurgitation, how is such regurgitation prevented? In the search for an answer to this question, our attention should first be called to the action of the left auricle in mitral stenosis. The lessons of morbid anatomy are to the effect that in some cases of this affection the muscular tissue of the auricle is enormously hypertrophied, in others atrophied to almost complete extinction. I have myself observed *post mortem* in a child the auricular muscle as thick as that of the right ventricle, and in an aged woman an extreme dilatation of the auricle, the cavity being lined with laminated clot, and in the thin wall muscular fibres scarcely represented at all.

An excellent summary concerning the left auricle in this disease has been published in the graduation thesis of M. Gérard.[6] Some authors—as Laennec, Stokes, and Niemeyer

—have concluded that dilatation of the left auricle is the direct consequence of mitral obstruction. Others—as Bouillaud, Potain, and Rendu—have insisted that dilatation and hypertrophy go together: "the left auricle dilates and hypertrophies simultaneously" (Potain and Rendu). The records of *post-mortem* examinations, however, have not at this stage of the inquiry determined the exact relation of the hypertrophy and dilatation.

First, Is dilatation of the auricle a necessity in compensated mitral stenosis? Is hypertrophy always to be demonstrated?[7] Is hypertrophy of the auricle a provision for effecting and maintaining compensation? Are dilatation of the auricle and atrophy of the muscle late effects—the latest sign of a failing compensation? Gérard says: "In pure mitral stenosis, the heart adapting itself, as it were, naturally to a diminished labour, lesions of the left auricle are often absent for a long period." This is contrary to what occurs in the combined lesion of insufficiency and stenosis, where the adaptation of the heart is impossible and hypertrophy of the left auricle occurs at any rate provisionally.[7]

The evidence of morbid anatomy has been further investigated by Dr. Samways.[8] Examining the records of 70 *post-mortem* examinations of cases of mitral stenosis made at Guy's Hospital, he finds that in pronounced mitral stenosis the characteristic modification of the left auricle is not dilatation but hypertrophy, and though at the *post-mortem* examination dilatation is often associated with hypertrophy, the dilatation is probably not evident during life whilst compensation exists, and it occurs when compensation fails.[9]

Let us turn to clinical evidence. I examined a large number of cases of mitral stenosis by means of the cardiograph. In 1880 I published some cardiographs showing a very pronounced, in some cases enormous, elevation which could only indicate an inordinately powerful contraction of the auricles in these cases.[9] In my work on the *Diagnosis of Diseases of the Heart*, published in 1892, I adduced arguments which seemed to me to point convincingly to the conclusion that the muscular contraction of the left auricle in some cases of mitral stenosis was sufficiently powerful to lift the apex of the left ventricle. Dr. Dickinson, who opposed the views of Fauvel, Gairdner, and a large number of other clinical observers as to the causation of the so-called presystolic murmur, adduced careful and accurate observations to show that in some cases the murmur which was observed in confirmed mitral stenosis occurred not before, but simultaneously with, the elevation of the heart's apex, as perceived by the finger. Dr. Dickinson's inference was that the murmur which was heard could not be presystolic and of auricular causation, but systolic and the work of the left ventricle. I contended that Dr. Dickinson's inference was unsound, though his clinical observations were strictly accurate. I urged[10] that one should not assume that the elevation of the heart's apex as felt by the finger of the observer is of necessity synchronous with the contraction of the ventricle—that in some cases the hypertrophied auricle extruding its blood contents through a moderately narrowed mitral orifice might be sufficiently powerful itself to cause a pronounced elevation of the apex, the proper systole of the ventricle following.

My observations and inferences thus expressed have been exactly corroborated by Professor Potain of Paris, who, in his work in the *Clinique Médicale de la Charité*, 1894, has recorded a number of cardiographic and sphygmographic investigations of his own, and has collated the results of others who have employed instruments of precision. Potain agrees with Dickinson that the presystolic roll (*roulement présystolique*) coincides with the apical impulse. But this lifting of the apex is not always produced by the ventricular systole, but often wholly or in great part by the systole of the auricle and the distension of the ventricle which this determines. The elaborate reasonings on which this conclusion is based are detailed in the article on the apex beat of the heart.[11] Potain further states that accumulated proofs leave no room for doubt not only that the left auricle contributes to the impulse of the left ventricle, but that the contraction of the muscle of the auricle does not cease until the complete closure of the mitral orifice, and the commencement of the propulsion of the blood of the left ventricle into the aorta. Dr. Samways has seen in this an explanation of the prevention of regurgitation into the left ventricle in the "pure" form of mitral stenosis. He contends, from experimental as well as mathematical data, that the auricular cavity being small (its muscular walls by their contraction having nearly emptied it) and the ventricular cavity being large (nearly replete), it is possible that the auricle as a contracting sphere may be master of the situation, and force the remnant of its contents into the ventricle, in spite of the muscle of the latter being already in contraction.

Dr. Robert H. Woods of Dublin had already shown in 1892 by mathematical demonstration that a small contracting sac has a mechanical advantage over a large one. Dr. Woods,[12] however, has expressed his opinion that Dr. Samways pushes the matter to an absurdity when he contends that the left auricle by its contraction sends blood into the contracting ventricle. This question is not to be judged only from the standpoints of experimental physics and mathematical formulæ. I have considered it from the side of pathology and morbid anatomy, and I think that the contentions of Professor Potain and Dr. Samways are fully justified.

I cannot regard the auricle only as a contracting sphere. It is not a muscular sac of uniform contractile power throughout. The commencing phase of the emptying its cavity is in the pulmonary veins, the concluding in its most muscular part, the auricular appendix. Moreover, there is another cause at work to effect the closure of the mitral orifice—the diminution of the area of the auriculo-ventricular ring and the shortening and approximation of the papillary muscles. Marc Sée[13] has contended that the three papillary muscles of the left ventricle in their contraction are so disposed as to fit into each other and so contribute to close the upper part of the ventricle. It is true that these muscles do not contract at the very earliest period of systole of the ventricle; the parietal muscle commences, but is reinforced by the papillaries in an extremely brief time.[14] I only adduce these considerations to show that the contraction of the auricle is not to be considered as the sole force, but is an auxiliary force in preventing regurgitation at an early part of ventricular systole. Furthermore, if the auricle can contend successfully with the ventricle until such moment as the latter has overcome the pressure in the aorta sufficiently to open the aortic valves, this is all that the argument demands. Auricle and ventricle would co-operate to do this. Dr. Robert H. Woods makes a statement with which I by no means agree. I know the view is held by many, and I think it time that the evidence of the other side should be duly considered. He writes: "There are no valves between the auricle and the lungs, and therefore raising the intra-auricular pressure during contraction of the ventricle could only result in the blood following the path of least resistance, namely, back into the pulmonary veins." But there is a valvular mechanism between left auricle and lungs—namely, in the pulmonary veins themselves. "At the moment of the auricular systole the orifices of the pulmonary veins are narrowed in the contraction of the layer of muscular fibres by which they are surrounded, and any great reflux of the blood into the veins is thus prevented."[15] "The contraction of the circular muscular fibres around the venous orifices and the subsequent contraction of the auricle cause these veins to empty themselves into the auricle; and by their presence and action they prevent any large quantity of blood from passing backwards into the veins when the auricle contracts. No valves are present in the superior and inferior cavæ in the adult heart, or in the pulmonary veins; hence the contraction of these circular muscular fibres plays an important part in preventing any reflux of blood during the contraction of the auricles."[16]

From these observations you will infer that though there is no membranous valve there is a very efficient sphincter—and a sphincter may be more powerful than a valve tending to prevent reflux towards the lungs. I think that this very important quasi-valvular arrangement is too often overlooked. It may be said that the sphincters may become inefficient. No doubt they may; hence some of the lung complications of the late stages of mitral stenosis. As evidence of the strain to which the pulmonary veins are subjected, I may cite the observations of Dr. James Barr, of Liverpool, who found well marked atheroma of the pulmonary veins in cases of mitral stenosis.

There are circumstances observed in cases of mitral stenosis

in children and young persons which have seemed to me to point very strongly to the correctness of the inferences of Potain and Samways. It is the rule to find in the *post-mortem* examination of such cases that the left ventricle is of small capacity contrasting with the large dilated right ventricle of the same subject, and with the normal left ventricle of a child of the same age as the subject observed. There cannot be any doubt that the morbid condition of mitral stenosis is of slow pathogenesis. These morbid processes must have commenced at the periphery of the valve curtains, or at the auriculo-ventricular orifice, and it seems to me that unless some cause prevented regurgitation, regurgitation must have occurred. If such regurgitation had occurred, why is it that its usual consequences are not in evidence? Surely the enhanced blood pressure within the ventricle would have caused left ventricular dilatation. But such dilatation is conspicuous by its absence. It is in the highest degree probable therefore that regurgitation was prevented, and, according to the accumulated testimony, prevented by the action of the auricle.

It is probable that the normal endowment of the auricular muscle is sufficient to prevent the regurgitation in the earlier stages of development of mitral stenosis, but in course of time the muscle becomes hypertrophied. Later on the dilatation of the auricle preponderates, and the muscular fibres become attenuated to almost extinction. Atrophy of the auricular muscle may, however, occur in the earlier stages from various causes of faulty nutrition. My own experience coincides with that of Dr. Samways in establishing as a general rule the doctrine that "the characteristic alteration in the left auricle in mitral stenosis is not dilatation but hypertrophy—dilatation is probably introduced only with the auricular breakdown."

The prognosis in the condition of disease which we are considering is grave. I have found the average age at death of 61 patients to be 32.7 years, but it is to be remembered that my cases included an unusual number of children, for in the etiology of the disease in children I was much interested, and probably more than my fair proportion of cases were sent under my notice. The late Dr. Hayden's cases, 42 in number, gave 37.8 years. Sir William Broadbent, 53 cases, gives as the average age at death 33 years for males and 37 to 38 for females.

The most recent inquiry, that by Dr. Samways[17] as to the *post-mortem* records of Guy's Hospital during ten years shows that the average age at death, males and females (identically) is $38\frac{1}{3}$ years; the less pronounced forms of constriction of the orifice 43.6 years; the more extreme stenosis 33 6 years.

The concurrence of testimony, therefore, is to show that the conditions of the disease are so grave that life is rarely prolonged beyond 40 years. In the form of disease which is associated with chronic fibrosis and granular kidney, however, the age at death is much more advanced; but these commence insidiously for the most part at a comparatively advanced age. I have observed such a case at the age of 70.

Notes and References.

[1] Duroziez, P., *Traité Clinique des Maladies du Cœur*. Paris: Steinheil. Pp. 258 *et seq.* [2] Hayden, *Diseases of Heart and Aorta*, p. 942. [3] Potain, C., *Clinique Médicale de la Charité*. Paris: Masson. 1894. Pp. 178 *et seq.*; pp. 507 *et seq.*; Teissier, Pierre, *loc. cit.*, pp. 913 *et seq.* [4] Blind, F. A., Le Rétrécissement Mitral des Artério-Scléreux, *Thèse de Paris*. 1894. [5] Samways, D. W., Le Rôle de l'Oreillette Gauche notamment dans le Rétrécissement Mitral. *Thèse de Paris*, 1896. [6] Gérard, L'Oreillette Gauche dans le Rétrécissement Mitral, *Thèse de Paris*, 1894. [7] *Ibid.*, p. 65. [8] *Ibid.*, p. 17. [9] Sansom, *Transactions of the Medical Society of London*, 1881, pp. 197-207. [10] *Ibid.*, Diseases of the Heart and Aorta, p. 378. [11] Potain, *Du Choc de la Pointe du Cœur*. [12] Woods, Robert H., M.B., F R.C.S., Letter in British Medical Journal, March 6th, 1897, p. 627. [13] Marc Sée, Sur le Mode de Fonctionnement des Valvules Auriculo Ventriculaires du Cœur, *Arch. de Phys.*, 2ème série, tome i, p. 381. [14] Roy and Adami have been able to detect this interval. Soltau Fenwick and Overend found that the papillary muscles contracted exactly at the same moment as those of the ventricular wall, *Lancet*, October 26th, 1889. [15] Gérard, *loc. cit.*, p. 29. [16] Landois and Stirling, *A Textbook of Human Physiology*. London: Chas. Griffin and Co 1885. Vol. I, p. 69. [17] Samways, British Medical Journal, 1897, i, p. 197, and 1898, i, p. 364.

The lepers of the Orange Free State are in part placed on a farm in the neighbourhood of Bloemfontein, in part maintained on Robben Island at the expense of the State. A proposal is now made that the lepers should be removed from the island and placed upon another farm in the Free State.

THE CROONIAN LECTURES

ON THE

CHEMICAL PRODUCTS OF PATHOGENIC BACTERIA CONSIDERED WITH SPECIAL REFERENCE TO ENTERIC FEVER.

Delivered before the Royal College of Physicians of London,

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Lecture II.

With these preliminary observations we now pass to the consideration of the investigation more recently made on the chemical products of the typhoid bacillus, of the bacillus coli communis, and of a form allied to these, namely, the bacillus enteritidis of Gärtner.

These three micro-organisms are in culture closely allied to each other. They all grow in broth, forming a cloudiness and a sediment, not commonly a scum on the surface, although this is present sometimes in cultures of the bacillus coli. The growth on agar is very similar in all three forms, being more fluorescent with the bacillus coli than with the other two forms. On gelatine they grow without producing any liquefaction of the medium. Their differences are as follows: In glucose gelatine and glucose agar the bacillus coli and Gärtner's bacillus form numerous bubbles of gas, while the typhoid bacillus, although it grows copiously, produces no bubbles. The bubbles are due to the formation of gas from the sugar present. On potato the bacillus coli gives a fleshy yellowish-brown growth; the Gärtner bacillus a slightly coloured, and the typhoid bacillus gives a filmy—almost transparent—growth. Milk is coagulated by the bacillus coli, but is not coagulated by the typhoid bacillus or by Gärtner's bacillus. Indol is formed in a broth culture by the bacillus coli, not at all by the typhoid bacillus, and only a slight indol reaction can be obtained, and that not constantly, in cultures of the Gärtner bacillus. Some varieties of the bacillus coli do not appear to form indol.

These cultural characteristics are slight, but are sufficient for the purposes of diagnosis, inasmuch as the bacillus coli can always be distinguished from the other two by the gas it forms in glucose gelatine, by its coagulation of milk and by the indol it produces, whereas Gärtner's bacillus is distinguished from the typhoid bacillus by the fact that it forms gas in glucose gelatine. In any of the media the growth of the bacillus coli and of Gärtner's bacillus is much more copious than that of the typhoid bacillus. The bacillus coli is further distinguished from the typhoid bacillus by not giving the "serum reaction" with the blood of a typhoid patient or with typhoid "antitoxic serum." Dr. Durham states that Gärtner's bacillus sometimes gives a sedimenting reaction with typhoid blood or serum. All these organisms are flagellated, the typhoid bacillus containing the most numerous flagella, the bacillus coli the smallest number, and Gärtner's bacillus being intermediate. The close similarity in vegetative properties of these three micro-organisms rendered it advisable that they should be investigated together. They probably play very different *rôles* in the production of disease. The typhoid bacillus is the cause of enteric fever; the bacillus coli plays a great part in the production of peritoneal lesions proceeding from the intestine and inflammatory conditions connected with the pelvic and other abdominal organs; and the Gärtner's bacillus was originally found in the body of a man who had been poisoned by beef which also contained the bacillus. Dr. Durham thinks that it may be the cause of some cases of food poisoning. Both the typhoid bacillus and Gärtner's bacillus may therefore be considered as micro-organisms, chiefly infecting the intestinal tract, and the bacillus coli—though it is not known to produce any gross lesion in the intestinal tract—is a natural habitant in that region and may aid in intestinal infections.

The Typhoid Bacillus.

The typhoid bacillus is found in enteric fever, in the intes-

tinal lesions, in the mesentery glands, and in the spleen. It is present, in some cases, in the motions of typhoid fever, and also in the urine, and has been occasionally found in the liver and blood. It is also present in some of the abscesses of remote parts which may be observed in the course of typhoid fever or during its convalescence. It is most readily separated from the spleen, and in the following manner: After the spleen has been removed wholly from the body, it is washed on the surface with boiling distilled water, followed by absolute alcohol. It is then incised with a sterilised knife. By means of a sterile platinum rod inserted into the substance of the spleen, inoculation of broth tubes or the surface of agar plates is made, and within 24 hours there is a copious growth of the typhoid bacillus. Another method is to remove a small portion of the splenic pulp by means of sterile instruments, and place it in 200 c.cm. of sterile distilled water in a flask which is incubated for 24 hours. The liquid is then brushed over the surface of agar plates, and in 24 hours a copious growth of the typhoid bacillus is obtained.

I have examined four spleens in this manner: one from the Middlesex Hospital, kindly sent me by Dr. Fardon; one from St. Thomas's Hospital, sent by Dr. Hawkins; one from Homerton Hospital, sent by Dr. Goodall; and one from University College Hospital, from a case under the care of Dr. Ringer. With the exception of one case all gave a pure and abundant culture of the typhoid bacillus. The exception showed a great preponderance of colonies of the typhoid bacillus on the agar plate, but one or two colonies appeared rather different to the others, being more opaque and fluorescent. These were separated, and proved to be the bacillus coli. All the remaining colonies, as well as those from the other three cases, gave all the typical reactions of the typhoid bacillus, including the serum reaction (Widal's). The presence of this pathogenic organism in pure culture in the spleen and its invariable presence is one of the arguments in favour of the typhoid bacillus being the cause of enteric fever.

INCREASE OF VIRULENCE OF THE BACILLUS.

In the investigation of the products of a pathogenic bacterium it is not of much value working with non-virulent cultures. None of the ordinary cultures of the typhoid bacillus obtainable in the laboratories will kill an animal. I obtained cultures from various laboratories in England, and found them all incapable of causing death. Although, as will appear, the action of the chemical products of these non-virulent forms are of some significance, yet much progress was not made until a virulent culture was obtained. Chantemesse and Widal[1] rendered the typhoid bacillus virulent by injecting 4 c.cm. of a broth culture under the skin of the guinea-pig, and at the same time injecting into the peritoneal cavity 8 to 10 c.cm. of the sterilised chemical products of the streptococcus. The animal died, and the typhoid bacillus was found in the blood, the organs, and in the peritoneal cavity. A culture was made from this in broth and used for a second experiment of a like character, employing rather less of the streptococcus products. When proceeding in this way it was found that less and less of the streptococcus products could be used, the animal still dying, until finally it was found that the culture of the typhoid bacillus obtained could, in subcutaneous doses of $\frac{3}{4}$ c.cm., kill the animal without the aid of the streptococcus products. Similar results have been obtained by using the products of the bacillus coli or of the bacillus prodigiosus instead of the streptococcus products. I attempted this method, using the bacillus coli products, but found that, although the virulence of the bacillus was undoubtedly increased, yet I could not obtain it in a virulent enough condition to cause death of itself. I obtained, however, an extremely virulent typhoid bacillus by utilising cultures made from the spleen of one of the cases examined.

The virulence of the typhoid bacillus as obtained direct from the spleen after death or during the course of the disease, varies somewhat. In one of the cases a small amount of splenic pulp was ground up with salt solution, and 2 c.cm. of this mixture were injected into the peritoneal cavity of a guinea-pig. Death occurred in the course of eight days, and a pure growth of the bacillus was obtained from the peritoneum, but not from the blood of the heart or the spleen. From another case a small quantity of a similar mixture was injected into two guinea-pigs, and both died in under twenty-four hours, and a pure growth of the bacillus was obtained from the peritoneal cavity and from the blood of the heart. The first of these cases was used for obtaining a virulent bacillus; 4 c.cm. of a four-days old culture of the splenic pulp in broth were injected into the peritoneal cavity of a guinea-pig; death occurred in under twenty-four hours. There was slight effusion into the peritoneal cavity, from which a pure culture of the bacillus was obtained; $\frac{1}{2}$ c.cm. of this effusion was injected into the peritoneal cavity of another guinea-pig. Death occurred in under twenty-four hours, and in the subsequent procedure the effusion from the peritoneal cavity of one guinea-pig was injected into the peritoneum of another, death occurring in the twenty-four hours. At the eleventh successive inoculation, $\frac{1}{10}$ c.cm. of the peritoneal effusion killed the guinea-pig in two days. At the thirteenth inoculation $\frac{1}{10}$ c.cm. diluted in salt solution killed in less than twenty-four hours, and at the sixteenth inoculation half a platinum loopful of a twenty-four-hour-old agar culture injected into the peritoneal cavity killed a guinea-pig in under twenty-four hours.

During the course of these inoculations it was observed that there was almost constantly an exudation of turbid fluid of greater or less amount into the peritoneal cavity. There was occasionally a little lymph on the surface of the intestines, and sometimes there were ecchymoses in the spleen. The peritoneal exudation was highly albuminous, coagulating solid on heating. On microscopical examination it showed large numbers of short rods, more or less actively motile. In the first inoculations some leucocytes were present in the exudation, showing phagocytosis. Later on, however, as the bacillus became more virulent, the cells and phagocytosis were not observed, and the exudation consisted simply of a highly albuminous fluid containing enormous quantities of typhoid bacilli, sometimes in clumps, usually singly. As the virulence of the bacillus increased so did the time of death diminish, and at the twenty-eighth inoculation 2 c.cm. of the peritoneal exudation were injected into the peritoneal cavity of a rabbit, causing death in five hours and a half, a result which cannot be attributed solely to bacterial action, but must be ascribed to the chemical poisons present in the peritoneal fluid. This was very evident in the experiment on a rabbit weighing 590 g., which received 0·25 c.cm. of the peritoneal fluid into left marginal vein. Symptoms of collapse soon supervened, and death occurred in two hours and a half. The peritoneal exudation produced by the introduction of virulent typhoid bacilli is therefore highly poisonous, and these properties were investigated.

In all these cases the typhoid bacillus was obtained in pure culture in the peritoneal cavity, whether there was much or little effusion, and it retained throughout its typical cultural characteristics. There was no case in which there was a mixed infection with any other micro-organism, so that the effects were those of the bacillus itself. An examination was made of the distribution of the bacillus in the various organs of the body. In the earlier inoculations during the increase of virulence it was found that although the animal died the bacillus was limited to the peritoneal cavity, and was not present in the spleen or the heart's blood, showing that death was produced by absorption of the poisons formed by the bacillus in the peritoneal cavity, which acted as a sort of living test tube. In the later experiments, however, the bacillus did not remain in the peritoneal cavity, although its distribution throughout the body was not constant. Thus, in one experiment (peritoneal injection), at death it was found that the heart's blood, spleen, and liver all gave a pure culture of the typhoid bacillus, as well as the fluid in the peritoneal cavity. This was confirmed by the next experiment, but in the one following a pure growth was obtained from the peritoneal effusion and from the spleen, and not from the liver or the heart's blood. There is a tendency, therefore, more with the weak virus than with the strong, for the typhoid bacillus to limit itself in its growth to the seat of inoculation, although a general distribution of the bacillus throughout the body usually occurs with the virulent form. This limitation of the bacillus to the site of injection is well marked when it is subcutaneously in-

[1] *Ann. de l'Institut Pasteur*, vol. vi, p. 725, 1892.

jected. Thus in a guinea-pig which received subcutaneously a quarter of a cubic centimetre of virulent peritoneal fluid there was a swelling at the site of inoculation, which ended in a slowly forming abscess pointing in 11 days; a pure culture of the bacillus was obtained from it. The animal was killed on the twelfth day and a pure culture of the bacillus was obtained from the abscess, but the heart's blood, the spleen, the liver and peritoneum were sterile; the heart muscle was not degenerated. Chantemesse and Widal and others have, however, found that infection of the body can occur after subcutaneous injection of the bacillus, and this occurs readily if the process of infection be aided in the manner previously described.

It is interesting to note in this series of experiments the absence of leucocytes in the peritoneal exudation as the bacillus became more virulent; and the formation of an abscess and the limitation of the growth of the bacillus when the virulent virus was injected under the skin.

Toxic Action of the Peritoneal Fluid.

It has been stated that the cause of death when the virulent peritoneal fluid is injected into a rabbit or a guinea-pig was due more to the action of a chemical poison than to the growth of the bacillus, since this occurred so rapidly; in one case in five and a-half hours, and following intravenous injection in two and a-half hours.

The effects of this chemical poison were examined by filtering the peritoneal fluid through porcelain, in a small apparatus improvised for the purpose. In the first experiment ½ c.cm. of this filtered sterile peritoneal fluid was injected into the marginal vein of a young rabbit. A moderate degree of fever followed the injection for several hours. Subsequently the temperature fell to the normal, and no symptoms were observed in the animal, which died at the end of thirty days. The heart's blood was sterile, and the heart muscle showed well-marked degeneration of the fibres—there being loss of striation with longitudinal fibrillation, and the presence of numerous small granules staining black with osmic acid. Other experiments were done in a similar manner, using 1 c.cm., 1.5 c.cm., and 2 c.cm. of the filtered peritoneal fluid. In all cases some degree of fever followed the injection, but no effect was subsequently observed, and death did not occur. The filtered peritoneal fluid was therefore not nearly so poisonous as the unfiltered; evidently the porcelain filtrate had kept back the greater part of the chemical poison, whether this was present in the albuminous fluid or in the bodies of the bacilli.

Examination of the Poison in the Fresh State in the Spleen.

Before continuing this part of the subject, we must return to the consideration of the poisons present in the spleen of typhoid patients. In all the cases examined, as has been stated, the typhoid bacillus was present in large quantities, and in only one was there an admixture with another bacterium, the bacillus coli.

The splenic pulp was rubbed through sterile wire gauze and treated with about 500 c.cm. of sterile normal salt solution. This was allowed to stand a short time, and an attempt was made to filter it through porcelain. This was a matter of great difficulty, only a small amount of the liquid passing through. It was thin and deeply blood-stained. It was injected into the marginal vein of a rabbit on two consecutive days—4 c.cm. on the first day and 3.5 c.cm. on the second day. No appreciable effect on either the temperature or the body weight followed the injection on either day or on the subsequent two days; but on the fifth day of the experiment the temperature was found to have fallen to 97.6°, and the animal was collapsed and had profuse and mucoid diarrhœa. The temperature remained subnormal the whole of that day, and at 10 o'clock on the sixth day it was 95.4°, and the animal was lying motionless on its side, but breathing regularly. It was killed with chloroform. At the *post-mortem* examination there was subcutaneous hæmorrhage over the lower third of the abdomen, extending down over the upper third of the front of the thighs. In the abdomen there was a soft blood clot, matting together the omentum and the adjacent coils of the intestine. There was no peritonitis. The thoracic organs were normal, the intestines were empty, except the upper part of the colon and cæcum, which contained soft fæces. There was no enlargement or redness of the Peyer's patches or of any other part of the mucous membrane. From the peritoneal cavity was obtained a growth of the bacillus coli, but the spleen contained no micro-organisms.

What is interesting in this experiment is that, following the injection of the poison, there was a period of incubation, during which no effect on the body temperature or the weight was to be observed, and that a fall of temperature, associated with great bodily prostration and mucoid diarrhœa, supervened somewhat rapidly. This fall of temperature and the collapse and diarrhœa observed are, as will be seen, to be ascribed to the action of the chemical poison of the typhoid bacillus.

A more extensive chemical examination of the spleen was made by means of the precipitation of the extract with alcohol in order to obtain any albumoses that might be present, as well as to separate the alcoholic extract. The method has already been described. The amount of albumoses obtained from each of three spleens was 0.652 g., 0.37 g., and 0.369 g. When dried they formed a fine whitish yellow and very light powder, soluble in water, and giving a brownish solution, which gave a distinct biuret reaction. The alcoholic extract was yellowish in colour, and was separated from the fatty bodies by precipitation with a large excess of ether. It contained a very large quantity of leucin and tyrosin, which separated out in the form of crystals on evaporation. The final alcoholic extract was a yellowish, sticky, resinous-like substance when dried over sulphuric acid.

The injection of the alcoholic extract into the vein of a rabbit did not seem to produce any effect on the temperature, and no appreciable effect on the body weight. In one case 0.112 g. was injected, and the animal appeared as well after the injection as before; it did not die. There was no diarrhœa, nor were there any symptoms to be noted. The injection of the albumoses also had but slight effect on the animal. In one case 0.2785 g. was injected in three doses into a rabbit weighing 790 g.; a dose of 0.352 g. per kilo. of body weight. After the first injection of about 0.4 g. there was no effect on the temperature. After the second injection of about 0.12 g. there was a rise of temperature, the highest being 105° during the day. After the third injection on the following day of the same amount there was only a slight rise of temperature, but on the succeeding days it was again normal. No symptoms were produced in the animal by these injections except a slight rise of temperature. This effect, therefore, is a very different one from that observed after the injection of the saline extract in a fresh spleen. It may have been, of course, that the poison was destroyed by the alcohol during the course of preparation. This, however, is unlikely, inasmuch as the manipulation was very rapid, the products being separated within three days, and the action of the alcohol on the albumoses being less than 18 hours.

THE ACTION OF CERTAIN DRUGS AND MINERAL WATERS ON THE SECRETION AND COMPOSITION OF HUMAN BILE: AN EXPERIMENTAL INVESTIGATION.

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[Abstract.]

The investigation of cholagogues is one of the most difficult in the whole domain of pharmacology. The importance of the subject is shown by the number of laborious researches undertaken to determine the action of drugs which are supposed to influence the secretion of bile, and its complexity by the contradictory results obtained. As nearly all recent experimental evidence casts doubt on the existence of so-called cholagogues, it occurred to me that the time would be well spent if I could contribute, even in a minor degree, towards a solution of this very difficult problem. While arrangements were being completed for carrying out a series of investigations on dogs by means of Schiff's amphibolic

biliary fistula in the physiological laboratory of St. Thomas's Hospital, I was informed that a patient with a permanent cutaneous biliary fistula had just left the institution. An interview was immediately arranged with this man, who readily consented to place himself at my disposal for experimental purposes.

In mentioning the history of the patient I wish to acknowledge Dr. Payne's kindness in permitting a reference to the notes of the case.

HISTORY OF THE CASE.

The patient, a man, aged 49, was admitted into St. Thomas's Hospital, under the care of Dr. Payne, on July 19th, 1897, and was operated upon by Mr. Anderson on July 20th. At the operation the gall bladder was found tensely distended, and contained clear fluid. The cause of the obstruction in the common bile duct was not ascertained, though a careful search was made. The opinion expressed at the time was that it was probably due to a small impacted gall stone. As the patient ten months later was in a satisfactory state of health this view is probably correct. He was discharged from the hospital on October 20th. During his stay there his stools were always clay-coloured. His weight on admission was 9 st., on his discharge 8 st. 9 lbs.

When he came under my notice on November 7th his health was moderately good. He was anæmic, and troubled more or less with flatulence, but no organic disease could be detected. His appetite was good, and he took a moderate amount of exercise. He lodged close to the hospital, and brought the bile and urine each day to the laboratory. His height was 5 feet 1 inch, and his weight on November 11th, without clothes, 58 kilogrammes (9 st. 2 lbs.). He only varied 2 lbs. while under my observation, and during the latter part of the period he "felt much better and stronger." His bowels were moved naturally once a day after leaving the hospital, but this action was subsequently modified by the drugs taken.

I asked him to take the same amount of food, liquid, and exercise each day, and impressed upon him the necessity for abiding by these rules, as otherwise my results would be vitiated. In addition he took 36 gr. of purified ox bile daily (12 gr. at 10 A.M., and at 2 and 6 P.M.), thus approximating the experimental conditions to the normal standard.

METHOD OF COLLECTING THE BILE.

Arbuthnot Lane's biliary tube was employed, which answered the purpose admirably. By means of sticking plaster, the shield was kept in absolute contact with the skin, so that not a drop of bile was lost. The inner was fastened to the outer tube with a small safety pin to prevent traction. The outer end of the collecting tube was firmly attached to an india-rubber urinal fitted with a stopcock. This allowed the patient to collect the bile at stated times without in any way disturbing the connections. The tube was changed about once a week. During the seventy days the case was under observation, only on two occasions was there any oozing, due to an insufficiency of plaster.

The bile was collected four times a day—at 8 A.M., at 12 noon, at 4 P.M., and at 8 P.M.—and put into different-sized bottles, properly labelled. The specific gravity of each sample was taken at the laboratory temperature, and the same hydrometer was used throughout. Then the four specimens were put into one bottle, shaken, and a portion reserved for analysis.

METHOD OF ANALYSIS.

Bile Solids.—The weight of the capsule was first ascertained, 25 c.cm. of bile measured (the same pipette was always used for this and for estimating the bile salts) and weighed, then evaporated to dryness over a water bath at a temperature of 100° C. The capsule was next placed in a hot-air chamber kept at a temperature of 110° C. by means of a gas-regulating apparatus for at least three hours. After that it was placed in an exsiccator until its weight was constant.

Bile Salts.—To 25 c.cm. of bile about 120 c.cm. of methylated spirit was added, and the whole filtered. The filtrate and washings were evaporated to dryness over a water bath, and extracted with absolute alcohol. The extract was then evaporated to a small volume, and two-thirds of its volume of anhydrous ether added. This was allowed to stand in a cool place for three days, and the precipitate of bile salts was then collected on a weighed filter. The filtrate was again evaporated to dryness, extracted and precipitated as before, and any further precipitate collected on the same filter. The filter was finally dried at 105° C. to constant weight.

I take this opportunity of expressing my gratitude to Dr. Brodie for his advice and for many acts of kindness. I also have to thank Dr. Sikes, Demonstrator of Physiology, for analysing the bile and urine on two occasions during my absence.

CASES RECORDED PREVIOUSLY.

For the purpose of comparing results I will briefly mention the salient facts in the published cases of human biliary fistula.

Monro[1] mentions a case of abscess of the liver where the bile was discharged by coughing, mixed with mucus and saliva. The quantity varied from 10 to 15 ounces in the twenty-four hours. It was irregular in flow, and greater in quantity after dinner.

Charles Robin[2] mentions a case of Taconi's where a patient had a biliary fistula. The bile amounted to 500 g. in the twenty-four hours.

Harley[3] describes a case of hydatids of the liver where the bile was discharged through a fistulous opening, the quantity varying from 16 to 20 ounces.

Murchison[4] records a case of biliary fistula where the bile flowed at the rate of 1 to 2 ounces per hour, usually increasing after meals.

Frerichs[5] quotes a case of Rouis where 900 g. of bile a day was expectorated.

Ranke[6] records a case of hydatid disease of the liver where a communication existed between the bile passages and a bronchus. Sometimes the bile was expectorated, while at others it passed into the duodenum. He gives the results of five observations of twenty-four hours' duration when the fæces gave no indication of biliary constituents. The patient had chronic bronchitis, and allowance had to be made for the secretion from the respiratory passages. The average of these observations gives 636 c.cm. of bile with 20.6 g. solid.

Noel[7] mentions a case of biliary fistula. On one occasion 900 g. of bile were secreted in the twenty-four hours, with a specific gravity of 1009.7.

Von Wittich[8] has published a case where a biliary fistula formed spontaneously on account of an impacted gallstone. He collected the bile for four hours during the day and for ten hours during the night, and from these data he calculated the amount in the twenty-four hours.

Westphalen[9] describes a case of liver abscess where the bile found its way into the right pleura, and subsequently after [illegible] the thoracic wall. Taking the average of seventeen [illegible] to 498 g. with 11.266 g. solid. The bile was analysed by Jacobsen. Westphalen tried the effects of water, calomel, and quinine on the biliary secretion. He found that large quantities of water did not increase the secretion nor alter the composition of bile. Calomel and quinine had no effect.

Yeo and Herroun[10] made a number of observations on a case of fistula due to cancer of the common duct. The patient was very ill at the time, and took little nourishment. The average quantity of bile secreted during the twenty-four hours only amounted to 374 c.cm. with 5.044 g. solids. No difference in the rate of secretion was noticed after the small meals taken by the patient.

Hammersten[11] records seven cases of biliary fistula, but in all of them a part of the bile found its way into the intestine. The percentage of solids in his cases varied from 1.63 to 3.53 per cent.

Edington[12] published a case of biliary fistula, but the obstruction was incomplete, so that some of the bile escaped into the duodenum.

The next four cases are important, as the patients, apart from the fistula, were in good health at the time of observation, and the obstruction was complete.

Copeman and Winston[13] record a case of biliary fistula in which the average amount of bile secreted in the twenty-four hours was 770 c.cm., with 11.094 g. solids. They endeavoured to determine the variations in the flow of bile in relation to time and meals.

Mayo Robson[14] reports some interesting observations which he made on a case of biliary fistula. The quantity of bile collected on various dates during the time the patient was in hospital averaged 850 c.cm. Mr. Fairley analysed the bile on two occasions: the mean gives 15.28 g. solids. Mr. Robson investigated the action of the following drugs: Calomel, rhubarb, podophyllin, carbonate of soda, iridin, euonymin, turpentine, and benzoate of soda. Unfortunately, Mr. Robson did not analyse the bile while these experiments were being carried out; he only gives the total quantities collected. He found that iridin increased the flow temporarily, while aërated soda water had the same effect without a subsequent fall. The other drugs had no effect.

Noel Paton and Balfour[15] describe a case of biliary fistula where they made a number of careful observations. They experimented with salicylate of soda, calomel, and ox bile, but at the time the patient was suffering from a moderately high temperature, so that little importance can be attached to their results. They found that salicylate of soda increased both the quantity and the solids, and that although ox bile and calomel influenced the secretion they were less active than the soda salt. A year later, when the patient's health was re-established, Paton[16] had the opportunity of analysing her bile on two successive days. The mean of these observations gave 590 c.cm. of bile with 13.6 g. solids.

The last recorded case is by Pfaff and Balch.[17] Their observations extended over ninety-seven days, and were of a painstaking character. The average of three days without drugs gives 514 c.cm. with 8.57 g. solids. They tried on their patient calomel, corrosive sublimate, salol, ox bile, human bile, and bile salts. Calomel and corrosive sublimate had no effect; if anything, the quantity was diminished, whereas the percentage of solids did not vary from normal. Salol had some influence, but not pronounced enough to justify them in asserting that it was a cholagogue. Human bile, ox bile, and bile salts increased both the quantity and the solids.

THE AMOUNT OF SECRETION IN TWENTY-FOUR HOURS.

In taking the average of the daily amount of bile I excluded those days during which drugs were used, and also the day subsequent to the administration of any drug. Thus the average of sixteen days gave 775 c.cm. of bile: the average of nine days 15.893 g. solids, and the average of six days 4.197 g. bile salts. To save repetition I may state that when the term "without medication" is used it refers to these sixteen days. The specific gravity varied during the period without medication from 1007.9 to 1012. A glance at Table I will reveal the fact that the quantity of bile in my case is very similar to that of Copeman's and Winston's, but in mine the total solids are much higher. This I attribute to my patient taking ox bile daily, and also a fair amount of exercise in the open air, while theirs was confined to the wards of a hospital.

TABLE I *(modified from Gamgee[19]) exhibiting the Results of Different Observers on the Secretion of Bile and Bile Solids (during the Twenty-four Hours) in the Human Subject.*

	Ranke.	Von Wittich.	Westphalen.	Yeo and Herroun.	Copeman and Winston.	Mayo Robson.	Paton and Balfour.	Pfaff and Balch.	Bain.
Sex... ...	M.	F.	M.	M.	F.	F.	F.	F.	M.
Weight in kilogrammes	47	—	—	—	43·7	53	73	51	58
Bile secreted in cubic centimetres ...	636	532	498	374	779	849	590	514	775
Bile solids in grammes	20 6	—	11.27	5·04	11.00	15.28	13 59	8 57	15.89
Bile secreted per kilo of body... ...	13.5 c.cm	—	—	—	17.8 c.cm.	16.0 c.cm.	8.08 c.cm.	10.27 c.cm.	13.36 c.cm.
Bile solids secreted per kilo of body	0 44 g.	—	—	—	0.25 g.	0.28 g.	0.18 g.	0.16 g.	0.27 g.

During the period without medication the smallest quantity of bile was secreted on January 20th—670 c.cm., the largest amount on November 11th—864 c.cm.; similarly, the smallest quantity of solids was secreted on January 24th—15.139 g., whilst the largest was on January 11th—16.640 g.

VARIATIONS IN THE RATE OF SECRETION.

There is abundant proof that the rate of secretion is very irregular, but the conditions which operate to produce this irregularity in flow are, to a certain extent, conjectural. The two most potent factors are probably diet and exercise. It is generally admitted that during digestion the secretion of bile is active, but there is a lack of experimental evidence regarding the kind of diet which most influences the secretion. It appears probable that exercise augments the biliary secretion, but if the exercise produces much perspiration this effect will be annulled. The evidence I have to adduce in support of this statement is exceedingly meagre. On two occasions when the patient was not having drugs circumstances arose which compelled him to take more than his usual exercise. In these two instances the quantity of bile was increased. An average of the days without medication gives the following quantities: From 8 to 12 P.M., 147.7 c.cm.; 12 to 4 P.M., 165.1 c.cm.; 4 to 8 P.M., 148 c.cm.; 8 to 8 A.M., 312.6 c.cm. It will be observed that there is a rise from 12 to 4, which coincides with the principal meal of the day, and the quantity secreted during the day—471 c.cm.—is much larger than that during the night—312 c.cm.

The colour of the bile was always of an olive green, the only variation observed being in depth of tint. The bile was invariably alkaline in reaction.

Dr. Samuel Fenwick[19] has made numerous observations upon the amount of sulphocyanate of potash in the saliva in both health and disease. He noticed a marked decrease in the amount when the activity of the nutritional functions was diminished, and in serious febrile affections he regards an increase as an element of favourable prognostic significance. He expresses his belief that the sulphocyanate salt is derived from the biliary salts after they enter the duodenum, and he bases this opinion on the statement that when the bile is prevented from reaching the alimentary canal, as he says happens in one form of dyspepsia characterised by eructations of sulphuretted hydrogen gas, he found the sulphocyanate salt invariably absent from the saliva. If Dr. Fenwick's hypothesis be correct the salt must be absent from the saliva when the common bile duct is occluded. In order to test this point the patient was asked to discontinue the ox bile pills during the Christmas holidays. His saliva was then examined on several occasions, and the sulphocyanate salt was always present, although the quantity was diminished. His saliva was also examined while he was taking ox bile, but no difference in the reaction could be detected.

THE INFLUENCE OF DRUGS ON THE SECRETION OF BILE.

Before describing my results it would be advantageous to refer very briefly to the experiments performed on dogs in relation to this subject.

Nasse[20] was the first to investigate cholagogues. He gave 1 g. of calomel to a dog with a permanent biliary fistula, and came to the conclusion that calomel increased the quantity of bile but diminished the bile solids.

Kolliker and Muller[21] tried calomel and aloes without effect.

Mosler[22] and Scott[23] found that calomel did not increase the amount of bile, indeed the latter said it produced a diminution in the quantity and in the solids. These four experimented on dogs with permanent biliary fistulæ.

The Committee of which Hughes Bennett[24] was chairman, decided that mercuric chloride, calomel, and pil. hydrargyri, did not increase the flow of bile.

Röhrig[25] experimented on curarised dogs and rabbits. He counted the drops of bile flowing from the cannula inserted into the open gall bladder, a method open to criticism. Moreover, he gave such large doses (30 drops of croton oil) that his results must be of little value.

Rutherford's[26] elaborate researches are so well known that a summary is unnecessary. Rutherford asserts that whatever increases the quantity of bile similarly affects the solids, and for that reason he did not consider it necessary to estimate the solids in the greater number of his experiments. I maintain that there are drugs which increase the solids without materially affecting the quantity of the bile, therefore it is incumbent upon the investigator to estimate the solids in all his experiments. Further, I consider the total solids are a more important guide to the influence of a drug on the liver than the quantity of bile secreted. Rutherford attaches great importance to the relationship existing between the quantity of bile secreted and the body weight of the animal. He bases nearly all his conclusions upon this supposed relationship—a relationship, however, which is disproved by referring to Table I. Apart from these criticisms, my results, as far as they go, confirm in the main Rutherford's experiments.

Rosenberg[27] used dogs with permanent biliary fistulæ. He found salicylate of soda, olive oil, and fats to be cholagogues, the last two being the most powerful. Durand's mixture and Carlsbad salts gave negative results.

Battistini[28] found santonin to be the best cholagogue, and in this is corroborated by Marfori.[29]

Prevost and Binet[30] declared that bile itself was the most powerful cholagogue, but turpentine, chlorate of potash, benzoate and salicylate of soda, salol, euonymin, and muscarin were effective. Amongst doubtful substances they placed Carlsbad salts.

Baldi[31] tried podophyllin, rhubarb, jalap, sodium phosphate, pilocarpin, and Carlsbad water without effect, but ox bile increased the amount and the solids.

Kunkel[32] tried large quantities of water, but the quantity of bile was not increased, nor were the solids affected.

Lewaschew[33] found salicylate of soda effectual.

Paschkis[34] and Niessen[35] obtained negative results with all cholagogues except bile. Since 1890 Stadelmann and his pupils—Niessen, Mandelstamm,[36] Müller,[37] Loewenton,[38] and Glass[39] have conducted a series of careful investigations of cholagogues. Stadelmann,[40] summarising the results of these investigations, shows that bile, and possibly salicylate of soda, alone act as cholagogues. He strongly condemns the practice of drawing comparative conclusions regarding the secretion of bile from experiments extending over short periods of time.

Gamgee,[41] commenting on the diversity of these results, suspends his judgment until a fresh research is undertaken on dogs by means of Schiff's amphibolic biliary fistulæ. While I agree with him regarding the value of evidence derived from experiments carried out by Schiff's method, it is my belief that fairly reliable results can be obtained in cases of human biliary fistula by the administration of ox bile during the entire investigation. Further, although dogs are more easily controlled than human beings as regards food, liquid, and exercise, it is a much more difficult matter in their case to collect the bile without loss.

In Table II I have drawn up a series of averages which will help to elucidate my conclusions. Some of the estimations of the bile salts unfortunately miscarried, so that on several occasions the average of bile salts is for a less number of days than those on which a particular drug was given. This also applies in a few instances to the bile solids.

TABLE II.—*Showing the average amount of Bile, Bile Solids, and Bile Salts on the days during which certain drugs or mineral waters were given.*

Drugs Administered.	Quantity of Bile in c.cm.	Bile Solids.		Bile Salts.	
		Total in Grammes.	Per cent.	Total in Grammes.	Per cent.
Without medication	775	15.893	2.07	4.197	0.55
Old Sulphur Spring	878	18.584	2.14	5.870	0.69
Kissingen Spa	845	16.330	1 97	4.734	0.55
Carlsbad mineral water ...	809	18.352	2.24	5 560	0.68
Euonymin	836	17.300	2 03	5.031	0.60
Benzoate of soda	856	18 514	2.16	—	—
Salicylate of soda...	797	17.215	2.14	5.462	0.68
Podophylloresin	744	18.714	2 48	5 774	0.7
Iridin	788	17.764	2 35	5.088	0.68
Chloride of iron spa	808	17.314	2 10	5.241	0.64
Strong Montpellier Sprin ...	747	15.318	2.00	3.853	0.50
Podophyllotoxin	758	14.311	1.88	4.044	0.56
Pint of hot water	785	16 519	2.09	4.207	0 53
Pint of soda water	783	16 612	2.10	—	—

INFLUENCE OF MINERAL WATERS.

The influence of the Harrogate mineral waters on the secretion of bile has never been tested experimentally, and as I am interested in this particular branch of therapeutics I began the investigation with them. It should be stated that the waters were sent up to London in bottles and kept in the laboratory some time before being used.

The Old Sulphur Spring.—The strong sulphur water generally acts as a mild laxative. If the bowels are moved naturally once a day the only difference it causes as a rule is that the evacuations are more copious, and this was the effect upon my patient. An average of four days gave 878 c.cm. of bile, with 18.5 g. solid. There is no doubt that this water has a very decided effect on the secretion and composition of bile, and I shall show in another paper that this effect is due to stimulation of the hepatic cells. As this water contains sulphuretted hydrogen gas it is possible the effect would have been greater had it been taken at its source.

No other drug or mineral water with which I experimented produced such a striking increase in both the quantity of bile and bile solids as the Old Sulphur Spring.

Strong Montpellier Spring.—The average of five days shows a diminution in the quantity of bile, in the solids, and bile salts, therefore this water is not a cholagogue. Hunter, in Allbutt's *System of Medicine*, asserts that the beneficial effects of most of the natural mineral waters are due to a flushing out of the biliary system. In the face of this and other experiments it is difficult to see how his hypothesis can be maintained.

Kissingen Spa.—The average of four days shows a distinct increase in the quantity of bile and a slight increase in the solids. The patient had a sharp attack of flatulent dyspepsia one night when he was taking this water, which necessitated the administration of two small doses of brandy. If this day's secretion be omitted, the average rises to 875 c.cm. of bile, with 16.6 g. solids; therefore, the action of the Kissingen water is to increase considerably the quantity of bile without materially augmenting the total solids.

Chloride of Iron Spa.—This water is prescribed for cases of anæmia. It was given to test the alleged effect of iron in reducing the quantity of bile. It should be stated, however, that in addition to iron it contains a large quantity of chloride of sodium, and appreciable quantities of the chlorides of calcium, magnesium, barium, and potash. The dose given was much larger than usual, but it did not disagree. The average of 808 c.cm. is somewhat misleading. The day before commencing the water the quantity of bile was 820 c.cm., and the day after it was stopped the quantity rose to 864 c.cm., and the solids to 19.457 g. It was my intention to have repeated this experiment, but time did not permit. The marked rise both in the quantity and the solids on the day after the last administration is a feature of interest.

In regard to the Harrogate waters, it is a point of clinical interest that the relative empirical reputations of the Old Sulphur and the Strong Montpellier Springs are experimentally sustained.

Carlsbad Mineral Water.—The patient took 10 oz. before breakfast and 10 oz. at bedtime. The second dose purged him seven times. The next day he had 6 oz. before breakfast and 4 oz. at bedtime. The average of the two days gave 809 c.cm. of bile and 18.3 g. solids. The quantity would be higher were it not for the depletion produced by the purging. Notwithstanding the negative results obtained by other investigators, I have no hesitation in saying that the high esteem in which this mineral water is held as a cholagogue is undoubtedly deserved.

Water before Breakfast.—A pint of hot water before breakfast. This was given on one occasion. The result was 785 c.cm. of bile, with 16 5 g. solids. A pint of soda water before breakfast. This was also taken on one occasion. The result was 783 c.cm. of bile, with 16.6 g. solids. In both instances the quantity of bile was scarcely affected, but there was a very slight increase in the solids.

Euonymin.—The average of five days gave 836 c.cm. of bile, with 17.3 g. solids, but this does not convey an accurate idea of its effect in relation to the quantity. The patient took 12 gr. on the first day, which purged him six times, with a consequent diminution in the quantity of bile, which spoilt the average. It is interesting to note that the solids were the highest on this day. On the last two days the drug was taken the quantity was 940 c.cm. and 904 c.cm. respectively, a very considerable increase; therefore euonymin unquestionably increases the quantity of bile, and, to a less extent, the bile solids.

Iridin.—The average of four days gave 788 c.cm. of bile, and the average of two days, 17.7 g. solids. From a consideration of these figures one can safely say that iridin does affect the complex chemical processes which take place in the liver without increasing the quantity of the bile.

Benzoate of Soda.—This drug was exhibited on one occasion, and in one dose of 20 gr. The result was 856 c.cm. of bile, with 18.5 g. solids. It is undesirable to express an opinion regarding the efficacy of a drug from merely one observation, but I should like to point out that the considerable rise in the total solids can scarcely be regarded as a coincidence, because during the days without medication the solids never exceeded 17 g.

Sodium Salicylate.—An average of two days gave 797 c.cm. of bile, with 17.2 g. solids, and the day after the discontinuance of the drug the solids rose to 18.3 g.; therefore there can be no doubt that it does influence the metabolism of the liver. During its administration the patient suffered a part of one day from indigestion, which might possibly have inhibited the biliary secretion. With one exception (Niessen) all investigators are agreed that this substance increases the secretion of bile.

Podophylloresin.—This is a resinous substance extracted from podophyllum emodi by Professor Dunstan,[12] for a sample of which I am indebted to Dr. Dixon. It was given in non-purgative doses. The average of two days gave 744 c.cm. of bile, with 18.7 g. solids. This is rather misleading as regards quantity. The day before the drug was given the quantity was only 670 c.cm., the first day of administration 710 c.cm., the second day 779 c.cm., and the day after its discontinuance the quantity rose to 817 c.cm., with 17 g. solids. The increase in the solids is the highest of all substances tested, therefore I think this drug has a decidedly stimulating effect on the liver.

Podophyllotoxin.—This is another extract of podophyllum emodi, also extracted by Professor Dunstan.[12] It was given on one occasion, and although the doses were supposed to be non-purgative it acted twice on the bowels. The result was 758 c.cm. bile, with 14 3 g. solids, and the day after the solids fell to 13 9 g., the lowest during the investigation, consequently this substance seems to have an adverse influence on the biliary secretion.

ANALYSIS OF THE URINE.

It was not deemed desirable to ask the patient to bring his urine until he became familiar with collecting his bile. The object in analysing the urine was to obtain an approximate idea of the amount of nitrogen excreted, and thereby an indication of the quantity of nitrogenous food assimilated. This end

could be more accurately attained by adopting some modification of Kjeldahl's process, but I wished to ascertain the action of the drugs used on the excretion of urea and uric acid. Unfortunately the urine was frequently either neutral or faintly acid, so that conclusions drawn from the results obtained would probably be fallacious. Various expedients were tried to prevent its decomposition, but without much success. The quantity of urine was above the average—about 2,000 c.cm., and the specific gravity rarely exceeded 1010. The colour, considering the quantity, appeared to be normal. Although it was examined repeatedly for albumen no trace was detected.

For the estimation of urea Hufner's hypobromite method was employed. For estimating uric acid Hopkins's long process was used until January 7th, when I tried Otto Folin's modification of Hopkin's short method. This consists essentially in substituting 10 g. of ammonium sulphate for saturation with ammonium chloride in 100 c.cm. of urine, and subsequently washing the precipitate with a 10 per cent. solution of ammonium sulphate instead of a saturated solution of ammonium chloride. Folin's method is expeditious, but I do not think it is reliable when the urine is concentrated, and it was found with the dilute urine of my patient that two hours were insufficient for complete precipitation. The uric acid was observed to be increased while the patient was taking salicylate of soda, and, to a slight extent, during the administration of euonymin. Noel Paton found that euonymin increased while salicylate and benzoate of soda markedly diminished the excretion of uric acid. Hopkins, in Schäfer's *Physiology*, states that the salicylates undoubtedly increase the quantity of uric acid in the urine.

For estimating creatine Johnson's method was adopted, but a very small amount of the mercurial compound always adhered to the flask, hence a margin of error is introduced into the result.

For the estimation of ammonia Schloesing's method was adopted, but it is unsatisfactory for clinical purposes because of the length of time required. As the urea kept persistently below the normal in this case, it was considered probable that the ammonia would be increased in consequence of the diminished formation of urea. Neubauer found the quantity of ammonia to vary in health from 0.3 to 1.2 g. in the twenty-four hours, and this has been confirmed by later observers. In my patient it varied from 1.04 to 1.4 g., but it is doubtful whether this slight augmentation is due to the feeble reaction of the urine or to diminished functional activity of the liver.

Summary of Conclusions.

1. The amount of bile secreted in the twenty-four hours in a man somewhat below medium height and weight averages 775 c.cm. and the bile solids 15.8 g.
2. More bile is secreted during the day than at night.
3. The sulphocyanate of potash in the saliva is not derived from the biliary salts.
4. The following substances increase both the quantity of bile and bile solids—Old Sulphur Spring (Harrogate) Carlsbad mineral water, euonymin, benzoate of soda, salicylate of soda, and Kissingen Spa (Harrogate).
5. Podophylloresin and iridin augment the bile solids without appreciably affecting the quantity of bile.
6. Strong Montpellier Spring (Harrogate) and podophyllotoxin appear to diminish slightly both the quantity and the solids.
7. Hot water and soda water in pint doses do not seem to increase the biliary secretion.
8. Salicylate of soda increases the excretion of uric acid in the urine.

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THE EFFECT OF EXERCISE ON THE HÆMOGLOBIN WITH REFERENCE TO THE VALUE OF REST IN THE TREATMENT OF ANÆMIA.

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Harrogate.

The observations made by G. Oliver and the writer, and published by the former in the Croonian Lectures for 1896,[1] have shown the occurrence of a diurnal physiological variation in the blood of healthy subjects, a fall in the percentage of hæmoglobin, corpuscles, and of the "worth" of the corpuscle taking place during the day, and a rise during the night.

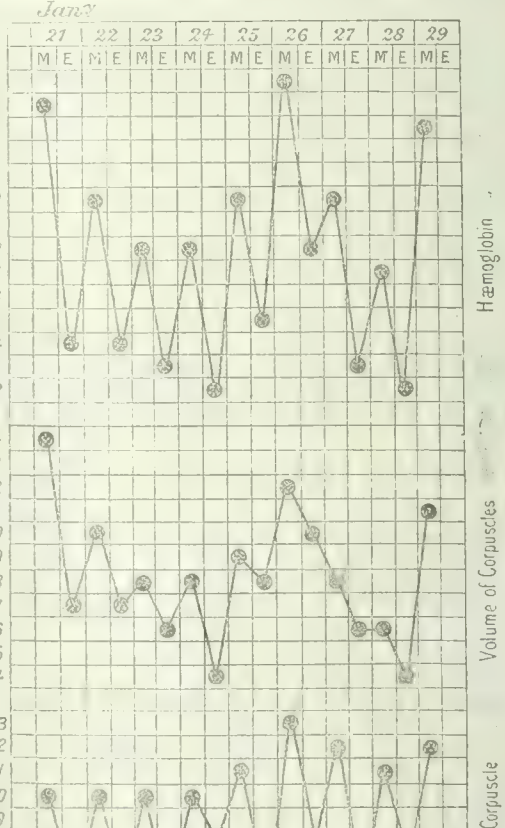


Chart I, taken from a continuous chart of observations on another subject is a typical example of the normal daily variations.

Examination of 650 observations on two subjects gave an average daily variation in hæmoglobin of 7.3 per cent. (7.4 per cent. day fall and 7.2 per cent. night rise); in the volume of the corpuscles of 4.3 per cent.; and, consequently, a variation in the "worth" of the corpuscle which averaged 5.9 per cent. (5 7 per cent. day fall and 6.1 per cent. night rise). The fall in "worth" is an indication of actual loss of hæmoglobin, in addition to the apparent loss resulting from dilution of the blood by fluids ingested during the day; a loss which is probably brought about by the wear and tear of the process of oxidation. It is interesting to note that the average night rise (6.1 per cent.) in the worth of the corpuscle is slightly in excess of the average day fall (5.7 per cent.), providing probably a slight reserve of hæmoglobin in the animal economy to meet variable calls made upon it, such as exercise, as will be seen below.

The amount of variation of the hæmoglobin almost always exceeds that of the corpuscles; hence a variation takes place in the "worth," the latter being a theoretical value obtained by dividing the percentage of hæmoglobin by the percentage volume of corpuscles.

It then became a matter of interest to determine whether the process was reversed in a subject who worked during the night and rested during the day. This was found to be the case.

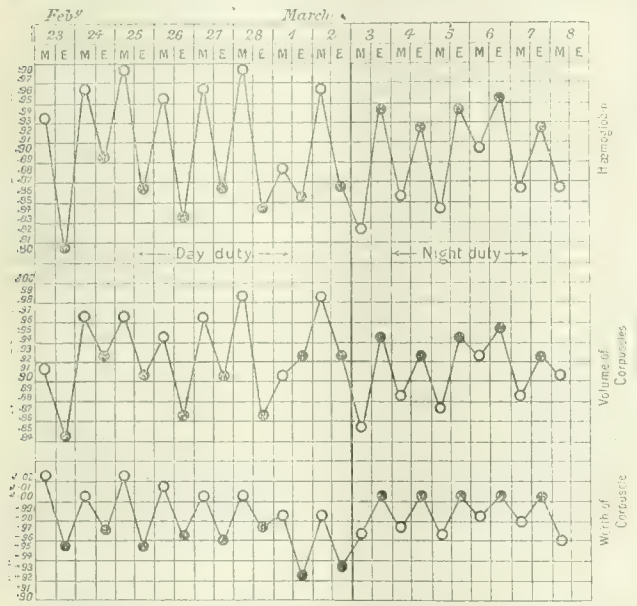


Chart II shows the result of observations made on the blood of a hospital nurse aged 22 for a fortnight, the first half of which she was on day duty, the second half on night duty. (The readings were taken immediately after rising and before retiring to rest.)

When on day duty the blood showed the usual variation of day fall and night rise; when on night duty a day rise and night fall. It is interesting to note that the average fall in the worth of the corpuscle while on day duty (4.8 per cent) is greater than that which occurred while on night duty (3.2 per cent.), the difference being probably accounted for by the fact that the amount of muscular work performed was distinctly less in the latter case than in the former. The effect of exercise given below tends to confirm this view.

ACTIVE EXERCISE.

The effect of exercise appears to be to cause a distinct fall in the "worth" of the corpuscle, or a loss of hæmoglobin.

To determine further the effect of exercise an examination of a continuous record of daily morning and evening observation of the blood of a healthy subject, extending over a period of three and a-half months, gave the following results. The average daily fall in the worth of the corpuscle on sixty-five days on which no exercise was taken amounted to 6.1 per cent., while the average fall on thirty-five days on which exercise was taken amounted to 9 1 per cent., showing an increased fall of 3 per cent. on exercise days over no exercise days. The exercise taken varied in kind and amount, but on each of the thirty-five days it was considerable. The primary effect, then, of exercise appears to be to increase the normal day fall.

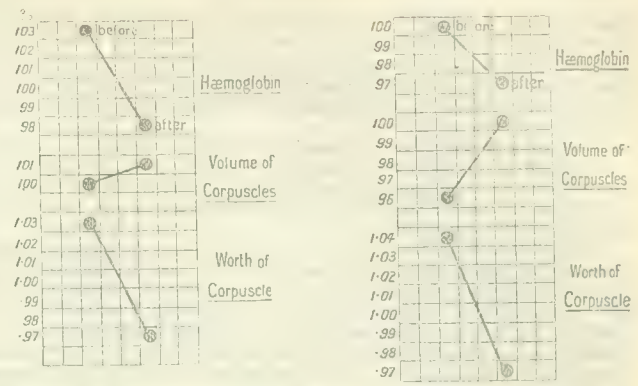


Chart III shows two examples of the result of exercise, the first (2 hrs. cycling and horse riding) without sensible perspiration, the second (2 hrs. hard tennis) with profuse perspiration.

In each case a fall in percentage of hæmoglobin took place, with a rise in percentage volume of corpuscles, and, consequently, a fall in the "worth" of the corpuscle. Where profuse perspiration occurred the rise in percentage of corpuscles is considerable, due partly to concentration of the blood by withdrawal of fluid; hence the fall in worth in this case, the exercise being more violent, is greater than in that where no sensible perspiration took place.

Similarly the average night rise in the worth of the corpuscle that succeeded the day fall on exercise days amounted to 9.3 per cent.; whereas the night rise succeeding the day fall on no-exercise days only amounted to 6.1 per cent., a gain of 3.2 per cent. rise after exercise. Thus the augmented day fall is followed by an augmented night rise. Comparing these two we find that the average increase in the night rise after exercise (3.2 per cent.) is in excess of the average increased fall that immediately follows exercise (3.0 per cent.), which tends to show that the latter has a secondary effect in stimulating the formation of hæmoglobin.

This position is corroborated by a further examination of the record. The morning observations (when the blood is at its highest point) of the days immediately following exercise were compared with the morning observations of the exercise days themselves; and similarly the morning readings of the days following no exercise were compared with those of the previous mornings, with the object of determining whether the worth of the corpuscle was higher on the morning after exercise than on the morning of the day of exercise itself; or lower on a morning after a no-exercise day than on the morning of the no-exercise day itself, with the following results:

Morning Readings following Exercise Days compared with Morning Readings of Exercise Days themselves. Thirty-five Observations.

Worth of corpuscle higher on the following morning than on previous:
10 times, or 28.5 per cent..... average increase, 2.8 per cent.
Worth of corpuscle lower on the following morning than on previous:
15 times, or 42.9 per cent. ..... average decrease, 1.8 per cent.
Worth of corpuscle equal on both occasions:
10 times, or 28.5 per cent.

Morning Readings following no-Exercise Days compared with Morning Reading of no-Exercise Days themselves. Sixty-five Observations.

Worth of corpuscle lower on following morning:
21 times, or 32.3 per cent ..... average decrease, 2.5 per cent.
Worth of corpuscle higher on following morning:
25 times, or 38.4 per cent..... average increase, 2.1 per cent.
Worth of corpuscle equal on both occasions:
19 times, or 28.7 per cent.

Average increase of 0.7 per cent. following exercise.
" decrease of 0.7 per cent. " no exercise.

This was in one way contrary to expectation, for the worth of the corpuscle read higher on the morning after exercise days than on the morning of the exercise days only ten times, whereas it read lower 15 times, being equal ten times in 35 observations. Also the worth of the corpuscle on the morning following no-exercise days read lower than on the previous morning less frequently (21 times) than it read higher (25 times), thus tending to show a greater formation of hæmoglobin as the result of no exercise than of exercise. But comparing the average amount of increase and decrease in the two cases, the reverse is seen to be the case. For the average increase after exercise days (when an increase took place) amounted to 2.8 per cent., while the average increase after no-exercise days amounted to only 2.1

per cent., a gain of 0.7 per cent. in favour of exercise. And further, the average decrease after exercise days (when a decrease took place) only amounted to 1.8 per cent., while the decrease after no-exercise days amounted to 2.5 per cent., a gain once more (in the shape of a lesser fall) in favour of exercise of 0.7 per cent.

These figures being so small, the actual amount of gain may appear trivial, but it must be borne in mind that the cumulative effect of even so small an increment must have a powerful influence in maintaining a high average level of the worth of the corpuscle.

Thus exercise appears to result in a temporary increased destruction of hæmoglobin, but to be followed by a more than corresponding increased formation; in the healthy subject its remote effect is to stimulate the production of hæmoglobin. Possibly this may be the cause of the reserve of hæmoglobin mentioned above as being stored up to provide against contingencies. That exercise causes a not inconsiderable temporary drain on the resources of the hæmoglobin the above figures abundantly demonstrate, and the advantage of a slight reserve becomes apparent.

If these conclusions be correct, it follows that during a period when little or no exercise is taken, the average level of the worth of the corpuscle must be below that of a period of the same length during which frequent exercise is taken. The record was examined on this point with the result that during the month of August, when the subject was taking frequent hard exercise, the average of the morning readings of the worth gave the figure 1.076; during September, when a moderate amount of exercise was taken, 1.052; while during October, when circumstances compelled the subject to lead an almost absolutely sedentary life, the average amounted to 1.03.

Passive Exercise.

That passive exercise in the form of massage causes a rise in the percentage of corpuscles has been noted by several observers, among them being Melassez,[2] Chéron,[3] and K. Mitchell.[4] The latter noticed an increase in the number of corpuscles, sometimes very considerable, after massage, the maximum being reached one hour after cessation of the process, but he failed to find a corresponding increase in hæmoglobin. The rise in corpuscles he attributes to the dislodgement of large numbers that are sluggishly lingering in the by-ways of the circulation, and not available for use until disturbed by the massage.

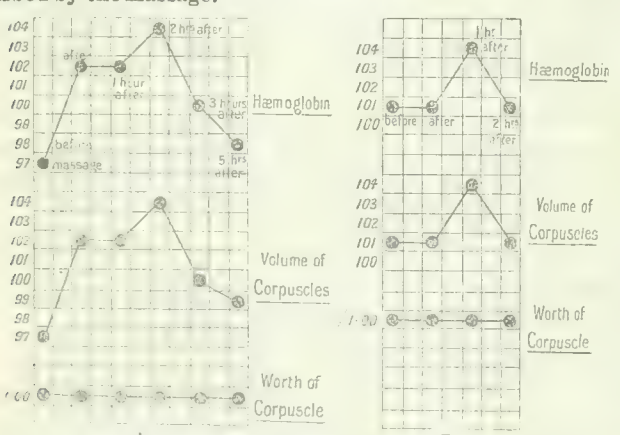


Chart IV.—Massage: A. Heavy movements (40 mins. to limbs and body). B. Light movements (40 mins. to limbs and body).

Chart IV shows in graphic form the result of two typical experiments. They agree with the observations made by Mitchell as regards the corpuscles, the volume of which is increased, the maximum being reached one hour after light massage and two hours after heavy massage. But a corresponding rise in the percentage of hæmoglobin was noted, with, consequently, no change in the worth of the corpuscle. This result is probably due to a diminution of the total volume of the blood, fluid passing out through the capillary wall to supply the place of lymph driven on by the massage, and not to the passage of stagnant corpuscles into the active circulation. The diminution was greater after heavy than after light massage, and persisted for some hours before the displaced fluid found its way back into the general circulation, and restored the blood to its original volume. In no case was a fall in the worth of the corpuscle observed after massage. Moreover, a prolonged course of massage (one hour twice a day) on a subject whose blood decimal, or worth, was normal, had no effect in either raising or lowering it. Before the course the blood averaged $\frac{88 \text{ hæmoglobin}}{83 \text{ corpuscles}} = 1.00$ worth; after three weeks' massage it rose to $\frac{109}{109}$, and after six weeks' massage it fell to $\frac{98}{98}$, about which point it remained. The volume of the blood was thus considerably diminished, and massage, therefore, is a powerful agent in promoting the transudation of fluid through the capillary walls, but apparently has no effect in causing destruction of the hæmoglobin.

In this connection it may be noted that Lloyd Jones[5] inclines to the belief that many cases of chlorosis are characterised by an increase in the total volume of the blood, and he quotes Rubenstein[6] as holding the same opinion. The effect of massage in reducing this may account to some extent for the benefit derived by many of these patients from its use.

Effect of Rest.

The next point determined was the effect of rest on the blood. With this object the blood of a normal subject (female) was examined night and morning for a considerable period, during which she was performing her ordinary avocation, which entailed a fair amount of exercise, walking and cycling. She was then put to bed, and remained there for five days, after which she resumed her usual course.

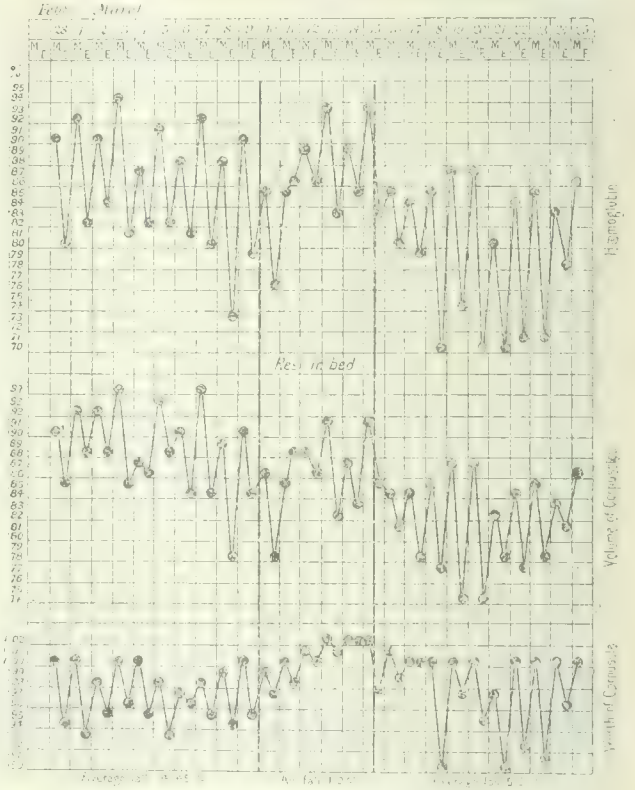


Chart V summarises the results obtained. It is a portion of the complete chart of the subject in question, and embraces ten days previous to rest, five days in bed, and ten days subsequently.

The general average of the readings is seen to be somewhat below the normal of 100. This is usually the case in female subjects. During the first period of ten days the hæmoglobin and corpuscles showed the customary variations of day fall and night rise, the variation in hæmoglobin being relatively greater than that of the corpuscle, hence the variation in the worth of the corpuscle; the average day fall for the ten days being 4.45 per cent. During the period of five days' rest similar variations in hæmoglobin and corpuscles took place, but they are more nearly related to one another, hence the variation in the worth becomes less than before, the average fall for the five days being only 1.2 per cent. The factor of exercise being eliminated, the destruction of hæmoglobin that occurs in the day becomes much less than when the subject

is leading her ordinary life. The period of ten days subsequent to rest show a return to the normal condition, the average fall in worth being 5 35 per cent., rather greater than before. The general average of the readings of hæmoglobin and corpuscles fell somewhat during the period after rest, but as the worth remains at about its mean of 1.00 the fall merely implies a temporary increase in the volume of the blood.

A further point of interest lies in the gradual steady increase in the worth that occurred during rest. Regarding the morning observations alone as being the readings taken when the blood is presumably at its steadiest point, a gradual rise takes place from 0 99 to 1.02, when it attained its maximum and remained there for three days, falling after activity was resumed to its mean of 1.00. Whether this high level would have been maintained through a prolonged period of rest is doubtful.

To summarise briefly the above facts:

1. There is a normal day fall and night rise in the worth of the corpuscle, representing a daily destruction and regeneration of hæmoglobin.

2. Active exercise increases the extent of the day fall and night rise.

3. Active exercise stimulates a slight over-production of hæmoglobin.

4. Passive exercise (massage) diminishes the volume of the blood, but has no effect in diminishing or increasing the amount of hæmoglobin.

5. Rest reduces the extent of the day fall in worth, representing a diminished destruction of hæmoglobin.

The bearing of these facts on the treatment of anæmia is obvious, providing as they do a physiological foundation for the well-known value of rest in bed in the treatment of that affection. Inasmuch, however, as the effect of exercise is to stimulate the production of hæmoglobin, while that of rest is to lessen its destruction, it may be objected that the conclusions to be drawn from these data are in mutual contradiction. In must be borne in mind, though, that the observations were made on normal subjects, in whom the temporary increased destruction of hæmoglobin brought about by exercise is fully met and repaired by increased formation. To complete the investigation it is necessary to determine by diurnal observation of the blood of an anæmic subject taking considerable exercise, whether the reproduction of the hæmoglobin would be sufficient to make good the loss occasioned by exercise. The undesirability of keeping a patient sufficiently long under observation without treatment has prevented me examining this point. From clinical experience we may infer with tolerable certainty that construction would fall short of destruction, or at least would not be in excess of it as is the case in health. In other words, that the already seriously diminished amount of hæmoglobin would be unable to respond to the call made upon it by exercise, so that gradually the total amount would be further lessened. Rest, on the other hand, by removing the drain, would enable the constructive process to exceed the destructive, and the store of hæmoglobin to be gradually built up.

MODE OF OBSERVATION.

The instruments used in the collection of these data were the hæmoglobinometer and hæmocytometer devised by Oliver.[1]

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THE ROYAL BERKSHIRE HOSPITAL.—The Prince of Wales, on the occasion of his visit to Reading on June 11th to open Reading College, visited the Royal Berkshire Hospital. The Prince, who was accompanied by Prince Christian and Lord Wantage, Lord Lieutenant of Berkshire, was received by the Vice-President, by the Senior Physician, Dr. Marriott, and by the Senior Surgeon, Mr. Maurice, by whom he was conducted through the various wards, the other members of the medical staff being present. The Prince spoke sympathetically to several patients, and remarked on the cleanliness, cheerfulness, and capacity of the wards, and commended the open air verandahs at the end of each ward which are used for convalescent patients.

A CASE OF EXOPHTHALMIC GOITRE WITH UNILATERAL EYE SYMPTOMS.

BY JAMES HINSHELWOOD, M.A., M.D., F.F.P.S.GLAS.,
Surgeon to the Glasgow Eye Infirmary; Dispensary Physician to the Western Infirmary; and Assistant to the Professor of Clinical Medicine in the University of Glasgow.

EXOPHTHALMIC GOITRE is a disease which of late years has been the subject of much difference of opinion as to etiology, pathology, and treatment. Many of the disputed points can only be solved by the lessons of clinical experience, and hence the value of the clinical record of any case of exceptional character. The following case, presenting several features of great clinical interest and rarity, has seemed to me worthy of special record and comment.

J. W., an unmarried woman, aged 24 years, came to the Glasgow Eye Infirmary on February 11th, 1898. She stated that since the beginning of this year her friends had been calling attention to the peculiar prominence and staring appearance of the left eye, which had gradually become more and more pronounced. About the same time her attention was also called to the fact that there was a distinct swelling of the throat, which had gradually become worse. Since the appearance of these symptoms she had felt somewhat nervous, being more easily excited and startled than she used to be But in other respects she had felt quite well.

Her left eye had a prominent and staring appearance, which gave the patient a very peculiar look. There was slight exophthalmos, but what gave the eye its peculiar appearance was a strong retraction of the upper lid (Stellwag's symptom), so that the palpebral aperture was very much greater than on the other side. On asking the patient to look downwards there was but little descent of the upper lid, while the globe rotated downwards in a normal manner (Graefe's symptom). The appearance and movements of the right eye were normal. A considerable uniform enlargement of the thyroid gland was found. There was no tachycardia, the pulse being about 72 per minute, and no history of palpitation. The patient was well coloured, and there was no menstrual disturbance.

She was put upon gradually increasing doses of antipyrin, beginning with 5 grains thrice daily, and decided improvement was evident within three weeks of the commencement of the treatment. She was shown at a meeting of the Glasgow Medico-Chirurgical Society on March 18th, 1898, and the following is a brief statement of her condition: The exophthalmos and retraction of the upper lid of the left eye have disappeared, so that when the patient looks straight forward there is no difference observable between the two eyes. In fact she is cured of the disfiguring appearance for which she sought relief. When she looks downwards, however, there is still very defective descent of the left upper lid—that is, the Graefe's symptom has persisted unchanged The enlargement of the thyroid is very markedly diminished, although yet quite distinct. She feels better as regards the nervousness since the antipyrin treatment was begun.

Although there was here no increased frequency of the heart's action, the symptom, which is generally regarded as the most constant, and that which occurs earliest, still there can be little doubt that here we have a case of exophthalmic goitre in the early stage. The three classical symptoms, the tachycardia, the enlargement of the thyroid, and the exophthalmos do not appear simultaneously, and the degree of completeness of the clinical picture will depend upon the stage of the disease at which the patient is first seen. When the disease is fully developed the diagnosis is easy, but in the early stages, the true character of such atypical cases is apt to be overlooked, and yet here the diagnosis is of the utmost importance, since it is at this stage our opportunities of successful treatment are greatest. Hence the importance of knowing that unilateral exophthalmos may be the first symptom of this disease. Two years ago I saw in private a case precisely similar to the present, where unilateral exophthalmos was the first and most striking symptom of the disease. The patient was a young lady, and consulted me with reference to the disfiguring appearance of a staring and prominent left eye. Here, too, the presence of Stellwag's and Graefe's symptoms made the diagnosis clear, which was further confirmed by a slight fulness of the thyroid and slight tachycardia. Hence in every case of unilateral exophthalmos the possibility of its being a manifestation of exophthalmic goitre should always be borne in mind, and the patient carefully examined.

A point of great interest in this case is the disappearance of the retraction of the upper lid (Stellwag's symptom), whilst the non-simultaneous descent of lid and globe of eye remains unchanged (Graefe's symptom). These two symptoms are commonly regarded as being due to the same cause, namely, spasm of Müller's muscle, those unstriated muscular fibres in the upper lid which are supplied by the sympathetic. The complete disappearance of the one symptom while the other remains unchanged clearly

demonstrates that these symptoms are entirely distinct and dependent upon different causes. While Stellwag's symptom may be explained by an affection of the sympathetic, we must seek another cause to explain Graefe's symptom, which is really a disturbance of the co-ordinated movement of the simultaneous descent of the upper lid and globe of the eye, and which is probably due to a central disorder of the oculomotor nuclei. The present case, at least, makes it clear that these symptoms are independent and cannot be accounted for simply by an affection of the sympathetic.

The improvement of the symptoms under the use of antipyrin is a fact of considerable interest. The negative evidence of pathological anatomy and the character of the symptoms make it probable that this malady is a neurosis, and that the disturbance is one of function and of the nutrition of the nerve elements as in epilepsy and chorea. In these latter conditions antipyrin has given excellent results, and hence it is not surprising that its administration should benefit exophthalmic goître. The dose has been gradually increased from 5 to 15 gr. thrice daily, and the marked improvement already manifest leads us to hope that greater benefit will result from pushing the drug still further.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

AN ACUTE CASE OF LANDRY'S PARALYSIS.

THE patient was 54 years old, tall and muscular, and had known scarcely any previous illness. During the last eight years his employment was in chemical works; while for 22 years previously he was working in a whitelead factory, but never had any lead poisoning. Throughout the week previous to the day of attack he was exposed more than usually, and complained of feeling the cold.

On March 27th he finished work in the engine-room at 8 A.M., and walked home about a mile. He told his wife that his hands had been tingling, and felt benumbed for two hours. He was disinclined for food, took some pills, and tried to sleep, but was unable. At midday some food he attempted to swallow "would not go down." At 5 P.M. some tea he was drinking "went the wrong way," and he had a violent fit of coughing. His son fetched me hurriedly. I found him in an exhausted condition, seated on a chair. The coughing had subsided. In a husky voice he complained of inability to swallow even his own spittle. He rose from his seat with difficulty, using his hands as though there were some lumbar weakness. On examining the epiglottis with my finger pharyngeal reflex was absent. The soft palate was freely movable. His power of grip was not subnormal.

At midnight he was in bed well propped up with pillows, but nevertheless his neck and back were so weak that his head and body had to be supported continually. At his own request he was lifted out of bed for defæcation, and seemed quite helpless. Inspiration was hurried, spasmodic and stridulous. His voice was hoarse and weak. Saliva had accumulated in his pharynx, which he could neither expectorate nor swallow, and which he wiped from his lips continually as it ran out abundantly. He could raise his forearms for this purpose, but could hardly move his arms. Pronation and supination were weak and limited. Wrists and fingers moved freely, but his grip was decidedly weaker. He could raise his knees from the bed 4 inches against considerable resistance, and could freely move his ankles and toes in all directions. Knee-jerks were present, plantar reflexes normal. He complained that the tinglings and numbness in hands and feet were very distressing. He felt his want of sleep, but could not obtain any because of choking.

At 8 A.M., March 28th, the only unparalysed muscles were the facial, lingual, masticatory, flexors and extensors of fingers and toes, upper intercostals and diaphragm. All reflexes were absent. No involuntary movements or rigidities were present. The spleen was just palpable. Gradually every muscle became paralysed. At midnight he could just open his mouth sufficiently to protrude his tongue half an inch. His respiration was in short gasps, about every second, and entirely diaphragmatic. Pulse about 2 per second, regular, but weak. Temperature 95.2°. Spleen easily felt 3 inches below ribs. He died at 1 A.M.

The age of the patient, the acuteness of the attack, and the course of the paralysis differed from previously-described cases of Landry's disease.

The muscles were affected symmetrically, and approximately in the following order: First, the pharyngeal, laryngeal, spinal, and cervical; then those of the hips, thighs, shoulders, and arms; next, the lower intercostal and abdominal; followed by those of forearms, legs, hands, feet, and upper ribs; lastly, facial, lingual, labial, and diaphragmatic muscles.

He never had pain or loss of sensation; the tingling and numbness in the extremities were the only sensory symptoms. The mental condition remained unaffected to the end. The temperature was subnormal throughout.

Northwich. HENRY H. HAWARD, M.B., B.C., etc.

HÆMATEMESIS TREATED BY PERCHLORIDE OF IRON.

IN a memorandum in the BRITISH MEDICAL JOURNAL of February 26th, Mr. St. George Reid speaks of the value of perchloride of iron in hæmatemesis, and I thoroughly coincide with his views.

This treatment I have adopted for some years. A few months ago a man called at my house in a great hurry, and drove me over four miles to see his daughter, aged 17, who had been vomiting blood. On my arrival I found her anæmic, with very pale lips and an extremely feeble pulse. She had vomited about two pints of blood (which I saw), and was suffering from symptoms of gastric ulcer. I commenced by giving her 15 minims of the liquor ferri perchloridi (the preparation I prefer), and this was repeated every three hours and then every four hours for about four days, after which it was given thrice daily. I also gave her some brandy in ice-cold milk, and she took nothing but ice-cold milk for the first few days, when, as she so quickly rallied and had no return of the hæmorrhage, I was enabled gradually to increase her diet. As her improvement in a few hours was so marked, and as there was no more tendency to sickness, I did not employ rectal feeding, although I should have done so had there been any difficulty with the stomach. She made a good recovery and has been in good health ever since.

Wolston, near Coventry. ARTHUR PURKISS, M.D.

REPORTS

OF

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

SIR PATRICK DUN'S HOSPITAL, DUBLIN.

A CASE OF PYÆMIA TREATED WITH ANTISTREPTOCOCCUS SERUM IN WHICH LIVING STREPTOCOCCI WERE FOUND.

(Under the care of C. B. BALL, M.D., F.R.C.S.I., Regius Professor of Surgery, University of Dublin, and Surgeon to Sir Patrick Dun's Hospital.)

[Reported by H. E. LITTLEDALE, M.B., B.Ch., House-Surgeon.]

J. B., aged 10, admitted on March 8th, 1898, stated that he had become ill two days previously rather suddenly, with headache, *malaise*, slight rigor, and great pain in the knee.

He was in a very dirty condition. His feet were covered with cuts and scratches which were full of dirt. His right knee was greatly swollen, red, and exquisitely tender; the glands in the right groin were enlarged; the tongue was thickly furred and dry, and the temperature was 101.4° F., and the pulse 124. Icebags were applied to the knee, and sodium salicylate given. As this treatment after two days caused no improvement, and the knee was becoming more inflamed and swollen, carbolic poultices were applied frequently. A small abscess had formed in the sole of the foot, which was opened with great care so as to get the pus as pure as possible for culture purposes. The culture was taken on blood serum, and kept at 98° F. Very little sign of growth occurred for

thirty hours, when very small, grey, shining points made their appearance. A cover glass taken from this showed that it consisted of streptococci and staphylococci, the former in great preponderance.

As the case was undoubtedly pyæmia and streptococci were present, though mixed with staphylococci, Mr. Ball thought that antistreptococcus serum might relieve the condition, which was then very bad. Two 10 c.cm. phials of fluid serum were procured, and the contents of one injected into the right thigh subcutaneously on March 14th, six days after admission. The temperature at the time of injection (12.10 P.M. March 14th) was 100°, the pulse 124. Four hours after injection the temperature rose to 103° F., and ten hours later it rose to 105° F.; the pulse was 140, and the respirations 36. At 8 A.M. on March 15th the temperature had dropped to 101° F., and at 11.45 A.M. a second injection of 10 c.cm. was given in the same thigh. The temperature ran up to 104.8° twelve hours after this injection; the pulse was 140, the respirations 38, and the patient's condition was somewhat alarming. In the next thirty-six hours the temperature fell to 100° F., and it kept between this and 102° F. until some hours before he died on April 1st, when it fell to 97 4° F.

The progress of the case was as follows: March 16th. Large abscess over knee opened, not communicating with joint. March 19th. Pericardial friction sound, with no pain or distress. March 21st. Pericardial effusion and pneumonia of right upper lobe, which extended next day to right lower lobe. Numerous abscesses were opened on the arms, back, and fingers in the next ten days, and on March 30th the patient developed right pneumothorax, with effusion into the pleural cavity, and on April 1st he died.

While in hospital the patient never had a rigor, he never sweated in the least, and his temperature was of a remittent, but never intermittent, character. No inflammation or œdema occurred at the point where the serum was injected.

Having read the case reported in the BRITISH MEDICAL JOURNAL for February 26th, 1898, by Drs. Nathan Raw and Hill, of streptococci being found in the dried serum, I thought it would be interesting to see if the serum we were using would give any growth. Immediately on opening the first 10 c.cm. phial, which I did with absolute care, a platinum loopful of the serum was smeared on a sloped agar tube, and another drop mixed with a tube of sterile ascitic fluid, and both tubes kept at 98° F. for forty hours.

A perfectly pure culture of streptococcus longus had begun to develop in both the tubes, most typical dewdrop-like colonies on the agar, and a wavy flocculent sediment in the ascitic fluid. A cover-glass preparation taken from the agar culture showed that it consisted of pure streptococci, six to ten in a chain, and a hanging drop from the ascitic fluid showed beautiful long chains of cocci winding right across the field.

Unfortunately inoculation experiments on animals were not undertaken in time, as when I tried to transplant the culture after it had been for eighteen days at room temperature, nothing grew, so that the streptococci must have died. The two injections of serum had been given before the cultures taken from it exhibited any signs of growth.

BLACKBURN AND EAST LANCASHIRE INFIRMARY.

ANEURYSM OF ABDOMINAL AORTA IN A BOY AGED 9 YEARS.

(Under the care of Dr. WATSON.)

Reported by ROBERT Y. AITKEN, M.D.Glasg., House Surgeon.]

THE patient, J. W., aged 9 years, was admitted on January 18th, 1897, suffering from heart disease. He had had rheumatism several times. Well marked systolic and diastolic murmurs were heard over the aortic cartilage. The area of cardiac dulness was slightly enlarged. The pulse suggested aortic regurgitation. The boy looked very ill and did not take nourishment well.

A week after admission he seemed to be improving, but gradually he became worse and died on February 26th. A week before death he complained of pain over the heart, and although no pericardial friction was heard, two days later the cardiac area was found to be enlarged upwards as far as the lower border of the second rib.

Post mortem the pericardium contained 5 ounces of clear fluid, and over the anterior surface of the left ventricle near the apex an area the size of a shilling was covered with recent lymph. The left ventricle was not much hypertrophied. The mitral valves were slightly thickened. The aortic valve was much thickened and covered with vegetations. There was a perforation a quarter of an inch in diameter through the apex of one of the flaps. In the arch of the aorta there were two small patches of atheroma, which bulged outwards and would no doubt have originated aneurysms had the child lived. The point of most interest, however, was that the abdominal aorta where it divides into the common iliac arteries presented an aneurysm the size of a golf ball on its anterior aspect. It was almost full of recent blood clot.

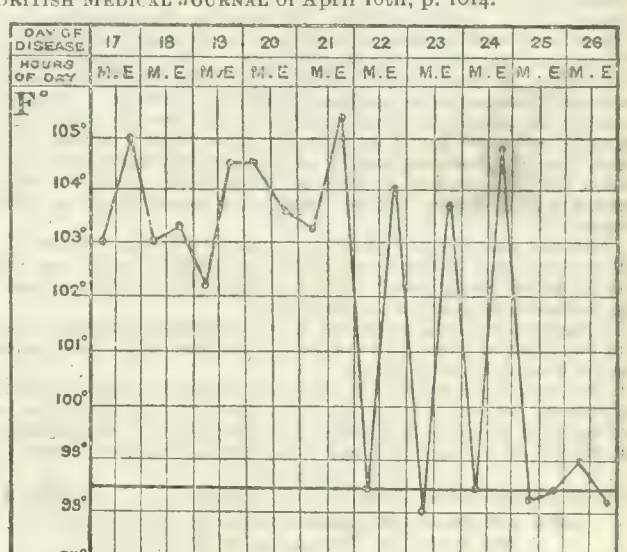
REMARKS BY DR. AITKEN.—The origin was no doubt an embolus caught at the bifurcation. There were no symptoms pointing to aneurysm during life, and the condition was not suspected. Dr. A. Jacobi has recorded a case of aneurysm of the descending aorta in a girl aged 7 years. Sainé has reported four cases: one in a fœtus, and three in children aged 2, 10, and 13 years respectively. Injury and embolism are the usual causes of aneurysm in children. There was no history of injury in this case.

SEAMEN'S HOSPITAL, GREENWICH.

REMARKABLE FLUCTUATIONS OF TEMPERATURE IN TYPHOID FEVER.

(By A. E GRIFFIN, M.R.C.S., L.R.C.P., House-Physician.)

THE accompanying chart of a case of typhoid fever is comparable to the one published by Dr. Arthur Dickson in the BRITISH MEDICAL JOURNAL of April 16th, p. 1014.



G. M., a man aged 28, working on a sludge barge, was admitted on the eleventh day of illness with a temperature of 104°; typical spots were present on the fourteenth day. The temperature was high all through, resisting tepid and cold sponging and even ice packing, and was accompanied by delirium and severe bronchitis till the twenty-first day of illness, when the temperature rose in the evening to 105 6°. The patient sweated profusely in the night, and the temperature fell to normal on the twenty-second day, but it had risen again by evening to 104°. On this day bronchitic *râles* were heard over both lower lobes and the sputum was a little blood-stained, but there were no definite signs of pneumonia. The abdomen was not distended or tender. The temperature intermitted for four days, but on the twenty-fifth day of illness it came down and stopped down. During this intermittent stage the bowels were opened five, six, and three times in the twenty-four hours, the motions being very loose and offensive. The patient sweated profusely each night, and

was semi-conscious. The patient made an excellent recovery, with the exception, two weeks later, of slight swelling and tenderness of the left thigh. During the acute stage the pulse averaged 100, while respirations never fell below 34.

Might I suggest that the intermittent temperature during these four days was due to the separation of typhoid sloughs with some septic absorption, and is not uncommon?

MISSION HOSPITAL, QUETTA, BALUCHISTAN.

THE TREATMENT OF PNEUMONIA BY DIGITALIS.

(By M. Eustace, B.A., M.D. T.C.D., Dipl. State Med. Univ. Dubl.)

In Quetta during the winter months pneumonia is very prevalent among the native population, and without treatment very fatal; but I think that in digitalis we have a drug capable of saving the worst cases, provided it is administered in time and in sufficient quantity. I have been using this drug for over two years in the Mission Hospital with ever-increasing confidence, and always find that where it has been given a fair chance its action is entirely beneficial. The ordinary dose used by me at present is 30 minims of the tincture every fourth hour, but I have given the same dose every hour or two in bad cases. I believe it to be better to increase the frequency of the administration than to increase the dose.

There is, I venture to think, an antagonism between the disease and the drug, as it is well tolerated. The temperature and the pulse are usually taken as a guide to the actual condition of the patient when making a prognosis of the case, but I am more inclined to pin my faith on the condition of the pulse, a very rapid pulse, even with a falling temperature, being a bad sign while a slower pulse, even with a higher temperature, is satisfactory. During the administration of digitalis the pulse must be watched, not so much for fear of harm coming to the patient, but to see if the drug is doing its duty. For success the pulse must be slowed by the drug and the dose must be increased till it is slowed. I believe that unless the dose given is sufficient to slow the pulse the specific action of the drug does not take place. Again, I do not like the combination of alcoholic stimulants with digitalis, as I believe they tend to inhibit its specific action, and am sure I get better results by combining it with ammonia.

There is nothing to be feared as regards ill-effects from the drug itself, and many cases after the crisis is past may be found to have a pulse of only 40, but they will express themselves as feeling well and comfortable.

I have quite given up using large poultices, and find that for our class of patients a rubber bottle filled with hot water meets the needs of the case.

The statistics work out quite in favour of the digitalis treatment and are good considering that few of our patients come into hospital till after the fourth day. Of patients treated thus we have lost one out of the last sixteen cases.

SCOTCH MISSION HOSPITAL, TIBERIAS, PALESTINE.

LONG RETENTION OF FOREIGN BODY IN THE LARYNX.

(By David W. Torrance, M.B., C.M.)

I think the following notes of a case of a leaf in an infant's larynx, removed after fourteen weeks whole and unchanged, will be interesting:

Faihan ibn Ahmed, aged 1 year, was brought to the out-patient department on January 3rd suffering from bronchitis and great dyspnœa, amounting almost to asphyxia. The mother gave the history that fourteen weeks previously she was feeding a pet sheep with leaves. Suddenly she noticed that her child, who was playing by her side, was choking, and on opening its mouth saw a leaf. She tried to extract the leaf with her finger, but it went further into the throat and out of sight. Symptoms became grave, and various attempts were made by native surgeons to extract the leaf, but they could find none.

The symptoms continuing she bought the child a two days' journey on foot to this hospital. My assistant, Dr. Daighagarian, saw the child, but he could detect no foreign body by the finger introduced into the larynx. On January 4th I was asked to see the patient, and also failed to detect any foreign body. I considered that either the leaf had been coughed up, or become decomposed, and that the bronchitis and laryngitis were the results of the irritation originally produced by the leaf, and treated it accordingly. Next day, possibly on account of the previous examinations, the symptoms became graver, and the patient was removed from the shelter to the hospital. Here I examined him under chloroform, and detected the leaf lying flat against the anterior wall of the larynx, and removed it with forceps.

It was a small leaf of the scrub oak, thick and prickly like a small holly leaf. It was 1⅛ inch long by ⅝ inch broad, whole, hard, and quite fresh looking. The leaf must have been partly within the vocal cords. Its point was uppermost, and it was adherent to the anterior wall of the larynx by its pricks, which were all directed upwards, and so prevented its expulsion on coughing. The symptoms speedily subsided, and the patient was dismissed after a week.

What I think is worthy of note is that the leaf was not in the least macerated after its fourteen weeks' residence in the larynx.

REPORTS OF SOCIETIES.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

Sir William Thomson, P.R.C.S.I., President, in the Chair.

Friday, May 13th, 1898.

Perforating Gastric Ulcer Successfully Treated by Operation.

Mr. John Campbell reported a case which will be published.

Dr. Craig thought the operation could be undertaken only when the ulcer was still acute, and was situated on the anterior wall of the stomach, and where firm adhesions had not already formed. When on the posterior wall adhesions would probably have formed, and the patient die from hæmorrhage, localised abscess, or other causes also, but an ulcer on the anterior wall was easily reached. The result in this case had removed from his mind the great gravity of recommending laparotomy in cases of perforating gastric ulcer. In this case the position of the ulcer exactly coincided with where an ulcer most amenable to treatment should be. It was evidently a recent or acute ulcer, and the existing cicatricial tissue evidently the result of the old ulceration which had existed twenty years before, or at later periods.

Mr. Myles related the case of a servant maid suddenly taken ill. Perforation was easily diagnosed, and the patient was exceedingly collapsed. Consent to be operated on was not obtained till the fourth day, when an immense collection of pus was distinguished on opening the abdomen; the surface of stomach was covered with lymph and adhesions had formed everywhere. It was impossible to determine the actual point of puncture. The abscess cavity was drained. Death followed. In a second case, on which he operated six hours after perforation, the abdomen was found full of blood. The patient had had symptoms of collapse, constant pain, and vomiting. The perforation was easily found and sutured, but unfortunately the girl died after leaving the theatre. In a third case the perforation was found on the posterior wall. It was impossible to drain the cavity owing to the situation. Death followed some weeks after operation. The operation of suturing a perforating ulcer on the anterior wall of the stomach was not, in his opinion, very difficult, provided proper access to the stomach could be obtained. He thought that in future he would enlarge the ordinary vertical incision by an oblique incision, as the increased facility of operation would more than counterbalance the disadvantages of liability to ventral hernia and greater shock. He saw a child in whom perforating gastric ulcer was diagnosed. Operation was not allowed, and the boy was perfectly well in two days. The diagnosis was therefore not so easy.

Mr. Frazer related a case where perforation occurred at the back of the upper curvature. Death took place in ten days. He did not see how it could have been easily reached by operation.

Mr. R. G. Patteson said that patients were generally seen when several attacks of inflammation had caused adhesions;

abscesses had formed outside the stomach, and a fatal result was brought about by perforation of the sac of the secondary abscess cavity. He cited a case where this had occurred. Whether the ulcer was acute or chronic was important. In cases which he had examined *post mortem* he found that in the area surrounding the ulcer there was a considerable amount of induration, where the gastric wall was enormously thickened, where any attempt at inversion of the wall to close the ulcer, or suture of any kind, would be difficult without invaginating a considerable area of stomach wall. If one had to excise a large indurated area probably cicatricial tissue would not unite in the same way as healthy mucous membrane. Every moment of delay added to the gravity of the operation. Perforations due to perforative peritonitis in typhoid fever could not be classed with such cases, as the ulceration was generally multiple, and although one perforation might be closed by operation, there was no guarantee that there were not other points about to rupture. It was much more difficult to close the stomach wall in a state of induration due to chronic inflammation than to close the intestinal wall.

After remarks from Mr. H. G. CROLY and Dr. A. J. SMITH, Mr. LENTAIGNE said he had had two cases recently under his care, in both of which there was absence of liver dulness. In the first case operation was not allowed, and the patient died in two or three days. *Post-mortem* examination showed a gastric ulcer on the anterior wall of the stomach. The symptoms of the second case were similar, and at the request of the patient, though against the wishes of the parents, the abdomen was opened. However, the perforation could not be found, and was not certainly on the anterior wall. He introduced a gauze drain, and endeavoured to give relief. The patient died in a week. *Post-mortem* examination showed a perforation on the posterior wall, and quite inaccessible.

Mr. JOHN CAMPBELL, in reply, said that although the anterior wall was by far the most favourable situation, still, it was possible to deal successfully with a rupture on the posterior wall at times, as was proved by a late successful case under Dr. Walton Browne, of Belfast. Regarding the likelihood of success, his own case was fortunate in respect to the amount of extravasation, which, he thought, had more to do with success than anything else. The more extravasation, the less chance of success. Probably it was not worth while to operate later than twenty-four hours after perforation. With reference to flushing *versus* sponging the abdominal cavity, he was in favour of the latter, as it was easier for the patient, and flushing often diluted and disseminated the material through the cavity. He was against operating in perforation from typhoid ulcers, as the patient was not able to bear a laparotomy. In answer to Mr. Lentaigne, he said that the liver dulness was present three hours after perforation, but had disappeared fourteen hours after perforation.

HÆMORRHAGE AS A COMPLICATION OF INTERNAL URETHROTOMY.

Mr. T. MYLES read a paper on this subject.

The PRESIDENT had had only one case of severe hæmorrhage after internal urethrotomy. Lately, in cases of tight strictures, he had performed internal urethrotomy, combined at once with a perineal section. By this means hæmorrhage, if it occurred, could be dealt with immediately. He was against the use of iron solution in connection with a wound in the urinary tract.

Mr. CROLY said that nothing would induce him to perform Maissonneuve's operation. He used Syme's and Wheelhouse's methods, and never lost a case of external urethrotomy. He had never seen troublesome hæmorrhage. External urethrotomy for a bad stricture, if the kidneys were sound, was a most successful procedure. If hæmorrhage did occur after external urethrotomy it was easily controlled.

Mr. LENTAIGNE had had one case in which severe hæmorrhage occurred after the operation of internal urethrotomy. He spoke very strongly in favour of Maissonneuve's operation.

Remarks were also made by Dr. T. E. GORDON, Dr. G. J. JOHNSTON, Dr. R. LANE JOYNT, Mr. E. H. BENNETT, and Surgeon-General POTTER; and Mr. MYLES, in reply to Mr. Bennett, said that he had not intended to convey that strictures were present altogether on the floor of the urethra. They were sometimes present on the roof, but in the large percentage of cases on the floor, because the antecedent ulcer was on the floor. For years there had been probably no greater advocate for Maisonneuve's operation than himself. It was the only instrument capable of dividing a stricture along the entire length of urethra. He did not agree with Mr. Lentaigne regarding the rectal pressure. If the rectum was inflated with a bag, and the venous flow back from the prostatic plexus obstructed, the hæmorrhage was increased. The operation of perineal section without a guide was difficult if the urethra was empty; it was not if the urethra was full.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—The annual meeting of this Association was held on June 14th, at the New Hospital for Women, when the business of the Association was transacted. The Managing Committee for the ensuing year was elected as follows: Mrs. Garrett Anderson, Mrs. Berry, Mrs. Boyd, Miss Chadburn, Miss Cock, Miss Crosfield, Mrs. Keith, Mrs. Scharlieb, Miss Sheppard, Miss Helen Webb. From this number the officers were elected: *President:* Miss Cock. *Vice President and Treasurer:* Mrs. Boyd. *Secretary and Librarian:* Miss Crosfield. In the evening the members dined together at the Midland Grand Hotel, fifty-eight being present.

ERRATUM.—In the report of the meeting of the Clinical Society which appeared in the BRITISH MEDICAL JOURNAL of June 4th, some remarks on Dr. Box's paper on gastric dilatation which were made by Dr. W. Pasteur were erroneously attributed to Dr. Parkes Weber.

REVIEWS.

INFLAMMATION OF THE BLADDER AND URINARY FEVER. By C. MANSELL MOULLIN, M.D.Oxon., F.R.C.S., Surgeon to, and Lecturer on Surgery at, the London Hospital. London: H. K. Lewis. 1898. (Demy 8vo, pp. 164. 5s.)

THERE has long been need of some authoritative work in the English language dealing with the subject of cystitis from the point of view of modern pathology. In no department of surgery has there been more laxity and inaccuracy of thought and of action than in this. This small work of Mr. MANSELL MOULLIN is an attempt to supply this deficiency, and to explain, in terms of microbial pathology, some of the more usual forms of cystitis, their causation, and their results. There can be no doubt that the effort is successful. Much good work in this direction has been accomplished abroad, notably by Rovsing and Melchior, the best of which the author has judiciously incorporated in his book. The excellent description of urinary fever by Thorndike, however, appears to have escaped his notice.

The author seems hardly as yet to have convinced himself of the accuracy of some of his own statements: thus, we read in the preface that "inflammation of the bladder is always due to micro-organisms," and yet in the text we find described "simple cystitis, inflammation of the bladder due to chemical or mechanical irritants in the absence of living organisms." This latter form, as indeed Mr. Moullin himself remarks, is, if it exist at all, a matter merely of academic interest and of no clinical significance or import.

The work consists of twelve chapters, each describing one branch of the subject, as "suppurative cystitis," "the organisms found in the urine in suppurative cystitis," "urinary fever," and so on. In the latter chapter four varieties of urinary fever are described: (1) The occurrence of a single rigor or more rarely of more than one. The urine generally contains the bacillus coli. (2) The prominent feature is profound collapse with or without a rigor, occurring almost invariably after kidney operations. (3) "Catheter fever." (4) Continued fever with rigors often occurring as regularly as attacks of ague. The urine is loaded with micro-organisms. Only the first two can in any way be included under the heading of urinary fever. The third should be described as cystitis and ascending pyelonephritis; the fourth as septic infection.

This classification ignores, and purposely ignores, any knowledge of urinary fever due merely to the excitation of the

peripheral nerves when the kidneys are either healthy or diseased. The chapter on urinary fever is perhaps especially worthy of mention, as much from the gracefulness and force of its language as from the accuracy of its clinical descriptions and the inevitableness of its logic. The work bears throughout the stamp of sound practical work and of extensive clinical experience, and it can be recommended with complete confidence to all interested in this branch of surgery.

On Partial Stationary Cataracts. By Hugo Wintersteiner, M.D. English edition of *Augenaerztliche Unterrichtstafeln.* Edited by Professor Hugo Magnus. Part II. London: Williams and Norgate. (Demy 8vo, pp. 32; 20 coloured plates. 17s.)

This book is a translation of one of the parts of the series brought out under the editorship of Professor Hugo Magnus, and deals with the subject of partial stationary cataracts. It consists of 20 coloured plates, with a text of 32 pages. The drawings have all been made to illustrate the chief forms of partial stationary cataracts met with, no matter from what cause. "All the figures have been produced in quintuple linear size," and they exhibit the appearance seen when examining them by transmitted light and by lateral illumination.

The term "partial cataract" is used to indicate merely those cases in which the lenticular opacities remain during the patient's whole life without alteration, or at least which grow with extraordinary slowness. They are divided into three large groups, with various subdivisions: (1) Congenital cataracts; (2) those of traumatic origin; (3) those which are secondary to local or general disease. The arrangement is based on topographical and morphological peculiarities of the various forms of cataracts, and not on their etiology; although it might be more scientific to classify them as congenital, constitutional, traumatic, etc., yet insurmountable difficulties would, it is maintained, arise owing to the fact that the etiology of many are yet unknown.

As the work is intended as a clinical rather than a complete treatise on the subject, there is little or no description of the histological appearances of the lenses met with in the various forms of affection. The different varieties and appearances of these cataracts are thoroughly described, and the clinical history of those represented is to be found in the text. The profuse way in which these cases are separated into numerous subdivisions is somewhat complicated and confusing. The plates give a good idea of the appearances met with, and they will be found useful for teaching purposes.

Neo-Malthusianism; an Inquiry into that System with Regard to its Economy and Morality. By R. Ussher. London: Gibbings and Co. 1898. (Cr. 8vo. Pp. 332. 6s.)

This is an attack upon a habit which is increasing among us, as well as in other nations, of preventing conception by artificial means. Its advocates have been persons who were moved by the misery of crowded populations, and no less by the unhappiness of those who cannot afford to marry, but the author of this work argues that the remedy is worse than the disease. In the first place, the teaching is wrongly named after Malthus, since that reverend gentleman had no such idea in his mind. Secondly, the practice is harmful both to the individual and to the State: to the former since it opens the door to gross intemperance among the married, and to promiscuous intercourse without marriage, while by removing the natural check to appetite, it leads to local maladies in women, and in both sexes to an erotic bestiality which is itself a curse; to the State because it tends markedly to lessen the birth-rate, which sooner or later means lessened power of resistance to attack, and lessened power of productive work. The author offers considerable evidence of the growing prevalence of the practice, and he is perfectly right in his statement of its dangers. We believe that medical men on the one hand and political economists on the other are entirely of his opinion. He further quite truly adds that its effects upon population are not merely to diminish it but to lower its quality, since while the educated restrict their output, the lowest class propagate none the less, and take no such measures of prevention. In many cases where it is practised by married people he ascribes it either to a mere luxurious selfishness or vanity, or to a false idea of womanly life due to the emancipation of women from previous disabilities, and to higher education. But the first is no great matter, since the sooner luxurious persons die out the better; and the second we believe will prove but a temporary insanity.

The author fully recognises the evils of unbridled production of children, and he, in common with every other right-minded person for many generations, insists that the true remedy lies in preventing marriages between the immature or unhealthy, and in sexual temperance among the married. These old-fashioned maxims are undoubtedly the right rules of conduct still. Medical men who do not urge them are as blamable as those who pretend that religion inculcates continued intercourse between husband and wife as a positive duty.

It is a pity that the author has overlaid an excellent purpose with a wearisome mass of unnecessary quotation and of ill-digested statistics. He has crammed his book with fallacious arguments often conveyed in doubtful grammar, and has added many chapters of crude social theories to the original subject. We fear that he may thus bring the cause which he has at heart into ridicule rather than respect.

Ueber die Therapie der Conjunctivitis Granulosa [On the Treatment of Granular Conjunctivitis]. Von Professor Hermann Kuhnt. Jena: Gustav Fischer. 1897. (Roy. 8vo, pp. 172. M.4.)

The author estimates that in East Prussia there are at least 75,000 people suffering from granular lids, and as director of the eye clinic at Königsberg he has had ample opportunities of observing the course of the disease and the effects of treatment. He passes in review the very numerous methods of treatment which are or have been in vogue, and points out what value (if any) each has, and in what class of case. Such complications as blepharospasm, entropium, and trachoma of the tear passages are fully dealt with. In an investigation on the coexistence of nasal disease and granular lids, he found that in no less than 65.5 per cent. of the cases there was nasal disease of one kind or another, but he does not think there is any causal connection between them.

In East Prussia he finds that the more severe and radical forms of treatment, excision of the affected conjunctiva and shelling out of the tarsal cartilage are usually called for, though even these do not protect against reinfection and relapses if the patient returns to his old surroundings and manner of life. Even after apparent cure, then, it is very important to keep the patient under observation, and improved hygienic conditions are, if possible, to be obtained. Medical supervision of children at school, and instruction of parents on the nature of the affection, are very desirable. Much rich clinical and operative experience is embodied in this volume.

Schulgesundheitslehre vom hygienischen Standpuntkte [School Hygiene.] Von Dr. Eulenberg and Dr. Theo. Bach. Parts 5 and 6. Berlin: J. J. Heines. London: Haas and Co. (Royal 8vo, pp. 365. M.3 each.)

The fourth part of this work was reviewed in the British Medical Journal of April 10th, 1897, p. 922. In the fifth part the consideration of physical exercise is continued. Several pages are devoted to cycling, and objection is raised to the common habit of stooping, especially in children, which partly counteracts the good effects of cycling. The authors maintain that the saddle should be much broader than is usual, and that the ischial tuberosities and not the genitalia should come into contact with the saddle; he quotes cases in which the testicles and prostate have been injured by the saddle. They urge also that no corsets should be worn by girls whilst riding, but hold that when properly safeguarded, cycling is on the whole the best form of exercise.

Reference is made to the English sports which have been introduced into the German schools during the last few years. Football as played in England is considered too dangerous,

and comments are made on the mortality produced by the English games, while inquiries at forty-six high schools in Germany showed that no fatal accident had occurred in any game. One of the most constant lesions in Association football is inflammation of the præpatellar bursa caused by the energetic contractions of the quadriceps femoris. Allowing for the occasional brutality of the game, football is considered exercise as much mental as physical. Swimming is strongly advocated in the summer, though the authors think the expense a hindrance towards its universal adoption.

Rowing is another sport which has been imported from England. The first rowing club was founded in Hamburg in 1836, and since then similar clubs have been started in all the chief towns.

No educational system should be considered complete without a flower and vegetable garden adjoining the school, in which the children should be instructed in elementary botany, the lessons of course varying according to the age of the child.

The supply of air and light in the class rooms is fully discussed, and occupies a large part of the volume. Meyrich, who is taken as the authority on the examination of dust, finds in every gramme 1,000,000 germs. The authors themselves found 18 varieties of bacteria. A detailed description of Pettenkofer's air analysis is also given. Diagrams of stoves in which the air is heated before it enters the room are reproduced, and various systems of ventilation are described.

The sixth part continues the discussion of heating and ventilation problems, and then goes on to the question of reading and writing. Great importance is attached to the size of the print and clearness. Tables illustrating this point are given. The causes of myopia are discussed at great length, but no definite answer is given to the question—Why is myopia so common in Germany?

SIR THOMAS BROWNE.

WE have received a small but excellent book,[1] which contains some of the best works of one of the most famous of all the great authors who have adorned the profession of medicine, and we are sure that the grateful thanks both of the profession and of the public will be given to Dr. Lloyd Roberts for it, and for the admirable and tasteful biography which he has prefixed thereto. The book contains, besides Sir Thomas Browne's well-known treatises, the *Religio Medici* and the *Hydriotaphia or Urn Burial*, three which will be new to many readers—*On Christian Morals*, a *Letter to a Friend on the Death of his Intimate Friend*, and a short tract on *Dreams*.

Few of our older authors have been more appreciated in the present century than Sir T. Browne. For this appreciation his memory is largely, we should say mainly, indebted to Charles Lamb, who claims (in Elia's essay on the *Two Races of Men*) to have been the first of the moderns to discover the beauties of the "Urn Burial," and to have introduced it to the notice of Coleridge. Lamb, indeed, paid to his favourite author the most sincere of all tributes—that of imitation. Many of his most humorous and fanciful passages might have been written by the author of *Religio Medici*. This imitation was very probably unconscious, for Browne's style is easier to caricature than to acquire; but it resulted probably from a similarity of humour in the mind of one saturated with the constant perusal of his predecessor.

But Lamb was far from being left alone in his admiration. Dr. Lloyd Roberts quotes eloquent tributes from De Quincy and from Carlyle, and refers to many authors of the present day. Yet he says with truth that Browne is not "read and appreciated as he deserves to be." We cannot doubt that the present publication will do much to reform this state of things.

Browne will always be identified chiefly with the *Religio Medici*. This is, indeed, a most singular work. At first sight, it appears to be the summing-up of a long life of meditation; it gives a critical account—almost a dissection—of the author's opinions, his inmost feelings, his character, hopes and fears. We know that the author lived to old age, and we should have expected to find that his book was the product of his latest years, written to guide his children along the thorny path which their father had trod with so much pain and so careful thought. But, to our amazement, we find that it was written before the age of 30, and several years before his marriage. "As yet I have not," he says, "seen one revolution of Saturn,[2] nor hath my pulse beat thirty years." But he was evidently of a precociously grave disposition, for he adds: "Methinks I have outlived myself, and begin to be weary of the sun;[3] I have shaked hands with delight in my warm blood and canicular days; I perceive I do anticipate the vices of age; the world to me is but a dream or mock show, and we all therein but pantaloons and anticks to my severer contemplations" (p. 61). None can read Browne carefully and intelligently without seeing that what he wrote came from his heart; and a man who could write thus, without affectation, before he was 30, must have always regarded with indifference the aims and methods of political factions, and still more so in after-years.

We should not, therefore, be surprised to find him quiescent in any ordinary political struggle, yet it does seem a blot on the character of a man "of light and leading," who evidently sympathised with the royal cause, that he remained perfectly passive, cultivating his gardens, attending to his patients, and pursuing his philosophical meditations, while the king's cause was ruined and the king's life was taken. Still, we must recollect that he was only an ordinary country practitioner, and however enthusiastic could have done but little. But enthusiasm, except for great ideas, was certainly not in Browne's character.

The same quiet temper is shown in his depreciation (or, indeed, deprecation) of posthumous fame: "At my death I mean to take a total adieu of the world, not caring for a monument, history, or epitaph—not so much as the bare memory of my name to be found anywhere but in the universal register of God" (p. 60). Yet no one was less cynical. "For my conversation," he says, "it is like the sun's, with all men, and with a friendly aspect to good and bad. Methinks there is no man bad, and the worst best, that is, while they are kept within the circle of those qualities wherein they are good," a profound reflection which he thus goes on to explain:—"There are in the most depraved and venomous dispositions certain pieces that remain untouched which by an *antiperistasis* become more excellent, or by the excellency of their antipathies are able to preserve themselves from the contagion of their enemy vices, and persist entire beyond the general corruption" (p. 110).

No one has ever given more perfectly beautiful expression to the idea of sympathy than in these words: "It is not the tears of our own eyes only but of our friends also that do exhaust the current of our sorrows; which, falling into many streams, runs more peaceably, and is contented with a narrower channel. It is an act within the power of charity to translate a passion out of one breast into another, and to divide a sorrow almost out of itself; for an affliction, like a dimension, may be so divided as, if not indivisible, at least to become insensible" (p. 98). Whatever, then, might have been the cause of the apparent indifference with which he regarded the stirring events around him, we may be sure that it did not proceed from want either of sympathy or of patriotism.

A perusal of the *Religio Medici* gives the reader a lifelike portrait of its author. It shows, in the first place, the firm and simple faith with which he clung to the essential points of the Christian religion as he understood them, and yet the easy temper and the tolerant understanding which declined to see an enemy in a papist or a sectary. Hear him on this question—a burning one at that time: "Nor must a few differences, more remarkable in the eyes of man than perhaps in the judgment of God, excommunicate from heaven one another.....Take our opinions together, and from the confusion thereof there will be no such thing as salvation; for first the Church of Rome condemneth us; we likewise them; the subreformists and sectaries sentence the

[1] *Religio Medici, and other Essays.* By Sir Thomas Browne. Edited with an Introduction by D. Lloyd Roberts, M.D., F.R.C.P. Revised Edition. London: Smith, Elder and Co. 1898. 12mo, pp. 305. 3s. 6d.

[2] The note explains that "The planet Saturn maketh his revolution once in thirty years."

[3] He makes no reference here to Macbeth, but no doubt was familiar with Shakespeare's works. Browne was 11 years old when Shakespeare died.

doctrine of our Church as damnable; the atomist or familist reprobates all these; and all these, them again.....Thus we go to heaven against each other's wills, conceits, and opinions, and with as much uncharity as ignorance, do err, I fear, in points not only of our own, but one another's salvation" (p. 83).

A noble utterance, and one which could not have been too common at the time of the rising of the mighty sect who, as Hudibras said,

> Do build their faith upon
> The holy text of pike and gun,
> Decide all controversies by
> Infallible artillery,
> And prove their doctrine orthodox
> By apostolic blows and knocks.

Browne's inquiring mind, in fact (sceptical in the true sense of the term), showed him that there were many things inexplicable to his philosophy, so that he sums up his creed with: "This is the tenour of my belief: wherein, though there be many things singular, and to the humour of my irregular self, yet, if they square not with maturer judgments, I disclaim them, and do not further father them than the learned and best judgments shall authorise them" (p. 86).

He shows the same tolerance in everyday matters as in religion. "I have no antipathy," he says, "or rather idiosyncrasy in diet, humour, air, anything. I wonder not at the French for their dishes of frogs, snails, and toadstools, nor at the Jews for locusts and grasshoppers; but being amongst them, make them my common viands; and I find they agree with my stomach as well as theirs.....I feel not in myself those common antipathies that I can discover in others; those national repugnances do not touch me, nor do I behold with prejudice the French, Italian, Spaniard, or Dutch.....I am no plant that will not prosper out of a garden. All places, all airs, make unto me one country; I am in England everywhere, and under any meridian. I have been shipwrecked, yet am not enemy with the sea or winds; I can study, play, or sleep in a tempest. In brief, I am averse from nothing" (pp. 87, 88). But his tolerance had its limits, though he still stops short of hatred, for on the same page he is constrained to add, "If there be any among those common objects of hatred I do contemn and laugh at, it is that great enemy of reason, virtue, and religion—the multitude; that numerous piece of monstrosity which, taken asunder, seem men and the reasonable creatures of God, but, confused together, make but one great beast, and a monstrosity more prodigious than Hydra. It is no breach of charity to call them fools..... Neither in the name of *multitude* do I only include the base and minor sort of people; there is a rabble even amongst the gentry."

That he had turned to good account his experience of foreign travel appears from the fact that he could say of himself, "Besides the jargon and *patois* of several provinces, I understand no less than six languages" (p. 104). His travels seem to have extended over five years or more. He took his M.A. degree at Oxford in his 23rd year (1627), and began to practise medicine in the neighbourhood of that city, but soon went abroad, and "finished his medical studies at Leyden in his 28th year (1633), where he took the degree of Doctor of Medicine" (p. xiii). After his return to England he first practised near Halifax, and it was here that he is believed to have written the *Religio Medici*; but in 1637, having been admitted M.D. *ad eundem* at Oxford, he removed to Norwich, where the rest of his life was spent, and where he died on his 78th birthday, October 18th, 1682.

He seems to have always been in good circumstances, and though he never wrote anything on medicine, he passed his life in the practice of his profession, and was regarded as the equal of any of the gentlemen in his neighbourhood. And in those days the distinction of classes was sharper, and knighthood was not given with so lavish a hand as at the present day. He was knighted in 1671, his 66th year, by Charles II on a visit to Norwich—no doubt because of his distinguished position in the county. Whether the medical profession as a whole has risen in the social scale in proportion to the other learned professions, is a wide question; but the case of Sir T. Browne will certainly prove that, even as long ago as the era of the Stuarts, the ordinary duties of a country practitioner were sufficient to satisfy the ambition of a man of good family, adequate means, and most uncommon attainments. Many and many a "general practitioner" has earned a well-deserved reputation for learning and virtue in his own neighbourhood, though unknown elsewhere. It was Browne's good fortune, through his literary accomplishments and genius, to have secured a high place in the great galaxy of our English classics, while always remaining fixed to the homely duties of his country practice.

He married in 1641, at the ripe age of 36, a Norfolk lady "of such symmetrical proportion," says Whitefoot,[4] "to her husband, both in the graces of her body and mind, that they seemed to come together by a kind of natural magnetism" (p. xvi). His marriage seems to have cost him (like Benedick) a few cheap jests, for the *Religio Medici* (pp. 106-7) speaks of marriage and the procreation of children in quite another vein from *Paradise Lost*. Probably if our author had ever noticed these jests, it would have been, to say with Benedick, "When I said I would die a bachelor I did not think I should live till I were married." The marriage, at any rate, seems to have been a most happy one, and he earned the Psalmist's blessing, to "see his children's children and peace upon Israel," after all the storms of his younger age.

We have given some space to our author's life, and to the matter of his writings, because we wish to arouse the interest of our professional brethren in one of the most celebrated of English country doctors. But it is as a literary man that Sir T. Browne appeals to the judgment of the public. And surely never was a man the master of a style so picturesque, so stimulating, so surprising, and yet so free from mere trickery and posture-making. It would take a profound knowledge of English literature, and a taste equally exquisite and sober, to trace the genesis of English prose style from the eccentricities of the euphuists, satirised in *Love's Labour's Lost*, through the writings of Bacon and Sir T. Browne to Dryden, Addison, and Swift, and so on to our own more strictly *pedestris sermo*. But that much of the Italian "concetti" still lingered in the mind of our author seems beyond dispute. Can anything be more curiously conceited (in the old meaning of the term) than this?

"Now for these walls of flesh, wherein the soul doth seem to be immured before the resurrection, it is nothing but an elemental composition, and a fabrick that must fall to ashes. *All flesh is grass* is not only metaphorically, but literally, true; for all those creatures we behold are but the herbs of the field, digested into flesh in them, or more remotely carnified in ourselves. Nay, further, we are what we all abhor, *anthropophagi* and cannibals, devourers not only of men, but of ourselves, and that not in an allegory, but a positive truth; for all this mass of flesh which we behold came in at our mouths, this frame we look upon hath been upon our trenchers—in brief, we have devoured ourselves" (p. 55).

Again, to judge of the picturesqueness of his style, see with what a rapier thrust the point is urged in these sentences: "The scepticks that affirmed they knew nothing, even in that opinion confute themselves, and thought they knew more than all the world beside" (p. 81). "They that endeavour to abolish vice destroy also virtue, for contraries, though they destroy one another, are yet the life of one another" (p. 96). The last sentence contains in a few words matter for endless reflection and comment. It is the aim of the "liberalism" of the day to get everybody to think alike, or, if this is impossible, at least to think each other's contradictory opinions equally valuable, and, as the phrase goes, "interesting." Sir T. Browne seems to have known better. He saw as well as Shakespeare that it is between "the endless jar of right and wrong that justice resides," and that if you obliterate the distinction between right and wrong, you may indeed take away the jar, and so remove friction, but you will thereby abolish motion also, and stop the world's progress.

We have dipped in here and there, and culled a few extracts out of a great work, chiefly with a view of showing our readers how much entertainment and instruction they may find from a study of the *Religio Medici* itself. It is a book not to read through and have done with, but one to take in hand at any unoccupied moment, open it anywhere, and read

[4] Whitefoot was a clergyman of Norwich, and an old friend of Sir T. Browne, who published a memoir of his friend soon after his death.

as long as leisure will serve. Like all thoroughly good books, "*decies repetita placebit.*"

Of the other treatises included in the present volume, that on Christian Morals is a kind of appendix to the *Religio Medici*. It abounds, like that work, in pithy and far-reaching observations, as when he is contending that "natural parts and good judgments rule the world. States are not governed by ergotisms.....Where natural logick prevails not, artificial too often faileth: where nature fills the sails the vessel goes smoothly on; and when judgment is the pilot the insurance need not be high" (p. 155).

The "Letter to a Friend" on the death of an intimate friend is well worth reading, though a good deal of it is textually repeated from the Christian Morals. It must be allowed that our author sometimes seems to drop the departed friend out of his sight altogether, and to throw the reins on the neck of his hobby, and wander whithersoever it may lead him. One curious matter we may mark here for the admirers of Dickens—namely, that Mr. Pegotty was (no doubt unconsciously) quoting Pliny or Aristotle, when he said that "people can't die along the coast except when the tide's pretty nigh out;" for Sir T. Browne quotes from Pliny: "Aristoteles nullum animal nisi æstu recedente expirare affirmat: observatum id multum in Gallico Oceano, et duntaxat in Homine compertum" (p. 205), so that Mr. Barkis acted on classical precedents in "going out with the tide," though on the shore of the German, not the Gallic, ocean.

The *Hydriotaphia or Urn Burial* deserves a treatise by itself, but we have exhausted our space; nor is it necessary that we should speak at any length of it. All lovers of Sir T. Browne will read and reread this lovely little tract, of which Carlyle says: "The conclusion of the essay on urn burial is absolutely beautiful: a still, elegiac mood, so soft, so deep, so solemn and tender, like the song of some departing saint flitting faint under the everlasting canopy of night; an echo of deepest meaning from the great and famous nations of the dead!" (p. xxxv). Our author was too good a philosopher and theologian to suppose that it could be of any religious importance whether a man's body is consumed in a few minutes by fire or in a few weeks by corruption; nor does he indicate any personal preference for one or the other mode of disintegration. He was himself buried in the usual fashion. But there is one passage in this tract which is curious in relation to the history of his own reliques: "To be knaved out of our graves, to have our skulls made drinking bowls, and our bones turned into pipes to delight and sport our enemies, are tragical abominations escaped in burning burials" (p. 279). "Strange to say," says Dr. Lloyd Roberts, "the very fate that he had so strongly deprecated befel his remains, for in 1840, the lid of his coffin was accidentally broken open by a blow from a workmen's pickaxe, and, to quote his own words, his bones were "knaved out of his grave," his skull being deposited on show in the Museum of Norwich Hospital" (p. xxvii).

We conclude, as we began, with sincere thanks to Dr. Lloyd Roberts for the loving care he has bestowed on Sir T. Browne's works, and an earnest recommendation to all our readers to procure and study this volume.

FRIENDLY SOCIETIES AND THE MEDICAL PROFESSION.

STATEMENTS OF THE FRIENDLY SOCIETIES, AND THE FACTS AS ASCERTAINED.

AT the conference between representatives of the British Medical Association and of representatives of certain of the leading registered friendly societies held on March 17th last at the office of the Registrar of Friendly Societies, it was stated on behalf of the friendly societies:

1. That it was a matter of perfect notoriety that no person was admitted to the friendly societies unless he was a working man, and that there was practically existing all the wage limit possible, because people were not admitted who had a higher income than those to whom the medical profession would be quite willing to render their services as members of a club.

2. That in many cases members joined the society, and paid for medical aid, but did not accept such aid.

3. Further, it was suggested that members who had joined clubs as working men when young, and rose later in life to superior positions, do not as a rule claim medical benefit, though they may still remain members of the society.

Since the conference it has been thought advisable to obtain from different sources, and particularly from members of the profession connected with medical societies, information in regard to these points. In reply to some applications for information the answers received leave no doubt that the statements made at the conference by the representatives of the different societies cannot be accepted as strictly in accordance with the facts. It may be as well to summarise the answers received instead of going fully into detail.

With regard to the above points a Lincolnshire practitioner states that in a local friendly society about half the members are well-to-do tradesmen, some of whom, however, do not take advantage of medical aid. He states that one of the leading tradesmen of the town received for himself and family in one year as club members medical attendance which would have cost at least £60 if charged at the rate of 2s. 6d. a visit. He states also that he has obtained evidence confirming his experience from two other local practitioners, one of whom supplied him with a list of sixty tradesmen in good positions who were attended by him as club members, whilst the other gave him a list of forty-eight names of tradesmen who had claimed medical aid as club patients.

A practitioner in Norfolk states that in local clubs—Odd Fellows, Foresters, etc.—there is no wage limit whatever, and that anyone is permitted to claim medical aid at club rates.

A medical man at Kidderminster informs us that in this town it is a matter of notoriety that anyone and everyone is admitted as a paying member of friendly societies. Among members in the local friendly societies there are, he says, manufacturers, accountants, auctioneers, surveyors, publicans, and shopkeepers of all sorts. He has known people attended as club patients who can afford to pay 10 or 20 guineas to a consultant from Birmingham, and persons earning £300 and £400 a year have to his knowledge been attended as club patients.

Another correspondent states that a schoolmaster at a large grammar school was admitted a paying member of a friendly society and made use of the medical benefit.

Medical men in London who are surgeons to friendly societies, Oddfellows, and Foresters have informed us verbally that they are called upon to attend members as club patients who are in good positions and who are considerably above the average well-to-do artisan as far as income is concerned. Our informants do not believe there is any wage limit whatever.

In a letter from a correspondent in Essex he says that the question of well-to-do people availing themselves of the benefit of the club doctor is a very old-standing grievance.

A medical man practising in Coventry states that the Oddfellows, and he thinks the Foresters, belong to the Coventry Dispensary, as these societies are represented on the committee. In 1892 there were between 25,000 and 26,000 members. There is no wage limit of any kind, all classes being admitted as members, including the well-to-do.

A practitioner in Cambridgeshire writes that he knows of many instances where well-to-do persons were admitted as paying members of friendly societies, and took advantage of these for medical benefits. He enumerates some cases—cab proprietor and farmer, druggist, jeweller and watchmaker, owner of landed property, gardener owning his own house and conservatory; each of these had good incomes. This gentleman also states that he is not acquainted with any cases of members who having joined a society and paid for medical aid did not accept it.

Another practitioner in the same county states that in an Oddfellows club there are such members as the following who take advantage of the medical benefit—clerk in holy orders, an old-established tradesman, a farmer farming his own land, a very well-to-do horse dealer, and a large farmer and coal merchant. He also states that he knows of no instance in which a member pays for medical aid and is treated privately.

A practitioner of standing in Inverness writes: "That these friendly societies (Oddfellows, Shepherds, etc.) are abused is an acknowledged fact. And this extends all over Scotland." Another practitioner in the same town enumer-

ates several instances in which persons of good position have been admitted as paying members of these friendly societies —a butcher whose income is probably £400 or £500 a year; a gunmaker, owner of considerable property in the town (probable income nearly £1,000 a year) always took benefits from Oddfellows; and a publican (probable income £500 to £700 a year). This gentleman also states that he cannot recall a single instance in which members joined a friendly society and paid for medical aid and did not accept it.

A very comprehensive report has also been received from the Honorary Secretary of the Portsmouth Medical Union in answer to questions submitted. The gentleman states in reference to the first point: That the publican at whose house the lodge is held is admitted a member. Other instances he gives—of an ironmonger in a good thoroughfare, bank clerks, a master butcher, etc.—who take advantage of medical aid.

In reference to the second point, he states that such cases do exist, but they are very rare.

All our correspondents are tolerably unanimous in answering the second question, that in some cases members of friendly societies who pay for medical aid do not claim such aid, but that such are quite the exception.

In reference to the third point one correspondent states that in his experience it is very rare for club members who have risen to a superior position not to claim medical benefit. Some few may pay a little extra, or give the doctor a present.

Another says that in his experience the statement that club members who have risen to a superior position, do not claim medical benefit, though they may remain members of the societies, is far more true of the *bonâ fide* working man than of the tradesman.

Another states that it is not his experience that when members rise in life to a superior position, they do not claim medical benefit. They all claim it.

Yet another correspondent gives a specific instance of a retired miller, who built himself a house and has a good income, but yet claims the services of the club doctor as a right. Again, a correspondent states that in his experience it is "certainly not the case" that men who rise to a superior position do not take advantage of medical benefit. He enumerates several cases of persons in good position, possessors of much property, insisting on having a right to claim medical benefit.

The Honorary Secretary of the Portsmouth Medical Union states in reference to this question (3) that it is not in accordance with the experience of the medical men of Portsmouth, and adds that many instances could be given. When the doctor of a friendly society gives general satisfaction to the members they invariably claim medical attendance, no matter what position they are in. Friendly societies in Portsmouth claim that they have a right to admit as benefit members any person, whatever his social position. He draws attention to the fact that many members of friendly societies who have joined when young and in receipt of small wages, whose positions have improved subsequently, still claim medical attendance. This correspondent concludes his report as follows:

If a member of a lodge goes to reside beyond the three-mile radius, he at once ceases to pay his contribution to the lodge surgeon, but continues his other payments. On his return within the specified radius, even if he has been absent in foreign countries for years, he is allowed to pay for the lodge surgeon, without any re-examination, and can at once claim medical attendance. In the case of one lodge known to him, he says, a greater injustice is done to the surgeon. Members of this society who go away on foreign service continue to pay their contributions for medical benefit, but such contribution is not paid to the surgeon. He goes on to say that it is felt at the present day that the friendly society movement, with its powerfully united and wealthy organisation, has become a system for "sweating" medical officers, and is the real cause of that suicidal underselling which is the incubus of medical life.

THE Philosophical Faculty of the University of Göttingen has awarded the Otto Vahlbruch prize for the greatest advance in science during the past two years to Professor Roentgen of Würzburg. This prize was founded in 1896, and is of the value of 9,200 marks (£460).

A SCHOOL OF TROPICAL DISEASES.

A KNOWLEDGE of tropical diseases is a necessary condition of successful colonisation. Whether we shall ever be able, as some who have given attention to the subject believe, to bring the acclimatisation of white men in the tropics within the sphere of practical politics may perhaps be open to question. But it is certain that much may be done to make tropical countries less deadly to Europeans than they are at present. As recently pointed out by Dr. Manson, the solution of the problem is a question of knowledge, and of the application of that knowledge.

Although the expansion and even the maintenance of our widespread empire largely depend on our power of successfully battling against tropical diseases, very little has hitherto been done in this country for the furtherance of the scientific study of these diseases. Young men go forth from our medical schools to all parts of the world, well grounded in the principles of their art, and able to apply the training which they have received in gathering for themselves the new knowledge requisite for dealing with the new conditions in which they find themselves placed. But they might buy their knowledge and experience at less cost to themselves and others if they took with them to their new sphere of activity some knowledge of the special difficulties which they will have to encounter. It would be unreasonable to expect that every medical school should make provision for the teaching of tropical diseases; in most of them, such teaching, if attempted, would necessarily have to be almost entirely theoretical, owing to the want of material which could serve as the basis of practical instruction. We would not be understood as implying that lectures on tropical diseases without clinical demonstrations must necessarily be useless. Any instruction is better than none, and lectures by competent teachers will at any rate prepare a man for further study on his own account when he is brought face to face with the facts of tropical life. But something more than this is possible, and we are pleased to be able to state that there is a prospect of something more being done.

We are informed that the Seamen's Hospital Society propose to utilise the large amount of clinical material in their hospitals and dispensaries for practical instruction in tropical diseases. With this object they have it in contemplation to build school premises, including residential quarters for eight students at their Albert Dock Hospital, which will be enlarged to accommodate forty patients. The staff at Greenwich and at the Albert Dock Hospital will be invited to co-operate with the Society in this new undertaking. The course of instruction will be based on a definite plan, the syllabus covering all the more important tropical diseases. The course will extend over a period of two months, and thus five batches of students will pass through the school every year, leaving August and September free for vacation. The residential system is considered desirable because of the distance of the school from town and because men will thus have opportunities of continuous observation so essential in the case of certain tropical diseases. Provision will also be made for non-resident students. For the residents an inclusive fee of 4 guineas a week is suggested, this amount covering all expenses of instruction, board, and lodging. For non-residents the fee will of course be considerably less.

The plan appears to be sound and feasible, and, if properly carried out, would certainly be of great use, not only from a medical, but from a political, point of view. The part which medical men have played in the expansion of the British Empire has never been adequately written, but it is fully recognised by all who have had opportunities of seeing the effect among native populations of the introduction of rational methods of dealing with disease. The establishment of such a school as that proposed is therefore a matter of real importance to the nation. There is only one difficulty in the way—the want of funds. That is a difficulty which in a wealthy country, whose commercial prosperity is largely bound up with the healthiness of its tropical colonies, ought to be easily removed. It is estimated that a sum of £10,000 would be required to place the School of Tropical Diseases on a solid footing. In a country where the practical importance of scientific knowledge is better appreciated by the Legislature

than it is here the money would be given for such a purpose without hesitation. Unfortunately the British elector has not yet been educated to the proper appreciation of such things; and, as there are no votes to be won or lost in connection with the matter, the Government is not likely to think it worth risking even a few questions from Parliamentary busybodies upon it. The present Secretary of State for the Colonies has, however, shown a statesman-like comprehension of the manifold factors which make the prosperity of the Empire, and this encourages the expectation that he will look favourably upon a scheme likely to be so directly useful in the work of colonisation.

MEDICAL WAR NEWS.

Return of the "Solace" From Key West.

The United States Hospital ship *Solace* returned to New York on June 5th from Key West, bringing 54 men belonging to the various warships who have been invalided either on account of illness or from wounds received in the bombardments in which the vessels have recently been engaged. Four of the men were suffering from tuberculosis. Four surgeons, eight trained nurses, and three apothecaries looked after the welfare of the sick and wounded during the trip. Ambulances from the Naval Hospital were awaiting the arrival of the vessel to transfer the patients. The men have improved very rapidly since leaving the enervating climate of Key West.

Sanitary Difficulties of a Cuban Invasion.

A meeting of American and Cuban physicians who have enlisted in the Red Cross Service was recently held to discuss the sanitary problems presented by an invasion of Cuba. Dr. E. Nuñez, at one time Director of the Hospital of our Mother in Havana, presided; Dr. Juan de Sollossa, formerly a surgeon in the Spanish army, acted as Spanish Secretary; and Dr. F. B. Carpenter was the English Secretary. From statements made by Drs. Francis Rivera, F. Marill, Julius Carbonnell, and C. R. Gill, it appeared that in the Cuban war 75 per cent. of the Spanish army suffered from endemic disease, 50 per cent. from yellow fever (about equally divided between mild and serious cases), and 25 per cent. from malarial fever. Dr. Sollossa said that before the war 30 per cent. of all foreigners suffered from these diseases, and the mortality was about 10 per cent. During the war the percentage of deaths in the army from disease alone was more than 25 per cent. With improved hygienic measures this death-rate could be considerably reduced. During the first three months of the year there was little yellow fever; in April, May, June, and July more cases occurred, though they were not numerous; and from the end of August to the middle of November the disease was most prevalent and severe. By taking proper precautions, those who had good health during the early months could usually escape an attack during the unhealthy months. Malarial fever was most prevalent during the rainy season. Dr. A. M. Lesser, Surgeon-in-Chief of the American Red Cross Society, said that diseases were most prevalent near the coast and in large cities. Six to twelve miles from the coast, at an altitude of 1,000 feet, all persons were comparatively immune. The mountains were easy of access, and could be used for hospitals as far as the conditions of war permitted. In the quartering of soldiers it was especially advisable to avoid the cities; and, if they were encamped in tents, it was essential that the tents should be impervious to the heavy dews. It was to be remembered that any person suffering from yellow fever or severe malarial fever would be unfit for duty for at least six or seven weeks, so that, unless the most careful sanitary precautions were taken, only a portion of the army could be counted on for regular duty, the rest being under hospital treatment. As regards the relative healthfulness of Cuba and Tampa and Key West, all the physicians present agreed that the climate of Florida was worse than that of the higher portions of Cuba, and that it would be better to keep the ill and wounded on high ground in Cuba than to remove them to Florida, thus subjecting them to the dangers of sea-sickness in addition to less salubrious conditions on their arrival.

The Field Equipment of the Medical Department.

The Surgeon-General has issued a Field Supply Table—approved by the Secretary for War, May 9th, 1898—to meet existing army conditions. It provides for the use of regimental surgeons two medicine chests, marked No. 1 and No. 2, containing a varied selection of drugs, many in the form of compressed tablets, instruments, dressings, and books of reference, such as Notter and Firth's *Hygiene*, Osler's *Practice of Medicine*, Zuckerkandl's *Operative Surgery*, Stephenson's *Wounds in War*, and Hare's *Therapeutics*. Each private of the hospital corps is provided with a pouch containing aromatic spirit of ammonia, first-aid packets with pins, scissors, jack-knife, wire gauze for splints, bandages, and plaster, while each man on duty as orderly to a medical officer carries some additional articles, such as a pocket case, rubber bandage, ligatures, chloroform, and a hypodermic syringe. The medical officer is provided with a field case, field desk, lanterns, litters, etc. The field desk is furnished with stationery, blank forms, and copies of the army regulations and Smart's *Handbook for the Hospital Corps*. It is stated that renewals of supplies can be obtained by regimental surgeons from the surgeons in charge of a brigade or division hospital, on a special requisition approved by the chief surgeon, and that no receipt is to be given for articles that may be expended.

On the supply list the names of expendable articles are printed in Roman type, those of unexpendable articles in italic. The table gives also the provision made for a brigade or division hospital, including medicines, antiseptics, and disinfectants, hospital stores, stationery, surgical instruments, appliances and dressings, furniture, bedding and clothing and miscellaneous articles, with surgical chests Nos. 1 and 2, a case containing an Arnold's steriliser and a Berkefeld filter, a field operating case, a mess chest, a food chest, a commode chest, and a set of folding field furniture.

Medical Aid in a Modern Naval Battle.

In the *Medical News* of June 11th Dr. Raymond Spear, assistant-surgeon U.S.N., of the *New York*, gives an interesting account of medical aid during an action at sea in the present war. When "general quarters" is sounded, the sick bay is immediately converted into an operating room, an operating table is placed in the centre, the ordinary instruments for amputating limbs are arranged in trays, and immediately disinfected by steam, aseptic dressings are laid out, and antiseptic solutions prepared for immediate use. In former times during an action the doctors remained in the sick bay and the wounded were brought to them; but conditions have changed, and now on a ship like the *New York*, where there is practically no protected place during an action, this is impossible.

The greatest loss of life in battle is from loss of blood. Some authorities estimate the loss of life from hæmorrhage alone as 75 per cent. of the total. The following is Dr. Spear's description of the method to be adopted:

The crew of each gun receives instruction in first aid to the wounded by the medical officers. Each gun has its own outfit of rubber tubing and packages of aseptic dressings. The men are instructed how to apply the rubber tubing to the limbs in order to arrest hemorrhage, how to apply aseptic dressings, being especially cautioned against touching wounds, and finally how to support limbs when broken, and how to carry the wounded, and where to place them.

Each deck of the *New York* is divided up into several compartments, separated by watertight bulkheads. During an action these bulkheads are closed. Under these conditions the medical officers cannot reach all of the wounded if they are in different compartments; therefore, if a man be injured sufficiently to be disabled, he is attended to by some of his companions. If an extremity be badly injured, a piece of rubber tubing is applied so as to arrest hæmorrhage, an aseptic dressing is applied, the leg is bound to the other one for support, or the arm is bound to the body if fractured, the man is placed in a hammock, and dragged to the best protected place near by, where he will not be in the way, and here he waits for the surgeon. The wounded are placed athwart ships if possible, thus offering the smallest possible target for the shells that come through the ship's side.

The doctors take their stations in the most protected parts of the ship, namely, behind the turrets, and here establish dressing stations and attend to all the wounded in the immediate vicinity. The surgeons have received orders to expose themselves as little as possible during action, as their real work begins when the fight is over. Each surgeon carries a haversack in which are pieces of rubber tubing for controlling hæmorrhage from the extremities, hæmostatics, a pocket-case, hypodermic syringe, and solutions of strychnine and morphine ready for hypodermic use, and some first-aid packages. Stationed with each doctor is a nurse, who carries in a knapsack surgical dressings, antiseptic solutions, whisky, etc. When the action is over the surgeons will take a hasty survey of the

wounded and give such attention as is absolutely necessary to each. When the wounded have been attended to, those cases needing immediate operation will be looked after, three operating tables being established if necessary. The wounded will not be disturbed, but will await the arrival of the hospital ship *Solace*, and will then be transferred to her, where they will receive medical attention during their transportation to the hospitals in Key West.

THE AMERICAN MEDICAL ASSOCIATION.

The forty-ninth annual meeting of the American Medical Association was held at Denver, Colorado, on June 7th, 8th, 9th, 10th. There was a large attendance, more than 1,100 delegates having registered their names on the morning of the first day. In the absence of the President, Surgeon-General Sternberg, owing to "imperative official duties," the chair was taken at the first general session by First Vice-President Dr. Joseph M. Mathews, of Louisville, Kentucky.

First General Session.

President's Address.—The President's address was read by Colonel A. A. Woodhull, of the United States army. In it the view was expressed that the day was perhaps not far distant when no reputable physician would be willing to confess that he did not belong to the American Medical Association, and when no progressive physician could afford to do without the *Journal* of that body. The President went on to say that the medical profession in the United States had suffered more from the ignorance of some of its members who held diplomas from regular schools of medicine than from the attacks of those whom they called irregulars or quacks. To maintain their standing in the estimation of the educated classes they must not rely upon their diplomas or upon their membership in medical societies, but must show themselves superior in knowledge and in professional resources to the ignorant pretenders, and to the graduates of a medical school which was bound in its teachings by an untenable creed. There were those who still spoke of "old school physicians" ignorant apparently of the fact that scientific medicine was to a great extent of very recent origin, and that all great discoveries in relation to the etiology, prevention, and specific treatment of infectious diseases, and nearly all the improved methods and instrumental appliances for clinical diagnosis and surgical treatment had their origin within the ranks of the regular profession. If they were to be characterised by any distinctive name, the only one applicable would be "the new school of scientific medicine." Not that science was complete, for they had still many things to learn and many problems which had thus far resisted all efforts at their solution. But they had learned how to attack these problems, and no one any longer expected that they could be solved by the exercise of the reasoning powers and the facile use of the pen. The old saying that "the pen is mightier than the sword" was no doubt true in politics; but in science the pen was a feeble instrument compared with the test tube, the microscope, the chemical balance, etc. Nevertheless, he advised well-informed physicians to make greater use of the pen, not for the elucidation of those problems which remained to be solved, but for the purpose of calling the attention of the non-medical portion of the community to the recent achievements of scientific medicine. Having referred to the injurious consequences of premature and unfounded opinions, especially when given by men of prominence in the profession, the President proceeded to call attention to the best method of counteracting such mischief. This was undoubtedly by united action on the part of the more enlightened members of the profession in behalf of truth and progress. This assistance they had had in combating the Antivivisection Bill, introduced into the United States Senate and vigorously pressed by the members of the Washington Humane Society and their misguided friends throughout the country. The result showed that when exercised in a humane cause the influence of the medical profession was a factor which would not be ignored even by the Senate of the United States. Dr. Sternberg then passed in rapid review the principal discoveries in the etiology of disease, in therapeutics, and in preventive medicine made in recent years, and concluded by insisting that there was no room for creeds and "'pathies" in medicine, any more than in astronomy, geology, or botany. No restriction was placed upon any physician who graduated from the regular schools as to the mode of treatment he should pursue in any given case. If he saw fit to prescribe a bread pill or a hundredth trituration of carbo vegetabilis, there was no professional rule of ethics to prevent him from doing so. But if his patient died from diphtheria because of his failure to administer a proper remedy, or if he recklessly infected a wound with dirty fingers or instruments, or transferred pathogenic streptococci from a case of phlegmonous erysipelas to the interior of the uterus of a puerperal woman, it would appear that the courts should have something to say as to his fitness to practise medicine.

Report of the Rush Monument Committee.

Dr. A. L. Gihon, chairman of the Rush Monument Committee, reported that in spite of the fact that at the last meeting of the Association held in Philadelphia, it had been decided that $100,000 should be raised for the erection of a fitting monument to America's great patriot physician, he had so far received only $162, or one-sixth of 1 per cent. of the amount pledged. This sum, together with the interest accruing on what was already on hand, had made the total increment $312, and the total amount of the fund $4,424 44 cents. Colorado and New York then contributed $2,000 each to the fund. Pennsylvania signified its willingness to contribute $2,000 when the contract for the monument had been made; Maine added $100; Ohio $336; California $110, and $1,000 more at the time of commencing the actual work of the monument; and Indiana reported about $500 already collected, but desired to do still better before reporting finally. These additions, counting those given both conditionally and unconditionally, brought the total sum to $12,460 44 cents.

Financial Report.

The report of the Treasurer was read by Dr. Henry P. Newman, of Chicago, who congratulated the Association upon its constantly increasing growth and prosperity. The year which closed on January 1st, 1898, added 1,500 new members, and during the same time the Association had erased from its books the names of only 75 members for non-payment of subscriptions. The receipts during the time for which he had the honour of being its treasurer had increased from $12,685.58 (about £2,537) in 1894 to $32,200 (£6,440) in 1897. The balance in hand on January 1st, 1898, was $14,092.85 (about £2,812), with a sinking fund of $3,000 (£600).

Second General Session.

Resolutions.—At the second general meeting, Second Vice-President Thompson in the chair, Dr. Dudley S. Reynolds, of Louisville, presented a resolution to the effect that after January 1st, 1899, any college professor or other teacher who shall confer any degree upon any person not complying with the standards of the American Medical Association regarding educational requirements shall hereafter be excluded from meetings of the Association. This was referred to the Executive Committee.—A resolution moved by Dr. W. W. Keen, of Philadelphia, favouring vivisection for purposes of experimental research, was referred to the Executive Committee.—Dr. George M. Gould, of Philadelphia, presented a resolution, the purpose of which was to encourage the establishment of medical libraries throughout the United States.—Dr. William Bailey, of Louisville, introduced a resolution to the effect that an office of general secretary be created, with a salary not to exceed $2,500 or $3,000 per annum. The Association had grown to such proportions that the services of at least one salaried man were required, who would devote his entire time to its interests. By this resolution the present Secretary (Dr. Atkinson) would be retained as an honorary officer. The resolution was referred to the Executive Committee.—Dr. H. W. Saunders, of Alabama, recommended in a resolution that the Association take steps leading to the establishment of a public health bureau, having its representative in every city and town in the land, and an executive head in the National Government.—Dr. Humiston, of Ohio, read a report adopted by the Ohio State Medical Society regarding the Antivivisection Bill, and recommending that in addition to other committees being named, one should be composed of residents of Washington, Philadelphia, and Baltimore. Under

this arrangement there would be the assurance of prompt attendance of committeemen whenever the Bill referred to came up.

Election of Officers.—The Nominating Committee recommended the following for election as the officers of the Association for the ensuing year:—*President:* Joseph M. Mathews, of Louisville; *First Vice-President:* W. W. Keen, of Philadelphia; *Second Vice-President:* J. W. Graham, of Denver; *Third Vice-President:* H. A. West, of Texas; *Fourth Vice-President:* J. E. Minney, of Topeka; *Treasurer:* Henry P. Newman, of Chicago; *Librarian:* George W. Webster, of Chicago; *Chairman of Committee of Arrangements:* Stirling Loving, of Columbus, Ohio. Place of Meeting: Columbus, Ohio.

THE ADDRESS ON MEDICINE.

Dr. J. H. MUSSER of Philadelphia delivered the general address on Medicine, taking for his subject "The Essential of the Art of Medicine." After reviewing the history of medicine in the eighteenth and the earlier years of the nineteenth century, he said it had now grown to be a science—a department of the science of biology. This progress was effected by the labours of physicians who were naturalists. The scope and positiveness of diagnosis had greatly increased, as fifteen diseases could now positively be recognised without any possibility of error. Diagnosis had grown to be scientific, precise, and positive. Error in method led to error in diagnosis. Therapeutics grew to a science by the influence of various forces, all the outcome of the mode of thought of the naturalist. The science of statistics showed the fallacy of determining the value of a drug from a small number of cases in which it was tried. Analysis of 12,000 prescriptions had shown that various drugs were called for about 31,000 times, and preparations of nux vomica, iron, opium, mineral acids, cinchona and its salts, mercury, ipecacuanha, bismuth, belladonna, arsenic, squills, hyoscyamus, and digitalis were called for in one-third of the total, and if external remedies and excipients were excluded, in one-half. Scepticism arose because too much was claimed. The more incurable the disease the greater the number of drugs claimed to cure it. Since the science of medicine was essential to the art we must educate our students to a scientific habit of thought.

LITERARY NOTES.

MESSRS. J. AND A. CHURCHILL announce the following new works: *Ovariotomy and Abdominal Surgery*, by Mr. Harrison Cripps; and *A Treatise on the Mental Affections of Children: Idiocy, Imbecility, and Insanity*, by Dr. W. W. Ireland. The same firm also announce second editions of the following works: *A Simple Method of Water Analysis*, by Dr. J. C. Thresh—a section on Sewage Effluents has been added to the work; *Lectures on Medicine to Nurses*, by Dr. Herbert Cuff, Medical Superintendent at the North-Eastern Fever Hospital, Tottenham—the book is now enlarged by lectures on Dropsy and on Diseases of Children; *The Attendants' Companion*: a Manual of the Duties of Attendants in Lunatic Asylums, by Dr. Charles Mercier. Messrs. Churchill will also shortly issue the ninth edition of Valentin's *Practical Chemistry, Qualitative and Quantitative Analysis*, by Dr. Hodgkinson, Professor of Chemistry in the Royal Military Academy, Woolwich.

In honour of the silver jubilee of Professor Durante's incumbency of the Chair of Surgery in the University of Rome, a number of his former assistants and pupils some years ago formed themselves into a Committee, under the presidency of Professor A. D'Antona, with the object of issuing a collection of monographs on the model of the German *Festschrift*. The work, to which, besides Professor Durante's pupils, many prominent surgeons, Italian and foreign, have contributed, has now been completed. It forms three large volumes, comprising more than 60 monographs, with more than 500 illustrations and 12 chromolithographs. Among the Italian contributors are Professors D'Antona, Ruggi, Postempski, Ceccherelli, Maffucci, Tricomi, Caselli, and Pacinotti. Among the foreign ones are Drs. W. W. Keen, W. G. Spiller, A. Broca, A. Chipault, and P. Berger. The work, which has been prepared under the supervision of Professors Roncali, Alessandri, Margarucci, and Morelli, is described as a triumph of Italian typographic art.

The *Sei-I-Kwai Medical Journal*, which is published by the Society for the Advancement of Medical Science in Japan, is a meritorious publication, from which we have more than once quoted. One part of each issue is in Japanese, which we have no doubt is of the most classical purity. Another part is in English, which in the editorial deliverances is often too clearly of native manufacture. Here is a specimen:

> Diseases of the animal sphere (or the nerves, senses, and muscles). Regarding Japanese pathological constitution, the writings of medical and ethnographic authors are not lacking in general remarks which are meant to express in the usual sense.....It would also be an essential task of the surgeon to separate such casings of the treatment of wounds as really are due to constitutional causes, from the consequences of the possibility that perhaps the causes of infection working against the healing art is some way different extra European countries.....The spleen is all malarial, typhus, variola diseases, and in those called και ε'ξοκην splenetid diseases, the seat of strong swelling and all corresponding symptoms. Let us observe here that unusually great swellings of the spleen are seldom found, either in *post-mortion* or clinical examination.

We venture to advise our excellent contemporary to engage the services of an English editor.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

THE VACCINATION BILL.—Sir Walter Foster's amendment to allow persons to make a statutory declaration of conscientious objection to vaccination, and thereby escape penalties for non-compliance with the Vaccination Acts, was debated all day on Friday last week, and was divided upon only just before the adjournment for luncheon on Tuesday. It was then rejected by a majority of 2 only, in a full Committee, the numbers being 26 to 24. It was strongly supported by Sir C. Dalrymple, the only member of the Royal Commission now in the House of Commons, and by 3 out of the 4 medical men on the Grand Committee. Sir C. Cameron and Dr. Clark spoke in its favour, and Sir William Priestley, who voted against it, met the amendment half way by suggesting that a statutory declaration should be accepted after the infliction of one penalty. The main argument of the President of the Local Government Board against the amendment was that it would lead to a wholesale system of statutory declaration, and so practically abolish vaccination. The reply was that he underrated the value of the proposals of the new Bill, and that by means of domiciliary vaccination and the introduction of calf lymph so much of the opposition would be allayed that when prosecutions ceased, and martyrs were no longer made, the agitation against vaccination would die out. Mr. Chaplin admitted that some 30 per cent. of the children born escape vaccination under the existing law, and if this be the case under Acts which permit repeated penalties, it is difficult to understand how the retention of two penalties will prove more effective. If domiciliary vaccination and calf lymph are to beget improvement, then it was contended they will do this not less, but even more effectively, if a conscience clause existed. The decision of the Grand Committee by a majority of two, which is an extremely narrow margin for the Government, is much to be regretted in the interests of vaccination. The proposals to vaccinate school children at 5 years of age who had not previously been vaccinated, and to introduce revaccination at 12 years, are rendered impossible by the attitude of the Government. Under the protection of a conscience clause such proposals might have been introduced. The general opposition to the Bill will also be much increased, and as a number of the ordinary supporters of the Government are disappointed at the attitude of Mr. Chaplin, the Grand Committee stage is not likely to be either short or smooth. At least two more days will be required for the remaining amendments, and it is possible that the Bill may not be reported till the end of next week.

THE LONDON UNIVERSITY COMMISSION BILL will be considered in the Grand Committee on Law when the Inebriates Bill is disposed of. The feeling is growing that the Committee stage will not be very prolonged. The following members have been added to the Grand Committee for the consideration of this Bill: Mr. Bryce, Mr. Cornwallis, Mr. Cozens-Hardy, Lord Edmond Fitzmaurice, Sir John Gorst,

Mr. Harwood, Mr. Brynmor Jones, Sir John Lubbock, Sir Wm. Priestley, Mr. Richards, Mr. Edmund Robertson, Sir Albert Rollit, Sir Barrington Simeon, Mr. W. F. D. Smith, and Mr. Yoxall.

THE HABITUAL INEBRIATES BILL stands next for consideration after the Vaccination Bill in the Grand Committee. It is probable that the Bill will not be reached next week, but the additions to the Committee have been made, and consist of the following fifteen members, namely, Lord Balcarres, Mr. Biddulph, Sir C. Cameron, Mr. Jesse Collings, Sir Walter Foster, Sir Cameron Gull, Mr. Hazell, Mr. Maurice Healy, Sir W. Houldsworth, Mr. Heywood Johnstone, Sir Wilfrid Lawson, Sir Elliott Lees, Mr. Samuel Smith, Sir Mark Stewart, Mr. H. J. Wilson.

Captain Norton asked the Under-Secretary for War if he could state whether there were sufficient army medical officers in the United Kingdom to meet the full requirements of two army corps upon a war footing without denuding the military medical establishments of the United Kingdom of their entire executive staff, and thus disorganising the Army Medical Service both at home and abroad. Mr. Powell Williams, in reply, said the Army Medical Staff when in full strength was fully adequate for two army corps, though recently it had not been at its full strength. It must, however, be remembered that in case of general mobilisation, there was a reserve of 268 medical officers who could be called upon.

MEDICO-LEGAL.

DOCKRELL v. DOUGALL.

A REPORT of this case (which was heard in the Queen's Bench Division before Mr. Justice Ridley and a common jury on May 26th and 27th) was published in the BRITISH MEDICAL JOURNAL of June 4th. It was an action for damages, and for an injunction to restrain the defendant from further publishing the alleged libel, and from distributing circulars imputing to the plaintiff that he prescribes or uses "sallyco" as an habitual drink.

The plaintiff is a physician, and the defendant is the proprietor of a recipe for a mineral water known as "sallyco," and trading as "The Sallyco Company."

As reported in the JOURNAL of June 4th, the jury returned a verdict for the defendant, but judgment was reserved for further consideration upon the plaintiff's application on a point of law.

The case came before Mr. Justice Ridley for further consideration on June 16th.

Mr. Blake Odgers, Q.C. (Mr. Brooke Little with him), for the plaintiff, argued that the plaintiff's name was used without his authority or consent, and that it was used to advertise a mineral water in which the defendant was interested, and that such use of the plaintiff's name without his leave, to his detriment, for the purpose of advertising this drink, was an unlawful act which his lordship had power (wholly apart from the finding of the jury as to whether it was a libel or not) to restrain by an injunction; and he cited the cases of Lord Byron *v.* Johnson, decided in 1816, Routh *v.* Webster (10 Beavan), Clark *v.* Freeman (11 Beavan), and the Springhead Spinning Company *v.* Riley (L. R. 6 Equity). Further, that a man had a property in his own name, and was entitled to an injunction to restrain any other man using his name to his detriment for the other's benefit. That evidence of eminent medical men had been given to show that for the plaintiff's name to appear on a leaflet advertisement in connection with a secret remedy would be detrimental to him and injure his social standing.

Mr. Witt, Q.C. (Mr. Ernest de Witt with him), argued for the defendant that the mere use of a person's name could not be the subject of an action, and he cited the case of Du Boulay *v.* Boulay, 2 Privy Council Appeal cases. The right to the exclusive use of a name in connection with a trade or business was familiar to our law, and any person using that name after a relative right of this description has been acquired by another, is considered to have been guilty of a fraud, or at least of an invasion of another's right, and renders himself liable to an action, or he may be restrained from the use of the name by injunction. But for the mere assumption of a name our law affords no redress. The true proposition was this, that there was no jurisdiction to grant an injunction to restrain the use of a man's name except in two cases: one where the user of it tended to injure his property; and the other where it tended to injure his reputation.

Mr. Justice Ridley, in giving judgment, said that the case was really one of libel, but he had also been asked to grant an injunction to restrain the defendant from using the plaintiff's name, because the defendant had not obtained the plaintiff's consent to use it, and the use of it was said to be detrimental to the plaintiff. He did not think that that was a sufficiently accurate proposition. Mr. Witt had stated as accurately as they could get it the lines which ought to be followed, namely, that the publication must tend to injure either the property or the reputation of the plaintiff, to entitle him to an injunction. Now in this case it did not injure his reputation, because the limit of that was clearly found in the law relating to defamation, libel, and slander. The jury found that there was no libel and there was no right of action in that respect. Now did it injure his property? He thought not not in any sense in which he could follow the words. This case seemed to him to be simply a case of libel in respect of which the defendant had succeeded in obtaining a verdict, and therefore he ought to have the verdict and judgment in the case with costs.

PROSECUTION UNDER THE LUNACY ACT.

DR. ERNEST NOEL REICHARDT, of Ewell, was, according to the *Daily Chronicle*, prosecuted on June 18th, before the Epsom Bench, at the instance of the Commissioners in Lunacy, for certain offences under the Lunacy Act. Mr. Bodkin, for the prosecution, said that the issue before the Bench was—Did the defendant, for payment, take charge and receive for board and lodging, or detain, a lunatic in an unlicensed house? If he did, there was a *primâ facie* case, which, with the assent of the legal representatives of the defendant, he would like sent to the Central Criminal Court in order that the matter might be determined by a judge and jury. The Bench assented, and the case will be tried at the October sessions of the Central Criminal Court.

FOREIGN DEGREES IN GREAT BRITAIN.

WE learn from the *Times* that John Hamilton, of Bedford Avenue, Tottenham Court Road, appeared at Bow Street Police-court, before Mr. Lushington, on June 17th, to answer two summonses for falsely pretending to and using the title of Doctor of Medicine, he being an unregistered practitioner. Evidence was given by a medical student that he visited the defendant at his advertised address, and paid him two guineas for medicine. On the door was a brass plate, bearing the words "John Hamilton, M.D., New York." Mr. Muir Mackenzie, who supported the summons on behalf of the General Medical Council, argued on decided cases that the fact that the defendant held a diploma granted in another country did not entitle him to practise as an M.D. in England. Mr Morton Smith, who defended, stated that the defendant had not described himself as other than he was, and pointed out that two previous prosecutions against him had failed. Mr. Lushington dismissed the summons, and stated that there was no evidence to show that the defendant had used this title to deceive. He allowed the defence three guineas costs.

In commenting upon this case, the *Daily Graphic*, after stating that technically it is difficult to dispute the justice of the decision, adds that in reality it seems to militate against the whole spirit of our medical legislation. The broad principle which ought to be upheld is the necessity of a British licence to practise. If once, our contemporary continues, "we travel outside that principle we open the door to all sorts of play upon the ignorance of the public. The New York doctorate may be as sound a qualification as any under the sun, but it would not of itself confer a licence to practise in any other State of the Union except New York; wherefore, *a fortiori*, it ought not to confer such a licence in this country. If the law is as Mr. Lushington finds it to be, it ought to be amended with all convenient speed."

THE CERTIFICATION OF LUNATICS IN IRELAND.

DR. A., the medical officer of an Irish dispensary district, was called upon by a police constable to attend at the police barrack some miles distant to examine a lunatic. He arrived there accompanied by a magistrate, B., about an hour later. He then found that another magistrate, C., had in the interval sent for Dr. D., the head officer of a neighbouring dispensary district. Dr. A. claimed his right to examine and certify as to the mental condition of the prisoner, but notwithstanding Dr. D. was employed, and of course got the fee. Dr. A. asks us to reply to the following questions: (1) Was A. right in claiming that he was the proper medical man to examine and certify for the patient? (2) Had C. acting alone power, even if A. was not available to call in D.? (3) Did D. act properly in examining and certifying for the patient? (4) Did A. act properly toward D.? Dr. A. asks our advice as to how he should act in similar circumstances.

*** 1. The answer to this question must be in the affirmative.

2. The 30 and 31 Vic., cap. 118, is the Act regulating the procedure in these cases: It says: "Whenever any person shall be brought before two justices, and it shall be proved to their satisfaction that such person was discovered under circumstances denoting a derangement of mind.....the said justices shall call to their assistance the medical officer, or if there be more than one, the nearest available medical officer of the dispensary district in which they shall be at the time, and if there shall not be any such available then the nearest available medical officer of any neighbouring dispensary district, etc." According to this Act, the court for the committal of a dangerous lunatic must be constituted by two justices sitting together, and they must call, in the first instance, the medical officer of the district in which they then are. We are therefore clearly of opinion that it was *ultra vires* on Mr. C.'s part to summon Dr. D. from a neighbouring district, and that Dr. A. being present, Messrs. B. and C. were bound by the Act to direct him to examine the prisoner.

3. Yes; if the two justices sitting together ordered him to do so he was bound to comply.

4. We consider that he did. We should advise him to place the facts of the case before the Irish Medical Association, who will fight it for him. It is a case to be brought before the Lord Chancellor in proper form.

On behalf of the magistrates it must be said that, owing to the peculiar provisions of the Irish lunacy laws, they have often to travel long distances and wait for hours in out of the way police barracks before the two justices and the medical officer of the district can be assembled to dispose of the prisoner.

PRINCIPAL AND ASSISTANT.

W. L. M.—We understand that our correspondent's assistant agreed to act as such for a given period—namely, till the end of July. This being so, we think our correspondent would be quite justified in declining to pay anything in respect of the broken period of three weeks. We assume, of course, that the absence of the assistant has not really been caused by illness or accident. If the engagement were weekly only, our correspondent's right might have to take the form of a counterclaim for damages.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1898.

SUBSCRIPTIONS to the Association for 1898 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office Orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 25TH, 1898.

DEEP WELL OR FILTERED RIVER WATER?

MR. A. H. SMEE, the Chief Medical Officer of the Gresham Life Assurance Society, is well known for the indefatigable manner in which he has associated himself with the advocacy of the urgent necessity for further precautions in connection with water supplies, especially those derived from deep wells in the chalk. He has published recently a statement of the death-rates of various English and other towns from enteric fever during 1896 and the first three quarters of 1897, and has supplemented these by a statement of the death-rate from enteric fever in the different parishes of London for the ten years 1881-90.

These statistics are certainly important, inasmuch as the main inference drawn from them is that "in the towns which derive their water supply from rivers, and this has been efficiently filtered, the mortality from fever is less than from towns obtaining their water from either moorlands or chalk. This shows that proper storage and filtration of river water and the action of air and light have a remarkable effect in reducing the risk of fever." Among the towns deriving their water supply from the chalk, Mr. Smee instances the following death-rates from fever per million living in 1896: Hull, 280; Norwich, 193; Epsom, 190 (mean of 10 years); Portsmouth, 153. Among towns receiving their supply from upland and moorland surfaces are: Belfast 560, Dublin 453, Liverpool 322, Glasgow 223, Leicester 203. Among towns supplied by filtered river waters are Hamburg 58, Cologne 49, Frankfort 42, Altona 41, while London, supplied from rivers and chalk, has a death-rate from enteric fever of 137 per million living. Taking the death-rates for the first three quarters of 1897, the results are more discrepant. Thus, Croydon (supplied from deep chalk wells) had a death-rate from enteric fever of 75, Portsmouth (chalk wells) of 185, Birmingham (partly wells in red sandstone and partly upland surface water) 130, London 79, Bradford (upland surface water) 82.

The results, however, it must be agreed, are on the whole consistent with Mr. Smee's contention that communities supplied with drinking water subjected to the action of light and to sand filtration have commonly a lower death-rate from enteric fever than communities supplied with unfiltered water, whether this is derived from upland surfaces or from deep wells. But the case made out by Mr. Smee is only a *primâ facie* case. It requires to be further investigated, in relation to the age constitution of the populations under comparison, and more particularly to the existence in specially anomalous instances of special causes of local aggravation of the death-rate from enteric fever—as, for instance, the occurrence of milk contamination on a considerable scale, or other circumstances materially altering the case. For example, Bristol during the first three quarters of 1897 had the very low enteric death-rate of 56 per million. As it receives its water from springs and deep wells, it evidently does not fit in with Mr. Smee's general rule. Had, however, the statistics for the fourth quarter of 1897 been included, the severe outbreak of enteric fever in Clifton during that quarter, due to accidental contamination of a large milk supply, rapidly controlled as it was, would yet have caused a fortuitous conformity to Mr. Smee's rule. The same remark must apply to other instances. The question raised by Mr. Smee shows the extreme difficulty of separating one item in the life of a community from the other items with which it is associated. That item may be one of prime importance, as water supply, but unless we are prepared to accept as a general induction the possibility that the occurrence of sporadic cases of enteric fever among persons having a water supply common to them and to a large population which remains totally uninfected, may, notwithstanding the sporadic distribution of the cases, be due to this common water supply, it is difficult to accept in its entirety the contention urged by Mr. Smee. The higher death-rates in certain towns or districts having a higher social status appear to fit in better with the notion that such populations more often partake of certain infected articles of food than others of a lower average social status. It is not impossible that the consumption of sewage-contaminated oysters and other shellfish is an appreciable factor in the case.

Mr. Smee's statistics for the 30 London districts for 1881-90, show the difficulty of arriving at a definite conclusion from average death-rates. Thus, while the whole of London had a death-rate from enteric fever of 185, that of the City (New River water) was 460, at the top of the scale; of the Strand (New River and Chelsea water) 380, of Greenwich (Kent deep chalk wells) 260; the death-rates at the lowest end of the scale being in St. George-in-the-East (East London river water) 120, Lewisham (Kent Well) 120, Kensington (West Middlesex river water) 100, and Woolwich (Kent Well) 100.

It is evident that, as Mr. Smee agrees, "other considerations must be taken into account besides the source of supply." The whole subject requires further investigation. It would be absurd to set up a general rule that river water once polluted by sewage and subsequently efficiently filtered through sand is preferable to water derived from deep chalk wells. The price of safety in both instances alike is constant vigilance. In both alike frequent bacterioscopic and chemical examinations of the water are desirable, and it is still more desirable that the sources of supply should be subjected to minute and systematic inspection embracing the whole of the water-bearing district. Such inspection, however, unless there is the corollary of legal power to enforce the necessary removal of sources of pollution, is but a bruised reed to lean upon; and it may be hoped that public attention being now directed to the subject the Government will be stimulated to introduce a wide and statesman-like measure dealing with this all-important subject.

CATECHISING THE DOCTOR.

WHAT are the obligations of a medical attendant in regard to supplying information to the coroner (before inquest) as to the cause of death of a patient? This is a question which every medical man must have had occasion to ask himself. The answer in any particular case is generally easy enough. If in any doubt as to the propriety of certifying in the usual way the doctor, knowing that an inquest may be considered necessary, naturally communicates at once, and frankly, with the coroner, giving him all relevant details, in the absence of which the coroner might come to a wrong decision as to the holding of an inquest, a mistake which might involve complications later on.

This course not only relieves the medical man of a responsibility which does not belong to him, but facilitates the prompt and efficient performance by the coroner of his duty towards the community, with a minimum of inconvenience to the relatives of the deceased. If no inquest is held the medical attendant is in no worse position than he would have been if he had certified in the usual way. He has given his information to the coroner instead of to the registrar. In either case we very strongly hold that he ought to receive proper compensation for his trouble. Unfortunately the law makes no provision for this, but it is only fair to bear in mind that whereas the information for the registrar is peremptorily demanded under a smart penalty and without acknowledgment of any kind, the information for the coroner is largely left to the medical man's own discretion, and in a considerable number of cases —perhaps we might say in most cases—where this discretion is wisely used, a not illiberal fee is the result. At the coroner's court a medical witness receives, for what is usually an attendance of half an hour or so, just double what is paid in the police or county court for a case which often keeps him there half the day.

This course, if not laid down in any statute, appears at least to be in accordance with the spirit of the common law. Moreover, in Jervis's *Treatise on Coroners*, a work of recognised authority, we find it laid down that "In all cases of sudden death, or death under any circumstances of suspicion, where the duty of informing the coroner is not by statute imposed upon any particular person, it is the duty of those who are about the deceased to give immediate notice to the coroner or his officer, or to the nearest officer of police, who then communicates with the coroner."

Again, it is an indictable offence to bury or otherwise dispose of a body with intent to prevent an inquest being held, and anyone aiding in the commission of the offence is punishable. It is possible that the doctor's part in the matter might be the subject of very unpleasant inquiries if it came out that he had suppressed information which would have assisted the cause of justice.

But cases must and do occasionally arise in which the medical attendant does not feel bound to go out of his way to give more than the barest statement of material facts. He may have very good reasons for his reticence, and when the coroner's officer presents himself to make inquiries concerning the cause of death, it may require a good deal of tact and good temper to avoid friction. On the one hand it may be of the utmost importance in the public interest that the coroner's officer, who is charged with the duty of reporting all the facts of the case, and securing the attendance of all material witnesses, should be acquainted with the probable cause of death, while it should be understood that this is merely a provisional opinion given under reserve, and in the absence of sufficient data to render it a final opinion. But on the other hand, it can hardly be contended that the medical man is bound to express any opinion, even a provisional opinion. If the officer pushes his inquiries with more zeal than discretion, as will sometimes happen, "catechising" the doctor in his ignorant clumsy way, it is no wonder that the latter sometimes resents it. This, and not any sordid motive, is the explanation of many regrettable collisions between medical men and coroners.

It is needless to say that no honourable man would suppress the truth, any more than he would suggest the false, in order to force on an inquest which the circumstances of the death did not justify. But for his trouble in giving information he ought to be compensated by a fee. Coroners, it is probable, would welcome such an alteration of the law.

"FACTS ABOUT SMALL-POX AND VACCINATION."

THE *Vaccination Inquirer* has been endeavouring to criticise the British Medical Association's recently-issued pamphlet, entitled "Facts about Small-pox and Vaccination." In our contemporary's article there is a suggestion that the task is a pleasant one. The pamphlet, we are told, "serves well to inform" the antivaccinationist "what the enemy at the present moment regards as his strong points," and for this reason "it presents itself as a tempting object of attack." That is the spirit in which the review begins. But in an unexpectedly candid and somewhat petulant note the editor indicates that he found the work of dealing with facts quite uncongenial—as, indeed, might have been prophesied regarding a typical antivaccinationist. He writes that the reply was entered on "not of our own motion, but in deference to a strongly-expressed wish in many quarters, and particularly in one quarter, which ever commands our utmost respect," and that otherwise "we should have preferred to leave this precious production alone," and that the real reply "is contained in the nineteen volumes of the *Vaccination Inquirer*," for indeed "its negligences and ignorances" could not "be properly exposed in any much smaller space." "But," the note concludes, "we have complied with what we found to be a strong wish."

The pamphlet which has caused so much perturbation among the leaders of the League consists of only eight quarto pages, and the suggestion that nineteen volumes might contain an adequate rejoinder is amusingly frank. We have had every reason to believe that the tract is doing good work, and the obvious alarm created by it among the more active followers of Lieutenant-General Phelps confirms our belief. It was printed in the BRITISH MEDICAL JOURNAL of March 5th, 1898, p. 632, and the reprint, which can be purchased at the offices of the British Medical Association, has already been largely circulated.[1] We may advise our readers to obtain a few copies for handing to parents or others who may be willing to give intelligent consideration to so important a subject.

[1] The prices are 6s. 6d. per 100, 10d. per dozen, and 1d. for a single copy.

In the same issue the *Inquirer* provides its readers with a sample of what we suppose it desires them to accept as "facts." Regarding the Vaccination Bill, it writes that "the British Medical Association" is "dissatisfied that the Bill does not provide for the heating of the furnace seven times hotter for the penalising of antivaccinators." It is needless to use strong language regarding this outrageous misstatement, and we content ourselves with quoting as follows from the report of the Parliamentary Bills Committee as adopted by the Council of the Association, signed by the President of the Council, and issued to every member of Parliament. We italicise the words specially bearing on the *Inquirer's* assertion:

(*a*) Revaccination should be provided for at the age of 12 years, *subject to whatever relief as regards limitation or abolition of penalties and allowance for conscientious objection may be granted with regard to primary vaccination.*

(*b*) Children entering on school life, who have not previously been vaccinated, should then be brought under the operation of the law, *subject to relief as above.*

(*c*) If (*a*) and (*b*) are granted, *even single penalties might be done away with* excepting in the case of neglect by a parent to register conscientious objection in such elaborate fashion as might be prescribed by an order of the Local Government Board.

This is what the *Inquirer* describes as "the heating of the furnace seven times hotter for the penalising of antivaccinators."

In a letter to the Secretary of the Tower Hamlets Branch of the Antivaccination League, we observe that Mr. Chaplin, through his secretary, complains of "the utterly misleading statements" contained in the notice calling a meeting at which certain resolutions were passed, and he adds that "some at least of the gentlemen whose names appear on the notice of the meeting must have been well aware of the facts." Again, the President of the Local Government Board, in a letter to the Secretary of the Salisbury Liberal Association, is moved to say that a resolution adopted by that body "affords another illustration of the prevailing ignorance under which opposition to legislation on the subject of vaccination is being carried on." Mr. Chaplin's knowledge of the ways of antivaccinationists is only in its infancy, otherwise he would take "utterly misleading statements" on their part as a mere matter of course. All the same, he will be none the worse for being brought into direct contact with the methods by which the agitation against vaccination is kept alive throughout the country.

THE PREVENTION OF TUBERCULOSIS.

A MEETING of many leading members of the profession in London, both physicians and surgeons, was held on June 22nd to consider whether the time has not come for a public movement having for its object the repression of tuberculosis. Sir William Broadbent, at whose house the meeting was held, said that the questions to be submitted to the meeting were, first, whether the moment was not opportune for the formation of a society to disseminate knowledge as to the modes in which tuberculosis was acquired, to enlist public interest in the adoption of such means, and perhaps especially to promote the establishment of sanatoria; and, secondly, whether such a society should be limited to the medical profession or extended to embrace members of the general public who took, or might be induced to take, an interest in the matter. Mr. Malcolm Morris made a short statement as to the organisations which exist in France, Belgium, and America, with the object of checking the spread of tuberculosis. Dr. Hermann Weber, Dr. J. E. Pollock, and Dr. Theodore Williams expressed the opinion that the time had come for the formation of a society of all persons interested. In this view the meeting concurred, and a resolution to this effect was adopted *nemine contradicente*. Dr. Ransome observed that much had already been done in Great Britain to diminish mortality from pulmonary consumption, and both Professor Corfield and Mr. Shirley Murphy referred to the considerable powers possessed by sanitary authorities, and concurred in the opinion that a society which would arouse public interest would be of great service in strengthening the hands of public-health officers. Dr. Heron observed that it would be very desirable to obtain the co-operation of the chairmen of Boards of Guardians. A small provisional Committee was appointed to make arrangements for holding a public meeting, and after a vote of thanks to Sir William Broadbent, moved by Dr. Holman and seconded by Dr. W. M. Ord, had been adopted, the meeting separated.

DEATHS IN CHILDBIRTH.

THE paper read by Mr. T. A. Coghlan before the Royal Statistical Society on June 21st dealt with a subject on which trustworthy data, so far as the British Empire is concerned, are most scanty. Many years ago Dr. Matthews Duncan published statistics of a somewhat similar kind, based on hospital experience. Those of Mr. Coghlan are based on the wider, and therefore firmer, basis of 105,749 confinements of married women, and the 714 deaths occurring in connection with these, in the three years 1894-96 in New South Wales. In his first table the author deals with the mortality in consecutive confinements up to the twenty-third confinement, of which there were actually two in the Colony during the period under review. From the data thus collected the risk in connection with each confinement among married women can easily be calculated. The risk attending the first birth is greater than that at any subsequent one up to the ninth; the minimum risk would appear to be at the fourth; but the increase of risk after the fourth confinement is probably due, in part at least, to the increased age of the mother. The great bulk of first confinements occur among women of ages from 20 to 24 years, though they are numerous in the three preceding and subsequent years of age. An examination of the first confinements at various ages shows that the risk attendant upon a first birth is at a minimum at the ages of 22 and 23 years, when it is 0.0068, as compared with 0.0238 for instance at the age of 39. When the ages are considered apart from the number of previous confinements, and 9,920 confinements of unmarried women are contrasted with 105,749 confinements of married women, it is seen that the risk of unmarried women in childbirth is greater at every age than that for the married, the disproportion in the risk being greatest at the lower ages. A very interesting table gives the average number of children to women marrying at different ages, the husband's age being assumed to be five years older than the wife's. If a woman marries at the age of 20 years, the total average number of children borne by her is 7.2, if at 21 years 6.8, at 24 years 5.6, at 28 years 4.1, at 32 years 2.9, at 36 years 1.7. From the data in the table just referred to, the probability of a woman surviving all her confinements can be calculated. The table resulting from these calculations shows the importance of age as an element of the risk at confinements. Thus, notwithstanding that a woman marrying at age 20 has, in the experience of New South Wales, on the average 7.22 confinements, and that the average for a woman marrying at age 40 is 0.75, the risk of dying of the former is not quite twice that of the latter. The following facts also can be deduced from the last table. On an average 1 woman out of 23 who marries at age 20 will die in childbirth; 1 in 32 if the marriage is at

age 25; 1 in 39 at age 30; 1 in 43 at age 35; and 1 in 42 at age 40. This brief summary does but scant justice to Mr. Coghlan's paper, which is important to obstetricians and to statisticians. We are glad to note the admirable use which is made of curves in correcting irregularities of the ratios, and thus producing a more natural and a truer series of results.

THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS IN PARIS.

The first International Medical Congress was held in Paris in 1867 under the presidency of Professor Bouillaud. Once again the Congress will be held in Paris from August 2nd to 9th, 1900, and the President is the distinguished surgeon, Professor Lannelongue. The Secretary-General is Dr. A. Chauffard, 21, Rue St. Guillaume, Paris. An official communication has been addressed by these gentlemen to Sir William Mac Cormac, asking him to form an English national committee. The President and Secretary express the hope that England will take a large place in the proceedings of the Congress, which they believe and expect will be a great success. It is announced already that the President of the French Republic will take part in the proceedings, and that probably he will preside at the opening ceremony. It is clear that our French colleagues intend to spare no effort to make this meeting one of the most successful which has ever taken place. We understand that Sir William Mac Cormac intends shortly to summon a meeting in London of those interested in the approaching Congress in order to carry out the request of the President and Secretary of the Congress as to the organisation of an English committee. The time and place will be announced later, but our friends across the Channel desire that the committee should be organised if possible before August 1st.

THE REBUILDING OF UNIVERSITY COLLEGE HOSPITAL.

On June 21st the Prince of Wales, who was accompanied by the Princess, laid the foundation stone of the new buildings at University College Hospital. The erection of these has, as is well known, been rendered possible by the munificence of Sir J. Blundell Maple, whose donation of over £100,000 will enable a building to be constructed, sufficiently large to accommodate 300 patients, and fitted with all the apparatus of modern medicine and surgery. The Prince and Princess were received by the Duke of Bedford, President of the Hospital, and a Reception Committee, conspicuous among whom were the veteran Consulting Physician and Consulting Surgeon to the Hospital, Dr. Hare and Sir H. Thompson. Various presentations having been made, the Duke of Bedford thanked His Royal Highness for his attendance, and called upon Mr. Henry Lucas, Chairman of the House Committee, to read a brief historical statement relating to the hospital and its rebuilding. In his reply, the Prince of Wales referred, first, to the gift of Sir J. B. Maple as the largest that had been made to a London Hospital since the seventeenth century, when Thomas Guy endowed the institution which bears his name. The needy of the locality had great reason to be thankful that the donor who was so anxious for their welfare lived within their midst, while the prosperous should emulate his generosity by their liberal support of the hospital which he is building. The Prince proceeded to point out the value of the institution to the large working-class population of the vicinity, and its special usefulness owing to its position near the termini of three great railway companies. He spoke further of its work as a medical school, instancing among its most distinguished pupils Sir William Jenner, to whom he referred as his old friend, and one of the most eminent physicians of the nineteenth century. There could be no doubt that the completion of the new building would result in improved facilities for the training of students, greatly to their own benefit and the ultimate profit of the public. Sir J. Blundell Maple expressed the hope that the hospital might be of use to those in sickness and in trouble, while at the same time affording opportunities for the training of medical men, who would do good work throughout the length and breadth of the land. He then invited the Prince of Wales to lay the stone, and Mr. A. Waterhouse, R.A., the architect of the building, handed him the customary implements. After the block of granite had been declared well and truly laid, a hymn was sung by the choir of St. Pancras Church, and the proceedings terminated with prayer offered by the Bishop of London.

A NEW STREET FROM HOLBORN TO THE STRAND.

Yet another scheme for carrying out this much-discussed and much-needed improvement has been prepared by the Improvements Committee of the London County Council, and will be submitted to the Council for its approval. The Committee, of which Mr. Shaw-Lefevre is chairman, propose to carry a 100-feet street from Southampton Row, which, passing rather to the west of Lincoln's Inn Fields, will give access to a crescent with two outlets to the Strand, the western extremity entering that thoroughfare opposite Wellington Street and the eastern extremity in the neighbourhood of the Law Courts. The fact that Parliamentary sanction has already been obtained for the clearance, under Part I of the Housing of the Working Classes Act, of certain insanitary areas situated in the line of the proposed street, and for the removal of the buildings between Holywell Street and the Strand, renders it important that there should be no further delay in carrying into effect in its entirety a scheme for improving the means of communication in this locality. The development of the insanitary areas to be cleared obviously depends upon the decision arrived at with regard to the street improvement, and the enhanced value which the alteration already determined upon may give to property which must at some time be acquired at the public cost, makes it desirable that there should be no further delay in coming to a decision as to the line the new street shall take and obtaining the necessary powers of purchase. It is estimated that the cost of the improvement will be £4,442,500, but sites upon the new street will be so valuable that recoupment so far as the greater part of this sum is concerned is anticipated, leaving a net cost of only £354,200. To this will have to be added £120,000 for making the street, etc., and £150,000 for rehousing persons of the labouring class displaced, making a total cost of £624,200, or about three-sixteenths of a penny in the pound on the county rate. It is possible that the expenditure may be to some slight extent reduced should the Council obtain a betterment clause in its Bill; but having regard to the magnitude of the improvement to be effected, the cost as given above cannot be regarded as excessive, and should not stand in the way of the carrying into execution a scheme so fraught with benefit both to Central London and to London as a whole.

CASTE AND PUBLIC HEALTH IN INDIA.

It is only too true that in India to-day the efforts made by the more enlightened members of the municipal councils to preserve the public health are in great part rendered futile by the opposition of the uneducated portion of the native population, which is mainly due to the unfortunate idea that sanitary measures are inimical to caste. Surgeon-Lieutenant-Colonel W. G. King, Sanitary Commissioner for Madras, in an address delivered to the graduates of the University of Madras, has lately discussed very opportunely this calamitous theory. He showed from the Hindu sacred books themselves that not only is sanitation quite compatible with caste, but that caste is a system whose object is the preservation of the public health, that the laws of Manu and the edicts of Vishnu were actually founded on a hygienic basis. But unfortunately

they were written in Sanskrit, which for generations has been only imperfectly understood by the majority, and so tradition has handed down a version the letter of which is in many instances contradictory to the spirit of the original law. Most explicit instructions, for example, were given in the Shastras to avoid all contamination of drinking water, and yet to-day the uneducated will drink fouled water provided the contamination has not been effected by a person of another caste. It is a cheering sign of the times, however, that in some of the more important places of pilgrimage it is no longer considered reverent for the devotees to descend into the sacred tanks except with cleansed bodies and wearing clean clothing. Much of the disturbance associated with the recent visitation of the plague has depended on the idea that the processes of isolation and disinfection were subversive of caste. But essentially similar precautions are a prominent feature in the system laid down in the sacred books; for, just as in the case of the early Jewish social regulations and with the same object, the observance of a stated number of days of purification is enjoined after events and acts occurring in a household that involve a risk of contamination, together with disinfection of infected clothing and articles of domestic use. Detailed instructions are given in the Shastras to purify some articles by dry heat, others by boiling, some by alkalies or acids, some by exposure to the air, and some by burial for definite periods. The vital processes of evolution are always slow and rarely conspicuous, while racial feeling is extremely sensitive; yet we anticipate that the dangerous error now prevalent among the uneducated of India will before long disappear, mainly through the disinterested efforts of the enlightened men and women of their own fatherland. The religious bias is confessedly one of the strongest factors in moulding the opinions and conduct of men of all races, yet we may derive a certain grim hopefulness in regard to India from the recollection that even in our own country a witness in a court of law is, as it would appear, hardly considered duly prepared to tell the truth, the whole truth, and nothing but the truth, until he has applied his lips to the more or less unclean cover of a particular volume of a greatly revered book; and that it is not so very long ago since epidemics of preventable disease were ascribed to Providence, and aroused nothing more effective than a weak resignation.

AN UNUSUAL COMPLICATION DURING ANÆSTHESIA.

THE occurrence of epileptiform seizures under an anæsthetic is not very rare, but a fatal result following upon it is happily very uncommon. Snow recorded a case of tetanus in which he administered chloroform, but, although he pushed the anæsthetic to as deep a degree as seemed safe, no relaxation of the jaw muscles could be obtained. This patient died twelve hours later. The same observer found that in patients who were the subjects of epilepsy the inhalation "very rarely" produced any approach to a fit. When given during an epileptic seizure, Snow found the convulsions ceased. In certain cases spasm of the glottis has been believed to have resulted in death, and to have been caused by the pungency of the vapour of the anæsthetic presented to the patient. But such instances as have been recorded are probably not in any sense a true spasm of the glottis, leading to asphyxia. It has been shown that the glottis, although momentarily set in spasm, practically always in the case of chloroform relaxes, and death, if it results at all, does so from the specific action of the drug. Apart from these epileptiform conditions, another of a far graver and more significant character was pointed out as occurring in the historic case of Hannah Greener, the first recorded instance of death under chloroform, which occurred on January 28th, 1848. The symptom referred to is a slight struggle occurring just before the fatal result; this commonly takes place suddenly, and when consciousness seems hardly to have been lost. In Snow's experiments he found that a similar shuddering struggle was produced in the lower animals by giving them chloroform by inhalation in concentrated vapour. In this case also the spasm or struggle occurred before insensibility had supervened. In a case which occurred in the Cottage Hospital at Ross, the patient, according to the report of the inquiry published in the *Hereford Times*, was an alcoholic subject, aged 30, who was being anæsthetised preparatory to an operation upon his knee. A mixture of two parts of ether and one of chloroform was being given from an inhaler. As soon as the inhaler was applied, violent struggling commenced and persisted, although the inhaler was withdrawn, and in less than four minutes the man died. The patient's father stated at the inquest that his son had previously had a similar "fit," and during it grew stiff and rigid. At all events all attempts to restore respiration failed. Such a mixture from an inhaler is a possible cause of giving an overdose, especially during struggling. It would be interesting to know if tracheotomy was done, and if it was successful in allowing air to enter the lungs. The man appears to have been in a very bad condition at the time of the occurrence.

A MEDICAL DUEL.

A DUEL between two members of the medical profession has recently taken place in Paris. Dr. Jean Charcot, son of the famous physician to the Salpêtrière, considering the memory of his father insulted by an article written by Dr. Lagelouze in the *Opinion Médicale*, challenged the writer. The duel came off on June 9th, the weapon used being the sword. M. Charcot "received on the upper part of the thenar eminence a button-hole wound 4 centimetres long, making it impossible for him to go on." Honour was declared to be satisfied, and all ended happily. A formal protocol was drawn up in which the circumstances of this terrific combat were set forth in detail with a solemnity worthy of the occasion. How so absurd a manner of settling a dispute can continue to exist among a people with so keen a sense of the ridiculous as the French it is difficult to understand. We have every sympathy with M. Charcot's veneration for the memory of his illustrious father, but he surely might find a better way of showing it than by getting a scratch on the ball of his thumb. Even the famous puncture of the integument of a royal abdomen was more of a satisfaction to honour than this. We venture to suggest that members of our profession who fall out should fight, if fight they must, in some manner likely to advance science. The hypodermic syringe occurs to us as a natural weapon. They might try upon each other the effect of the latest antitoxic serum; in such a contest almost as much blood would be drawn as in an ordinary French duel, and honour would be satisfied in a manner not less heroic.

CONVALESCENT SOLDIERS.

WE trust that Captain Norton, M.P., who has shown great interest in several matters connected with the soldier, will meet with success in obtaining some definite promise from the Government in respect of provision for the convalescing soldier. Mr. Brodrick's reply to Captain Norton in the House that a convalescent home at Eastbourne exists (where there are only 16 beds!) can scarcely be considered sufficient in the face of the facts and figures. It appears indeed to be admitted that there is practically an absence of suitable and adequate provision in the form of convalescent hospitals or homes by the War Office for the requirements of soldiers convalescing from acute diseases. It is desirable that steps should be taken with the view of obtaining for the convalescing soldier the advantages of fresh bracing air. The alternatives are to establish military convalescent hospitals, or to secure an arrangement with the governors of existing civil convalescent homes to take a certain number of soldiers at a fixed weekly charge. For patients fairly strong, who may require short periods of change of air, barrack accommodation at certain stations should be utilised. With an average of 64,395 admissions to hospital in the United Kingdom (England, Wales, Scotland, and Ireland);

an invaliding list of 2,173, and a constantly sick rate of 3,844.93,[1] there must, of course, be a number of men requiring the invigorating air of a seaside or mountain resort to re-establish perfect health and fitness for duty. Such cases do not benefit by detention in military hospitals beyond a certain period; and to detain them absorbs accommodation already insufficient in many garrisons for the needs of the ordinary sick-rate. A convalescent list in military life is not sanctioned by regulation, and is, more or less, looked on by commanding officers as an encouragement to schemers; the fallacy of this is apparent. The disposal of soldiers dying from incurable disease is intimately associated with the arrangements for those convalescing from acute diseases, and both were embraced in Captain Norton's question on the 14th.

THE ROENTGEN RAYS IN SURGERY.

The outrage at the German Embassy presents several points of interest from a surgical point of view. The slightness of the obstacles which sometimes prevent a bullet doing serious injury was illustrated by the fact that the bullet fired at the policeman was stopped by a notebook in his breast pocket. In the case of Count Arco Valley also the first bullet fired at him struck him over the spinal column, but must have been turned aside by a button or some other hard substance as only a bruise was inflicted. The second bullet entered the buttock. Mr. Waterhouse examined the wound, but even the telephone probe failed to reveal the bullet. Dr. Mackenzie Davidson then took skiagraphs to determine its position, and the measurements, as well as inspection of the skiagram in the stereoscope, showed that the bullet lay at a depth of 2 inches from the surface. The skiagrams showed further that the bullet had been deflected so greatly that its rounded front pointed towards the surface of the body. The patient has made satisfactory progress and it has not been considered advisable to recommend the removal of the bullet.

DEFUNCT PAUPERS AND SENTIMENTAL GUARDIANS.

It is a curious coincidence that on both sides of the Atlantic there should be at the present moment an outcry—in each case, it is true, small, but distinct—against the disposal of unclaimed bodies by handing them over to medical schools for dissection. In this country, at least, one had hoped that this question had been settled long ago. There was a fierce struggle over the passage of the Anatomy Act, but after that measure was carried sentiment by degrees gave way to reason, and, with the exception of occasional "scandals" invented by penny-a-liners in search of sensation, there has been little objection of an articulate kind to the provision of dissecting material in the manner referred to. It is with some astonishment therefore that one learns of the Nottingham Guardians warmly debating at a recent meeting the proposed rescission of a resolution passed on October 26th, 1897:

> That the bodies of such paupers as have not in life expressed a contrary desire, shall, after death in the workhouse of the parish, if unclaimed, be sent to the Anatomical School, Cambridge, under the provisions of the Anatomy Act, 1832.

This resolution, it was stated by the mover of the proposal, had been carried by a majority of only two members (17 against 15). He added that nine of those members who voted in favour of the resolution had not been re-elected on the present Board; and he thought that was a strong reason why the new members should be consulted as to whether the bodies should be sent or not. The seconder of the motion said he had found that there was a very strong feeling amongst the poor on the matter. The foolish old cry about sacrificing the poor for the benefit of the rich was raised by other speakers. Dr. Bolton pointed out that if guardians throughout the country objected to bodies being sent to the anatomical schools, medical men would have to go to the Continent to get the knowledge necessary for the practice of their profession. He was strongly supported by the Rev. L. H. Gwynne, who expressed his willingness to have his body dissected after his death if it would thus be of any benefit to suffering humanity. Nevertheless the resolution was carried by 17 votes to 7. On the other side of the Atlantic a Bill relative to dissection, before the Massachusetts Legislature, has excited vehement opposition. All that was proposed was that the existing law in that State relative to the disposal of dead bodies should be amended, so that the four leading Colleges of the State should have the bodies of paupers from State institutions, unless the pauper himself asked during his last illness for an ordinary burial, or the same request was made by one of his friends. The newspapers have attacked the medical men of Massachusetts in the most violent manner for promoting a Bill which is described as "a menace to liberty" and "a disgrace to the statutes of the State." It need hardly be pointed out again that, as was shown by Macaulay in his great speech on the Anatomy Act, it is the poor far more than the rich who benefit by a high standard of technical knowledge in the medical profession. If dissection were, in some frenzy of hysterical sentiment, made illegal in this country, the rich could easily procure the services of properly trained doctors from some more enlightened land; but what about the poor? The finest feelings in guardians would be inadequate substitutes for anatomical knowledge in Poor-law medical officers.

EXPERIMENTAL SCIENCE IN THE STATES.

The Agricultural Department of the United States issue at intervals an *Experiment Station Record*, which has now run to nine volumes, and the eighth and ninth numbers of the ninth contain much interesting matter. There are now some 64 educational institutions subsidised under the Land Grants Acts of 1862 and 1890, and of these 61 have courses of instruction in Agriculture. All the States have now agricultural experiment stations, most of them with very complete equipments. Many of these publish bulletins and other reports, while the *Record* epitomises and, as it were, indexes much of the work done. Most of the matter thus condensed—and the epitomes are not confined to station or even to American work—has a scientific interest beyond its mere relation to beeves. The careful experiments (p. 786) from the Connecticut Storrs Station Report for 1896 on the milk yield of cows fed, first on ordinary rations selected by the farmer, and then on a more nitrogenous *régime* suggested by the experimenter, have more than a mere agricultural interest. The following article (p. 788) is an epitome of one made in Germany dealing with the same economic question. The writer *more Teutonico* goes by no means superficially into the matter, and concludes (we presume the Americanism is not his) that "(1) the feeding of corn is in every respect advantageous to milch cows in the production of milk and the maintenance of live weight. Following this, wheat bran, cotton-seed meal, and peanut cake range in value in the order given. . . . . (3) Beet molasses appears to have a stimulative action on the milk glands, so that for a time more and richer milk is yielded than on rations richer in total nutrients and in albuminoids." The experiments of H. W. Conn (Connecticut Storrs Sta. Rept., 1896) on Cream Ripening (p. 791) are, so far as they go, of value. The bacterial flora differed in the milk of different cows and in that of the same cows at different seasons. Experiments were made with 68 species, all distinctly dairy bacteria. They were collected, some from the cream, some from milk, others from the dust "which fell from the cow during milking," and included probably specimens of all the general types of milk bacteria. Portions of Pasteurised cream ripened by these microbes were compared with control specimens left without any "starter." About half of the 68 species, when used to ripen the cream, produced butter without any noticeable flavour, aroma, or acidity, and

[1] These figures are quoted from the last A. M. D. Report for 1896.

indistinguishable from the control butter. Twenty produced butter described as good-flavoured. Of these 20, 9 were lactic-acid producing organisms, while the remaining 11 left the milk either neutral or alkaline; 7 of these latter liquefied gelatine. Eighteen species produced "bad" butter; of these, 9 were acid producing, 9 not. Of the 30 species indifferent as to flavour-producing qualities none were acid makers, and it was evident that it was not in virtue of their lactic acid producing qualities that the useful bacteria performed their function. No single species tested produced at once flavour, acid, and aroma. Some of the species producing good flavour were quite widely distributed in July. One particular species producing good flavour and a strong acid was found in each of the creameries from which milk was taken in May and June. The *Record* contains also papers on soil and on the relation of the quantity of water it holds to the surface tension of the liquid and the modification of this surface tension by the salts held in solution, which suggest lines of research on questions of water supply of hygienic interest. But we must disguise our affection for our American cousin and his fascinating *Record*. *O si sic omnes agricolæ!*

THE GEOLOGY OF LONDON.

WE called attention some little time ago to the interesting report by Mr. H. B. Woodward, F.R.S., on the soils and subsoils of London and its neighbourhood, which dealt with the matter from a sanitary point of view. Mr. James B. Jordan has now devised a model or raised geological map representing an area of 320 square miles with London as a centre. The map has been reproduced in steel plate, enamelled in colours, and embossed to represent the natural undulations of the surface. The horizontal scale is 1 in. to a mile, and the vertical scale is 1 in. to 1,000 feet, so that the model gives to the metropolitan area a somewhat more mountainous appearance than really belongs to it. It will, nevertheless, be found an extremely interesting guide to a comprehension of the geology of the district, and will afford a convenient mode of becoming better acquainted with this important subject. The area embraced extends beyond the administrative county of London to Finchley on the north, Croydon on the south, St. Mary Cray and Plumstead on the east, and Twickenham and Harrow on the west. The principal places, roads, rivers, and railways are shown, and the chief heights are given in feet above ordnance datum. The geology is further illustrated by transverse and vertical sections of the strata which are given on the frame of the map. The model, so far as we have been able to test it, is remarkably accurate. The publisher[1] informs us that this is the first attempt to produce topographical models in stamped metal, and we think that both he and Messrs. Huntley, Boorne, and Stevens, of Reading, who have carried out the work are to be congratulated on the success with which the mechanical difficulties have been overcome.

THE ARMY MEDICAL EXAMINATION.

WE published in the BRITISH MEDICAL JOURNAL of June 4th a letter from Mr. Edward Owen, of St. Mary's Hospital, in which he expresses the opinion that the system of examination of candidates for the Army Medical Service is "as wrong as it can be." Instead of examining in anatomy, physiology, and materia medica, he would limit examination entirely to the practical aspects of medicine, surgery, and operative surgery, so that a house-physician or house-surgeon might be able to go in, from his practical work, confident of taking a good place. Not only that, but as army medical officers are expected and should be men of good physical powers, he would give extra marks for excellence in athletic exercises. Men, he says, who would prove the very best material for the army are deterred from competing through sheer disgust at the utterly unpractical nature of the examination, which can only be approached by useless "grinding" with a crammer. He urges that the examination should be recast if commissions in the new Royal Medical Corps are to attract the best sort of men. Even those who would not endorse all the opinions of our correspondent, will admit that they embody a great deal of sound common sense. We fail to see the advantage of examining an already duly qualified medical man on unpractical, abstruse, or even rudimentary subjects of the earlier part of the professional curriculum. We should like to see this matter discussed and threshed out; for Mr. Owen, no doubt, is well able to speak the mind of many students and young medical men. It would be a thousand pities if the success of the new Royal Medical Corps should be imperilled by pedantic adherence to an old and more or less obsolete system of competitive examination.

[1] Mr. Edward Stanford, 26 and 27, Cockspur Street, Charing Cross, S.W. The price of the model is 15s. 6d post free.

THE INFECTIVITY OF THE URINE IN TYPHOID FEVER.

THE fact that the urine of patients suffering from typhoid fever may contain the typhoid bacillus in large quantities, though it has been established by the observation of several observers, has not, perhaps, attracted the attention which it deserves. Wright and Semple published a paper on the subject nearly three years ago,[1] in which they stated that in 6 out of 7 cases examined the bacillus was easily detected in the urine, and they pointed out the important bearing of the observation on practical hygiene. Last year Dr. P. Horton Smith read a paper at the meeting of the Royal Medical and Chirurgical Society,[2] in which he showed that the bacilli might be present in the urine at some period of the disease in enormous quantities. He never found them in the first or second week. Dr. J. Petruschky, Director of the Bacteriological Institute at Dantzig, has recently[3] examined the urine in 50 cases of typhoid fever, and in 3 he found the bacillus in enormous numbers, in all cases late in the disease. The bacilli persisted in the urine after defervescence for a period more or less prolonged—in one case for two months, in another for four weeks, and in another for eight days. The fact that the urine may be infectious to man was established by an unfortunate accident which Dr. Petruschky relates. The sister of the ward accidentally drank a small quantity of urine which had been passed by a typhoid patient into a wineglass, and after an incubation period of twelve days she developed typhoid fever. The subject is one which appears to require further investigation, more especially as to the period of the illness at which the bacilli may be expected most probably to appear in the urine, since if it should turn out that they are present as frequently as Wright and Semple suppose during an early stage, the bacteriological examination of the urine might be a valuable aid to diagnosis in doubtful cases. The facts already known, however, are quite sufficient to emphasise the importance of disinfecting the urine and of instructing nurses and others about the patient to exercise the most scrupulous care in disinfecting their hands, or any vessels which may have become contaminated with urine.

[1] *Lancet*, 1895, vol. ii. p. 100.
[2] BRITISH MEDICAL JOURNAL, 1897, vol. i, p. 394.
[3] *Cent. f. Bakt. Parasit. u. Infectionskrank*, April 12th, 1898.

THE LANGUAGE OF PRESCRIPTIONS.

A FEW weeks ago, in referring to the language of prescriptions, we hinted that it might be well that these documents should be written in plain English rather than in the jargon—truly a thing of shreds and patches—which passes for Latin among us. We are gratified to observe that no less a person than Professor Virchow has recently urged a similar reform upon his countrymen. If we are to use the speech of ancient Rome, he says, we should at any rate be careful to write it correctly. Physicians may plead that, like the German Emperor of old, they are *supra grammaticam*; but this, even if it be admitted, is no reason why an inconvenient and meaningless custom should be adhered to. The *Philadelphia Medical*

Journal has also expressed its approval of our suggestion in a characteristically perfervid manner. It says: "The practice [of writing prescriptions in Latin] is a pompous bit of humbug which should be left to mediævalists [we hope Dr. Gould will pardon us that diphthong; it is a sacrifice to etymological sentiment] and not scientists. As soon as we get our therapeutics out into the daylight of common sense and genuine science, we shall surely dispense with the sorry jumble of bad Latin and poor English, illustrated by nine-tenths of the actual prescriptions on file to-day at the drug stores." The only argument for the use of Latin that has in it any element of plausibility is that it may sometimes be expedient to conceal from the patient the exact nature of the remedies prescribed for him. But the patients who are likely to trouble about the ingredients of the potions or pills which they are directed to swallow are just those who in general are able to decipher the meaning of a prescription for themselves. Besides, if the language of the prescription is to be hieratic and cryptical, does not the language of modern chemistry sufficiently conceal thought to be used for the purpose? Would not the curiosity of most patients be baffled by such terms of art as acetonediethylsulphone, metadihydroxybenzene, and diethylsulphonemethylmethane?

THE SELECTION OF CASES FOR ISOLATION.

The provision of joint isolation hospitals is not without some attendant disadvantages. Where a single authority provides accommodation for its own infectious cases the control of the hospital as well as the selection of the cases interned is in its own hands. When there is a joint Board some say as to the class of cases to be sent in must of course remain with such Board and its officers. The section (cxxiv) of the Public Health Act, 1875, which enables a magistrate, on the certificate of any legally-qualified medical practitioner, to order the removal to an infectious diseases hospital, conveniently near, of any person suffering from a dangerous infectious disorder, expressly stipulates for the consent of the superintending body of such hospital. The order may be made, it will be noticed, on the certificate of any medical practitioner, not solely on that of the medical officer of health; and if the hospital authority consent to receive the patient, and the justice is satisfied of the want of accommodation and seriousness of the infective malady, the latter may order the removal "at the cost of the local authority," and apparently without consulting them in the matter. Under one condition—that the patient is lodged in a common lodging-house—the local authority can themselves (with the like consent of the hospital authorities) give the necessary order. In so far as an authority is represented on a joint hospital Board, it has therefore some say as to what cases shall be admitted to the joint hospital, and should the joint Board require the sanction or signature of some member of the local authority, or of some authorised officer of that authority, before admitting a patient, they would seem to be within their rights in doing so. But it is the joint Board, and not the local authority, whose consent is needed before putting the compulsory machinery of the Public Health Act in motion. The consideration of these questions has been suggested to us by a report in the *Redditch Indicator* of a discussion at a special meeting of the Redditch Urban District Council. That body was notified by the joint Board that a temporary isolation hospital would be opened at Rock Hill, Bromsgrove, and that patients would be received after due notification from the medical officer of health that they should be removed. The discussion turned chiefly on whether the medical officer of health should have the assistance of the chairman of the Sanitary Committee, and perhaps of one or two other members of the Council, in determining what cases should be sent to hospital. We do not think that practically any difficulty is likely to arise from a nominal reference of this kind. The people who pay for the hospital, and for the maintenance of the patients there, have, through their representatives, the right to say how far they are prepared to go in the matter of isolation, and we do not fear that the medical officer would be seriously hampered in his discretion by having to keep in touch with the chairman of his committee in this matter. No wise chairman would refuse to endorse the action of his medical officer in hurrying off to hospital a serious case from a crowded house, and in the cases where the pressure comes rather from the desire of the householder to be rid of a troublesome patient—say a domestic servant—than from absolute lack of necessary accommodation, we conceive the health officer might be rather glad than otherwise to transfer the importunities of the ratepayer to his representative. We conceive that in practice little or no difficulty would result from the medical officer having to report his actions at short intervals to his chairman, and the increased contact resulting from frequent consultations of this sort would have many general sanitary advantages. Before leaving this subject of isolation hospitals we should perhaps remind our readers that the Corporation of Hull lately proceeded for cost of maintenance against a ratepayer whose child was removed with his consent but not at his solicitation and without a magistrate's order to the isolation hospital. The magistrate's court found for the Corporation, but stated a case and the judges have decided in favour of the ratepayer. There are matters of interest in the case which we may perhaps deal with on another occasion.

THE ROYAL ARMY MEDICAL CORPS.

Dr. Farquharson has given notice of his intention to ask the Under-Secretary of State for War whether, in view of the undermanning of the Medical Department and of the fact that an examination for thirty-nine commissions is to be held in the first week of August, he can now state when the new Warrant constituting a Royal Army Medical Corps will be issued.

Dr. G. E. Shuttleworth has been elected a Foreign Member of the Moscow Society of Neurology and Mental Science.

The complimentary dinner to Dr. Playfair (postponed from June 8th) will be held at the Grand Hotel on July 4th, at 7.15 P.M. Lord Lister has kindly promised to preside. Applications for tickets should be made not later than June 30th, to Dr. John Phillips, 68, Brook Street, W.

Sir John Kirk, G.C.M.G., K.C.B., M.D., formerly Political Agent and Consul-General at Zanzibar, received the honorary degree of D.C.L. from the University of Oxford at the annual commemoration of the founders and benefactors of the University on June 22nd.

A discussion on the Accurate Localisation of Intracranial Tumours will be opened by Dr. C. E. Beevor at the meeting of the Neurological Society of London on June 30th. Among those who are expected to take part in the discussion are Dr. Byrom Bramwell, Dr. Michell Clarke, Dr. Ormerod, Dr. Newton Pitt, Dr. Sharkey, and Mr. Marcus Gunn.

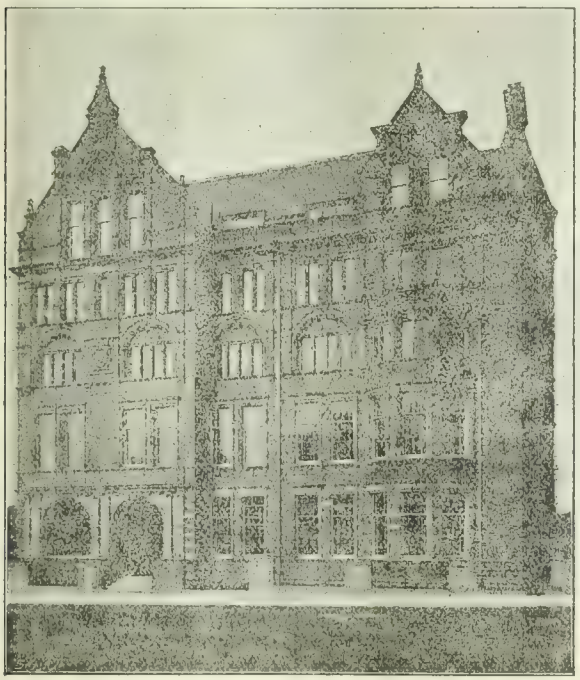
English-speaking Practitioners in Italy.—It is generally acknowledged that it was largely owing to the efforts of Dr. John J. Eyre, of Rome, that the Italian Government was induced to abandon its intention of modifying the law of Italy in such a way as to prevent medical men possessing British qualifications from practising their profession among their countrymen in Italy. We are pleased to be able to announce that Dr. Eyre a few days ago received a testimony of the gratitude of his medical fellow countrymen in Italy. At a meeting held at the house of Dr. Edmondston Charles, Dr. Eyre was presented with a clock bearing the following inscription: "Presented to Dr. J. J. Eyre by appreciative colleagues in Italy. 5. vi., 98."

THE NEW LABORATORIES OF THE BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

THE new building which has now become the permanent home of the British Institute of Preventive Medicine is situated on the Thames Embankment, near Chelsea Bridge. The site chosen is well adapted for the purpose, as it faces an open space, with a clear light aspect on all sides. The building is detached, stands in its own grounds, and has a good frontage to the river. The site was acquired from the Duke of Westminster, who is a member of the Council of the Institute, and building operations were commenced in the autumn of 1894.

ADMINISTRATION.

The ground floor contains the Board room and general offices, together with a waiting room. To the right of the main entrance is the director's private office, together with



two laboratories for himself and his assistants. These laboratories will accommodate six workers, and are fitted up with the usual appliances for bacteriological investigation.

BACTERIOLOGICAL LABORATORY.

The main bacteriological laboratory is situated at the back on the ground floor, and occupies the entire length of the building. It has accommodation for twenty-five students, and has the advantage of a north light for microscopical work. The working benches are of teak, and are provided with gas, water, and electric light.

Each worker is provided with a complete set of apparatus for his work, as well as with a set of drawers and lock-up cupboards. For dissections and aseptic operations a glass-top table is provided. The incubators stand on slate tables, and a special glass blowing table has been provided. At one end of the room is a fume chamber, and a wash-up sink with hot and cold water.

A small room in connection with this laboratory will admit of operations being carried out under the best conditions for aseptic work. The floor is concrete, the benches of slate, and the walls covered with glazed tiles.

This laboratory will be mainly utilised for instruction. The Institute has already attracted workers from all parts of the world, and the number will no doubt greatly increase with the enhanced facilities of its new building. The courses of instruction are attended by qualified medical men, army surgeons, and students of hygiene. The students of hygiene will receive a course of bacteriological instruction specially suited to their requirements, and dealing with the bacteriological examination of water, soil, and air, food stuffs, etc. A course of systematic bacteriology will also be given, and will comprise lectures and practical work. This practical instruction will extend over three months, and, following the method adopted at the Institut Pasteur, will touch on all the phases of bacteriological work. From time to time six weeks' courses will be given, dealing especially with bacteriology in relation to clinical work. This laboratory will also be utilised to give those desiring it a thorough grounding in bacteriological methods, with a view to subsequent research work.

In the basement is a room specially devoted to the preparation of culture media. The fittings comprise a hooded stone bench for steam sterilisers, a large copper for boiling out test tubes, and provision for filtering gelatine while hot. In this room the student will be allowed to follow the methods of the preparation of the various culture media; indeed, such preparation of media is rightly regarded as an essential part of the training.

Adjacent to this room is another which will be maintained at incubation temperature. The convenience of this will be recognised by all bacteriological workers. Such a room will be particularly useful for the preparation of tuberculin, mallein, and similar fluids on a large scale.

There is further a large room which will be fitted up as a workshop for general repairs. The same room will contain a large centrifugal machine, and a water distilling apparatus.

THE PHOTOGRAPHIC LABORATORY.

The back of the basement is devoted to photography. In a large room are provided two complete photomicrographic cameras, one for use with the electric arc light, and constructed to carry out work with the highest powers, and the other to be used for lower power work, and also for purposes of preliminary instruction. The larger form of apparatus is of the latest design, with some new features introduced to facilitate its working. Thus there are two brickwork and masonry supports for these cameras to ensure firmness and freedom from vibration, and each one is so placed that a curtain can be drawn at any moment to effectually screen off either apparatus. Attention will be given to the application of photography to spectroscopy, so far as it is applicable to bacteriological research, and apparatus will also be provided for photometric observations. It is hoped later to establish a lantern-slide library, when illustrations for lectures on any branch of work carried on at the Institute will be available. This department is under the care of Mr. J. E. Barnard, who is responsible for many of the fittings.

THE CHEMICAL LABORATORY.

The large chemical and water laboratory is situated on the first floor. It contains all appliances for chemical work, and working accommodation for twenty men. The two fume chambers contain water and gas supply which can be regulated without opening the chambers. In this, distilling and evaporating operations can readily be carried on. There is also a special hooded chamber for water baths. The teak benches have ample water and gas supply, as well as taps and wastes for distilling purposes, and an electric light supply. The centre bench also contains an experimental main which will allow of electric currents of any strength being used. This main is regulated by means of a motor transformer in the basement. Provision is likewise made in the basement for elementary organic analyses in the shape of a combustion furnace. In this room investigations of a chemical character and bearing on hygiene and preventive medicine will be conducted, and it is hoped the laboratory will become a centre for the investigation of matters concerning public health. The chemical analyses of water are conducted in this room, and a number of samples are received from local authorities for this purpose. Here also the necessary instruction in chemistry and physics for public health work is carried on, and special instruction also given in water analyses. It is intended that the general training given shall be of a thorough character, and compare with that



Research laboratory, ground floor.

given in hygienic institutes on the Continent. A small meteorological station will be erected for the use of the students. The laboratory is in charge of a trained chemist, who devotes his whole time to this work.

The Chemico-Bacteriological Laboratory.

Perhaps the most important laboratory, certainly that from which we shall expect the most important results, is the Chemico-Bacteriological Laboratory. Here will be conducted, under the supervision of the director, such investigations as relate to what may be called the physiology of bacterial life—the chemical products of the pathogenic bacteria and the chemistry of fermentative processes. The growing importance of this kind of work has rightly led the Institute to provide for its being carried on under the best possible conditions.

Private Research.

At the back of the building on the same floor are two rooms for private research work, a private chemical laboratory, and the balance room. Further provision for private research is made on the floor above, where are a series of rooms. These will be fitted up as occasion demands according to the work in progress.

Vaccine Laboratory.

On the same floor are the laboratories and office that are to be used by the Local Government Board for the preparation and storage of glycerinated calf lymph.

Museum and Lecture Theatre.

The museum is situated on the third floor. It consists of a large room with a gallery and two bays. It is hoped in course of time to form a collection of pathological specimens. Attached to the museum is a preparation room. On the third floor is the lecture theatre, with accommodation for 150. The room can be darkened, and the lecture table is designed to afford facility for demonstrations. It is furnished with a sink, water, electric light, and a terminal of the experimental main. Ample provision is also made for lantern demonstrations.

Crematorium and Animal House.

In the yard behind the Institute is a large crematorium in which all infectious material will be destroyed. There is also a large animal house with loose boxes. A small laboratory is also attached to the building. The construction of the animal house allows of thorough disinfection, and the cages for the smaller forms are made of galvanised iron, so that they can be sterilised.

Electric Supply.

The whole block of buildings is lighted electrically, the current being taken from the mains of the local company. Current is supplied for experimental purposes by a distinct

system of mains, which are carried into the various laboratories to terminals, to which temporary connection can be readily made. This main is fed by a motor transformer, taking current from the supply at a pressure of 200 volts, and allowing of it being supplied at any pressure from 5 to 50 volts. This arrangement, suggested by Mr. Middleton, avoids the necessity of the cumbrous and wasteful resistances usually employed.

GENERAL WORK OF THE INSTITUTE.

The director and staff are to be most heartily congratulated on coming into possession of this well-equipped laboratory. At present a large amount of diagnosis work is being undertaken for sanitary authorities, and a staff is kept constantly engaged in examining and reporting on waters, sputa, and various organic fluids. The aim of the director is to make the Institute a national home for bacteriology in all its branches.

The present staff is as follows; Director and Honorary Secretary: Dr. Allan Macfadyen, to whose enthusiastic industry the new laboratories owe many of their best features The bacteriologists to the Institute are Dr. R. T. Hewlett and Mr. Foulerton, F.R.C.S. Dr. Arthur Harden is chemist, and Mr. C. Cooper assistant secretary. The department for the preparation of antitoxins remains at Sudbury, near Harrow, and is in charge of Dr. Dean, assisted by Dr. Salter.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association, at No. 429, Strand (corner of Agar Street), London, on Wednesday the 6th day of July next, at 2 o'clock in the afternoon.

June 9th, 1898. FRANCIS FOWKE, *General Secretary*.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1898.

MEETINGS of the Council will be held on July 6th and October 19th, 1898. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the latter meeting—namely, September 29th.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary*.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the offices of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the Office.

BRANCH MEETINGS TO BE HELD.

NORTH OF ENGLAND BRANCH.—The annual meeting will be held at Sunderland on Wednesday, July 13th, at 4.30 P.M., when the President-elect, Dr. William Robinson, will deliver an address, and the officers of the Branch will be elected. The dinner after the meeting will take place at 6 P.M.—G. E. WILLIAMSON, F.R.C.S., Honorary Secretary, 8, Eldon Square, Newcastle-on-Tyne.

OXFORD AND DISTRICT BRANCH.—The annual meeting will be held on Friday, July 8th, at Oxford. Dr. Rogers the President-elect, kindly invites the members to luncheon in the Hall of Christ Church at 1.45 P.M. Full particulars will be sent to each member.—WILLIAM COLLIER, St. Mary's Entry, Oxford, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—The annual general meeting will be held at the Hotel Cecil on Tuesday, June 28th, 1898, at 6 P.M. The members will dine together at 7 P.M. Robert Farquharson, M.D., M.P., President-elect, in the chair.—ISAMBARD OWEN, H. B. ROBINSON, Hon. Secretaries.

LANCASHIRE AND CHESHIRE BRANCH.—The sixty-second annual meeting of this Branch will be held in Powell's Boys' Reading Room, Wigan, on Tuesday, June 28th, 1898, at 2 P.M. Agenda: Inaugural Address by the President, Mr. W. Berry, F.R.C.S.I. Report of Council and Financial Statement Election of Office Bearers, Representatives in the Council of the Association, Representatives in the Parliamentary Bills Committee, and Ordinary Members of the Council for 1898-99. Choice of Place for holding next Annual Meeting. (A cordial invitation, which has been provisionally accepted by the Council, has been received from the members resident in Bolton, to hold the next annual meeting in that town.) Appointment of two Auditors. Votes of Thanks to the Office Bearers and Members of late Council Medical and Surgical Communications: Dr. E. T Davies: Abdominal Hysterectomy for Fibroid Tumours, with Specimens. Dr. C. Thurstan Holland: Foreign Bodies and the Use of the x Rays. Mr. E. Stanmore Bishop: A Case of Ureteral Calculus. The President and Members resident in Wigan are anxious that, as far as possible, this day should be spent as an enjoyable holiday. From 12 to 2 P.M. Arrangements will be made for the inspection of the Free Library and Reference Library, the Wigan Parish Church, and the Exhibits. At 4 P.M. conveyances will be provided to convey members to Haigh Hall, on the invitation of the Earl of Crawford, K.T., to view the Gardens and inspect the Library. Mr. Walter Simpson has kindly invited a limited number of gentlemen to Longhurst for Afternoon Tea and Bowls. The Royal Albert Edward Infirmary will also be open to visitors, who will be received by members of the medical staff. Drugs and Medical Appliances.—There will be an Exhibit of New Drugs and Chemicals, Medical and Surgical Instruments, etc., in the Reading Room. Luncheon.—A luncheon, provided by the President and Members of the Wigan Medical Society, will be served at the Old Council Chamber from 12 to 2 P.M. Dinner.—Arrangements have been made for a dinner at the Old Council Chamber, Rodney Street, Wigan, at 6.30 P.M.; tickets (wine not included) 5s. each. In order to facilitate arrangements the Secretary will feel much obliged if every member who intends to be present at the meeting will kindly inform him whether he purposes being present at luncheon and dinner. Those gentlemen who intend coming, but who, on the day of meeting, may find it impossible to do so, will not be held responsible for their dinner tickets. The Secretary is very anxious to get the number as correctly as possible, in order to assist the Reception Committee. N.B.—Those gentlemen who have not yet paid their subscriptions will please remit such, without further delay, to the Honorary Secretary, Dr. Barr. Subscriptions to the Royal Medical Benevolent College can be paid to Dr. Barr. Those who wish to become members of the Branch, or of the Association and Branch, should communicate with the Honorary Secretary at once. There are over 1,000 members of the medical profession in these two counties who are not members of the British Medical Association; and 400 who are members of the British Medical Association, but not of this Branch. There is thus a large field in which members can render valuable aid in stimulating the growth and importance of this Branch. The Secretary has sent a notice of this meeting, a list of members, and an application form to each of the 400; he hopes that members will induce as great a number of these as possible to join the Branch. It may be pointed out to these that at present they have no representation, and the small annual subscription of 2s. 6d. is a good investment Those who are outside the pale of the Association and Branch have frequently received circulars, but on the present occasion it has not been deemed necessary to notify them. Application forms can be had by applying to the Secretary, 72, Rodney Street, Liverpool. It is intended to hold a joint meeting with the North Wales Branch, in Chester, in September. Gentlemen wishing to take part in this meeting should communicate with Dr. Barr.—JAMES BARR, M.D., Honorary Secretary, 72, Rodney Street, Liverpool.

NORTH WALES BRANCH.—The annual meeting will be held at Llangollen on or about July 13th. Members having papers to read, cases to communicate, or specimens to show are requested to intimate the same before July 2nd.—W. JONES-MORRIS, Is-y-coed, Portmadoc, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch will be held on Tuesday, June 28th, at 12.30 P.M., at St. Saviour's, Bridgwater, the residence of the President, Mr. R. H. F Routh. Besides the ordinary business, the President will deliver an address on "Cycling: its Prophylactic and Curative Properties." The President has kindly asked the members of the Branch to lunch with him at his house after the meeting. During the afternoon, arrangements have been made for the amusement of visitors, including a drive to Lilstock, tickets 2s. 6d. There will be a dinner at the Clarence Hotel, Bridgwater, at 7.30 tickets 4s., exclusive of wine.—R. LIDDON MEADE-KING, M.D., Taunton, Honorary Secretary.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The next annual meeting will be held at Cardiff on June 30th. Further particulars in circular.—A. SHEEN, M.D., Cardiff; D. A. DAVIES, M.B., Swansea, Honorary Secretaries.

BATH AND BRISTOL BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 29th, in the Royal Mineral Water Hospital, Bath, at 4.30 P.M., when Mr. F. R. Cross will resign the chair to Dr. Lionel Weatherly, President-elect, who will deliver the Presidential Address. The business of the meeting will be to receive the report of the Council, to elect the officers of the Branch, to transact the necessary business, and such subjects connected with the interest of the Branch and of the profession as may be brought before it. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. Members who have not paid their subscriptions are re-

quested to do so immediately to the Local Secretaries. The dinne will be held at the Grand Pump Room Hotel at 7 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charges. The Bath Secretary particularly requests that members will inform him by Monday, June 27th, whether it is their intention to be present at the dinner. By so doing they will greatly facilitate the satisfactory completion of the necessary arrangements.—W. M. BEAUMONT, Bath, J. MICHELL CLARKE, Clifton, Honorary Secretaries.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.—The annual meeting of this Branch will be held in Cambridge on Tuesday afternoon, July 5th, 1898. Members who desire to make any communications are requested to inform the Honorary Secretary as early as possible, in order that a full programme may be issued without delay.—JOSEPH GRIFFITHS, Honorary Secretary, 63, Trumpington Street, Cambridge.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch was held on June 16th, at the Medical Institute.

Installation of New President.—The retiring President, Dr. SAUNDBY, introduced his successor, Mr. VINCENT JACKSON of Wolverhampton, who delivered an address on the History of the Medical Profession.

Election of Office-Bearers.—The following office-bearers were elected for the coming session: *President elect:* Mr. Bennett May. *Treasurer:* Dr. F. W. Underhill. *Representatives of the Branch in the Council of the Association:* Mr. Langley Brown, Dr. Carter, and Mr. Jordan Lloyd. *Representatives in the Parliamentary Bills Committee:* Dr. S. H. Agar and Mr. Barling. *Honorary Secretaries:* Mr. W. F. Haslam and Dr. Foxwell. *Council:* Dr. Joy, Dr. Malet, Dr. J. McCarthy, Dr. Milner Moore, Dr. E. N. Nason, Dr. T. W. Thursfield, Dr. E. Underhill, Mr. Eales, Mr. G. Heaton, Mr. F. Marsh, Mr. Christopher Martin, Dr. Simon, Dr. Rickards, Mr. Priestley Smith, Mr. J. W. Taylor, and Mr. M. A. Messiter.

GLASGOW AND WEST OF SCOTLAND BRANCH.

THE summer meeting of this Branch was held on June 15th.

Visit to the Birthplace of John and William Hunter.—Members of the Branch, in company with members of the Glasgow Southern Medical Society, travelled by train to East Kilbride, and drove thence to Hamilton, visiting, *en route*, Long Calderwood, the birthplace of John and William Hunter. In Hamilton Dr. James Finlayson, of Glasgow, gave an interesting demonstration of manuscripts and books in illustration of the life and works of John Hunter.

Dinner.—Members subsequently dined in the Commercial Hotel, Hamilton, under the presidency of Dr. Freeland Fergus and Dr. Jas. Allan. In replying to the toast of the Branch, Dr. FREELAND FERGUS, the President, made reference to the large additions which have recently been made to the membership, and to the work that the Branch is doing in matters concerning the interests of the profession.

BRITISH MEDICAL ASSOCIATION.

SIXTY-SIXTH ANNUAL MEETING.

THE sixty-sixth annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, July 26th, 27th, 28th, 29th, 1898.

President: T. G. RODDICK, M.D., Professor of Surgery in McGill University, Montreal.

President-Elect: Sir THOMAS GRAINGER STEWART, M.D., LL.D., F.R.S.E., Professor of Practice of Medicine and Clinical Medicine in the University of Edinburgh; Physician in Ordinary to Her Majesty the Queen for Scotland, Edinburgh.

President of the Council: ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Physician to the General Hospital, Birmingham.

Treasurer: CHARLES PARSONS, M.D., Dover.

An Address in Medicine will be delivered by THOMAS RICHARD FRASER, M.D., LL.D., F.R.S., Professor of Materia Medica and Clinical Medicine in the University of Edinburgh.

An Address in Surgery will be delivered by THOMAS ANNANDALE, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., Surgeon to the Edinburgh Royal Infirmary, Regius Professor of Clinical Surgery, University, Edinburgh.

An Address in Psychological Medicine will be delivered by Sir JOHN BATTY TUKE, M.D., D.Sc., Pres.R.C.P.Edin., Lecturer on Insanity, School of Medicine of the Royal Colleges, Edinburgh.

The Scientific Business of the Meeting will be conducted in Sixteen Sections.

A. MEDICINE.

Anatomy Theatre, University New Buildings.

President: GEORGE WILLIAM BALFOUR, M.D., LL.D. *Vice-Presidents:* Sir CHRISTOPHER JOHN NIXON, M.D.; JOHN MITCHELL BRUCE, M.D., ALEXANDER JAMES, M.D.; GEORGE ALEX. GIBSON, M.D. *Honorary Secretaries:* J. J. GRAHAM BROWN, M.D., 3, Chester Street, Edinburgh; SAMUEL HERBERT HABERSHON, M.D., 70, Brook Street, Grosvenor Square, W.; GEORGE LOVELL GULLAND, M.D., 6, Alva Street, Edinburgh.

The following subjects have been arranged for discussion:

1. Wednesday, July 27th.—The Clinical Varieties of Hepatic Cirrhosis. To be opened by Dr. Alexander James.

2. Thursday, July 28th.—The Significance and Consequences of different states of Vascular Tension with their General Management. To be opened by Sir William Broadbent, Bart., M.D.

3. Friday, July 29th.—Serum Diagnosis and Therapeutics in Infective Diseases. To be opened by Professor Wright (Netley).

The following, among others, intend to take part in these discussions: Sir Christopher Nixon, Dr. G. W. Balfour, Dr. M. A. Boyd, Professor Bradbury, Dr. Graham Brown, Dr. Mitchell Bruce, Dr. Lauder Brunton, Dr. R. W. Burnet, Dr. H. Campbell, Dr. D. Drummond, Dr. Wm. Ewart, Dr. Foxwell, Dr. Gibbes, Dr. Gibson, Dr. Gulland, Dr. Handford, Dr. Habershon, Dr. Claude Ker, Dr. S. A. Lindsay, Dr. McWeeney, Dr. Muirhead, and Dr. Smart.

The following papers have been announced:

ANDERSON, Professor McCall. A Plea for the More General Use of Tuberculin by the Profession.
BAIN, William, M.D., M.R.C.P.Lond. (Harrogate). The Treatment of Congestion of the Liver not dependent upon Cardiac Disease or Toxic Conditions.
BURTON-FANNING, Dr. The Open-air Treatment of Phthisis.
CAMPBELL, Dr. H. The Treatment of Thoracic Aneurysm by Electrolysis.
CAVERHILL, Dr. The Open-air Treatment of Consumption, with exhibition of patients treated in German sanatoria.
DAVIDSON, Dr. Thomas. Southern California as a Health Resort.
DRUMMOND, Dr. D. On Ether Pneumonia.
EWART, Dr. William.
HAIG, A., M.A., M.D.Oxon., F.R.C.P. On the Granules Precipitated in the Blood by Chloride of Ammonia (Process of Mr. Barber Smith), and what we may Learn from them.
HILLIER, Dr. A. P. Chronic Dysentery.
MURRAY, G., M.A., M.D., F.R.C.P. (Newcastle). On the Early Diagnosis of Thyroidal Fibrosis.
SCHOTT, Dr. Theodore. On Chronic Muscular Disease of the Heart.
SMART, Dr. A. (1) Chemico-clinical Observations on the Elimination of Phosphoric Acid in Nervous Disorders: Preliminary Note. (2) Clinical Observations on the Relative Efficacy of Preparations of Iron commonly in Use in the Treatment of Anæmia and Chlorosis: Further Note.
STRACHAN, Dr. J. The Alcoholic Neurosis.
SUCKLING, C. W., M.D. (Birmingham). Movable Kidney, with Special Reference to its Influence on the Nervous System.
THORNE, W. Bezly, M.D., M.R.C.P. (London). On Cardio-vascular Repair.
THORNHILL, Dr. Hayman. Observations on the Treatment of Cholera.

B. SURGERY.

Surgery Theatre, University New Buildings.

President: JOHN DUNCAN, F.R.C.S.Edin., LL.D. *Vice-Presidents:* ALEX. GORDON MILLER, F.R.C.S.Edin.; JOHN CHIENE, F.R.C.S.Edin.; JAMES RUTHERFORD MORISON, F.R.C.S.; JOSEPH MONTAGUE COTTERILL, F.R.C.S.Edin. *Honorary Secretaries:* FRANCIS MITCHELL CAIRD, F.R.C.S.Edin., 21, Rutland Street, Edinburgh; J. W. BEEMAN HODSDON, F.R.C.S.Edin., 52, Melville Street, Edinburgh. THOMAS KENNEDY DALZIEL, F.F.P.S.G., 106, Bath Street, Glasgow.

Discussion I: Injuries of the Elbow Joint. To be introduced by Professor Bennett (Dublin), followed by Messrs. Roberts (Philadelphia), Chiene, Bryant, Keetley, Jones, Macnamara, Thomas, Warden, Morgan, Poland, Murphy, Dalziel, Ward Cousins, and Parry.

Discussion II.: The Origin, Effects, and Treatment of Septic Infection of the Urinary Tract. To be introduced by Dr. David Newman, followed by Messrs. Rovsing (Copenhagen), Moullin, Macnamara, Macewen, Will, Melchior (Copenhagen), Lawson Tait, Morgan, Stanmore, Bishop, and Nicoll.

The following papers have been promised:

ALLINGHAM, Herbert. Cases of Intestinal Anastomosis.

BROOK, W. F. Successful Removal of Calculi of Unusual Size from both Kidneys.
BRUCE, William. On the Nature and Treatment of Sciatica.
CASPER, Leopold (Berlin). On Catheterism of the Ureters in Both Sexes.
CHEATLE, Lenthal. Operation for End-to-End Anastomosis of Bowel.
CRIPPS, Harrison. On Abdominal Surgery.
DOYEN, Dr. (Paris). (1) Surgery of the Brain. (2) Operations on the Stomach and Intestine. (3) Operations for Congenital Dislocations of the Hip-Joint.
FREYER, P. J. The Instruments Required in Litholapaxy, with an Analysis of 650 Operations for Stone by this Method.
HERN, John. An Amputation at the Ankle-Joint, with Case.
HUTCHINSON, J., jun. Removal of the Gasserian Ganglion for Trigeminal Neuralgia.
HUTTON, W. Menzies. On the Treatment of Empyema.
KEETLEY, C. B. On the Preservation of Mobility in Joints Operated On.
LITTLE, E. Muirhead. On Coxa Vera.
LLOYD, Jordan, F.R.C.S. On Cirsoid Aneurysm.
MELCHIOR, Max (Copenhagen). On Septic Infection of the Urinary Tract.
MILLER, A. G. On Muscle Atrophy in Connection with Joint Affections.
MORISON, A. E. On Floating Kidney.
MORISON, Rutherford. Wound Treatment. The Result of One Year of Antiseptic Treatment in Freshly-made Operation Wounds in Uninfected Tissues.
NEVE, Arthur. Clinical Paper on Chloroform.
NEWMAN, Dr. David (1) The Value of Catheterism of the Ureters in the Diagnosis of Diseases of the Kidney, with illustrative cases. (2) Cases Illustrating Some Points of Interest in the Etiology and Treatment of Hæmaturia.
NICOLL, Jas. H. (1) The Treatment of Chronic Enlargement of the Prostate. (2) The Pathogeny and Treatment of Tuberculous Lymphatic Adenitis.
OWEN, Edmund. Operative Treatment of Left Palate.
PARRY, R. H. Cases of Spasmodic Torticollis treated by Neurotomy of the Cervical Plexus.
PEARSON, C. Yelverton. The Treatment of Spina Bifida by "Open Operation," followed by Closure of the Spinal Canal, with photographs and notes of a successful case.
POLAND, John, F.R.C.S. The Treatment of Injuries of the Elbow-joint in Children.
RAWDON, H. G. Two Cases of Successful Enterectomy following Strangulated Hernia, in which Murphy's Button was used.
ROBSON, Mayo. (1) The Operative Treatment of Hydatids of the Liver, illustrated by cases. (2) Two Cases of Partial Hepatectomy for Malignant Disease. (3) On a Series of Cases of Choledochotomy, including two of Duodeno-choledochotomy.
ROBERTS, Dr. The Advantage of the Extended Position in Fractures of the Condyloid Portion of the Humerus.
ROVSING, Dr. On Some Mysterious Hæmorrhages from a Single Kidney, and their Cure by Nephrotomy.
SMITH, Noble. On the Treatment of Fractured Spines: (*a*) by Reduction and Fixation; (*b*) by Laminectomy; A Plea for more Active Treatment.
STORES, Sir William. Thyroidectomy in Exophthalmic Goître.
TAIT, Lawson, F.R.C.S. On the Secondary Results of Operation on the Liver and its Ducts.
TUBBY, A. H. (1) Acute Spreading Gangrene, with an Account of a Successful Case. (2) Retroperitoneal Hernia, illustrated by a case in which recovery took place after operation.
WHEELER, W. S. The Radical Cure of Hernia by Displacement Method.
WILSON, Alex. The Treatment of Accidents under Chloroform.

Communications are also expected from Professors Mikulicz (Breslau) and Kocher (Bern).

C. OBSTETRICS AND DISEASES OF WOMEN.

Medicine Theatre, University New Buildings.

President: ALEX. RUSSELL SIMPSON, M.D. *Vice-Presidents:* CHARLES E. UNDERHILL, M.B.; GEORGE ERNEST HERMAN, M.B.; D. BERRY HART, M.D.; A. H. FREELAND BARBOUR, M.D. *Honorary Secretaries:* R. MILNE MURRAY, M.B., 11, Chester Street, Edinburgh; F. W. N. HAULTAIN, M.D., 17, Rutland Street, Edinburgh; JOHN CAMPBELL, M.D., 21, Great Victoria Street, Belfast.

It has been arranged that the first part of the meeting of this Section on each of these days shall be devoted to a discussion on a subject of Obstetrical or Gynæcological interest. The subjects selected are as follows:

1. Wednesday, July 27th.—The Surgical Treatment of Pelvic Inflammation. To be opened by Dr. Cullingworth (London).

2. Thursday, July 28th.—The Use and Abuse of the Midwifery Forceps. To be opened by Dr. Milne Murray (Edinburgh).

3. Friday, July 29th.—The Treatment of Puerperal Eclampsia. To be opened by Dr. Halliday Croom (Edinburgh).

It has been arranged that specimens illustrative of the subjects of the special discussions shall be exhibited in the Pathological Museum.

The following among others are expected to take part in the discussions:—Dr. W. S. Playfair (London), Dr. Säenger (Leipzig), Dr. Martin (Berlin), Dr. Landau (Berlin), Dr. Gardner (Montreal), Dr. Bowreman Jessett (London), Dr. More Madden (Dublin), Dr. Stephenson (Aberdeen), Dr. Smyly (Dublin), Dr. Handfield Jones (London), Dr. Donald (Manchester), Dr. Kynoch (Dundee), Dr. Buist (Dundee), Dr. Sloan (Glasgow), Dr. Macan (Dublin), Dr. Byers (Belfast), Dr. Yelverton Pearson (Cork), Dr. Aust Lawrence (Bristol), Dr. Giles (London), Dr. Amand Routh (London), Mr. Stanmore Bishop (Manchester), Dr. Christopher Martin (Birmingham), Dr. F. Edge (Wolverhampton, Dr. Ward Cousins (Southsea), Dr. Jardine (Glasgow), Dr. Horn (Darlington), Dr. W. J. Sinclair (Manchester).

The following papers have been promised:

BUIST, Dr. R. C. (Dundee). Two Symphysiotomies.
DONALD, Dr. A. (Manchester). On Vaginal Section.
DOYEN, Dr. (Paris). (1) Abdominal Hysterectomy and its Indication (tumours, suppuration, etc.). (2) Modification of the Technique of Vaginal Hysterectomy.
EDGE, Dr. Fred. (Wolverhampton). Posterior Colpotomy as a means of Primary and Secondary Drainage of the Abdominal Cavity.
FARRAR, Dr. J. (Gainsborough). A New and Speedy Method of Dilating a Rigid Os in Parturition.
FOTHERGILL, Dr. W. E. (Manchester). The Function of the Decidual Cell.
JARDINE, Dr. Robert (Glasgow). (1) Saline Injections into the Cellular Tissues in Cases of Eclampsia and Collapse from Hæmorrhage. (2) Aseptic Midwifery.
JESSETT, Dr. F. B. (London). (1) A hundred cases of Vaginal Hysterectomy for Carcinoma. (2) Surgical Treatment of Fibro-myomata of Uterus by Panhysterectomy or the Subperitoneal Method.
JONES, Dr. Handfield (London). The value of Curette Scrapings in the Early Diagnosis of Corporeal Cancer.
KYNOCH, Dr. (Dundee). A case of Osteomalacia.
LANDAU, Dr. (Berlin). (1) Vaginal Cœliotomy. (2) Surgical Treatment of Uterine Cancer and its Relapse.
MACPHATTEN, Dr. Neil (Denver, U.S.A.). The Treatment of Suppuration within the Female Pelvis.
MADDEN, Dr. T. More (Dublin). On some Improvements in the Mechanism and Use of the Midwifery Forceps and in their Employment.
MARTIN, Dr. Christopher (Manchester). Conservative Surgery of the Ovary.
PARSONS, Dr. Inglis (London). A New Method of Treatment for Prolapse of the Uterus.
PURSLOW, Dr. C. E. (Birmingham). Notes of Four Cases of Pregnancy complicated with Ovarian Tumour.
ROUTH, Dr. Amand (London). Treatment of Cystocele.
SCHARLIEB, Dr. M. (London). On a case of Missed Labour verified by Operation and also *Post Mortem*.
SMITH, Dr. Lapthorn (Montreal). Treatment of Displacements of the Uterus by Operation, based on 200 Cases.
SMYLY, Dr. W. J. (Dublin). Extirpation of Myomatous Uteri by the Vagina.
TAIT, Lawson, F.R.C.S. (Birmingham). (1) Further research into the Effects of Removal of the Uterine Appendages as the best treatment of Uterine Myomata. (2) Case of Ruptured Tubal Pregnancy.

D. STATE MEDICINE.

Forensic Medicine Theatre, University New Buildings.

President: Sir HENRY D. LITTLEJOHN, M.D., LL.D. *Vice-Presidents:* JOHN C. MCVAIL, M.D.; GEORGE REID, M.D.; THOMAS GOODALL NASMYTH, M.D.; JAMES MCLINTOCK, M.D. *Honorary Secretaries:* CHARLES HUNTER STEWART, M.B., D.Sc., 18, Moray Place, Edinburgh; WILLIAM LESLIE MACKENZIE, M.D., Public Health Office, Leith.

It is proposed to hold discussions on the following:

1. Rivers Pollution; with Special Reference to the Present Condition of Scottish Rivers. To be opened by Dr. McLean Wilson. The following among others intend to take part: Professor Glaister, Dr. J. C. McVail, Dr. C. R. Macdonald, Dr. Matthew J. Oliver.

2. Vaccination; with Special Reference to Prospective Legislation. To be opened by Dr. F. S. Bond, Gloucester. The following among others intend to take part: Dr. J. Watkin Edwards, Dr. J. C. McVail, Dr. Arthur Newsholme, Dr. Matthew J. Oliver, Mr. T. Garrett Horder.

3. The Hygienic Control of Milk Supplies. To be opened by Dr. T. G. Nasmyth. The following among others intend to take part: Professor Forster (University of Strassburg), Professor Saltet (University of Amsterdam), Dr. W. Brown (Carlisle), Dr. Maxwell Williamson, Dr. Spottiswoode Cameron, Dr. T. F. S. Caverhill, Dr. J. Watkin Edwards, Dr. Henry Kenwood, Dr. E. W. Hope, Dr. C. R. Macdonald, Dr. J. S. Neech, Dr. Arthur Newsholme, Dr. Matthew J. Oliver, Dr. Templeman, Dr. W. H. Symons, Dr. A. K. Chalmers, Dr. J. Maxwell Ross.

4. The Plea of Insanity in Criminal Cases, conjointly with the Psychological Section.

The following intend to contribute papers:

ALIAN, Dr. F. J. Formaldehyde as a Disinfectant.

Cameron, Dr. Spottiswoode. Remarks on Removal and Disposal of Refuse.
Cameron, Dr. Macmartin. Surface Wells as a Source of Water Supply.
Caverhill, Dr. T. F. S. Temporary Hospitals.
Chalmers, Dr. A. K. Meat Inspection.
Dicey, Dr. Diphtheria in London.
Millard, Dr. Killick. Return Cases of Scarlet Fever.
Robertson, Dr. John (Sheffield). Soil as a Factor in the Spread of Certain Diseases.
Seaton, Dr. Sanitary Analysis of Water.

E. Psychology.

Students' Common Room, University New Buildings.

President: Thomas Smith Clouston, M.D. *Vice-Presidents:* William Wotherspoon Ireland, M.D.; H. F. Hayes Newington, M.R.C.S.; Joseph Wiglesworth, M.D. *Honorary Secretaries:* John Macpherson, M.D., Stirling District Asylum, Larbert, Stirlingshire; George M. Robertson, M.B., District Asylum, Murthly, Perth.

The following discussions have been arranged:

1. Suicide: Its Social and Psychiatrical Aspects. To be opened by Professor Morselli of Genoa.

2. Aphasia in Relation to Testamentary Capacity. To be opened by Professor Sir William Gairdner, K.C.B.

3. Hypnotism: Its Phenomena and Theories. Introduced by Dr. J. Milne Bramwell of London. Mr. T. W. H. Myers of Cambridge has kindly consented to take part in this discussion.

4. Dr. Shuttleworth will introduce a discussion on Moral Imbecility.

The following among others have intimated their intention of taking part in the discussions: Professor Benedikt of Vienna, Dr. Marie of Dun-sur-Auron, Dr. Kurella of Breslau, Dr. Magnan of Paris, Dr. Pierson of Lindenlvos, Dr. Hayes of Dublin, Sir John Batty Tuke, Dr. A. Haig, of London, Dr. Yellowlees, Dr. Fletcher Beach, Dr. Ernest White, Dr. Sibbald, Dr. James Shaw, Dr. Crockley Clapham, Dr. Urquhart, Dr. Outterson Wood, Dr. John Woods, etc.

The following papers have been intimated:

Adam, Dr. James, West Malling, Kent. The Average Duration of General Paralysis.
Bois, C. A., and Kerr, N. T., Drs., Hartwood, Glasgow. Clinical Studies with Spleen and Thyroid Extract.
Dawson, W. R., and Rambant, D. F., Drs., Dublin. The Ocular Phenomena in General Paralysis.
Hotcheiss, Dr., Glasgow. A case of Hæmatoporphyrinuria.
McLean, Dr. A., London. The Better Inspection of Institutions for the Insane in England and Wales.
Passmore, Dr. E. S., London. The Clinical Diagnosis of States of Melancholia.
Sutherland, Dr. J. F., Deputy Commissioner in Lunacy, Edinburgh. The Insanities of Inebriety from the Legislative and Medico-Legal Standpoint.

Drs. Bruce, Easterbrook, Hamilton Mann, and Walter Bernard have also promised papers.

F. Neurology.

Midwifery Theatre, University New Buildings.

President: Byrom Bramwell, M.D. *Vice-Presidents:* Joseph Arderne Ormerod, M.D.; William Russell, M.D.; Alexander Bruce, M.D. *Honorary Secretaries:* Robert Alexander Fleming, M.D., 10, Chester Street, Edinburgh; William Ford Robertson, M.D., 12, Bristo Place, Edinburgh.

The following discussions and demonstrations have been arranged:

1. Wednesday, July 27th, 10 A.M.—A discussion on the Treatment (Curative and Palliative) of Intracranial Tumours will be opened by Professor Ferrier, M.D., F.R.C.P., F.R.S. The following members have promised to take part: Dr. C. E. Beevor, Mr. H. F. Waterhouse, Dr. E. F. Trevelyan, Mr. C. A. Morton, Dr. John M. MacCormac, Dr. J. Michell Clarke, and Dr. T. Outterson Wood.

2. Thursday, July 28th, 10 A.M.—A discussion on the Influence of Micro-organisms and Toxins in the Production of Disease of the Central and Peripheral Nervous System will be opened by Dr. Thomas Buzzard, F.R.C.P. The following gentlemen have promised to take part: Dr. W. S. Colman, Dr. F. J. Smith, Dr. Fletcher Beach, Dr. John M. MacCormac, and Dr. T. Outterson Wood.

3. Friday, July 29th, 10 A.M.—Demonstration of (*a*) Preparations, lantern slides, and microscopic sections illustrative of the Morbid Anatomy of Diseases of the Nervous System (Brain, Spinal Cord, and Peripheral Nerves). (*b*) Patients, and Morbid Specimens from Individual Cases of Nervous Disease of special interest and importance from a clinical, pathological, and physiological point of view.

Drs. E. F. Trevelyan, Andrew Smart, and J. Michell Clarke have, amongst others, already intimated their intention to take part in the demonstrations.

The following papers have been promised:

Beevor, Charles, E., M.D., F.R.C.P. On the Bilateral Action of the Latissimus Dorsi in Hemiplegia.
McAldowie, A. M., M.D. Case of Tumour of Cirus Cerebri.
Murray, Professor George, M.A., M.D., F.R.C.P., and Richardson, George, M.B., F.R.C.S. Case illustrating the advantages of Removal of Recurrent Cerebral Tumour.
Smart, Andrew, M.D., LL.D. Some Further Notes on Undescribed Neuroses in their Physiological and Clinical Aspects.
Trevelyan, E. F., M.D., M.R.C.P. Case of Acute Meningo-myelitis, in which a Dipococcus was Cultivated from the End. With Microscopic Specimens.

G. Pathology.

Pathology Theatre, University New Buildings.

President: William Smith Greenfield, M.D. *Vice-Presidents:* Frederick Walker Mott, M.D., F.R.S.; John MacFadyean, M.B.; Almroth Edward Wright, M.D. *Honorary Secretaries:* Harold Jalland Stiles, M.B., 5, Castle Terrace, Edinburgh; Robert Muir, M.D., 20, Hartington Place, Edinburgh.

A discussion on the Agglutinating or Sedimenting Properties of Sera and their Relation to Immunity will be opened by Herbert E. Durham, M.B., C.B.

The following communications have been announced:

Auld, A. G., M.D. (1) Some Results of Extirpation of the Suprarenal Gland. (2) On the Toxins of the Pneumococcus.
Bruce, Professor R., and Hill, C. A., M.B. A Classification of the Micro-organisms Found in Water.
Durham, H. E., M.B. (1) An Inquiry into an Epidemic caused by a Variety of the Bacillus Enteritidis of Gärtner by means of Serodiagnosis (Gruber's Reaction) and Bacteriological Examination. (2) A Simple Method of Demonstrating the Formation of Gas by Bacteria.
Levy, Alfred G., M.D. The Blood Changes after Experimental Hyroidectomy.
McFadyean, Professor J. (Subject to be afterwards announced.)
McWeeney, Professor E. J. On the Growth of the Typhoid Bacillus in Bouillon containing a Certain Proportion of the Homologous Serum.
Muir, R., M.D. On the Nature and Significance of Changes in the Bone Marrow during Leucocytosis.
Smith, J. Lorrain, M.D. The Pathological Effects of Breathing Oxygen at a High Tension.
Stiles, Harold J., M.B. The Nature of Parotid Tumours.
Stockman, Professor S. The Pathological Effects of Dead Tubercle Bacilli.
Thoma, Professor R. Normal Circulation and Circulatory Disturbances in the Spleen.

H. Pharmacology and Therapeutics.

Materia Medica Theatre, University New Buildings.

President: James Ormiston Affleck, M.D. *Vice-Presidents:* Charles Douglas Fergusson Phillips, M.D., LL.D.; J. Theodore Cash, M.D., F.R.S.; Nestor Tirard, M.D.; Ralph Stockman, M.D. *Honorary Secretaries:* R. Dundas Helm, M.D., 3, Alfred Street N., Portland Square, Carlisle; A. Lockhart Gillespie, M.D., 23, Walker Street, Edinburgh.

There will be three discussions on subjects of general interest and importance related to Pharmacology and Therapeutics. These subjects are as follows:

1. Wednesday, July 27th.—The Treatment of Diseases of the Stomach. Introduced by Dr. G. Herschell and Professor C. A. Ewald, and taken part in by, among others, Drs. Lauder Brunton, Saundby, Fenton, B. Turck, Symons Eccles, and Pearson. For convenience the subject will be considered under the heads of: (*a*) General Treatment and Diet; (*b*) The Influence of Drugs upon Gastric Chemical Processes; (*c*) The Influence of the Treatment of co-existing Maladies upon Diseases of the Stomach; (*d*) The Indications for Surgical Treatment.

2. Thursday, July 28th.—The Treatment of Chronic Renal Disease. Opened by Dr. Nestor Tirard, Professor Ewald, and Dr. Saundby. With special reference to: (*a*) Hygiene and Diet; (*b*) The Influence of Drugs and other Therapeutic Measures; (*c*) Uræmia.

3 Friday, July 29th.—The Therapeutic Value of Recent Synthetic Analgesics: Their Benefits and Attendant Risks. Opened by Professor Ralph Stockman. Professor Cash and Dr. F. C. Phillips will take part. (The antipyretic properties possessed by members of this group will not form a part of the subject for discussion.)

It is also proposed to hold a demonstration of recently-devised intragastric instruments and other apparatus and measures for the treatment of gastric diseases; to this it is

expected that Dr. Turck (Chicago), Drs. Herschell and Eccles, Drs. Einhorn (New York), and Hemmeter (Baltimore) will contribute. The Secretaries will be glad to receive notice of any member wishing to show any further novelty relating to this subject.

The following papers have been announced:

CASH, Professor. The Pharmacology of the Alkaloids of Aconitum Napellus.

EWALD, Professor C. A. (1) On the Present State of the Treatment and of our Knowledge of Gastric Disorders. (2) The Benefit of Repeated Tapping and Venesection in Chronic Kidney Disease, especially in Uræmia.

GILLESPIE, A. Lockhart. (1) Brief Note on the Action of the Bromide and Iodide of Strontium together upon Exophthalmic Goitre in Children. (2) Preliminary Note on the Action of Stipa Viridula. (3) The Action of Diet, Antiseptics, and of some other Drugs upon the Intestinal Processes.

HERSCHELL, George. The Treatment of Atony of the Stomach and Intestines by Mechanical Vibration.

KERR, Norman. Alcohol in Drugs and Drug Preparations.

PHILLIPS, C. D F. On the Pharmacological and Therapeutical Actions of Hydrastis Canadensis.

TURCK, Fenton B. (Chicago). (1) Pneumatic Gymnastics of the Stomach. (2) The Indications for Gastrostomy, with a Note on a new Method of Operation.

(Some of these papers will not be read separately, but used as a basis for the remarks made at the discussions.)

The demonstration and explanation of new gastric appliances (should it be found feasible) will take place on Thursday, July 28th, at 1 P.M. or any other hour which may be subsequently fixed upon. Details as to the appliances and measures to be illustrated will probably be specially noted later on.

I. OPHTHALMOLOGY.

Chemistry Tutorial Class Room, University New Buildings.

President: D. ARGYLL ROBERTSON, M.D., LL.D. *Vice-Presidents:* R. MARCUS GUNN, F.R.C.S.; GEORGE A. BERRY, M.B.; GEORGE MACKAY, M.D. *Honorary Secretaries:* WILLIAM GEORGE SYM, M.D., 50, Queen Street, Edinburgh; ANGUS MCGILLIVRAY, M.D., 23, South Tay Street, Dundee.

The following papers have been promised:

BUCHANAN, Leslie, M.D. Extraocular Growths, etc.

COLLINS, E Treacher, F.R.C.S. On Cases where Skiagraphs were of Service for the Detection and Removal of Intraocular Foreign Bodies.

DAVIDSON, Dr. M'Kenzie. Demonstration of Employment of Roentgen Rays in Ophthalmology.

EYRE. Dr. J. W. (London). A Clinical and Bacteriological Study of Diplo-bacillary Conjunctivitis.

FALLOWS, Dr. (1) Case of Polypoid Growth from a Meibomian Cyst Illustrated. (2) The Use of Fluorescin in the Diagnosis of Corneal Abrasions in the form of Tabloids.

GRIFFITH, John, F.R.C.S. Case of Acute Exopthalmic Goitre.

HERN, Dr. John. The Operations now usually Substituted for Enucleation of the Eyeball.

HINSHELWOOD, James, M.D. Use of Holocaine in Ophthalmic Surgery.

JULER, Henry, F.R.C.S. (1) A Case of Gumma of the Ciliary Body with Recovery of Vision. (2) Case of Interstitial Keratitis with Acquired Syphilis.

LAWSON, Arnold, F R.C.S. Bacteriology of Normal Conjunctival Sac and its bearing on the Use of Antiseptics.

NUËL, Professor (Liège). Absorption of Aqueous Humour of the Iris.

REID, Dr. Thomas. (1) Reparative Processes in the Cornea. (2) Intercalary Cells in Corneal Epithelium. (3) Early Stages of Trachoma: Lantern Demonstration.

SNELLEN, Professor (Utrecht). (Title not announced.)

THOMPTON, Dr. J. Tatham. A Case of Cyst of the Hyaline Canal producing a Double Lens.

WILLIAMS, R. Paralysis of Accommodation after Influenza.

Microscopic and naked-eye specimens, apparatus, etc., have been promised for the Museum by Drs. Reid, Usher, and Buchanan.

J. LARYNGOLOGY AND OTOLOGY.

Surgery Tutorial Class Room, University New Buildings.

President: PETER MACBRIDE, M.D. *Vice-Presidents:* J. J. KIRK DUNCANSON, M.D.; J. DUNDAS GRANT, M.D.; ROBERT MACKENZIE JOHNSTON, M.D.; STCLAIR THOMSON, M.D. *Honorary Secretaries:* ADAM BROWN KELLY, M.B., 26, Blythswood Square, Glasgow; A. LOGAN TURNER, M.D., 20, Coates Crescent, Edinburgh.

The subject selected for discussion is The Mutual Relationship and Relative Value of Experimental Research and Clinical Experience in Laryngology, Rhinology, and Otology. The discussion will be introduced under these three heads by Sir Felix Semon (London), Dr. Greville MacDonald (London), and Dr. William Milligan (Manchester).

The following gentlemen have intimated their intention of taking part in the discussion or in the work of the Section: Dr. Charles Warden (Birmingham), Dr. Richard Ellis (Newcastle-on-Tyne), Dr. Farquhar Matheson (London), Professor Urban Pritchard (London), Dr. Dundas Grant (London), Dr. David Newman (Glasgow), Dr. L. H. Pegler (London), Dr. J. Kerr Love (Glasgow), J. Walker Downie, M.B. (Glasgow), John Macintyre, M.B. (Glasgow), Dr. Watson Williams (Bristol), Dr. William Hill (London), Macleod Yearsley, F.R.C.S. (London), W. Jobson Horne, M.B. (London), Dr. H. S. Birkett (Montreal), Dr. Holbrook Curtis (New York), Dr. Von Stein (Moscow), W. R. H. Stewart, F.R.C.S Edin., Dr. Thomas Barr (Glasgow), James Erskine, M.B. (Glasgow), Dr. Robert Fullerton (Glasgow), T. Mark Hovell, F.R.C.S.E. (London).

The following papers have been announced:

BARR, Dr. Thomas. (1) Notes on Extradural Suppuration in the Sigmoid Fossa due to Ear Disease. (2) A Case of Double Acute Mastoid Empyema, with Exposure of Dura Mater and Operation in Both.

COLLIER, Mayo, M.B., M S., F.R.C.S.Eng. Nasal Obstruction, its Relation to Throat and Ear Disease.

CURTIS, Holbrook. The Treatment of Acute Laryngitis in Singers.

DOWNIE, Walker, M.B. Three Cases of Foreign Body in the Throat in which the position of the Body was determined by the Roentgen Rays. Illustrated by Skiagraphs.

HORNE, W. Jobson, M.B. The Pathogenesis and Earlier Clinical Evidence of Laryngeal Tuberculosis.

HOVELL, T. Mark, F.R C.S E. Catheterisation of the Eustachian Tubes.

MACINTYRE, John, M.B. Demonstration on the X Rays, with special reference to the Diseases of the Upper Respiratory Tract.

MILLIGAN, Dr. Some Observations upon Antrectomy as a means of Treatment in Suppurative Middle-ear Disease.

NEWMAN, Dr. David. (1) On Laryngeal Paralysis from Pressure upon the Vagus or Recurrent Laryngeal Nerves. (2) Some Cases showing the Relationship of Nasal and Pharyngeal Disease to the General Health.

SHAW, Cecil, M D. Notes of a case of Epithelioma of the Pharynx, with Microscopic Specimens of Tumour.

THOMSON, Dr. StClair. Nasal Hydrorrhœa.

WAGGETT, Ernest, M.B. Some New Methods and Instruments.

YEARSLEY, Macleod, F.R.C.S. The Thyroid Treatment of Middle-ear Disease.

YONGE, Dr. E. S. The Treatment of Dysphagia in Laryngeal Tuberculosis.

K. DISEASES OF CHILDREN.

Practical Materia Medica Room, University New Buildings.

President: JOSEPH BELL, F.R.C.S.Edin. *Vice-Presidents:* JAMES CARMICHAEL, M.D.; JOHN PLAYFAIR, M.D.; T. M. BURN-MURDOCH, M.B.; GEORGE ARTHUR WRIGHT, F.R.C.S. *Honorary Secretaries:* GEORGE HARRY MELVILLE DUNLOP, M.D., 20, Abercromby Place, Edinburgh; JOHN THOMSON, M.D., 14, Coates Crescent, Edinburgh; WALTER STACY COLMAN, M.D., 22, Wimpole Street, W.

The following subjects have been selected for discussion:

1. Wednesday, July 27th.—The Treatment of Spinal Caries. To be opened by Mr. Victor Horsley.

The following gentlemen are expected to join in the discussion: Robt. Jones, F.R C.S.Edin. (Liverpool), T. S. Kirk, M.B. (Belfast), R. W. Murray, F.R.C.S. (Liverpool), Noble Smith, F.R.C.S.Edin. (London), A. H. Tubby, F.R.C.S. (London), W. Thomas, F.R.C.S. (Birmingham).

2. Thursday, July 28th.—Certain Aspects of Congenital Syphilis. In opening the discussion Mr. Jonathan Hutchinson will deal with the Lesions of the Bones and of the Organs of Special sense, and Dr. Henry Ashby will speak of those of the Brain and other Internal Organs.

The following members have intimated their intention to join in the discussion: Professor A. Baginsky (Berlin), M. Jules Comby (Paris), T. Telford Smith, M.D. (Lancaster).

3. Friday, July 29th.—Rheumatic Heart Disease in Childhood; with special reference to (*a*) physical signs, (*b*) prognosis. To be opened by Dr. D. B. Lees.

The following are expected to join in the discussion: H. Ashby, M.D. (Manchester), Professor A. Baginsky (Berlin), James Finlayson, M.D. (Glasgow), W. P. Herringham, M.D. (London), H. D. Rolleston, M.D. (London), J. Lindsay Steven, M.D. (Glasgow).

The following papers have been announced:

BATTEN, F. E., M.D. (London). On Diphtheritic Paralysis.

CARMICHAEL, James, M.D. (Edinburgh). Types of Infantile Pneumonia.

CLARKE, J. Jackson, F.R.C.S. (London). On Congenital Dislocation of the Hip Joint.

COLLIER, H. Stansfield, F.R.C.S. (London). On Dislocation of the Hip joint occurring in the Course of Infectious Diseases.

COMBY, Jules, M.D. (Paris). On Movable Kidney in Children.

COUTTS, J. A., M.B. (London). On Congenital Syphilis.

EVE, F. S., F.R.C.S (London). On Tendon Grafting.

JONES, Robert, F.R.C.S.Edin. (Liverpool). On the Short Leg of Hip Joint Disease and its Treatment.

MARTIN, R., M.D.Aberd. (Manchester). On the Effects of Tobacco Smoking on Children.

Murray, R. W., F.R.C.S. (Liverpool). 1. On Harelip and Cleft Palate. 2. On the Treatment of Club Foot.
Nicoll, James H., M.B. (Glasgow). The Radical Cure of Spina Bifida treated by Open Operation
Still, G. F., M.D. (London). On the Micro-organism of Simple Posterior Basic Meningitis in Infants.
Sutherland, G. A., M.D. (London). The Treatment of Hydrocephalus by Intracranial Drainage.

L. Dermatology.

Students' Library, University New Buildings.

President: William Allan Jamieson, M.D. *Vice-Presidents:* Walter George Smith, M.D.; John James Pringle, M.B.; Alexander Morton, M.D. *Honorary Secretaries:* James Limont, M.B., 3, Queen Square, Saville Place, Newcastle-on-Tyne; Norman Walker, M.D., 7, Manor Place, Edinburgh.

The arrangements are as follows:

On Wednesday, July 27th, after the President has delivered his introductory remarks, the Section will adjourn to the Royal Infirmary, where a Clinical Meeting for the Exhibition of Patients will be held and the cases informally discussed.

On Thursday, July 28th, the subjects for discussion will be (1) The Nature and Treatment of Lupus Erythematosus. To be opened by Professor Boeck (Christiania), and Dr. Unna (Hamburg); and (2) What are we to understand by Eczema? To be opened by Mr. Malcolm Morris (London), and Dr. Wallace Beatty (Dublin).

Papers will be communicated on Friday.

M. Medicine in Relation to Life Assurance.

Music Class Room, University New Buildings.

President: Claud Muirhead, M.D. *Vice-Presidents:* Sir R. Douglas Powell, Bart., M.D.; Peter Alexander Young, M.D.; James Ritchie, M.D. *Honorary Secretaries:* James Murdoch Brown, M.D., 9, Walker Street, Edinburgh; Francis Darby Boyd, M.D., 6, Atholl Place, Edinburgh.

The subjects already arranged for discussion are:

The Prognosis of Cardiac Disease in its bearings upon Life Assurance — to be opened by Professor Sir William T. Gairdner, K.C.B.

Middle-Ear Disease in relation to Life Assurance. This will be opened by Dr. McBride, President of the Section of Laryngology and Otology. (These two Sections will probably hold a joint discussion on this subject).

Does Evidence of Limited Family Vitality call for an advanced rate of Premium? To be opened by Dr. James Ritchie (Edinburgh).

The subjects of papers promised are:

Low, Mr. G. M. (Manager Edinburgh Life Assurance Society). Extra Rating as a Statistical Problem
Meikle, Mr James (Actuary, Scottish Provident Institution). Gout as a Factor in Life Assurance.
Playfair, Dr. (Edinburgh), conjointly with Mr. T. Wallace (Actuary, North British and Mercantile Insurance Company). The Bearing of Pregnancy upon Life Assurance.
McCandlish, Mr. John M. (Late Manager, Union and National Assurance Company). The Medical Advisers of Assurance Companies; Some of Their Difficulties.

N. Tropical Diseases.

Practical Pathology Room, University New Buildings.

President: Patrick Manson, M.D., LL.D. *Vice-Presidents:* Andrew Davidson, M.D., LL.D.; Andrew Smart, M.D., LL.D.; William John Ritchie Simpson, M.D. *Honorary Secretaries:* James Cantlie, M.B., 46, Devonshire Street, Portland Place, W.; Surgeon-Captain M. Louis Hughes, A.M.S., Aldershot.

The following discussions have been arranged: 1. The Unclassified Fevers of the Tropics. To be opened by Brigade-Surgeon-Lieutenant-Colonel Crombie, I.M.S.

2. Beri-Beri in Temperate Climates. To be opened by Conolly Norman, M.D. (Dublin).

3. The Epidemic of Plague in India. To be opened by W. J. R. Simpson, M.D. (late of Calcutta).

The following among others intend to take part in the discussions or to send papers: Surgeon-Major-General Hamilton, Inspector-General Turnbull, R.N.; Dr. Patrick Manson, Professor Haffkine, Mr. Hankin, Surgeon-Major Andrew Duncan, Surgeon-Major Ronald Ross, Surgeon-Captain Louis Hughes, Surgeon-Captain Buchanan, Dr. Andrew Davidson, Dr. Daniels, Dr. Sandwith, Dr. Sambon, Mr. James Cantlie, etc.

The following papers have been announced:

Black, Surgeon-Major, F.R.C.S.Edin. Sketch of Disease at Hong Kong in 1865 amongst the Troops, with Views, Charts, etc.
Brown, Surgeon-Captain E. Harold, I.M.S. Abdominal Surgery in the Tropics.
Cantlie, Mr. James. Surgical Requirements of the Tropics.
Davidson, Dr. Andrew, LL.D. The Malarial Problem in its Epidemiological Aspects.
Haffkine, Professor W. M. Plague in India.
Hamilton, Surgeon-Major-General J. B., P.M.O. Plymouth. Enteric Fever in Armies and Tropical Climates.
Hughes, Surgeon-Captain Louis, A.M.S. On the Training of Regimental Officers in the Prevention of Disease in the Army in Tropical Climates.
Manson, Dr. Patrick, LL.D. Appearance of Pigmentation in Lymphocytes in Relation to the Diagnosis of Malaria.
Sandwith, Dr., Cairo. (1) Pellagra; (2) The Treatment of Acute Dysentery.
Walsh, Surgeon-Major Tull, I.M.S. Clinical Aspects and Treatment of Malarial Fever.
Yare, Surgeon-Major, A.M.S. Malarial Eye Affections.

O. Anatomy.

Practical Physiology Room, University New Buildings.

President: Sir John Struthers, M.D., LL.D. *Vice-Presidents:* Sir James A. Russell, M.B., LL.D.; Johnson Symington, M.D.; Andrew Melville Paterson, M.D. *Honorary Secretaries:* David Hepburn, M.D., University, Edinburgh. Joseph Ryland Whitaker, B.A., M.B.Lond., F.R.C.P.Edin., Surgeons' Hall, Royal College of Surgeons, Edinburgh.

There will be a discussion on The Significance of Anatomical Variations, in which Professor Shepherd, of Montreal, will take part.

Professor Symington will give a Lantern Demonstration on Cranial Topography, while Professor Young (Manchester) has promised to take part in the discussion.

The following papers have been announced:

Cunninghae, Professor (Dublin): (1) The Medullary Substance of the Occipital Lobe of the Cerebral Hemisphere, with special reference to the Optic Radiations: Lantern Demonstration. (2) The Intraparietal Sulcus of Turner and the Affenspalte: a Study of the Growing Cerebral Cortex: Lantern Demonstration.
McCarthy, Dr. (Montreal). A New Dissection showing the Internal Gross Anatomy of the Hippocampus Major, with Specimens.
Thomson, Professor (Oxford). Sexual Differences of the Fœtal Pelvis.
Waterston, David, M.A., M.B., C.M., Demonstrator of Anatomy, University of Glasgow. Observations on the Anatomical Basis of Reduction of Dislocation of the Shoulder-joint by Manipulation.

P. Physiology.

Physiology Theatre, University New Buildings.

President: William Rutherford, M.D., F.R.S. *Vice-Presidents:* John Alexander MacWilliam, M.D.; D. Noël Paton, M.D.; E. Waymouth Reid, M.B., F.R.S. *Honorary Secretaries:* Edmond William Wace Carlier, M.D., 39, Morningside Drive, Edinburgh; Robert Arthur Young, M.D., 37, Trevor Square, Knightsbridge, S.W.

The following discussions have been arranged:

1. Theories regarding the Production of Different Qualities of Sensation. To be opened by Professor Rutherford, F.R.S.

2. Intestinal Absorption. To be opened by Professor Waymouth Reid, F.R.S.

The following papers are promised:

Carlier, E. W., M.D. Changes that Occur in Some Cells in Mucous Membrane of the Newt's Stomach during Digestion.
Copeman, S. Monckton, M.D. Biliary Secretion in Man.
Dunlop, J. C., M.D. On the Distribution of Nitrogen in the Urine.
Gillespie, A. Lockhart, M.D. On Proteoses.
Gulland, G. Lovell, M.D. On the Influence of Nerves on Intracranial Blood Vessels.
Harris, D. Fraser, M.D. The Physico-Chemical State of Caseinogen.
MacWilliam, Professor J. A., M.D. The Influence of the Central Nervous System on the Rate of the Heart's Beat.
Milroy, T. H., M.D. Chemical Changes in Pelagic Ova during Maturation.
Milroy, T. H., M.D., and Malcolm, J., M.B. The Metabolism of Nuclein under Physiological and Pathological Conditions.
Paton, Noel D., M.D. (1) Protoplasm and Zymin Action. (2) Further Observations on the Metabolism of the Salmon.
Pembrey, M. S., M.D. Observations upon the Deep and Surface Temperature of Man in Health and Disease.
Rutherford, Professor, F.R.S. (1) On the Secretion of Bile in the Human Subject. (2) On the Action of the Internal Intercostal Muscle.
Sturrock, A. C., M.B. The Selective Power of Tissues, especially as Illustrated in the Mammary Gland.
Thompson, Professor W. H., M.D. On the Influence of Peptone and its Precursors on the Work of the Kidney.
Turner, F. D. Dawson, M.D. (1) Experiments on the Production of Complementary Colour Sensations. (2) Stereoscopic Exhibition of Roentgen Photographs of Injected Blood Vessels.
Waller, Augustus D., M.D., F.R.S. On the Action of Anæsthetics on Vegetable and Animal Protoplasm.
Watson, D. C., M.B. The Place of Formation and *Rôle* of Uric Acid in the Animal Organism.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 26TH, 1898.

9.30 A.M.—Meeting of 1897-98 Council.
11 A.M.—Opening Service in St. Giles' Cathedral.
2.30 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2.30 P.M. President's Address.
9.30 P.M.—Reception by the Right Hon. the Lord Provost of Edinburgh, in the Museum of Science.

WEDNESDAY, JULY 27TH, 1898.

9.30 A.M.—Meeting of 1898-99 Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Second General Meeting. Address in Medicine by Professor T. R. Fraser, M.D., LL.D.
Garden Party at Craig House, Morningside Drive. Sir Alexander Christison, Bart., and Dr. Clouston will receive.
9.30 to 12 P.M.—Reception will be given by the Local Committee in honour of the Association, within the McEwan Hall and New University Quadrangle.

THURSDAY, JULY 28TH, 1898.

9.30 A.M.—Meeting of Council.
10 A.M. to 2 P.M.—Sectional Meetings.
3 P.M.—Third General Meeting. Address in Surgery, by Professor Annandale, F.R.C.S.
Reception and Garden Party by the Royal College of Physicians, within the College and the adjacent Queen Street Gardens.
Reception by the Royal College of Surgeons within the College.
Reception by the Royal Medical Society within the Society's Hall.
Garden Party by Professor and Mrs. Balfour, Inverleithen House.
7 P.M.—Public Dinner of the Association. Music Hall, George Street.
9 to 11 P.M.—The Ladies Committee will give a *conversazione* to ladies and invited guests within the Royal College of Physicians.

FRIDAY, JULY 29TH, 1898.

10.30 A.M. to 1.30 P.M.—Sectional Meetings.
3 P.M.—Concluding General Meeting. Address in Psychological Medicine. By Sir John Batty Tuke, President of the Royal College of Physicians, Edinburgh.
Garden Party by the Right Hon. the Earl of Hopetoun, G.C.M.G., at Hopetoun House.
Reception and Ball by the Right Hon. the Lord Provost and the Magistrates of Edinburgh, in the Music Hall, George Street.

SATURDAY, JULY 30TH, 1898.

10 A.M.—The University Graduation Ceremonial will take place within the McEwan Hall.
Excursions.

Honorary Local Secretaries.

R. W. PHILIP, M.D., F.R.C.P.Edin., 4, Melville Crescent, Edinburgh.
JOHN SHAW M'LAREN, M.B., F.R.C.S.Edin., 14, Walker Street, Edinburgh.

THE ANNUAL MUSEUM.

The annual Exhibition in connection with the meeting will be held in the Drill Hall, Forrest Road, Edinburgh, from July 26th to July 29th inclusive. The Exhibition will comprise foods and drugs, medical and surgical instruments, appliances and dressings, medical publications, sanitary and ambulance appliances, and other articles of interest to the medical profession.

The Drill Hall is a spacious building, well lit from the roof, and as the entrance is almost directly opposite that of the reception room, the situation is exceptionally advantageous. The small hall adjoining will be reserved for sanitary and ambulance appliances. For these the charge for floor space will be 1s. per square foot (all fittings to be provided by the exhibitor). For other exhibits the charge will be from 4s. per square foot, tables 3 feet and 3 feet 6 inches wide being provided.

Between two and three thousand catalogues will be printed and distributed gratis to members. Advertisements, prepaid, must be received before July 1st. All advertisements are subject to the approval of the Committee.

On application to the Secretary of the Exhibition Committee, Dr. Norman Walker, 7, Manor Place, Edinburgh, the regulations and any other particulars desired will be forwarded.

SPECIAL CORRESPONDENCE.

EDINBURGH.

Presentation of the Freedom of the City to Lord Lister.—Lord Lister's Reply.—Reception by the President and Fellows of the Royal College of Surgeons, Edinburgh.—The Edinburgh Royal Infirmary Residents' Club and Lord Lister.—Missionary Loan Exhibition.

MEDICAL Edinburgh was *en fête* last week. There were three functions. Lord Lister shared the honours of the first with Lord Wolseley; he was the sole hero of the second and third. In the McEwan Hall of the University new medical buildings on Wednesday, June 15th, in the presence of a great and representative assembly, the freedom of the city of Edinburgh, the highest honour the civic corporation has in its power to bestow, was conferred on the head of the British army, and on the most outstanding figure in British surgery, perhaps in the surgery of the world. In handing the burgess ticket to Lord Lister the Lord Provost, Mr. Mitchell Thomp-son, spoke of the association of the city of Edinburgh with the great advances of modern medicine and surgery. That city, he said, not only shared in the common benefit to humanity, but had the honour of being identified with the labours of so many of the most distinguished physicians and surgeons, and was surely justified in expressing its recognition of the value of the work which had been, and was still being, carried on. They had selected one who in himself was an illustrious example of all that was greatest and best in the surgical profession, and who had already been appreciated, and had received the highest honour in being called by Her Majesty to the House of Peers. His life's work was briefly sketched and his labours in antiseptic surgery spoken of. "Lord Lister," said the Lord Provost, "had done more to diminish suffering and prolong life than other living man. It was no mere happy conjecture, but the result of careful and prolonged investigation with scientific insight and accurate observation, extending over a series of years, that enabled him to give this boon to the world."

In his reply, Lord Lister referred to the connection between the University of Edinburgh and the Municipality, to the McEwan Hall and its use in connection with the present municipal function, to his own career from the day that he came up from his studentship in London, a perfect stranger with no other introduction than a letter to Mr. Syme from his old friend Dr. Sharpey, of Mr. Syme's unbounded kindness, of his beginning his career as a teacher of surgery in Edinburgh Extra-mural School, of his transference to Glasgow and his return to Edinburgh, of some of his best and happiest years in Edinburgh, of the enthusiastic students it was always a joy to him to teach. He concluded by saying: "I regard that all worldly distinctions are as nothing in comparison with the hope that I may have been the means of reducing in some degree the sum of human misery."

On Thursday afternoon, June 16th, the President and Fellows of the Royal College of Surgeons gave a reception in their hall in honour of Lord Lister. The invitations were confined to members of the Medical Faculty in Edinburgh, and to the President and Members of the Faculty of Physicians and Surgeons of Glasgow. Over 300 were present. The guests were received by the President, Professor John Chiene (a pupil and former Resident of the honoured visitor, Lord Lister, who stood on his left hand), by Sir John Struthers, the Vice-President; by the Secretary, Dr. Cadell; and by Sir Henry P. Littlejohn and Dr. John Smith, members of Council. Each guest was presented to Lord Lister, who cordially shook hands with all.

The fourth annual dinner of the Edinburgh Royal Infirmary Residents' Club was held in the Royal Hotel, Edinburgh, on Thursday, June 16th. The presence of Lord Lister, who, as President of the Club, occupied the chair, proved a great attraction, and the number of old Residents who attended, eighty-six in all, was larger than at any previous dinner. The President was supported on his right by Sir William T. Gairdner, K.C.B., Dr. Christison, and Dr. J. D. Maclaren, the two last-named having been his fellow residents. On his left were Sir Thomas Grainger Stewart, Dr.

Yellowlees, and Dr. Andrew Smart. The croupiers were Professor Chiene (the President-elect), Dr. T. A. Ross, representing the present Residents, and the Secretary (Dr. Ker). In speaking to the toast of the evening, "The Residency," Lord Lister gave interesting reminiscences of his first arrival in Edinburgh, and of his experiences as house-surgeon to Mr. Syme. Amongst other stories he mentioned that he on one occasion amputated a hip, in the belief that accidents were the house-surgeon's perquisite. Mr. Syme appears to have accepted his excuses more readily than some of his successors in the surgical wards might do to-day, were any present house-surgeon fired to emulate so great an example. Professor Chiene proposed Lord Lister's health in an admirable speech, characterised throughout by feeling and good taste. He alluded to his own first meeting years ago with Lord Lister, and to the influence exercised by his personality. Mr. Chiene wound up by presenting to the club the chair in which the President was sitting, and which he had had made out of wood from the old Royal Infirmary. This chair, with a suitable inscription, will now be a feature at all future dinners of the Club. Dr. T. A. Ross proposed the health of the senior old resident present, Sir William Gairdner, who was a house-physician so early as 1846. In replying to the toast Sir William gave an amusing sketch of the starving, purging, and bleeding treatment which used to go on in the old days. The speaking was succeeded by an impromptu "smoker," in which the following, amongst others, took part: Drs. Hepburn, Ballantyne, James, Ross, Gray, Berry, Simson, Hosack Fraser, and Mr. F. M. Caird. The proceedings terminated at midnight. To the great regret of all those present, Sir John Struthers, who is the senior member of the Club, having been in the house in 1844, was at the last moment prevented by a slight indisposition from attending the dinner, which he had not previously missed.

Under the auspices of the Edinburgh Medical Missionary Society, founded in 1841 by Dr. Abercrombie, a loan exhibition is to be held during the annual meeting of the British Medical Association in Edinburgh on July 25th, 26th, 27th, 28th, 29th, and 30th. The President of this Society is Professor Sir T. Grainger Stewart, M.D., President-Elect of the Association. The building in which the exhibition will take place is the historic Heriot's Hospital or School, founded in 1628, kindly lent by the governors for the purpose. It is situated immediately opposite the Royal Infirmary, and adjoins the Drill Hall, where the annual exhibition will be located. The loan exhibition will be open daily from noon to 10 P.M., and members of the Association will be admitted free on presentation of their membership tickets. The exhibits will illustrate all departments of missionary work, but prominence will be given to medical missions. Photographs and models of hospitals abroad, native surgical instruments and drugs from China, Palestine, etc., and a valuable collection of medical antiquities, dating from the first to the fifteenth century, will doubtless prove of special interest to medical visitors. Mrs. Bishop, F.R.G.S., Dr. A. Neve of Kashmir, Dr. F. I. Mackinnon of Damascus, Dr. Greig of Kirin, and others are expected to be present. A cordial welcome will be accorded all members of the Association who may find time to inspect the instructive exhibits which have been gathered together.

MANCHESTER.

Hospital Saturday Fund.—Wanted "Sewage Schemes."—Boracic Acid in Milk.—Burnley Hospital Question.

The fourth published list of subscriptions for the Hospital Saturday fund in Manchester brings the total sum received up to £3,195, as against £3,953 for the corresponding list of last year.

We have recorded from time to time the "evolution" of the sewage question in Manchester. The three "experts," Mr. Latham, Professors P. F. Frankland, and W. H. Perkin, having had referred to them, "for their conjoint opinion and advice," the scheme approved by the City Council on May 20th state in an advertisement just issued under the heading 'City of Manchester—Sewage Disposal,' that in as far as they are also requested and authorised to advise as to any alternative scheme which may be put before them, or which they may recommend," they are prepared to receive written communications setting forth any scheme which may be suggested if received at the Town Hall, Manchester, on or before July 1st, 1898. No premium is offered, nor will any expense be paid in respect of any scheme which may be so submitted. The opponents of the several rejected schemes will now have an opportunity of offering for consideration and report any pet schemes they may have.

The use of boracic acid as a preservative for food stuffs and milk has recently attracted much attention in this district. The Cheshire magistrates had a case before them last week in which a farmer was charged with mixing boracic acid in his milk. It was admitted that it was added in the belief that it would act as a preservative and yet exercise no deleterious effects upon consumers. It appears that the defendant bought the powder on the assurance of a traveller in the business that it was in no sense injurious. The defendant was fined in a modified penalty.

The official report of the inquiry by the joint Committee representing the Burnley Victoria Hospital and the Burnley Union, regarding the death of a drayman named Smith, has been issued. The evidence is voluminous and goes fully into the facts of the case; but at a meeting of the joint Committee it was resolved to take some additional evidence. The Committee will meet a week hence to consider their report.

LIVERPOOL.

Hospital for Women, Shaw Street.—Hospital Saturday Street Collection.—Certificate of Sanitary Knowledge.

Dr. Arthur J. Wallace has been appointed Honorary Assistant Surgeon to the Shaw Street Hospital for Women in succession to Dr. J. E. Gemmell, who has been promoted to the senior staff. Dr. Wallace is the assistant to the Professor of Midwifery at University College, Liverpool, and in addition holds the appointment of hospital medical officer to the Ladies' Charity and Lying-in Hospital.

The ladies' street collection on June 11th on behalf of the Hospital Saturday Fund has reached the sum of £736, being an increase of £113 over last year's collection.

The result of the first examination, held on behalf of the joint Sanitary Science Instruction Committee for their certificate of sanitary knowledge, has recently been announced. The examination was conducted at Ashton Hall, University College, Liverpool, by Dr. F. Vacher, M.O.H. Cheshire County Council, Dr. E. P. Manby, assistant M.O.H. Liverpool, and by Mr. J. Wilding. Twenty candidates presented themselves for examination, of which number fourteen, including two ladies, satisfied the examiners and received the certificate.

BRISTOL.

The Bristol Candidate for the Council of the College of Surgeons.

It is a good many years since Bristol had a candidate for the Council of the College of Surgeons, but the present one seems to bid fair to be the first representative of the West of England on that body. Mr. F. Richardson Cross, M.B.Lond., F.R.C.S., is well known to all practitioners in the West, and his reputation as an ophthalmic surgeon stands high in London. Mr. Cross was at the beginning of his career a general surgeon, but some years ago gave this up to bestow the whole of his time on diseases of the eye. As lecturer on anatomy Mr. Cross was for ten years connected with the medical school. He is at the present time President of the Bath and Bristol Branch of the Association, and some years ago he served the Bristol Medico-Chirurgical Society in a similar capacity. For many years he has been a member of the Committee of the *Bristol Medico-Chirurgical Journal*. Mr. Cross is at the present time the High Sheriff of the City of Bristol, a position which no medical man has ever held before. His acceptance of the office is consistent with his often repeated statement that medical men should take part in matters outside their profession. Mr. Cross has always held this, and always acted up to it, and being on a committee or in an official position he has never allowed his personal convenience to hinder him in the proper discharge of the duties he has undertaken. The feeling is very strong in the West of England that Mr.

Cross will make not only a good member of the Council, but a conscientious one, who will give his time and attention to the matters and welfare of the College.

CORRESPONDENCE.

DIABETES MELLITUS AND ITS TREATMENT.

SIR,—If you will permit me to do so, I should like to emphasise the remarks of your reviewer of Dr. Williamson's work on *Diabetes*, with reference to the question of the sudden commencement of the restricted dietary. I think the reviewer very aptly expresses himself on the point in saying[1] that "It depresses and wearies the patient to have less and less [carbohydrate food] to eat each week, whereas it cheers and encourages him when, after abstinence for a time, he is allowed some of the things for which he has a strong craving. It is not only more easy to manage the patient in this latter way, but we are also able more quickly to measure the extent of the disease, and to form our prognosis." My experience leads me to dissent entirely from the proposition implying that danger of producing diabetic coma is in a general way to be apprehended in severe cases by the sudden adoption of the diabetic dietary. I believe the notion is founded upon pure conjecture, and consider that the cases in which it would be inadvisable to commence at once with the fully altered diet are so rare that they may practically be regarded as constituting a negligible quantity. My own experience must differ from that of others if ground exists for a different view being entertained; and it is because I think the interests of successful treatment are at stake that I have been led to trouble you with this letter.—I am, etc.,

Grosvenor Street, W., June 22nd. F. W. PAVY.

FOREIGN PRACTITIONERS AND RECIPROCITY.

SIR,—As Mr. Carter's letter published by you in your last issue may confuse some of your readers on the relation of the Apothecaries' Society to the reciprocity question, I ask for space to restate the facts.

Mr. Carter describes the construction of the now defunct Reciprocity Report and denies any responsibility in its construction, suggesting however that I asserted he had admitted such responsibility. I asserted nothing of the kind. I said in my letter, published June 11th, about the general question that "Mr. Carter admitted to the Council that he was responsible for a statement on this subject in the letter written by the Executive Committee of the General Medical Council to the Privy Council." There is not a word here of reference to the Reciprocity Report, and therefore the first two-thirds of Mr. Carter's letter need not have been written. Reference to my letter of June 11th shows that the statement I did make has been left by Mr. Carter untouched. I proved that he had misinformed the General Medical Council concerning the policy of the Apothecaries' Society, of which body he is the representative in the Council. Mr. Carter informed the Council that the Apothecaries' Society's Act never had been, and never would be, put in force against a foreigner possessing a foreign diploma, but practising in this country without any British qualification. I showed in my letter of the 11th inst. that this public statement of Mr. Carter, endorsed as it was by Dr. MacAlister, was contrary to fact. This was the charge Mr. Carter had to meet, but he does not even attempt to do anything of the kind, although his letter occupies a column and a half of the valuable space of the BRITISH MEDICAL JOURNAL.

In conclusion, I observe that Mr. Carter says, "the letter written by the Executive Committee to the Privy Council seems to be a figment of Mr. Horsley's disordered imagination. There is nothing to show that *any such* letter was *ever* written in relation to the subject." On this I have only to remark that two letters on the subject were written by the Executive Committee to the Privy Council and are to be found on pages 147-151 of the minutes of the General Medical Council, vol. xxxv.—I am, etc.,

25, Cavendish Square, W., June 19th. VICTOR HORSLEY.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1898, p. 1524.

THE MEDICAL EXPERT AID COMMITTEE.

SIR,—I ask permission to inform your readers that I am the "one medical man" who you "regret has been found willing to become a member of an organisation which can only add to the troubles of the already grievously-burdened general practitioner, while doing no good to anyone else." As to the sympathy expressed for the general practitioner I, as a general practitioner, should have more faith in it if such professions on the part of the BRITISH MEDICAL JOURNAL were accompanied by corresponding action, which is, in my humble opinion, not the case. I fail to see why a doctor cannot with dignity accept a fee of half a guinea from patients whom he now attends for nothing with a false pretence of philanthropic motives.

As to the scheme, which, I believe, originated entirely with medical men, it is open to criticism, and such is cordially invited and will be carefully considered, with a view to correcting any defects which exist. I have no other motive for being on the Committee of Management than my desire to promote the welfare of the medical profession and the public, and I decline to be taught my duty by writers who are anonymous.—I am, etc.,

June 20th. HUGH WOODS.

SIR,—From the general practitioner's point of view, I think there is a good deal to be said in favour of this scheme.

Although every practitioner has a certain number of friends amongst the consultants whom he might ask to see his poorer patients for a reduced fee, yet there is much reluctance to ask favours even of his friends.

In almost every practice there is a certain proportion of poorer patients whose means will not allow them the luxury of the advice of a specialist at the fee of 2 guineas, and yet who would frequently be glad to obtain such advice at the comparatively small sum of half a guinea. Such patients generally become recipients of charity, and obtain specialists' advice for nothing by attending as hospital out-patients.

Surely it would not be beneath the dignity of the younger consultants to see such persons, and their time would be just as well spent in giving advice to a dozen patients at half a guinea each as in seeing fifty hospital out-patients for nothing, always remembering that they bring with them a recommendation from their medical attendant, who will thus bear evidence to their *bona fides*.—I am, etc.,

June 21st. CANTAB.

THE DENTAL EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—Does not the cogent reasoning and the common sense of the letter of "F.R.C.S." suggest the needlessness of the curriculum of the dental student, in so far as it includes strictly medical and surgical subjects? Why should his time be spent upon these at all? One must excuse an examiner asking questions upon the subjects taught. What is the use of general anatomy or of medicine and surgery to the dentist? The structure of the sole of the foot, the range of temperature in typhoid fever, the diagnosis of early phthisis, the distinctive mark of scirrhus of the breast, etc., what have these to do with him?

The dentist exists for the public, and the public are more concerned about the perfect adaptability of their artificial teeth and the careful filling of decayed teeth than they are that the dentist should be able to diagnose measles. If the dentist be taught his profession properly, and his charges be such that the poor and the poorer middle class can avail themselves of his valuable skill, the public will excuse his acquiring, or seeming to acquire, learning which in the main is useless.—I am, etc.,

June 14th S. C. R. M.

SIR,—It may be very important that a dental surgeon should recognise a syphilitic tongue, or know the microscopical appearance of a myeloid cell, or be able to diagnose and treat a scalded larynx, or correctly perform the operation of laryngotomy.

It is no doubt equally necessary that he should be well acquainted with the difference in dentition between a pig and a stag, or a herring and a shark, and of course he ought to

know the origin and insertion of the biceps flexor and triceps extensor cubiti muscles.

But from the general practitioner's point of view it is still more important that he should know how to save a carious six-year-old molar, and how to make a denture that shall at once be comfortable and efficient, that is, that he should be a "dentist." Most of us are now as much alive to the necessity of correcting faulty teeth in many cases of debility and indigestion as to the correction of errors of refraction in many cases of headache, and we are usually asked to "recommend a good dentist."

The L.D.S.Eng. is probably the most difficult dental qualification to obtain, and it surely should give confidence to the profession that its possessor, besides being a half-informed and wholly untrained medical practitioner, is capable of doing good dental work. I submit that to those who are acquainted with the dental examinations of the Royal College of Surgeons of England it does nothing of the sort.

It is not here suggested that a merely skilful dental mechanic should be made L.D.S.Eng., but it is here and now complained that such an one is not necessarily a dentist at all in the ordinarily accepted meaning of the term.—I am, etc.,

June 6th. G. P.

"EXTRANEOUS ORGANISMS" IN PRESERVED VACCINE.

SIR,—In his report, which appears in the appendix to the report of the medical officer of the Local Government Board for 1895 6, it is stated by Dr. Copeman that in advocating the use of lanolin as a suitable preservative medium for animal vaccine pulp I base my preference to glycerine on the opinion that glycerinised vaccine favours the growth of fungi, and adds that such a conclusion must have been arrived at from examination of specimens that had been exposed to air. I have never based my preference on such grounds. In this country, on the plains, lanolin vaccine has been proved incontestably a better preservative medium than glycerine, having regard to the main point of duration of activity, and it is on this ground I prefer it for tropical climates, though I am perfectly aware that glycerine is sufficiently useful in temperate climates.

The problem presented in this country is the obtaining of a preservative medium that shall be capable, in spite of rapidly varying grades of temperature, of preserving the activity of the vaccine, and in the hands of vaccinators in rural tracts not always under complete supervision, of maintaining it, in spite of unnecessary exposure to air, with a minimum of evil from "extraneous organism" thus derived. This preservation must be effected without such luxuries as storage over ice boxes, or by packing in bulky non-conducting materials. So far I can confidently state that nothing has stood these tests in India so effectually as lanolin. Lanolin vaccine has been repeatedly sent to distant localities, and has succeeded in establishing a stock where glycerine has failed; for example, through the hot plains of Southern India, and thence to the snows to Gilgit. As Dr. Copeman refers to a communication of mine in the *Indian Medical Gazette*, December, 1896, it is desirable that I should quote what actually I did say in reference to moulds on lanolin:

> No mould grows on lanolin vaccine that has not been carelessly prepared or exposed to dirt and filth subsequently.....I would never think, therefore, of using such contaminated material on human beings, but I have repeatedly used it on calves by simply removing the upper layer, with full success, showing, as Gottstein maintains, lanolin resists penetration.....But I may state that carefully-prepared specimens of lanolin vaccine have frequently shown activity of six and nine months' duration, and exceptional specimens have proved active at the end of seventeen and thirty-two months, notwithstanding the most careless treatment and frequent change of climate.

I have perused with interest Dr. Blaxall's experiments on the comparative merits of glycerine, lanolin, and vaseline. It seems to me, however, that these experiments have been conducted on a narrow basis. It so happens that Dr. Sreenevassa Row, Bacteriologist to the Mysore Government, before Dr. Blaxall's report reached this country, had been investigating the subject of the respective inhibitive powers on "extraneous organisms" of glycerine and lanolin, and I shall be able shortly, with his permission, to refer to the results of his observations. In the meantime, I may state that they fully confirm Dr. Copeman's original results as to the inhibitive powers of lanolin, besides proving the possession of other valuable properties as a vaccine preservative, which I need not anticipate. I would, however, now add that it is difficult for me to reconcile Dr. Copeman's present statement as to the uselessness of lanolin with the following quotations from papers by him:

> From experiments which I have carried out, in part since this paper was written, it would appear that anhydrous lanolin possesses the property of inhibiting the growth of saprophytic organisms in a similar manner to that of glycerine. (*Journal of Pathology and Bacteriology*, Vol. II, No. IV, May, 1894, p. 425.)

He reaffirms his statement as to lanolin in a paper read before the International Congress of Hygiene, Buda-Pesth, in September, 1894, in the following words:

> If, however, previous to making a plate cultivation the lymph has been intimately mixed with a certain proportion of either glycerine or anhydrous lanolin, and subsequently kept protected from air for a period of from a few days to a couple of months, it is found that all "extraneous organisms" have now been killed out, and no growth occurs in gelatine or agar plates. At the same time, the mixture will be found to have gained in efficiency as vaccine, rather than the reverse.

I can only suppose that Dr. Blaxall has not used the form of lanolin that has been uniformly advised by me, namely, "neutral anhydrous lanolin," specially prepared for vaccination purposes by Beno Jaffé and Darmstaedter, Martinkenfelde, Berlin, by methods approved by Professor Liebreich. In his report on this subject Dr. Blaxall states that he used a specimen which was apparently labelled "pure lanolin." I need not add that brands in the market differ greatly in purity, and that it is well that care be exercised in selecting specimens for special purposes. Perhaps in this point lies the difference of result obtained by Drs. Copeman, Blaxall, and Dr. Sreenevassa Row.—I am, etc.,

W. G. KING,
Sanitary Commission for Madras.

THE ROYAL ARMY MEDICAL CORPS.

SIR,—Mr. Edmund Owen sounded a note in the right direction when he called attention to the subjects of the examination for the Royal Army Medical Corps. But this is not the whole of the difficulty. The whole system of the examination is antiquated and out of date in a very marked degree, and gives rise to the idea in the minds of the candidates that the examination is not by any means a fair and adequate test of their knowledge, and, as long as the present methods obtain, is not likely to command the confidence of our best men. Let us take only one point by way of illustration. It is universally admitted to be a fundamental principle of all properly-conducted examinations that two examiners should, under all circumstances, act together; but at the army examinations there is only one examiner in each subject, and he is expected at the clinical examination to examine fifty or sixty candidates in an afternoon, to make the whole of the arrangements himself, and to form a correct and accurate judgment on the *relative* merits (for the examination is competitive) of all these candidates. No wonder, as the candidates say, he seems a little "bewildered" towards the end of the afternoon. Most of the men who present themselves have had a considerable experience of how examinations should be conducted, and is it likely that such an arrangement will command their confidence? The promise of reforms in matters of service and rank is a great gain; but unless the portal through which the service is entered is radically reformed, I am afraid that the best men will still hold aloof.—I am, etc.,

Upper Berkeley Street, W., June 17th. T. DIXON SAVILL.

THE DIAGNOSIS OF INFECTIOUS DISEASES.

SIR,—A short time since I was asked to see some cases in which the medical attendant was in doubt as to their nature. I found four children all suffering from sore throat, one having croupous breathing and discharge from the nose, the temperature not exceeding 102° in any of them. One only had a rash, not of the bright colour met with in scarlet fever, but of a more dusky hue. There were difficulties in the way of making a very searching examination of the throats, but a limited amount of exudation membrane was present.

I considered them all to be cases of diphtheria analogous to the form I described in the BRITISH MEDICAL JOURNAL of

July 23rd, 1887. The surgeon who called me in, and who, besides having had much experience, has enjoyed unusual opportunities for scientific investigation, fully endorsed my view of the case. The patients being in one small room, the use of which was shared by other members of the family, he sent his notifications direct to the hospital to ensure immediate removal, the Town Hall being by that time (6 P.M.) closed for the day.

I saw the medical officer of health a day or two afterwards at his office, when he said that the superintendent of the hospital had notified the above cases as scarlet fever; he also told me that one child had since died, and with his usual courtesy pointed out to me the entry of cause of death, which was, first, scarlet fever; secondly, septic sore throat, which to my mind confirmed my previously expressed opinion. Asking if he could tell me what means had been used to verify the diagnosis, I could obtain no further information on that point.

It appears to me that it would be well if in connection with the sanitary department some facilities might be afforded for cultivations and other means of definitely deciding the nature of doubtful cases without the delay that at present exists.

That departmental activity is not wanting is proved by the fact that while this important point is still in doubt a zealous vestry official returned me my four notification certificates in order that I might have the opportunity of indicating the sex of William, Mary, and Patsy by inserting M or F to the respective names, and fulminating divers pains and penalties in the event of similar omissions in future, and also complaining of a delay in notifying which had not occurred.—I am, etc.,

Kensington, W. M.R.C.S.Eng., etc.

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

SIR,—I have been much interested by Dr. Russel's paper in the BRITISH MEDICAL JOURNAL of June 4th on spasmodic stricture of the œsophagus at or near the cardiac orifice of the stomach. During a long residence in the West Indies I met with several cases of this nature, and all of them appeared to be connected with malaria, as is possible two of Dr. Russel's may have been—that of the surgeon in the colonial service and the retired naval officer.

My attention was first directed to the complaint by being myself the subject of it. In 1870 I had a most severe attack of malarial remittent fever, and during convalescence suffered for several days from the following symptoms: Fluid food could be swallowed without much pain or difficulty, but solid food occasioned much pain in the lower half of the œsophagus, which, when the cardiac orifice was attained, became most intense. After several seconds had elapsed I could feel the morsel of food slowly dilating the cardiac orifice, and the pain then became agonising, until at last I could feel it pass slowly through, and comparative relief followed, although a sensation of soreness continued for some time. I subsequently had several cases of a similar nature while in the West Indies, all of them associated with malaria, and in some of them the symptoms were distinctly intermittent in their occurrence. I have also since coming to this country been consulted for the same symptoms by a gentleman who had spent many years abroad in a malarial locality.

It is somewhat singular that Dr. Russel's cases, with one exception, all lived within a radius of less than forty miles, and I would suggest inquiry as to whether malarial influences might not have had something to do with their occurrence.

I may add that all the symptoms were soon relieved, and in a few days entirely disappeared under full doses of tinct. belladonnæ and liq. arsenicalis.—I am, etc.,

Eastbourne, June 6th. IZETT ANDERSON, M.D.Edin.

Obituary.

WILLIAM WHALLEY, M.D.

ON June 10th Bradford lost one of its most valued citizens. Dr. Whalley was born in the village of Oxenhope in 1833. He must have passed his boyhood in the Worth Valley at the time that Charlotte Brontë was in the neighbouring village of Haworth doing work which in later days was to make the Yorkshire Uplands famous in literary history. In 1858, Mr. Whalley, who studied at University College, took the M.R.C.S., and two years later the L.S.A. For some time he acted as Assistant to Dr. Milligan of Keighley, and in 1861 went to Bradford, where he practised up till the time of his death. He was one of the founders of the Bradford Medico-Chirurgical Society, and was now and then induced to give a popular lecture on some scientific subject. One such, on the eye, he printed by request. He was a regular attendant in his younger days at the meetings of the profession in Bradford and the county, and an occasional contributor to the medical journals. To our own pages he contributed in 1879 a brief but interesting analysis of some 2,200 cases of midwifery, of which he had kept careful notes. It was, however, as an excellent practitioner, trusted by his friends, esteemed by his medical brethren, that he was best known. Of tall, commanding figure, courteous in mien, and considerate in action, he held a large practice well together, and enjoyed to the end the confidence and affection of his patients. His eldest son was latterly in practice with his father, and his second son is a solicitor. He leaves also two daughters, one the wife of Mr. Crocker of Bingley.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Dezanneau, Professor of Clinical Surgery in the School of Medicine of Angers, and author of numerous contributions to professional literature, aged 66; Professor A. von Zenker, the distinguished Professor of Pathological Anatomy in the University of Erlangen, aged 73; and Dr. Fr. Kretschy, of Vienna, Lecturer on Internal Medicine in the University of Vienna, and for many years assistant to Professor Duchek, aged 50.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

DEGREES.—At the Congregation on June 16th the following degrees were conferred:

M.D.—E. H. Douty, M.A., King's; H. K. Anderson, M.A., Caius; J. B. Christopherson, M.A., Caius; J. J. Taylor, M.A., Emmanuel.

M.B.—J. B. Byles, King's; H. G. Deller, J. E. Sandilands, and F. J. Watson, Trinity; E. E. Prest and P. W. G. Sargent, St. John's; H. E May and F. A. Mills, Clare; H. S. Pendlebury, Pembroke; T. Betteridge, T. E. Heilborn, and A. C. Ransome, Caius; J. L. Kirk and C. White, Christ's.

B.C.—J. B. Byles, H. G. Deller, J. E. Sandilands, F. J. Watson, E. E. Prest, P. W. G. Sargent, H. S. Pendlebury, T. Betteridge, W. E. Heilborn, A. C. Ransome, J. L. Kirk, C. White.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

Part I. Chemistry and Physics.—C. Akerman, Cai.; A. E. Barclay, B.A., Christ's; G. F. Bird, Trin.; H. J. D. Birkett, Trin.; W. F. Blandford, B.A., Pet.; M. B. Briggs, Joh.; J. R. Briscoe, H. Selw.; A. D. Brunwin, Trin.; P. J. Burgess, B.A., Sid. Sues.; S. H. Clarke, Cai.; R. M. Courtauld, Pemb; Coventon, Trin.; G. Cowan, King's; W. L. Cripps, Trin.; A. H. Crossley, Cla.; H. F. Curl, Christ's; H. H. J. Fawcett, Trin.; G. R. Footner, Pemb.; C. B. Goulden, Non-Coll.; H. E. Graham, Jes.; S. L. Harke, Pemb.; G. H. Harper Smith, Cai.; E. T. Harris, Christ's; Hart, Sid. Suss.; W. H. Hastings, Trin.; G. P. D. Hawker, B.A., Cai.; F. A. Hepworth, Joh.; E. Higson, Magd.; T. W. S. Hills, Down; G. G. Hirst, Cai.; H. F. Horne, King's; J. B. Irving, Joh.; F. S. Jones, Joh.; H. M. Joseph, Trin.; A. S. Littlejohns, Cai.; F. J. Lovett, Trin.; F. Lushington, Jes; C. W. P. Moffatt, Cla.; R. F. Moore, Non-Coll.; W. H. Orton, Trin.; B. H. Pain, Emm.; O. V. Payne, Joh.; H. I. Pinches, Sid. Suss.; J. N. Robins, Christ's; G. H. Shepley, Joh.; T. Somerville, Emm.; E. C. Sparrow, Trin.; J. M. Stenhouse, Sid. Suss; S. J. Steward, Down; H. T. Thompson, Christ's; G. Thwaites, Joh.; C. F. O. White, Trin.; R. E. Whitting, King's; E. Wight, Sid. Suss.; A. B. Wilson, Pemb.; N. Wilson, Pemb.; F. L. Woods, Cai.; R. A. Worthington, Cla.; E. A. Wright, H. Selw.

Part II. Elementary Biology.—C. B. M. Aldridge, Christ's; A. E. Barclay, B.A., Christ's; H. J. Beddow, Christ's; G. F. Bird, Trin.; H. J. D. Birkett, Trin.; M. B. Briggs, Joh.; J. R Briscoe, H. Selw.; E. M. Brown, Pemb.; H. G. Brown, Emm.; P. J. Burgess, B.A., Sid. Suss.; H. M. Clarke, Cla.; S. H. Clarke, Cai.; D. H. Collingham, King's; G. C. Compton, Cai.; E. J. Cooper-Smith, Joh.; R. M. Courtauld, Pemb.; A. W. D. Coventon, Trin.; G. Cowan, King's; F. D. Crew, Emm.; A. H. Crossley, Cla.; J. M. Cunningham, Trin.; H. A. Cutler, B.A., Cla.; S. Dixon, Trin.; E. A. Ellis, Down; C. H. J. Fagan, Cai.; H. Falk, King's; H. H. J. Fawcett, Trin.; G. R. Footner, Pemb.; L. H. Frankenburg, Emm.; R. E. V. Hale, Cai.; G. H. Harper-Smith, Cai.; E. Harrison, Trin; R. N. Hart, Sid. Suss.; A. F. Heald, Non-Coll.; F. A. Hepworth, Joh.; W. R. Higgins, Cai.; E. Higson, Magd.; T. W. S. Hills, Down.; H. F. Horne, King's; W. E. Hume, Pemb.; W. F. Ingpen, Pemb.; F. A. G. Jeans, Joh.; S. C. Johnson, Trin.; F. S. Jones, Joh.; H. M. Joseph, Trin.; A. E. Kerr, Christ's; H. R. Lawrence, Pemb.; P. C. Litchfield, Trin.

H. R. Luker, Pemb.; H. F. Marris, Cai.; C. W. P. Moffatt, Cla.; W. M. Mollison, King's; R. F. Moore, Non-Coll.; W. H. Newton Emm.; W. H. Orton, Trin; H. B. Owen, Cai.; B. H. Pain, Emm.; O. V. Payne, Joh.; H. I. Pinches, Sid. Suss.; C. T. MacL. Plowright, Joh.; R. N. Poignand, Cai.; T. Somerville, Emm.; E. C. Sparrow, Trin; J. M. Stenhouse, Sid. Suss.; S. J. Steward, Down.; R. Streatfeild, Queens'; H. T. Thompson, Christ's; W. H. Thresher, Cai.; G. Thwaites, Joh; G. A. Ticehurst, Joh.; W. E. Weber, H. Selw.; R. E. Whitting, King's; H. L. Whytehead, H. Selw.; E. Wight, Sid. Suss.; R. G. Wills, Joh.; C. D. Wilson, Corp. Chr.; H. W. Wiltshire, Cla.; F. L. Woods, Cai.

Second Examination for Medical and Surgical Degrees.—The following candidates have satisfied the Examiners:—

Part I. Pharmaceutical Chemistry—B. L. T. Barnett, B.A., Joh.; F. M. Bulley, Emm.; R. Butterworth, B.A., Christ's; S. Child, B.A., Pemb.; R. A. Clapham, B.A., Emm.; G. H. Colt, Sid. Suss.; W. F. L. Day, Cai; A. P. Day, Christ's; J. H. Donnell, Cai.; T. L. Drapes, Sid. Suss.; R. S. Drew, Pemb; J. E. Frere, Pemb.; H. P. Gibb, Sid. Suss.; J. G. Gubbins, Cla; P. Hardy, Trin. H.; P. Harrison, B.A., Christ's; E. H. Harrisson, Cla.; N. G. Harry, Jes.; W. N. Heard, B.A., Down.; F. C. Hepburn, Pemb.; W. H. Hills, Pemb.; C. D. Horsley, Cai.; B. Hudson, Cla.; G. C. Lawson, B.A., Trin.; W. E. Lee, Trin.; H. B. McCaskie, Cai.; F. B. Manser, B.A., Pet.; O. May, Joh.; E. B. F. Molteno, Pemb.; W. E. Muil, B.A., Cai.; C. H. W. Page, Corp. Chr.; P. N. Panton, Trin.; W. E. Paramore, Joh.; C. A. W. Pope, Trin.; R. M. Ranking, Pemb.; R. H. Robbins, Trin.; N. O. Roberts, B.A., Christ's; Roche, B.A., Queens'; C. T. Scott, Sid. Suss.; F. E. Shipway, B.A., Christ's; H. C. Sidgwick, Cla.; J. L. Timmins, B.A., Emm.; S. M. Toppin, Cai.; A. C. Warren, B.A., Emm.; F. Whitaker, B.A., Trin.; W. M. Willoughby, B.A., Cai.; A. F. R. Wollaston, B.A., King's; H. G. K. Young, B.A., Emm.

Part II. Human Anatomy and Physiology—A. G. Bate, B.A., King's; F. H. M. A. Beckett, B.A., H. Selw.; R. L. Bellamy, B.A., Down; H. Bentley, B.A., Joh.; J. R. Bentley, Emm.; F. M. Boulton, B.A., Trin.; W. V. Braddon, Trin. H.; A. H. Brehaut, B.A., H. Selw.; C. de L. Carey, B.A., Emm.; F. J. Child, B.A., Christ's; E. M. Clark, B.A., Trin.; J. S. Clarke, B.A., Cai.; Colyer, M.A., Cath.; G. L. Crimp, B.A., Cai.; W. E. M. Ede, B.A., King's; F. P. Edwards, Down; A. O. M. Fehrsen, B.A., Cai: W. M. Fletcher, M.A., Trin.; H. S. Flook, B.A., Trin.; O. F. F. Grünbaum, B.A., Trin.; A. E. Hodder, King's; C. R. Howard, B.A., Pemb.; J. H. McAllum, M.A., Christ's; A. Martineau, B.A., Emm.; A. S. Mellor, B.A., King's; J. W. Mercer, B.A., Cla.; C. H. Miller, B.A., Trin.; D. J. Morgan, B.A., Joh.; S. H. Nathan, M.A., Trin; H. H. Riddle, Pet.; L. W. Roberts, M.A., Down; G. Roper, B.A., Non.-Coll.; E. A. Ross, Trin.; B. B. Sapwell, B.A., Corp. Chr.; C. A. St. J. Scott, B.A., Trin.; G. A. C. Shipman, B.A., Trin.; A. I. Simey, B.A., King's, A. T. Spanton, B.A., Trin.; C. Stiebel, Trin. H.; E. J. D. Taylor, Cai.: H. Wacher, B.A., Joh.; E. G. Wales, Down; R. F. Williams, B.A., Cai.; J. A. Wood, B.A., Joh.; F. E. Wood, Down; R. T. Worthington, B.A., Tain.

UNIVERSITY COLLEGE, DUNDEE.

Mr. David Myles, C.A., has left by will £10,000 to University College, Dundee. The latter sum is to be devoted to the establishment of bursaries or scholarships, but otherwise no restriction is placed on the discretion of the College authorities as to the manner in which the fund is to be administered. It is expected that arrangements will be made so as to cover as much ground as possible, and the bursaries will be available for medical students. Coming so soon after the settling of the arrangements for the completion of the medical school, this legacy is most opportune, and is only the first proof of what the College has always expected—that wealth would begin to flow it so soon as its standing was settled. Mr. Myles has also left £1,000 to Dundee Royal Infirmary.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, June, 1898. The following candidates passed in:

Surgery.—J. C. Bell, Guy's Hospital; F. Elias, London Hospital; J. Prentice, Liverpool.

Medicine—J. S. Barnes, St. Thomas's Hospital; P. D'E. Burrell, St. George's Hospital; F. Ede, Royal Free Hospital; J. M. Edwards (Section I), Charing Cross Hospital; J. W. King (Section I and II), Charing Cross Hospital.

Forensic Medicine.—J. S. Barnes, St. Thomas's Hospital; P. D'E. Burrell, St. George's Hospital; F. Ede, Royal Free Hospital; J. M. Edwards, Charing Cross Hospital; D. Hamilton, Royal Free Hospital; J. W. King, Charing Cross Hospital.

Midwifery.—C. J. Barnes, King's College Hospital; W. T. Davies, London Hospital; F. Ede, Royal Free Hospital; D. Hamilton, Royal Free Hospital; J. W. King, Charing Cross Hospital.

The diploma of the Society was granted to the following candidates: Messrs. J. S. Barnes, J. C. Bell, and J. Prentice.

NAVAL AND MILITARY MEDICAL SERVICES.

ARMY MEDICAL STAFF EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A Field Officer is desirous of exchanging to remain another year at home; he is now second on the roster for foreign service—Please address to No. 2091, British Medical Journal, 429, Strand, London, W.C.

THE ARMY MEDICAL STAFF.

Thirty-nine commissions in the Army Medical Staff will be offered at the next examination, which is to commence on August 5th. The latest date for making applications, which must be addressed to the Director-General, is July 27th. We are asked to state that appointments in the West African Service are again open.

THE LOUISA MARGARET HOSPITAL.

The new hospital so named for soldiers' wives and children at Aldershot has been completed, and a Board of Officers, with the Principal Medical Officer as President, assembled last week to report on its fitness for occupation.

THE VICTORIA CROSS.

Inquirer asks: During the progress of the Frontier war it was announced that several medical officers had, through great gallantry under fire, most surely earned the Victoria Cross, yet not a single medical officer has been so decorated. Why?

THE VOLUNTEER MEDICAL ASSOCIATION.

The annual meeting of the Volunteer Medical Association took place at 20, Hanover Square on June 16th, and was attended by a considerable number of members. The Senior Honorary Secretary read the report of the Council, and presented the balance sheet, both of which were approved and ordered to be circulated. The meeting then proceeded to the election of the officers and Council for the ensuing year. Surgeon-Major Cantlie (London Scottish) was elected Treasurer in place of Brigade-Surgeon-Lieutenant-Colonel A. Clark (S. Lond. Vol. Brigade), who was elected Chairman of the Council, and Surgeon-Captains Rory Fletcher (Central London Rifle Rangers) and J. Harper (Volunteer Medical Staff Corps) were respectively re-elected and elected Hon. Secretaries. A motion, proposed by Surgeon-Major Swaley-Smith, to the effect that one-third of the Council, being those longest in office, should retire annually and not be eligible for re-election for two years was after some discussion withdrawn, the proposer intimating that he would bring it up in a modified form on a future occasion. A special vote of thanks was passed to Surgeon-Captain Rory Fletcher for his untiring services as Secretary, and the meeting concluded with the usual vote of thanks to the Chairman.

The competition for the Ambulance Challenge Shield of the Volunteer Medical Association will take place at Wellington Barracks on Saturday, July 23rd, at 4 P.M. Entries close on July 1st.

GLASGOW COMPANIES VOLUNTEER MEDICAL STAFF CORPS.

The annual inspection of the Glasgow Companies was made last week by Surgeon-Colonel Rooney. The parade state showed a total of all ranks of 188; but these numbers do not include the band, which numbers 27 players, the majority of whom are not borne on the strength. The two companies were divided into half companies, and marched past as four companies, first in column and then in quarter-column. Surgeon-Captain Beatson was in command, Surgeon-Captain McGregor Robertson acted as major, and the companies were under the command of Surgeon-Captains Somerville, Moyes, Gibson Graham, and Reid. Surgeon-Captain Anderson (Acting Chaplain), Rev. Dr. Adamson, and Lieutenant and Quartermaster Lee were also on parade. The feature of this year's inspection was the presence of a cycle stretcher squad equipped with the Hardcastle stretcher, and the swiftness and excellence of their field work earned the special mention of the inspecting officer, who, in addressing the men after the inspection, recalled the excellent appearance made last year in order to express the opinion that this year's work showed a decided improvement.

The church parade of the companies was held on the Sabbath preceding the inspection, when there was a good turn out of the men, and the local infirmaries benefited to £16 10s., the amount of the collection.

MEDICAL STAFF MOVEMENTS.

When Surgeon-Major-General W. Taylor proceeds to take up the appointment of Principal Medical Officer in India early in December, *vice* Surgeon-Major-General Gore, who will retire under the age clause, it is understood that Surgeon-Major-General H. S. Muir, now P.M.O. in Egypt, will succeed to Surgeon-Major-General Taylor's billet at the Medical Division of the War Office.

THE NEW NAVAL HOSPITAL.

Plans and arrangements for the new Naval Hospital at Chatham have been approved and tenders invited. It is to be built on an estate of some 26 acres, purchased by the Admiralty for £25,000. The present plans allow four blocks of buildings, and careful consideration has been given to all probable requirements. The cost of the new hospital, inclusive of the site, is estimated at £350,000. The inadequate accommodation in the existing building and the absence of special accommodation for infectious cases has been much felt.

THE NAVY.

Staff-Surgeon George F. Dean, B.A., M.B., has been placed on the retired list, June 7th. He was appointed Surgeon February 11th, 1884, and Staff-Surgeon twelve years thereafter.

The following appointments have been made at the Admiralty: Thomas Sibbald, Fleet Surgeon, to the *Centurion*, June 20th; George R. D. Charlton, Fleet-Surgeon, to the *Vivid*, for Keyham Naval Barracks, undated.

ARMY MEDICAL STAFF.

Surgeon-Colonel William Graves is placed on retired pay, June 13th. His commissions were dated as follows: Assistant Surgeon, September

22nd, 1858: Surgeon, March 1st, 1873; Surgeon-Major, April 1st, 1873; Brigade-Surgeon, July 25th, 1885; and Surgeon-Colonel, August 1st, 1891. He has no war record in the Army Lists.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,752 births and 3,167 deaths were registered during the week ending Saturday last, June 18th. The annual rate of mortality in these towns, which had increased from 16.4 to 16.9 per 1,000 in the four preceding weeks, declined to 14.7 last week. The rates in the several towns ranged from 8.5 in Cardiff, 9.2 in Leicester, 9.5 in Burnley, and 9.6 in West Ham and in Croydon to 19.3 in Manchester and in Salford, 19.7 in Preston, 20.6 in Gateshead, and 22.2 in Newcastle-upon-Tyne. In the thirty-two provincial towns the mean death-rate was 15.3 per 1,000, and was 1.5 above the rate recorded in London, which was only 13.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.6 per 1,000; in London the rate was equal to 1.7 per 1,000, while it averaged 1.5 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.9 in Salford, 3.0 in Wolverhampton, 3.2 in Halifax, and 3.5 in Newcastle-upon-Tyne. Measles caused a death-rate of 1.1 in Bradford, 1.6 in Plymouth, 2.1 in Newcastle-upon-Tyne, and 2.2 in Halifax; whooping-cough of 1.5 in Swansea and in Gateshead; and "fever" of 1.1 in Portsmouth, and 1.2 in Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 45 deaths from diphtheria in the thirty-three towns included 26 in London, 6 in Leeds, 3 in West Ham, 2 in Liverpool, 2 in Salford, and 2 in Burnley. No fatal case of small-pox was registered during the week under notice, either in London or in any of the thirty-two large provincial towns; and only one small-pox patient was under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 18th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2,207 and 2,169 at the end of the two preceding weeks, had risen again to 2,194 on Saturday last, June 18th; 230 new cases were admitted during the week, against 256, 220 and 206 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 18th, 991 births and 609 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 23.0 and 21.3 per 1,000 in the two preceding weeks, further fell to 20.2 last week, but was 5.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.2 in Paisley and 18.7 in Greenock to 21.2 in Glasgow and 27.2 in Perth. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Dundee and Paisley. The 206 deaths registered in Glasgow included 16 from measles, 4 from scarlet fever, 8 from whooping-cough, 3 from "fever," and 6 from diarrhœa. Three fatal cases of scarlet fever, 3 of measles, and 5 of whooping-cough were recorded in Edinburgh; 12 of measles in Dundee; and 3 of "fever" in Paisley.

THE CRYPT OF ST. GEORGE, SOUTHWARK.

THE churchwardens of St. George, Southwark, have received instructions to clear the crypt of the remains of the bodies and coffins that lay there. In consequence of the visit of the Inspector of Burial Grounds, an order has been issued by the Home Office.

RECOGNITION OF THE SERVICES OF A POOR-LAW MEDICAL OFFICER.

AT a recent meeting of the Cork Board of Guardians the resignation of Dr. T. J. Murphy, who, for seven years has held the office of resident medical officer of the Cork Workhouse, was received with regret, and a resolution was adopted expressing the Board's high appreciation of the manner in which Dr. Murphy had discharged his duties. Notice was given of the intention to ask the Local Government Board to sanction a gratuity to Dr. Murphy after his seven years' service. By retiring Dr. Murphy forfeited his claim to superannuation. The high expressions of appreciation by the Board of Guardians show that Dr. Murphy fully deserves such a recognition, and we hope that the Local Government Board will raise no objection with regard to the gratuity.

EXTRA FEE FOR FRACTURE.

R. M. writes that he is surgeon to a colliery, also a Poor-law medical officer. A collier fractures his leg, and a few days later a parish order is granted in order that "R. M." may certify for parish relief. He asks whether he is entitled to charge the guardians the extra fee for the fracture.

*** If the medical order was in the usual form—namely, directing the medical officer "to visit and undertake the treatment" of the case in question, we consider that "R. M." could claim the extra fee from the guardians, this being paid not for the setting of the fracture, but for the treatment of the case.

AT the annual general meeting of the South-Eastern Branch, held at Tunbridge Wells on Wednesday, June 22nd, donations of £26 5s. were unanimously voted to the British Medical Benevolent Fund and to the Royal Medical Benevolent College.

MEDICAL NEWS.

A GLASGOW Southern Medical Club has been formed. Though the chief functions of the club will be social, it will also afford a home for the Glasgow Southern Medical Society.

DR. A. M. STALKER has been appointed Surgeon to H.M. Prison, Dundee, in room of Dr. J. W. Miller, who has resigned after twenty-three years' service.

THE North London Consumption Hospital has received a donation of £1,000 from "R. S. P." to endow a bed in the hospital.

PRESENTATION.—Dr. A. C. Godfrey has been presented by the members of the Court Sir George Hewitt of the Ancient Order of Foresters, Freemantle, Southampton, with a silver coffee pot in recognition of his services as surgeon to the court for nearly thirty years.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The annual meeting of the Brussels Medical Graduates' Association will take place at the Café Royal, Regent Street, W., on Tuesday, July 12th, at 6.30 P.M. The members and their friends will dine together afterwards at 7.30. The price of the dinner is 7s. 6d. Any Brussels medical graduate desiring to be present should communicate with the Honorary Secretary, Dr. Major Greenwood, 243, Hackney Road, London, N.E.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—The annual meeting of this association was held on June 14th. The Council's report showed by the amount of work accomplished during the the past year the need of such an association to protect the interest of Poor-law medical officers. At the annual luncheon the chair was taken by the President, Dr. Farquharson, M.P.

DR. FORBES, who on the occasion of his retiring from the post of medical superintendent of the Shoreditch Infirmary, was recently entertained at dinner by the Infirmary Superintendents' Society, has been presented with a literary machine—reading desk, lamp, and table combined—together with a gilt-framed testimonial expressing the good feeling of the patients of the institution in the form of an acrostic. The testimonial was inscribed and illuminated by a patient of the institution who had been under Dr. Forbes's care for many years. Dr. Forbes had held the post of medical superintendent for more than thirty years.

THE annual *conversazione* of the British Balneological and Climatological Society was held at Limmer's Hotel on June 8th. About one hundred fellows and guests were present and were received by the President, Dr. Wm. V. Snow (Bournemouth). Dr. G. V. Poore gave an address on "Circumstances which influence the Effectiveness of Climatic Treatment" which was published in the BRITISH MEDICAL JOURNAL of June 11th. Dr. Hedley exhibited a reflecting stereoscope for the examination of skiagrams, and Messrs. Negretti and Zambra displayed meteorological instruments. Music was provided by the Bijou Orchestra.

MATERNITY CHARITY AND DISTRICT NURSES' HOME.—A meeting was held on June 20th at 19, Grosvenor Place, in furtherance of the work of this home, which is situated at Plaistow, West Ham. Lady Battersea presided. The annual report stated that the main objects of the Society were to provide for the poor of the neighbourhood gratuitous skilled nursing at their own homes in maternity and other cases, and to train women, more especially in village and cottage nursing, and in midwifery. Lady Battersea said there were 80 nurses in connection with the home, and during the past year 3,963 persons were nursed in their own homes in the fourteen parishes of the district; 2,797 out-patients were attended to at the home, and 91,654 visits were paid to the sick. Besides this, 2,309 loans of bedding, clothing, and appliances had been made. The expenditure for the year amounted to £4,431. During the same period 120 probationers had been trained at the home. Since its establishment in 1889 the home had trained and sent out over 700 nurses, 300 of whom were at present at work among the poor in thirty-four counties in England and three in Scotland, and twelve county councils had given scholarships to the home for training nurses.

APPOINTMENTS UNDER THE WORKMEN'S COMPENSATION ACT.—The following gentlemen have been appointed by the Home Secretary to act as Medical Referees under the Workmen's Compensation Act: Mr. W. J. Beatty (Stockton-on-Tees) for County Court Circuit No. 15; Dr. G. H. Cooke (St. Helens) for Birkenhead County Court District; Dr. T. M Dolan (Halifax) for County Court Circuit No. 12; Mr. W. Gifford-Nash, F.R.C.S. (Bedford) for County Court Circuit No. 35; Dr. S. Hamilton (Newport, Mon.) for County Court Circuit No. 24; Dr. R. C. Hunter, J.P. (Pontypridd) for Pontypridd, the Rhondda Valleys, Aberdare, Merthyr, and Breconshire; Dr. T. Gordon Kelly (Desford, Leicester) for County Court Circuit No. 20; Dr. J. Dickinson Leigh (Scarborough) for Whitby, Malton, and Scarborough Districts; Dr. P. MacGregor (Huddersfield) for Huddersfield County Court; Dr. C. H. Milburn (Hull) for County Court Circuit No. 16; Dr. E Rice-Morgan (Morriston, Glamorganshire) for County Court Circuit No. 30.

THE CITY OF LONDON ASYLUM.—The Right Honourable the Lord Mayor, M.P., accompanied by the sheriffs and members of the Corporation, visited the City of London Asylum, at Stone, near Dartford, on June 18th, for the purpose of laying the foundation stone of a new chapel for the patients. The Lord Mayor was assisted in performing the ceremony by several members of the Visiting Committee and by the City Surveyor, who is the architect. Subsequently a large party of visitors was conducted through the wards by Dr. E. W. White, the Medical Superintendent, who afterwards showed the improvements now being carried out, the principal of which are infirmary blocks both for male and female patients, a new laundry, two new bathroom blocks, and a pathological laboratory. During an interval in the inspection, which was obviously of great interest to the visitors, the Lord Mayor presented certificates and distinctive badges to three attendants and six nurses who, after two years' training, had recently passed the examination of the Medico-Psychological Association for proficiency in the nursing of mental disease.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—One additional Examiner in (1) Botany, (2) Chemistry, (3) Medical Jurisprudence and Public Health. Grant, £30 per annum. Applications to the Secretary by July 5th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House Surgeon. Salary, £50, with board, apartments, and laundry. Applications to the secretary, 5, Rumford Place, Liverpool, by July 4th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Assistant House-Surgeon, unmarried, and under 30 years of age. Salary not exceeding £30 per annum, with board and residence. Applications to the Secretary by June 20th.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Registrar. Applications to the Secretary by July 2nd.

CANCER HOSPITAL, Fulham Road, S.W.—House Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board and residence Applications to the Secretary by July 9th.

CAVAN INFIRMARY. Surgeon. Salary, £94 per annum, with house and garden. Applications to the Secretary by July 1st

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Surgeon. Salary, £100 per annum, with board, apartments, and laundress. Applications to the Secretary by June 30th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator. Honorarium, £50 per annum. Applications to the Dean by July 18th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Resident Dispenser and Assistant. Honorarium, 20 guineas per annum, with board, lodging, and washing. Applications to the Honorary Secretary by July 5th

DUDLEY: GUEST HOSPITAL.—Resident Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Secretary by June 30th.

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN.—Two Resident Medical Officers. Applications to Messrs. Henry and Scott, 20, St. Andrew's Square, Edinburgh, by July 9th.

HALIFAX: ROYAL INFIRMARY.—House-Surgeon; unmarried. Salary, £80 per annum, increasing to £100, with residence, board, and washing. Applications to the Secretary by June 29th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Applications to the Secretary by June 29th

LANARK: MIDDLE WARD ISOLATION HOSPITAL.—Resident Physician. Salary, £140 per annum, with board, etc. Applications to J. B. Ferguson, District Clerk, County Buildings, Hamilton, by July 7th.

LINCOLN COUNTY HOSPITAL.—Assistant House Surgeon. Honorarium of £10 for each period of six months, with board, residence, and washing. Applications to the Secretary by June 27th.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, 77A, Lord Street.—Non-resident Medical Officer. Stipend, £70 per annum. Applications to the Secretary by July 1st.

LIVERPOOL STANLEY HOSPITAL.—Honorary Assistant Surgeon. Applications to the Honorary Secretary by July 8th.

MANCHESTER EAR HOSPITAL.—Clinical Clerkship. Appointment for six months. Applications to the Secretary by July 11th.

MENSTON, NEAR LEEDS: WEST RIDING ASYLUM.—Fourth Assistant Medical Officer. Salary to commence at £100, rising to £150, with board and apartments. Applications to the Medical Superintendent by July 2nd.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—House Physician. Salary £60 per annum, with board, lodging, and washing. Tenable for two years. Unmarried, and under 30 years of age. Applications to the Secretary by June 28th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—Honorary Anæsthetist. Applications to the Secretary by June 30th.

PENANG: MUNICIPAL COMMISSIONERS OF GEORGETOWN.—Health Officer. Salary, 300 dollars per month, and 18 dollars per month horse allowance. Must hold diploma of Public Health. Applications to Dr. Charles Hunter Stewart, Public Health Laboratory, University, Edinburgh.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser. Salary, £70 first year, with board and lodging. Applications to the Honorary Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners; and an Examiner in Dental Surgery. Applications to the Secretary by July 6th.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant Surgeon, must be F.R.C.S.Eng. Applications to the Secretary by June 30th. Also Junior House-Surgeon. Salary, £50, with board and residence. Applications to the Secretary by July 4th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, Strand, W.C.—House-Surgeon. Applications to the Secretary by July 2nd.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck Street, Cavendish Square.—Resident Medical Officer. Salary 100 guineas per annum, rising 10 guineas annually to 120 guineas, with furnished apartments, attendance, coal, and light. Applications to the Secretary by June 30th.

SHEFFIELD: ROYAL INFIRMARY.—Vacancy on the Honorary Surgical Staff. Applications to the Secretary by June 27th.

SHOREDITCH: PARISH OF ST LEONARD.—Resident Assistant Medical Officer for the Workhouse and Infirmary. Salary, £120 per annum, with rations, furnished apartments, and washing. Applications, on forms provided, to the Clerk by June 27th.

STAFFORDSHIRE COUNTY ASYLUM.—Third Assistant Medical Officer. Unmarried, and under 30 years of age. Salary, £100 a year, rising to £150, with furnished apartments, board, etc. Applications to the Medical Superintendent.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by July 7th.

UNIVERSITY COLLEGE, LONDON.—Resident Medical Officer. Applications to the Secretary by June 27th.

VICTORIA UNIVERSITY, YORKSHIRE COLLEGE, LEEDS.—Professor of Materia Medica, Pharmacology, and Therapeutics. Applications to the Registrar.

WOLVERHAMPTON: WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary 100 a year, with board, lodging, and washing.—Also Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and a small honorarium. Applications to the Chairman of the Medical Committee by July 1st.

MEDICAL APPOINTMENTS.

BENNETT, Mr. A. J., appointed Assistant Medical Officer for the Gordon Road Workhouse and Children's Homes at Heaton Road of the Parish of St. Giles, Camberwell.

BILL, J. Francis, M.B.Lond., M.R.C.S., L.R.C.P., appointed Senior Resident Medical Officer to the London Temperance Hospital.

BONNEY, W. F. V., M.B., B.S., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Chelsea Hospital for Women.

CLARK, W. Adams, M.D., M.R.C.S., L.R.C.P., appointed Clinical Assistant to the Chelsea Hospital for Women.

DENNY, E. B., L.R.C.P.Edin., L.R.C.S.I., appointed Medical Officer for the Hainton District of the Louth Union.

FRASER, Peter, M.D., appointed Medical Officer of Health to the Llanrwst Urban District Council.

GIBSON, T., M.B., appointed Assistant Medical Officer to the Infirmary of the Parish of St. Giles, Camberwell.

GORDON, Dr. James, appointed Medical Officer for the South Hougham District of the Dover Union.

HUNTER, G. H., M.R.C.S.Eng., appointed Medical Officer for the Haughley District of the Stow Union.

LAURIE, Dr., appointed Medical Officer for the Moreton District of the Newton Union.

LEWIS, Mr. F., appointed Medical Officer for the Fifth District of the Steyning Union.

LEWIS, J. K., M.R.C.S.Eng., appointed Medical Officer for the Rewe District of the St. Thomas Union.

RENDALL, Percy, M.D., M.R.C.S.Eng., appointed Honorary Surgeon to the Epsom and Ewell Cottage Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning in order to insure insertion in the current issue.

MARRIAGES.

BROOK—HINE.—On June 16th, at Hillingdon Church, near Uxbridge, by the Rev. Bousfield Lombard, M.A., assisted by the Rev. C. M. Harvey, Vicar, William Frederick Brook, F.R.C.S., of Swansea, Senior Surgeon to Swansea Hospital, eldest son of W. F. Brook, M.R.C.S., of Fareham, to Agnes Beatrice Hine, younger daughter of S. D. Hine, M.R.C.S., of Renson.

COGHILL-SINCLAIR—COGHILL.—At the Parish Church of St. Catherine's Ventnor, on the 7th inst., by the Rev. E. A. Coghill, Vicar of Holy Trinity, Southwell, Notts, brother of the bridegroom, assisted by the Rev. John Bailey, Vicar of Holy Trinity, Cowes, and the Rev. G. P. Bassett Kerry, Vicar of Ventnor, Percy de Geiger Coghill, son of the late Harry Coghill, of Coghurst Hall, Sussex, and Brampton Tree House, Newcastle, Staffs, to Agnes Irene Sinclair, M.B., C.M.Edin., youngest daughter of Dr. and Mrs. Sinclair-Coghill, of St. Catherine's House, Ventnor.

COLLIS—FAIRBAIRN.—On the 17th inst., at Mansfield College Chapel, Oxford, by the Rev. the Principal father of the bride, assisted by the Rev. John Watson, D.D., of Liverpool, and the Rev. Professor George Adam Smith, D.D., of Glasgow, Dr. Edgar Leigh Collis (Oxon.), fourth son of W. B. Collis, Esq., Stourbridge, to Barbara Shields, elder daughter of the Rev. the Principal and Mrs. Fairbairn.

GRAHAM—BLACKBURN.—At the Parish Church, Batley, Yorks, on June 14th, by the Vicar, the Rev. T. G. Davis, M.A., Vyner Graham, M.R.C.S., L.R.C.P., of Westbrook House, Aston Village, Birmingham, third son of T. Graham, Esq., of Emcroft, Moorlands Avenue, Dewsbury, to Sarah Alice (Sissie), eldest daughter of Alderman J. W. Blackburn, J.P. (Mayor of Batley), Field House, Batley.

NEWBOLT—ASHBURNER.—By special licence on June 18th, at St. Peter's Church, Kirk Onchan, Isle of Man, by the Rev. S. A. P. Keimode, M.A., Vicar, assisted by the Rev. Canon Savage, Incumbent of St. Thomas's, Douglas, and the Rev. F. Caywood Deardon, B.A., Vicar of Bamford, and the Rev. Henry Sharland, Curate, George Palmerston Newbolt, M.B., F.R.C.S., of 42, Catherine Street, Liverpool, only son of the late K. Kent Newbolt, Esq., of Weymouth, to Mary, only child of Robert Ashburner, Esq., of Douglas, Isle of Man.

STEAD—HARRISON.—On the 14th inst., at St. Paul's Church, Clifton, Bristol, by the Rev. S. Stead, formerly Archdeacon of Bombay, assisted by the Rev. Canon Mather, Vicar of St. Paul's, Clifton, Charles Clement, elder son of the Rev. S. Stead, to Adelaide Mary, third daughter of Dr. A. J. Harrison, Fairland Lodge, Clifton.

THOMPSON—HODSON.—On the 15th inst., at All Saints Church, Alrewas, by the Rev. W. Townshend, cousin of the bride, assisted by the Rev. W. A. Webb, Vicar of the Parish, Charles Thompson, M.R.C.S., L.R.C.P., of Heath Cottage, Stapenhill, Burton-on-Trent, to Lena, daughter of W. H. Hodson, Esq., of Tonbridge.

THOMSON—WOTHERSPOON.—At St. Giles's Cathedral, Edinburgh, on June 10th, 1898, by the Very Rev. J. Cameron Lees, D.D., LL.D., Dean of the Chapel Royal and of the Order of the Thistle, assisted by the Rev. P. Hay Hunter, St. Andrew's Parish Church, Edinburgh, and the Rev. W. H. Gray, B.D., minister of Aberdour, Henry Alexis Thomson, M.D., F.R.C.S., Edinburgh, to Ethel Kate, fourth surviving daughter of C. Grey Wotherspoon, of Hillside, Aberdour, Fife, and the Temple, London, barrister-at-law.

DEATH.

WHALLEY.—June 10th, at his residence, 77, Little Horton Lane, Bradford, William Whalley, M.D., M.R.C.S., in the 66th year of his age.

DIARY FOR NEXT WEEK.

MONDAY.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Mr. Wyatt Wingrave: The Normal and Morbid Histology of the Accessory Sinuses of the Nose.

TUESDAY.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. William Ewart: The Treatment of Chronic Bright's Disease: Tubal Nephritis, Reconsidered. Dr. D. B. Lees and Dr. F. J. Poynton: Acute Dilatation of the Heart in the Rheumatism and Chorea of Childhood. Dr. D. B. Lees: Acute Dilatation of the Heart in Rheumatic Fever.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, 4.30 P.M.—Dr. Dundas Grant: On Disorders of the Nose and Throat in their Relation to Diseases of the Nervous System.

National Hospital for the Paralysed and Epileptic, 3.30 P.M.—Lecture by Mr. Victor Horsley, F.R.S.

City Orthopædic Hospital, 5.30 P.M.—Lecture by Mr. Chisholm Williams: Lateral Curvature of Spine.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Dr. Rafenacht Walters: An Unusual Eruption in Two Children.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. C. B. Keetley: The Treatment of the Various Kinds of Hernia.

Hospital for Consumption, Brompton, 4 P.M.—Dr. Schorstein: Fibroid Phthisis.

THURSDAY.

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Dr. C. E. Beevor will introduce a discussion on the Accurate Localisation of Intracranial Tumours. Drs Byrom Bramwell, Michell Clarke, Ormerod, Newton Pitt, and Sharkey, and Mr. Marcus Gunn will take part in the discussion.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Garrod: Demonstration of Selected Cases.

Central London Throat, Nose, and Ear Hospital, Gray's Inn Road, W.C., 5 P.M.—Dr. Dundas Grant: Diseases of the Sphenoidal and Ethmoidal Sinuses.

Charing Cross Hospital, Post-Graduate Class, 4 P.M.—Dr. Amand Routh: Demonstration of Gynæcological Cases.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances*—Daily, 2. *Operations.*—Tu. F. S., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR.—*Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 1.30; Skin, M. Th., 1.45; Dental, M., 9; Throat and Ear, F., 9.30. *Operations.*—Tu. F. S., 3.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F. 2.30; Skin W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic) M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—Daily, 10. *Operations.*—M. Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.-p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30, F., 2; Dental, M. Tu., 10; Skin, W., 11.30. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.-p., 2, o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30 *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2, S., 10; Surgical, daily, exc., W., 2, W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 2; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2.

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.-p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9. Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily, 1.-p., 1; o.-p., 12; Obstetric, 1.-p., Tu. F., 1.45; o.p., M. Th. 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, M., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males S., 2; females, W., 9.30. *Operations.*—M., 9; Tu., 2.30.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F., 1.45; o.p., M. Th., 1.0; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30.; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M. 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Tu., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30; Skin, W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY POST ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429 Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate beforehand with the Manager, 429, Strand, W.C.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look to the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that all letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not to his private house.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *duplicate copies.*

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are directed will be found under their respective headings.*

QUERIES.

M. B. asks for references to literature on the pathology of antenatal ascites.

RUSTICUS asks for advice as to treatment of a case of chronic gonorrhœa in a male, contracted August, 1897. There is a slight morning discharge. The ordinary remedies do not seem to improve the condition.

J. S. S. would be pleased to hear of a home or hospital in or near London where a female patient, suffering from an eruption of the face and general œdema of the body (due, it is believed, to the absorption of arsenic), could be received and treated. The patient is able to pay a small fee.

M. B. asks to be recommended a book to read in mental psychology for the M.D.Lond. in addition to Titchener, especially in relation to mental disorders.

*** Our correspondent will probably find all that is required in the following works: *Mental Physiology.* By Dr. T. B. Hyslop. (London: J. and A. Churchill. 1895. 18s.) *The Human Mind: A Textbook of Psychology.* By James Sully, M.A., LL.D. In two volumes. (London: Longmans, Green, and Co. 1892. 21s.)

FEMALE LODGES.

A CORRESPONDENT asks for information as to the fees usually paid by women's friendly societies.

*** Female lodges, on the average, pay less than male lodges for medical benefits. They are not remunerative to the surgeon, and practitioners have been strongly advised to have nothing to do with them.

LUMBAGO.

ALPHA asks for suggestions for the treatment of a case of lumbago, which was treated in its acute stage with potassium iodide and blisters, then with massage, faradisation, and Bath waters. For the past couple of months the stiffness and pain when lying down in bed has decreased very little.

THE COURTESY CALL.

ETIQUETTE asks within what radius a dental practitioner starting in practice in London should call on the medical practitioners of the district.

*** The object of the complimentary visit is to cultivate friendly relations between members of the same profession. The radius within which such calls are made cannot be defined in miles, but in a large town they should not be extended beyond the immediate "neighbourhood." If our correspondent does not hold a surgical qualification established practitioners might consider it superfluous for him to pay them the compliment in question.

ANSWERS.

NEMO.—We understand that the paragraph in question was published without the consent, and in fact contrary to the wishes, both of the patient and his medical attendant.

J. C. R.—There is no examination for the Colonial Medical Service. We may call our correspondent's attention to the article, "A School of Tropical Diseases," published at page 1662, and to the Educational Number of the JOURNAL (August 28th, 1897), p. 558.

BROOKLYN.—We do not think that any useful opinion could be expressed without a special knowledge of the local conditions. Very much would depend upon the extent to which the provincial town mentioned was a centre easily reached from the surrounding country.

NOTES, LETTERS, Etc.

ERRATUM.—In the report of the last meeting of the British Orthopædic Society, published in the BRITISH MEDICAL JOURNAL of June 18th, the words "Dr. Bannatyne said," etc. (line 31 from the end of the report) should have been "Dr. Bannatyne and," etc. Dr. Bannatyne was not, we are informed, present at the meeting, and the printer's error which has been indicated deprives Dr. Wohlmann of his share of the credit of their joint research.

NATHAN LEWIS HATFIELD PRIZE.

THE College of Physicians of Philadelphia announces through its Committee that the sum of 500 dollars (£100) will be awarded to the author of the best essay in competition for the First Nathan Lewis Hatfield Prize for Original Research in Medicine. The subject proposed is "A Pathological and Clinical Study of the Thymus Gland and its Relations." The competition is open to members of the medical profession and men of science in the United States.

THE "NATIONAL ANTIVIVISECTION HOSPITAL FUND."

HOSPITAL Sunday this year was used by the antivivisectionists for their own advantage, and a few contributions were given in mysterious stamped envelopes addressed to the National Antivivisection Hospital Fund. They were duly forwarded, and the few pounds thus perverted to a hospital that exists only on paper and will do harm if ever it is built, are no great loss to the hospitals that do all the work for London. This method of procuring shillings and half-crowns shows how the antivivisectionists have come down.

CONSULTING PHYSICIANS AND SURGEONS.

MR. T. GARRETT HORDER, Hon. Sec. Hospital Reform Association (Cardiff), writes: There is one aspect of the hospital question which has not up to the present time received much consideration. I allude to the appointment and advertisement of consulting physicians and surgeons. I am not thinking of those cases where men, after long and laborious services, are on their retirement from the active duties appointed to such posts, but to those instances where the managers think proper to ask men whose position in the profession is likely to shed lustre on these institutions to become consulting physicians or surgeons as the case may be. Sometimes men residing in London are asked to be associated with hospitals in country districts, where their opportunities of assisting by their advice are likely to be very limited indeed. I am certain that if this view of the case is pointed out to the consultants they would hesitate before allowing their names to be used. I have this week received a report of a hospital in Tunbridge Wells where the names of two eminent men appear as consulting eye and ear doctors. It would surprise me very much if I heard that either of these gentlemen ever went down to Tunbridge Wells and consulted with the medical officers on any case.

AN OVERDOSE OF EXALGINE.

DR. A. LOCKHART GILLESPIE (Edinburgh) writes: Dr. Lermitte will find notes of a case in which the patient took 36 grains of exalgine between 2 and 11 P.M., in the *Edinburgh Medical Journal* for May, 1892, p. 1054, and a fuller account of the symptoms produced in the *Medical Press and Circular*, April, 1892.

LACERATION OF THE FUNIS THROUGH PRECIPITATE LABOUR.

DR. WM A. S. ROYDS (St. Mary Bourne, Hants) writes: Mr. Rainsbury's case brings to my recollection two somewhat similar. In a labour case which I was attending I discovered before delivery that the cord was round the neck, and used more force than was perhaps desirable to replace it over the head. To my horror the cord gave way. It was a relief to find on the birth of the child that it had ruptured about 2 or 3 inches distant, and not, as I feared might have been the case, close to the abdominal wall. This case and Mr. Rainsbury's would support the idea that there is a "place of election" for the separation of the cord, and that this is at the point where it is usually tied. A similar case to Mr Rainsbury's which I saw, where a newly-born infant was brought to the Royal Berks Hospital with the cord torn off close to the abdomen, leaving a wound, out of which, if I recollect rightly, some considerable portion of the abdominal contents protruded, which required a length of suture, does not support the view.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Amiral Soap; Mr. R. B. Anderson, London; Dr. C. Addison, Sheffield; Alpha; Dr. R. G. Alexander, Halifax; Assistant M.D.; Another Member; R. Y. Aitken, M.B., Blackburn. **B** Dr. L. A. Bidwell, London; Dr. J. Barr, Liverpool; Dr. B. Bramwell, Edinburgh; Mr. H. J. Blakesley, Leicester; Mr. F. J. Brown, Newark-on-Trent; W. C. Bosanquet, M.B., London; Brooklyn; Mr. W. J. Beatty, Stockton-on-Tees; Mr. E. O. Bark, Birmingham; Dr. H. A. Ballance, Norwich; Messrs. Brown, Bros. and Co., Glasgow; B. G; J. F. Bill, M.B., London. **C** Colonial Medical Officer; Cymro; Dr. W. Collier, Oxford; Cantab. **D** Dr. J. Duncan, Edinburgh; D.P.H. and M.O.H.; Dr. N. Davis, Bracknell. **F** Mr. C. Fitch, London; Forensic Member; Mr. G. R. J. Fletcher, London; Former Colleague; Messrs. Ferris and Co., Bristol; Mr. W. Fanowski, Warsaw. **G** Mr. R. B. Graham, Leven; A. C. Godfrey, M.B., Southampton; Mr. C. J. Graham, London; C. H. Golding-Bird, M.B., London; H. Galt, M.B., Glasgow; Galen Manufacturing Co., London; Mr. J. Griffith, London; Mr. H. Gold, London; Greer. **H** Mr. H. Hilliard, London; Dr. G. H. R. Holden, Reading; Mr. J. H. Hemming, Kimbolton; Mr. G. A. Hawkins-Ambler, Liverpool; Mr. T. G. Horder, Cardiff; Mr. W. F. Haslam, Birmingham; Mr. M. J. Houghton, Ilford; Dr. L. Hamilton, Liverpool; Dr. F. de Havilland Hall, London; S. Hamilton, M.B., Newport, Mon.; Dr. J. Hamilton, London. **J** Dr. W. A. Jamieson, Edinburgh; J. C. R. **K** Dr. T. W. G. Kelly, Leicester; Mr. C. W. Krohne, London. **L** Dr. W. Lattey, Southam; Dr. R. P. R. Lyle, Dublin; Mr. E. M. Little, London; W. F. Lloyd, M.B., Lampeter; J. D. Leigh, M.B., Scarborough. **M** Mr. A. Myers, London; W. MacLennan, M.B., Glasgow; Mr. P. Monti, London; M.B.; Dr. C. W. Marriott, Reading; Dr. C. Muirhead, Edinburgh; E. J. D. Mitchell, M.B., Eltham; Dr. P. McBride, Edinburgh; Mr. E. R. Morgan, Morriston; M.D.; Mr. R. Macartney, Cinderford; C. H. Milburn, M.B., Hull; J. McClure, M.B., Ladybank. **N** J. H. Nicoll, M.B., Glasgow; Mr. P. Newell, Crowborough; Mr. W. G. Nash, Bedford. **O** Mr. E. A. Onyon, Eye. **P** G. H. Percival, M.B., Northampton; Mr. J. Poland, London; Dr. J. Phillips, London; Puzzled; Dr. A. Purkiss, Wolston; Perplexed. **R** Mr. T. F. Raven, Broadstairs; Dr. D. A. Robertson, Edinburgh; Mr. T. H. Ravenhill, Birmingham; Dr. P. Rendall, Ewell; Rusticus; Dr. H. Rayner, London. **S** S.C.R.M.; Dr. J. O. Symes, Bristol; A. M. Sheild, M.B., London; Scotia; Dr. E. M. Smith, York; Sir J. Struthers, Edinburgh; Mr. P. Smith, Birmingham; Mr. W. G. Silvester, Leamington; Mr. J. Snowman, London; Dr. S. Sunderland, London. **T** H. N. Taylor, M.B., Colchester. **V** Vox. **W** Messrs. Wills, Limited, London; Dr. H. Willson, Weybridge; Dr. F. Willcocks, London; W. D. S.; E. W. White, M.B., Dartford; etc.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Hereditary Albuminuria.

JULES RANAULT (*Journ. de Méd.*, October 25th, 1897) draws attention to this subject. He points out that the child of an eclamptic woman may be born with albuminuria and die in convulsions, and that on *post-mortem* examination profuse intratubular hæmorrhage may be found, and he also believes that albuminuria is not infrequent in breast-fed children of mothers who are the subjects of nephritis. There is also another variety of hereditary albuminuria—that which declares itself from 12 to 20 years of age in the children of parents who themselves suffer from albuminuria or who have died of nephritis. In certain of these cases the mother showed albuminuria during pregnancy, and the question may be asked whether albuminuria discovered at 12 or 13 does not date from birth, but in several instances it is certain that previous to its discovery at that age it was not present. In other cases albuminuria appeared in the parents after the birth of the child, from which it would seem that a certain renal susceptibility was transmitted, which declared itself during adolescence as acute nephritis. The author quotes several cases in support of this fact, showing that several members of a family may be affected with albuminuria through as many as three generations, and that it may vary in its features, being cyclic in some cases, while in others the symptoms are those of well-marked acute nephritis. It is pointed out that in this the kidney is merely on a par with other organs, such as the lung, stomach, etc. The author puts in a class by themselves these cases of inherited gout where the parents suffer from gouty nephritis. In these instances he states that the albuminuria is often of the cyclic variety; in others the children proceed to renal disease having the same characteristics as their parents. Children in whom albuminuria is discovered are dyspeptic, pale, and anæmic, and have little muscular energy. It is slight in degree and may diminish under the influence of proper diet, but does not show any tendency to disappear. On the other hand, the albuminuria tends to increase after exercise, muscular strain, mental work, or strong emotions. Provided no infectious disease occurs to aggravate this form of albuminuria, it continues to progress slightly but constantly, and in from six to fifteen years patients have become typically nephritic with small contracted kidneys, and succumb to uræmia. Thus, the prognosis of hereditary albuminuria is bad, for if the patients do not fall victims to their first infectious disease, they develop pronounced nephritis.

(2) Lumbar Puncture.

V. RANKE (*Münch. med. Woch.*, September 21st, 1897) discusses the value of lumbar puncture in tuberculous meningitis. He has employed it in 25 cases, including 19 of this form of meningitis. The author observes that in no case as yet has the puncture produced a cure. In Freyhan's atypical case the recovery could not be shown to be due to the puncture. A fatal result occurred in all the author's 19 cases of tuberculous meningitis. V. Ranke gives instances in which a temporary improvement followed upon the puncture, but in most cases there was no change in the condition of the patient. It would appear that such improvement is only seen in the early stages of the disease, when the pressure has not lasted long. The author has never seen any improvement in the optic neuritis. It must be remembered that the symptoms of tuberculous meningitis are liable to great variation. As a rule the diagnosis of this disease is easy, but in some few cases it may be impossible, and it is in these cases that a positive result obtained by spinal puncture may be of diagnostic value. As with many other observers, the author found the number of tubercle bacilli present in the fluid to be small in numbers. He concludes that lumbar puncture can only be of very limited diagnostic value in tuberculous meningitis. The differential diagnosis between it and the meningitis consecutive to ear disease has not always been made easy by spinal puncture. In tuberculous meningitis the fluid drawn off is clear, usually colourless, but it may be very slightly green or yellow. The specific gravity was about 1010, and the amount of albumen 1 to 1.5 pro mille. Traces of sugar were present. The amount of fluid drawn off was usually from 20 c.cm. to 30 c.cm., and the pressure high, amounting to 160 mm. to 300 mm. water. In the author's cases no harm of any kind was produced by the puncture.

(3) Serum Diagnosis of Typhoid Fever.

PATELLA (*Atti e Rendiconti dell Acad. Med.-Chir. di Perugia.*, vol. ix, f. 2), writing on the above subject, confirms the favourable experience of others with regard to Widal's reaction in the differential diagnosis of typhoid. As with other observers, so with the author agglutinative action was noticed in diseases that were not typhoid; for example, in a case of ulcerative endocarditis the reaction was observed; still, on the whole, he believes the test is a valid one, and likely to prove more useful in future than at present. Whether the agglutinative power is a reaction of infection or of immunity seems to be as yet an open question; in any case it is associated with the globulin substances, and has nothing to do with serum albumin. It seems doubtful whether any prognostic value can be attached to the intensity of Widal's reaction in relation to the gravity of the disease. In two-thirds of the cases of typhoid Widal's reaction was observed in the first week in a dilution of 1 in 10, a reaction which was not observed in more than 2 per cent. of non-typhoid cases when the serum was so diluted. Later on in the disease reaction is positive with dilutions even up to 1 in 2,000, which never happens in other diseases.

(4) Alimentary Glycosuria.

KREHL (*Centralbl. f. inn. Med.*, October 9th, 1897) has studied alimentary glycosuria occurring after beer drinking. Kratschmer has also made some similar observations. Krehl examined for this purpose some 100 students. He was able to vary the kind and amount of the beer taken, as well as the time of drinking and the diet. The urines of four young brewers who had drunk large quantities of beer in the fasting state or at breakfast time were also examined, and in one case sugar was found. The exact composition of the beer, especially in regard to sugar, was not ascertained. The students examined mostly drank ½ to 2½ litre of beer in the morning. Of 57 drinking a lager beer, the sugar reaction was positive in 4 cases, or 7 per cent. In the case of an export beer, 5 out of 14, or 36 per cent., had glycosuria. In 25 students drinking ½ to 1½ litre of Rosen beer, no glycosuria was observed. Out of 19 cases drinking large quantities of an Ehringsdorf beer in the evening, 1, or 5 per cent., had glycosuria. Of 11 other students drinking largely of all sorts of beer, only 1 had glycosuria. It was often impossible to repeat the examination in these cases. The predisposition of the individual is always important in these cases, for those who drink the most are not always those who have the glycosuria. The more marked presence of the glycosuria in the morning was due to the more rapid absorption. Both Strümpell and Strauss showed that alcohol favoured the appearance of an alimentary glycosuria. Perhaps the sugar in the urine in these cases was due to the action of the alcohol, but other substances in the beer may be responsible. The author thinks that at the present moment there is no satisfactory explanation of the alimentary glycosuria following upon beer drinking.

SURGERY.

(5) The Surgical Treatment of Ano-Rectal Imperforation.

MATAS (*Trans. of the Amer. Surg. Assoc.*, 1897) discusses the surgical treatment of congenital ano-rectal imperforation considered in the light of modern operative procedures, and gives a report of a personal experience of Kraske's operation in this condition. In his conclusions the author states that the most prevalent varieties of congenital ano-rectal anomalies, especially the types of imperforation, which most urgently call for surgical relief, are amenable to successful treatment by the perineal route. As a rule the actual internal anatomical conditions in any case cannot be determined by external signs, and the surgeon cannot depend upon the introduction of a guide in the bladder or vagina to determine the position of the closed rectal

pouch. The longer operative interference is delayed in cases of imperforate anus, the less will be the resistance to shock. The ideal result of operative interference in these cases is the restoration of the intestinal outlet in its normal situation or in the perineo-sacral region with perfect sphincteric control. The only way in which this result can be accomplished without subsequent evil effects is by proctoplasty performed in accordance with Amussat's teaching. This surgeon proposed that not only should the rectal pouch be sought for by a free and systematic dissection of the perineum, but that after it had been found it should be freely detached from its surroundings, so that it might be dragged to the level of the skin, where after the intestine had been opened and evacuated, the mucous membrane could be sutured without tension to the skin and unite by primary intention. The operator should endeavour to avoid injury to the sphincter and levator muscles by making strictly median incissions. Intraperitoneal exploration through the perineum should be systematically resorted to whenever a reasonable exploration of the subperitoneal tissues fails to reveal the rectal pouch. In every case in which a perineal incision is insufficient to reach the rectal pouch, it would be advisable to adopt the coccygeo-sacral route by a free median incision through the cartilaginous coccyx and sacrum. If more space be required a bilateral osteoplastic flap can be easily made, which will afford a larger entrance into the pelvis without permanently sacrificing the osseous framework. Primary exploratory laparotomy practised with the view of identifying the anatomical relations of the closed intestine, and guiding the bowel to the perineum from above is not indicated as a rule, and has not been followed by encouraging results. The mortality of colotomy in cases of ano-rectal imperforation is greater than that of perineal or even perineo-sacral proctoplasty. Inguinal colotomy, as a primary procedure, is indicated only when the infant is much exhausted, and when life, threatened by stercoræmia and peritonitis, is ebbing fast. Median or lateral laparotomy for the purpose of exploration is indicated when, after the intraperitoneal exploration through a perineo-sacral incision, it is evident that the rectal pouch (or any portion of the colon) cannot be brought down to the pelvic outlet, and only the small intestine is available for proctoplasty. Under such circumstances, if the condition of the patient be good, it is justifiable to perform exploratory laparotomy, with the object of identifying the lowest portion of the bowel. The aim of the operator should then be to guide the colon, the cæcum, or the most available loop of illum to the perineo sacral wound, where it can be permanently drained with greater safety The perineo-sacral anus, if properly established, is almost certain to be voluntarily controlled in the course of time. The iliac anus is far more uncertain in this respect.

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(6) The Radical Cure of Hernia in Infancy.

Froelich (*Rev. de Chir.*, No. 11, Supplement, 1897), at a recent session of the Congrès Français de Chirurgie, discussed the indications of the radical cure of inguinal hernia in infants, and described his method of operating in such cases. This surgeon holds that in children under 2 years of age inguinal hernia will usually be cured by the use of a suitable truss. Beyond this age spontaneous cure is an exceptional event, and an operation for radical cure is therefore indicated. In early life, if a hernia increases in size in spite of the application of a good truss, an operation should be performed, however young may be the subject. Such treatment, which is almost quite free from risk, will not only relieve the child of a permanent infirmity, but also obviate the physiological failure likely to be caused by a large hernia. The mortality, it is stated, is about 4 per cent. and the relapses 6 per cent. The operation performed by Froelich consists in simple ligature of the neck of the sac, which is retained intact and without any dissection from the scrotal tissues, and in careful suture of the abdominal wall. In the discussion on this paper Broca expressed his concurrence with regard to the indications for surgical treatment in young subjects, but at the same time held that it was advisable to deal more freely with the sac. In children as in adults there is no risk of peritonitis, and therefore, except with regard to the saving of time, no advantage can be gained by refraining from opening and removing the sac.

(7) Extirpation of the Appendix Vermiformis in Chronic Appendicitis.

M. W. af Schultén (*Finska läkaresällsk. Handlingar*, August, September, and November, 1897) relates 17 cases of appendicitis in which the appendix was removed during the non-acute stage of the malady, in 12 of which the appendicitis had also recurred on several occasions. In two cases the removal of the appendix was associated with other operations—resection of the intestine for preternatural anus, ovariotomy for twisted pedicle; in 3 instances it was extirpated during operations for hernia, for it is better in such cases to take it away, as it has been known to cause trouble later; and in the remaining 12 patients the operation was undertaken for recurrent appendicitis. In 3 of these latter there was simple catarrh, in 2 obliteration and stenosis, and in 7 perforative appendicitis. The clinical symptoms vary little in character although much in intensity, and the operation is indicated when the diagnosis of appendicitis with exacerbations or recurrences is made.

MIDWIFERY AND DISEASES OF WOMEN.

(8) Labour in Mature Primiparæ.

De Koninck (*Revue Médicale*. Louvain, October 30th, 1897) has compiled an instructive memoir on labour in primiparæ married for some years and relatively mature (28 years Bidd and Pourtad, 32 Ahlfeld). De Koninck gives 30 as the earliest year coming under "maturity," the "*primipares agées*" of French authorities. He sets aside as curiosities certain cases of primiparæ almost "aged" in the English sense of the term, such as Cohnstein's two women aged 50 and Steinmann's woman aged 52. It appears that in a genuine uncomplicated case of delayed impregnation the advent of the catamenia is always found to have occurred late in youth. Out of 401 such cases menstruation was retarded till 20 in 39, till 24 in 4, and till 26 in 1. As to the retarded first pregnancy, abortion, ectopic gestation, twins, and special renal mischief are relatively frequent. Above all, lingering labour is specially common, statistics even exceeding guesses and *a priori* reasoning in this respect. In 12 out of 17 noted by De Koninck labour lasted from forty to fifty hours, the remaining labours being yet longer; 1 exceeded ninety hours. Feebleness of uterine contraction is absolute from first to last, and independent of any obstetrical combination. They also cause far more physical and mental exhaustion than the vigorous contractions of a young uterus, and at the same time are more painful. There are discrepancies in the "pains" seen in mature primiparæ of the same age, probably homologous with the great variations in the age of menopause observed in otherwise normal women. The uterus may be older in one woman aged 35 than in another of the same age. The forceps and other obstetrical operations are often required in the mature. Most of the above facts are easily explained. The excess of male infants borne by mature primiparæ (30 per cent.) is a less explicable phenomenon. Hecker considers the predominance of male infants as a speciality of all primiparæ, but Rumpe turns attention to the fact that in a family of children the predominance of males is commoner the further the mother is from her first menstrual period.

(9) Cæsarean Section by Transverse Incision of Fundus.

Braun (*Centralbl. f. Gynäk.*, No. 45) has had experience of Fritsch's Cæsarean section, the operation being the second of its kind ever recorded. Fritsch bases his practice on the course of the secondary branches of the uterine arteries which run horizontally, so that a longitudinal incision down the front of the gravid uterus cannot fail to cause free hæmorrhage. He is accustomed to extirpate diseased Fallopian tubes completely, snipping a wedge-shaped piece out of the uterine cornu. Bleeding is always free, but the tying of a suture passed antero-posteriorly under the bleeding vessel stops it at once. The ligature lies at right angles to the vessel, the most favourable position. Hence Fritsch conceived the idea of making an incision straight along the fundus from cornu to cornu, in order to extract the fœtus in a Cæsarean section.

Braun publishes full notes of his own case. The patient was a rachitic primipara with a universally and irregularly contracted pelvis. The conjugata vera was $2\frac{3}{4}$ inches. Labour pains had set in. Care was taken to antevert the gravid uterus sufficiently, the upper part of the wound being held together with forceps during delivery of the child. Then the transverse incision was made. Braun found that it bled as much as the longitudinal incision in Cæsarean sections where he had operated during labour at term or in relatively early pregnancy. The placental site did not lie near the fundus. The delivery of the fœtus, which was living and weighed 6 lbs., was neither harder nor easier than through a vertical incision. The wound in the fundus was under 4 inches long after the fœtus had been extracted. The sutures had to be placed close together, 15 deep and 8 superficial being applied. Ergot was given after the abdominal wound was closed, as there was hæmorrhage. The patient made a good recovery.

(10) Treatment of Endometritis in Bromine Vapour.

NITOT (*La Gynécologie*, October 15th, 1897) maintains that the correct prophylactic treatment of parenchymatous metritis and chronic salpingitis consists in rapid cure of recent endometritis, which is the starting point of those troublesome diseases. To ensure cure a remedy is needed which can penetrate to the deepest recesses of the mucosa, and even the tubes, without dangerous effects. Caustics and fluid preparations do not possess such properties. A gas is required, and it must be freely diffusible, antiseptic, and capable of acting on the epithelium so as to modify without destroying them ("anticatarrhal action"). Bromine emits gas with the necessary qualities; a saturated aqueous solution should therefore be placed in a bottle with double tubing like an ether spray or the chloroform bottle in a Junker's inhaler. A hollow sound, connected with one tube, is passed into the uterus, whilst the solution is made to bubble by pressure on a ball connected with the second tube. Thus vapour is propelled into the uterus. Nitot claims the best results, and notes that the advantages of gaseous diffusion over intrauterine injections or other medication are self-evident.

(11) Hæmatoma of the Vulva.

BINDER (*Centralb. f. Gynäk.*, No. 34, 1897) relates an instance of this accident, where he believes that its predisposing cause was vascular degeneration owing to intemperance. The patient was a woman, aged 39, who had taken to drinking for three years. One day, when lifting a weight off a chair, she was seized with violent pains in the vulva. The weight was no greater than she was quite accustomed to carry at the time. The pain increased and was accompanied with a constant desire to defæcate. Binder found the right labium majus rather enlarged and tender, and a tense livid swelling lay in the right ischio-rectal fossa. Ice bags were applied to the vulva. Three hours later the labium was as big as a fist, and deep purple in colour, the swelling near the anus much larger, and the right side of the vagina occupied by a similar swelling which blocked the vaginal canal. There were no external or internal hæmorrhoids, and the patient had not borne a child for sixteen years. The treatment by ice was continued, and at the end of a fortnight the swellings had disappeared, leaving the characteristic discoloration seen in ecchymoses. In the course of the second week a greenish discoloration of the integument developed along a narrow tract over Poupart's ligament as high as the crest of the right ilium.

(12) A Novel Cause of Menorrhagia: Tubal Polypus.

FRAENKEL (*Monats. f. Geburtst. u. Gynæk.*, October, 1897) examined a tube from a case of constant uterine hæmorrhage, for which the appendages were removed. A large firmly attached mass was found in a tube, and it was histologically identical with the true placental polypus often found in the uterus. Incomplete tubal abortion must have occurred, a fragment of the product of conception remaining adherent to the tubal wall.

THERAPEUTICS.

(13) Kinesitherapy in Heart Disease.

COLOMBO (*Gazz. Med. di Torino*, 48, N. 39, 40, 1897) pleads for a more general use of kinetic treatment in heart disease. Even in advanced cases he seems to think such treatment is very advantageous. Milder forms of treatment, for example, the Swedish method of gymnastic exercise, should be started at first, and afterwards more active methods, for example Oertel's, can be tried. The action of the Swedish method is most marked upon the peripheral vessels, whilst Oertel's system acts more directly upon the heart itself, so that dividing heart disease into disease of central or cardiac, and that of peripheral or vascular origin, the different methods could be applied accordingly. The Swedish method, moreover, has this advantage, that it can be applied in severe cases which cannot leave their bed.—Barié (*Sem. Méd.*, November 12th, 1897) advocates the treatment of heart disease by Swedish gymnastics. The aim of the exercises is to facilitate the work of the heart by increasing its contractile power, and by lessening the peripheral resistance. The exercises are a series of regulated, combined, or alternating movements of resistance or opposition. The movements employed fall under the main groups: (1) Kneading, rubbing, or stroking of the muscular masses in the limbs and abdomen; (2) movements of circumduction which facilitate the circulation in the main venous trunks; (3) movements which favour respiration. The exercises are very varied, and accomplished by means of passive and active movements, numerous different manipulations, and by special apparatus. The average duration of the treatment ought not to be less than an hour a day during three months of each year. The treatment is suitable for cases of dilatation, hypertrophy, fatty degeneration, chronic myocarditis, and various neuroses and functional affections of the heart. Such symptoms as shortness of breath, palpitation, insomnia, cephalagia, giddiness, gastric phenomena, œdema, ecchymosis, cyanosis, improve or disappear under treatment. The pulse-rate is lowered, but rises again as soon as treatment is interrupted. Rational application of the treatment does not exclude internal treatment by ordinary medical means, and the two methods may often be employed simultaneously with the best results.

(14) Treatment of Chlorosis.

WARFVINGE of Stockholm (*La Gynécologie*, October 15th, 1897) believes that the benefit derived from iron in the treatment of chlorosis is self-evident, and cannot be explained away by those who are sceptical about drugs. He is, on the other hand, doubtful about iron being passed on from the dose to the individual blood corpuscle. More probably it acts as a diffusible chemical compound which counteracts, as it passes through the organism, pathological conditions that interfere with the normal regeneration of the blood. Preparations like hæmoglobin and hæmol, or the ferrocyanide of potash are not suited for chlorosis, as they form too stable compounds with iron, making salts which largely pass unaltered out of the organism. The older preparations are better, and Warfvinge administers them subcutaneously, as a dose given that way need be only one-fifth as strong in iron as a draught taken by the month, nor is it liable to irritate the alimentary canal. De Dominicis of Naples holds that chlorosis is a disease of the entire organism; the gastric troubles are secondary, and though chlorosis prevails in the weak, it may nevertheless be not a mere indication of weakness but a specific auto-intoxication as in diabetes. He believes in the transfusion of heterogenous blood—that of the dog, for example. The good effects, in his experience, are durable. Charrin, who holds that chlorosis, as distinguished from anæmia, is a disease of women, thinks that Keiffer is correct in considering the utero-ovarian apparatus as a gland. It plays a part in elimination, and when its part is done insufficiently auto-intoxication occurs.

(15) The Local Action of Suprarenal Extract on the Cutaneous Blood Vessels.

VELICH (*Wien. med. Blätter*, 1897, No. 45) finds that a watery suprarenal extract which has been sterilised by boiling causes, when dropped into the eye, marked vascular constriction, and so relieves conjunctival hyperæmia, however caused. The effect upon granulations is not less marked; appli-

cation of the extract to trachoma leads to marked anæmia of the growth, while large granulating surfaces both in man and animals are soon rendered conspicuously anæmic. The author was next led to investigate the action of the extract upon the vessels lying beneath the unbroken skin. He finds that not only does the normal pink colour rapidly vanish, but that the hyperæmic skin, as in nævi, also becomes anæmic with the more prolonged action of the drug. The application of the extract to the eczematous skin led also to most profound anæmia, which was so exquisite that white letters could be written with it upon the red eczematous surfaces. Experiments on rats showed that sarcomata could also be blanched by the same means. It was only in long-continued hyperæmia both of skin and mucous membranes that the action of the suprarenal extract was less conspicuous. In this condition there is paralysis of the cutaneous vasoconstrictors, stimulation of which is the means by which the extract acts; it is thus obviously ineffectual where these nerves are inexcitable. The author's researches suffice, however, to show that suprarenal juice forms a ready and convenient means of subduing acute local hyperæmia; its therapeutic value remains to be worked out.

(16) Dangers of the Nasal Douche.

Lichtwitz (*Sem. Méd.*, November 26th, 1897) deprecates the routine prescription of the nasal douche in all cases of hypersecretion of the nasal mucous membrane. Irrigation is called for only when the nasal fossæ require clearing of pus and crusts, for instance in idiopathic ozæna. This affection is mainly limited to the nasal fossæ properly so called, and irrigation is in such a case the most fitting form of procedure. An ordinary syringe or enema syringe with suitable nozzle should be used. In all other nasal affections irrigation is inadequate or useless; it is even dangerous. Repeated flooding of the mucous membrane may give rise to olfactory lesions. Antiseptics are highly injurious, and pure water is badly borne; the physiological solutions of sodium chloride, sod. bicarb. or sod. sulph. are the only harmless liquids. In numerous cases irrigation has caused the sense of smell to be temporarily or permanently diminished or lost. Distressing frontal or occipital headache may result owing to the liquid passing into the sinuses. The injection of irritating liquids may even set up inflammation of these cavities. The most skilful and careful irrigation is insufficient in many cases to prevent the resulting headache. A very grave complication is the penetration of the liquid into the middle ear, suppurating otitis media occasionally supervening. In acute coryza, especially in children, douching should never be practised, In one such case known to the author mastoiditis followed irrigation of the nasal cavities. The predisposition to otitis is increased after retro-nasal operations, in particular after ablation of adenoid vegetations. For eight years the author has given up all irrigation after pharyngo-tonsillotomy, and during that period has met with no case of post-operative complication.

PATHOLOGY.

(17) The Influence of the Organism upon Toxins.

Metchnikoff (*Ann. de l'Institut Pasteur*, November 25th, 1897) has applied the method of comparative pathology to the question of the mechanism by which the animal organsm prepares antitoxins, and the laws which regulate their production. By growing bacteria and lowly fungi upon culture media containing toxins he was enabled to show that the virulence of the latter was in most cases diminished and sometimes destroyed. In any case these microbes have no influence in the production of antitoxins, and the idea of preparing them by this means must be abandoned. The animal organism alone being capable of producing antitoxins, the next point was to find out whether this was a property common to all animals, or limited to the superior. Metchnikoff found that the injection of large quantities of tetanus toxin into scorpions and the larvæ of other athropods produced no antitoxin. The toxin remained for months in the blood or tissues without losing its properties; similar results were obtained when it was taken into the alimentary canal of the leech. It was hence shown that even those invertebrates in which antimicrobic phagocytosis is most marked are utterly incapable of producing antitoxin. Coming next to vertebrates, no power of producing antitoxin is possessed by fish or amphibia; it first appears in reptiles, but not in all kinds. Thus tortoises, like invertebrates, can retain tetanus toxin in the blood for a lengthened period without forming antitoxin; it is in reptiles that the production of the latter is first observed, but in them only when they are kept at a temperature higher than 30° C. If the temperature is 20° C. the results are just the same as in tortoises and invertebrates. The establishment of the antitoxic property in these cold-blooded animals is not attended with any rise of temperature, and the same is true in warm-blooded animals such as fowls. With regard to the last-named animals, whose power of producing tetanus antitoxin was first demonstrated by Vaillard, Metchnikhoff has some new and important observations. He finds that practically all the toxin injected into the peritoneum passes into and remains in the blood, none of the organs being toxic after their blood has been washed out. To this an exception is found in the case of the genital organs, ovaries, and testicles, which possess the power of fixing some of the circulating toxin. This they share with the leucocytes, to the toxicity of which that of the blood is due. After a while the toxic power of the blood diminishes, and after passing through a neutral period it becomes antitoxic. It is now found that with the exception of the generative organs, none of the organs when freed from blood possess any antitoxic power. The genital glands are found to be markedly antitoxic, but the author brings evidence to show that the antitoxin is not manufactured by them, but is absorbed from the blood, so that in the fowl the antitoxic property resides solely in the blood. Metchnikoff concludes that it is not possible to accept the idea that natural immunity depends on antitoxic power, and he further points out that the latter is evolved in the history of the animal kingdom at a much later date than the phenomena of phagocytosis.

(18) Duodenal Ulcer with Subsequent Development of Colloid Carcinoma.

Letulle (*Gaz. des Hôpitaux*, December 9th, 1897) had under his care in 1895 a man who had two attacks of abdominal pain and melæna—one in January, the other in October. On both occasions improvement followed milk diet and rest in bed; there was no hæmatemesis at this time. He was thought to have gastric ulcer. In August, 1897, the man returned extremely ill and wasted, with incessant vomiting and diarrhœa. There was no jaundice, no excess of fat in the motions, and no albuminuria or glycosuria. There was a tumour as large as the fist on the epigastrium to the right of the middle line, which appeared to be fixed to the spine, and did not move on respiration; it pulsated. Cancer of the stomach was diagnosed. At the necropsy, however, the stomach appeared healthy, but there was a large simple ulcer in the first part of the duodenum, near the centre of which colloid carcinoma had developed. The ulcer extended farther out in all directions than the malignant growth at the margins of the ulcer where the mucosa was polypoid. The growth measured 13 by 12 cm., and was on the side of the duodenum, which is in contact with the pancreas; it did not extend so far the pylorus above or the opening of the common bile duct below. The duodenum was greatly dilated in the situation of the growth, and the pylorus was found open. At the level of the biliary papilla the duodenum was narrower than normal. The bile duct was unaffected and opened alone, there being no duct of Wirsung; the only pancreatic duct ran to open at the lesser caruncle, where the accessory duct, or duct of Santorini, debouches into the duodenum. This point, which is higher up in the bowel, was invaded by the growth, and thus complete aseptic occlusion of the ducts of the pancreas had been brought about. The pancreas was extremely atrophied, and, especially in the head, cavernous from the dilated condition of its ducts. Microscopically, the pancreas was not invaded by growth, and was extensively, but not completely, atrophied. The duodenal growth was a colloid columnar-celled carcinoma, some of the cells containing glycogen.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(19) The Distribution of Anæsthesia in Tabes Dorsalis.

MARINESCO (*Sem. Méd.*, October 13th, 1897) has studied the topography of anæsthesia (chiefly tactile) in 50 cases of locomotor ataxy, 10 of which had amaurosis. He finds that there are four principal foci of anæsthesia: (1) Thoracic anæsthesia was present in 40. In slight cases this is found as a horizontal zone in the nipple region on either side. If the outer limit of this thoracic zone reaches the axillary line it may then extend along the inner aspect of one, or more often both arms. In such a case the two nipple bands, which are not always symmetrical, are united anteriorly. Anæsthetic zones are also found in the scapular region on either side, but though they may be united in the middle line the interscapular region is always more sensitive than the rest. Thus when the anterior and posterior thoracic bands are complete they form an anæsthetic thoracic girdle; (2) In the upper limbs anæsthesia may be limited to the internal surface of the arms, or may extend along the inner aspect of the forearm to the little finger; (3) In most cases of tabes the perineo-anal and genital regions, especially the latter, are anæsthetic; anæsthesia being especially common at the lower part of the scrotum, but extending sometimes to the penis also. This exists just as much in the early as in the late stage of the disease, and should always be looked for. When present here it is generally found in other parts as well, such as the thorax or feet, for it is rarely present in one region alone; (4) In the lower limbs the position of the anæsthesia is very variable, being common in the plantar and dorsal region of the foot, the dorsum of the toes, the outer surface of the legs, and lastly on the anterior and posterior surfaces of the thighs. Other parts of the body where anæsthesia may be found are the epigastrium, left hypochondrium, and laryngeal mucosa. Cases of tabes with amaurosis have certain anæsthetic peculiarities. Though some may be anæsthetic at the seats of election, and if the anæsthesia be in the lower limbs ataxic, etc., others, and perhaps the largest class, have normal or nearly normal tactile sensation. Such patients are not ataxic, and the knee-jerk is present. A fact of great importance is that certain subjective sensations correspond to the four chief anæsthetic foci described above, to (1) the girdle sensation, to (2) numbness of the arms, to (3) micturition troubles and impotence, and to (4) lightning pains and "pins and needles" in the legs and feet. The author found, also, in three patients that gastric crises corresponded to anæsthesia of the epigastrium, and in one to anæsthesia of the left hypochondrium. In one case, again, laryngeal crises were present, with anæsthesia of the laryngeal mucosa. By looking for these anæsthetic areas doubtful cases may often be diagnosed with certainty. The relation between cutaneous anæsthesia and reflex pain can be understood more readily since Head's work was published. The areas of tabetic anæsthesia correspond very closely to the areas supplied by the various spinal nerve roots (for instance, the lower part of the scrotum is supplied by the third sacral nerve), as worked out and figured by Thorburn from the effect of traumatic lesions of the cord.

(20) Infantile Diphtheria and Preventive Inoculation.

RIETHER (*Wien. klin. Woch.*, 1897, No. 28) replies to the numerous papers which have recently appeared on the immunity of sucklings to diphtheria by quoting a series of 31 cases occurring within two years in a foundling hospital with which he is connected; of these only 7 recovered. The disease is hence not frequent, but by no means so exceptionally rare as has been asserted. It is practically almost always primarily nasal, the acid contents of the mouths of sucklings preventing, as Monti has shown, the growth of the Klebs-Loeffler bacillus. A case which was at first regarded as primary oral diphtheria was proved bacteriologically to be streptococcal stomatitis; the child got well. One of the other cases was exceptional in that the primary affection was of the unhealed umbilicus, the fauces being attacked secondarily. The disease almost invariably attacked weak and reduced children. It being found impossible to stamp the diphtheria out by room and house disinfection, it was decided to give all children a prophylactic inoculation of 100 units of Paltauf's antitoxin. Of 1,450 children thus treated, although in other respects no further safeguard against diphtheria was used, only two contracted the disease. Each of these was extremely weakly, and in each the onset dated from seven weeks after the inoculation. In 1897 no case of diphtheria had developed in the hospital, the only ones under treatment having been brought in ill. There was evidence also that this prophylaxis was diminishing the spread of diphtheria outside the institution as well. The children varied in age from a few hours to 2 or 3 months; 240 died of various causes unconnected with the inoculation, and in no one of them was any affection of the kidneys detected. In 2 there were minute abscesses, the size of a pea, at the site of injection, and in a few a mild erythema developed at the same spot. An urticarial eruption which also appeared in rare cases could not certainly be attributed to the antitoxin. The author thus considers himself justified in stating that antidiphtheria serum can be injected without danger beneath the skin of infants in the first days or weeks of life, and that 100 units serve as a protection against the disease for five or six weeks. It may be added that this is the largest series of prophylactic inoculations against diphtheria hitherto recorded.

(21) Multiple Neuritis following Influenza.

HERMAN B. ALLYN has made an extensive study of multiple neuritis following influenza (*Journ. Amer. Med. Association*, July 24th, 1897), in which he points out that influenza, like other toxic diseases, is frequently followed by severe lesions of the peripheral nerves, either sex equally liable. According to the cases collected by this author, the condition occurs most frequently between 25 and 45 years, and is most apt to appear during convalescence, sometimes as late as three weeks after the subsidence of the disease. There may be sensory, motor, vasomotor, or trophic symptoms, or all may occur together, but he finds that the sensory and vasomotor effects are the most frequent, therein contrasting with diphtheria and other causes of multiple neuritis. The prognosis is, as a rule, good, recovery usually taking place with complete restoration of function and power, though in 5 out of 36 cases death occurred, in some cases from general motor paralysis, in others from more severe local effects as lingual and pharyngeal paralysis. Recovery may be delayed for months, but the average seems to be about four weeks. The treatment consists, first, in absolute rest in bed; secondly, in the administration of anodynes when pain is severe. Morphine or codeine are of great service, and the writer has also found salicylate of cinchonidine, useful, particularly in cases where the pain is not so intense. Later on, potassium iodide and mercuric chloride in small doses may be useful, and if the pain be localised in a limb, firm pressure as by a flannel bandage often gives relief, and even blistering over the painful nerve has been tried with good effect. The action of the heart and the character of the respiration require careful attention, especially the latter, as diaphragmatic paralysis is not an infrequent complication. The nutrition of the patient requires careful watching, and the author recommends that medication be purely hypodermic, the stomach being reserved for food, this point being particularly important in the administration of anodynes. The writer concludes his paper by an interesting remark that neuritis following follicular tonsillitis is perhaps in some cases influenzal rather than diphtheritic, as some forms of sore throat are accompanied by as much headache, backache, and prostration as are found in any case of undoubted influenza, and such cases of neuritis do not always show the more purely motor symptoms that characterise the diphtheritic form.

(22) Tricorrhexis Nodosa.

RODOLFO PANICHI (*Settimana Medica*, September 18th, 1897) describes this affection, which consists in the occurrence of small whitish nodules on the

hairs, with later splitting of the hairs into broom-like extremities, and known most widely under the name "trichorrhexis nodosa." He specially considers the parasitic theory of origin of Hodara and Von Essen. The fact that the disease has a distinct preference for certain localities, for the hairs of the beard and pubes, its rapid increase and progress, and bacteriological researches, all are arguments in favour of the idea that the condition is a disease *per se*, and that it is due to a special micro-organism.

SURGERY.

(23) Insertion of Artificial Globe into Tenon's Capsule.

Morton (*New York Med. Journ.*, October 30th, 1897) thus describes the method he has carried out: The patient being anæsthetised, a circular incision was made in the conjunctiva, close to the corneal limbus. The internal rectus was dissected free from surrounding tissue up to its attachment to the globe, and held by a pair of advancement forceps, after which it was cut close to the sclera. A double needle catgut suture was passed from within outward, enclosing the central bundle of the tendon, and tied on its external surface. The ends of the suture, which are cut to a generous length, are now laid aside to the nasal side of the field of operation. The external, the superior, and the inferior recti are treated in a similar manner. The oblique muscles are cut, and, no suture being used, escape. The globe is removed after section of the nerves, and all capillary hæmorrhage stopped before proceeding. The glass sphere is now placed into the cavity previously occupied by the eyeball, and now lined with the parietal and a portion of the visceral layer of Tenon's capsule. The sutures holding the externus and the internus are now taken by the operator, the assistant taking at the same time the sutures retaining the superior and inferior recti. Before the second turn is made in the sutures held by the operator the assistant ties his sutures together, and these are enclosed in the final turn of the knot holding the external and internal recti. The sutures are now enclosed in a common knot at their intersection. This process of tying the sutures is of vital importance. In the first place, should the sutures slip over the glass sphere—the horizontal up or down, the vertical in or out—it would escape from the cavity as placed, and put all of the strain upon the light silk sutures in the conjunctival wound. Moreover, should the suture slip, the normal position of the muscles—as retained by this method—upon the glass ball is disturbed, and a condition of unequal tension results, which destroys the proper movements of the artificial bulb. This is a point in the operation which the author lays stress upon—that is, the careful adaptation of the sutures, so that the tendons assume the same position they occupied in the living eye. By attention to this point, which is obtained by the method of tying the sutures, the excursions of the artificial ball are as unrestricted as in Mules's operation. The muscles are retained in their place by a process of adhesive inflammation to the overlying and surrounding conjunctiva, which is completed before the sutures are absorbed. It must be clearly understood that the tendons are not sutured together, but merely held in a normal position until retained by the inflammatory process. The catgut sutures and sphere are now covered by the conjunctiva, which is held by interrupted sutures of Chinese silk. Some finely-powdered iodoform is dusted into the *cul-de-sac* and a bandage is applied and allowed to remain for three days. It is interesting to note that the reaction which followed in this operation was very slight, and caused the patient no pain or elevation of temperature. The ball was not sensitive, and at the end of three weeks the patient wore the artificial eye with comfort. Morton thinks the operation applicable in cases where the eye is atrophic and obviously unfit for a glass sphere; secondly, in cases where the tunics are badly lacerated from severe injury. As in Mules's operation so here the artificial ball, by holding the prothesis closer to the inner canthus and puncta, permits the tears to drain away almost as perfectly as in the normal eye.

(24) The Treatment of Hæmorrhoids by Injections.

The treatment of hæmorrhoids by the injection of carbolic acid and glycerine, mixed in various proportions into the substance of each pile by means of a hypodermic syringe was first used by American surgeons. S. G. Shaleeta, of the Kieff Jewish Hospital (in a reprint from the *South Russian Medical Gazette*, Nos. 18, 19, 20, 21, 22, 23, and 24, 1897), has modified this method by using pure liquid carbolic acid, injecting each pile with a Pravaz's syringe to a certain degree of fulness, and completing the operation in one sitting. Two, three, or four syringefuls of the acid are injected, according to the number and size of the tumours. For external piles he uses a mixture of two parts of pure carbolic acid to one part of a 2 per cent. of cocaine. Even if four syringefuls of this mixture are injected the quantity of cocaine is not sufficient to cause dangerous symptoms. As a matter of experience only a few drops should be injected where we have to deal with external piles, the syringe being introduced through the mucous membrane, and not through the skin. The history of 69 cases treated in this way is given, and the results in all cases were highly encouraging. When the piles shrivelled up and separated the surface presented was similar to that produced by the operation for ligature or the clamp and cautery. The advantages which the author claims for this mode of treatment are: (1) Absence of marked pain during the injections; (2) no necessity for anæsthesia (this is a great advantage in old and feeble patients, and those exhausted by repeated hæmorrhages); (3) little risk of suppression of urine following this operation; (4) no loss of blood during the operation; (5) no necessity to keep the bowels quiet for three or four days after the operation, as is the case in other methods of operating.

MIDWIFERY AND DISEASES OF WOMEN.

(25) Deep Incision of Cervix in Labour.

Barkman (*Centralbl. f. Gynäk.*, No. 32, 1897) published last year an important report, in the Bohemian language, on the results of this practice, after Skutsch and Dührssen, in the Prague maternity school. In 3,855 labours (1892-95) incision was practised 24 times, namely, one incision in 1 case, two incisions in 8 cases, three in 9, and four in 6. In 11 cases the incisions were sutured after labour, 7 uniting down to the edge of the external os by first intention. The indications for incisions were: prolapse of cord 3 cases, eclampsia 3, dangers threatening fœtus 17, cancer of the portio 1. Delivery was completed by symphysiotomy and forceps in 3 cases, by the forceps alone 14, by turning and extraction 5, and by perforation and cranioclasty in 2. The presentation was: vertex 21, face 1, brow 1, and transverse 1. The pelvis was capacious in 9 cases, and contracted more or less in 15. In 3 cases the incisions were enlarged by laceration, in 3 they bled severely, the hæmorrhage required the tampon in 1 of these cases, and was checked by suture in the others. In several cases median incisions were made into the vagina and perineum. Of the children, 14 were born active, and 8 in suspended animation (6 saved), whilst the remaining 2 were the cranioclasty cases. The puerperium was normal in 17 of the patients; in 3 there was a slight rise of temperature, in 2 parametritis, in 1 mastitis, and in 1 endometritis, salpingitis, peritonitis, and fatal sepsis. This patient was mentally afflicted and very uncleanly; there was strong evidence that the artificial incisions were not the channels of infection.

(26) Serumtherapy in Puerperal Septicæmia.

Wallich (*Annales de Gynécologie et d'Obstétrique*, November, 1897) concludes an important report as follows: (1) From an experimental point of view, employing Marmorek serum on animals inoculated (in their blood) with streptococci derived from puerperal infection, Wallich has not obtained regularly either preventive or curative results, especially with the serum used on women in 1896. (2) From a clinical aspect, Wallich fails to find sufficient modification in septicæmia morbidity and mortality in the Baudelocque clinic in 1896 to justify any definite conclusion. Marmorek serum was there employed most methodically. A much longer experience is required. The

value of preventive serumtherapy is absolutely unknown. Therefore intra-uterine treatment, which has been well tried, must not be cast aside in favour of curative serumtherapy by antistreptococcic serum. The bacteriologic diagnosis of puerperal infection is as yet hard to make in any clinical fashion.

(27) The Tubal Mucosa in Tubal Gestation.

CLARENCE WEBSTER (*Amer. Journ. of Obstet.*, September, 1897), like Fraenkel and Abel, claims to have detected a true decidua in the tube in cases of tubal pregnancy. Bland Sutton denies that a tubal decidua exists. Webster insists that Fraenkel, Abel, and himself did not endeavour to prove that a decidual formation might develop in the gravid tube, but, on the contrary, discovered decidual tissue in examining tubes purely with the object of defining their histology. Parry's theory, on which Sutton's views are based, is a mere hypothesis, as there is no reason to believe that he ever examined a section of pregnant tube through the microscope. Webster further maintains that if the placenta be examined in the case of an early pregnancy where escape into the peritoneal cavity has occurred, it presents appearances much the same as those found in the placenta of a miscarriage from uterine pregnancy, the maternal surface being covered with the thin superficial layer of the decidua serotina, irregular in its thickness and distribution. This irregularity is more marked in the case of the tubal than in the uterine placenta, because the development of the placenta in the tube wall is more irregular in the former.

(28) Primary (?) "Deciduoma Malignum" of Vagina.

SCHMORL (*Centralbl. f. Gynäk.*, No. 40, 1897) discovered this condition, which he terms "syncytial tumour," in a woman aged 38. It was discovered 18 weeks after a normal labour, and the patient died within six months. The uterus, tubes, and ovaries were quite free from metastases, which, on the other hand attacked the lungs, liver, kidneys, and intestines. All these secondary growths resembled microscopically the vaginal tumour. Schmorl holds that technically the growth in the vagina was secondary. A syncytial growth may, he thinks, have originated in the placenta, and a metastatic deposit in the vagina followed, the uterus escaping infection. Already it has been found that syncytial elements can pass from a hydatidiform mole into the vessels of the villi, so these elements might readily fail to be landed on uterine tissue, yet pass on to be arrested in an adjacent organ or canal.

(29) Hysterical Dysmenorrhœa.

B. VEDELER (*Norsk. Mag. f. Laegevidensk.*, No. 10, October, 1897) thinks that too much has been made of the local (uterine, ovarian, and tubal) causes of dysmenorrhœa, and believes that it is most often a symptom of hysteria. In order to support this idea he brings forward 13 clinical histories, and has adopted a treatment in accordance therewith. He sends his patients to a spa, and gives as medicines ergotin and bromide of sodium. If the pain is not strictly confined to the lower part of the abdomen, Vedeler gives the latter drug (1 g. twice daily) during the intermenstrual period. In more inveterate cases recourse is had to electricity, but only to its action by suggestion. In the worst cases of all, hypnotism may be tried or operation, but with regard to the latter the author thinks the results of forced dilatation are not encouraging.

(30) A Cause of Obstinate Suppuration of Labium.

CHAVANNAZ (*Bulletins et Mémoires de la Soc. de Gynéc. d'Obstét., etc., de Bordeaux*) relates a case of interest in respect to chronic suppuration in the vulvar region. A woman, aged 34, was recently admitted into hospital under Pousson, of Bordeaux, for an obstinate swelling of the left labium majus. As long as twelve years previously, when in the second month of her first pregnancy, the left labium majus became swollen and was incised. A hard mass remained in the affected part, and was laid open repeatedly in the course of several years. In December, 1896, it began to discharge pus freely, and was as big as a Tangerine orange. It fluctuated distinctly, and was extirpated without trouble in January. On microscopical examination the tumour proved to be a dermoid cyst.

THERAPEUTICS.

(31) Asthma Treated by Antidiphtheria Serum.

L. REVILLIOD (*Rev. Méd. de la Suisse Rom.*, November 20th, 1897) was induced to try antidiphtheria serum in the treatment of true spasmodic asthma (asthma from organic chest lesions or nasal polypi, etc., is not included in this) by the following considerations: (1) An asthmatic attack is probably an attempt to eliminate by the respiratory passages a volatile poison, which is at the same time the cause of the attack. (2) The classical drug for asthma, namely, iodide of potassium, is excreted by the respiratory tract, and probably acts by facilitating gaseous excretion, and rendering unnecessary the asthmatic dyspnœa. (3) Antidiphtheria serum, apart from its specific action on the diphtheria toxins, is excreted by the respiratory tract, as shown by its effect in loosening the false membranes. An outward excretory current is thus set up, and the vitality of the mucosa modified, just as is the case with iodide and chlorate of potassium. (4) Iodides, antidiphtheria serum, and asthma have this in common—that they all frequently produce rashes, which shows that the skin as well as the lungs is an excretory channel. (5) This treatment need not violate the fundamental doctrine of serumtherapy. For diseases apparently different may be allied in one or more points, and thus it is that quinine cures other diseases than malaria, mercury than syphilis, and that chlorate of potassium acts as well in ulcerative as in mercurial stomatitis. In accordance with this Revilliod finds that antidiphtheria serum has an action as brilliant in streptococcic as in diphtheritic angina. Seven cases of asthma were thus treated with the following results:—(1) Three cured; (*a*) male, aged 24; asthmatic attacks every night for six years; respiration always noisy and shallow; numberless methods of treatment without result; complete cure after ten injections of 10 c.cm. of Roux's serum spread over five months. No relapse when seen 6½ months later; (*b*) female, aged 40, rheumatic subject, asthmatic attacks every night for 7 months; other treatment without effect; cured by three injections of 10 c.cm. of the serum in ten days, and remained quite well when seen five months later; (*c*) male, aged 36; asthmatic and short of breath since bronchitis eight years ago; for last month attacks every evening between five and eleven, and at other times if fatigued, etc.; other treatment unavailing; cured by six serum injections in two months. (2) One permanently relieved; male, aged 56; asthma 44 years; three injections in ten days. (3) Three cases temporarily relieved, but the treatment was not always persevered in. The injections cause at first the attacks to be less severe, then at greater intervals. An injection was usually given whenever an attack threatened.

(32) Silver as an Antiseptic.

CREDÉ (Reprint from the *Arch. f. klin. Chirurgie*, Bd. 55, Ht. 4) first refers to his use of silver salts as antiseptics. Actol (silver lactate) is an exceedingly good antiseptic within the animal body, excelling corrosive sublimate. It, however, coagulates albumen, and thus cannot be used as a dusting powder for wounds. Itrol (silver citrate) is also a good antiseptic, and can be dusted on a wound very thinly but not daily. It may also be used for washing out cavities. Itrol dissolves in distilled water, 1 in 4,000; and if a stronger solution is required actol should be used. The author, of course, adopts the aseptic method, but he also dusts wounds and the line of incision with itrol. He has employed these silver preparations largely and with good results, and reports from other observers are also favourable. Credé maintains that the ideal antiseptic must possess the property of acting as such within the body itself. For this purpose he injected silver lactate subcutaneously in erysipelas, anthrax, and phlegmons with good results. In weak solutions its action was insufficient, so that stronger solutions of 1 in 30 to 50 were used. Aseptic necrotic foci, however, often formed, which led to this preparation being abandoned. The author then turned his attention to metallic silver, and Heyden prepared a form of almost pure

metallic silver soluble in distilled water. This preparation also dissolves in water containing albumen such as ascitic fluid. The fluid then becomes of a dark brown colour. Several grammes of a 1 per cent. solution may be injected without pain or unpleasant symptom. The author has also used an ointment in the so-called septic diseases, and he found that it was absorbed by the skin. The amount for inunction is 3 g. for the adult and 1 g. for a child. This preparation seems to exercise a curative action in strepto- and staphylococcus infections. When the disease is in an early stage a single inunction may be sufficient. The ointment must be thoroughly rubbed in for fifteen to thirty minutes. The condition of the patient is often greatly improved within twenty-four hours. Of course the local disease must if possible be removed. Marked pyæmia can very rarely be influenced. Credé states that his experience permits him to conclude that this soluble silver exercises a favourable influence upon sepsis.

(33) Arecoline as a Myotic.

Bietti (*Archivio di Ottalmologia*, vol. v, Fasc 1-2) has been investigating the action of this alkaloid obtained from areca or betel nut. A 1 per cent. solution instilled into the conjunctival sac causes some burning and lachrymation and hyperæmia. After four or five minutes the pupil begins to contract, maximal contraction being reached in about twelve minutes; this lasts a quarter of an hour, after which the pupil regains its normal size in about two hours, or three hours if a 2 per cent. hydrobromate solution is used. At the third minute the ciliary muscle begins to contract, as shown by approximation of the near point; this goes on to a maximum till the tenth or twelfth minute, after which the near point recedes to its normal position in the course of forty or fifty minutes. Cocaine in 4 per cent. solution does not hinder the action of arecoline on the pupil. Arecoline is unable to overcome the mydriatic action of atropine or scopolamine. In the case of a woman with simple glaucoma in both eyes arecoline produced contraction of the pupil where 1 per cent. eserine failed. It would appear to act more promptly and more energetically than eserine, but its duration of action is less.

(34) Hypodermic Injections of Lecithin.

Serono (*Arch. Ital. de Biologie*, tome xxvii, fasc. iii, 1897) by a special process has obtained from yolk of egg a lecithin which is physiologically active and yet harmless. Danilewski had found previously that when injected hypodermically it improved the condition of dogs and chickens. His great difficulty was to obtain it sufficiently pure not to be toxic, as it is very readily decomposed, giving rise to either cholin, neurin, or muscarin, and the expensive commercial preparations kill rabbits quickly. Serono's preparation is quite harmless, provided that it is freshly prepared every five or six days, and that when a flask is once opened it is not used again. He injects 1 c.cm. daily until nitrogenous metabolism becomes too active (four or five injections), then leaves off and begins again later if necessary. It is useless to give it by the mouth, as the digestive processes decompose it. In dogs and men he finds that (1) the general condition improves; (2) there is a considerable increase in weight, probably owing to increased appetite and assimilation; (3) there is a rapid increase in the number of the red corpuscles, while the white remain constant, and the increase of hæmoglobin does not correspond to that of the red discs; (4) traces of nucleo-albumin are found in the otherwise normal urine; (5) nitrogenous metabolism is increased (almost doubled), while the nitrogen of the egesta is always less than that of the ingesta, and does not agree with the increase of weight. Clinically the improvement in two chlorotic women, whom iron by the mouth as well as hypodermically had failed to benefit, was very striking. The injections also cured a man, aged 40, of diffuse neuralgic pains and anorexia which had lasted two years; improved an old man aged 80, bedridden with extreme feebleness and loss of power in the legs, so that he was able to get up, and cured a man of nervous dyspepsia with hyperchlorhydria.

PATHOLOGY.

(35) Tuberculous Disease of the Œsophagus.

Cone (*Johns Hopkins Hospital Bulletin*, November, 1897) has collected together all the recorded cases of tuberculosis of the œsophagus, 48 in number. Following Plexner cases of tuberculosis of the œsophagus are divided into: (1) Those where the disease spreads from adjacent parts; for example, from the bronchial glands, spinal caries, or tuberculous ulcers of the pharynx. It was formerly held that this method explained the great majority of the cases, but in the 48 instances this was found to be so in 24. (2) Where a pre-existing lesion of the œsophagus disposed to infection, this occurred in 5 cases. In this category cases of carcinoma and tuberculosis are referred to. (3) Instances where the œsophagus is affected in generalised tuberculosis, and in which the mucosa is affected without any pre-existing disease. Four cases were due to blood infection, and 15 to inoculation of the previously healthy mucosa with tuberculous sputum. A case of tuberculous disease of the œsophagus in a coloured man, aged 33 years, is described. The mode of infection was by the general circulation, and started from a tuberculous epididymis. The œsophagus showed in its lower two-third elevated dots and nodules that had not caseated. These nodules were found to be enlarged lymphoid follicles invaded by miliary tubercles; in no case were tubercles found apart from lymphoid follicles or extending under the mucosa. Tubercle bacilli were found. No other instance of localisation of the tuberculous process in the lymphoid structures of the œsophagus has been hitherto recorded.

(36) The Finer Tissue Changes in Experimental Plague.

Lustig and Zardo (*Centralbl. f. allgem. Pathol.*, viii, 10) records the results of his histological investigations upon various animals in whom he had sought to produce immunity against bubonic plague. These animals were inoculated intraperitoneally or subcutaneously with virulent or attenuated cultures with the contents of buboes and with spleen pulp. Subcutaneous injections led to a typical attack of plague lasting from four to ten days, while intraperitoneal injection killed the animal by acute septicæmia in twenty-four to forty-eight hours without buboes. In rats, mice, rabbits, and guinea-pigs the kidneys were especially affected in both types of disease. There was marked necrosis of the tubules and glomeruli, such as one sees resulting from the excretion of highly toxic substances. Even the connective tissue became necrotic, and numerous hæmorrhages appeared both in cortex and medulla. Typical bacilli were rarely seen in either parenchyma or blood vessels. Microscopical changes in the spleen were very evident in cases running a slow course. There was hyaline degeneration of the trabeculæ with widening and often enlargement of their arteries, while the large leucocytes in the meshes of the connective tissue were surrounded by numerous altered red corpuscles. Hæmorrhages in the pulp were constant, and necrotic foci in the neighbourhood of the follicles very frequent. The spleen tissue was always very rich in bacilli, but there were less frequent in the blood vessels of the organs. Degenerative changes were found in the liver and suprarenals, but the heart muscle was not much affected. The buboes and swollen lymphatic glands near the seat of inoculation contained vast numbers of bacilli. Many dividing polynuclear and mononuclear leucocytes were present, some of which enclosed bacilli, while others were pale and contained an almost invisible nucleus. Another characteristic was the presence of large cells, highly granular and staining deeply with methylene blue. These were grouped round the vessels and also scattered through the connective tissue meshes; they were undoubtedly plasma cells ("Mastzellen"). Cajal and Calleja believe that they represent unicellular wandering glands which secrete a nutritive and bactericidal substance, but the authors reserve their judgment as to this point; they are never found in normal lymph glands. Side by side with these active masses were found, in the same glands, necrotic foci. The tissue changes in experimental plague were thus found to closely resemble those observed in the disease in man; they were obviously due to the toxins rather than the bacilli. All endeavours to produce resistance to the action of the bacillus in the experimental animals failed.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(37) Nervous Dyspepsia.

ROSENHEIM (*Berl. klin. Woch.*, November 1st, 1897) states that in nervous dyspepsia there is an increased irritability of the stomach nerves, and especially of the sensory nerves. Whether this increased irritability is really due to a mild inflammatory process in the mucous membrane is difficult to determine. In the neurasthenic a slight degree of inflammation not recognisable by our present methods could produce morbid manifestations in the form of a dyspepsia which only an advanced gastritis would otherwise call forth. The fact that many dyspeptics are improved by dieting and other measures of value in gastritis favours this view. The neurasthenic develop under slight provocation mild inflammatory changes in the digestive organs, and especially in the stomach. It is important to separate hyperacidity and acid gastritis from nervous dyspepsia, and yet it is not always easy. There is undoubtedly a genuine gastritis, the chief symptom of which is an increased production of gastric juice. Hypersecretion also occurs in unquestionable nervous dyspepsia, and hence the difficulty in determining between these two conditions. The author says that he becomes less and less inclined to look upon cases with constant hyperacidity as nervous dyspepsia. The tendency to extend the boundaries of nervous dyspepsia must be restricted. In hyperacidity of inflammatory origin Carlsbad waters in suitable doses give very good results, whereas in nervous dyspepsia they are badly borne. The author includes under the picture of nervous dyspepsia a certain degree of relaxation of the stomach walls, but this motor insufficiency varies from time to time. Where, however, the motor function is considerably and persistently impaired, the disease is atony of the stomach; this may also appear as a complication of nervous dyspepsia. Verhoogen found gastric disturbances in 55 per cent. of his cases of hysteria, but among them he does not include nervous dyspepsia, which is undoubtedly rare in marked hysteria. The author has himself carefully carefully investigated 50 cases of neurasthenia, and in 38 dyspepsia was present, and in 11 the nervous form of it. The diagnosis of this complaint must be made with care. The author concludes that (1) nervous dyspepsia is a disease by itself, and chiefly a sensory neurosis; (2) the motor and secretory functions of the stomach may also be impaired in it; (3) it is not as frequent a disease as has been assumed; (4) it mostly exists along with other nervous manifestations, but it is wrong to assume that it is a symptom of neurasthenia; and (5) the symptomatic treatment of the stomach symptoms is of great value in nervous dyspepsia, but treatment directed to the general condition and to the cause is even of greater importance.

(38) Sigmoiditis.

A. MAYOR (*Rev. Méd. de la Suisse Rom.* October 20th, 1897) publishes a case of this disease in a girl aged 22, who two years previously had had symptoms of dysentery. The illness began on April 12th with rigors, etc., and when first seen on April 22nd her appearance suggested enteric fever, but there was a swelling in the left iliac fossa over the position of the sigmoid flexure, softish, nodular and tender, the size of a fœtal head. Under treatment the temperature fell and she improved considerably. However, on May 2nd there was a relapse, followed on May 4th by a quantity of pus being passed per rectum. By June 10th she was convalescent and no swelling could be felt. The above case proves that inflammation of the sigmoid flexure and its neighbourhood is a pathological fact. The starting point is usually a localised submucous colitis, which may affect any other part of the colon also, but is commonest at its flexures, as at the cæcum (certain varieties of typhlitis) and at the sigmoid flexure (sigmoiditis). Here the attack of dysentery probably left the sigmoid flexure in a state of less resistance to possible infection, which was aided by the presence of chronic constipation. These circumstances produced the sigmoiditis and the subsequent perisigmoid abscess.

(39) Addison's Disease.

EBSTEIN (*Deut. med. Woch.*, November 11th, 1897) records some cases in which symptoms resembling those of peritonitis appeared towards the close of the disease: Case I. A man, aged 33, with Addison's disease, had slight signs of consolidation at the apices. He then developed a follicular tonsillitis. A little later he was seized with dyspnœa, vomiting, and fatal collapse. At the necropsy there was tuberculous disease of the adrenals, erosions of the stomach, follicular enteritis, etc. Case II occurred in a man, aged 27. There was no bronzing. He complained of pain in the knee-joint. Later he had severe pain in the abdomen, constipation, vomiting, and died. At the necropsy there was follicular enteritis, recent tuberculosis of the lymphatic glands in the abdomen, as well as tuberculous disease of the adrenals. The semilunar ganglia were swollen, soft, and coloured brown. Case III, in a man aged 36, had characteristic bronzing. Vomiting supervened with diffuse tenderness of the abdomen and rigidity of the abdominal muscles. There was constipation. Death occurred in collapse. Here both adrenals were atrophied. There was a chronic lepto-meningitis and puckering at the apices of the lungs. Case II was an example of Addison's disease without pigmentation. Death in Addison's disease takes place in various ways: through increasing cardiac weakness, with fever and vomiting and severe cerebral symptoms, etc. In the three patients referred to above there was severe vomiting but no fever or diarrhœa. There were pains in the abdomen and rigidity of the abdominal muscles. Death occurred with symptoms resembling those of general peritonitis. This mode of termination is not explained. There may be atypical cases of Addison's disease. The author then refers to the occurrence of joint affections in this disease, and he gives details of a case in which a blood-stained effusion was found in the knee-joint after death. Thus the joint affection may not be limited to neuralgic pains. The author next discusses the nature of Addison's disease, and refers to Mühlmann's views with regard to pyrocatechin, to which this writer attributes the bronzing and other symptoms. Perhaps a nervous cause may lie at the bottom of the pseudo-peritonitic symptoms referred to above. The author finally refers to a recent typical case in which similar symptoms but not so severe occurred, but there was no necropsy. In one of the author's cases of Addison's disease improvement was obtained by feeding with suprarenal glands, but reports are as yet too conflicting to draw any conclusions as to the value of this treatment.

(40) Barlow's Disease, with Fatal Issue.

O. NAEGELI (*Corr.-Bl. f. Schweizer Aerzte*, October 1st, 1897) puts on record a rapidly fatal case of Barlow's disease in a child, 11 months old, who had been supplied with insufficient and improper food. The child died in three weeks with all the typical symptoms of the malady—blood extravasation under the periosteum of the bones of the leg and elsewhere, fracture of the femur, inanition, and anæmia. A catarrhal pneumonia helped to bring about the fatal termination. There was no history of syphilis and nothing to indicate that the malady was rachitic in nature. It is clearly differentiated from other diseases, and is a chronic general affection of young children due to unsatisfactory feeding. It is accompanied by changes in the blood and bones, and is complicated later by a distinct hæmorrhagic tendency.

SURGERY.

(41) Total Resection of the Scapula for Malignant Disease.

BERGER (*Bull. et Mém. de la Soc. de Chir. de Paris*, Tome xxiii, 1897), in commenting on a case of successful extirpation of the scapula for relapsing sarcoma, lays it down as a rule that in total resection of this bone for tumour, as in interscapulo-thoracic amputation, division of the corresponding clavicle should be a preliminary stage of the operation. The chief difficulty in the operation of removing the diseased scapula is the uncertainty with regard to the situation of the axillary vessels

and the terminal branches of the brachial plexus, which are hidden by the tumour. If these organs are involved in the disease, resection of the scapula alone will not suffice, and it will be necessary to remove at the same time the whole of the upper extremity. Preliminary section of the clavicle enables the surgeon to expose the vessels and nerves, to make out their connections with the tumour, and to decide whether resection of the scapula alone can be practised with good prospects of success, or whether it be necessary to remove both the scapula and the upper limb. The following steps, it is suggested, should be taken in removal of the scapula when the axillary vessels are concealed by the tumour and their relations to the diseased parts cannot be made out: (1) The posterior and superior portions of the tumour to be exposed by suitable incisions; (2) the clavicle to be divided at the middle, and the two fragments to be separated, so that the position and condition of the large vessels and nerve may be determined; (3) if these organs be free and not involved in the disease, to disinsert the attachments of the deltoid to the clavicle and scapula, to detach the capsule of the shoulder-joint from the margin of the glenoid cavity, to cut through the muscles which intervene between the scapula and the humerus, and to divide the insertions of the muscles attached to the coracoid process; (4) to clear the superior and axillary borders of the scapula, to turn over the bone in a backward direction, separating the subscapular fossa from the trunk, and, finally, to cut through the muscles inserted into the posterior border of the bone.

(42) Cystic Dilatation of the Common Bile Duct.

Russell (*Annals of Surgery*, December, 1897, p. 692) describes the case of a boy aged 8 years, who had been in good health until March 18th, 1897, when he became feverish and complained of pain in the right side of the abdomen. On the next day he was jaundiced, and on the following day a tumour was for the first time noticed. There was constipation, the motions being pale and offensive, and the urine contained bile. When examined five days after the onset there was a large elastic tumour, somewhat tender and dull on percussion, and continuous with the liver dulness. This tumour occupied the right lumbar region, extending below the iliac spine and almost to the middle line. It was diagnosed as a hydatid cyst. In the right linea semilunaris ust below the ribs, there was another nd smaller tumour, which was regarded s the gall bladder or another hydatid cyst. The case was thought to be one of catarrhal jaundice, which was then prevalent in Melbourne, occurring in a child who was the subject of hydatid cysts, previously undetected. Accordingly the child was kept in bed for sixteen days, but the biliary obstruction remained complete, and attacks of severe pain unaccompanied by vomiting, but resembling biliary colic, supervened. At the operation the smaller tumour turned out to be the gall bladder, containing colourless mucus. The larger cyst was retroperitoneal; it was aspirated and incised. Clear fluid came away first, then mucous fluid from the gall bladder followed, and some black, cinder-like mass, shown to be bilirubin, was found. After the operation bile came from the cyst. The child died four days later from severe hæmorrhage from the wound. At the necropsy the large cyst was the dilated common bile duct, the duodenal opening of which was small and valvular. The author regards it as congenital, and compares it to congenital hydronephrosis. It appeared probable that the bile had run uninterruptedly into the duodenum until the onset of catarrhal jaundice, which increased the tension in the dilated duct, and thus permanently occluded the duodenal outlet. On this explanation three weeks must have been sufficient to remove the bile pigment from the contents of the dilated duct. The condition of the liver is not described. The writer regards the case as unique, but it may be added that Wilks and Moxon describe a dilated common bile duct the size of a child's head in a child aged 4 years, which, in addition, contained myxomatous growths.

(43) Operative Treatment of Trachoma and Pannus.

R. Noiszewski (*Przeglad Chirurgiczny*, iii, 4, December, 1897) has during the last seven years practised a new method of treatment in 33 cases of chronic trachoma complicated by sarcomatous pannus. He believes that pannus of the cornea arising during the course of trachoma is due to contact of the cornea with the conjunctiva of the upper diseased eyelid. He, therefore, removes the portion of conjunctiva which would come in contact with the cornea in the various movements of the eye (a piece 15 to 20 mm. long and 11 mm. broad including conjunctiva and subconjunctival tissue). A piece of the same size is cut from the buccal mucous membrane and transplanted to the denuded area on the palpebral conjunctiva, and fixed in position by four sutures. A great amelioration in the condition of vision has generally followed the use of this method; and in one instance observed for six years, visual acuity reduced to perception of light had risen to $V = \frac{6}{12}$.

MIDWIFERY AND DISEASES OF WOMEN.

(44) Cocaine Anæsthesia in Perineorrhaphy.

W. H. Humiston (*Virginia Med. Semi-Monthly*, November 12th, 1897) records his ten years' experience of cocaine anæsthesia in minor gynæcological surgery, and especially in curetting, trachelorrhaphy, and the repair of the perineum by Tait's split-flap operation. He reports satisfactory results, and claims that one thus avoids the long-continued vomiting which so often follows the use of chloroform or ether. The maximum quantity used is 50 minims of a 2 per cent. solution, equal to a dose of 1 grain. Thirty minutes before the operation $\frac{1}{2}$ ounce of whisky or brandy is given, followed by the hypodermic administration of $\frac{1}{3}$ grain of strychnine. The margins of the area of operation in perineorrhaphy are systematically gone over with the hypodermic syringe containing the cocaine, so that the drug is equally distributed in the tissues, and the whole field anæsthetised.

(45) Vesicular Mole and the Panic about Deciduoma.

Pick (*Monats. f. Geb. u. Gynäk.*, October, 1897) relates a case of vesicular mole extracted during the fourth month of pregnancy from a woman, aged 22; at the same time a tumour of the size of a walnut was removed from the anterior vaginal wall close to the urethra. It was very easily detached from its seat, and was in part a true vesicular chorionic growth. The syncytium on the upper surface of the villi was detected in a state of active proliferation. When this case was reported, three years and a-half after the removal of the growth, the patient was quite well, and in the fourth month of a normal pregnancy. Hence Pick insists that an innocent vesicular mole may produce metastases, and that Neumann's theory that proliferating syncytium in the stroma of villi proved malignancy is incorrect, and hence total extirpation of the uterus is not called for on such evidence alone.

(46) Deciduoma Malignum of Vagina.

Schmorl (*Monats. f. Geb. u. Gynäk*, October, 1897) states that a tumour of the vagina was detected eighteen weeks after the normal delivery of a woman, aged 30. Death occurred within half a year. The uterus and appendages were found free from any new growth, but there were metastases in the lungs, liver, kidneys, and intestines. All, as well as the primary growth in the vagina, showed the characteristic structure of syncytial tumours. Schmorl believed that the latter was originally placental, the infected placenta being delivered before it could attack the uterus direct, but not before the metastatic processes commenced. Schmorl exhibited his case on the same occasion that Pick brought forward the metastatic tumour in the vagina in a patient who had been delivered of a hydatidiform mole, but she was living four years after its removal free from recurrence. There was a long discussion on both cases, and it seemed evident that there are many inexplicable discrepancies between the histology, pathology, and clinical history of these remarkable tumours, which ten years ago seemed unknown.

(47) True and False Diverticula of Female Urethra.

Josephson (*Nordisk. med. Arkiv*, vol. xxx, 1897, No. 23) writes of a woman aged 34, mother of three children, who suffered from dysuria since her last

confinement. There was a cystic tumour as big as a plum in the urethro-vaginal septum. It communicated with the right side of the urethra by a narrow fistulous tract. The cyst was enucleated. In its wall were tubules which, like its own lining membrane, bore ciliated epithelium. Josephson considers that it was a cystadenoma developed from an embryonic relic of the Wolffian duct. The communication with the urethra was secondary and formed a false urethral diverticulum. Josephson further describes a case where a true diverticulum was detected in process of development from the urethra. Forty-three cases collected from other authors are collected.

(48) Tubal Gestation.

DÜHRSSEN (*Archiv f. Gynäk.*, vol. liv, pt. 2, 1897) has compiled a valuable monograph on this condition based upon operative experience and anatomical research. He feels sure that the most frequent cause of tubal gestation is gonorrhœa through the catarrhal salpingitis which that disorder sets up. He also shows, from a specimen, that polypus of the tube may likewise cause the same phenomenon. He figures a tubal sac, on the uterine side of which lies a small polypus which obstructed the lumen, so as to prevent the fertilised ovum from passing into the uterus. The ostium is very patulous. A less familiar condition is held by Dührssen to be the cause of tubal pregnancy when evidence of inflammation or mechanical obstruction is absent. He finds that in seven of his cases the abnormal followed within a year a normal pregnancy. He carefully examined the tube in one of these cases, and found the most definite evidence of atrophy of its walls. This puerperal atrophy damages the peristaltic action of the tube, and as the lumen is dilated the entry of spermatozoa is favoured. The weakened tube then fails to propel a fertilised ovum into the uterus.

(49) Osteomalacia in Pregnancy: Porro's Operation or Castration and Cæsarean Section.

FREY (*Centralbl. f. Gynäk.*, No. 46, 1897) relates a case where Mermann of Mannheim successfully performed Cæsarean section in a woman who had osteomalacia. The child was saved. He preferred removal of the appendages to Porro's operation. The broad ligaments he admits were very vascular and the tubes quite varicose. Nineteen months later the patient was in good health, the bone disease having been checked. Frey does not omit the caution conveyed by Beaucamp's case where the uterus as well as the appendages was removed, yet after two years the osteomalacia which had hitherto remained stationary had advanced (*Archiv f. Gynäk.*, vol. xxxvi). Inclusive of Mermann's, there are 6 cases of Cæsarean section and removal of appendages. Kleinwächter did 2, 1 died of obstruction, the only fatal case in this short series, and as for after results Mermann's report is later after the operation than any other. No fewer than 35 cases of Porro's operation for osteomalacia are tabulated by Frey. 13 were performed by Braun von Fernwald, 6 by Fehling, 3 by Löhlein, 2 by Neumann, and each of the remainder by a different operator. Only one after-history was followed up as long as three years; the next in length, two years, was Beaucamp's, noted above as an ultimate failure. The remaining histories are valueless on account of their brevity in this respect. There were four deaths of the mother in the 35 cases, in 1 the uterus had ruptured.

THERAPEUTICS.

(50) Treatment of Epilepsy by Hot Air Baths.

RECENT experimental observations have proved that the fits in cases of idiopathic epilepsy are preceded and accompanied by greatly increased toxicity of the blood, urine, and gastric juice; and therapeutic measures, such as the free use of purgatives, diuretics, and intestinal antiseptics, washing out of the stomach, etc., have been advocated with a view to the prevention of the formation or accumulation of toxins in the body in such cases. Cabitto (*Riv. Sper. di Freniatria*, 1897, pp. 36, and 52. *Journ. Ment. Science*, January, 1898) has recently made the further observation that the sweat of epileptics has a correspondingly increased toxicity about the time of the fits. He obtained the sweat for his experiments by placing the patients in a hot air bath, and the results he obtained suggested to him the use of this as a therapeutic agent in epilepsy, with a view to elimination of the toxins by way of the skin. He has given the treatment an extensive trial, and states that he is convinced that it is an excellent means of preventing and interrupting epileptic attacks. It should be employed whenever the prodromal symptoms manifest themselves. The beneficial effects were not merely transitory, and therefore he believes that the baths exert upon other organs in addition to the cutaneous glands an influence which causes them to eliminate the poison more rapidly. He recommends that the various other measures that have been found of service for the prevention of auto-intoxication should also be employed.

(51) Serum Treatment of Tetanus.

WEISCHER (*Münch. med. Woch.*, November 16th, 1897) reports two cases of treated with Behring's serum. Case 1 occurred in a man, aged 29, who had run a splinter under his nail. Four days afterwards (May 20th) he had difficulty in mastication and speaking. Two days later the legs were stiff on admission, on the 26th there was marked trismus, and the neck muscles were very rigid. The arms remained unaffected throughout the disease, but the legs were absolutely rigid. The small wound in the finger was suppurating. On the 27th the symptoms had increased, and the respiratory muscles were involved. On the 28th 5 g. of Behring's dry serum were dissolved in 45 c.cm. of water and injected. The injection was repeated on the 30th, and from this time the patient steadily improved, and ultimately recovered. Case 11 occurred in a man, aged 37, who was said to have had a previous attack of so-called idiopathic tetanus two years previously. The thyroid gland was enlarged. On March 20th the patient was exposed to wet cold, and immediately trismus appeared. On admission two days later all the signs of tetanus were present. The teeth could not be separated more than 1 cm. The risus sardonicus was present, and the neck muscles were hard. The legs were also rigid. From time to time general tetanic spasm supervened. Behring's serum was injected on April 6th. On the next day the patient's condition was much the same, but on the following day improvement commenced, and he gradually recovered. The author discusses the question as to whether the last case could have been one of aggravated tetany, but he excludes it. Eighteen cases, including the above, have been treated in Leichtenstern's clinic during the past seventeen years. Twelve of these, and probably 14, were traumatic in nature. Ten of the 18 died. In the 16 cases not treated with serum, warm baths, diaphoretics, pilocarpin, and narcotics, such as chloral hydrate, opium, morphine, bromides were used. The author draws attention to the various kinds of serum, probably of unequal value, sent out from different institutions. He has collected the records of 98 cases treated with serum, and of these 57 recovered. Thus the mortality was only 41.8 per cent. Future investigations alone can definitively decide the value of the serum treatment of tetanus.

(52) Large Doses of Iodine in Eye Affections.

PAGENSTECHER (*Klin. Monatsbl. f. Augenh.*, December, 1897) remarks that large doses (5 g. to 25 g. a day) of iodine are often well borne, even where the usual doses call forth symptoms of iodism. The first case in which the use of large doses of KI gave striking results was one of orbital tumour, thought possibly to be sarcomatous, which was increasing in size under small doses of KI. Removal of the orbital contents was proposed, but Pagenstecher was led to try much larger doses of KI first of all; this brought about some shrinking of the tumour in a few days, and the immobile eye became less fixed. Iodide of sodium (7 or 8 g. a day) was now combined with the iodide of potassium, and within a fortnight the protrusion of the eye had so far receded that the lids could be closed. A fortnight later the swelling had completely disappeared. For a time the treatment caused profuse night sweats. Another class of case in which this treatment has been very beneficial is episcleritis, more particularly when there is much thickening, with secondary involvement of the iris and cornea. In paresis and paralysis

of ocular muscles similar results have been obtained, but not so uniformly. Pagenstecher begins straightway with large doses of KI in combination with bromide; 20 g. KI and 75 g. KBr in 200 g. of water, a tablespoonful directly after meals, three times a day, either plain or in seltzer water or milk; the dose is increased by a tablespoonful a day till 8 or 10 g. of KI are being taken. After a fortnight iodide of sodium in the same or larger doses is ordered, and continued, perhaps, for several months.

(53) Strophanthus.

Wilcox (*Journ. Amer. Med. Assoc.*, September 11th, 1897) supplements his previous studies by a comparative account of the varieties and preparations of strophanthus. He finds that the tincture of strophanthus kombé (pubescent variety) is an active and eligible preparation, of which the maximum dose should be 5 minims four times daily. Of the commercial tinctures of strophanthus hispidus, many are nearly or quite inert. The fluid extracts of this variety and of both kinds of strophanthus kombé are unsuitable preparations by reason of the digestive disturbances they occasion, which appear to be independent of the amount of strophanthin contained in the crude drug. The hypodermic tabloids of strophanthin as prepared from all kinds of strophanthus are not irritating to the digestive tract in doses of $\frac{1}{250}$ to $\frac{1}{200}$ gr. The source and percentage of strophanthin appear to be without influence on their activity. The tabloids do not irritate when given subcutaneously, and the smaller dose ($\frac{1}{250}$ gr.) appears to be sufficient for all practical purposes. The reputation which strophanthus has of irritating the alimentary canal is probably based on the use of the fluid extracts; the author has not been able to obtain sufficient strophanthus bracteatus to investigate its clinical uses. He sums up the advantages of strophanthus over digitalis under three heads: (1) Greater rapidity of action; (2) absence of cumulative effects; and (3) non-interference with the calibre of the arteries. It is, therefore, particularly indicated in the aged, gouty, nephritic, and atheromatous, besides being the cardiac remedy *par excellence* for children; its reputation has suffered in the past from the variability, unsuitability, and unreliability of the commercial preparations, for the improvement of which the present study makes.

PATHOLOGY.

(54) The Pathology of Syphilides.

Ehrmann (*Wien. klin. Runds.*, 1897, No. 25) reports the results of his investigations into the histological nature of syphilitic eruptions. The main difference between the primary sore and other syphilides is that, as a rule, each of the latter is formed in connection with a single blood vessel, while several participate in the origin of the former. A very important point with regard to the initial lesion, and one upon which its clinical characters very largely depend, is that even at a very early stage, however sharply defined it may seem to be, columns of cells (infiltration processes) are seen extending along the planes of the subcutaneous connective tissue. It is this, together with the early implication of the lymphatics and connective tissue spaces, that renders immediate excision of the hard sore useless. The author's method of investigation is to excise primary sores and inject their blood vessels with gelatine colored with Prussian blue; when this has set the lymph spaces and vessels are filled with dialysed iron by means of a syringe introduced to the level of the papillary layer of the skin. He finds that the centre of infiltration is never a vein but usually a lymphatic; this is surrounded by a network of dilated capillaries (its nutritive vessels) from which the leucocytic diapedesis forming the infiltration takes place. Ehrmann finds that the leucocytes closely surround the lymphatics, and explains this by the fact that the syphilitic virus contained in the latter attracts them by chemiotaxis. In some infiltrating bands no lymphatic vessel is seen, but only the network of dilated capillaries; in such cases the author believes the virus to have passed along a connective tissue space instead of a lymph vessel. The passage of the virus along the lymphatic vessels is comparable to that which occurs with tattoo marks, and leads to the indolent swelling of the inguinal glands; its passage along connective tissue clefts may lead to its storage in them, and so give rise to a reappearance of induration after its apparent healing (sclerosis redux). The secondary syphilides are found both clinically and histologically to depend on changes in the vascular system; they depend upon widening of the papillary and subpapillary blood vessels, with (in the papular syphilides) a perivascular cell-infiltration comprising both leucocytes and Unna's plasma cells. The two special forms—mucous papules and condylomata—are alike in histology. There is an increase in the size of the epidermal cells, especially in the basal and spinous layers, together with an epidermal infiltration with polynuclear leucocytes; the epidermal cells also increase by rapid karyokinesis. The difference between these two forms is that the condylomata, being situated where skin surfaces come into contact, are protected from evaporation, so that the individual cells and the whole syphilide attain a greater size than is the case with the exposed mucous papule. In them, also, the author has observed a process to which he gives the name "hemichromasia;" the cells in the stratum Malpighii are imperfectly stained by Weigert's method, only the lower half of each cell being coloured in the condylomata, and the upper in the mucous papules. Experimental evidence shows that the pole of the cell containing moist water stains least: thus in the condylomata the superficial part of the cell is sodden, while in the mucous papules it is dried by evaporation. The lesion in the so-called malignant forms (such as rupia and lichen syphiliticus) is not suppurative, but necrosis of the papillary bodies underneath an epidermis destroyed by leucocytes. These forms are not due to a mixed infection, but may result from chronic poisoning—for example, by alcohol in the case of rupia, and by the toxins of scrofula in the case of the lichen. It is important to note that these forms heal with scarring, while the before-mentioned syphilides disappear without leaving a trace. Ehrmann has finally studied the pigments of syphilitic eruptions. In dark recent rashes he has been able to demonstrate the presence of iron, showing that the pigment is derived from the blood, but in older lesions this is impossible, and the colour is found to be due to large melanin-looking cells derived from those of the connective tissue; at this stage pigmentation is usually found only in dark people, and in spots normally containing some pigment. In syphilitic leucoderma there is a multiplication of the melanoblasts at the edges of the patches, while they are entirely absent from the centre; between the two they are found in the cutis, but not in the epidermis.

(55) The Thymus Gland in Exophthalmic Goitre.

Soupault (*Bull. de la Soc. Anat. Paris*, July, 1897) describes in detail the histological appearances of the thymus and thyroid glands in a girl aged 18 years, who died after having presented the symptoms of exophthalmic goitre for eight months. Thyroidectomy was followed on the evening of the same day by death from acute asphyxia. The thymus was much enlarged, measuring 13 cm. from above downwards and 6 cm. in the maximum transverse diameter; its weight was 69 g. Microscopically the upper part of the gland resembled the thymus of a newly-born child, The lower part of the thymus showed a remarkable appearance, the lobular arrangement being exaggerated as the result of considerable fibrosis. There were no lymphoid cells in the spaces which were filled with epithelial cells of various forms—battledore, spindle, round, or polyhedral—some of them being very large, others small. In places there are cystic cavities lined by columnar cells and containing mucoid material and occasionally villous projections. Letulle compared these appearances to some cases of ovarian carcinoma. The author believes these appearances to be unique. The epithelial cells are derived from the original hypoblastic stalk of the thymus. He supports Marie's view that the persistence of the thymus in Graves's disease is due to a revival of growth occurring, and not to its development having gone on regularly and uninterruptedly. The appearances of the thyroid are also detailed, but do not present any features that have not been previously described by Greenfield and Edmunds.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(56) Prolonged Diphtheria.

GOLAY (*Rev. Méd. de la Suisse Rom.*, November 20th, 1897) publishes a case of diphtheria which, as regards the persistent presence of Loeffler's bacillus, lasted 36z days. On March 11th, 1896, the illness began, and after an injection of antitoxin the membrane had almost vanished on the 16th, and the child seemed quite well. Up till August 6th virulent cultures of the bacillus were obtained (twenty-five examinations), at first in pure cultures, afterwards along with streptococci. From then till September 2nd cocci predominated, but a few short bacilli proved experimentally to be diphtheritic, were present also. On September 1st there was an acute relapse, with patches on the tonsils and B. diphtheriæ in pure culture. By September 4th, after an injection of serum (the third) the child was again cured clinically. On September 10th no bacilli were found microscopically, and the cure was thought to be complete (just six months from the beginning), and no more cultures were made. However, on October 22nd there was another acute relapse, and the short bacillus was present with streptococci. By October 28th nothing could be discovered under the microscope, and the patient, a boy aged 5½ years, was again looked upon as cured, and no further cultures were made till February 5th, 1897, when there was a third acute relapse when short bacilli and streptococci were found. These persisted after a fourth injection of serum till March 9th. From then till September, 1897, the child kept well, but, as the parents would not consent to any more bacteriological examinations it is doubtful if he were finally cured even then. Golay thinks there can be no doubt but that bacilli were never really absent. He concludes from this and other cases that (1) a fortnight's isolation after the disappearance of the false membrane, as advised in classical works, is totally inadequate; not till three or four examinations at intervals of a week have proved the complete absence of bacilli can cure be considered permanent; (2) the presence of Loeffler's bacillus between the attacks of angina does not alter the general health; (3) the prolonged presence of diphtheria bacilli after the disappearance of membrane is the rule rather than the exception, but probably this period is not so prolonged when there is an associated steptococcus infection; (4) local treatment should be abandoned entirely, as its only use is to torture the patient. In the case given above a good number of the local applications recently recommended (by Loeffler and others) were tried thoroughly without the slightest effect.

(57) Spread of Phthisis.

FLÜGGE (*Deut. med. Woch.*, October 14th, 1897) mentions that the chief point in the prevention of phthisis has of recent times centred in the prevention of the drying of the sputum. There is, however, no evidence to show that the healthy individual gets phthisis through breathing dry sputum dust. Cornet showed that the dust in rooms inhabited by phthisical patients could induce tuberculosis when inoculated into the peritoneal cavity of guinea-pigs, but it is not proved that this bacillus-containing dust really exists as atmospheric dust. Nearly all experiments in which it has been attempted to induce tuberculosis in animals by the inhalation of dry sputum dust have failed. It has only succeeded when there has been some lesion of the respiratory tract. On the other hand, the disease can be produced with certainty by making animals inhale finely divided drops of infected fluid sputum. Whether the tubercle bacillus can be carried along in a living state in dust in weak atmospheric currents is doubtful. It has been shown in the author's laboratory that tubercle bacilli in the finest dust cannot be carried along as readily as other microbes, staphylococcus, etc. The danger then, of infection by atmospheric dust obtained from dry sputum is not only not proved, but is improbable. The author draws attention to the infection being conveyed by finely divided fluid sputum as produced by coughing. These minute particles can be carried along in a weak atmospheric current. The patient with phthisis may contaminate the surrounding air with minute particles of sputum containing tubercle bacilli. production of these fine particles of moist sputum must depend on the frequency and character of the cough, and the abundance of the sputum and mouth secretions. Those who cough violently and frequently with open mouth most often infect the surround-atmosphere. Those in the constant presence of phthisical patients run the most risk. The author thinks that the danger of infection by the finely divided sputum is not as great as it might appear to be, and that it can presumably be avoided by attention to a few simple details. This is in keeping with experiments carried on in the author's laboratory. The mouth secretions of the phthisical should be examined, as these lend themselves better to fine division than the sputum itself. If these views are correct much the greater danger lies in the existence in the atmosphere of a more fleeting contagium than would be the case with infected dry dust.

(58) The Skin Changes in Rheumatic Fever.

SINGER (*Wien. klin. Woch.*, 1897, No. 38) records seven cases of erythema multiforme and two of purpura rheumatica occurring during the course of acute rheumatism. He discusses the erythema at length, and states that it may assume the form of erythema gyratum, figuratum, and urticatum on the trunk or the extremities, that in more severe cases it may become hæmorrhagic or nodose (E. nodosum), and that in rare instances vesicles may form. The extensor surfaces of the extremities are its favourite seats; it is often present, though less thickly, on the body of the flexor surfaces. Singer considers that erythema multiforme may be either symptomatic or idiopathic. The most common forms of the former are those accompanying pyæmic processes, in the symptomatology of which these skin affections should be accorded a prominent place. Next in importance are the erythemata complicating rheumatic joint inflammations. The idiopathic form is mainly incident in the spring and autumn, and is characterised by fever, joint pains, and a relapsing course, and associated with tonsillitis and endocarditis. It thus shows so many points of similarity to articular rheumatism that it no doubt must be traced to a rheumatic cause in the majority of cases, although the joint symptoms may appear to be of subordinate importance. In many instances the eruptions betoken the skin localisation of micro-organisms circulating in the blood; bacteriological investigations in erythema multiforme practically always show staphylococci and streptococci. Considering this and the frequency already mentioned of cutaneous eruptions in septicæmia and pyæmia, one is justified in regarding erythema multiforme as *par excellence* a septic skin disease; an exception is afforded by the rare cases of purely nervous erythema. From this conclusion and the undoubted relation between erythema multiforme and acute rheumatism, it follows that the latter is also to be regarded as, in a wide sense, a septic blood disease.

(59) Pseudo-hypertrophic Paralysis.

E. TORDEUS (*Journ. de Clin. et de Thérap. Inf.*, v, p. 741, September 23rd, 1897) reports a typical case of muscular pseudo-hypertrophy in a boy, aged 9. The condition had begun when the boy was about 4 years old; and Tordeus gives the result of fifteen months' treatment with electricity and the injection of a gramme of muscle extract (*suc musculaire*) daily. The muscles of the calf had not increased in volume, and the hypertrophy had not invaded any other muscles than those affected when the treatment was begun. The muscular activity had considerably increased, and the boy could walk more easily and, further, without fatigue. He no longer fell over the slightest obstacle, and in rising from a chair he did not require to use his arms. This improvement Tordeus ascribes to the combined influence of the electricity and the injections of the muscle extract.

SURGERY.

(60) Echinococcus of Both Lungs treated Surgically.

STEINER (*Centralbl. f. Chir.*, No. 1, 1898) relates a successful case with very severe symptoms. The patient was a

country girl who had signs of liver and pulmonary disease. The heart was much displaced to the right, and when the mouth was opened a buzzing noise was heard synchronous with the cardiac sounds. On puncture of the left side of the thorax posteriorly, fluid containing hooklets was withdrawn. A year and a half before this report Professor Israel opened over the hepatic swelling, incised a large hydatid sac, fixing its edges to the abdominal wound, and then found a second sac behind it; this was opened and the subphrenic space discovered posteriorly. The seventh and eighth left ribs were resected behind, the costal and pulmonary layers of the pleura united by a circle of sutures, and the lung laid open within the circle. A hydatid as big as a normal human bladder was removed, lung immediately filling its place. At once the buzzing noise, caused by pressure of the cyst on the pericardium, disappeared. Six weeks later there was pricking pain and dulness at the right base. On puncture hydatid fluid escaped; dyspnœa followed till the patient coughed up much hydatid fluid. Later on chronic bronchopneumonia developed. On recovery it appeared that the echinococcus had atrophied and come away. The patient is now well. Professor Israel noted that the right thorax, which had been treated by nothing more radical than puncture, was somewhat diminished in capacity, whilst the left, where resection and removal of a hydatid had been so successfully undertaken, remained of normal capacity.

(61) Sinusitis.

Germann (Ophthal. Section, Moscow Congress, *Ann. d'Oculist.*, November, 1897) insists that the importance of affections of the facial air sinuses in the causation of orbital diseases is not sufficiently recognised. Primary phlegmon of the orbit is very rare in comparison with that due to perforation of the orbital walls; in fact, orbital cellulitis is nearly always secondary. The orbital affections produced by affections of the nose and accessory cavities may be divided into (1) orbital phlegmon, (*a*) without suppuration, (*b*) septic, with suppuration, caries, and necrosis; (2) mucoid cysts, forming after perforation of the orbital wall; (3) optic neuritis, atrophy of the nerve, contraction of the field of vision, decreased vision, neuralgia of the first division of the fifth; (4) irido-choroiditis with vitreous opacities. The following symptoms are of importance in a diagnostic sense—ozæna, escape of pus by the nostrils, pain in the teeth, dental caries, eczema of the nostrils, epistaxis, impeded nasal respiration, exophthalmos, direction of the protrusion and want of movement in the eye—deviation down and out pointing to ethmoid or frontal trouble; deviation up and out to maxillary trouble. Sometimes, by closing the opposite nostril and inspiring by the one on the affected side, we may notice bulging of the fluctuating region. In other cases, pressure over the swelling causes pus to escape by the nose. After perforation or incision of the orbital phlegmon the pus may be seen to contain air bubbles, and fluid injected through the incision may escape by the nose. Careful examination of the nose and its annexes is called for. Prognosis is doubtful for vision and for the position and mobility of the eye. Fatal cases are those which have not been diagnosed and treated early. Treatment should not be limited to simple incision, irrigation, and drainage, but the underlying condition should be sought out.

(62) The Electrical Treatment of Urethral Strictures.

Debedat (*Arch. d'Elect. Méd.*, November, 1897) has introduced a modification of Newman's electrical bougie for which he claims especial advantages. Instead of being wholly metallic, the new instrument is covered with ivory up to its olivary extremity, so that the current passes to the urethra through this part alone. The author uses it in such manner as to produce dilatation without the passage of a current during its introduction, and electrolysis only while in contact with the stricture in the act of withdrawal. The electrical application is thus accurately limited to a small area. Debedat reports the successful use of the bougie in a number of cases, two of which he summarises. He concludes that electrolysis by this improved method is a truly curative procedure as regards urethral strictures, which are by it attacked alone without injury to the healthy urethra. None of the cases hitherto observed have called for further surgical treatment. In his opinion, moreover, there is a certain proportion of cases in which electrolysis is the method of election.

(63) Hydrocele and Sublimate Injections.

Etienne (*Gazette des Hôpitaux*, January 8th, 1898) treats simple hydrocele of the tunica vaginalis by puncture and injection of a 1 in 1,000 solution of sublimate. The injection only causes a little pain in the thighs, and the fluid disappears in about a fortnight. Two injections of sublimate without alcohol follow the puncture, and, lastly, a boracic solution is injected. Etienne's 27 cases seem all to have been successful.

MIDWIFERY AND DISEASES OF WOMEN.

(64) Chirurgico-Gynæcological Treatment in Hysteria and Insanity.

Angelucci and Pieraccini (*Riv. Sper. di Freniatria*, 1897, p. 290; and *Journ. Ment. Science*, January, 1898) have published the results of an "international inquiry" into the question of the advisability and efficacy of chirurgico-gynæcological treatment in hysteria and insanity. They received reports of 109 cases in which ablation of the internal organs of generation was undertaken for the cure of hysteria and insanity, or other neuropathic conditions. Only 17 were stated to have been affected beneficially. The remaining 92 were either uninfluenced or affected injuriously. Insanity afterwards developed in 44 of these women, 20 of whom had suffered from hysteria before the operation, while 24 had not. Twenty-three others who were insane and hysterical prior to the operation were worse after it. Two not previously hysterical had become so. The remaining 23, who had been in part insane and in part hysterical, remained in the same state after operation. The authors also received reports of 6 cases of hysteria which were favourably influenced by suggestion through simulation of the operation. Of 76 alienists who sent in opinions as to the advisability of surgical interference in hysteria, 56 were unfavourable to such interference, 3 were in favour of it, while the remaining 17 would not commit themselves to an opinion on the question. Of 18 surgeons and gynæcologists, 13 were against operative treatment, while 5 were favourable to it under certain conditions. The authors conclude that ablation of the normal uterus or appendages is to be entirely proscribed as a means of cure in hysterical neuroses and insanity; that the existence of hysteria constitutes a contraindication to surgical operation for the cure of gynæcological conditions; and that such operations can only benefit the neuropathic state of the patient through suggestion. They further recommend that in cases in which all known means of combatting hysteria have failed, the effect of suggestion should be tried by simulating the operation of laparotomy.

(65) Appendicitis during and after Pregnancy.

Vinay (*Lyon Méd.*, January 2nd,) records 4 cases, and in all refers to 32 cases. The small number tends to show that pregnancy does not set up torsion of the appendix or colitis, conditions which would increase the virulence of the colon bacillus, and so induce appendicitis. In the 32 cases there were 10 deaths, a percentage of 31 per cent., which is much higher than that of Armstrong in his series of 517 cases, with a mortality of 12.8 per cent. The only complication of importance in appendicitis occurring during pregnancy is abortion, which was noted in 40 per cent.; this accounts for the fact that in half the 32 cases the children died. This frequency of abortion is much above that seen in other infectious diseases, and is referred to the intimate vascular and lymphatic connections existing between the appendix and the uterine annexa. Clado described an appendicular ovarian peritoneal fold as being constantly present, and considers that this carries the lymphatics from one to the other. Lafforgue, however, only finds it in 20 per cent. of bodies examined. In 2 of Vinay's 4 cases the appendicitis was primary, but in the other 2 the appendicitis was due to the spread of infection from the uterus. In the first there was post-puerperal infection which lighted up old appendicular mischief. The appendix was resected, and the right tube and ovary appeared healthy. In the other case, a primipara

with a history of membranous colitis there was hæmorrhagic metritis due to retention of placental tissue, with subsequent appendicitis. The differential diagnosis of appendicitis during pregnancy from tubal gestation on the right side is not difficult, but it is less easy to distinguish it from right salpingitis complicating pregnancy. Appendicitis during pregnancy should be treated like ordinary appendicitis.

(66) Local Treatment of Puerperal Fever.

HERRENSCHNEIDER (*Centralbl. f. Gynäk.* No. 46, 1897) strongly believes in the use of proper uterine therapeutics in puerperal fever. He has observed several fatal cases and found them distinctly traceable to a process of infective inflammation of the endometrium clearly local and manageable at first. He has successfully treated ten cases since these observations were made by intrauterine antiseptic injections, curetting, and, lastly, packing with iodoform gauze. The latter step is the most important, and should be continued after every injection until the temperature falls to normal. He combats the theory that scraping opens up blood vessels and lymph channels, allowing greater chance of the introduction of more septic material. Certainly vessels are wounded, but the tampon prevents the anticipated danger as it excites normal contraction of the uterine muscle, which tries to expel the foreign body. This therapeutical effect of the tampon is superior to the action of ergot administered with the view of expelling septic fragments and mucous from an otherwise empty uterus. The drug causes uniform contraction of the longitudinal and circular fibres when the uterine cavity is practically empty, so that the os becomes closed. Thus the escape of poisonous mucus is prevented, not assisted. The tampon closes the raw surface of endometrium upon itself and keep the os open.

(67) Vesical Palpation in Pelvic Disease.

HEYDENREICH, of Nancy (*Ann. de Gynéc. et d'Obstét.*, December, 1897) had under his care a woman, aged 39. She suffered from some inflammatory affection in front of the uterus; the anterior vaginal fornix bulged greatly downwards, and a mass extended upwards to three fingers-breadth above the pubes. The urine contained pus. The condition seemed obscure, so the urethra was dilated with Hegar's instrument. The forefinger was then passed into the bladder, and in its upper part, a little to the left, was a hole leading into a big pouch. On withdrawing the finger a gush of pus rushed from the urethra. In short, there was an ante-uterine abscess, which had opened into the bladder. Heydenreich passed his left forefinger into the bladder, almost in the pouch, and the right into the anterior vaginal fornix. The exact spot in that region where the point of the operator's left finger could be felt was determined, and an incision made there. A sound was passed into the pouch and out through the vagina, another was retained in the bladder. A rapid convalescence followed, the patient could hold her water, but often not for long.

(68) The Curette after Abortion and Delivery.

BÜTTNER (*Centralbl. f. Gynäk.*, No. 51, 1897) has observed 28 cases where the operator was Glaevecke. He finds that the use of the curette is free from danger if carried out with proper precautions. It permanently stops hæmorrhage after abortion or delivery, and, as a rule, the catamenia return soon, and continue normally, contrary to what is so often seen in mismanaged cases. A skilful use of the curette likewise prevents those morbid changes which are the cause of sterility.

(69) Acute Torsion of Pedunculated Myoma.

PILLIET AND DELAUNAY (*Bulletins de la Soc. Anat. de Paris*, July, 1897) describe a case of this complication, instructive on account of the symptoms. A married woman, aged 40, went about unaware that she had an abdominal tumour; she had only had one child, born when she was 19, and was perfectly regular till about a year before her illness; then the catamenia appeared at gradually diminishing intervals. Violent pain occurred during the last period; then and not earlier a large abdominal tumour was discovered. Péan operated after his method, applying pressure forceps, passed through the vagina, to the broad ligaments. The abdomen was opened, and a large, deep-purple tumour discovered; it looked at first like a sanguineous cyst, but proved solid on puncture. It turned out to be a pedunculated uterine myoma. The pedicle was fixed to the lower angle of the wound.

THERAPEUTICS.

(70) Treatment of Tuberculous Peritonitis by Creasote Enemata.

THOMAS (*Rev. Méd. de la Suisse Rom.*, November 20th, 1897) thinks the operation of laparotomy for tuberculous peritonitis is not without danger, and, if the condition of the patient admits of delay, medical treatment should be tried, especially since Gatti's experiments show that it is only when the tubercles have developed into the fibrous form that laparotomy does good, and that it is useless when they are caseous, while when both fibrous and caseous tubercles are present the former only are benefited. The author has tried enemata of creasote emulsified in cod-liver oil in 5 cases of tuberculous peritonitis. The patients were from 7 to 46 years old, in moderate general condition, with coexisting or preexisting single or double pleurisy, distended abdomen, and on palpation hard masses (adherent intestinal coils). All suffered from anorexia, diarrhœa, or constipation, and some were febrile. Though some of these might have recovered spontaneously, the rapid improvement and gain in weight were sufficient proofs of the value of the treatment. The method was to give an enema of 100 g. to 150 g. of cod-liver oil containing from 0.5 g. to 2 g. of creasote according to age every night. If necessary a few drops of laudanum were added to ensure retention. Local treatment consisting of iodised or iodoformised (10 per cent.) collodion was always employed as well, but no drugs were given by the mouth.

(71) Xeroform.

PASCHKIS (*Wien. klin. Runds.*, October 17th, 1897) claims distinct advantages for powders in the treatment of certain skin affections. For this purpose, he says, powders should slowly dissolve in the secretion, and should be impalpable, not crystalline; they should have no tendency to cake, and they should have no action upon healthy skin. Lastly, they should not have an offensive smell. These conditions are, in his opinion, fulfilled by xeroform—a light, fine yellow, slowly soluble powder, which is a compound of bismuth and tribromphenol. Paschkis has used xeroform in a number of cases of eczema and other forms of skin disease with breach of surface and ulcers of various kinds. The following was the mode of employment. After cleaning the surface of the sore with dry cotton the powder was lightly dusted over the surface. When necessary, a light dry gauze dressing was placed over the powdered surface, the whole being fixed with a bandage. Burns and excoriated places in eczema were treated in the same way. In some of the latter cases the use of the powder was supplemented by the application of an ointment or Lassar's paste. Paschkis gives a table which includes 62 cases of venereal ulcer, 5 cases of herpes, 6 cases of eczema, 5 cases of ulcer of the leg, and 4 burns. In all cases the results were excellent. Dirty ulcers cleaned rapidly, and healthy granulations soon appeared under its use. Superficial ulcers and erosions healed in a few days. Adenitis was a rare complication under its use. He does not claim that xeroform has an antiseptic action, but says it is an exceedingly valuable dressing, that rapidly dries the diseased surfaces, and favours healthy granulation and cicatrisation.

(72) The Electrical Treatment of Tic Douloureux.

BERGONIÉ (*Arch. d'Elect. Méd.*, October 25th, 1897) tries to show, on the basis of 15 cases observed by himself and others, of which he gives full details, that electricity affords the best means of palliating, if not curing, tic douloureux, and at the same time states his views as to the best way in which to use it. Majendie employed galvano-puncture, while Duchenne preferred faradism, but the modern tendency is to use the continuous current. Bergonié recommends that this should be obtained from piles or accumulator, and not from electrical machines; that they should be of very high intensity—never less than 35 and often over 50 milliampères; and that the positive electrode should be applied to the seat of pain. This positive electrode should have an area of 200 to 250 square centi-

metres; the negative, about double the size, is applied over the spinal column, and each sitting should last at least 15 minutes, many exceeding half an hour. The author lays great stress on the employment of a rigid positive electrode accurately moulded to the face; the affected area is thus exactly covered, and the application of the current both direct and definitive. Bergonié is inclined to attribute the action of the current in these cases to its electrolytic rather than its electromotive properties. At the end of the application the skin of the affected region has not only lost its hypersensitiveness, but is almost, if not quite, anæsthetic, and the same applies to the deep parts, so that the muscular actions involved in speech, mastication, etc., no longer produce pain. The author's conclusions are as follows: (1) In the present state of the treatment of trigeminal neuralgia, galvanism with currents of high intensity and long duration is to be placed among the most efficacious remedies. (2) When this is applied in the correct manner it is free from all inconvenience and, still more, from danger. (3) Its action is probably to be reckoned among the electrolytic effects of the current, and these may very likely reach the trunk and roots of the affected nerve, as well as its peripheral terminations.

(73) Transfusion in Severe Hæmolytic Anæmia.

BATTISTINI AND SCOFONE (*Archiv. Ital. de Biol.*, T. 28, f. 1, Turin), experimenting on dogs in whom anæmia had been produced by injections of pyrodin, found that when the anæmia was very advanced and the animals almost dying, transfusion of blood or serum was quite inefficacious, and even precipitated death. When hæmolysis is well marked and anæmia progressive, transfusion of blood causes severe toxic symptoms; and although it may produce a temporary improvement, the animal ultimately dies. If, on the other hand, hæmolysis has ceased and active regeneration is beginning, transfusion, although followed by slight toxic phenomena, gives rise to improvement, and it may be cures the condition. Washing out the organism with abundant injections of physiological serum, after bleeding, do not modify in any marked degree the progress of anæmia.

(74) The Use of Buckskin in the Treatment of Eczema.

DAVEZAC (*Journ. de Méd. de Bordeaux*, No. 51, 1897) was accidentally led to try the effect of a buckskin dressing in a case of old-standing eczema of the leg in a working man. He found that a small piece of buckskin placed between the ointment and the rest of the dressing greatly ameliorated the condition. Its good effects he ascribed to the flexibility of the buckskin, which allowed it to be moulded to every part of the surface; to the ease with which it could be cleansed; to the fact that it did not markedly absorb the ointment used, and that therefore the part remained moist; and to the safety with which it could be removed, the newly-formed epidermis not being torn away. The nature of the ointment employed mattered little. The buckskin did not dry, adhere, and tear as does linen; and it did not produce cutaneous erythema as does caoutchouc.

PATHOLOGY.

(75) The True and False Diphtheria Bacillus.

C. FRAENKEL (*Berl. klin. Woch.*, December 13th) says that the methods hitherto employed to distinguish these microbes are insufficient. Only a conditional value can be attached to the grouping of bacilli as seen in preparations from pure cultures. The true bacillus is generally long and often swollen at one or both ends, while the pseudo-bacillus is shorter and more uniform in appearance. By the microscope alone it may be impossible to separate these two microbes. Differences in the mode of growth may also fail to settle the question. Agglutination in Gruber's sense may give rise to false conclusions. The diphtheria bacillus usually produces in peptone meat broth acid and the pseudo-bacillus alkaline metabolic products, but this distinction cannot be relied upon. These morphological and cultivation differences are not constant. Owing to time, etc., experiments on animals are not available for this purpose. Even here the pseudo-bacillus is not at all the necessarily harmless microbe to animals as has been stated. The difficulties in distinguishing these microbes have led some authorities to look upon the pseudo-bacillus as really belonging to the diphtheria bacillus group. Fraenkel has confirmed Spronck's experiments in which the local changes sometimes induced by the injection of large quantities of the pseudo-bacillus are not influenced by the diphtheria serum, whereas such influence is seen in lesions due to Loeffler's bacillus. Neisser has recently pointed out a sure and rapid method of distinguishing between these two microbes based on the staining properties belonging to the granules present in the diphtheria bacillus. He found that when cover-glass preparations of the diphtheria bacillus cultivated on blood serum at not more than 35° C. for 10 to 20 hours are treated for 1 to 3 secs. with acid methylene blue and then washed and stained with Bismark brown for 3 to 5 secs., the polar granules are stained in the diphtheria bacillus, but not in the pseudo-bacillus. The formula for the methylene blue is methylene blue powder 1 g, alcohol (96 p.c.) 20 c.cm., aqua destil. 950 c.cm., acid. acet. glac. 50 c.cm. Fraenkel has been able to confirm Neisser's observations, and he looks upon the whole process as very simple and rapid. The suspected material is drawn over the surface of the serum preferably in a Petri's dish, and impression specimens are made and stained as above.

(76) Sarcoma of the Gall Bladder.

GRIFFON AND SÉGALL (*Bull. de la Soc. Anat.*, July, 1897) records an example of that extremely rare primary growth of the gall bladder, a spindle-celled sarcoma. The patient was a woman aged 76, with wasting but no jaundice. A tumour was felt during life in the region of the gall bladder. At the necropsy the gall bladder contained two calculi, and was contracted around them. Growing from the fundus of the gall bladder and invading the liver was a white growth microscopically a spindle-celled sarcoma.

(77) The Transmission of the Agglutinating Substance of Typhoid Bacilli by Mother's Milk.

CASTAIGNE (*Méd. Moderne*, November 13th, 1897) reports a case of enteric fever in a woman aged 25, where, contrary to rule, the agglutinating property in her serum was transmitted to her child aged 4½ months, whom she was suckling. There seems to be no possibility of error in this view of the case, since (1) the mother had had no previous attack of typhoid fever, and certainly was not affected with it at the time of her confinement, and therefore the transmission could not have been through the placental circulation; (2) though the child had suffered from gastro-enteric disorder, this certainly was not typhoid fever, and therefore the agglutinating substance was not manufactured in the child itself, for (*a*) blood taken on two occasions from a splenic puncture proved sterile; (*b*) the stools cultivated on Elssner's medium did not produce Eberth's bacillus; (*c*) the symptoms did not point to enterica; (*d*) the serum reaction disappeared from the child's blood four days after taking it from the breast and feeding it on sterilised cow's milk (which caused vomiting and diarrhœa), and reappeared strongly four days after giving it the breast again, which is what one would expect if the reaction were passive. (3) The mother's milk gave the reaction strongly. The following example is typical of the relative agglutinating power of the mother's and child's fluids, which were frequently tested: (*a*) Mother, serum 1:600, milk 1:400, urine 1:10; (*b*) child, serum 1:40, urine 0. Such transmission has never been observed before in man, and experimentally only in one animal, the mouse. It is thus a very exceptional case, but may be explained as follows: (1) The mother had a very severe attack, the serum reaction being sometimes greater than 1:1000, and the milk as high as 1:600; (2) the child had previously had gastro-enteric troubles from improper food. The coexistence of these two factors, the latter acting by facilitating the absorption of the agglutinating substance contained in such large quantities in the mother's milk, is probably necessary for transmission to take place. In this connection Achard and Bensaude have shown that the agglutinating substance may be absorbed by all mucous cavities when introduced into them, provided that such introduction produces lesions. If, however, the mucosa remains healthy it is not absorbed.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(78) Gastric Secretion.

Prevost (*Rev. Méd. de la Suisse Rom.*, October 20th, 1897) gives a summary of the researches on the digestive functions of the stomach carried out during the last few years in the laboratory of the Imperial Institute of Experimental Medicine of St. Petersburg, under the direction of Pawlow and Nencki. Heidenhain's method of isolating a portion of the cardiac end of the stomach, and observing its secretion through a fistula, has been modified by Pawlow so as to preserve the vagus nerve supply to the isolated portion. In some dogs œsophagotomy was performed as well, so that "fictitious" meals could be given, the food taken in at the mouth passing out at the œsophageal opening. (1) Gastric juice begins to be secreted five to six minutes after the commencement of a fictitious meal, is fairly abundant in quantity, and of very great digestive power. It lasts four to five hours, and then gradually disappears, its digestive power becoming *pari passu* weaker. (2) The influence of food on the pharyngeal mucous membrane is psychic, not mechanical, since the richness of the gastric secretion varies with the kind of food introduced by the mouth, leather, etc., producing no secretion. (3) For a fictitious meal to cause a really active secretion the fibres of the vagus must be intact, as is proved by comparing the results in dogs operated on by Heidenhain's original method and by Pawlow's modification of it. (4) The necessity of a psychic stimulus is proved by introducing certain foods through the gastric fistula without the animal's knowledge, when they remain undigested unless a psychic influence is brought to bear (Ganotzki, Lobassoff, and others). (5) According to Lobassoff foods can be divided into (*a*) those which for their digestion require the psychic influence of the appetite (boiled white of egg, bread, starch), and (*b*) those which can cause secretion of gastric juice without it (meat, gelatine, milk, peptone, Liebig's extract). Secretion, however, in the latter case occurs later, lasts longer, is less in quantity, and of a lower acidity and activity than the psychic juice. (6) Fat introduced into the stomach always diminishes the secretion of gastric juice both in quantity and quality. This is not due to a local action, as it is observed also in the isolated portion, and is therefore probably caused by inhibitory fibres in the gastric nerves. (7) Gastric juice is not of uniform composition in the same animal; each kind of food requires a special kind of secretion, differing in the length of its latent period, in quantity, acidity, activity, etc. Thus there is a special secretion for meat, for milk, and for bread, the mucosa adapting itself to the food which happens to be present (Khigine). (8) The whole process of secretion is reflex from beginning to end. (9) Most of the secretory fibres reach the glands by the vagus. However, secretion of a juice containing little pepsin is possible after the subdiaphragmatic section of the vagus; thus there must be two sorts of juice: (*a*) pneumogastric; (*b*) without the pneumogastric (Turgens). Stimulation of the peripheral end of the subvagus produces a secretion of gastric juice *plus* mucus. Hence the vagus contains fibres for the mucous as well as for the gastric juice glands (Ouchakoff). Atropine prevents this secretion. Of the above facts perhaps the most important is the great part that psychic influences take in digestion.

(79) The Pathogenesis of Chronic Nephritis.

Senator (*Berl. klin. Woch.*, September 10th, 1897) includes under this head an insidious inflammation of the kidneys, of which the cause lies in some faulty state of the blood, and which would eventually end in destruction of the renal parenchyma with formation of connective tissue. The kidneys, more than any other organ, suffer from changes in the circulation, and especially from changes in the blood itself. The vessels of the Malphigian tuft and the capsule are particularly exposed to the action of any poison in the blood. The epithelium of the renal tubes is supsupplied supplied by the same blood as the tuft, only in a more concentrated form. Semmola thought that the changed condition of the blood lay in an alteration of the blood albumen, and that this latter was due to a disturbed function of the skin, but it is not proved that the change in the albumen is primary. The starting itself of the process and the share of the individual tissues in the disease vary according to the causative irritant, and the duration and intensity of its action. If it is slight and fleeting the parenchyma is affected, but with a severe irritant all the tissues may be affected, even if not in equal degree. What part of the parenchyma is involved depends also on the character of the irritant. It is difficult to explain why it is that when the cause has ceased to act, the disease still proceeds as in chronic following upon acute nephritis. Not only can no microbes or toxins be found in the urine, but the urine itself possesses a diminishes urotoxic coefficient. In some insidious forms of nephritis the question arises as to whether the parenchyma or the interstitial tissue is primarily affected. In some cases of acute nephitis changes in the interstitial tissue are present in a very early stage. The author thinks that the changes in the different tissues often occur simultaneously. Arterio-sclerosis in the kidney may be the result of chronic inflammation, or it may be primary or may arise coincidently with the inflammation. Senator then summarises his conclusions: (1) Chronic nephritis is usually due to a faulty state of the blood. (2) It may arise from acute nephritis and own the same cause; it may end in a secondary granular atrophy. (3) There is a primary granular atrophy or chronic interstitial nephritis. The change here may perhaps occur primarily in the interstitial tissue. (4) There is a contracting nephritis, due to a primary arterio-sclerosis. (5) Closely allied to the latter is a contracted kidney, due to a deficient blood supply. The typical example of this is when the disease is due to a narrowing and aplasia of the renal arteries, whether acquired or congenital.

(80) Difficulties of the Bacteriological Diagnosis of Diphtheria.

Spronck (*Sem. Méd.*, September 20th, 1897) summarises the literature relating to the distinction between true and false diphtheria bacilli. He concludes that: (1) A macroscopic and microscopic examination of the colonies developed on serum are insufficient for a certain diagnosis. (2) Inoculation of an animal is indispensable in all cases of diphtheria, unless severe or during an epidemic. (3) De Martini's criterion that true diphtheria bacilli, whether virulent or so attenuated as to be harmless, will not grow in antidiphtheritic serum has been proved to be wrong by C. Fraenkel and the author. The latter has found that when the hypodermic injection of 2 c.cm. of a recent broth culture does not kill a guinea-pig weighing about 300 g., but causes a more or less marked local œdema, in the great majority of cases one has to do with the pseudo-diphtheria bacillus. To make certain, however, another guinea-pig must be injected with antidiphtheritic serum. Then if it be injected with 2 c.cm. of the broth culture, and no local œdema occurs, it is an attenuated true B. diphtheriæ; if local œdema is still produced, a pseudo-diphtheria bacillus. The truth of this test invented by Spronck has been confirmed by C. Fraenkel. Such attenuated true B. diphtheriæ are common except during epidemics. (4) As regards the short variety of bacillus, it is possible that some may be true B. diphtheriæ. Still the author has never met with a single example of a slightly pathogenic short bacillus which turned out to be so under the antidiphtheria serum test. As short bacilli are of daily occurrence, that they should be diphtheritic must be therefore very rare. (5) Diphtheria is never produced by non-virulent bacilli, such as are commonly found in many mouths. These saphrophytes, which may be long or short or of medium length, and resemble exactly the B. diphtheriæ morphologically, belong to several varieties of bacilli quite distinct from Loeffler's.

SURGERY.

(81) Extraction of a Bullet from the Brain with the Help of the Roentgen Rays.

Braatz (*Centralbl. f. Chir.*, No. 1, 1898) publishes a case of successful removal of a bullet from the brain after an in-

terval of two years from the date of injury. The bullet, which had entered on the right side of the head, was discovered by means of the Roentgen rays near the base of the cranium on the left side. Without the aid of the rays, it would have been impossible, the author points out, to localise the foreign body. The patient at the age of 16 years, was in November, 1895, struck in the right temporal region by a revolver bullet of small calibre, which passed into the cranial cavity. The immediate symptoms, which were torpor, impairment of speech, and signs of paralysis of the facial and hypoglossal nerves, disappeared in the course of a few days, but after an interval of good health lasting for over six months, the patient began to complain of headache on the left side, which soon became very intense and almost intolerable. On examination with the Roentgen rays, the plate having been placed beyond the left side of the head, the position of the foreign body was indicated by an indistinct shadow at the level of the zygomatic arch and a little in front of the external ear. Above this was a crescent-shaped shadow more clearly defined, which indicated, it was thought, the point on the inner surface of the cranial vault where the bullet had struck and rebounded. Guided by the results of this examination, the author made an attempt to remove the bullet by trephining in the left temporal region, but without success, although a large opening was made in the bone, and the dura was incised and raised from the surface of the brain. It was found necessary to operate in haste, and to remove the patient to bed as quickly as possible, as the breathing became very seriously affected by the anæsthetic. The headache then ceased, but after an interval of a fortnight was renewed with the same intensity. On November 27th of last year, the presence of the bullet in the region of the operation wound having again been made out by the Roentgen rays, the author made a second attempt to extract the foreign body. The old wound having been opened up, and the surface of the brain exposed, a small hard body could be felt on exploring the brain with a blunted needle. This body was struck after the needle had been passed inwards and downwards along an extent of about two inches from the margin of the opening made in the temporal bone, and was situated near the foramen rotundum. The brain tissue was then divided along the track of the needle by a blunt knife, and finally the foreign body, which proved to be a much distorted mass of lead weighing about 41 gr., was removed by means of small artery forceps. The patient made a rapid recovery, and nine days after the date of operation was presented at a meeting of the Society of Medical Science held at Königsberg. Braatz's paper gives many interesting details of the application under many difficulties of the Roentgen rays in this case, and of the technical devices by which these difficulties were overcome.

(82) Genu Recurvatum.

Gerardt Marchant (*Rev. d'Orthopédie*, No. 1, 1898) publishes a rare case of acquired genu recurvatum. The patient, a lad aged 17, had been treated when 5 years old for an abscess in the right thigh. After this had been opened, there was during two years a continuous discharge from two openings which, when finally closed, were replaced each by a permanent scar, one superficial and mobile, on the front of the thigh, the other depressed and fixed to bone, on the outer surface. The deformity, which developed slowly after the complete healing of the abscess, was characterised by marked hyperextension of the right leg, which formed with the thigh a retiring angle of 160°. When the patient was recumbent on his back, the only portion of the right lower limb which touched the couch was the popliteal region. The patella was elevated far above the knee, and fixed in front of the thigh. The muscles of the thigh were much wasted. The leg was fixed, and the affected limb was shorter than its fellow by a little more than 2 inches. On careful examination of the thigh, the author made out a stiff and tense cord, evidently formed by the lower half of the quadriceps muscle stretched from the middle of the thigh to the patella. It was assumed that the previous suppurative affection—probably of osteomyelitic origin—had resulted in abnormal adhesion of the extensor muscles to the front of the femur, and that the portion of the quadriceps intervening between two fixed parts, namely, its insertion below and its adhesion to the bone above, had been prevented from keeping pace with the femur in the vertical growth of the limb; and had thus produced slow and continuous hyperextension. It was decided therefore to separate the adherent portion of muscle from the bone, and thus to overcome the hyperextension, and to re-establish the normal relations of the articular surfaces of the knee. An operation which consisted in subcutaneous detachment of the quadriceps from the femur, and in division of the tense cord formed by the lower part of the muscle, was followed after a time by satisfactory results. The limb, it is stated, was restored to the normal position, and almost to the length of the sound limb, and there was a fair though not complete range of the movements of flexion and extension at the knee.

(83) Operative Treatment of Congenital Umbilical Hernia in the Newborn.

K. Hedman (*Finska Läkaresällsk. Handlingar*, December, 1897) has operated upon a case of congenital umbilical hernia in a newborn infant. The hernia was of the size of the little finger, and contained liver and small intestine, which could be seen through the transparent sac wall. Attempts at taxis proved that the abdominal cavity could contain the herniated organs. The little patient, who weighed 3,600 g., was put under chloroform, and a needle with a silk ligature was passed through the skin elevation, and the silk was gradually tightened as the contents were returned to the abdomen. The umbilical vessels in the sac wall were separately ligatured. The hernial pouch was then cut off, and the wound closed with silk sutures. The operation, which lasted an hour and a-half, was successful, but was followed by the development of a bilateral inguinal hernia.

MIDWIFERY AND DISEASES OF WOMEN.

(84) Salivation due to Retroflexion of Gravid Uterus.

Audebert (*La Gynécologie*, December 15th, 1897) reports a case where the patient was a secundipara; there had been septic symptoms after her first labour. Hypogastric pain continued till she again became pregnant, in November, 1895. Early in the following December the patient noticed that her mouth was full of saliva, yet she was not troubled with nausea. This symptom grew worse and worse, and dyspepsia and dysuria set in. There were only two fits of vomiting, quite accidental, all this time. In February, 1896, in the middle of the third month, the uterus could not be detected above the pubes, and the anterior lip of the softened cervix touched the pubes. Behind the cervix a soft mass continuous with it filled the pelvic cavity. Attempts at reduction gave great pain and the uterus remained fixed. But a day or two later the patient was placed in the genu-pectoral position; then the gravid organ was easily reduced. By means of a pad in Douglas's pouch the uterus was retained in its normal position. Immediately after reduction the salivation rapidly diminished, falling from 810 g. on the day before to 160 g. next day, ceasing entirely at the end of three days. The pregnancy thenceforward proceeded normally.

(85) Missed Abortion.

König (*Vratch*, No. 24, 1897) reports a clinical case of fœtal retention or missed abortion, the English term being introduced. The patient was aged 33; she had gone through six normal deliveries (the last three years ago) and one miscarriage. The abnormal pregnancy continued for eleven months. During the fifth and six months there was discharge of blood. This returned in the course of the last three months. The general health was good. The uterus lay four fingers' breadth above the pelvis, and did not contract during exploration; the vaginal portion of the cervix remained firm. The os externum, however, was patulous, admitting the forefinger, by which a spongy mass could be detected. Ergotine and hydrastis being given, the patient on the next day discharged the ovum, which measured 4⅜ by 2¼ inches. It exhibited numerous hæmorrhagic foci, but the original cause could not be ascertained. König also writes of a woman, aged 42, who sustained severe

mental shock at the sixth month. Uterine pains set in and the movements of the fœtus ceased. Three months later it was expelled; it had lain dead in the uterus for all that time without causing any disturbance. König further reports twenty-seven cases published since 1835, no fewer than 10 having been observed in Russia. The majority of patients were multiparæ aged between 30 and 40; all the primiparæ were elderly. In 29 per cent. the nine months of pregnancy were exceeded before expulsion of the ovum. In only 2 cases is it related that the placenta continued to grow after the death of the fœtus.

(86) Origin of Gelatiniform Cysts of the Placenta.

DELORE (*L'Obstét.*, ii, No. 5, p. 422, September 15th, 1897), in connection with a research on the maternal circulation in the placenta, advances a new explanation of the mode of origin of gelatiniform cysts on the fœtal surface of the placenta. He believes that the jelly of Wharton exists not only in the umbilical cord, but also in the placenta, and especially in the chorio-allantoidian layer. Retention of this jelly by such an accidental obliteration as happens in sebaceous cysts leads to the formation of the gelatiniform placental cyst. If such a cyst be incised it can be seen that it is an accidental cavity produced by a glueing together of the villi by fibrin and a separation of the chorionic membrane.

(87) Trace of Gaertner's Duct in Adult.

BURCKHARDT (*Monats. f. Geburtsh. u. Gynäk.*, June, 1897) examined a uterus removed for obstinate endometritis. The patient was 41, and had borne three children; the last was 9 years of age. A distinct cystic body was found in the wall of the cervix somewhat anteriorly. It measured 14 mm., or just over half an inch in length and 7 mm. in breadth, and contained an albuminous fluid. It was lined with a perfect layer of cubical epithelium, which had no connection with the histologically different epithelial layer of the cervical mucous membrane. From its position and structure this cystic structure was undoubtedly a relic of Gärtner's duct.

(88) Rise of Temperature in Childbed.

BUMM, of Basel (*Centralb. f. Gynäk.*, No. 45, 1897) reports that although a new building and perfected antiseptic precautions have been at the disposal of the patients in the Basel University maternity, the results have not come up to expectation. Bad sepsis has not been observed, but high temperatures were noted in 170 out of 750 labours. He tabulates them thus: 27, or 16 per cent., of the patients were feverish through diseases complicating labour—phthisis, pneumonia, etc.; 95, or 55 per cent., suffered from direct infection of the genito-urinary tract or breast—namely, 22 (13 per cent.), through streptococcus infection, 1 through colon bacillus infection, 11 (7 per cent.) through gonorrhœa, 58 (or 35 per cent.) through putrid intoxication, and 3 (or 0.4 per per cent.) through phlegmonous mastitis. There remained 48 (or 29 per cent.) where no cause of infection could be accurately determined. Bumm dwells on the small percentage of infections from micro-organisms, and the mild and purely local character of the symptoms when such infection did occur. In 58 (or 35 per cent.) of the cases it was clear that retention of secretion in the uterus, wherever that secretion was infected, accounted for the rise of temperature.

(89) Fatal Puerperal Sepsis from Elm Tent.

CULLEN (*Johns Hopkins Hosp. Reports*, vol. vi, 1897) writes of a woman whose medical attendant deemed it necessary to produce abortion at the fourth month. A slippery-elm tent was inserted into the uterine cavity, a few hours later the patient fainted. Great abdominal pain and a little uterine hæmorrhage followed. On the fourth day great pain and flooding occurred at stool, possibly the fœtus was then passed. A rigor followed, with symptoms of peritonitis, and she died on the sixteenth day. Purulent peritonitis was discovered, and there were abscesses in the uterine wall. The uterine mucosa was everywhere covered with a fine, shaggy necrotic tissue. Lying free in the uterine cavity were six pieces of wood averaging 2⅔ inches in length, over ½ inch in breadth, and ⅔ inch in thickness. The lamellæ of the tent had separated, the continued uterine contraction forced the edges of the tent into the substance of the uterus, and it is little wonder, Cullen remarks, that sepsis followed. Had the cervical canal been dilated the pieces could have been removed with ease. The case occurred several years ago, when the operative technique was not so perfect as at present. The uterus was examined after it had lain for long in spirit.

THERAPEUTICS.

(90) Treatment of Lupus by Concentrated Light.

N. R. FINSEN, of Copenhagen (*Sem. Méd.*, 1897, No. 59), who some time ago published an account of the red-light treatment of variola, has now utilised the light rays, which he found so injurious in small-pox, in the treatment of lupus vulgaris. The action of light as a disinfectant and bactericide has been recognised by many investigators, especially recently by A. Ransome in regard to tubercle bacilli. It is, therefore, very interesting to hear that Finsen, by means of a simple apparatus, has concentrated the rays—either sun rays or electric arc rays—on patches of lupus, and in most cases has obtained satisfactory results. R. L. Bowles has pointed out that the rays at the violet end of the spectrum—or "chemical rays," as they are termed—probably penetrate more deeply than do rays in other parts of the spectrum, and one should think that the almost translucent material of lupus granulations would be more suited to transmit them than ordinary skin. There seems nothing improbable in the view that the concentrated light rays, at least the "chemical" ones, actually reach the tubercle bacilli which cause the cutaneous affection, and gradually kill them if the lupus granulations be not too opaque. Finsen's paper is illustrated by some of the results he has obtained.

(91) Thyroid Treatment in Insanity.

GERVER (*Obozrenye Psychiatryick*, November, 1897) has tried the effect of Poehl's thyroidin in 10 cases of insanity. The patients included 3 cases of acute primary dementia, 3 cases of melancholia, 1 case of recurring mania, 1 case of delusional insanity, 1 case of organic lesion of the brain, and 1 case of epilepsy. To begin with, 2 grains of thyroidin were administered twice daily, and the dose gradually increased to 10 grains given three or four times a day. The treatment was continued for about six weeks, but in 1 case, that of organic cerebral lesion, it had to be discontinued earlier, as it caused too much gastro-intestinal disturbance. The result of the trial was disappointing. Only two of the patients benefited by the treatment, and even in them some doubt was felt whether the improvement was due to the thyroidin or whether it occurred in the natural course of the disease. The successful cases were 1 case of melancholia in a lady, aged 72, in whom the disease disappeared a year previously without any thyroidin treatment, and the case of delusional insanity in a middle-aged man, who stated that he felt the strong stimulant effect of the thyroidin. During the treatment some peculiar physiological effects of thyroidin were observed in all the patients. Their pulses were increased, and they all lost weight. The temperature, sleep, or appetite were unaffected. Salivation was observed in one case, and twitchings of the facial muscles in another.

(92) Milk Somatose containing Tannin.

SCHMIDT, of Schultz's Clinic (*Münch. med. Woch.*, November 23rd, 1897), says that even somatose, undoubtedly one of the best of artificial foods, is apt to produce diarrhœa when given in large doses. Somatose prepared from the casein of milk has advantages over that obtained from meat. It is more free from salts, but it causes diarrhœa when given in large doses even more readily than meat somatose. It has much the same taste as meat somatose and is not more unpleasant. The author adds 5 per cent. tannin to milk somatose in such a way as to form a chemical combination between the two, in order to get a preparation more suited to patients with impaired digestive organs. The proportion of tannin is such as to do away with the irritating effects likely to arise when somatose is given in large doses. This preparation of tannin somatose has been used in the author's clinic. It is readily soluble in water. Healthy individuals can take as much

as 50 g. in the day without ill effects. It is best given in one to two spoonful doses dissolved in hot water and added to some meat extract so as to make a broth. This form of somatose is best adapted to those with chronic affections of the digestive organs. In cases of chronic catarrhal enteritis the author has found it useful. In two cases of membranous enteritis and one of mucous colitis the stools became normal. In early tuberculous enteritis it is also useful. It exercises a slightly astringent action in mild tuberculous diarrhœa, but it is not usually of much service when a decidedly astringent agent is required as in acute intestinal catarrh. The author has used this form of somatose in fifteen cases of typhoid fever. With the exception of two cases in which it was vomited, it was well borne in doses of three teaspoonfuls in the day. In the diarrhœa of rickets it was also of service, especially when phosphoretted cod-liver oil was given as well. The author concludes that this tannin somatose is a non-irritating and slightly astringent food stuff useful in those with enfeebled or diseased digestive organs, and that its value in typhoid fever is not to be under-estimated.

(93) Treatment of Peripheral Neuritis by Alternating Currents.

Regnier (*Arch. d'Elect. Méd.*, September, 1897) records satisfactory results in nine cases of peripheral neuritis (four of which were due to lead, one to alcohol, and one to trauma) treated by alternating currents. A large indifferent electrode was placed on the back of the patient and a small active one moved along the course of the affected nerves and muscles, remaining two minutes on each. The current was obtained from the central station at Paris, and the author finds that, if good rheostats are employed, it is well borne by the patients; he thinks that the danger of such alternating currents may have been somewhat exaggerated. The effect of these currents upon the nerves of sensation is much less marked than that of faradic currents; an electromotive force of 10 to 12 volts could thus be used with them which would have been intolerable with faradism. The mechanical effect is described as being as energetic but less brutal than that of faradism; the redness of the skin is similar to that observed with faradism, but is not painful and only lasts ten or fifteen minutes. Regnier comes to the important conclusion that the action of alternating currents resembles, without being identical with, that of galvano-faradisation.

(94) Iron in Anæmia.

R. B. Duncan (*Intercolon. Med. Journ. of Australasia*, October 20th, 1897) has found that in the primary or essential anæmia of young girls the time when iron is given has a great deal to do with success in treatment. He uses the citrate of iron and ammonia in doses of 5 gr. to 10 gr. combined with 10 gr. to 15 gr. of bicarbonate of potash in half an ounce of water. This is given in half a small tumblerful of water twenty minutes before meals, as recommended by Fothergill. With no other combination did the writer get such immediate and beneficial results, although why the dilution of the remedy and its administration a considerable time before food should lead to these effects is a difficult matter to settle.

PATHOLOGY.

(95) A Simple Method of Distinguishing Typhoid from Colon Bacilli.

Kashida (*Centralbl. f. Bakter.*, 1897, Nos. 20 and 21) describes a simple means of differentiating these bacilli, based upon the fact that the colon bacillus when grown upon certain nutrient media leads first to a production of acid, and afterwards of ammonia, while the typhoid culture remains neutral in reaction. All that is required is a special medium, the preparation of which is thus described. To neutral bouillon 1½ per cent. agar is added, and the whole steamed till the agar is dissolved. If any change in reaction has occurred, this is corrected; the steaming is then repeated for an hour, and the agar bouillon filtered. To the filtrate are added 2 per cent. lactose, 1 per cent. urea, and 30 per cent. litmus tincture, and, after renewed sterilisation, the medium is ready for use. Some is poured into a plate, and cultivations of the colon and typhoid bacilli are made, one upon each half. After eighteen hours the colon culture and its neighbourhood are coloured red, while in thirty-six the red colour is much more marked, and occupies half the plate, the part which has been sown with typhoid bacilli remaining colourless. At the end of fifty-four hours, however, the colon culture and the medium surrounding it have again become blue, and have acquired an ammoniacal odour from the decomposition of the urea; if a rod dipped in HCl be brought into the neighbourhood, fumes of ammonium chloride result. The typhoid culture meanwhile has continued to grow without change of colour or development of ammonia. The difference is still obvious after four or five days, and can hence be readily applied to the differentiation of suspected colonies.

(96) Primary Carcinoma of the Bile Ducts.

P. Claisse (*Gaz. des Hôpitaux*, November 16th, 1897) records the case of a man, aged 73, who began to lose strength five months and became jaundiced two months before his death from asthenia. The gall bladder was not enlarged, but the liver was slightly tender though not increased in size. The commencement of the common hepatic duct was found at the necropsy to be obstructed by a firm growth, which was not papillomatous and had given rise to an annular stricture; microscopically it was a columnar-celled carcinoma, showing a transition to a sphenoidal-celled carcinoma. There were no other growths on the body. The bile ducts throughout the liver were dilated, but there was no fibrosis. Claisse has collected 50 other cases; in four-fifths of the cases the growth was near the termination of the common bile duct, and therefore gave rise to distension of the gall bladder. Now, in cholelithiasis, according to the law of Courvoisier and Terrier, the gall bladder is usually not dilated, so generally the diagnosis between carcinoma of the bile ducts and gall stone impaction can be made on the state of the gall bladder. In the rare event, as in this case, of the growth being above the entrance of the cystic duct, however, this criterion would fail, as the gall bladder would not be dilated.

(97) Pathology of Early Lesions in Congenital Syphilis.

Hochsinger (*Wien. med. Woch.*, Nos. 25, 26, 27, 1897) gives some new ideas on this subject. He first draws attention to the early visceral changes in the fœtus, consisting of diffuse cell infiltration of the liver, lungs, pancreas, and kidneys, the liver being most often and earliest affected. Similar diffuse infiltrations of the skin occur at a later stage in palmar and plantar psoriasis. These diffuse lesions differ from the later stages of hereditary syphilis, and also from acquired syphilis. Histological examination of the affected organs shows that the first change is in the smallest arterioles and veins and capillary twigs, and consists of a small cell infiltration of the perivascular sheaths and adventitia of the vessels, this infiltration subsequently extending to the connective tissue of the organ affected. In fœtal syphilis these diffuse perivascular inflammations always affect the glandular organs, the liver never being free. The same affection is found in the sweat glands in palmar and plantar psoriasis. Hochsinger then points out that the glands in fœtal life are the seats of active development and most abundant blood supply, the liver having a functionally active epithelium as early as the second month, the lungs, kidneys, and pancreas developing a little later. These seats of active development and vascularity are the ones affected by the syphilitic virus. With regard to epiphysitis, this occurs during the second half of intrauterine life, and is a less diffused process of inflammation because the active vascular changes are confined to the epiphysial region. Hochsinger finds that the sweat glands do not develop till the eighth or ninth month, and the subaceous glands a little earlier. This explains the later appearance of the cutaneous affections, plantar and palmar psoriasis and pemphigus, and also why cutaneous affections are absent *in utero*, the sweat glands, which are the chief seats of the syphilitic lesions, not yet being developed. The reason why the palms and soles are especially affected is, according to Hochsinger, due to the larger size, earlier development, and greater number of the glands, and also to the fact that they are situated in the pars reticularis of the skin instead of in the subcutaneous tissue, as in other parts of the skin.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(98) The Muscles of Respiration.

Rudolph Fick (*His: Archiv f. Anat. Physiol.*, Anat. Abth. Suppl., vol. 1897, pp. 43 79) publishes an original paper on the muscles of respiration. In the first part he refers to the results of other investigators, especially in relation to the intercostal muscles. The last part contains an account of his own investigations. In the observations of other authors the internal intercostal muscles were dissected, and their action determined by direct inspection. In those of Fick all the costal muscles were left intact. He first examined the auxiliary muscles of respiration in the neck, and proved that they were absolutely inactive in normal quiet respiration, and only came into action in isolated, extraordinary, deep, sighing respirations, the result of their action being to elevate the thorax *in toto*. Next the auxiliary muscles of respiration and the diaphragm were paralysed by severing their nerves in the neck, and the action of the abdominal muscles eliminated by dividing them. It was then found that the respirations continued in normal rhythmic manner, the difference between inspiration and expiration (apparently active) measured through a tracheal cannula being 60 mm. of water. These experiments, taken in connection with the geometrical deductions contained in the early part of the communication, proved that normal quiet inspiration is the effect of the contraction of the external intercostal and intercartilaginous muscles, and that expiration is effected by the internal intercostal muscles. Bergendal and Bergmann, of Stockholm, have arrived at the same results by similar experiments.

(99) Disturbances of Cardiac Rhythm in Gastric and Intestinal Disorders.

Tedeschi (*Rif. Med.*, May 7th and 8th, 1897) has studied this subject in 16 cases of gastric or intestinal disease. In 7 of these cases the patients were liable to attacks during which they complained of a sense of impending death, a failure of respiration, and a pain over the cardiac area. The patients were for the most part young or middle aged, and were in other respects well and of good family history. No disease of the heart, vessels, or lungs could be discovered. The attack usually came on for the first time in bed just on getting to sleep; sometimes it aroused the patient in the middle of the night. The attacks are usually followed by moderate polyuria. During the paroxysm the author was able in some cases to make out an increase in the transverse diameter of the cardiac area, indicating a transitory and acute dilatation of the heart. In order of gravity the cardiac disturbances met with were: (1) Arrhythmic vertigo of the heart, sudden, and transitory. (2) Confirmed arrhythmia, more serious and more lasting. (3) Arrhythmia, pseudo-anginal, paroxysmal. As to the cause, the author believes they are due to an autointoxication of gastric or intestinal origin, determined by defective motility of the stomach or intestine, perverted chemical action or diminished elimination of toxic products.

(100) Peculiar Attitude of the Body in Hanot's Hypertrophic Cirrhosis with Chronic Jaundice.

Sicard and Remlinger (*Rev. de Méd.*, September, 1897) observed in a man, aged 23, the subject of Hanot's hypertrophic cirrhosis with chronic jaundice of rapid development, a very peculiar attitude of the body. The right shoulder was lower than the left, the right upper limb was also depressed, and the tip of the right middle finger was 4 cm. below the corresponding point on the left side. The right side of the body as a whole was lower than the left, the right half of the pelvis and the right hip being depressed. The right gluteal fold was 2 cm. below that on the left. There was no spinal curvature, and no anatomical lesion to account for it, and it appeared to be purely functional. This alteration was noticed two months after the onset of hepatic symptoms, at a time when probably the liver was not much enlarged. It is possible that the attitude is due to the weight of the liver, but it has not been observed in cases of Hanot's cirrhosis where the vertical hepatic dulness in the nipple line was as much as 20 to 25 cm., whereas in this case it was only 13 cm. It did not seem probable that there were adhesions causing this change. The patient, who was entirely unconscious of this change in his figure, was able to correct it for a time, but it gradually returned. The alteration was very manifest in the erect posture, and became more marked on walking and less evident on sitting down. There seemed no doubt that the patient was suffering from Hanot's type of cirrhosis, the rapid development being due, perhaps, to his being in the warm climate of Tunis. The patient was sent for further observation to Paris.

(101) Septic and Puerperal Neuritis.

Hugo Kraus (*Wien. klin. Woch.*, 1897, No. 40) records a case of neuritis affecting mainly the legs, and depending apparently upon a gonorrhœal toxæmia. He adds notes which he has collected of a considerable number of other cases of multiple neuritis of septic origin. The seat of the disease appears to be very variable; only the forearms or the legs may be involved, or the whole of the limbs, individually or together. Sometimes the gluteal muscles may be affected, also the external ocular muscles and the parts supplied by the vagus. Psychical disturbance is very often present in addition. The intensity of the neuritis is equally variable; there may be in the same individual severe and, indeed, irreparable changes in one nerve side by side with slight and temporary implication of another. The prognosis is in general good, the sensory and motor disturbances disappearing in the course of weeks or months; permanent paralysis of certain of the affected muscles occurs in a few cases. Now and then, though very rarely, the process extends and leads to death. As regards incidence, the disease appears to be more frequent in middle life and in females. It seems that the septic process leads to neuritis only in patients who are predisposed to nervous affections. Krause considers also the etiology of puerperal neuritis on the basis of a large number of recorded cases. He shows that this cannot always be traced to the same cause; instances in which pregnancy and the puerperium ran a normal course must first of all be distinguished from those in which some complication was present. In a large proportion the nervous phenomena were associated with septic processes; in others the sacral nerves were actually compressed by pelvic exudations. In addition to the female generative tract the surface of the body and the lungs may also serve as points of entrance for the infective processes. The actual changes in the nerves are not associated with the presence of septic or infective micro-organisms, but are really toxic degenerations. There is usually an interval (in the author's case six weeks) between the primary onset of the disease and the appearance of the neuritis. The severity of the primary and secondary affections is often incongruous, both in extent and intensity.

(102) Difficulties in the Localisation of Cerebral Tumours.

L. Bruns (*Wien. klin. Rundschau*, 1897, No. 46) points out the ordinary differential diagnostic signs of cerebral tumours, and suggests means by which they may be supplemented. Thus, disturbances of equilibration characterise tumours both of the frontal lobe and the cerebellum, whence confusion between tumours in these two situations is often occasioned. In most cases, however, careful examination of the general and local symptoms will establish a diagnosis, these being often markedly different when the tumour is in the frontal lobe and the cerebellum. Homonymous hemianopsia, again, is of little value in the topical diagnosis of tumours. If, however, right homonymous hemianopsia is from the beginning associated with alexia and word blindness, a tumour in the white matter of the left occipital lobe can be inferred. The localising symptoms of tumours in the neighbourhood of the central convolutions, particularly in the frontal and parietal lobes, are often difficult to distinguish from those of the motor area itself. In such cases Bruns particularly recommends the method of percussion introduced by Macewen. He considers the anomalies of cranial percussion—tenderness, tympanites, and cracked-pot sound—of great importance in general

diagnosis when they are marked and extensive, for local when they are distinctly circumscribed. The local diagnosis is particularly facilitated when the conjectural seat of the brain symptoms agrees with the evidence from percussion. In the cases of difficult diagnosis between tumours of the motor area and its vicinity definitely circumscribed changes to percussion may lead to a conclusive diagnosis, and thus be even more important for localisation than the cerebral symptoms themselves. Markedly localised tenderness and tympanites are scarcely possible except when the tumour is at least in the neighbourhood of the cortex.

SURGERY.

(103) The Surgery of Chronic Peritonitis. Largeau (*Progrès Médical*, November 27th, 1897) advocates abdominal section for chronic peritonitis of the perihepatic, perigastric, pericæcal, pericystic, pelvic, and above all traumatic or post-operatives types. It often happens that the setting free of adherent structures, or the division of a band of organised lymph causes the immediate disappearance of intolerable gastric or gastro-intestinal disturbance and chronic obstruction. In chronic tuberculous peritonitis the case is different. Care must be taken that the disease is not assuming a temporarily acute form when the abdomen is opened. It is true that mere exploration has given good results after all forms, but Largeau admits that where there is ulceration and suppuration the prognosis is bad. In the ascitic and in the dry form of tuberculous peritonitis abdominal section is alike satisfactory. A small abdominal wound should be made at first, and the deeper tissues divided with great care, as intestine is often adherent, and the diseased peritoneum is not always easy to distinguish. The lower end of the incision should be brought low down in a female subject, as it is important to explore the internal genital organs; in fact, tuberculous appendages, often the primary seat of the whole mischief, may require removal. The main part of the operation is thorough drying of the exposed cavity with fine sponges or compresses. Not only Douglas's pouch must be so treated, but care must be taken to dry all diseased peritoneum lying under coils of intestine; hence the operation always takes some time to do properly. Only soft adhesions between viscera should be separated. Whilst this drying process is the essential feature, the surgeon must never fail to seek for the primary seat of disease. The chances are very great in a female subject that the Fallopian tubes are at fault, but in women, as in all male cases, the cæcum and appendix must be searched, and tuberculous disease of the omentum (very common as a secondary complication), or an ulcerating area beginning in the small or large intestine, looked out for. The last condition is the gravest; when detected, pus is generally present around the breach in the intestinal wall. This pus must be washed away; it is useless to attempt to close the intestine by suture, hence drainage is compulsory. Lastly, in the purely dry form of tuberculous peritonitis separation of adhesions often proves very satisfactory, as they are firm in this type, and give rise to obstruction. Washing out with chemical solutions or flushing of the peritoneum seems superfluous, and drainage is only needed when the intestine is ulcerated. It is very important to close the abdominal wound carefully.

(104) Enlarged and Displaced Liver Cured by Cholecystostomy.

Mauclaire (*Bull. de la Soc. Anat. de Paris*, November, 1897) writes of a patient of Le Dentu's, a stout woman subject to symptoms of gall-stone colic. Jaundice was not observed, but the fits of pain became intolerable. The liver descended to half-way between the hypochondrium and the iliac crest, but hepatic dulness extended well above the lower border of the ribs, and as the displaced anterior edge of the liver was very thick, it was clear that the liver was hypertrophied. The stools were well coloured. At the operation Le Dentu found the gall bladder greatly distended, but not adherent. A big calculus was worked out of a kind of pouch, close to the orifice of the duct, by careful manipulation. The edges of the wound in the gall bladder were stitched to the abdominal incision. The bile came away for a fortnight, and the pain disappeared. The patient's bed was now arranged so that her head lay lower than her pelvis, and the orifice of the fistula well compressed. In three days it had closed. Six weeks after the operation, after the patient had been up and about for three weeks, the abdomen was examined. The liver had reduced itself, and no longer came down below the false ribs. On careful percussion it was found that hepatic dulness was strictly limited to the normal area, so that both the displacement and hypertrophy had disappeared.

(105) Surgery of Pancreatic Cysts.

Lauwers of Courtrai (*Revue de Gynéc. et de Chir. Abdom-*, November and December, 1897) operated in June, 1897, on a woman aged 44. She had been in good health till the preceding April, when she suffered from dull, continuous, and increasing epigastric pain. In May Lauwers detected a large oval tumour distending the abdomen. It fluctuated and could be moved laterally. It filled the epigastrium and part of the hypochrondria, came downwards a little below the umbilicus and inclined more to the left than to the right. Stomach resonance was heard over the upper part of its anterior aspect. For this reason aspiration was not undertaken. The urine was free from sugar and albumen. On opening the abdomen the stomach was found stretched over its anterior surface, the lower segment being transversely bisected by the colon; but the cyst extended at the same time so far upwards as to pass well above the lesser curvature of the stomach. This upper part was chosen for puncture, and about five pints of a transparent, yellowish, greasy fluid, containing shreds of fibrin were removed. Lauwers explored the cyst from the inside. He could feel the vertebral column through the posterior walls, but could not actually define the pancreas and no calculi were detected. The wall of the cyst was so closely fused with the posterior aspect of the stomach that the operator did not attempt enucleation. The edges of the incision in the cyst were sewn to the peritoneal layer of the abdominal incision at its lower angle, and the cavity of the cyst packed with iodoform gauze. For a week there was such free discharge from the cyst that the dressings had to be changed every day, and at the end of the week a drainage tube was substituted for the gauze. During the third week, as the discharge threatened to continue indefinitely, Lauwers injected 10 g. of pure tincture of iodine. This caused great pain, relieved by morphine. The discharge rapidly diminished; 5 g. of the tincture were injected a week later. Six weeks after the operation the secretion had ceased and the fistula was completely closed. In October the patient was in perfect health, free from abdominal pain, and digestion was easy. The abdomen was flat. The fluid from the cyst was examined twice, but as has happened in other cases of undoubted pancreatic cyst, no sugar, bile, nor amylolytic material was detected on analysis.

MIDWIFERY AND DISEASES OF WOMEN.

(106) Hernia of the Abdominal Wound after Operation.

Kouwer (*Centralbl. f. Gynäk.*, No. 49, 1897) discussed this question at a recent meeting of the Dutch Obstetrical and Gynæcological Association. He insists on dividing the parietes accurately along the linea alba, carefully avoiding the sheaths of the recti, which, he says, must not be opened. The sheaths after the operation are united with a continuous silk suture; the integuments are closed separately in two layers. Kouwer's aim is to avoid constriction of muscular tissue, which would lead to its atrophy and consequent weakening of the scar. He also likes to ensure the accurate union of each layer along the line of its sutured wound, and to avoid the adhesion of muscle to sheath or sheath to skin. If there be any objection to leaving sutures in the tissues, Kouwer recommends interrupted figure-of-8 sutures, the deeper loop holding the aponeurosis together, the more superficial closing the skin wound. In order to restore tone to the abdominal muscles he recommends massage and faradisation. There was much discussion on the method recommended by Kouwer. Treub believed in a single set of interrupted sutures. He exhibited a preparation of the parts around an abdominal wound closed after this method. The patient re-

covered, but died later from return of the malignant disease for which the operation had been performed. Union of layer to layer was perfect, and there were no signs of atrophy of the muscle or other tissues from pressure.

(107) Crossbirths and Cæsarean Section.

Ten-Cate-Hoedemaker (*Centralbl. f. Gynäk.*, No. 49, 1897) read notes before a Dutch medical society in June, 1897, on seven successful Cæsarean sections. Two were performed for neglected crossbirth cases. Mendes de Leon objected to abdominal operations for such cases. Ten-Cate-Hoedemaker and other experienced surgeons could doubtless save a majority of their patients, but the obstetrician and practitioner would be unfavourably influenced by his advice, as they might probably save just as many neglected crossbirths by purely obstetrical manœuvres. Ten-Cate-Hoedemaker alleged that there was great danger of rupture of the uterus in these cases, and the risk was actually increased if the obstetrician or practitioner attempted embryotomy. On the other hand, Stratz and Kouwer had performed these obstetric operations without ever causing rupture of the uterus. Professor Treub, the president, said that he agreed with the opposition, and considered that the meeting should express condemnation of Cæserean section in neglected crossbirths.

(108) Phenomena Attributed to Menstruation.

Laurent (*Chronique Médicale*, December 15th, 1897) does not entirely disbelieve in certain ideas, popular amongst women in different countries, relating to menstruation. In the sugar refineries in the North of France the female hands are actually kept out of the premises when the sugar is being boiled, and also when it is undergoing the process of cooling. The objection to women is that if one or more were menstruating the sugar would be blackened. A similar notion prevails in Cochin China in respect to the preparation of opium. Another doctrine, also common to Europe and Asia, is that the hands of a menstruating woman break objects of strength and toughness. Especially is this notion entertained in relation to stringed instruments. A performer on the double-bass at a theatre in Paris declared that if his wife touched one cord of the instrument during her "period" it snapped at once. Two young women, excellent violinists, informed Laurent that they never played when menstruating, as the snapping of cords interfered greatly with the performance. One of these ladies admitted that she was extremely nervous and irritable at the period. Several much more credible phenomena have been reported, and clearly come under the head of neuroses. Young girls sometimes acquire an idea that their clothes stick to them at the period. Such a person gets nervous during the catamenia, and trying to pull off a tight glove fails, and then believes that it sticks to her. Since she thinks that the same must be the case with her clothes, she loses the power as well as the will to pull them off. Laurent observed this in two sisters. Their body linen did not stick to the skin through perspiration or any visible cause, but it could not be taken off during a "period" till a servant pushed her hand between it and the skin.

(109) Fleshy Mole in Twin Pregnancy.

Voigt (*Prager med. Woch.*, No. 23, 1897) reports that a woman of 30, who had been four times pregnant, was troubled during pregnancy with nervous cough and excitability with emaciation. Abortion occurred at the sixth month, and was preceded by rigors and a temperature of 104°. The placenta, reddish-brown in colour, and the membranes came away, and the uterine cavity seemed to be empty. The uterus underwent apparently normal evolution, but there was still fever. Four days later the patient sat upright, hæmorrhage followed, and a pale red fœtid fleshy mole, as big as a fist, was discharged. Its surface was villous. The temperature fell at once. The cough and also some distinct enlargement of the spleen noted during the abortion subsided, but gradually.

(110) Cystocele: Plastic Restoration of Vaginal Columns.

Marsi (*La Gynécologie*, October 15th, 1897) insists that cystoceles should be repaired by operation as soon as possible, else prolapse of the uterus, much harder to manage, will speedily follow the prolapse of the vagina. Two flaps should be dissected up laterally from a longitudinal median incision. Then, being drawn back, their bases are sutured as well as their free edges. Thus there is no loss of substance, and the vaginal flaps adhere and form a firm anterior vaginal column which supports the bladder well.

THERAPEUTICS.

(111) Action of Antidiphtheria Serum on Diphtheritic Albuminuria.

Spronck (*Sem. Méd.*, November 24th, 1897) has tried the effect of antidiphtheria serum injected hypodermically or intravenously on albuminuria produced experimentally in rabbits by the injection of diphtheria toxin. From his experiments he draws the following conclusions: (1) The hypodermic injection of 10 c.cm. of antidiphtheria serum or of non-immunised horse's serum (without the addition of antiseptics) produces in rabbits weighing 2 to 3 kilos. a very slight albuminuria, which lasts only 24 hours, and is due simply to a filtering through of some of the injected serum. (2) The passage of this albumin is rather more marked, and lasts longer when the rabbit is suffering from, or is just recovering from, diphtheritic albuminuria. (3) Antidiphtheria serum does not in any way aggravate a pre-existing diphtheritic albuminuria in the rabbit, even when relatively large doses are injected hypodermically. (4) On the contrary, it has a favourable action if injected at the beginning or not later than 24 to 48 hours after its appearance. (5) Antidiphtheria serum is incapable of removing a diphtheritic albuminuria, but it may modify its course favourably both in intensity and duration. (6) It is too early to transfer these conclusions from animals to man; still, they bear a striking analogy to those formulated by Sevestre and Martin from clinical observation. One important fact taught by the author's experiments is that good from injecting antitoxin can result only in recently established diphtheritic albuminuria, and this probably accounts for the clinical observation that the action of antidiphtheria serum on diphtheritic albuminuria is inconstant. (7) To explain this favourable action one must suppose that the antitoxic substance, having a special affinity for the toxin, neutralises a part of the latter, which has been assimilated by the renal cells.

(112) Physiological Action of Massage on Glandular Secretion.

Colombo (*Supplemento al Policlin.*, October 30th, 1897), experimenting on dogs with gastric and biliary fistulæ, has estimated the effect of massage on the amount and quality of the gastric juice, bile, and renal secretion. He found that as regards the gastric juice the quantity which came through the fistula in the space of two hours was more than double that which flowed without massage. Massage for five minutes made no difference, but when continued for fifteen minutes the secretion reached its maximum; if continued longer the amount remained about the same, but the quality was poorer. As regards the bile the best results were obtained by ten minutes' percussion followed by ten minutes' friction and kneading. Ten minutes' abdominal massage also increased the amount of urine; slight traces of albumen were observed in the first few minutes after massage, but this was only transitory. In each case the watery part of the secretion was increased out of proportion to the specific elements. This suggests that the observed increase is largely due to a greater flow of blood and better filtration in the various organs concerned.

(113) Urethral Injections.

Vadja (*Wien. med. Woch.*, 23 to 28, 1897), by means of examination of many cases with the endoscope, and by employing coloured fluids for injection, has come to the following conclusions: Ordinary injections nearly always reach the membranous and prostatic urethra, and the injected fluid gets into the folds of the mucous membrane. The resistance offered by the muscles of the urethra can be overcome by a pressure of 1½ metres of water. The pressure of the injection should be gradually increased to a maximum point occurring just before tenesmus occurs. This point is usually preceded by a desire to micturate, due to commencing distension of the membranous part. If tenesmus occurs the injections must be stopped. The syringe should not have a friction

resistance of more than 40 to 50 c.cm. of water, and should work uniformly. Each syringe should be tested previously. With regard to the quantity of fluid to inject, 12 c.cm. is enough to reach the prostatic part of the urethra. Vadja is of opinion that careful injections made as above, with a good syringe working evenly with little frictional resistance, are as good as irrigations.

(114) Chelidonium in Cancer.

Finkelstein (*Vratch*, No. 34, 1897), who has tried extract of chelidonium majus in subcutaneous injections in 4 cases of inoperable cancer, does not think it possesses any specific action upon this disease; neither shrivelling and diminution of the growth, nor subsidence of the enlarged glands were observed in any of the cases. The only change which took place under the influence of the injection was softening of the growth and necrosis of the skin at the places of injection. No harmful action upon the heart was noticed.

(115) The Therapeutic Value of Injections of Renal Juice.

Mois (*La Clinica Moderna*, December 1st, 1897) has been experimenting with rabbits to watch the effect of injections of renal juice, first in healthy animals, and then in those upon whom unilateral nephrectomy had been performed. Five cubic centimetres of a glycerine extract of kidney was injected, and appeared to have little or no effect either in healthy or in nephrectomised rabbits, but if the quantity was increased beyond 5 c.cm., albuminuria, occasional hæmoglobinuria, and irregular productions of urea frequently appeared. Much the same results followed correspondingly larger injections of watery extract of kidney. The appearance of bad results with small doses of the glycerine extract is probably due to the glycerine, and not to the kidney juice. The author believes that, in doses which would be safe to use, kidney extract is of no value therapeutically.

PATHOLOGY.

(116) "Fibrinous" Bronchitis.

Graudy (*Centralbl. f. allgem. Path.* viii, 13) describes the histological appearances in the bronchi of a patient suffering from this disease who died of cardiac failure; he gives also a careful account of the microscopical characters of the casts. These had always been held to be fibrinous till Neelsen examined them in 1 case and pronounced them to consist of mucus, a view which had hitherto met with no support. Graudy, however, found the casts to consist apparently of fibres enclosing masses of leucocytes and large, swollen, round epithelial cells. Weigert's fibrin stain gave no coloration, thionin a faint pink; Curschmann's spirals were absent, this being the sole point of difference from Neelsen's results. The casts were thus composed of mucus and not of fibrin. With regard to the bronchi, the epithelium was intact except in a few spots; Weigert pointed out many years ago that fibrinous exudates only arose where the epithelium had been shed over large areas. In the case under notice, the goblet cells were unusually numerous, and the glands had undergone mucoid degeneration, their ducts being filled with mucus. The origin of the casts was thus obvious; their central portions had undergone some chemical change resulting in the formation of a substance striking a brown instead of a pink colour with thionin. This change no doubt is the cause of sticky and "fibrinous" character of the exudation. The whole process is thus analogous to pseudomembranous colitis, and is probably a further stage of that which leads to the formation of Curschmann's spirals. The disease is chronic, and as a rule not fatal. The author does not wish it to be assumed that the results obtained by Neelsen and himself explain all bronchial casts; he regards it as possible that some may yet prove to be fibrinous in nature.

(117) An Adenomyoma undergoing Sarcomatous and Carcinomatous Degeneration.

Ivanoff (*Vratch*, No. 49 and 50, 1897) made a careful examination of a rare form of uterine tumour occurring in a widow, aged 43. The patient had had no children or miscarriages. She first applied for medical advice in 1891 on account of pains in the abdomen, profuse hæmorrhage, and a yellow, malodorous discharge from the vagina. The first examination revealed nothing, but after some months it was found that the uterus became enlarged and tender, and that a cauliflower-like mass appeared in the posterior fornix. The case was diagnosed as one of carcinoma of the body of the uterus making its way into the posterior fornix through the vaginal wall, and not by way of the cervical canal, as is usually the case. The mass was scraped away with a sharp spoon, and scrapings examined microscopically confirmed the diagnosis of carcinoma. The patient underwent a similar operation in six months' time, but the disease kept spreading, and she died in March, 1897. The *post-mortem* examination showed a tumour in the posterior wall of the uterus of the size of a child's head, and invading the neighbouring organs. There were secondary tumours in the peritoneum, pleura, and lungs, and the mesenteric and mediastinal glands were enlarged. A careful microscopic investigation of the different parts of the tumour proved the presence of epithelial, muscular, fibrous, sarcomatous, and carcinomatous elements. The greater part of the tumour was firm, consisting of sarcomatous and myomatous tissue with small cyst-like cavities lined with cubical epithelium, similar to that covering the ovary. The lower part of the growth where it was spreading into the vagina and where it formed the cauliflower-like mass, could not be satisfactorily examined, as the part was gangrenous and would not stain. A more careful examination of the scrapings removed during life was made instead. They showed spaces lined with columnar epithelium (some containing cell nests) and large epithelial cells with large round or ovoid nuclei scattered singly or in groups through the connective tissue, that is, all the characters of carcinoma. The secondary tumours in the peritoneum, pleura, and lungs were sarcomatous. The author expresses the view that the tumour was originally an adeno-myoma, which under some irritation became malignant, the myoma undergoing sarcomatous change, while the epithelium in the adenomatous portion was gradually becoming carcinomatous under the same irritant.

(118) Gonococcus Toxin.

J. de Christmas (*Ann. de l'Inst. Pasteur*, No. 8, August 25th, 1897) describes new methods of cultivating and isolating the gonococcus. Whilst this organism may be cultivated on human serum, or on a medium consisting of one part of pleuritic or ascitic fluid and two parts of peptonised gelatine, its vitality is of but brief duration. On rabbit's serum, however, the growth may be kept alive for months, and so rapid is the growth of the gonococcus on this medium that twelve hours after inoculation with gonorrhœal pus, colonies of cocci may be distinguished, having outgrown all other organisms. Its optimum temperature is 35° C. On rabbit's serum the colonies are rounded transparent, slightly elevated in the centre, and of a viscid consistency. Microscopic examination shows the cocci in twos or fours being held together by viscid material. They are not circular in outline, but resemble cubes with the corners rounded. The gonococcus, when injected into human beings or animals, does not give rise to the specific disease, and dies after a period varying from twenty-four to forty-eight hours. Cultivated in a fluid medium (1 part of ascitic fluid, 3 peptone broth) a toxin is formed which may be separated from the cocci by filtration. Injection of the toxin into rabbits produces fever, loss of weight, anæmia, and death. Secondary abscesses, pus from which is sterile, are also formed. Injected into the human urethra the toxin gives rise to a suppurative urethritis, the symptoms appearing in four hours, and although of short duration, exactly resembling those of an ordinary attack of gonorrhœa. The epithelium is the structure attacked. No gonococci could be detected in the discharge. One attack did not confer immunity, but toxins obtained from cultures of other cocci did not excite a similar urethritis. By the injection of gradually increasing doses of gonococci into the veins of a goat an antigonococcus serum was obtained. This was of low strength, has no effect on the specific urethritis, but may, the author thinks, be of use in cases of general infection with joint symptoms, salpingitis, etc.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(119) Traumatic Pulmonary Tuberculosis. Schrader (*Berl. klin. Woch.*, November 15th, 1897) says that trauma has long been recognised as a possible cause of acute pneumonia, but that the connection between injury and chronic disease of the lung is less easily established. He relates the following case. A man, aged 29, previously healthy, and with no family history of phthisis, had a severe fall on the right side of the back, and was unconscious for fifteen minutes. On the same evening he felt ill, and was admitted into hospital two days after the accident. There was then considerable grazing over the right scapula, and pain was complained of in the chest corresponding to the injured part. The breathing was difficult, and the temperature 38.8° C. The breath sounds were absent, vocal vibration increased, and the percussion note impaired in the region underlying the injury. The diagnosis of pneumonia of the right middle and lower lobes was eventually made. About thirteen days after the accident tubercle bacilli were found in the sputum. The patient's condition remained much the same for some days. There was loss of weight. Eventually improvement took place, so that four months after the accident there were no abnormal physical signs beyond a slightly impaired note over the lower part of the right lung. The author refers to some recorded cases of supposed phthisis following injury. He draws attention to the fact that before the traumatism the patient was absolutely well. Whether the pneumonia following upon the injury is to be looked upon as a contusion pneumonia which favoured the invasion of the tubercle bacillus, or whether it was a tuberculous bronchopneumonia from the beginning, is difficult to decide. The author is inclined to accept the latter interpretation. The temperature chart was characteristic of tuberculosis. Finally, the author summarises the evidence in favour of this view: (1) The development and course of the tuberculous lesion were carefully observed after the accident; (2) the disease corresponded to the site of the injury; (3) there was no clinical evidence of tuberculous disease in the lung immediately after the injury, and no history of previous illness; and (4) certain proof of tuberculosis was forthcoming some little time after the accident, the development of which was quite in keeping with that of the ordinary disease.

(120) Tabetic Anæsthesia. Marinesco (*Sem. Méd.*, December 3rd, 1897) investigated 50 cases of tabes dorsalis with a view of determining the proportion and extent of the anæsthesia which is usually present. Tabetic sensory disturbances are not fixed, but appear and disappear without obvious cause. Thoracic anæsthesia was present in 40 cases, the anæsthetic areas being in the region of the nipples. The anæsthetic band may reach the axilla, or extend down the inner aspect of the arm, and even to the ulnar border of the hand and little finger. Anæsthetic bands may exist on the back of the trunk in the scapular region. When the area is continuous in front and behind a sense of constriction results. The genital and perineo-anal region is often anæsthetic; the scrotum and penis may both be involved. This exists at the onset of the disease, and should be looked for in all cases; anæsthesia in one region is rare. In the lower limbs anæsthesia of the plantar or dorsal regions of the feet or toes, side of leg, or anterior or posterior aspect of the thigh is common. In 10 of the authors' cases there was amaurosis. In the majority of these tactile sensation was normal; in others the anæsthetic foci were slightly marked, or only one was marked, usually in the lower limbs. Patients of the first group are not ataxic; the knee-jerks are normal or exaggerated. To the anæsthetic foci correspond important subjective disturbances, sensations of constriction, disorders of micturition and impotence, lightning pains, formication in legs and feet, and numbness of the ulnar region. When pain or paræsthesia is complained of there may actually be anæsthesia of the same regions. In three patients suffering from gastralgia, anæsthesia of the epigastric or left hypochondriac region was present. In a case with laryngeal spasm there was anæsthesia of the mucous membrane. Tabetic anæsthesia is bilateral, but rarely symmetrical. Careful examination of the anæsthesia confirms the theory of its origin from the sensory nerve roots. The anæsthetic area does not exactly correspond to the root area. Its localisation depends on three factors: (1) Unequal distribution of the lesions in different roots; (2) innervation of a given area by several roots; (3) participation of an endogenous process in the root lesions. The anæsthetic foci are of great importance in the early or differential diagnosis of disease.

(121) The Serum Diagnosis of Enteric Fever. Levy and Gissler (*Münch. med. Woch.*, December 14th, 1897) describe their method of carrying out Widal's test. The typhoid bouillon culture should not be older than ten to twelve hours; otherwise there is danger of a pseudo-agglutination. The authors maintain that fluid serum should be used in preference to dry blood. An observation period of two hours is sufficient. In a typhoid epidemic the serum reaction gave a positive result in 105 out of 115 cases. The authors investigated these cases in such a way that one of them made the bacteriological examination and the other the clinical, and then they compared notes. All the 105 cases showed the clinical characteristics of enteric fever, whereas the remaining 10 did not. When it is considered how difficult it is to exclude errors of diagnosis in an epidemic, the value of the test becomes obvious. Two cases were particularly instructive. The diagnosis lay between enteric and puerperal fevers. In the one case the patient was admitted after fourteen days' illness, and Widal's test was positive. Besides a puerperal endometritis, the characteristic lesions of enteric fever were found after death. In the other case the patient was sent in with the diagnosis of enteric fever, but the reaction was negative. At the necropsy a puerperal endometritis was found, but no lesions of enteric fever. A table is appended showing the details of the various cases. In none of the genuine cases did the reaction fail. The serum reaction enabled them to distinguish between diseases with symptoms resembling enteric fever and the abortive forms of the disease itself. In 10 of the 18 cases it made the diagnosis possible in the first week; of the remaining 8, 5 were not enteric fever, and 3 gave the reaction later. Of 26 examined in the second week of the illness, the reaction was positive in 22, and the remaining 4 proved not to be typhoid. Of 26 in the third week, 24 were positive, and the remaining 2 turned out not to be typhoid fever; 16 examined in the fourth week, 13 in the fifth, 7 in the sixth, 10 in the seventh, and 5 in the eighth all gave positive results, and the disease presented the characteristics of enteric fever.

(122) Dextrocardia without General Inversion of the Viscera. Auché and Bouyer (*Journ. de Méd. de Bordeaux*, August 22nd, 1897) have met with a case of dextrocardia apparently congenital without coexisting inversion of the other organs. The patient was a man, 42 years of age, with a good family history, who had served his time in the army. His only trouble was a long-continued series of dyspeptic attacks and stenosis of the lower end of the œsophagus. At the time when he was seen by Auché and Bouyer, however, he had developed pulmonary tuberculosis, and it was during the examination of the chest that the presence of the heart on the right side was noticed. The cardiac inversion was complete; it was not simply a case in which the organ was pushed or pulled to the right, but the apex beat was in the fourth intercostal space outside the mammillary line, a position which it does not occupy in acquired displacements. Further, there was no evidence of pleurisy, old or recent, on the left side, while on the right there was no thoracic retraction. It was apparently, then, an instance of that rare anomaly, dextrocardia without inversion of the other organs, unconfirmed so far by a necropsy.

(123) Hereditary Locomotor Ataxy. Kalischer, at the Berliner Gesellschaft für Psychiatrie (*Neurol. Centralblatt.*, December, 1897) showed a mother and

son, aged 51 and 27 years respectively, both suffering from typical locomotor ataxy. There was nothing whatever to suggest syphilis either in the history or in the patients. In the mother the disease began at 31 years; in the son at 26 years of age. Other cases have been recorded in which the children of parents who had locomotor ataxy showed symptoms of the disease much earlier than in Kalischer's case, but it is pointed out that in children the diagnosis must be made with caution, as Friedreich's disease is easily mistaken for locomotor ataxy. The writer has been able to find two such cases where the diagnosis and hereditary locomotor ataxy in children seemed certain, and other doubtful cases are mentioned.

SURGERY.

(124) Some Modern Methods of Treating Fractures.

BUSCARLET (*Rev. Méd. de la Suisse Rom.*, December 20th, 1897) insists on the fact that the best method of treating fractures is a combination of the old method of complete immobilisation of the parts with massage and passive movements. Those who follow the classical method exclusively get straight limbs at the expense of free movement, while those who follow Lucas-Championnière's advice without understanding it, and use massage alone, produce lifelong deformities. The author's method is to apply light, easily removable plaster splints, and to seize the first opportunity, when there is a certain amount of union, to begin passive movements. This varies for each fracture, the time to begin being earlier for fractures at the wrist and shoulder, for instance, than for those at the elbow, knee, and ankle, while it is latest for the humerus and ankle when there has been much displacement. He gives 14 cases of fracture in various parts thus treated where the cure was very rapid and satisfactory. Labbé (*Sem. Méd.*, December 29th) believes that the treatment by passive movements and massages is excellent for some fractures, such as articular and periarticular, but that immobilisation is necessary for others, such as all fractures about the middle of long bones, and especially those at the lower third of the leg. To treat these by massage is to court the formation of false joints. Lucas-Championnière (*ibid.*) agreed with Labbé that a few fractures, such as those at the lower third of the leg, required splints; otherwise all should be treated by massage and movements, since immobilisation was an unfavourable condition for repair. He did not believe in the danger of false joints. J. B. Roberts (*Annals of Surgery*, January, 1898) relates the case of a man with fracture of both legs of five months' duration where deformity and overlapping with greatly delayed union occurred. He cut down and wired the worst one; some suppuration, but no union followed. He then applied a rubber bandage round the lower part of the thigh so tightly as to keep the leg blue and swollen, with the idea of increasing the formation of callus by the circulatory changes. The patient wore this bandage and a light plaster splint day and night for three and a-half months, and was encouraged to walk with a stick. At the end of the time a considerable amount of union had taken place. Consolidation had taken place also in the other leg, which, however, had never been so bad, so it is difficult to tell exactly the part played by the congestion method, though it seemed to do good.

(125) Operating for Chronic Disease of Vermiform Appendix.

RICKETTS (*Amer. Journ. Obstet.*, December, 1897) describes some instructive cases where operation was performed on the strength of symptoms which he considered as justifying surgical interference. The first patient was a doctor subject for ten years to recurrent inflammation of the appendix. He had been unable to practise for a year. The distal end of the appendix was found attached to Poupart's ligament, and a little pus was present. Recovery was uninterrupted. A woman, aged 50, had suffered for eight years from recurrence of the same disease. She had been obliged to go about with her body bent for a year. The appendix measured 5 inches, and the distal end was attached to the right ovary and Fallopian tube. Recovery was very rapid. A girl, aged 14, was seized with fever and dyspnœa. Empyema developed; after diagnosis by aspiration the pleura was laid open and a pint of pus removed. The right iliac fossa was blistered on account of local pain. In three days the gauze, which had been stuffed into the pleura, was removed. The cavity healed without trouble. Thirteen days later the abdomen was opened. Two quarts of pus were removed; it was very fœtid, as is usual in cases of abscess of the appendix. A gauze drain was inserted, and the patient was making a good recovery when the report was published.

(126) Surgery of Congenital Ano-rectal Imperforation.

MATAS (*Amer. Journ. of Obstet.*, December, 1897) finds that the most prevalent varieties of congenital ano-rectal anomalies, especially the types of imperforation which most urgently call for surgical relief, are amenable to successful treatment by the perineal route. The cases where primary colostomy are justified are in the minority. External search, sounds, etc., are unreliable agents in determining the degree of deformity. The earlier the operation is undertaken the better the result. The newborn infant when free from sepsis compares most favourably with the adult in the capacity to resist traumatism. Puncture or incision without proctoplasty are no longer justifiable except in purely membranous obstruction; the rectal mucosa at least must be fixed to the anal margin. Intraperitoneal exploration through the perineum should be systematically resorted to whenever a reasonable exploration of the subperitoneal tissues by a median perineal incision fails to reveal the rectal pouch. In such cases the coccygeo-sacral route by a free median incision through the cartilaginous coccyx and sacrum is the preferable operation. If more space be required a bilateral osteoplastic flap can easily be made; it will make a larger entrance into the pelvis without permanently sacrificing the bony framework, and thus increasing the risk of rectal prolapse. Primary exploratory laparotomy, with a view of guiding the bowel to the perineum from above, after ascertaining its relations is not indicated as a rule. The artificial anus made in the perineo-sacral region is the aim of the surgeon in these deformities. If properly performed, the sphincter is almost certain to be controllable after a time. Inguinal colotomy is justifiable only when the case has been left till the infant is sinking from stercoræmia and peritonitis. Median or lateral exploratory laparotomy is indicated when after exploration of the peritoneum through a perineo-sacral incision it is evident that the terminal blind extremity of the bowel cannot be brought down to the pelvic outlet, and only the small intestine is available for proctoplasty. The lowest part of the bowel should then be guided to the perineo-sacral wound, where it can be drained permanently with greater safety.

(127) Sphincterectomy of Iris.

DE WECKER (*Annales d'Oculistique*, December, 1897) finds that a very small marginal iridectomy is often a necessary supplement to the tattooing of a central corneal nebula if good vision is to be obtained. The iridectomy must be confined to the sphincter iridis, and not involve the dilatory fibres. The points and limbs of the iris forceps must be extremely fine. The effect of the sphincterectomy should be to render the pupil somewhat oval in shape.

MIDWIFERY AND DISEASES OF WOMEN.

(128) Post-partum Eclampsia.

LEMICHEZ (*Journ. des Sc. Méd. de Lille*, November 13th, 1897) puts on record a case in which a woman, aged 22, developed *post-partum* eclampsia after a normal labour, which had been followed, however, by rather severe after-pains, necessitating the giving of opium. She made a slow but complete recovery. This was the patient's third pregnancy, and it is noteworthy that her first labour (forceps) had been complicated by eclampsia, and that the attacks had continued into the puerperium notwithstanding a free natural hæmorrhage at the time of delivery. Her second gestation had been accompanied by slight œdema of the ankles, but had terminated normally and without incident. In the third pregnancy the attacks of vomiting had been persistent and very troublesome, and she had suffered for three months from almost continuous

headache. These phenomena occurred before she came under medical treatment in the Maternity Hospital.

(129) Cystic Tumour of the Round Ligament.

ULESKO-STROGANOWA (*Vratch*, 1897, p. 1162) describes a case of this kind of tumour which was not a peritoneal cyst, in the inguinal canal. The patient was 53. During an operation for the removal of an ovarian cyst and myoma of the uterus this tumour was discovered. It was as big as a fist, unilocular, and contained a limpid fluid as seen in a parovarian cyst. The cyst wall contained muscular fibres, and was lined internally with ciliated columnar epithelium. No epithelial structure normally exists in the round ligament, hence this tumour must have been developed from a stray Wolffian tube.

(130) The Bicycle and Gynæcology.

FAUQUEZ (*La Gynécologie*, December 15th, 1897) lays down rules for the use and disuse of the bicycle, a full memoir on the subject having appeared in the *Journal des Connaissances Médicales*, August 26th, 1897. He maintains that the bicycle is to be recommended in cases where complete normality of the genital tract exists, for the relief of anæmia, dyspepsia, neurasthenia, sterility, obesity, deferred appearance of the catamenia in young girls, and in menopause troubles. The bicycle is a therapeutic agent in simple uterine congestion, in amenorrhœa due to imperfect development of the uterus and ovaries, or to other causes involving simple debility, including nerve shock; in nervous and congestive dysmenorrhœa; in simple deviations of the period, such as a supplementary show between the normal catamenia; and in cases of fibroid when all hæmorrhage has ceased. The bicycle is allowable in mechanical and membranous dysmenorrhœa; in displacements and flexions; in mild and painless cases of chronic metritis after labour and abortion: and in the leucorrhœa of anæmia. Lastly, the bicycle must be absolutely forbidden in amenorrhœa associated with phthisis, cancer, diabetes, organic disease of the heart, and albuminuria and organic renal diseases; in metrorrhagia or excessive menstruation; in acute metritis, perimetritis, salpingitis, ovaritis, pelvic abscess, and parametritis; in hæmatocele and bleeding fibroids; and, lastly, in vulvitis and vaginitis not thoroughly healed.

(131) Inversion of Uterus: Dangers of Massage in Labour.

SJÖBERG (*Hygiea*, p. 348, 1897) reports two cases of fatal puerperal inversion of the uterus. The first patient was a 4 para, aged 26. Spontaneous delivery occurred somewhat speedily, and the placenta came away "without any forcible traction on the cord," according to the midwife's account. Sjöberg found the patient dying; the uterus was completely inverted. He replaced it with the greatest ease, but the woman died ten minutes later. This appears to have been a mismanaged case of precipitate labour in a vigorous subject. The second patient was an anæmic unipara. Labour up to the delivery of the fœtus is reported as normal. The placenta, however, did not come away; only the most gentle traction seems to have been exercised on the cord; then the fundus uteri was submitted to massage. The whole uterus became inverted. As in the former case, Sjöberg arrived too late; the patient was already collapsed, and though the womb was easily reduced she died soon afterwards.

(132) Intestinal Obstruction associated with Twisted Ovarian Pedicle.

SCHALITA (*Vratch*, No. 18. 1897) relates 2 cases. A woman, aged 20, was seized with violent pain in the right iliac fossa, and no motions passed for several days. A fluctuating epigastric tumour free from the uterus was detected. Abdominal section was performed, a cyst of the right ovary was removed, its pedicle was twisted, and the tube loaded with clot. The cyst adhered to the great omentum, and a point on the ascending colon, apparently compressed by the cyst, was gangrenous. The patient recovered. The second patient was aged 51. Her abdomen had been swelling for two years. As in the first case, pain and intestinal obstruction set in suddenly. Abdominal section was satisfactorily undertaken. A loop of intestine was found strangulated between the ovarian tumour and the abdominal wall, the pedicle was twisted, and there was hæmorrhage into the cavity of the cyst. Schalita notes that in both instances the intestinal lesions were much less severe than the disturbances in the original seat of disease, so that he suspects that the torsion caused them by provoking great peritoneal irritation.

THERAPEUTICS.

(133) The Statistics of the Serum Treatment of Diphtheria.

PHOTIADÈS (*Arch. Générales de Méd.*, January, 1898) shows that recently endless confusion has arisen in the study of diphtheria. In place of Trousseau's clinical classification of sore throats into true diphtheritic angina as opposed to toxic, infective, and malignant angina, the presence of Loeffler's bacillus is now sufficient to fix the diagnosis of diphtheria. To adapt the new facts of bacteriology to one's clinical knowledge becomes more and more difficult. For instance, Gouguenheim finds diphtheria to be much more common in adults than is usually supposed; besides, in its membranous form it occurs commonly as lacunar tonsillitis. He says every acute case of sore throat should be examined bacteriologically for fear of missing diphtheria. A harmless catarrhal angina may reveal Loeffler's bacillus (Gahli and Deucher). There are typical and atypical Loeffler's bacilli; typical but not virulent pseudo-diphtheritic bacilli (Park). Virulent Loeffler's bacilli may cause a local non-contagious disease, fibrinous rhinitis (Scheinmann). The pseudo-membrane, formerly the clinical and pathological criterium of diphtheria, is not a product of a specific bacillus, but may be produced by streptococci, staphylococci, or the bacterium coli. The B. diphtheriæ is hardly ever present alone (Danelo and Ruault). Severe septic diphtheria is not caused necessarily by an associated infection, for in some cases streptococci cannot be found in the internal organs, and when they are, the symptoms during life may not have pointed to septic diphtheria at all (Kuttner and others). After all this it is not surprising that statistics have been made to prove (1) that the serum treatment has almost suppressed mortality, (2) that since this treatment was begun the mortality is as high as ever. Thus, without considering the conflicting statistics of individuals, it has been shown that the serum has increased the mortality at Trieste, St. Petersburg, and Moscow, has diminished it enormously at Paris, Berlin, Vienna, and Buda-Pesth, and has had no influence on it at Leipzig, Milan, and London. In America, Coakney has shown for Boston, New York, and Brooklyn (1) that the declared cases of diphtheria have increased enormously: (2) that though the relative mortality (percentage of declared cases) has diminished since the serum treatment, the absolute mortality calculated on the total population is as high as in the worst years since 1882. Though the public demand that every clinician should have an opinion as to the value of serum, either for or against, statistics are perfectly useless up to now in helping him to form one. He must therefore fall back on his own resources, which are those of clinical empiricism. It is enough for him that the serum acts, and that chance has been excluded from the cases where it succeeds, that is, he must consider the individual, not masses of statistics. No one who has seen the membrane clear up, the natural voice return if the nares are involved, and convalescence begin within forty-eight hours in a case which experience shows to be very severe, can doubt the good done by the serum. Its failure in certain cases is no reason for doubting its use. Everything points to the fact that diphtheria toxins vary greatly in virulence, and it is possible that bacteriology may prove eventually that some diseases, considered absolutely specific, are not so. For this, theories of bacterial symbiosis have prepared us, and Windrath has shown that there is nothing specific in the toxins of specific bacteria. It accords with this, that the author has often used the serum in cases which were clinically severe diphtheria, but where bacteriology showed streptococci to be in the majority, with as much success as in those caused by Loeffler's bacillus alone.

(134) The Action of Cotarnine.

MARFORI (*Archiv. Ital. de Biologie*, Tome xxviii, Fasc. ii, 1897) has studied the

action of cotarnine, which is methyloxyhydrastinine, and, like hydrastinine, is derived from a base of isochinoline, the two bases respectively being narcotine and hydrastine. Clinically Gottschalk observed that cotarnine hydrochlorate (=Merck's "stypticine") has hæmostatic and sedative properties, and may replace ergot and hydrastis canadensis with advantage. The author, using Merck's stypticine, finds experimentally that its general action on animals is first to stimulate the central nervous system, giving rise to convulsions; then to cause a general paralysis, with death from respiratory paralysis. Thus its general action is similar to narcotine, and, like the latter, it has a slight narcotic action also. Small doses do not influence temperature or sensation. The blood pressure in moderately curarised animals is unchanged by small doses, and falls markedly with large. A rise in blood pressure always coincides with dyspnœa. Thus, a vasoconstrictor action is almost excluded. The kidney generally diminishes in volume, which is due to lessened cardiac activity and not to a vasoconstrictor action, since the blood pressure falls simultaneously and the cardiac beats increase in frequency. It is difficult, therefore, to explain the hæmostatic action of the stypticine observed clinically by Gottschalk and others, since it has no vasoconstrictor action; and Marfori proved also that it does not hasten the coagulation of the blood. While hydrastinine is less poisonous than hydrastine, cotarnine is much more poisonous than narcotine, the lethal doses in rabbits and guinea-pigs being 0.4 to 0.5 per kilo. of body weight.

(135) The Action of Atropine and Pilocarpin on Peristalsis.

Traversa (*Il Policlin.*, November 15th, 1897), being struck by the fact that injections of atropine caused constipation rather than increased emission of fæces in horses, has investigated the action of this drug and also of pilocarpin. It was found that pilocarpin accelerated and strengthened peristalsis, whilst atropine lessened and finally abolished the movements of the intestine. In each case the result is obtained through paralysis or stimulation of the ganglia and nerve endings in the intestine. From this it follows that belladonna is not likely to be of value in constipation from atony of the bowel muscle, but in lead colic where it is not improbable that the intestinal ganglia are irritated belladonna may prove a useful remedy, and indeed in all cases when painful intestinal spasm, due to irritability of the intestinal ganglia, is present, the drug in question may be used with advantage.

(136) The Treatment of Chronic Appendicitis by Mercury.

Horwitz (*Annals of Surgery*, January, 1898) reports four cases of chronic appendicitis, in each of which operation was clearly indicated, and had been advised by several eminent surgeons. This was refused by all the patients, each of whom came under the author's care for secondary syphilis, and was put on "tonic" doses of protoiodide of mercury. Case I, male, aged 44, had had nine attacks of appendicitis, one quite recently. There was a tender indurated mass in the right iliac fossa. Soon after the mercury treatment was begun he had a fresh acute attack of appendicitis, when the mercury was given up for a time. After the cessation of the acute symptoms it was resumed, with the result that not only the syphilitic symptoms disappeared, but also the appendicitis and constipation. Four years have passed since then, and there has been no return of the appendicitis. Case II, male, aged 31. Three attacks of appendicitis; has dyspepsia and chronic constipation. He had a slight acute attack of appendicitis after a year's treatment with protoiodide of mercury. Since then (two years and a-half) has no trouble with the appendix. Case III, male, aged 28. Five attacks of appendicitis; doughy, tender mass in right iliac fossa. Protoiodide of mercury given. Health improved, and since then (three years and a-half) appendix has given no trouble. Case IV, male, aged 33. Two attacks of appendicitis, and suffers from dyspepsia and constipation. Signs of chronic appendicitis in right iliac fossa. Protoiodide given up till now (one year and a-half). Has had two attacks of appendicitis while under treatment, though none since last June. The author says it is remarkable for the chronic form of appendicitis following acute attacks to subside under small doses of mercury, and, though these cases are too few to arrive at definite conclusions, he thinks it well worth while for others to test the treatment in all cases of chronic appendicitis where operation is refused.

PATHOLOGY.

(137) The Toxic and Antitoxic Properties of Eel's and Viper's Blood and Bile.

Wehrmann (*Ann. de l'Institut Pasteur*, November, 1897) has worked at this subject in Calmette's laboratory, and publishes an exhaustive memoir, in which the following are the principal conclusions arrived at. (A) Eel serum; 1 c.mm. injected into the peritoneal cavity kills a guinea-pig of medium size, and the same dose kills a rabbit weighing 4lbs. by intravenous injection. When heated to 58° C. for 15 minutes it loses the greater part of its toxicity, and acts just as if simply diluted with water. When injected it usually causes somnolence, and perhaps fall of temperature, but the animal is as a rule all right within two to three hours, by which time, however, it has acquired some degree of active immunity to unwarmed serum, lasting as long as three days. This warmed eel serum is also preventive against viper serum, but only for 20 to 24 hours. It has no neutralising or curative action in respect of these poisons, and is hence not antitoxic. Eel serum precipitated by alcohol and redissolved in water has no curative properties. Eels are no more resistant to serpent venom than are guinea-pigs. The toxicity of eel's blood is, however, greatly reduced by the injection of antivenomous serum 24 hours before bleeding. Antivenomous serum is preventive in respect of, and in stronger doses neutralises *in vitro*, and cures the effects of eel serum. Antidiphtheria serum prevents and neutralises, but is not curative. Antitetanic serum, normal horse and rabbit serum, and beef bouillon are inactive as regards eel serum. The serum of a rabbit immunised against eel serum is preventive and curative as regards serpent venom and eel and viper serum. (B) Viper serum; this is about one-third as toxic as that of the eel. It can be used as a preventive inoculation against snake venom, but not against eel serum; antivenomous serum is preventive and curative in respect of it. Viper serum precipitated by alcohol and redissolved in water gave in one out of two experiments a curative effect as regards snake venom. (C) Action of bile from the ox, eel, and viper upon toxic serums and upon venom. Ox bile destroys *in vitro* the the toxicity of eel serum and of venom, but has no preventive or curative action. Eel bile neutralises *in vitro* venom and eel serum, but has no preventive or curative action. On the other hand, viper bile has *in vitro* a preventive and neutralising action in respect of venom and eel and viper serum. These varieties of bile hence act mainly by admixture, as if they possessed digestive properties. The author's studies are of great importance, as illustrating how the serums of animals immunised against one poison are frequently curative in respect of others.

(138) Mesarteritis Syphilitica.

F. Backhaus (*Beit. zur path. Anat.*, Bd. 22, Heft 3) comes to the following conclusions: (1) In the aorta there may be an inflammatory affection of the tunica media, characterised by a circumscribed small-cell infiltration. This infiltration afterwards undergoes transformation into a kind of connective tissue poor in nuclei. Accompanying the transformation there is always a certain amount of shrinking. Here and there may be found some necrosis of the media. (2) The tunica intima may be secondarily involved, and may show thickening or may be affected through the scar-like contraction going on in parts of the media. (3) The tunica adventitia may show small-celled infiltration, but more often there is a diffuse fibrous increase without tendency to contraction. (4) The affection has only been observed in syphilitic subjects, and is regarded as a hitherto unrecorded result of syphilis. (5) The affection is very likely the cause of aortic aneurysms in syphilitic subjects. (6) The affection is totally different from chronic endarteritis, though the two may be associated with each other.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(139) Prehemiplegic Pain.

FÉRÉ has published (*Journ. de Méd.*, January 10th, 1898) observations from which it would seem that hemiplegia due to cerebral lesions is often preceded by motor or sensory phenomena which may be considered premonitory. The motor derangement consists in a momentary loss of motor activity, awkwardness of movement, some tremor or choreiform movements. The sensory manifestations consist in feelings of numbness, diminished tactile or thermic sensation, subjective feelings of cold, heat, or tingling. Such phenomena are particularly met with in cases of softening, cerebral growths, and pericephalitis, and not infrequently in hysteria. Such symptoms may precede a cerebral lesion for a long time or by a few hours, and are located exclusively in the area of the lesion, affecting the joints, fibrous tissues or muscular tissues, and may persist long after the establishment of hemiplegia. The author has collected a good number of cases in support of these observations. The sensations are sometimes spontaneous, but become increased by movement, pressure, etc. They may be continuous or intermittent, sometimes disappearing for several days or even weeks. In some cases they cease on the disappearance of hemiplegia. When the pains appear in the joints, there does not seem to be any increased liability to arthropathic change. In other instances the pain may follow the course of the nerve, such as the sciatic. The writer looks upon these symptoms as very important from a clinical point of view, for in the presence of vascular disease their appearance would be of extreme importance as an indication for preventive treatment.

(140) The Roentgen Rays in Gastro-intestinal Diseases.

BOAS AND LEVY-DORN (*Deut. med. Woch.*, January 13th, 1898) state that the object is (1) to detect new growths and (2) to discover changes in the position of the stomach, a narrowing of the pylorus or a stenosis of the intestine. The method employed by the authors was to administer gelatine capsules containing a substance impervious to the Roentgen rays. The capsules were 2½ cm. long, 1¼ wide, and were carefully and repeatedly coated with celluloid. They were filled with metallic bismuth free from arsenic. The capsules were also stained with a harmless aniline dye to render their detection in the stools more easy. The authors have used these capsules in 14 cases. The capsules were seen as an intense shadow in the Roentgen picture, and their course could thus be followed. The excursions of the stomach during inspiration and expiration could be made out, and also the effect of peristalsis upon the movement of the capsules. The Roentgen rays only revealed the whereabouts of the capsule in the abdomen, and not the particular section of the intestine in which it was placed. The latter had to be determined by other considerations. In the large majority of cases the authors found the capsule in the greater curvature of the stomach, or in the cæcum or in the small intestine near the ileo-cæcal valve. The other parts of the intestine were traversed so rapidly that very repeated examination would be required to show the position of the capsule there. The authors were never fortunate enough to make out the passage of the capsule through the pylorus into the intestine. In cases of pyloric growth they have seen the capsule remain in the fundus of the stomach for four or five days. Thus the method enabled them to recognise stenosis of the pylorus when it had attained a certain degree. When there is no narrowing in the gastro-intestinal tract the capsule appears in the stool from two to six days. The method should also be useful in determining the action of certain drugs in peristalsis.

(141) Acute Rheumatism.

RIVA (*Centralbl. f. inn. Med.*, August 14th, 1897) makes a preliminary communication upon the etiology of this disease. He first refers to the fact that, although it is generally accepted that acute rheumatism is an infective disease, yet the pathogenic microbe remains undiscovered. Perhaps this is due to the nutrient media used for its cultivation not being suitable. The author obtained synovial fluid for this purpose from the joints of horses. To the peptone broth, fish jelly (8 to 10 per cent.) or fucus crispus (1 to 2 per cent.) is added. A small quantity of glucose (1 to 2 per cent.) is also added, and just enough lactic acid to make the medium slightly acid. He has in addition used broth without the jelly or fucus, also the fluid alone from the inflamed joints, etc. Riva has thus examined 8 cases of acute rheumatism, 7 of moderate severity, and 1 very severe and complicated with pleurisy, pericarditis, and perhaps bronchopneumonia. The fluid to be examined was always obtained from the knee-joint, and in 3 cases the blood was also examined. Five or six drops of the synovial fluid were obtained under the strictest precautions and added to the culture tubes. In this way a growth was obtained in all cases, whereas the ordinary nutrient media remained sterile. The author cannot as yet draw any definite conclusions as to the morphology and biology of the microbe. The growth was luxuriant at 35° to 37° C., but only slight at 15° to 17° C. The surface growth was in the form of a film. The gelatine was liquefied at ordinary room temperature, otherwise it became turbid. Growth appeared in media not acidified with lactic acid, but it was sparse. Glucose was likewise not essential but useful. In young colonies the microbe was found, assuming later an egg shape, and varying in size from a leucocyte to a large torula. Later these bodies disappeared and two different kinds of bacilli were found. Thus, (1) a growth similar in all cases was always obtained, and (2) no growth was obtained, with one or two exceptions, when subcultures were made upon the ordinary nutrient media. In all probability this is the microbe causing acute rheumatism.

(142) Aniline Poisoning.

FRANK AND BEYER (*Münch. med. Woch.*, January 19th, 1897) report a case in a woman, aged 52, who took 100 g. of a 5 per cent. solution of aniline oil. The stomach was washed out within a quarter of an hour. The wash water as well as the breath smelt of aniline. In an hour's time she complained of prostration and nausea, and the face became blue. Later vomiting occurred, and the cyanosis was pronounced. Somnolence with frequent yawning supervened. The rectum and bladder acted involuntarily. The pulse was small, rapid, and occasionally intermittent. The extremities were cold. The pupils, moderately wide, reacted sluggishly to light. The patient was transfused with an alkaline solution. The blood was of a dark brownish-red colour, and coagulated rapidly. There was no marked dyspnœa. Injections of camphor were also used, and wine and coffee administered by the rectum. Ten hours after taking the poison the patient was still somnolent. A warm bath produced improvement, the pulse becoming stronger and the stupor less marked. Fourteen hours later the patient was much better, the cyanosis having diminished, but headache and giddiness persisting. A few hours later she was practically well. Here the symptoms of intoxication developed rapidly, notwithstanding the gastric lavage. The cyanosis appeared in an hour and a half, soon became marked, and was unaccompanied by dyspnœa. This cyanosis must be referred to the development of a blue colouring substance in the body from the aniline. The next most important symptom was the stupor. Vomiting and diarrhœa were less prominent symptoms. The intoxication symptoms disappeared with much rapidity. The beneficial action of the transfusion is difficult of explanation. The warm bath with warm douching was also of value. When chloroform and caustic potash were added to the blood the characteristic smell of phenyl-iso-nitrite was observable. Another portion of the blood in alkaline solution was shaken up with ether, and the extract obtained, after evaporating the ether, was treated with calcic chloride solution, when a bluish-violet colour appeared. The urine gave similar reactions, but contained no albumen or blood, and did not reduce Fehling's solution. Very little preformed sulphuric acid was found. The presence of paramido-phenol was demonstrated.

SURGERY.

(143) The Influence of Neurectomy on Callus Formation.

Kapsammer (*Wien. klin. Woch.*, 1897, No. 13) records the result of an experimental investigation upon callus formation. He resected a portion of the right sciatic nerve in 11 dogs, and of the anterior crural as well in a twelfth; then broke both legs in each, put them up in plaster, and studied the formation of callus at varying periods, killing the animals after five to twenty-one days. In every case the callus formation was more abundant in the side on which neurectomy had been performed; the amount sometimes reached twice as much. As regards fixation, excluding a case in which the left tibia was not perfectly broken through, in 9 instances out of 11 there was more power of moving the fragments upon each other on the side of the nerve section than on the other; the other two cases were not examined till twenty-one and fourteen days respectively after the operation. It may thus be concluded that after resection of the sciatic nerve fractures of the leg are healed with abnormally great callus formation, but that the consolidation of this callus occurs later than with normal innervation. Kusmin, who had previously investigated the same point, but who had not produced both fractures in the same dog, came to the conclusion that the callus on the side of the neurectomy was both more abundant and of greater firmness.

(144) Partial Optic Atrophy from Use of Iodoform in a Case of Burn.

Terson (Société de Biologie: *Annales d'Oculist.*, November, 1897) reports the case of a woman who sustained burns of the thighs and abdomen, to which iodoform dressings were applied. After three weeks of this treatment, without other signs of general poisoning, a progressive amblyopia appeared, accompanied by atrophy of the temporal half of both discs. This has persisted for several years. It is known that extensive burns of themselves can induce optic neuritis (Mooren) and retinal hæmorrhages (Wagenmann). On the other hand, in similar cases, the use of iodoform has resulted in double optic atrophy (Valude); and even when applied to wounds (Hirschberg and Küster), and when given internally (P. Smith, Hutchinson), toxic amblyopia has followed, but has readily yielded to appropriate treatment.

(145) Pneumococcus Arthritis.

Tournier and Courmont describe (*Rev. de Méd.*, September 10th, 1897) a case of acute purulent pneumococcus arthritis occurring in a man, aged 50, in the secondary stage of syphilis, and who on the sixth day of a pneumonia manifested a suppurative arthritis of the left knee of extremely acute character. Arthrectomy was performed without any improvement, and the patient died with inflammation of other serous surfaces. They draw the following conclusions from this and other cases, that there are different forms of arthritis in cases due to pneumonic infection, and that the morbid appearances are as different as the clinical course. There may (*a*) be a slight form without any particular macroscopic lesion; (*b*) hydrarthrosis; (*c*) the ordinary purulent form; (*d*) a form accompanied by osteo-arthritis with lesion of the cartilages. This seems to occur more frequently than is suspected. They state, further, that the prognosis is bad owing to the tendency to extension of the inflammation to other serous surfaces such as the pleura, pericardium, and meninges, and to this extension is largely due the fatal issue. Bacteriological examination of the pus from affected joints always shows pneumococci, and the way in which other tissues become infected would appear to be through the blood.

(146) Deviation of the Umbilicus.

Boulland (*Journ. de Méd.*, January 25th, 1898) has drawn attention to this subject. As is well known, a past pleurisy, especially when accompanied by a dense adhesion, is able to cause deviation of the sternum to the right or left of the middle line according to the side affected. In the same way, deviation of the umbilicus may occasionally be observed in patients who have had a previous tuberculous peritonitis for adhesions form inside the abdominal cavity as in the pleural. There is, however, this important feature in connection with the peritoneal condition that such adhesions are liable to cause intestinal obstruction; therefore, deviation of the umbilicus may be of practical importance to the surgeon in determining where to operate in opening the abdomen.

(147) Surgical Treatment of Abscess of Liver.

Lafourcade, of Bayonne (*Gazette des Hôpitaux*, January 8th, 1898) operated on two cases. The first patient had suffered from dysentery in a colony. Abscess slowly developed. Lafourcade punctured, withdrawing three pints and a-quarter of chocolate-coloured pus. Then he resected the edges of the eighth, ninth, and tenth ribs, incised the abscess, and drained. A large biliary fistula developed, and death ensued. In a second case a syphilitic subject had a hepatic abscess. Transpleural laparotomy was performed. Two and a-half pints of pus came away, the abscess was drained, and a good recovery followed.

MIDWIFERY AND DISEASES OF WOMEN.

(148) Rectal Irrigation in Eclampsia.

An interesting case is recorded by Sené (*Journ. de Méd.*, January 10th, 1898) as showing the remarkable results obtainable by copious rectal irrigation. The case was that of a patient in the seventh month of pregnancy, who developed eclampsia. A copious bleeding caused arrest of the convulsions, but she shortly fell into a condition of complete coma, with total suppression of urine. For half an hour a copious enema of tepid water was administered, about five minutes being given to the injection, the torpid condition of the patient greatly facilitating the operation. At the end of twelve hours the patient began to recognise when spoken to in a loud voice. Shortly after sensation showed evidence of returning, and a small amount of urine was passed, while occasionally fæcal material was returned by the enema. The next day the coma had completely disappeared, the patient replied to questions, but had no recollection of the events of the previous forty-eight hours. Micturition became completely re-established, and delivery was effected on the fourth day, with disappearance of all the symptoms. There is no doubt that a portion of the injected water became absorbed, acting as a diluent to the blood, thereby reducing its toxic effect on the nerve centres.

(149) Death of Fœtus after Ligature of Funis.

Dittrich (*Prager med. Woch.*, Nos. 43, 44, 1897) relates a case of great importance in relation to suspicious deaths of newborn children. A 3-para, aged 33, taken with labour pains, was conveyed, at her own desire, to a lying-in hospital. She was delivered (spontaneously) on the way. A companion, not a midwife, tied the umbilical cord with a piece of tape twisted several times round, and knotted in two places. Nevertheless, the child was dead when the mother arrived at the hospital. It was evident that the mother had done her best to reach the institution in time, and it was further proved that the companion was not guilty of criminal negligence. The child had bled to death from the cord, which had been ligatured, as above stated. The fact that the ligature had been brought several times round the cord showed that the operator also was guiltless of negligence. She had tied it also twice in a knot, but it was seen that she had not twisted it or tied it firmly enough. A uterine sound was easily passed through the loop. Persons devoid of any experience in medicine or training nearly always tie ligatures too loosely, as they are afraid of cutting through tissues or of giving pain. This error is known to be particularly frequent when a parturient woman's friend or relative undertakes ligature of the funis.

(150) Pregnancy, Catamenia, Blood Pressure.

Jedoroff (*Annales de Gynéc. et d' Obstét.*, January, 1898) notes that the ovaries not only develop ova, but also secrete a chemical compound which plays a part in general nutritive changes. Hence ovary juice actually remedies constitutional disturbances during the menopause, especially when that change is artificial, being due to removal of the ovaries. Ovarian juice when administered to guinea-pigs increases arterial tension and diminishes cardiac activity.

The substance extracted from the uterine mucosa, from menstrual blood, and from the mammary glands promotes a diminution of tension and increase in cardiac activity. Jedoroff inquires if the elevation of arterial tension before the appearance of the catamenia and its fall when they appear do not represent a balance of the influence of the ovary juice and of a less known uterine substance. For the elevation of tension about a week before the flow precisely corresponds with the period of maximum ovarian activity, and therefore with the time when most ovary juice enters the circulation. On the other hand, the fall in arterial tension some four or five days before the "show" corresponds with the period of maximum uterine activity, when the menstrual decidua is developing. Batzevitch finds that arterial tension progressively increases after the fifth week before term, and remains higher than in pregnancy during the first days of childbed. For at the end of pregnancy the uterus loses its glands, so that the ovarian function prevails and arterial tension increases.

(151) Hyperemesis Gravidarum and Salt in Food.

Antonchevitch (*La Gynécologie*, October 15th, 1897) sees a strict homology between uncontrollable vomiting of pregnancy, and vomiting from which animals suffer when deprived of salt in their food, being fed on albumen artificially deprived, as much as possible, of potassium and sodium salts. He has, therefore, dieted women suffering from hyperemesis gravidarum by taking care that their food contains at least a full proportion of salts.

(152) Inflamed Appendages and Inflamed Vermiform Appendix.

Delagénière, of Le Mans (*Ann. de Gynéc. et d'Obstét.*, December, 1897) has observed this complication in 5 cases. In one of these cases he removed uterus and appendages entire; in the other 4 he took away the diseased tube and ovary only, but in all the diseased vermiform appendix was amputated. The appendix in these cases is subject to very chronic inflammatory change of the usual follicular type. Diagnosis is highly important, as abdominal section is required; removal of the appendages by the vagina would be useless, since part of the disease which lies in the vermiform appendix would be out of reach. Hence when sudden attacks of pain in the right iliac fossa, not associated with the catamenia, and gastro-intestinal disturbance are added on to definite symptoms of disease of the appendages, the pelvis must be explored from the abdominal side. If the diagnosis be confirmed, the vermiform appendix as well as the tube and ovary proving diseased, the former must be removed as well as the latter. Delagénière believes that the disease of the appendix is secondary to inflammation of the uterine appendages, being propagated by contact, adhesion, and abscess. The method of resection is the same as for primary disease of the appendix.

(153) Extrauterine Pregnancy and Electricity.

Nedorodoff (*La Gynécologie*, October 15th, 1897) strongly advocates electricity in the treatment of ectopic gestation. He admits very strict limitations, but no statistics or cases are published in his report. The earlier stages should, he insists, be subjected to electricity; indeed, it is the right treatment for this abnormal condition when still in progress, but not advanced beyond the middle of the third month. More boldly, Nedorodoff declares that electricity is the sole possible method when the early abnormal gestation has degenerated into hæmatosalpinx. Even advanced periuterine hæmatocele cannot, in his opinion, be treated otherwise. All other cases of extrauterine pregnancy, he admits, come within the domain of surgery.

(154) Osteomalacia not due to Lactic Acid.

Hofmann (*Centralbl. f. inn. Med.*, No. 14th, 1897) denies the truth of Schmidt and Weber's theory that mollities ossium is due to a purely chemical change, excess of lactic acid in the marrow playing the principal part in removing lime salts from the bones. It has been claimed, as proof of this theory, that lactic acid may be found in the urine of patients suffering from mollities, and the lactic acid test is still recommended by some authorities as a valuable assistant in the early diagnosis of the disease. Hofmann has had the opportunity of examining two patients with well-marked mollities. The urine of both was carefully examined on several occasions, and several different tests for lactic acid were used each time. Not a trace of lactic acid was ever found. Heiss finds that lactic acid does not produce mollities even when administered steadily and for a long time to animals.

THERAPEUTICS.

(155) Treatment of Tuberculosis.

V. Ziemssen (*Münch. med. Woch.*, January 4th, 1898) draws attention to the still very imperfect state of our knowledge of tuberculosis. He discusses (1) the specific, and (2) the climatic dietetic treatment. His results with the new tuberculin have been unsatisfactory, although Koch's directions were strictly adhered to. Occasionally the author has observed an increase of weight, diminution of expectoration and fever, while tuberculin was being used, but the same has been known to occur under other conditions. In local tuberculosis of the skin, bones, and joints, perhaps the results of the tuberculin treatment may be different. For instance, the author has recently seen a case of lupus under Posselt's care in which tuberculin had brought about a cure. V. Ziemssen says that he has no expectations either from the tuberculin treatment or that by Maragliano's serum. The condition of the lungs is far too complicated to admit of a direct action of the tuberculin upon the pathogenic microbe. The lung cannot be protected from the streptococcus and staphylococcus infections. The value of the open air treatment of phthisis is universally admitted. The advantages of high altitudes lie (1) in the air being purer and freer from gases and bacteria; (2) in the greater amount of ozone present; (3) in the diminished pressure; (4) in the rays of the sun being warmer, the air drier, and fog rarer; and (5) in the increase of the red cells induced. The increase in the hæmoglobin does not depend on the high altitude. The hardening of the body against atmospheric agencies by the outdoor life and hydrotherapy as well as the increased appetite can be brought about elsewhere. The disadvantages of high altitudes consist in the variation in wind, rain, and snow which may make acclimatisation difficult. There is also the difficulty in the journey. The treatment in the majority of cases has to be carried out at home. Some well-known sanatoria show that phthisis can be as well treated in ordinary as in high altitudes. The author lays much stress on the formation of such sanatoria for all classes of the community; in them really lies the future of a more efficient treatment of phthisis.

(156) Serumtherapy of Tetanus.

Engelmann (*Münch. med. Woch.*, 1897, Nos. 32-4) has collected 17 cases of tetanus treated with Behring's antitoxic serum, and 34 treated with that of Tizzoni and Cattani. Of the former two preparations were used, a dry one of which 5 grains contained 500 nominal antitoxic units and a solution of which 5 c.cm. contained 5 units. The Tizzoni antitoxin was in 4½-gramme flasks, and had an immunising power of 1:100 mill. The author concludes that all three preparations possess the power of favourably influencing the course of the disease, while none of them is dangerous, even in large doses. He recommends that they should be used as early as possible, and in doses proportional in size to the severity of the disease. No definite difference could be satisfactorily established between the mode of action of the two serums.

(157) Somatose.

Richard Drews, of Hamburg (*Centralbl. f. inn. Med.*, January 22nd, 1898), again returns to the subject of the action of somatose upon the lactating mammary gland. His more recent investigations in 75 cases have confirmed his views based on 25 previous cases. In addition, the author has received reports from others of 45 cases. Somatose has no action upon cases in which the mammary gland is deficient or incapable of secreting. It is contra-indicated also in diseases such as tuberculosis, in which suckling should be avoided. The administration of somatose in suitable cases produced in a few days an abundant secretion of

milk. In nearly all the cases remedies and measures supposed to act as galactogogues had been used without effect. In nearly all cases of deficient mammary secretion the patients complained of headache, pains in the back and in the breasts, loss of appetite, etc. When the somatose restored the secretion, these pains disappeared. When the deficient secretion was due to febrile processes the author always waited a few days before giving somatose, and then a prompt result was obtained. One teaspoonful, consisting of 12 to 16 g., was given three time a day in milk, cocoa, etc. Recently the author has used iron somatose in anæmic states, also with good results. The use of somatose was mostly begun early, and in cases where prematurely born infants could not be suckled owing to a deficiency of milk, it was given during the last few months of pregnancy. These results have also been confirmed by other observers. The author would explain the effects of somatose not by any improvement in the general condition but by a direct stimulating action on the gland tissue itself.

(158) Post-Diphtherial Paresis Cured by Antitoxin.

Silvestri (*Rif. Med.*, January 8th, 1898) reports the case of a child 10 years of age who had an attack of diphtheria on November 1st lasting four or five days, and untreated. On November 8th nasal regurgitation took place; on November 12th slight strabismus, paresis lower half of the face, disappearance of pharyngeal reflex and knee-jerks, inability to stand or walk without falling. On November 13th an injection of 10 c.cm. of antidipheritic serum was given and repeated. On the seventh day slight improvement set in, and by the twenty-seventh day the child was completely cured. In the author's opinion this was due to the treatment adopted, and not to the lapse of time; and he reports the case as an example of the benefit of antitoxin treatment even in the paralytic stage of diphtheria.

(159) Treatment of Gonorrhœa.

Janet (*Revue de Thérapeutique Médico-Chirurgicale*) gives his experience since 1892, when he introduced the irrigation treatment for gonorrhœa. He thinks irrigation the best method, and employs it during the earliest stages of the disease, in fact, as soon as the disease is established. He strongly condemns the practice of leaving the urethra alone during the early stage, and thinks such practice is the cause of most cases of chronic urethritis, and of most of the complications of gonorrhœa. He maintains that during the first few days the gonococci cause damage to the urethral mucous membrane, and also infect the organism with toxins. Janet states that during his five years' experience he has had no case of stricture or other complication when irrigation was begun in the first stage. As regards drugs Janet still considers permanganate of potassium the best, although in cases where this failed to act well he had good results with itrol and argonin; he has not yet tried Neisser's protargol. His abortive treatment consists in irrigation of the anterior urethra only (unless the second glass of urine is turbid, showing that the posterior urethra is affected), twice a day with a lukewarm solution of permanganate, 1 in 2,000, from a height of 50 cm. above the penis. After three or four days the irrigations are done every eighteen hours, then every twenty-four hours, the solution being strengthened up to 1 in 1,000 by the eighth day. If the discharge is then mucous, and contains no gonococci, the irrigation is left off. If there is recurrence, or if the posterior urethra is affected from the first, complete irrigation of the whole urethra is practised, the anterior urethra being previously cocainised. The douche vessel is raised to 1 metre above the penis, and the patient told to attempt to micturate; the solution is then allowed to pass slowly into the bladder by regulating the pressure carefully. For these cases he starts with a 1 in 4,000 solution, which is afterwards gradually increased. If cases are not quickly cured by this method, extra-urethral accumulations of gonococci are present either in the prostate, the urethral glands, or crypts of the fossa navicularis. Such cases he treats by a kind of gentle massage of the prostate or urethra, as the case may be, to express all secretions containing the cocci, followed by irrigation. In cases of stricture complicated with gonorrhœa he uses the ordinary irrigation if the stricture is slight; if more severe, dilatation and irrigation combined at the same sitting. Cystitis, if due to simple irritation, he treats by irrigation of the bladder with small quantities of permanganate; if the cystitis is infective he combines silver nitrate with the permanganate (1 in 4,000 of each), or else a 1 in 4,000 solution of itrol. If orchitis is present he suspends irrigation till the acute symptoms have passed off.

PATHOLOGY.

(160) The Pathology of Addison's Disease.

Max Mosse (*Fortschritte der Medicin*, November 1st, 1897) remarks that there are four methods of studying the function of an organ which is not accessible to direct observation during life: (*a*) The observation of the changes which are induced by extirpation of the organ in animals; (*b*) clinical observation of cases in which the organ has been destroyed by operation or disease; (*c*) isolation of the substances which are formed in the organs, and which are either necessary for the body as a whole or are stored up as deleterious waste products to be got rid of; (*d*) a combination of (*b*) and (*c*), a method carried out by the author in the present case of Addison's disease. The case was fatal, and extracts were carefully prepared of the diseased suprarenal capsules, the liver, and the spleen. Small quantities of these were injected into animals (white mice and guinea-pigs), with the result that in nearly every case they died within a few hours, after symptoms of motor paralysis. The toxicity of the extract of the liver was distinctly less than that of the spleen and suprarenals. The author attributes the toxicity of the suprarenals to the caseous material, but attributes the toxicity of the other organs to the presence of a poison in the blood which is normally got rid of by means of the suprarenals. Corresponding doses of liver and spleen extracts from a patient dead of chronic nephritis were quite harmless. It is pointed out that if this view is correct the observations of Szymanovicz and Cybulski on the formation of a nerve and muscle stimulant in the capsules will not alone explain the fatal effects of the destruction of those organs. The author concludes that the capsules have a twofold function, namely, the production of a physiologically active substance and the destruction of a poisonous one. The symptoms and the fatal result of Addison's disease are to be explained by the failure of both these functions.

(161) Lardaceous Disease.

N. P. Krawkow (*Arch. f. exper. Pathologie u. Pharmakologie*, vol. xl., Parts 3 and 4) comes to the conclusion that the amyloid substance found in lardaceous disease is a peculiar combination of albumen and chondroïtin sulphuric acid, a combination therefore of two substances which form part of the normal body. Thus the rule holds good that processes and products observed in disease have their representatives likewise during healthy states of the organism. In lardaceous disease, however, the amyloid substance is out of place, like fat is in some cases of fatty degeneration of organs. In health the amyloid-like substance occurs evenly distributed and diluted in the arterial walls, whereas in lardaceous disease it is massed together in a concentrated form, so that its presence can be detected by agents, which fail to demonstrate it in normal organs.

(162) Fusion of the Kidneys.

Meschinet de Richemond (*Journ. de Méd. de Bordeaux*, November 14th, 1897) exhibited at a recent meeting of the Bordeaux Anatomical Society a specimen in which the kidneys were united, not by their upper ends into the rarely seen horseshoe kidney, but by their lower extremities into the more common crescentic form. The author believes the greater frequency of fusion of the lower renal extremities to be due to the oblique position in which these organs normally lie with their lower ends approximated. The specimen came from a negro, 24 years of age, and had given rise to no symptoms of inconvenience during life. The point of union was at the sacro-lumbar articulation, and was marked by great thinning out of the renal tissue.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(163) Angina Pectoris and Pericarditis.

J. Pawinski (*Deut. Arch f. klin. Med.*, vol. lviii, p. 565) lays stress on the occurrence of "stenocardial" feelings and "cardiac asthma" in patients with dry pericarditis, and considers how such cases may best be distinguished from the true angina pectoris resulting from changes in the coronary arteries. Pericardial friction may be absent, at least in light cases, and at the commencement. When, however, in a hitherto healthy individual the symptoms come on suddenly, and last for some hours without any, or with only short, intermissions, and when nitro-glycerine and even morphine fail to give relief, one should always suspect pericarditis, especially if local antiphlogistic remedies, such as wet cupping or leeches, gives relief. Hot precordial applications were found more useful than cold ones. The occurrence of fever and the history of a previous chill, wetting, or sore throat speak likewise in favour of pericardial origin for the symptoms, and so does the decided increase of the symptoms by precordial pressure. The latent form of pericarditis may be accompanied by a sudden change in the character of the pulse, which may be weaker and arrhythmic. Muscular rheumatism, intercostal neuralgia, pulmonary infarction, embolism of the coronary arteries, and rupture of the heart must of course be distinguished. Pawinski gives an interesting review of the literature of the subject.

(164) Pathogenesis of Tabes.

Obersteiner (*Berl. klin. Woch.*, October 18th, 1897) remarks that the exact mode of origin of this disease is still doubtful. The etiology of the disease and its pathological anatomy provide the chief means for throwing light on the pathogeny. The author refers to the relation of syphilis to locomotor ataxia. He rather inclines to the view that tabes should be classed as a tertiary manifestation of syphilis. Probably exposure to cold, traumatism, poisons can call forth or help to bring about the appearance of the disease even in the absence of syphilis. In the morbid anatomy the questions arise as to whether the whole of the direct prolongation of the posterior roots in the cord degenerates, or whether fibres starting in the posterior columns are also affected. It must be noted that not all the fibres of the posterior roots are necessarily involved, and that where only a certain number of fibres in the roots are degenerate, the whole of their prolongation in the cord may be affected, as well as Lissauer's zone and Clarke's column. The degeneration of the intramedullary prolongation of the posterior roots is, however, alone established. It is more difficult to decide why this degeneration takes place. The posterior roots spring entirely or in the greatest measure from the cells of the posterior ganglion. Peripheral sensory fibres, spinal ganglion cells, posterior roots, and their prolongation constitute a sensory proto-neuron. Tabes has been looked upon as a disease of this centripetal proto-neuron, but this is only partially correct. The degeneration in the peripheral nerves is not constant, and not always in proportion to the disease in the roots and columns. The disease in the spinal ganglion is often not intense enough to explain the disease in the cord. The author then draws attention to the posterior roots, and especially to the place where they enter the cord. Here the medullary sheath is reduced to a minimum, and the author and Redlich look upon this as a place of less resistance. Here a meningeal lesion or altered blood vessels would suffice to cause degeneration in the roots. The cause for the degeneration of the intramedullary fibres with or without the extra-medullary must lie in some toxic agent. A primary interstitial overgrowth or disease caused by vascular change can no longer be accepted as a sufficient explanation.

(165) Glycosuria in Cancer of the Pancreas.

Bard and Pic (*Revue de Médecine*, No. 12, 1897) record two cases of cancer of the pancreas, in which glycosuria was present, and give a review of a large number of cases previously published by various authors. From a study of these cases they draw the following conclusions: (1) Glycosuria may be present in cancer of the pancreas in two classes of cases: in one class the sugar in the urine is abundant and there are the other symptoms of true diabetes; in the second class there is a simple glycosuria, slight and variable. (2) True diabetes is not dependent on cancer of the pancreas, but the latter condition may predispose to the former; on the other hand, the development of cancer of the pancreas may sometimes cause diabetic symptoms to diminish or disappear. (3) The mild form of glycosuria is due to an ascending cirrhosis of the pancreas owing to obstruction of the pancreatic duct; it is present only in a small number of cases. (4) The secondary cirrhosis of the pancreas is associated with similar cirrhosis of the liver.

(166) Enervation.

Margain has recently made a study (*Thèse de Bordeaux*, 1897) of a certain morbid condition related on the one hand to hysteria, on the other to neurasthenia, and which includes in point of fact many phenomena met with in neuropathic patients, and aptly included under the title of "enervation." The author points out that owing to modern conditions of life the effects of overstrain, the multiplicity of emotions, and, it must be admitted, the glaring defects of modern education, enervation promises to become more and more frequent, and persons so affected seem to become less able to cope with it. Loss of energy, sleeplessness, defective digestion, and irritability are among its leading symptoms. Against this, a treatment both moral and physical must be directed, the general health must be carefully watched, for it would seem that such patients are under the influence of a form of auto-intoxication, due, it may be, to constipation, confinement, or alterations in nutrition produced by excesses.

(167) School Hygiene and Tuberculosis.

L. Woodruff (*Cleveland Med. Gaz.*, September, 1897), in an article on school hygiene, dwells upon the danger of the communication of tuberculosis in schools. No one having this disease should be permitted to attend or to teach school. A case is reported in which a school teacher seems to have contracted phthisis in a room infected by his predecessor, who had died of the disease; but obviously other explanations may be forthcoming.

SURGERY.

(168) A New Form of Parietal Incision in Laparotomy.

L. Lennander (*Centralbl. f. Chir.*, No. 4, 1898) describes a new method which he has practised in the course of the last two and a half years of incising the abdominal wall in both lateral and median laparotomy. This method consists in a vertical section of the anterior layer of the sheath of the rectus and free exposure without incision of this muscle, the outer margin of which is pushed inwards in the lateral operation, and the inner margin outwards in median laparotomy. The posterior layer of the sheath thus exposed is incised in the same direction and to the same extent as the wound in the skin. In closing the abdominal wound four rows of sutures are applied, one to the incision in the peritoneum and the posterior layer of the sheath, the second for fixing the replaced margin of the rectus to the corresponding margin of the sheath, the third for closing the wound in the anterior layer of the sheath, and the last for bringing together the edges of the skin. The following advantages are claimed for this method in lateral section, by which the outer margin of the rectus is exposed and the muscle is pushed towards the middle line: (1) It permits free access to the abdominal cavity; (2) the surgeon may in most cases avoid division of the nerves supplying the rectus; (3) between the sutured wound in the peritoneum and posterior layer of the sheath and that in the anterior layer of the sheath of the rectus is interposed a thick layer of undivided muscle, the full blood supply of which is maintained, as the inferior epigastric artery is not cut through in this operation; (4) there is less risk in this than in other methods of localised necrosis and sloughing of aponeurotic structures,

as the abdominal incision is made through parts that are freely supplied by blood. In median laparotomy the incision is made not exactly in the middle line, but through the sheath of the rectus, at a distance of from ½ cm. to 2 cm to the right or left of the linea alba. The rectus muscle is then pushed outwards and the abdomen opened as in the lateral operation by incision of the posterior layer of the sheath. In addition to the advantages common to this and the lateral operation there is that of preservation of the linea alba with its decussating tendinous fibres. In cases of chronic abdominal distension in which there is wide separation of the recti the author would cut along the linea alba, and, when closing the wound, open the sheath on both sides and stitch together the inner margins of the exposed muscles.

(169) Schleich's Infiltration Anæsthesia.

Krecke (*Münch med. Woch.*, October 19th, 1897) observes that the limits of the application of this method are more narrow than was at first supposed. The use of the ether or ethyl chloride spray before the first injection is more unpleasant to the patient than the puncture itself. At times the infiltration gives rise to pain, even when the tissues are not inflamed. The author has noticed this more frequently recently, even after having performed more than 150 operations under this method. In inflamed tissues he prefers the ether spray or bromethyl narcosis; 10 g. of bromethyl produced rapidly a narcosis lasting three to five minutes. Even when pain is complained of during the development of the local anæsthesia, the incision afterwards is always painless. There is no doubt about the anæsthesia produced by Schleich's method. The anæsthesia of the deeper parts is much better effected before the incision is made, as the fluid may escape from the cut surface. Schleich stated that the differentiation between the tissue layers becomes even more marked, but Krecke has not been able to confirm this. The recognition of small glands may be difficult owing to the infiltration. The infiltration also tends to obliterate the differentiation between healthy and diseased tissues. Schleich's method is well adapted for the removal of foreign bodies or of small tumours. In operations for carcinoma, where glands have to be removed, the author uses general anæsthesia. The method is useful in phimosis, and also in scraping lupous tissue. The author has not employed it in transplanting skin, as he doubts whether the flaps would live. Difficulty may be experienced in removing an ingrowing toenail under this method. It is particularly useful in secondary suture, and plastic operations may be performed under it. In tracheotomy it is of exceptional value, and urethrotomy can also be easily and painlessly performed under it. The author has employed it in one case of strumectomy, and in two laparotomies. In abdominal surgery Schleich's method has found a wide application. It is also of value in certain operations on the genito-urinary organs. The anæsthesia is also of benefit in some neuralgias and pains. The author concludes that Schleich's method is destined to take the place of general anæsthesia in many cases.

(170) Testicular Complications of Elephantiasis.

Le Dentu (*Rev de Chir.*, January, 1898) describes a form of chronic enlargement of the testis frequently met with in the inhabitants of warm countries, and associated in many instances with elephantiasis of the scrotum and lower limbs. This form of testicular enlargement, which is associated with swelling and induration of the epididymis and spermatic cord, even when existing alone, is held to be invariably of the nature of elephantiasis, and not due, as supposed by many authorities on tropical diseases, to any malarial influence. The author has found after castration and during an operation for hydrocele that this condition, for which he proposes the name of elephantiasis of the testis, is the result not of any enlargement of the testis itself, but of distension of the lymph vessels of the tunica albuginea, epididymis, and cord, and of excessive proliferation of the connective tissue. Such changes, he points out, are met with in cases of well-marked elephantiasis of the integument and of inguino-scrotal lymphangioma. In discussing the primary cause of elephantiasis of the testes together with enlargement of the lymph vessels of the scrotum and groin, the author, whilst recognising the difficulties which at present prevent the acceptance of filariasis as an invariable factor, holds that the filaria undoubtedly plays a considerable part in the genesis of such morbid conditions. He is disposed to think that in cases of elephantiasis the filaria which is so frequently, though not constantly, present in such disease, acts not on tissues in a state of health, but on a lymphatic system that has been modified by residence in a warm climate. Cases of undoubted elephantiasis nostras prove that the parasite is not indispensable for the development of the lymphatic lesions, but, at the same time, it is pointed out that elephantiasis is as rare in Europe as the morbid conditions attributed to the filaria are frequent in warm countries.

MIDWIFERY AND DISEASES OF WOMEN.

(171) Complete Spontaneous Inversion of Uterus in Labour.

Solberg (*Monats. f. Geb. u. Gyn.*, November, 1897) records a bad case of this accident in a woman, aged 23. She had been subject to anæmia, dyspepsia, dysmenorrhœa, and leucorrhœa, and had been twice pregnant and aborted on both occasions. The labour proceeded satisfactorily till a quarter of an hour after the delivery of the child; then symptoms of internal hæmorrhage set in. Half an hour later, when the patient had become very pale and restless, a strong pain occurred, and the placenta was expelled suddenly. In separating it—for it partly adhered to something—fluid blood and clot escaped in abundance from the vagina. Two hours and three-quarters later the physician arrived; the patient was then in a sinking condition. Complete inversion of the uterus was discovered; the fundus was as large as a fœtal head and covered with adherent clot. Part of the membranes were packed between the body of the uterus and the vaginal walls, having been torn off when the placenta was removed. The inversion was replaced by steady pressure on the uterus; the resistance suddenly ceased, the organ immediately slipping upwards into its normal position. The patient was so exhausted that it was thought dangerous to give any anæsthetic. There was no more hæmorrhage, and the uterus contracted well, but the patient died four hours later, though stimulants were given freely.

(172) The Influence of the Menopause on the Kidney.

Le Gendre (*Gaz. des Hôp.*, December 21st, 1897) has studied the renal manifestations which occur, especially in women of a neuro-arthritic diathesis, at the menopause. When the menstrual flow is delayed, diminished, or suppressed, the kidneys may become congested; this is particularly marked in cases with a floating kidney, which then becomes swollen, painful, and less easily displaced. The following symptoms may depend on the renal congestion, diminution in the urinary excretion, slight albuminuria or temporary hæmaturia, lumbar pains, nausea, and intense headache. They may, however, be relieved by bleeding or by the application of leeches to the lumbar region or os uteri, and by milk diet and theobromine. If the patient is the subject of chronic renal disease, the symptoms may become very acute at the period if the menstrual flow be suppressed. In the case of a woman, aged 49, with high tension pulse and polyuria, three attacks occurred each at a menstrual period; in the first there was transitory hemiplegia and partial coma, with albuminuria and vomiting, which were relieved when the delayed menstrual flow appeared. A second attack disappeared after bleeding, but the third attack was fatal from uræmia and convulsions.

(173) Lacerated Cervix, Cancer, and Emmet's Operation.

Fischel, of Prague (*Wiener klin. Rundschau*, 1897, No. 9) reports a case which is interesting in view of one of the arguments used by advocates of operation for lacerated cervix. He recently removed a cancerous cervix from a woman, aged 40. In 1883 Breisky had performed Emmet's operation on the same patient for laceration with ectropion. The cancer was a well-defined tubercle, about three-quarters of an inch long, on the site of the first operation. Breisky, as Fischel observes, strongly advocated Emmet's operation on the ground that cancer was especially apt

to develop an ectropion from laceration. But in this case, though the operation succeeded, it offered no protection against cancer which assumed the characters usually observed when it develops on the everted surface of a cervical laceration.

(174) Primary Peritoneal Pregnancy.

Picqué and Rochard (*La Médecine Moderne*, October 30th, 1897) claim to have observed a genuine example of this disputed type of ectopic gestation. A woman, aged 25, was suspected to suffer from salpingitis. Abdominal section was performed. A sessile tumour was discovered in the iliac fossa; it was extracted without great difficulty. The tube and ovary on the same side were normal, and on the strength of this fact it was concluded that the tumour, which bore a small embryo, was a primary peritoneal gestation sac. Hartmann, in discussing this case, said that he had once examined a peritoneal or abdominal pregnancy, and found on strict scrutiny that it had been grafted on the peritoneum by a little pedicle which was a fimbria of the Fallopian tube. He suspects, therefore, that many cases of so-called primary abdominal or peritoneal pregnancy originally developed on a tubal fimbria, afterwards lost or transformed beyond recognition. Rochard further related a case of what he termed an abdominal fœtal cyst of tubo-ovarian origin. He diagnosed uterine fibroid, and did not know the true nature of the disease till he had opened the abdomen. A dead macerated fœtus filled the cyst, in the walls of which was the ovary.

(175) Deciduo-cellular Tissue Discovered in the Peritoneum.

Josefson (*Nordiskt. med. Arkiv*, vol. xxx, 1897, No. 28) reports the necropsy of a woman who died under chloroform one hour and a half after delivery. The serous coat of the uterus and adjacent peritoneum bore white tubercles, some as big as a pea. On microscopic examination their structure resembled decidual tissue.

(176) Tuberculosis of Genital Tract in Childhood.

Urbanovich (*L'Obstetrique*, December 15th, 1897) describes the *post-mortem* appearances in the case of a girl aged 11, who died of dysentery. There was tubercle of the lungs, liver, intestines, peritoneum, and Fallopian tubes. He holds the disease of the tubes to be secondary in this case. Primary tuberculosis of the tubes, brought about by the passage of the bacillus tuberculosis along the vagina and uterus into the tubal canal, may occur in children, but seems quite exceptional. Though the disease was advanced in the tubes in this case, tubercle always develops rapidly when it implants itself on those structures, whether primarily or otherwise. In no case of tuberculous peritonitis does advanced disease of a Fallopian tube necessarily imply that it was the original seat of tubercle.

(177) A Plea for Vaginal Operations in Disease of Appendages.

Maslovsky (*Journ. d'Obstét. et de Gynéc. de St. Petersbourg*, December, 1897) advocates posterior colpotomy in operations for removal of diseased appendages, and even for tumours of those structures. He has performed the operation 122 times since February, 1891. He acts on a principle based on experience, for he finds that adhesions of the appendages to neighbouring organs are weakest towards Douglas's pouch, and the lower the appendages themselves are displaced the less firm will be the adhesions. Hence diseased appendages are most accessible from below, since, even if they be big and adherent, the operator can begin at the point where the adhesions are weakest.

THERAPEUTICS.

(178) The Tuberculin Treatment of Phthisis.

Rembold (*Zeitschrift für Hygien. und Infectionskrankh.*, December, 1897) records 70 cases, which were treated with tuberculin during the winter of 1890-91. The cases were not published before, as the writer desired to watch their subsequent progress before announcing the result of the treatment. All the patients were suffering from phthisis, and are divided into two groups: (1) those in whom there was a mixed infection, as shown by much high temperature and in some cases by bacteriological examination; (2) those in whom there was pure tuberculosis as shown by the slightness or absence of fever. The conclusions arrived at are the following: In cases of the first group there was no improvement whatever after the use of tuberculin, but the writer considers that it is often very difficult to be certain that a case is one of mixed infection, and therefore much care is to be exercised in the decision as to treatment. In cases of pure tuberculosis there is little or no benefit from tuberculin if the case is already advanced; but in cases of moderate severity considerable and lasting improvement occurred in several of the cases treated. Where tuberculin was used in the early stages of the disease there were invariably good results, in many cases complete cure, and in the others lasting improvement. The dangers of tuberculin treatment may be reduced to a minimum by careful attention to the requirements of each case: the dose especially must be suited to each individual case.

(179) Picric Acid in Eczema.

Aubert (*Thèse de Paris*, No. 34, 1897) says that speaking generally picric acid is indicated in those forms of eczema in which the inflammation is acute and superficial, and where the lesions are mostly epidermic. The keratoplastic action of the remedy cannot display itself in the chronic forms of eczema accompanied by induration of the skin and particularly by epidermic thickening; picric acid is incapable of modifying these chronic lichenoid eczemas. On the other hand the keratogenic properties of the agent find an excellent field of action in acute eczemas with swelling of the integument, superficial ulceration, and weeping. Under its influence the inflammation rapidly subsides, and the acid forms on contact with the ulcerated and oozing surfaces a protective layer composed of coagulated proteid substances and of epithelial *débris* under which healing takes place rapidly. Picric acid has the further advantage that it immediately stops itching; this effect is produced in chronic as well as acute forms of the disease. In acute eczema a cure is effected in from ten to fifteen days. The method of use is as follows: A solution of 12 g of picric acid in one litre of tepid boiled water is painted over and somewhat beyond the affected surfaces; the parts are then wrapped in lint wrung out of the same solution, and over this is placed a covering of cotton wool. It is important that oiled silk should not be used, otherwise maceration of the surface is pretty certain to occur. The dressing should be renewed every two or three days. Brousse recommends that before the picric acid is applied the cutaneous surface should be washed with a solution of boric acid.

(180) Tenaline.

Tenaline is a new preparation recently prepared from the areca nut, with the object of retaining the tæniafuge alkaloids of arecaine, arecaidine, and guvacine, and getting rid as far as possible of the very toxic principle known as arecoline. F. Hobday, Professor of Therapeutics, Royal Veterinary College, London (*Journ. Comp. Path. and Therap.*, December, 1897) has been able to observe its effects and test its efficacy in rather more than 60 cases of animals, and concludes that tenaline is certainly of great value as a vermifuge, especially for tapeworms, in the dog and cat. It has the advantage over powdered areca nut of being much easier to administer as its bulk is small, and a purgative is not a necessary adjunct. Its effect on ascarides is also well marked, as they may either be vomited up from the stomach or expelled in the fæces. Its action on the bowels is to increase secretion and stimulate peristalsis, so that even if no worms be present an animal which has received a full dose passes liquid evacuations. Above all, its general effect seems invariably to be to cause expulsion of the head as well as the segments, thus getting rid of the most troublesome part of the parasite. With reference to dose, that recommended is an allowance of 1 minim for each pound of body weight, and it is also advised that it should be administered pure, or with the addition of a little water. The latter was found to give the best results, the addition being made of an equal amount or rather more. That the results are better when water is added, especially where small doses of the medicine are prescribed, may be explained by the fact of its being necessary to give a sufficient quantity of fluid to reach and come in

direct contact with the worm which is lying in the intestine. Although 1 minim for each pound of body weight is usually sufficient, Hobday's observations appear to show that this amount can be doubled with perfect safety. The only noticeable effect was vomiting, temporarily increased peristaltic movement of the bowels, accompanied by colic, and the passage of liquid fæces; there were no after-results except dulness and slight diarrhœa. That tenaline is, however, toxic was illustrated by the case of a Maltese terrier weighing 4 lbs., and known to be the host of intestinal parasites. One drachm of pure tenaline was given subcutaneously. In ten minutes the animal became unconscious, respirations became very shallow, and five minutes later the dog was dead. *Post-mortem* examination revealed nothing diagnostic, and the intestines contained living specimens of ascarides and tæniæ. Tenaline is unsuitable for subcutaneous use.

(181) Treatment of Tabes.

Eulenburg (*Deut med. Woch.*, October 28th, 1897) first refers to the new conception of tabes as a disease of the sensory neuron. At first the treatment of tabes was looked upon as useless. As regards prognosis each case must be individualised. Besides pursuing at one time a more rapid and at another time a slower course, the disease may become stationary even in its earlier stages, so that a relative recovery may be spoken of. This arrest of the disease may give rise to error in estimating the value of a given treatment. Nothing is expected nowadays from derivative and revulsive measures, and the same may be said of the silver treatment. The improvement that may take place under treatment by electricity, by baths, and by the local application of heat or cold cannot be satisfactorily explained. The value of antisyphilitic treatment is difficult to estimate. The author agrees that a large percentage of sufferers from tabes have previously had syphilis, but syphilis is not the sole or essential cause of the disease. Thus antisyphilitic treatment cannot be described as a radical treatment. Relative recovery is not more common under antisyphilitic treatment than under other methods. Cases of tabes with previous syphilis may improve with or without antisyphilitic treatment. Harm may sometimes be done by injudicious antisyphilitic treatment. Eulenburg emphasises the value of morphine and strychnine under certain circumstances in this disease. Potassic iodide, antipyrin, antifebrin, etc., are of uncertain value in the pains of locomotor ataxy. As regards so-called organotherapy, treatment by spinal cord extract and by Brown-Séquard's fluid has been tried. The author says that he has used spermin in subcutaneous injection in bad cases with considerable improvement. Nerve stretching ought never to be resorted to. Suspension, etc., may produce improvement, especially in the ataxia. The author speaks highly of Frenkel's treatment of ataxia by compensatory exercises. Thus the ability to work may be preserved or even recovered. The question of sending patients to health resorts is next discussed; it must of course largely depend on the means of the patient.

(182) Treatment of Tertiary Syphilis of the Nose and Throat.

StClair Thomson (*Laryngoscope*, January), after referring to the routine prescribing of iodide of potassium in all tertiary affections, either alone or else seconded by some mercurial preparation given by the mouth, enters a strong plea for inunction of mercury in all syphilitic affections of the upper air passages, and in all stages, unless there are other contra-indications. The insidiousness, and at the same time the rapidity, with which a tertiary process may spread in the nose or throat, sometimes causing little inconvenience to the patient, always render it a grave lesion. The disastrous after-effects are only too well known. Syphilitic stenoses of the larynx and trachea are amongst the most resistant of strictures, and when the nose is disfigured it leaves a condition which is at present irremediable, and often causes the greatest social inconvenience and mental distress to the patient. In connection with the collapse of the bridge which results in the saddle back, nose, or *nez en lorgnette*, StClair Thomson contends that it is not caused by the loss of the septum. He points out that the nose is not kept up by the septum; if it were, collapse would always follow when this support is removed. Large portions of the septum are often removed by operative procedures without resulting collapse. The bridge, like all bridges, is maintained by the arches on either side. When falling-in of the nose does occur it is due either to disease affecting these lateral arches, or else to the retraction of cicatricial tissue; and how much syphilitic scars retract is evident from what is visible in tertiary affections of the pharynx. This view of the case is confirmed by Thomson's observations, for in all cases which he has been able to submit to inunction of mercury before the collapse of the bridge took place it has never ensued, even when the case did not come under treatment in time to prevent the loss of a large part of the septum.

(183) Washing out the Intestines.

Clozier (*Gazette des Hôpitaux*, September 11th, 1897) recommends the free washing out of the intestine in infectious enteritis. In four cases he threw up nine pints of water pure, saline or with salol, and repeated the process of irrigation of the intestinal tract by enema several times in each case with good results.

(184) Holocaine and Cocaine in Ophthalmic Practice.

Lagrange and Cosse (*Recueil d' Ophtal.*, November, 1897) have used the hydrochlorate of holocaine, in 1 per cent. solution, in 50 cases. They conclude as follows: (1) It is particularly efficacious when the conjunctiva is inflamed; (2) it is to be preferred in operations for strabismus, chalazion, pterygium, and the extraction of foreign bodies from the conjunctiva and cornea; subcutaneously or subconjunctivally, four to eight drops of the above solution may be used; (3) for iridectomy and cataract extraction a combination is recommended (holocaine 0.05, cocaine 0.10, water 10); (4) cocaine in 2 or 3 per cent. solution is the anæsthetic to be preferred in operations in which it is desirable to lower the intraocular tension.

PATHOLOGY.

(185) The Action of Saliva on Bacteria.

Triolo (*Rev. d'Igiene e di Med. Prat.*, An. 2, N. 12, Naples) has reinvestigated the above subject by new methods. Having first thoroughly disinfected the mouth with corrosive sublimate 1 in 1,000 or permanganate of potash and then washed out with distilled water until no trace of the germicide could be detected, the saliva was taken fresh from the mouth, and its effect observed on various germ cultures. The result showed that the saliva possessed decided bactericidal properties, killing old cultures (five days) and diminishing the number of recent ones (eighteen hours). Saliva filtered (as in Sanarelli's experiments) has very little germicidal action. Very little difference was observed between parotid and submaxillary saliva as regards their action on germs. Indeed, the author believes that the chief germicidal action of the saliva must be attributed to the secretion of the muciparous glands of the mouth. A short bibliography is given.

(186) A Simple Method of Estimating the Toxicity of the Urine.

Pelligrini (*Rev. Sper. di Freniatria*, 1897, p. 114) has made a number of experiments which go to show that the amount of potassium indoxyl sulphate in the urine is a reliable index of the degree of its toxicity. He recommends the employment of Primavera's test for this substance, which is as follows: Pour from 4 to 5 c.cm. of urine into a test tube, and add slowly one-third the volume of pure concentrated sulphuric acid. Cool the mixture by dipping the end of the test tube into cold water. Add 1.5 c.cm. of pure chloroform. Mix thoroughly, and then allow the chloroform to settle to the bottom of the tube. If potassium indoxyl sulphate is present in normal quantity, the chloroform has a light-blue tint. When it is present in excessive amount the chloroform has a deeper blue colour proportionate to the excess. Information regarding the degree of toxicity of the urine is of special value in cases of insanity, in the causation of many of which auto-intoxication is now known to be a very important factor. Pelligrini believes that the increased toxicity of the urine in such cases is chiefly due to abnormal fermentation within the gastro-intestinal tract; it is important, therefore, to correct any disorder of digestion in these patients.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(187) Meralgia Paræsthetica.

Sabrazès and Cabannes (*Rev. de Méd.*, November, 1897) give an account of the literature of this affection, and report a case. It occurs more frequently in men than women. The cause of the disease is not always apparent. The chief symptom is an abnormal sensation on the antero-external aspect of the thigh in the distribution of the femoro-cutaneous nerve, felt during rest as well as on standing or walking. This sensation may be converted into one of more or less severe pain under certain circumstances. Most often the sensation consists of numbness, accompanied or not by formication. Slow, rapid, or prolonged walking or standing may bring on the attack. Usually it is arrested by sitting down for some minutes. The left side has been more frequently involved than the right; occasionally it has been bilateral even from the commencement. The paræsthetic zone extends from the anterior superior spine to the external condyle. Sometimes it occupies patches only. Sensation is variously affected. The hypæsthesia and hypalgesia is often partial. This objective disturbance of sensation is a prominent symptom in the case. This meralgia is usually a disease by itself, but tabes and diabetes have been noted as causes. The affection may undergo spontaneous cure. Treatment gives variable results. Massage and electricity have been found useful; rest is essential. Resection of the nerve might be advisable in inveterate cases. The femoro-cutaneous nerve is usually derived from the second lumbar. The diagnosis is generally easy; it must be distinguished among other affections from hysteria. Bernhardt would look upon the disease as a neuritis of the femoro-cutaneous nerve associated with an infective illness (enteric fever), with an intoxication, or with tabes, or due to the action of cold. The femoro-cutaneous nerve is superficially placed, and hence is, according to some authorities, exposed to traumatism. The authors themselves regard the disease as a more or less profound neuritis of the femoro-cutaneous nerve which may be caused by direct traumatism. The position of the nerve exposes it not only to direct injury, but also to stretching and to congestive accidents. This change in the nerve may also be associated with an infection, intoxication, or a disease of the central nervous system.

(188) Neurotic Pemphigus followed by Keloid.

Kaposi, at the Gesellschaft der Aerzte of Vienna (*Neurol. Centralblatt*, November, 1897), showed a case of neurotic pemphigus in a young man. A few weeks after a burn of the dorsum of the right hand blebs appeared, and spread up the arm from the seat of injury. The left side of the body subsequently became affected, and keloid growth appeared where the blebs had been. The pemphigus and its results are to be explained by an irritation of the nerves, which starts at the seat of injury and spreads up to the vasomotor centres in the spinal cord. Keloid thus produced, whether by zoster gangrænosus hystericus, or by pemphigus neuroticus, has a more favourable prognosis than idiopathic keloid. The former variety of keloid usually subsides after months or years.

(189) Anæmia Splenica.

Jawin (*Berl. klin. Woch.*, August 16th, 1897) relates a case occurring in a man, aged 25, in whom there was considerable anæmia and great enlargement of the spleen. There was a greater diminution in the hæmoglobin relatively to the number of red cells, as in chlorosis. There was a very large number of nucleated red cells, presenting characteristic figures, 3,840 such cells existing in 1 c. mm. of blood. The nucleus took on the stain intensely. Sometimes a nucleus was found in a red cell exactly resembling the large nucleus of a mononucleated leucocyte. The nucleus was sometimes placed centrally and sometimes in the periphery, even extending into the plasma. All stages of extrusion of the nucleus could be seen. The author says that there was evidence of regenerative processes taking place in the nuclei of the red cells, but at the same time there were also unmistakable signs of degeneration and chromatolysis. The author refers to recorded cases in which a great number of nucleated red cells have been found. In his case the patient suffered from an infective disease of doubtful nature, lasting four months, and in consequence of this an enlargement of the liver and spleen ensued. Severe changes in the blood occurred. The temperature varied at first between 36.5 and 37.2° C. The number of the red cells steadily diminished, but the hæmoglobin did not diminish *pari passu*. Many megalocytes and microcytes were present. Analogous changes took place in the white cells. The number of lymphocytes was increased relatively to the number of white cells. The number of neutrophile cells was lessened, and the number of mononucleated white cells and eosinophile cells normal. Later the lymphocytes diminished and the mononucleated leucocytes increased. The number of white cells, however, never exceeded the normal, and fell proportionately with the diminution in the red cells. There was no albumen or sugar in the urine. The body weight remained constant. The lymphatic glands were eventually enlarged. Nose bleeding was frequent, and lately a hæmorrhage occurred into the lens. The disease was neither pernicious anæmia nor leukæmia. It differed from lienal pseudoleukæmia by the slight enlargement of the glands, and especially by the great number of nucleated red cells. It resembled v. Jaksch's infantile pseudoleukæmic anæmia. The characteristics of the affection were (1) considerable anæmia with an almost normal temperature; (2) greatly enlarged and hard spleen; (3) enlarged and hard liver without pain; (4) very slight enlargement of lymphatic glands; (5) greatly diminished red cells with poikilocytosis, megalocytes, microcytes, and occasionally chromatophilia: (6) very numerous nucleated red cells with degenerative and regenerative processes; (7) relatively slightly decreased hæmoglobin; (8) no leucocytosis; and (9) small number of Erhlich's "Mastzellen."

SURGERY.

(190) The Prevention of Hernia after Laparotomy.

Volkovitch (*Vratch*, No. 5, 1898) regards the ordinary methods of incision in abdominal section as the great cause of subsequent weakness of the abdominal walls, and the formation of herniæ. In place of the incision along the linea alba he recommends an incision through either rectus. The wound is closed by a series of sutures at different depths. The first series of interrupted sutures takes in the peritoneum and the inner layer of the rectal sheath. The second series of interupted sutures unites the remaining layers with the exception of the skin, which is stitched up separately by a continued suture. In operations on the lateral regions of the abdomen the principle to be observed is to separate the tendino-muscular structures along the course of their fibres, as each layer comes into view, and not to divide the muscular fibres across in the plane of the wound, as is usually done. Taking the lower lateral region for instance, all incisions should have the direction from above downwards and inwards—that is, parallel to the fibres of the external oblique, which are then separated along their course. To ensure sufficient room for the same procedure with the underlying layers it is necessary to make the first incision somewhat longer than usual. The margins of the external oblique muscle are then forcibly drawn apart with retractors, and this separates them from the underlying internal oblique muscle. The latter is then opened up in the same way along its whole length, from the spine or crest of the ilium to the sheath of the rectus. The margins are again drawn apart with retractors, and the transversalis comes into view. As this muscle is continued inwardly as an aponeurosis, the separation of the fibres towards the rectal sheath has to be done with a knife or scissors. The direction of the last fissure is transverse, and the peritoneum is divided in the same line. To prevent it from slipping under the tense muscular margins during the course of the operation, it is fixed to the muscles by a few temporary stitches. The wound is closed after the operation by a series of sutures in layers. The first series unites the peritoneum and the transversalis

muscles, the second the internal oblique, the third the external oblique; the fourth, unlike the others, is a continued suture, and includes the skin only. In some operations in this region—as, for example, for the removal of the appendix vermiformis, the above method does not give quite enough room. In such cases the author recommends the enlargement of the wound by continuing the last transverse incision through the rectal sheath, and even through the margin of the rectus muscle, and not the addition of a longitudinal incision along the outer margin of the sheath, as recommended by some surgeons.

(191) The Remote Results of Operations for Renal Tuberculosis.

Bangs (*Annals of Surgery*, January, 1898) has collected 135 cases of nephrectomy and nephrotomy for renal tuberculosis, with the object of determining the effects of operative treatment in such cases in prolonging life and effectually curing the disease. The results of this inquiry, though avowedly meagre, are regarded as interesting and worthy of repeated study. The first and undoubted conclusion which they warrant is, the author states, that the immediate results of the operations for renal tuberculosis in the cases in which such treatment is indicated are brilliant. On the other hand, it has been found difficult to arrive at any definite conclusion as to the remote results. So many of the cases have been lost sight of that the conditions of the patient after intervals of months or years, and during these months and years, are unknown. It is thought, however, that these statistics favour the view that operative intervention affords better remote results by expectant treatment and suitable hygienic measures.

(192) Diaphragmatic Hernia.

Dolinsky (*Vratch*, 1897, p. 1343) states that a healthy woman gave birth to a female child, which was very livid. The heart could be felt beating on the right side. All the usual methods to promote respiration proved useless, and the infant speedily died. A necropsy was performed, and the left half of the diaphragm was found wanting. The abdominal viscera had entered the thoracic cavity, pushed the heart to the right, and pressed the left lung, which formed a very small solid mass.

(193) Treatment of Articular Tuberculosis by the Roentgen Rays.

Kirmisson (*Bull. et Mém. de la Soc. de Chir. de Paris*, Nos. 1-4, 1898) has recently communicated the case of a young man, aged 17, affected with tuberculous arthritis of the wrist. The joint was much swollen measuring over 9 inches in circumference, and the integument on both its dorsal and palmar surfaces presented numerous fistulous openings. The joint was exposed daily to the *x* rays for fifteen minutes. During this treatment, which was continued for two months and a half, there was a rapid diminution of the fungous swelling and complete cicatrisation of the sinuses on the dorsal surface. After an interval of five months, when the patient was again seen by the author, the patient, though much relieved, was not cured. The subsequent application of an elastic bandage was speedily followed by complete cure, all the sinuses closing, the wrist being reduced to its normal size and regaining all its movements. In the discussion on this communication the good results were attributed mainly to the rest of the limb and its conservative treatment, from which in young subjects greater success may be expected than from any operative measures.

(194) Operation Statistics of Cataract.

Knapp (Moscow Congress: *Annales d'Oculist.*, October, 1897) gives some details of his last 400 operations. A. *Method:* Incision entirely in the margin of the transparent cornea, in a plane parallel to that of the iris, and with a small conjunctival flap. Corneal incisions tend to be complicated by adherence of the iris and by keratitis; more peripheral incisions by prolapse of iris and cyclitis. The conjunctival flap protects against infection of the wound, a matter of great importance in countries where conjunctival and lachrymal affections are common. The opening in the capsule is made with a cystitome, behind the upper part of the iris near the equator of lens, and is 6 or 7 mm. in extent. He expresses the lens without introducing the spatula, and has given up using any instrument of traction, even in complicated cases. Reposition of the iris by means of a sound or stylet slightly curved. Binocular bandage. Patient need not be kept in bed. The dressing is changed after twenty-four hours, sooner if necessary; minute inspection of the eye and of the wound; immediate ablation of any prolapse of iris. B. *Reaction, complications of healing:* (*a*) Inflammatory processes. (1) slight iritis six times, good results in five, medium ($\frac{1}{200}$, complicated) in one; (2) irido-cyclitis twice, $\frac{1}{200}$; (3) hæmorrhage in anterior chamber once, $\frac{2}{200}$, after discission, $\frac{2}{8}$; (4) retarded closure of the lip of the wound, once: eleventh day, pleuro-pneumonia, recovery, $\frac{2}{8}$: (5) partial infection twice, hypopyon $\frac{1}{200}$, chronic iritis $\frac{1}{\infty}$; (6) total suppuration of cornea four times after difficult operations; three times primary infection, once after severe injury (fifth day), V=0. (*b*) Mechanical complications (1) a small number of posterior synechiæ; (2) anterior synechiæ and small entanglements; (3) prolapse of iris 26 times out of 345 simple extractions =7.6 per cent. (the other 55 extractions were + iridectomy). In the majority of cases first night. Immediate removal with cocaine or ether. Healing without accident 25 times; partial suppuration of the wound in a bronchitic, good projection. (*c*) Secondary operations, 160=40 per cent. (1) Enucleation once after the extraction of a traumatic cataract dislocated into A.C. (2) Iridectomy 5 times; glaucoma after simple extraction once, $\frac{3}{200}$; acute glaucoma after discission 3 times, good results; glaucoma after discission of the capsule with + T. and H, symptoms of cyclitis and hypopyon once, $\frac{2}{8}$; and in one case cure of glaucoma (after discission) without operation (eserine, morphine). (3) Extraction of the thickened capsule after useless attempts with one and two needles, twice good. (4) Discission of secondary cataract 153=38 per cent., no benefit, twice; in all the other cases, including the 6 cases of glaucoma, augmentation of the visual acuity. (*d*) Optical results good ($\frac{2}{200}$ to $\frac{2}{8}$), 359=90 per cent.; medium ($\frac{3}{200}$ to $\frac{1}{200}$) 29=7 per cent.; bad (0 to $\frac{1}{\infty}$) 12=3 per cent. Knapp strongly advocates the simple operation.

MIDWIFERY AND DISEASES OF WOMEN.

(195) Malignant Uterine Disease after Pregnancy.

Lönnberg and Mannheimer (*Monats. f. Geburtsh. u. Gynäk.*, January, 1898) discuss two instructive cases, both operated upon by Netzel. One occurred some time ago, before the discovery of deciduoma malignum, and was published as a peculiar case of cancer. The patient died six months after delivery from cachexia and hæmorrhage, treatment proving ineffectual. There were metastases in several of the internal organs. It was noted at the time that the cells in the tumour substance resembled decidual cells. The second patient was 42. She was delivered of a large hydatid mole; flooding ensued, and a month after delivery the uterus, much enlarged, was removed. Twelve days later some metastatic deposit was removed from the vagina. A year later the patient was still in good health. The growth sprang from the posterior wall of the uterus, and the microscopic appearances indicated carcinoma syncytiale uteri. The author's have collected all reliable cases of sarcoma deciduo-cellulare, syncytial carcinoma, serotinal tumour, and sarcoma of the chorion, that is to say, all instances of malignant disease apparently associated with the histological products of gestation, and collectively termed deciduoma malignum. Out of 53, 29 were associated with normal and 24 with vesicular ciolar pregnancy.

(196) Metritis Dissecans in Childbed.

Beckmann (*Vratch*, 1897, p. 1342) reports two cases. A primipara, aged 23, became infected during delivery and died on the sixth day. There was purulent peritonitis; typical endometritis dissecans was also detected, with a sphacelated area as wide as a crownpiece, which became detached during examination, displaying a perforation. The second patient was also a primipara, aged 29. Basiotripsy had to be performed, and the

patient was infected during labour. On the twenty-sixth day the uterus expelled a piece of its mucosa 5 inches long, triangular, and 3½ inches wide at its base; next day another piece 1½ in. long came away. The temperature, which had been high, fell, and the patient made a rapid recovery.

(197) Vicarious Menstruation after Hysterectomy.

Marsi (*La Gynécologie*, October 15th, 1897) states that total hysterectomy was performed on a young woman in August, 1896. Ever since she observes that the urine becomes bloody at intervals precisely corresponding to former monthly periods. Between the times of appearance of blood the urine is absolutely normal, and at no time is there any evidence of disease of the urinary tract.

THERAPEUTICS.

(198) Exercise Treatment in Nervous Diseases.

Goldscheider (*Deut. med. Woch.*, 1898, Nos. 4 and 5) more especially refers to tabes dorsalis and some other diseases. He maintains that the ataxia is due to a disturbance of the muscular sense. He first learned to use exercise treatment in v. Leyden's clinic; but this method has been subsequently largely extended by Fraenkel. In the so-called paraplegic stage of tabes slight flexions and extensions, etc., of the limbs may be made when the patient is in bed. Help may be given by lightly supporting the thigh or leg. A chair may be inverted over the foot of the bed, and the patient can then exercise himself in touching the cross bars or by putting the feet in between them. The movements are first made with the eyes open and afterwards with closed eyes. Ample periods of rest must be allowed so as not to produce fatigue, otherwise an exhaustion lasting over several days may result. The author confirms Fraenkel's opinion that even in these advanced cases improvement may be produced and the patient may even walk again. Some patients do not improve, and sometimes the exercises have to be given up owing to the pains which are apparently induced by them. In less advanced cases various movements may be practised to improve the gait, and the author figures many pieces of apparatus adapted to this end. A chair on four legs with rollers may be useful. The treatment must be persisted in over long periods of time. The chief point lies in many movements performed without fatigue and with intervals of rest. The author draws attention to the absence of the sense of fatigue. In some patients there is an atony of the muscles, and here electricity and massage must be employed as well. The knee and hip joints may be supported by bandaging. The author then refers to the treatment of intentional tremor by exercises. He looks upon this tremor as closely allied to ataxia, and as capable of improvement by exercises. In chorea some improvement may also be produced, but the exercises should be carried out only once in the day or once in two or three days. The good effects of this treatment in writers' cramp are well recognised. In athetosis also some improvement may be produced by long-continued exercise treatment. In speaking of paresis and muscular atrophies the author draws attention to the value of exercises carried out in a bath, and especially in peripheral neuritis. In neuralgias, etc., exercises, particularly of a passive form, may be useful. In articular pains left after rheumatism, and more especially after contusions, this treatment is valuable. Goldscheider thinks that much more attention should be given to exercise treatment.

(199) Tuberculin R.

Huber, of v. Leyden's clinic (*Berl. klin. Woch.*, February 14th, 1898) reports upon 18 cases in men, including 15 cases of phthisis, treated with tuberculin R. The injections were carried out precisely according to Koch's directions. In only 4 patients could the whole course of the treatment be completed or nearly completed; in the majority it had to be abandoned at different stages. In these 4 cases 17, 18, 21, and 25 injections respectively were given, the largest dose being 10, 10, 25, and 30 mgr. In all, 38, 48, 82, and 198 mgr. respectively were given in 34, 43, 68, and 103 days. In nearly all the patients there was a local reaction, including pain, redness and infiltration. Twice abscesses occurred, which contained the staphylococcus and were apparently due to contamination of the fluid. Fever is the most important general symptom, and in no case was this wholly absent. Even after 0.03 or 0.06 mgr. considerable rises of temperature were noted. Other general symptoms were mostly insignificant. In one case of advanced phthisis there occurred, after a dose of 0.5 grm., shivering and rise of temperature, with marked shortness of breath, and collapse and cardiac weakness. In two advanced cases hardly adapted to the treatment death occurred during the course of it. In doubtful but apparently suitable cases the treatment had to be broken off. Of great significance for this method of treatment are the four cases which appeared specially suitable and in which the complete or almost complete course was possible. The author finally summarises his results. Among five advanced cases of phthisis two were possibly injured by the treatment, but this could not be proved, no effect being noted in the other three. In two doubtful but apparently suitable cases the condition remained as before. In three other suitable cases, one was improved, the other two remained as before; in these cases the treatment had to be discontinued. In four cases really suitable for the treatment, one remained unchanged, one was almost cured but only temporarily so, and two were considerably improved. Of course, these numbers are too small to permit of conclusions, but yet it would appear that by a judicious selection of the cases and a careful use of the remedy no harm will be done, but apparently no striking or specific effects are to be looked for.

(200) Hyoscin and Hyoscyamin as Mydriatics.

Emmert (*Correspondenz-Blatt. f. Schweiz. Aerzte*, February 1st, 1898) is surprised at Landolt and Gygax saying in their recent *Pocket-book of Therapeutics for Ophthalmic Surgeons* that "hyoscin and hyoscyamin have been abandoned owing to their uncertain action." For the last sixteen years Emmert has found hyoscin to be the most constant and reliable mydriatic we have, and this has been the experience of many others. As the hydrobromate it is a very stable salt, and has been introduced into both the Swiss and German (under the name scopolamin, which is identical with hyoscin) pharmacopœias. Its advantages over atropine are: (1) It dilates the pupils more quickly; (2) the mydriasis does not last so long, and the paralysis of accommodation lasts about the same time, and this is an advantage for healthy eyes; (3) it cures inflammatory affections of the eye quite as quickly as atropine; (4) even if used for a long time it has no local irritant action (as "atropine conjunctivitis"); (5) it is five times more powerful; (6) used in solutions as strong as 1 in 500 or even 250, any general intoxication is very rare, and even if present quickly passes off and is not dangerous; a solution of 1 in 1,000 is usually sufficient, and never causes poisoning; (7) intraocular tension is not influenced in chronic, though hyoscin is contraindicated in acute, glaucoma; (8) instead of stimulating the cerebral cortex and quickening the pulse like atropine, it has a paralysing action on the former and slows the pulse, and hence is much safer in heart disease. Considering the weaker solutions required, it is practically as cheap to use as atropine. As regards hyoscyamin, its little use as a mydriatic is not due to an uncertain action, but because it has no advantages over atropine.

(201) Biniodide of Mercury as a Substitute for Potassium Iodide.

Hobday (*Journ. Comp. Path. and Therap.*, December, 1897) says the great objection to the use of potassium iodide in veterinary practice, especially for the larger animals, where full and repeated doses have to be employed, is its expense. About two years ago, in the course of conversation, Professor Edgar, of Dartford, observed that he had been using the biniodide of mercury as a substitute for potassium iodide in the treatment of actinomycosis, and that he found the treatment to be attended with an equal amount of success. The recipe used consisted of from 2 to 6 gr. of biniodide of mercury dissolved in an ounce of water by the aid of from 5 to 10 or 12 gr. of potassium iodide. Hobday has been able to collect a fair number of instances in which it has been tried

successfully on cattle suffering from actinomycosis. In the treatment of chronic elephantiasis and of tumours of the shoulder and elbow, the biniodide has been used in the clinic at the Veterinary College as a substitute for potassium iodide, and an equal amount of success has been obtained together with the advantage of obtaining the alterative effect of the mercury. Professor Edgar has also tried it successfully in the horse for the dispersal of glandular enlargements, for capped elbows, and for scirrhous cords; he has also found it a valuable agent as an astringent to the lacteal secretion in mares and cows. Summing up the results, Hobday concludes: (1) That the agent is very much cheaper to use than potassium iodide. (2) That the results which he has been able to collect regarding its value in actinomycosis confirm those which Professor Edgar had already obtained. (3) That the observations which Professor Edgar and himself had been independently making at the same time upon its therapeutic effects as a resolvent, specific and alterative in certain diseases of the horse, appear to demonstrate its value, and to agree in almost every detail. (4) They have each found that, as is frequently the case with potassium iodide, failure to continue with the medicine for a sufficiently long time may cause a relapse, the tumours again enlarging.

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(202) Protargol in Gonorrhœa.

Goldenberg (*New York Med. Journ.*, January 22nd, 1898), who claims to have used "Janet's" irrigation method for gonorrhœa before Janet published his first paper, gives his views on irrigation and also on the use of protargol. He thinks the irrigation treatment good if the patient is seen early enough, but not if inflammatory symptoms are pronounced. He irrigates the anterior urethra in the same way as Janet, by means of a douche can and glass cannula; but differs from Janet in using a large hand syringe for the posterior urethra, claiming that the resistance of the compressor muscle can be overcome more easily than by increased water pressure. Goldenberg thinks protargol better than any other silver preparation, and uses it as a 1 per cent. solution for the anterior urethra, and ½ to 1 per cent. for the posterior urethra. He instructs the patient himself to do the former, the surgeon doing the posterior urethra (when affected) by the above-mentioned syringe. Goldenberg has also used pure protargol powder insufflated through an endoscope tube, and had good results by this method. He has also used a protargol ointment 10 per cent. applied by steel sounds retained in the urethra for about 15 minutes.—Strauss (*Monats. für prakt. Derm.*, vol. xxvi, 1898) has also employed protargol in gonorrhœa in about 30 acute cases. He uses Neisser's method of prolonged injection, beginning with a ½ per cent. solution, and increasing the strength up to 3 per cent. for anterior urethritis. The injections are done three times daily, the morning and mid-day ones being retained in the urethra for 10 to 15 minutes, the evening injection being retained 20 to 30 minutes. For posterior urethritis he uses either instillation with a 10 per cent. solution or irrigation with a ½ to 1 per cent. solution. He recommends the treatment to be begun as early as possible, and to be kept up for several weeks, and for some days after all gonococci have disappeared. To show the absence of irritation in using protargol, Strauss quotes Benario, who administered 12 c.cm. of a 10 per cent. solution to a fasting dog by the mouth. During the next four days no symptoms appeared, and *post mortem* no signs of irritation were found in the mucous membrane of the œsophagus or stomach. Benario also applied protargol to the conjunctival sac of a dog. A 5 to 10 per cent. solution caused no effect; a 20 per cent. solution caused some chemosis and lachrymation; the solid powder caused cloudiness of the epithelium and glueing together of the eyelids, which, however, cleared up in five days, leaving the eye normal. Strauss also recommends protargol as a general antiseptic and dusting powder for all kinds of wounds.

PATHOLOGY.

(203) The Typhoid Bacillus in Butter Milk.

E. Frenkel and Kister (*Münch. med. Woch.*, February 15th, 1898) refer to an epidemic in Hamburg in which women and children were largely affected, and which appeared to be spread by milk. In a small number of the cases butter milk was suspected to be the infecting agent. Milk has been repeatedly shown to be the means by which typhoid fever is spread. Sterile milk is an excellent cultivation medium for the typhoid bacillus, and non-sterile milk does not lead to the destruction of the typhoid bacillus rapidly enough to preclude infection. The authors then refer to the published researches upon the vitality of the typhoid bacillus in milk. Within their knowledge no similar investigations have been made with butter milk. Butter milk has an acid reaction, which becomes more marked after a few days. Thus only certain microbes can continue to live in it. Whereas most microbes present in it can readily be distinguished from the typhoid bacillis by their colonies, yet there is one variety which resembles it in its growth. It was however found to be non-motile and gas-producing. Another variety was actively motile, and produced no gas, but its colonies were rounded and finely granular, and it gave a negative reaction with typhoid serum. The authors also investigated the vitality of the typhoid bacillus in butter milk. The degree of acidity present did not suffice to kill this microbe. Researches were made to find out how long the typhoid bacillus could live in the presence of the gas and acid-producing microbes of butter milk. In all the butter milk tubes infected with the typhoid bacillus, a gradual diminution of the typhoid bacillus was noted, so that at room temperature they could not be found after three days, and at body temperature not after twenty-four hours. It is easily understood how the typhoid bacillus can live in sterile butter milk, and yet die in the non-sterile, owing to the increase in the acid-producing microbes present. These researches, although perhaps not exactly corresponding to the natural conditions, yet show that a small quantity of typhoid bacilli are not destroyed in butter milk for at least forty-eight hours. The possibility of infection by butter milk must be admitted, and caution must therefore be exercised in its consumption during typhoid epidemics.

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(204) A New Pathogenic Microbe (Tetragenes Citreus).

Vincenzi (*La Rif. Med.*, December 17th, 1897) describes a new pathogenic organism found by him in a suppurating submaxillary gland of a child, aged 3 weeks. Three other varieties of tetragenes (t. septicus, albus, and aureus) have been described by authors in connection with suppurating glands. The present variety is distinguished by its colour. It shows itself as a coccus dividing crucially into groups of four. It is not stained by Gram's method. In some specimens a capsule could be detected. It grows well in all the usual nutritive media. Gelatine is softened by it, but not truly liquefied. It grows in milk without coagulating it and giving a citron-coloured sediment. It is quite innocuous for animals. Infection in the author's case probably occurred through the mouth.

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(205) A Rapid Method of Identifying the Plague Bacillus.

Hankin and Leumann (*Centralbl. f. Bakter.*, xxii, 16 and 17) record a rapid means of distinguishing this bacillus with certainty. It has long been known that the organism in old agar cultures gives rise to peculiar involution forms which resemble torulæ in appearance, and cannot be mistaken for any other microbe. Some of these forms having been found in brine from the neighbourhood of an infected village, it occurred to the authors to see if they could not be rapidly produced by growing normal plague bacilli on salted agar. This was found to be the case, and the microbe can be recognised by the formation of these within twenty-four hours of its inoculation on agar containing 2.5 to 3.5 per cent. of salt, the culture being kept at a temperature of 37° C. At first no obvious growth occurs, but at the end of the time mentioned huge spheres and pear-shaped bodies are seen which are quite unmistakable. The exact proportion of salt required varies with the nutrient value of the agar employed. In applying the test to the detection of plague bacilli in the blood of animals dead of the disease, it is best to make a culture first on ordinary agar, and then to subcultivate on salted agar.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(206) Localisation of Cerebral Tumours by means of Roentgen Rays.

G. Obici and P. Bollici (*Rivista di Patologia Nervosa e Mentale*, October, 1897) record three cases in which the position of bullets in the cranial bones was ascertained by means of skiagraphs, and also one in which a sarcoma of the brain was localised in the same way. In the last case the skiagraphs were taken only after death. They showed the tumour in the form of a comparatively dark, fairly well-defined area; and the accuracy of their evidence with regard both to the position and size of the new growth was fully confirmed by subsequent dissection. This successful result led the authors to institute a number of experiments upon the heads of cadavers, with a view to ascertaining more precisely the value of radiography in the localisation of various kinds of gross brain lesions. After taking skiagraphs in the natural state, they simulated various pathological conditions by introducing tumours into the brain, forming artificial cysts, etc. They then made a second series of skiagraphs in the same positions and compared them with the first. A full account of the results of these experiments the authors reserve for a future communication. They state, however, that they are satisfied that radiography is capable of adding to the uncertain clinical methods hitherto employed a new method of localising gross cerebral lesions which is more sure because more direct. It can at least aid clinical diagnosis by confirming it or throwing doubt upon it, and should be employed in all cases in which there is reason to suspect the presence of tumours or foreign bodies in the brain, more especially when operative procedure is contemplated. It is to be observed that these conclusions are at variance with those of Jolly in the British Medical Journal of January 23rd, 1897, p. 235, who was unable to demonstrate tumours in the brain by means of Roentgen photographs.

(207) Widal's Reaction in Typhoid Fever.

Tschistovitch (*Bolnitchnaya Gazeta Botkina*, No. 51, 1897) discusses the significance of Widal's reaction in the course of typhoid fever and its value in prognosis. On the author's recommendation the serum of 80 cases of typhoid was tested by Yepifanoff, and it was found that in the more severe cases the reaction was generally feeble until the later stages of the disease, while in cases where the reaction was well marked the disease ran a favourable course. This caused the author to look on the agglutinating power of the serum as a useful quality, and as tending to produce immunity. To throw further light on the subject he tested the serum of a number of cold-blooded and warm-blooded animals who were injected with agar and bouillon cultures of typhoid bacilli. Perches, frogs, and tritons were used to represent the one class, and rabbits and guinea-pigs the other. The cold-blooded animals developed but little of the agglutinating power of the serum, and this only after about a month after infection, while the rabbits and guinea-pigs showed the reaction markedly, and as early as the second and third day. In the warm-blooded animals the leucocytes were counted, and it was found that their number diminished for the first two or three days, and then again increased slowly until they reached the normal, or sometimes even increased above the normal. The reaction in the serum was not developed until the leucocytes sank to the lowest number, and were commencing to increase again. As a result of these experiments the author is inclined to regard this power of agglutination in the serum as a sign of immunity. It is not developed in cold-blooded animals, as the temperature of their blood is unfavourable to the growth of typhoid bacilli while phagocytosis in them is very active, as was seen in one of the tritons, whose leucocytes were full of the bacilli. The presence of Widal's reaction is, however, not of much value in prognosis, as the latter in typhoid fever depends on many collateral causes, such as the state of the heart, of the intestines, of the central nervous system, etc.

(208) Hæmorrhages in Neurasthenia.

Ausset (*Rev. de Méd.*, n. 9, 1897) draws attention to the fact that hæmorrhages may occur as part of the symptomatology of neurasthenia. Taking hæmatemesis as a type of this class of hæmorrhage, if one examines the blood it is seen to be more watery than ordinary blood, the hæmoglobin hardly reaches a fifteenth of the normal figure, and the red corpuscles are much reduced in number. If the blood is allowed to stand it separates into three layers: at the bottom a thick greyish layer, then a reddish very thin stratum, and finally a liquid layer redder than the middle one. Microscopic examination showed the bottom layer to consist chiefly of pavement epithelium cells, the middle of red corpuscles almost devoid of colour, and the upper layer of dissolved hæmoglobin. There are generally well-marked vasomotor disturbances in other parts of the body. The hæmorrhage, as a rule, only occurs once, and the patients are able to go to work in a very short period. The author believes these hæmorrhages to be due to a vasomotor paralysis, causing rupture of the capillaries situated near the glandular epithelium. Recurrence may occur, but usually at a long interval. The prognosis is good.

(209) Cardiac Bruits of Nervous Origin.

Hoeflmayr (*Münch. med. Woch.*, iv, 1897) records the occurrence of cardiac *bruits* in neurasthenia and hysteria. He found a systolic murmur twice, and a diastolic murmur once in 334 neurasthenic or hysterical patients. He suggests that in these conditions the centre for innervation of the cardiac muscle is weakened by venous congestion and increased acidity of the blood, which by stimulating the centre excessively soon exhaust it, so that the cardiac muscle contracts imperfectly. This explanation would be as applicable to the diastolic as to the systolic *bruit*, for imperfect closure of the semilunar valves may be produced by feeble contraction of the muscles which assist diastole.

SURGERY.

(210) Colotomy and Colostomy.

V. Mosetig-Moorhof (*Wien. med. Presse*, 1898, No. 3) reviews the accepted methods of forming an artificial anus, and describes a modification in technique which he has found useful in certain cases. The classical inguinal operation—that of Littre—he terms "colostomy;" it consists in bringing the descending colon up to the anterior abdominal wall, to which it is stitched, the opening into the lumen being made at once or after an interval, according to circumstances. The disadvantage of this simple operation is that it does not entirely prevent the entry of fæces into the distal part of the bowel, where they stagnate and tend to set up inflammatory troubles. To prevent this Madelung introduced true colotomy, in which the gut is cut completely across, the proximal portion brought out of the wound, and the distal closed by sutures and returned to the abdomen. This method is not entirely satisfactory, as the distal end tends to become distended by the accumulation of its own secretion, which may eventually lead to ulceration. König and Sonnenburg obviated this difficulty by leaving the upper extremity of this portion open and attached to the abdominal wall below the artificial anus; by this means the rectum can if desired be irrigated from above. Another means of preventing fæces from getting into the rectum is by the formation of a spur, first devised by Verneuil, whose original plan has been considerably improved by later surgeons. The disadvantage of both this method and colotomy is that they require a long and freely movable colon and mesocolon; when they are inadvisable or impracticable the author recommends the method he has himself devised. This consists in the ordinary operation of colostomy performed at one sitting, but preceded by partial occlusion of the distal portion of the bowel. A ligature is tied round this, occluding it to about one-half its diameter, and the bulging serous surfaces on either side are sewn together with interrupted stitches. An artificial constriction is thus produced, which prevents the accumulation of fæces in the rectum. In attaching the gut to the body wall the author first sews the serous and muscular coats of the intestine to the

parietal peritoneum, and then passes the ordinary sutures through both bowel and abdominal wall. If, however, this would lead to considerable tension, he prefers to attach the intestine to the fascia of the external oblique, leaving the skin free but shutting off the muscular planes from the risk of infection.

(211) Treatment of Senile Gangrene.

JONES (*Med. Chronicle*, January, 1898) lays down the following rules for the treatment of senile gangrene: (1) When the gangrene is limited to one or two toes and the patient's condition is satisfactory, the surgeon should be content with the expectant plan of treatment, taking precautions to lessen or prevent the effects of local septic infection; (2) when, however, the gangrene has reached the metatarsus, he should be prepared to perform the high operation—that is, amputation above the knee, or, in rare and favourable cases, through the knee-joint itself. The local treatment in limited forms of gangrene should consist in thorough cleansing of the foot and leg, free dusting of the immediate vicinity of the dead part with iodoform, and the application over this powder of sublimate or salicylic wool. The use of artificial heat in the form of poultices and fomentations must be discarded as not only ineffectual, but positively mischievous. Pain may be relieved by the internal administration of opium and the local application of a powder composed of boric acid, sublimate of bismuth, and hydrochlorate of morphine. A case is reported of amputation through the lower third of the thigh for gangrene of the leg in a man aged 57, who a fortnight after the operation was pronounced to be out of danger and making a very good recovery.

(212) The Relative Severity of Primary and Recurrent Carcinoma.

BINNIE (*Annals of Surgery*, February, 1898) in considering the question, Why recurrent carcinoma may be locally worse than the primary disease of the same region? points out that the physical condition of the disease plays an important part in this respect. The usual path of dissemination, it is stated, is through the lymphatic system, and in cancer of the breast the most important route is through the axilla. When a mamma has been extirpated, and the axilla cleared of its lymph glands, it is, of course, necessary for the seat of operation to be drained of its lymph. After occlusion of important lymphatics, as after ligature of a large artery, a collateral circulation must be established. Thus collateral circulation in the case of the breast is provided by lymphatics of secondary importance. If after removal of a cancerous breast, together with the contents of the axilla, some carcinomatous tissue that has been left on the chest wall begins to grow, the disease is disseminated by a host of subsidiary lymphatics which extend in all directions, and by roundabout paths reach the venous system at the root of the neck. In some cases of primary cancer of the breast early and excessive infiltration of the axillary glands and lymphatics may cause occlusion of the drainage route, and a condition precisely similar to that resulting from an extensive operation.

(213) Results of Forcible Straightening of the Spine.

BILHAUT (*Annales de Chir. et d'Orthopéd.*, January, 1898) gives details of cases showing the increase in height following forcible straightening of the spine in Potts's disease. He finds that in all patients attacked by this malady, adults, or children, some changes are produced in the height. In adults it diminishes before old age, even without the occurrence of the hump. In children the growth of the spine is arrested, and the height increases only by increase in the lower limbs and head. In the early stages of the disease the height diminishes. The growth of the posterior arch and the cuneiform flattening of the bodies only aggravate the gibbosity without elongating the vertical dimensions of the thorax. The child regains his powers of growth when the curve is reduced, and along with this comes a correction of the form of the thorax, and an improvement in the vital forces from the better condition under which the thoracic and abdominal viscera act.

(214) The Radical Treatment of Hydrocele.

BLOCK (*Rev. de Chir.*, February 2nd, 1898) describes a new operation for the radical cure of hydrocele of the tunica vaginalis. The old method of injection of iodine, he points out, causes a very painful inflammatory reaction, and, in common with the more recent treatment by incision and drainage, necessitates prolonged rest in bed, and does not ensure freedom from relapse. The author makes a free incision into the sac, applies a 3 per cent. solution of carbolic acid to the surface of the exposed testicle, and the whole of the inner surface of the tunica vaginalis, and stuffs the cavity with strips of iodoform gauze. After removal of the gauze on the third or fourth day, the wound in the skin is closed by catgut sutures. Of 18 cases treated by this method, the patients having been seen after intervals between eight months and five years from the date of operation, in one only was a relapse noted. This was a case of very large hydrocele in a man aged 64 years.

MIDWIFERY AND DISEASES OF WOMEN.

(215) Sphincteric Hysterotomy.

DEFONTAINE (*Archiv. Prov. de Chir.*, No. 2, 1898) describes an operation for free division of the uterine cervix intended not merely as a preliminary measure in removal of an intrauterine tumour, or to facilitate exploration of the uterine cavity, but for the purpose of abolishing the functions of the sphincter, and, consequently, of modifying the physiological and pathological conditions of the uterus. Division of the sphincter, it is held, is more effectual than amputation of the cervix in causing involution of the uterus, and, consequently, of ameliorating certain forms of metritis and of uterine deviation. Sphincteric hysterotomy, the author states, is indicated in cases in which it is necessary (*a*) to assure evacuation of the contents of the uterine cavity; (*b*) to facilitate involution of the uterus; and (*c*) to prevent the upward extension of any infective process towards the oviducts. It is regarded as a measure of radical treatment in cases of metritis and of affections of the uterus complicated by septic inflammation, particularly uterine flexions and dysmenorrhœa of uterine origin, and, also, advanced retraction of the cervix. It acts by allowing complete evacuation of the uterine cavity, and by facilitating involution of the diseased organ. The operation, which is considered as quite a harmless one, has had good results after the failure of dilatation of the sphincter and curetting. It should be practised only in cases in which the expectation of conception no longer exists, or when the gravity of the affection leads to a disregard of inconvenient consequences in this respect. It is stated, however, that an autoplastic operation may in certain cases re-establish the uterine sphincter, and favour the possibility of pregnancy.

(216) Catamenia, Kidney, and Heart.

PETIT (*Gazette des Hôpitaux*, December 20th, 1897) recently had under observation a woman, aged 39, who was attacked with small-pox eight years previously, and had suffered ever since from chronic nephritis and albuminuria with mitral obstruction and insufficiency. For a year the patient had been subject to violent dyspnœa and asystolism, always associated with the menstrual period. At the same time the show of blood had steadily diminished in quantity. Petit thinks that it is instructive and important to settle a difficult question: Is the patient undergoing a precocious but true menopause, with primary neurotic effects acting on the diseased heart? Or do the symptoms represent the amenorrhœa of advanced heart disease, already distinguished from mere amenorrhœa of debility in any disease by Dalché? Petit inclines to the former opinion, as there is a distinct periodical molimen, which though accompanied by a small and steadily diminishing show of blood, always sets up dyspnœa and alarming diminution in the excretion of urine. Digitalis and theobromine answer well between periods, but are useless in allaying the violent attacks during the catamenia. Local abstraction of blood, followed by injection of artificial serum, subdues the dangerous catamenial symptoms.

(217) Hæmatoma Vulvæ in Childbed.

WETTERGREN (*Hygeia*, Stockholm, vol. lviii, Pt. II, p. 225, 1896-7) reports that a woman, aged 42, was easily delivered of her ninth child shortly after the

membranes had ruptured. The placenta came away spontaneously. The patient went to sleep, and awoke with a feeling of tenseness in the perineum. Three hours later Wettergren discovered a hæmatoma as large as a fœtal head in the left labium and behind the vagina on the left. Three weeks later it burst through the inner side of the left labium. Then it was emptied and the tampon applied. Two weeks later the patient was quite well. A painless resistant mass could be felt for a long time towards the left side of the pelvic wall. There were no varicose veins in the neighbourhood of the genitals during pregnancy and labour, and no history of hæmorrhagic diathesis.

(218) Rupture of Ovarian Cyst into the Rectum.

Richelot and Pauchet (*La Médecine Moderne*, October 30th, 1897) report a case of undoubted ovarian cystoma, as proved by operation, which twice ruptured into the rectum. Pauchet operated and removed the ovarian tumour. Although it had of necessity communicated with the rectum no trace of adhesion to that part of the intestine could be detected when the abdomen was opened. There was also a myoma of the uterus, which was enucleated.

(219) Gonorrhœa in Married Women.

Van Schaick (*New York Med. Journ.*, November 15th, 1897) draws attention to the frequency of gonorrhœa in married women. The author examined 65 cases of married women complaining of leucorrhœa, and found gonococci in 17 of them, or 26 per cent. The examination was made by gently scraping the vaginal rugæ, the posterior *cul-de-sac*, and the labial folds with a curette, previously sterilised by heat; the preparations obtained were stained with methylene blue. Each case was examined for gonococci three times, and in several it was only at the second or third examination that they were found.

(220) Spondylolisthetic Pelvis.

Vedeler (*Monats. f. Geburts. u. Gynäk.*, November, 1897) reports a genuine case of this interesting type of pelvic deformity. The patient was 32, and had been spontaneously delivered seven months before the pelvis was measured. She specially complained of pains in the abdomen, which prevented her from holding herself upright when she walked. On careful scrutiny it was found that the body of the last lumbar vertebra had slid forwards on the first sacral. The conjugata vera measured over 3½ inches, the outlet was as much transversely, but less antero-posteriorly. As usual, no precise cause for the deformity could be determined. The patient had suffered from some renal complaint, with pains in the back.

(221) Vaginismus.

Vedeler (*Monats. f. Geburts. u. Gynäk.*, November, 1897) believes that Rode and others have confounded vaginismus with dyspareunia. The former is always of hysterical origin, and Vedeler declares that it often disappears spontaneously without treatment. The result of various operations for vaginismus is misinterpreted by many authorities. It is the hysteria that is cured by surgical interference, and with it the principal symptom in these cases—namely, hyperæsthesia.

(222) Conservative Operations on the Uterine Appendages.

J. Coplin Stinson (*Occidental Med. Times*, October, 1897) recommends that in operations upon ovarian cysts and cystic ovaries any portion of ovarian tissue which appears normal, even though small, should be retained. Resection and plastic operations should be practised in women when pregnancy is liable to occur and delivery at term can be conducted with safety. The writer emphasises his views by the record of two cases of adherent and retroverted uterus with enlarged, prolapsed and cystic ovaries, in which he excised the cysts from the glands and sutured their cut edges with fine silk. In each case the result was satisfactory; in the first, a woman 35 years of age, there was disappearance of all pelvic symptoms, and in the second the operation was followed by regular menstruation without pain or other morbid symptom.

THERAPEUTICS.

(223) Suprarenal Gland in Addison's Disease.

At a recent meeting of the Société Médicale des Hôpitaux, Béclère (*Sem. Méd.*, March 2nd) gave details of a case of Addison's disease, in which he used suprarenal gland with success. The patient was a man, aged 28, with slight tuberculous lesions at the apex of one lung, and all the classical symptoms of Addison's disease. He was given each day from 15 to 20 g. of fresh suprarenal capsule (from the ox, sheep, or calf). Subcutaneous injections of a glycerinated extract of suprarenal capsule were also given for some time. This treatment was carried out during five months, and, although the patient bore it without any inconvenience, no improvement in his condition was observed. It was not for some time after its discontinuance that he began to regain his strength and the pigmentation began to disappear. In a short time the improvement was so great that he was able to resume his occupation. The cure was maintained, and at the date of the report—three years after the treatment—he was in good health except for the tuberculous affection in his lung. Béclère points out that it is by no means certain that the cure in this case was the result of the treatment, as Addison's disease sometimes presents remissions of longer or shorter duration independently of medical treatment. He thinks, however, that the suprarenal treatment had something to do with it. He points out that the suprarenal substance does not act in the same way as thyroid medication in myxœdematous patients: whereas the latter supplies something which is wanting to the organism; the suprarenal substance appears to favour a compensatory hypertrophy of the portions of the suprarenal body which have remained healthy. It is not surprising, therefore, that its effects should be slower than those of the thyroid treatment. In the discussion on Béclère's paper, Hayem stated that in 1894 he had treated a case of Addison's disease with suprarenal substance (10 to 15 g. of fresh gland daily). The treatment was followed by notable improvement, especially in respect of restoration of strength, but it had no effect on the pigmentation. The patient died two years later. Galliard stated that the treatment had proved useless in a patient under his care. Widal said that in a typical case in which, besides the ordinary symptoms of the disease, there was great gastro-intestinal disturbance, he gave raw suprarenal capsule up to 12 g. daily, without causing any ill-effect. After some days of the treatment the strength increased, but the pigmentation remained unaffected. The patient was able to leave the hospital, but came back again in a few weeks in as bad a condition as before. This time he proved intolerant of the treatment, and quickly died. Widal thinks that the method is worthy of further trial. The effects are variable according to the stage of the disease; perhaps, also, according to the degree, the locality, and the nature of the lesion of the suprarenal gland.

(224) Eucasin.

Hugo Weiss, of v. Schrötter's clinic (*Wien. klin. Woch.*, December 30th, 1897) publishes an investigation of the utility of this food based upon the observation of 79 cases in which it was employed. Eucasin is essentially casein which has been treated with ammonia so as to render it readily soluble. The substance as at first sold had an unmistakable flavour of rotten cheese, and was consequently extremely unpalatable; but this difficulty has now been overcome, and it is said to be readily taken, particularly in the form of cakes, thick soups, and chocolate. Its principal advantages are three in number. First, it contains a very large percentage of proteid—95.65 as against 20.63 in beef. Secondly, the proteid is in an extremely digestible form, and one giving rise to very little fermentative change in the alimentary canal; in this respect eucasin is to be preferred to meat extracts, which tend after a while to produce severe indigestion. Lastly, it is by far cheaper than all similar preparations. The author found that healthy people fed upon eucasin showed within three or four weeks a notable increase in weight without any digestive disturbances. Forty of his patients were suffering from tuberculosis of the lungs or larynx, and these put on flesh in a remarkable manner on a daily diet consisting of three or four tablespoonfuls of eucasin, two to four eggs, a pint and a half of milk and some fat; the two most

marked cases gained respectively fifteen and ten pounds in two months and six weeks. Weiss considers eucasin by far the best food in chronic phthisis where there is loss of appetite, and he has also found it valuable in acute affections of the apices. In gastric disorders it is particularly indicated owing to its small bulk and ready absorbability; the author has used it in gastric ulcer, and in atony of the stomach and hyperemesis gravidarum with gratifying results. In chronic intestinal catarrh, with constipation, particularly in fat anæmic women with the uric acid diathesis, it is also most useful, and Weiss has also proved its value in 8 cases of anæmia and chlorosis. In leukæmia he states that it diminishes the output of uric acid. The results obtained in diabetes, rheumatism, malignant disease, and nephritis are too few as yet to be conclusive.

(225) Adonis Vernalis in Epilepsy.

Tekutiew (*Neurol. Centralbl.*, February, 1898) recorded the case of a boy, aged 10 years, who had suffered from severe epilepsy for two years. The fits occurred fifteen to twenty times a day, and there was commencing mental degeneration. A mixture of infusion of adonis vernalis with some codeine and sodium bromide was given, and the dose of adonis vernalis subsequently increased. The result was most successful; the attacks of epilepsy gradually diminished, and before the patient left the hospital had ceased altogether. The treatment by adonis vernalis was strongly recommended by Bechterew, who combined it with bromides, and found that some cases of epilepsy seemed to be permanently cured by it.

(226) Scarification as a Method of Treatment in Eczema and Psoriasis.

At a recent meeting of the Société de Thérapeutique, L. Jacquet (*Sem. Méd.*, March 2nd) claimed to have been the first to employ systematically the scarification method of treatment in eczema and psoriasis. He begins by carefully cleansing the affected surfaces by the constant application for a longer or shorter period of time of cold potato poultices; these are often renewed, and are covered with elastic tissue, no antiseptic being added. When the surface has been thoroughly cleansed, he scarifies with a sharp point in parallel lines, 1 to 2 mm. apart, down to the superficial layer of the derma. The blood is allowed to flow freely, and bleeding is even kept up by the application of tepid boiled water; the surface is then covered with a few folds of tarlatan steeped in the boiled water until potato poultices can again be applied. These are kept on till the next sitting, which as a rule takes place three or four days later, when every trace of the scarification has disappeared. Carried out in this manner the scarifications are well borne, even by children. The invariable result of each sitting is, according to Jacquet, that a few minutes after the operation there is increase of redness, with slight tension and heat; these phenomena last one, or at most two days, after which redness, swelling, heat, smarting, and itching are distinctly less than before the scarification. By this method Jacquet says he has cured 11 cases of eczema of different kinds, all of which had proved refractory to other recognised modes of treatment. Among them were three cases of lichenoid eczema (of the dorsum of the feet, of the hands, and of the forearms); one old bilateral eczema of the preauricular region; three of the face in adults, and four of the face in children. Six to seven sittings, according to the nature of the case, were required, and Jacquet states as a general rule that the resistance to the treatment increases in a regular ascent from acute eczematisation to lichenoid eczema. In psoriasis the method is applicable only when the discs are isolated and few in number. It is indicated particularly in lesions of the hand and face, and, in the case of women, of the chest and the upper part of the back. Its utility though limited is real; Jacquet says that by means of it he has completely cured two patients, one with psoriasis of the back of the hand in two months; the other, a woman who on account of the disease could not wear a low dress, in one month. In both these cases carefully applied treatment of other kinds had failed.

PATHOLOGY.

(227) Experimental Typhoid Fever in Animals.

E. Fraenkel and Simmonds, as the result of intraperitoneal injections of the bacillus typhosus in rabbits and mice, succeeded in producing a disease marked by hypertrophy of the spleen, mesenteric glands, and Peyer's patches. In this case, however, it was possible that the symptoms were caused not by the growth and multiplication of the bacilli but by toxic substances in the organisms originally injected. The experiments of P. Remlinger (*Ann. de l'Inst. Pasteur*, No. 11, November 25th, 1897) have, however, removed any doubts that may have existed as to the possibility of communicating enteric fever to animals. His method of procedure was to feed rabbits or rats upon cabbage or lettuce leaves soaked in water containing a culture of bacillus typhosus. The feeding was not in any case prolonged beyond ten days, and was stopped at the first appearance of symptoms of disease. Unless the diet was ample and given continuously it was found that no effect was produced. Of eight rabbits experimented upon four were unaffected, although the bacillus typhosus was found in the fæces during the whole period of feeding. Their blood did not give Widal's reaction. The fifth rabbit suffered from a febrile attack of eleven days' duration but recovered. Here again no Widal reaction could be obtained. The three remaining rabbits suffered from what may be regarded as a typical attack of enteric fever, rise of temperature, *malaise*, and diarrhœa being prominent symptoms. The blood in all three cases was shown to have an agglutinating action on cultures of the Eberth-Gaffky bacillus. *Post-mortem* examination showed congestion of the small intestine, proliferation and ulceration of Peyer's patches, with enlargement of spleen and mesenteric glands. Cultures of the typhoid bacillus were made from various organs of the body. The same method of feeding gave similar results with white rats, and in one case a pure culture of the typhoid baciilus was obtained from the blood of the heart. The proof that the Eberth-Gaffky bacillus is the specific cause of enteric fever is thus complete.

(228) Systematic Hypertrophic Cirrhosis of the Peritoneum.

Du Pacquier (*Archives Générales de Médecine*, December, 1897) describes a case of peculiar hypertrophic cirrhosis of the peritoneum which he does not regard as ordinary chronic peritonitis. The change was limited to the peritoneum, which became greatly thickened, and by its contraction brought about atrophy of the several abdominal organs. The patient was a thin man, aged 48, who for five months had suffered from ascites, followed fifteen days later by œdema of the legs; there were dilated veins over the abdominal wall, but no jaundice or hæmatemesis. The urine was scanty, but contained no albumen or sugar. Tuberculous peritonitis was the probable diagnosis. Paracentesis abdominis was performed and a hard mass of intestines being felt. The condition was then regarded as one of chronic peritonitis, the nature of the cause being left open. The patient gradually sank and died in urgent dyspnœa. At the necropsy, both layers of the peritoneum were universally thickened, especially in the flanks where it was as much as 3 to 4 millimetres thick. There was a clear ascitic effusion, but no adhesions between the parietal and visceral layers of the peritoneum. The intestines were firmly united together, and could not be separated without tearing their walls. The small intestines were surrounded by the colon, and the whole mass was pigmented and bound down to the spine. No trace of the great omentum could be found. The viscera were firmly compressed and so atrophied as to be isolated in the abdominal cavity, and to have lost their normal relations. Microscopically they were healthy. The lumen of the colon was reduced to 1.5-2 cm., the mucous and submucous coats were normal, the muscular coat hypertrophied, and the serous coat thickened and composed of parallel layers of fibrous tissue with small foci of small cells showing recent inflammation. The stomach, reduced to half its size, showed the same changes. Glisson's capsule was three times its normal thickness, the liver cells were loaded with pigment, and there was great congestion. The kidneys were atrophied, but otherwise healthy. There was no glandular enlargement, no tubercle in the lungs, and no history or evidence of syphilis, alcoholism, or malaria.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(229) Recurrent Hepatic Fever.

Friedel Pick (Reprint from *Abhandlung. d. XV Cong. f. inner. Med. z.* Berlin) records a case throwing some light on the much-debated etiology of this affection, which Charcot, who first described it, considered to be of a septic nature, but which Budd and Frerichs pronounced aseptic, like the well-known "catheter fever." The patient was a woman of 49, who suffered for eighteen months prior to her death from periodical attacks of biliary pain with fever and rigors, followed after a few days by intense jaundice; the stools varied in colour from normal to that of putty, but no stones were ever observed in them. Between the attacks the patient was still slightly jaundiced but afebrile; the liver reached two fingers'-breadths below the ribs and was tender, but the gall bladder could not be made out. Many of the attacks observed in hospital were painless; the liver enlarged rapidly during a crisis, and then slowly resumed its normal size. In most of the attacks there was exceptional leucocytosis. The patient eventually died of cholæmia, and at the necropsy the common bile duct was found blocked by a stone, the gall bladder was atrophied, and the liver had undergone the usual changes consequent upon total biliary obstruction; the bile ducts contained colon bacilli. Pick considers the fact that painless attacks sometimes occurred goes against the irritative theory of the etiology of the disease, which he is inclined to attribute to poisoning by products of, in this case, the bacillus coli communis. He lays great stress on the leucocytosis, and holds that in a case of cholelithiasis with recurrent febrile and colicky attacks the absence of leucocytosis between the attacks shows that a pyæmic or suppurative condition is absent, and that operation is therefore not contra-indicated. A further point of interest was noted by Regnard: that during the attacks there is a marked diminution in the urea excreted; this was quoted by Charcot as one of the most convincing proofs that urea was formed mainly in the liver. Pick, however, by 50 daily observations on the urea, total N, and ammonia of the case under notice, showed that all three curves fell in like degree during the crises. At the same time the amount of urine diminished, so that all the urinary changes can be explained simply as the result of the diminished amount of food and drink consumed, there being no replacement of urea by ammonia in the urine as Regnard imagined.

(230) Syphilitic Jaundice.

Werner (*Münch. med. Woch.*, July 6th, 1897) bases his observations on 57 cases occurring among 15,799 cases of early syphilis. Syphilitic jaundice is characterised by (1) its appearance in the early secondary stage; (2) the presence of fresh specific manifestations; (3) the influence of treatment; and (4) its sudden development without gastric disturbance. As regards the last point it must be remembered that slight gastric symptoms may accompany the appearance of constitutional syphilis. Long duration is not characteristic of syphilitic jaundice, as catarrhal jaundice may also last a long time. In typical cases this icterus occurs at a time when syphilis affects the skin and mucous membranes. There are some other cases in which the above characteristics are not always present. The author does not believe that mercury can be the cause of the jaundice. In these more exceptional cases caution is needed in coming to a conclusion. Among the 57 cases there were 11 atypical ones, in some of which the jaundice followed upon a relapse, in others it preceded a relapse, and in the remainder took the place of the relapse. The frequency of syphilitic jaundice was represented by 0.37 per cent. It occurs more frequently in women than men, but then the observations in women were more complete. Ordinary catarrhal jaundice may occur in the syphilitic, and here the author refers to an epidemic of jaundice in which many prostitutes and other women under observation were among those affected. The jaundice may also be an early manifestation of cirrhosis of the liver. Of course, jaundice occurring in late syphilis is quite distinct from that described above. The intensity of syphilitic jaundice varies. Xanthopsia was observed in 3 cases. In many cases the jaundice increased when the anti-syphilitic treatment was commenced, and after reaching its acme rapidly disappeared. Hepatic enlargement was not a striking feature in the disease. In 22 out of 50 cases the jaundice was noted within six months after the infection. The syphilis in most of the cases was severe. In 50 cases cutaneous affections were present in 18, affections of the mucous membranes in 16, and both combined in 16. Marked glandular enlargement was present in 41 out of 50 cases. The author then gives the views of authorities on the nature of this form of jaundice. There are two chief views, one of which would attribute the jaundice to compression by enlarged glands in the portal fissure, and the other to a papular eruption in the intestinal tract similar to that seen on the skin. There is no morbid anatomy known in support of either of these theories.

(231) Pretuberculous Enlargement of the Spleen.

Tedeschi (*Rif. Med.*, January 24th, 25th, 26th, 1898), as the result of observations on a number of prisoners, has come to the conclusion that in a certain number of cases one of the earliest signs of phthisis is an enlargement of the spleen. In several cases seen by him the only initial symptoms were some wasting, anæmia, increased frequency of pulse (this was constant), and enlarged spleen. Sometimes there was no cough and no physical signs in the lungs, and yet very shortly typical acute tuberculosis set in. As yet the author has not sufficient data to found any general statement upon. But he has seen quite a sufficient number of cases to feel warranted in drawing attention to enlargement of the spleen as an important early symptom in tubercle. Malaria, syphilis, etc., are of course excluded in these cases.

(232) A New Test for Peptone in the Urine.

E. Freund (*Wien. klin. Rundschau*, 1898, No. 3) points out that the ordinary method of demonstrating peptone in the urine is both cumbrous and inaccurate. It consists in removing the albumen by means of alkaline acetate of iron, filtering and precipitating with acetic and phosphotungstic acids after concentration. The precipitate is dissolved in an alkali, and if it contains peptone gives the biuret reaction. Among the disadvantages of this procedure, Salkowski has recently shown that after concentration the colouring matter of the urine may not only conceal but simulate the biuret test. The author has accordingly devised a method requiring the use neither of acetate of iron, which is itself coloured, nor of phosphotungstic acid. He adds to 10 c.cm. urine (which, if much albumen is present, should be previously acidified with acetic acid, boiled and neutralised but not filtered) 2 or 3 drops of a 10 per cent. solution of lead acetate. He then filters, and if the test has been properly performed, finds that the filtrate fails to give any of the group reactions for native proteids or nucleo-albumens but is almost colourless, and hence particularly suited for the performance of the biuret test. The results were confirmed by adding Witte and Brücke's peptones to urine when it was found that an addition of about 1 part in 12,000 was recognisable by this reaction.

SURGERY.

(233) Operative Treatment of Gastric Ulcer.

Tuffier (*Bull. et Mém. de la Soc. de Chir. de Paris*, Nos. 11 and 12, 1897) reports three cases of gastric ulcer treated by posterior gastro-enterostomy. The indications were in two of these cases profuse and obstinate hæmatemesis, and, in the third case, perforative peritonitis. The subjects of the first two cases, who had been strong men, were reduced to a condition of extreme anæmia by the loss of blood, and much exhausted by incessant vomiting. The situation of the ulcer was different in each case. The disease in one case involved the smaller curvature and the lower surface of the liver; in the second it was seated near the pylorus; and the perforating ulcer in the third case was found in the upper third of the greater curvature, and hidden by the false ribs. The patient in whom the gastric ulcer had extended to the liver died on the eighth day simply from exhaustion, and quite

free from any indications of peritonitis. The other two patients made a speedy and complete recovery, and the author states that he was astonished at the rapidity and persistence of the successful results. Gastro-enterostomy in such cases acts favourably in two ways: it prevents retention of the contents of the stomach, and it places this organ in a state of rest. The good results of the surgical treatment were fully manifested before there had been sufficient time for the ulcer to heal. The functions of the stomach, it is held, are not abolished by establishing anastomosis between this organ and the small intestine. The chemical changes effected by digestion are fully maintained, the food is retained for a normal period, and does not, as is supposed by many, pass at once from the œsophagus into the jejunum, and in some cases, after a certain interval, the stomach regains its contractile function, and is capable of evacuating its contents.

(234) Operation for Hydatids of the Liver.

BOBROFF (*Khirurgya*, January, 1898) gives the history of 4 cases of hydatids of the liver and 1 case of hydatid cyst of the pancreas successfully operated on by him. His method of operating differs from that adopted by other surgeons. After incising the cyst and letting out the fluid, he removes the chitinous wall and carefully disinfects the interior of the fibrous capsule. The sac and the abdominal walls are then completely closed by sutures, no drainage being provided. At one time the author used to fill the sac with a solution of sodium chloride, but experience has proved this to be superfluous. The transudation of fluid towards the emptied cyst only takes place if the cavity is left open and drained. In 1 case the author had to operate a second time on the same patient 14 months after the first operation, as a fresh cyst appeared in the left lobe of the liver, after the removal of the hydatids from the right lobe. The latter was found at the second operation to be diminished in size, but not adherent to the abdominal wall; a depressed scar was felt over the place where the sac was stitched up on the first occasion. Convalescence in all the 5 cases was rapid, the patients being able to leave their beds in two or three weeks after the operation.

(235) Lumbar Nephropexy without Suturing.

SENN (reprint from *Journ. Amer. Med. Assoc.*, December 11th, 1897) suggests that the many modifications which nephropexy has undergone prove that the results hitherto obtained by the different methods have not proved satisfactory. Strong objection is made to the practice of incising and detaching the fibrous capsule, which has, it is stated, resulted in serious and permanent damage to the kidney. For some years the author has relied more on extensive excision of the adipose capsule than on the use of sutures in the fixation of movable kidney. In his last four cases he has dispensed altogether with the use of sutures and has trusted exclusively to extensive removal of the pararenal fat, scarification of the fibrous capsule, direct temporary support of the kidney by a strip of iodoform gauze, plugging of the wound by gauze, prolonged rest on the back, and localised compression of the front of the abdomen over the kidney. The immediate and remote results obtained by this method of operating, the details of which are here described at full length, have proved so satisfactory in the author's practice that he is not disposed to return to suturing, and is led strongly to recommend his new mode of performing nephropexy for further trial.

(236) Disinfection of the Field of Operation.

LANDERER AND KRÄMER (*Centralbl. für Chir.*, No. 8, 1898) point out that the ordinary method of disinfecting the seat of a proposed operation by scrubbing, and the application of ether and some antiseptic solution, acts merely on the surface of the skin, and does not attack any micro-organisms which may exist in the cutaneous glands, and which can be reached only by a disinfectant in a gaseous form. In the course of the past five months the authors have used for this purpose a 1 per cent. solution of formalin with, it is stated, very good results. Compresses dipped in this solution and covered by some impermeable material are applied to the skin at the seat of operation, and allowed to remain with one or two renewals from twelve to thirty-six hours. If allowed to remain for more than two days, this application is apt to cause hardening of the skin, and so interfere with primary union. This use of formalin is regarded as only a preliminary measure, and should not lead to any omission in careful cleansing and disinfection of the skin immediately before the operation.

(237) Resection of the Shoulder-Joint.

WOLFF (*Centralbl. f. Chir.*, No. 6, 1898) states that in many cases of tuberculous disease of the shoulder-joint the coracoid process is affected. The disease, he asserts, does not attack this process primarily, but spreads to it after it has involved the glenoid cavity, through the neck of the scapula. Consequently if both glenoid cavity and coracoid process be found diseased, it would be necessary to remove, together with these parts, the neck of the bone. To effect this it would be necessary to expose the diseased joint by a different incision from that usually practised for the removal of the head of the humerus. The author advocates Bardenheuer's transverse incision, which is carried from the tip of the coracoid process to the acromio-clavicular-joint, and then extended downwards and backwards along the outer surface of the shoulder. The trapezius and outer portion of the deltoid having been detached from the bone, the acromion process is sawn through, and either removed or displaced outwards at the acromio-clavicular joint. The capsule of the shoulder-joint is then opened in the usual way by division of the tendons inserted into the two tuberosities.

MIDWIFERY AND DISEASES OF WOMEN.

(238) Gastro-enteric Disorders in Inflammation of the Female Genital Organs.

DELBET (*Arch. Générales de Méd.*, February, 1898) describes the various ways in which uterine affections may produce dyspepsia, such as reflex action, general weakening of the system through hæmorrhage, etc. They may act mechanically by (*a*) perilymphatic effusions compressing the rectum, and causing dilatation behind it which may extend to the stomach; (*b*) extension of inflammation from the uterine and vaginal lymphatics to the rectal mucosa causing muco-membranous colitis; (*c*) by the great omentum becoming adherent to the uterus. A case of this sort, unlike any yet reported, happened in the author's practice. A woman, aged 23 years, was confined of her second child in January, 1894. A month later there were pains in the lower part of the abdomen, followed by leucorrhœa and later dyspepsia. The latter continued till February, 1895, when she vomited after every meal. The temperature was normal, and there was emaciation. *Per vaginam* the uterus was found to be flexed, its body occupying the right *cul-de-sac*. In the left *cul-de-sac* there was a rounded slightly movable tumour the size of two fists. The diagnosis made was left pyosalpinx. No improvement following rest, etc. Delbet operated. The stomach was then found to be dilated, reaching nearly to the pubes. The greater curvature was adherent to the anterior part of the pelvic swelling by a number of bands. These were separated easily, and the "tumour" then turned out to be the matted together great omentum; it was enucleated and removed. The left ovary and tube were also removed, as there was a small abscess in the former. Complete recovery with cessation of dyspeptic troubles followed. Here the relation between the pelvic organs and the dyspepsia was undeniable. The latter began soon after the uterine complications, and ceased immediately after the operation, nothing having previously benefited it. The author excludes in this case dilatation of the stomach from chemical alterations in its secretion, or from excessive food or drink, and concludes that it was caused by traction on the greater curvature by the great omentum which had become adherent to the uterus and subsequently contracted, because (1) the great omentum (which may extend to the pelvis in some persons) was not only adherent but tightly stretched; (2) though traction on the omentum which produces gastroptosis might lead to secondary dilatation, Delbet found from experiments on the cadaver that the mechanism was probably as follows: Omental traction is transmitted to the pylorus,

and may cause obstruction by kinking it; more often, however, the first part of the duodenum is pulled down with the stomach, and a kink is formed between the movable first and the fixed second part of the duodenum.

(239) Pruritus Vulvæ in Pregnancy.

Fieux (*La Gynécologie*, February 15th, 1898) advocates thorough local treatment of pruritus, to be undertaken by the doctor himself. A woman under his care was tormented with pruritus which caused sleeplessness, loss of appetite, and mental irritability. She did not consult anybody for a fortnight, but gave herself sublimate injections twice daily, and kept cold water compresses on the vulva. As she became worse, she consulted Fieux. He found no objective symptoms beyond superficial scratches, nor were there any traces of discharge, oxyurides, or any other parasites. He declined to prescribe any lotion or ointment, but at once practised Ruge's antiseptic toilet of the vulva. The vulva, vagina, and cervix were thoroughly washed with soap, all folds and creases in the mucusa being opened up; then the vagina was freely washed out with a weak sublimate solution, some 16 pints being used. This process lasted a quarter of an hour, and definitively cured the patient. Ruge usually performs the "toilet" two or three times, and applies to the vulva after each sitting an ointment of carbolised vaseline. Fieux saw his patient six weeks after the treatment by washing, and the pruritus had not recurred. There may be a purely nervous pruritus, but the satisfactory effects of Ruge's treatment seem, in Fieux's opinion, to imply that even in pregnancy where no objective local symptoms are present, the disease is often due to bacteria.

(240) Puerperal Pseudo-Rheumatism and Gonorrhœal Rheumatism.

Bégouin (*Annales de Gynéc. et d'Obstét.*, February, 1898), after careful clinical research, concludes that the so-called "puerperal rheumatism," distinguished by Lorain from acute articular rheumatism in the puerperium, and from the arthritis of puerperal septicæmia, is nothing else than gonorrhœal rheumatism. Lorain traced it to infection from "normal leucorrhœa," or held it to be a direct result of pregnancy and the puerperium. Bégouin contends that the clinical records of the older cases of "puerperal rheumatism" and the bacteriological reports of more recent cases alike prove that the disease is gonorrhœal. It nearly always takes the form of an acute non-articular arthritis, obstinate, hard to treat, and often ending in ankylosis. These characters are just the same as in typical gonorrhœal rheumatism in the male or non-parturient female, whilst a bacteriological inspection of the articular fluid and of the genito-urinary secretions can finally prove the identity of this disease. Treatment is the same as in non-puerperal gonorrhœal rheumatism. Of course the discharge itself must be cured; there is little fear that it will be neglected if once detected. Yet though gonorrhœa is so perilous to the eyes of the fœtus, and though most diseases modify pregnancy or are modified by it, gonorrhœal rheumatism seems to have little influence either on pregnancy, delivery, or even lactation.

(241) Management of Epispadias in Female Child.

Rasch (*Beiträge zur klin. Chirurg.*, vol. xviii, Pt. 3, 1897) reports a case where epispadias existed in a moderate degree. The child was 2 years old. The vulva seemed split longitudinally, so that the posterior commissure as well as the anterior was deficient. At the site of the anterior was a shallow concavity which opened into the urethra. The clitoris was represented by a tubercle on each side of the urethra, the meatus of which was very patulous, admitting the little finger. No sphincter could be felt, and there was complete incontinence of urine. A triangular flap was dissected off the mons veneris and made to close in the gaping urethra. The tubercles representing each half of the clitoris were vivified and united in front of the new meatus. The urethra towards the bladder, the neck of which was involved in the malformation, was closed by catgut sutures passed transversely through the submucous tissue. The parts healed well, and the child could on recovery hold its urine perfectly.

(242) Dieting for Dystocia from Narrow Pelvis.

Pradon (*Monats. f. Geburts. u. Gynäk.*, January, 1898) dieted a woman who had twice been delivered by aid of the cranioclast of very big children (12 lbs., 11 lbs.): the pelvis was distinctly narrow, though only external measurements are given. The patient was kept for the last four months of her third pregnancy on a diet poor in carbohydrates, after Prochownik's principle. A somewhat thin fœtus, weighing 8 lbs. 12 ozs., was delivered by forceps.

THERAPEUTICS.

(243) Sanatogen.

Vis and Treupel (*Münch. med. Woch.*, March 1st, 1898) have investigated the digestibility of certain albuminous preparations, and especially sanatogen. The observations carried out on healthy men extended in each case over a week. The amount of work done on each day was as far as possible the same. It was so arranged that nearly half the total amount of nitrogen supplied in the food was derived from the substance to be investigated. The diet consisted of 132.6 g. of fat, 345.9 g. of carbohydrates, and 129 g. of albumins along with 2½ litres of fluid. The total nitrogen thus supplied amounted to 20.61 g. The fæces and urine were examined, and the nitrogen estimated by Kjeldahl's method. It was found that on an average 1.392 of g. nitrogen were excreted. Then 69 g. of sanatogen were introduced in place of a corresponding amount of other albumins. Sanatogen is a sodium and casein glycerine phosphate, and is prepared from milk casein. It contains on an average 13 02 per cent. nitrogen. It is readily soluble, and has a more agreeable smell and taste than other milk casein preparations. The total amount of nitrogen excreted was on an average 1.475 g. The authors thus succeeded in getting an almost equal amount of nitrogen excreted in the two series of experiments, the difference only being 0.0839 g. The less digestible an albuminous substance is, the greater will be the excretion of nitrogen. Sanatogen is thus worthy of a further trial. It belongs to the undigested albuminous food preparations. It is given in a teaspoonful dose or more at the time of the meal, when it is rubbed up in cold water, and then warm soup, etc., added.

(244) Tuberculin R.

Kernig (*St. Petersburg. med. Woch.*, February 14th, 1898) describes his experience of this agent in 9 cases of phthisis and 9 cases of surgical tuberculosis. (1) In phthisis. The first dose was $\frac{1}{5}\frac{1}{5}$ mgr. as recommended by Koch. The injections were given with the strictest precautions so that there was never an abscess, although some redness or swelling was always noted. Slight fever was observed in all cases except one. Tubercle bacilli were found in the sputum at the time of the injections in only 4 of the 9 cases. In 7 cases changes were induced in the diseased lung as was shown by the increased dulness, and often by more numerous *râles*. In 3 cases a reaction did not occur until the following day. With one exception all the cases were slight with little fever. The maximum number of injections was 13 and the largest dose ½ mgr. In 2 cases albuminuria was observed at the time of the injections, and in 2 cases there was a distinct enlargement of the spleen. Details of the cases are then given. In 5 out of the 9 cases the condition of the patient was worse after the treatment than before. In the single more severe case, a very rapid course in the tuberculosis was noted, and in another case, absolutely without fever, a rise of temperature occurred during the following fourteen days, when the patient began to improve again. The remaining cases do not appear to have improved. These unfavourable results were seen notwithstanding that the greatest care was exercised. The author maintains that tuberculin R. produces exactly the same manifestations as the old tuberculin. He further observes that this dangerous and concentrated poison is recommended for patients who are not in the clinical sense very ill, and who improve greatly under suitable treatment. Kernig repeats the warning against tuberculin R. uttered by him at the last International Congress. (2) In surgical tuberculosis. Under this head are included 2 cases of lupus, 5 of joint tuberculosis, and 2 of tuberculous glands. All these cases were free from fever. In 1 case of lupus improvement was obtained, but the case was as bad

as ever two months later. Fever was observed only when the larger doses of tuberculin were given. Finally, the author refers to recent reports upon tuberculin R, and says that his unfavourable results do not stand alone.

(245) Eucaine in Dental Surgery.

Zaloga (*Khirurgya*, February, 1898) considers eucaine a more valuable local anæsthetic in dental surgery than cocaine. In the course of six months he made use of cocaine in 220 cases of tooth extraction while eucaine was used in 320 cases for the same purpose. In each case the hydrochlorate of the alkaloid was used, and about 1 c.cm. of solution was injected deeply into the gum in two places on each side of the tooth. A 2 per cent. solution of hydrochlorate of cocaine was sufficient to produce local anæsthesia; but a 5 per cent. solution of eucaine hydrochlorate was necessary to get the same result. The doses of the two alkaloids were therefore 0.02 and 0.05 g. respectively. Toxic effects were observed in 46 per cent. of cases where cocaine was used. The symptoms of poisoning ranged from a slight giddiness to faintness, cold perspiration, dilated pupils, sickness, and irregular respiration. None of these symptoms followed the use of eucaine. The only drawback in the use of the latter alkaloid is the subsequent appearance of a painless swelling over the seat of injection. This peculiar effect was not due to any septicity of the solution, as the latter was carefully tested bacteriologically, and found free from germs.

(246) Bloodletting, Blisters, and Emetics.

A. Robin (*Bull. de l'Acad. de Méd.*, No. 4, 1898), after remarking on the almost total neglect of some of the older methods of treatment, gives his investigations into their action. (I) Bleeding has been almost abandoned, since its action is supposed to be mechanical in modifying the blood pressure or getting rid of some poison contained in the blood evacuated, and therefore too temporary to be of much good. When one considers its action on nutrition, however, new indications for its use are found. (*a*) Action on nutrition. The author and Binet find that a moderate bleeding (150 to 250 g.) in an acute disease such as pneumonia increases nitrogenous metabolism, favours the formation of its end products by oxidation, and stimulates the chemical changes which take place in the nervous system. The same effects are seen in bleeding for uræmia or morbus cordis, and in pathological hæmorrhages such as hæmatemesis. (*b*) On respiration. Bloodletting (and menstruation) increases the respiratory changes in every detail to a certain extent in proportion to the amount of blood lost. The oxygen absorbed, urea, and the coefficient of nitrogenous oxidation, are all increased. The indications for its use are therefore: (1) For its temporary effect on the blood pressure, in cardiac syncope, acute œdema of the lungs, and cerebral hæmorrhage; (2) where nutritive action is insufficient, as shown by a lowering of the respiratory changes, the percentage of urea and coefficients of oxidation. (3) In some infective diseases when the symptoms are caused by bacterial toxins, which can be got rid of in two ways, either by excretion or by oxidation, which latter converts them into harmless soluble products. (4) In some auto-intoxications, such as uræmia, venesection acts not so much by subtracting a certain quantity of the poison with the blood, as by oxidising the poison into a harmless soluble product. (II) Emetics. The author finds that besides clearing the bronchi, emetics, like venesection, increase oxidation. The gaseous changes in respiration are increased in every detail, this action being partly mechanical, a larger quantity of air passing in and out, and partly vital, there being a greater amount of oxygen absorbed and more CO_2 given out per volume of expired air. Emetics are of the same value in infective bronchitis as purgatives in intestinal infections, while there are few contraindications. (III) Blisters are useful for their revulsive and derivative properties, and because they increase phagocytosis. Besides this, Robin finds that they increase the amount of air passing through the lungs in a given time ("pulmonary ventilation") to such an extent that the oxygen absorbed may be doubled. There are contraindications, such as albuminuria; otherwise blisters are of great value in acute or chronic pulmonary complaints.

PATHOLOGY.

(247) Associated Microbes in Diabetic Phthisis.

Ehret, of Naunyn's clinic (*Münch. med. Woch.*, December 28th, 1897) first refers to the microbes which have been found associated with the tubercle bacillus in cases of ordinary phthisis. In 7 such cases investigated by himself the streptococcus was alway found in the sputum but only once in the blood; no effect, however, on the temperature curve was observed as a result of the use of Marmorek's streptococcus serum. The author relates a case occurring in a diabetic, aged 36. Glycosuria was found in the urine two years previously, and the cough had existed for four weeks. The case rapidly proved fatal. The whole of the left lung was either solid or riddled with cavities, whereas the caseating centres were limited to the upper lobe in the right lung. The sputum was obtained during life with all necessary precautions. Cultivations were made on grape sugar agar. Besides streptococci and a few staphylococci and tetragoni, there was a bacillus which Förster and Levy assigned to the pseudo-diphtheria bacillus group, but it differed from the pseudo-bacillus in its pathogenic properties and in its liking for sugar-containing media. It was also cultivated from the pus in the cavities and from pieces of lung tissue. On grape sugar agar this bacillus developed in punctate, transparent grey colonies after twenty-four hours, and as raised grey and somewhat transparent colonies after forty-eight hours. In 3 further cases of florid phthisis in diabetes the same microbe was found in the sputum. The author points out that apparently in diabetic phthisis the microbes associated with the tubercle bacillus differ from those present in non-diabetic phthisis. Perhaps in this lies the explanation of the rapid course of phthisis in diabetes.

(248) Congenital Ichthyosis.

J. M. Winfield and J. M. Van Cott (*Journ. Cutan. and Genito-Urin. Dis.*, November, 1897) report a case of congenital ichthyosis rendered noteworthy by a microscopic examination of the affected skin. The infant, sex not stated, died when 2½ weeks old from inanition and loss of temperature. It was the second ichthyotic infant the mother had given birth to, and before delivery she had been exceedingly nervous and worried as to the possibility of this happening; after delivery the maternal mental state became so bad as to necessitate the separation of the mother and infant. The necropsy showed absence of the thyroid gland, while in the lymph spaces of the skin and subcutaneous tissue were numerous micrococci, and in their neighbourhood was coagulation necrosis of the tissues. The horny layer of the skin was considerably thickened, the rete Malpighii was fairly normal, and sweat and sebaceous follicles were present. It is believed that there was a dermatitis set up by a micrococcus whose exact origin and nature were obscure, but which must have been the result of intrauterine infection. The absence of the thyroid may have removed a restraining influence upon the growth of the micro-organisms, for it has been shown that bouillon made from thyroids has such an inhibitory action on bacteria.

(249) Serofibrinous Pleurisy.

Damany (*Thèse de Paris*, 1897) has investigated the etiology of sero-fibrinous effusion. The conclusions arrived at by the author are that, notwithstanding the apparent influence of cold, such pleurisies are in reality tuberculous, and that primary pleurisy may be called tuberculosis of the pleura. This is also the position of Landouzy, who has made experimental investigation by injecting serofibrinous pleuritic fluid into the peritoneal cavity of rabbits and guineapigs. The author supports the observation made by Landouzy that, whether the patient be well nourished and fat, and in apparently perfect health up to the time of contracting the pleurisy, the fact remains the same, that such a pleurisy is tuberculous. The action, if cold, is of no more etiological value than an erysipelas or pneumonia, or at the most it may have some slight determining origin. The writer refers to further experiments performed by Landouzy by means of injections of tuberculin, which went far to support the position of these two authors.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(250) Alkaptonuria.

Futcher (*New York Med. Journ.*, January 15th, 1898) describes this puzzling condition of the urine in a man aged 44, a patient of Osler's, who had repeatedly been declined by the officers of life insurance companies, who were under the impression that he had glycosuria. The urine was of a specific gravity of 1020, and reduced Fehling's solution, but was shown to be free from sugar by the application of other tests, failing to ferment, being optically inactive, no reduction of bismuth in Botgert's test, no crystals of phenylglycosazone on applying the phenylhydrazone test. The urine was reddish brown, had a peculiar odour, and darkened on adding a few drops of liquor potassæ or on standing. The word "alkaptone" was invented by Boedeker for a substance found in urine, which has the power of reducing alkaline copper solutions, and absorbs oxygen from the atmosphere. It has been thought to be identical with pyrocatechin. Baumann and Wolkow believe the condition of the urine to be due to the presence of homogentisinic acid, and that this acid is derived from tyrosin as a result of the activity of a special microbe in the intestine. Embden, following out this, showed that when tyrosin was given by the mouth the amount of this acid in the urine was greatly increased. Alkaptonuria can hardly be said to be a disease, and has no pathological significance; it is, however, of considerable interest and some importance, since it may, as in several cases recorded in this paper, give rise to a diagnosis of glycosuria. Notwithstanding the fact that it reduces Fehling's solution, the reaction is not quite typical. An inky-brown colour being produced before the sulphate of copper is reduced, this peculiar behaviour of the reaction should arouse one's suspicions of alkaptone. It is noteworthy that it has been found in more than one member of a family.

(251) Tuberculous Endocarditis.

Etienne has made a careful study (*Arch. de Méd. Expér.*, January, 1898) of the occurrence of endocarditis in the course of tuberculous affections. Eliminating, of course, all chronic forms of endocarditis as having a very different origin, he finds that an acute form of inflammation of the cardiac valves is sometimes found associated with tubercle. Careful examination of these cases, however, throws doubt upon the specific origin of many, for, as the author shows, it is possible for septic conditions, such as are frequently found in the later stages of tuberculous disease, to manifest themselves by endocarditis. In such cases careful microscopic examination has failed to reveal the presence of the tubercle bacillus in the vegetations, while, on the other hand, various forms of bacteria met with in other instances of endocarditis are easily demonstrated. Under these circumstances very many cases of endocarditis found in tuberculous patients are not to be considered as tuberculous endocarditis in the proper sense of the word. On the other hand, abstraction being made of all these, some few remain, in which small caseous foci may be discovered in the vegetations, and the ordinary methods of staining reveal the presence of Koch's bacilli. Therefore, tuberculous endocarditis is certainly a pathological entity, though a rare one.

(252) Caisson Disease.

Hoche (*Berl. klin. Woch.*, May 31st, 1897) discusses the diseases of the nervous system caused by increased atmospheric pressure, as seen in diving, etc. He relates two cases occurring in men laying the foundation of a bridge. In both there was evidence of an affection of the dorsal cord; in one the lateral columns and in the other the posterior columns being chiefly involved. One case recovered completely, and the other was making satisfactory progress. The author discusses minutely the mode of the origin of the disease. The symptoms do not appear for two to thirty minutes after the patients come up. Evanescent symptoms, including obscuring of the sight, tinnitus aurium, mental confusion and excitement, disturbed speech, loss of consciousness, monoplegias may be present. By far the most common manifestation is a spinal paraplegia, often of a spastic character. More rarely tabetic symptoms may be observed, which persist after the paraplegia has passed away. As regards life, the prognosis is good if the patient survives the first symptoms; and, as regards complete recovery, a tolerably large number get well. Sometimes a permanent exaggeration of the reflexes remains. There are very few cases which have been minutely and thoroughly examined in relation to the morbid anatomy. The author refers to the researches, experimental and other, of Leyden, Bert, Rensselaer, and others, as well as to the investigations of Kadyi into the vascular distribution in the spinal cord. He arrives at the following conclusions: The disease is produced by the too rapid change from high to lower pressure, gas being liberated in the blood and tissue fluids, especially nitrogen. The quantity of such gas escaping determines the severity of the disease. The gas in the form of bubbles makes its way like emboli into the central nervous system, and produces here an ischæmic softening by obstruction of the terminal arteries. The distribution of the gas bubbles partly depends on the vascular arrangements. The type of dorsal paraplegia is directly due to the peculiarities in the distribution of the vessels of the cord. The relatively good prognosis is due to the easily absorbed gaseous emboli. The author also refers to the question of compensation for injury in this disease, and he contends that such compensation may be enforced, as the complaint is quite on a different footing from such lesions as those of chronic lead or phosphorus poisoning.

(253) Acromegalo-gigantism.

Matignon (*La Médecine Moderne*, November 6th, 1897) describes the case of a Chinaman, aged 25 years, who was at the same time a giant and the subject of some of the changes characteristic of acromegaly. He was 1 metre 83 cm. in height, being 20 cm. above the ordinary stature of the Chinese, and this in spite of the fact that he had marked scoliosis which developed at the age of 19. The signs of acromegaly were the dorsal curvature, prognathism, exaggerated development of the lower extremities of the humeri and radii, and the large size of the mastoid processes. The general giant growth was, however, more prominent than the acromegaly. Brissaud, in 1896, applied the term "acromegalo-gigantism" to this combination. In Matignon's case there was great muscular weakness, and while some parts of the body had developed excessively others showed arrest or retrogression of their ordinary development; the thyroid and testes were in a rudimentary condition, and the deltoid, the muscles of the arm, and of the thenar and hypothenar eminences were partially atrophied. The author speculates as to the subsequent course of events, and as to whether the signs of acromegaly will eventually become so marked or even more prominent than those of gigantism. He has seen another case of acromegaly in Pekin. The patient was a Tartar woman without any signs of general giant growth.

SURGERY.

(254) The Operative Surgery of Gastric Ulcer.

Heydenreich (*Sem. Méd.*, February 2nd, 1898) gives the indications for surgical interference in gastric ulcer: (1) In perforation it is absolutely necessary as early as possible before the perforation, and to wash out the abdomen. Since 1894 the mortality after operation has fallen to 52.94 per cent,, and without operation the condition is almost necessarily fatal. (2) For stricture of the pylorus. In this condition it is hard to distinguish obstruction from swelling of the tissues round the ulcer, or from pyloric spasm from true fibrous stricture. For the latter there are three possible operations: (*a*) Resection of the pylorus; (*b*) gastro-enterostomy; (*c*) pyloroplasty. Of these the first is the most dangerous, and has no advantages over the others, unless the ulcer can be excised with the pylorus. Pyloroplasty is not applicable if the ulcer extends to the pylorus, or where the pylorus is adherent, and its walls have lost their softness. When there is a choice between the second and third methods. Mikulicz prefers pyloroplasty. (3)

Operation may be required for adhesions or abscesses in connection with the ulcer. These are mostly very hard to diagnose, but it must be remembered that in some cases of persistent pain exploratory laparotomy is justified. (4) For hæmatemesis. Since sudden death is the exception, and many cases recover with medical treatment, the propriety of operation is still doubtful. Hartmann's 12 cases gave 8 deaths and 4 recoveries. The author believes the chief point to be the quantity of blood lost. For violent hæmorrhage laparotomy has almost always failed. Sometimes the infiltration of the surrounding tissues has rendered excision of the ulcer or ligaturing the bleeding vessel impossible. Often the bleeding comes from a branch of the splenic artery, whose territory is very difficult to reach, and sometimes the ulcer has been too small to be found. For slighter hæmorrhages which become dangerous through repetition operation may be successful; usually pyloroplasty or more often gastro-enterostomy have been performed in such cases with a view to procuring rest of the stomach, and consequently of the ulcer and its healing. (5) This last consideration has led some to propose gastro-enterostomy for cases of uncomplicated gastric ulcer. The general death-rate for all cases of gastric ulcer is 25 to 30 per cent., for gastro-enterostomy only 16.2 per cent., and therefore the operation has less danger than the disease. Another advantage of not waiting for complications is that the patient is in better health. At any rate cases which do not improve with medical treatment in a reasonable time should be treated surgically.

(255) Bottini's Operation for Hypertrophy of the Prostate.

FREUDENBURG (*Berl. klin. Woch.*, No. 46, 1897) reports a case of complete retention from prostatic hypertrophy in a patient aged 63, which was entirely removed by galvano-caustic incision of the enlarged gland after the failure of bilateral castration. The urine, which after the first operation had remained turbid, became quite clear after the second, and the patient is now able to relieve his bladder regularly without using a catheter. This case, it is stated, shows that Bottini's operation acts directly by removing the obstacle to the discharge of urine, and not, as has been suggested, by merely destroying the orifices of the ejaculatory ducts, and the ganglia and nerves which extend to the vesiculæ seminales and vasa deferentia. It is of practical importance also, as it suggests a doubt whether it be advisable to perform castration for the relief of urinary retention before an attempt has been made to overcome this result of prostatic enlargement by galvanic incision of the gland.

(256) The Surgical Treatment of Exophthalmic Goître.

ANZILOTTI (*La Clin. Mod.*, An. 4, n. 7) draws attention to the successful results obtained by surgical interference with the cervical sympathetic in the treatment of exophthalmic goître. Unilateral or, better still, bilateral excision of the superior or middle cervical ganglion with the intervening cord brought about notable improvement in fourteen cases. Diminution of the exophthalmos, goître, and tachycardia, and in many cases true cure, occurred after this procedure. No trophic disturbance followed, nor organic alteration in the integrity and power of accommodation. Myosis was the most constant after-effect; congestion of the face, lachrymation, and hypersecretion of nasal mucus were also observed. When no result follows the operation it is probably owing to some abnormal anatomical distribution of the cervical sympathetic. On the theory that exophthalmic goître is due to some poison in the thyroid circulation it is difficult to explain why the vasomotor disturbances should be localised to the upper part of the body alone.

(257) Cyst of the Pancreas.

THORÉN (*Kirurgisk kasnistik frau Jönköpings lasarett*, 1896-7) publishes a second case under his care. The first appeared in the Swedish paper *Eira*, 1893, p. 99, and is noted in abstract in Heinricus's monograph on Cysts of the Pancreas, in *Langenbeck's Archiv*, vol. liv, 1897, p. 456. The patient was 52. The tumour filled the left hypochondrium; it was fixed to the parietes, and drained. In Thorén's second case the patient was 20. A large tumour filled the left side of the abdomen, not apparently reaching to the left ribs, whilst the pelvis was free. The colon lay in front of the tumour. At the operation a cystic tumour springing from the left side of the pancreas was discovered; it was fixed to the abdominal walls and drained. Several solid masses sprang from its inner wall, and one was partly cut away with a piece of the wall for examination. The wall contained muscular fibre. Traces of the same tissue were also detected in the solid masses, mixed with round cells and numerous giant cells of varied outline.

MIDWIFERY AND DISEASES OF WOMEN.

(258) Spontaneous Rupture of the Uterus during Labour.

POROSCHIN (*Cent. f. Gynäk.*, Feb. 19th, 1898) comments on the want of exact knowledge of the cause of this condition. Most cases have been explained, either by the mechanical theory of Bandl or by structural alterations in the uterine wall due to chronic interstitial metritis, fatty degeneration, tuberculosis, etc. There remains a minority of cases to which neither explanation will apply, and in this group Dawidoff has concluded that the accident is generally due to alterations in the elastic connective tissue of the uterus. He finds that in 7 cases of spontaneous rupture of the uterus, the elastic fibres were thickened, markedly shortened, and indistinctly outlined, with knob-like thickenings in the bends of the fibres. In the light of these researches, Poroschin gives the following case:—A patient, aged 45, 11-para, had a fall on her back two days before the onset of labour. After the fall she felt no fœtal movements, neither had she any pain before labour began. Labour pains, at first weak, became stronger and more frequent. After several very strong pains, the patient became pale, with the lips cyanotic, and a pulse of 120, hardly felt; at the same time, she complained of violent abdominal pain. The membranes were ruptured, and blood-stained amniotic fluid came away. After a few minutes a dead child was born by expression. As there was much hæmorrhage the placenta was expressed by Credé's method. Under treatment the bleeding was arrested, but the patient gradually sank. A necropsy revealed a zig-zag rent, 2½ inches long, in the long axis of the posterior uterine wall; this rent did not involve the serous covering of the uterus. The author explains the rent as due to the sudden bending of the uterus in its long axis over the spinal column when the patient fell, so that the tissues tore on the inner surface of the organ. The bleeding partly loosened the placenta, and led to the death of the fœtus. Under the influence of strong pains the edges of the rent were drawn apart, and led to the fatal hæmorrhage. Microscopic examination revealed a complete absence of elastic connective tissue in all the sections taken near the rent. To this fact is attributed the readiness with which rupture was produced. The absence of elastic tissue is in turn explained by the age and repeated pregnancies of the patient.

(259) Iodide of Potassium in Metrorrhagia from Uterine Fibroma.

P. BOQUET (*Sem. Méd.*, March 2nd, reports very good results from the use of iodide of potassium in the treatment of metrorraghia connected with uterine fibroma. Two years ago he was called to a woman, aged 47, with a large uterine fibroma which caused continual metrorrhagia, so that the patient had to spend most of her time in bed. There were evident marks of syphilis on various parts of her body, and she stated that she had been infected by a child whom she had nursed twenty years before; the disease had never been treated. On the hypothesis that the syphilis had something to do with the evolution of the fibroma, Boquet prescribed iodide of potassium, 2 g. a day the first week, this dose being increased by 1 g. weekly during three consecutive weeks, so that in the fourth week the woman was taking 5 g. daily; after this the dose was reduced to 2 g. a day. A fortnight after the beginning of the treatment the bleeding ceased, and soon the syphilitic lesions began to disappear. At a later period the iodide was discontinued, and soon afterwards the bleeding began again; the remedy was again administered but in smaller doses, and finally the patient was able to remain two, then three, and afterwards six months without taking the iodide and without any return of the metrorrhagia. En-

couraged by this result he gave iodide of potassium in the same doses administered in the same way to four other women suffering from fibroma with metrorrhagia but absolutely free from syphilis. In all these cases the bleeding was stopped, pains ceased, and the size of the tumour was markedly diminished. Boquet suggests that iodide of potassium exerts a special effect on the genital organs of women, and he thinks that the drug might be tried not only in metrorrhagia connected with uterine fibroma, but also in hæmorrhagic metritis.

(260) The Absolute Indication for Cæsarean Section in the Kyphotic Pelvis.

Guérard (*Cent. f. Gyn.*, January 22nd, 1898) discusses the lowest limit of contraction in kyphotic pelves that demands Cæsarean section. It has usually been held that when the distance between the ischial tuberosities is as little as 5.5 cm. (2.2 inches) Cæsarean section is inevitable. He relates a case in which this diameter was 4.7 cm. only. The circumstances were most favourable for Cæsarean section; but neither husband nor wife would consent to it; so there was no alternative but to attempt delivery through the natural passages by sacrifice of the child. This was done successfully, the operation lasting one and a-half hour. The child was fully developed. The author quote a case related by Brewis in which a forceps delivery was effected with safety to both mother and child, the distance between the ischial tuberosities being 5.8 cm.; and a case by Torggler from Schauta's clinic where the same result was obtained with a diameter of 5 5 cm. He concludes that 5 5 cm. is not the lowest limit of the absolute indication for Cæsarean section; but that on the whole each case must be judged on its merits.

(261) Treatment of Renal Affections During Pregnancy.

O. Pasteau and J. D. d'Herbécourt (*Bull. de la Soc. Obst. et. Gyn. de Paris*, February 10th, 1898) report the case of a patient four and a-half months pregnant, who suffered from purulent cystitis. She had suffered from leucorrhœa for six months. The region of the right kidney was full, dull, and very tender; pyelonephritis by direct infection from the bladder was diagnosed. Irrigation of the bladder was resorted to, with improvement of the bladder signs, but the temperature continued high. When a large quantity of urine was evacuated the temperature generally fell for a time. On one occasion artificial distension of the bladder was done for purposes of ureteroscopy, and though the examination of the ureter could not be effected, it was observed that the temperature fell for several hours afterwards, so they determined, when the cystitis had subsided, to distend the bladder artificially at regular daily intervals for a few moments. This was done, with the result that the temperature remained normal, and the patient was confined naturally at eight and a-half months. The authors explain the results by supposing that the right ureter used to become temporarily blocked by pressure of the gravid uterus. Distension of the bladder raised the uterus and freed the ureter.

(262) Diseases of Women and Hydronephrosis.

Pfannenstiel (*Allgemeine med. Centralzeitung*, No. 27, 1897) removed, in two cases, a hydronephrotic kidney of great size, where the urine had been perfectly healthy, yet at the operation the opposite kidney was found to bear an abscess. In one case the patient had disease of the appendages with strong adhesions; in the second abortion had occurred, and sepsis complicated the already complex condition. Pfannenstiel declares that in future he will not place implicit faith in healthy urine as evidence of a healthy kidney when its fellow is hydronephrotic. He will rather rely on fixing the dropsical kidney to the parietes and draining its cavity. Then he will watch the patient for some time, and, should all go well, remove the cystic kidney, but should there be suspicion as to the soundness of its fellow, he would ultimately close the fistula in the loin.

(263) Incurable Cancer of Uterus.

Berton (*Centralbl. f. Gynäk.*, No. 43, 1897) published the results in Winckel's wards of treatment of advanced uterine cancer by free burning of diseased tissue. The thermo-cautery was the agent for this purpose in all the cases. In 60.8 per cent. the patient remained free from the three cardinal symptoms, hæmorrhage, discharge, and pain, for from a fortnight to six months, or seven weeks on an average. Slight rise of temperature was observed in 32 out of 100 patients. Only 1 death is noted; the patient had already undergone scraping three times, and died nine days after the fourth application of the cautery from exhaustion.

THERAPEUTICS.

(264) The Mercurial Treatment of Syphilis.

Schwimmer (*Wien. med. Presse*, 1897, No. 44) while agreeing that removal of the primary sore can at best palliate and never cure the disease, recommends that the use of mercury should be begun before the onset of secondary symptoms. He states that of 15 cases of severe early syphilis seen by him during the last three years not one had been mercurially treated. He deprecates any reliance being placed on the severity of the primary symptoms as a guide to the subsequent course of the disease, and holds that all cases should undergo the same medicinal treatment. He points out that the discovery of the organisms of the soft sore and of gonorrhœa has led to no improvement in the therapeutics of those disorders, and considers that the possibility of a bacterial cause for syphilis should not interfere with its present empirical treatment. With regard to the duration of treatment, with which the question of permissibility of marriage is bound up, Schwimmer quotes two cases in which, after prolonged treatment and freedom from symptoms, patients were allowed to marry; no infection of the wives took place, and each had two healthy children. Nevertheless each developed eight years after infection further syphilitic mischief, in one case affecting the testicle, in the other the periosteum. He concludes that the most prolonged treatment (three years Fournier, five years Neisser) cannot absolutely protect against relapses. As such lengthy treatment is very depressing both physically and morally, he considers two years enough, but does not recommend marriage till the end of the third or fourth year.

(265) Lavage in the Gastro-intestinal Affections of Sucklings.

O. Cozzolino (*La Pediatria*, January, 1898) describes the operation of washing out the stomach as practised upon infants. It is contraindicated in the case of infants in a state of collapse, and in those suffering from affections of the respiratory organs or from cardiac lesions. The author regards it as the best means of rapidly and certainly cutting short an attack of infantile dyspepsia, and of preventing the concomitant diarrhœa and gastro-intestinal catarrh. It is also of use in habitual vomiting when this is due to a catarrhal lesion of the digestive tract, and the child shows a decrease in body weight or an insufficient increase; in cases of prolonged labour where the infant has swallowed much liquor amnii; and in nervous disturbances such as convulsions, which are often due to the irritation of noxious products remaining in the alimentary canal. It is also of use in infants who have been given soothing syrups containing opium, and who are suffering from the effects of that drug. Cozzolino regards as rather fanciful Troitzky's suggestion that lavage should be used as a preventive measure when lactation is disturbed by moral affections, etc., in the nurse.

(266) The Serum Treatment of Diphtheria.

Böttcher, of the Giessen Clinic (*Deut. med. Woch.*, January 13th and 20th, 1898) concludes a paper on this subject. As regards dose 1,500 units were injected at once on admission. It is important, especially in country practice, that a sufficiently large dose should be given at the outset. In the clinic the injection was given into the outer side of the thigh. All other local treatment was omitted except the inhalation from weak salicylic acid solutions. Careful symptomatic treatment was always carried out, especially with the object of maintaining the patient's strength. Among 200 cases injected during the last 17 months there was a mortality of only 8 per cent. The previous mortality was calculated at 44 per cent., but the total difference cannot of course be without further consideration, placed exclusively to the credit of the serum

treatment. In the cases where tracheotomy was necessary, the mortality has also fallen very considerably. In the diphtheria of infants the good results were very obvious, so that in 65 infants under 2 years only 11, or 16 per cent., died. Again, tracheotomy has been considerably less often required, the diminution being to the extent of 33 per cent. The earlier the treatment is begun the more favourable the results. Thus, of 185 cases treated within the first four days only 8 died, or 4.3 per cent. If Bose's previous statistics from the same clinic be included, the death-rate with this early treatment was only 3.6 per cent., and among the tracheotomised 8.8 per cent. The mortality steadily increased when the treatment was begun on the fifth day and later. In children with previous pulmonary disease like bronchitis the prognosis is especially unfavourable; three such cases were admitted, and died of the respiratory affection some time after they had recovered from the diphtheria. The author has included three cases in his statistics which were almost moribund on admission. If these were left out the total mortality would stand at 6.5 per cent., and that among the tracheotomised at 12.5 per cent. The effect of the serum treatment on the general condition of the patient and on the local lesion was obvious. Even severe laryngeal symptoms yielded under sufficient doses of the serum. The necessity of doing tracheotomy or intubation on the second half of the first day of the serum treatment, or even on the second day or later, never arose. No ill-effects were observed. In only 5 children was any rash seen, and this soon disappeared. No painful joint affection, high fever, or unfavourable action on the general condition was noted. Among his other conclusions the author also mentions that the serum treatment protects against a diphtheritic infection of the tracheotomy wound.

(267) Indications for Sulphur Baths.

PARTES, of Herkulesbad (*Wien. med. Presse*, 1897, No. 49), gives a detailed analysis of the external and internal therapeutics of sulphur waters, and lays down the following indications for their use: (1) In chronic catarrh of the respiratory organs, dependent more upon venous hyperæmia and unaccompanied by any special complication. (2) Circulatory disturbances in the abdomen and the gastric and intestinal disorders evoked by them. (3) Various exudative processes in joints, muscles, and bones, defective callus formation after fractures, chronic periostitis, caries, and necrosis, callous ulcers, tendo-vaginitis, and deficient mobility after various injuries in which surgical interference is not indicated. (4) Chronic phlebitis, periphlebitis, and inflammations of the skin. (5) Various forms of chronic rheumatism, gout, and rheumatic and nervous paralyses. (6) Metallic poisoning, especially by lead and mercury, and its after-effects. (7) Syphilis, sciatica, and neuralgia. To test the value of the sulphur treatment careful histories and states should be taken and the cases followed up long after leaving the baths. The good and bad results must be classified and tabulated for purposes of comparison.

(268) Treatment of Syphilis with Serum of Mercurialised Animals.

TARNOWSKY AND JAKOWLER (Moscow International Medical Congress, 1897, *Semaine Médicale*, August 25th, 1897) give the results of their experiments. Three colts were injected with from 4 to 6 grammes of calomel in the course of 2½ months. With the serum of these animals 16 cases of syphilis in various stages were treated by gluteal injections of 10-20 c.cm. The average number of injections was 17. No effect on the disease took place in any case. On the contrary, evil effects were noticed, including anæmia, pyrexia, joint and muscular pains, and albuminuria. The authors conclude that treatment of syphilis with mercurialised serum is at present contra-indicated.

PATHOLOGY.

(269) The Blood in Artificial Uræmia.

MONARI has carried out a long series of researches (*Lo Sperimentale*, 1897) on the bacteriological condition of the blood in animals rendered artificially uræmic. The animals employed were dogs and rabbits in a condition of perfect health, and the methods of inducing uræmia were, first, ligature of the ureters; secondly, excision of the kidney. In all cases control experiments were made on healthy animals. The presence of micro-organisms in the blood was ascertained in 24 out of 30 cases; in the remaining 6 they were absent; in 17 only 1 species of micro-organism was found; in 23 there were more. It was also found that the same organisms existed in the serous cavities under the same conditions. Eight times the organism seemed to be identical with the bacterium coli: in 7 cases this existed in association with staphylococcus pyogenes albus; once with a streptococcus; while in 8 the staphylococcus was found in a pure condition. To account for the origin of these organisms, the author carried out other series of experiments, taking care to exclude any possibility of entrance from the seat of operation. The idea which suggested itself to the writer was that the bactericidal power of the blood is greatly reduced in uræmic conditions in a manner similar to the alterations in its corpuscles, density, and oxydising power, questions which have been recently carefully studied. As a result of his experiments he considers that there is a considerable diminution in the bactericidal power of the blood under these conditions. He furthermore investigated results of injecting toxic products of different cultures into the blood, with the result that a fatal termination was precipitated. The general conclusions drawn by the writer are that in uræmia certain micro-organisms find their way into the circulation most probably from the intestine, and that owing to the altered condition of the blood they are liable to multiply, and their products are harmful to the economy.

(270) Protozoa in Multiple Cerebral Sclerosis.

JÜRGENS records a case of multiple cerebral sclerosis associated with the presence of bodies which he gives reason for considering protozoa (*Deut. med. Woch.*, March 10th, 1898). The patient was an infant, which died about three months after the first onset of symptoms (convulsions, etc.). The head became hydrocephalic, and at the necropsy the dura mater was tense, the ventricles distended, and the substance of the cerebrum (white and grey matter) varied in consistency. The heart showed in its substance light grey streaks one-third of an inch long and about one-tenth of that in breadth. In these areas the muscle substance was found on microscopical examination to be absent, the space of each cell being taken up by one or two oval bodies about the size of lymph cells, with strongly refracting nuclei. Other bodies were round, with marked granulation of their contents, but without nuclei. There were also larger cysts with finely granular contents. At the margin of the grey streaks the invasion of the muscular substance by these bodies could be observed. They presented amœboid movements. They had not produced any other obvious affection of the heart, but Jürgens suggests that by their increase they would have led to insufficiency of the cardiac muscle. In the tougher areas of the brain he found marked cell proliferation of recent date. On rubbing up portions of brain substance in a mortar with distilled water enormous numbers of protozoa were found, which appeared to be identical with those found in the muscular substance of the heart. Six rabbits were inoculated with this material, and a similar affection of the heart to that observed in the infant was produced. He believes that the organism was a micro-sporidium.

(271) The Effect of Hyperpyrexia on Gonorrhœa.

ABOUTKOFF (*Vratch*, No. 8, 1898) reports 5 cases of gonorrhœa in which the temperature rose to 104° F., and even higher owing to complications of the disease itself (such as prostatitis, pyelitis, etc.), and in one case owing to an attack of enteritis. The effect of this hyperpyrexia was speedily to check the urethritis and cure the disease. This favourable influence on the course of gonorrhœa the author explains by the great sensitiveness of gonococci to changes of temperature. Observations made on artificial cultures of these germs have shown that they develop and thrive best at a temperature of 78° F. to 86° F., but that their development ceases and they perish when a temperature of 101° F. is reached.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(272) Gastroptosis.

Bial, of Renver's clinic (*Berl. klin. Woch.*, July 19th, 1897) discusses the relation of this affection to nervous gastric affections. Of great importance is the improvement produced by a mechanical treatment. By the use of a suitable binder the sensations of burning and fulness, the pains in the abdomen, unpleasant taste in the mouth, nausea, vomiting, and other symptoms of a gastric neurosis disappear. In cases of pendulous abdomen, etc., it is thus possible to restore to some extent the normal relation of parts, and to provide for the intestine a firm wall of support. The author has investigated the limits of the stomach before and after the application of a binder adapted for the purpose. He gives details of 3 cases in which a reposition of the stomach was brought about in this way. Bial discusses the benefits of such treatment in cases of enteroptosis in which symptoms of a gastric neurosis are present. In such cases the effects of suggestive treatment cannot be neglected. He relates in detail 2 cases in which general treatment without any regard to the local condition was successful. In 1 case hypnotic treatment was adopted. In the other the stomach boundaries were investigated by the gastrodiaphanoscope, and this formed part of the treatment. In both cases there was considerable gastroptosis. In such cases the disease is really a general one. In women an alteration in the position of the organs is very common. If the nervous system is affected, then this change in position of the viscera becomes apparent by symptoms. In such cases the trouble really arises in the centres, and not in the local conditions. The disappearance of these local conditions may not be followed by a disappearance of the symptoms, and hence the importance of the general treatment. There are cases which defy all treatment, both general and local, but in the majority of casas great improvement results.

(273) Gastric Erosion.

Dieulafoy (*Bull. de l'Acad. de Méd.*, No. 3, 1898) has collected 7 cases (2 his own) of superficial erosion of the gastric mucosa accompanied by violent hæmatemesis. He concludes: (1) Besides the simple gastric ulcer, there is a form of very superficial erosion, varying in size from a sixpenny to a four-shilling piece, for which a suitable name is "exulceratio simplex." (2) This latter may cause even more terrible hæmatemesis than most cases of simple ulcer. (3) The loss of substance does not extend in depth below the mucosa, including the muscularis mucosæ. The accompanying hæmatemesis is caused by ulceration of the arteries running in the muscularis mucosæ. The opening in the vessel is usually lateral, and thus in the worst position for natural arrest of hæmorrhage. (4) Clinically the disease may present all the classical signs of simple gastric ulcer, but more often its onset is insidious or completely latent until revealed by profuse hæmatemesis. (5) The best treatment in this form of simple erosion is by operation. The quantity of blood vomited rather than the frequency of hæmatemesis being the indication for operation, a large amount usually coinciding with ulceration of a large artery, a fatal condition unless remedied at once. (6) It is very important to remember while operating that the stomach may at first sight appear perfectly normal, in spite of an erosion being present. Thus, the mucous membrane must be examined very carefully, if necessary with a lens. Occasionally patches looking like ecchymoses may serve as a guide to the position of the erosion. (7) In the absence of special indications it is sufficient to suture together the bleeding part with a small part of the healthy mucosa round it. The prognosis after operation for exulceratio simplex is better than for ulcus simplex, because of the limited extent of the former lesion.

(274) Hypertrophic Pulmonary Osteo-arthropathy.

Massalongo (*Il Policlinico*, September 15th, 1897) has made a clinical and critical study of this disease, and believes that the bone changes have no pathogenic relation to the pulmonary disease nor to any alteration in the peripheral circulation secondary to the pulmonary disease. In the author's view these arthropathies are not due to any one single cause but to many different causes, and he proposes to call the disease "secondary hypertrophic osteo-arthropathy." In the genesis of the disease more or less important parts are played by preceding rheumatic arthritis, syphilis, cachectic and infective conditions, alterations in the function of certain glands and of their internal secretions, and toxic substances produced in the diseased focus.

(275) Paralysis of the Recurrent Laryngeal in Mitral Stenosis.

Ortner (*Wien. klin. Woch.*, 1897, No. 33) records two cases of this complication which may lead to great diagnostic difficulties. The first was that of a boy of 17 with a rheumatic history, whose complaint was great dyspnœa, with swelling of the abdomen and lower extremities. Examination showed venous pulsation in the neck, and hoarseness from complete paralysis of the left vocal cord; the right carotid was beating powerfully, while the pulse in the left was extremely small and feeble. The heart was enlarged downwards and outwards, and also to the right. At the apex the first sound was accentuated, and there was a faint presystolic murmur, with more marked systolic and diastolic; there was a weak systolic murmur in the tricuspid area, but the sounds at the base were clear, and the pulmonary second scarcely accentuated. The diagnosis was mitral stenosis and regurgitation with tricuspid insufficiency, and an aneurysm of the arch of the aorta pressing on the left recurrent laryngeal. It was believed that the left carotid and both subclavian arteries were compressed by the aneurysm, and, further, that the right subclavian arose behind the left. At the necropsy it was found that the pericardium was universally adherent and the heart generally enlarged; the left venous ostium was stenosed, and the bicuspid valve had a few vegetations upon it. The left auricle was enormous, extending under the left main bronchus, and pressing on the recurrent nerve, which was degenerated. The aorta and orifices of the great vessels were normal. The paralysis of the vocal cord was thus due to the pressure upon the nerve of a left auricle enlarged through mitral stenosis. The second patient was a woman of 34, also with a rheumatic history. She suffered with dyspnœa, giddiness, and palpitation, and of late there had developed swelling of the feet and abdomen, with hoarseness. The patient was cyanosed, and the heart hypertrophied more than dilated. At the apex there was a variable presystolic murmur, followed by a loud first sound with a systolic murmur; the second sound was feeble. At the base a systolic murmur was audible on both sides, a diastolic only on the right; the heart was very irregular. There was complete paralysis of the left vocal cord. This time the cause of the laryngeal paralysis was correctly diagnosed. At the necropsy the mitral valve showed buttonhole stenosis, and the left auricle was immensely enlarged, squeezing the recurrent laryngeal against the aorta, and leading to its degeneration. There was also marked aortic stenosis, the valves being fused together so that the orifice barely admitted the little finger. The complication of paralysis of the recurrent laryngeal in mitral stenosis has not, it is believed, been previously recorded.

SURGERY.

(276) Coxa Vara.

De Quervain (*Sem. Méd.*, January 29th, 1898) has collected the literature of a little known deformity of the hip described recently under the name of "coxa vara" from analogy with genu varum. It consists essentially in a downward bending of the neck of the femur, the head being lower than the top of the great trochanter. Several varieties have been described: (*a*) Congenital (rare). (*b*) Infantile (rickety coxa vara). (1) Simple bending downwards of the neck (Kocher's coxa adducta). (2) Bending of the neck downwards and backwards). (*c*) Coxa vara adolescentium. (1) Kocher's coxa adducta. (2) Downward and backward displacement of the neck with rotation of the head on its long axis. (3) Elevation of the trochanter and inward rotatation. (*d*) Coxa vara of adults (the

only observed case due to osteomalacia). Frequency: This deformity, at any rate the rickety variety and that found in adolescents where there are generally no signs of rickets, is much more common than is generally thought. Sex: Males more often affected than females. Etiology: In infancy, rickets; in adolescence probably late rickets as in genu valgum, where the other signs have disappeared, or rarely cretinism, or possibly juvenile osteomalacia. Predisposing causes are inflammatory processes in the neck of the femur, either tuberculous or osteomyelitic, and also employments necessitating much standing or lifting weights. Frequently an injury precedes it or aggravates the already existing condition. It is usually unilateral. Symptoms: The onset is insidious, pain, often felt chiefly in the knee, being the first symptom, then limping, with perhaps difficulty in kneeling and sitting. The pain is worst while the process is developing, but while pain usually decreases the joint stiffness often increases progressively. Physical signs: Projection of the trochanteric region with a depression between great trochanter and glutei; thigh muscles usually atrophied; abduction of hip always limited, with tendency to adduction. Where the downward bending of the neck is combined with a backward displacement and rotation of the head the signs are more marked. The limb is then rotated outwards and adducted, while internal rotation and often flexion are impossible. The trochanter is above Nélaton's line in all cases. Prognosis depends on age. Before five years the deformity is due to rickets, and may disappear spontaneously; after this age a functional improvement only is possible through adaptation to the new conditions. Diagnosis: From (1) forward dislocation of the head, (2) recent fracture of the neck, if after an injury there is great aggravation of the pain; (3) from old fracture with resulting deformity; (4) separation of the epiphysis; (5) congenital dislocation; (6) tuberculous disease. In the latter case the chief point is that though in early hip disease there may be slight external rotation, this is accompanied by abduction and flexion instead of adduction without flexion. Treatment: (1) Of any constitutional disease such as rickets. (2) Absolute rest in bed with permanent extension relieves the pain and improves the movements and helps spontaneous straightening in rickety cases. (3) When the case has gone on for some time and the difficulty of walking, etc., is great, some form of osteotomy (the author prefers linear of the neck) must be performed.

(277) Inflated Rubber Cylinders for Circular Suture of the Intestine.

Halsted (*Bull. Johns Hopkins Hosp.*, February, 1898) states that the objections to circular enterorrhaphy without such mechanical aids as bone bobbins, bone plates, and buttons, may be removed by the employment of rubber cylinders in the manner indicated in this paper by a series of very clear and excellent plates. The following advantages are claimed for the inflated rubber cylinder in circular suture of the intestine: (1) The vermicular action of the bowel is arrested over the bag, and the stitches can, consequently, be placed at regular and proper intervals; (2) the distended bag unrolls and spreads out to a fine edge the everted raw edge of the intestine, and enables the operator to place the stitches with great precision at the desired distance from the edge; (3) if distended intestine is to be sutured to collapsed intestine or intestine of larger to intestine of smaller lumen, the smaller may easily be expanded to fit the larger piece; (4) very little handling of the intestine itself by the operator is necessary; the tube from bag to syringe is used as a handle to rotate and elevate the parts to be united; (5) the cylinder takes the place of at least two assistants, and the operation could readily be performed without an assistant; (6) it prevents escape of intestinal contents, and hence dispenses with injurious clamps or the fingers of assistants; (7) the entire operation, exclusive of suture of the abdominal wall, can be performed on dogs in five or six minutes, and probably in less time.

(278) Excision of Iliac Aneurysm.

Dollinger (*Pest. med.-chir. Presse*, 1897, No. 49) showed, four months after the operation, a man of 32, from whom he had removed an aneurysm of the right external iliac artery. The patient had had a pulsating swelling in the right groin for some two years, but could trace it to no traumatic cause. The aneurysm was situated at the opening of the right external iliac artery into the femoral, and was 2½ inches long by 1½ broad; it had grown very rapidly during the past few months. The patient could not stand the pain of digital compression, so that an operation became necessary. The Hunterian operation was regarded as risky, as the artery could not retract and there might be severe secondary hæmorrhage; and the recent statistics of Delbet induced the author to adopt a modernised form of Antyllus's procedure. The prognosis in the matter of liability to gangrene was most favourable, as it was found before the operation that a collateral circulation already existed. An incision was made parallel to Poupart's ligament, the aneurysm pushed forwards and the peritoneum upwards, and the artery was tied nearly an inch above the former. The narrowed femoral, which was only of the size of the temporal, was next ligatured, and the sac dissected out and removed. The limb at first went pale, but under massage it became yellowish, and finally of the normal colour. The patient made an uninterrupted recovery, and when shown had good use in his limbs.

(279) A New Incision for Operations on the Shoulder-Joint.

Senn (*Philadelph. Med. Journ.*, January 1st, 1898) describes a new incision for arthrectomy, resection, and reduction of irreducible dislocation of the shoulder-joint. For this, which is really a modification of Bardenheuer's method, the advantage is claimed that the scar resulting from the operation is well protected by the prominence formed by the shoulder-joint, and that the incision allows free access to every part of the joint and its immediate vicinity. The external incision is made so as to form an oval cutaneous flap which is turned upwards, exposing the upper half of the deltoid muscle. It is commenced over the coracoid process, and is carried downwards and outwards in a gentle curve as far as the middle of the deltoid, whence it is continued in a similar curve upwards and backwards as far as the posterior border of the axillary space at a point opposite the coracoid. This semilunar flap of integument having been dissected up as far as the base of the acromion, the process is sawn through and turned downwards together with the attached portion of deltoid muscle. The capsule of the joint is thus freely exposed, and the further course of the operation in accordance with the nature of the case, can be readily carried out. In completing the operation the author fixes the acromion in its normal position by two or three strong catgut sutures. Silver wire, he asserts, is seldom required in suturing a temporarily detached bony prominence in operations upon the different joints. Catgut sutures hold the fragment long enough in place for osseous union to occur. A sufficiently strong hold is gained by the sutures including only the periosteum and other fibrous structures, and it is very rarely found necessary to drill the apposed fragments of bone.

MIDWIFERY AND DISEASES OF WOMEN.

(280) Apparent Death from Post-partum Hæmorrhage.

Gimbert, of Cannes (*Gaz. Hebdom.*, February 27th, 1898), records a case in which on his arrival at the bedside he found the child born and hæmorrhage going on; in a vessel there was a litre and a half of blood, and the bed was soaked. The inert uterus reached to the umbilicus; the pulse could hardly be felt. It was 8.30 A.M. With one hand the aorta was compressed; with the other towels soaked in boiling water were rubbed on the abdomen; ergotin was injected, stimulants were given to drink. The uterus rapidly contracted, and the placenta was delivered, accompanied by a fresh gush of blood. But the loss of blood, estimated at 3 litres, was too much, and the patient sank, with all the signs of apparent death. Instantly the body and head seemed to shrink; the skin was cold as a corpse. No heart beats, pulse, respiration, nor reflex of any kind could be detected. Straightway the patient was placed across the bed, head low on the nurse's knees; direct insufflation of air, from mouth to mouth, with rhythmic traction of the tongue was prac-

tised ; hot applications were made to the chest. There was no effect at all. There was at hand a pan of filtered and boiled water holding 300 g. ; into this 3 g. of salt were thrown, and a syringeful (20 c.cm.) was injected into one thigh, while stimulation was continued. No result. It was 9.10 A.M. A similar injection was made into the other thigh. After a third injection (60 c.cm. in all) the patient made a little sound ; still the heart gave no sign. A fourth injection was made, after which a little fluttering was felt in the right radial artery ; some facial contractions and a conjunctival reflex appeared, and attempts at inspiration commenced. Very hot coffee, bouillon, and cognac were slowly given by the mouth ; the heart beats could be heard, the breathing became better, the skin warmer. It was a quarter to 10. At 11 A.M. resuscitation was assured. At 3 P.M. the patient could be left. The eventual recovery was satisfactory. The author, in commenting on the case, discusses the part played by the subcutaneous injection of serum, to which he attributes the resuscitation of the patient, for rhythmical traction of the tongue, insufflation of air, and stimulation of reflexes were unavailing until after the injections. He used this method rather than venous transfusion partly because more immediately applicable, partly because salt solution injected under the skin gets mixed with blood before it reaches the heart, instead of arriving there as salt solution ; and partly because intravenous injection has too sudden an action, causing sometimes a dangerous reaction and even toxic symptoms.

(281) The Cystoscope in Gynæcological Practice.

Winter (*Zeits. für Geburtsh. und Gynäk.*, Bd. xxxvi., Heft 3) has been employing the cystoscope and ureter catheterisation in women's diseases, and has found it of great use in some cases of doubtful diagnosis. In cases of irritable bladder, for instance, he has by means of the cystoscope seen a sediment lying in the bladder consisting of epithelium and leucocytes. He is inclined to believe that most, if not all, irritable bladders are dependent on some slight inflammatory changes, and are not of purely nervous origin. In cases of hæmaturia where some doubt is entertained as to the origin of the blood Winter has often seen blood appear at the orifice of a ureter. In carcinoma of the anterior wall of the cervix, where the disease is apt to implicate the bladder, and where symptoms referable to the bladder do not show themselves till the disease is considerably advanced ; in these cases, Winter has found that by means of the cystoscope he has been able to diagnose early implication of the bladder wall. Nitze's cystoscope is used. The chief indications for the use of ureter catheterisation in women are : (1) In kidney diseases, particularly pyelitis, also in tuberculous kidney. Examining the condition of the remaining kidney when one has been excised. (2) Examining for renal calculus and other conditions, Casper's ureter-cystoscope is used, and catheters of the French type. The idea of obtaining a view of the whole urinary apparatus is no doubt an excellent one. It requires immense patience and perseverance to become an efficient observer with the cystoscope ; this is probably the reason that it is so little used.

(282) "Atrophying Ligatures" in Inoperable Uterine Cancer.

Hartmann and Fredet (*An. de Gynéc. et d'Obstét.*, February, 1898), in a series of papers on the ligature of arteries for the relief of uterine tumours of different kinds, report in full three operations in which the disease was advanced cancer. The first patient was 67, and suffered badly from hæmorrhages ; the cervix was replaced by a cauliflower mass. On May 13th, 1897, Hartmann opened the abdomen and divided the peritoneum close to the ureter, exposed the uterine artery, and tied it. The ovarian artery was also tied. The same was done on the opposite side. There was very marked but never complete cessation of the bleeding. The patient died of cachexia on January 1st, 1898. In the second case the patient was 45. The uterine arteries were tied on October 15th, 1897, and the patient left hospital on November 11th and has not since been heard of. The third patient, 39 years of age, had a vast cancerous ulcer opening up the uterus from the vaginal side. Hartmann and Fredet ligatured the right hypogastric artery, the left utero-umbilical trunk, both ovarian, and the right round ligament artery. This latter was tied, because at the necropsy of the first case that vessel was found pervious though not enlarged. The operation was performed on October 11th, 1897. The hæmorrhages, for which it had been undertaken, were only checked for a few weeks, and the patient died on January 10th, 1898. Complete reports of the necropsies of the first and third cases are given, with diagrams showing the different methods of securing the arteries. The best plan is to expose and tie the uterine artery in the ovarian fossa behind the broad ligament. The results, however, are very questionable ; the bleeding is but checked, the growth of the tumour hardly affected.

(283) Suckling and the Typhoid Bacillus.

Talamon and Castaigne (*L'Obstétrique*, January 15th, 1898) observed two cases of typhoid fever in women suckling their infants. The first patient had been delivered three months when the fever set in. The milk and the blood exhibited clearly the agglutinative properties of Eberth's bacillus. The blood of the suckling did not agglutinate. The second mother was taken ill with typhoid fever four months after delivery. The agglutinative power in the blood and milk was very strong. The infant had suffered for a month from severe gastro-intestinal disturbance. Then its blood was found to agglutinate, and it was weaned. The agglutinative power diminished, and at length disappeared. The child was again put to the breast, and very soon its blood again agglutinated the bacillus of Eberth. Talamon and Castaigne believe that the intestinal irritation in the case of this infant was not an effect, but rather the cause, of the agglutinative principle being passed with unusual ease and rapidity into the circulation.

(284) Tarnier's Forceps in Cases of Retention of the After-coming Head.

G. Saguet (*Union Méd. du Nord-Est*, February 15th, 1898) was summoned to a difficult case of labour, and found a 9-parous woman, 45 years of age, partially delivered. There had been a pelvic presentation, and the very large fœtus had been with difficulty drawn through the vulva as far as the shoulders. The head, in an extended position, was still at the brim, the chin being posterior ; considerable traction had been made with the help of two fingers in the mouth, and the Mauriceau and Champetier de Ribes manœuvre had been tried without result. Further traction only led to fracture of the maxilla of the dead infant, and to the giving way of the neck also. Forceps (Tarnier) was then applied to the head without anæsthesia—there was no chloroform available—and after about fifteen minutes' traction the child was born. It weighed 16 lbs. Saguet emphasises the value of the application of forceps, especially the Tarnier axis-traction instrument, to the after-coming head in breech presentations.

THERAPEUTICS.

(285) Tuberculin R.

Bussenius and Cossmann (*Das Tuberculin R.*, 1898) give a most elaborate analysis based on 34 cases. In 29 of these cases there was tuberculosis of the lungs, and in only 5 was there any fever. Among the non-febrile cases only 2 were temporarily improved, and 3 got worse. In the 5 cases with fever none were improved ; 1 became worse and 2 eventually died. In 18 of the cases there was laryngeal tuberculosis. In 2 cases with ulcers a cure of the local lesion was observed. In 5 cases there was improvement, and in 5 the condition remained as before. In 2 cases of tuberculosis of the fauces 1 was cured and the other eventually died. In 8 cases in which there was lupus, 4 were cured, 3 were improved, and 1 got worse. In 2 cases where there was glandular tuberculosis the condition remained unchanged in 1, and it became worse in the other. In 1 case where there was a fistula healing took place. As will be readily seen there were in the 34 cases many with multiple tuberculous lesions. The total results in the 34 cases were as follows : (1) Cured, 0 ; (2) improved, 9 considerably and 7 slightly ; (3) unchanged, 8 ; (4) became worse, 6 ; and (5) died, 4. The authors draw the

following conclusions: (1) In no case can a cure be promised, though there are cases in which improvement may be obtained, and that without danger. (2) The treatment may be recommended (*a*) in all cases of lupus, (*b*) in such cases formerly looked upon as scrofulous as react to tuberculin, (*c*) in all cases of early phthisis without fever and in good condition, and (*d*) in lenticular ulceration of the larynx. (3) Tuberculin R may be used in non-febrile phthisis with more extensive infiltration or cavity formation if the patient desires its trial. (4) In febrile phthisis the treatment should not be undertaken even if the patient desires it. The treatment should be discontinued (*a*) in the absence of any sign of improvement, (*b*) if the disease extends or if the patient loses weight and strength or becomes anæmic, (*c*) if a mixed infection or hæmoptysis supervene, the treatment being abandoned for the time. If complications appear it should be given up entirely. Other therapeutic measures, are not to be abandoned during the specific treatment. The injections in moderate doses should be repeated at long intervals if the patient has obtained benefit from the use of tuberculin R. The length of the interval must be determined for each case.

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(286) The Early Treatment of Syphilis.

Neumann (*Wien. klin. Rundschau*, 1897, Nos. 47 and 48) holds that no remedy can be depended upon to ward off the onset of constitutional symptoms in syphilis; the most that results is their temporary postponement. He admits, however, that exceptionally abortive treatment appears to be successful. Mercury and iodine are specific antisyphilitic remedies which do not destroy the cause of syphilis, though they control its products. No other remedy is yet known which acts directly on the cause of syphilis, whatever that may be, and of this many proofs can be adduced. Thus the abortive treatment would, if these remedies acted on the cause of syphilis, utterly destroy it before it could take possession of the whole organism. But of 100 cases thus treated in Neumann's clinic, not one remained free from secondary symptoms. Again saturation of the organism with mercury or iodine does not prevent relapses, which have occurred up to fifty-five years after infection. Late syphilitic manifestations appear most frequently on the very sites of the early lesions, which would be impossible if the cause of the disease had been destroyed. *Per contra* mercury and iodide are often ineffectual in well-marked syphilis. By whatever remedies and in whatever manner treated from 6 to 22 per cent. of syphilitics remain uncured, that is, develop tertiary symptoms. From these considerations Neumann concludes that the symptomatic treatment of syphilis is the sole rational one, and that it acts by establishing a temporary or permanent immunity to the ever-present cause of the disease. The "chronic intermittent" treatment of Fournier referred to above is not to be recommended, as the results obtained by it are no better than by the symptomatic method.

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(287) The Electrical Treatment of Neurasthenia.

Apostoli (*Annales de l'Electrobiologie*, January 15th, 1898) lays down the following postulates in the electrical diagnosis and treatment of neurasthenia, a subject which has been recently so much advanced by the discoveries and inventions of d'Arsouval. Neurasthenia is a clinical affection, which is best understood and treated after dismissing all thought as to its etiology. It is projected, as a rule, on a background either of hysteria or of arthritis; these colour the symptoms differently, and necessitate different treatment. Electricity properly used, quite apart from its curative properties, is a veritable touchstone in the detection of neurasthenia. Electricity may be accepted as the routine treatment for the affection, the particular variety to be employed varying with the subject. Local applications, especially at the beginning of the attack are, as a rule, inferior to general electrical means, such as static baths, or baths connected with alternating currents of great rapidity. The more neurasthenia is complicated by peripheral nervous troubles, such as hysterical hemianæsthesia, the stronger is the indication for the kind of electricity whose peripheral localisation gives the highest tension. Here static electricity or franklinisation is required, while in arthritic forms, or where the general nutrition is obviously affected, cellular currents, or those of high frequency should be employed. The hysterical form with anæsthesia may yield to the simple static bath, but more often requires the use of sparks along the spine. Hyperæsthetic hysterical subjects are best treated with very mild static electricity, no sparks being employed; the anæsthetic patients are little, if at all, helped by currents of high frequency, and derive no benefit from auto-induction by the large solenoid. The arthritic class, on the other hand, are very susceptible to the shock of sparks, and are not benefited thereby; they improve greatly with rapidly alternating currents. In many cases, particularly in those in which the two classes of symptoms are combined, it may be advisable to use static electricity and the alternating currents simultaneously; galvanism and faradism are of little use in the treatment of neurasthenia.

PATHOLOGY.

(288) The Nature of "Scurvy Rickets."

Otto Naegeli (*Centralbl. f. allgem. Pathol.*, viii, 17) records a careful examination of the tissues in an exceptionally well-marked example of this affection, occurring in an artificially fed child aged 11 months; only three previous cases appear to have been so thoroughly investigated. The signs of rickets were extremely slight, and the author considers that they might well be diminished as secondary. Dismissing the infective and rachitic theories of the origin of the disease, he regards it as a specific chronic general affection of small children consequent upon imperfect nutrition. It is characterised by general changes in the growing organism, especially in the blood and bones. When this condition has reached a certain height a hæmorrhagic diathesis supervenes, no doubt in consequence of the constitutional debility and the well-marked clinical picture of the disease is hence evoked. The hæmorrhages occur in single attacks spread over a considerable period; they are first seen in the region of the bony changes, and particularly in the calcifying border of the epiphyseal line and in the nucleus of ossification of the epiphysis. The disease has no more to do with syphilis than with bacillary infection or rickets. Whether it can be grouped under the heading of infantile scurvy cannot be stated with certainty, but probably it is not so to be classified. The true nature of the idiopathic affection under consideration cannot be stated without further histological investigations.

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(289) Gummata of the Heart in Congenital Syphilis.

Lecount (*Journ. Amer. Med. Assoc.*, January 22nd, 1898) on the examination of a full-term child that died directly after birth found, besides well-marked lesions of congenital syphilis on the skin and lungs, four areas of focal interstitial myocarditis. The largest was on the anterior surface of the heart, midway between the apex and the base; it involved the left ventricle and the septum, and formed a white circular area 1 cm. in diameter. On the diaphragmatic surface of the heart near its right border there were three similar though smaller areas. Microscopically the appearances were those of a granuloma; there was no caseation. Syphilomata in the heart are rare in congenital syphilis. Mracek in 112 cases of heart syphilis found 9 of congenital origin; and L. Hektoen added a fresh example in 1896, but none have been published since.

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(290) Nervous Lesions in Gastro-Enteritis.

E. Müller and Manicatide have published a preliminary note (*Deut. med. Woch.*, March 3rd, 1898) on the changes observed in the nerve cells of the brain and spinal cord in cases of gastro-enteritis in infants. The changes were of a degenerative character, and affected nuclei as well as the cell substance. They varied in intensity in different cases and in different areas in the same case. Neither the presence or absence of fever, nor the duration of the illness, appeared to have any relation to the severity of the cell degeneration. The observation, as the authors point out, illustrates the extent of the toxic effects produced by gastro-enteritis.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(291) Headache.

M. Benedikt (*Wiener Klinik*, March, 1898) first refers to the different forms of pain as they affect various nerves. (1) Pains which appear and disappear suddenly, and are due to disease of nerve roots or their immediate prolongations into the central nervous system. (2) Pains which begin gradually and increase by exacerbations, and finally diminish. This is followed by an interval entirely or nearly free from pain. This form is due to a lesion of the nerve plexus or the nerve trunk. (3) The pains are less variable, of more or less long duration, and due to lesions of she nerve termination. As regards the tensory nerves of the head, pains may be observed in the trigeminal and occipital nerves, and in the upper cervical plexus. Shooting pains may occur in the fifth nerve, but the pains more often present the characters belonging to the third group. Migraine is a peculiar form of headache. It is remarkable that pains may occur in local brain disease, and especially tumours, which have all the characters of those due to lesions of the meninges or bones. These pains have not an excentric character, because they are not directly due to the focal lesion, that is, that the nerves apparently affected do not spring necessarily from the diseased portions of the brain. The author looks upon the view which would assign these pains to intracranial pressure as untenable. He says that every abnormal irritation within the brain has a corresponding area of irritation of the skull. He relates a case of a small tumour in the brain, in which the symptoms, and also the other morbid lesions found, could not have been due to intracranial pressure. In regard to treatment, Benedikt looks upon the iodides as the most valuable remedies in neuralgia, and he thinks little of the many anodyne agents more or less recently introduced. Electrical treatment is the next most valuable method, and then *points de feu*. In the latter case the wounds are kept open by an irritating ointment. This cannot be done in trigeminal neuralgia, and the author looks upon the operative treatas being the best, the success being due to the mechanical effect of tearing, etc., applied to the nerve. Bloodless stretching is also recommended in some other neuralgias. Anæmia, syphilis, albuminuria, of course require treatment. The author says that the electrical treatment of migraine is the best, and he even speaks of hypnosis here. Sodium iodide has a favourable action. The pains due to organic brain disease, and especially tumour, since they are not directly focal symptoms, may be influenced by measures not necessarily addressed to the original disease. Hence the iodides and mercury may be useful in non-syphilitic cases. *Points de feu* may also be valuable. Benedikt thinks that any palliative results which may follow upon trephining are merely due to revulsion.

(292) Myxœdema in a Child.

Korsakoff (*Vratch*, No. 9, 1898) exhibited before the Moscow Pædiatric Society a female infant, 7 months old, suffering from myxœdema. The child's mother stated that shortly after birth constipation set in, and had continued ever since; that about the same time she noticed a swelling of the face, eyelids, and tongue, which projected between the lips. The child was pale, weak, and apathetic; it rarely smiled, took no notice of the surroundings, and occasionally cried out in a coarse, unpleasant voice. It was never noticed to perspire. On examination the weight was 4,920 grammes, and the length of the body 58 cm.; the skin and mucous membranes were anæmic; the skin over the face, neck, and upper part of the chest was œdematous; in other parts dry, and forming regular folds in the extremities; the tongue was swollen, the thyroid gland could not be felt, the pulse was 98, and the temperature 36.8° C. There was convergent strabismus and nystagmus of the eyes. A fourth part of a tablet of calf's dried thyroid was regularly administered, and improvement commenced on the second day of treatment. The swelling of the face diminished, perspiration set in, and the action of the bowels became regular. Shortly afterwards the psychical condition of the child improved, and the weight fell to 4,590 grammes. The cause of the disease in this case was obscure. The parents were young and healthy; there was no history or sign of syphilis; there was no hereditary taint on either side; the child was the mother's firstborn (she never having had any miscarriages); the father was formerly addicted to alcohol.

(293) Pneumonic Endocarditis of the Pulmonary Valves.

Kerschensteiner (*Münch. med. Woch.*, August 3rd, 1897) concludes a study of this subject after relating an interesting case. He first refers to the researches of Netter, Weichselbaum, and others. He says that pneumonic endocarditis is not very infrequent. A malignant endocarditis arising in connection with pneumonia may be caused by (1) the pneumococcus, and (2) the strepto- and staphylococcus. These different forms of the disease are differentiated by the course, temperature, curve, and complications. The course of a true pneumonic endocarditis is much shorter than that of a streptococcus endocarditis. The disease in the author's case only arose a few days before death. Here there were no characteristic symptoms of the endocarditis, but a systolic murmur was heard on the fourteenth day of the disease. the crisis having taken place on the tenth. This murmur was heard the day after the diagnosis of meningitis was made, but a general infection with the pneumococcus was believed to exist on the twelfth day of the pneumonia. When malignant endocarditis is due to the pneumococcus, the fever is usually continuous, whereas in the other forms it is intermittent. Infarcts and metastatic abscesses are very rare in pneumonic endocarditis, but are usually found in the endocarditis produced by the pyogenic microbes. Pneumonic endocarditis is more easily recognised when there is no meningitis, and when it is consecutive to an acute pneumonia. It was a striking fact that there should have been such marked changes in the pulmonary valves in this case, and yet so little evidence of it during life. The bacteriological examination of the blood was negative in this case. Malignant endocarditis is now looked upon as a localisation of a general microbic infection. Here the endocarditis was an expression of the pneumococcus infection, which may be called a pneumococcæmia. If, as in the case of the gonococcus, the invasion of the microbe occurs by a definite channel, the nature of the ensuing endocarditis may be readily recognised. Perhaps in the future it will be possible to differentiate the various clinical pictures produced by the different microbes in malignant endocarditis. Pneumonia, endocarditis, and meningitis present a characteristic trio of lesions in pneumococcæmia.

(294) Lævulose in the Urine associated with Melancholia, Insomnia, and Impotence.

Marie and Robinson (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, June 25th, 1897) draw attention to a curious combination of symptoms associated with the presence of lævulose in the urine. In the two cases which they record the following symptoms were observed: Melancholia, with predominance of ideas of ruin, and suicidal tendencies, obstinate insomnia, and permanent impotence; but there was little or no thirst, polyphagia, or polyuria. The urine had a specific gravity of 1013 to 1021; it reduced Fehling's solution, and contained a substance (with or without glucose) which gave the reactions for lævulose. The symptoms disappeared rapidly (in two or three days), and the lævulose disappeared from the urine when carbohydrates were removed from the diet.

SURGERY.

(295) Contusion of Carotid Arteries.

Rivit (*Sem. Méd.*, March 9th, 1898) reports a similar case to that already recorded by Verneuil of accidental contusion of the carotid arteries ending fatally. The patient was knocked down on the railway, and the upper right part of the thorax caught between the wheel and the rail. The patient did not lose consciousness, but when in the hospital was able to describe the accident. The right clavicle was fractured, and there was an enormous sanguineous effusion in the same locality. The upper four or five ribs were fractured in the dorsal

region. The left clavicle was intact, and a simple ecchymosis extended up the neck. In turning over on his back the patient suddenly became paralysed, speech was lost, the mouth drawn to one side, tongue could not be protruded, the right arm and leg were paralysed. Tactile and thermic sensibility retained, no ptosis. After several minutes syncope supervened. There was no lesion indicating intracranial hæmorrhage, but no pulsation was evident in the left carotid, facial, or temporal arteries. Thrombosis of the left carotid artery was diagnosed. The next day sensation was lost on the paralysed side; he could swallow, but passed water involuntarily. Death ensued the same morning. The necropsy revealed a small circular zone of ecchymosis surrounding the common carotid 2 cm. below the left clavicle. Corresponding with this was found rupture of the middle and inner coats of the vessel, the torn parts forming a valve, on the rough surface of which was a clot adherent and extending as far as the external carotid. The brain showed no visible alteration. There was no thrombus or embolism. In cases presenting apparent symptoms of cerebral lesions the lateral regions of the neck should be explored, as injury to the carotid may give rise to all the ordinary signs.

(295) The Operative Treatment of Exstrophy of the Bladder.

Fowler (*Amer. Jour. Med. Sci.*, March, 1898) reports a case of exstrophy of the bladder in which he employed with good results a new method of implanting the ureters into the rectum. By this method an effort is made to combine an efficient valve action with the additional safeguard of compression of the ureters by the circular muscular fibres of the bowel during defæcation. The operation is performed as follows: The abdomen, having been opened in the middle line with the patient in the Trendelenburg position, the ureters are exposed by incision of the posterior layer of the peritoneum, and traced to their terminations upon the bladder wall, from which they are detached, the ends of the ducts being cut through obliquely. A longitudinal incision about 3 inches in length is now made in the anterior wall of the rectum, only the serous and muscular coats being divided. These structures are dissected laterally until the mucous coat is laid bare, and a diamond-shaped space in the submucous tissue exposed. The edges of the incision are retracted, and a tongue-shaped flap of mucous membrane, with its base directed upward, is cut from the mucous membrane in the lower half of the diamond-shaped space. This flap of mucous membrane is doubled upon itself in an upward direction in such a manner that one-half of its mucous surface presents anteriorly, when it is secured by one or two catgut sutures. A flap valve is thus formed, both sides of which are covered by mucous membrane. The ureters are now placed in the incision, so that their obliquely cut ends lie upon the presenting mucous surface of the flap. A few fine catgut sutures serve to secure the ureters in position in the upper half of the diamond-shaped space, care being taken that these sutures do not involve the lumen of either ureter. The flap valve and attached ends of the ureters are now pushed into the rectal cavity, and the wound in the rectal wall closed by two rows of sutures, one row to the gap in the mucous membrane left by the reflected half of the tongued-shaped flap, and the second row to bring together the edges of the divided muscular and serous coats. The following advantages are claimed for this method: (1) An efficient permanent valve, with a mucous surface applied to the open mouths of the ureters, is provided. The valve is so situated that it is closely applied to and occludes the open ends of the ureters as the rectum becomes filled with urine, or when fæcal matter passes from above; (2) implantation of the ureters in the submucous space of the rectal wall along a distance of about 1 inch above the point where they open into the rectum affords an additional safeguard against renal infection. In this situation the circular muscular fibres of the rectum compress the ureters and secure occlusion at this point during defæcation.

(297) Traumatic Rupture of the Kidney: Secondary Nephrectomy.

Link (*Wien. med. Woch.*, March 12th, 1898) records the case of a soldier who was kicked by a horse in the right loin. He suffered great shock, with subnormal temperature and violent pain in the right side of the abdomen and renal region, extending also into the right testicle; the urine was bloody. The liver dulness was increased and there was vomiting; a subcutaneous injury of the right kidney was diagnosed. Treatment was at first directed to the relief of shock, pain being at the same time controlled by morphine; subsequently ice was applied to the lumbar region, ergotin injected, and hydrastis given internally. The patient steadily improved and was almost free from fever, though the urine generally contained some blood. At the end of three weeks, however, a rigor occurred, and there were signs of exudation into the right pleural cavity; 2½ pints of sero-sanguineous fluid were drawn off and immediate relief followed; but the patient became steadily worse, with fever, diarrhœa, wasting, and the signs of a perinephric abscess. This was opened six weeks after the injury. The kidney was found to be torn into two parts, which were only united at the hilum. The upper one was apparently normal, but the lower was broken up and necrotic; this was removed, in the hope that the remaining portion would be of use. The wound was plugged with iodoform gauze, but, although the patient's general condition greatly improved and the blood disappeared from the urine, the dressings were continually soaked by the flow from the remains of the right kidney. Ten days after the first operation the wound was accordingly reopened and the rest of the kidney excised; from this time progress was uninterrupted. The amount of urine immediately after the second operation was only one-fifth the normal, but within a fortnight it had returned to its proper quantity, the left kidney having no doubt hypertrophied in the interim. Link states that if he had another similar case he would operate much earlier and not run the risk of the procedure upon a patient whose strength was greatly reduced. In this instance he deferred interfering partly at the wish of the patient, but more because of the great fatality of previous primary nephrectomies for injury. On this latter point, however, he quotes German statistics only.

MIDWIFERY AND DISEASES OF WOMEN.

(298) When may Women with Heart Disease Marry?

Kisch (*Therapeut. Monats.*, February, 1898) discusses this question. He does not agree with Peter's dictum: "*Fille pas de mariage, femme pas de grossesse, mère pas d'allaitement.*" Every case, however, must be decided on its merits. The chief points to be considered are: (1) the kind of heart disease, (2) its duration, (3) the presence or absence of compensation, (4) the general health, (5) the social position of the patient. (*a*) They may marry if the disease is not of long standing, and compensation is good, and the general health not undermined. They will have during pregnancy, and still more during and for a time after delivery, many troubles due to their heart, but in by far the greater number of cases there will be no danger to life. This applies to well compensated mitral regurgitation and stenosis, aortic regurgitation, fairly marked sequelæ of pericarditis, and to muscular degeneration if not too far advanced. The patients must also be in a position to spare themselves bodily exertion as much as possible during pregnancy, to avoid mental excitement, and to have constant medical supervision. (*b*) The prognosis is not so good if the patients are very anæmic or nervous, or advanced in years, or if the valvular disease is congenital or acquired in childhood. In these cases the physician should advise against marriage, or at any rate point out that the disease will almost certainly become worse after marriage. (*c*) Marriage is to be absolutely forbidden as dangerous to life when compensation is failing or when there is advanced muscular degeneration. In all cases where there is dyspnœa, palpitation and a quickened pulse on slight exertion, or marked œdema not disappearing after rest in bed, when there is a tendency to arrhythmia, scanty urine with albumen, and attacks with irregular small pulse, coldness of the extremities, nausea, dyspnœa, syncope, etc., marriage is dangerous whether the cause of the symptoms be valvular disease, diseased arteries, or cardiac muscles. Even those for whom marriage

is allowable must follow certain rules strictly: (1) Coitus must not be frequent, and must be continued to the end of the orgasm, otherwise reflex heart troubles and depression result. (2) They must not have more than one or two children, as the strength of a diseased heart diminishes with every pregnancy in geometrical progression. If this rule is followed induction of premature labour will be luckily seldom necessary, since when it is the results are very unfavourable.

(299) Total Hysterectomy for Pelvic Papilloma.

Delagénière, of Le Mans (*Ann. de Gynéc. et d'Obstét.*, December, 1897) dwells on the apparently hopeless character of papillomatous tumours of the broad ligament as far as operative relief is concerned. In two cases, however, he has successfully removed the whole papilloma down to the very last trace by first removing the uterus entire, so that the pelvic cellular tissue can be well opened up. The entire operation is performed from the abdominal side. After the peritoneal cavity has been opened the fundus is drawn well up by a volsella, the lower part separated from the bladder in front and from the vagina behind, and the lateral parts freed from their connections. By a circular cut the vagina is then set entirely free, and all bleeding vessels secured. The papillomatous cyst now appears in the wide breach made in its broad ligament, which is opened up further, in the usual manner, to the brim of the pelvis, so that the cyst can be enucleated. After that has been done the peritoneum is sewn over the rent in the broad ligament, so as to reconstitute the pelvic floor, and Douglas's pouch is drained.

(300) Cæsarean Section: Utero-Vaginal Fistula.

Savor (*Centralbl. f. Gynäk*, No. 49, 1897) states that in August, 1897, a woman, aged 34, was admitted in Chrobak's wards in her second pregnancy. The pelvis was much deformed, and in 1892 Schauta performed Cæsarean section; the child lived only three weeks. The uterine wound was closed with silk sutures. Convalescence was rapid. Early in January, 1897, the second pregnancy began. By the middle of June the patient quickened. She was very thin, sickly, and rachitic. In August she began to feel very ill. The urine was albuminous and ammoniacal. In hospital she was feverish and there was dyspnœa with bronchitis. On August 28th she was much exhausted. As she could not be delivered at term *per vias naturales* and was too ill to tolerate abdominal section, Chrobak used Hegar's dilator and ruptured the membranes when the cervix was sufficiently wide. The waters, very abundant, escaped, giving relief to the pulmonary symptoms, but spontaneous delivery did not take place until two days later. Very little blood was lost, but the patient died an hour a-half after delivery from fatal syncope as she tried to sit upright. The urine during labour was bloody. At the necropsy the bladder was found dragged upwards by a strong adhesion to the front of the uterus. It contained a phosphatic calculus one inch and a-half in its longest diameter. A small fistulous tract made a communication between the uterine and vesical cavities. It is remarkable that the decidua lined the track up to the vesical mucous membrane. Hence it must have existed before the pregnancy; the decidua developed along it, and it opened at its uterine end on the area to which the placenta had been attached. After convalescence from Schauta's operation there were no signs of a utero-vesical fistula. But a silk thread formed the nucleus of the calculus. The bladder had not been touched at the operation; one of the lower silk sutures must therefore have worked its way into the vesical cavity, leaving a tract. During pregnancy septic infection of the uterus occurred.

(301) Dry Gangrene of Fœtal Leg.

Stolz (*Wien. klin. Woch.*, January 6th, 1898) describes a remarkable case of twin labour where one twin was flattened and macerated, whilst the other had gangrene of the leg from constriction. The mother was 18, and had already born a child to term. She was in very good health. The first twin presented in the second vertex position at the labour, which took place in the twenty-sixth week of pregnancy; it was living, and weighed but 1 lb. 4 ozs., measuring not quite a foot; it lived sixty-five hours. The macerated fœtus was delivered twenty minutes later; it was under 10 ins. in length. There was a common placenta. The right leg of the first fœtus showed a deep circular constriction under the patella. The part below was peg-shaped, ending in a point of skin, through which the lower extremities of the tibia and fibula projected, with polished ends. The foot, well formed, turned inwards behind the bones. The skin over the undeveloped part of the leg was livid at birth and rather lax. Though the infant lived but sixty-five hours, all the more prominent symptoms of dry gangrene (which had evidently set in before birth) became well established. The lax integuments shrank more and more, and grew black and dry whilst the child was still breathing. The epiphyses were quite loose. Had the fœtus remained to term *in utero* the leg would probably have undergone complete spontaneous separation, or have been so atrophied at birth as to retain its vitality with a very small blood supply. As it happened, some unknown cause disturbed the pregnancy, the increased circulation through labour laid stress on the obstructed vessels of the constricted limb, which was still enough developed to require more nutrition than it could get, and the little it received proved quite inadequate after birth. The original cause of constriction must have been an amniotic band; the umbilical cord had not coiled round any part of the child's body.

THERAPEUTICS.

(302) The Treatment of Whooping-cough.

Marfan (*Journ. de Med.*, March 10th, 1898) points out the two leading features in the prognosis of whooping-cough—first, the number of attacks of coughing; secondly, the supervention of broncho-pneumonia; the former giving rise to various hæmorrhages, epistaxis, meningeal, cerebral, and otherwise, as well as various mechanical effects on the lungs, the second causing serious change in the lung tissue and constitutional effects. This complication may be immediately ascertained by the presence of temperature as the spasmodic condition is afebrile. From this it may be gathered that the therapeusis of whooping-cough may be divided into—first, the treatment of the spasmodic condition; secondly, pneumonic. For the first, the writer particularly makes use of three remedies—belladonna, antipyrin and bromoform, the dosage varying with the age of the patient. In the case of belladonna, the quantity should be increased daily, until the severity of the spasmodic attacks is reduced. Unfortunately it not infrequently happens that the physiological effects of the drug manifest themselves before the cough shows any diminution. This is the great drawback to this drug. Antipyrin is administered with syrup of orange. Like the former, the dose may be increased daily till the maximum is reached. Its effects are often extremely good, but the objection to its use is that should there be any symptom of broncho-pneumonia it must be stopped, as its depressing action may be conducive to dangerous symptoms. Bromoform, the writer thinks, is likely to replace both of these drugs. As it is soluble only in alcohol and glycerine, its administration is sometimes a little difficult, but Marfan prescribed it with an emulsion of almond oil and mucilage flavoured with orange. The child may get up to 3 drops if about 6 months old; 8 drops when 2 years old; and when over 5 years of age from 20 to 30. The first symptom of intolerance is drowsiness, and, as this requires large doses, it follows that the drug is not dangerous when used with ordinary precaution. One important point is that during the first stage of its administration the attacks of whooping-couch may be slightly more marked, after which they subside. Another point worthy of note is that bromoform has no injurious action on the broncho-pneumonia. It is difficult to know if this drug has any power to shorten the duration of the disease, and the writer, from his observations, is inclined to think that it does so. As to the broncho-pneumonia, Marfan states that it is much more liable when there is rhinitis or lesion of the buccal mucous membrane, and that it is important that all cases complicated by broncho-pneumonia should be separated from others. The treatment is the same as in any other case, but the antispasmodic treatment should be continued, for the author denies, that as

stated by some, broncho-pneumonia arising in the course of whooping-cough, has any beneficial effect on the disease. As to the management of the case, Marfan has come round to the opinion that cases of whooping-cough should not be allowed out, as they do better, especially in towns, by remaining absolutely indoors, but it is advantageous to change the case into a different room for the night. So soon as the whooping character of the cough has disappeared, the author recommends change of air, especially to the seaside, as the patient usually has some cough which may last for a considerable time. The duration of the contagiousness extends over the whole period of spasmodic cough, though some consider that it is only the invasion period that is dangerous.

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(303) Formaldehyde in Urine after Urotropin

Citron (*Monats. der Krank. des Harn- und Sexual-Apparates*, Heft 2, 1898) has investigated the question of the appearance of formaldehyde in the urine after the administration of urotropin. On account of this property, urotropin has been used to dissolve calculi by several surgeons, and was recommended for cystitis by Casper. Citron gave from ½ to 2 g. of urotropin to a healthy man, and observed the urine at various periods from half an hour to twenty-four hours. Urotropin was found in the urine by testing with bromine water, which gives a yellowish precipitate with urotropin. On adding a few drops of dilute acid, formaldehyde was recognised by its odour; also the urine gave the test for formaldehyde with resorcin. This reaction was not always obtained after twenty-four hours, but urotropin was always present. Citron concludes that after taking urotropin, a body appears in the urine having the chemical properties of formaldehyde, but whether it is free formaldehyde is uncertain. This body is formed from urotropin by acid reaction in the kidneys or bladder. To ensure this reaction the patient's urine must be kept strongly acid, as the reaction does not take place in neutral or alkaline urine.

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(304) Therapeutic Use of Extreme Cold.

Letulle and Ribard (*Presse Méd.*, March 19th, 1898), at the Société Médicale des Hôpitaux of Paris, described their method of the local application of extreme cold ("krymotherapy") to overcome the anorexia of phthisis. Their plan is to apply during about half an hour every morning a bag, containing about 2 kilogrammes of carbonic acid gas, to the epigastric and hepatic regions. The skin is protected by a thick layer of cotton wool, and maintains a temperature of about 25° C. A second application precedes the evening meal. The temperature of solid carbonic acid is about −80°C. Pictet, who first experimented on men and dogs with extremely low temperatures, thought that for temperatures below −60°C. the diathermancy of even bad conductors of heat is so much increased that the rays traverse them like light passes through glass. Pictet of Paris, and Chassat and Cordès of Geneva, treated cases by the cold of their "frigorific pits." Letulle and Ribard prefer the above-mentioned method, and think that some organs, such as the liver, are cooled more than others by the cold. The organism has to resist the cooling process, and the result is an increase of nutritive changes, a burning up of old materials, an absorption of new materials, and an increase of appetite corresponding to the increased digestive vigour.

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(305) The Treatment of Pneumonia.

De Renzi (*Gaz. degli Osped. e delle Clin.*, February 13th, 1898) advises the frequent use of a mouth wash of sublimate solution (1 in 5,000) or ac. salicylic. (1 in 500) both as a prophylactic and as a germicide, killing the pneumococcus which is frequently found in the mouth. He dwells on the importance of fresh and pure air, and on the necessity of feeding, relying chiefly on milk and eggs, broths having certain disadvantages. As to drugs, the only one recognised by him is alcohol (ethylic), which he is in the habit of giving to all his cases. Since the introduction of the antipneumonic serum (prepared by Pane), he has used it with very gratifying results. During the last three years he has used the serum in 32 cases (and in the earlier years only the severest cases were selected; in the last year all the cases (14) were treated with serum), with a mortality of 9 per cent., whereas in the previous years with the ordinary treatment in vogue, the mortality was 24 per cent. No bad results have followed injection, and in 1 case as much as 200 c.cm. was injected in the course of twenty-four hours. The most marked effect was the lowering of the temperature. Of the 3 fatal cases, 2 were admitted almost moribund, and the third had serious concomitant disease.

PATHOLOGY.

(306) Transmission of Syphilis to the Third Generation.

Buret (*France Médicale*, February 4th, 1897) discusses G. Ogilvie's recent paper on this subject (*Brit. Journ. of Derm.*, October and November, 1897). He agrees that, although syphilis may exert a "dystrophic" influence on the third generation, proofs of transmission of the disease are up to the present time more or less vague, and are not supported by clinical evidence. Buret is of opinion that the children of hereditarily syphilitic parents may be feeble, puny, and deformed, and less resistant to certain chronic affections; also that in such children retinitis, choroiditis, keratitis, caries, and necrosis of bones are possible, but are due primarily to the congenital feebleness of the child, the syphilis of the forefathers only preparing the soil for such affections. But condylomata, etc., occurring in a robust child born of healthy parents cannot be put down to syphilis in one of the grandparents, but must be acquired. With regard to the question of reinfection by syphilis, Buret believes that further indisputable clinical facts are required before this can be definitely accepted.

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(307) Roentgen Rays and Bacteria.

Rieder (*Münch. med. Woch.*, January 25th, 1898) first refers to the mostly negative results obtained by previous investigators. The apparatus used by him was an induction machine with a 30 cm. spark and a reliable interrupter. The distance of the cathode from the culture was generally 10 cm. A lead cover with an aperture in the middle was substituted for the glass cover of the Petri's dish, as glass absorbs the rays. (1) Agar tubes were inoculated with cholera vibrios and poured out into two dishes. One dish was then exposed to the rays for forty-five minutes, and then both were put into the warm oven. It was found that there was much less growth on the exposed plate. Two similar plates were taken, and the one exposed was covered with lead as above described. In the part corresponding to the aperture there was practically no growth. The growth of the cholera colonies was almost entirely checked, only a few large colonies developing. With the B. coli and an hour's exposure only a few colonies appeared. The same was true of the S. pyogenes aureus even with a shorter exposure. With the S. pyogenes there were many fewer colonies in the exposed parts than in the periphery. Diphtheria bacilli inoculated upon serum showed only a few colonies in the exposed part. With anthrax and the typhoid bacillus hardly any colonies appeared, whereas in the periphery the typhoid bacillus grew luxuriantly. The author says that other bacteria can also be influenced in their growth. (2) Rieder has also investigated the action of the rays on already developed colonies. On a cholera plate no increase or diminution in the growth was observed in the exposed parts, but on reinoculation into fresh media the growth was normal. Thus no bactericidal action was obtained here. By exposing cholera bouillon, however, in thin layers to the action of the rays some result was obtained. In the case of the B. coli further development of the colonies was interfered with. Experiments also indicated that the growth of the tubercle bacillus could be influenced by the rays. These results differ from those obtained by other observers. Thus the power of further development of bacteria outside the body in good nutrient media is fairly rapidly impaired by the Roentgen rays. The results were the same whether the aperture in the lead was covered by paper or not. The heat given out with the rays does not exercise a bactericidal action, nor is there an chemical alteration induced in the media. The author thinks that these experiments encourage further investigations with the rays, not only upon animals, but also upon the human subject.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(308) Pancreatic Calculus and Temporary Diabetes.

W. Polyakoff (*Berl. klin. Woch.*, March 14th, 1898) describes the case of a man, aged 28, who during three weeks had four or five colic-like attacks accompanied by vomiting. After this (about two months) he had a persistent dull pain and feeling of oppression in the upper part of the abdomen. He lost flesh and became weak, in spite of his appetite being unusually good. The excessive hunger and thirst induced the patient to seek medical aid. The urine was then found to be excessive in quantity (about 5 pints per diem), and to contain much sugar. Great improvement followed suitable treatment for the diabetes, and the sugar entirely disappeared from the urine. Polyakoff discusses the nature of the attacks of abdominal pain from which the patient suffered, and comes to the conclusion that they were attacks of pancreatic colic. According to another author, pancreatic calculus, by causing atrophy of the gland, may, after some years, lead to diabetes and a form of diarrhœa somewhat analogous to "fatty stools." In this case, however, the diabetes was of temporary occurrence, and the disturbance of the pancreatic cells may have been only functional.

(309) A New Test for Bile Pigments.

Gluzinski (*Wien. klin. Woch.*, December 30th, 1897) was led by the examination of livers hardened in formalin to devise a new test for bile. This consists in boiling for a few minutes with formalin when an emerald-green colour results, which turns to an amethyst-violet on the addition of a few drops of hydrochloric acid. Gluzinski finds that the reaction is given by bile pigments but not by bile salts. The violet colour is taken up by chloroform, which, if the pigment originally present in the fluid was biliverdin, gives two absorption bands in the green, the other bile pigments giving no bands under similar circumstances. By this means the author was enabled to show that a sample of icteric urine contained biliverdin. With regard to the delicacy of the test a certain urine gave it, and also Gmelin's reaction; on tenfold dilution the latter failed, but the former (the new test) persisted until dilution had been carried to the extent of 140 to 150 times.

(310) Anasarca without Albuminuria or Visceral Lesion.

Lascols has recently made an extensive series of observations (*Thèse de Lyon*, 1897) on the occurrence of anasarca which is not dependent on renal, cardiac, or any other apparent visceral lesion. In early life cold is particularly important and seems able to produce anasarca, which may be the only manifestation of its effects. The influence of rheumatism seems to act pretty frequently, and the same may be said of various infections, and it is a known fact that intoxications, such as those of lead, alcohol, carbonic oxide, etc., are capable of producing œdema. The author also quotes a case of anasarca without albuminuria occurring in a patient affected with malaria. This he considers might be looked upon as another instance of toxæmia. He quotes cases of anasarca occurring during pregnancy, but unaccompanied by albuminuria, and in which there was no evidence of compression of any portion of the circulatory system. There are a certain number of cases which he includes under the head of dyscrasias, of which chlorosis is an example. Of all these forms, the writer looks upon infantile anasarca *a frigore* as perhaps the most remarkable. He distinguishes two forms, the one febrile with a certain amount of general reaction; the other apyretic and without other symptoms. In the former the skin may present some slight pink coloration; beginning with headache, slight pyrexia, with or without rigor, some thirst and anorexia, rarely vomiting or diarrhœa. The œdema may first be quite generalised; in other instances it begins locally, but progresses rapidly and remains several days, after which it begins to decline. The urine, diminished in quantity, is always free from albumen. From seven to fourteen days may be the entire duration of the attack, the general symptoms extending only over the first two or three days. Prognosis is favourable, the cure being complete and permanent. The chronic form of infantile anasarca is much rarer, and the prognosis is bad, such cases as have been described having ended fatally. In the adult anasarca *a frigore* is more indefinite in its characters, often beginning with marked general symptoms, rigor, and headache, the œdema developing slowly. The duration varies from a fortnight to three months; the œdema may recur several times. Rheumatic anasarca is not confined to the acute forms of the disease, for in some instances it occurs in connection with the arthritic diathesis as the only manifestation. It may also be met with in gouty subjects, and Breucq is quoted as reporting a case of generalised anasarca in a gouty patient without the least albuminuria. Teissier and Lecreux describe the case of a gouty patient without albuminuria or cardiac disease in which the arthritis was on one occasion replaced by general anasarca lasting three months. Cénas records two observations of anasarca accompanying erythema multiforme, the patients having extreme swelling of the eyelids, and hard œdema of the lower limbs. The site of the œdema did not always correspond with the eruption. Cénas thinks that the unknown infective agent of erythema multiforme has marked predilection for the peripheral termination of the nerves and acts by producing transitory peripheral neuritis. Anasarca has also been noticed in locomotor ataxy, insular sclerosis, epilepsy, and hysteria.

(311) Tricuspid Stenosis with Mitral and Aortic Disease.

Kasem Beck (*Centralbl. f. inn. Med.*, November 13th, 1897) reports two cases of this combined valvular lesion. Tricuspid stenosis, when present, is nearly always combined with mitral disease. Ashton and Stewart record a case of advanced stenosis of the mitral tricuspid and aortic orifices. In the author's case the tricuspid stenosis could not be recognised during life. Case I: A man, aged 53, was admitted with pain in the chest, difficult breathing, and œdema of the legs. There was no history of rheumatism. The peripheral arteries were sclerosed, and the pulse small. The apex beat was displaced outwards. The first sound was loud at the apex, and the second sound muffled and followed by a diastolic murmur. At mid-sternum there was a faint systolic murmur. The liver was enlarged. The urine was free from albumen. The diagnosis was made of arteriosclerosis, double aortic disease, hypertrophy of the left ventricle, and dilatation of the right. The patient was discharged improved, but soon returned with all the symptoms aggravated. A pericardial rub was now heard. There was a systolic and diastolic murmur at the base, but no murmur could be heard at the apex. At the necropsy there was double aortic disease, tricuspid stenosis, relative insufficiency of the mitral orifice, etc. Case II occurred in a man, aged 43, who was in the hospital some three years previously with cardiac and renal disease. The apex beat was displaced downwards and outwards. There was a systolic and diastolic murmur, more marked in the aortic area, but also heard at the apex. During the next three years he was in the hospital on several occasions. At length he was readmitted in uræmic coma, and died. During life the diagnosis was made of mitral stenosis and regurgitation, aortic stenosis and regurgitation, dilatation of the aorta, relative tricuspid insufficiency, arteriosclerosis, and Bright's disease. At the necropsy tricuspid stenosis was also found.

SURGERY.

(312) Asepsis in Operative Surgery.

Quénu (*Rev. de Chir.*, March, 1898) discusses a recent paper by Mikulicz, who holds that as a result of his personal experience and that of other German surgeons the substitution of aseptic for antiseptic methods in surgical operations has done harm and not good. The failures that occur from time to time in the practice of very careful surgeons are attributed to the difficulty in effectually sterilising the hands, and also to the discharge of pathological microbes from the mouth and nose of the operator in breathing and talking. Mikulicz asserts that a marvellous improvement has followed

his use of sterilised gloves whilst performing operations. Quénu, whilst admitting the difficulty of rendering the hands pure, attaches more importance to a strict avoidance of contact with any septic patient for twenty-four hours before performing a serious operation. An ideal precaution, he states, would be for the operating surgeon never to open an abscess, or, at least, never to touch pus. He suggests the separation of wards for suppurating cases from those of aseptic cases, with a special *personnel* and material for each. A rectal or vaginal examination should not be made for at least a day before the operation, and, if this cannot be avoided, special care should be taken to cleanse and sterilise the skin of the hands. He is opposed to the performance of an important operation in a large theatre, and in the presence of a great number of students.

(313) Ultimate Effects of Uniting an Injured Vas Deferens.

Ingianni and Arpini (*Il Policlinico*, January 15th, 1898) have conducted an experimental inquiry on this subject. They find that a transverse incision gave better results as far as union of the two ends was concerned than an oblique one; also it was an advantage to have some support in the lumen of the duct when suturing the ends together. When sterilised horsehair was introduced for this purpose the hair either became displaced (from peristaltic action) or set up inflammatory action and eventually occluded the duct. When catgut (prepared in a special manner so as to be rigid and yet reabsorbable) was tried in the place of horsehair good union occurred, but the lumen of the duct was blocked as with the horsehair; the same result followed the use of decalcified bone and silver wire. In the majority of the cases the testes appeared normal to macroscopic examination. Microscopic examination of the duct at the point of union showed that the lumen was blocked by connective tissue which developed in the space between the two ends left by the retraction of the muscular walls of the vas.

(314) Healing of a Wound of the Heart.

Semeleder (*Wien. med. Presse*, 1898, No. 48) records the case of a man, aged 27, who was brought into hospital suffering from two stab wounds in the chest. Both were horizontal; one was between the third and fourth left costal cartilages, about four-fifths of an inch from the sternal margin; the other in the back, at the lower edge and about the middle of the spine of the left scapula. There was no hæmorrhage, pain, or discomfort. The wound in the back healed in five days, while the other granulated, and was treated with iodoform. The patient got up, and wished to leave the hospital; but next day complained of abdominal pain, and died quite suddenly a week after the injury. The anterior wound went somewhat downwards. The inner surface of the chest wall was united to the pericardium and diaphragm by adhesive peritonitis for more than an inch and a half. There was a healed scar an inch long on the right side of the pericardium; the sac contained a few drops of clear fluid. On the outer side of the right ventricle was a healed wound more than half an inch in length, which had not penetrated the thickness of the cardiac muscle. There was a medium-sized, pale, fibrinous clot in the heart. The cause of death was compression of the left lung by an abundant effusion of sero-sanguineous fluid, the origin of which could not be traced.

(315) Suprapubic Cystotomy.

Laccetti (*Riforma Medica*, December 1st, 2nd, 3rd, 1897) thinks that of all the cutting methods used in the treatment of vesical calculus suprapubic cystotomy is the best. He describes the operative technique used by him, and speaks highly of the advantage of Petersen's rectal sound. He generally makes a longitudinal incision—6 to 12 cm.—and disturbs the adipose tissue in front of the bladder as little as possible. Where there is chronic vesical catarrh or renal disease, the author advises non-suture of the bladder, and prefers to leave the bladder wound open and drain through a siphon.

(316) Double Teratoma in an Infant.

R. W. Lovett and W. T. Councilman (*Journ. Exper. Med.*, II, No. 4, 1897) record a unique case of double teratoma. The subject, a well-developed male infant 3 weeks old, was normal save for a scrotal tumour which had the appearance of an enormous hydrocele, and yielded a quantity of light, serous-looking fluid on tapping. Further examination, however, revealed a tumour of the testicle, diagnosed as malignant. The testis was therefore removed, and the wound healed by first intention. The growth consisted of a solid stroma in which appeared small islands of cartilage enclosing numerous cysts of various sizes. The microscope showed striated muscular fibres, hyaline cartilage, newly-formed bone without Haversian canals, and very numerous cysts, some lined by columnar and some by stratified squamous epithelium. There were also structures resembling those of the eye. The diagnosis of teratoma of the testicle was accordingly made. For months later the child was again brought in for treatment, a swelling having appeared in the right parietal region. This tumour was partly removed, but it grew rapidly, and finally attained a size greater than that of the head, causing the death of the child. At the necropsy the tumour was found to be outside the brain (which it had greatly compressed without the production during life of motor symptoms) between the dura and the skull. Like the growth in the testis, it contained structures derived from all the three germinal layers (nerves, ganglia, bone with Haversian canals, striated muscular fibres, intestine, cysts, lymph tissue, etc.). It was, therefore, also a teratoma. The authors discuss the current views regarding the origin of teratoma, but are unable to throw much light upon this case except to suggest fœtal inclusion.

MIDWIFERY AND DISEASES OF WOMEN.

(317) Total Inversion of the Uterus After Abortion.

Switalski (*Cent. f. Gyn.*, January 22nd, 1898) relates the case of a woman, aged 36, 4-para, who aborted at the fifth month. There was much bleeding, and the placenta came away some hours later. Later she had repeated hæmorrhages which led to her going into hospital, where total inversion was diagnosed. The fundus, inverted, lay in the vagina; there was half an inch of cervix left in proper position, with very thin walls. The os externum had a diameter of 1 inch. At the upper end of the uterus a pit with thick margins could easily be felt *per rectum*. Manual reposition under chloroform was attempted, the cervix being drawn down by a volsella; but this only resulted in the cervix being torn anteriorly up to the internal os with separation of the bladder. The posterior *cul-de-sac* was then opened, and a posterior median incision was made in the uterus extending from 1 inch from the os externum to 1 inch from the fundus. The uterus was easily reinverted, the uterine wall was stitched up, and then the wound in the posterior fornix was closed and the cervix repaired. The patient made a good recovery. A microscopic examination of a piece of the uterine wall removed for the purpose showed degenerative changes. Switalski thinks that the condition of the cervix should be ascertained before manual reposition is attempted. If unhealthy, as in this case, gradual reposition would be better. He has been able to find only two other cases of inversion of the uterus after abortion.

(318) Ectopic Gestation taken for Retroversion of Gravid Uterus.

J. Van der Haeven (*Nederland. Tijdschrift van Geneskunde*, 1897, Pt. ii, No. 12) relates an instructive case showing the dangers of interference when symptoms of retroversion of the gravid uterus occur. This patient was a primipara, aged 23, three months pregnant. Previously she had always been quite regular. For a few days she suffered from pain on defæcation, and for three there was complete obstruction, neither flatus nor fæces passing, in spite of purgatives and enemata. The pulse was good, the abdomen moderately distended with flatus, and not extremely tender. The cervix lay forwards and to the left, whilst in the posterior fornix a swelling of the size of the uterus at the third month could be detected. The patient was put under chloroform, and the reposition of the uterus was effected with apparent ease. Directly the effects of the anæsthetic passed off, symptoms of acute anæmia were observed. Circumstances prevented an operation being undertaken. Six hours later the

patient seemed better. One hour after the supposed reduction the bowels acted. Six days later membrane was discharged from the uterine cavity; on microscopic examination it proved to be decidua. Three weeks later the patient was examined under chloroform and much infiltration in the right parametrium was discovered. A month afterwards the period appeared, and the hæmatoma had greatly diminished.

(319) Hypertrophy of Breasts; Mastopexy.

Pousson (*Abeille Médicale*, No. 28, 1897) met with a patient whose breasts were greatly enlarged, hanging down on both sides to the loins. Severe neuralgic pains were felt in both breasts. A semilunar piece was cut out of the breast, extending from the sternum to the axilla, and including skin, fat, and glandular substance, which latter showed no evidence of any new growth. The mamma was then sutured to the exposed aponeurosis of the pectoralis major, and the cutaneous wound closed. The opposite breast was treated in a similar manner. The neuralgic symptoms disappeared completely.

(320) Vaginal Cæsarean Section with Total Extirpation of a Carcinomatous Uterus at Term.

Seiffart (*Centralb. f. Gyn.*, February 5th, 1898) adoped the procedure advocated in Dührssen's monograph on Vaginal Cæsarean Section. The child was saved alive, but the mother died two days after the operation of heart failure. The patient was 37 years of age, and had had five children by two marriages, and sought advice only two weeks before her expected confinement on account of repeated and offensive discharges of blood. A cancerous mass the size of a man's fist was discovered arising from the posterior wall of the cervix. Part of the anterior lip and the whole of the supravaginal portion of the cervix were free from growth. After the usual preparations the cancerous mass was scooped out and the tumour remains energetically disinfected. Later in the day the operation was performed. The whole of the posterior lip of the cervix was first removed, the bladder was separated off, and the lower part of each broad ligament ligatured. The anterior lip was then split, and the division carried on to the body of the uterus, the cut edges being bound with ligatures to control bleeding. The bag of membranes was ruptured, and the head of the child was driven down, rendering forceps necessary; it had been intended to turn. The child was born partly asphyxiated, but was soon revived with a few swings on Schultze's plan. The placenta was at once removed, the anterior uterine wall folded in, and the fundus turned out, after which the posterior wall was split, and each half of the uterus removed after securing the broad ligament with clamps. The patient went on well till the morrow midday; after this she gradually sank of heart failure. The author speaks well of vaginal Cæsarean section, but inasmuch as the patient might, he thinks, have recovered if he had postponed the total extirpation of the uterus, he recommends that this part of the operation should always be postponed if the delivery procedures are difficult or the patient weak, but with a small child and favourable conditions he counsels completion of the operation at one sitting.

(321) Coexistence of Uterine Cancer and Fibroid.

Bourgeois (*Thèse de Lyon*, 1897) has summed up 18 cases: in 11 there was myoma of the body of the uterus and epithelioma of the cervix; in the remaining 7 the body was subject to myoma and cancer simultaneously. In the former class the average age of the patients was 43, and all apparently still menstruated. In the latter, where the body of the uterus was cancerous, the average age was as high as 56, and it is significant that the menopause was always delayed in this class. The patients were for the greater part multiparæ. The myomas were as a rule multiple or voluminous, usually submucous or interstitial, rarely subperitoneal. The early stage of cancerous complication is usually very insidious. Bourgeois supports the theory of Wahrendorff and Ehrendorfer that the presence of a fibroma acts as a constant irritant to the endometrium in its vicinity. Glandular proliferation follows and adenomatous tissue is very liable to malignant degeneration. Of necessity operation is indicated when a fibroma becomes cancerous. Bourgeois admits that though the relation of the two diseases is evident, it is by no means definite, nor can he calculate any proportion between cancer of the normal and of the fibroid uterus.

THERAPEUTICS.

(322) The Therapeutic Action of Hydrastinin.

Rousse (*Arch. Internat. de Pharmacodynamie*, iv, 3 and 4) contributes a long and important article on the internal effects of this base, which is an oxidation product of hydrastin, the active principle of hydrastis canadensis; it has the empirical formula $C_{11}H_{13}NO_3$, and is to be regarded as a derivative of pyrocatechin. The author's first observations were clinical, and he was able to confirm the well-known property of the drug (of which he employed the hydrochlorate) in checking uterine hæmorrhage, besides showing it to have an ameliorative influence upon the night sweats of phthisis. He next investigated the action of the drug upon frogs and mammals, and was enabled to prove that it exerts a vaso-constrictor action on the generative organs and the intestine, which persists even when the bulbar vasomotor centre is paralysed by chloral, and is hence peripheral in nature. A similar action probably results in the renal blood vessels as well. As is only to be expected, some dilatation of the cutaneous blood vessels accompanies this effect. Rousse furthermore finds experimentally that hydrastinin induces uterine contractions; this is not noticeable clinically, but he considers it probable that in women the uterine vaso-constriction is accompanied by a contraction of the smooth muscle of the organ, which is too gentle to occasion pain or abortion. During labour it undoubtedly strengthens feeble contractions and revives an inert uterus. The author purposes in a subsequent paper to state the results obtained with cotarnin, the action of which he has shown to be similar to that of hydrastinin.

(323) Concentration of Diphtheria Antitoxin.

A practical disadvantage in the use of diphtheria antitoxin is the large amount of serum that has sometimes to be injected. Bujwid (*Deut. med. Woch.*, February 24th) has discovered a method of concentration by which 1,000 units can be injected with 1½ to 3 c.cm. of serum. The details of the preparation consist in, first, freezing the serum gradually, so that white crystals begin to form in the yellow fluid. Eventually the yellow fluid also freezes. The resulting solid mass is next allowed to thaw gradually. The yellow fluid is the first to appear, and consists of albumen and salts; the white crystals are the next to thaw. The two fluids now remain separate, the yellow being below and the white above. The immunising quality is only contained in the yellow fluid, and it appears to be twice as strong as it was before being frozen.

(324) Serum Treatment of Pneumonia.

Pane (*Gazz. degli Osped. e delle Clin.*, January 30th, 1898) reports nine cases of pneumonia treated with antipneumonic serum during a recent epidemic of pneumonia in Naples which was of a grave type. The quantity of serum used varied from 10 to 110 c.cm. Death occurred in one case, but here the treatment was not adopted until the fifth day of the disease, and then the serum was used only in small quantities (10 c.cm.). In all the other cases the effect of serum treatment was markedly good, inducing rapid improvement of the symptoms. No intolerance or ill-effects were observed. Since there is little hope if the pneumococcus enters the blood, and since this probably does not happen before the third or fourth day, if good results are to be anticipated from the administration of serum, it must evidently be used in the early stages of the disease to be of avail; moreover, at this time a smaller quantity of serum will suffice. As an average dose, the author recommends 20 c.cm. per diem.

(325) Iodoformogen.

Kromayer (*Berl. klin. Woch.*, March 7th, 1898) describes this new preparation, which is a combination of iodoform with albumen. It is a very fine, bright yellow powder, which does not roll into balls. It is practically odourless. It is insoluble in water, and can be sterilised at 100° C. The author has used it in

more than a hundred cases, and he gives illustrative details of three of them. It has some of the disadvantages of iodoform, in that it may produce an eczema. Xromayer says that at the present time it is the best dusting powder for wounds, etc., available.

(326) The Action of Physostigmin on Peristalsis.

TRAVERSA (*Il Policlinico*, January 1st, 1898), as the result of a series of experiments upon dogs and horses, finds that physostigmin not only increases peristalsis, but provokes violent and general contractions of the intestine. These movements cease under the influence of atropine, and do not occur in atropinised animals. These results are brought about through the excitation of the peripheral motor nervous apparatus, for they were observed after section of the vagus and sympathetic, the lumbar part of the cord, and in portions of resected intestine, artificially kept alive and fed with blood medicated with the drug in question. The statement of Brunton and others that pilocarpin and physostigmin cause increased peristalsis—the one through the nerves and the other through the muscular fibre—is not borne out by the author's experiments. According to him, physostigmin acts in precisely the same way as pilocarpin—namely, through the peripheral nervous apparatus.

(327) Agar-Agar in Diseases of the Skin.

GALLOIS recommends the use of agar-agar (*Journ. de Méd.*, March 10th, 1898) in certain inflammatory infections of the skin, more particularly erysipelas. The formula employed by him is a 1 per cent. solution in water, to which is added 0.1 per cent. perchloride of mercury and tartaric acid. The patient applies the substance directly to the part affected, by rubbing, by which means it is spread out as a thin coating which dries fairly rapidly and which can be renewed several times a day if necessary. The great advantage of this method is its cleanliness; it gives to the skin a sensation of freshness, and owing to its elasticity it does not cause contraction in the same way as gelatine. It is not necessary to warm the solution, a proceeding which is essential in the case of gelatine. The coating which it forms on the skin prevents friction, and can when necessary be removed by simple washing. Agar is cheap, and there is no doubt that it can be used as a useful vehicle for other substances to be applied to the skin.

(328) Urea as a Diuretic.

FUTRAN of Kusnezoff's clinic (*Therap. Monats.*, March, 1898) first refers to previous researches into this subject, and especially those of Klemperer. He has used this agent in 5 per cent. watery solution, beginning with 10 g. in the day and increasing by 5 g. daily up to 20, 25, or even 30 g. in the twenty-four hours. No real ill-effects were observed. In one case there was slight diarrhœa. To avoid fallacies milk should not be given while the urea is being administered. Futran has thus treated 14 patients: 2 with atrophic cirrhosis of the liver, 2 with serous pleurisy, 2 with emphysema and secondary cardiac disease, 1 with myocarditis, 1 with interstitial nephritis, and 5 healthy individuals. He appends tables which show that in no case was there any marked diuresis, and he concludes that urea has a very insignificant diuretic action, and that it is of less value than other diuretics.

(329) Somatose.

JOACHIM (*Centralbl. f. inn. Med.*, March 12th, 1898) has investigated the action of somatose in nursing women. He has used it in fifteen cases in which there was a deficiency of milk, and he satisfied himself that it produced, not only a larger quantity but also a better quality of milk. He does not agree with R. Drews, who first recommended the use of somatose for this purpose, that it exercises a specific action on the breast tissue itself. He thinks it succeeds only when the appetite and general condition of the patient are improved. The author gives details of three cases bearing out this view.

(330) Antitoxin Treatment of Tetanus.

MAX SCHUBERT (*Münch. med. Woch.*, February 22nd, 1898) relates two cases unsuccessfully treated with Behring's serum (No. 100). Case I.—A man, aged 47, suffered a complicated fracture of the second phalanx of the right index finger due to the fall of an iron plate upon it. Five days later he had pain in the back, and on the following day stiffness in the neck and back muscles. On admission well-marked symptoms of tetanus were present. The gangrenous finger was amputated, and a few hours later 5 g. of the antitoxin dissolved in 40 c.cm. sterile water was injected into the vein of the arm. Death occurred a few hours later on the third day of the disease. Case II.—A man, aged 39, ran a nail into his foot. Two days later he was admitted with a phlegmonous inflammation of the dorsum of the foot. This was subsequently incised. The site of puncture by the nail on the plantar surface showed no signs of inflammation. Seven days after the accident the patient could not open his mouth more than 2 cm., and as this appeared to be the commencement of traumatic tetanus 5 g. of Behring's antitoxin was immediately injected subcutaneously. The clinical picture of tetanus rapidly developed, and the patient died three days later. In this second case the antitoxin treatment was commenced ten hours after the first symptoms, and the dose used was that recommended for the fully developed disease. An incubation period of seven days undoubtedly made the prognosis unfavourable. The subcutaneous administration of the antitoxin as against the intravenous cannot be made responsible for the failure, because, according to Behring, the action of the former is established only twelve hours later than the latter, and death did not occur here until sixty hours after the injection. Only the report of further cases can show whether the published cases of recovery after the use of antitoxin (No. 100) were really due to the antitoxin treatment. The first very acute case recorded by the author should hardly be counted, as the disease had been established for two days before the antitoxin was used, and death occurred twelve hours and a-half later, but the circumstances of the second case were quite different.

(331) Treatment of Gonorrhœal Rheumatism.

RENDU (*La Médecine Moderne*, No. 102, 1896) is of opinion that the proper treatment of gonorrhœal rheumatism consists in treating the discharge itself. Internal remedies such as salicylate of soda, salol, and salophen are unsatisfactory. The gonococci must be destroyed at their point of origin where they multiply and infect the organism generally. The best means is by permanganate of potash irrigations. According to Rendu, after two or three days of this treatment, the swelling, pain, and œdema of the joints subside, and a cure is effected. The treatment is more effective in early cases, but if the joints have been affected for long, it often fails. In such obstinate cases Rendu recommends injection of the joints with 1 in 4,000 perchloride of mercury. In suppurating cases arthrotomy is indicated. If the joint has not long been immobile there is little fear of ankylosis, but stiffness and muscular atrophy often occur, which are best treated by massage exercises and the faradic current.

PATHOLOGY.

(332) Little's Disease.

SPILLER (*Journ. of Nerv. and Ment. Dis.*, February, 1898), under this title, records a case of microcephaly and spasticity in which an examination of the brain was made. There was no macroscopic lesion, but microscopical examination showed absence of the very large ganglion cells which are found in the normal motor cortex. The fibres of the pyramidal tract were unusually small: the cells in the anterior horns in the cervical and lumbar regions were very few. Several similar cases are quoted in which there was deficient development of the tracts in the cord without scleroses. In idiots with paralysis diminution in size and number of the pyramidal cells of the cortex has repeatedly been found, and it seems likely that this arrest of development causes a corresponding arrest in the association centres, and therefore an arrest in the development of the intellect. The question of operative treatment depends largely on the possibility or otherwise of assisting the further development of the cortical cells, and it is conceivable that, as a slight arrested hydrocephalus has seemed to favour mental development by lessening the resistance to the growth of the brain, so craniotomy might in some cases do good.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(333) Pulmonary Gangrene.

Schroeder (*Centralbl. f. inn. Med.*, January 15th, 1898) relates a case from Gerhardt's clinic due to perforation of the œsophagus by a bone. Eight days before admission a woman, aged 53, swallowed a piece of bone, which appeared to her to stick in the throat. On admission, she only complained of a bad taste and smell in the mouth. A bougie was passed into the stomach without difficulty. The evening temperature rose to nearly 40° C. A few days later a limited dulness was discovered at the right base. The vocal fremitus was diminished there; large moist *râles* were heard on inspiration, and the expiration was bronchial. Three weeks after admission elastic fibres and pieces of lung tissue were found in the ill-smelling expectoration. An œdema of the skin appeared over the right base, near the angle of the scapula, and exploratory puncture withdrew a sero-purulent but sterile fluid. The symptoms then began to diminish and the abnormal physical signs disappeared, so that, nine weeks after admission, the patient was discharged well. Pulmonary gangrene due to perforation of the œsophagus is rarely seen, and is almost always fatal. It may originate from perforation (1) into the upper air passages—larynx, trachea, or large bronchus—with escape of food into the lungs, and (2) into the lung itself. The foreign body may pass directly out into the upper air passages or lung, or it may perforate the œsophageal wall and the escaping food particles may set up a suppurative focus, which may extend into the mediastinum, trachea, or lung. If perforation takes place into the lung, there will be an accompanying pleurisy, simple or purulent, according as the pleural cavity is shut off or not. There may also be a purulent pleurisy secondary to gangrene of the lung. The author believes that in his case the bone damaged the œsophageal wall and induced a gangrene there. The gangrene extended and produced a localised purulent focus in the mediastinum. A simple pleurisy was also set up and the gangrene extended into the lung. In the meantime the foreign body escaped through the alimentary canal. The case terminated favourably because there was no suppurative pleurisy or extensive purulent mediastinitis.

(334) Acute and Subacute Nephritis.

Councilman (*Med. and Surg. Reports*, Boston City Hospital, 1897) has made an anatomical an bacteriological examination of 49 cases. He adopts the following classification: (1) Acute diffuse nephritis, divided into (*a*) degenerative, (*b*) glomerular, (*c*) hæmorrhagic, and (*d*) interstitial non-suppurative nephritis; (2) subacute glomerular nephritis; (3) chronic diffuse nephritis, including (*a*) glomerular, (*b*) arteriosclerotic, and (*c*) degenerative and interstitial nephritis; (4) senile nephritis; and (5) amyloid nephritis. The author then gives details of the 49 cases. (1) In 25 cases of acute glomerular nephritis, proliferation in and among the vessels of the glomerulus was present in 23. Hyaline thrombi were seen in 3 cases, and necrosis of the glomerulus in 2. Proliferation of the capsular epithelium plays a prominent part in the glomerular changes, being present to some extent in all the cases, but most markedly in 2. Dilatation of the tubules was often observed, and fatty degeneration of the epithelium was found in some degree in almost all cases. Sometimes the epithelium was enormously swollen, very clear, and filled with small spaces. The most marked changes in the interstitial tissue was œdema. In the typical cases there was no actual increase in the connective tissue fibrillæ. The kidneys were enlarged, and the capsule, sometimes hyperæmic, stripped easily. The surface was smooth; the colour variable, but usually pinkish and mottled. There were usually small white foci of intense fatty degeneration. A thin fluid could be squeezed out. The glomeruli were pale and bloodless, Bacteria were present in the kidneys in 17 cases. The pneumococcus was present in 9, the streptococcus in 3, the staphylococcus in 1, and the colon bacillus alone in 1. The most typical cases of the intracapillary glomerular lesions occurred in the pneumococcus infection. Acute and usually ulcerative endocarditis was present in 9 cases, erysipelas in 1, measles in 2, syphilis in 2, acute rheumatism in 2, acute streptococcus infection following abortion in 1, scarlet fever in 1, diphtheria in 1, gonorrhœa in 1, and no acute accompanying infection could be found in 8 cases. Œdema was present in 10 out of 14 cases in which it was looked for. (2) Details are given of 13 cases of subacute and chronic glomerular nephritis. This disease is the large white kidney of Wilks and the chronic parenchymatous nephritis of the Germans. Much of what is said above about the glomeruli is applicable here. All of them show an increase in the number of cells. Lobulation of the glomerulus may exist as well as hyaline degeneration. The capsular epithelium mostly shows some hyperplasia and the epithelium of the tubes extensive degeneration. The connective tissue is always slightly increased. This represents a more chronic condition of lesions of the same character as those found in the acute form. (3) Acute interstitial nephritis is represented by 8 cases. The essential lesion is in the interstitial tissue, and it cannot be looked upon as secondary to a primary epithelial degeneration. The cells seem in large part to come from the endothelium of the blood vessels, small veins, and capillaries. The changes are more marked in the intermediate zone of the kidney. The cells of the connective tissue capsule take parts in the process, and leucocytes are found between the cells. There was also degeneration of the renal epithelium. In these cases a toxic material must be supposed to act on the parenchyma and interstitial tissue. The streptococcus was found in all the 4 cases examined. The associated disease was ascertained in 6 cases; it was scarlet fever in 3, diphtheria in 2, and endocarditis following abortion in 2. (4) Three cases of acute hæmorrhagic nephritis were examined, 2 occurring in typhoid fever and 1 in acute pneumonic endocarditis. The hæmorrhage usually occurs from the glomerulus, but in one case here there was extensive hæmorrhage into the tubules alone. The bacteriological examination was negative in the 2 cases examined.

(335) Wide Nostrils and Disease of the Air Passages.

M. Saenger (*Centralbl. f. inn. Med.*, March 19th, 1898) states that the protection afforded by the normal nose against air which is too cold, too dry, or dust laden, is often considerably reduced when the nasal cavities are too roomy. The mucous membrane is often in these cases anæmic, dry, and covered with desiccated secretion. The author states that in individuals with wide nostrils an abundant deposit of dust can be found in the naso-pharynx, pharynx, larynx, and even trachea, whereas in others no such deposit is seen. This deposit is not present if the patient is provided with a nasal obturator. The author's obturator consists of two plates adapted partially to fill up the entrance into the nostrils, and united by a U-shaped spring. When the instrument is in position the spring grasps the septum. The size of the nasal plates is such as to permit of quite easy breathing with a closed mouth. The author has had good results with this obturator in individuals with too roomy nostrils working in dusty atmospheres as well as in patients with obstinate catarrh of the throat, larynx, or bronchi; if the obturator was left off the catarrhal symptoms recurred. The number of those with too wide nostrils and prone to catarrh of the respiratory passages is considerable. Of course it does not follow that all people with too roomy nostrils suffer in this way. The masks worn by workers in dusty atmospheres are both expensive and inconvenient. The use of the mouth respirator as a protection against cold air is irrational, for the best respirator is a sound nose. It is only the natural entrance for the air which requires protection.

(336) Occupation Paresis.

Kron (*Deut. med. Woch.*, November 3rd, 1897) draws attention to an occupation paresis affecting the lower extremities, and relates a case: A girl, aged 16, had been engaged some time in an occupation in which she had to assume a squatting posture, with

sharply-flexed knees and extended toes. She suffered at times from "pins and needles" in the feet, and later the legs became weak. The affection was more marked on the right side. When she walked she dragged her feet. The abnormal sensations gradually disappeared and the left leg recovered completely, but spasm of the plantar flexors occurred whenever she took up the kneeling position. Later atrophy of the anterior tibial muscles and extensor digitorum was observed. A partial reaction of degeneration was present in these muscles. Sensation was unaffected. The tendo-Achillis reflexes were absent, but the knee-jerks were present. Peroneal paralysis has been observed in most of the recorded cases of this kind. Sensation has been involved at first. The cause of these nervous manifestations is undoubtedly pressure on the nerves at the back of the knee, and the mode of this pressure can be demonstrated on the dead body. The peroneal nerve is more exposed because of its relation to the biceps femoris and the head of the fibula. The paresis is mostly not a serious one and recovery ensues; but it is sometimes an obstinate affection, as in the above-named case, where it lasted over two years. The treatment is by rest, massage, baths, and electricity. The prophylaxis is obvious. The position should be at once abandoned if there is any feeling of pins and needles in the feet.

SURGERY.

(337) Operative Treatment of Hepatic Abscess.

Fontan (*Bull. et Mém. de la Soc. de Chir.*, No. 7, 1898), who has had much experience in the surgical treatment of abscess of the liver, advocates a method which consists (1) in a very large opening made in the region where the presence of pus has been made out; (2) in suture of the costal to the diaphragmatic pleura in cases in which the chest is opened, and of the parietal to the hepatic peritoneum when the abdominal cavity alone is involved; and (3) in methodical and prudent though complete curetting of the wall of the abscess cavity. The seat of election in opening a hepatic abscess should be, it is held, the axillary line, or a little behind this at the level of the eighth, ninth, or tenth rib, of which a piece from 6 to 8 centimetres in length should be resected. The author endeavours, when possible, to perform a transpleural operation, and he insists on the importance of stitching together the two layers of pleura with the object of preventing pneumothorax and pyothorax. The curetting, which is executed with uterine curettes, is intended to remove from the cavity the detritus and small masses of dead tissus which are often met with in the hepatic abscess, and the spontaneous elimination of which may retard and threaten the convalescence of the patient, who has probably been much exhausted by his malady. This practice, he asserts, is not likely to cause either hæmorrhage or a free discharge of bile, as the blood vessels and biliary ducts of the walls of the sac are closed by thrombosis.

(338) Complete Backward Dislocation of the Little Finger.

Paci (*Archiv. di Ortoped.*, An. 14, n. 6) reports the case of a man, aged 26, who received a blow from the butt of a rifle on the dorsum of the hand. The nature of the injury was not diagnosed until twenty-one days after the accident. During this time the hand was more or less useless from pain. Three days later he was admitted into hospital with manifest dislocation of the little finger. The head of the metacarpal bone projected on the palmar aspect, the end of the phalanx projecting dorsally. Attempts were made under chloroform to reduce the dislocation by manipulation, but were unsuccessful. On cutting down it was found that the tendons had become so shortened that the dislocation returned immediately after reduction. Paci therefore resected the head of the metacarpal bone. Consecutive treatment by massage, hydrotherapy, and electricity gave the finger a certain amount of useful but limited movement. Dislocation of these parts is extremely rare.

MIDWIFERY AND DISEASES OF WOMEN.

(339) Treatment of Rupture of Uterus.

Orthmann (*Centralbl. f. Gynäk.*, No. 9, 1898) recently read two interesting cases before a German society. In the first case criminal abortion had been attempted in the fourth month (patient 27, third pregnancy). In the right fornix a large hole was found with the membranes coming through it, there were signs of internal hæmorrhage. Abdominal section was performed, a large hæmatoma in the right parametrium was broken up, and the ovum extracted. The patient recovered. In the second case (patient 41, seventh pregnancy) there was a transverse presentation, and some unqualified person attempted delivery. Violent pain and collapse ensued. There was complete rupture of the uterus, which lay to the left, the child to the right. The uterus was totally extirpated, the laceration passed along the right side of the organ, somewhat anteriorly, extending through the cervix into the vagina and right parametrium. The patient died of peritonitis on the third day. The muscular walls of the uterus were unusually thick, even for pregnancy—a fact already observed in cases of rupture of the uterus. Orthmann is inclined to believe that the rupture was caused by violent pulling on the cord, which in fact had been torn off. A long discussion ensued as to whether this malpraxis could actually cause rupture of the uterus. Olshausen doubted it; Orthmann thought that at least the fœtus, in a crossbirth, could be held down in a dangerous position when the cord was dragged upon, so that rupture came if a strong pain set in. The question of extirpation of the ruptured uterus or suture of the laceration was also discussed; the right course depends upon circumstances.

(340) Adenomyoma of Round Ligament.

Blumer (*Amer. Journ. Obstet.*, January, 1898) was consulted by a woman, aged 47, who had noticed a growth in the right groin for twenty-three years. At first it appeared as two distinct enlargements, each about the size of a maize seed; they gradually united and grew very slowly. For the last six months growth had been rapid. The tumour never caused pain even at the menstrual period. Blumer found a growth of the size of an egg in the right inguinal region apparently midway between the external and internal rings. The removal of the growth was effected under cocaine by Vander Veer, who states that he was obliged to expose the deeper layers of the fascia, and believed at the time that the tumour originated in the inguinal canal itself. The tumour proved to be a very vascular myoma, undoubtedly, from its position, developed in the round ligament. It bore well-marked glandular material, possibly of the kind described by von Recklinghausen. Martin and Cullen have recently described cases somewhat similar.

(341) Serumtherapy for the Newborn.

Loviot (*Bulletins et Mémoires de la Soc. Obstétricale et Gynécologique de Paris*, January, 1898) carried out this treatment with success in the case of an infant under three months utterly exhausted by gastroenteritis. It also had double inguinal hernia. Asses' milk, washing out of the stomach, and other remedies proved of no avail. Loviot injected artificial serum subcutaneously (10 g. or 154 gr. of table salt to the litre or 1.7 pints of sterilised water). From 20 to 50 g. of the serum were injected once or twice daily, according to the patient's condition for about a week. The injections were made into the subcutaneous tissue of the front of the thigh, the abdomen, or the back of the forearm. The *couveuse* was not needed, as there was no fall in temperature. The infant rapidly recovered from its perilous condition.

(342) The Curette: Perforation of Uterus, or Passage into Tube?

Jahreiss (*Centralb. f. Gynäk.*, No. 6, 1898) relates 2 cases of grave importance, though both ended satisfactorily. In neither was there preliminary dilatation, nothing more being done than washing out of the uterine cavity. In the first case the cavity was curetted for free metrorrhagia after abortion. Nothing abnormal was noticed about the position of the uterus, nor did its walls seem remarkably soft. Suddenly the curette passed an indefinite way out to the right. On retraction it could again be passed almost to the hilt in the same direction, entering at the same point. Altogether, it seemed that the right Fallopian tube was patulous. No intra-uterine injection was used. The second

case was similar. A very anæmic woman had aborted, and fourteen days later the curette was used. Great masses of placental tissue came away. Suddenly the curette was found to slip several inches upwards, and violent hæmorrhage followed. The axis was normal; the walls did not seem unusually soft, and the curette had been used very carefully. The operation was done in a consulting-room. The uterus was plugged with iodoform gauze, and the patient laid on the doctor's sofa, a bag of ice being applied to her abdomen. Two hours later she was sent home in a cab. Next day the gauze tampon was removed. There was a little hypogastric tenderness for a time, but no rise of temperature, tympanites, nor symptoms of injury to the bladder.

(343) Influence of Morphine and Ether on Uterine Pains.

Hensen (*Archiv f. Gynäk.*, vol. lv, Part 1, 1898) publishes a very exhaustive monograph on this subject, furnished with instructive tables. He finds that morphine in doses of under a third of a grain exerts no influence on the force of the pains and of the abdominal muscles. Ether causes a distinct effect, as after one or two minutes the force of the pains is diminished and the interval prolonged. When ether is discontinued the previous force of the pains is restored in from five to twenty minutes. Under ether narcosis the abdominal muscles cease to aid in the process of labour. Chloroform produces similar effects on the pains, but when its administration is suspended restoration of the pains to their previous force of frequency is very much slower. Its evil influence does not disappear for quite two hours. Hence Hensen urges that ether should always be used as the anæsthetic in labour. It facilitates turning and forceps delivery as well as the ether compound, whilst its effects very rapidly disappear, a most desirable result when we remember the chances of *post-partum* hæmorrhage after instrumental labour.

(344) Chorea in Pregnancy.

Loviot (*Bull. et Mém. de la Soc. Obstét. et Gynéc. de Paris*, January, 1898) writes of a young woman who suffered for three weeks, when 14 years old, from very severe chorea. She married, and towards the end of her first pregnancy the nervous disorder returned and continued for a time after delivery at term; there was no delirium nor intractable insomnia. A year later, when in good health, the patient again became pregnant. Chorea of unusual gravity set in. By the end of the third month she was very ill, exhausted by absolute insomnia. An antiseptic bougie was introduced into the uterus, under chloroform. It was rejected in thirty-six hours. A second was introduced without any anæsthetic being given. Thirty hours later the ovum was expelled entire. At once the patient's condition improved, and in a few days all delirium ceased and the patient slept fairly. Several relapses occurred, but she was well at the end of August, 1897, several weeks after the abortion. At present some nervousness and trembling of the hands are observed, but the general health is good.

THERAPEUTICS.

(345) Oophorin.

E. Saalfeld (*Berl. klin. Woch.*, 1898, No. 13) in view of the observations of L. Landau on the oöphorin treatment of nervous symptoms occurring in women about the climacteric period, gave oöphorin preparations to women suffering from acne rosacea and cutaneous disorders at the menopause. Saalfeld thinks the results were satisfactory. In a woman, aged about 20, double oöphorectomy was followed by nervous symptoms, adiposity, and a lichen-like eczema over most of the body. Great improvement followed the use of oöphorin, both in regard to the skin eruption and the other symptoms, and the weight was also somewhat reduced. Saalfeld likewise treated cases of acne, and of seborrhœa of the scalp with loss of hair, which often occur in chlorotic women. He obtained some good results in these cases, in certain of them better than the results obtained by chalybeate and local treatment. On the whole, though the results were not so good as those obtained in climacteric troubles, he thinks oöphorin may be used with advantage in some such cases to aid external treatment. A woman, aged 26, had from childhood been troubled with prurigo. The peculiarity of this case was that during the menstrual periods, and for a short time after them, considerable relief from the itching was observed. Oöphorin treatment gave good results, although many other methods of treatment had previously been tried without any definite benefit.

(346) The Treatment of Obesity.

Kisch, of Marienbad (*Wien. med. Presse*, March 13th, 1898) deprecates too rigidly uniform measures in the treatment of obesity, which should be carefully adapted to each individual case. He discusses the principal indications under seven heads: (1) All dietetic excess should be avoided; three, or at the outside four, meals a day should be permitted and no food allowed in the intervals. The quantity and variety taken should be based upon the heat-giving properties of the food substances; Kisch gives the value of some of the principal diets in calories, and recommends that no more than the amount necessary to provide the minimum number of calories should be allowed. (2) As regards quality, the first essential is an adequate supply of proteids; a moderate amount of carbohydrate may be allowed but the fat must be reduced to a minimum. Piquant seasonings are to be avoided as they may stimulate to dietetic excess. (3) The consumption of fluid is not to be limited unless symptoms of cardiac failure are present; such liquids as are fancied, with the exception of alcohol, may be taken at any time, but moderation is to be observed at meals. Cold water, especially if charged with carbonic acid, is to be preferred; anæmic subjects should drink less than plethoric. The amount allowed must be restricted when signs of fatty affection of the heart are present. (4) The author is a strong advocate of exercise and active movements in the treatment of plethoric obesity, the state of the heart being always taken into consideration; they are of particular value in increasing the activity of oxidation processes. In anæmic subjects, however, these advantages are counterbalanced by the increased nitrogenous waste which may injuriously affect the heart. In these patients passive movements and massage are accordingly to be recommended. (5) Great importance is attributed to diminution in the hours of sleep, during which the activity of metabolism is reduced; sleep should be entirely forbidden during the day. (6) Tissue change is also to be increased by baths, particularly in springs rich in carbon dioxide, which are most stimulating to the skin. Turkish baths are also of value if the heart is sound. (7) Finally, it is of importance to secure a pure air, rich in ozone, especially in a high and wooded neighbourhood. The lungs are thus stimulated to greater activity, and the effect is aided by the change in the patient's habits and occupations.

(347) The Effects of Chloroform and Ether on Parenchymatous Organs.

Paraspero (*Il Policlinico*, December, 1897), partly to test the relative dangers of these two anæsthetics, and partly to observe their effects on the tissues, subjected rabbits to their influence for two hours daily until they died on the fourth or fifth day. The tissues were then examined microscopically, and also those of a woman who had died from chloroform. The histological examination clearly showed, both for ether and chloroform, that these drugs acted as poisons, causing degenerative, inflammatory, or necrotic processes, sufficient in organs previously weakened, to bring about cessation of their functional activity. As the results were no less marked in chloroform than after ether, the author feels that his experiments afford no basis for preferring one anæsthetic to the other. The choice, when there is no acute or chronic disease of the internal organs, should be left to the surgeon.

(348) Ascitic Fluid in Syphilis.

Jullien (*Sem. Méd.*, March 9th, 1898) reports on two cases of secondary syphilis treated by him with subcutaneous injections of ascitic fluid taken with every aseptic precautiom from a syphilitic patient. The first patient received 93 c.cm. of the fluid in fifteen injections without any unfavourable symptom, local or general. No good result ensued. The second patient came under treatment for a roseolous rash. Between July 10th and August 30th she received 520 g. of the fluid in fifty-seven injections. The only symptom was a

slight local œdema following a 40-g. dose. The result of the treatment was altogether comparable to that of a regular mercurial course. The patient's weight increased 58 kilogrammes in four months, and symptoms quickly disappeared. In January the patient left the hospital free from all signs of disease. From first to last she had no mercury whatever, and no bad symptom with the exception of a slight arthritis.

PATHOLOGY.

(349) New Media for the Cultivation of the Tubercle Bacillus.

Arthur Ransome, in a communication recently made to the Royal Society, reports the results of his investigations into the influence of products of respiration, etc., on the growth of the tubercle bacillus. He had previously shown, in conjunction with Professor Delépine, that daylight and free currents of air rapidly deprive finely divided tuberculous matter of its virulence, that even in the dark, though its action is retarded, fresh air has still some disinfecting influence, and that in the absence of air or in confined air. He has now condensed the moisture from the breaths of healthy and phthisical persons, together with that from the air of a wine cellar in a gravelly subsoil, of cellars under low-lying, insanitary cottages, and of a weaving shed in Blackburn, and used it in various ways as a culture medium for tubercle bacilli. When these organic fluids (analyses of which are given) were added to sterilised blood serum or to glycerine peptone agar they were found to facilitate the growth of the bacilli to some extent. When added to simple glycerine agar or sterilised potato—on which the bacillus normally grows but slowly—there was marked increase in the amount of bacterial development. In the next series of experiments pure filter papers—deprived of salts by soaking in HCl. and HF, and each containing only 0.1 mg. of nitrogen—were soaked in the organic fluids, to which 6 per cent. of glycerine had been added, and then used as the culture media. Again, very free growth as a rule resulted. The glycerine was afterwards dispensed with, and the bacilli found to grow freely on filter paper soaked with the organic fluids from healthy and phthisical breath alone. In all these experiments the incubator at a temperature of 35° C. was used, but growth was also found to occur at a temperature of 21° C. In subsequent series ordinary wall paper impregnated with the condensed moistures was employed, and good cultivations almost invariably obtained at the ordinary temperature of the laboratory. These researches have an important bearing on the question of prophylaxis against tuberculosis. They prove that any one of the various organically charged vapours, whether coming from healthy or from diseased lungs, from the air of cellars, or from comparatively pure ground, forms an excellent culture medium for the tubercle bacillus when kept away from the disinfecting influence of air and light. This power of promoting its growth is particularly manifest when the supporting substance is common wall paper, though it is quite apparent when very pure filter paper is used. It is further proved that on these substances the growth of the bacillus may take place at the ordinary temperatures of dwelling rooms; and hence that there is no safety against the increase of the organism in ordinary living rooms in which ordinary tuberculous dust is present, and in which the natural disinfectants of the bacillus, fresh air and light, are not present in sufficient amount to destroy its virulence.

(350) Relation of Syphilis to Tabes and General Paralysis.

Sarbo (*Pester med. chir. Presse*, xxxiv, 3-5) gives the statistics of Fournier (91 per cent.), Erb (88 per cent.), Gowers (70 per cent.) regarding the frequency of antecedent syphilis in locomotor ataxy. In non-tabetic patients above the age of 18 he finds syphilis present in only 22.5 per cent., cases with a doubtful history even being included. He considers tabes as a metasyphilitic disorder, that is, not in itself "specific," and likens it to post-diphtheritic paralysis; just as certain forms of paralysis following obscure throat affections lead us to consider the latter to have been diphtheritic, so tabes justifies the suspicion of antecedent syphilis. Destroyed nerve fibres cannot be repaired by antisyphilitic treatment. To explain the various sites of the lesion he adduces Edinger's theory: Those tracts in the cord which, being constantly in use (muscular sense, equilibrium, etc.), undergo most waste and repair, are more readily affected by anything that tends to interfere with such repair—for example, a syphilitic toxin—for their frequent use will, with such interference, lead to exhaustion and decay. Sarbo finds syphilis in 50 per cent. of general paralytics, and points out the frequent coexistence of tabes and general paralysis; the large proportion of prostitutes among, and the marked sterility of, "paralytic" women; also the frequency of implication of the ocular muscles in both diseases. Not all the cases of general paralysis are syphilitic, for "general paralysis" is probably a collective term for several different morbid processes; it will, perhaps, in time, be possible to distinguish those due to syphilis as constituting a disease distinct both clinically and pathologically from the rest.

(351) Epithelioma of the Bladder due to the Irritation of Bilharzia Hæmatobia.

Albarran and Bernard (*Archiv. de Méd. Expériment. et d'Anatomie Pathologique*, November, 1897) record a case of bilharzia of the bladder in which epithelioma resulted. The bladder was contracted, and the mucosa was covered with papillomatous and raised projections, which in one spot had run together to form a definite tumour. The submucosa was thickened and infiltrated with bilharzia ova. The muscular walls were hypertrophied and secondarily infected and inflamed, as shown by the presence of cocci and small cell infiltration. There was also some pericystitis. The ureters were partially obstructed where they ran through the bladder wall, and were dilated and inflamed, but did not contain any bilharzia ova; there was septic pyelonephritis, but no invasion of the kidney by bilharzia. In the region of the tumour the bladder wall was infiltrated with epitheliomatous growth which had deeply infiltrated its muscular coat. In places degeneration of the cells in the centres of the epitheliomatous masses had taken place, giving rise to a condition which is quite exceptional in carcinoma of the bladder—the formation of cystic spaces. In this case it is important to separate the lesions due to bilharzia from those due to ordinary urinary infection. The bilharzia ova by their irritation set up epithelial proliferation and so epithelioma, while the pyelonephritis and inflammation of the ureter were the result of secondary infection with micro-organisms. In order to support the causation of cancer by bilharzia examples of rectal polypi due to bilharzia are quoted, and 4 cases of vesical carcinoma associated with bilharzia (R. Harrison) are referred to. The growth in this instance can hardly have been an ordinary epithelioma occurring in a patient who also happened to have bilharzia, since the character of the growth was peculiar in the presence of cystic spaces; and, again, the rest of the bladder showed very extensive papillomatous changes which are not seen in association with ordinary vesical epithelioma. Neither could the growth be explained as the result of cystiti for although in chronic cystitis epithelial proliferation may result, it is never of the markedly atypical character seen in this case. Having established the fact that the vesical epithelioma was due to the irritation of bilharzia ova, the authors proceed in the second part of their paper to a lengthy discussion in support of the parasitic theory of new growths.

(352) The Infective Theory of Rickets.

Mercoli (*Gazz. degli Osped. e delle Clin.*, January 30th, 1898) again draws attention to his experiments and observations on this subject. He believes that rickets is due to infection from the presence of streptococci and staphylococci. These organisms are constantly found in the mouths of children and the mammary ducts of nursing women, and are swallowed. As long as the alimentary canal is healthy nothing happens; but if this is out of order from catarrh, dentition, etc., and if in any way these organisms find their way into the blood and are localised in all the organs, but especially in the parts of greatest functional activity, the disease is produced. In the infant these are the nervous system and the epiphysial ends of the bones; hence the symptoms in rickets. The bone lesions are considered by the author to be examples of chronic osteomyelitis of a special type.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(353) Relaxation of the Heart.

L. Feilchenfeld (*Berl. klin. Woch.*, February 28th, 1898) thinks that the study of the lesser degrees of cardiac weakness and dilatation have been somewhat neglected. After fatigue the heart is in a temporarily relaxed condition, similar to that of the skeletal muscles after severe exertion. After wrestling the heart may be temporarily dilated and, as the pulse indicates, may contract with much diminished force. The temporary and physiological relaxed condition of the organ merges by intermediate degrees into one of actual dilatation. From his clinical observations Feilchenfeld distinguishes three phases of pathological relaxation of the heart: (1) A premonitory stage characterised by palpitation, excitability of the heart's action, feeling of fatigue and slight anxiety. Cases of this kind should not be considered merely nervous. As etiological factors he mentions the following: rapid growth at puberty, sexual excesses and masturbation, physical and mental overwork, mental troubles, anæmia, alcohol and nicotine, fatty infiltration, previous illnesses, and premature old age. (2) The first stage of actual relaxation. This he divides into an acute, a subacute, and an intermittent form, and thinks that cases are often labelled as cardiac neurasthenia. (3) This class embraces the ordinary cases of actual dilatation, on which so much has been written. Feilchenfeld maintains that the early stages should be especially sought for. The early stages of cardiac dilatation should be recognised, just as much as the early stages of pulmonary tuberculosis, so that the condition may be opposed in time. The author agrees with Gerhardt and Fränzel that palpation is more important than percussion for estimating the size of a relaxed heart. One must feel in the intercostal spaces for the left ventricle several times and with the patient in different positions, but especially in the leaning forward position made use of by Gumprecht. Whitwicki and Seeligmüller have observed a marked difference in respiration accordingly as the patient lies on his left or his right side, and Feilchenfeld believes that this may be an important symptom of dilatation of the left ventricle. In one case he noted on repeated occasions an increase of twelve to twenty inspirations in the minute when the patient turned from his right on to his left side.

(354) Methylene Blue as a Test for Sugar in the Urine.

Fröhlich of Nothnagel's clinic (*Centralbl. f. inn. Med.*, January 29th, 1898) adds to 10 c.cm. of the urine 5 c.cm. of a concentrated solution of neutral lead acetate, and then, after shaking, 5 c.cm. of basic lead acetate solution. When the whole is filtered, an almost clear colourless fluid should be obtained. Then equal parts of the filtrate and a watery solution of methylene blue (0.3 per cent.) are placed in two different test tubes, and to the tube containing the methylene blue is added 1 c.cm. of a 10 per cent. caustic potash solution for each 5 c.cm., so as to make it strongly alkaline. This latter tube is then heated over an open flame, and the contents of the other tube are poured into it, and the whole boiled. If sugar is present, the dark blue colour is changed to a whitish one; the solution then becomes transparent, and finally a pale yellow. The excess of lead does not interfere with the reaction, for it falls to the bottom. The author generally uses 5 c.cm. of the filtrate obtained from the urine, and the same quantity of methylene blue solution with 1 c.cm. of the 10 per cent. solution of caustic potash, but, if the urine contains much sugar, a few drops of the filtrate will suffice. The decolorisation takes place in twenty to twenty-five seconds, but the test tube should not be shaken. If the test is to be successful, the filtrate should possess hardly if any yellow colour. To concentrated urine it is well to add some water. Fröhlich has tried a large number of urines with this test, and has controlled the results in 100 cases by the phenyl hydrazin and Fehling's tests. The lowest limit lies at about 0.04 to 0.05 per cent. of sugar; the reaction with a urine containing 1 in 1,000 sugar is slow. Like Le Goff, the author found that neither urea, uric acid, sodic chloride, nor albumen, can reduce the methylene blue. Le Goff has shown that creatin and bile pigments cannot do so either, and Fröhlich has proved the same thing as regards creatinin. All the possible reducing substances, such as hæmatoporphyrin, methæmoglobin, bilirubin, biliverdin, urobilin, melanogen, are all precipitated by the lead acetates. Glucaronic acid can, in addition, reduce methylene blue, but it is also precipitated. Thus, under these circumstances, methylene blue is a reliable test for grape sugar in the urine.

(355) Enlarged Thymus and Sudden Death.

Clessin (*Münch. med. Woch.*, March 15th, 1898) says that during more recent years a relation between sudden death and an enlarged thymus has been admitted. Death may thus occur in infants previously healthy during the first years of life. It has been assumed that the hyperplastic gland has become suddenly swollen, and through pressure on the air passages, nerves, large veins, etc., has caused death. Beneke and others have shown that if the head be bent backwards in enlarged thymus the trachea may be almost closed. On the other hand, very considerable enlargement of the thymus may produce no ill effect. The author then refers to Siegel's case in which an infant had dyspnœa, unrelieved by tracheotomy. Siegel then attributed the dyspnœa to an enlarged thymus, and permanently relieved it by an operation on the thymus itself. Both Lange and Wiegert saw evidence of compression of the trachea in cases of sudden death and enlarged thymus. The author then relates a case in a boy aged two months. The greatly enlarged thymus covered two-thirds of the heart, and was adherent to the pericardium. The anterior and posterior walls of the trachea were almost in contact about 2 c.cm. above the bifurcation. There was also a hæmorrhage into the gland. There cannot be a doubt that death was due here to compression of the trachea. There was also some bronchitis present. In many cases Paltauf's view may be correct that a cardiac paralysis is the cause of death. The compression of the trachea should be demonstrated either (1) by dividing the trachea straight across just above the sternum and looking down upon the constriction as in Paltauf's method, or (2) by taking the trachea and thymus out and dividing them both across as in Weigert's method. [The writer of the above abstract has himself seen quite recently a case of the same kind in which an infant died absolutely suddenly. No cause of death could be discovered in the body except a greatly enlarged thymus. See also Epitome, British Medical Journal, 1896, i, par. 334, and ii, par. 93.]

SURGERY.

(356) Total Extirpation of the Bladder for Tumours.

Tuffier and Dujarier (*Rev. de Chir.*, April, 1898) review the subject of total cystectomy, and report a case in which the bladder was successfully removed, by the first-mentioned author, for an alveolar epithelioma which had infiltrated in varying degrees the whole extent of the wall of this organ. The indications for such an operation must, it is stated, be very rare. The patient, on the one hand, should be strong enough to support so serious an intervention, and the disease, though of considerable extent, must not have invaded any structures beyond the bladder. The method of operation should favour rapidity, a minimum of disturbance, and the least possible interference with the peritoneum. In considering the mode of procedure, the surgeon has to adapt his plan to one or other of two kinds of cases: one in which the patient has already undergone suprapubic cystotomy, the other in which the bladder has not yet been opened. In the former condition the adhesions around the vesical fistula would necessitate a careful dissection, and the field of operation would be found infected. In the second case an exploratory median incision should be practised above the pubes, so that the surgeon may make out the extent and situation of the lesions. This preliminary stage, however, may be replaced by a careful cystoscopic examination. This would be an advantage from the point of view of asepsis, as a bladder so far diseased as to require cystectomy is usually in-

fected. The incision of the abdominal wall, which would afford the widest field of operation, and, at the same time, cause the least disturbance, should consist in a median wound joining at its lower extremity a horizontal one reaching from one external inguinal ring to the other, and dividing the recti muscles. When the bladder has been exposed the most important step is the separation of the peritoneum. This membrane can be readily detached from the front of the bladder, but adheres closely to the apex. Behind and at the level of the prostate the bladder may be readily liberated after section of the ureters. As the bladder is being gradually stripped of peritoneum the liberated portions should be brought into the wound, and freely exposed to the eye and fingers of the operator. The authors think it better to divide the ureters at once, and not to practise preliminary catheterism. Both ureters and the lower vascular pedicles of the bladder may be secured by a curved clamp, and then be divided above this. After the bladder has been removed the vessels can be readily secured, and a catheter passed into each of the ureters. It is necessary, before dividing the neck of the bladder, to apply a curved clamp below the line of section. The free hæmorrhage which is likely to occur at this stage can, when the raw surface is freely exposed, be arrested by ligature of the arteries and the application of the thermo-cautery. Care must now be taken to destroy the mucous membrane of the vesical extremity of the urethra, so that the large wound may not be infected from this source. The authors discuss fully the best method of dealing with the ureters. In the female the vagina, they believe, would best serve as outlet for the urine. With regard to the male, they have been led to the conclusion that the most promising method would be to implant the ureters into the large intestine, not into the rectum, however, which is deeply seated and fixed to the concavity of the sacrum, but into the sigmoid flexure, which can be readily put into communication with the wound by a short peritoneal incision.

(357) The Use of the Catheter in Cases of Prostatic Disease.

Bangs (*Med. News*, February 12th, 1898) in a paper on catheter life, with some remarks on the etiology of hypertrophy of the prostate gland, lays down some general directions on catheterism which should, it is held, be rigidly followed by the patient. The soft catheter with solid tip is the best to use if possible. If a rigid one be required, one made of elastic webbing, with a curve or bend at the point, is preferable. A new catheter must be treated with the same care as to cleanliness and asepsis as one that has been in use. If possible, it should be exposed to the vapour of formaldehyde: if not, it should be immersed in a solution of formalin (1 to 2 per cent.) during at least fifteen minutes. Then it should be placed in a strip of bichloride gauze, or placed between the folds of a perfectly clean towel. Each catheter should be kept in a separate receptacle or closed drawer, where dust cannot find access to it, and where it cannot be handled except by the person who is to use it. If the patient must carry the instrument about with him, it should be kept wrapped in several layers of bichloride gauze, and outside this should be placed a wrapping of "waxed" or parchment paper, held firmly by rubber bands. Just before using the catheter the patient must thoroughly clean his hands, and rinse his fingers in pure alcohol. In the meantime the catheter should be lying in formalin solution. Then, after shaking it, and wiping off any drops that may remain upon it with a piece of clean gauze, and smearing it with a proper lubricant, the patient should gently pass it along the urethra. Immediately after use the catheter should be thoroughly washed with soap and water, be steeped for a time in the solution of formalin, and then carefully put away in gauze or clean towel in readiness for the next use.

(358) A New Method of Draining the Peritoneal Cavity.

Delagénière (*Bull. et Mém. de la Soc. de Chir.*, No. 12, 1898), holding that the means hitherto used for draining the abdomen after laparotomy are defective, proposes to drain this cavity in a similar way as a spirit lamp is drained by its wick. He employs a perforated nickel tube, in which is inserted a skein of absorbent cotton. This skein closely fits the interior of the metallic tube, and is frayed out as it projects from either end. Both the outer tube and the cotton can be readily sterilised, and the skein can be changed from time to time without removing the tube. In no case, the author states, should the metal tube be allowed to remain for a longer period than thirty-six hours. Excellent results, it is stated, have been obtained from this method of drainage, and after long and difficult abdominal operations the course of the after-treatment has thus been rendered absolutely apyretic. The nickel tubes used by the author vary in length from 8 to 10 cm., and in diameter from 15 to 20 mm.

(359) Extensive Injury of the Liver successfully Treated by Operation.

Snyers (*Ann. de la Soc. Belge. de Chir.*, April, 1898) reports a case of penetrating gunshot wound on the right side of the chest, with laceration of the liver. The injury had been caused by a gun loaded with small shot. At the sternal extremity of the seventh rib was a small circular wound, which was plugged by a protruded piece of omentum. On opening up this wound, and exposing freely the abdominal cavity, the author found that the free anterior margin of the liver formed a large loose flap, which was attached to the rest of the organ merely along a portion of its upper surface. This flap was about 4 inches in length, and 2 fingerbreadths in thickness. Between it and the lacerated liver structure on the under surface of the organ were found loose fragments of the seventh and eighth ribs. These fragments having been removed, several ligature were applied along the attachment of the hepatic flap to the rest of the liver, and the flap itself was then cut away. The wound was plugged and drained by antiseptic gauze. The patient, a lad, aged 16, was much collapsed at the end of the operation, which was performed within an hour from the time of injury, but finally made a complete recovery.

MIDWIFERY AND DISEASES OF WOMEN.

(360) The Technique of Uterine Curetting after Incomplete Abortion.

Beuttner (*Rev. Med. de la Suisse Rom.*, Jan. 20th, 1898) goes into the details of curetting the uterus. He uses strict antiseptic precautions, but insists chiefly on the three following points: (1) Before introducing the curette, a sound should be used and the length it penetrates marked on the curette, otherwise the uterus is liable to be perforated. It is not sufficient to estimate the length by the curette, as this instrument may cause a temporary active dilatation of the uterus, which is very misleading. (2) A speculum should always be used for fear of infecting the uterus with vaginal organisms. (3) Iodoform (or preferably xeroform) gauze should be introduced into the uterine cavity after curetting, but in different ways according as it has been done for hæmorrhage or infection. In the former case the gauze should be packed well in to excite uterine contraction and left there for twenty-four hours; in the latter, it is introduced loosely to act as a drain into the vagina, into which, finally, a plug of cotton wool is placed to absorb the discharge.

(361) Vomiting of Pregnancy treated by Oxygenated Water.

Gallois and Bonnel (*Bull. Gén. de Thérap.*, March 23rd, 1898) reported to the Société de Thérapeutique the results of this treatment. Hayem and Pinard had advised inhalations of oxygen for the same purpose; but as the oxygen could not always be procured in gaseous form, they tried water containing ten or more volumes of oxygen gas (peroxide of hydrogen, H_2O_2). They administered a tablespoonful in a litre of water, given with wine and drunk during meals. They note that two tablespoonsful of oxygenated water to the litre leads to an unpleasant metallic taste. They do not think the cure results from suggestion, because it did not follow when the dose employed was a teaspoonful to the litre. As a rule, cure is complete in two or three days. Vomiting due to gastric disease is not improved, nor has the treatment any effect on heartburn. In pure cases of vomiting of pregnancy they had only two failures. The method was also tried with success in the vomiting of phthisis.

(362) Are there True Tubo-Ovarian Cysts?

Zahn (*Virchow's Archiv*, vol. cli., Pt. 2, 1898) has carefully examined cases of tubo-ovarian cyst. Like most recent observers he finds that the big cystic dilatation which lies externally and inferiorly is not part of a cystic ovary, but is the dilated ampulla of the tube, and that the orifice, with structures like fimbriæ, by which the dilatation communicates with the internal, superior, and clearly tubal part of the cyst is not the ostium of the tube, but the opening of the tubal canal into its own ostium, the plicæ projecting into the ampulla so as to simulate fimbriæ. He admits, in facts, that in a tubo-ovarian cyst all the cystic portion is tubal. He distinguishes, however, a true tubo-ovarian cyst from a large hydrosalpinx where the ovary is concealed in the bend of the big cystic tube. In a tubo-ovarian cyst the ovary is actually included in the dilated ampulla. The ostium has closed over it, and the ampulla has become dilated. This condition specially favours "ampullar tubal pregnancy."

(363) Passage of Substances from Fœtus to Mother.

Lannois and Brian (*Gaz. Hebdom. de Méd. et Chir.*, March 3rd, 1898) having had under observation a patient with grave symptoms of albuminuric origin, in whose case the symptoms suddenly disappeared on the death of the fœtus, though the latter was not expelled till seventeen days later, made some experimental inquiries, from which they conclude: (1) That substances (such as salicylate of soda, iodide of potassium, and methylene blue) injected into the fœtus, pass through the placenta, and can be detected in the tissues and urine of the mother. (2) This experimental fact supports the view already advocated by Lannois, that normal excretory products of the fœtus pass through the placenta to be eliminated by the maternal organism. (3) In cases of renal insufficiency these waste products of fœtal life can therefore in part contribute to the maternal auto-intoxication, and consequently can play a part in eclampsia and other accidents associated with the albuminuria of pregnancy.

(364) Panhysterectomy with Removal of Cancerous Glands.

Jacobs (*Rev. de Gynéc. et de Chir. Abdom.*, January-February, 1898) practises a very complete abdominal operation for uterine cancer. He rejects vaginal hysterectomy entirely, as it is impossible to remove diseased glands by that method. The vagina is carefully disinfected for several days before operation, and the thermocautory freely applied to the cervical canal, and higher if necessary should there be free discharge. The patient being placed in the Trendelenburg position, Jacobs first performs what is really "retroperitoneal hysterectomy," the appendages are taken away with the body of the uterus, and pressure forceps applied to the uterine and ovarian vessels. The cut surface of the cervix, left at this stage as a guide, is touched with the thermocautery, the vessels tied, and then no forceps are in the way. The divided broad ligaments can then be opened up very freely, so that enlarged glands along the course of the large vessels can be cleared out of the parametrium. It is advisable to catheterise the ureters at this stage of the operation. All infected lymphatics being cleared out the broad ligaments are carefully sewn up with a continuous suture, so that the parametrium is protected from contamination during the removal of the cervix. That structure is seized by a volsella, and one point of a pair of scissor is pushed into the canal, which is cut vertically from above downwards through its anterior part to the vagina. The operator's left forefinger is passed into the vagina, then the scissors can cut all round the cervix, and remove infected portions of the vaginal wall if necessary. In the latter case it is advisable to trim away the uterine arteries and ureters first from their connective tissue attachments to the cervix. Nodules in the vagina are also excised. The cut upper edge of the vaginal wall is closed with a continuous suture, then the peritoneum is sewn over the vagina by closure of the hole left between the already sewn up broad ligaments by the removal of the cervix, and lastly this long line of suture is covered in by a second line, the peritoneum being folded over the first behind and in front of it. This last step ensures, in Jacobs's opinion, not only complete occlusion, but also a thorough repair of the pelvic floor. Out of 11 cases in Jacobs's practice 10 recovered from the operation, and 1 died of pneumonia. In 3 cases recurrence was observed from three to five months, but in all 3 the operation was incomplete, as all the infected glands could not be extirpated. Several cases were operated upon quite recently.

THERAPEUTICS.

(365) The Treatment of Tetanus.

Heddaeus, of Czerny's Clinic (*Münch. med. Woch.*, March 29th, 1898) relates a case of tetanus of moderate severity secondary to a wound of the arm. Here local spasm in the arm preceded trismus and general spasm. The serum treatment appeared to be of service in this case. The author then gives details of two typical and very severe cases of cephalic tetanus both treated with Behring's serum. The first patient was aged 45 years, and the trismus appeared on the fourth day. The wound of the face was so extensive as to make it almost impossible to say when the facial paralysis commenced. The serum was injected into the veins of the arm on the fourth day, and was repeated five days later, when an exacerbation in the symptoms occurred. Heddaeus believes that there is evidence to show that in this very severe case the early injection of the serum was the means of saving the patient's life. In the second case, of a man aged 28, the wound in the face was insignificant. In five days the first symptoms developed. On the sixth day the site of the wound was thoroughly excised and 5 per cent. carbolic acid applied. The tetanus antitoxin was injected on the following day, also into the veins of the arm. The patient died on the following day. This case belonged to the severest, the symptoms developing with great rapidity. Summarising the results in these three cases the author says that in the first case improvement did not follow immediately upon the injection, but only after some hours. In the second case there was an arrest of the symptoms after the injection, and then improvement. Later the patient became much worse, but subsequently recovered. Between the first and second injections the wound was well cleaned. In the third case there was a short lull in the disease after the injection, but then the patient became worse and died. Here the serum was used late and in too small quantities, so that this case is rightly excluded in estimating the value of the serum treatment. Heddaeus says that so far, he has reason to be satisfied with the results of this treatment. With the exception of one case treated with opium, all the twelve cases treated during the past twenty years in the clinic have died. The following conclusions are drawn: (1) Behring's tetanus antitoxin is an efficacious remedy of a specific character, and should be used at the earliest possible moment. (2) The earliest destruction of the infected area must not be omitted, as from it a permanent supply of toxin is provided. (3) The symptomatic treatment with sedatives, including narcotics, should go hand in hand with the serum treatment. (4) Other means of eliminating the tetanus poison should not be neglected. (5) Preventive serum treatment deserves further consideration.

(366) Stypticin.

Bakofen, of Czempin's Policlinic (*Münch. med. Woch.*, April 5th, 1898), says that in some cases of uterine hæmorrhage where curetting or a larger operation seems unnecessary or is refused it may be desirable to have recourse to medicinal agents. He has used stypticin, which was introduced by Freund, and is a product obtained from the opium alkaloid narcotin, and closely allied to hydrastin. In 45 cases it was possible to draw conclusions as to the value of the remedy. It is given in doses of 0.025 to 0.05 g. several times in the day. In 5 cases of menorrhagia in virgins, stypticin was of value in 3 cases, and in the remaining 2 cases hydrastin and even curetting were without effect. In 9 cases of menorrhagia due to inflammatory affections of the pelvic connective tissue or annexa, etc., it never failed. In 12 cases of consecutive menorrhagia, it only failed in 2. In 4 cases in which hæmorrhage came on later after operations on the appendages, it succeeded in 2 but failed in 2 cases. In 2 cases of acute gonorrhœal infection of the uterine mucous membrane with hæmorrhage stypticin was useful. In 8 cases of hæmorrhagic endometritis the results

were favourable in 5, doubtful in 1, and negative in 2; in 5 cases curetting had been previously done without effect. Of course in fungous or polypoid endometritis curetting is the best treatment. In 2 cases of climacteric hæmorrhage, stypticin was very useful in 1 and but only moderately so in the other. In a case of hæmorrhage occurring in the fourth to fifth month of pregnancy it acted well and without inducing pains. In 2 cases headache was noted after its use and in 2 diarrhœa. No sedative action was observed. The author says that, although he has not obtained as good results with stypticin as some other writers, yet he cannot deny that it has an action on uterine bleeding, and constitutes an addition to our resources.

(367) The Dangers of Blisters.

HUCHARD (*Bull de l'Acad. de Méd.*, No. 7, 1898), in the discussion following Robin's paper on Bloodletting, Blistering, and Emetics (*vide* EPITOME, No. 246, vol. i, 1898), while agreeing with the use of bloodletting and emetics, attacked the blister. (1) It often produces an open wound, which facilitates secondary infections or the absorption of cantharides. (2) Besides causing the well-known inflammation of the kidneys and bladder it has a general congestive action. (3) Thus even in those diseases where it is most often used, such as pneumonia and pleurisy, it should be discarded, since, though it increases pulmonary ventilation, it increases also pulmonary congestion. (4) It tends to close excretion by the kidneys, so important in all infective diseases, and this is especially harmful in those normally causing albuminuria. Instead of aiding the excretion of toxins blisters are likely to produce a fresh intoxication. (5) The only real use of blisters is in their revulsive and analgesic action. This effect is best obtained by by less dangerous means, such as mustard plasters or cold baths.

(368) Metallic Iodine in Syphilis.

BOUVEYRON (*Lyon Méd.*, January 9th, 1898) draws attention to the good results obtained in certain cases of severe syphilis by the use of metallic iodine. He thinks this treatment deserves more trials than have hitherto been given to it, and considers that it has been used in insufficient doses and by defective ways of administration. He points out that, in order to get a good effect with iodine, it must be used with an excipient which does not combine with it, and one which at the same time is a perfect solvent. Also the causticity and astringent taste of the iodine must be corrected, and it must be administered half an hour before meals, to avoid combination with articles of food. The author's mixture is: iodine, 1 g., dissolved in iodide of potassium solution q. s.; glycerine, 5 to 10 g.; citric acid, 15 g.; syrup and distilled water to 1,000 c.cm. The glycerine and syrup correct the causticity, and the citric acid masks the flavour. Of this solution, he commences with half an ounce a day half an hour before meals, and increases up to three or four ounces a day. (This represents doses of about $\frac{1}{4}$ gr. of iodine in each half-ounce). He quotes 3 cases of severe tertiary syphilis treated by him in this way which had resisted mercurial inunction and treatment with iodides up to 90 gr. daily. All the cases healed rapidly without any bad effects of iodism.

PATHOLOGY.

(369) Colles's Law.

HOCHSINGER (*Wien. med. Woch.*, Nos. 43 to 52, 1897) gives a lengthy discussion on Colles's law as it now stands, and on the questions which are connected with it. His conclusions are as follows: (1) Healthy women who have been impregnated by syphilitic men can give birth to syphilitic children, but remain free from syphilis all their lives. (2) Women who are pregnant with the fœtus of a syphilitic father, but free from contact infection from him, acquire through such a pregnancy a certain but very variable degree of immunity against syphilis, which has been the foundation for the so-called Colles's law. (3) Colles's immunity of the mother is the result of immunising substances derived from the spermatically infected fœtus, and is not absolute. (4) The exceptions to Colles's law concern women who, for reasons not always easy to discern, have only absorbed an insufficient quantity of the immunising substance during pregnancy, or in whom the requisite tissue activity for the establishment of immunity is absent. (5) A retro-infection of the mother from a spermatically infected fœtus, the so-called *choc en retour*, or "syphilis by conception," is clinically not proved, and not provable, although theoretically not difficult to establish. (6) Finger's hypothesis of the toxic nature of tertiary syphilis, and of the crypto-genetic tertiary infection of the mother, is incompatible with Colles's immunity, and is at variance with the pathological anatomy and clinical experience of early congenital syphilis. (7) Hereditarily syphilitic children infected by the father should not be suckled by the mother if it is her first child, and she is free from syphilis. If the mother has had several spermatically infected children, and is still free from syphilis she may confidently suckle the child.

(370) The Tetanus Antitoxic Properties of the Normal Central Nervous System.

WASSERMANN AND TAKAKI (*Berl. klin. Woch*, January 3rd, 1898) describe a new method of producing artificial immunity against tetanus. In their experiments they mixed from one to ten times the lethal dose of the tetanus poison with an emulsion of normal brain or spinal cord substance. At the same time control experiments were made with emulsions obtained from other organs as well as with ordinary serum. The authors were thus able to prove without exception that normal brain and spinal cord substance possess antitoxic properties, whereas other organs do not. The antitoxic action was never as marked as in the case of serum obtained from highly artificially immunised animals. In numerous experiments 1 c.cm. brain substance neutralised ten times the lethal dose of the tetanus poison, whereas 1 c.cm. of spinal cord substance only neutralised three times the lethal dose. The authors also succeeded in immunising animals by the injection of emulsions of brain and spinal cord as late as twenty-four hours after the injection of three to five times the lethal dose of tetanus poison. They were even able to keep animals alive which had been injected with a lethal dose of tetanus poison by using the above emulsions four to six hours later. Considering the character of the symptoms of tetanus, it was strange that brain emulsion was more efficient than that obtained from the spinal cord. The above experiments demonstrate that the power possessed by the central nervous system of combining with the tetanus poison exists during life. The emulsions used by the authors were obtained from the brain and cord of guinea-pigs, and also of pigeons, rabbits, horses, and the human subject. Neither the clear fluid obtained after the centrifugalisation of the emulsions nor the cerebro-spinal fluid itself possessed antitoxic properties. These experiments support Ehrlich's view that the tetanus poison combines with the cells of the spinal cord, etc.

(371) The Experimental Production of Russell's Fuchsin Bodies (Blastomycetes).

SANFELICE (*Centralbl. f. Bakt.*, 1898, Nos. 7 and 8) replies at length to the critics of his views concerning these "cancer organisms," and adduces a new and important series of experiments in their support. He injected pure cultures of saccharomyces neoformans into the abdominal cavities of ten cats of various ages; all died within five months, and in the tissues of all of them were found the typical blastomycetes. These were particularly abundant in the mesenteric glands, the spleen, and the marrow. They gave all the characteristic staining reactions, and in particular that of Touton, which is to all intents and purposes pathognomonic. Sanfelice points out that this experimental evidence must be of more value than mere histological investigation, and calls attention to the fact that no author who has opposed the view that Russell's fuchsin bodies are blastomycetes has brought forward any experiments to show that they are only products of cell degeneration. He states emphatically that inoculation of cats with pure cultures of saccharomyces neoformans produces the typical bodies that have been described by Russell and other observers in malignant tumours and certain chronic inflammatory processes in man. Such bodies are not present in the tissues of normal cats, and only appear therein after inoculation with pure cultures of saccharomyces neoformans or with pieces of the tissues of cats containing the typical blastomycetes.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(372) Blood Reaction in Diabetes.

LOEWY (*Fortschritte der Medicin*, March, 1898) records some further investigations of Bremer's reaction in the blood of diabetic patients. The original method of obtaining the reaction was to stain a film of blood in two solutions, each consisting of a mixture of 0.5 per cent. solution of eosin with a saturated solution of methylene blue, the one contained excess of the former, the other excess of the latter stain. After passing the film through these two mixtures successively, Bremer found that in normal blood the red corpuscles were stained deep brown, whereas in diabetic blood they are left pale yellow or greenish yellow. Loewy, in his experiments, used the simpler modification which has lately been suggested. The blood is stained two minutes in 2 per cent. methylene blue, and then 10 seconds in 0.125 per cent. eosin solution. Keeping strictly to the technique described by Bremer in this method, Loewy found that in every case of diabetes in which the amount of sugar in the urine was more than 2 per cent., the blood gave the characteristic reaction. In one case, where dieting had already caused the sugar to disappear, the reaction was still obtained in the blood. The failure of several observers to obtain the reaction in diabetes is probably due to their not having paid sufficient attention to the details of the method, which must be adhered to strictly. No reaction was obtained in the blood in cases of severe anæmia; no opportunity occurred for trying it in leuæmia, in which some observers have found the reaction. The blood plasma is not necessary for the reaction; 5 c.cm. of blood were taken from a vein of a diabetic patient, and separated from the plasma by a centrifuge; the corpuscles were then washed with normal salt solution until the washings showed no trace of sugar; the typical Bremer reaction was then obtained with the blood corpuscles. It was also found that normal blood treated with a weak acid gave the reaction.

(373) Excretion of CO_2 by the Lungs in Diabetes.

EBSTEIN (*Deut. med. Woch.*, February 17th, 1898) returns to the question as to whether there is a diminished formation and therefore excretion of carbonic acid in diabetes. He relates a case of diabetes in a man, aged 47, in which Lehman investigated the gases of respiration. The patient was put on a given diet for several days previously. This diet was the usual one as regards albuminous matters, and was rich in fats but poor in carbohydrates. During two days the amount of carbon dioxide excreted from the lungs was 705.3 and 670.2 g. respectively. A table is appended showing the details of the examination of the urine. The results of the investigation confirms the view that the diabetic gives out less carbon dioxide under similar dietetic conditions than the healthy individual.

(374) Traumatic Tabes.

LAMMERS (*Centralbl. f. inn. Med.*, July 31st, 1897) refers to the researches of Hitzig and Klemperer into this subject, and relates the following case: A man, aged 49, suffered from a traumatic rupture of the thigh muscles. After four weeks he was able to resume work, but in five days' time he was unable to continue owing to pain. Some seven months later the gait was uncertain, and there was a difference of some 3 cm. between the two thighs. On admission ten months after the accident he complained of pains in the thigh and inability to walk for long. There was much wasting of the left thigh, and fibrillary twitching was present here. The knee-jerks were only feebly present. The pupils did not react to light. Romberg's symptom was well marked. There was no disturbance of sensation. Later the patellar reflex disappeared. A year after the injury the clinical picture of tabes was characteristic. The author then reviews the case in regard to the rules laid down by Morton Prince in judging as to whether these cases of tabes are to be looked upon as traumatic: (1) The diagnosis of tabes was undoubted in this case. (2) The patient had not suffered from any symptoms of tabes before the accident, and immediately afterwards the manifestations were directly due to the traumatism. (3) Syphilis as well as other possible causes of tabes were excluded. (4) The injury was such as to produce a considerable physical or psychical effect. (5) The symptoms of tabes developed within the year, which is the time laid down. Thus the above case appears to stand a critical examination. The symptoms began here in the affected leg. An ascending neuritis has been looked upon by some as the mode of development of the disease in traumatic tabes.

(375) Paroxystic Chronic Icterus with Splenic Enlargement.

G. HAYEM (*Presse Méd.*, March 9th, 1898) gives an account of five patients presenting more or less analogous symptoms. They all have chronic jaundice of moderate degree, with occasional periods of exacerbation. In the intervals between the crises the liver is not at all or only slightly enlarged, but the spleen is always large, and seems abnormally hard to the touch. During the crises the jaundice deepens and the spleen becomes still more enlarged and tender to pressure, whilst the liver undergoes only a moderate uniform increase in size, remaining smooth and soft. The fæces are always coloured, excepting occasionally during the crises, when their colour may be temporarily more or less completely lost. During the crises the urine becomes icteric and gives a distinct Gmelin's reaction, though usually during a short period only. At other times the urine contains urobilin and occasionally modified bile pigments, but Gmelin's reaction can never be obtained, though this reaction can always be produced in the serum of the patient's blood. There appears to be no special tendency to obstruction in the portal circulation, to enlargement of the subcutaneous abdominal veins, ascites, tympanites, or hæmorrhoids. In all the patients there were old troubles in connection with the functions of the digestive tract. All five patients were decidedly anæmic. There may have been slight fever during some of the crises, but otherwise the icterus is unaccompanied by any abnormal rise of temperature. The periods of exacerbation appear sometimes to terminate with a fit of polyuria. Some of the crises suggested the possibility of cholelithiasis, but gall stones could not be found in the fæces. On the few occasions when these were examined Hayem inclines to the view that his cases represent an as yet undescribed benign form of disease belonging to the group of infectious jaundice. He proposes to term the affection "chronic infectious icterus with splenic enlargement and crises of exacerbation." In one case from fluid abstracted from the patient's spleen he was able to obtain cultivations of encapsuled diplococci, resembling Fraenkel's pneumococcus. These microbes proved fatal to mice in less than twenty-four hours. The digestive tract may be the source of the infection, and the microbe need not be the same in all cases. He does not think the disease is identical with the chronic icterus, which he has described as occurring amonst certain dyspeptics, and which is characterised by the absence of bile pigments in the urine and their presence in the blood serum. The treatment which Hayem recommends consists in careful general hygiene, strict antidyspeptic regimen, milk diet during the exacerbations, sustaining the strength, and seeing that the excretory functions are properly performed.

SURGERY.

(376) The Operative Treatment of Goitre.

WORMSER (*Rev. de Chir.*, April, 1898), who has had much experience of the operative treatment of goître in Kocher's clinic at Berne, is of opinion that the possible mishaps of thyroidectomy are not so serious as to counterbalance the many advantages of this method, whilst, on the other hand, strumectomy or intraglandular enucleation is too rarely indicated to claim recognition as a regular operation. Thyroidectomy as now performed by Kocher permits the surgeon to establish a complete hæmostasis, to avoid any injury to the recurrent nerves, and to preserve a part of the normal glandular structure if such should persist at the time of operation. This operation, it is held, affords the best conditions for immediate healing,

causes very little disfigurement, and renders impossible any local relapse of the disease. In strumectomy the loss of blood is usually abundant, and often very serious, and there is a risk of secondary hæmorrhage. As the wound is deep and irregular, surrounded by torn thyroid tissue, and occupied by blood, there is a greater risk after enucleation of infective disorders. Moreover, as has been proved by statistics, relapses are much more frequent after this operation than after thyroidectomy. This latter operation, the author states, is indicated in cases of (1) Malignant tumour of the thyroid gland; (2) acute and chronic strumitis; (3) parenchymatous goître—diffuse hypertrophy of the gland; (4) polycystic goître; and (5) goître with disseminated foci. It is contraindicated in cases in which no normal thyroid tissue is left. Strumectomy may be practised in cases of (1) unilocular cystic goître; (2) isolated nodules enclosed in normal tissue, if such can be removed rapidly and without much bleeding; (3) large morbid deposits existing in immovable goîtres.

(377) Abdominal Incisions.

WOOLSEY (*Annals of Surgery*, January, 1898) concludes that: (1) Abdominal incisions, except those in or close to the median line, should be obliquely transverse in order to run parallel to the nerves (and thereby also to the cleavage lines of the skin), so as to avoid partial paralysis of the muscles, weakness of the abdominal wall, and a tendency to hernia; (2) intermuscular, or even transmuscular, incisions should be preferred to those in the linea alba or semilunaris, for in both the latter cases the cicatrix is less strong and more prone to hernia, and in the semilunar line the nerves are necessarily divided; (3) in place of the median vertical incision the intermuscular incision near the inner margin of the rectus, or a "trap door" incision around this inner margin offers many important advantages.

(378) Operations on the Stomach.

CARLE AND FANTINO (*Il Policlinico*, March 15th, 1898) publish a first instalment of considerations upon 102 operations upon the stomach performed by them in the last few years. In the present number they deal with 83 operations upon the pylorus; of these, 44 were cases of non-malignant pyloric stenosis. The authors deal at some length with the bad effects resulting from prolonged retention of food in the stomach, and point out that this of itself may be a cause of hyperchloridria. The few cases of pyloric stricture where hypochlorhydria or anachlorhydria was present could be explained in other ways. Excess of acid does not hinder fermentation, but may increase it by delaying the digestion of amylaceous food. Of the 44 non-malignant strictures, 30 were cicatricial, 9 spasmodic, 3 due to gastric atony, and 2 to stricture of the duodenum. In 4 cases cicatricial contraction of the pylorus followed very soon after the swallowing of corrosive acids. The position of the cicatrix here is explained by the fact that when the stomach is empty and retracted the pylorus is the lowest point, the lesser curvature being nearly vertical, In 8 cases where there were unmistakable signs of previous ulcer hæmatemesis had occurred only 3 times. There was evidence of peripyloritis in 19 out of the 44 cases. This strengthens the author's view that spasm of the pylorus is due to some local alteration of the mucous membrane—for example, anal fissure. As regards operative treatment, 27 were treated with gastro-enterostomy, 3 by digital divulsion, and 14 by pyloroplasty. There is a full discussion as to the relative value of anterior or posterior gastro-enterostomy, with a decided opinion in favour of the latter method.

(379) The Other Kidney in Nephrectomy.

EDEBOHLS (*Annals of Surgery*, April, 1898) states that the presence of a second kidney in cases of contemplated nephrectomy may be determined by most of these aids, examination of the urine, palpation, cystoscopy, catheterisation of the ureters, skiagraphy, and the fluoroscope. None of these aids however can in every case give satisfactory information as to the exact condition of the other organs. In cases of pyuria and tuberculosis of vesical or unilateral renal origin, catheterisation of the ureters involves the risk of infection of a previously healthy ureter and kidney, and should therefore be avoided. When not absolutely certain of the presence and exact condition of the other kidney the surgeon, it is held, should perform an exploratory incision in the lumbar region, which if properly performed according to modern methods may be regarded as a safe and expeditious procedure. The author describes in detail his own method of making such exploration, and of exposing and closely examining the second kidney.

MIDWIFERY AND DISEASES OF WOMEN.

(380) The Use of the High Forceps.

TOTH (*Arch. f. Gyn.*, vol. lv., part 1, 1898) deals with this question, with special reference to the contracted pelvis. He refers to the different fashions that prevail as to the use of the forceps, the frequency in head presentations varying from 1 or 2 to 11 or 12 per cent. In Buda-Pesth, among 7,775 births in fifteen years, the forceps was used 155 times—that is, in 1.9 per cent. of the cases. Forty-four cases of high forceps came under the author's observation, falling into three groups: (1) With normal pelvis, 10 cases; (2) with contracted pelvis, 24 cases; (3) unsuccessful applications followed by craniotomy, 10 cases. In the first group the indications were uterine inertia, protracted second stage, with danger to mother or child, undue stretching of the lower uterine segment, with risk of rupture of the uterus; 7 of the children were saved, 2 of the others weighed 11¾ lbs. and 12¾ lbs. respectively. In the second group 21 children were saved and 23 mothers. In the third group perforation was performed on the living child seven times, and on the dead child three times. One mother died of rupture of the uterus and peritonitis. In this case the assistant, contrary to the practice in vogue at the clinic, turned after the high forceps had failed, and then had to perforate the after-coming head. The indications were: Delayed dilatation and failure of the head to engage, 2 cases; threatened uterine rupture from undue stretching of the lower uterine segment, 7 cases; embarassed breathing, with severe nephritis, 1 case. After quoting and comparing many statistics, the author sums up in the following conclusions: (1) The use of the high forceps is not so dangerous, either for the mother or for the child, as is commonly supposed; on the contrary, it gives undeniably better results for both than turning, especially from a head to a foot presentation. (2) In general, where labours must be terminated in the interest of the mother, then, if conditions are no longer applicable for turning, the high forceps should be tried before perforation of the living child is resorted to. (3) In cases of generally contracted pelves of the first and second degrees, where the narrowing affects especially the upper straits, the high forceps should have the preference over turning after a due period of waiting has shown that a spontaneous termination of labour is still possible. The same principle should guide us in those cases where the disproportion is due to a relatively large child, while the pelvis is of normal size. (4) In case where the high forceps has failed further waiting is not permissible, but perforation must at once be resorted to. Under favourable circumstances symphysiotomy may be considered as an alternative, but turning (into a foot presentation) is contra-indicated, and must be decisively rejected. (5) The high-forceps operation can be performed with any instruments of convenient length; but the author has been repeatedly convinced of the superiority of Tarnier's axis traction over other high forceps.

(381) Dystocia from Cicatricial Growths: Cæsarean Section.

NEHRKORN (*Virchow's Archiv*, vol. cli, Part I, 1898), in a paper on a case where striated muscular tissue was found in the uterine wall, gives a remarkable clinical record of the same case. The patient was 28, and had suffered severely from pelvic inflammation following abortion three years previously. Flooding occurred before labour pains set in, the membranes ruptured, the labour made no progress for several days, and the patient on that account was examined. A very firm mass was detected in Douglas's pouch, in the region of the sacrum; it obviously impeded the fœtal head. As the heart sounds were still audible Cæsarean section was performed. The uterine wall was of extraordinary thickness. On the second day complete obstruction had set in, the deposit in the pelvis pressing on

the rectum. The abdomen was opened; the descending colon could not be reached, so a coil of small intestine was drawn into the incision and opened. This gave relief, but the patient died ten hours later. At the necropsy a dense mass of cicatricial tissue, representing both parametric and perimetric deposit, was found soldering the uterus to the sacrum. That organ was much hypertrophied posteriorly, and its thickened posterior wall rose up so as to form a sharp angle a little above the os internum. At the angle its muscular tissue was redder than usual, owing, as microscopical examination proved, to the predominance of striated muscular fibres. Girode reported the presence of striped muscle in a uterus six years ago. In Nehrkorn's case the pelvic disease had caused many morbid changes. The rectum was obstructed, the uterus, renal pelves, and calyces were dilated, and the kidneys were in a state of parenchymatous degeneration.

(382) Accouchement Force.

MARX (*Medical Record*, April 2nd, 1898) reports 50 cases in which this procedure was adopted; 8 were for placenta prævia. All the mothers recovered, and all the children were born alive; 13 were for uræmia or eclampsia: 12 mothers recovered, and all the children save 1 were born alive; of the remaining 29, 28 mothers survived and 1 died, being almost moribund from scarlatina. The author claims that in most cases this method is the best; the hand alone is used for dilating the cervix, and so is ready in any emergency. The risk of sepsis is reduced to a minimum, moreover the result is certain, while this cannot be said of bougie and Barnes's bags. It is a rapid process; in 1 case of eclampsia with no labour pains, and a cervix an inch long, in seventeen minutes he fully dilated the cervix, perforated the first baby, which was dead, turned the second living baby, manually removed the placenta, and tamponed the utero-vaginal tract. The procedure is divided into two stages: the first, which is not always employed, consists in a preliminary tamponade of the cervical canal with strips of gauze. After five to fifteen hours, pains having started, the tampon is again removed, the vagina cleansed, an anæsthetic given, and the second stage started. If the child's head has engaged, one finger of each hand is hooked into the cervix, and traction made in opposite directions. The hand is not introduced into the vagina; then two and three fingers of each hand are introduced. Forceps can then be easily applied. If the head has not engaged, the hand being introduced into the vagina, one finger is inserted into the os, and continuous pressure exerted till the whole finger enters; this is now flexed and withdrawn, the flexed finger having a diameter equal to two fingers; then two fingers are introduced, both flexed and withdrawn. By degrees the conated hand can be passed entirely into the uterus, one or both feet are grasped, and then the membranes are ruptured, and extraction at once made. The reason for this is that the cervix, being artificially dilated, retraction is almost certain to occur, unless delivery be performed at once, and that at a most inopportune time—that is, when the neck of the body is passing through the os; the delay entailed in again overcoming this spasm might prove fatal to the child.

(383) Appendicitis and Pregnancy.

PINARD (*Sem. Méd.*, March 23rd, 1898) reports the case of a previously healthy young woman who was suddenly seized with violent epigastric pain radiating into the right iliac fossa. The next day vomiting began. On the fourth day there was considerable meteorism, but a tumour corresponding to the gravid uterus was found, with tenderness over McBurney's point. *Per vaginam* nothing abnormal discovered. Temperature 98.6 F., pulse 120. On the fifth day Segond operated and let out a quantity of fœtid pus. During the night a living 5½ months' fœtus was expelled, which, however, died soon after. *Post-mortem* there was gangrene of the appendix in three separate places. Blood from the child's umbilical cord gave pure cultures of B. coli. The author has collected 45 cases of appendicitis complicating pregnancy, the diagnosis being confirmed in 30 by operation or *post-mortem*. He concludes from these that: (1) Appendicitis may attack a pregnant woman at the beginning or at any time during pregnancy or the puerperium. (2) In most cases it causes abortion. The child dies as a rule very rapidly, as the author's case proves, from infection. (3) It is only possible to save both the mother and child when the abscess is limited and encysted. (4) Every type of appendicitis may occur. (5) The diagnosis may be difficult owing to the enlarged uterus, or still more during the puerperium, but is usually possible with care. (6) Treatment consists in operating as early as possible. A preliminary induction of premature labour is unjustifiable, since pregnancy is not always interrupted if the mother recovers. (7) Prophylaxis consists in operating in every case of relapsing appendicitis in a young girl or non-pregnant woman during the period of sexual activity to prevent future complications during pregnancy.

(384) Accessory Suprarenal Capsules near Ovary.

GOTTSCHALK (*Centralb. f. Gynäk.*, No. 15, 1898), in removing a pair of diseased appendages, discovered accessory "adrenal" bodies in the infundibulo-pelvic ligament close to one of the ovaries. He reports the case as adding a fifth to the four already published of accessory suprarenal capsules detected in the pelvis.

THERAPEUTICS.

(385) Geosote.

RIECK (*Reprints from Deuts. med. Zeit.*, 1896, No. 103, and 1897, No. 63) records the results of a year's use of this compound, first made by Wendt of Berlin. Geosote is a valerianate of guaiacol, and hence is closely related to eosote, the valerianate of creosote. It is a yellow, oily liquid, soluble with difficulty in aqueous media, but readily in alcohol, ether, chloroform, and benzol; it is stated to be readily absorbable by the skin, and to be of particular value when subcutaneously injected. Internally it is best given in capsules containing 3 grains, of which the author states that he has taken 15 at a sitting without ill-effect; on another occasion he injected more than 100 grains beneath the skin of his arm without inconvenience. Geosote has a particular influence on all mucous membranes checking increased secretion, and at the same time retarding its putrefaction. Rieck has accordingly found it valuable in the treatment of diarrhœa, and also in bronchial affections, in which the expectoration had not yielded to the administration of iodides. He recommends it warmly in diseases of the respiratory organs in children. The special indication, however, for this, as for all similar preparations, is in the treatment of tuberculosis. The author has used it in 76 tuberculous cases, of which he claims that no fewer than 31 were cured and 32 improved by its use. Only 8 died, 3 of which were acute pulmonary tuberculosis, 2 tuberculous meningitis, and 3 general tuberculosis. In all of them the author graphically says the most ideal serumtherapy would have been of no more use than that of an antiseptic after the guillotine. He states that the special action of geosote is to cause diminution of the tuberculous process and encapsulement of its products; it would thus act like tuberculin, but without producing a general reaction. It is said to exert a similar influence upon tuberculous glands in the neck. In surgical cases the effects of its local use are stated to be even more obvious, and in support of this the history of a very striking case of bone and joint tuberculosis is given. If future observations bear this out, geosote will be a most valuable aid to conservative surgery.

(386) Halogen Metabolism.

BLUM (*Münch. med. Woch.*, 1898, Nos. 8 and 9) discusses this subject under the following headings: (1) The iodine-containing substance in the thyroid gland; (2) the origin of this iodo-albumin; (3) the fate of this substance in the body; and (4) the question of iodine metabolism. (1) Free iodo-thyrin does not exist in the thyroid body, since by alcoholic extraction a substance containing iodine is obtained, which by its chemical behaviour belongs to the albumins. If thyroid gland is extracted with water and coagulated by heat, etc., the iodo-thyrin is found combined with albumin. A body containing iodine can be obtained from this coagulum, which is no longer coagulable by heat (thyrogen c.). Like other albumins iodo-albumen can be converted by formalin into a non-coagulable body

(thyrogen f.). The author thinks that the iodo-thyrin is in real chemical combination with the albumin, and he details evidence in favour of this view. (2) Iodo-thyrin is increased by the administration of iodine preparations. The author has administered potassic iodide to animals from which half the thyroid had been removed. He has invariably found an excess of iodine in the remaining half, even amounting to an increase of 400 per cent. The thyroid body can not only seize upon iodine preparations, but can rapidly convert them into its own peculiar iodine-containing product. The greater part of potassic iodide administered is excreted. Unlike the thyroid, other organs of the body can retain the iodine only for a short time, when it is again taken up by the circulation. The iodo-albumin is formed by the splitting up of the iodine compound brought to the gland with the development of free iodine, which latter enters into reaction with the albuminous bodies present in the thyroid. (3) The author has investigated the question as to whether the iodine-containing substance of the thyroid is split up anywhere else in the body. The intestinal tract is certainly not engaged in liberating the halogen from its organic combinations. Because traces of organically combined iodine may be found here and there in the body, the view can scarcely be adopted that iodo-albumin can be split up there, whether this substance has been built up synthetically *in situ*, or has been derived from the thyroid. (4) It would appear that thyroid metabolism takes place exclusively in the gland itself, and that it exercises from here its action upon the other tissues of the body.

(387) Orthoform.

Kallenberger (*Berl. klin. Woch.*, March 21st, 1898) has used orthoform in surgical practice. It is a fine white non-hygroscopic powder, and has the following properties: (1) It acts as a local anæsthetic wherever sensory nerve endings are exposed. (2) It is non-poisonous, so that the author was able in one case to use as much as 60 gr. in one week upon a large raw surface. (3) It is antiseptic. Kallenberger then relates cases illustrating the value of orthoform (1) In fresh wounds, (2) in burns, (3) in ulcers of the legs, (4) in carcinomatous ulcers, (5) in syphilitic ulcers, and (6) in toothache where the ends of the nerve were exposed. The pain mostly disappeared in three to five minutes, after which the local anæsthesia was complete, and lasted on an average for thirty-five hours. If the exudation is very abundant an ointment should be used instead of the powder, which may be washed away. In a case of ulcer of the leg where iodoform was substituted for the orthoform there was no return of pain for seven hours. This period of freedom from pain is more marked the more prolonged the previous application of the orthoform has been. This agent also limits the exudation. Orthoform has been used internally in laryngeal ulcers, as well as in gastric ulcer and carcinoma. A chloride in addition to the base has been thus employed by Neumayer, but for surgical purposes the chloride is unsuitable owing to its irritating properties.

(388) Lycoctonin.

Marchetti (*Lo Sperimentale*, An. 51, f. 4) gives an account of his experiments with this alkaloid, derived of aconitum lycoctonum and presenting itself as a yellowish powder, slightly soluble in ordinary water, but easily in water acidulated with acetic or tartaric acid. The minimum lethal dose in the frog is about 78 cg. per kilog. Poisoning is shown by paresis or general paralysis. In warm-blooded animals the results were mostly negative except in very large doses. Lycoctonin possesses, in addition to a paralytic action on the central nervous system, a peripheral action on the striated muscle fibre. On the heart the effect is chiefly seen in excitation of the intracardiac "apparatus of arrest," together with a rather weak exciting action on the myocardium; it is not a very active cardiac poison. At present it does not appear that lycoctonin could be employed advantageously in human therapeutics, but probably this is not the most active principle of the plant.

PATHOLOGY.

(389) A New Form of Tuberculosis.

Cèourmont describes (*Arch. de Méd. Expér.*, January, 1898) what he considers to be a form of tubercle similar in all its naked eye and microscopic appearances to the ordinary form, but dependent on the presence of a different micro-organism and which he considers to be therefore an atypical form of human tuberculosis. The patient was a man, aged 51, without tuberculous, rheumatic, syphilitic, or alcoholic history. As the result of a fall he injured his right elbow, which subsequently inflamed and finally presented clinical appearances of tuberculous disease of the joint, but without pain. On aspiration a reddish brown non-purulent fluid was drawn off. Examination of the joint showed the ordinary appearances of tuberculous arthritis, and sections of the swollen synovial membrane had all the microscopic appearances of tubercle including giant cells. Subsequently the surrounding tissues were invaded and the patient died in a cachectic condition after leaving the hospital, so that no necropsy was obtained. The most careful examination of both fluid and sections failed to reveal the presence of Koch's tubercle bacillus. Guinea-pigs and rabbits were inoculated in various ways with the fluid. In the former instance tubercle was easily produced; in some few instances the animals died without apparent lesion. The length of survival in inoculation varied. There was often abscess formation, the glands became rapidly involved, the liver and other organs became infiltrated with tubercle. In the case of rabbits, there was generally very severe subcutaneous lesion with pus formation. Pulmonary tubercle appeared, but generally the serous surfaces remained free. In the case of intravenous injection, the animals died with miliary tubercle. The author was able to separate and cultivate a streptobacillus by inoculating various media with a caseous tubercle from the liver. The organism grew freely in ordinary peptonised bouillon, which became cloudy in 24 hours at 37° without producing any pellicle or odour. On gelatine the cultures developed abundantly in the form of a white deposit, thin and slightly creamy, at the end of 24 hours without liquefaction. Stab cultures showed the presence of fine punctiform colonies, which, however, did not reach any large size. The organism was easily stained by gentian violet, carbol-fuchsin, but did not retain Gram's stain. In character, microscopic examination showed that the organism was a streptobacillus without mobility, the elements being slightly rounded at the ends. Inoculation of the pure culture gave rise to miliary tubercle, caseating abscess, and lesions similar to those produced by inoculation of the original fluid and the organism could subsequently be demonstrated in the various lesions. The writer suggests that in these observations a lesion similar in all its aspects to ordinary tubercle is apparently due to a micro-organism having characters completely different from those usually observed in Koch's bacillus.

(390) Air Embolism.

Death from entrance of air into the veins is an accident which has from time to time attracted considerable attention. Begouin has recently investigated (*Arch. Clin. de Bordeaux*, January, 1898) the condition with a view to ascertaining the real cause of death, and if any method of treatment is possible. Opinions have been very divided as to the mechanism which brings about death, for several physiologists have stated that large quantities of air may be introduced in the veins of animals without a fatal result. As the result of a series of experiments undertaken by the author, he observed that the rapidity of death seemed to depend rather on the amount of air contained in the right ventricle, and according as this air is introduced gradually or forcibly, so there will be slowly or rapidly produced asphyxia. On *post-mortem* examination, the author found the right ventricle greatly distended with frothy blood. He then found that by passing a very fine trochar into the right ventricle after admission of air by the veins, and aspirating, death did not take place, but on the contrary, in a very short time the animal seemed to have recovered. The author's conclusions are, therefore, that death is due to distension of the right ventricle by air and consequent right-sided asystole. Secondly, that removal of the air by aspiration allowed the ventricle to recover.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(391) Amœbic Dysentery.

HARRIS (*Amer. Jour. of Med. Sci.*, April, 1898) has investigated 35 cases, most of which were chronic. In the chronic cases the temperature rarely rises above 101° in the evening. Albumen was only once present, and peptones, albumoses, and globulins were always absent. The stools numbered from 2 to 40 in the 24 hours, and varied in consistency according to the severity of the disease. In 6 analyses of the stools from 2 severe cases large quantities of serum albumen were present. Liver abscess occurred twice, peritonitis twice, piles once, and appendicitis once. Ten were treated with ordinary astringents, and 5 died; and 25 with rectal injections of hydrogen dioxide, of which 8 recovered, 4 improved, 4 remained as before, and 5 died. One case recovered after injections of potassic permanganate. Amœbic dysentery is a disease of the poor, and is almost always associated with filth. The stools should be collected in a perfectly clean and warm vessel; it should contain no water. Urine is particularly damaging to the amœbæ. The amœbæ die in two to six hours after expulsion. They often die as rapidly at body as at room temperature. They did not appear to be killed by saturated solutions of quinine sulphate or boracic acid, but an aqueous solution of quinine 1 in 300 killed them in ten minutes; they were also killed by weak solutions of hydrogen dioxide, potassic permanganate, and toluidine blue. Among the stains used toluidine blue was the best. In staining sections the author has first used eosin or benzopurpurine and then toluidine blue with good results. In 4 of the author's fatal cases the appendix was involved, its walls destroyed, and amœbæ present in the pus in and about the appendix. Two chief lesions are noted: (1) The submucosa shows marked changes, the mucosa being practically healthy, and (2) much less frequently the mucosa is eroded, and there is nothing abnormal beneath it. Thus changes in the submucosa may be traced in advance of surface ulceration. Amœbæ are found everywhere scattered throughout the diseased tissue. Very rarely a single amœba may be found in advance of the pathological changes. The amœbæ penetrate into the deeper layers of the intestine, but usually the peritoneum thickens more rapidly than the necrotic process extends. Hyperplastic tissue found in the disease is more resistant than the normal tissues. The author describes a hepatic abscess in which amœbæ were found. How the amœbæ reach the liver is doubtful, but they are probably brought by the portal vein. Harris then gives the symptoms of amœbic dysentery. The diagnosis can be made by finding the amœbæ. It is a very fatal disease. When it becomes chronic, as it most often does, the chances of recovery, even under the best treatment, are always bad. A severe attack may rapidly get better, or a mild attack get quickly worse at any period of the disease. Relapses are frequent. Liver abscess is a very fatal complication, and perforation and peritonitis always so. In the chronic disease opium checks the number of the discharges, but the author has never seen any permanent good from it. Sulphuric acid has in several cases apparently produced benefit, but never a cure. One patient recovered while taking salol. The author has never obtained any perceptible results from rectal injections of quinine 1 in 5,000, but injections of 100 to 300 watery solution of bisulphate of quinine were somewhat beneficial in one or two cases. He has had good results from hydrogen dioxide injections. The ordinary hydrogen dioxide is diluted four to eight times with water, and about a quart injected twice daily. The diet should be liquid. The author uses milk alone, and occasionally, as a change, egg albumen. He thinks that amœbic dysentery would cease to exist with ordinary attention to sanitary laws.

(392) Beri-Beri.

HIROTA (*Centralbl. f. inn. Med.*, April 23rd, 1898) draws attention to the spread of this disease (kakke) to suckling infants through the milk of nursing mothers suffering from it. He refers to some 52 cases in such infants, of which 42 recovered and 5 died, the result in the remaining 5 cases being unknown. The cases which recovered were treated at first with medicinal agents without much effect, and then the infants were weaned, a wet nurse being used in only a very few cases. Cow's milk or condensed milk was thus mostly substituted for human milk. Improvement occurred almost at once, the vomiting being arrested, diuresis appearing, etc. The aphonia alone remained. The author maintains that the disease is really due to an intoxication brought about by the milk, and that the only sure cure is to withhold the milk, and this before the disease is too advanced. Details are given of 4 severe cases of beri-beri in infants, and the author shows, in a comparative table, that the symptoms presented by the infants resemble those of the acute disease in adults. The beri-beri of these infants thus belongs to the acute pernicious form. The disease must be due to an intoxication, since recovery could not take place so rapidly if it were an infection. Beri-beri in infants thus throws much light on the etiology of the disease. As yet the author has been unable to separate out the disease-producing substance present in the milk.

(393) Diseases of Small Arteries giving Rise to the Symptoms of Dermatomyositis.

W. ROSENBLATH (*Zeit. f. klin. Med.*, vol. xxxiii, Parts 5 and 6) describes the case of a man, aged 37, belonging to a healthy family, who had had no noteworthy illness till the last month of 1895. He then gradually began to suffer from pains, chiefly in the limbs, partly referable to the muscles, partly to the joints. He had enlargement of the heart, œdema of the legs, albuminuria, and tendency to sweating, and to a subfebrile temperature. Occasionally he suffered from vomiting. There was some effusion in the knee-joints, and certain of the finger-joints were at times tender. The clinical features changed somewhat in the course of the disease. On March 10th, 1896, there was much swelling of the skin of both upper arms, less of the forearms; much œdema of the thighs, less of the legs and feet, and none of the scrotum. Active movements of the limbs were then almost impossible: passive movements could be obtained, though in the left wrist they were painful. Owing to the œdema it was difficult to examine the muscles for tenderness on pressure, and the œdema likewise hampered the electrical examination. No special tenderness of the nerve trunks could be made out. Sensation seemed to be unaffected, except that the patient appeared to be very little sensible to strong faradic currents. On March 12th there was a sudden attack of dyspnœa, lasting about two hours, and on March 14th there was a similar attack which lasted longer. The patient died on March 15th, with cyanosis and signs of pulmonary œdema. As to the diagnosis, rheumatism, nervous affections, polymyositis, and trichinosis, were all thought of; polymyositis or dermatomyositis was thought most probable. The *post-mortem* examination showed the following: Œdema of the cutaneous, subcutaneous, and muscular tissues of the body and extremities; fatty degeneration of the heart with dilatation of both ventricles; pleuritic adhesions; chronic catarrh of the stomach; nephritis. Microscopical examination of the muscles and nerve trunks showed that the chief pathological alterations were those of the small arteries in the connective tissue. The following changes were to be noted: degeneration of the vessel walls, exudation of leucocytes and fibroid formation around the vessels and thrombosis. The muscle and nerve fibres themselves were much less affected.

(394) Gastric Form of Epilepsy.

FICHAUX has collected (*Thèse de Lille*, 1897) a certain number of cases showing the existence of a form of epileptic seizure which manifests itself by attacks of gastralgia. This form of the disease has attracted very little notice, Trousseau and Féré being almost the only writers who allude to it. To quote one case in illustration: A girl, aged 22, under the writer's care, apparently in good health, will suddenly cry out with severe pain in the epigastrium, this not being preceded by any other symptom. If standing up, she has time to sit down; she becomes extremely pale, with a slight loss of consciousness lasting for two or three seconds, during which time she is unable to perceive any sensation. On returning to con-

sciousness there is a feeling of fatigue and headache, which lasts an hour or so. Under the influence of bromide these attacks become very much less frequent. In all the cases collected by the author there was this same sudden character in the onset. In the absence of every other symptom the apparently perfect health of the patient between the attacks is strongly suggestive of their epileptic nature.

SURGERY.

(395) Protrusion and Perforation of the Umbilicus in Ascites.

Ehret, of the Strassburg Medical Clinic (*Münch. med. Woch.*, April 12th, 1898) discusses protrusion and perforation of the umbilicus occurring in connection with obstructive ascites. The protrusion may be more or less rounded, or even pear-shaped. Perforation is uncommon. The author gives details of 3 cases, and adds another in which death was due to uncontrollable hæmorrhage from the protruded umbilicus. In one of these cases perforation took place on four or five different occasions, and the patient was still living. In another the patient was alive and free from ascites a year after the perforation. In the remaining case the patient died some three years after the perforation. The rupture took place in all the cases either where tapping was declined or when the patient was not under treatment. In 3 cases there was primary hepatic disease, and in the fourth heart disease. The protrusion may occur where there is no congenital widening of the umbilical ring. If a hernial sac is present the protrusion occurs earlier and more readily, and becomes larger. In 2 cases only fluid was present, and in the third bowel and omentum as well. In cases with previous inguinal hernia the fluid presses back the bowel, if not adherent, from the sac. Thus strangulation occurs in these cases much more readily at the umbilicus than in the inguinal canal. If intestine is present in the protrusion, tapping must be done with caution, the prolapsed bowel being pushed back and held there. In one of the author's cases the protrusion was described as big as a child's head. In two of the cases, after tapping, the whole fist could be introduced through the dilated umbilical ring. The perforation appears to be due to hæmorrhage into the tissues, which then give way. After the rupture complete closing takes place. This rapid closing prevents infection. If the ascites collects anew, rupture may again take place unless prevented by tapping.

(396) Seminal Vesiculitis and Prostatitis in Gonorrhœa.

Swinburne (*Amer. Journ. of Cut. and Genito-Urinary Diseases*, March, 1898) thinks that these complications of gonorrhœa occur oftener than is suspected, and require special treatment. He quotes three cases which, after prolonged and ineffectual treatment for chronic discharge, cleared up when the state of the vesiculæ was found and treated. The author's conclusions are as follows: (1) In chronic urethritis and at the end of prolonged urethritis, or when the posterior urethra is affected, the seminal vesicles and prostate should always be examined. (2) When epididymitis has occurred seminal vesiculitis is very apt to occur also. (3) Tuberculous conditions should be excluded if possible, for the treatment may render the condition worse. (4) The treatment consists in expressing the contents of the vesiculæ by the finger passed above the prostate *per rectum*. (5) Expression of the contents of the vesiculæ is a good test for sterility, to determine whether the ducts between the testis and the seminal vesicles are patent.

(397) Tracheotomy after the Use of Antitoxin.

Noccioli (*Gaz. degli Osped. e delle Clin.*, February 27th, 1898) contributes some statistics as to the results of tracheotomy in diphtheria after the use of serum. His tracheotomies number 15 in all; of these, 7 died and 8 were cured. But for various reasons 4 of the deaths can be excluded, which brings the mortality down to 25 per cent., a great improvement on the statistics of the operation before the use of antitoxin. The author never used an anæsthetic; in all cases except one he performed the high operation. No inconvenience followed the removal of the tracheotomy tube, usually on the eighth or tenth day after the operation.

(398) Sympathetic Papillitis.

Mulder (*Zehender's klin. Monats.*, December, 1897) reports a case of this uncommon affection. E. M., aged 15, a shoemaker, received an injury to the right eye with a piece of a cartridge case while shooting. The injured eye is said to have become blind soon after, and was for a long time very painful. After three months' treatment it quieted down, but the patient has since frequently had headache affecting the left half of the head; at times so badly that he has had to keep his bed for a week or two. Neither eye was painful. On May 4th, 1896, the patient noticed that the sight of the left eye was worse, and soon he was unable to carry on his work. On June 2nd he came under Mulder's care, who noted as follows: The injured eye is of normal size; by focal illumination a small scar is visible in the otherwise clear cornea, probably indicating where the foreign body entered. Anterior chamber of normal depth; iris slightly discoloured, pupil small and bound down by posterior synechiæ; behind the pupil the thickened lens capsule can be seen. No perception of light; tension normal. The globe is only slightly sensitive to pressure, but this occasions some pericorneal injection. The left eye is normal in appearance; no pericorneal injection. Pupil reactions normal. Vision $\frac{6}{24}$ E. The optic disc shows the appearances of a moderate papillitis: veins somewhat enlarged and tortuous, the contour of the papilla being veiled; one small retinal hæmorrhage near the disc. Field of vision normal; slight impairment of colour perception in centre of field. Vitreous and choroid quite normal. No albumen or sugar in urine. The diagnosis was made of sympathetic papillitis, and on June 4th the right eye was enucleated. Examination of it showed total detachment of retina, and in the ciliary region an encapsuled piece of copper. After the operation the headache entirely disappeared. No internal medicines were given, in order to see whether the symptoms of papillitis would spontaneously disappear. June 11th, V. = $\frac{6}{12}$; swelling of papilla and blood vessels less. June 16th, V. = $\frac{6}{9}$; colour vision quite normal. July 4th, V. = $\frac{6}{6}$. The disc has the normal appearance, and only a trace of the small hæmorrhage remains. The patient was dismissed cured; and in November Mulder heard that the eye had remained all right, and that there had been no headache.

MIDWIFERY AND DISEASES OF WOMEN.

(399) Uterine Tetanus with Threatened Rupture.

Brünings (*Cent. f. Gyn.*, April 16th, 1898) saw a 3-para, aged 33, with the following history: On Saturday labour began, and the midwife, an old woman, ruptured the membranes early in the evening. Sunday morning a doctor was called in, and found the uterus firmly contracted and the os nearly dilated. In the evening the condition was unaltered, though pains had been present all day. On Monday afternoon the doctor endeavoured to deliver, both by forceps and by turning, under deep narcosis, but unsuccessfully. On Tuesday at noon Brünings saw the patient; the head had not engaged, but the os was fully dilated. Under narcosis forceps were applied, but no impression could be made; the cervix was greatly thinned out, and there was marked contraction of the uterus round the child's neck. The child's heart beats ceased, and as the mother's condition was becoming grave, craniotomy was performed; but still delivery could by no means be effected, and as it was evident that the mother could not live much longer unless labour could be terminated, Cæsarean section was resorted to. The extraction was easy. The uterus was found to be very livid, and its peritoneal covering markedly œdematous, attaining in parts the thickness of the little finger. The operation lasted half an hour, but shortly afterwards the patient succumbed. The child was unusually well developed; the conjugata vera was just under 4 inches, and the transverse diameter at the brim 4¾ inches. The uterine tetanus is to be ascribed to the premature perforation of the membranes in a case where a large child was found in conjunction with a generally contracted pelvis. It is noteworthy that the child remained alive for so long after the onset of the tonic contraction of the uterus.

(400) Hysterectomy for Acute Puerperal Septic Metritis.

VINEBERG (*New York Med. Jour.*, April 2nd, 1898) reports a successful case. Symptoms began on the sixth day after confinement; three days later curetting was done, and was followed by improvement for twenty-four hours. On the twelfth day the patient was taken to hospital, apathetic, delirious, with temperature 103°, and pulse 130. Intrauterine irrigations brought away no *débris*. On the evening of the thirteenth day she seemed sinking, and abdominal total hysterectomy was done. On cutting open the uterus the whole interior above the cervical canal was covered with a dark, tenacious, slimy discharge, emitting a very foul odour. Attached to the left horn was a piece of placenta 2 cm. by 4 cm., and firmly adherent. The patient left hospital in six weeks. The author explains the lateness of the onset in these cases as follows: A piece of retained placenta disintegrates, and the *débris* are at first carried away with the lochia. After a week the cervical canal becomes moderately closed, and at the same time the heavy fundus sinks forward, so that escape of the discharges is interfered with, resulting in absorption and sepsis. This may occur without fœtor of the lochia. The proper treatment is immediate curettage, followed by special precautions to allow of subsequent drainage. If this fail, as shown by rapid weak pulse and loss of ground by the patient, hysterectomy should be done. In a footnote to the paper the author reports a second and later case, where the same treatment was successfully carried out. He gives references to eight other cases reported.

(401) Incarceration of a Pessary.

GALAKTIONOFF (*Centrabl. f. Gynäk.*, No. 5, 1898) states that a country woman, aged 60, suffered for ten years from prolapse. Another peasant introduced an improvised passage made of three stout pieces of iron wire. For four years before treatment the patient suffered from hypogastric pain, fœtid discharge, eczema vulvæ, and escape of pus from a sinus in the perineum. In the sinus one end of the pessary, now broken in half, could be felt. The other end projected from the vaginal mucous membrane, high up to the extent of half an inch; all the remainder lay in the recto-vaginal septum, and could be felt *per anum* immediately under the rectal mucous membrane. The pessary had to be cut out and the perineum required repair by Tait's flap operation. The parts fortunately healed well. Neugebauer relates a case where one end of a broken wire pessary reached the inner extremity of the inguinal fold.

(402) Pregnancy: Suppuration of Hydatid in Liver.

MIKUCKI (*Monatsschrift f. Geburtsh. und Gynäk.*, November, 1897) reports a case illustrating the dangers of hydatid disease of the liver in parous women, even when in abeyance. A woman, aged 33, who had been delivered normally six times, again became pregnant. About the fourth month fever, rigors, and abdominal pain set in, the patient's general condition becoming very bad. Two tumours could be felt in the abdomen in the seventh month, one clearly the uterus, whilst the other, to the right of and above the fundus, was much larger, fixed, fluctuating, and intensely tender. This tumour was diagnosed as either an echinococcus of the liver or an ovarian tumour with twisted pedicle. Von Jordan, of Cracow, operated, and discovered a large hydatid cyst containing about 10 pints of purulent fluid. After the contents had been removed the edge of the cyst was sewn to the parietes and drained, and Mikulicz's gauze drainage applied to the neighbouring peritoneum, as some of the fluid had entered that cavity. Abortion occurred three hours after the operation, and the patient died on the third day.

(403) Fœtus Papyraceus.

LITTAUER (*Centralbl. f. Gynäk.*, No. 2, 1898) exhibited a specimen of fœtus papyraceus at a recent meeting of the Leipzig Obstetrical Society. It was expelled during a twin labour at term, and preceded its brother, which was well developed and delivered spontaneously. There was a common placenta, and infarcts were detected in the segment belonging to the blighted fœtus. The lower part of the fœtus was devoid of all anatomical form, but the upper portion had been subject to lateral compression, and retained its component parts so well that it looked like a profile portrait in a cameo. It seems to have died at about the third month.

THERAPEUTICS.

(404) Periplœin.

LEVASCHOFF (*Vratch*, No. 11, 1898) makes a preliminary communication as to the action of a new cardiac tonic, periplœin. This is a glucoside derived from the bark of periploca græca, a plant belonging to the order Asclepiadeæ, and growing, among other places, on the south-west coast of the Black Sea. The pharmacology of this substance was first investigated by Burzinski, who found that it at first slows the action of the heart while increasing the blood pressure; if continued and the dose increased, the blood pressure still increases, but there is an increase in the frequency of the heart beats; finally, if still larger doses are given, the pulse becomes irregular, the blood pressure fluctuates, and the heart suddenly stops, the blood pressure rapidly falling to zero. This effect, according to Burzinski, is due to a direct action of the drug on the nerve centres: the slowing of the heart's action in the first instance is dependent on a stimulation of the centres for the pneumogastric nerves, and the increase in the blood pressure is caused by stimulation of the vaso-motor centres in the spine and medulla oblongata. The author was induced to investigate this substance, especially in view of its suitability for hypodermic injection, as it is soluble in water, and does not cause any marked inflammation at the seat of injection. The same cannot be said of either digitalin, digitoxin, or Merck's digitoxin. The dose of the substance was determined at first by trials on animals, on healthy subjects (the author and his laboratory assistant), and lastly, with suitable precautions, on patients. The maximum daily dose for hypodermic injection was found to be 0.001 g. The injections were made with sterilised solutions and due antiseptic precautions. The local effects at the seat of injection were slight and unimportant. The rapidity of the effect was first of all studied by its action on the pulse, its frequency, general character, the degree of blood pressure, and its sphygmographic tracing. For greater accuracy the sphygmograph remained on the wrist for two or three hours after the injection. It was found that even one hour after the injection there was a slowing of the heart's action with an increase of blood pressure. In cases with dicrotic pulse, the waves of the pulse became fuller and more regular, and the dicrotism was less marked. The cardiac impulse became more marked under the action of periplœin, but the area of cardiac dulness was not changed except in cases when the remedy was continued for a lengthened period. The heart sounds and murmurs became more distinct. The secretion of urine was markedly increased in cases of heart disease, but no such effect was observed in cases of dropsy of renal or hepatic origin or in healthy subjects. After the second injection there generally appeared a substance in the urine which gave the sugar reaction with Fehling's solution, but did not respond to other saccharine tests (such as phenyl-glycozone).

(405) Electricity in Incontinence of Urine.

CAPRIATI (*Arch. d'Elect. Méd.*, March 15th, 1898) records a case of involuntary enuresis successfully treated by means of the currents introduced into medicine by Morton, of New York. These are known as induced static currents, and are furnished by the oscillatory discharge of Leyden jars connected with an electrical machine. The patient is not insulated, but is connected with one of the jars, while the other is connected with earth. The intensity of the current is regulated by merely altering the distance between the jars. Capriati's patient was a previously healthy man of 35, who was gradually attacked by weakness and wasting in the left leg, with club-foot and exaggerated knee-jerk on that side. There was no reaction of degeneration, but incontinence of urine was very troublesome. The author considered the symptoms to point to a limited lesion of the spinal cord in the lumbar region. At first galvanism was tried with the kathode over the dorso-lumbar spine, and the anode on the perineum; this was continued for 10 minutes daily for more than 20 days without any benefit resulting. Endo-urethral faradisation (Guyon)

was next adopted, but was so painful that it had to be abandoned after two sittings. Finally, Morton's currents were used in conjunction with the spino-perineal galvanisation. Immediate relief followed, and after the treatment had been carried out every other day for two months, cure was complete as regards the incontinence. As galvanisation by itself had proved ineffectual, the credit must be given entirely to the method of static induction. It was extremely well borne when used in the manner laid down by Bordier. A sound, the end of which formed an electrode, was introduced into the urethra as far as the sphincter of the bladder, and its free end was attached by a chain to one of the Leyden jars; the machine was regulated to give 6 to 8 sparks a second, and each sitting lasted 5 minutes.

(406) Treatment of Infantile Paralyses.

Eulenburg (*Deut. med. Woch.*, April 7th, 1898) discusses the value of tendon transplantation in these paralyses, and relates a case of spastic paralysis in which it was successfully performed. In anterior poliomyelitis there is frequently a rapid atrophy of some muscles, followed by contracture in their antagonists, which leads to various deformities of the foot. Electricity and gymnastic treatment are almost useless to overcome these deformities, and hence a mechanical orthopædic treatment has to be adopted. The object of the new procedure of tendon or muscle transplantation is to render the paralysed muscles capable of voluntary movement. The tendon of the muscle to be transplanted is split lengthwise, and is united with the tendon of the paralysed muscle. In paralytic pes equino-varus where the extensor communis digitorum and peronei are affected, transplantation is made from the gastrocnemius, tibialis anticus, and occasionally from the extensor longus pollicis. A portion of the gastrocnemius has thus been united with the peroneus longus and a portion of the tibialis anticus with the extensor communis digitorum. These procedures have been carried out with very good results by several surgeons in the case of the lower extremity, but as yet with very little effect in the case of the arm. In cerebral spastic paralysis definite muscles or groups of muscles with the same function are mostly affected by spasm, whereas the antagonists are by no means devoid of function. Thus Eulenburg adopted tendon transplantation in a case of spastic paraplegia in a child aged 3. A portion of the tendo Achillis with the attached soleus was implanted by Sonnenburg into the united tendons of the peronei, and the foot was put up in plaster. After a fortnight faradic stimulation of the tibial nerve produced pronation with a raising of the outer side of the foot. A month later a similar procedure was carried out on the opposite side. All spasm disappeared, and the child could place its feet on the ground extremely well. In paralytic deformities of the foot this transplantation has been done with success, and Eulenburg thinks that it should be of equal service in spastic deformities. He is also of opinion that it may be of value in partial paralyses left after cerebral apoplexy, in some old paralyses of peripheral origin, etc.

(407) Capillary Puncture of the Heart.

Bégouin (*Sem. Méd.*, January 29th, 1898) refers to the well-known fact that entrance of air into the jugular vein causes rapid death by asphyxia. This asphyxia is due to an accumulation of air in the right ventricle. By experiments on dogs and rabbits he finds that, when air has been insufflated into the jugulars, and asphyxia, which would probably prove fatal, has come on, if the air contained in the right ventricle be aspirated through a capillary puncture, the symptoms of asphyxia disappear gradually as the air is drawn off, and the animals soon recover completely. The author believes capillary puncture of the ventricle would be equally successful in man whenever this accident happens, as in the course of an operation.

PATHOLOGY.

(408) Secondary Infection with Tubercle Bacilli.

D. Hansemann (*Berl. klin. Woch.*, March 14th, 1898) says that although the secondary infection of tuberculous lesions with other kinds of microbes has been much discussed, the secondary infection of diseased parts of the body with tubercle bacilli has been less considered. At the Berlin Medical Society he demonstrated specimens illustrating the latter condition. Amongst them was a specimen showing the secondary infection of typhoid ulcers of the small intestine with miliary tubercles. Similar cases have been recorded by F. Ernst, Birch-Hirschfeld, and Heuschert. Hansemann does not think that scrofulous enlargement of lymphatic glands necessarily implies the presence of tubercle bacilli, though such glands are eminently predisposed to invasion by the bacilli. In a child aged 4¾ he found scrofulous mesenteric glands, some of which showed simple hyperplastic changes, whilst others showed distinct tuberculous changes. He exhibited a lung with croupous pneumonia; in the hepatised portion were Fraenkel's pneumococci, but there were likewise recent caseous patches containing tubercle bacilli. The patient at first had typical pneumonia with pneumococci in the sputum, but the symptoms changed, and tubercle bacilli appeared in the sputum. He likewise demonstrated specimens from a case of broncho-pneumonia, in which some of the patches of pulmonary consolidation near an old apical tuberculous lesion, had undergone a secondary infection with tubercle bacilli. Fibrous thickening around bronchi, such as occurs in old persons, favours secondary infection with tubercle bacilli, but is not itself necessarily of tuberculous origin. In the chronic fibroid changes sometimes resulting from acute pneumonia secondary tuberculous changes are very apt to develop, and so also in the chronic lymphangitis of the lungs resulting from the inhalation of coal dust, etc. Such cases may, however, be diagnosed as phthisis, without any secondary infection with tubercle bacilli having in reality taken place. There are certain less coarse fibroid changes in the lungs, which are due to chronic lymphangitis of uncertain origin (certainly not caused by ordinary pneumonia, bronchitis, or syphilis), and such lungs are very liable to secondary infection with pyogenic microbes or tubercle bacilli. In another case with a bronchiectatic cavity in each upper lobe Hansemann found only streptococci and putrefactive bacteria in one cavity, whereas a profuse growth of tubercle bacilli was present on the walls of the other cavity; he thinks that in this case the tubercle bacilli lived practically merely as saprophytes, because no tuberculous lesion was found in any other part of the body. He believes that syphilitic lesions in the lungs are generally invaded by tubercle bacilli, and that pulmonary syphilis is thus frequently difficult to recognise; in fact, when completely caseous gummata becomes secondary infected with tubercle bacilli, it is impossible to distinguish them from caseous patches of tuberculous origin. In the discussion which followed Hansemann's paper, Kroenig pointed out the danger of placing patients suffering from pneumonia, or from enteric fever with pulmonary complications, in hospital wards close to consumptive patients.

(409) Hanot's Cirrhosis of the Liver.

E. Boix (*Presse Méd.*, March 16th, 1898), at the Paris Society of Biology, recorded his observations on the form of hypertrophic cirrhosis with chronic jaundice described by Hanot. (1) The splenic enlargement persists unaltered during the whole course of the illness, although the variations in the size of the liver may be considerable and of frequent occurrence. (2) The splenic enlargement precedes the alterations in the liver, or at least it precedes the outward manifestations of the disease. In one of Boix's patients, who died at about 30 of this form of cirrhosis, a large spleen had been noted during youth. (3) The disease may sometimes occur in different members of the same family. Children of patients may have a large spleen without any other sign of the affection. In one family the children are said to have a very pigmented skin, and this has been observed likewise in some collateral branches of the family. (4) The large spleen may be considered as the essential part of the disease. (5) Although ordinarily malaria has nothing to do with the affection, the cause is probably analogous to that of malaria and dependent on drinking water. (6) As Hanot and Riener admitted, the affection seems to be a specific one, or at least a peculiar infection of the spleen and liver, not a simple infection of the liver.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(410) Cranial Percussion.

Paoli and Mori have made an extensive series of observations (*Il Policlinico*, February 15th, 1898) on the value of percussing the cranial cavity as an aid to diagnosis in cases of intracranial disease. They begin by giving a careful account of the results obtained by percussing the normal skull. They point out the necessity of shaving the head in cases where the hair is thick, and they prefer to percuss with the finger directly on the surface. They recommend the division of the cranial surface into three symmetrical parts—frontal, parietal, and occipital, and in each of these regions there are constant points, so that the note of one side may be gradually compared with the corresponding note of the other. In the case of the frontal and occipital regions there are median points as well. By their investigations they find that a dull note is found in a very limited extent, the rule being a high degree of resonance, with well-marked differences according to the portion percussed. They also find that the results vary with age and sex, and, to a certain extent, with the density of the skullcap. They also find that the sense of resistance varies in different instances. Thus in boys in the first decennium there is a very notable resonance in the note, more particularly in the temporal and parietal regions, while in some portions of the frontal (more particularly over the sinuses), and in the occipital, the note is fairly dull. In boys the subjects of rickets the note is still more resonant, and sometimes a crack-pot element is perceived. In adults the note varies to a certain extent; in women there is more resonance, the note resembling rather that obtained in childhood, and a crack-pot sound is not uncommon. In the adult man the resonance is much less than that obtained in women and children, and the areas over which the dull note is heard are much more extensive. In advanced age the opposite obtains, for in old women the resonance is considerably diminished, while in old men of the same age it is much more marked than earlier in life. The authors therefore draw attention to the fact that want of symmetry in the cranial development must be looked for. The areas which generally give a dull note are the parts over the frontal sinuses and mastoid processes, especially in young children, which the writers regard as curious in view of the fact that there are air spaces in both these situations. After ascertaining these facts the authors proceeded to examine patients with different forms of intracranial disease. Their first case was a boy suffering from epilepsy, who had fractured his frontal bone by falling. Percussion showed marked dulness all over the portion corresponding to the fracture. The patient was subsequently trephined, and considerable thickening of the dura was then discovered, with a large layer of hæmorrhagic infiltration in the form of hæmatoma, and exactly corresponding with the area of dulness. Several other cases of fracture were similarly examined, and the writers were enabled to note marked degrees in the amount of resonance. Another case is quoted in which, as the result of a fall, a patient lost the use of his right hand and arm and speech. On examination a wound was found over the right half of the occipital bone, and careful percussion showed a marked decrease in resonance on the left side of the head over the parietal. The patient improved considerably, and subsequently regained the use of the right hand and arm, and at the same time percussion showed a return of resonance over the left motor area. The authors consider that this method of examination is likely to prove of considerable service in certain cases of injury to the head.

(411) Colour Tests for Diabetic Urine.

Bremer (*Centralbl. f. inn. Med.*, April 2nd, 1898) says that both in diabetic urine and blood the colour reactions do not depend on the presence of sugar. In two clean and dry test tubes 10 c.cm. of normal and diabetic urine respectively are placed; 0.5 mg. or less of finely rubbed up gentian violet is then allowed to drop on to the surface of the urine. In diabetic urine the superficial layers of varying depth are coloured blue or violet blue, and this colour does not disappear on shaking. In normal urine, even after shaking, no colour, or only the faintest trace, is developed. Merck's gentian violet B is the best. In low temperatures the reaction is not so marked, hence in winter it is well to place the test tube in a water bath. The addition of mineral acids or sugar to normal urine will not lead to the development of this colour reaction, which is really due to the presence of reducing substances in the diabetic urine. With urines of unusually low specific gravity under 1015 the reaction may approach that seen in diabetic urines. When, however, the reaction occurs in urine of high specific gravity the presence of diabetes is certain. If non-diabetic urine of moderate specific gravity gives a doubtful reaction due to the abnormal solubility of the violet-colouring matter, there is a disturbance of metabolism. The author adds that the reaction may throw some light on some of the many obscure points in the composition and chemistry of normal and diabetic urines.

(412) Syphilitic Phlebitis.

R. Heuzard (*Thèse de Paris*, 1898, No. 179) comes to the following conclusions. Syphilis can manifest itself in the veins. There are two forms of syphilitic phlebitis. The first form is acute or subacute, and corresponds to the secondary period of the disease. The efficacy of treatment proves that this form is really due to the syphilis and not to a secondary affection. The other form of syphilitic phlebitis is chronic, and corresponds to the tertiary period of the disease; it may be localised (gumma of a vein) or generalised (phlebosclerosis). The phlebitis of both secondary and tertiary syphilis affects the veins of the lower extremities by preference. In regard to diagnosis, other varieties of phlebitis and lymphangitis must be excluded. The prognosis is generally favourable, the average duration being two months. The treatment should be antisyphilitic mixed.

(413) Statistics of Diphtheria.

Kossel (*Deut. med. Woch.*, April 14th, 1898) says that the mortality from diphtheria has been much diminished during the last few years, and that opinions can thus differ only as to the cause of the reduced mortality. The statistics are greatly in favour of its being due to the serum treatment, but a longer time must elapse before the final proof is forthcoming. In the Berlin Charité the mortality from diphtheria is both absolutely and relatively smaller; it has fallen to half what it was in the previous period of four years. In a second table the author gives the mortality from diphtheria in the Berlin hospitals, and also the total mortality from the same disease in Berlin. Here it is shown that this total mortality in 1896-7 has only just equalled the mortality which used to prevail in the hospitals in the most favourable years. In the beginning of the serum treatment the fact that larger numbers of diphtheria patients were sent into hospital has been adduced to explain the lessened percentage mortality, but the mortality during the last two years has remained much the same as during the first two years of the serum treatment. The mortality stands at one-third what its was. The mortality in other German towns has also decreased. Thus their death-rate from diphtheria from 1886 to 1894 was 106 per 100,000, whereas during the last three years it has only been 44. In Paris the death-rate has also fallen. The very favourable impression made upon physicians by the serum treatment is thus confirmed by statistics. The fall in the death-rate cannot be a matter of chance, or independent of the method of treatment.

SURGERY.

(414) Osteoplastic Craniectomy.

Gigli (*Centralbl. f. Chir.*, No. 16, 1898) describes at length a proposed method of performing osteoplastic resection of more or less of the cranial vault by means of his fine and flexible saw. The wall of the skull having been perforated at four places by suitable drills to allow of the introduction of the wire saw, the bone is divided along lines between each pair of openings except below, where but just so much is sawn through as to permit yielding of the cranial vault, and reflection downwards of a large flap of bone and scalp. The chief difficulty in such a procedure would

consist in passing the wire saw from one opening to another without causing some compression of the surface of the brain, and laceration of the cerebral membranes. To overcome this difficulty, the author would introduce into each opening a grooved and curved sound to serve as guide to a thin and flat strip of whalebone which can be passed between the bone and dura mater without causing mischief. By means of the strip of whalebone the attached wire saw can readily be carried beneath the bone along the intended lines of section. In any case in which there might be indications of adhesions between the bone and dura mater, he would, by means of the whalebone, circumscribe the whole area of the osteoplastic flap by a continuous loop of thick thread, the constriction of which, by pulling on the two free ends protruding from the lower cranial perforations, would serve to tear through such adhesions, and to separate the bone from the dura mater. Gigli's paper is followed by one on the Technique of Exploratory Craniectomy, in which Codivilla describes an instrument he has recently devised, by means of which he has been able to form with ease and promptness very large osteoplastic flaps in the vault of the cranium. This instrument consists in a screw which is driven into the wall of the skull at the centre of the intended flap, and to which is attached a movable metal arm capable of carrying a knife for the section of the skin, and osteotomes of varying size for the division of bone.

(415) Repair of Muscle by Wire.

Lucas-Championnière contributes an article (*Journ. de Méd.*, April 25th, 1898) on his method of repairing ruptured muscle by means of wire in a manner very similar to that employed by him in fractures of the patella. A man, aged 50, was admitted to the Beaujon Hospital under his care with the following history: A long heavy ladder blown over by a gust of wind struck the patient across the left thigh. Very shortly after there was extreme swelling of the part, but careful examination showed that there was no fracture. Notwithstanding this, there was complete inability to move the limb. In a fortnight's time it was possible to diagnose rupture of the triceps tendon above the patella, accompanied by considerable laceration of the muscle tissue, and there still remained considerable effusion of blood into the thigh. There was a marked hollow immediately above the patella, which became more evident on making any attempt to raise the limb, which attempt was always futile. It was easy to ascertain the absence of any fracture of the patella. Lucas-Championnière decided to operate, and found on cutting down that there remained only a short tongue of fibrous tissue representing the triceps tendon at its insertion to the patella; above, the muscle was irregularly torn and retracted. There was an opening into the synovial sac of the knee, and the articulation was filled with blood clot. The writer proceeded by inserting two silver wires into the patella and carrying them from there to the triceps tendon above, though he feared that the least traction would cause them to tear away from the latter. The patient healed rapidly, but a month later after leaving the hospital he was taken with some kind of convulsive seizure, as the result of which there was a repetition of all the symptoms in the injured limb. Lucas-Championnière cut down on the knee a second time above the cicatrix of the former operation. He found that the silver wires had not cut the tissue, but having become untwisted they had given. With the view of avoiding repetition of this accident, he devised the following proceeding: Above the level of the stump of torn triceps muscle and tendon he threaded a strong piece of silver wire perpendicularly to the muscular fibres in such a manner that it could not possibly give. Then, two parallel pieces of silver wire were passed through the patella and drawn upwards so as to pass over the first transverse wire. Thus, by means of a bony base below and a metallic above, he was able to exert sufficient traction to bring the patella and the triceps tendon into approximation, these in their turn being sutured with catgut. To prevent any entanglement of the wires they were carefully doubled on themselves. Healing was rapid, and the patient left the hospital in three weeks, but was seen again seven months after the operation, when it was found he could walk perfectly; extension of the limb was complete, there was no pain, and the knee presented no abnormal characters. On examination by the radiograph it was discovered that the silver wires were broken, from which fact the writer draws the following conclusion: That in suturing the muscle and tendon by a silver wire healing results by fibrous union brought about by means of the wire acting mechanically. Should it be necessary to keep the wires permanently in place, it is better to employ platinum rather than silver.

(416) Operations on the Stomach.

Carle and Fantino (*Il Policlinico*, April 15th, 1898) have made a further contribution on the pathology and surgery of the stomach, dealing chiefly with non-malignant stricture of the pylorus. The choice lies between pyloroplasty and posterior gastro-enterostomy if operation is decided upon. Pyloroplasty is dangerous when there is extensive and pronounced thickening, or when peripyloritis exists with adhesions to surrounding viscera; for these cases and also for stenosis of the duodenum gastro-enterostomy or resection is the only possible method. When either operation can be adopted, the authors recommend gastro-enterostomy for the hyposthenic cases (that is, cases with a diminution of the motor and secretory activity of the stomach), and pyloroplasty in spasmodic strictures and in cicatricial stenosis of an annular form, as this operation preserves the normal relations of the viscera, and is not followed by regurgitation of bile. A careful account of the various effects of the two operations is given, and a contrast drawn between them, also a description of the method of operation.

(417) Operative Treatment of Progressive Myopia.

Zanotti (*Annales d'Oculist.*, February, 1898) records the following case: Girl, aged 16, vision R. $\frac{1}{10}$ with -15 D., L. $\frac{1}{5}$ with -13 D.; well-marked atrophic crescents, and some spots of atrophic choroiditis, more marked in the right eye. Complete rest of the eyes was ordered for several weeks, together with the use of atropine and smoked glasses, iodide internally, and intramuscular injections of sublimate. These measures giving no real relief extraction of the lens in the worse eye was proposed and carried out; an iridectomy was done, the capsule incised by two vertical crescentic incisions, and the transparent masses of lens substance extracted with the curette. No reaction, the remains of lens becoming absorbed easily. Three months later the capsule was needled and a clear pupil obtained. Vision ten days later with + 2.25 D. sp., was $\frac{1}{5}$. She returned to her work of silk spinning, but finding that the sight of the left eye got weaker, came for treatment again. The degree of myopia had increased to 16 D., and there were macular changes; a similar operation was therefore performed as on the right eye, and after capsular needling vision with + 2 D. was $\frac{1}{5}$. She was able to resume her work, and when seen nine months later was quite satisfied with the result.

MIDWIFERY AND DISEASES OF WOMEN.

(418) Ectopic Pregnancy Twice in the same Patient.

Schoolfield (*Amer. Jour. of Obst.*, March, 1898) reports two cases of this rare occurrence. In the first case 4 years elapsed between the two pregnancies, the first of which was verified by operation, whilst the second was diagnosed by the symptoms and physical signs, but without operation. In the second case, $3\frac{3}{4}$ years separated the two pregnancies, and both times the patient was operated upon; the second operation was performed through the vagina, and the patient died on the third day. The cases previously recorded, as collected by the author, are:—Cases confirmed by necropsy: Lawson Tait, 1; Haydn, 1. Cases confirmed by laparotomy: Veit jun., Carl Beck, K. Abel, J. M. Duff, J. F. W. Ross, H. C. Coe, E. Herman, each 1 case. Cases verified by neither necropsy nor laparotomy: Veit jun., Kletsch, Olshausen, Langenbeck, Van Heukelom, Frommel, Leopold Meyer, Mackenrodt, and Winckel. The author discusses (*a*) the method of operation; (*b*) the treatment of the remaining appendage in first cases. As to method, he thinks the vaginal route is preferable in some cases, especially

in dealing with second occurrences, for here adhesions have generally shut off the sac from the rest of the peritoneal cavity. He holds that in first cases the remaining appendage should be removed for safety's sake, even when it is not obviously diseased.

(419) Production of Sterility by Division of the Fallopian Tubes.

KOSSMANN (*Cent. f. Gyn.*, April 9th, 1898) relates some early experiments on young hens, to show that simple ligature of the tubes is insufficient to ensure sterility. The oviduct was tied with silk; but six weeks later the hens began to lay. *Post-mortem* examination showed that the silk ligatures had become encrusted with calcareous matter, and then broken by the swelling oviduct. The two halves of the broken rings were found in the peritoneal cavity. He goes on to remark that ligature of the tube followed by division may be ineffective if the division be made with knife or scissors, for the union of the cut edges of the two halves with the surrounding peritoneum may lead to the formation of a little sac which serves as a communication. The same result may follow the removal of a piece of tube by a clean incision; and even the sewing up of the cut ends is uncertain, for the cutting through of a stitch may vitiate the operation. The writer holds that the only certain method is the excision of part of the mucous membrane of the tube or its destruction by means of the thermo-cautery.

(420) Albuminuria and Past and Future Pregnancies.

BLAUDEAU (*Thèse de Paris*, 1897) publishes information of much importance as to albuminuria in past pregnancies and the prognosis if the patient should again conceive. Altogether albuminuria in pregnancy seems to prevail most in first, second, and third gestations, becoming rarer in multiparæ. Blaudeau has worked in the Baudelocque Clinic for the last two and a half years for the necessary statistics. He came upon 23 cases of pregnant multiparæ who had suffered from albuminuria in earlier gestations. In 13 not a trace of albumen could be found in their urine, which was repeatedly examined; 3 out of the 13 had convulsions in previous pregnancies; 1 of the 3, indeed, had 11 eclampsic attacks in an early labour, yet when again gravid, some eighteen months later, neither albuminuria nor eclampsia occurred. In 8 of the total 23 albuminuria recurred, but in a milder form, whilst the infants were stronger than their elder brothers. In 2 of the 23 only was the albuminuria worse than in earlier pregnancies; 1 had eclampsia and 1 was prematurely delivered of a macerated fœtus.

(421) Pyometra and Pyosalpinx in an Infant from Persistent Sinus Urogenitalis.

NEHRKORN (*Virchow's Archiv*, vol. cli, Pt. 1, 1898) gives clinical and pathological details of an infant, aged 11 months, who was admitted moribund into hospital. She had been healthy till three weeks previously; then double pneumonia set in, and a hypogastric tumour developed. A practitioner made an exploratory puncture, and thin pus escaped; the temperature rose to 105°. The child was unfit for abdominal section, and died two hours after admission. There was blood in the peritoneal cavity, but no pus, the swelling being adherent to the parietes and surrounded by adherent intestine. This swelling was a greatly dilated uterus full of pus; its cavity communicated by a long median canal with the bladder, opening into the latter organ below and between the ureters. Pus ran freely from the uterus into the bladder. The right tube was dilated, obstructed, and full of pus. The vagina was wanting. The kidneys were hydronephrotic, the ureters dilated. Nehrkorn believes that the primary disease was infective nephritis and cystitis, which poisoned the uterus through the abnormal patent sinus urogenitalis, the absence of a vagina preventing the escape of diseased products.

(422) Fixation of Movable Liver.

BLANC (*Loire Méd.*, December 15th, 1897, p. 317) reports the case of a woman, aged 35, who suffered from locomotor ataxy. Fever, rigor, and bilious vomiting set in, and as the liver seemed to be enlarged, abscess of that organ was feared. On careful examination, the liver was found to be movable to an extreme degree. It could be pushed up under the ribs, but descended directly the hand was taken away. There appeared to be no doubt that it grew larger during the attacks of pain which took place in the course of the other acute symptoms. Icterus was also present, so that there could be little doubt that the displacement of the liver caused obstruction of the bile ducts. A Langenbuch's incision was made; the liver was found firm and deeply grooved by stays. The serous coat of the liver and the corresponding surface on the parietes behind the costal cartilages were scratched with the knife so that adhesive exudation might be encouraged. Three No. 3 silks were passed to the depth of half an inch into the substance of the liver, and brought out between the cartilages of the false ribs; lastly they were tied. Three more silks were employed to fix the liver to the upper part of the incision; they included peritoneum and muscle. A year and ten months later the patient was in good health and comfort. No attacks of pain and fever had occurred after the operation.

THERAPEUTICS.

(423) Tuberculin R.

STARCK, of Erb's Clinic (*Münch. med. Woch.*, April 26th, 1898) reports the results obtained from treatment with tuberculin R. in 10 cases of phthisis and 3 of lupus. In 5 further cases of phthisis the treatment was as yet not complete. Other methods of treatment except expectorants were discontinued. The patients were under observation for some time before the commencement of the tuberculin treatment. All the cases were in the first stage of the disease, and there was no evidence as yet of any secondary infection. The tubercle bacillus was found in all the cases. The injections were given at 10 A.M., and the temperature was taken every two hours after the injection for 12 to 24 hours. Up to last August staphyloccocci and streptococci could be obtained by cultivation from the tuberculin, but the author has never found the tubercle bacillus. Since the end of last year more attention has been given to the preparation of tuberculin, and since then no reaction has been observed. Generally $\frac{1}{5\,5\,5}$ mg. of the dry substance was given at first, and this dose was gradually increased, the injection being generally given every second day. Any rise of temperature was carefully guarded against. An unexpected rise of temperature may be due to contamination of the preparation, or an apparent accumulation of tuberculin in the body. A single dose of 6 mg. was never exceeded. On an average 25 injections were given, 30 to 40 mg. being thus injected. There was a local reaction in 24 out of the 234 injections, consisting mostly of redness, pain, some swelling, and in 4 instances infiltration. In 2 cases, in spite of all precautions, there was always a reaction. As regards the physical signs in no case did they appear worse, and in 6 cases there was distinct improvement. The body weight increased considerably in all the cases. Albuminuria, diarrhœa, increased pulse-rate, etc., were never observed. In all the cases there was considerable subjective improvement, and in only 4 cases was there no objective improvement. The author then discusses the question whether the improvement could have been due to anything else than the tuberculin. In comparing these cases with those treated in other ways in the clinic it would appear as if a larger number improved under tuberculin than under other methods. The author obtained the impression that the tuberculin acted favourably upon the tuberculosis. In the case of lupus tuberculin R. is recognised as a valuable remedy. The results obtained encourage the author to a further trial of the remedy. The course may be repeated after an interval of 2 to 3 months. The author discusses the cause of the want of success with tuberculin R., and he attributes it chiefly to its being used in unsuitable cases. Only the future can decide whether tuberculin R. will obtain an assured place in the treatment of phthisis. Full details of the author's cases are appended in tabular form.

(424) Suprarenal Extract.

MANKOVSKY (*Russian Archives of Pathology, Clinical Medicine, and Bacteriology*, vol. v, No. 3, March, 1898) prepares suprarenal extract from the fresh suprarenal capsules of a cow. The glands are first freed from fat, cut into thin strips,

dried, and rubbed down in a mortar into a powder. The active principles are then dissolved by treating the powder with water, glycerine and water, or alcohol. All the manipulations must be conducted aseptically. The most useful preparation is the solution in glycerine and water. It is easily prepared and keeps well. The author made numerous experiments on animals to determine the physiological action of this extract. If injected hypodermically it causes some pain and irritation locally. The general effects are a great increase in blood pressure and a stimulation of the cardiac and respiratory centres. This occurs even when the animals (dogs were used in all experiments) are under the influence of chloroform, morphine, or chloral hydrate. In another series of experiments the author shows that this action is peculiar to the suprarenal extract alone, and does not occur with extracts taken from the fresh thyroid gland, pancreas, lymphatic glands, parotid, kidney, liver, spleen, cerebrum, heart, or skeletal muscles. As the chemical reactions of suprarenal extract and pyrocatechin are similar, Mühlman (see EPITOME, 1896, ii, 432) and others supposed that the latter was the active principle in the suprarenals, but the author shows that there is a marked difference in the physiological action of the two substances. The increase of blood pressure following the injection of suprarenal extract appears to depend rather on stimulation of the peripheral sympathetic system than on any action of the vasomotor centre. The author is of opinion that the most useful application of the suprarenal extract will be in cases of cardiac weakness and threatening collapse.

(425) Chlorinated Soda in Gonorrhœa.

CHASSAIGNAC (*Amer. Journ. of Cut. and Genito-Urinary Diseases*, January, 1898) has used this treatment in his clinic for two years. He uses the U.S.P. liquor sodæ chlorinatæ. The author has treated 500 cases in various stages of the disease, and found benefit in all except those which were too acute to syringe, or in very chronic cases. The advantages claimed are: (1) It is alkaline, and the gonococcus thrives best in an acid medium; (2) it is antiseptic, penetrating and non-irritating; (3) it dissolves the secretions of the mucous membrane, but does not coagulate albuminoids. The solution must be pure and comparatively freshly prepared. The author uses dilutions of three different strengths—1 in 48, 1 in 32, and 1 in 24, beginning with the weak solution in acute cases, the stronger solution being used for older cases. It is used three or four times a day at first, with a syringe holding three-eighths of an ounce, the fluid being retained for two or three minutes. It is also recommended in gonorrhœal ophthalmia.

(426) The Treatment of Pertussis.

MARFAN (*Rif. Med.*, March 8th, 1898) teaches that although there is no specific remedy for whooping-cough, yet much may be done to diminish the number and violence of the attacks of coughing and to relieve the broncho-pneumonia. Affections of the bronchial glands may give rise to a cough rather like whooping-cough, but not of the same spasmodic character. The vomiting so often observed with the cough is attributed by the author to increased abdominal tension due to forcible inspiration. For the cough the author recommends belladonna, antipyrin, and bromoform in order of merit. Bromoform is best given in emulsion; it shortens the duration of the attack (in four cases reduced to three weeks) and lessens the cough. The first symptom of intolerance is drowsiness; the drug may also cause diarrhœa and vomiting. On the whole it is the best remedy known at present. When this drug fails a mixture of antipyrin, belladonna, and syr. tolut. is recommended. Antiseptic douching of the nose and mouth is advisable as a preventive of broncho-pneumonia. Rigorous confinement to the house is not essential.

PATHOLOGY.

(427) The Properties acquired by the Serum in the course of Enteric Fever.

COURMONT (*Arch. Internat. de Pharmacodynamie*, vol. iv, fasc. 1 and 2, 1897) draws the following conclusions from his experiments: *a*. Properties acquired by the serum in the course of the disease. (1) The condition of the serum at first (sometimes as early as the fourth day of the disease) favours infection by the typhoid bacillus. Later and during convalescence this favouring action disappears. (2) It is succeeded by an immunising action, which increases gradually till cure is complete, but which exists before the symptoms of infection go. (3) Typhoid serum mixed with cultures of the typhoid bacilli and left in contact with them for some hours attenuates their virulence considerably. This attenuating property is independent of (1) and (2), since it is present during the whole course of the disease. Human non-typhoid serum has, as a rule, no such power. *b*. Relations between clumping and the other properties acquired: (1) The above properties of typhoid serum can be detected in quantities of serum only just sufficient to cause clumping in the dose of culture injected into an animal. (2) There is no relation between the clumping power and the favouring infection or immunising properties; the former may coexist with the other two in the same serum, but is independent of them. (3) However, there is a fairly constant relation between the clumping and attenuating properties; in fact, the degree of attenuation of cultures seems to be exactly proportional to the modification of the bacilli produced by their clumping. Clumping must, therefore, be considered, as a protective reaction of the organism during the period of infection. *c*. Clinical applications: The study of these acquired properties, especially of the formation of the clumping substance, is useful in serum prognosis. Thus the infection-favouring property persisting sometimes may fortell a relapse, and an early established immunising property a quick recovery. The curve of the variations in the clumping power of the serum during the whole course of the fever reveals the way the organism reacts against infection, and constitutes one of the most important elements in prognosis.

(428) Functional Neuroses.

BIERNACKI (*Neurol. Centralb.*, March, 1898) discusses the etiology of hysteria and neurasthenia. He contends that these neuroses are not the manifestation of a primary psychical disturbance, as most observers have thought, but that they are merely symptoms of a morbid condition of the blood. In 50 cases of hysteria and neurasthenia in which the blood was examined by special methods, there was found to be an abnormal amount of fibrinogen, and also an abnormal amount of fibrin in proportion to the amount of fibrinogen. In many cases also a curious clear appearance of the venous blood without any diminution of red corpuscles or of hæmoglobin was observed. The blood changes are so constant in functional neuroses, even when these follow some traumatism, that they can only be regarded as primary. This view is supported by the frequency of hysteria as a complication of chlorosis, even when, as the writer has shown, the only evidence of chlorosis is the hydræmic condition of the blood. The blood changes which produce functional neuroses are due to disturbance of oxidation processes. This explains the frequent association of hysteria with the uric acid diathesis. The hereditary character of hysteria is analogous to the heredity of gout and diabetes, which are also the result of disturbed oxidation processes. The effect of emotional disturbance in producing hysteria does not disprove this view, for gout and diabetes are markedly influenced by emotion.

(429) Studies on the Gonococcus.

HEIMAN (New York *Medical Record*, January 15th, 1898), from a new series of experiments on the gonococcus, with cultures on chest serum agar, concludes thus: (1) The gonococcus can be kept alive in certain culture media as the above for 82 days; (2) it can be transplanted, probably indefinitely, the author having succeeded 25 times; (3) the gonococcus is not present in the normal urethra, and the statements of former observers who claimed to find it there are not supported by Gram's staining or by cultures; (4) inoculation of the eyes of newborn rabbits and kittens with gonococci gave negative results, even after irritation of the conjunctiva with acetic acid. The author examined 4 cases of gonorrhœal arthritis for the gonococcus, 2 with negative and 2 with positive results. One of the latter cases was in a newborn infant, where arthritis of the wrist occurred two weeks after gonorrhœal ophthalmia.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(430) An Early Symptom of Measles.

SLAWYK, of Heubner's clinic (*Deut. med. Woch.*, April 28th, 1898) draws attention to the eruption present in the mouth during the early days of measles, first described by Koplik. It consists of shining red spots, in the middle of which there are very minute bluish-white efflorescences. Slawyk says that Koplik's spots have not received the attention which they deserve, and that they represent an absolutely trustworthy and early indication of the disease. During last winter an epidemic of measles broke out in some of the clinics of the Berlin Charité. These cases, along with those of Heubner's clinic, numbered 52 cases, and in 45 of these Koplik's spots were observed. In 2 of the remaining cases the patients were too ill to permit of a satisfactory examination of the mouth. The spots appeared on the mucous membrane of the cheek and sometimes of the lips. They are mostly few in number. A bright light is necessary, as they are not visible in a yellow light. They practically never run together. They are distinguished from thrush by their colour and their rounded contour. They may be picked off with the forceps without pain or bleeding, and they are then seen under the microscope to consist of large masses of epithelium undergoing fatty changes. They have not been observed in other acute illnesses. In every case where they were seen the measles rash followed, so that whenever they were present the child was at once transferred to the measles ward. Koplik's spots appear on the first or second day of the disease, and increase in numbers up to the time of the skin eruption; they usually further remain for three or four days, so that they last from three to six days. They produce no discomfort. In some cases of measles followed by a stomatitis they were absent. No prognostic significance can be attached to them, as they were present both in mild and severe cases. Details of 8 illustrative cases are given.

(431) Osteosarcoma of the Lung and the Roentgen Rays.

LEO (*Berl. klin. Woch.*, April 18th, 1898) relates a case in which the Roentgen rays revealed the presence of growths in the lungs. A boy, aged 10, had his leg amputated for sarcoma. Six or seven weeks afterwards he had a dry cough, and 16 days later pain in the left side and back: besides a slight systolic murmur. No abnormal physical signs could then be made out. He had an alarming attack of dyspnœa six weeks later. Eventually a circumscribed patch of dulness was found at the angle of the left scapula, which extended. Impaired percussion also appeared below the right clavicle. Bronchial breathing was present over the dull area. The patient died of increasing dyspnœa. Five tumours were found in the peripheral portions of the left lung immediately beneath the pleura. In the right lung there was a mass as big as the fist besides smaller nodules. With the exception of parts presenting bony hardness the growths were composed of soft tissue. The diagnosis of organic lung disease was possible at any early date, and owing to the previous history metastases in the lungs appeared most probable. Two days before death a Roentgen photograph was taken. There was a distinct shadow to be seen between the ribs abutting on the cardiac shadow, and with an irregular limit above and below. On the right side the shadow was deeper, of an oval shape, and as large as the adult fist. The size of the shadow was very striking, as it was much larger than the physical examination would lead one to expect. The Roentgen rays proved with certainty that the greater part of both lungs was involved. The necropsy showed that the new growth was an osteosarcoma, but it must remain undetermined whether the marked shadow was due to the bony tissue or not. Here photography was of greater service than the physical signs, although the diagnosis was previously certain. It cannot be doubted that the Roentgen rays may enable a diagnosis of lung tumour to be made at a time when percussion can detect no abnormality.

(432) Meteorological Influence on Epileptic Attacks.

M. W. SOKOLOW (*St. Petersburger med. Woch.*, 1898. No. 15), from a number of tabulated observations, comes to the conclusion that there is a certain regularity and arrangement in the occurrence of epileptic attacks. He holds that the earth's magnetism exercises an as yet unexplained, but undoubted and constant, influence on epileptic patients as far as the disease manifests itself in fits. Further and long-continued observations are needed to clear up the subject.]

(433) Gall Stones in Newly-born Infants.

JOHN THOMSON (*Edinburgh Hospital Reports*, vol. v) records the case of a male child who became jaundiced two days after birth, and, getting steadily weaker, died on the twentieth day. The urine was brown; the motions yellow, and later green, but never clay-coloured. There was no ordinary meconium, but yellow matter like ochre was passed. At the necropsy no abnormality of the bile ducts was noticed; the liver was normal to the naked eye, but microscopically showed commencing cirrhosis and some fatty infiltration. The gall bladder contained one calculus weighing 25 mg., which was elongated and constricted in the middle, a smaller one, and several fragments. Their combined weight when dried was 30 mg. Their composition showed biliverdin and traces of cholesterin. The author has collected 6 other cases with biliary calculi in which jaundice was present either at or immediately after birth. In all death occurred within one month. In the only 2 in which a description of the bile ducts is given abnormalities were found. Probably in this class of cases the same conditions are present which give rise to congenital obliteration of the bile ducts.

(434) Trophic Lesions in General Paralysis.

COLOLIAN (*Archives de Neurol.*, March, 1898) records 57 cases of general paralysis of the insane with reference particularly to the occurrence of trophic lesions in this disease. Of these cases 33 were men, 24 were women. The commonest lesion was found to be alopecia, which occurred in 26 cases. Changes in the teeth and nails occurred next in frequency—10 and 17 cases respectively. Ichthyosis occurred in 11 cases, and other skin lesions (for example, bullæ, œdema, and zona) with less frequency. General wasting occurred only in 3 cases, muscular wasting only in 1 case. Cutaneous pigmentation, hæmaturia, perforating ulcer, and erythema were only found in isolated cases. In most of the cases more than one trophic lesion occurred, and in only 8 of the 57 cases was there no evidence of trophic lesion.

SURGERY.

(435) Bullets in the Brain and the Roentgen Rays.

VON BERGMANN (*Berl. klin. Woch.*, May 2nd, 1898) refers to 32 cases of bullet wounds of the brain which he had observed, and in which the bullet has been left undisturbed. Of these, 8 were severe cases, and the patients rapidly died. Of the remaining 24, 19 recovered, and these had remained well. Of the other 5, 2 developed an abscess of the frontal lobe, and both subsequently died, although the abscess was opened; 2 others died apparently from a suppurative meningitis, and the fifth had not been heard of. The patients who recovered either showed no symptoms or were unconscious for a short time, or had a local paralysis or spasm. It is possible that in the first-named group of cases the bullet did not penetrate the brain substance. Thus it becomes important, as Eulenburg has shown, to determine the situation of these bullets by the Roentgen rays. The author gives details of 2 cases examined in this way. Case I occurred in a woman, aged 28, who shot herself in the head when cleaning a loaded revolver. There was severe pain in the head and vomiting, but no loss of consciousness. The site of entry of the bullet was on the nasal side of the left upper eyelid. There was no paralysis. The wound was healed in the second week, and the patient subsequently recovered from an exophthalmos and choked discs. The situation of the bullet was found by the Roentgen radiography to be in the white matter of the occipital lobe. Case II was that of a man, aged 25, who was wounded by a

revolver shot in the right temporal region three years ago. He was unconscious for three days, and had a left hemiplegia and partial anæsthesia. His sight was also impaired and the hearing in the left ear. Very considerable recovery followed. Within the last six months, however, there had been severe attacks of pain in the head, chiefly limited to the right side. Here the situation of the bullet was at the junction of the anterior two thirds and posterior one third of the hinder limb of the internal capsule, and this was confirmed by the Roentgen rays. The patient wished to have the bullet removed. During a stay of three weeks in the hospital there was no return of the pain, and the patient was eventually dissuaded from an almost certainly fatal operation. Von Bergmann says that both cases supply evidence in favour of leaving these bullets alone. The treatment should consist in not searching for them, and in a most rigid protection of the wound against infection. When the bullet lies in or near the bone without penetrating the brain, the treatment described may not be suitable, and the Roentgen radiography should determine the situation, and hence the treatment. The author refers to a case in which the bullet had not even penetrated the skull, but lay outside it.

(436) Indications for the Operative Treatment of Hepatic Tumours.

TERRIER AND AUVRAY (*Rev. de Chir.*, May, 1898), in considering the indications for operative interference in cases of tumour of the liver, point out that the opportunities afforded to the surgeon of intervening in such instances must be regarded as very rare. In most cases of hepatic tumour the growth is secondary, and an index of generalisation of disease, starting in some organ more or less remote from the liver. This conclusion applies not only to malignant disease—such as carcinoma and sarcoma—but also to lymphadenoma, which ought to be considered in a large majority of cases as the local manifestation of a general malady needing an exclusively medical treatment. In most cases of primary cancer of the liver there is a local multiplicity—that is to say that, though the liver is the only organ affected, the growths are multiple and disseminated throughout the parenchyma of the gland. It is a necessary condition of success for the removal of any hepatic tumour that the growth be a single one, and also that it be situated at a part of the liver that is readily accessible. It would not be justifiable to attack any tumour deeply situated in either of the two large lobes of the liver. A condition favouring extirpation would be the presence of a pedicle. With regard to therapeutical indications, therefore, the seat of the disease in the liver, the absence or presence of a pedicle, and the existence of one or several growths would be facts of the first importance. The removal of a tumour presenting the above-mentioned favourable conditions for operative interference would still be contra-indicated if such tumour has contracted close adhesions with the abdominal wall or the surrounding abdominal viscera. The authors conclude that a hepatic tumour, whether benign or malignant, may justifiably be removed if it be single, readily accessible, possessed of a pedicle, and free from adhesions to surrounding structures. The prospects of success are least favourable in cases of cancer on account of the probability of relapse. In the liver, however, as in other organs, a centre of infection constituted by a malignant growth ought to be suppressed, and even in cases in which extirpation would be impossible a palliative operation—cholecystostomy, for example—would be indicated, with the object of relieving functional disturbances, and so of prolonging the life of the patient.

(437) Cyst of the Urachus: Cancer of Bladder.

ROTTER (*Deut. med. Woch.*, January 20th, 1898, Supplement, p. 10) recently operated on a case of this kind associated with cancer of the bladder. The patient was a bricklayer, aged 43. In May, 1896, he noticed that his urine often contained blood, and fibrin also came away during micturition. Pains were felt, chiefly in the urethra. He was admitted into hospital in January, 1897. On cystoscopy, a tumour as big as a walnut was seen on the mucosa posteriorly near the fundus. There was also a cystic tumour above the symphysis, rising to two fingers' breadth below the umbilicus. A yellow, turbid fluid, with cholestearine crystals, was drawn off on puncture. In February, 1897, Rotter operated. The cyst lay under the muscles in the subserous tissue, the parietal peritoneum was behind it, easily separable above, firmly adherent below. The lower part of the cyst ran into the bladder, its walls being lost in the vesical walls just where the tumour lay. Rotter therefore removed the tumour and part of the bladder, with the whole cyst, which was clearly a dilated urachus. The peritoneal cavity was opened, owing to the strong adhesion of the back of the cyst to the serous membrane inferiorly. The hole made in the bladder was 2¾ inches long. The mucous membrane, muscular coat, and serous investment were sutured separately. The abdominal wall over the site of the urachal cyst was also closed in three layers, the lower angle being drained for two days. No catheter was left in the bladder, and the patient was able to pass water naturally after the operation. The tumour of the bladder was a papillary cancer; it had passed through the vesical walls, invading the urachal cyst. The patient recovered, but no note is made of his case after discharge from hospital. No mention is made of muscular tissue being found in the cyst wall.

(438) Papilloma of the Bladder and Urethra.

SPANGARO (*Il Policlinico*, March 15th, 1898) reports the case of a male child, aged 3 years, who was noticed to complain of pain at the end of micturition. A few drops of blood were passed, and there were some minute coagula suspended in the urine. The child's general health was becoming worse from day to day. Palpation over the suprapubic region was rather painful, but nothing could be felt. A catheter was passed without difficulty, and was felt to grate against some foreign body, giving a metallic sound. After catheterisation the urine was blood-stained for the rest of the day. Perineal cystotomy was performed but no trace of calculus was detected; a few small fleshy nodules the size of a pea and encrusted with calcareous salts were removed. Twenty-five days later, the local conditions being healed, the child was seized with symptoms of uræmia, and died in less than two months from the first onset of symptoms. At the necropsy both kidneys were in an advanced condition of hydronephrosis, the bladder extensively covered with papillomatous growths completely surrounding the mouths of the ureters, and the urethra itself dotted with similar growths.

MIDWIFERY AND DISEASES OF WOMEN.

(439) Symphysiotomy for Dystocia due to a Large Fœtus.

LEPAGE (*Ann. de Gynéc. et d'Obstét.*, March, 1898), in an article on 8 cases in which symphysiotomy was performed, specially refers to one instance in which the pelvis was normal, and yet the operation was required on account of the large size of the fœtus. The mother, a 2-para, aged 28, had in her first confinement been delivered with difficulty, and by forceps, of a large deadborn infant. In the present pregnancy the uterus was larger than normal, and palpation revealed a large hard fœtal head above the brim. There were frequent and severe pains; the head presented, O.D.P., but did not engage, and dilatation went on slowly. The fœtus was alive. Symphysiotomy was performed, the parts were held apart with Farabeuf's *écarteur*, and the head was brought down to the vulva, the *écarteur* being removed at this stage and the pubic bones approximated. Natural efforts expelled the child, which was with some difficulty resuscitated. It was a male, and weighed 5 200 g. (over 10 lbs.), while the occipito-mental diameter of the head measured 14 9 cm. (nearly 6 inches). There was marked ossification of the cranial bones, and the promontory mark was on the right parietal boss. The puerperium was satisfactory.

(440) Puerperal Myelitis.

BRUSH (*Medical News*, New York, March 26th, 1898) reports 5 cases of this complication of the puerperium. In every case the patient had been in good health up to the time the disease in question made its appearance, and the symptoms began with loss of power, numbness or anæsthesia, and incontinence or retention of urine; in the 5 cases the onset

dated from "the getting up," and the tenth, seventh, fifth, and ten days after labour respectively. The later results were as follows: Case I, four years later: spastic paraplegia, diminished sensation, slight ataxia of the arms, feebleness and incompleteness of the act of urination. Case II, five months later: spastic paraplegia, return of sensation, improvement in the incontinence of urine. Case III, sixteen months later: complete paraplegia with partial loss of all forms of sensation and absence of reflexes, no incontinence of urine, atrophy of the paralysed limbs. Case IV, eight months later: spastic paresis, return of sensation, improvement in control of bladder and rectum. Case V, sixteen months later: spastic paresis, return of sensation, retention of urine alternating with incontinence. The author regards it as probable that septicæmia was the etiological factor, since in all the cases there was either a history of a febrile movement, not due to any other assigned cause, or of injuries to uterus, cervix, or perineum, through which septic infection might readily have entered.

(441) Adhesions of the Liver and Gall Bladder in Ovarian Uterine Tumours.

FREUND (*Deut. med. Woch.*, May 5th, 1898) says that adhesions between these tumours and organs in the upper abdomen must be rare. He relates two cases in which such adhesions were present. The first occurred in a woman, aged 58, who had a large ovarian tumour. She had been tapped as many as twenty times before admission, and the adhesions were in consequence most widespread. The ovarian tumour was connected with the liver by a long thick mass which suggested a carcinoma. This mass turned out to be the distended gall bladder filled with stones. The separation of the tumour was easy, but there was considerable hæmorrhage. The gall bladder was removed intact, the cystic duct being ligatured in two places and divided. The patient made a good recovery. Fourteen days after the operation there was a typical attack of gallstone colic. Within the author's knowledge, this is the first case of an ovariotomy accompanied by a cholecystectomy. He discusses whether it would have been better to have removed the gall bladder without separating the adhesions to the tumour, but this would have made the cholecystectomy more difficult. The adhesions of the gall bladder to the tumour may have been the cause of the gall stones. The explanation of the attack of pain fifteen days after the operation is difficult. The second case occurred in a woman aged 65, who was also the subject of chronic nephritis, with some œdema of the legs. She pressed for operation. The tumour was an enormous soft fibromyoma of the uterus, and was adherent to the left lobe of the liver. There was severe hæmorrhage during the operation, and also from the stump, which was treated extraperitoneally, after the operation. The adhesions to the liver were very vascular. There was reason to believe that the patient was a bleeder. She made a good recovery from the operation, but never really regained her strength. She died a few weeks after her discharge from nephritis. The extirpated tumour showed no signs of malignant degeneration, as had been expected.

(442) Gynæcological Examination of Women recently Confined.

DOLÉRIS (*Bull. Soc. Obst. et Gyn. de Paris*, No. 3, 1898) dwells on the importance of a careful vaginal examination during the puerperium before patients are discharged from the medical attendant's care. He believes that a large proportion of such patients carry away from their confinement the seeds of most of the pelvic troubles to which they are subject later on. Examination is specially necessary when the puerperium has been attended by any signs of infection, and should embrace (1) bimanual examination; (2) inspection of the vulva, vagina, and cervix; (3) investigation of traumatic lesions of the cervix and of the condition of the cervical mucosa: (4) culture examinations of the cervical secretions; (5) catheterisation of the uterine canal, with dilatation if necessary. This will often show the presence in the uterine canal of an abundant brownish or creamy liquid, in which in infectious cases pathogenic micro-organisms are constantly found. The infective condition, which is often complicated by displacements and subinvolution, should be vigorously treated before the patient leaves hospital or her home. Intrauterine irrigation and drainage should be combined with hypodermic injections of ergotine. In cervical lacerations with eversion, applications of creosote and glycerine (1 in 5) and insufflations of iodoform answer well. The author further recommends the daily injection of 100 to 200 c.cm. of artificial serum as a stimulant and tonic agent. For displacements he employs the Hodge pessary in the case of retroversion, and the use of tampons for several weeks in cases of prolapse and colpocele. Treatment on these lines is prophylactic, and will avert many subsequent troubles and more serious complications.

(443) Primary Cancer of Fallopian Tube.

FALK (*Deut. med. Woch.*, March 31st, 1898, Supplement, p. 43) publishes notes of a case of this rare disease, three other instances of which have been recorded during the past twelve months, by Hofbauer, Jacobson, and Hubert Roberts. The patient, aged 45, was previously healthy. Irregular menstruation and serous discharge were observed in September, 1897. A cystic tumour as large as a fist was detected to the right of the uterus. The patient had never suffered from gonorrhœa. Bloody serum escaped on aspiration of the tumour. The patient objected to operation, but the tumour rapidly increased to the size of a fœtal head, and another swelling could be detected in the left fornix. Cancer of the tube was diagnosed. The radical operation was performed, by which term Falk seems to imply hysterectomy, with removal of the cancerous appendages. Then primary cancer of the right tube was discovered, as diagnosed. The patient was discharged "cured" in nineteen days.

THERAPEUTICS.

(444) Salicylic Acid in Pneumonia.

DE BECKER (*Ann. et Bull. de la Soc. de Méd. d'Anvers*, An. LX, February-March) has for the last two years treated pneumonia with salicylic acid. The first case in which he tried it was that of a little girl, aged 4 years, with pneumonia of the left apex and a pneumonic focus at the lower angle of the right scapula. During five days he treated her with digitalis, blisters, etc., but the physical signs did not alter, dyspnœa became worse, and weakness increased. He then changed the treatment to 10 centigrammes of salicylic acid every hour, and after the first doses the tongue became clean and a cough developed, which cleared the lung in twenty-four hours. Three days later the patient's elder sister contracted pneumonia, but the attack was cut short in two days by the same treatment. De Becker has since treated in the same manner twelve cases of acute pneumonia, all of which were rapidly cured, except one in which death was due to the sudden onset of meningitis. He explains the effect of the salicylic acid partly by its antiseptic action, partly by its producing dissociation and early liquefaction of the hepatisation products, and by its setting up cough, sometimes accompanied by violent efforts. The expectorated material is liquid and to the naked eye appears to consist of nothing but blood. The acid therefore, he thinks, does rapidly what Nature often has a great difficulty in doing, taking so long about it, moreover, that the heart fails under the prolonged strain to which it is subjected. As regards dosage, in the case of children 10 centigrammes are given every hour, or in the very young every two hours; in adults 50 centigrammes every two or three hours; in the aged the same amount every three or four hours, regard being had to the state of the heart. The dose must be adjusted to the condition, the guiding symptom being the expectoration; as soon as this is free the dose should be diminished. De Becker finds that the acid is best given dissolved in a little hot water, a good quantity of jam or honey being added. Coffee chocolate, and even diluted milk are also good vehicles. Cardiac disease and extreme weakness are contra-indications. He believes that if salicylic acid is given early (first or second day) it will be found a true abortive of pneumonia.

(445) Naftalan.

F. ROSENBAUM (*Deut. med. Woch.*, 1898, No. 14) has found naftalan to possess marked antiseptic properties, and he is convinced of its efficiency in inflammatory processes and in certain

skin affections. It has a vigorous deodorant action in gangrenous processes. The author gives details of 3 cases of local gangrene which were treated by the use of naftalan powder. In 2 of these cases the gangrene supervened on a phlegmonous inflammation consequent upon burns, and in the remaining one the scrotum became gangrenous as a result of a local erysipelas. The foul smell was in all 3 cases rapidly subdued, and healing soon took place. The author then refers to an ulcerative process called ulcus tropicum, which is prevalent among the inhabitants of Russia beyond the Caspian Sea. Its microbic origin has been established, and yet no satisfactory local treatment has been found for it. In a case of this kind naftalan gave the best results after many other local remedies had been used in vain. This disease mostly lasts a year. The troublesome itching disappeared in this case almost at once, and in fourteen days healing was complete. Further researches are being made into the value of naftalan in this tropical ulcer. Rosenbaum also refers to a case of obstinate psoriasis of the head, which yielded to a local treatment with naftalan ointment. Finally, this agent is of great service in frostbite of the extremities. It produces a hyperæmia, and wards off the threatening gangrene. Here, also, as in burns, naftalan exercises an anodyne action. Pawlowsky has been trying this remedy by the mouth in cases of chronic diarrhœa.

(446) Picric Acid in the Treatment of Burns.

C. WILLEMS, of Ghent (*Ann. de la Soc. Belge de Chir.*, An. VI, No. 2, May 15th) points out that picric acid is really of use only in burns of the first and second degrees. The special action of the acid is to favour the growth of new epidermis. In such superficial burns the utility of the agent, he holds, is beyond question. By means of it he has seen extensive burns of the face and limbs heal with great rapidity. Epidermisation takes place so quickly that no suppuration occurs. Another advantage of the picric acid is its marked analgesic property. In burns of the third degree Willems finds the acid much less useful; it does, indeed, check suppuration, but it has no effect in quickening granulation. As in practice, however, these three degrees of burns are generally present at the same time, the acid may with advantage be used at first, as it soothes the pain and rapidly heals the superficial lesions; an antiseptic can then be substituted for the treatment of the granulating surface. The pain and the toxic accidents which have been placed to the discredit of picric acid are to be attributed to the use of too strong preparations. Willems points out that a saturated watery solution has generally been used, compresses soaked in this being applied to the wound and allowed to dry on it. He points out that picric acid is dissolved in water in the proportion of only about one-half per cent. In cases reported to the Surgical Society of Paris not long ago as proving the serious disadvantages of the treatment by this agent, solutions of 5 per cent. and 10 per cent. appear to have been used. Willems contends that it is unfair to condemn an agent for effects due to its misuse. Willems himself uses the acid in vaseline ointment of the strength of 1, or at most 2, per cent.; 15 g. of this spread upon lint make a dressing suitable for a vast burn. Although most of his patients have been children, he has seen no sign of toxic effect, and the pain, when there was any, was slight and transient. The sole drawback is the yellow discoloration of the skin which the acid produces. This can be got rid of by repeated washing with alcohol, or with carbonate of lithine diluted with water.

(447) Guaiacol in Epididymitis.

LENZ (*Wien. klin. Rundschau*, Nos. 4, 5, 6, 1898) gives his results from the use of guaiacol in 52 cases of epididymitis, 50 of which were of gonorrhœal origin. He uses a 10 per cent. ointment made with vaseline, or a 5 per cent. if the skin of the scrotum is tender. The scrotum is first washed with soap and with ether. This ointment is applied during the acute stage, and the author claims that in from three to five days the fever, pain, and swelling disappear. In subacute stages the action of guaiacol is less active and very slight in chronic cases. After the acute stage it is best replaced by a 1 or 2 per cent. ointment of extract of belladonna, with equal parts of simple ointment and unguentum diachyli. Salol internally, 15 grains *ter die*, is a useful adjunct to the treatment. The quick absorption of the guaiacol is shown by its appearance in the urine in 15 to 30 minutes, as shown by the reaction with perchloride of iron, while its quick elimination is proved by the fact that none is present in the urine after twenty-four hours.

PATHOLOGY.

(448) Malformation of the Heart.

D. DELLA ROVERE (*Centralbl. f. Pathol.*, 1898, Nos. 6-7) reports upon a probably unique specimen of cardiac malformation. The child during its eight days' existence presented moderate cyanosis of lower extremities, stertorous breathing, and latterly icterus. The left auricle was hourglass-shaped and diminutive; that part of it into which the pulmonary veins opened was saccular, and the hemiazygos vein opened into this same sac. The left ventricle was reduced to a minute cavity at the posterior aspect of the intraventricular septum, while the mitral valve was represented by an opening only 5 mm. in circumference. Right ventricle and right auricle were dilated to an extent equal to the combined capacities of right and left ventricle and right and left auricle respectively, of a child of same age. The left ventricle communicated with the conus arteriosus through a small opening above the interventricular septum. Foramen ovale was patent. Septum of bulbus arteriosus fully developed, but not united to the interventricular septum. The tricuspid and the pulmonary valves had each only two segments. The ductus Botalli was pervious. The superior and inferior venæ cavæ did not enter the right auricle at the customary sites, but more posteriorly. There were no signs of fœtal endocarditis at any point.

(449) Endarteritis of Renal Arteries, and Cortical Necrosis.

J. R. BRADFORD AND T. W. P. LAWRENCE (*Journ. of Path. and Bact.*, May, 1898) record the case of a woman, aged 36, confined of a stillborn child some days before admission, suffering from anuria. History mainly negative. Anæmia and weakness, but no dropsy, headache, sickness, or convulsions; intellect clear to the last. The cortex of each kidney was found bright buff-coloured, and sharply defined from the pyramids; microscopically the convoluted tubules were seen to be necrotic. This necrosis was due to thrombosis of all those branches of the renal artery which had reached an approximate diameter of 100 μ—evidently of the so-called "interlobular" arteries; all branches of the renal arteries were extensively diseased, the media, and especially the intima, being thickened and sclerosed. The interstitial tissue of the kidneys was not increased. The patient thus presented the typical clinical picture associated with "obstructive suppression," while the morbid appearances were such as should, according to theory, have given rise to uræmia. The authors hold that this case throws grave doubts on the view held by many "that uræmia is dependent on the mere retention of normal but toxic products that ought to be excreted." The case also shows the independence of renal endarteritis and extensive renal cirrhosis.

(450) Syphilis of the Kidneys.

GREENE (*Amer. Journ. of Cut. and Genito-Urinary Diseases*, January, 1898) divides syphilitic affections of the kidneys as follows: (1) parenchymatous nephritis, (2) interstitial nephritis, (3) gummata, (4) amyloid degeneration. Parenchymatous nephritis, according to Neumann and others, occurs in early syphilis. Interstitial nephritis may occur early or late, and has been found in young infants in congenital syphilis. It begins as an endoarteritis and a periarteritis. It cannot be diagnosed except by the history and the reaction to treatment. Typical gummata are rare in the kidney, but they probably occur oftener than is expected and yield to treatment. Gummata are generally associated with interstitial nephritis. Amyloid disease was found by Wagner in 35 out of 63 syphilitic kidneys, usually affecting one kidney only. The author quotes a case where a probably syphilitic kidney simulated renal calculus, nephrotomy and needling being resorted to with no result. Under mercurial inunction the hæmaturia and other symptoms ceased in three weeks.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(451) Hereditary Tabes Dorsalis.

KALISCHER (*Berl. klin. Woch.*, May 2nd, 1898) relates an instance of typical and uncomplicated tabes in a woman aged 51 and her son aged 27. There was absolutely no evidence of syphilis. Whereas the tabes occurred in the woman at about the usual age, it was precocious in the son. Precocious tabes occurring between 20 and 30 years of age has been attributed to hereditary influences, and in the author's cases heredity appeared to be the only cause. Charcot pointed out that these cases of tabes are characterised by the great multiplicity of the symptoms, and this was so in this case. Much importance has been attached to syphilis in the early production of such nervous disease as tabes, general paralysis, but it is open to doubt whether the syphilis or the neuropathic tendency plays the greater part. Kalischer then refers to recorded cases of tabes in parent and offspring. In Erb's first instance syphilis in the father was probably the cause of the disease, but in the second there was no acquired syphilis, although Erb attributes the tabes to congenital syphilis without very obvious reason. In Leyden's two pairs of sisters there was also syphilis, and this authority does not attach much importance to heredity. In Goldflamm's instance in father and son there was previous syphilis. The author then refers to infantile or juvenile tabes; he appears to think that some of the recorded cases are examples of cerebro-spinal syphilis rather than tabes. In juvenile tabes hereditary tendency is rare, whereas in juvenile general paralysis it is more frequent. Thus in 41 cases of the latter disease 7 of the parents had suffered from general paralysis. Only occasionally do traumatism and more often hereditary influences occur in juvenile general paralysis. Sometimes general paralysis is found in a child with a tabetic parent or tabes in the offspring of a parent subsequently developing general paralysis.

(452) Hæmatoporphyrinuria.

KEITH CAMPBELL (*Journ. of Ment. Science*, April, 1898) records the case of a servant girl, aged 22, admitted into the Perth Asylum for subacute mania. Three days prior to admission she had had 30 gr. of sulphonal for the sleeplessness incident to her complaint. Eleven days after admission the urine was noticed to be cherry red, but did not give the guaiacum test or show the presence of red corpuscles. The condition had probably been present before this time but undetected owing to the fault of the nurse. Hitherto the physical symptoms had been mainly vomiting, abdominal pain, and constipation. Now, however, progressive paralysis set in, commencing with the flexors of the lower limb, and gradually involving the whole musculature, the arms being affected late. Loss of sensation spread in a similar manner from below upwards. The knee-jerks and superficial reflexers were early affected, and finally quite lost; the sphincters were paralysed three days from the onset of the paresis. Hiccough was noted from the first; later on came dysphagia. The diaphragm was almost completely paralysed. The pupils were dilated. Hæmatoporphyrin was now definitely recognisable in the urine. The last stage of the disease, commencing thirteen days after admission and eleven after the first gastric symptoms, was characterised by epileptiform convulsions, obviously of asphyxial origin. She died on the seventeenth day after admission. A curious fact was that the red blood corpuscles averaged 7,000,000 per cubic millimetre, and in form were practically normal; the urine contained a trace of albumen. The only *post-mortem* change of interest was hyaline degeneration of both suprarenal capsules. The author lays great stress on the importance of early recognition of the urinary condition in such a case, and the hopelessness of the prognosis when paralytic symptoms appear. This particular patient must have had a special idiosyncrasy in relation to sulphonal, unless, as was suggested in the discussion, the disease was really due to the condition of the suprarenal capsules. There was no evidence of any other disease to which the hæmatoporphyrinuria might have been due.—Ogden (Med. Rep. of Boston City Hosp., 1898) records another case. The patient was a rheumatic woman, aged 38, the subject of mitral disease, who was admitted for diphtheria. After recovery diarrhœa and vomiting set in, followed by loss of sensation in the lower limbs, with tenderness over the nerve trunks. Then anæsthesia eventually extended up to the waist, the sphincters were paralysed, and there was general muscular atrophy. The urine secreted was small in amount, and contained hæmatoporphyrin, but very little albumen. Two doses of trional had been given, one fifteen and the other eight days before death. The presence of hæmatoporphyrin was only established two days before death; no necropsy was obtained. The author considers the trional to have probably been the cause of the pigmentation of the urine, but there are several elements of doubt in the case. A fair bibliography is appended.

(453) Infantile Colitis.

CALMELS, working with Guinon, draws attention (*Thèse de Paris*, 1898) to the importance of this affection, which is one of the most important diseases to which children are liable, and one which is not so commonly recognised as it deserves to be. The writer points out that acute colitis may occur in the first months of infancy independently of any diathetic condition; but when affecting older children, especially when chronic, there is almost always a neuro-arthritic heredity, the father often being gouty, the mother hysterical or neurasthenic. Such patients are themselves neurotic and irritable. It may even occur that the parents of children suffering from chronic colitis are themselves the subjects of intestinal disorders. Under these circumstances, more than one child in a family may suffer from colitis. Constipation is a very important factor. Clinically, chronic colitis may manifest itself in two forms, the indolent and the enteralgic types, or it may even be paroxysmal. It appears, especially after the second year, in children who have been habitually constipated, and its mode of onset may either be insidious, accompanied by indefinite colic during digestion, and alternating diarrhœa and constipation, or else it may come on as the result of an attack of acute enteritis. The subjects of this disease present what the author considers a typical facies. They are pale, anæmic, sometimes with pigmentation of the skin of the face and neck. There are dark circles round the eyes, the cheeks are red, and round the nose the skin presents a peculiar yellow tint. Not infrequently the lips are of a vermilion red. The patients are wasted, their feet are cold and their hands burning; the tongue is white and coated at the base, red at the point. The breath is fœtid, and the abdomen either retracted or distended. On physical examination the abdomen may or may not be tender; in some cases the least touch causes the patient to cry out and the tenderness is more marked over the sigmoid flexure. In other cases it is possible to ascertain the presence of scybalous masses on palpation. Such patients hardly ever have an evacuation of the bowels without artificial means, and the effort is generally accompanied by the presence of blood and not infrequently prolapse. The fæces are hard, dark, and fœtid, sometimes covered with mucus. In some instances attacks of diarrhœa supervene at intervals. The appetite is absent or capricious; digestion is slow and accompanied by flushing of the face, eructations, and colic; sleep is broken, and night sweating is sometimes abundant. The urine is dark and contains indican. The liver is increased in size. These patients are depressed, irascible, and indolent. Growth is tardy, and they suffer from a constant want of energy and disinclination to play or amuse themselves. The author points out that at no time do such patients present any appearance of rickets. They grow into dyspeptic or neurasthenic subjects, and are generally below average stature. There may be enteroptosis, movable kidney, etc., in adult life. The writer mentions that intestinal hæmorrhage, appendicitis, ascites are the most frequent complications, and as a rule skin eruptions of some kind are present. The treatment is often difficult. The writer records a good number of observations in which much benefit was derived from hot compresses, enemata of boiled water injected fairly high up into the intestine, taking care not to introduce too much

fluid at a time. Castor oil is the best kind of laxative for constipation. The diet should consist of light soups, well stewed fruit, boiled fish, boiled eggs, panada, and milk combined with magnesia. Warm douching, accompanied by friction, seems particularly good in some cases, but the abdomen should not be douched.

SURGERY.

(454) Extirpation of the Larynx and Œsophagus.

CARRÉ (*Münch. med. Woch.*, May 3rd, 1898) reports 3 noteworthy cases. Case I occurred in a man, aged 43. The whole larynx was extirpated for malignant disease. The trachea was divided through the first ring, and the larynx was separated from the œsophagus. The œsophageal wall was left up to the arytenoid cartilages. The hyo-thyroid membrane was divided through, the epiglottis being taken away. The patient made a good recovery, and was free from recurrence two years later. Case II was that of a woman, aged 49. Here the larynx and a large piece of the œsophagus were removed. The carcinoma started in the gullet and spread into the larynx. The diagnosis was only made possible by a laryngofissure. The patient was free from recurrence four months afterwards. Garré referring to the statistics of laryngectomy, says that the improved technique has considerably reduced the death-rate. Death has usually resulted from broncho-pneumonia. This is to be avoided by a careful protection of the trachea and the shutting off of the lumen from possible contamination by secretions. This can be effected by Trendelenburg's tampon cannula or by Hahn's cannula surrounded by a sponge. Prevention of the broncho-pneumonia is also assisted by the closure of the pharynx by suture or a plastic operation. The position of the patient is most important—a horizontal position with inclination of the head backwards allows of the secretions draining away from the trachea. By attention to these points, the mortality has fallen to 20 per cent. The author appears to think that a splitting open of the larynx is often necessary to the correct and early diagnosis of carcinoma laryngis. Finally, Garré relates a third case with resection of 5 cm. of the œsophagus and excision of the larynx and upper five rings of the trachea. He closed in the great defect in the œsophagus by means of healthy mucous membrane dissected off the trachea. Somewhat curiously, this mucous membrane did not prove sensitive to the contact of food. When a total transverse division of the œsophagus has to be made, the plastic operation becomes more difficult, and various devices have been had recourse to. Garré's patient recovered well from the operation, but unfortunately an early recurrence took place in the glands.

(455) Massage in Surgical Practice.

ZABLUDOWSKI (*Samml. klin. Vorträge*, No. 209, 1898) holds that massage is one of the most important factors of conservative surgery, and a sovereign means of quickly restoring the use of the limbs to surgical patients who have been debilitated by long confinement in bed. To injuries of the limbs and chronic articular troubles a long list of other affections, both local and general, is added in which, it is stated, massage is likely to do good. This list includes peripheral circulatory disturbances; chronic gynæcological diseases, hæmorrhoids, and prostatic enlargement; and many abdominal complaints on the borderland of medical and surgical practice. It is indicated in many cases of paralysis of both cerebral and peripheral origin, so long as such paralysis is not associated with muscular contraction and rigidity, and exaggerated tendon reflexes. In the treatment of chronic neuritis and muscular rheumatism, massage, to do any good, must be practised with some energy. The author insists on the necessity of a long and careful training of those who intend to take up the massage treatment, and he mentions many affections, some of a serious nature, which may result from ignorance of the details of the method, or of carelessness in its practice.

(456) Detached Retina.

HORSTMANN (*Arch. f. Augen.*, xxxvi) gives the results of his observations on 35 cases of detached retina. In 5 of his cases there was complete recovery of sight, in 2 the retina resumed its normal position, but was functionally imperfect; in another 2 cases the retina returned to its normal position only for a short time. In 11 cases there was partial detachment, and in 15 complete detachment. After a careful examination of his cases he comes to the conclusion that every case of spontaneous detachment of the retina is in the first instance due to an affection of the uveal tract. It appears that a shrinking of the hyaloid membrane takes place, caused by the transudation of fluid from the blood vessels. The fluid is not driven into the substance of the retina, but passes between the choroid and retina; in this manner a detached retina is produced. If the detachment is large, the raised part will probably tear, and the torn portion can only regain its normal position when the shrinking of the hyaloid membrane has developed to a definite extent. The slow process of transudation retards the shrinking of the hyaloid membrane, and consequently the replacement of the torn retina. The diminished tension of the eyeball, which is frequently met with in large retinal detachments, is an argument in favour of the lessened volume of the hyaloid membrane. Spontaneous cure in cases of retinal detachment with return of visual powers were only observed in those cases in which the detached portion had not completely lost the perception of light, and in which the subretinal exudation had not become absorbed; in these cases, also, the detached portion was not torn, nor was there any alteration in the ocular tension. Instances also occurred in which the detached portion assumed its normal condition, but remained functionless, the subretinal exudation had become absorbed in these cases, but there was no diminution in ocular tension, nor any torn portion of retina to be observed. If a torn retina is associated with a minus tension, the prognosis is very bad. All operative influence is useless; the least harmful perhaps is tapping the subretinal exudation by scleral puncture. A few cases have been recorded in which replacement of the detached retina took place after this operation. All methods are to be deprecated which cause injury to the retina or ciliary body.

MIDWIFERY AND DISEASES OF WOMEN.

(457) Laparotomy for Retroversion of the Gravid Uterus.

JACOBS (*Journal d'Accouchements*, April 10th, 1898) was called to a 2-para, aged 31, five months pregnant. Her first confinement was normal; the second, at the age of 25, was followed by peritonitis. Since then she had had periodic attacks of pain, and had miscarried three times in four years, always between the third and sixth month. For two months during the present pregnancy she had suffered from retention of urine, necessitating constant catheterisation, and very painful defæcation. Miscarriage threatened, and the patient was much cast down because her two first babies had died of croup and scarlatina. A retroversion of the gravid uterus was found, and for eight days all known methods of reposition were tried, including Petersen's bag in the rectum. Laparotomy was decided on and performed. The fundus uteri was held down by numerous adhesions, which were separated carefully, causing some hæmorrhage. Once the fundus was raised above the pelvic inlet, it showed no tendency to fall back again. The recovery was uneventful, and there was no sign of abortion. The patient was confined of a fine boy at term. The author points out that pregnancy probably occurs more often in cases of retroversion than is commonly supposed. Many cases no doubt escape observation because the uterus rectifies itself spontaneously. When incarceration takes place, it is probably due not to the bony pelvis but to adhesions. Reposition can generally be effected. If unsuccessful, some authors advise induction of abortion. The author holds that celiotomy is the better course, as it is practically without risk to the mother, and in most cases saves the fœtus. He has dealt with 11 cases in this way; in 10 the patient's pregnancy went on to term; in only 1 abortion took place, four days after operation.

(458) Fritsch's Cæsarean Section (Transverse Incision).

STEINTHAL (*Centralbl. f. Gynäk.*, No. 14, 1898) reports a case which shows that there are disadvantages in Fritsch's transverse incision in the

fundus between the cornua. The patient was 34, and in an exhausted condition, labour being delayed by a myoma which blocked the pelvis. Steinthal opened the abdomen, and made the transverse incision. Hæmorrhage was very slight, as the uterine and ovarian arteries were secured by digital compression. But though extraction was expected to prove easy, the child stuck fast, the head being held firmly by a tight ring far above the level of the tumour. A vertical incision had to be made. The child was then safely delivered and afterwards reared. An elastic ligature was slipped over the uterus down to (not over) the tumour. The placenta was then removed with but little loss of blood. Afterwards the tumour was drawn out of the pelvis; it was a subserous myoma springing by a broad pedicle from the back of the uterus at the level of the internal os, and numerous intestinal adhesions had to be separated. Lastly the uterus and tumour were amputated, the uterine pedicle being secured extraperitoneally. The woman made a good recovery. Steinthal's case shows that, though the transverse fundal incision bleeds but little, the fœtus cannot always be extracted through it. The necessity for a vertical incision in addition causes so much damage to the uterus that it becomes safer to remove that organ than to close the double wound by sutures. Hence the conservative aim of the operator is completely defeated when a "Fritsch's incision" will not allow of the extraction of the fœtus.

(459) Spontaneous Rupture of Uterus during Labour.

J. J. HEALY (*Boston Med. and Surg. Journ.*, April 21st, 1898) gives details of 2 cases of spontaneous uterine rupture in full-term labour. In one instance the liquor amnii had escaped some hours, and the head was not yet engaged in the pelvic brim. The patient's friends refused to allow ether and forceps until the woman was already collapsed. A dead child was at length delivered by forceps, and then it was found that there was a large transverse rent in the lower third of the uterus. Death of the mother followed immediately on delivery. The infant weighed 15 lbs. In the second case the head was distending the perineum and the occiput had passed under the pubic arch, when suddenly the pains ceased, the head receded to the brim of the pelvis, and the patient became collapsed. The child was delivered by forceps, great difficulty being experienced in the extraction of the shoulders, but the patient died. No cause could be assigned for the rupture.

(460) Conception and Delivery through Cervico-Vaginal Fistula.

KRAKÓW (*Centralbl. f. Gynäk*, No. 14, 1898) relates an almost unique case, where the patient had a fistulous track in the back of the cervix, running between its canal and the vagina. A similar fistula was described by Nordmann (*Archiv f. Gynäk.*, vol. xxxix, c891, p.33). Kraków's patient was 22; she had been delivered by forceps nearly three years previously, and afterwards was sterile and subject to free vaginal discharge. Nordmann's patient was delivered spontaneously before the midwife arrived, and seems to have felt some injury at the time; the fistula was detected nearly four years later. Kraków's patient was carefully examined. Anteflexion was extreme, the the cervix was elongated so that the os externum pressed against the anterior vaginal wall. A fistulous orifice was found in the posterior aspect of the cervix. A sound could easily be passed through it into the uterus. Three attempts to close it by plastic measures simply made it narrower, but the acute flexion of the cervix on the body was aggravated. The patient conceived a year later. At term labour came on, the os externum dilated, the waters escaped, but the descent of the fœtal head was impeded by a tough band. This band was the part of the cervix between the os and the fistula. Directly it was divided the head advanced, and was delivered by the short forceps, as the pains had grown weak. The perineum was incompletely torn, and repaired with two sutures. As the cervical tissues were rather bruised no plastic operation was attempted on the cervix.

THERAPEUTICS.

(461) Chinosol.

F. HOBDAY, of the Royal Veterinary College, London (*Journ. Comp. Path. and Therap.*, March) discusses the therapeutic and toxicological effects of chinosol. Chinosol, which is a light yellowish powder, is stated to be a pure chemical compound belonging to the quinoline group, readily soluble in water, and having for its formula $C_9H_6NKSO_4$. Its properties are represented as antiseptic, disinfectant, and deodorant. During the past nine months the drug has been extensively used in both the canine and the equine clinic. As regards its antiseptic properties, wounds of all kinds were treated with solutions of from 1 in 60 to 1 in 1200 with the most satisfactory effect, the strength which was found to give the best results being from half a grain to a grain to the ounce. Upon fœtid ulcerating wounds a proportion of 1 in 480 speedily caused a healthy appearance and entire absence of pus, the application being made once or twice daily. In several cases the effects of solutions of this strength could be compared (in treating wounds in the same animal) with solutions of lysol and creolin, the chinosol giving decidedly the best result. In the form of powder, as a dry dressing, when mixed with boracic acid, zinc oxide, or starch, and compared with iodoform used similarly, the sequelæ appeared about the same. When the pure powder was applied to wounds, the effect was to cause a good deal of pain, the animals showing signs of great irritation for two or three minutes, and the raw surface turning a blackish-brown colour. As a disinfectant to the hands, skin, and suture threads, it was employed in solutions of from 1 to 1,000 to 1 in 60 without any signs of irritation either to the hands of the operator or the skin of the patient. With instruments, however, care must be taken, and the solution used should be carefully measured. On several occasions when this precaution was neglected the instruments lost their edge, the steel parts became coated with greenish-black spots which were very troublesome to remove, and in those which had white bone handles the latter became discoloured and rough to the touch. The solution recommended for this purpose consists of 1 in 1,200, and, if the instruments are to remain in it for anything like an hour, this strength certainly should not be exceeded. As a deodoriser for the hands or for fœtid wounds, solutions of the same strength as those used for the disinfectant purposes acted satisfactorily. Details of several illustrative cases are given, and the author sums up the conclusions to which his experience has led him as follows: (1) That chinosol acts well as an antiseptic, disinfectant, and deodorant when used in certain proportions. (2) That its action is better marked when used as a lotion than when used as a powder. (3) That the powder is not suitable for use on fresh wounds unless diluted in some way or other. (4) That for the disinfection of instruments care must be taken not to make the solution too concentrated. (5) That the drug possesses toxic properties. (6) That if used subcutaneously in too concentrated a form it will produce local irritation and swelling. The strength recommended for subcutaneous injection in human practice is from 1 in 600 to 1 in 200. (7) That the cat is very susceptible to its action, and that in this animal much more care is necessary to guard against toxic symptoms than in the case of the dog. In the cat, if subcutaneously injected, the extreme limit of dose should be one-sixteenth of a grain for each pound body weight, and in the dog one-eighth of a grain per lb. (8) That chinosol is not rapidly absorbed from the unbroken skin of the dog, and can be applied for several days in succession even in fairly concentrated solutions to the skin of this animal without producing eruptions or sores. (9) That the chief symptoms of poisoning are: Sneezing and coughing, an increased flow of thick ropy saliva, subnormal temperature, staggering gait commencing with loss of motor power in the hind quarters, great prostration, and ultimately death from failure of the heart's action. (10) That the chief *post-mortem* characteristic is the smell of chinosol on or in some part of the body; whilst another symptom to be looked for is the presence of frothy saliva in the pharynx, œsophagus, or stomach.

(462) Artificial Milk.

MEYER, of v. Noorden's clinic (*Berl. klin. Woch.*, May 9th, 1898) has investigated two kinds of artificial milk supplied by Rose, the one resembling in composition human milk, and the other sug-

gested by v. Noorden for diabetics. The latter contained besides the milk salts 2 to 3 per cent. albuminous matters, 4 to 6 per cent. fats, and a trace of saccharin for sweetening purposes. (1) The composition of the first was found to resemble human milk very closely. In place of sterilisation of the milk, which has been found to produce a partial peptonising of the albuminous matters, and a splitting up of the organic phosphorus compounds, the individual constituents of the milk were previously sterilised. The mode of coagulation of the casein here in a finely divided form has apparently an advantage over human milk. Another difference between this artificial and human milk lies in the fact that the casein of the former is completely digested in two to three hours by pancreatic ferment. The author investigated the metabolism in 3 cases, including 2 infants and 1 girl aged 22 with gastric ulcer. The absorption of the fat in all cases was most satisfactory. The absorption of the nitrogenous substances was good in the first 2 cases, but not so satisfactory in the third. Here 6.76 g. of the 22.9 g. of nitrogen supplied was found in the stools Thus more nitrogen was excreted than absorbed in this case, but this was probably due to the previous diet being rich in nitrogen. The artificial milk was well borne in all the cases. In the feeding of infants, if cow's milk, properly prepared, is well borne, there is no need of artificial milk, but cow's milk often disagrees. This artificial milk has been largely used by the author for infants with good results. In adults also with gastro-intestinal affections, and in whom a milk diet was indicated, it has also been of service. (2) In diabetes the second kind of artificial milk was used. It was usually well taken by the patients, alone or combined with tea, coffee, or cognac. In one severe case of diabetes in a man aged 26, who would not take albuminous diet, this artificial milk was exclusively employed for a week with a consequent gain in weight of 3 lbs. The convenience of having a preparation of milk that can be altered as desired is considerable.

(463) Treatment of Diphtheria.

Richardière (*Sem. Méd.*, April 20th, 1898) reports on 696 children with diphtheria recognised both bacteriologically and clinically, who were treated at the Hôpital Trousseau in 1897. Of these 125 died, a mortality of 17.9 per cent.; 31 of these died within twenty-four hours of admission; excluding these the mortality stands at 14.1 per cent. Of the total number 433 did not require operation and 18 died, a mortality of 4.1 per cent. Out of 172 who were intubated 47, or 27.3 per cent., died, almost invariably of broncho-pneumonia. Primary tracheotomy was done 11 times with 5 deaths. Tracheotomy after intubation was done 56 times with 45 deaths. Treatment was almost entirely by antitoxic serum. Children over 2 years received 20 c.cm. and under 1 year 10 c.cm. In most cases a single injection sufficed to check the extension of the false membrane. In benign cases irrigation of the throat and nose was carried out with boiled water, in severe cases a solution of 1 in 4,000 of permanganate of potash was used. If false membranes persisted or reappeared, a solution of glycerine and corrosive sublimate (1 in 30) was used locally. For the treatment of broncho-pneumonia warm baths given every three hours were employed. In nearly every case bacteriological examination showed the existence of streptococci and staphylococci, etc., in addition to the Loeffler bacillus. The gravity of the illness did not appear to be increased by the presence of these organisms. The prognosis should be based only on the clinical signs.

(464) Silver Nitrate in Pneumonia.

Caccianiga (*Gazz. degli Osped.*, May 1st, 1898) has treated 6 consecutive cases of acute pneumonia with silver nitrate. In all the cases crisis occurred in the first two days, the pulse frequently fell, the local symptoms remained unchanged—that is, did not disappear with the fall of temperature. The dose given was from 0.005 g. to 0.015 g. per diem, divided into 10 doses in pill form. During the treatment no other medicine was given. The ages of the patients varied from 12 years to 60 years.

PATHOLOGY.

(465) Spinal Concussion.

Kirchgaesser (*Münch. med. Woch.*, February 8th, 1898) first refers to the experimental researches of Schmans and Bickeles into this subject. He has himself experimented on rabbits when blows were given with a hammer on the back of the animal previously covered with a guttapercha plate. Usually a tetanic spasm and occasionally clonic spasms in the legs followed upon the first blow. Sometimes an epileptic fit could be induced. The animals recovered rapidly and showed more or less marked paresis in the legs. One animal died from unknown causes, and the others were killed from the eighth to the fourteenth day. Some control experiments were also made. In four of the animals destruction of the medullary sheaths was found in the region corresponding to where the blows were given. The changes became much less marked above and below the lesion. The upper parts showed an ascending degeneration in both Goll's and Gowers's columns, and in the cerebellar tract and the lower parts a descending degeneration in the pyramidal tracts. In the fifth experiment, in which after a few comparatively light blows no distinct paresis was noted, the changes were less distinct and involved the front part of the cord. There was no ascending degeneration in Goll's column. The author's observations agree with those of Schmaus. Thus a pure uncomplicated concussion can bring about advanced destruction of the axis cylinders and medullary sheaths. It is impossible to say at present how far these changes are capable of recovery. At any rate concussion demands a conspicuous place in the causation of spinal cord diseases. The author thinks that such experiments as the above are of the greatest importance in regard to the connection between nervous symptoms and past injury, and he is of opinion that other weighty etiological factors must be present in order to set aside the connection between the two in individuals previously free from nervous symptoms.

(466) Influence of the Vagus on Changes in the Myocardium.

Hofmann (*Virchow's Archiv*, November, 1897) records some experiments which he has made in order to ascertain the influence of the vagus in the production of inflammatory and degenerative changes in the heart. Rabbits were used for the experiments, which consisted in section of the vagus—in some cases on one side only, in others on both sides. Where unilateral section of the vagus was done, the operation was borne well as a rule, but in a few cases a rapid and fatal pneumonia followed, and others died of cardiac failure. Where, however, the animal survived the operation, subsequent examination showed no degenerative and no inflammatory changes whatever in the heart. Bilateral section of the vagus, on the contrary, proved almost always fatal, being followed by very acute fatty degeneration of the myocardium, associated with an abnormal fragility of the vessels, which was probably due to the destruction of special trophic fibres. There also occurred in these cases small patches of myocarditis and sometimes of endocarditis. By similar experiments Hofmann also studied the influence of the vagus in the production of ulcerative endocarditis. After section of the vagus on one or both sides, staphylococcus pyogenes aureus was injected into the vein of the ear of a rabbit. It was found that neither the myocardium nor the valves showed any invasion by the microorganism, and it is concluded that the removal of vagus influence does not favour the occurrence of ulcerative endocarditis.

(467) The Cerebral Hemispheres and Immunity.

E. S. London (*Centralbl. f. Pathol.*, 1898, Nos. 6-7) gives a preliminary note on the effects of removal of the cerebral hemispheres upon immunity. He finds that total extirpation of the cerebral lobes of the pigeon abolishes the natural immunity of these birds to anthrax. Removal of only one hemisphere preserves this immunity. The fatal effects of anthrax after total extirpation could not be prevented by the injection of an emulsion of cerebral substance. The sooner the anthrax was inoculated after operation, the more rapid was the fatal issue. The writer briefly calls to mind the susceptibility of general paralytics to the tuberculous virus.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(468) Metabolism in Total Resection of the Stomach.

HOFFMANN, of Eichhorst's Clinic (*Münch. med. Wooh.*, May 3rd, 1898) has investigated the metabolism in Schlatter's well-known case of total resection of the stomach. Six and a half months after the operation the patient had gained 5.4 kilog. in weight. It was found that the amount of nitrogen present in the stools varied within normal limits, but during the six days a complete nitrogenous balance was not obtained as occurs in health. There was a retention of from 0 1 g. to 1.4 g. of nitrogen. This retention is known to occur in convalescence from acute illnesses, etc. There was no increase in weight during the first period of observation. A month and a half later a further investigation was made with a more varied diet, and here the absence of the stomach seemed of no importance. A nitrogenous balance could now be established, showing that the regeneration of the blood was so far complete that there was no longer any need of retention of nitrogen. The retention of phosphorus was also marked. Hoffmann found that fatty matters were satisfactorily dealt with, so that of 8.5 g. taken only 4.64 g. were excreted. He adds that this shows how incorrect it is to treat patients suffering from chronic stomach disorders with as little food as possible. The author has also investigated the question of the action of hydrochloric acid upon putrefactive processes, and he concludes that the absence of the acid in this case was without influence upon these putrefactive processes in the alimentary canal. He goes so far as to add that the administration of hydrochloric acid as a disinfectant of the intestinal contents is useless. As regards the quantity of chlorides in the urine, there was no decrease after the chief meal in this case. This confirms the current view that the diminution of the chlorides in the urine after a meal is due to the hydrochloric acid excreted by the stomach. The absolute acidity of the urine was higher in this case than in ordinary individuals. The retention of sodic chloride was striking, without there being any increase in the body weight. There was no relationship between the excretion of chlorides and the acidity of the urine in the different periods of the day. The urine was examined for the presence of pepsin, but no trace was found.

(469) Primary Dementia of Puberty.

J. WIDEROE (*Norsk Mag. for Laegevidensk.*, April, 1898) describes two cases of what may be called the primary dementia of puberty or dementia præcox—one in a girl of 17 and the other in a boy of 15 years of age. In such cases the beginning of the disease is very insidious; there is a gradual diminution in the intellectual powers and a modification in the character and manner of life of the affected individual. In some instances the degenerative process is arrested and the individual is left in a condition still fitted to occupy an independent and even useful position in society; but in other cases the process goes on to complete intellectual ruin, although this is rarer than in secondary dementia or in general paralysis. The patients may show now and again acute attacks, which, if the first symptoms have not been noted, may be mistaken for acute mania or melancholia. Heredity plays a great part as the primary cause of these cases; and accidental causes are venereal excesses, the abuse of tobacco and alcohol, and mental exhaustion. Overpressure in schools acting upon brains of low resisting power may thus come to be a danger. As far as complete recovery is concerned the prognosis is not good.

(470) Deformity of the Trunk in Sciatica.

ZANIBONI contributes (*Gazz. degli Ospedali*, March 20th, 1898) an account of two cases illustrating the deformity which may arise in cases of sciatica. This condition, though referred to by different authors, does not seem to have been sufficiently recognised till Massalongo, in conjunction with Zaniboni, made it a subject of study. The condition as described by these authors is not met with in slight cases of sciatica of short duration, but if the disease is at all pronounced or of some duration, it is almost certain to be recognised. This deformity is characterised by rotation of the trunk in such a manner that the costal margin of the affected side approaches the iliac crest with lateral curvature in the lumbar region of the vertebral column, the convexity of which corresponds to the affected side, there being at the same time a curvature in the dorsal region in the inverse sense. This attitude is constantly present, whether the patient is standing, sitting, or lying, more especially should the pain be at all severe. It is accompanied by a certain degree of contraction of the muscles which corresponds to the inferior convexity. It would appear that the deformity does not disappear during sleep, but that it may relax under an anæsthetic. Thus, it would seem that the cause of deformity is pain, the object of the patient being to rest as much as possible on the sound side. The author is of opinion that the prognosis of such cases is much more serious where there is a neurotic history, and that the deformity appears earlier, and is much more likely to be permanent.

(471) The Palmo-Plantar Sign in Typhoid Fever.

QUENTIN draws attention (*Arch. Gén. de Méd.*, May, 1898) to a sign which he considers to be of considerable use in the diagnosis of typhoid fever, and one which has hitherto not received much notice. It consists in a peculiar yellow coloration of the palms of the hands and the soles of the feet. During convalescence these same regions show marked desquamation. The writer points out that in a large series of cases of febrile affections collected by him, he has remarked the presence of a slight yellow tinge in some cases of acute articular rheumatism and tuberculosis, but that in typhoid this coloration is much more intense. The explanation is obscure, but that offered is that the epidermic tissues undergo a special nutritive change in the presence of typhoid fever, probably due to elimination of toxic products through the skin.

SURGERY.

(472) Arrest of Hæmorrhage from Large Vessels by Suturing.

LINDNER (*Berliner Klinik*, April, 1898) reports a case in which, during an attempt to close a fæcal fistula in the left groin, the common femoral artery and vein were both opened. The bleeding from the vein was arrested by resection of about three-quarters of an inch of the wounded vessel and by double ligature. The arterial wound, on the other hand, was closed by two rows of fine silk sutures. The patient, an old and feeble man, made a good recovery. The author remarks that, whilst occlusion by ligature of a large arterial trunk alone, or of the accompanying venous trunk alone, is not likely to be followed by gangrene of the distal parts, simultaneous ligature of both vessels is, in this respect, attended by much risk, which is more likely to occur after wounding of both common femoral vessels than after a similar injury either of the axillary vessels or of the large vessels of the neck. Experiments on animals and the successful results of cases recorded by Schede have proved that under modern conditions of practical surgery a wounded vein may be sutured effectually without any risk of phlebitis. The indications for suturing are much more urgent in the case of a wound of a large artery, for, however small the wound may be, the prospects of closing it by compression are not so favourable as in a case of even a large venous wound. The practice of suturing an arterial wound must be subject to certain restrictions, as experience has proved that it would not be safe to apply a suture to a transverse wound involving more than one-half of the circumference of the vessel. In such cases it would be advisable to resort t the practice advocated by Murphy of resecting the injured portion of the artery and bringing the ends together, the proximal end being invaginated into the distal one, and fixing them by five sutures. In practising arterial suture Lindner would transfix all the coats of the vessel, and in selecting the material of his suture would prefer fine silk to catgut.

(473) Accidents in Laparotomy.

Poroschin (*Vratch*, No. 19, 1898) relates two cases of injury to the urinary tract occurring in the course of laparotomy. The first case was that of a woman, aged 53, who was operated on for a cystic tumour of the right ovary and a cyst of the broad ligament on the same side. In separating the latter from its adhesions the right ureter was cut across. This was noticed during the operation through the escape of urine from the renal end of the duct. The two ends were therefore freed from the adherent tissues and joined together by four fine silk sutures. The stitches were passed through the serous and muscular coats only, leaving the inner layer intact. For greater security a piece of peritoneum was put round the ureter and fixed in position by a few stitches. The abdomen was closed in the ordinary way, no drainage being provided. The patient made an uninterrupted recovery, getting up on the twentieth day, and leaving the hospital on the thirty-seventh day after the operation. The other case was that of a peasant woman, aged 43, who underwent laparotomy for a large subserous fibromyoma uteri. In this case the fibromyoma was firmly attached to the bladder walls, which were torn in the attempt to separate the tumour from them. After the removal of the growth the rent in the bladder was repaired by uniting the edges by a series of sutures in layer. The mucous coat was stitched together by a continued suture, while the edges of the muscular and serous coats were united by interrupted sutures. A catheter was left in the urethra for the first four days. This patient also made a good recovery.

(474) Exploratory Gastrotomy.

Keen (*Philadelphia Med. Journ.*, May 7th, 1898), in the course of the Cartwright Lectures on the Surgery of the Stomach, states that a further object for opening the stomach beyond the removal of a foreign body, and retrograde dilatation of a stricture of the œsophagus, is one of exploration in order, if possible, to attain a positive diagnosis when other means have failed. Two original cases are recorded in support of the lecturer's opinion of the innocuousness of this procedure, and of the probability that in future it will be of great service. Exploratory gastrotomy, it is asserted, allows an extensive and minute examination of the stomach to be made with thoroughness and safety. By his own experience, and by cases reported by others, Keen has been led to the conclusion that in any case in which by other means at his command no positive diagnosis can be reached, the surgeon is thoroughly justified in opening and exploring the stomach. In order to prevent any possible septic complications, Keen insists on the necessity in this as in all similar operations on the stomach of washing out this organ, and, before it is opened, of bringing it out of the abdominal cavity, and of protecting this cavity by a wall of iodoform gauze. In this way the operation can be made a practically extraperitoneal one.

(475) Symposthion.

Deutsch (*Wien. med. Presse*, 1898, No. 19) describes two cases of an affection, named "symposthion" by Lang. It consists in adhesion of the inner surface of the prepuce to the glans penis, and is of some importance as a complication of venereal diseases, as it leads to the formation of niches and recesses in which secretion can accumulate and organisms multiply. Thus the first of the cases under notice was one of gonorrhœa, which improved somewhat under irrigation with permanganate, but subsequently relapsed. The adhesions between prepuce and glans left two recesses into which sounds could readily be passed. These recesses were found to contain pus, in which gonococci were abundantly present. The other case was one of soft sores complicated by inguinal buboes. In both the symposthion was operated on with success, the adhesions being separated and the foreskin completely retracted. The free edge of the latter was sewn round behind the sulcus, and the raw surface, where necessary, covered in with Thiersch grafts. Any exuberant granulations were touched with lunar caustic. The author states that the condition is usually inflammatory in origin, but may in a certain number of cases, as pointed out by Düring, be congenital.

MIDWIFERY AND DISEASES OF WOMEN.

(476) The History of Pain and the Menstrual History of Extrauterine Pregnancy.

Barton Cooke Hirst (*Amer. Jour. of Obst.*, April, 1898) has analysed 22 cases of extrauterine pregnancy, to elucidate the value of the history of pain and of menstruation for diagnosis. He gives three cardinal symptoms: (1) Pain, characteristic in nature, manner of occurrence, and situation; (2) irregularity of menstruation, often with the discharge of what the patient calls "pieces of flesh;" (3) the following physical signs: For the first two to four weeks a swelling in the tube, no bigger than the end joint of one's thumb, and unadherent; later an exquisitely-sensitive mass fixed in the pelvis by thick velvety adhesions. Pain has been the most helpful symptom in guiding the author to a diagnosis. It may be defined as a pain described by the patient in the strongest terms; occurring in paroxysms with free intervals; appearing at any time from a few days to months after a normal menstruation; situated often in one groin, though often referred to the lower abdomen, and sometimes shooting down one leg or up to the epigastrium; and so severe as to occasion profound systemic disturbance, such as syncope and excessive shock, which the author attributes to pain rather than to hæmorrhage. The characteristic menstrual history of extrauterine gestation is one of irregularity and often not of cessation at all. In 27 per cent. of Hirst's cases there was no cessation, and in 18 per cent. more a menstrual period was only delayed ten to twelve days. Prolonged uterine bleeding, on the other hand, preceded or followed by the discharge of decidua, is the almost universal rule at some period in the history of a tubal pregnancy.

(477) Periodic Menstrual Psychoses.

Trénel (*Ann. de Gynéc. et d'Obst.*, March, 1898) relates a case of delirium with hallucinations occurring at the menstrual periods in a woman 37 years of age, who had given birth to a child some years previously. The attacks took place in January, March, April, and May of 1896, and on the two last occasions were followed by melancholic depression lasting for a few days. Such cases are rare, but may be met with either in early, late, or middle menstrual life, and may be acute, subacute, or chronic. The intervals between the menstrual periods are generally free from mental symptoms. The prognosis is relatively favourable, 68 per cent. ending in cure, but the condition may become chronic, or may be followed by dementia, or may be transformed into ordinary insanity or perhaps into true periodic insanity. When there are coexistent lesions of the genital organs, removal of the ovaries may be indicated, and may sometimes give good results, but recourse to operation should be had only after a long period of observation. Treatment in the attacks should usually be carried out at home, and not in an asylum.

(478) Extrauterine Pregnancy dating Twenty-four years Expelled by the Bowels.

Demonnier (*Bull. Soc. Obst. et Gyn. de Paris*, No. 3, 1898) relates the following case: In July, 1896, a patient brought him two bones, one of which appeared to be a fœtal frontal bone; they had been expelled by the bowel in the preceding March. Her general health had been good, and she had had neither rigors, fever, abdominal pain, tenesmus, nor bloody or purulent stools. Examination showed a hard tumour the size of a turkey's egg in the region of the left adnexa. The uterus was fixed. Inquiry showed that in 1872 she had an apparently normal pregnancy; at term labour pains came on, which were ineffective. She consulted two doctors in Paris, who diagnosed extrauterine pregnancy, and advised that no operation should be performed. According to the patient's account they further affirmed that she would not become pregnant again. Nevertheless, two normal confinements at term, followed by normal puerperia, occurred subsequently, one in 1878 and one in 1881. When seen in July, 1896, the general condition was too bad to justify operation. Antiseptic douches led to no diminution in the size of the tumour, and it was concluded that the lithopædion had not been completely expelled. The author points out the rarity of the occurrence of inflammatory troubles supervening in a lithopædion twenty-four years from the onset. The

opening of the fistulous track into the bowel gives much better results than one in connection with bladder or vagina. He regarded the case as an argument for early surgical intervention in these cases. The occurrence of two subsequent confinements at term is noteworthy.

(479) A Second Laparotomy for Repeated Tubal Gestation.

FALK (*Zeitsch. f. Geb. u. Gyn.*, vol. xxxviii, Part 2, 1898) adds another to the recently recorded cases of this condition, of which in 1893 Abel could collect only 8 authentic instances. Falk's patient was operated on the first time in September, 1894, for a tubal gestation of the right side; the appendages of the left side were not seen during this operation. The fact of pregnancy was established by the finding of a 14-weeks-old fœtus. The second operation took place in November, 1897; the gravid left tube was removed with the ovary. The rent was found on its posterior surface. A well-developed and non-macerated fœtus lay in its gestation sac; the size corresponded to a 13 to 14 weeks' pregnancy. The author considers the question of etiology. Freund's explanation linked the occurrence of tubal gestation with a condition of spiral twists in the tube. Falk rejects this explanation on the ground that no such condition of the tube was found in his case on either occasion. He regards as insufficient the explanations which attribute tubal pregnancy to changes in the tubal mucosa or obstructions in its lumen. Virchow, Spiegelberg, Schröder, Martin, Scanzoni, and, more recently, Webster and Rumpf explained the condition as brought about by perimetric and perisalpingitic adhesions causing obstruction of the tube by the formation of peritoneal bands; and the circumstances of both pregnancies in the author's case lead him to adopt this explanation.

(480) Primary Cancer of Fallopian Tube.

HOFBAUER (*Archiv f. Gynäk.*, vol. lv, Part 2, 1898, p. 316) observed a case of this disease in Schauta's wards, so that the number of instances of primary tubal cancer fairly authenticated comes now to about a score. Schauta's patient was 46; her last confinement occurred twenty-three years before admission for "bleeding and discharge." She had been subject to hypogastric pains for several years, and profuse menstruation set in every three weeks when she was 43. For a year free leucorrhœa caused annoyance, and it was accompanied by pains in the left iliac fossa, which had become very severe. There was neither dysuria nor pain during defæcation. A mass could be felt on each side of the uterus, which was enlarged. A curette was applied to the thick and tough cervix, and a cavity with soft yielding walls was detected in its posterior part, whence much broken-down tissue was removed. On June 2nd, 1897, the uterus and appendages were removed through the vagina. No note of the operation nor any after-history is given. The left tube was over 4 inches in length, adherent to omentum and other structures. It was deeply curved on itself, in the usual fashion, and as thick as a thumb in the middle. It contained free broken-down masses in its lumen, whilst other similar structures were attached to the wall by pedicles, and some were sessile. Near the uterus the mucosa was normal. The right tube measured 4 inches; it was obstructed, and as thick as a finger in the middle. It curved round the ovary, and its interior contained similar free and sessile growths. Under the microscope the uterine tissues showed glandular hyperplasia. The broken-down tissue from the cervix represented, in Hofbauer's opinion, metaplasia of the pavement epithelium from inflammatory changes, and this condition was, he believes, quite distinct from the growths in the tubes, which he classifies as carcinoma villosum cylindro-epitheliale. The ovaries were normal.

THERAPEUTICS.

(481) Venesection in Children's Diseases.

A. BAGINSKY (*Berl. klin. Woch.*, May 23rd, 1898) first refers to the history of venesection, and discusses the question as to whether there are not some diseases in which it might be used with benefit. He gives details of two cases in which it was successfully employed: the one in a child aged 7½ with uncompensated cardiac disease, and the other in a boy aged 9 with cirrhosis of the lung and bronchiectasis. In these cases the author thinks that the venesection exercised a life-saving effect in the dangerous suffocative attacks. Details are then given of a third case of bronchopneumonia in a child, aged 7, who was *in extremis*. As no blood could be obtained from the median veins, the left radial artery was opened, and 30 c.cm. of blood let out. The effects of the venesection in these cases is a mechanical one of relieving the circulation. Baginsky has not always had the good results noted in these three cases, but there were then other dangers present besides the mechanical hindrance to the circulation. Venesection is more difficult in children than adults. It is better to lay bare the vein under aseptic precautions, and then to open it. The author refers to the more local blood-letting, as by leeches. There are particularly two forms of disease in which such blood-letting may be of use, namely, simple eclampsia in the child and uræmic eclampsia. There are many valuable remedies for simple eclampsia, so that it is less necessary to perform venesection here unless these remedies fail. Here also venesection acts in a mechanical manner. The author says that he has employed this measure in a considerable number of cases of eclampsia, and he gives details of one in which it was used with the best results. In this case of uræmia, baths with douches, chloral hydrate, chloroform, injections of camphor, mustard, etc., had been employed without effect. The child was deeply comatose, with Cheyne-Stokes breathing. It was also cyanosed and pulseless. Six leeches were applied to the head. The convulsions became less at once, and the child slowly recovered. Thus in uræmic eclampsia where other treatment has been used in vain, venesection should be tried. Baginsky concludes that blood letting is not only indicated, but necessary, in the conditions above referred to.

(482) Nutrient Enemata.

BRANDENBURG AND HUPPERZ, of Riegel's Clinic (*Deut med. Woch.*, May 19th, 1898) draw attention to the value of alcarnose in rectal feeding. They think that nutrient enemata are not so widely employed as they ought to be. At first eggs were used for rectal feeding, and later these were peptonised. Milk has also been much employed. Leube's pancreatic meat clyster has not been so widely used owing to difficulties in the preparation. A disadvantage in egg and meat clysters lies in the fact that decomposition may take place, and so lead to irritation of the bowel. According to Brandenburg's experiments casein is only slightly absorbed, and the absorption of fat is also small. The increased excretion of urea provides important evidence in regard to the absorption of albumens from the rectum. The amount of nitrogen in the stools is not so reliable, because there may be a long retention in the rectum of the materials used. Investigation into the metabolism has been made in Riegel's clinic with several artificial food stuffs. The authors have used alcarnose, which contains albumens and carbohydrates in a digested state. It is thus a mixture of albumoses and maltose. The urea excretion, the amount of nitrogen in the stools, the presence of ethyl sulphuric acids in the urine, were especially attended to, as well as the general condition of the patient. In the many cases in which alcarnose was used no unpleasant effects were observed. The investigations into metabolism in three cases embraced three periods: (1) A preliminary period with known diet; (2) the alcarnose period; and (3) an after-period. The details are given in tabular form. There was one case of gastric ulcer, one of arteriosclerosis with hyperacidity, and one of neurasthenia. In all the cases there was a considerable nitrogen excretion in the urine, amounting in some instances to half the amount of nitrogen in the clyster. The same amount was never found when casein was used. There was no increase in the intestinal putrefaction. The authors conclude that alcarnose is specially suited for rectal feeding.

(483) Treatment of Colitis.

GUINON (*Rev. Mens. des Mal. de l'Enf.*, 1898, pp. 113, 243) distinguishes three main varieties of colitis in children—acute simple, dysenteriform, and chronic. In the first variety, which occurs usually in hot weather, the attack comes on

with fever, vomiting, and diarrhœa of watery fæcal stools. The characteristic symptoms become quickly established—colic accompanied by tenesmus, and the passage at frequent intervals of small stools which have an offensive odour, and consist entirely or in large part of mucus streaked with blood. In severe cases the pain may be so great that the preliminary purgative indicated as a general rule cannot be used. Hot compresses should be kept constantly applied to the belly; a warm bath may be given twice in the day and a single enema containing opium; by the mouth antipyrin, and if this fails to give relief chloral should be given. Milk and all solid food should be withdrawn, and the child given only broths and thin gruels, or "albuminous barley water," made by beating the white of an egg in barley water. As soon as the acute symptoms have subsided, small rectal injections of warm solutions containing common salt (gr. ij to ℥j) or sodium biborate (gr. j to ℥j) should be given. Antiseptic drugs are contraindicated owing to their irritating qualities. In the dysenteriform the fever is higher, the colic more severe, and in there is marked tenderness over the colon, accompanied by contraction of the abdominal muscles. The stools consist of mucus mingled with blood; in some cases so intimately as to resemble pneumonic sputum. In cases of this type ipecacuanha is the best remedy, given in small doses every two hours with a little opium. If after three or four days the stools have not become fæcal, a copious injection of warm solution of silver nitrate (gr. ij to Oj) should be given. If symptoms of collapse ensue, subcutaneous injections of artificial serum (physiological salt solution) should be given. As much as a pint may be injected in this way in the course of twenty-four hours. In the chronic form the regulation of the diet is the most important point, and it may be necessary altogether to withdraw milk for some time. Particular attention should be given to guarding against constipation, which is very apt to ensue, and to lead to a fresh attack of colitis determined by the irritation caused by the retained fæces. Of drugs calomel in minute doses, and a simple mixture of hydrochloric acid are the most generally useful. Hot baths, and hot compresses to the belly night and morning are also useful.

(484) The Treatment of Anæmia by Mountain Air.

LÉPINE (*Sem. Méd.*, March 16th, 1898) gives a summary of what is known as to the effect of altitudes on anæmia. Paul Bert first drew attention to this subject in 1882 by finding that a given volume of a mountain animal's blood absorbes more oxygen under similar conditions than an equal quantity from an animal of the plain. More detailed experiments have confirmed this. Thus Müntz found that seven years after importing rabbits from the plain to the Pic du Midi (2,877 metres), the blood of their descendants differed greatly from that of those which had remained below. If the fixed matters, the metallic iron of the blood, and the oxygen absorbed be each represented by 100 for the plain animals, the corresponding numbers for the mountain animals are 139, 174, and 180. Still more striking were his results with sheep which had lived on the Pic only six weeks. It is probable that several climatic factors are involved in this increase of hæmoglobin, but Regnard has shown that barometric depression alone is sufficient, for he obtained the same results by keeping guinea-pigs under a bell jar for a month under a constant atmospheric pressure corresponding to an elevation of 3,000 metres. Mercier again found that while counting the corpuscles of men and rabbits returned from the mountains to the plains, the daily decrease ceased on the barometer falling 13 mm., and in two rabbits there was even an increase of corpuscles. Whether on a mountain or under a bell jar the most noticeable alteration in the blood is an increase of the red corpuscles, which appears earlier and is more rapid than the increase of hæmoglobin. Egger has had the same results in man at an elevation of 1,890 metres; the average increase of red corpuscles after fifteen days was 16 per cent. Mercier confirms this. Those observers (Loewy, Kohlbrugge), who have failed to note this property of mountain air, were not careful to exclude vitiating conditions from their experiments. All the most reliable evidence goes to show that the increase of red corpuscles is real and has nothing to do with a supposed concentration of the serum through evaporation. Viault and others have remarked the great number of small discs in blood received on elevated places, which are probably developing erythrocytes. This explains the fact that the hæmoglobin does not increase so rapidly as the corpuscles, since the young globules do not contain their full amount. Finally, Schauman and Rosenquist have observed nucleated red corpuscles in the blood of dogs and rabbits living for some weeks under a bell jar under a depression of 45 to 48 cm. of mercury. Suter and Jaquet found that in rabbits which had lived at Davos for four weeks not only was their blood one-sixth richer in hæmoglobin than that of those left behind at Basle, but the quantity was more per kilogramme of body weight (about one-tenth). The mechanism of the increase of red corpuscles is still not properly understood. It is certain that in healthy persons this increase is not permanent, but disappears on a return to the plains as rapidly as it came. However, the most important fact is that anæmic people retain more red corpuscles than they had before their mountain sojourn for long after their return.

(485) Action of Extract of Suprarenal Capsules.

CORONA (*Rif. Med.*, May 16th, 17th, 18th, 1898), as the result of a series of experiments with extract of suprarena capsule upon the frog, finds that th extract is toxic, and that the toxic su stances are various and of opposite properties. Death occurs through small repeated doses or after one big dose. Gradually increasing doses confer no immunity; the action is cumulative. The capsular extract acts on the nervous mechanism of the heart, first exciting, then paralysing; it has similar action on the respiration, als on the muscular and nervous system in general, giving rise to a general torpor but not paralysis. It has no noticeabl action on the corpuscular elements the blood. Instead of acting as an antitoxic to neurin or curare, capsular extract tends to increase the effects of these substances. The suprarenal extract does not extinguish nervous electric or the muscular irritability, but weakens the latter. Thyroid extract does not modify in any way the symptomology of suprarenal extract poisoning after a certain time; suprarenal extract modifies the pigment of the skin in the sense of clearing it. This resu is probably brought about by its action on the melanic chromatophores causing them to contract or driving their pigment into the usual emuncto channels.

PATHOLOGY.

(486) The Biology of the Tubercle Bacillus.

MARPMANN (*Centralbl. f. Bakt.*, xxii, 20, 21) claims to have opened up a new point of view in bacteriological pathology by his researches on the growth of the tubercle bacillus. This has long been known to secrete a cellulose capsule, which is a characteristic of aërobic microbes, whereas those which are anaërobic are distinguished by the formation of volatile gases, such as marsh gas, sulphuretted hydrogen, phosphoretted hydrogen, and ammonia. The author finds that tubercle bacilli grow readily on a new medium, consisting of crude lecithin rendered germ free by repeated warming to 50° C. At first only traces of volatile gases are given off; but after five or six days, if the access of air is prevented, the presence of phosphoretted hydrogen can be demonstrated by the contained gases blackening paper impregnated with silver but not lead. Marpmann concludes that the tubercle bacillus is capably anaërobic, and can give rise to reduction as well as oxidation products. The formation of phosphoretted hydrogen is much more marked in the case of the cholera bacillus, and it is suggested that the symptoms of cholera intoxication may be due to that gas. Similarly it is possible that this and other gases may be the causes of the symptoms of other bacterial infections if this is the case, treatment should aim at neutralising them as well as at increasing the resistance of the tissues to them. It is this new suggestion which the author considers may lead to most important results.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(487) Intermittent Lameness.

BOURGEOIS has made an exhaustive investigation of this subject (*Thèse de Paris*, 1897). It will be remembered that Charcot was the first to notice the occurrence of this condition in the human subject, although it has for some time been known to veterinary medicine. The affection consists of an intermitting painful paralysis, due apparently to arterial obliteration coming on suddenly, so that all motor power is suspended in arm or leg, as the case may be. This arterial obliteration may be due primarily to atheroma, whether occurring in an arthritic subject or in connection with alcoholism, saturnism, malaria, or senility, or, again, diabetes, which seems to cause a form of hyperplastic endarteritis, causing diminution or obliteration of the lumen of the vessel; or syphilis may be the cause of arterial stenosis. In other cases, a tumour, aneurysmal or otherwise, has been sufficient to induce the symptoms by pressure on the vessel. Thus, from any of these causes the blood supply to the limbs is diminished. When, therefore, the patient is at rest, there may be no inconvenience; but when any attempt is made, more particularly an unaccustomed one, a sudden attack of pain with loss of motor power may result. Thus it is that while walking the patient may suddenly become affected with lameness. In patients affected with atheroma, diabetes, etc., the initial symptoms are slow and often insidious. Walking, for instance, is accompanied by a certain amount of fatigue, and little by little the patient remarks that he is becoming unfit to go more than a certain distance, and the more fatigued he becomes the more he suffers from pain in one or both limbs. Not infrequently the condition is thought to be rheumatism, varicose veins, or some form of actual paralysis. Finally, the patient finds that after a few minutes walking he is obliged to sit down, unable to take another step. In syphilitic cases, the onset seems to be more rapid, but may show a tendency to subside to reappear in the form of crises. Finally there is added to the pain and inability to move the limb a sense of extreme numbness with sensations of burning and itching. These symptoms may become so marked that the limb stiffens, the tendons stand out, and intolerable cramp with marked contracture may occur. These phenomena may be limited to the toes, but as a rule they are more common in the calves and thighs, and even in the gluteal region in certain cases. The temperature of the affected limb may be lowered and the skin is often colder than that of the opposite side, presenting a blue or discoloured appearance. During an attack arterial pulsation is diminished, even imperceptible. Common sensation may be unaffected, but in some cases anæsthesia has been noted. The reflex action seems unaffected. The patient when overcome by the severity of the symptoms lies down to rest. There is then a rapid change for the better, so that the majority of the painful symptoms disappear as if by magic. He may be able to resume walking, but this abeyance is of short duration, for in a few minutes there is a return of all the painful symptoms. In cases untreated there is a progress more or less rapid for the worse, until finally gangrene of the limb may set in as the result of the extreme impairment of nutrition. In very many cases treatment is extremely satisfactory, for iodide of sodium or potassium with careful dieting have often completely relieved the patient. In other cases the diagnosis of aneurysm followed by operation has completely relieved the disease.

(488) Hæmatospermia.

KRONER (*Berl. klin. Woch.*, March 28th, 1898) describes a case of hæmatospermia, which he considers to be due neither to congestion nor inflammation, but to an alteration in the quality of the blood. A strong man, aged 49, had suffered from eczema many years. Previously to the eczema he had enjoyed good health. In 1895 he noticed blood in his seminal fluid. He had not been subject to hæmorrhages of any description before this time, and did not belong to a family of "bleeders." The urine was free from albumen and sugar. There was no history of syphilis or sexual excess. The semen remained bloody, and in the spring of 1896 signs of scurvy appeared, notwithstanding the patient's satisfactory mode of living. In spite of treatment and change of air, repeated hæmorrhages followed, the cachexia increased, and death took place about half a year from the commencement of the illness. Other cases of hæmatospermia occurring in Professor Klemperer's practice are noted by Lichowetzer (*Berl. klin. Woch.*, March 21st, 1898). One followed sexual excess in a healthy student, aged 23, and no recurrence took place. The other case was that of a chemist, aged 29; it occurred on sexual intercourse after two years' abstinence. Both these cases seemed to be purely congestive in origin. Other cases are of distinct inflammatory origin, and follow gonorrhœal epididymitis. In a young man with peritonitic symptoms discharges of bloody semen occurred several times. This patient recovered, but with complete azoospermia. Many cases of hæmatospermia are mentioned in French medical literature.

(489) Alcohol and Infantile Convulsions.

MEUNIER describes a case of infantile convulsions (*Journ. de Méd.*, April 25th, 1898). The patient was a child five weeks old, whose parents were both perfectly healthy, there being one child older. A wet nurse had been engaged, who was to all appearance quite healthy. The most careful examination failed to reveal any of the ordinary causes of infantile convulsions. There was no elevation of temperature nor abnormal disorder. The attack began with anuria, lasting for a whole day. It was only as the result of most careful investigation, and after changing the nurse, that the discovery was made that the first nurse engaged was in the habit of consuming about 2 litres of wine daily. The writer lays down the following observation in connection with this case and others, that alcoholism on the part of the nurse is a competent cause of convulsions in a breast-fed child; that such convulsions are preceded by nervous irritability, general hyperæsthesia, but without gastro-intestinal derangement, elevation of temperature, or pulmonary complication. They are apt to appear in extremely well-nourished children. As regards the fits, they show marked tendency to increase in number and severity. In some instances there may be anuria. Under such circumstances it is necessary to inquire carefully into the habits of the nurse, and to make a change as early as possible.

(490) Hæmaturia Consecutive to Mountain Sickness.

LUZZATTO (*Gazz. degli Ospedali*, May 1st, 1898) reports the case of a man, aged 23, not without some experience in climbing, who ascended some 1,500 m. in five hours, and was then seized with mountain sickness, and had finally to descend. The following day it was noticed that the urine was bloody, normal in quantity, no casts. There was no pain in the lumbar region, and the phenomenon disappeared in thirty-six hours under a milk diet; subsequent observation revealed no signs of any kidney disease. The hæmaturia did not appear until twenty-four hours after the unusual exertion of climbing, and probably it was not therefore due to unusual exertion alone, but rather to some mechanico-chemical change in conjunction with possible reflex neuroparalysis. The patient had never suffered in a similar way before.

SURGERY.

(491) Trendelenburg's Operation for Varicose Veins.

CUMSTON (*Annals of Surgery*, May, 1898) regards Trendelenburg's operation as the ideal method of treating varicose veins of the lower extremity associated with extensive ulceration. Trendelenburg found by experiments that the veins of the leg, after they had been temporarily emptied by elevation of the limb and compression of the trunk of the saphenous vein, are refilled slowly by the return blood coming from the arteries, and instantly by a blood wave coming from above downwards. The conclusion that the veins in the leg are distended by great central pressure led this surgeon to advise ligature of the saphenous vein at two points and

excision of the vessel between the ligatures. An incision about 4 inches in length is made over the saphenous trunk, beginning just above the union of the lower with the middle third of the thigh. The vein having been exposed is carefully freed with a blunt dissector, and all branches going off from the vessel are ligatured. A ligature is then placed on the venous trunk at the upper and another at the lower angle of the skin incision, and the portion of vein between these two ligatures is cut away with scissors. Cumston's experience has led him to the conclusion that Trendelenburg's operation is certainly the greatest advance that has ever been made in the treatment of ectasis of the saphenous vein, and although every case submitted to this treatment has not resulted in a complete cure, it is almost always followed by marked improvement with rapid cicatrisation of the ulcers.

(492) Retroperitoneal Fibromyoma Invading Mesentery.

Binaud and Bégouin (*Bulletins de la Soc. de Gynéc, etc., de Bordeaux*, May-June, 1897) report a case in Demons's practice which closely resembles that described by Marmaduke Sheild in the *Medico Chirurgical Transactions*, vol. lxxx, 1897. The patient was a woman, aged 50; the menopause had taken place at 48, and a year later a tumour developed in the right iliac fossa, and grew slowly. It was well-defined, hard, and seemed to be somewhat movable in all directions. It extended from the hypogastrium to within a finger's breadth of the umbilicus, and from the anterior superior spine of the right ilium to 2 inches to the left of the median line. The surface of the tumour was tuberous, the most prominent part dull on percussion, the rest quite resonant. The uterus was small, retroverted, and entirely free from the tumour, which extended into the right fornix. On April 1st, 1897, Demons operated. A coil of small intestine with the cæcum and vermiform appendix were found stretched out upon the surface of the tumour. The uterus and ovaries were quite distinct from the growth which had opened up the mesentery, and made a capsule of its lower layer. The patient was placed in Trendelenburg's position, a vertical incision was made into the capsule, and the tumour enucleated. The right ureter had sunk into the substance of the tumour, from which it had to be dissected out. The pouch of peritoneum was closed after careful hæmostasis. Unfortunately the patient, after doing well for a fortnight, was taken suddenly ill and died on the seventeenth day. Two drachms of pus were found in the cavity whence the tumour had been enucleated; the pus had entered the peritoneum at a point where some coils of intestine were found adherent, and showed signs of sloughing. The tumour was entirely solid, and presented all the microscopic characters of a fibromyoma. It is remarkable that this tumour was removed on April 1st, 1897, only three weeks after Sheild's report was read, Demons and the English surgeon working entirely independent of each other. Binaud and Bégouin believe that Demons's case is unique, but Saneyosthi (*Sei-i-kwai*, June 12th, 1896) removed twenty-one rounded fibromyomata, like interstitial uterine fibroids, from behind the peritoneum of a girl aged 9, the mesentery apparently being involved; and Péan removed a very large fibroma, probably myomatous, the "root of the mesentery." (See Anderson, Carlisle meeting, British Medical Journal, vol. ii, 1896, p. 1093.)

(493) Metastatic Carcinoma of Choroid.

Legrange (*Rec. d'Ophtal.*, December, 1897) gives a summary of 18 recorded cases of this affection, and adds a case of his own. A woman, aged 48, had had the left breast removed in 1892 for cancer. In January, 1896, visceral troubles set in, and the right eye became quite blind and painful. In the outer quadrant of the iris a new growth was visible, bossy and sharply defined, and blocking the angle of the anterior chamber. Through the clear lens a complete detachment of the retina could be seen. The eye was excised. Later in the year signs of cancer of the spinal column showed themselves, and the patient died in August. On section of the eye two tumours were found, one in the iris and one in the choroid, the sclerotic and retina not being involved. Microscopically the growth was an alveolar carcinoma, showing hæmorrhages in parts. Choroidal carcinoma sometimes invades the optic nerve; involvement of the retina has been noticed only in one case. The left eye is more often affected than the right, for the same reason, probably, that cerebral embolism is more frequent on the left side. The relative rarity of ocular metastases is explained by the narrow calibre of the ophthalmic artery, and by its being set at an angle of 90° to the internal carotid artery. In the choroid the tumour takes the form of a plaque, whereas sarcoma grows into a mushroom form. Vision is quickly lost, owing to retinal detachment. Both eyes may be affected together, or one soon after the other, or the growth may be limited to one eye. Death supervenes within a year of the ocular metastasis. The primary seat of the cancer may be the breast, stomach, or lungs. In the eye the macula is the region first to be involved, there being several distinct foci of growth which soon fused together. Carcinoma of the choroid can be confounded with sarcoma, retinal glioma, angio-sarcoma and angioma of choroid, hyalitis, and metastatic exudative choroiditis; but generally diagnosis is not difficult because of the primary affection.

MIDWIFERY AND DISEASES OF WOMEN.

(494) Treatment of Fibroids by securing Uterine Arteries.

Gouillaud (*Ann. de Gynéc. et d'Obstét.*, April, 1898), also Hartmann and Fredet, (*ibid*) maintain that though oöphorectomy for fibroid is out of date, and hysterectomy much in much in vogue, nevertheless treatment by the simpler method of cutting off the chief blood supply of the uterus is rational and effective. Hartmann and Fredet are not surprised that removal of the ovaries is often ineffective, as it is the uterine and not the ovarian arteries that ought to be secured. Gouillaud treated successfully one case by simple forcipressure of the arteries for forty-eight hours. The patient was a parous women, aged 45, very sickly through free hæmorrhages. The fibroid reached several inches above the pubes, but had chiefly developed in the direction of the pelvis. The operation was performed in October, 1894. A circular incision was made around the cervix, as in vaginal hysterectomy. The bladder and the posterior relations of the cervix were not very freely detached, but the lateral dissection was carried up for over two inches on each side to allow of the proper application of a long-bladed forceps. This was done, it appears, without difficulty on either side, so that the fibroid evidently did not burrow in the broad ligaments. The cut edges of the mucous membrane were sutured anteriorly and posteriorly, the gap on each side being left wide enough open to allow a strip of iodoform gauze to be placed against the blades of the forceps which were removed in forty-eight hours. In July, 1896, the patient was examined. The hæmorraghes had ceased entirely, and no pelvic pain could be felt. The uterine cavity, which two years earlier measured four and a third inches was now but two and a half in length. Hartmann and Fredet report 5 cases of ligature of the uterine arteries through a vaginal incision. In order to get at the side of the cervix easily, a lateral incision is made on each side of the usual circular cut round the cervix, and prolonged for about an inch down the side of the vagina. The cervix is freed for half an inch by scissors, then the valve of a speculum is pressed against the corresponding side of the vagina. This exposes the uterine pedicle, which is the term given by the authors, not to the broad ligament, but to the band of parametric tissue which accompanies the uterine artery. This "ligament" is denuded, drawn down, and tightly ligatured. If it be thick, two ligatures should be applied. The silk must be tied very firmly, for experience and the principle well understood in the surgery of aneurysm shows that the inner coat of the uterine artery must be divided by the pressure of the ligature, else the desired occlusion may not be effected. The cervix, directly the second uterine pedicle is secured, becomes in most cases very pale. The ligatures are cut short and the entire wound closed, after antiseptic washing, with catgut sutures. The vagina is packed with iodoform gauze. In 4 of the 5 cases the curette was used before the operation was performed, and in 2 small cervical polypi were twisted off. All 5 cases under Hartmann and Fredet have done well. Out of 40 performed

after the above method by others, no death occurred.

(495) Sequelæ of Operation for Ruptured Tubal Cyst.

STANKIEWICZ (*Gazeta Lekarska*, 1897, No. 39) operated in a typical case of ruptured tubal gestation cyst. The patient was 30, and had been pregnant five times before, aborting twice. She was last delivered, normally, only five months before symptoms of acute anæmia set in, the new pregnancy having advanced to the fifth week. Stankiewicz first performed transfusion with salt solution before the anæsthetic (ether) was given. The operation was successfully performed: chorionic villi were found in the tubal cyst. The anæmia proved dangerous, yet the patient did well till the third week, when convalescence was retarded by an attack of parametritis around the pedicle. This abated. Four months later the patient fell out of a cart. The exudation recurred, with rise of temperature. Fluctuation was at last detected, and an incision was made in the posterior fornix, the cavity thus laid open being drained. The patient at length recovered.

(496) Laceration of Posterior Fornix.

LOOFF (*Ann. de Gynéc. et d'Obstét.*, March, 1898) reports a case of great medico-legal importance, also of interest as showing that the posterior vaginal fornix may be lacerated by a slight and a natural force. The patient was 23, and the injury was received during coitus, in the sitting posture. Severe pain followed by hæmorrhage occurred. The vagina was found torn from the back of the cervix to the extent of an inch and a-half; the edges of the rent were irregular, the subjacent connective tissue was opened up, but the peritoneum was intact. An artery was found bleeding, and was secured by torsion. The vagina was plugged with iodoform gauze.

(497) Appendicitis and Pregnancy.

PINARD (*Ann. de Gynéc.*, May, 1898) records a case which throws light on this subject, to which attention was first drawn by Mundé five years ago. Pinard likewise furnishes two valuable tables of cases which did (30) and which did not (15) undergo operation for inflamed appendix during pregnancy. His own patient was a primipara, aged 25. At the sixth month she was seized when walking with characteristic acute pains in the abdomen, most marked in the right iliac fossa; severe vomiting and tympanitic distension followed. At the end of five days she was very ill; general peritonitis had clearly set in. The fœtal heart was still audible. Segond operated, first making the usual incision for reaching the appendix. On opening the peritoneum a quantity of fœtid pus escaped, the right appendages literally swam in it. As it was clear that the pus extended to the other side an incisi n was made above the left groin, and the left tube and ovary were found swimming in pus. A double-barrelled drain was passed through each wound, so that their ends met in Douglas's pouch; then the peritoneum was well washed out with hot water. The pus had come from a large retro-cæcal space. The operation lasted twenty minutes. Abortion occurred the following night, and the patient died a few hours later. The appendix was found to be perforated in two places. The maternal tissues were not examined for microbes, but Wallich obtained pure coli-bacillus cultures from the blood in one of the vessels in the umbilical cord. An inflamed appendix, as Mundé has shown, requires speedier surgical relief in pregnancy than under other conditions, and the fact of pregnancy must in no other sense influence the operator. In other words, it is wrong to provoke abortion or induce premature labour. There is a focus of infection especially dangerous in pregnancy, therefore it must be removed.

THERAPEUTICS.

(498) The Treatment of Suppuration by Bicarbonate of Soda.

BRUCKER has made a study (*Thèse de Bordeaux*) of a fact observed by him—namely, the influence of the reaction of the blood in the healing of certain conditions. Bearing in mind that the normal alkalinity of the blood shows important variations according to sex, age, and as to whether the blood is arterial or venous in origin, and the diet to which the patient has been addicted, so in certain pathological conditions these variations are very marked, and a reduction in the normal alkalinity is observed in certain cases of febrile reaction due to bacterial intoxication. It has been found that certain artificial intoxications can be combated by raising the alkalinity of the blood by the injection of alkaline serum. Going on these grounds, Brucker has principally investigated the influence of alkaline dressings in the treatment of local inflammatory affections, and according to his observations such a dressing, whether moist or dry, very rapidly reduces the inflammation suppurative or otherwise, and causes rapid healing of wounds. This seems independent of any antiseptic property in the proper sense of the word. The method employed by him is to apply the dressing of absorbent wool on ordinary principles, using merely a 2 per cent. solution of bicarbonate of soda, or in some cases vaseline and bicarbonate (1 in 25), or the soda may be applied directly in the form of a powder. He finds that strong solutions do not act more quickly than a 2 per cent., showing that the chief agent is the alkali, and not any antiseptic principle. The same method may be applied for purulent otitis, etc.

(499) Treatment of Tinea Tonsurans.

HERMAN B. SHEFFIELD (*New York Medical Journal*, May 14th) about a year and a-half ago described in the *American Medico-Surgical Bulletin*, September 5th, 1896, a method of treatment which cured every case of ringworm of the scalp under his care in from three to six weeks. He succeeded in eradicating an epidemic of tinea tonsurans consisting of 379 cases at the Hebrew Sheltering Guardian Society Orphan Asylum. Later more than 80 new cases came under the writer's care, and every one of them yielded promptly to the same treatment. The same success was obtained by Dr. Spalding, visiting physician to the Juvenile Asylum of New York, who cured over 40 stubborn cases within three weeks. Dr. Moreau Morris, inspector of the New York Board of Health, has also witnessed successful results from this method of treatment in various institutions of New York. The following is the formula of the remedy: ℞: Acidi carbol., olei petrolei, āā 65; tinct. iodini, olei ricini, āa 110; olei rusci (German), q.s. ad. 500. After clipping the hair close to the scalp this mixture is applied over the entire scalp—more thickly over the affected spots—by means of a painter's brush, once a day for five successive days. On the sixth day it is wiped off with a rag dipped in plain olive oil; now the hair is clipped again and the scalp washed thoroughly but gently with green soap and a soft nail brush, care being taken that all the scales and loose hair covering the scalp are removed. No epilation is, as a rule, necessary. On the seventh day the mixture is reapplied as thickly as before, and the whole process is repeated regularly for three or four successive weeks, the length of time depending upon the severity of the case, when it it is found that new hair begins to appear, and that no trichophyton fungi can be discovered in the hair epilated for microscopical examination. These procedures are followed by a few days' application of a 10-per cent. sulphur ointment, and then by the use of the following preparation for about two weeks:—℞: Resorcini, acidi salicyl., āā 16; aletholis, 120; olei ricini q.s. ad. 500. This mixture considerably hastens the growth of the hair on the bald spots. In cases where isolation is impracticable or impossible, as often happens in private families, this resorcin mixture serves as an excellent substitute.

(500) Holocaine as a Local Anæsthetic in Ophthalmology.

ZUNZ (*Journ. Méd. de Bruxelles*, May 19th) considers that holocaine is preferable as a local anæsthetic to cocaine or eucaine. It closely resembles phenacetin. It is a powerful base, insoluble in cold water, but easily soluble in alcohol and ether. A saturated solution of the hydrochlorate contains 2.5 per cent. of the salt, which is the one to be employed. It is itself an antiseptic, and therefore does not need sterilisation, although it does not undergo decomposition on boiling. A 0.1 per cent. solution causes complete anæsthesia in the rabbit after 20 seconds, which lasts from 12 to 15 minutes, and is due to a direct paralysis of the terminations of the sensory nerves. It is more toxic

than cocaine, and resembles strychnine in its toxic effect. Death is due to stoppage of respiration from spasm of the respiratory muscles. It has no effect on the pupil, or on accommodation, or on the vessels. The anæsthesia is more prompt and not less profound than that due to cocaine. Its instillation is always accompanied by a slight sensation of burning, but this quickly ceases, and is not more unpleasant than that produced by cocaine. Complete analgesia in man occurs 40 or 50 seconds after the instillation of 1 or 2 drops of a 1 per cent. solution, and if the dose is repeated after an interval of 40 seconds, absolute corneal anæsthesia supervenes half a minute later. Coincidentally with the burning sensation there occurs slight redness of the conjunctiva, but the burning ceases at the end of 30 or 40 seconds, and the redness disappears at the end of 2 minutes. With a 0.5 per cent. solution the anæsthesia lasts 5 to 8 minutes with a 1.0 per cent. solution it lasts 10 minutes, and the analgesia persists for five minutes after the return of tactile sensibility. If the anterior chamber of the eye is opened, it acts as quickly on the iris and ciliary body as on the cornea. Unlike cocaine it does not affect the intraocular tension, or cause exfoliation of the corneal epithelium, or produce effects due to stimulation of the sympathetic nerve terminations, such as widening of the ocular aperture, pallor of the conjunctiva, or proptosis. It thus acts as well, and more rapidly and with smaller doses, than cocaine, without its inconvenient effects, and, unlike eucaine, it does not cause any congestion of the tissues to which it is applied. Its one defect is its toxicity, but, up to the present time, there has not been a single case of poisoning recorded consequent on its use in ophthalmology.

(501) Treatment of Enlarged Spleen by Ether Spray.

Moscucci (*Rif. Méd.*, April 23rd, 1898), at the suggestion of Professor Raimond, has tried the effect of ether spray applied to the left half of the abdomen in cases of enlarged spleen. In the 12 cases briefly reported by the author very marked reduction in the volume of the enlarged spleen was observed after treatment. From 25 to 30 g. of ether were sprayed over the splenic area, through a Richardson's atomiser, once a day. Measurements of the spleen before and after treatment are given in each case. With the reduction in size the patient's general condition improved. No bad results are recorded. As a rule, the right side of the abdomen was covered with cotton wool and only the affected splenic area played upon.

PATHOLOGY.

(502) The Origin of Cirsoid Aneurysms.

J. L. Reverdin (*Rev. Méd. de la Suisse Rom.*, February 20th, 1898) publishes a case of cirsoid aneurysm apparently following an infection. A man, aged 31, became ill in March, 1895, with slight fever, pharyngitis, œdema of the frontal region and root of the nose, diarrhœa (which lasted several weeks and brought on a "typhoid" state), epistaxis, enlargement of the liver and spleen, ascites, and œdema of the lower limbs. During convalescence there was neuritis of the right median nerve. Two physicians diagnosed the case as infective gastro-enteritis, although there is some doubt as to its exact nature. In May, 1896, a slight enlargement above the left eyebrow was noticed, where the œdema originally occurred. The skin over it was not discoloured. About this time also he had hæmatemesis and melaena. On December 9th, 1896, when first seen by Reverdin, there was nothing abnormal to be found in his general condition, but there was a typical cirsoid aneurysm extending from the external to the internal angle of the left eyelids, and forming a large projection at the root of the nose. This was removed successfully. Writers generally divide cirsoid aneurysms into (1) those following pre-existing nævi, (2) those following injury, and (3) those which are idiopathic. In France they are considered to be allied to arteriovenous aneurysms, but it is difficult to see how multiple communications between arteries and veins could arise at the same time owing to an injury. Others, including Billroth, believe them to be due to arteritis, which weakens the vessel walls and allows their dilatation. The above case is interesting on this hypothesis. Since injury and nævi could be excluded, the etiology appears to be an infective arteritis, and an infective origin has never been upheld before. Histologically the tumour presented the ordinary appearances of cirsoid aneurysms, but one vessel was obliterated by a fibrous mass. The process was then probably: (1) Lodging of pathogenic organisms in the vessels of this region, causing an infective arteritis (the organisms, however, had disappeared before the operation), in one vessel, the obliterated one, an embolus or thrombus, probably septic, formed, and this accounted for the painful frontal œdema observed near the beginning of the illness; (2) diminution of resistance in the vessel walls caused by the arteritis; and (3) finally, at a later period, their dilatation. The presence of several small red spots, formed by a central dilated vessel, and smaller ones radiating from it, supported the theory of infective arteritis. These also appeared for the first time after the infective illness. Reverdin believes that arteritis explains also all cases of cirsoid aneurysm following an injury; their slow development some time after being just what one would expect. Those following nævi could be explained by a congenital defect of nutrition of the walls of the vessels.

(503) Immunity against Tetanus.

Tizzoni has made an important series of experiments (*Gazz. degli Ospedali*, March 6th, 1898) showing that it is possible to render animals immune against tetanus by injecting a culture of Fraenkel's pneumococcus. When thus treated not only do injections of the bacillus itself have no effect, but the resistance of the animal to the minimum lethal dose of tetanus is greatly increased. At the same time the local effects appear to be merely decreased in severity. Also that the action of tetanus poison on an animal already inoculated shortens the period of immunity of Fraenkel's pneumococcus. The writer has also observed that the immunity conferred by injection of pneumococcus differs from that produced in other cases by the extreme rapidity of its action; if employed a short time before or even at the same time as the more severe poison, it is still able to act quite efficaciously. This material loses its power and becomes almost inactive against tetanus poison, although it seems to retain its own power of conferring immunity against its own original bacillus. The converse is to a certain extent true according to the writer, as tetanus antitoxin confers a certain degree of immunity, though this is not complete, as the animals are liable to die, but their symptoms are considerably reduced in severity. The author discusses the question of resemblance between pneumococcus and tetanus antitoxins.

(504) Tuberculosis of the Stomach.

Blumer (*Albany Medical Annals*, March, 1898) describes three or four shallow circular ulcers near the greater curvature of the stomach in a woman aged 50, who had generalised miliary tuberculosis, tuberculous ulcers in the ileum, and tuberculosis of the kidneys and aorta. The ulcers were shown to have the microscopic structure of tubercle, and to contain tubercle bacilli. Tuberculosis of the stomach is rare. Blumer has only been able to collect thirty well-authenticated examples. Probably gastric ulcers in tuberculous subjects have often been regarded as tuberculous. The tuberculous lesions of the stomach may be divided into (1) miliary tubercles, which are rare; (2) single, and (3) multiple ulcers. They are always secondary. In order to explain the infrequency of tuberculosis of the stomach, two theories have been proposed: (*a*) that it is due to the rarity of lymphoid tissue in the stomach; there is no proof in support of this idea; (*b*) that the acid of the gastric juice prevents the development of the tubercle bacilli. While this factor has been rather overestimated in the past, and underestimated lately, it is probable that when the mucosa is healthy the acid is sufficient to prevent infection, but not when the resistance of the gastric mucosa is lessened. Thus in multiple tuberculous ulcers it is probable that hæmorrhagic erosions or some factor interfering with the blood supply of part of the mucosa play an important part. Large, single, tuberculous gastric ulcers are probably due either to infection of a pre-existing ulcer or to direct extension inwards of peritoneal tuberculosis.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(505) Lumbar Puncture.

STADELMANN (*Deut. med. Woch.*, November 18th, 1897) bases his observations on some 100 cases. (1) Tuberculous meningitis, including 14 to 16 cases. Usually there was evidence of much increased pressure, but this was not always so, even when the necropsy later showed a considerably increased intracranial pressure. The author would attribute this to (*a*) filling of the subarachnoid spaces with brawny œdematous exudation; (*b*) puncture of the subdural instead of the subarachnoid space; (*c*) closure of the communication between the cavities of the brain and the spinal subarachnoid spaces. The fluid is mostly clear, sometimes turbid, rarely purulent or blood stained. Tubercle bacilli were found in only about 22 per cent. of the cases, notwithstanding diligent search. The negative result may be due to (*a*) absence of the bacillus from the exudation owing to the tubercles not having broken down; (*b*) closure of the communication with the brain as above described, the tuberculosis in the spinal meninges being ill developed; (*c*) the tubercles being so few and ill developed that they can be found only on most careful examination after death; (*d*) the meningitis being a serous and not a tuberculous one, etc. (2) Suppurative meningitis. Here the fluid is turbid or purulent, and contains bacteria such as the meningococcus, pneumococcus, staphylococcus, or streptococcus. Occasionally in undoubted cases complicating middle-ear disease a clear fluid with no bacteria may be found. It is obvious that purulent meningitis cannot thus always be distinguished from tuberculous meningitis. The result is of value only when the nature of the meningitis can be determined by ascertaining the microbe setting it up. (3) Cerebral abscess. The distinction between this disease and suppurative meningitis is of importance on account of treatment. It has been said that the escape of much clear fluid under high pressure shows that there is no complicating (purulent) meningitis, but the evidence is insufficient. Lumbar puncture does not assist in the diagnosis between the abscess and sinus thrombosis. The author draws attention to some cases of pneumonia and alcoholism in which spinal puncture has enabled him to exclude a suspected meningitis. In the differential diagnosis between coma due to alcoholism, or to alcoholism combined with fractured skull, etc., spinal puncture may be of service. If the fluid drawn off is blood-stained or contains pathogenic microbes a differential diagnosis becomes possible. (4) Cerebral tumour. Lumbar puncture acts unfavourably in these cases. (5) Cerebral hæmorrhage. The fluid may be blood-stained when the hæmorrhage has ruptured into the ventricles or on the surface of the brain. (6) It is not possible to make a differential diagnosis between apoplexy, embolism, and softening through spinal puncture. The author has never succeeded in diminishing intracranial pressure in apoplexy by spinal puncture, and he decidedly warns against its employment here. A fresh hæmorrhage may result from it. (7) Miscellaneous cases. (*a*) Hydrocephalus. The author can report no good results. (*b*) In a case of hæmorrhagic encephalitis no special result was obtained, and the same was true of (*c*) uræmia, etc. The author has never seen any therapeutic results obtained by spinal puncture. The diagnostic value of the procedure is undoubted, but it is important not to over-estimate it lest it be brought into discredit.

(506) Nervous Bronchial Asthma in Childhood.

KISSEL (*Archiv f. Kinderheilkunde*, vol. 24, Parts III and IV, 1898) has lately had five cases under his care in the Olga Children's Hospital, Moscow. The ages of the children varied between 9 and 10 years. There was a strong neurotic family history in most of the cases. The attacks of asthma occurred only in the winter months. They usually began with a copious expectoration of mucus: rhonchi could be heard all over the chest during a paroxysm. There was no sign of rickets or any malformation of the chest wall. All the viscera appeared to be normal, and between the attacks the children appeared to be perfectly well. Kissel has made an exhaustive examination of the cases of asthma published by various authors. The reflex asthma caused by adenoid growths he does not admit amongst cases of true nervous asthma. Again, cases of tubercular bronchial glands at the bifurcation of the trachea are said to cause asthma; twelve cases have been published by Biedert and Litting (*Pädiatrische Arbeiten:* Festschrift Henoch, 1890, p. 257); half were children and half adults; in no instance was bronchial asthma observed during life, yet at the *post-mortem* examination the bronchial glands were much enlarged. Barthez and Sanné (*Traité Clinique et Pratique des Mal. de l'Enfance*, Bd. iii, p. 1108) also published cases in which the bronchial glands were enlarged *post mortem*, but in which no evidence of asthma was observed during life. The clinical picture in cases of enlarged bronchial glands resembles whooping-cough more often than asthma; the peculiar cry, and sudden onset of the dyspnœa, together with the whoop during inspiration, are points which have been noted by several observers as occurring in cases of enlarged bronchial glands. Henoch (*Vorlesungen über Kinderkrankheiten*, St. Petersburg, 1888) says that in cases of compression of the vagus and recurrent laryngeal hoarseness is frequently met with, and also spasmodic cough associated with noisy inspiration, resembling whooping-cough. Certain indefinite nervous affections, he says, are also met with, and rarely cases of asthma. Kissel maintains that true nervous asthma exists in children as well as in adults, but he admits that it is rare. He has worked out some statistics with regard to the number of cases of asthma occurring in the various children's hospitals—twenty in number. Amongst 21,528 in-patients there were 6 cases of asthma; amongst 214,712 out-patients there were 7 cases. The towns selected were Vienna, Breslau, Dresden, Bern, Stockholm, London, Philadelphia, Zürich, Berlin, Paris, Buda-Pesth, Stettin.

(507) Morbus Maculosus Werlhofii in an Infant.

AXEL MADSEN (*Ugeskrift for Laeger*, No. 16, April 22nd, 1898) records the case of a male infant, 18 months old, well nourished and developed, who three days previously had developed a rash on the body and extremities, and had had six or seven evacuations of the bowels daily. The rash consisted of petechiæ, and of more widespread ecchymoses on the thighs, and during the last two days pure blood had been passed from the anus both at the time of defæcation and at other times. Small blood travasations were seen on the lips. The temperature was normal, and there was neither albumen nor blood in the urine. The icebag was placed on the abdomen, and stimulants were administered. The diarrhœa became less, but the melæna continued, consequently injections of tannic and gallic acid were given; in four days the bleeding ceased, and in ten days complete cure resulted.

(508) Acute Nephritis complicating Chronic Gastro-enteritis.

EBSTEIN (*Deut. med. Woch.*, 1897, No. 24) describes the case of a woman, aged 27, who had suffered from diarrhœa for nine months; during the last two months she had complained of abdominal pain. She was admitted into the Göttingen Klinik: there she got rapidly worse, and suddenly developed symptoms of acute nephritis, which terminated fatally in two days. At the *post-mortem* examination chronic follicular enteritis and acute nephritis were found; there was no other abnormality. Ebstein suggests that the nephritis had some causal relationship with the enteritis. All the infectious diseases could with certainty be excluded. It is well known that in acute enteritis the kidneys are often affected; also in chronic enteritis slight albuminuria sometimes occurs. How a chronic disease of the stomach and intestines gives rise to an acute inflammation of the kidneys it is impossible to say. Ebstein has published the case with the hope of stimulating observations and experiments on this subject.

SURGERY.

(509) Operative Treatment of Microcephaly.

KEEN (*Jour. of Nervous and Mental Disease*, February, 1898) discusses the advisability of operating in cases of mi-

crocephaly. In 18 cases craniotomy was done, the youngest being 18 months, the oldest 6½ years old. In five cases the operation proved fatal. Six cases were slightly improved, seven were not benefited. No good can be expected from the operation in cases with average sized heads, nor in those with extreme microcephaly, nor where the patient is already more than 7 years old. In one case a restless, mischievous idiot was transformed by the operation into a "quiet sleepful child," but the improvement, when there is any, is only slight. Much depends on careful and specially adapted education after the operation. The writer concludes that in some cases of moderate microcephaly the operation is justifiable, and in a small number of cases a slight improvement will follow, but in the majority there will be no result good or bad, while in a certain proportion (15-20 per cent.) "the operation will happily be followed by death."

(510) Resection of the Transverse Colon for Gunshot Wound.

VENTURI (*Rif. Med.*, April 16th, 1898) reports the case of a woman, aged 29, admitted into hospital on January 13th with gunshot wound of the umbilicus. On passing a probe, the wound was found to extend upwards, and gas escaped. Owing to the grave condition of the patient (pulse 140, respirations 40, vomiting, etc.), operation was postponed until the next day, when laparotomy was performed. It was then seen that the omentum was perforated, and the anterior wall of the transverse colon, the posterior wall was ulcerated, but not perforated. It was decided to resect the injured part of the bowel, and some 8 cm. of the colon were excised, and the two ends united over Murphy's button, with Lembert sutures. The operation lasted two hours, and was well borne; a small iodoform gauze drain was left in. The subsequent progress of the case was very satisfactory. The bowels (which had not been open for ten days) acted freely the third day after the operation. On January 31st Murphy's button was passed in the fæces, and on February 15th (thirty days after the operation) the patient left the hospital completely re-established.

(511) Tracheotomy under Local Anæsthesia.

B. FRAENKEL (*Berl. klin. Woch.*, June 6th, 1898) draws attention to the fact that in chronic stenosis of the larynx tracheotomy cannot always be done at the most opportune moment, and the risk of the operation may thus be increased by the general anæsthetic. The tracheotomy may have to be done in much haste. It may happen that the patient may have to take up a certain position in order to facilitate the breathing, and when such a patient is placed on the operating table he has an attack of asphyxia. By doing away with the voluntary respiratory efforts as occurs in general anæsthesia, it may no longer be possible for the patient to force air through the narrowed passage. Fraenkel has performed 23 tracheotomies under cocaine during the past three years. He has then injected a 20 per cent. solution in two places or a 10 per-cent. solution in four places beneath the skin of the part. In a few minutes tracheotomy could be carried out without pain. In children only a 10 per cent. solution should be used. In the adult 0.04 g. of cocaine are injected. The patient fears the tracheotomy under cocaine less than the general anæsthesia. The author has found that under cocaine it is never necessary to complete the operation in a hurry owing to threatening asphyxia. Fraenkel has thus tracheotomised 17 adults: 5 for laryngeal syphilis, 6 for tuberculous laryngitis, 4 for carcinoma, 1 for pachydermia laryngis, and 1 for stenosis resulting from attempted suicide. In a further 2 cases tracheotomy was done for acute disease. In 4 cases chloroform was used as well as cocaine. After a certain amount of anæsthesia was induced cocaine was injected, and the tracheotomy performed in partial narcosis.

MIDWIFERY AND DISEASES OF WOMEN.

(512) Albuminuria during Pregnancy.

CHARLES (*Journ. d'Accouchements*, April 3rd, 1898) relates two cases: In one, a primipara at the eighth month, the treatment adopted, consisting of milk diet, diaphoresis, and purgation, brought on premature labour. The child died eighteen hours after delivery; the mother recovered from her confinement, but albuminuria persisted. The prognosis in her case was bad. In the second case, also a primipara, albuminuria existed before pregnancy. For three months she remained fairly well under careful treatment, but after a long railway journey, followed by exposure in wet weather, the symptoms became worse, and she died of uræmia at the fourth month. The author recalls the conclusions of his previous researches on the subject, namely: (1) In most pregnant women there is a certain degree of auto-intoxication; this is the normal toxæmia of pregnancy. (2) In lesions or disease of the kidney or liver the toxic condition becomes aggravated and may lead to grave complications, notably uræmia. (3) Toxæmia of renal origin is the most common, associated with albuminuria and œdema. (4) Albuminuria is not the cause of eclampsia, but a symptom owning a common origin. (5) Grave complications, such as coma, dyspnœa, paralysis, may prove fatal in the absence of eclampsia. (6) In most cases toxic eclampsia breaks out in albuminuric women; albuminuria is therefore an important precursory sign which should not be neglected. (7) The author's statistics show that 1 pregnant woman in 40 is albuminuric, and that of 4 albuminuries 1 develops eclampsia; eclampsia without albuminuria is rare —1 case in 9—and is less serious. (8) Albuminuria alone without eclampsia has often serious or fatal consequences —in 110 cases, 8 women and 20 children died; there were 61 premature labours, 8 *post-partum* hæmorrhages, and 3 cases of threatened convulsions. (9) Albuminuria should be looked for in all pregnant women. (10) Every albuminuric pregnant woman should be actively treated, a milk diet being the best. (11) In case of threatened danger premature labour is indicated, and gives excellent results.

(513) Absence of Internal Organs in Adult: Kidney in Pelvis.

MÜLLERHEIM (*Centralb. f. Gynäk*, No. 15, 1898) reports an interesting case where the vagina, uterus, and ovaries were apparently absent, the septum between the bladder and the rectum was very thin, and no structure could be felt in its substance. The patient was a girl, aged 20, well nourished; the mammæ, pubes, and vulva were normal. On rectal examination the right kidney could plainly be felt in the pelvis. The outline of the hilum was clear, and lay uppermost. No pulsation could be felt in its neighbourhood, but it is significant that a pulsating vessel could be traced into its convex border, which lay lowest. Müllerheim demonstrated a pelvic vessel running in this manner into a congenitally displaced kidney a year ago. No kidney could be detected in the right loin. He catheterised the ureters with great care. When the end of the instrument lies in a ureter, the urine flows out irregularly; when it lies in the renal pelvis it escapes continuously. He therefore passed one catheter just into the vesical orifice of the ureter, and measured the length of the portion still outside the bladder. Then he passed the cathether onwards till urine flowed continuously. The portion of the catheter outside the bladder was once more measured. The difference from the first measurement represented the length of the ureter. This ingenious method was applied to both sides, and the right ureter was found to be nearly 4 inches shorter than its fellow.

(514) Lithopædion discharging after Twenty-four Years: Intervening Normal Pregnancies.

LEMONNIER (*Bulletins et Mémoires de la Soc. Obstét. et Gynéc. de Paris*, March 10th, 1898) was consulted in July, 1896, by a patient who brought him two pieces of fœtal bone which she had discharged in a motion during the previous March. One was part of a frontal bone, including the orbital arch. There was but little pain when they were passed, no hæmorrhage from the bowel, and no fever. Lemonnier had attended this patient for over three years. At the beginning of that period he had detected a hard mass of the size of a turkey's egg in the left fornix. There was much gastro-intestinal irritation at the time, and so Lemonnier diagnosed recent pelvic peritonitis. After the discharge of the bones in 1896, he made fresh inquiries of his patient. Then he discovered that her first pregnancy was in 1872; it went on well till term. Then labour pains set in, and passed off and returned for a week. At a consultation

Guéneau de Mussy and Demarquay diagnosed extrauterine pregnancy. Once more, in July, 1896, Lemonnier explored the pelvis. The hard mass was still present, so that but little of the lithopædion had come away. The fistulous communication could not be reached by the explorer's finger. The prognosis is much less serious in a case of this kind than when the fœtal bones discharge into the bladder. No operation was deemed advisable.

(515) Pessary in the Uterus for Fifteen Years.

R. DE BOVIS (*Union Méd. du Nord-Est*, March 15th, 1898) places on record the case of a woman, aged 76 years, who had long suffered from leucorrhœa. It was thought from her age and the fœtid nature of the discharge that cancer of the uterus existed. In the vagina a metallic stem was found passing into the cervical canal, and the patient recollected that fifteen years previously a pessary had been inserted for prolapse. It was found impossible to withdraw the pessary, as the disc portion of it was imbedded in the cervical tissues. A transverse incision was made in the anterior vaginal fornix, the bladder was stripped off, and then the cervix was divided with scissors in the median line and the foreign body removed. There was purulent endometritis, and so douches were used and the vagina packed with iodoform gauze. There was complete recovery. The pessary must have been sucked into the uterus.

(516) Uterine Fibroids and Acetonuria.

BOSSI (*Archivio di Ostetricia e Ginecologia*, Naples, vol. iv, Part 4), in his valuable paper on the Process of Absorption of Uterine Fibroids, states that he detected marked and prolonged acetonuria during the retrogression of fibroids after oöphorectomy or ligature of the ovarian arteries.—Hartmann and Fredet (*Annales de Gynéc. et d'Obstét.*, April, 1898) also observed a distinct excess of acetone in the urine of their patients after ligature of the uterine arteries. They think it proper to note, however, that evidence as to the normal excretion of that compound and as to acetonuria after anæsthesia and in disease, remains defective. Chemical tests, too, are difficult in this case, and require an expert, nor is the favourite test for acetone (Legal and Chautard's) reliable. Becker has found that acetonuria is common, though not constant, after anæsthesia by any of the usual compounds. Argenson detected half a gramme of acetone in a litre of urine (7½ grains to 1¾ pint) after chloroform narcosis. The same observer found a slight excess of acetone in the urine of a patient suffering from rectal cancer, and others have seen the same in cases of malignant tumours. In conclusion, marked acetonuria is certainly seen where uterine fibroids are undergoing absorption, but the exact significance of the phenomenon has not been explained. Bossi and Hartmann do not assert that it represents direct molecular disintegration of the "fibroid."

THERAPEUTICS.

(517) Local Treatment by Superheated Air.

F. KRAUSE (*Münch. med. Woch.*, May 17th, 1898) relates his experience with this agent. He improvised an apparatus in place of Tallerman's costly one. Care is needed in using hot air that no conductor comes in contact with the skin. In every case the author began with a lower temperature of 70° or 80° C., and then gradually increased it up to 100°, 126°, or even 135°. The susceptibilities of patients vary greatly. The hot air may be used twice a day for an hour or more. Care must be exercised in taking off the apparatus not to allow it to come in contact with the surface. The skin is then very red, and mostly covered with sweat. Thus the air within the apparatus is laden with moisture, unless provision is specially made against it. Before the sweating commences the contact of the hot air may be very troublesome to some patients. The air is not under any pressure, as openings for its escape are provided. The greatly increased perspiration and the considerably augmented blood supply are the healing factors. The anodyne effects were very marked, especially in rheumatic affections. The movements of the joints were improved, and the feeling of weakness lessened or removed. Krause has employed this method in rheumatic affections, in arthritis deformans, and gonorrhœal arthritis. Very good results were obtained in subacute or chronic gonorrhœal arthritis, but it failed in two acute cases. The author has also used hot air in the stiffness and pain left after injuries, in some chronic synovial effusions, in chronic periostitis, and in the painful muscular spasm of flat foot. In one case a psoriasis of the leg was rapidly cured by this process. Too much must not be expected of it, but on the other hand it is certainly an addition to our resources, and in cases too in which treatment has not hitherto been very successful.

(518) Local Applications of Salicylate of Methyl.

LINOSSIER AND LANNOIS (*Bull. de l'Acad. de Méd.*, March 22nd, 1898) revert to the study of the therapeutic action of methyl salicylate applied to the unbroken skin. They first substantiate their view that this action is due to actual cutaneous absorption and not to the inhalation of the drug through the lungs. They claim that having entered the body it is saponified in the blood and thus converted into sodium salicylate, which exercises its ordinary remedial effects without irritating the stomach and with the additional advantage of producing some local analgesia. A further fact which seems to be well-established is the rarity and slightness of the toxic effects. Even after large doses vertigo, tinnitus, etc., are quite exceptional. There is practically no cutaneous irritation; the local anæsthetic action is of particular use in chronic rheumatic affections. In acute rheumatism the application should be made twice a day; the remedy is also frequently though not universally efficacious in infectious and gouty arthritis and in many other chronic painful diseases such as neuralgia. With regard to the method of use the authors recommend that the methyl salicylate should simply be painted on and hermetically covered over with several layers of india-rubber. They have experimented with several kinds of excipient, such as vaseline and lanoline, and find by examination of the urine that less of the drug is absorbed than when it is used as described. The ordinary dose is 60 gr., but in acute and infectious (for example, gonorrhœal) cases two to three times the amount may be given. They do not recommend the use of oil of wintergreen. A good bibliography is appended.

(519) Therapeutics of Syphilis.

ZEISSL (*Wien. med. Presse*, November 21st, 1897) discusses the questions of the early, or so-called preventive, treatment of syphilis, and also the duration of treatment. The author's own method is similar to that of Neumann (see EPITOME, 286), namely, to confine the treatment of syphilis to the duration of symptoms, that is, symptomatic as opposed to continuous or to chronic intermittent treatment. Zeissl compares the syphilitic microbe treated by the chronic intermittent method to the malarial parasite treated by quinine, and points out that Golgi has shown that the action of quinine differs on different varieties of malarial parasites, and also at different periods in the life-history of the same parasite. Therefore he argues that by treating syphilis by a chronic intermittent method we may be giving the drug at one time when it is not required, and omitting it at a time when it may be of some use. Zeissl does not give mercury till the secondary symptoms are fully developed, and omits the treatment when symptoms have disappeared. During the absence of active manifestations of the disease he avoids both mercury and iodides. He states that the course of syphilis is now no better than at the time when all primary sores, both hard and soft, were treated by mercury, and uses this as an argument against treating the primary sore. Another argument is that large doses of mercury are required in the secondary stage if a course has been given for the primary.

(520) Stypticin.

RONOSSE AND WALTON (*Belg. Méd.*, May 19th, 1898) have studied the action of stypticin (the hydrochlorate of cotarnine, an oxidation product of narcotine, and closely allied to hydrastinine both in its chemical constitution and pharmacological action) on the frog, rabbit, and dog. They found that the fatal dose by subcutaneous injection in the frog is 5 to 10 mg. per 20 g. of body weight, and in the rabbit and dog 20 to 30 cg. per kilog., and that it kills by paralysing the respiratory centre. It exerts only a very feeble action on the sensory nerve mechanisms. It increases peristalsis; it slows the heart in the frog and rabbit and quickens it in the dog. Its action

on the pulse wave is first to increase its amplitude, then to reduce it to the normal or even below, again to increase it until two or three hours after the intravenous injection it reaches its maximum of one and a half to two and a half times greater than the normal; and, lastly, to gradually diminish it until the ordinary amplitude is reached four or five hours after its administration. Although it produces slight vaso-dilatation it is yet manifestly a circulatory stimulant. It increases the force and quickens the rate of the contractions of the gravid uterus independently of any effect on the blood supply. They employed it clinically in many cases of uterine disease, usually in doses of 9 to 15 cg. in the form of pills. They gave it in endometritis, both before and during the menstrual period, with good and lasting effect. In the hæmorrhage following abortion and parturition it proved, even in large doses, less useful than hydrastinine because less rapid in its action. On the hæmorrhage due to simple uterine tumours it had no appreciable effect but the pulse showed marked improvement. As compared with hydrastinine, it acts less quickly on the heart and not at all on the abdominal blood vessels; and whereas the action of hydrastinine on the heart is rapid and stimulating, like that of ether, the action of stypticin resembles rather that of digitalis. The authors consider that if a rapid hæmostatic action is required as in *post-partum* hæmorrhage hydrastinine should be prescribed, but if a more lasting action is desired, as in prolonged uterine hæmorrhage, stypticin is preferable.

(521) Physiological Action of Hypophysis Cerebri.

Howell (*Jour. of Exp. Med.*, vol. iii, p. 245) has made experiments with extracts of the hypophysis cerebri, which indicate that there is a distinct difference in the physiological action of the anterior and posterior lobes. The effect of extracts of the former or hypophysis proper on the blood pressure and heart beat was uncertain and inconstant. The posterior lobe, which is connected with the infundibulum by a stalk, he proposes to call the infundibular body. It has been shown by Berkley to possess a glandular structure; and Howell considers that his experiments support the opinion that it is endowed with secretory activity. The injection of extract of the infundibular body (sheep) into the femoral artery (dog) was followed by slowing of the heart-rate and rise of blood pressure, the maximal blood pressure being reached at about the time the pulse-rate was slowest. The increase in blood pressure was accompanied by, and in part most probably caused by, a peripheral constriction of the arteries.

PATHOLOGY.

(522) Foot and Mouth Disease.

The *Centralblatt für Bakteriologie*, xxiii, 9-10, contains the report of the Commission on Foot and Mouth Disease, by Löffler and Frosch. No organisms could be seen in nor cultivated from lymph taken from recent bullæ upon the buccal mucous membrane, although that lymph proved virulent to calves inoculated with it. Experiments proved that the bacillus of Bussenius and Siegel does not give rise to the disease in question, but to a severe form of enteritis. Drying the lymph for twenty-four hours at summer heat (31° C. maximum) makes it inert, but it could be kept for nine weeks at 0° C. without loss of virulence. The lymph cannot penetrate through the unbroken skin; it is most effective when injected directly into the blood, or into the peritoneal cavity. Of special interest are the paragraphs devoted to the question of protective inoculation. One attack confers immunity for at least five months. The blood of such immune animals does not confer immunity upon others; but if it be mixed with the lymph from recent bullæ in the proportion of 1 c.cm. to $\frac{1}{50}$ c.cm., such immunity is obtained. Of the calves treated with this mixture, 75 per cent became immune to a quantity of virulent lymph, the $\frac{1}{1000}$ part of which would ordinarily have sufficed to cause the disease. If the lymph be filtered through "Kieselguhr" (which allows not even the smallest known organisms to pass through it), its virulence—estimated at about 1 to $2\frac{1}{2}$ trillions—is neither lost nor lessened. That a filtrate free from all organisms, and containing only toxins in solution should be so intensely virulent appears incredible, and the writers are of opinion that there have passed through the filter organisms so minute that the most powerful systems of lenses fail to demonstrate them; such organisms need be but $\frac{1}{5}$ the size of the smallest bacillus known (influenza) to escape detection by the microscope. Should this supposition prove correct, then other diseases, for example, small-pox, scarlatina, typhus, and rinderpest, may possibly be due to such minutest of minute organisms.

(523) The Alkalinity of the Blood in Epileptics.

Charon and Briche (*Arch. de Neurologie*, December, 1897) record the results of a number of observations made along two lines. In the first series the number of attacks was recorded hour by hour for 10 days in 130 epileptics and compared with the diurnal variations in the alkalinity of the blood. In the second series saline solutions of two different strengths were injected subcutaneously daily for 9 or 10 weeks in 8 cases, in order to ascertain if any alteration in the number or character of the attacks resulted. The solutions contained 1 in 40 or 1 in 10 of salts respectively, and in either case the salts were four-fifths neutral-phosphate of sodium and one-fifth chloride of sodium. It was found that the blood of epileptics exhibited constant diurnal variations, the maxima and minima being in direct relation to the amount of work done by the digestive apparatus. The epileptic attacks presented equally constant numerical variations, isochronous, and in inverse proportion to the alkalinity of the blood. Repeated saline injections did not permanently modify the degree of alkalinity of the blood. The produce are extremely brief elevation in its alkalinity, an elevation which disappeared within an hour, during which time there was no attack. The net result of the injections was to diminish the number of isolated attacks and to favour their occurrence in bouts. They did not reduce the total number, and any influence which they exerted upon their severity was in the direction of increase. They as a rule increased the postparoxysmal psychical disturbances, and in certain cases provoked outburst of a maniacal nature.

(524) Facial Asymmetry in Infantile Hemiplegia.

Féré (*Nouvelle Iconographie de la Salpêtrière*, 1897) records some observations on 15 cases of infantile hemiplegia. He found that on the affected side in half the cases the forehead was lower in two-thirds of the cases, the vertical measurement of the orbit was less, and in four-fifths of the cases the inferior maxilla was smaller than on the sound side. The ear also was found in these cases to show a flattened helix, and to appear larger than on the sound side, and other projections beside "Darwin's tubercle" were present on the affected side. It is evident that in such cases the asymmetry of the two sides is simply due to arrest of development in direct connection with the hemiplegia; hence the writer argues that similar defects associated with mental weakness are not necessarily evidence of atavism as has been suggested.

(525) Typhoid Bacilli in Urine.

Petruschky (*Centralbl. für Bakteriol.*, 1898, No. 14) has examined the urine of 50 consecutive cases of typhoid for the bacilli of that disease, with positive results in 3 of them. In all 3 the organisms were present in enormous quantities—from 5,000 to 172 millions per c.cm. of urine. In one case the organisms were preceded by blood in the urine; in the rest there were no concomitant symptoms save a trace of albumen and turbidity of the urine. The bacilli generally appeared suddenly, and, what is of the greatest importance, they were present during convalescence in all three instances—and, indeed, in two of the cases they did not make their appearance till convalescence had definitely set in—and continued present for some weeks. Their virulence was proved by the accidental infection of a nurse with such urine. The writer demands that in all cases of typhoid the urine should be treated with antiseptics, even during convalescence, and that all utensils and all linen with which the urine may have come in contact be scrupulously cleansed and disinfected. Finally, he thinks that his observations may prove of some importance in the epidemiology of typhoid.

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